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 821961

Naval Training Center Orlando
Orlando, Florida

July 2019

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

N65928_003407
NTC ORLANDO, FL
SSIC 5000-33c

LABORATORY DATA PACKAGE B821961 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 #: B821961

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



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Maxxam Analytics International
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4. QA/QC Data
5. Initial Calibration
6. Continuing Calibration

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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:

Project Manager

Maxxam
A Bureau Veritas Group Company

Stephanie
Pollen
2018.03.06
10:53:12 -05'00'

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

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: B821961

Sample Analysis

Samples were analyzed on QC batches 5390275 (2018/02/09-10) and 5393111 (2018/02/13). A reduced sample volume was extracted for the following sample:

FZT426 *OLD-SA2-06ATW-0118*

This was due to the discolored and turbid appearance of the sample matrix, which would likely have resulted in clogging of the solid phase extraction (SPE) cartridge if the full sample volume had been extracted. Detection limits were adjusted accordingly.

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						
FZT419	OLD-OV1-101TW-0118	2018/01/25	2018/01/30	2018/02/08	2018/02/10	2018/02/09-10
FZT420	OLD-OV1-102TW-0118	2018/01/25	2018/01/30	2018/02/08	2018/02/10	2018/02/09-10
FZT421	OLD-OV1-102TW-0118-D	2018/01/25	2018/01/30	2018/02/08	2018/02/10	2018/02/09-10
FZT422	OLD-OV1-103TW-0118	2018/01/25	2018/01/30	2018/02/08	2018/02/10	2018/02/09-10
FZT423	OLD-SA2-04ATW-0118	2018/01/25	2018/01/30	2018/02/08	2018/02/10	2018/02/09-10
FZT424	EB-GW-012518-3	2018/01/25	2018/01/30	2018/02/08	2018/02/10	2018/02/09-10
FZT425	FB-OLD-012518-6	2018/01/25	2018/01/30	2018/02/08	2018/02/10	2018/02/09-10
FZT426	OLD-SA2-06ATW-0118	2018/01/26	2018/01/30	2018/02/09	2018/02/13	2018/02/13
FZT427	OLD-SA2-01ATW-0118	2018/01/26	2018/01/30	2018/02/09	2018/02/13	2018/02/13
FZT428	FB-OLD-012618-7	2018/01/26	2018/01/30	2018/02/09	2018/02/13	2018/02/13
FZT430	EB-GW-012618-4	2018/01/26	2018/01/30	2018/02/09	2018/02/13	2018/02/13
FZT431	DI BLANK	2018/01/26	2018/01/30	2018/02/09	2018/02/13	2018/02/13

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: all within recommended hold times

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 Fallon

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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www.maxxamanalytics.com



2.1 Sample Custody

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Maxxam Analytics International Corporation o/a Maxxam Analytics
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 of

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 Kotm	P.O. #			
Address	PO Box 3382	Address	661 Anderson Drive	Project	JM11 NTC Orlando	COC #:	Project Manager:
	Logan UT 84321		Pittsburgh, PA 15220	Project Name		C#647124-03-01	Stephanie Pollen
Tel	(781) 455-0653 x Fax	Tel	412-921-8291 Fax 412-921-4040	Site #			
Email	rcarr@earthtoxics.com	Email	Ron.Kotm@tetratech.com	Sampled By	Grzywacz		

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)

Turnaround Time (TAT) Required: Please provide advance notice for rush projects

30-Jan-18 15:50
Stephanie Pollen
B821961
TSP ENV-1261

specified) ☒
for most tests
tain tests such as BOD and Dioxins/Furans are > 5 er for details.
lies to entire submission)
Time Required ☐
(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		OLD-OU1-101TW-0118	01/25/18	1015	GW		X									2	
2		OLD-OU1-102TW-0118	01/25/18	1310	GW		X									2	
3	MG	OLD-OU1-102TW-0118-D	01/25/18	1310	GW		X									2	
4		OLD-OU1-103TW-0118	01/25/18	1404	GW		X									2	
5		OLD-SA2-04ATW-0118	01/25/18	1545	GW		X									2	
6		EB-GW-012518-~~6~~3 MG	01/25/18	1210	W		X									2	
7	MG	FB-OLD-012518-6	01/25/18	1215	W		X									2	
8		OLD-SA2-06ATW-0118	1/26/18	1036	GW		X									2	
9		OLD-SA2-01ATW-0118	1/26/18	1148	GW		X									2	
10		FB-OLD-012618-7	1/26/18	1055	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	Laboratory Use Only: Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
[signature]	18/01/29	1300	[signature]	2018/01/30	15.50			1.5/2.1/1.5	Present / 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

D 417032

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A Bureau Veritas Group Company

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CHAIN OF CUSTODY RECORD

Page of

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#31688 Earth Toxics Inc	Company Name:	Titan Tech	Quotation #:	B80382	Maxxam Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ron Kotun	P.O. #:			647897
Address:	PO Box 3382	Address:	661 Anderson Drive	Project:	JM11 NTC Orlando	COC #:	Project Manager:
	Logan UT 84321		Pittsburgh, PA 15220	Project Name:		C#647897-01-01	Stephanie Pollen
Tel:	(781) 455-0653 x Fax:	Tel:	412-921-8291 Fax: 412-921-4040	Site #:			
Email:	rcarr@earthtoxics.com	Email:	ronikotun@titantech.com	Sampled By:	Grzegorz		

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)

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		EB-GW-012618-4	1/26/18	1050	W		X									2	
2		DI BLANK	1/26/18	1100	W		X									2	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Recei	Custody Seal Present	Yes	No
[signature]	18/01/29	1300	[signature] Gumka	2018/01/30	15:50			1.5/2.1/1.5	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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** 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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3. Analytical Results

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3.1 Summary Report

Maxxam Analytics International
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L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

Your Project #: JM11 NTC Orlando
Your C.O.C. #: 647124-03-01, 647897-01-01

Attention: Rick Carr

Earth Toxics Inc
PO Box 3382
Logan, UT
USA 84321

Report Date: 2018/02/14
Report #: R4987081
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B821961
Received: 2018/01/30, 15:50

Sample Matrix: Water
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
PFOS and PFOA in water by SPE/LCMS (1)	7	2018/02/08	2018/02/10	CAM SOP-00894	EPA 537 m
PFOS and PFOA in water by SPE/LCMS (1)	5	2018/02/09	2018/02/13	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 (lt in the apparent difference.
(1) Per- and polyfluoroalkyl substances (PFAS) id n the certificate of analysis represent the extracted internal standard.

Encryption Key Steph Pollen

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.

Total Cover Pages : 1

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 #: B821961
Report Date: 2018/02/14

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

RESULTS OF ANALYSES OF WATER

Maxxam ID		FZT419				FZT420				
Sampling Date		2018/01/25 10:15				2018/01/25 13:10				
COC Number		647124-03-01				647124-03-01				
	UNITS	OLD-OV1-101TW-0118	DL	LOD	LOQ	OLD-OV1-102TW-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	5390275
MeFOSAA	ug/L	0.011 U	0.0030	0.011	0.021	0.010 U	0.0029	0.010	0.020	5390275
Perfluorobutane Sulfonate (PFBS)	ug/L	0.016 J	0.0057	0.016	0.021	0.015 U	0.0054	0.015	0.020	5390275
Perfluoroheptanoic Acid (PFHpA)	ug/L	0.015 J	0.0078	0.016	0.021	0.015 U	0.0074	0.015	0.020	5390275
Perfluorohexanoic Acid (PFHxA)	ug/L	0.039	0.0037	0.011	0.021	0.010 U	0.0035	0.010	0.020	5390275
Perfluorohexane Sulfonate (PFHxS)	ug/L	0.47	0.0059	0.016	0.021	0.046	0.0056	0.015	0.020	5390275
Perfluorononanoic Acid (PFNA)	ug/L	0.019 U	0.0091	0.019	0.021	0.018 U	0.0087	0.018	0.020	5390275
Perfluorotetradecanoic Acid	ug/L	0.011 U	0.0028	0.011	0.021	0.010 U	0.0027	0.010	0.020	5390275
Perfluorotridecanoic Acid	ug/L	0.011 U	0.0040	0.011	0.021	0.010 U	0.0038	0.010	0.020	5390275
Perfluoroundecanoic Acid (PFUnA)	ug/L	0.011 U	0.0026	0.011	0.021	0.010 U	0.0025	0.010	0.020	5390275
Perfluorodecanoic Acid (PFDA)	ug/L	0.016 U	0.0064	0.016	0.021	0.015 U	0.0061	0.015	0.020	5390275
Perfluorododecanoic Acid (PFDoA)	ug/L	0.011 U	0.0053	0.011	0.021	0.010 U	0.0050	0.010	0.020	5390275
Perfluoro-n-Octanoic Acid (PFOA)	ug/L	0.069	0.0035	0.011	0.021	0.0085 J	0.0033	0.010	0.020	5390275
Perfluorooctane Sulfonate (PFOS)	ug/L	0.14	0.0063	0.016	0.021	0.011 J	0.0060	0.015	0.020	5390275
Surrogate Recovery (%)										
13C2-Perfluorodecanoic acid	%	103				94				5390275
13C2-Perfluorododecanoic acid	%	74				88				5390275
13C2-Perfluorohexanoic acid	%	94				92				5390275
13C2-perfluorotetradecanoic acid	%	79				87				5390275
13C2-Perfluoroundecanoic acid	%	82				86				5390275
13C4-Perfluoroheptanoic acid	%	96				93				5390275
13C4-Perfluorooctanesulfonate	%	82				91				5390275
13C4-Perfluorooctanoic acid	%	101				88				5390275
13C5-Perfluorononanoic acid	%	95				89				5390275
18O2-Perfluorohexanesulfonate	%	100				99				5390275
D3-MeFOSAA	%	87				90				5390275
D5-EtFOSAA	%	87				90				5390275

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

Maxxam Job #: B821961
Report Date: 2018/02/14

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

RESULTS OF ANALYSES OF WATER

Maxxam ID		FZT421	FZT422				
Sampling Date		2018/01/25 13:10	2018/01/25 14:04				
COC Number		647124-03-01	647124-03-01				
	UNITS	OLD-OV1-102TW-0118-D	OLD-OV1-103TW-0118	DL	LOD	LOQ	QC Batch
Miscellaneous Parameters							
EtFOSAA	ug/L	0.010 U	0.010 U	0.0033	0.010	0.020	5390275
MeFOSAA	ug/L	0.010 U	0.010 U	0.0029	0.010	0.020	5390275
Perfluorobutane Sulfonate (PFBS)	ug/L	0.018 J	0.012 J	0.0054	0.015	0.020	5390275
Perfluoroheptanoic Acid (PFHpA)	ug/L	0.015 U	0.015 U	0.0074	0.015	0.020	5390275
Perfluorohexanoic Acid (PFHxA)	ug/L	0.0074 J	0.010 U	0.0035	0.010	0.020	5390275
Perfluorohexane Sulfonate (PFHxS)	ug/L	0.031	0.015 U	0.0056	0.015	0.020	5390275
Perfluorononanoic Acid (PFNA)	ug/L	0.018 U	0.018 U	0.0087	0.018	0.020	5390275
Perfluorotetradecanoic Acid	ug/L	0.010 U	0.010 U	0.0027	0.010	0.020	5390275
Perfluorotridecanoic Acid	ug/L	0.010 U	0.010 U	0.0038	0.010	0.020	5390275
Perfluoroundecanoic Acid (PFUnA)	ug/L	0.010 U	0.010 U	0.0025	0.010	0.020	5390275
Perfluorodecanoic Acid (PFDA)	ug/L	0.015 U	0.015 U	0.0061	0.015	0.020	5390275
Perfluorododecanoic Acid (PFDoA)	ug/L	0.010 U	0.010 U	0.0050	0.010	0.020	5390275
Perfluoro-n-Octanoic Acid (PFOA)	ug/L	0.0057 J	0.0098 J	0.0033	0.010	0.020	5390275
Perfluorooctane Sulfonate (PFOS)	ug/L	0.11	0.019 J	0.0060	0.015	0.020	5390275
Surrogate Recovery (%)							
13C2-Perfluorodecanoic acid	%	108	94				5390275
13C2-Perfluorododecanoic acid	%	86	88				5390275
13C2-Perfluorohexanoic acid	%	109	94				5390275
13C2-perfluorotetradecanoic acid	%	70	77				5390275
13C2-Perfluoroundecanoic acid	%	100	86				5390275
13C4-Perfluoroheptanoic acid	%	107	94				5390275
13C4-Perfluorooctanesulfonate	%	101	84				5390275
13C4-Perfluorooctanoic acid	%	106	92				5390275
13C5-Perfluorononanoic acid	%	105	96				5390275
18O2-Perfluorohexanesulfonate	%	111	90				5390275
D3-MeFOSAA	%	101	95				5390275
D5-EtFOSAA	%	96	93				5390275

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

Maxxam Job #: B821961
Report Date: 2018/02/14

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

RESULTS OF ANALYSES OF WATER

Maxxam ID		FZT423				FZT424				
Sampling Date		2018/01/25 15:45				2018/01/25 12:10				
COC Number		647124-03-01				647124-03-01				
	UNITS	OLD-SA2-04ATW-0118	DL	LOD	LOQ	EB-GW-012518-3	DL	LOD	LOQ	QC Batch
Miscellaneous Parameters										
EtFOSAA	ug/L	0.012 U	0.0038	0.012	0.023	0.010 U	0.0033	0.010	0.020	5390275
MeFOSAA	ug/L	0.012 U	0.0033	0.012	0.023	0.010 U	0.0029	0.010	0.020	5390275
Perfluorobutane Sulfonate (PFBS)	ug/L	0.017 U	0.0062	0.017	0.023	0.015 U	0.0054	0.015	0.020	5390275
Perfluoroheptanoic Acid (PFHpA)	ug/L	0.017 U	0.0085	0.017	0.023	0.015 U	0.0074	0.015	0.020	5390275
Perfluorohexanoic Acid (PFHxA)	ug/L	0.024	0.0040	0.012	0.023	0.010 U	0.0035	0.010	0.020	5390275
Perfluorohexane Sulfonate (PFHxS)	ug/L	0.31	0.0064	0.017	0.023	0.015 U	0.0056	0.015	0.020	5390275
Perfluorononanoic Acid (PFNA)	ug/L	0.021 U	0.010	0.021	0.023	0.018 U	0.0087	0.018	0.020	5390275
Perfluorotetradecanoic Acid	ug/L	0.012 U	0.0031	0.012	0.023	0.010 U	0.0027	0.010	0.020	5390275
Perfluorotridecanoic Acid	ug/L	0.012 U	0.0044	0.012	0.023	0.010 U	0.0038	0.010	0.020	5390275
Perfluoroundecanoic Acid (PFUnA)	ug/L	0.012 U	0.0029	0.012	0.023	0.010 U	0.0025	0.010	0.020	5390275
Perfluorodecanoic Acid (PFDA)	ug/L	0.017 U	0.0070	0.017	0.023	0.015 U	0.0061	0.015	0.020	5390275
Perfluorododecanoic Acid (PFDoA)	ug/L	0.012 U	0.0058	0.012	0.023	0.010 U	0.0050	0.010	0.020	5390275
Perfluoro-n-Octanoic Acid (PFOA)	ug/L	0.011 J	0.0038	0.012	0.023	0.010 U	0.0033	0.010	0.020	5390275
Perfluorooctane Sulfonate (PFOS)	ug/L	0.31	0.0069	0.017	0.023	0.015 U	0.0060	0.015	0.020	5390275
Surrogate Recovery (%)										
13C2-Perfluorodecanoic acid	%	96				104				5390275
13C2-Perfluorododecanoic acid	%	87				87				5390275
13C2-Perfluorohexanoic acid	%	97				99				5390275
13C2-perfluorotetradecanoic acid	%	72				83				5390275
13C2-Perfluoroundecanoic acid	%	85				99				5390275
13C4-Perfluoroheptanoic acid	%	96				98				5390275
13C4-Perfluorooctanesulfonate	%	85				91				5390275
13C4-Perfluorooctanoic acid	%	90				97				5390275
13C5-Perfluorononanoic acid	%	99				107				5390275
18O2-Perfluorohexanesulfonate	%	99				99				5390275
D3-MeFOSAA	%	91				85				5390275
D5-EtFOSAA	%	88				83				5390275

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

Maxxam Job #: B821961
Report Date: 2018/02/14

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

RESULTS OF ANALYSES OF WATER

Maxxam ID		FZT425					FZT426				
Sampling Date		2018/01/25 12:15					2018/01/26 10:36				
COC Number		647124-03-01					647124-03-01				
	UNITS	FB-OLD-012518-6	DL	LOD	LOQ	QC Batch	OLD-SA2-06ATW-0118	DL	LOD	LOQ	QC Batch
Miscellaneous Parameters											
EtFOSAA	ug/L	0.012 U	0.0038	0.012	0.023	5390275	0.10 U (1)	0.033	0.10	0.20	5393111
MeFOSAA	ug/L	0.012 U	0.0033	0.012	0.023	5390275	0.10 U (1)	0.029	0.10	0.20	5393111
Perfluorobutane Sulfonate (PFBS)	ug/L	0.017 U	0.0062	0.017	0.023	5390275	0.15 U (1)	0.054	0.15	0.20	5393111
Perfluoroheptanoic Acid (PFHpA)	ug/L	0.017 U	0.0085	0.017	0.023	5390275	0.15 U (1)	0.074	0.15	0.20	5393111
Perfluorohexanoic Acid (PFHxA)	ug/L	0.012 U	0.0040	0.012	0.023	5390275	0.10 U (1)	0.035	0.10	0.20	5393111
Perfluorohexane Sulfonate (PFHxS)	ug/L	0.017 U	0.0064	0.017	0.023	5390275	0.15 U (1)	0.056	0.15	0.20	5393111
Perfluorononanoic Acid (PFNA)	ug/L	0.021 U	0.010	0.021	0.023	5390275	0.18 U (1)	0.087	0.18	0.20	5393111
Perfluorotetradecanoic Acid	ug/L	0.012 U	0.0031	0.012	0.023	5390275	0.10 U (1)	0.027	0.10	0.20	5393111
Perfluorotridecanoic Acid	ug/L	0.012 U	0.0044	0.012	0.023	5390275	0.10 U (1)	0.038	0.10	0.20	5393111
Perfluoroundecanoic Acid (PFUnA)	ug/L	0.012 U	0.0029	0.012	0.023	5390275	0.10 U (1)	0.025	0.10	0.20	5393111
Perfluorodecanoic Acid (PFDA)	ug/L	0.017 U	0.0070	0.017	0.023	5390275	0.15 U (1)	0.061	0.15	0.20	5393111
Perfluorododecanoic Acid (PFDoA)	ug/L	0.012 U	0.0058	0.012	0.023	5390275	0.10 U (1)	0.050	0.10	0.20	5393111
Perfluoro-n-Octanoic Acid (PFOA)	ug/L	0.012 U	0.0038	0.012	0.023	5390275	0.10 U (1)	0.033	0.10	0.20	5393111
Perfluorooctane Sulfonate (PFOS)	ug/L	0.017 U	0.0069	0.017	0.023	5390275	0.15 U (1)	0.060	0.15	0.20	5393111
Surrogate Recovery (%)											
13C2-Perfluorodecanoic acid	%	95				5390275	98				5393111
13C2-Perfluorododecanoic acid	%	86				5390275	101				5393111
13C2-Perfluorohexanoic acid	%	96				5390275	98				5393111
13C2-perfluorotetradecanoic acid	%	75				5390275	103				5393111
13C2-Perfluoroundecanoic acid	%	83				5390275	96				5393111
13C4-Perfluoroheptanoic acid	%	96				5390275	104				5393111
13C4-Perfluorooctanesulfonate	%	83				5390275	103				5393111
13C4-Perfluorooctanoic acid	%	92				5390275	103				5393111
13C5-Perfluorononanoic acid	%	91				5390275	101				5393111
18O2-Perfluorohexanesulfonate	%	103				5390275	101				5393111
D3-MeFOSAA	%	77				5390275	91				5393111
D5-EtFOSAA	%	79				5390275	95				5393111

DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Due to the sample matrix, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x).

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 #: B821961
Report Date: 2018/02/14

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

RESULTS OF ANALYSES OF WATER

Maxxam ID		FZT427	FZT428	FZT430				
Sampling Date		2018/01/26 11:48	2018/01/26 10:55	2018/01/26 10:50				
COC Number		647124-03-01	647124-03-01	647897-01-01				
	UNITS	OLD-SA2-01ATW-0118	FB-OLD-012618-7	EB-GW-012618-4	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	5393111
MeFOSAA	ug/L	0.010 U	0.010 U	0.010 U	0.0029	0.010	0.020	5393111
Perfluorobutane Sulfonate (PFBS)	ug/L	0.015 U	0.015 U	0.015 U	0.0054	0.015	0.020	5393111
Perfluoroheptanoic Acid (PFHpA)	ug/L	0.015 U	0.015 U	0.015 U	0.0074	0.015	0.020	5393111
Perfluorohexanoic Acid (PFHxA)	ug/L	0.010 U	0.010 U	0.010 U	0.0035	0.010	0.020	5393111
Perfluorohexane Sulfonate (PFHxS)	ug/L	0.015 U	0.015 U	0.015 U	0.0056	0.015	0.020	5393111
Perfluorononanoic Acid (PFNA)	ug/L	0.018 U	0.018 U	0.018 U	0.0087	0.018	0.020	5393111
Perfluorotetradecanoic Acid	ug/L	0.010 U	0.010 U	0.010 U	0.0027	0.010	0.020	5393111
Perfluorotridecanoic Acid	ug/L	0.010 U	0.010 U	0.010 U	0.0038	0.010	0.020	5393111
Perfluoroundecanoic Acid (PFUnA)	ug/L	0.010 U	0.010 U	0.010 U	0.0025	0.010	0.020	5393111
Perfluorodecanoic Acid (PFDA)	ug/L	0.015 U	0.015 U	0.015 U	0.0061	0.015	0.020	5393111
Perfluorododecanoic Acid (PFDoA)	ug/L	0.010 U	0.010 U	0.010 U	0.0050	0.010	0.020	5393111
Perfluoro-n-Octanoic Acid (PFOA)	ug/L	0.010 U	0.010 U	0.010 U	0.0033	0.010	0.020	5393111
Perfluorooctane Sulfonate (PFOS)	ug/L	0.015 U	0.015 U	0.015 U	0.0060	0.015	0.020	5393111
Surrogate Recovery (%)								
13C2-Perfluorodecanoic acid	%	93	83	81				5393111
13C2-Perfluorododecanoic acid	%	89	81	70				5393111
13C2-Perfluorohexanoic acid	%	93	94	87				5393111
13C2-perfluorotetradecanoic acid	%	64	78	70				5393111
13C2-Perfluoroundecanoic acid	%	82	75	76				5393111
13C4-Perfluoroheptanoic acid	%	97	88	93				5393111
13C4-Perfluorooctanesulfonate	%	104	94	89				5393111
13C4-Perfluorooctanoic acid	%	99	91	87				5393111
13C5-Perfluorononanoic acid	%	93	90	83				5393111
18O2-Perfluorohexanesulfonate	%	90	99	91				5393111
D3-MeFOSAA	%	78	76	74				5393111
D5-EtFOSAA	%	77	76	74				5393111

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 #: B821961
Report Date: 2018/02/14

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

RESULTS OF ANALYSES OF WATER

Maxxam ID		FZT431				
Sampling Date		2018/01/26 11:00				
COC Number		647897-01-01				
	UNITS	DI BLANK	DL	LOD	LOQ	QC Batch
Miscellaneous Parameters						
EtFOSAA	ug/L	0.010 U	0.0033	0.010	0.020	5393111
MeFOSAA	ug/L	0.010 U	0.0029	0.010	0.020	5393111
Perfluorobutane Sulfonate (PFBS)	ug/L	0.015 U	0.0054	0.015	0.020	5393111
Perfluoroheptanoic Acid (PFHpA)	ug/L	0.015 U	0.0074	0.015	0.020	5393111
Perfluorohexanoic Acid (PFHxA)	ug/L	0.010 U	0.0035	0.010	0.020	5393111
Perfluorohexane Sulfonate (PFHxS)	ug/L	0.015 U	0.0056	0.015	0.020	5393111
Perfluorononanoic Acid (PFNA)	ug/L	0.018 U	0.0087	0.018	0.020	5393111
Perfluorotetradecanoic Acid	ug/L	0.010 U	0.0027	0.010	0.020	5393111
Perfluorotridecanoic Acid	ug/L	0.010 U	0.0038	0.010	0.020	5393111
Perfluoroundecanoic Acid (PFUnA)	ug/L	0.010 U	0.0025	0.010	0.020	5393111
Perfluorodecanoic Acid (PFDA)	ug/L	0.015 U	0.0061	0.015	0.020	5393111
Perfluorododecanoic Acid (PFDoA)	ug/L	0.010 U	0.0050	0.010	0.020	5393111
Perfluoro-n-Octanoic Acid (PFOA)	ug/L	0.010 U	0.0033	0.010	0.020	5393111
Perfluorooctane Sulfonate (PFOS)	ug/L	0.015 U	0.0060	0.015	0.020	5393111
Surrogate Recovery (%)						
13C2-Perfluorodecanoic acid	%	85				5393111
13C2-Perfluorododecanoic acid	%	80				5393111
13C2-Perfluorohexanoic acid	%	95				5393111
13C2-perfluorotetradecanoic acid	%	74				5393111
13C2-Perfluoroundecanoic acid	%	75				5393111
13C4-Perfluoroheptanoic acid	%	91				5393111
13C4-Perfluorooctanesulfonate	%	83				5393111
13C4-Perfluorooctanoic acid	%	90				5393111
13C5-Perfluorononanoic acid	%	91				5393111
18O2-Perfluorohexanesulfonate	%	86				5393111
D3-MeFOSAA	%	75				5393111
D5-EtFOSAA	%	73				5393111

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 #: B821961
Report Date: 2018/02/14

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

TEST SUMMARY

Maxxam ID: FZT419 **Collected:** 2018/01/25
Sample ID: OLD-OV1-101TW-0118 **Shipped:**
Matrix: Water **Received:** 2018/01/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFOS and PFOA in water by SPE/LCMS	LCMS	5390275	2018/02/08	2018/02/10	Marian Godax

Maxxam ID: FZT420 **Collected:** 2018/01/25
Sample ID: OLD-OV1-102TW-0118 **Shipped:**
Matrix: Water **Received:** 2018/01/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFOS and PFOA in water by SPE/LCMS	LCMS	5390275	2018/02/08	2018/02/10	Marian Godax

Maxxam ID: FZT421 **Collected:** 2018/01/25
Sample ID: OLD-OV1-102TW-0118-D **Shipped:**
Matrix: Water **Received:** 2018/01/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFOS and PFOA in water by SPE/LCMS	LCMS	5390275	2018/02/08	2018/02/10	Marian Godax

Maxxam ID: FZT422 **Collected:** 2018/01/25
Sample ID: OLD-OV1-103TW-0118 **Shipped:**
Matrix: Water **Received:** 2018/01/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFOS and PFOA in water by SPE/LCMS	LCMS	5390275	2018/02/08	2018/02/10	Marian Godax

Maxxam ID: FZT423 **Collected:** 2018/01/25
Sample ID: OLD-SA2-04ATW-0118 **Shipped:**
Matrix: Water **Received:** 2018/01/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFOS and PFOA in water by SPE/LCMS	LCMS	5390275	2018/02/08	2018/02/10	Marian Godax

Maxxam ID: FZT424 **Collected:** 2018/01/25
Sample ID: EB-GW-012518-3 **Shipped:**
Matrix: Water **Received:** 2018/01/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFOS and PFOA in water by SPE/LCMS	LCMS	5390275	2018/02/08	2018/02/10	Marian Godax

Maxxam ID: FZT425 **Collected:** 2018/01/25
Sample ID: FB-OLD-012518-6 **Shipped:**
Matrix: Water **Received:** 2018/01/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFOS and PFOA in water by SPE/LCMS	LCMS	5390275	2018/02/08	2018/02/10	Marian Godax

Maxxam Job #: B821961
Report Date: 2018/02/14

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

TEST SUMMARY

Maxxam ID: FZT426 **Collected:** 2018/01/26
Sample ID: OLD-SA2-06ATW-0118 **Shipped:**
Matrix: Water **Received:** 2018/01/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFOS and PFOA in water by SPE/LCMS	LCMS	5393111	2018/02/09	2018/02/13	Kenneth Chu

Maxxam ID: FZT427 **Collected:** 2018/01/26
Sample ID: OLD-SA2-01ATW-0118 **Shipped:**
Matrix: Water **Received:** 2018/01/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFOS and PFOA in water by SPE/LCMS	LCMS	5393111	2018/02/09	2018/02/13	Kenneth Chu

Maxxam ID: FZT428 **Collected:** 2018/01/26
Sample ID: FB-OLD-012618-7 **Shipped:**
Matrix: Water **Received:** 2018/01/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFOS and PFOA in water by SPE/LCMS	LCMS	5393111	2018/02/09	2018/02/13	Kenneth Chu

Maxxam ID: FZT430 **Collected:** 2018/01/26
Sample ID: EB-GW-012618-4 **Shipped:**
Matrix: Water **Received:** 2018/01/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFOS and PFOA in water by SPE/LCMS	LCMS	5393111	2018/02/09	2018/02/13	Kenneth Chu

Maxxam ID: FZT431 **Collected:** 2018/01/26
Sample ID: DI BLANK **Shipped:**
Matrix: Water **Received:** 2018/01/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFOS and PFOA in water by SPE/LCMS	LCMS	5393111	2018/02/09	2018/02/13	Kenneth Chu

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Maxxam Job #: B821961
Report Date: 2018/02/14

Earth Toxics Inc
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GENERAL COMMENTS

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

Package 1	1.7°C

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
5390275	M_G	Spiked Blank	13C2-Perfluorodecanoic acid	2018/02/10		112	%	50 - 150
			13C2-Perfluorododecanoic acid	2018/02/10		110	%	50 - 150
			13C2-Perfluorohexanoic acid	2018/02/10		115	%	50 - 150
			13C2-perfluorotetradecanoic acid	2018/02/10		101	%	50 - 150
			13C2-Perfluoroundecanoic acid	2018/02/10		105	%	50 - 150
			13C4-Perfluoroheptanoic acid	2018/02/10		116	%	50 - 150
			13C4-Perfluorooctanesulfonate	2018/02/10		111	%	50 - 150
			13C4-Perfluorooctanoic acid	2018/02/10		114	%	50 - 150
			13C5-Perfluorononanoic acid	2018/02/10		113	%	50 - 150
			18O2-Perfluorohexanesulfonate	2018/02/10		114	%	50 - 150
			D3-MeFOSAA	2018/02/10		91	%	50 - 150
			D5-EtFOSAA	2018/02/10		98	%	50 - 150
			EtFOSAA	2018/02/10		99	%	73 - 128
			MeFOSAA	2018/02/10		100	%	77 - 127
			Perfluorobutane Sulfonate (PFBS)	2018/02/10		99	%	65 - 135
			Perfluoroheptanoic Acid (PFHpA)	2018/02/10		95	%	73 - 129
			Perfluorohexanoic Acid (PFHxA)	2018/02/10		97	%	74 - 129
			Perfluorohexane Sulfonate (PFHxS)	2018/02/10		91	%	67 - 132
			Perfluorononanoic Acid (PFNA)	2018/02/10		99	%	72 - 131
			Perfluorotetradecanoic Acid	2018/02/10		97	%	70 - 134
			Perfluorotridecanoic Acid	2018/02/10		100	%	67 - 143
			Perfluoroundecanoic Acid (PFUnA)	2018/02/10		108	%	71 - 133
			Perfluorodecanoic Acid (PFDA)	2018/02/10		94	%	71 - 133
			Perfluorododecanoic Acid (PFDoA)	2018/02/10		92	%	71 - 131
			Perfluoro-n-Octanoic Acid (PFOA)	2018/02/10		97	%	71 - 130
			Perfluorooctane Sulfonate (PFOS)	2018/02/10		93	%	72 - 131
5390275	M_G	Spiked Blank DUP	13C2-Perfluorodecanoic acid	2018/02/10		102	%	50 - 150
			13C2-Perfluorododecanoic acid	2018/02/10		93	%	50 - 150
			13C2-Perfluorohexanoic acid	2018/02/10		105	%	50 - 150
			13C2-perfluorotetradecanoic acid	2018/02/10		86	%	50 - 150
			13C2-Perfluoroundecanoic acid	2018/02/10		90	%	50 - 150
			13C4-Perfluoroheptanoic acid	2018/02/10		104	%	50 - 150
			13C4-Perfluorooctanesulfonate	2018/02/10		90	%	50 - 150
			13C4-Perfluorooctanoic acid	2018/02/10		98	%	50 - 150
			13C5-Perfluorononanoic acid	2018/02/10		104	%	50 - 150
			18O2-Perfluorohexanesulfonate	2018/02/10		99	%	50 - 150
			D3-MeFOSAA	2018/02/10		87	%	50 - 150
			D5-EtFOSAA	2018/02/10		86	%	50 - 150
			EtFOSAA	2018/02/10		99	%	73 - 128
			MeFOSAA	2018/02/10		95	%	77 - 127
			Perfluorobutane Sulfonate (PFBS)	2018/02/10		100	%	65 - 135
			Perfluoroheptanoic Acid (PFHpA)	2018/02/10		90	%	73 - 129
			Perfluorohexanoic Acid (PFHxA)	2018/02/10		91	%	74 - 129
			Perfluorohexane Sulfonate (PFHxS)	2018/02/10		92	%	67 - 132
			Perfluorononanoic Acid (PFNA)	2018/02/10		93	%	72 - 131
			Perfluorotetradecanoic Acid	2018/02/10		102	%	70 - 134
			Perfluorotridecanoic Acid	2018/02/10		100	%	67 - 143
			Perfluoroundecanoic Acid (PFUnA)	2018/02/10		110	%	71 - 133
			Perfluorodecanoic Acid (PFDA)	2018/02/10		89	%	71 - 133
			Perfluorododecanoic Acid (PFDoA)	2018/02/10		94	%	71 - 131
			Perfluoro-n-Octanoic Acid (PFOA)	2018/02/10		100	%	71 - 130
			Perfluorooctane Sulfonate (PFOS)	2018/02/10		99	%	72 - 131
5390275	M_G	RPD	EtFOSAA	2018/02/10	0.58		%	30
			MeFOSAA	2018/02/10	4.7		%	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)	2018/02/10	1.1		%	30
			Perfluoroheptanoic Acid (PFHpA)	2018/02/10	5.6		%	30
			Perfluorohexanoic Acid (PFHxA)	2018/02/10	5.8		%	30
			Perfluorohexane Sulfonate (PFHxS)	2018/02/10	1.1		%	30
			Perfluorononanoic Acid (PFNA)	2018/02/10	5.8		%	30
			Perfluorotetradecanoic Acid	2018/02/10	5.5		%	30
			Perfluorotridecanoic Acid	2018/02/10	0.25		%	30
			Perfluoroundecanoic Acid (PFUnA)	2018/02/10	2.5		%	30
			Perfluorodecanoic Acid (PFDA)	2018/02/10	5.7		%	30
			Perfluorododecanoic Acid (PFDoA)	2018/02/10	2.7		%	30
			Perfluoro-n-Octanoic Acid (PFOA)	2018/02/10	3.5		%	30
			Perfluorooctane Sulfonate (PFOS)	2018/02/10	6.4		%	30
5390275	M_G	Method Blank	13C2-Perfluorodecanoic acid	2018/02/10		95	%	50 - 150
			13C2-Perfluorododecanoic acid	2018/02/10		87	%	50 - 150
			13C2-Perfluorohexanoic acid	2018/02/10		96	%	50 - 150
			13C2-perfluorotetradecanoic acid	2018/02/10		83	%	50 - 150
			13C2-Perfluoroundecanoic acid	2018/02/10		85	%	50 - 150
			13C4-Perfluoroheptanoic acid	2018/02/10		96	%	50 - 150
			13C4-Perfluorooctanesulfonate	2018/02/10		91	%	50 - 150
			13C4-Perfluorooctanoic acid	2018/02/10		91	%	50 - 150
			13C5-Perfluorononanoic acid	2018/02/10		100	%	50 - 150
			18O2-Perfluorohexanesulfonate	2018/02/10		94	%	50 - 150
			D3-MeFOSAA	2018/02/10		81	%	50 - 150
			D5-EtFOSAA	2018/02/10		79	%	50 - 150
			EtFOSAA	2018/02/10	0.010 U, LOD=0.010		ug/L	
			MeFOSAA	2018/02/10	0.010 U, LOD=0.010		ug/L	
			Perfluorobutane Sulfonate (PFBS)	2018/02/10	0.015 U, LOD=0.015		ug/L	
			Perfluoroheptanoic Acid (PFHpA)	2018/02/10	0.015 U, LOD=0.015		ug/L	
			Perfluorohexanoic Acid (PFHxA)	2018/02/10	0.010 U, LOD=0.010		ug/L	
			Perfluorohexane Sulfonate (PFHxS)	2018/02/10	0.015 U, LOD=0.015		ug/L	
			Perfluorononanoic Acid (PFNA)	2018/02/10	0.018 U, LOD=0.018		ug/L	
			Perfluorotetradecanoic Acid	2018/02/10	0.010 U, LOD=0.010		ug/L	
			Perfluorotridecanoic Acid	2018/02/10	0.010 U, LOD=0.010		ug/L	
			Perfluoroundecanoic Acid (PFUnA)	2018/02/10	0.010 U, LOD=0.010		ug/L	
			Perfluorodecanoic Acid (PFDA)	2018/02/10	0.015 U, LOD=0.015		ug/L	
			Perfluorododecanoic Acid (PFDoA)	2018/02/10	0.010 U, LOD=0.010		ug/L	
			Perfluoro-n-Octanoic Acid (PFOA)	2018/02/10	0.010 U, LOD=0.010		ug/L	
			Perfluorooctane Sulfonate (PFOS)	2018/02/10	0.015 U, LOD=0.015		ug/L	
5393111	KC1	Spiked Blank	13C2-Perfluorodecanoic acid	2018/02/13		79	%	50 - 150
			13C2-Perfluorododecanoic acid	2018/02/13		79	%	50 - 150

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			13C2-Perfluorohexanoic acid	2018/02/13		89	%	50 - 150
			13C2-perfluorotetradecanoic acid	2018/02/13		78	%	50 - 150
			13C2-Perfluoroundecanoic acid	2018/02/13		81	%	50 - 150
			13C4-Perfluoroheptanoic acid	2018/02/13		89	%	50 - 150
			13C4-Perfluorooctanesulfonate	2018/02/13		93	%	50 - 150
			13C4-Perfluorooctanoic acid	2018/02/13		93	%	50 - 150
			13C5-Perfluorononanoic acid	2018/02/13		95	%	50 - 150
			18O2-Perfluorohexanesulfonate	2018/02/13		84	%	50 - 150
			D3-MeFOSAA	2018/02/13		70	%	50 - 150
			D5-EtFOSAA	2018/02/13		69	%	50 - 150
			EtFOSAA	2018/02/13		104	%	73 - 128
			MeFOSAA	2018/02/13		102	%	77 - 127
			Perfluorobutane Sulfonate (PFBS)	2018/02/13		107	%	65 - 135
			Perfluoroheptanoic Acid (PFHpA)	2018/02/13		102	%	73 - 129
			Perfluorohexanoic Acid (PFHxA)	2018/02/13		101	%	74 - 129
			Perfluorohexane Sulfonate (PFHxS)	2018/02/13		103	%	67 - 132
			Perfluorononanoic Acid (PFNA)	2018/02/13		95	%	72 - 131
			Perfluorotetradecanoic Acid	2018/02/13		102	%	70 - 134
			Perfluorotridecanoic Acid	2018/02/13		100	%	67 - 143
			Perfluoroundecanoic Acid (PFUnA)	2018/02/13		108	%	71 - 133
			Perfluorodecanoic Acid (PFDA)	2018/02/13		115	%	71 - 133
			Perfluorododecanoic Acid (PFDoA)	2018/02/13		96	%	71 - 131
			Perfluoro-n-Octanoic Acid (PFOA)	2018/02/13		98	%	71 - 130
			Perfluorooctane Sulfonate (PFOS)	2018/02/13		98	%	72 - 131
5393111	KC1	Spiked Blank DUP	13C2-Perfluorodecanoic acid	2018/02/13		77	%	50 - 150
			13C2-Perfluorododecanoic acid	2018/02/13		80	%	50 - 150
			13C2-Perfluorohexanoic acid	2018/02/13		85	%	50 - 150
			13C2-perfluorotetradecanoic acid	2018/02/13		79	%	50 - 150
			13C2-Perfluoroundecanoic acid	2018/02/13		76	%	50 - 150
			13C4-Perfluoroheptanoic acid	2018/02/13		83	%	50 - 150
			13C4-Perfluorooctanesulfonate	2018/02/13		88	%	50 - 150
			13C4-Perfluorooctanoic acid	2018/02/13		84	%	50 - 150
			13C5-Perfluorononanoic acid	2018/02/13		86	%	50 - 150
			18O2-Perfluorohexanesulfonate	2018/02/13		83	%	50 - 150
			D3-MeFOSAA	2018/02/13		71	%	50 - 150
			D5-EtFOSAA	2018/02/13		71	%	50 - 150
			EtFOSAA	2018/02/13		105	%	73 - 128
			MeFOSAA	2018/02/13		105	%	77 - 127
			Perfluorobutane Sulfonate (PFBS)	2018/02/13		99	%	65 - 135
			Perfluoroheptanoic Acid (PFHpA)	2018/02/13		105	%	73 - 129
			Perfluorohexanoic Acid (PFHxA)	2018/02/13		94	%	74 - 129
			Perfluorohexane Sulfonate (PFHxS)	2018/02/13		96	%	67 - 132
			Perfluorononanoic Acid (PFNA)	2018/02/13		99	%	72 - 131
			Perfluorotetradecanoic Acid	2018/02/13		99	%	70 - 134
			Perfluorotridecanoic Acid	2018/02/13		99	%	67 - 143
			Perfluoroundecanoic Acid (PFUnA)	2018/02/13		108	%	71 - 133
			Perfluorodecanoic Acid (PFDA)	2018/02/13		109	%	71 - 133
			Perfluorododecanoic Acid (PFDoA)	2018/02/13		97	%	71 - 131
			Perfluoro-n-Octanoic Acid (PFOA)	2018/02/13		100	%	71 - 130
			Perfluorooctane Sulfonate (PFOS)	2018/02/13		92	%	72 - 131
5393111	KC1	RPD	EtFOSAA	2018/02/13	0.91		%	30
			MeFOSAA	2018/02/13	2.7		%	30
			Perfluorobutane Sulfonate (PFBS)	2018/02/13	8.3		%	30
			Perfluoroheptanoic Acid (PFHpA)	2018/02/13	2.9		%	30

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Perfluorohexanoic Acid (PFHxA)	2018/02/13	7.4		%	30
			Perfluorohexane Sulfonate (PFHxS)	2018/02/13	7.0		%	30
			Perfluorononanoic Acid (PFNA)	2018/02/13	4.1		%	30
			Perfluorotetradecanoic Acid	2018/02/13	3.0		%	30
			Perfluorotridecanoic Acid	2018/02/13	0.62		%	30
			Perfluoroundecanoic Acid (PFUnA)	2018/02/13	0.0075		%	30
			Perfluorodecanoic Acid (PFDA)	2018/02/13	5.7		%	30
			Perfluorododecanoic Acid (PFDoA)	2018/02/13	1.3		%	30
			Perfluoro-n-Octanoic Acid (PFOA)	2018/02/13	1.7		%	30
			Perfluorooctane Sulfonate (PFOS)	2018/02/13	5.5		%	30
5393111	KC1	Method Blank	13C2-Perfluorodecanoic acid	2018/02/13		77	%	50 - 150
			13C2-Perfluorododecanoic acid	2018/02/13		72	%	50 - 150
			13C2-Perfluorohexanoic acid	2018/02/13		82	%	50 - 150
			13C2-perfluorotetradecanoic acid	2018/02/13		73	%	50 - 150
			13C2-Perfluoroundecanoic acid	2018/02/13		72	%	50 - 150
			13C4-Perfluoroheptanoic acid	2018/02/13		81	%	50 - 150
			13C4-Perfluorooctanesulfonate	2018/02/13		86	%	50 - 150
			13C4-Perfluorooctanoic acid	2018/02/13		82	%	50 - 150
			13C5-Perfluorononanoic acid	2018/02/13		86	%	50 - 150
			18O2-Perfluorohexanesulfonate	2018/02/13		86	%	50 - 150
			D3-MeFOSAA	2018/02/13		70	%	50 - 150
			D5-EtFOSAA	2018/02/13		69	%	50 - 150
			EtFOSAA	2018/02/13	0.010 U, LOD=0.010		ug/L	
			MeFOSAA	2018/02/13	0.010 U, LOD=0.010		ug/L	
			Perfluorobutane Sulfonate (PFBS)	2018/02/13	0.015 U, LOD=0.015		ug/L	
			Perfluoroheptanoic Acid (PFHpA)	2018/02/13	0.015 U, LOD=0.015		ug/L	
			Perfluorohexanoic Acid (PFHxA)	2018/02/13	0.010 U, LOD=0.010		ug/L	
			Perfluorohexane Sulfonate (PFHxS)	2018/02/13	0.015 U, LOD=0.015		ug/L	
			Perfluorononanoic Acid (PFNA)	2018/02/13	0.018 U, LOD=0.018		ug/L	
			Perfluorotetradecanoic Acid	2018/02/13	0.010 U, LOD=0.010		ug/L	
			Perfluorotridecanoic Acid	2018/02/13	0.010 U, LOD=0.010		ug/L	
			Perfluoroundecanoic Acid (PFUnA)	2018/02/13	0.010 U, LOD=0.010		ug/L	
			Perfluorodecanoic Acid (PFDA)	2018/02/13	0.015 U, LOD=0.015		ug/L	
			Perfluorododecanoic Acid (PFDoA)	2018/02/13	0.010 U, LOD=0.010		ug/L	
			Perfluoro-n-Octanoic Acid (PFOA)	2018/02/13	0.010 U, LOD=0.010		ug/L	

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Maxxam Job #: B821961
Report Date: 2018/02/14

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

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Perfluorooctane Sulfonate (PFOS)	2018/02/13	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.

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.

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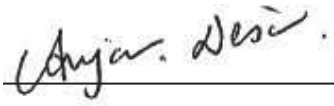
Maxxam Job #: B821961
Report Date: 2018/02/14

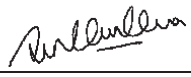
Earth Toxics Inc
Client Project #: JM11 NTC Orlando
Sampler Initials: GRZ

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



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
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3.2 Sample Chromatograms

Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
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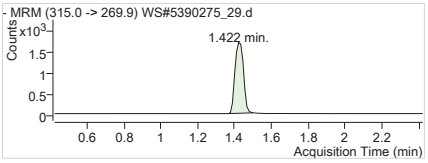
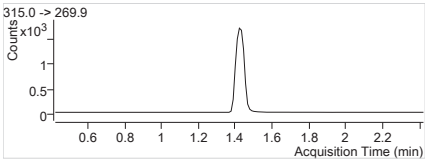
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics

Sample Name	**5390275:FZT419-01:10x**	**Instrument**	LCMS04
Data File	WS#5390275_29.d	**Operator**	
Sample Type	Sample	**Dilution**	0.24
Acq. Method	PFC_Water_Low.m	**Position**	P2-C8
Acq. Date	2018/02/09 6:52:22 PM	**Injection Volume**	Per Method
Sample Annotation	not used.		

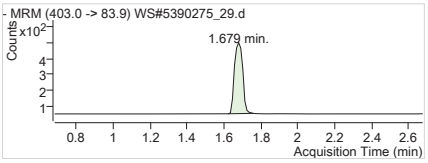
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	5337	1.42	1 µg/L		
MPFHxS	1408	1.68	1 µg/L		
MPFHpA	7061	1.69	1 µg/L		
MPFOA	7462	1.87	1 µg/L		
MPFOS	1521	1.98	1 µg/L		
MPFNA	7458	2.01	1 µg/L		
MPFDA	5949	2.14	1 µg/L		
MPFUnA	6325	2.23	1 µg/L		
MPFDoA	8741	2.32	1 µg/L		
MPFTeDA	9271	2.47	1 µg/L		
13C6-PFHxA IS	22782	1.42	1 µg/L		
13C9-PFDA IS	30367	2.13	1 µg/L		

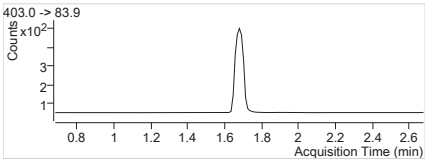
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	426	1.09	-	0.19 µg/L	-
PFHxA 1	3128	1.42	-	0.35 µg/L	-
PFHxS 1	12032	1.68	-	4.60 µg/L	-
PFHpA 1	1232	1.69	-	0.15 µg/L	-
PFOA 1	8701	1.87	-	0.68 µg/L	-
PFOS 1	2785	1.96	-	1.25 µg/L	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	5337	1.42	-	93.86 µg/L	-
18O2-PFHxS	1408	1.68	-	98.86 µg/L	-
13C4-PFHpA	7061	1.69	-	95.28 µg/L	-
13C4-PFOA	7462	1.87	-	94.93 µg/L	-
13C4-PFOS	1521	1.98	-	85.11 µg/L	-
13C5-PFNA	7459	2.01	-	96.01 µg/L	-
13C2-PFDA	5832	2.14	-	92.17 µg/L	-
13C2-PFUnA	6325	2.23	-	79.04 µg/L	-
13C2-PFDoA	8741	2.32	-	84.44 µg/L	-
13C2-PFTeDA	9493	2.47	-	79.04 µg/L	-
13C6-PFHxA	22782	1.42	-	23.35 µg/L	-
13C9-PFDA	30367	2.13	-	23.55 µg/L	-



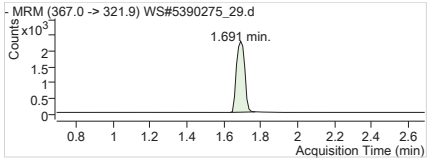


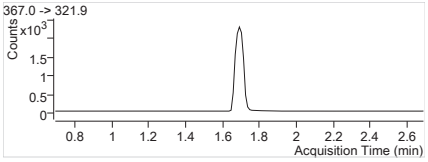
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



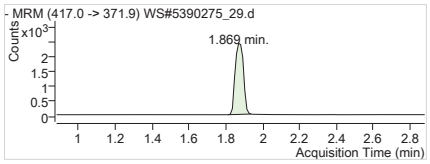


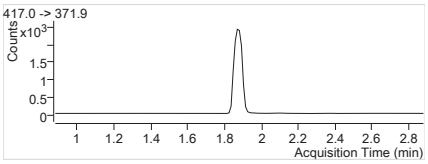
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



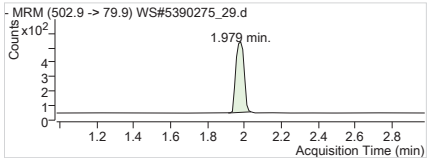


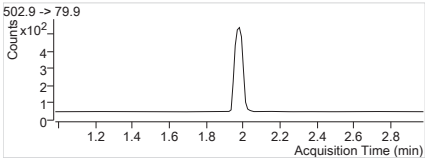
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



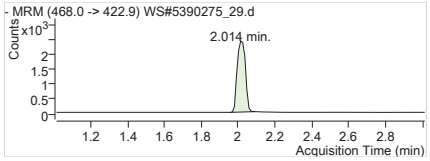


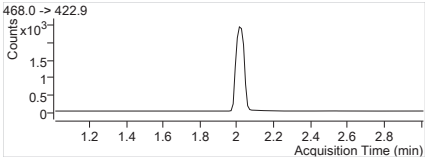
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: Sample



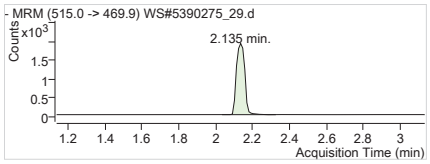


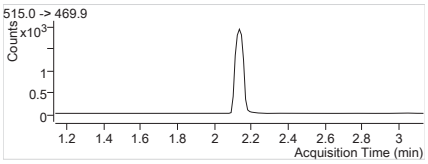
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



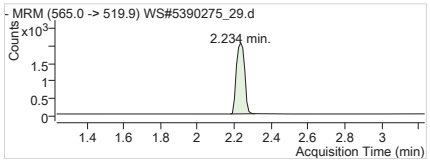


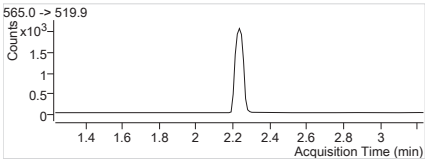
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



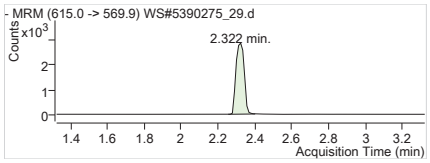


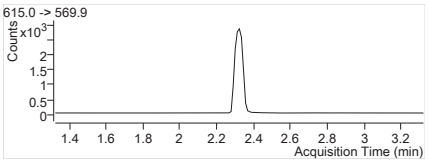
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



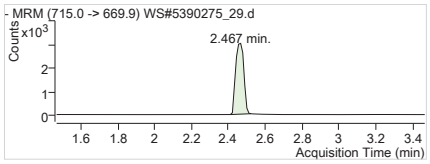


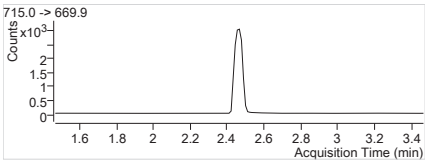
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



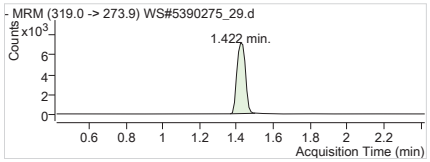


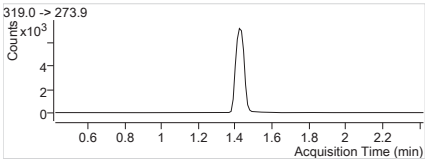
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



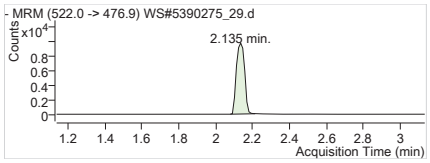


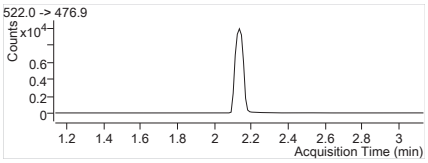
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



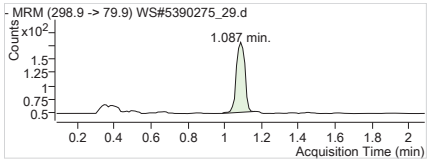


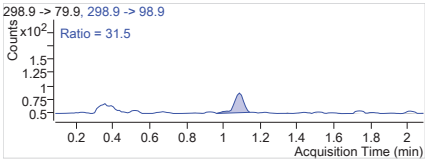
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



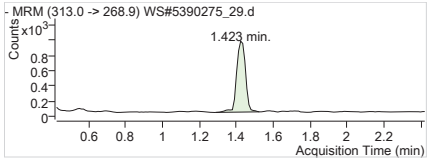


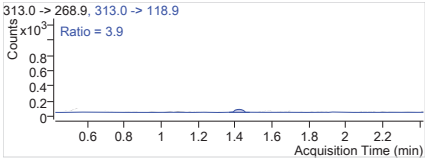
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



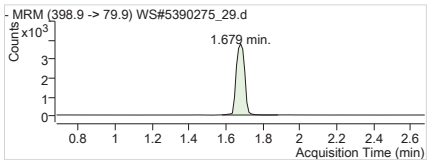


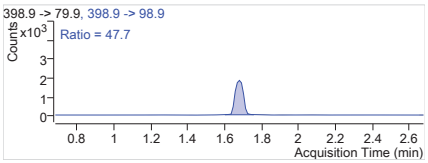
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 0.19 µg/L
Area ratio: 0.30256
Sample type: Sample



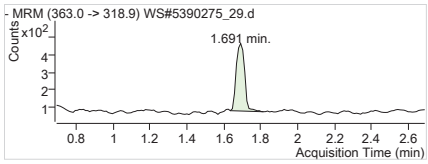


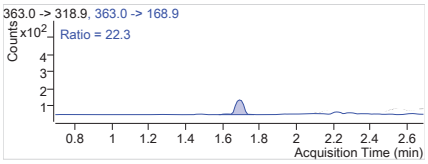
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 0.35 µg/L
Area ratio: 0.58610
Sample type: Sample



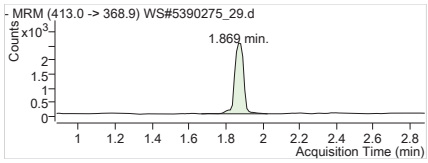


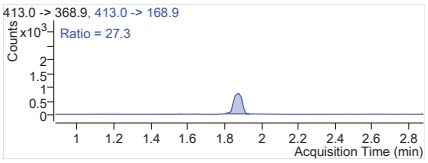
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 4.60 µg/L
Area ratio: 8.54545
Sample type: Sample



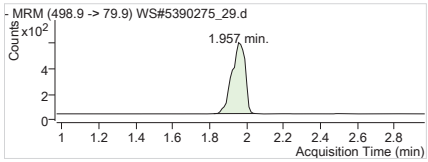


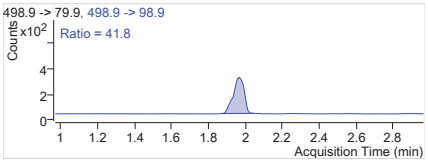
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.15 µg/L
Area ratio: 0.17448
Sample type: Sample



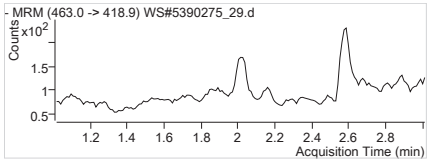


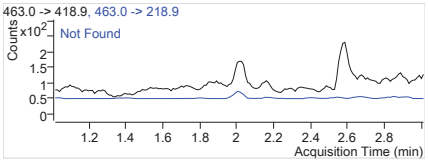
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 0.68 µg/L
Area ratio: 1.16604
Sample type: Sample



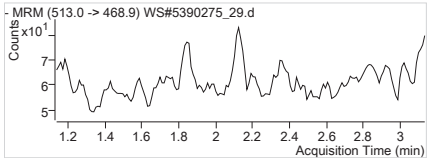


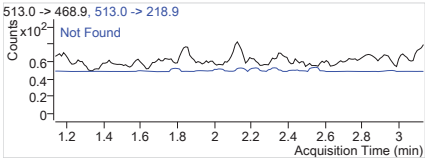
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.957 (1.968)
Calc. conc. 1.25 µg/L
Area ratio: 1.83103
Sample type: Sample



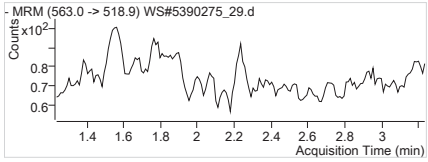


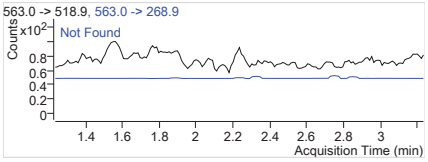
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.014)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



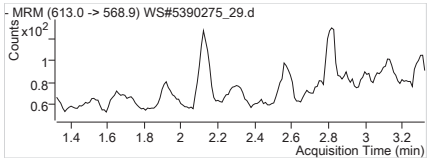


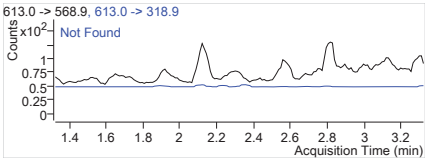
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



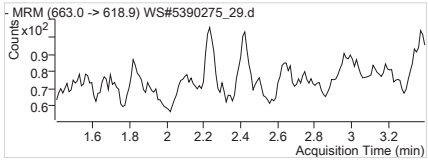


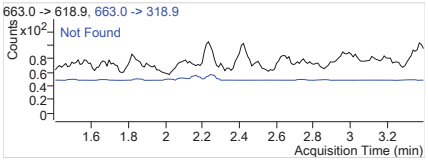
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.234)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



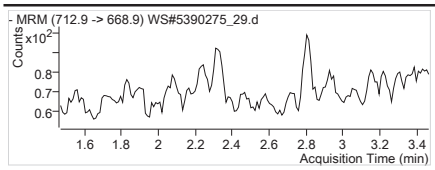


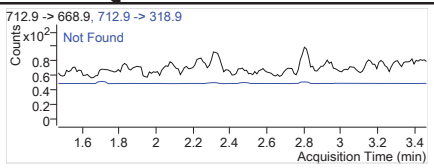
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



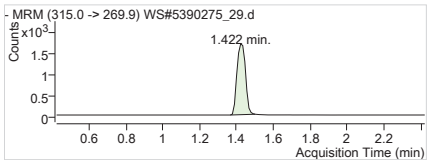


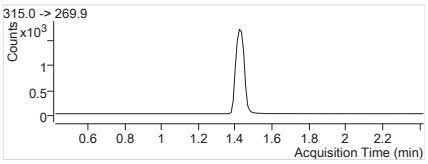
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



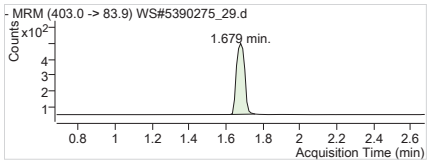


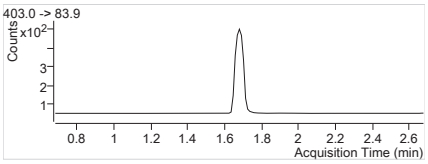
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



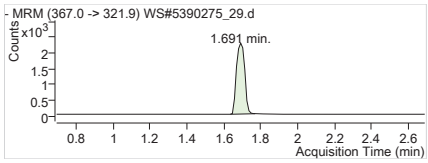


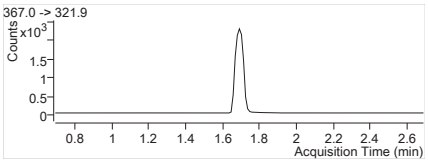
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 93.86 µg/L
Area ratio: 0.23426
Sample type: Sample



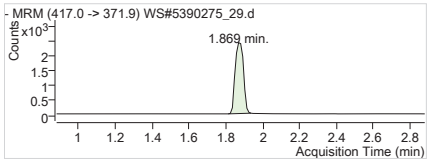


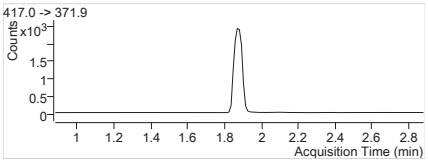
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 98.86 µg/L
Area ratio: 0.06180
Sample type: Sample



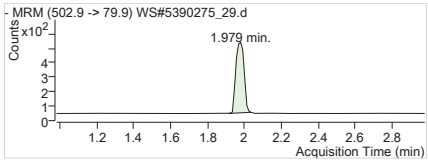


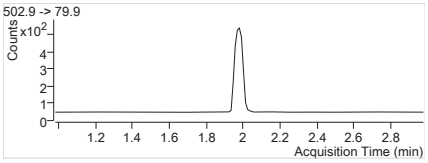
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 95.28 µg/L
Area ratio: 0.30994
Sample type: Sample



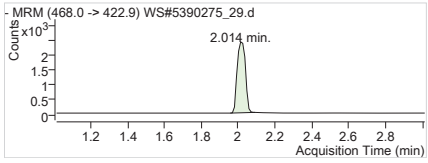


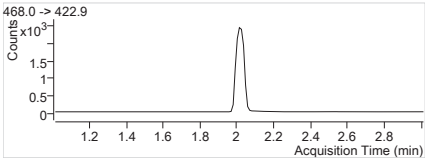
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 94.93 µg/L
Area ratio: 0.32754
Sample type: Sample



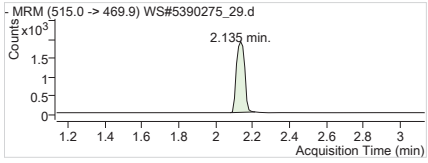


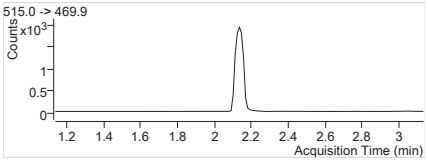
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 85.11 µg/L
Area ratio: 0.06676
Sample type: Sample



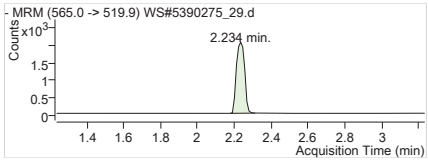


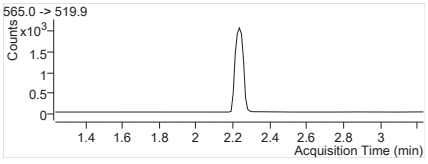
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 96.01 µg/L
Area ratio: 0.32741
Sample type: Sample



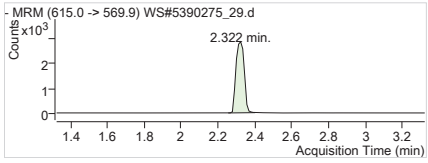


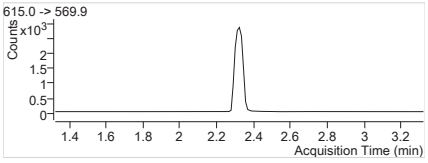
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 92.17 µg/L
Area ratio: 0.19205
Sample type: Sample



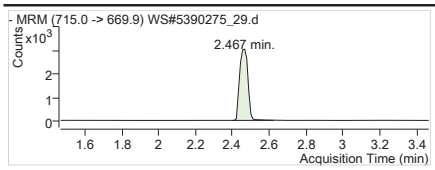


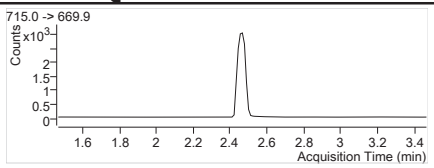
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 79.04 µg/L
Area ratio: 0.20829
Sample type: Sample



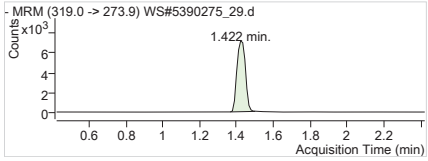


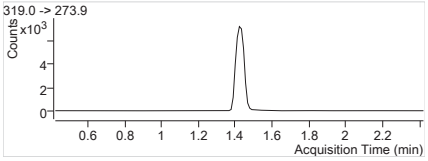
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 84.44 µg/L
Area ratio: 0.28785
Sample type: Sample



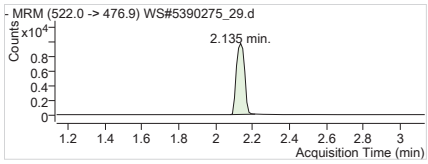


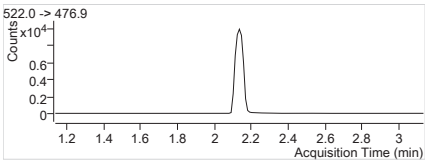
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	79.04 µg/L
Area ratio:	0.31261
Sample type:	Sample





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	23.35 µg/L
Area ratio:	0
Sample type:	Sample





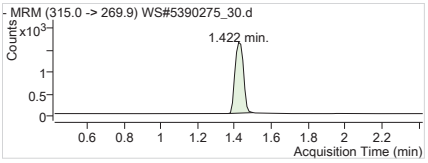
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	23.55 µg/L
Area ratio:	0
Sample type:	Sample

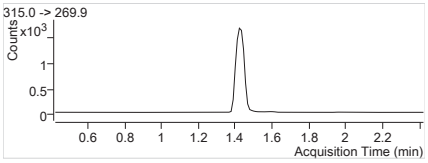
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics

Sample Name	**5390275:FZT419-01**	**Instrument**	LCMS04
Data File	WS#5390275_30.d	**Operator**	
Sample Type	Sample	**Dilution**	0.025
Acq. Method	PFC_Water_Low.m	**Position**	P2-C9
Acq. Date	2018/02/09 6:57:18 PM	**Injection Volume**	Per Method
Sample Annotation	Reported for all.		

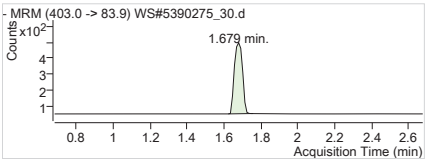
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	5164	1.42	1 µg/L		
MPFHxS	1382	1.68	1 µg/L		
MPFHpA	6866	1.69	1 µg/L		
MPFOA	7648	1.87	1 µg/L		
MPFOS	1426	1.98	1 µg/L		
MPFNA	7131	2.01	1 µg/L		
MPFDA	6608	2.14	1 µg/L		
MPFUnA	6606	2.23	1 µg/L		
MPFDoA	7704	2.32	1 µg/L		
MPFTeDA	9312	2.47	1 µg/L		
13C6-PFHxA IS	22054	1.42	1 µg/L		
13C9-PFDA IS	30454	2.13	1 µg/L		

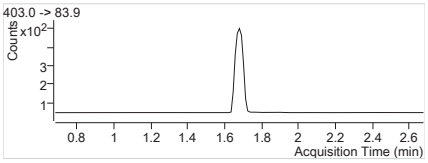
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	334	1.09	-	0.02 µg/L	-
PFHxA 1	3233	1.42	-	0.04 µg/L	-
PFHxS 1	11464	1.68	-	0.47 µg/L	-
PFHpA 1	1127	1.69	-	0.02 µg/L	-
PFOA 1	8681	1.87	-	0.07 µg/L	-
PFOS 1	2837	1.96	-	0.14 µg/L	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	5164	1.42	-	93.82 µg/L	-
18O2-PFHxS	1382	1.68	-	100.23 µg/L	-
13C4-PFHpA	6866	1.69	-	95.71 µg/L	-
13C4-PFOA	7648	1.87	-	100.51 µg/L	-
13C4-PFOS	1426	1.98	-	82.43 µg/L	-
13C5-PFNA	7131	2.01	-	94.82 µg/L	-
13C2-PFDA	6531	2.14	-	102.92 µg/L	-
13C2-PFUnA	6606	2.23	-	82.32 µg/L	-
13C2-PFDoA	7704	2.32	-	74.21 µg/L	-
13C2-PFTeDA	9557	2.47	-	79.35 µg/L	-
13C6-PFHxA	22054	1.42	-	2.35 µg/L	-
13C9-PFDA	30454	2.13	-	2.46 µg/L	-



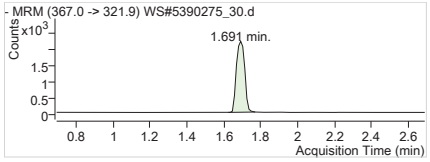


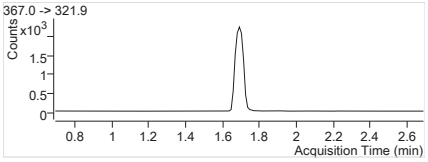
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



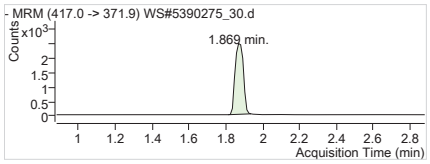


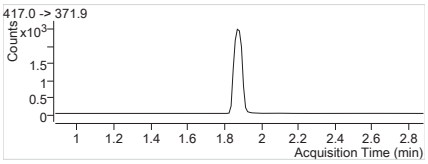
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



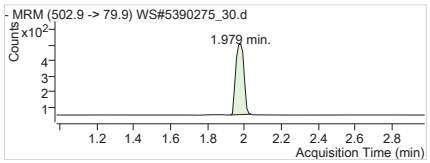


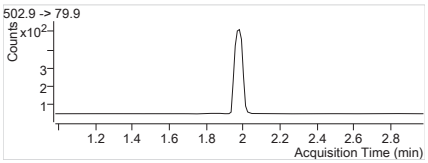
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



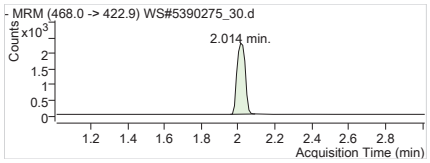


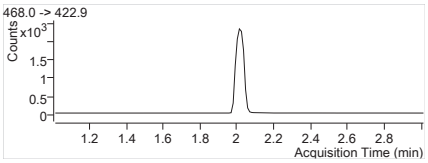
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: Sample



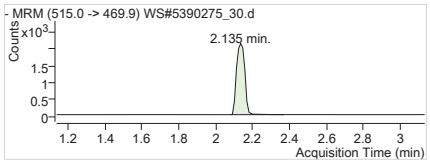


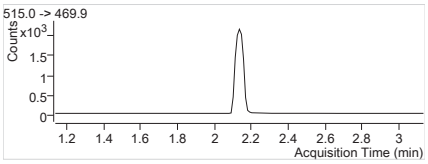
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



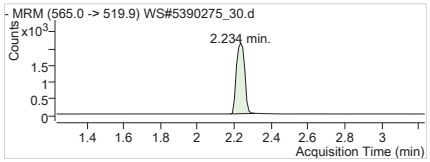


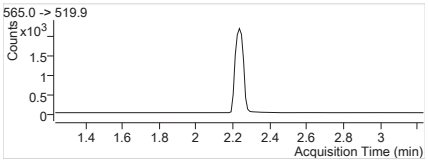
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



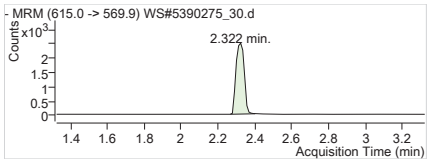


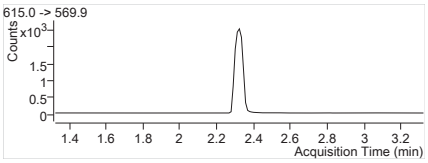
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



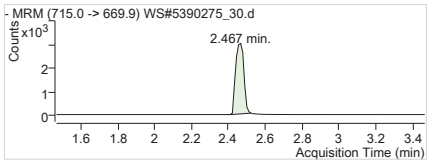


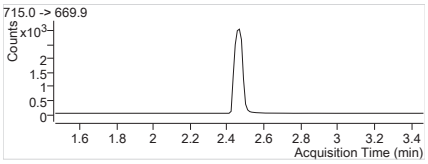
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



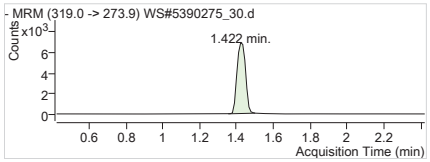


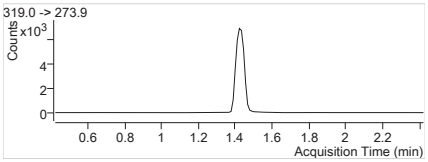
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



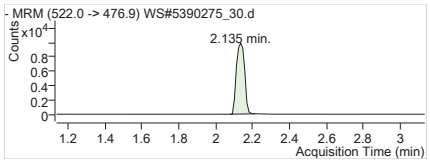


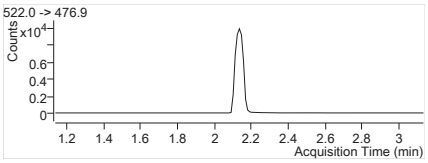
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



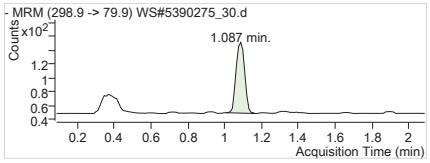


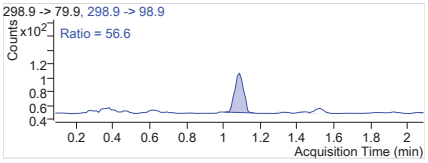
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



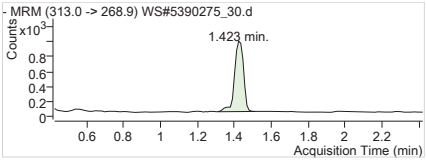


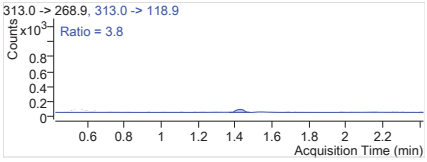
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



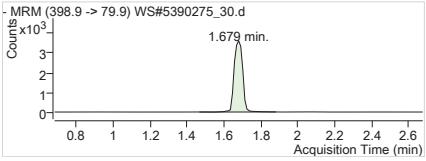


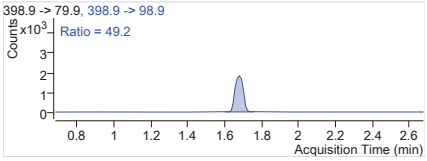
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 0.02 µg/L
Area ratio: 0.24168
Sample type: Sample



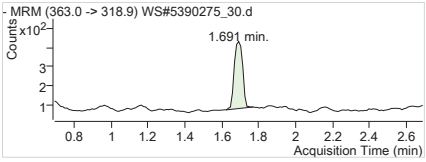


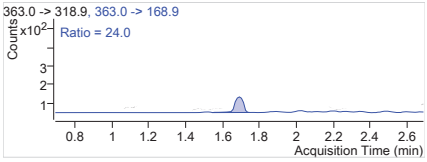
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 0.04 µg/L
Area ratio: 0.62607
Sample type: Sample



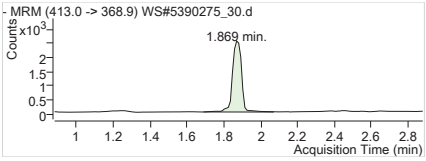


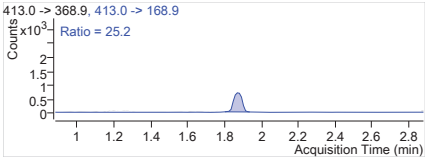
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 0.47 µg/L
Area ratio: 8.29522
Sample type: Sample



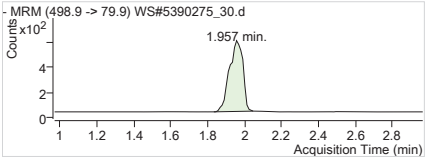


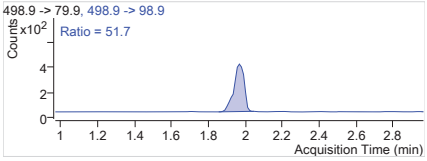
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.02 µg/L
Area ratio: 0.16414
Sample type: Sample



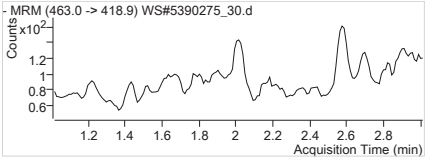


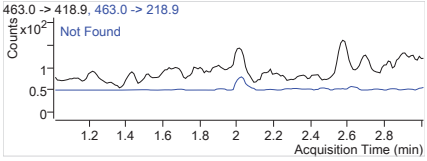
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 0.07 µg/L
Area ratio: 1.13507
Sample type: Sample



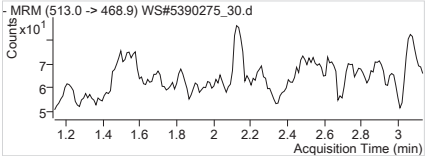


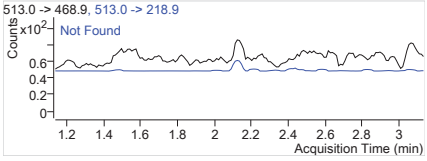
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.957 (1.968)
Calc. conc. 0.14 µg/L
Area ratio: 1.98948
Sample type: Sample



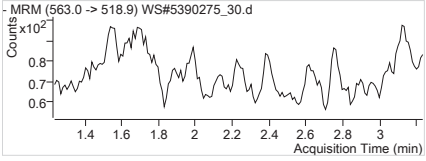


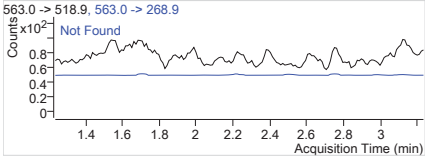
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.014)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



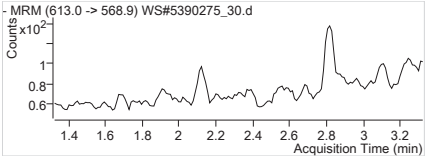


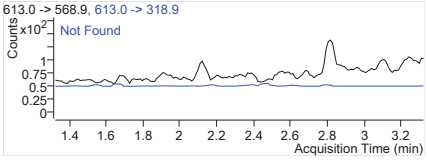
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



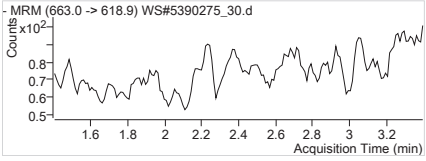


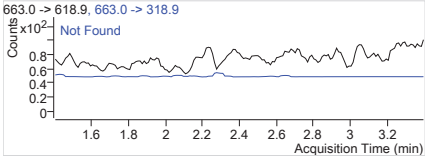
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.234)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



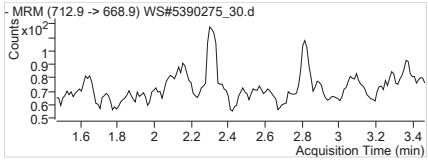


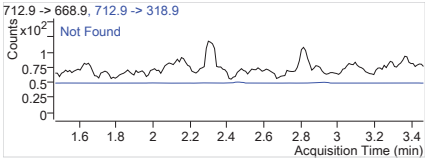
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



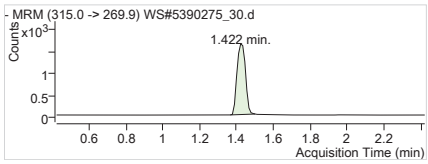


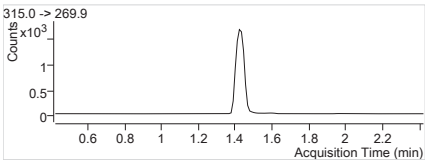
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



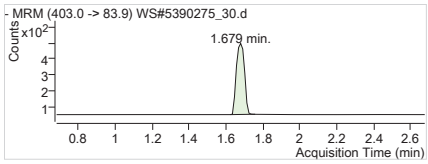


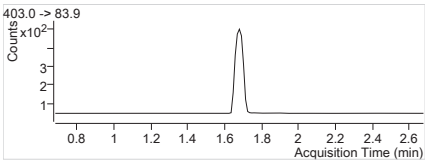
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



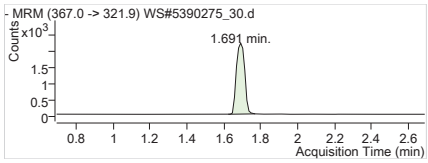


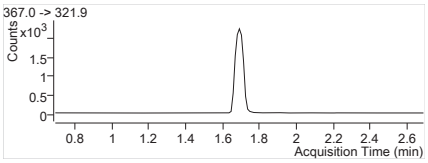
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 93.82 µg/L
Area ratio: 0.23415
Sample type: Sample



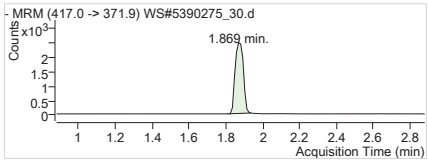


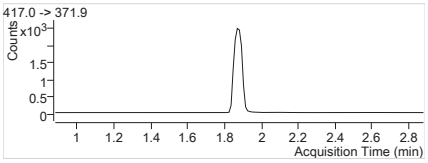
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 100.23 µg/L
Area ratio: 0.06266
Sample type: Sample



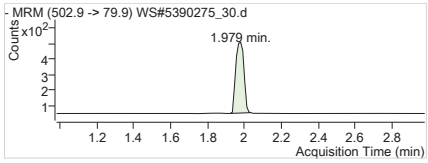


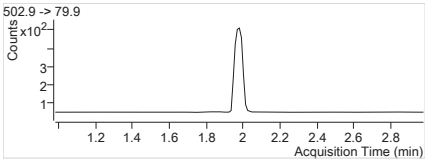
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 95.71 µg/L
Area ratio: 0.31133
Sample type: Sample



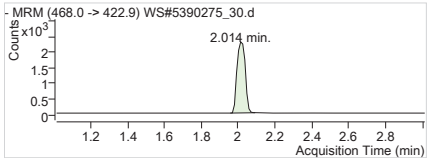


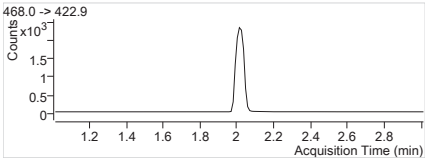
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 100.51 µg/L
Area ratio: 0.34679
Sample type: Sample



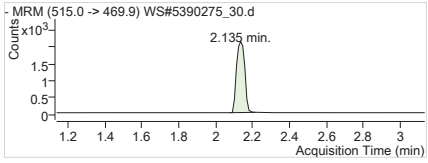


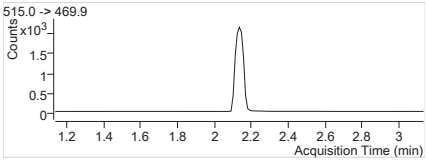
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 82.43 µg/L
Area ratio: 0.06466
Sample type: Sample



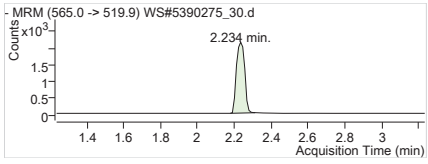


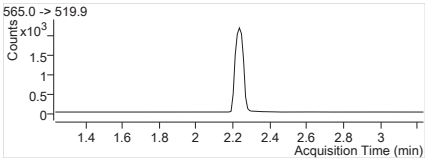
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 94.82 µg/L
Area ratio: 0.32334
Sample type: Sample



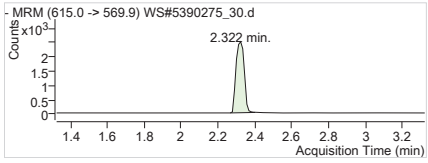


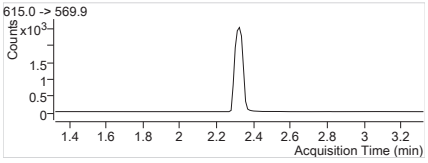
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 102.92 µg/L
Area ratio: 0.21445
Sample type: Sample



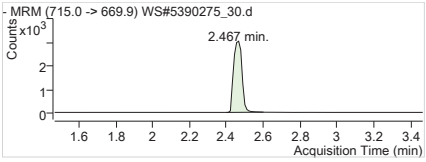


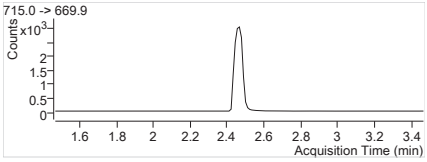
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 82.32 µg/L
Area ratio: 0.21692
Sample type: Sample



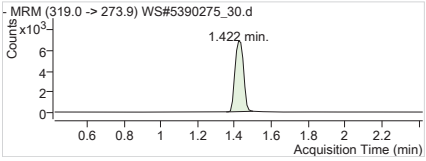


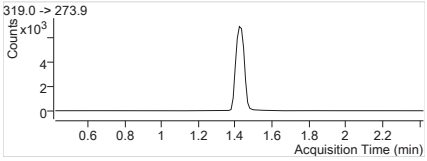
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 74.21 µg/L
Area ratio: 0.25297
Sample type: Sample



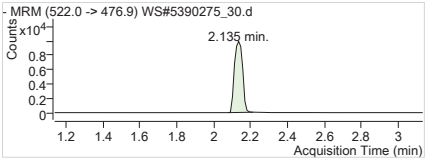


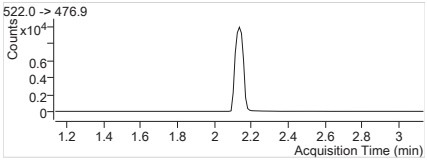
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	79.35 µg/L
Area ratio:	0.31382
Sample type:	Sample





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	2.35 µg/L
Area ratio:	0
Sample type:	Sample





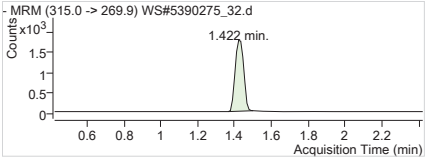
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	2.46 µg/L
Area ratio:	0
Sample type:	Sample

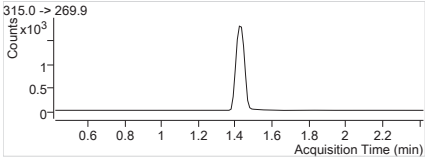
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics

Sample Name	**5390275:FZT420-01**	**Instrument**	LCMS04
Data File	WS#5390275_32.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low.m	**Position**	P2-D1
Acq. Date	2018/02/09 7:07:10 PM	**Injection Volume**	Per Method
Sample Annotation	-		

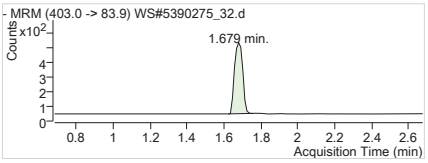
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	5599	1.42	1 µg/L		
MPFHxS	1509	1.68	1 µg/L		
MPFHpA	7411	1.69	1 µg/L		
MPFOA	7429	1.87	1 µg/L		
MPFOS	1737	1.98	1 µg/L		
MPFNA	7426	2.01	1 µg/L		
MPFDA	6466	2.14	1 µg/L		
MPFUnA	7368	2.23	1 µg/L		
MPFDoA	9708	2.32	1 µg/L		
MPFTeDA	10878	2.47	1 µg/L		
13C6-PFHxA IS	24368	1.42	1 µg/L		
13C9-PFDA IS	32418	2.13	1 µg/L		

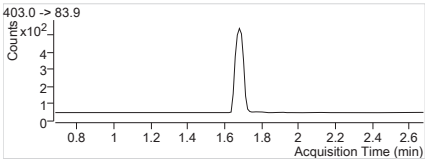
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1			-	ND	-
PFHxA 1			-	ND	-
PFHxS 1	1236	1.68	-	0.05 µg/L	-
PFHpA 1			-	ND	-
PFOA 1	1046	1.88	-	0.01 µg/L	-
PFOS 1	263	1.97	-	0.01 µg/L	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	5599	1.42	-	92.06 µg/L	-
18O2-PFHxS	1509	1.68	-	99.05 µg/L	-
13C4-PFHpA	7411	1.69	-	93.50 µg/L	-
13C4-PFOA	7429	1.87	-	88.36 µg/L	-
13C4-PFOS	1737	1.98	-	90.87 µg/L	-
13C5-PFNA	7426	2.01	-	89.37 µg/L	-
13C2-PFDA	6383	2.14	-	94.49 µg/L	-
13C2-PFUnA	7368	2.23	-	86.25 µg/L	-
13C2-PFDoA	9708	2.32	-	87.85 µg/L	-
13C2-PFTeDA	11171	2.47	-	87.13 µg/L	-
13C6-PFHxA	24368	1.42	-	2.50 µg/L	-
13C9-PFDA	32418	2.13	-	2.51 µg/L	-



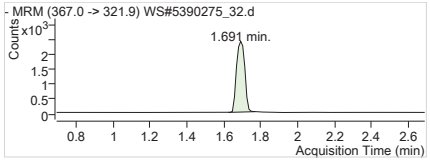


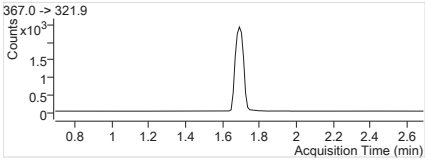
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



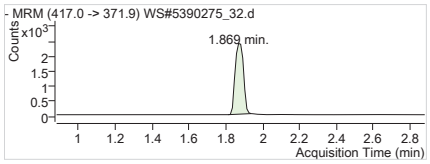


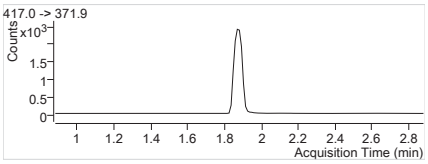
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



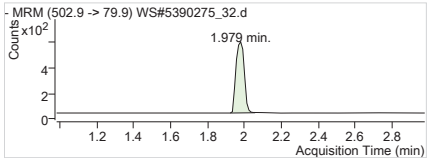


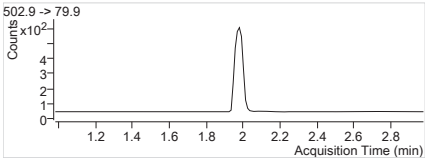
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



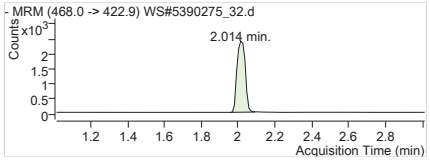


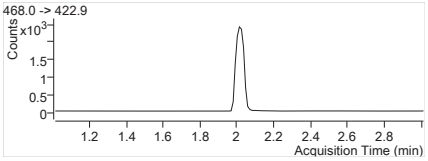
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: Sample



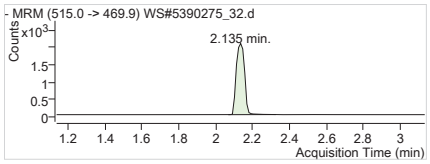


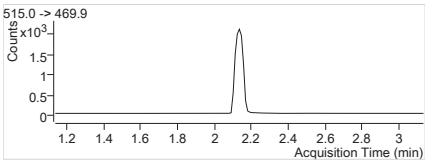
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



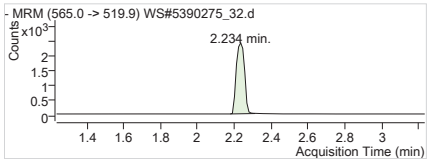


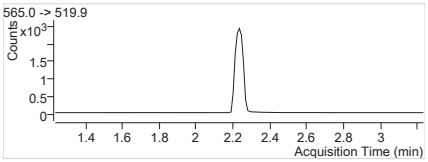
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



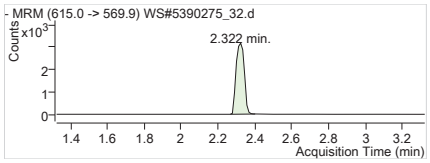


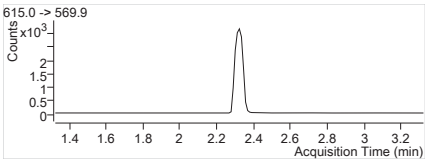
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



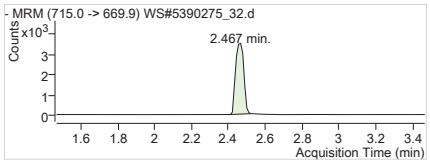


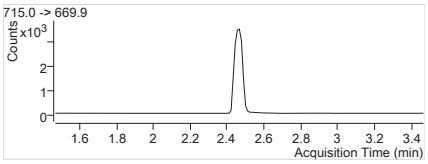
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



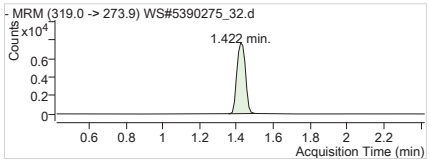


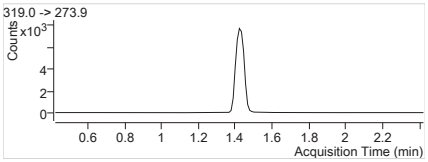
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



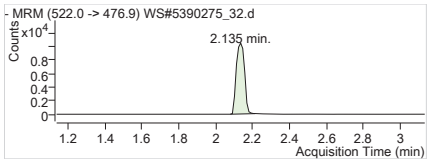


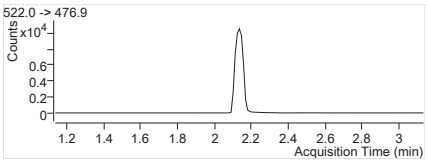
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



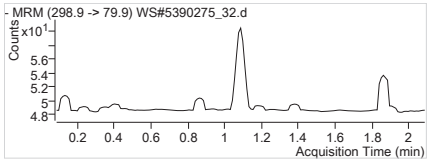


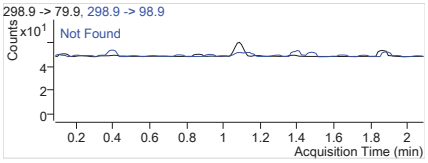
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



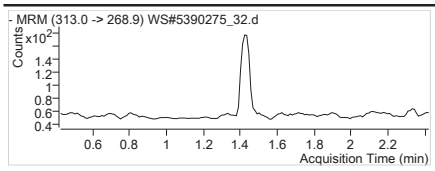


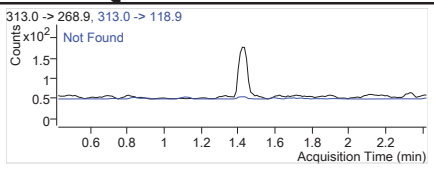
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample





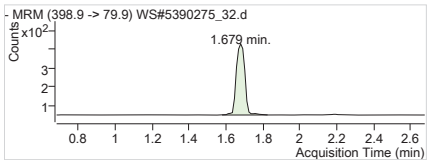
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.087)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample

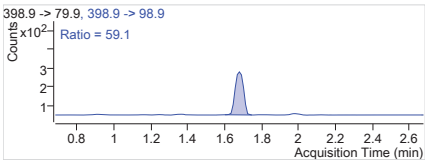




PFHxA 1

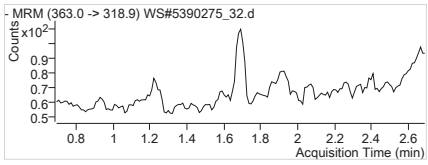
RT (Exp. RT):	313.0 -> 268.9
Calc. conc.	0.000 (1.423)
Area ratio:	N.D.
Sample type:	0
	Sample

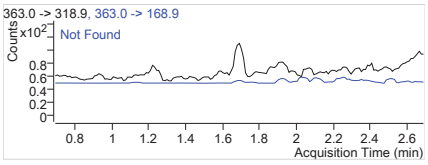




PFHxS 1

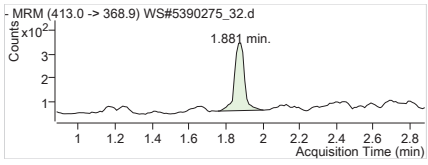
RT (Exp. RT):	398.9 -> 79.9
Calc. conc.	1.679 (1.679)
Area ratio:	0.05 µg/L
Sample type:	0.81909
	Sample

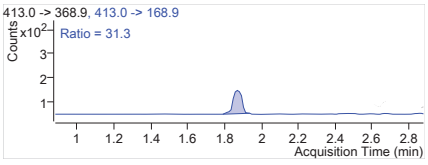




PFHpA 1

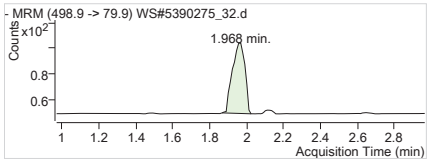
RT (Exp. RT):	363.0 -> 318.9
Calc. conc.	0.000 (1.691)
Area ratio:	N.D.
Sample type:	0
	Sample

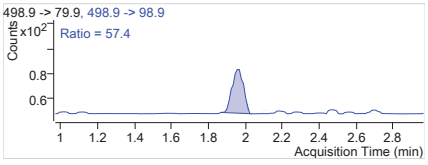




PFOA 1

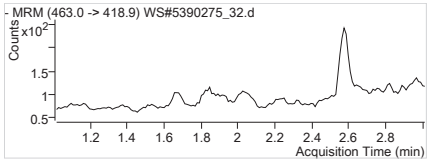
RT (Exp. RT):	413.0 -> 368.9
Calc. conc.	1.881 (1.881)
Area ratio:	0.01 µg/L
Sample type:	0.14080
	Sample

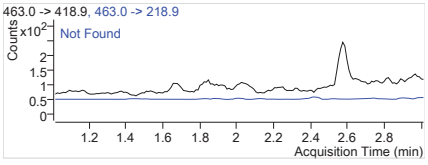




PFOS 1

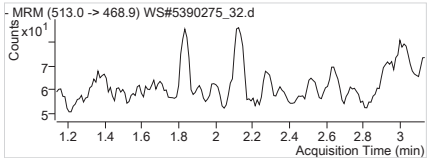
RT (Exp. RT):	498.9 -> 79.9
Calc. conc.	1.968 (1.968)
Area ratio:	0.01 µg/L
Sample type:	0.15141
	Sample

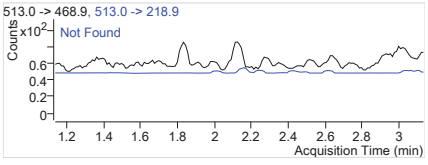




PFNA 1

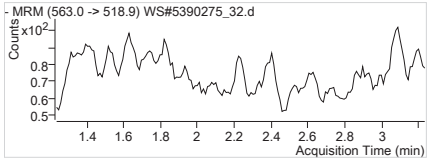
RT (Exp. RT):	463.0 -> 418.9
Calc. conc.	0.000 (2.014)
Area ratio:	N.D.
Sample type:	0
	Sample

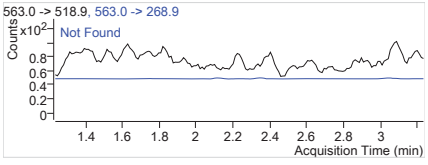




PFDA 1

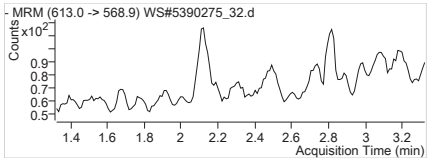
RT (Exp. RT):	513.0 -> 468.9
Calc. conc.	0.000 (2.135)
Area ratio:	N.D.
Sample type:	0
	Sample

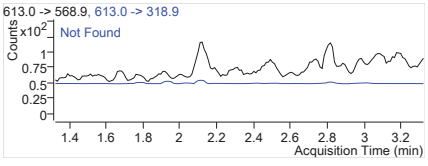




PFUnA 1

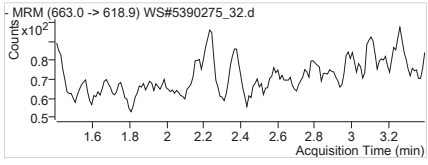
RT (Exp. RT):	563.0 -> 518.9
Calc. conc.	0.000 (2.234)
Area ratio:	N.D.
Sample type:	0
	Sample

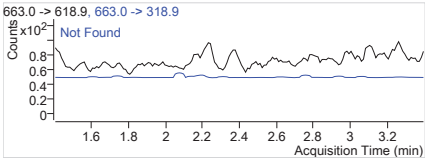




PFDoA 1

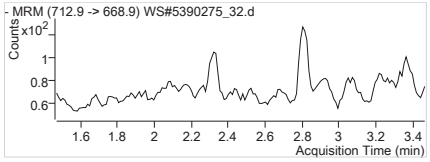
RT (Exp. RT):	613.0 -> 568.9
Calc. conc.	0.000 (2.323)
Area ratio:	N.D.
Sample type:	0
	Sample

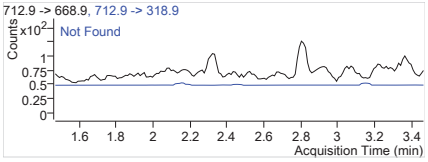




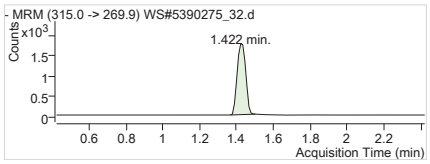
PFTrDA 1

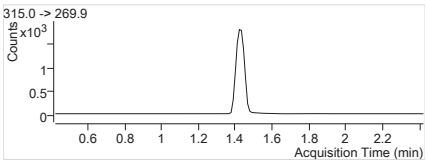
RT (Exp. RT):	663.0 -> 618.9
Calc. conc.	0.000 (2.400)
Area ratio:	N.D.
Sample type:	0
	Sample



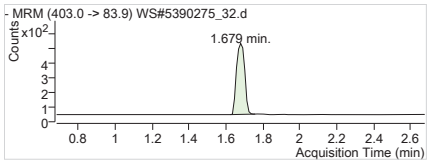


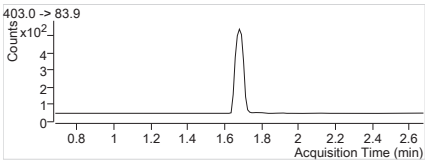
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



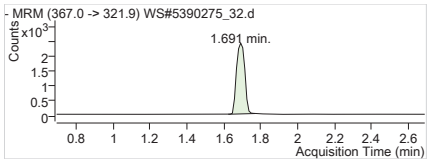


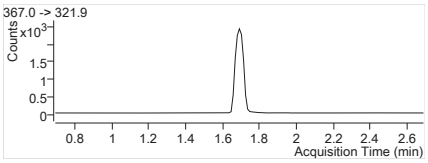
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 92.06 µg/L
Area ratio: 0.22977
Sample type: Sample



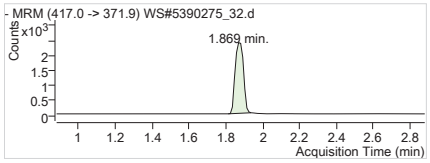


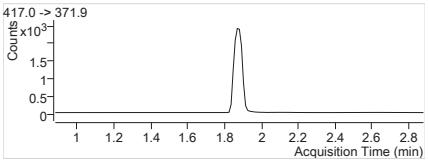
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 99.05 µg/L
Area ratio: 0.06193
Sample type: Sample



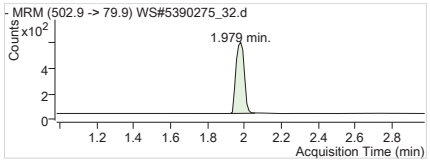


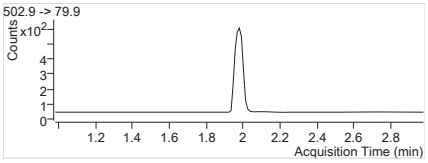
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 93.50 µg/L
Area ratio: 0.30413
Sample type: Sample



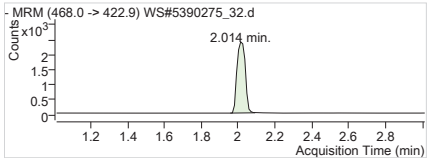


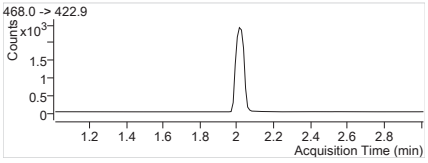
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 88.36 µg/L
Area ratio: 0.30487
Sample type: Sample



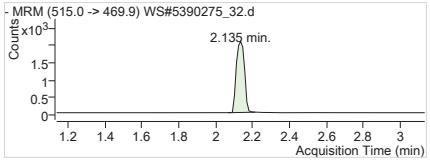


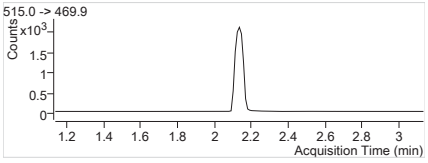
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 90.87 µg/L
Area ratio: 0.07128
Sample type: Sample



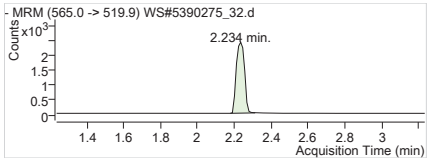


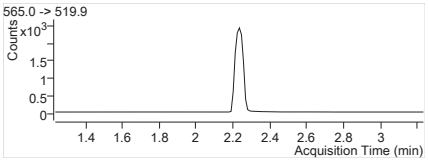
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 89.37 µg/L
Area ratio: 0.30474
Sample type: Sample



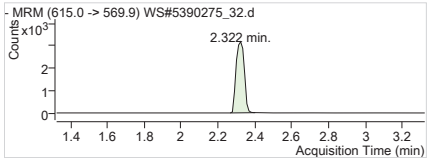


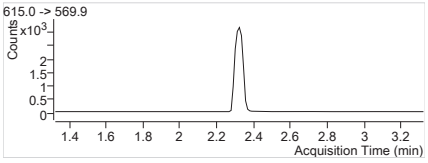
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 94.49 µg/L
Area ratio: 0.19690
Sample type: Sample



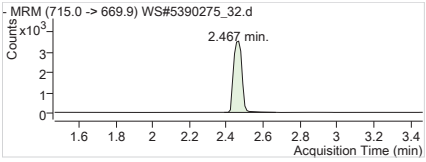


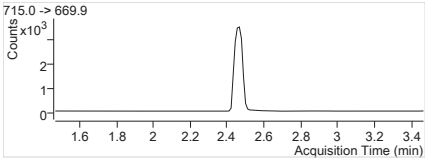
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 86.25 µg/L
Area ratio: 0.22728
Sample type: Sample



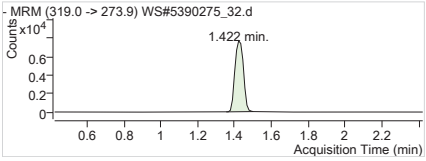


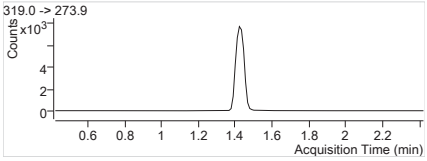
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 87.85 µg/L
Area ratio: 0.29946
Sample type: Sample



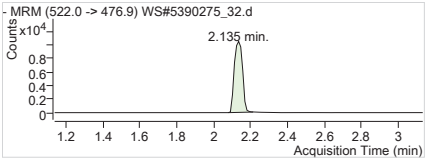


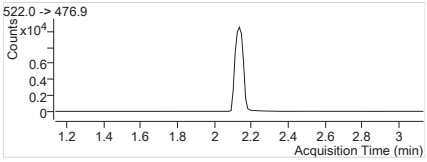
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	87.13 µg/L
Area ratio:	0.34459
Sample type:	Sample





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	2.50 µg/L
Area ratio:	0
Sample type:	Sample





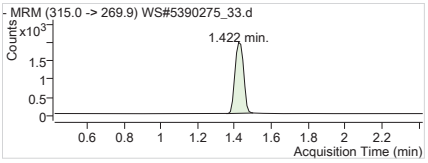
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	2.51 µg/L
Area ratio:	0
Sample type:	Sample

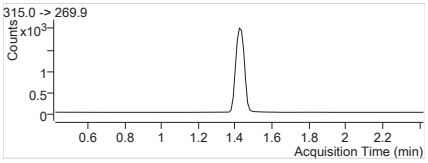
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics

Sample Name	**5390275:FZT421-01**	**Instrument**	LCMS04
Data File	WS#5390275_33.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low.m	**Position**	P2-D2
Acq. Date	2018/02/09 7:12:05 PM	**Injection Volume**	Per Method
Sample Annotation	-		

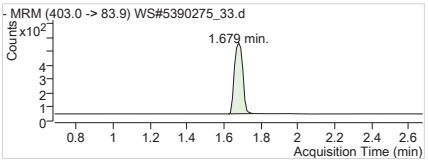
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6343	1.42	1 µg/L		
MPFHxS	1607	1.68	1 µg/L		
MPFHpA	8067	1.69	1 µg/L		
MPFOA	8531	1.87	1 µg/L		
MPFOS	1847	1.98	1 µg/L		
MPFNA	8328	2.01	1 µg/L		
MPFDA	6976	2.14	1 µg/L		
MPFUnA	8148	2.23	1 µg/L		
MPFDoA	9096	2.32	1 µg/L		
MPFTeDA	8493	2.47	1 µg/L		
13C6-PFHxA IS	23233	1.42	1 µg/L		
13C9-PFDA IS	30895	2.13	1 µg/L		

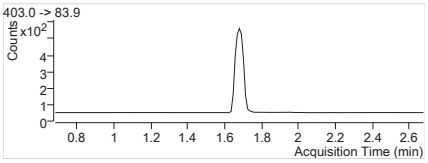
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	469	1.09	-	0.02 µg/L	-
PFHxA 1	778	1.42	-	0.01 µg/L	-
PFHxS 1	849	1.68	-	0.03 µg/L	-
PFHpA 1			-	ND	-
PFOA 1	792	1.87	-	0.01 µg/L	-
PFOS 1	2941	1.92	-	0.11 µg/L	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	6343	1.42	-	109.39 µg/L	-
18O2-PFHxS	1607	1.68	-	110.64 µg/L	-
13C4-PFHpA	8067	1.69	-	106.75 µg/L	-
13C4-PFOA	8531	1.87	-	106.43 µg/L	-
13C4-PFOS	1847	1.98	-	101.34 µg/L	-
13C5-PFNA	8329	2.01	-	105.13 µg/L	-
13C2-PFDA	6921	2.14	-	107.51 µg/L	-
13C2-PFUnA	8148	2.23	-	100.08 µg/L	-
13C2-PFDoA	9096	2.32	-	86.37 µg/L	-
13C2-PFTeDA	8587	2.47	-	70.28 µg/L	-
13C6-PFHxA	23233	1.42	-	2.38 µg/L	-
13C9-PFDA	30895	2.13	-	2.40 µg/L	-



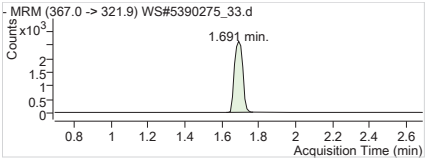


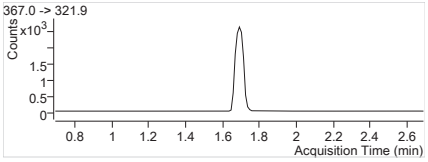
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



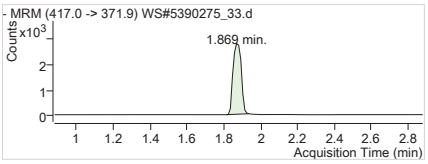


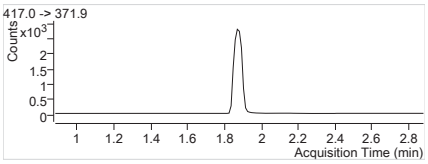
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



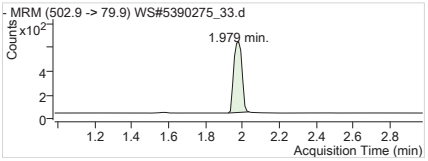


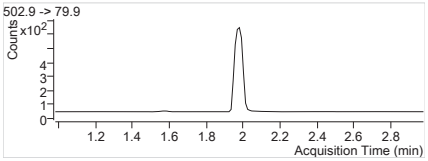
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



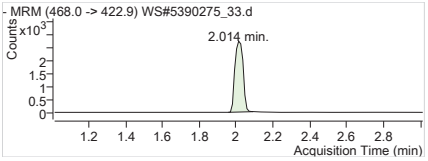


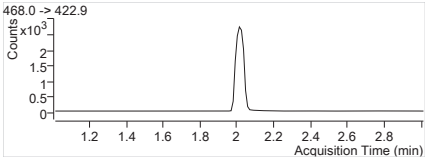
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: Sample



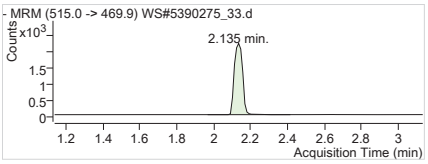


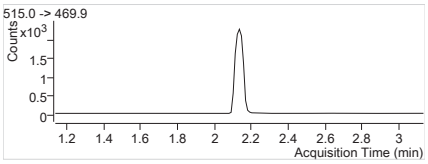
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



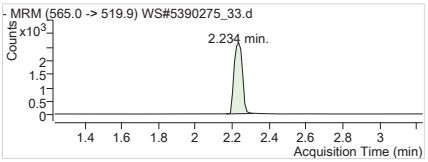


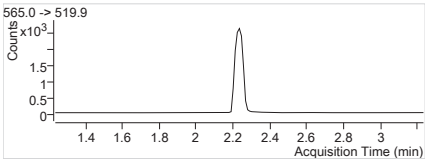
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



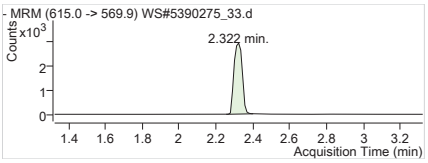


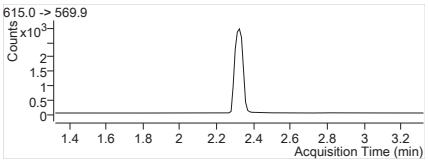
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



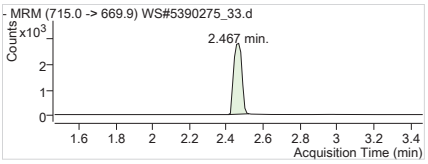


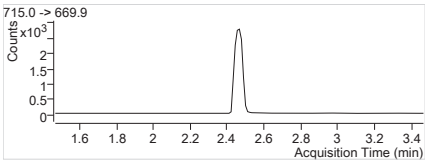
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



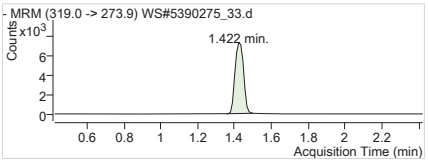


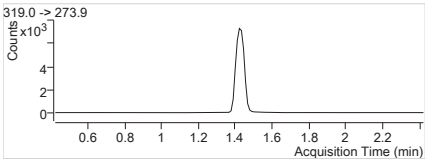
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



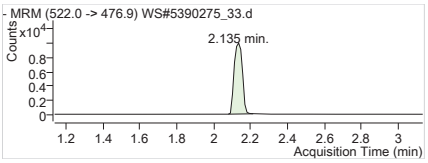


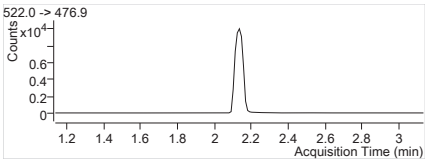
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



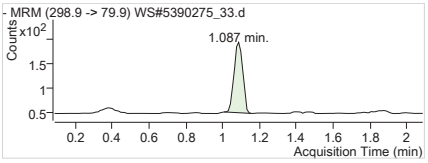


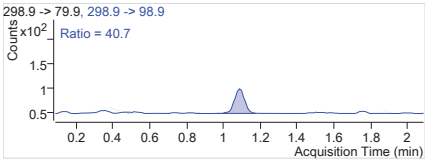
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



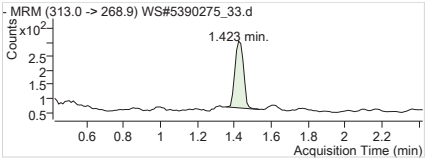


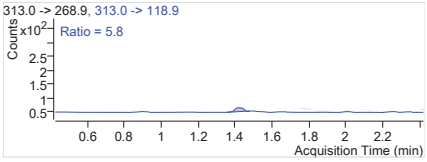
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



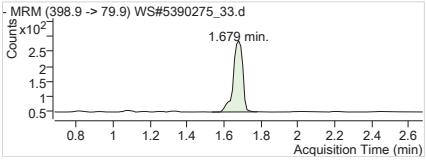


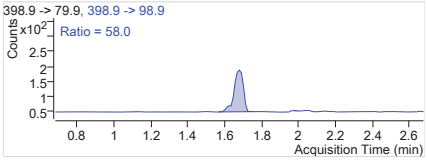
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 0.02 µg/L
Area ratio: 0.29185
Sample type: Sample



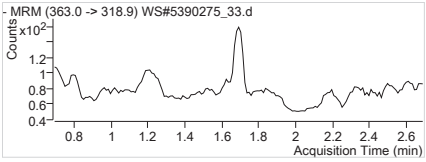


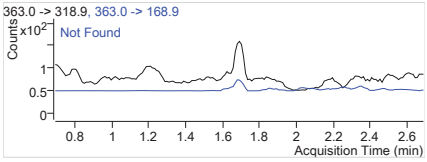
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 0.01 µg/L
Area ratio: 0.12265
Sample type: Sample



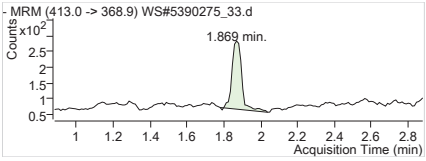


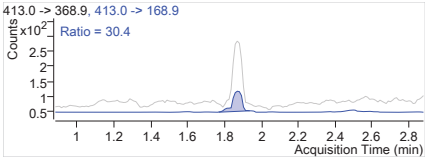
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 0.03 µg/L
Area ratio: 0.52831
Sample type: Sample



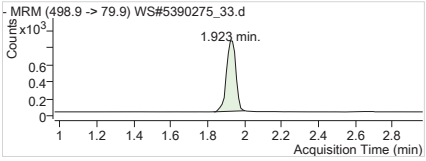


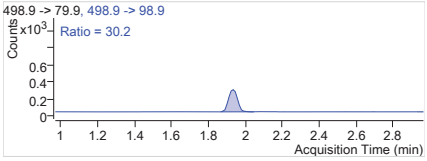
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



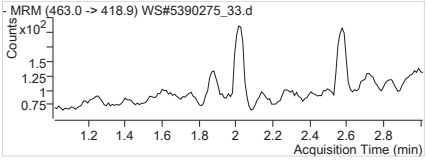


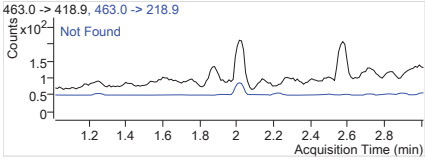
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 0.01 µg/L
Area ratio: 0.09284
Sample type: Sample



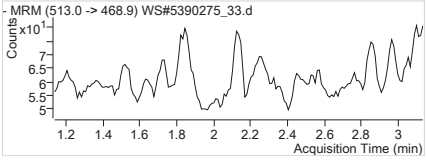


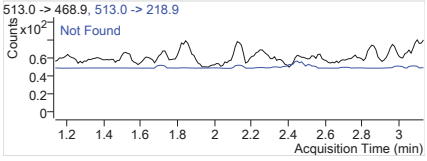
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.923 (1.968)
Calc. conc. 0.11 µg/L
Area ratio: 1.59231
Sample type: Sample



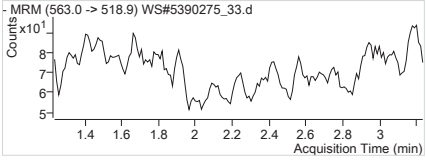


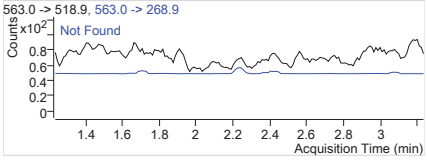
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.014)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



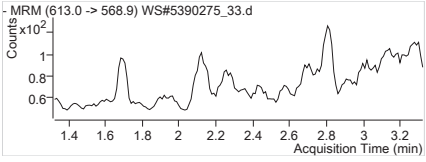


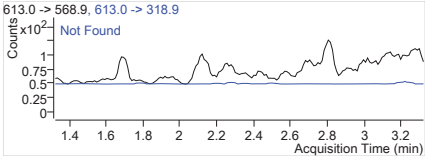
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



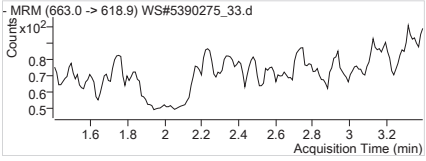


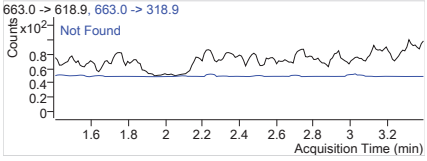
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.234)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



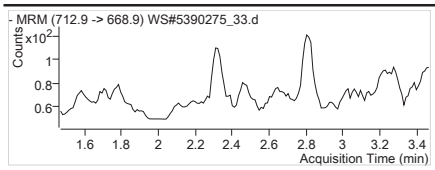


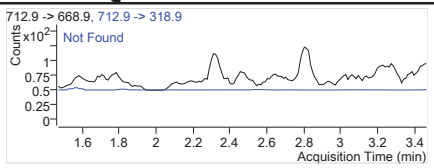
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



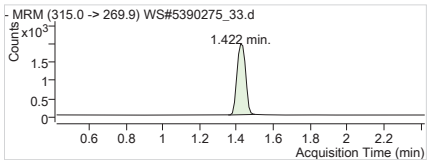


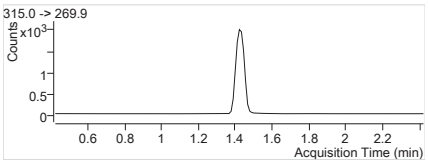
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



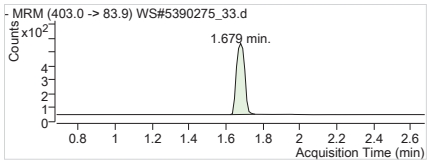


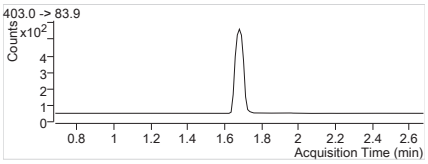
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



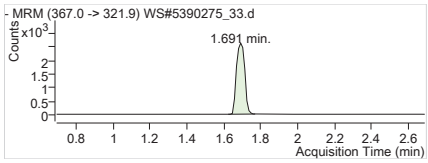


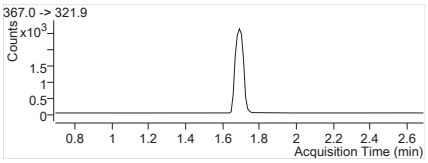
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 109.39 µg/L
Area ratio: 0.27302
Sample type: Sample



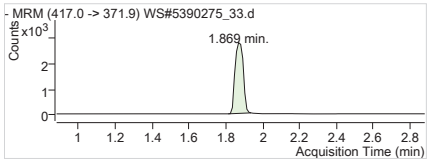


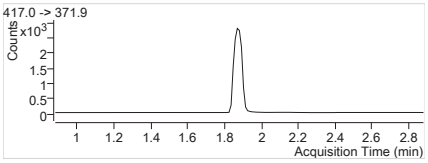
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 110.64 µg/L
Area ratio: 0.06917
Sample type: Sample



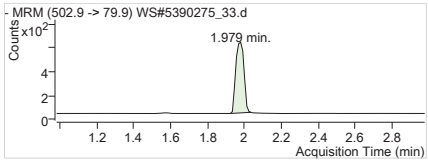


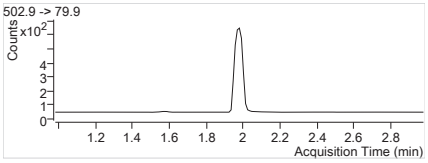
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 106.75 µg/L
Area ratio: 0.34722
Sample type: Sample



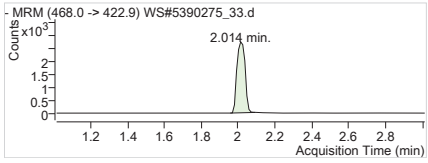


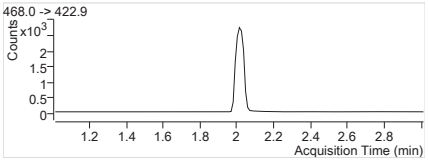
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 106.43 µg/L
Area ratio: 0.36719
Sample type: Sample



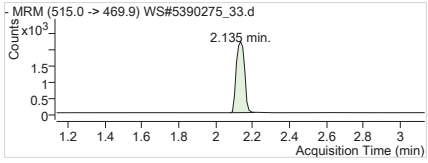


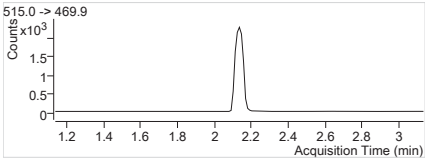
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 101.34 µg/L
Area ratio: 0.07950
Sample type: Sample



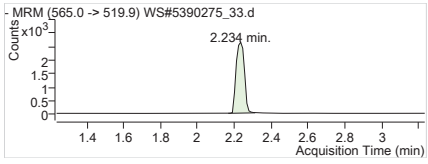


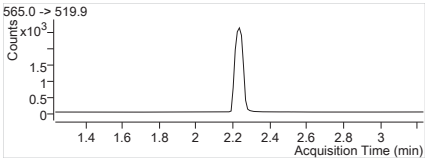
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 105.13 µg/L
Area ratio: 0.35850
Sample type: Sample



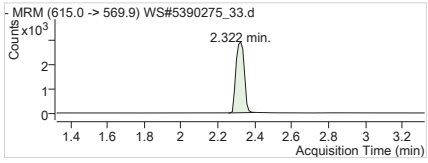


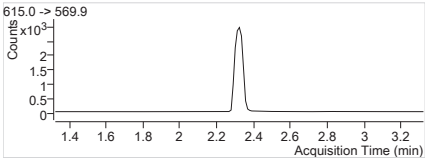
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 107.51 µg/L
Area ratio: 0.22402
Sample type: Sample



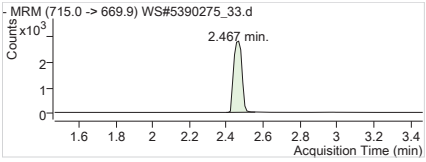


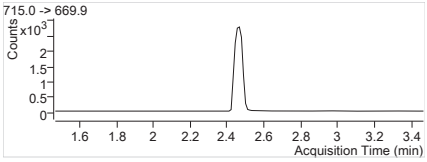
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 100.08 µg/L
Area ratio: 0.26373
Sample type: Sample



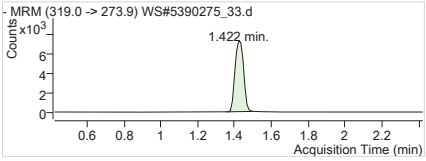


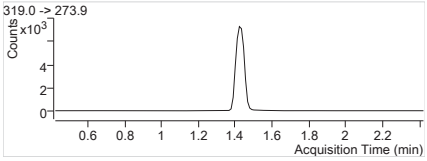
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 86.37 µg/L
Area ratio: 0.29442
Sample type: Sample



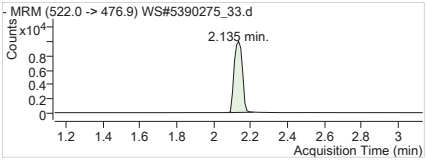


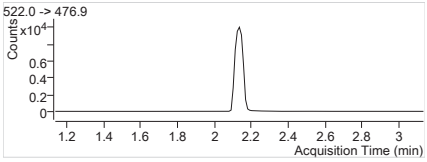
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	70.28 µg/L
Area ratio:	0.27794
Sample type:	Sample





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	2.38 µg/L
Area ratio:	0
Sample type:	Sample





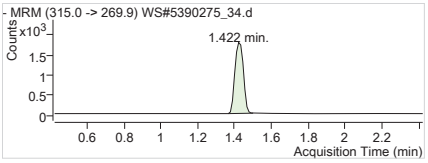
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	2.40 µg/L
Area ratio:	0
Sample type:	Sample

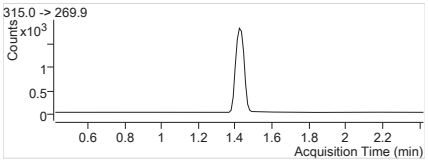
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics

Sample Name	**5390275:FZT422-01**	**Instrument**	LCMS04
Data File	WS#5390275_34.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low.m	**Position**	P2-D3
Acq. Date	2018/02/09 7:17:01 PM	**Injection Volume**	Per Method
Sample Annotation	-		

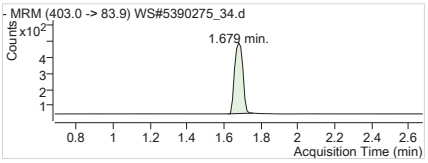
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	5670	1.42	1 µg/L		
MPFHxS	1354	1.68	1 µg/L		
MPFHpA	7359	1.69	1 µg/L		
MPFOA	7628	1.87	1 µg/L		
MPFOS	1589	1.98	1 µg/L		
MPFNA	7948	2.01	1 µg/L		
MPFDA	6293	2.14	1 µg/L		
MPFUnA	7172	2.23	1 µg/L		
MPFDoA	9522	2.32	1 µg/L		
MPFTeDA	9405	2.47	1 µg/L		
13C6-PFHxA IS	24155	1.42	1 µg/L		
13C9-PFDA IS	31821	2.13	1 µg/L		

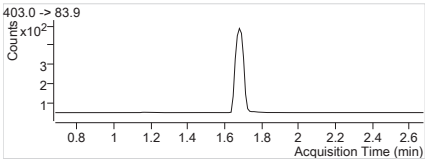
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	225	1.09	-	0.01 µg/L	-
PFHxA 1			-	ND	-
PFHxS 1			-	ND	-
PFHpA 1			-	ND	-
PFOA 1	1246	1.87	-	0.01 µg/L	-
PFOS 1	437	1.95	-	0.02 µg/L	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	5670	1.42	-	94.05 µg/L	-
18O2-PFHxS	1354	1.68	-	89.66 µg/L	-
13C4-PFHpA	7359	1.69	-	93.66 µg/L	-
13C4-PFOA	7628	1.87	-	91.53 µg/L	-
13C4-PFOS	1589	1.98	-	83.86 µg/L	-
13C5-PFNA	7947	2.01	-	96.48 µg/L	-
13C2-PFDA	6232	2.14	-	93.99 µg/L	-
13C2-PFUnA	7172	2.23	-	85.53 µg/L	-
13C2-PFDoA	9522	2.32	-	87.78 µg/L	-
13C2-PFTeDA	9665	2.47	-	76.80 µg/L	-
13C6-PFHxA	24155	1.42	-	2.48 µg/L	-
13C9-PFDA	31821	2.13	-	2.47 µg/L	-



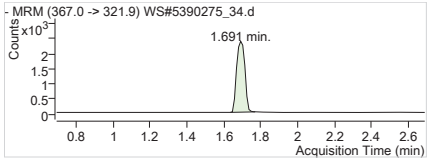


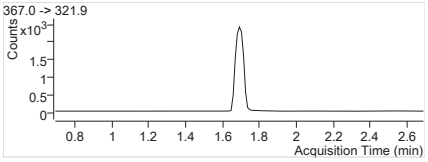
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



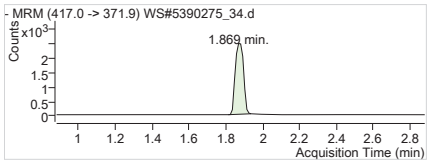


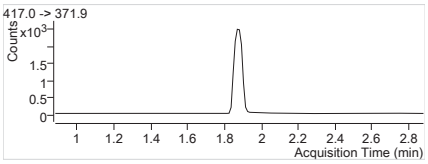
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



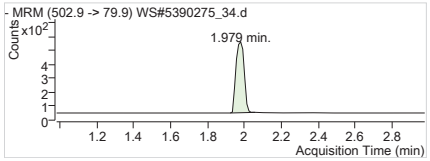


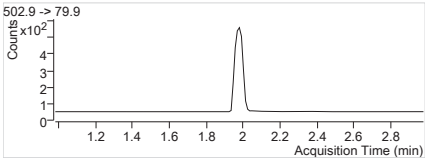
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



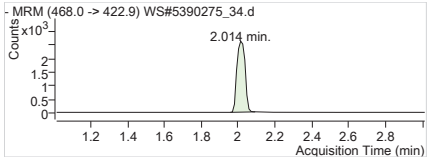


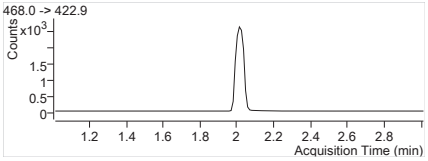
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: Sample



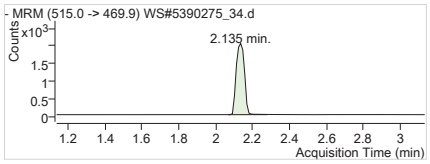


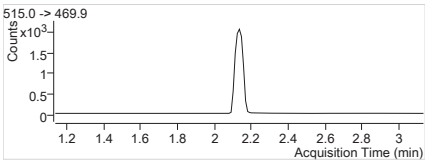
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



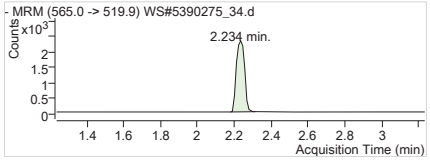


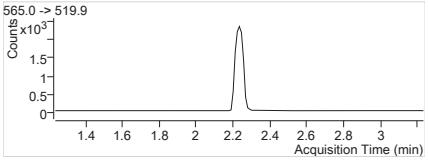
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



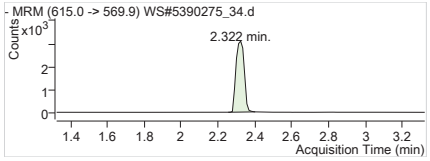


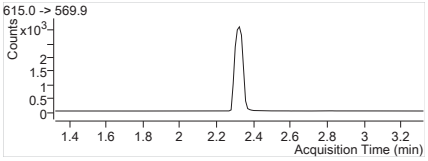
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



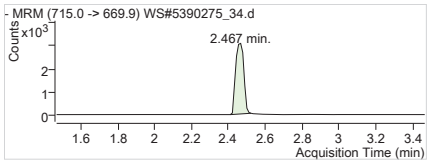


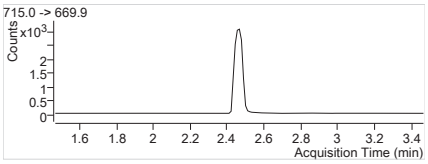
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



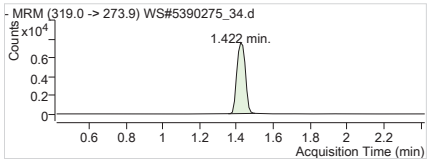


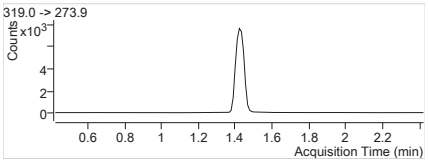
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



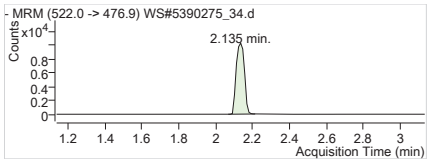


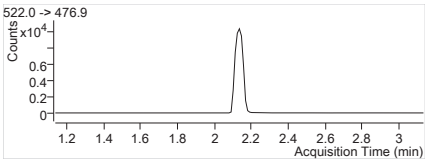
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



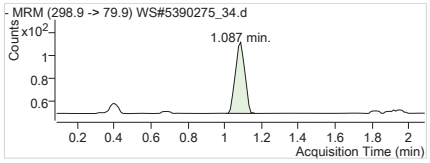


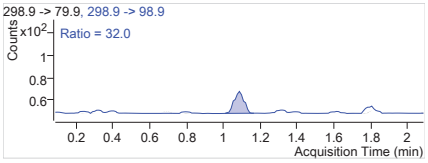
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



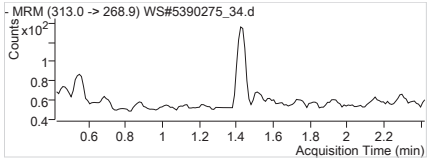


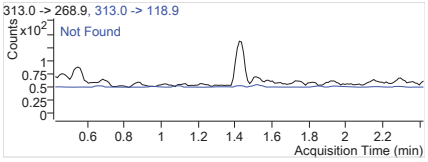
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample





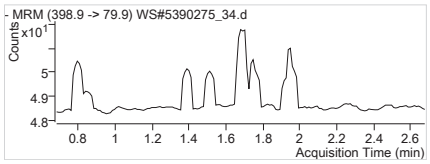
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 0.01 µg/L
Area ratio: 0.16617
Sample type: Sample

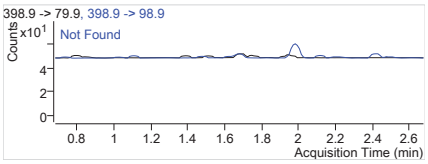




PFHxA 1

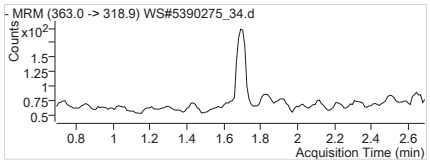
RT (Exp. RT):	0.000 (1.423)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

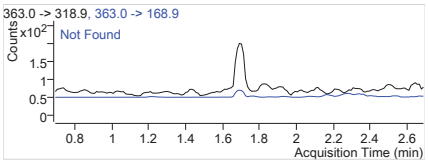




PFHxS 1

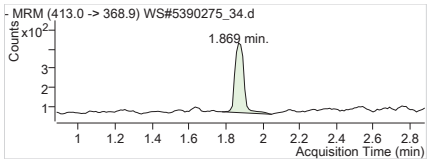
RT (Exp. RT):	0.000 (1.679)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

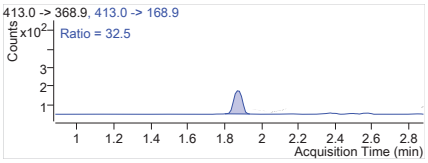




PFHpA 1

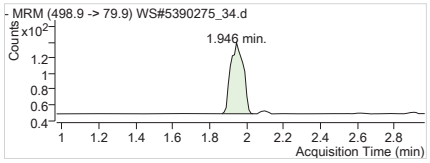
RT (Exp. RT):	0.000 (1.691)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

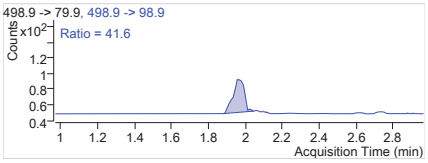




PFOA 1

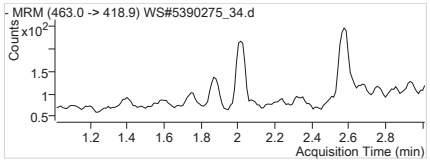
RT (Exp. RT):	1.869 (1.881)
Calc. conc.	0.01 µg/L
Area ratio:	0.16335
Sample type:	Sample

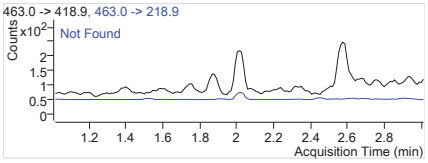




PFOS 1

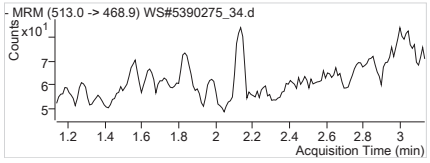
RT (Exp. RT):	1.946 (1.968)
Calc. conc.	0.02 µg/L
Area ratio:	0.27502
Sample type:	Sample

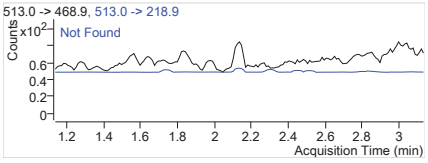




PFNA 1

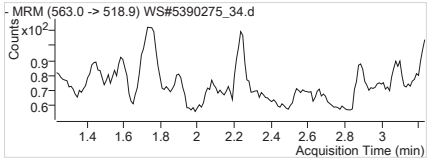
RT (Exp. RT):	0.000 (2.014)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

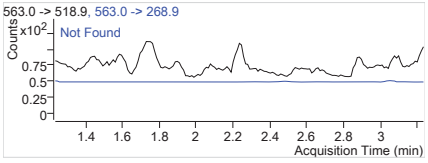




PFDA 1

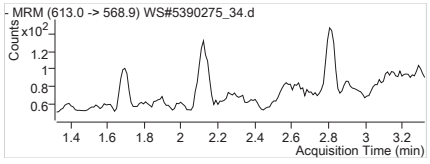
RT (Exp. RT):	0.000 (2.135)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

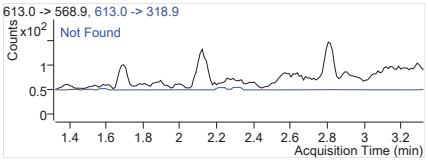




PFUnA 1

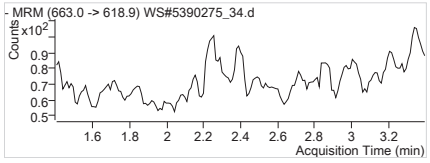
RT (Exp. RT):	0.000 (2.234)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

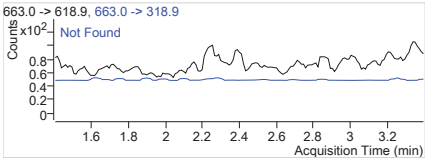




PFDoA 1

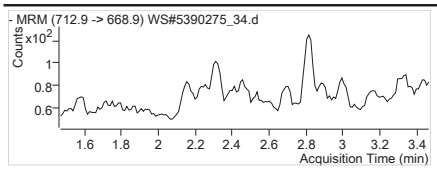
RT (Exp. RT):	0.000 (2.323)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

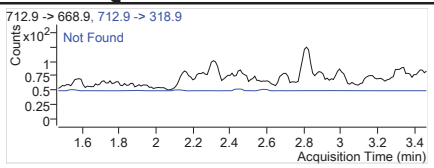




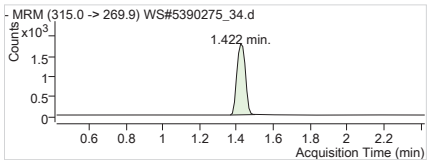
PFTrDA 1

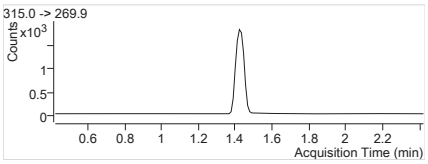
RT (Exp. RT):	0.000 (2.400)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample



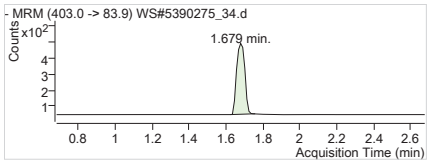


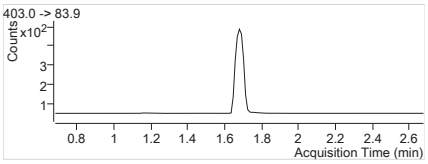
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



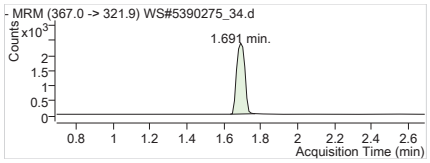


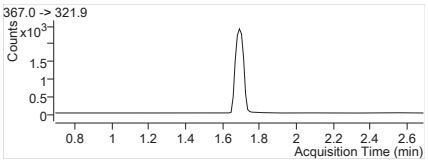
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 94.05 µg/L
Area ratio: 0.23473
Sample type: Sample



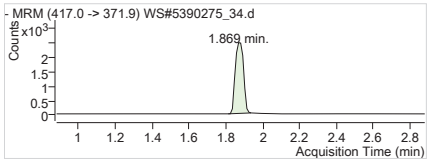


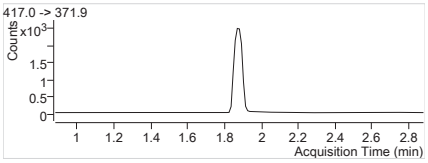
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 89.66 µg/L
Area ratio: 0.05605
Sample type: Sample



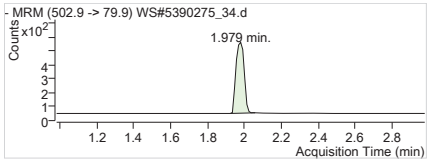


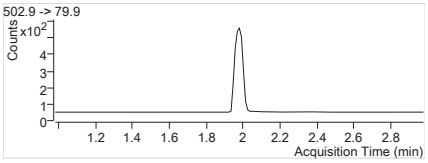
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 93.66 µg/L
Area ratio: 0.30466
Sample type: Sample



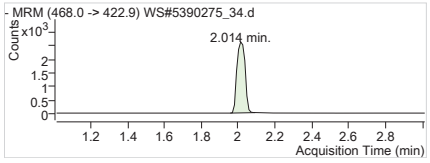


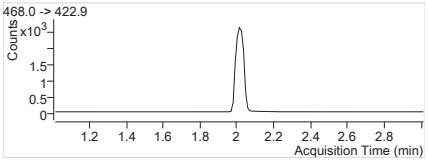
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 91.53 µg/L
Area ratio: 0.31579
Sample type: Sample



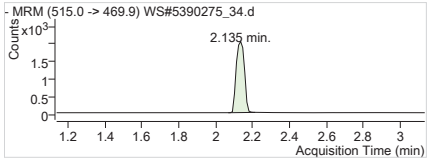


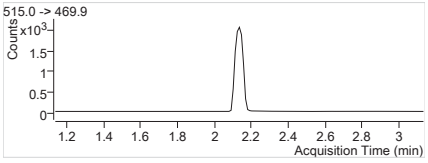
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 83.86 µg/L
Area ratio: 0.06578
Sample type: Sample



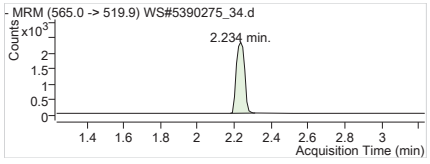


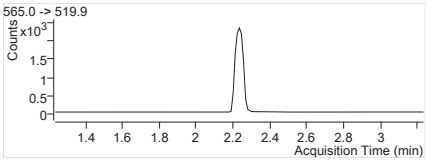
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 96.48 µg/L
Area ratio: 0.32900
Sample type: Sample



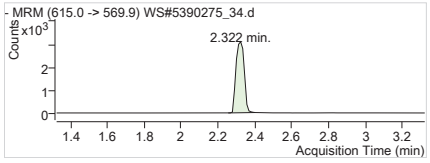


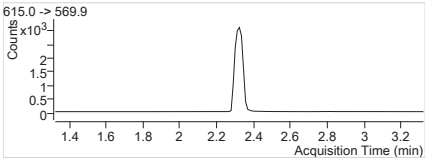
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 93.99 µg/L
Area ratio: 0.19585
Sample type: Sample



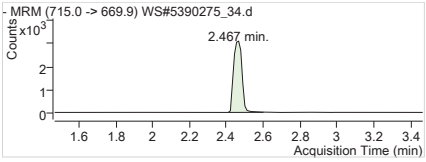


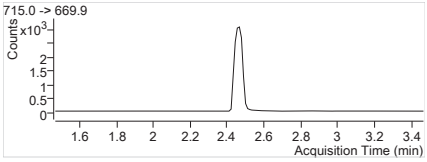
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 85.53 µg/L
Area ratio: 0.22539
Sample type: Sample



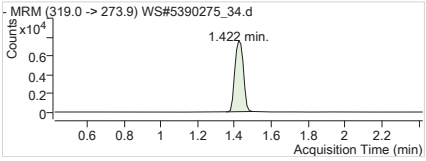


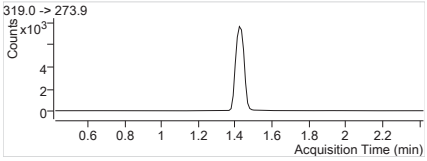
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 87.78 µg/L
Area ratio: 0.29924
Sample type: Sample



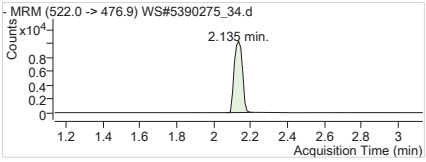


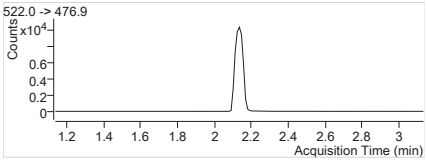
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	76.80 µg/L
Area ratio:	0.30373
Sample type:	Sample





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	2.48 µg/L
Area ratio:	0
Sample type:	Sample





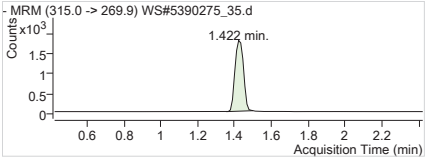
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	2.47 µg/L
Area ratio:	0
Sample type:	Sample

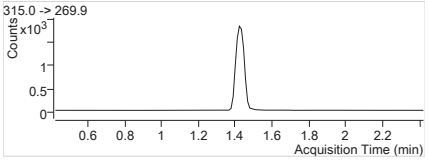
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_ETOxics

Sample Name	**5390275:FZT423-01**	**Instrument**	LCMS04
Data File	WS#5390275_35.d	**Operator**	
Sample Type	Sample	**Dilution**	0.0273
Acq. Method	PFC_Water_Low.m	**Position**	P2-D4
Acq. Date	2018/02/09 7:21:57 PM	**Injection Volume**	Per Method
Sample Annotation	-		

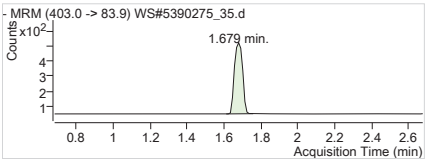
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	5716	1.42	1 µg/L		
MPFHxS	1466	1.68	1 µg/L		
MPFHpA	7363	1.69	1 µg/L		
MPFOA	7312	1.87	1 µg/L		
MPFOS	1566	1.98	1 µg/L		
MPFNA	7929	2.01	1 µg/L		
MPFDA	6433	2.14	1 µg/L		
MPFUnA	6964	2.23	1 µg/L		
MPFDoA	9230	2.32	1 µg/L		
MPFTeDA	8626	2.47	1 µg/L		
13C6-PFHxA IS	23594	1.42	1 µg/L		
13C9-PFDA IS	31236	2.13	1 µg/L		

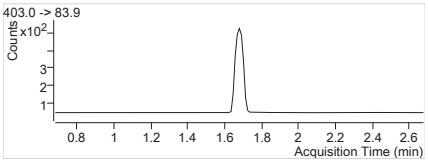
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1			-	ND	-
PFHxA 1	2035	1.42	-	0.02 µg/L	-
PFHxS 1	7436	1.68	-	0.31 µg/L	-
PFHpA 1			-	ND	-
PFOA 1	1153	1.87	-	0.01 µg/L	-
PFOS 1	6289	1.97	-	0.31 µg/L	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	5716	1.42	-	97.07 µg/L	-
18O2-PFHxS	1466	1.68	-	99.39 µg/L	-
13C4-PFHpA	7363	1.69	-	95.94 µg/L	-
13C4-PFOA	7312	1.87	-	89.82 µg/L	-
13C4-PFOS	1566	1.98	-	84.61 µg/L	-
13C5-PFNA	7929	2.01	-	98.55 µg/L	-
13C2-PFDA	6275	2.14	-	96.41 µg/L	-
13C2-PFUnA	6964	2.23	-	84.61 µg/L	-
13C2-PFDoA	9230	2.32	-	86.69 µg/L	-
13C2-PFTeDA	8857	2.47	-	71.70 µg/L	-
13C6-PFHxA	23594	1.42	-	2.75 µg/L	-
13C9-PFDA	31236	2.13	-	2.76 µg/L	-



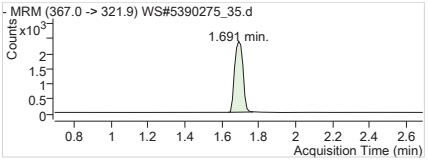


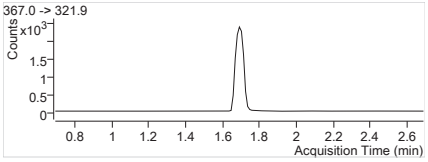
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



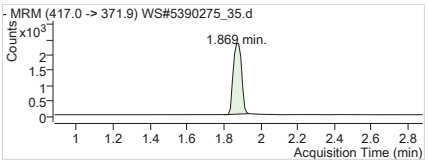


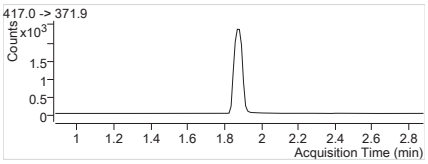
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



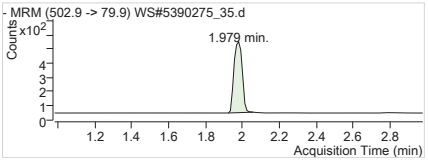


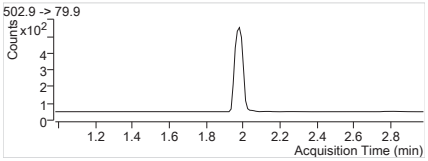
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



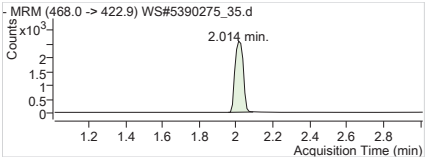


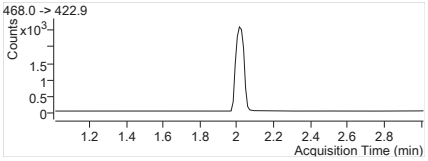
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: Sample



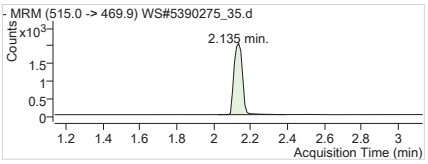


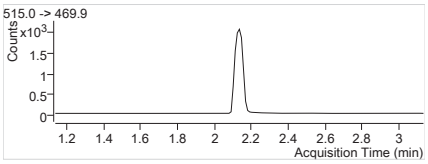
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



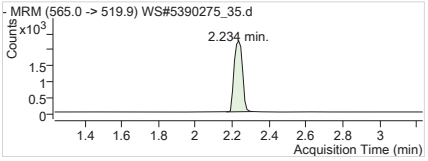


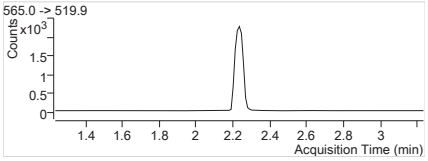
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



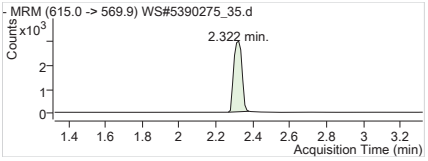


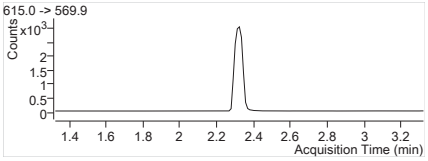
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



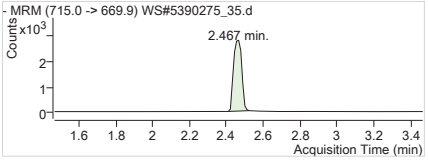


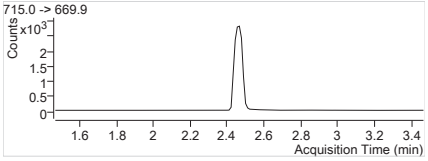
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



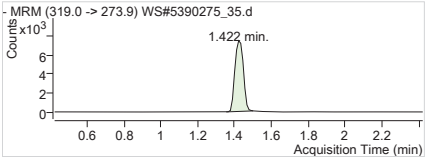


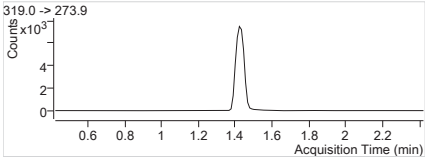
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



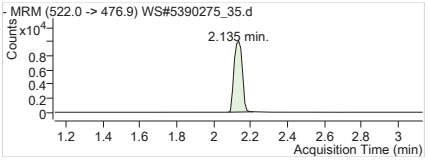


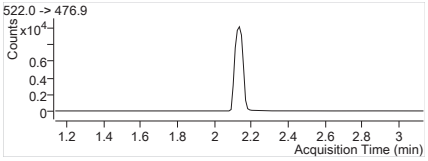
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



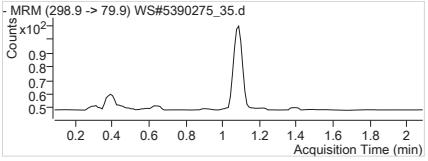


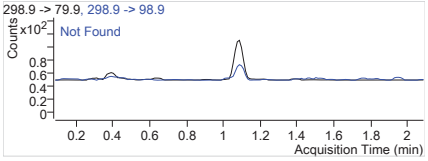
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



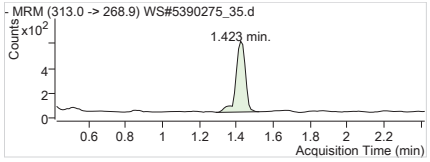


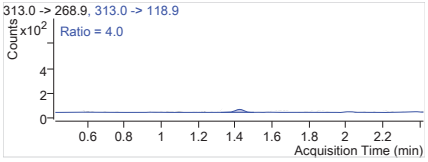
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



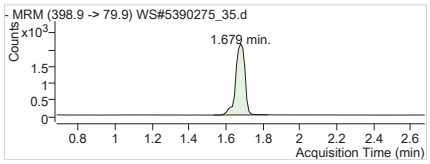


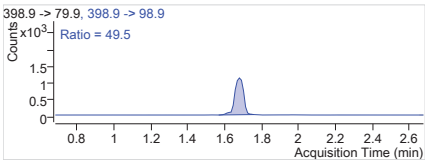
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.087)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



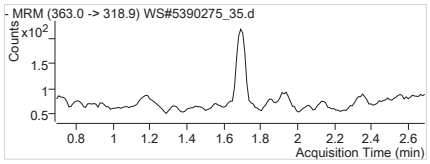


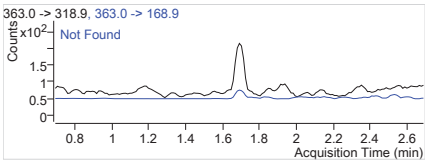
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 0.02 µg/L
Area ratio: 0.35602
Sample type: Sample



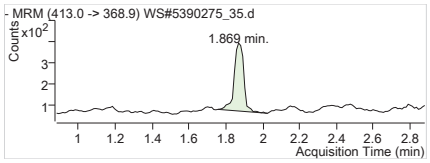


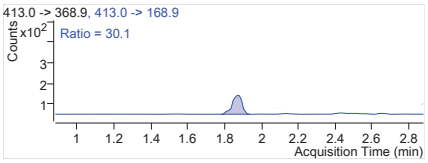
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 0.31 µg/L
Area ratio: 5.07231
Sample type: Sample



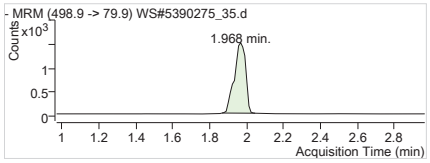


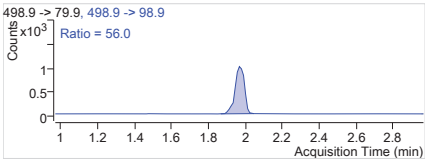
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



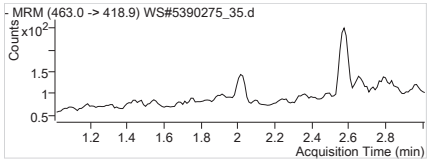


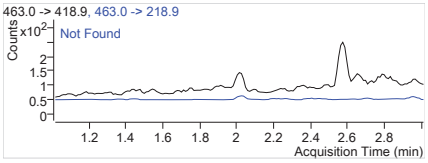
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 0.01 µg/L
Area ratio: 0.15769
Sample type: Sample



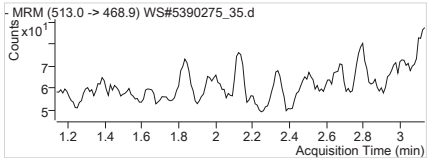


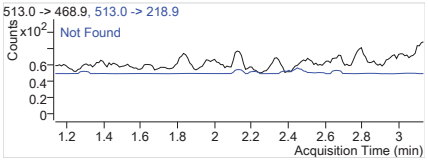
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 0.31 µg/L
Area ratio: 4.01596
Sample type: Sample



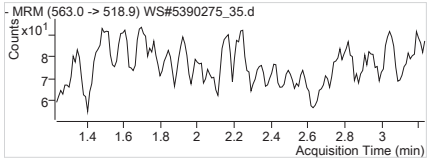


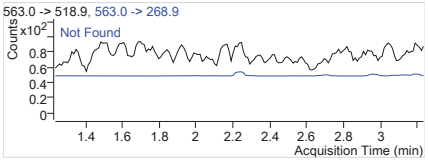
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.014)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



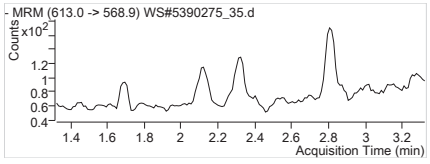


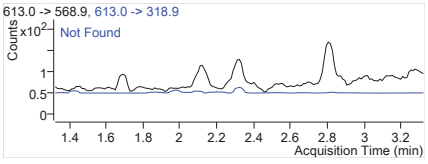
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



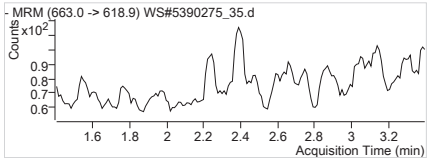


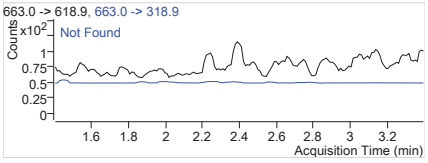
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.234)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



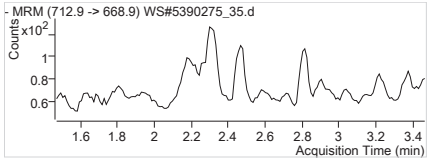


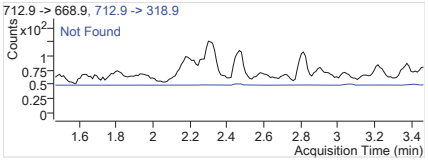
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



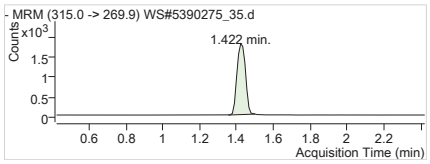


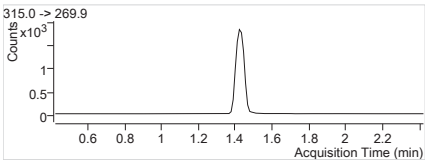
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



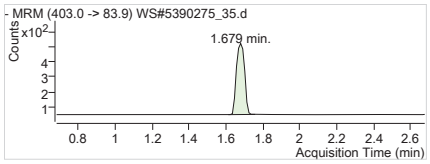


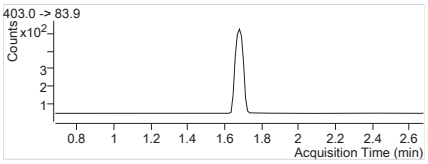
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



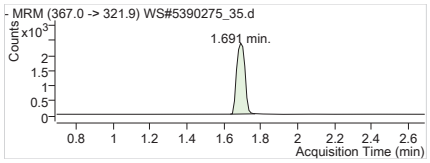


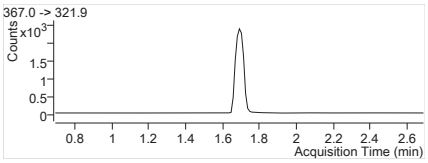
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 97.07 µg/L
Area ratio: 0.24226
Sample type: Sample



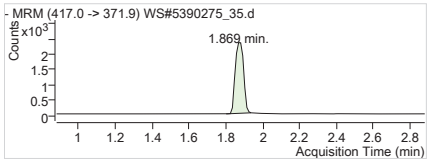


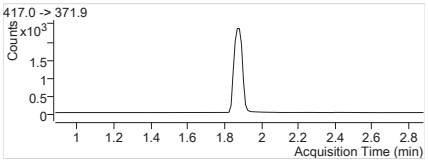
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 99.39 µg/L
Area ratio: 0.06213
Sample type: Sample



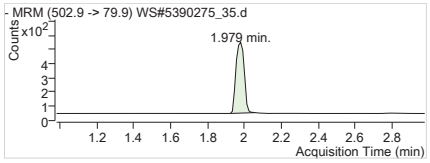


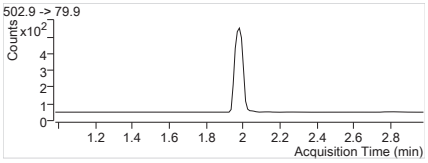
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 95.94 µg/L
Area ratio: 0.31207
Sample type: Sample



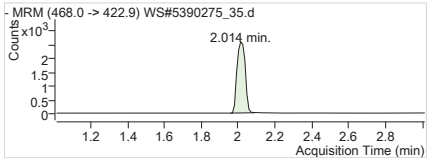


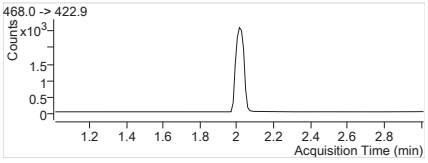
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 89.82 µg/L
Area ratio: 0.30991
Sample type: Sample



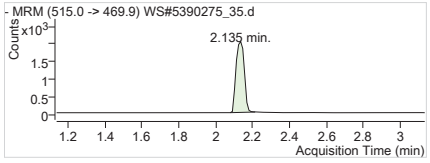


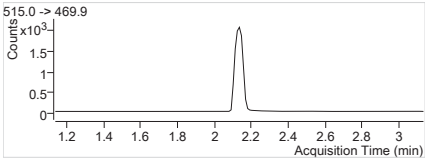
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 84.61 µg/L
Area ratio: 0.06637
Sample type: Sample



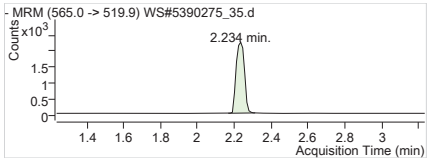


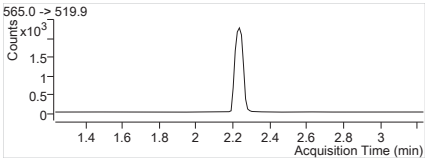
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 98.55 µg/L
Area ratio: 0.33606
Sample type: Sample



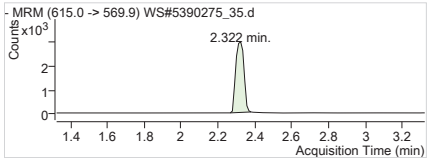


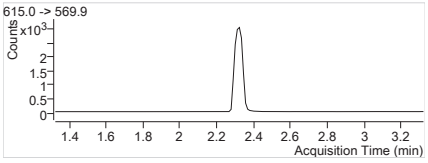
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 96.41 µg/L
Area ratio: 0.20089
Sample type: Sample



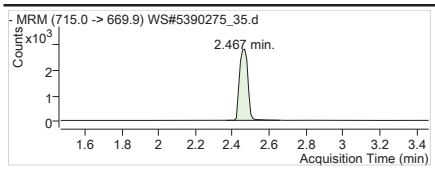


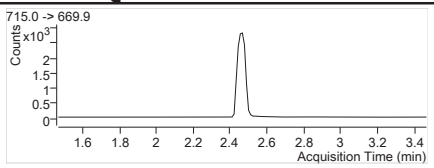
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 84.61 µg/L
Area ratio: 0.22295
Sample type: Sample



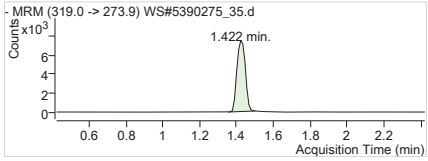


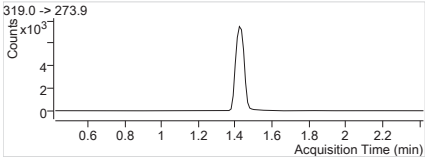
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 86.69 µg/L
Area ratio: 0.29549
Sample type: Sample



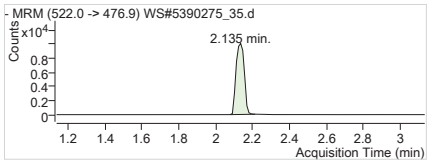


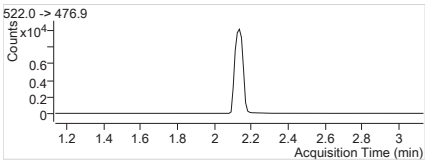
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	71.70 µg/L
Area ratio:	0.28355
Sample type:	Sample





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	2.75 µg/L
Area ratio:	0
Sample type:	Sample





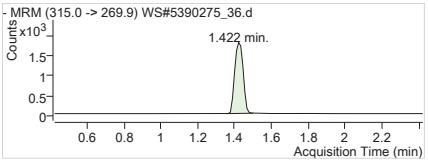
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	2.76 µg/L
Area ratio:	0
Sample type:	Sample

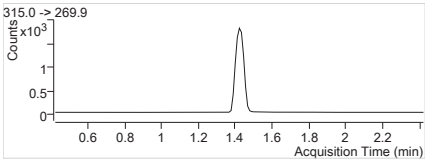
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics

Sample Name	**5390275:FZT424-01**	**Instrument**	LCMS04
Data File	WS#5390275_36.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low.m	**Position**	P2-D5
Acq. Date	2018/02/09 7:26:53 PM	**Injection Volume**	Per Method
Sample Annotation	-		

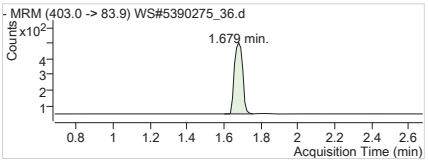
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	5661	1.42	1 µg/L		
MPFHxS	1423	1.68	1 µg/L		
MPFHpA	7307	1.69	1 µg/L		
MPFOA	7700	1.87	1 µg/L		
MPFOS	1646	1.98	1 µg/L		
MPFNA	8401	2.01	1 µg/L		
MPFDA	6862	2.14	1 µg/L		
MPFUnA	8126	2.23	1 µg/L		
MPFDoA	9304	2.32	1 µg/L		
MPFTeDA	9948	2.47	1 µg/L		
13C6-PFHxA IS	23008	1.42	1 µg/L		
13C9-PFDA IS	31282	2.13	1 µg/L		

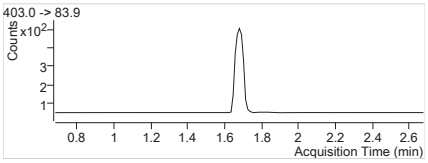
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1			-	ND	-
PFHxA 1			-	ND	-
PFHxS 1			-	ND	-
PFHpA 1			-	ND	-
PFOA 1			-	ND	-
PFOS 1			-	ND	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	5661	1.42	-	98.58 µg/L	-
18O2-PFHxS	1423	1.68	-	98.93 µg/L	-
13C4-PFHpA	7307	1.69	-	97.63 µg/L	-
13C4-PFOA	7700	1.87	-	97.00 µg/L	-
13C4-PFOS	1646	1.98	-	91.20 µg/L	-
13C5-PFNA	8400	2.01	-	107.06 µg/L	-
13C2-PFDA	6755	2.14	-	103.63 µg/L	-
13C2-PFUnA	8126	2.23	-	98.58 µg/L	-
13C2-PFDoA	9304	2.32	-	87.25 µg/L	-
13C2-PFTeDA	10300	2.47	-	83.26 µg/L	-
13C6-PFHxA	23008	1.42	-	2.36 µg/L	-
13C9-PFDA	31282	2.13	-	2.43 µg/L	-



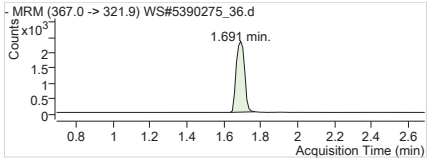


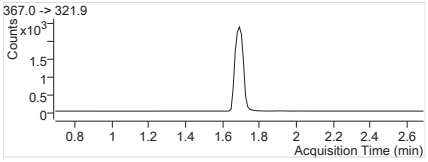
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



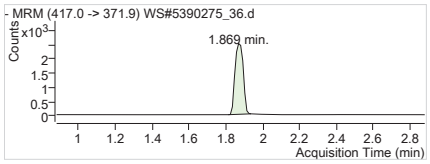


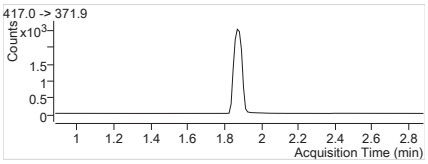
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



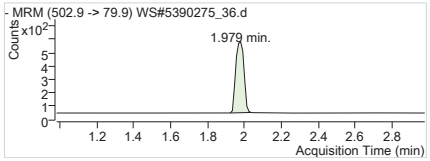


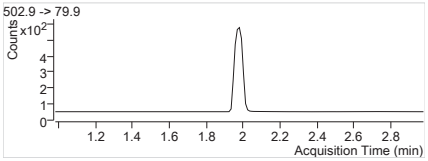
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



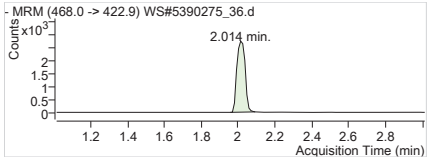


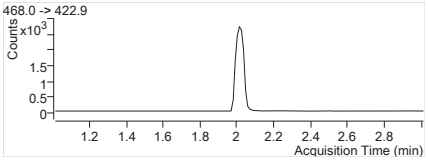
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: Sample



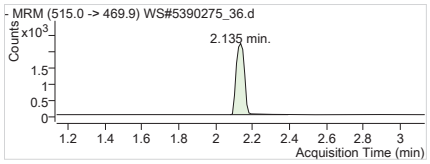


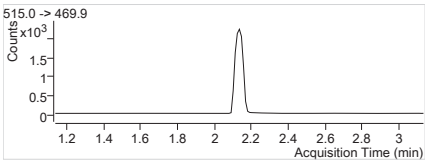
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



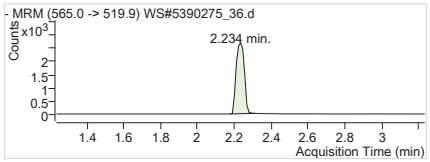


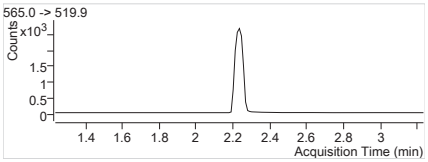
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



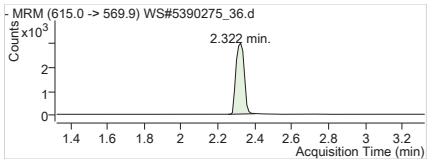


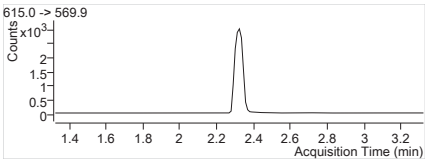
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



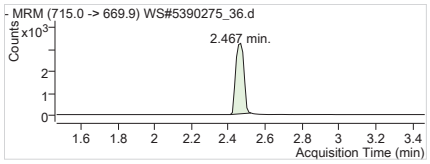


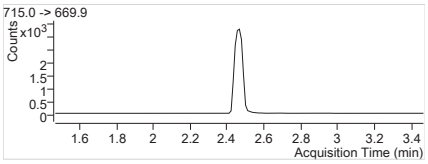
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



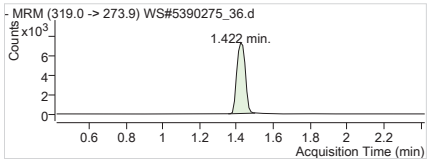


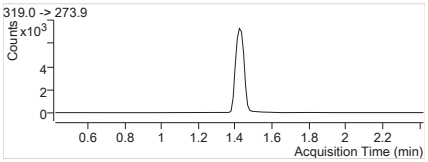
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



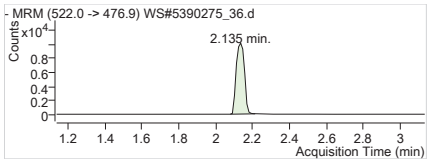


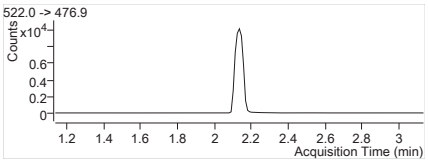
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



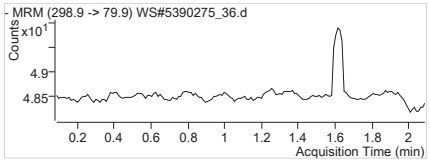


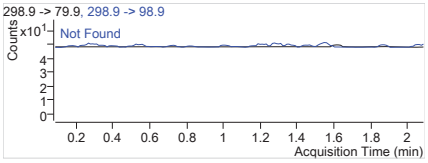
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



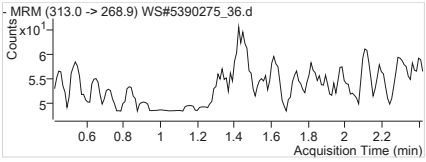


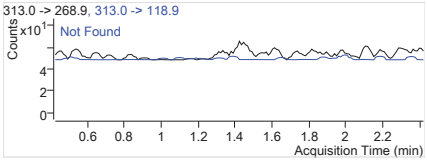
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample





PFBS 1 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.087)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample

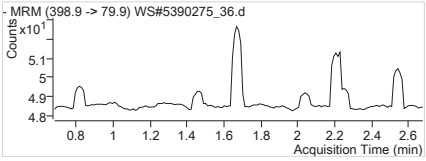


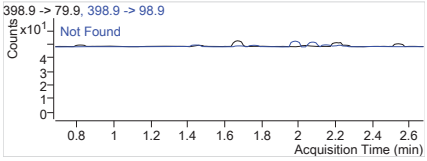


PFHxA 1

RT (Exp. RT):	0.000 (1.423)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

313.0 -> 268.9

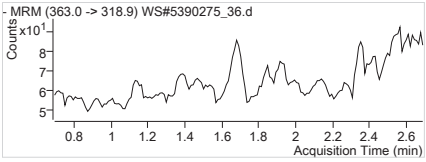


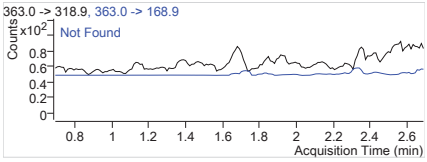


PFHxS 1

RT (Exp. RT):	0.000 (1.679)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

398.9 -> 79.9

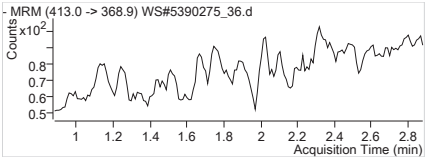


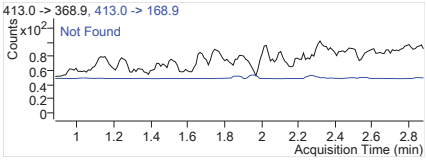


PFHpA 1

RT (Exp. RT):	0.000 (1.691)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

363.0 -> 318.9

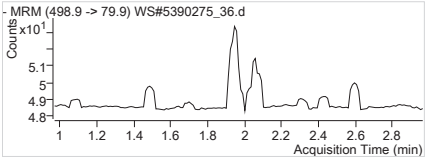


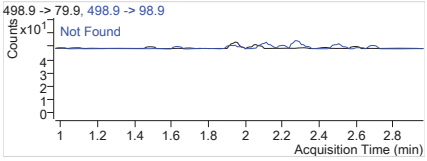


PFOA 1

RT (Exp. RT):	0.000 (1.881)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

413.0 -> 368.9

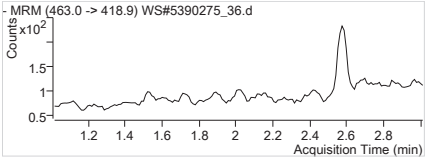


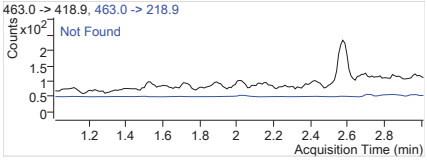


PFOS 1

RT (Exp. RT):	0.000 (1.968)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

498.9 -> 79.9

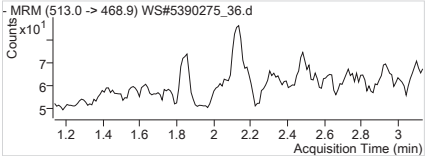


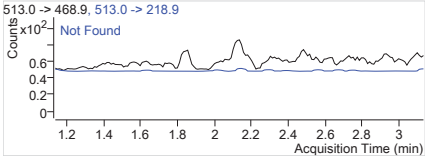


PFNA 1

RT (Exp. RT):	0.000 (2.014)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

463.0 -> 418.9

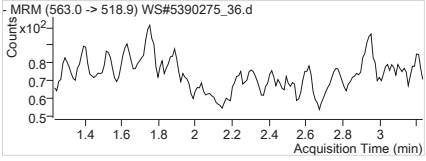


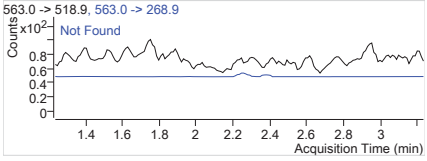


PFDA 1

RT (Exp. RT):	0.000 (2.135)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

513.0 -> 468.9

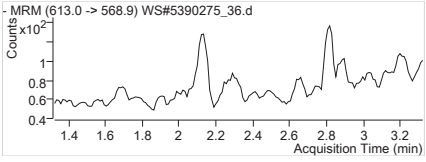


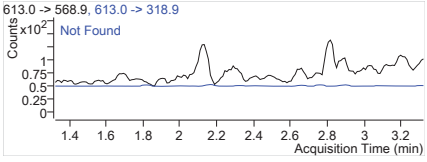


PFUnA 1

RT (Exp. RT):	0.000 (2.234)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

563.0 -> 518.9

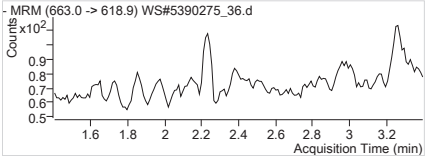


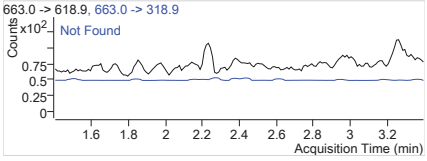


PFDoA 1

RT (Exp. RT):	0.000 (2.323)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

613.0 -> 568.9

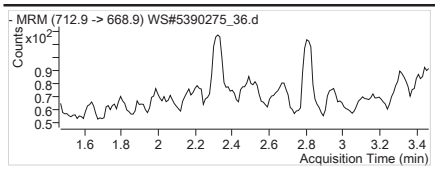


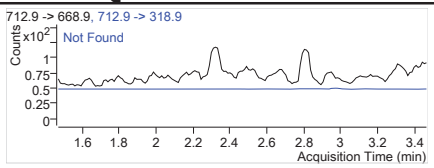


PFTrDA 1

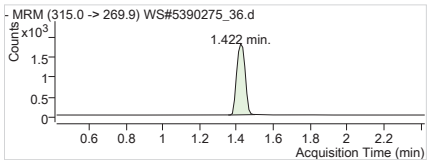
RT (Exp. RT):	0.000 (2.400)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

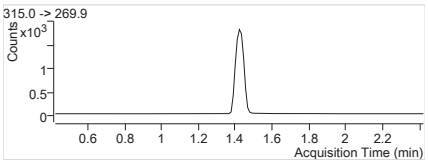
663.0 -> 618.9



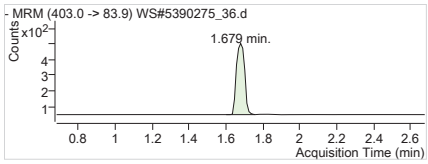


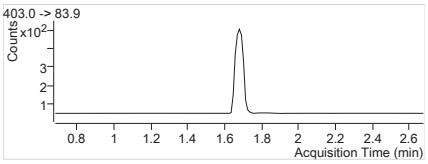
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



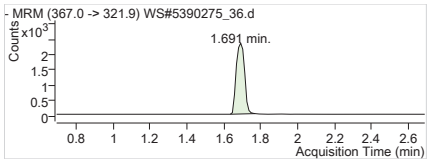


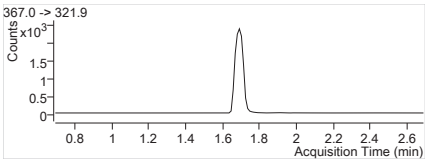
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 98.58 µg/L
Area ratio: 0.24604
Sample type: Sample



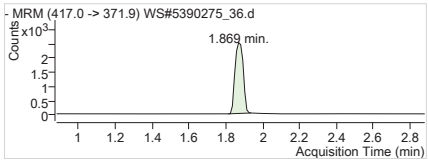


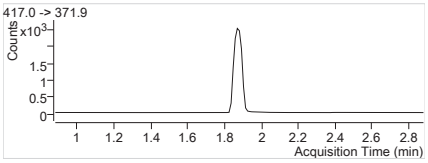
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 98.93 µg/L
Area ratio: 0.06185
Sample type: Sample



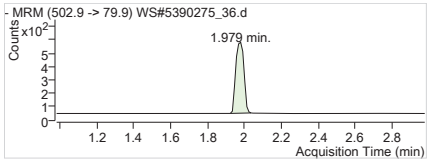


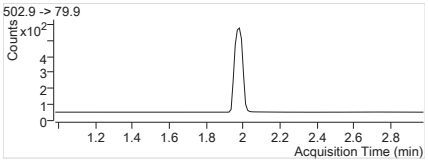
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 97.63 µg/L
Area ratio: 0.31759
Sample type: Sample



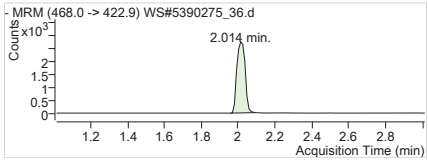


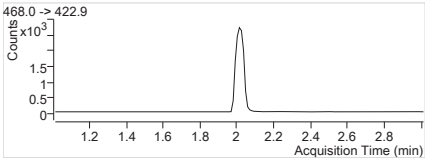
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 97.00 µg/L
Area ratio: 0.33467
Sample type: Sample



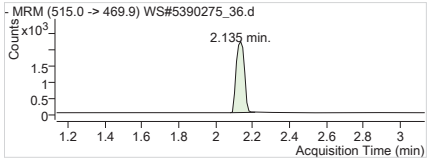


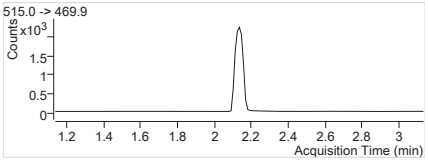
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 91.20 µg/L
Area ratio: 0.07154
Sample type: Sample



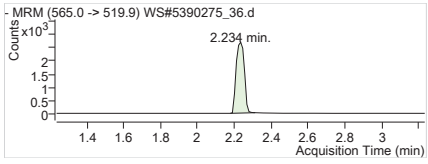


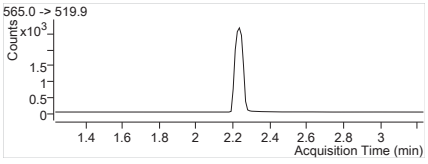
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 107.06 µg/L
Area ratio: 0.36509
Sample type: Sample



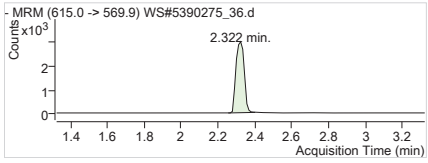


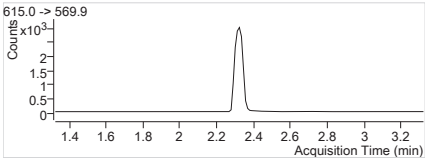
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 103.63 µg/L
Area ratio: 0.21594
Sample type: Sample



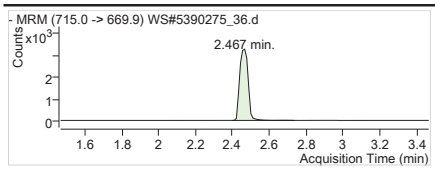


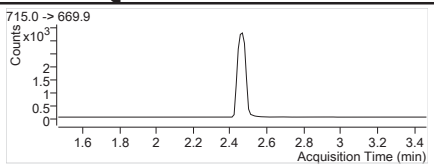
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 98.58 µg/L
Area ratio: 0.25977
Sample type: Sample



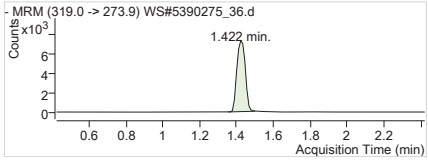


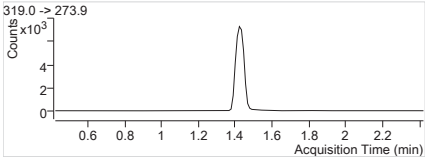
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 87.25 µg/L
Area ratio: 0.29742
Sample type: Sample



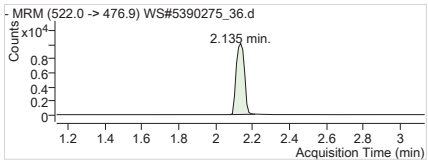


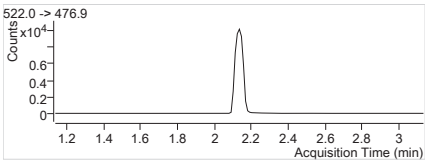
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	83.26 µg/L
Area ratio:	0.32926
Sample type:	Sample





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	2.36 µg/L
Area ratio:	0
Sample type:	Sample





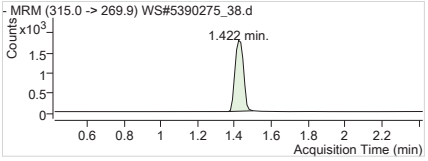
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	2.43 µg/L
Area ratio:	0
Sample type:	Sample

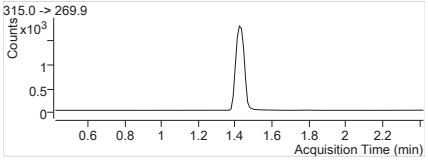
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics

Sample Name	**5390275:FZT425-01**	**Instrument**	LCMS04
Data File	WS#5390275_38.d	**Operator**	
Sample Type	Sample	**Dilution**	0.0273
Acq. Method	PFC_Water_Low.m	**Position**	P2-D6
Acq. Date	2018/02/09 7:36:45 PM	**Injection Volume**	Per Method
Sample Annotation	-		

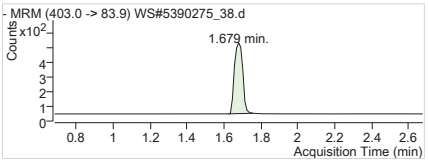
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	5620	1.42	1 µg/L		
MPFHxS	1519	1.68	1 µg/L		
MPFHpA	7354	1.69	1 µg/L		
MPFOA	7481	1.87	1 µg/L		
MPFOS	1541	1.98	1 µg/L		
MPFNA	7292	2.01	1 µg/L		
MPFDA	6262	2.14	1 µg/L		
MPFUnA	6772	2.23	1 µg/L		
MPFDoA	9056	2.32	1 µg/L		
MPFTeDA	8882	2.47	1 µg/L		
13C6-PFHxA IS	23542	1.42	1 µg/L		
13C9-PFDA IS	31050	2.13	1 µg/L		

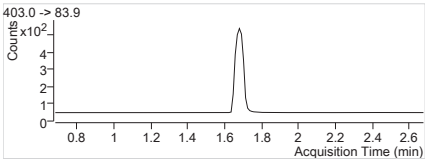
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1			-	ND	-
PFHxA 1			-	ND	-
PFHxS 1			-	ND	-
PFHpA 1			-	ND	-
PFOA 1			-	ND	-
PFOS 1			-	ND	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	5620	1.42	-	95.65 µg/L	-
18O2-PFHxS	1519	1.68	-	103.21 µg/L	-
13C4-PFHpA	7354	1.69	-	96.03 µg/L	-
13C4-PFOA	7481	1.87	-	92.10 µg/L	-
13C4-PFOS	1541	1.98	-	83.44 µg/L	-
13C5-PFNA	7291	2.01	-	90.82 µg/L	-
13C2-PFDA	6165	2.14	-	95.29 µg/L	-
13C2-PFUnA	6772	2.23	-	82.77 µg/L	-
13C2-PFDoA	9056	2.32	-	85.56 µg/L	-
13C2-PFTeDA	9151	2.47	-	74.52 µg/L	-
13C6-PFHxA	23542	1.42	-	2.74 µg/L	-
13C9-PFDA	31050	2.13	-	2.74 µg/L	-



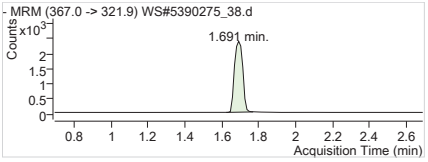


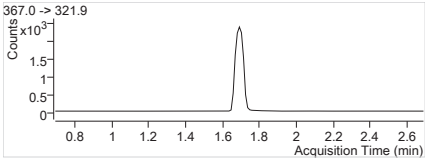
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



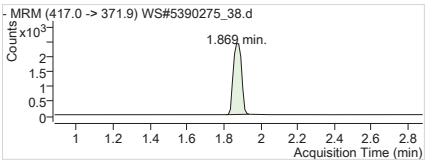


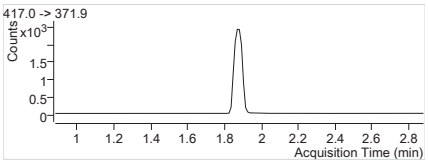
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



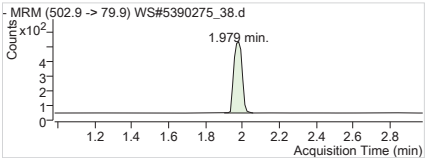


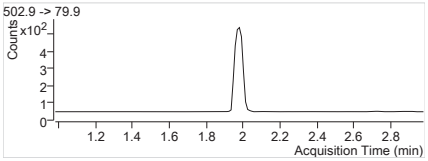
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



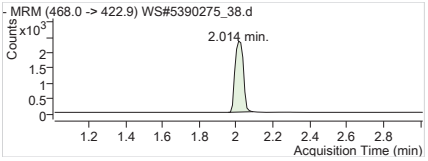


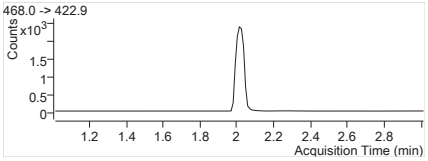
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: Sample



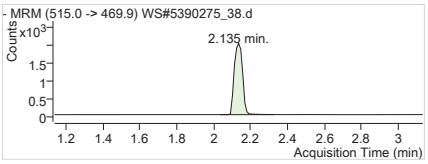


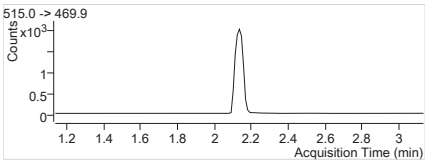
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



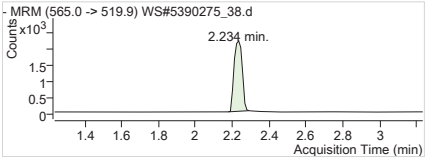


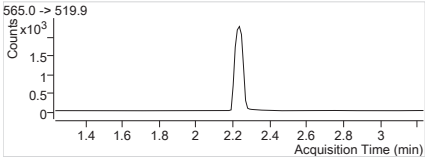
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



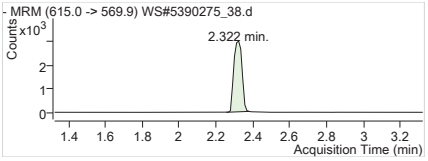


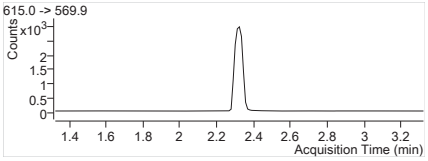
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



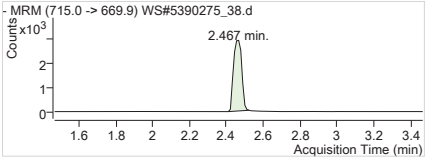


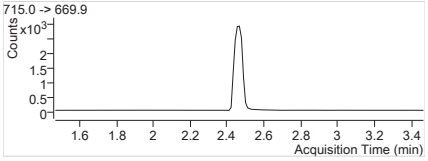
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



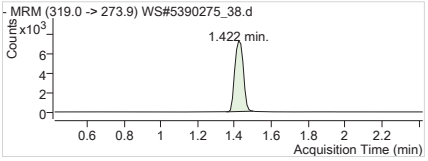


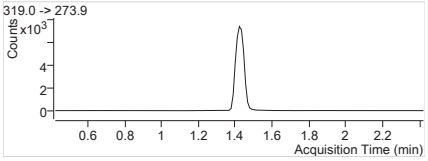
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



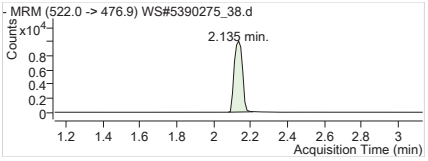


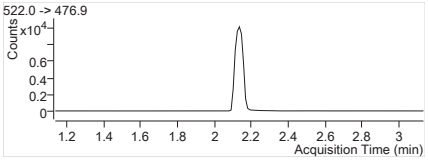
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



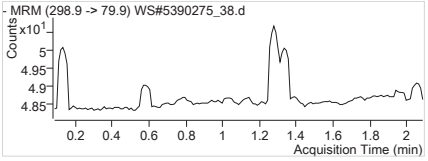


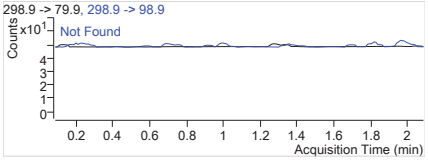
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



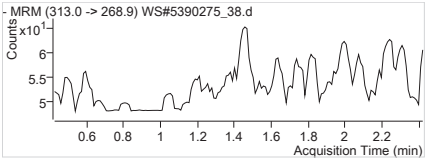


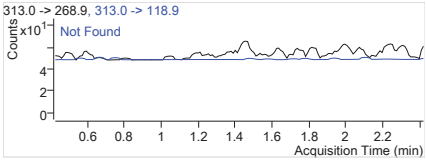
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



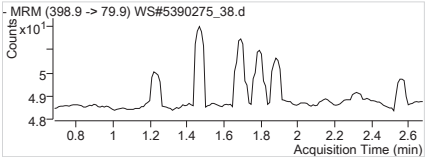


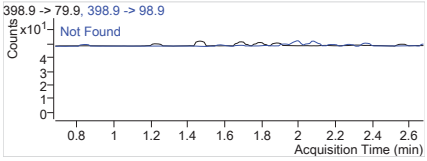
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.087)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



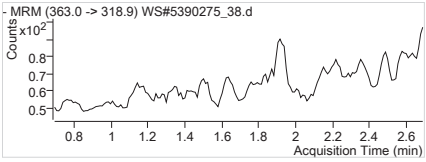


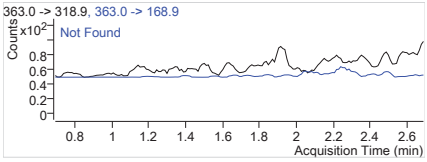
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.423)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



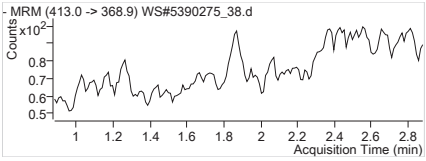


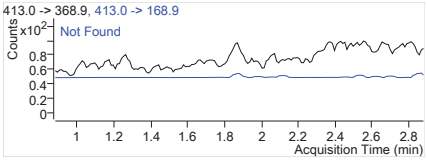
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.679)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



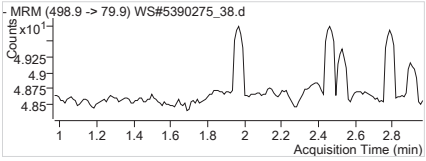


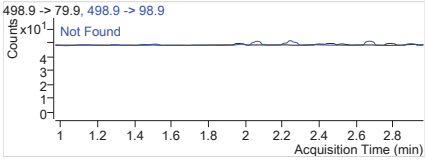
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



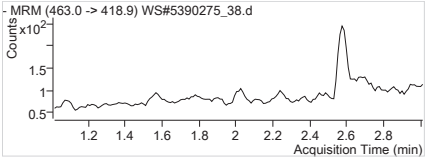


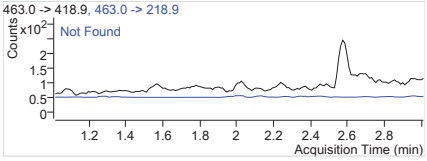
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



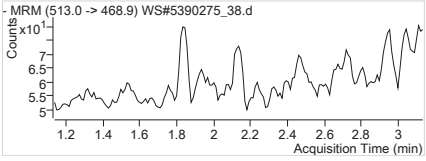


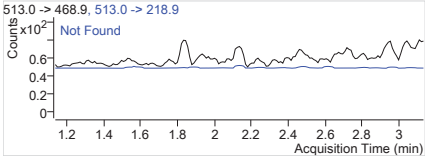
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.968)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



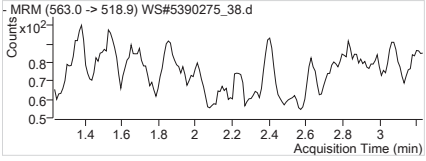


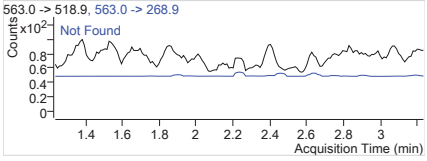
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.014)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



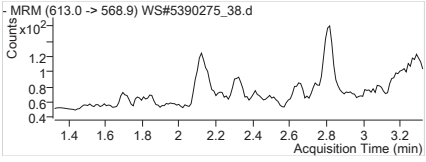


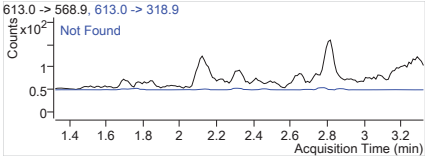
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



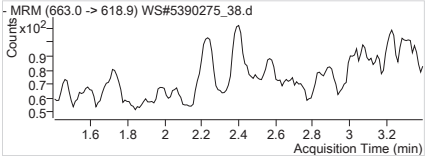


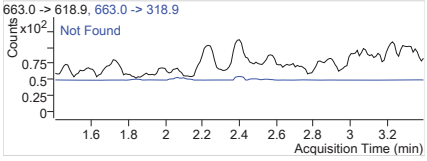
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.234)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



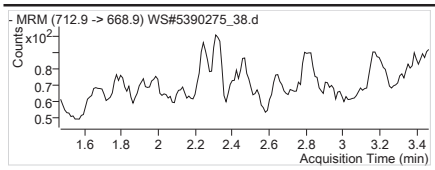


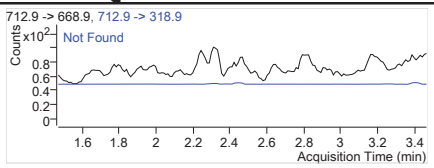
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



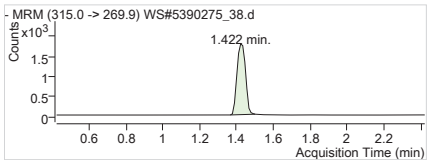


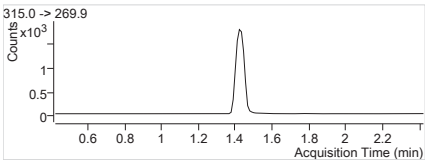
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



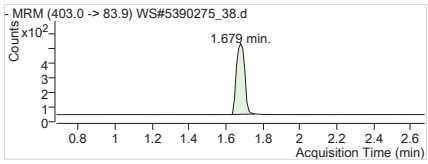


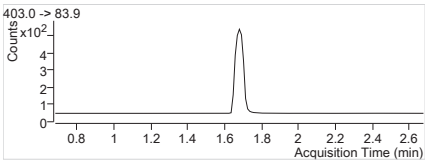
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



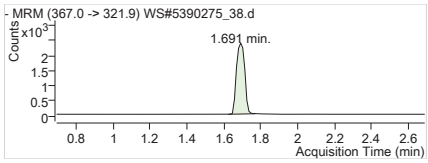


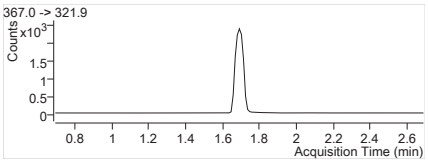
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 95.65 µg/L
Area ratio: 0.23872
Sample type: Sample



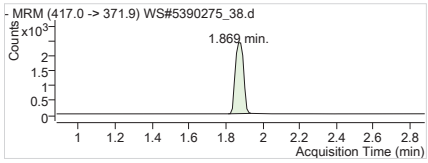


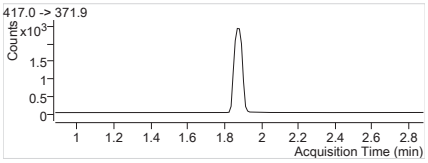
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 103.21 µg/L
Area ratio: 0.06452
Sample type: Sample



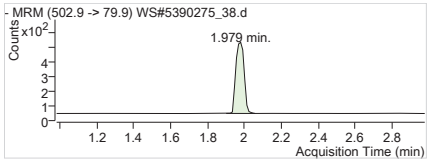


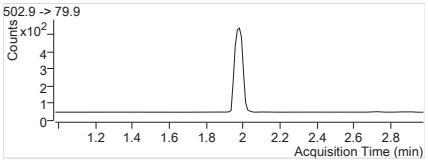
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 96.03 µg/L
Area ratio: 0.31238
Sample type: Sample



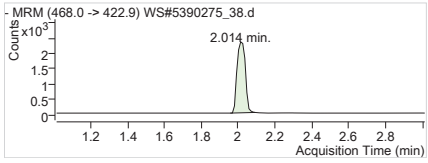


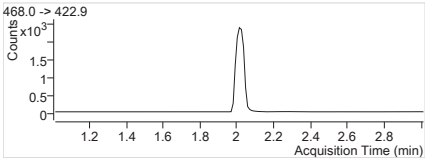
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 92.10 µg/L
Area ratio: 0.31777
Sample type: Sample



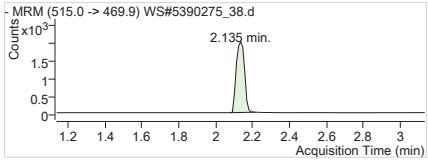


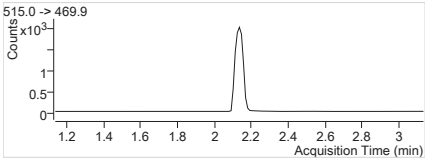
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 83.44 µg/L
Area ratio: 0.06546
Sample type: Sample



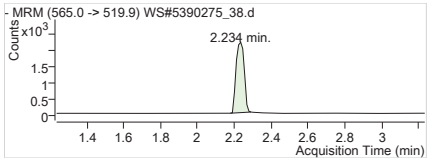


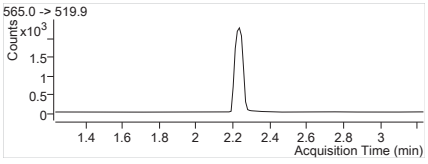
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 90.82 µg/L
Area ratio: 0.30970
Sample type: Sample



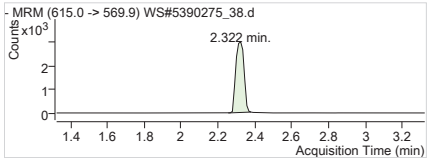


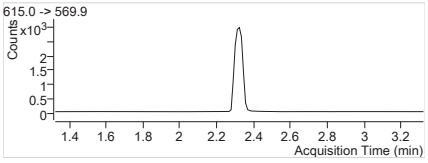
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 95.29 µg/L
Area ratio: 0.19855
Sample type: Sample



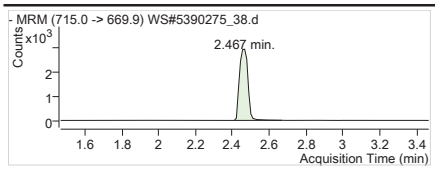


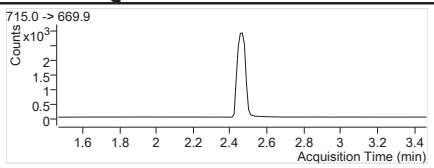
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 82.77 µg/L
Area ratio: 0.21810
Sample type: Sample



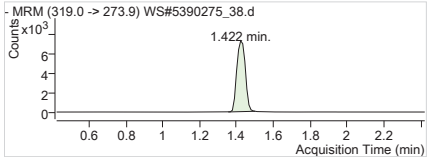


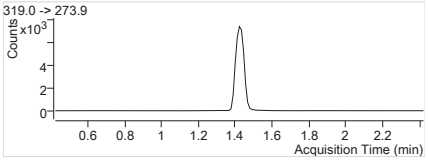
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 85.56 µg/L
Area ratio: 0.29166
Sample type: Sample



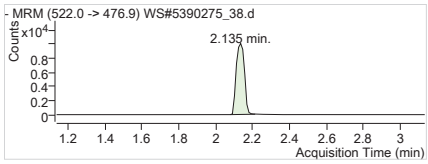


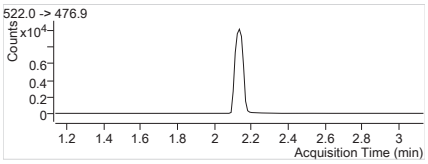
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	74.52 µg/L
Area ratio:	0.29472
Sample type:	Sample





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	2.74 µg/L
Area ratio:	0
Sample type:	Sample





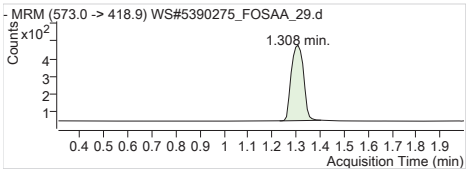
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	2.74 µg/L
Area ratio:	0
Sample type:	Sample

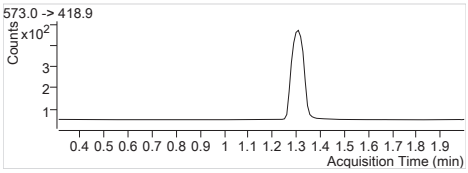
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**5390275:FZT419-01:10x**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_29.d	**Operator**	
Sample Type	Sample	**Dilution**	0.24
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-C8
Acq. Date	2018/02/10 1:35:29 AM	**Injection Volume**	Per Method
Sample Annotation	not used.		

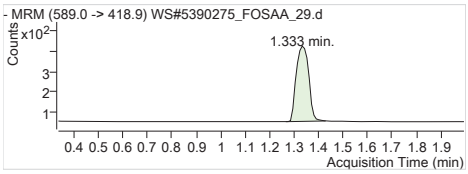
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1511	1.31	1 µg/L		
D5-EtFOSAA IS	1338	1.33	1 µg/L		
13C9-PFDA IS	23518	0.89	1 µg/L		

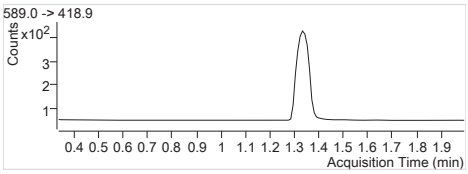
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1548	1.31	-	89.76 µg/L	-
D5-EtFOSAA	1346	1.33	-	87.77 µg/L	-
13C9-PFDA	23125	0.89	-	23.41 µg/L	-



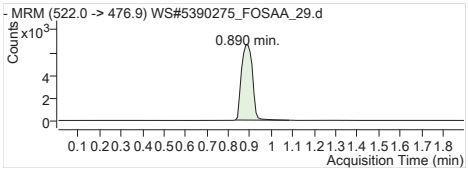


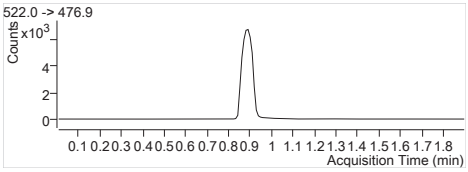
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: Sample



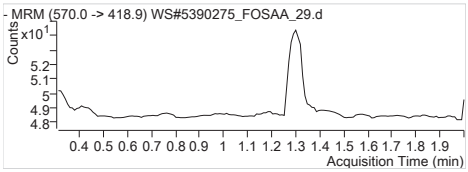


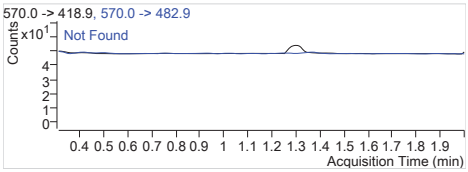
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: Sample



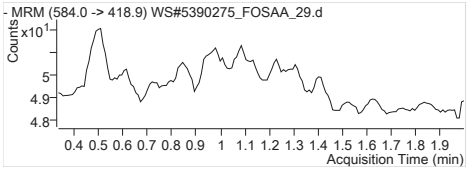


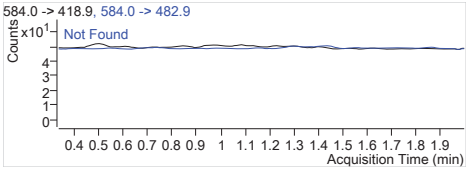
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.890 (0.900)
Concentration: 1 µg/L
Sample type: Sample



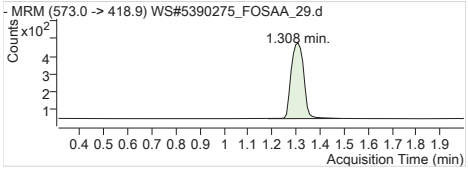


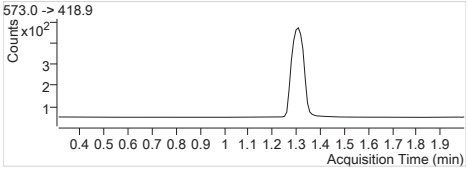
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



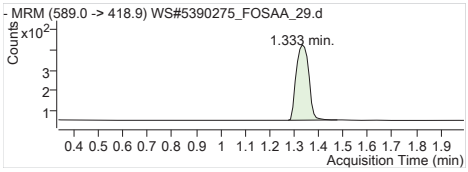


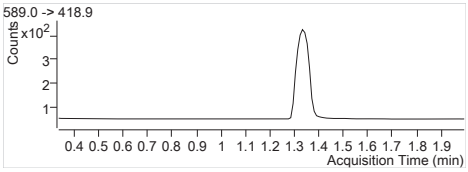
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.334)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



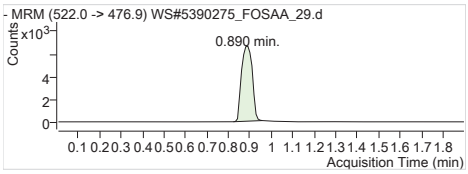


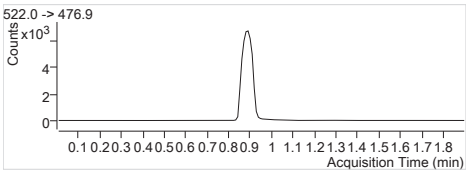
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 89.76 µg/L
Area ratio: 0.06582
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	87.77 µg/L
Area ratio:	0.05723
Sample type:	Sample





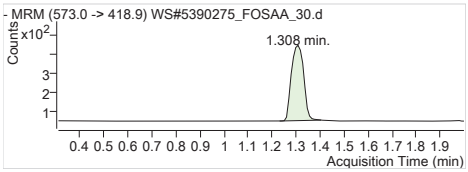
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.890 (0.900)
Calc. conc.	23.41 µg/L
Area ratio:	0
Sample type:	Sample

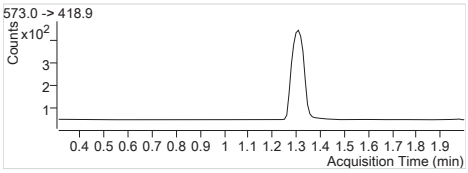
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**5390275:FZT419-01**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_30.d	**Operator**	
Sample Type	Sample	**Dilution**	0.025
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-C9
Acq. Date	2018/02/10 1:37:54 AM	**Injection Volume**	Per Method
Sample Annotation	Reported for all.		

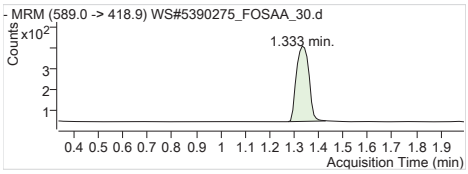
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1414	1.31	1 µg/L		
D5-EtFOSAA IS	1279	1.33	1 µg/L		
13C9-PFDA IS	22422	0.89	1 µg/L		

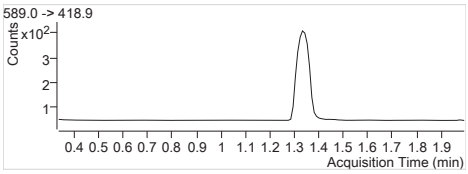
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1436	1.31	-	87.33 µg/L	-
D5-EtFOSAA	1278	1.33	-	87.41 µg/L	-
13C9-PFDA	21978	0.89	-	2.32 µg/L	-



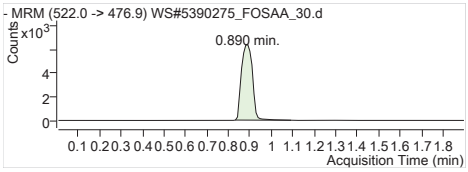


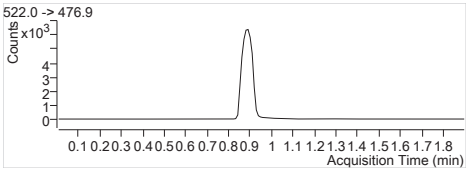
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: Sample



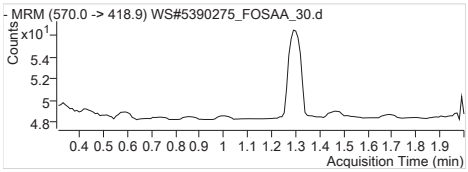


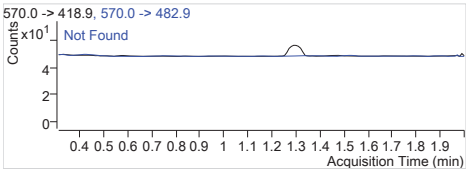
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: Sample



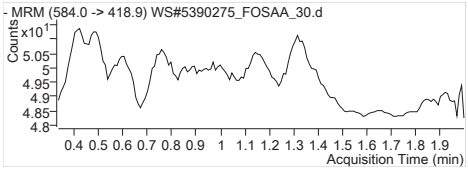


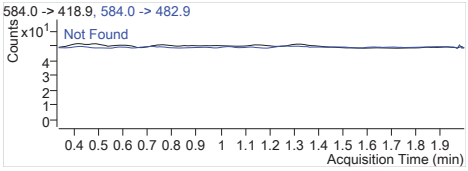
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.890 (0.900)
Concentration: 1 µg/L
Sample type: Sample



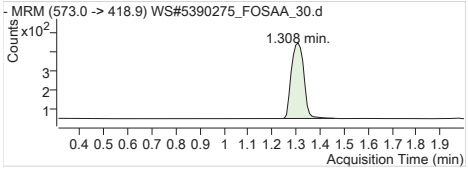


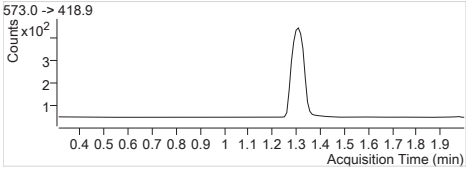
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



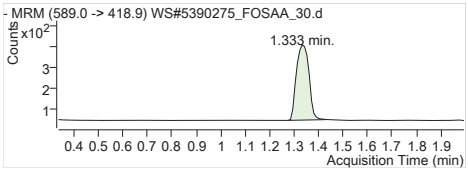


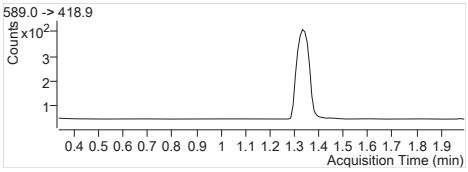
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.334)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



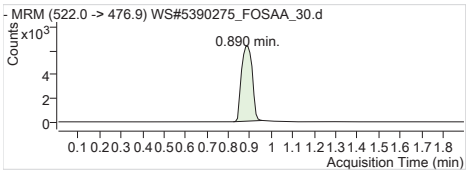


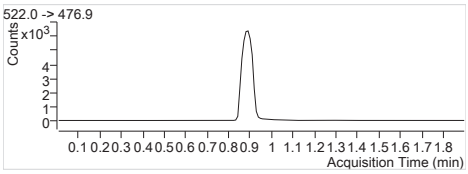
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 87.33 µg/L
Area ratio: 0.06404
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	87.41 µg/L
Area ratio:	0.05700
Sample type:	Sample





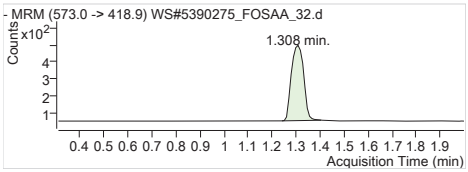
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.890 (0.900)
Calc. conc.	2.32 µg/L
Area ratio:	0
Sample type:	Sample

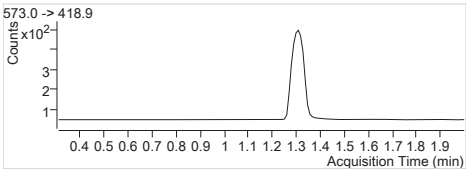
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**5390275:FZT420-01**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_32.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-D1
Acq. Date	2018/02/10 1:42:43 AM	**Injection Volume**	Per Method
Sample Annotation	-		

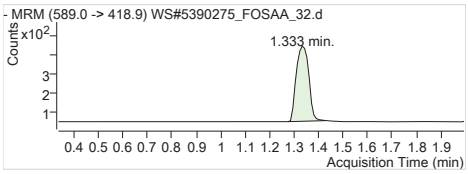
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1590	1.31	1 µg/L		
D5-EtFOSAA IS	1401	1.33	1 µg/L		
13C9-PFDA IS	24424	0.89	1 µg/L		

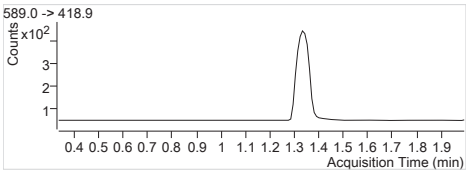
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1611	1.31	-	89.94 µg/L	-
D5-EtFOSAA	1432	1.33	-	89.91 µg/L	-
13C9-PFDA	24277	0.89	-	2.46 µg/L	-



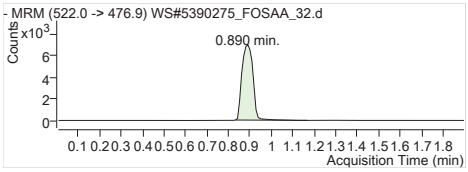


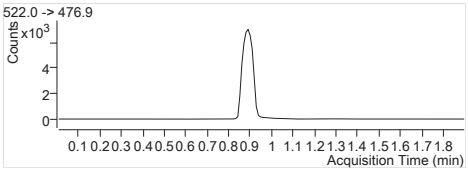
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: Sample



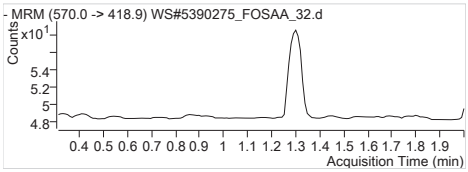


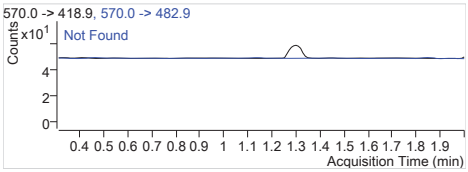
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: Sample



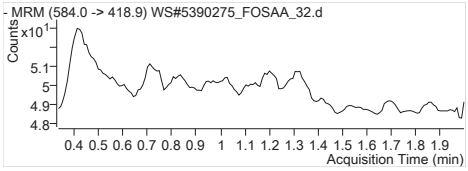


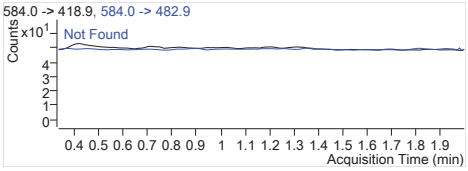
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.890 (0.900)
Concentration: 1 µg/L
Sample type: Sample



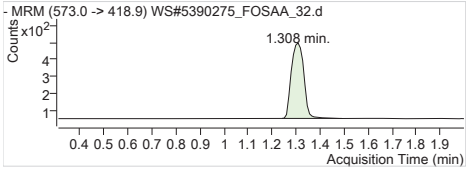


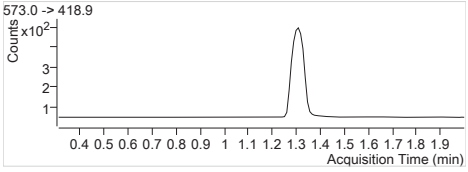
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



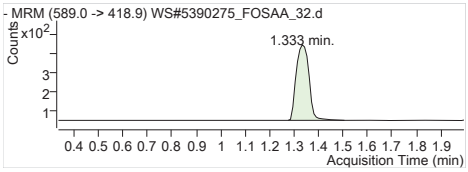


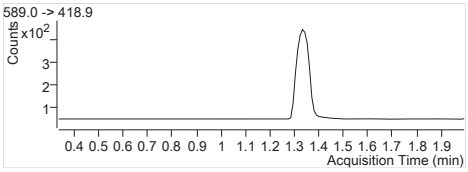
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.334)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



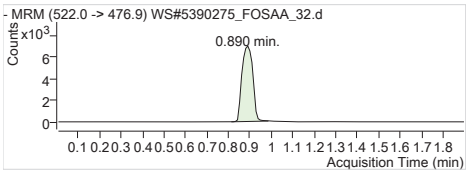


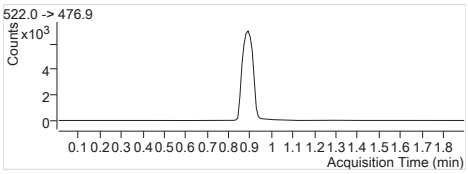
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 89.94 µg/L
Area ratio: 0.06596
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	89.91 µg/L
Area ratio:	0.05863
Sample type:	Sample





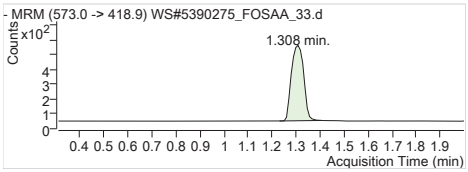
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.890 (0.900)
Calc. conc.	2.46 µg/L
Area ratio:	0
Sample type:	Sample

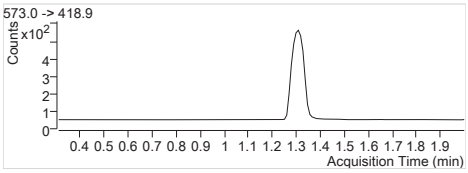
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**5390275:FZT421-01**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_33.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-D2
Acq. Date	2018/02/10 1:45:06 AM	**Injection Volume**	Per Method
Sample Annotation	-		

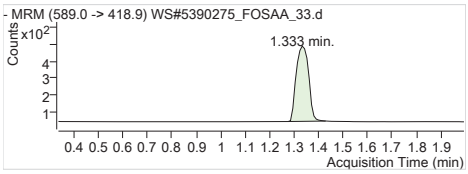
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1828	1.31	1 µg/L		
D5-EtFOSAA IS	1539	1.33	1 µg/L		
13C9-PFDA IS	24873	0.90	1 µg/L		

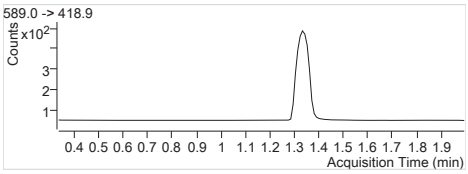
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1836	1.31	-	100.66 µg/L	-
D5-EtFOSAA	1552	1.33	-	95.69 µg/L	-
13C9-PFDA	24264	0.90	-	2.46 µg/L	-



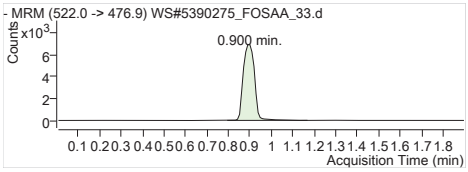


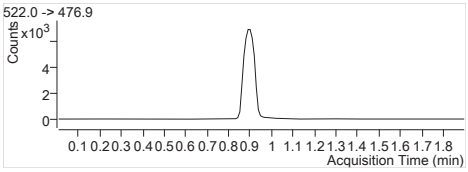
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: Sample



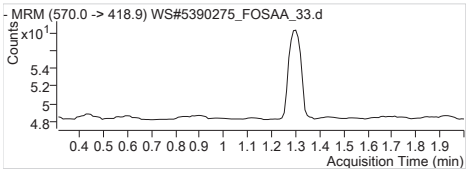


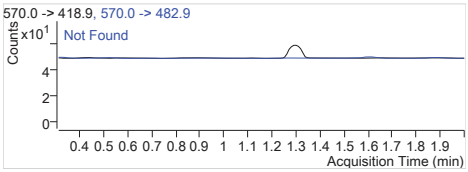
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: Sample



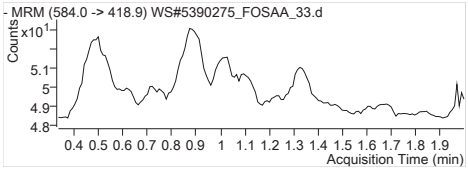


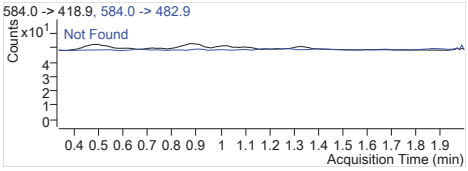
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.900 (0.900)
Concentration: 1 µg/L
Sample type: Sample



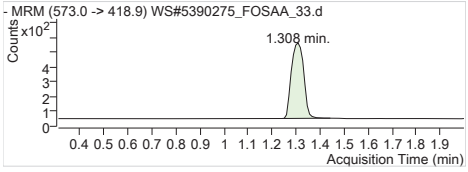


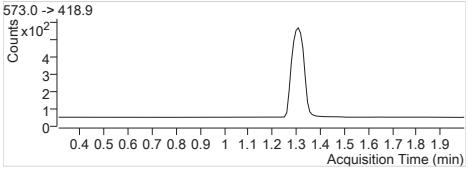
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



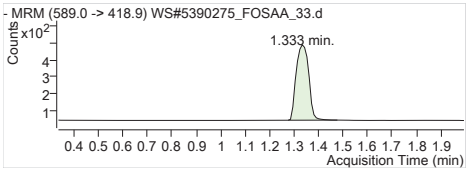


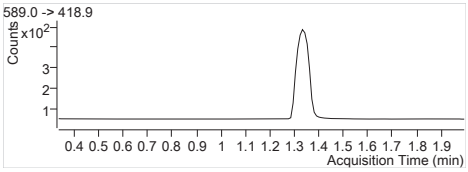
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.334)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



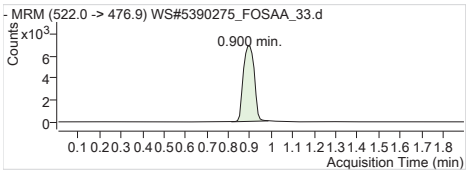


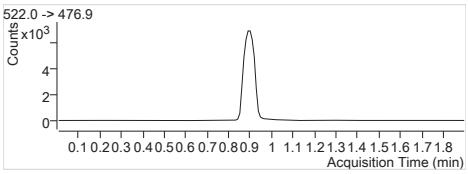
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 100.66 µg/L
Area ratio: 0.07381
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	95.69 µg/L
Area ratio:	0.06240
Sample type:	Sample





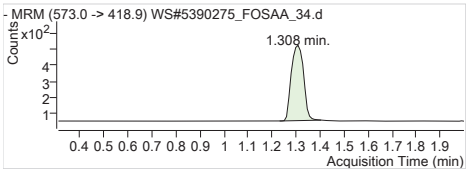
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.900 (0.900)
Calc. conc.	2.46 µg/L
Area ratio:	0
Sample type:	Sample

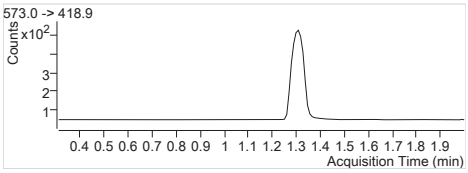
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**5390275:FZT422-01**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_34.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-D3
Acq. Date	2018/02/10 1:47:32 AM	**Injection Volume**	Per Method
Sample Annotation	-		

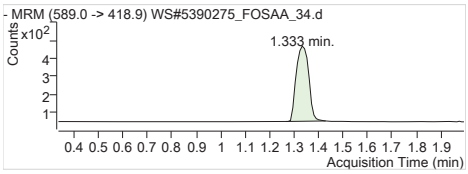
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1692	1.31	1 µg/L		
D5-EtFOSAA IS	1486	1.33	1 µg/L		
13C9-PFDA IS	24737	0.89	1 µg/L		

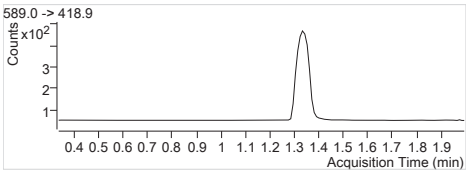
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1720	1.31	-	94.82 µg/L	-
D5-EtFOSAA	1500	1.33	-	92.99 µg/L	-
13C9-PFDA	24231	0.89	-	2.45 µg/L	-



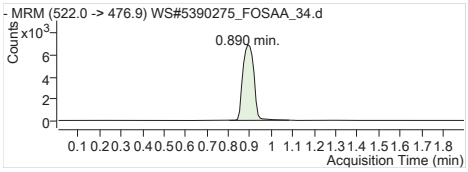


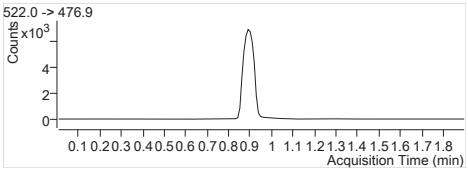
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: Sample



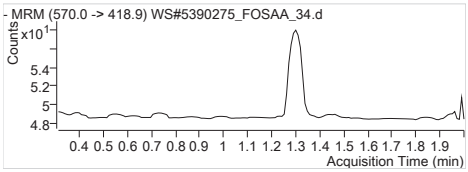


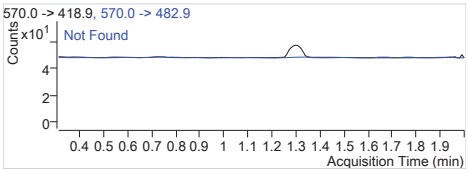
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: Sample



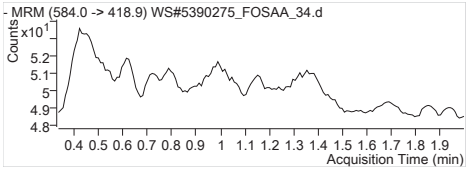


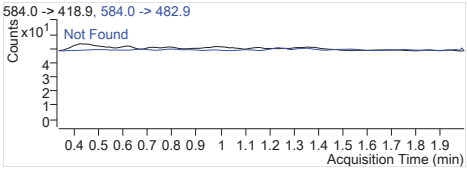
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.890 (0.900)
Concentration: 1 µg/L
Sample type: Sample



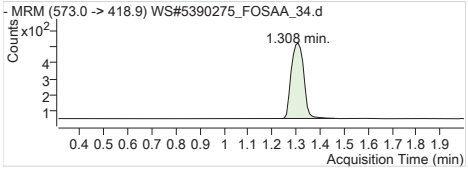


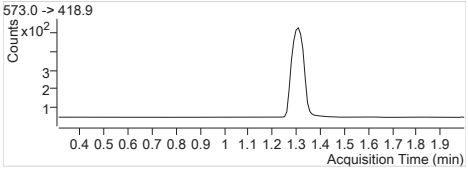
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



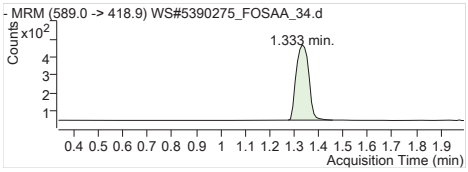


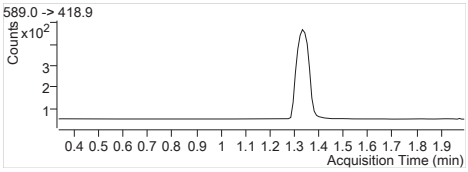
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.334)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



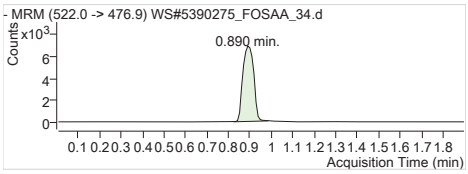


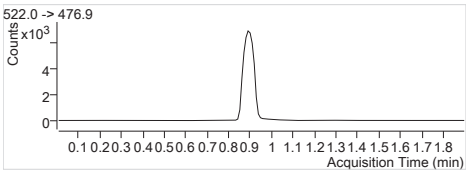
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 94.82 µg/L
Area ratio: 0.06953
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	92.99 µg/L
Area ratio:	0.06064
Sample type:	Sample





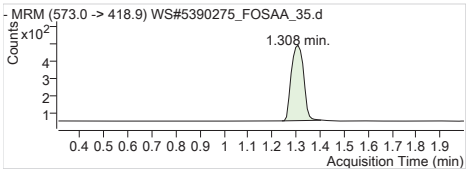
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.890 (0.900)
Calc. conc.	2.45 µg/L
Area ratio:	0
Sample type:	Sample

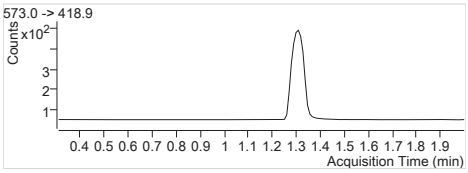
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**5390275:FZT423-01**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_35.d	**Operator**	
Sample Type	Sample	**Dilution**	0.0273
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-D4
Acq. Date	2018/02/10 1:49:57 AM	**Injection Volume**	Per Method
Sample Annotation	-		

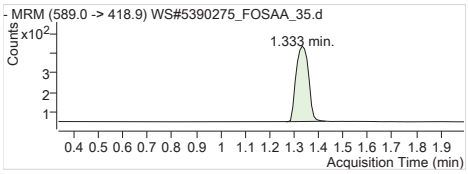
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1579	1.31	1 µg/L		
D5-EtFOSAA IS	1374	1.33	1 µg/L		
13C9-PFDA IS	23957	0.88	1 µg/L		

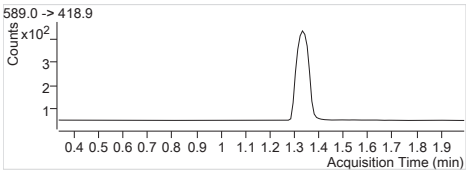
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1607	1.31	-	91.47 µg/L	-
D5-EtFOSAA	1377	1.33	-	88.14 µg/L	-
13C9-PFDA	23274	0.88	-	2.68 µg/L	-



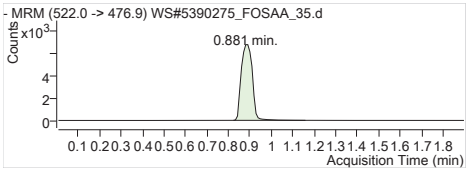


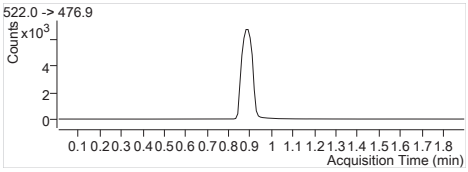
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: Sample



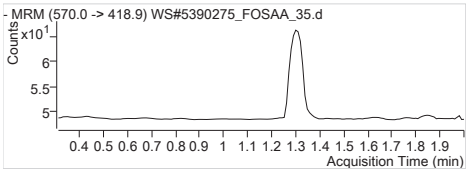


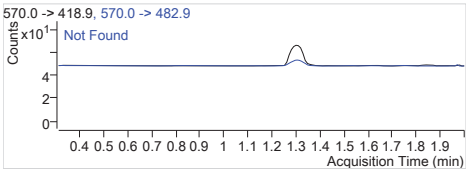
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: Sample



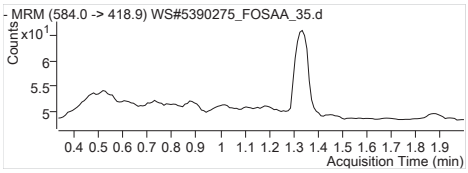


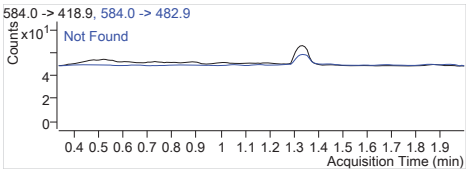
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.881 (0.900)
Concentration: 1 µg/L
Sample type: Sample



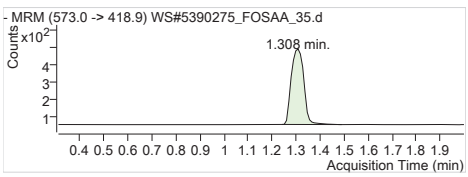


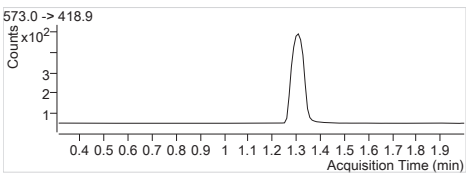
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



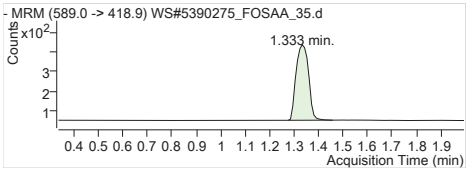


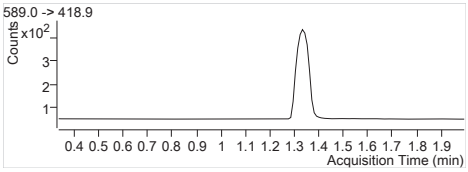
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.334)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



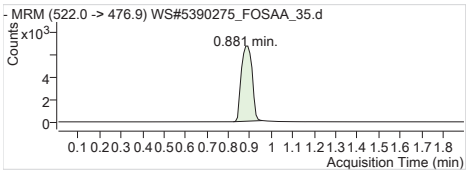


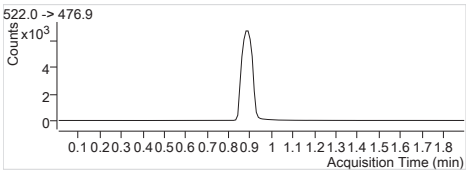
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 91.47 µg/L
Area ratio: 0.06708
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	88.14 µg/L
Area ratio:	0.05748
Sample type:	Sample





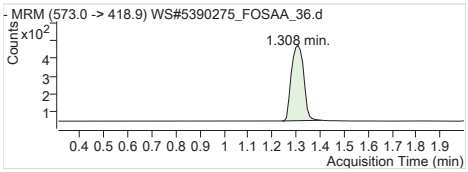
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.881 (0.900)
Calc. conc.	2.68 µg/L
Area ratio:	0
Sample type:	Sample

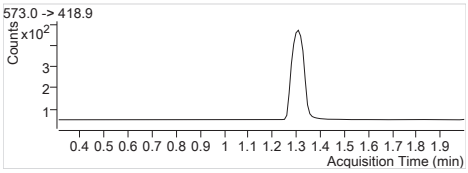
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**5390275:FZT424-01**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_36.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-D5
Acq. Date	2018/02/10 1:52:21 AM	**Injection Volume**	Per Method
Sample Annotation	-		

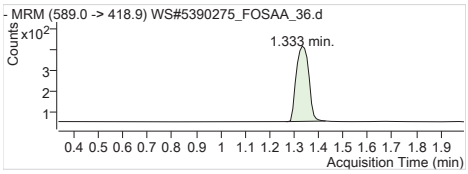
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1505	1.31	1 µg/L		
D5-EtFOSAA IS	1310	1.33	1 µg/L		
13C9-PFDA IS	24401	0.89	1 µg/L		

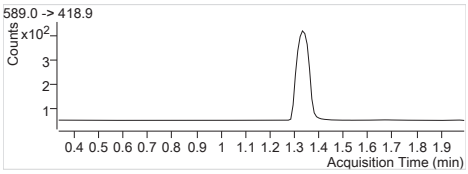
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1524	1.31	-	85.17 µg/L	-
D5-EtFOSAA	1325	1.33	-	83.27 µg/L	-
13C9-PFDA	24074	0.89	-	2.44 µg/L	-



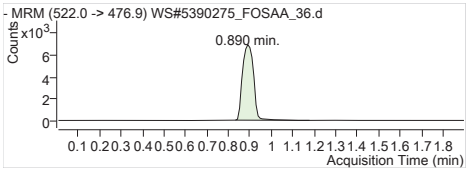


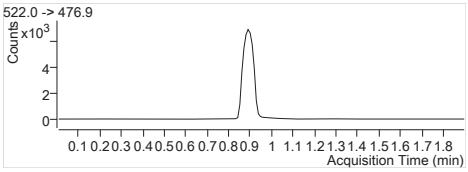
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: Sample



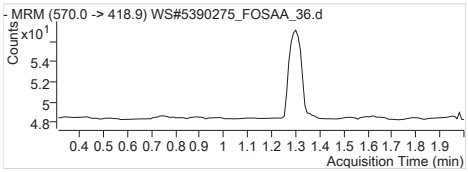


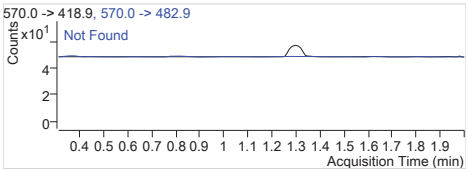
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: Sample



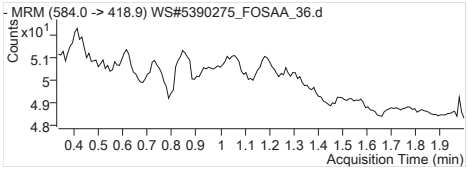


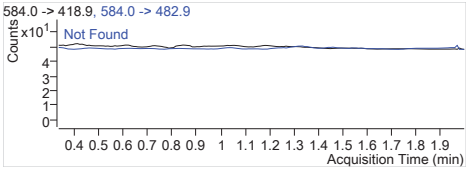
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.890 (0.900)
Concentration: 1 µg/L
Sample type: Sample



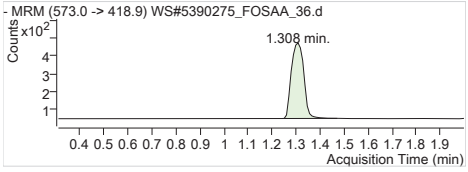


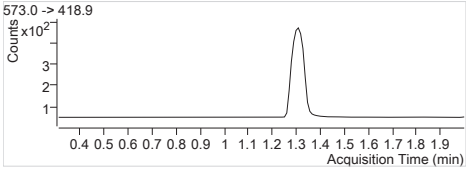
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



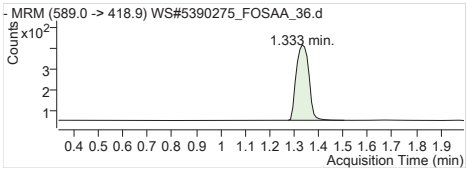


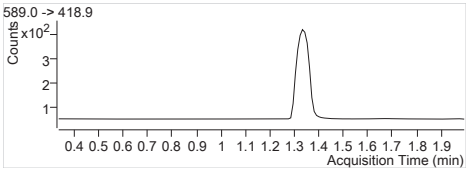
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.334)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



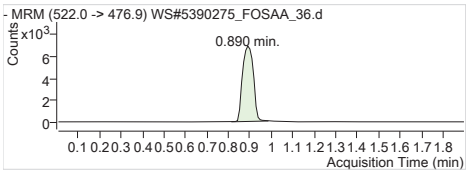


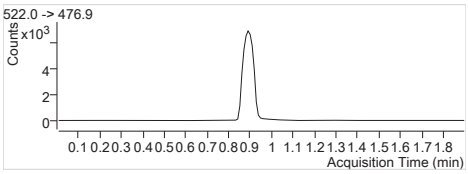
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 85.17 µg/L
Area ratio: 0.06246
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	83.27 µg/L
Area ratio:	0.05430
Sample type:	Sample





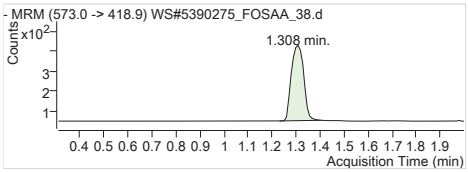
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.890 (0.900)
Calc. conc.	2.44 µg/L
Area ratio:	0
Sample type:	Sample

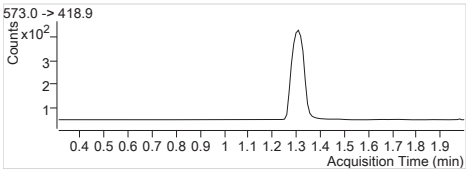
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**5390275:FZT425-01**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_38.d	**Operator**	
Sample Type	Sample	**Dilution**	0.0273
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-D6
Acq. Date	2018/02/10 1:57:11 AM	**Injection Volume**	Per Method
Sample Annotation	-		

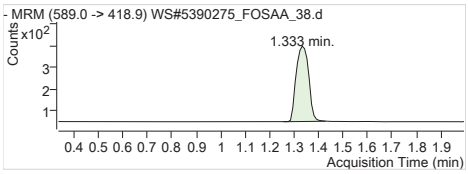
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1352	1.31	1 µg/L		
D5-EtFOSAA IS	1240	1.33	1 µg/L		
13C9-PFDA IS	24107	0.89	1 µg/L		

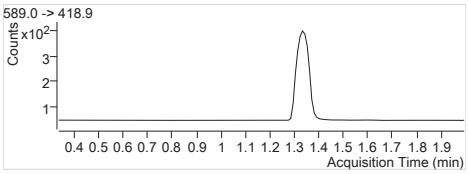
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1361	1.31	-	76.99 µg/L	-
D5-EtFOSAA	1246	1.33	-	79.26 µg/L	-
13C9-PFDA	23872	0.89	-	2.75 µg/L	-



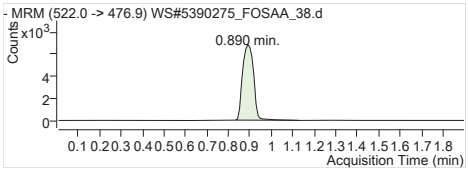


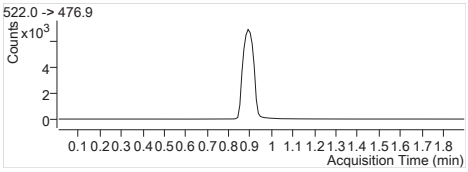
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: Sample



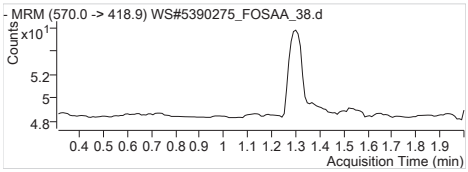


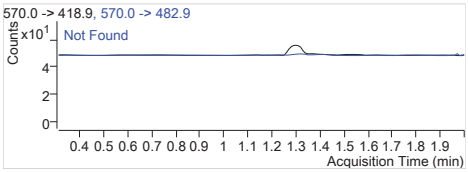
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: Sample



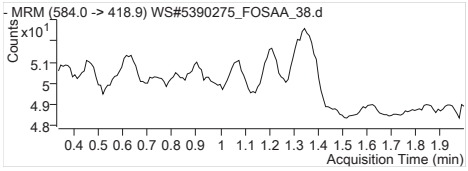


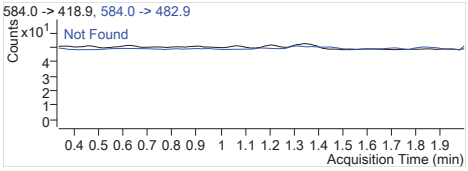
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.890 (0.900)
Concentration: 1 µg/L
Sample type: Sample



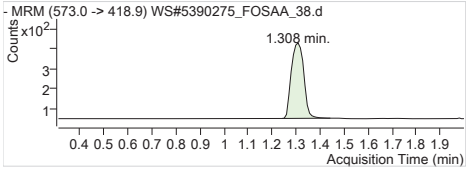


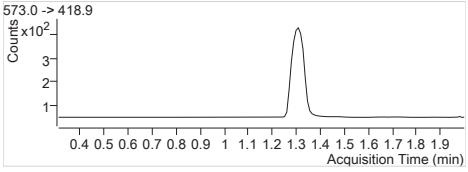
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



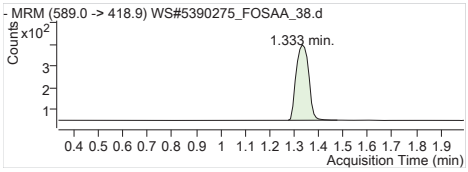


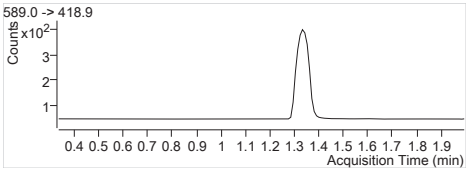
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.334)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



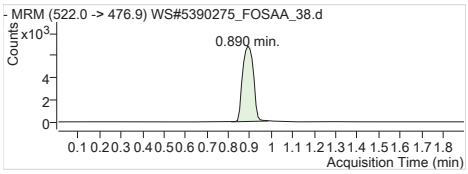


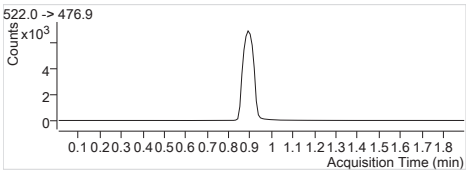
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 76.99 µg/L
Area ratio: 0.05646
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	79.26 µg/L
Area ratio:	0.05169
Sample type:	Sample





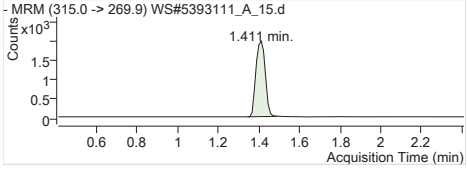
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.890 (0.900)
Calc. conc.	2.75 µg/L
Area ratio:	0
Sample type:	Sample

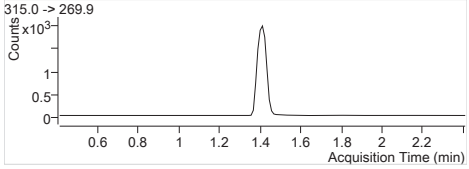
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**5393111:FZT426-01:10x**	**Instrument**	LCMS04
Data File	WS#5393111_A_15.d	**Operator**	
Sample Type	Sample	**Dilution**	0.24
Acq. Method	PFC_Water_Low.m	**Position**	P2-B5
Acq. Date	2018/02/13 2:15:34 PM	**Injection Volume**	Per Method
Sample Annotation	-		

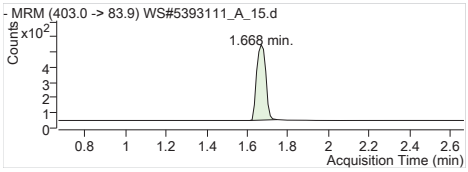
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6178	1.41	1 µg/L		
MPFHxS	1555	1.67	1 µg/L		
MPFHpA	8361	1.68	1 µg/L		
MPFOA	8833	1.86	1 µg/L		
MPFOS	1915	1.97	1 µg/L		
MPFNA	8330	2.00	1 µg/L		
MPFDA	6602	2.12	1 µg/L		
MPFUnA	7541	2.22	1 µg/L		
MPFDoA	10238	2.31	1 µg/L		
MPFTeDA	11977	2.46	1 µg/L		
13C6-PFHxA IS	22258	1.41	1 µg/L		
13C9-PFDA IS	27193	2.12	1 µg/L		

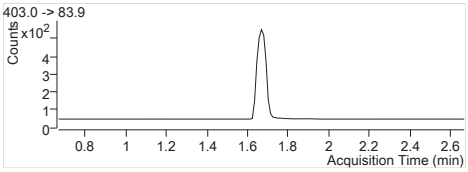
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1			-	ND	-
PFHxA 1			-	ND	-
PFHxS 1			-	ND	-
PFHpA 1			-	ND	-
PFOA 1			-	ND	-
PFOS 1			-	ND	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	6178	1.41	-	98.09 µg/L	-
18O2-PFHxS	1555	1.67	-	101.15 µg/L	-
13C4-PFHpA	8361	1.68	-	103.93 µg/L	-
13C4-PFOA	8833	1.86	-	103.43 µg/L	-
13C4-PFOS	1915	1.97	-	102.54 µg/L	-
13C5-PFNA	8330	2.00	-	101.14 µg/L	-
13C2-PFDA	6567	2.12	-	97.54 µg/L	-
13C2-PFUnA	7541	2.22	-	96.23 µg/L	-
13C2-PFDoA	10238	2.31	-	100.71 µg/L	-
13C2-PFTeDA	12035	2.46	-	103.14 µg/L	-
13C6-PFHxA	22258	1.41	-	22.87 µg/L	-
13C9-PFDA	27193	2.12	-	21.58 µg/L	-



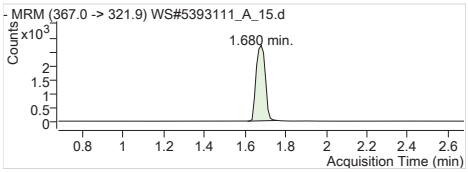


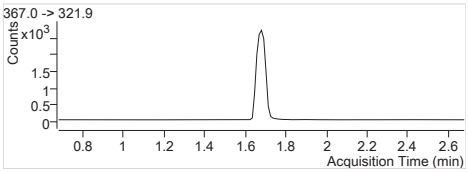
MPFHxA	Internal Standard
RT (Exp. RT):	1.411 (1.411)
Concentration:	1 µg/L
Sample type:	Sample



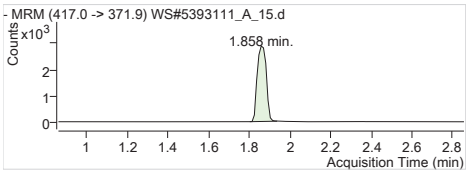


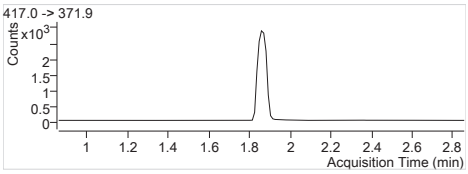
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: Sample



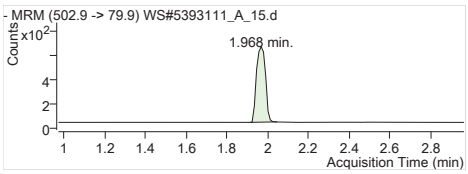


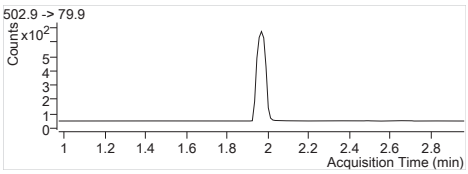
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: Sample



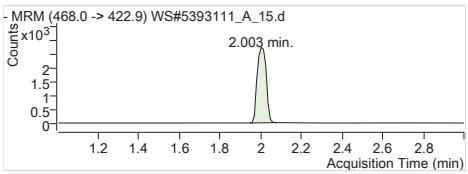


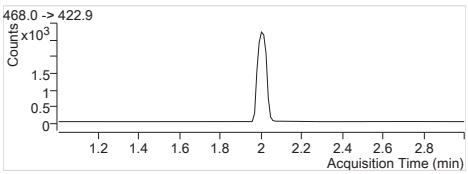
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: Sample



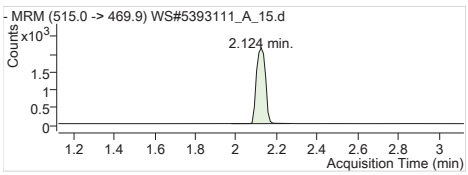


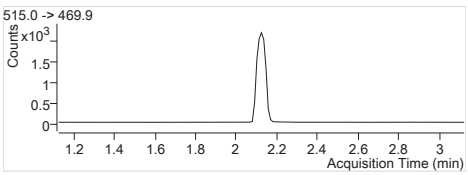
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: Sample



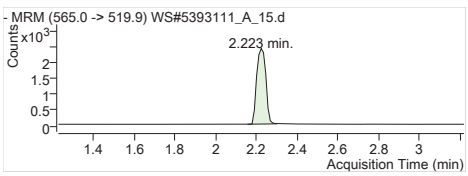


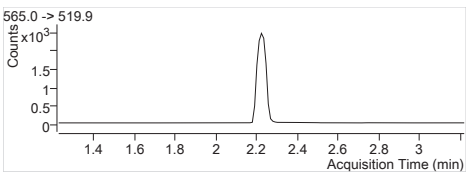
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: Sample



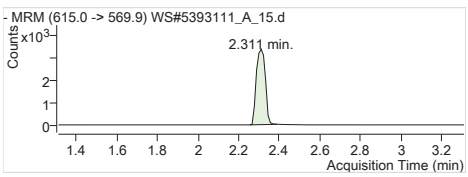


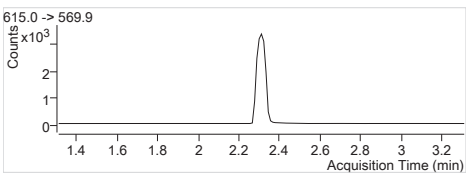
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Sample



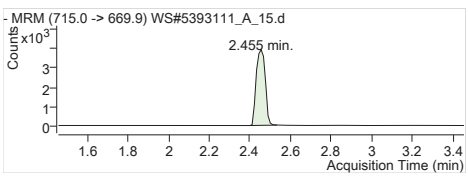


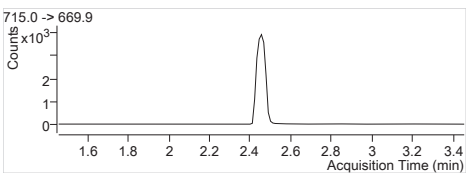
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: Sample



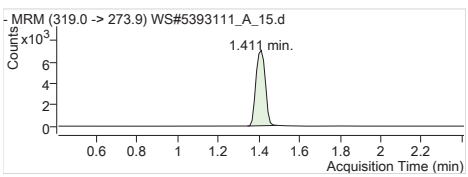


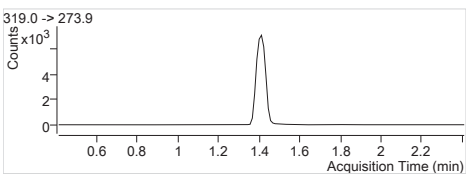
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: Sample



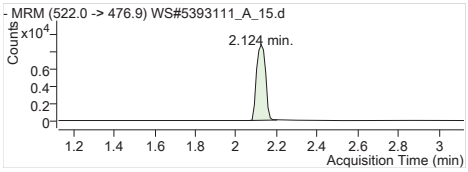


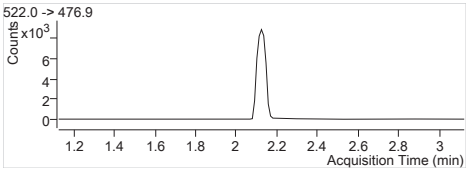
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: Sample



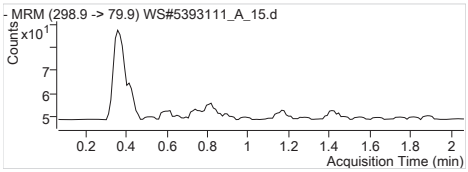


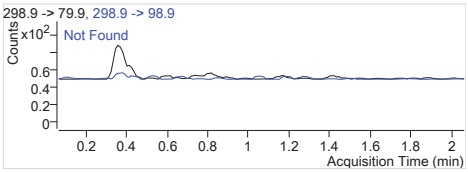
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Sample



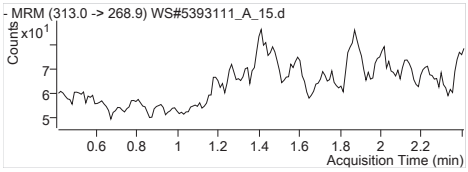


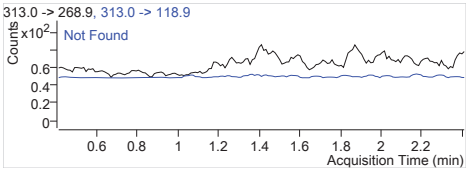
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Sample



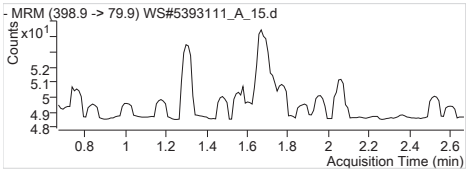


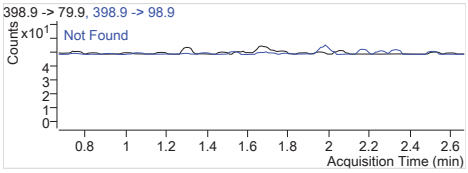
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.064)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



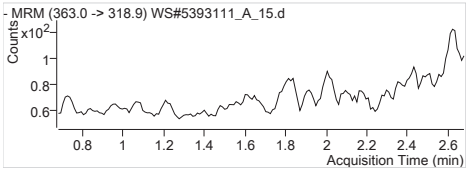


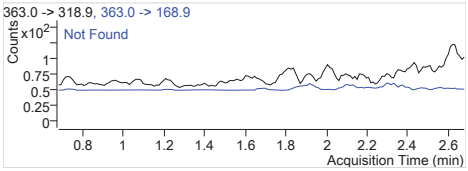
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.411)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



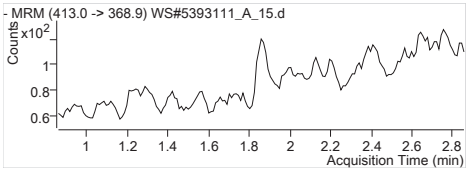


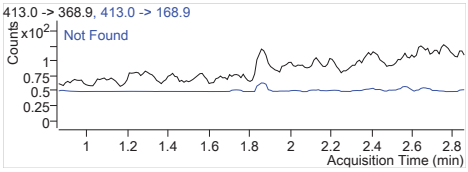
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.668)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



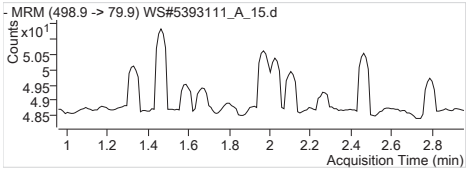


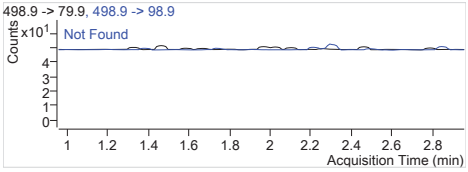
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.680)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



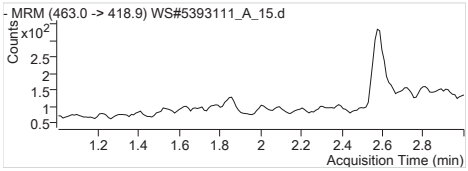


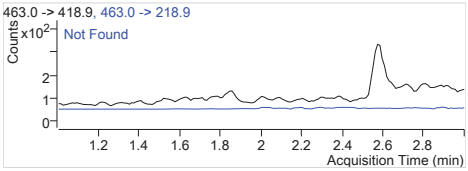
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.858)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



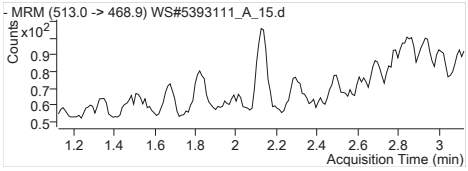


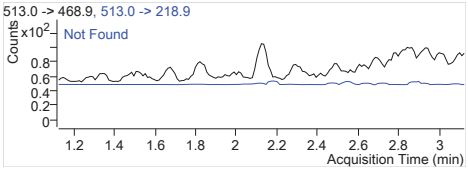
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.957)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



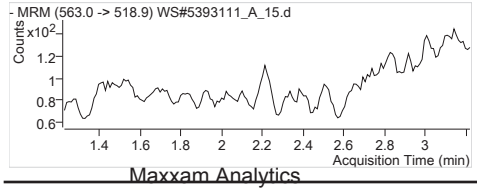


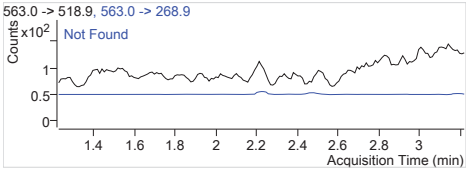
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.003)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



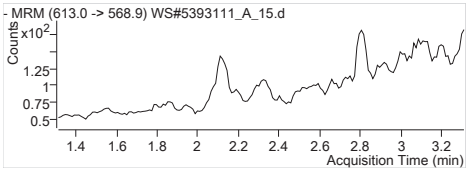


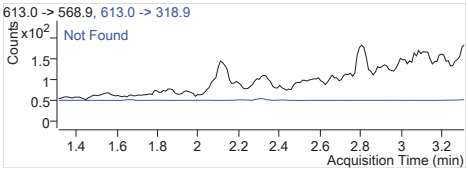
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.124)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



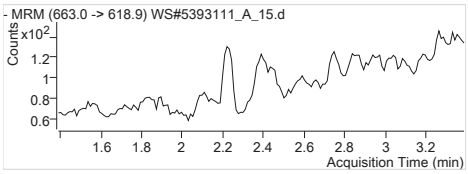


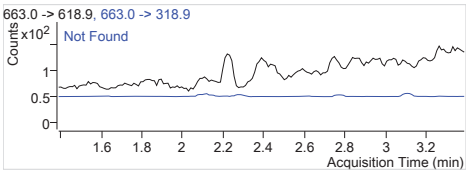
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.223)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



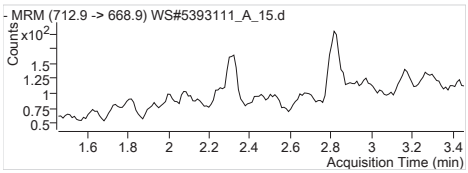


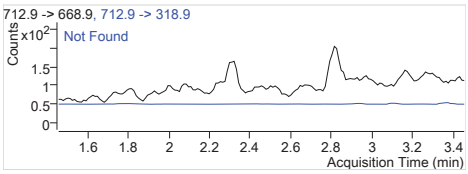
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.311)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



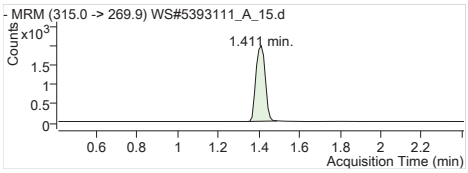


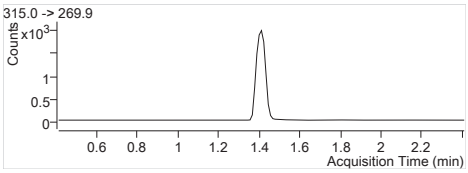
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.389)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



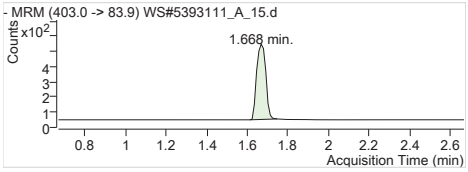


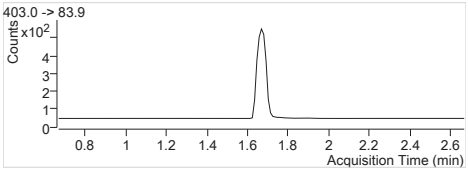
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.456)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



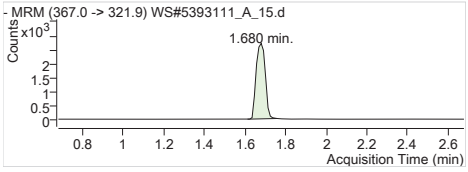


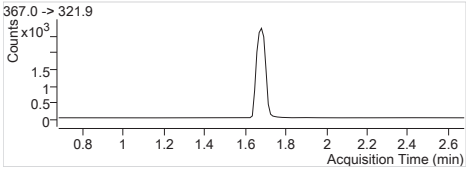
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 98.09 µg/L
Area ratio: 0.27756
Sample type: Sample



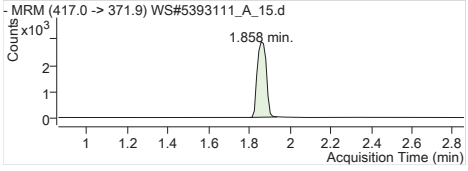


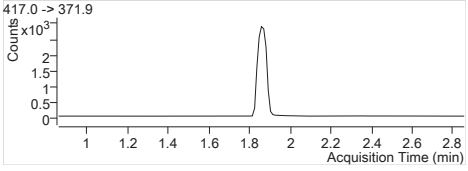
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 101.15 µg/L
Area ratio: 0.06986
Sample type: Sample



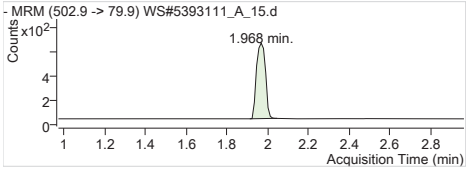


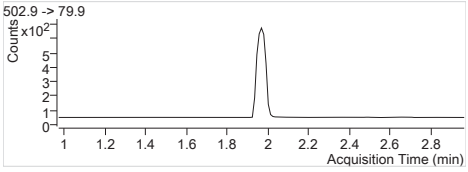
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 103.93 µg/L
Area ratio: 0.37564
Sample type: Sample



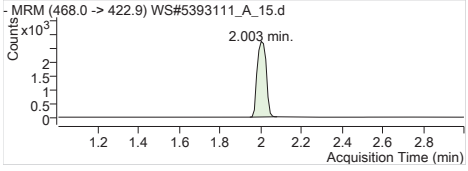


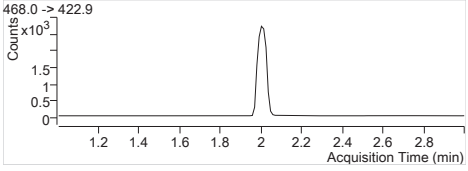
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 103.43 µg/L
Area ratio: 0.39685
Sample type: Sample



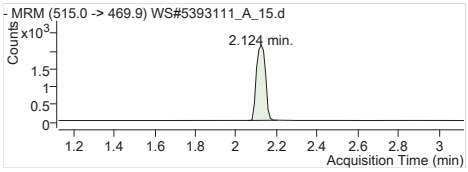


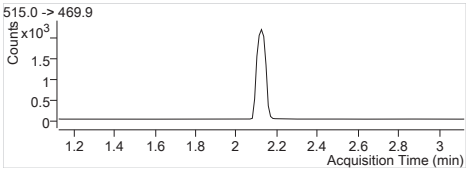
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 102.54 µg/L
Area ratio: 0.08604
Sample type: Sample



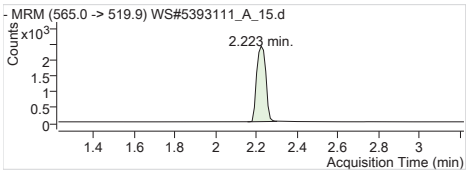


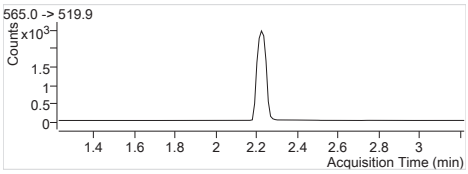
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 101.14 µg/L
Area ratio: 0.37425
Sample type: Sample



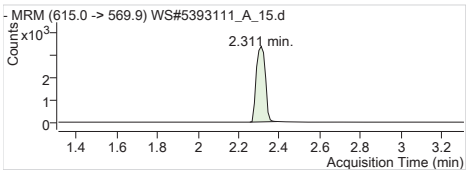


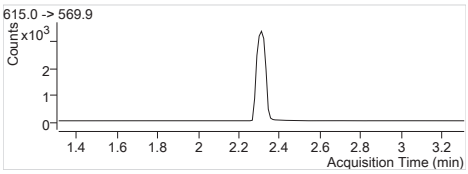
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 97.54 µg/L
Area ratio: 0.24150
Sample type: Sample



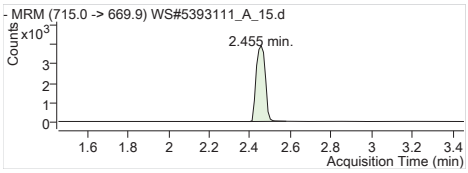


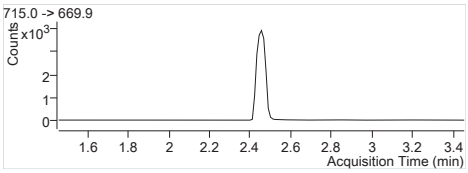
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 96.23 µg/L
Area ratio: 0.27731
Sample type: Sample



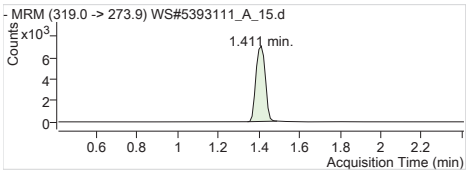


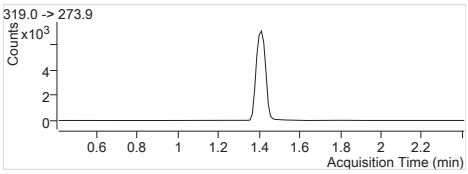
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 100.71 µg/L
Area ratio: 0.37649
Sample type: Sample



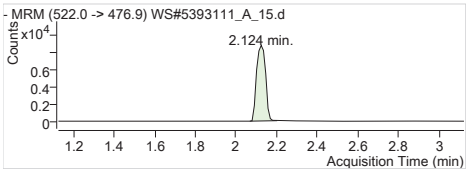


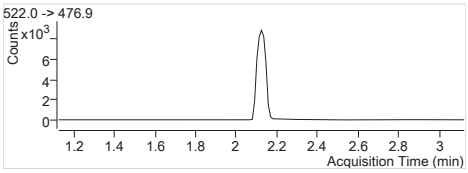
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 103.14 µg/L
Area ratio: 0.44258
Sample type: Sample





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 22.87 µg/L
Area ratio: 0
Sample type: Sample





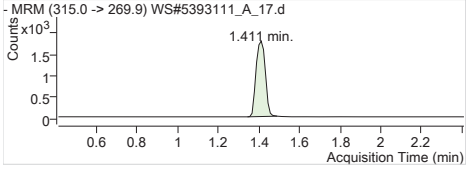
13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 21.58 µg/L
Area ratio: 0
Sample type: Sample

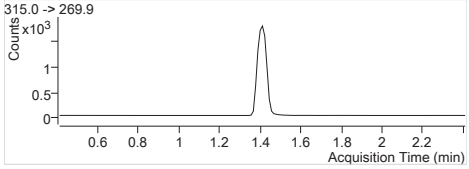
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**5393111:FZT427-01**	**Instrument**	LCMS04
Data File	WS#5393111_A_17.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low.m	**Position**	P2-B6
Acq. Date	2018/02/13 2:25:26 PM	**Injection Volume**	Per Method
Sample Annotation	-		

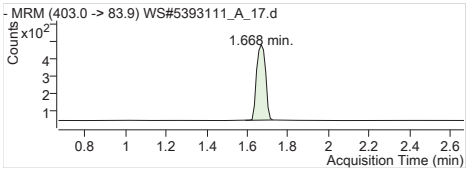
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	5599	1.41	1 µg/L		
MPFHxS	1325	1.67	1 µg/L		
MPFHpA	7405	1.68	1 µg/L		
MPFOA	8040	1.86	1 µg/L		
MPFOS	1845	1.97	1 µg/L		
MPFNA	7295	2.00	1 µg/L		
MPFDA	6394	2.12	1 µg/L		
MPFUnA	6499	2.22	1 µg/L		
MPFDoA	9204	2.31	1 µg/L		
MPFTeDA	7393	2.46	1 µg/L		
13C6-PFHxA IS	21220	1.41	1 µg/L		
13C9-PFDA IS	27515	2.12	1 µg/L		

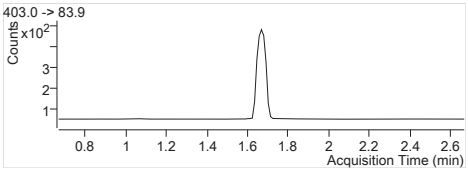
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1			-	ND	-
PFHxA 1			-	ND	-
PFHxS 1			-	ND	-
PFHpA 1			-	ND	-
PFOA 1			-	ND	-
PFOS 1			-	ND	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	5599	1.41	-	93.25 µg/L	-
18O2-PFHxS	1325	1.67	-	90.40 µg/L	-
13C4-PFHpA	7405	1.68	-	96.55 µg/L	-
13C4-PFOA	8040	1.86	-	98.75 µg/L	-
13C4-PFOS	1845	1.97	-	103.63 µg/L	-
13C5-PFNA	7295	2.00	-	92.90 µg/L	-
13C2-PFDA	6366	2.12	-	93.45 µg/L	-
13C2-PFUnA	6499	2.22	-	81.96 µg/L	-
13C2-PFDoA	9204	2.31	-	89.48 µg/L	-
13C2-PFTeDA	7570	2.46	-	64.11 µg/L	-
13C6-PFHxA	21220	1.41	-	2.18 µg/L	-
13C9-PFDA	27515	2.12	-	2.18 µg/L	-



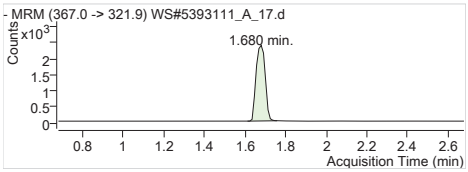


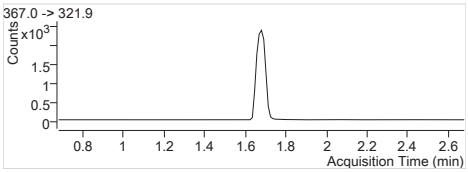
MPFHxA	Internal Standard
RT (Exp. RT):	1.411 (1.411)
Concentration:	1 µg/L
Sample type:	Sample



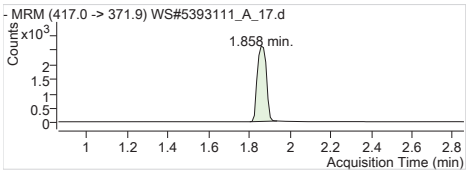


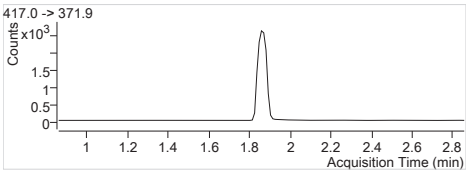
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: Sample



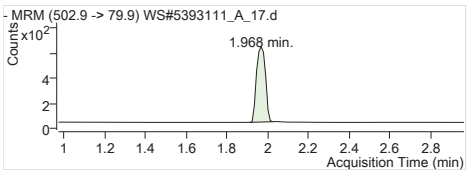


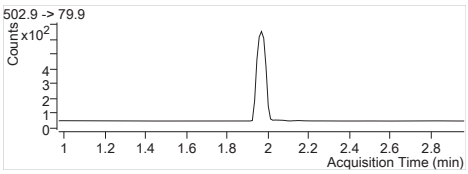
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: Sample



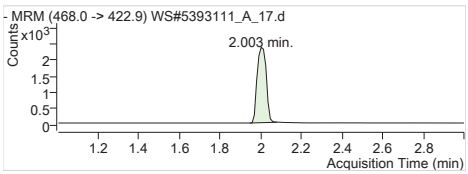


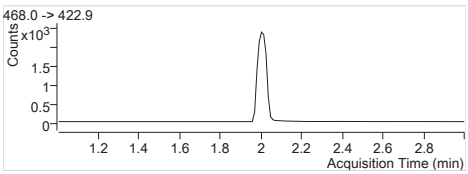
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: Sample



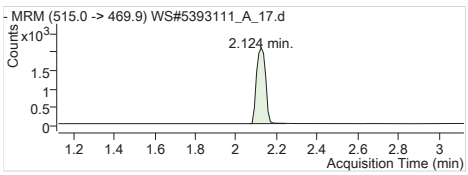


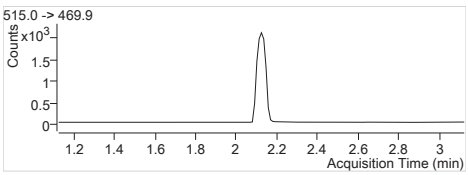
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: Sample



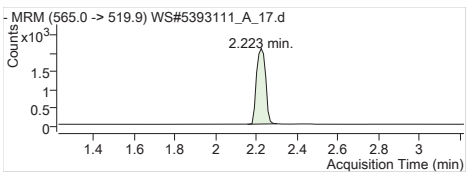


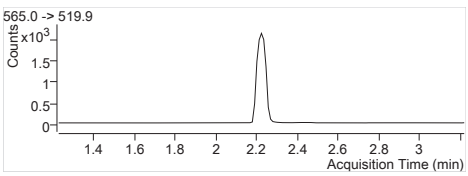
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: Sample



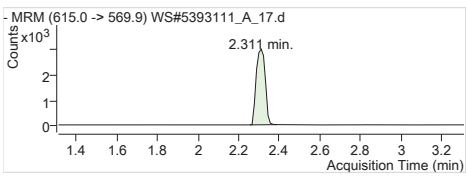


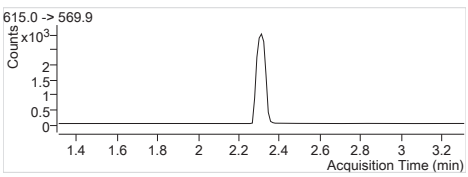
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Sample



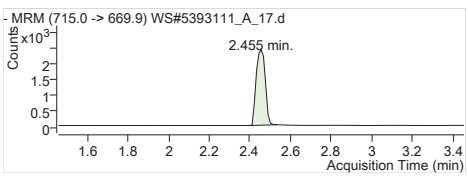


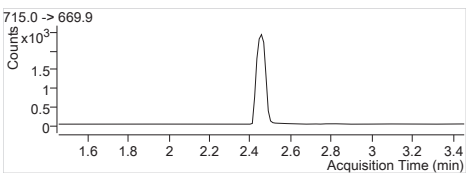
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: Sample



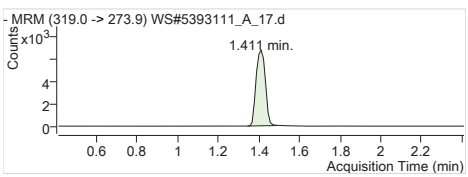


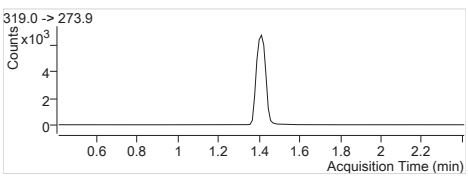
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: Sample



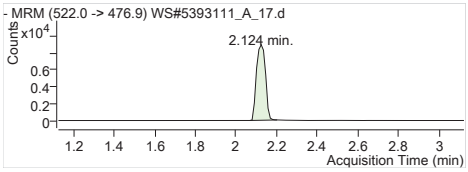


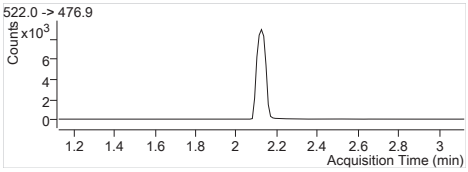
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: Sample



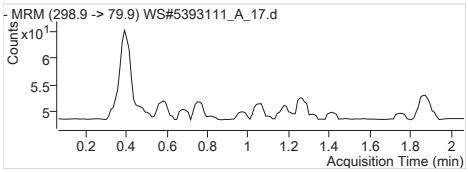


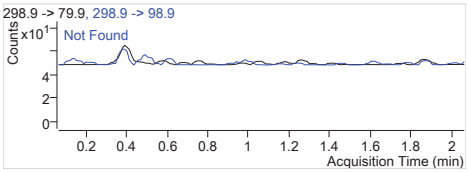
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Sample



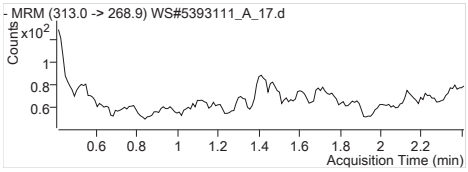


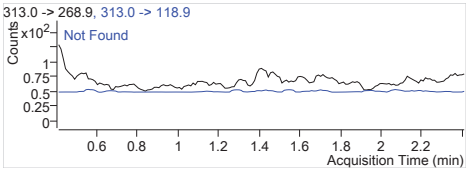
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Sample



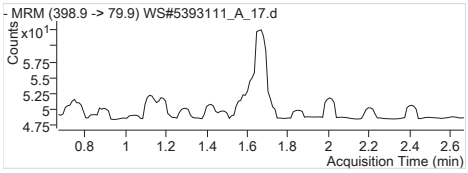


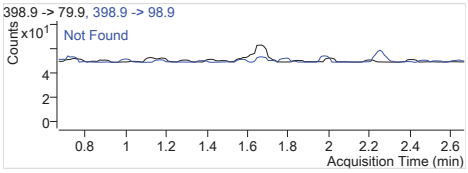
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.064)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



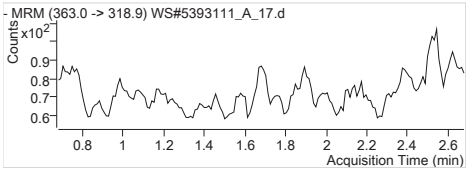


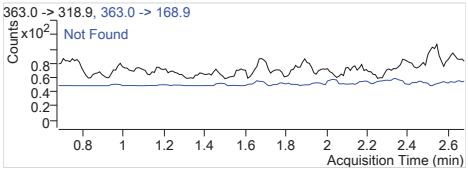
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.411)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



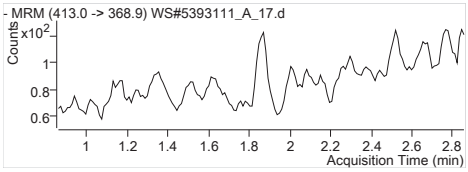


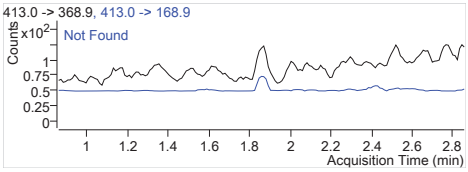
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.668)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



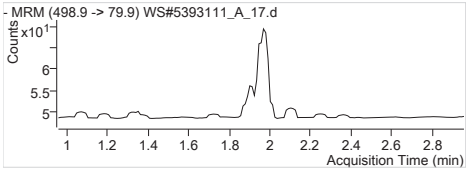


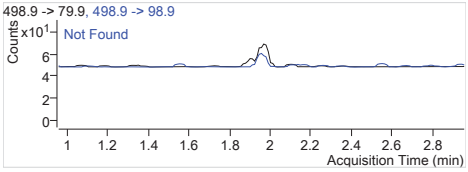
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.680)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



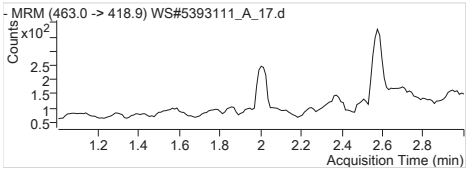


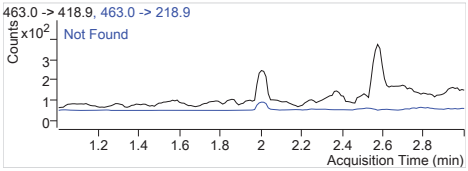
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.858)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



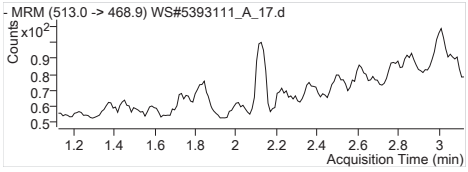


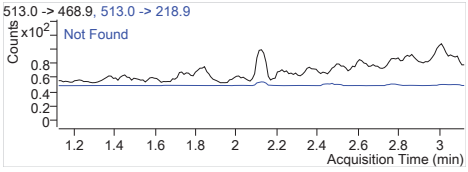
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.957)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



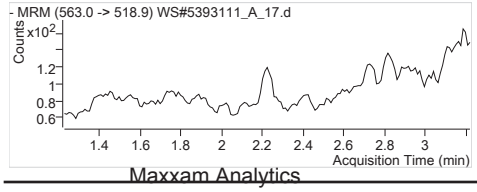


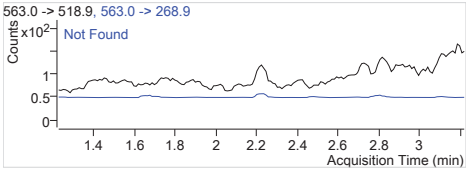
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.003)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



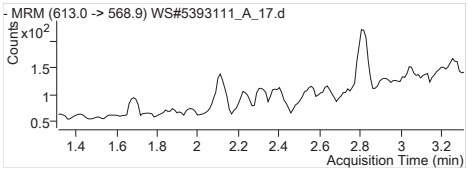


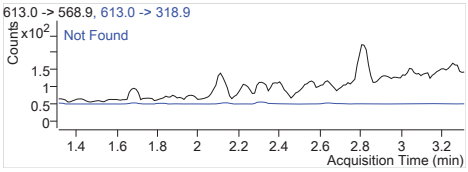
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.124)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



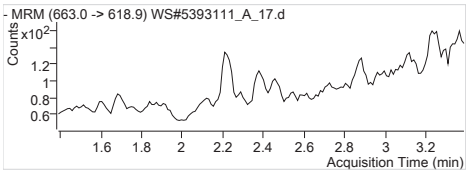


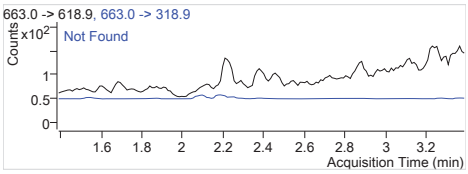
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.223)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



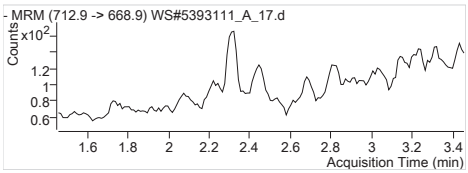


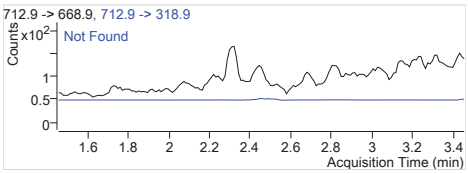
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.311)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



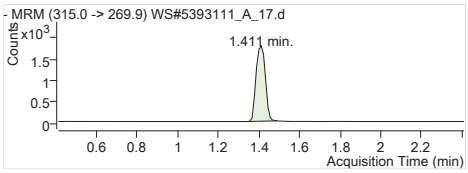


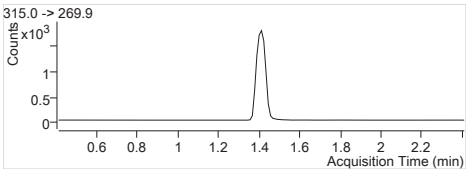
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.389)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



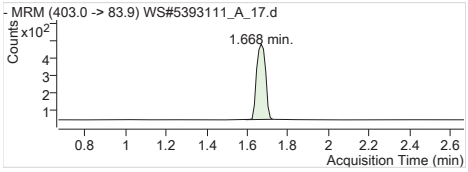


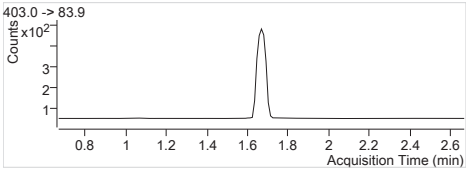
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.456)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



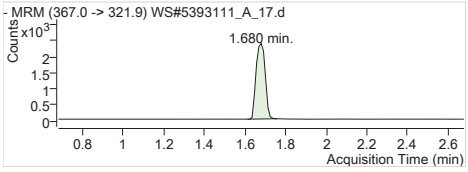


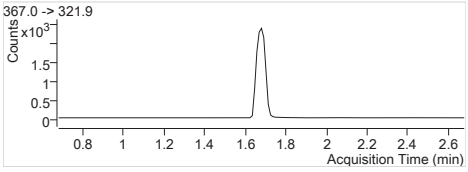
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 93.25 µg/L
Area ratio: 0.26385
Sample type: Sample



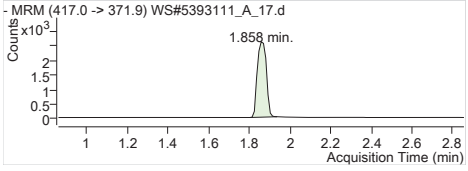


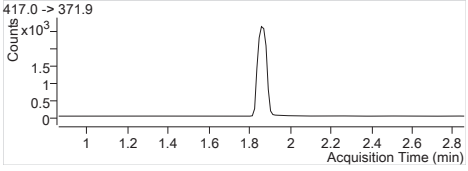
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 90.40 µg/L
Area ratio: 0.06244
Sample type: Sample



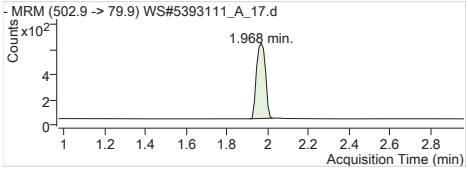


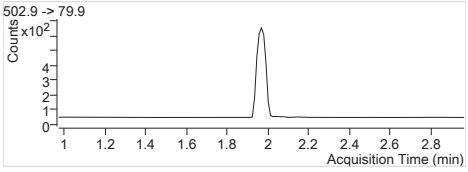
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 96.55 µg/L
Area ratio: 0.34896
Sample type: Sample



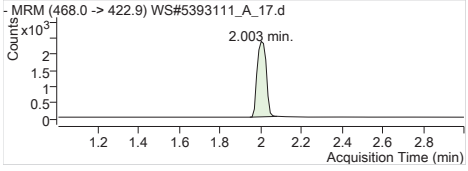


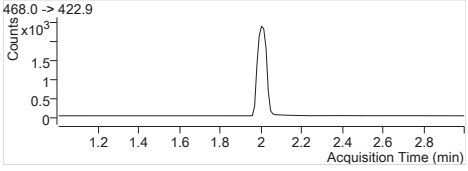
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 98.75 µg/L
Area ratio: 0.37889
Sample type: Sample



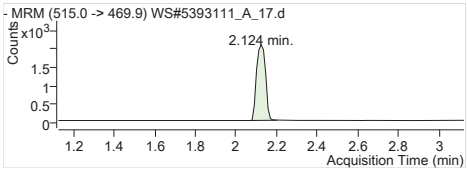


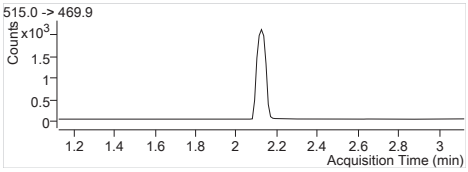
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 103.63 µg/L
Area ratio: 0.08695
Sample type: Sample



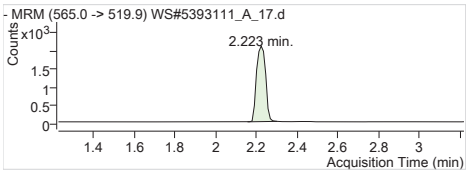


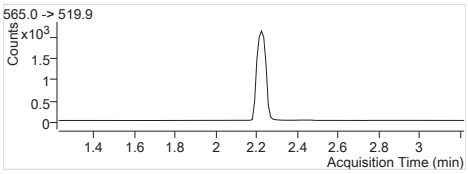
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 92.90 µg/L
Area ratio: 0.34378
Sample type: Sample



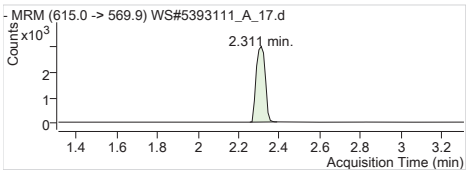


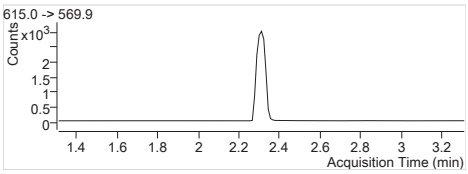
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 93.45 µg/L
Area ratio: 0.23136
Sample type: Sample



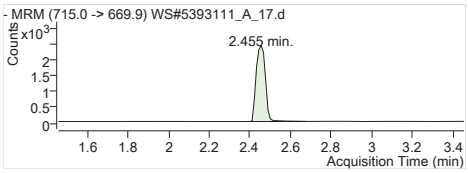


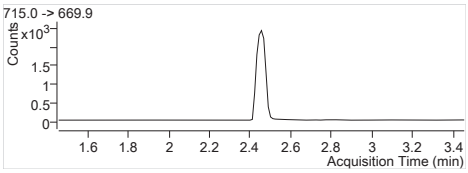
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 81.96 µg/L
Area ratio: 0.23620
Sample type: Sample



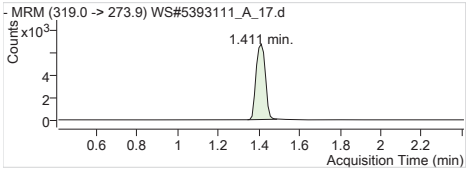


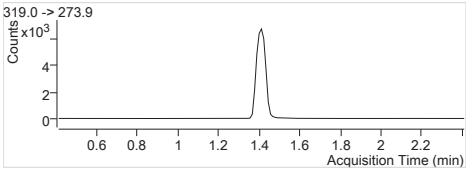
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 89.48 µg/L
Area ratio: 0.33451
Sample type: Sample



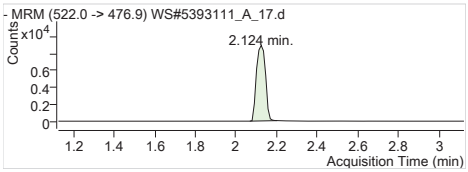


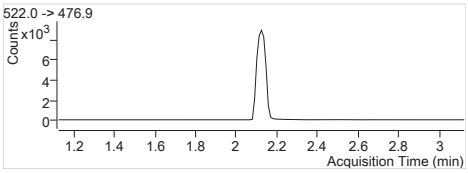
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 64.11 µg/L
Area ratio: 0.27512
Sample type: Sample





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 2.18 µg/L
Area ratio: 0
Sample type: Sample





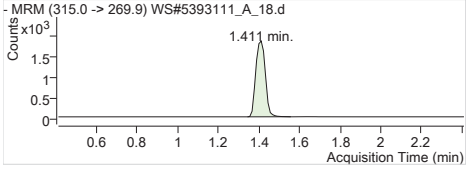
13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 2.18 µg/L
Area ratio: 0
Sample type: Sample

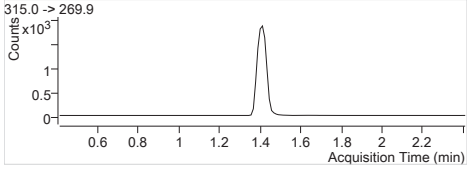
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**5393111:FZT428-01**	**Instrument**	LCMS04
Data File	WS#5393111_A_18.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low.m	**Position**	P2-B7
Acq. Date	2018/02/13 2:30:22 PM	**Injection Volume**	Per Method
Sample Annotation	-		

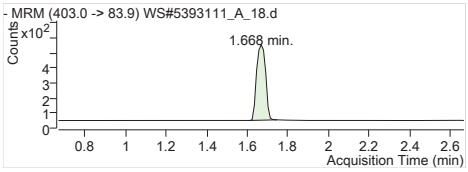
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6033	1.41	1 µg/L		
MPFHxS	1557	1.67	1 µg/L		
MPFHpA	7276	1.68	1 µg/L		
MPFOA	7934	1.86	1 µg/L		
MPFOS	1801	1.97	1 µg/L		
MPFNA	7553	2.00	1 µg/L		
MPFDA	6249	2.12	1 µg/L		
MPFUnA	6448	2.22	1 µg/L		
MPFDoA	9045	2.31	1 µg/L		
MPFTeDA	9821	2.46	1 µg/L		
13C6-PFHxA IS	22774	1.41	1 µg/L		
13C9-PFDA IS	29834	2.12	1 µg/L		

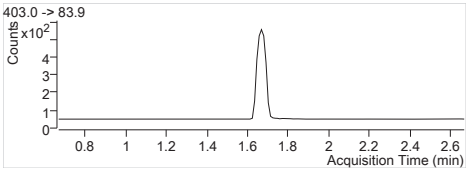
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1			-	ND	-
PFHxA 1			-	ND	-
PFHxS 1			-	ND	-
PFHpA 1			-	ND	-
PFOA 1			-	ND	-
PFOS 1			-	ND	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	6033	1.41	-	93.62 µg/L	-
18O2-PFHxS	1557	1.67	-	98.98 µg/L	-
13C4-PFHpA	7276	1.68	-	88.40 µg/L	-
13C4-PFOA	7934	1.86	-	90.80 µg/L	-
13C4-PFOS	1801	1.97	-	94.25 µg/L	-
13C5-PFNA	7553	2.00	-	89.63 µg/L	-
13C2-PFDA	6125	2.12	-	82.92 µg/L	-
13C2-PFUnA	6448	2.22	-	75.00 µg/L	-
13C2-PFDoA	9045	2.31	-	81.10 µg/L	-
13C2-PFTeDA	10030	2.46	-	78.34 µg/L	-
13C6-PFHxA	22774	1.41	-	2.34 µg/L	-
13C9-PFDA	29834	2.12	-	2.37 µg/L	-



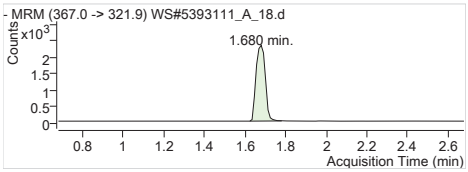


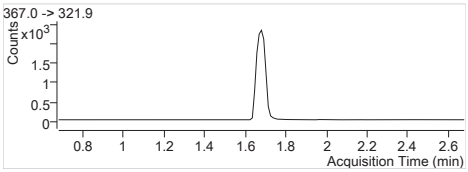
MPFHxA	Internal Standard
RT (Exp. RT):	1.411 (1.411)
Concentration:	1 µg/L
Sample type:	Sample



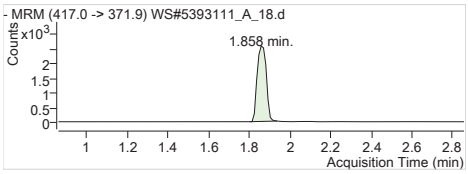


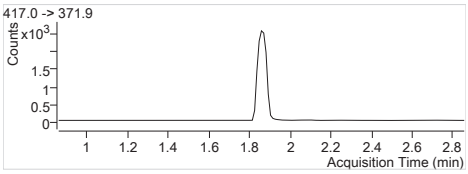
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: Sample



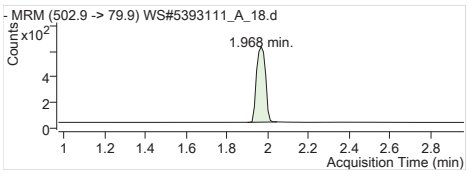


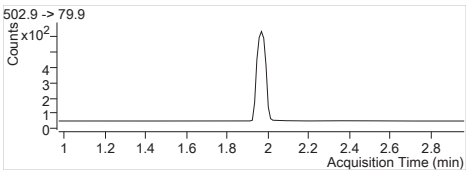
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: Sample



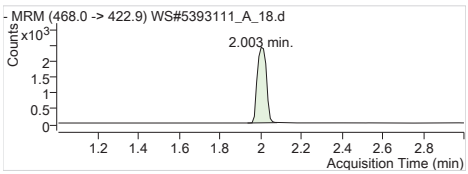


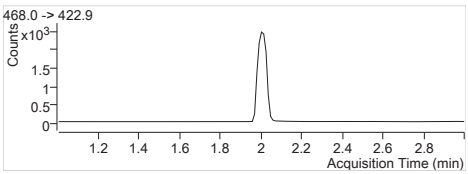
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: Sample



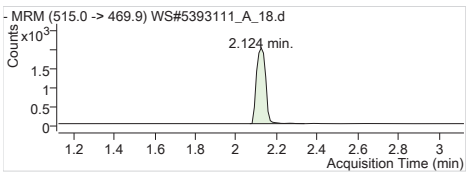


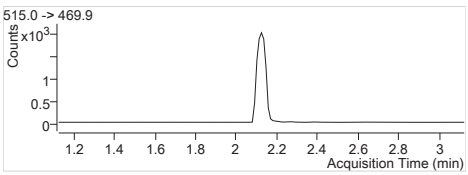
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: Sample



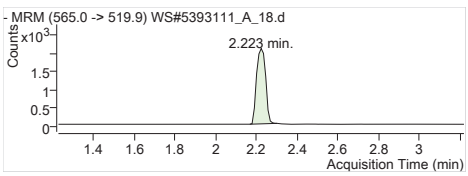


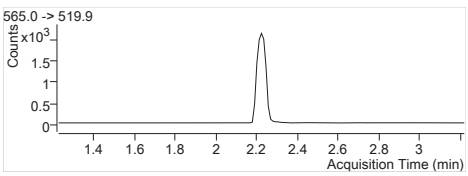
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: Sample



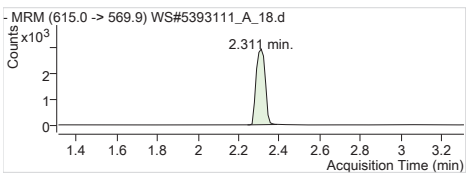


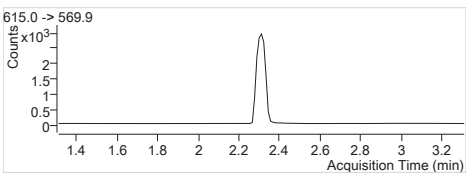
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Sample



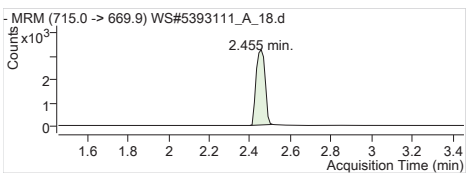


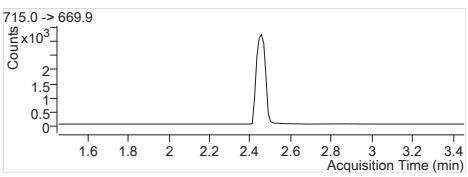
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: Sample



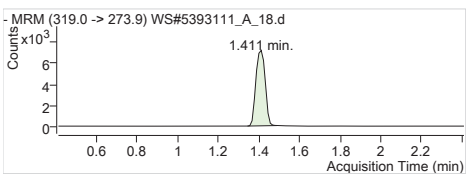


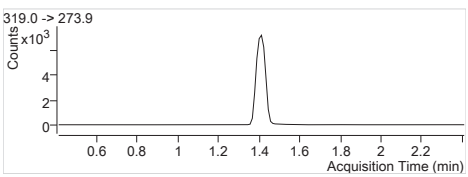
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: Sample



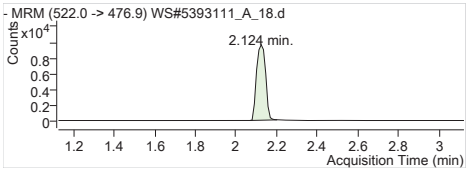


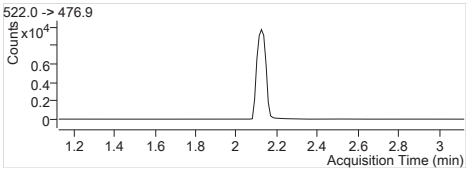
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: Sample



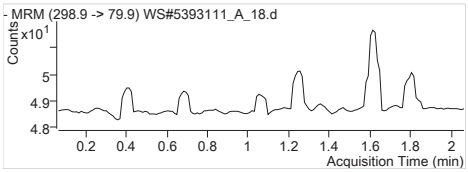


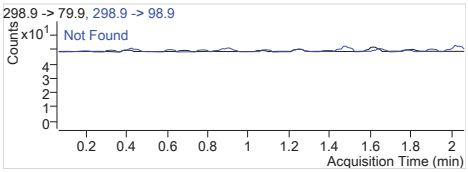
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Sample



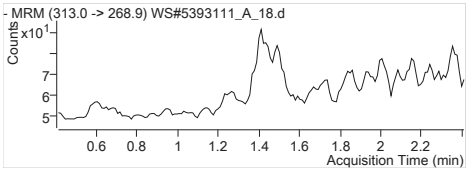


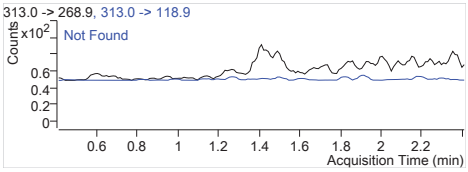
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Sample



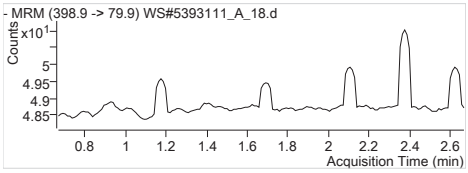


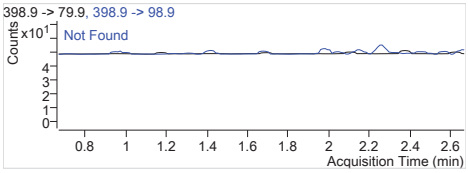
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.064)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



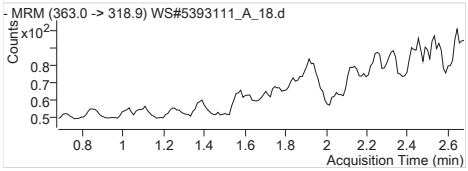


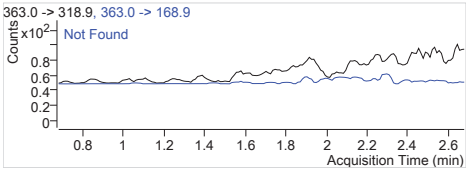
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.411)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



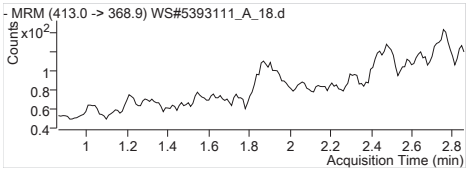


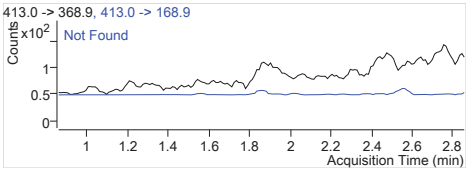
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.668)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



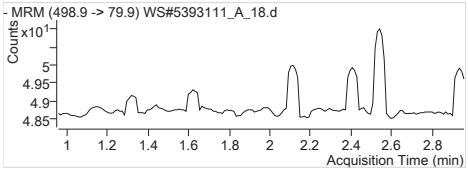


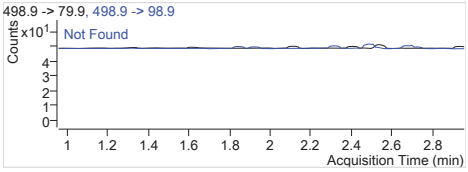
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.680)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



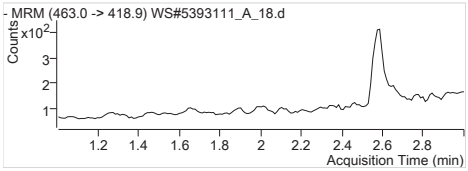


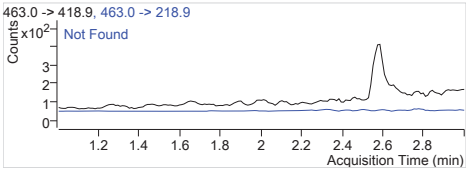
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.858)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



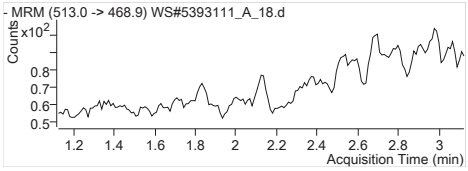


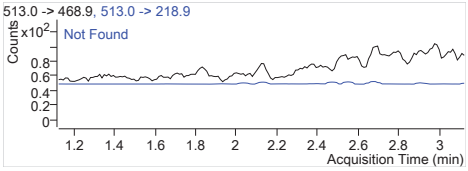
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.957)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



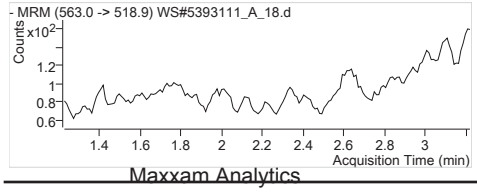


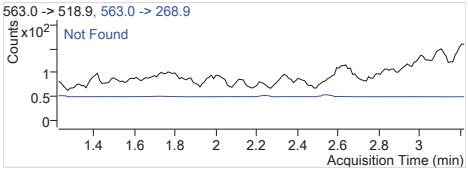
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.003)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



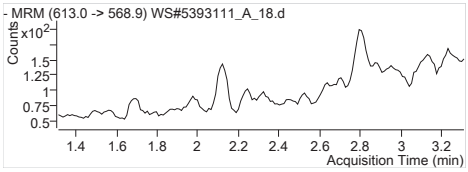


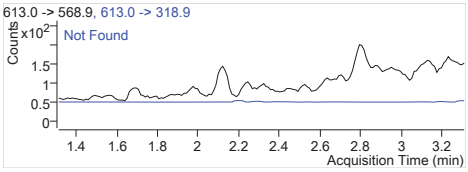
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.124)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



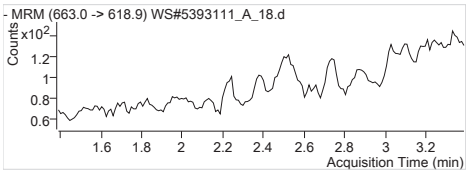


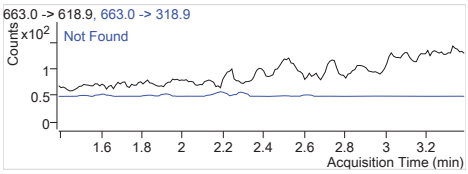
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.223)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



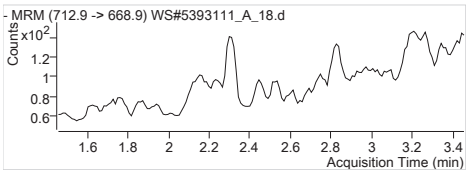


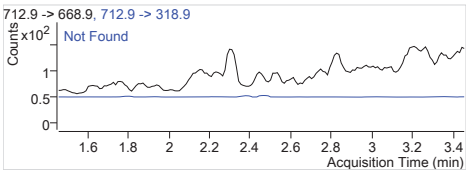
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.311)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



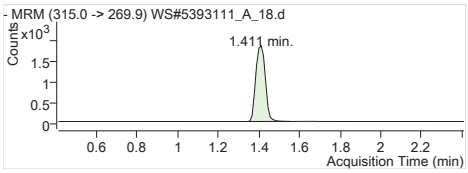


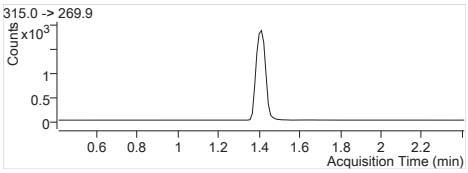
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.389)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



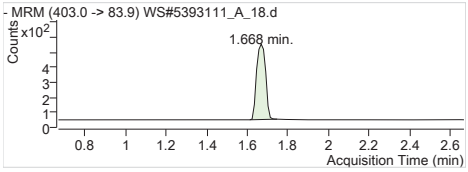


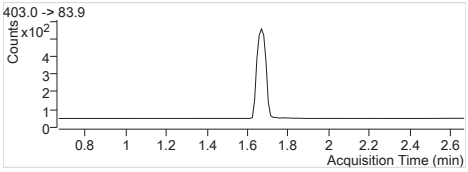
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.456)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



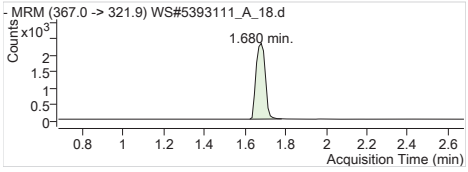


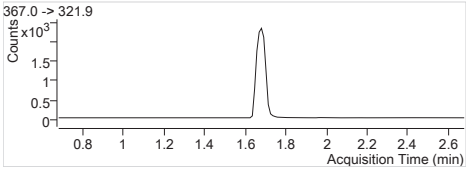
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 93.62 µg/L
Area ratio: 0.26491
Sample type: Sample



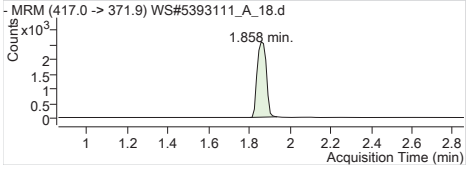


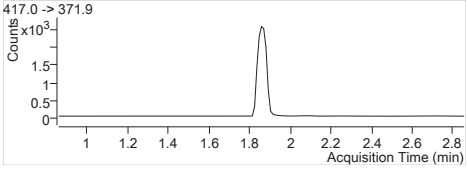
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 98.98 µg/L
Area ratio: 0.06837
Sample type: Sample



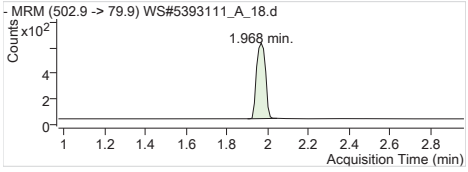


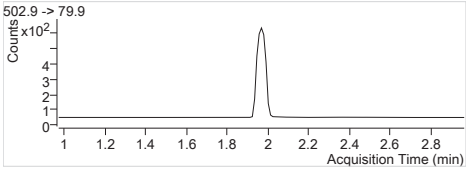
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 88.40 µg/L
Area ratio: 0.31949
Sample type: Sample



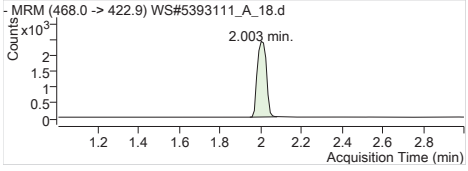


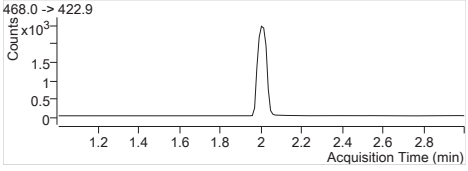
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 90.80 µg/L
Area ratio: 0.34838
Sample type: Sample



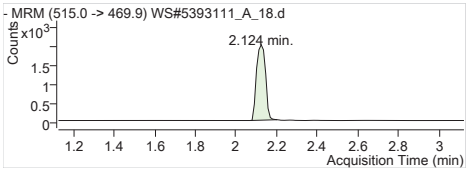


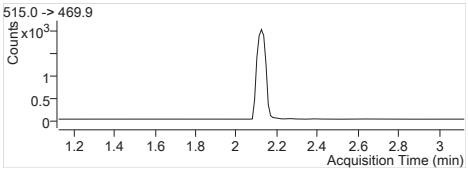
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 94.25 µg/L
Area ratio: 0.07908
Sample type: Sample



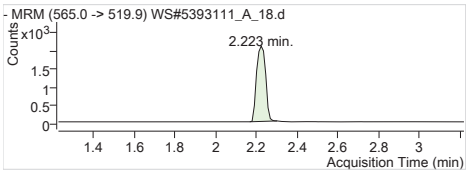


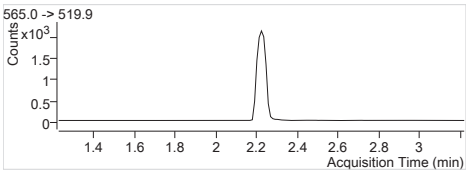
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 89.63 µg/L
Area ratio: 0.33165
Sample type: Sample



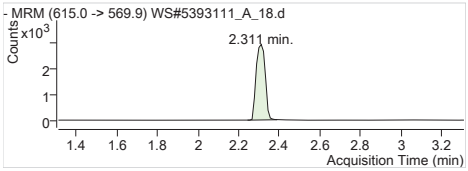


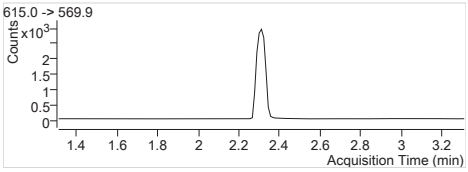
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 82.92 µg/L
Area ratio: 0.20530
Sample type: Sample



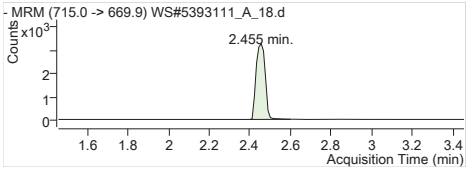


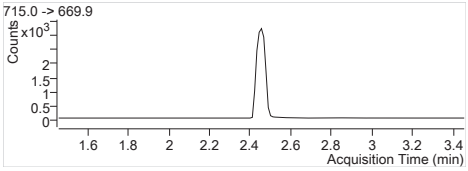
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 75.00 µg/L
Area ratio: 0.21613
Sample type: Sample



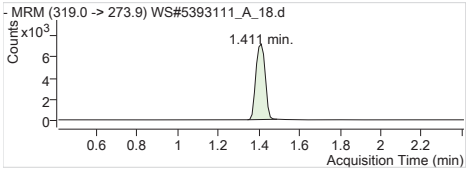


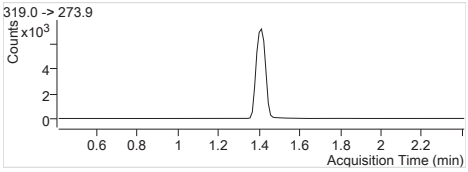
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 81.10 µg/L
Area ratio: 0.30318
Sample type: Sample



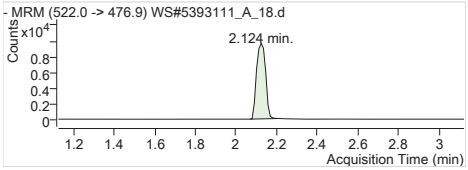


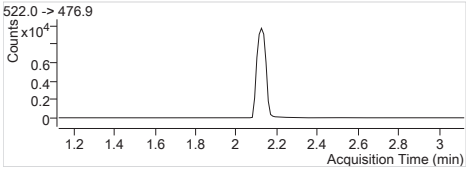
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 78.34 µg/L
Area ratio: 0.33619
Sample type: Sample





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 2.34 µg/L
Area ratio: 0
Sample type: Sample





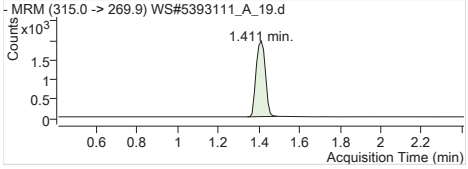
13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 2.37 µg/L
Area ratio: 0
Sample type: Sample

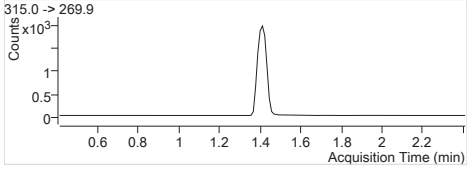
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**5393111:FZT430-01**	**Instrument**	LCMS04
Data File	WS#5393111_A_19.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low.m	**Position**	P2-B8
Acq. Date	2018/02/13 2:35:18 PM	**Injection Volume**	Per Method
Sample Annotation	-		

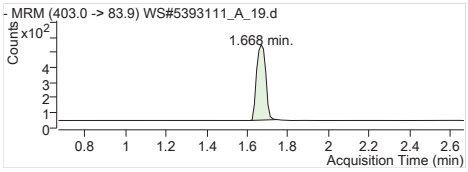
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6104	1.41	1 µg/L		
MPFHxS	1566	1.67	1 µg/L		
MPFHpA	8344	1.68	1 µg/L		
MPFOA	8236	1.86	1 µg/L		
MPFOS	1848	1.97	1 µg/L		
MPFNA	7632	2.00	1 µg/L		
MPFDA	6562	2.12	1 µg/L		
MPFUnA	7019	2.22	1 µg/L		
MPFDoA	8481	2.31	1 µg/L		
MPFTeDA	9530	2.46	1 µg/L		
13C6-PFHxA IS	24793	1.41	1 µg/L		
13C9-PFDA IS	32238	2.12	1 µg/L		

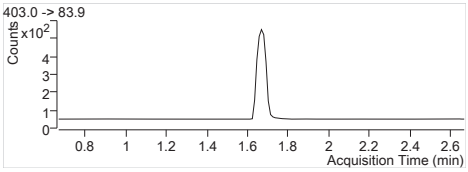
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1			-	ND	-
PFHxA 1			-	ND	-
PFHxS 1			-	ND	-
PFHpA 1			-	ND	-
PFOA 1			-	ND	-
PFOS 1			-	ND	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	6104	1.41	-	87.01 µg/L	-
18O2-PFHxS	1566	1.67	-	91.45 µg/L	-
13C4-PFHpA	8344	1.68	-	93.12 µg/L	-
13C4-PFOA	8236	1.86	-	86.58 µg/L	-
13C4-PFOS	1848	1.97	-	88.84 µg/L	-
13C5-PFNA	7632	2.00	-	83.19 µg/L	-
13C2-PFDA	6471	2.12	-	81.08 µg/L	-
13C2-PFUnA	7019	2.22	-	75.55 µg/L	-
13C2-PFDoA	8481	2.31	-	70.37 µg/L	-
13C2-PFTeDA	9738	2.46	-	70.39 µg/L	-
13C6-PFHxA	24793	1.41	-	2.55 µg/L	-
13C9-PFDA	32238	2.12	-	2.56 µg/L	-



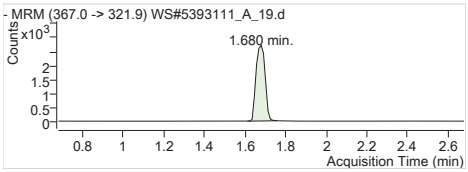


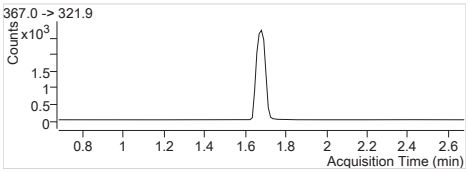
MPFHxA	Internal Standard
RT (Exp. RT):	1.411 (1.411)
Concentration:	1 µg/L
Sample type:	Sample



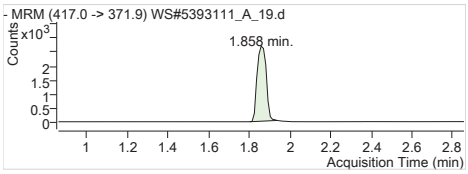


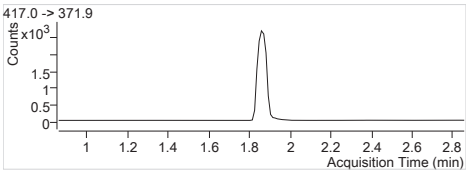
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: Sample



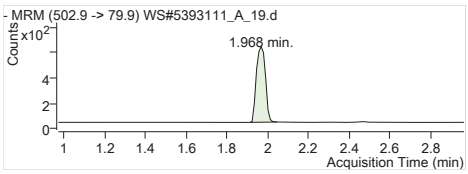


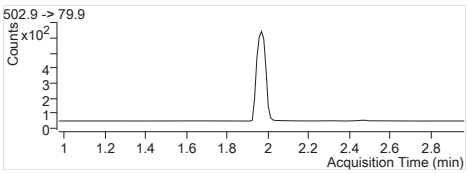
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: Sample



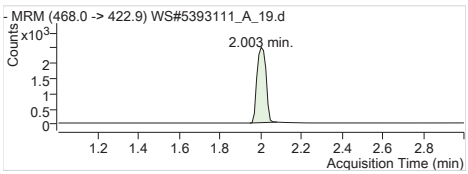


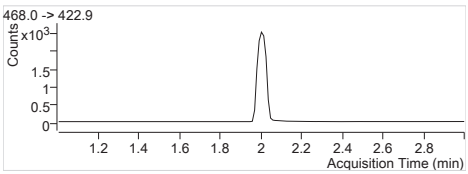
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: Sample



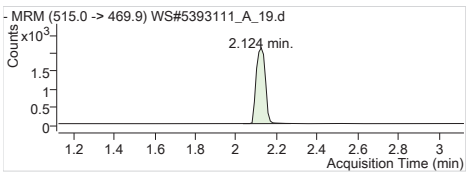


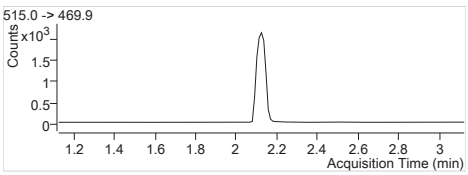
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: Sample



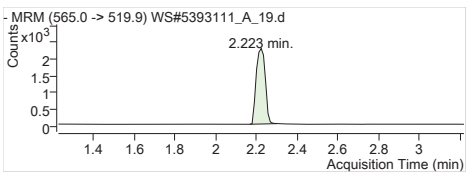


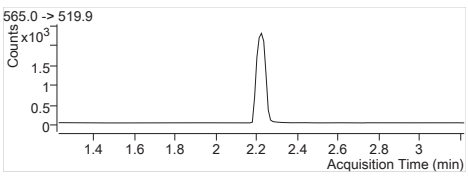
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: Sample



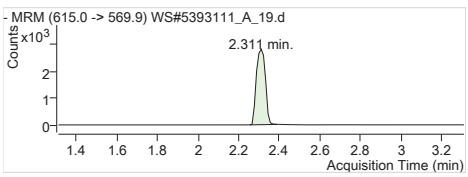


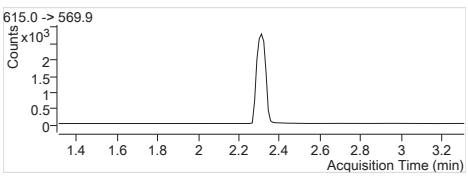
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Sample



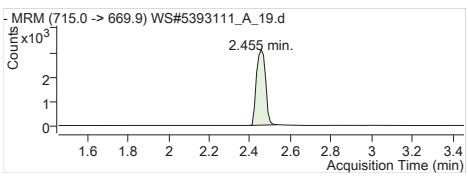


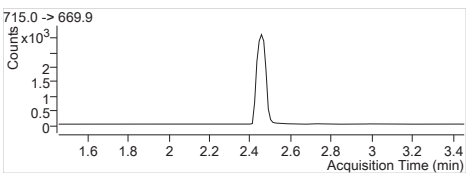
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: Sample



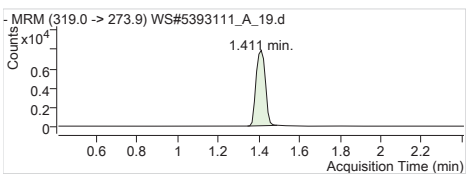


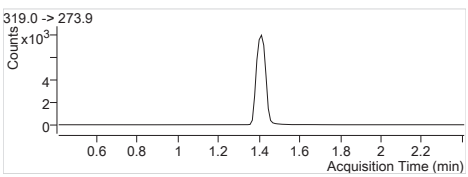
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: Sample



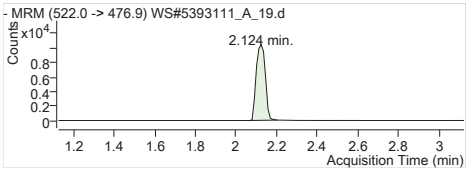


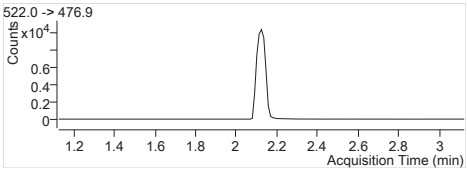
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: Sample



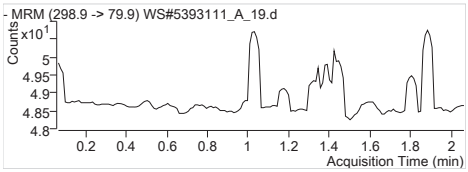


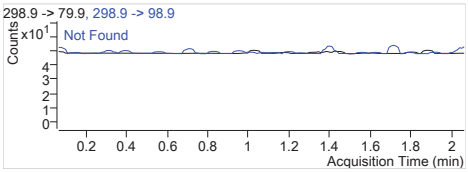
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Sample



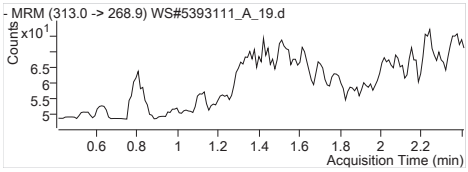


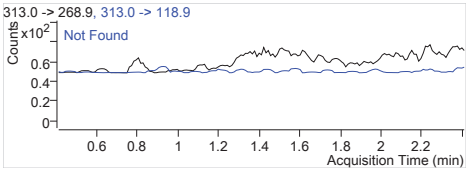
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Sample



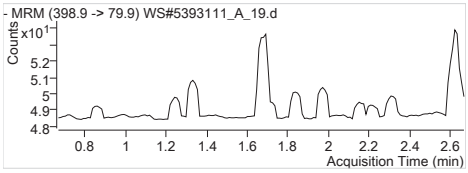


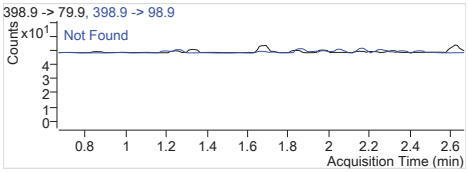
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.064)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



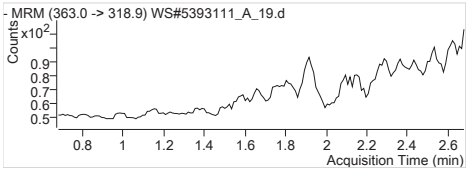


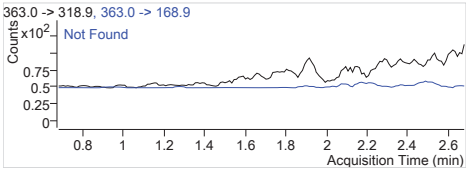
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.411)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



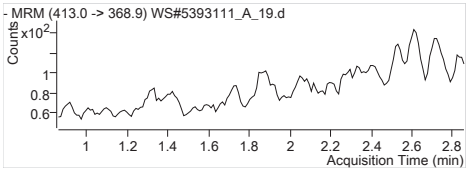


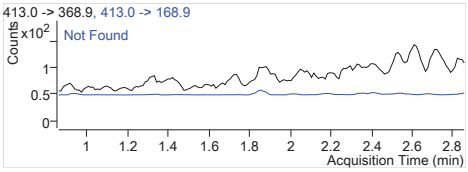
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.668)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



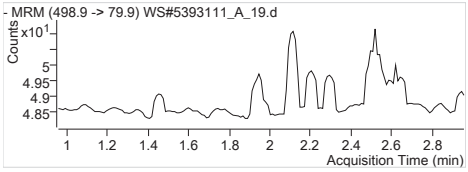


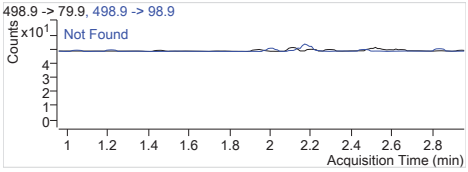
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.680)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



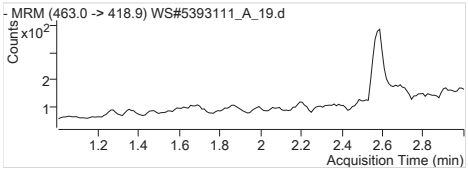


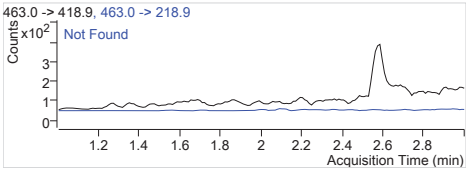
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.858)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



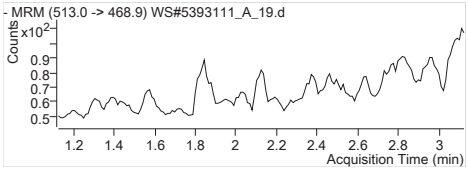


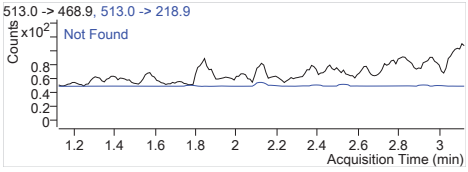
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.957)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



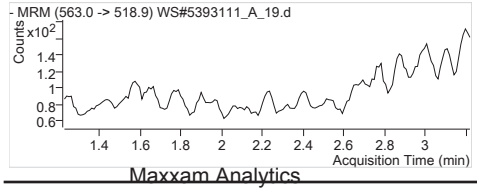


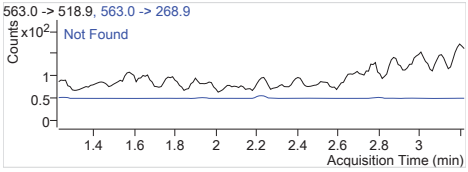
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.003)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



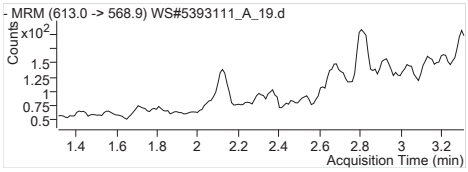


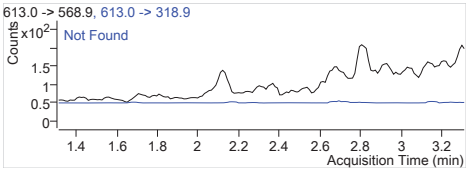
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.124)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



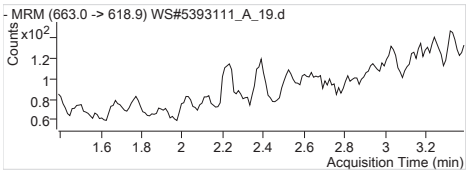


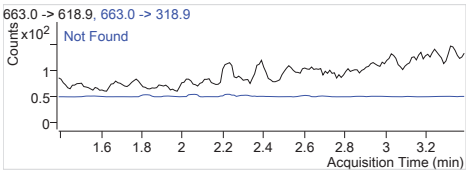
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.223)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



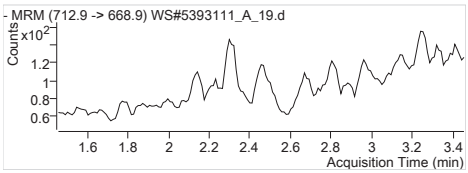


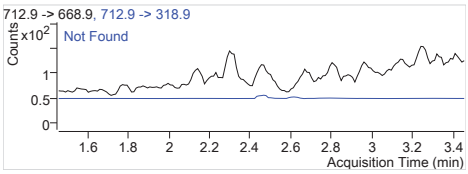
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.311)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



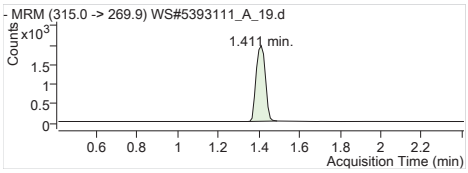


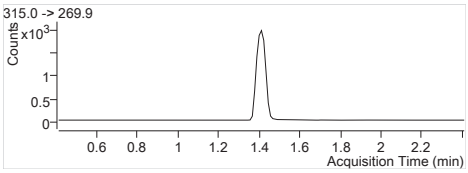
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.389)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



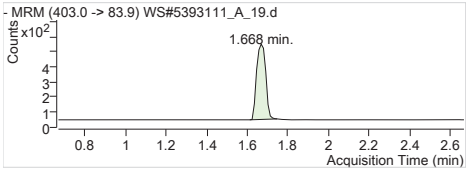


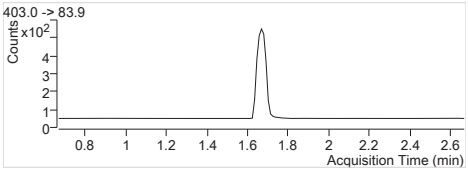
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.456)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



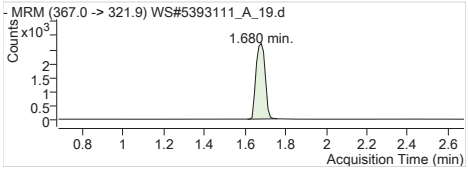


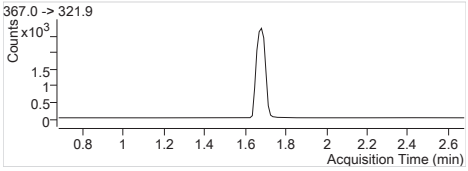
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 87.01 µg/L
Area ratio: 0.24620
Sample type: Sample



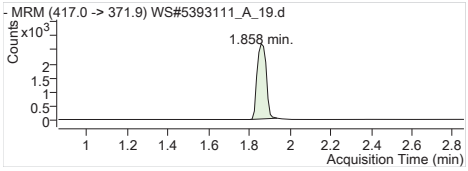


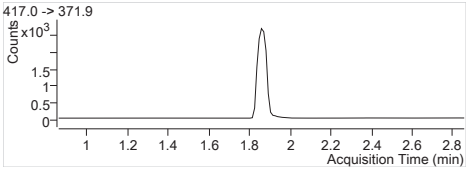
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 91.45 µg/L
Area ratio: 0.06316
Sample type: Sample



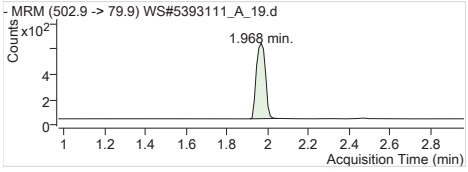


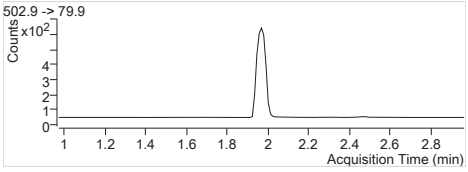
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 93.12 µg/L
Area ratio: 0.33655
Sample type: Sample



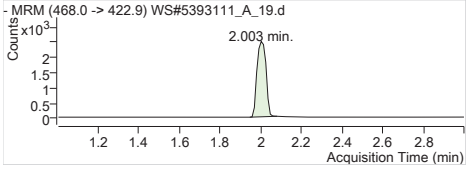


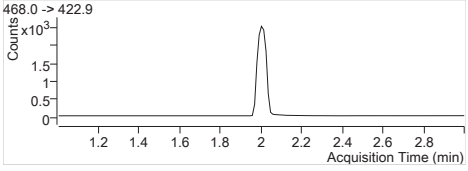
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 86.58 µg/L
Area ratio: 0.33219
Sample type: Sample



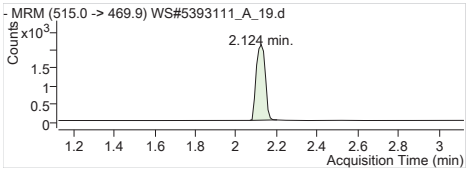


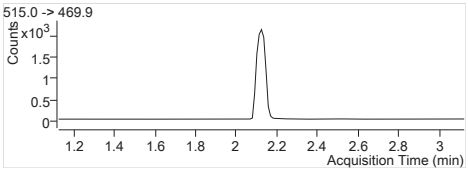
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 88.84 µg/L
Area ratio: 0.07454
Sample type: Sample



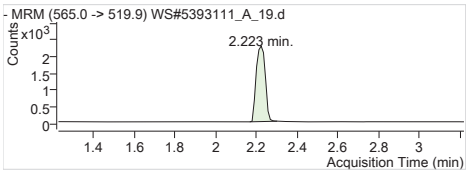


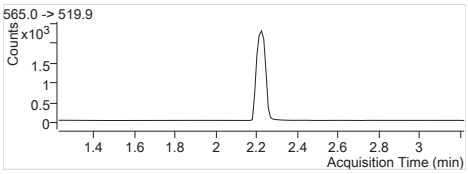
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 83.19 µg/L
Area ratio: 0.30783
Sample type: Sample



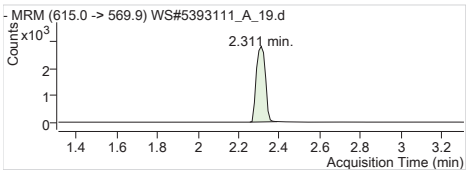


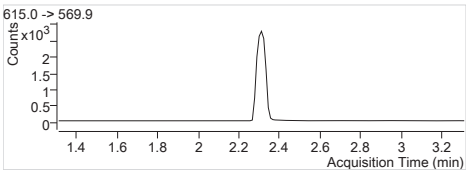
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 81.08 µg/L
Area ratio: 0.20073
Sample type: Sample



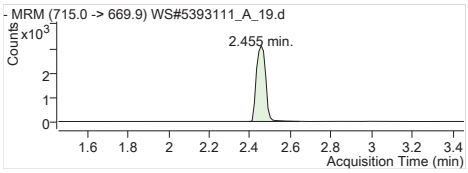


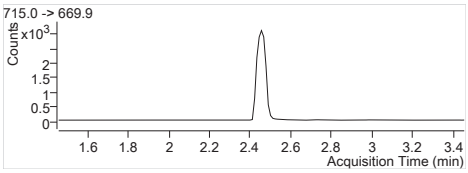
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 75.55 µg/L
Area ratio: 0.21772
Sample type: Sample



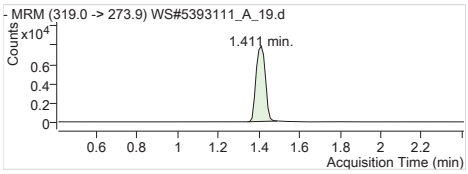


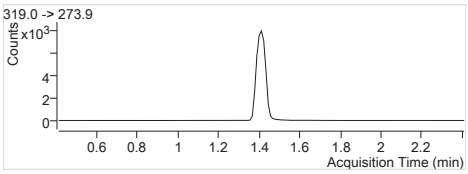
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 70.37 µg/L
Area ratio: 0.26307
Sample type: Sample



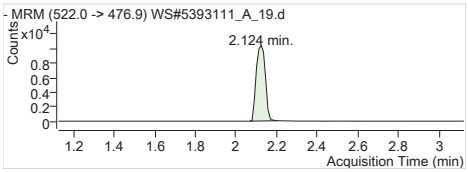


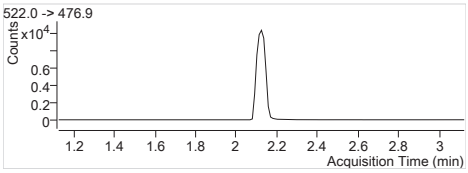
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 70.39 µg/L
Area ratio: 0.30207
Sample type: Sample





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 2.55 µg/L
Area ratio: 0
Sample type: Sample





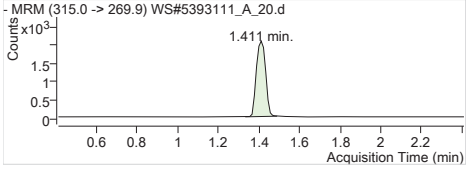
13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 2.56 µg/L
Area ratio: 0
Sample type: Sample

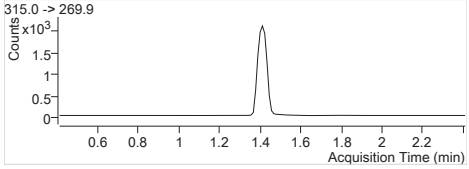
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**5393111:FZT431-01**	**Instrument**	LCMS04
Data File	WS#5393111_A_20.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low.m	**Position**	P2-B9
Acq. Date	2018/02/13 2:40:14 PM	**Injection Volume**	Per Method
Sample Annotation	-		

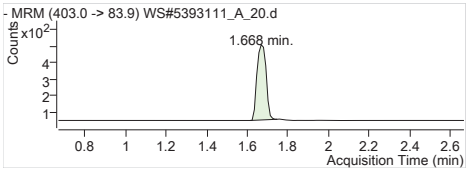
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6525	1.41	1 µg/L		
MPFHxS	1433	1.67	1 µg/L		
MPFHpA	7955	1.68	1 µg/L		
MPFOA	8375	1.86	1 µg/L		
MPFOS	1680	1.97	1 µg/L		
MPFNA	8162	2.00	1 µg/L		
MPFDA	6440	2.12	1 µg/L		
MPFUnA	6534	2.22	1 µg/L		
MPFDoA	9055	2.31	1 µg/L		
MPFTeDA	9392	2.46	1 µg/L		
13C6-PFHxA IS	24201	1.41	1 µg/L		
13C9-PFDA IS	30395	2.12	1 µg/L		

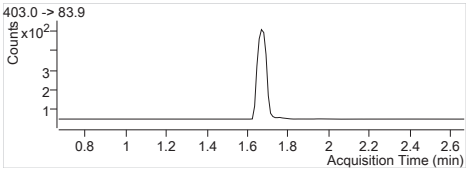
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1			-	ND	-
PFHxA 1			-	ND	-
PFHxS 1			-	ND	-
PFHpA 1			-	ND	-
PFOA 1			-	ND	-
PFOS 1			-	ND	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	6525	1.41	-	95.28 µg/L	-
18O2-PFHxS	1433	1.67	-	85.73 µg/L	-
13C4-PFHpA	7955	1.68	-	90.95 µg/L	-
13C4-PFOA	8375	1.86	-	90.20 µg/L	-
13C4-PFOS	1680	1.97	-	82.74 µg/L	-
13C5-PFNA	8163	2.00	-	91.15 µg/L	-
13C2-PFDA	6383	2.12	-	84.82 µg/L	-
13C2-PFUnA	6534	2.22	-	74.59 µg/L	-
13C2-PFDoA	9055	2.31	-	79.69 µg/L	-
13C2-PFTeDA	9610	2.46	-	73.68 µg/L	-
13C6-PFHxA	24201	1.41	-	2.49 µg/L	-
13C9-PFDA	30395	2.12	-	2.41 µg/L	-



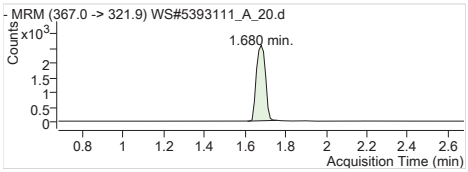


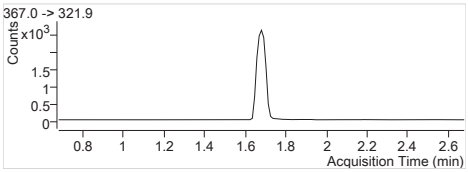
MPFHxA	Internal Standard
RT (Exp. RT):	1.411 (1.411)
Concentration:	1 µg/L
Sample type:	Sample



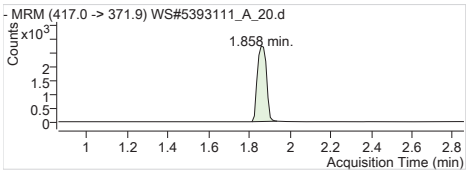


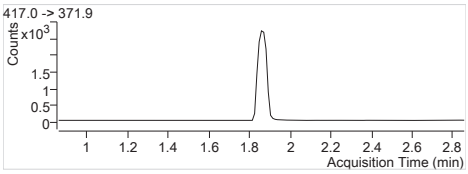
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: Sample



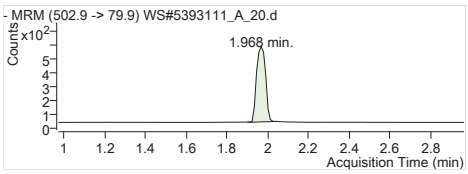


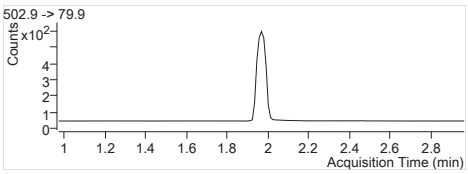
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: Sample



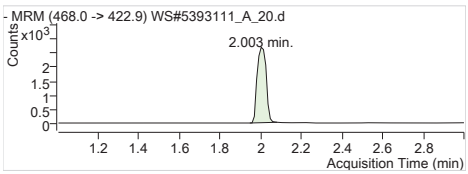


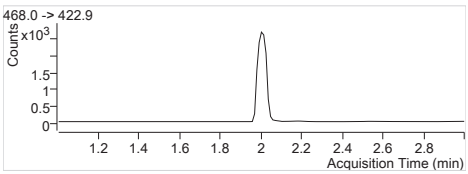
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: Sample



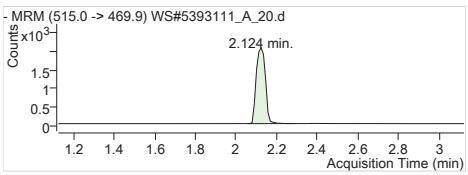


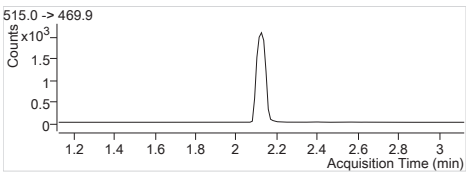
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: Sample



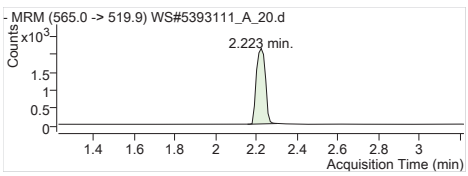


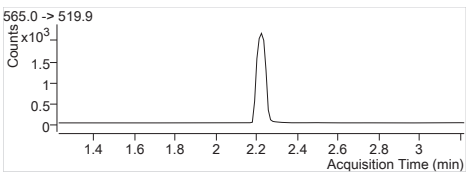
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: Sample



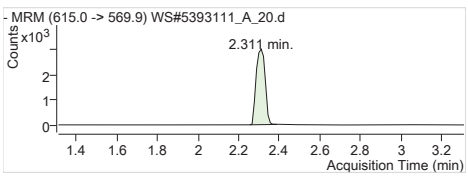


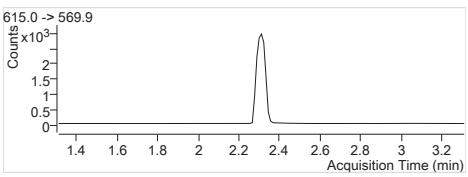
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Sample



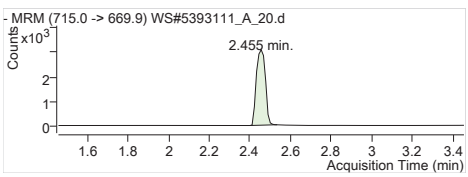


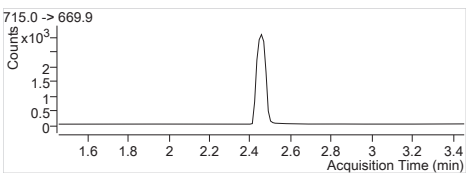
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: Sample



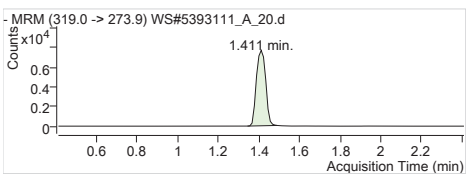


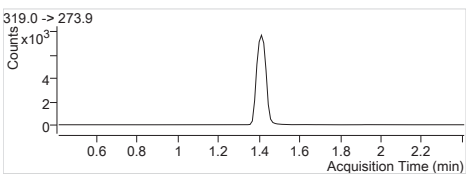
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: Sample



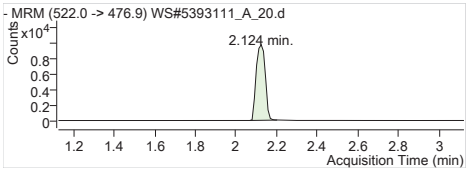


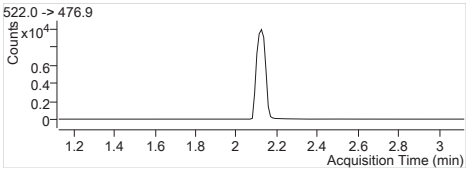
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: Sample



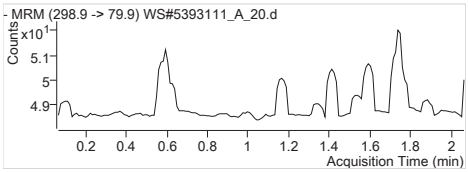


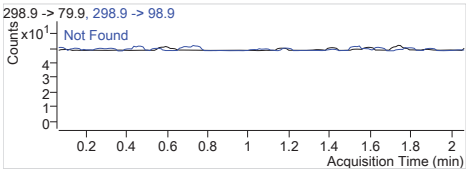
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Sample



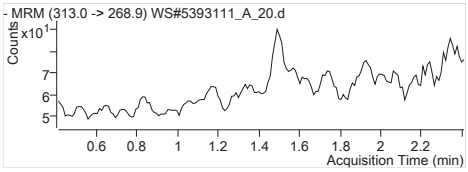


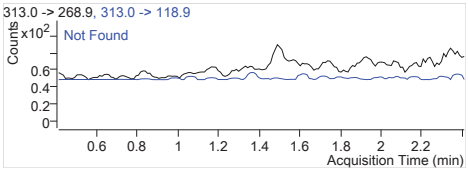
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Sample



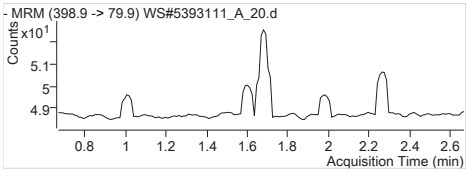


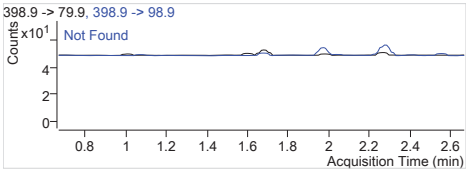
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.064)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



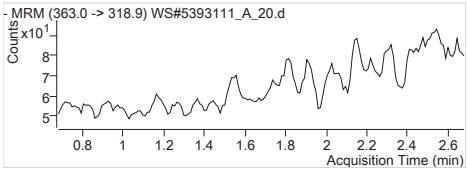


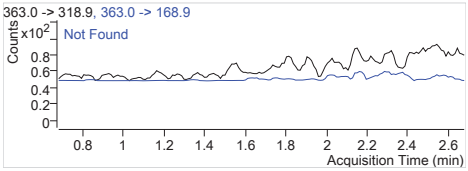
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.411)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



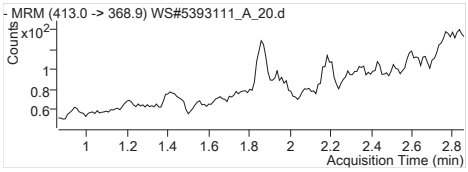


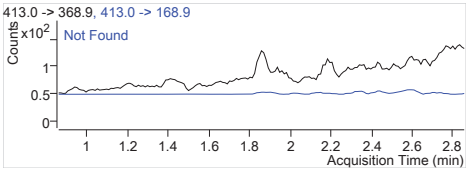
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.668)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



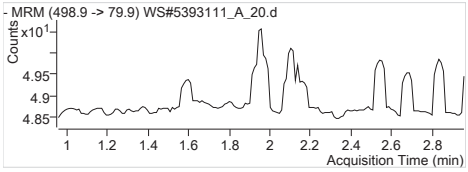


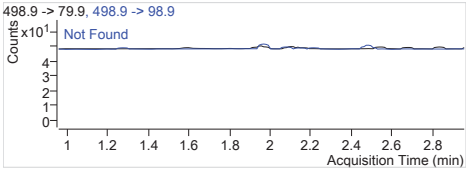
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.680)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



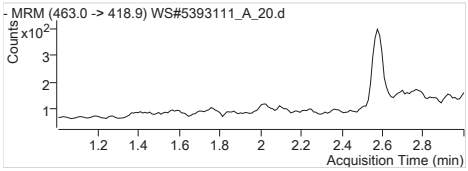


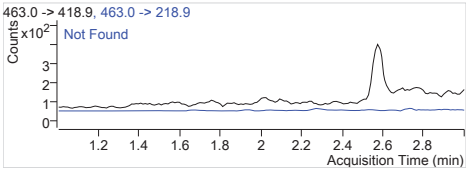
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.858)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



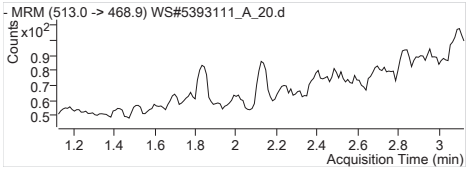


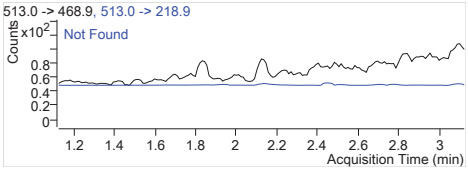
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.957)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



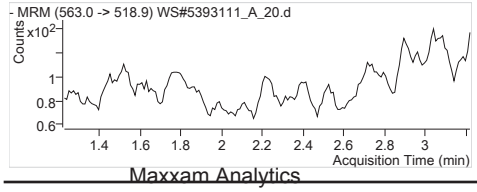


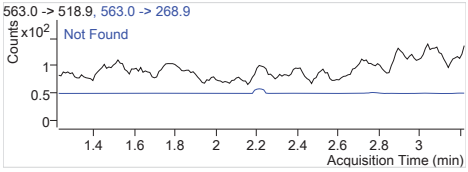
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.003)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



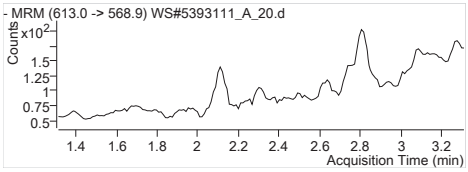


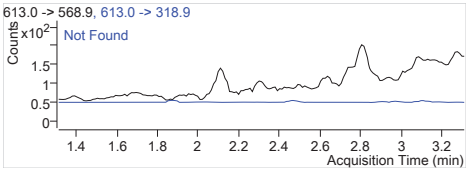
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.124)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



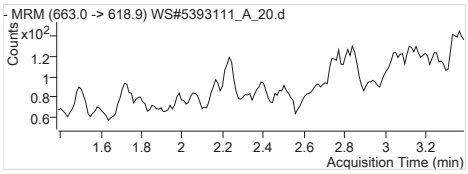


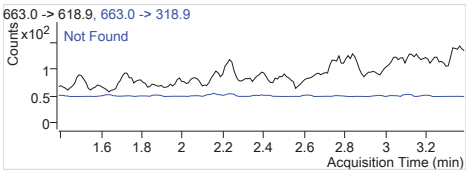
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.223)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



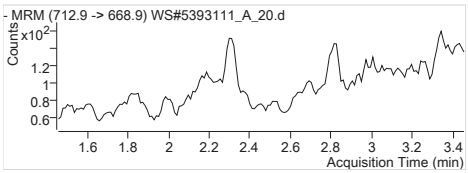


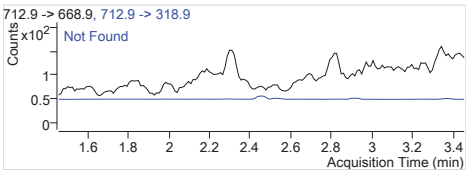
PFDoA 1	613.0 -> 568.9
RT (Exp. RT):	0.000 (2.311)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample



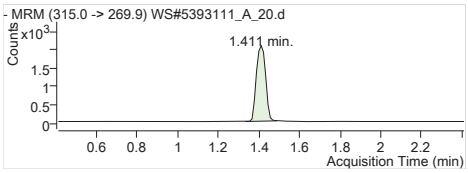


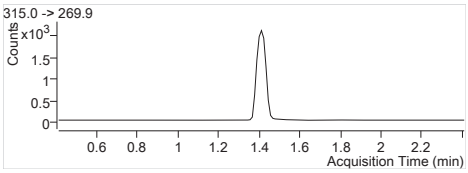
PFTrDA 1	663.0 -> 618.9
RT (Exp. RT):	0.000 (2.389)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample



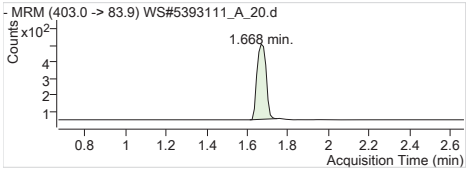


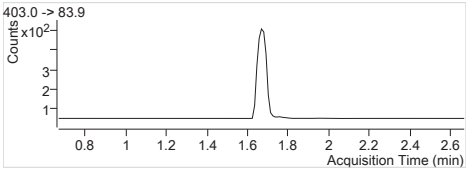
PFTeDA 1	712.9 -> 668.9
RT (Exp. RT):	0.000 (2.456)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample



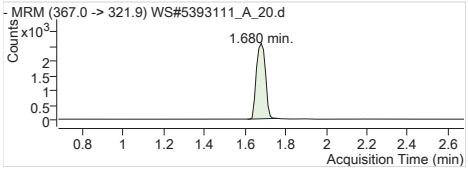


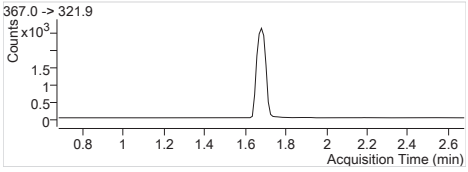
13C2-PFHxA	315.0 -> 269.9
RT (Exp. RT):	1.411 (1.411)
Calc. conc.	95.28 µg/L
Area ratio:	0.26962
Sample type:	Sample



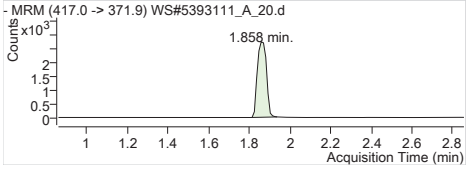


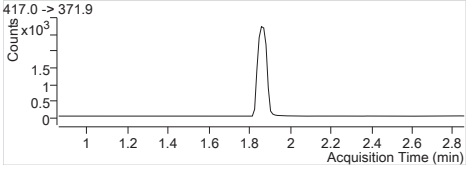
18O2-PFHxS	403.0 -> 83.9
RT (Exp. RT):	1.668 (1.668)
Calc. conc.	85.73 µg/L
Area ratio:	0.05921
Sample type:	Sample



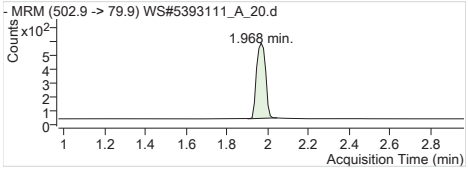


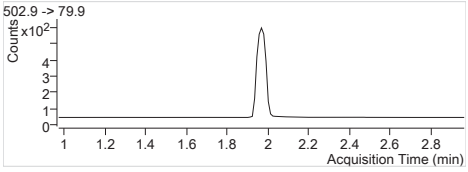
13C4-PFHpA	367.0 -> 321.9
RT (Exp. RT):	1.680 (1.680)
Calc. conc.	90.95 µg/L
Area ratio:	0.32871
Sample type:	Sample



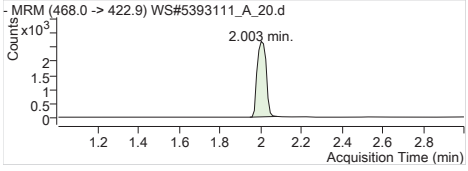


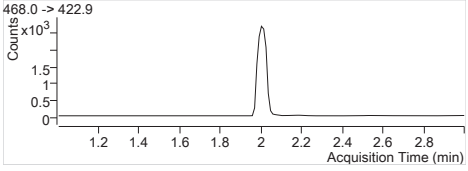
13C4-PFOA	417.0 -> 371.9
RT (Exp. RT):	1.858 (1.858)
Calc. conc.	90.20 µg/L
Area ratio:	0.34606
Sample type:	Sample



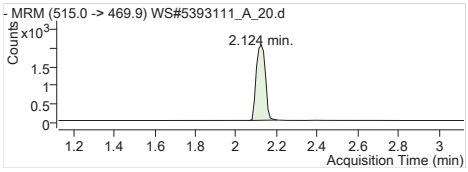


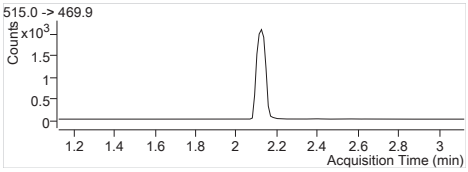
13C4-PFOS	502.9 -> 79.9
RT (Exp. RT):	1.968 (1.968)
Calc. conc.	82.74 µg/L
Area ratio:	0.06942
Sample type:	Sample



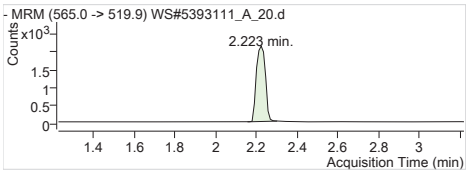


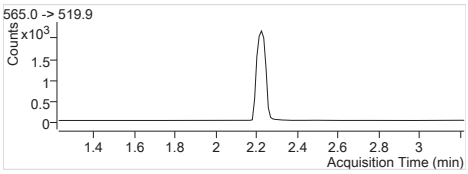
13C5-PFNA	468.0 -> 422.9
RT (Exp. RT):	2.003 (2.003)
Calc. conc.	91.15 µg/L
Area ratio:	0.33730
Sample type:	Sample



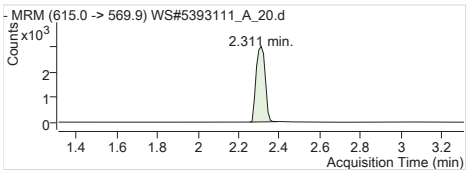


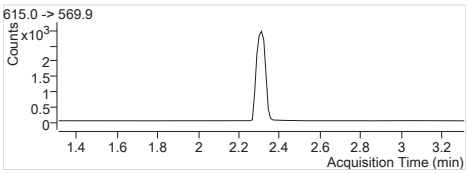
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 84.82 µg/L
Area ratio: 0.21000
Sample type: Sample



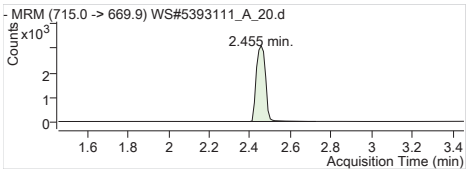


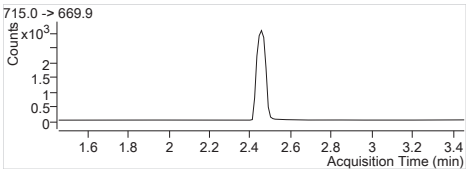
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 74.59 µg/L
Area ratio: 0.21497
Sample type: Sample



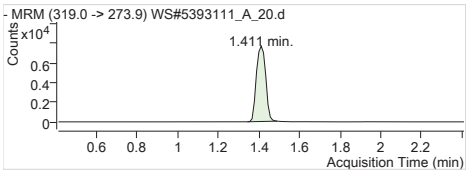


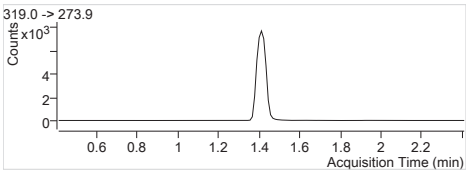
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 79.69 µg/L
Area ratio: 0.29791
Sample type: Sample



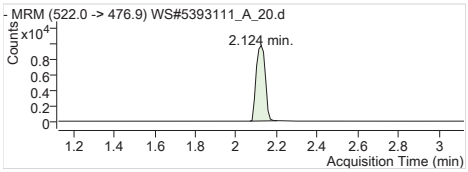


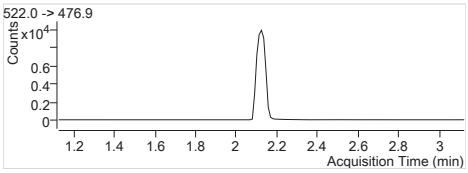
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 73.68 µg/L
Area ratio: 0.31617
Sample type: Sample





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 2.49 µg/L
Area ratio: 0
Sample type: Sample





13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 2.41 µg/L
Area ratio: 0
Sample type: Sample

Quantitation Results

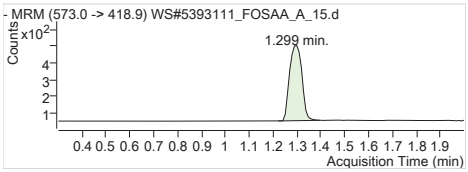
Agilent Technologies

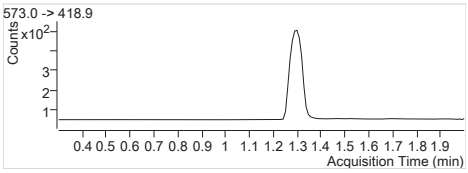
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**5393111:FZT426-01:10x**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_15.d	**Operator**	
Sample Type	Sample	**Dilution**	0.24
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-B5
Acq. Date	2018/02/13 12:00:49 PM	**Injection Volume**	Per Method
Sample Annotation	-		

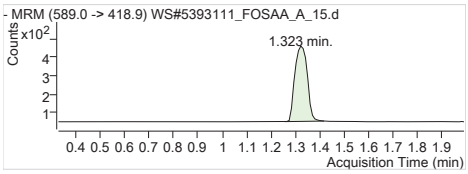
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1638	1.30	1 µg/L		
D5-EtFOSAA IS	1458	1.32	1 µg/L		
13C9-PFDA IS	24008	0.88	1 µg/L		

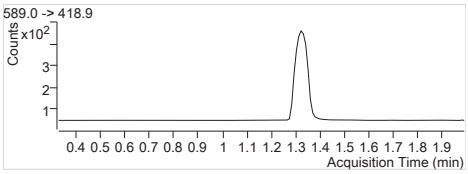
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1640	1.30	-	91.09 µg/L	-
D5-EtFOSAA	1467	1.32	-	95.09 µg/L	-
13C9-PFDA	23367	0.88	-	21.98 µg/L	-



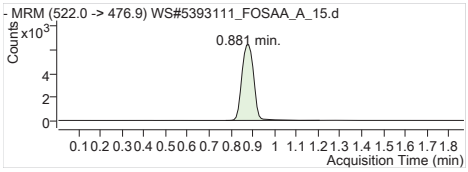


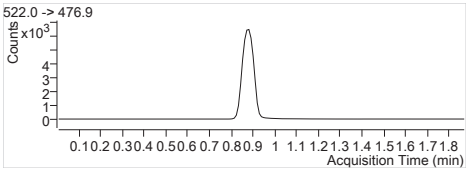
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: Sample



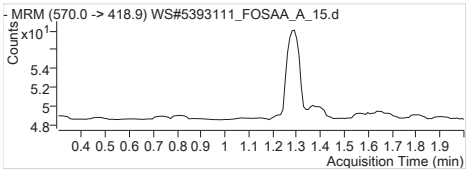


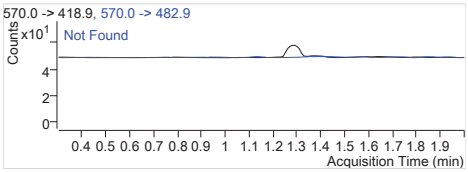
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: Sample



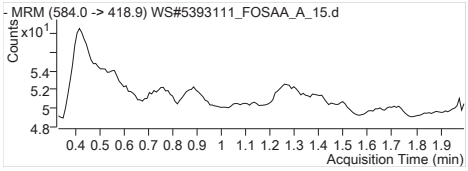


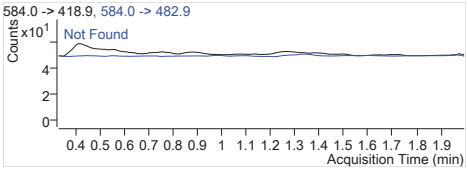
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.881 (0.871)
Concentration: 1 µg/L
Sample type: Sample



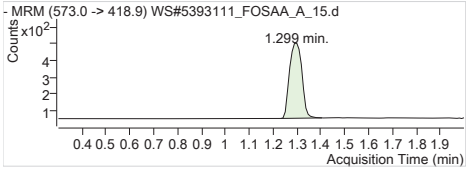


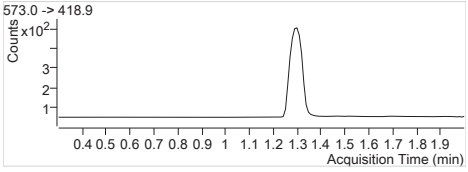
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.300)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



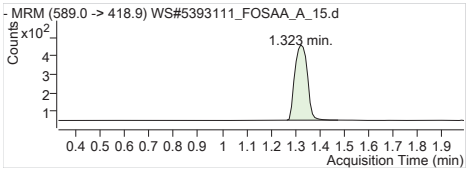


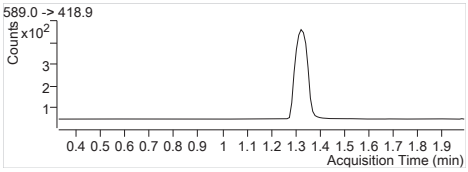
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.325)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



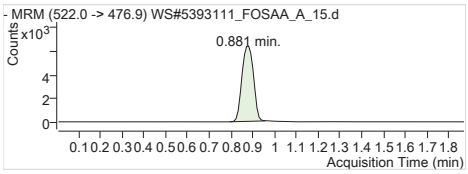


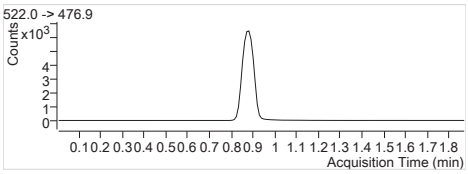
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 91.09 µg/L
Area ratio: 0.06831
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	95.09 µg/L
Area ratio:	0.06110
Sample type:	Sample





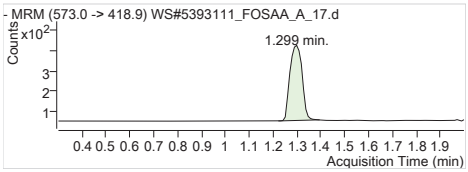
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.881 (0.871)
Calc. conc.	21.98 µg/L
Area ratio:	0
Sample type:	Sample

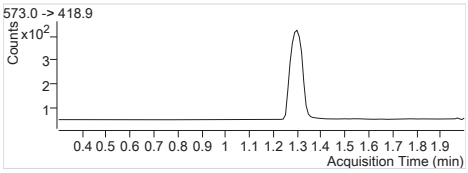
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**5393111:FZT427-01**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_17.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-B6
Acq. Date	2018/02/13 12:05:39 PM	**Injection Volume**	Per Method
Sample Annotation	-		

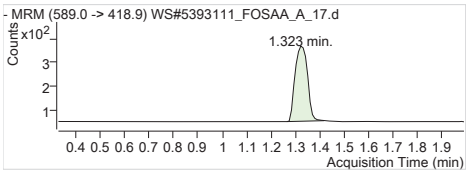
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1332	1.30	1 µg/L		
D5-EtFOSAA IS	1129	1.32	1 µg/L		
13C9-PFDA IS	23191	0.88	1 µg/L		

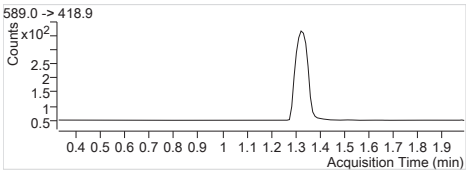
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1352	1.30	-	77.74 µg/L	-
D5-EtFOSAA	1149	1.32	-	77.10 µg/L	-
13C9-PFDA	22543	0.88	-	2.12 µg/L	-



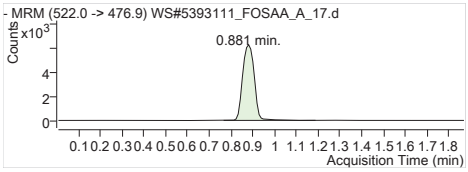


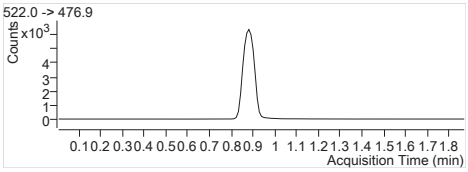
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: Sample



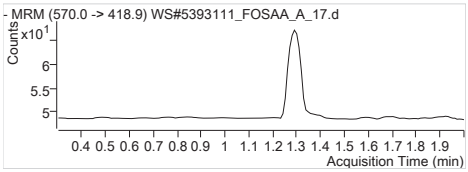


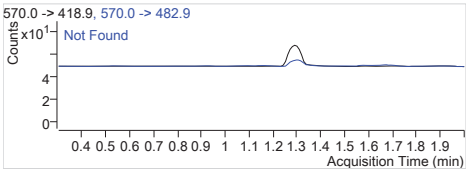
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: Sample



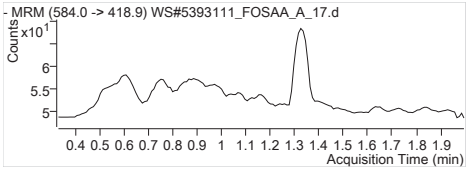


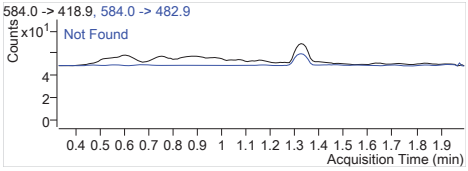
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.881 (0.871)
Concentration: 1 µg/L
Sample type: Sample



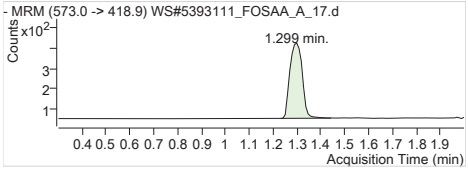


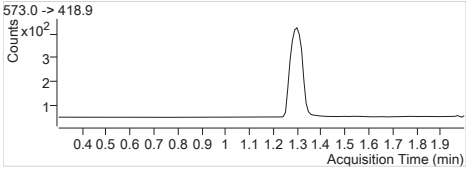
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.300)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



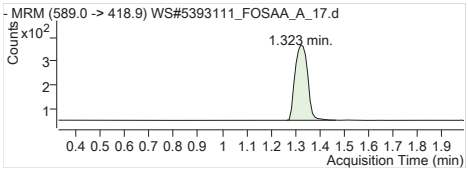


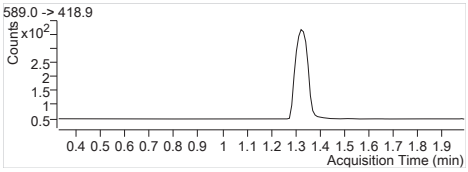
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.325)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



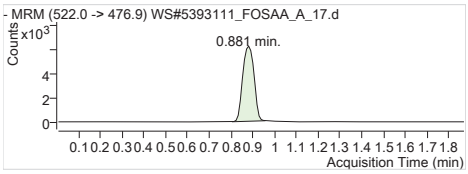


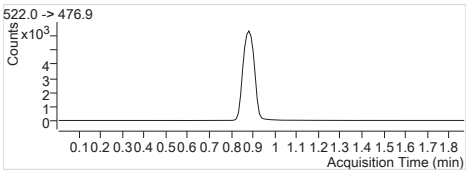
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 77.74 µg/L
Area ratio: 0.05830
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	77.10 µg/L
Area ratio:	0.04955
Sample type:	Sample





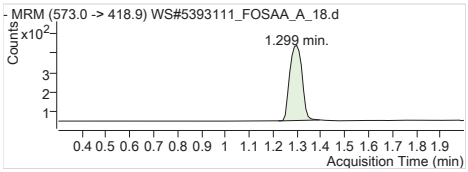
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.881 (0.871)
Calc. conc.	2.12 µg/L
Area ratio:	0
Sample type:	Sample

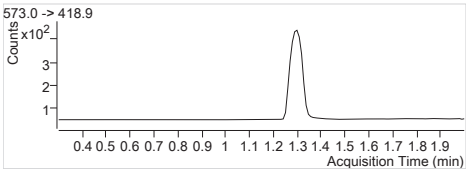
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**5393111:FZT428-01**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_18.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-B7
Acq. Date	2018/02/13 12:08:04 PM	**Injection Volume**	Per Method
Sample Annotation	-		

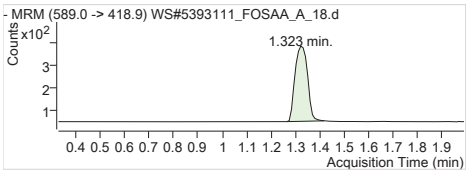
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1396	1.30	1 µg/L		
D5-EtFOSAA IS	1187	1.32	1 µg/L		
13C9-PFDA IS	24825	0.88	1 µg/L		

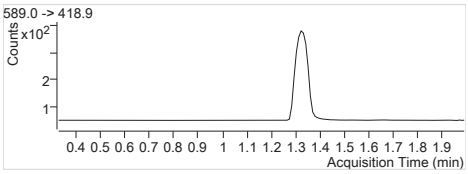
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1419	1.30	-	76.23 µg/L	-
D5-EtFOSAA	1207	1.32	-	75.66 µg/L	-
13C9-PFDA	24266	0.88	-	2.28 µg/L	-



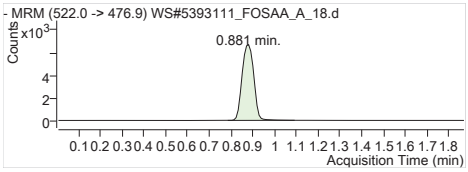


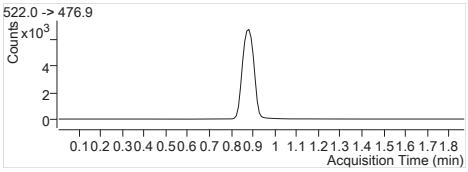
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: Sample



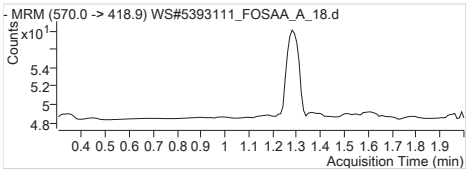


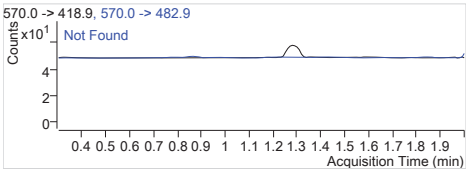
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: Sample



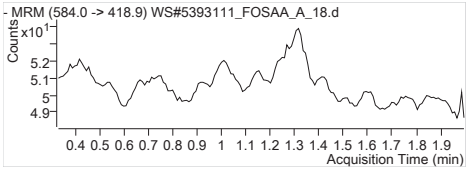


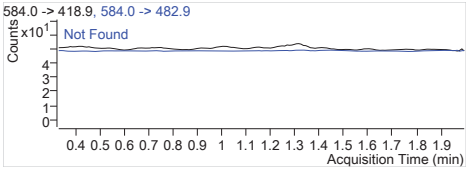
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.881 (0.871)
Concentration: 1 µg/L
Sample type: Sample



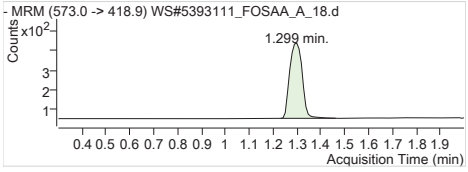


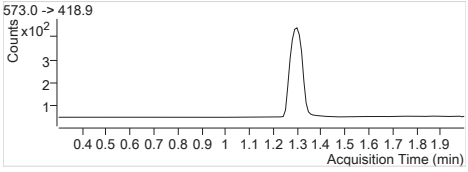
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.300)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



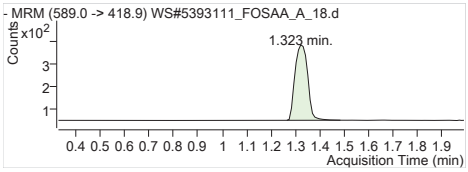


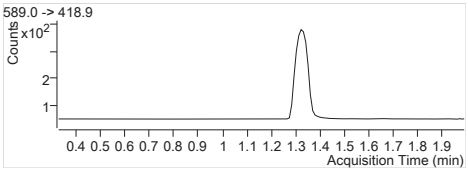
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.325)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



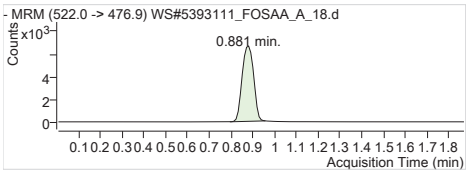


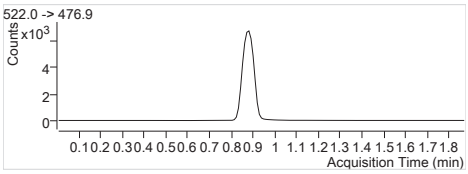
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 76.23 µg/L
Area ratio: 0.05716
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	75.66 µg/L
Area ratio:	0.04862
Sample type:	Sample





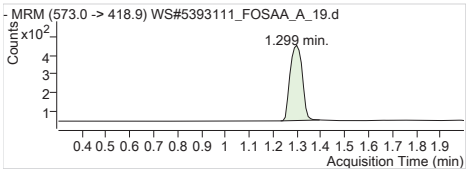
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.881 (0.871)
Calc. conc.	2.28 µg/L
Area ratio:	0
Sample type:	Sample

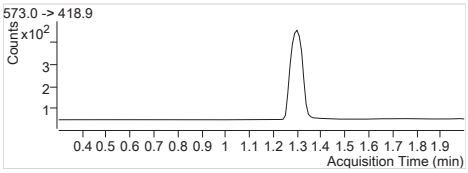
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**5393111:FZT430-01**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_19.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-B8
Acq. Date	2018/02/13 12:10:29 PM	**Injection Volume**	Per Method
Sample Annotation	-		

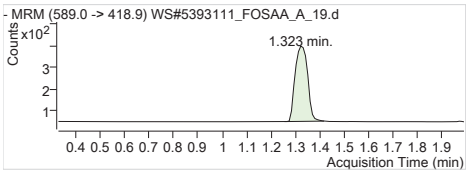
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1423	1.30	1 µg/L		
D5-EtFOSAA IS	1242	1.32	1 µg/L		
13C9-PFDA IS	26318	0.88	1 µg/L		

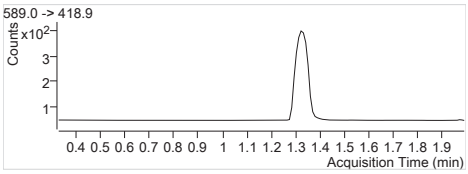
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1455	1.30	-	73.73 µg/L	-
D5-EtFOSAA	1255	1.32	-	74.21 µg/L	-
13C9-PFDA	25605	0.88	-	2.41 µg/L	-



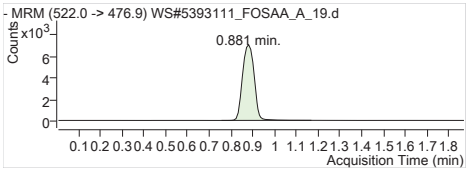


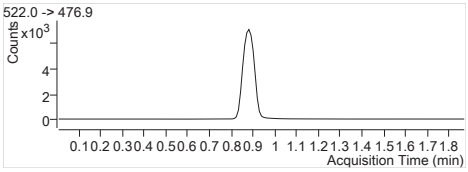
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: Sample



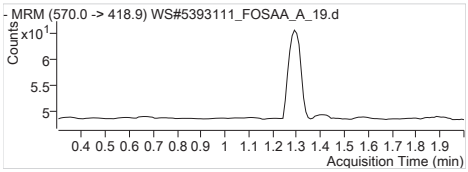


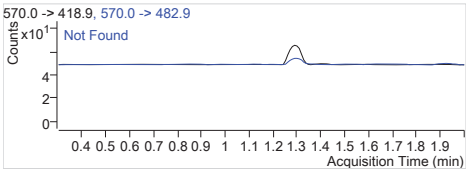
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: Sample



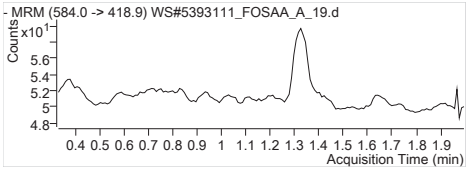


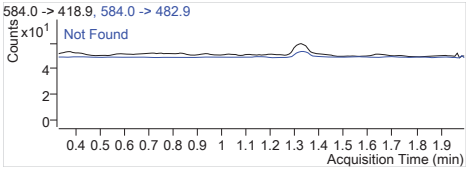
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.881 (0.871)
Concentration: 1 µg/L
Sample type: Sample



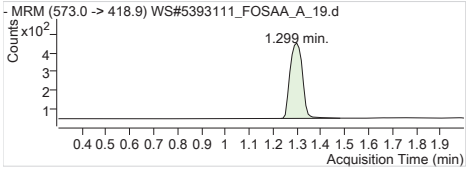


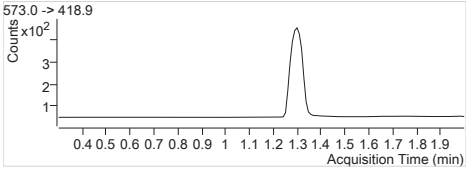
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.300)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



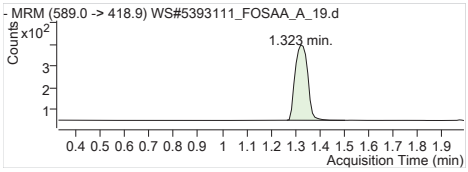


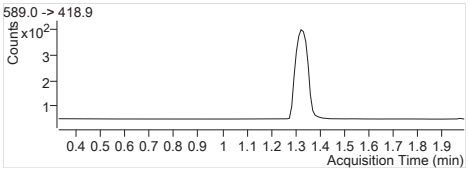
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.325)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



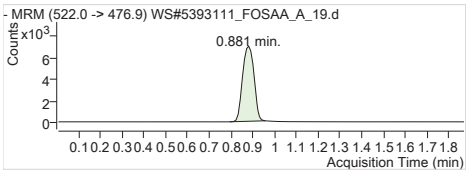


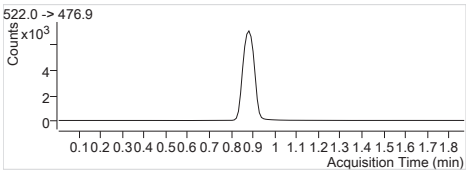
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 73.73 µg/L
Area ratio: 0.05529
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	74.21 µg/L
Area ratio:	0.04769
Sample type:	Sample





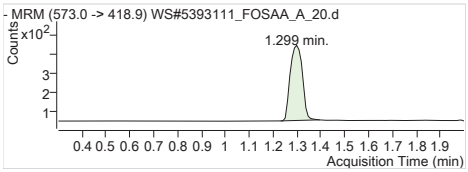
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.881 (0.871)
Calc. conc.	2.41 µg/L
Area ratio:	0
Sample type:	Sample

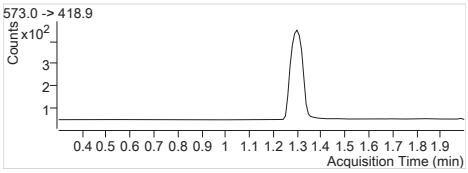
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**5393111:FZT431-01**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_20.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-B9
Acq. Date	2018/02/13 12:12:54 PM	**Injection Volume**	Per Method
Sample Annotation	-		

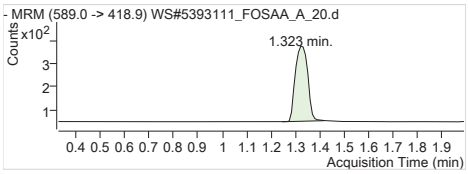
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1411	1.30	1 µg/L		
D5-EtFOSAA IS	1162	1.32	1 µg/L		
13C9-PFDA IS	25423	0.88	1 µg/L		

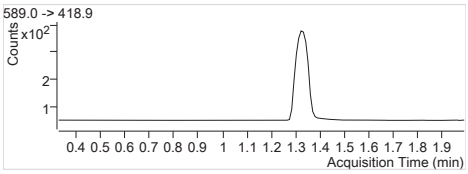
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1430	1.30	-	75.01 µg/L	-
D5-EtFOSAA	1192	1.32	-	72.97 µg/L	-
13C9-PFDA	24713	0.88	-	2.32 µg/L	-



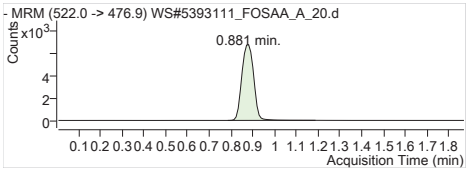


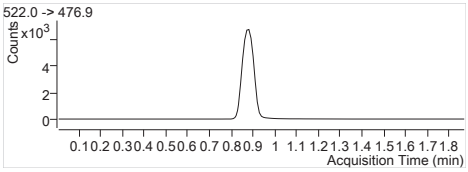
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: Sample



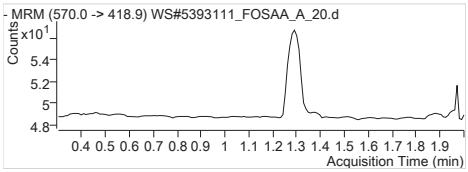


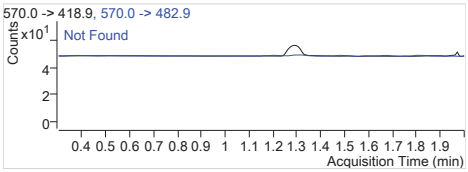
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: Sample



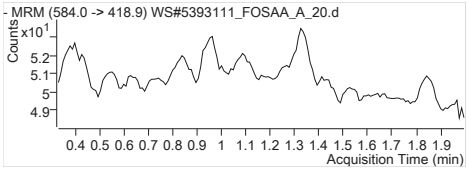


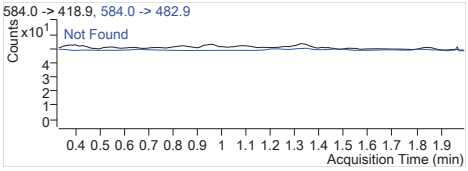
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.881 (0.871)
Concentration: 1 µg/L
Sample type: Sample



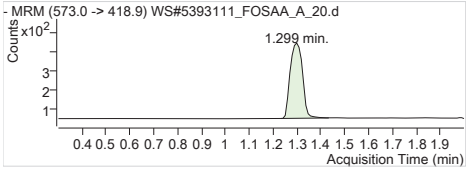


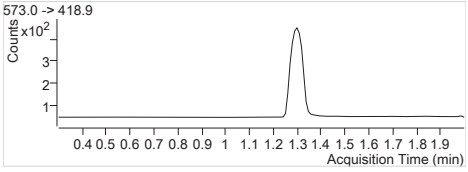
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.300)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



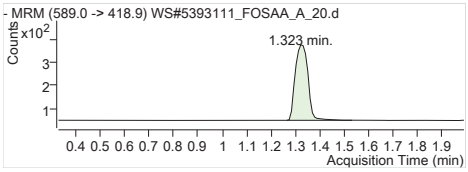


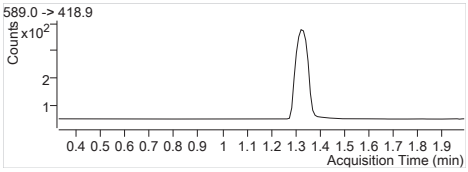
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.325)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



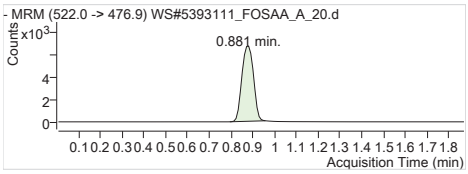


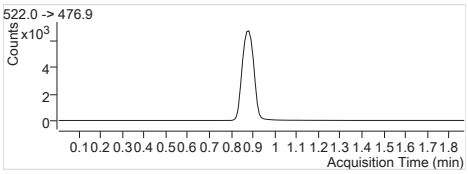
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 75.01 µg/L
Area ratio: 0.05625
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	72.97 µg/L
Area ratio:	0.04689
Sample type:	Sample





13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.881 (0.871)
Calc. conc.	2.32 µg/L
Area ratio:	0
Sample type:	Sample



4. QA/QC Data

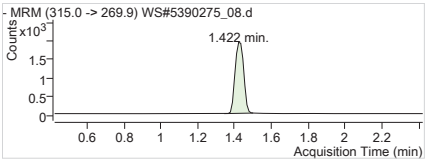
Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

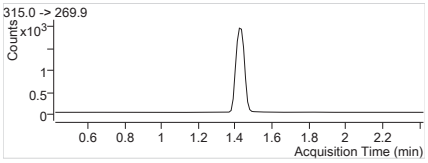
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics

Sample Name	**IB**	**Instrument**	LCMS04
Data File	WS#5390275_08.d	**Operator**	
Sample Type	Sample	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A8
Acq. Date	2018/02/09 5:08:46 PM	**Injection Volume**	Per Method
Sample Annotation	-		

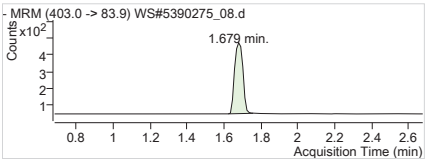
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6204	1.42	1 µg/L		
MPFHxS	1324	1.68	1 µg/L		
MPFHpA	8662	1.69	1 µg/L		
MPFOA	8417	1.88	1 µg/L		
MPFOS	1818	1.98	1 µg/L		
MPFNA	8044	2.01	1 µg/L		
MPFDA	7103	2.14	1 µg/L		
MPFUnA	7788	2.23	1 µg/L		
MPFDoA	10618	2.32	1 µg/L		
MPFTeDA	12712	2.47	1 µg/L		
13C6-PFHxA IS	20118	1.42	1 µg/L		
13C9-PFDA IS	26942	2.13	1 µg/L		

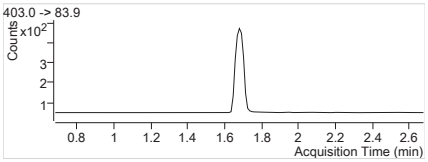
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1			-	ND	-
PFHxA 1			-	ND	-
PFHxS 1			-	ND	-
PFHpA 1			-	ND	-
PFOA 1			-	ND	-
PFOS 1			-	ND	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	6204	1.42	-	123.56 µg/L	-
18O2-PFHxS	1324	1.68	-	105.27 µg/L	-
13C4-PFHpA	8662	1.69	-	132.37 µg/L	-
13C4-PFOA	8417	1.88	-	121.26 µg/L	-
13C4-PFOS	1818	1.98	-	115.20 µg/L	-
13C5-PFNA	8044	2.01	-	117.26 µg/L	-
13C2-PFDA	6976	2.14	-	124.26 µg/L	-
13C2-PFUnA	7788	2.23	-	109.70 µg/L	-
13C2-PFDoA	10618	2.32	-	115.62 µg/L	-
13C2-PFTeDA	13078	2.47	-	122.74 µg/L	-
13C6-PFHxA	20118	1.42	-	85.91 µg/L	-
13C9-PFDA	26942	2.13	-	87.05 µg/L	-



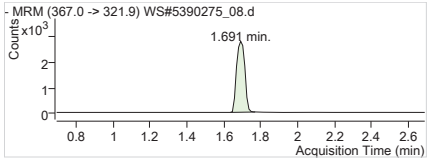


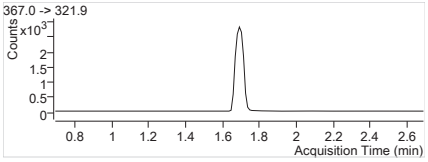
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



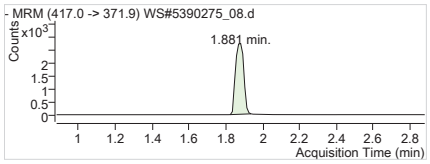


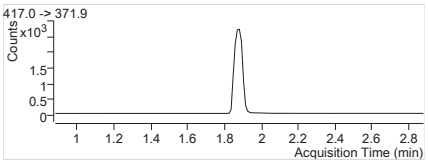
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



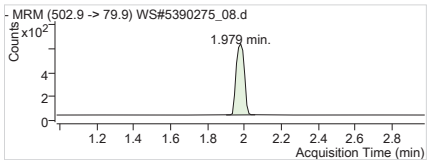


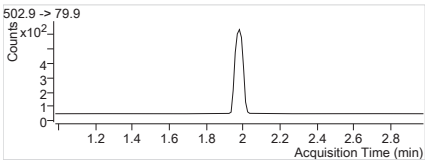
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



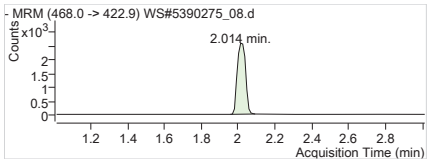


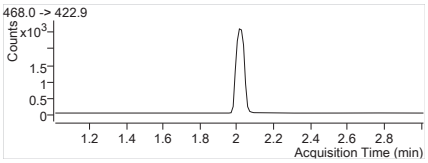
MPFOA Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Sample



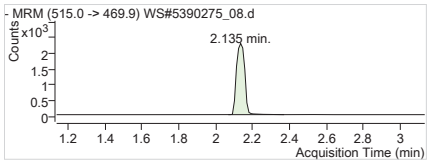


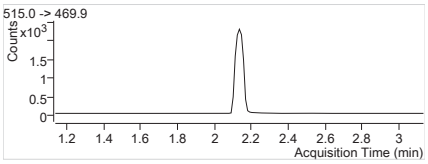
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



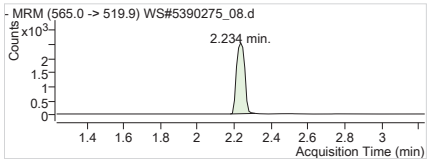


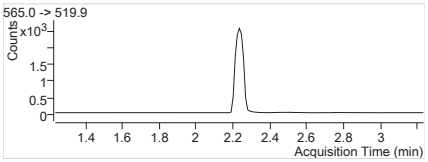
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



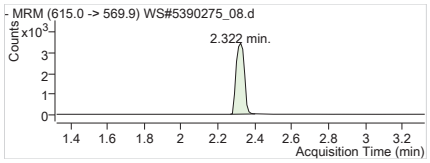


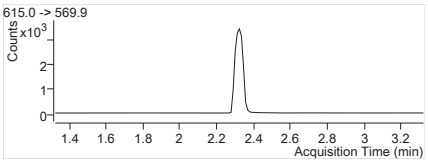
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



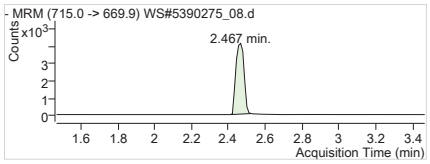


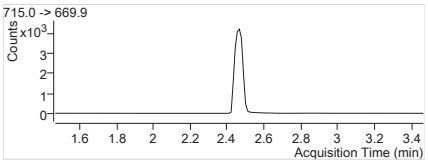
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



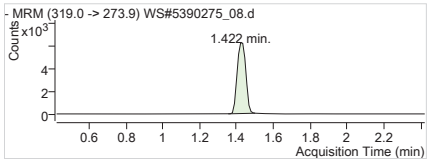


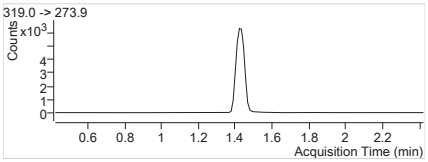
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



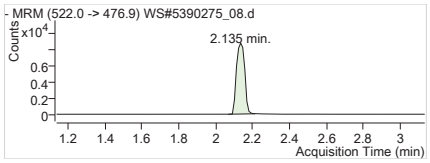


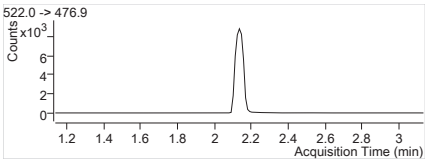
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



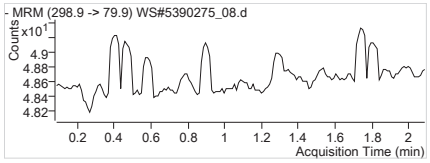


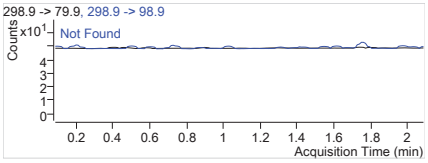
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



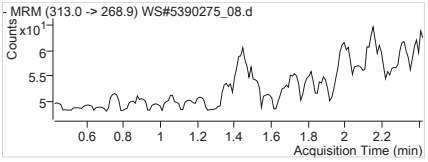


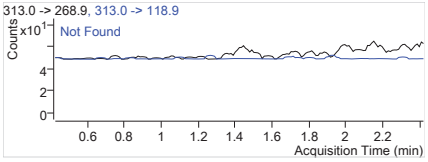
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



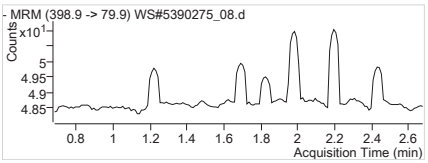


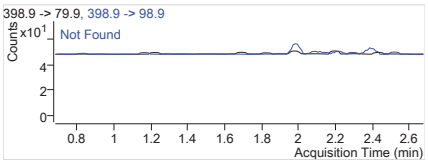
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.087)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



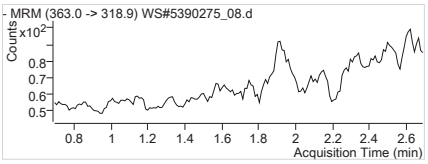


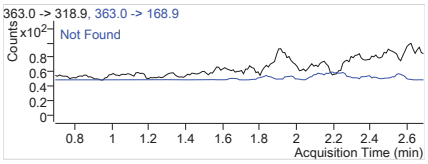
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.423)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



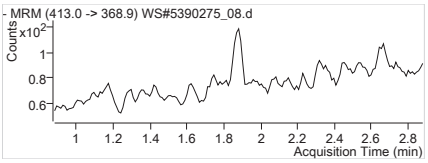


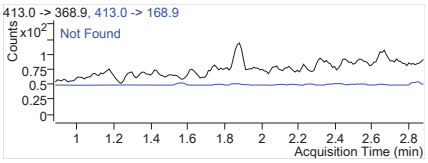
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.679)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



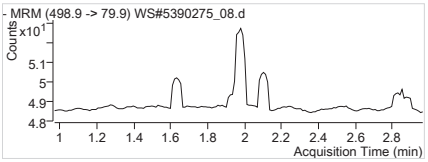


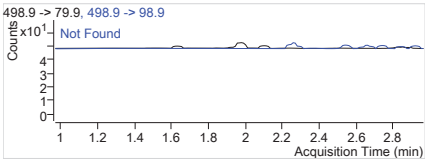
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



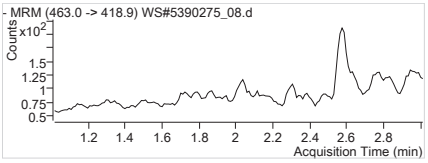


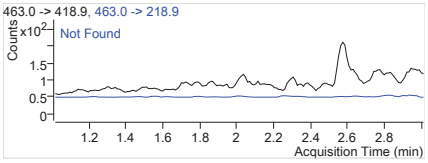
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



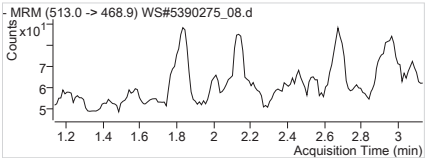


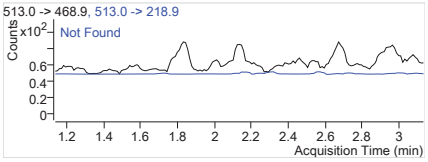
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.968)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



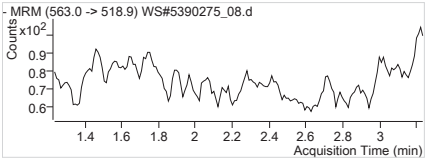


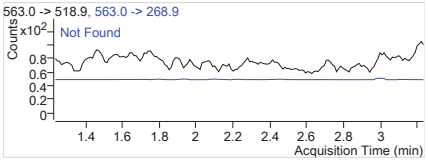
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.014)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



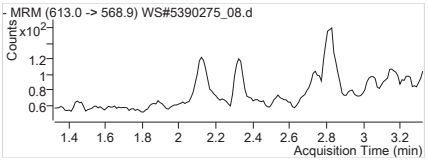


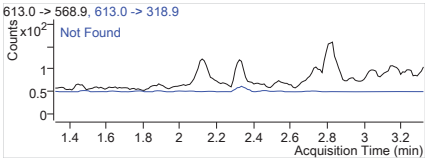
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



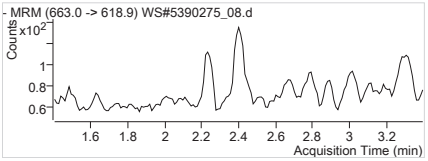


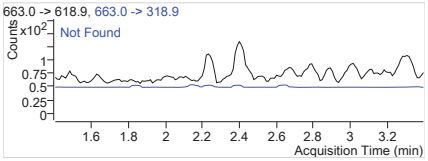
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.234)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



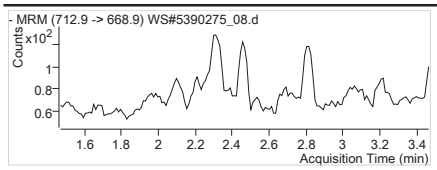


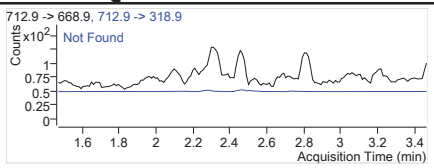
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



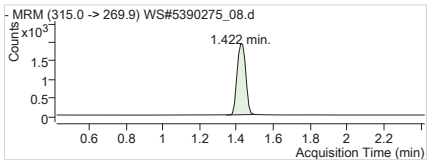


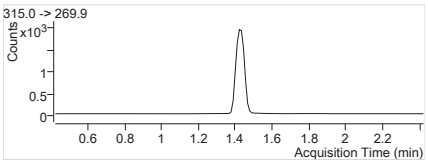
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



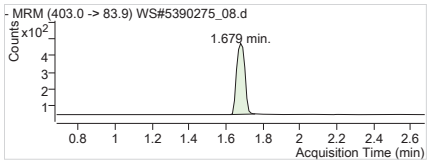


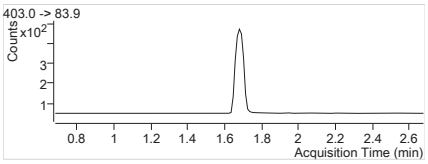
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



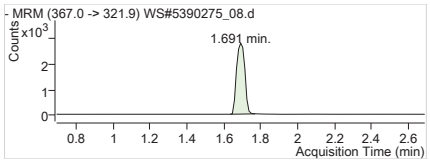


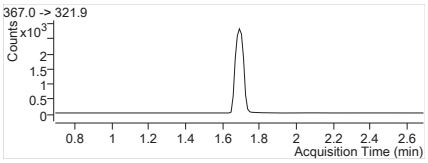
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 123.56 µg/L
Area ratio: 0.30838
Sample type: Sample



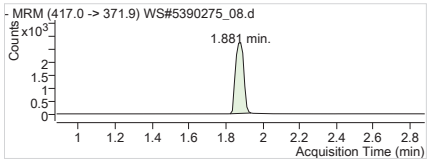


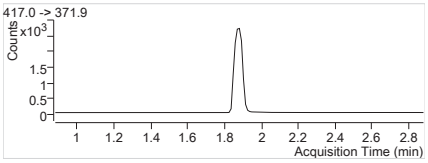
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 105.27 µg/L
Area ratio: 0.06581
Sample type: Sample



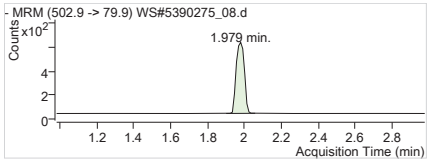


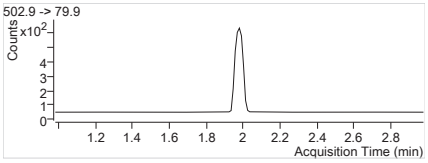
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 132.37 µg/L
Area ratio: 0.43056
Sample type: Sample



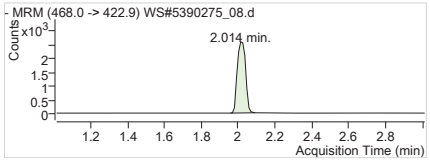


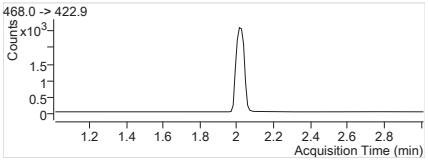
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 121.26 µg/L
Area ratio: 0.41838
Sample type: Sample



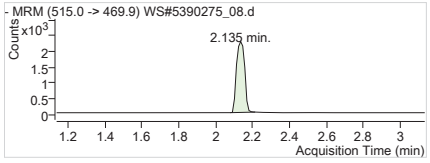


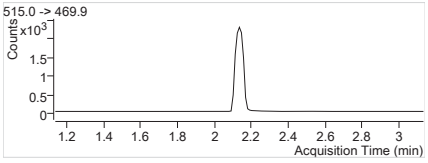
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 115.20 µg/L
Area ratio: 0.09037
Sample type: Sample



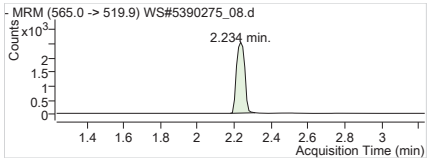


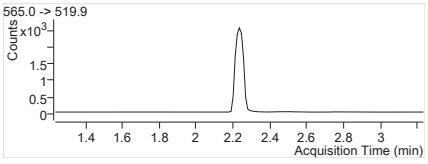
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 117.26 µg/L
Area ratio: 0.39984
Sample type: Sample



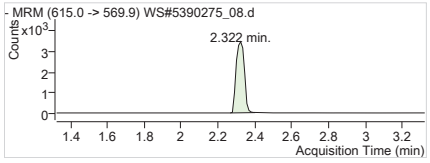


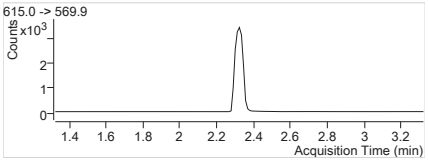
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 124.26 µg/L
Area ratio: 0.25893
Sample type: Sample



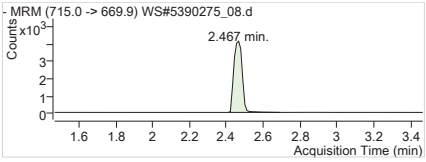


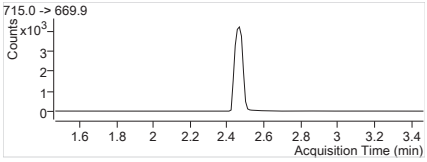
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 109.70 µg/L
Area ratio: 0.28907
Sample type: Sample



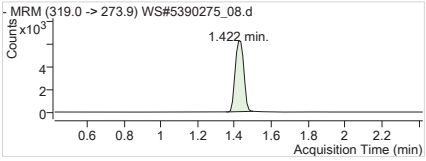


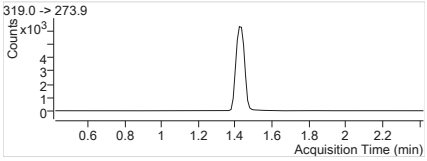
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 115.62 µg/L
Area ratio: 0.39411
Sample type: Sample



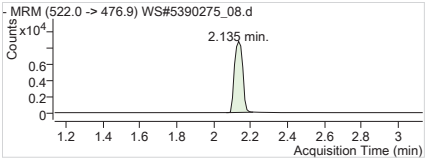


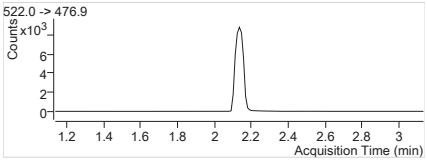
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	122.74 µg/L
Area ratio:	0.48541
Sample type:	Sample





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	85.91 µg/L
Area ratio:	0
Sample type:	Sample





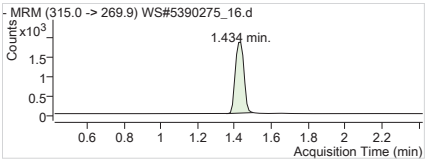
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	87.05 µg/L
Area ratio:	0
Sample type:	Sample

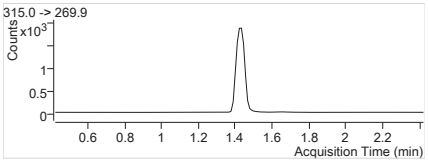
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics

Sample Name	IB	**Instrument**	LCMS04
Data File	WS#5390275_16.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low.m	**Position**	P2-A8
Acq. Date	2018/02/09 5:48:14 PM	**Injection Volume**	Per Method
Sample Annotation	-		

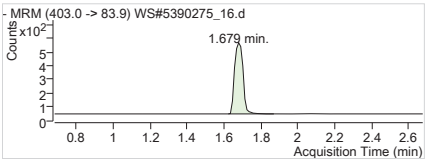
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	5962	1.43	1 µg/L		
MPFHxS	1657	1.68	1 µg/L		
MPFHpA	7598	1.69	1 µg/L		
MPFOA	8443	1.87	1 µg/L		
MPFOS	1755	1.98	1 µg/L		
MPFNA	8169	2.01	1 µg/L		
MPFDA	6529	2.14	1 µg/L		
MPFUnA	8292	2.23	1 µg/L		
MPFDoA	11338	2.32	1 µg/L		
MPFTeDA	12842	2.47	1 µg/L		
13C6-PFHxA IS	20823	1.42	1 µg/L		
13C9-PFDA IS	26431	2.13	1 µg/L		

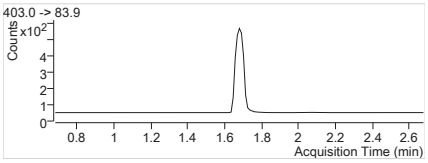
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1			-	ND	-
PFHxA 1			-	ND	-
PFHxS 1			-	ND	-
PFHpA 1			-	ND	-
PFOA 1			-	ND	-
PFOS 1			-	ND	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	5962	1.43	-	114.72 µg/L	-
18O2-PFHxS	1657	1.68	-	127.28 µg/L	-
13C4-PFHpA	7598	1.69	-	112.18 µg/L	-
13C4-PFOA	8443	1.87	-	117.52 µg/L	-
13C4-PFOS	1755	1.98	-	107.44 µg/L	-
13C5-PFNA	8168	2.01	-	115.03 µg/L	-
13C2-PFDA	6410	2.14	-	116.39 µg/L	-
13C2-PFUnA	8292	2.23	-	119.06 µg/L	-
13C2-PFDoA	11338	2.32	-	125.84 µg/L	-
13C2-PFTeDA	13101	2.47	-	125.33 µg/L	-
13C6-PFHxA	20823	1.42	-	2.13 µg/L	-
13C9-PFDA	26431	2.13	-	2.05 µg/L	-



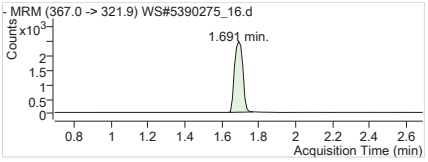


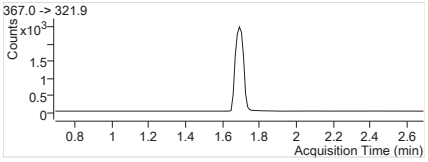
MPFHxA Internal Standard
RT (Exp. RT): 1.434 (1.422)
Concentration: 1 µg/L
Sample type: Sample



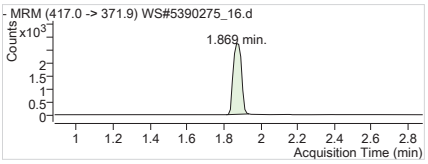


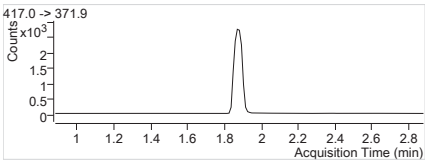
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



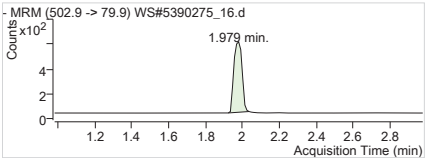


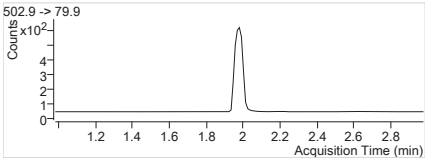
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



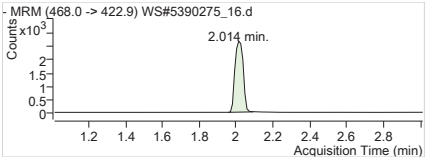


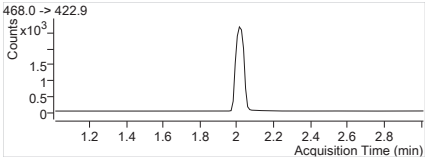
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: Sample



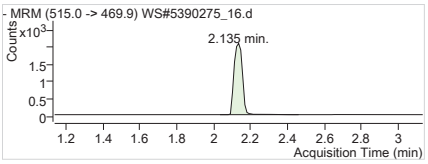


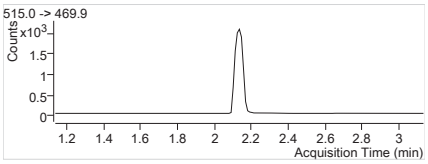
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



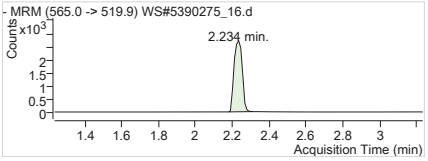


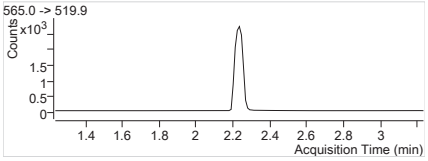
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



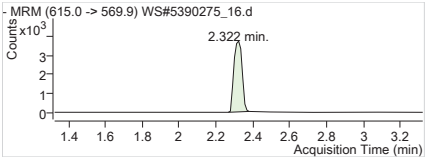


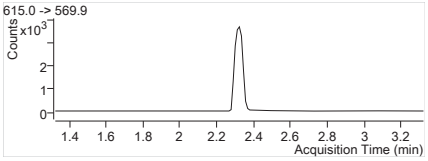
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



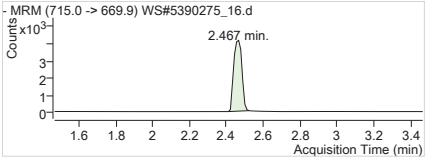


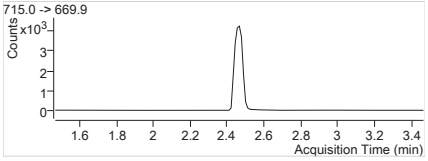
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



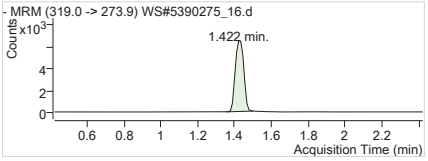


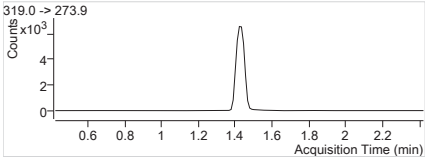
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



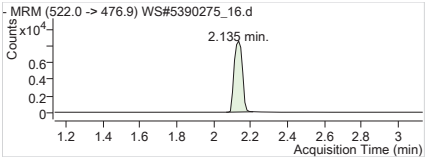


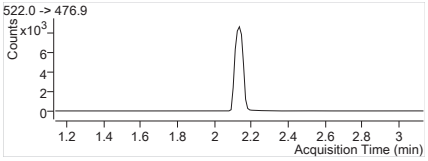
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



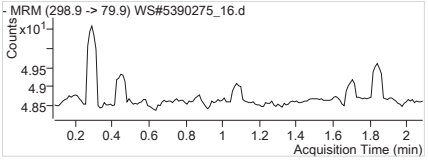


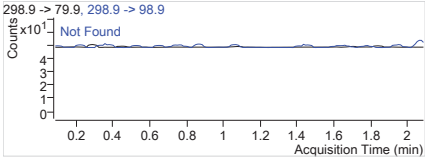
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



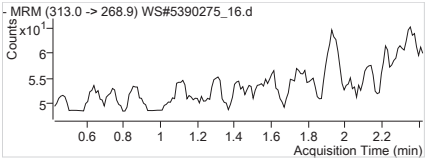


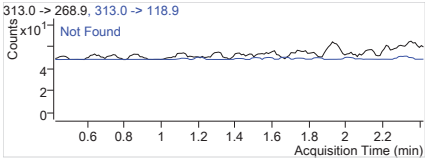
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



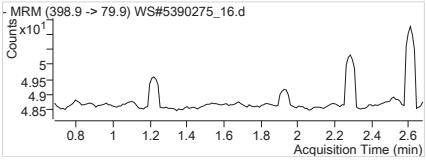


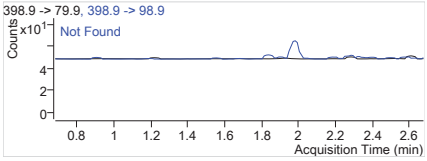
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.087)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



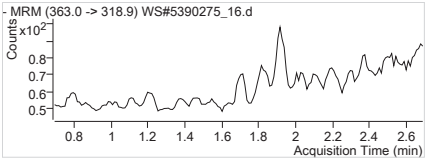


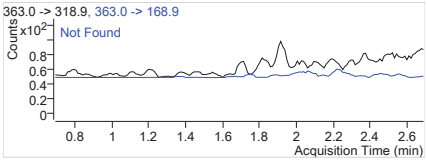
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.423)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



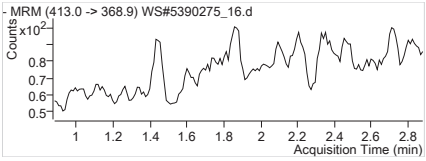


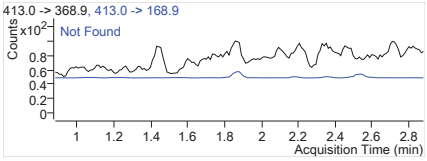
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.679)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



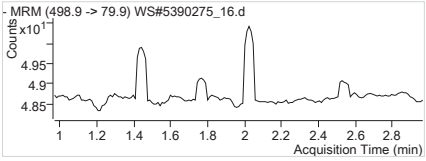


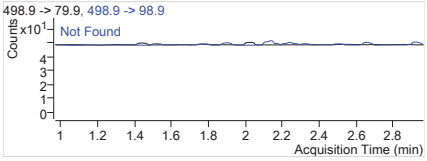
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



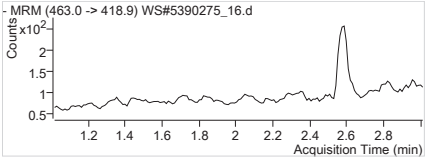


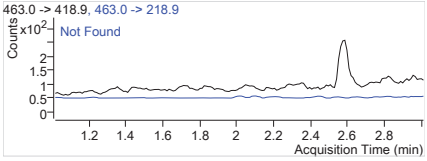
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



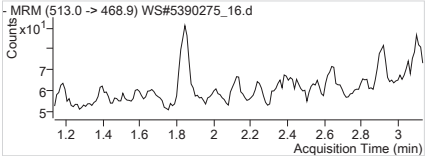


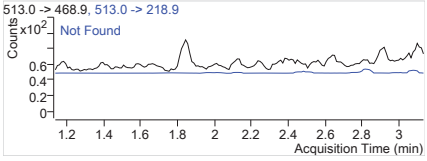
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.968)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



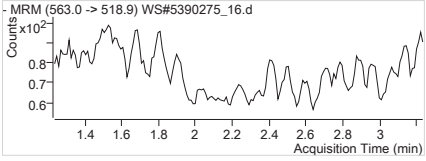


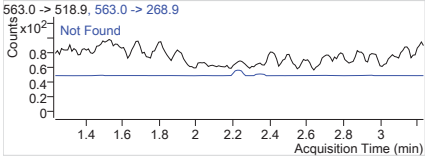
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.014)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



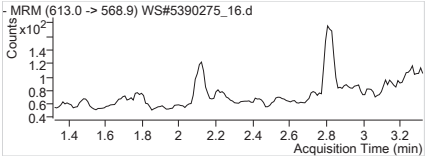


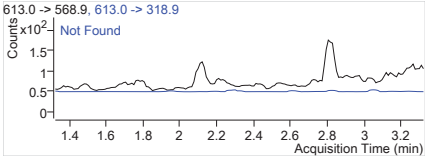
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



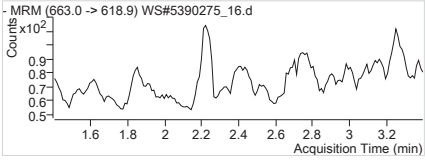


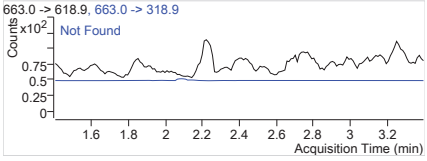
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.234)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



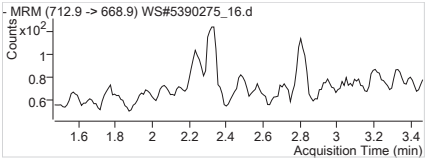


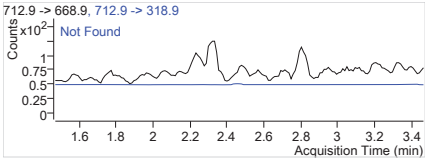
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



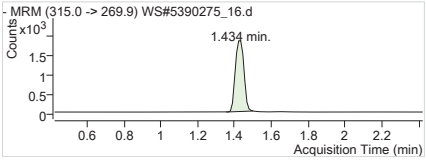


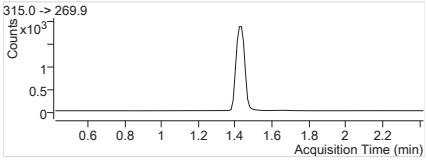
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



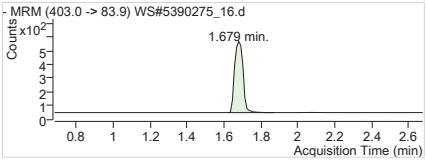


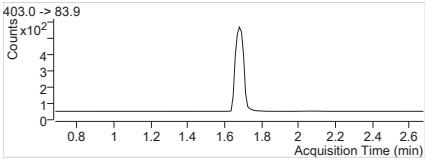
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



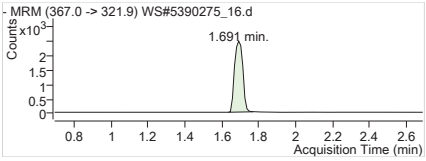


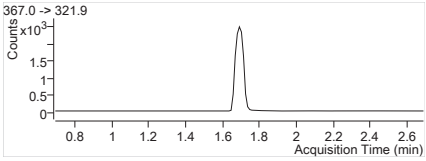
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.434 (1.422)
Calc. conc. 114.72 µg/L
Area ratio: 0.28632
Sample type: Sample



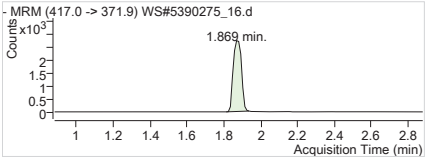


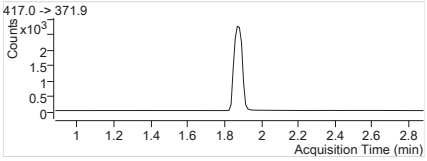
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 127.28 µg/L
Area ratio: 0.07958
Sample type: Sample



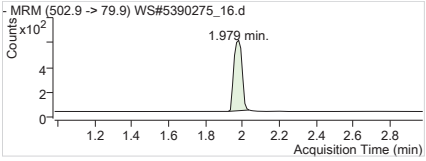


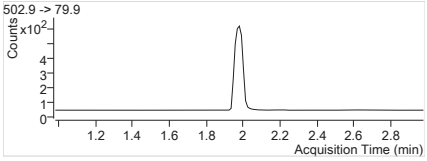
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 112.18 µg/L
Area ratio: 0.36488
Sample type: Sample



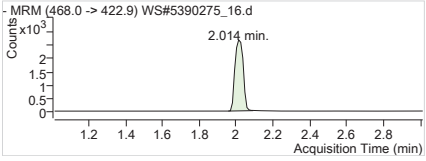


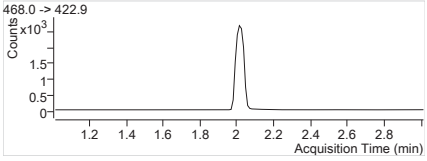
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 117.52 µg/L
Area ratio: 0.40547
Sample type: Sample



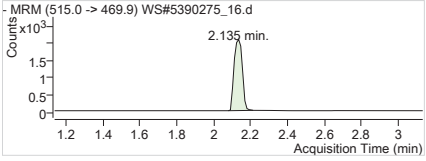


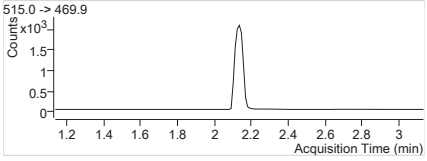
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 107.44 µg/L
Area ratio: 0.08428
Sample type: Sample



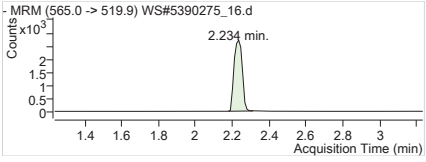


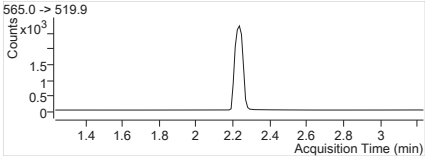
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 115.03 µg/L
Area ratio: 0.39226
Sample type: Sample



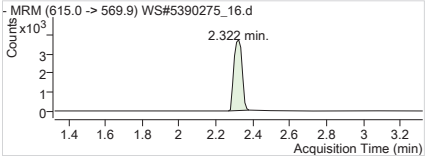


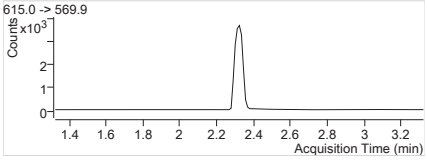
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 116.39 µg/L
Area ratio: 0.24252
Sample type: Sample



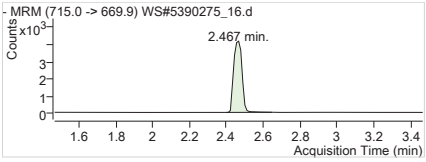


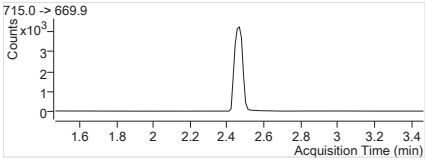
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 119.06 µg/L
Area ratio: 0.31372
Sample type: Sample



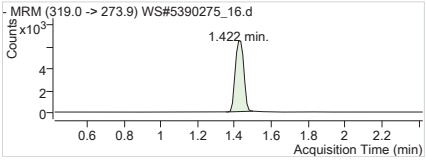


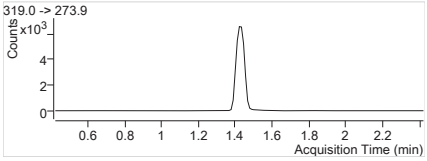
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 125.84 µg/L
Area ratio: 0.42897
Sample type: Sample



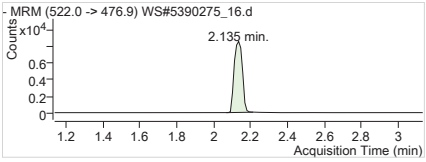


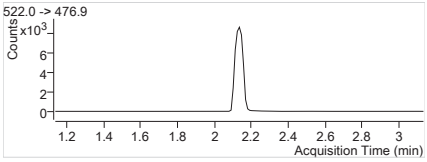
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	125.33 µg/L
Area ratio:	0.49567
Sample type:	Sample





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	2.13 µg/L
Area ratio:	0
Sample type:	Sample





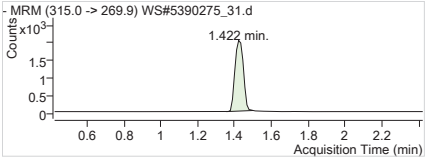
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	2.05 µg/L
Area ratio:	0
Sample type:	Sample

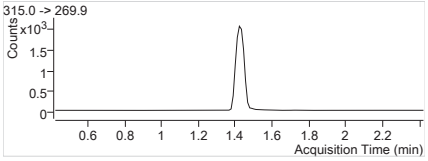
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics

Sample Name	IB	**Instrument**	LCMS04
Data File	WS#5390275_31.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low.m	**Position**	P2-A8
Acq. Date	2018/02/09 7:02:15 PM	**Injection Volume**	Per Method
Sample Annotation	-		

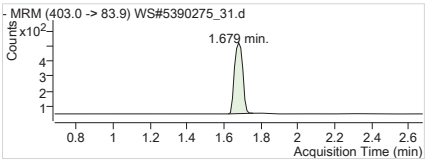
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6392	1.42	1 µg/L		
MPFHxS	1474	1.68	1 µg/L		
MPFHpA	7893	1.69	1 µg/L		
MPFOA	8591	1.87	1 µg/L		
MPFOS	1816	1.98	1 µg/L		
MPFNA	8703	2.01	1 µg/L		
MPFDA	6832	2.14	1 µg/L		
MPFUnA	8181	2.23	1 µg/L		
MPFDoA	10915	2.32	1 µg/L		
MPFTeDA	13159	2.47	1 µg/L		
13C6-PFHxA IS	20118	1.42	1 µg/L		
13C9-PFDA IS	26900	2.13	1 µg/L		

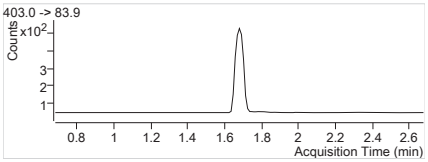
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1			-	ND	-
PFHxA 1			-	ND	-
PFHxS 1			-	ND	-
PFHpA 1			-	ND	-
PFOA 1			-	ND	-
PFOS 1			-	ND	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	6392	1.42	-	127.30 µg/L	-
18O2-PFHxS	1474	1.68	-	117.19 µg/L	-
13C4-PFHpA	7893	1.69	-	120.61 µg/L	-
13C4-PFOA	8591	1.87	-	123.77 µg/L	-
13C4-PFOS	1816	1.98	-	115.07 µg/L	-
13C5-PFNA	8703	2.01	-	126.86 µg/L	-
13C2-PFDA	6793	2.14	-	121.19 µg/L	-
13C2-PFUnA	8181	2.23	-	115.41 µg/L	-
13C2-PFDoA	10915	2.32	-	119.03 µg/L	-
13C2-PFTeDA	13537	2.47	-	127.25 µg/L	-
13C6-PFHxA	20118	1.42	-	2.06 µg/L	-
13C9-PFDA	26900	2.13	-	2.09 µg/L	-



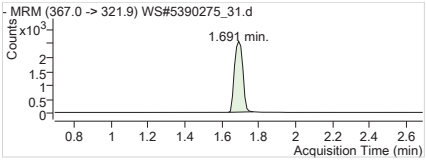


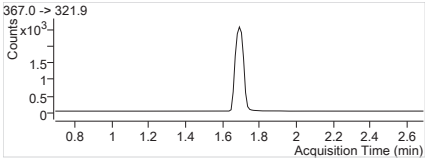
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



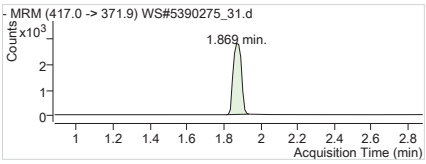


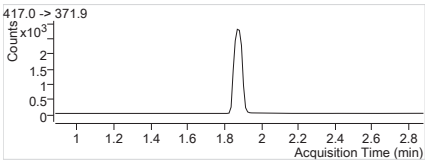
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



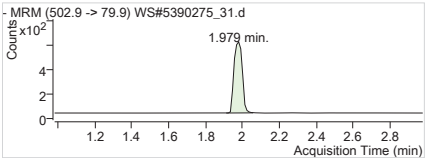


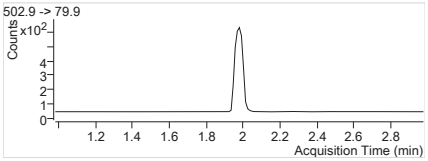
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



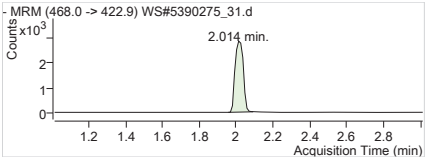


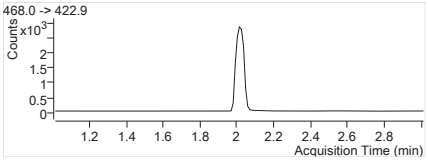
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: Sample



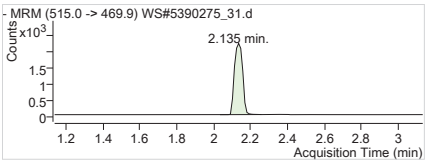


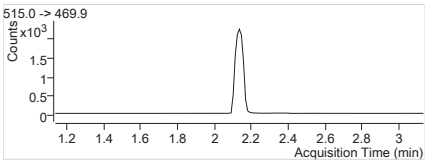
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



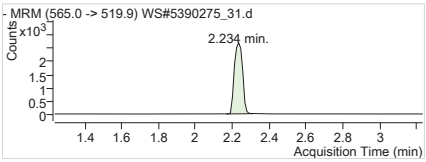


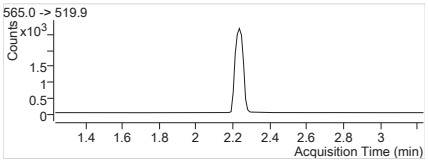
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



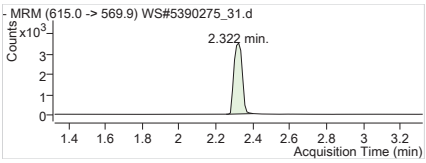


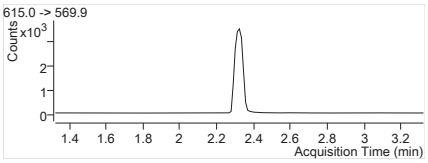
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



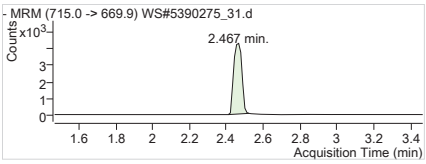


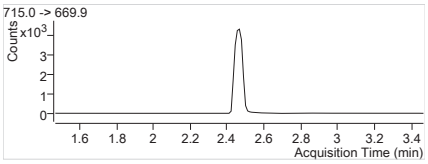
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



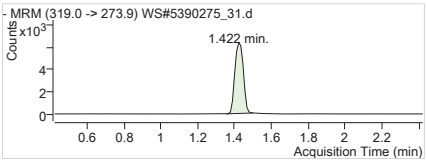


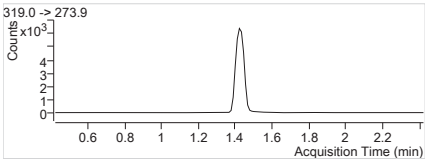
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



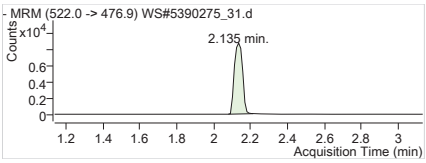


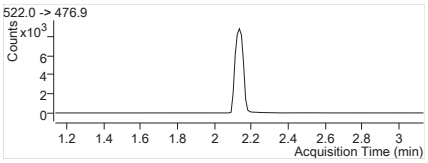
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



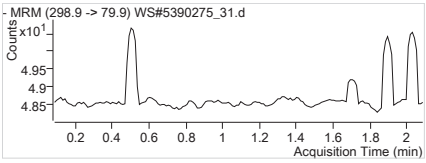


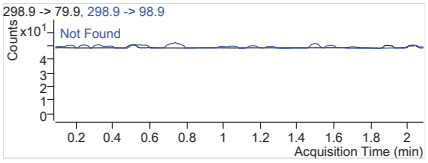
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



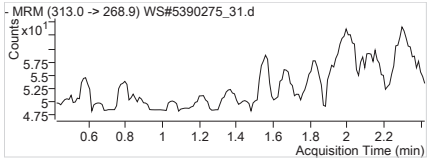


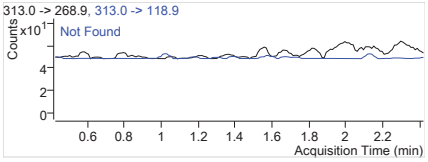
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



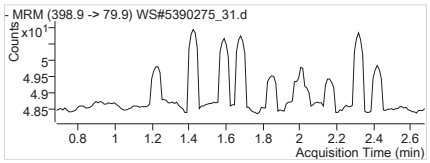


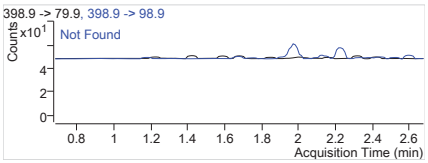
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.087)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



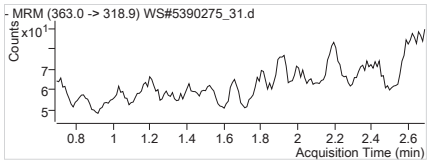


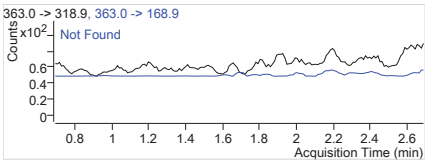
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.423)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



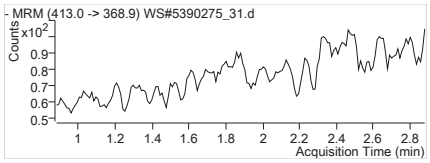


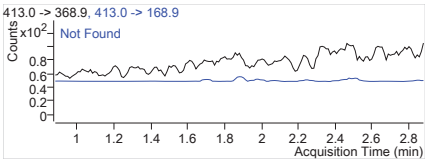
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.679)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



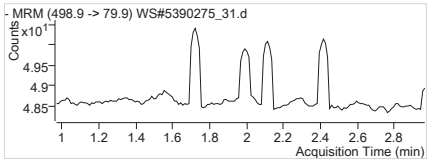


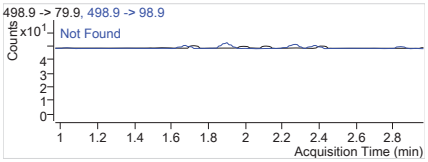
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.691)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



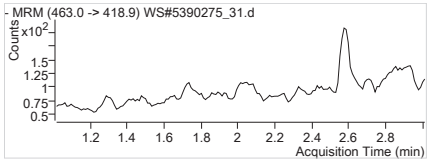


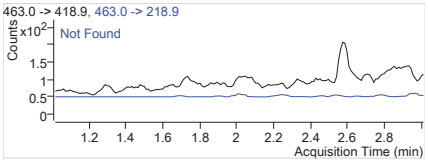
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.881)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



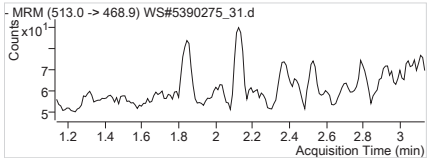


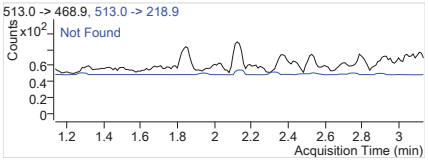
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.968)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



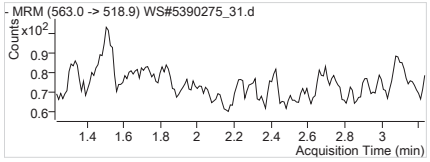


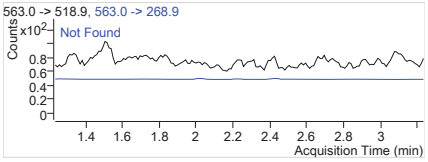
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.014)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



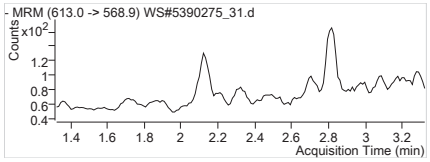


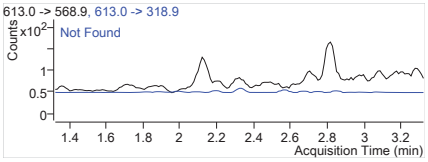
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



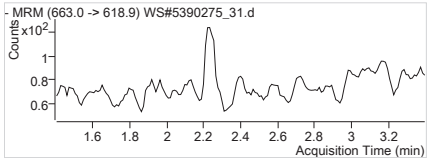


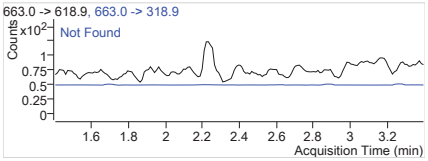
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.234)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



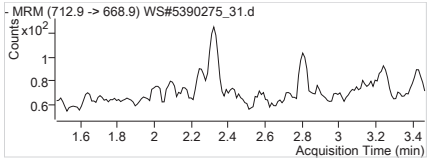


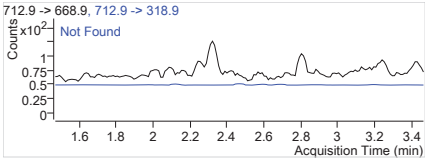
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



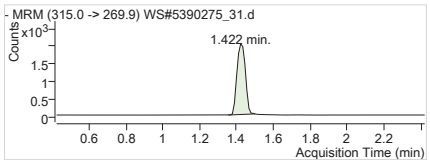


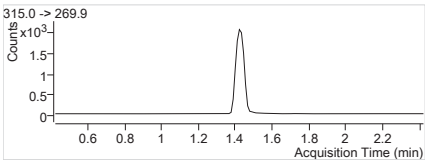
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



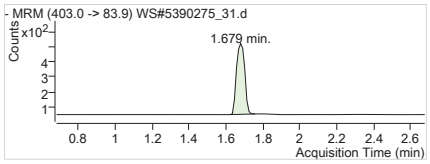


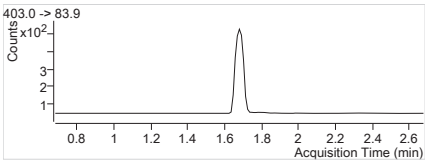
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



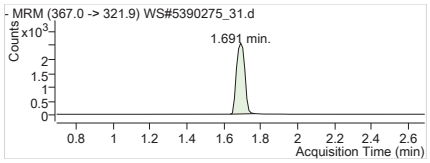


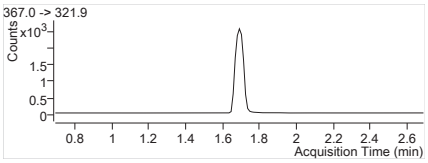
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 127.30 µg/L
Area ratio: 0.31773
Sample type: Sample



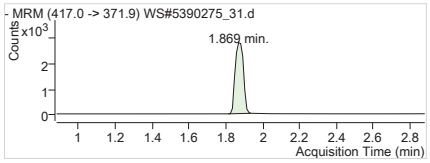


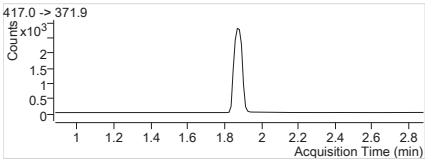
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 117.19 µg/L
Area ratio: 0.07327
Sample type: Sample



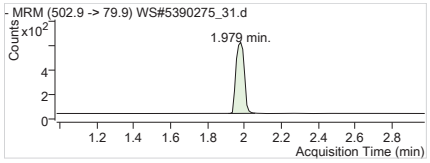


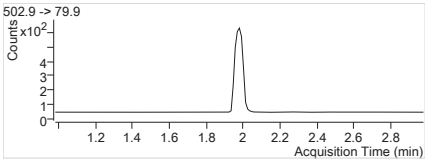
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 120.61 µg/L
Area ratio: 0.39234
Sample type: Sample



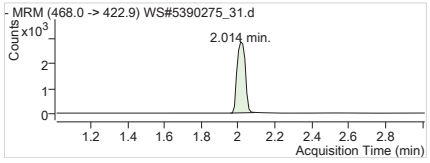


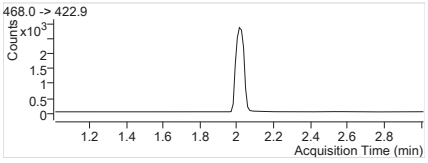
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 123.77 µg/L
Area ratio: 0.42703
Sample type: Sample



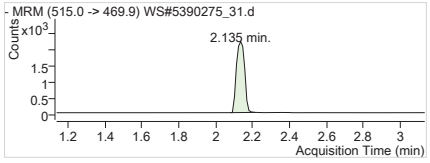


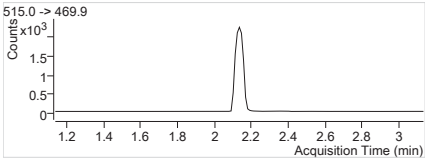
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 115.07 µg/L
Area ratio: 0.09027
Sample type: Sample



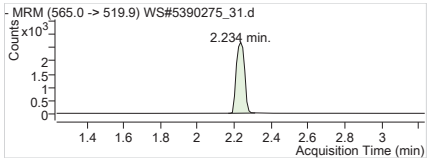


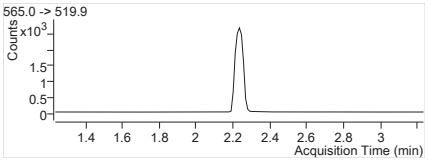
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 126.86 µg/L
Area ratio: 0.43260
Sample type: Sample



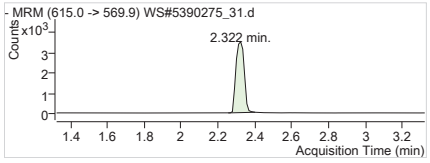


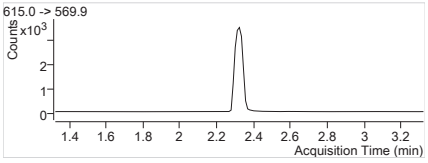
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 121.19 µg/L
Area ratio: 0.25253
Sample type: Sample



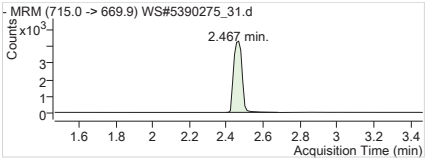


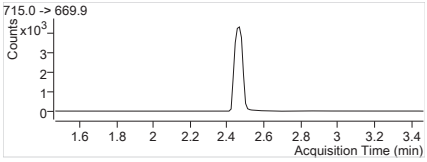
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 115.41 µg/L
Area ratio: 0.30413
Sample type: Sample



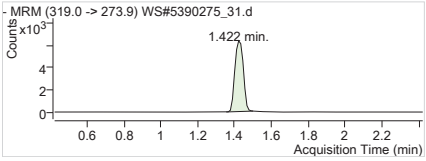


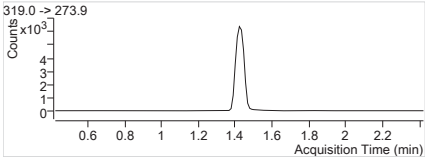
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 119.03 µg/L
Area ratio: 0.40576
Sample type: Sample



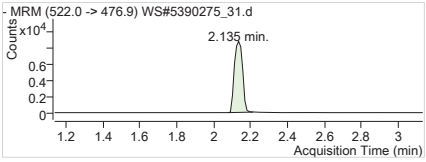


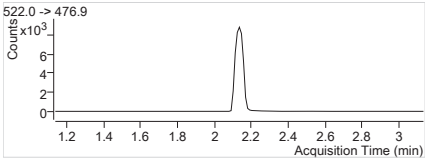
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	127.25 µg/L
Area ratio:	0.50323
Sample type:	Sample





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	2.06 µg/L
Area ratio:	0
Sample type:	Sample





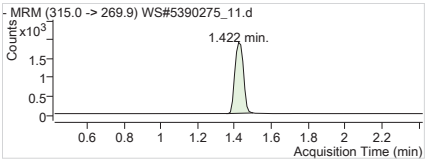
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	2.09 µg/L
Area ratio:	0
Sample type:	Sample

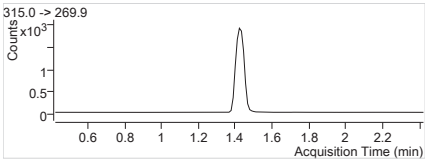
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_ETOxics

Sample Name	**5390275:BLANK**	**Instrument**	LCMS04
Data File	WS#5390275_11.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low.m	**Position**	P2-B1
Acq. Date	2018/02/09 5:23:34 PM	**Injection Volume**	Per Method
Sample Annotation	-		

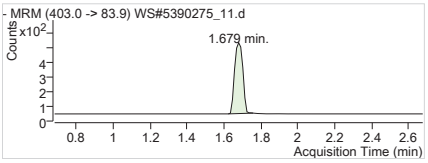
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6018	1.42	1 µg/L		
MPFHxS	1488	1.68	1 µg/L		
MPFHpA	7878	1.69	1 µg/L		
MPFOA	7930	1.87	1 µg/L		
MPFOS	1791	1.98	1 µg/L		
MPFNA	8573	2.01	1 µg/L		
MPFDA	6720	2.14	1 µg/L		
MPFUnA	7477	2.23	1 µg/L		
MPFDoA	9980	2.32	1 µg/L		
MPFTeDA	10709	2.47	1 µg/L		
13C6-PFHxA IS	25220	1.42	1 µg/L		
13C9-PFDA IS	33519	2.13	1 µg/L		

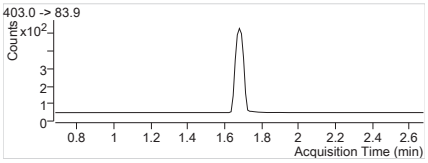
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1			-	ND	-
PFHxA 1			-	ND	-
PFHxS 1			-	ND	-
PFHpA 1			-	ND	-
PFOA 1			-	ND	-
PFOS 1			-	ND	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	6018	1.42	-	95.61 µg/L	-
18O2-PFHxS	1488	1.68	-	94.37 µg/L	-
13C4-PFHpA	7878	1.69	-	96.03 µg/L	-
13C4-PFOA	7930	1.87	-	91.13 µg/L	-
13C4-PFOS	1791	1.98	-	90.53 µg/L	-
13C5-PFNA	8573	2.01	-	99.69 µg/L	-
13C2-PFDA	6615	2.14	-	94.71 µg/L	-
13C2-PFUnA	7477	2.23	-	84.65 µg/L	-
13C2-PFDoA	9980	2.32	-	87.35 µg/L	-
13C2-PFTeDA	10961	2.47	-	82.69 µg/L	-
13C6-PFHxA	25220	1.42	-	2.58 µg/L	-
13C9-PFDA	33519	2.13	-	2.60 µg/L	-



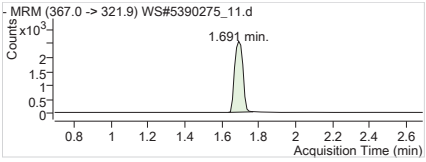


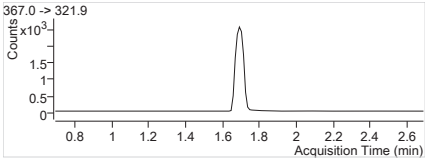
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



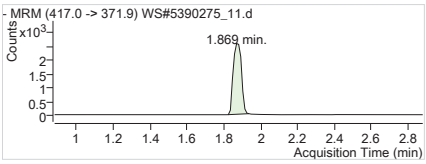


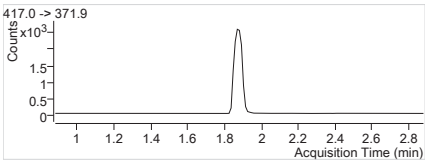
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



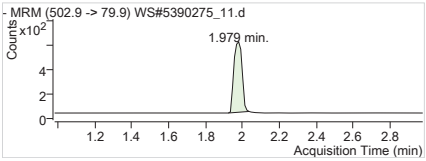


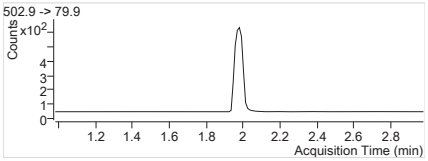
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



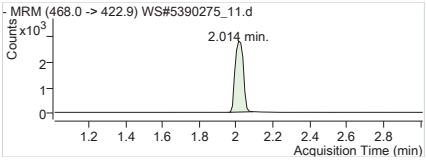


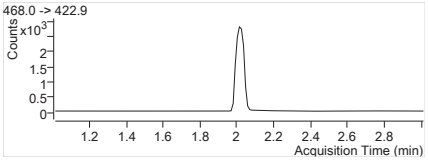
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: Sample



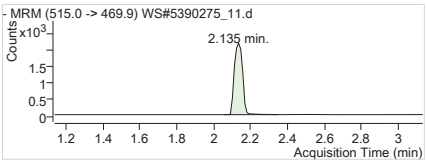


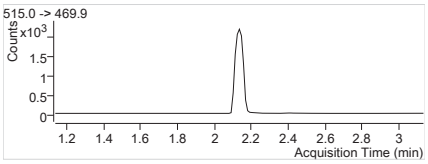
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



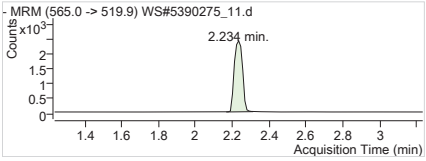


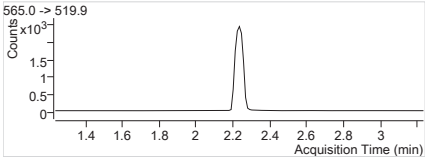
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



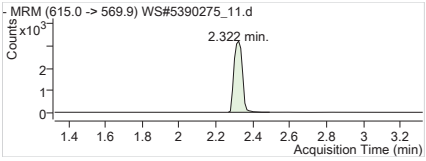


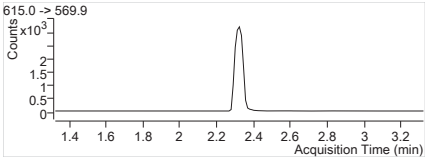
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



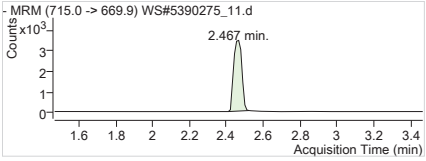


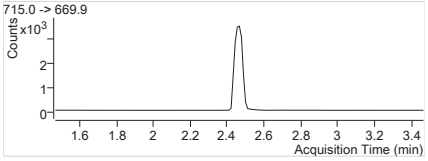
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



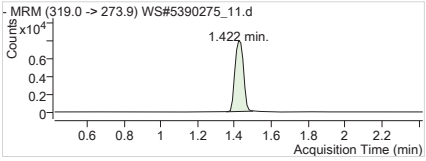


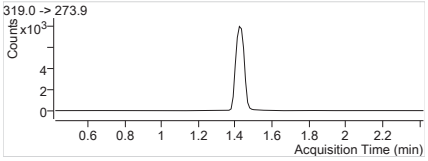
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



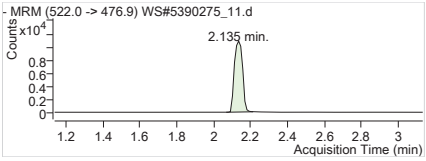


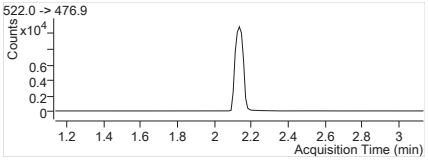
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



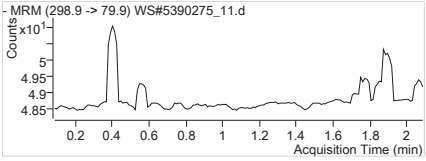


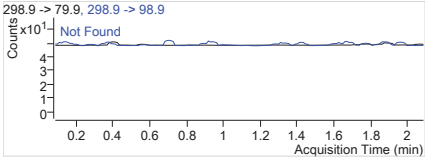
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



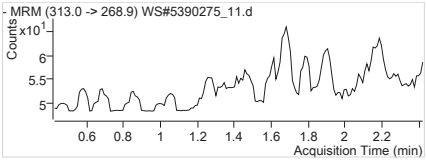


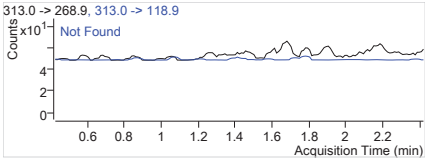
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample





PFBS 1 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.087)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample

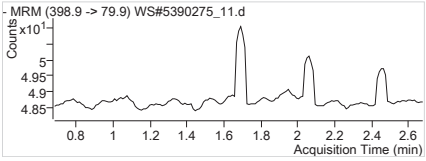


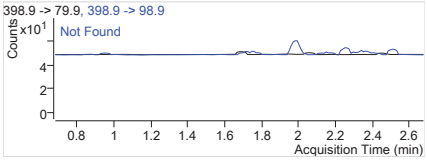


PFHxA 1

RT (Exp. RT):	0.000 (1.423)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

313.0 -> 268.9

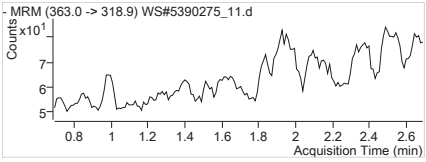


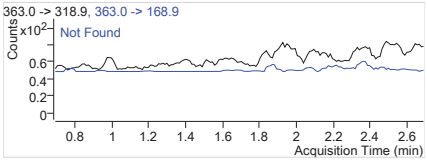


PFHxS 1

RT (Exp. RT):	0.000 (1.679)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

398.9 -> 79.9

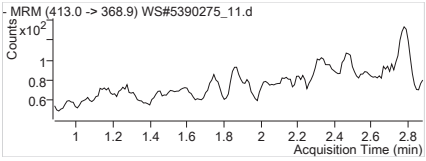


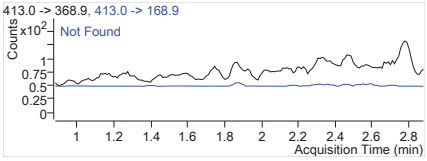


PFHpA 1

RT (Exp. RT):	0.000 (1.691)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

363.0 -> 318.9

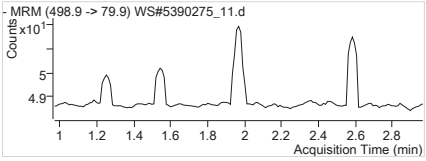


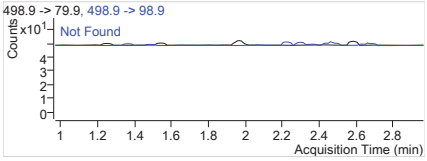


PFOA 1

RT (Exp. RT):	0.000 (1.881)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

413.0 -> 368.9

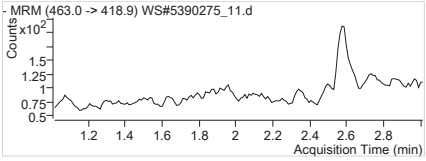


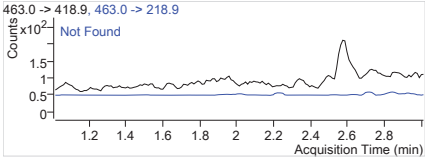


PFOS 1

RT (Exp. RT):	0.000 (1.968)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

498.9 -> 79.9

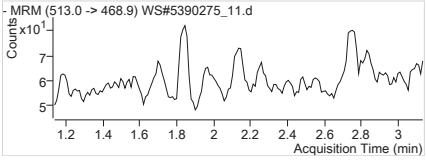


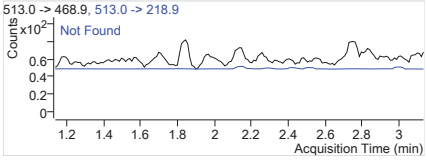


PFNA 1

RT (Exp. RT):	0.000 (2.014)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

463.0 -> 418.9

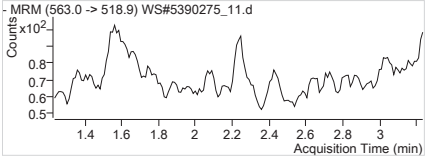


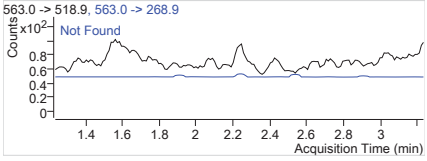


PFDA 1

RT (Exp. RT):	0.000 (2.135)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

513.0 -> 468.9

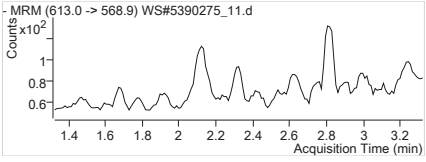


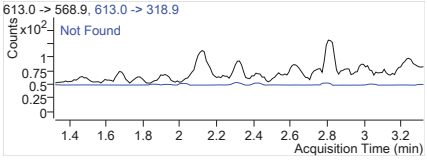


PFUnA 1

RT (Exp. RT):	0.000 (2.234)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

563.0 -> 518.9

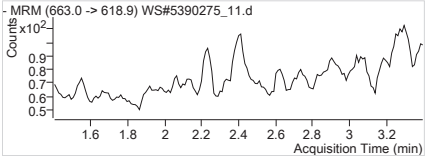


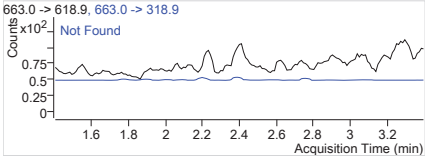


PFDoA 1

RT (Exp. RT):	0.000 (2.323)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

613.0 -> 568.9

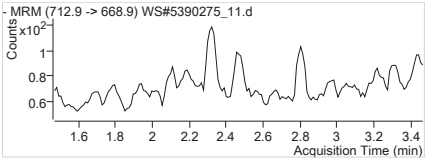


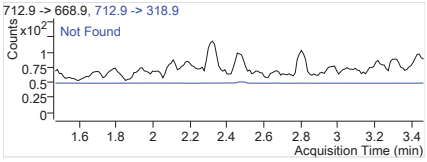


PFTrDA 1

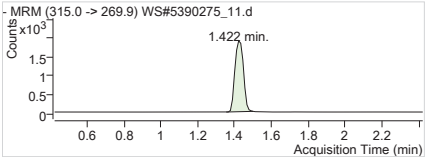
RT (Exp. RT):	0.000 (2.400)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample

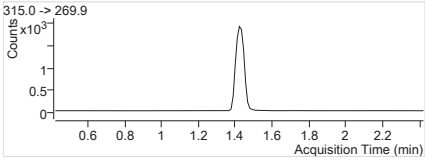
663.0 -> 618.9



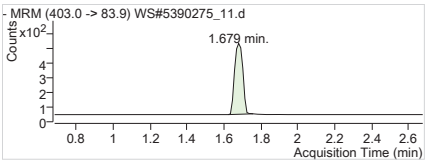


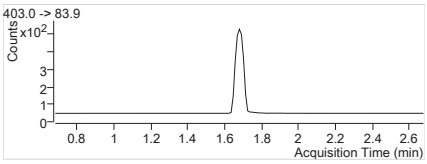
PFTeDA 1	712.9 -> 668.9
RT (Exp. RT):	0.000 (2.467)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample



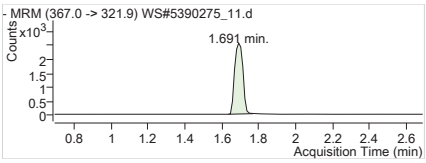


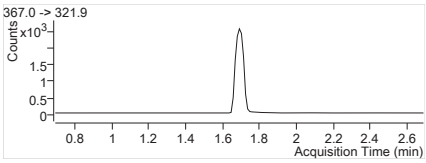
13C2-PFHxA	315.0 -> 269.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	95.61 µg/L
Area ratio:	0.23862
Sample type:	Sample



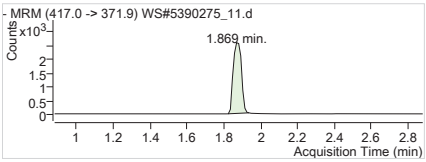


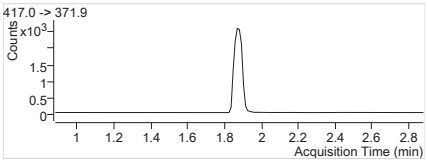
18O2-PFHxS	403.0 -> 83.9
RT (Exp. RT):	1.679 (1.679)
Calc. conc.	94.37 µg/L
Area ratio:	0.05900
Sample type:	Sample



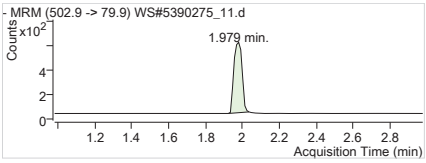


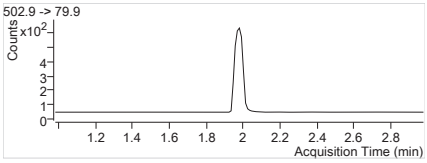
13C4-PFHpA	367.0 -> 321.9
RT (Exp. RT):	1.691 (1.691)
Calc. conc.	96.03 µg/L
Area ratio:	0.31237
Sample type:	Sample



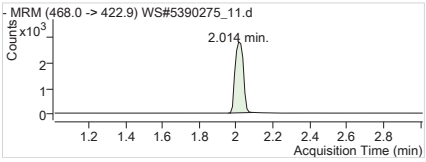


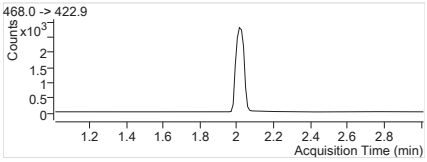
13C4-PFOA	417.0 -> 371.9
RT (Exp. RT):	1.869 (1.881)
Calc. conc.	91.13 µg/L
Area ratio:	0.31443
Sample type:	Sample



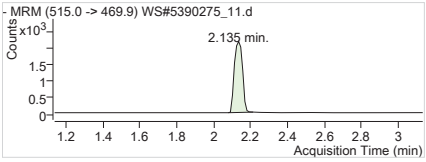


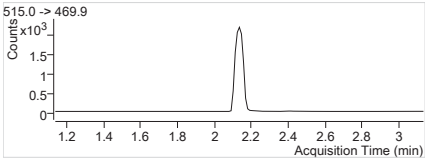
13C4-PFOS	502.9 -> 79.9
RT (Exp. RT):	1.979 (1.979)
Calc. conc.	90.53 µg/L
Area ratio:	0.07102
Sample type:	Sample



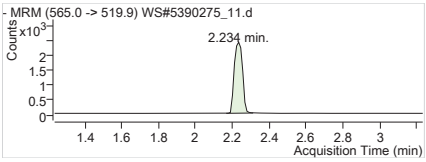


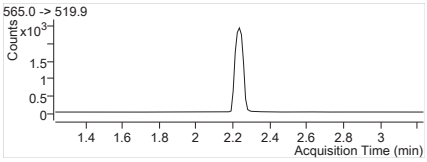
13C5-PFNA	468.0 -> 422.9
RT (Exp. RT):	2.014 (2.014)
Calc. conc.	99.69 µg/L
Area ratio:	0.33993
Sample type:	Sample



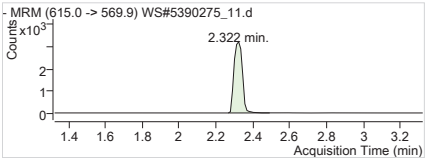


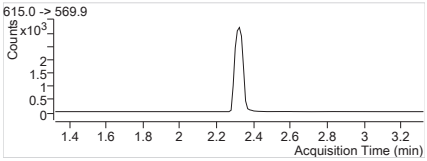
13C2-PFDA	515.0 -> 469.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	94.71 µg/L
Area ratio:	0.19735
Sample type:	Sample



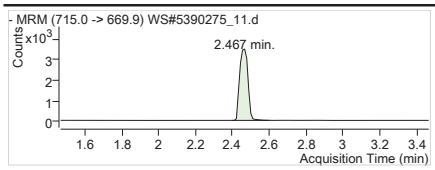


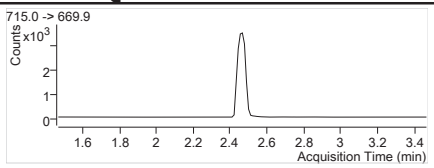
13C2-PFUnA	565.0 -> 519.9
RT (Exp. RT):	2.234 (2.234)
Calc. conc.	84.65 µg/L
Area ratio:	0.22307
Sample type:	Sample



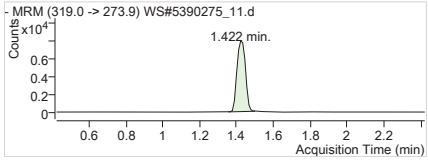


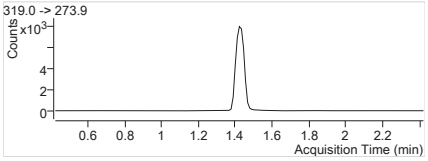
13C2-PFDoA	615.0 -> 569.9
RT (Exp. RT):	2.322 (2.322)
Calc. conc.	87.35 µg/L
Area ratio:	0.29774
Sample type:	Sample



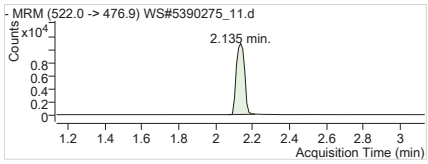


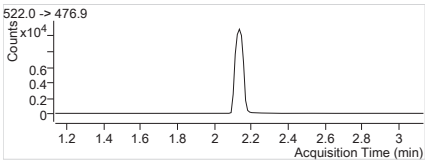
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	82.69 µg/L
Area ratio:	0.32701
Sample type:	Sample





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	2.58 µg/L
Area ratio:	0
Sample type:	Sample





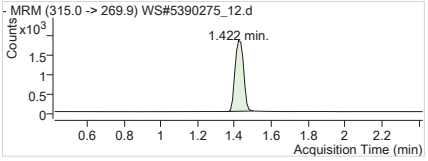
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	2.60 µg/L
Area ratio:	0
Sample type:	Sample

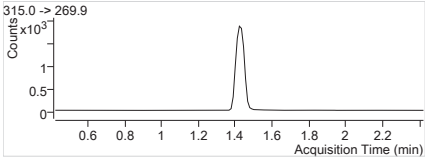
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics

Sample Name	**5390275:SPIKE**	**Instrument**	LCMS04
Data File	WS#5390275_12.d	**Operator**	
Sample Type	QC	**Dilution**	0.024
Acq. Method	PFC_Water_Low.m	**Position**	P2-B2
Acq. Date	2018/02/09 5:28:30 PM	**Injection Volume**	Per Method
Sample Annotation	-		

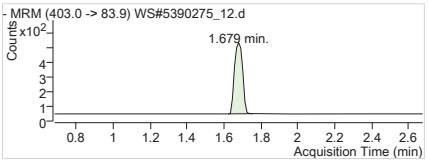
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	5934	1.42	1 µg/L		
MPFHxS	1484	1.68	1 µg/L		
MPFHpA	7823	1.69	1 µg/L		
MPFOA	8194	1.87	1 µg/L		
MPFOS	1800	1.98	1 µg/L		
MPFNA	8022	2.01	1 µg/L		
MPFDA	6475	2.14	1 µg/L		
MPFUnA	7487	2.23	1 µg/L		
MPFDoA	10153	2.32	1 µg/L		
MPFTeDA	10617	2.47	1 µg/L		
13C6-PFHxA IS	20746	1.42	1 µg/L		
13C9-PFDA IS	27176	2.13	1 µg/L		

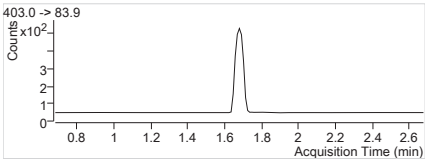
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	13715	1.09	20.80	0.49 µg/L	98.87
PFHxA 1	48409	1.42	20.80	0.48 µg/L	96.98
PFHxS 1	12599	1.68	20.80	0.46 µg/L	91.52
PFHpA 1	62580	1.69	20.80	0.48 µg/L	95.29
PFOA 1	68281	1.87	20.80	0.48 µg/L	97.07
PFOS 1	12307	1.97	20.80	0.46 µg/L	92.93
PFNA 1	61670	2.01	20.80	0.50 µg/L	99.23
PFDA 1	63868	2.14	20.80	0.47 µg/L	93.89
PFUnA 1	71259	2.23	20.80	0.54 µg/L	107.76
PFDoA 1	80868	2.32	20.80	0.46 µg/L	91.82
PFTrDA 1	91784	2.40	20.80	0.50 µg/L	100.22
PFTeDA 1	73632	2.47	20.80	0.48 µg/L	96.83
13C2-PFHxA	5934	1.42	100.00	114.60 µg/L	114.60
18O2-PFHxS	1484	1.68	100.00	114.42 µg/L	114.42
13C4-PFHpA	7823	1.69	100.00	115.93 µg/L	115.93
13C4-PFOA	8194	1.87	100.00	114.48 µg/L	114.48
13C4-PFOS	1800	1.98	100.00	110.60 µg/L	110.60
13C5-PFNA	8022	2.01	100.00	113.40 µg/L	113.40
13C2-PFDA	6349	2.14	100.00	112.12 µg/L	112.12
13C2-PFUnA	7487	2.23	100.00	104.55 µg/L	104.55
13C2-PFDoA	10153	2.32	100.00	109.60 µg/L	109.60
13C2-PFTeDA	10851	2.47	100.00	100.96 µg/L	100.96
13C6-PFHxA	20746	1.42	100.00	2.13 µg/L	88.59
13C9-PFDA	27176	2.13	100.00	2.11 µg/L	87.81



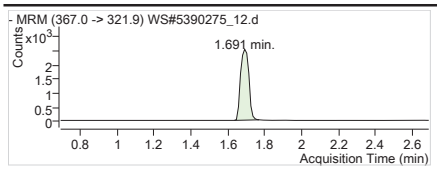


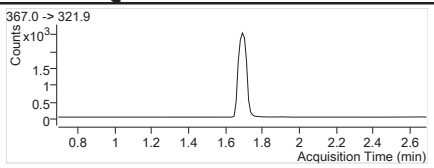
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: QC



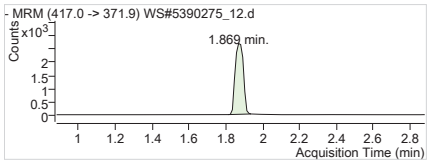


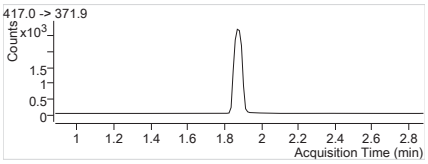
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: QC



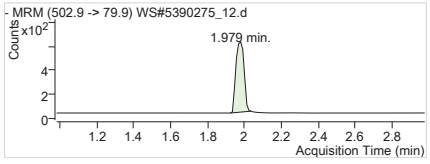


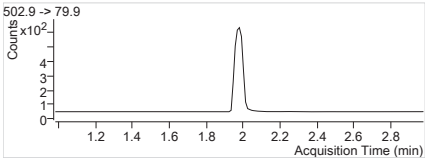
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: QC



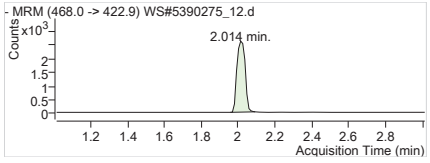


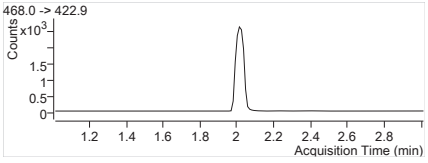
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: QC



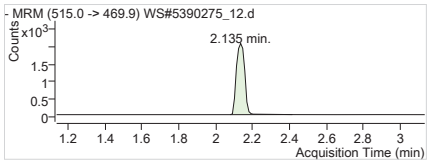


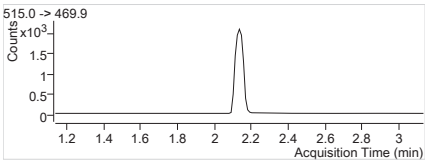
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: QC



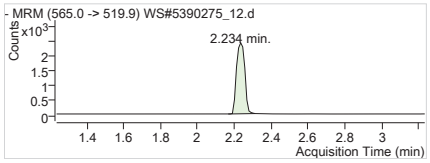


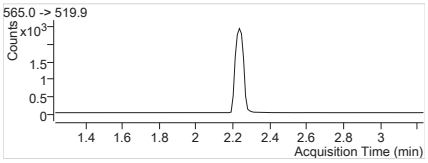
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: QC



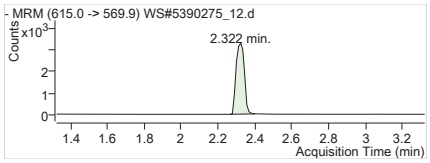


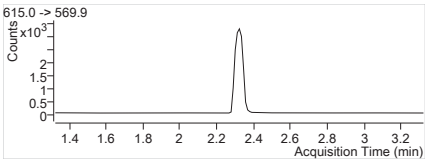
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: QC



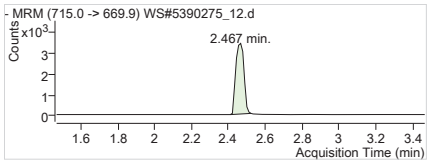


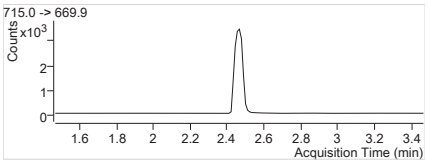
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: QC



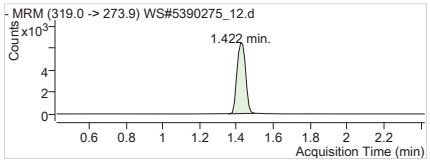


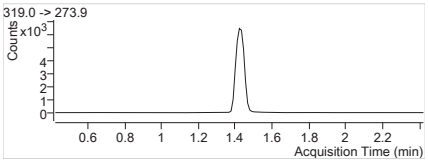
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: QC



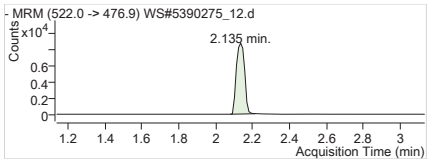


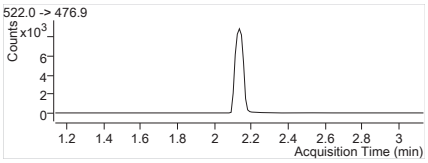
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: QC



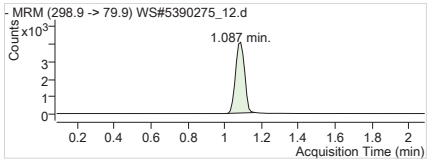


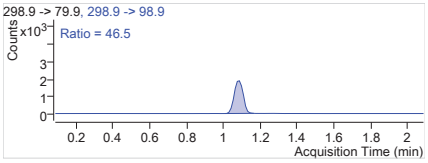
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: QC



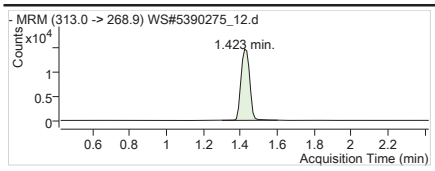


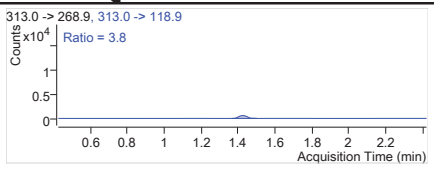
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: QC



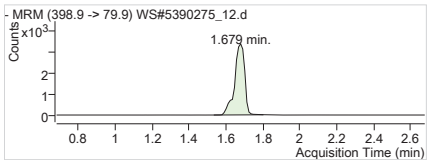


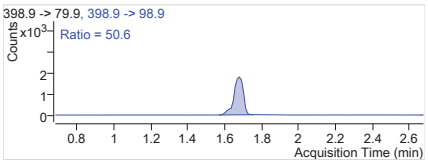
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 0.49 µg/L
Area ratio: 9.24191
Sample type: QC



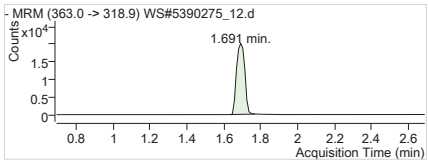


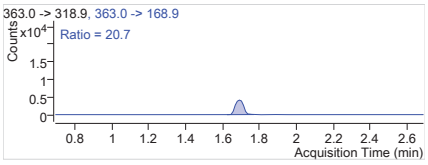
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 0.48 µg/L
Area ratio: 8.15790
Sample type: QC



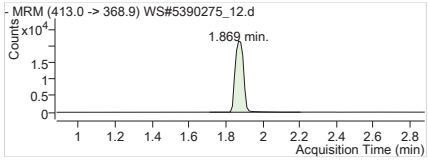


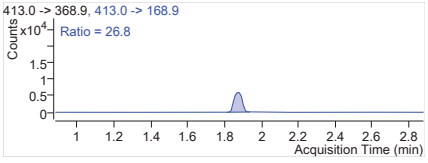
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 0.46 µg/L
Area ratio: 8.48989
Sample type: QC



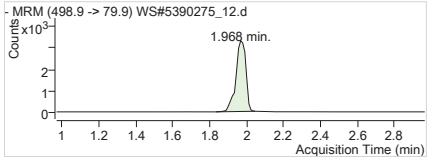


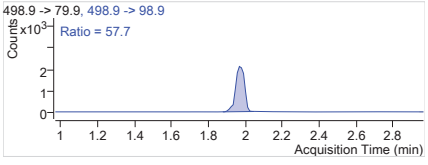
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.48 µg/L
Area ratio: 7.99949
Sample type: QC



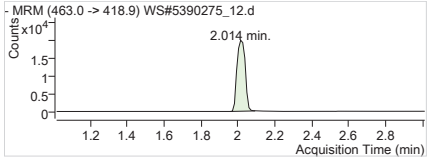


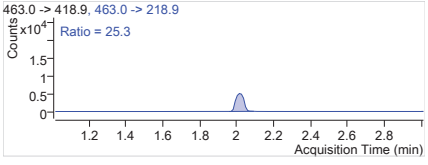
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 0.48 µg/L
Area ratio: 8.33305
Sample type: QC



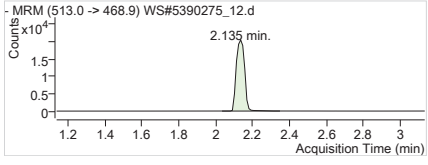


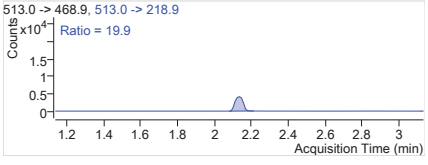
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 0.46 µg/L
Area ratio: 6.83722
Sample type: QC



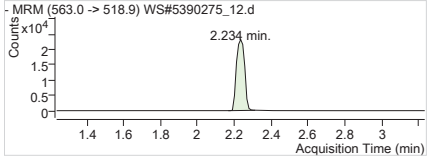


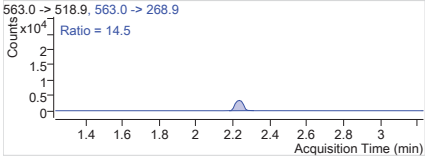
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 0.50 µg/L
Area ratio: 7.68761
Sample type: QC



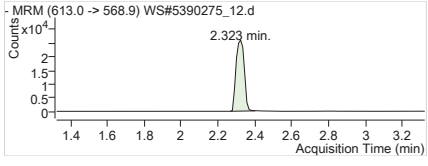


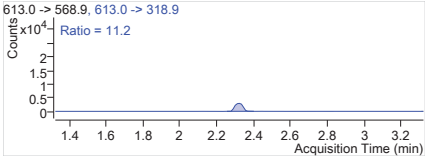
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 0.47 µg/L
Area ratio: 9.86378
Sample type: QC



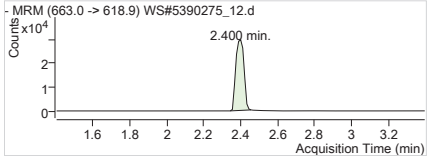


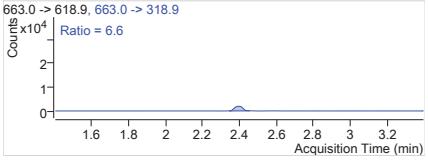
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 0.54 µg/L
Area ratio: 9.51770
Sample type: QC



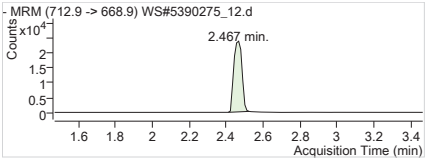


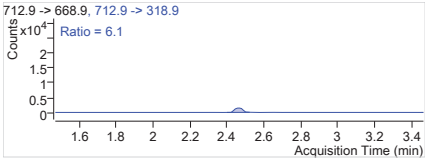
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 0.46 µg/L
Area ratio: 7.96494
Sample type: QC



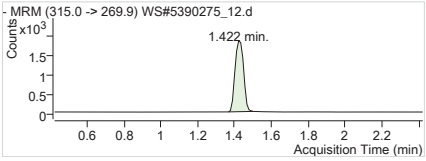


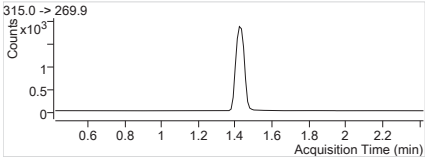
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 0.50 µg/L
Area ratio: 8.64500
Sample type: QC



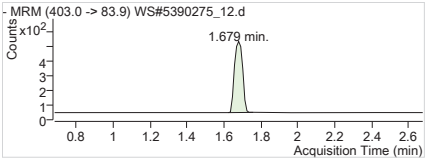


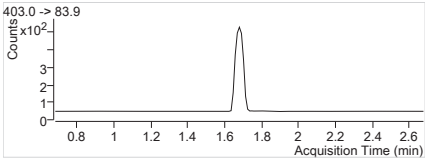
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 0.48 µg/L
Area ratio: 6.93529
Sample type: QC



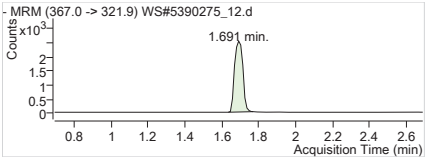


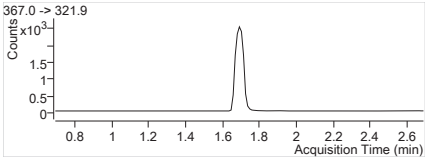
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 114.60 µg/L
Area ratio: 0.28603
Sample type: QC



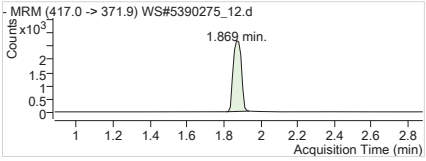


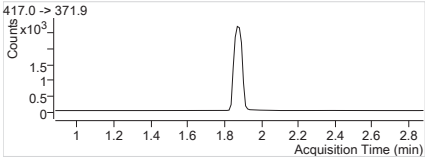
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 114.42 µg/L
Area ratio: 0.07153
Sample type: QC



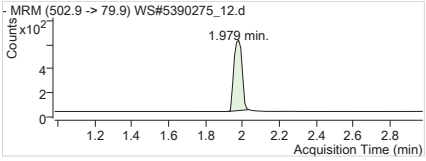


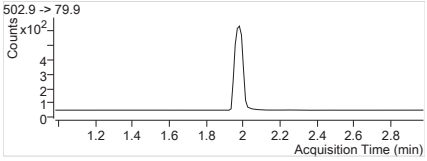
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 115.93 µg/L
Area ratio: 0.37708
Sample type: QC



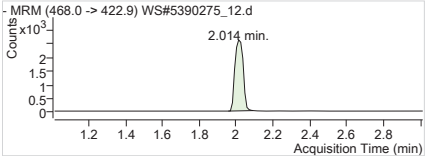


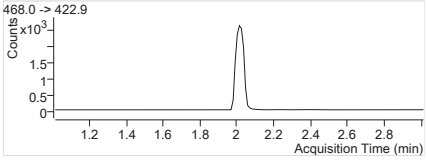
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 114.48 µg/L
Area ratio: 0.39497
Sample type: QC



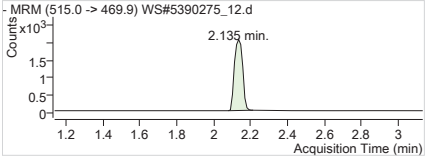


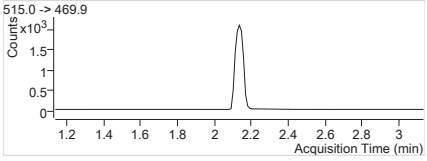
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 110.60 µg/L
Area ratio: 0.08676
Sample type: QC



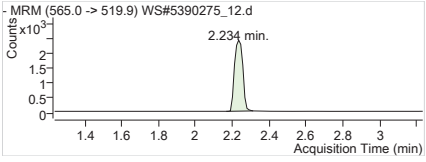


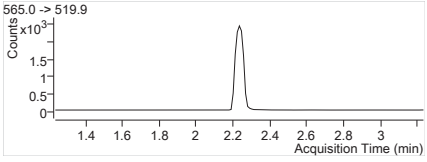
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 113.40 µg/L
Area ratio: 0.38668
Sample type: QC



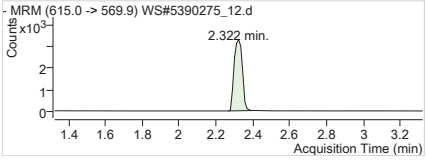


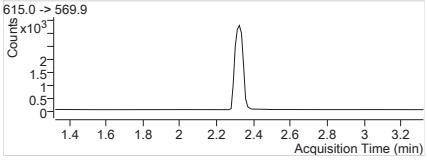
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 112.12 µg/L
Area ratio: 0.23363
Sample type: QC



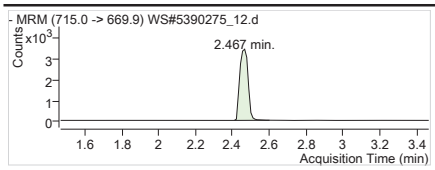


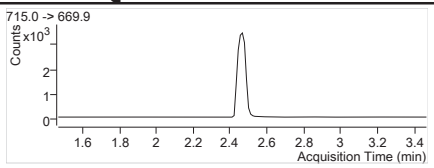
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 104.55 µg/L
Area ratio: 0.27550
Sample type: QC



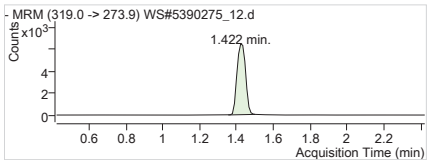


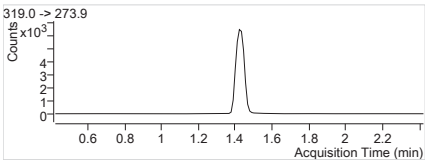
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 109.60 µg/L
Area ratio: 0.37360
Sample type: QC



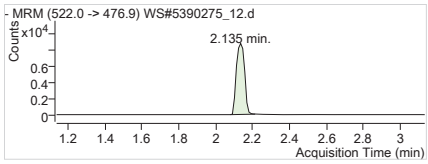


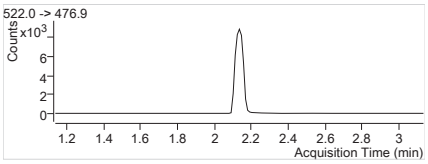
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	100.96 µg/L
Area ratio:	0.39929
Sample type:	QC





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	2.13 µg/L
Area ratio:	0
Sample type:	QC





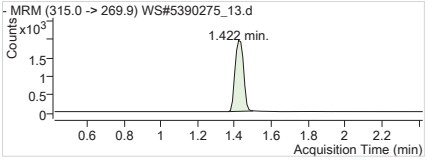
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	2.11 µg/L
Area ratio:	0
Sample type:	QC

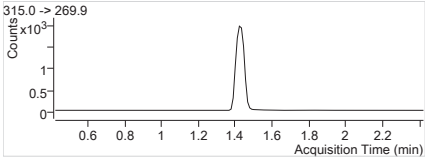
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics

Sample Name	**5390275:SPIKE:D1**	**Instrument**	LCMS04
Data File	WS#5390275_13.d	**Operator**	
Sample Type	QC	**Dilution**	0.024
Acq. Method	PFC_Water_Low.m	**Position**	P2-B3
Acq. Date	2018/02/09 5:33:26 PM	**Injection Volume**	Per Method
Sample Annotation	-		

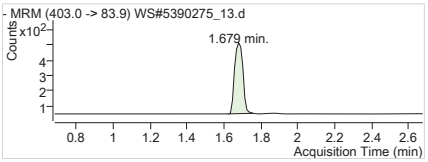
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6153	1.42	1 µg/L		
MPFHxS	1453	1.68	1 µg/L		
MPFHpA	7992	1.69	1 µg/L		
MPFOA	7919	1.87	1 µg/L		
MPFOS	1668	1.98	1 µg/L		
MPFNA	8332	2.01	1 µg/L		
MPFDA	6633	2.14	1 µg/L		
MPFUnA	7371	2.23	1 µg/L		
MPFDoA	9861	2.32	1 µg/L		
MPFTeDA	10300	2.47	1 µg/L		
13C6-PFHxA IS	23523	1.42	1 µg/L		
13C9-PFDA IS	30943	2.13	1 µg/L		

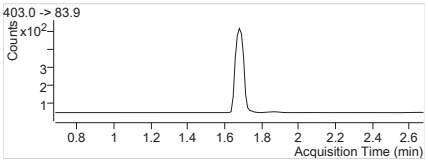
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	13584	1.09	20.80	0.50 µg/L	100.01
PFHxA 1	47374	1.42	20.80	0.46 µg/L	91.53
PFHxS 1	12479	1.68	20.80	0.46 µg/L	92.57
PFHpA 1	60411	1.69	20.80	0.45 µg/L	90.10
PFOA 1	68343	1.87	20.80	0.50 µg/L	100.53
PFOS 1	12157	1.97	20.80	0.49 µg/L	99.06
PFNA 1	60415	2.01	20.80	0.47 µg/L	93.61
PFDA 1	61773	2.14	20.80	0.44 µg/L	88.68
PFUnA 1	71957	2.23	20.80	0.55 µg/L	110.52
PFDoA 1	80666	2.32	20.80	0.47 µg/L	94.30
PFTrDA 1	88818	2.40	20.80	0.50 µg/L	99.97
PFTeDA 1	75483	2.47	20.80	0.51 µg/L	102.32
13C2-PFHxA	6153	1.42	100.00	104.80 µg/L	104.80
18O2-PFHxS	1453	1.68	100.00	98.80 µg/L	98.80
13C4-PFHpA	7992	1.69	100.00	104.45 µg/L	104.45
13C4-PFOA	7919	1.87	100.00	97.57 µg/L	97.57
13C4-PFOS	1668	1.98	100.00	90.39 µg/L	90.39
13C5-PFNA	8330	2.01	100.00	103.85 µg/L	103.85
13C2-PFDA	6555	2.14	100.00	101.67 µg/L	101.67
13C2-PFUnA	7371	2.23	100.00	90.40 µg/L	90.40
13C2-PFDoA	9861	2.32	100.00	93.49 µg/L	93.49
13C2-PFTeDA	10540	2.47	100.00	86.13 µg/L	86.13
13C6-PFHxA	23523	1.42	100.00	2.41 µg/L	100.45
13C9-PFDA	30943	2.13	100.00	2.40 µg/L	99.98



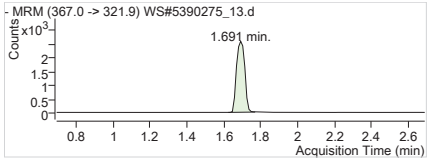


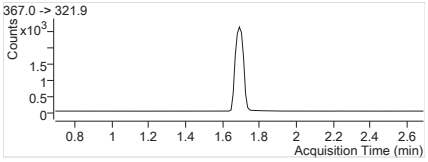
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: QC



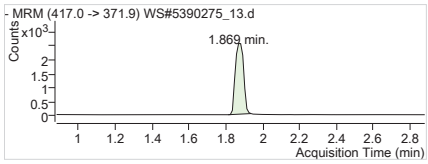


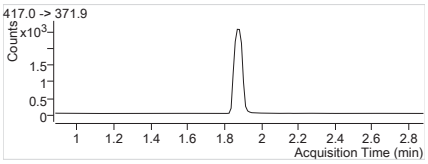
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: QC



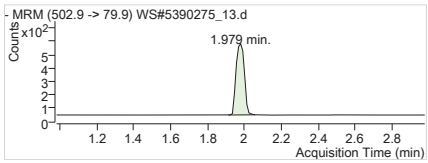


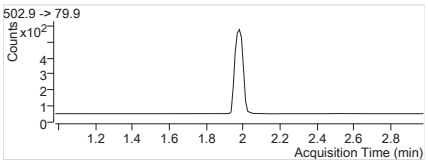
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: QC



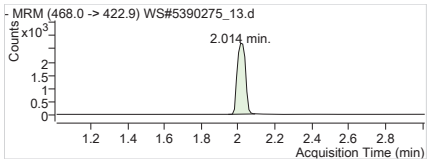


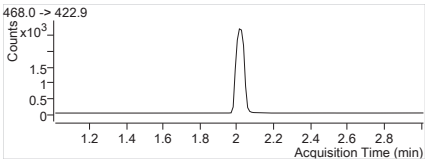
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: QC



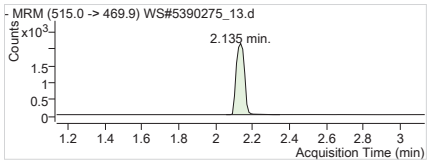


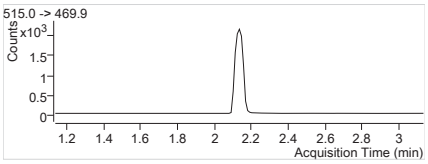
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: QC



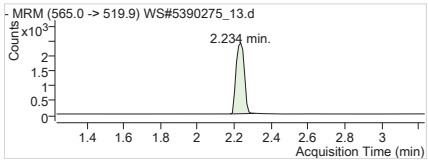


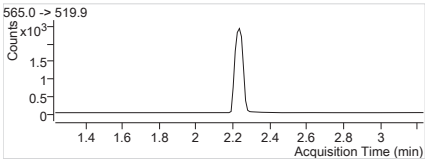
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: QC



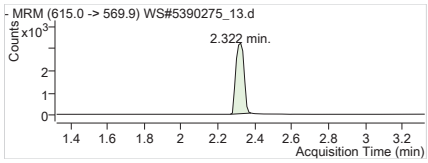


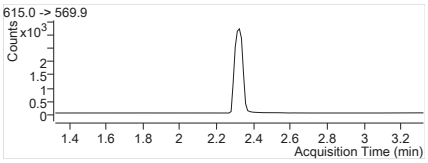
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: QC



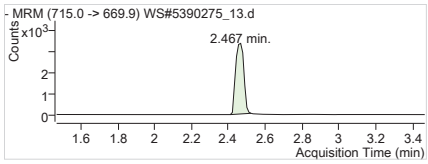


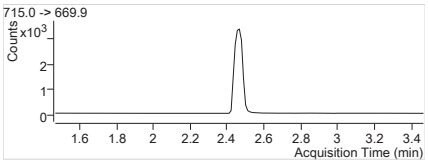
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: QC



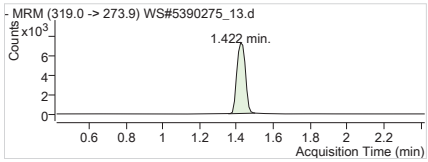


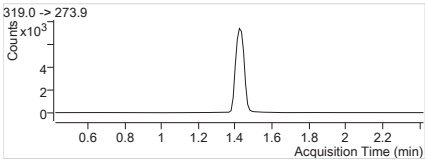
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: QC



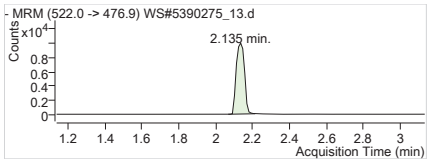


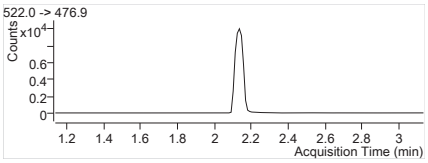
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: QC



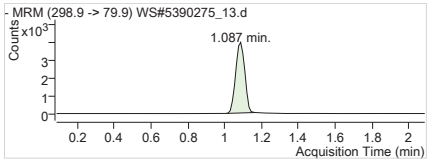


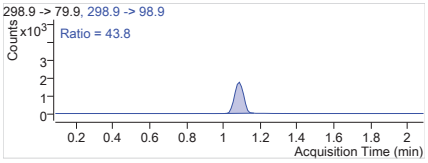
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: QC



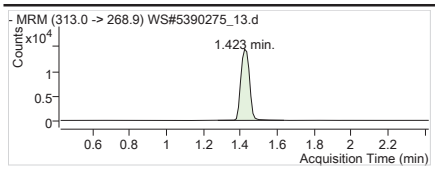


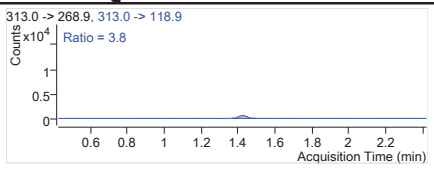
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: QC



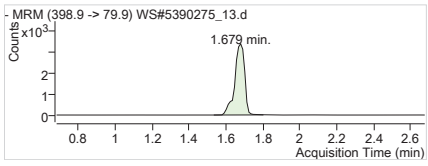


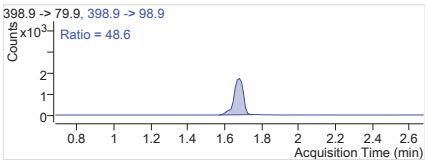
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 0.50 µg/L
Area ratio: 9.34893
Sample type: QC



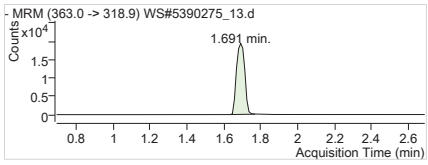


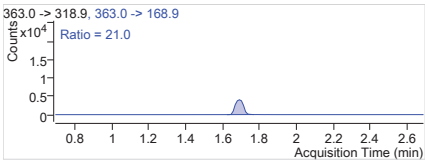
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 0.46 µg/L
Area ratio: 7.69933
Sample type: QC



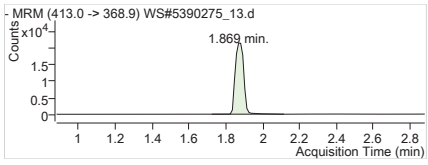


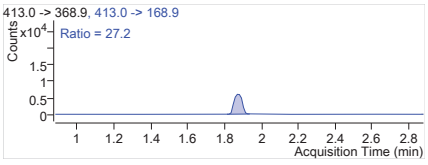
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 0.46 µg/L
Area ratio: 8.58844
Sample type: QC



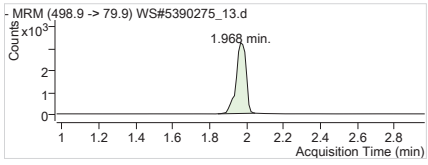


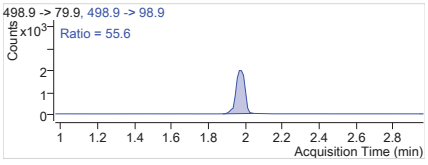
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.45 µg/L
Area ratio: 7.55893
Sample type: QC



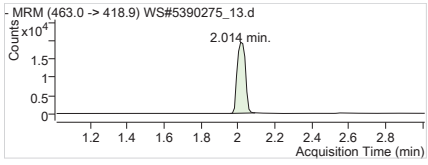


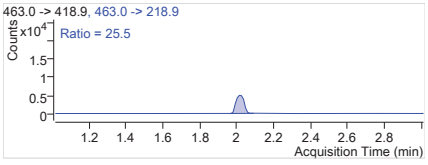
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 0.50 µg/L
Area ratio: 8.63026
Sample type: QC



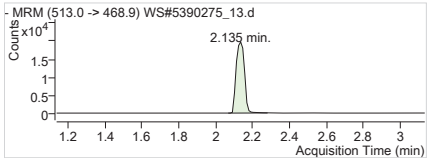


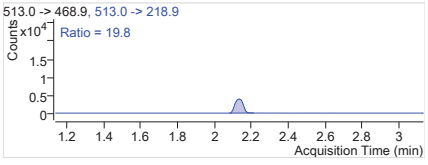
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 0.49 µg/L
Area ratio: 7.28837
Sample type: QC



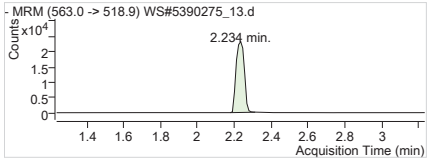


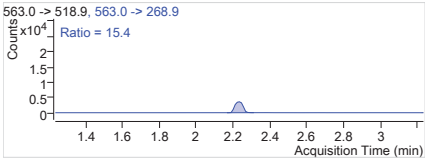
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 0.47 µg/L
Area ratio: 7.25096
Sample type: QC



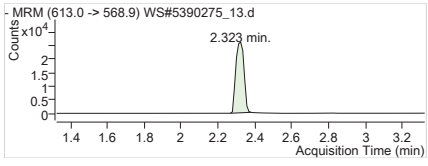


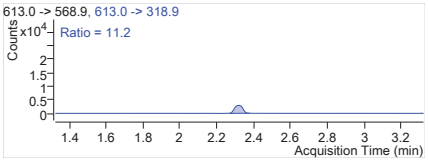
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 0.44 µg/L
Area ratio: 9.31298
Sample type: QC



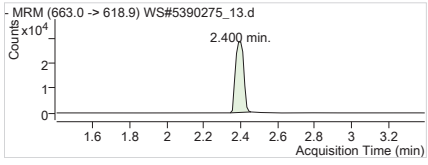


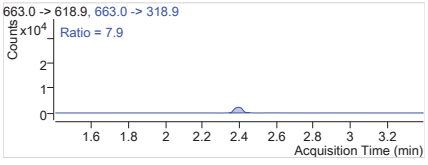
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 0.55 µg/L
Area ratio: 9.76218
Sample type: QC



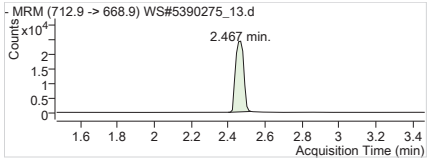


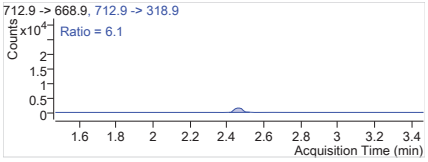
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 0.47 µg/L
Area ratio: 8.18031
Sample type: QC



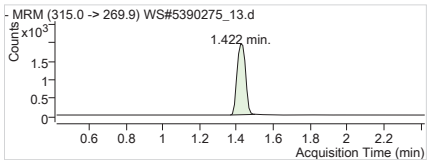


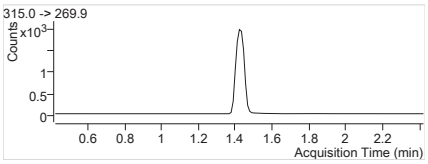
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 0.50 µg/L
Area ratio: 8.62311
Sample type: QC



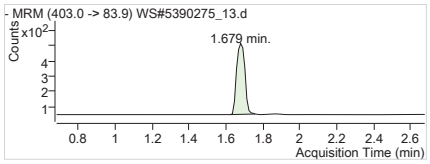


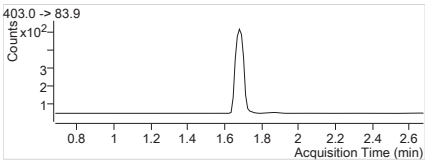
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 0.51 µg/L
Area ratio: 7.32845
Sample type: QC



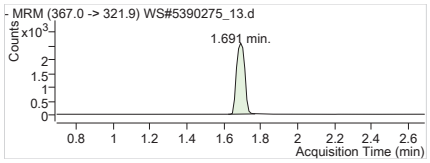


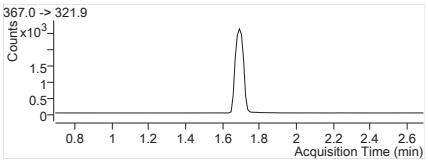
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 104.80 µg/L
Area ratio: 0.26157
Sample type: QC



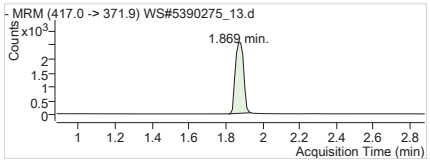


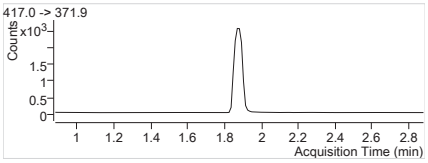
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 98.80 µg/L
Area ratio: 0.06177
Sample type: QC



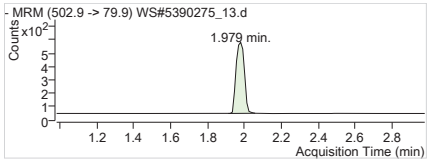


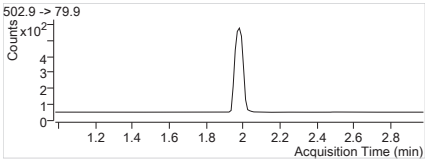
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 104.45 µg/L
Area ratio: 0.33975
Sample type: QC



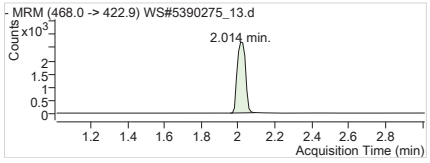


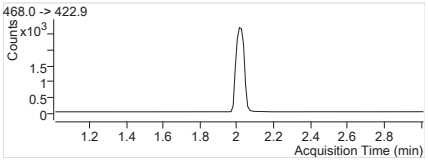
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 97.57 µg/L
Area ratio: 0.33665
Sample type: QC



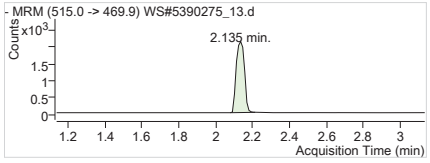


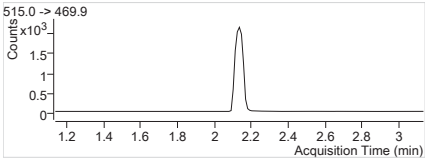
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 90.39 µg/L
Area ratio: 0.07091
Sample type: QC



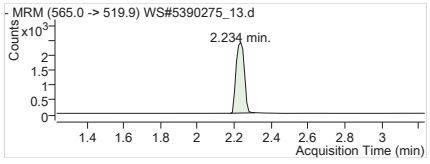


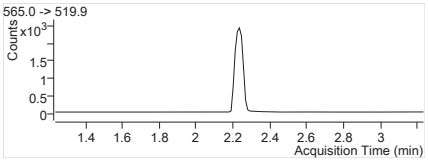
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 103.85 µg/L
Area ratio: 0.35412
Sample type: QC



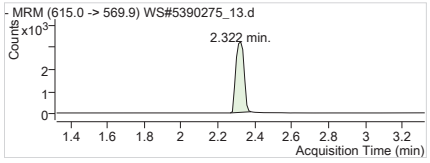


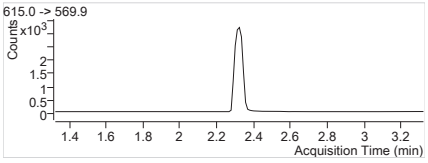
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 101.67 µg/L
Area ratio: 0.21184
Sample type: QC



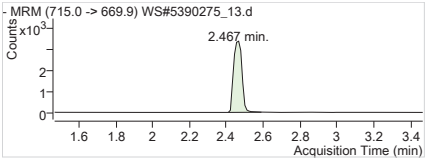


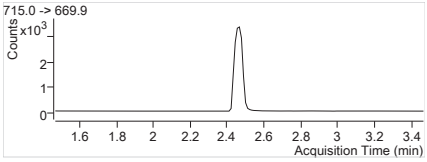
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 90.40 µg/L
Area ratio: 0.23821
Sample type: QC



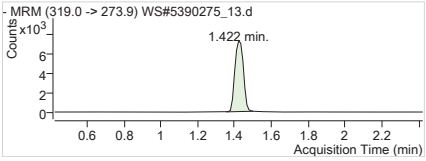


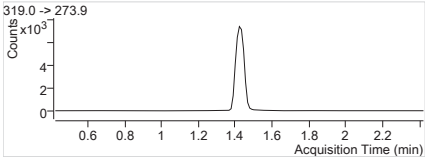
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 93.49 µg/L
Area ratio: 0.31868
Sample type: QC



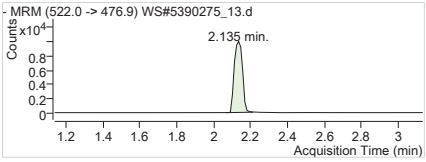


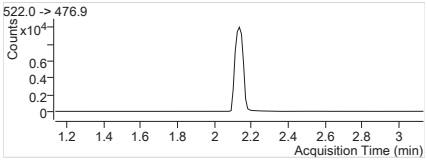
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	86.13 µg/L
Area ratio:	0.34063
Sample type:	QC





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	2.41 µg/L
Area ratio:	0
Sample type:	QC





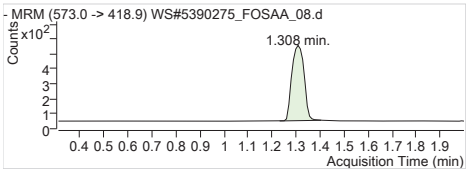
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	2.40 µg/L
Area ratio:	0
Sample type:	QC

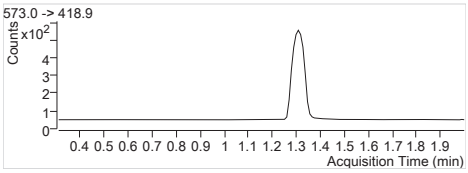
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**IB**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_08.d	**Operator**	
Sample Type	Sample	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A8
Acq. Date	2018/02/10 12:44:47 AM	**Injection Volume**	Per Method
Sample Annotation	-		

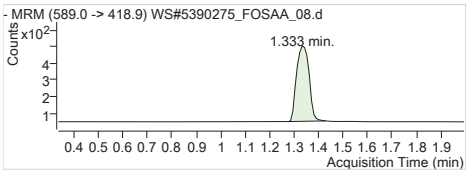
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1784	1.31	1 µg/L		
D5-EtFOSAA IS	1610	1.33	1 µg/L		
13C9-PFDA IS	21134	0.90	1 µg/L		

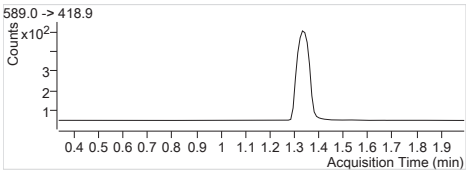
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1802	1.31	-	116.27 µg/L	-
D5-EtFOSAA	1630	1.33	-	118.28 µg/L	-
13C9-PFDA	20473	0.90	-	86.34 µg/L	-



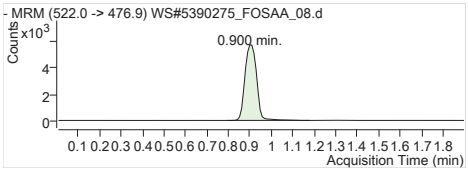


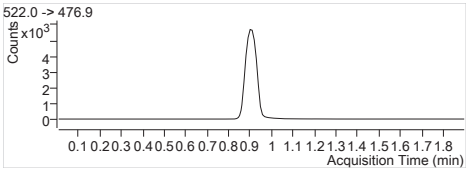
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: Sample



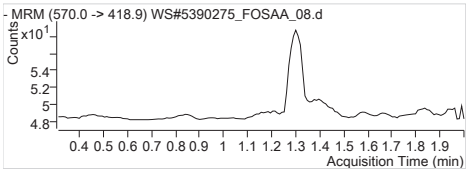


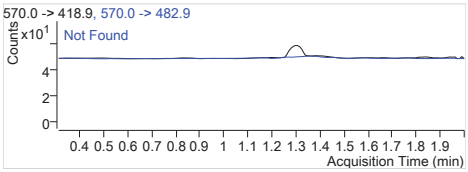
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: Sample



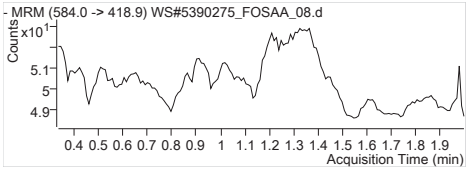


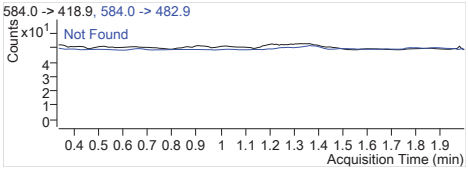
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.900 (0.900)
Concentration: 1 µg/L
Sample type: Sample



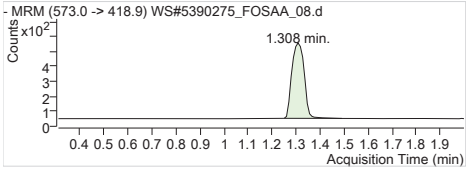


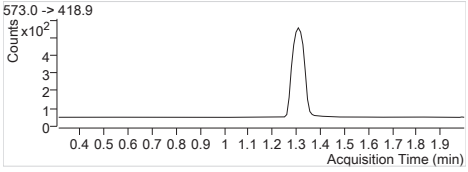
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



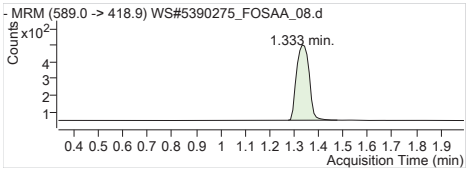


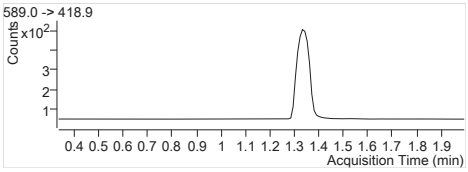
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.334)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



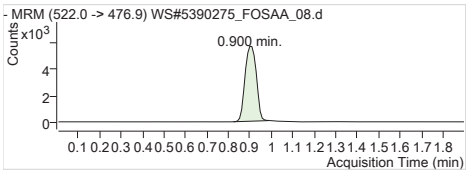


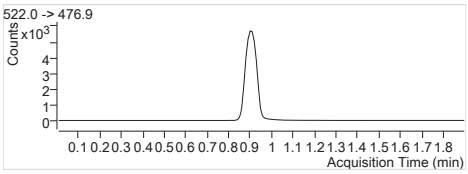
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 116.27 µg/L
Area ratio: 0.08527
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	118.28 µg/L
Area ratio:	0.07713
Sample type:	Sample





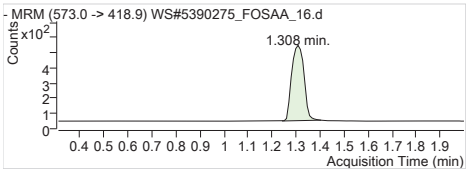
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.900 (0.900)
Calc. conc.	86.34 µg/L
Area ratio:	0
Sample type:	Sample

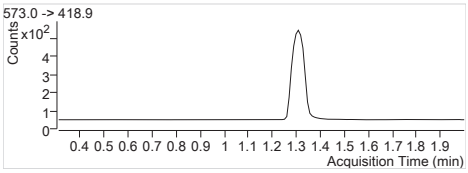
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**IB**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_16.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A8
Acq. Date	2018/02/10 1:04:06 AM	**Injection Volume**	Per Method
Sample Annotation	-		

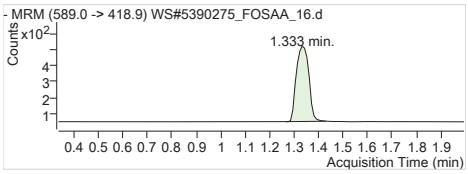
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1771	1.31	1 µg/L		
D5-EtFOSAA IS	1670	1.33	1 µg/L		
13C9-PFDA IS	21079	0.90	1 µg/L		

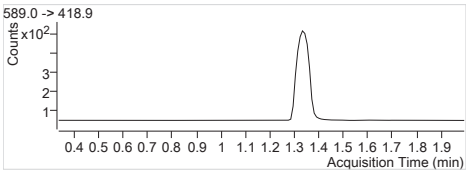
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1792	1.31	-	115.93 µg/L	-
D5-EtFOSAA	1691	1.33	-	123.02 µg/L	-
13C9-PFDA	20539	0.90	-	2.08 µg/L	-



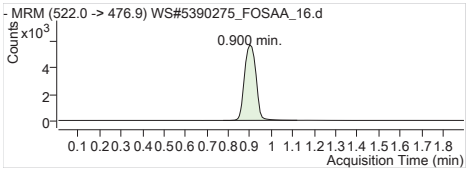


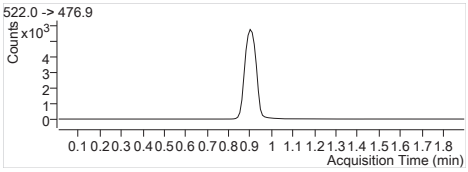
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: Sample



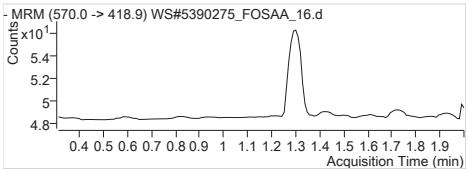


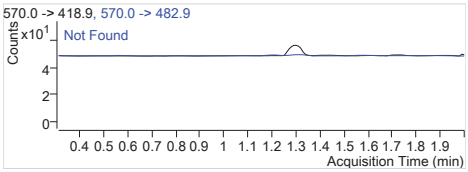
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: Sample



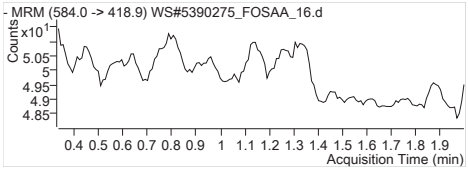


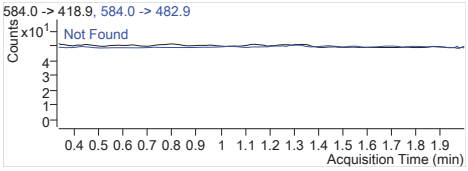
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.900 (0.900)
Concentration: 1 µg/L
Sample type: Sample



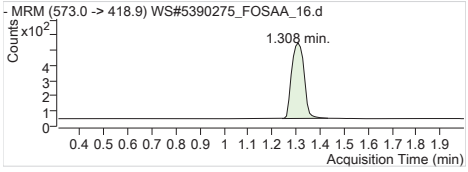


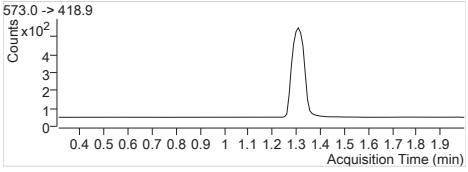
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



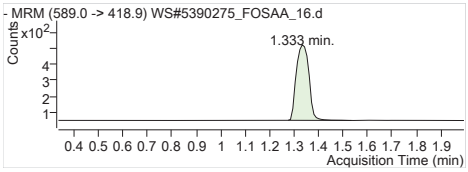


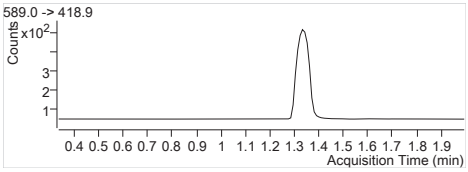
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.334)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



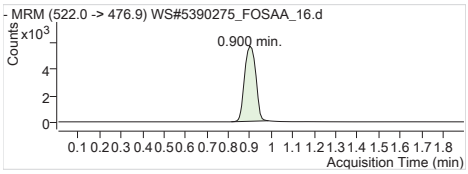


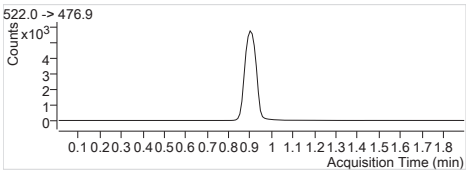
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 115.93 µg/L
Area ratio: 0.08501
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	123.02 µg/L
Area ratio:	0.08022
Sample type:	Sample





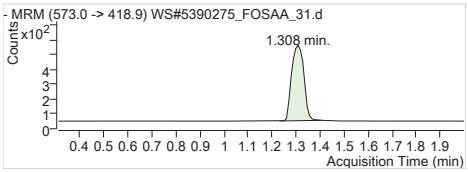
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.900 (0.900)
Calc. conc.	2.08 µg/L
Area ratio:	0
Sample type:	Sample

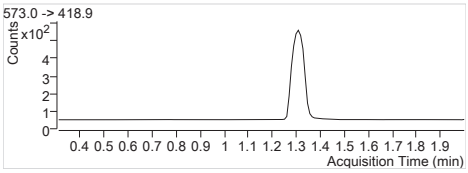
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**IB**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_31.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A8
Acq. Date	2018/02/10 1:40:19 AM	**Injection Volume**	Per Method
Sample Annotation	-		

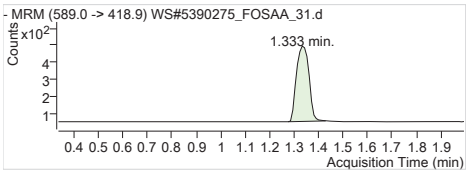
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1815	1.31	1 µg/L		
D5-EtFOSAA IS	1578	1.33	1 µg/L		
13C9-PFDA IS	20276	0.90	1 µg/L		

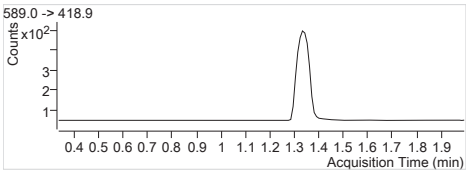
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1832	1.31	-	123.21 µg/L	-
D5-EtFOSAA	1605	1.33	-	121.39 µg/L	-
13C9-PFDA	19611	0.90	-	1.99 µg/L	-



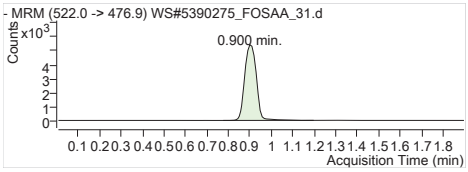


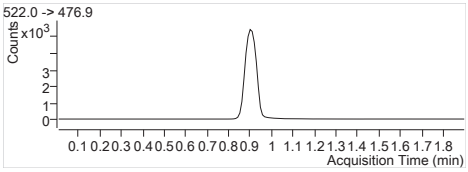
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: Sample



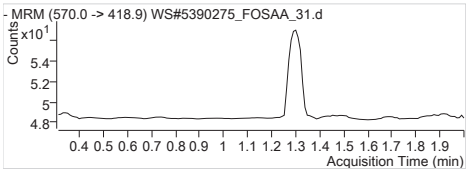


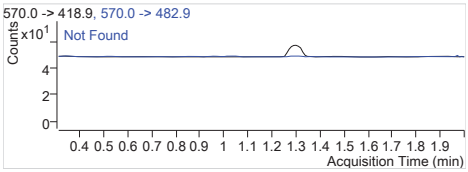
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: Sample



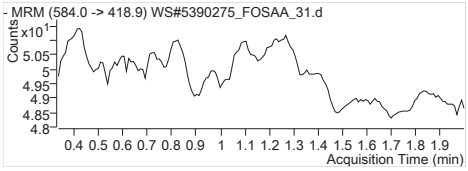


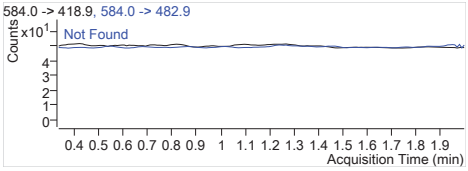
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.900 (0.900)
Concentration: 1 µg/L
Sample type: Sample



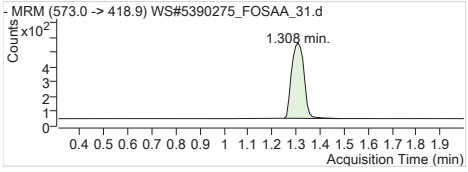


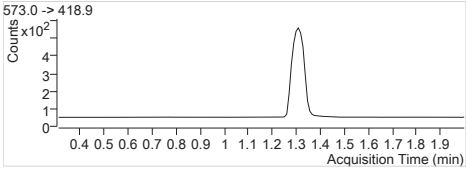
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



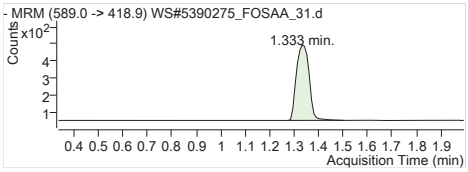


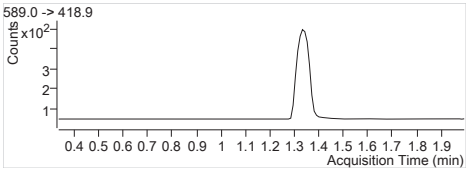
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.334)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



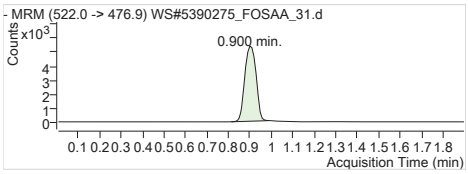


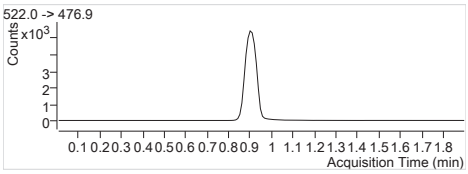
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 123.21 µg/L
Area ratio: 0.09035
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	121.39 µg/L
Area ratio:	0.07916
Sample type:	Sample





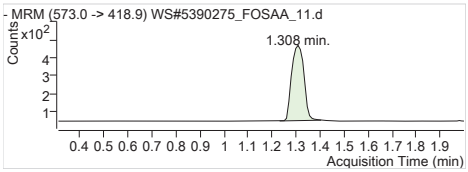
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.900 (0.900)
Calc. conc.	1.99 µg/L
Area ratio:	0
Sample type:	Sample

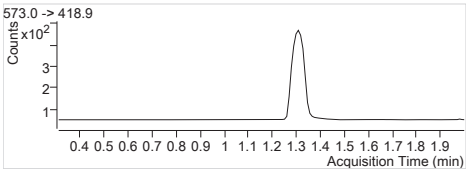
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**5390275:BLANK**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_11.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-B1
Acq. Date	2018/02/10 12:52:01 AM	**Injection Volume**	Per Method
Sample Annotation	-		

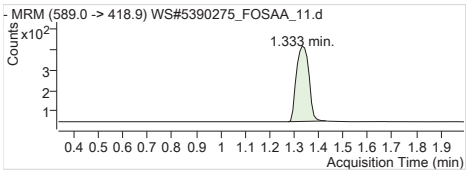
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1483	1.31	1 µg/L		
D5-EtFOSAA IS	1291	1.33	1 µg/L		
13C9-PFDA IS	25518	0.89	1 µg/L		

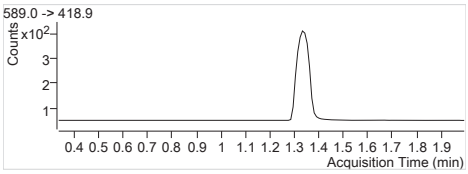
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1511	1.31	-	80.75 µg/L	-
D5-EtFOSAA	1307	1.33	-	78.55 µg/L	-
13C9-PFDA	24956	0.89	-	2.53 µg/L	-



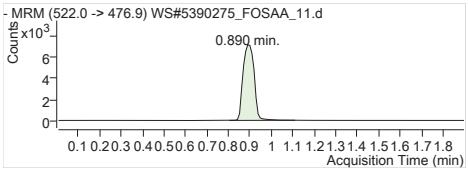


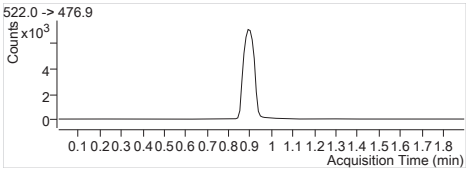
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: Sample



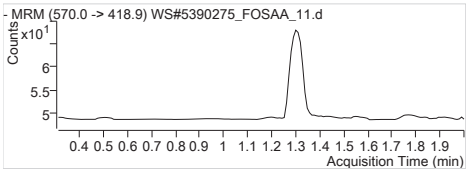


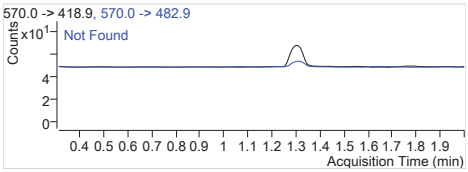
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: Sample



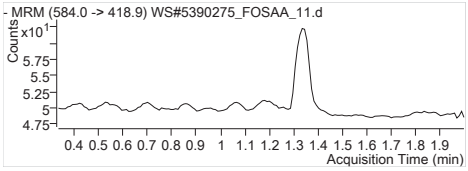


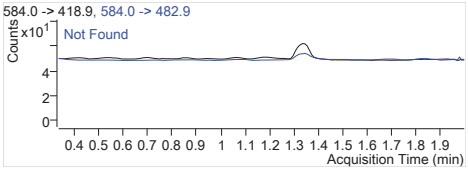
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.890 (0.900)
Concentration: 1 µg/L
Sample type: Sample



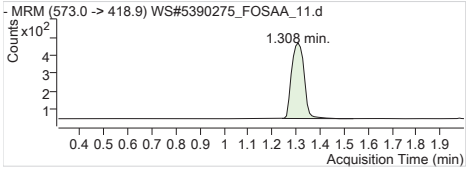


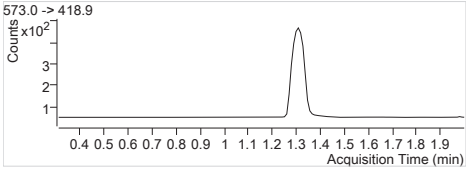
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.310)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



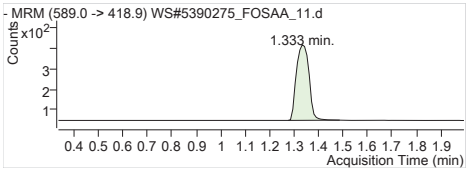


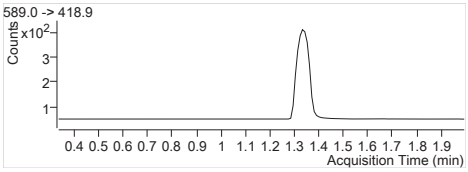
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.334)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



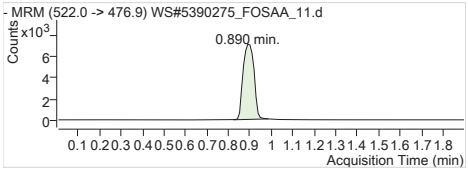


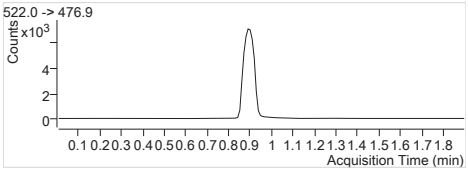
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 80.75 µg/L
Area ratio: 0.05921
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	78.55 µg/L
Area ratio:	0.05122
Sample type:	Sample





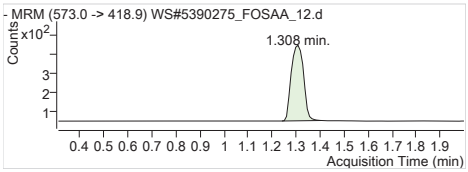
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.890 (0.900)
Calc. conc.	2.53 µg/L
Area ratio:	0
Sample type:	Sample

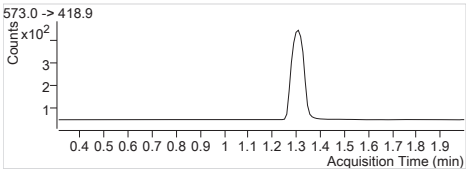
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**5390275:SPIKE**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_12.d	**Operator**	
Sample Type	QC	**Dilution**	0.024
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-B2
Acq. Date	2018/02/10 12:54:26 AM	**Injection Volume**	Per Method
Sample Annotation	-		

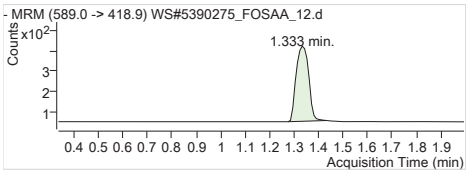
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1407	1.31	1 µg/L		
D5-EtFOSAA IS	1330	1.33	1 µg/L		
13C9-PFDA IS	21375	0.88	1 µg/L		

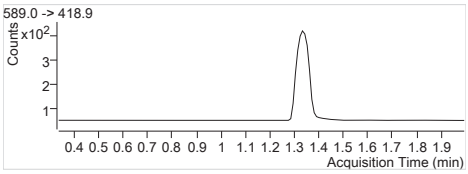
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	10168	1.31	20.80	0.50 µg/L	100.11
EtFOSAA 1	11323	1.33	20.80	0.49 µg/L	98.90
D3-MeFOSAA	1419	1.31	100.00	90.53 µg/L	90.53
D5-EtFOSAA	1363	1.33	100.00	97.79 µg/L	97.79
13C9-PFDA	20888	0.88	100.00	2.11 µg/L	88.09



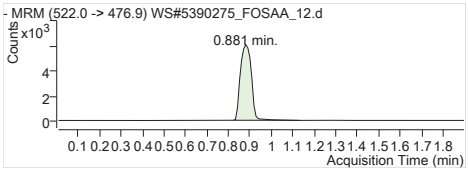


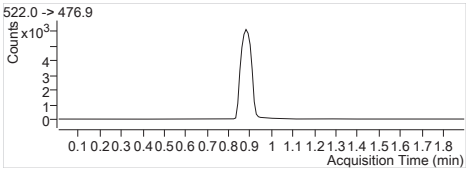
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: QC



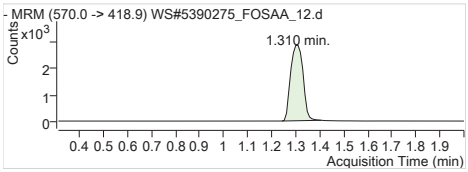


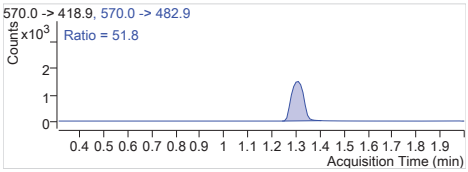
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: QC



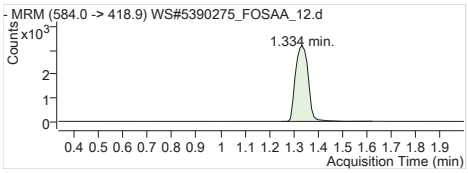


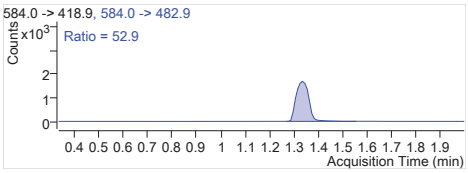
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.881 (0.900)
Concentration: 1 µg/L
Sample type: QC



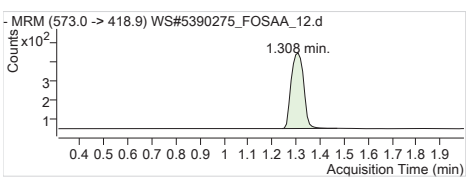


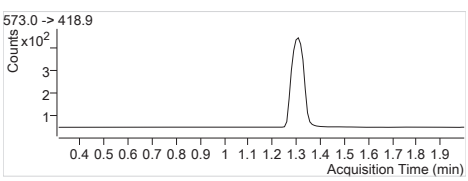
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 0.50 µg/L
Area ratio: 7.22672
Sample type: QC



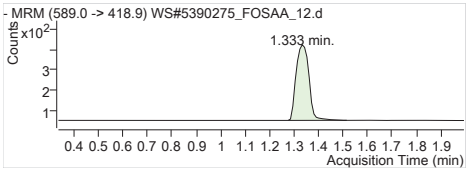


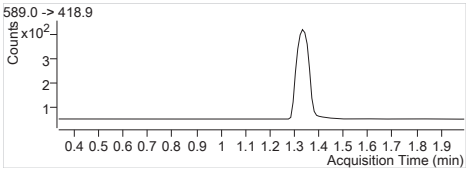
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.334)
Calc. conc. 0.49 µg/L
Area ratio: 8.51353
Sample type: QC



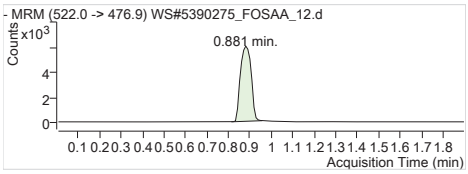


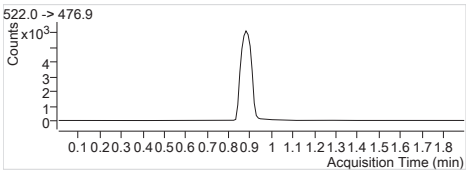
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 90.53 µg/L
Area ratio: 0.06639
Sample type: QC





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	97.79 µg/L
Area ratio:	0.06377
Sample type:	QC





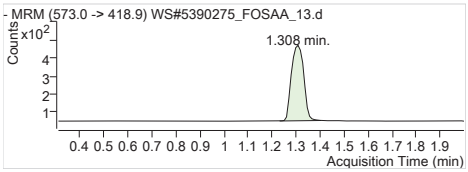
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.881 (0.900)
Calc. conc.	2.11 µg/L
Area ratio:	0
Sample type:	QC

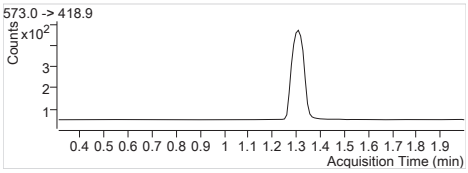
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**5390275:SPIKE:D1**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_13.d	**Operator**	
Sample Type	QC	**Dilution**	0.024
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-B3
Acq. Date	2018/02/10 12:56:51 AM	**Injection Volume**	Per Method
Sample Annotation	-		

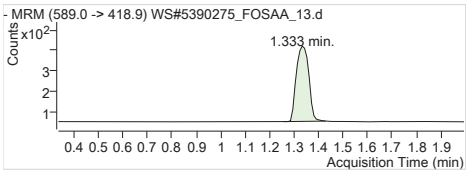
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1504	1.31	1 µg/L		
D5-EtFOSAA IS	1319	1.33	1 µg/L		
13C9-PFDA IS	23768	0.89	1 µg/L		

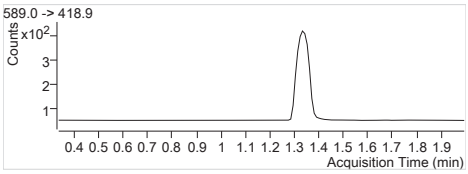
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	10371	1.31	20.80	0.48 µg/L	95.51
EtFOSAA 1	11295	1.33	20.80	0.50 µg/L	99.47
D3-MeFOSAA	1509	1.31	100.00	86.58 µg/L	86.58
D5-EtFOSAA	1329	1.33	100.00	85.75 µg/L	85.75
13C9-PFDA	23524	0.89	100.00	2.38 µg/L	99.21



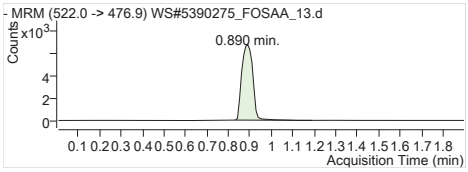


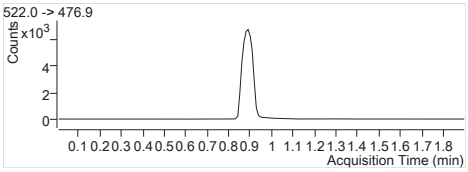
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: QC



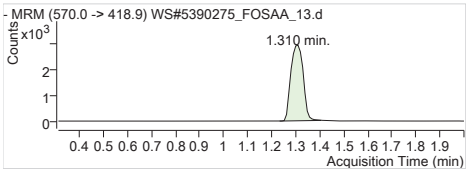


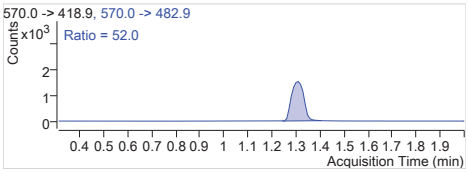
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: QC



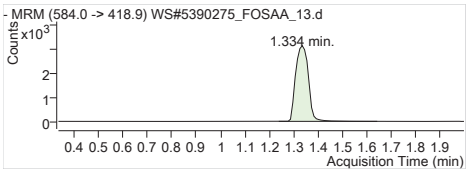


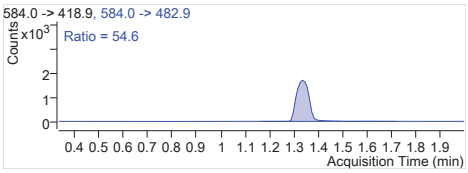
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.890 (0.900)
Concentration: 1 µg/L
Sample type: QC



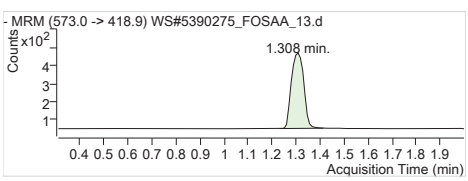


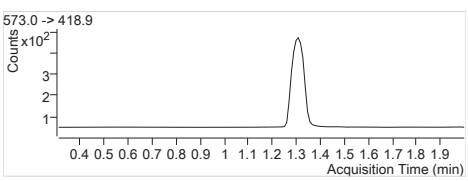
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 0.48 µg/L
Area ratio: 6.89561
Sample type: QC



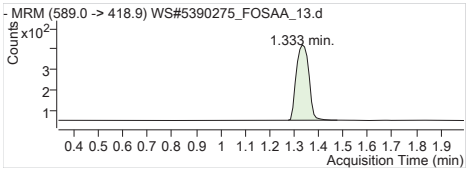


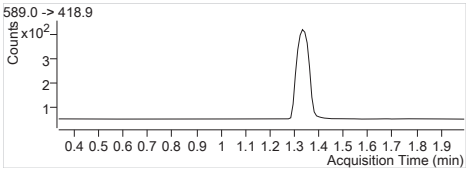
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.334)
Calc. conc. 0.50 µg/L
Area ratio: 8.56331
Sample type: QC



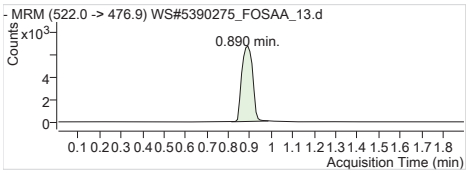


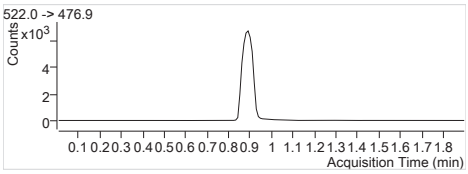
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 86.58 µg/L
Area ratio: 0.06349
Sample type: QC





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	85.75 µg/L
Area ratio:	0.05592
Sample type:	QC





13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.890 (0.900)
Calc. conc.	2.38 µg/L
Area ratio:	0
Sample type:	QC

Quantitation Results

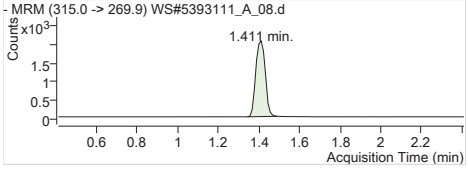
Agilent Technologies

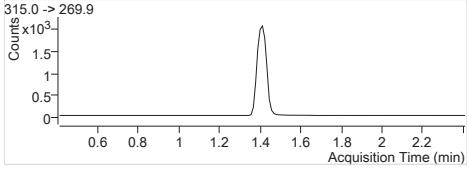
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**IB**	**Instrument**	LCMS04
Data File	WS#5393111_A_08.d	**Operator**	
Sample Type	Sample	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A8
Acq. Date	2018/02/13 1:41:02 PM	**Injection Volume**	Per Method
Sample Annotation	-		

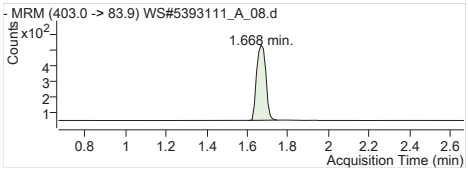
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6619	1.41	1 µg/L		
MPFHxS	1517	1.67	1 µg/L		
MPFHpA	8673	1.68	1 µg/L		
MPFOA	9288	1.86	1 µg/L		
MPFOS	2053	1.97	1 µg/L		
MPFNA	9085	2.00	1 µg/L		
MPFDA	7658	2.12	1 µg/L		
MPFUnA	9079	2.22	1 µg/L		
MPFDoA	11058	2.31	1 µg/L		
MPFTeDA	12491	2.46	1 µg/L		
13C6-PFHxA IS	21095	1.41	1 µg/L		
13C9-PFDA IS	26482	2.12	1 µg/L		

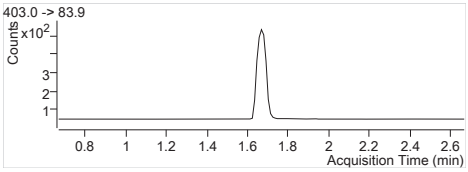
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1			-	ND	-
PFHxA 1			-	ND	-
PFHxS 1			-	ND	-
PFHpA 1			-	ND	-
PFOA 1			-	ND	-
PFOS 1			-	ND	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	6619	1.41	-	110.89 µg/L	-
18O2-PFHxS	1517	1.67	-	104.12 µg/L	-
13C4-PFHpA	8673	1.68	-	113.76 µg/L	-
13C4-PFOA	9288	1.86	-	114.76 µg/L	-
13C4-PFOS	2053	1.97	-	115.99 µg/L	-
13C5-PFNA	9085	2.00	-	116.39 µg/L	-
13C2-PFDA	7574	2.12	-	115.52 µg/L	-
13C2-PFUnA	9079	2.22	-	118.96 µg/L	-
13C2-PFDoA	11058	2.31	-	111.70 µg/L	-
13C2-PFTeDA	12495	2.46	-	109.95 µg/L	-
13C6-PFHxA	21095	1.41	-	90.33 µg/L	-
13C9-PFDA	26482	2.12	-	87.56 µg/L	-



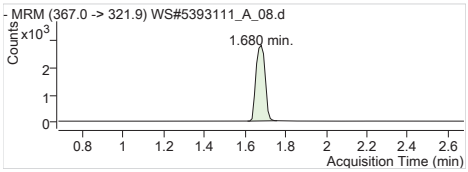


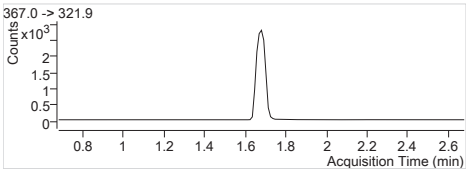
MPFHxA	Internal Standard
RT (Exp. RT):	1.411 (1.411)
Concentration:	1 µg/L
Sample type:	Sample



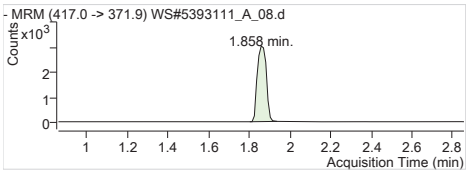


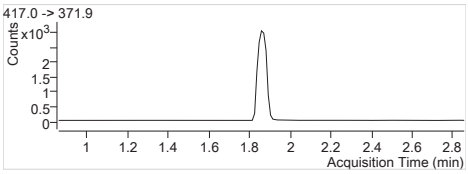
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: Sample



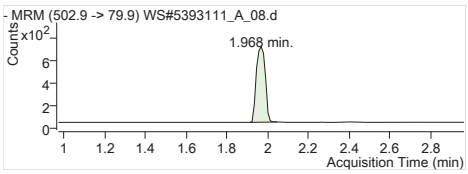


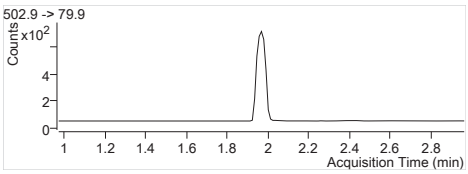
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: Sample



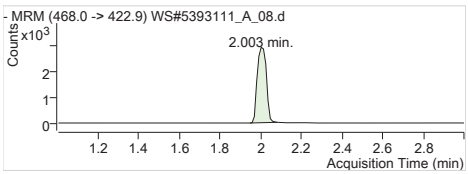


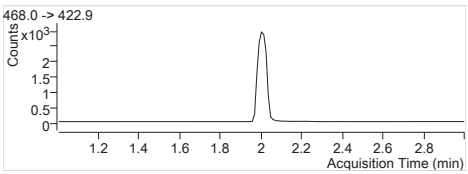
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: Sample



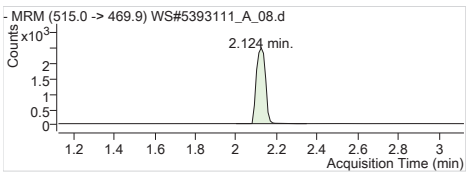


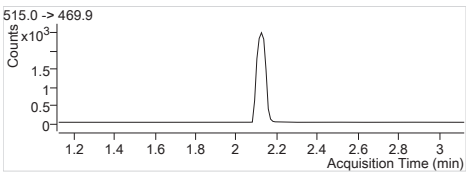
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: Sample



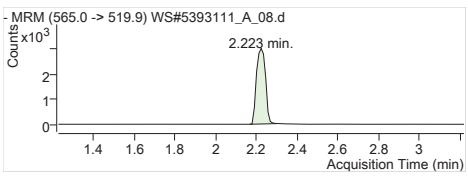


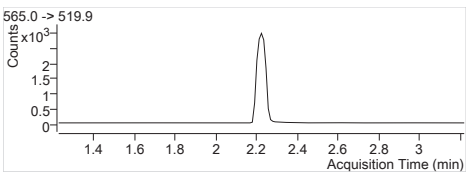
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: Sample



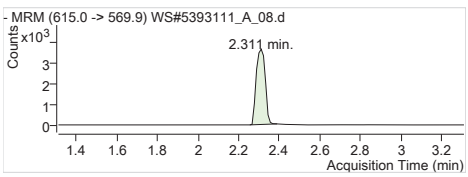


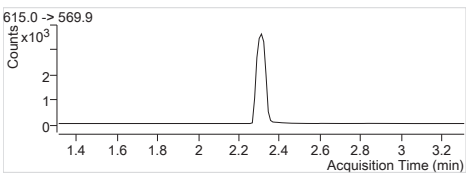
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Sample



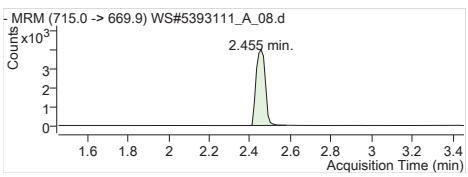


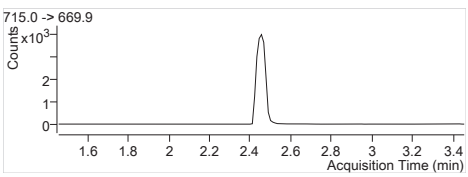
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: Sample



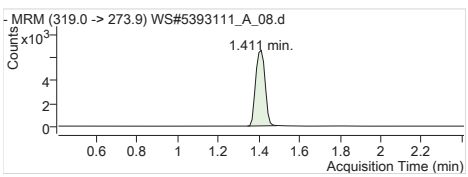


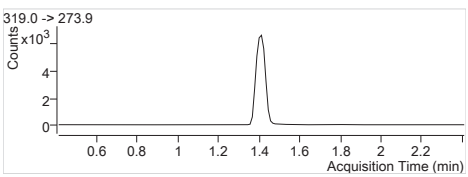
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: Sample



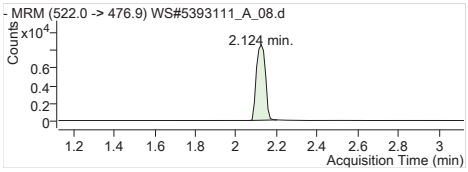


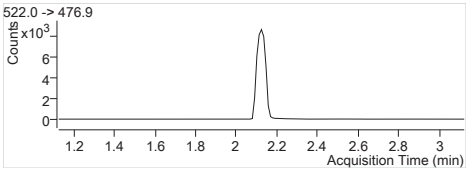
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: Sample



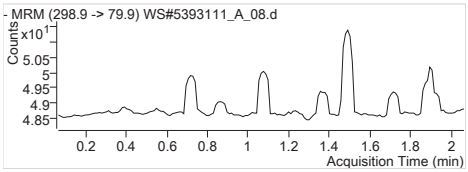


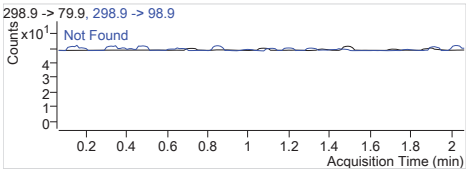
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Sample



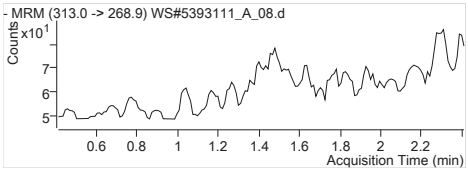


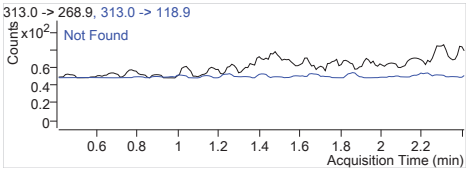
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Sample



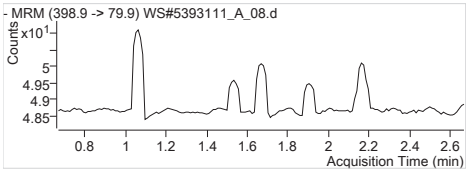


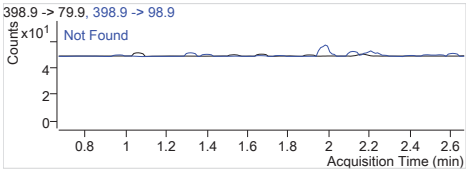
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.064)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



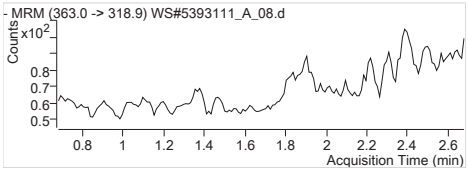


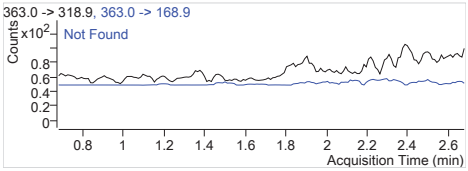
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.411)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



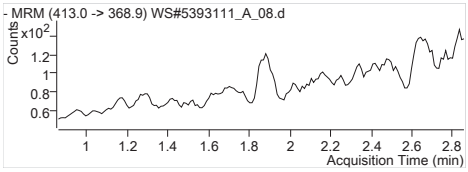


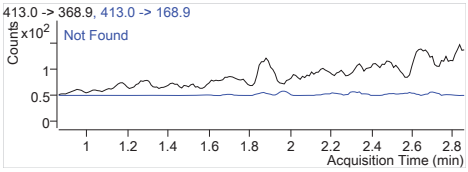
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.668)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



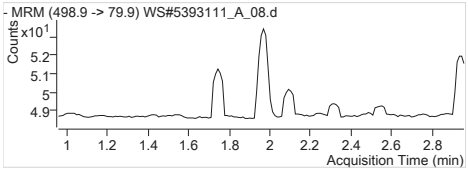


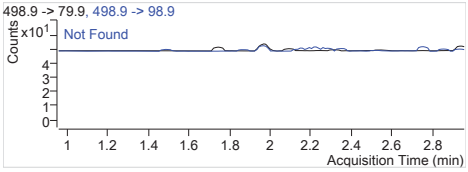
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.680)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



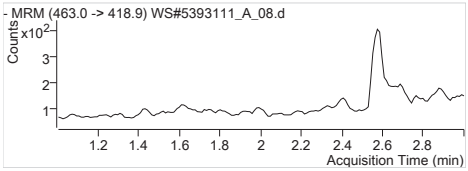


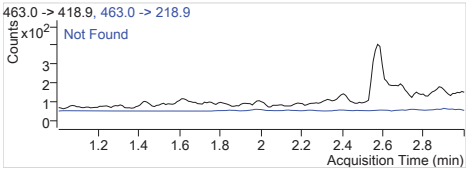
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.858)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



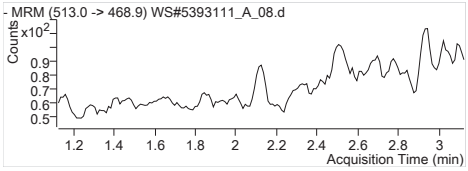


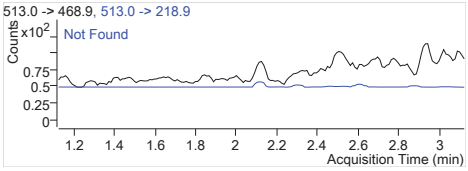
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.957)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



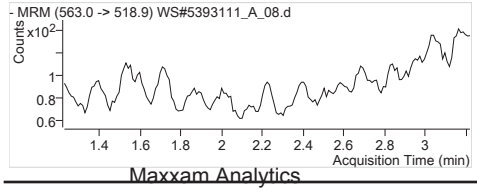


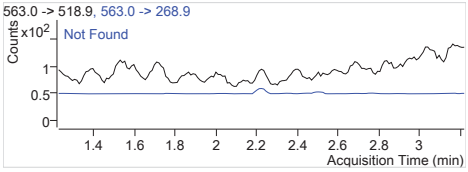
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.003)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



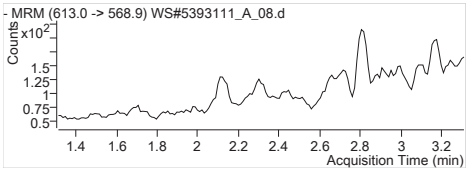


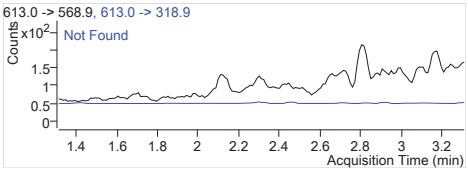
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.124)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



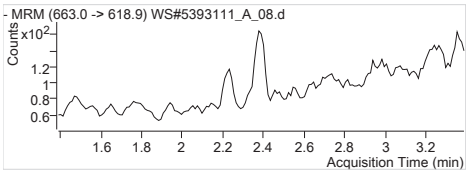


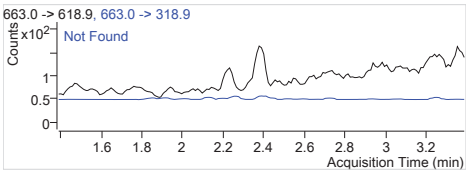
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.223)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



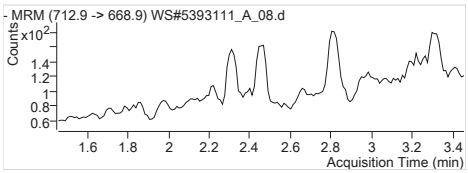


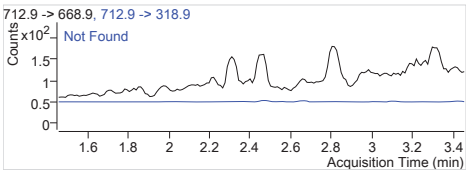
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.311)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



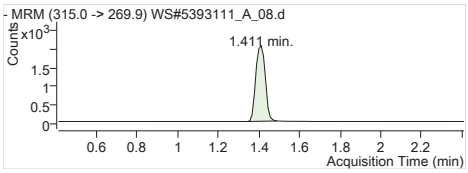


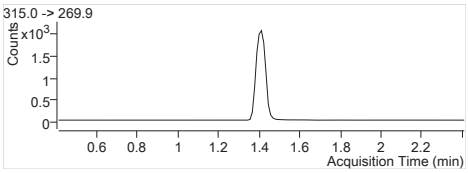
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.389)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



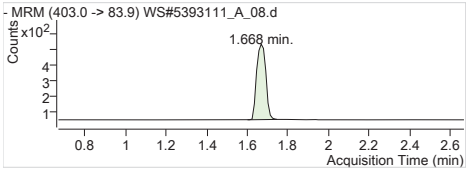


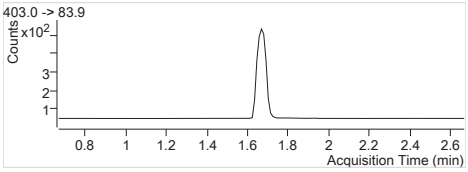
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.456)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



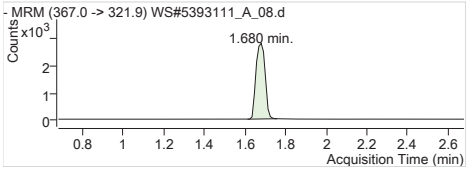


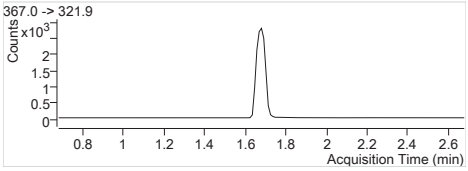
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 110.89 µg/L
Area ratio: 0.31377
Sample type: Sample



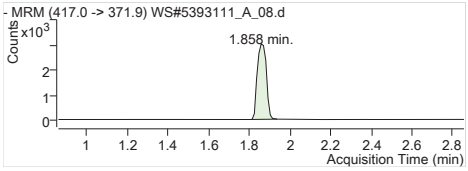


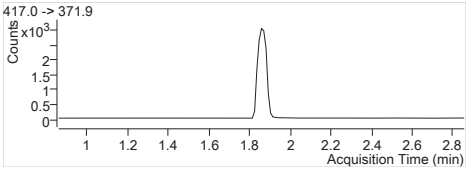
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 104.12 µg/L
Area ratio: 0.07191
Sample type: Sample



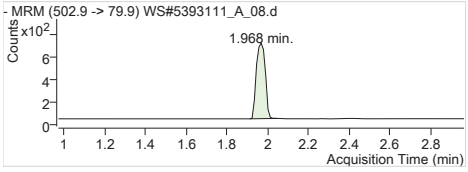


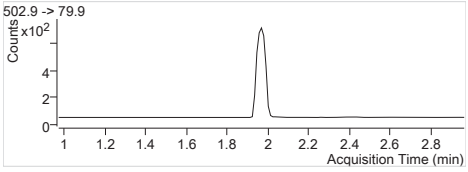
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 113.76 µg/L
Area ratio: 0.41114
Sample type: Sample



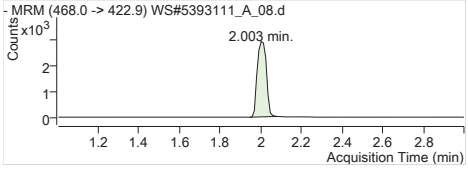


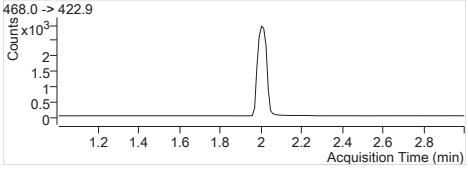
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 114.76 µg/L
Area ratio: 0.44029
Sample type: Sample



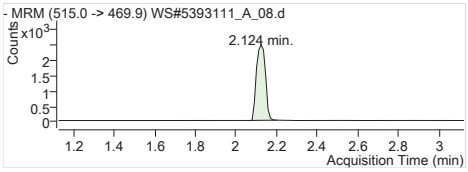


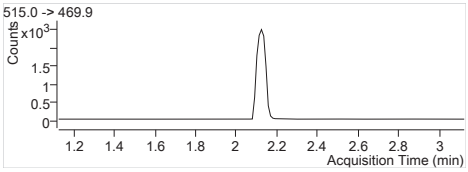
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 115.99 µg/L
Area ratio: 0.09732
Sample type: Sample



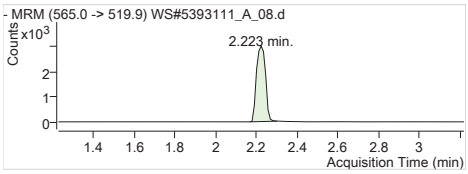


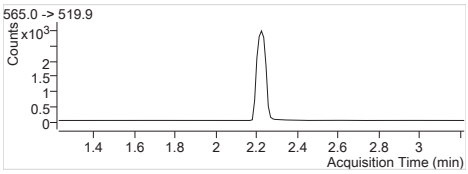
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 116.39 µg/L
Area ratio: 0.43067
Sample type: Sample



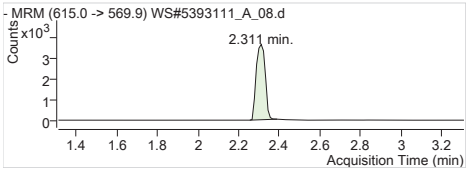


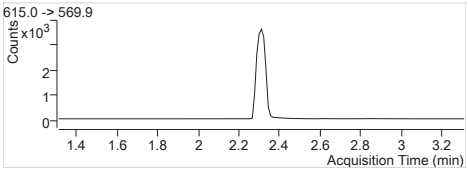
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 115.52 µg/L
Area ratio: 0.28601
Sample type: Sample



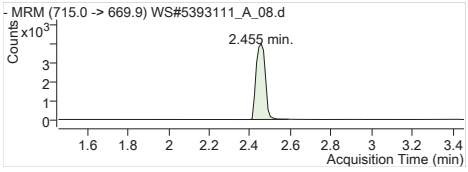


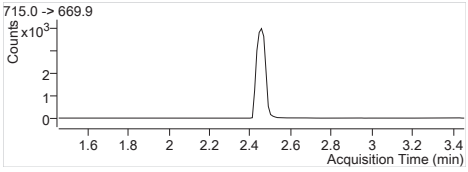
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 118.96 µg/L
Area ratio: 0.34284
Sample type: Sample



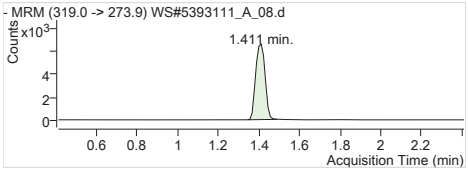


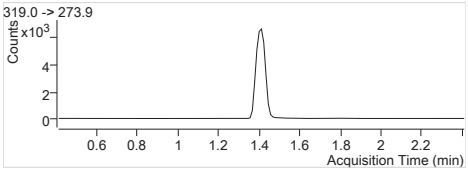
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 111.70 µg/L
Area ratio: 0.41757
Sample type: Sample



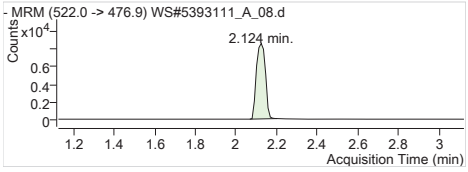


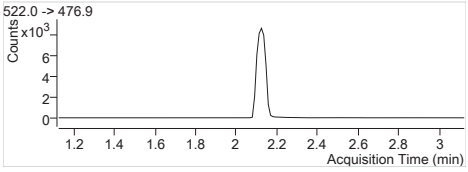
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 109.95 µg/L
Area ratio: 0.47183
Sample type: Sample





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 90.33 µg/L
Area ratio: 0
Sample type: Sample





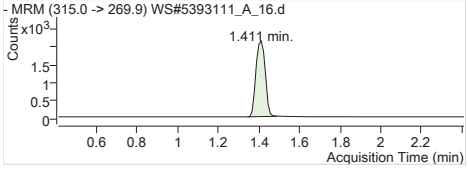
13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 87.56 µg/L
Area ratio: 0
Sample type: Sample

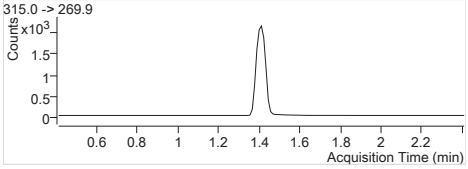
Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**IB**	**Instrument**	LCMS04
Data File	WS#5393111_A_16.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low.m	**Position**	P2-A8
Acq. Date	2018/02/13 2:20:30 PM	**Injection Volume**	Per Method
Sample Annotation	-		

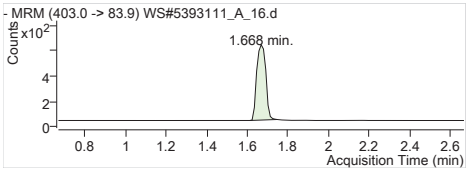
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6729	1.41	1 µg/L		
MPFHxS	1852	1.67	1 µg/L		
MPFHpA	8975	1.68	1 µg/L		
MPFOA	9393	1.86	1 µg/L		
MPFOS	2071	1.97	1 µg/L		
MPFNA	9030	2.00	1 µg/L		
MPFDA	7514	2.12	1 µg/L		
MPFUnA	8684	2.22	1 µg/L		
MPFDoA	11828	2.31	1 µg/L		
MPFTeDA	12820	2.46	1 µg/L		
13C6-PFHxA IS	21822	1.41	1 µg/L		
13C9-PFDA IS	27149	2.12	1 µg/L		

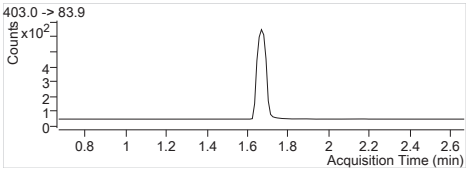
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1			-	ND	-
PFHxA 1			-	ND	-
PFHxS 1			-	ND	-
PFHpA 1			-	ND	-
PFOA 1			-	ND	-
PFOS 1			-	ND	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	6729	1.41	-	108.98 µg/L	-
18O2-PFHxS	1852	1.67	-	122.87 µg/L	-
13C4-PFHpA	8975	1.68	-	113.80 µg/L	-
13C4-PFOA	9393	1.86	-	112.19 µg/L	-
13C4-PFOS	2071	1.97	-	113.11 µg/L	-
13C5-PFNA	9030	2.00	-	111.83 µg/L	-
13C2-PFDA	7422	2.12	-	110.42 µg/L	-
13C2-PFUnA	8684	2.22	-	110.99 µg/L	-
13C2-PFDoA	11828	2.31	-	116.54 µg/L	-
13C2-PFTeDA	13059	2.46	-	112.09 µg/L	-
13C6-PFHxA	21822	1.41	-	2.24 µg/L	-
13C9-PFDA	27149	2.12	-	2.15 µg/L	-



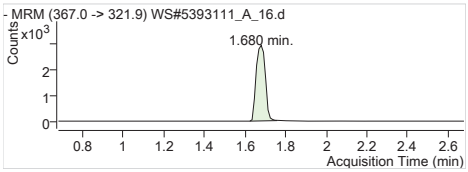


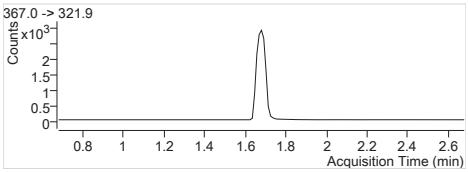
MPFHxA Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Sample



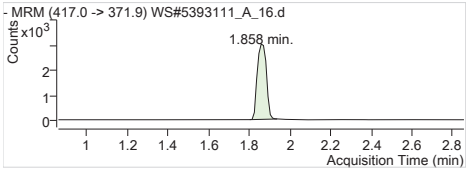


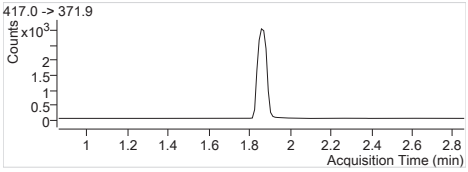
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: Sample



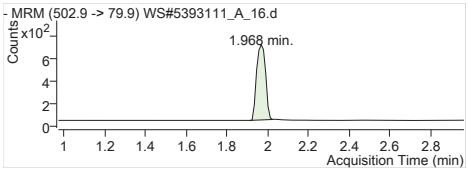


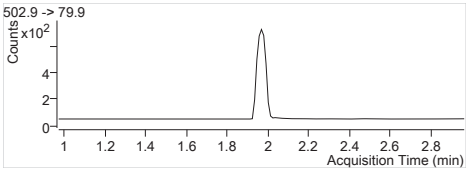
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: Sample



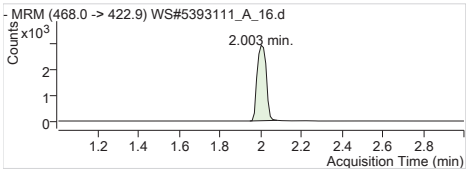


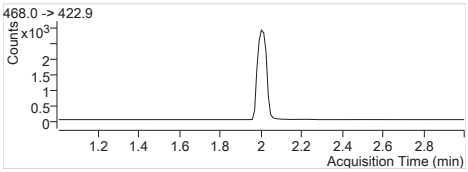
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: Sample



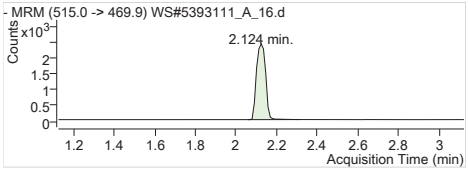


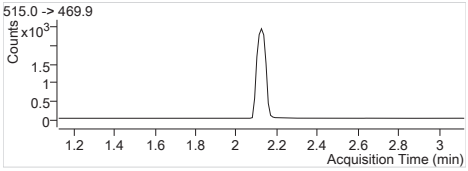
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: Sample



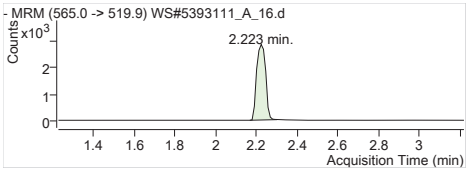


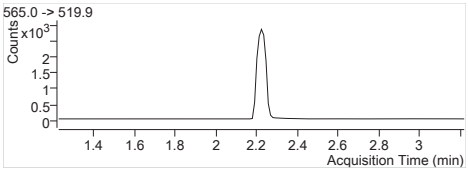
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: Sample



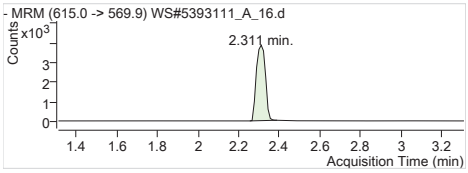


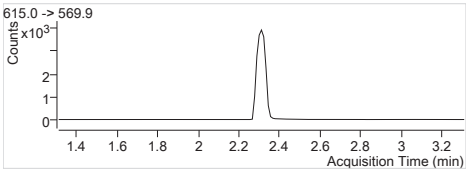
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Sample



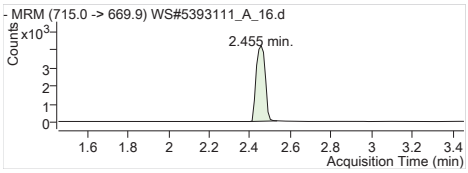


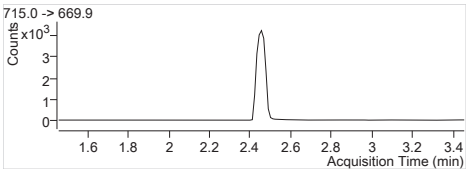
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: Sample



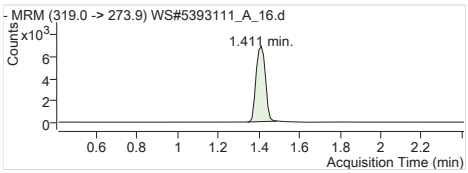


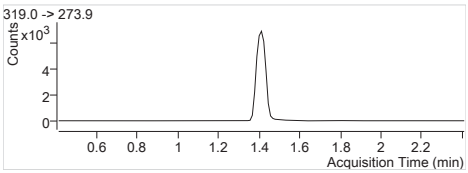
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: Sample



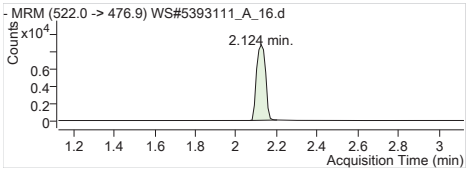


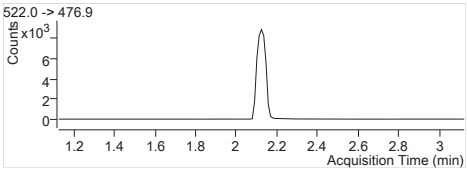
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: Sample



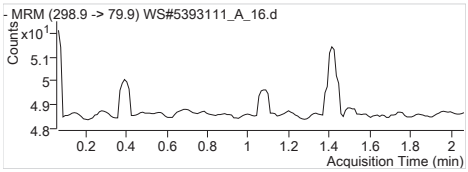


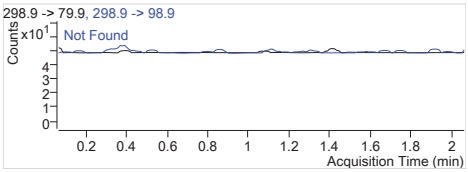
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Sample



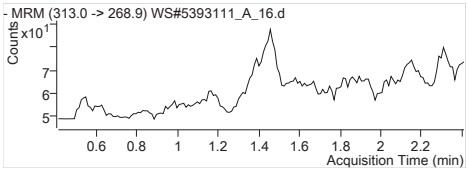


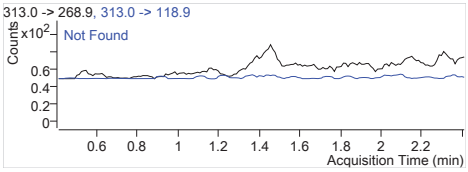
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Sample



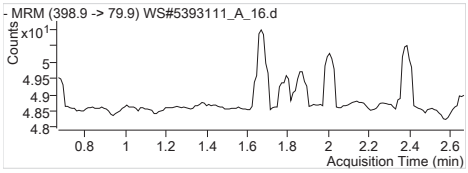


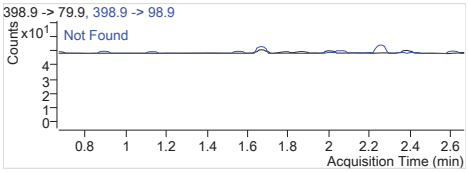
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.064)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



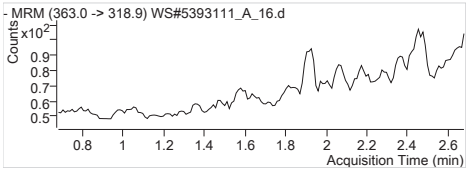


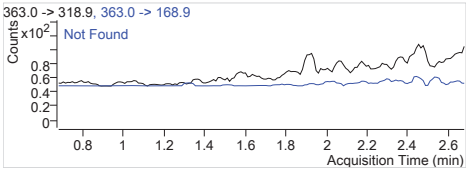
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.411)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



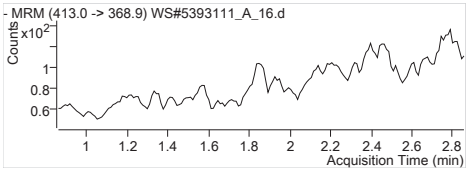


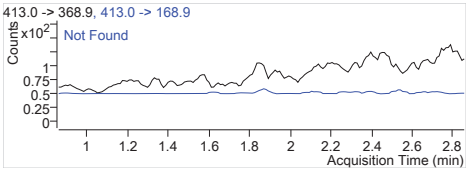
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.668)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



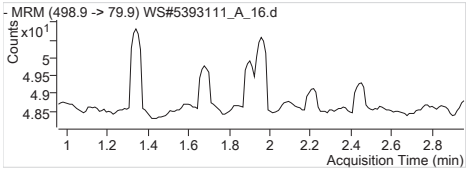


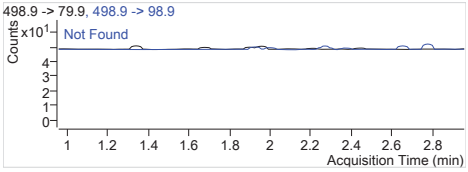
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.680)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



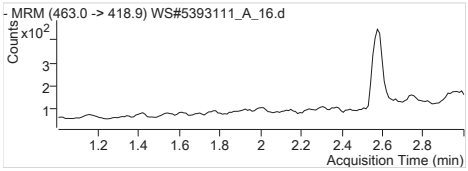


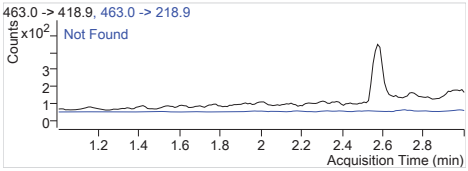
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.858)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



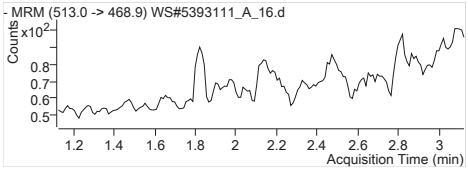


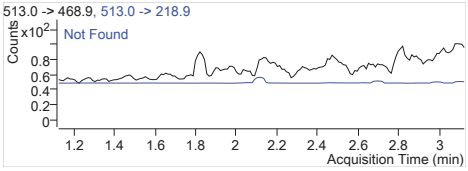
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.957)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



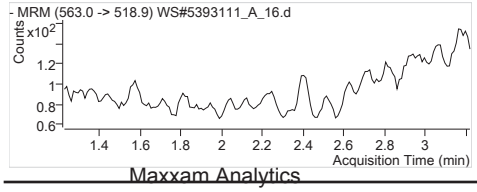


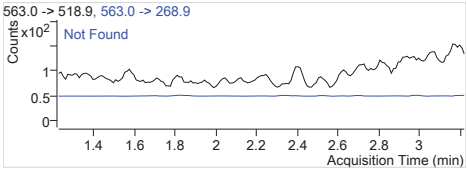
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.003)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



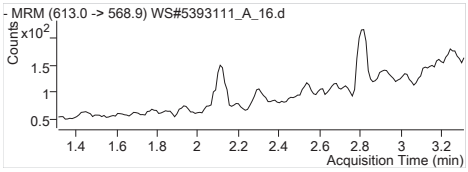


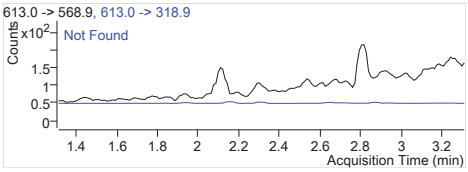
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.124)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



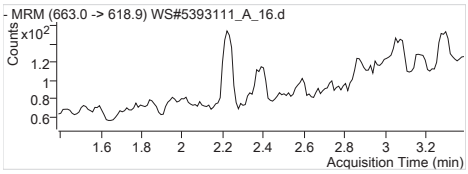


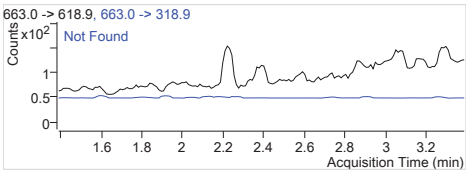
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.223)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



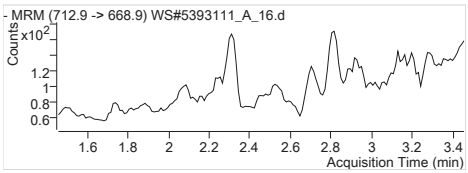


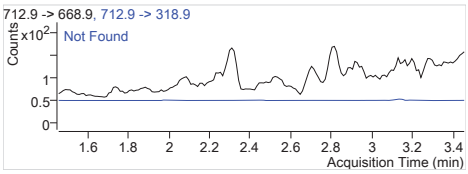
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.311)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



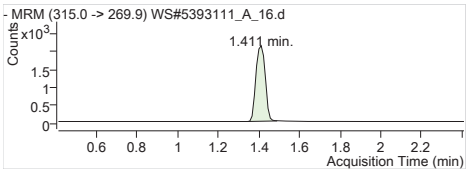


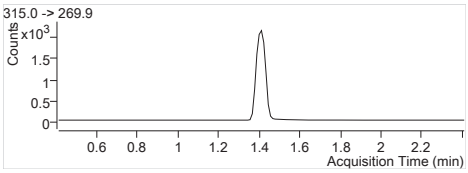
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.389)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



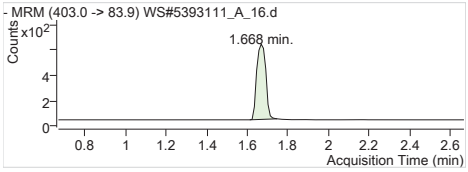


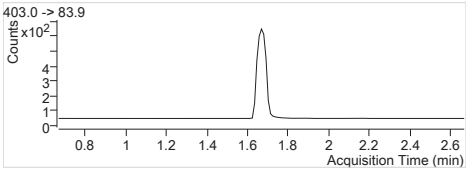
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.456)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



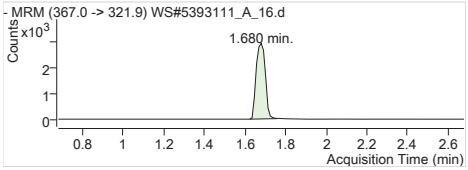


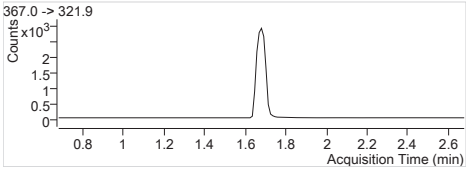
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 108.98 µg/L
Area ratio: 0.30836
Sample type: Sample



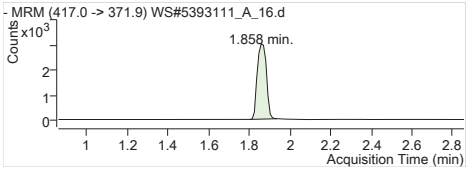


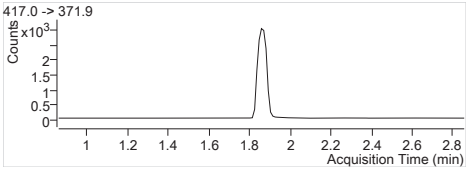
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 122.87 µg/L
Area ratio: 0.08487
Sample type: Sample



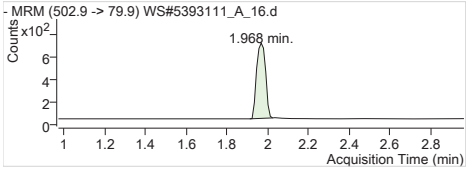


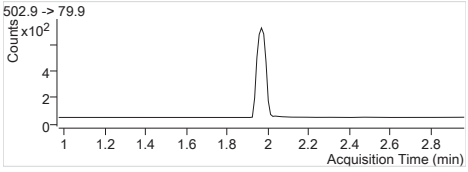
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 113.80 µg/L
Area ratio: 0.41128
Sample type: Sample



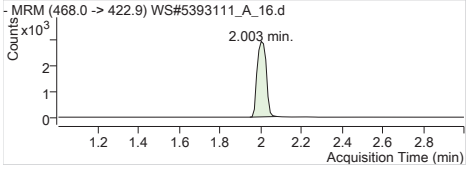


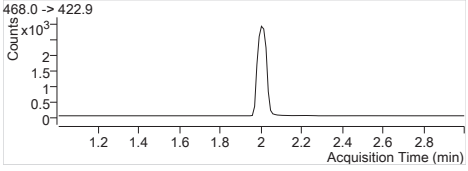
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 112.19 µg/L
Area ratio: 0.43044
Sample type: Sample



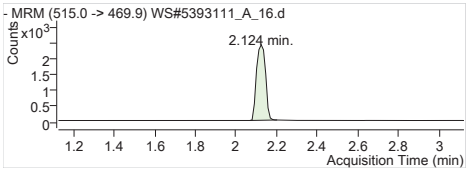


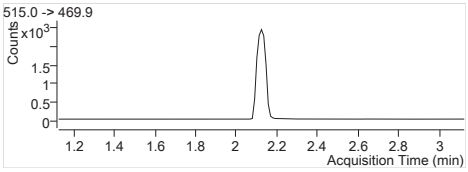
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 113.11 µg/L
Area ratio: 0.09490
Sample type: Sample



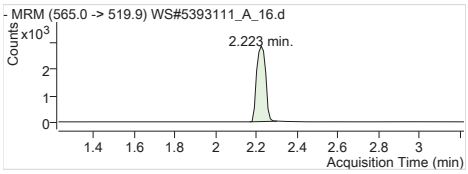


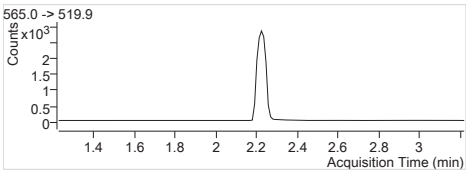
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 111.83 µg/L
Area ratio: 0.41380
Sample type: Sample



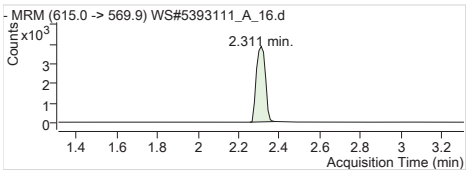


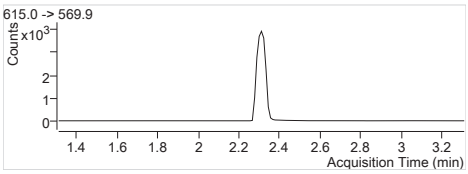
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 110.42 µg/L
Area ratio: 0.27338
Sample type: Sample



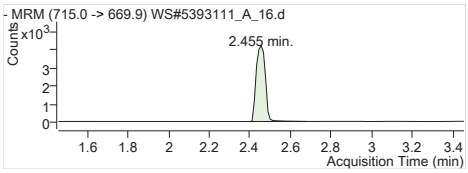


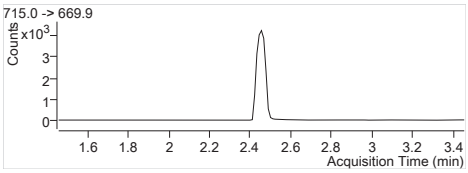
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 110.99 µg/L
Area ratio: 0.31986
Sample type: Sample



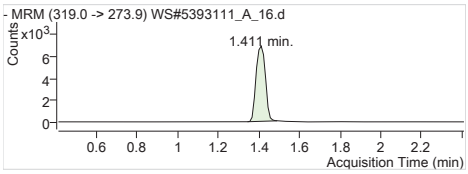


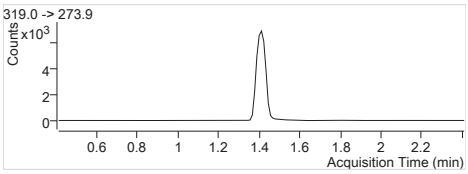
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 116.54 µg/L
Area ratio: 0.43567
Sample type: Sample



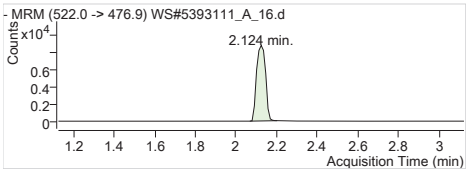


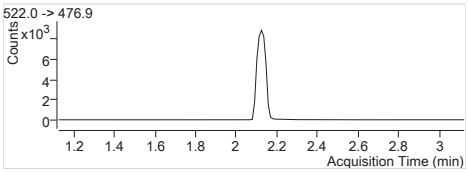
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 112.09 µg/L
Area ratio: 0.48101
Sample type: Sample





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 2.24 µg/L
Area ratio: 0
Sample type: Sample





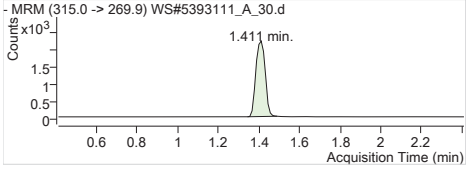
13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 2.15 µg/L
Area ratio: 0
Sample type: Sample

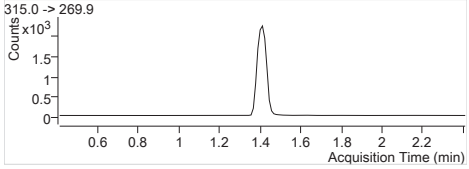
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**IB**	**Instrument**	LCMS04
Data File	WS#5393111_A_30.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low.m	**Position**	P2-A8
Acq. Date	2018/02/13 3:29:34 PM	**Injection Volume**	Per Method
Sample Annotation	-		

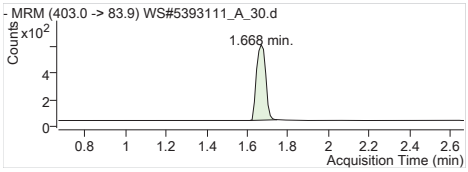
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	7088	1.41	1 µg/L		
MPFHxS	1757	1.67	1 µg/L		
MPFHpA	8347	1.68	1 µg/L		
MPFOA	9143	1.86	1 µg/L		
MPFOS	1974	1.97	1 µg/L		
MPFNA	9189	2.00	1 µg/L		
MPFDA	7835	2.12	1 µg/L		
MPFUnA	8533	2.22	1 µg/L		
MPFDoA	12094	2.31	1 µg/L		
MPFTeDA	13249	2.46	1 µg/L		
13C6-PFHxA IS	21391	1.41	1 µg/L		
13C9-PFDA IS	27144	2.12	1 µg/L		

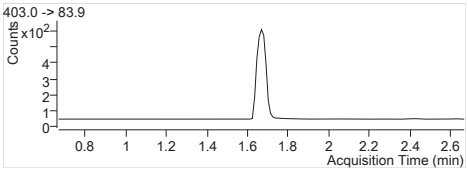
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1			-	ND	-
PFHxA 1			-	ND	-
PFHxS 1			-	ND	-
PFHpA 1			-	ND	-
PFOA 1			-	ND	-
PFOS 1			-	ND	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	7088	1.41	-	117.10 µg/L	-
18O2-PFHxS	1757	1.67	-	118.92 µg/L	-
13C4-PFHpA	8347	1.68	-	107.97 µg/L	-
13C4-PFOA	9143	1.86	-	111.40 µg/L	-
13C4-PFOS	1974	1.97	-	109.98 µg/L	-
13C5-PFNA	9188	2.00	-	116.08 µg/L	-
13C2-PFDA	7736	2.12	-	115.12 µg/L	-
13C2-PFUnA	8533	2.22	-	109.08 µg/L	-
13C2-PFDoA	12094	2.31	-	119.18 µg/L	-
13C2-PFTeDA	13408	2.46	-	115.11 µg/L	-
13C6-PFHxA	21391	1.41	-	2.20 µg/L	-
13C9-PFDA	27144	2.12	-	2.15 µg/L	-



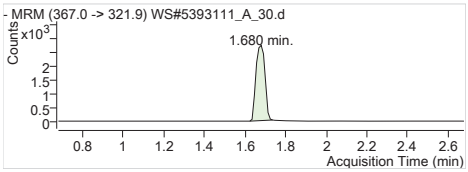


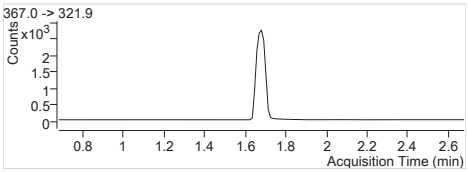
MPFHxA	Internal Standard
RT (Exp. RT):	1.411 (1.411)
Concentration:	1 µg/L
Sample type:	Sample



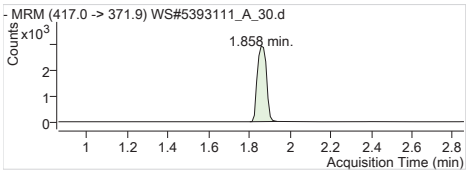


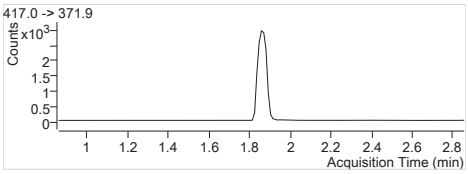
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: Sample



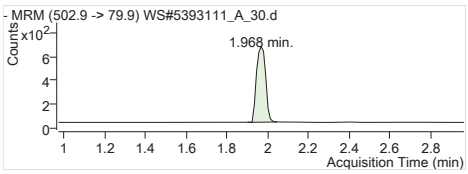


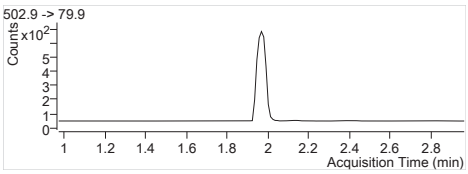
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: Sample



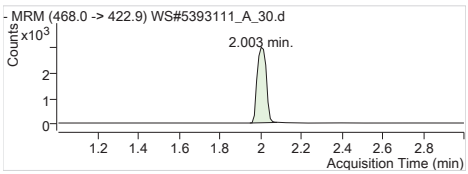


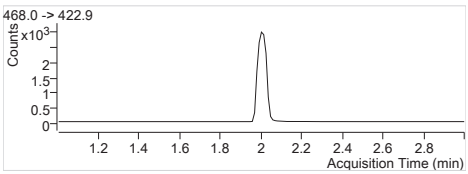
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: Sample



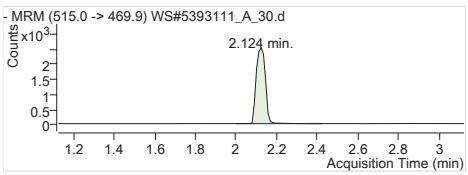


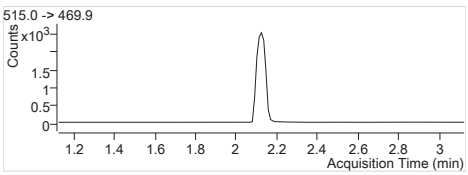
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: Sample



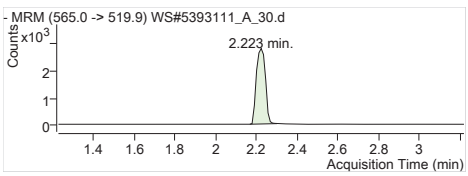


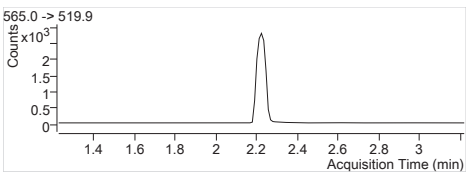
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: Sample



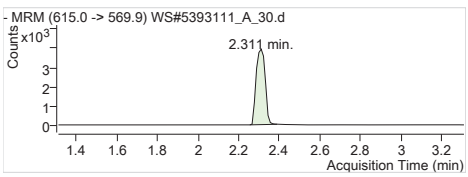


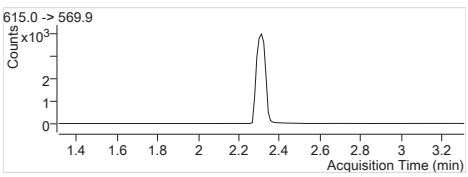
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Sample



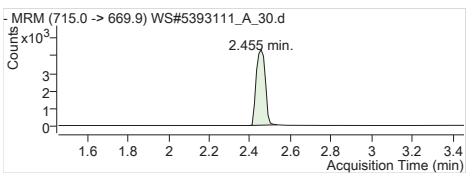


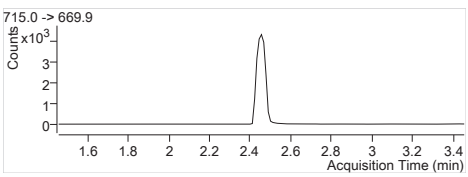
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: Sample



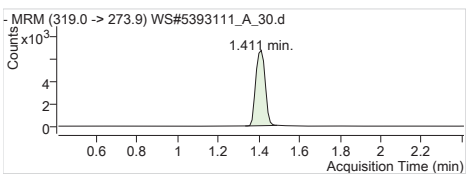


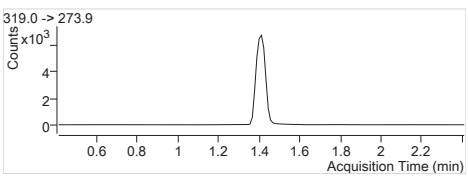
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: Sample



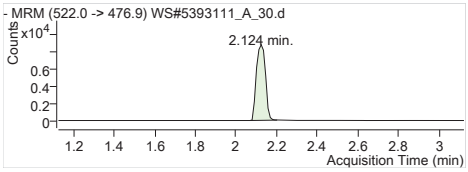


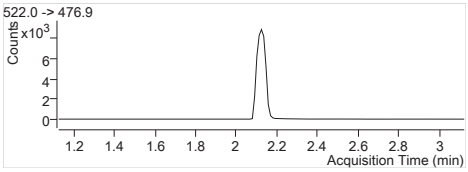
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: Sample



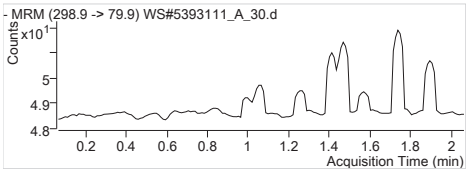


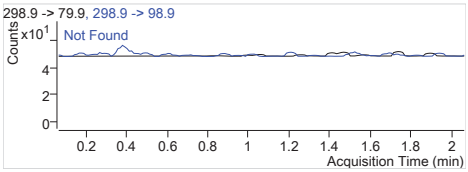
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Sample



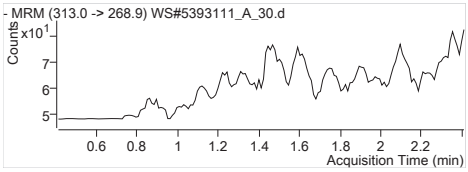


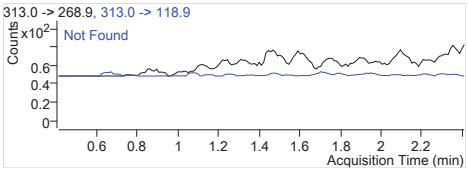
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Sample



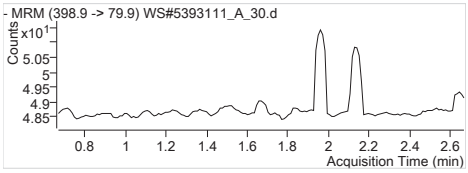


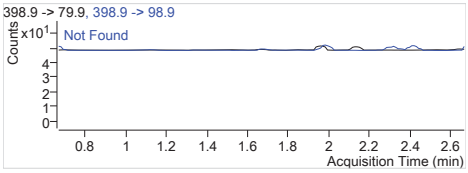
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.064)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



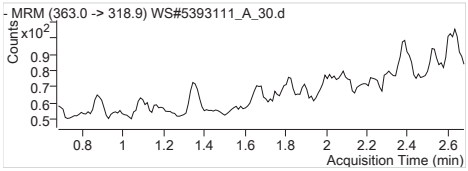


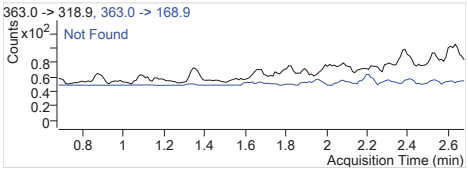
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.411)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



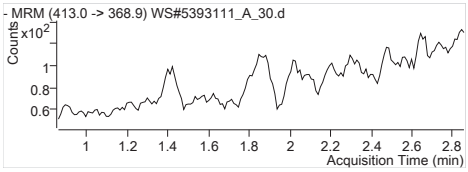


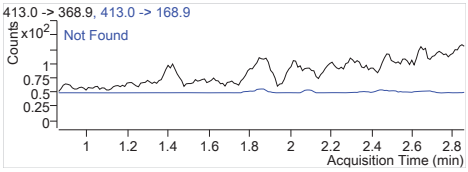
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.668)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



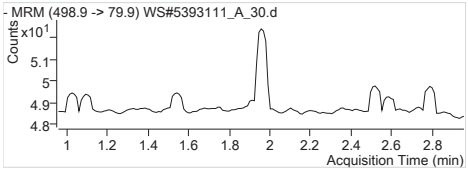


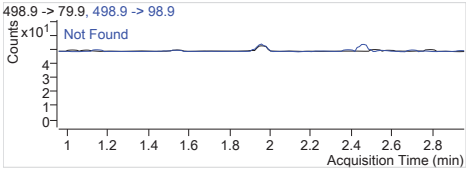
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.680)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



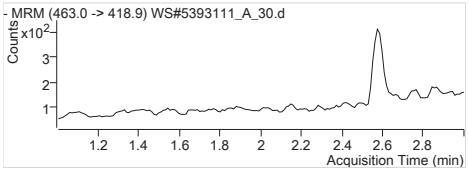


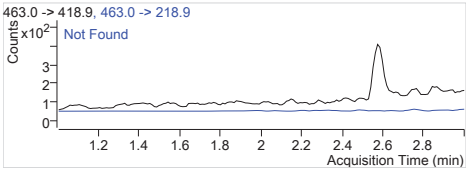
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.858)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



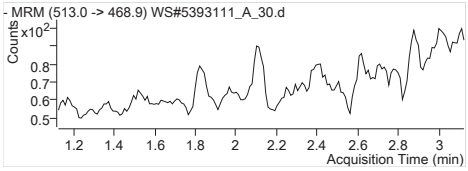


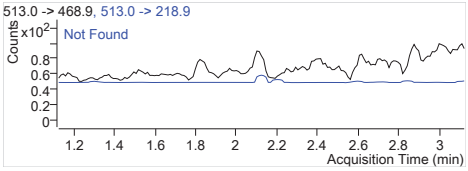
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.957)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



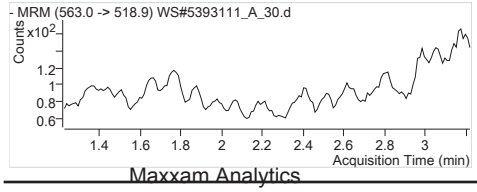


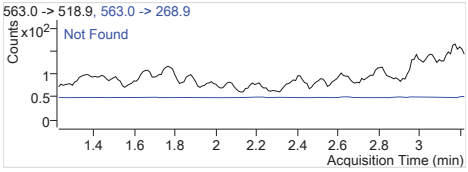
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.003)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



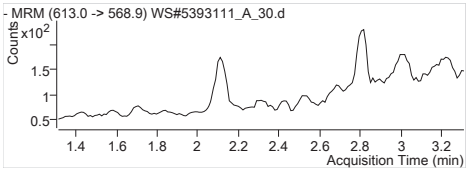


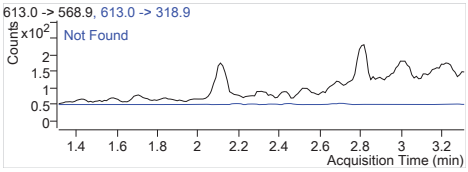
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.124)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



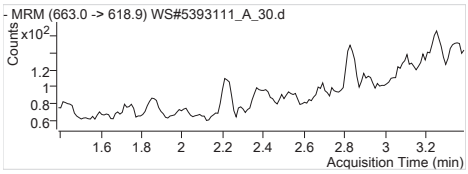


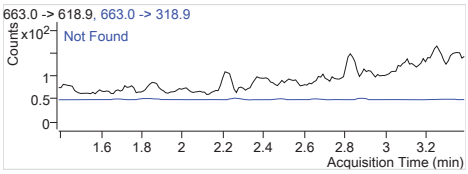
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.223)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



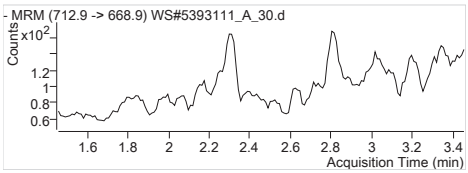


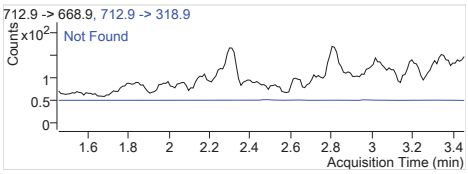
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.311)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



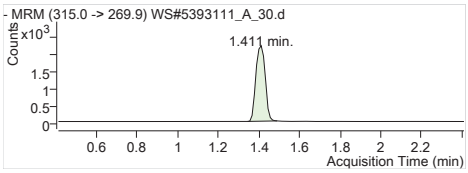


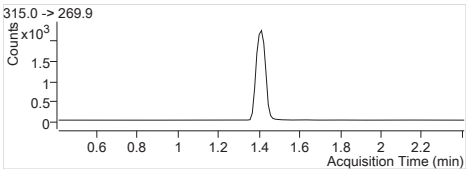
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.389)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



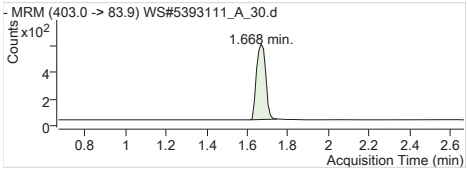


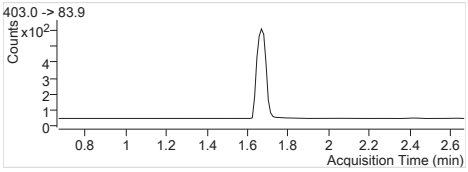
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.456)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



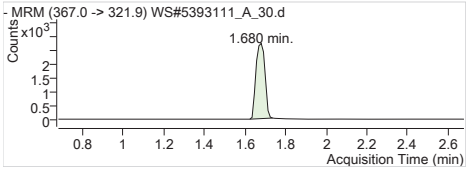


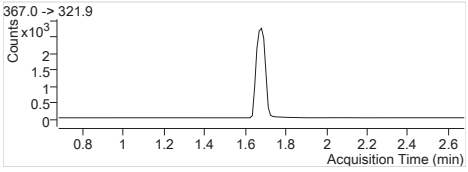
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 117.10 µg/L
Area ratio: 0.33135
Sample type: Sample



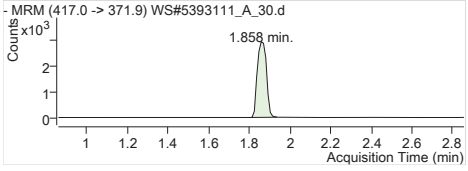


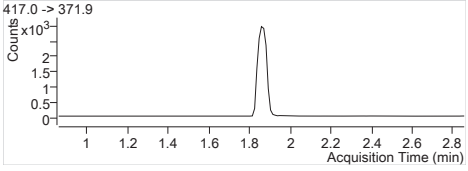
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 118.92 µg/L
Area ratio: 0.08214
Sample type: Sample



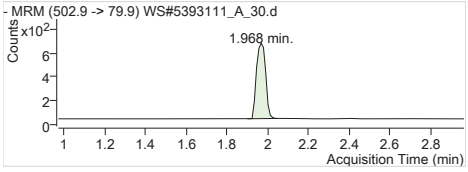


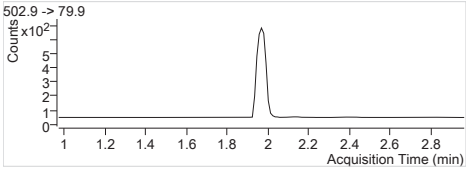
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 107.97 µg/L
Area ratio: 0.39021
Sample type: Sample



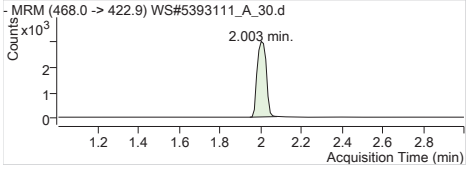


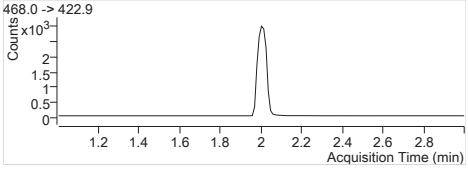
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 111.40 µg/L
Area ratio: 0.42742
Sample type: Sample



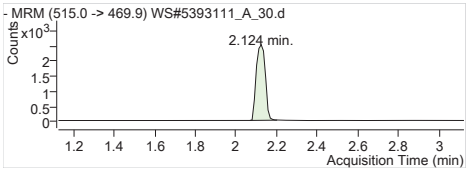


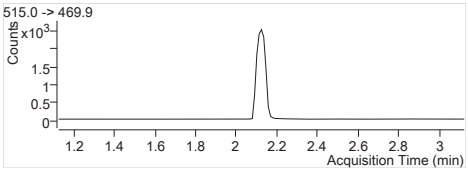
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 109.98 µg/L
Area ratio: 0.09228
Sample type: Sample



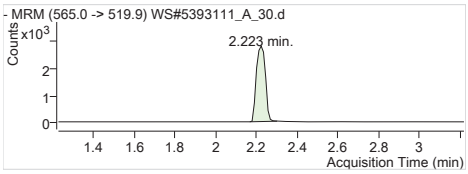


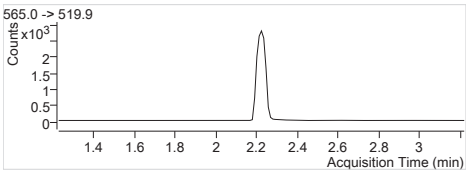
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 116.08 µg/L
Area ratio: 0.42953
Sample type: Sample



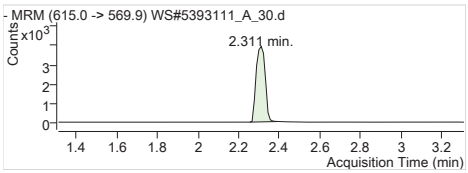


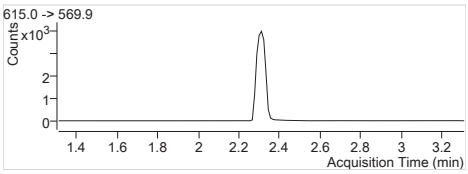
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 115.12 µg/L
Area ratio: 0.28500
Sample type: Sample



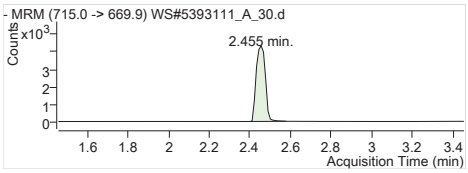


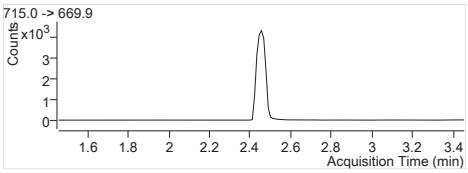
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 109.08 µg/L
Area ratio: 0.31436
Sample type: Sample



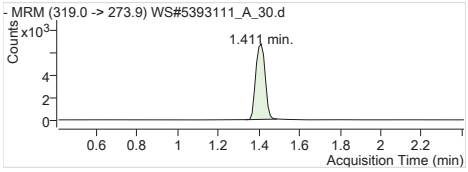


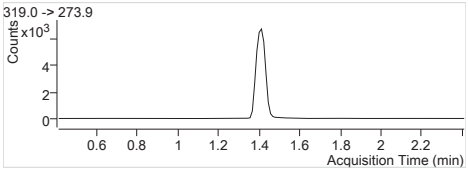
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 119.18 µg/L
Area ratio: 0.44555
Sample type: Sample



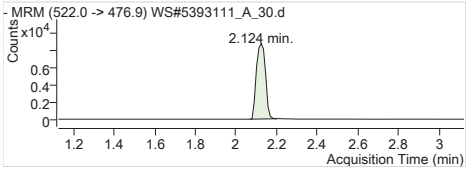


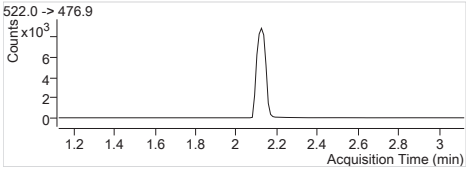
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 115.11 µg/L
Area ratio: 0.49396
Sample type: Sample





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 2.20 µg/L
Area ratio: 0
Sample type: Sample





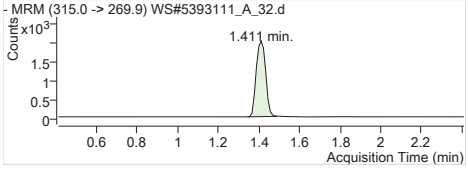
13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 2.15 µg/L
Area ratio: 0
Sample type: Sample

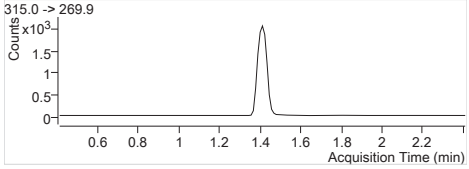
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**IB**	**Instrument**	LCMS04
Data File	WS#5393111_A_32.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low.m	**Position**	P2-A8
Acq. Date	2018/02/13 3:39:27 PM	**Injection Volume**	Per Method
Sample Annotation	-		

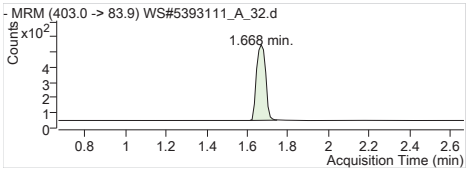
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6467	1.41	1 µg/L		
MPFHxS	1559	1.67	1 µg/L		
MPFHpA	8062	1.68	1 µg/L		
MPFOA	9317	1.86	1 µg/L		
MPFOS	2104	1.97	1 µg/L		
MPFNA	8780	2.00	1 µg/L		
MPFDA	7341	2.12	1 µg/L		
MPFUnA	8332	2.22	1 µg/L		
MPFDoA	11460	2.31	1 µg/L		
MPFTeDA	12833	2.46	1 µg/L		
13C6-PFHxA IS	20837	1.41	1 µg/L		
13C9-PFDA IS	26749	2.12	1 µg/L		

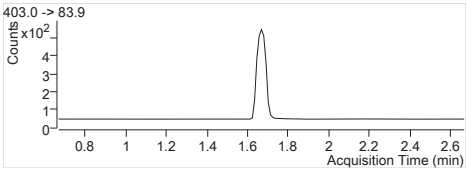
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1			-	ND	-
PFHxA 1			-	ND	-
PFHxS 1			-	ND	-
PFHpA 1			-	ND	-
PFOA 1			-	ND	-
PFOS 1			-	ND	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	6467	1.41	-	109.68 µg/L	-
18O2-PFHxS	1559	1.67	-	108.32 µg/L	-
13C4-PFHpA	8062	1.68	-	107.05 µg/L	-
13C4-PFOA	9317	1.86	-	116.54 µg/L	-
13C4-PFOS	2104	1.97	-	120.34 µg/L	-
13C5-PFNA	8781	2.00	-	113.88 µg/L	-
13C2-PFDA	7243	2.12	-	109.37 µg/L	-
13C2-PFUnA	8332	2.22	-	108.09 µg/L	-
13C2-PFDoA	11460	2.31	-	114.60 µg/L	-
13C2-PFTeDA	13151	2.46	-	114.57 µg/L	-
13C6-PFHxA	20837	1.41	-	2.14 µg/L	-
13C9-PFDA	26749	2.12	-	2.12 µg/L	-



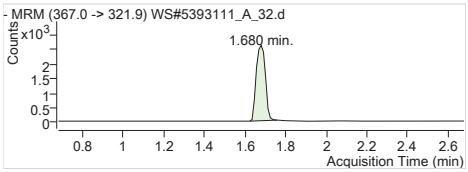


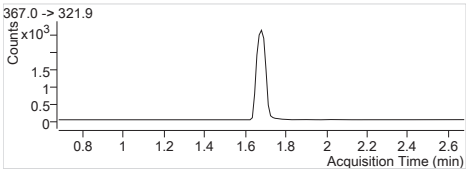
MPFHxA	Internal Standard
RT (Exp. RT):	1.411 (1.411)
Concentration:	1 µg/L
Sample type:	Sample



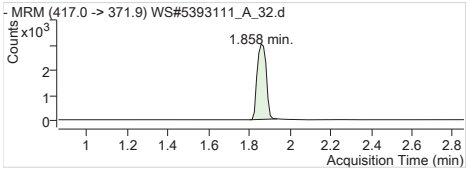


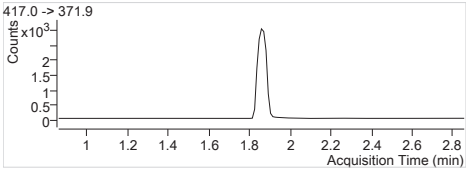
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: Sample



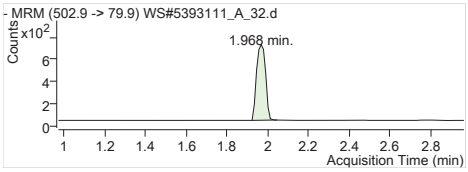


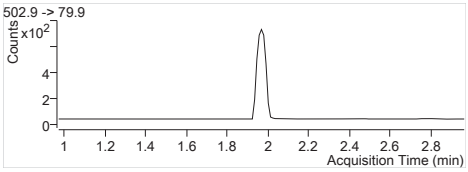
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: Sample



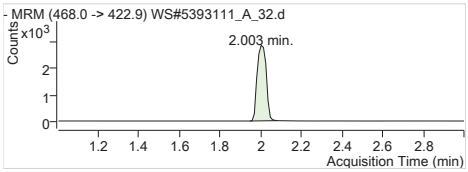


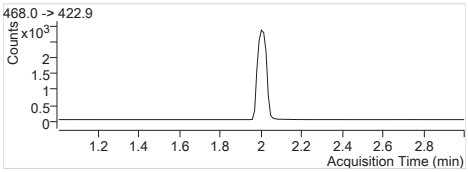
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: Sample



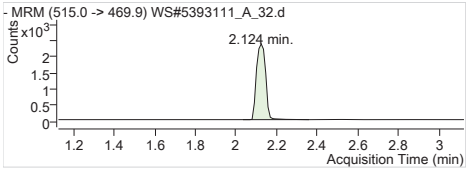


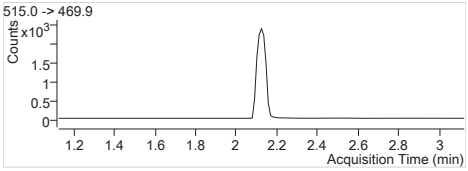
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: Sample



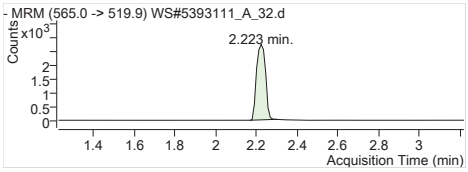


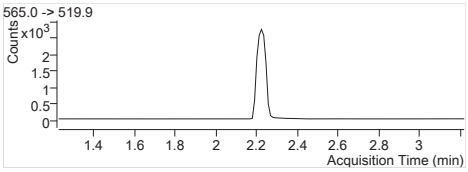
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: Sample



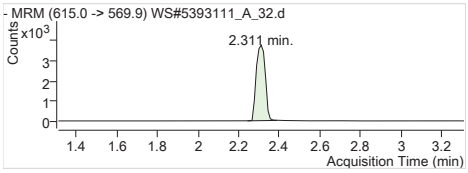


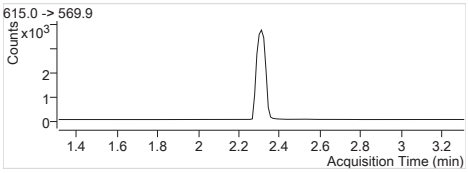
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Sample



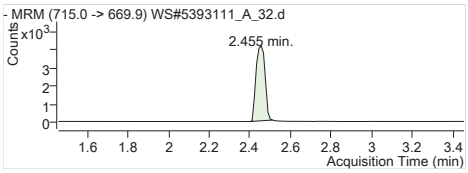


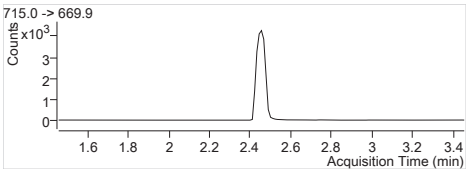
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: Sample



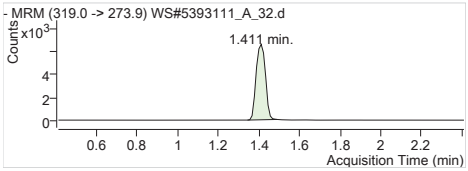


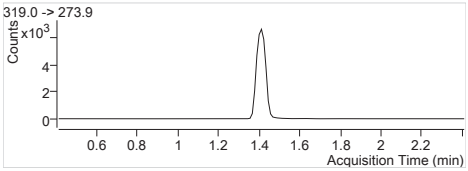
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: Sample



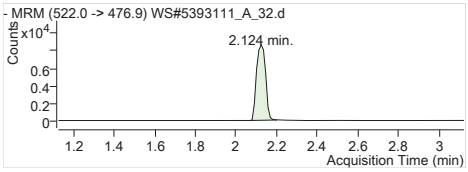


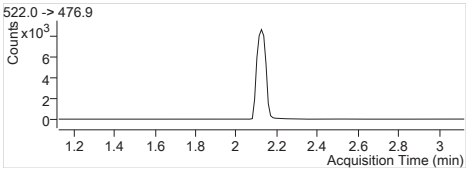
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: Sample



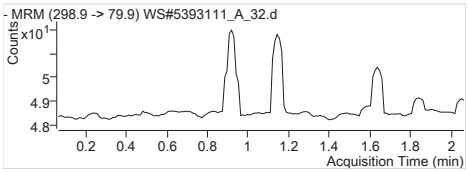


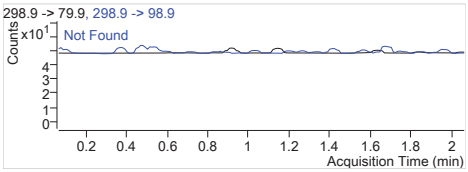
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Sample



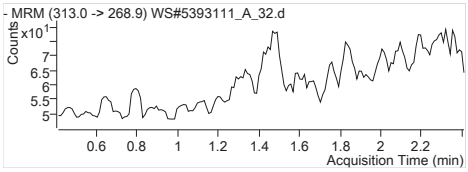


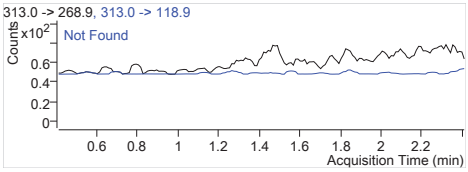
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Sample



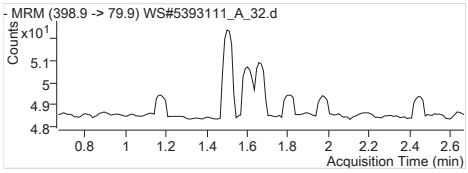


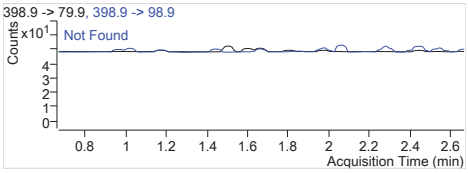
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.064)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



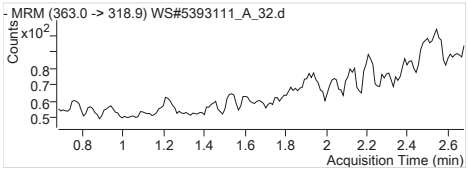


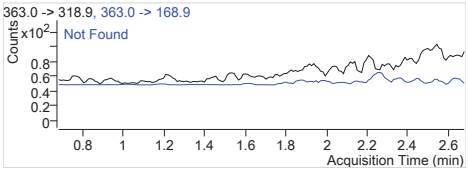
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.411)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



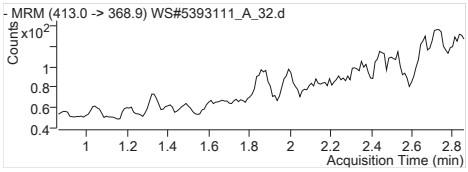


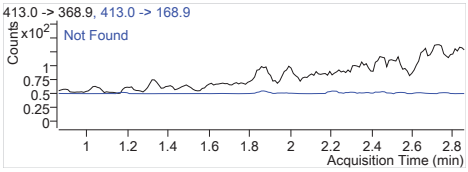
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.668)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



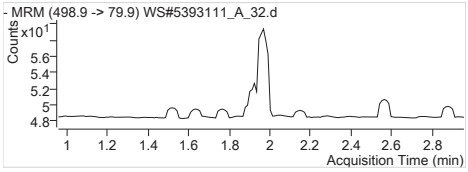


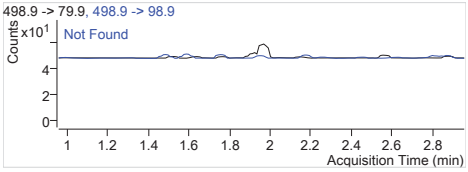
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.680)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



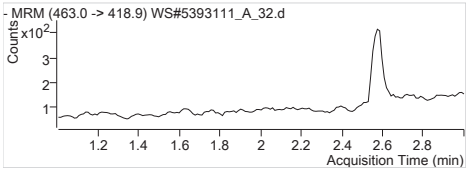


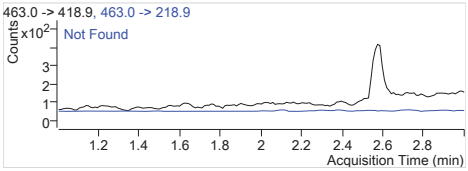
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.858)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



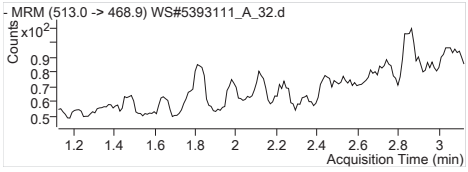


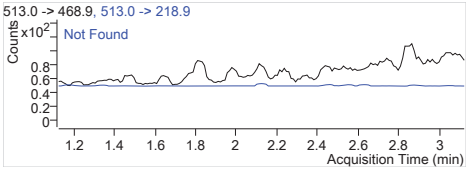
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.957)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



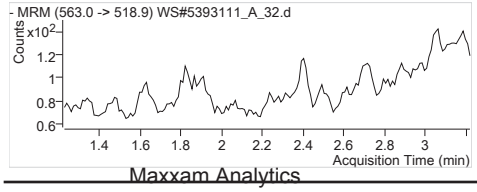


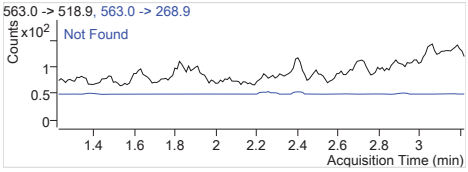
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.003)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



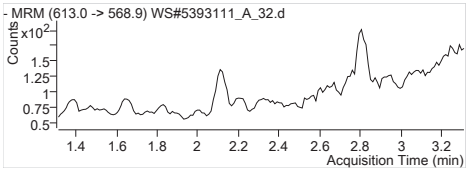


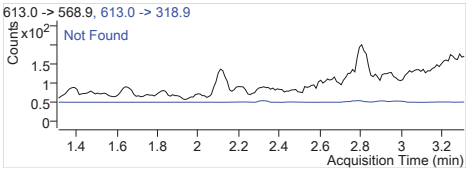
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.124)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



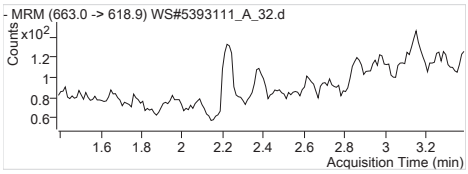


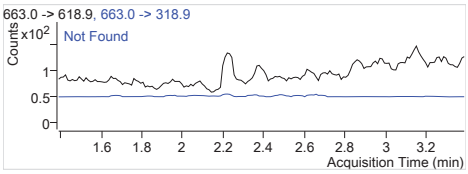
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.223)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



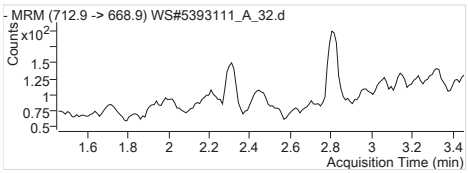


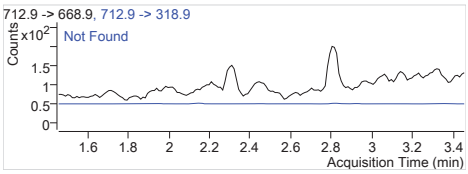
PFDoA 1	613.0 -> 568.9
RT (Exp. RT):	0.000 (2.311)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample



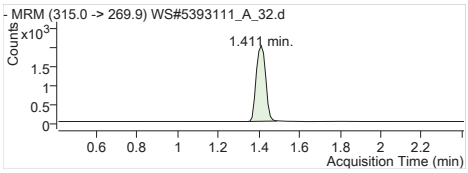


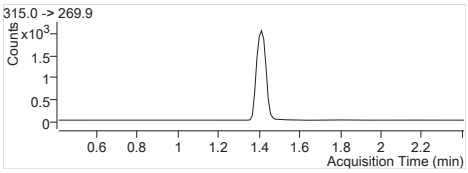
PFTrDA 1	663.0 -> 618.9
RT (Exp. RT):	0.000 (2.389)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample



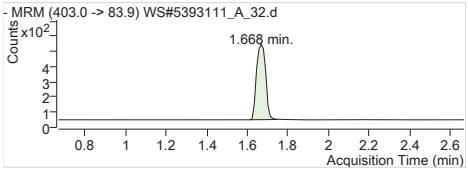


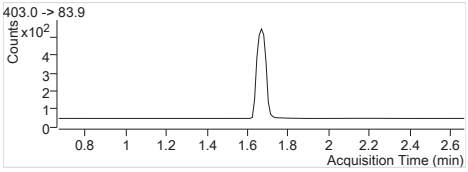
PFTeDA 1	712.9 -> 668.9
RT (Exp. RT):	0.000 (2.456)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample



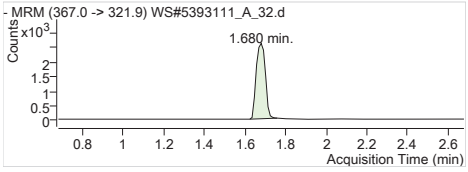


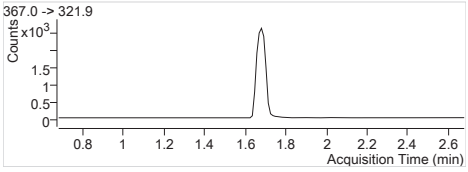
13C2-PFHxA	315.0 -> 269.9
RT (Exp. RT):	1.411 (1.411)
Calc. conc.	109.68 µg/L
Area ratio:	0.31036
Sample type:	Sample



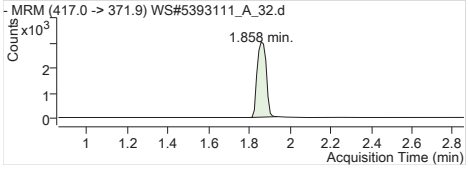


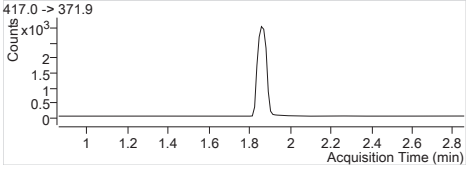
18O2-PFHxS	403.0 -> 83.9
RT (Exp. RT):	1.668 (1.668)
Calc. conc.	108.32 µg/L
Area ratio:	0.07482
Sample type:	Sample



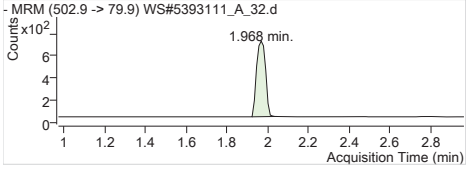


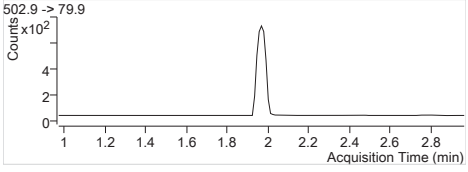
13C4-PFHpA	367.0 -> 321.9
RT (Exp. RT):	1.680 (1.680)
Calc. conc.	107.05 µg/L
Area ratio:	0.38691
Sample type:	Sample



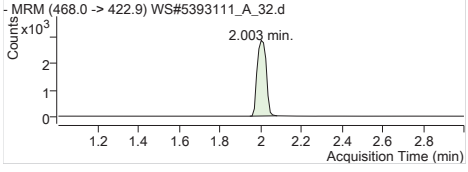


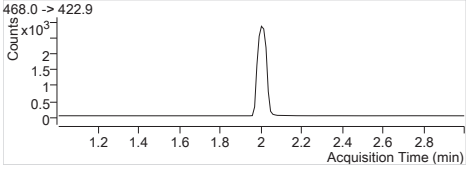
13C4-PFOA	417.0 -> 371.9
RT (Exp. RT):	1.858 (1.858)
Calc. conc.	116.54 µg/L
Area ratio:	0.44714
Sample type:	Sample



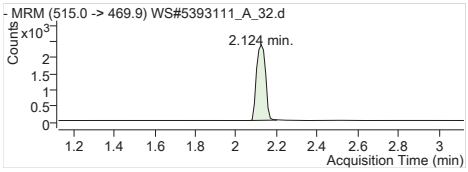


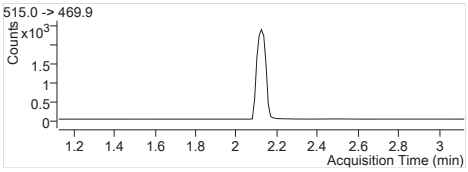
13C4-PFOS	502.9 -> 79.9
RT (Exp. RT):	1.968 (1.968)
Calc. conc.	120.34 µg/L
Area ratio:	0.10097
Sample type:	Sample



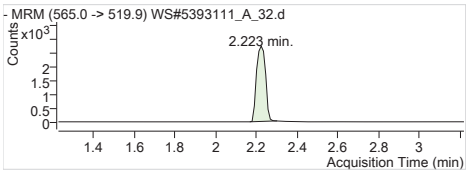


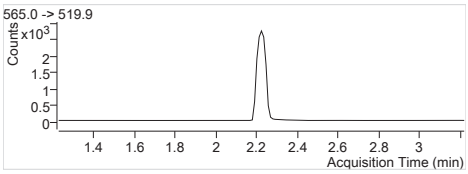
13C5-PFNA	468.0 -> 422.9
RT (Exp. RT):	2.003 (2.003)
Calc. conc.	113.88 µg/L
Area ratio:	0.42141
Sample type:	Sample



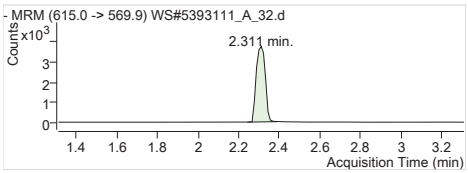


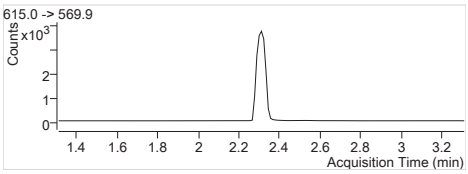
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 109.37 µg/L
Area ratio: 0.27078
Sample type: Sample



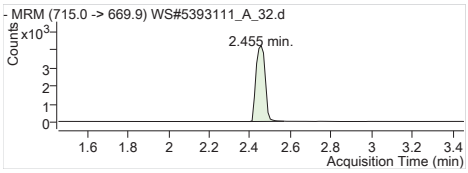


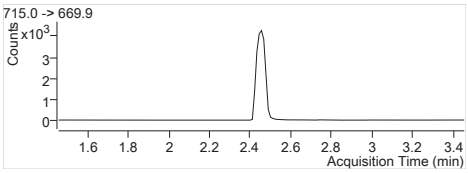
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 108.09 µg/L
Area ratio: 0.31149
Sample type: Sample



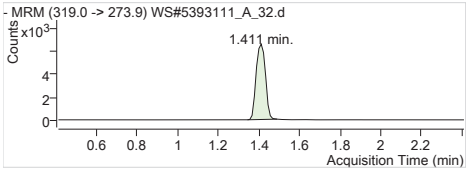


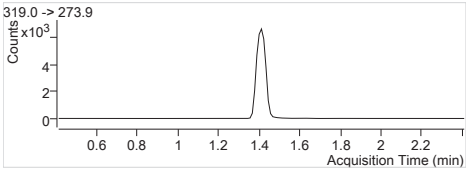
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 114.60 µg/L
Area ratio: 0.42843
Sample type: Sample



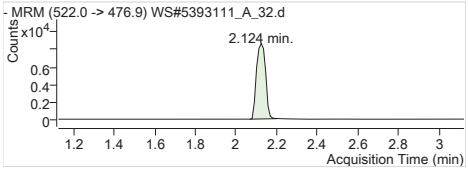


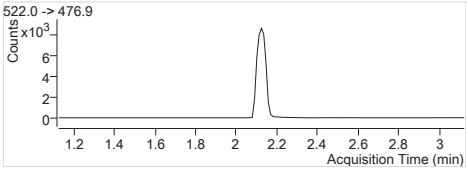
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 114.57 µg/L
Area ratio: 0.49164
Sample type: Sample





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 2.14 µg/L
Area ratio: 0
Sample type: Sample





13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 2.12 µg/L
Area ratio: 0
Sample type: Sample

Quantitation Results

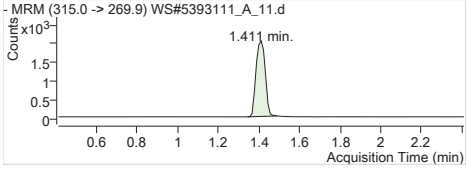
Agilent Technologies

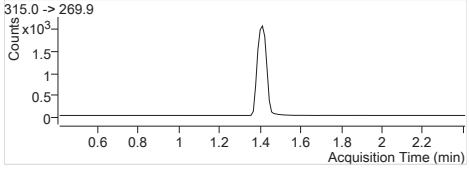
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**5393111:BLANK**	**Instrument**	LCMS04
Data File	WS#5393111_A_11.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low.m	**Position**	P2-B1
Acq. Date	2018/02/13 1:55:50 PM	**Injection Volume**	Per Method
Sample Annotation	-		

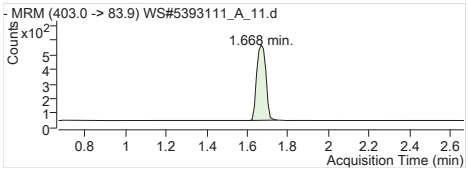
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6346	1.41	1 µg/L		
MPFHxS	1630	1.67	1 µg/L		
MPFHpA	8070	1.68	1 µg/L		
MPFOA	8608	1.86	1 µg/L		
MPFOS	1980	1.97	1 µg/L		
MPFNA	8715	2.00	1 µg/L		
MPFDA	6971	2.12	1 µg/L		
MPFUnA	7483	2.22	1 µg/L		
MPFDoA	9682	2.31	1 µg/L		
MPFTeDA	11221	2.46	1 µg/L		
13C6-PFHxA IS	27425	1.41	1 µg/L		
13C9-PFDA IS	36016	2.12	1 µg/L		

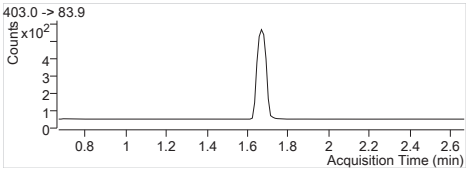
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1			-	ND	-
PFHxA 1			-	ND	-
PFHxS 1			-	ND	-
PFHpA 1			-	ND	-
PFOA 1			-	ND	-
PFOS 1			-	ND	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	6346	1.41	-	81.78 µg/L	-
18O2-PFHxS	1630	1.67	-	86.05 µg/L	-
13C4-PFHpA	8070	1.68	-	81.42 µg/L	-
13C4-PFOA	8608	1.86	-	81.81 µg/L	-
13C4-PFOS	1980	1.97	-	86.05 µg/L	-
13C5-PFNA	8716	2.00	-	85.89 µg/L	-
13C2-PFDA	6895	2.12	-	77.33 µg/L	-
13C2-PFUnA	7483	2.22	-	72.10 µg/L	-
13C2-PFDoA	9682	2.31	-	71.91 µg/L	-
13C2-PFTeDA	11227	2.46	-	72.64 µg/L	-
13C6-PFHxA	27425	1.41	-	2.82 µg/L	-
13C9-PFDA	36016	2.12	-	2.86 µg/L	-



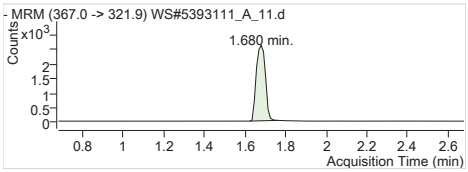


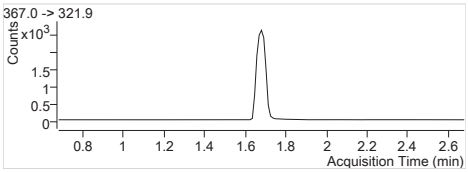
MPFHxA	Internal Standard
RT (Exp. RT):	1.411 (1.411)
Concentration:	1 µg/L
Sample type:	Sample



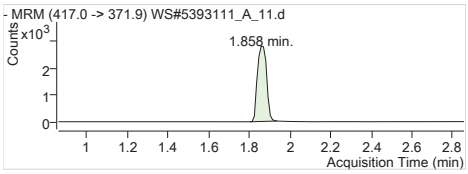


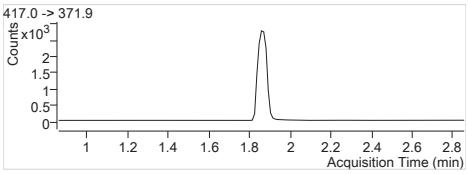
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: Sample



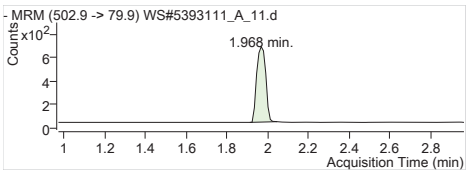


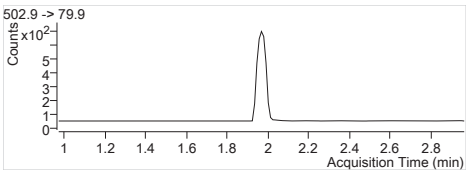
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: Sample



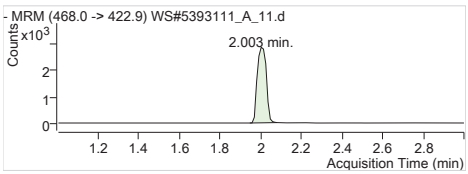


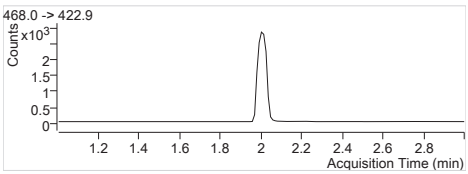
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: Sample



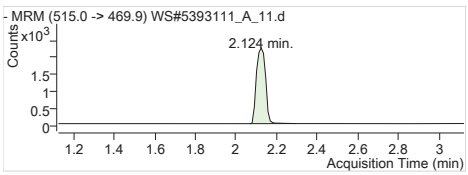


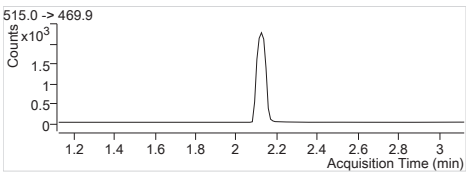
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: Sample



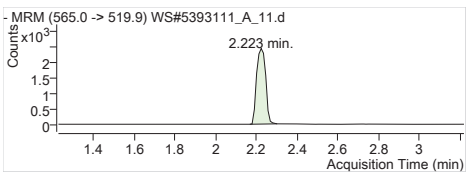


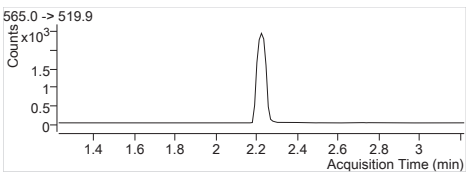
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: Sample



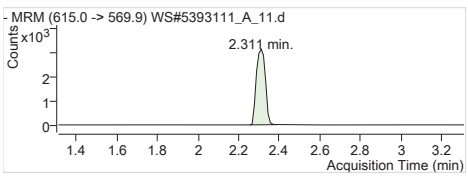


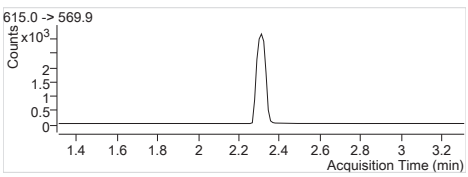
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Sample



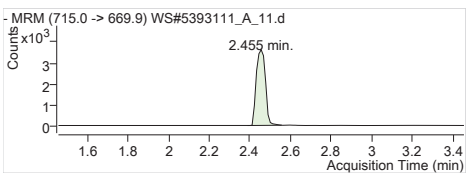


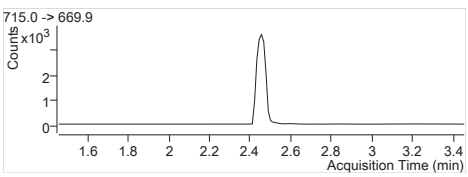
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: Sample



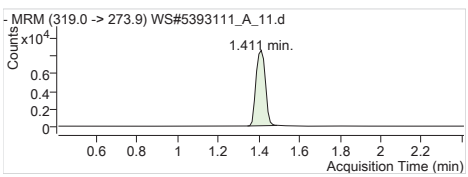


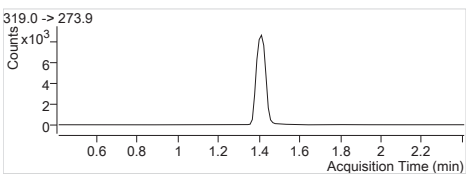
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: Sample



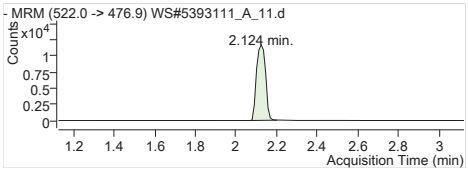


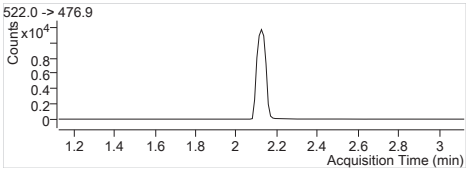
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: Sample



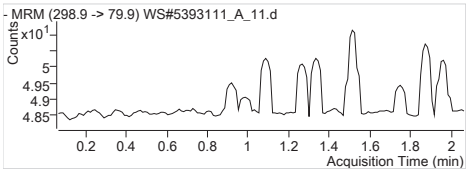


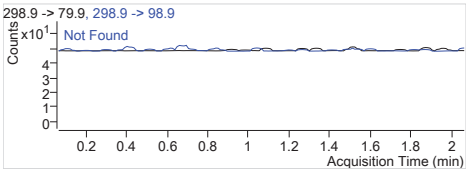
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Sample



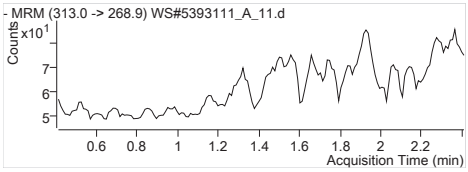


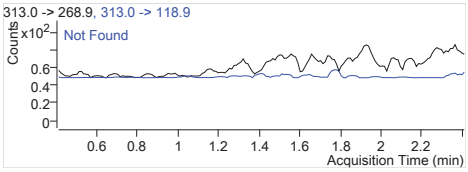
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Sample



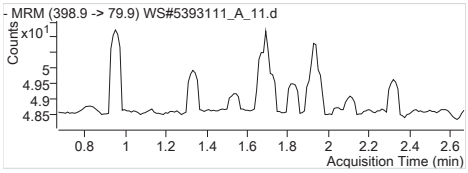


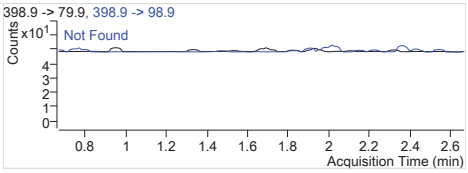
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 0.000 (1.064)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



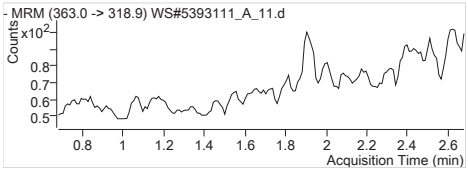


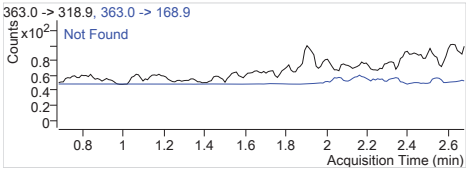
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 0.000 (1.411)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



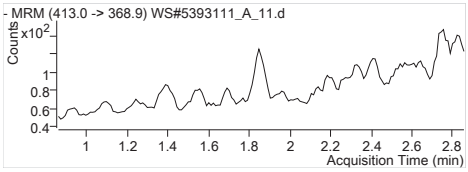


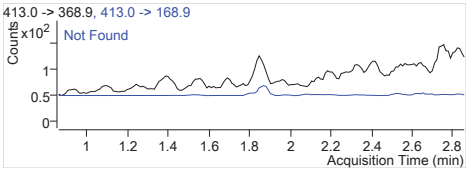
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 0.000 (1.668)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



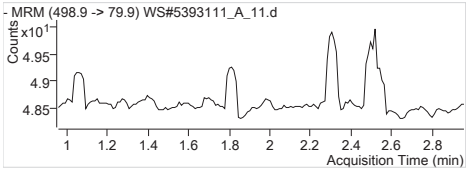


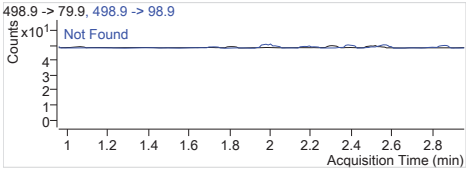
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 0.000 (1.680)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



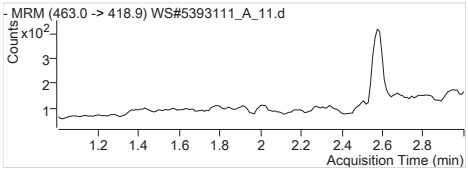


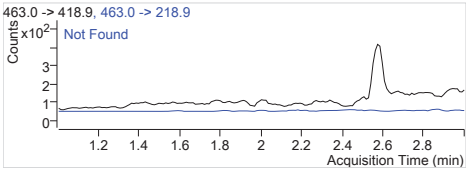
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 0.000 (1.858)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



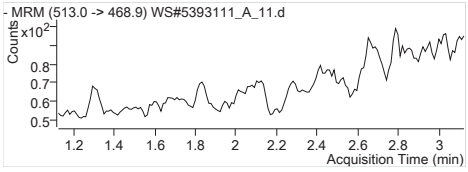


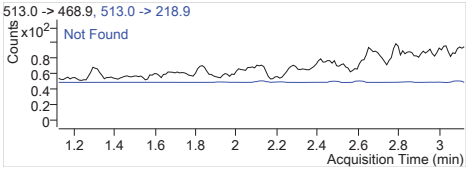
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 0.000 (1.957)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



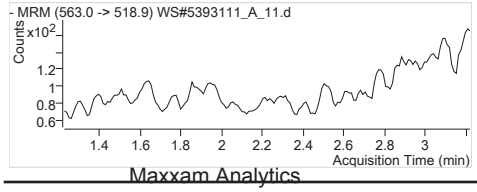


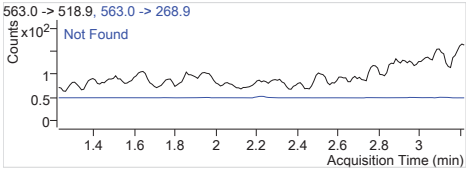
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.003)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



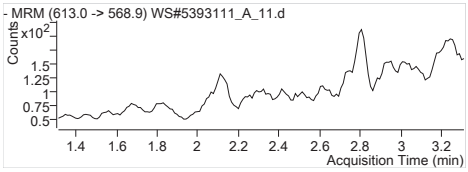


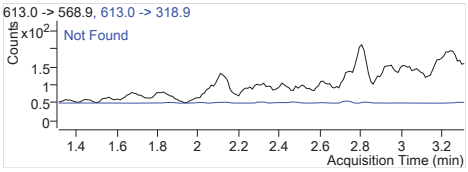
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.124)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



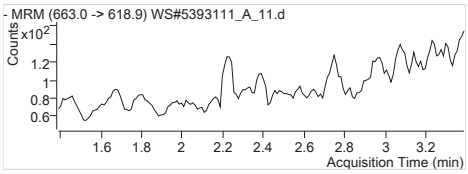


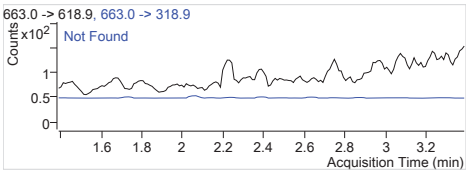
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.223)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



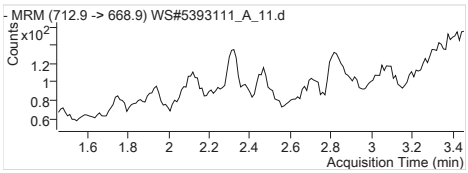


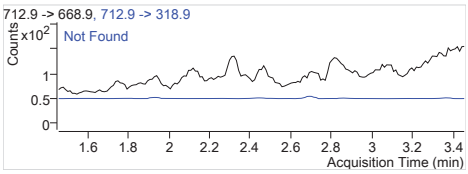
PFDoA 1	613.0 -> 568.9
RT (Exp. RT):	0.000 (2.311)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample



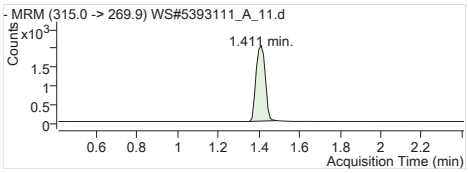


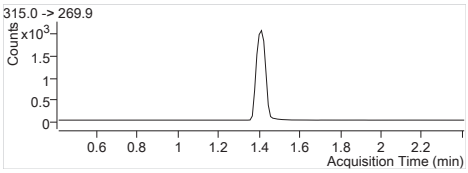
PFTrDA 1	663.0 -> 618.9
RT (Exp. RT):	0.000 (2.389)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample



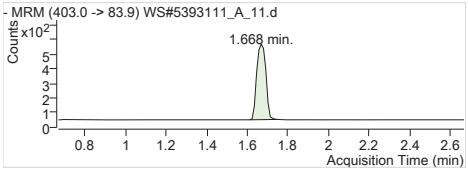


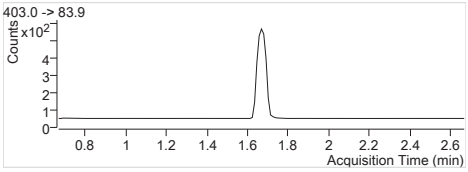
PFTeDA 1	712.9 -> 668.9
RT (Exp. RT):	0.000 (2.456)
Calc. conc.	N.D.
Area ratio:	0
Sample type:	Sample



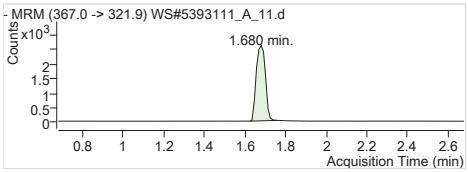


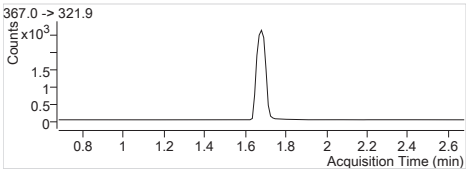
13C2-PFHxA	315.0 -> 269.9
RT (Exp. RT):	1.411 (1.411)
Calc. conc.	81.78 µg/L
Area ratio:	0.23139
Sample type:	Sample



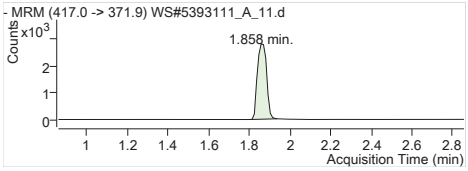


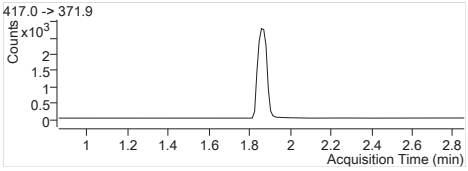
18O2-PFHxS	403.0 -> 83.9
RT (Exp. RT):	1.668 (1.668)
Calc. conc.	86.05 µg/L
Area ratio:	0.05943
Sample type:	Sample



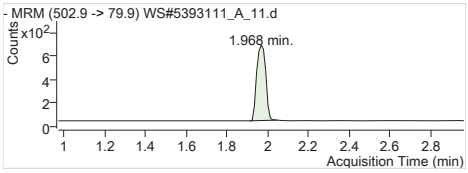


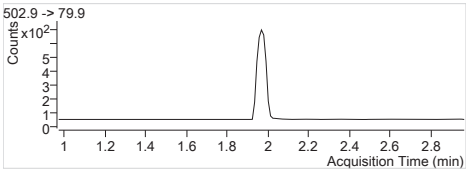
13C4-PFHpA	367.0 -> 321.9
RT (Exp. RT):	1.680 (1.680)
Calc. conc.	81.42 µg/L
Area ratio:	0.29426
Sample type:	Sample



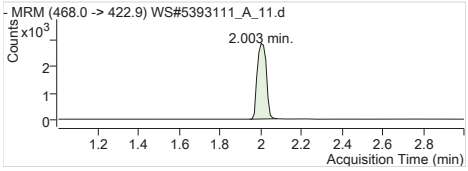


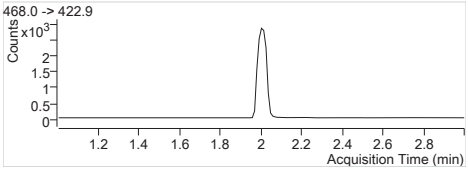
13C4-PFOA	417.0 -> 371.9
RT (Exp. RT):	1.858 (1.858)
Calc. conc.	81.81 µg/L
Area ratio:	0.31387
Sample type:	Sample



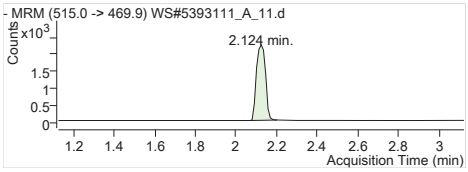


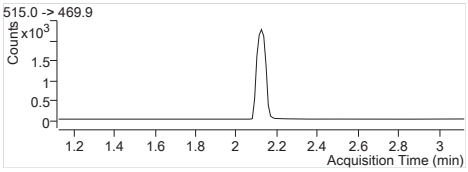
13C4-PFOS	502.9 -> 79.9
RT (Exp. RT):	1.968 (1.968)
Calc. conc.	86.05 µg/L
Area ratio:	0.07220
Sample type:	Sample



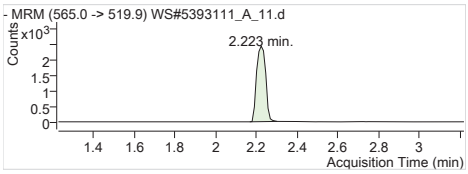


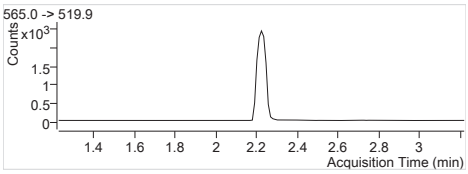
13C5-PFNA	468.0 -> 422.9
RT (Exp. RT):	2.003 (2.003)
Calc. conc.	85.89 µg/L
Area ratio:	0.31781
Sample type:	Sample



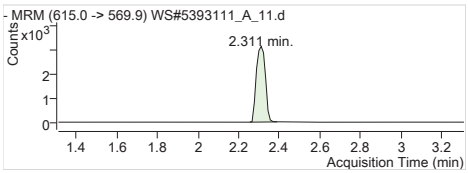


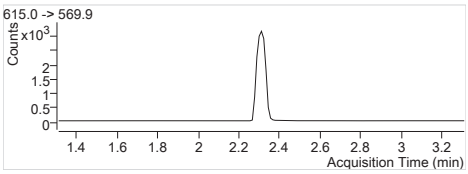
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 77.33 µg/L
Area ratio: 0.19144
Sample type: Sample



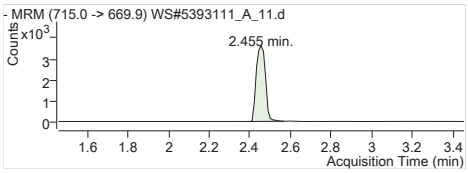


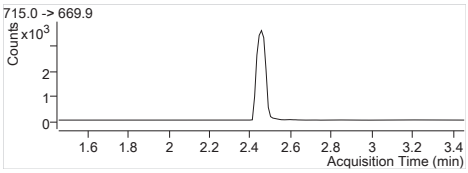
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 72.10 µg/L
Area ratio: 0.20777
Sample type: Sample



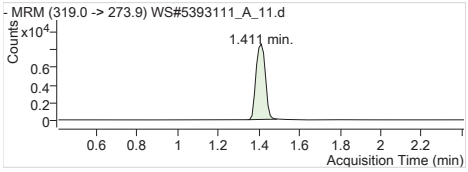


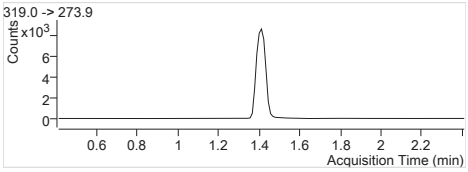
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 71.91 µg/L
Area ratio: 0.26882
Sample type: Sample



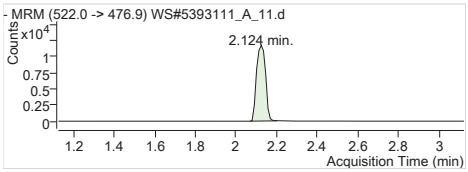


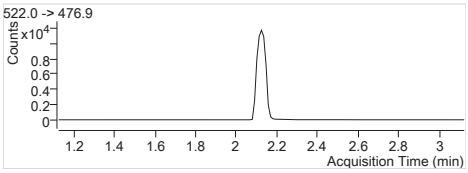
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 72.64 µg/L
Area ratio: 0.31172
Sample type: Sample





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 2.82 µg/L
Area ratio: 0
Sample type: Sample





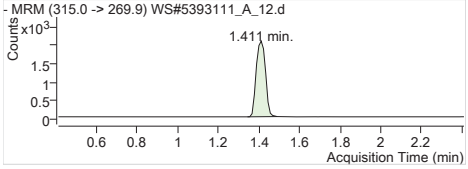
13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 2.86 µg/L
Area ratio: 0
Sample type: Sample

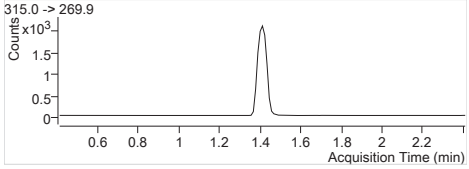
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**5393111:SPIKE**	**Instrument**	LCMS04
Data File	WS#5393111_A_12.d	**Operator**	
Sample Type	QC	**Dilution**	0.024
Acq. Method	PFC_Water_Low.m	**Position**	P2-B2
Acq. Date	2018/02/13 2:00:46 PM	**Injection Volume**	Per Method
Sample Annotation	-		

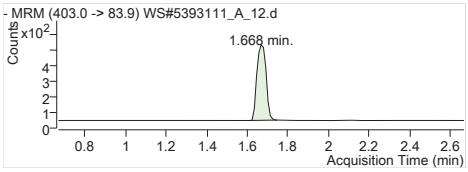
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6562	1.41	1 µg/L		
MPFHxS	1518	1.67	1 µg/L		
MPFHpA	8414	1.68	1 µg/L		
MPFOA	9269	1.86	1 µg/L		
MPFOS	2028	1.97	1 µg/L		
MPFNA	9204	2.00	1 µg/L		
MPFDA	6683	2.12	1 µg/L		
MPFUnA	7993	2.22	1 µg/L		
MPFDoA	10099	2.31	1 µg/L		
MPFTeDA	11318	2.46	1 µg/L		
13C6-PFHxA IS	26060	1.41	1 µg/L		
13C9-PFDA IS	34077	2.12	1 µg/L		

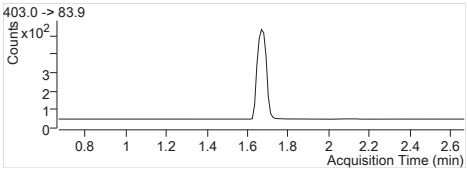
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	17847	1.06	20.80	0.54 µg/L	107.18
PFHxA 1	61071	1.41	20.80	0.51 µg/L	101.61
PFHxS 1	16581	1.67	20.80	0.51 µg/L	102.73
PFHpA 1	75897	1.68	20.80	0.51 µg/L	101.98
PFOA 1	86395	1.86	20.80	0.49 µg/L	98.37
PFOS 1	16258	1.96	20.80	0.49 µg/L	97.71
PFNA 1	75448	2.00	20.80	0.47 µg/L	94.74
PFDA 1	79145	2.12	20.80	0.58 µg/L	115.53
PFUnA 1	83128	2.22	20.80	0.54 µg/L	108.00
PFDoA 1	93833	2.31	20.80	0.48 µg/L	96.01
PFTrDA 1	105648	2.39	20.80	0.50 µg/L	99.95
PFTeDA 1	88445	2.46	20.80	0.51 µg/L	102.36
13C2-PFHxA	6562	1.41	100.00	88.99 µg/L	88.99
18O2-PFHxS	1518	1.67	100.00	84.34 µg/L	84.34
13C4-PFHpA	8414	1.68	100.00	89.33 µg/L	89.33
13C4-PFOA	9269	1.86	100.00	92.70 µg/L	92.70
13C4-PFOS	2028	1.97	100.00	92.75 µg/L	92.75
13C5-PFNA	9204	2.00	100.00	95.45 µg/L	95.45
13C2-PFDA	6673	2.12	100.00	79.10 µg/L	79.10
13C2-PFUnA	7993	2.22	100.00	81.39 µg/L	81.39
13C2-PFDoA	10099	2.31	100.00	79.28 µg/L	79.28
13C2-PFTeDA	11402	2.46	100.00	77.97 µg/L	77.97
13C6-PFHxA	26060	1.41	100.00	2.68 µg/L	111.59
13C9-PFDA	34077	2.12	100.00	2.70 µg/L	112.67



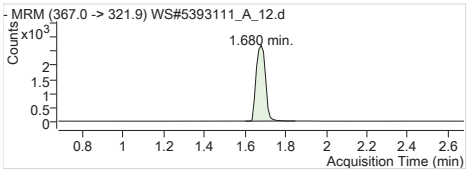


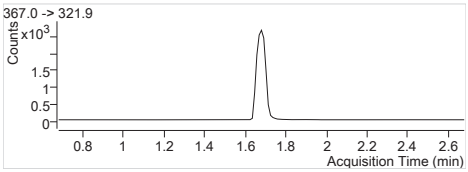
MPFHxA	Internal Standard
RT (Exp. RT):	1.411 (1.411)
Concentration:	1 µg/L
Sample type:	QC



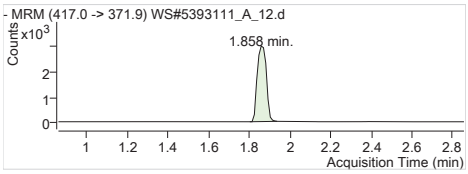


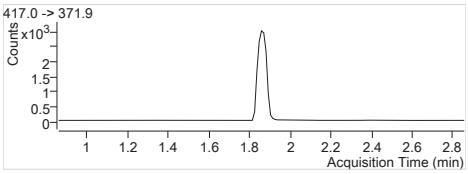
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: QC



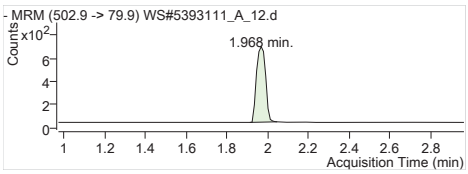


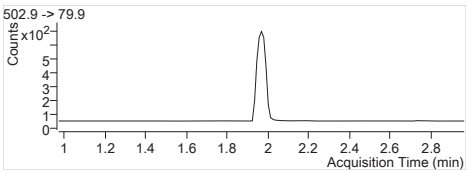
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: QC



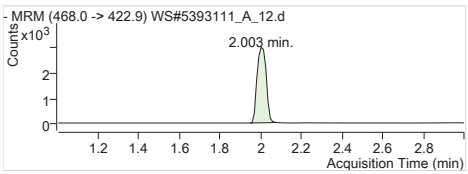


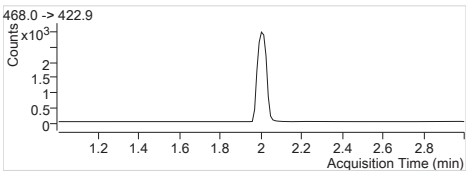
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: QC



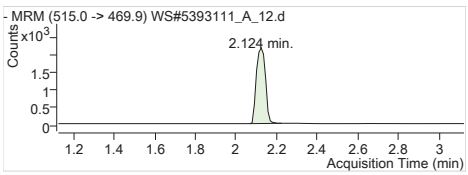


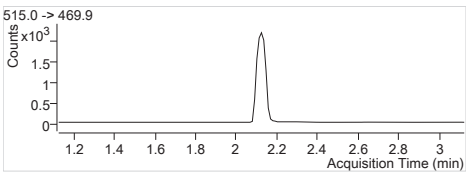
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: QC



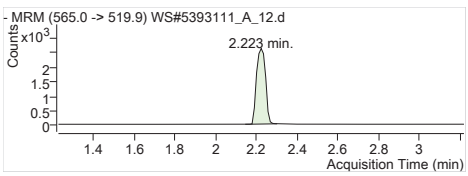


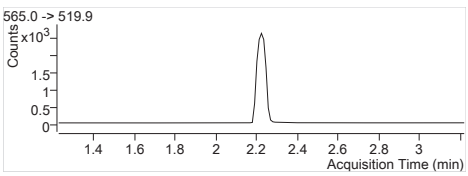
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: QC



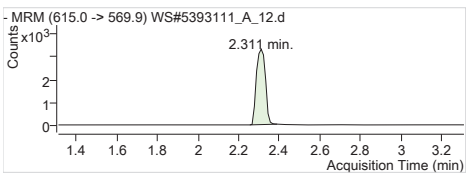


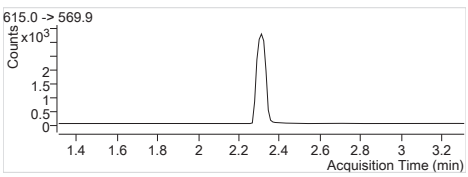
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: QC



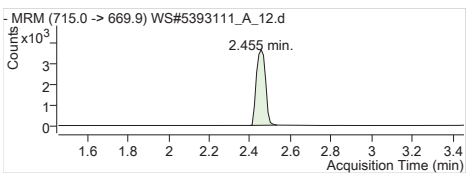


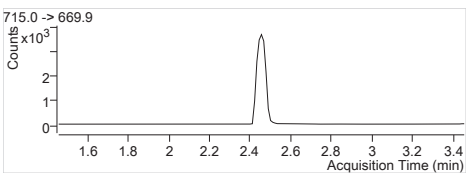
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: QC



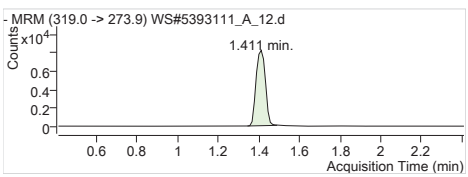


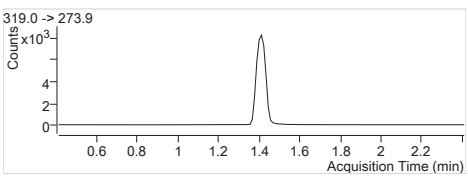
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: QC



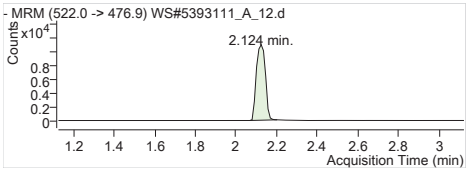


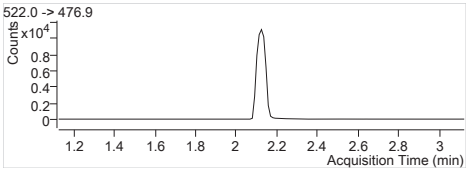
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: QC



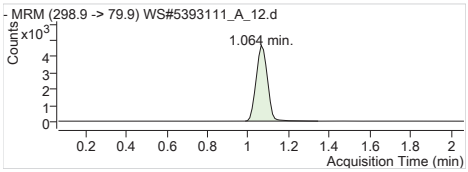


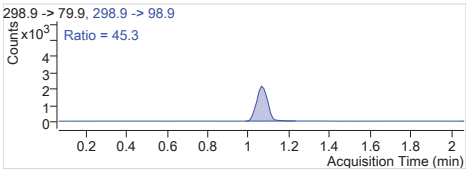
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: QC



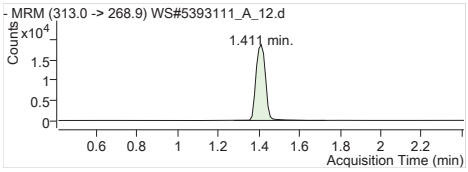


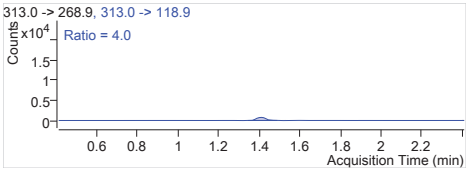
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: QC



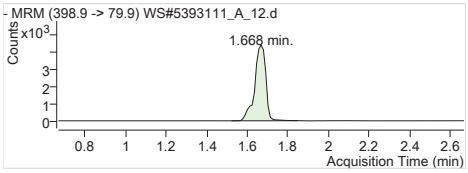


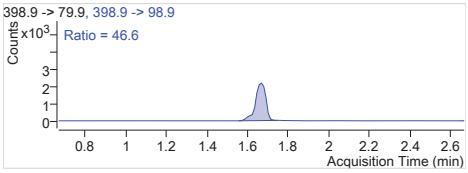
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.064 (1.064)
Calc. conc. 0.54 µg/L
Area ratio: 11.75692
Sample type: QC



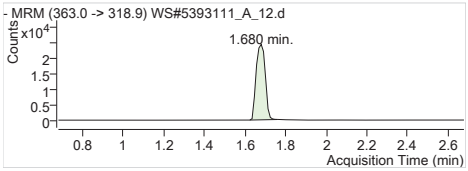


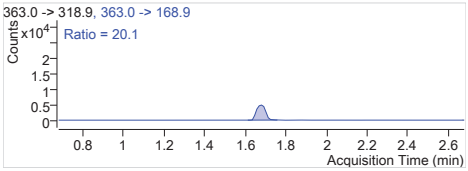
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 0.51 µg/L
Area ratio: 9.30677
Sample type: QC



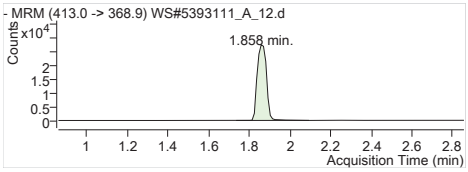


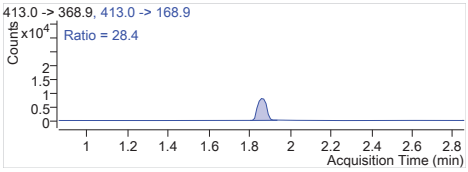
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 0.51 µg/L
Area ratio: 10.92292
Sample type: QC



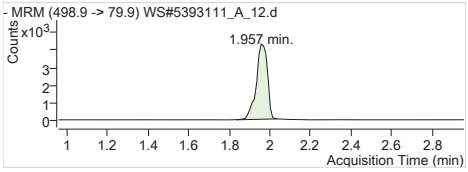


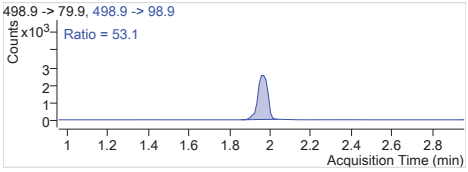
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 0.51 µg/L
Area ratio: 9.02032
Sample type: QC



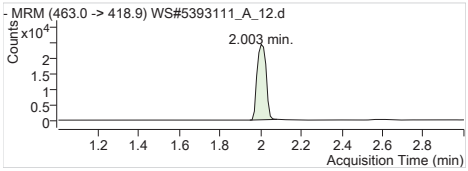


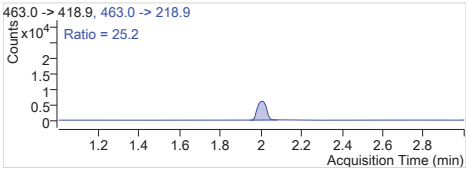
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 0.49 µg/L
Area ratio: 9.32085
Sample type: QC



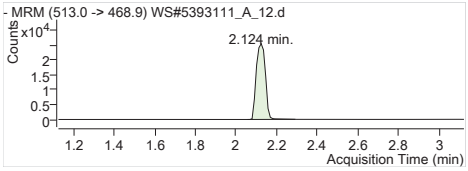


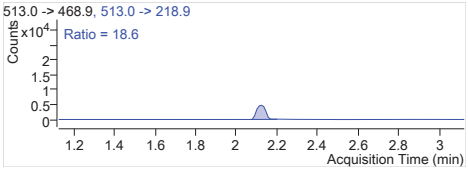
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.957 (1.957)
Calc. conc. 0.49 µg/L
Area ratio: 8.01677
Sample type: QC



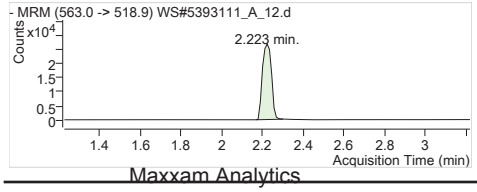


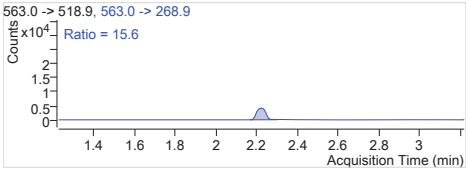
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 0.47 µg/L
Area ratio: 8.19731
Sample type: QC



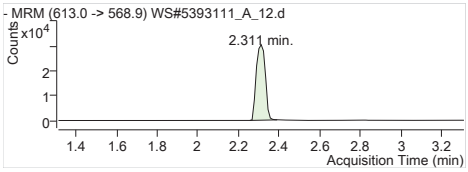


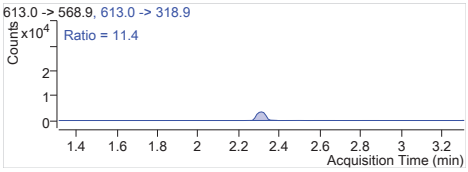
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 0.58 µg/L
Area ratio: 11.84274
Sample type: QC



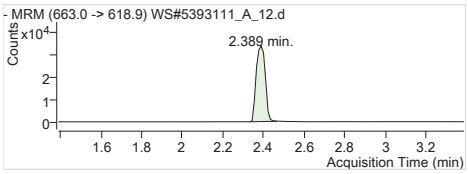


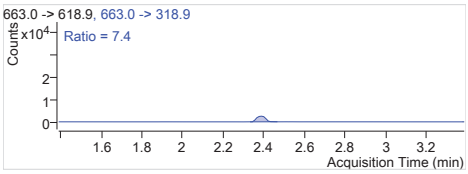
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 0.54 µg/L
Area ratio: 10.40010
Sample type: QC



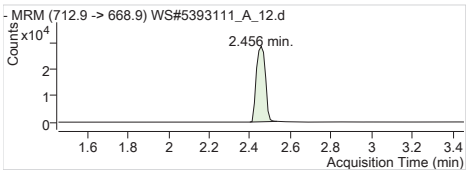


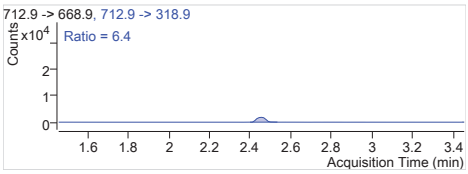
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 0.48 µg/L
Area ratio: 9.29132
Sample type: QC



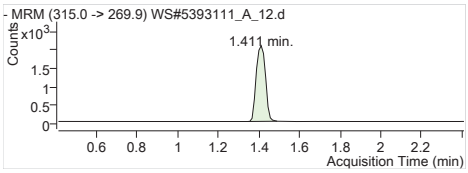


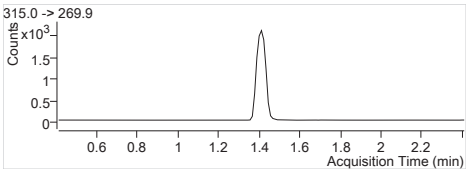
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.389 (2.389)
Calc. conc. 0.50 µg/L
Area ratio: 9.33451
Sample type: QC



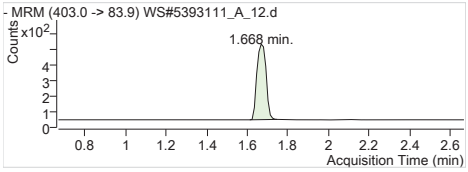


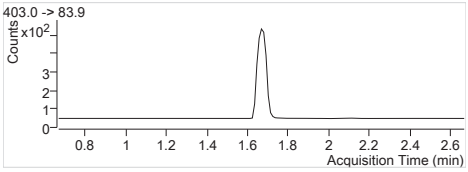
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.456 (2.456)
Calc. conc. 0.51 µg/L
Area ratio: 7.81454
Sample type: QC



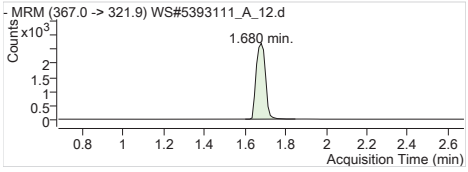


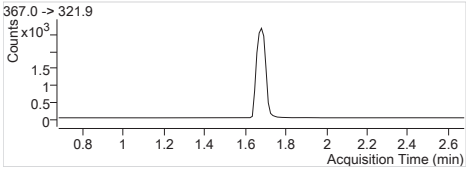
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 88.99 µg/L
Area ratio: 0.25180
Sample type: QC



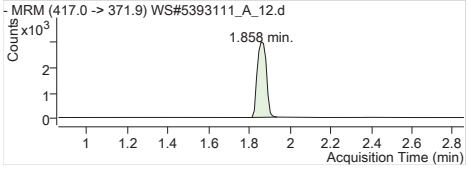


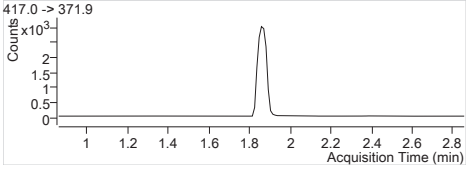
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 84.34 µg/L
Area ratio: 0.05825
Sample type: QC



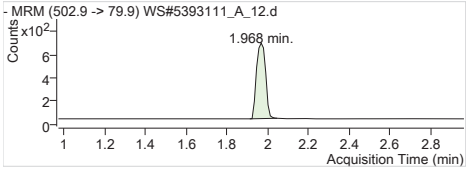


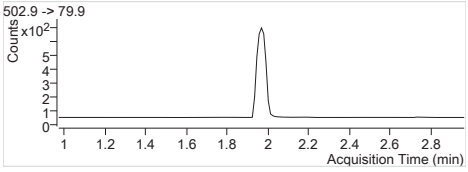
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 89.33 µg/L
Area ratio: 0.32287
Sample type: QC



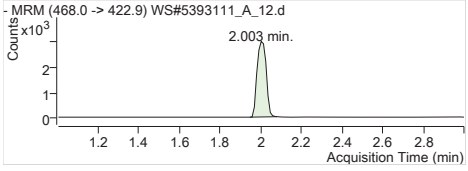


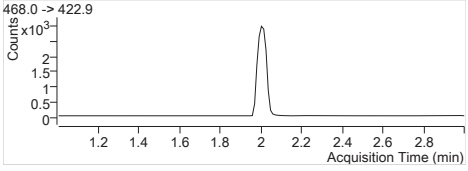
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 92.70 µg/L
Area ratio: 0.35568
Sample type: QC



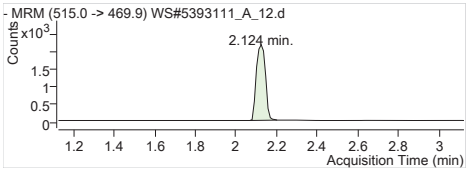


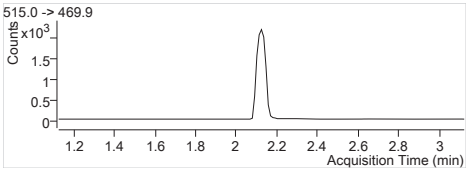
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 92.75 µg/L
Area ratio: 0.07782
Sample type: QC



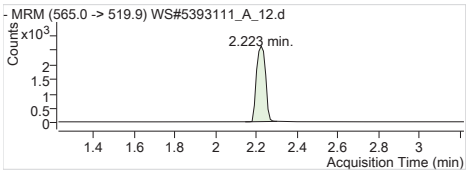


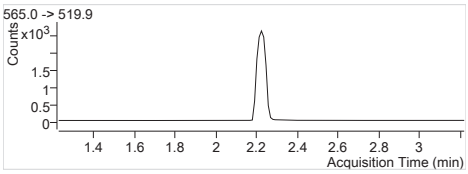
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 95.45 µg/L
Area ratio: 0.35318
Sample type: QC



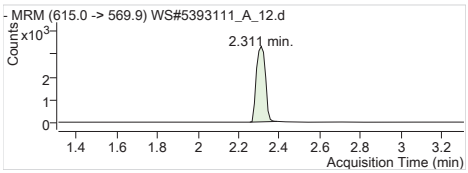


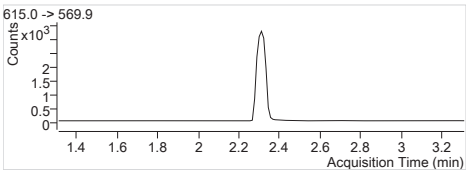
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 79.10 µg/L
Area ratio: 0.19582
Sample type: QC



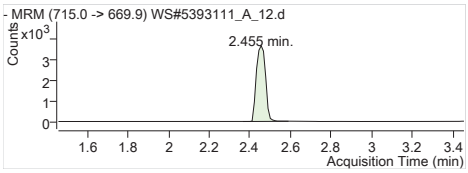


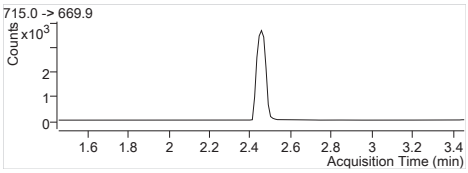
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 81.39 µg/L
Area ratio: 0.23456
Sample type: QC



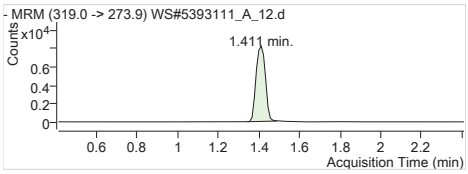


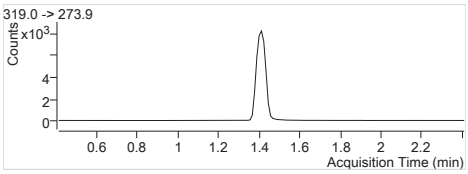
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 79.28 µg/L
Area ratio: 0.29636
Sample type: QC



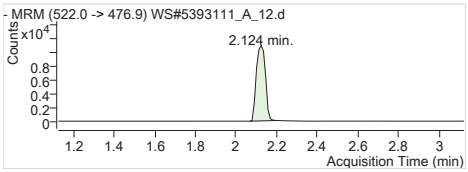


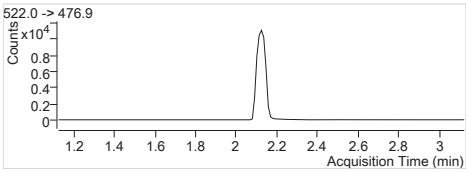
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 77.97 µg/L
Area ratio: 0.33460
Sample type: QC





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 2.68 µg/L
Area ratio: 0
Sample type: QC





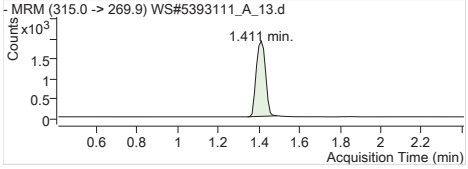
13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 2.70 µg/L
Area ratio: 0
Sample type: QC

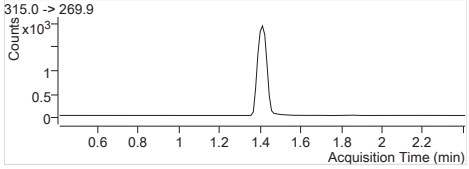
Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**5393111:SPIKE:D1**	**Instrument**	LCMS04
Data File	WS#5393111_A_13.d	**Operator**	
Sample Type	QC	**Dilution**	0.024
Acq. Method	PFC_Water_Low.m	**Position**	P2-B3
Acq. Date	2018/02/13 2:05:42 PM	**Injection Volume**	Per Method
Sample Annotation	-		

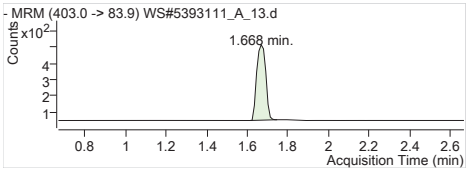
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	5995	1.41	1 µg/L		
MPFHxS	1440	1.67	1 µg/L		
MPFHpA	7545	1.68	1 µg/L		
MPFOA	8062	1.86	1 µg/L		
MPFOS	1845	1.97	1 µg/L		
MPFNA	7924	2.00	1 µg/L		
MPFDA	6171	2.12	1 µg/L		
MPFUnA	7062	2.22	1 µg/L		
MPFDoA	9581	2.31	1 µg/L		
MPFTeDA	10761	2.46	1 µg/L		
13C6-PFHxA IS	25038	1.41	1 µg/L		
13C9-PFDA IS	32181	2.12	1 µg/L		

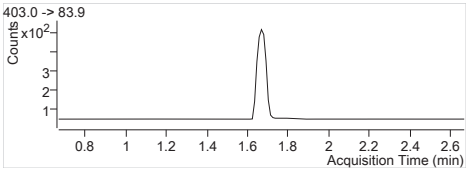
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	15573	1.06	20.80	0.49 µg/L	98.68
PFHxA 1	51758	1.41	20.80	0.47 µg/L	94.32
PFHxS 1	14655	1.67	20.80	0.48 µg/L	95.74
PFHpA 1	70072	1.68	20.80	0.52 µg/L	105.00
PFOA 1	76451	1.86	20.80	0.50 µg/L	100.07
PFOS 1	13998	1.96	20.80	0.46 µg/L	92.50
PFNA 1	67669	2.00	20.80	0.49 µg/L	98.67
PFDA 1	69019	2.12	20.80	0.54 µg/L	109.14
PFUnA 1	73440	2.22	20.80	0.54 µg/L	107.99
PFDoA 1	90195	2.31	20.80	0.49 µg/L	97.27
PFTrDA 1	99831	2.39	20.80	0.50 µg/L	99.33
PFTeDA 1	81573	2.46	20.80	0.50 µg/L	99.30
13C2-PFHxA	5995	1.41	100.00	84.62 µg/L	84.62
18O2-PFHxS	1440	1.67	100.00	83.27 µg/L	83.27
13C4-PFHpA	7545	1.68	100.00	83.38 µg/L	83.38
13C4-PFOA	8062	1.86	100.00	83.92 µg/L	83.92
13C4-PFOS	1845	1.97	100.00	87.82 µg/L	87.82
13C5-PFNA	7925	2.00	100.00	85.54 µg/L	85.54
13C2-PFDA	6120	2.12	100.00	76.81 µg/L	76.81
13C2-PFUnA	7062	2.22	100.00	76.15 µg/L	76.15
13C2-PFDoA	9581	2.31	100.00	79.64 µg/L	79.64
13C2-PFTeDA	10883	2.46	100.00	78.81 µg/L	78.81
13C6-PFHxA	25038	1.41	100.00	2.57 µg/L	107.22
13C9-PFDA	32181	2.12	100.00	2.55 µg/L	106.41



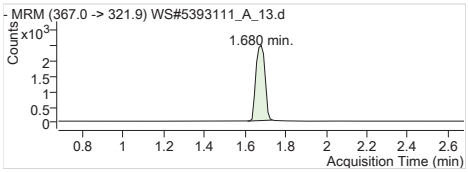


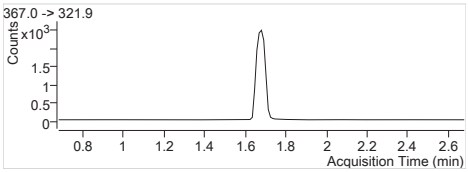
MPFHxA Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: QC



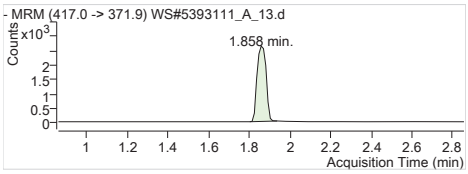


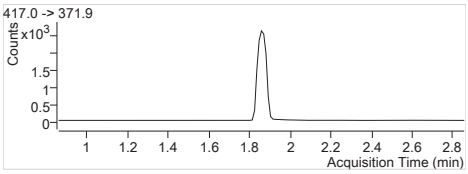
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: QC



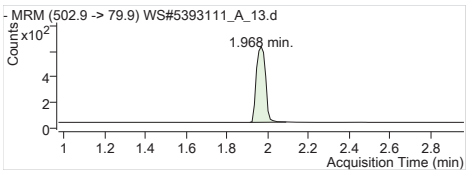


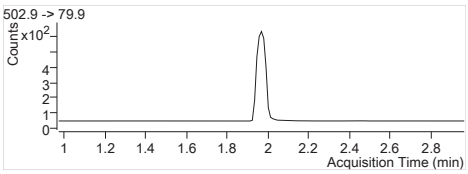
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: QC



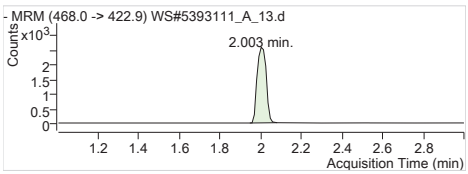


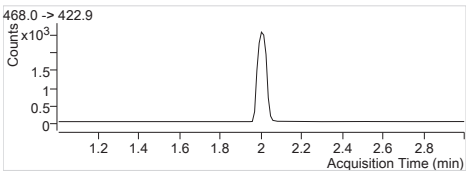
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: QC



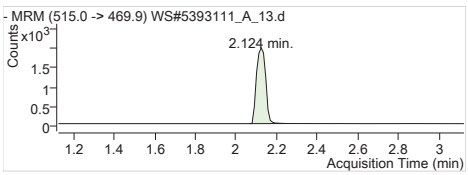


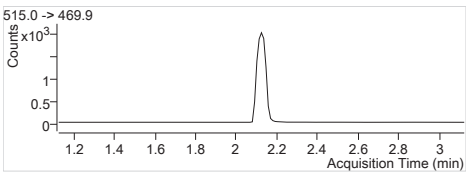
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: QC



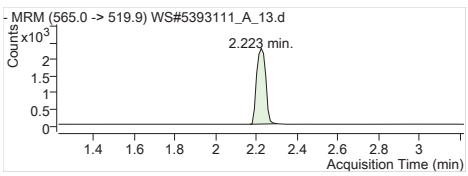


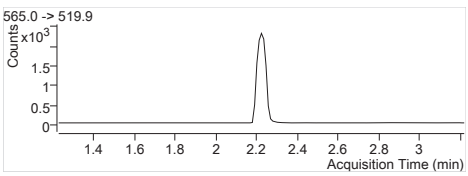
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: QC



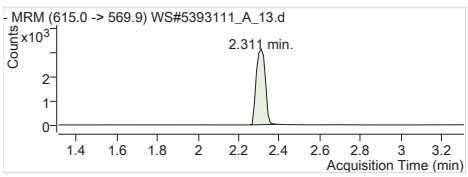


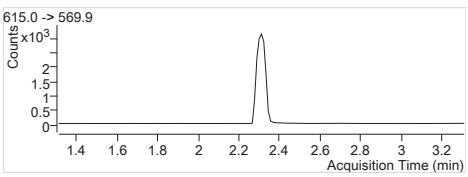
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: QC



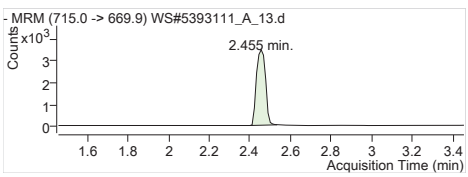


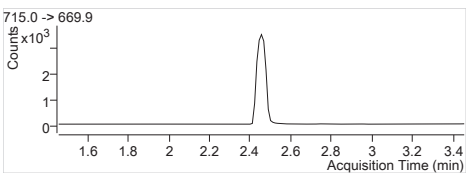
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: QC



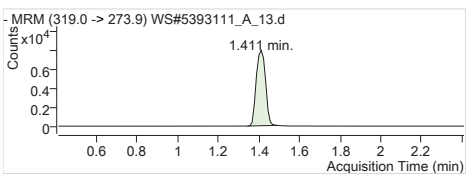


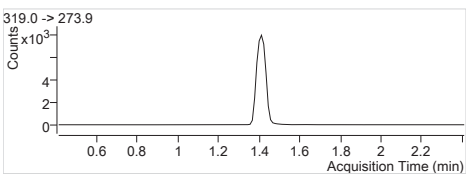
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: QC



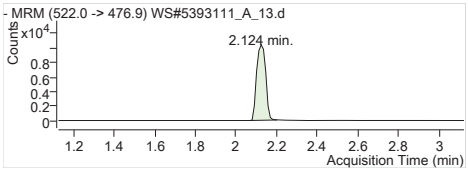


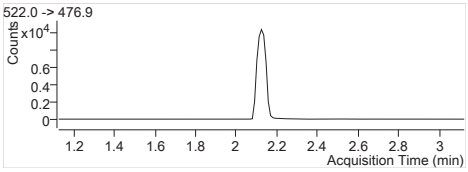
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: QC



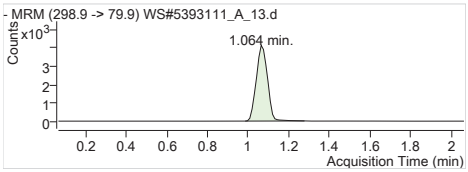


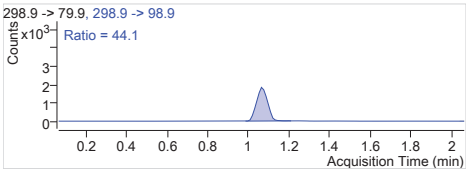
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: QC



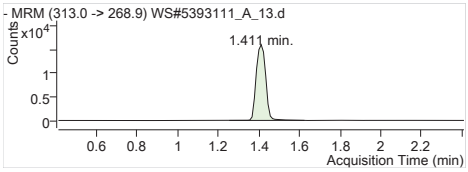


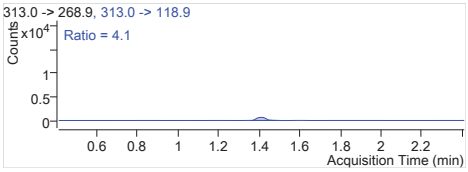
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: QC



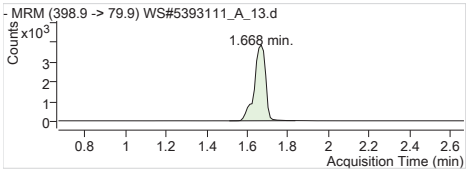


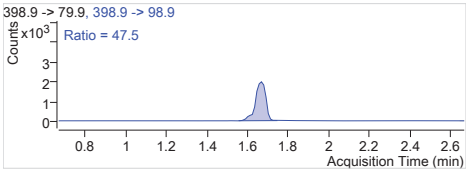
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.064 (1.064)
Calc. conc. 0.49 µg/L
Area ratio: 10.81458
Sample type: QC



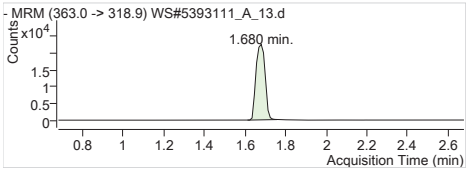


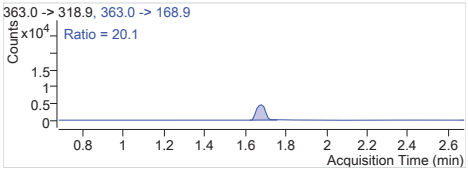
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 0.47 µg/L
Area ratio: 8.63353
Sample type: QC



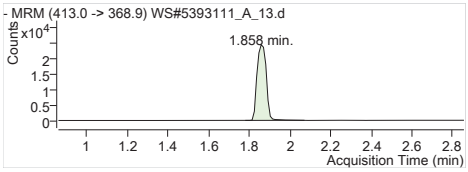


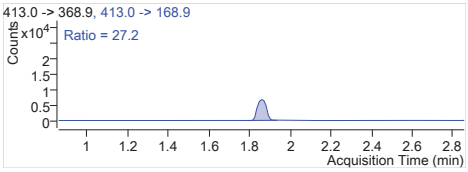
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 0.48 µg/L
Area ratio: 10.17708
Sample type: QC



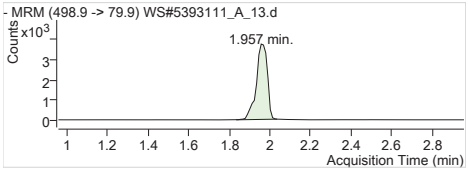


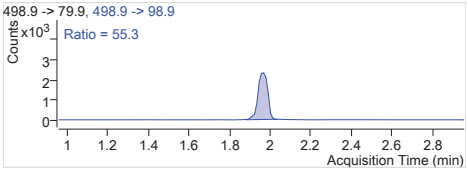
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 0.52 µg/L
Area ratio: 9.28721
Sample type: QC



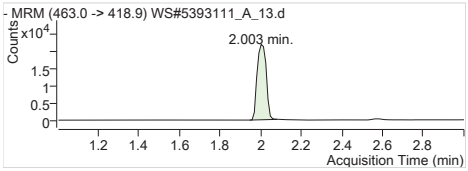


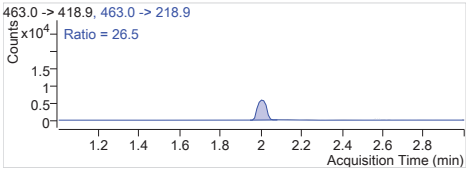
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 0.50 µg/L
Area ratio: 9.48288
Sample type: QC



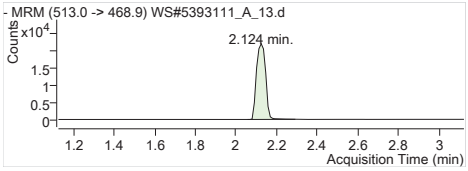


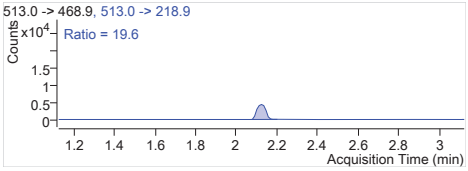
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.957 (1.957)
Calc. conc. 0.46 µg/L
Area ratio: 7.58699
Sample type: QC



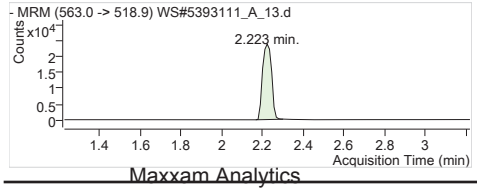


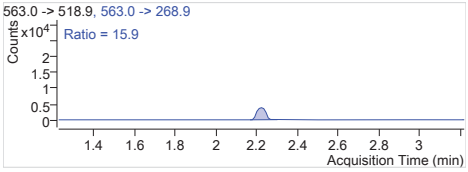
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 0.49 µg/L
Area ratio: 8.53975
Sample type: QC



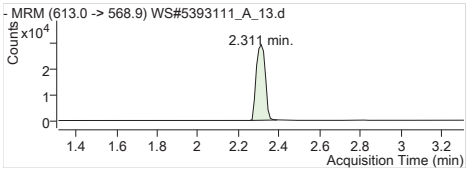


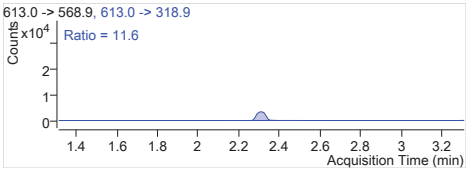
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 0.54 µg/L
Area ratio: 11.18441
Sample type: QC



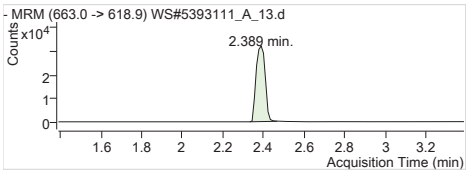


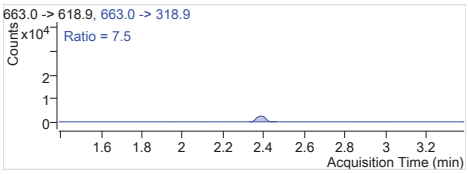
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 0.54 µg/L
Area ratio: 10.39932
Sample type: QC



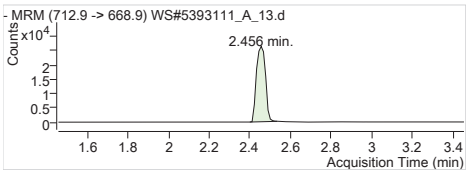


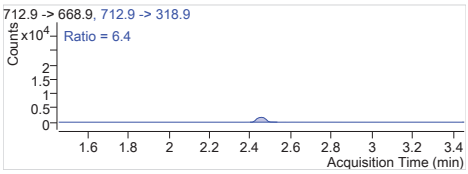
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 0.49 µg/L
Area ratio: 9.41394
Sample type: QC



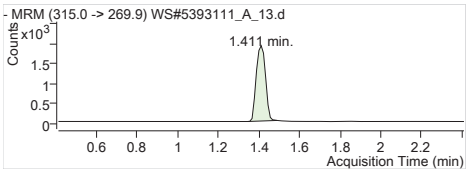


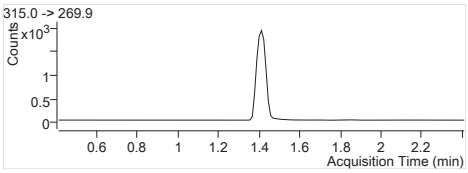
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.389 (2.389)
Calc. conc. 0.50 µg/L
Area ratio: 9.27711
Sample type: QC



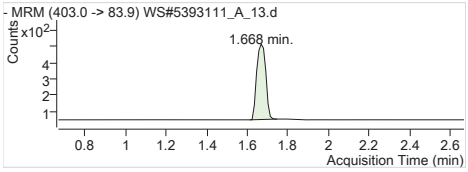


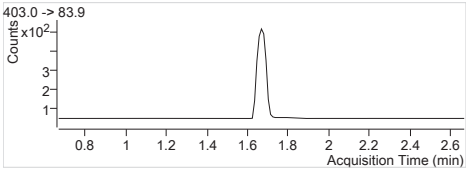
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.456 (2.456)
Calc. conc. 0.50 µg/L
Area ratio: 7.58043
Sample type: QC



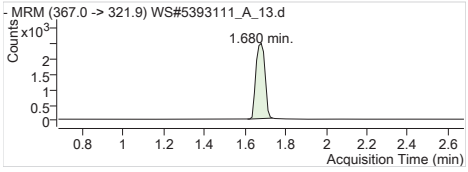


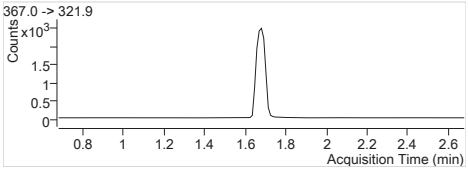
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 84.62 µg/L
Area ratio: 0.23944
Sample type: QC



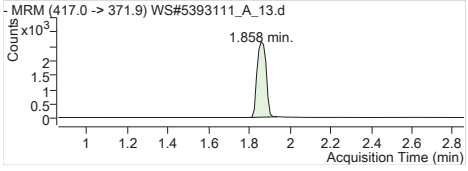


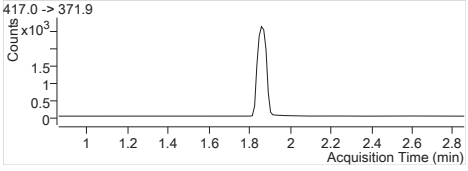
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 83.27 µg/L
Area ratio: 0.05751
Sample type: QC



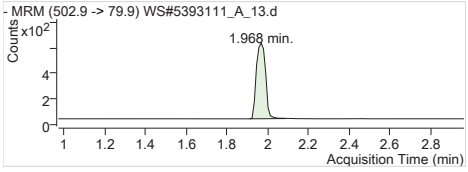


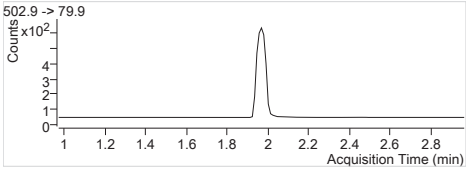
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 83.38 µg/L
Area ratio: 0.30134
Sample type: QC



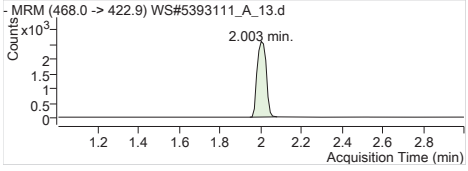


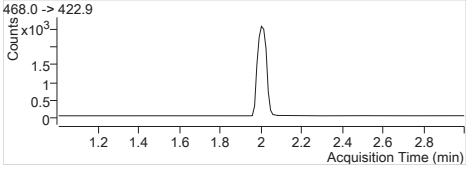
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 83.92 µg/L
Area ratio: 0.32199
Sample type: QC



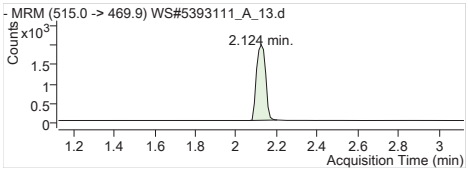


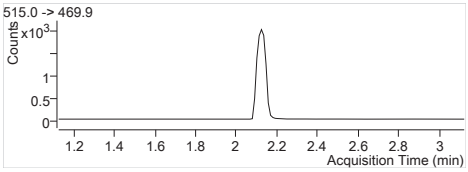
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 87.82 µg/L
Area ratio: 0.07369
Sample type: QC



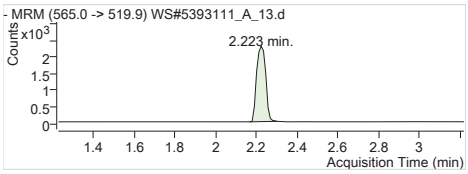


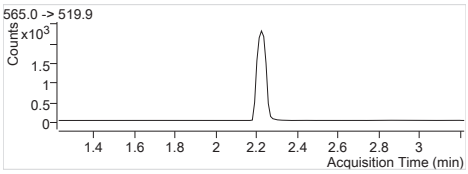
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 85.54 µg/L
Area ratio: 0.31652
Sample type: QC



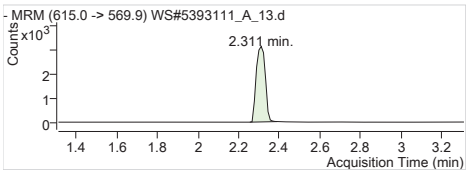


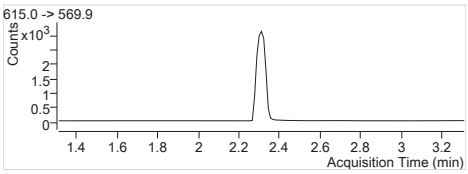
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 76.81 µg/L
Area ratio: 0.19017
Sample type: QC



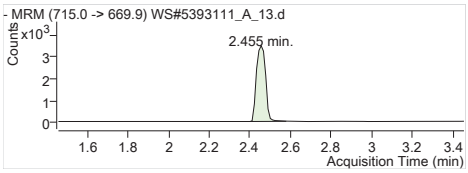


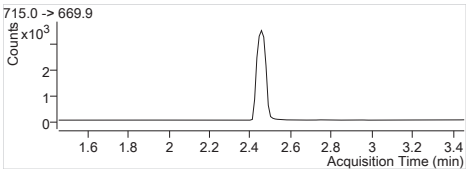
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 76.15 µg/L
Area ratio: 0.21945
Sample type: QC



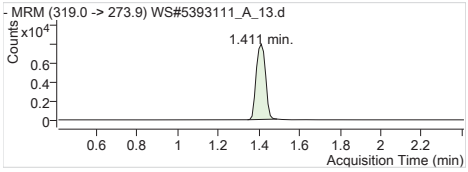


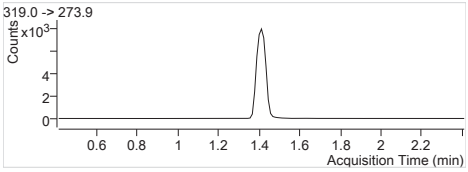
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 79.64 µg/L
Area ratio: 0.29772
Sample type: QC



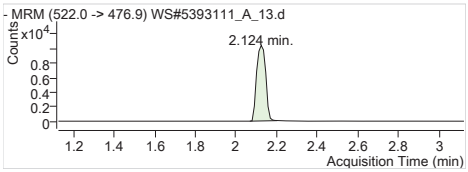


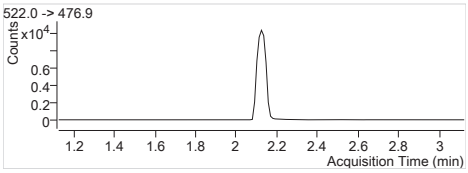
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 78.81 µg/L
Area ratio: 0.33818
Sample type: QC





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 2.57 µg/L
Area ratio: 0
Sample type: QC





13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 2.55 µg/L
Area ratio: 0
Sample type: QC

Quantitation Results

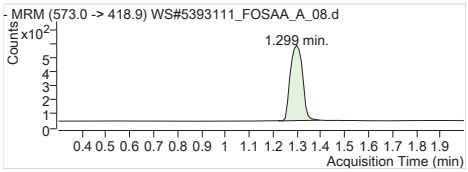
Agilent Technologies

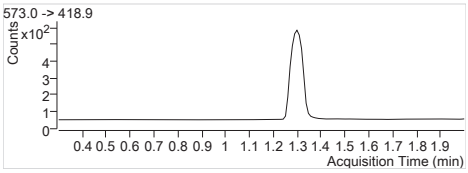
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**IB**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_08.d	**Operator**	
Sample Type	Sample	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A8
Acq. Date	2018/02/13 11:43:56 AM	**Injection Volume**	Per Method
Sample Annotation	-		

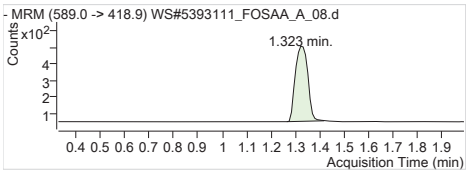
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1902	1.30	1 µg/L		
D5-EtFOSAA IS	1634	1.32	1 µg/L		
13C9-PFDA IS	23133	0.87	1 µg/L		

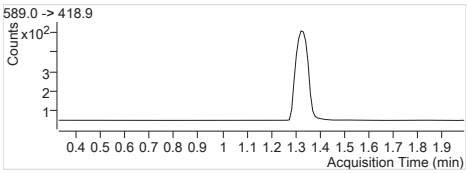
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1909	1.30	-	110.05 µg/L	-
D5-EtFOSAA	1660	1.32	-	111.67 µg/L	-
13C9-PFDA	22474	0.87	-	88.09 µg/L	-



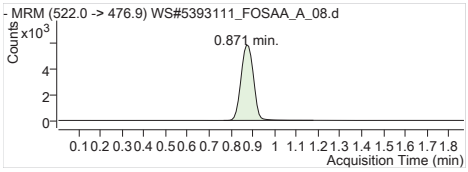


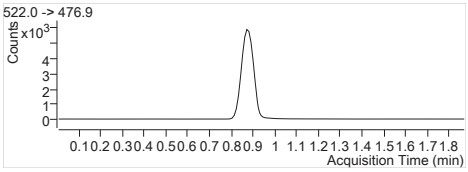
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: Sample



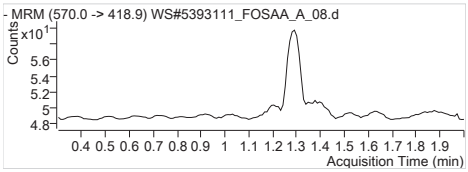


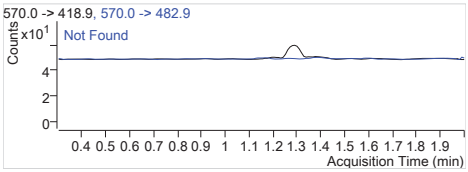
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: Sample



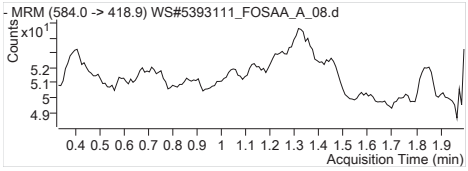


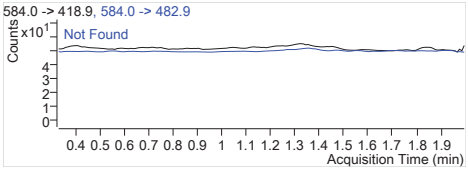
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.871 (0.871)
Concentration: 1 µg/L
Sample type: Sample



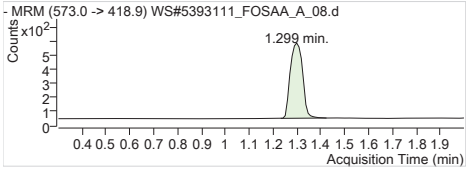


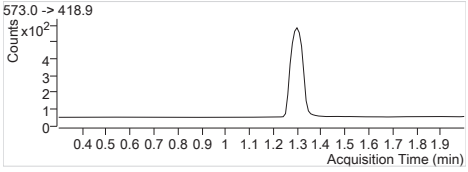
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.300)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



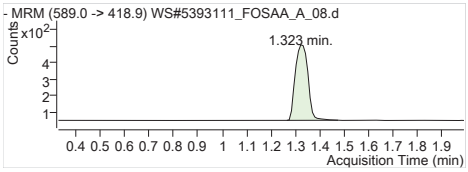


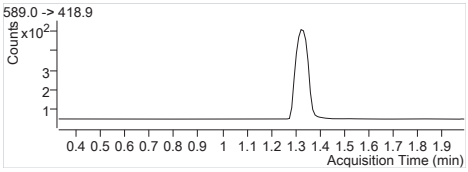
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.325)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



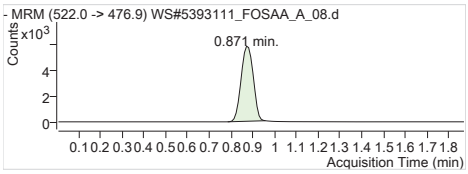


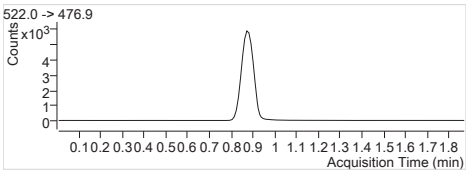
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 110.05 µg/L
Area ratio: 0.08252
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	111.67 µg/L
Area ratio:	0.07176
Sample type:	Sample





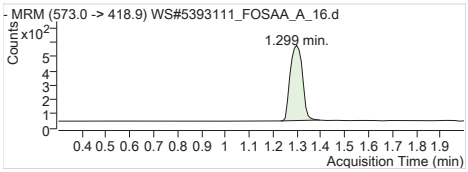
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.871 (0.871)
Calc. conc.	88.09 µg/L
Area ratio:	0
Sample type:	Sample

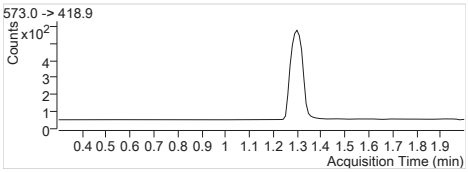
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**IB**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_16.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A8
Acq. Date	2018/02/13 12:03:14 PM	**Injection Volume**	Per Method
Sample Annotation	-		

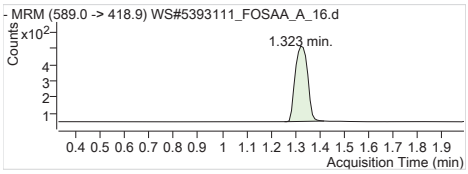
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1874	1.30	1 µg/L		
D5-EtFOSAA IS	1656	1.32	1 µg/L		
13C9-PFDA IS	23243	0.87	1 µg/L		

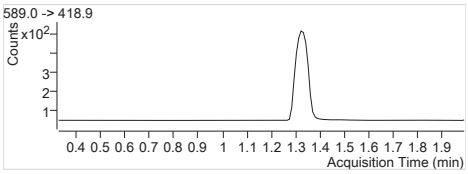
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1896	1.30	-	108.78 µg/L	-
D5-EtFOSAA	1667	1.32	-	111.61 µg/L	-
13C9-PFDA	23228	0.87	-	2.19 µg/L	-



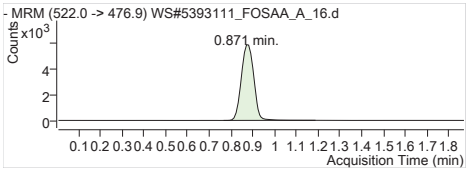


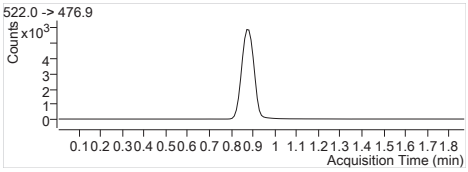
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: Sample



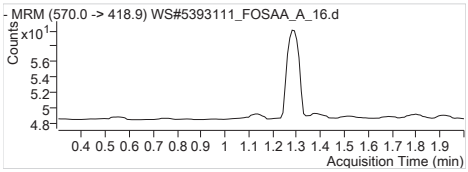


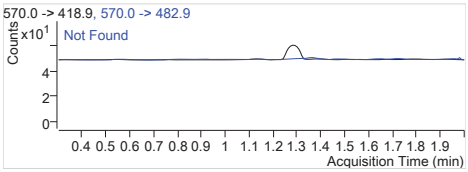
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: Sample



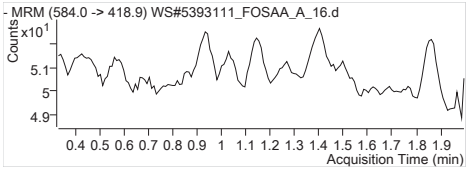


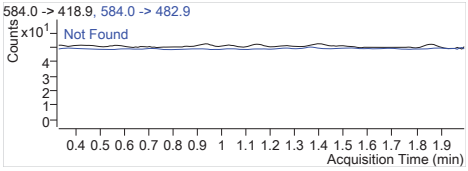
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.871 (0.871)
Concentration: 1 µg/L
Sample type: Sample



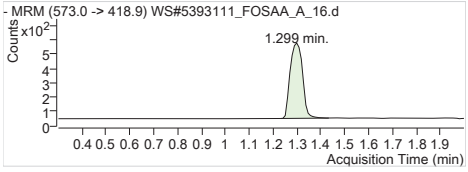


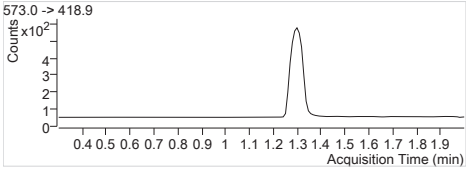
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.300)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



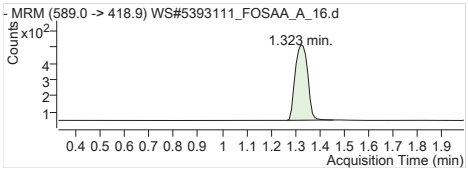


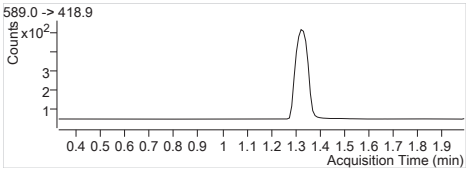
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.325)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



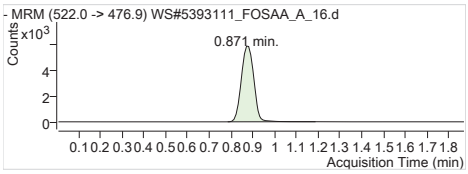


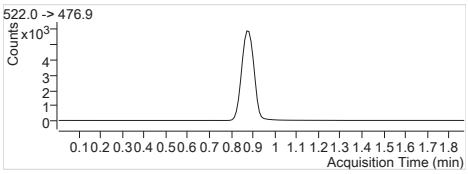
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 108.78 µg/L
Area ratio: 0.08157
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	111.61 µg/L
Area ratio:	0.07172
Sample type:	Sample





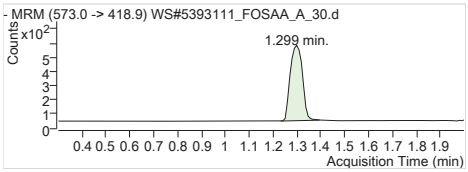
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.871 (0.871)
Calc. conc.	2.19 µg/L
Area ratio:	0
Sample type:	Sample

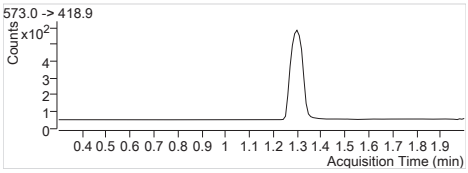
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**IB**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_30.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A8
Acq. Date	2018/02/13 12:37:01 PM	**Injection Volume**	Per Method
Sample Annotation	-		

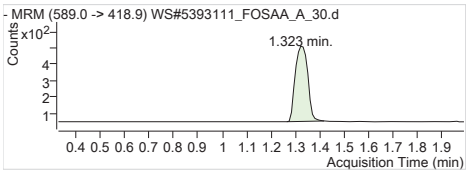
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1891	1.30	1 µg/L		
D5-EtFOSAA IS	1648	1.32	1 µg/L		
13C9-PFDA IS	23271	0.87	1 µg/L		

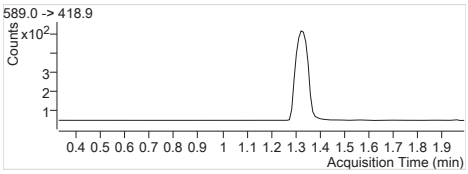
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1913	1.30	-	109.62 µg/L	-
D5-EtFOSAA	1664	1.32	-	111.28 µg/L	-
13C9-PFDA	22609	0.87	-	2.13 µg/L	-



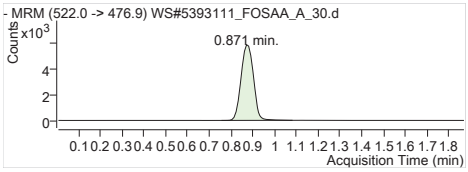


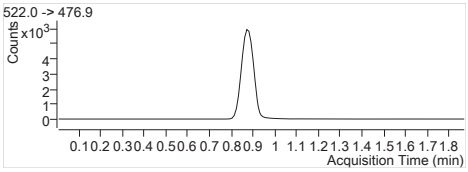
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: Sample



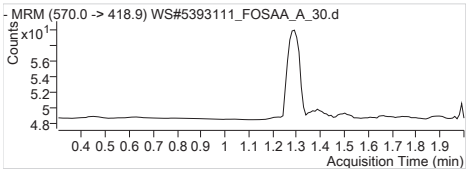


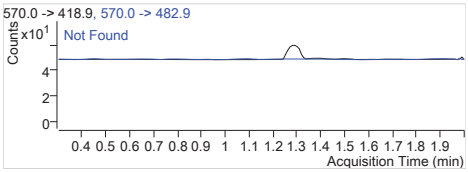
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: Sample



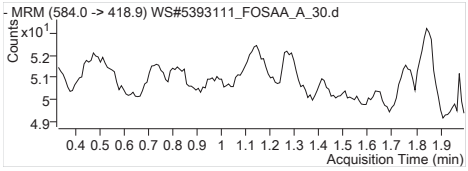


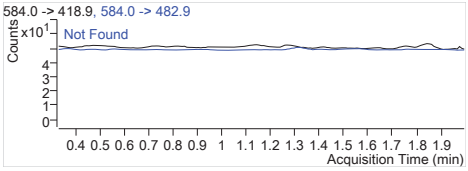
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.871 (0.871)
Concentration: 1 µg/L
Sample type: Sample



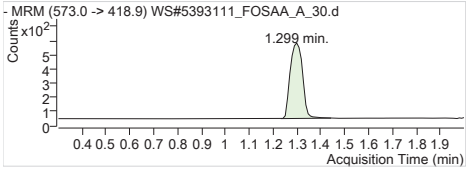


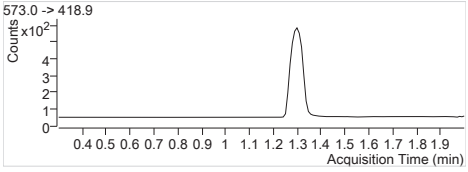
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.300)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



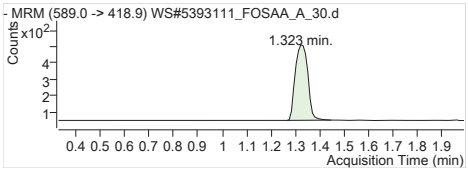


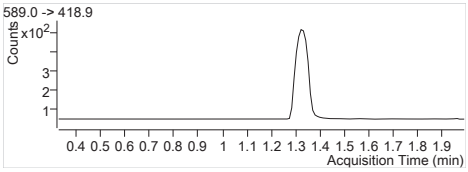
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.325)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



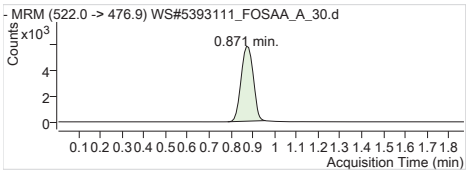


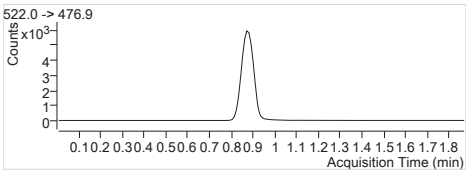
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 109.62 µg/L
Area ratio: 0.08221
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	111.28 µg/L
Area ratio:	0.07151
Sample type:	Sample





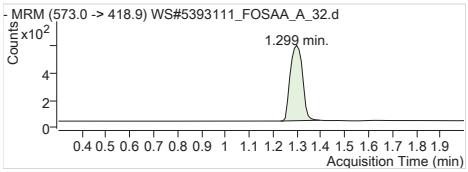
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.871 (0.871)
Calc. conc.	2.13 µg/L
Area ratio:	0
Sample type:	Sample

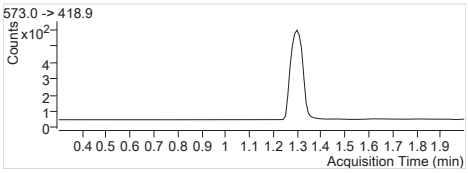
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**IB**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_32.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A8
Acq. Date	2018/02/13 12:41:51 PM	**Injection Volume**	Per Method
Sample Annotation	-		

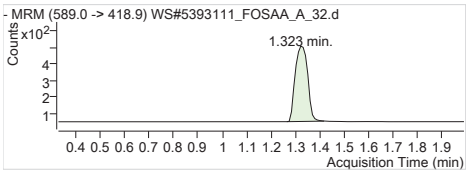
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1955	1.30	1 µg/L		
D5-EtFOSAA IS	1633	1.32	1 µg/L		
13C9-PFDA IS	23555	0.87	1 µg/L		

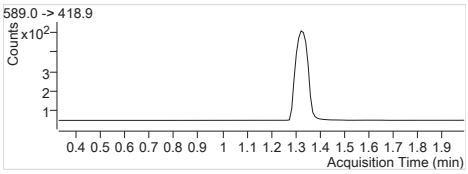
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1973	1.30	-	111.70 µg/L	-
D5-EtFOSAA	1656	1.32	-	109.41 µg/L	-
13C9-PFDA	22892	0.87	-	2.15 µg/L	-



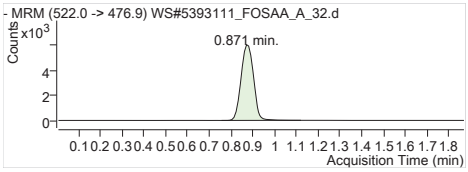


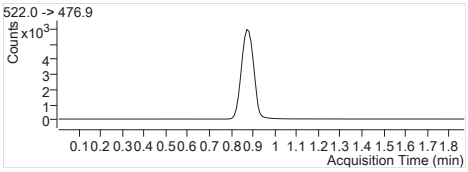
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: Sample



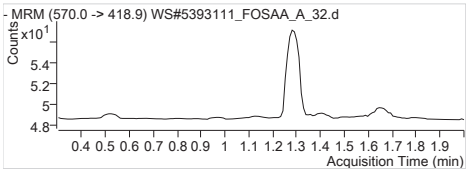


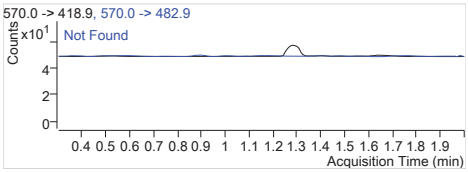
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: Sample



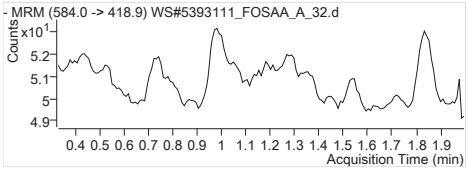


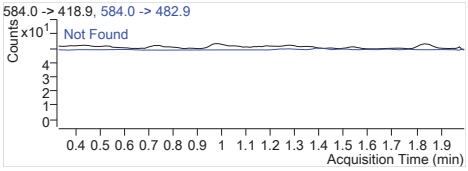
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.871 (0.871)
Concentration: 1 µg/L
Sample type: Sample



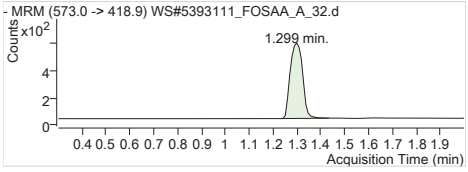


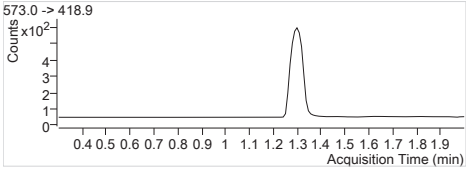
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.300)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



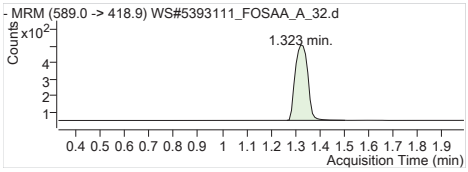


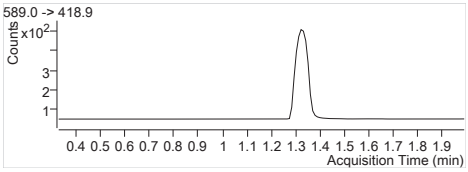
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.325)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



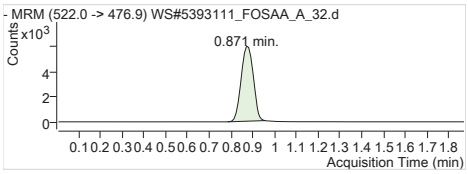


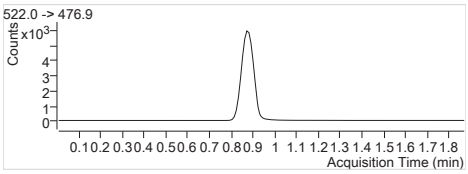
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 111.70 µg/L
Area ratio: 0.08376
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	109.41 µg/L
Area ratio:	0.07030
Sample type:	Sample





13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.871 (0.871)
Calc. conc.	2.15 µg/L
Area ratio:	0
Sample type:	Sample

Quantitation Results

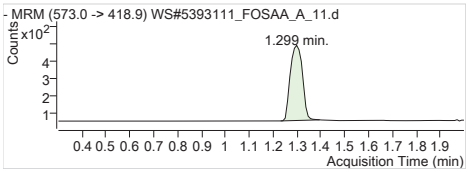
Agilent Technologies

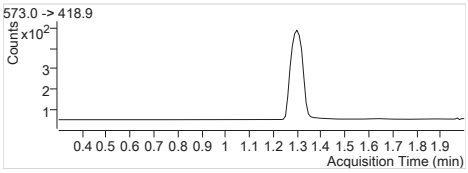
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**5393111:BLANK**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_11.d	**Operator**	
Sample Type	Sample	**Dilution**	0.024
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-B1
Acq. Date	2018/02/13 11:51:11 AM	**Injection Volume**	Per Method
Sample Annotation	-		

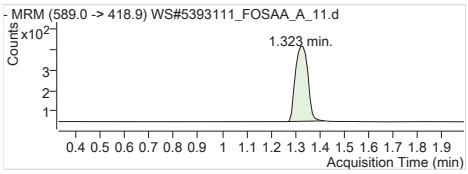
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1554	1.30	1 µg/L		
D5-EtFOSAA IS	1306	1.32	1 µg/L		
13C9-PFDA IS	30049	0.88	1 µg/L		

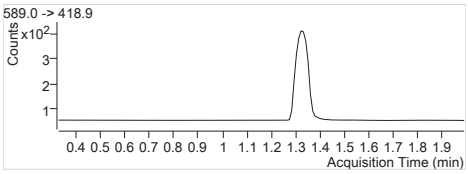
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1			-	ND	-
EtFOSAA 1			-	ND	-
D3-MeFOSAA	1577	1.30	-	69.99 µg/L	-
D5-EtFOSAA	1325	1.32	-	68.62 µg/L	-
13C9-PFDA	29227	0.88	-	2.75 µg/L	-



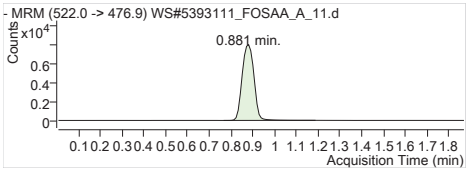


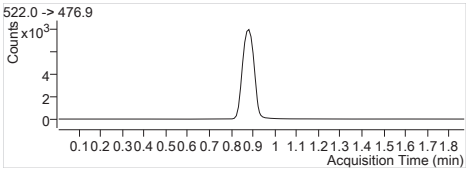
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: Sample



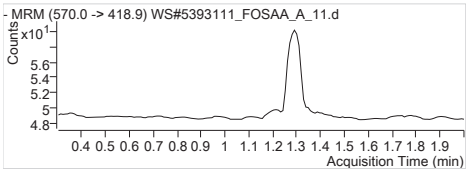


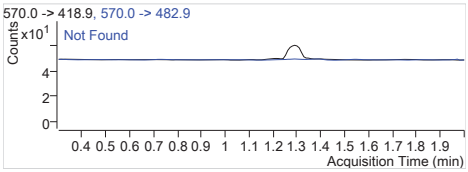
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: Sample



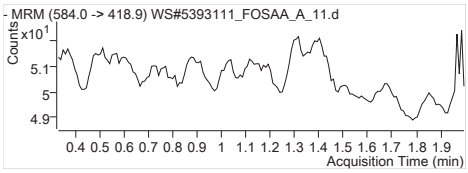


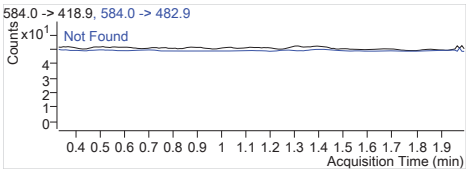
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.881 (0.871)
Concentration: 1 µg/L
Sample type: Sample



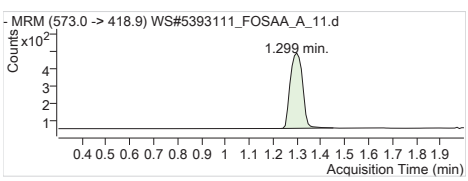


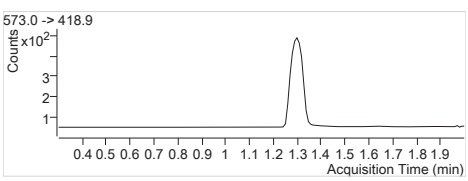
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 0.000 (1.300)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



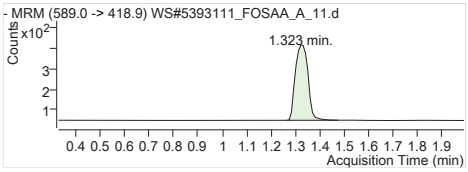


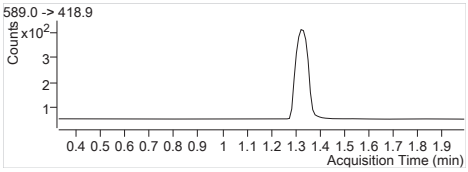
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 0.000 (1.325)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



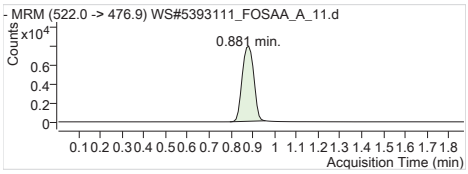


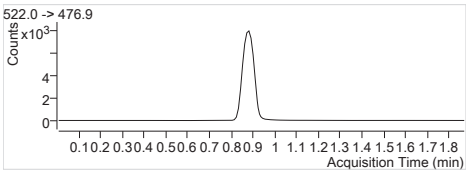
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 69.99 µg/L
Area ratio: 0.05248
Sample type: Sample





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	68.62 µg/L
Area ratio:	0.04409
Sample type:	Sample





13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.881 (0.871)
Calc. conc.	2.75 µg/L
Area ratio:	0
Sample type:	Sample

Quantitation Results

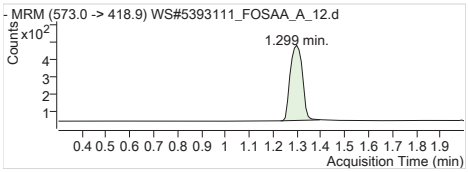
Agilent Technologies

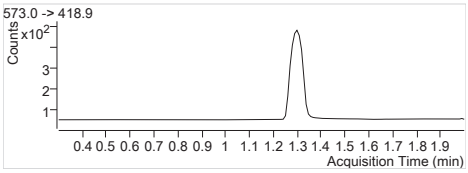
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**5393111:SPIKE**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_12.d	**Operator**	
Sample Type	QC	**Dilution**	0.024
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-B2
Acq. Date	2018/02/13 11:53:36 AM	**Injection Volume**	Per Method
Sample Annotation	-		

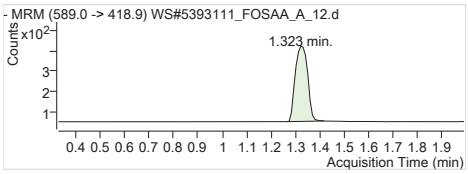
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1529	1.30	1 µg/L		
D5-EtFOSAA IS	1319	1.32	1 µg/L		
13C9-PFDA IS	29721	0.88	1 µg/L		

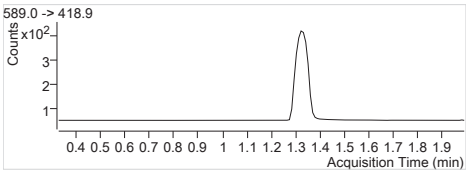
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	12617	1.30	20.80	0.51 µg/L	102.07
EtFOSAA 1	12986	1.32	20.80	0.52 µg/L	104.32
D3-MeFOSAA	1553	1.30	100.00	69.68 µg/L	69.68
D5-EtFOSAA	1323	1.32	100.00	69.27 µg/L	69.27
13C9-PFDA	28877	0.88	100.00	2.72 µg/L	113.18



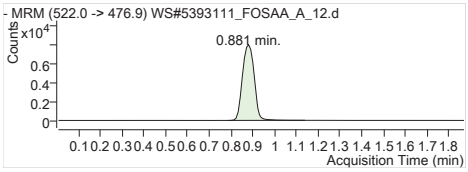


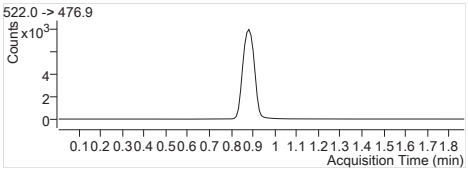
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: QC



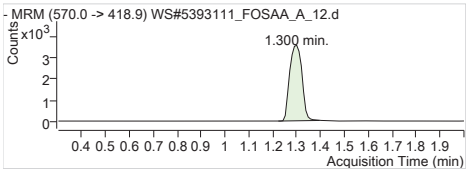


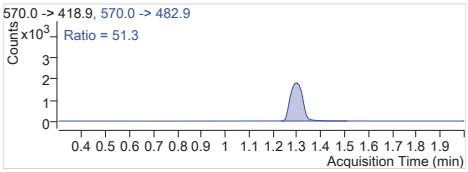
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: QC



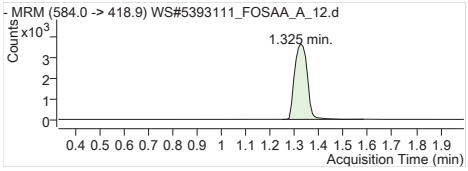


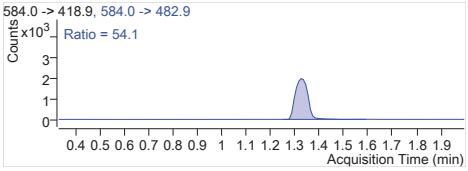
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.881 (0.871)
Concentration: 1 µg/L
Sample type: QC



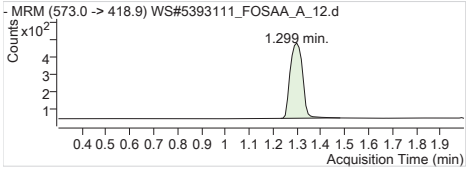


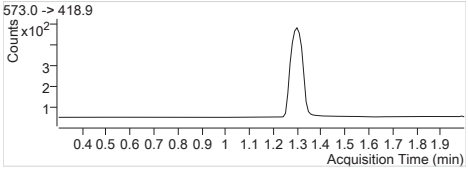
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.300 (1.300)
Calc. conc. 0.51 µg/L
Area ratio: 8.25180
Sample type: QC



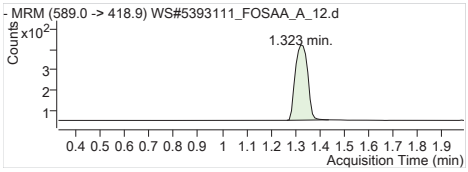


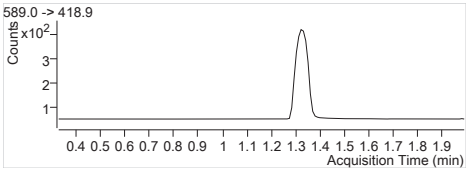
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.325 (1.325)
Calc. conc. 0.52 µg/L
Area ratio: 9.84534
Sample type: QC



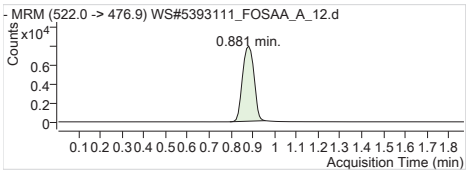


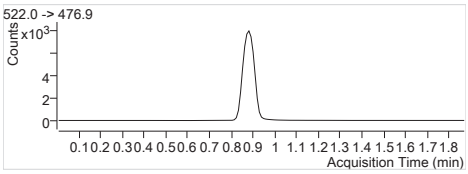
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 69.68 µg/L
Area ratio: 0.05225
Sample type: QC





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	69.27 µg/L
Area ratio:	0.04451
Sample type:	QC





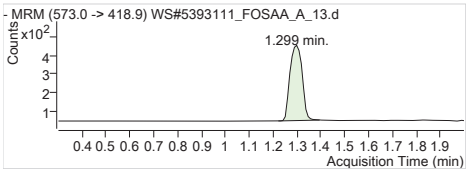
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.881 (0.871)
Calc. conc.	2.72 µg/L
Area ratio:	0
Sample type:	QC

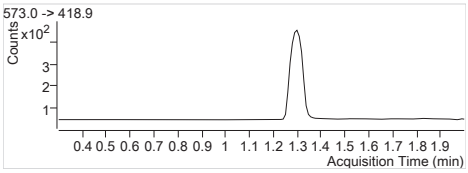
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**5393111:SPIKE:D1**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_13.d	**Operator**	
Sample Type	QC	**Dilution**	0.024
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-B3
Acq. Date	2018/02/13 11:56:01 AM	**Injection Volume**	Per Method
Sample Annotation	-		

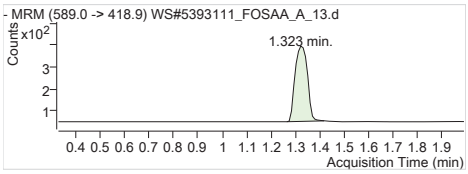
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1428	1.30	1 µg/L		
D5-EtFOSAA IS	1221	1.32	1 µg/L		
13C9-PFDA IS	27367	0.87	1 µg/L		

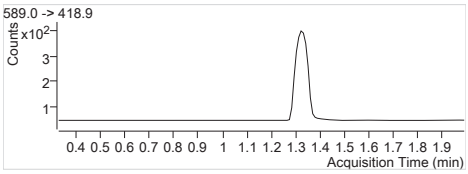
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	12104	1.30	20.80	0.52 µg/L	104.84
EtFOSAA 1	12131	1.32	20.80	0.53 µg/L	105.27
D3-MeFOSAA	1448	1.30	100.00	70.56 µg/L	70.56
D5-EtFOSAA	1242	1.32	100.00	70.63 µg/L	70.63
13C9-PFDA	26603	0.87	100.00	2.50 µg/L	104.27



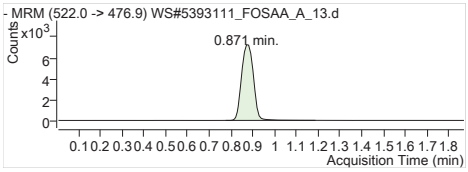


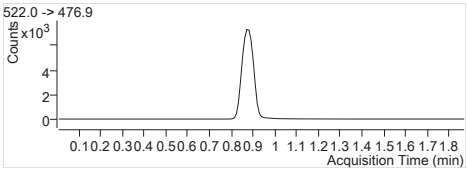
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: QC



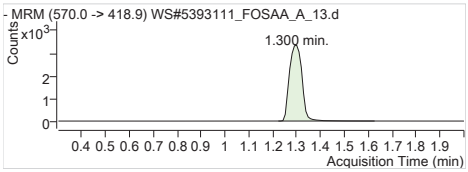


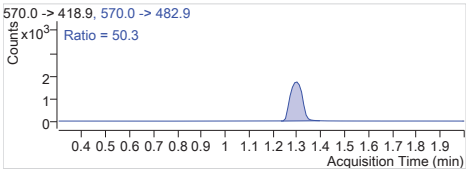
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: QC



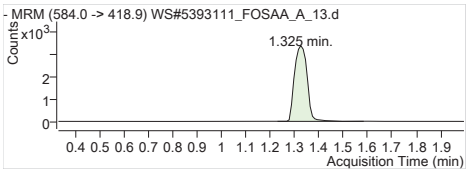


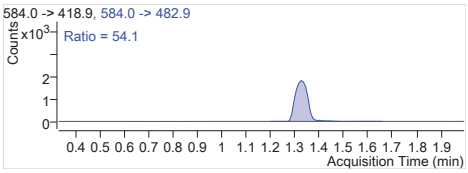
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.871 (0.871)
Concentration: 1 µg/L
Sample type: QC



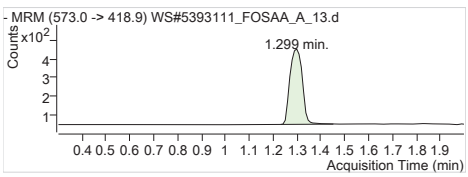


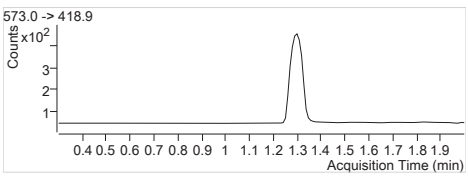
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.300 (1.300)
Calc. conc. 0.52 µg/L
Area ratio: 8.47619
Sample type: QC



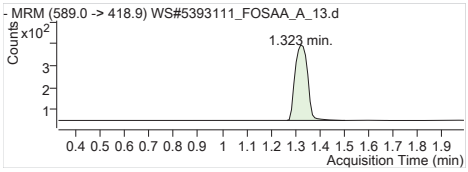


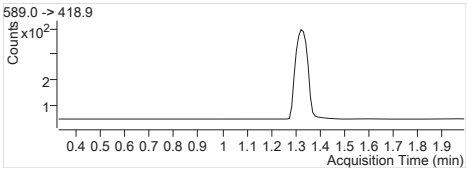
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.325 (1.325)
Calc. conc. 0.53 µg/L
Area ratio: 9.93530
Sample type: QC



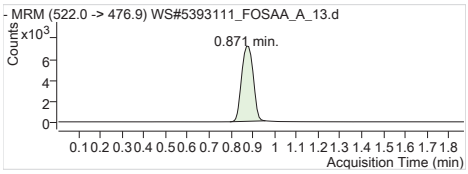


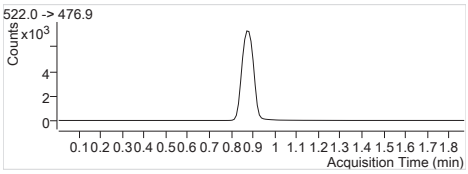
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 70.56 µg/L
Area ratio: 0.05291
Sample type: QC





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	70.63 µg/L
Area ratio:	0.04538
Sample type:	QC





13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.871 (0.871)
Calc. conc.	2.50 µg/L
Area ratio:	0
Sample type:	QC

DoD Projects - Internal Data Validation Checklist

Run date: 2018/02/09

Worksheet # (s): 5390075

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: 2018/02/10

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: 2018/02/13

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 # 5390275 | Testcode: PFOS 4LCM-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: 2018/02/08

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# : 5390275

Page #: 1/2

Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Thursday, February 08, 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	% Moisture (centrifuged sediment %)	Wt or Vol	Final Vol (mL)	DF or AF	# Cont	Expiry Date	Test DeadLine	Criteria	Extract Date	conc (ng/mL)
5,3		SPIKE	0	PFOS		0	125	3	1X					2018/02/08	26
5,4		SPIKE	1	PFOS		0	125	3	1X					2018/02/08	35
5,1		BLANK				0	125	3	1X					2018/02/08	25
5,6	B819794	*FZH306-01R	[redacted]		*	<0.1	115/12.5	3	1X/10X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	29/26
5,8	B819794	*FZH307-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	31
5,10	B819794	*FZH308-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	28
5,12	B819794	*FZH309-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	29
5,14	B819794	*FZH310-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	24
5,16	B819794	*FZH311-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	29
5,18	B819794	*FZH312-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	25
5,20	B819794	*FZH313-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	28
5,22	B819794	*FZH314-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	28
5,24	B819794	*FZH315-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	32
6,1	B819794	*FZH316-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	30
6,3	B819794	*FZH317-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	29
6,5	B821961	*FZT419-01R	OLD-OV1-101TW-*			0	120/12.5	3	1X/10X	2	2018/02/08	2018/02/12 23:00	DOD	2018/02/08	27/27
6,7	B821961	*FZT420-01R	OLD-OV1-102TW-*		*	<0.1	115	3	1X	2	2018/02/08	2018/02/12 23:00	DOD	2018/02/08	25
6,9	B821961	*FZT421-01R	OLD-OV1-102TW-*		*	<0.1	125	3	1X	2	2018/02/08	2018/02/12 23:00	DOD	2018/02/08	35
6,11	B821961	*FZT422-01R	OLD-OV1-103TW-*		*	<0.1	125	3	1X	2	2018/02/08	2018/02/12 23:00	DOD	2018/02/08	28
6,14	B821961	*FZT423-01R	OLD-SA2-04ATW-*		*	<0.1	110	3	1X	2	2018/02/08	2018/02/12 23:00	DOD	2018/02/08	29
6,16	B821961	*FZT424-01R	EB-GW-012518-3			0	125	3	1X	2	2018/02/08	2018/02/12 23:00	DOD	2018/02/08	29
6,18	B821961	*FZT425-01R	FB-OLD-012518-6			0	110	3	1X	2	2018/02/08	2018/02/12 23:00	DOD	2018/02/08	30

2018/02/08 DM3

Remarks: Spike + spike dup were analyzed due to lack of bottles available per sample.

Samples extracted by: Daniella McLean DM3 2018/02/08

Instrumentation performed by: [signature] Date: 2018/02/09

Calculations performed by: [signature] Date: 2018/02/12

Validated by: AD Date: 2018/02/13

Job No.	Rep	Client Name	Contact	Client Tier	National
	Remarks				
GB819794	[redacted]				
GB821961	SP8	Earth Toxics Inc	Rick Carr	Tier 5 (Enviro.) AECOM	

nreg, PFOSALCM-W Level IV Data Package and TetraTech EDD required Project #: JM11 NTC Orlando

TCR 1/04/08 DM3

Job	Sample	Lab Comments
	SPIKE	
	SPIKE	
	BLANK	
B819794	FZH306-01R	
B819794	FZH307-01R	
B819794	FZH308-01R	
B819794	FZH309-01R	
B819794	FZH310-01R	
B819794	FZH311-01R	
B819794	FZH312-01R	
B819794	FZH313-01R	
B819794	FZH314-01R	
B819794	FZH315-01R	
B819794	FZH316-01R	
B819794	FZH317-01R	
B821961	FZT419-01R	
B821961	FZT420-01R	
B821961	FZT421-01R	
B821961	FZT422-01R	
B821961	FZT423-01R	
B821961	FZT424-01R	
B821961	FZT425-01R	

S1 25
S2 50 } SK-7377
S3 150

S4 37.5
S5 75 } I-5297
S6 125

ICV 62.5 - I-5299

IB 2850µL MeOH + 150µL IS

LQ 2018/02/08

Folder: 2018/02/09

Worksheet Reagent Tracking Record Worksheet # 5390275

Volume (µL)

Surrogate/Spike solutions	√	Solution ID #	Conc.	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) SAD	1ug/mL	75	21 62.5	75	21 62.5	NA	NA
PFC Internal Standard Solution	✓	SI-6763 (3/4) SAD	50/125 ng/mL	200	100 150	200	100 150	200	100 150
PFC Injection IS	✓	SI-6770 (1/2) LS	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	✓	SHB37527	2018/02/08	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-108-346	
0.2% Formic Acid				Leachate Fluid			
0.05M KOH				Reagent Water	✓	57297	2018/02/08
0.05M HCl							

*Spiked by: DM3
Spike Date: 2018/02/08
Spike Syringe/Pipette ID#: G24390G
Int. Std Syringe/Pipette ID#: M41011F
*Spiking Witnessed by: SAD
Final pH

Equipment & ID	√	Equipment	ID#	√	Equipment	Lot #
Pipettor K55191G	✓	SPE Cartridge	00347247A	✓	QC Balance ID	
K39732F	✓	Filter			Thermometer ID &Temp	
Dispenser		Centrifuge	42148683	✓		
		Sonicator				

Bottle Tracking
Bottle# 18801
Cap# 18778
Systems plus Lot# 18-01-31

Comments: envi CARB lot # 92806V
250 mL cylinder # 3026

* - SPIKING OF QC's & SAMPLES MUST BE WITNESSED AT ALL TIMES.

Worksheet Number: **5390275**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

Parameter Name	Units	SPIKE	SPIKE Dup1	BLANK	DL	B819794 FZH306	DL
6:2 Fluorotelomer sulfonate	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
8:2 Fluorotelomer sulfonate	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
N-ethylperfluorooctane sulfonamide	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
EtFOSAA	ug/L	98.73704	99.31378	0	0.02	0	0.022
N-ethylperfluorooctane sulfonamidoe	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
N-methylperfluorooctane sulfonamide	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
MeFOSAA	ug/L	99.94997	95.35731	0	0.02	0	0.022
N-methylperfluorooctanesulfonamidol	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
Perfluorobutanoic acid	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
Perfluorobutane Sulfonate (PFBS)	ug/L	98.71117	99.84753	0	0.02	0.01357358	0.022
Perfluorodecane Sulfonate	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
Perfluoroheptanoic Acid (PFHpA)	ug/L	95.13685	89.95128	0	0.02	0.02015355	0.022
Perfluoroheptane sulfonate	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
Perfluorohexanoic Acid (PFHxA)	ug/L	96.82719	91.38624	0	0.02	0.16301726	0.022
Perfluorohexane Sulfonate (PFHxS)	ug/L	91.36893	92.42372	0	0.02	0.64080552	0.022
Perfluorononanoic Acid (PFNA)	ug/L	99.07054	93.45820	0	0.02	0	0.022
Perfluorooctane Sulfonamide (PFOSA)	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
Perfluoropentanoic Acid (PFPeA)	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
Perfluorotetradecanoic Acid	ug/L	96.67494	102.15326	0	0.02	0	0.022
Perfluorotridecanoic Acid	ug/L	100.06429	99.81234	0	0.02	0	0.022
Perfluoroundecanoic Acid (PFUnA)	ug/L	107.58542	110.34205	0	0.02	0	0.022
Perfluorodecanoic Acid (PFDA)	ug/L	93.73946	88.53687	0	0.02	0	0.022
Perfluorododecanoic Acid (PFDoA)	ug/L	91.67334	94.14593	0	0.02	0	0.022
Perfluoro-n-Octanoic Acid (PFOA)	ug/L	96.91656	100.37079	0	0.02	1.09614430	0.2
Perfluorooctane Sulfonate (PFOS)	ug/L	92.78330	98.89724	0	0.02	0.11318006	0.022
13C2-6:2 Fluorotelomer sulfonate	ug/L	N/A*******	N/A*******	N/A*******		N/A*******	
13C2-8:2 Fluorotelomer sulfonate	ug/L	N/A*******	N/A*******	N/A*******		N/A*******	
13C2-perfluorotetradecanoic acid	ug/L	100.961424	86.1290054	82.6856916		80.6911563	
13C4-Perfluorobutanoic acid	ug/L	N/A*******	N/A*******	N/A*******		N/A*******	
D3-MeFOSAA	ug/L	90.5262279	86.5754492	80.7450641		89.6046952	
D5-EtFOSAA	ug/L	97.7875566	85.7484354	78.5457727		88.3538321	
N-methyl-d3-perfluorooctane sulfona	ug/L	N/A*******	N/A*******	N/A*******		N/A*******	
N-ethyl-d5-perfluorooctane sulfonam	ug/L	N/A*******	N/A*******	N/A*******		N/A*******	
13C2-Perfluorodecanoic acid	ug/L	112.120079	101.665566	94.7114312		98.8181289	
13C2-Perfluorododecanoic acid	ug/L	109.599957	93.4889055	87.3455978		87.4807351	
13C2-Perfluorohexanoic acid	ug/L	114.602431	104.803279	95.6065762		100.937394	
13C2-Perfluoroundecanoic acid	ug/L	104.550078	90.3995058	84.6522273		93.0658351	
13C4-Perfluoroheptanoic acid	ug/L	115.926395	104.449446	96.0316232		106.865082	
13C5-Perfluorononanoic acid	ug/L	113.395072	103.848013	99.6858785		105.506174	
13C4-Perfluorooctanoic acid	ug/L	114.477035	97.5740708	91.1349364		97.6113475	
13C4-Perfluorooctanesulfonate	ug/L	110.603717	90.3930272	90.5278272		95.8385808	
13C5-Perfluoropentanoic acid	ug/L	N/A*******	N/A*******	N/A*******		N/A*******	
13C8-Perfluorooctane Sulfonamide	ug/L	N/A*******	N/A*******	N/A*******		N/A*******	
18O2-Perfluorohexanesulfonate	ug/L	114.418335	98.8027438	94.3743446		98.8281409	

Worksheet Number: **5390275**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

Parameter Name	B819794 FZH307	B819794 FZH308	B819794 FZH309	B819794 FZH310	B819794 FZH311	B819794 FZH312	B819794 FZH313
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)	0	0	0	0	0.03091633	0.02861117	0
Perfluorodecane Sulfonate	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluoroheptanoic Acid (PFHpA)	0	0	0	0	0.01428181	0.01411075	0
Perfluoroheptane sulfonate	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluorohexanoic Acid (PFHxA)	0	0	0	0	0.06534061	0.05476750	0
Perfluorohexane Sulfonate (PFHxS)	0	0	0	0	0.29583622	0.24908969	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	0	0	0	0.07670963	0.07203558	0
Perfluorooctane Sulfonate (PFOS)	0	0	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	88.0680000	86.8608573	87.8905475	80.2040040	59.0255218	60.1080556	89.1723513
13C4-Perfluorobutanoic acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
D3-MeFOSAA	77.8589063	85.2540841	89.9948050	75.3728576	81.8120912	81.3136404	85.5567451
D5-EtFOSAA	82.7199877	82.8709282	90.2189944	74.7361183	77.0654875	80.0720739	84.1656061
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	97.1254937	98.0335657	96.7975758	86.3813110	94.0630577	88.4513128	97.8507278
13C2-Perfluorododecanoic acid	83.4585883	88.2851841	87.0291522	81.1838849	82.9666300	78.3342783	91.8266736
13C2-Perfluorohexanoic acid	98.9676811	100.677600	101.236272	95.1771456	84.7393485	100.179614	108.419969
13C2-Perfluoroundecanoic acid	90.9778388	89.3646980	91.9394437	86.9135767	86.3275143	82.7734182	93.1827909
13C4-Perfluoroheptanoic acid	95.3241259	102.536042	101.389379	93.7037731	94.4569724	100.878913	106.932048
13C5-Perfluorononanoic acid	99.3476708	102.154490	99.9785099	92.4394284	95.2594350	99.6626902	99.8473345
13C4-Perfluorooctanoic acid	97.6243949	98.2225352	100.741919	92.5064257	91.5326895	95.2639531	99.5033583
13C4-Perfluorooctanesulfonate	87.5900801	88.3640832	93.5916978	92.4205221	93.2316865	97.2111351	97.3939925
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	91.1006299	94.1380657	102.925923	90.9678119	88.7183475	109.153130	104.470782

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

Parameter Name	B819794 FZH314	B819794 FZH315	B819794 FZH316	B819794 FZH317	DL	B821961 FZT419	DL
6:2 Fluorotelomer sulfonate	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
8:2 Fluorotelomer sulfonate	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
N-ethylperfluorooctane sulfonamide	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
EtFOSAA	0	0	0	0	0.02	0	0.021
N-ethylperfluorooctane sulfonamidoe	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
N-methylperfluorooctane sulfonamide	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
MeFOSAA	0	0	0	0	0.02	0	0.021
N-methylperfluorooctanesulfonamidol	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
Perfluorobutanoic acid	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
Perfluorobutane Sulfonate (PFBS)	0	0	0	0	0.02	0.01637505	0.021
Perfluorodecane Sulfonate	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
Perfluoroheptanoic Acid (PFHpA)	0	0	0	0	0.02	0.01515964	0.021
Perfluoroheptane sulfonate	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
Perfluorohexanoic Acid (PFHxA)	0	0	0	0	0.02	0.03886198	0.021
Perfluorohexane Sulfonate (PFHxS)	0	0	0	0	0.02	0.46502754	0.021
Perfluorononanoic Acid (PFNA)	0	0	0	0	0.02	0	0.021
Perfluorooctane Sulfonamide (PFOSA)	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
Perfluoropentanoic Acid (PFPeA)	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
Perfluorotetradecanoic Acid	0	0	0	0	0.02	0	0.021
Perfluorotridecanoic Acid	0	0	0	0	0.02	0	0.021
Perfluoroundecanoic Acid (PFUnA)	0	0	0	0	0.02	0	0.021
Perfluorodecanoic Acid (PFDA)	0	0	0	0	0.02	0	0.021
Perfluorododecanoic Acid (PFDoA)	0	0	0	0	0.02	0	0.021
Perfluoro-n-Octanoic Acid (PFOA)	0	0	0	0	0.02	0.06906087	0.021
Perfluorooctane Sulfonate (PFOS)	0	0	0	0	0.02	0.14107697	0.021
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	78.7571411	72.3625690	87.8858723	77.6140902		79.3502833	
13C4-Perfluorobutanoic acid	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******	
D3-MeFOSAA	80.0333858	79.6860818	83.2091605	82.7687800		87.3329729	
D5-EtFOSAA	77.8998452	79.1490116	81.4519800	79.4368201		87.4078359	
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	95.3056650	95.1759882	93.5115361	88.9018089		102.919802	
13C2-Perfluorododecanoic acid	85.0529923	79.9925542	84.5824690	84.1392722		74.2118853	
13C2-Perfluorohexanoic acid	91.5104518	91.0355458	96.9239060	92.4985039		93.8165650	
13C2-Perfluoroundecanoic acid	80.0332319	75.1899144	86.1605817	88.6140805		82.3182802	
13C4-Perfluoroheptanoic acid	96.5572929	90.8104079	98.1240645	91.0772973		95.7105483	
13C5-Perfluorononanoic acid	95.4886893	88.0432392	96.5384998	88.5559449		94.8219681	
13C4-Perfluorooctanoic acid	92.1239120	88.8106051	98.1530635	90.5342635		100.511857	
13C4-Perfluorooctanesulfonate	88.4346366	84.6019347	90.6930047	77.4138830		82.4259096	
13C5-Perfluoropentanoic acid	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******	
13C8-Perfluorooctane Sulfonamide	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******	
18O2-Perfluorohexanesulfonate	93.9384731	99.3572278	94.9838535	100.835294		100.234394	

Worksheet Number: **5390275**

PFOS and PFOA in water by SPE/LCMS - Water

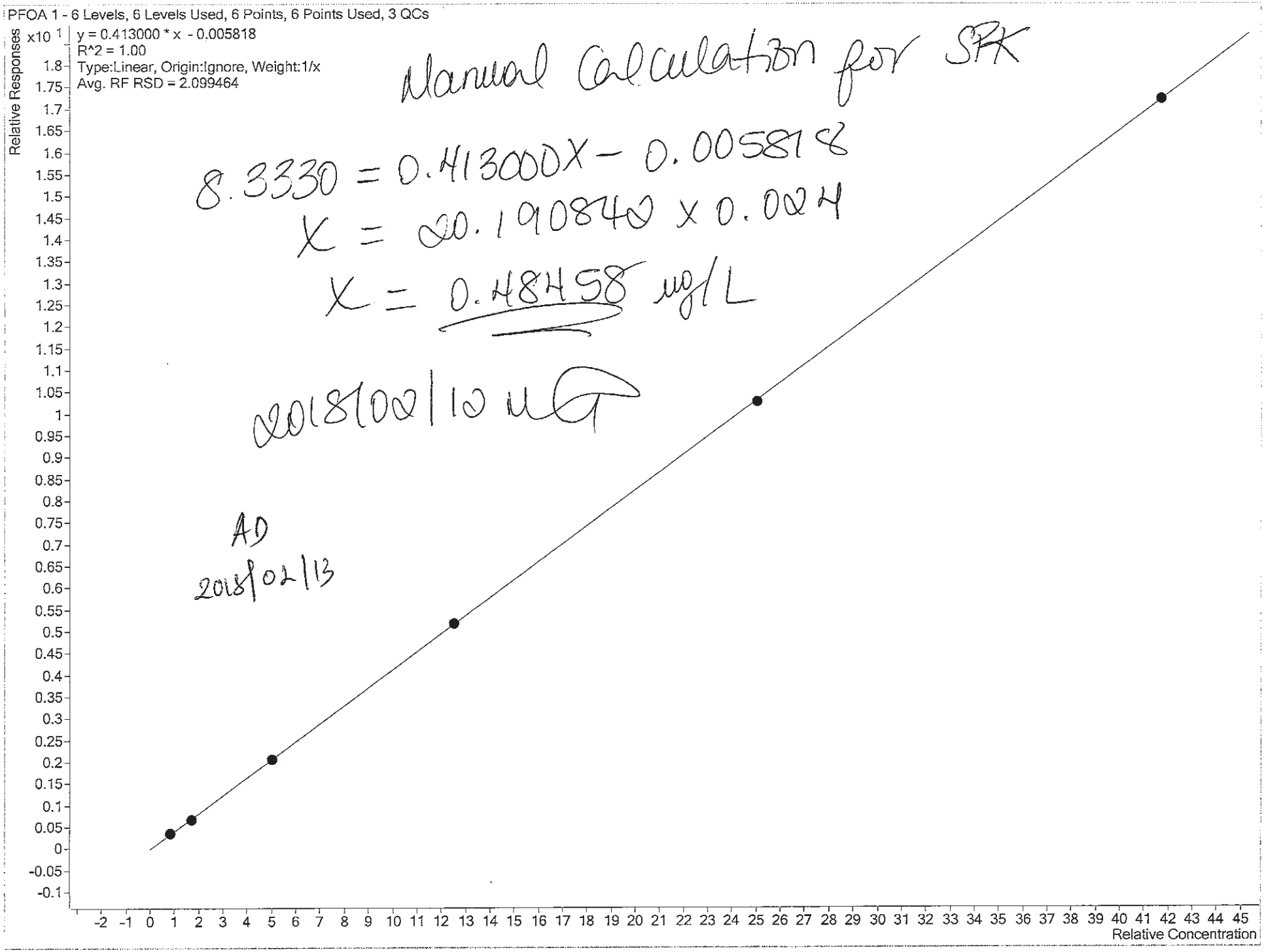
ug/L

Parameter Name	B821961 FZT420	B821961 FZT421	B821961 FZT422	DL	B821961 FZT423	DL	B821961 FZT424
6:2 Fluorotelomer sulfonate	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
8:2 Fluorotelomer sulfonate	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
N-ethylperfluorooctane sulfonamide	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
EtFOSAA	0	0	0	0.02	0	0.023	0
N-ethylperfluorooctane sulfonamidoe	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
N-methylperfluorooctane sulfonamide	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
MeFOSAA	0	0	0	0.02	0	0.023	0
N-methylperfluorooctanesulfonamidol	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
Perfluorobutanoic acid	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
Perfluorobutane Sulfonate (PFBS)	0	0.01838361	0.01171140	0.02	0	0.023	0
Perfluorodecane Sulfonate	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
Perfluoroheptanoic Acid (PFHpA)	0	0	0	0.02	0	0.023	0
Perfluoroheptane sulfonate	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
Perfluorohexanoic Acid (PFHxA)	0	0.00744255	0	0.02	0.02421384	0.023	0
Perfluorohexane Sulfonate (PFHxS)	0.04631918	0.03075768	0	0.02	0.31160970	0.023	0
Perfluorononanoic Acid (PFNA)	0	0	0	0.02	0	0.023	0
Perfluorooctane Sulfonamide (PFOSA)	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
Perfluoropentanoic Acid (PFPeA)	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
Perfluorotetradecanoic Acid	0	0	0	0.02	0	0.023	0
Perfluorotridecanoic Acid	0	0	0	0.02	0	0.023	0
Perfluoroundecanoic Acid (PFUnA)	0	0	0	0.02	0	0.023	0
Perfluorodecanoic Acid (PFDA)	0	0	0	0.02	0	0.023	0
Perfluorododecanoic Acid (PFDoA)	0	0	0	0.02	0	0.023	0
Perfluoro-n-Octanoic Acid (PFOA)	0.00852015	0.00573303	0.00983033	0.02	0.01080789	0.023	0
Perfluorooctane Sulfonate (PFOS)	0.01088635	0.10852173	0.01926183	0.02	0.31025114	0.023	0
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	87.1318776	70.2788267	76.7996558		71.6972452		83.2556952
13C4-Perfluorobutanoic acid	N/A*******	N/A*******	N/A*******		N/A*******		N/A*******
D3-MeFOSAA	89.9449742	100.656693	94.8155504		91.4706144		85.1678129
D5-EtFOSAA	89.9125032	95.6879850	92.9903949		88.1445306		83.2725982
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	94.4935643	107.508859	93.9890425		96.4099639		103.632135
13C2-Perfluorododecanoic acid	87.8506711	86.3701723	87.7841053		86.6857719		87.2522678
13C2-Perfluorohexanoic acid	92.0600584	109.388101	94.0495412		97.0669334		98.5813930
13C2-Perfluoroundecanoic acid	86.2512627	100.084052	85.5319788		84.6068275		98.5789910
13C4-Perfluoroheptanoic acid	93.4975655	106.745638	93.6602120		95.9393122		97.6345691
13C5-Perfluorononanoic acid	89.3677775	105.131647	96.4810608		98.5513872		107.064702
13C4-Perfluorooctanoic acid	88.3623509	106.426906	91.5293614		89.8237945		96.9993103
13C4-Perfluorooctanesulfonate	90.8681164	101.342869	83.8587624		84.6100157		91.1974207
13C5-Perfluoropentanoic acid	N/A*******	N/A*******	N/A*******		N/A*******		N/A*******
13C8-Perfluorooctane Sulfonamide	N/A*******	N/A*******	N/A*******		N/A*******		N/A*******
18O2-Perfluorohexanesulfonate	99.0525028	110.638603	89.6618555		99.3867513		98.9286610

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

Parameter Name	DL	B821961 FZT425	DL	RDL	MDL	IDL	
6:2 Fluorotelomer sulfonate	0.02	N/A*******	0.023	0.02	0.0066	0	
8:2 Fluorotelomer sulfonate	0.02	N/A*******	0.023	0.02	0.0066	0	
N-ethylperfluorooctane sulfonamide	0.02	N/A*******	0.023	0.02	0.01	0	
EtFOSAA	0.02	0	0.023	0.02	0.0033	0	
N-ethylperfluorooctane sulfonamidoe	0.02	N/A*******	0.023	0.02	0.0079	0	
N-methylperfluorooctane sulfonamide	0.02	N/A*******	0.023	0.02	0.013	0	
MeFOSAA	0.02	0	0.023	0.02	0.0029	0	
N-methylperfluorooctanesulfonamidol	0.02	N/A*******	0.023	0.02	0.012	0	
Perfluorobutanoic acid	0.02	N/A*******	0.023	0.02	0.0055	0	
Perfluorobutane Sulfonate (PFBS)	0.02	0	0.023	0.02	0.0054	0	
Perfluorodecane Sulfonate	0.02	N/A*******	0.023	0.02	0.006	0	
Perfluoroheptanoic Acid (PFHpA)	0.02	0	0.023	0.02	0.0074	0	
Perfluoroheptane sulfonate	0.02	N/A*******	0.023	0.02	0.008	0	
Perfluorohexanoic Acid (PFHxA)	0.02	0	0.023	0.02	0.0035	0	
Perfluorohexane Sulfonate (PFHxS)	0.02	0	0.023	0.02	0.0056	0	
Perfluorononanoic Acid (PFNA)	0.02	0	0.023	0.02	0.0087	0	
Perfluorooctane Sulfonamide (PFOSA)	0.02	N/A*******	0.023	0.02	0.0034	0	
Perfluoropentanoic Acid (PFPeA)	0.02	N/A*******	0.023	0.02	0.0075	0	
Perfluorotetradecanoic Acid	0.02	0	0.023	0.02	0.0027	0	
Perfluorotridecanoic Acid	0.02	0	0.023	0.02	0.0038	0	
Perfluoroundecanoic Acid (PFUnA)	0.02	0	0.023	0.02	0.0025	0	
Perfluorodecanoic Acid (PFDA)	0.02	0	0.023	0.02	0.0061	0	
Perfluorododecanoic Acid (PFDoA)	0.02	0	0.023	0.02	0.005	0	
Perfluoro-n-Octanoic Acid (PFOA)	0.02	0	0.023	0.02	0.0033	0	
Perfluorooctane Sulfonate (PFOS)	0.02	0	0.023	0.02	0.006	0	
13C2-6:2 Fluorotelomer sulfonate		N/A*******					
13C2-8:2 Fluorotelomer sulfonate		N/A*******					
13C2-perfluorotetradecanoic acid		74.5209169					
13C4-Perfluorobutanoic acid		N/A*******					
D3-MeFOSAA		76.9862401					
D5-EtFOSAA		79.2626771					
N-methyl-d3-perfluorooctane sulfona		N/A*******					
N-ethyl-d5-perfluorooctane sulfonam		N/A*******					
13C2-Perfluorodecanoic acid		95.2873130					
13C2-Perfluorododecanoic acid		85.5610968					
13C2-Perfluorohexanoic acid		95.6475003					
13C2-Perfluoroundecanoic acid		82.7670369					
13C4-Perfluoroheptanoic acid		96.0336964					
13C5-Perfluorononanoic acid		90.8217031					
13C4-Perfluorooctanoic acid		92.1028542					
13C4-Perfluorooctanesulfonate		83.4431857					
13C5-Perfluoropentanoic acid		N/A*******					
13C8-Perfluorooctane Sulfonamide		N/A*******					
18O2-Perfluorohexanesulfonate		103.207324					



Manual Calculation for SPK

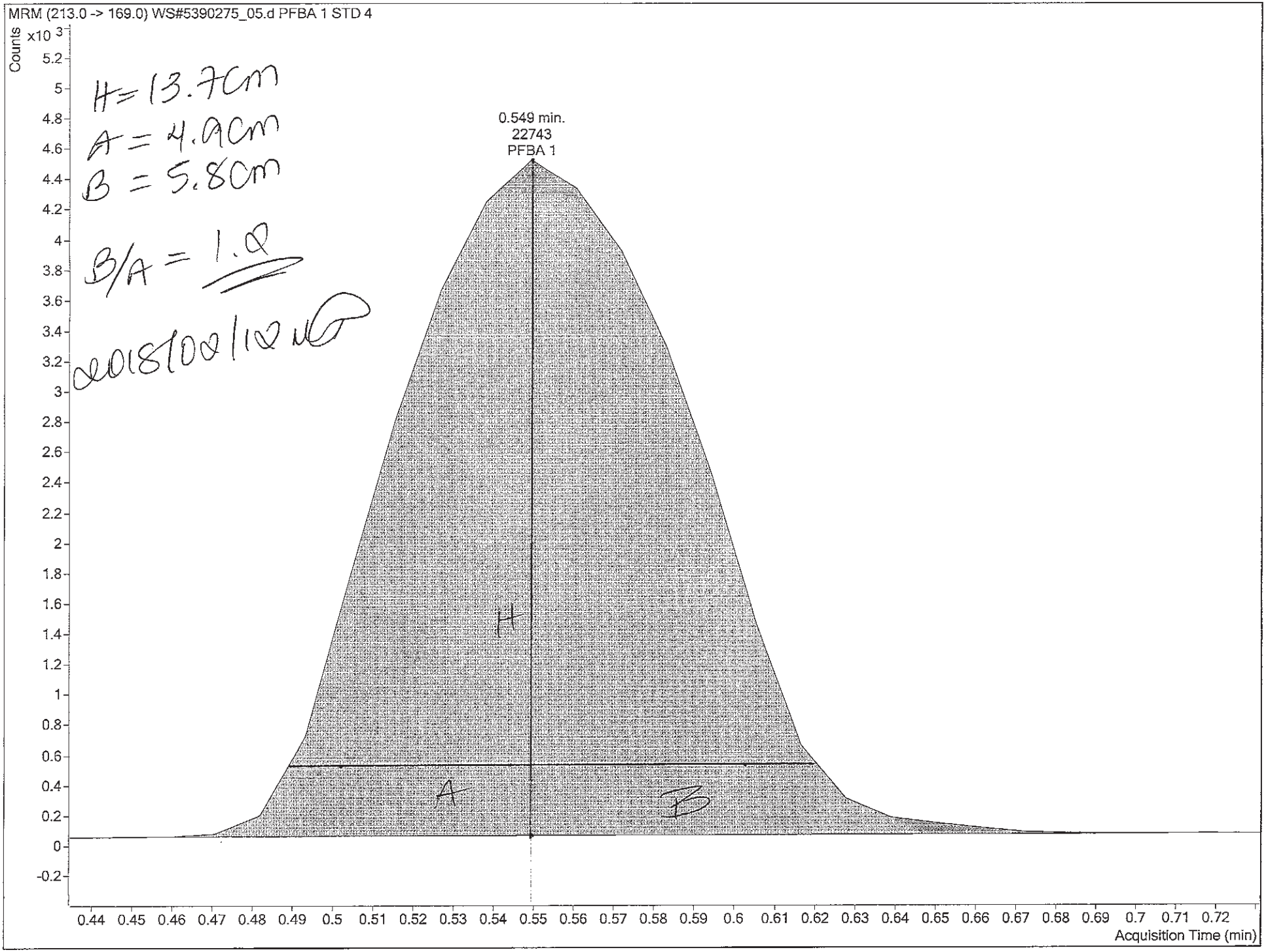
$8.3330 = 0.413000X - 0.005818$

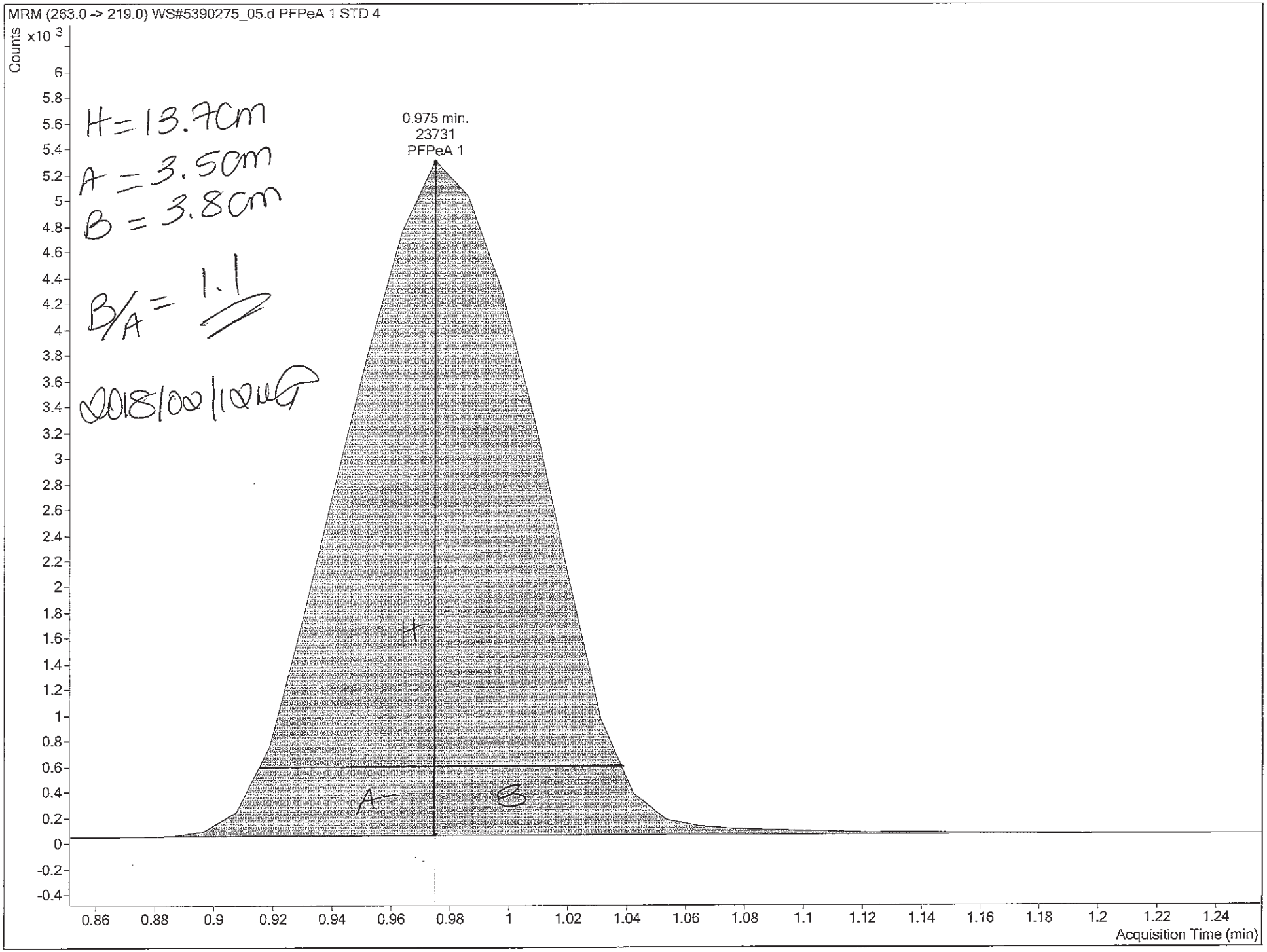
$X = 20.190840 \times 0.024$

$X = \underline{0.48458}$ ug/L

2018/02/10 MG

AD
2018/02/13


MRM (213.0 -> 169.0) WS#5390275_05.d PFBA 1 STD 4
Counts
x10 3
0.549 min.
22743
PFBA 1
H= 13.7cm
A = 4.9cm
B = 5.8cm
B/A = 1.2
20181002/12 MC
H
A
B
Acquisition Time (min)


MRM (263.0 -> 219.0) WS#5390275_05.d PFPeA 1 STD 4
Counts
x10 3
0.975 min.
23731
PFPeA 1
H=13.7cm
A=3.5cm
B=3.8cm
B/A= 1.1
0018/100/10uG
H
A
B
Acquisition Time (min)

Report Name: Worksheet - Parameter Lists

Report Date: 2018/02/08

Test Code: **PFOSALCM-W**

Worksheet Number: **5390275**

Sample Number	Parameter Code	Parameter	
FZH306-01	ETFOSAA	EtFOSAA	*
FZH311-01	MEFOSAA	MeFOSAA	*
FZH312-01	PFBS	Perfluorobutane Sulfonate (PFBS)	
FZT419-01	PFHPA	Perfluoroheptanoic Acid (PFHpA)	
FZT420-01	PFHXA	Perfluorohexanoic Acid (PFHxA)	
FZT421-01	PFHXS	Perfluorohexane Sulfonate (PFHxS)	
FZT422-01	PFNA	Perfluorononanoic Acid (PFNA)	
FZT423-01	PFTEDA	Perfluorotetradecanoic Acid	
FZT424-01	PFTRDA	Perfluorotridecanoic Acid	
FZT425-01	PFUNA	Perfluoroundecanoic Acid (PFUnA)	
	PFDA	Perfluorodecanoic Acid (PFDA)	
	PFDOA	Perfluorododecanoic Acid (PFDoA)	
	PFOA	Perfluoro-n-Octanoic Acid (PFOA)	
	PFOS	Perfluorooctane Sulfonate (PFOS)	
FZH307-01	NONE	NONE	
FZH308-01			
FZH309-01			
FZH310-01			
FZH313-01			
FZH314-01			
FZH315-01			
FZH316-01			
FZH317-01			

* - This parameter is usually off, but will be reported for this group of samples!

WorkSheet 5390275 Instrument Sequences

1.	5390275:SPIKE	SPIKE
2.	5390275:SPIKE:D1	SPIKE :D1
3.	5390275:BLANK	BLANK
4.	5390275:FZH306-01	[redacted]
5.	5390275:FZH307-01	[redacted]
6.	5390275:FZH308-01	[redacted]
7.	5390275:FZH309-01	[redacted]
8.	5390275:FZH310-01	[redacted]
9.	5390275:FZH311-01	[redacted]
10.	5390275:FZH312-01	[redacted]
11.	5390275:FZH313-01	[redacted]
12.	5390275:FZH314-01	[redacted]
13.	5390275:FZH315-01	[redacted]
14.	5390275:FZH316-01	[redacted]
15.	5390275:FZH317-01	[redacted]
16.	5390275:FZT419-01	OLD-OV1-101TW-0118
17.	5390275:FZT420-01	OLD-OV1-102TW-0118
18.	5390275:FZT421-01	OLD-OV1-102TW-0118-D
19.	5390275:FZT422-01	OLD-OV1-103TW-0118
20.	5390275:FZT423-01	OLD-SA2-04ATW-0118
21.	5390275:FZT424-01	EB-GW-012518-3
22.	5390275:FZT425-01	FB-OLD-012518-6

Worklist Report

Agilent Technologies

Instrument Name: LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180209_Low_B.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\20180209\WS#5390275
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

2018/02/09

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#5390275_01.d	Sample		As Method	-
2	STD 1	P2-A2	PFC_Water_Low.m	WS#5390275_02.d	Calibration	STD 1	As Method	-
3	STD 2	P2-A3	PFC_Water_Low.m	WS#5390275_03.d	Calibration	STD 2	As Method	-
4	STD 3	P2-A4	PFC_Water_Low.m	WS#5390275_04.d	Calibration	STD 3	As Method	-
5	STD 4	P2-A5	PFC_Water_Low.m	WS#5390275_05.d	Calibration	STD 4	As Method	-
6	STD 5	P2-A6	PFC_Water_Low.m	WS#5390275_06.d	Calibration	STD 5	As Method	-
7	STD 6	P2-A7	PFC_Water_Low.m	WS#5390275_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#5390275_08.d	Sample		As Method	-
9	ICV	P2-A9	PFC_Water_Low.m	WS#5390275_09.d	QC	ICV	As Method	-
10	ISC	P2-A2	PFC_Water_Low.m	WS#5390275_10.d	ConCal	STD 1	As Method	-
11	5390275:BLANK	P2-B1	PFC_Water_Low.m	WS#5390275_11.d	Sample		As Method	-
12	5390275:SPIKE	P2-B2	PFC_Water_Low.m	WS#5390275_12.d	QC	ICV	As Method	-
13	5390275:SPIKE:D1	P2-B3	PFC_Water_Low.m	WS#5390275_13.d	QC	ICV	As Method	-
14	5390275:FZH306-01:10x	P2-B4	PFC_Water_Low.m	WS#5390275_14.d	QC	ICV	As Method	-
15	5390275:FZH306-01	P2-B5	PFC_Water_Low.m	WS#5390275_15.d	Sample		As Method	-
16	IB	P2-A8	PFC_Water_Low.m	WS#5390275_16.d	Sample		As Method	-
17	5390275:FZH307-01	P2-B6	PFC_Water_Low.m	WS#5390275_17.d	Sample		As Method	-
18	5390275:FZH308-01	P2-B7	PFC_Water_Low.m	WS#5390275_18.d	Sample		As Method	-
19	5390275:FZH309-01	P2-B8	PFC_Water_Low.m	WS#5390275_19.d	Sample		As Method	-
20	5390275:FZH310-01	P2-B9	PFC_Water_Low.m	WS#5390275_20.d	Sample		As Method	-
21	5390275:FZH311-01	P2-C1	PFC_Water_Low.m	WS#5390275_21.d	Sample		As Method	-
22	5390275:FZH312-01	P2-C2	PFC_Water_Low.m	WS#5390275_22.d	Sample		As Method	-
23	5390275:FZH313-01	P2-C3	PFC_Water_Low.m	WS#5390275_23.d	Sample		As Method	-
24	5390275:FZH314-01	P2-C4	PFC_Water_Low.m	WS#5390275_24.d	Sample		As Method	-
25	CCV	P2-A5	PFC_Water_Low.m	WS#5390275_25.d	ConCal	STD 4	As Method	-
26	5390275:FZH315-01	P2-C5	PFC_Water_Low.m	WS#5390275_26.d	Sample		As Method	-
27	5390275:FZH316-01	P2-C6	PFC_Water_Low.m	WS#5390275_27.d	Sample		As Method	-
28	5390275:FZH317-01	P2-C7	PFC_Water_Low.m	WS#5390275_28.d	Sample		As Method	-
29	5390275:FZT419-01:10x	P2-C8	PFC_Water_Low.m	WS#5390275_29.d	Sample		As Method	-
30	5390275:FZT419-01	P2-C9	PFC_Water_Low.m	WS#5390275_30.d	Sample		As Method	-

Maxxam Analytics

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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
31	IB	P2-A8	PFC_Water_Low.m	WS#5390275_31.d	Sample		As Method	-
32	5390275:FZT420-01	P2-D1	PFC_Water_Low.m	WS#5390275_32.d	Sample		As Method	-
33	5390275:FZT421-01	P2-D2	PFC_Water_Low.m	WS#5390275_33.d	Sample		As Method	-
34	5390275:FZT422-01	P2-D3	PFC_Water_Low.m	WS#5390275_34.d	Sample		As Method	-
35	5390275:FZT423-01	P2-D4	PFC_Water_Low.m	WS#5390275_35.d	Sample		As Method	-
36	5390275:FZT424-01	P2-D5	PFC_Water_Low.m	WS#5390275_36.d	Sample		As Method	-
37	CCV	P2-A5	PFC_Water_Low.m	WS#5390275_37.d	ConCal	STD 4	As Method	-
38	5390275:FZT425-01	P2-D6	PFC_Water_Low.m	WS#5390275_38.d	Sample		As Method	-
39	CCV	P2-A5	PFC_Water_Low.m	WS#5390275_39.d	ConCal	STD 4	As Method	-

Worklist Report

Agilent Technologies

Instrument Name: LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180209_Low_B_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\20180209\WS#5390275_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)

2018/02/09

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#5390275_FOSAA_01.d	Sample		As Method	-
2	STD 1	P2-A2	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_02.d	Calibration	STD 1	As Method	-
3	STD 2	P2-A3	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_03.d	Calibration	STD 2	As Method	-
4	STD 3	P2-A4	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_04.d	Calibration	STD 3	As Method	-
5	STD 4	P2-A5	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_05.d	Calibration	STD 4	As Method	-
6	STD 5	P2-A6	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_06.d	Calibration	STD 5	As Method	-
7	STD 6	P2-A7	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_07.d	Calibration	STD 6	As Method	-
8	IB	P2-A8	PFC_Water_Low_FOSAA.m	WS#5390275_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#5390275_FOSAA_09.d	QC	ICV	As Method	-
10	ISC	P2-A2	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_10.d	ConCal	STD 1	As Method	-
11	5390275:BLANK	P2-B1	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_11.d	Sample		As Method	-
12	5390275:SPIKE	P2-B2	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_12.d	QC	ICV	As Method	-
13	5390275:SPIKE:D1	P2-B3	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_13.d	QC	ICV	As Method	-
14	5390275:FZH306-01:10x	P2-B4	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_14.d	QC	ICV	As Method	-
15	5390275:FZH306-01	P2-B5	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_15.d	Sample		As Method	-
16	IB	P2-A8	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_16.d	Sample		As Method	-
17	5390275:FZH307-01	P2-B6	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_17.d	Sample		As Method	-
18	5390275:FZH308-01	P2-B7	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_18.d	Sample		As Method	-
19	5390275:FZH309-01	P2-B8	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_19.d	Sample		As Method	-
20	5390275:FZH310-01	P2-B9	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_20.d	Sample		As Method	-
21	5390275:FZH311-01	P2-C1	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_21.d	Sample		As Method	-
22	5390275:FZH312-01	P2-C2	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_22.d	Sample		As Method	-
23	5390275:FZH313-01	P2-C3	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_23.d	Sample		As Method	-
24	5390275:FZH314-01	P2-C4	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_24.d	Sample		As Method	-
25	CCV	P2-A5	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_25.d	ConCal	STD 4	As Method	-
26	5390275:FZH315-01	P2-C5	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_26.d	Sample		As Method	-
27	5390275:FZH316-01	P2-C6	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_27.d	Sample		As Method	-
28	5390275:FZH317-01	P2-C7	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_28.d	Sample		As Method	-
29	5390275:FZT419-01:10x	P2-C8	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_29.d	Sample		As Method	-
30	5390275:FZT419-01	P2-C9	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_30.d	Sample		As Method	-
31	IB	P2-A8	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_31.d	Sample		As Method	-
32	5390275:FZT420-01	P2-D1	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_32.d	Sample		As Method	-
33	5390275:FZT421-01	P2-D2	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_33.d	Sample		As Method	-
34	5390275:FZT422-01	P2-D3	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_34.d	Sample		As Method	-

Maxxam Analytics

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D:\MassHunter\Worklists\PFCs\PFC_180209_Low_B_FOSAA.wkl

Report generation date: 09-Feb-2018 10:31:26 AM

Worklist Report

Agilent Technologies

Maxxam Analytics

	Sample Name	Sample Position	Method	Data File	Sample Type	Level Name	Inj Vol (µl)	Comment
35	5390275:FZT423-01	P2-D4	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_35.d	Sample		As Method	-
36	5390275:FZT424-01	P2-D5	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_36.d	Sample		As Method	-
37	CCV	P2-A5	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_37.d	ConCal	STD 4	As Method	-
38	5390275:FZT425-01	P2-D6	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_38.d	Sample		As Method	-
39	CCV	P2-A5	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_39.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 4:39 PM	PFC_Water_Low.m	WS#5390275_02.d	P2-A2
STD 2	-	2018/02/09 4:44 PM	PFC_Water_Low.m	WS#5390275_03.d	P2-A3
STD 3	-	2018/02/09 4:49 PM	PFC_Water_Low.m	WS#5390275_04.d	P2-A4
STD 4	-	2018/02/09 4:53 PM	PFC_Water_Low.m	WS#5390275_05.d	P2-A5
STD 5	-	2018/02/09 4:58 PM	PFC_Water_Low.m	WS#5390275_06.d	P2-A6
STD 6	-	2018/02/09 5:03 PM	PFC_Water_Low.m	WS#5390275_07.d	P2-A7
IB	-	2018/02/09 5:08 PM	PFC_Water_Low.m	WS#5390275_08.d	P2-A8
ICV	-	2018/02/09 5:13 PM	PFC_Water_Low.m	WS#5390275_09.d	P2-A9
ISC	-	2018/02/09 5:18 PM	PFC_Water_Low.m	WS#5390275_10.d	P2-A2
5390275:BLANK	-	2018/02/09 5:23 PM	PFC_Water_Low.m	WS#5390275_11.d	P2-B1
5390275:SPIKE	-	2018/02/09 5:28 PM	PFC_Water_Low.m	WS#5390275_12.d	P2-B2
5390275:SPIKE:D1	-	2018/02/09 5:33 PM	PFC_Water_Low.m	WS#5390275_13.d	P2-B3
5390275:FZH306-01:10x	Reported for PFOA only.	2018/02/09 5:38 PM	PFC_Water_Low.m	WS#5390275_14.d	P2-B4
5390275:FZH306-01	Reported for all except PFOA.	2018/02/09 5:43 PM	PFC_Water_Low.m	WS#5390275_15.d	P2-B5
IB	-	2018/02/09 5:48 PM	PFC_Water_Low.m	WS#5390275_16.d	P2-A8
5390275:FZH307-01	-	2018/02/09 5:53 PM	PFC_Water_Low.m	WS#5390275_17.d	P2-B6
5390275:FZH308-01	-	2018/02/09 5:58 PM	PFC_Water_Low.m	WS#5390275_18.d	P2-B7
5390275:FZH309-01	-	2018/02/09 6:03 PM	PFC_Water_Low.m	WS#5390275_19.d	P2-B8
5390275:FZH310-01	-	2018/02/09 6:07 PM	PFC_Water_Low.m	WS#5390275_20.d	P2-B9
5390275:FZH311-01	-	2018/02/09 6:12 PM	PFC_Water_Low.m	WS#5390275_21.d	P2-C1
5390275:FZH312-01	-	2018/02/09 6:17 PM	PFC_Water_Low.m	WS#5390275_22.d	P2-C2
5390275:FZH313-01	-	2018/02/09 6:22 PM	PFC_Water_Low.m	WS#5390275_23.d	P2-C3
5390275:FZH314-01	-	2018/02/09 6:27 PM	PFC_Water_Low.m	WS#5390275_24.d	P2-C4
CCV	-	2018/02/09 6:32 PM	PFC_Water_Low.m	WS#5390275_25.d	P2-A5
5390275:FZH315-01	-	2018/02/09 6:37 PM	PFC_Water_Low.m	WS#5390275_26.d	P2-C5
5390275:FZH316-01	-	2018/02/09 6:42 PM	PFC_Water_Low.m	WS#5390275_27.d	P2-C6
5390275:FZH317-01	-	2018/02/09 6:47 PM	PFC_Water_Low.m	WS#5390275_28.d	P2-C7
5390275:FZT419-01:10x	not used.	2018/02/09 6:52 PM	PFC_Water_Low.m	WS#5390275_29.d	P2-C8
5390275:FZT419-01	Reported for all.	2018/02/09 6:57 PM	PFC_Water_Low.m	WS#5390275_30.d	P2-C9
IB	-	2018/02/09 7:02 PM	PFC_Water_Low.m	WS#5390275_31.d	P2-A8
5390275:FZT420-01	-	2018/02/09 7:07 PM	PFC_Water_Low.m	WS#5390275_32.d	P2-D1
5390275:FZT421-01	-	2018/02/09 7:12 PM	PFC_Water_Low.m	WS#5390275_33.d	P2-D2
5390275:FZT422-01	-	2018/02/09 7:17 PM	PFC_Water_Low.m	WS#5390275_34.d	P2-D3

FINAL INJECTION SEQUENCE

Sample					
Name	Comment	Acq. Date-Time	Acq. Method File	Data File	Pos.
5390275:FZT423-01	-	2018/02/09 7:21 PM	PFC_Water_Low.m	WS#5390275_35.d	P2-D4
5390275:FZT424-01	-	2018/02/09 7:26 PM	PFC_Water_Low.m	WS#5390275_36.d	P2-D5
CCV	-	2018/02/09 7:31 PM	PFC_Water_Low.m	WS#5390275_37.d	P2-A5
5390275:FZT425-01	-	2018/02/09 7:36 PM	PFC_Water_Low.m	WS#5390275_38.d	P2-D6
CCV	-	2018/02/09 7:41 PM	PFC_Water_Low.m	WS#5390275_39.d	P2-A5

FINAL INJECTION SEQUENCE

Sample					
Name	Comment	Acq. Date-Time	Acq. Method File	Data File	Pos.
STD 1	-	2018/02/10 12:30 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_02.d	P2-A2
STD 2	-	2018/02/10 12:32 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_03.d	P2-A3
STD 3	-	2018/02/10 12:35 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_04.d	P2-A4
STD 4	-	2018/02/10 12:37 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_05.d	P2-A5
STD 5	-	2018/02/10 12:39 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_06.d	P2-A6
STD 6	-	2018/02/10 12:42 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_07.d	P2-A7
IB	-	2018/02/10 12:44 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_08.d	P2-A8
ICV	-	2018/02/10 12:47 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_09.d	P2-A9
ISC	-	2018/02/10 12:49 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_10.d	P2-A2
5390275:BLANK	-	2018/02/10 12:52 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_11.d	P2-B1
5390275:SPIKE	-	2018/02/10 12:54 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_12.d	P2-B2
5390275:SPIKE:D1	-	2018/02/10 12:56 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_13.d	P2-B3
5390275:FZH306-01:10x	not used.	2018/02/10 12:59 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_14.d	P2-B4
5390275:FZH306-01	Reported for all.	2018/02/10 1:01 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_15.d	P2-B5
IB	-	2018/02/10 1:04 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_16.d	P2-A8
5390275:FZH307-01	-	2018/02/10 1:06 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_17.d	P2-B6
5390275:FZH308-01	-	2018/02/10 1:08 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_18.d	P2-B7
5390275:FZH309-01	-	2018/02/10 1:11 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_19.d	P2-B8
5390275:FZH310-01	-	2018/02/10 1:13 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_20.d	P2-B9
5390275:FZH311-01	-	2018/02/10 1:16 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_21.d	P2-C1
5390275:FZH312-01	-	2018/02/10 1:18 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_22.d	P2-C2
5390275:FZH313-01	-	2018/02/10 1:20 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_23.d	P2-C3
5390275:FZH314-01	-	2018/02/10 1:23 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_24.d	P2-C4
CCV	-	2018/02/10 1:25 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_25.d	P2-A5
5390275:FZH315-01	-	2018/02/10 1:28 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_26.d	P2-C5
5390275:FZH316-01	-	2018/02/10 1:30 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_27.d	P2-C6
5390275:FZH317-01	-	2018/02/10 1:33 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_28.d	P2-C7
5390275:FZT419-01:10x	not used.	2018/02/10 1:35 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_29.d	P2-C8
5390275:FZT419-01	Reported for all.	2018/02/10 1:37 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_30.d	P2-C9
IB	-	2018/02/10 1:40 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_31.d	P2-A8
5390275:FZT420-01	-	2018/02/10 1:42 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_32.d	P2-D1
5390275:FZT421-01	-	2018/02/10 1:45 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_33.d	P2-D2
5390275:FZT422-01	-	2018/02/10 1:47 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_34.d	P2-D3

FINAL INJECTION SEQUENCE

Sample					
Name	Comment	Acq. Date-Time	Acq. Method File	Data File	Pos.
5390275:FZT423-01	-	2018/02/10 1:49 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_35.d	P2-D4
5390275:FZT424-01	-	2018/02/10 1:52 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_36.d	P2-D5
CCV	-	2018/02/10 1:54 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_37.d	P2-A5
5390275:FZT425-01	-	2018/02/10 1:57 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_38.d	P2-D6
CCV	-	2018/02/10 1:59 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_39.d	P2-A5

DoD Projects - Internal Data Validation Checklist

Run date: 2018/02/13

Worksheet # (s): 5393111

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: MCP Date: 2018/02/13

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: CM Date: 2018/02/14

Comments: GFAD933 + 934 sent for rework to high level analysis due to high levels of analytes on 2018/02/14

*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 # 5393111 Testcode: PFOSACM-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: 2018/02/09

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:

Refer to FCD-01126 BL 2018/02/12

WS# : 5393111

Page #: 1/2

RUSH

Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Friday, February 09, 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 (estimated)	Final Vol (mL)	DF or AF (mL)	# Cont	Expiry Date	Test DeadLine	Criteria	Extract Date (mg)
7-3		SPIKE	0	PFOS		0	125	3	1X					2018/02/09 27
7-2		SPIKE	1	PFOS		0	125	3	1X					2018/02/09 29
7-1		BLANK				0	125	3	1X					2018/02/09 30
7-4	B820260	*FZJ946-01R		[redacted]		0	125	3	1X	2	2018/02/09	2018/02/09 23:00	DOD	2018/02/09 31
7-5	B821961	*FZT426-01R		OLD-SA2-06ATW-*		<0.1	12.5	3	10X	2	2018/02/09	2018/02/12 23:00	DOD	2018/02/09 32
7-7	B821961	*FZT427-01R		OLD-SA2-01ATW-*		<0.1	125	3	1X	2	2018/02/09	2018/02/12 23:00	DOD	2018/02/09 25
7-9	B821961	*FZT428-01R		FB-OLD-012618-7		0	125	3	1X	2	2018/02/09	2018/02/12 23:00	DOD	2018/02/09 26
7-10	B821961	*FZT430-01R		EB-GW-012618-4		0	125	3	1X	2	2018/02/09	2018/02/12 23:00	DOD	2018/02/09 28
7-12	B821961	*FZT431-01R		DI BLANK		0	125	3	1X	2	2018/02/09	2018/02/12 23:00	DOD	2018/02/09 29
7-14	B823886*	*GAC647-01R		[redacted]		0	125	3	1X	2	2018/02/13	2018/02/08 17:00	DOD	2018/02/09 32
7-16	B823886*	*GAC649-01R		[redacted]		0	125	3	1X	2	2018/02/13	2018/02/08 17:00	DOD	2018/02/09 31
7-18	B823886*	*GAC651-01R		[redacted]		0	125	3	1X	2	2018/02/13	2018/02/08 17:00	DOD	2018/02/09 30
7-19	B824213	*GAD929-01R		[redacted]		0	125	3	1X	2	2018/02/09	2018/02/14 23:00	DOD	2018/02/09 28
7-20	B824213	*GAD930-01R		[redacted]		0	125	3	1X	2	2018/02/09	2018/02/14 23:00	DOD	2018/02/09 26
7-21	B824213	*GAD931-01R		[redacted]		<0.1	125	3	1X	2	2018/02/09	2018/02/14 23:00	DOD	2018/02/09 27
7-22	B824213	*GAD932-01R		[redacted]		0	125	3	1X	2	2018/02/09	2018/02/14 23:00	DOD	2018/02/09 29
7-23	B824213	*GAD933-01R		[redacted]		<0.1	1.25	3	100X	2	2018/02/09	2018/02/14 23:00	DOD	2018/02/09 32
7-24	B824213	*GAD934-01R		[redacted]		<0.1	1.25	3	100X	2	2018/02/09	2018/02/14 23:00	DOD	2018/02/09 30

2018/02/09 SSV.

Remarks: • Carbon clean up done.
• 9 did 10x for FZT426 because sample is very bad. dark brown in colour and Turbid.

Samples extracted by: Shivani Shivani

Instrumentation performed by: FC Date: 2018/02/12

Calculations performed by: [signature] Date: 2018/02/13

Validated by: CM Date: 2018/02/14

Job No.	Rep / Client Name / Remarks	Contact	Client Tier	National
GB820260	[redacted]			
GB821961	SP8 Earth Toxics Inc	Rick Carr	Tier 5 (Enviro.)	AECOM
	nreg, PFOSALCM-W Level IV Data Package and TetraTech EDD required F/C by NGV - 2018/02/08 Project #: JM11 NTC Orlando			
GB823886	[redacted]			
GB824213				

Job	Sample	Lab Comments
	SPIKE	Spk/Spk Dup prepared due to insufficient amount of sample
	SPIKE	
	BLANK	
B820260	FZJ946-01R	
B821961	FZT426-01R	
B821961	FZT427-01R	Centrifuged at 4000 rpm.
B821961	FZT428-01R	
B821961	FZT430-01R	
B821961	FZT431-01R	
B823886	GAC647-01R	"
B823886	GAC649-01R	"
B823886	GAC651-01R	
B824213	GAD929-01R	
B824213	GAD930-01R	
B824213	GAD931-01R	"
B824213	GAD932-01R	
B824213	GAD933-01R	Sample we are dosing as a high also.
B824213	GAD934-01R	"

Calibration Standard Preparation #

	Mean (ul)	Spk (ul)	IS
S_1	2825	25	SK7377
S_2	2800	50	
S_3	2700	150	
S_4	2813	37.5	I-5297
S_5	2775	75	
S_6	2725	125	
ICV	2788	62.5	I-5299
IB	2850		150 (ul)

JMS 2018/02/09

Worksheet Reagent Tracking Record

Worksheet # 5393111

Volume (µL)

Surrogate/Spike solutions	√	Solution ID #	Conc.	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(4/4) JPB	50/125 ng/mL	200	100 / 150	200	100 / 150	200	100 / 150
PFC Injection IS	✓	SI-6770(1/2) JPB	~~400 ng/mL~~ 100	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	✓	SHB0545	2018/02/09	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	108-349
0.2% Formic Acid				Leachate Fluid			
0.05M KOH				Reagent Water	✓	57297	2018/02/09
0.05M HCl							

*Spiked by: SSU

Spike Date: 2018/02/09

Spike Syringe/Pipette ID#: G24390G

Int. Std Syringe/Pipette ID#: Intanol std# K19865F Injection IS# G24390G

*Spiking Witnessed by: JPB

Final pH

Equipment & ID	√	Equipment	ID#	√	Equipment	Lot #
Pipettor K55791G K39732F	✓	SPE Cartridge	003437247A	✓	QC Balance ID	FC-1
	✓	Filter			Thermometer ID &Temp	
Dispenser		Centrifuge	42148683	9:30-9:35		
		Sonicator				

Bottle Tracking
Bottle# 18801
Cap# 18778
Systems plus Lot# 18/01/31

Comments: 850 ml volumetric Cylinder #3026
Envi Carb# 92806V

* - SPIKING OF QC's & SAMPLES MUST BE WITNESSED AT ALL TIMES.

Worksheet: 5393111 **Dilution and Column Cleanup Worksheet**

Job Number	Sample ID	Sample: Initial Final Volume	Dilution Required	Sample added mL	Solvent Added mL	Int Stan Added uL	New Effective Final Volume	INITIAL SSV. DATE	Column Clean Up
B821961	FZT426	1	10X	12.5	-	150	125	218/02/04	-
B824213	GAD933	-	100X	1.25	123.75	150	125	218/02/05	-
	GAD934	-	100X	1.25	123.75	150	125	218/02/05	-

218/02/04 SSV

10ml # K551916

250ml volumetric cylinder # 3026

LCMS4_0 # 57297

Worksheet Number: **5393111**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

Parameter Name	Units	SPIKE	SPIKE Dup1	BLANK	B820260 FZJ946	DL	B821961 FZT426
6:2 Fluorotelomer sulfonate	ug/L	105.69287	106.76411	0	0	0.02	N/A*******
8:2 Fluorotelomer sulfonate	ug/L	101.42034	104.21074	0	0	0.02	N/A*******
N-ethylperfluorooctane sulfonamide	ug/L	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******
EtFOSAA	ug/L	104.15328	105.10459	0	N/A*******	0.02	0
N-ethylperfluorooctane sulfonamidoe	ug/L	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******
N-methylperfluorooctane sulfonamide	ug/L	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******
MeFOSAA	ug/L	101.90288	104.67266	0	N/A*******	0.02	0
N-methylperfluorooctanesulfonamidol	ug/L	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******
Perfluorobutanoic acid	ug/L	96.81029	104.98966	0	0	0.02	N/A*******
Perfluorobutane Sulfonate (PFBS)	ug/L	107.00695	98.52294	0	0	0.02	0
Perfluorodecane Sulfonate	ug/L	104.79485	102.96079	0	0	0.02	N/A*******
Perfluoroheptanoic Acid (PFHpA)	ug/L	101.81802	104.83022	0	0	0.02	0
Perfluoroheptane sulfonate	ug/L	99.40149	96.84953	0	N/A*******	0.02	N/A*******
Perfluorohexanoic Acid (PFHxA)	ug/L	101.44902	94.16447	0	0	0.02	0
Perfluorohexane Sulfonate (PFHxS)	ug/L	102.56776	95.58329	0	0	0.02	0
Perfluorononanoic Acid (PFNA)	ug/L	94.58887	98.51440	0	0	0.02	0
Perfluorooctane Sulfonamide (PFOSA)	ug/L	98.01192	97.80571	0	0	0.02	N/A*******
Perfluoropentanoic Acid (PFPeA)	ug/L	111.45918	107.15878	0	0	0.02	N/A*******
Perfluorotetradecanoic Acid	ug/L	102.19269	99.13740	0	0	0.02	0
Perfluorotridecanoic Acid	ug/L	99.78780	99.17589	0	0	0.02	0
Perfluoroundecanoic Acid (PFUnA)	ug/L	107.82925	107.82118	0	0	0.02	0
Perfluorodecanoic Acid (PFDA)	ug/L	115.34391	108.96260	0	0	0.02	0
Perfluorododecanoic Acid (PFDoA)	ug/L	95.85328	97.10967	0	0	0.02	0
Perfluoro-n-Octanoic Acid (PFOA)	ug/L	98.21271	99.91137	0	0	0.02	0
Perfluorooctane Sulfonate (PFOS)	ug/L	97.55814	92.35321	0	0	0.02	0
13C2-6:2 Fluorotelomer sulfonate	ug/L	86.6777179	80.6630225	89.7940994	104.654840		N/A*******
13C2-8:2 Fluorotelomer sulfonate	ug/L	83.2276206	77.0906257	85.9065722	100.954615		N/A*******
13C2-perfluorotetradecanoic acid	ug/L	77.9719025	78.8074986	72.6418162	80.5230889		103.135320
13C4-Perfluorobutanoic acid	ug/L	95.7828537	81.8678722	82.5117476	104.013416		N/A*******
D3-MeFOSAA	ug/L	69.6808388	70.5580714	69.9853279	N/A*******		91.0947184
D5-EtFOSAA	ug/L	69.2740254	70.6266166	68.6214440	N/A*******		95.0929083
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	79.0950256	76.8141603	77.3264715	91.3326560		97.5437155
13C2-Perfluorododecanoic acid	ug/L	79.2750111	79.6398802	71.9099347	88.4543326		100.711089
13C2-Perfluorohexanoic acid	ug/L	88.9887591	84.6180257	81.7761702	100.356479		98.0923416
13C2-Perfluoroundecanoic acid	ug/L	81.3910058	76.1475850	72.0955109	83.8490214		96.2276267
13C4-Perfluoroheptanoic acid	ug/L	89.3336735	83.3770847	81.4167937	102.482051		103.934368
13C5-Perfluorononanoic acid	ug/L	95.4453505	85.5366455	85.8861557	104.385366		101.137320
13C4-Perfluorooctanoic acid	ug/L	92.7042064	83.9236045	81.8081538	101.300808		103.433938
13C4-Perfluorooctanesulfonate	ug/L	92.7490334	87.8238736	86.0467372	90.3489945		102.541223
13C5-Perfluoropentanoic acid	ug/L	87.0563413	83.7976020	86.4858595	99.2311615		N/A*******
13C8-Perfluorooctane Sulfonamide	ug/L	84.8568322	81.0758076	76.2852142	92.8788435		N/A*******
18O2-Perfluorohexanesulfonate	ug/L	84.3361519	83.2682194	86.0512907	111.590941		101.148786

Worksheet Number: **5393111**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

Parameter Name	DL	B821961 FZT427	B821961 FZT428	B821961 FZT430	B821961 FZT431	B823886 GAC647	B823886 GAC649
6:2 Fluorotelomer sulfonate	0.2	N/A*******	N/A*******	N/A*******	N/A*******	0	0
8:2 Fluorotelomer sulfonate	0.2	N/A*******	N/A*******	N/A*******	N/A*******	0	0
N-ethylperfluorooctane sulfonamide	0.2	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
EtFOSAA	0.2	0	0	0	0	N/A*******	N/A*******
N-ethylperfluorooctane sulfonamidoe	0.2	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
N-methylperfluorooctane sulfonamide	0.2	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
MeFOSAA	0.2	0	0	0	0	N/A*******	N/A*******
N-methylperfluorooctanesulfonamidol	0.2	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluorobutanoic acid	0.2	N/A*******	N/A*******	N/A*******	N/A*******	0	0
Perfluorobutane Sulfonate (PFBS)	0.2	0	0	0	0	0	0
Perfluorodecane Sulfonate	0.2	N/A*******	N/A*******	N/A*******	N/A*******	0	0
Perfluoroheptanoic Acid (PFHpA)	0.2	0	0	0	0	0	0
Perfluoroheptane sulfonate	0.2	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluorohexanoic Acid (PFHxA)	0.2	0	0	0	0	0	0
Perfluorohexane Sulfonate (PFHxS)	0.2	0	0	0	0	0	0
Perfluorononanoic Acid (PFNA)	0.2	0	0	0	0	0	0
Perfluorooctane Sulfonamide (PFOSA)	0.2	N/A*******	N/A*******	N/A*******	N/A*******	0	0
Perfluoropentanoic Acid (PFPeA)	0.2	N/A*******	N/A*******	N/A*******	N/A*******	0	0
Perfluorotetradecanoic Acid	0.2	0	0	0	0	0	0
Perfluorotridecanoic Acid	0.2	0	0	0	0	0	0
Perfluoroundecanoic Acid (PFUnA)	0.2	0	0	0	0	0	0
Perfluorodecanoic Acid (PFDA)	0.2	0	0	0	0	0	0
Perfluorododecanoic Acid (PFDoA)	0.2	0	0	0	0	0	0
Perfluoro-n-Octanoic Acid (PFOA)	0.2	0	0	0	0	0	0
Perfluorooctane Sulfonate (PFOS)	0.2	0	0	0	0	0	0
13C2-6:2 Fluorotelomer sulfonate		N/A*******	N/A*******	N/A*******	N/A*******	116.517392	81.2705514
13C2-8:2 Fluorotelomer sulfonate		N/A*******	N/A*******	N/A*******	N/A*******	122.094329	76.1050920
13C2-perfluorotetradecanoic acid		64.1128099	78.3443888	70.3914851	73.6783156	111.444959	77.3155084
13C4-Perfluorobutanoic acid		N/A*******	N/A*******	N/A*******	N/A*******	76.3475598	63.2048365
D3-MeFOSAA		77.7432242	76.2251821	73.7251123	75.0092066	N/A*******	N/A*******
D5-EtFOSAA		77.1035814	75.6644729	74.2104118	72.9664901	N/A*******	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		93.4515519	82.9247189	81.0760738	84.8227009	114.758855	86.3140535
13C2-Perfluorododecanoic acid		89.4800847	81.0991644	70.3717362	79.6903254	109.573159	78.9507751
13C2-Perfluorohexanoic acid		93.2477634	93.6197216	87.0079188	95.2841229	124.954541	88.9701396
13C2-Perfluoroundecanoic acid		81.9605712	74.9965870	75.5501112	74.5941791	114.496458	85.0631486
13C4-Perfluoroheptanoic acid		96.5532240	88.3975993	93.1177153	90.9481709	125.097886	83.1060895
13C5-Perfluorononanoic acid		92.9035897	89.6257384	83.1882254	91.1526005	125.640415	88.8856718
13C4-Perfluorooctanoic acid		98.7533050	90.8016729	86.5821224	90.1970791	124.769560	87.4776965
13C4-Perfluorooctanesulfonate		103.625548	94.2519294	88.8359476	82.7354861	121.308951	91.4718284
13C5-Perfluoropentanoic acid		N/A*******	N/A*******	N/A*******	N/A*******	119.713803	81.8153443
13C8-Perfluorooctane Sulfonamide		N/A*******	N/A*******	N/A*******	N/A*******	127.853116	84.8445384
18O2-Perfluorohexanesulfonate		90.4038486	98.9841635	91.4490289	85.7293043	134.709157	92.3903242

Worksheet Number: **5393111**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

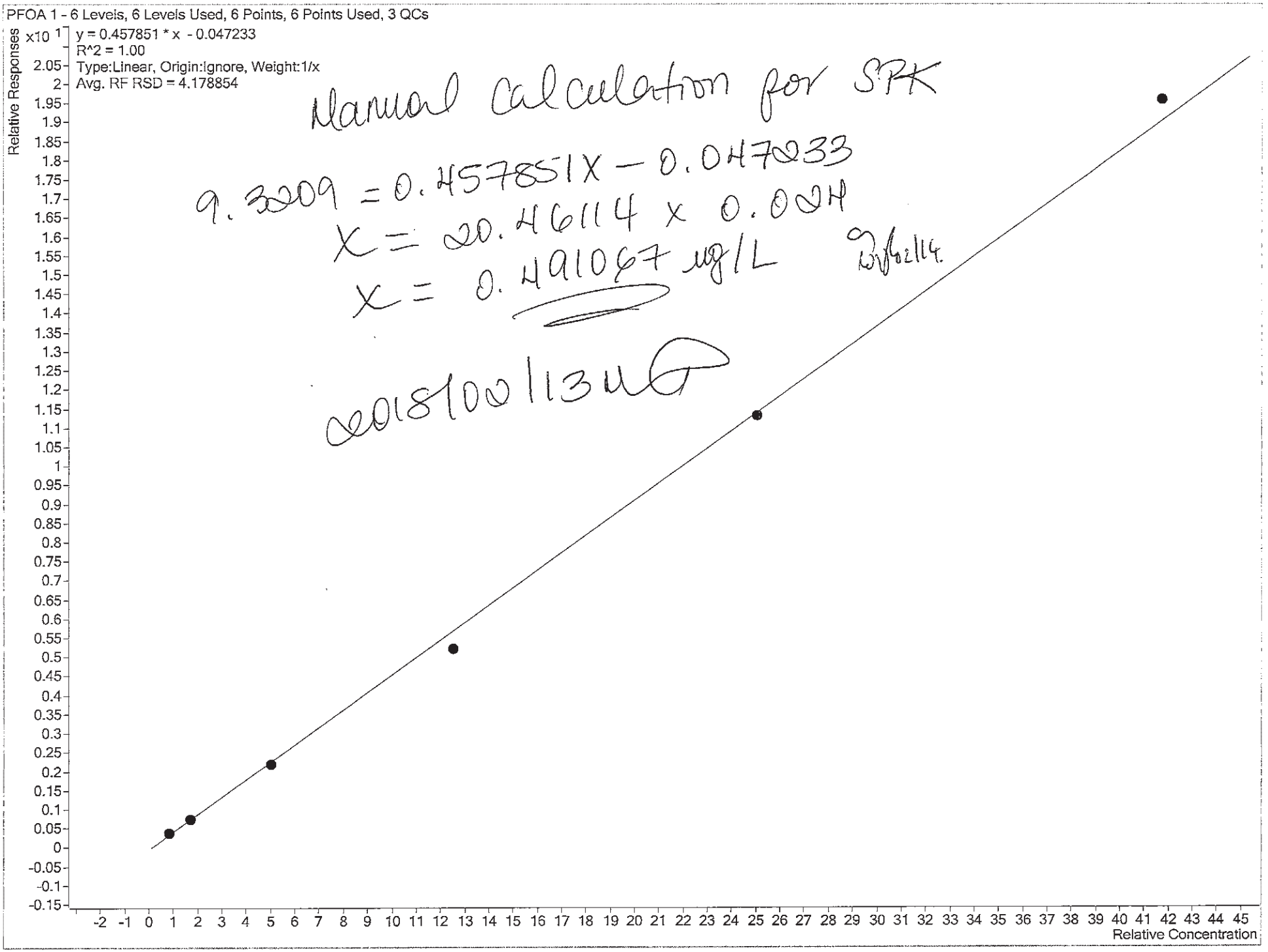
Parameter Name	B823886 GAC651	B824213 GAD929	B824213 GAD930	B824213 GAD931	B824213 GAD932	DL	B824213 GAD933
6:2 Fluorotelomer sulfonate	0	0	0	0	0	0.02	N/A*******
8:2 Fluorotelomer sulfonate	0	0	0	0	0	0.02	N/A*******
N-ethylperfluorooctane sulfonamide	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******
EtFOSAA	N/A*******	0	0	0	0	0.02	0
N-ethylperfluorooctane sulfonamidoe	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******
N-methylperfluorooctane sulfonamide	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******
MeFOSAA	N/A*******	0	0	0	0	0.02	0
N-methylperfluorooctanesulfonamidol	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******
Perfluorobutanoic acid	0	0	0	0	0	0.02	N/A*******
Perfluorobutane Sulfonate (PFBS)	0	0	0	0	0	0.02	1.54195164
Perfluorodecane Sulfonate	0	0	0	0	0	0.02	N/A*******
Perfluoroheptanoic Acid (PFHpA)	0	0	0	0	0	0.02	1.18944524
Perfluoroheptane sulfonate	N/A*******	0	0	0	0	0.02	N/A*******
Perfluorohexanoic Acid (PFHxA)	0	0	0	0	0	0.02	4.39839741
Perfluorohexane Sulfonate (PFHxS)	0	0	0	0	0	0.02	31.6427107
Perfluorononanoic Acid (PFNA)	0	0	0	0	0	0.02	0
Perfluorooctane Sulfonamide (PFOSA)	0	0	0	0	0	0.02	N/A*******
Perfluoropentanoic Acid (PFPeA)	0	0	0	0	0	0.02	N/A*******
Perfluorotetradecanoic Acid	0	0	0	0	0	0.02	0
Perfluorotridecanoic Acid	0	0	0	0	0	0.02	0
Perfluoroundecanoic Acid (PFUnA)	0	0	0	0	0	0.02	0
Perfluorodecanoic Acid (PFDA)	0	0	0	0	0	0.02	0
Perfluorododecanoic Acid (PFDoA)	0	0	0	0	0	0.02	0
Perfluoro-n-Octanoic Acid (PFOA)	0	0	0	0	0	0.02	5.76491697
Perfluorooctane Sulfonate (PFOS)	0	0	0	0.02278008	0	0.02	240.451900
13C2-6:2 Fluorotelomer sulfonate	104.575378	91.5911860	99.5687772	99.8204014	100.886305		N/A*******
13C2-8:2 Fluorotelomer sulfonate	94.0289644	80.6138466	95.9500274	89.9974499	89.7788706		N/A*******
13C2-perfluorotetradecanoic acid	78.4003134	71.6298248	80.3805289	60.8990572	68.2389077		79.6429256
13C4-Perfluorobutanoic acid	95.5756973	84.5243044	97.2382628	93.5251213	96.3160936		85.6527749
D3-MeFOSAA	N/A*******	73.0012565	74.9642190	66.9518255	77.0005286		70.1518910
D5-EtFOSAA	N/A*******	76.4197875	78.8549114	70.5865209	75.8225004		70.0461846
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	85.7828367	84.0615846	82.3983130	82.6575460	82.5763946		79.6908372
13C2-Perfluorododecanoic acid	84.8939026	72.2911348	84.8713935	70.5288286	76.2423837		73.4461017
13C2-Perfluorohexanoic acid	92.9808857	90.3314663	96.8950305	91.0506578	91.9571033		91.0222568
13C2-Perfluoroundecanoic acid	89.9132019	76.3745169	83.0895864	80.2146710	75.7011233		74.1657675
13C4-Perfluoroheptanoic acid	98.7676559	86.5651227	100.601624	95.7180050	86.3839934		85.6275015
13C5-Perfluorononanoic acid	98.2143785	90.5550384	96.6598776	91.3058643	82.7508580		82.1539656
13C4-Perfluorooctanoic acid	96.3986447	88.3889896	99.0135260	90.0033548	86.6597525		88.4435680
13C4-Perfluorooctanesulfonate	94.5377183	90.5494851	103.536361	95.0215201	86.9077260		N/A*******
13C5-Perfluoropentanoic acid	97.0517626	86.3602265	97.1930848	91.2605374	91.8654017		N/A*******
13C8-Perfluorooctane Sulfonamide	88.5105163	85.4631847	95.4302078	82.8952047	93.7823091		N/A*******
18O2-Perfluorohexanesulfonate	98.9561350	93.5581677	109.632889	91.9206618	89.6098577		89.2170716

Worksheet Number: **5393111**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

Parameter Name	B824213 GAD934	DL	RDL	MDL	IDL		
6:2 Fluorotelomer sulfonate	N/A*******	2	0.02	0.0066	0		
8:2 Fluorotelomer sulfonate	N/A*******	2	0.02	0.0066	0		
N-ethylperfluorooctane sulfonamide	N/A*******	2	0.02	0.01	0		
EtFOSAA	0	2	0.02	0.0033	0		
N-ethylperfluorooctane sulfonamidoe	N/A*******	2	0.02	0.0079	0		
N-methylperfluorooctane sulfonamide	N/A*******	2	0.02	0.013	0		
MeFOSAA	0	2	0.02	0.0029	0		
N-methylperfluorooctanesulfonamidol	N/A*******	2	0.02	0.012	0		
Perfluorobutanoic acid	N/A*******	2	0.02	0.0055	0		
Perfluorobutane Sulfonate (PFBS)	32.1664698	2	0.02	0.0054	0		
Perfluorodecane Sulfonate	N/A*******	2	0.02	0.006	0		
Perfluoroheptanoic Acid (PFHpA)	9.01235455	2	0.02	0.0074	0		
Perfluoroheptane sulfonate	N/A*******	2	0.02	0.008	0		
Perfluorohexanoic Acid (PFHxA)	52.6657501	2	0.02	0.0035	0		
Perfluorohexane Sulfonate (PFHxS)	226.751200	2	0.02	0.0056	0		
Perfluorononanoic Acid (PFNA)	0	2	0.02	0.0087	0		
Perfluorooctane Sulfonamide (PFOSA)	N/A*******	2	0.02	0.0034	0		
Perfluoropentanoic Acid (PFPeA)	N/A*******	2	0.02	0.0075	0		
Perfluorotetradecanoic Acid	0	2	0.02	0.0027	0		
Perfluorotridecanoic Acid	0	2	0.02	0.0038	0		
Perfluoroundecanoic Acid (PFUnA)	0	2	0.02	0.0025	0		
Perfluorodecanoic Acid (PFDA)	0	2	0.02	0.0061	0		
Perfluorododecanoic Acid (PFDoA)	0	2	0.02	0.005	0		
Perfluoro-n-Octanoic Acid (PFOA)	28.8674964	2	0.02	0.0033	0		
Perfluorooctane Sulfonate (PFOS)	1126.27380	2	0.02	0.006	0		
13C2-6:2 Fluorotelomer sulfonate	N/A*******						
13C2-8:2 Fluorotelomer sulfonate	N/A*******						
13C2-perfluorotetradecanoic acid	53.7912963						
13C4-Perfluorobutanoic acid	95.9061312						
D3-MeFOSAA	75.5392952						
D5-EtFOSAA	72.3555102						
N-methyl-d3-perfluorooctane sulfona	N/A*******						
N-ethyl-d5-perfluorooctane sulfonam	N/A*******						
13C2-Perfluorodecanoic acid	86.3161082						
13C2-Perfluorododecanoic acid	78.8717989						
13C2-Perfluorohexanoic acid	93.9266583						
13C2-Perfluoroundecanoic acid	81.6063245						
13C4-Perfluoroheptanoic acid	87.6927476						
13C5-Perfluorononanoic acid	94.2584877						
13C4-Perfluorooctanoic acid	94.1786479						
13C4-Perfluorooctanesulfonate	N/A*******						
13C5-Perfluoropentanoic acid	N/A*******						
13C8-Perfluorooctane Sulfonamide	N/A*******						
18O2-Perfluorohexanesulfonate	N/A*******						



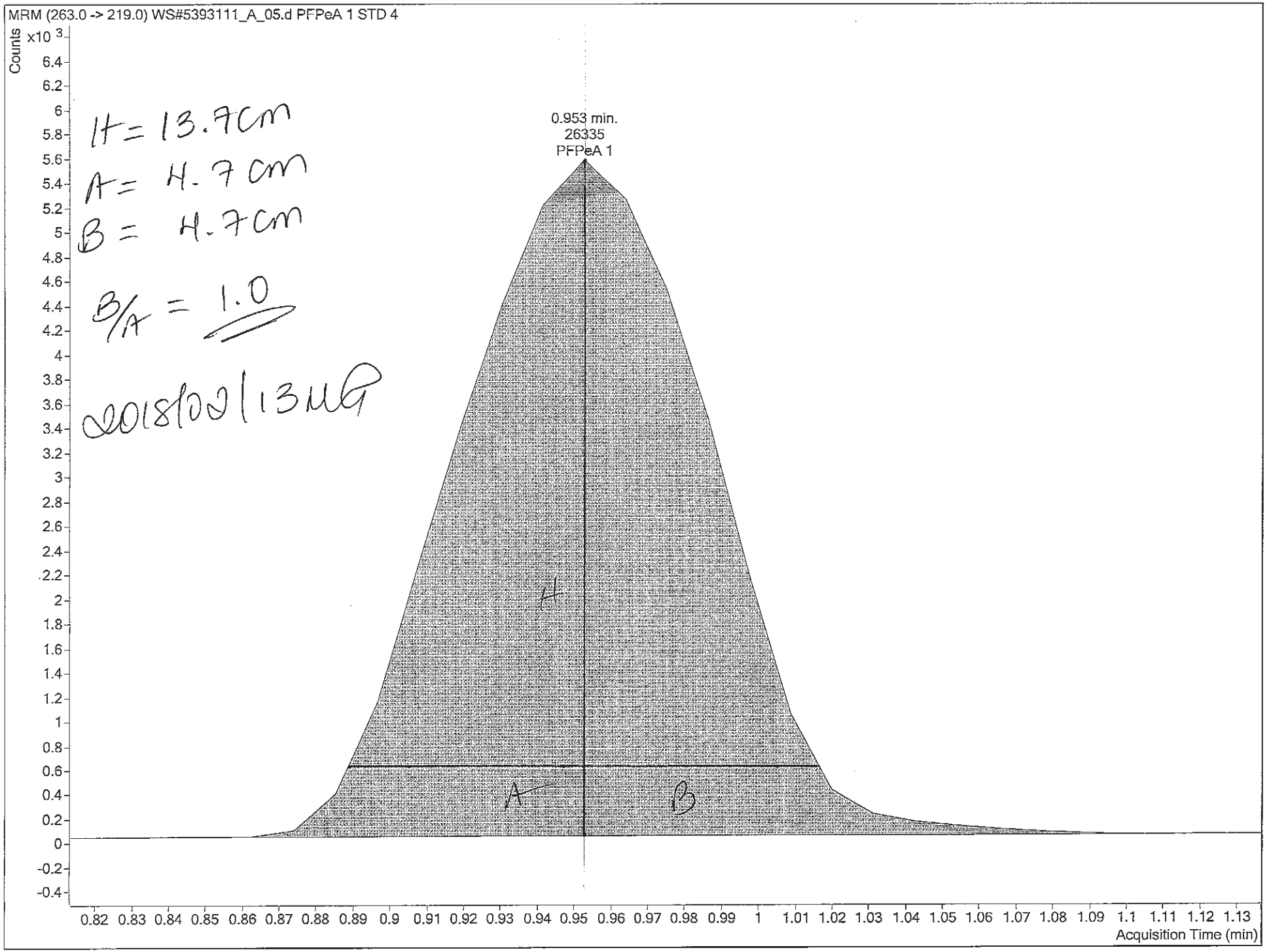
Manual calculation for SPK

$9.3209 = 0.457851X - 0.047233$

$X = 20.46114 \times 0.024$

$X = 0.491067$ ug/L

2018/02/13 MG



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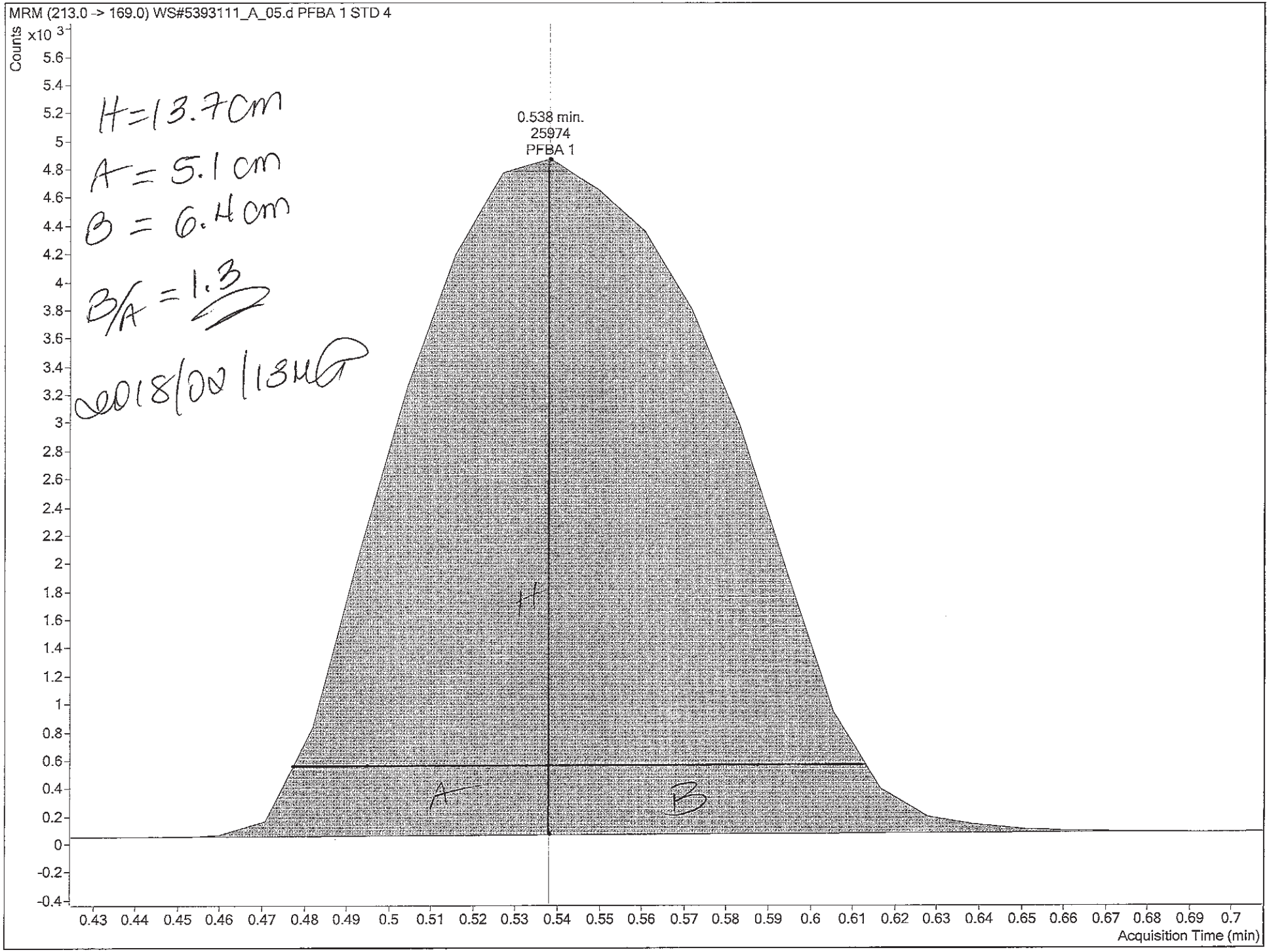
MRM (213.0 -> 169.0) WS#5393111_A_05.d PFBA 1 STD 4
Counts
x10 3
0.538 min.
25974
PFBA 1
H=13.7cm
A=5.1cm
B=6.4cm
B/A=1.3
2018/02/13
H
A
B
Acquisition Time (min)

Report Name: Worksheet - Parameter Lists

Report Date: 2018/02/09

Test Code: **PFOSALCM-W**

Worksheet Number: **5393111**

Sample Number	Parameter Code	Parameter	
FZJ946-01	6:2FTS	6:2 Fluorotelomer sulfonate	*
GAC647-01	8:2FTS	8:2 Fluorotelomer sulfonate	*
GAC649-01	PFBA	Perfluorobutanoic acid	
GAC651-01	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 (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)	
FZT426-01	ETFOSAA	EtFOSAA	*
FZT427-01	MEFOSAA	MeFOSAA	*
FZT428-01	PFBS	Perfluorobutane Sulfonate (PFBS)	
FZT430-01	PFHPA	Perfluoroheptanoic Acid (PFHpA)	
FZT431-01	PFHXA	Perfluorohexanoic Acid (PFHxA)	
GAD933-01	PFHXS	Perfluorohexane Sulfonate (PFHxS)	
GAD934-01	PFNA	Perfluorononanoic Acid	

* - This parameter is usually off, but will be reported for this group of samples!

Report Name: Worksheet - Parameter Lists

Report Date: 2018/02/09

Test Code: **PFOSALCM-W**

Worksheet Number: **5393111**

Sample Number	Parameter Code	Parameter
		(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)
GAD929-01	NONE	NONE
GAD930-01		
GAD931-01		
GAD932-01		

* - This parameter is usually off, but will be reported for this group of samples!

WorkSheet 5393111 Instrument Sequences

1.	5393111:SPIKE	SPIKE
2.	5393111:SPIKE:D1	SPIKE :D1
3.	5393111:BLANK	BLANK
4.	5393111:FZJ946-01	[redacted]
5.	5393111:FZT426-01	OLD-SA2-06ATW-0118
6.	5393111:FZT427-01	OLD-SA2-01ATW-0118
7.	5393111:FZT428-01	FB-OLD-012618-7
8.	5393111:FZT430-01	EB-GW-012618-4
9.	5393111:FZT431-01	DI BLANK
10.	5393111:GAC647-01	[redacted]
11.	5393111:GAC649-01	[redacted]
12.	5393111:GAC651-01	[redacted]
13.	5393111:GAD929-01	[redacted]
14.	5393111:GAD930-01	[redacted]
15.	5393111:GAD931-01	[redacted]
16.	5393111:GAD932-01	[redacted]
17.	5393111:GAD933-01	[redacted]
18.	5393111:GAD934-01	[redacted]

Worklist Report

Agilent Technologies

Instrument Name: LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180212_Low.wkl

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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\20180212\WS#5393111
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# SHBJ5451, Sigma

FC 2018/02/12

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#5393111_01.d	Sample		As Method	-
2	STD 1	P2-A2	PFC_Water_Low.m	WS#5393111_02.d	Calibration	STD 1	As Method	-
3	STD 2	P2-A3	PFC_Water_Low.m	WS#5393111_03.d	Calibration	STD 2	As Method	-
4	STD 3	P2-A4	PFC_Water_Low.m	WS#5393111_04.d	Calibration	STD 3	As Method	-
5	STD 4	P2-A5	PFC_Water_Low.m	WS#5393111_05.d	Calibration	STD 4	As Method	-
6	STD 5	P2-A6	PFC_Water_Low.m	WS#5393111_06.d	Calibration	STD 5	As Method	-
7	STD 6	P2-A7	PFC_Water_Low.m	WS#5393111_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#5393111_08.d	Sample		As Method	-
9	ICV	P2-A9	PFC_Water_Low.m	WS#5393111_09.d	QC	ICV	As Method	-
10	ISC	P2-A2	PFC_Water_Low.m	WS#5393111_10.d	ConCal	STD 1	As Method	-
11	5393111:BLANK	P2-B1	PFC_Water_Low.m	WS#5393111_11.d	Sample		As Method	-
12	5393111:SPIKE	P2-B2	PFC_Water_Low.m	WS#5393111_12.d	QC	ICV	As Method	-
13	5393111:SPIKE:D1	P2-B3	PFC_Water_Low.m	WS#5393111_13.d	QC	ICV	As Method	-
14	5393111:FZJ946-01	P2-B4	PFC_Water_Low.m	WS#5393111_14.d	Sample		As Method	-
15	5393111:FZT426-01:10x	P2-B5	PFC_Water_Low.m	WS#5393111_15.d	Sample		As Method	-
16	IB	P2-A8	PFC_Water_Low.m	WS#5393111_16.d	Sample		As Method	-
17	5393111:FZT427-01	P2-B6	PFC_Water_Low.m	WS#5393111_17.d	Sample		As Method	-
18	5393111:FZT428-01	P2-B7	PFC_Water_Low.m	WS#5393111_18.d	Sample		As Method	-
19	5393111:FZT430-01	P2-B8	PFC_Water_Low.m	WS#5393111_19.d	Sample		As Method	-
20	5393111:FZT431-01	P2-B9	PFC_Water_Low.m	WS#5393111_20.d	Sample		As Method	-
21	5393111:GAC647-01	P2-C1	PFC_Water_Low.m	WS#5393111_21.d	Sample		As Method	-
22	5393111:GAC649-01	P2-C2	PFC_Water_Low.m	WS#5393111_22.d	Sample		As Method	-
23	5393111:GAC651-01	P2-C3	PFC_Water_Low.m	WS#5393111_23.d	Sample		As Method	-
24	5393111:GAD929-01	P2-C4	PFC_Water_Low.m	WS#5393111_24.d	Sample		As Method	-
25	CCV	P2-A5	PFC_Water_Low.m	WS#5393111_25.d	ConCal	STD 4	As Method	-
26	5393111:GAD930-01	P2-C5	PFC_Water_Low.m	WS#5393111_26.d	Sample		As Method	-
27	5393111:GAD931-01	P2-C6	PFC_Water_Low.m	WS#5393111_27.d	Sample		As Method	-
28	5393111:GAD932-01	P2-C7	PFC_Water_Low.m	WS#5393111_28.d	Sample		As Method	-
29	5393111:GAD933-01:100x	P2-C8	PFC_Water_Low.m	WS#5393111_29.d	Sample		As Method	-
30	IB	P2-A8	PFC_Water_Low.m	WS#5393111_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	5393111:GAD934-01:100x	P2-C9	PFC_Water_Low.m	WS#5393111_31.d	Sample		As Method	-
32	IB	P2-A8	PFC_Water_Low.m	WS#5393111_32.d	Sample		As Method	-
33	CCV	P2-A5	PFC_Water_Low.m	WS#5393111_33.d	ConCal	STD 4	As Method	-

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Worklist Report

Agilent Technologies

Maxxam Analytics

Instrument Name: LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180212_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\20180212\WS#5393111_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)

cc 20180212

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#5393111_FOSAA_01.d	Sample		As Method	-
2	STD 1	P2-A2	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_02.d	Calibration	STD 1	As Method	-
3	STD 2	P2-A3	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_03.d	Calibration	STD 2	As Method	-
4	STD 3	P2-A4	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_04.d	Calibration	STD 3	As Method	-
5	STD 4	P2-A5	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_05.d	Calibration	STD 4	As Method	-
6	STD 5	P2-A6	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_06.d	Calibration	STD 5	As Method	-
7	STD 6	P2-A7	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_07.d	Calibration	STD 6	As Method	-
8	IB	P2-A8	PFC_Water_Low_FOSAA.m	WS#5393111_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#5393111_FOSAA_09.d	QC	ICV	As Method	-
10	ISC	P2-A2	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_10.d	ConCal	STD 1	As Method	-
11	5393111:BLANK	P2-B1	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_11.d	Sample		As Method	-
12	5393111:SPIKE	P2-B2	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_12.d	QC	ICV	As Method	-
13	5393111:SPIKE:D1	P2-B3	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_13.d	QC	ICV	As Method	-
14	5393111:FZJ946-01	P2-B4	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_14.d	Sample		As Method	-
15	5393111:FZT426-01:10x	P2-B5	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_15.d	Sample		As Method	-
16	IB	P2-A8	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_16.d	Sample		As Method	-
17	5393111:FZT427-01	P2-B6	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_17.d	Sample		As Method	-
18	5393111:FZT428-01	P2-B7	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_18.d	Sample		As Method	-
19	5393111:FZT430-01	P2-B8	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_19.d	Sample		As Method	-
20	5393111:FZT431-01	P2-B9	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_20.d	Sample		As Method	-
21	5393111:GAC647-01	P2-C1	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_21.d	Sample		As Method	-
22	5393111:GAC649-01	P2-C2	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_22.d	Sample		As Method	-
23	5393111:GAC651-01	P2-C3	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_23.d	Sample		As Method	-
24	5393111:GAD929-01	P2-C4	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_24.d	Sample		As Method	-
25	CCV	P2-A5	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_25.d	ConCal	STD 4	As Method	-
26	5393111:GAD930-01	P2-C5	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_26.d	Sample		As Method	-
27	5393111:GAD931-01	P2-C6	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_27.d	Sample		As Method	-
28	5393111:GAD932-01	P2-C7	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_28.d	Sample		As Method	-
29	5393111:GAD933-01:100x	P2-C8	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_29.d	Sample		As Method	-
30	IB	P2-A8	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_30.d	Sample		As Method	-
31	5393111:GAD934-01:100x	P2-C9	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_31.d	Sample		As Method	-
32	IB	P2-A8	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_32.d	Sample		As Method	-
33	CCV	P2-A5	PFC_Water_Low_FOSAA.m	WS#5393111_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	-	2018/02/13 1:11 PM	PFC_Water_Low.m	WS#5393111_A_02.d	P2-A2
STD 2	-	2018/02/13 1:16 PM	PFC_Water_Low.m	WS#5393111_A_03.d	P2-A3
STD 3	-	2018/02/13 1:21 PM	PFC_Water_Low.m	WS#5393111_A_04.d	P2-A4
STD 4	-	2018/02/13 1:26 PM	PFC_Water_Low.m	WS#5393111_A_05.d	P2-A5
STD 5	-	2018/02/13 1:31 PM	PFC_Water_Low.m	WS#5393111_A_06.d	P2-A6
STD 6	-	2018/02/13 1:36 PM	PFC_Water_Low.m	WS#5393111_A_07.d	P2-A7
IB	-	2018/02/13 1:41 PM	PFC_Water_Low.m	WS#5393111_A_08.d	P2-A8
ICV	-	2018/02/13 1:45 PM	PFC_Water_Low.m	WS#5393111_A_09.d	P2-A9
ISC	-	2018/02/13 1:50 PM	PFC_Water_Low.m	WS#5393111_A_10.d	P2-A2
5393111:BLANK	-	2018/02/13 1:55 PM	PFC_Water_Low.m	WS#5393111_A_11.d	P2-B1
5393111:SPIKE	-	2018/02/13 2:00 PM	PFC_Water_Low.m	WS#5393111_A_12.d	P2-B2
5393111:SPIKE:D1	-	2018/02/13 2:05 PM	PFC_Water_Low.m	WS#5393111_A_13.d	P2-B3
5393111:FZJ946-01	-	2018/02/13 2:10 PM	PFC_Water_Low.m	WS#5393111_A_14.d	P2-B4
5393111:FZT426-01:10x	-	2018/02/13 2:15 PM	PFC_Water_Low.m	WS#5393111_A_15.d	P2-B5
IB	-	2018/02/13 2:20 PM	PFC_Water_Low.m	WS#5393111_A_16.d	P2-A8
5393111:FZT427-01	-	2018/02/13 2:25 PM	PFC_Water_Low.m	WS#5393111_A_17.d	P2-B6
5393111:FZT428-01	-	2018/02/13 2:30 PM	PFC_Water_Low.m	WS#5393111_A_18.d	P2-B7
5393111:FZT430-01	-	2018/02/13 2:35 PM	PFC_Water_Low.m	WS#5393111_A_19.d	P2-B8
5393111:FZT431-01	-	2018/02/13 2:40 PM	PFC_Water_Low.m	WS#5393111_A_20.d	P2-B9
5393111:GAC647-01	-	2018/02/13 2:45 PM	PFC_Water_Low.m	WS#5393111_A_21.d	P2-C1
5393111:GAC649-01	-	2018/02/13 2:50 PM	PFC_Water_Low.m	WS#5393111_A_22.d	P2-C2
5393111:GAC651-01	-	2018/02/13 2:55 PM	PFC_Water_Low.m	WS#5393111_A_23.d	P2-C3
5393111:GAD929-01	-	2018/02/13 2:59 PM	PFC_Water_Low.m	WS#5393111_A_24.d	P2-C4
CCV	-	2018/02/13 3:04 PM	PFC_Water_Low.m	WS#5393111_A_25.d	P2-A5
5393111:GAD930-01	-	2018/02/13 3:09 PM	PFC_Water_Low.m	WS#5393111_A_26.d	P2-C5
5393111:GAD931-01	-	2018/02/13 3:14 PM	PFC_Water_Low.m	WS#5393111_A_27.d	P2-C6
5393111:GAD932-01	-	2018/02/13 3:19 PM	PFC_Water_Low.m	WS#5393111_A_28.d	P2-C7
5393111:GAD933-01:100x	Reported for all except PFOS.	2018/02/13 3:24 PM	PFC_Water_Low.m	WS#5393111_A_29.d	P2-C8
IB	-	2018/02/13 3:29 PM	PFC_Water_Low.m	WS#5393111_A_30.d	P2-A8
5393111:GAD934-01:100x	Reported for all except PFHxS, PFOS.	2018/02/13 3:34 PM	PFC_Water_Low.m	WS#5393111_A_31.d	P2-C9
IB	-	2018/02/13 3:39 PM	PFC_Water_Low.m	WS#5393111_A_32.d	P2-A8
CCV	-	2018/02/13 3:44 PM	PFC_Water_Low.m	WS#5393111_A_33.d	P2-A5

FINAL INJECTION SEQUENCE

Sample					
Name	Comment	Acq. Date-Time	Acq. Method File	Data File	Pos.
STD 1	-	2018/02/13 11:29 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_02.d	P2-A2
STD 2	-	2018/02/13 11:31 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_03.d	P2-A3
STD 3	-	2018/02/13 11:34 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_04.d	P2-A4
STD 4	-	2018/02/13 11:36 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_05.d	P2-A5
STD 5	-	2018/02/13 11:39 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_06.d	P2-A6
STD 6	-	2018/02/13 11:41 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_07.d	P2-A7
IB	-	2018/02/13 11:43 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_08.d	P2-A8
ICV	-	2018/02/13 11:46 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_09.d	P2-A9
ISC	-	2018/02/13 11:48 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_10.d	P2-A2
5393111:BLANK	-	2018/02/13 11:51 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_11.d	P2-B1
5393111:SPIKE	-	2018/02/13 11:53 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_12.d	P2-B2
5393111:SPIKE:D1	-	2018/02/13 11:56 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_13.d	P2-B3
5393111:FZJ946-01	-	2018/02/13 11:58 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_14.d	P2-B4
5393111:FZT426-01:10x	-	2018/02/13 12:00 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_15.d	P2-B5
IB	-	2018/02/13 12:03 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_16.d	P2-A8
5393111:FZT427-01	-	2018/02/13 12:05 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_17.d	P2-B6
5393111:FZT428-01	-	2018/02/13 12:08 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_18.d	P2-B7
5393111:FZT430-01	-	2018/02/13 12:10 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_19.d	P2-B8
5393111:FZT431-01	-	2018/02/13 12:12 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_20.d	P2-B9
5393111:GAC647-01	-	2018/02/13 12:15 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_21.d	P2-C1
5393111:GAC649-01	-	2018/02/13 12:17 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_22.d	P2-C2
5393111:GAC651-01	-	2018/02/13 12:20 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_23.d	P2-C3
5393111:GAD929-01	-	2018/02/13 12:22 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_24.d	P2-C4
CCV	-	2018/02/13 12:24 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_25.d	P2-A5
5393111:GAD930-01	-	2018/02/13 12:27 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_26.d	P2-C5
5393111:GAD931-01	-	2018/02/13 12:29 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_27.d	P2-C6
5393111:GAD932-01	-	2018/02/13 12:32 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_28.d	P2-C7
5393111:GAD933-01:100x	-	2018/02/13 12:34 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_29.d	P2-C8
IB	-	2018/02/13 12:37 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_30.d	P2-A8
5393111:GAD934-01:100x	-	2018/02/13 12:39 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_31.d	P2-C9
IB	-	2018/02/13 12:41 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_32.d	P2-A8
CCV	-	2018/02/13 12:44 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_33.d	P2-A5

INJECTION INTERNAL STANDARD PEAK AREAS

Sample Name	Analyte	13C6-PFHxA	13C9-PFDA
	Mass labeled IS	STD 4	STD 4
	IS Area	24336	31660
		IS Peak Area	IS Peak Area
STD 1		23265	31397
STD 2		23676	30926
STD 3		23144	30938
STD 4		24336	31660
STD 5		23276	31734
STD 6		22811	29039
IB		20118	26942
ICV		24288	32215
ISC		23804	32182
5390275:BLANK		25220	33519
5390275:SPIKE		20746	27176
5390275:SPIKE:D1		23523	30943
5390275:FZH306-01:10x		25064	32842
5390275:FZH306-01		21947	29926
IB		20823	26431
5390275:FZH307-01		24072	31080
5390275:FZH308-01		23890	32295
5390275:FZH309-01		24803	32633
5390275:FZH310-01		25338	32529
5390275:FZH311-01		23258	30398
5390275:FZH312-01		22201	31529
5390275:FZH313-01		22997	30369
5390275:FZH314-01		24707	31608
CCV		24806	32186
5390275:FZH315-01		23762	32357
5390275:FZH316-01		24654	33518
5390275:FZH317-01		24651	33318
5390275:FZT419-01:10x		22782	30367
5390275:FZT419-01		22054	30454
IB		20118	26900
5390275:FZT420-01		24368	32418
5390275:FZT421-01		23233	30895
5390275:FZT422-01		24155	31821
5390275:FZT423-01		23594	31236
5390275:FZT424-01		23008	31282
CCV		24204	32789
5390275:FZT425-01		23542	31050
CCV		24535	32723

INJECTION INTERNAL STANDARD PEAK AREAS

Sample Name	Analyte	13C9-PFDA
	Mass labeled IS	STD 4
	IS Area	25154
		IS Peak Area
STD 1		24231
STD 2		24810
STD 3		24721
STD 4		25154
STD 5		24748
STD 6		23294
IB		21134
ICV		24598
ISC		24430
5390275:BLANK		25518
5390275:SPIKE		21375
5390275:SPIKE:D1		23768
5390275:FZH306-01:10x		25178
5390275:FZH306-01		22234
IB		21079
5390275:FZH307-01		24082
5390275:FZH308-01		25352
5390275:FZH309-01		24562
5390275:FZH310-01		25998
5390275:FZH311-01		22685
5390275:FZH312-01		23193
5390275:FZH313-01		24051
5390275:FZH314-01		24450
CCV		25073
5390275:FZH315-01		24471
5390275:FZH316-01		24664
5390275:FZH317-01		24614
5390275:FZT419-01:10x		23518
5390275:FZT419-01		22422
IB		20276
5390275:FZT420-01		24424
5390275:FZT421-01		24873
5390275:FZT422-01		24737
5390275:FZT423-01		23957
5390275:FZT424-01		24401
CCV		25106
5390275:FZT425-01		24107
CCV		25357

INJECTION INTERNAL STANDARD PEAK AREAS

Sample Name	Analyte	13C6-PFHxA	13C9-PFDA
	Mass labeled IS	STD 4	STD 4
	IS Area	23942	30523
		IS Peak Area	IS Peak Area
STD 1		22616	31562
STD 2		24047	29599
STD 3		23970	31810
STD 4		23942	30523
STD 5		23146	29646
STD 6		22396	28323
IB		21095	26482
ICV		20366	26857
ISC		24665	32190
5393111:BLANK		27425	36016
5393111:SPIKE		26060	34077
5393111:SPIKE:D1		25038	32181
5393111:FZJ946-01		21291	27574
5393111:FZT426-01:10x		22258	27193
IB		21822	27149
5393111:FZT427-01		21220	27515
5393111:FZT428-01		22774	29834
5393111:FZT430-01		24793	32238
5393111:FZT431-01		24201	30395
5393111:GAC647-01		17046	22445
5393111:GAC649-01		24274	30656
5393111:GAC651-01		23512	29890
5393111:GAD929-01		26772	34716
CCV		24562	32675
5393111:GAD930-01		21975	27304
5393111:GAD931-01		23894	31328
5393111:GAD932-01		23670	31124
5393111:GAD933-01:100x		24115	30477
IB		21391	27144
5393111:GAD934-01:100x		23200	31287
IB		20837	26749
CCV		24980	31567

INJECTION INTERNAL STANDARD PEAK AREAS

Sample Name	Analyte	13C9-PFDA
	Mass labeled IS	STD 4
	IS Area	27486
		IS Peak Area
STD 1		27159
STD 2		26366
STD 3		26149
STD 4		27486
STD 5		25687
STD 6		24440
IB		23133
ICV		22491
ISC		27258
5393111:BLANK		30049
5393111:SPIKE		29721
5393111:SPIKE:D1		27367
5393111:FZJ946-01		23186
5393111:FZT426-01:10x		24008
IB		23243
5393111:FZT427-01		23191
5393111:FZT428-01		24825
5393111:FZT430-01		26318
5393111:FZT431-01		25423
5393111:GAC647-01		18893
5393111:GAC649-01		24794
5393111:GAC651-01		25501
5393111:GAD929-01		27675
CCV		27346
5393111:GAD930-01		23268
5393111:GAD931-01		26192
5393111:GAD932-01		25389
5393111:GAD933-01:100x		26594
IB		23271
5393111:GAD934-01:100x		26498
IB		23555
CCV		27597

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: 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.

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.

SIGMA-ALDRICH

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3050 Spruce Street, Saint Louis, MO 63103, USA
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Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Rec'd: 2017/12/28
By: [illegible]
HPLC - M.L.
8 x 4 L

Product Name:
Methanol - for HPLC, ≥99.9%

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.

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 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 # 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
201.796.1323 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 make regulatory coverage 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





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

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: 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: 34950
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

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

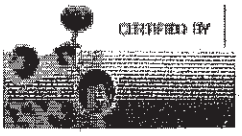
Certificate of Analysis

Fisher Scientific Quality System has been found to conform to Quality Management System standard ISO9001:2008 standard by SAI Global Certificate Number CERT - 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 or 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



CERTIFIED BY

Quality Assurance Specialist - Certificate of Analysis BPF

Note: The date listed is valid for all package sizes of the lot of this product, expressed as a extension of this 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®

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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:	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
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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.

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

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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 standard by SAI Global Certification Number QMS 11000116

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Catalog Number	A669	Quality Test / Release Date	6/24/2017
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	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	<0.0020
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, manufactured as a subdivision of the catalog number listed above. If there are any questions with this certificate, please call Chemical Services at (800) 926-6161
Fisher Sci. supported always confident

Date Received: 2017/12/28-RAZ-P2B
Date Received: 2018/01/09-lov-HPLC 1X500ml

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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%

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

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.

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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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
201.796.1329 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

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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.

Specifications	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	<5.50
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 SPF

Note: The data listed is valid for all package sizes of this lot of this product, unless noted on a subsequent line of the catalog number listed above. If there are any questions with this certification, 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

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 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

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

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 # 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	2018/10/31
		2018/02/06				

NOTES: 1L cylinder # 5553

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ONLY CLASS A GLASSWARE IS USED FOR THE PREPARATION OF REAGENTS WHEN APPLICABLE.

Certificate of Analysis

MilliporeSigma

Date of Release: 10/27/2017

Name: Water
Chromsolvent, 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®

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:	CH4O
Formula Weight:	32.04 g/mol
Quality Release Date:	18 DEC 2017
Expiration Date:	NOV 2022

CH_3OH

HPLC
3Bottles
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	0.39
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		

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 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	SHBJ 2924	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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SIGMA-ALDRICH®

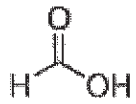
sigma-aldrich.com

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:
2017/09/22
1X, 100 mL
LC group

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, WX0001-6, 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-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
400 Summit 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 # 345 Replaced Reagent # 336 Analyst: SAD

Reagent Name: FMOC Preparation date: 2018/02/07 Expiry date: daily

Final Volume: 50ml Oven No. : — 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	0.0751	2017/11/08	2018/01/09	Sigma	WXBC3136V	2022/11/06
ACN	50	2017/09/20	2018/01/03	Fisher	172966	2022/05/31
			SAD 2018/02/07			

NOTES:

Reagent # 346 Replaced Reagent # 343 Analyst: DM3

Reagent Name: 0.2 % NH_4OH Preparation date: 2018/02/08 Expiry date: daily

Final Volume: 1L Oven No. : — Temp. : — Final Conc.: 0.2 : 99.8 %v

Balance ID: — Pipette/Syringe/Cylinder ID: N314775 Storage: —

CHEMICAL NAME	VOLUME/ WEIGHT	DATE RECEIVED	DATE OPENED	SUPPLIER	LOT NUMBER	EXPIRY DATE
NH_4OH	2 mL	2017/09/15	2017/09/22	Fisher	166631	2020/01/31
MeOH	998 mL	2018/01/31	2018/02/06	Sigma	SHBJ3527	2022/11/30
		2018/02/08	DM3			

NOTES:

1L cylinder # 5553

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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'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 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 (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	A554	Quality Test / Release Date	1/17/2017
Lot Number	166531	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





Quality Assurance Specialist - Certificate of Analysis BPF

Notes: The date listed is valid for all package sizes of this lot of this product, expressed as a extension of this 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

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:	CH4O
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 # 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:

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 syrup

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®

sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techservice@sial.com
Outside USA: eurtechservice@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: 10/27/2017

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.		
Absolute date			31-OCT-2018	
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-cresol/phenol)		50	<50	ppb
LC/MS Purity (resorcinol)		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 400-210 nm		0.005	< 0.001	AU
UV Cut-off		190	<190	nm

Dr. Oliver Schumann
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
Date Received: 2018.02.07 - 4 x 4L - HPLC
Date Received: 2018.02.07 - 4 x 4L - HPLC

REAGENT PREPARATION FORM

Reagent # 349 Replaced Reagent # 347 Analyst: LQ

Reagent Name: 0.2% NH4OH in meOH Preparation date: 2018/02/09 Expiry date: Daily

Final Volume: 1L Oven No. : — Temp. : — Final Conc.: 0.2 ± 99.8 v/v

Balance ID: — Pipette/Syringe/Cylinder ID: I 479879 Storage: Shelf

CHEMICAL NAME	VOLUME/ WEIGHT	DATE RECEIVED	DATE OPENED	SUPPLIER	LOT NUMBER	EXPIRY DATE
NH4OH	2 ml	2018/01/09	2018/01/25	Fisher	172996	2020/08/31
meOH	998ml	2018/02/07	2018/02/09	Sigma	SHBJ 5451	2022/09/30
				2018/02/09		

NOTES:
1L volumetric Cylinder # 5553

Reagent # 350 Replaced Reagent # 338 Analyst: HD3

Reagent Name: 0.3% NH4OH Preparation date: 2018/02/09 Expiry date: Daily

Final Volume: 50ml Oven No. : — Temp. : — Final Conc.: 0.3%

Balance ID: — Pipette/Syringe/Cylinder ID: M41011F, CLASSA VOL. FLASK Storage: Shelf

CHEMICAL NAME	VOLUME/ WEIGHT	DATE RECEIVED	DATE OPENED	SUPPLIER	LOT NUMBER	EXPIRY DATE
NH4OH	150 uL	2018/01/01	2018/01/25	Fisher	172996	2020/08/31
MeOH	49.85ml	2018/02/07	2018/02/09	Sigma	SHBJ5451	2022/09/30
		HD3	2018/02/09			

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.

Fisher Scientific

1 Reagent Lane
Fair Lawn, NJ 07410
201.795.7100 tel
201.795.1329 fax

Certificate of Analysis

Fisher Scientific Quality System has been found to conform to Quality Management System Standard ISO/IEC 2005 intended by SAI Global Certificate Number CERT - [illegible]

[illegible]

Catalog Number	A663	Quality Test / Release Date	6/24/2017
Lot Number	172596	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.

Result 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 25.0 - 30.0	29.2
BORON (B)	ppm	<= 5.1	0.001
CALCIUM (Ca)	ppm	<= 5.3	0.006
CARBON DIOXIDE	%	<= 5.002	<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

Teresa Bailey-Wyckie

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 reference of the ordering number listed above. If there are any questions with this certificate, please call Chemical Services at (800) 221-6101. Stored for 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

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®

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: SHBJ5481

Michael Grady, Manager
Quality Control
Sheboygen 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

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 extension 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@aial.com Outside USA: eurtechserv@aial.com

Certificate of Analysis

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: 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 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-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	0.88	mAU
Gradient at 254 nm		0.5	0.09	mAU
LC/MS Purity (n-nitrosohexa)		50	<50	ppb
LC/MS Purity (reserpine)		50	<50	ppb
Metals, solitare 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 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 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

Certificate of Analysis

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	
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 400–260 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

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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

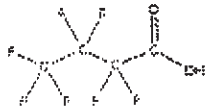
CERTIFICATE OF ANALYSIS DOCUMENTATION

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

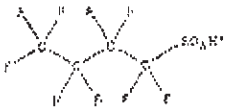
Certified By: _____ Date: 05/30/2017
E.G. Chittim, General Manager

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	**LOT NUMBER:**	LPFBS0917
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) 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 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 Chittim, General Manager

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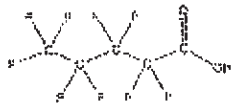
WELLINGTON LABORATORIES

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 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 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 ~ 0.3% 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. Chittim, General Manager

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Date Received: 2017.11.30 - 2 ampoules - HPLC

WELLINGTON LABORATORIES

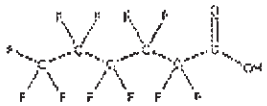
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFHxA
COMPOUND: Perfluoro-n-hexanoic acid

LOT NUMBER: 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.

FOR LABORATORY USE ONLY; NOT FOR HUMAN OR DRUG USE

Certified By: _____ Date: 11/01/2017
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

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 2017/01/30
Z. 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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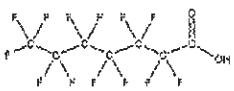
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFHpA
COMPOUND: Perfluoro-n-heptanoic acid

LOT NUMBER: PFHpA1216

STRUCTURE:



CAS #: 375-85-9

Received 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 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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim Date: 12/12/2016

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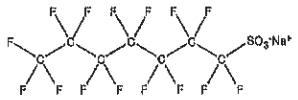
Received 2016/12/23 1 x 1.2mL MMN FZ-11
Received 2016/12/29 1 x 1.2mL MMN FZ-11
Received 2017/05/25 2 x 1.2mL MMN FZ-11
Received 2017/05/29 2 x 1.2mL MMN FZ-11
Date Received: 2017/06/02-DMZ-1.2ml-FD
Date Received: 2017/08/09 1X1.2ml HPLC
Received 2016/12/23 1 x 1.2mL MMN FZ-11
Received 2016/12/29 1 x 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) 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 ($C_8F_{17}SO_3Na$).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 09/07/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

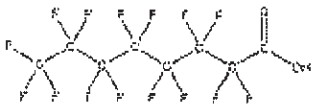
Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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 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. Criddle 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:	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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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

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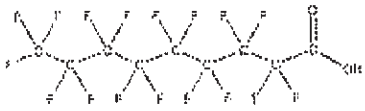
CERTIFICATE OF ANALYSIS DOCUMENTATION

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

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Form 27, Issued 2016.11.30
Revised 4, Revised 2017.03.09

Date Received: 2017.11.30 - 2 ampoules - HPLC

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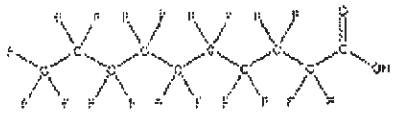
CERTIFICATE OF ANALYSIS DOCUMENTATION

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: >98%
LAST TESTED: 05/29/2017
EXPIRY DATE: 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 07, Issued 2006-11-10
Amendments Revised 2017-09-07

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

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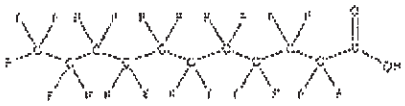
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	PFUdA	**LOT NUMBER:**	PFUdA0917
COMPOUND:	Perfluoro-n-undecanoic acid		
STRUCTURE:		**CAS #:**	2058-94-8



MOLECULAR FORMULA:	$C_{11}HF_{21}O_2$	**MOLECULAR WEIGHT:**	564.09
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%		
LAST TESTED: (mm/dd/yyyy)	09/21/2017		
EXPIRY DATE: (mm/dd/yyyy)	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)

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 (mm/dd/yyyy)
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Ampoule 2 TRW
Date received: 2017/09/22

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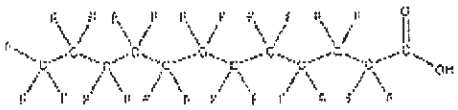
CERTIFICATE OF ANALYSIS DOCUMENTATION

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.

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Certified By: _____ Date: 05/30/2017
B.G. Chittim, General Manager

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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

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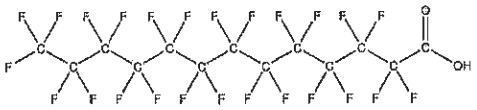
CERTIFICATE OF ANALYSIS
DOCUMENTATION

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 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 ($C_{14}HF_{27}O_2$).

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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

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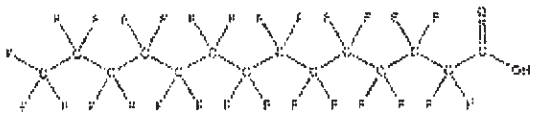
CERTIFICATE OF ANALYSIS DOCUMENTATION

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)

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 ~ 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

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WELLINGTON LABORATORIES

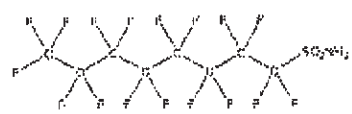
CERTIFICATE OF ANALYSIS
DOCUMENTATION

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

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Certified By: _____ Date: 09/14/2017
S.C. Chittim, General Manager

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WELLINGTON LABORATORIES

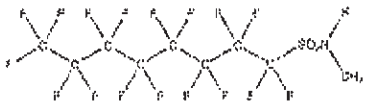
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: N-MeFOSA-M
COMPOUND: N-methylperfluoro-1-octanesulfonamide

LOT NUMBER: NMeFOSA0717M

STRUCTURE:

CAS #: 31506-32-8



MOLECULAR FORMULA: $C_9H_5F_{17}NO_2S$
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

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Date received: 2017/11/30 1 ampoule - HPLC

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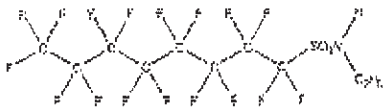
CERTIFICATE OF ANALYSIS DOCUMENTATION

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.

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Certified By: _____ Date: 07/18/2017
B.G. Chittim, General Manager

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Date Received: 2017.11.30 - 1 ampoule - HPLC

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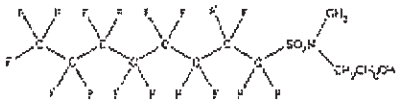
CERTIFICATE OF ANALYSIS DOCUMENTATION

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
[illegible]

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

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CERTIFICATE OF ANALYSIS DOCUMENTATION

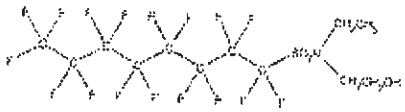
PRODUCT CODE: N-EtFOSE-M

COMPOUND: 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol

LOT NUMBER: NEtFOSE0417M

STRUCTURE:

CAS #: 1691-89-2



MOLECULAR FORMULA: $C_{10}H_{12}F_{17}NO_3S$

CONCENTRATION: 50 ± 2.5 µg/ml

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

MOLECULAR WEIGHT: 871.25

SOLVENT(S): Methanol

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

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Certified By: B.G. Chittim, General Manager

Date: 04/26/2017

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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

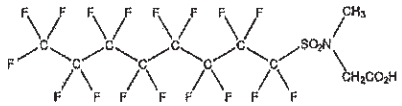
WELLINGTON LABORATORIES

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.

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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

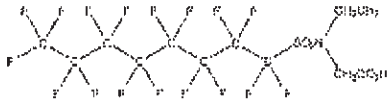
Ampoule: 2 TRW
Date received: 2017/09/12

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
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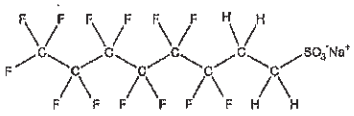
Received : 20170525HPLC,
RECEIVED:2017/09/26 HPLC
Date Received: 2017.08.09 - 1 ampoule - HPLC
Date Received: 2017.11.30 - 2 ampoules - HPLC

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.

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Certified By: _____ **Date:** 04/24/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

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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

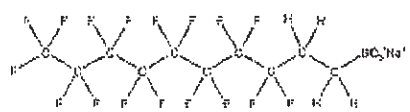
WELLINGTON LABORATORIES

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.

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Certified By: B.G. Chittim Date: 12/21/2016

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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

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. INITIATE ALL INSERTS. LOGBOOK, PAGE AND APPROPRIATE SOLUTION NUMBER REFERENCES MUST BE WRITTEN ON ALL INSERTS.

WELLINGTON LABORATORIES

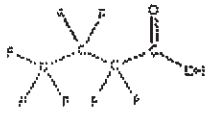
CERTIFICATE OF ANALYSIS DOCUMENTATION

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)

697 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

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Form 0.37, Issued 2004-11-16
Revision # 4, Revised 2017-03-05

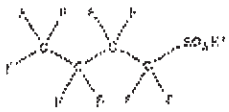
PFBA0517 (1 of 4)
rev2

Maxxam Analytics 343 of 711

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	L-PFBS	**LOT NUMBER:**	LPFBS3917
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) 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 congeners

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 Chelim, General Manager

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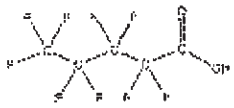
WELLINGTON LABORATORIES

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 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 $C_7H_2F_{12}O_2$ (hydride - derivative) as measured by ^{19}F NMR

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ Date: 06/16/2017
B.G. Chittim, 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

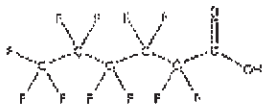
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFHxA
COMPOUND: Perfluoro-n-hexanoic acid

LOT NUMBER: 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: B.G. Chittim, General Manager **Date:** 11/01/2017

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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).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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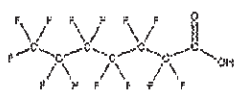
WELLINGTON LABORATORIES

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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim Date: 12/12/2016

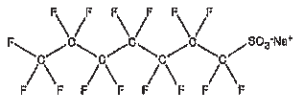
Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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) 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

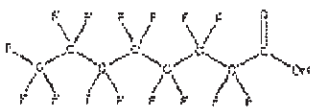
Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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 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.

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Certified By: B.G. Griffin Date: 02/22/2017

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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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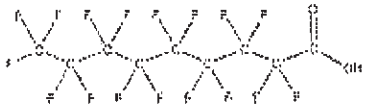
date recieved:2017/05/29 1.2x1- HPLC
date received: 2017/08/09 1 ampule HPLC
date received: 2017/08/30 1 ampule HPLC
date eceived: 2017/09/26 1.2x1ampule HPLC
date received 2017/09/12 2 ampules
Date Received: 2017.11.30 - 2 ampoules -HPLC

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 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).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 07/24/2017
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

Date Received: 2017.11.30 - 2 ampoules - HPLC

WELLINGTON LABORATORIES

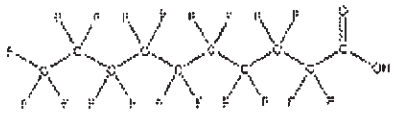
CERTIFICATE OF ANALYSIS DOCUMENTATION

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).

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
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Form 27, Issued 2007-11-10
Authorized, Revised 2017-03-07

PFDA0517 (1 of 4)
rsd

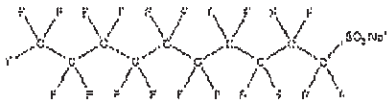
Date Received: 2017.11.30 - 2 ampoules - HPLC

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: $C_{10}F_{11}SO_2Na$
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).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim Date: 02/22/2017

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Form 27, Issued 2006-11-15
Revised & 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

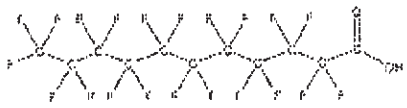
CERTIFICATE OF ANALYSIS DOCUMENTATION

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.

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
519-822-2436 • Fax: 519-822-2649 • info@well-labs.com

Form#37, Issued 2004-11-10
Revised#6, Revised 2017-03-09

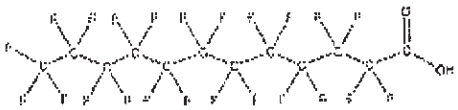
Ampoule 2 TRW
Date received: 2017/09/22

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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ Date: 05/30/2017
B.G. Chittim, General Manager

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Form 2.2, Issued 2006-11-16
Published & Revised 2017-03-06

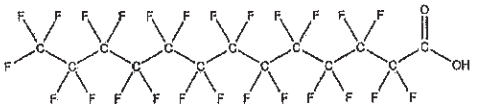
Date Received: 2017.11.30 - 2 ampoules - HPLC

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 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 ($C_{14}HF_{27}O_2$).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 05/04/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

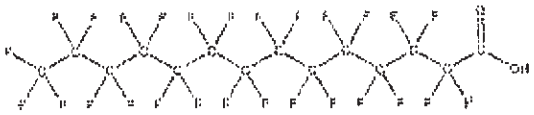
Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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	**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 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 ($C_{15}HF_{29}O_2$).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 09/21/2017

B.G. Chittim, General Manager

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WELLINGTON LABORATORIES

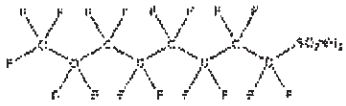
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: FOSA-I

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/yy) 09/01/2017

EXPIRY DATE: (mm/dd/yy) 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 ampules

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ Date: 09/14/2017 (mm/dd/yy)
S.C. Chilton, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

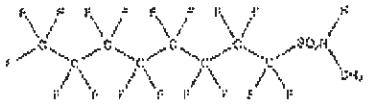
WELLINGTON LABORATORIES

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.

FOR LABORATORY USE ONLY; NOT FOR HUMAN OR DRUG USE

Certified By: _____ Date: 07/10/2017
B.G. Chittim, General Manager

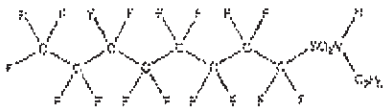
Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Date received: 2017/11/30 1 ampoule - HPLC

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE:	N-EtFOSA-M	LOT NUMBER:	NEtFOSA0717M
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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ Date: 07/15/2017
B.G. Chittim, General Manager

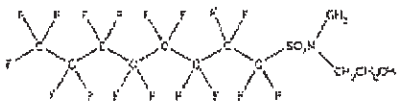
Wellington Laboratories Inc., 345 Southgate Dr, Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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
DMSO: 1.2 mL X 1
[illegible]

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

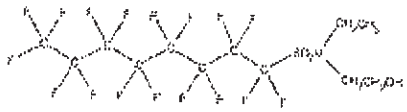
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: N-EtFOSE-M
COMPOUND: 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol
LOT NUMBER: 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: 04/24/2017 (HRGC/LRMS)
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/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
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

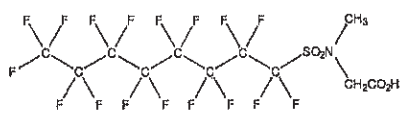
WELLINGTON LABORATORIES

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

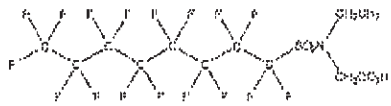
Ampoule: ē TRW
Date received: 2017/09/12

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: $C_{12}H_6F_{17}NO_4S$
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

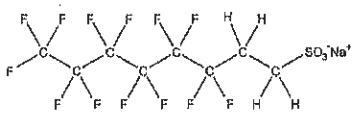
Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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

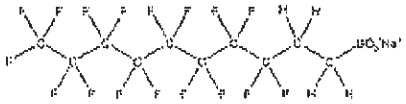
Date Recieved: 2017/05/25 1x1.2 HPLC
Date Recieved: 2017/08/09 1x1.2 HPLC
Date Recieved: 2017/08/30 1x1.2 HPLC
Date Recieved: 2017/09/26 1x1.2 HPLC
Date Recieved: 2017/11/30 1x1.2 HPLC

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:	$C_8H_4F_{13}SO_3Na$	**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 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

Form# 27, expire 2016-12-16
Template# 2, Revised 2015-05-27

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

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): Sw PRLRE 108-278 Lot No(s).: Sw PRLRE 108-278
Date Solvent Opened: Sw 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: Sw 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.

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

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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

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			

No writing on bottom page.

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

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.: BCBT3582

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: 652

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: 652			

No writing on bottom page.

Storage Location / Conditions: _____

Notes/Comments

Solution No.: _____ Date: _____ Expiry Date: _____ Discard Date: _____

Replaces Solution: _____ Replaced by Solution: _____ Chemist: _____

Compound: _____ Purity: _____

Date Received: _____ Expiry Date: _____ Lot No.: _____

Supplier: _____

Date Opened: _____

652, 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

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

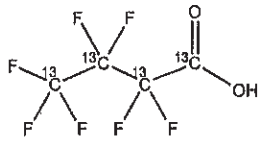
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: MPFBA
COMPOUND: Perfluoro-n-[1,2,3,4-$^{13}C_4$]butanoic acid

LOT NUMBER: MPFBA0417

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA:	$^{13}C_4HF_7O_2$	**MOLECULAR WEIGHT:**	218.01
CONCENTRATION:	50 ± 2.5 µg/ml	**SOLVENT(S):**	Methanol Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C ($1,2,3,4$-$^{13}C_4$)
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 ✓
1 ampoule
2014/10/25 65%

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

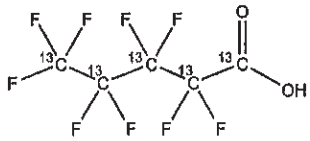
CERTIFICATE OF ANALYSIS
DOCUMENTATION

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 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

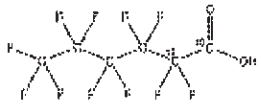
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFHxA
COMPOUND: Perfluoro-n-[1,2-$^{13}C_2$]hexanoic acid

LOT NUMBER: MPFHxA1116

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA: $^{13}C_2{}^{12}C_4HF_{11}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 316.04
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: 11/22/2016
EXPIRY DATE: 11/22/2021
RECOMMENDED STORAGE: Store ampoule in a cool, dark place (Freezer)

ISOTOPIC PURITY: ≥99% ^{13}C (1,2-$^{13}C_2$)

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

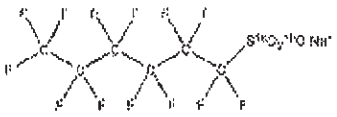
Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Received date: 2017/02/22 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:	$C_6F_{13}S^{18}O_2{}^{18}ONa$	**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 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 ($C_6F_{13}S^{18}O_2{}^{18}O^-$) 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.

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Certified By: _____ B.G. Chittim **Date:** 03/02/2017

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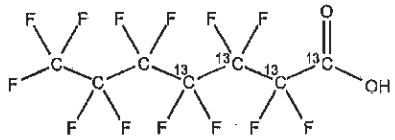
Date received 2017/09/07 1 ampule HPLC
Date received 2017/10/25 1 ampule HPLC

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 Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C (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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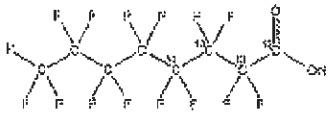
WELLINGTON LABORATORIES

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 Water (<1%)
CHEMICAL PURITY:	>98%	**ISOTOPIC PURITY:**	≥99% ^{13}C (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 mmn
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.G. Chittim Date: 10/19/2016

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Form 37, Issued 2014-11-16
Revision 0, Revised 2015-03-24

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

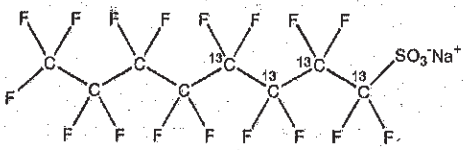
WELLINGTON LABORATORIES

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) 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

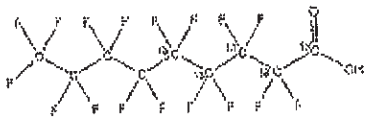
PRODUCT CODE: MPFNA

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 [illegible]
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: [signature] B.G. Chittim

Date: 10/11/2016

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form 0127, Issued 2004-11-10
Revised 0, Revised 2015-03-24

MPFNA0916 (1 of 4)
rev0

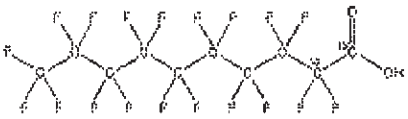
Received date: 2017/02/22 2x1.2 mL MZ
Received date: 2017/05/02 1x1.2 mL ssv
Received date: 2017/05/31 2x1.2 mL ssv
Received date: 2017/09/07 2x1.2 mL TRW
Received date: 2017/10/25 2x1.2 mL

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

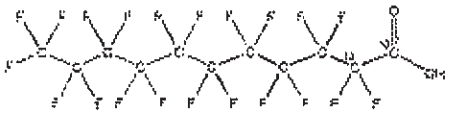
Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

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 Water (<1%)
CHEMICAL PURITY:	>98%	ISOTOPIC PURITY:	≥99% ^{13}C ($1,2\text{-}^{13}C_2$)
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-$^{13}C_2$-PFUdA (~1%; see Figure 2), 2-$^{13}C_2$-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

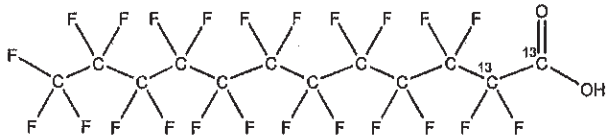
CERTIFICATE OF ANALYSIS
DOCUMENTATION

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)
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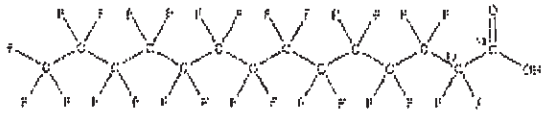
CERTIFICATE OF ANALYSIS DOCUMENTATION

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

MOLECULAR WEIGHT: 716.10
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: 03/01/2017
EXPIRY DATE: 03/01/2022
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

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.

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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

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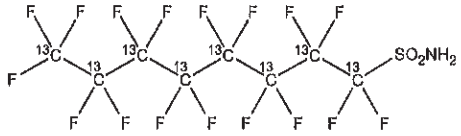
CERTIFICATE OF ANALYSIS
DOCUMENTATION

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)
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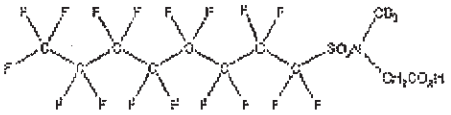
WELLINGTON LABORATORIES

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

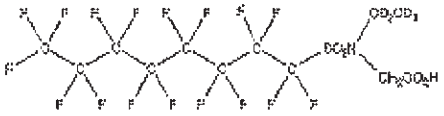
WELLINGTON LABORATORIES

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: $C_{10}D_4H_3F_{17}NO_4S$ **MOLECULAR WEIGHT:** 590.26

CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
Water (<1%)

CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥98% $^2H_4$

LAST TESTED: (mm/dd/yyyy) 11/22/2016

EXPIRY DATE: (mm/dd/yyyy) 11/22/2021

RECOMMENDED STORAGE: Refrigerate ampoule

Received [illegible] 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.

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Certified By: B.G. Chittim **Date:** 12/01/2016 (mm/dd/yyyy)

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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

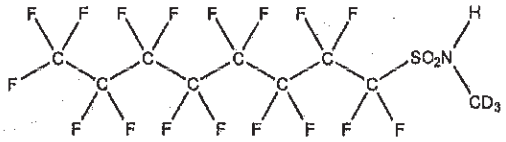
WELLINGTON LABORATORIES

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.

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Certified By: _____ **Date:** 04/24/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

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WELLINGTON LABORATORIES

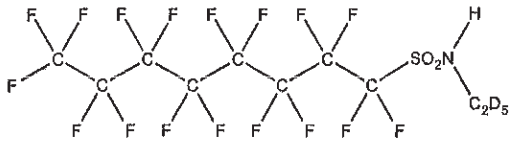
CERTIFICATE OF ANALYSIS
DOCUMENTATION

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.

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Certified By: _____ **Date:** 11/06/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

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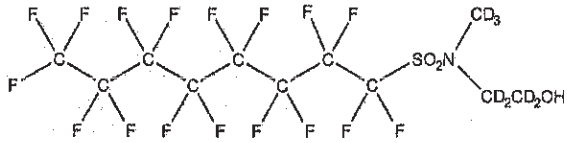
WELLINGTON LABORATORIES

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) 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.

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Certified By: _____ **Date:** 11/03/2017 (mm/dd/yyyy)
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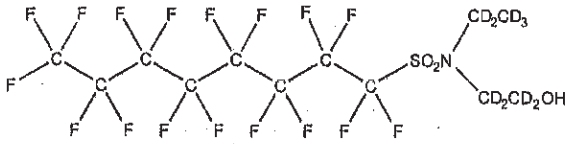
WELLINGTON LABORATORIES

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) 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.

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Certified By: _____ **Date:** 10/18/2017
(mm/dd/yyyy)
B.G. Chittim, General Manager

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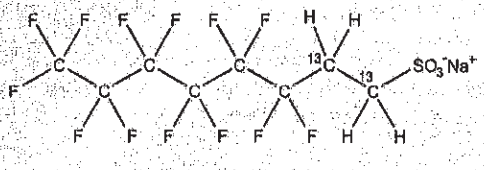
WELLINGTON LABORATORIES

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)	**SOLVENT(S):**	Methanol
	47.5 ± 2.4 µg/ml (M2-6:2FTS anion)		
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. Rec'd
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)

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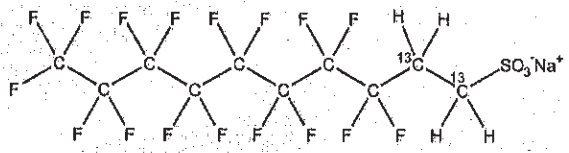
WELLINGTON LABORATORIES

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).

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Certified By: _____ **Date:** 07/07/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

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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): Su PRLRE 108-287 Lot No(s).: Su PRLRE 108-287
Date Solvent Opened: Su PRLRE 108-287
Volumetric Flask Used: 100mL Class-A (5640) Syringe ID: Pipette M4101IF
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 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 & Derivation 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 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

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:

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

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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

Maxxam Analytics

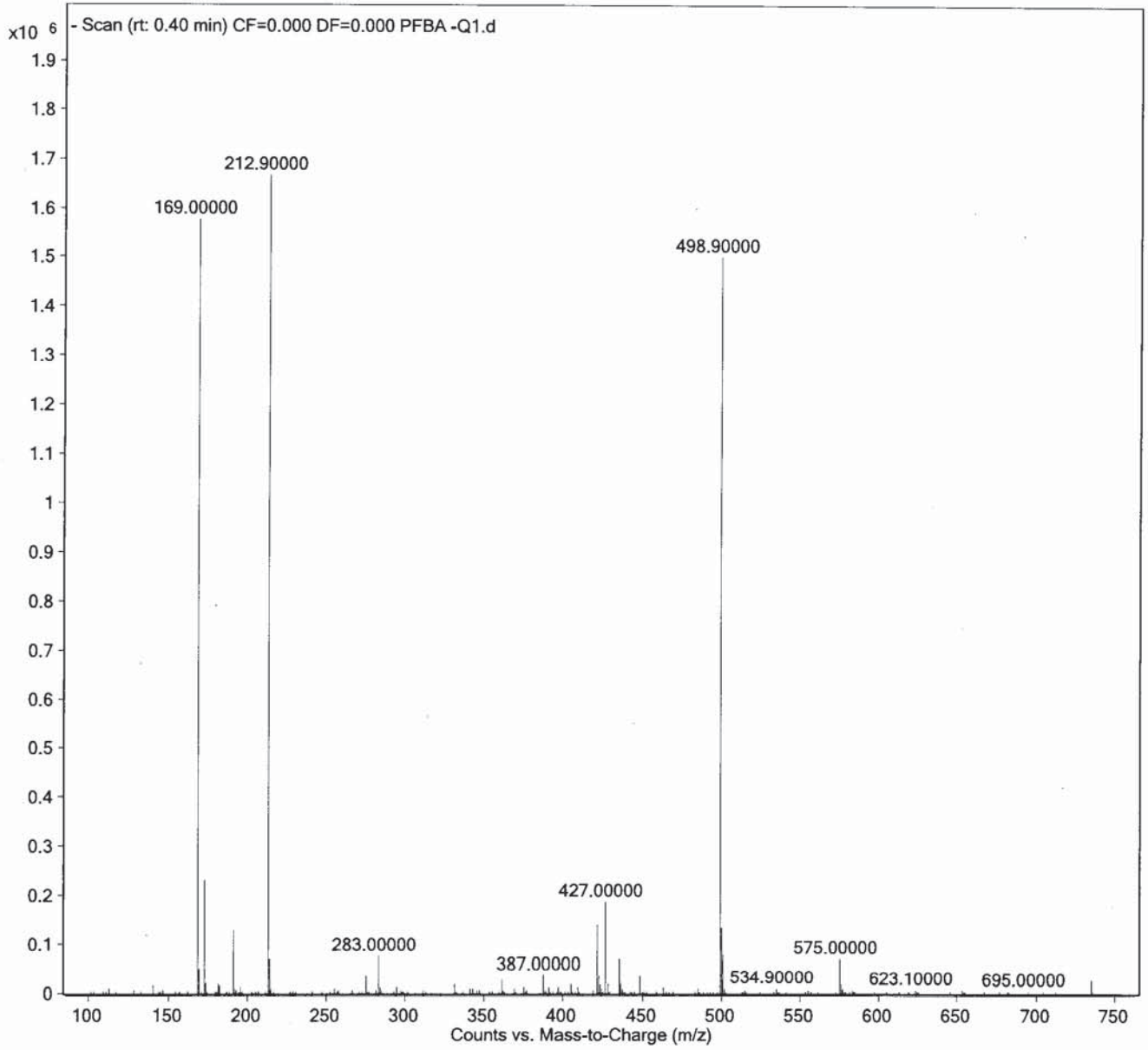
Mass Assignments – Analytes, Extracted Internal Standards and Injection Internal Standards

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

Analyte Precursor Ion Verification

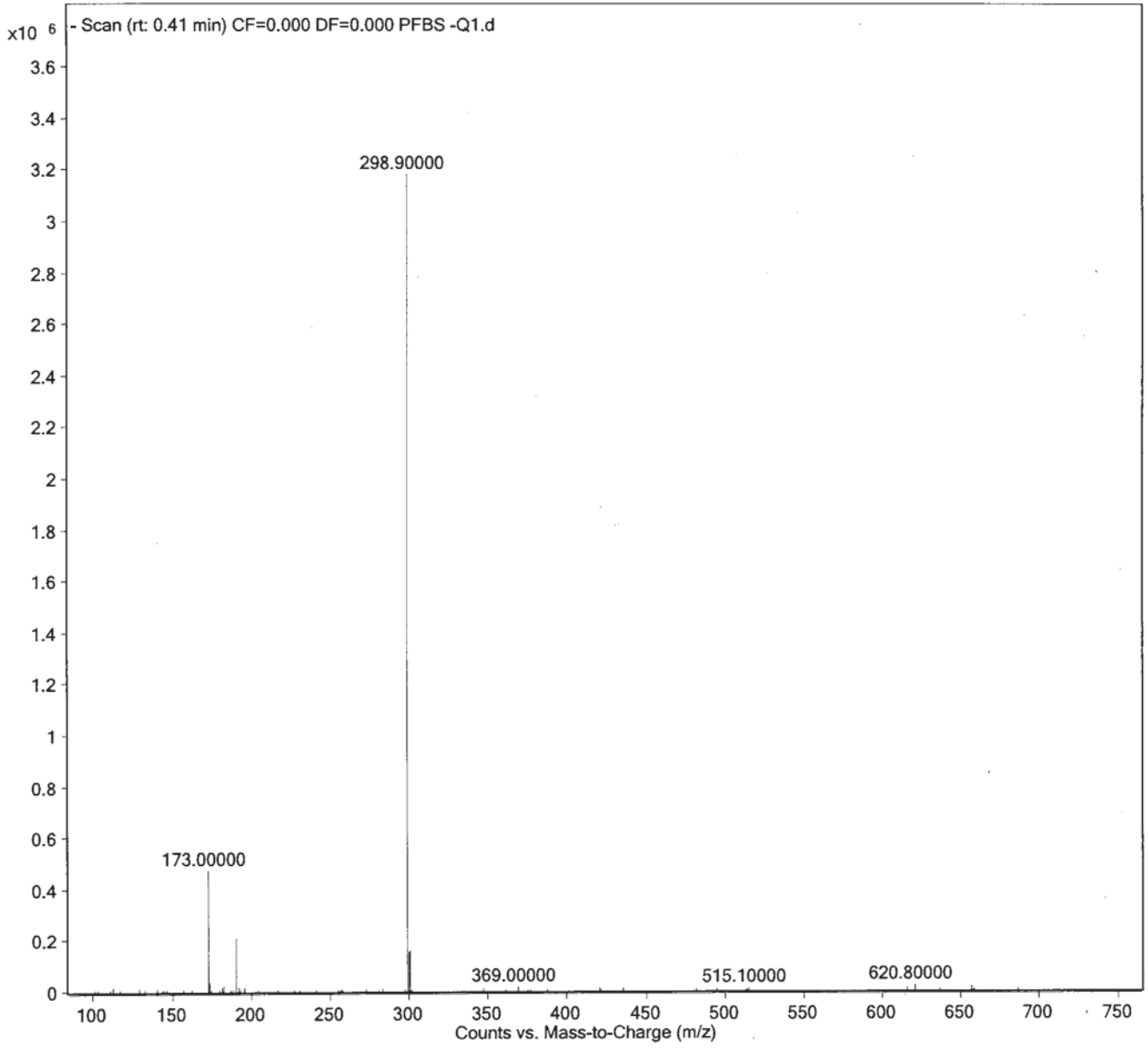
Sample Name	PFBA -Q1	**Position**	P1-A1	**Instrument Name**	LCMS04
User Name	M_G	**Inj Vol**	10	**InjPosition**	
Sample Type	Sample	**IRM Calibration Status**	Not Applicable	**Data Filename**	PFBA -Q1.d
CQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/10 4:37:04 PM



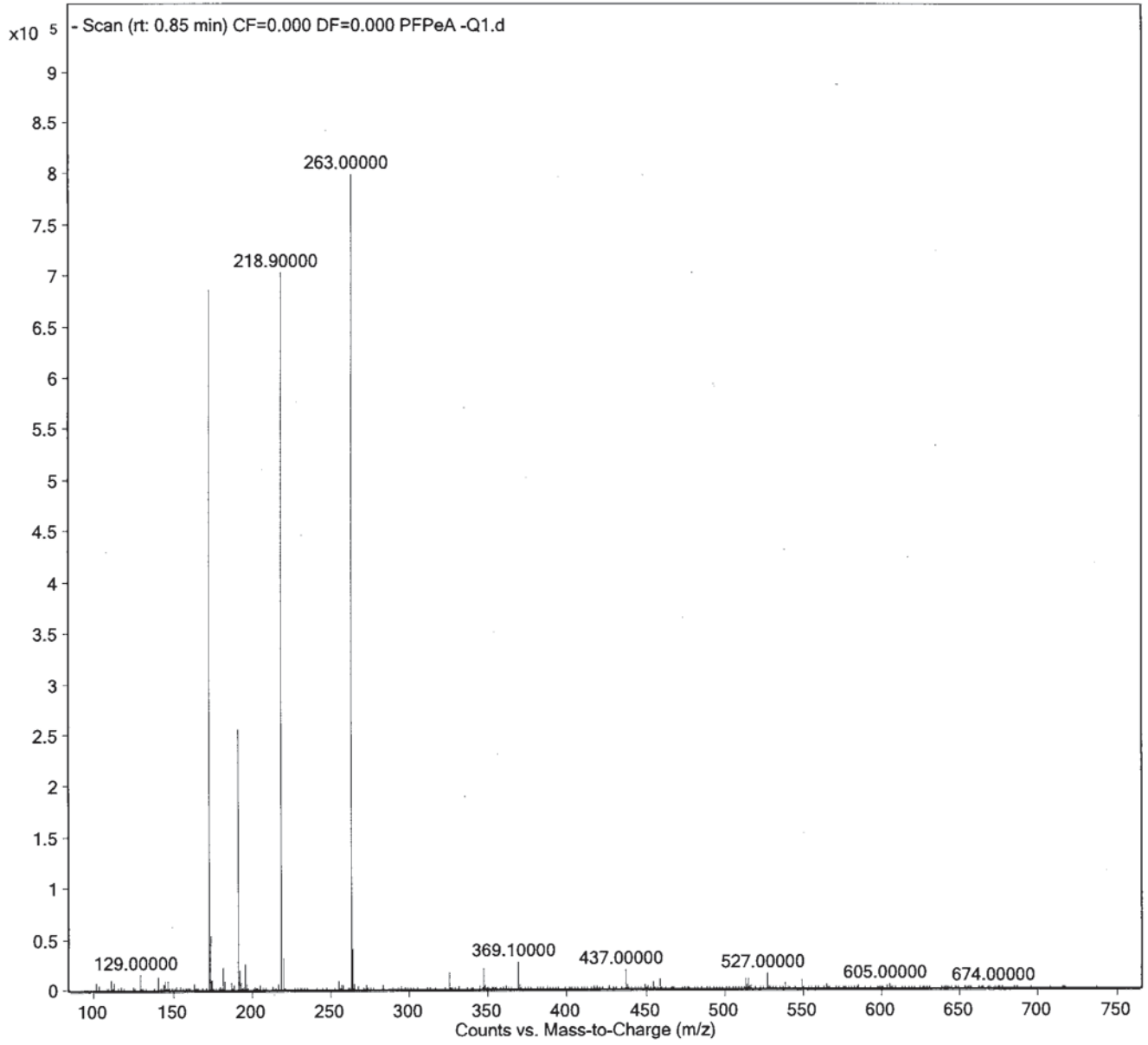
Maxxam Analytics

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

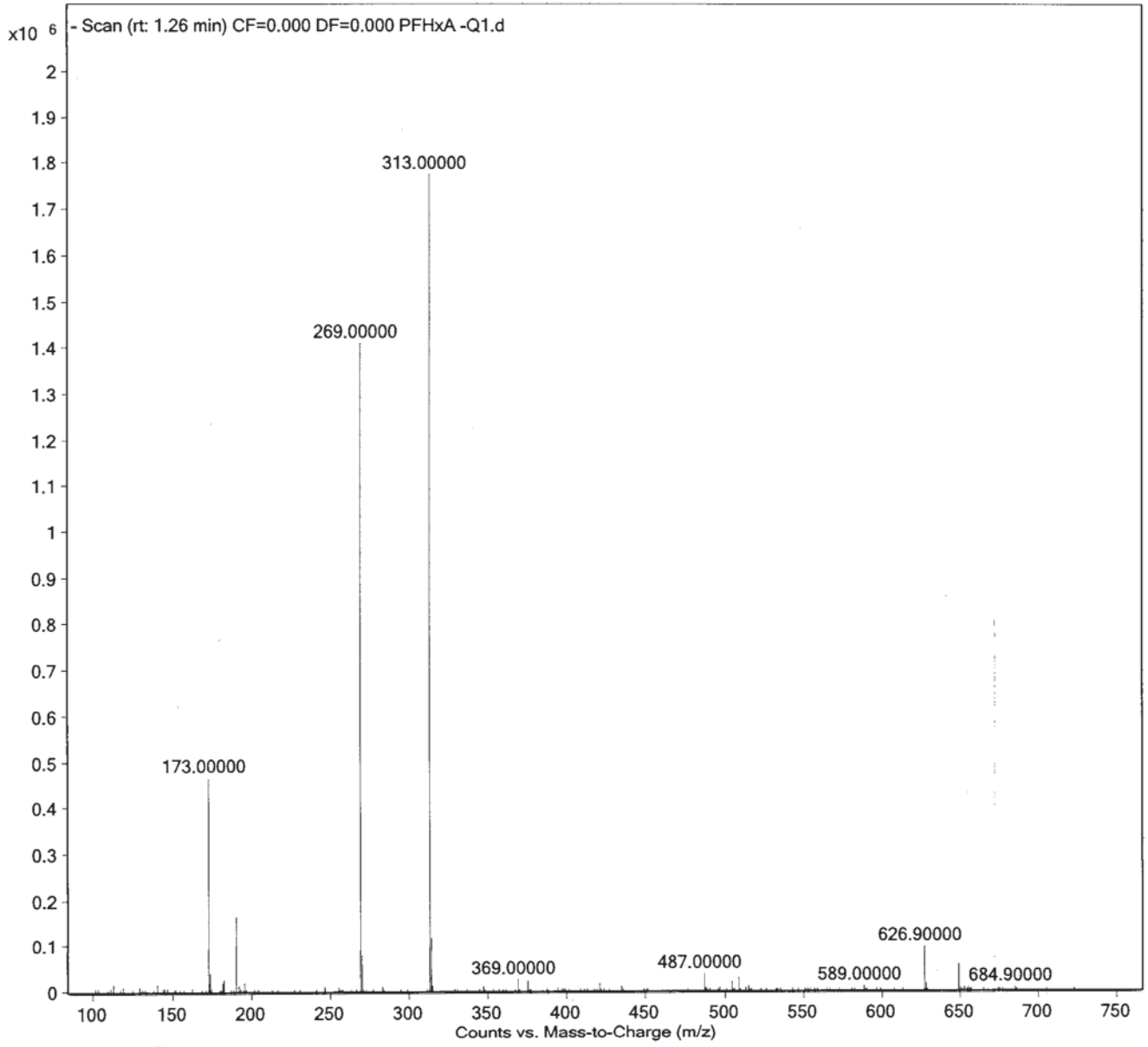


Sample Name	PFPeA -Q1	**Position**	P1-A3	**Instrument Name**	LCMS04
User Name	M_G	**Inj Vol**	10	**InjPosition**	
Sample Type	Sample	**IRM Calibration Status**	Not Applicable	**Data Filename**	PFPeA -Q1.d
ACQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/10 4:48:06 PM



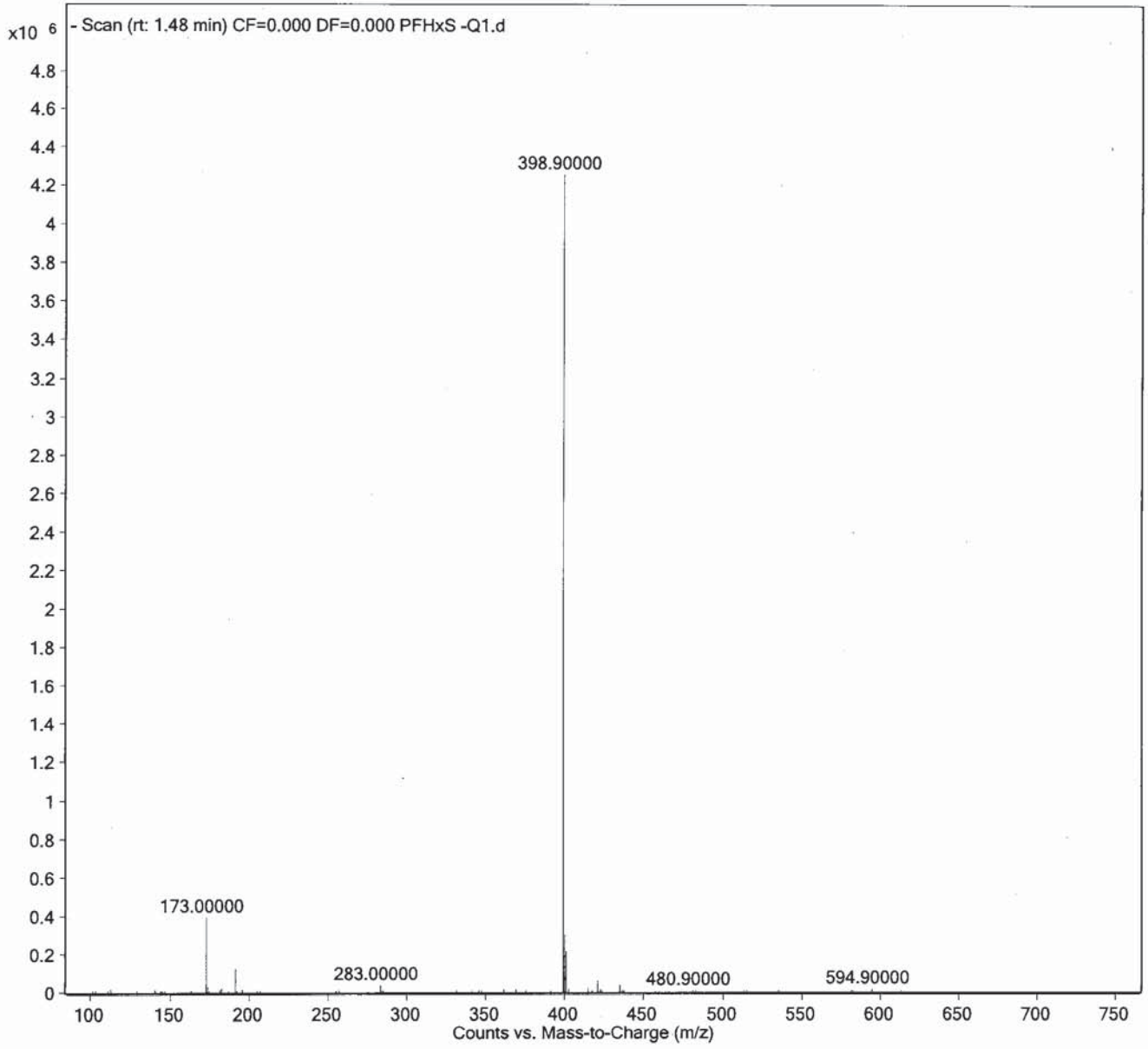
MaxXam Analytics

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



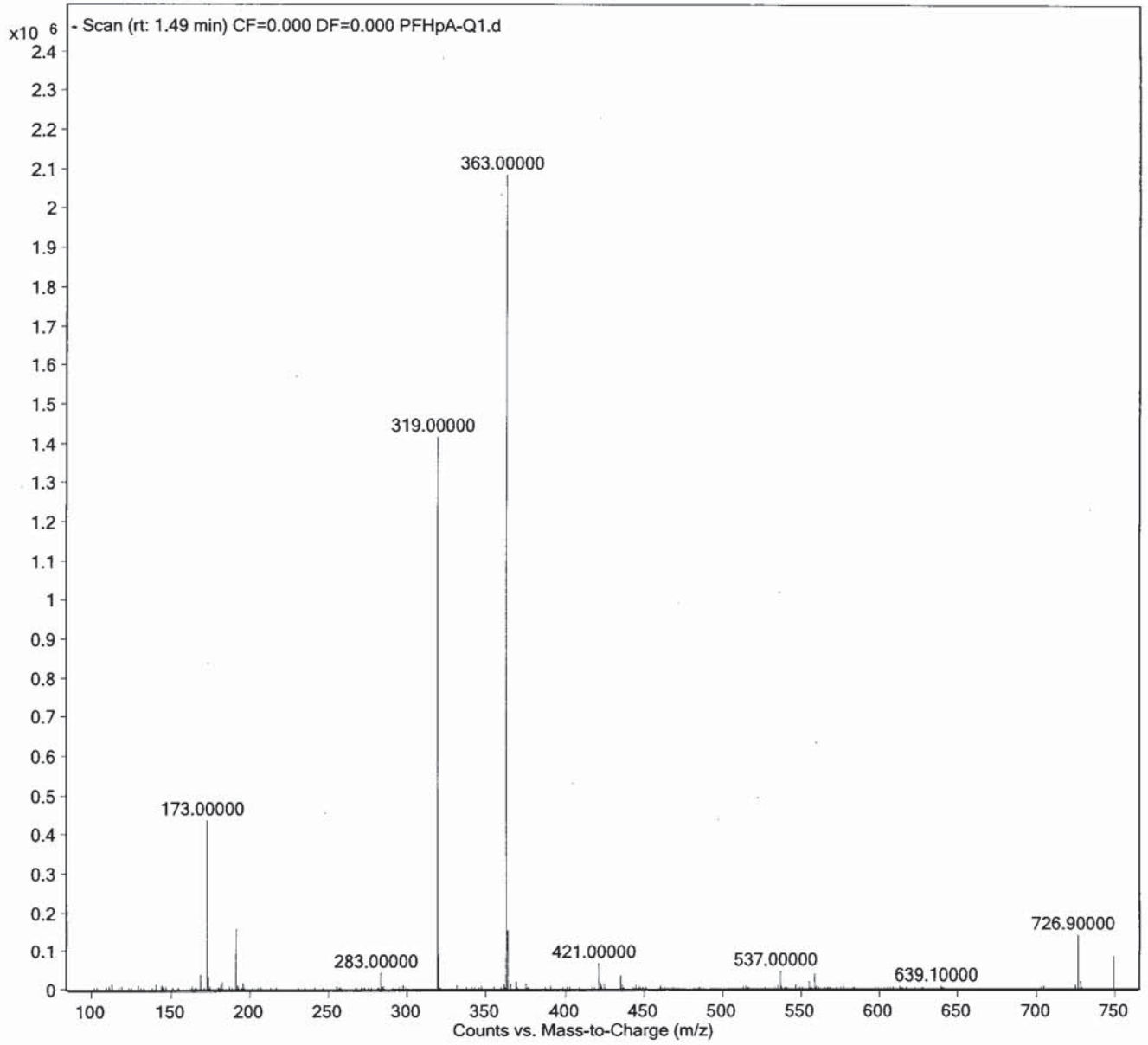
Maxxam Analytics

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
ACQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/10 4:59:06 PM



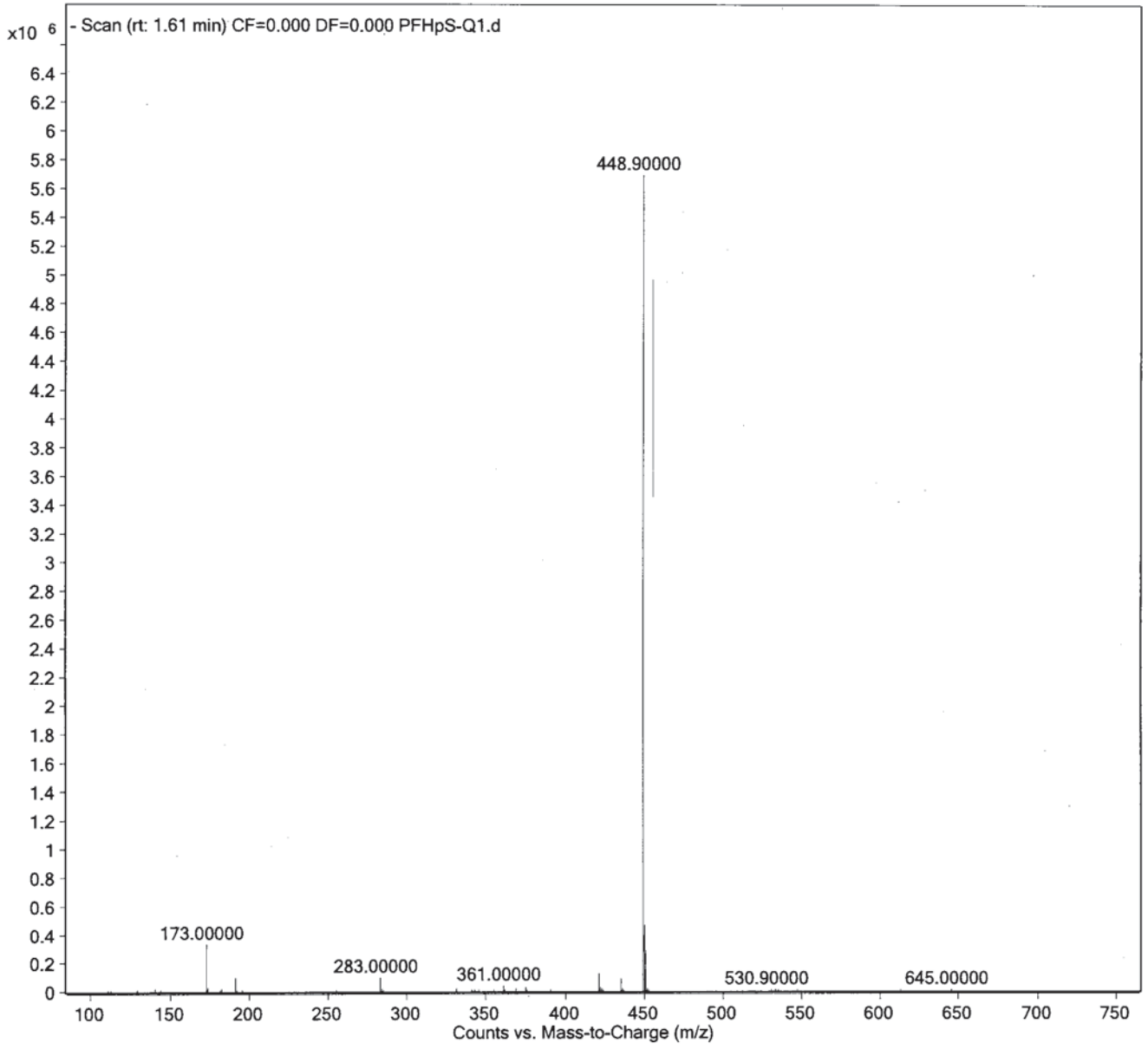
Maxxam Analytics

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



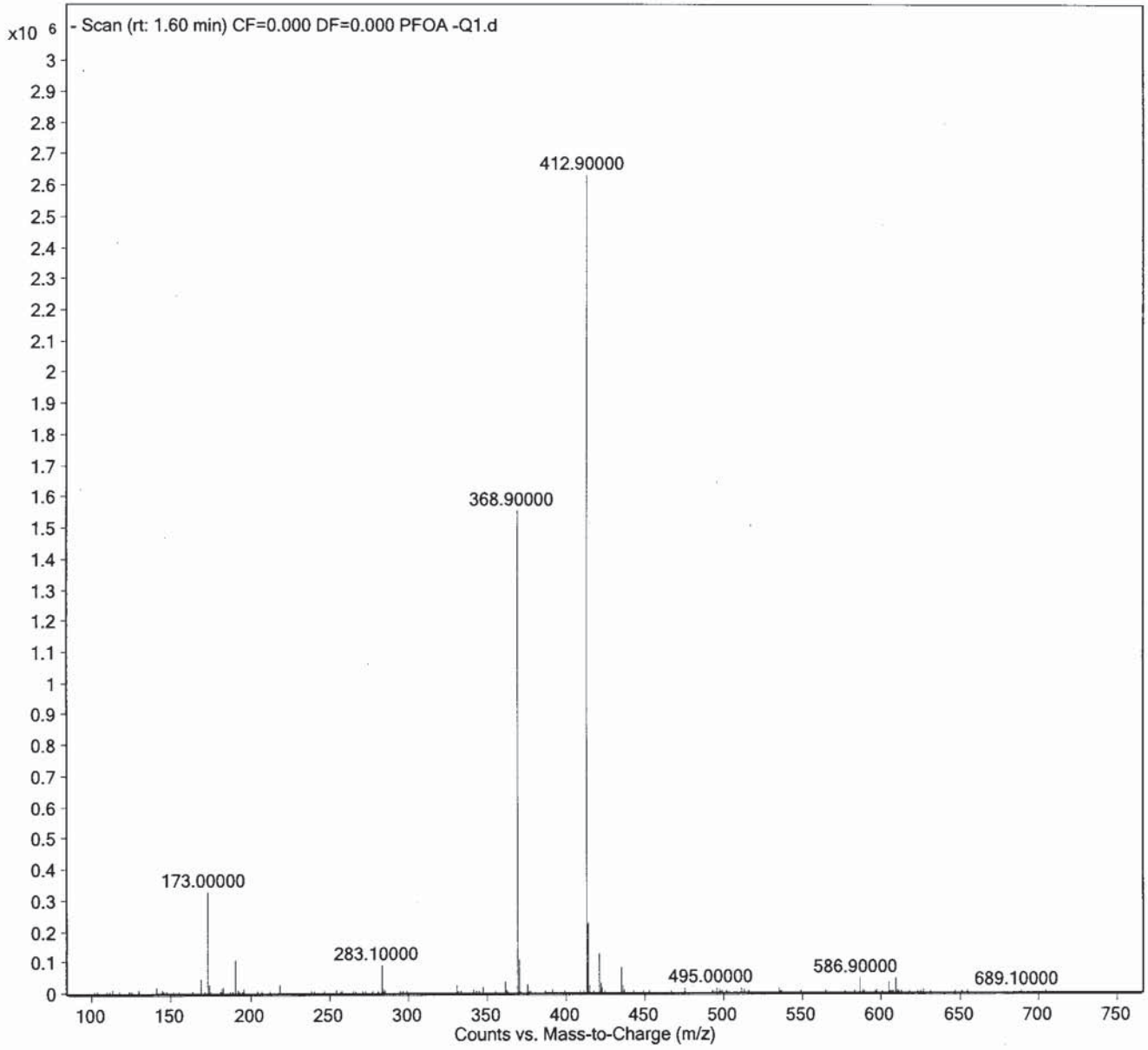
MaxXam Analytics

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
ACQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/10 5:10:06 PM



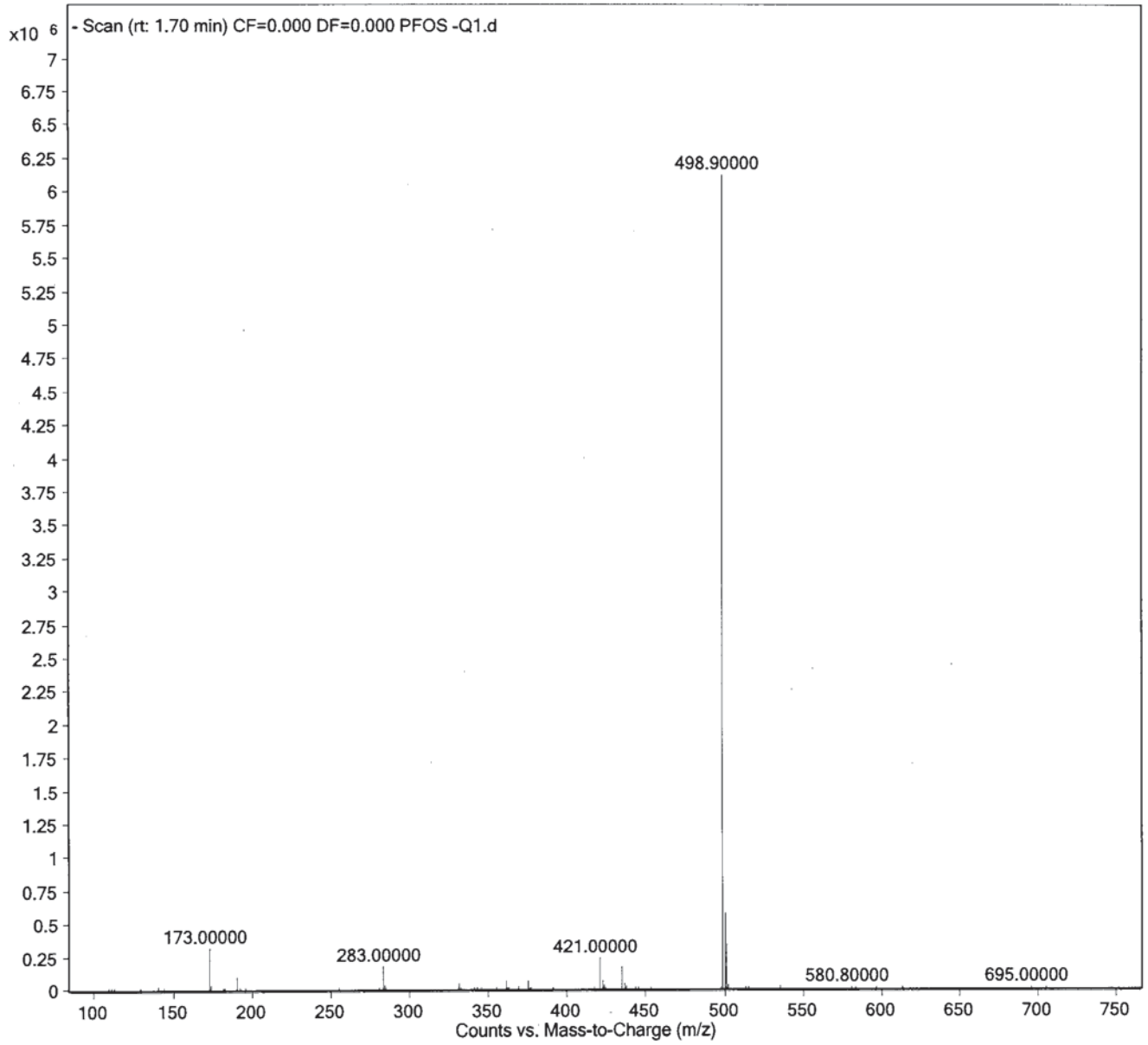
Maxxam Analytics

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



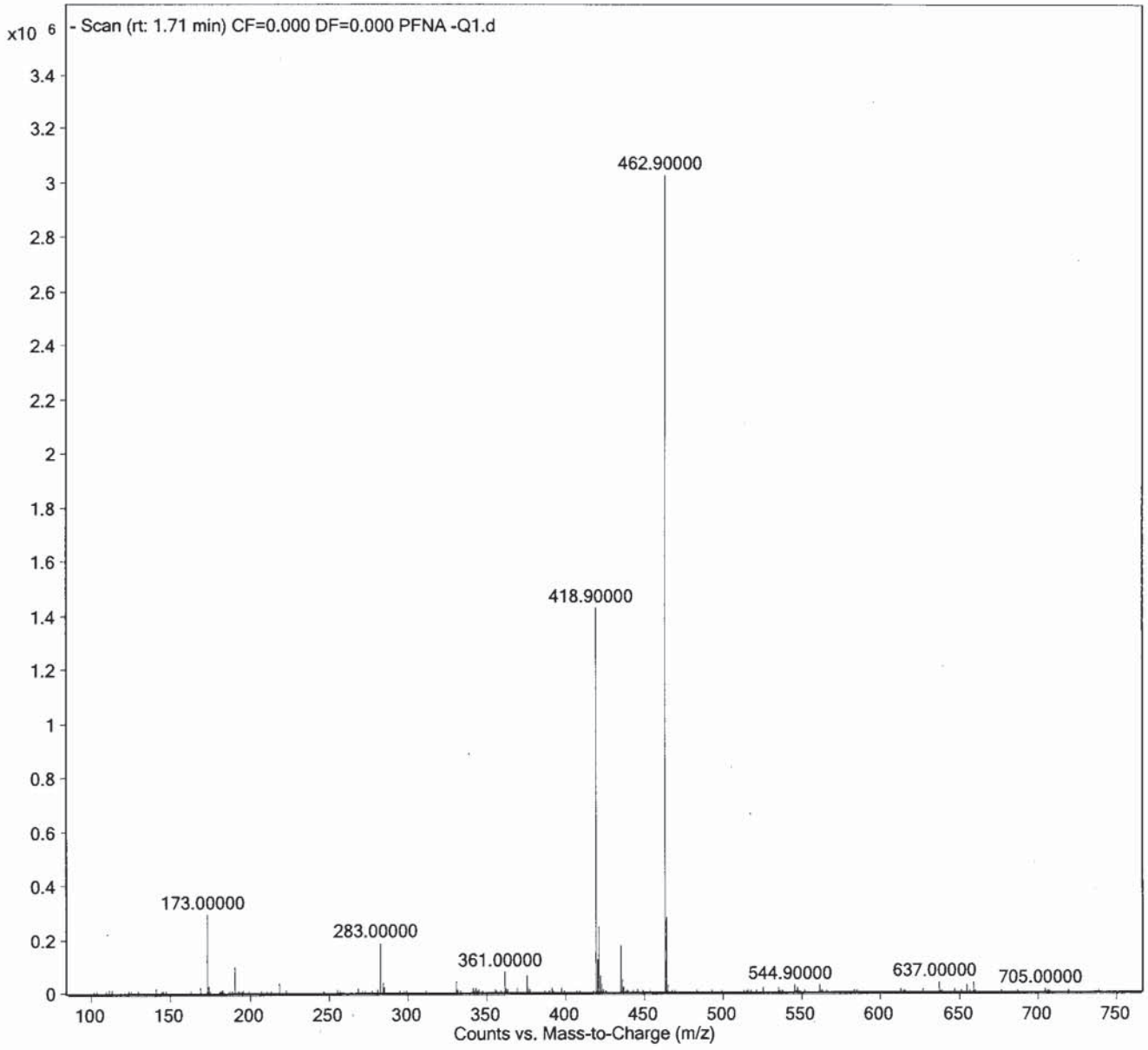
Maxxam Analytics

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



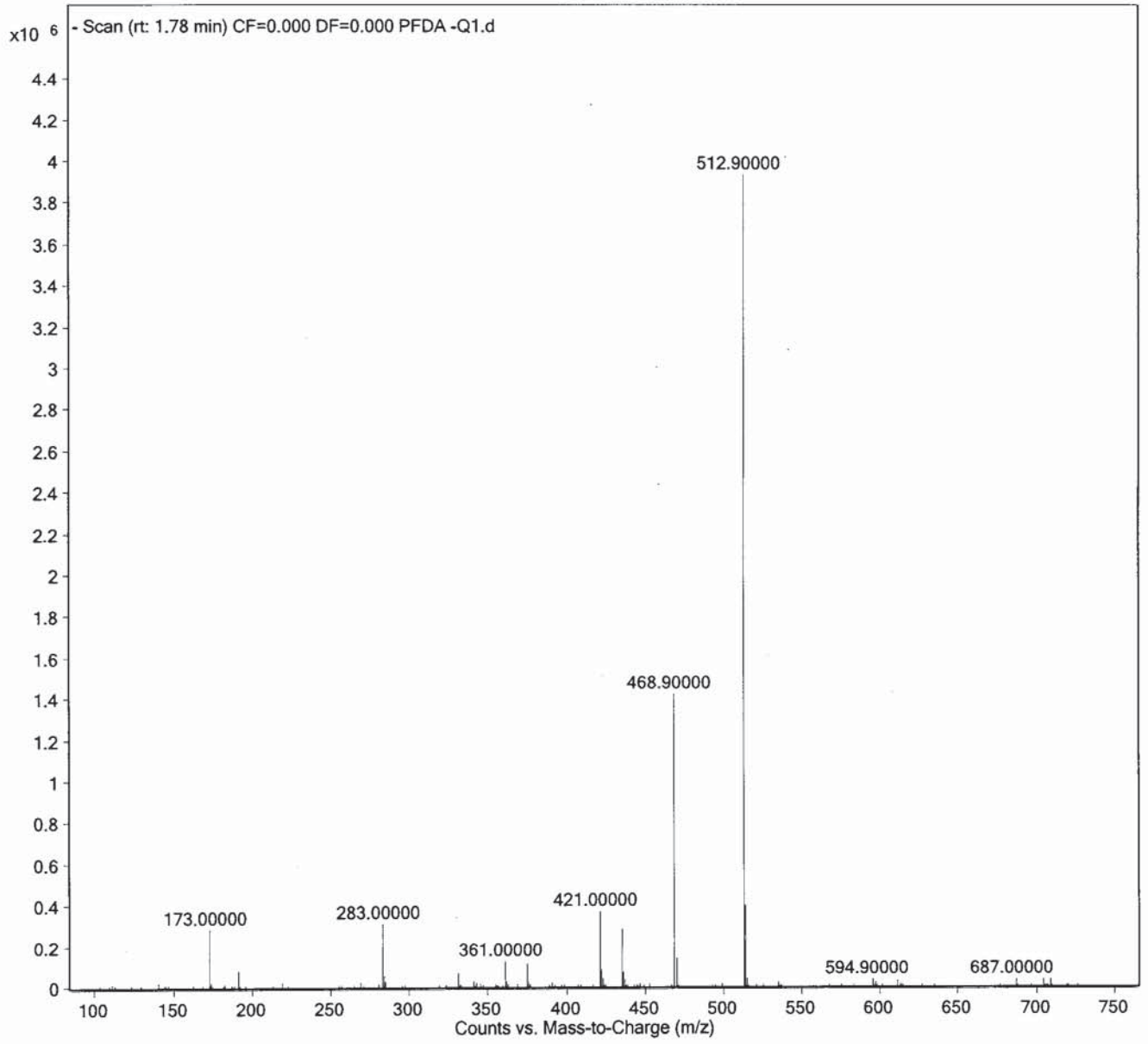
MaxXam Analytics

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



Jacksam Analytics

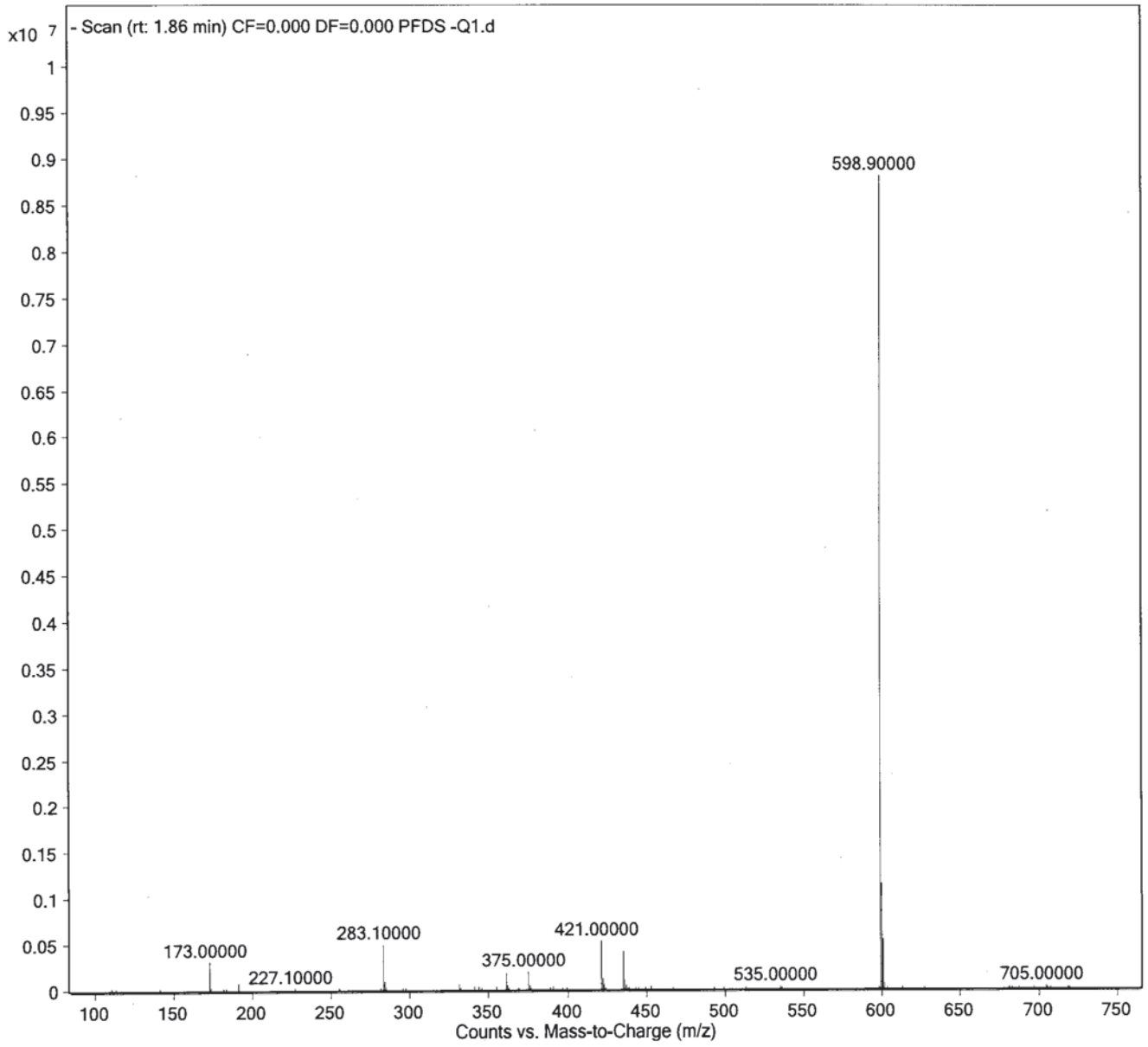
Sample Name	PFDA -Q1	**Position**	P1-B2	**Instrument Name**	LCMS04
User Name	M_G	**Inj Vol**	10	**InjPosition**	
Sample Type	Sample	**IRM Calibration Status**	Not Applicable	**Data Filename**	PFDA -Q1.d
ACQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/10 5:32:12 PM



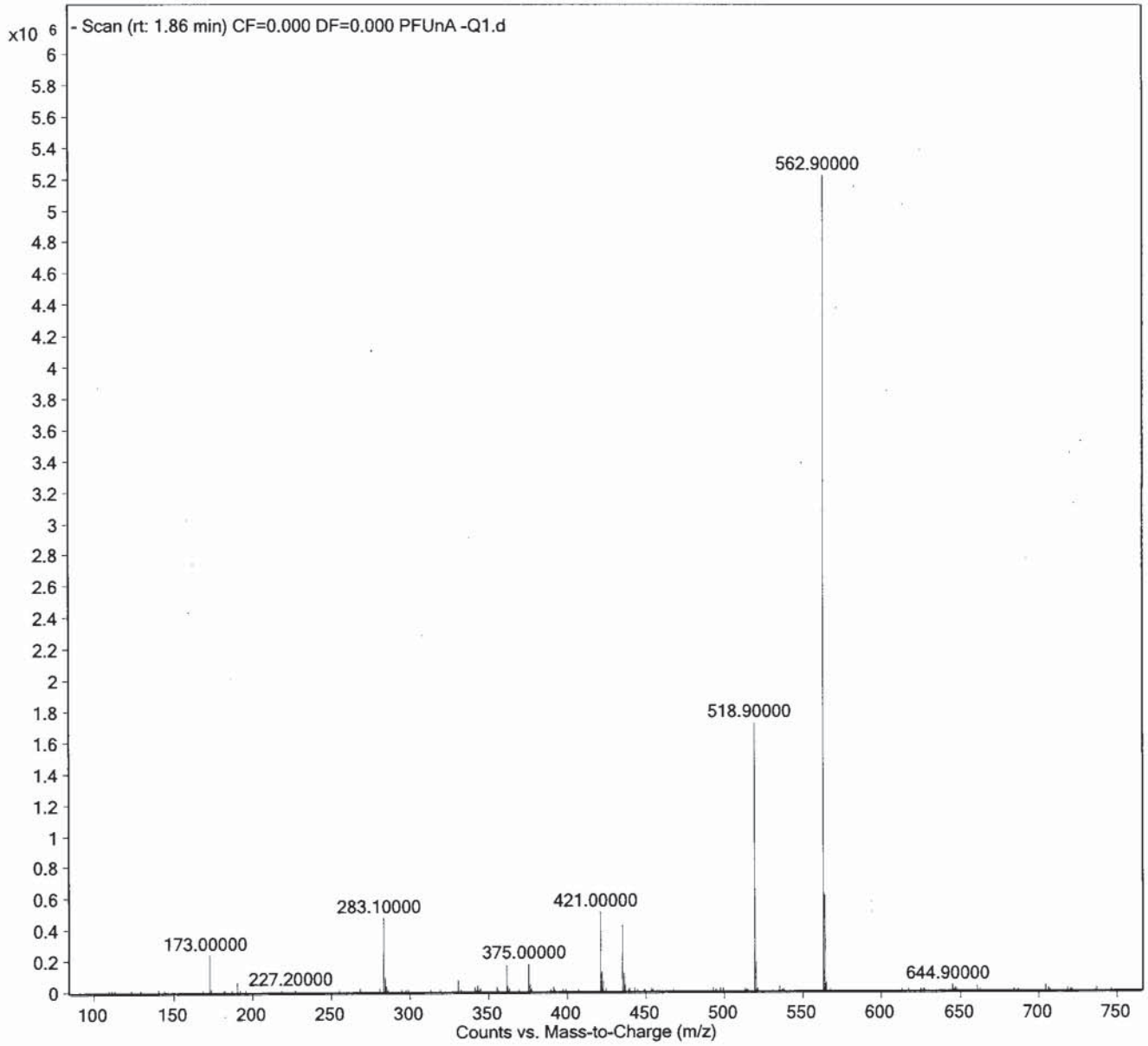
Maxxam Analytics

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
ACQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/10 5:37:42 PM

MaxxAm Analytics

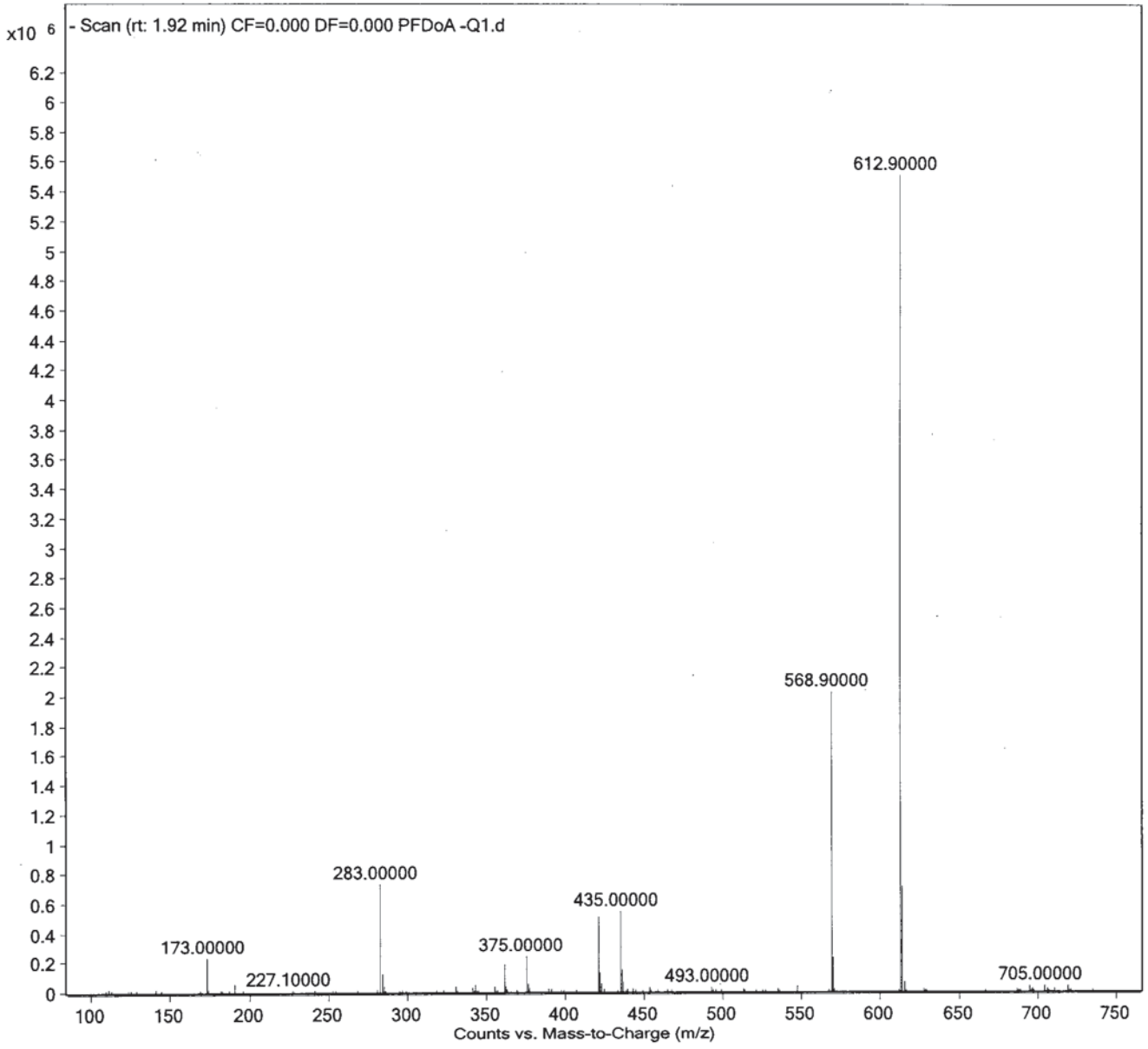


Sample Name	PFUnA -Q1	**Position**	P1-B4	**Instrument Name**	LCMS04
User Name	M_G	**Inj Vol**	10	**InjPosition**	
Sample Type	Sample	**IRM Calibration Status**	Not Applicable	**Data Filename**	PFUnA -Q1.d
ACQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/10 5:43:12 PM



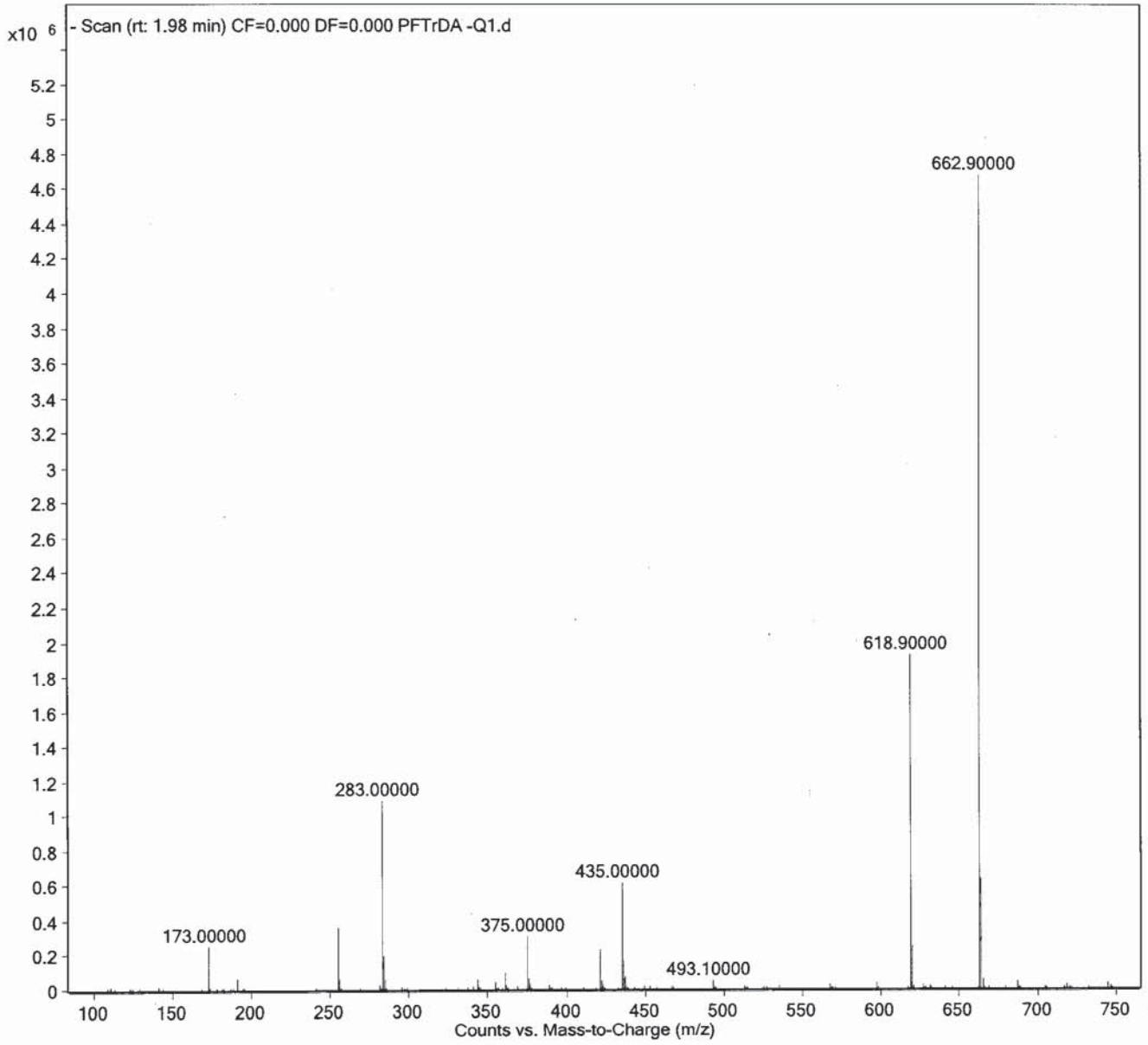
MaxXam Analytics

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



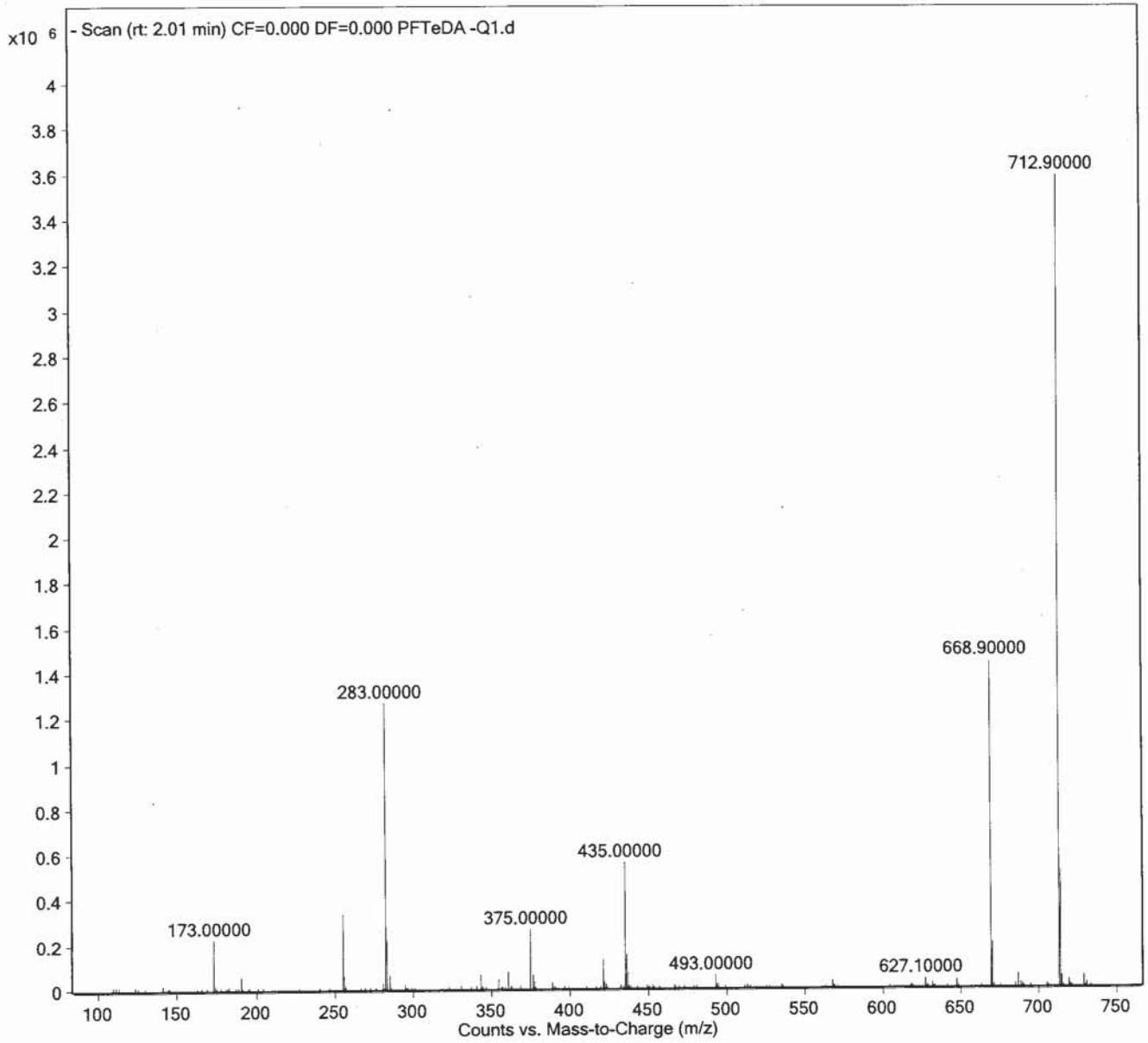
Jaxam Analytics

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



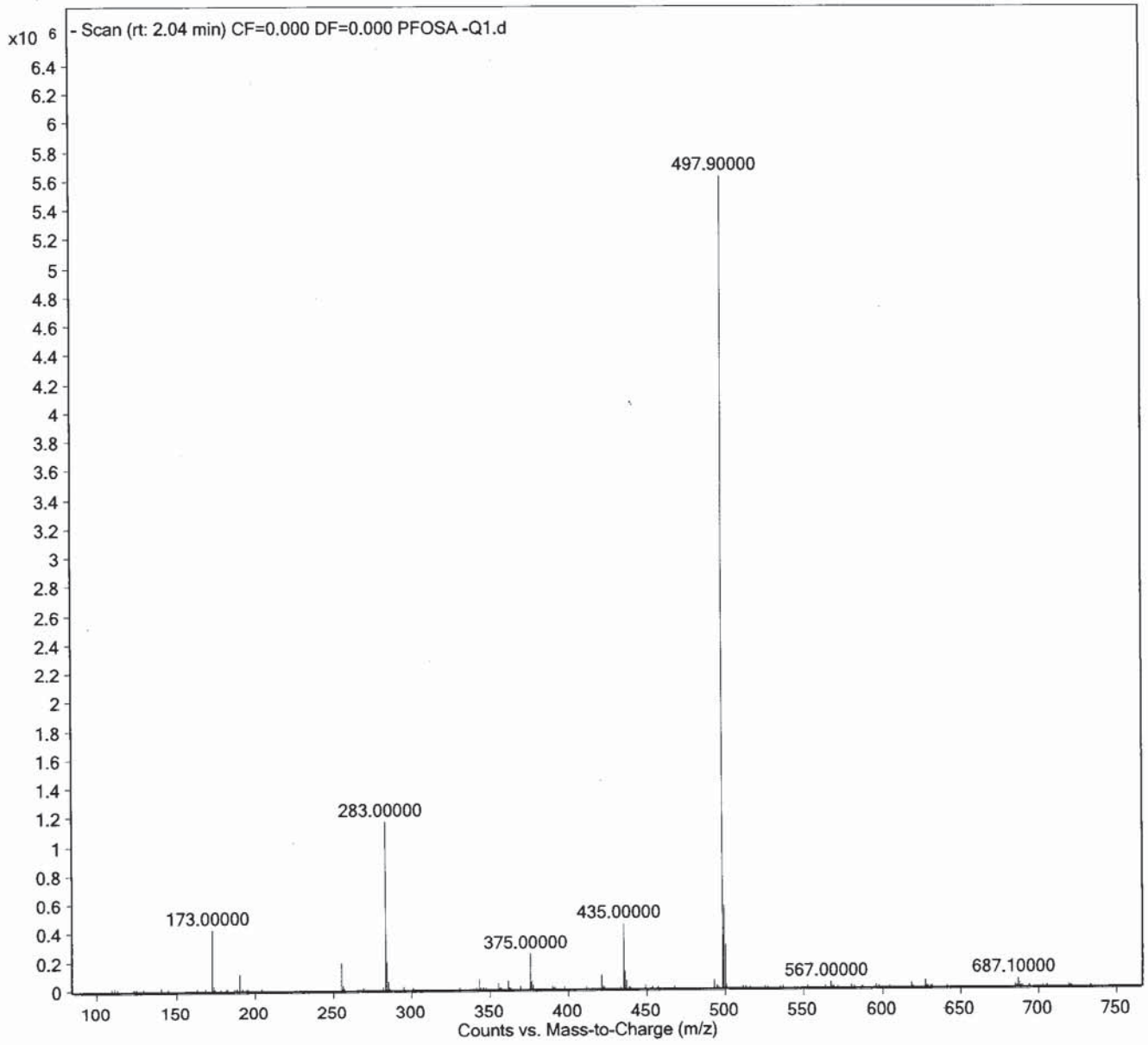
Alaskan Analytics

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
ACQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/10 5:59:42 PM



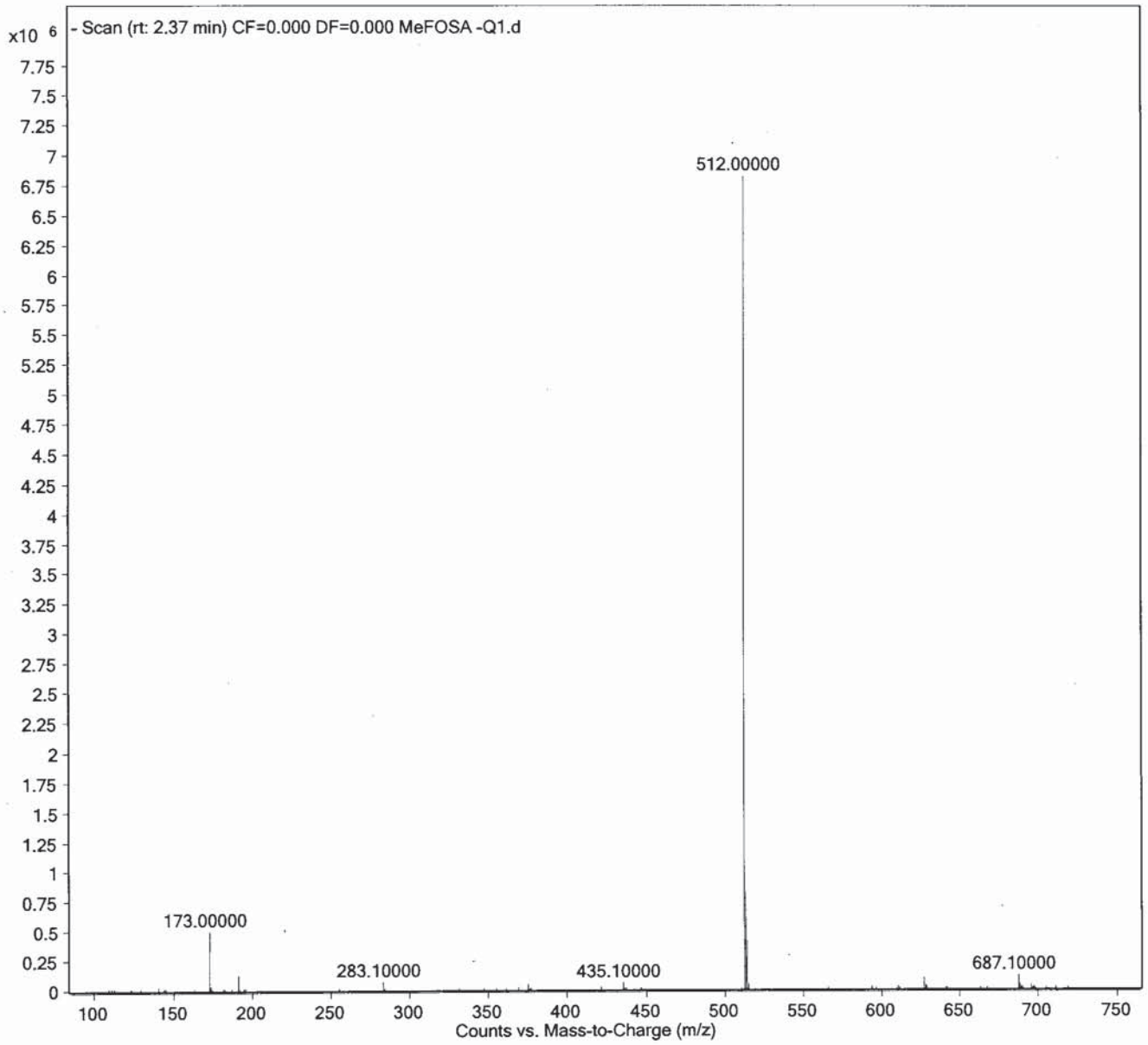
Eurofins Lancaster Laboratories Environmental

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



Saxam Analytics

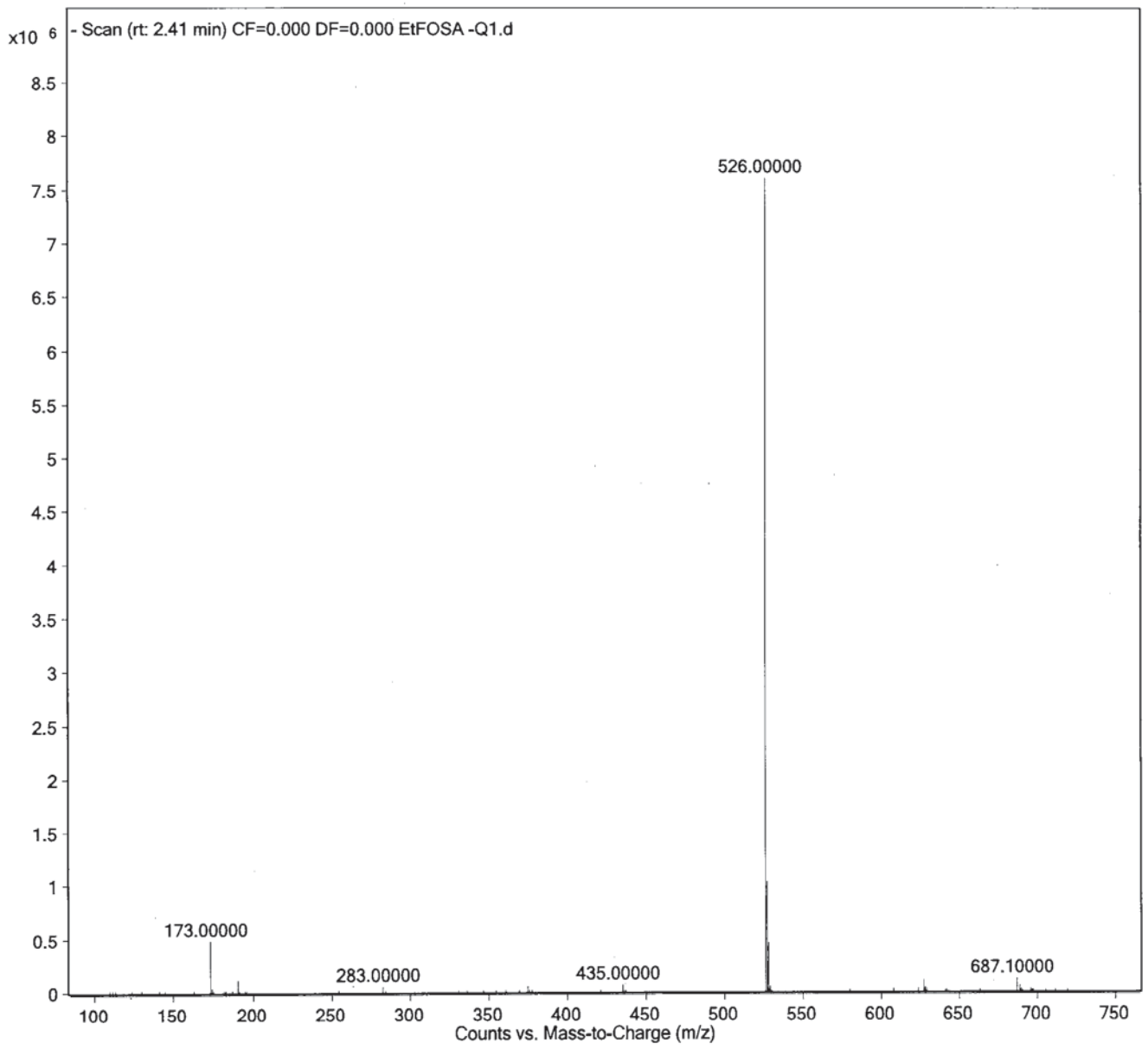
Sample Name	MeFOSA -Q1	**Position**	P1-B9	**Instrument Name**	LCMS04
User Name	M_G	**Inj Vol**	10	**InjPosition**	
Sample Type	Sample	**IRM Calibration Status**	Not Applicable	**Data Filename**	MeFOSA -Q1.d
ACQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/10 6:10:45 PM



MaxxAm Analytics

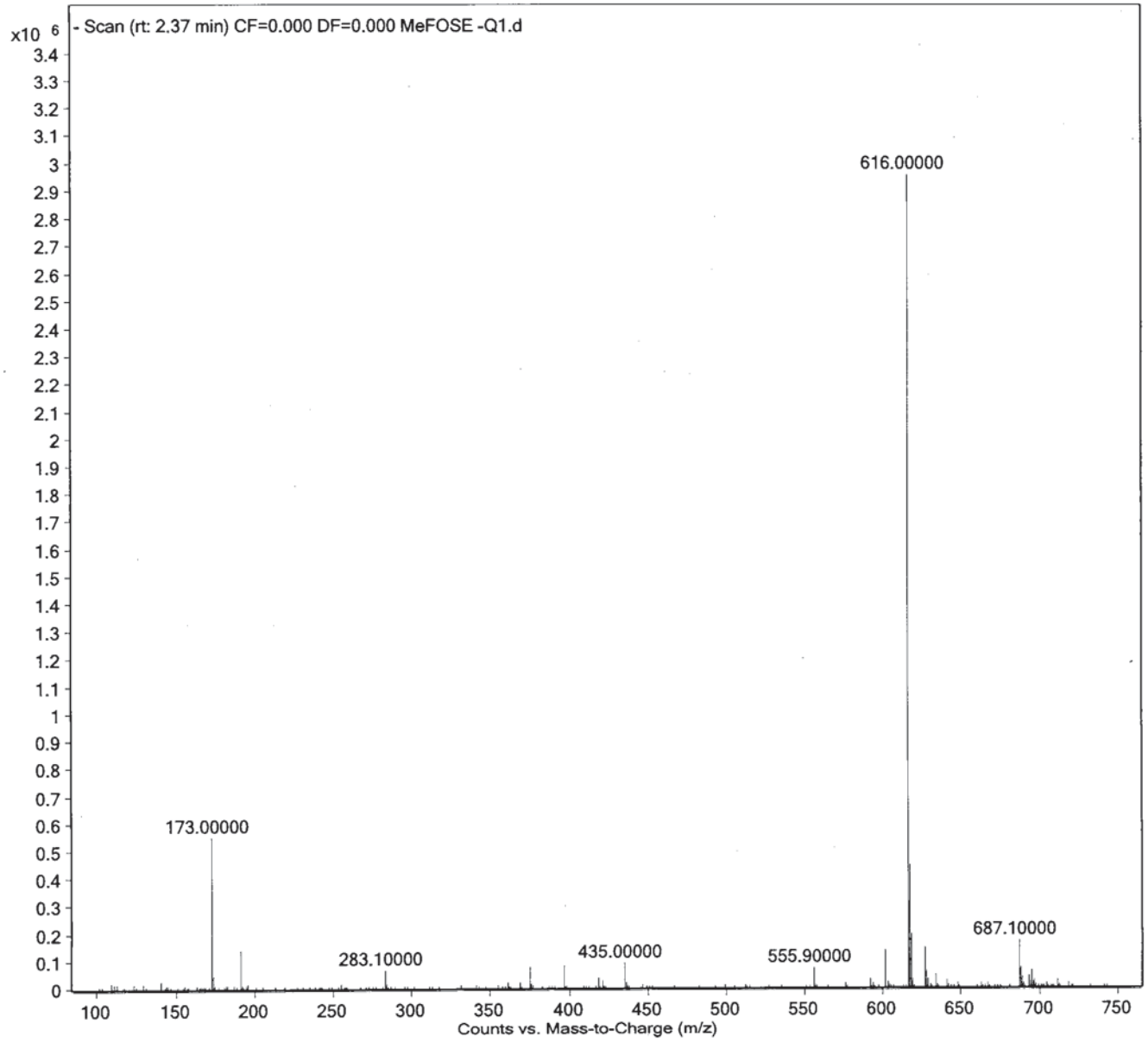
Sample Name	EtFOSA -Q1	**Position**	P1-C1	**Instrument Name**	LCMS04
User Name	M_G	**Inj Vol**	10	**InjPosition**	
Sample Type	Sample	**IRM Calibration Status**	Not Applicable	**Data Filename**	EtFOSA -Q1.d
ACQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/10 6:16:16 PM

Maxxam Analytics



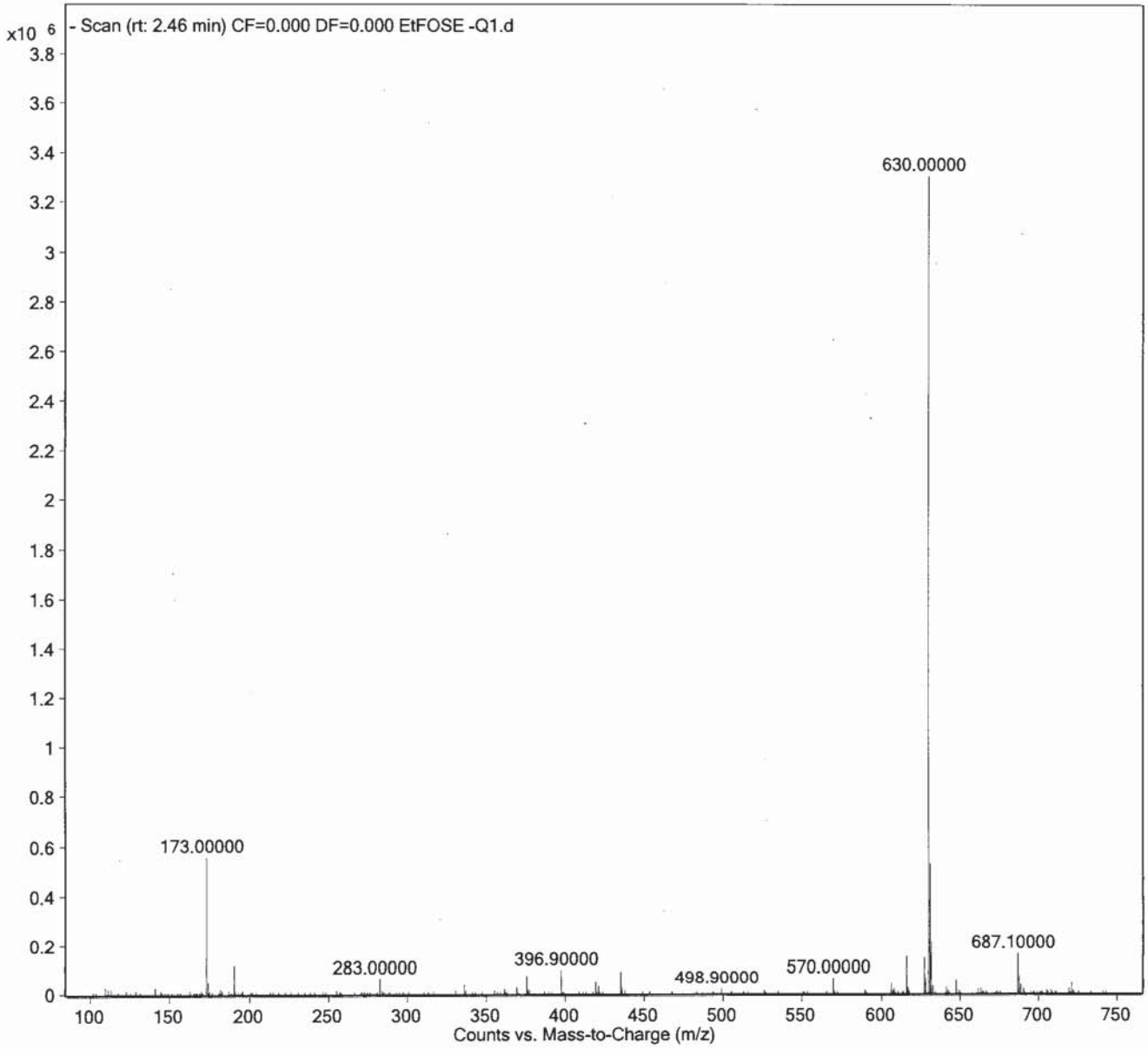
Sample Name	MeFOSE -Q1	**Position**	P1-C2	**Instrument Name**	LCMS04
User Name	M_G	**Inj Vol**	10	**InjPosition**	
Sample Type	Sample	**IRM Calibration Status**	Not Applicable	**Data Filename**	MeFOSE -Q1.d
ACQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/10 6:21:46 PM

Maxxam Analytics

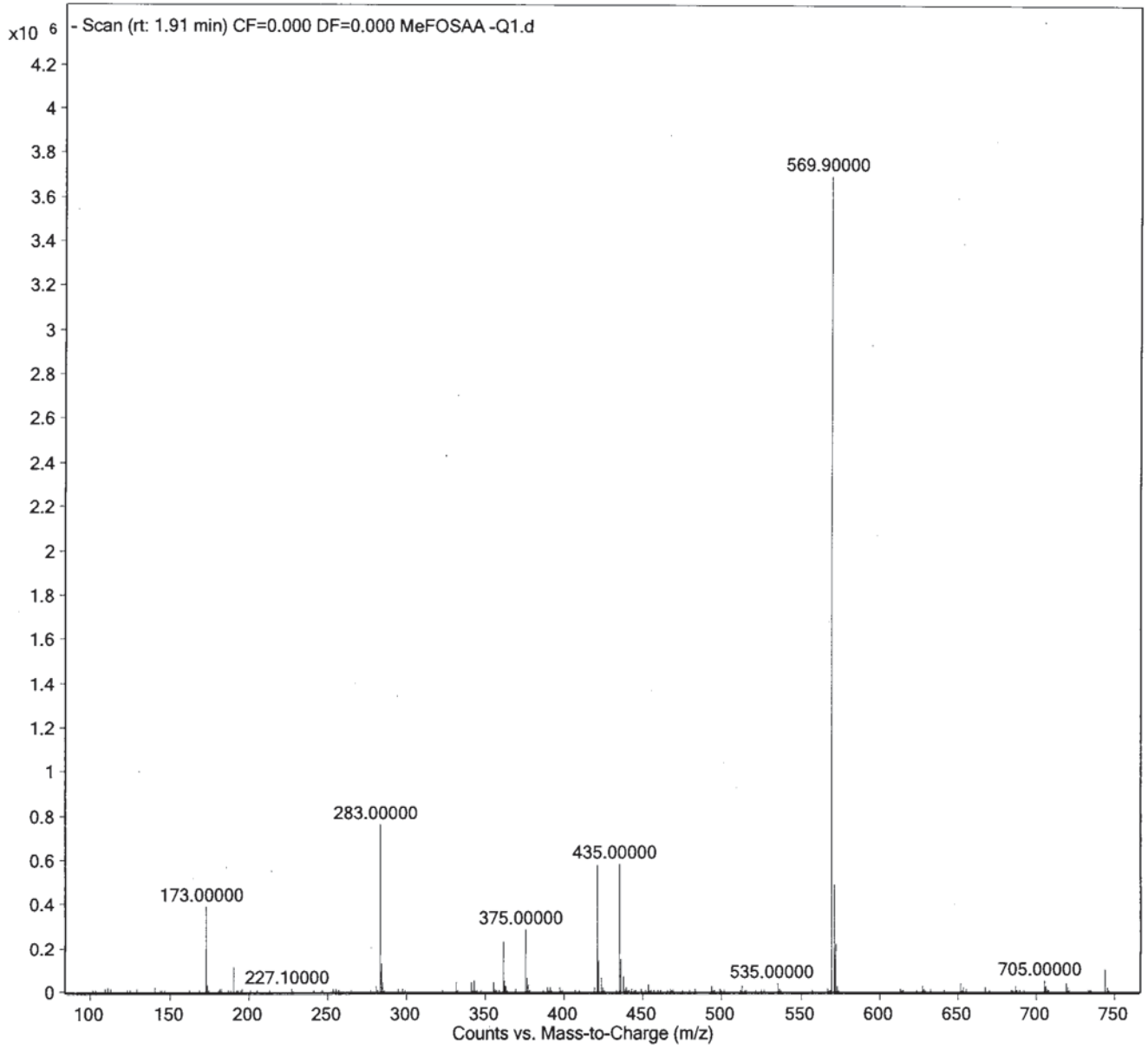


Sample Name	EtFOSE -Q1	**Position**	P1-C3	**Instrument Name**	LCMS04
User Name	M_G	**Inj Vol**	10	**InjPosition**	
Sample Type	Sample	**IRM Calibration Status**	Not Applicable	**Data Filename**	EtFOSE -Q1.d
ACQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/10 6:27:16 PM

Maxxam Analytics

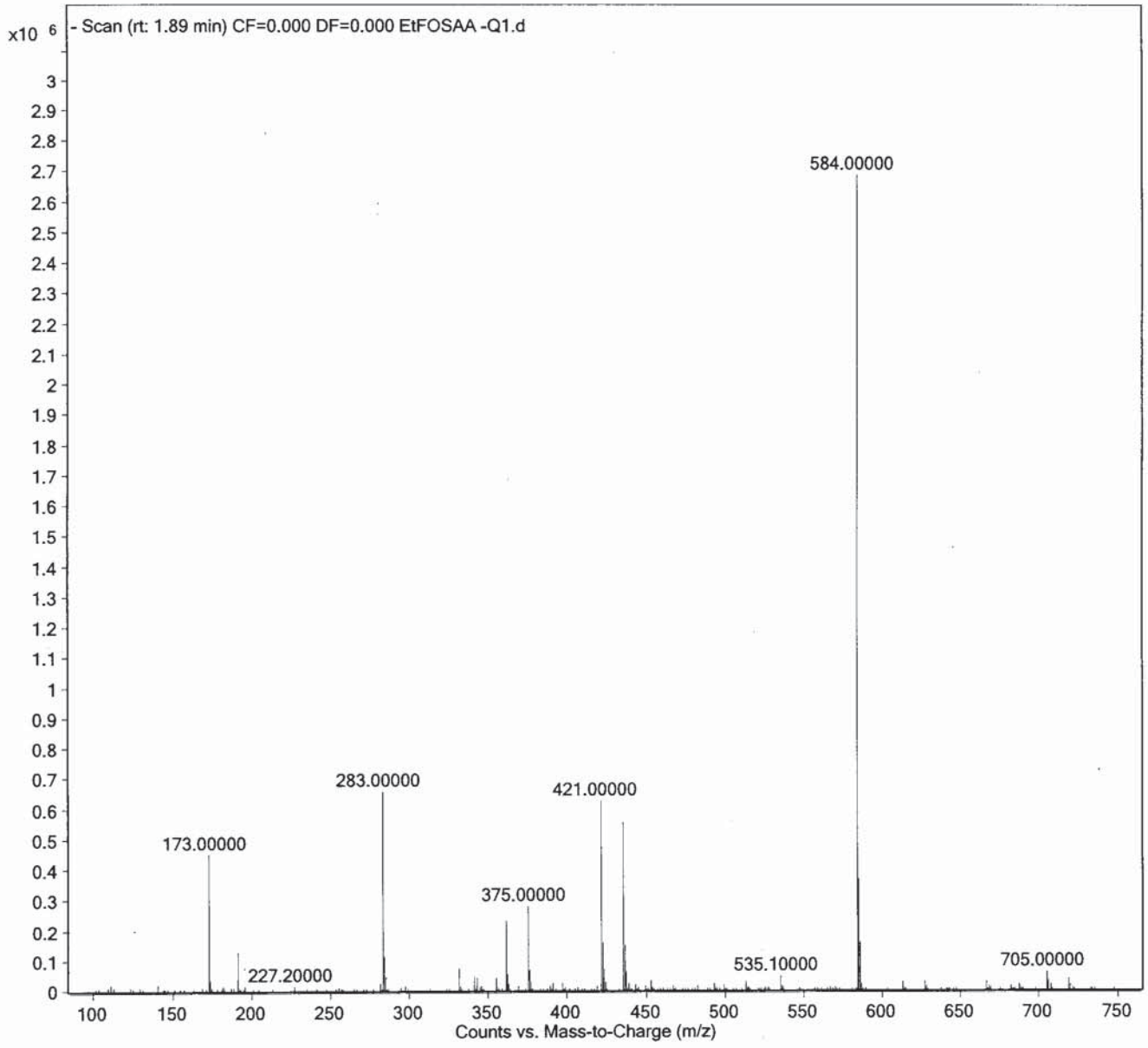


Sample Name	MeFOSAA -Q1	**Position**	P1-C4	**Instrument Name**	LCMS04
User Name	M_G	**Inj Vol**	10	**InjPosition**	
Sample Type	Sample	**IRM Calibration Status**	Not Applicable	**Data Filename**	MeFOSAA -Q1.d
ACQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/10 6:32:46 PM

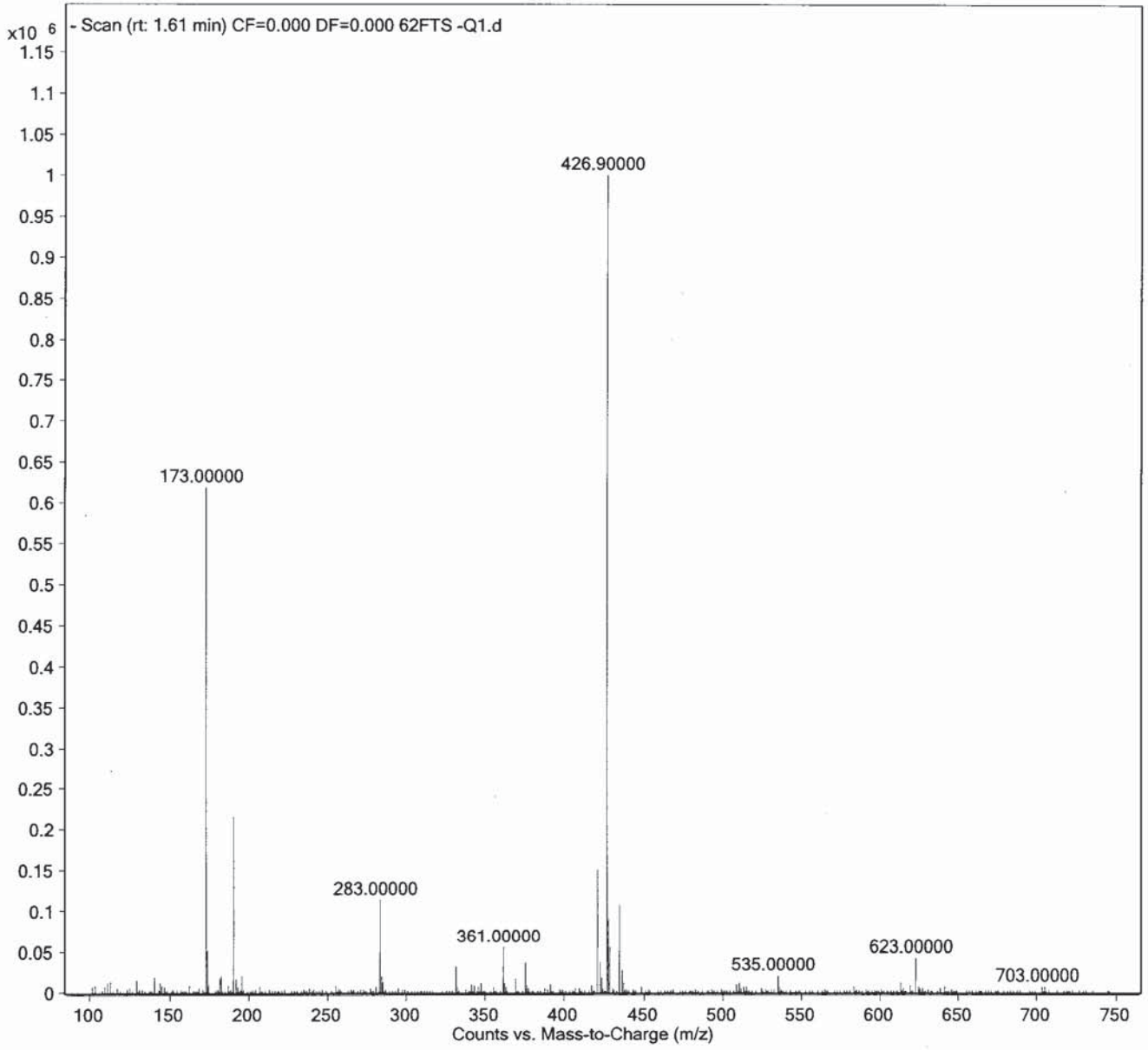


Maxxam Analytics

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

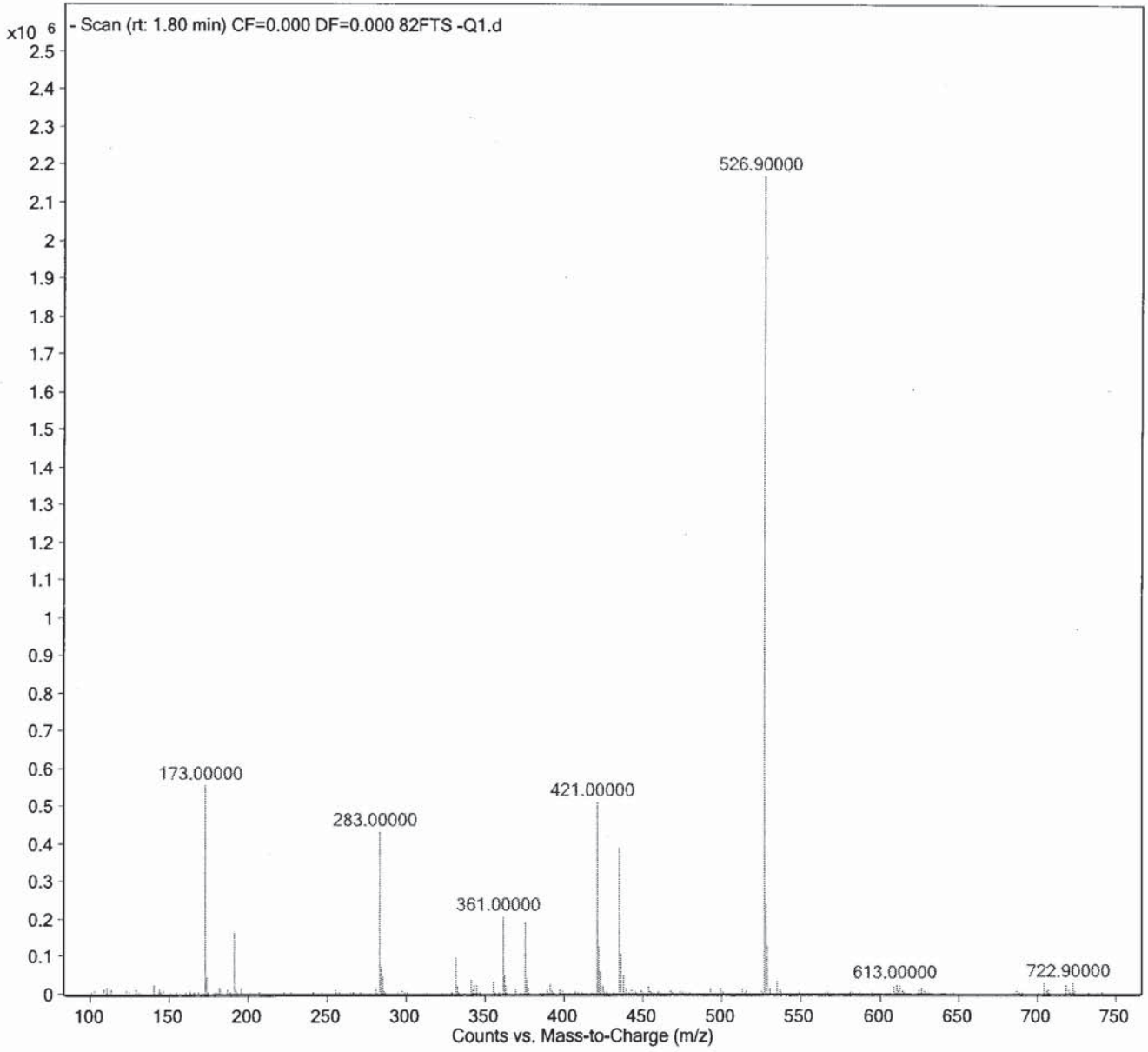


Sample Name	6:2FTS -Q1	**Position**	P1-C6	**Instrument Name**	LCMS04
User Name	M_G	**Inj Vol**	10	**InjPosition**	
Sample Type	Sample	**IRM Calibration Status**	Not Applicable	**Data Filename**	62FTS -Q1.d
CQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/10 6:43:46 PM



Maxxam Analytics

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



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Worklist Report

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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

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	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

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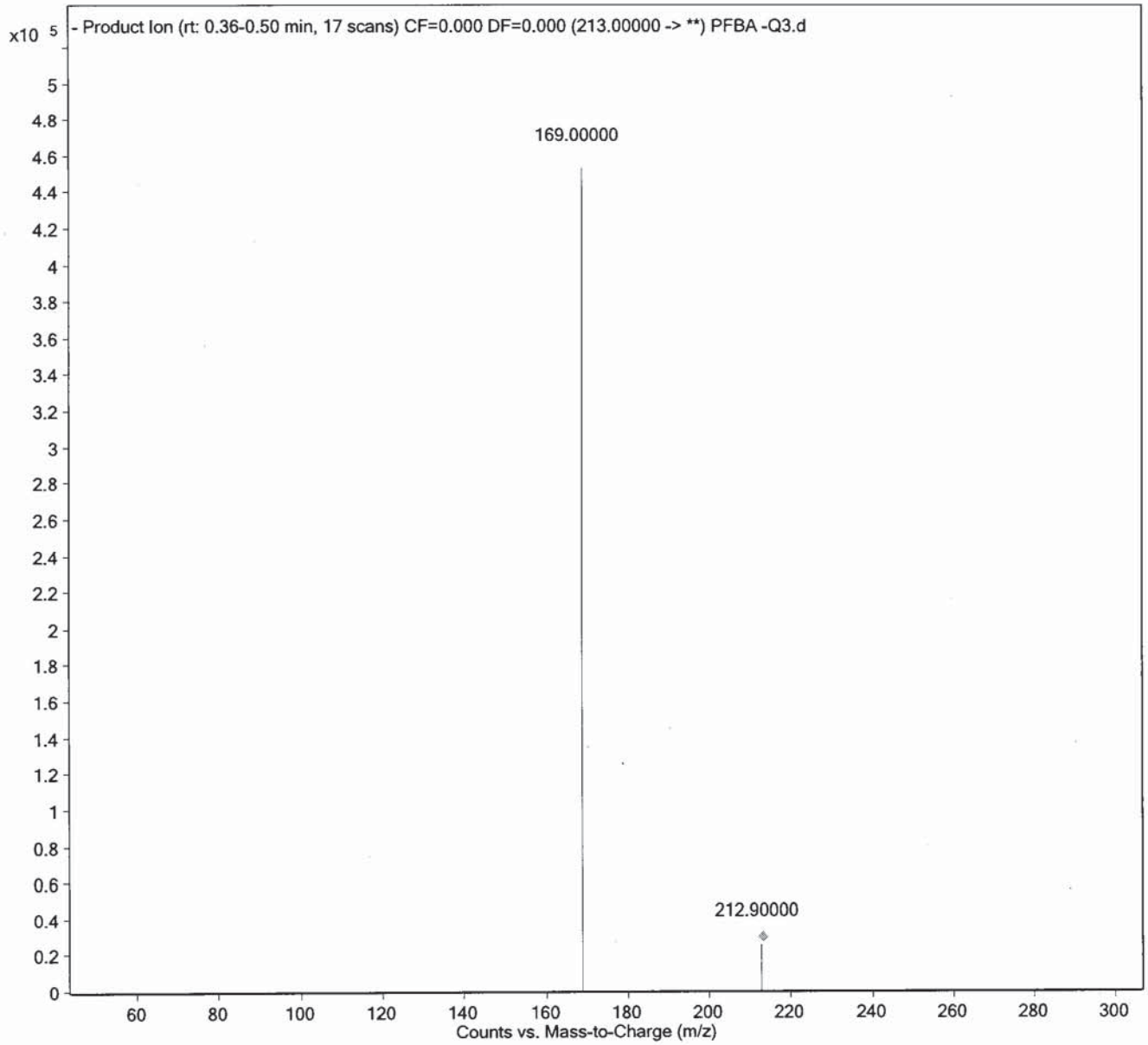
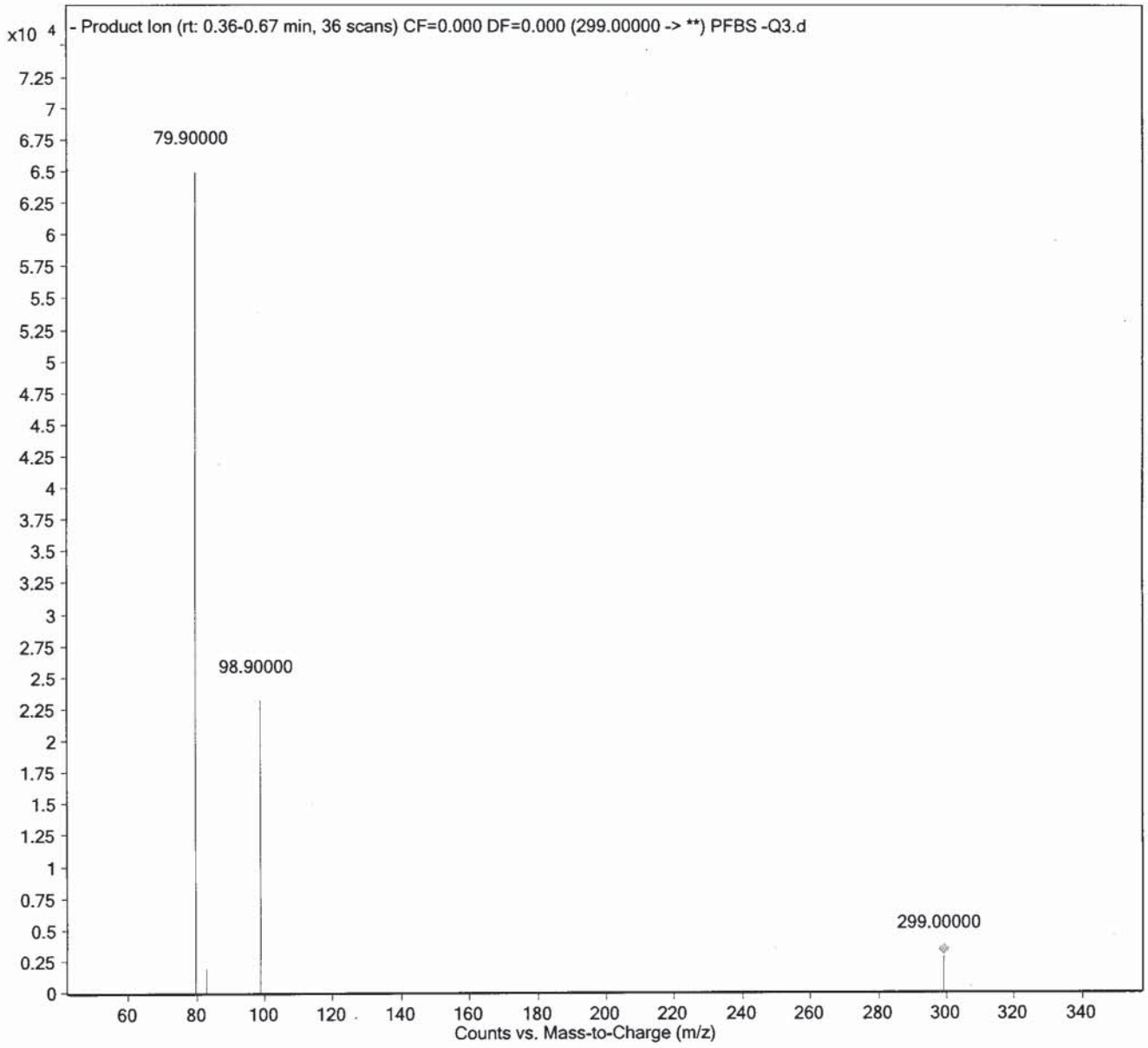
Analyte Product Ion Verification

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



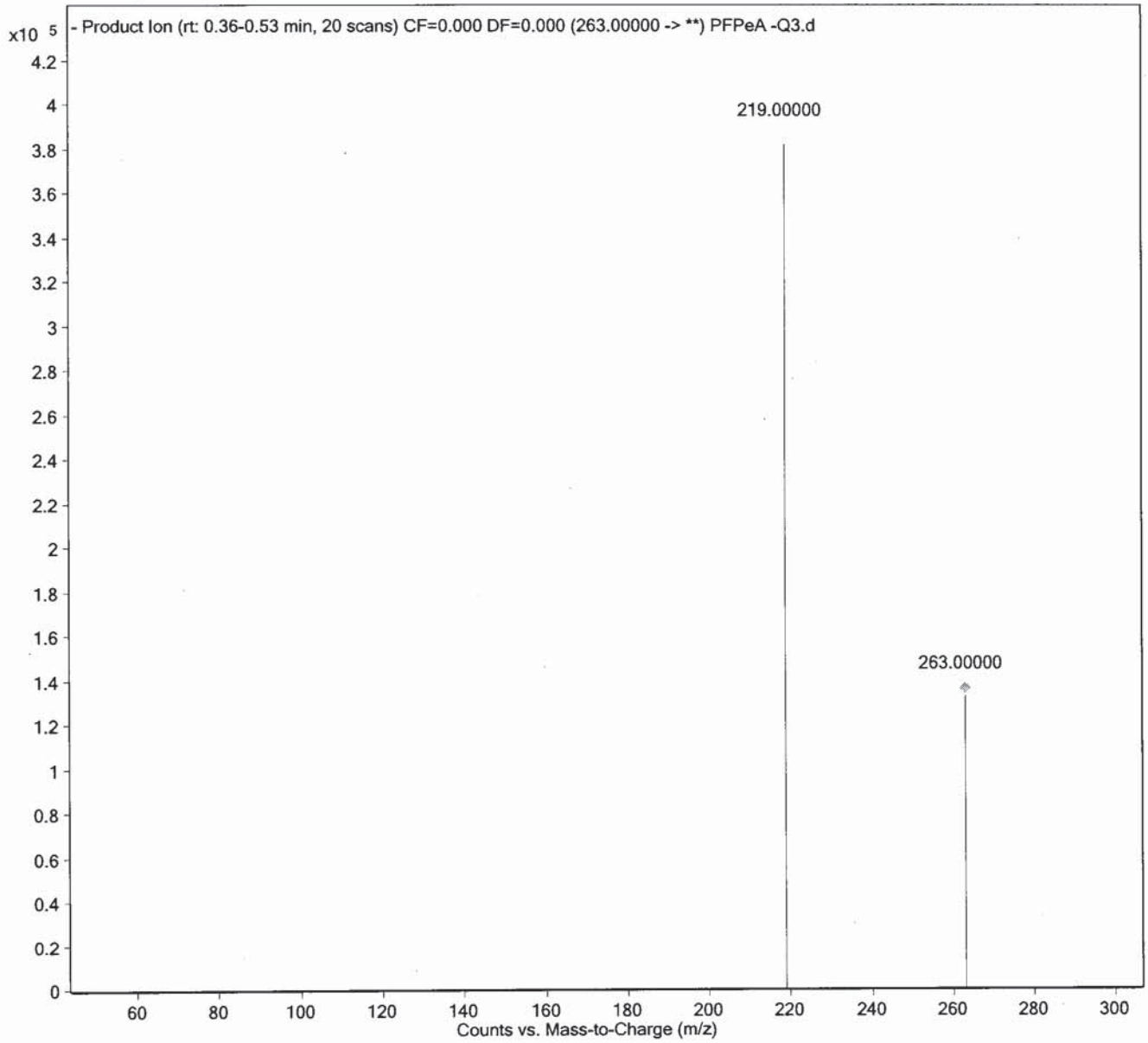
SaxAm Analytics

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



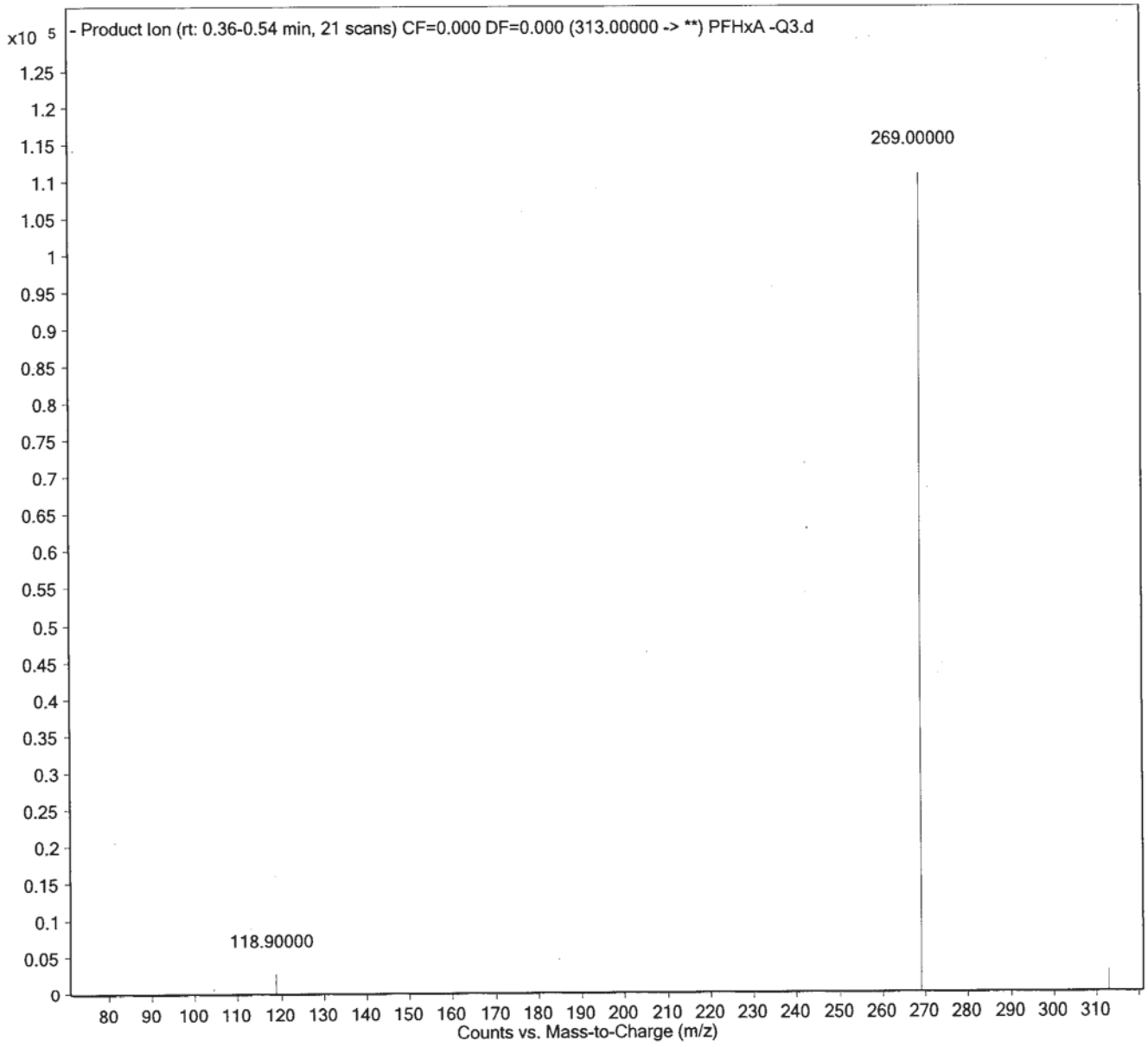
Maxxam Analytics

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



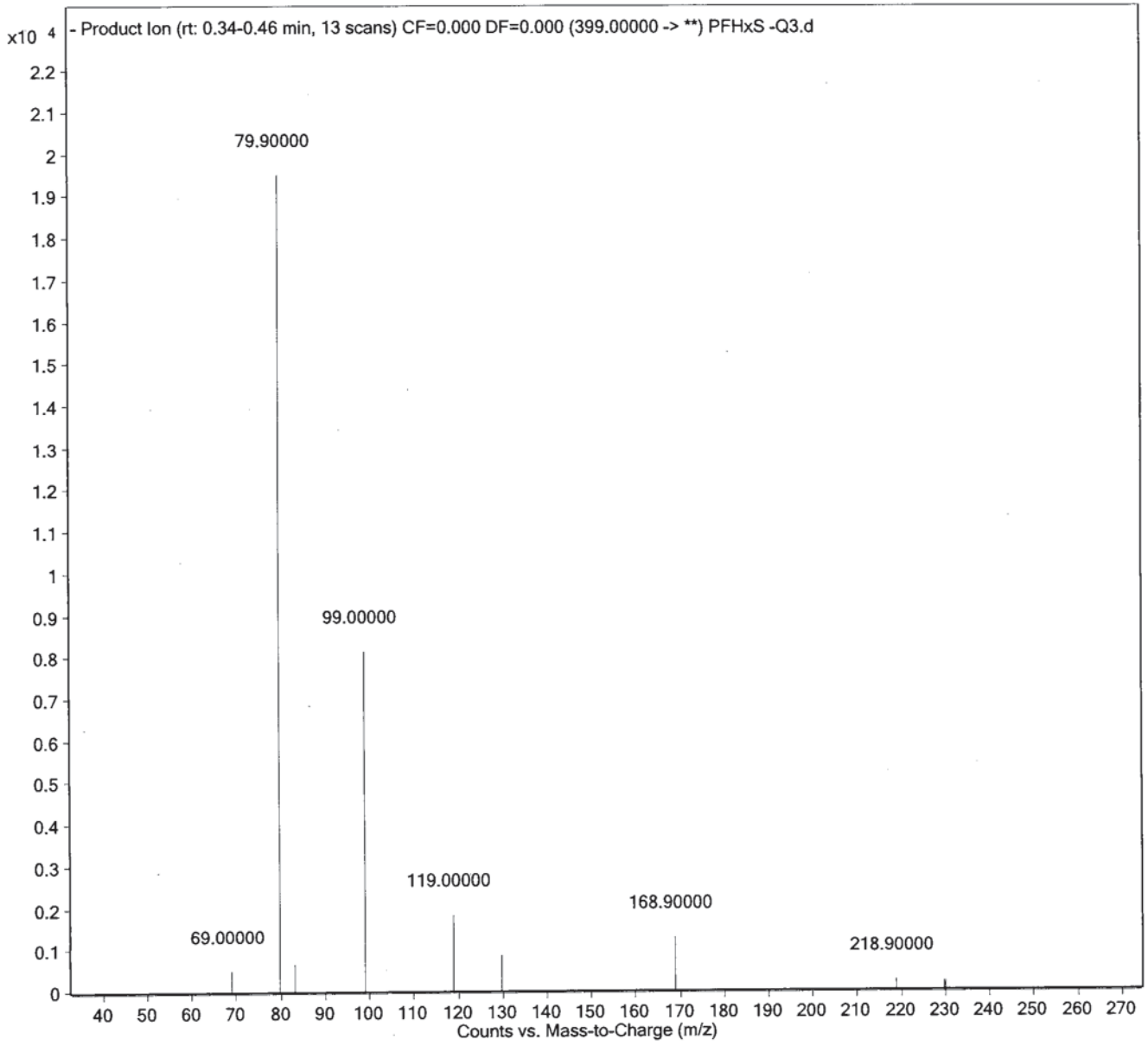
SAIExam Analytics

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
ACQ Method	PFC_MassVerification-PFHxA-Q3.m	**Comment**		**Acquired Time**	2017/07/10 7:11:16 PM



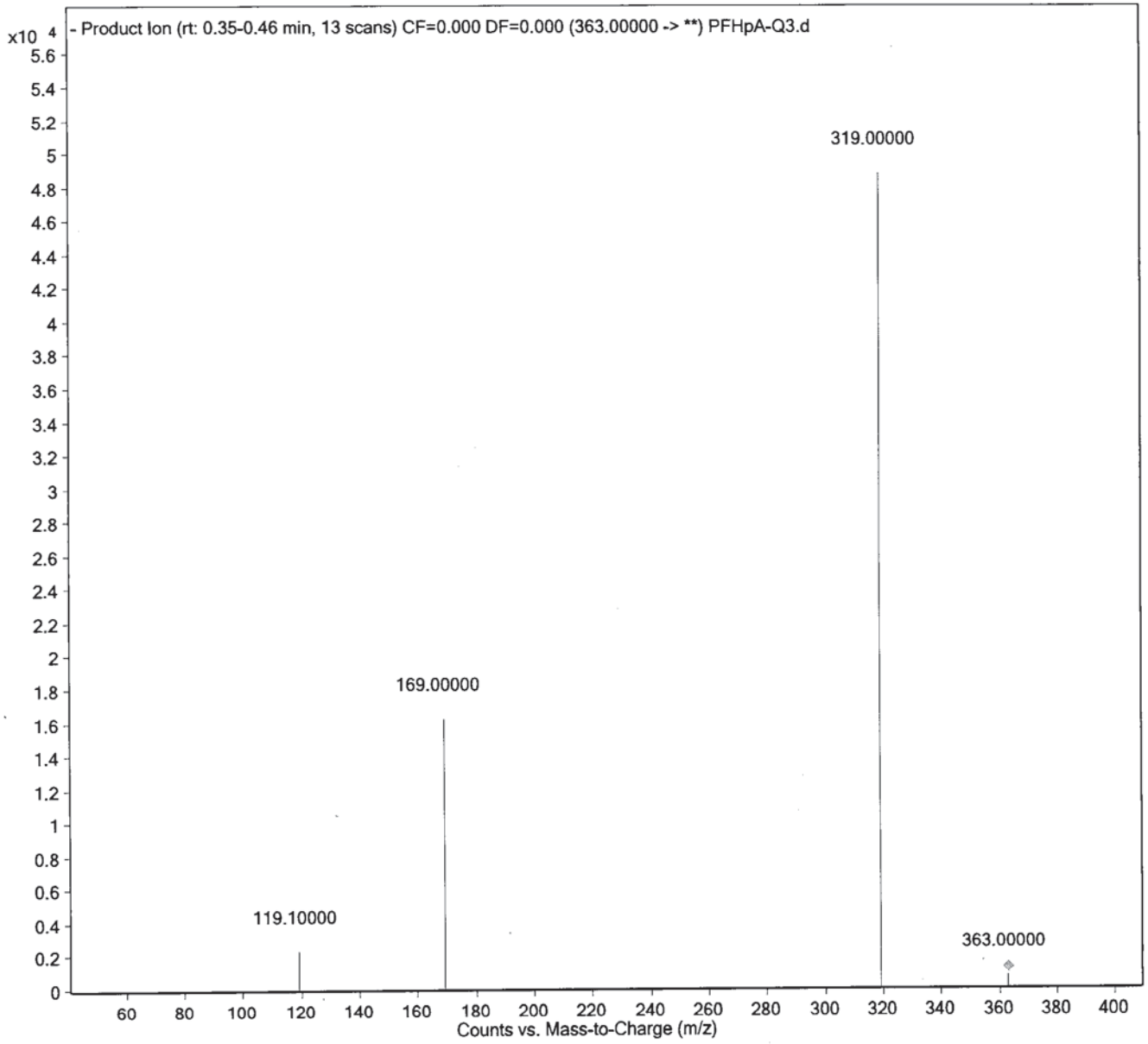
SaxKam Analytics

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



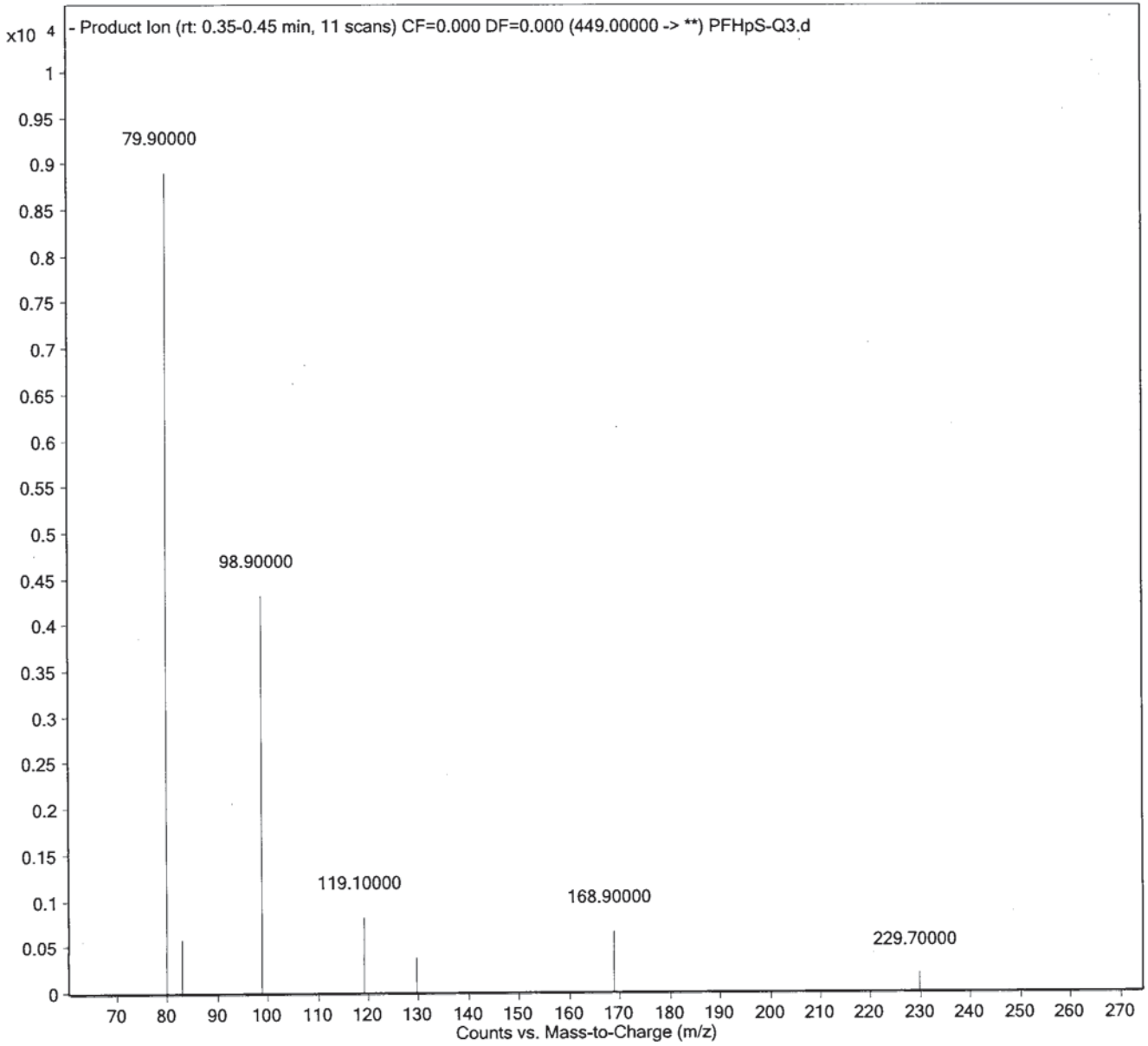
SaxKam Analytics

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



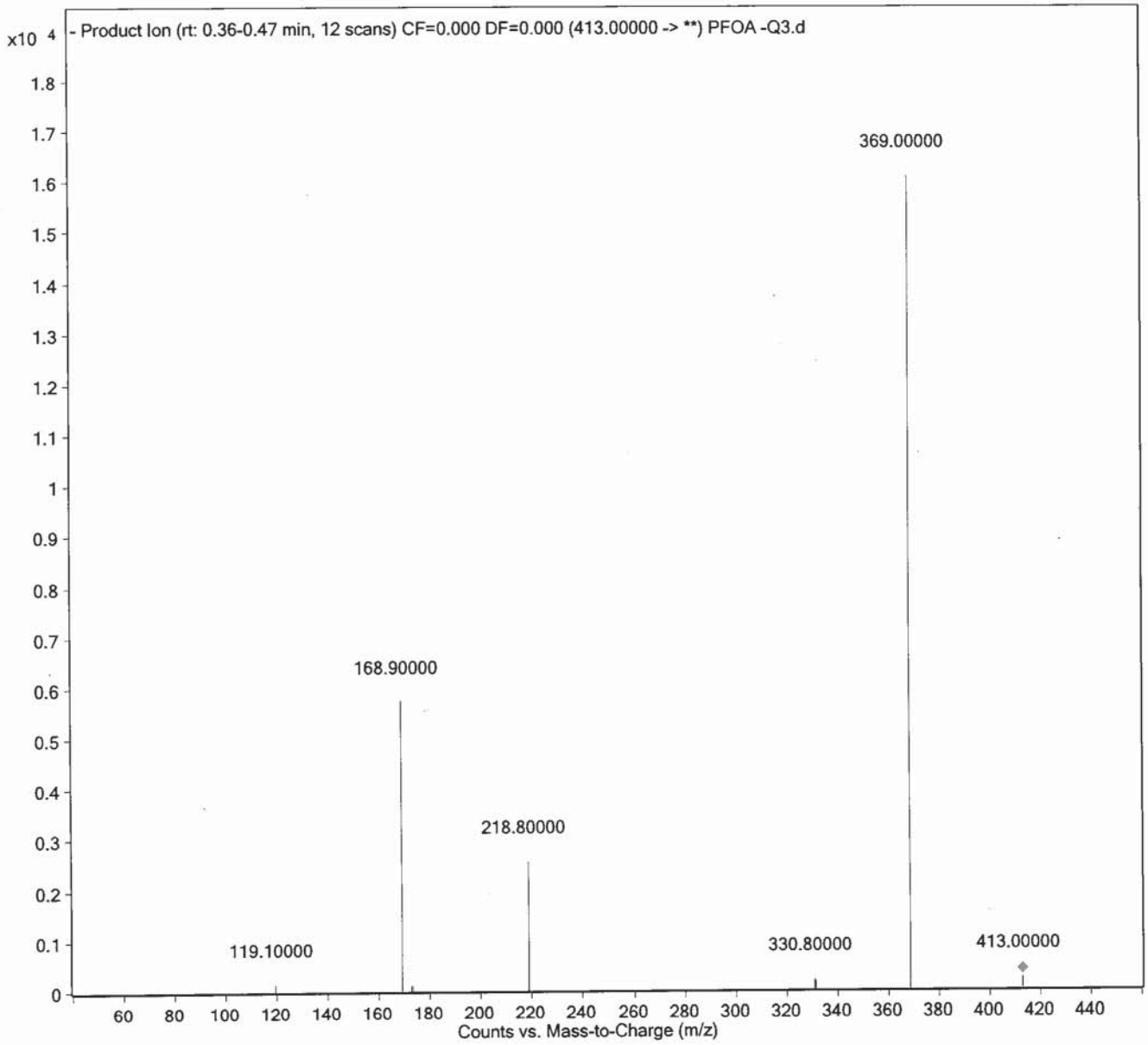
Saxam Analytics

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



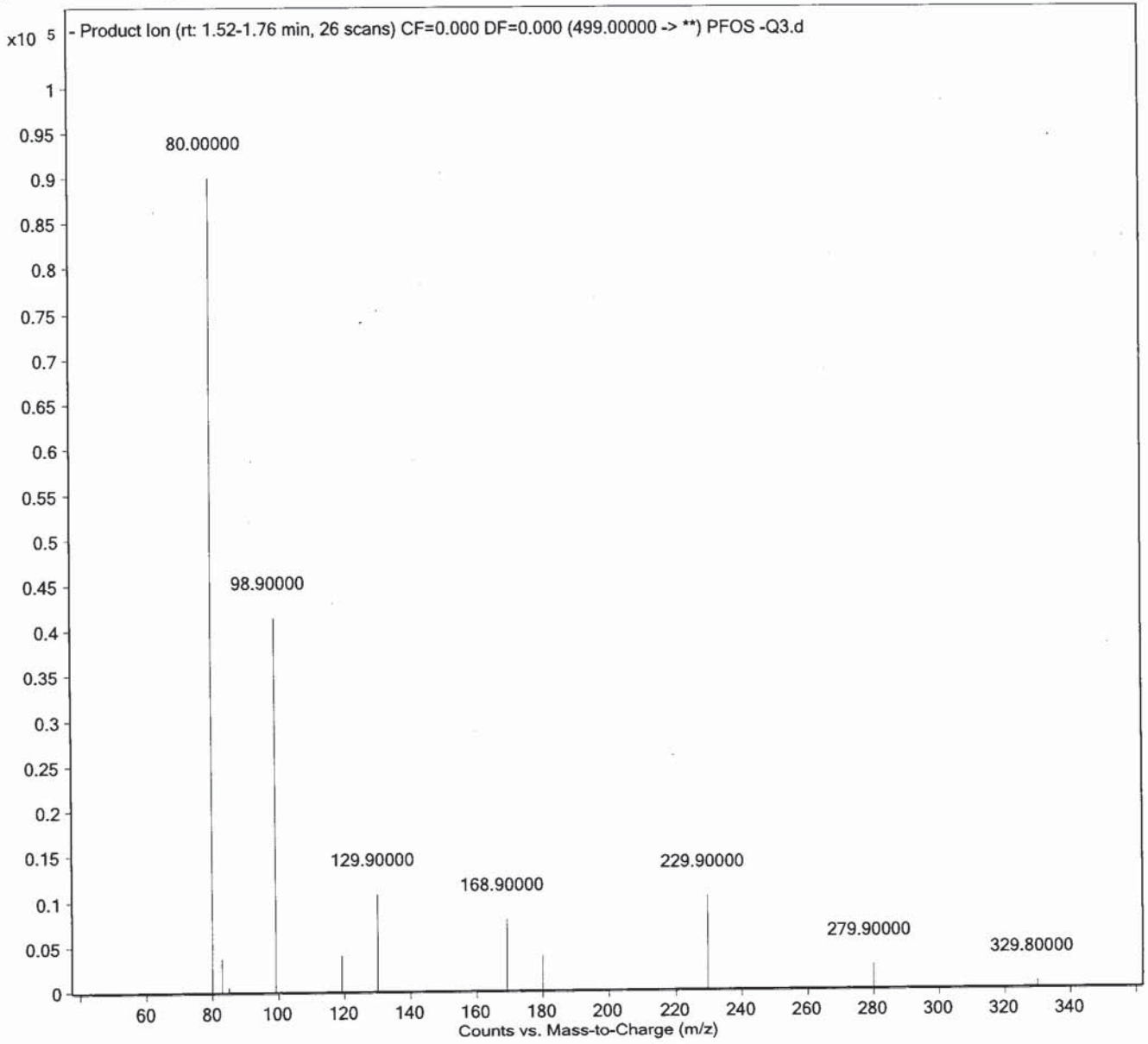
Eurofins Lancaster Laboratories Environmental, LLC, 2425 New Holland Pike, Lancaster, PA 17601 Phone: 717-656-2300 Fax: 717-656-2681

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
ACQ Method	PFC_MassVerification-PFOA-Q3.m	**Comment**		**Acquired Time**	2017/07/10 7:33:19 PM



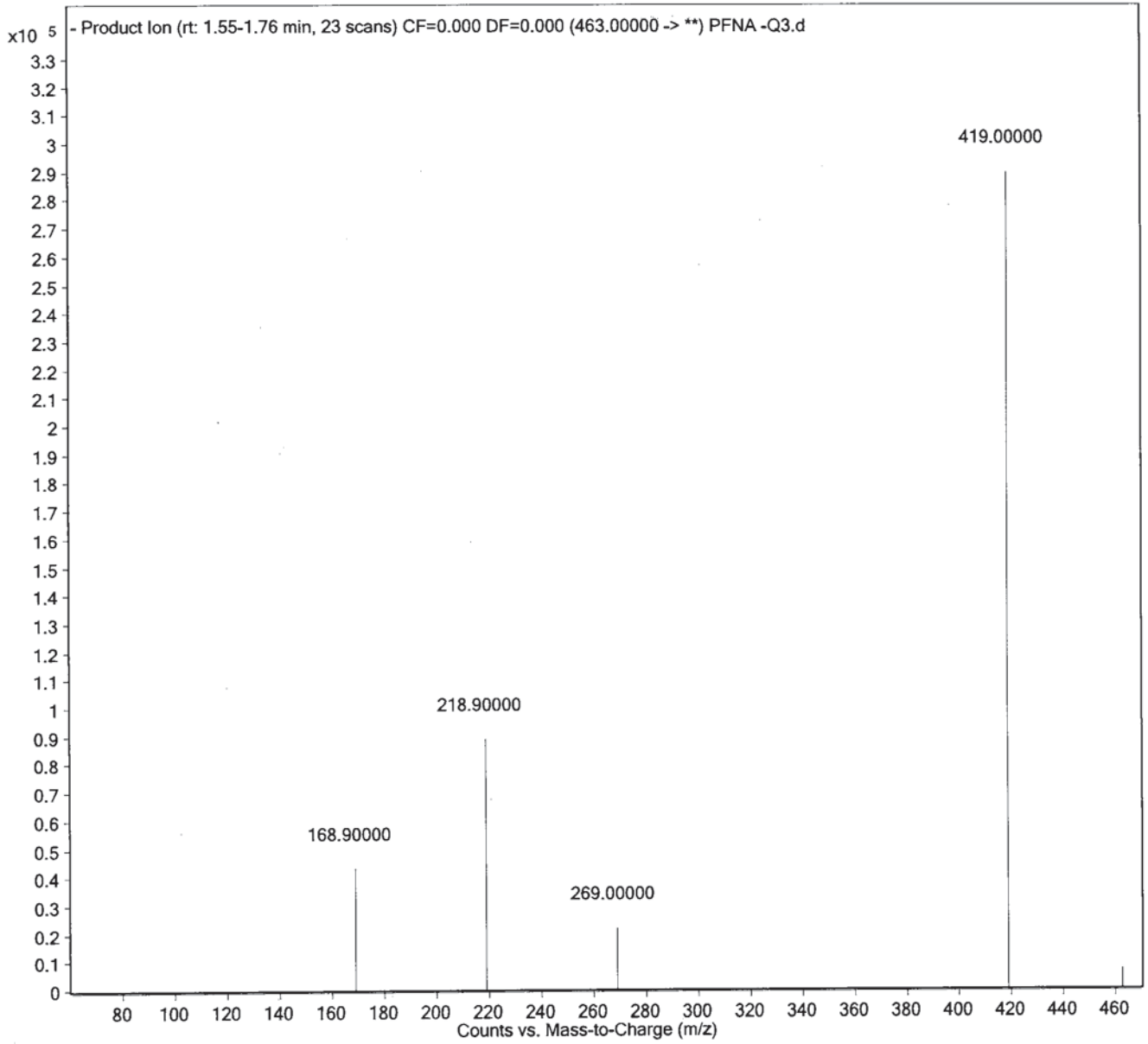
Saxcam Analytics

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



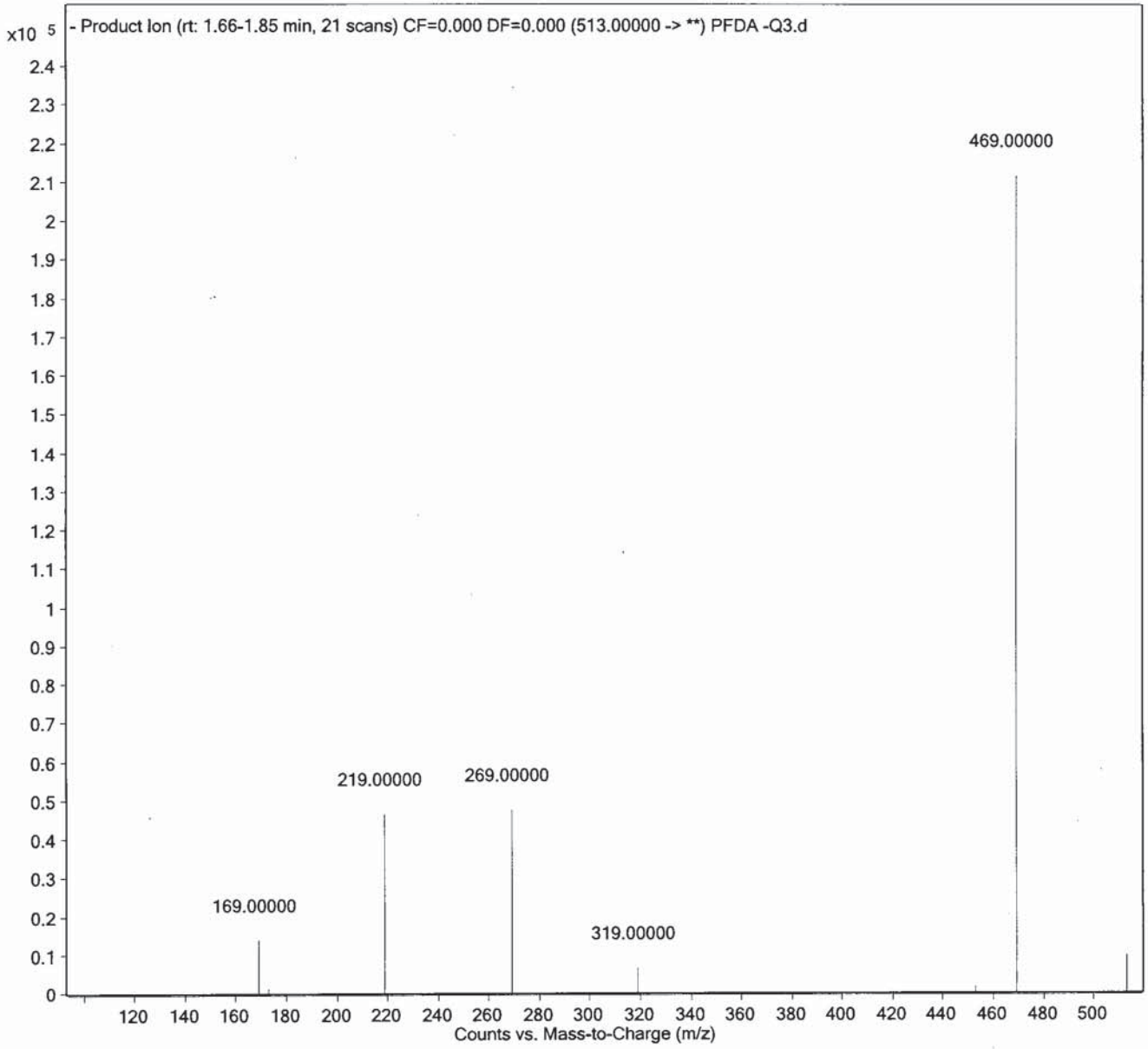
Maxxam Analytics

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
ACQ Method	PFC_MassVerification-PFNA-Q3.m	**Comment**		**Acquired Time**	2017/07/10 7:44:22 PM



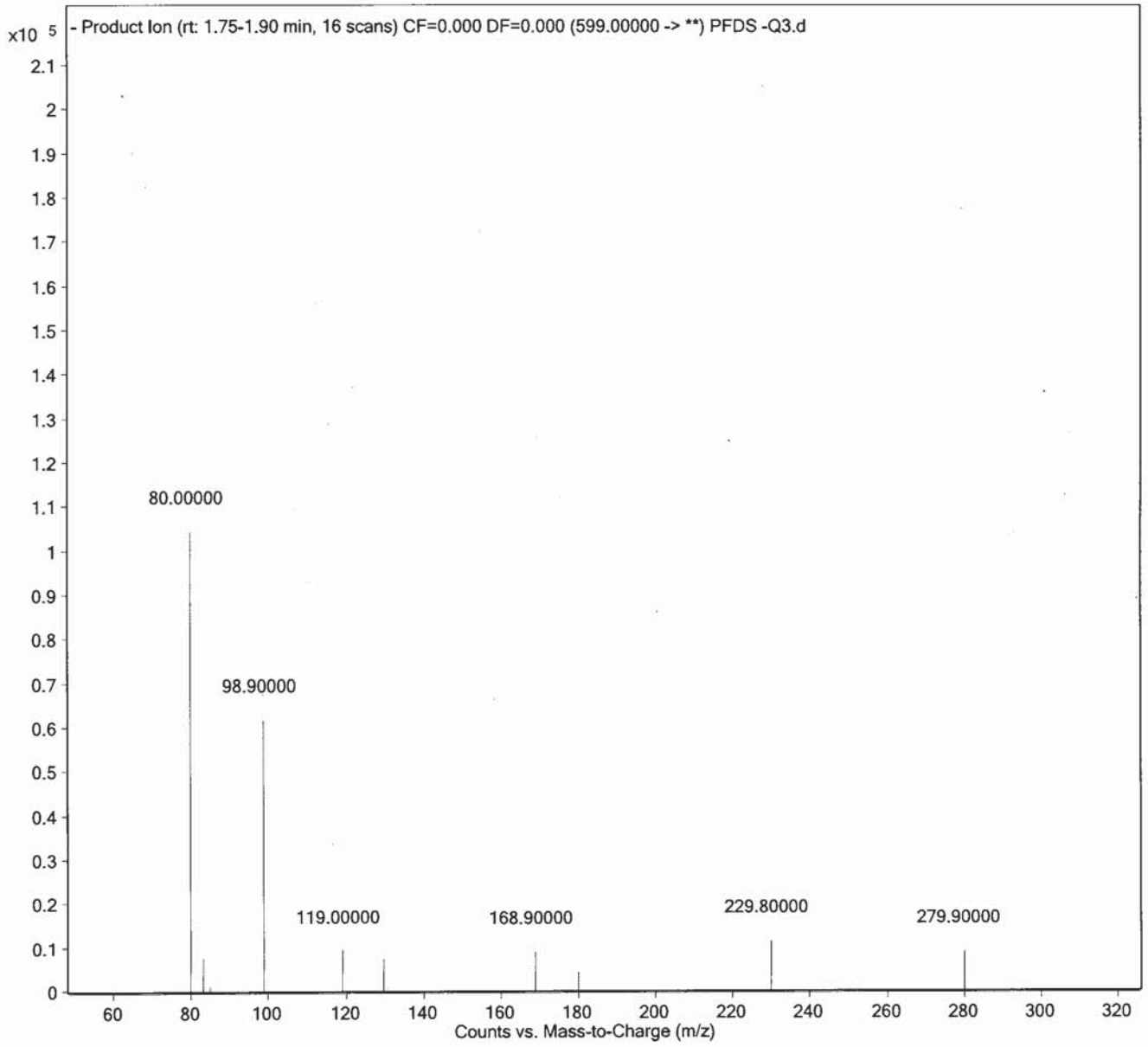
Saxam Analytics

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



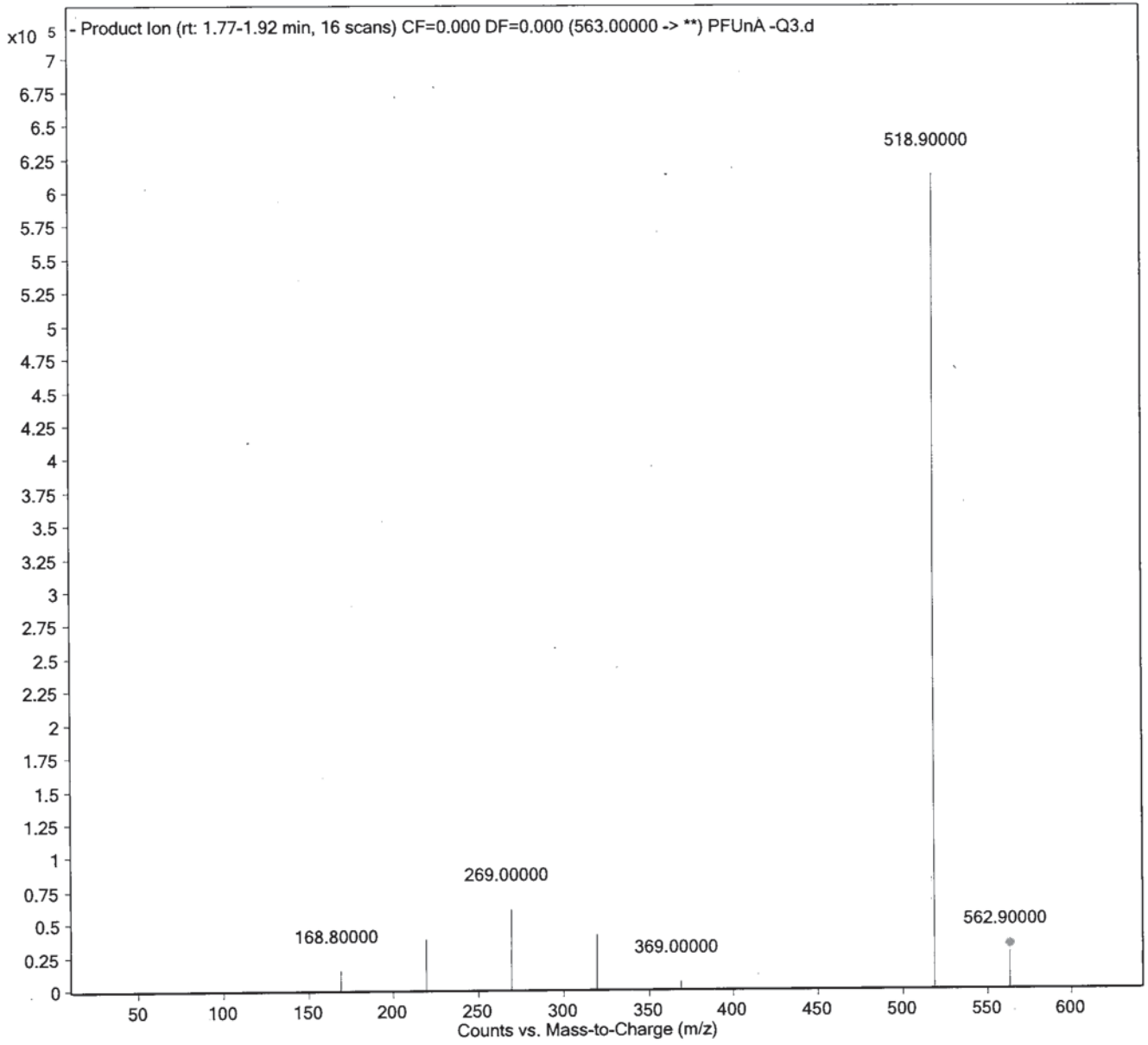
Maxxam Analytics

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



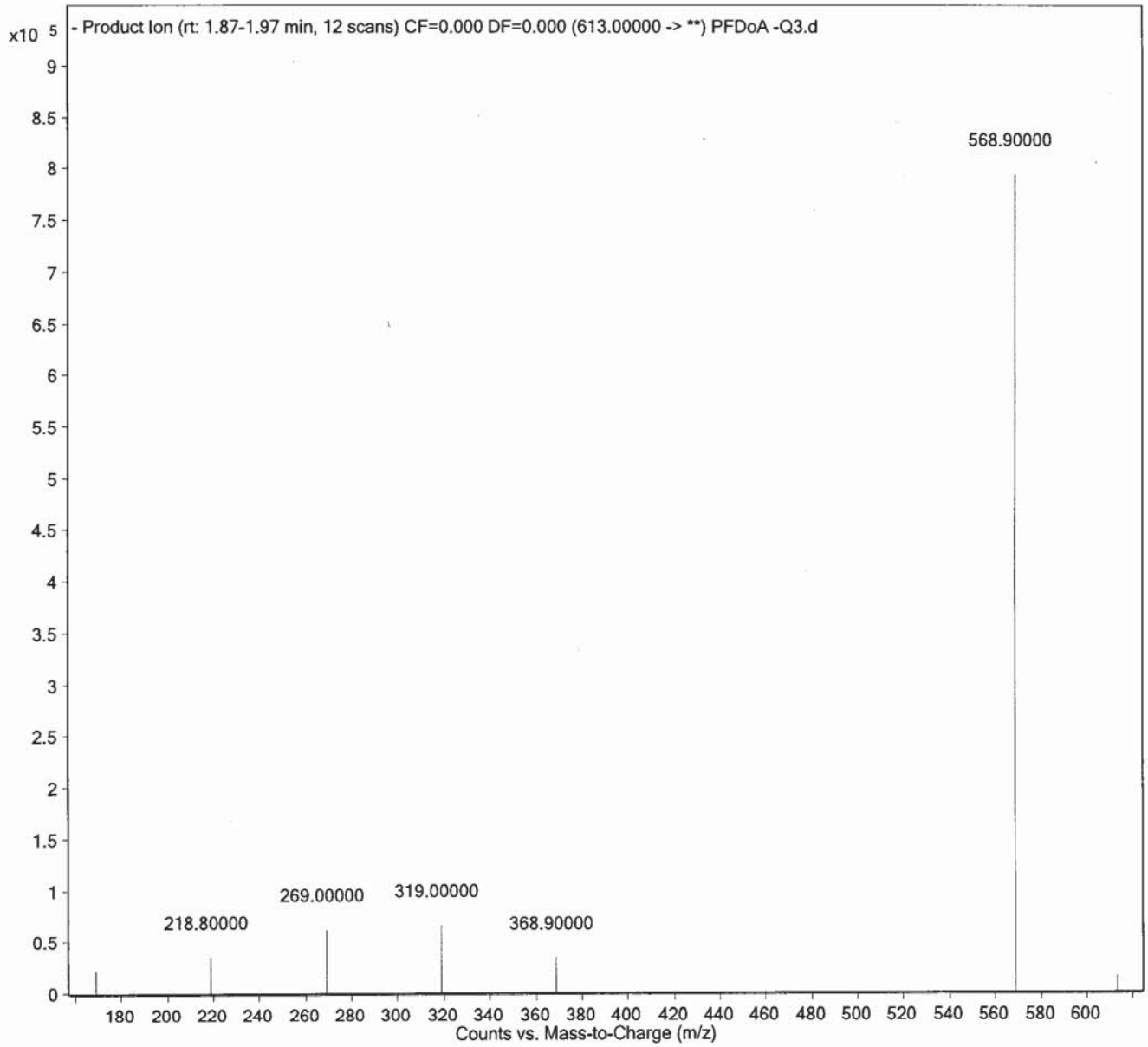
Maxxam Analytics

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
ACQ Method	PFC_MassVerification-PFUnA-Q3.m	**Comment**		**Acquired Time**	2017/07/10 8:00:52 PM



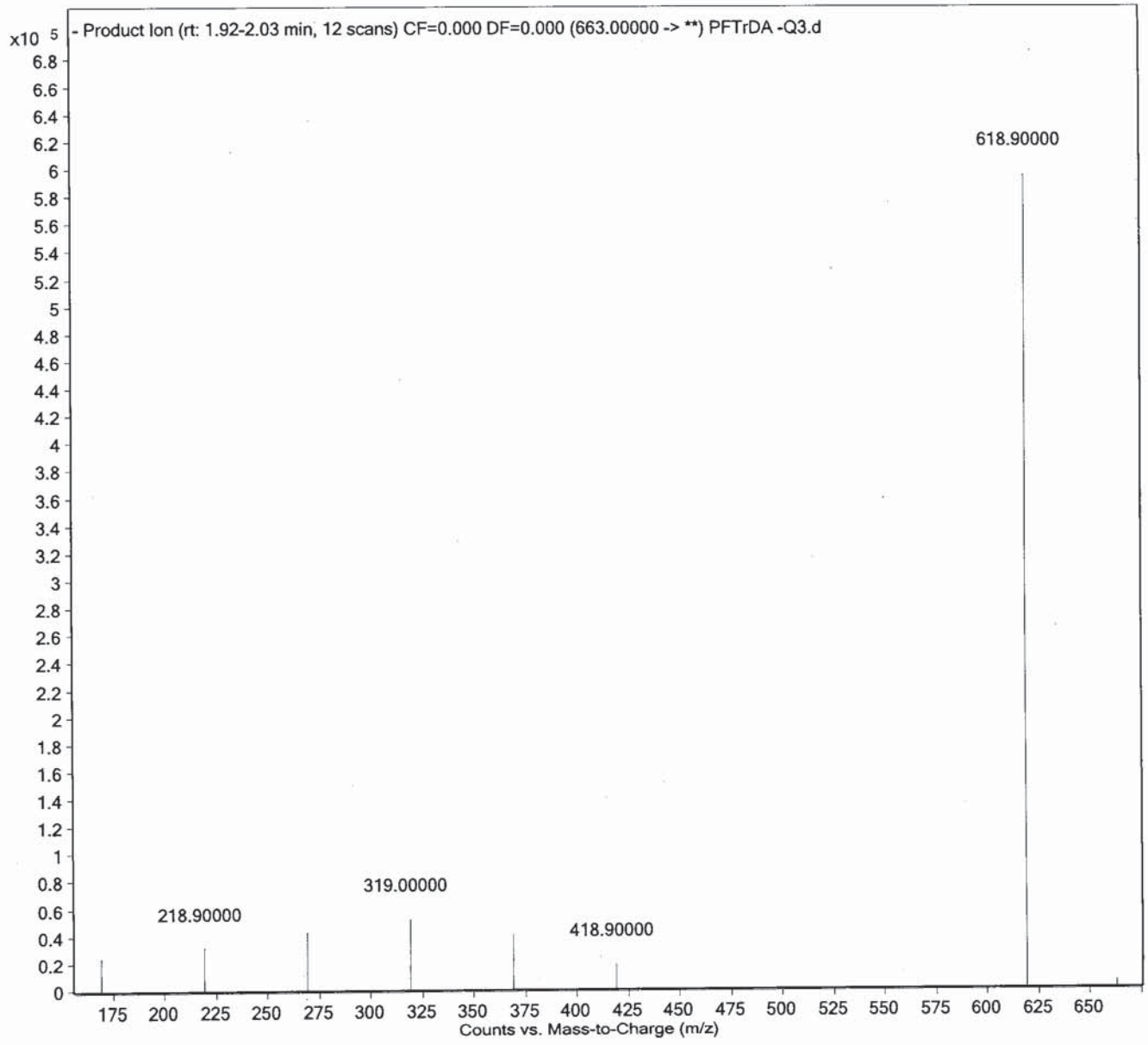
Maxxam Analytics

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



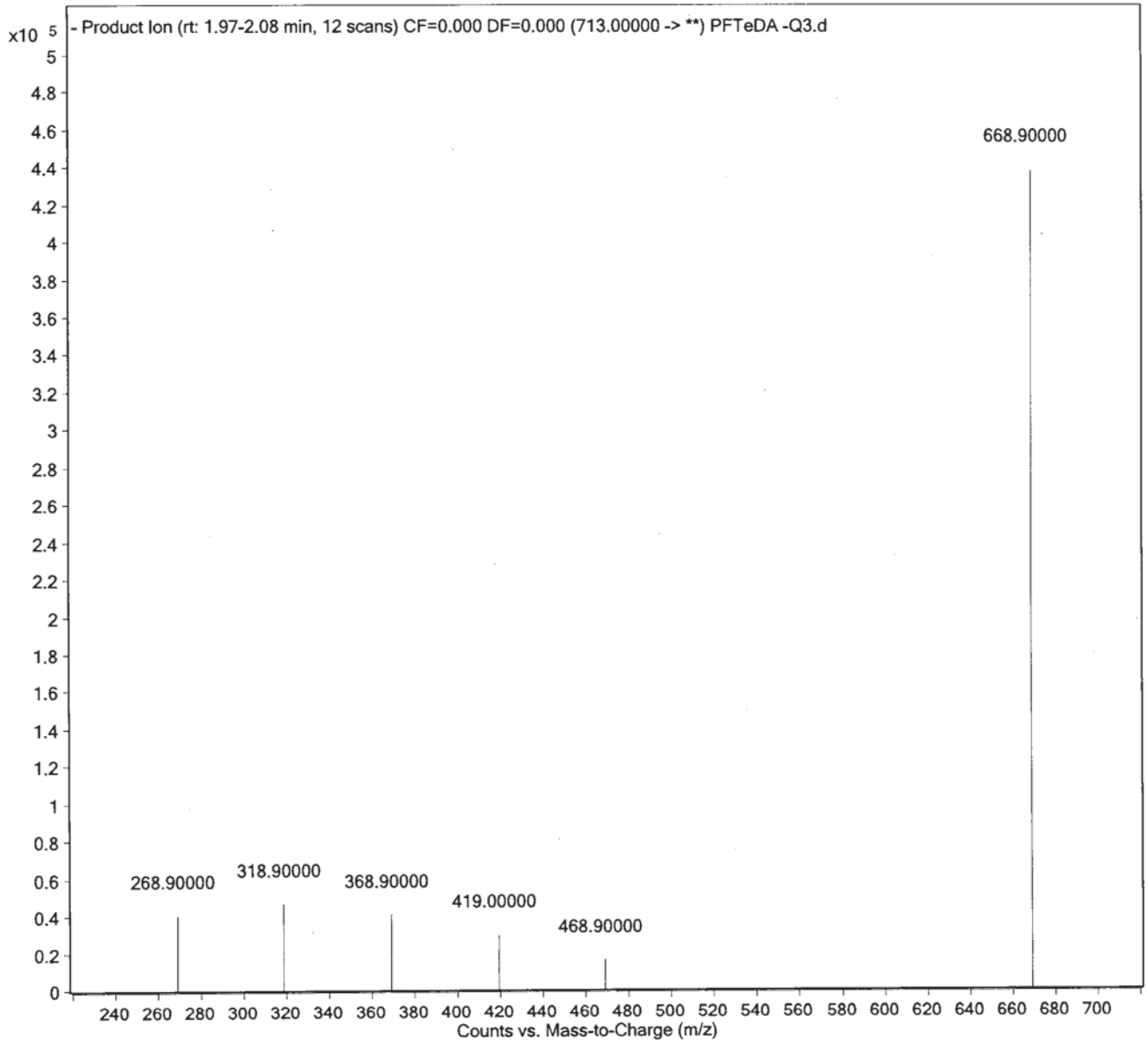
SaxAm Analytics

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
ACQ Method	PFC_MassVerification-PFTrDA-Q3.m	**Comment**		**Acquired Time**	2017/07/10 8:11:53 PM



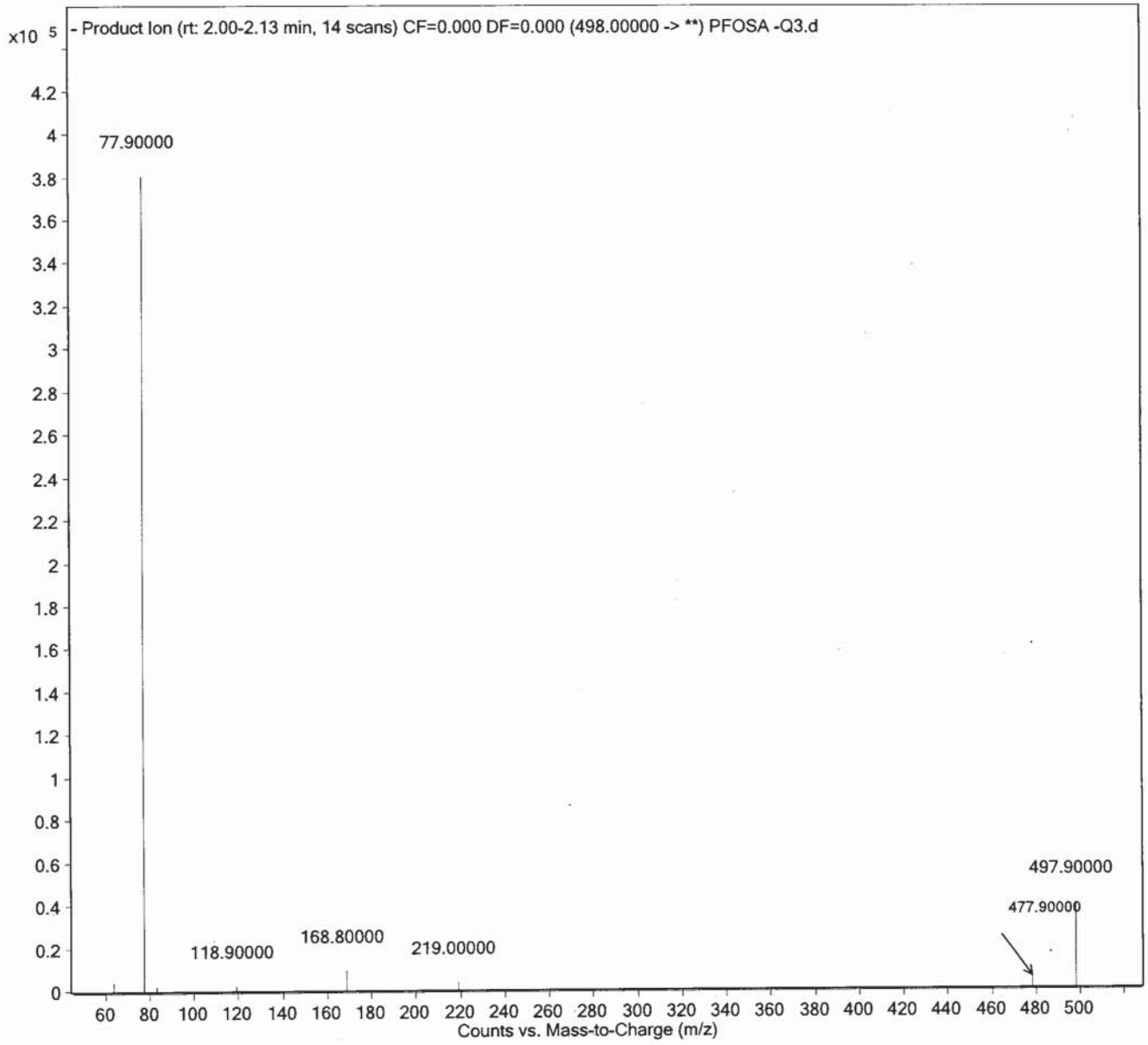
Maxxam Analytics

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



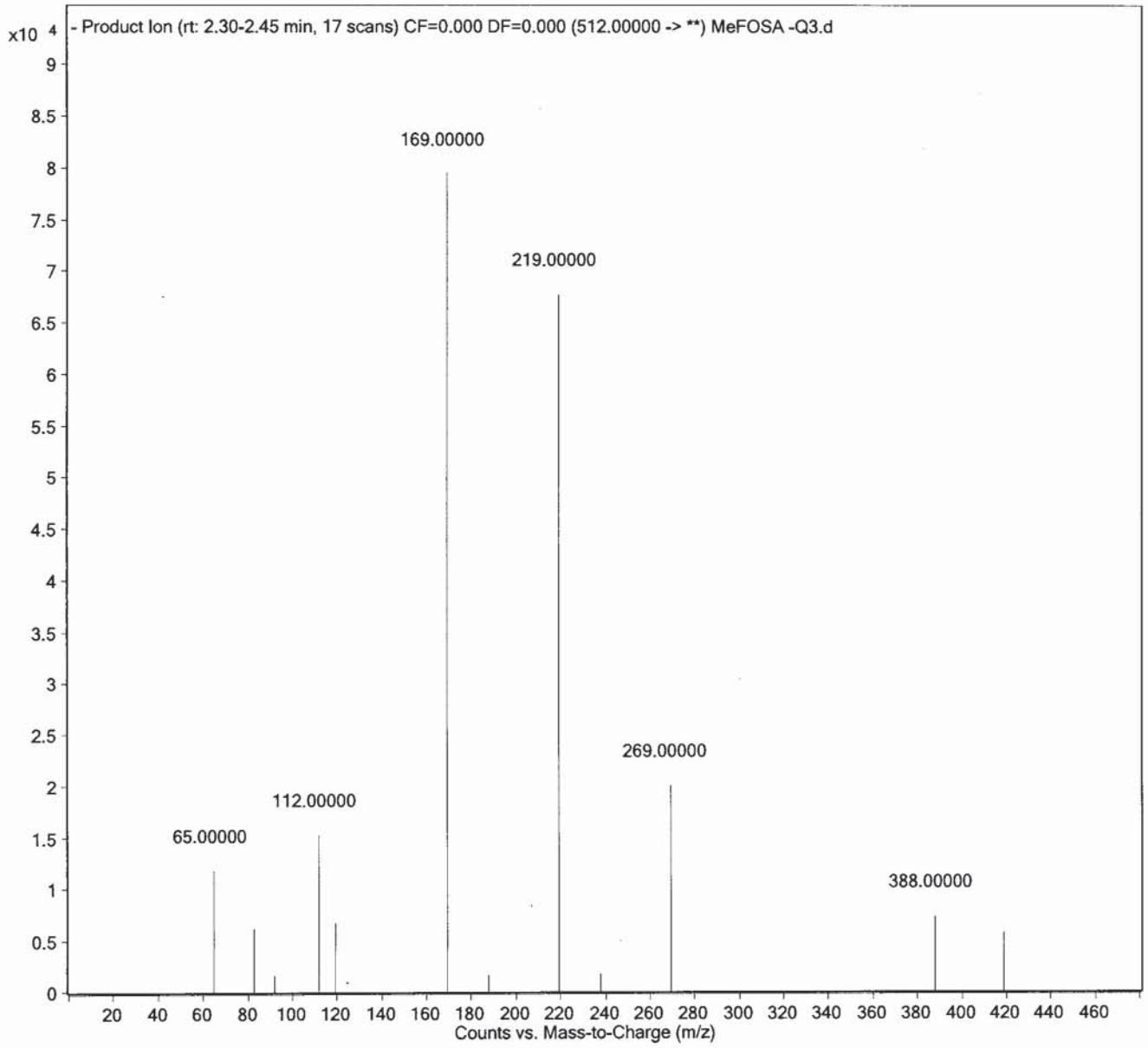
SAExam Analytics

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
CQ Method	PFC_MassVerification-PFOSA-Q3.m	**Comment**		**Acquired Time**	2017/07/10 8:22:55 PM



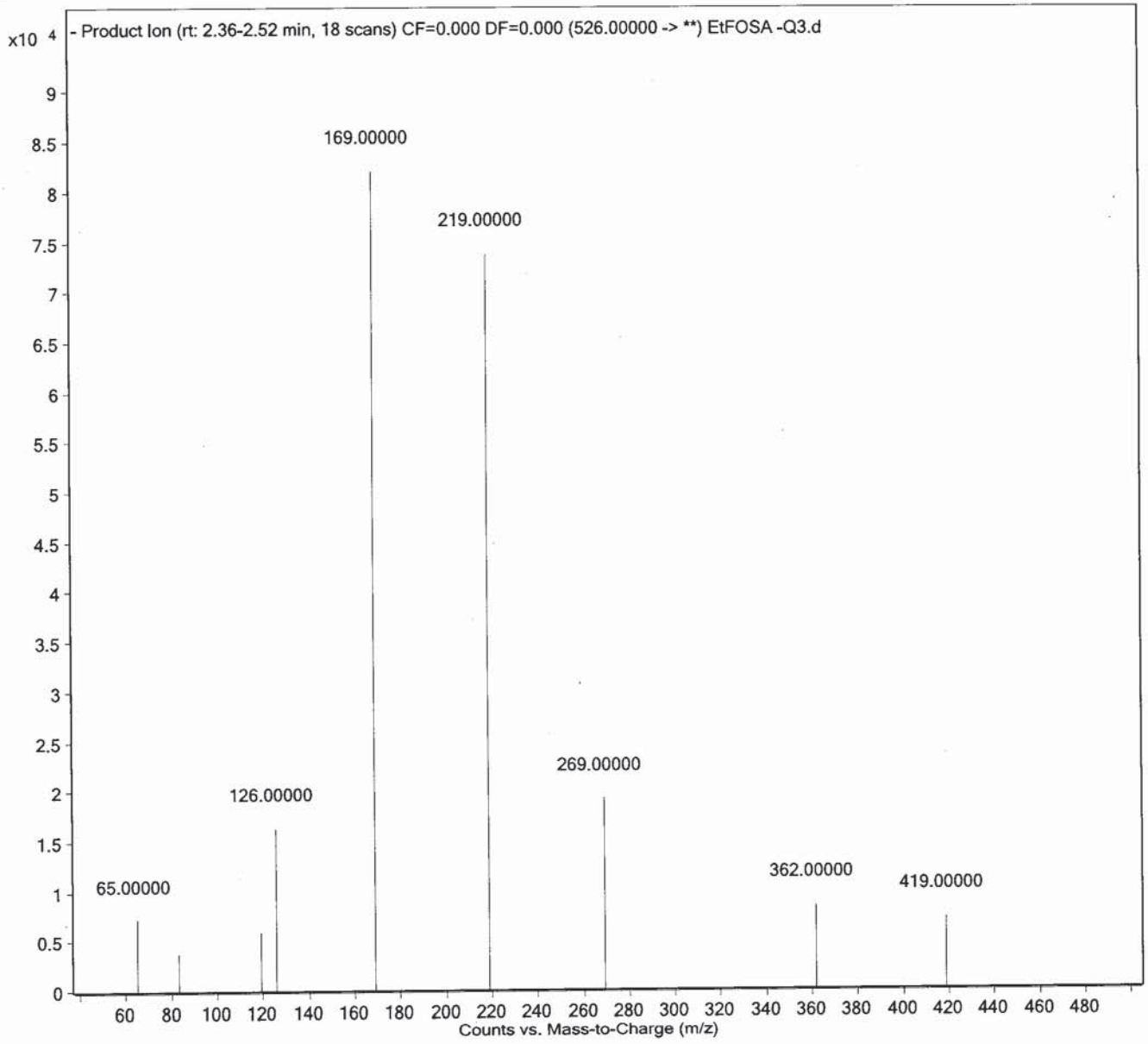
Maxxam Analytics

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



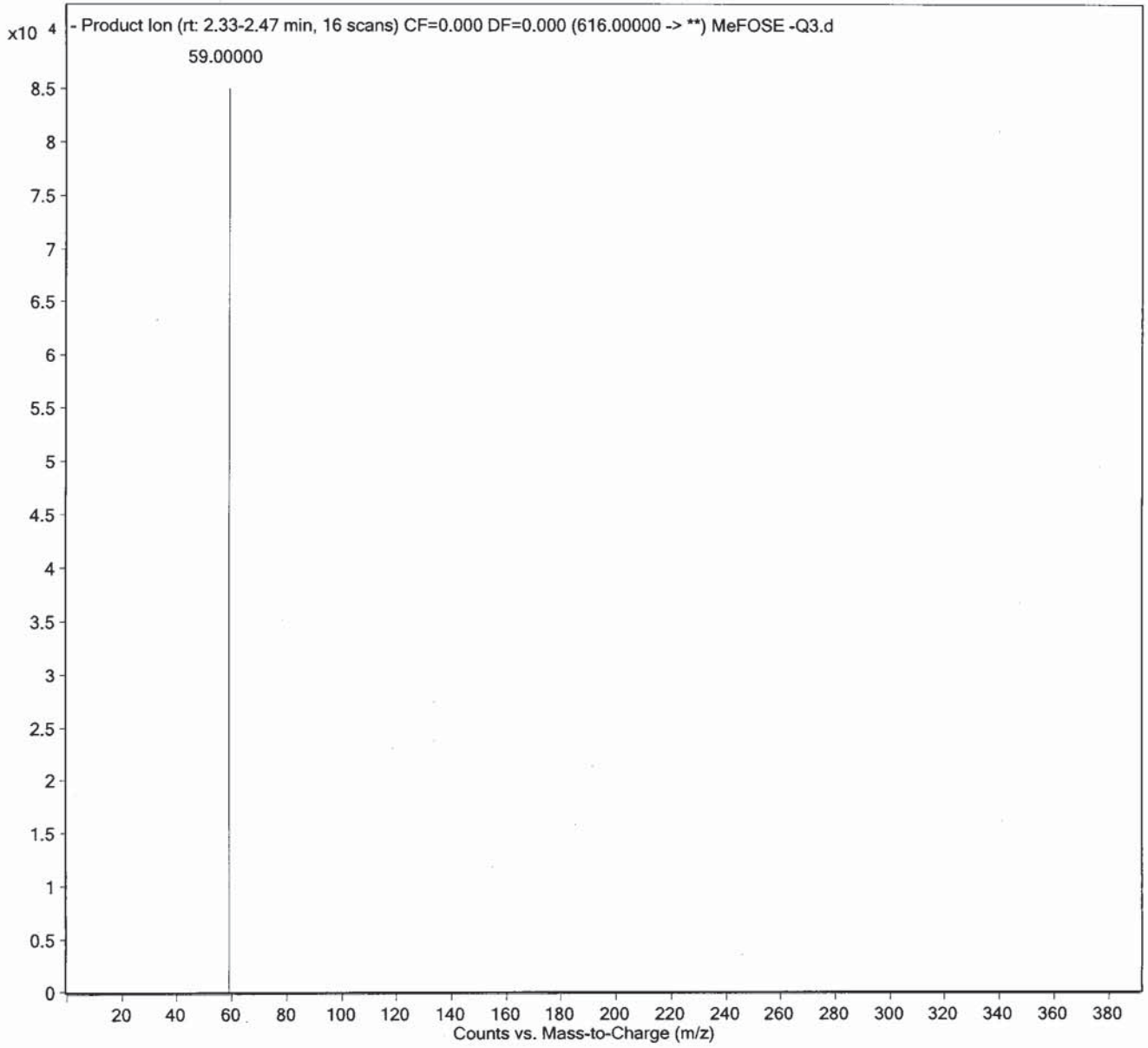
SiteKam Analytics

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



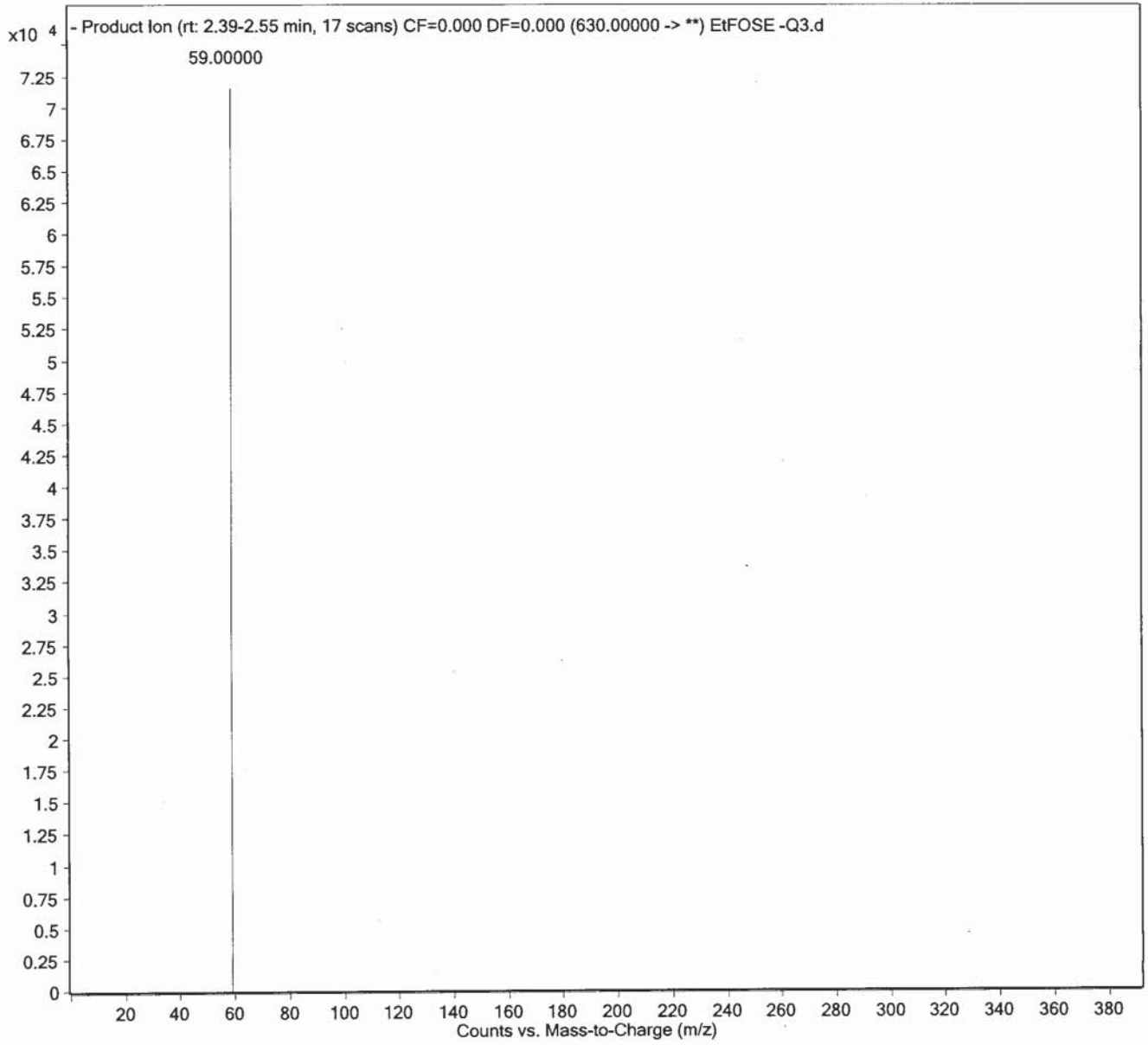
Maxxam Analytics

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



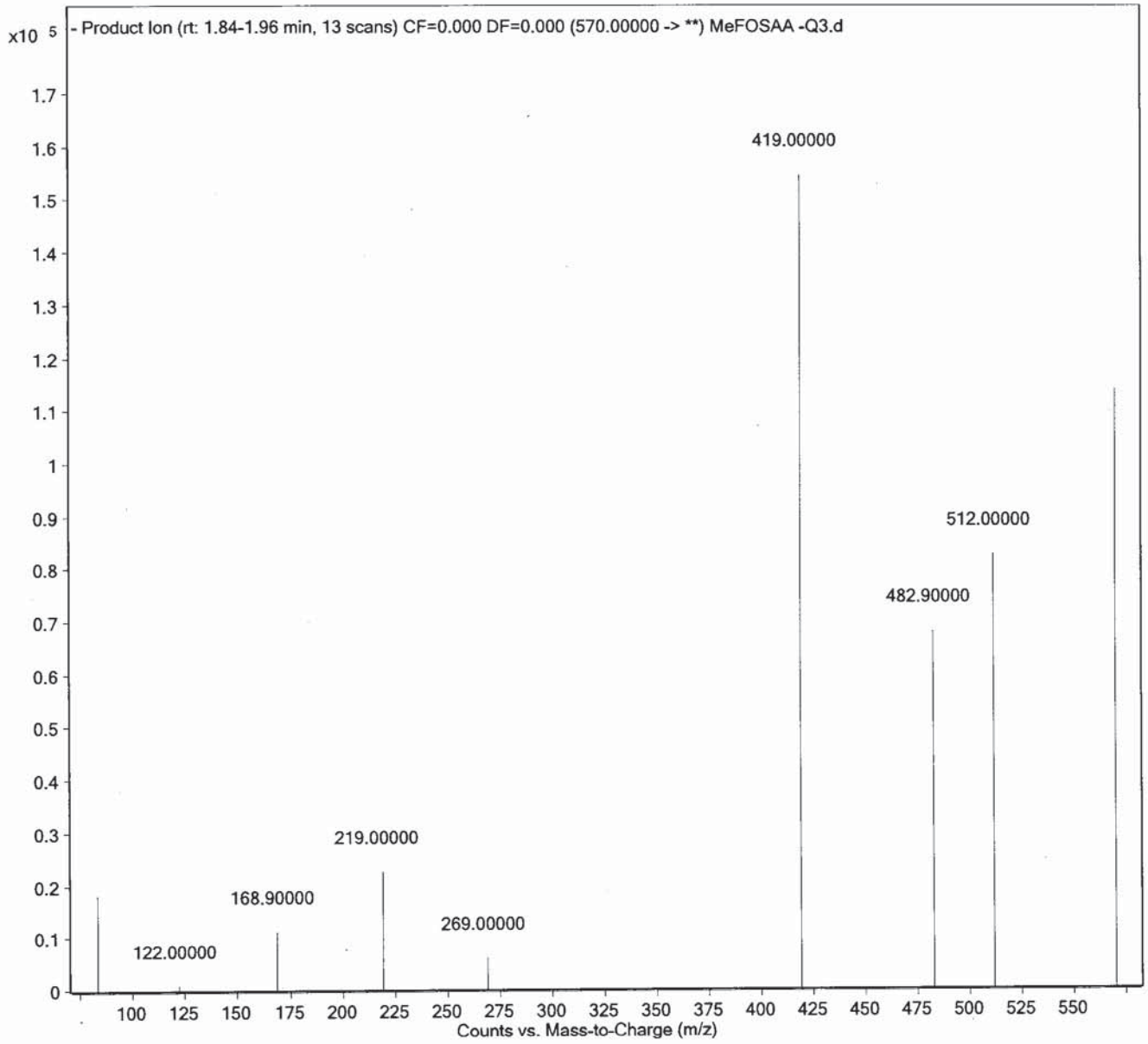
Maxxam Analytics

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



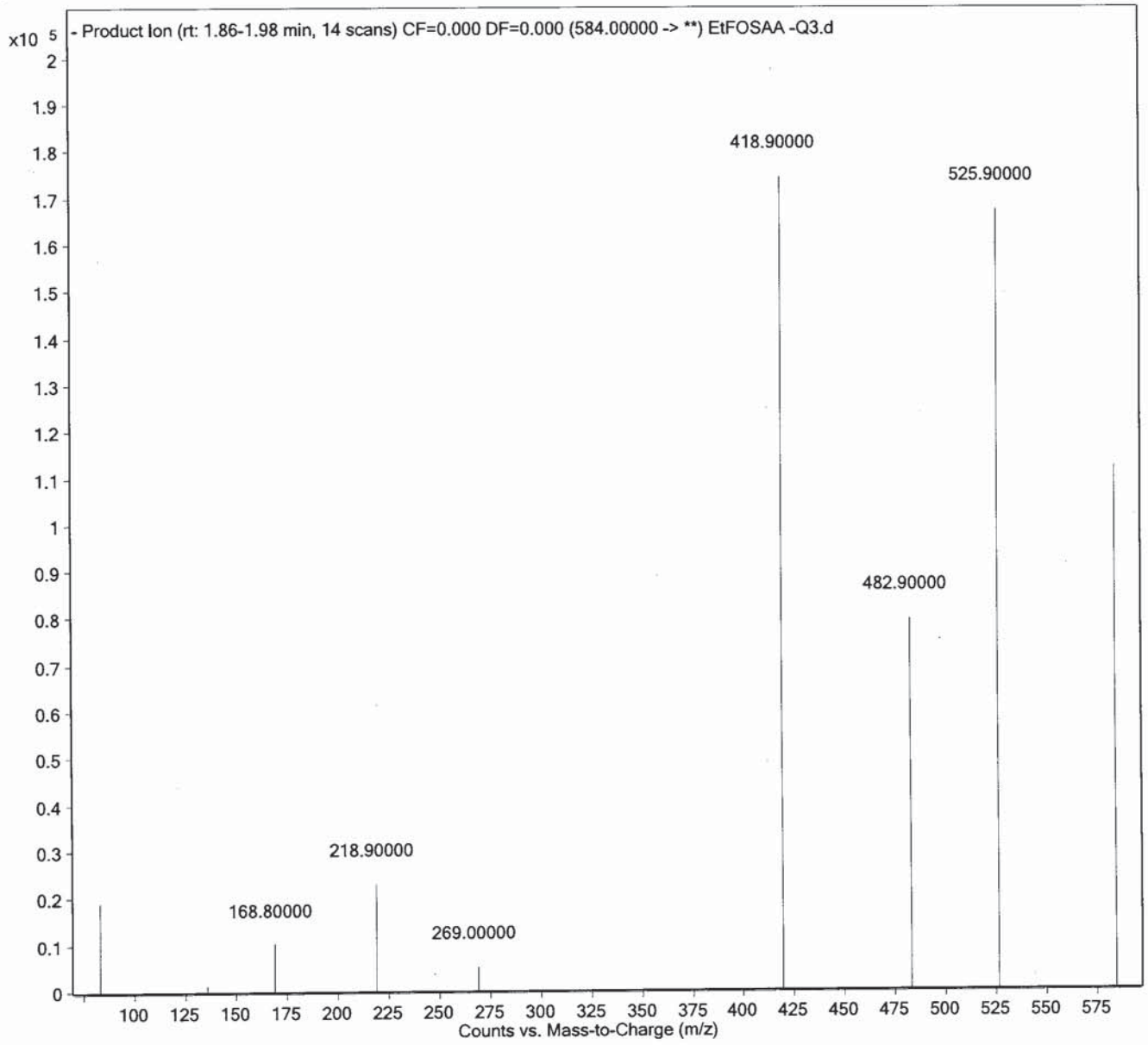
SaxAm Analytics

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



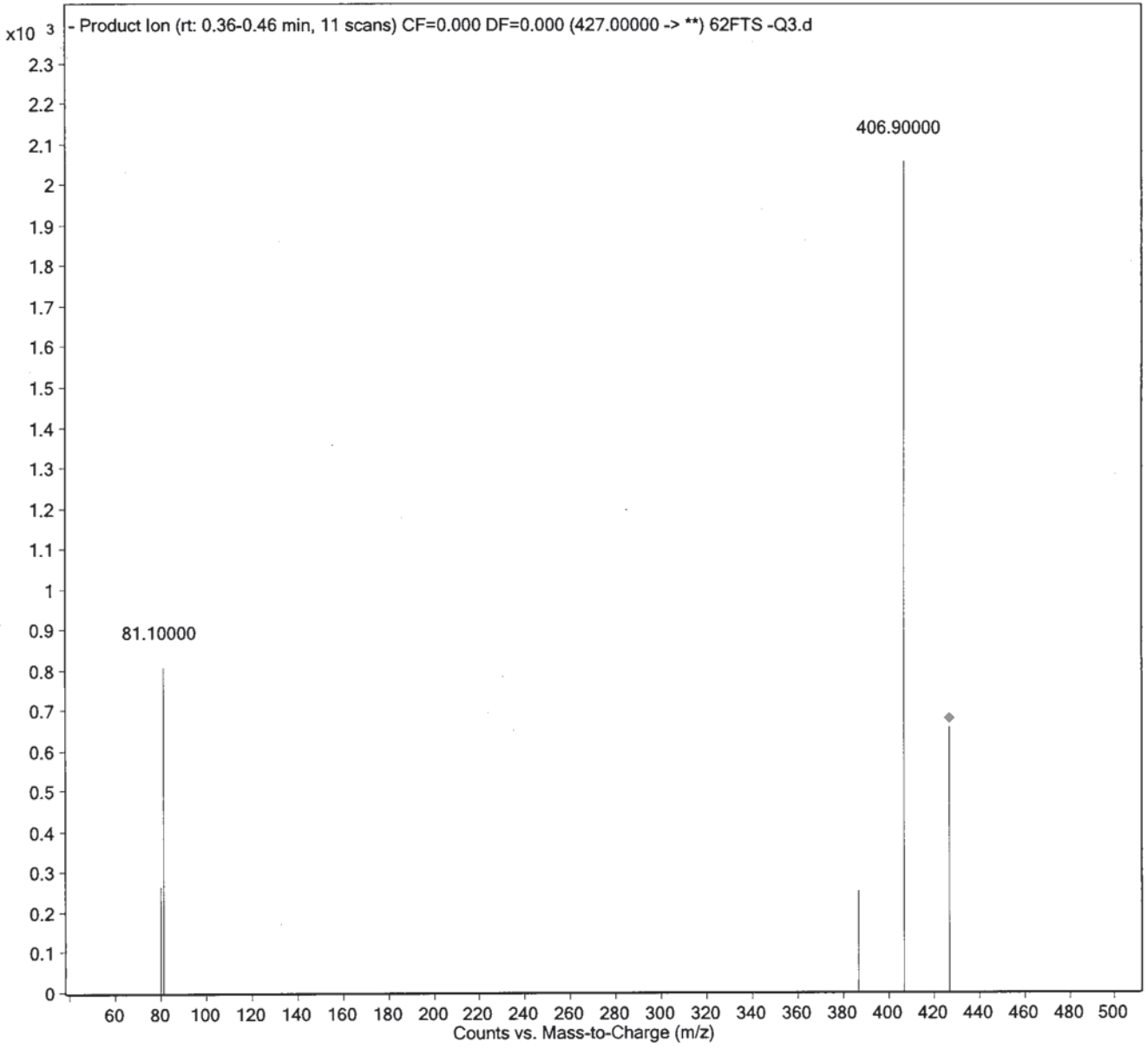
SaxAm Analytics

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
ACQ Method	PFC_MassVerification-EtFOSAA-Q3.m	**Comment**		**Acquired Time**	2017/07/10 8:55:57 PM

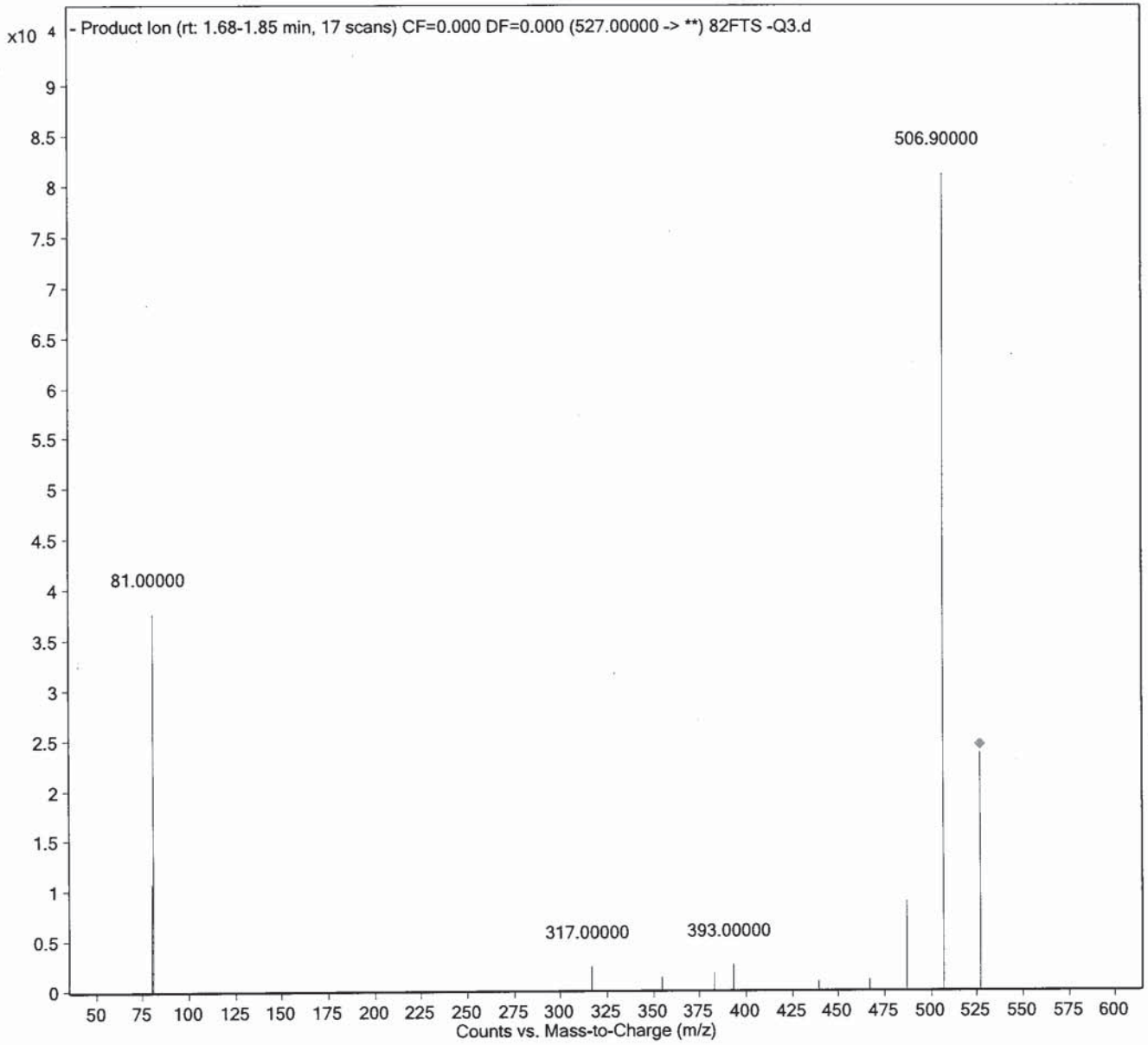


Maxxam Analytics

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



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

Maxxam Analytics

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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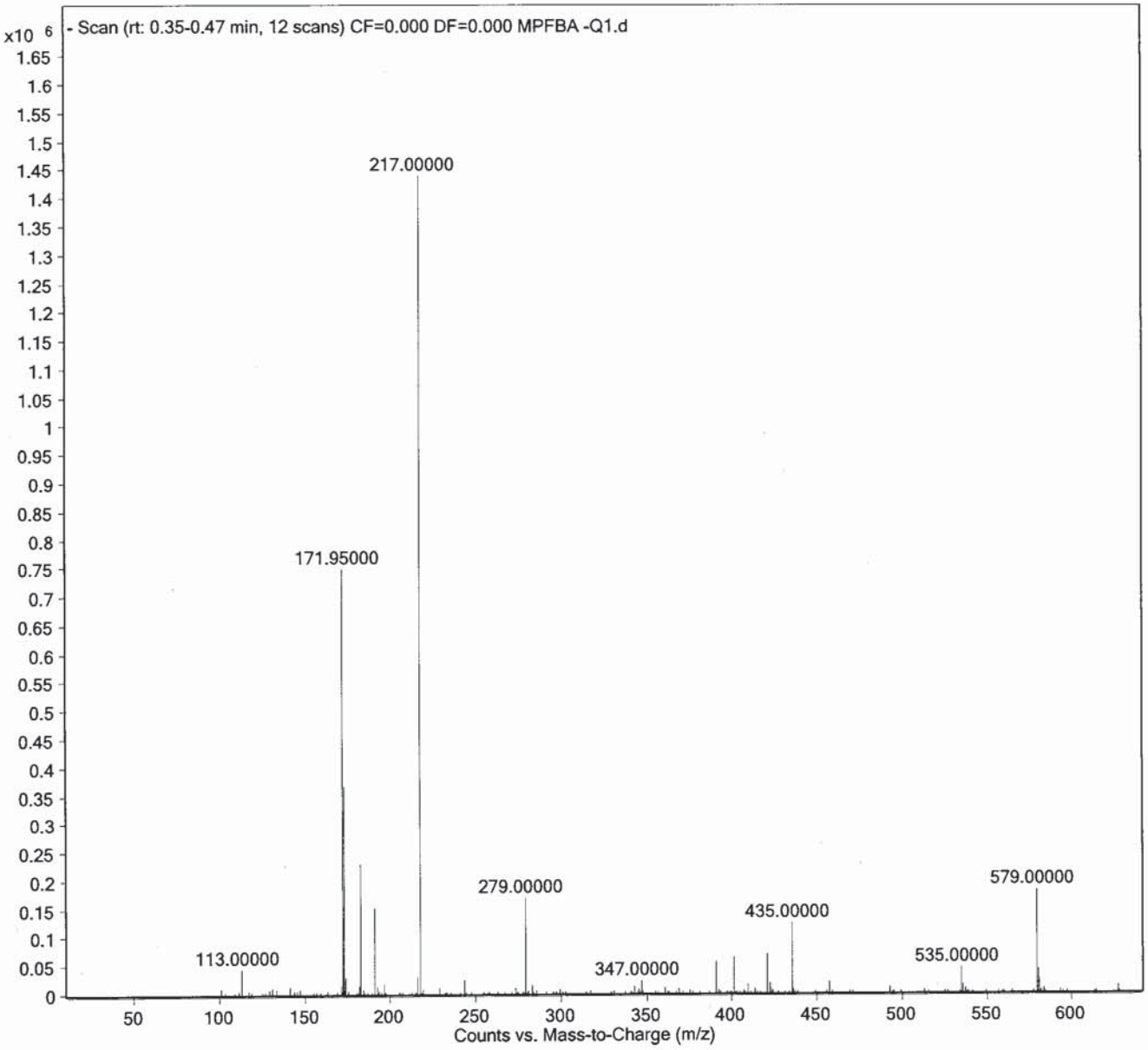
	Sample Name	Sample Position	Method	Data File	Sample Type	Inj Vol (µl)	Sample Group
10	PFNA -Q3	P1-B1	PFC_MassVerification-PFNA-Q3.m	PFNA -Q3.d	Sample	As Method	PFAS-Q3
11	PFDA -Q3	P1-B2	PFC_MassVerification-PFDA-Q3.m	PFDA -Q3.d	Sample	As Method	PFAS-Q3
12	PFDS -Q3	P1-B3	PFC_MassVerification-PFDS-Q3.m	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

Maxxam Analytics

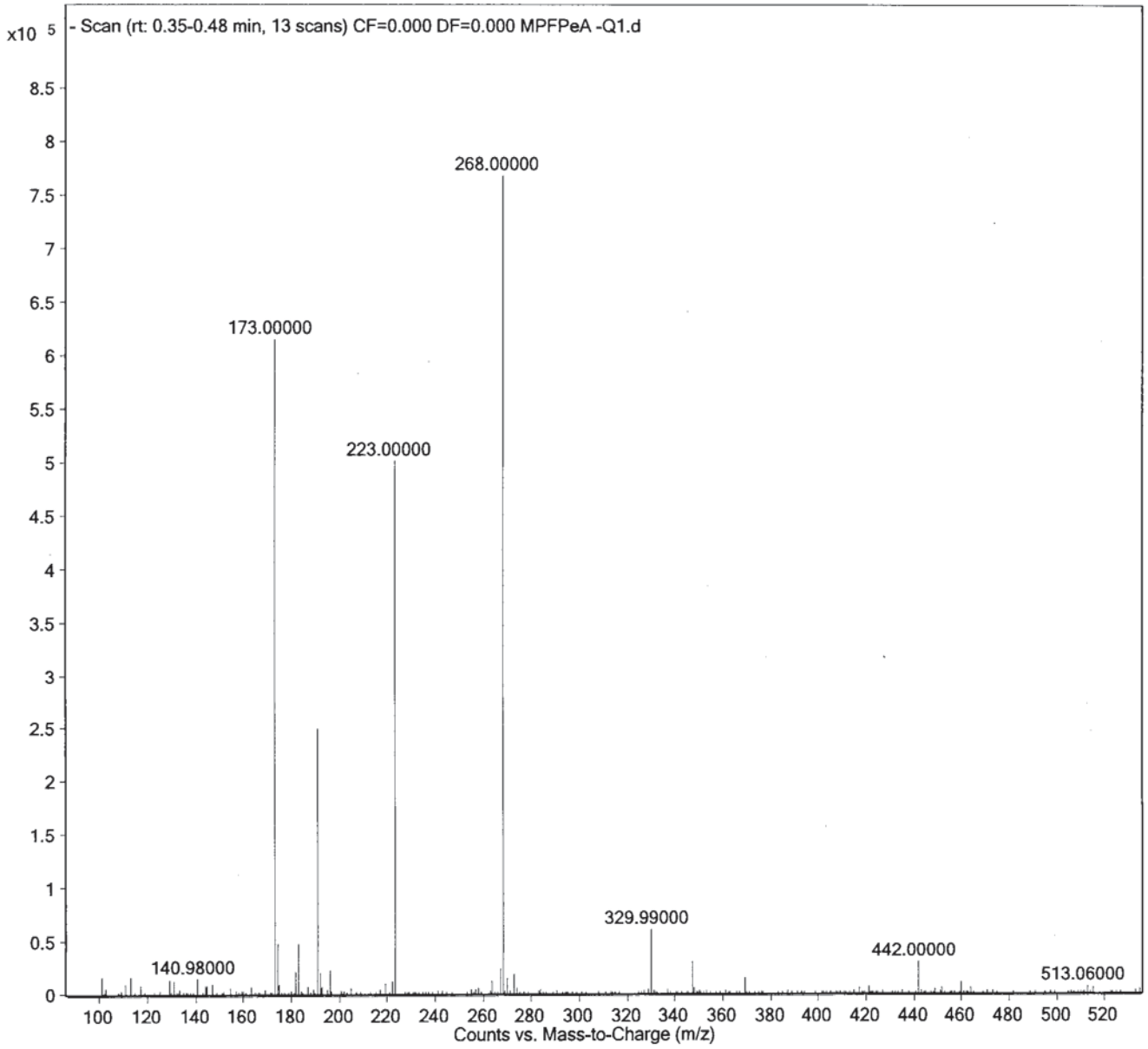
Extracted and Injection Internal Standard Precursor Ion Verification

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



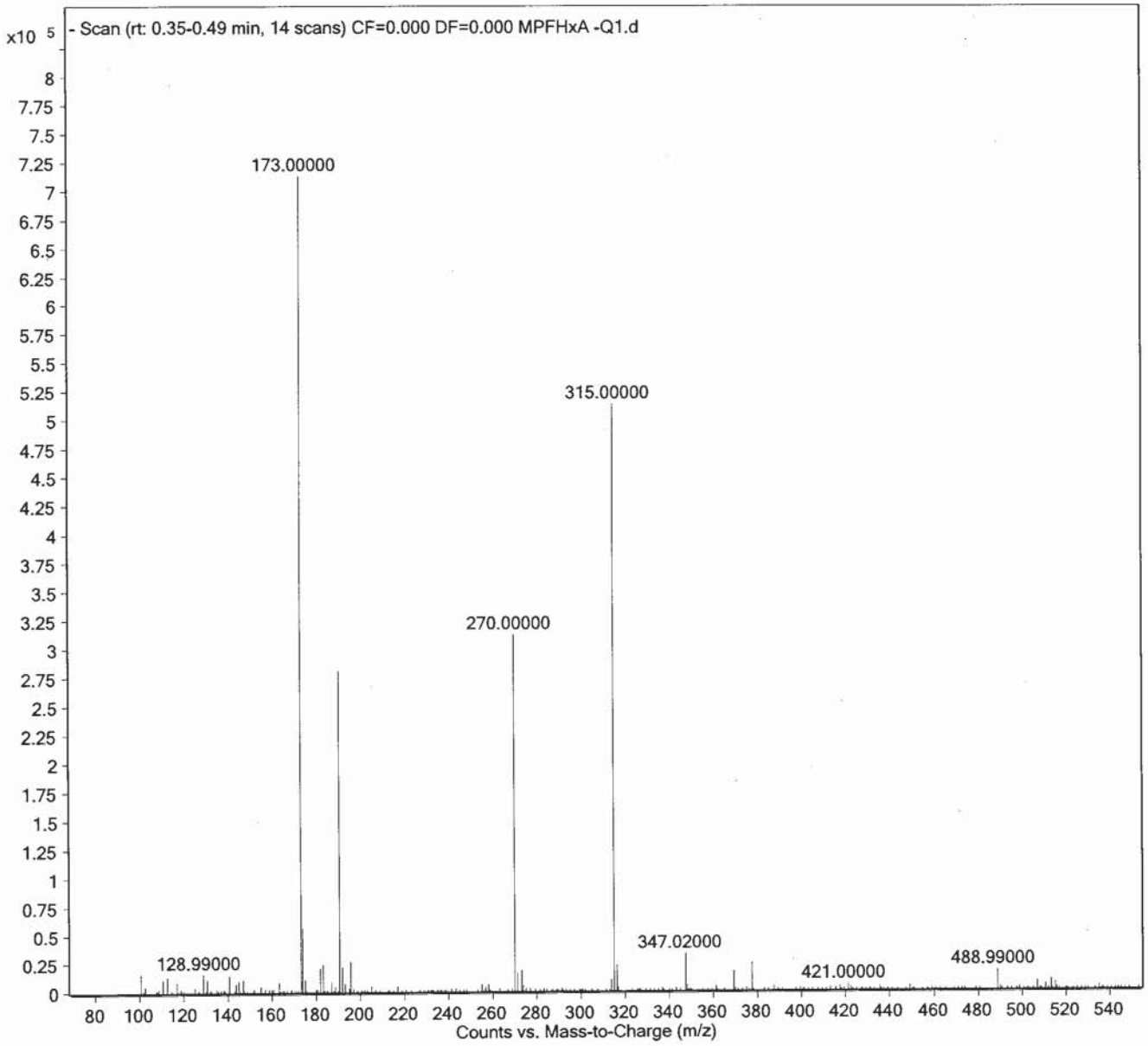
Saram Analytics

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



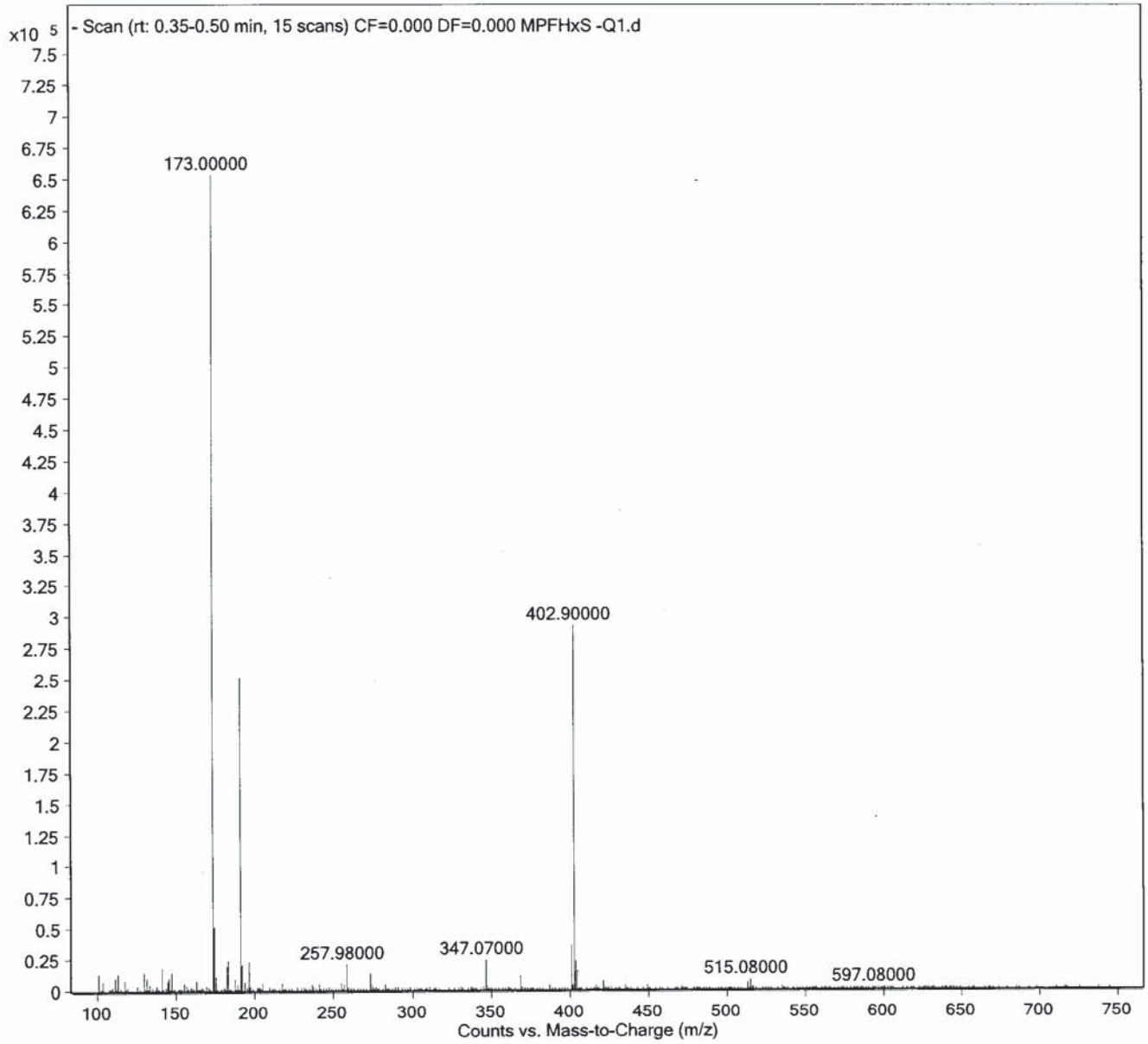
Alpha Analytics

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
AcQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/11 1:11:48 PM



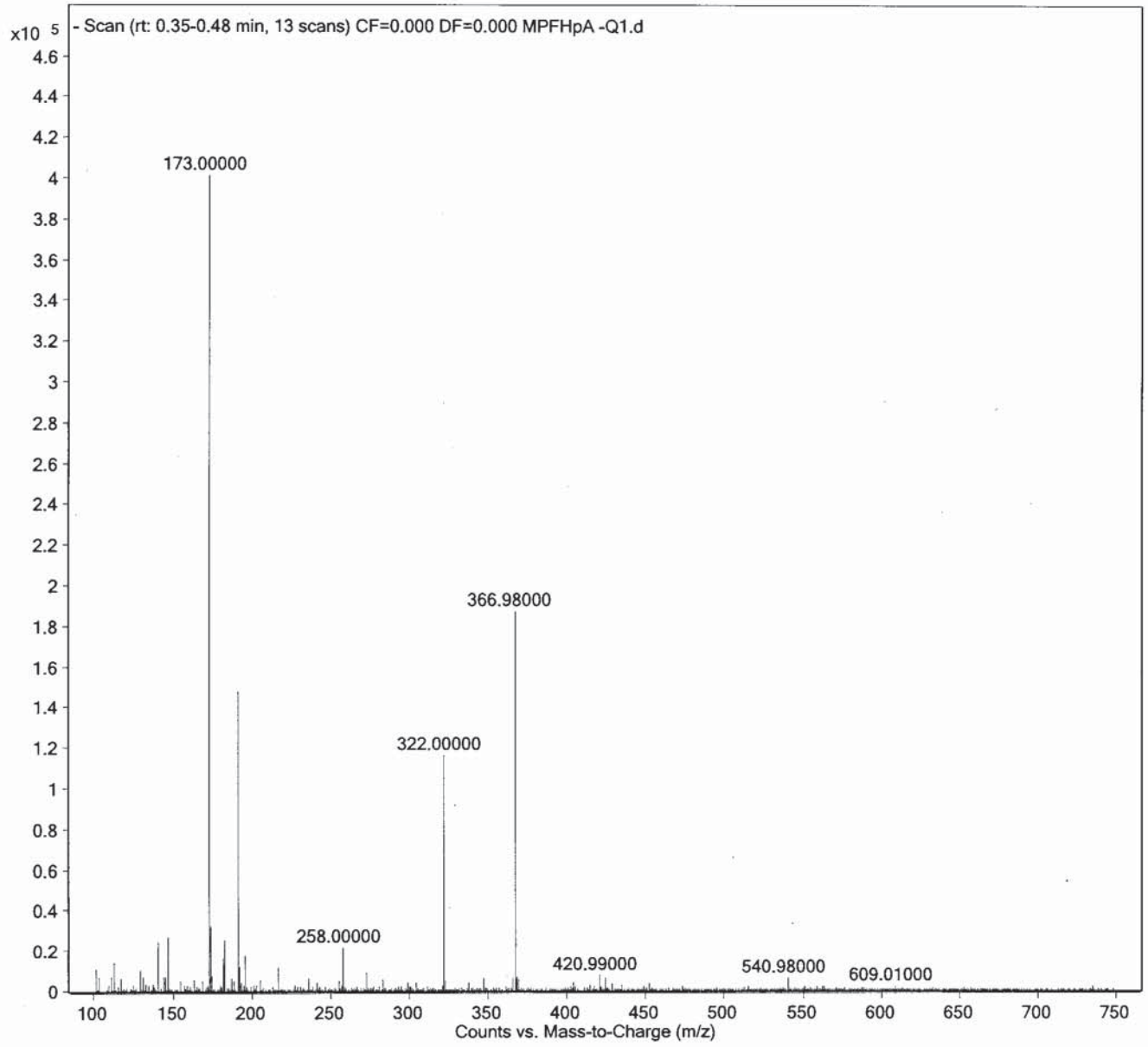
Maxxam Analytics

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



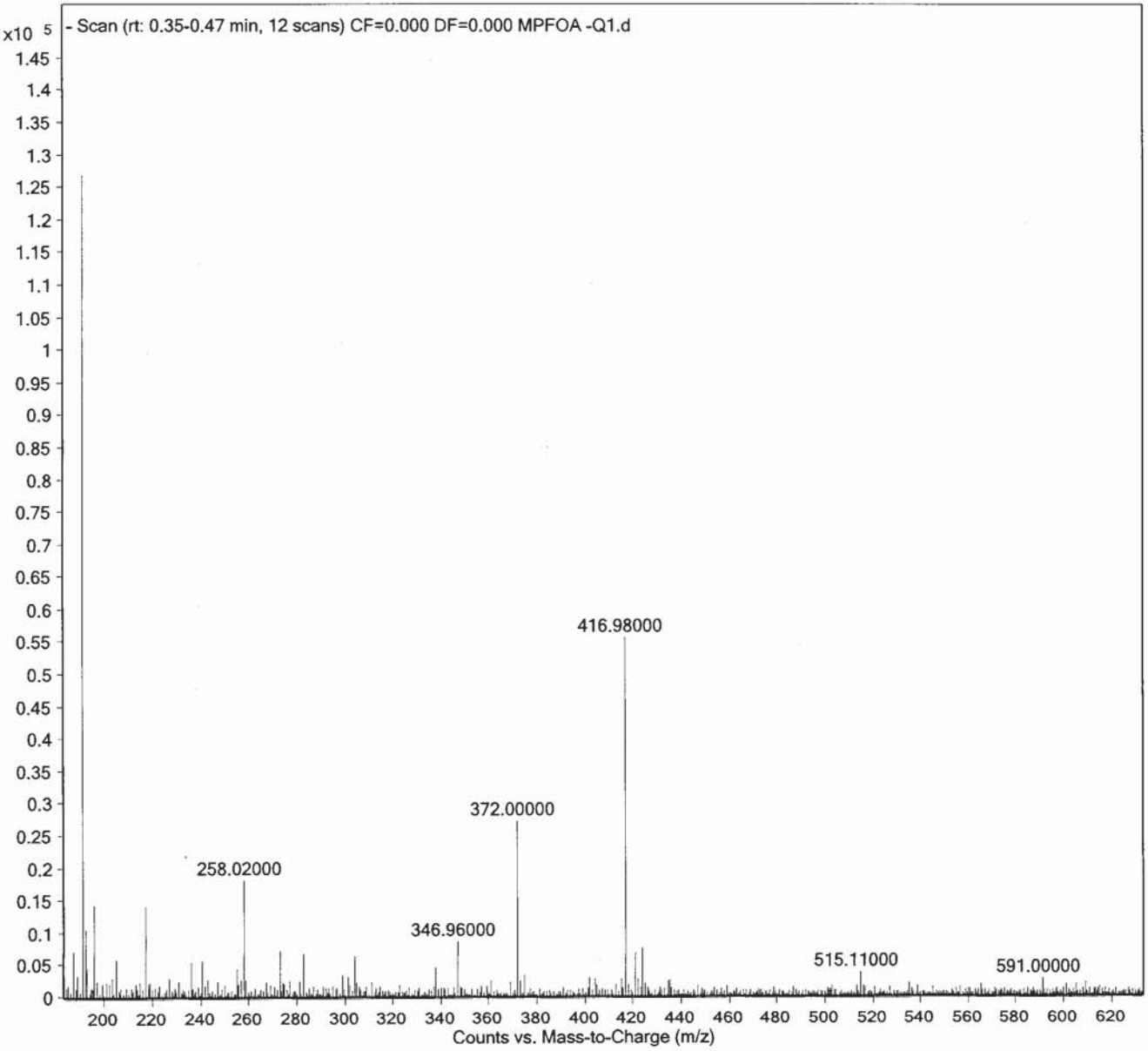
SanAsam Analytics

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



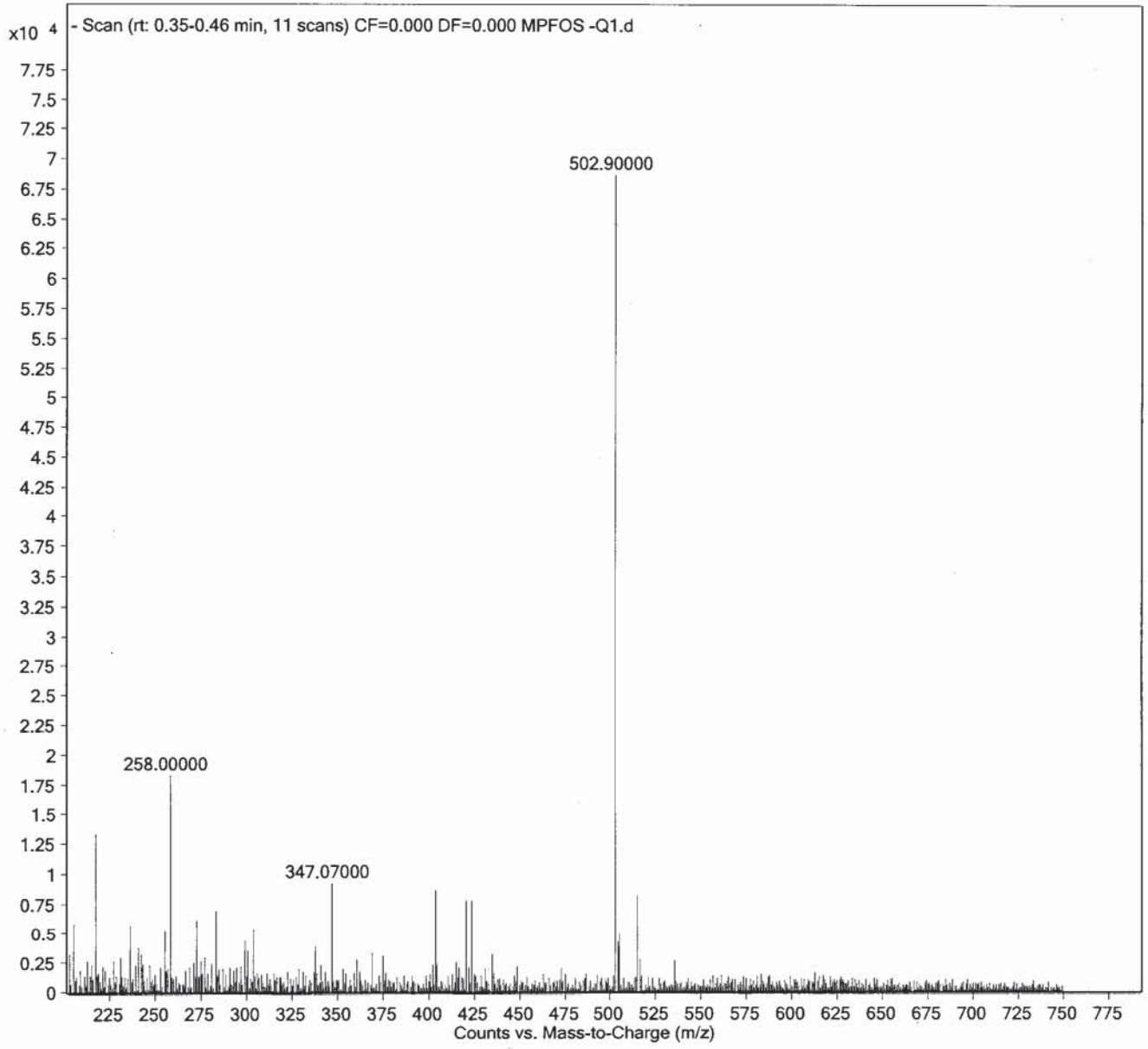
MaxXam Analytics

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



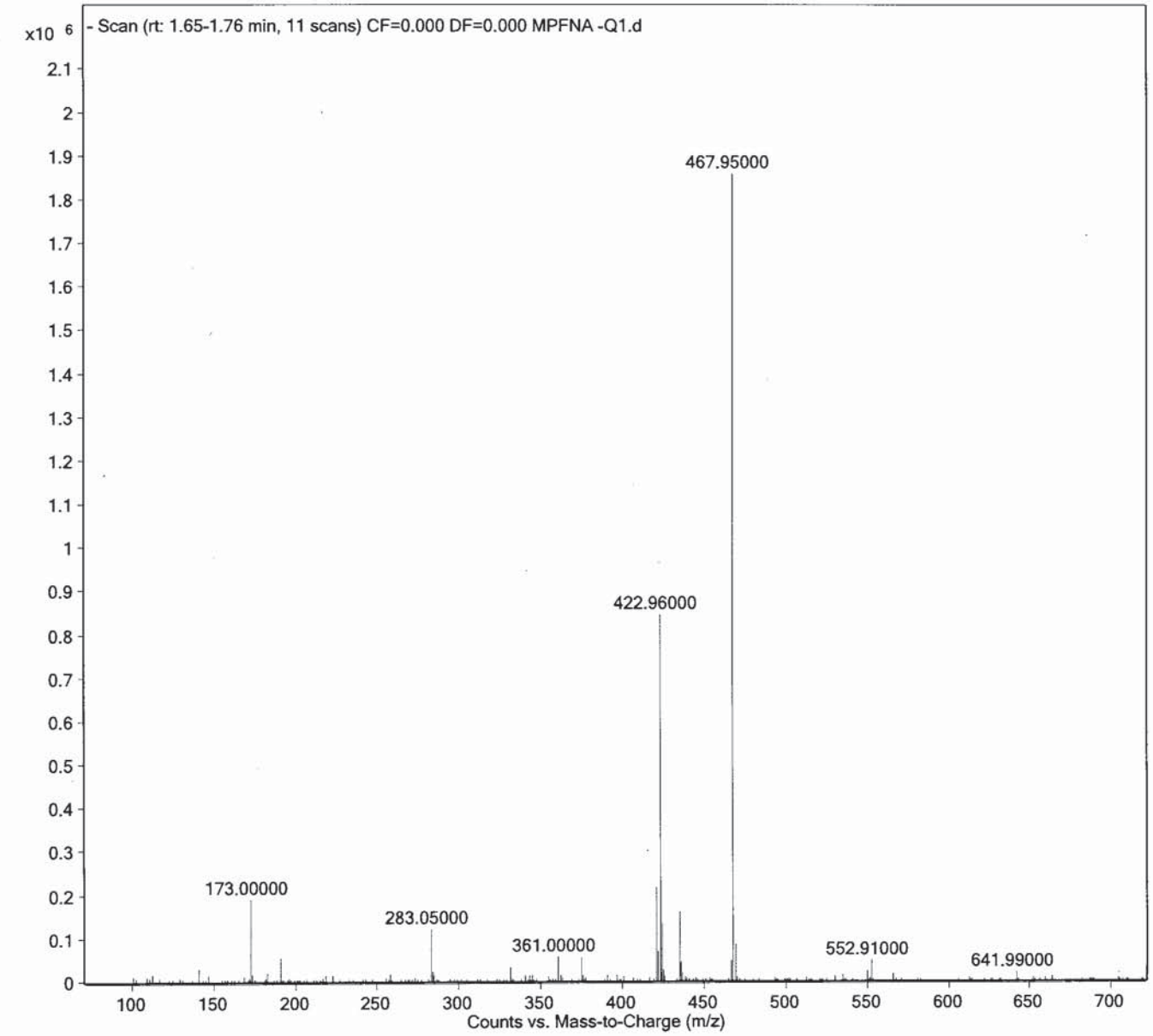
SaxAam Analytics

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



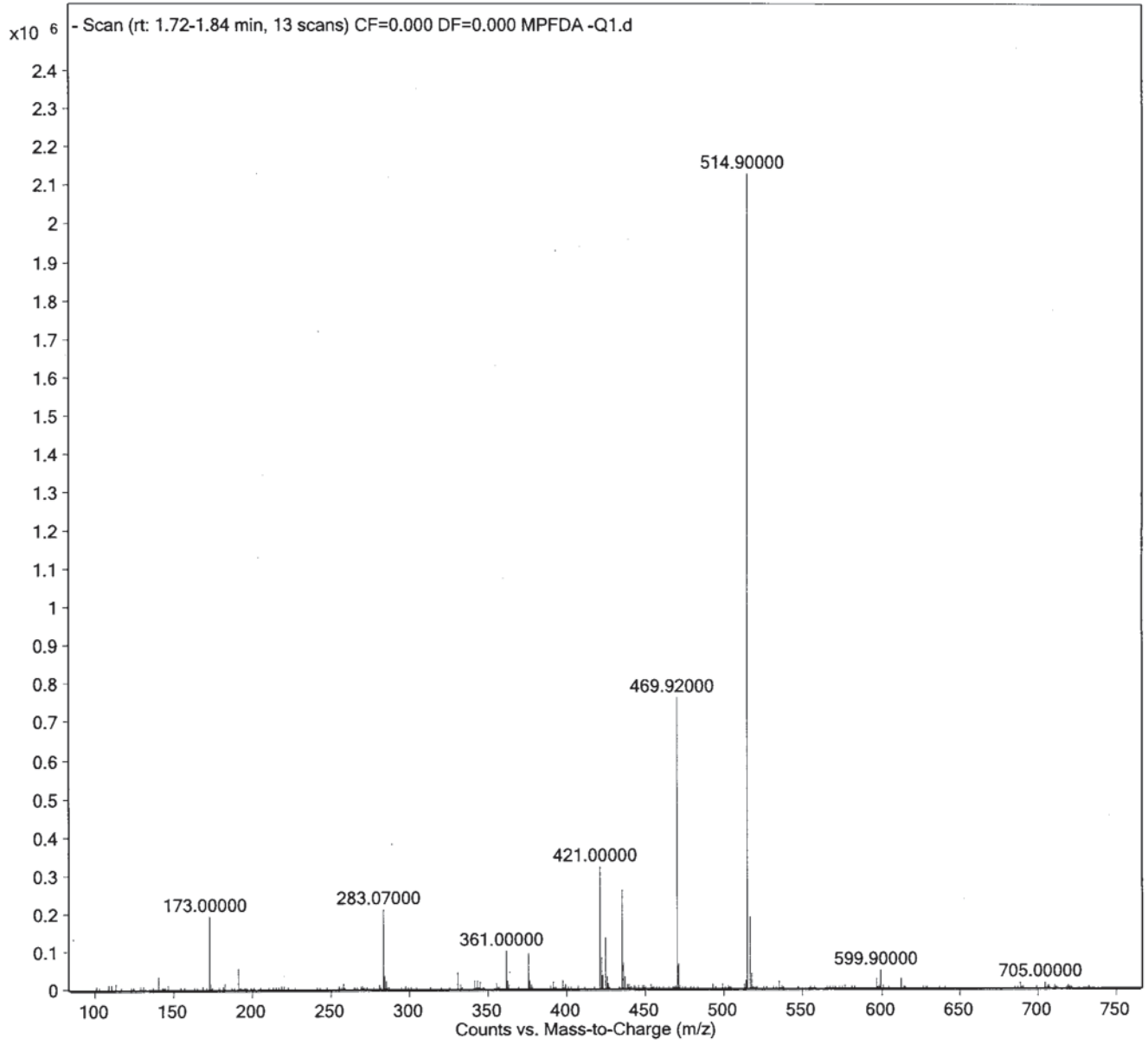
Maxxam Analytics

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



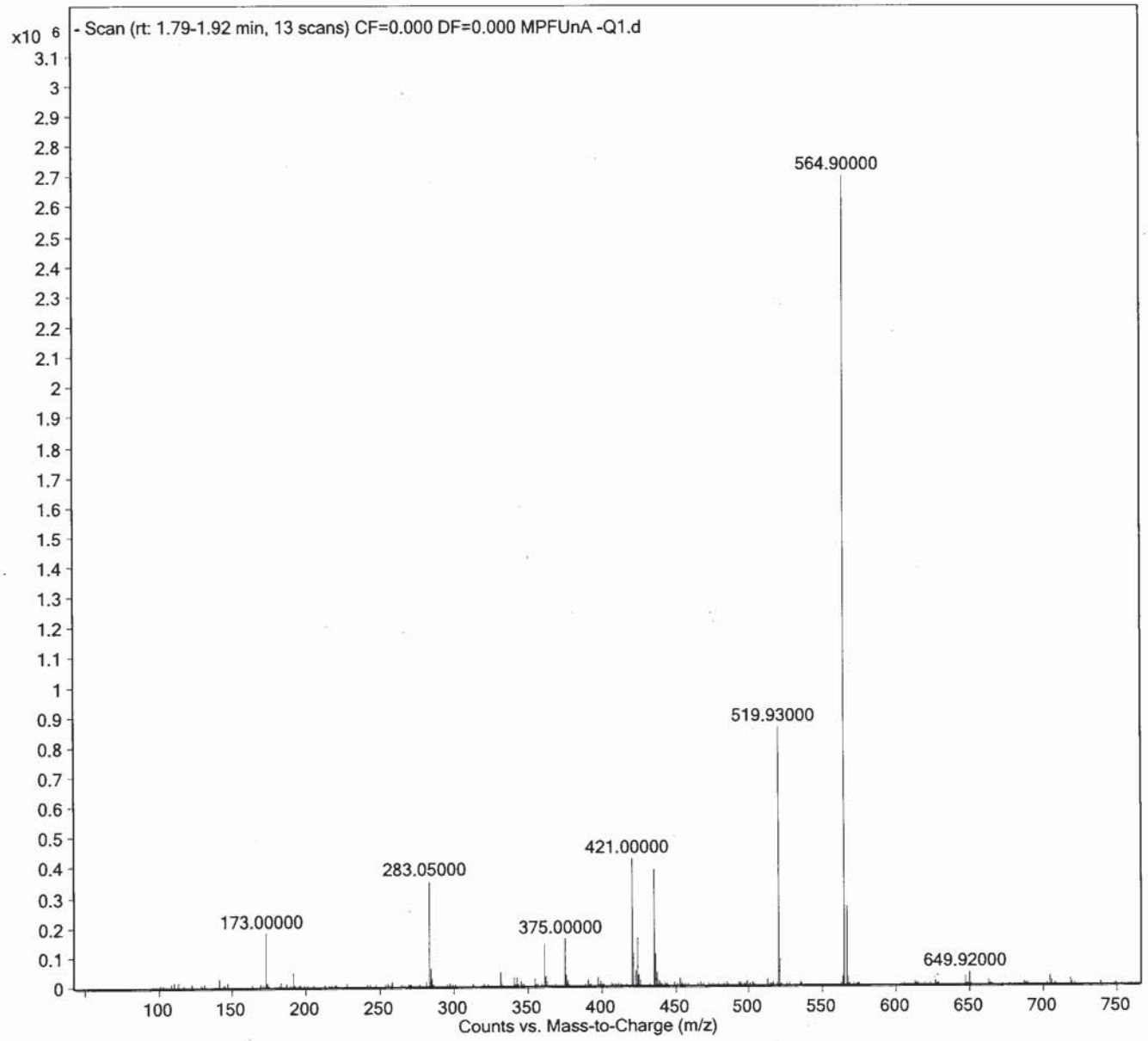
Maxam Analytics

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

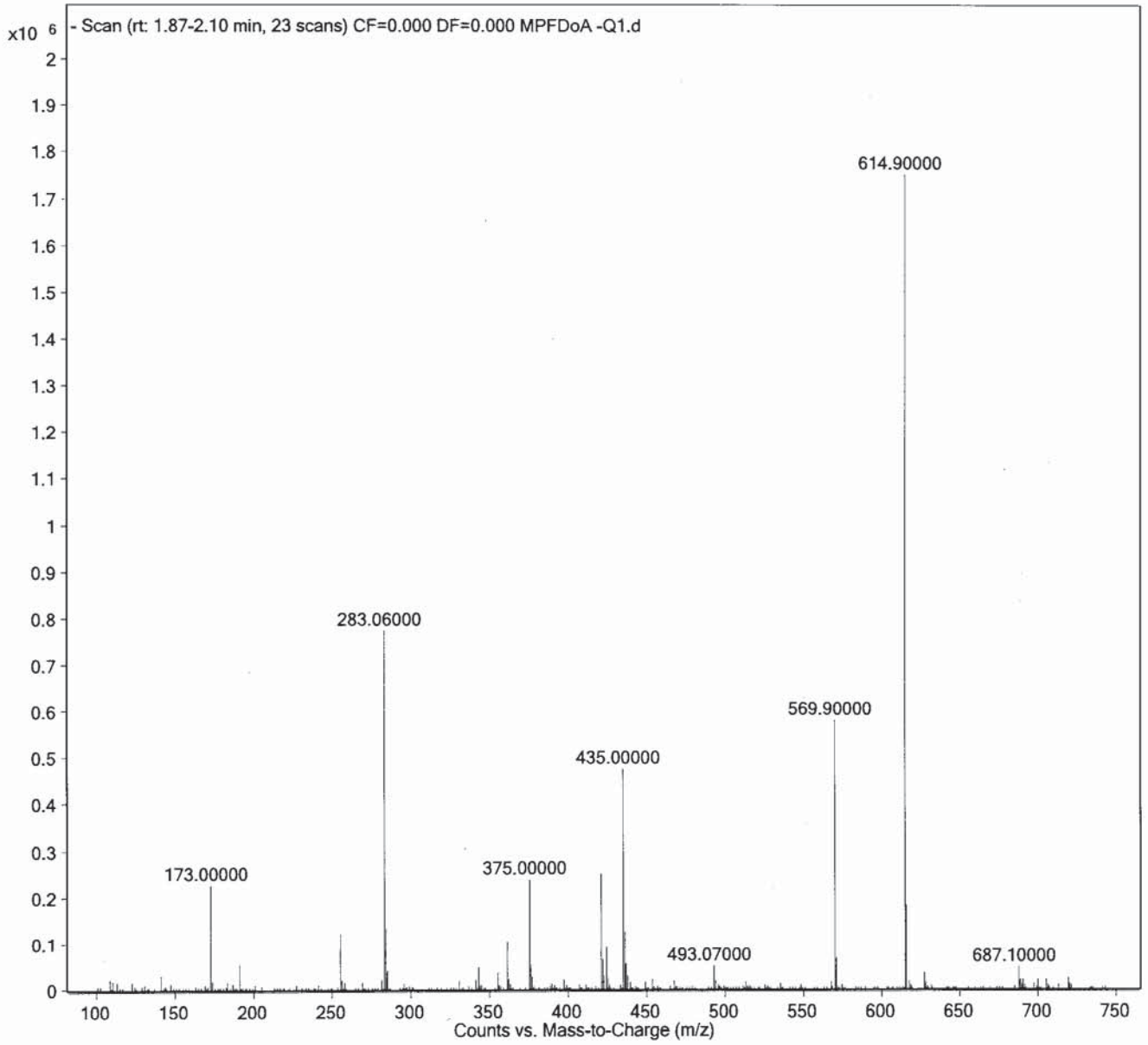


Alaskan Analytics

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

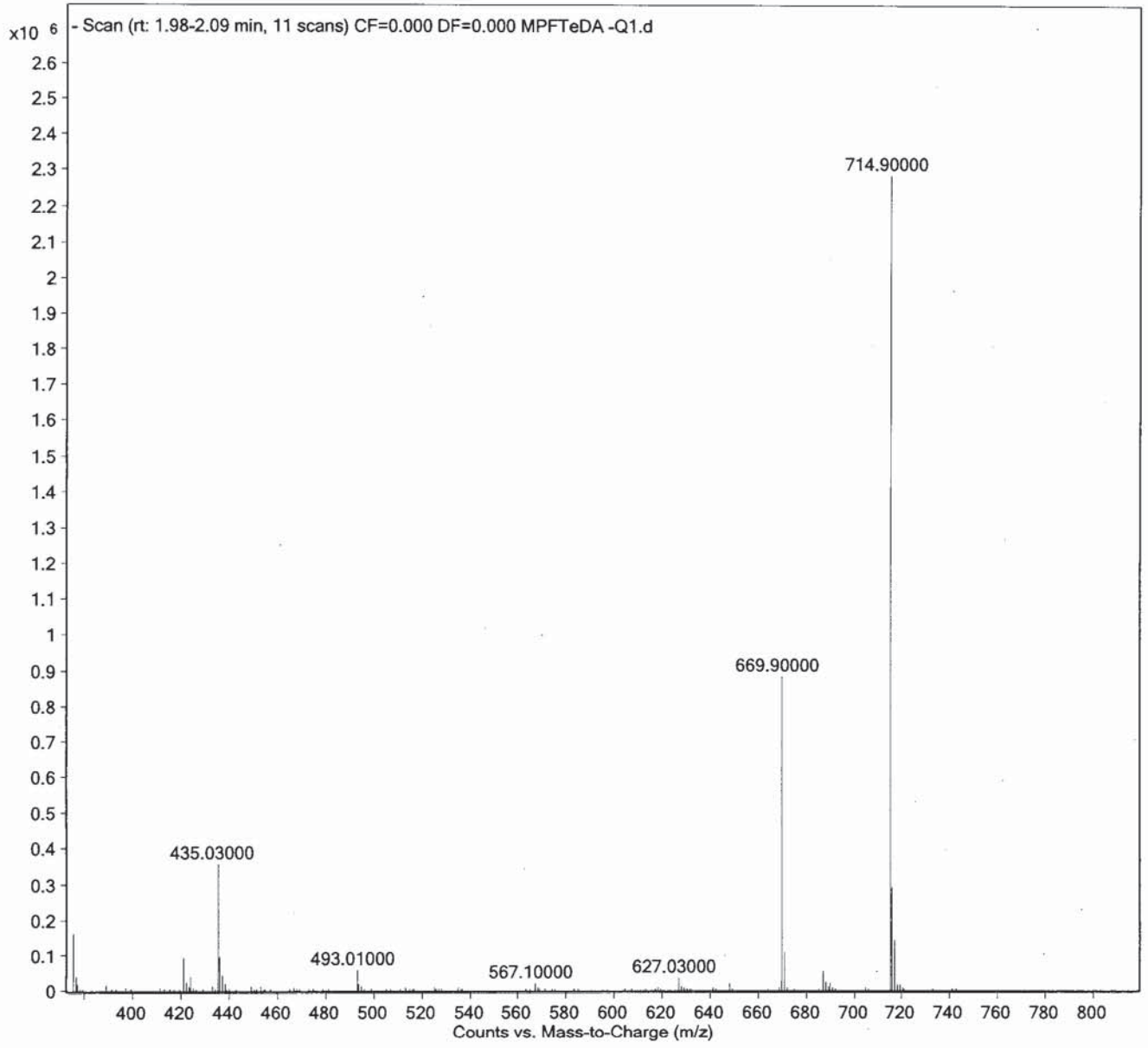


Sample Name	MPFDoA	**Position**	P2-B2	**Instrument Name**	LCMS04
User Name	AD	**Inj Vol**	10	**InjPosition**	
Sample Type	Sample	**IRM Calibration Status**	Not Applicable	**Data Filename**	MPFDoA -Q1.d
ACQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/11 1:55:53 PM



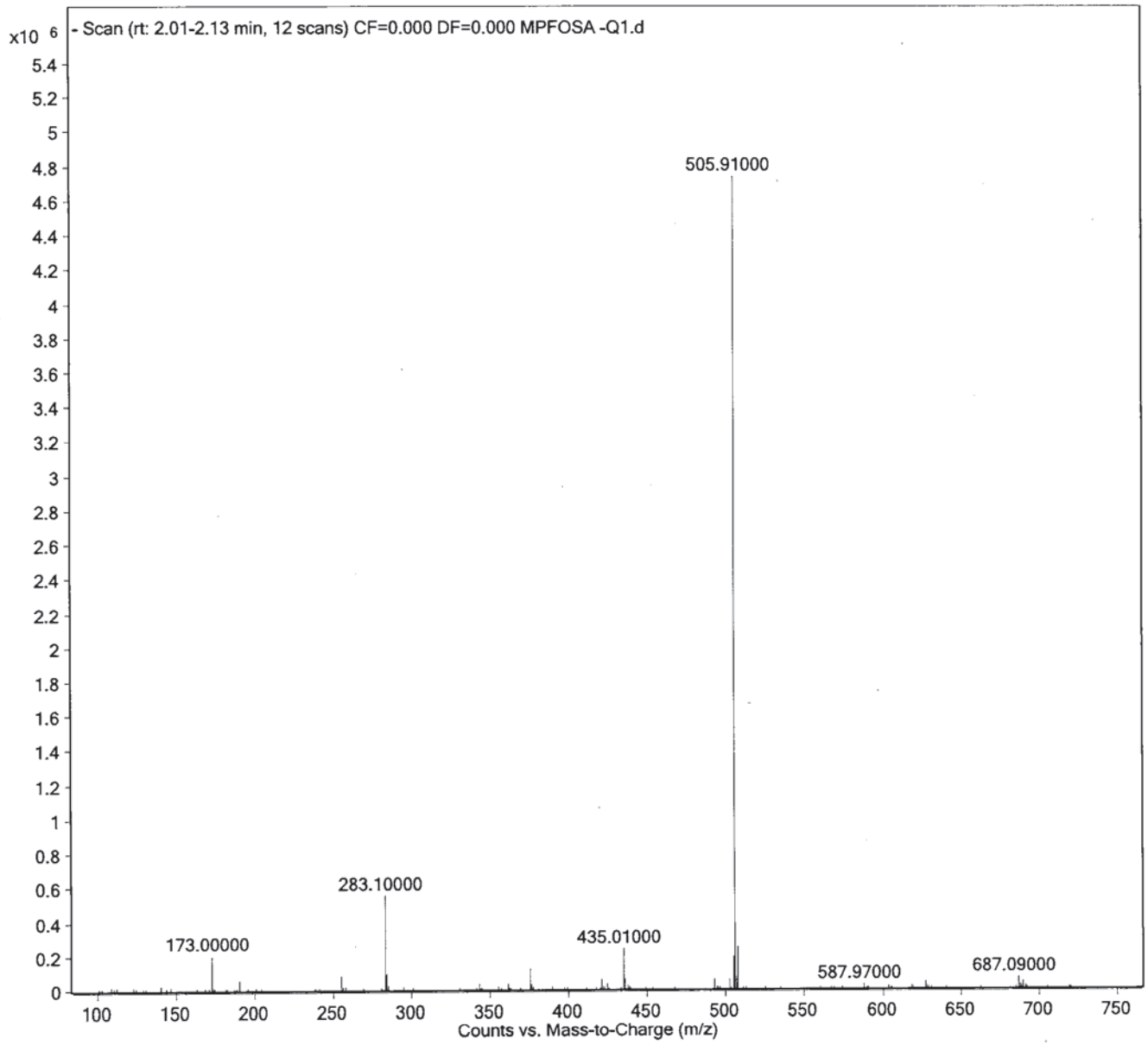
Alaskan Analytics

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

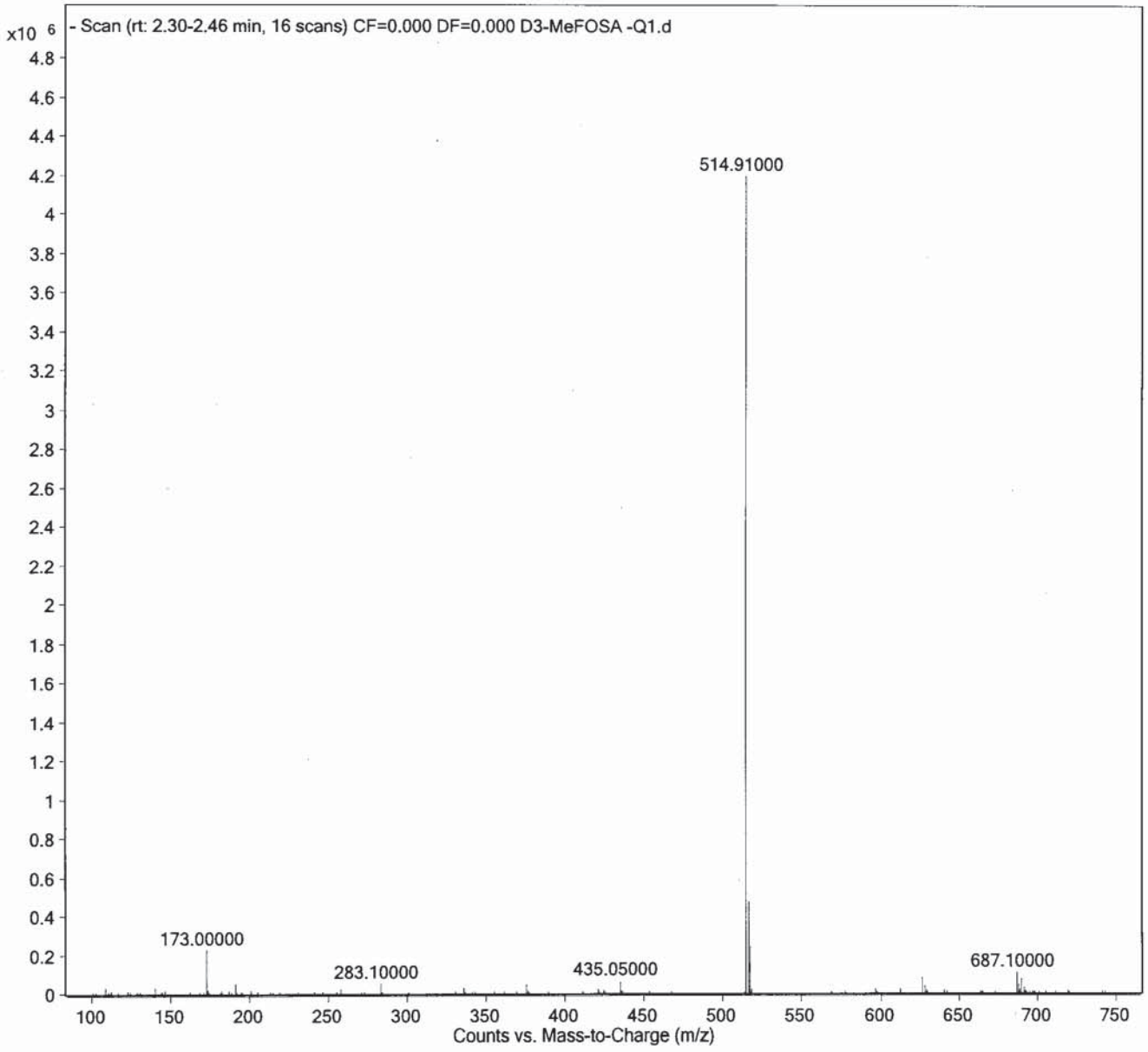


Alaxam Analytics

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

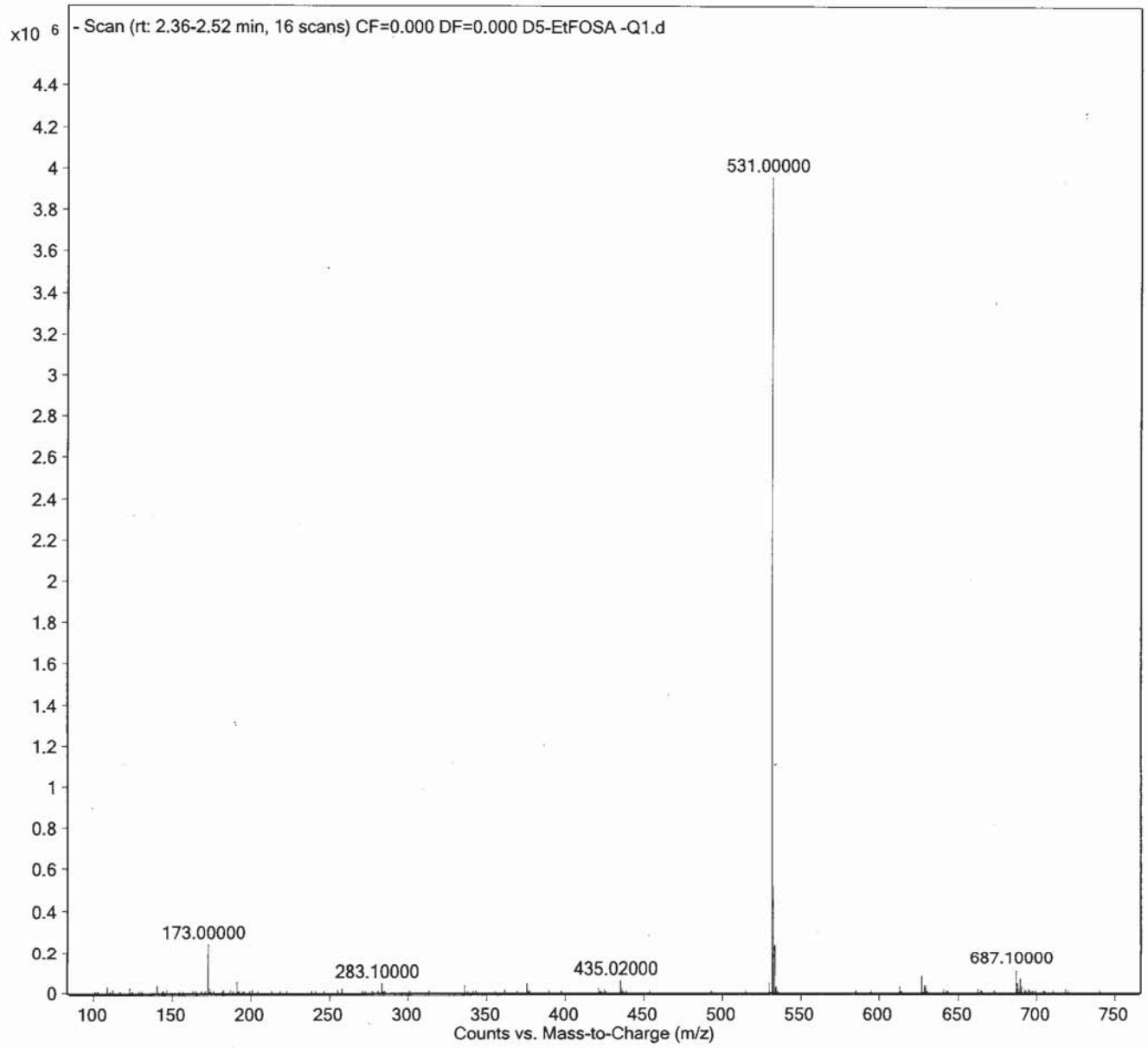


Sample Name	D3-MeFOSA	**Position**	P2-B5	**Instrument Name**	LCMS04
User Name	AD	**Inj Vol**	10	**InjPosition**	
Sample Type	Sample	**IRM Calibration Status**	Not Applicable	**Data Filename**	D3-MeFOSA -Q1.d
ACQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/11 2:12:24 PM



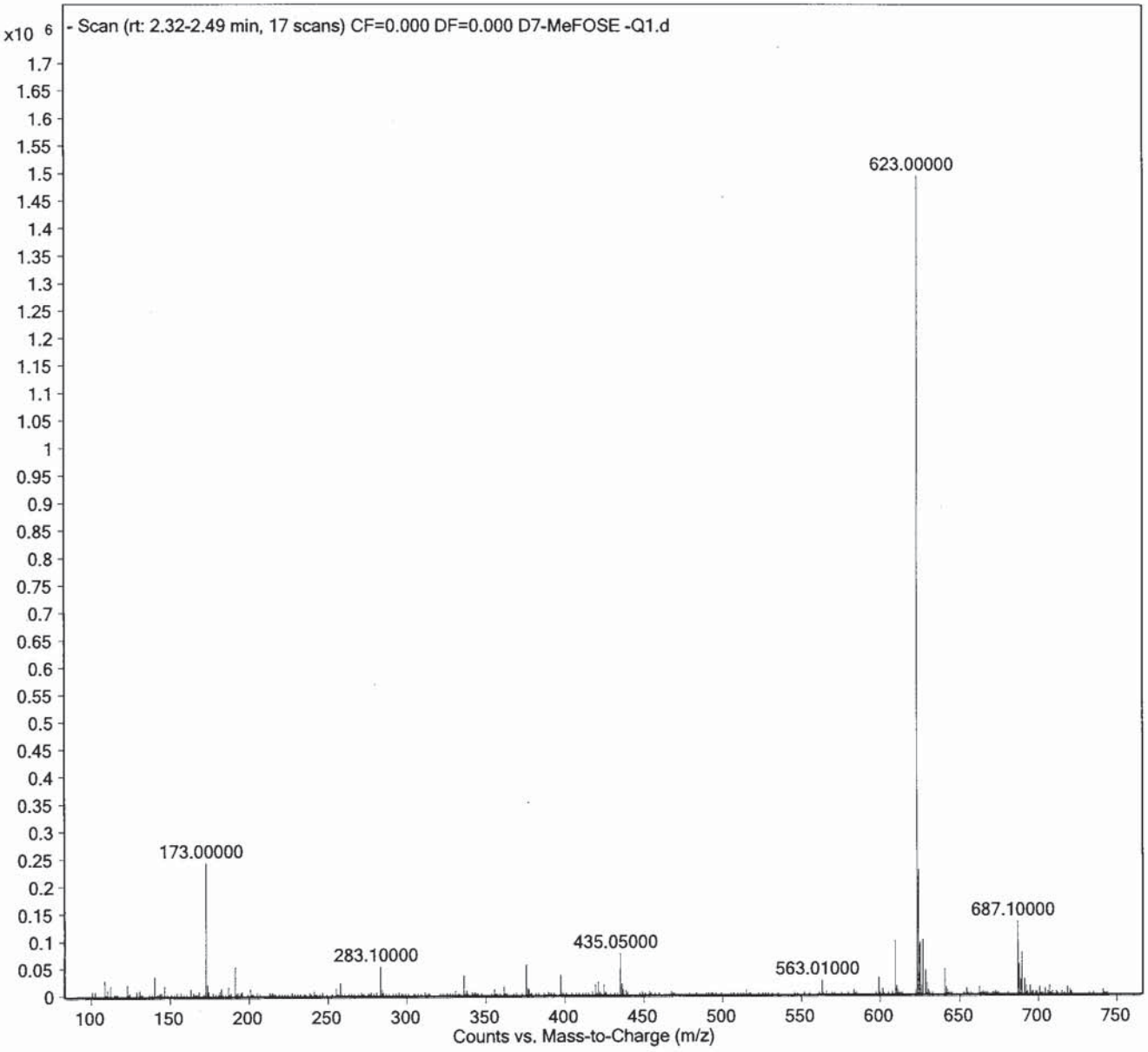
MaxXam Analytics

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
ACQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/11 2:17:53 PM



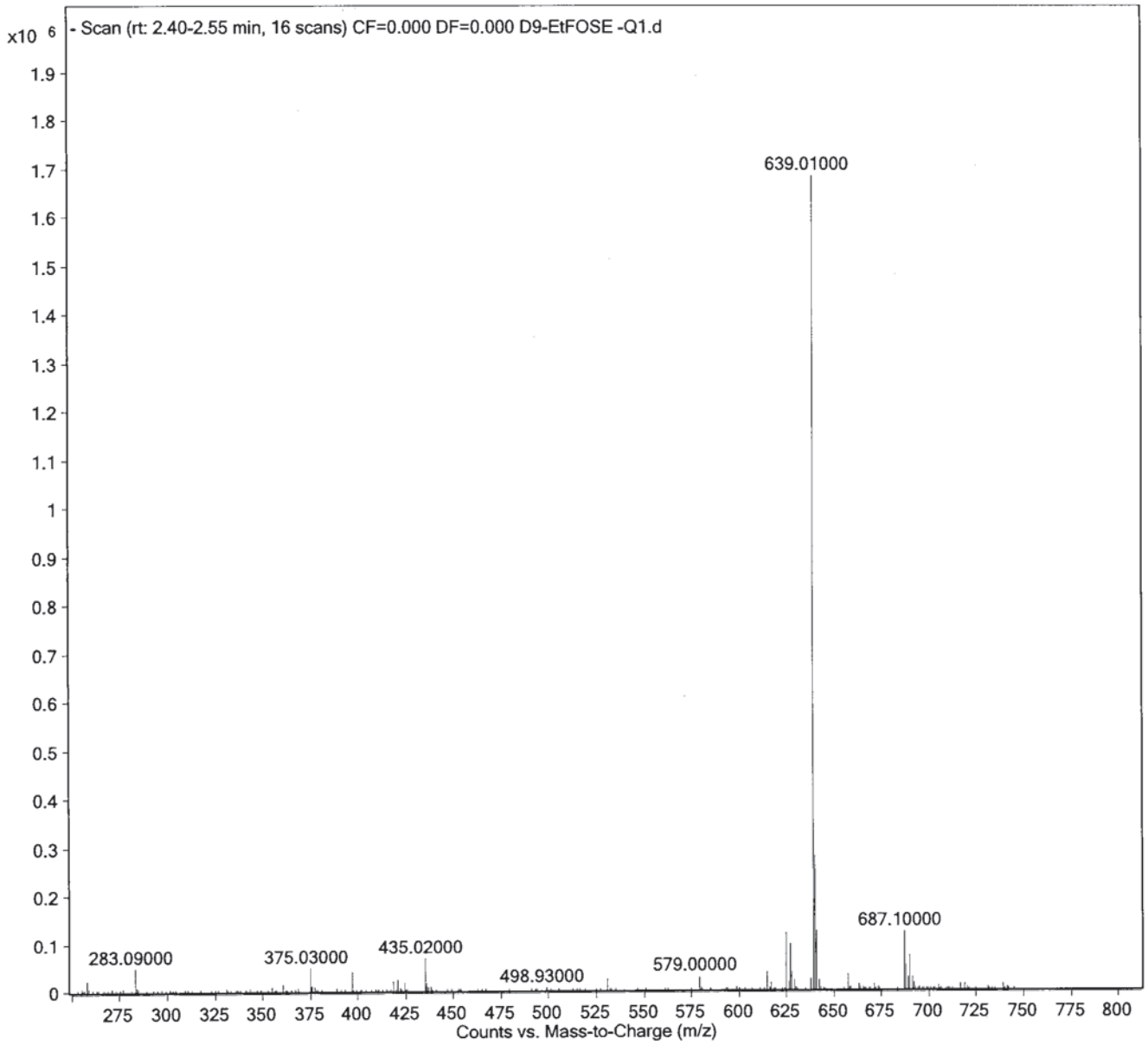
Maxam Analytics

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



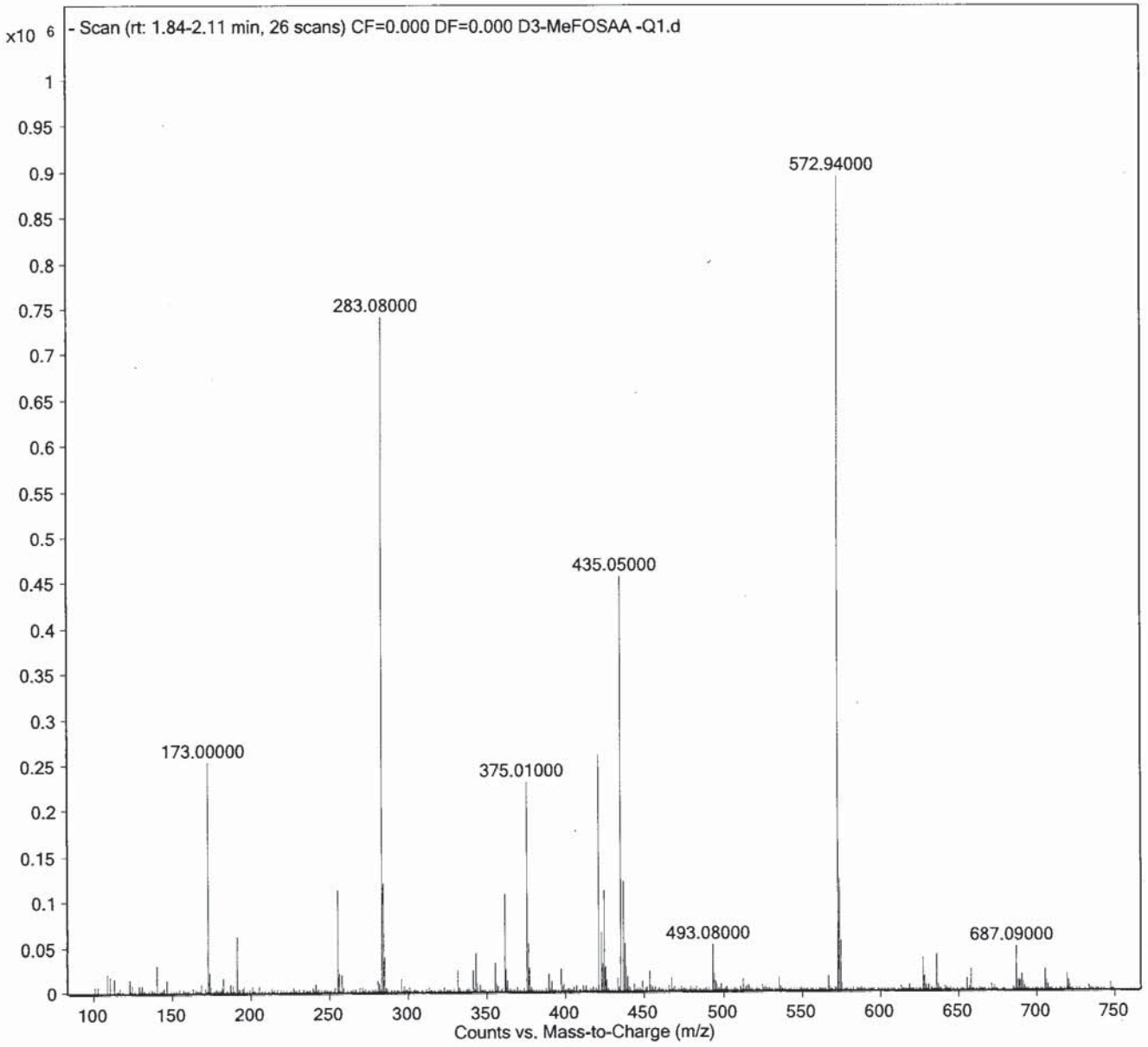
SGS AXYS Analytics

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
ACQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/11 2:28:56 PM

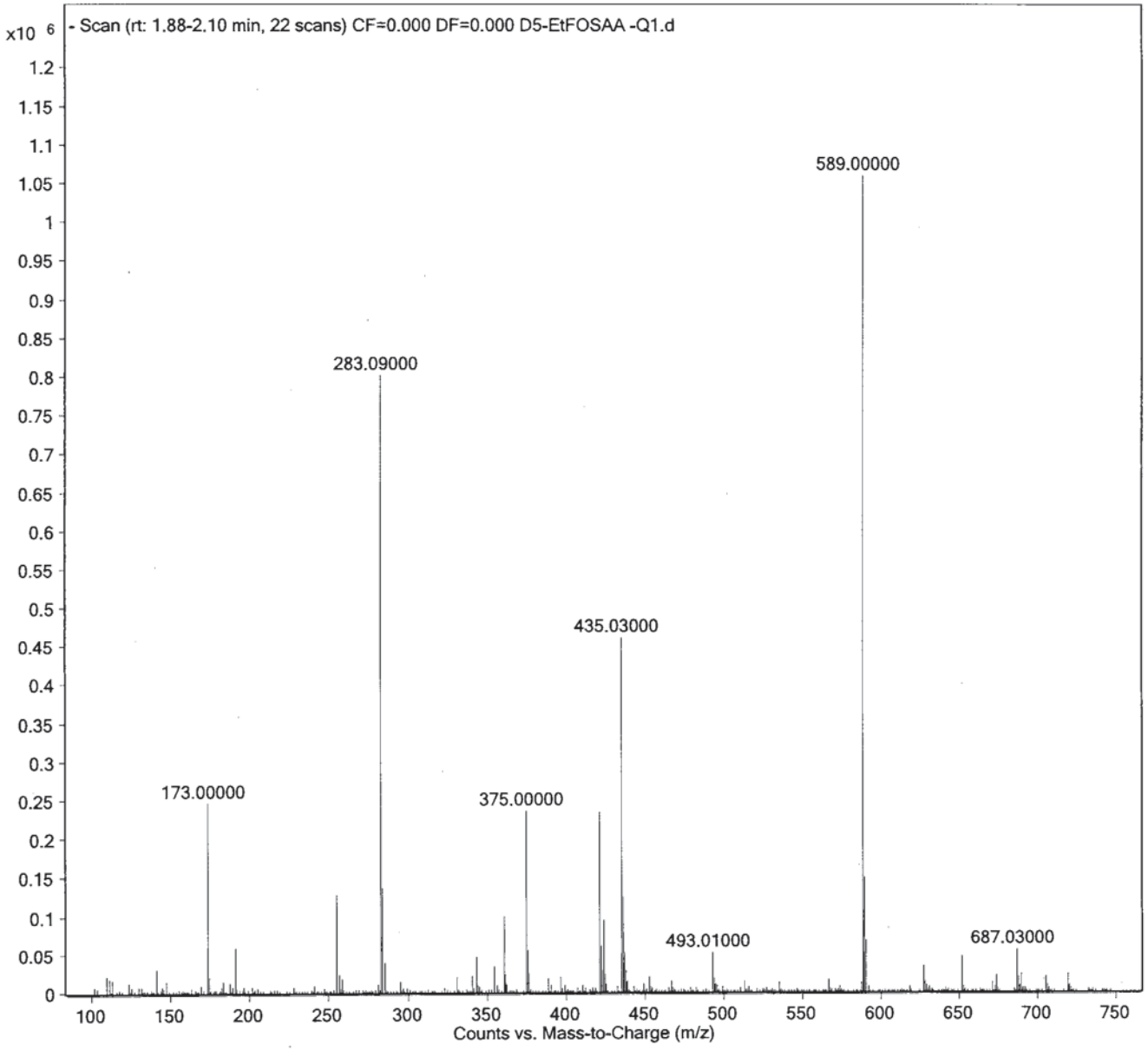


SaxAm Analytics

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

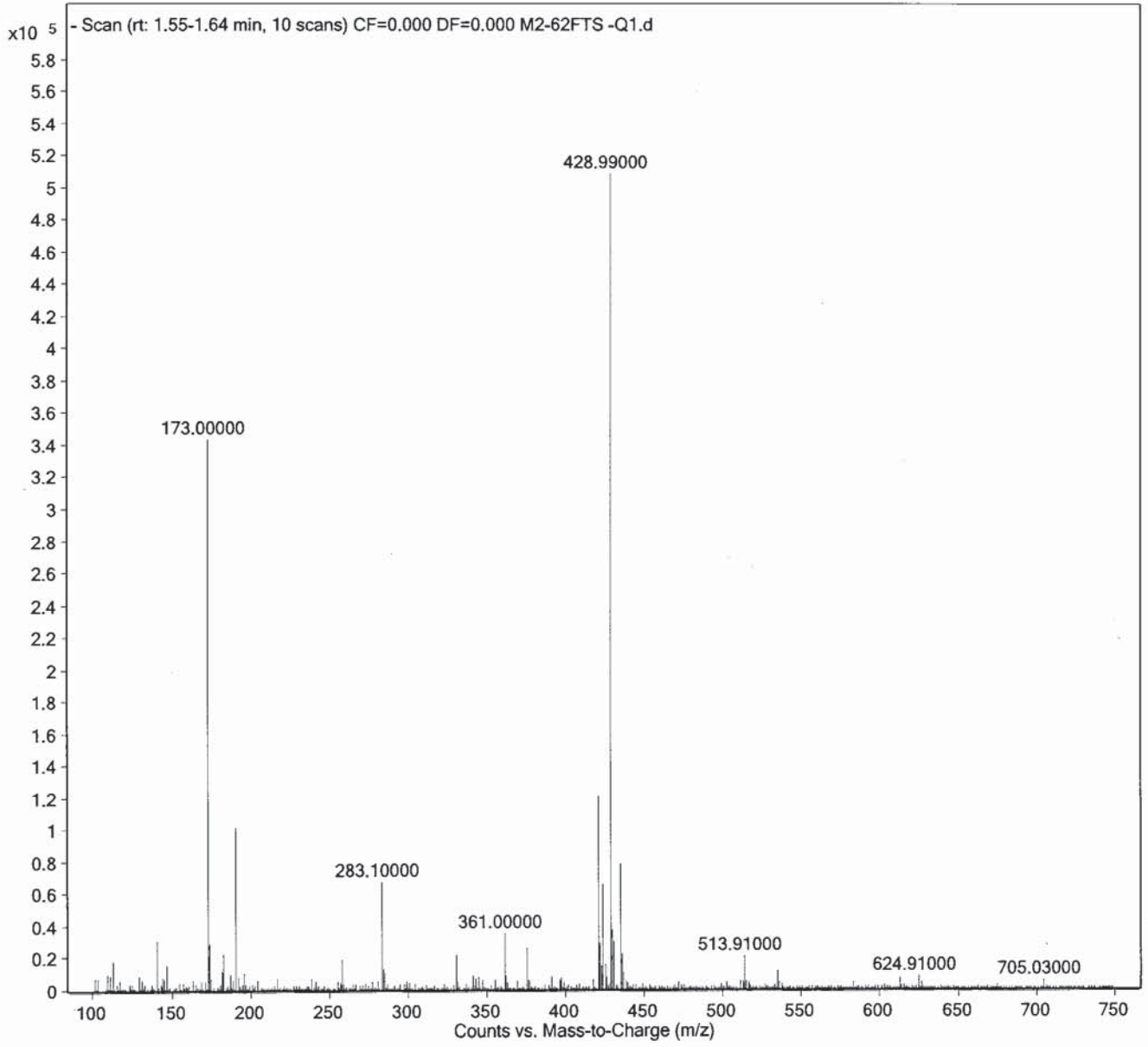


Sample Name	D5-EtFOSAA	**Position**	P2-C1	**Instrument Name**	LCMS04
User Name	AD	**Inj Vol**	10	**InjPosition**	
Sample Type	Sample	**IRM Calibration Status**	Not Applicable	**Data Filename**	D5-EtFOSAA -Q1.d
ACQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/11 2:39:59 PM



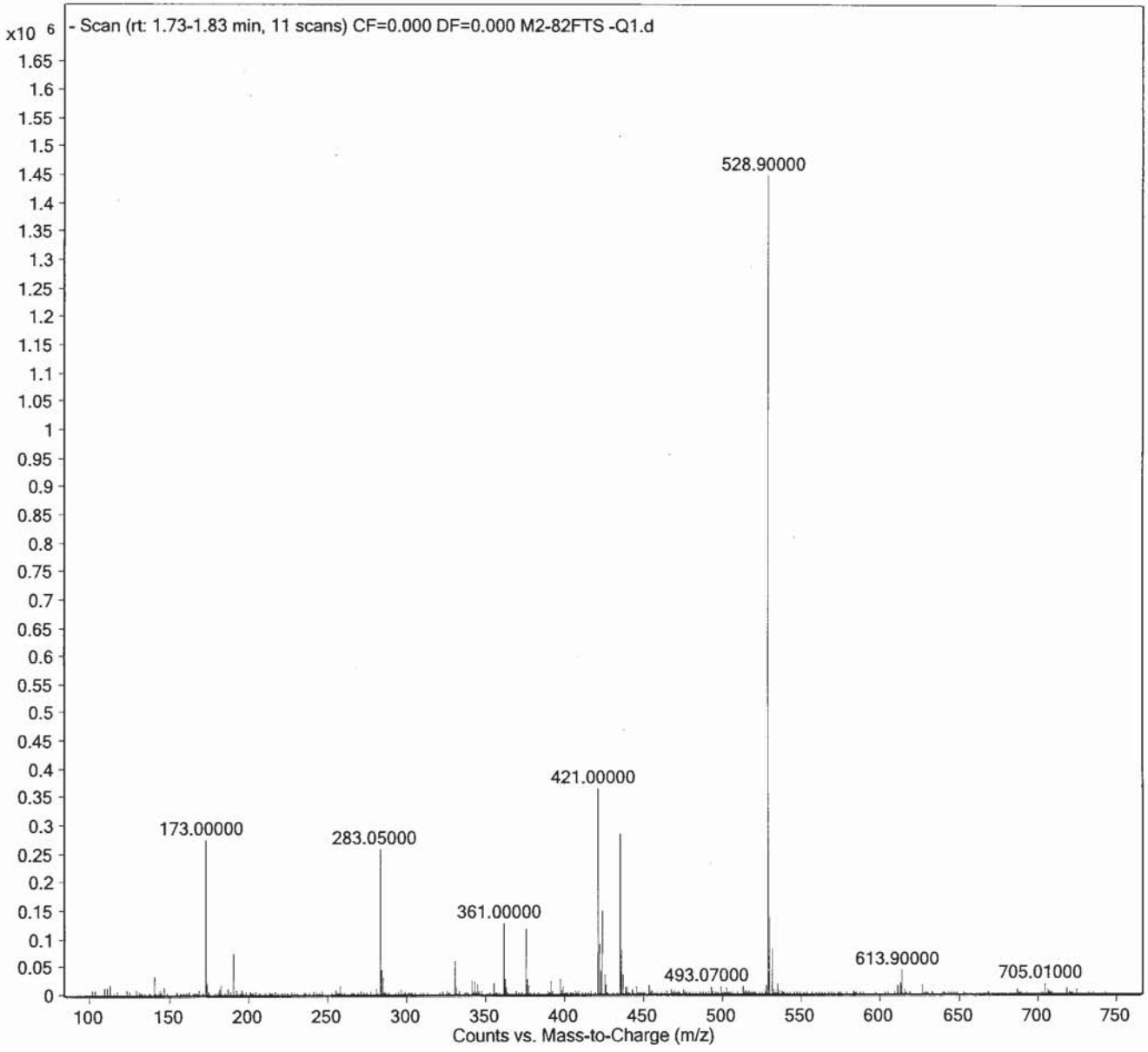
Alaska Analytics

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



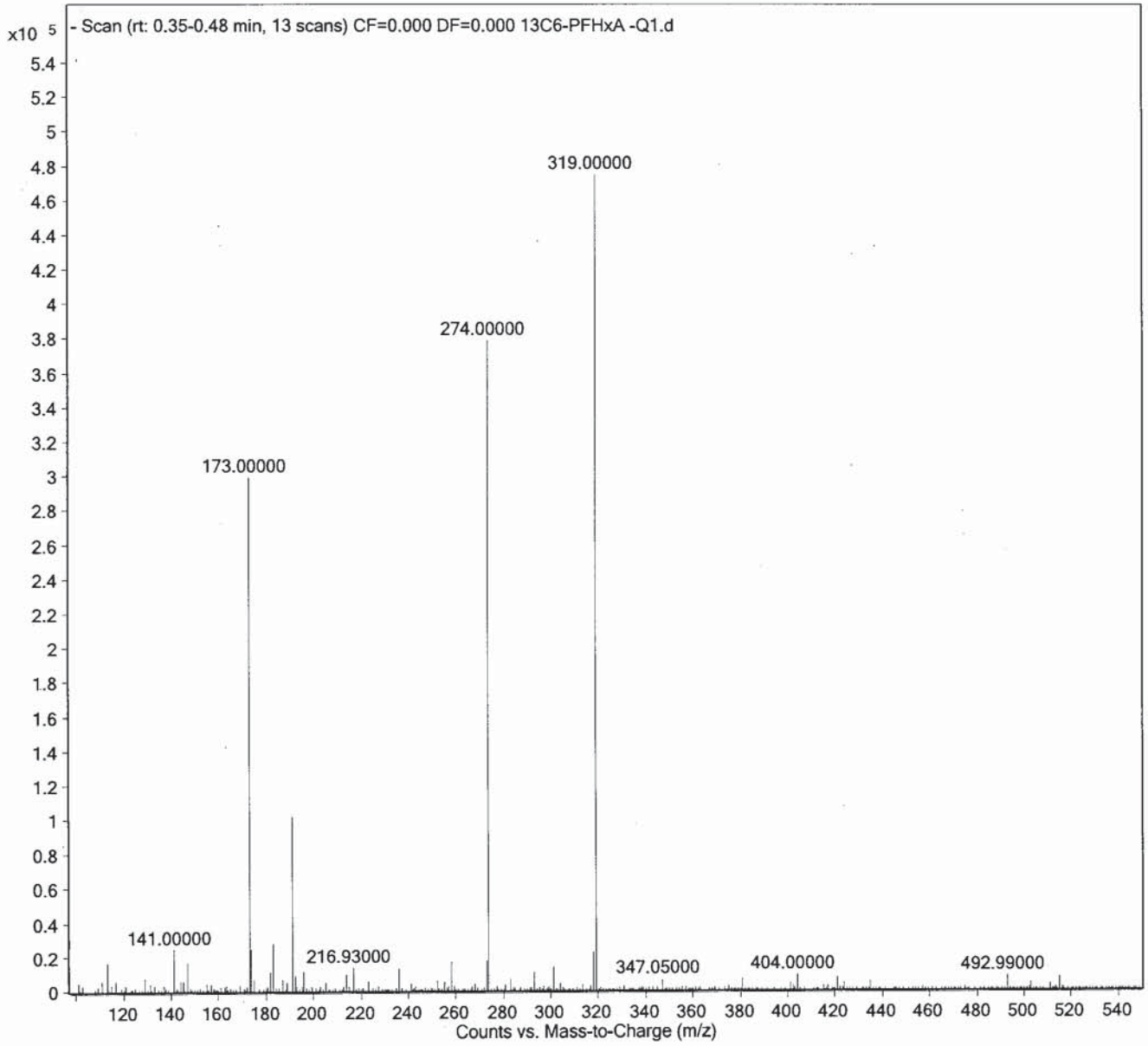
Alaskan Analytics

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



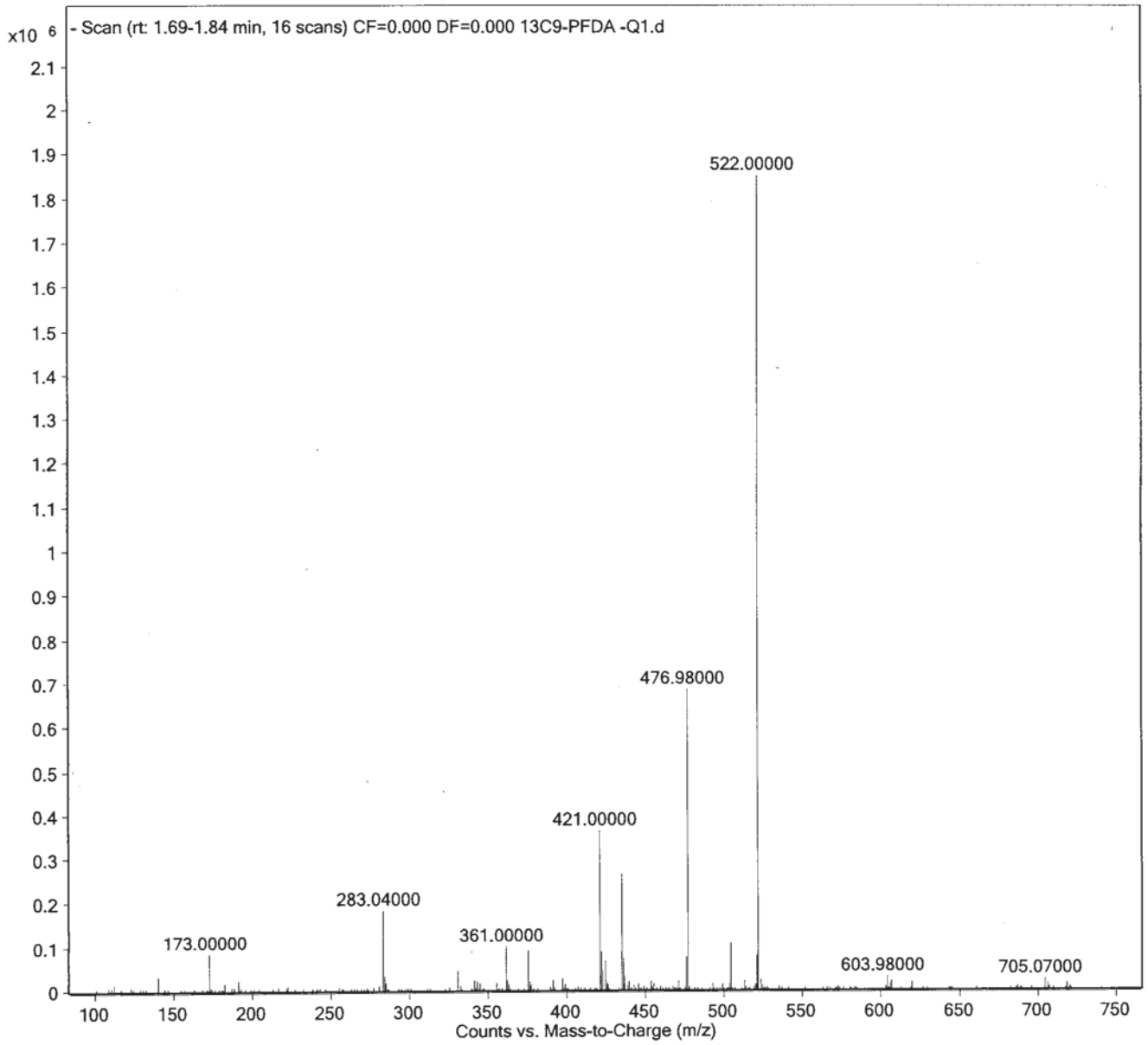
Maxxam Analytics

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



SiaAm Analytics

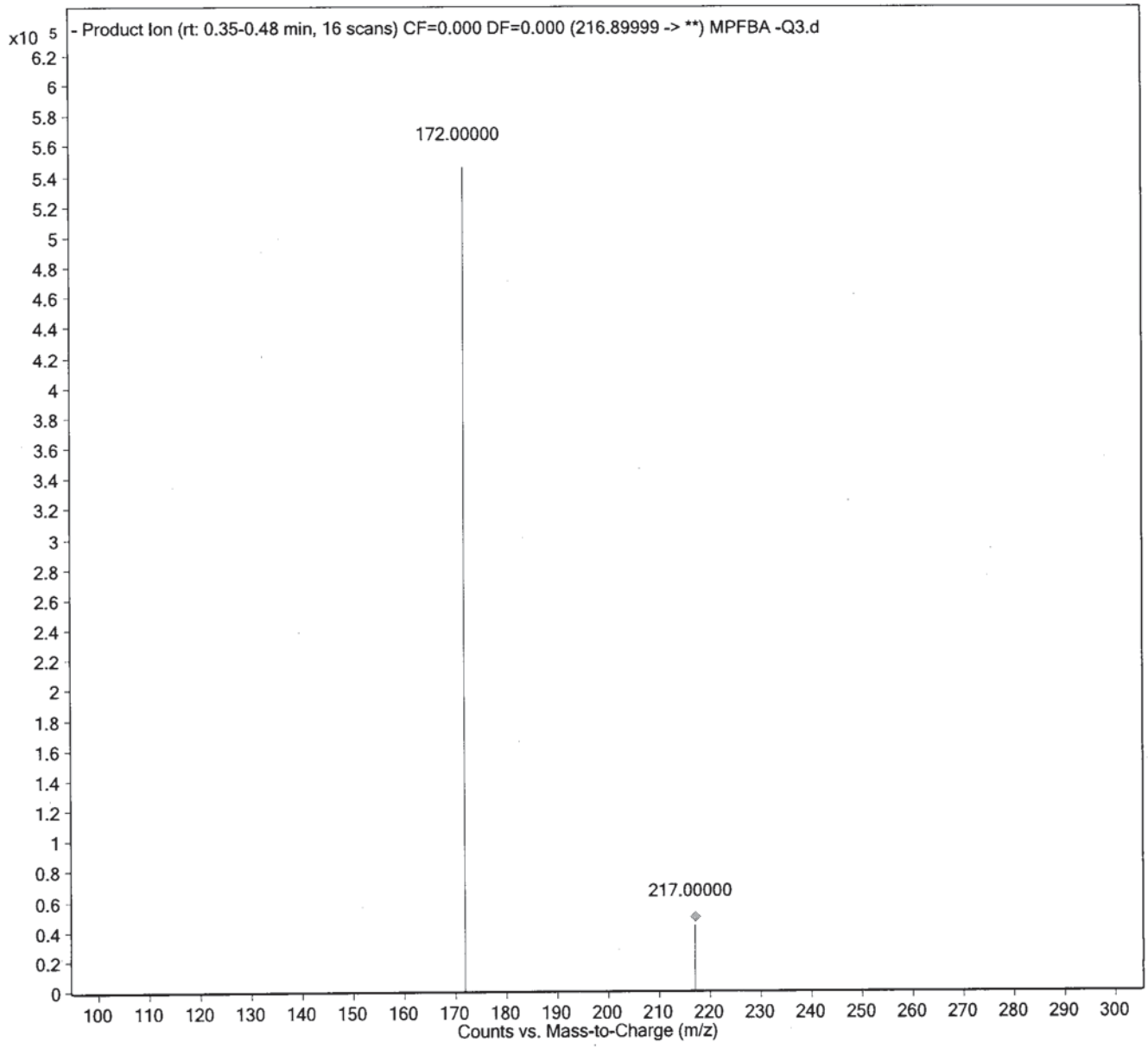
Sample Name	13C9-PFDA	**Position**	P2-C5	**Instrument Name**	LCMS04
User Name	AD	**Inj Vol**	10	**InjPosition**	
Sample Type	Sample	**IRM Calibration Status**	Not Applicable	**Data Filename**	13C9-PFDA -Q1.d
ACQ Method	PFC_MassVerification-Q1.m	**Comment**		**Acquired Time**	2017/07/11 3:01:59 PM



Maxxam Analytics

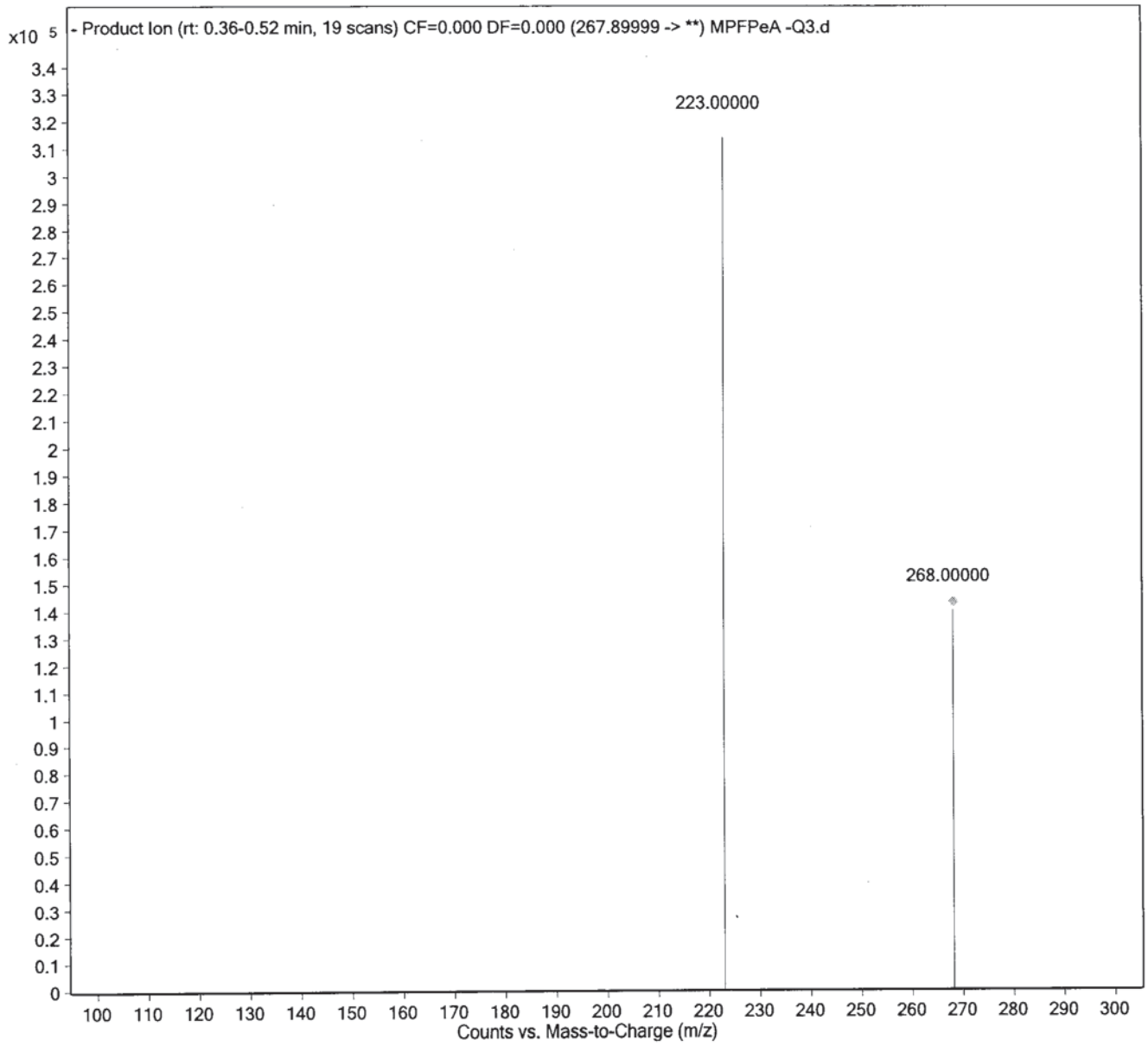
Extracted and Injection Internal Standard Product Ion Verification

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



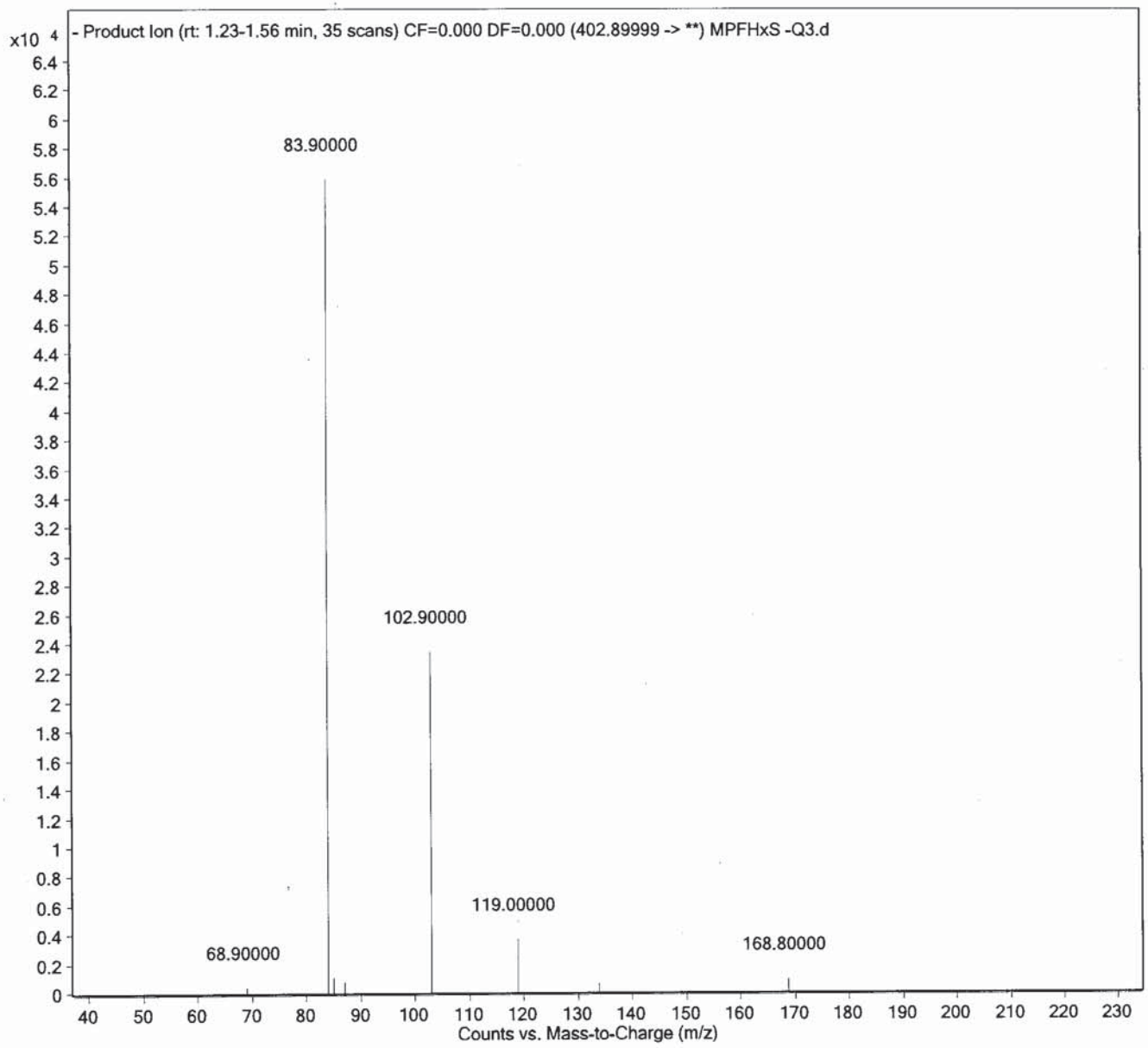
Maxxam Analytics

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



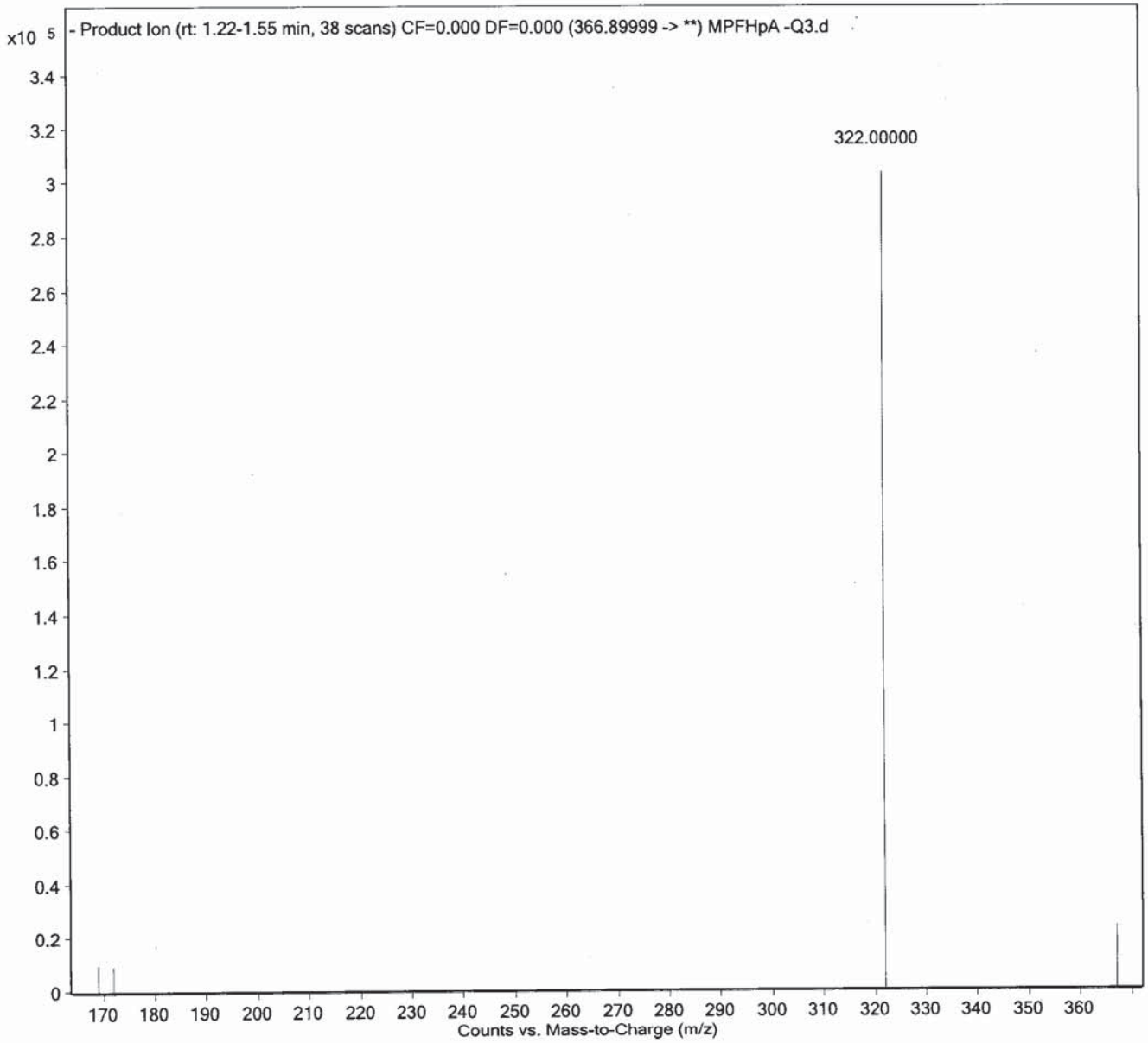
Maxxam Analytics

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



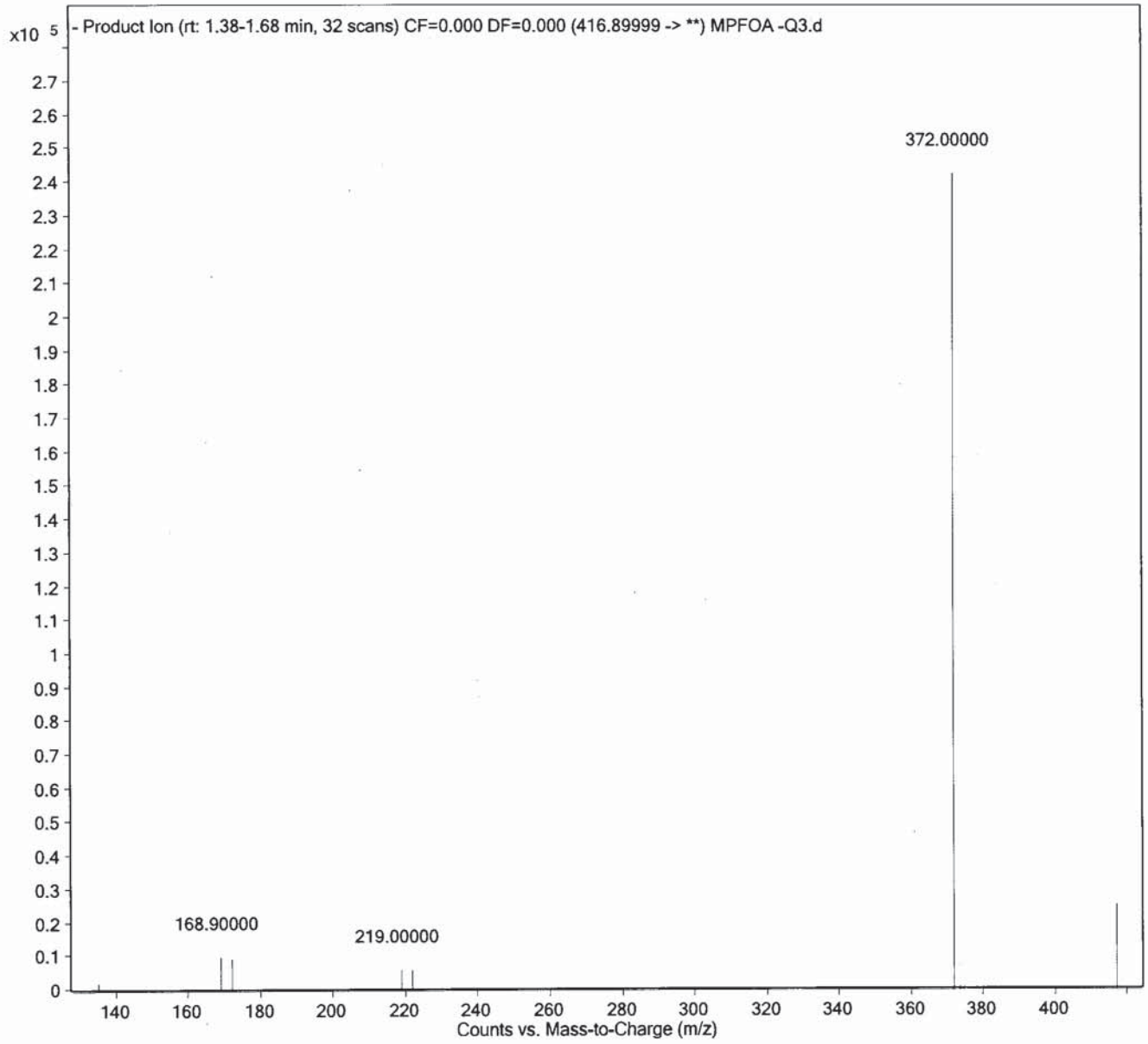
SaxAm Analytics

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



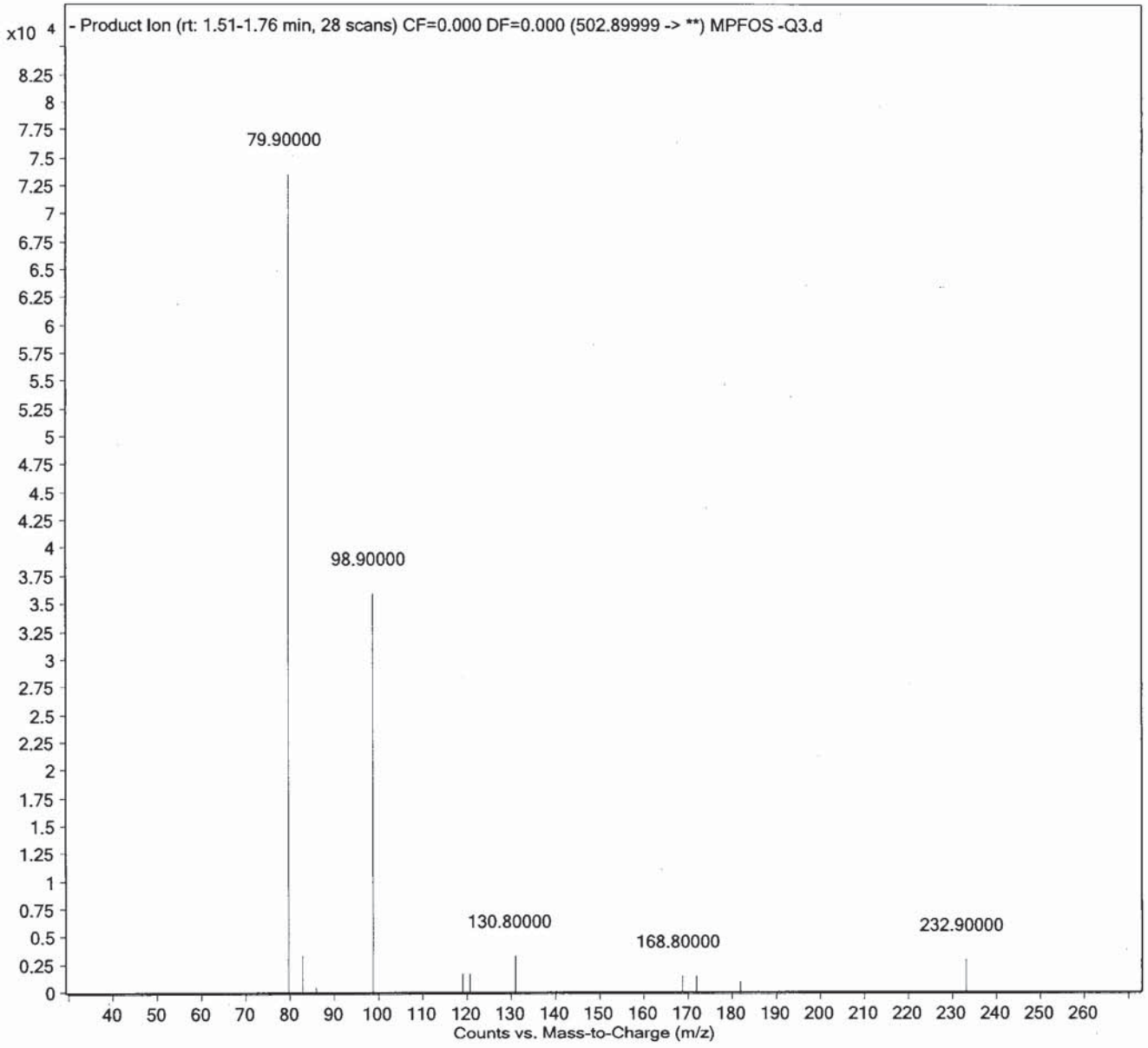
Saxam Analytics

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



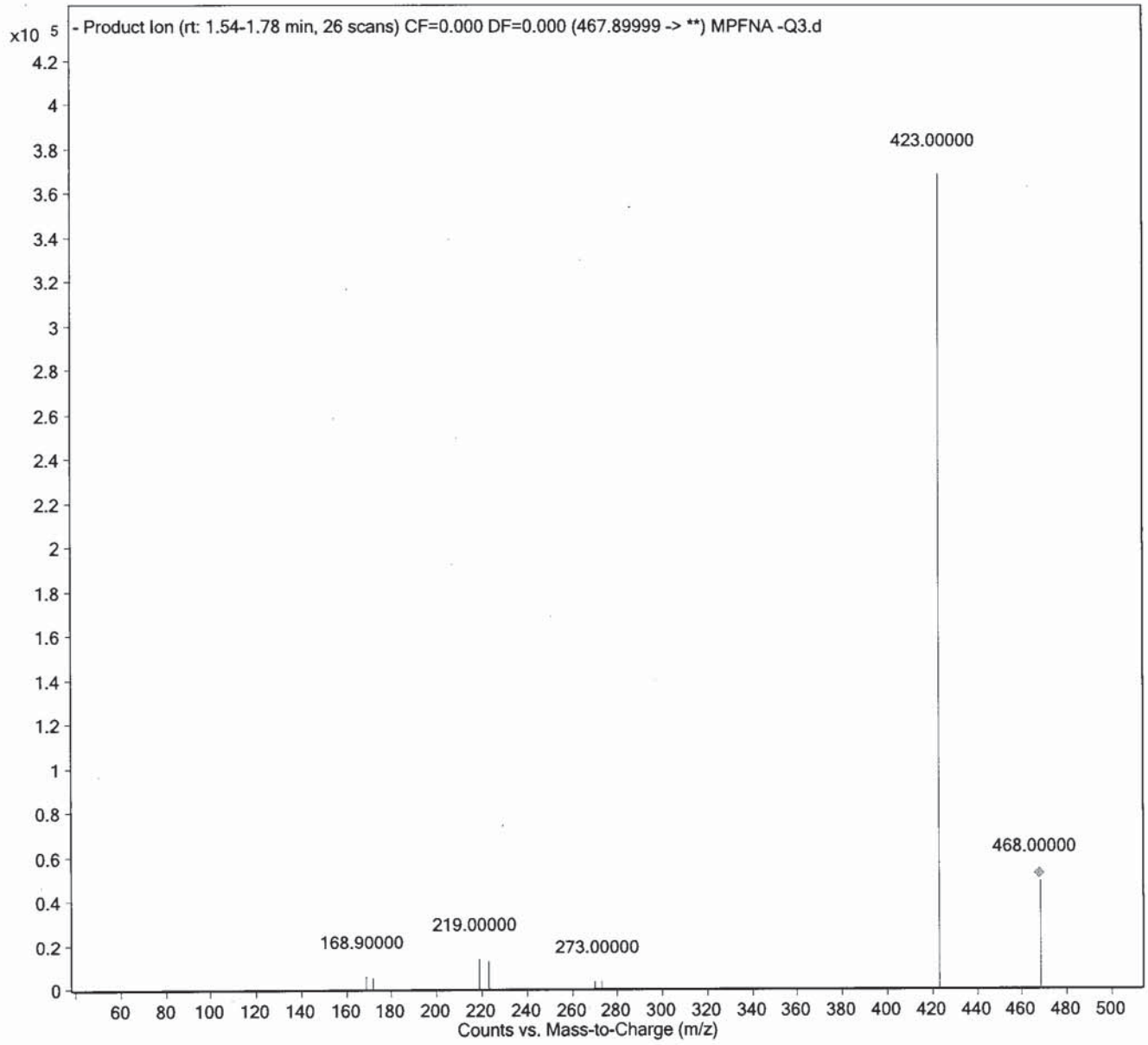
SanKam Analytics

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



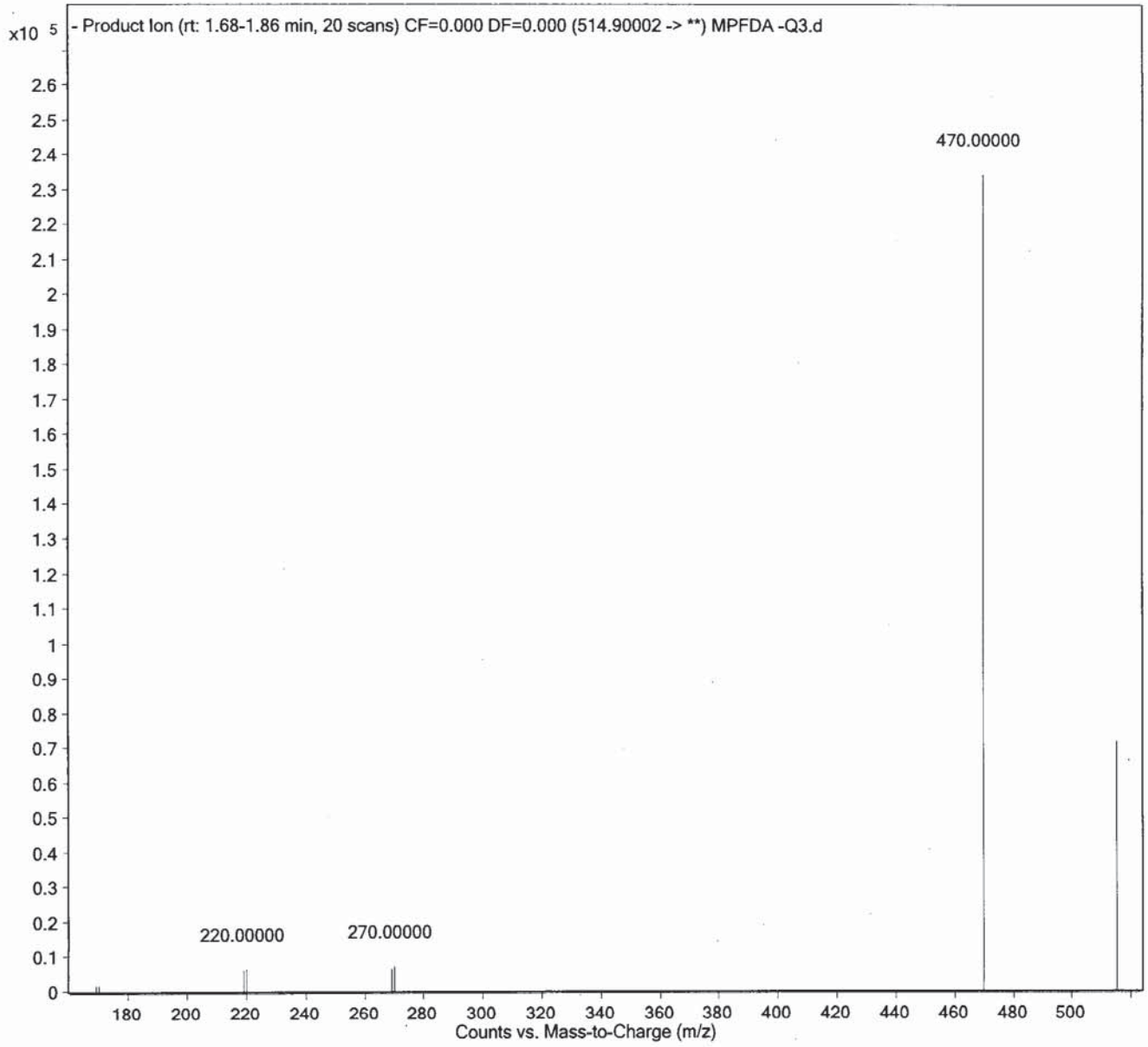
Alaskan Analytics

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



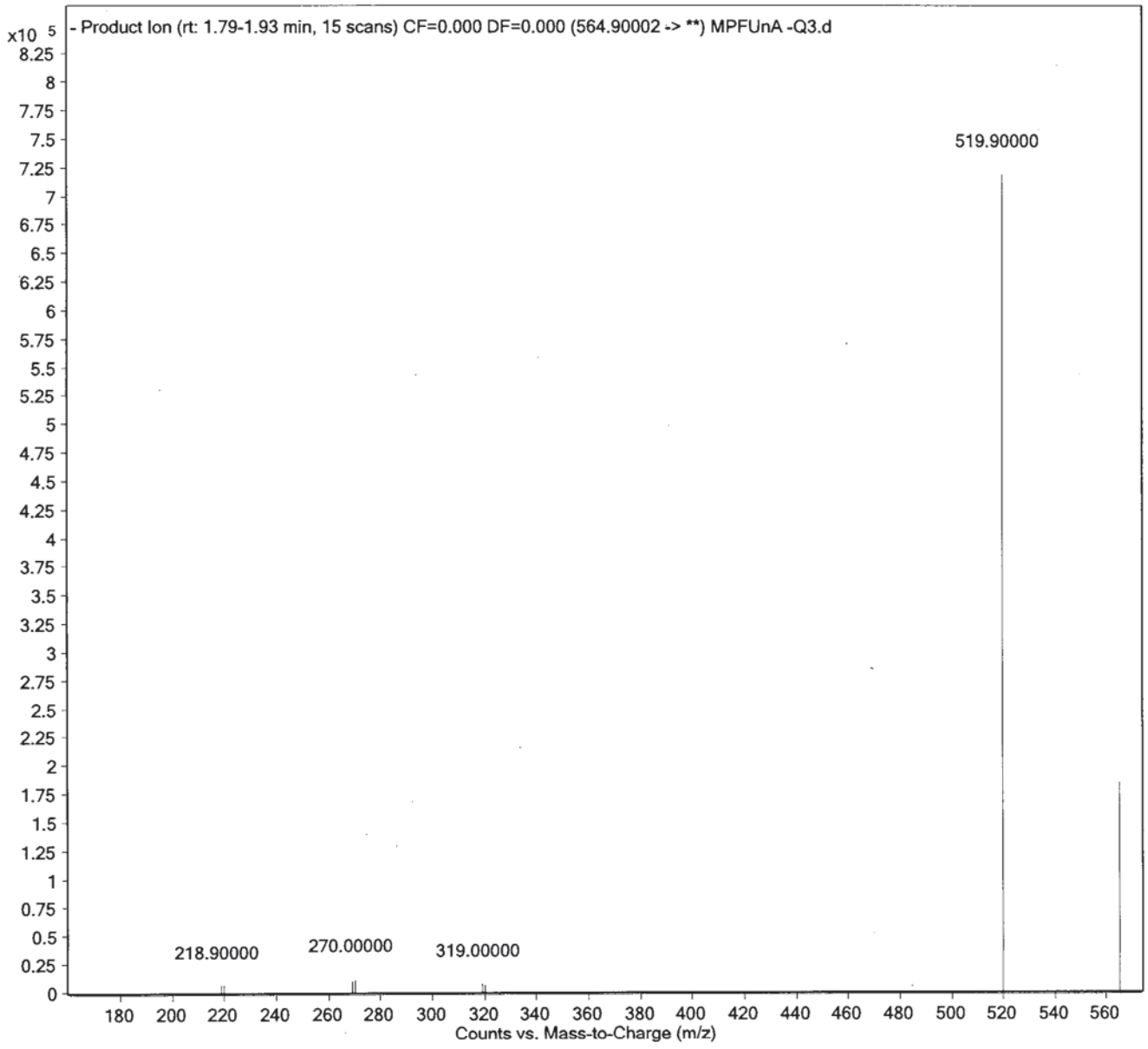
Saxam Analytics

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



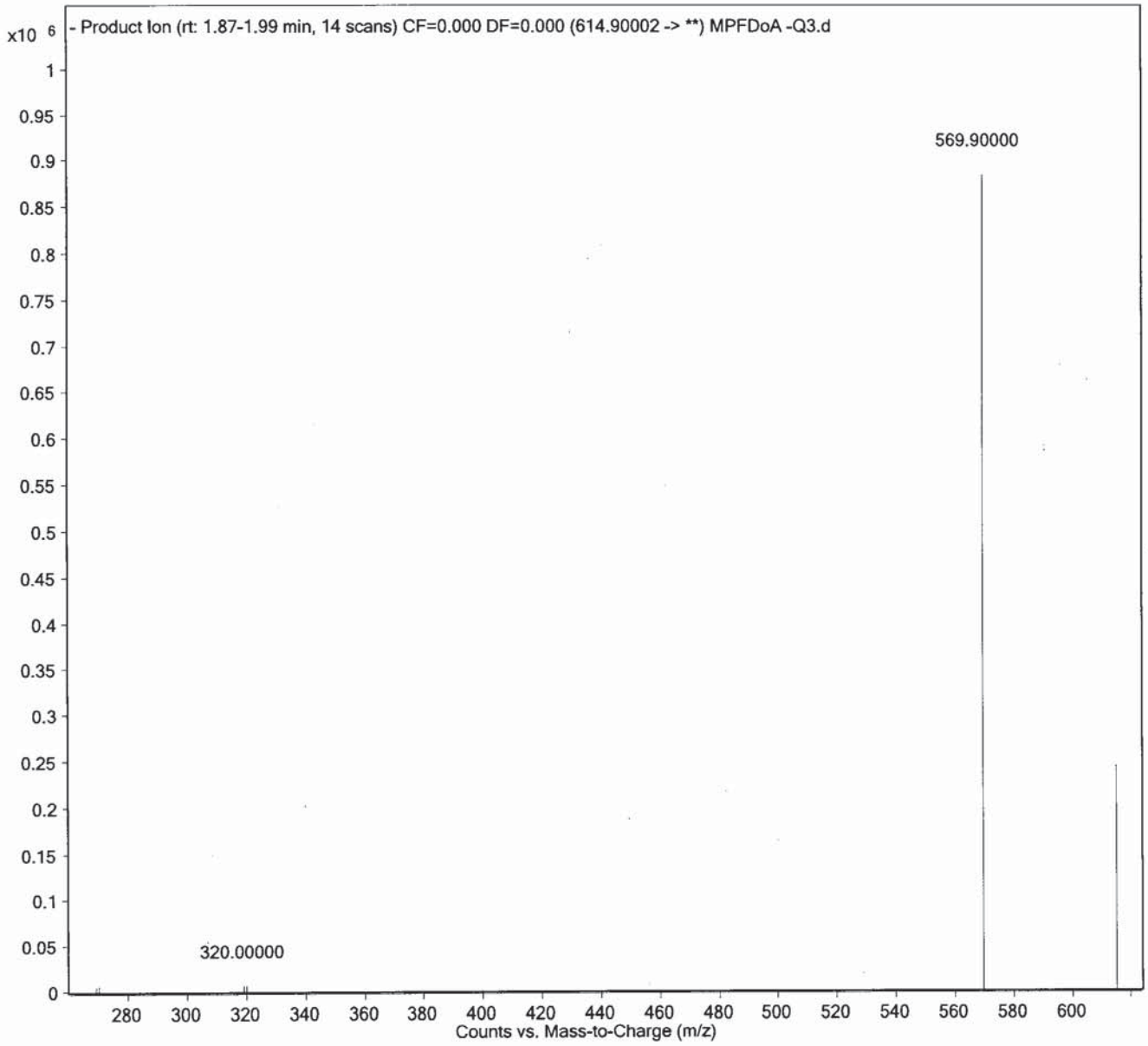
SaxAm Analytics

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



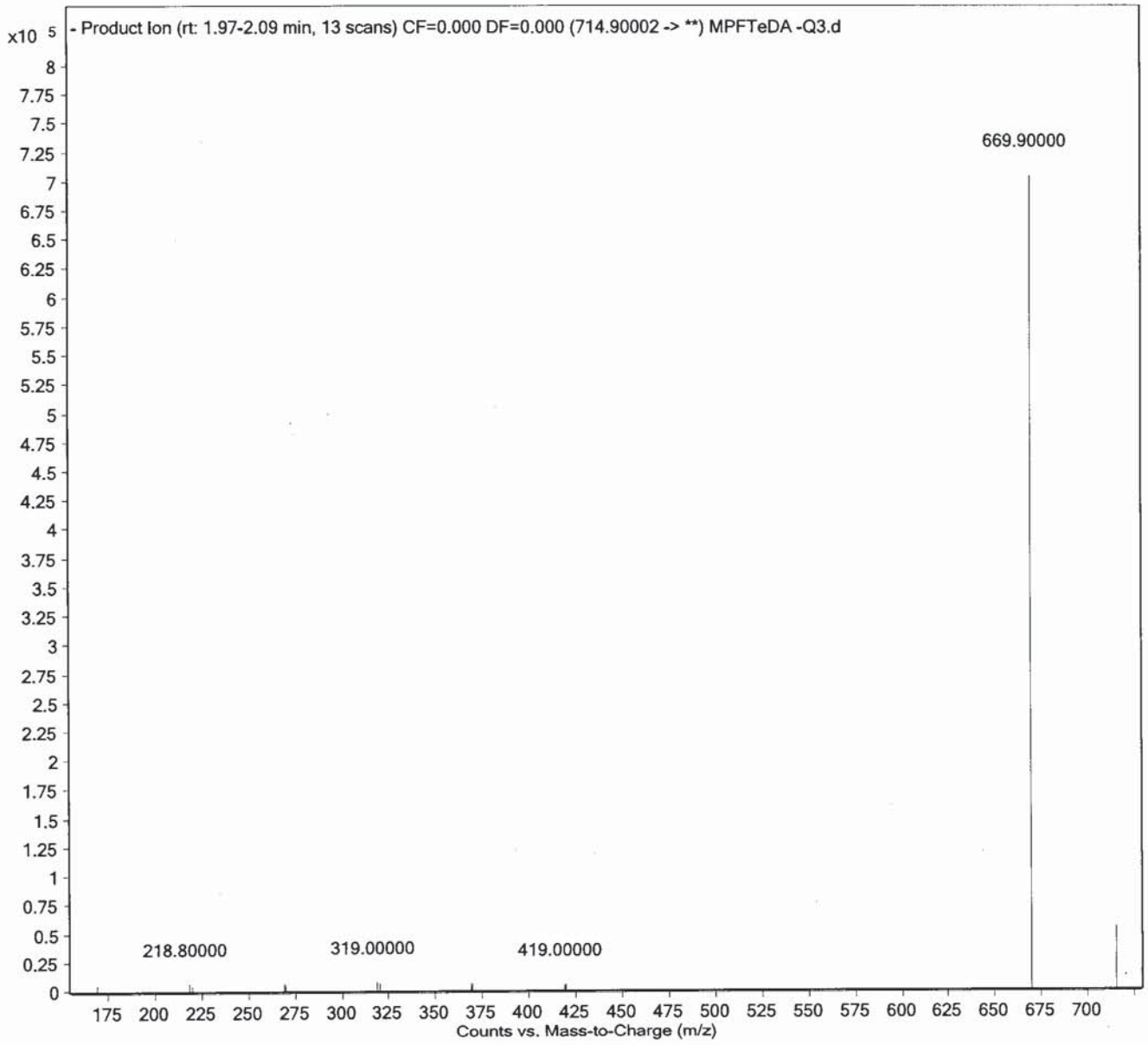
SaxAam Analytics

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



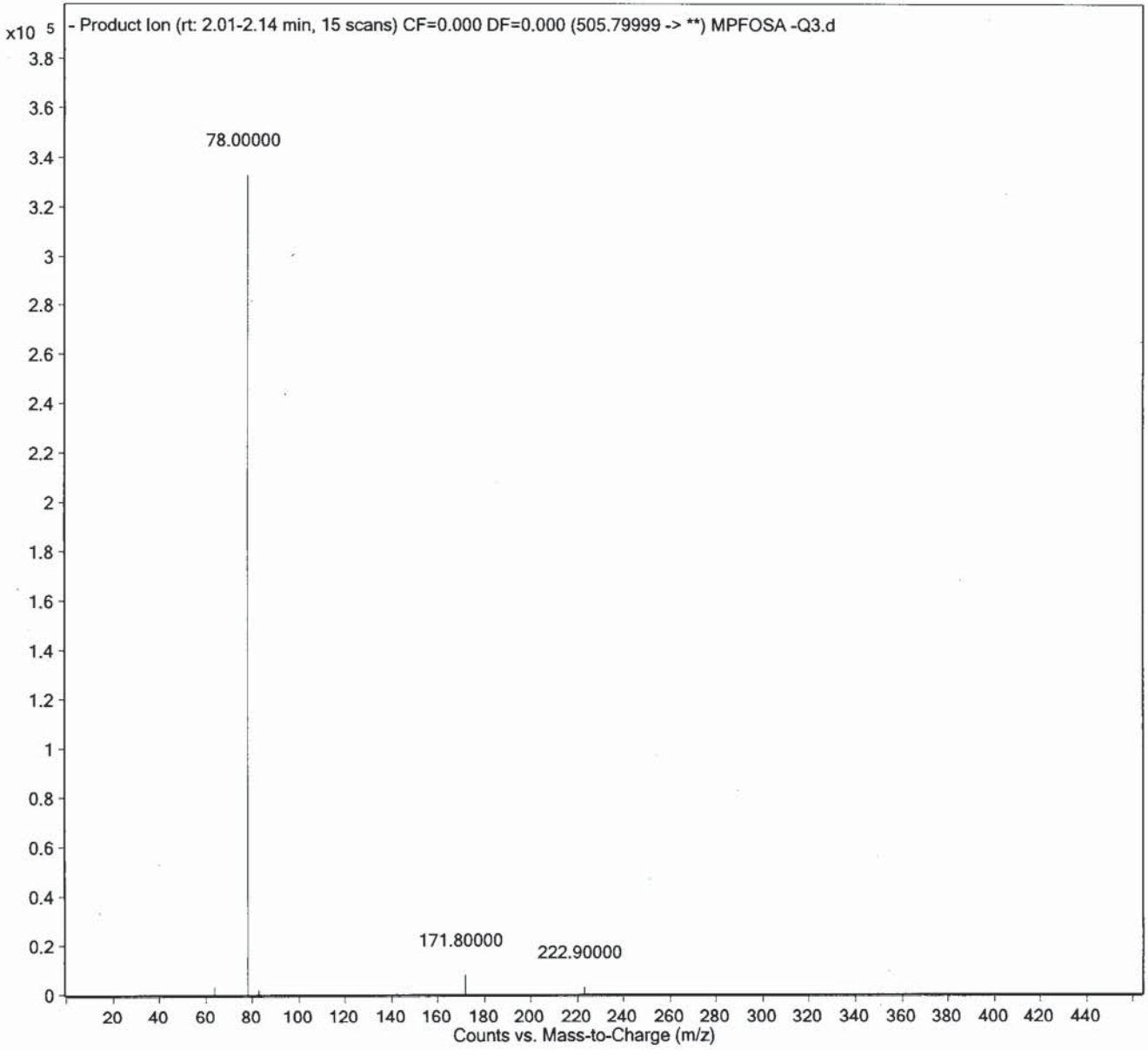
Saxam Analytics

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



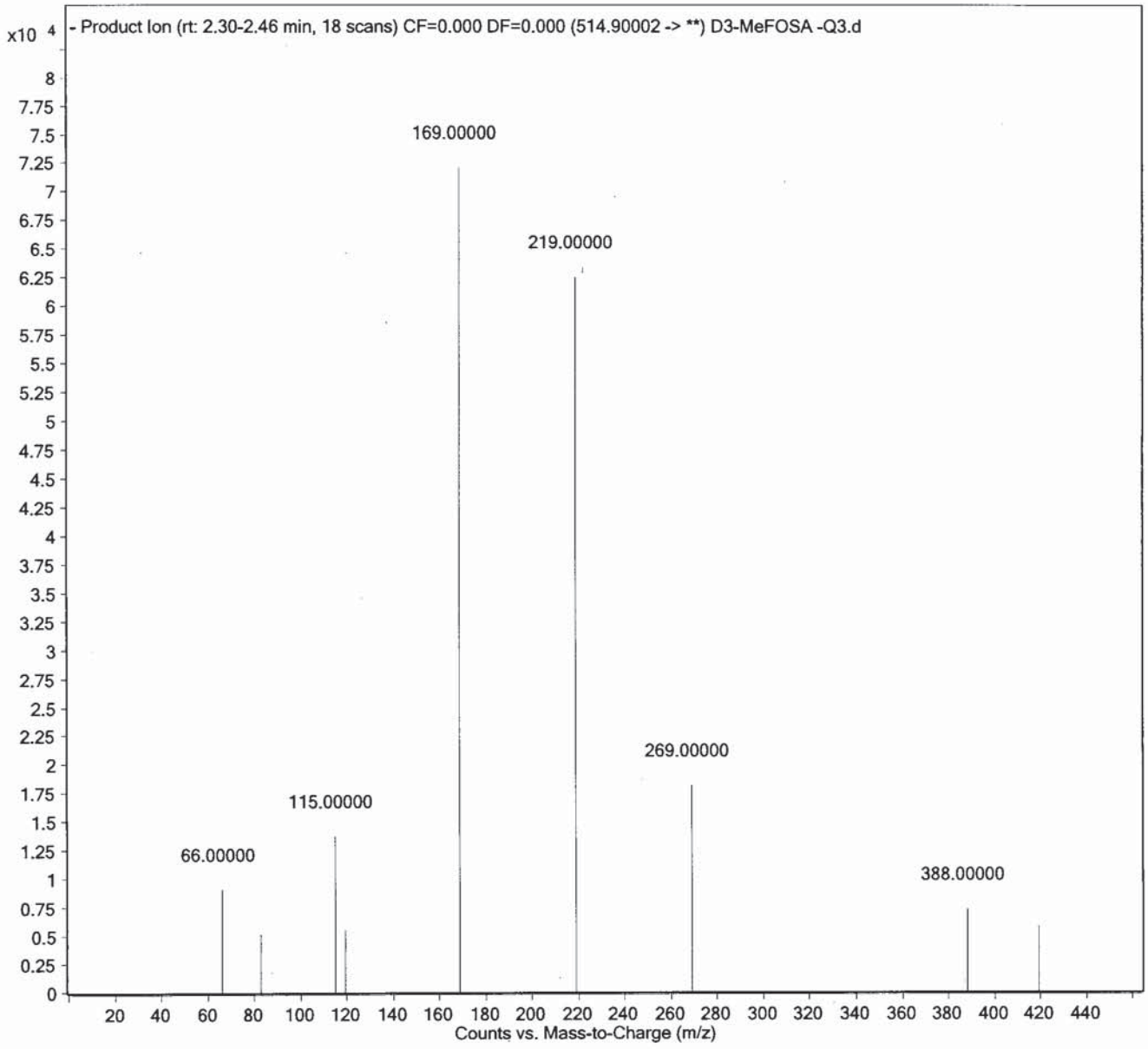
SaxAam Analytics

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



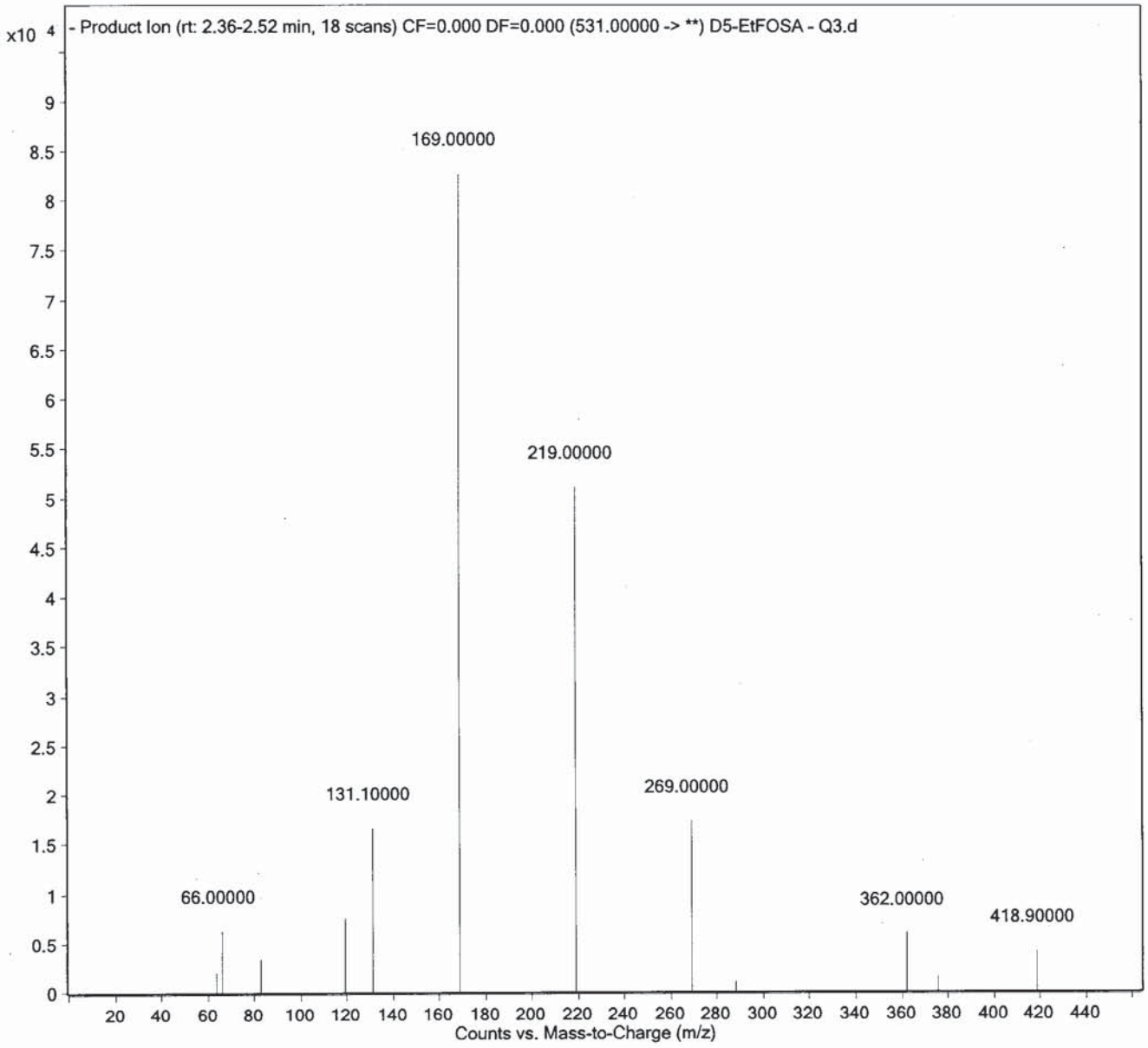
MaxXam Analytics

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



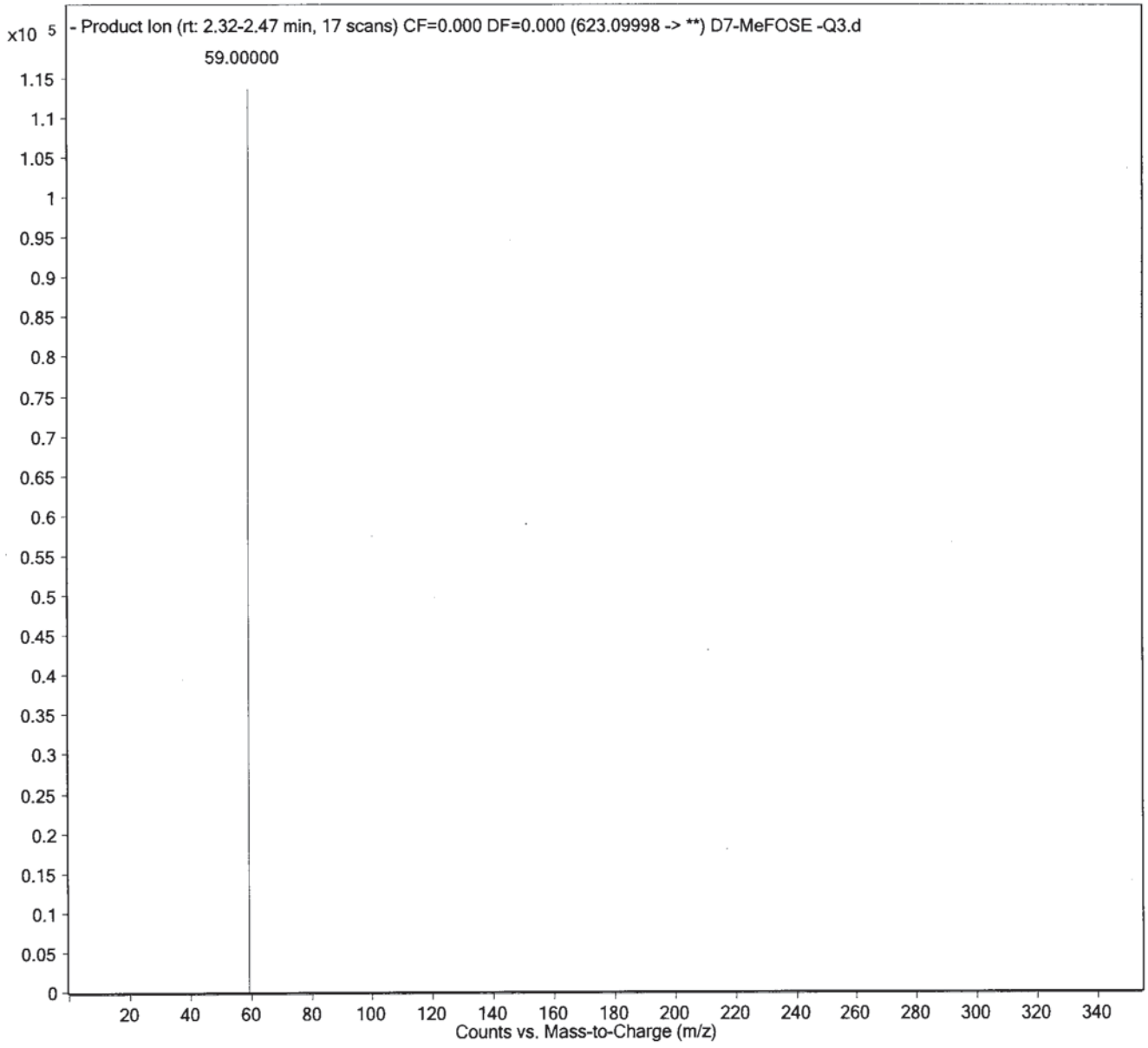
SaraKam Analytics

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



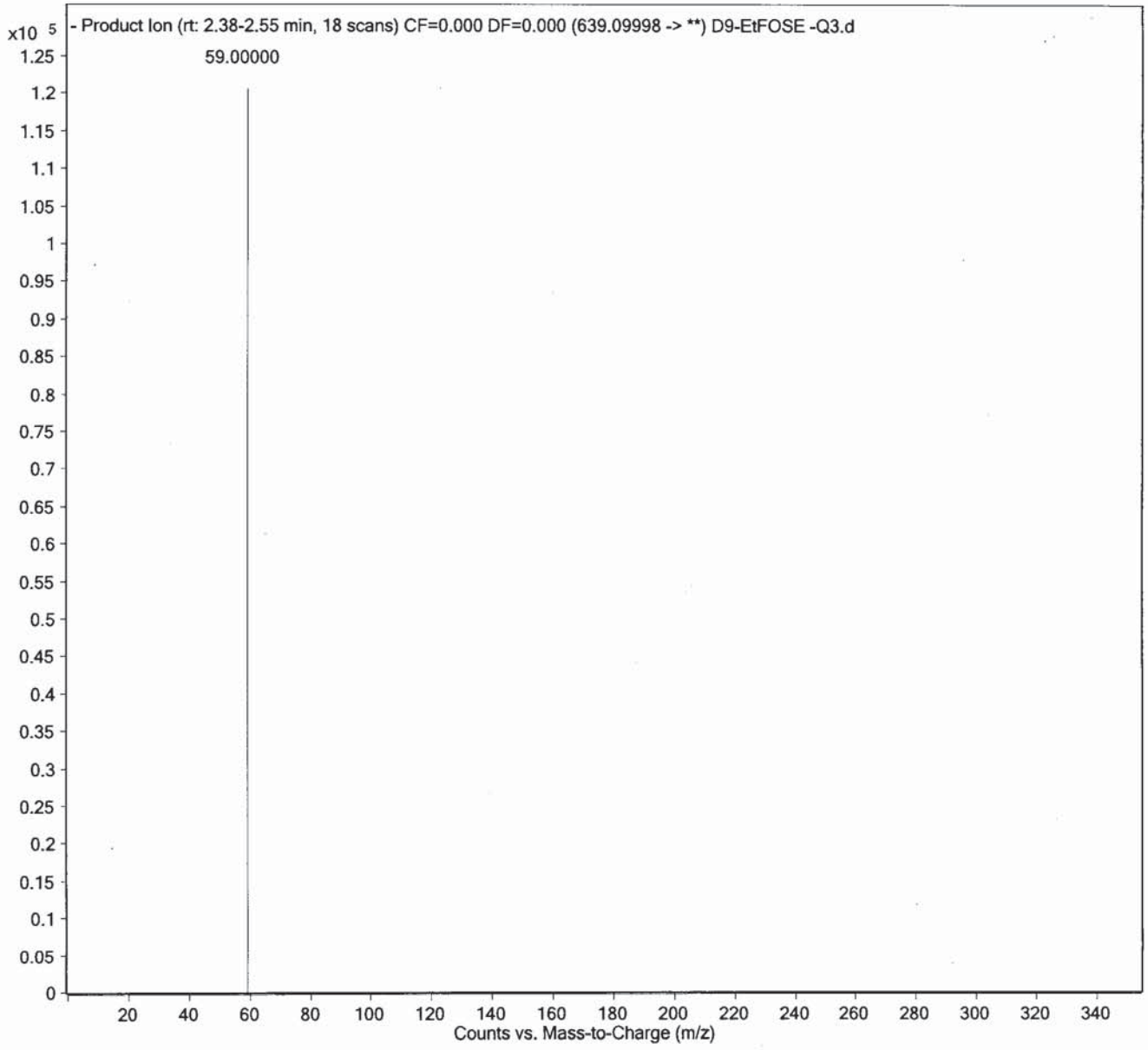
SaxAm Analytics

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



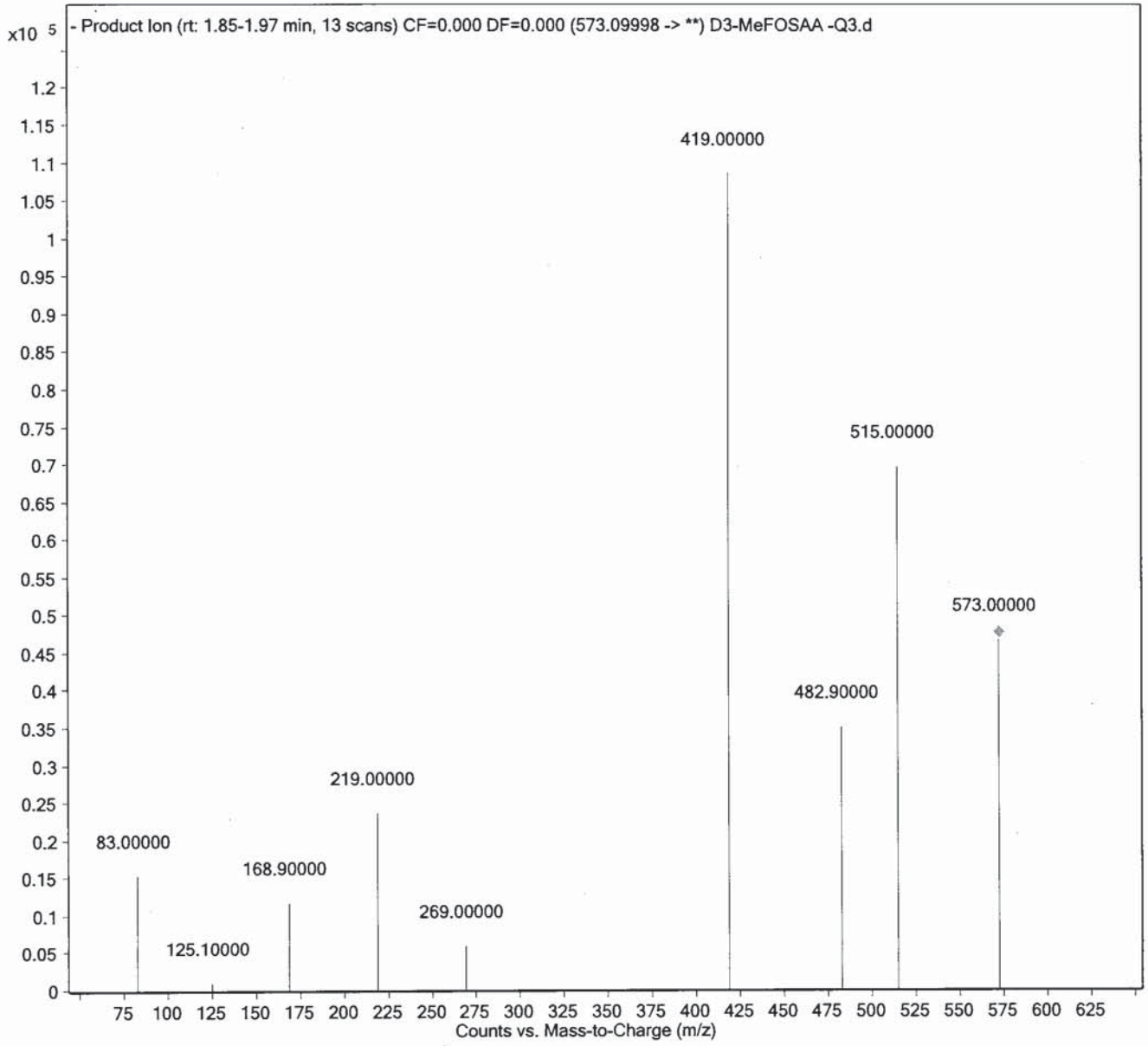
Alaska Analytics

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



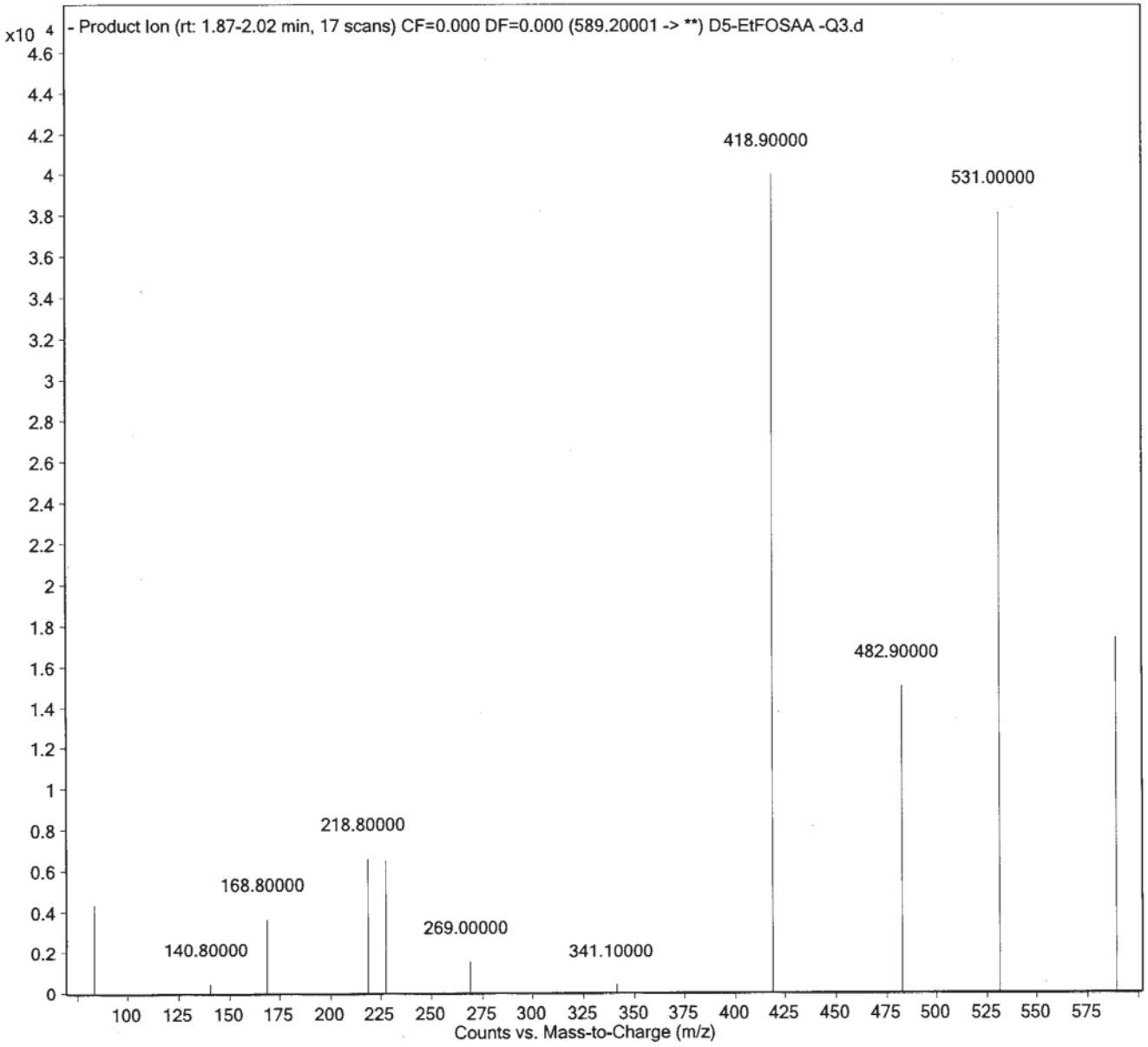
Maxxam Analytics

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



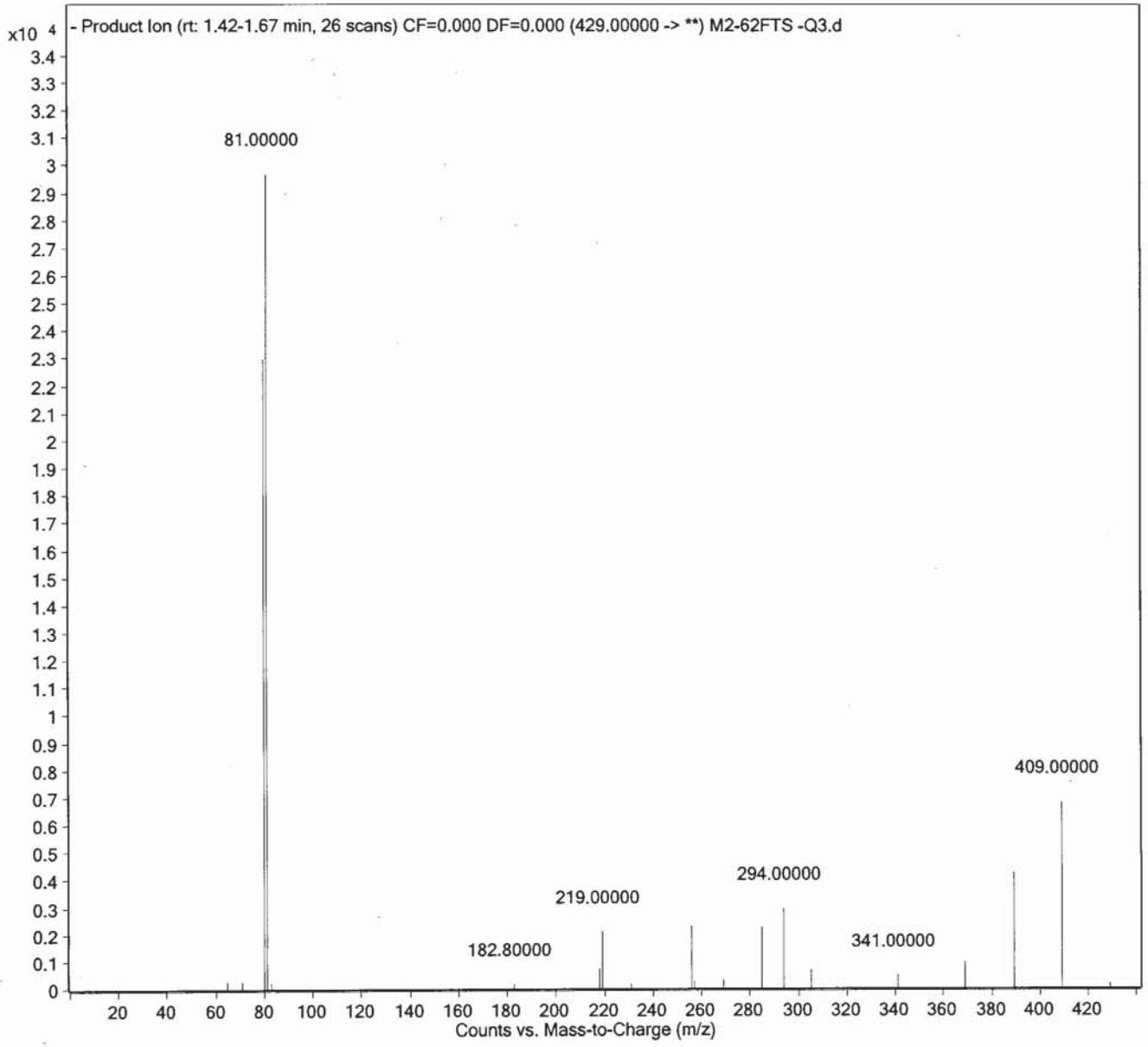
SGS AXAM Analytics

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



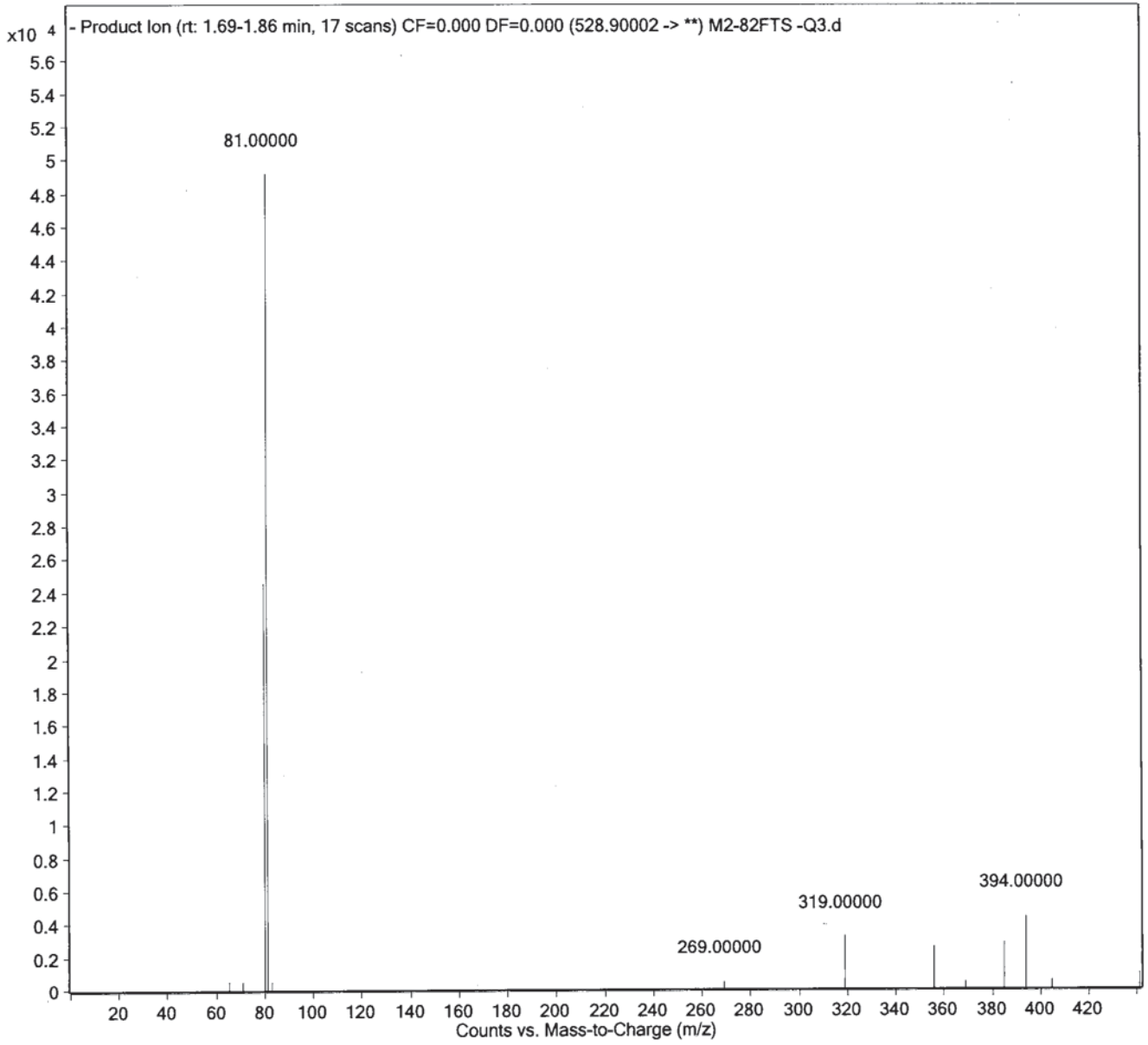
SGS AXYS Analytical

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



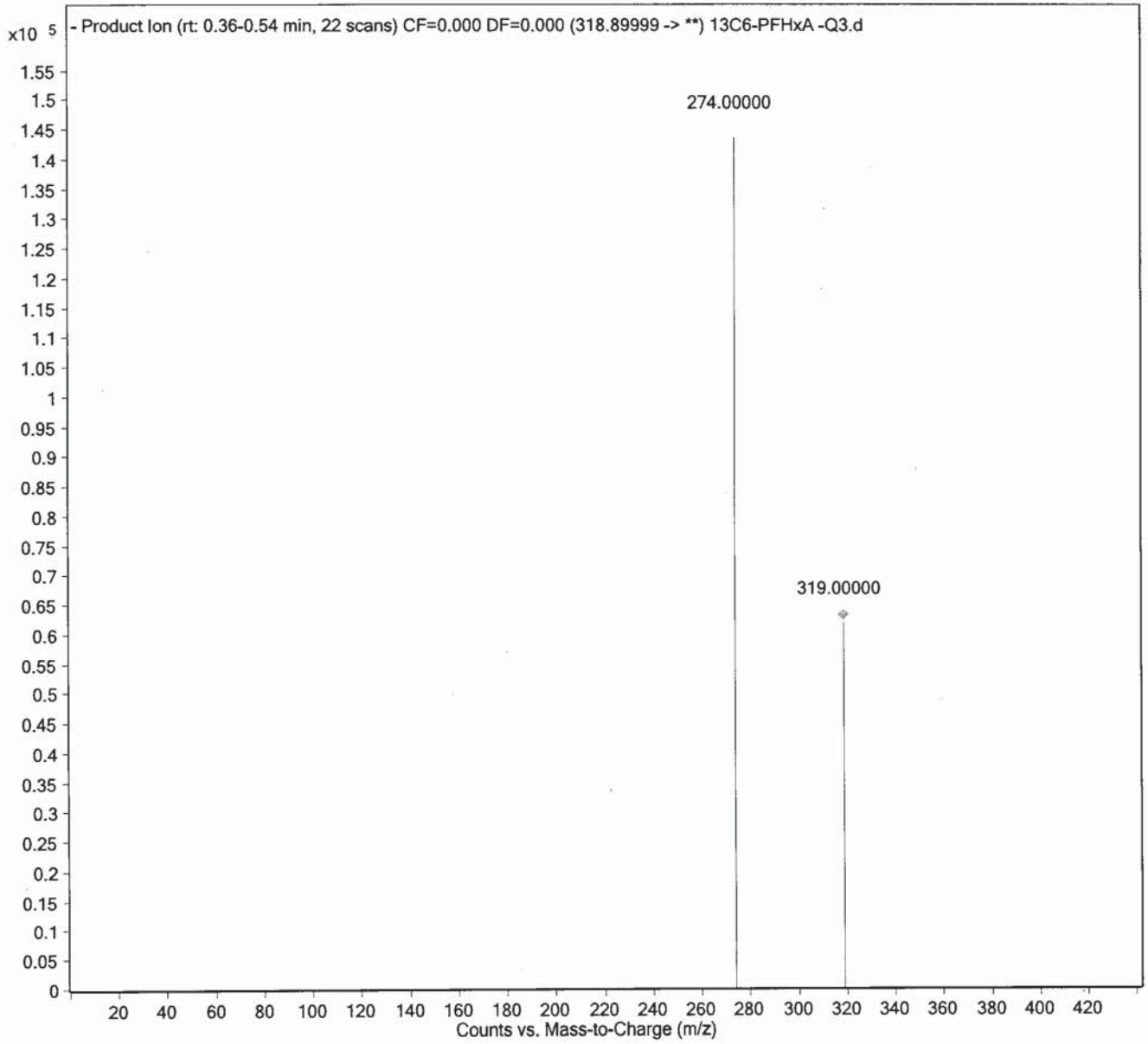
Maxxam Analytics

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

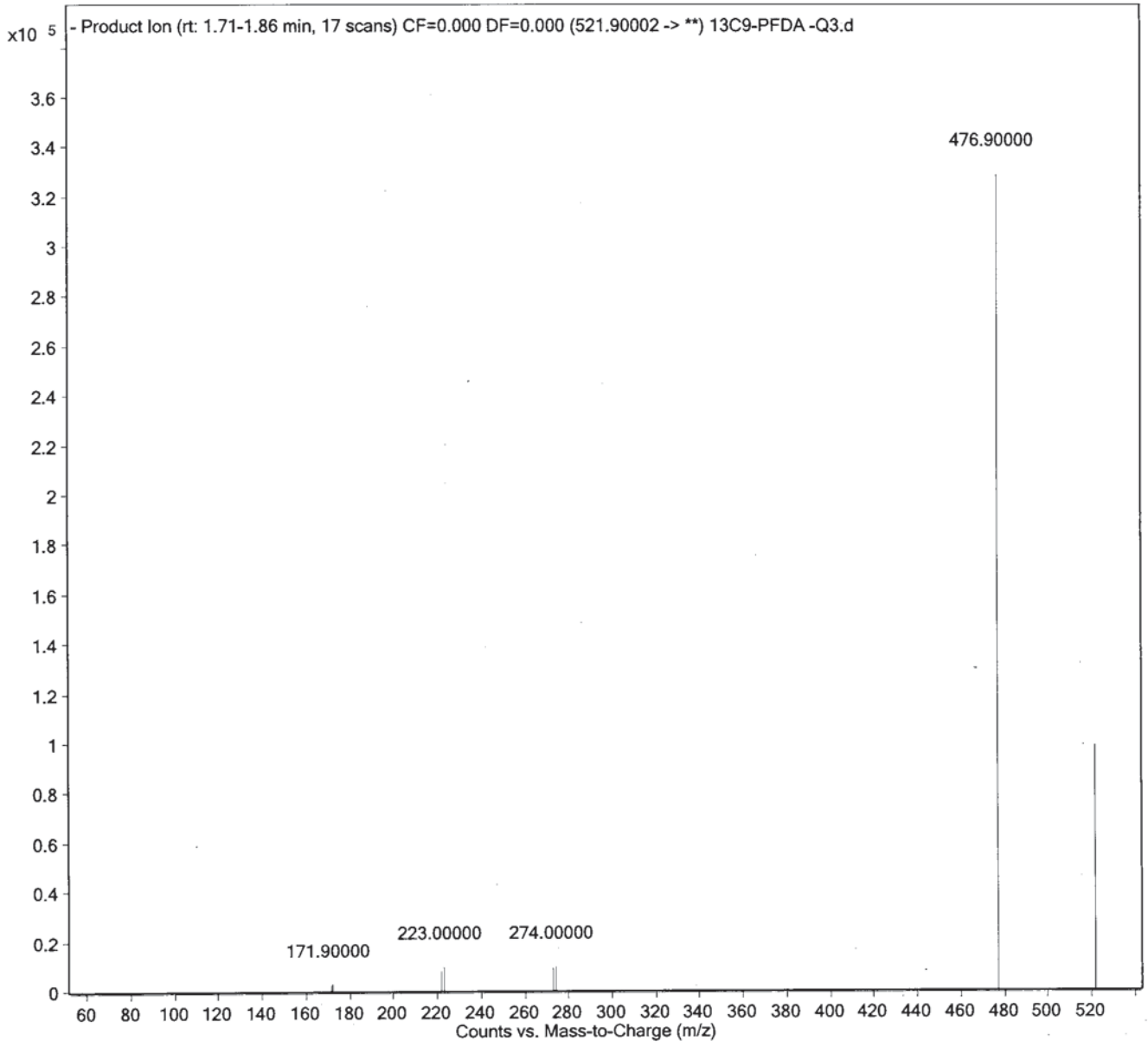


SaxKam Analytics

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



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



Worklist Report

Agilent Technologies

Maxxam Analytics

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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Maxxam Analytics

	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

Maxxam Analytics

	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

	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}						

Maxxam Analytics



5. Initial Calibration

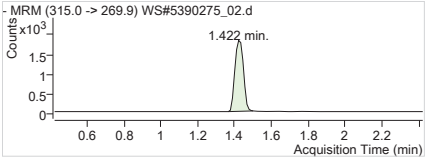
Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

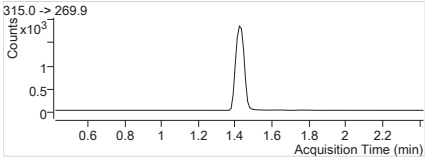
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics

Sample Name	**STD 1**	**Instrument**	LCMS04
Data File	WS#5390275_02.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A2
Acq. Date	2018/02/09 4:39:10 PM	**Injection Volume**	Per Method
Sample Annotation	-		

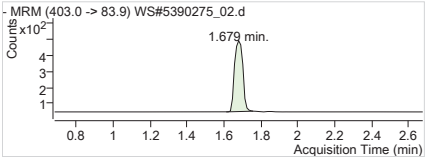
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	5820	1.42	1 µg/L		
MPFHxS	1376	1.68	1 µg/L		
MPFHpA	7611	1.69	1 µg/L		
MPFOA	8121	1.87	1 µg/L		
MPFOS	1830	1.98	1 µg/L		
MPFNA	7882	2.01	1 µg/L		
MPFDA	6429	2.14	1 µg/L		
MPFUnA	8094	2.23	1 µg/L		
MPFDoA	10583	2.32	1 µg/L		
MPFTeDA	11860	2.47	1 µg/L		
13C6-PFHxA IS	23265	1.42	1 µg/L		
13C9-PFDA IS	31397	2.13	1 µg/L		

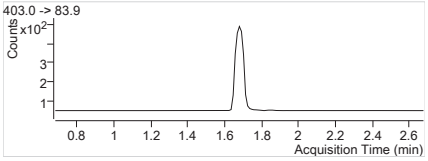
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	541	1.09	0.83	0.99 µg/L	119.29
PFHxA 1	1974	1.42	0.83	0.85 µg/L	101.85
PFHxS 1	539	1.68	0.83	0.98 µg/L	117.71
PFHpA 1	2221	1.69	0.83	0.92 µg/L	110.78
PFOA 1	2822	1.87	0.83	0.86 µg/L	103.07
PFOS 1	546	1.98	0.83	0.87 µg/L	104.64
PFNA 1	2426	2.01	0.83	0.88 µg/L	105.83
PFDA 1	2665	2.14	0.83	0.93 µg/L	112.62
PFUnA 1	2635	2.23	0.83	0.82 µg/L	98.87
PFDoA 1	3757	2.32	0.83	0.90 µg/L	108.09
PFTrDA 1	3728	2.40	0.83	0.88 µg/L	105.61
PFTeDA 1	3469	2.47	0.83	0.86 µg/L	103.22
13C2-PFHxA	5820	1.42	100.00	100.23 µg/L	100.23
18O2-PFHxS	1376	1.68	100.00	94.60 µg/L	94.60
13C4-PFHpA	7611	1.69	100.00	100.57 µg/L	100.57
13C4-PFOA	8121	1.87	100.00	101.17 µg/L	101.17
13C4-PFOS	1830	1.98	100.00	100.27 µg/L	100.27
13C5-PFNA	7883	2.01	100.00	99.37 µg/L	99.37
13C2-PFDA	6335	2.14	100.00	96.83 µg/L	96.83
13C2-PFUnA	8094	2.23	100.00	97.83 µg/L	97.83
13C2-PFDoA	10583	2.32	100.00	98.88 µg/L	98.88
13C2-PFTeDA	12252	2.47	100.00	98.67 µg/L	98.67
13C6-PFHxA	23265	1.42	100.00	99.35 µg/L	99.35
13C9-PFDA	31397	2.13	100.00	101.45 µg/L	101.45



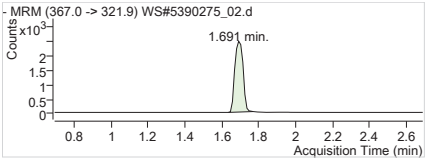


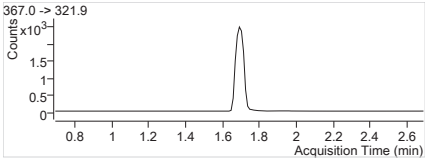
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Calibration



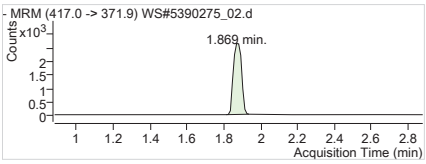


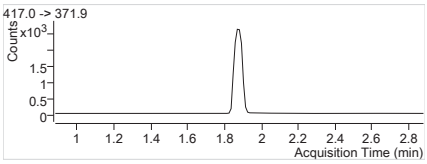
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Calibration



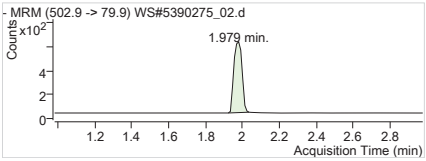


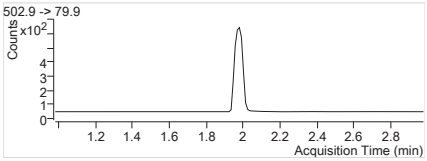
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Calibration



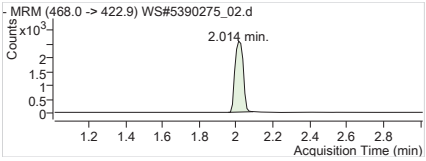


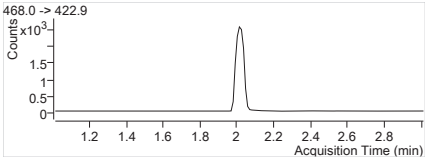
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: Calibration



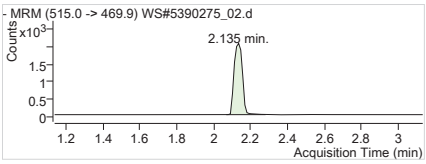


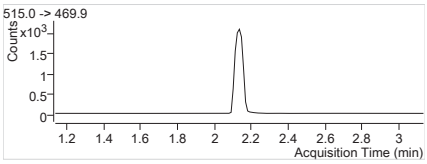
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



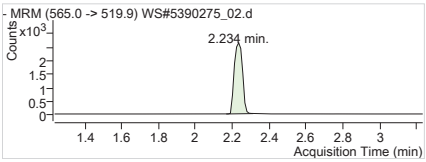


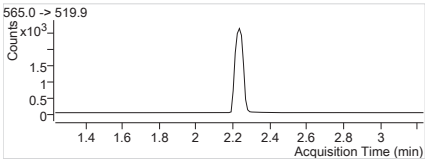
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Calibration



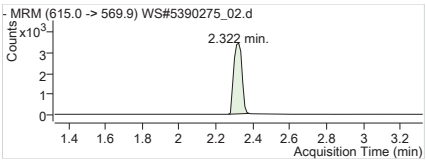


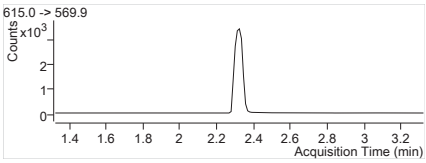
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



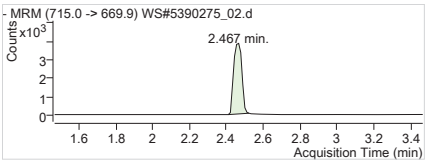


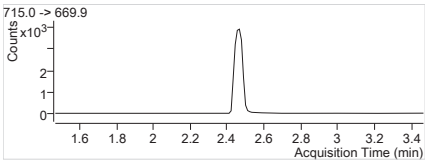
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Calibration



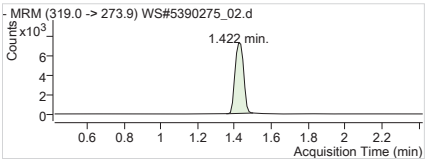


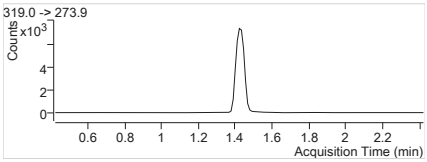
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Calibration



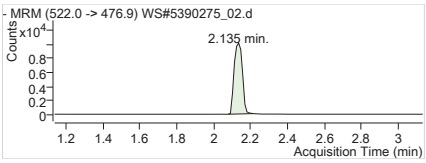


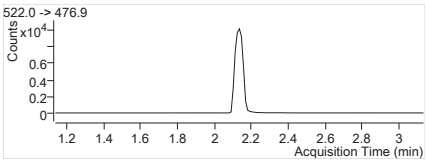
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Calibration



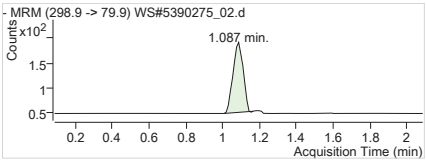


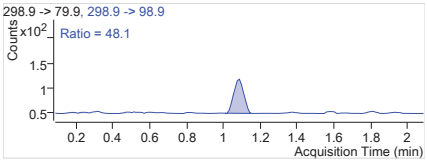
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Calibration



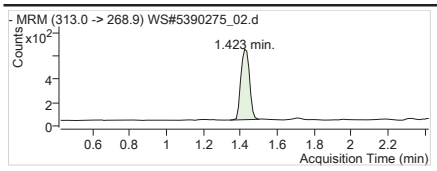


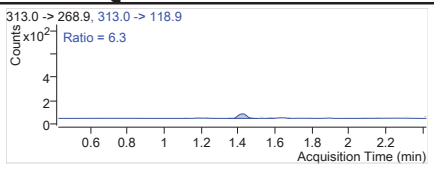
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



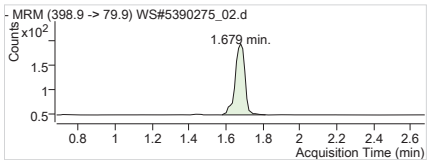


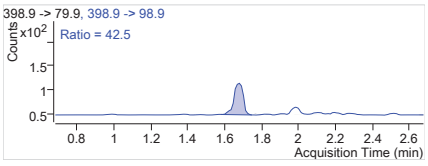
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 0.99 µg/L
Area ratio: 0.39317
Sample type: Calibration



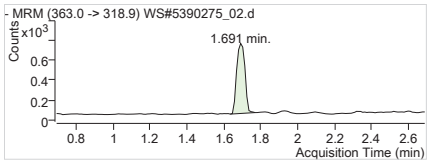


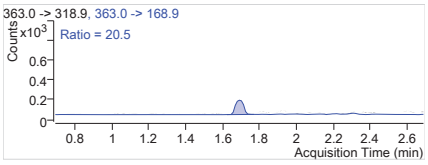
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 0.85 µg/L
Area ratio: 0.33918
Sample type: Calibration



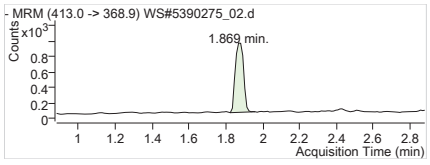


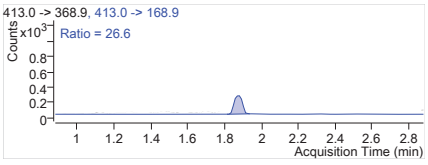
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 0.98 µg/L
Area ratio: 0.39172
Sample type: Calibration



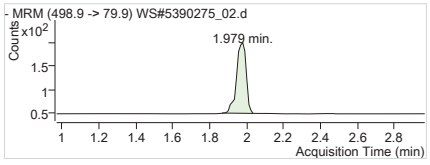


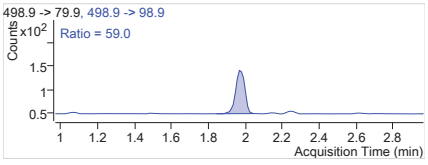
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.92 µg/L
Area ratio: 0.29181
Sample type: Calibration



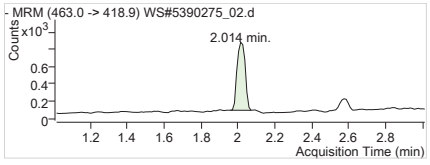


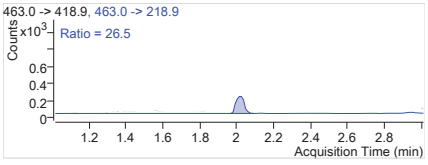
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 0.86 µg/L
Area ratio: 0.34749
Sample type: Calibration



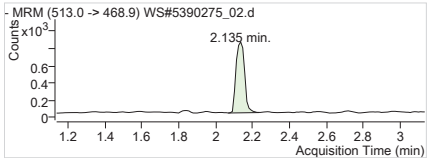


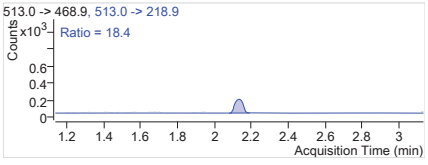
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.979 (1.968)
Calc. conc. 0.87 µg/L
Area ratio: 0.29836
Sample type: Calibration



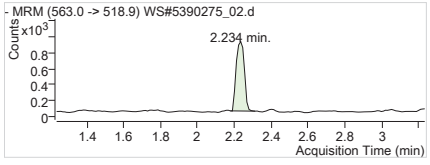


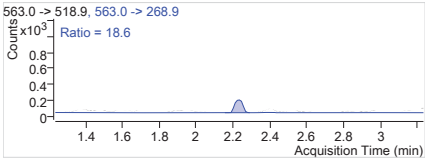
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 0.88 µg/L
Area ratio: 0.30779
Sample type: Calibration



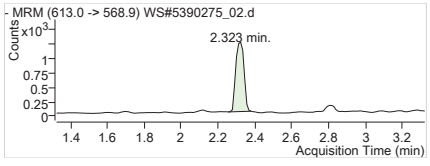


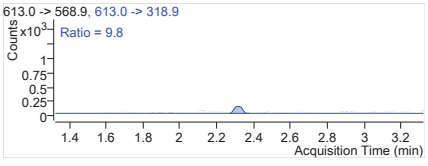
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 0.93 µg/L
Area ratio: 0.41453
Sample type: Calibration



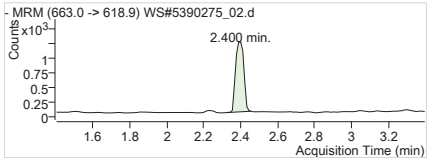


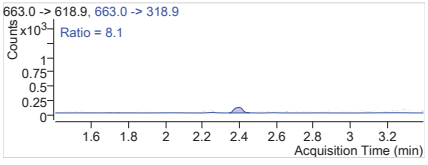
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 0.82 µg/L
Area ratio: 0.32555
Sample type: Calibration



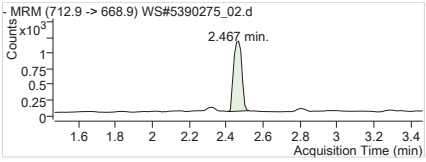


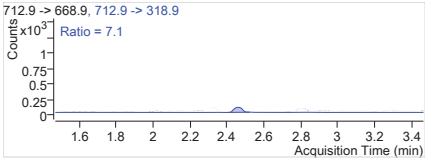
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 0.90 µg/L
Area ratio: 0.35500
Sample type: Calibration



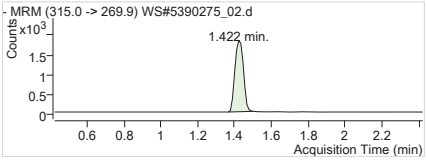


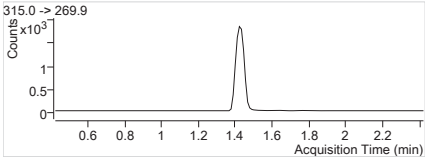
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 0.88 µg/L
Area ratio: 0.31433
Sample type: Calibration



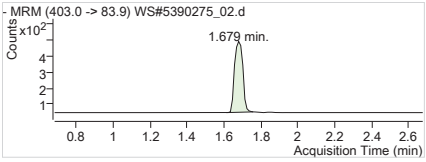


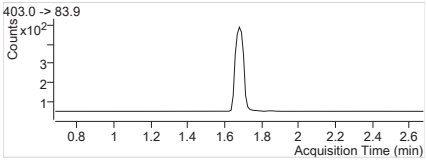
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 0.86 µg/L
Area ratio: 0.29250
Sample type: Calibration



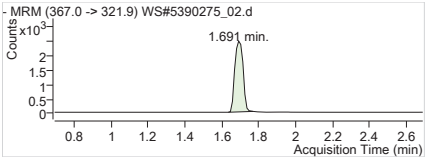


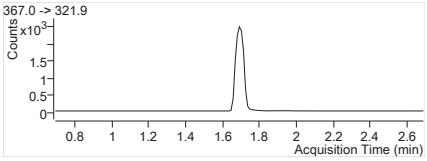
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 100.23 µg/L
Area ratio: 0.25016
Sample type: Calibration



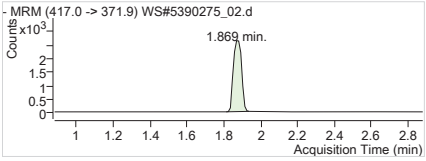


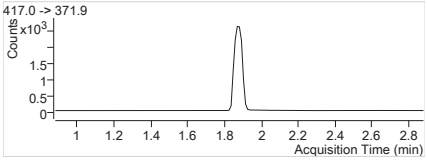
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 94.60 µg/L
Area ratio: 0.05914
Sample type: Calibration



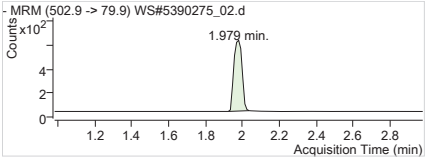


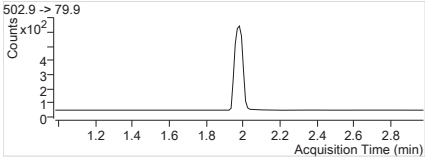
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 100.57 µg/L
Area ratio: 0.32714
Sample type: Calibration



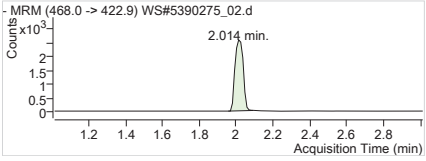


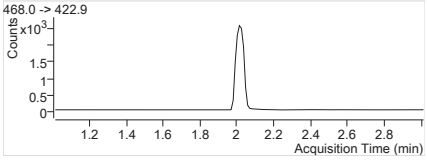
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 101.17 µg/L
Area ratio: 0.34907
Sample type: Calibration



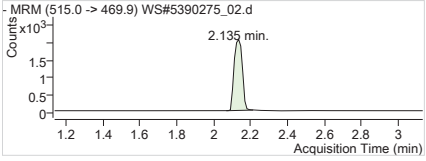


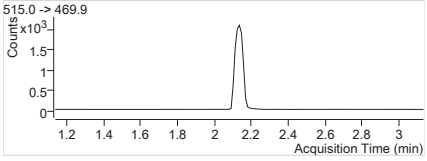
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 100.27 µg/L
Area ratio: 0.07866
Sample type: Calibration



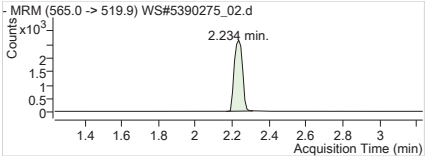


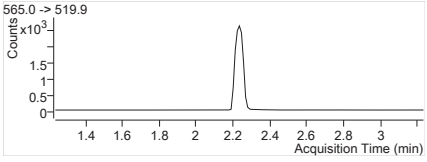
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 99.37 µg/L
Area ratio: 0.33884
Sample type: Calibration



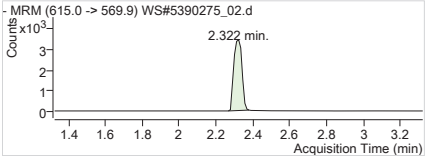


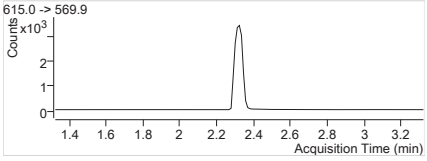
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 96.83 µg/L
Area ratio: 0.20177
Sample type: Calibration



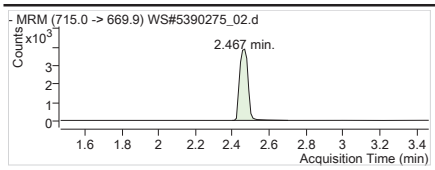


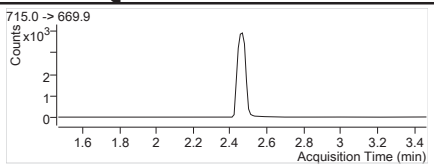
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 97.83 µg/L
Area ratio: 0.25780
Sample type: Calibration



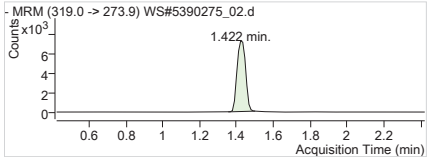


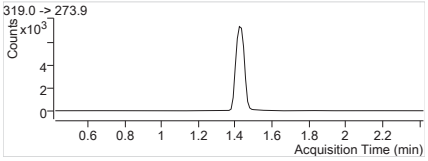
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 98.88 µg/L
Area ratio: 0.33707
Sample type: Calibration



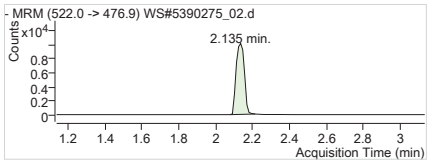


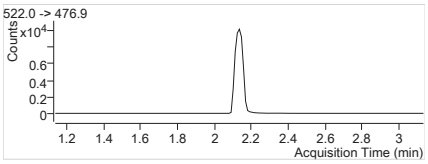
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	98.67 µg/L
Area ratio:	0.39023
Sample type:	Calibration





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	99.35 µg/L
Area ratio:	0
Sample type:	Calibration





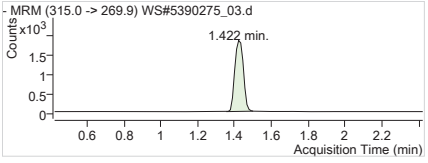
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	101.45 µg/L
Area ratio:	0
Sample type:	Calibration

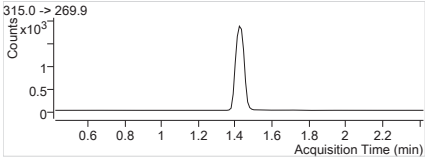
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_ETOxics

Sample Name	**STD 2**	**Instrument**	LCMS04
Data File	WS#5390275_03.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A3
Acq. Date	2018/02/09 4:44:06 PM	**Injection Volume**	Per Method
Sample Annotation	-		

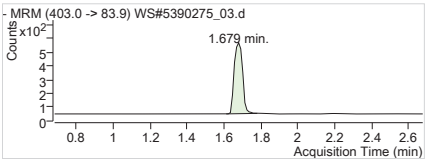
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	5932	1.42	1 µg/L		
MPFHxS	1645	1.68	1 µg/L		
MPFHpA	8067	1.69	1 µg/L		
MPFOA	7836	1.87	1 µg/L		
MPFOS	1829	1.98	1 µg/L		
MPFNA	8356	2.01	1 µg/L		
MPFDA	6532	2.14	1 µg/L		
MPFUnA	8078	2.23	1 µg/L		
MPFDoA	10806	2.32	1 µg/L		
MPFTeDA	11749	2.47	1 µg/L		
13C6-PFHxA IS	23676	1.42	1 µg/L		
13C9-PFDA IS	30926	2.13	1 µg/L		

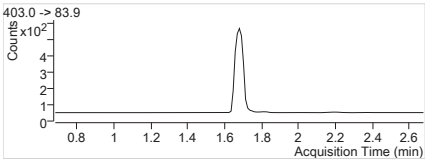
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	1012	1.08	1.70	1.48 µg/L	87.13
PFHxA 1	3942	1.42	1.70	1.65 µg/L	97.03
PFHxS 1	979	1.68	1.70	1.43 µg/L	84.15
PFHpA 1	4423	1.69	1.70	1.55 µg/L	91.08
PFOA 1	5249	1.87	1.70	1.64 µg/L	96.24
PFOS 1	1079	1.97	1.70	1.69 µg/L	99.51
PFNA 1	5019	2.01	1.70	1.66 µg/L	97.80
PFDA 1	4849	2.14	1.70	1.58 µg/L	92.93
PFUnA 1	5562	2.23	1.70	1.67 µg/L	98.43
PFDoA 1	6436	2.32	1.70	1.47 µg/L	86.62
PFTrDA 1	6964	2.40	1.70	1.54 µg/L	90.82
PFTeDA 1	6403	2.47	1.70	1.59 µg/L	93.51
13C2-PFHxA	5932	1.42	100.00	100.39 µg/L	100.39
18O2-PFHxS	1645	1.68	100.00	111.14 µg/L	111.14
13C4-PFHpA	8067	1.69	100.00	104.75 µg/L	104.75
13C4-PFOA	7836	1.87	100.00	95.93 µg/L	95.93
13C4-PFOS	1829	1.98	100.00	98.48 µg/L	98.48
13C5-PFNA	8356	2.01	100.00	103.50 µg/L	103.50
13C2-PFDA	6514	2.14	100.00	101.09 µg/L	101.09
13C2-PFUnA	8078	2.23	100.00	99.12 µg/L	99.12
13C2-PFDoA	10806	2.32	100.00	102.50 µg/L	102.50
13C2-PFTeDA	12045	2.47	100.00	98.48 µg/L	98.48
13C6-PFHxA	23676	1.42	100.00	101.10 µg/L	101.10
13C9-PFDA	30926	2.13	100.00	99.93 µg/L	99.93



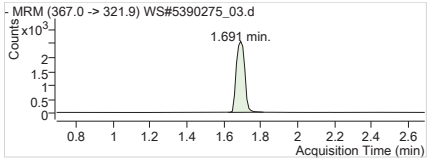


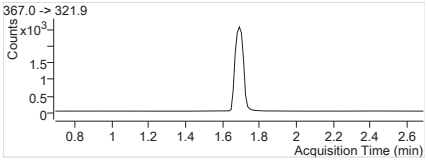
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Calibration



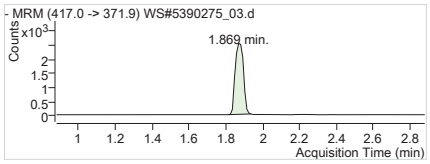


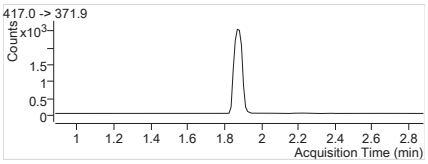
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Calibration



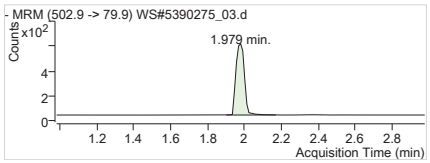


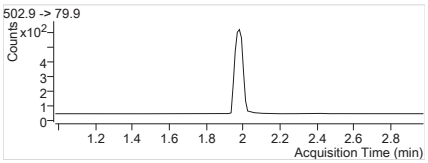
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Calibration



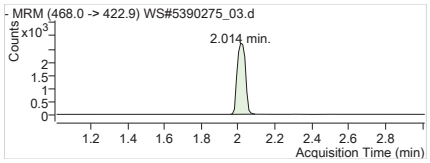


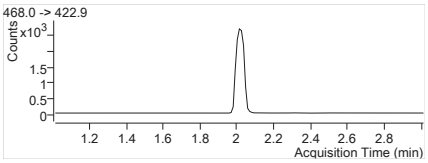
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: Calibration



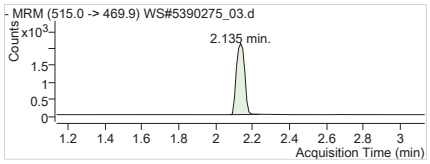


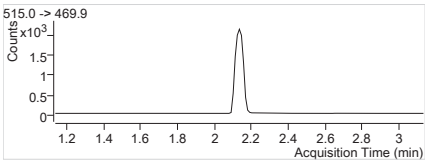
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



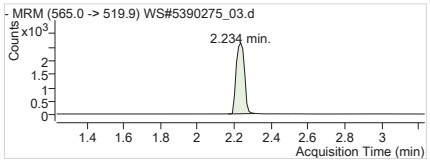


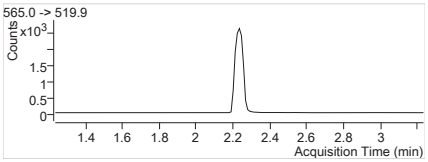
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Calibration



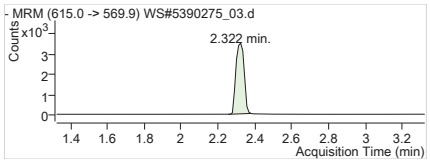


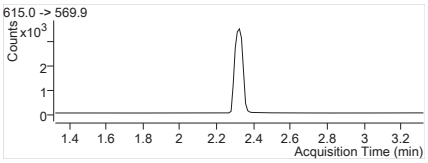
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



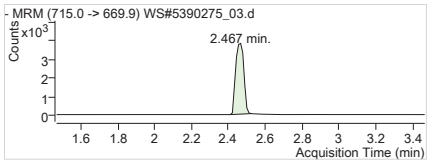


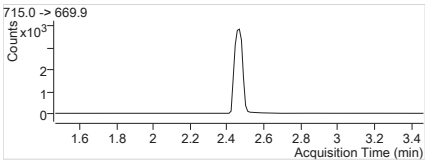
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Calibration



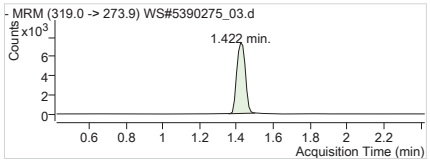


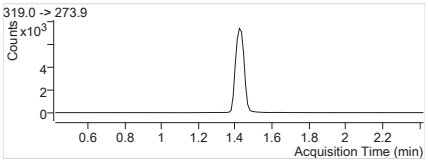
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Calibration



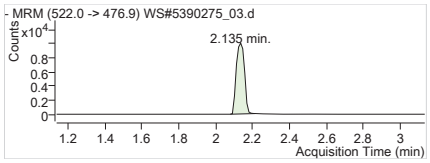


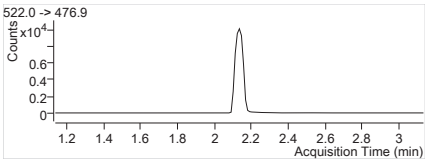
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Calibration



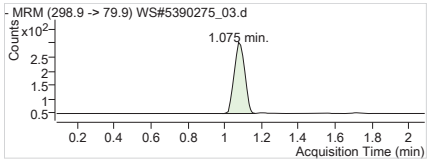


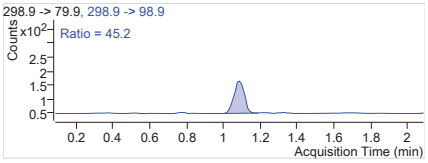
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Calibration



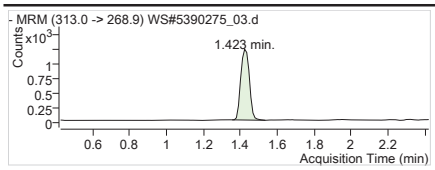


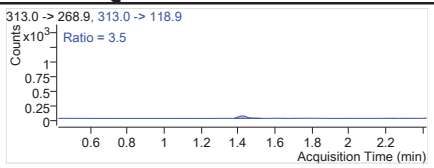
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



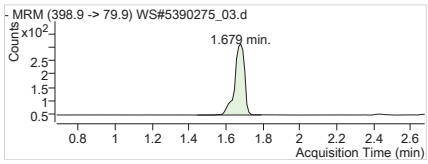


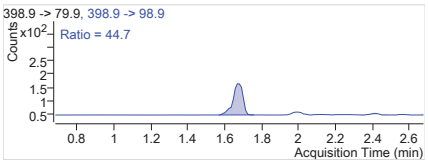
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.075 (1.087)
Calc. conc. 1.48 µg/L
Area ratio: 0.61520
Sample type: Calibration



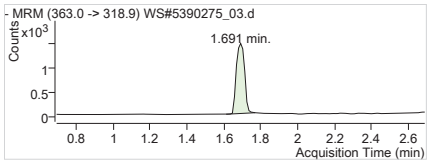


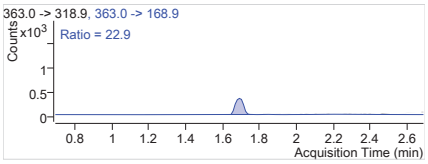
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 1.65 µg/L
Area ratio: 0.66453
Sample type: Calibration



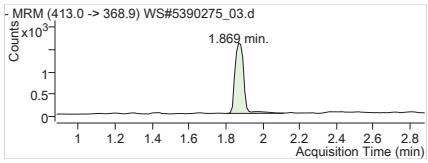


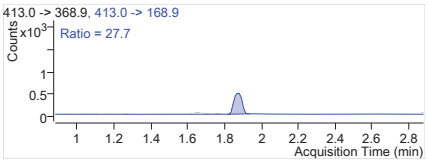
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 1.43 µg/L
Area ratio: 0.59514
Sample type: Calibration



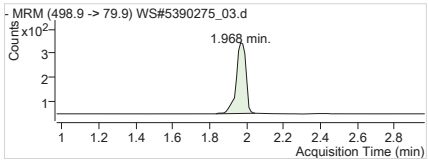


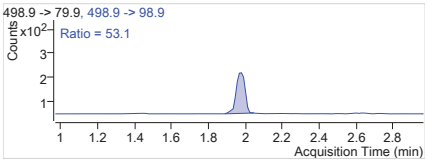
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 1.55 µg/L
Area ratio: 0.54828
Sample type: Calibration



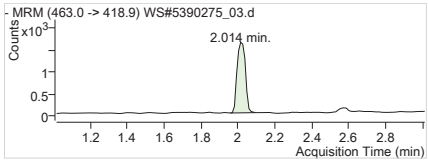


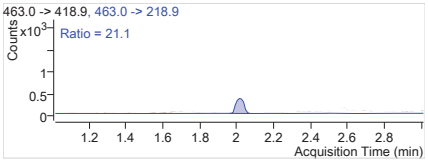
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 1.64 µg/L
Area ratio: 0.66986
Sample type: Calibration



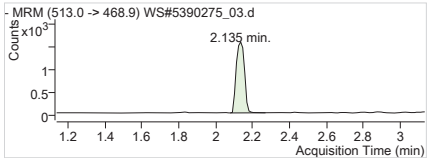


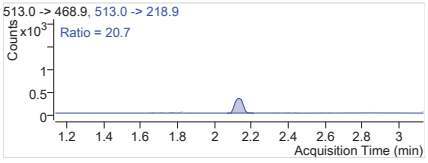
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 1.69 µg/L
Area ratio: 0.58994
Sample type: Calibration



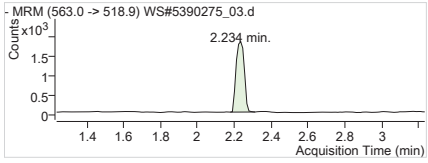


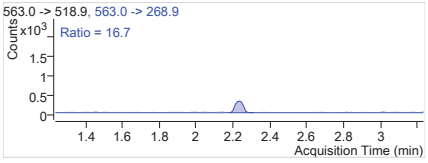
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 1.66 µg/L
Area ratio: 0.60065
Sample type: Calibration



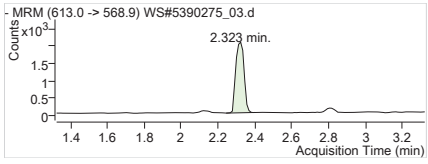


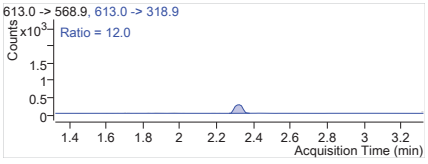
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 1.58 µg/L
Area ratio: 0.74235
Sample type: Calibration



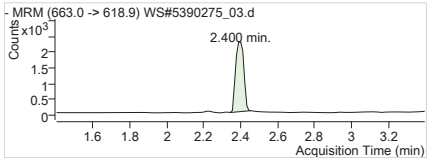


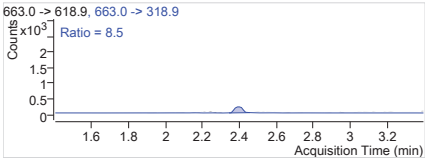
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 1.67 µg/L
Area ratio: 0.68854
Sample type: Calibration



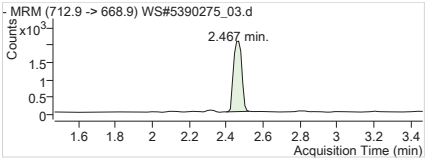


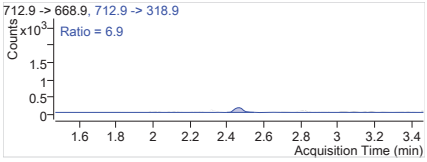
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 1.47 µg/L
Area ratio: 0.59560
Sample type: Calibration



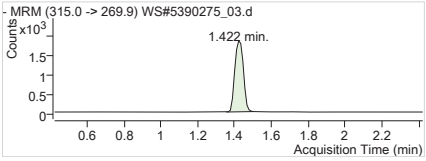


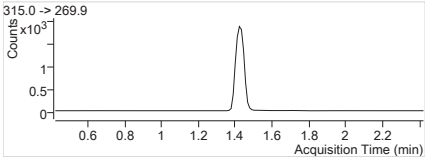
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 1.54 µg/L
Area ratio: 0.59273
Sample type: Calibration



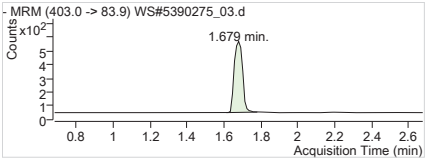


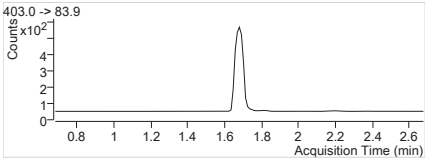
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 1.59 µg/L
Area ratio: 0.54498
Sample type: Calibration



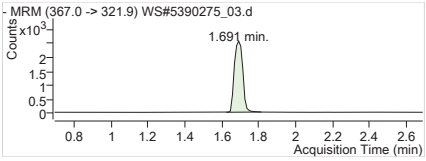


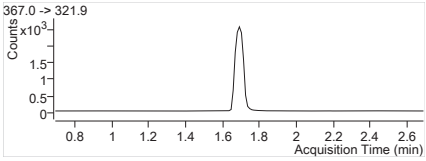
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 100.39 µg/L
Area ratio: 0.25055
Sample type: Calibration



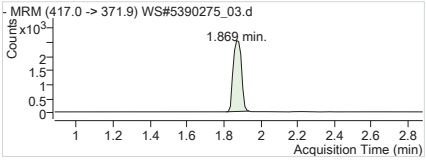


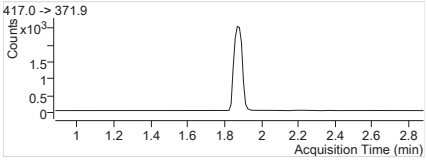
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 111.14 µg/L
Area ratio: 0.06948
Sample type: Calibration



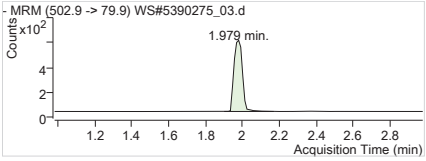


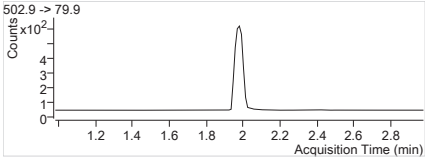
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 104.75 µg/L
Area ratio: 0.34072
Sample type: Calibration



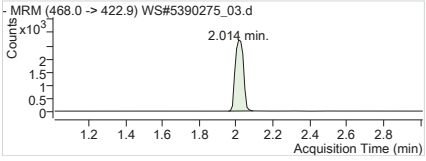


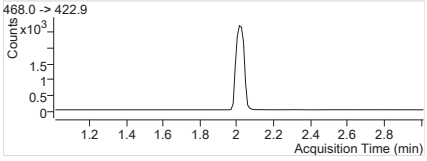
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 95.93 µg/L
Area ratio: 0.33097
Sample type: Calibration



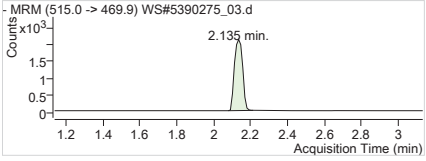


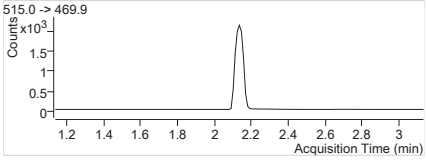
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 98.48 µg/L
Area ratio: 0.07725
Sample type: Calibration



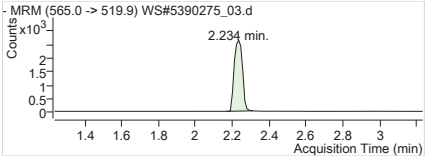


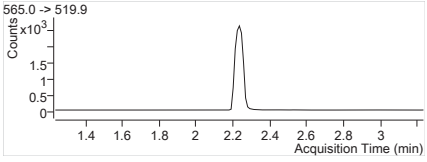
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 103.50 µg/L
Area ratio: 0.35293
Sample type: Calibration



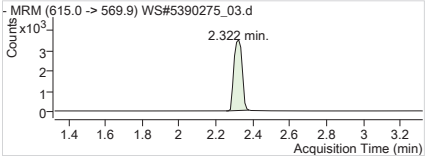


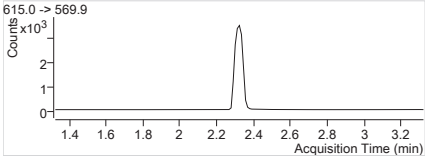
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 101.09 µg/L
Area ratio: 0.21063
Sample type: Calibration



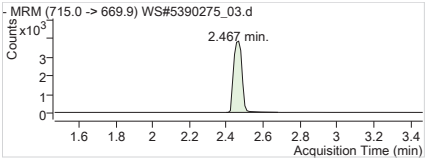


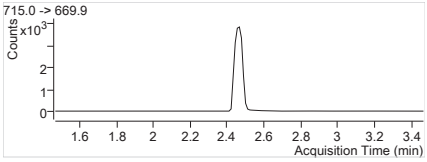
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 99.12 µg/L
Area ratio: 0.26120
Sample type: Calibration



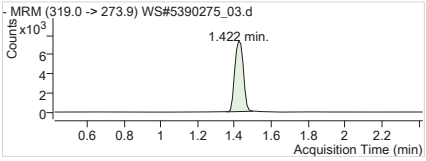


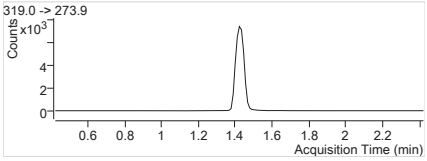
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 102.50 µg/L
Area ratio: 0.34941
Sample type: Calibration



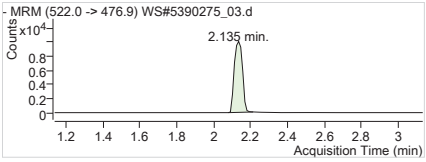


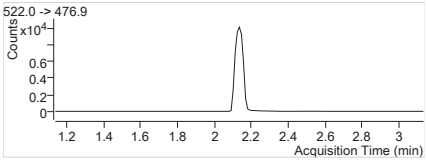
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	98.48 µg/L
Area ratio:	0.38948
Sample type:	Calibration





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	101.10 µg/L
Area ratio:	0
Sample type:	Calibration





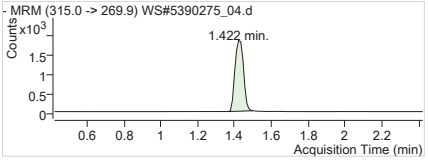
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	99.93 µg/L
Area ratio:	0
Sample type:	Calibration

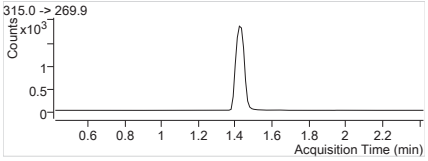
Batch Path	T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_ETOxics

Sample Name	**STD 3**	**Instrument**	LCMS04
Data File	WS#5390275_04.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A4
Acq. Date	2018/02/09 4:49:02 PM	**Injection Volume**	Per Method
Sample Annotation	-		

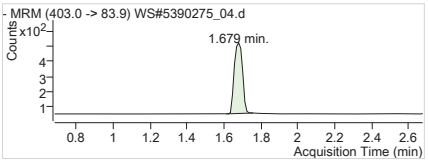
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	5831	1.42	1 µg/L		
MPFHxS	1476	1.68	1 µg/L		
MPFHpA	7819	1.69	1 µg/L		
MPFOA	7987	1.87	1 µg/L		
MPFOS	1767	1.98	1 µg/L		
MPFNA	7897	2.01	1 µg/L		
MPFDA	6924	2.14	1 µg/L		
MPFUnA	8321	2.23	1 µg/L		
MPFDoA	10381	2.32	1 µg/L		
MPFTeDA	11516	2.47	1 µg/L		
13C6-PFHxA IS	23144	1.42	1 µg/L		
13C9-PFDA IS	30938	2.13	1 µg/L		

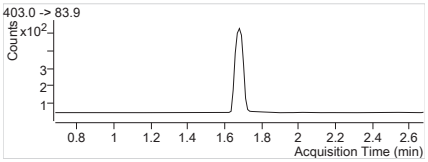
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	3027	1.09	5.00	4.66 µg/L	93.14
PFHxA 1	11350	1.42	5.00	4.82 µg/L	96.37
PFHxS 1	3224	1.68	5.00	4.97 µg/L	99.48
PFHpA 1	14826	1.69	5.00	4.85 µg/L	97.07
PFOA 1	16529	1.87	5.00	5.02 µg/L	100.50
PFOS 1	3104	1.97	5.00	4.99 µg/L	99.71
PFNA 1	13528	2.01	5.00	4.64 µg/L	92.83
PFDA 1	15458	2.14	5.00	4.51 µg/L	90.24
PFUnA 1	17037	2.23	5.00	4.87 µg/L	97.31
PFDoA 1	21697	2.32	5.00	5.05 µg/L	100.94
PFTrDA 1	24331	2.40	5.00	5.19 µg/L	103.76
PFTeDA 1	20492	2.47	5.00	5.17 µg/L	103.47
13C2-PFHxA	5831	1.42	100.00	100.95 µg/L	100.95
18O2-PFHxS	1476	1.68	100.00	102.01 µg/L	102.01
13C4-PFHpA	7819	1.69	100.00	103.86 µg/L	103.86
13C4-PFOA	7987	1.87	100.00	100.02 µg/L	100.02
13C4-PFOS	1767	1.98	100.00	97.33 µg/L	97.33
13C5-PFNA	7897	2.01	100.00	100.06 µg/L	100.06
13C2-PFDA	6856	2.14	100.00	106.35 µg/L	106.35
13C2-PFUnA	8321	2.23	100.00	102.07 µg/L	102.07
13C2-PFDoA	10381	2.32	100.00	98.43 µg/L	98.43
13C2-PFTeDA	11720	2.47	100.00	95.79 µg/L	95.79
13C6-PFHxA	23144	1.42	100.00	98.83 µg/L	98.83
13C9-PFDA	30938	2.13	100.00	99.96 µg/L	99.96



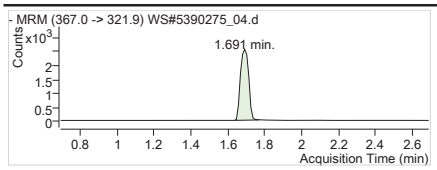


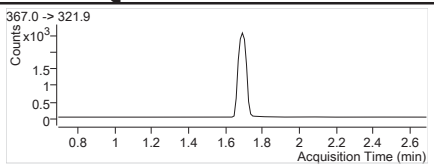
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Calibration



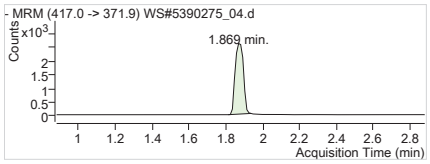


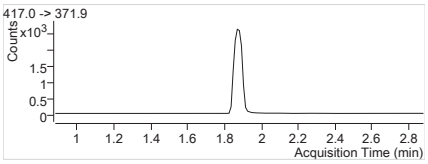
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Calibration



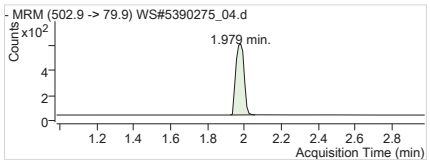


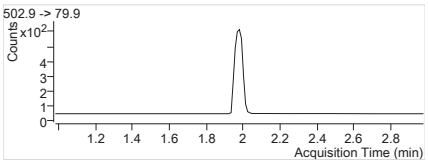
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Calibration



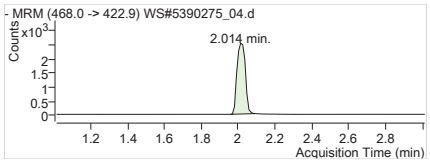


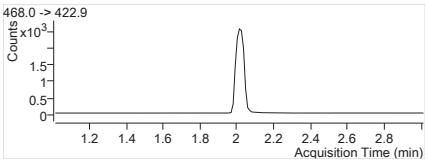
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: Calibration



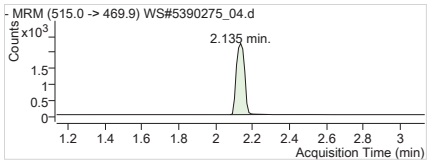


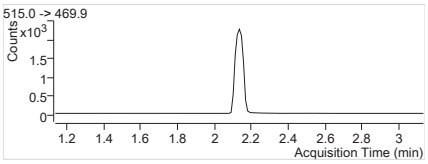
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



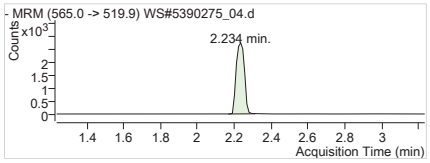


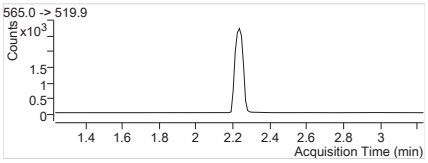
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Calibration



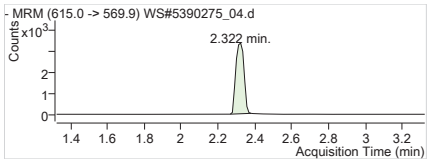


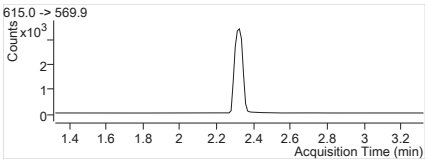
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



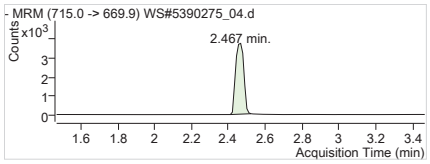


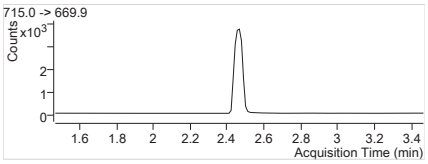
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Calibration



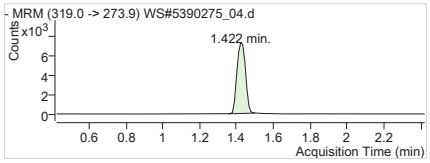


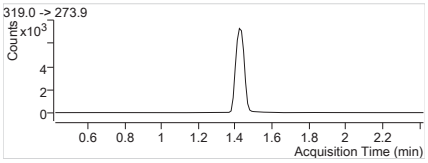
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Calibration



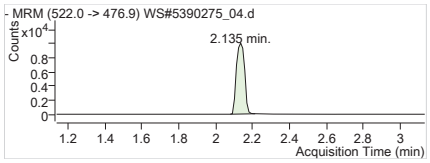


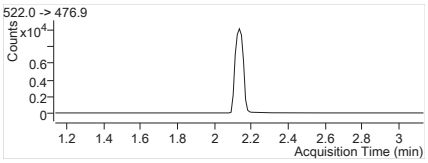
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Calibration



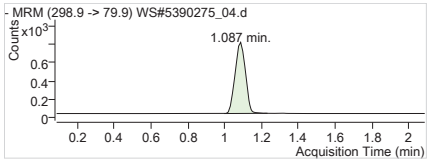


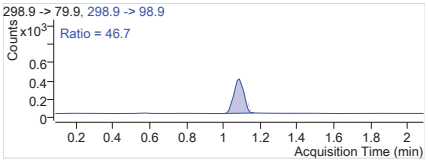
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Calibration



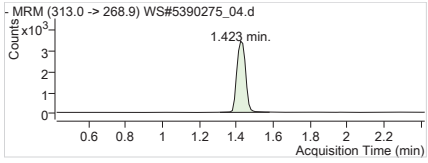


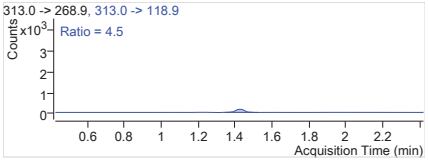
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



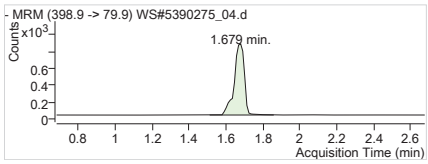


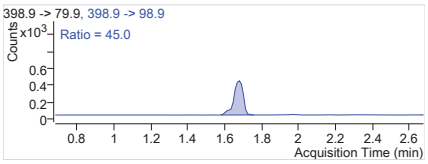
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 4.66 µg/L
Area ratio: 2.05081
Sample type: Calibration



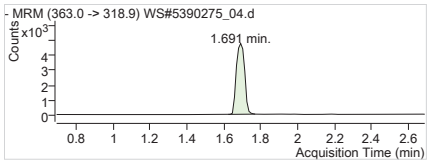


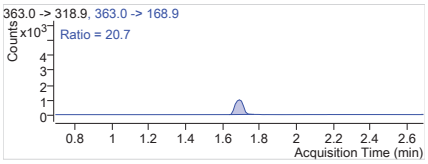
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 4.82 µg/L
Area ratio: 1.94649
Sample type: Calibration



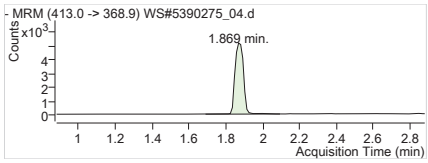


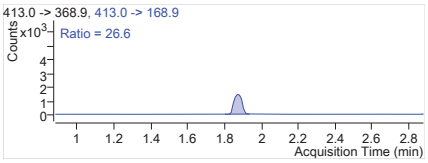
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 4.97 µg/L
Area ratio: 2.18428
Sample type: Calibration



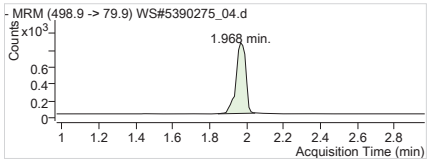


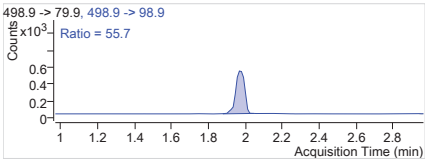
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 4.85 µg/L
Area ratio: 1.89615
Sample type: Calibration



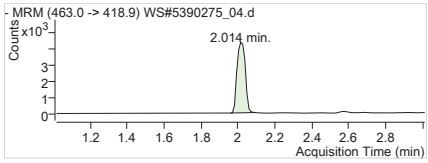


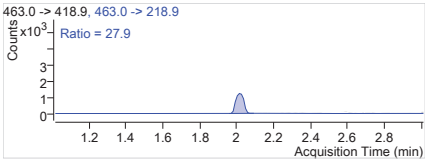
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 5.02 µg/L
Area ratio: 2.06949
Sample type: Calibration



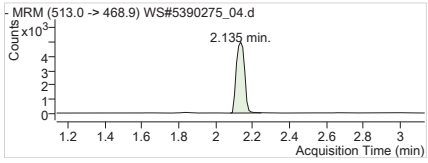


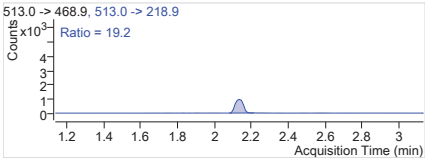
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 4.99 µg/L
Area ratio: 1.75665
Sample type: Calibration



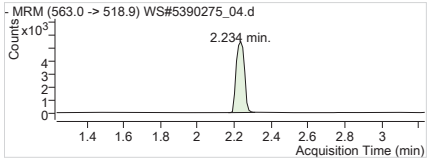


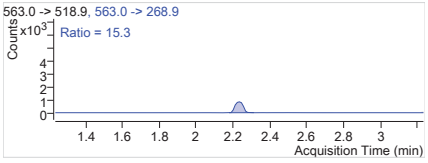
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 4.64 µg/L
Area ratio: 1.71306
Sample type: Calibration



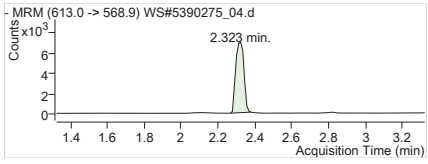


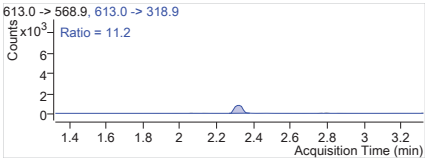
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 4.51 µg/L
Area ratio: 2.23252
Sample type: Calibration



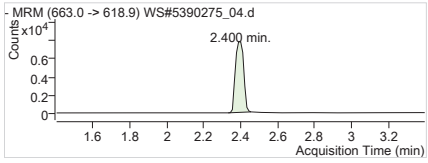


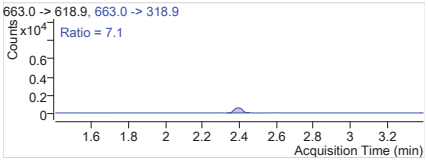
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 4.87 µg/L
Area ratio: 2.04747
Sample type: Calibration



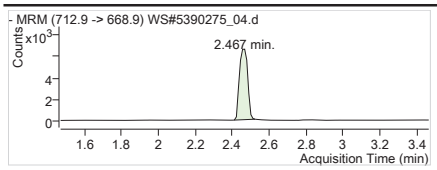


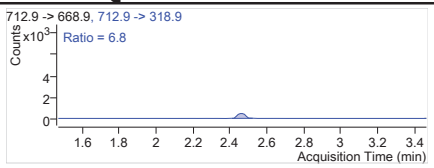
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 5.05 µg/L
Area ratio: 2.09007
Sample type: Calibration



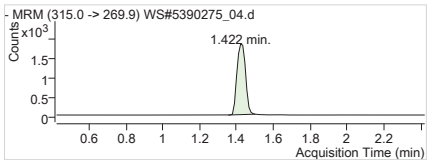


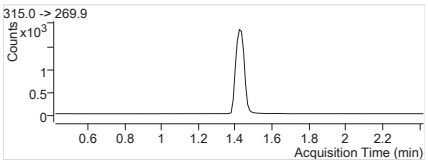
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 5.19 µg/L
Area ratio: 2.11280
Sample type: Calibration



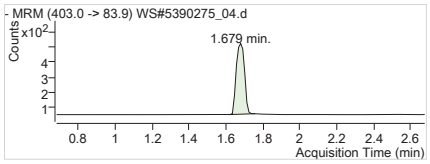


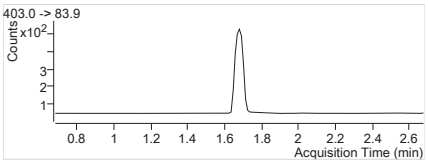
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 5.17 µg/L
Area ratio: 1.77944
Sample type: Calibration



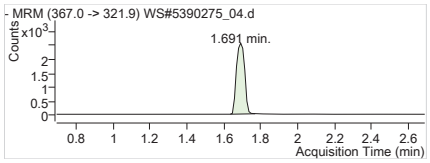


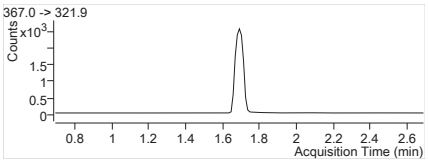
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 100.95 µg/L
Area ratio: 0.25194
Sample type: Calibration



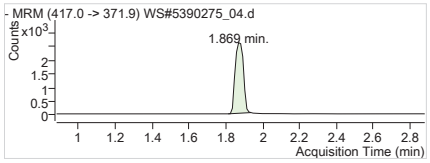


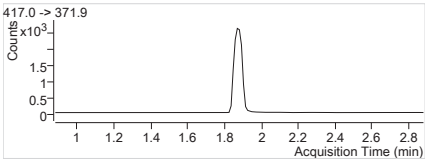
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 102.01 µg/L
Area ratio: 0.06377
Sample type: Calibration



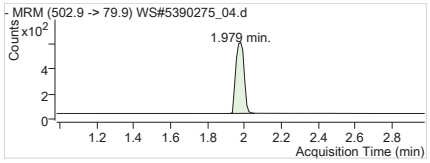


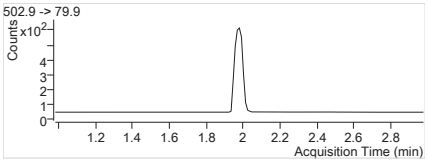
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 103.86 µg/L
Area ratio: 0.33784
Sample type: Calibration



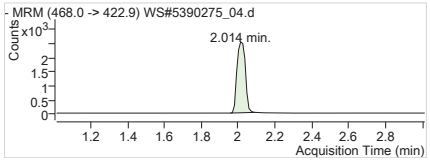


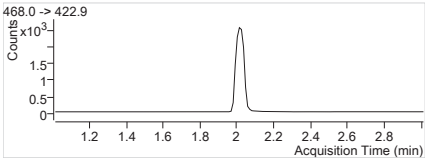
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 100.02 µg/L
Area ratio: 0.34510
Sample type: Calibration



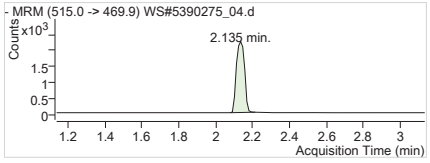


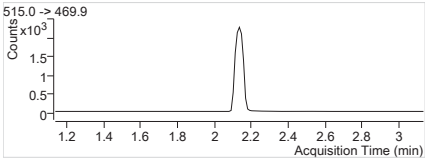
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 97.33 µg/L
Area ratio: 0.07635
Sample type: Calibration



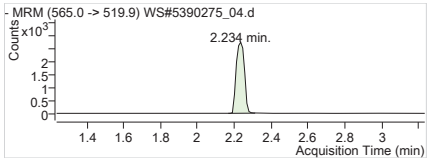


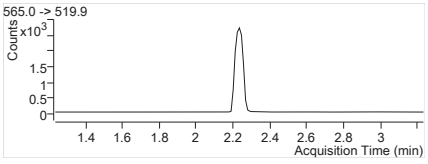
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 100.06 µg/L
Area ratio: 0.34121
Sample type: Calibration



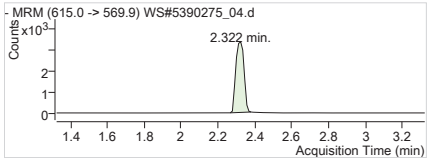


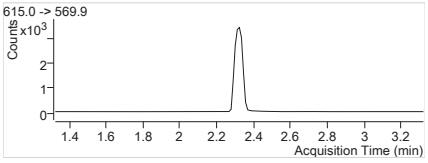
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 106.35 µg/L
Area ratio: 0.22160
Sample type: Calibration



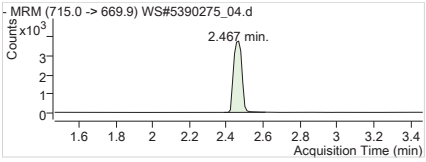


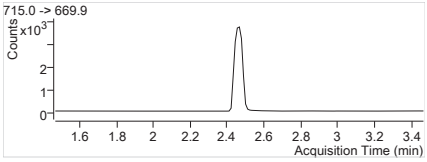
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 102.07 µg/L
Area ratio: 0.26896
Sample type: Calibration



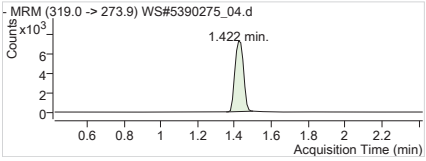


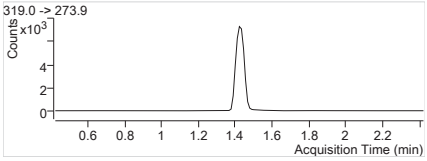
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 98.43 µg/L
Area ratio: 0.33554
Sample type: Calibration



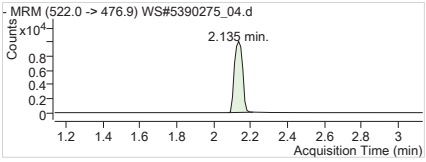


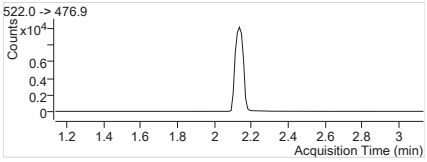
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	95.79 µg/L
Area ratio:	0.37882
Sample type:	Calibration





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	98.83 µg/L
Area ratio:	0
Sample type:	Calibration





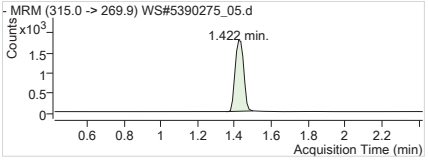
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	99.96 µg/L
Area ratio:	0
Sample type:	Calibration

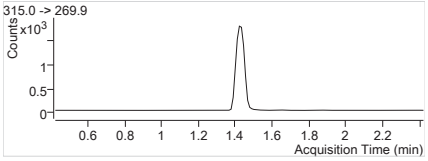
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics

Sample Name	**STD 4**	**Instrument**	LCMS04
Data File	WS#5390275_05.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A5
Acq. Date	2018/02/09 4:53:58 PM	**Injection Volume**	Per Method
Sample Annotation	-		

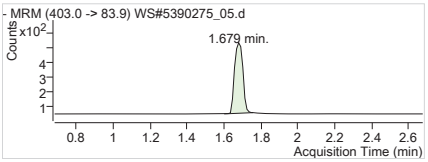
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	5692	1.42	1 µg/L		
MPFHxS	1500	1.68	1 µg/L		
MPFHpA	7701	1.69	1 µg/L		
MPFOA	8209	1.88	1 µg/L		
MPFOS	1935	1.98	1 µg/L		
MPFNA	7869	2.01	1 µg/L		
MPFDA	6359	2.14	1 µg/L		
MPFUnA	8063	2.23	1 µg/L		
MPFDoA	10327	2.32	1 µg/L		
MPFTeDA	12271	2.47	1 µg/L		
13C6-PFHxA IS	24336	1.42	1 µg/L		
13C9-PFDA IS	31660	2.13	1 µg/L		

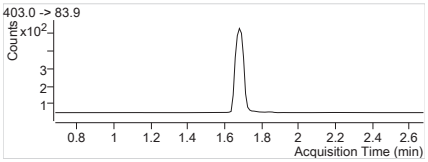
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	7920	1.09	12.50	11.80 µg/L	94.40
PFHxA 1	30189	1.42	12.50	13.12 µg/L	104.94
PFHxS 1	8047	1.68	12.50	12.07 µg/L	96.53
PFHpA 1	38723	1.69	12.50	12.53 µg/L	100.27
PFOA 1	42521	1.88	12.50	12.56 µg/L	100.45
PFOS 1	8505	1.97	12.50	12.44 µg/L	99.49
PFNA 1	38764	2.01	12.50	13.25 µg/L	105.96
PFDA 1	41655	2.14	12.50	13.01 µg/L	104.07
PFUnA 1	45808	2.23	12.50	13.40 µg/L	107.21
PFDoA 1	57043	2.32	12.50	13.26 µg/L	106.08
PFTrDA 1	64478	2.40	12.50	12.72 µg/L	101.75
PFTeDA 1	53350	2.47	12.50	12.63 µg/L	101.03
13C2-PFHxA	5692	1.42	100.00	93.71 µg/L	93.71
18O2-PFHxS	1500	1.68	100.00	98.59 µg/L	98.59
13C4-PFHpA	7701	1.69	100.00	97.28 µg/L	97.28
13C4-PFOA	8209	1.88	100.00	97.77 µg/L	97.77
13C4-PFOS	1935	1.98	100.00	101.36 µg/L	101.36
13C5-PFNA	7869	2.01	100.00	94.82 µg/L	94.82
13C2-PFDA	6258	2.14	100.00	94.86 µg/L	94.86
13C2-PFUnA	8063	2.23	100.00	96.65 µg/L	96.65
13C2-PFDoA	10327	2.32	100.00	95.69 µg/L	95.69
13C2-PFTeDA	12496	2.47	100.00	99.80 µg/L	99.80
13C6-PFHxA	24336	1.42	100.00	103.92 µg/L	103.92
13C9-PFDA	31660	2.13	100.00	102.30 µg/L	102.30



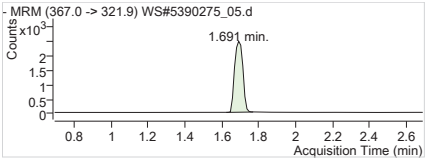


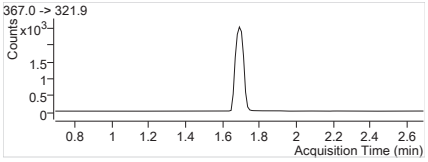
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Calibration



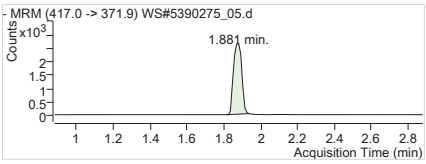


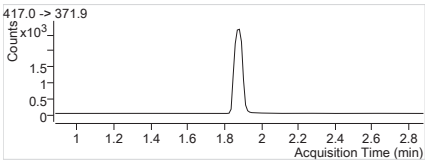
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Calibration



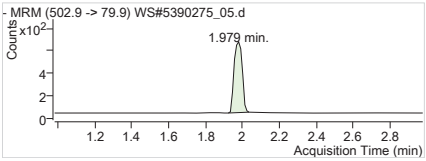


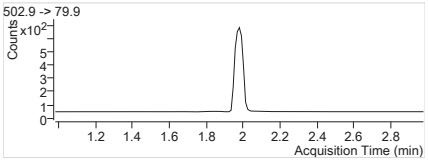
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Calibration



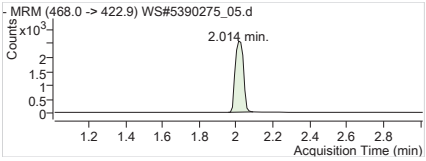


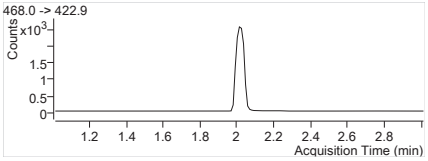
MPFOA Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: Calibration



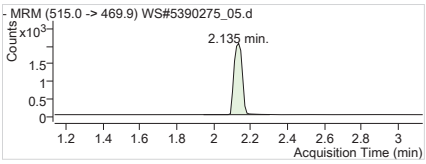


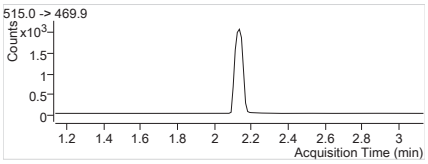
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



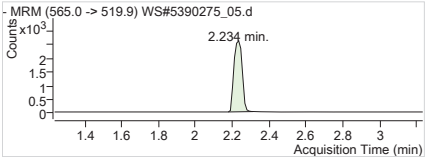


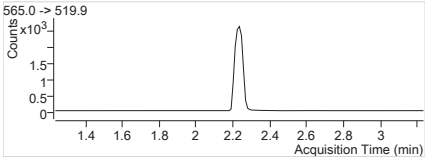
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Calibration



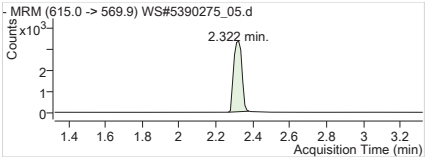


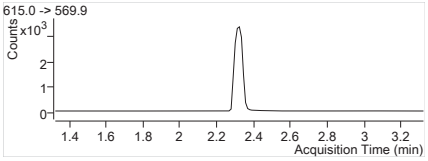
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



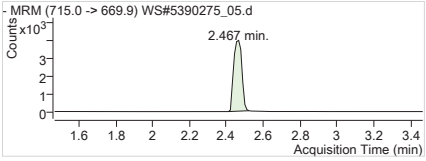


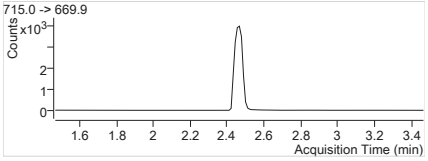
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Calibration



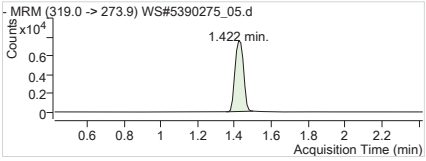


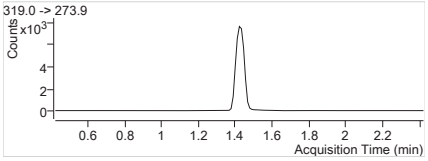
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Calibration



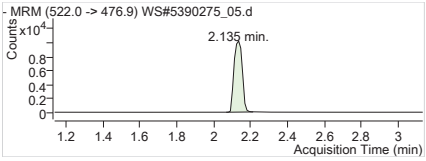


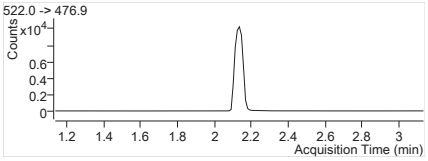
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Calibration



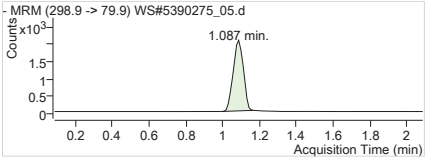


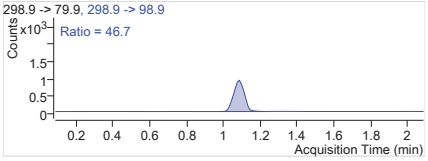
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Calibration



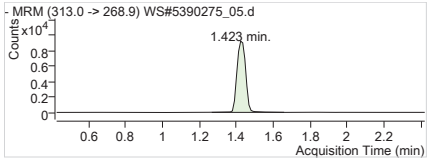


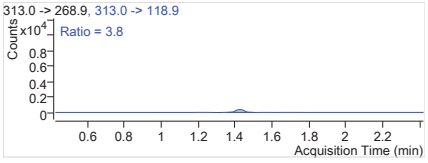
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



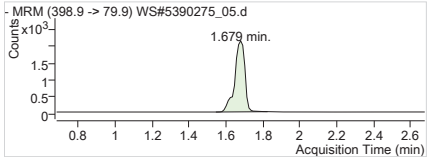


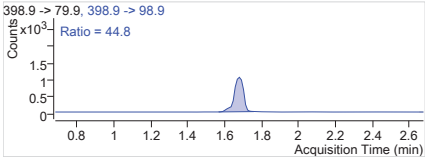
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 11.80 µg/L
Area ratio: 5.28000
Sample type: Calibration



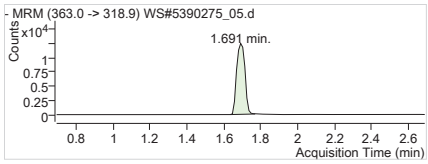


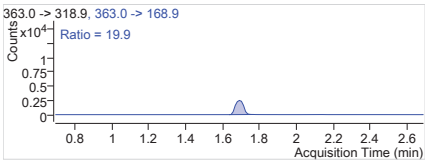
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 13.12 µg/L
Area ratio: 5.30376
Sample type: Calibration



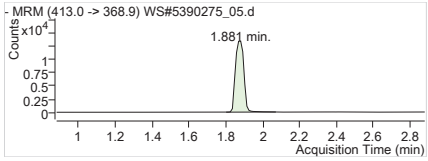


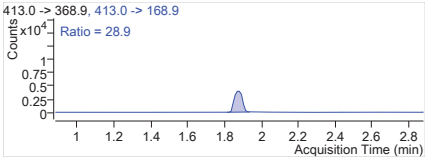
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 12.07 µg/L
Area ratio: 5.36467
Sample type: Calibration



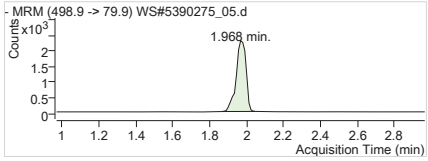


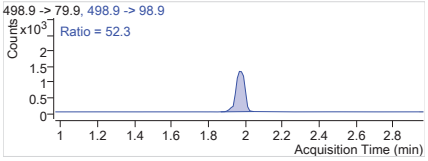
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 12.53 µg/L
Area ratio: 5.02831
Sample type: Calibration



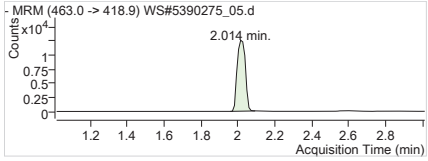


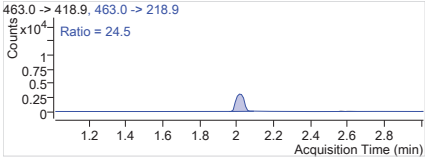
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 12.56 µg/L
Area ratio: 5.17980
Sample type: Calibration



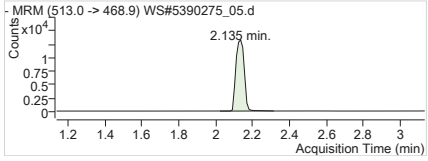


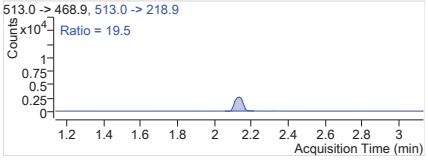
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 12.44 µg/L
Area ratio: 4.39535
Sample type: Calibration



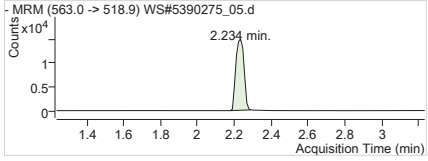


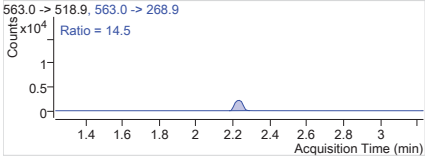
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 13.25 µg/L
Area ratio: 4.92617
Sample type: Calibration



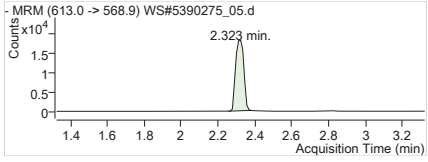


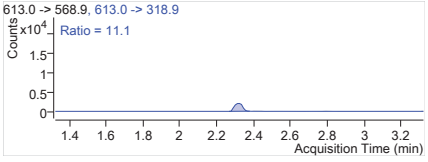
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 13.01 µg/L
Area ratio: 6.55056
Sample type: Calibration



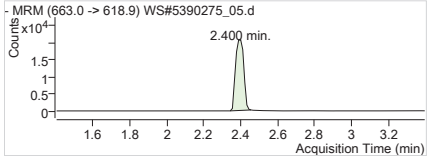


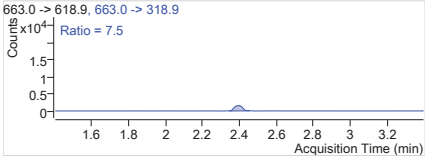
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 13.40 µg/L
Area ratio: 5.68126
Sample type: Calibration



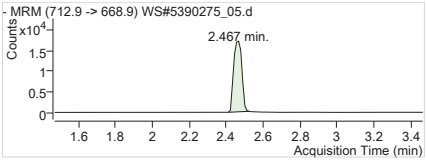


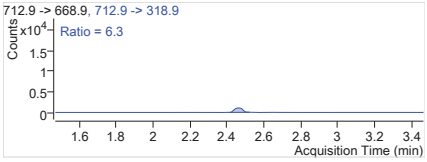
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 13.26 µg/L
Area ratio: 5.52368
Sample type: Calibration



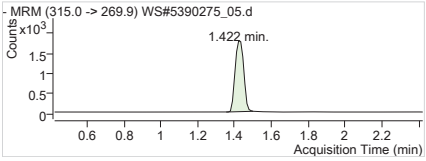


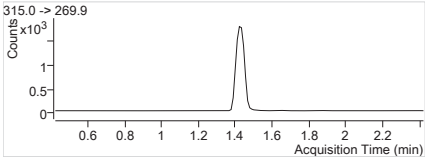
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 12.72 µg/L
Area ratio: 5.25450
Sample type: Calibration



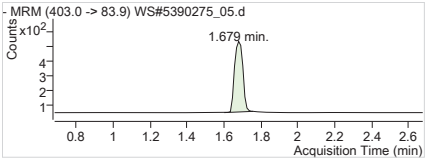


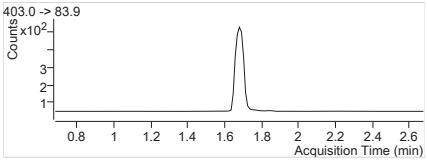
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 12.63 µg/L
Area ratio: 4.34765
Sample type: Calibration



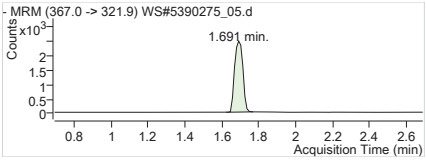


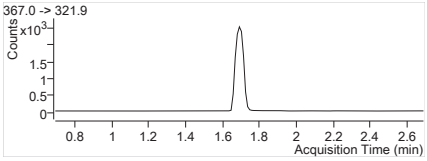
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 93.71 µg/L
Area ratio: 0.23389
Sample type: Calibration



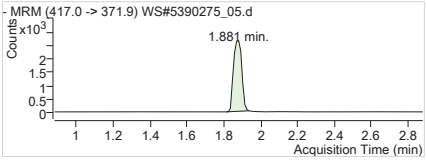


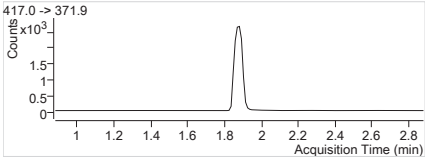
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 98.59 µg/L
Area ratio: 0.06164
Sample type: Calibration



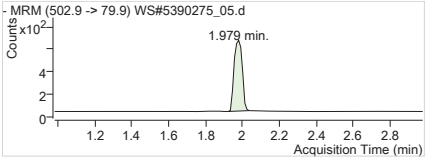


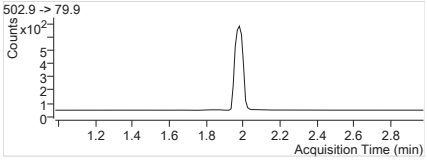
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 97.28 µg/L
Area ratio: 0.31644
Sample type: Calibration



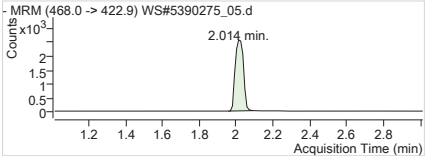


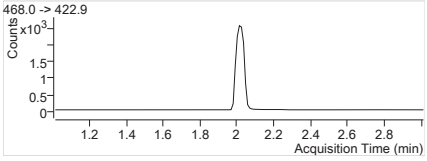
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 97.77 µg/L
Area ratio: 0.33732
Sample type: Calibration



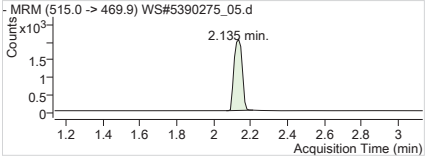


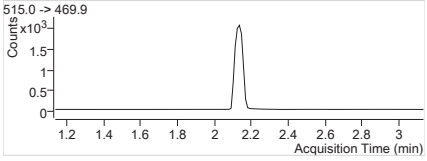
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 101.36 µg/L
Area ratio: 0.07951
Sample type: Calibration



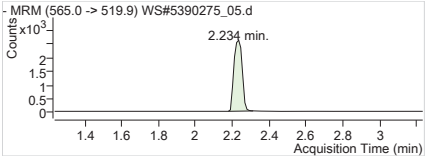


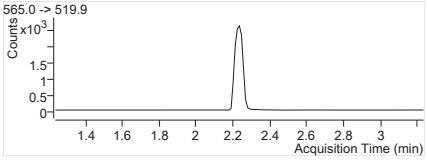
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 94.82 µg/L
Area ratio: 0.32335
Sample type: Calibration



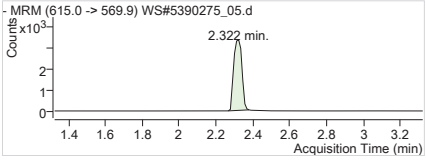


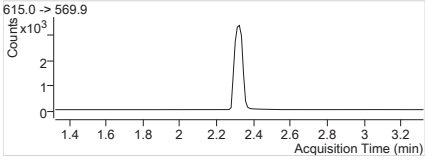
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 94.86 µg/L
Area ratio: 0.19766
Sample type: Calibration



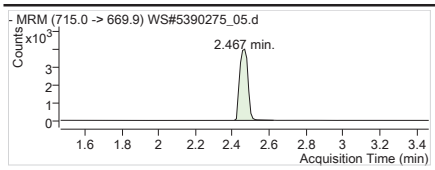


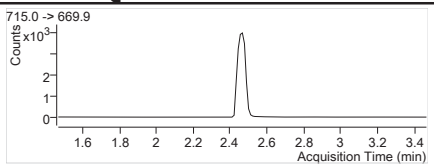
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 96.65 µg/L
Area ratio: 0.25467
Sample type: Calibration



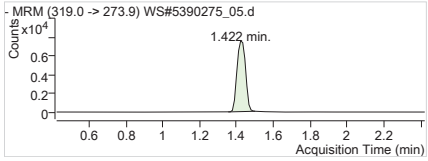


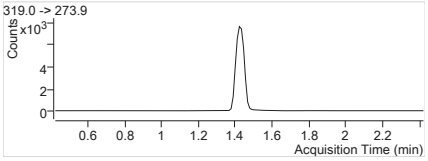
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 95.69 µg/L
Area ratio: 0.32618
Sample type: Calibration



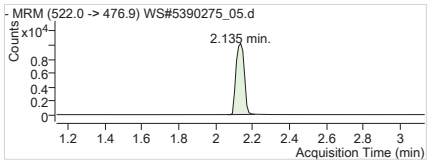


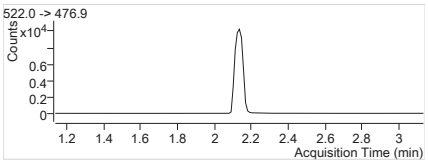
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	99.80 µg/L
Area ratio:	0.39469
Sample type:	Calibration





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	103.92 µg/L
Area ratio:	0
Sample type:	Calibration





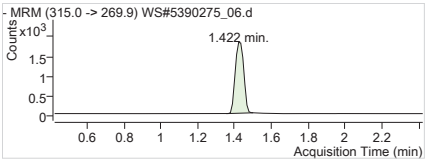
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	102.30 µg/L
Area ratio:	0
Sample type:	Calibration

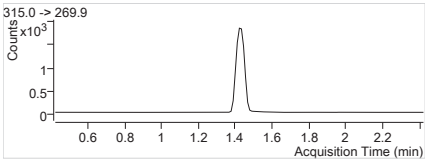
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_ETOxics

Sample Name	**STD 5**	**Instrument**	LCMS04
Data File	WS#5390275_06.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A6
Acq. Date	2018/02/09 4:58:54 PM	**Injection Volume**	Per Method
Sample Annotation	-		

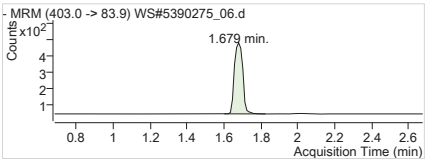
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	5774	1.42	1 µg/L		
MPFHxS	1364	1.68	1 µg/L		
MPFHpA	7457	1.69	1 µg/L		
MPFOA	8285	1.87	1 µg/L		
MPFOS	1965	1.98	1 µg/L		
MPFNA	8152	2.01	1 µg/L		
MPFDA	6459	2.14	1 µg/L		
MPFUnA	8107	2.23	1 µg/L		
MPFDoA	10683	2.32	1 µg/L		
MPFTeDA	12269	2.47	1 µg/L		
13C6-PFHxA IS	23276	1.42	1 µg/L		
13C9-PFDA IS	31734	2.13	1 µg/L		

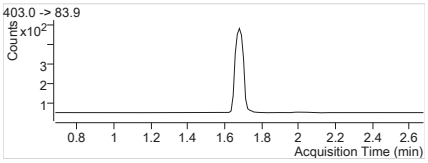
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	16645	1.09	25.00	27.12 µg/L	108.46
PFHxA 1	59511	1.42	25.00	25.48 µg/L	101.94
PFHxS 1	15508	1.68	25.00	25.46 µg/L	101.83
PFHpA 1	76118	1.69	25.00	25.23 µg/L	100.94
PFOA 1	85172	1.87	25.00	24.91 µg/L	99.62
PFOS 1	15876	1.97	25.00	22.84 µg/L	91.35
PFNA 1	73172	2.01	25.00	24.09 µg/L	96.36
PFDA 1	81955	2.14	25.00	25.09 µg/L	100.35
PFUnA 1	85920	2.23	25.00	24.95 µg/L	99.81
PFDoA 1	110949	2.32	25.00	24.89 µg/L	99.55
PFTrDA 1	123420	2.40	25.00	24.24 µg/L	96.95
PFTeDA 1	103773	2.47	25.00	24.56 µg/L	98.25
13C2-PFHxA	5774	1.42	100.00	99.39 µg/L	99.39
18O2-PFHxS	1364	1.68	100.00	93.74 µg/L	93.74
13C4-PFHpA	7457	1.69	100.00	98.49 µg/L	98.49
13C4-PFOA	8285	1.87	100.00	103.17 µg/L	103.17
13C4-PFOS	1965	1.98	100.00	107.62 µg/L	107.62
13C5-PFNA	8153	2.01	100.00	102.72 µg/L	102.72
13C2-PFDA	6413	2.14	100.00	96.98 µg/L	96.98
13C2-PFUnA	8107	2.23	100.00	96.95 µg/L	96.95
13C2-PFDoA	10683	2.32	100.00	98.76 µg/L	98.76
13C2-PFTeDA	12591	2.47	100.00	100.32 µg/L	100.32
13C6-PFHxA	23276	1.42	100.00	99.39 µg/L	99.39
13C9-PFDA	31734	2.13	100.00	102.54 µg/L	102.54



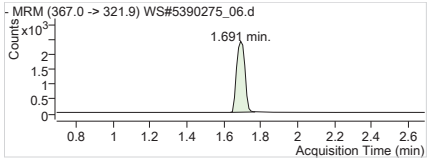


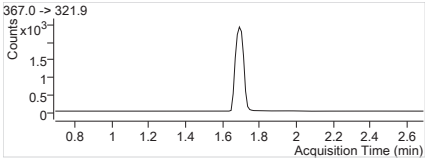
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Calibration



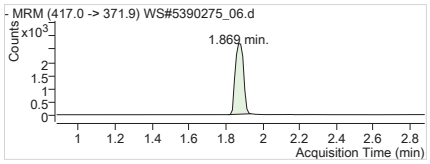


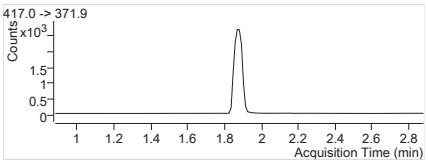
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Calibration



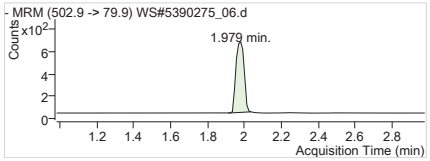


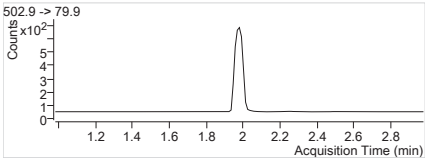
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Calibration



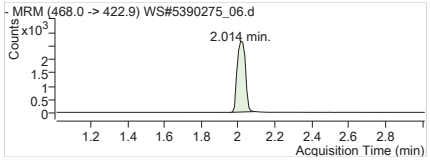


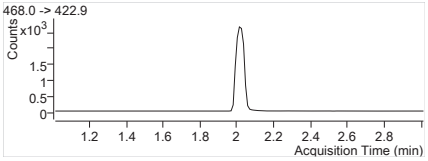
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: Calibration



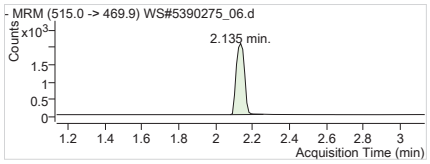


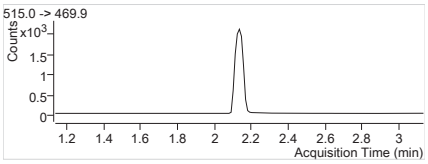
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



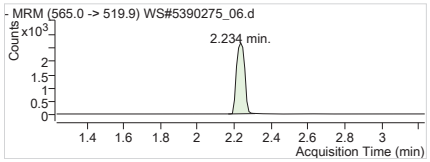


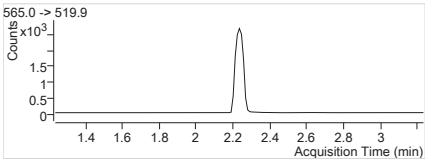
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Calibration



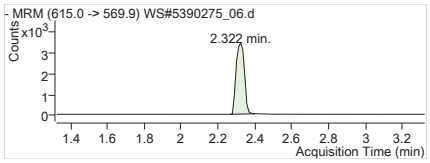


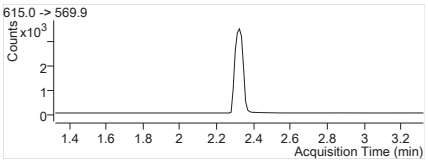
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



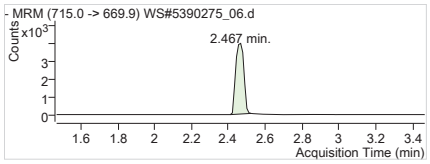


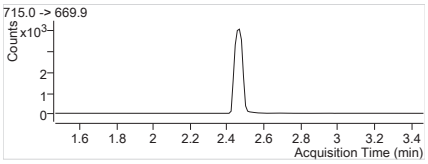
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Calibration



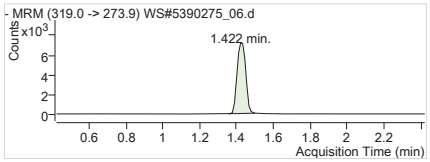


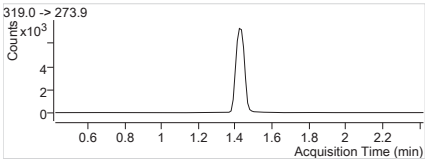
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Calibration



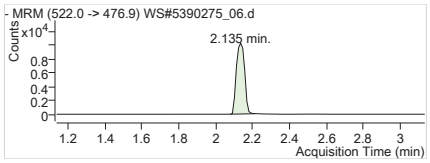


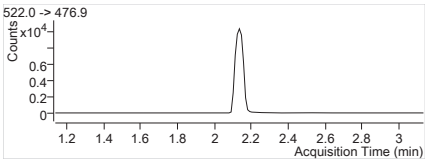
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Calibration



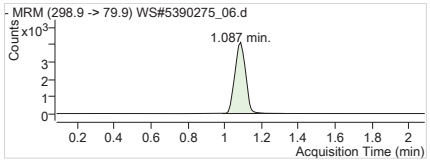


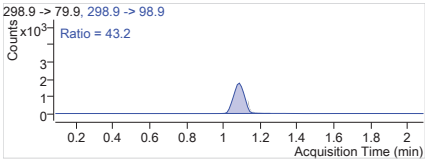
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Calibration



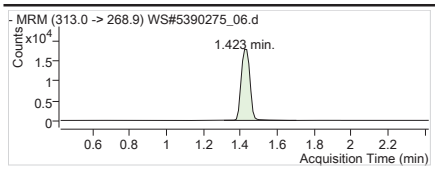


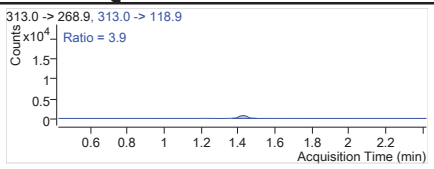
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



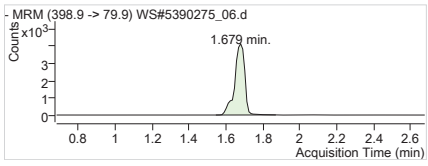


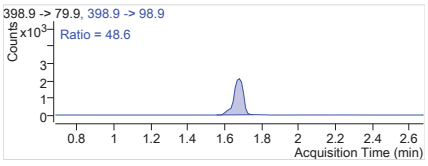
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 27.12 µg/L
Area ratio: 12.20308
Sample type: Calibration



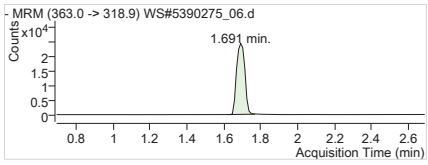


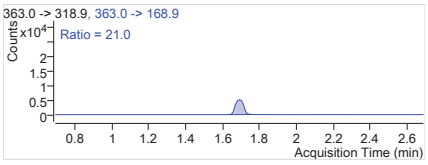
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 25.48 µg/L
Area ratio: 10.30672
Sample type: Calibration



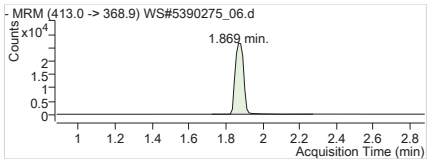


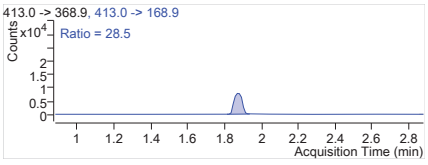
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 25.46 µg/L
Area ratio: 11.36950
Sample type: Calibration



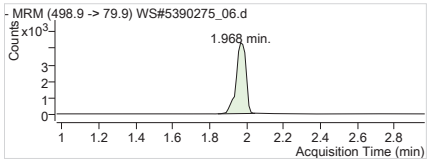


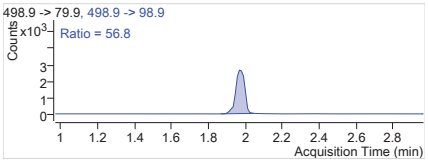
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 25.23 µg/L
Area ratio: 10.20759
Sample type: Calibration



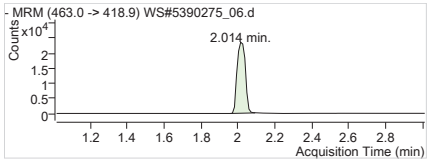


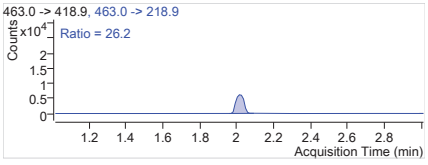
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 24.91 µg/L
Area ratio: 10.28027
Sample type: Calibration



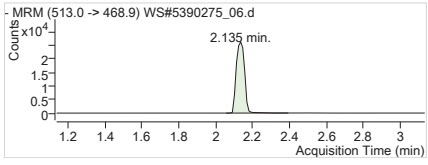


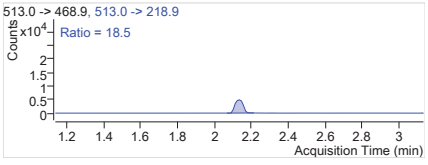
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 22.84 µg/L
Area ratio: 8.07939
Sample type: Calibration



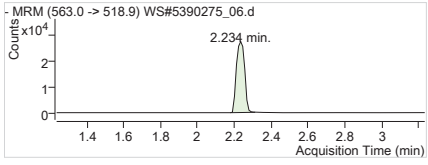


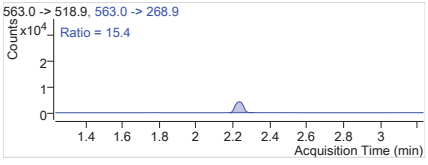
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 24.09 µg/L
Area ratio: 8.97596
Sample type: Calibration



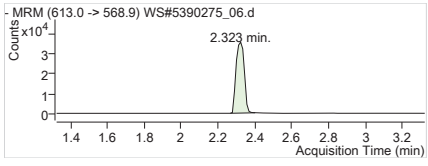


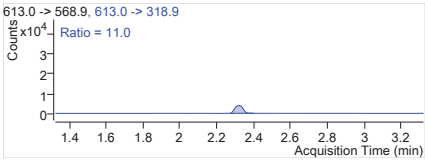
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 25.09 µg/L
Area ratio: 12.68850
Sample type: Calibration



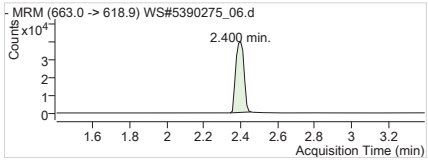


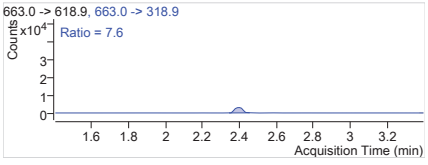
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 24.95 µg/L
Area ratio: 10.59825
Sample type: Calibration



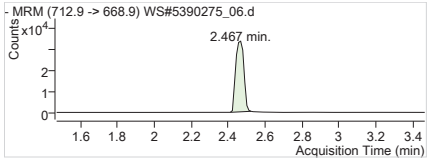


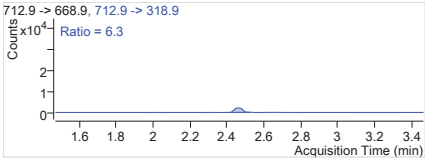
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 24.89 µg/L
Area ratio: 10.38557
Sample type: Calibration



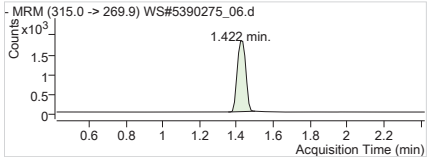


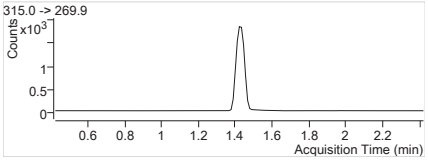
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 24.24 µg/L
Area ratio: 10.05950
Sample type: Calibration



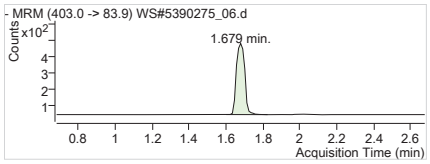


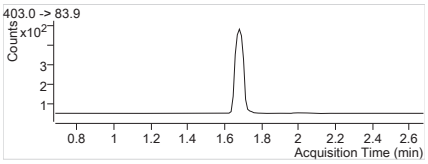
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 24.56 µg/L
Area ratio: 8.45815
Sample type: Calibration



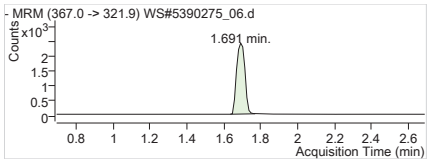


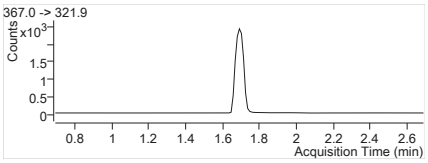
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 99.39 µg/L
Area ratio: 0.24807
Sample type: Calibration



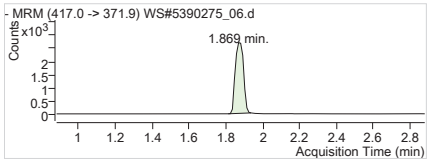


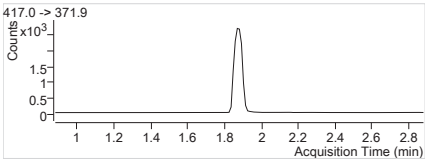
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 93.74 µg/L
Area ratio: 0.05860
Sample type: Calibration



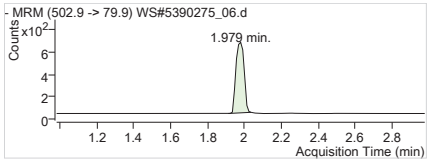


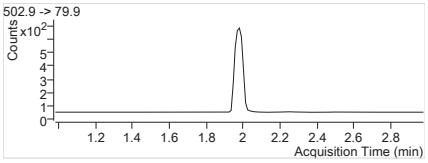
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 98.49 µg/L
Area ratio: 0.32037
Sample type: Calibration



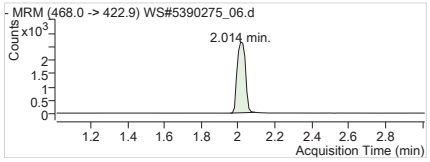


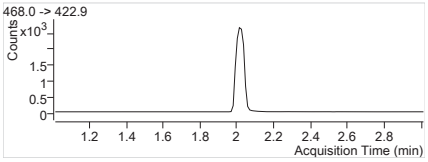
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 103.17 µg/L
Area ratio: 0.35595
Sample type: Calibration



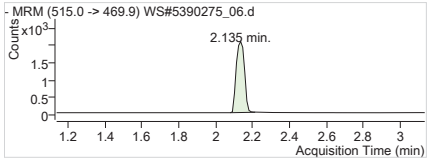


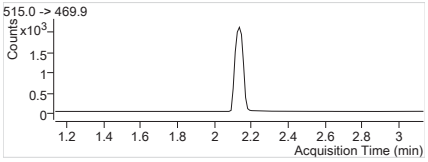
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 107.62 µg/L
Area ratio: 0.08442
Sample type: Calibration



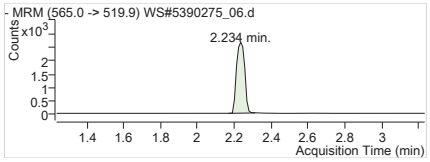


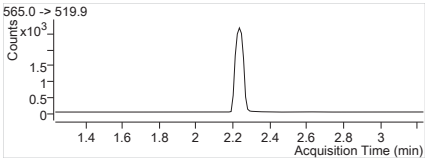
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 102.72 µg/L
Area ratio: 0.35027
Sample type: Calibration



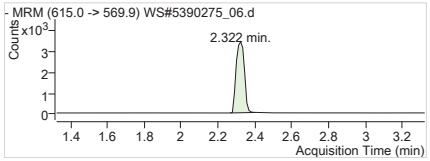


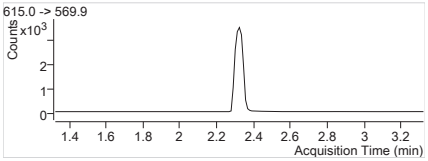
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 96.98 µg/L
Area ratio: 0.20209
Sample type: Calibration



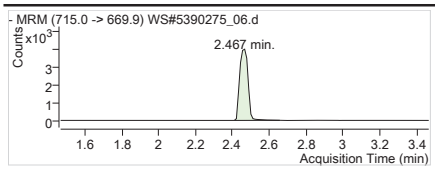


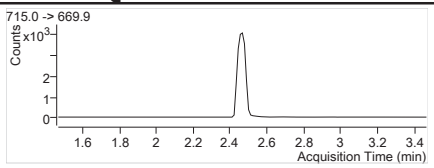
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 96.95 µg/L
Area ratio: 0.25547
Sample type: Calibration



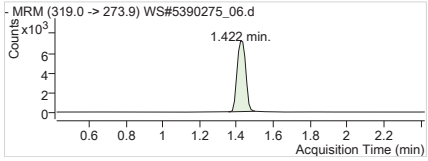


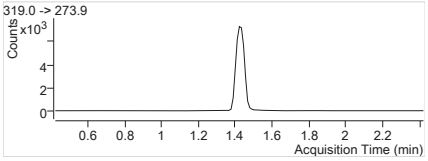
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 98.76 µg/L
Area ratio: 0.33664
Sample type: Calibration



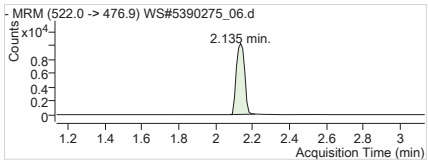


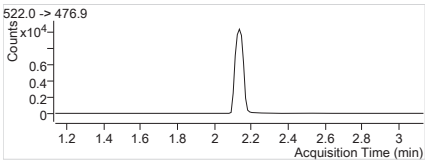
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	100.32 µg/L
Area ratio:	0.39677
Sample type:	Calibration





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	99.39 µg/L
Area ratio:	0
Sample type:	Calibration





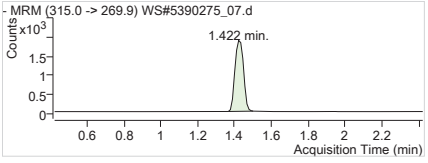
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	102.54 µg/L
Area ratio:	0
Sample type:	Calibration

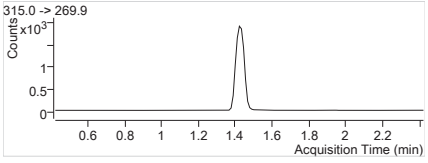
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_ETOxics

Sample Name	**STD 6**	**Instrument**	LCMS04
Data File	WS#5390275_07.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A7
Acq. Date	2018/02/09 5:03:50 PM	**Injection Volume**	Per Method
Sample Annotation	-		

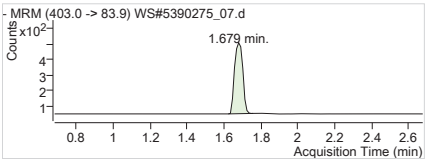
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	5997	1.42	1 µg/L		
MPFHxS	1425	1.68	1 µg/L		
MPFHpA	7052	1.69	1 µg/L		
MPFOA	8023	1.87	1 µg/L		
MPFOS	1699	1.98	1 µg/L		
MPFNA	7741	2.01	1 µg/L		
MPFDA	6311	2.14	1 µg/L		
MPFUnA	8217	2.23	1 µg/L		
MPFDoA	10466	2.32	1 µg/L		
MPFTeDA	11892	2.47	1 µg/L		
13C6-PFHxA IS	22811	1.42	1 µg/L		
13C9-PFDA IS	29039	2.13	1 µg/L		

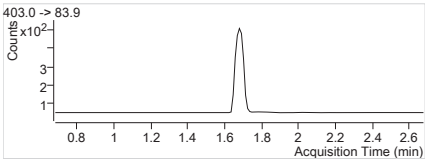
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	26131	1.09	41.70	40.69 µg/L	97.57
PFHxA 1	99005	1.42	41.70	40.82 µg/L	97.88
PFHxS 1	26662	1.68	41.70	41.83 µg/L	100.30
PFHpA 1	119160	1.69	41.70	41.64 µg/L	99.85
PFOA 1	138298	1.87	41.70	41.75 µg/L	100.12
PFOS 1	26409	1.97	41.70	43.91 µg/L	105.30
PFNA 1	121875	2.01	41.70	42.21 µg/L	101.23
PFDA 1	133055	2.14	41.70	41.61 µg/L	99.78
PFUnA 1	143281	2.23	41.70	41.02 µg/L	98.36
PFDoA 1	179920	2.32	41.70	41.17 µg/L	98.72
PFTrDA 1	208563	2.40	41.70	42.17 µg/L	101.12
PFTeDA 1	171694	2.47	41.70	41.92 µg/L	100.53
13C2-PFHxA	5997	1.42	100.00	105.33 µg/L	105.33
18O2-PFHxS	1425	1.68	100.00	99.92 µg/L	99.92
13C4-PFHpA	7052	1.69	100.00	95.04 µg/L	95.04
13C4-PFOA	8023	1.87	100.00	101.94 µg/L	101.94
13C4-PFOS	1699	1.98	100.00	94.95 µg/L	94.95
13C5-PFNA	7742	2.01	100.00	99.53 µg/L	99.53
13C2-PFDA	6286	2.14	100.00	103.89 µg/L	103.89
13C2-PFUnA	8217	2.23	100.00	107.38 µg/L	107.38
13C2-PFDoA	10466	2.32	100.00	105.73 µg/L	105.73
13C2-PFTeDA	12281	2.47	100.00	106.94 µg/L	106.94
13C6-PFHxA	22811	1.42	100.00	97.41 µg/L	97.41
13C9-PFDA	29039	2.13	100.00	93.83 µg/L	93.83



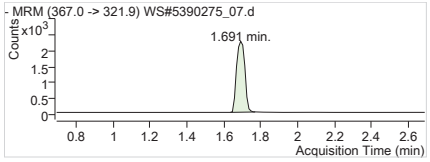


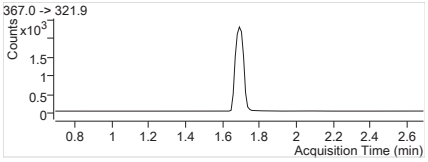
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Calibration



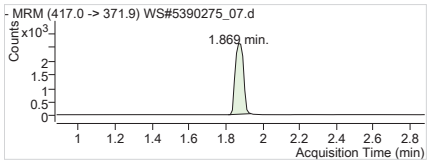


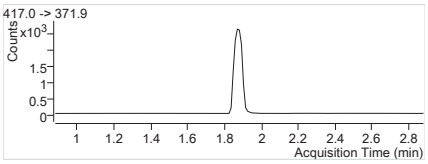
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Calibration



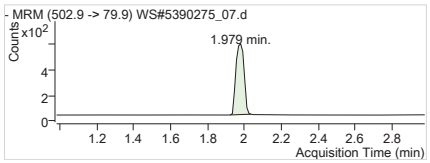


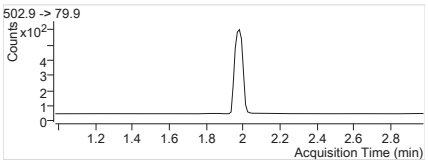
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Calibration



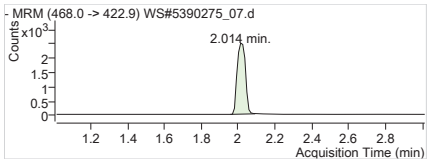


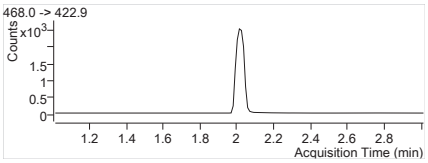
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: Calibration



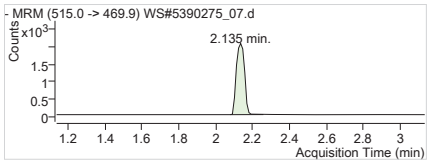


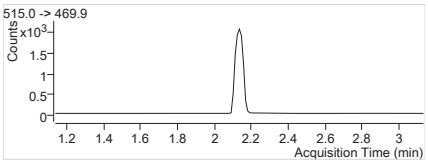
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Calibration



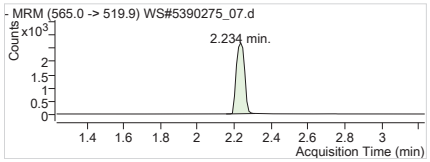


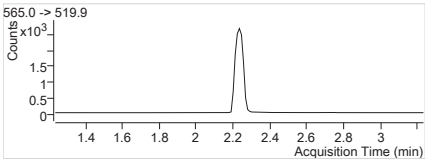
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Calibration



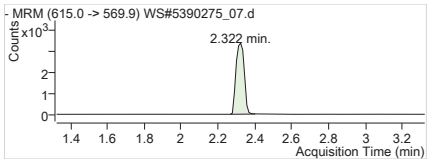


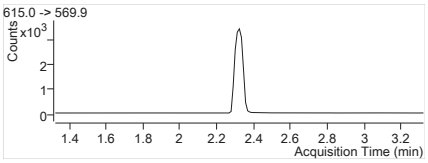
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



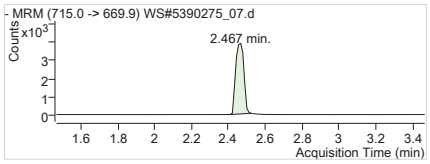


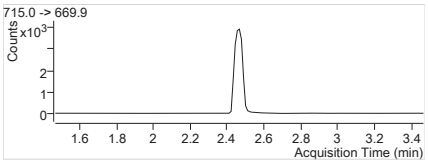
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Calibration



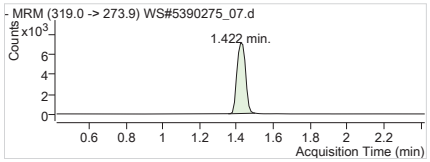


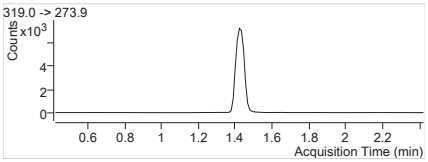
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Calibration



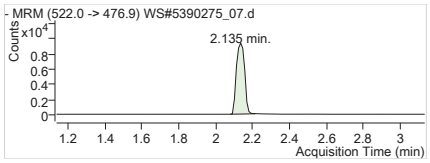


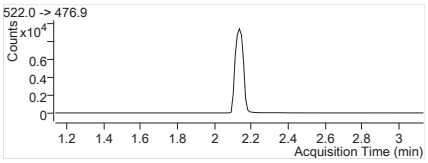
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Calibration



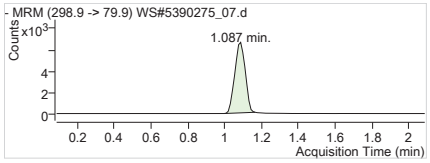


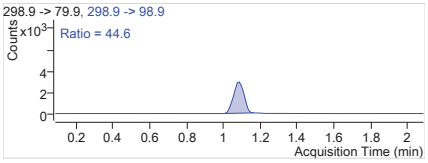
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Calibration



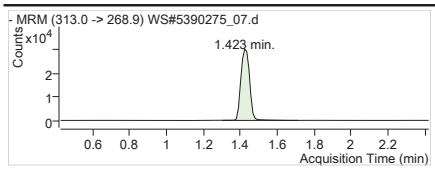


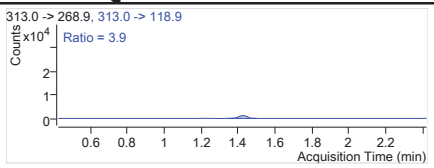
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Calibration



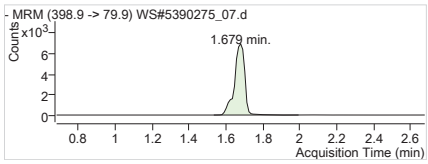


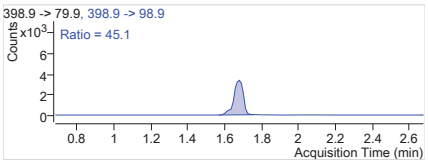
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 40.69 µg/L
Area ratio: 18.33754
Sample type: Calibration



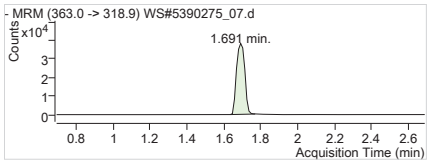


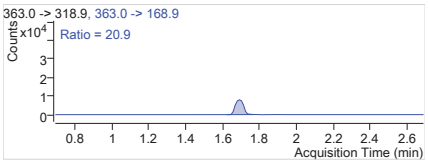
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 40.82 µg/L
Area ratio: 16.50909
Sample type: Calibration



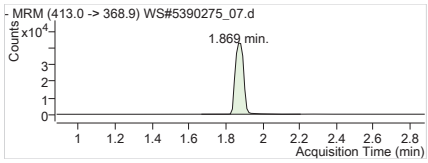


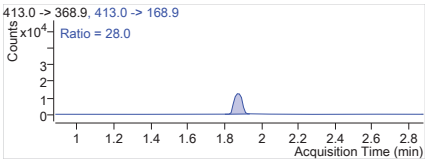
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 41.83 µg/L
Area ratio: 18.71018
Sample type: Calibration



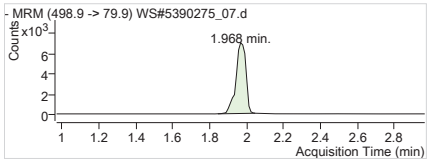


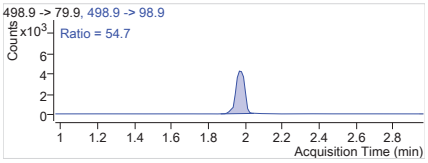
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 41.64 µg/L
Area ratio: 16.89733
Sample type: Calibration



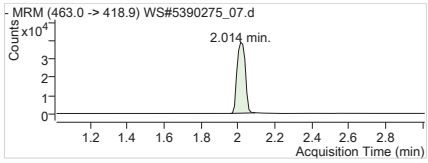


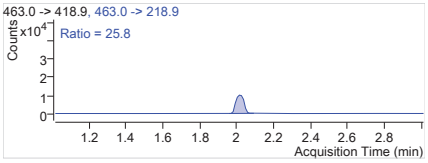
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 41.75 µg/L
Area ratio: 17.23769
Sample type: Calibration



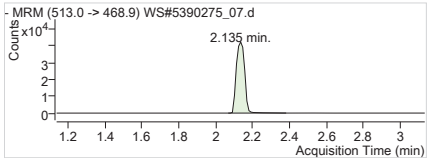


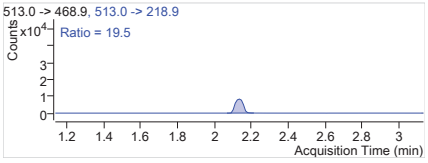
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 43.91 µg/L
Area ratio: 15.54385
Sample type: Calibration



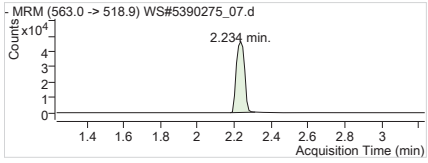


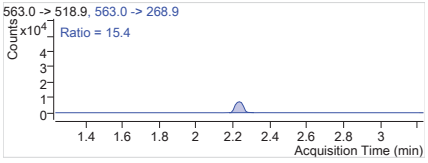
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 42.21 µg/L
Area ratio: 15.74409
Sample type: Calibration



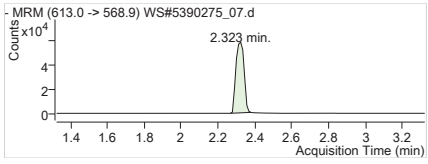


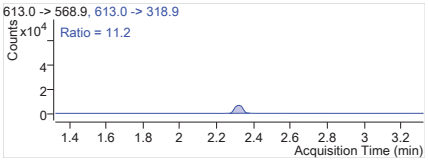
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 41.61 µg/L
Area ratio: 21.08303
Sample type: Calibration



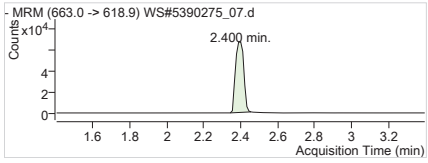


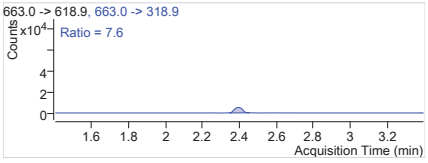
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 41.02 µg/L
Area ratio: 17.43714
Sample type: Calibration



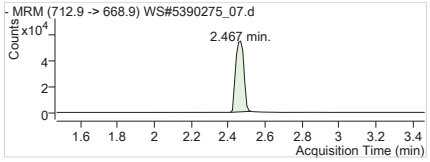


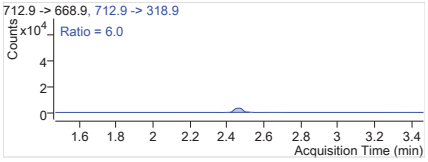
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 41.17 µg/L
Area ratio: 17.19090
Sample type: Calibration



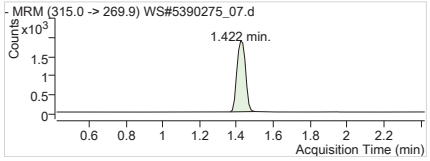


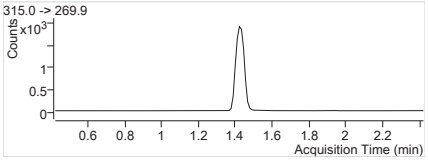
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 42.17 µg/L
Area ratio: 17.53809
Sample type: Calibration



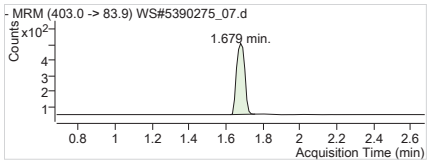


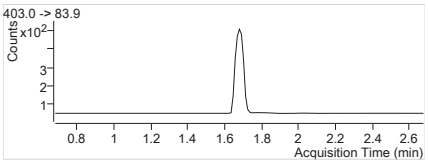
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 41.92 µg/L
Area ratio: 14.43777
Sample type: Calibration



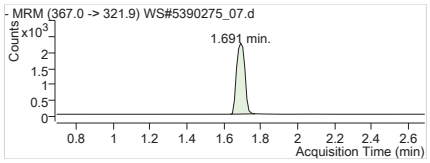


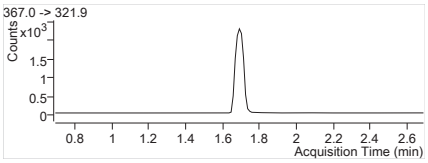
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 105.33 µg/L
Area ratio: 0.26290
Sample type: Calibration



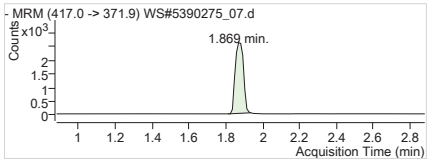


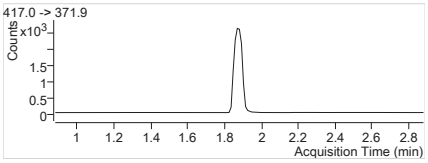
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 99.92 µg/L
Area ratio: 0.06247
Sample type: Calibration



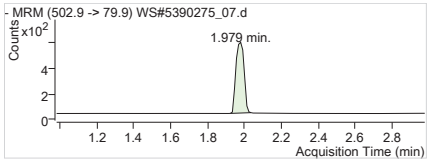


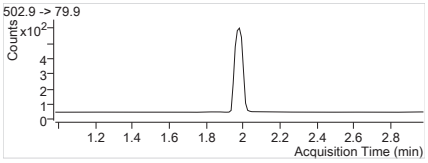
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 95.04 µg/L
Area ratio: 0.30915
Sample type: Calibration



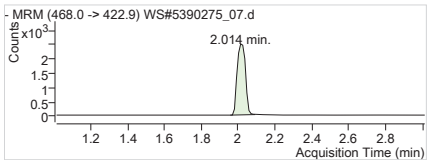


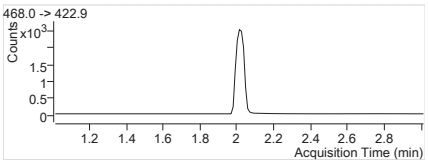
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 101.94 µg/L
Area ratio: 0.35172
Sample type: Calibration



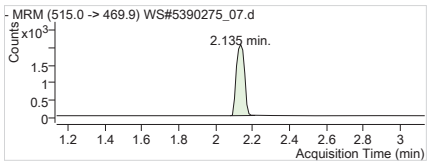


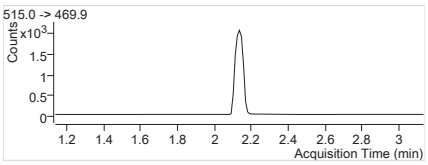
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 94.95 µg/L
Area ratio: 0.07448
Sample type: Calibration



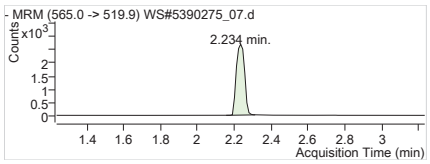


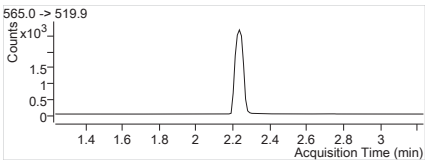
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 99.53 µg/L
Area ratio: 0.33940
Sample type: Calibration



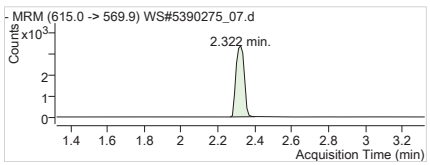


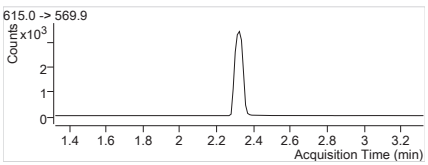
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 103.89 µg/L
Area ratio: 0.21647
Sample type: Calibration



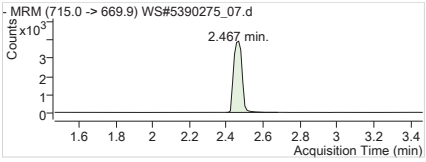


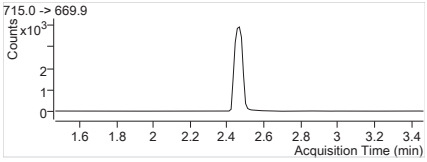
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 107.38 µg/L
Area ratio: 0.28296
Sample type: Calibration



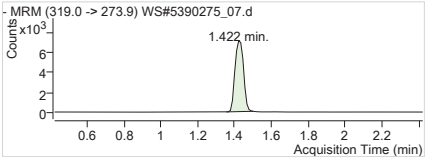


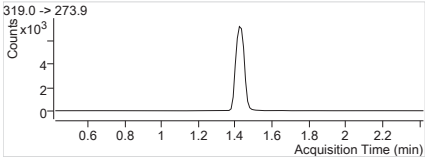
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 105.73 µg/L
Area ratio: 0.36041
Sample type: Calibration



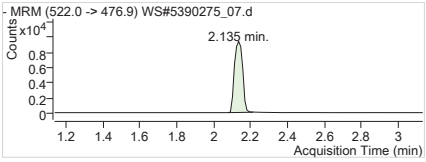


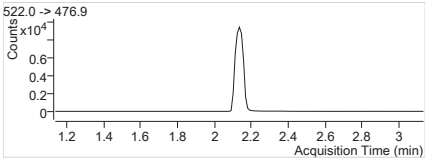
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	106.94 µg/L
Area ratio:	0.42291
Sample type:	Calibration





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	97.41 µg/L
Area ratio:	0
Sample type:	Calibration





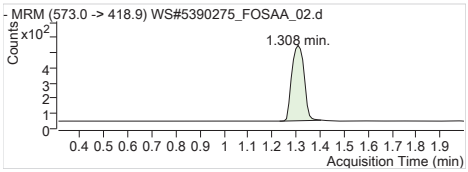
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	93.83 µg/L
Area ratio:	0
Sample type:	Calibration

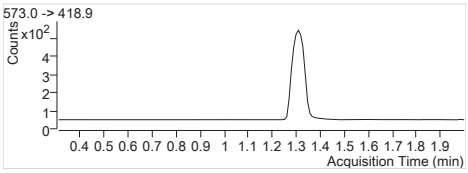
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_EToxics

Sample Name	**STD 1**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_02.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A2
Acq. Date	2018/02/10 12:30:18 AM	**Injection Volume**	Per Method
Sample Annotation	-		

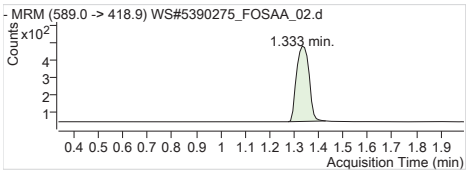
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1769	1.31	1 µg/L		
D5-EtFOSAA IS	1531	1.33	1 µg/L		
13C9-PFDA IS	24231	0.90	1 µg/L		

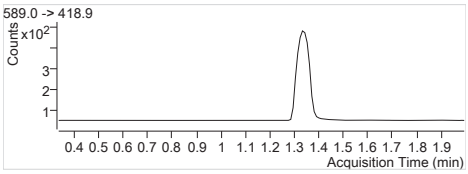
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	553	1.31	0.83	0.84 µg/L	101.61
EtFOSAA 1	536	1.33	0.83	0.86 µg/L	103.95
D3-MeFOSAA	1805	1.31	100.00	101.58 µg/L	101.58
D5-EtFOSAA	1553	1.33	100.00	98.29 µg/L	98.29
13C9-PFDA	23601	0.90	100.00	99.54 µg/L	99.54



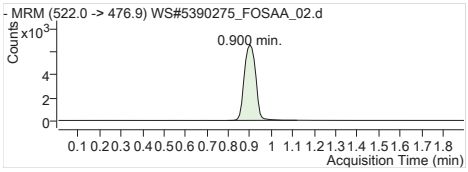


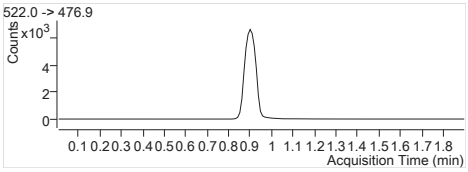
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: Calibration



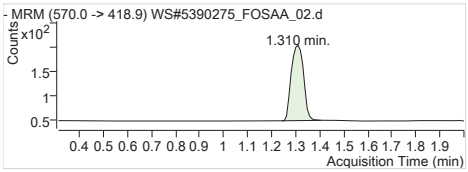


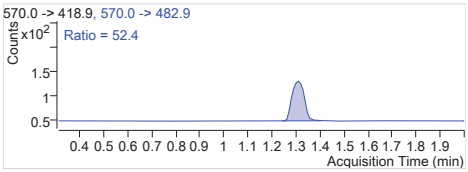
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: Calibration



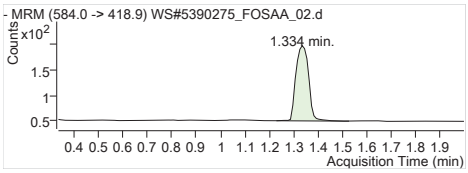


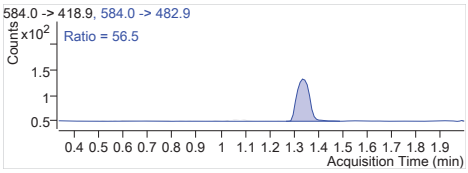
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.900 (0.900)
Concentration: 1 µg/L
Sample type: Calibration



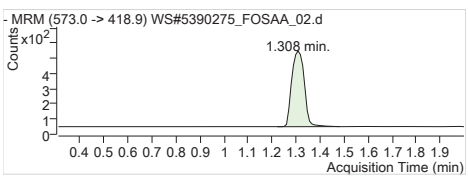


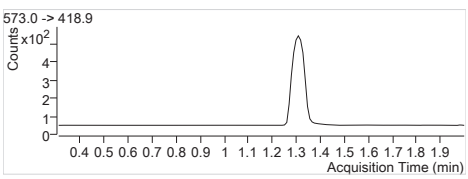
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 0.84 µg/L
Area ratio: 0.31261
Sample type: Calibration



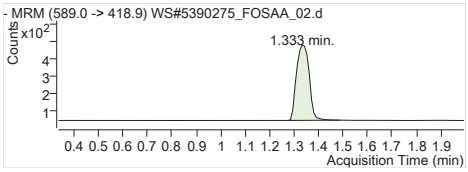


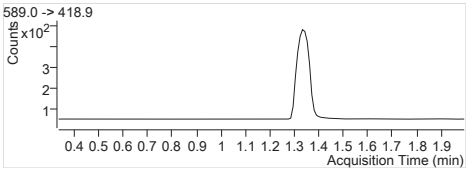
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.334)
Calc. conc. 0.86 µg/L
Area ratio: 0.35010
Sample type: Calibration



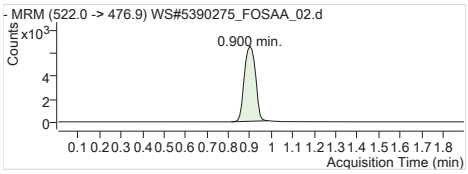


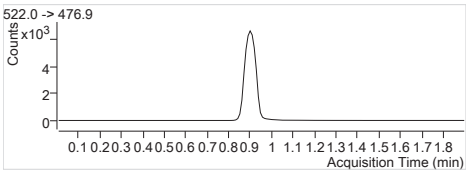
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 101.58 µg/L
Area ratio: 0.07449
Sample type: Calibration





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	98.29 µg/L
Area ratio:	0.06409
Sample type:	Calibration





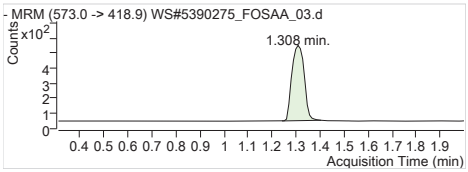
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.900 (0.900)
Calc. conc.	99.54 µg/L
Area ratio:	0
Sample type:	Calibration

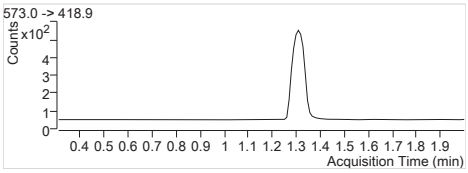
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**STD 2**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_03.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A3
Acq. Date	2018/02/10 12:32:43 AM	**Injection Volume**	Per Method
Sample Annotation	-		

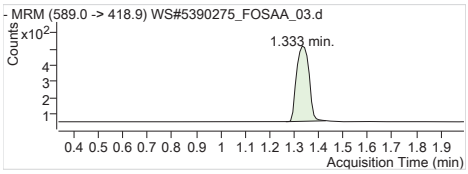
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1787	1.31	1 µg/L		
D5-EtFOSAA IS	1656	1.33	1 µg/L		
13C9-PFDA IS	24810	0.90	1 µg/L		

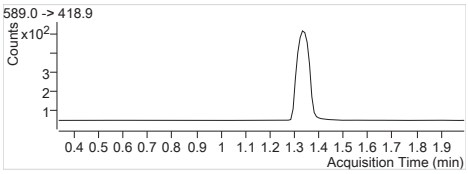
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	1050	1.31	1.70	1.64 µg/L	96.35
EtFOSAA 1	1058	1.33	1.70	1.56 µg/L	91.76
D3-MeFOSAA	1804	1.31	100.00	99.15 µg/L	99.15
D5-EtFOSAA	1686	1.33	100.00	104.21 µg/L	104.21
13C9-PFDA	24025	0.90	100.00	101.32 µg/L	101.32



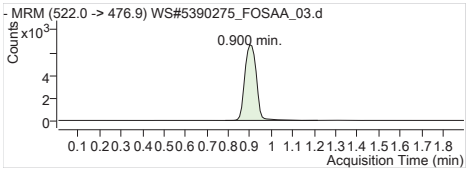


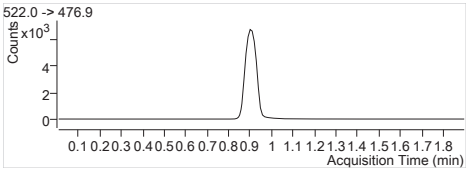
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: Calibration



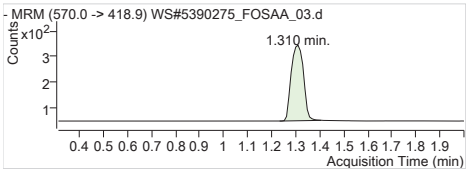


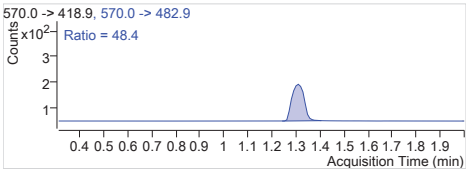
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: Calibration



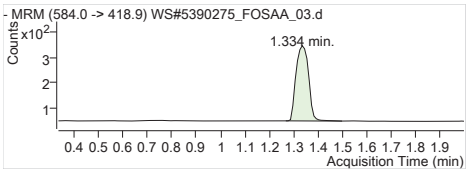


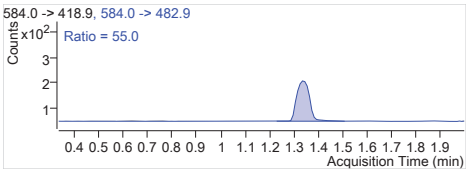
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.900 (0.900)
Concentration: 1 µg/L
Sample type: Calibration



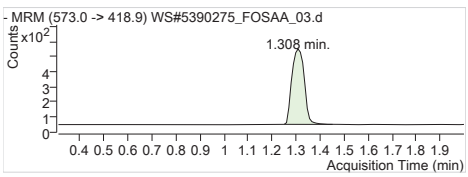


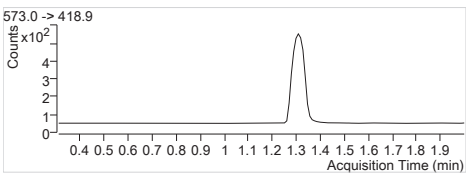
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 1.64 µg/L
Area ratio: 0.58758
Sample type: Calibration



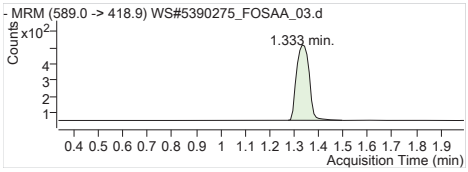


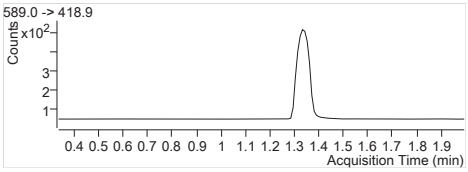
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.334)
Calc. conc. 1.56 µg/L
Area ratio: 0.63889
Sample type: Calibration



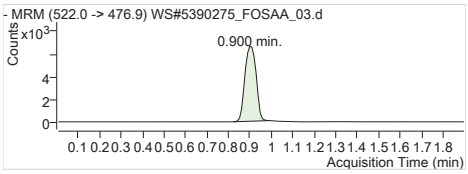


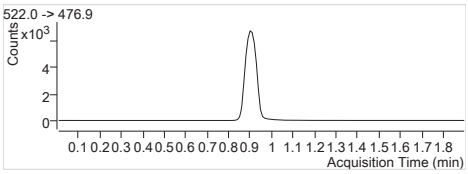
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 99.15 µg/L
Area ratio: 0.07271
Sample type: Calibration





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	104.21 µg/L
Area ratio:	0.06796
Sample type:	Calibration





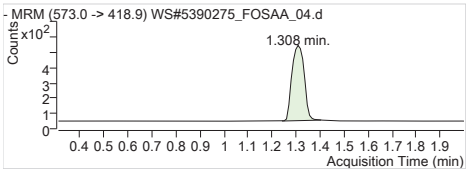
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.900 (0.900)
Calc. conc.	101.32 µg/L
Area ratio:	0
Sample type:	Calibration

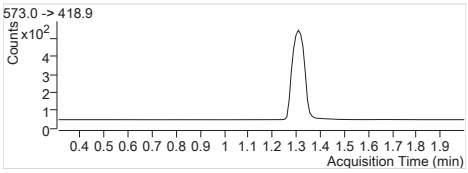
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**STD 3**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_04.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A4
Acq. Date	2018/02/10 12:35:07 AM	**Injection Volume**	Per Method
Sample Annotation	-		

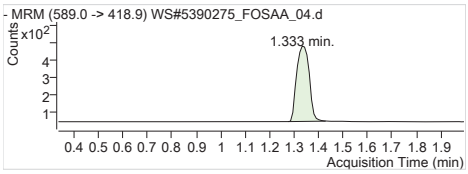
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1760	1.31	1 µg/L		
D5-EtFOSAA IS	1552	1.33	1 µg/L		
13C9-PFDA IS	24721	0.90	1 µg/L		

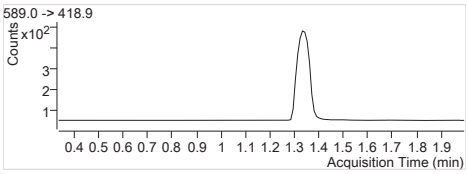
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	3076	1.31	5.00	4.99 µg/L	99.81
EtFOSAA 1	3185	1.33	5.00	4.97 µg/L	99.44
D3-MeFOSAA	1804	1.31	100.00	99.51 µg/L	99.51
D5-EtFOSAA	1556	1.33	100.00	96.52 µg/L	96.52
13C9-PFDA	23954	0.90	100.00	101.03 µg/L	101.03



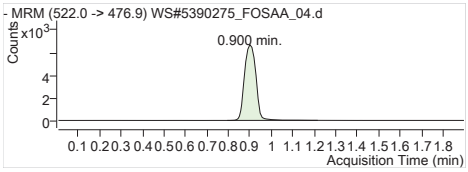


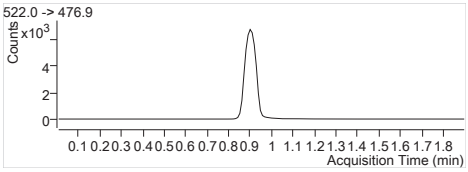
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: Calibration



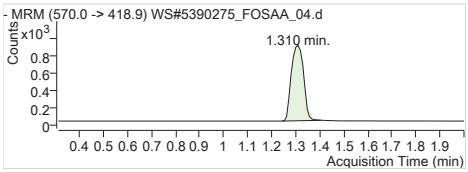


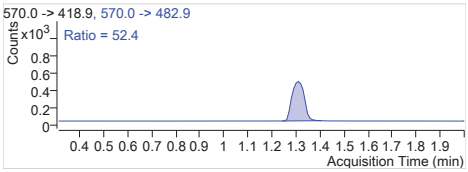
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: Calibration



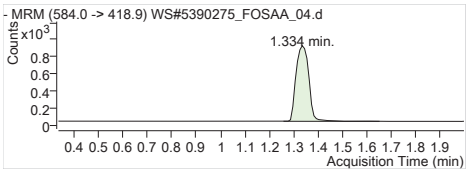


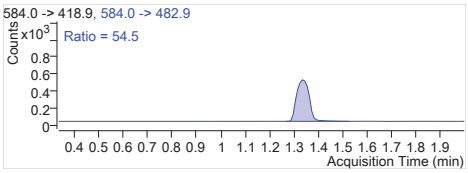
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.900 (0.900)
Concentration: 1 µg/L
Sample type: Calibration



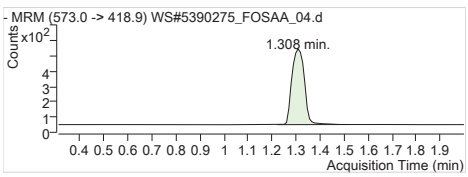


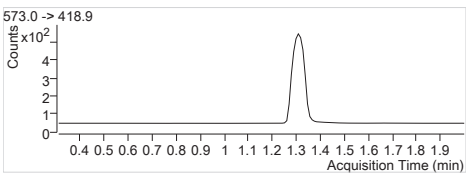
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 4.99 µg/L
Area ratio: 1.74773
Sample type: Calibration



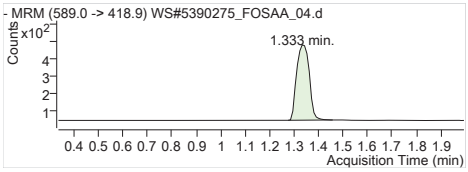


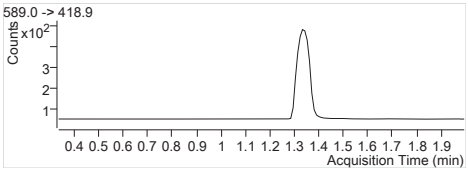
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.334)
Calc. conc. 4.97 µg/L
Area ratio: 2.05219
Sample type: Calibration



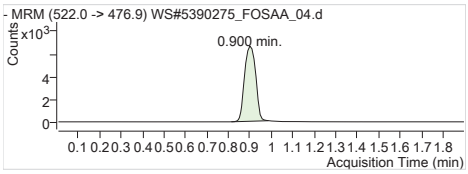


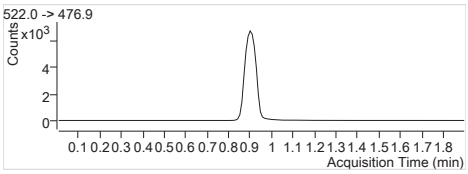
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 99.51 µg/L
Area ratio: 0.07297
Sample type: Calibration





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	96.52 µg/L
Area ratio:	0.06294
Sample type:	Calibration





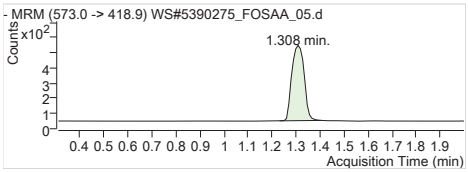
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.900 (0.900)
Calc. conc.	101.03 µg/L
Area ratio:	0
Sample type:	Calibration

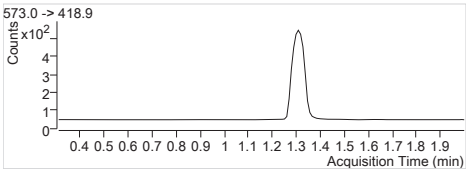
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**STD 4**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_05.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A5
Acq. Date	2018/02/10 12:37:32 AM	**Injection Volume**	Per Method
Sample Annotation	-		

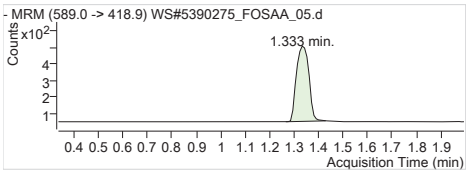
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1775	1.31	1 µg/L		
D5-EtFOSAA IS	1623	1.33	1 µg/L		
13C9-PFDA IS	25154	0.90	1 µg/L		

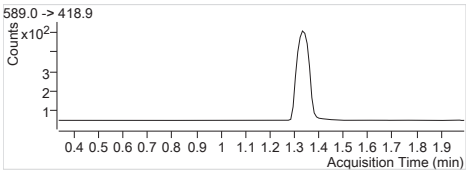
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	8045	1.31	12.50	13.04 µg/L	104.30
EtFOSAA 1	8482	1.33	12.50	12.63 µg/L	101.07
D3-MeFOSAA	1829	1.31	100.00	99.15 µg/L	99.15
D5-EtFOSAA	1655	1.33	100.00	100.90 µg/L	100.90
13C9-PFDA	24257	0.90	100.00	102.30 µg/L	102.30



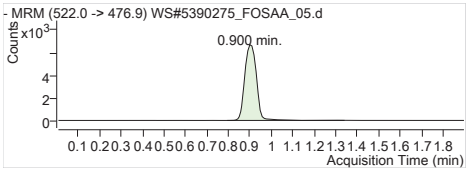


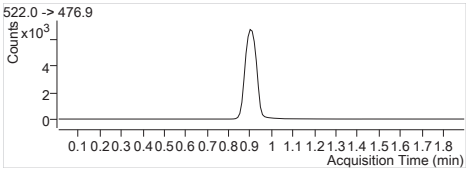
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: Calibration



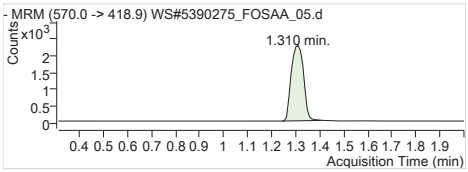


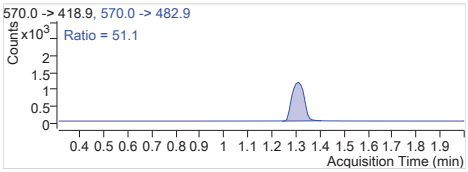
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: Calibration



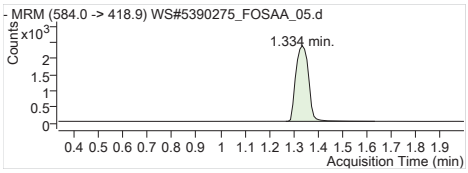


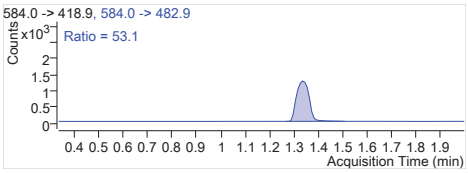
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.900 (0.900)
Concentration: 1 µg/L
Sample type: Calibration



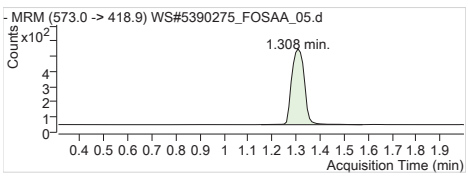


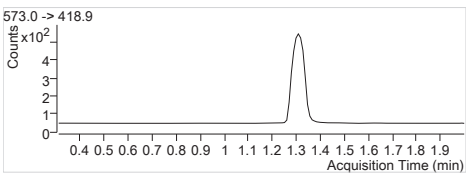
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 13.04 µg/L
Area ratio: 4.53239
Sample type: Calibration



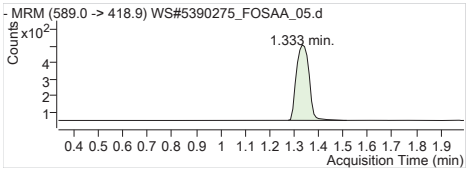


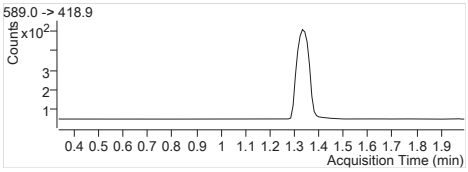
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.334)
Calc. conc. 12.63 µg/L
Area ratio: 5.22612
Sample type: Calibration



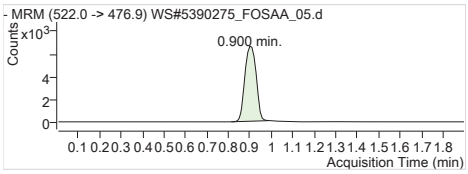


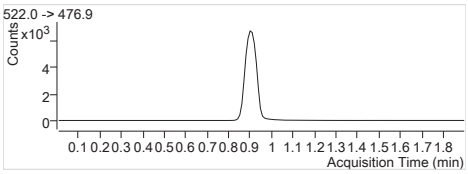
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 99.15 µg/L
Area ratio: 0.07271
Sample type: Calibration





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	100.90 µg/L
Area ratio:	0.06579
Sample type:	Calibration





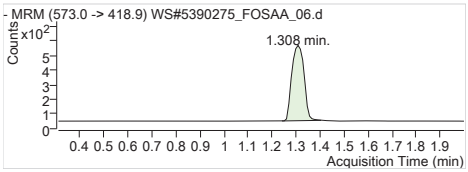
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.900 (0.900)
Calc. conc.	102.30 µg/L
Area ratio:	0
Sample type:	Calibration

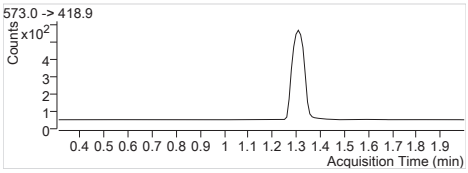
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**STD 5**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_06.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A6
Acq. Date	2018/02/10 12:39:57 AM	**Injection Volume**	Per Method
Sample Annotation	-		

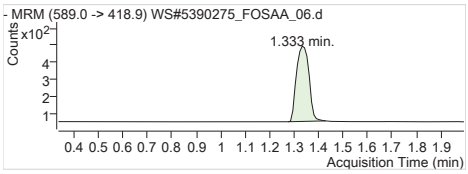
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1837	1.31	1 µg/L		
D5-EtFOSAA IS	1580	1.33	1 µg/L		
13C9-PFDA IS	24748	0.90	1 µg/L		

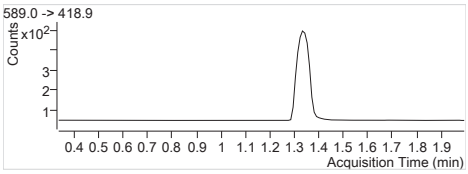
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	15384	1.31	25.00	24.14 µg/L	96.56
EtFOSAA 1	16586	1.33	25.00	25.36 µg/L	101.44
D3-MeFOSAA	1859	1.31	100.00	102.43 µg/L	102.43
D5-EtFOSAA	1598	1.33	100.00	99.02 µg/L	99.02
13C9-PFDA	23920	0.90	100.00	100.88 µg/L	100.88



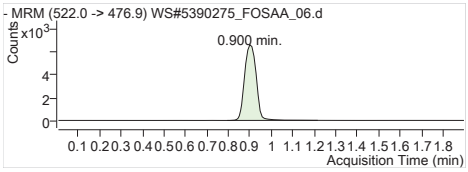


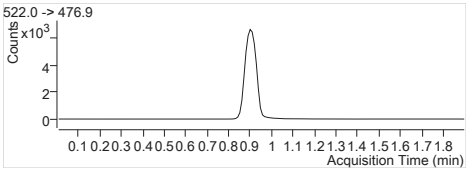
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: Calibration



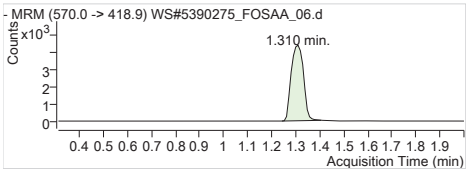


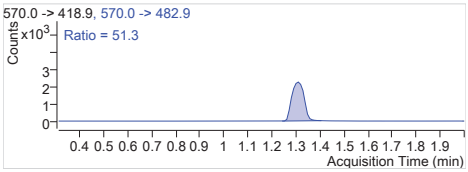
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: Calibration



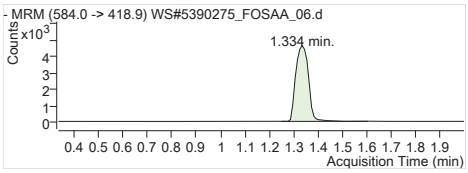


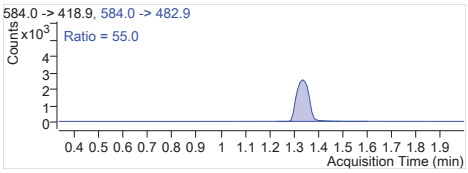
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.900 (0.900)
Concentration: 1 µg/L
Sample type: Calibration



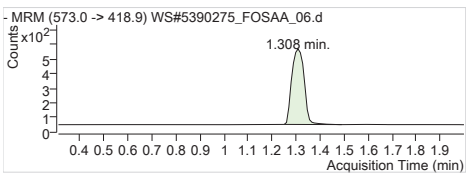


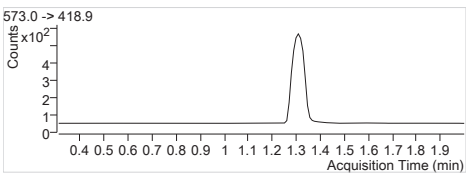
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 24.14 µg/L
Area ratio: 8.37452
Sample type: Calibration



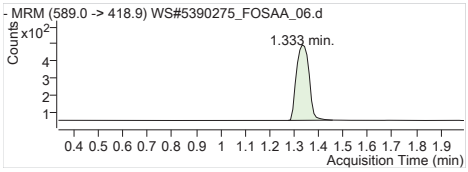


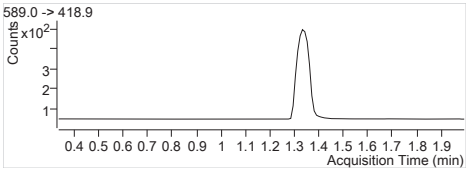
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.334)
Calc. conc. 25.36 µg/L
Area ratio: 10.49747
Sample type: Calibration



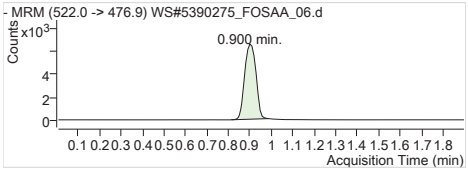


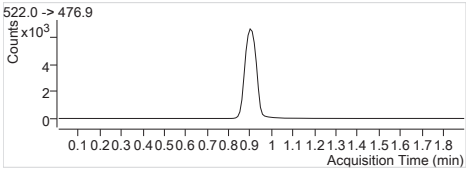
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 102.43 µg/L
Area ratio: 0.07512
Sample type: Calibration





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	99.02 µg/L
Area ratio:	0.06457
Sample type:	Calibration





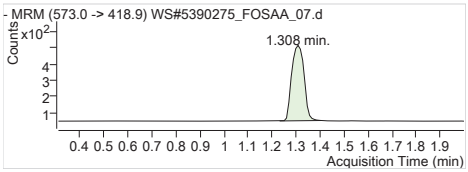
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.900 (0.900)
Calc. conc.	100.88 µg/L
Area ratio:	0
Sample type:	Calibration

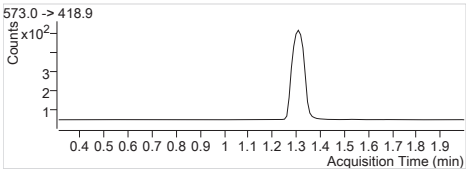
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**STD 6**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_07.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A7
Acq. Date	2018/02/10 12:42:22 AM	**Injection Volume**	Per Method
Sample Annotation	-		

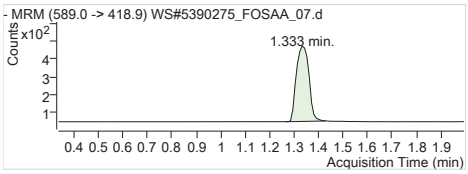
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1661	1.31	1 µg/L		
D5-EtFOSAA IS	1514	1.33	1 µg/L		
13C9-PFDA IS	23294	0.90	1 µg/L		

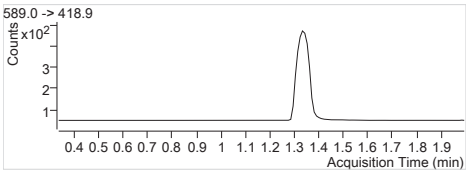
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	24332	1.31	41.70	42.27 µg/L	101.37
EtFOSAA 1	26753	1.33	41.70	42.68 µg/L	102.34
D3-MeFOSAA	1677	1.31	100.00	98.17 µg/L	98.17
D5-EtFOSAA	1535	1.33	100.00	101.06 µg/L	101.06
13C9-PFDA	22508	0.90	100.00	94.93 µg/L	94.93



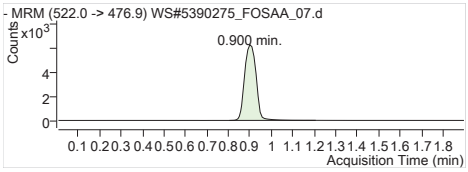


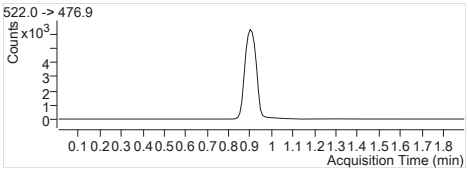
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: Calibration



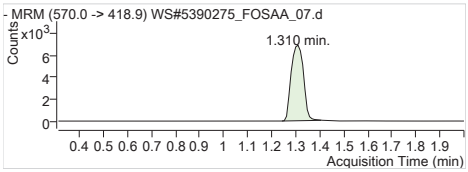


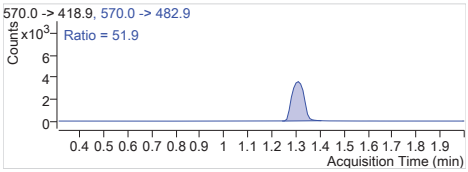
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: Calibration



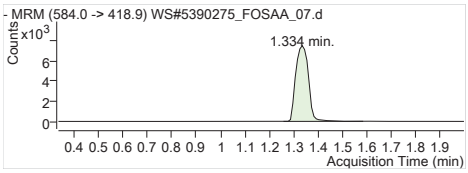


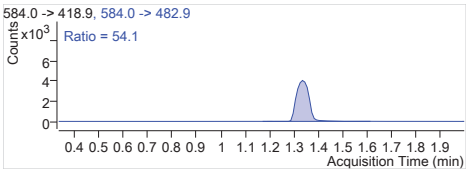
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.900 (0.900)
Concentration: 1 µg/L
Sample type: Calibration



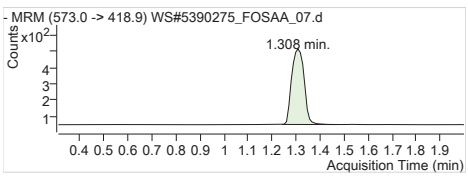


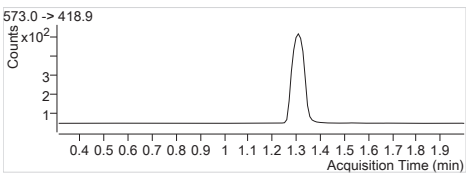
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 42.27 µg/L
Area ratio: 14.64901
Sample type: Calibration



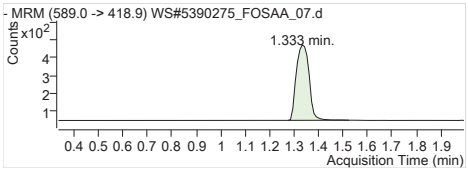


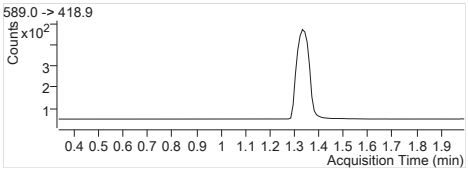
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.334)
Calc. conc. 42.68 µg/L
Area ratio: 17.67041
Sample type: Calibration



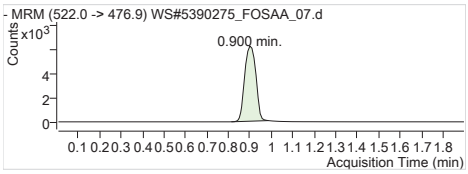


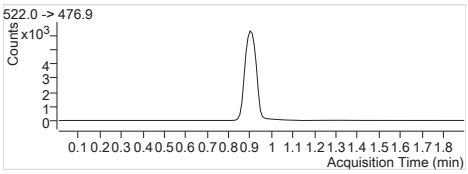
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 98.17 µg/L
Area ratio: 0.07199
Sample type: Calibration





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	101.06 µg/L
Area ratio:	0.06590
Sample type:	Calibration





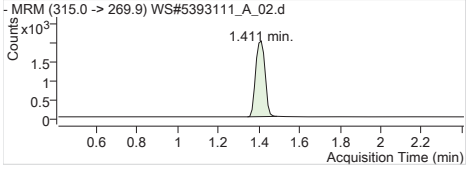
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.900 (0.900)
Calc. conc.	94.93 µg/L
Area ratio:	0
Sample type:	Calibration

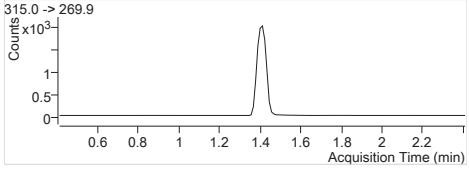
Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**STD 1**	**Instrument**	LCMS04
Data File	WS#5393111_A_02.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A2
Acq. Date	2018/02/13 1:11:26 PM	**Injection Volume**	Per Method
Sample Annotation	-		

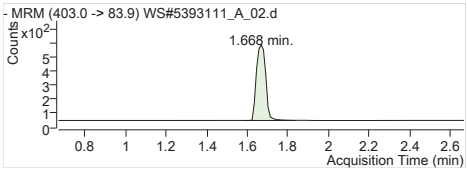
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6392	1.41	1 µg/L		
MPFHxS	1717	1.67	1 µg/L		
MPFHpA	8247	1.68	1 µg/L		
MPFOA	8747	1.86	1 µg/L		
MPFOS	1957	1.97	1 µg/L		
MPFNA	8445	2.00	1 µg/L		
MPFDA	7148	2.12	1 µg/L		
MPFUnA	8479	2.22	1 µg/L		
MPFDoA	10865	2.31	1 µg/L		
MPFTeDA	12432	2.46	1 µg/L		
13C6-PFHxA IS	22616	1.41	1 µg/L		
13C9-PFDA IS	31562	2.12	1 µg/L		

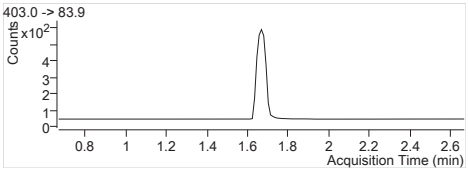
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	645	1.05	0.83	0.95 µg/L	113.94
PFHxA 1	2199	1.41	0.83	0.93 µg/L	112.22
PFHxS 1	765	1.67	0.83	0.93 µg/L	111.74
PFHpA 1	2910	1.68	0.83	0.83 µg/L	100.23
PFOA 1	3151	1.86	0.83	0.89 µg/L	107.22
PFOS 1	495	1.96	0.83	0.74 µg/L	88.64
PFNA 1	2710	2.00	0.83	0.90 µg/L	107.94
PFDA 1	2544	2.12	0.83	0.83 µg/L	100.38
PFUnA 1	2954	2.22	0.83	0.79 µg/L	95.64
PFDoA 1	3878	2.31	0.83	0.90 µg/L	108.32
PFTrDA 1	4216	2.39	0.83	0.81 µg/L	97.70
PFTeDA 1	3463	2.46	0.83	0.80 µg/L	96.50
13C2-PFHxA	6392	1.41	100.00	99.88 µg/L	99.88
18O2-PFHxS	1717	1.67	100.00	109.92 µg/L	109.92
13C4-PFHpA	8247	1.68	100.00	100.89 µg/L	100.89
13C4-PFOA	8747	1.86	100.00	100.81 µg/L	100.81
13C4-PFOS	1957	1.97	100.00	103.13 µg/L	103.13
13C5-PFNA	8444	2.00	100.00	100.90 µg/L	100.90
13C2-PFDA	7026	2.12	100.00	89.92 µg/L	89.92
13C2-PFUnA	8479	2.22	100.00	93.22 µg/L	93.22
13C2-PFDoA	10865	2.31	100.00	92.08 µg/L	92.08
13C2-PFTeDA	12616	2.46	100.00	93.15 µg/L	93.15
13C6-PFHxA	22616	1.41	100.00	96.84 µg/L	96.84
13C9-PFDA	31562	2.12	100.00	104.36 µg/L	104.36



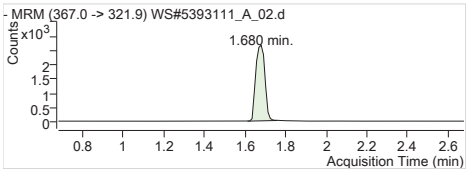


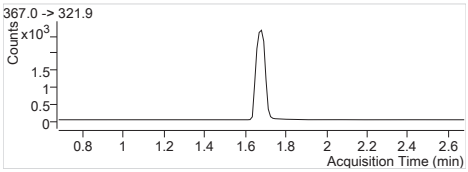
MPFHxA Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Calibration



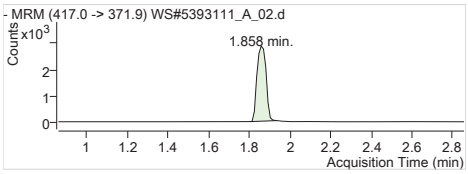


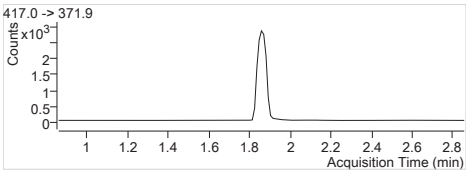
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: Calibration



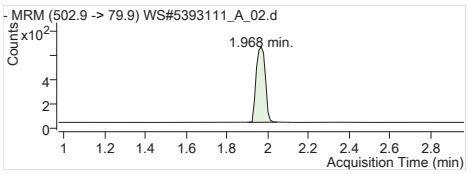


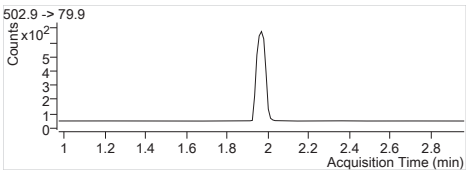
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: Calibration



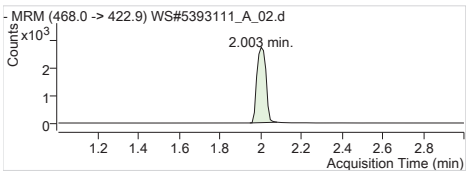


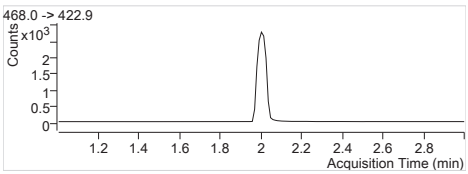
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: Calibration



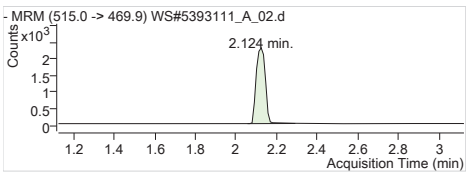


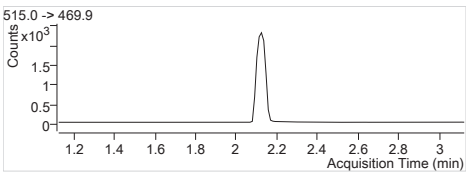
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: Calibration



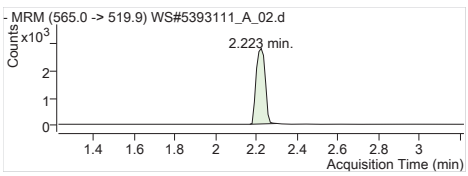


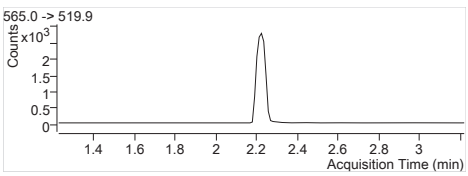
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: Calibration



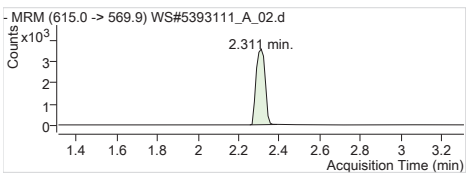


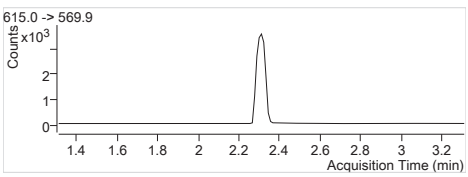
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Calibration



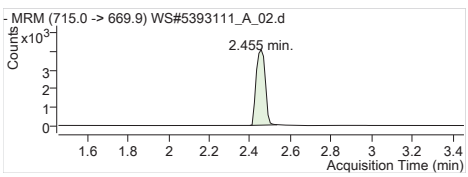


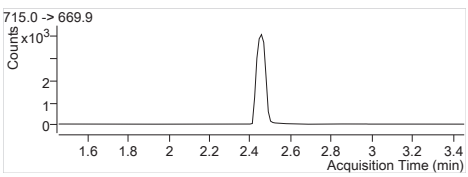
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: Calibration



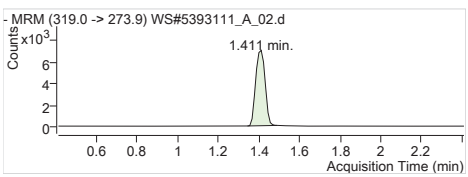


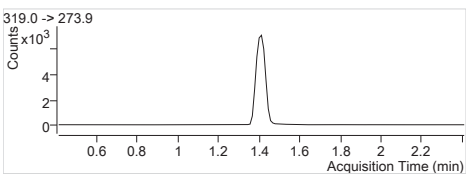
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: Calibration



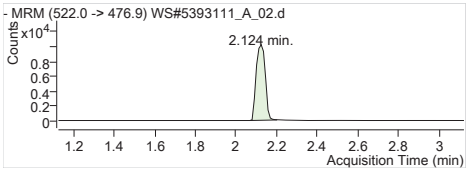


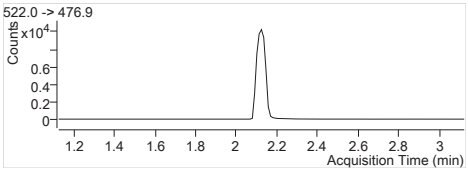
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: Calibration



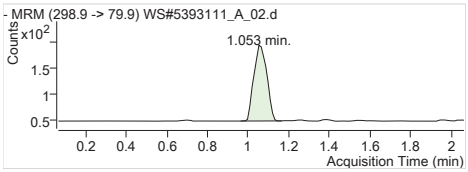


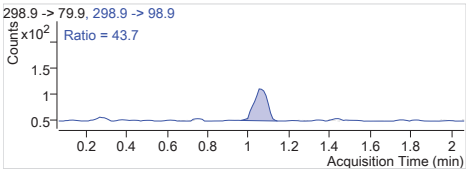
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Calibration



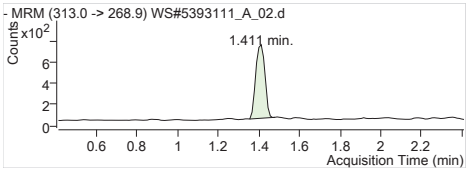


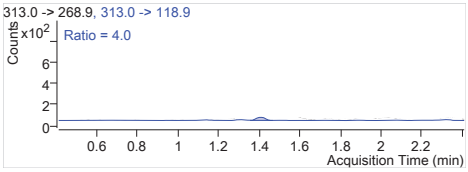
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Calibration



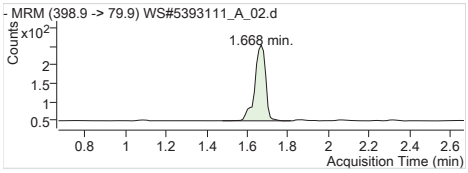


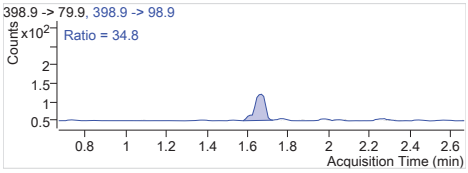
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.053 (1.064)
Calc. conc. 0.95 µg/L
Area ratio: 0.37566
Sample type: Calibration



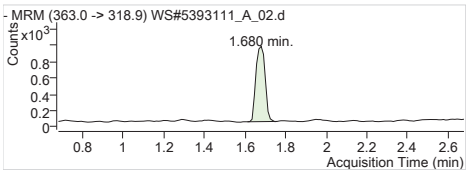


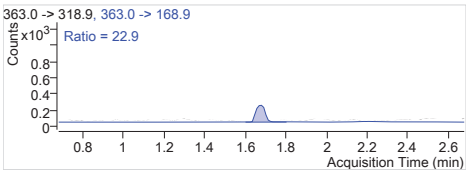
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 0.93 µg/L
Area ratio: 0.34402
Sample type: Calibration



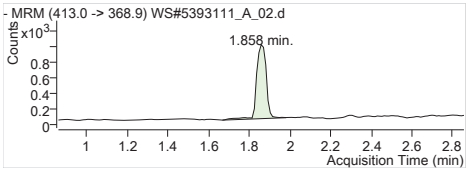


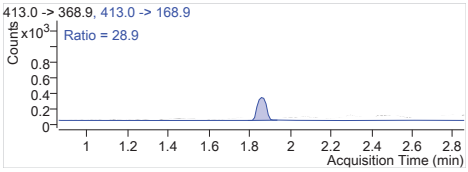
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 0.93 µg/L
Area ratio: 0.44554
Sample type: Calibration



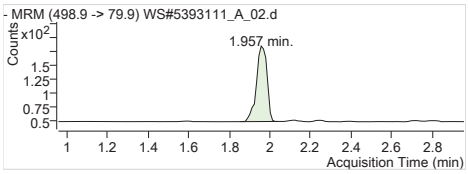


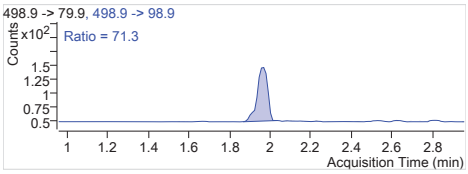
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 0.83 µg/L
Area ratio: 0.35286
Sample type: Calibration



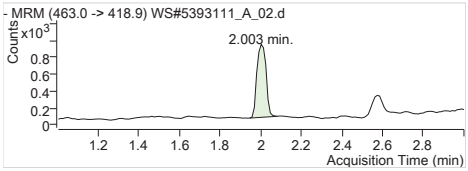


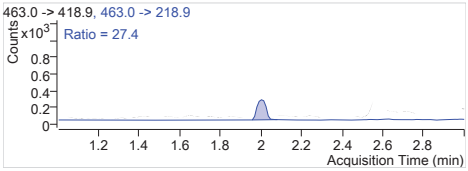
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 0.89 µg/L
Area ratio: 0.36024
Sample type: Calibration



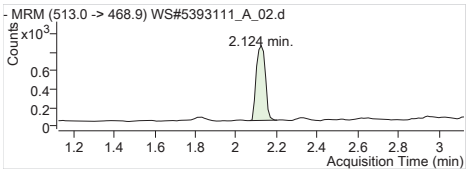


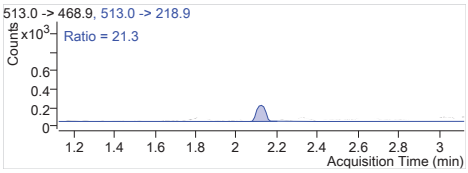
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.957 (1.957)
Calc. conc. 0.74 µg/L
Area ratio: 0.25294
Sample type: Calibration



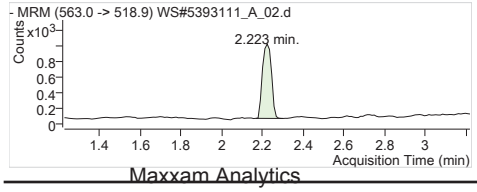


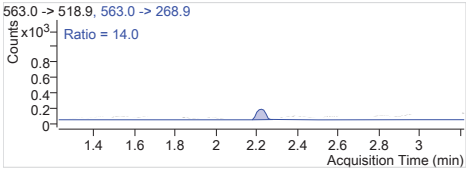
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 0.90 µg/L
Area ratio: 0.32090
Sample type: Calibration



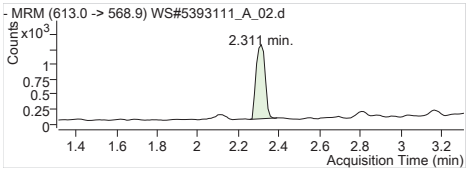


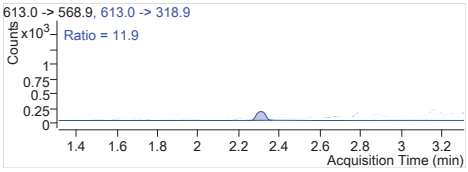
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 0.83 µg/L
Area ratio: 0.35590
Sample type: Calibration



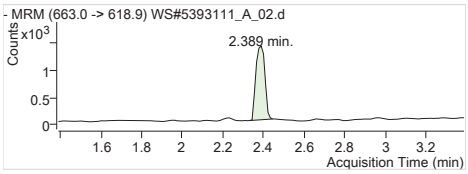


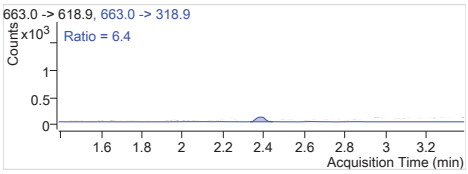
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 0.79 µg/L
Area ratio: 0.34839
Sample type: Calibration



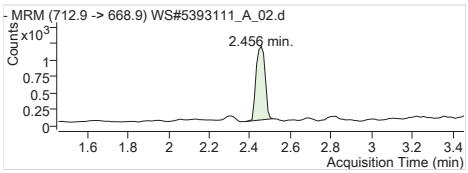


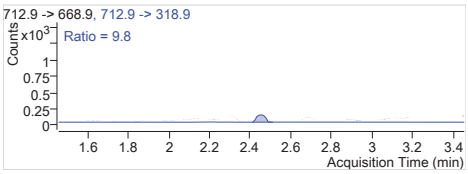
PFDoA 1	613.0 -> 568.9
RT (Exp. RT):	2.311 (2.311)
Calc. conc.	0.90 µg/L
Area ratio:	0.35693
Sample type:	Calibration



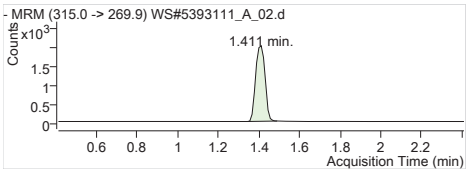


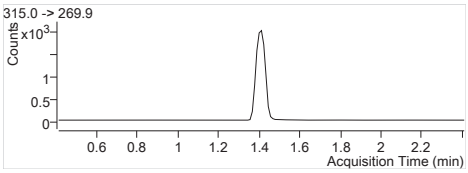
PFTrDA 1	663.0 -> 618.9
RT (Exp. RT):	2.389 (2.389)
Calc. conc.	0.81 µg/L
Area ratio:	0.33912
Sample type:	Calibration



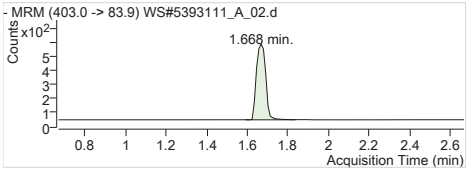


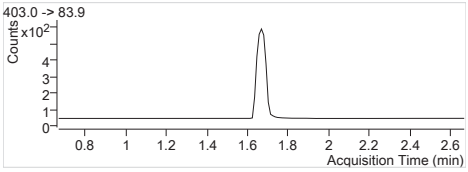
PFTeDA 1	712.9 -> 668.9
RT (Exp. RT):	2.456 (2.456)
Calc. conc.	0.80 µg/L
Area ratio:	0.27856
Sample type:	Calibration



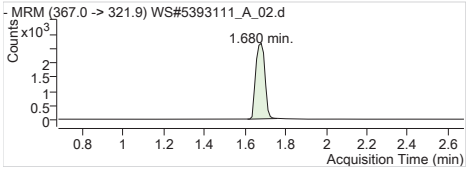


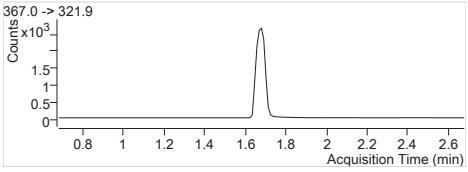
13C2-PFHxA	315.0 -> 269.9
RT (Exp. RT):	1.411 (1.411)
Calc. conc.	99.88 µg/L
Area ratio:	0.28263
Sample type:	Calibration



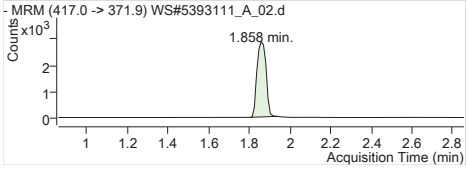


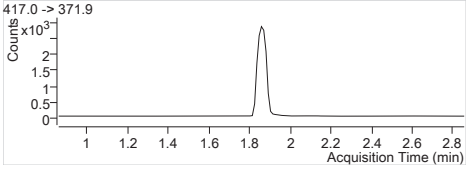
18O2-PFHxS	403.0 -> 83.9
RT (Exp. RT):	1.668 (1.668)
Calc. conc.	109.92 µg/L
Area ratio:	0.07592
Sample type:	Calibration



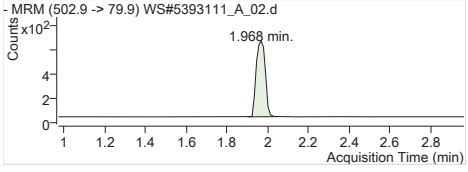


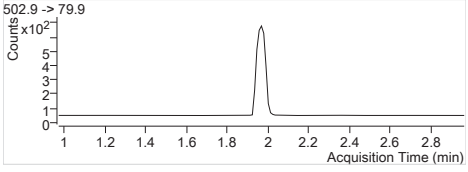
13C4-PFHpA	367.0 -> 321.9
RT (Exp. RT):	1.680 (1.680)
Calc. conc.	100.89 µg/L
Area ratio:	0.36465
Sample type:	Calibration



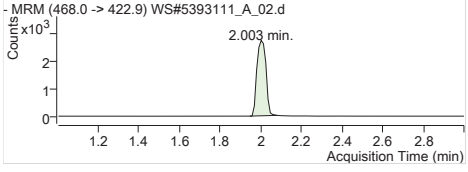


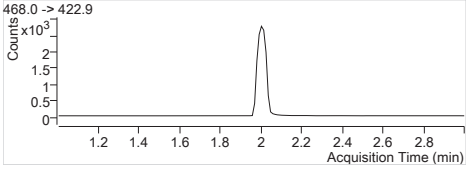
13C4-PFOA	417.0 -> 371.9
RT (Exp. RT):	1.858 (1.858)
Calc. conc.	100.81 µg/L
Area ratio:	0.38676
Sample type:	Calibration



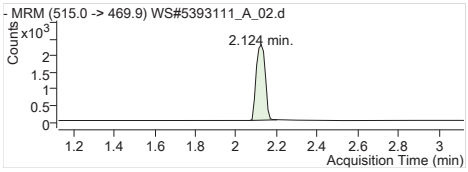


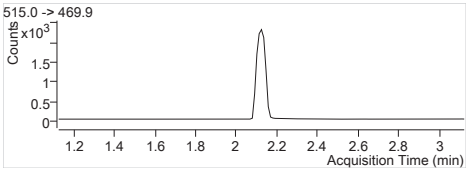
13C4-PFOS	502.9 -> 79.9
RT (Exp. RT):	1.968 (1.968)
Calc. conc.	103.13 µg/L
Area ratio:	0.08653
Sample type:	Calibration



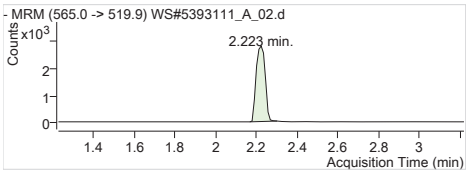


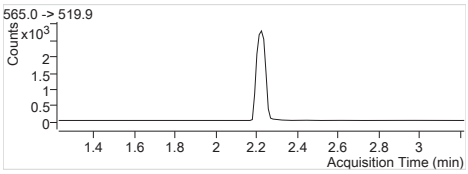
13C5-PFNA	468.0 -> 422.9
RT (Exp. RT):	2.003 (2.003)
Calc. conc.	100.90 µg/L
Area ratio:	0.37336
Sample type:	Calibration



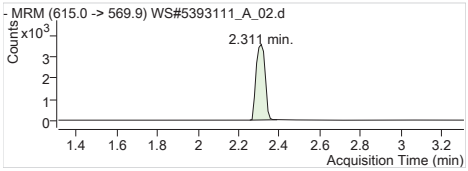


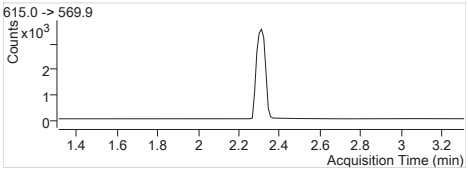
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 89.92 µg/L
Area ratio: 0.22261
Sample type: Calibration



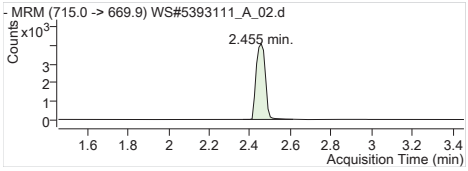


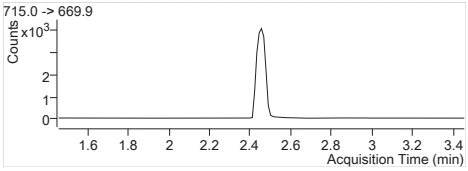
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 93.22 µg/L
Area ratio: 0.26865
Sample type: Calibration



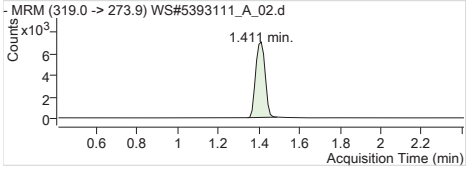


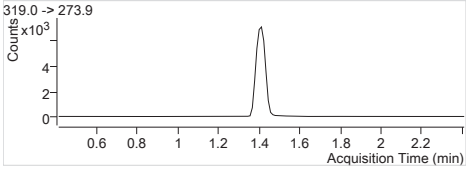
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 92.08 µg/L
Area ratio: 0.34424
Sample type: Calibration



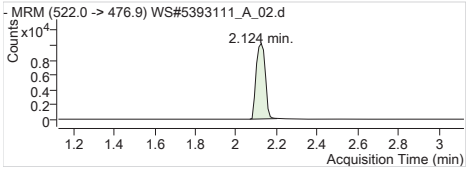


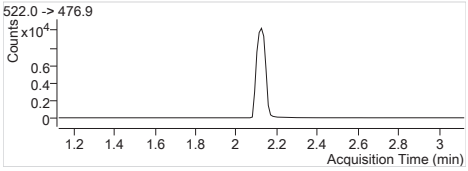
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 93.15 µg/L
Area ratio: 0.39972
Sample type: Calibration





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 96.84 µg/L
Area ratio: 0
Sample type: Calibration





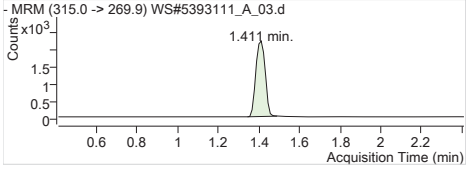
13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 104.36 µg/L
Area ratio: 0
Sample type: Calibration

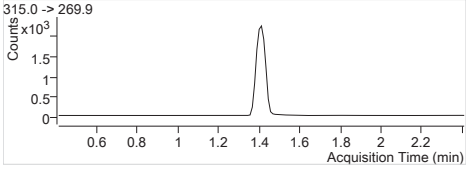
Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**STD 2**	**Instrument**	LCMS04
Data File	WS#5393111_A_03.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A3
Acq. Date	2018/02/13 1:16:22 PM	**Injection Volume**	Per Method
Sample Annotation	-		

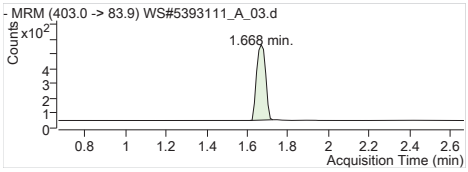
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	7030	1.41	1 µg/L		
MPFHxS	1576	1.67	1 µg/L		
MPFHpA	8738	1.68	1 µg/L		
MPFOA	9165	1.86	1 µg/L		
MPFOS	2029	1.97	1 µg/L		
MPFNA	8946	2.00	1 µg/L		
MPFDA	7693	2.12	1 µg/L		
MPFUnA	8612	2.22	1 µg/L		
MPFDoA	11957	2.31	1 µg/L		
MPFTeDA	12823	2.46	1 µg/L		
13C6-PFHxA IS	24047	1.41	1 µg/L		
13C9-PFDA IS	29599	2.12	1 µg/L		

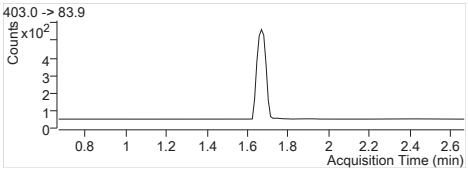
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	1309	1.06	1.70	1.80 µg/L	105.82
PFHxA 1	4661	1.41	1.70	1.65 µg/L	97.09
PFHxS 1	1264	1.67	1.70	1.62 µg/L	95.47
PFHpA 1	6372	1.68	1.70	1.72 µg/L	100.99
PFOA 1	6828	1.86	1.70	1.73 µg/L	101.79
PFOS 1	1317	1.96	1.70	1.74 µg/L	102.07
PFNA 1	6137	2.00	1.70	1.77 µg/L	103.99
PFDA 1	6095	2.12	1.70	1.71 µg/L	100.85
PFUnA 1	6714	2.22	1.70	1.72 µg/L	101.38
PFDoA 1	8135	2.31	1.70	1.59 µg/L	93.50
PFTrDA 1	9538	2.39	1.70	1.71 µg/L	100.57
PFTeDA 1	7730	2.46	1.70	1.68 µg/L	98.98
13C2-PFHxA	7030	1.41	100.00	103.32 µg/L	103.32
18O2-PFHxS	1576	1.67	100.00	94.89 µg/L	94.89
13C4-PFHpA	8738	1.68	100.00	100.54 µg/L	100.54
13C4-PFOA	9165	1.86	100.00	99.34 µg/L	99.34
13C4-PFOS	2029	1.97	100.00	100.56 µg/L	100.56
13C5-PFNA	8945	2.00	100.00	100.52 µg/L	100.52
13C2-PFDA	7582	2.12	100.00	103.47 µg/L	103.47
13C2-PFUnA	8612	2.22	100.00	100.96 µg/L	100.96
13C2-PFDoA	11957	2.31	100.00	108.06 µg/L	108.06
13C2-PFTeDA	13001	2.46	100.00	102.36 µg/L	102.36
13C6-PFHxA	24047	1.41	100.00	102.97 µg/L	102.97
13C9-PFDA	29599	2.12	100.00	97.87 µg/L	97.87



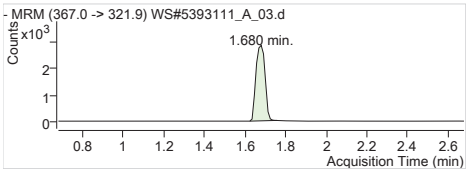


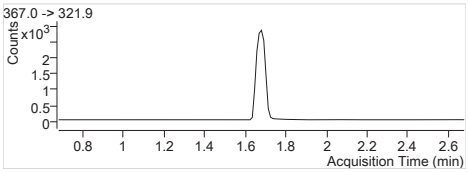
MPFHxA Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Calibration



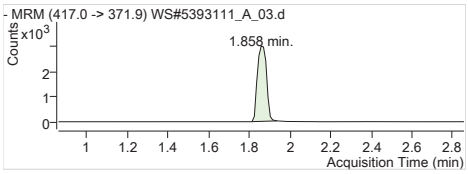


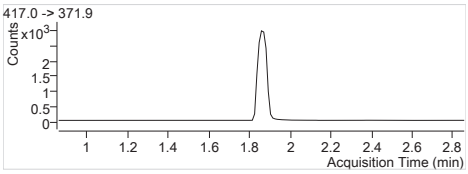
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: Calibration



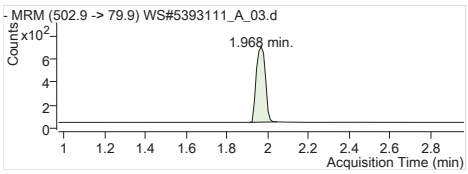


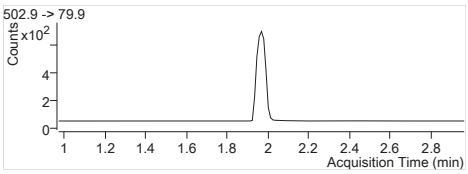
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: Calibration



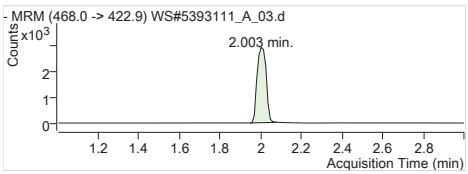


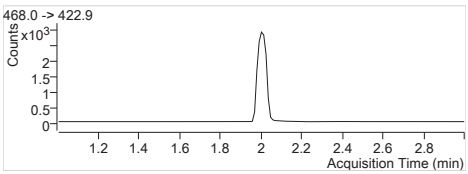
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: Calibration



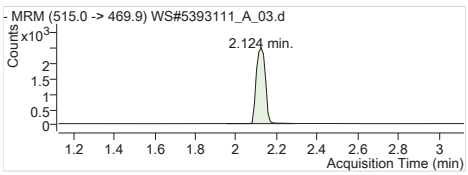


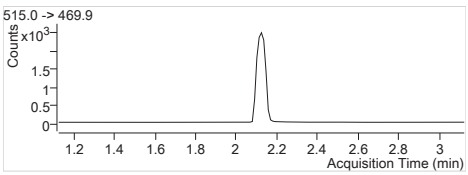
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: Calibration



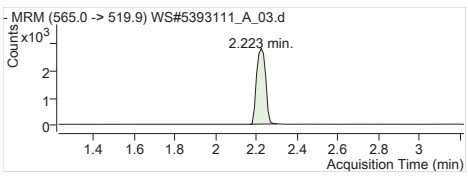


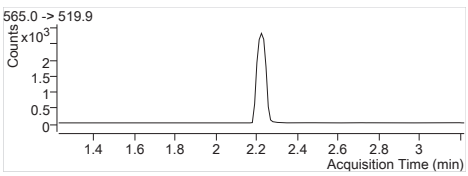
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: Calibration



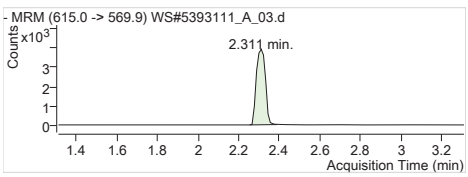


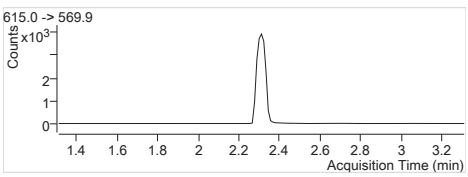
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Calibration



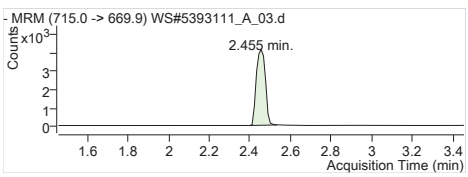


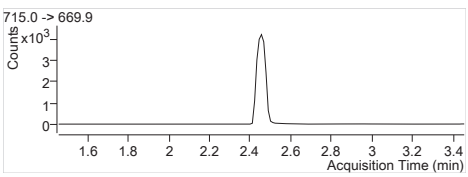
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: Calibration



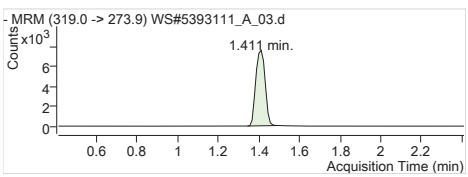


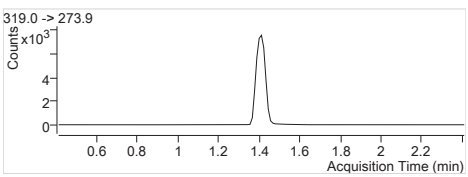
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: Calibration



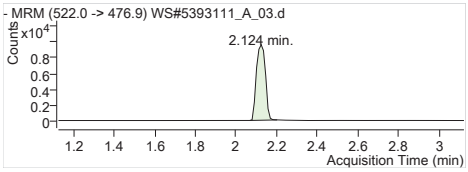


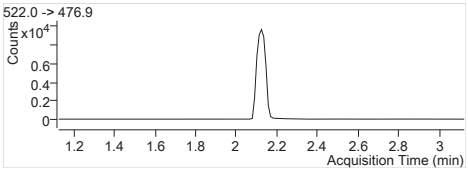
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: Calibration



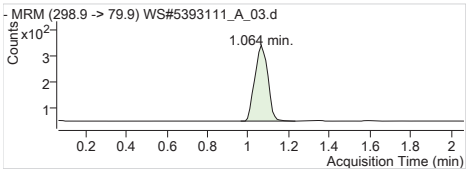


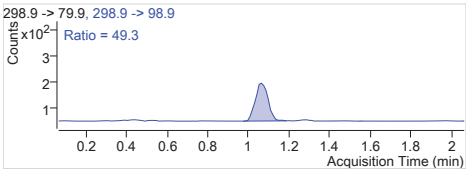
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Calibration



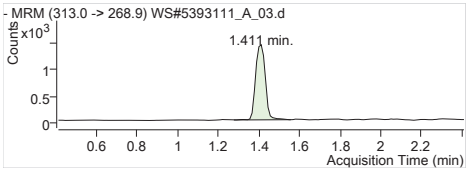


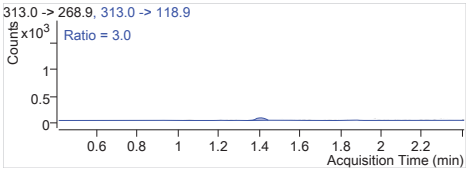
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Calibration



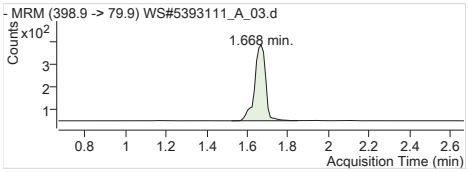


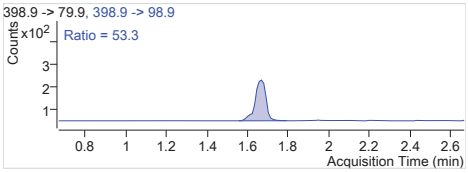
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.064 (1.064)
Calc. conc. 1.80 µg/L
Area ratio: 0.83058
Sample type: Calibration



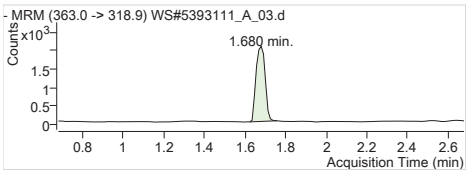


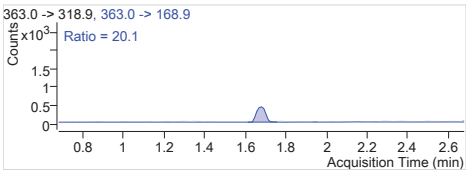
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 1.65 µg/L
Area ratio: 0.66302
Sample type: Calibration



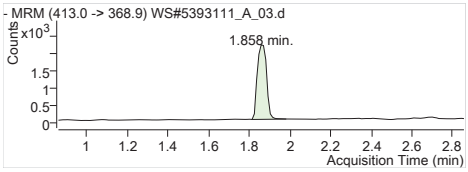


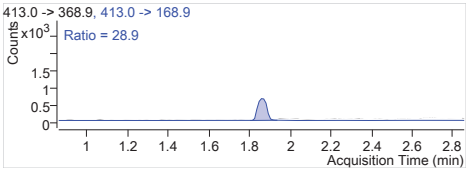
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 1.62 µg/L
Area ratio: 0.80203
Sample type: Calibration



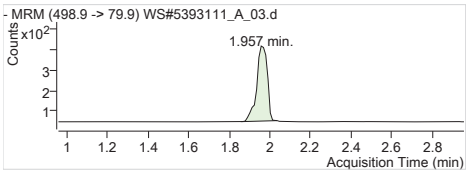


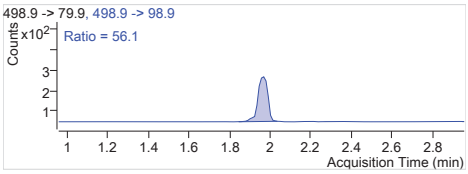
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 1.72 µg/L
Area ratio: 0.72923
Sample type: Calibration



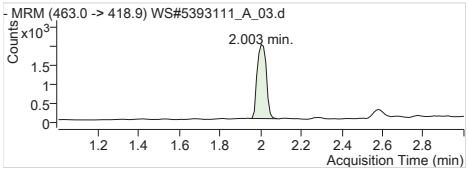


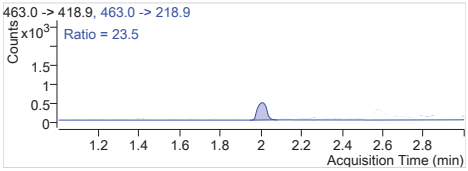
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 1.73 µg/L
Area ratio: 0.74501
Sample type: Calibration



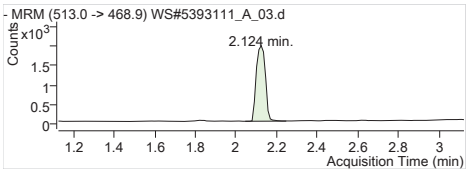


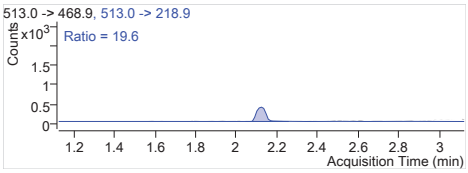
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.957 (1.957)
Calc. conc. 1.74 µg/L
Area ratio: 0.64909
Sample type: Calibration



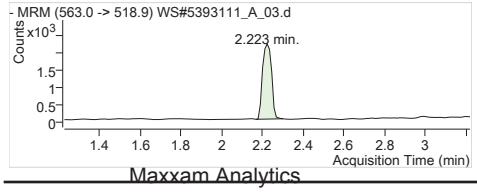


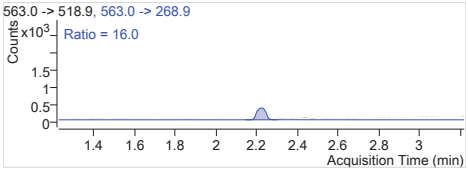
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 1.77 µg/L
Area ratio: 0.68600
Sample type: Calibration



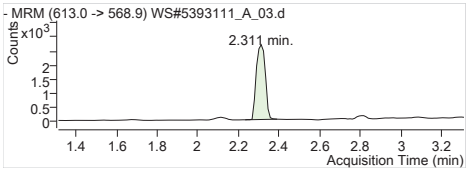


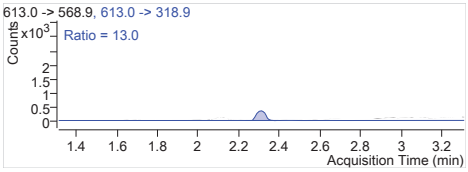
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 1.71 µg/L
Area ratio: 0.79228
Sample type: Calibration



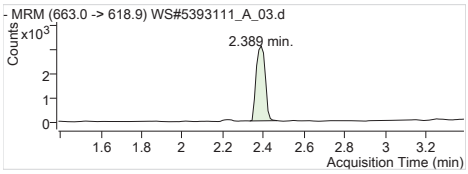


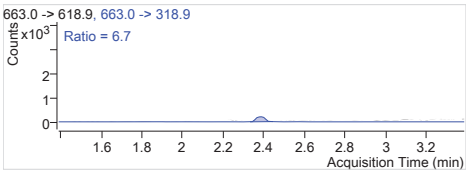
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 1.72 µg/L
Area ratio: 0.77961
Sample type: Calibration



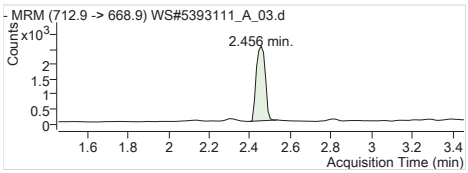


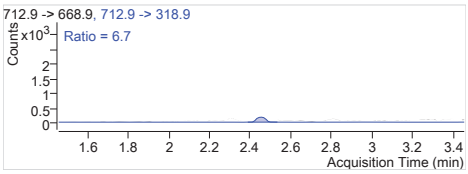
PFDoA 1	613.0 -> 568.9
RT (Exp. RT):	2.311 (2.311)
Calc. conc.	1.59 µg/L
Area ratio:	0.68035
Sample type:	Calibration



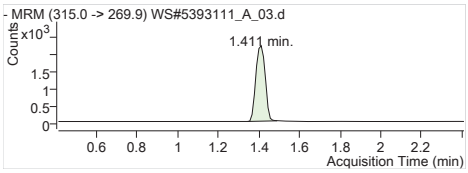


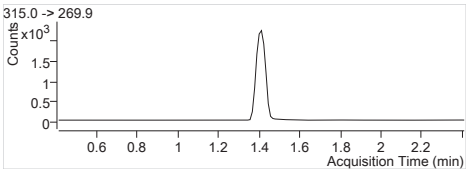
PFTrDA 1	663.0 -> 618.9
RT (Exp. RT):	2.389 (2.389)
Calc. conc.	1.71 µg/L
Area ratio:	0.74382
Sample type:	Calibration



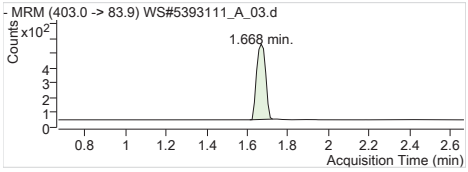


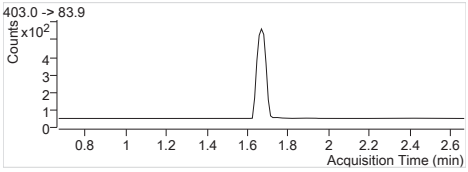
PFTeDA 1	712.9 -> 668.9
RT (Exp. RT):	2.456 (2.456)
Calc. conc.	1.68 µg/L
Area ratio:	0.60282
Sample type:	Calibration



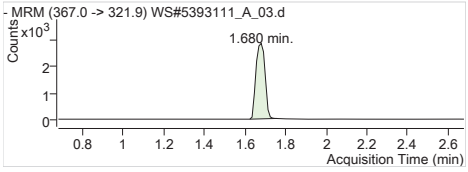


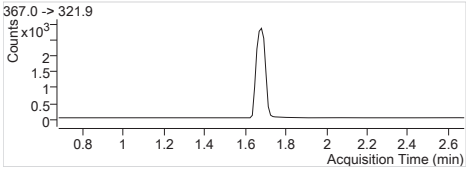
13C2-PFHxA	315.0 -> 269.9
RT (Exp. RT):	1.411 (1.411)
Calc. conc.	103.32 µg/L
Area ratio:	0.29234
Sample type:	Calibration



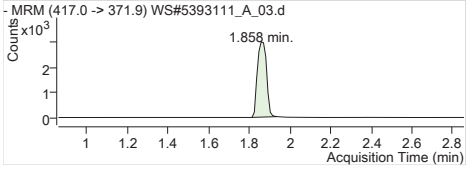


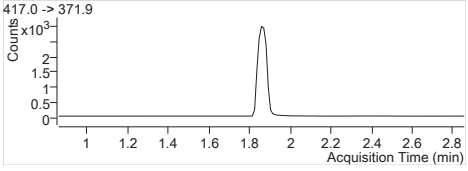
18O2-PFHxS	403.0 -> 83.9
RT (Exp. RT):	1.668 (1.668)
Calc. conc.	94.89 µg/L
Area ratio:	0.06554
Sample type:	Calibration



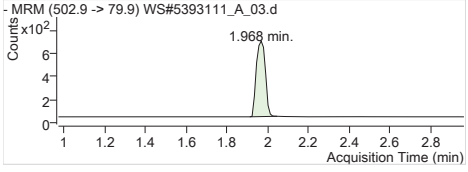


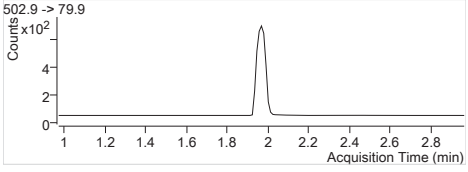
13C4-PFHpA	367.0 -> 321.9
RT (Exp. RT):	1.680 (1.680)
Calc. conc.	100.54 µg/L
Area ratio:	0.36337
Sample type:	Calibration



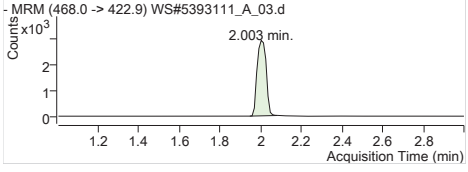


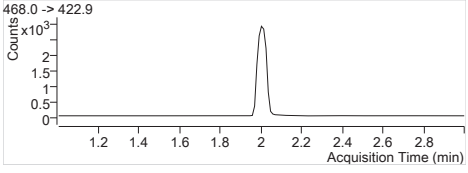
13C4-PFOA	417.0 -> 371.9
RT (Exp. RT):	1.858 (1.858)
Calc. conc.	99.34 µg/L
Area ratio:	0.38113
Sample type:	Calibration



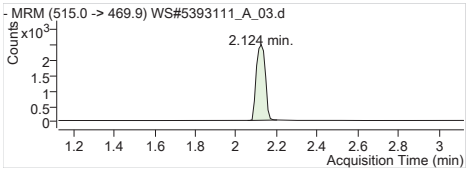


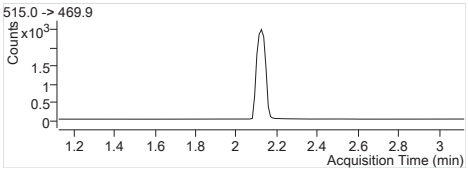
13C4-PFOS	502.9 -> 79.9
RT (Exp. RT):	1.968 (1.968)
Calc. conc.	100.56 µg/L
Area ratio:	0.08438
Sample type:	Calibration



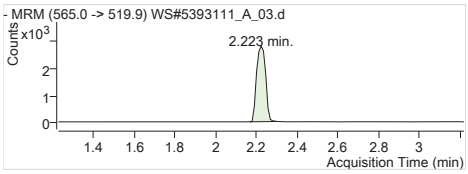


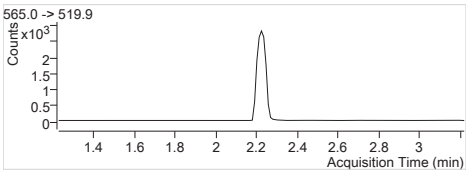
13C5-PFNA	468.0 -> 422.9
RT (Exp. RT):	2.003 (2.003)
Calc. conc.	100.52 µg/L
Area ratio:	0.37198
Sample type:	Calibration



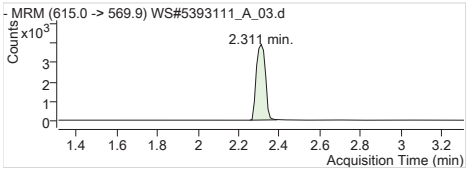


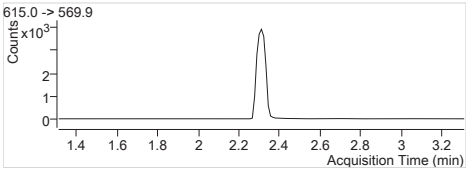
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 103.47 µg/L
Area ratio: 0.25616
Sample type: Calibration



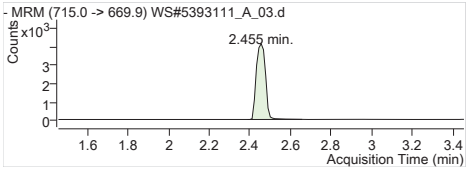


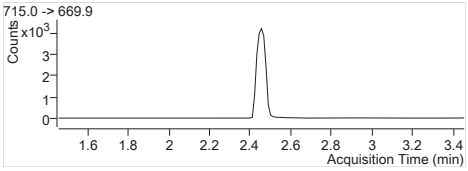
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 100.96 µg/L
Area ratio: 0.29096
Sample type: Calibration



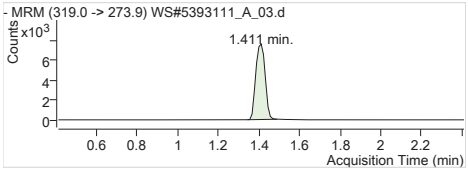


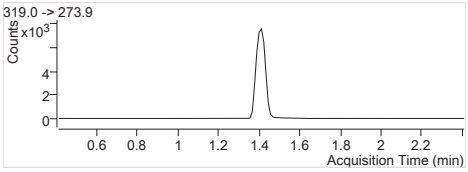
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 108.06 µg/L
Area ratio: 0.40397
Sample type: Calibration



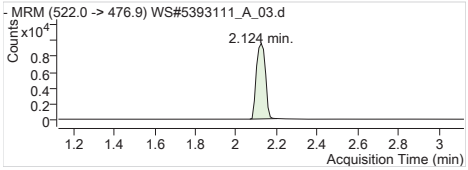


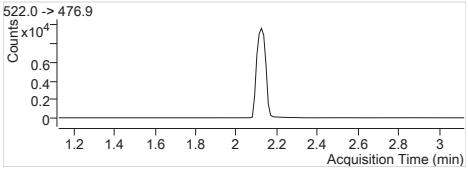
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 102.36 µg/L
Area ratio: 0.43924
Sample type: Calibration





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 102.97 µg/L
Area ratio: 0
Sample type: Calibration





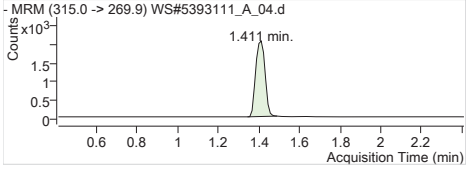
13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 97.87 µg/L
Area ratio: 0
Sample type: Calibration

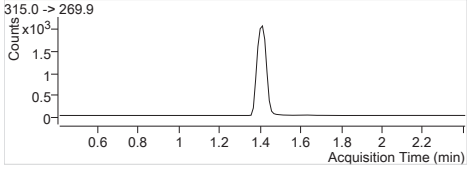
Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**STD 3**	**Instrument**	LCMS04
Data File	WS#5393111_A_04.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A4
Acq. Date	2018/02/13 1:21:18 PM	**Injection Volume**	Per Method
Sample Annotation	-		

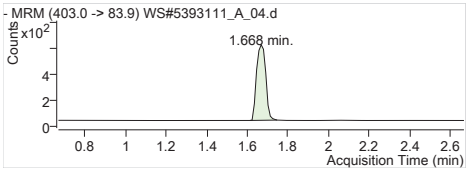
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6521	1.41	1 µg/L		
MPFHxS	1812	1.67	1 µg/L		
MPFHpA	8740	1.68	1 µg/L		
MPFOA	9311	1.86	1 µg/L		
MPFOS	1928	1.97	1 µg/L		
MPFNA	9465	2.00	1 µg/L		
MPFDA	7371	2.12	1 µg/L		
MPFUnA	8446	2.22	1 µg/L		
MPFDoA	11416	2.31	1 µg/L		
MPFTeDA	12702	2.46	1 µg/L		
13C6-PFHxA IS	23970	1.41	1 µg/L		
13C9-PFDA IS	31810	2.12	1 µg/L		

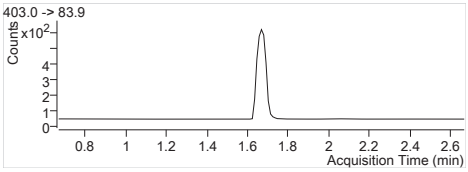
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	3744	1.06	5.00	4.12 µg/L	82.33
PFHxA 1	13895	1.41	5.00	4.96 µg/L	99.18
PFHxS 1	4457	1.67	5.00	4.86 µg/L	97.14
PFHpA 1	18779	1.68	5.00	5.05 µg/L	101.09
PFOA 1	20184	1.86	5.00	4.84 µg/L	96.76
PFOS 1	3935	1.96	5.00	5.25 µg/L	104.94
PFNA 1	17071	2.00	5.00	4.44 µg/L	88.74
PFDA 1	18530	2.12	5.00	5.19 µg/L	103.82
PFUnA 1	20287	2.22	5.00	5.22 µg/L	104.42
PFDoA 1	26456	2.31	5.00	5.08 µg/L	101.68
PFTrDA 1	30071	2.39	5.00	5.32 µg/L	106.31
PFTeDA 1	24409	2.46	5.00	5.27 µg/L	105.37
13C2-PFHxA	6521	1.41	100.00	96.14 µg/L	96.14
18O2-PFHxS	1812	1.67	100.00	109.45 µg/L	109.45
13C4-PFHpA	8740	1.68	100.00	100.89 µg/L	100.89
13C4-PFOA	9311	1.86	100.00	101.24 µg/L	101.24
13C4-PFOS	1928	1.97	100.00	95.86 µg/L	95.86
13C5-PFNA	9465	2.00	100.00	106.71 µg/L	106.71
13C2-PFDA	7294	2.12	100.00	92.62 µg/L	92.62
13C2-PFUnA	8446	2.22	100.00	92.13 µg/L	92.13
13C2-PFDoA	11416	2.31	100.00	96.00 µg/L	96.00
13C2-PFTeDA	12884	2.46	100.00	94.39 µg/L	94.39
13C6-PFHxA	23970	1.41	100.00	102.64 µg/L	102.64
13C9-PFDA	31810	2.12	100.00	105.18 µg/L	105.18



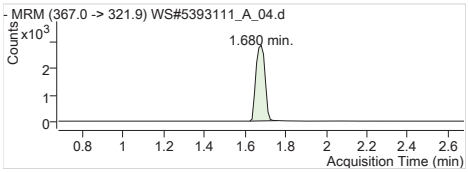


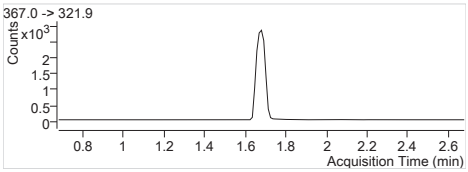
MPFHxA Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Calibration



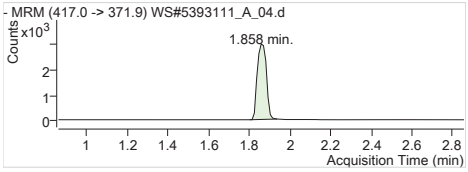


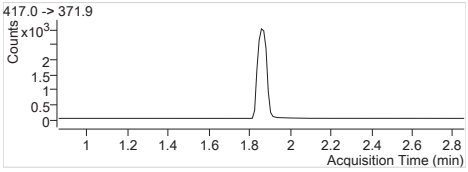
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: Calibration



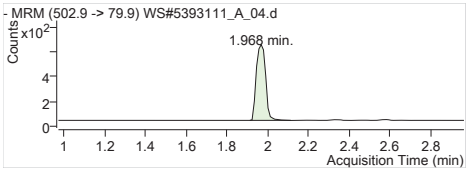


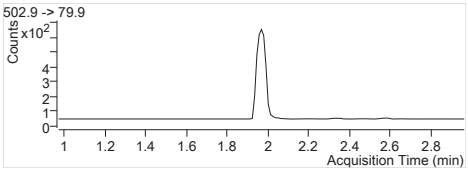
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: Calibration



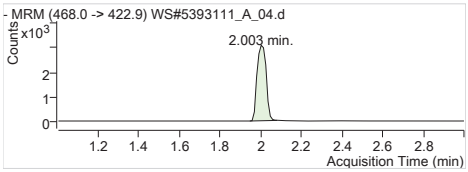


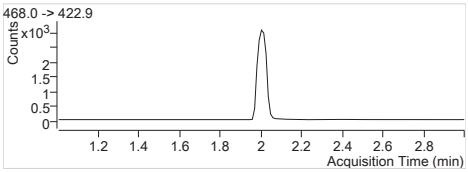
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: Calibration



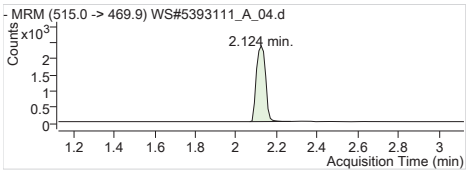


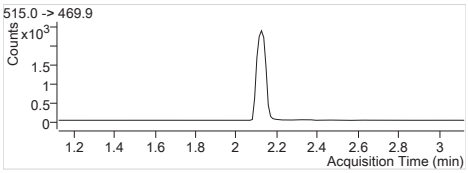
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: Calibration



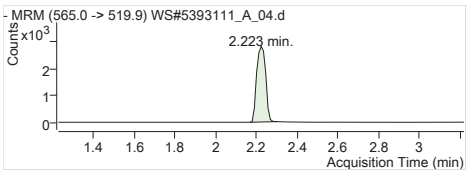


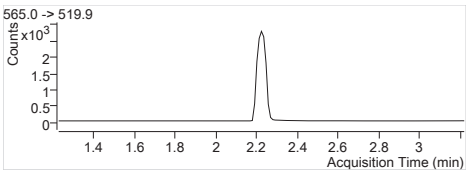
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: Calibration



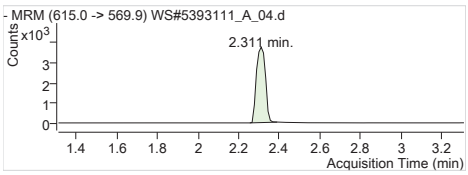


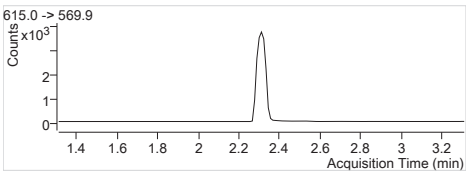
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Calibration



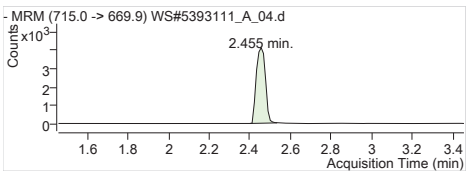


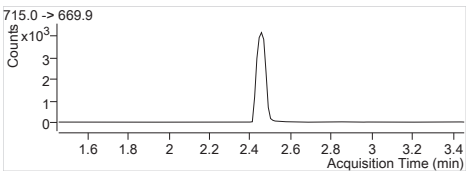
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: Calibration



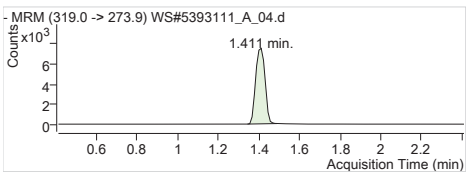


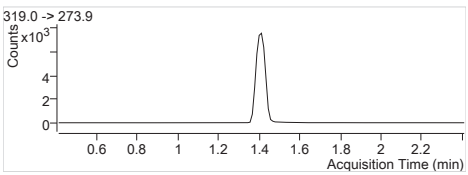
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: Calibration



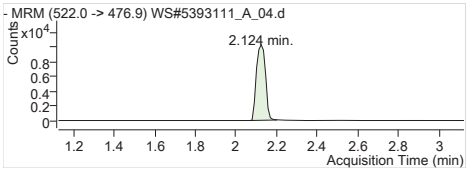


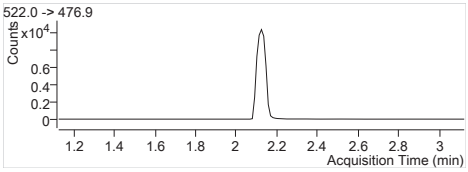
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: Calibration



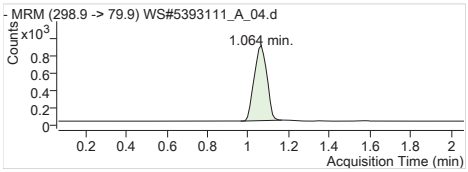


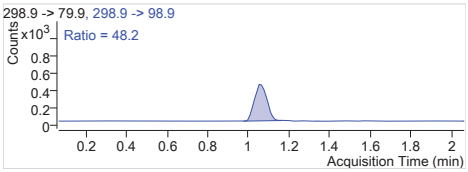
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Calibration



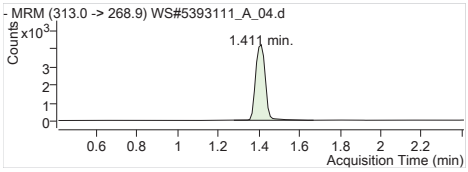


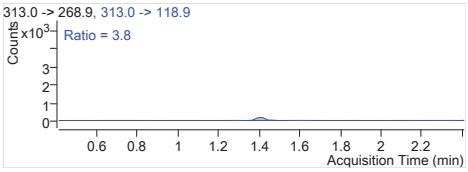
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Calibration



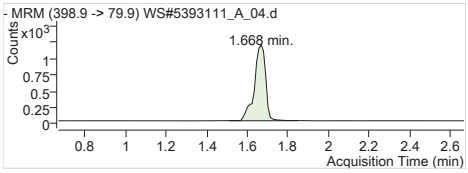


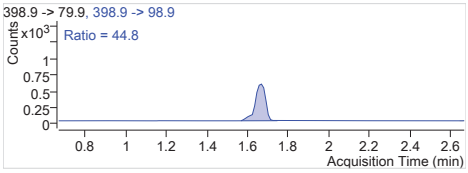
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.064 (1.064)
Calc. conc. 4.12 µg/L
Area ratio: 2.06623
Sample type: Calibration



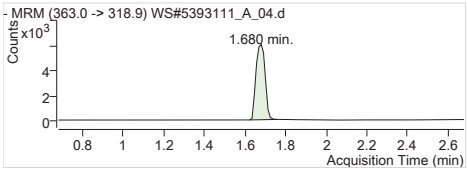


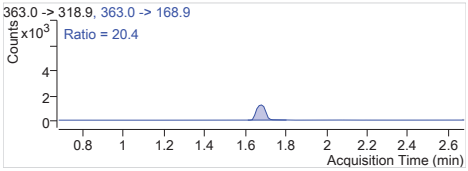
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 4.96 µg/L
Area ratio: 2.13081
Sample type: Calibration



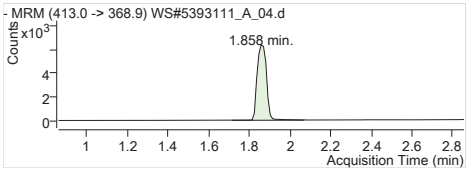


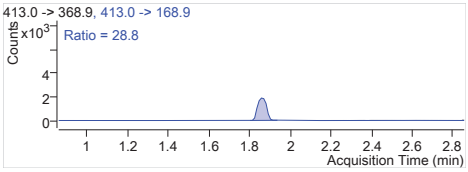
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 4.86 µg/L
Area ratio: 2.45971
Sample type: Calibration



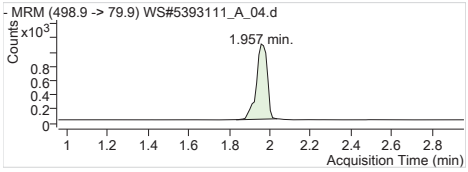


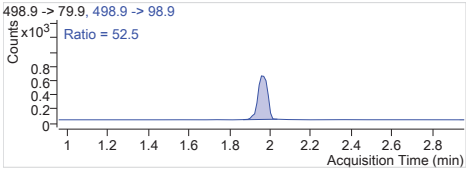
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 5.05 µg/L
Area ratio: 2.14863
Sample type: Calibration



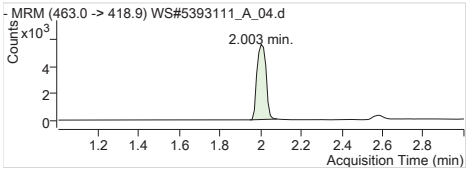


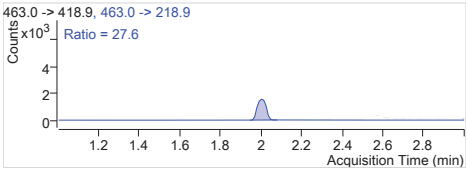
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 4.84 µg/L
Area ratio: 2.16776
Sample type: Calibration



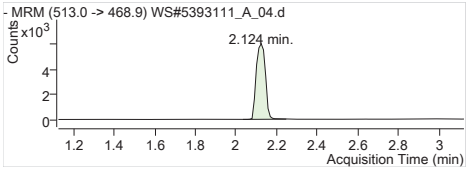


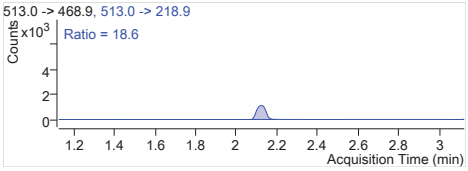
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.957 (1.957)
Calc. conc. 5.25 µg/L
Area ratio: 2.04098
Sample type: Calibration



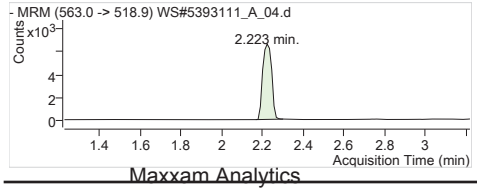


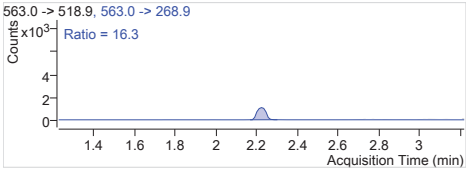
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 4.44 µg/L
Area ratio: 1.80359
Sample type: Calibration



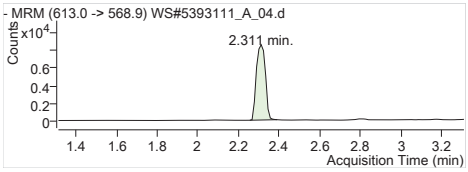


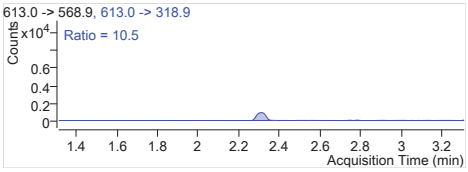
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 5.19 µg/L
Area ratio: 2.51391
Sample type: Calibration



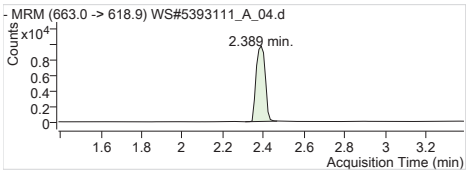


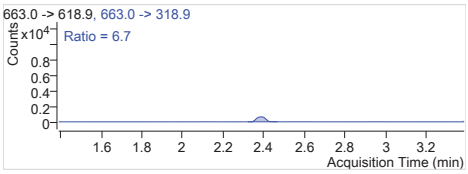
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 5.22 µg/L
Area ratio: 2.40197
Sample type: Calibration



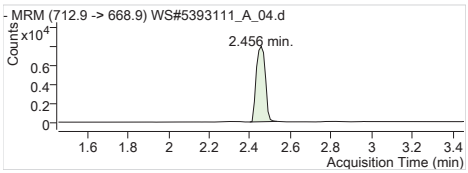


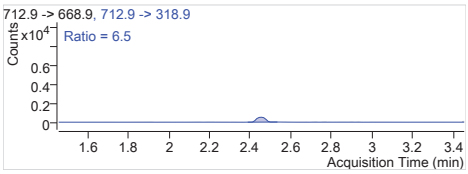
PFDoA 1	613.0 -> 568.9
RT (Exp. RT):	2.311 (2.311)
Calc. conc.	5.08 µg/L
Area ratio:	2.31745
Sample type:	Calibration



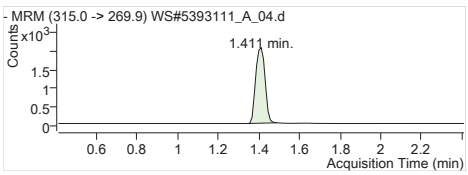


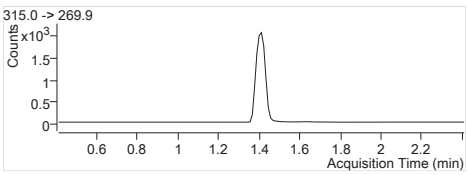
PFTrDA 1	663.0 -> 618.9
RT (Exp. RT):	2.389 (2.389)
Calc. conc.	5.32 µg/L
Area ratio:	2.36742
Sample type:	Calibration



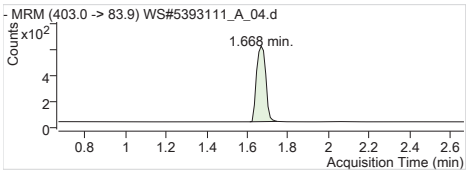


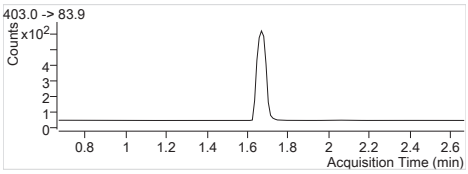
PFTeDA 1	712.9 -> 668.9
RT (Exp. RT):	2.456 (2.456)
Calc. conc.	5.27 µg/L
Area ratio:	1.92167
Sample type:	Calibration



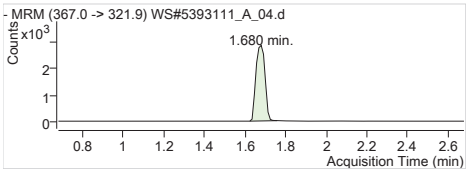


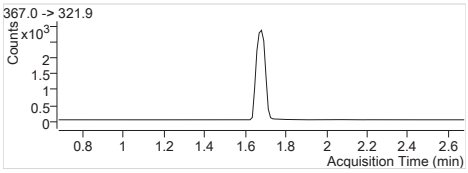
13C2-PFHxA	315.0 -> 269.9
RT (Exp. RT):	1.411 (1.411)
Calc. conc.	96.14 µg/L
Area ratio:	0.27205
Sample type:	Calibration



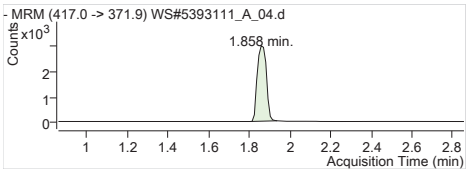


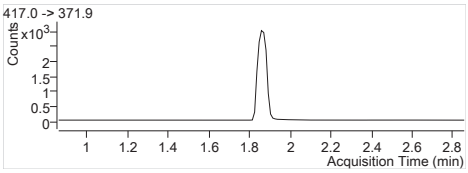
18O2-PFHxS	403.0 -> 83.9
RT (Exp. RT):	1.668 (1.668)
Calc. conc.	109.45 µg/L
Area ratio:	0.07559
Sample type:	Calibration



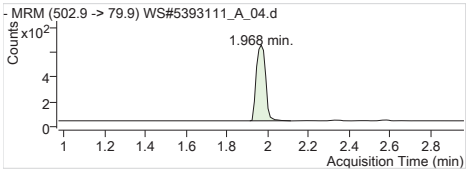


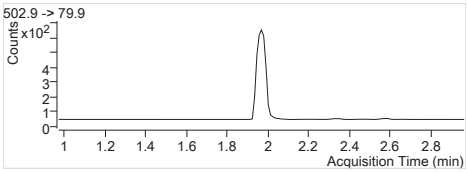
13C4-PFHpA	367.0 -> 321.9
RT (Exp. RT):	1.680 (1.680)
Calc. conc.	100.89 µg/L
Area ratio:	0.36462
Sample type:	Calibration



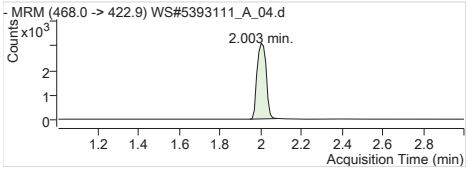


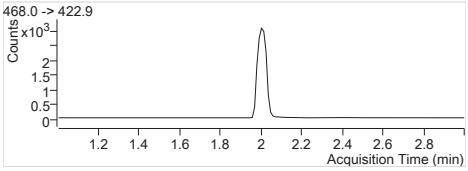
13C4-PFOA	417.0 -> 371.9
RT (Exp. RT):	1.858 (1.858)
Calc. conc.	101.24 µg/L
Area ratio:	0.38844
Sample type:	Calibration



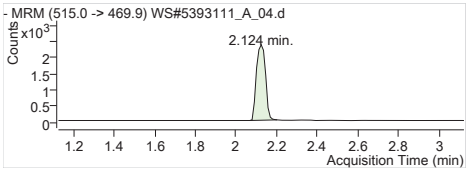


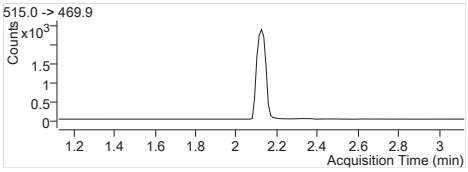
13C4-PFOS	502.9 -> 79.9
RT (Exp. RT):	1.968 (1.968)
Calc. conc.	95.86 µg/L
Area ratio:	0.08043
Sample type:	Calibration



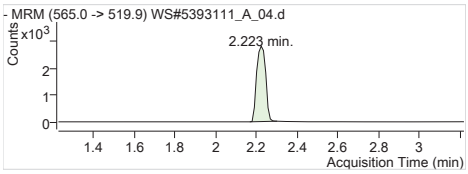


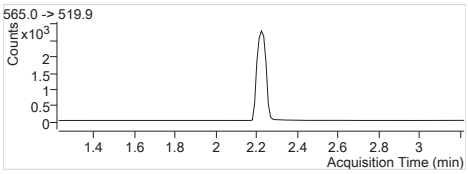
13C5-PFNA	468.0 -> 422.9
RT (Exp. RT):	2.003 (2.003)
Calc. conc.	106.71 µg/L
Area ratio:	0.39487
Sample type:	Calibration



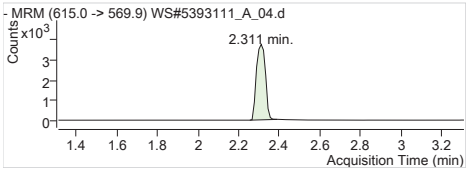


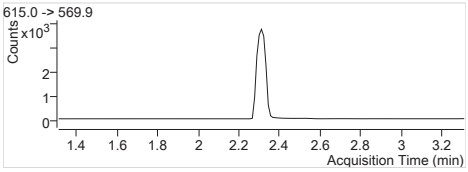
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 92.62 µg/L
Area ratio: 0.22930
Sample type: Calibration



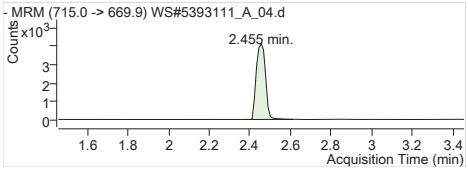


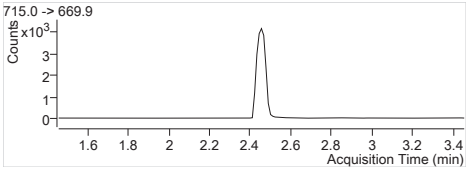
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 92.13 µg/L
Area ratio: 0.26551
Sample type: Calibration



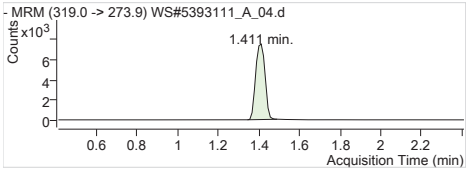


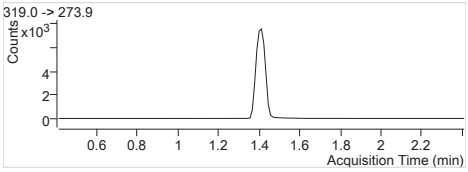
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 96.00 µg/L
Area ratio: 0.35888
Sample type: Calibration



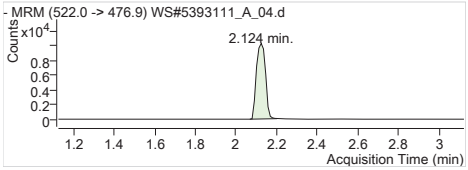


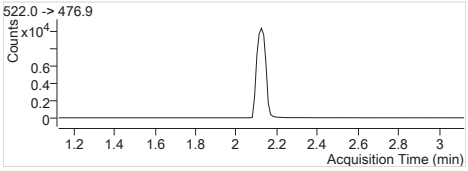
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 94.39 µg/L
Area ratio: 0.40503
Sample type: Calibration





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 102.64 µg/L
Area ratio: 0
Sample type: Calibration





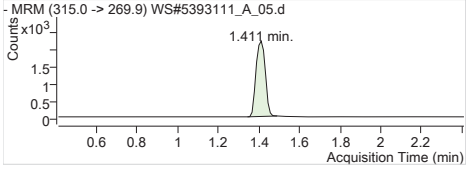
13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 105.18 µg/L
Area ratio: 0
Sample type: Calibration

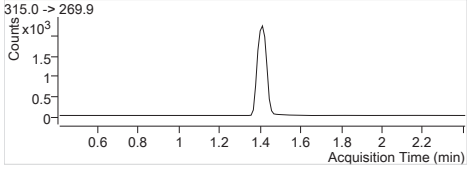
Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**STD 4**	**Instrument**	LCMS04
Data File	WS#5393111_A_05.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A5
Acq. Date	2018/02/13 1:26:14 PM	**Injection Volume**	Per Method
Sample Annotation	-		

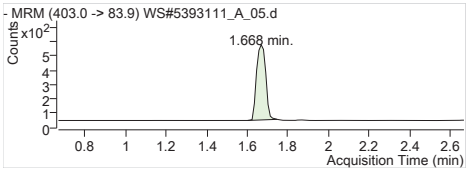
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6940	1.41	1 µg/L		
MPFHxS	1660	1.67	1 µg/L		
MPFHpA	9023	1.68	1 µg/L		
MPFOA	9544	1.86	1 µg/L		
MPFOS	1861	1.97	1 µg/L		
MPFNA	8362	2.00	1 µg/L		
MPFDA	8235	2.12	1 µg/L		
MPFUnA	8908	2.22	1 µg/L		
MPFDoA	11800	2.31	1 µg/L		
MPFTeDA	13664	2.46	1 µg/L		
13C6-PFHxA IS	23942	1.41	1 µg/L		
13C9-PFDA IS	30523	2.12	1 µg/L		

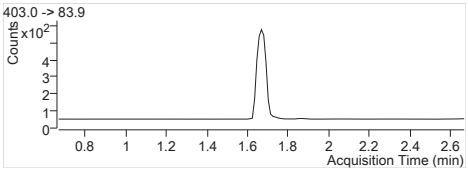
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	9973	1.06	12.50	11.51 µg/L	92.08
PFHxA 1	33716	1.41	12.50	11.11 µg/L	88.86
PFHxS 1	9564	1.67	12.50	11.30 µg/L	90.39
PFHpA 1	44837	1.68	12.50	11.69 µg/L	93.49
PFOA 1	49745	1.86	12.50	11.49 µg/L	91.90
PFOS 1	9992	1.96	12.50	13.64 µg/L	109.16
PFNA 1	42617	2.00	12.50	12.30 µg/L	98.41
PFDA 1	46555	2.12	12.50	11.53 µg/L	92.25
PFUnA 1	52123	2.22	12.50	12.66 µg/L	101.26
PFDoA 1	65485	2.31	12.50	11.98 µg/L	95.86
PFTrDA 1	71180	2.39	12.50	11.63 µg/L	93.02
PFTeDA 1	59763	2.46	12.50	11.94 µg/L	95.48
13C2-PFHxA	6940	1.41	100.00	102.44 µg/L	102.44
18O2-PFHxS	1660	1.67	100.00	100.38 µg/L	100.38
13C4-PFHpA	9023	1.68	100.00	104.27 µg/L	104.27
13C4-PFOA	9544	1.86	100.00	103.90 µg/L	103.90
13C4-PFOS	1861	1.97	100.00	92.64 µg/L	92.64
13C5-PFNA	8362	2.00	100.00	94.38 µg/L	94.38
13C2-PFDA	8197	2.12	100.00	108.47 µg/L	108.47
13C2-PFUnA	8908	2.22	100.00	101.27 µg/L	101.27
13C2-PFDoA	11800	2.31	100.00	103.41 µg/L	103.41
13C2-PFTeDA	13665	2.46	100.00	104.33 µg/L	104.33
13C6-PFHxA	23942	1.41	100.00	102.52 µg/L	102.52
13C9-PFDA	30523	2.12	100.00	100.92 µg/L	100.92



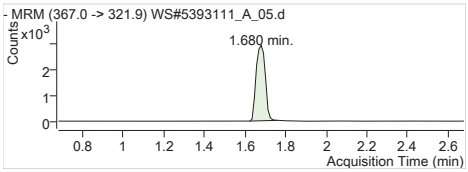


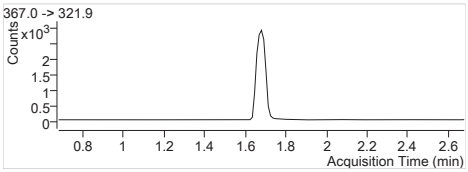
MPFHxA Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Calibration



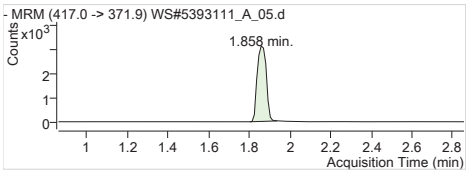


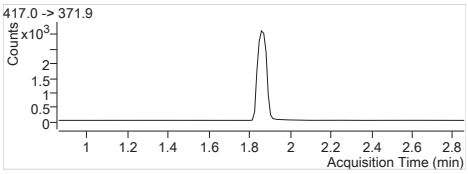
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: Calibration



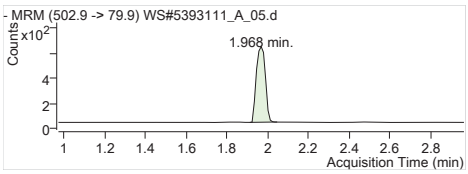


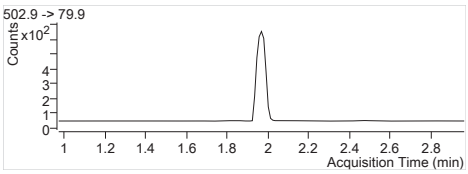
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: Calibration



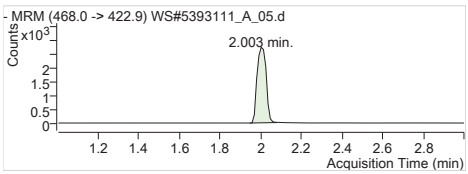


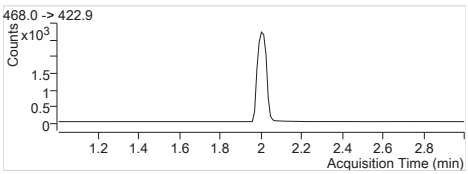
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: Calibration



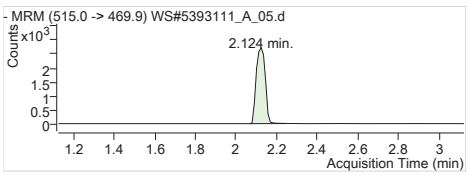


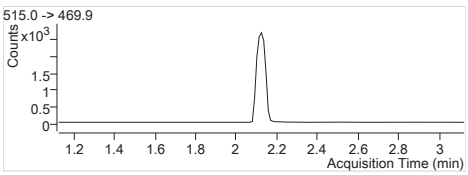
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: Calibration



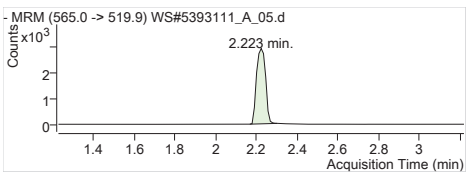


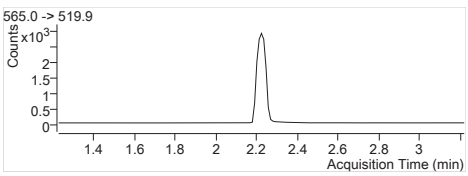
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: Calibration



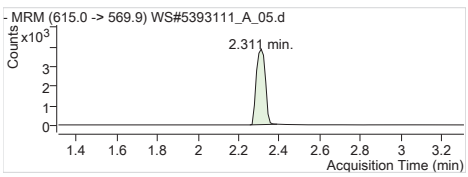


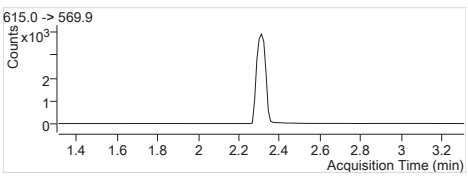
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Calibration



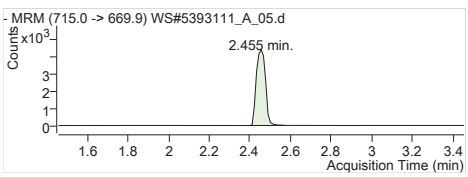


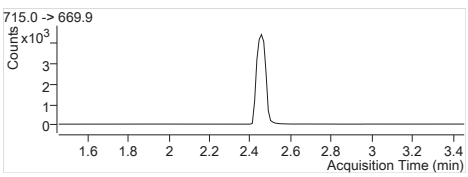
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: Calibration



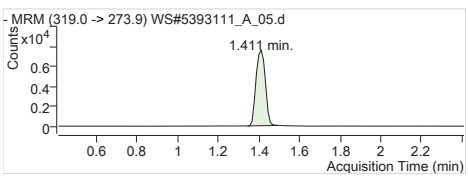


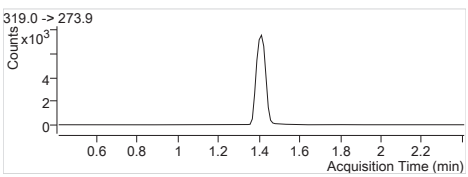
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: Calibration



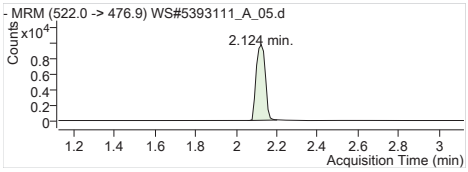


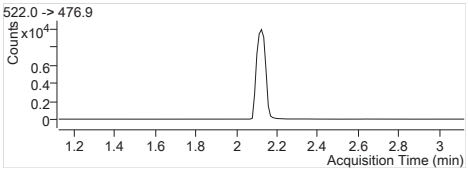
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: Calibration



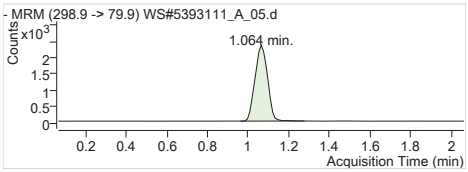


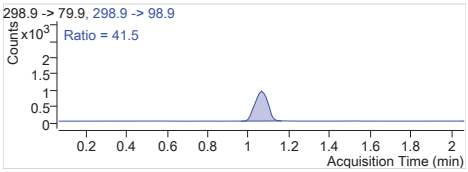
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Calibration



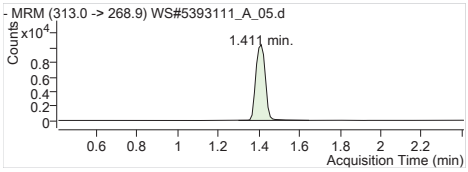


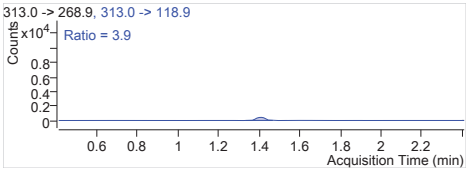
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Calibration



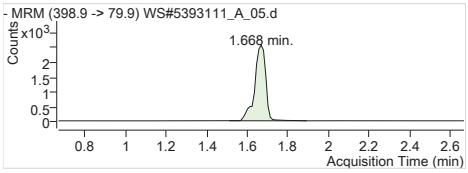


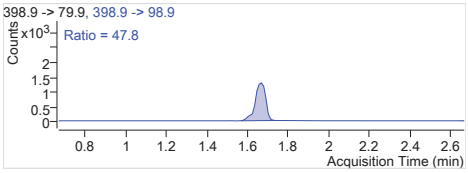
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.064 (1.064)
Calc. conc. 11.51 µg/L
Area ratio: 6.00783
Sample type: Calibration



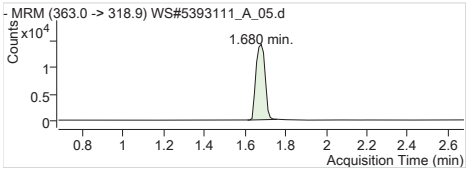


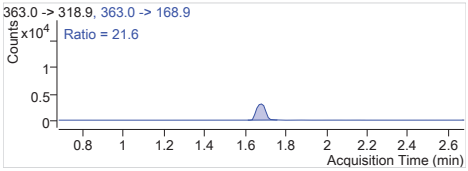
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 11.11 µg/L
Area ratio: 4.85821
Sample type: Calibration



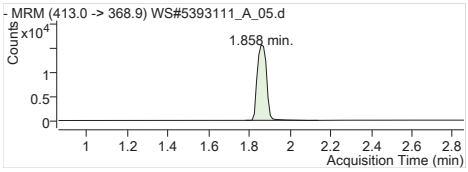


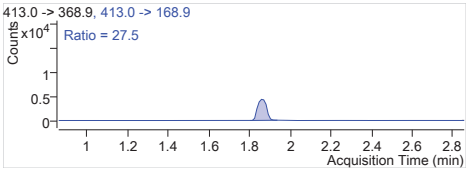
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 11.30 µg/L
Area ratio: 5.76145
Sample type: Calibration



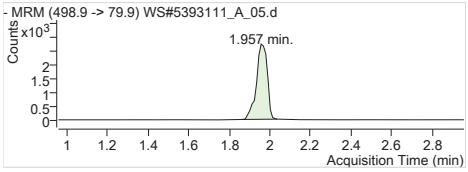


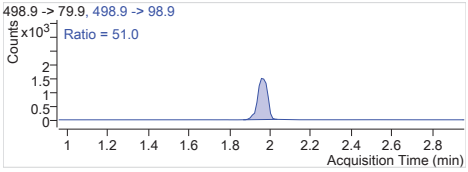
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 11.69 µg/L
Area ratio: 4.96919
Sample type: Calibration



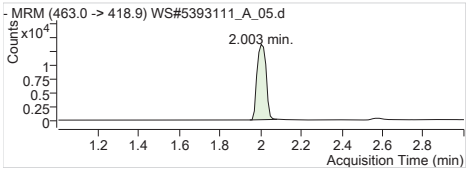


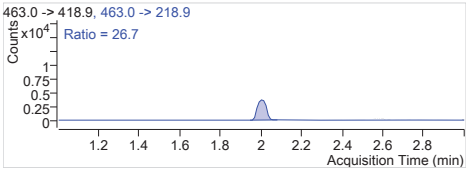
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 11.49 µg/L
Area ratio: 5.21218
Sample type: Calibration



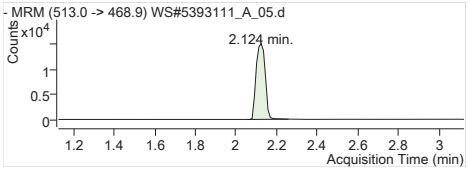


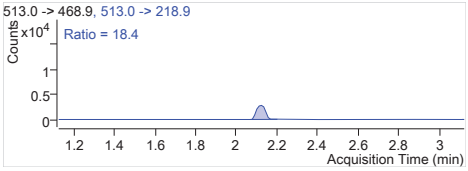
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.957 (1.957)
Calc. conc. 13.64 µg/L
Area ratio: 5.36916
Sample type: Calibration



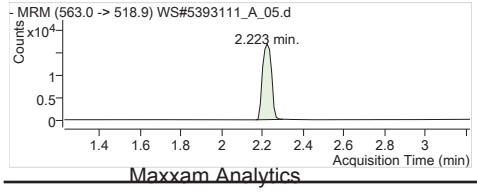


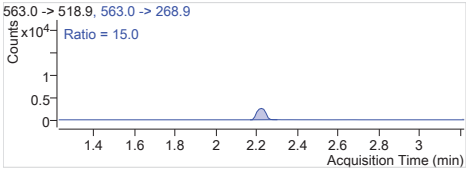
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 12.30 µg/L
Area ratio: 5.09651
Sample type: Calibration



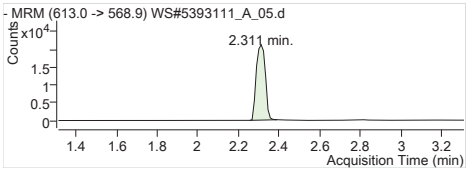


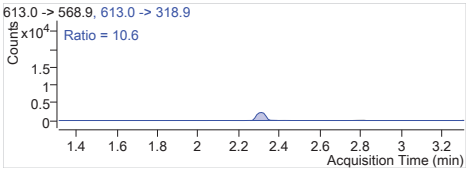
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 11.53 µg/L
Area ratio: 5.65331
Sample type: Calibration



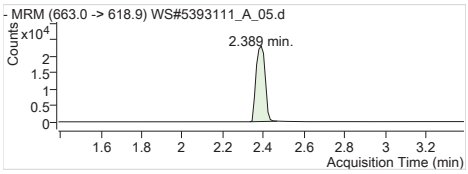


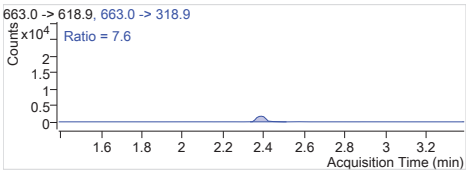
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 12.66 µg/L
Area ratio: 5.85126
Sample type: Calibration



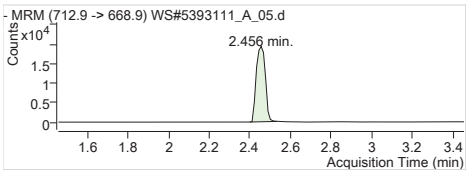


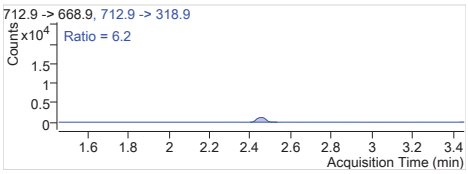
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 11.98 µg/L
Area ratio: 5.54958
Sample type: Calibration



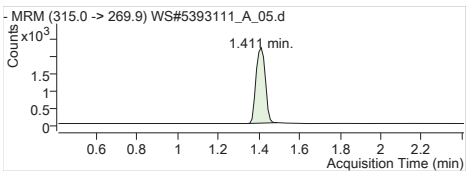


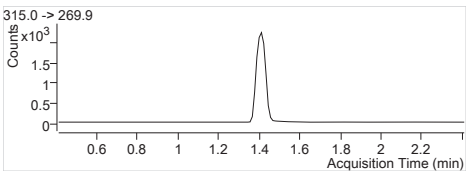
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.389 (2.389)
Calc. conc. 11.63 µg/L
Area ratio: 5.20931
Sample type: Calibration



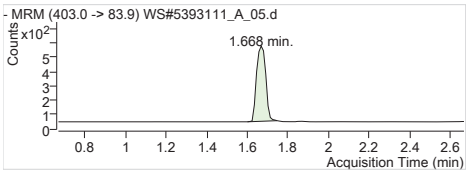


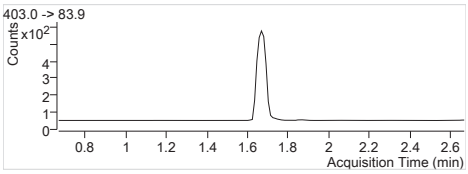
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.456 (2.456)
Calc. conc. 11.94 µg/L
Area ratio: 4.37376
Sample type: Calibration



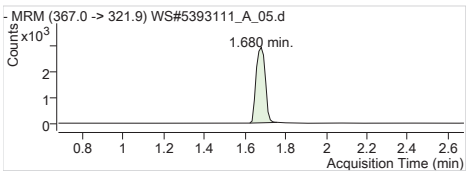


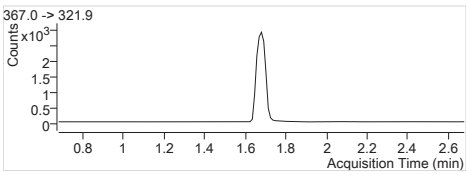
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 102.44 µg/L
Area ratio: 0.28987
Sample type: Calibration



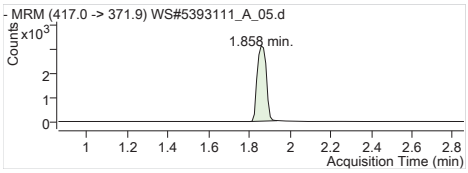


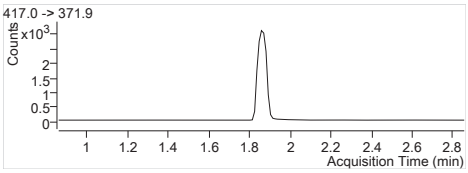
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 100.38 µg/L
Area ratio: 0.06933
Sample type: Calibration



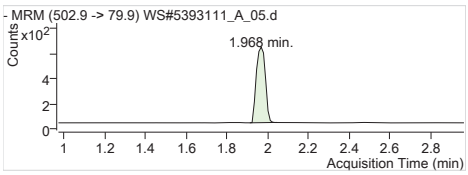


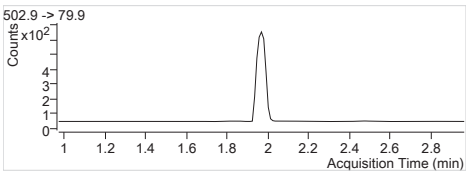
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 104.27 µg/L
Area ratio: 0.37687
Sample type: Calibration



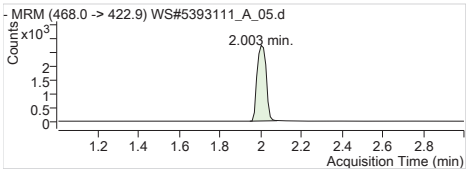


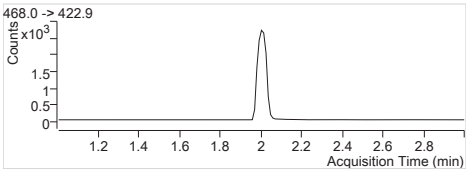
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 103.90 µg/L
Area ratio: 0.39863
Sample type: Calibration



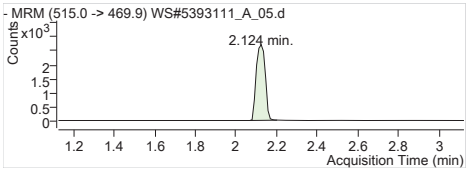


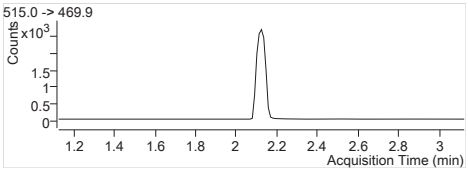
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 92.64 µg/L
Area ratio: 0.07773
Sample type: Calibration



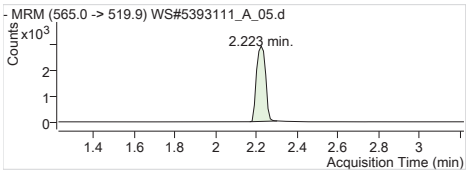


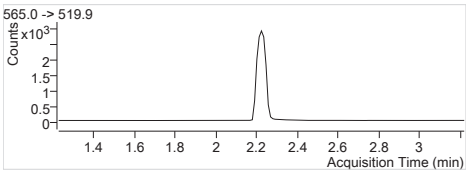
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 94.38 µg/L
Area ratio: 0.34926
Sample type: Calibration



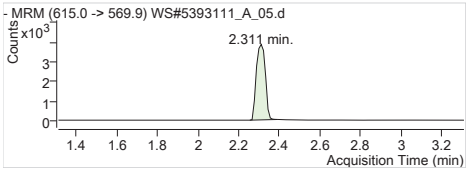


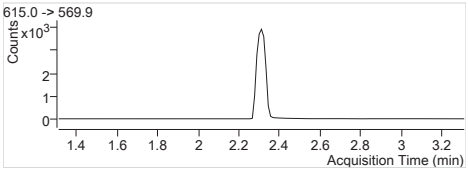
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 108.47 µg/L
Area ratio: 0.26855
Sample type: Calibration



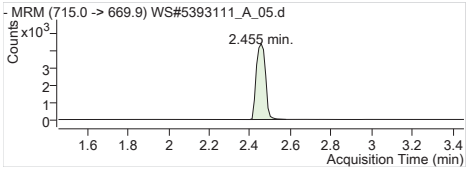


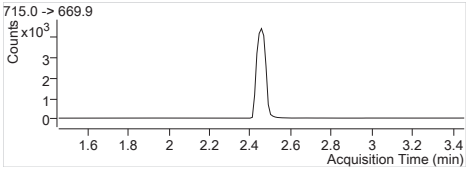
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 101.27 µg/L
Area ratio: 0.29185
Sample type: Calibration



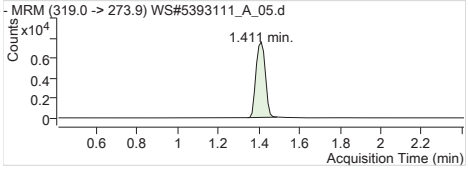


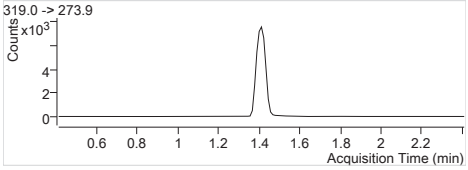
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 103.41 µg/L
Area ratio: 0.38659
Sample type: Calibration



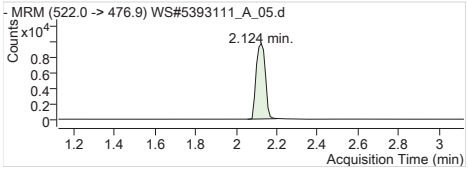


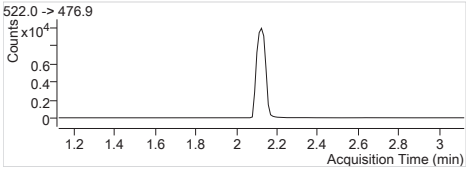
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 104.33 µg/L
Area ratio: 0.44770
Sample type: Calibration





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 102.52 µg/L
Area ratio: 0
Sample type: Calibration





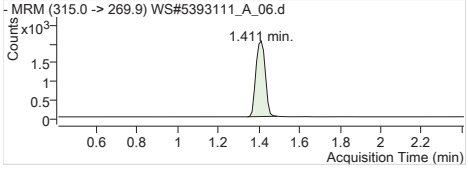
13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 100.92 µg/L
Area ratio: 0
Sample type: Calibration

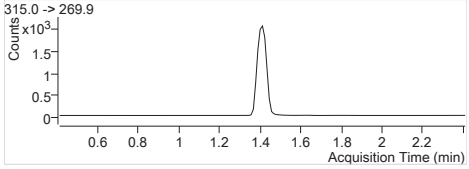
Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**STD 5**	**Instrument**	LCMS04
Data File	WS#5393111_A_06.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A6
Acq. Date	2018/02/13 1:31:10 PM	**Injection Volume**	Per Method
Sample Annotation	-		

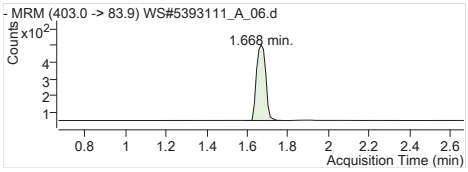
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6470	1.41	1 µg/L		
MPFHxS	1441	1.67	1 µg/L		
MPFHpA	7840	1.68	1 µg/L		
MPFOA	8604	1.86	1 µg/L		
MPFOS	2011	1.97	1 µg/L		
MPFNA	8361	2.00	1 µg/L		
MPFDA	7286	2.12	1 µg/L		
MPFUnA	9076	2.22	1 µg/L		
MPFDoA	11086	2.31	1 µg/L		
MPFTeDA	12417	2.46	1 µg/L		
13C6-PFHxA IS	23146	1.41	1 µg/L		
13C9-PFDA IS	29646	2.12	1 µg/L		

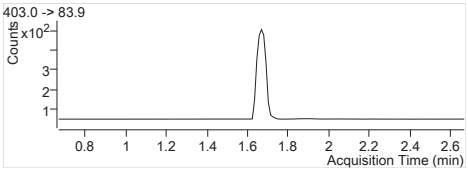
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	19908	1.06	25.00	26.15 µg/L	104.62
PFHxA 1	70129	1.41	25.00	24.59 µg/L	98.36
PFHxS 1	19383	1.67	25.00	26.30 µg/L	105.20
PFHpA 1	88396	1.68	25.00	26.51 µg/L	106.05
PFOA 1	97428	1.86	25.00	24.84 µg/L	99.34
PFOS 1	19043	1.96	25.00	23.99 µg/L	95.96
PFNA 1	85811	2.00	25.00	24.64 µg/L	98.56
PFDA 1	91770	2.12	25.00	25.55 µg/L	102.20
PFUnA 1	100268	2.22	25.00	23.86 µg/L	95.44
PFDoA 1	127517	2.31	25.00	24.69 µg/L	98.76
PFTrDA 1	143058	2.39	25.00	25.65 µg/L	102.58
PFTeDA 1	122099	2.46	25.00	26.78 µg/L	107.11
13C2-PFHxA	6470	1.41	100.00	98.79 µg/L	98.79
18O2-PFHxS	1441	1.67	100.00	90.14 µg/L	90.14
13C4-PFHpA	7840	1.68	100.00	93.72 µg/L	93.72
13C4-PFOA	8604	1.86	100.00	96.89 µg/L	96.89
13C4-PFOS	2011	1.97	100.00	103.55 µg/L	103.55
13C5-PFNA	8360	2.00	100.00	97.61 µg/L	97.61
13C2-PFDA	7237	2.12	100.00	98.60 µg/L	98.60
13C2-PFUnA	9076	2.22	100.00	106.23 µg/L	106.23
13C2-PFDoA	11086	2.31	100.00	100.03 µg/L	100.03
13C2-PFTeDA	12645	2.46	100.00	99.40 µg/L	99.40
13C6-PFHxA	23146	1.41	100.00	99.11 µg/L	99.11
13C9-PFDA	29646	2.12	100.00	98.02 µg/L	98.02



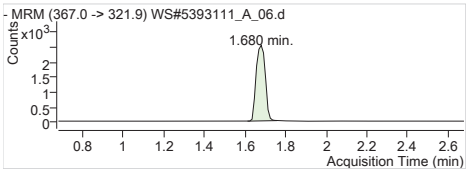


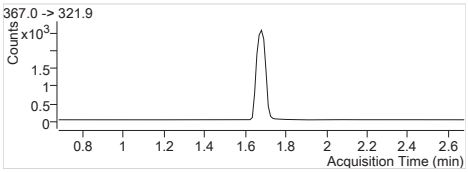
MPFHxA Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Calibration



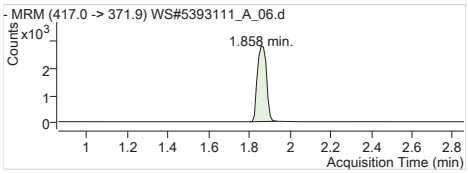


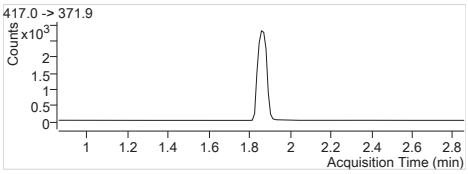
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: Calibration



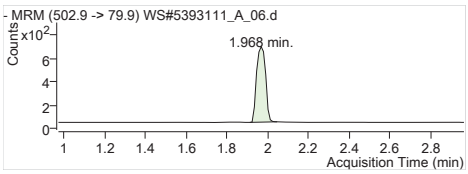


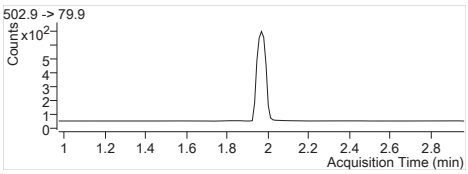
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: Calibration



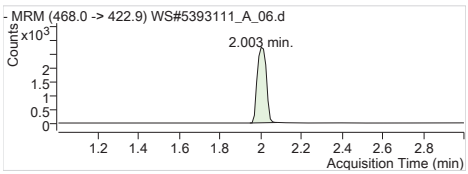


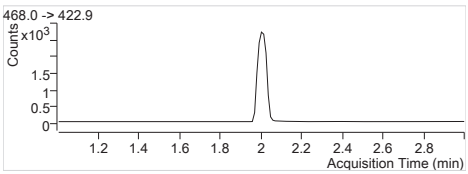
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: Calibration



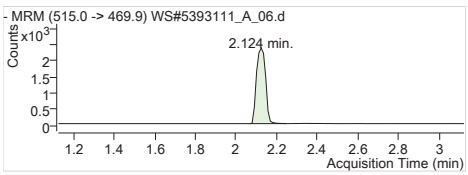


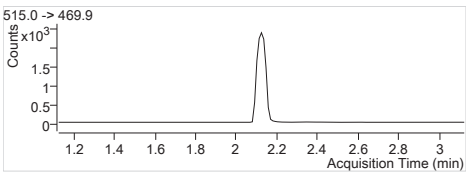
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: Calibration



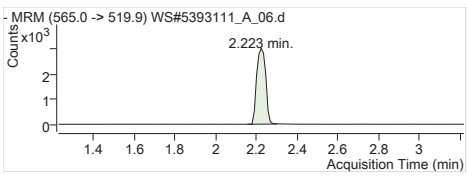


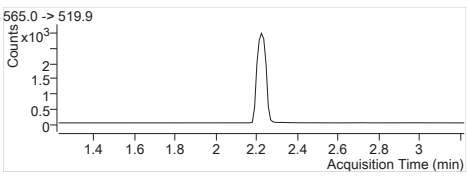
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: Calibration



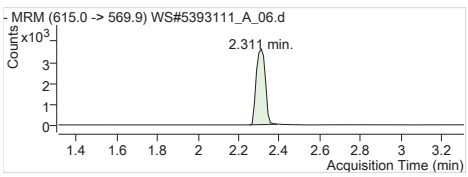


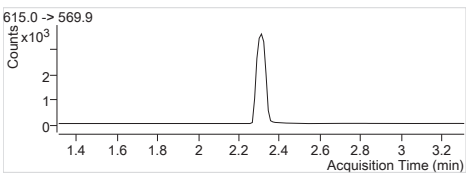
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Calibration



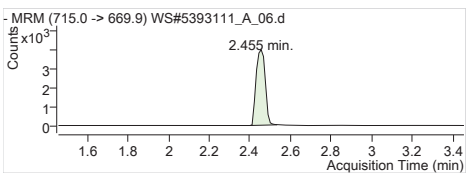


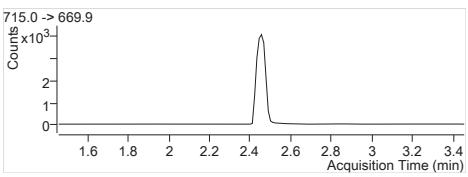
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: Calibration



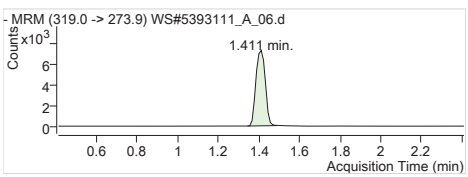


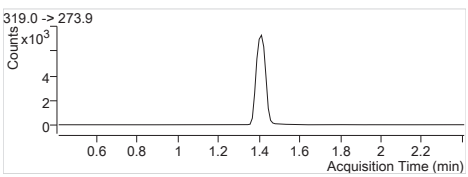
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: Calibration



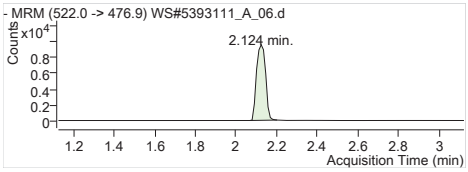


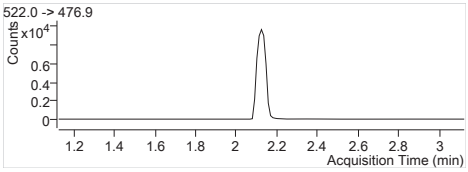
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: Calibration



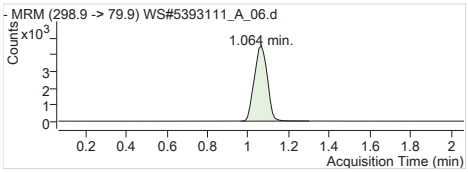


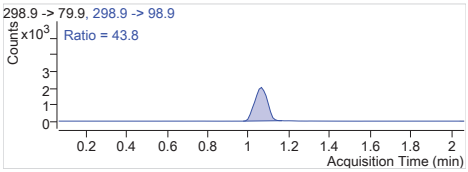
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Calibration



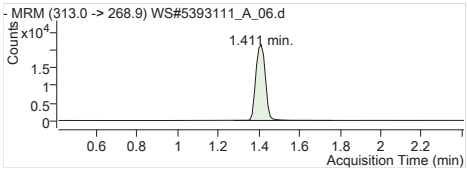


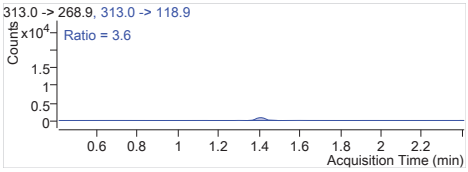
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Calibration



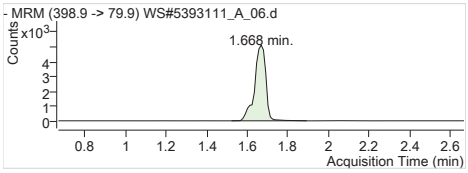


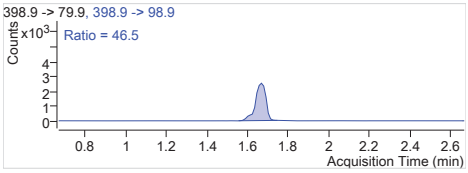
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.064 (1.064)
Calc. conc. 26.15 µg/L
Area ratio: 13.81541
Sample type: Calibration



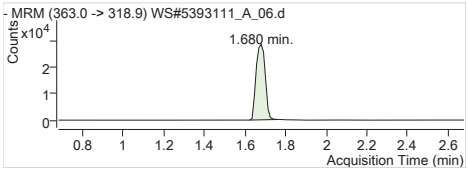


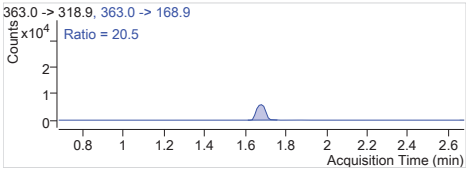
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 24.59 µg/L
Area ratio: 10.83910
Sample type: Calibration



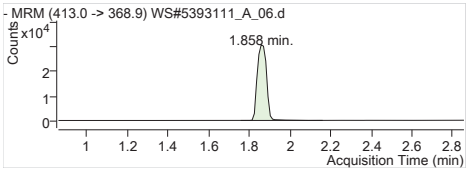


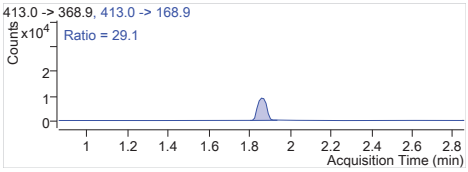
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 26.30 µg/L
Area ratio: 13.45108
Sample type: Calibration



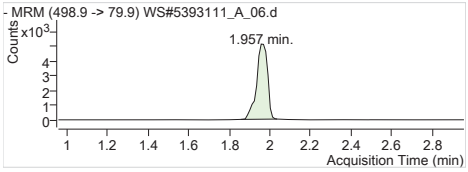


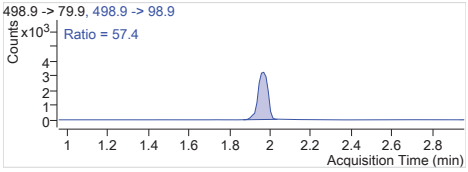
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 26.51 µg/L
Area ratio: 11.27500
Sample type: Calibration



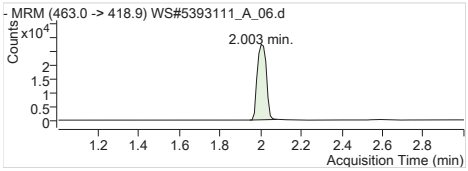


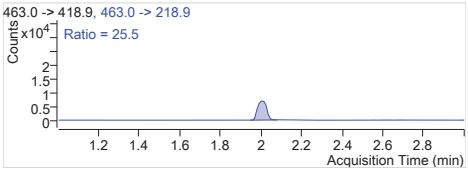
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 24.84 µg/L
Area ratio: 11.32357
Sample type: Calibration



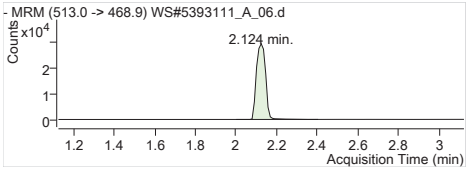


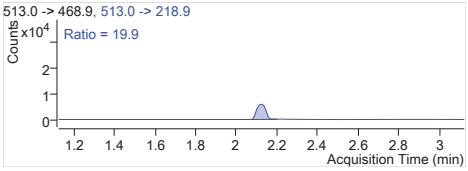
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.957 (1.957)
Calc. conc. 23.99 µg/L
Area ratio: 9.46942
Sample type: Calibration



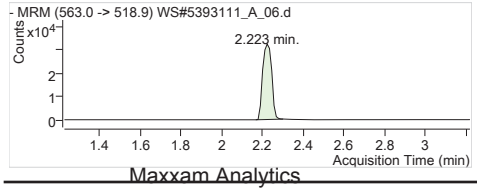


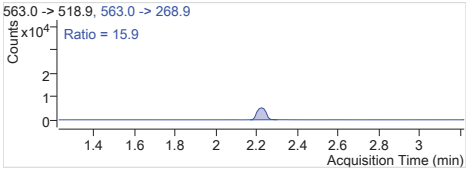
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 24.64 µg/L
Area ratio: 10.26325
Sample type: Calibration



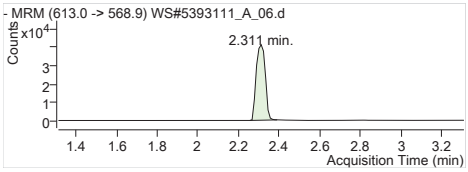


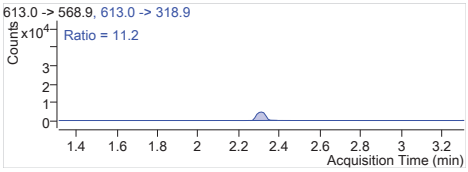
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 25.55 µg/L
Area ratio: 12.59539
Sample type: Calibration



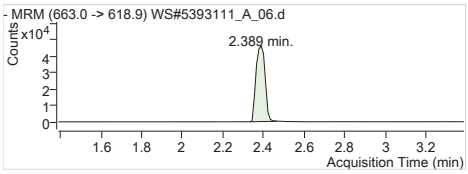


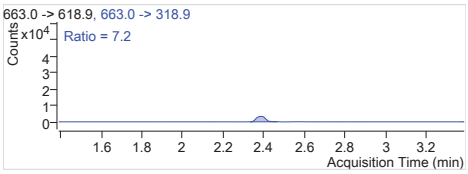
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 23.86 µg/L
Area ratio: 11.04760
Sample type: Calibration



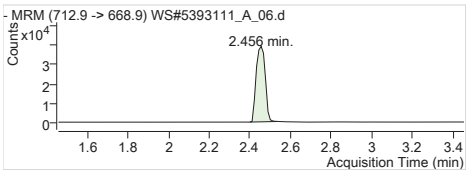


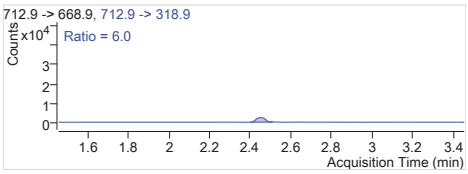
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 24.69 µg/L
Area ratio: 11.50253
Sample type: Calibration



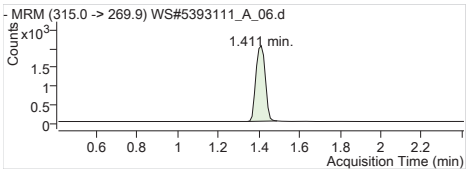


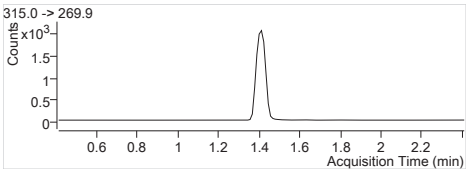
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.389 (2.389)
Calc. conc. 25.65 µg/L
Area ratio: 11.52114
Sample type: Calibration



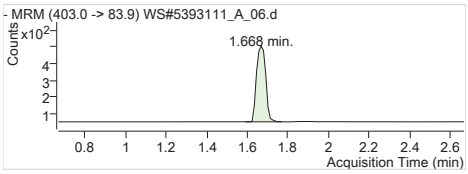


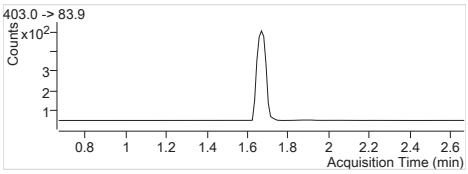
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.456 (2.456)
Calc. conc. 26.78 µg/L
Area ratio: 9.83321
Sample type: Calibration



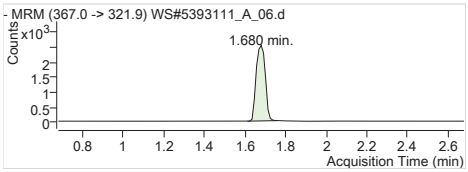


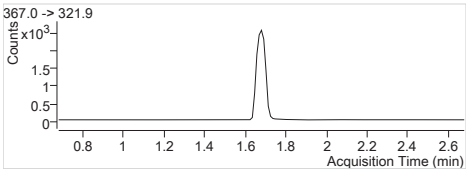
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 98.79 µg/L
Area ratio: 0.27953
Sample type: Calibration



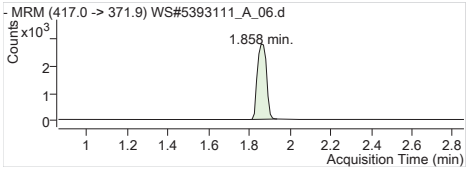


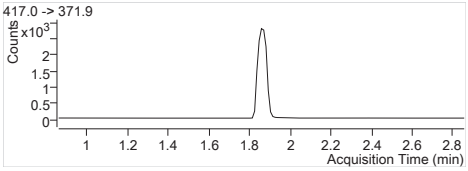
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 90.14 µg/L
Area ratio: 0.06226
Sample type: Calibration



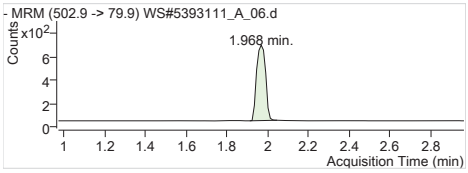


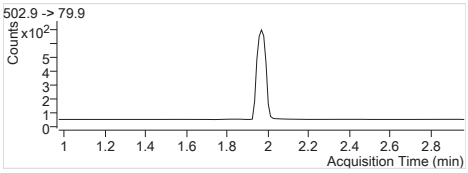
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 93.72 µg/L
Area ratio: 0.33872
Sample type: Calibration



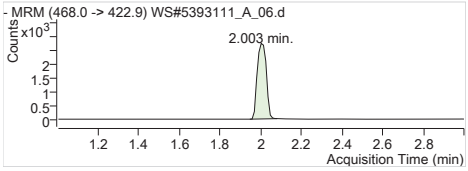


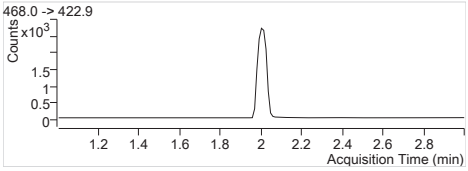
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 96.89 µg/L
Area ratio: 0.37173
Sample type: Calibration



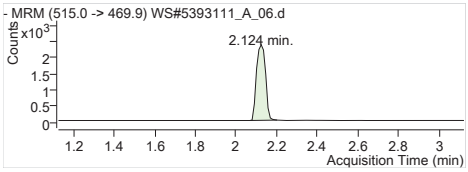


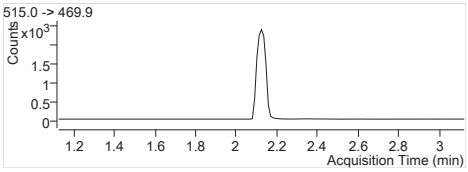
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 103.55 µg/L
Area ratio: 0.08688
Sample type: Calibration



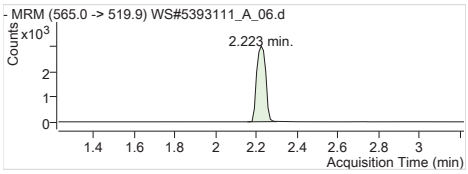


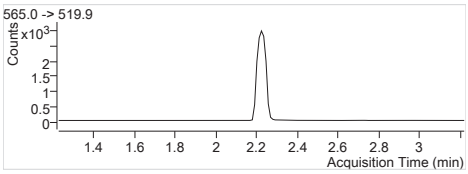
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 97.61 µg/L
Area ratio: 0.36119
Sample type: Calibration



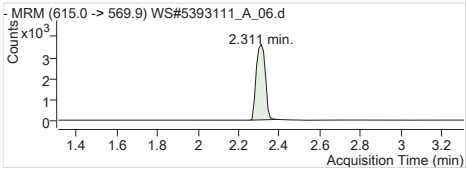


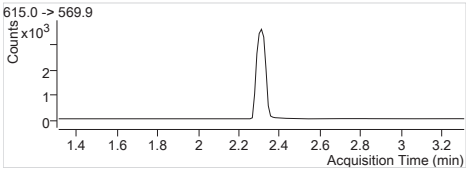
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 98.60 µg/L
Area ratio: 0.24411
Sample type: Calibration



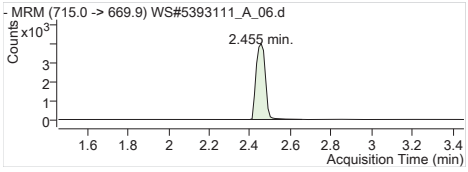


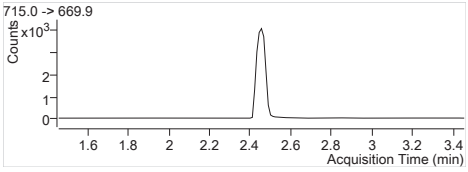
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 106.23 µg/L
Area ratio: 0.30615
Sample type: Calibration



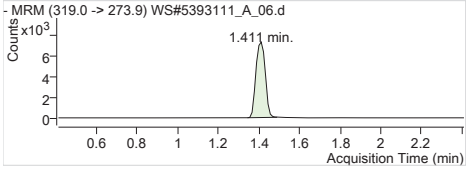


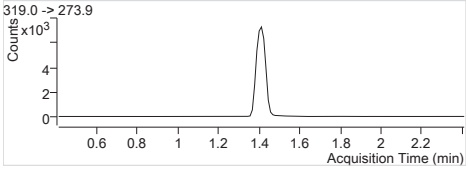
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 100.03 µg/L
Area ratio: 0.37395
Sample type: Calibration



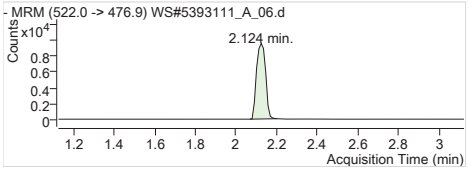


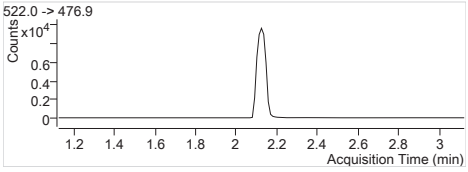
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 99.40 µg/L
Area ratio: 0.42653
Sample type: Calibration





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 99.11 µg/L
Area ratio: 0
Sample type: Calibration





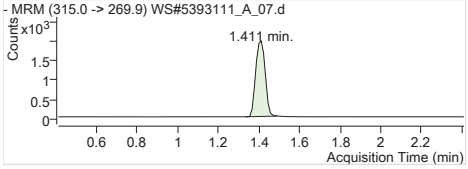
13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 98.02 µg/L
Area ratio: 0
Sample type: Calibration

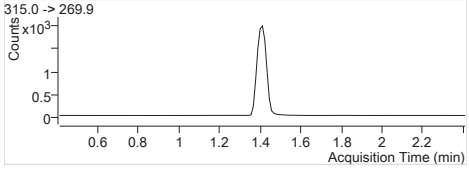
Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**STD 6**	**Instrument**	LCMS04
Data File	WS#5393111_A_07.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A7
Acq. Date	2018/02/13 1:36:06 PM	**Injection Volume**	Per Method
Sample Annotation	-		

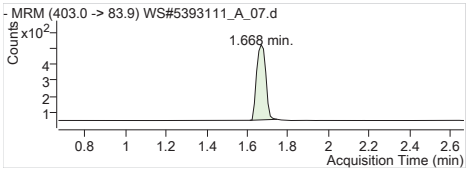
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6301	1.41	1 µg/L		
MPFHxS	1473	1.67	1 µg/L		
MPFHpA	8069	1.68	1 µg/L		
MPFOA	8406	1.86	1 µg/L		
MPFOS	1959	1.97	1 µg/L		
MPFNA	8278	2.00	1 µg/L		
MPFDA	7565	2.12	1 µg/L		
MPFUnA	8667	2.22	1 µg/L		
MPFDoA	10632	2.31	1 µg/L		
MPFTeDA	12758	2.46	1 µg/L		
13C6-PFHxA IS	22396	1.41	1 µg/L		
13C9-PFDA IS	28323	2.12	1 µg/L		

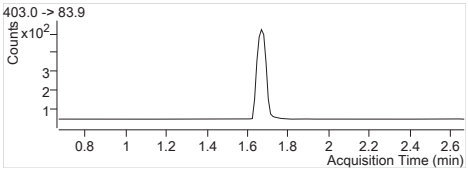
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	32955	1.06	41.70	42.20 µg/L	101.21
PFHxA 1	121135	1.41	41.70	43.49 µg/L	104.30
PFHxS 1	31458	1.67	41.70	41.72 µg/L	100.06
PFHpA 1	140439	1.68	41.70	40.93 µg/L	98.15
PFOA 1	164903	1.86	41.70	42.95 µg/L	103.00
PFOS 1	32051	1.96	41.70	41.38 µg/L	99.23
PFNA 1	147522	2.00	41.70	42.69 µg/L	102.37
PFDA 1	156573	2.12	41.70	41.91 µg/L	100.50
PFUnA 1	170577	2.22	41.70	42.47 µg/L	101.86
PFDoA 1	210940	2.31	41.70	42.49 µg/L	101.88
PFTrDA 1	238756	2.39	41.70	41.62 µg/L	99.81
PFTeDA 1	188733	2.46	41.70	40.26 µg/L	96.56
13C2-PFHxA	6301	1.41	100.00	99.43 µg/L	99.43
18O2-PFHxS	1473	1.67	100.00	95.22 µg/L	95.22
13C4-PFHpA	8069	1.68	100.00	99.69 µg/L	99.69
13C4-PFOA	8406	1.86	100.00	97.83 µg/L	97.83
13C4-PFOS	1959	1.97	100.00	104.25 µg/L	104.25
13C5-PFNA	8277	2.00	100.00	99.87 µg/L	99.87
13C2-PFDA	7498	2.12	100.00	106.93 µg/L	106.93
13C2-PFUnA	8667	2.22	100.00	106.18 µg/L	106.18
13C2-PFDoA	10632	2.31	100.00	100.41 µg/L	100.41
13C2-PFTeDA	12930	2.46	100.00	106.38 µg/L	106.38
13C6-PFHxA	22396	1.41	100.00	95.90 µg/L	95.90
13C9-PFDA	28323	2.12	100.00	93.65 µg/L	93.65



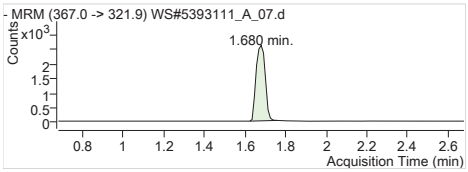


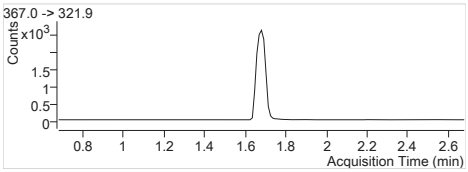
MPFHxA Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Calibration



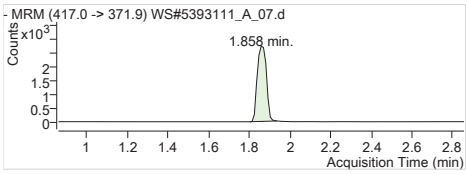


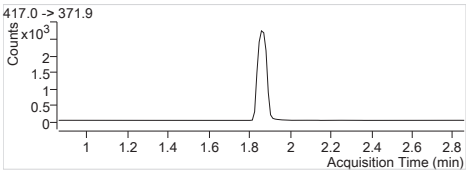
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: Calibration



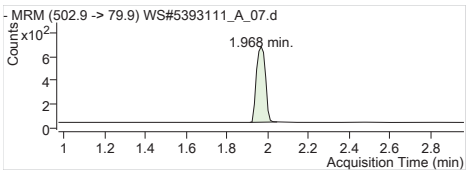


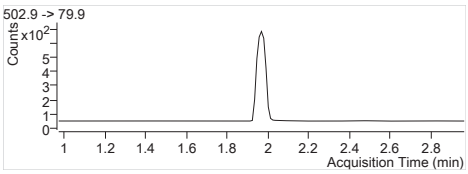
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: Calibration



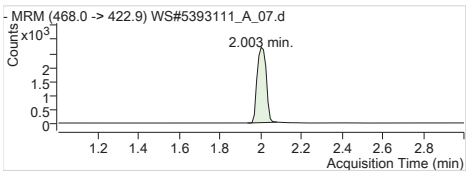


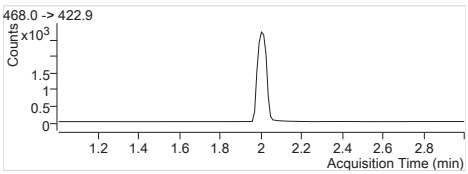
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: Calibration



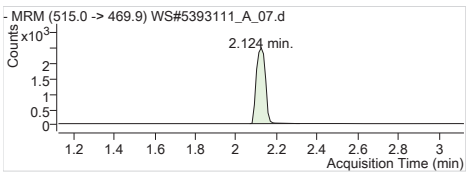


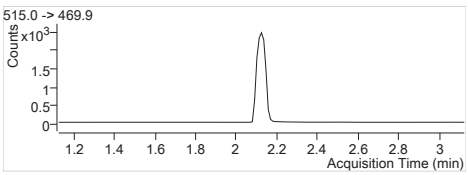
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: Calibration



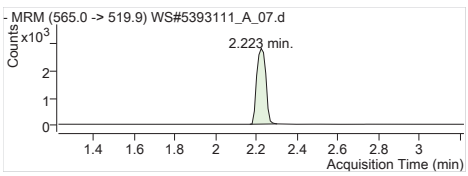


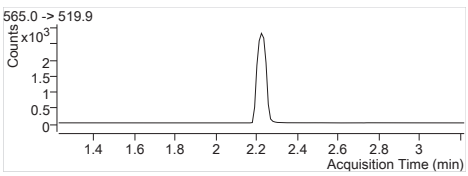
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: Calibration



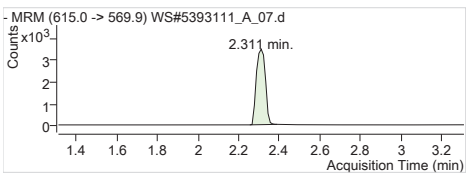


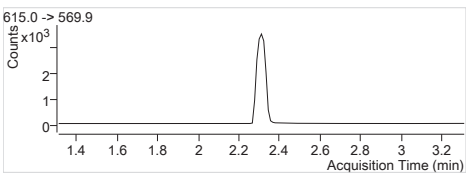
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Calibration



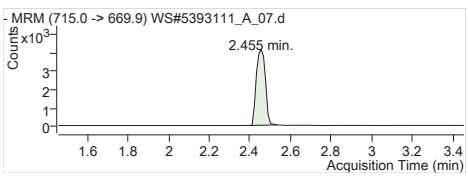


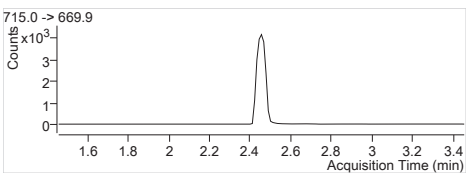
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: Calibration



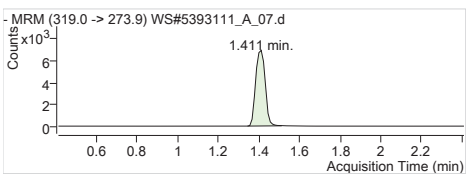


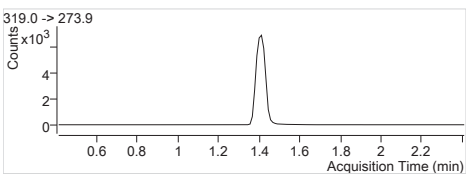
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: Calibration



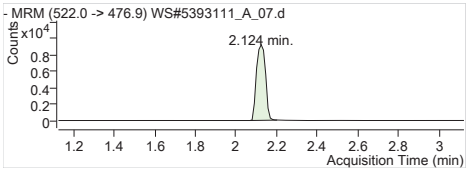


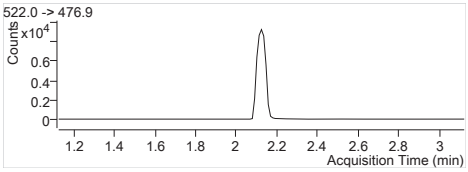
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: Calibration



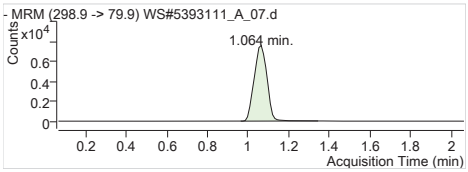


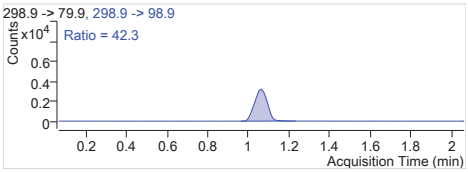
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: Calibration



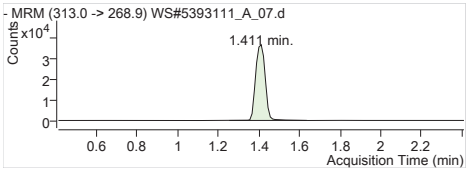


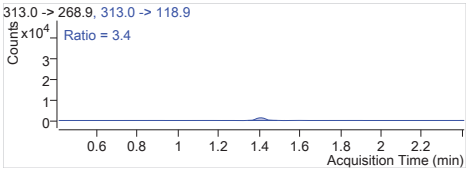
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: Calibration



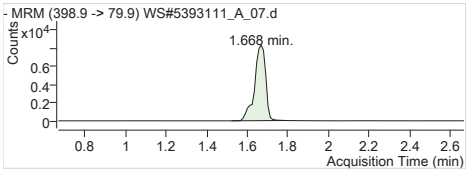


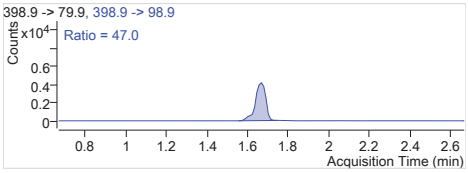
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.064 (1.064)
Calc. conc. 42.20 µg/L
Area ratio: 22.37271
Sample type: Calibration



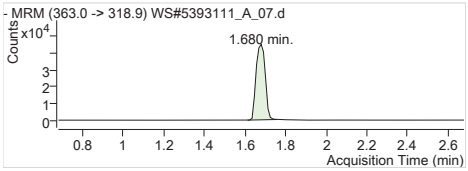


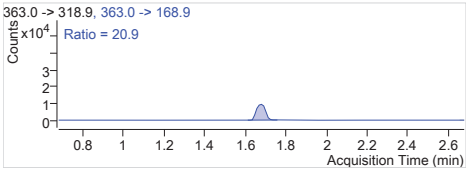
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 43.49 µg/L
Area ratio: 19.22473
Sample type: Calibration



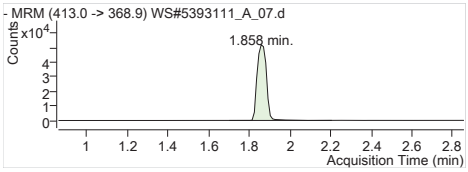


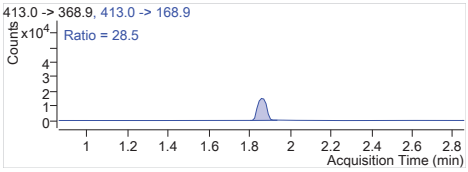
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 41.72 µg/L
Area ratio: 21.35642
Sample type: Calibration



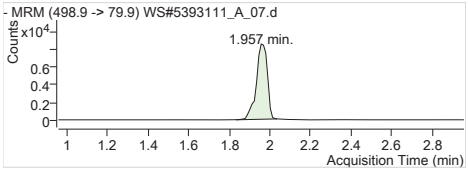


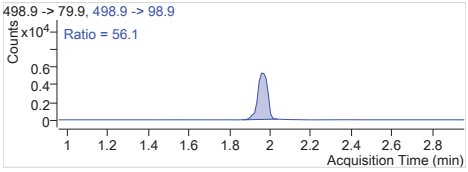
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 40.93 µg/L
Area ratio: 17.40476
Sample type: Calibration



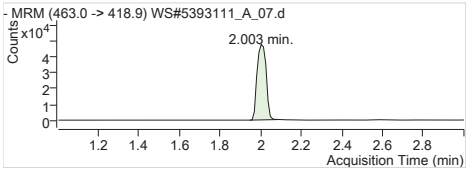


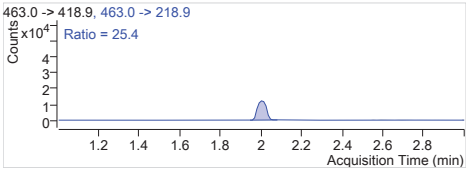
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 42.95 µg/L
Area ratio: 19.61730
Sample type: Calibration



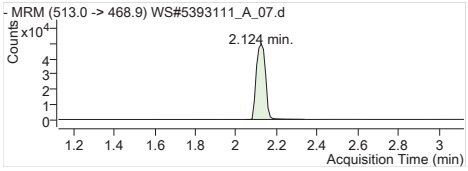


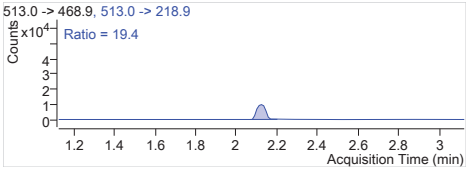
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.957 (1.957)
Calc. conc. 41.38 µg/L
Area ratio: 16.36090
Sample type: Calibration



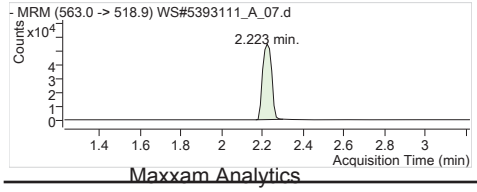


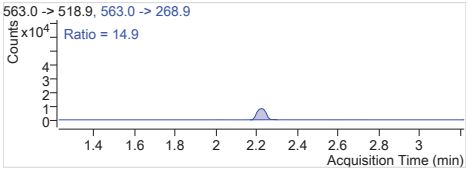
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 42.69 µg/L
Area ratio: 17.82097
Sample type: Calibration



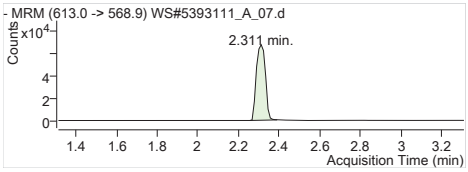


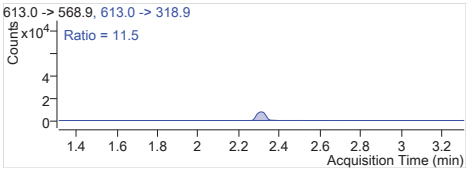
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 41.91 µg/L
Area ratio: 20.69703
Sample type: Calibration



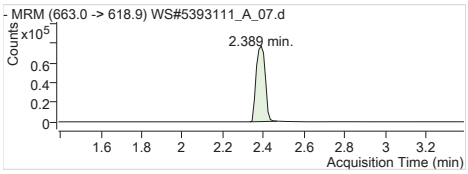


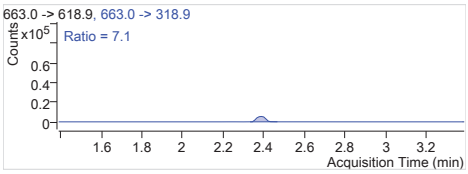
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 42.47 µg/L
Area ratio: 19.68120
Sample type: Calibration



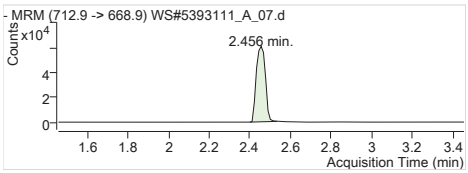


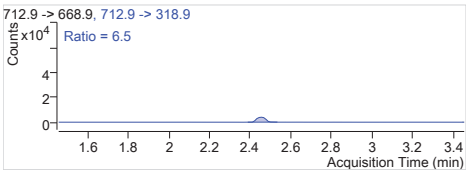
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 42.49 µg/L
Area ratio: 19.84011
Sample type: Calibration



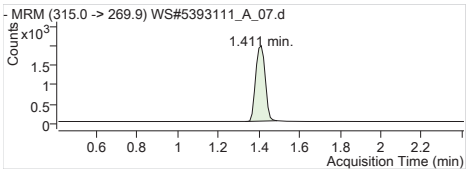


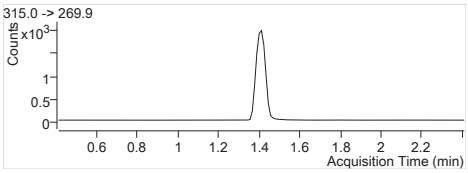
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.389 (2.389)
Calc. conc. 41.62 µg/L
Area ratio: 18.71422
Sample type: Calibration



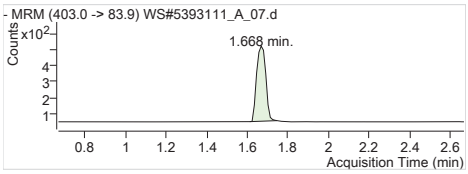


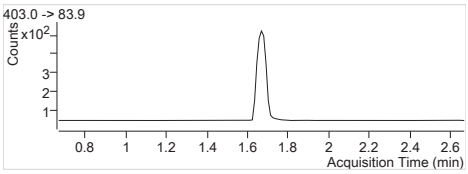
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.456 (2.456)
Calc. conc. 40.26 µg/L
Area ratio: 14.79331
Sample type: Calibration



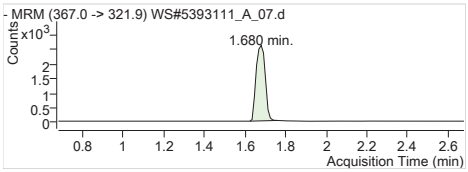


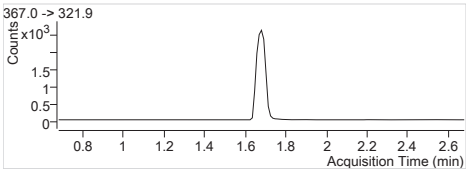
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 99.43 µg/L
Area ratio: 0.28134
Sample type: Calibration



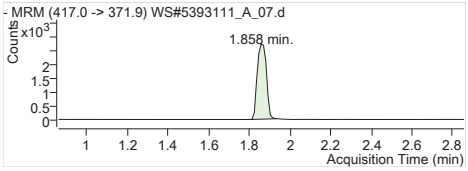


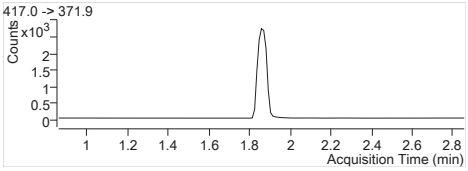
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 95.22 µg/L
Area ratio: 0.06577
Sample type: Calibration



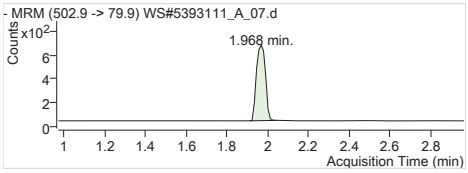


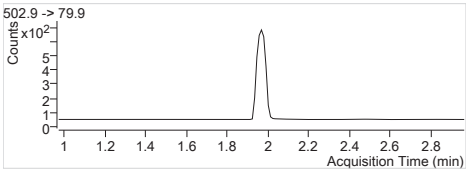
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 99.69 µg/L
Area ratio: 0.36029
Sample type: Calibration



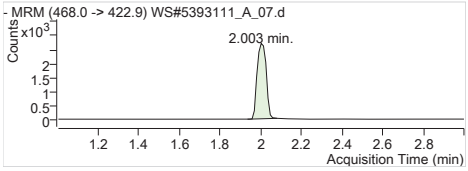


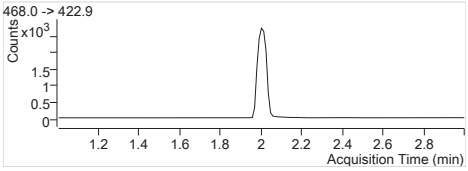
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 97.83 µg/L
Area ratio: 0.37533
Sample type: Calibration



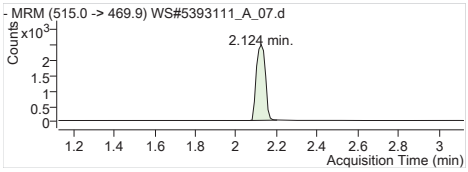


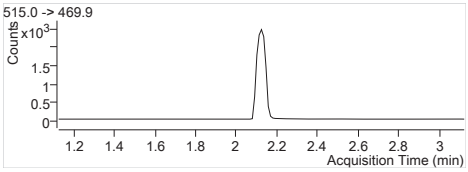
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 104.25 µg/L
Area ratio: 0.08747
Sample type: Calibration



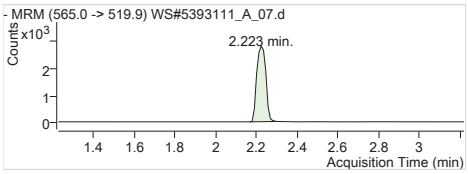


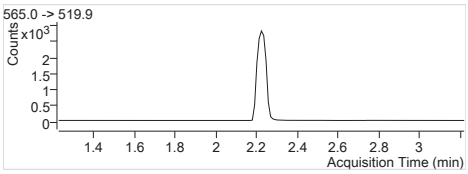
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 99.87 µg/L
Area ratio: 0.36957
Sample type: Calibration



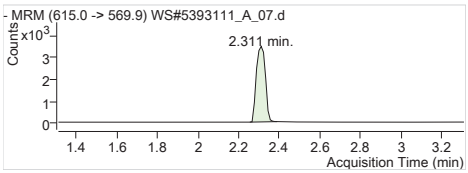


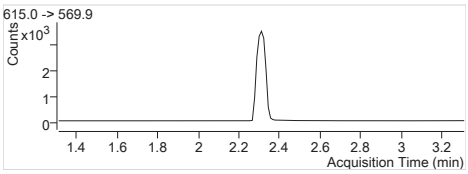
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 106.93 µg/L
Area ratio: 0.26473
Sample type: Calibration



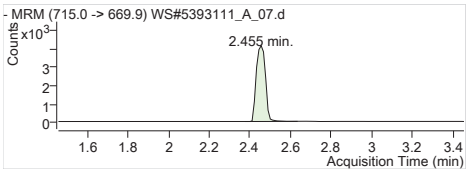


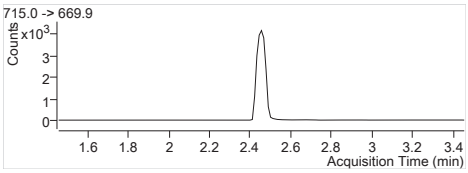
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 106.18 µg/L
Area ratio: 0.30601
Sample type: Calibration



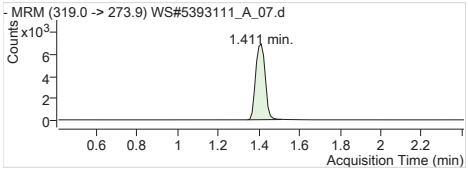


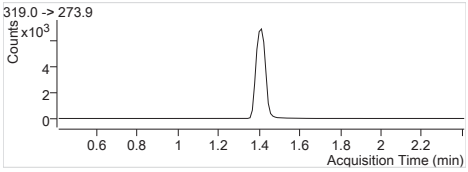
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 100.41 µg/L
Area ratio: 0.37538
Sample type: Calibration



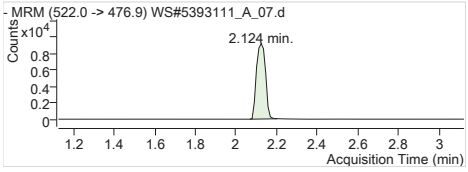


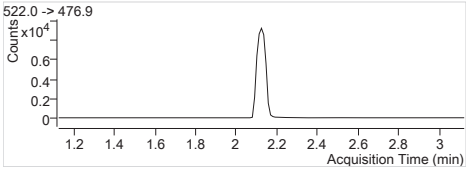
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 106.38 µg/L
Area ratio: 0.45652
Sample type: Calibration





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 95.90 µg/L
Area ratio: 0
Sample type: Calibration





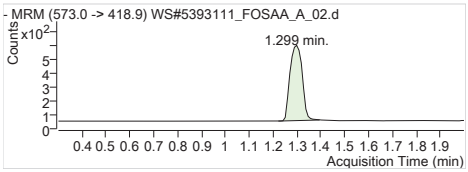
13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 93.65 µg/L
Area ratio: 0
Sample type: Calibration

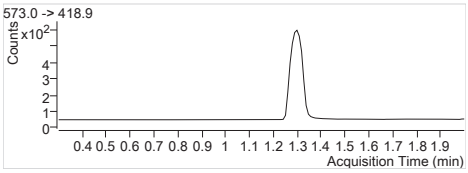
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**STD 1**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_02.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A2
Acq. Date	2018/02/13 11:29:26 AM	**Injection Volume**	Per Method
Sample Annotation	-		

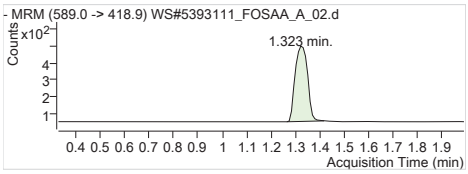
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1936	1.30	1 µg/L		
D5-EtFOSAA IS	1603	1.32	1 µg/L		
13C9-PFDA IS	27159	0.87	1 µg/L		

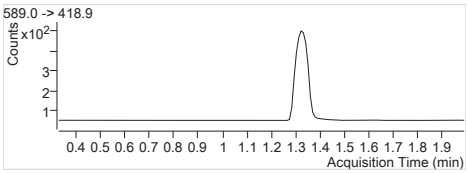
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	624	1.30	0.83	0.84 µg/L	101.04
EtFOSAA 1	627	1.32	0.83	0.87 µg/L	104.90
D3-MeFOSAA	1969	1.30	100.00	96.68 µg/L	96.68
D5-EtFOSAA	1633	1.32	100.00	93.57 µg/L	93.57
13C9-PFDA	26376	0.87	100.00	103.38 µg/L	103.38



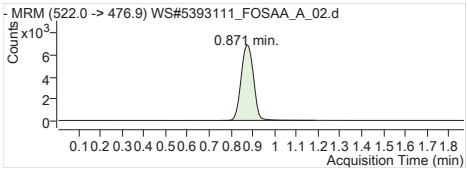


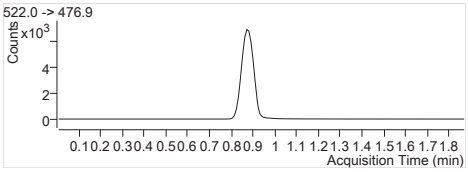
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: Calibration



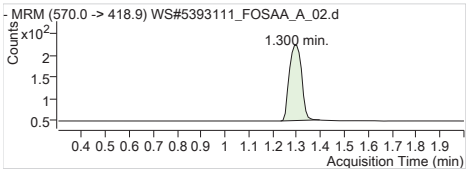


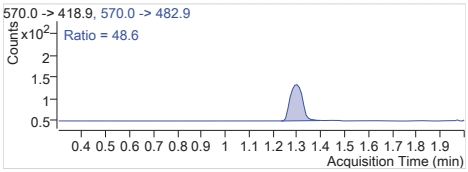
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: Calibration



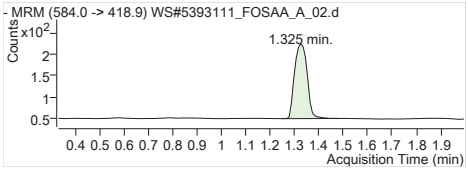


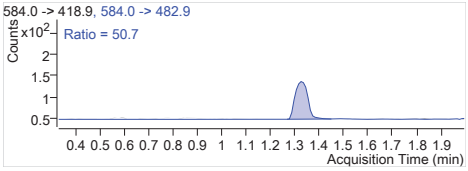
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.871 (0.871)
Concentration: 1 µg/L
Sample type: Calibration



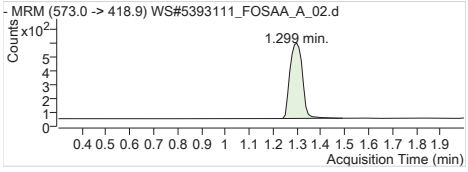


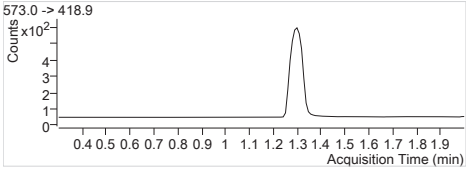
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.300 (1.300)
Calc. conc. 0.84 µg/L
Area ratio: 0.32231
Sample type: Calibration



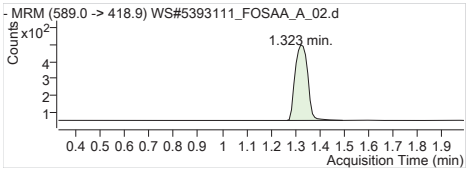


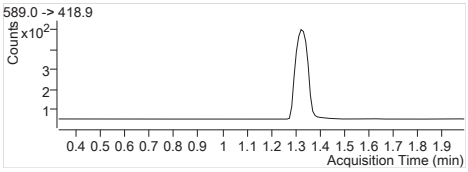
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.325 (1.325)
Calc. conc. 0.87 µg/L
Area ratio: 0.39114
Sample type: Calibration



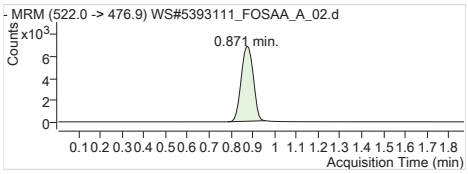


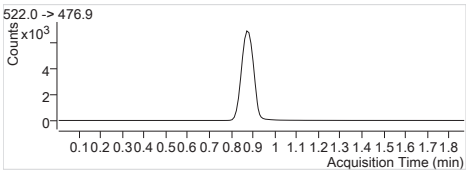
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 96.68 µg/L
Area ratio: 0.07250
Sample type: Calibration





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	93.57 µg/L
Area ratio:	0.06013
Sample type:	Calibration





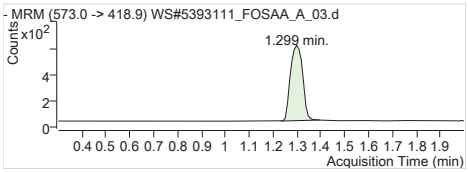
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.871 (0.871)
Calc. conc.	103.38 µg/L
Area ratio:	0
Sample type:	Calibration

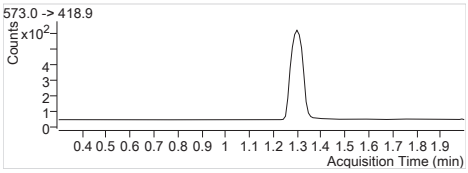
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**STD 2**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_03.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A3
Acq. Date	2018/02/13 11:31:51 AM	**Injection Volume**	Per Method
Sample Annotation	-		

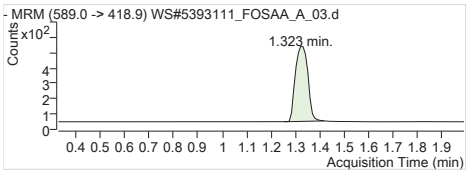
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	2025	1.30	1 µg/L		
D5-EtFOSAA IS	1768	1.32	1 µg/L		
13C9-PFDA IS	26366	0.87	1 µg/L		

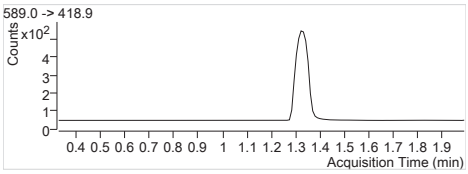
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	1301	1.30	1.70	1.66 µg/L	97.76
EtFOSAA 1	1241	1.32	1.70	1.56 µg/L	91.49
D3-MeFOSAA	2060	1.30	100.00	104.19 µg/L	104.19
D5-EtFOSAA	1791	1.32	100.00	105.71 µg/L	105.71
13C9-PFDA	25555	0.87	100.00	100.16 µg/L	100.16



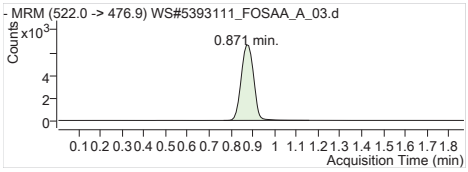


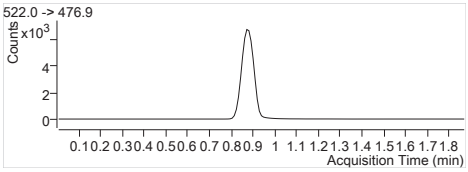
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: Calibration



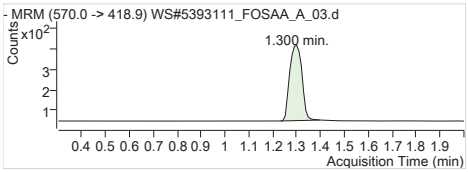


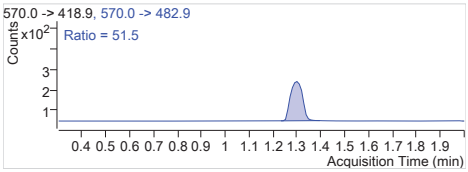
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: Calibration



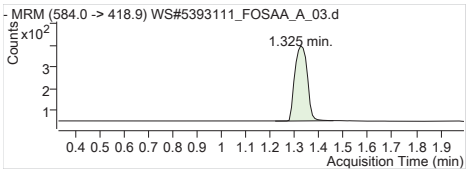


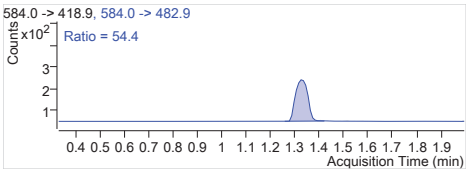
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.871 (0.871)
Concentration: 1 µg/L
Sample type: Calibration



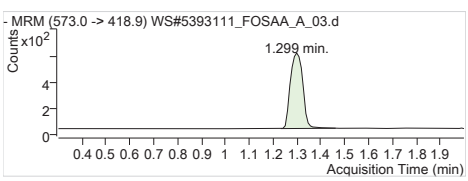


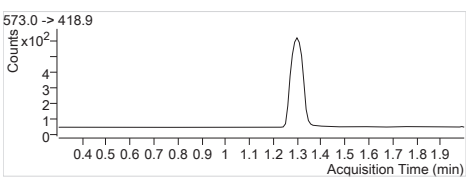
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.300 (1.300)
Calc. conc. 1.66 µg/L
Area ratio: 0.64247
Sample type: Calibration



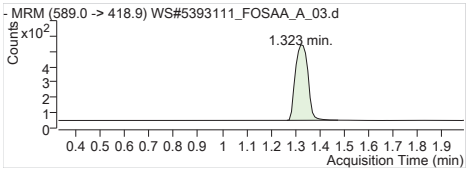


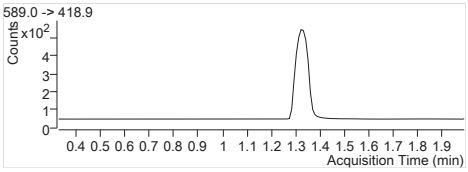
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.325 (1.325)
Calc. conc. 1.56 µg/L
Area ratio: 0.70192
Sample type: Calibration



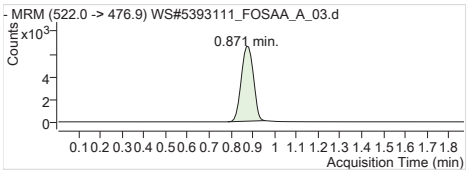


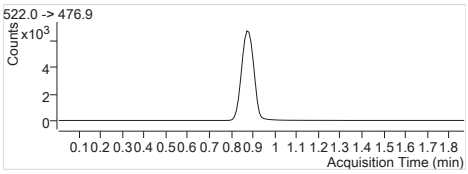
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 104.19 µg/L
Area ratio: 0.07813
Sample type: Calibration





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	105.71 µg/L
Area ratio:	0.06793
Sample type:	Calibration





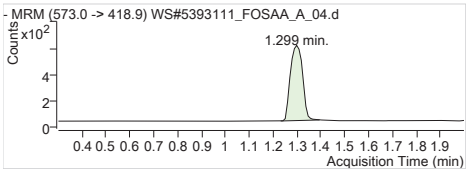
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.871 (0.871)
Calc. conc.	100.16 µg/L
Area ratio:	0
Sample type:	Calibration

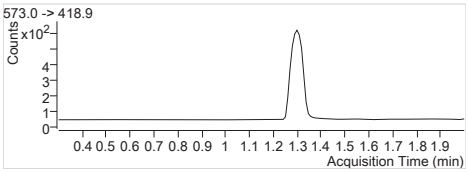
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**STD 3**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_04.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A4
Acq. Date	2018/02/13 11:34:16 AM	**Injection Volume**	Per Method
Sample Annotation	-		

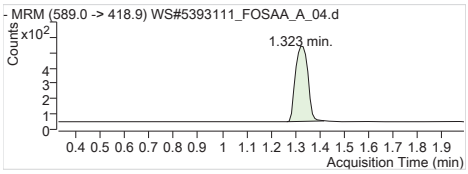
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	2018	1.30	1 µg/L		
D5-EtFOSAA IS	1760	1.32	1 µg/L		
13C9-PFDA IS	26149	0.87	1 µg/L		

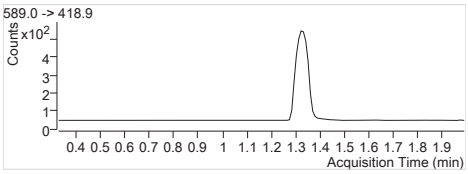
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	3918	1.30	5.00	5.00 µg/L	100.05
EtFOSAA 1	3779	1.32	5.00	4.74 µg/L	94.78
D3-MeFOSAA	2051	1.30	100.00	104.60 µg/L	104.60
D5-EtFOSAA	1790	1.32	100.00	106.53 µg/L	106.53
13C9-PFDA	25326	0.87	100.00	99.27 µg/L	99.27



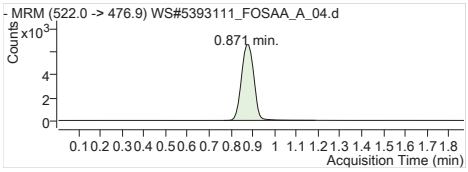


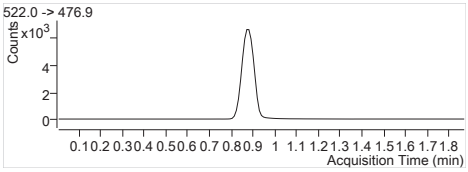
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: Calibration



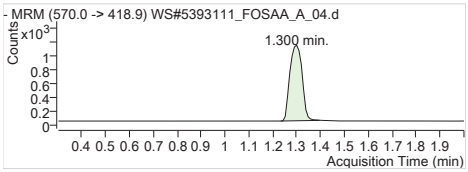


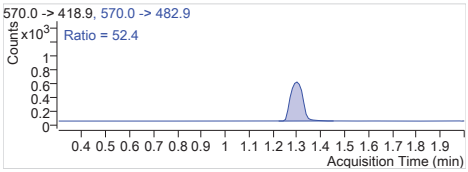
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: Calibration



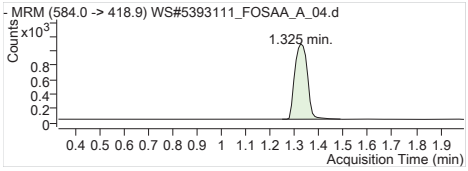


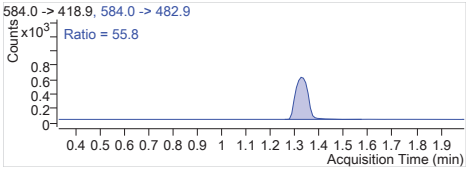
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.871 (0.871)
Concentration: 1 µg/L
Sample type: Calibration



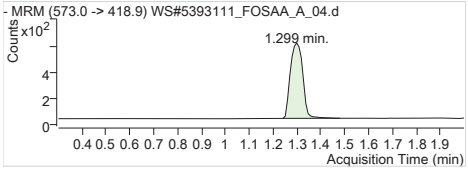


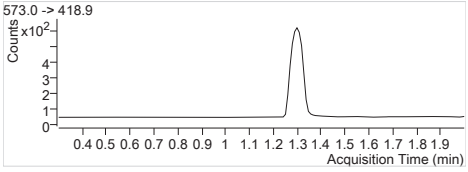
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.300 (1.300)
Calc. conc. 5.00 µg/L
Area ratio: 1.94153
Sample type: Calibration



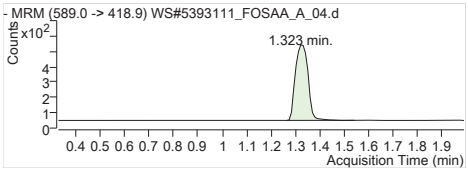


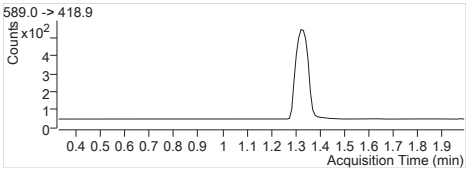
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.325 (1.325)
Calc. conc. 4.74 µg/L
Area ratio: 2.14716
Sample type: Calibration



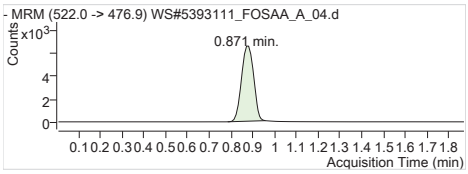


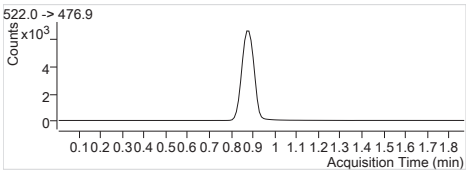
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 104.60 µg/L
Area ratio: 0.07844
Sample type: Calibration





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	106.53 µg/L
Area ratio:	0.06845
Sample type:	Calibration





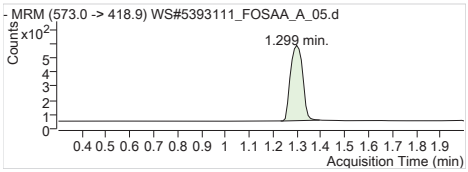
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.871 (0.871)
Calc. conc.	99.27 µg/L
Area ratio:	0
Sample type:	Calibration

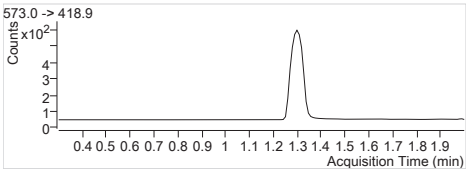
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**STD 4**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_05.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A5
Acq. Date	2018/02/13 11:36:41 AM	**Injection Volume**	Per Method
Sample Annotation	-		

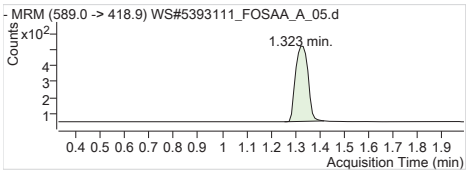
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1929	1.30	1 µg/L		
D5-EtFOSAA IS	1694	1.32	1 µg/L		
13C9-PFDA IS	27486	0.87	1 µg/L		

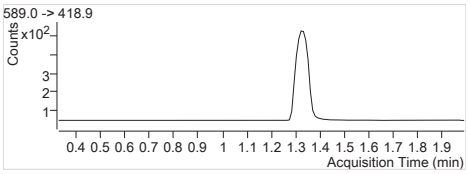
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	9346	1.30	12.50	12.47 µg/L	99.75
EtFOSAA 1	9377	1.32	12.50	12.20 µg/L	97.63
D3-MeFOSAA	1967	1.30	100.00	95.43 µg/L	95.43
D5-EtFOSAA	1721	1.32	100.00	97.44 µg/L	97.44
13C9-PFDA	26617	0.87	100.00	104.33 µg/L	104.33



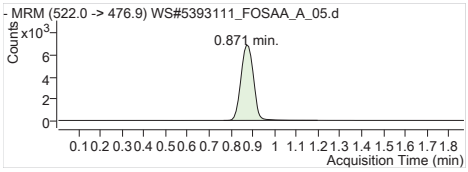


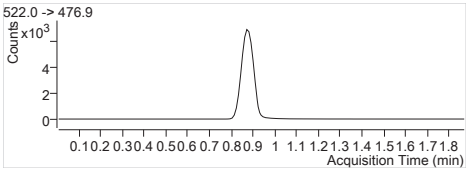
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: Calibration



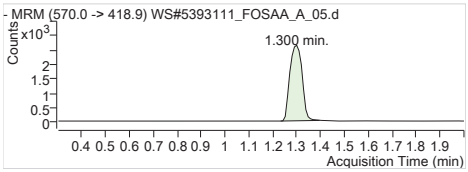


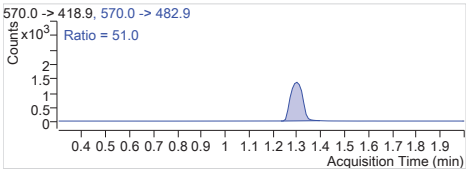
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: Calibration



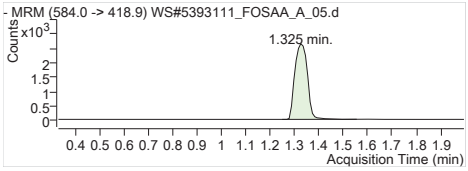


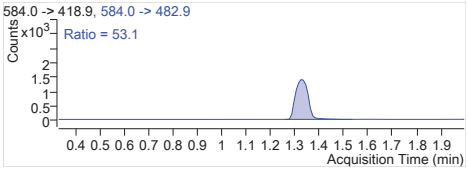
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.871 (0.871)
Concentration: 1 µg/L
Sample type: Calibration



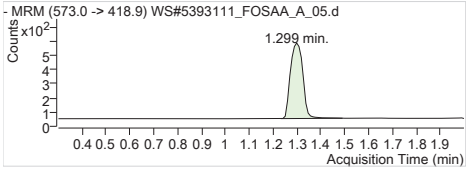


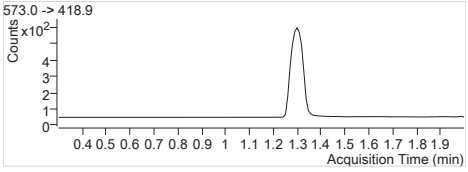
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.300 (1.300)
Calc. conc. 12.47 µg/L
Area ratio: 4.84500
Sample type: Calibration



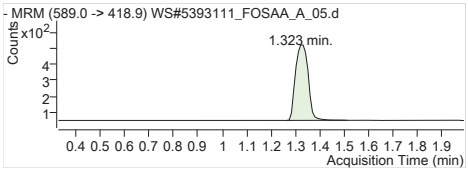


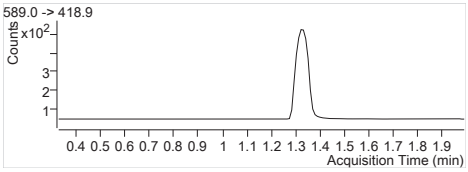
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.325 (1.325)
Calc. conc. 12.20 µg/L
Area ratio: 5.53542
Sample type: Calibration



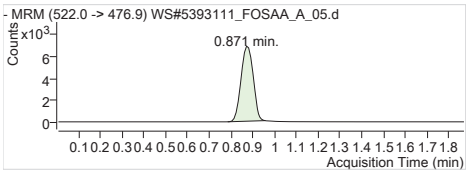


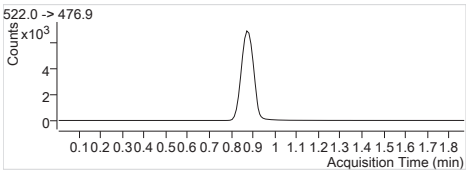
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 95.43 µg/L
Area ratio: 0.07156
Sample type: Calibration





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	97.44 µg/L
Area ratio:	0.06261
Sample type:	Calibration





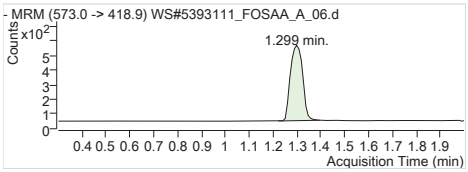
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.871 (0.871)
Calc. conc.	104.33 µg/L
Area ratio:	0
Sample type:	Calibration

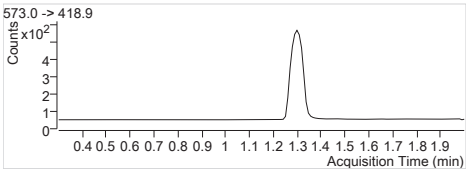
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**STD 5**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_06.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A6
Acq. Date	2018/02/13 11:39:06 AM	**Injection Volume**	Per Method
Sample Annotation	-		

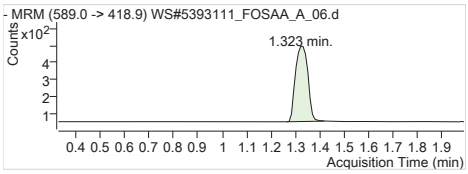
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1849	1.30	1 µg/L		
D5-EtFOSAA IS	1596	1.32	1 µg/L		
13C9-PFDA IS	25687	0.87	1 µg/L		

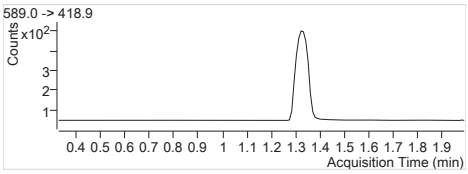
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	18424	1.30	25.00	25.63 µg/L	102.53
EtFOSAA 1	18917	1.32	25.00	26.12 µg/L	104.48
D3-MeFOSAA	1855	1.30	100.00	96.30 µg/L	96.30
D5-EtFOSAA	1611	1.32	100.00	97.60 µg/L	97.60
13C9-PFDA	25168	0.87	100.00	98.65 µg/L	98.65



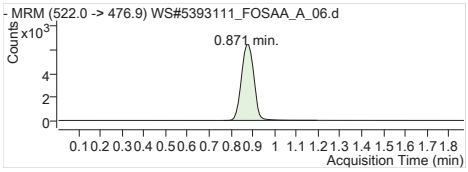


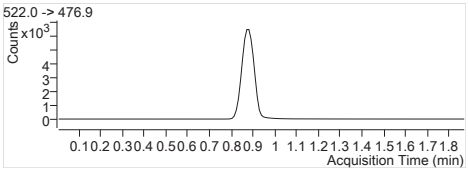
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: Calibration



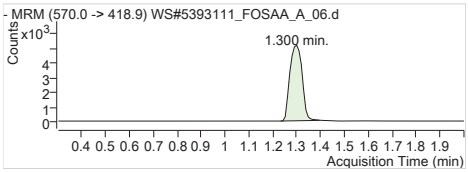


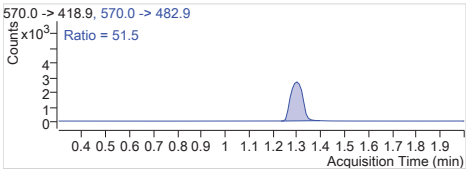
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: Calibration



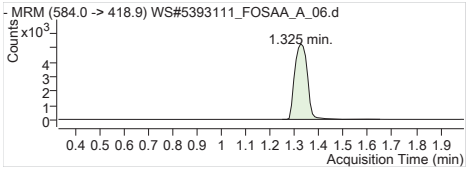


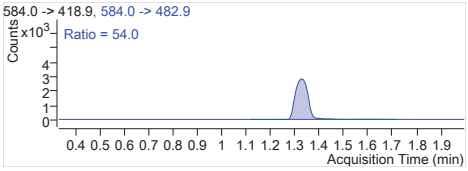
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.871 (0.871)
Concentration: 1 µg/L
Sample type: Calibration



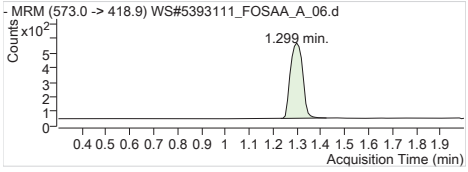


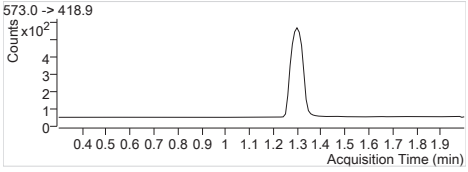
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.300 (1.300)
Calc. conc. 25.63 µg/L
Area ratio: 9.96431
Sample type: Calibration



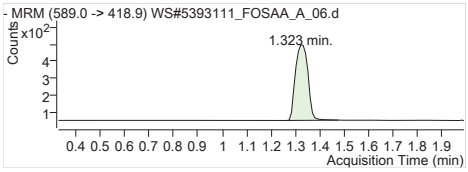


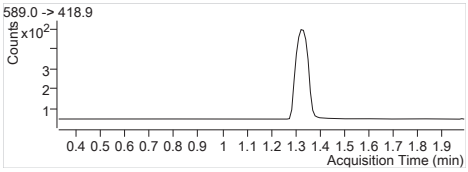
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.325 (1.325)
Calc. conc. 26.12 µg/L
Area ratio: 11.85276
Sample type: Calibration



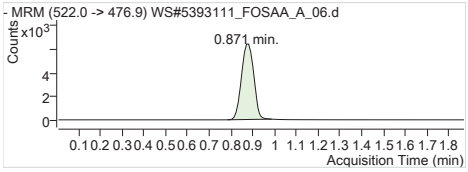


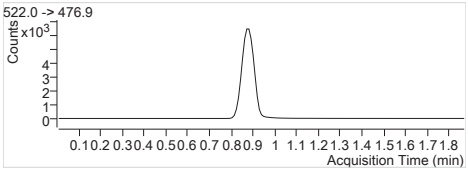
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 96.30 µg/L
Area ratio: 0.07222
Sample type: Calibration





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	97.60 µg/L
Area ratio:	0.06272
Sample type:	Calibration





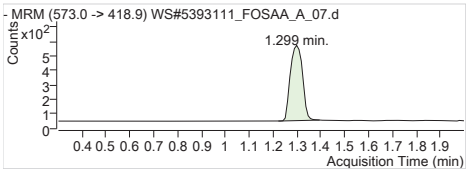
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.871 (0.871)
Calc. conc.	98.65 µg/L
Area ratio:	0
Sample type:	Calibration

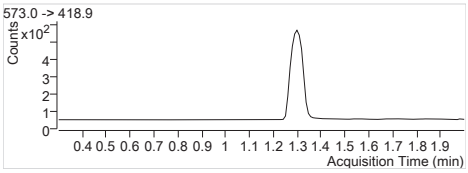
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**STD 6**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_07.d	**Operator**	
Sample Type	Cal	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A7
Acq. Date	2018/02/13 11:41:31 AM	**Injection Volume**	Per Method
Sample Annotation	-		

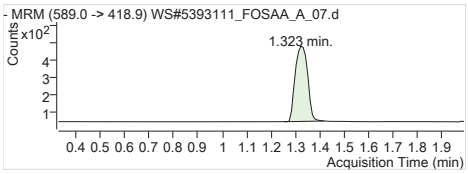
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1846	1.30	1 µg/L		
D5-EtFOSAA IS	1542	1.32	1 µg/L		
13C9-PFDA IS	24440	0.87	1 µg/L		

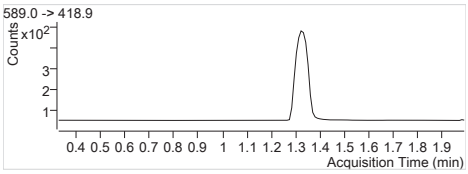
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	29587	1.30	41.70	41.23 µg/L	98.86
EtFOSAA 1	31142	1.32	41.70	44.50 µg/L	106.72
D3-MeFOSAA	1884	1.30	100.00	102.80 µg/L	102.80
D5-EtFOSAA	1557	1.32	100.00	99.14 µg/L	99.14
13C9-PFDA	24038	0.87	100.00	94.22 µg/L	94.22



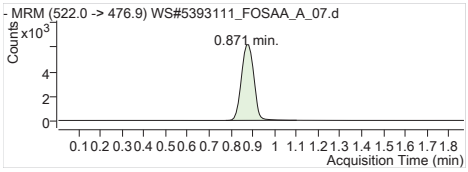


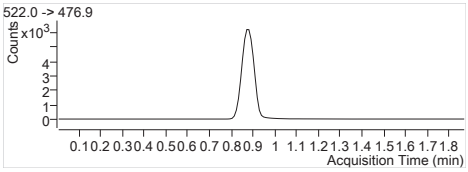
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: Calibration



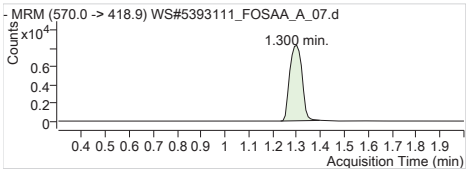


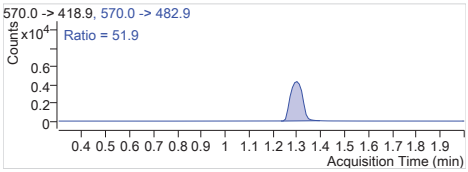
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: Calibration



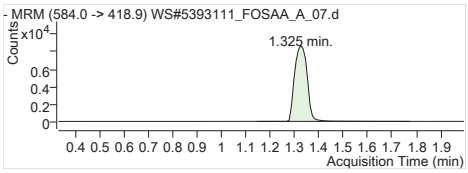


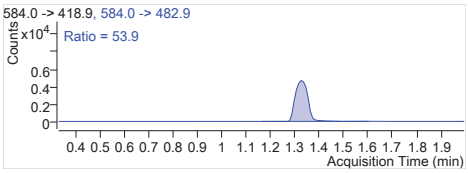
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.871 (0.871)
Concentration: 1 µg/L
Sample type: Calibration



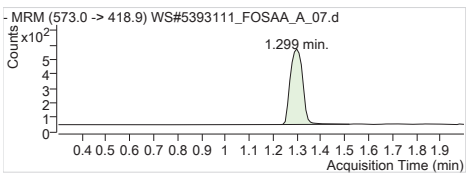


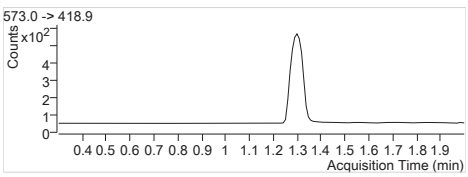
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.300 (1.300)
Calc. conc. 41.23 µg/L
Area ratio: 16.02763
Sample type: Calibration



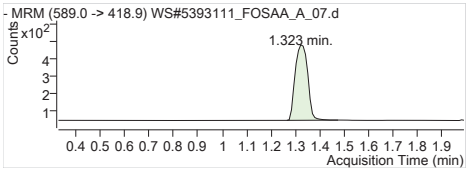


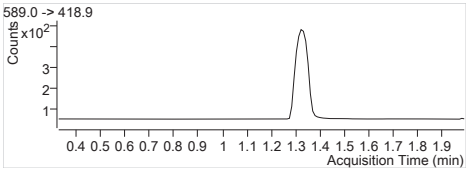
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.325 (1.325)
Calc. conc. 44.50 µg/L
Area ratio: 20.19585
Sample type: Calibration



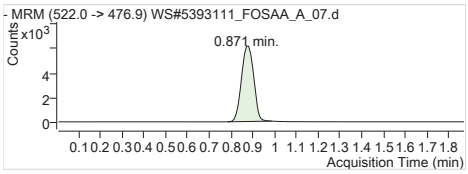


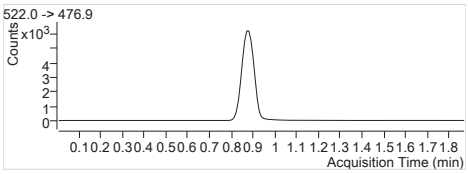
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 102.80 µg/L
Area ratio: 0.07709
Sample type: Calibration





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	99.14 µg/L
Area ratio:	0.06371
Sample type:	Calibration





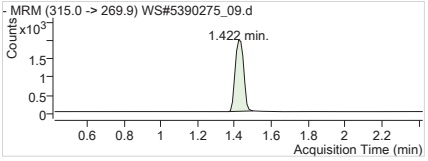
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.871 (0.871)
Calc. conc.	94.22 µg/L
Area ratio:	0
Sample type:	Calibration

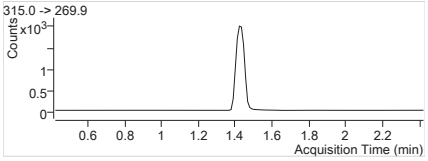
Batch Path	T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics

Sample Name	**ICV**	**Instrument**	LCMS04
Data File	WS#5390275_09.d	**Operator**	
Sample Type	QC	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A9
Acq. Date	2018/02/09 5:13:42 PM	**Injection Volume**	Per Method
Sample Annotation	-		

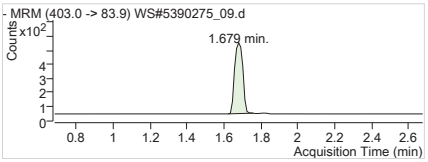
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6289	1.42	1 µg/L		
MPFHxS	1551	1.68	1 µg/L		
MPFHpA	7459	1.69	1 µg/L		
MPFOA	8591	1.87	1 µg/L		
MPFOS	1762	1.98	1 µg/L		
MPFNA	7638	2.01	1 µg/L		
MPFDA	6759	2.14	1 µg/L		
MPFUnA	8592	2.23	1 µg/L		
MPFDoA	10573	2.32	1 µg/L		
MPFTeDA	12551	2.47	1 µg/L		
13C6-PFHxA IS	24288	1.42	1 µg/L		
13C9-PFDA IS	32215	2.13	1 µg/L		

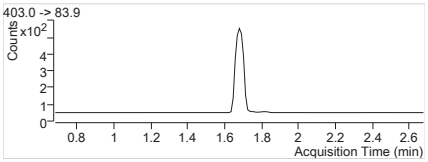
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	14160	1.09	20.80	20.32 µg/L	97.67
PFHxA 1	50267	1.42	20.80	19.76 µg/L	95.02
PFHxS 1	13585	1.68	20.80	19.63 µg/L	94.40
PFHpA 1	63512	1.69	20.80	21.08 µg/L	101.36
PFOA 1	72717	1.87	20.80	20.51 µg/L	98.60
PFOS 1	12891	1.97	20.80	20.68 µg/L	99.43
PFNA 1	61697	2.01	20.80	21.68 µg/L	104.25
PFDA 1	69266	2.14	20.80	20.29 µg/L	97.52
PFUnA 1	78627	2.23	20.80	21.55 µg/L	103.62
PFDoA 1	95987	2.32	20.80	21.76 µg/L	104.63
PFTrDA 1	105334	2.40	20.80	20.24 µg/L	97.31
PFTeDA 1	94279	2.47	20.80	21.81 µg/L	104.87
13C2-PFHxA	6289	1.42	100.00	103.75 µg/L	103.75
18O2-PFHxS	1551	1.68	100.00	102.14 µg/L	102.14
13C4-PFHpA	7459	1.69	100.00	94.41 µg/L	94.41
13C4-PFOA	8591	1.87	100.00	102.52 µg/L	102.52
13C4-PFOS	1762	1.98	100.00	92.48 µg/L	92.48
13C5-PFNA	7638	2.01	100.00	92.22 µg/L	92.22
13C2-PFDA	6613	2.14	100.00	98.52 µg/L	98.52
13C2-PFUnA	8592	2.23	100.00	101.21 µg/L	101.21
13C2-PFDoA	10573	2.32	100.00	96.28 µg/L	96.28
13C2-PFTeDA	12855	2.47	100.00	100.90 µg/L	100.90
13C6-PFHxA	24288	1.42	100.00	103.72 µg/L	103.72
13C9-PFDA	32215	2.13	100.00	104.09 µg/L	104.09



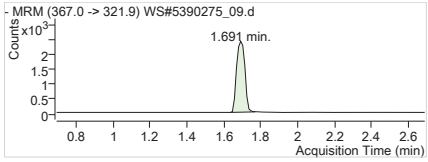


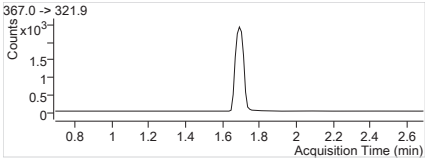
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: QC



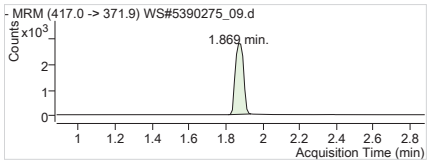


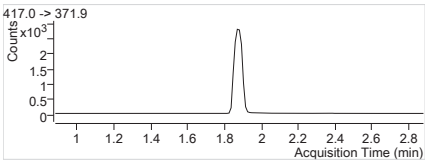
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: QC



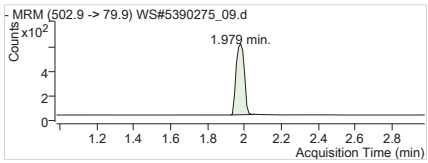


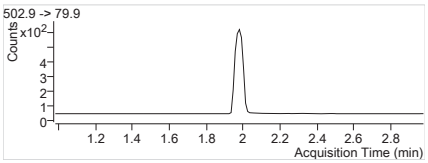
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: QC



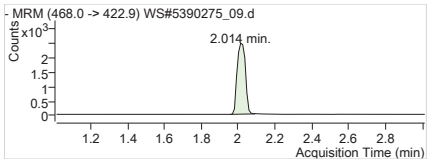


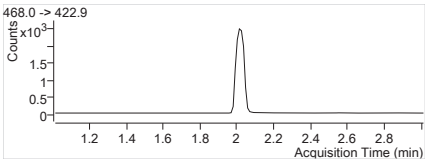
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: QC



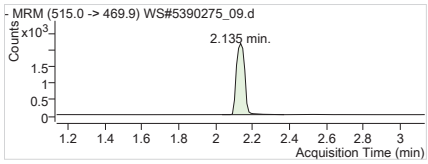


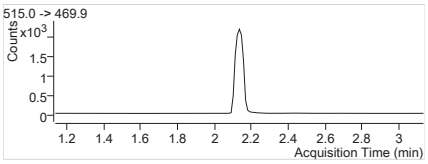
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: QC



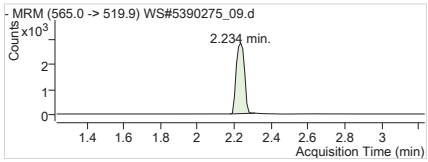


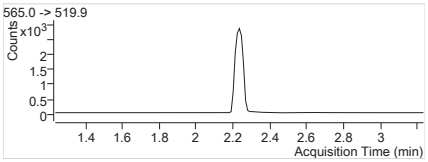
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: QC



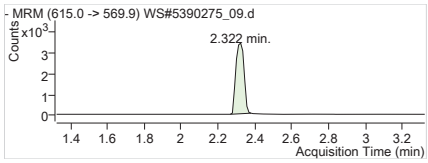


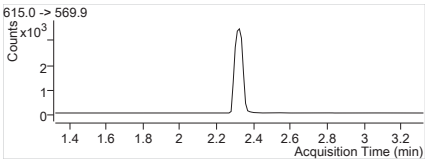
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: QC



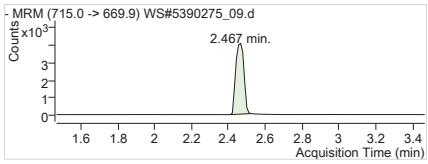


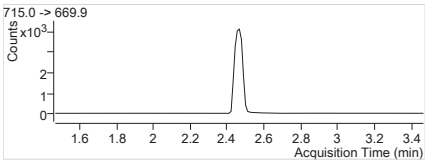
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: QC



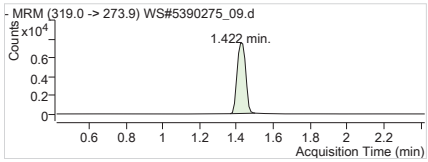


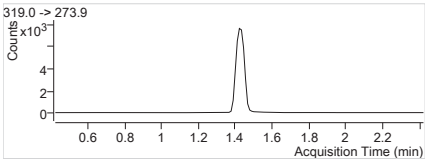
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: QC



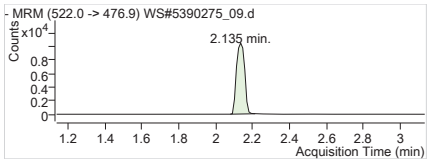


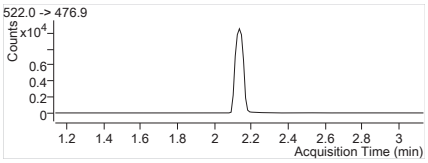
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: QC



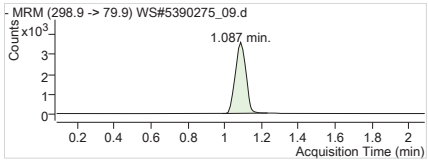


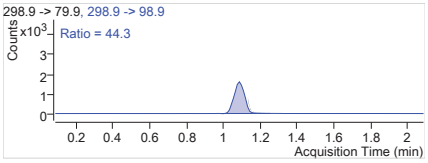
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: QC



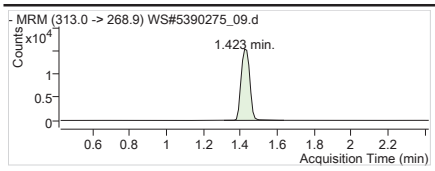


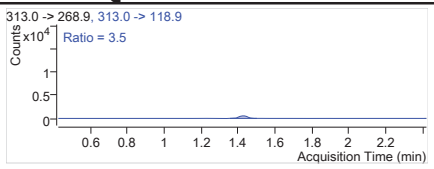
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: QC



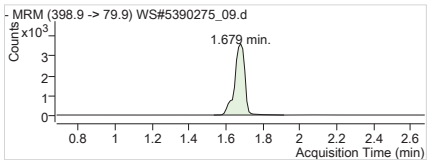


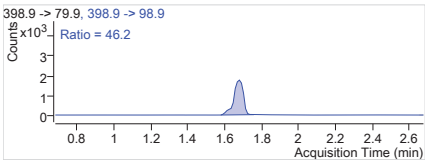
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 20.32 µg/L
Area ratio: 9.12959
Sample type: QC



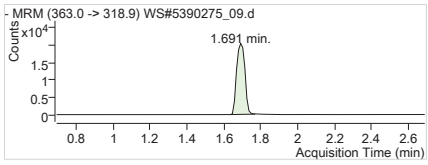


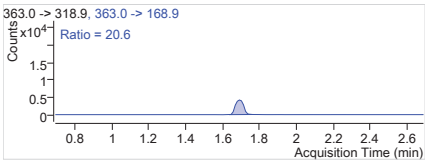
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 19.76 µg/L
Area ratio: 7.99284
Sample type: QC



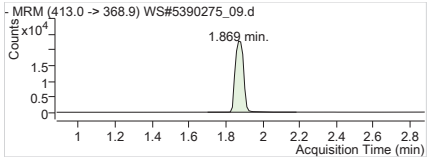


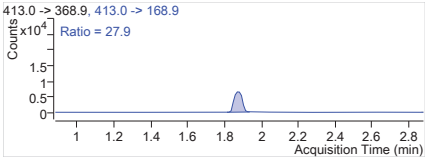
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 19.63 µg/L
Area ratio: 8.75887
Sample type: QC



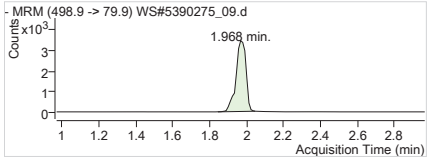


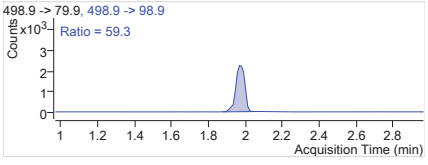
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 21.08 µg/L
Area ratio: 8.51481
Sample type: QC



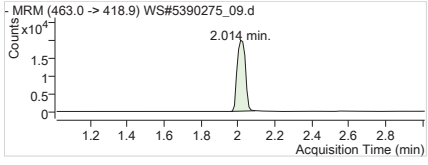


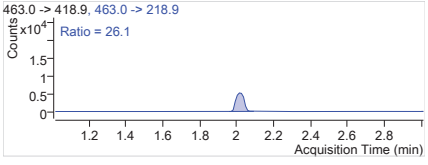
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 20.51 µg/L
Area ratio: 8.46432
Sample type: QC



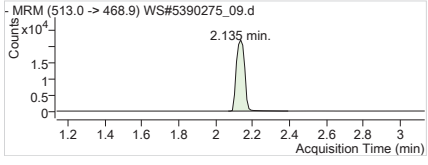


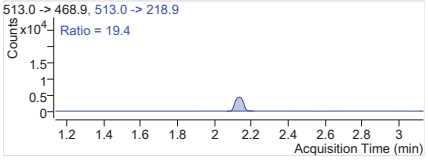
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 20.68 µg/L
Area ratio: 7.31612
Sample type: QC



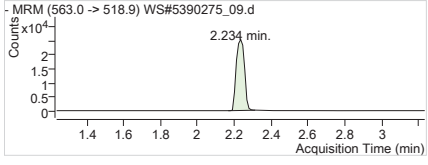


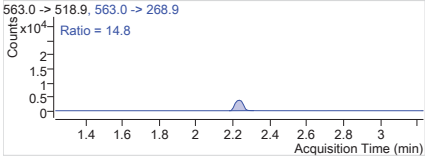
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 21.68 µg/L
Area ratio: 8.07764
Sample type: QC



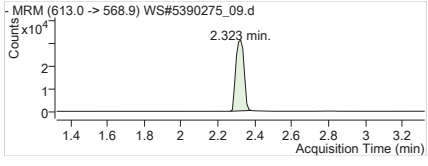


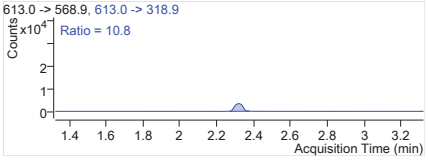
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 20.29 µg/L
Area ratio: 10.24797
Sample type: QC



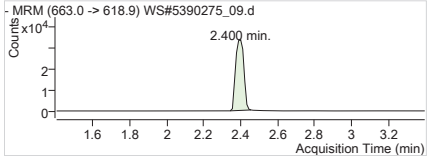


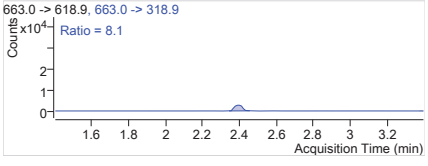
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 21.55 µg/L
Area ratio: 9.15119
Sample type: QC



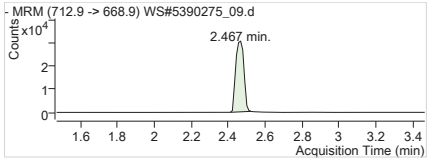


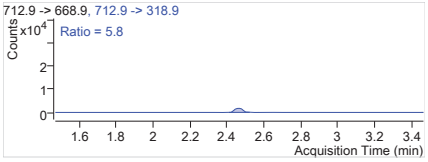
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 21.76 µg/L
Area ratio: 9.07850
Sample type: QC



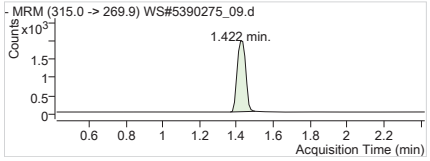


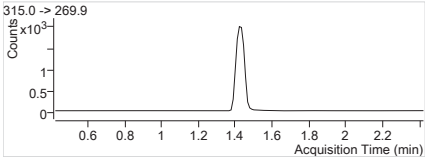
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 20.24 µg/L
Area ratio: 8.39248
Sample type: QC



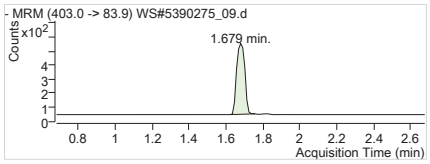


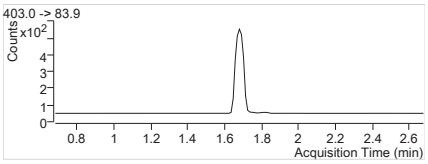
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 21.81 µg/L
Area ratio: 7.51167
Sample type: QC



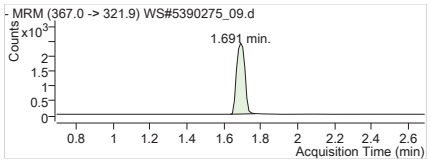


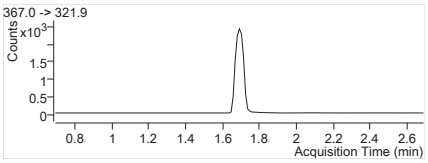
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 103.75 µg/L
Area ratio: 0.25893
Sample type: QC



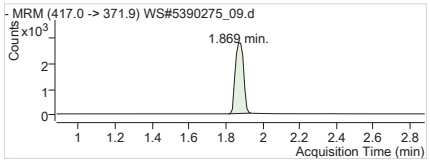


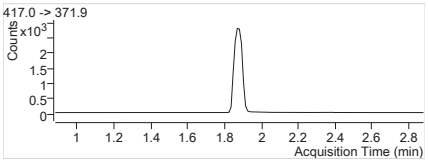
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 102.14 µg/L
Area ratio: 0.06386
Sample type: QC



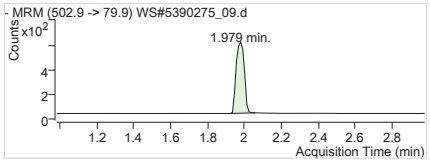


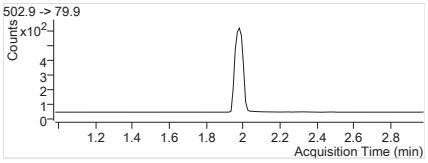
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 94.41 µg/L
Area ratio: 0.30711
Sample type: QC



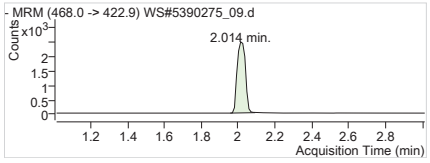


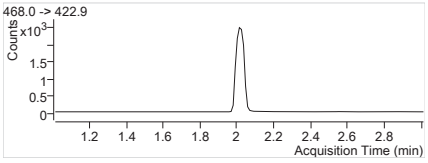
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 102.52 µg/L
Area ratio: 0.35371
Sample type: QC



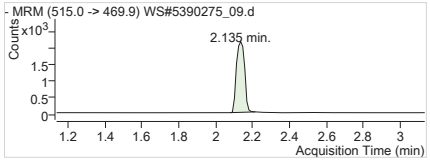


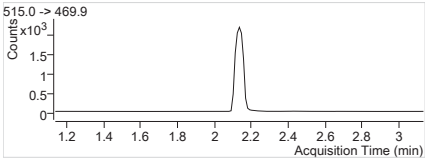
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 92.48 µg/L
Area ratio: 0.07255
Sample type: QC



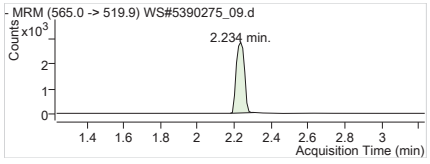


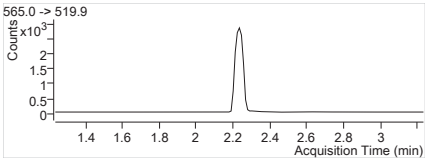
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 92.22 µg/L
Area ratio: 0.31448
Sample type: QC



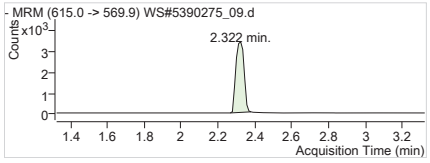


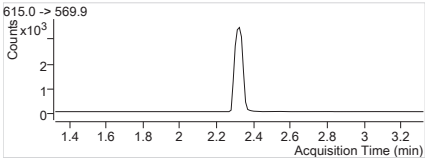
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 98.52 µg/L
Area ratio: 0.20528
Sample type: QC



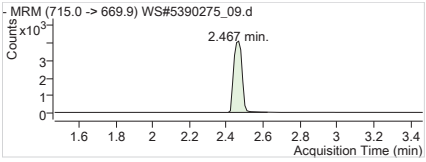


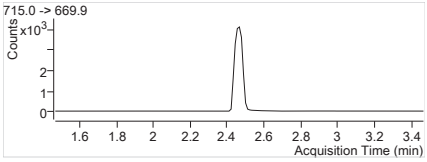
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 101.21 µg/L
Area ratio: 0.26671
Sample type: QC



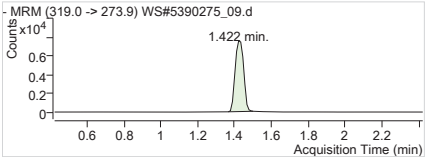


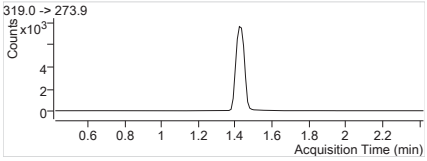
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 96.28 µg/L
Area ratio: 0.32820
Sample type: QC



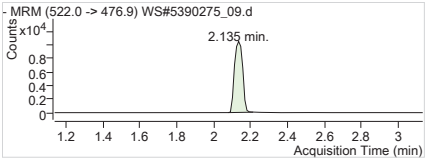


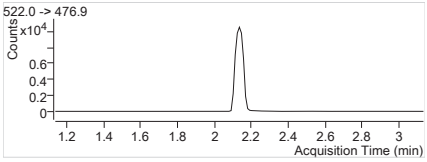
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	100.90 µg/L
Area ratio:	0.39904
Sample type:	QC





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	103.72 µg/L
Area ratio:	0
Sample type:	QC





13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	104.09 µg/L
Area ratio:	0
Sample type:	QC

Quantitation Results

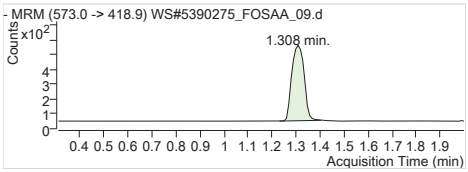
Agilent Technologies

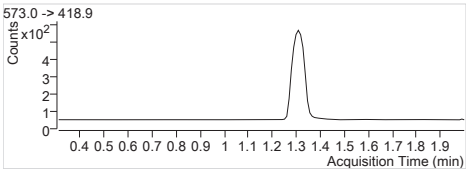
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**ICV**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_09.d	**Operator**	
Sample Type	QC	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A9
Acq. Date	2018/02/10 12:47:12 AM	**Injection Volume**	Per Method
Sample Annotation	-		

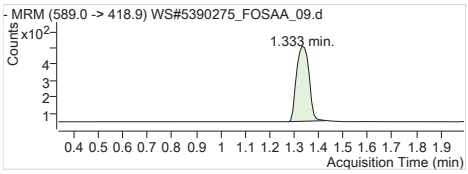
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1834	1.31	1 µg/L		
D5-EtFOSAA IS	1640	1.33	1 µg/L		
13C9-PFDA IS	24598	0.90	1 µg/L		

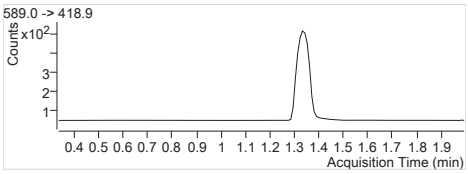
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	13389	1.31	20.80	21.04 µg/L	101.13
EtFOSAA 1	14748	1.33	20.80	21.73 µg/L	104.46
D3-MeFOSAA	1871	1.31	100.00	103.72 µg/L	103.72
D5-EtFOSAA	1684	1.33	100.00	104.99 µg/L	104.99
13C9-PFDA	23828	0.90	100.00	100.49 µg/L	100.49



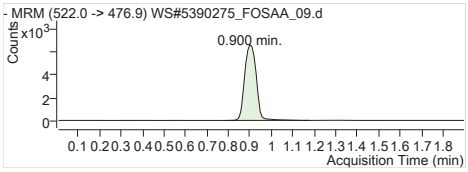


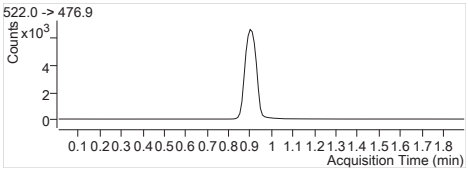
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: QC



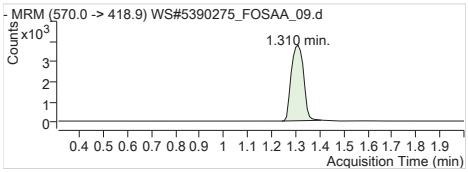


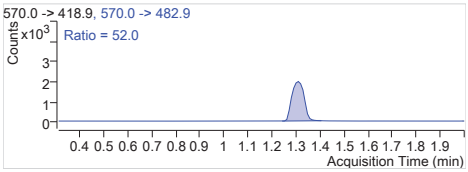
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: QC



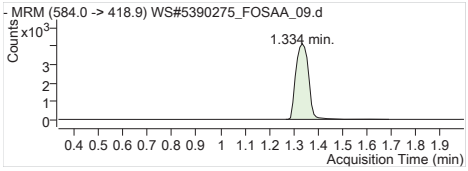


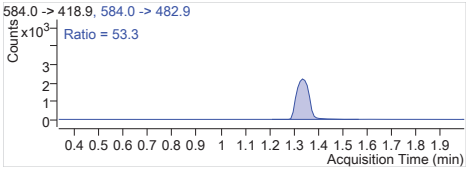
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.900 (0.900)
Concentration: 1 µg/L
Sample type: QC



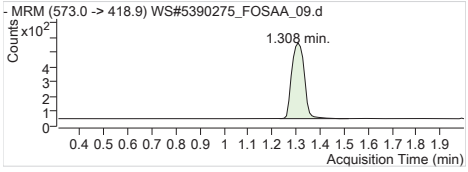


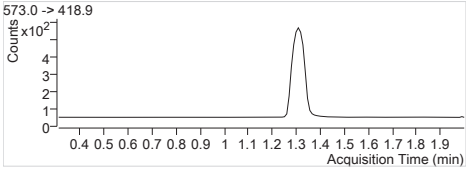
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 21.04 µg/L
Area ratio: 7.30044
Sample type: QC



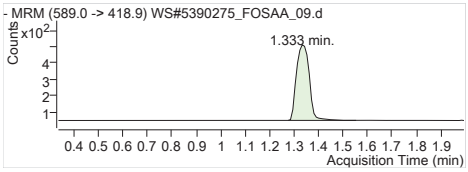


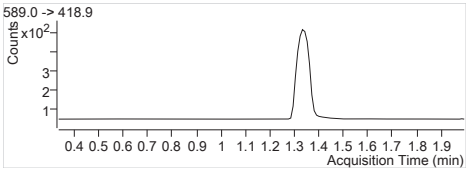
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.334)
Calc. conc. 21.73 µg/L
Area ratio: 8.99268
Sample type: QC



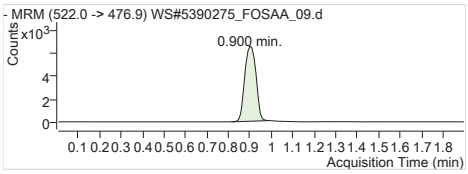


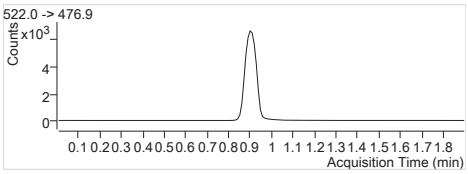
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 103.72 µg/L
Area ratio: 0.07606
Sample type: QC





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	104.99 µg/L
Area ratio:	0.06846
Sample type:	QC





13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.900 (0.900)
Calc. conc.	100.49 µg/L
Area ratio:	0
Sample type:	QC

Quantitation Results

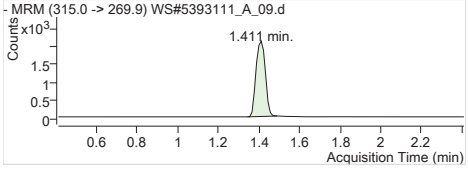
Agilent Technologies

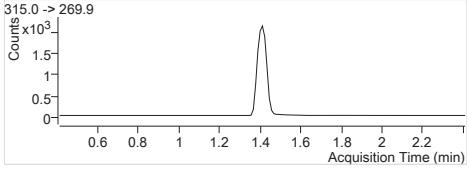
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**ICV**	**Instrument**	LCMS04
Data File	WS#5393111_A_09.d	**Operator**	
Sample Type	QC	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A9
Acq. Date	2018/02/13 1:45:58 PM	**Injection Volume**	Per Method
Sample Annotation	-		

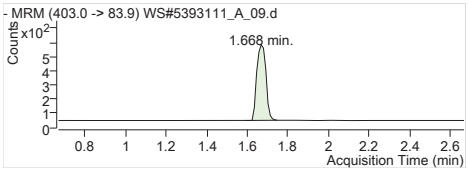
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6673	1.41	1 µg/L		
MPFHxS	1677	1.67	1 µg/L		
MPFHpA	8209	1.68	1 µg/L		
MPFOA	9378	1.86	1 µg/L		
MPFOS	2131	1.97	1 µg/L		
MPFNA	8779	2.00	1 µg/L		
MPFDA	7507	2.12	1 µg/L		
MPFUnA	8478	2.22	1 µg/L		
MPFDoA	11862	2.31	1 µg/L		
MPFTeDA	13496	2.46	1 µg/L		
13C6-PFHxA IS	20366	1.41	1 µg/L		
13C9-PFDA IS	26857	2.12	1 µg/L		

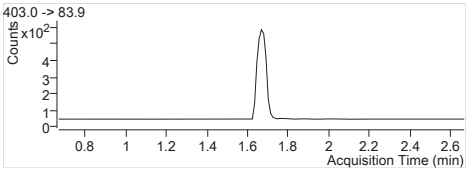
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	17039	1.06	20.80	19.30 µg/L	92.78
PFHxA 1	59667	1.41	20.80	20.31 µg/L	97.65
PFHxS 1	16036	1.67	20.80	18.71 µg/L	89.97
PFHpA 1	77428	1.68	20.80	22.18 µg/L	106.64
PFOA 1	86549	1.86	20.80	20.26 µg/L	97.40
PFOS 1	15751	1.96	20.80	18.75 µg/L	90.13
PFNA 1	78049	2.00	20.80	21.36 µg/L	102.70
PFDA 1	79521	2.12	20.80	21.51 µg/L	103.39
PFUnA 1	87572	2.22	20.80	22.31 µg/L	107.27
PFDoA 1	107057	2.31	20.80	19.40 µg/L	93.28
PFTrDA 1	125450	2.39	20.80	20.70 µg/L	99.53
PFTeDA 1	104476	2.46	20.80	21.09 µg/L	101.40
13C2-PFHxA	6673	1.41	100.00	115.79 µg/L	115.79
18O2-PFHxS	1677	1.67	100.00	119.22 µg/L	119.22
13C4-PFHpA	8209	1.68	100.00	111.52 µg/L	111.52
13C4-PFOA	9378	1.86	100.00	120.02 µg/L	120.02
13C4-PFOS	2131	1.97	100.00	124.71 µg/L	124.71
13C5-PFNA	8779	2.00	100.00	116.49 µg/L	116.49
13C2-PFDA	7492	2.12	100.00	112.68 µg/L	112.68
13C2-PFUnA	8478	2.22	100.00	109.54 µg/L	109.54
13C2-PFDoA	11862	2.31	100.00	118.15 µg/L	118.15
13C2-PFTeDA	13683	2.46	100.00	118.73 µg/L	118.73
13C6-PFHxA	20366	1.41	100.00	87.21 µg/L	87.21
13C9-PFDA	26857	2.12	100.00	88.80 µg/L	88.80



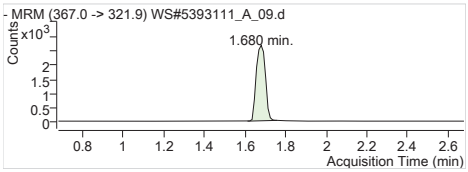


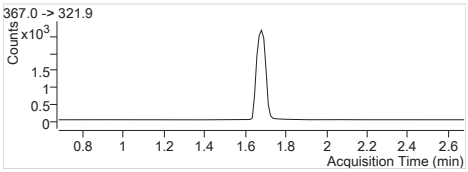
MPFHxA	Internal Standard
RT (Exp. RT):	1.411 (1.411)
Concentration:	1 µg/L
Sample type:	QC



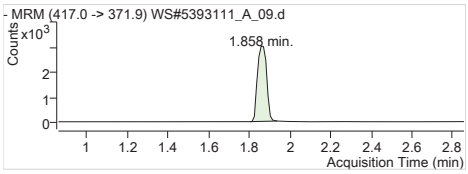


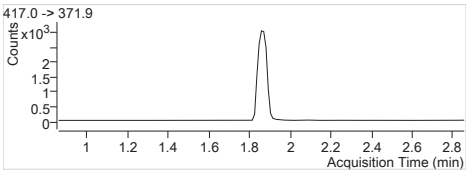
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: QC



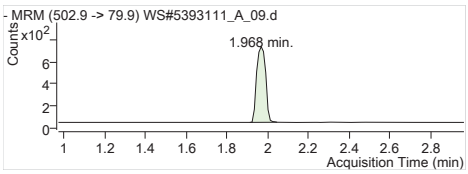


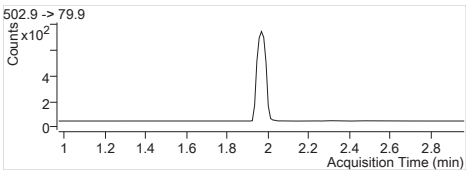
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: QC



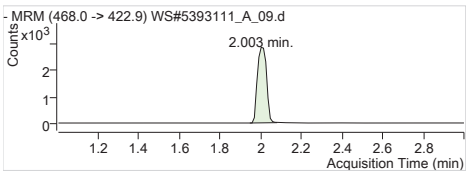


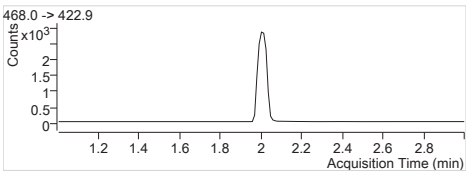
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: QC



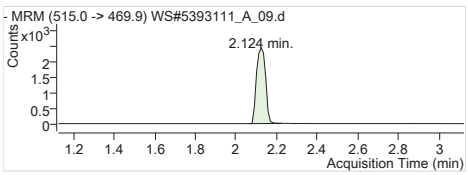


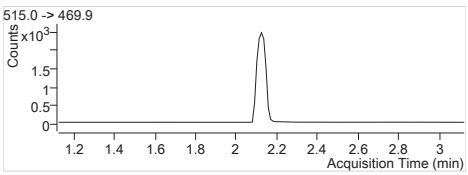
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: QC



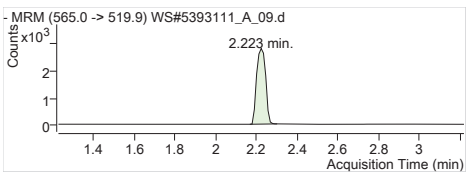


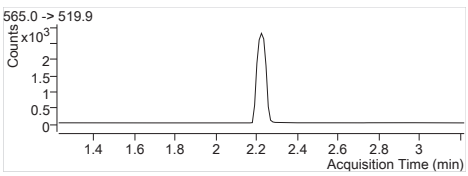
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: QC



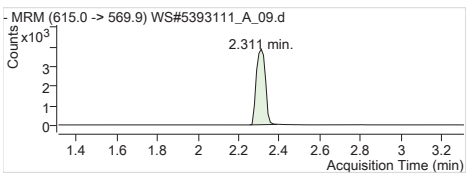


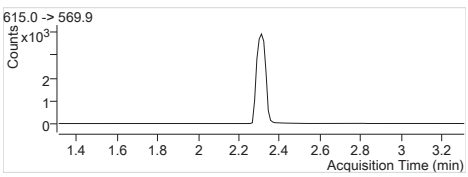
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: QC



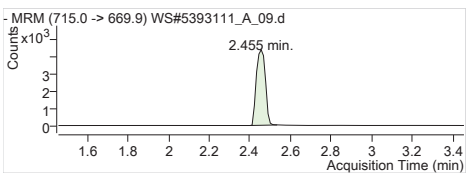


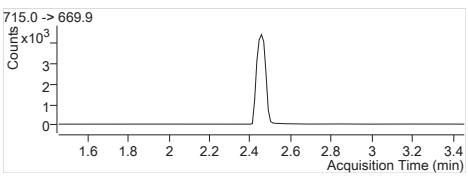
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: QC



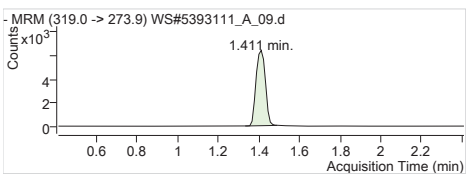


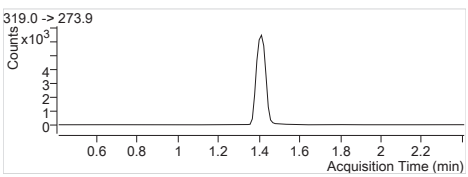
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: QC



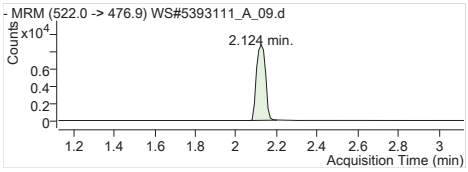


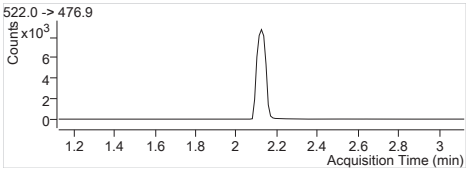
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: QC



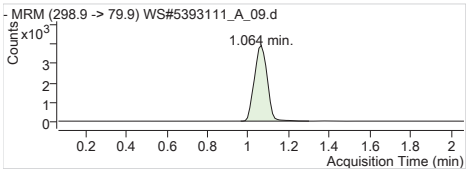


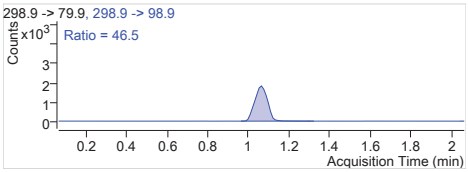
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: QC



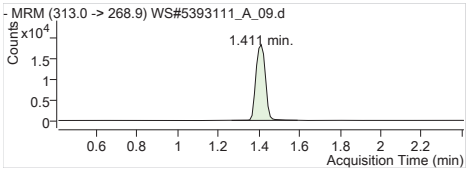


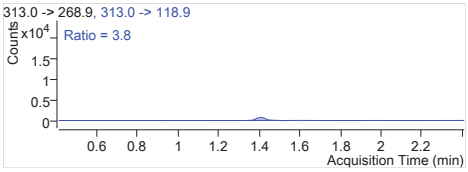
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: QC



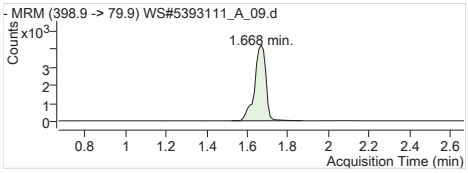


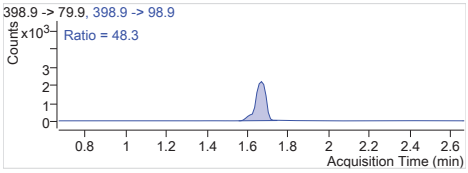
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.064 (1.064)
Calc. conc. 19.30 µg/L
Area ratio: 10.16041
Sample type: QC



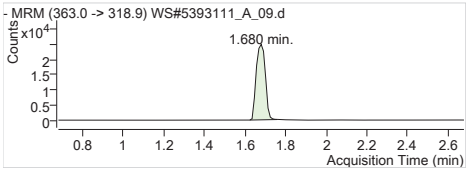


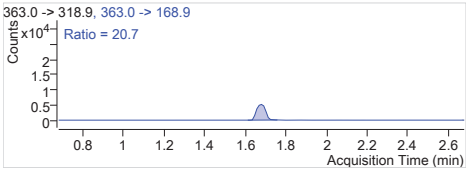
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 20.31 µg/L
Area ratio: 8.94156
Sample type: QC



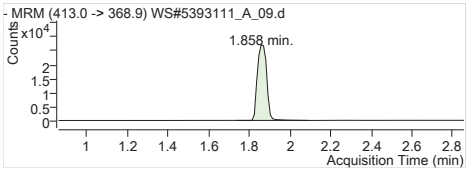


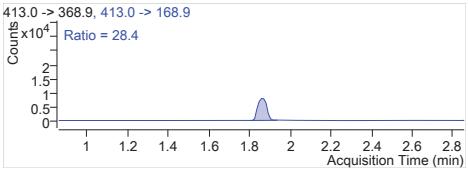
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 18.71 µg/L
Area ratio: 9.56231
Sample type: QC



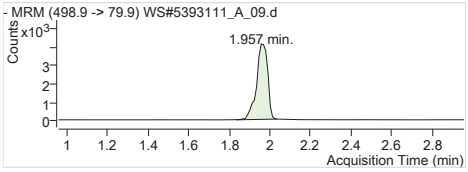


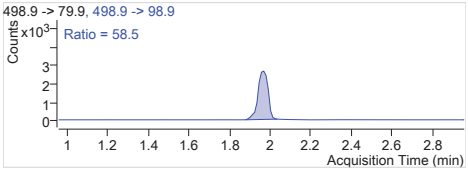
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 22.18 µg/L
Area ratio: 9.43209
Sample type: QC



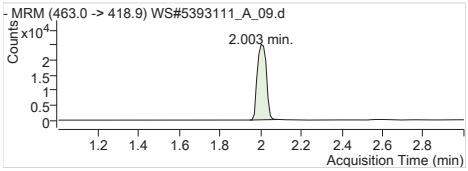


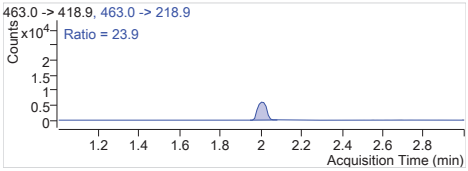
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 20.26 µg/L
Area ratio: 9.22894
Sample type: QC



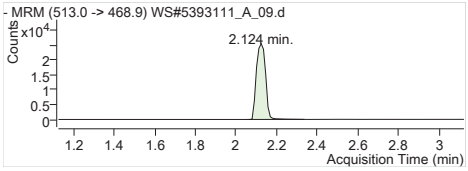


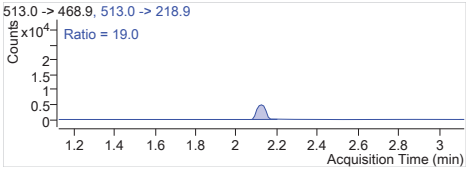
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.957 (1.957)
Calc. conc. 18.75 µg/L
Area ratio: 7.39137
Sample type: QC



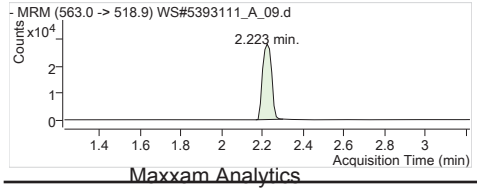


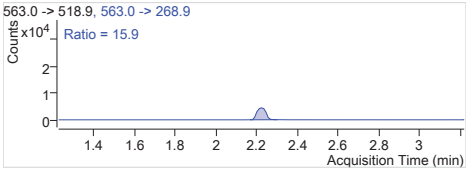
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 21.36 µg/L
Area ratio: 8.89042
Sample type: QC



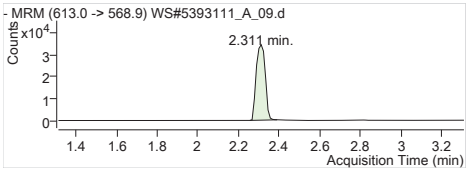


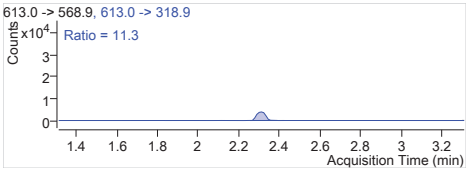
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 21.51 µg/L
Area ratio: 10.59291
Sample type: QC



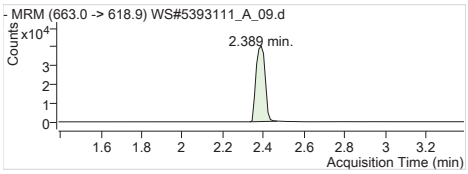


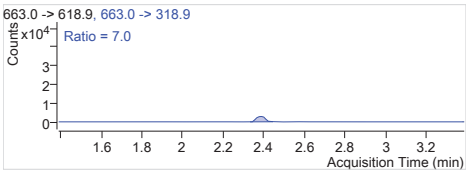
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 22.31 µg/L
Area ratio: 10.32932
Sample type: QC



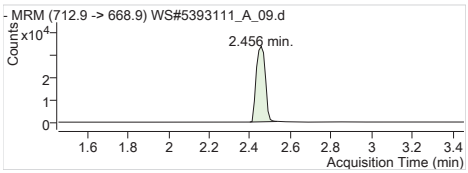


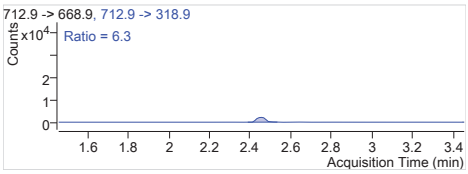
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 19.40 µg/L
Area ratio: 9.02521
Sample type: QC



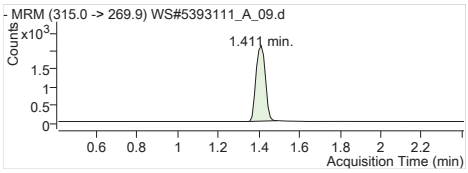


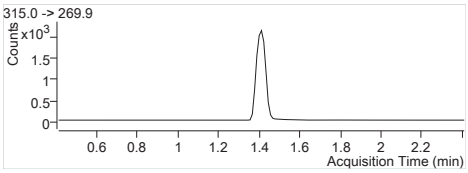
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.389 (2.389)
Calc. conc. 20.70 µg/L
Area ratio: 9.29535
Sample type: QC



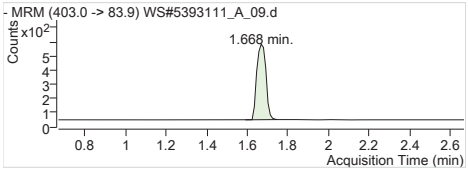


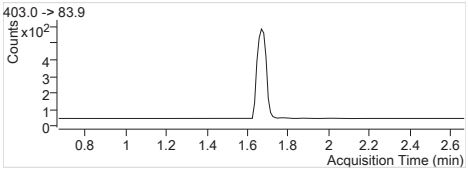
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.456 (2.456)
Calc. conc. 21.09 µg/L
Area ratio: 7.74126
Sample type: QC



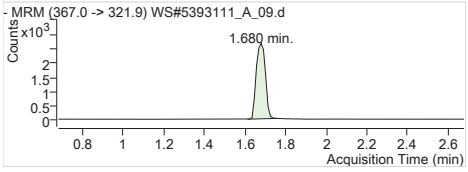


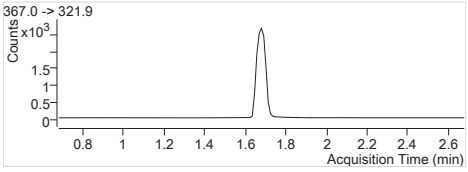
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 115.79 µg/L
Area ratio: 0.32765
Sample type: QC



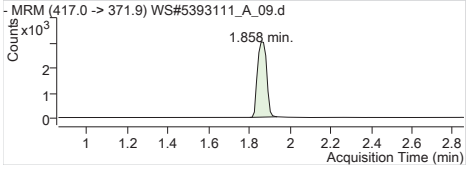


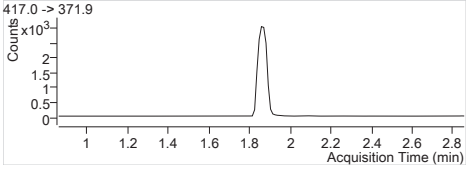
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 119.22 µg/L
Area ratio: 0.08234
Sample type: QC



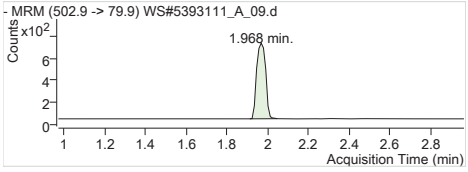


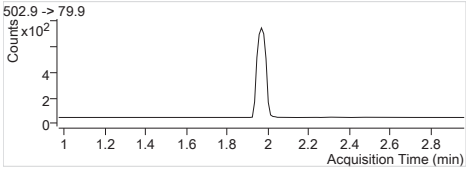
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 111.52 µg/L
Area ratio: 0.40307
Sample type: QC



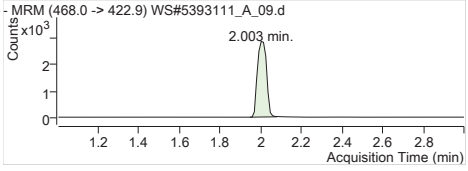


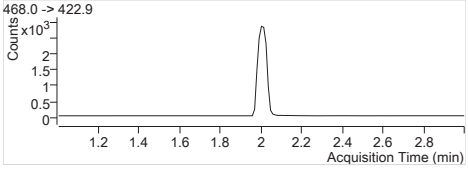
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 120.02 µg/L
Area ratio: 0.46047
Sample type: QC



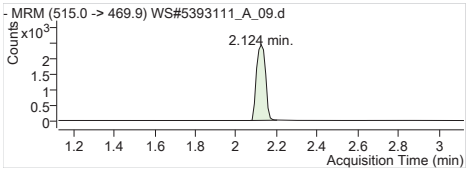


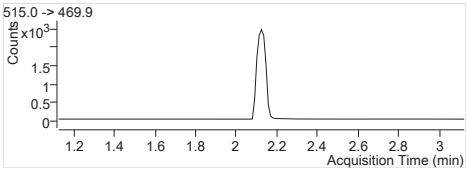
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 124.71 µg/L
Area ratio: 0.10464
Sample type: QC



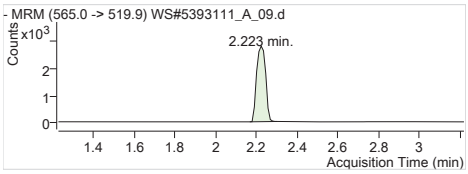


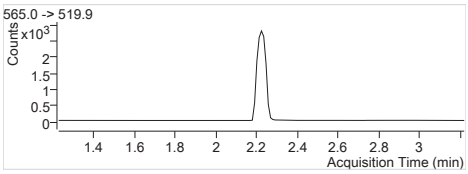
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 116.49 µg/L
Area ratio: 0.43106
Sample type: QC



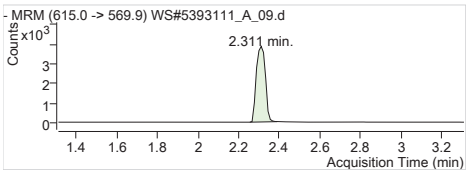


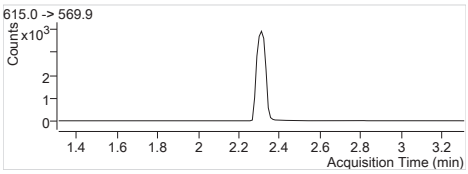
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 112.68 µg/L
Area ratio: 0.27896
Sample type: QC



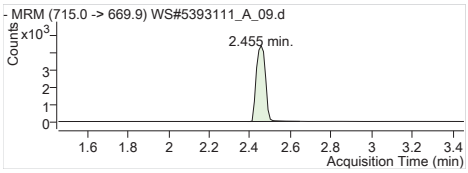


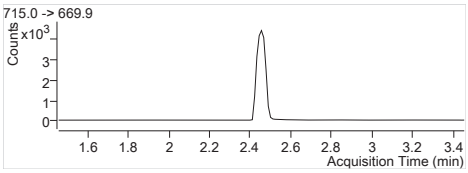
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 109.54 µg/L
Area ratio: 0.31567
Sample type: QC



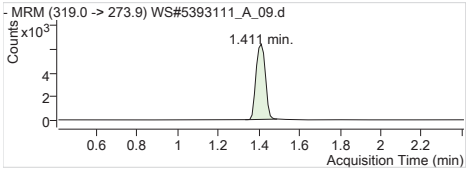


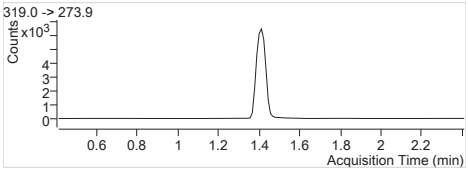
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 118.15 µg/L
Area ratio: 0.44167
Sample type: QC



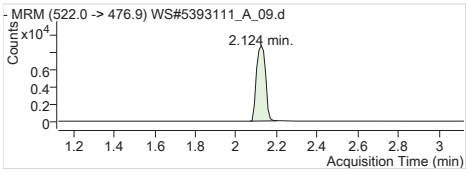


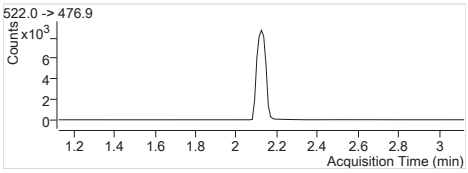
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 118.73 µg/L
Area ratio: 0.50948
Sample type: QC





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 87.21 µg/L
Area ratio: 0
Sample type: QC





13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 88.80 µg/L
Area ratio: 0
Sample type: QC

Quantitation Results

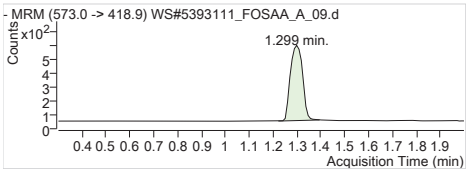
Agilent Technologies

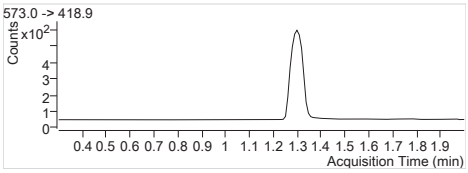
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**ICV**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_09.d	**Operator**	
Sample Type	QC	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A9
Acq. Date	2018/02/13 11:46:21 AM	**Injection Volume**	Per Method
Sample Annotation	-		

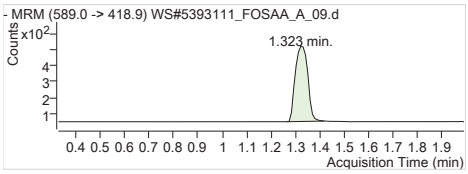
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1932	1.30	1 µg/L		
D5-EtFOSAA IS	1683	1.32	1 µg/L		
13C9-PFDA IS	22491	0.87	1 µg/L		

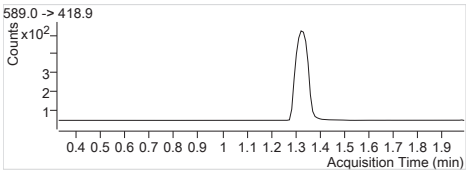
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	15808	1.30	20.80	21.05 µg/L	101.21
EtFOSAA 1	16267	1.32	20.80	21.30 µg/L	102.42
D3-MeFOSAA	1960	1.30	100.00	116.21 µg/L	116.21
D5-EtFOSAA	1695	1.32	100.00	117.28 µg/L	117.28
13C9-PFDA	21782	0.87	100.00	85.37 µg/L	85.37



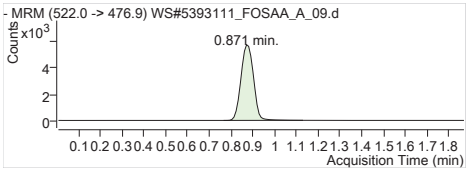


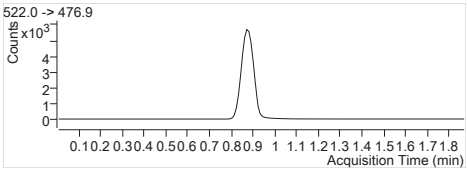
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: QC



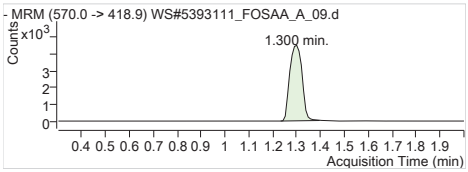


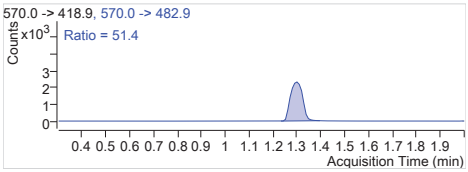
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: QC



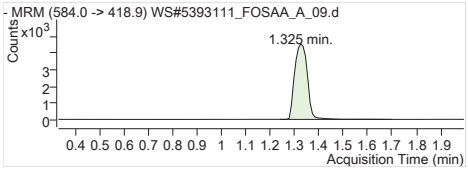


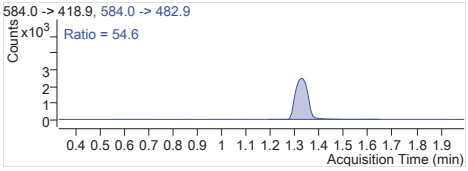
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.871 (0.871)
Concentration: 1 µg/L
Sample type: QC



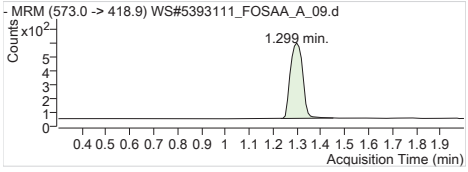


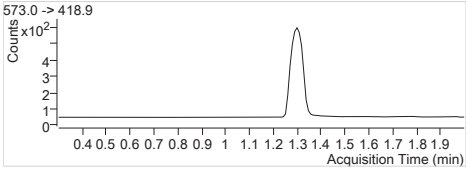
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.300 (1.300)
Calc. conc. 21.05 µg/L
Area ratio: 8.18219
Sample type: QC



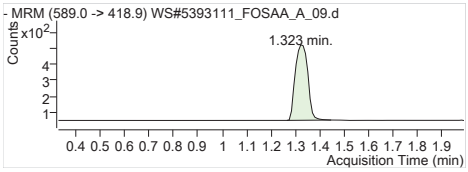


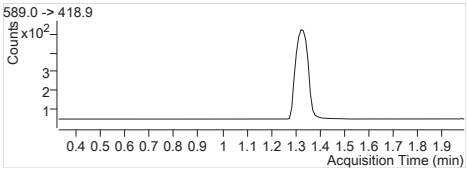
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.325 (1.325)
Calc. conc. 21.30 µg/L
Area ratio: 9.66548
Sample type: QC



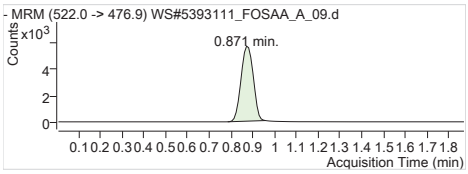


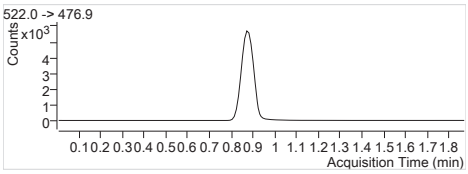
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 116.21 µg/L
Area ratio: 0.08715
Sample type: QC





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	117.28 µg/L
Area ratio:	0.07536
Sample type:	QC

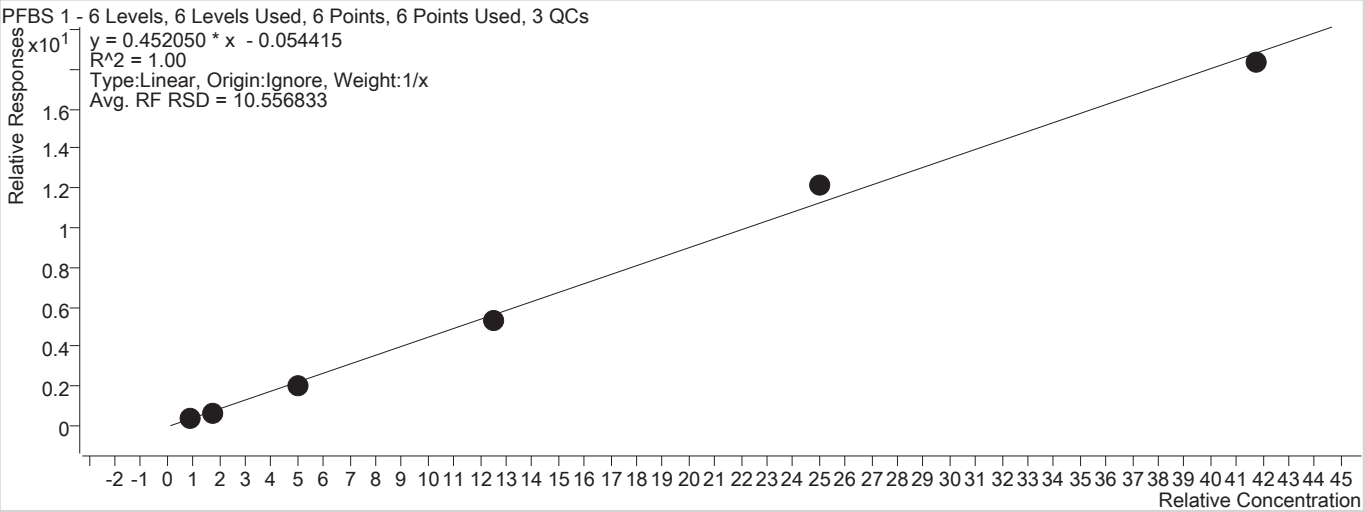




13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.871 (0.871)
Calc. conc.	85.37 µg/L
Area ratio:	0
Sample type:	QC

Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics.batch.bin
Last Calib Update 2018/02/15 1:03:31 PM
Instrument: LCMS04

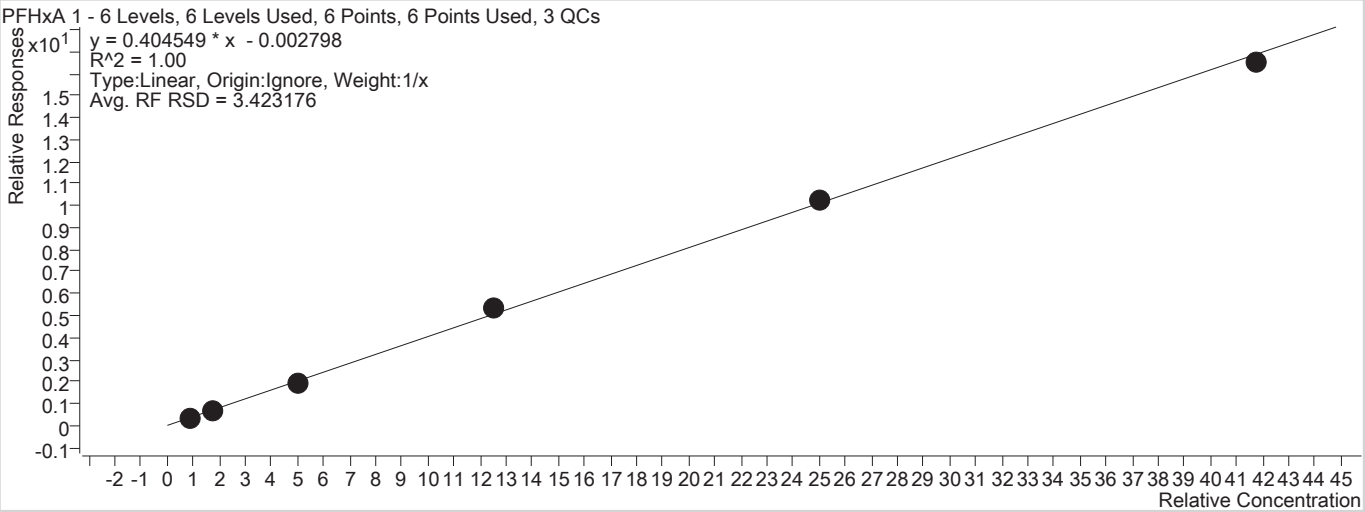
Analyte: PFBS 1
Internal Standard: MPFHxS



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/09 4:39:10 PM	0.83	0.99	541	0.4737	44	119.3
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.48	1012	0.3619	150	87.1
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	4.66	3027	0.4102	369	93.1
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	11.80	7920	0.4224	126	94.4
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	27.12	16645	0.4881	1529	108.5
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	40.69	26131	0.4397	119	97.6

Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics.batch.bin
Last Calib Update 2018/02/15 1:03:31 PM
Instrument: LCMS04

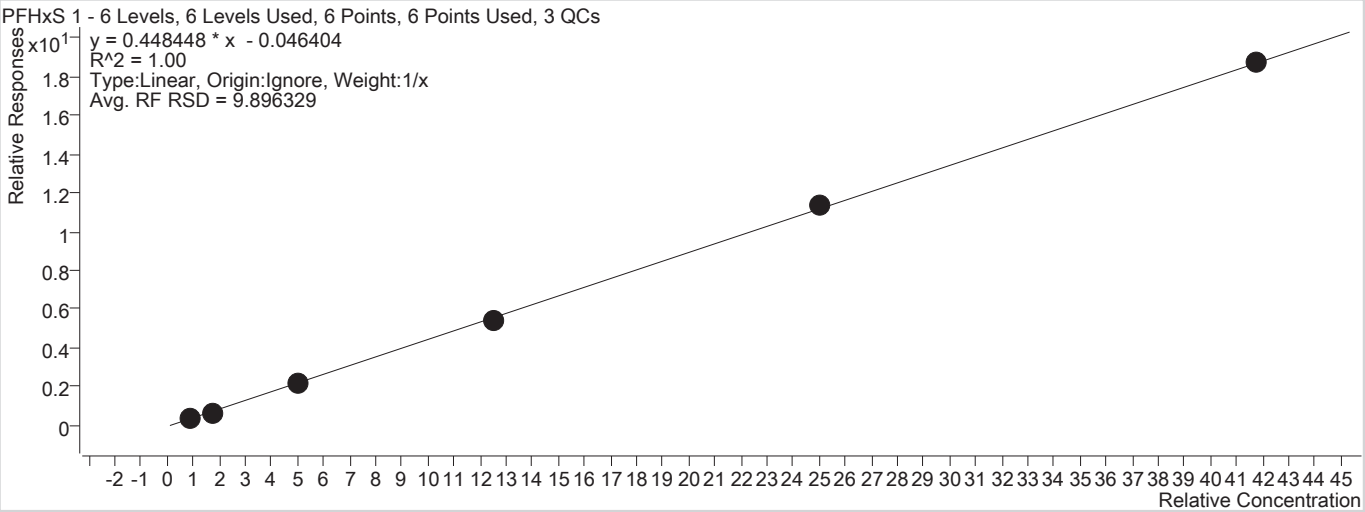
Analyte: PFHxA 1
Internal Standard: MPFHxA



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/09 4:39:10 PM	0.83	0.85	1974	0.4086	125	101.8
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.65	3942	0.3909	743	97.0
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	4.82	11350	0.3893	612	96.4
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	13.12	30189	0.4243	2466	104.9
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	25.48	59511	0.4123	4146	101.9
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	40.82	99005	0.3959	13336	97.9

Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics.batch.bin
Last Calib Update 2018/02/15 1:03:31 PM
Instrument: LCMS04

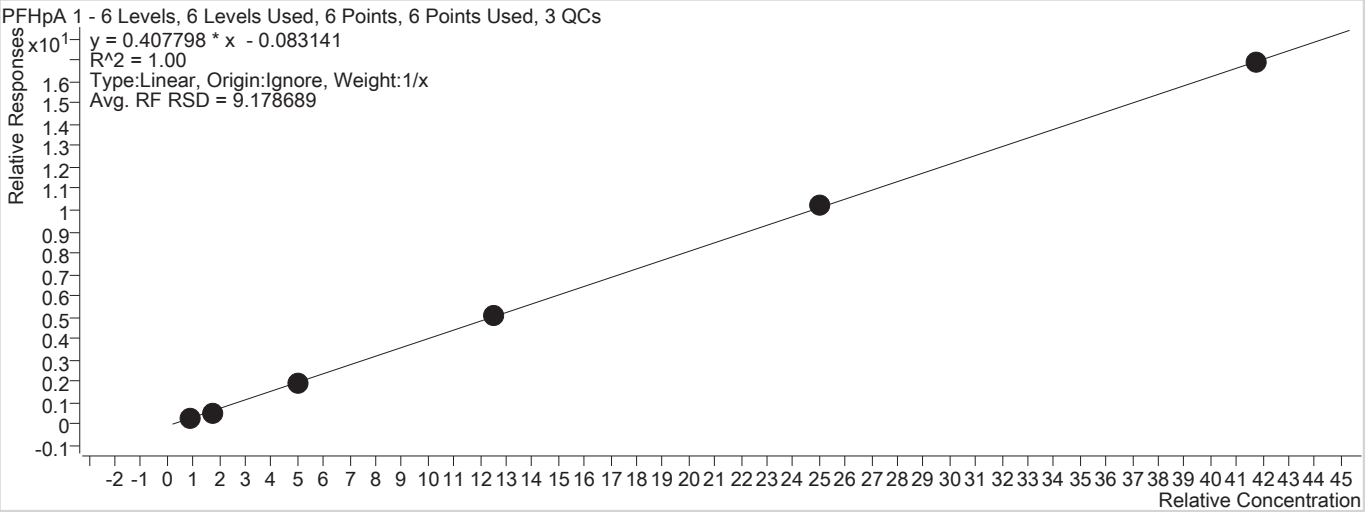
Analyte: PFHxS 1
Internal Standard: MPFHxS



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/09 4:39:10 PM	0.83	0.98	539	0.4719	168	117.7
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.43	979	0.3501	123	84.2
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	4.97	3224	0.4369	441	99.5
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	12.07	8047	0.4292	376	96.5
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	25.46	15508	0.4548	1375	101.8
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	41.83	26662	0.4487	2102	100.3

Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics.batch.bin
Last Calib Update 2018/02/15 1:03:31 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	2018/02/09 4:39:10 PM	0.83	0.92	2221	0.3516	29	110.8
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.55	4423	0.3225	64	91.1
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	4.85	14826	0.3792	199	97.1
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	12.53	38723	0.4023	213	100.3
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	25.23	76118	0.4083	283	100.9
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	41.64	119160	0.4052	232	99.9

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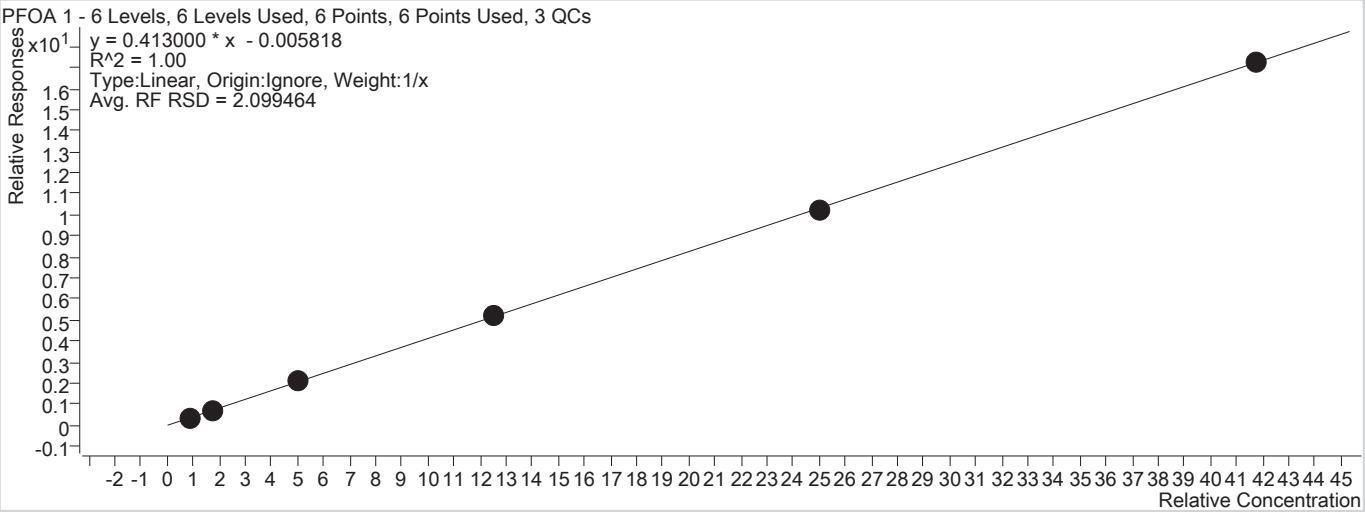
Instrument: LCMS04

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 4:39:10 PM	0.83	0.86	2822	0.4187	26	103.1
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.64	5249	0.3940	48	96.2
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	5.02	16529	0.4139	138	100.5
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	12.56	42521	0.4144	393	100.4
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	24.91	85172	0.4112	929	99.6
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	41.75	138298	0.4134	1754	100.1

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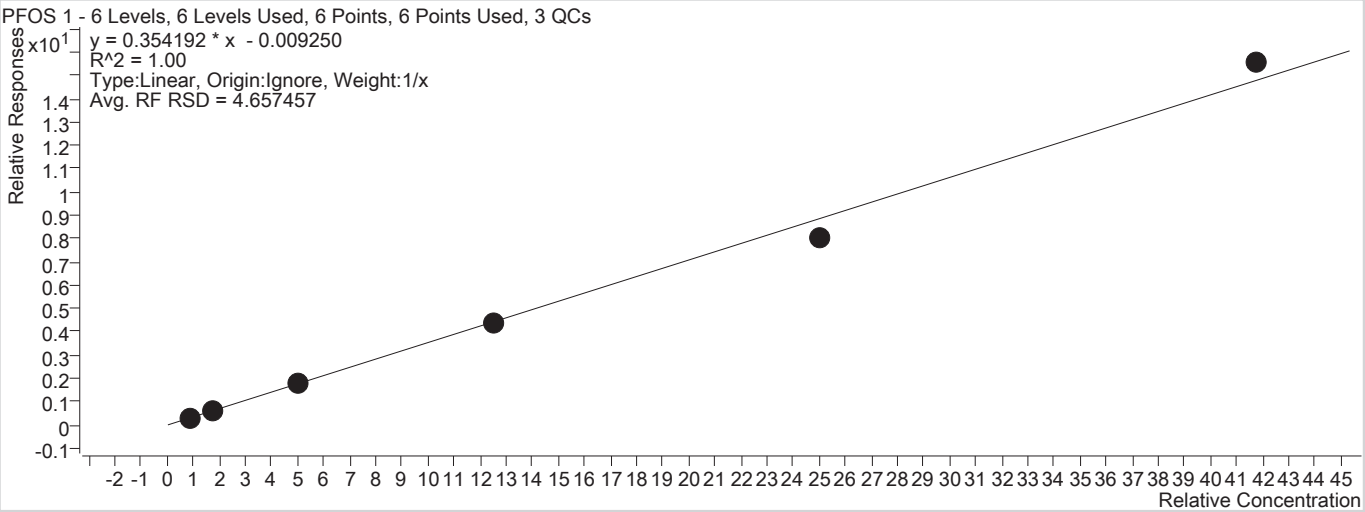
Instrument: LCMS04

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 4:39:10 PM	0.83	0.87	546	0.3595	109	104.6
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.69	1079	0.3470	208	99.5
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	4.99	3104	0.3513	167	99.7
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	12.44	8505	0.3516	191	99.5
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	22.84	15876	0.3232	331	91.3
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	43.91	26409	0.3728	236	105.3

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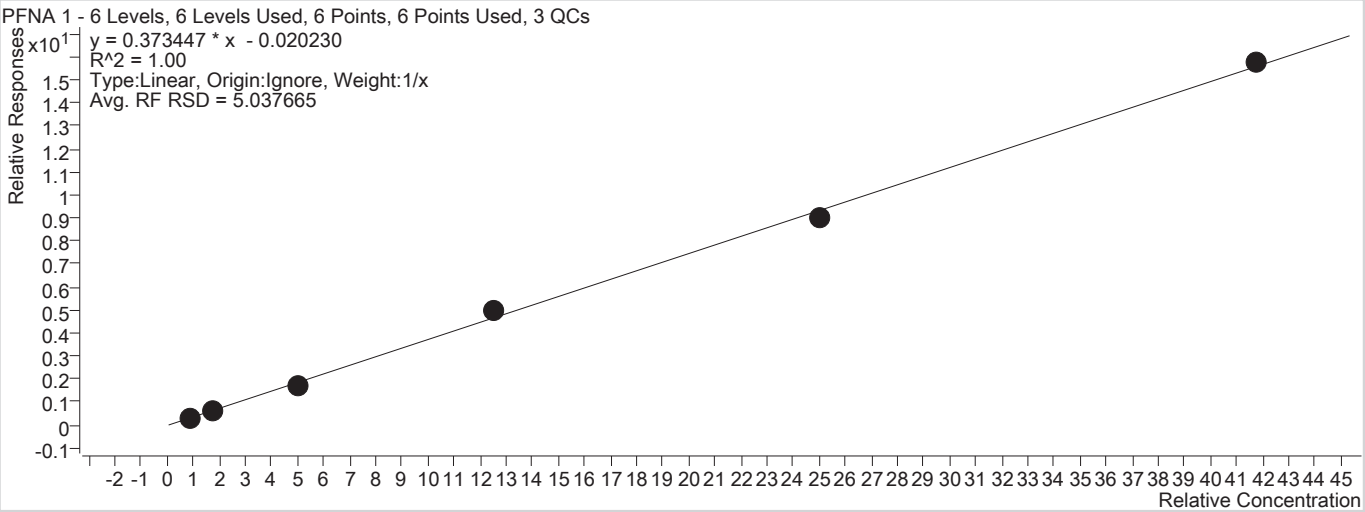
Instrument: LCMS04

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 4:39:10 PM	0.83	0.88	2426	0.3708	49	105.8
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.66	5019	0.3533	70	97.8
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	4.64	13528	0.3426	238	92.8
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	13.25	38764	0.3941	331	106.0
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	24.09	73172	0.3590	1390	96.4
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	42.21	121875	0.3776	2584	101.2

Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics.batch.bin
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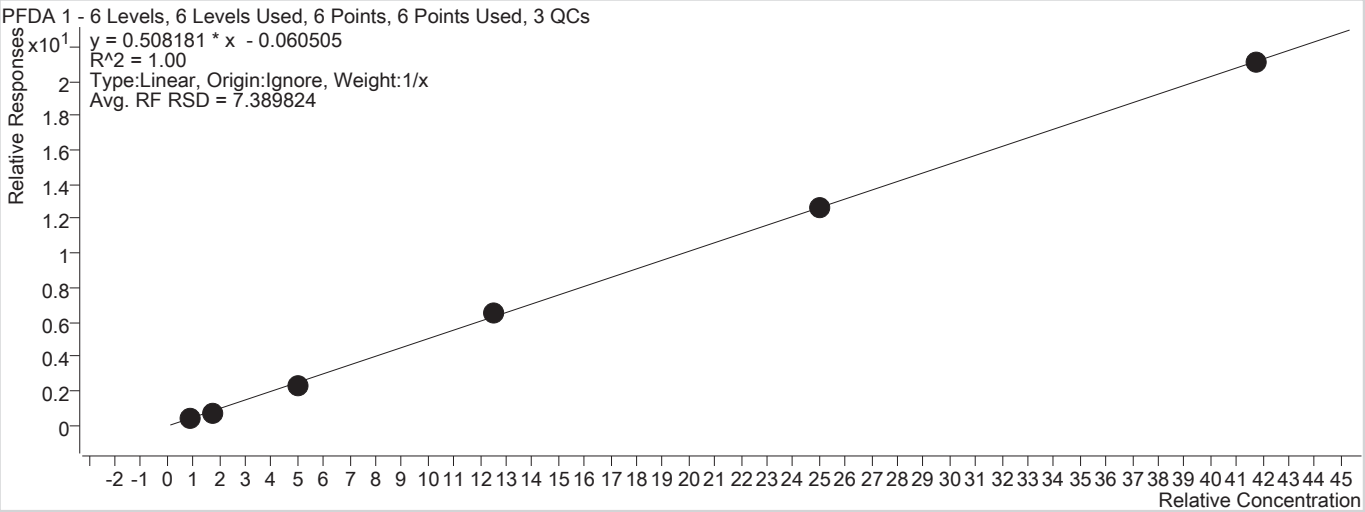
Instrument: LCMS04

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 4:39:10 PM	0.83	0.93	2665	0.4994	31	112.6
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.58	4849	0.4367	65	92.9
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	4.51	15458	0.4465	136	90.2
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	13.01	41655	0.5240	355	104.1
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	25.09	81955	0.5075	1213	100.4
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	41.61	133055	0.5056	1146	99.8

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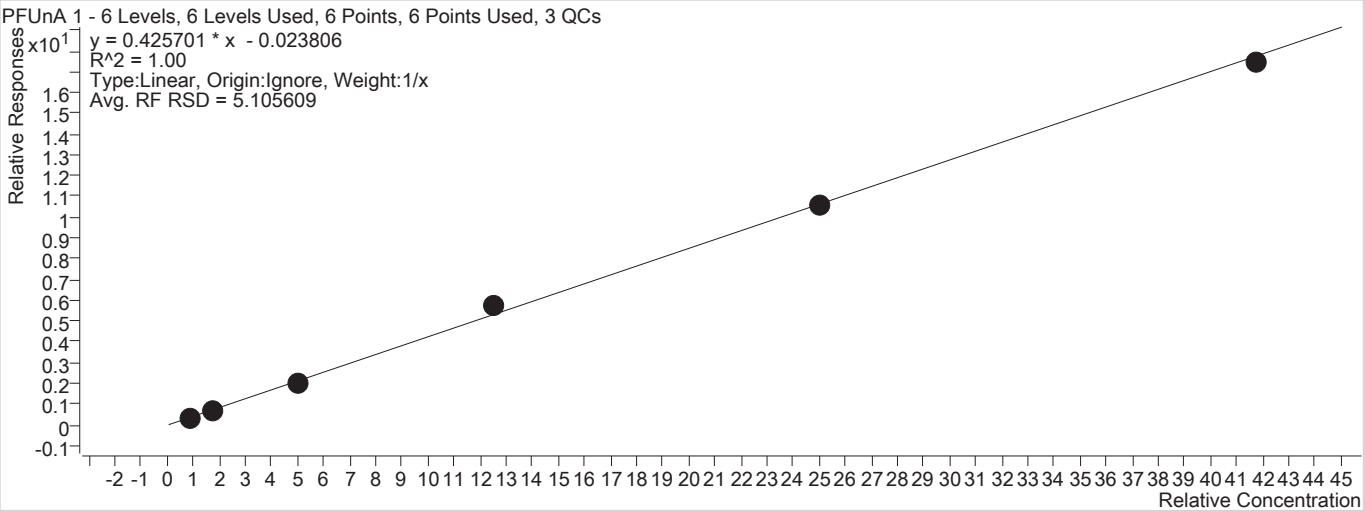
Instrument: LCMS04

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 4:39:10 PM	0.83	0.82	2635	0.3922	22	98.9
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.67	5562	0.4050	60	98.4
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	4.87	17037	0.4095	153	97.3
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	13.40	45808	0.4545	142	107.2
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	24.95	85920	0.4239	310	99.8
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	41.02	143281	0.4182	256	98.4

Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics.batch.bin
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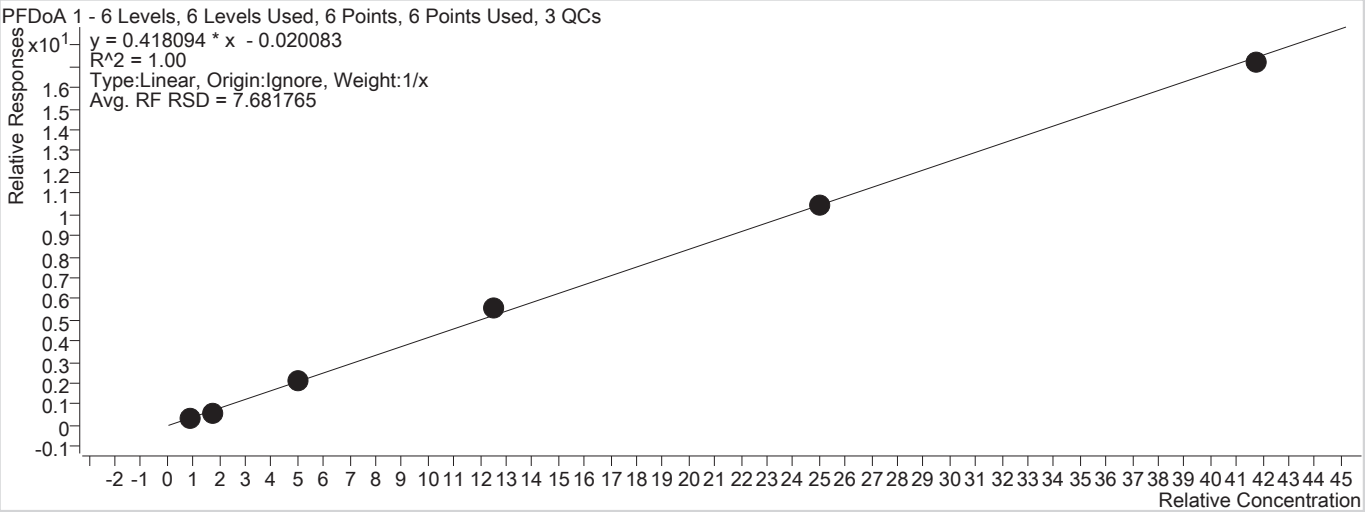
Instrument: LCMS04

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 4:39:10 PM	0.83	0.90	3757	0.4277	70	108.1
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.47	6436	0.3504	175	86.6
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	5.05	21697	0.4180	498	100.9
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	13.26	57043	0.4419	2640	106.1
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	24.89	110949	0.4154	4130	99.6
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	41.17	179920	0.4123	4038	98.7

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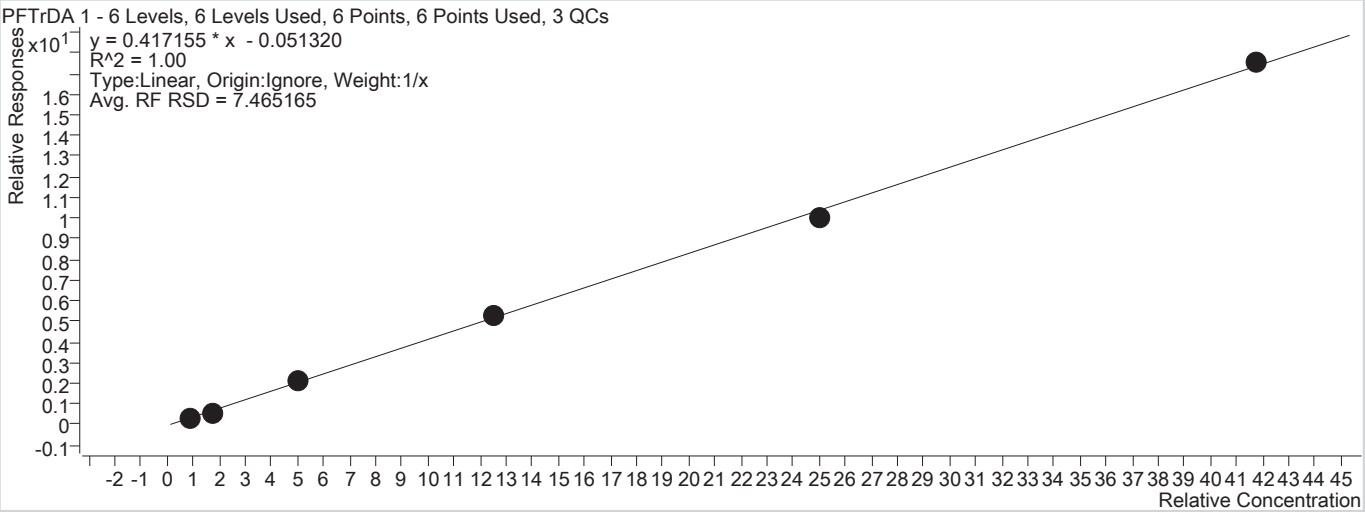
Instrument: LCMS04

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 4:39:10 PM	0.83	0.88	3728	0.3787	28	105.6
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.54	6964	0.3487	36	90.8
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	5.19	24331	0.4226	121	103.8
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	12.72	64478	0.4204	121	101.8
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	24.24	123420	0.4024	136	97.0
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	42.17	208563	0.4206	140	101.1

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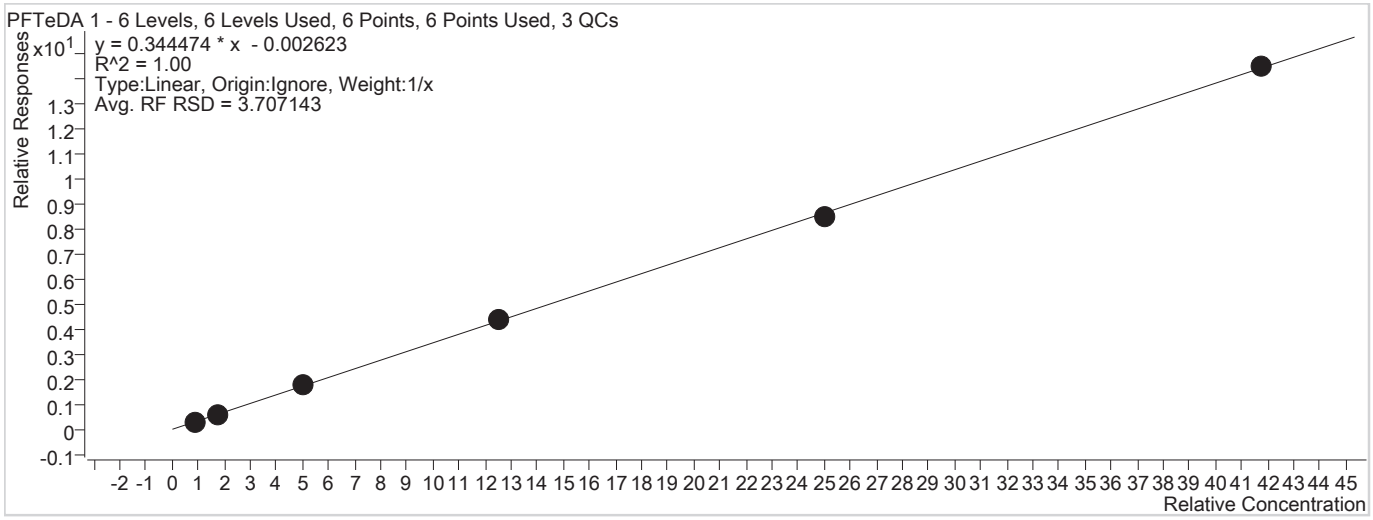
Instrument: LCMS04

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 4:39:10 PM	0.83	0.86	3469	0.3524	18	103.2
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.59	6403	0.3206	41	93.5
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	5.17	20492	0.3559	89	103.5
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	12.63	53350	0.3478	126	101.0
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	24.56	103773	0.3383	124	98.2
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	41.92	171694	0.3462	134	100.5

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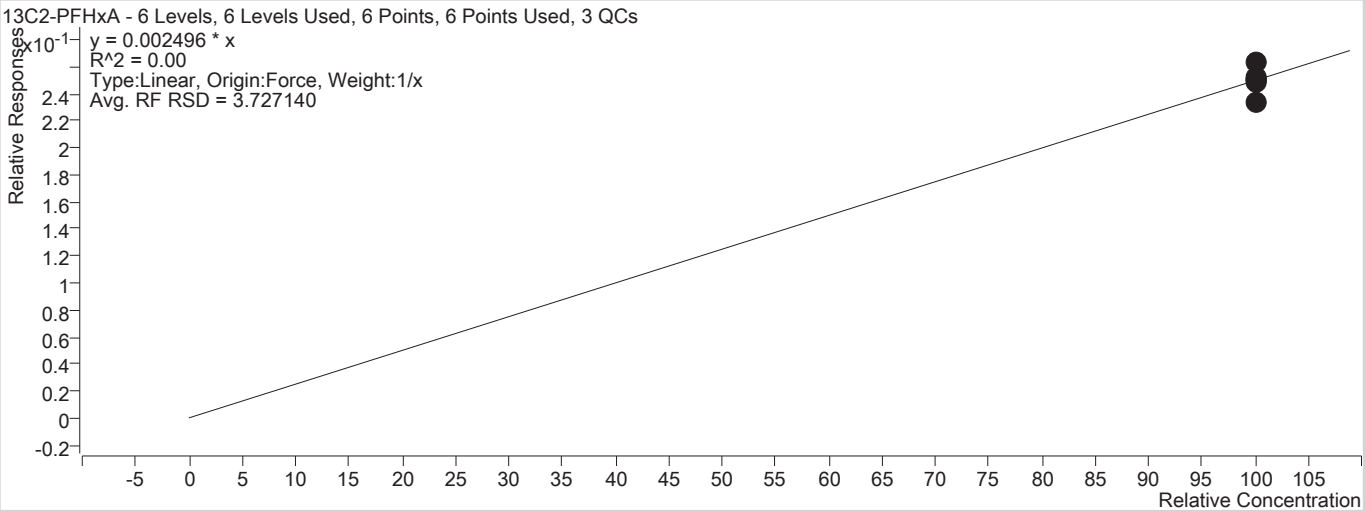
Instrument: LCMS04

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 4:39:10 PM	100.00	100.23	5820	0.0025	211	100.2
STD 2	STD 2	x	2018/02/09 4:44:06 PM	100.00	100.39	5932	0.0025	278	100.4
STD 3	STD 3	x	2018/02/09 4:49:02 PM	100.00	100.95	5831	0.0025	170	100.9
STD 4	STD 4	x	2018/02/09 4:53:58 PM	100.00	93.71	5692	0.0023	199	93.7
STD 5	STD 5	x	2018/02/09 4:58:54 PM	100.00	99.39	5774	0.0025	172	99.4
STD 6	STD 6	x	2018/02/09 5:03:50 PM	100.00	105.33	5997	0.0026	234	105.3

Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics.batch.bin
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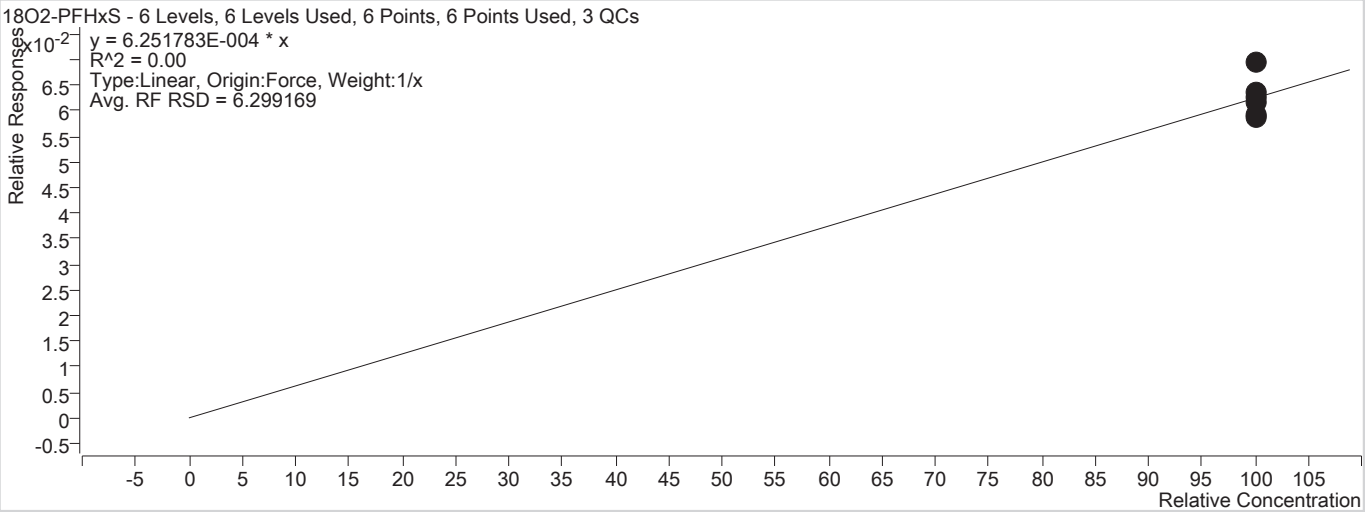
Instrument: LCMS04

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 4:39:10 PM	100.00	94.60	1376	0.0006	188	94.6
STD 2	STD 2	x	2018/02/09 4:44:06 PM	100.00	111.14	1645	0.0007	192	111.1
STD 3	STD 3	x	2018/02/09 4:49:02 PM	100.00	102.01	1476	0.0006	137	102.0
STD 4	STD 4	x	2018/02/09 4:53:58 PM	100.00	98.59	1500	0.0006	113	98.6
STD 5	STD 5	x	2018/02/09 4:58:54 PM	100.00	93.74	1364	0.0006	170	93.7
STD 6	STD 6	x	2018/02/09 5:03:50 PM	100.00	99.92	1425	0.0006	222	99.9

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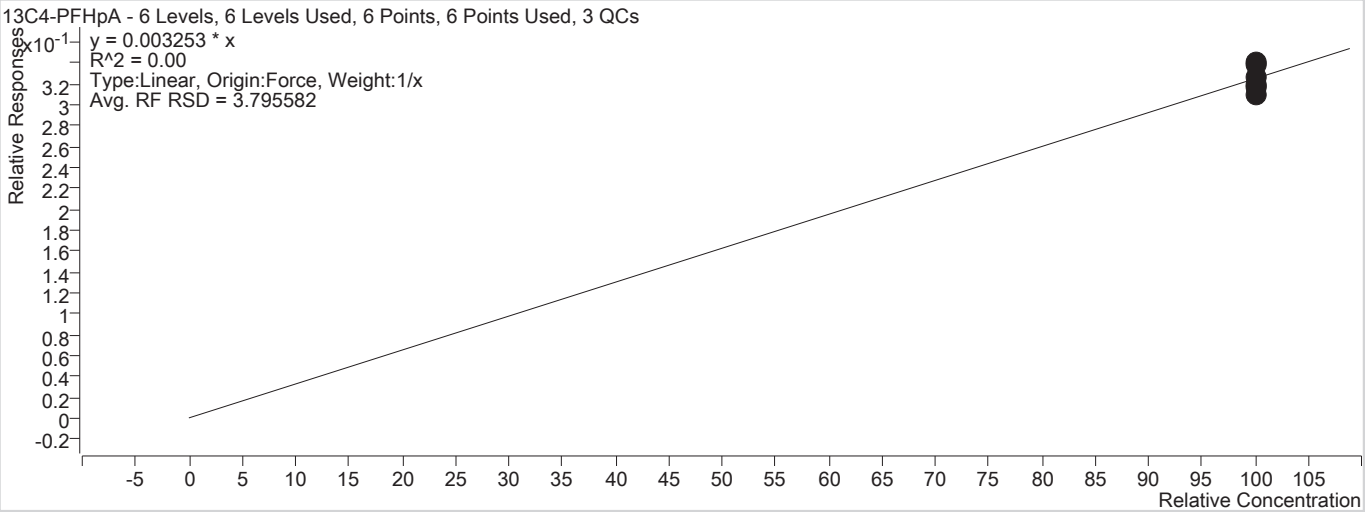
Instrument: LCMS04

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 4:39:10 PM	100.00	100.57	7611	0.0033	173	100.6
STD 2	STD 2	x	2018/02/09 4:44:06 PM	100.00	104.75	8067	0.0034	583	104.7
STD 3	STD 3	x	2018/02/09 4:49:02 PM	100.00	103.86	7819	0.0034	312	103.9
STD 4	STD 4	x	2018/02/09 4:53:58 PM	100.00	97.28	7701	0.0032	376	97.3
STD 5	STD 5	x	2018/02/09 4:58:54 PM	100.00	98.49	7457	0.0032	339	98.5
STD 6	STD 6	x	2018/02/09 5:03:50 PM	100.00	95.04	7052	0.0031	212	95.0

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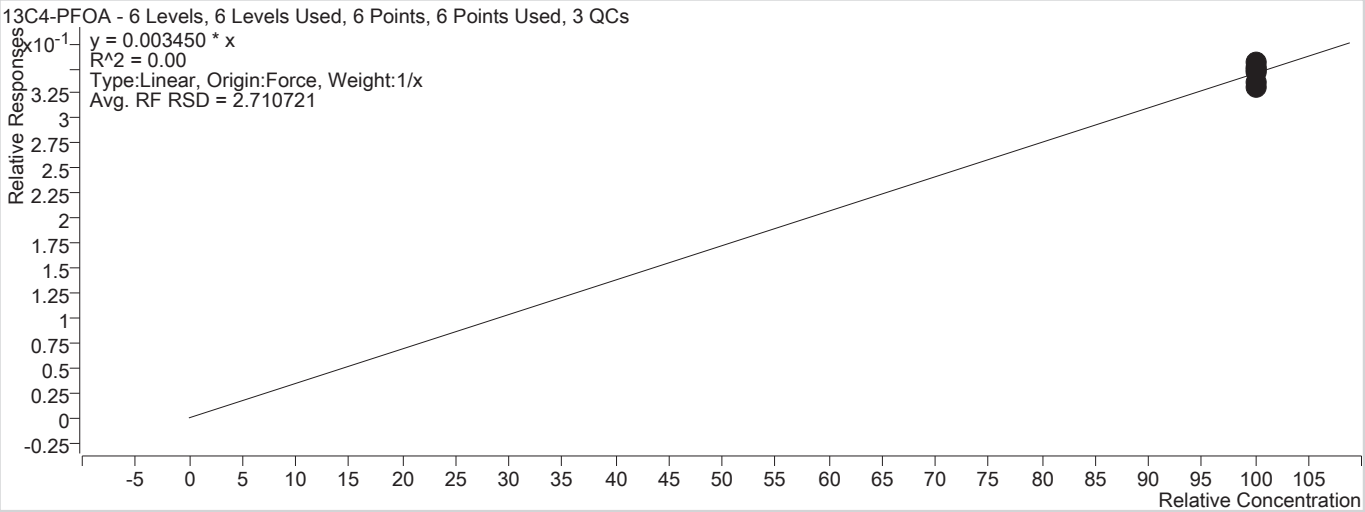
Instrument: LCMS04

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 4:39:10 PM	100.00	101.17	8121	0.0035	256	101.2
STD 2	STD 2	x	2018/02/09 4:44:06 PM	100.00	95.93	7836	0.0033	167	95.9
STD 3	STD 3	x	2018/02/09 4:49:02 PM	100.00	100.02	7987	0.0035	113	100.0
STD 4	STD 4	x	2018/02/09 4:53:58 PM	100.00	97.77	8209	0.0034	118	97.8
STD 5	STD 5	x	2018/02/09 4:58:54 PM	100.00	103.17	8285	0.0036	125	103.2
STD 6	STD 6	x	2018/02/09 5:03:50 PM	100.00	101.94	8023	0.0035	116	101.9

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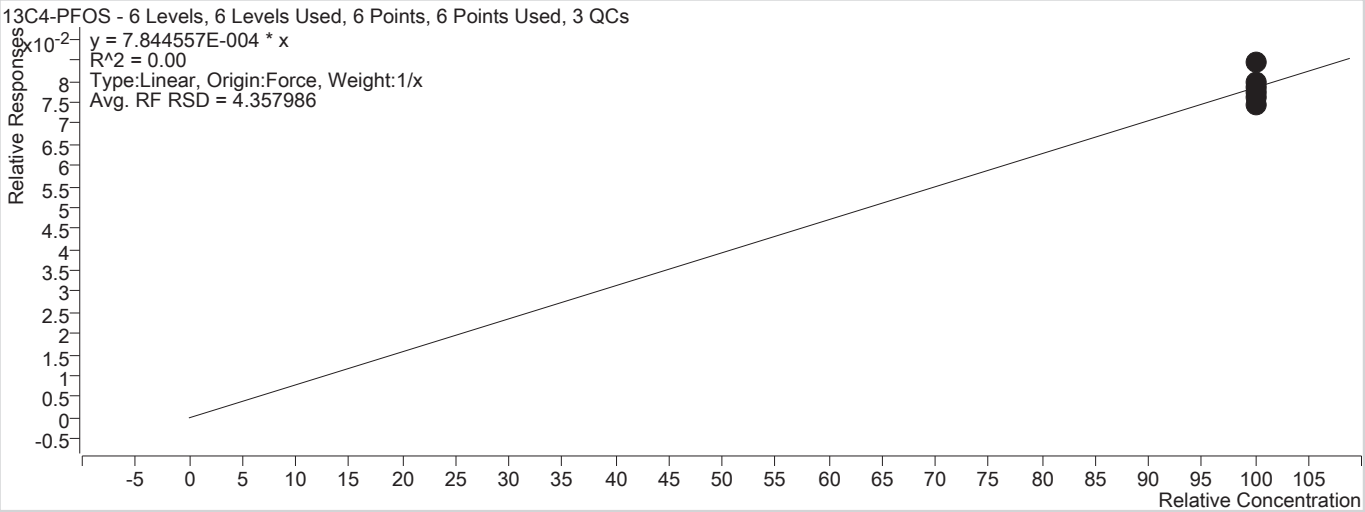
Instrument: LCMS04

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 4:39:10 PM	100.00	100.27	1830	0.0008	170	100.3
STD 2	STD 2	x	2018/02/09 4:44:06 PM	100.00	98.48	1829	0.0008	284	98.5
STD 3	STD 3	x	2018/02/09 4:49:02 PM	100.00	97.33	1767	0.0008	306	97.3
STD 4	STD 4	x	2018/02/09 4:53:58 PM	100.00	101.36	1935	0.0008	111	101.4
STD 5	STD 5	x	2018/02/09 4:58:54 PM	100.00	107.62	1965	0.0008	99	107.6
STD 6	STD 6	x	2018/02/09 5:03:50 PM	100.00	94.95	1699	0.0007	125	94.9

Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics.batch.bin
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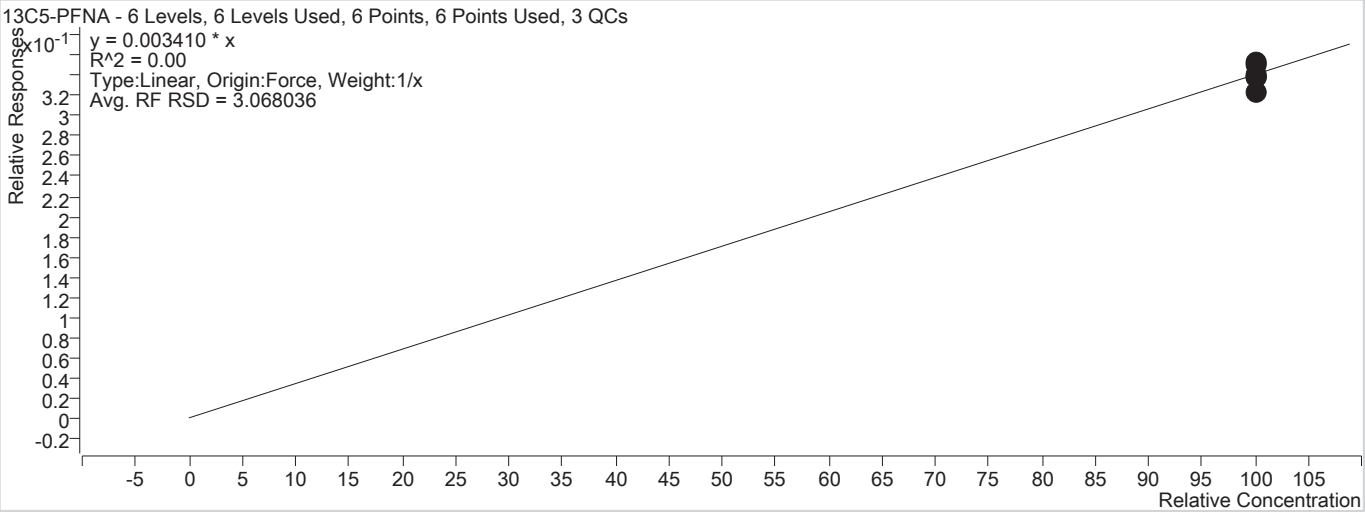
Instrument: LCMS04

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 4:39:10 PM	100.00	99.37	7883	0.0034	223	99.4
STD 2	STD 2	x	2018/02/09 4:44:06 PM	100.00	103.50	8356	0.0035	553	103.5
STD 3	STD 3	x	2018/02/09 4:49:02 PM	100.00	100.06	7897	0.0034	193	100.1
STD 4	STD 4	x	2018/02/09 4:53:58 PM	100.00	94.82	7869	0.0032	295	94.8
STD 5	STD 5	x	2018/02/09 4:58:54 PM	100.00	102.72	8153	0.0035	170	102.7
STD 6	STD 6	x	2018/02/09 5:03:50 PM	100.00	99.53	7742	0.0034	308	99.5

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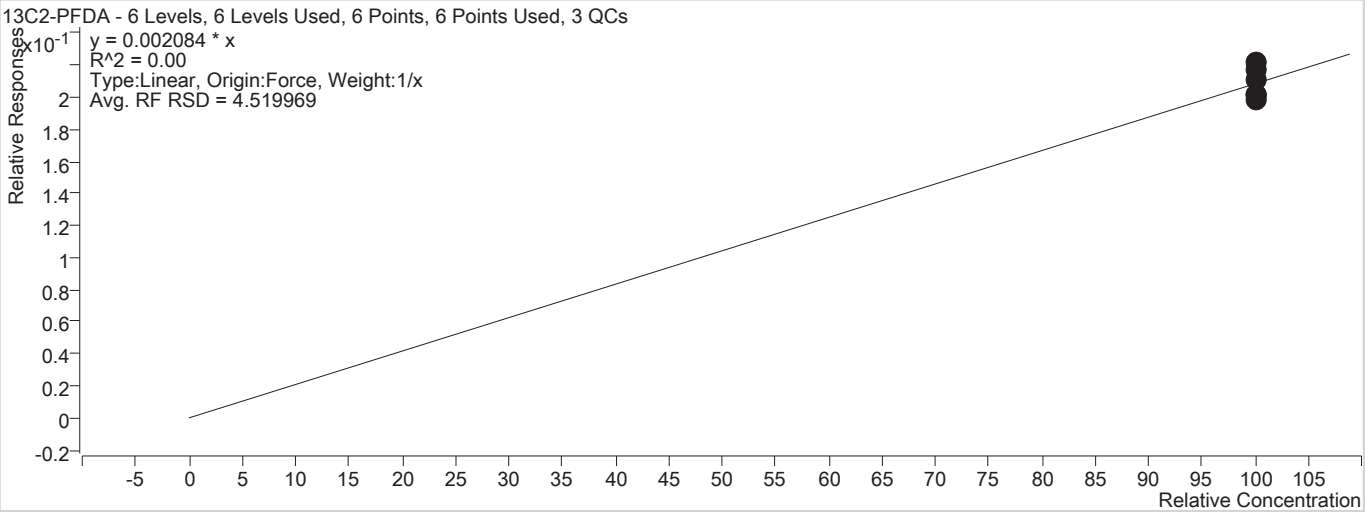
Last Calib Update 2018/02/15 1:03:31 PM
Instrument: LCMS04

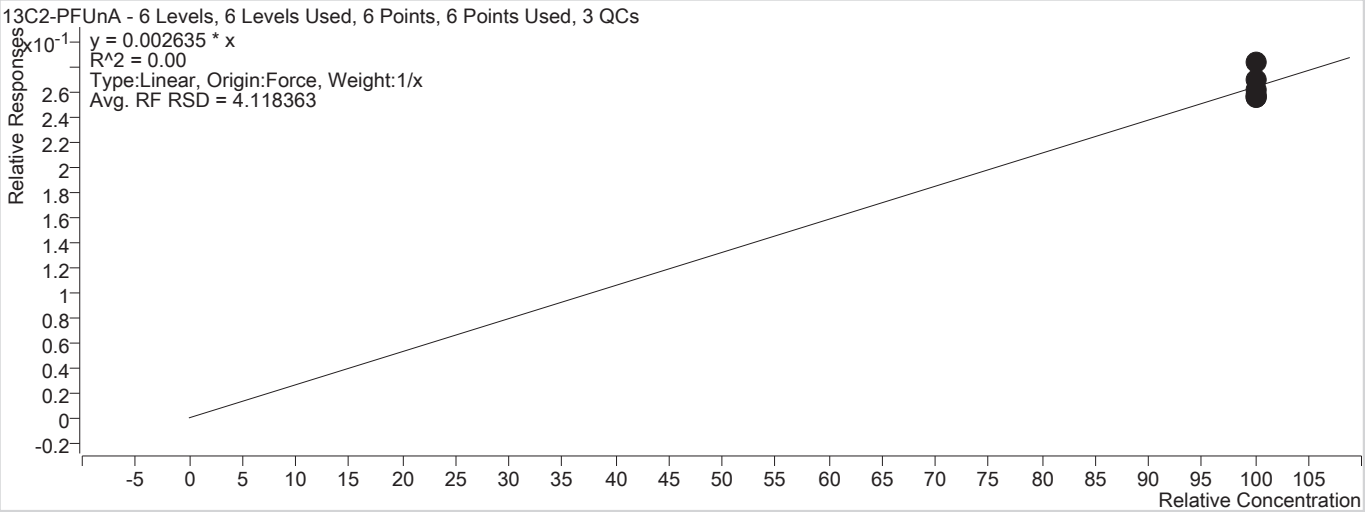
Analyte: 13C2-PFDA
Internal Standard: 13C9-PFDA IS



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/09 4:39:10 PM	100.00	96.83	6335	0.0020	208	96.8
STD 2	STD 2	x	2018/02/09 4:44:06 PM	100.00	101.09	6514	0.0021	288	101.1
STD 3	STD 3	x	2018/02/09 4:49:02 PM	100.00	106.35	6856	0.0022	240	106.4
STD 4	STD 4	x	2018/02/09 4:53:58 PM	100.00	94.86	6258	0.0020	223	94.9
STD 5	STD 5	x	2018/02/09 4:58:54 PM	100.00	96.98	6413	0.0020	325	97.0
STD 6	STD 6	x	2018/02/09 5:03:50 PM	100.00	103.89	6286	0.0022	512	103.9

Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics.batch.bin
Last Calib Update 2018/02/15 1:03:31 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	2018/02/09 4:39:10 PM	100.00	97.83	8094	0.0026	313	97.8
STD 2	STD 2	x	2018/02/09 4:44:06 PM	100.00	99.12	8078	0.0026	239	99.1
STD 3	STD 3	x	2018/02/09 4:49:02 PM	100.00	102.07	8321	0.0027	471	102.1
STD 4	STD 4	x	2018/02/09 4:53:58 PM	100.00	96.65	8063	0.0025	254	96.6
STD 5	STD 5	x	2018/02/09 4:58:54 PM	100.00	96.95	8107	0.0026	318	96.9
STD 6	STD 6	x	2018/02/09 5:03:50 PM	100.00	107.38	8217	0.0028	296	107.4

Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics.batch.bin
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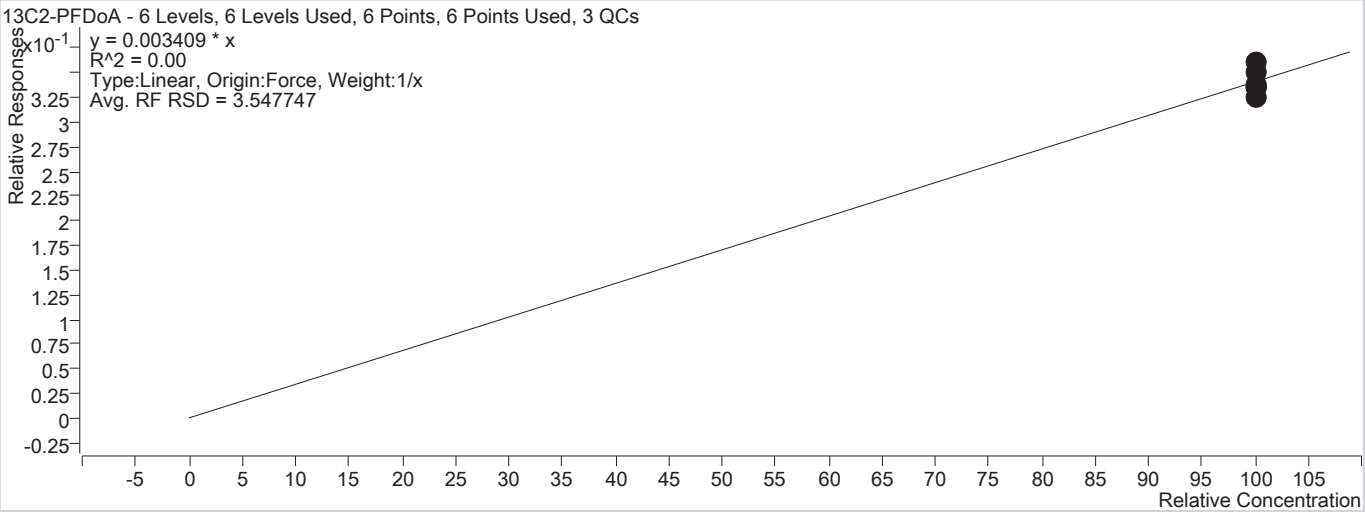
Instrument: LCMS04

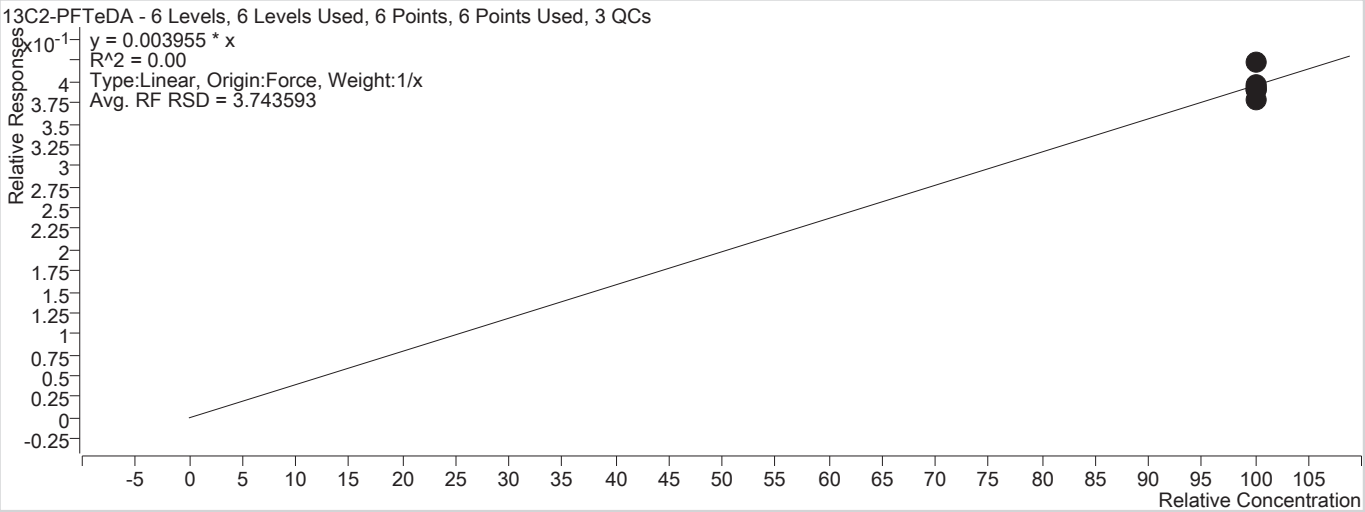
Analyte: 13C2-PFDoA
Internal Standard: 13C9-PFDA IS



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/09 4:39:10 PM	100.00	98.88	10583	0.0034	166	98.9
STD 2	STD 2	x	2018/02/09 4:44:06 PM	100.00	102.50	10806	0.0035	155	102.5
STD 3	STD 3	x	2018/02/09 4:49:02 PM	100.00	98.43	10381	0.0034	144	98.4
STD 4	STD 4	x	2018/02/09 4:53:58 PM	100.00	95.69	10327	0.0033	128	95.7
STD 5	STD 5	x	2018/02/09 4:58:54 PM	100.00	98.76	10683	0.0034	273	98.8
STD 6	STD 6	x	2018/02/09 5:03:50 PM	100.00	105.73	10466	0.0036	368	105.7

Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics.batch.bin
Last Calib Update 2018/02/15 1:03:31 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	2018/02/09 4:39:10 PM	100.00	98.67	12252	0.0039	711	98.7
STD 2	STD 2	x	2018/02/09 4:44:06 PM	100.00	98.48	12045	0.0039	583	98.5
STD 3	STD 3	x	2018/02/09 4:49:02 PM	100.00	95.79	11720	0.0038	466	95.8
STD 4	STD 4	x	2018/02/09 4:53:58 PM	100.00	99.80	12496	0.0039	496	99.8
STD 5	STD 5	x	2018/02/09 4:58:54 PM	100.00	100.32	12591	0.0040	653	100.3
STD 6	STD 6	x	2018/02/09 5:03:50 PM	100.00	106.94	12281	0.0042	902	106.9

By Compound Report

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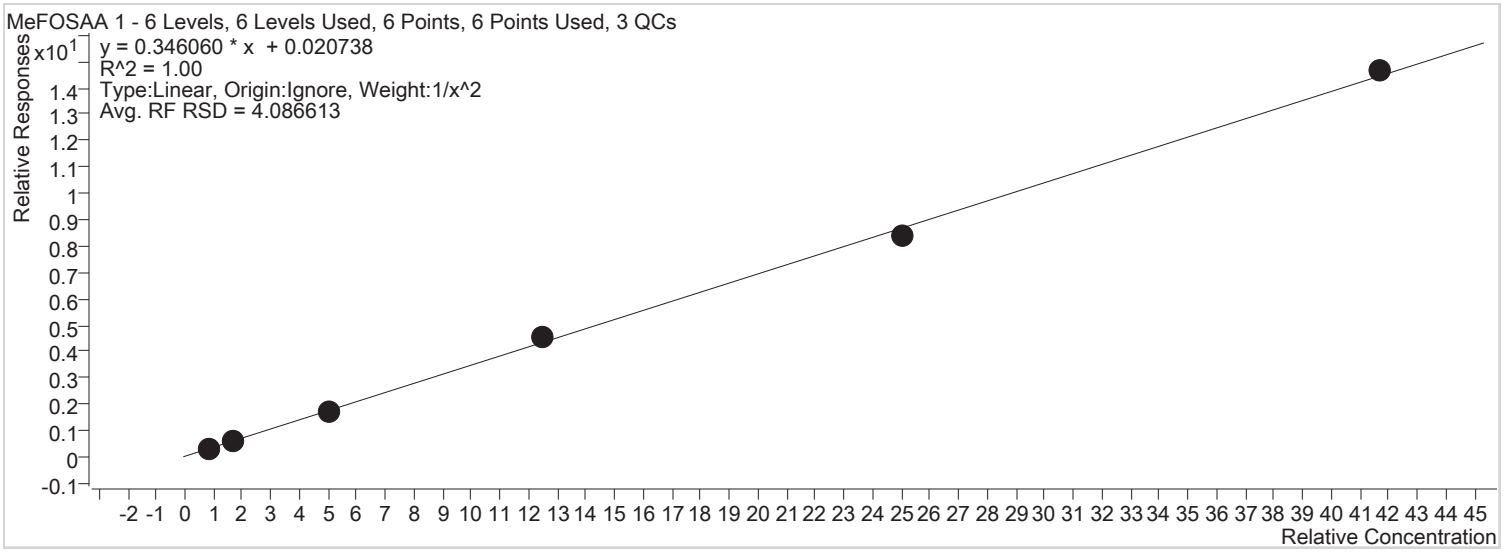
Batch Path T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_EToxics.batch.bin

Last Calib Update 2018/02/12 2:10:54 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	2018/02/10 12:30:18 AM	0.83	0.84	553	0.3766	118	101.6
STD 2	STD 2	x	2018/02/10 12:32:43 AM	1.70	1.64	1050	0.3456	265	96.4
STD 3	STD 3	x	2018/02/10 12:35:07 AM	5.00	4.99	3076	0.3495	261	99.8
STD 4	STD 4	x	2018/02/10 12:37:32 AM	12.50	13.04	8045	0.3626	302	104.3
STD 5	STD 5	x	2018/02/10 12:39:57 AM	25.00	24.14	15384	0.3350	257	96.6
STD 6	STD 6	x	2018/02/10 12:42:22 AM	41.70	42.27	24332	0.3513	252	101.4

Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_EToxics.batch.bin
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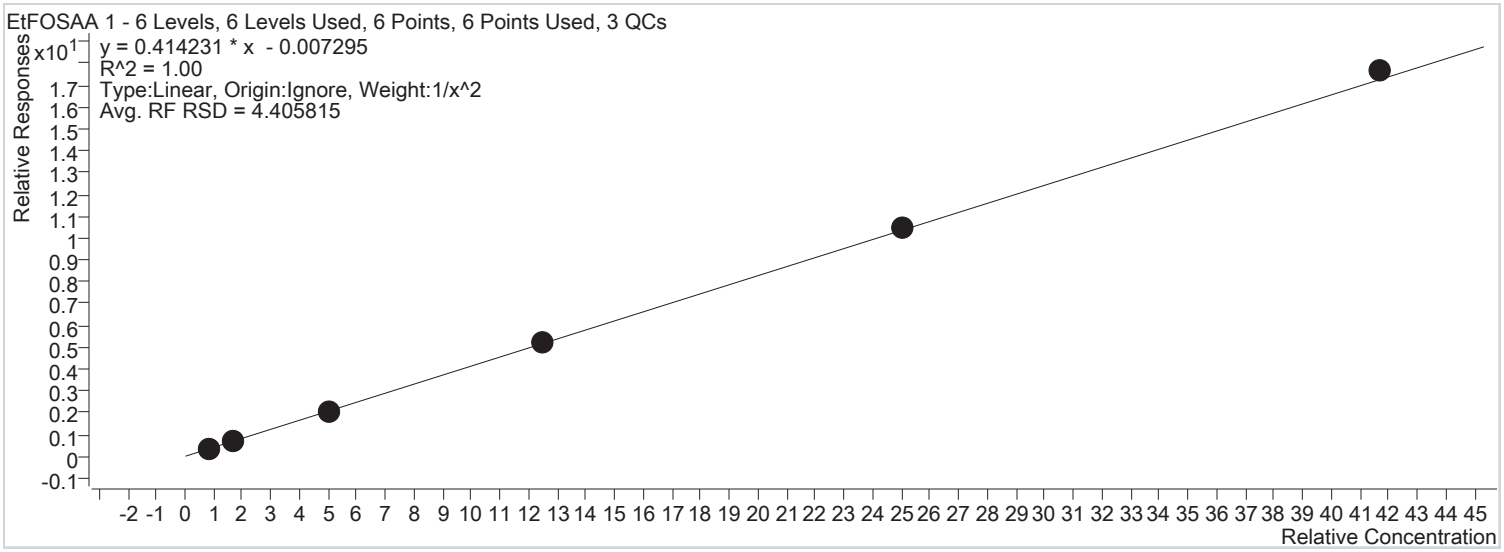
Instrument:	LCMS04
Analyte:	EtFOSAA 1
Internal Standard:	D5-EtFOSAA IS



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/10 12:30:18 AM	0.83	0.86	536	0.4218	80	103.9
STD 2	STD 2	x	2018/02/10 12:32:43 AM	1.70	1.56	1058	0.3758	124	91.8
STD 3	STD 3	x	2018/02/10 12:35:07 AM	5.00	4.97	3185	0.4104	400	99.4
STD 4	STD 4	x	2018/02/10 12:37:32 AM	12.50	12.63	8482	0.4181	880	101.1
STD 5	STD 5	x	2018/02/10 12:39:57 AM	25.00	25.36	16586	0.4199	1369	101.4
STD 6	STD 6	x	2018/02/10 12:42:22 AM	41.70	42.68	26753	0.4238	2940	102.3

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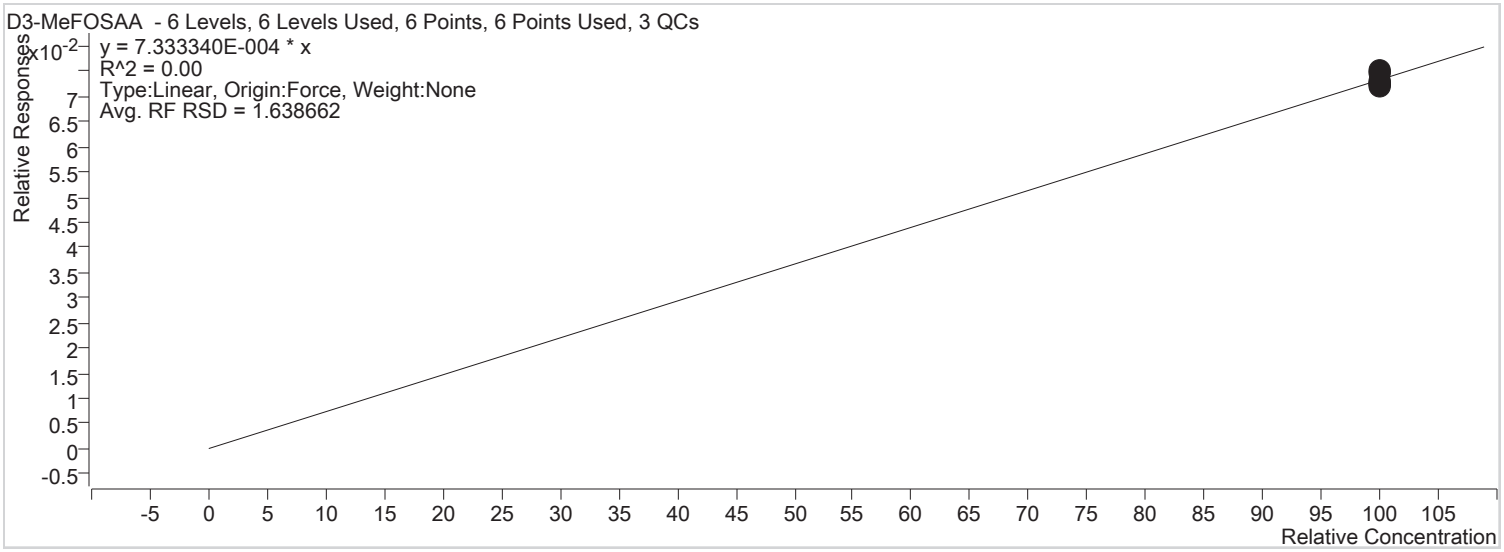
Batch Path T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_EToxics.batch.bin

Last Calib Update 2018/02/12 2:10:54 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	2018/02/10 12:30:18 AM	100.00	101.58	1805	0.0007	249	101.6
STD 2	STD 2	x	2018/02/10 12:32:43 AM	100.00	99.15	1804	0.0007	155	99.2
STD 3	STD 3	x	2018/02/10 12:35:07 AM	100.00	99.51	1804	0.0007	269	99.5
STD 4	STD 4	x	2018/02/10 12:37:32 AM	100.00	99.15	1829	0.0007	251	99.2
STD 5	STD 5	x	2018/02/10 12:39:57 AM	100.00	102.43	1859	0.0008	219	102.4
STD 6	STD 6	x	2018/02/10 12:42:22 AM	100.00	98.17	1677	0.0007	168	98.2

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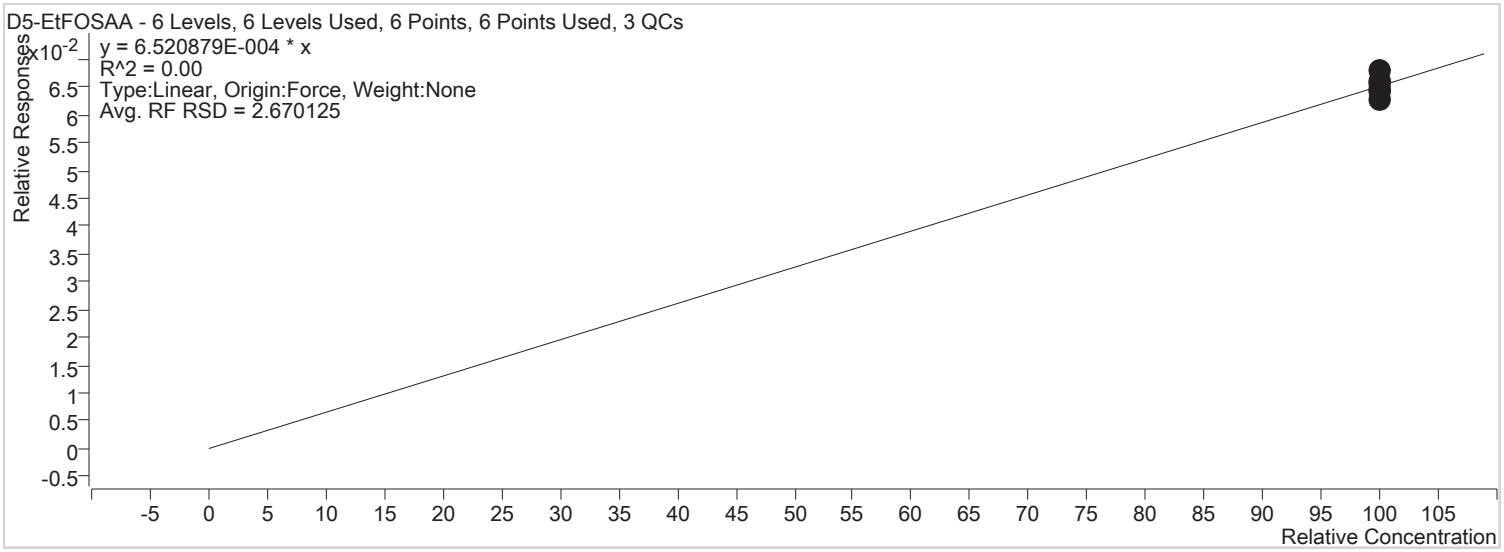
Batch Path T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_EToxics.batch.bin

Last Calib Update 2018/02/12 2:10:54 PM

Instrument: LCMS04

Analyte: D5-EtFOSAA

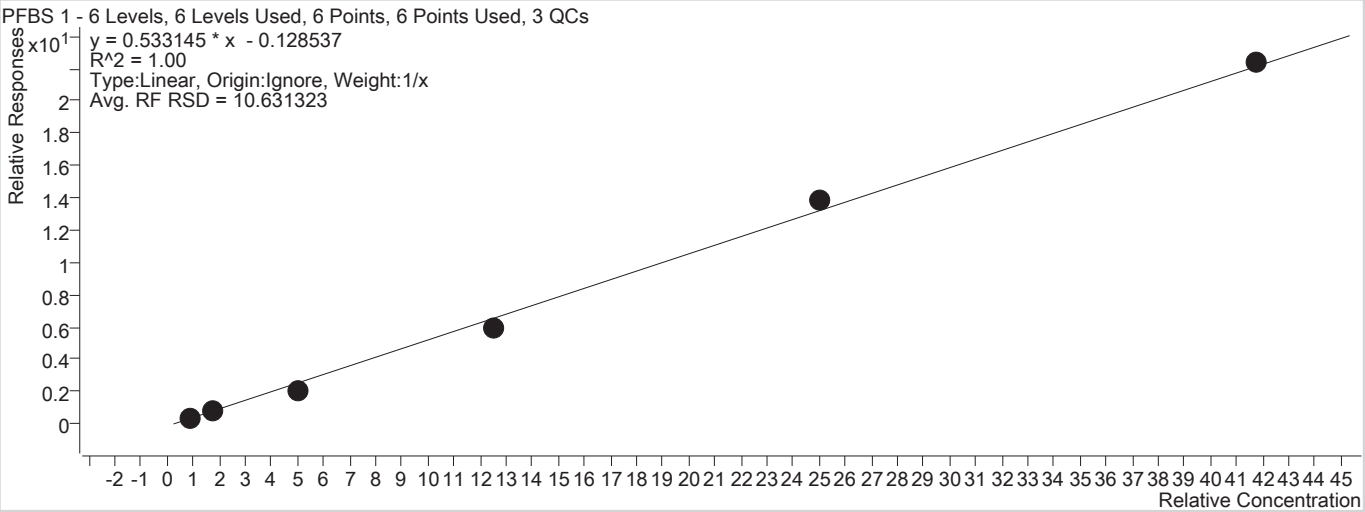
Internal Standard: 13C9-PFDA IS



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/10 12:30:18 AM	100.00	98.29	1553	0.0006	193	98.3
STD 2	STD 2	x	2018/02/10 12:32:43 AM	100.00	104.21	1686	0.0007	276	104.2
STD 3	STD 3	x	2018/02/10 12:35:07 AM	100.00	96.52	1556	0.0006	109	96.5
STD 4	STD 4	x	2018/02/10 12:37:32 AM	100.00	100.90	1655	0.0007	299	100.9
STD 5	STD 5	x	2018/02/10 12:39:57 AM	100.00	99.02	1598	0.0006	171	99.0
STD 6	STD 6	x	2018/02/10 12:42:22 AM	100.00	101.06	1535	0.0007	239	101.1

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
Last Calib Update 2018/02/26 2:51:40 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	2018/02/13 1:11:26 PM	0.83	0.95	645	0.4526	61	113.9
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.80	1309	0.4886	100	105.8
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	4.12	3744	0.4132	130	82.3
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	11.51	9973	0.4806	541	92.1
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	26.15	19908	0.5526	1003	104.6
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	42.20	32955	0.5365	864	101.2

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
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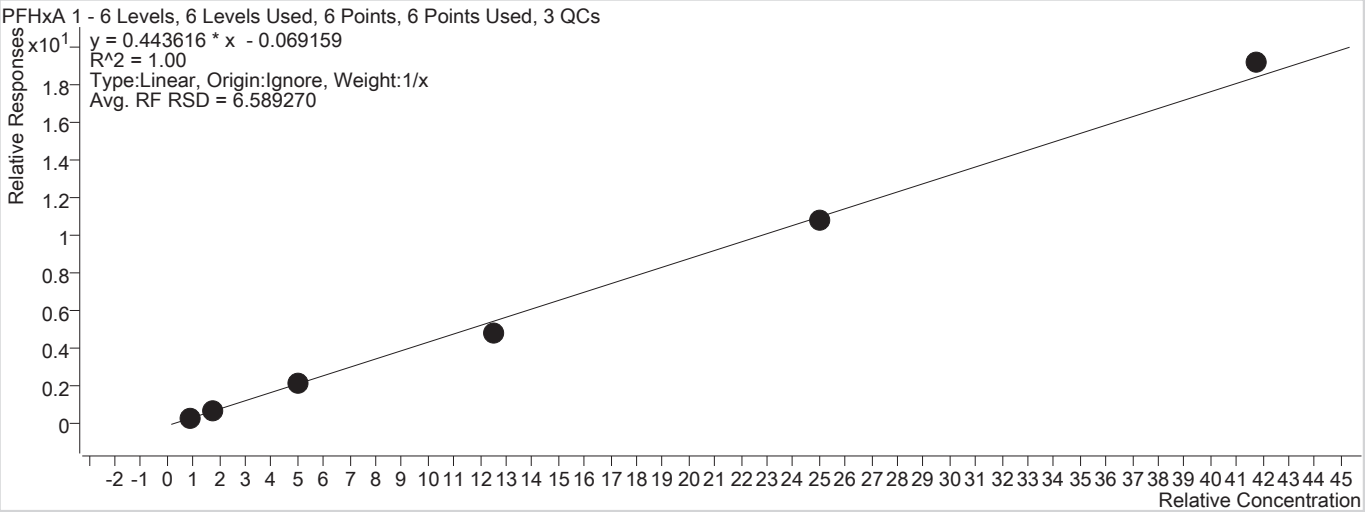
Instrument: LCMS04

Analyte: PFHxA 1
Internal Standard: MPFHxA



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 1:11:26 PM	0.83	0.93	2199	0.4145	48	112.2
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.65	4661	0.3900	94	97.1
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	4.96	13895	0.4262	417	99.2
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	11.11	33716	0.3887	718	88.9
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	24.59	70129	0.4336	1292	98.4
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	43.49	121135	0.4610	2059	104.3

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
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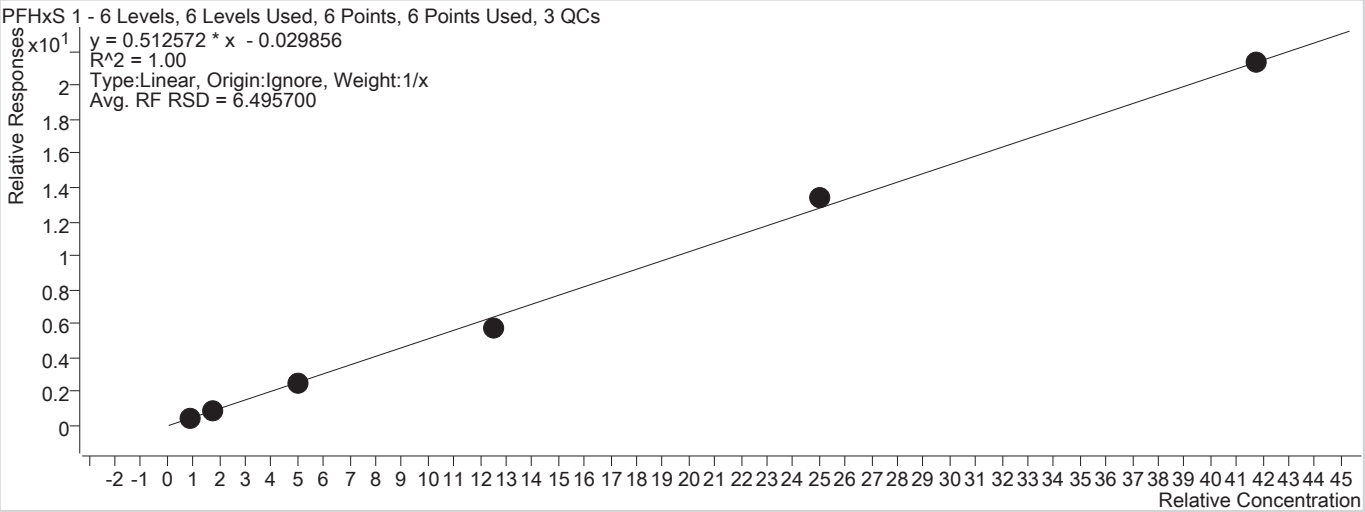
Instrument: LCMS04

Analyte: PFHxS 1
Internal Standard: MPFHxS



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 1:11:26 PM	0.83	0.93	765	0.5368	80	111.7
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.62	1264	0.4718	239	95.5
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	4.86	4457	0.4919	512	97.1
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	11.30	9564	0.4609	1226	90.4
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	26.30	19383	0.5380	1224	105.2
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	41.72	31458	0.5121	524	100.1

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
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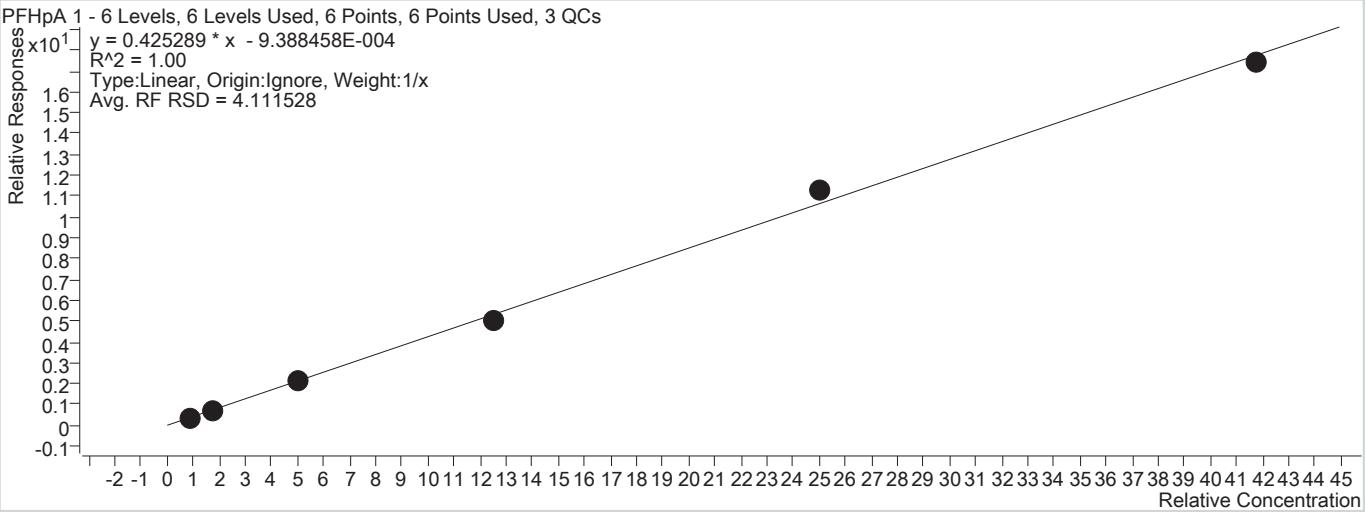
Instrument: LCMS04

Analyte: PFHpA 1
Internal Standard: MPFHpA



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 1:11:26 PM	0.83	0.83	2910	0.4251	27	100.2
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.72	6372	0.4290	57	101.0
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	5.05	18779	0.4297	142	101.1
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	11.69	44837	0.3975	186	93.5
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	26.51	88396	0.4510	227	106.1
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	40.93	140439	0.4174	246	98.1

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
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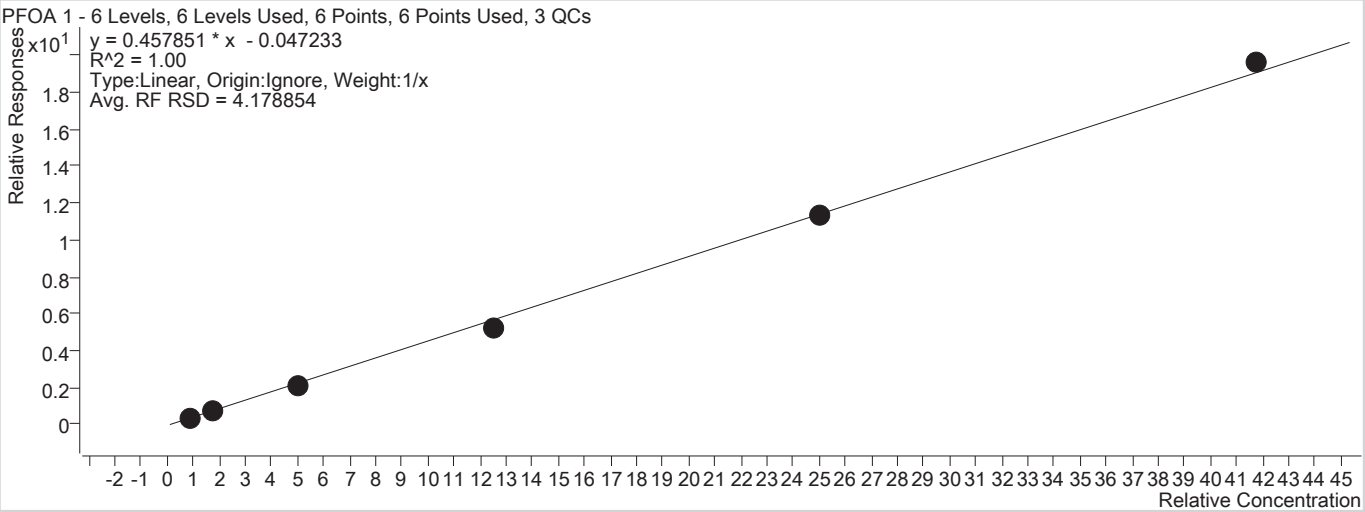
Instrument: LCMS04

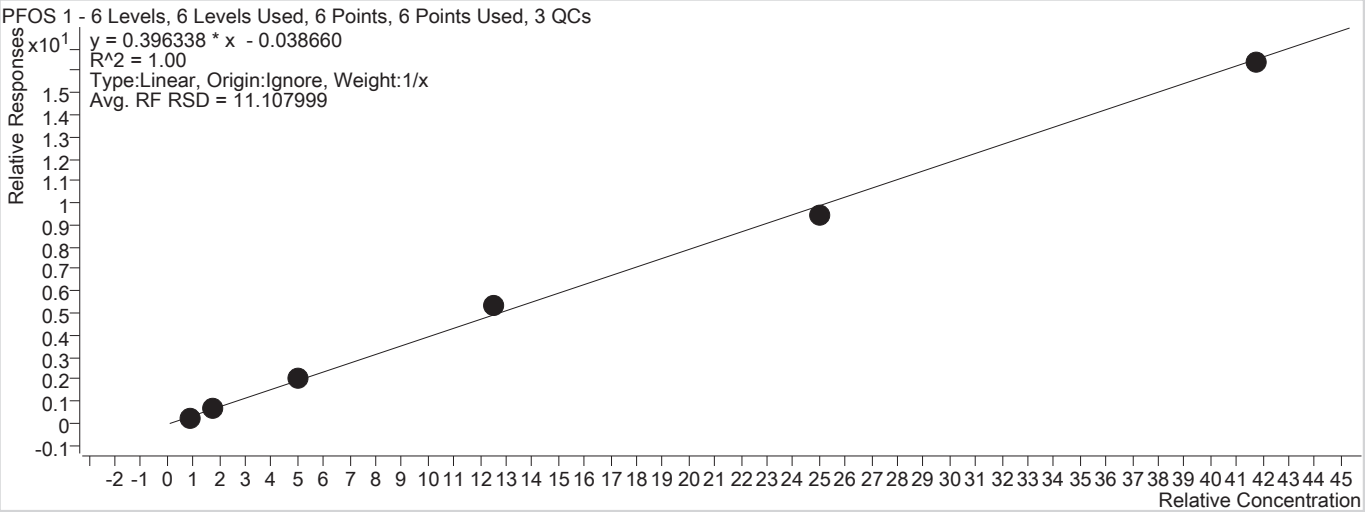
Analyte: PFOA 1
Internal Standard: MPFOA



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 1:11:26 PM	0.83	0.89	3151	0.4340	29	107.2
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.73	6828	0.4382	48	101.8
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	4.84	20184	0.4336	215	96.8
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	11.49	49745	0.4170	439	91.9
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	24.84	97428	0.4529	935	99.3
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	42.95	164903	0.4704	1266	103.0

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
Last Calib Update 2018/02/26 2:51:40 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	2018/02/13 1:11:26 PM	0.83	0.74	495	0.3047	69	88.6
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.74	1317	0.3818	103	102.1
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	5.25	3935	0.4082	138	104.9
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	13.64	9992	0.4295	161	109.2
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	23.99	19043	0.3788	137	96.0
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	41.38	32051	0.3923	179	99.2

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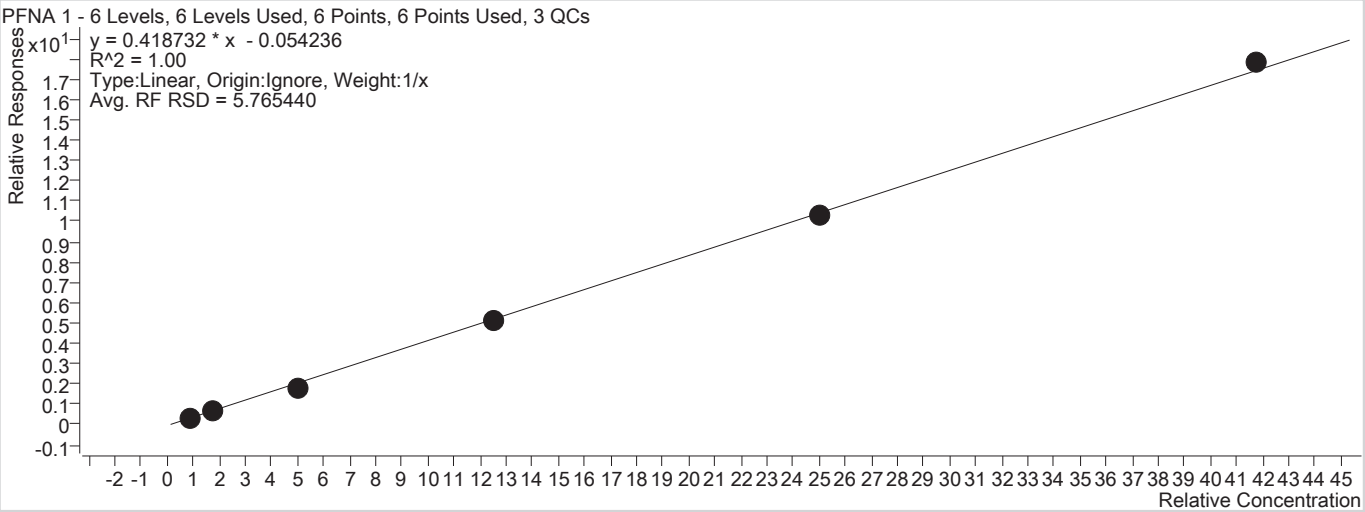
Last Calib Update 2018/02/26 2:51:40 PM
Instrument: LCMS04

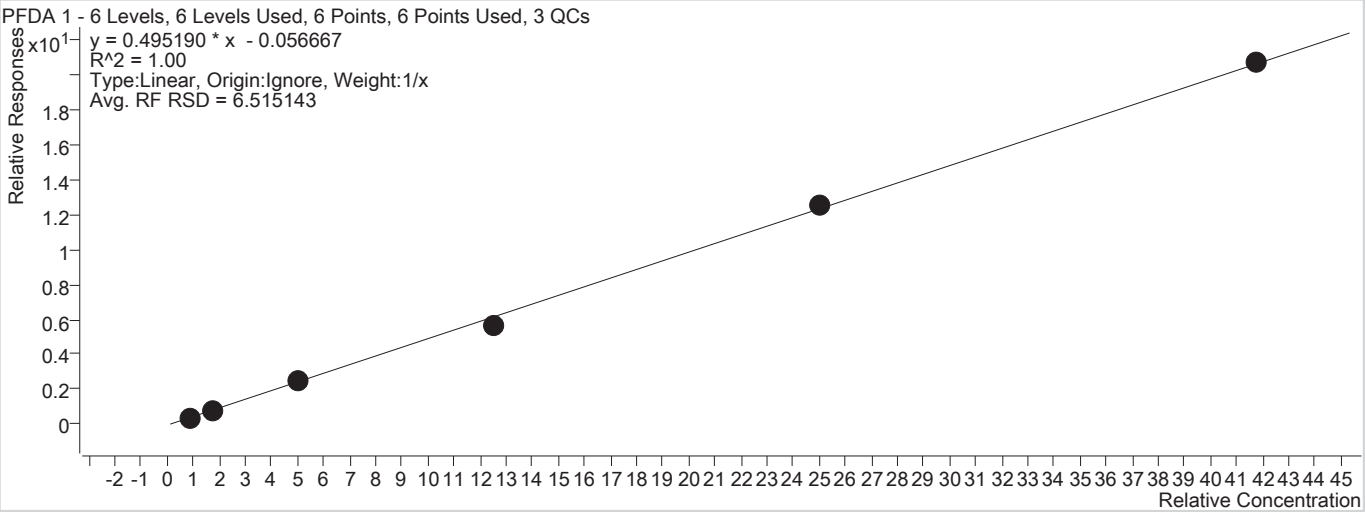
Analyte: PFNA 1
Internal Standard: MPFNA



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 1:11:26 PM	0.83	0.90	2710	0.3866	45	107.9
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.77	6137	0.4035	105	104.0
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	4.44	17071	0.3607	350	88.7
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	12.30	42617	0.4077	1235	98.4
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	24.64	85811	0.4105	1734	98.6
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	42.69	147522	0.4274	4300	102.4

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
Last Calib Update 2018/02/26 2:51:40 PM
Instrument: LCMS04

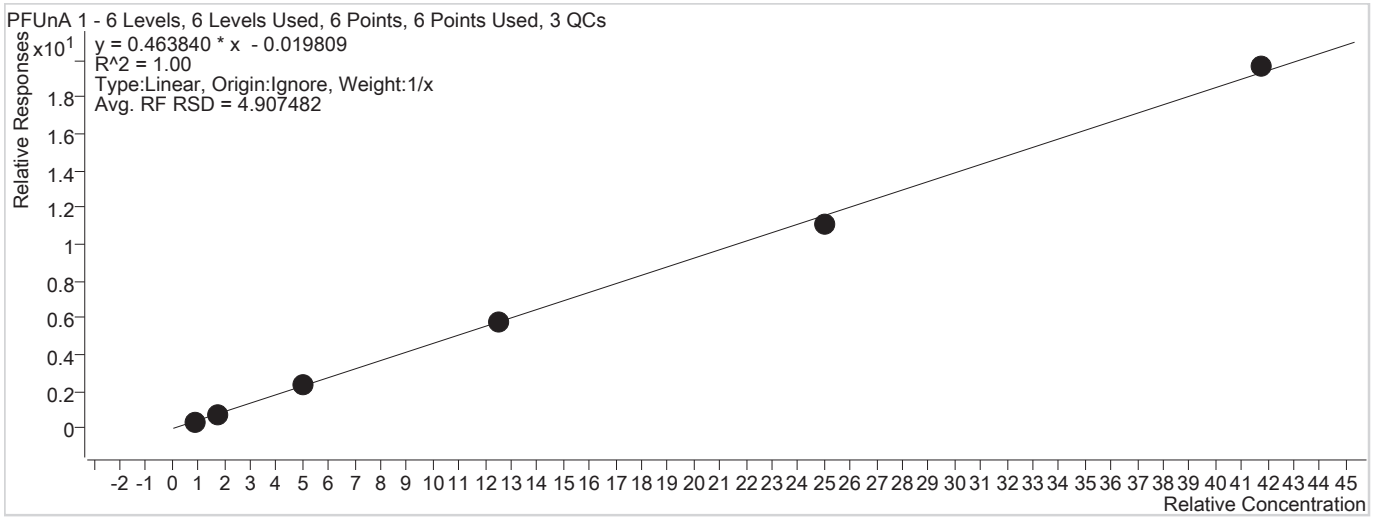
Analyte: PFDA 1
Internal Standard: MPFDA



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 1:11:26 PM	0.83	0.83	2544	0.4288	20	100.4
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.71	6095	0.4660	76	100.8
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	5.19	18530	0.5028	193	103.8
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	11.53	46555	0.4523	387	92.2
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	25.55	91770	0.5038	889	102.2
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	41.91	156573	0.4963	1026	100.5

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
Last Calib Update 2018/02/26 2:51:40 PM
Instrument: LCMS04

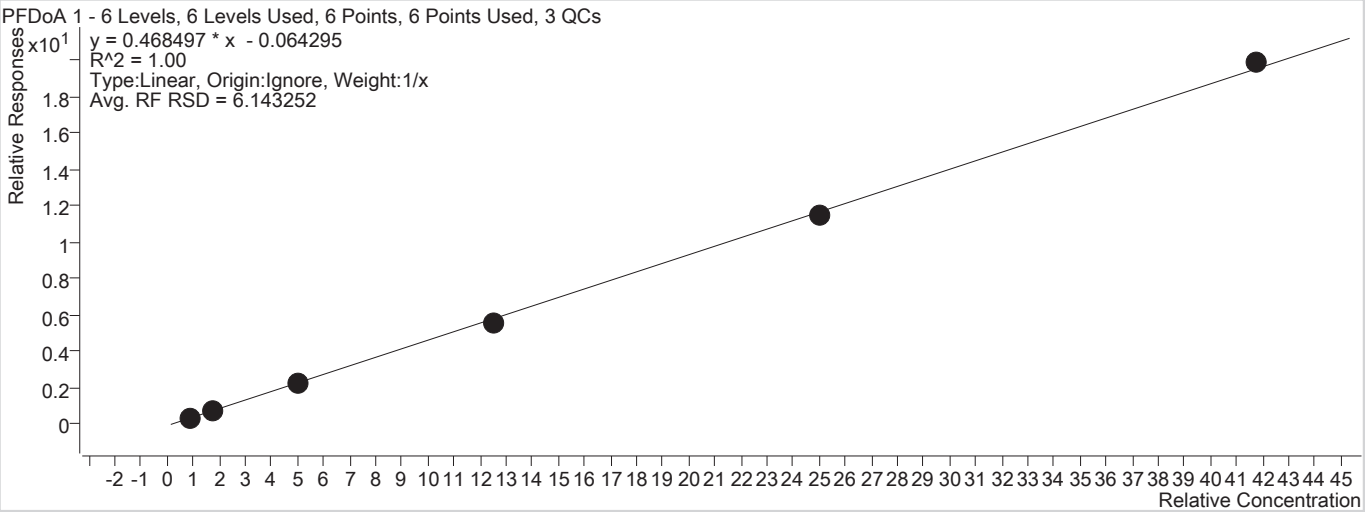
Analyte: PFUnA 1
Internal Standard: MPFUnA



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 1:11:26 PM	0.83	0.79	2954	0.4197	23	95.6
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.72	6714	0.4586	46	101.4
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	5.22	20287	0.4804	131	104.4
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	12.66	52123	0.4681	231	101.3
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	23.86	100268	0.4419	206	95.4
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	42.47	170577	0.4720	303	101.9

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
Last Calib Update 2018/02/26 2:51:40 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	2018/02/13 1:11:26 PM	0.83	0.90	3878	0.4300	92	108.3
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.59	8135	0.4002	218	93.5
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	5.08	26456	0.4635	314	101.7
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	11.98	65485	0.4440	1350	95.9
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	24.69	127517	0.4601	3578	98.8
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	42.49	210940	0.4758	4994	101.9

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
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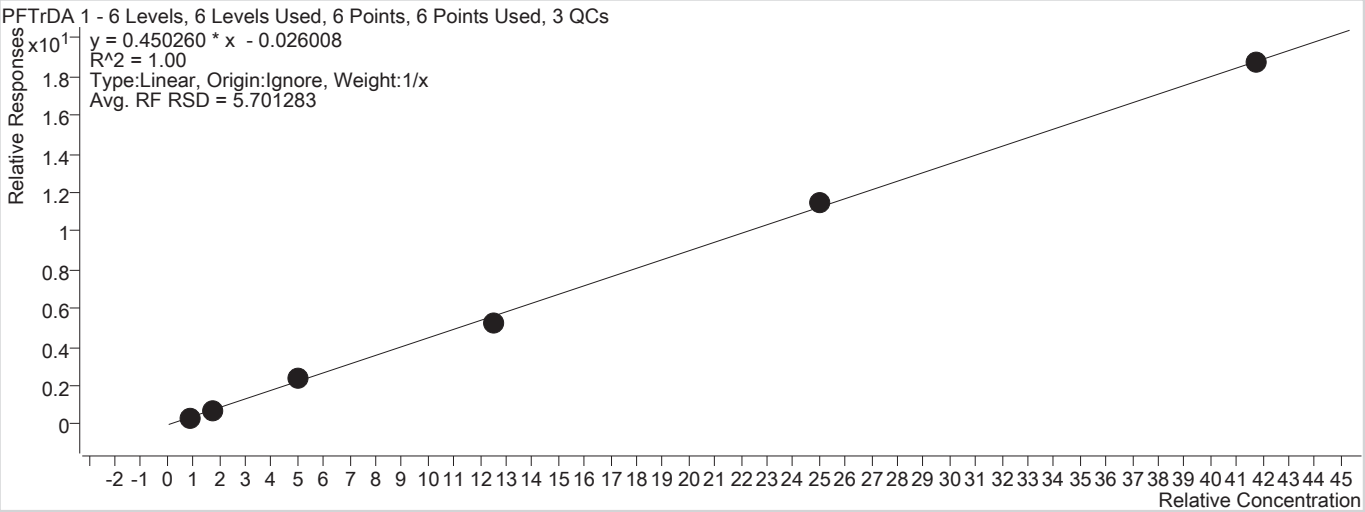
Instrument: LCMS04

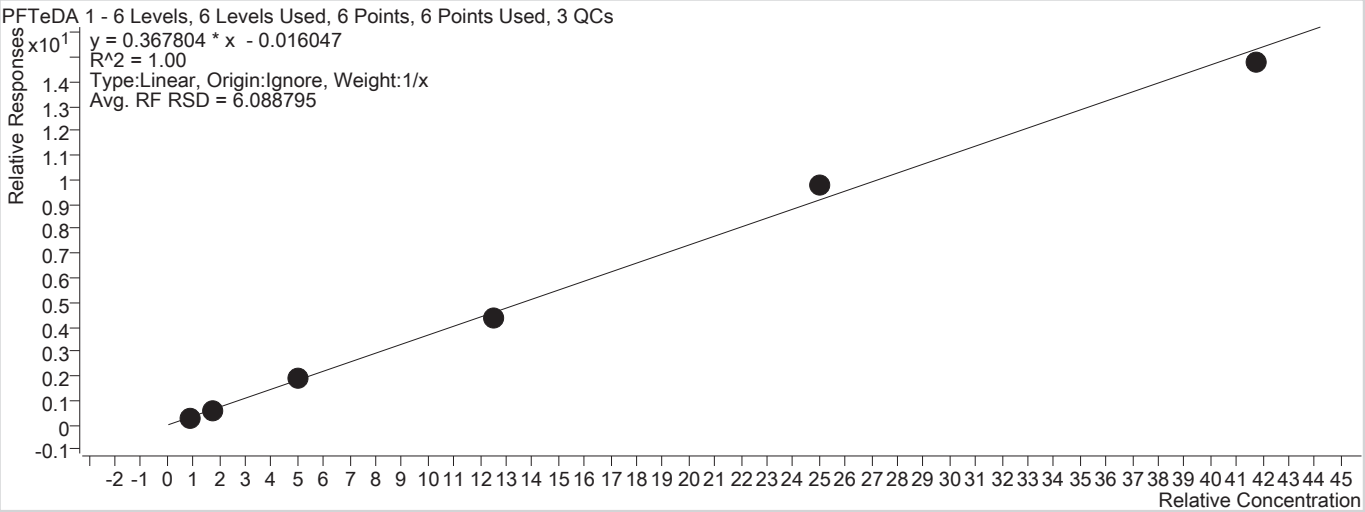
Analyte: PFTrDA 1
Internal Standard: MPFTeDA



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 1:11:26 PM	0.83	0.81	4216	0.4086	25	97.7
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.71	9538	0.4375	43	100.6
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	5.32	30071	0.4735	142	106.3
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	11.63	71180	0.4167	229	93.0
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	25.65	143058	0.4608	267	102.6
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	41.62	238756	0.4488	270	99.8

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
Last Calib Update 2018/02/26 2:51:40 PM
Instrument: LCMS04

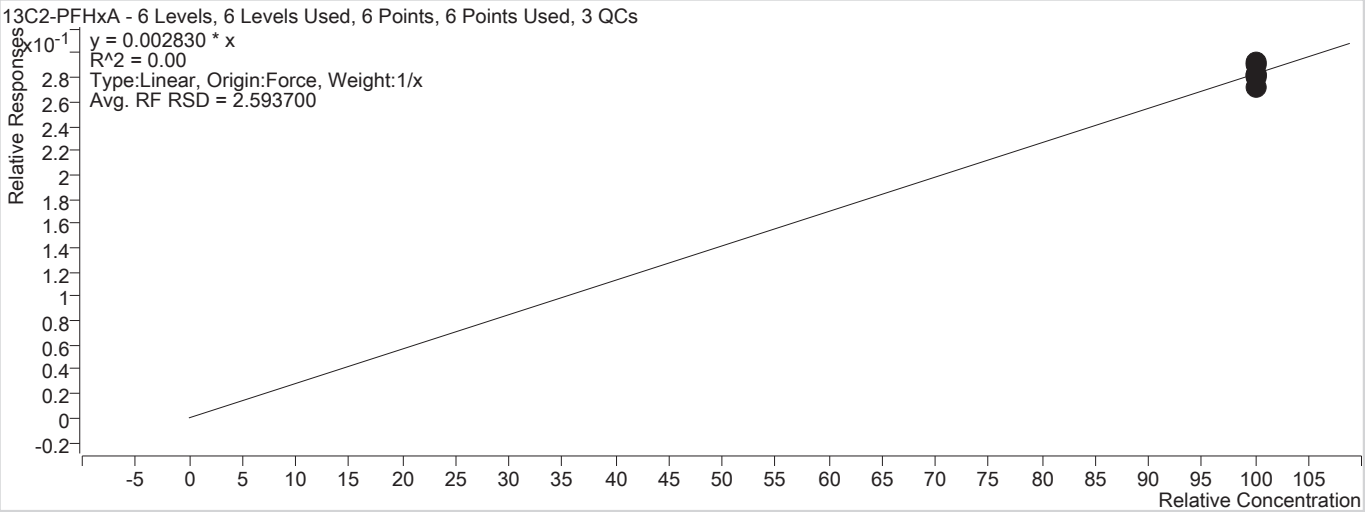
Analyte: PFTeDA 1
Internal Standard: MPFTeDA



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 1:11:26 PM	0.83	0.80	3463	0.3356	32	96.5
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.68	7730	0.3546	80	99.0
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	5.27	24409	0.3843	432	105.4
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	11.94	59763	0.3499	559	95.5
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	26.78	122099	0.3933	1172	107.1
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	40.26	188733	0.3548	1877	96.6

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
Last Calib Update 2018/02/26 2:51:40 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	2018/02/13 1:11:26 PM	100.00	99.88	6392	0.0028	282	99.9
STD 2	STD 2	x	2018/02/13 1:16:22 PM	100.00	103.32	7030	0.0029	222	103.3
STD 3	STD 3	x	2018/02/13 1:21:18 PM	100.00	96.14	6521	0.0027	231	96.1
STD 4	STD 4	x	2018/02/13 1:26:14 PM	100.00	102.44	6940	0.0029	179	102.4
STD 5	STD 5	x	2018/02/13 1:31:10 PM	100.00	98.79	6470	0.0028	239	98.8
STD 6	STD 6	x	2018/02/13 1:36:06 PM	100.00	99.43	6301	0.0028	198	99.4

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
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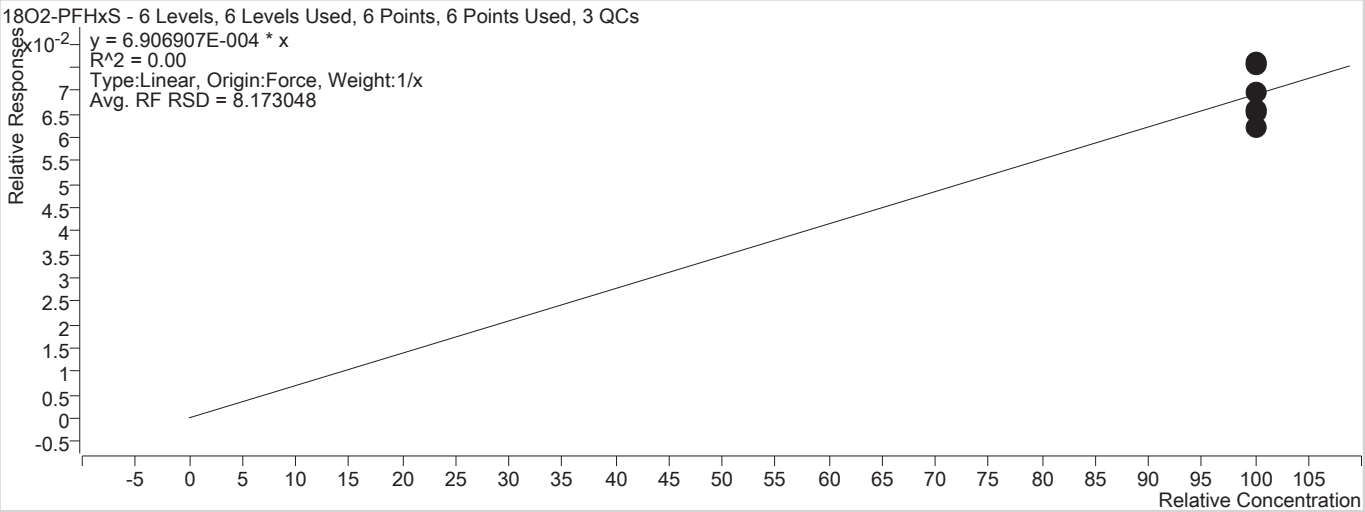
Instrument: LCMS04

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	2018/02/13 1:11:26 PM	100.00	109.92	1717	0.0008	348	109.9
STD 2	STD 2	x	2018/02/13 1:16:22 PM	100.00	94.89	1576	0.0007	190	94.9
STD 3	STD 3	x	2018/02/13 1:21:18 PM	100.00	109.45	1812	0.0008	272	109.4
STD 4	STD 4	x	2018/02/13 1:26:14 PM	100.00	100.38	1660	0.0007	132	100.4
STD 5	STD 5	x	2018/02/13 1:31:10 PM	100.00	90.14	1441	0.0006	289	90.1
STD 6	STD 6	x	2018/02/13 1:36:06 PM	100.00	95.22	1473	0.0007	112	95.2

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
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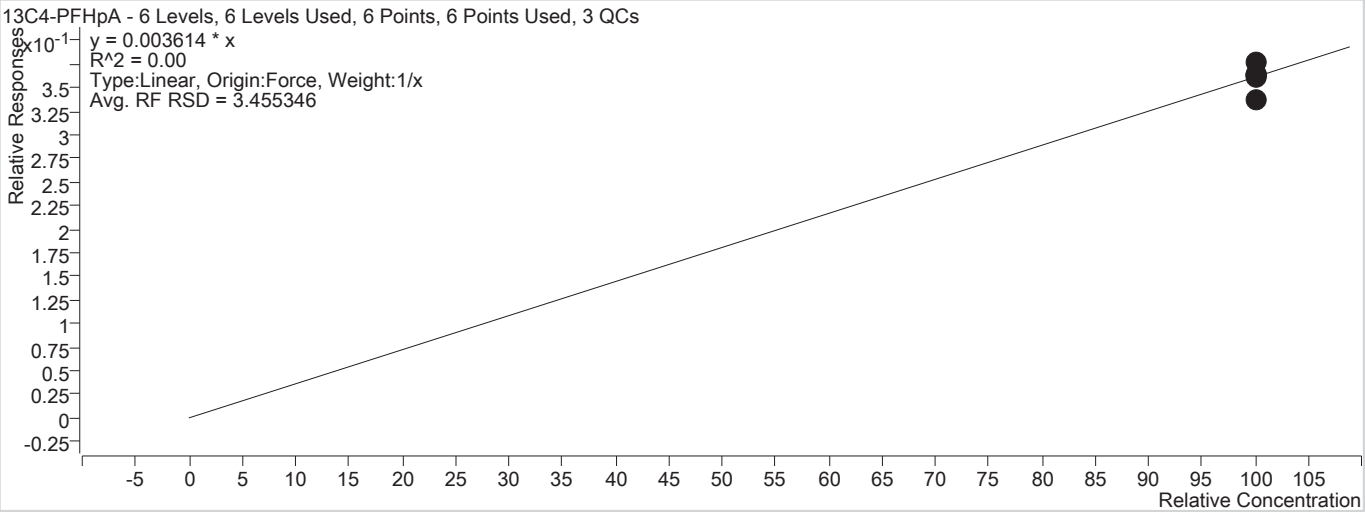
Instrument: LCMS04

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	2018/02/13 1:11:26 PM	100.00	100.89	8247	0.0036	231	100.9
STD 2	STD 2	x	2018/02/13 1:16:22 PM	100.00	100.54	8738	0.0036	199	100.5
STD 3	STD 3	x	2018/02/13 1:21:18 PM	100.00	100.89	8740	0.0036	298	100.9
STD 4	STD 4	x	2018/02/13 1:26:14 PM	100.00	104.27	9023	0.0038	189	104.3
STD 5	STD 5	x	2018/02/13 1:31:10 PM	100.00	93.72	7840	0.0034	274	93.7
STD 6	STD 6	x	2018/02/13 1:36:06 PM	100.00	99.69	8069	0.0036	207	99.7

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
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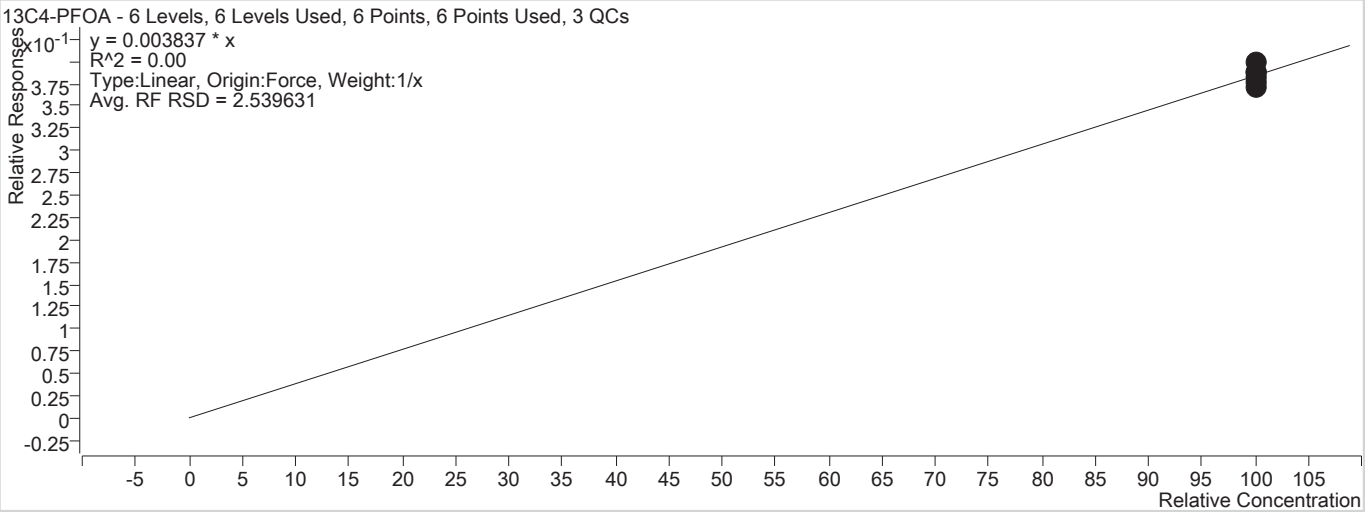
Instrument: LCMS04

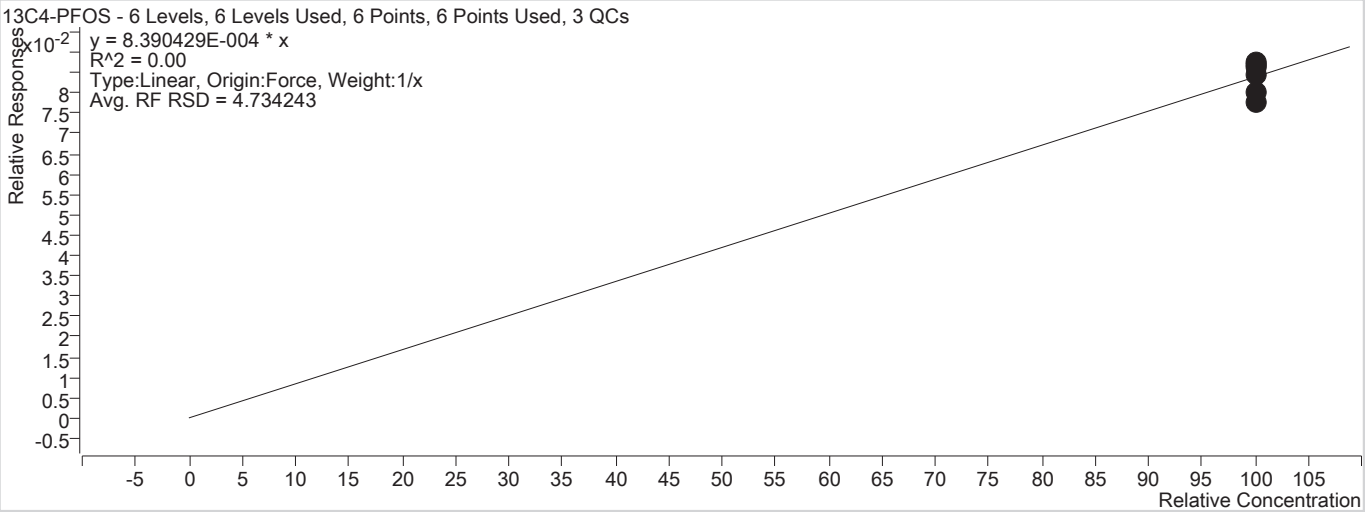
Analyte: 13C4-PFOA
Internal Standard: 13C6-PFHxA IS



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 1:11:26 PM	100.00	100.81	8747	0.0039	120	100.8
STD 2	STD 2	x	2018/02/13 1:16:22 PM	100.00	99.34	9165	0.0038	160	99.3
STD 3	STD 3	x	2018/02/13 1:21:18 PM	100.00	101.24	9311	0.0039	206	101.2
STD 4	STD 4	x	2018/02/13 1:26:14 PM	100.00	103.90	9544	0.0040	183	103.9
STD 5	STD 5	x	2018/02/13 1:31:10 PM	100.00	96.89	8604	0.0037	229	96.9
STD 6	STD 6	x	2018/02/13 1:36:06 PM	100.00	97.83	8406	0.0038	160	97.8

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
Last Calib Update 2018/02/26 2:51:40 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	2018/02/13 1:11:26 PM	100.00	103.13	1957	0.0009	374	103.1
STD 2	STD 2	x	2018/02/13 1:16:22 PM	100.00	100.56	2029	0.0008	216	100.6
STD 3	STD 3	x	2018/02/13 1:21:18 PM	100.00	95.86	1928	0.0008	179	95.9
STD 4	STD 4	x	2018/02/13 1:26:14 PM	100.00	92.64	1861	0.0008	169	92.6
STD 5	STD 5	x	2018/02/13 1:31:10 PM	100.00	103.55	2011	0.0009	151	103.6
STD 6	STD 6	x	2018/02/13 1:36:06 PM	100.00	104.25	1959	0.0009	214	104.3

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
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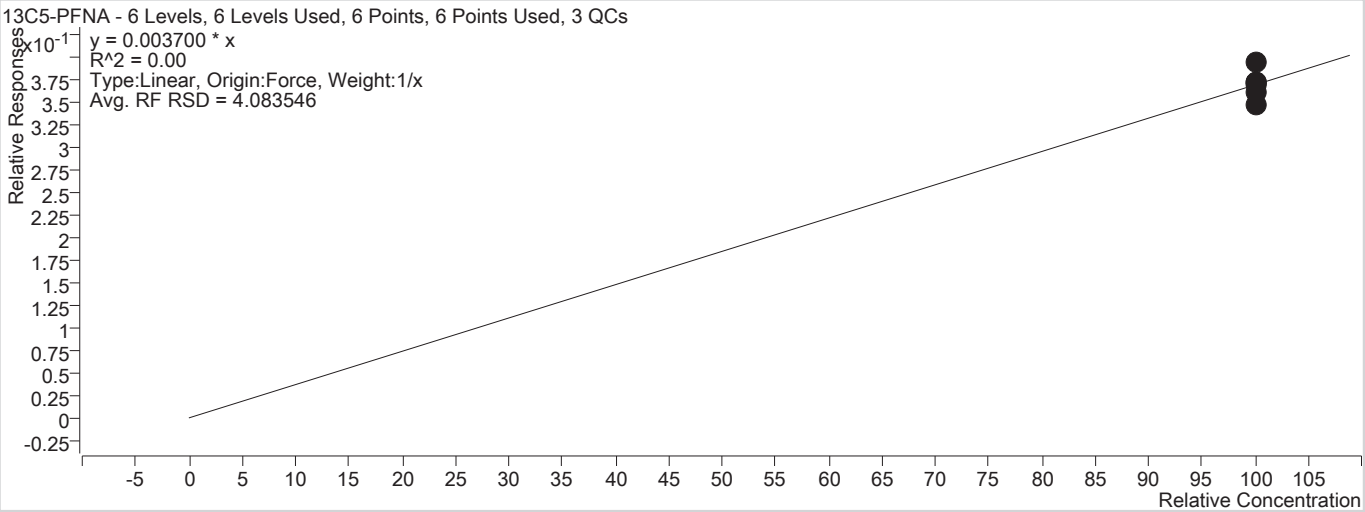
Instrument: LCMS04

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	2018/02/13 1:11:26 PM	100.00	100.90	8444	0.0037	186	100.9
STD 2	STD 2	x	2018/02/13 1:16:22 PM	100.00	100.52	8945	0.0037	212	100.5
STD 3	STD 3	x	2018/02/13 1:21:18 PM	100.00	106.71	9465	0.0039	255	106.7
STD 4	STD 4	x	2018/02/13 1:26:14 PM	100.00	94.38	8362	0.0035	312	94.4
STD 5	STD 5	x	2018/02/13 1:31:10 PM	100.00	97.61	8360	0.0036	288	97.6
STD 6	STD 6	x	2018/02/13 1:36:06 PM	100.00	99.87	8277	0.0037	183	99.9

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
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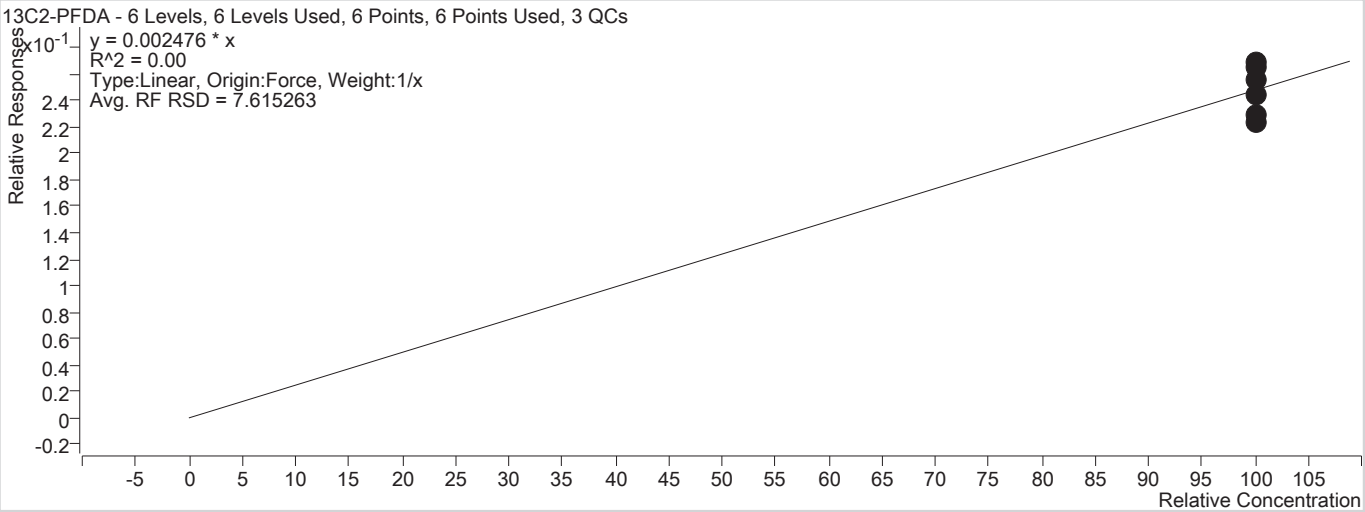
Instrument: LCMS04

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	2018/02/13 1:11:26 PM	100.00	89.92	7026	0.0022	207	89.9
STD 2	STD 2	x	2018/02/13 1:16:22 PM	100.00	103.47	7582	0.0026	278	103.5
STD 3	STD 3	x	2018/02/13 1:21:18 PM	100.00	92.62	7294	0.0023	229	92.6
STD 4	STD 4	x	2018/02/13 1:26:14 PM	100.00	108.47	8197	0.0027	475	108.5
STD 5	STD 5	x	2018/02/13 1:31:10 PM	100.00	98.60	7237	0.0024	342	98.6
STD 6	STD 6	x	2018/02/13 1:36:06 PM	100.00	106.93	7498	0.0026	347	106.9

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
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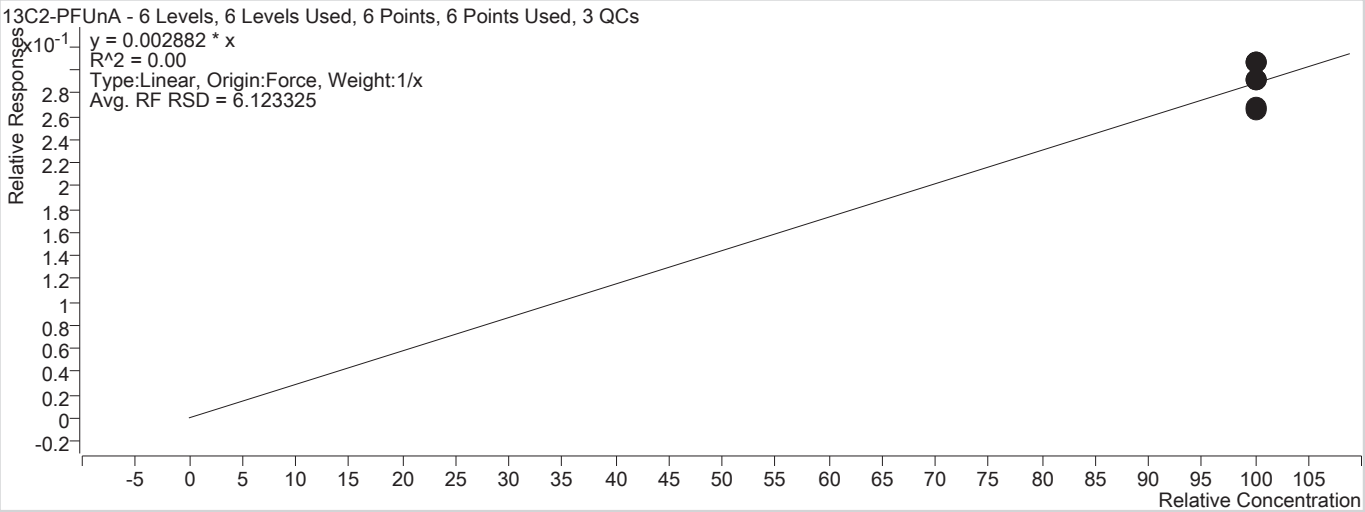
Instrument: LCMS04

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	2018/02/13 1:11:26 PM	100.00	93.22	8479	0.0027	176	93.2
STD 2	STD 2	x	2018/02/13 1:16:22 PM	100.00	100.96	8612	0.0029	355	101.0
STD 3	STD 3	x	2018/02/13 1:21:18 PM	100.00	92.13	8446	0.0027	237	92.1
STD 4	STD 4	x	2018/02/13 1:26:14 PM	100.00	101.27	8908	0.0029	167	101.3
STD 5	STD 5	x	2018/02/13 1:31:10 PM	100.00	106.23	9076	0.0031	469	106.2
STD 6	STD 6	x	2018/02/13 1:36:06 PM	100.00	106.18	8667	0.0031	364	106.2

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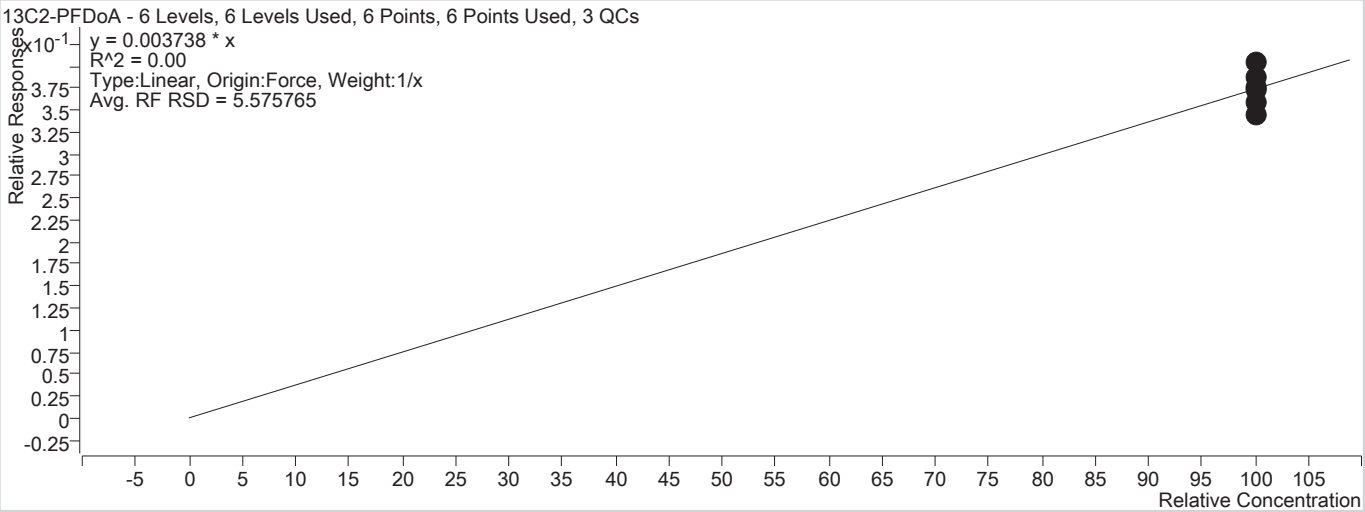
Instrument: LCMS04

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	2018/02/13 1:11:26 PM	100.00	92.08	10865	0.0034	245	92.1
STD 2	STD 2	x	2018/02/13 1:16:22 PM	100.00	108.06	11957	0.0040	434	108.1
STD 3	STD 3	x	2018/02/13 1:21:18 PM	100.00	96.00	11416	0.0036	183	96.0
STD 4	STD 4	x	2018/02/13 1:26:14 PM	100.00	103.41	11800	0.0039	229	103.4
STD 5	STD 5	x	2018/02/13 1:31:10 PM	100.00	100.03	11086	0.0037	196	100.0
STD 6	STD 6	x	2018/02/13 1:36:06 PM	100.00	100.41	10632	0.0038	242	100.4

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
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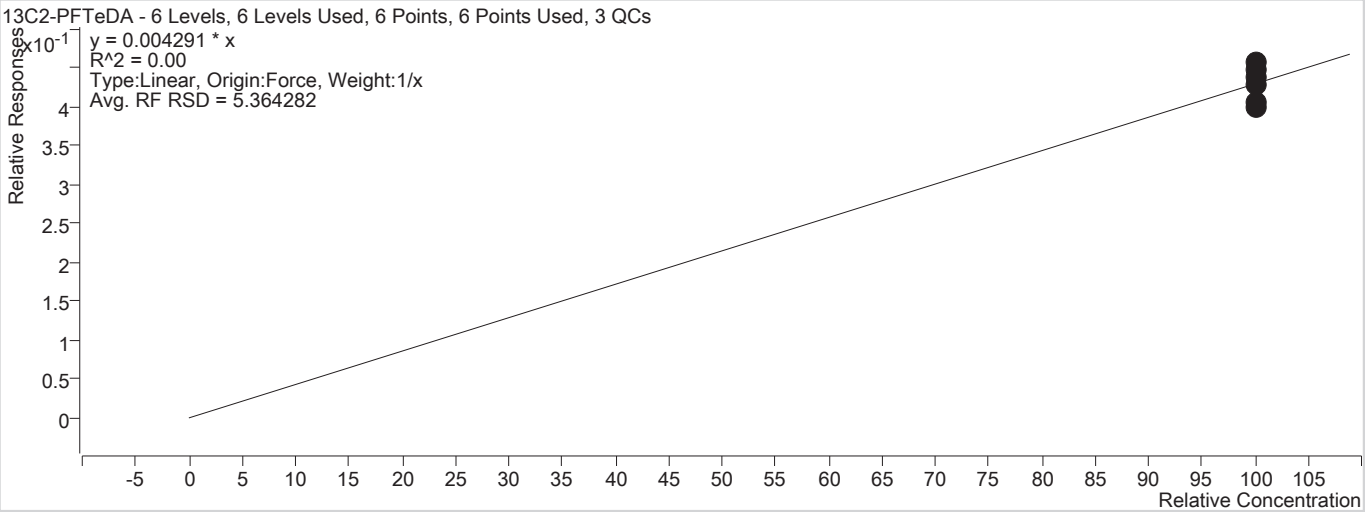
Instrument: LCMS04

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	2018/02/13 1:11:26 PM	100.00	93.15	12616	0.0040	442	93.1
STD 2	STD 2	x	2018/02/13 1:16:22 PM	100.00	102.36	13001	0.0044	397	102.4
STD 3	STD 3	x	2018/02/13 1:21:18 PM	100.00	94.39	12884	0.0041	446	94.4
STD 4	STD 4	x	2018/02/13 1:26:14 PM	100.00	104.33	13665	0.0045	373	104.3
STD 5	STD 5	x	2018/02/13 1:31:10 PM	100.00	99.40	12645	0.0043	473	99.4
STD 6	STD 6	x	2018/02/13 1:36:06 PM	100.00	106.38	12930	0.0046	324	106.4

By Compound Report

Agilent Technologies

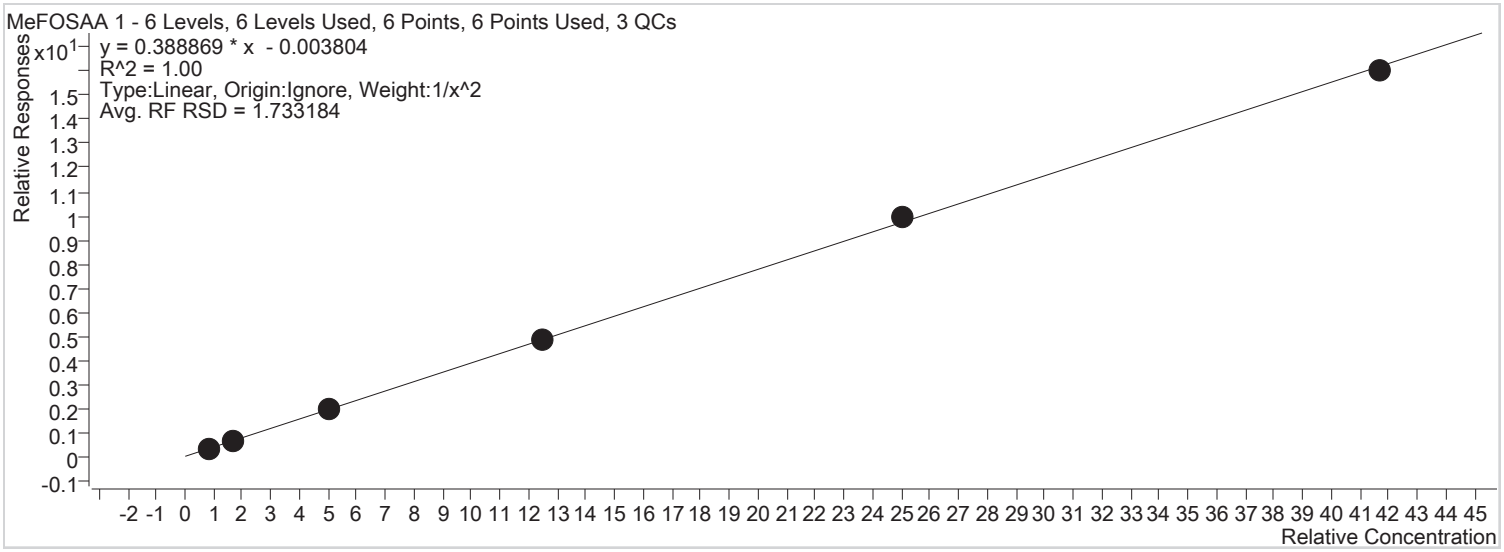
Batch Path T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_ETOxics.batch.bin

Last Calib Update 2018/02/14 10:03:30 AM

Instrument: LCMS04

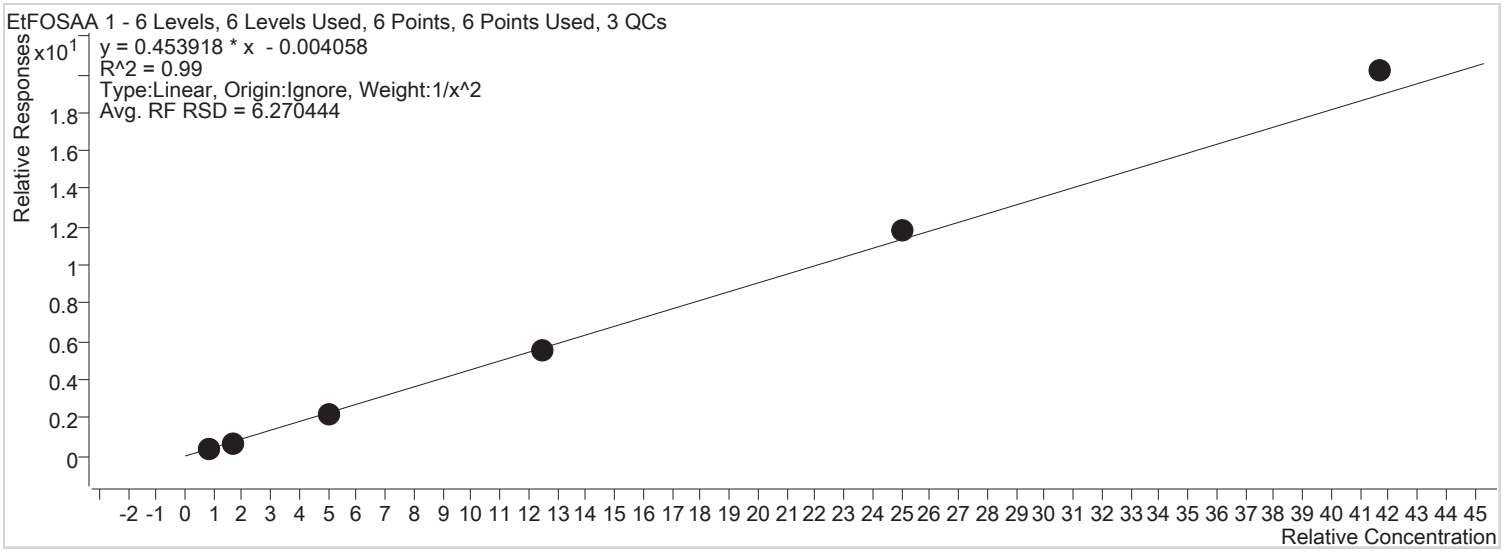
Analyte: MeFOSAA 1

Internal Standard: D3-MeFOSAA IS



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 11:29:26 AM	0.83	0.84	624	0.3883	118	101.0
STD 2	STD 2	x	2018/02/13 11:31:51 AM	1.70	1.66	1301	0.3779	154	97.8
STD 3	STD 3	x	2018/02/13 11:34:16 AM	5.00	5.00	3918	0.3883	260	100.1
STD 4	STD 4	x	2018/02/13 11:36:41 AM	12.50	12.47	9346	0.3876	277	99.8
STD 5	STD 5	x	2018/02/13 11:39:06 AM	25.00	25.63	18424	0.3986	260	102.5
STD 6	STD 6	x	2018/02/13 11:41:31 AM	41.70	41.23	29587	0.3844	279	98.9

Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_ETOxics.batch.bin
Last Calib Update	2018/02/14 10:03:30 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	2018/02/13 11:29:26 AM	0.83	0.87	627	0.4713	63	104.9
STD 2	STD 2	x	2018/02/13 11:31:51 AM	1.70	1.56	1241	0.4129	165	91.5
STD 3	STD 3	x	2018/02/13 11:34:16 AM	5.00	4.74	3779	0.4294	394	94.8
STD 4	STD 4	x	2018/02/13 11:36:41 AM	12.50	12.20	9377	0.4428	1055	97.6
STD 5	STD 5	x	2018/02/13 11:39:06 AM	25.00	26.12	18917	0.4741	1135	104.5
STD 6	STD 6	x	2018/02/13 11:41:31 AM	41.70	44.50	31142	0.4843	3193	106.7

Agilent Technologies

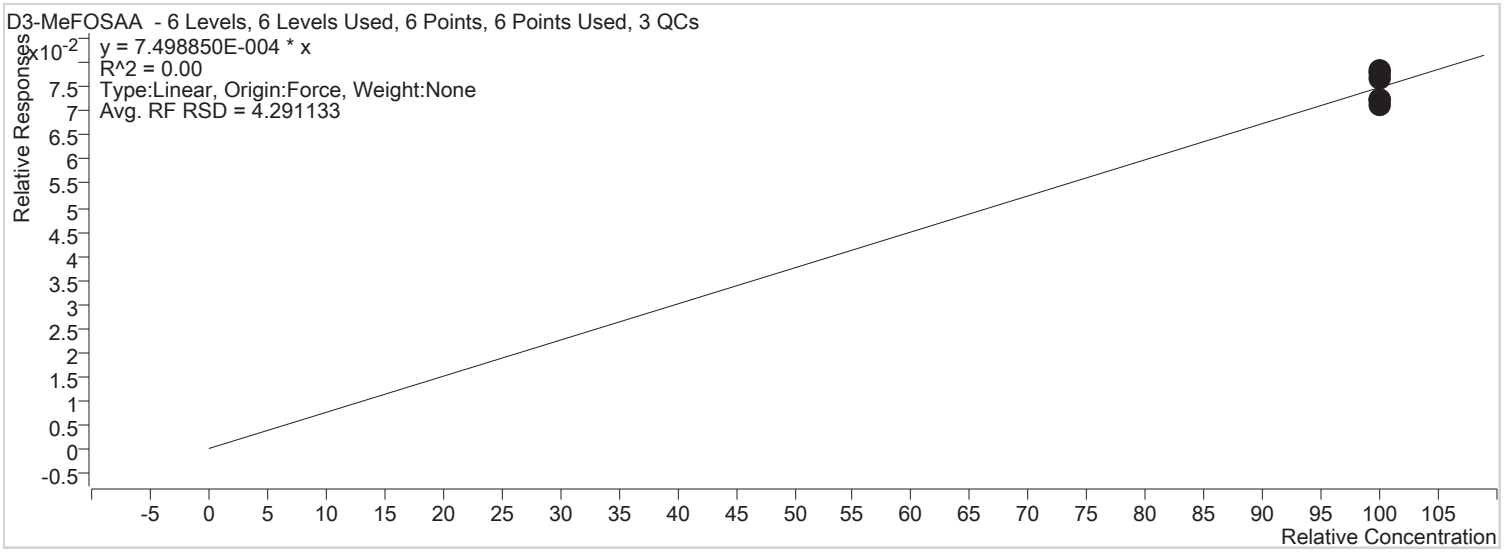
Batch Path T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics.batch.bin

Last Calib Update 2018/02/14 10:03:30 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	2018/02/13 11:29:26 AM	100.00	96.68	1969	0.0007	163	96.7
STD 2	STD 2	x	2018/02/13 11:31:51 AM	100.00	104.19	2060	0.0008	136	104.2
STD 3	STD 3	x	2018/02/13 11:34:16 AM	100.00	104.60	2051	0.0008	107	104.6
STD 4	STD 4	x	2018/02/13 11:36:41 AM	100.00	95.43	1967	0.0007	140	95.4
STD 5	STD 5	x	2018/02/13 11:39:06 AM	100.00	96.30	1855	0.0007	122	96.3
STD 6	STD 6	x	2018/02/13 11:41:31 AM	100.00	102.80	1884	0.0008	100	102.8

Agilent Technologies

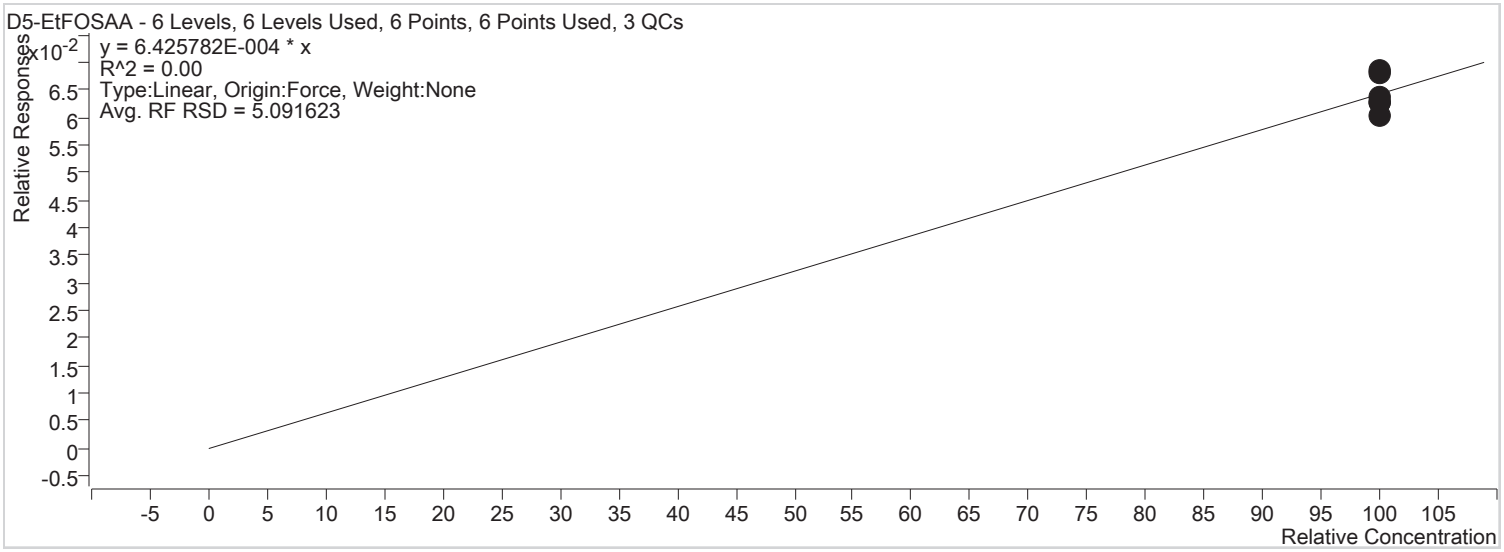
Batch Path T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_ETOxics.batch.bin

Last Calib Update 2018/02/14 10:03:30 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	2018/02/13 11:29:26 AM	100.00	93.57	1633	0.0006	266	93.6
STD 2	STD 2	x	2018/02/13 11:31:51 AM	100.00	105.71	1791	0.0007	195	105.7
STD 3	STD 3	x	2018/02/13 11:34:16 AM	100.00	106.53	1790	0.0007	246	106.5
STD 4	STD 4	x	2018/02/13 11:36:41 AM	100.00	97.44	1721	0.0006	227	97.4
STD 5	STD 5	x	2018/02/13 11:39:06 AM	100.00	97.60	1611	0.0006	128	97.6
STD 6	STD 6	x	2018/02/13 11:41:31 AM	100.00	99.14	1557	0.0006	133	99.1



6. Continuing Calibration

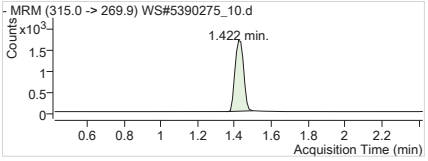
Maxxam Analytics International
6740 Campobello Rd
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.maxxamanalytics.com

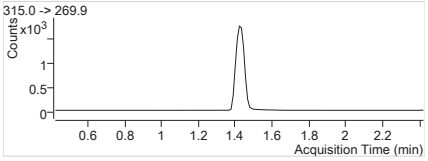
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics

Sample Name	**ISC**	**Instrument**	LCMS04
Data File	WS#5390275_10.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A2
Acq. Date	2018/02/09 5:18:37 PM	**Injection Volume**	Per Method
Sample Annotation	-		

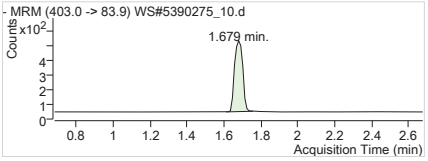
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	5486	1.42	1 µg/L		
MPFHxS	1497	1.68	1 µg/L		
MPFHpA	7297	1.69	1 µg/L		
MPFOA	7985	1.87	1 µg/L		
MPFOS	1771	1.98	1 µg/L		
MPFNA	7879	2.01	1 µg/L		
MPFDA	6673	2.14	1 µg/L		
MPFUnA	8214	2.23	1 µg/L		
MPFDoA	10218	2.32	1 µg/L		
MPFTeDA	12294	2.47	1 µg/L		
13C6-PFHxA IS	23804	1.42	1 µg/L		
13C9-PFDA IS	32182	2.13	1 µg/L		

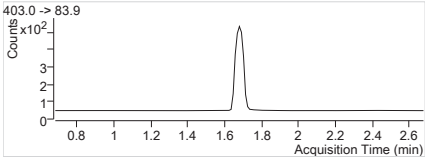
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	615	1.09	0.83	1.03 µg/L	124.00
PFHxA 1	1861	1.42	0.83	0.85 µg/L	101.86
PFHxS 1	505	1.68	0.83	0.86 µg/L	103.10
PFHpA 1	2492	1.69	0.83	1.04 µg/L	125.46
PFOA 1	2791	1.87	0.83	0.86 µg/L	103.66
PFOS 1	526	1.97	0.83	0.86 µg/L	104.18
PFNA 1	2605	2.01	0.83	0.94 µg/L	113.19
PFDA 1	2978	2.14	0.83	1.00 µg/L	120.15
PFUnA 1	2764	2.23	0.83	0.85 µg/L	101.97
PFDoA 1	3640	2.32	0.83	0.90 µg/L	108.44
PFTrDA 1	4076	2.40	0.83	0.92 µg/L	110.58
PFTeDA 1	3554	2.47	0.83	0.85 µg/L	102.03
13C2-PFHxA	5486	1.42	100.00	92.34 µg/L	92.34
18O2-PFHxS	1497	1.68	100.00	100.59 µg/L	100.59
13C4-PFHpA	7297	1.69	100.00	94.24 µg/L	94.24
13C4-PFOA	7985	1.87	100.00	97.23 µg/L	97.23
13C4-PFOS	1771	1.98	100.00	94.84 µg/L	94.84
13C5-PFNA	7880	2.01	100.00	97.08 µg/L	97.08
13C2-PFDA	6538	2.14	100.00	97.50 µg/L	97.50
13C2-PFUnA	8214	2.23	100.00	96.86 µg/L	96.86
13C2-PFDoA	10218	2.32	100.00	93.14 µg/L	93.14
13C2-PFTeDA	12560	2.47	100.00	98.68 µg/L	98.68
13C6-PFHxA	23804	1.42	100.00	101.65 µg/L	101.65
13C9-PFDA	32182	2.13	100.00	103.98 µg/L	103.98



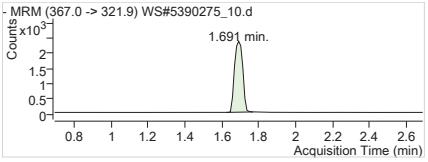


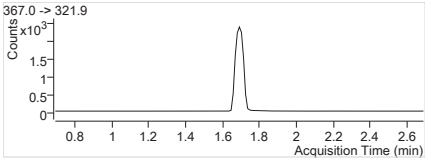
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: CC



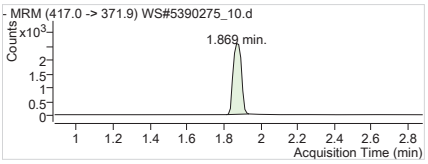


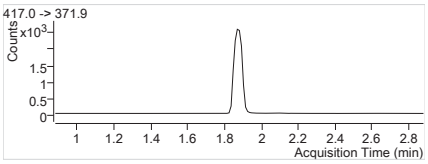
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: CC



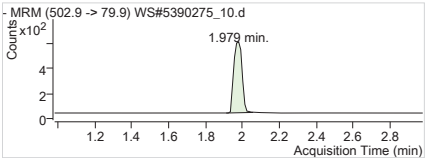


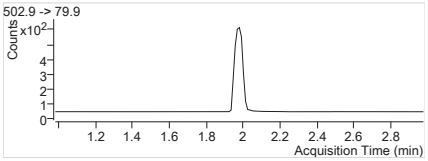
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: CC



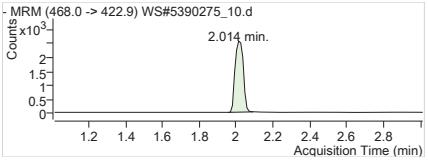


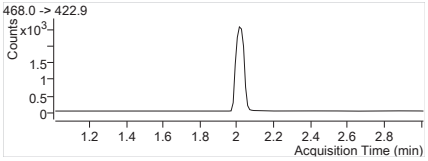
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: CC



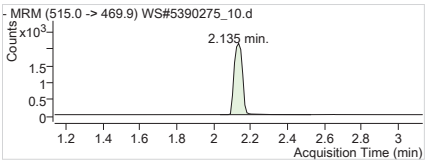


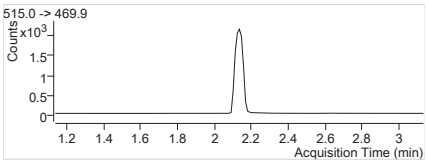
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



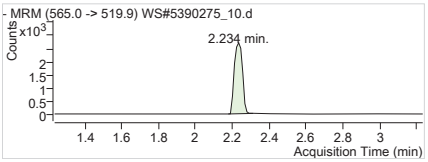


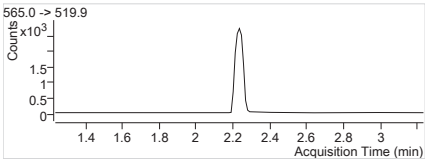
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: CC



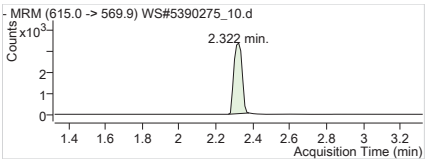


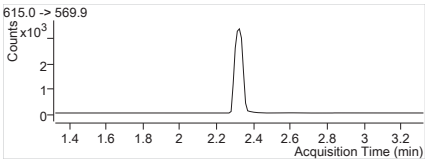
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



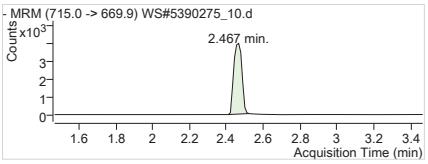


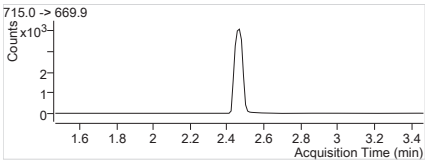
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: CC



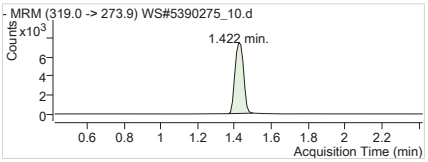


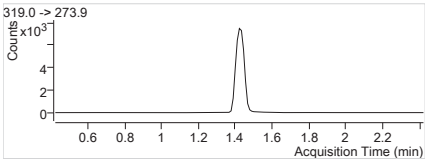
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



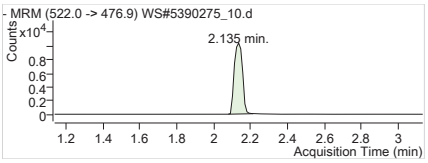


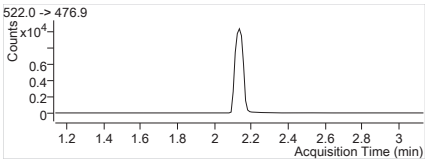
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



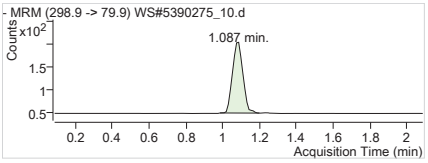


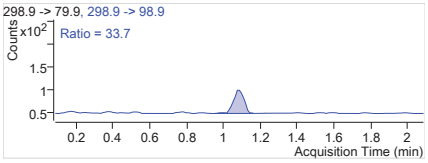
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: CC



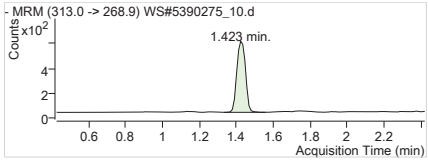


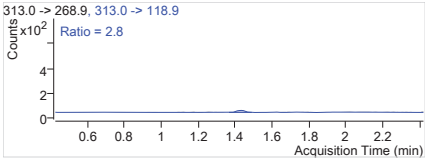
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



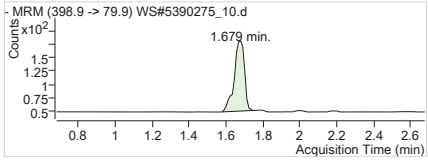


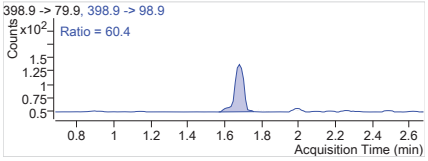
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 1.03 µg/L
Area ratio: 0.41082
Sample type: CC



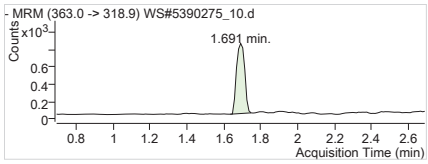


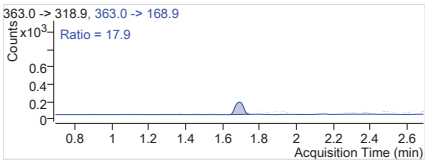
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 0.85 µg/L
Area ratio: 0.33923
Sample type: CC



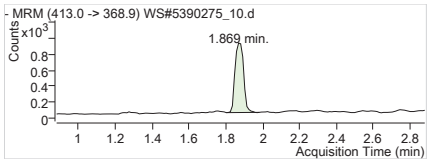


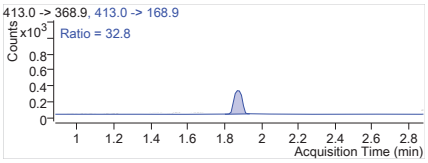
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 0.86 µg/L
Area ratio: 0.33734
Sample type: CC



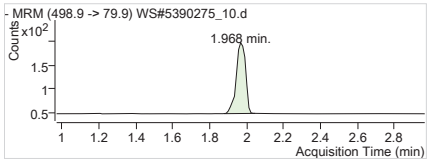


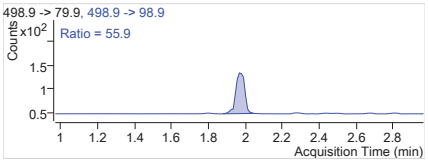
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 1.04 µg/L
Area ratio: 0.34151
Sample type: CC



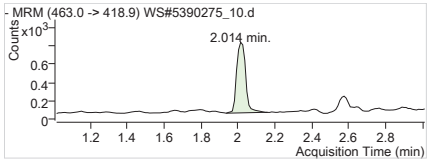


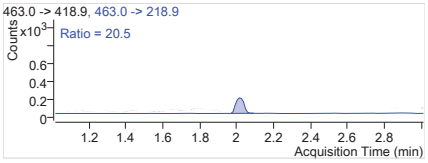
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 0.86 µg/L
Area ratio: 0.34953
Sample type: CC



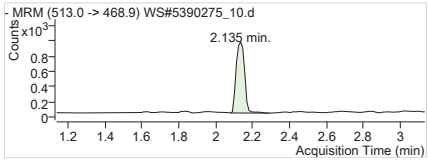


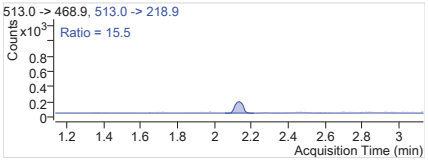
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 0.86 µg/L
Area ratio: 0.29701
Sample type: CC



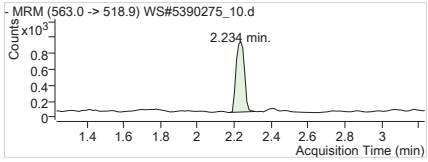


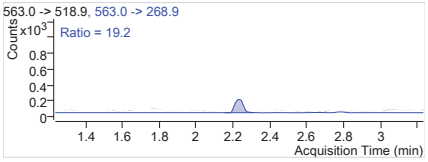
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 0.94 µg/L
Area ratio: 0.33063
Sample type: CC



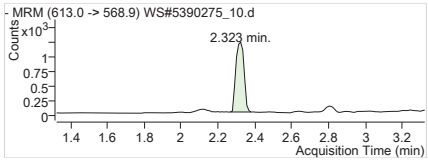


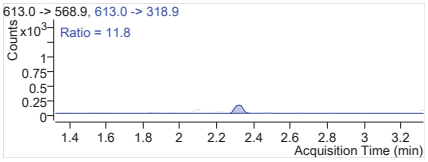
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 1.00 µg/L
Area ratio: 0.44628
Sample type: CC



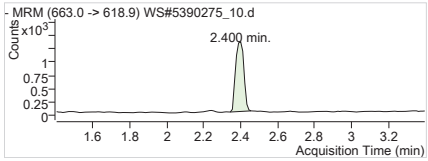


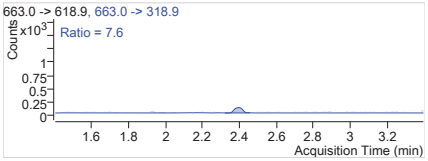
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 0.85 µg/L
Area ratio: 0.33650
Sample type: CC



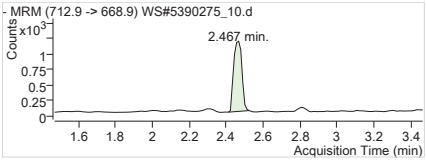


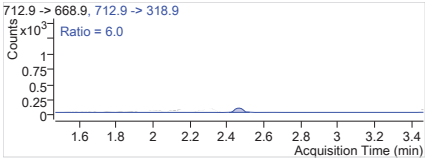
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 0.90 µg/L
Area ratio: 0.35623
Sample type: CC



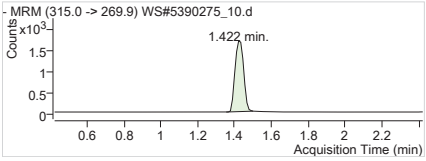


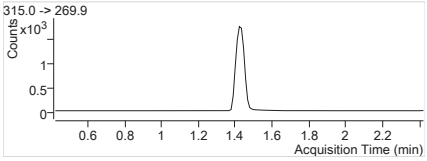
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 0.92 µg/L
Area ratio: 0.33154
Sample type: CC



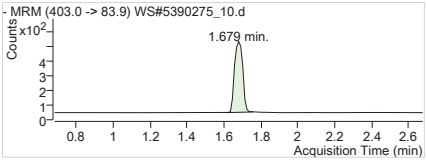


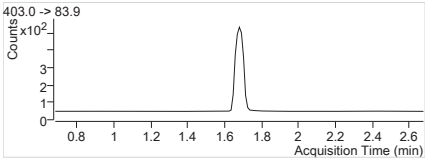
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 0.85 µg/L
Area ratio: 0.28908
Sample type: CC



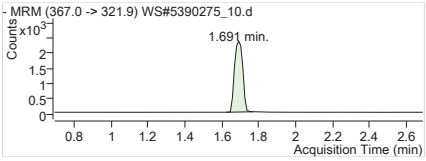


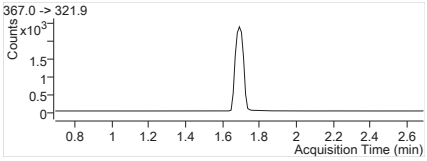
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 92.34 µg/L
Area ratio: 0.23047
Sample type: CC



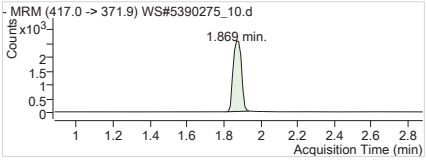


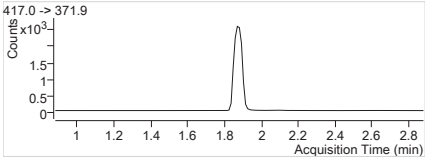
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 100.59 µg/L
Area ratio: 0.06289
Sample type: CC



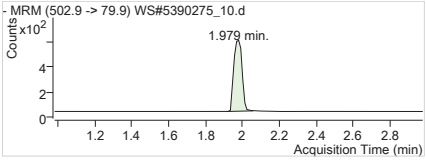


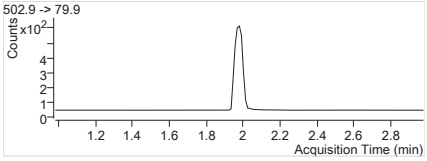
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 94.24 µg/L
Area ratio: 0.30655
Sample type: CC



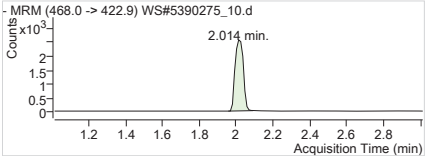


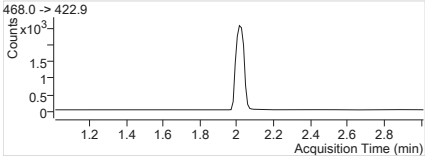
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 97.23 µg/L
Area ratio: 0.33545
Sample type: CC



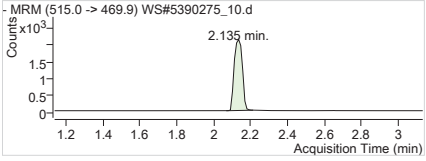


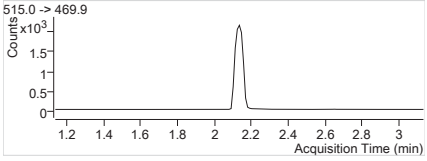
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 94.84 µg/L
Area ratio: 0.07440
Sample type: CC



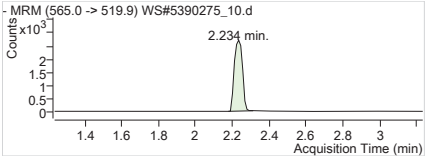


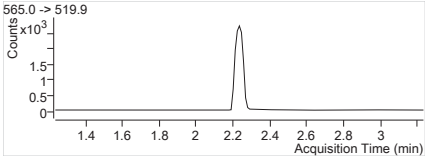
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 97.08 µg/L
Area ratio: 0.33104
Sample type: CC



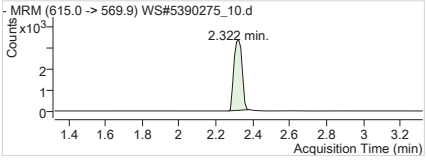


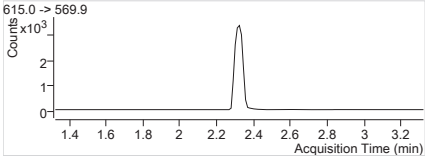
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 97.50 µg/L
Area ratio: 0.20316
Sample type: CC



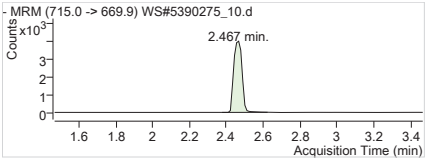


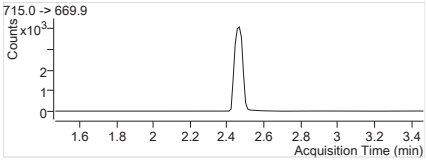
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 96.86 µg/L
Area ratio: 0.25524
Sample type: CC



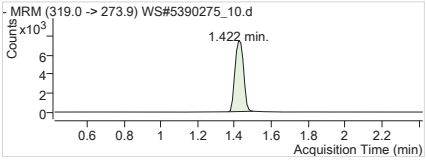


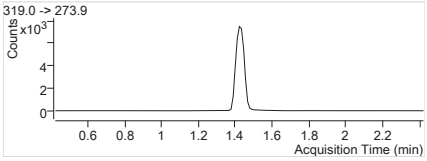
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 93.14 µg/L
Area ratio: 0.31751
Sample type: CC



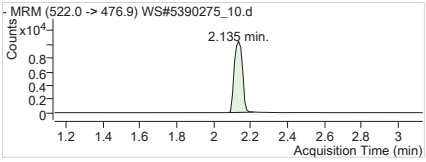


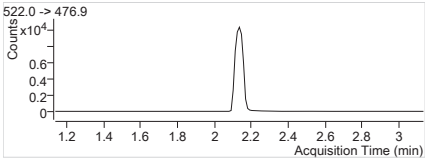
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	98.68 µg/L
Area ratio:	0.39028
Sample type:	CC





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	101.65 µg/L
Area ratio:	0
Sample type:	CC





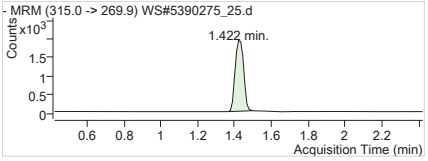
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	103.98 µg/L
Area ratio:	0
Sample type:	CC

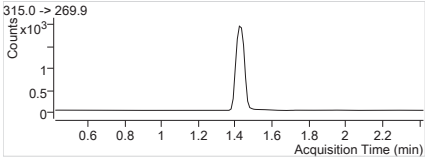
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics

Sample Name	**CCV**	**Instrument**	LCMS04
Data File	WS#5390275_25.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A5
Acq. Date	2018/02/09 6:32:37 PM	**Injection Volume**	Per Method
Sample Annotation	-		

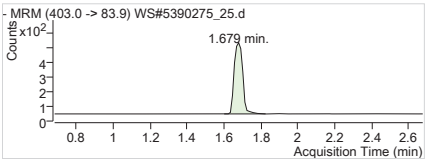
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6106	1.42	1 µg/L		
MPFHxS	1563	1.68	1 µg/L		
MPFHpA	7952	1.69	1 µg/L		
MPFOA	8125	1.87	1 µg/L		
MPFOS	1819	1.98	1 µg/L		
MPFNA	8226	2.01	1 µg/L		
MPFDA	6769	2.14	1 µg/L		
MPFUnA	7787	2.23	1 µg/L		
MPFDoA	11004	2.32	1 µg/L		
MPFTeDA	12407	2.47	1 µg/L		
13C6-PFHxA IS	24806	1.42	1 µg/L		
13C9-PFDA IS	32186	2.13	1 µg/L		

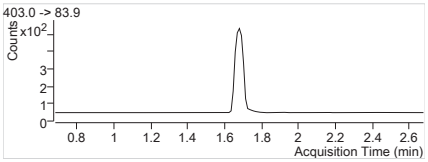
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	8292	1.09	12.50	11.86 µg/L	94.85
PFHxA 1	31560	1.42	12.50	12.78 µg/L	102.27
PFHxS 1	8083	1.68	12.50	11.64 µg/L	93.08
PFHpA 1	39494	1.69	12.50	12.38 µg/L	99.06
PFOA 1	43665	1.87	12.50	13.03 µg/L	104.21
PFOS 1	8485	1.97	12.50	13.20 µg/L	105.57
PFNA 1	38502	2.01	12.50	12.59 µg/L	100.70
PFDA 1	41272	2.14	12.50	12.12 µg/L	96.94
PFUnA 1	46680	2.23	12.50	14.14 µg/L	113.10
PFDoA 1	57396	2.32	12.50	12.52 µg/L	100.19
PFTrDA 1	63873	2.40	12.50	12.46 µg/L	99.71
PFTeDA 1	54735	2.47	12.50	12.81 µg/L	102.52
13C2-PFHxA	6106	1.42	100.00	98.62 µg/L	98.62
18O2-PFHxS	1563	1.68	100.00	100.79 µg/L	100.79
13C4-PFHpA	7952	1.69	100.00	98.55 µg/L	98.55
13C4-PFOA	8125	1.87	100.00	94.93 µg/L	94.93
13C4-PFOS	1819	1.98	100.00	93.48 µg/L	93.48
13C5-PFNA	8225	2.01	100.00	97.24 µg/L	97.24
13C2-PFDA	6712	2.14	100.00	100.08 µg/L	100.08
13C2-PFUnA	7787	2.23	100.00	91.81 µg/L	91.81
13C2-PFDoA	11004	2.32	100.00	100.30 µg/L	100.30
13C2-PFTeDA	12642	2.47	100.00	99.32 µg/L	99.32
13C6-PFHxA	24806	1.42	100.00	105.93 µg/L	105.93
13C9-PFDA	32186	2.13	100.00	104.00 µg/L	104.00



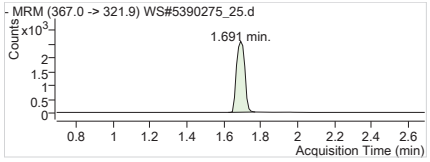


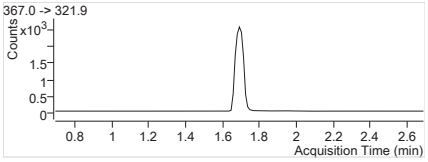
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: CC



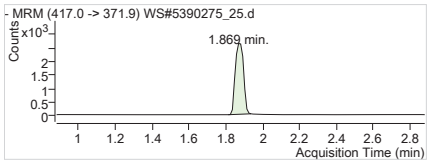


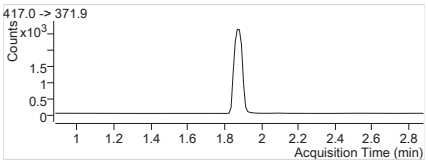
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: CC



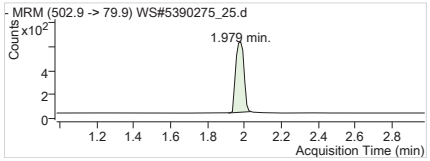


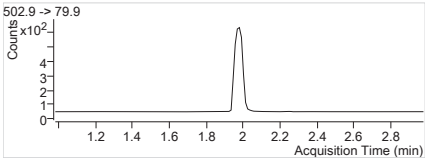
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: CC



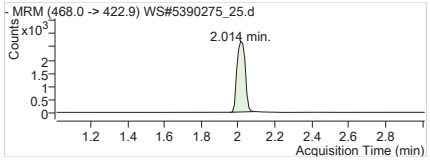


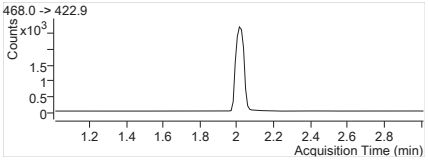
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: CC



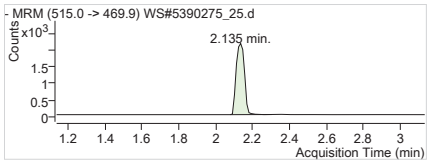


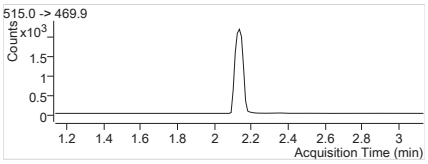
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



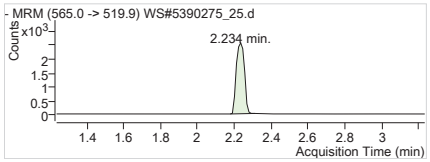


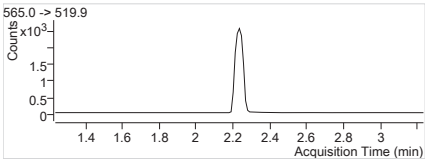
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: CC



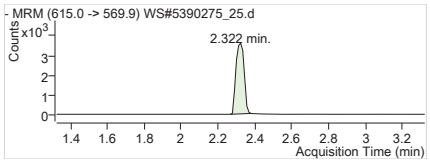


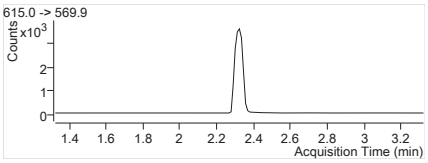
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



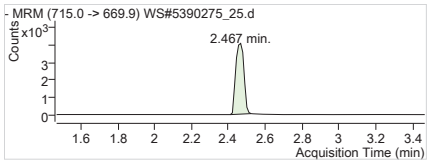


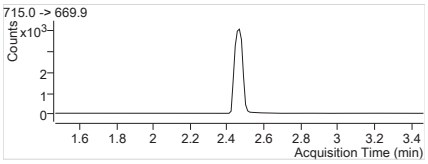
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: CC



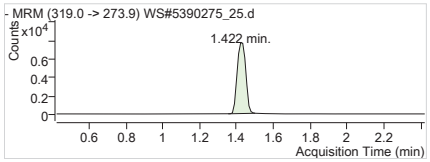


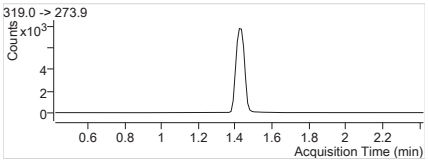
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



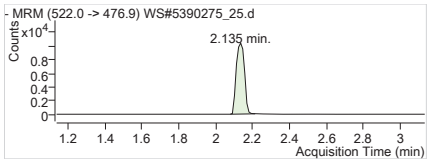


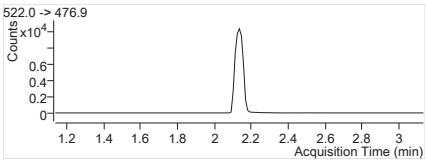
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



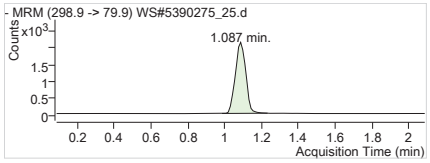


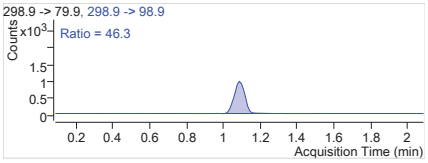
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: CC



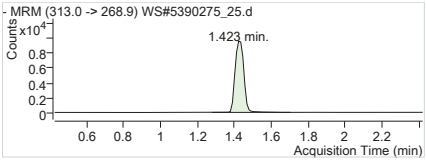


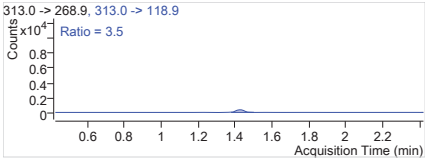
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



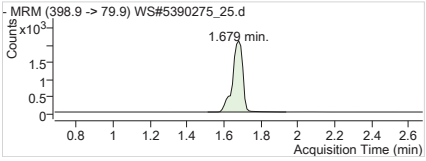


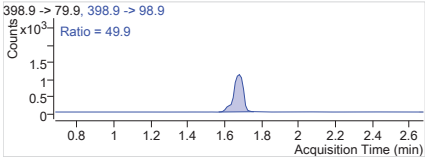
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 11.86 µg/L
Area ratio: 5.30518
Sample type: CC



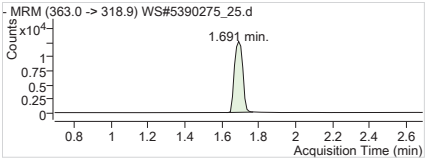


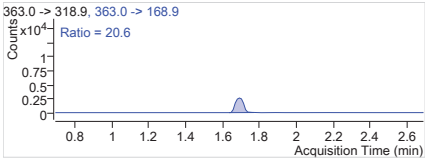
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 12.78 µg/L
Area ratio: 5.16869
Sample type: CC



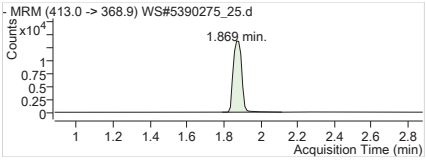


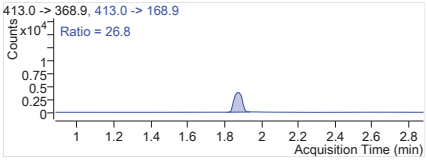
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 11.64 µg/L
Area ratio: 5.17147
Sample type: CC



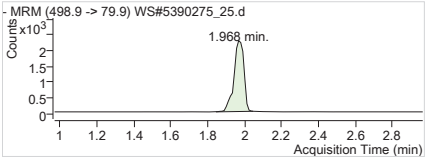


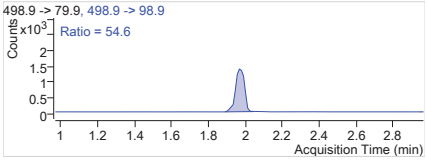
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 12.38 µg/L
Area ratio: 4.96655
Sample type: CC



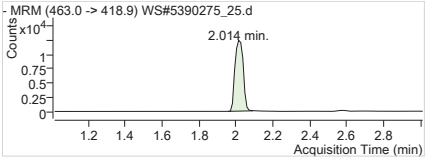


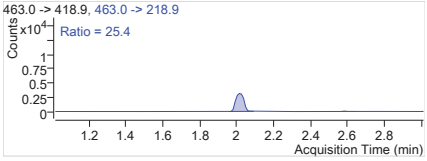
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 13.03 µg/L
Area ratio: 5.37415
Sample type: CC



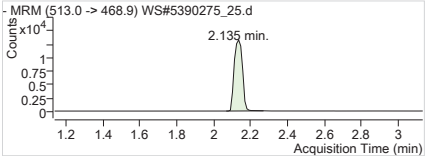


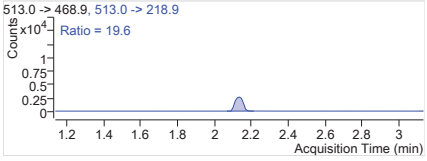
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 13.20 µg/L
Area ratio: 4.66465
Sample type: CC



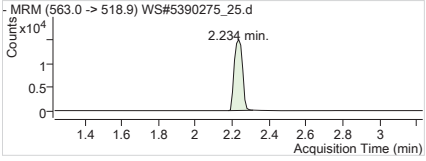


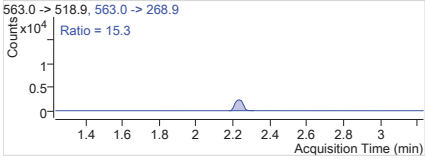
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 12.59 µg/L
Area ratio: 4.68053
Sample type: CC



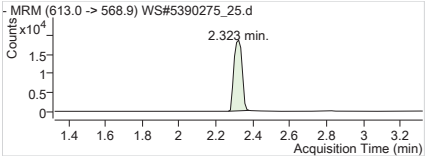


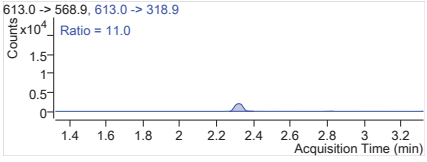
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 12.12 µg/L
Area ratio: 6.09721
Sample type: CC



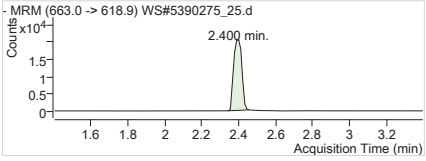


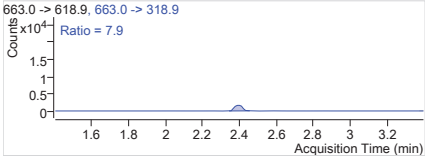
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 14.14 µg/L
Area ratio: 5.99461
Sample type: CC



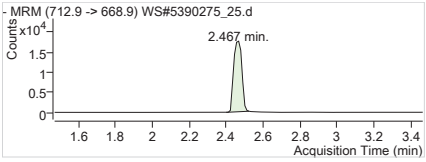


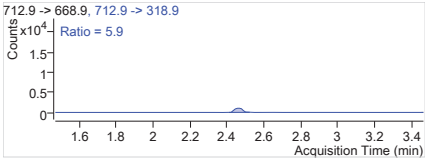
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 12.52 µg/L
Area ratio: 5.21592
Sample type: CC



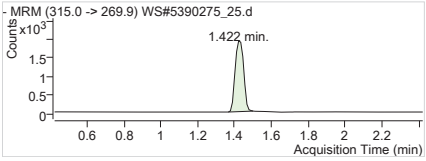


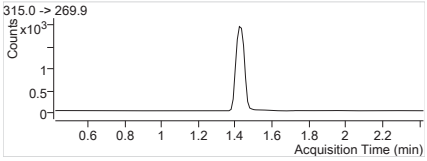
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 12.46 µg/L
Area ratio: 5.14814
Sample type: CC



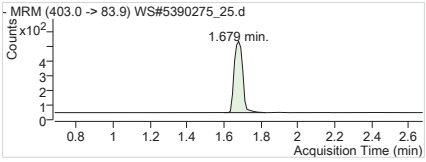


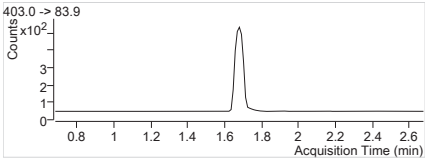
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 12.81 µg/L
Area ratio: 4.41162
Sample type: CC



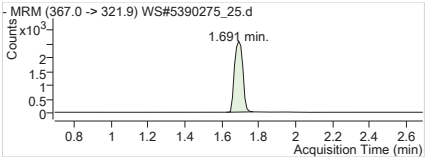


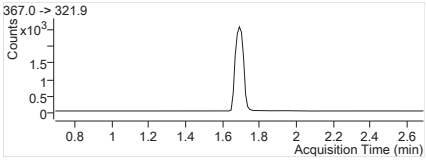
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 98.62 µg/L
Area ratio: 0.24615
Sample type: CC



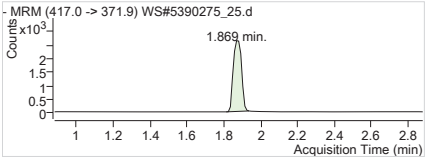


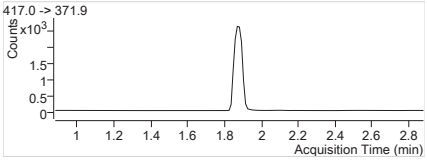
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 100.79 µg/L
Area ratio: 0.06301
Sample type: CC



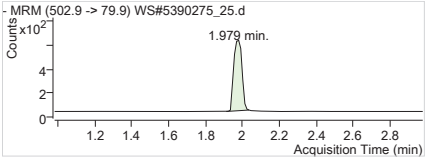


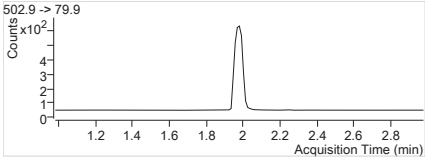
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 98.55 µg/L
Area ratio: 0.32057
Sample type: CC



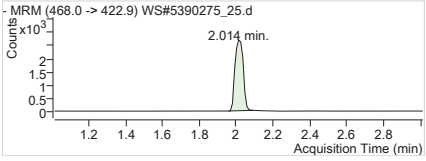


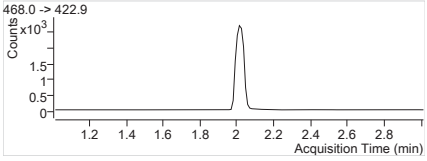
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 94.93 µg/L
Area ratio: 0.32754
Sample type: CC



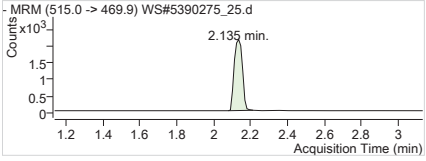


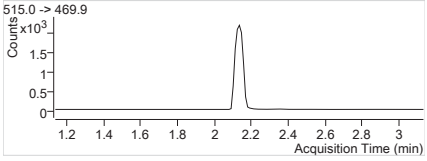
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 93.48 µg/L
Area ratio: 0.07333
Sample type: CC



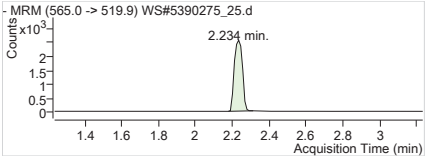


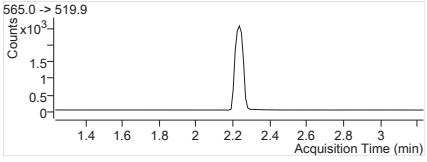
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 97.24 µg/L
Area ratio: 0.33157
Sample type: CC



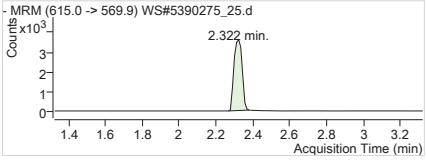


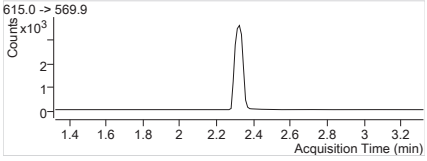
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 100.08 µg/L
Area ratio: 0.20854
Sample type: CC



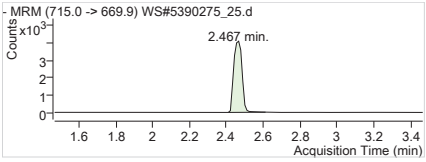


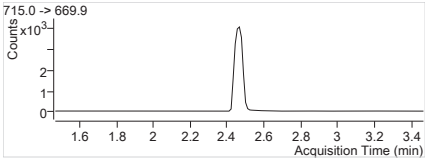
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 91.81 µg/L
Area ratio: 0.24194
Sample type: CC



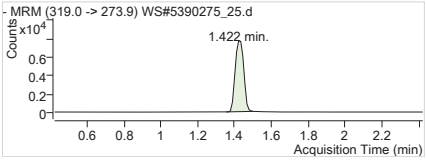


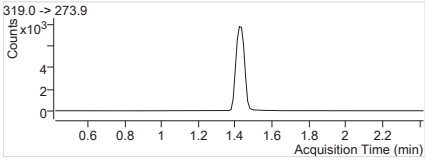
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 100.30 µg/L
Area ratio: 0.34189
Sample type: CC



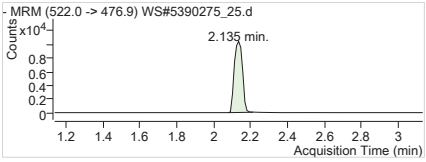


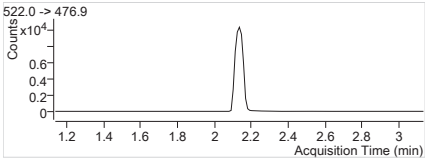
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	99.32 µg/L
Area ratio:	0.39278
Sample type:	CC





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	105.93 µg/L
Area ratio:	0
Sample type:	CC





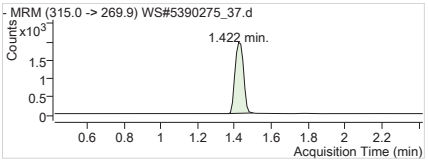
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	104.00 µg/L
Area ratio:	0
Sample type:	CC

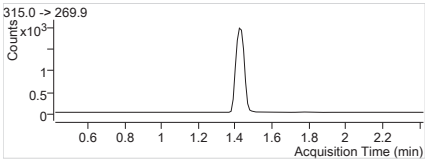
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics

Sample Name	**CCV**	**Instrument**	LCMS04
Data File	WS#5390275_37.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A5
Acq. Date	2018/02/09 7:31:50 PM	**Injection Volume**	Per Method
Sample Annotation	-		

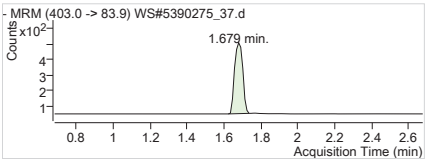
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6167	1.42	1 µg/L		
MPFHxS	1420	1.68	1 µg/L		
MPFHpA	7953	1.69	1 µg/L		
MPFOA	8588	1.88	1 µg/L		
MPFOS	1772	1.98	1 µg/L		
MPFNA	8159	2.01	1 µg/L		
MPFDA	6721	2.14	1 µg/L		
MPFUnA	8037	2.23	1 µg/L		
MPFDoA	10877	2.32	1 µg/L		
MPFTeDA	11979	2.47	1 µg/L		
13C6-PFHxA IS	24204	1.42	1 µg/L		
13C9-PFDA IS	32789	2.13	1 µg/L		

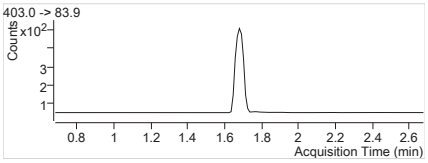
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	8447	1.09	12.50	13.28 µg/L	106.24
PFHxA 1	30714	1.42	12.50	12.32 µg/L	98.54
PFHxS 1	8101	1.68	12.50	12.82 µg/L	102.60
PFHpA 1	39324	1.69	12.50	12.33 µg/L	98.63
PFOA 1	44189	1.88	12.50	12.47 µg/L	99.78
PFOS 1	8034	1.97	12.50	12.83 µg/L	102.61
PFNA 1	37403	2.01	12.50	12.33 µg/L	98.64
PFDA 1	41383	2.14	12.50	12.24 µg/L	97.88
PFUnA 1	44635	2.23	12.50	13.10 µg/L	104.82
PFDoA 1	55933	2.32	12.50	12.35 µg/L	98.78
PFTrDA 1	66477	2.40	12.50	13.43 µg/L	107.41
PFTeDA 1	52273	2.47	12.50	12.68 µg/L	101.40
13C2-PFHxA	6167	1.42	100.00	102.09 µg/L	102.09
18O2-PFHxS	1420	1.68	100.00	93.84 µg/L	93.84
13C4-PFHpA	7953	1.69	100.00	101.02 µg/L	101.02
13C4-PFOA	8588	1.88	100.00	102.84 µg/L	102.84
13C4-PFOS	1772	1.98	100.00	93.33 µg/L	93.33
13C5-PFNA	8158	2.01	100.00	98.84 µg/L	98.84
13C2-PFDA	6586	2.14	100.00	96.40 µg/L	96.40
13C2-PFUnA	8037	2.23	100.00	93.02 µg/L	93.02
13C2-PFDoA	10877	2.32	100.00	97.32 µg/L	97.32
13C2-PFTeDA	12223	2.47	100.00	94.26 µg/L	94.26
13C6-PFHxA	24204	1.42	100.00	103.36 µg/L	103.36
13C9-PFDA	32789	2.13	100.00	105.95 µg/L	105.95



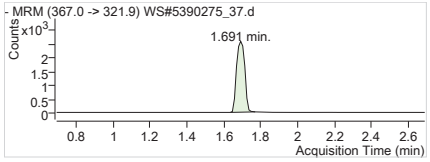


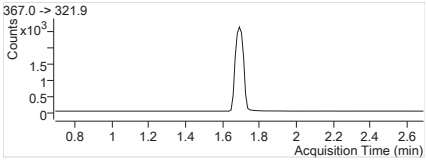
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: CC



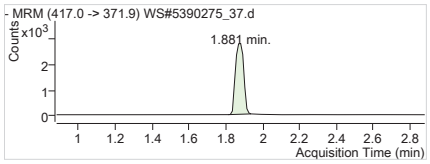


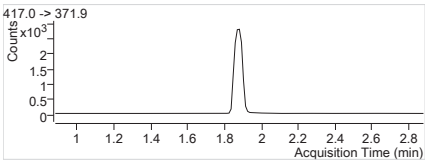
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: CC



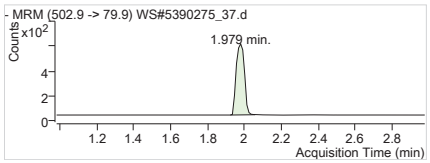


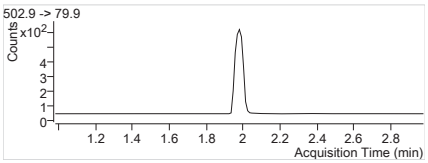
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: CC



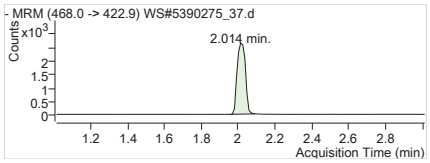


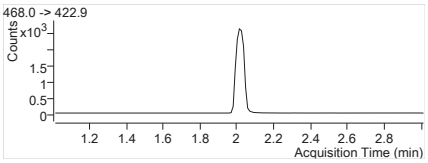
MPFOA Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: CC



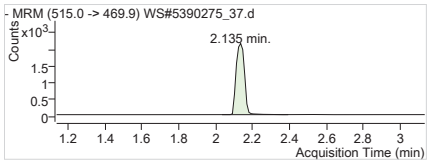


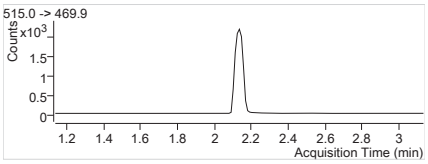
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



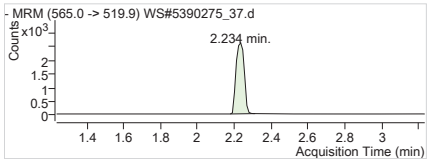


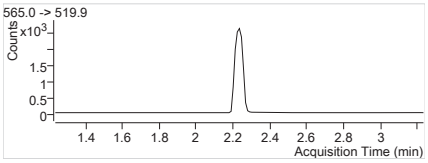
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: CC



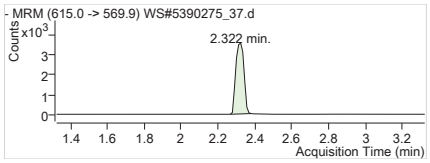


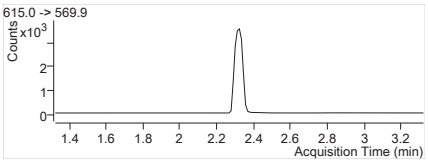
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



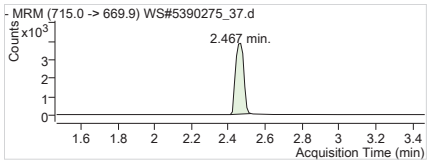


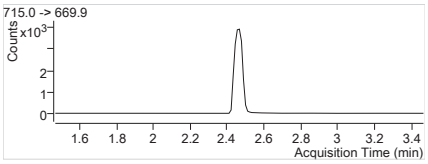
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: CC



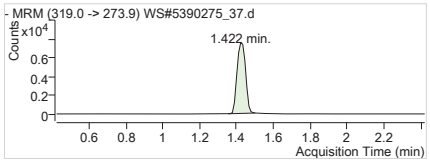


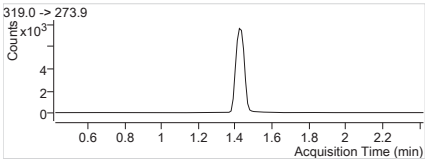
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



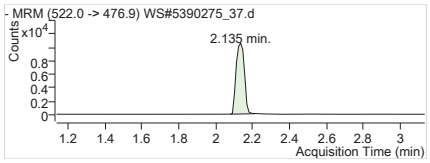


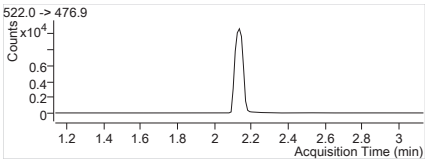
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



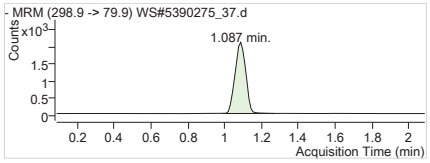


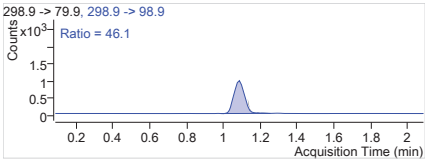
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: CC



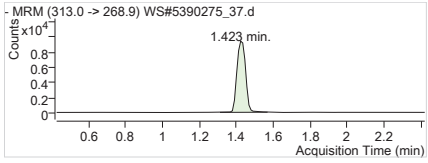


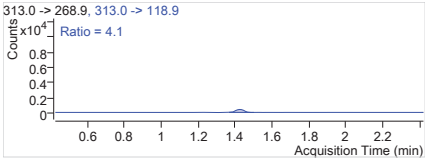
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



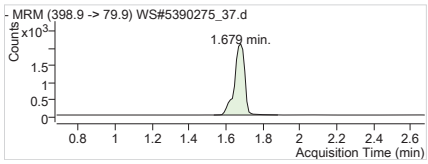


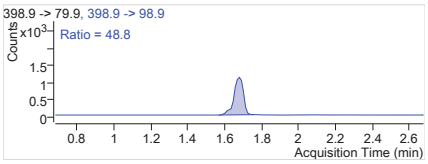
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 13.28 µg/L
Area ratio: 5.94859
Sample type: CC



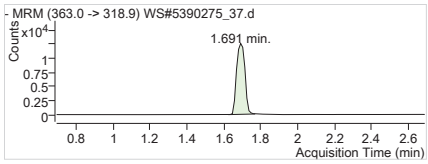


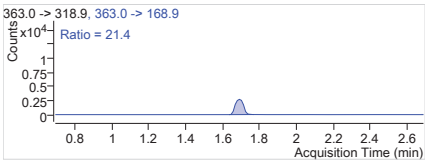
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 12.32 µg/L
Area ratio: 4.98038
Sample type: CC



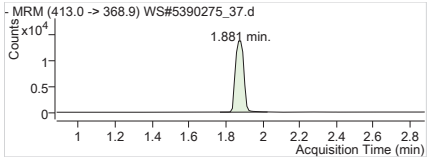


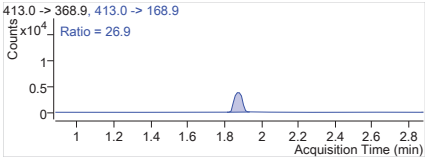
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 12.82 µg/L
Area ratio: 5.70493
Sample type: CC



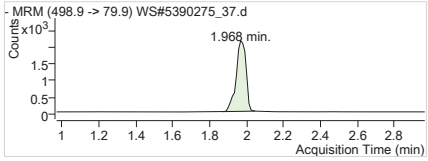


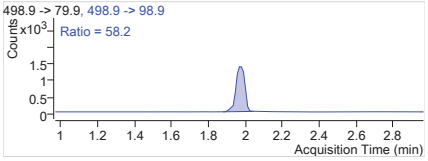
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 12.33 µg/L
Area ratio: 4.94455
Sample type: CC



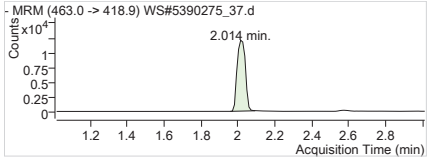


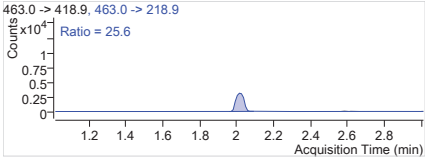
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 12.47 µg/L
Area ratio: 5.14544
Sample type: CC



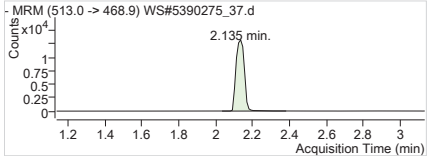


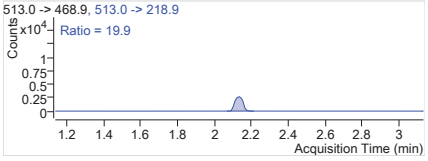
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 12.83 µg/L
Area ratio: 4.53386
Sample type: CC



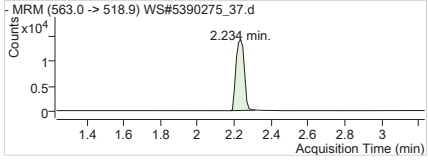


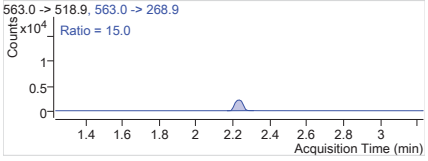
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 12.33 µg/L
Area ratio: 4.58426
Sample type: CC



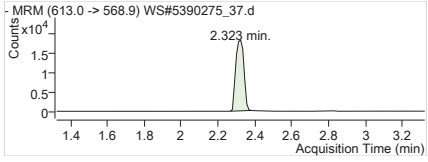


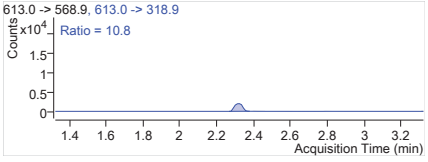
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 12.24 µg/L
Area ratio: 6.15727
Sample type: CC



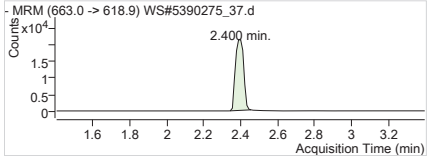


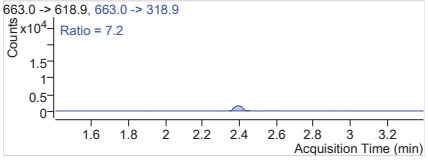
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 13.10 µg/L
Area ratio: 5.55369
Sample type: CC



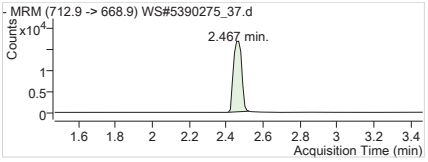


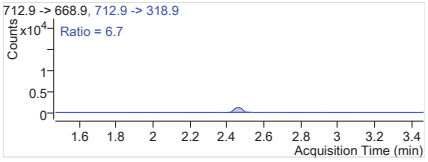
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 12.35 µg/L
Area ratio: 5.14232
Sample type: CC



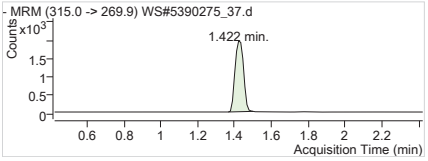


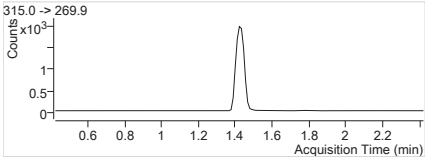
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 13.43 µg/L
Area ratio: 5.54946
Sample type: CC



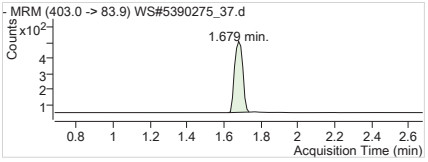


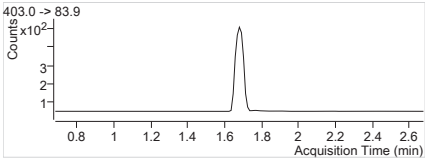
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 12.68 µg/L
Area ratio: 4.36372
Sample type: CC



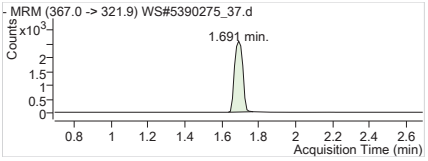


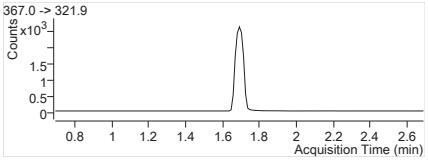
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 102.09 µg/L
Area ratio: 0.25479
Sample type: CC



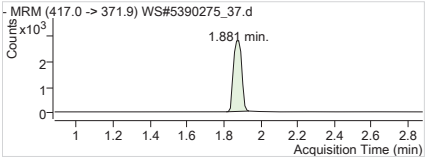


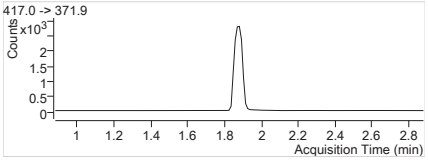
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 93.84 µg/L
Area ratio: 0.05867
Sample type: CC



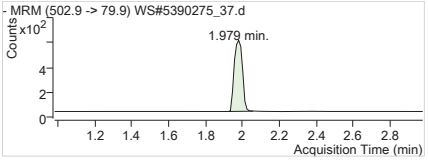


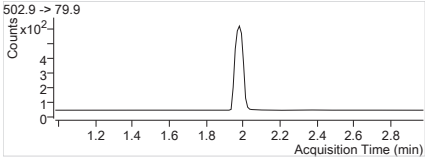
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 101.02 µg/L
Area ratio: 0.32858
Sample type: CC



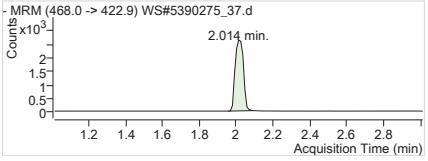


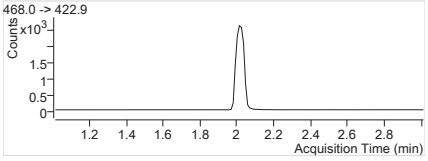
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 102.84 µg/L
Area ratio: 0.35482
Sample type: CC



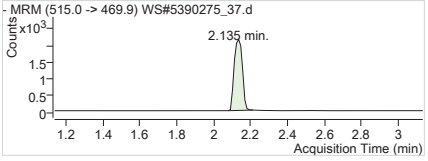


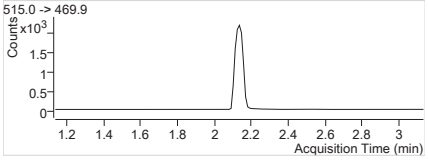
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 93.33 µg/L
Area ratio: 0.07321
Sample type: CC



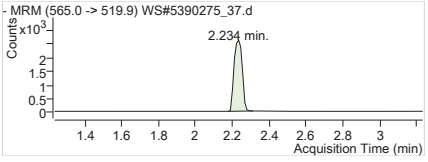


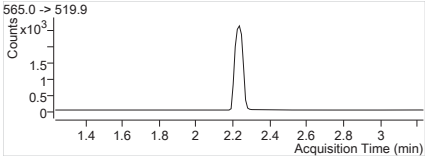
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 98.84 µg/L
Area ratio: 0.33705
Sample type: CC



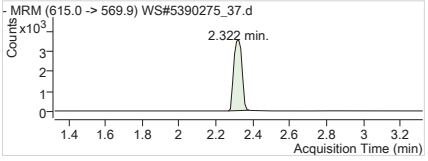


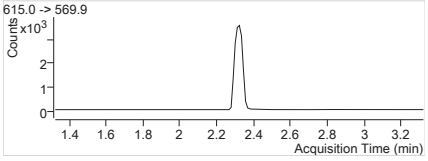
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 96.40 µg/L
Area ratio: 0.20086
Sample type: CC



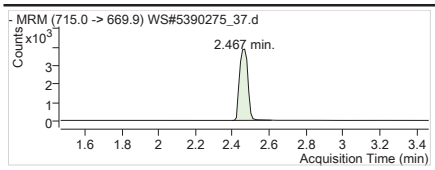


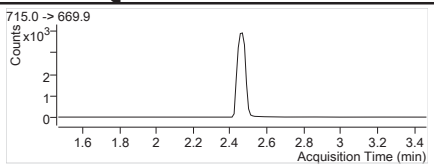
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 93.02 µg/L
Area ratio: 0.24511
Sample type: CC



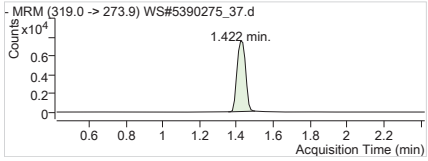


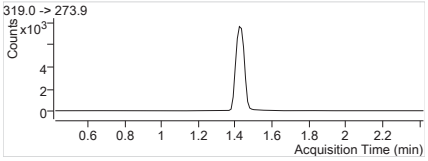
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 97.32 µg/L
Area ratio: 0.33173
Sample type: CC



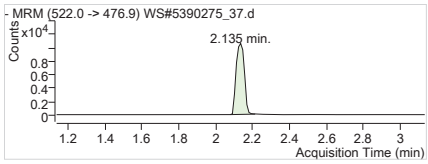


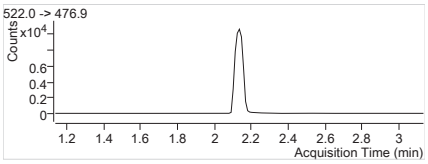
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	94.26 µg/L
Area ratio:	0.37278
Sample type:	CC





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	103.36 µg/L
Area ratio:	0
Sample type:	CC





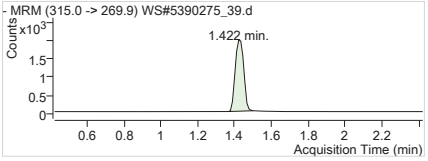
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	105.95 µg/L
Area ratio:	0
Sample type:	CC

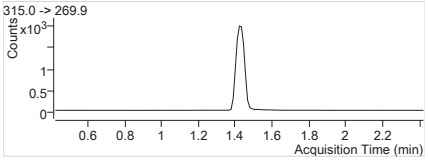
Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_ETOxics

Sample Name	**CCV**	**Instrument**	LCMS04
Data File	WS#5390275_39.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A5
Acq. Date	2018/02/09 7:41:41 PM	**Injection Volume**	Per Method
Sample Annotation	-		

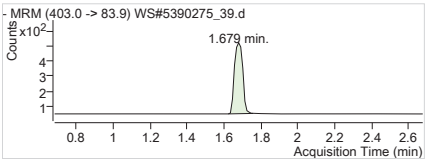
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6281	1.42	1 µg/L		
MPFHxS	1480	1.68	1 µg/L		
MPFHpA	8013	1.69	1 µg/L		
MPFOA	8179	1.87	1 µg/L		
MPFOS	1782	1.98	1 µg/L		
MPFNA	8557	2.01	1 µg/L		
MPFDA	7058	2.14	1 µg/L		
MPFUnA	8042	2.23	1 µg/L		
MPFDoA	10771	2.32	1 µg/L		
MPFTeDA	12470	2.47	1 µg/L		
13C6-PFHxA IS	24535	1.42	1 µg/L		
13C9-PFDA IS	32723	2.13	1 µg/L		

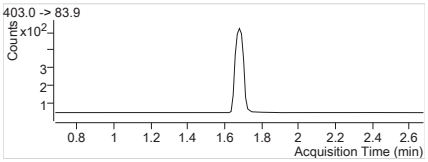
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	8507	1.09	12.50	12.84 µg/L	102.69
PFHxA 1	31206	1.42	12.50	12.29 µg/L	98.30
PFHxS 1	7842	1.68	12.50	11.92 µg/L	95.35
PFHpA 1	40071	1.69	12.50	12.47 µg/L	99.73
PFOA 1	44844	1.87	12.50	13.29 µg/L	106.32
PFOS 1	8191	1.97	12.50	13.00 µg/L	104.03
PFNA 1	38957	2.01	12.50	12.25 µg/L	97.96
PFDA 1	42848	2.14	12.50	12.07 µg/L	96.52
PFUnA 1	45949	2.23	12.50	13.48 µg/L	107.82
PFDoA 1	58582	2.32	12.50	13.06 µg/L	104.45
PFTrDA 1	63959	2.40	12.50	12.42 µg/L	99.35
PFTeDA 1	54825	2.47	12.50	12.77 µg/L	102.17
13C2-PFHxA	6281	1.42	100.00	102.57 µg/L	102.57
18O2-PFHxS	1480	1.68	100.00	96.49 µg/L	96.49
13C4-PFHpA	8013	1.69	100.00	100.40 µg/L	100.40
13C4-PFOA	8179	1.87	100.00	96.62 µg/L	96.62
13C4-PFOS	1782	1.98	100.00	92.59 µg/L	92.59
13C5-PFNA	8558	2.01	100.00	102.29 µg/L	102.29
13C2-PFDA	7014	2.14	100.00	102.87 µg/L	102.87
13C2-PFUnA	8042	2.23	100.00	93.26 µg/L	93.26
13C2-PFDoA	10771	2.32	100.00	96.56 µg/L	96.56
13C2-PFTeDA	12715	2.47	100.00	98.25 µg/L	98.25
13C6-PFHxA	24535	1.42	100.00	104.77 µg/L	104.77
13C9-PFDA	32723	2.13	100.00	105.73 µg/L	105.73



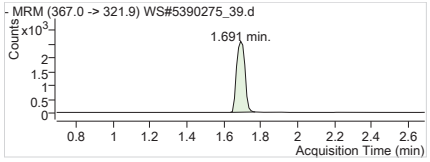


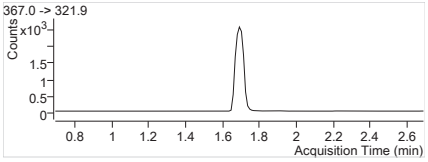
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: CC



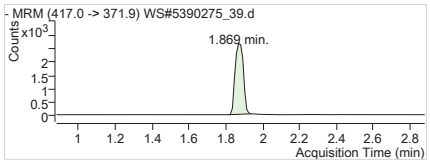


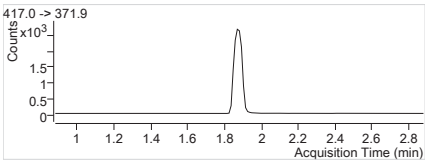
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: CC



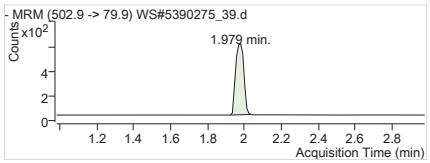


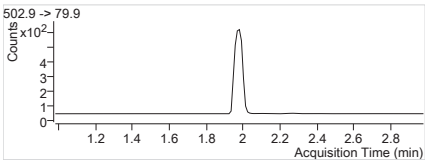
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: CC



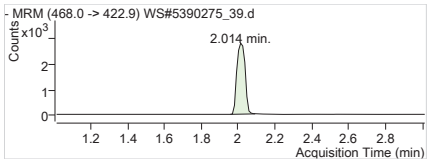


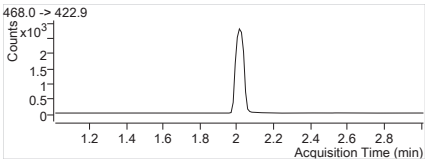
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: CC



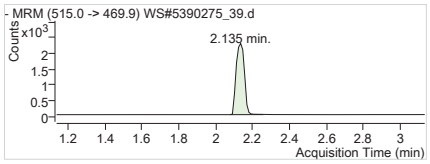


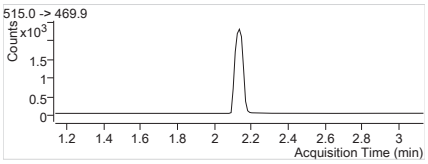
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



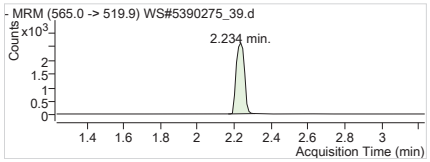


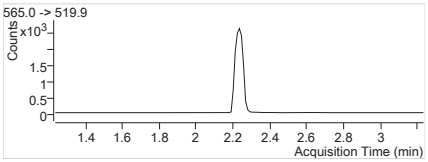
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: CC



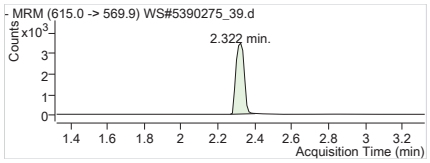


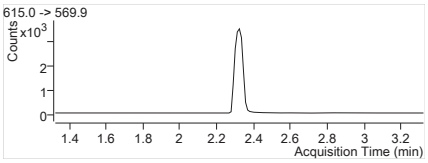
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



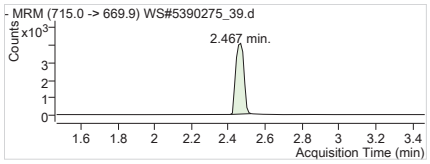


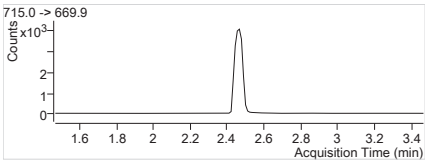
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: CC



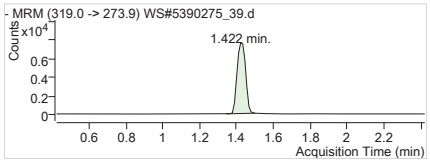


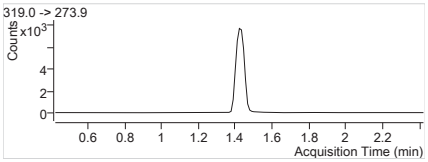
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



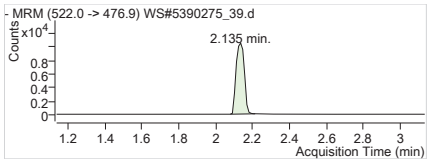


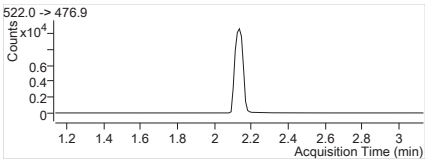
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



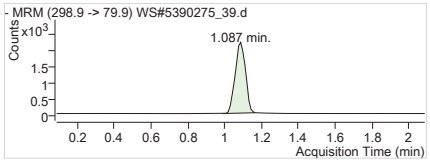


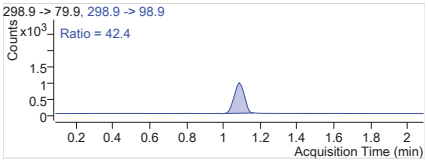
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: CC



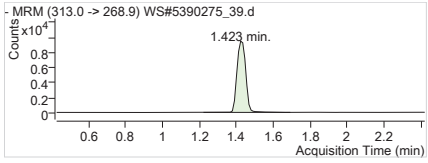


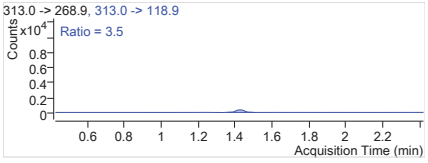
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



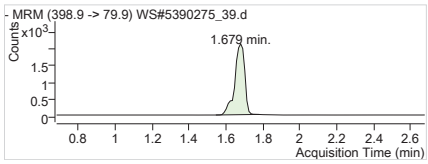


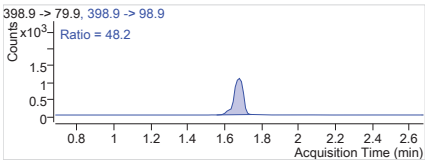
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 12.84 µg/L
Area ratio: 5.74797
Sample type: CC



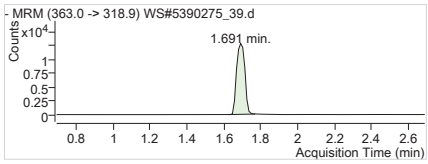


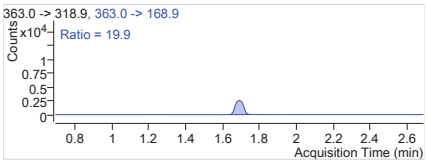
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 12.29 µg/L
Area ratio: 4.96832
Sample type: CC



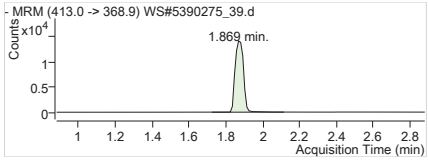


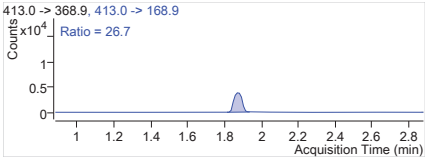
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 11.92 µg/L
Area ratio: 5.29865
Sample type: CC



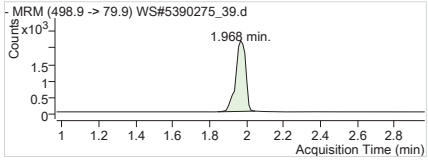


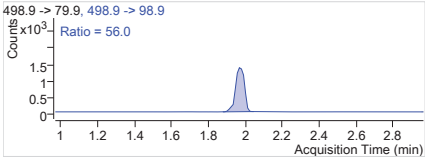
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 12.47 µg/L
Area ratio: 5.00075
Sample type: CC



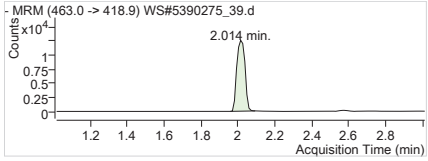


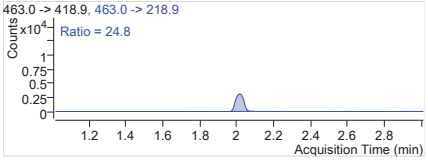
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 13.29 µg/L
Area ratio: 5.48282
Sample type: CC



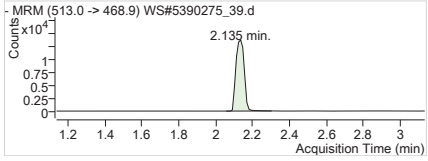


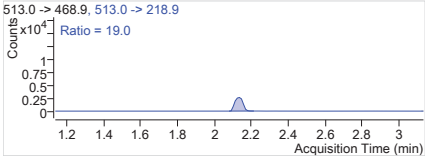
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 13.00 µg/L
Area ratio: 4.59652
Sample type: CC



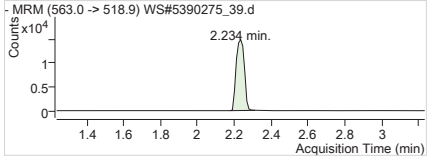


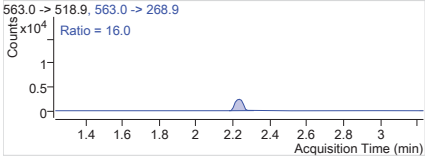
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 12.25 µg/L
Area ratio: 4.55265
Sample type: CC



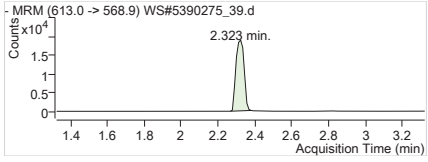


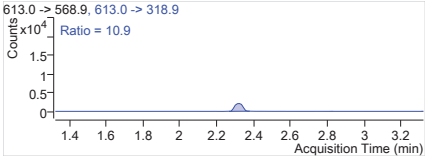
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 12.07 µg/L
Area ratio: 6.07084
Sample type: CC



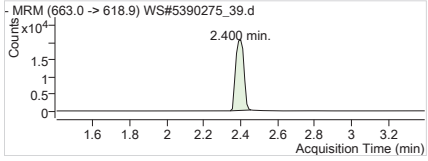


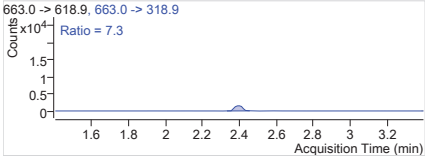
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 13.48 µg/L
Area ratio: 5.71363
Sample type: CC



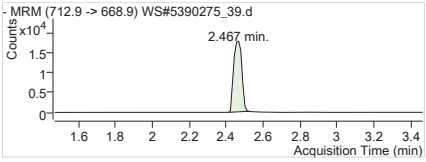


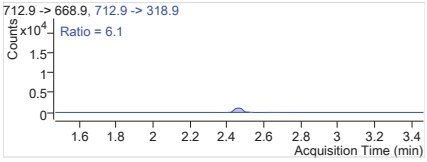
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 13.06 µg/L
Area ratio: 5.43886
Sample type: CC



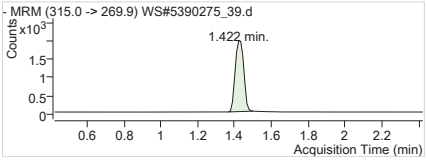


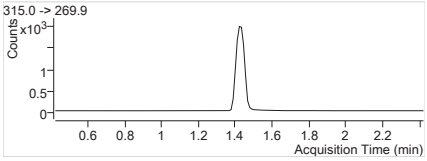
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 12.42 µg/L
Area ratio: 5.12903
Sample type: CC



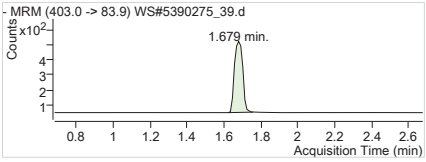


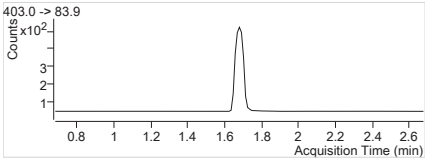
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 12.77 µg/L
Area ratio: 4.39655
Sample type: CC



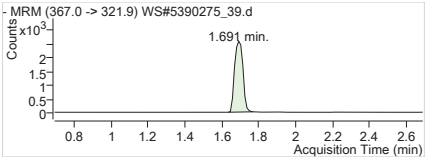


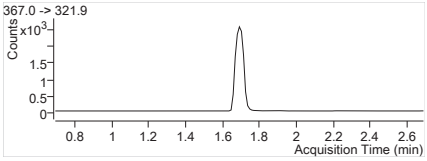
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 102.57 µg/L
Area ratio: 0.25600
Sample type: CC



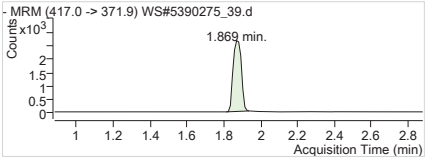


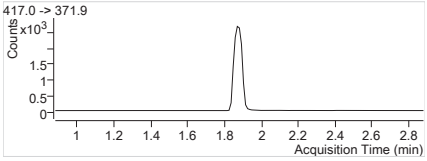
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 96.49 µg/L
Area ratio: 0.06032
Sample type: CC



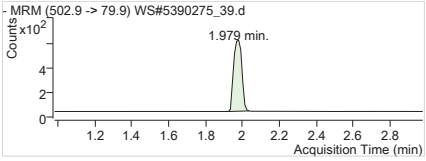


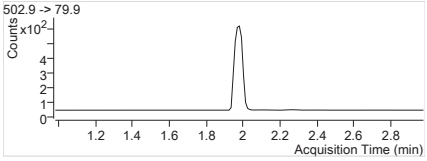
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 100.40 µg/L
Area ratio: 0.32659
Sample type: CC



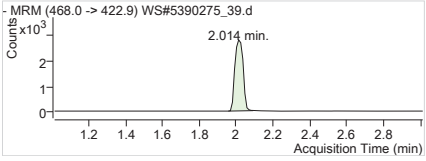


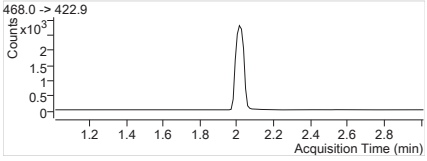
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 96.62 µg/L
Area ratio: 0.33336
Sample type: CC



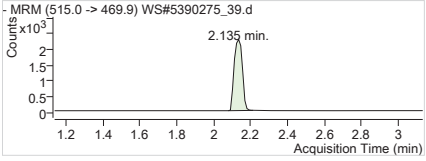


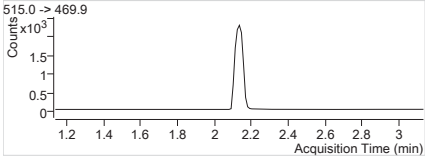
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 92.59 µg/L
Area ratio: 0.07263
Sample type: CC



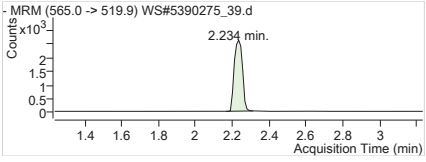


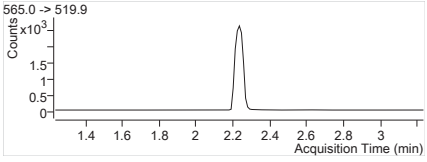
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 102.29 µg/L
Area ratio: 0.34881
Sample type: CC



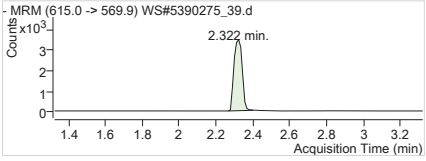


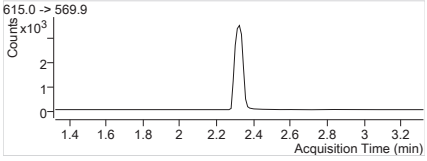
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 102.87 µg/L
Area ratio: 0.21434
Sample type: CC



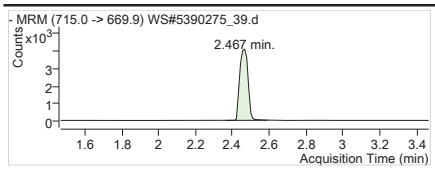


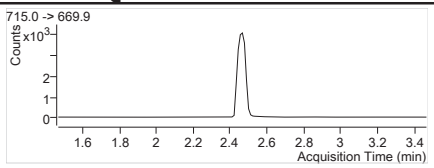
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 93.26 µg/L
Area ratio: 0.24576
Sample type: CC



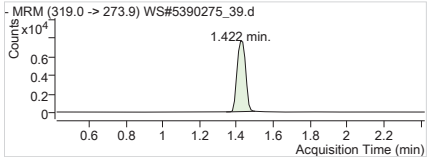


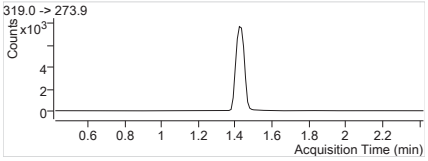
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 96.56 µg/L
Area ratio: 0.32916
Sample type: CC



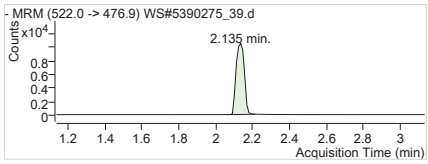


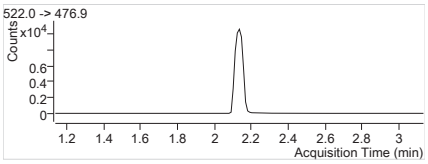
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	98.25 µg/L
Area ratio:	0.38856
Sample type:	CC





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	104.77 µg/L
Area ratio:	0
Sample type:	CC





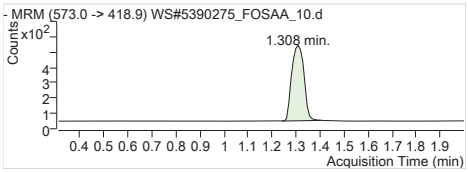
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	105.73 µg/L
Area ratio:	0
Sample type:	CC

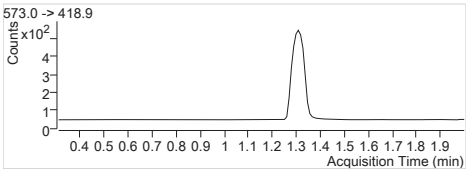
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**ISC**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_10.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A2
Acq. Date	2018/02/10 12:49:37 AM	**Injection Volume**	Per Method
Sample Annotation	-		

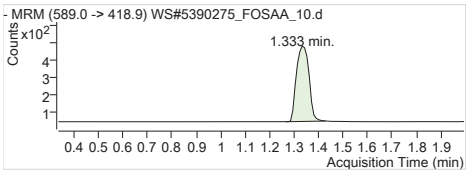
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1754	1.31	1 µg/L		
D5-EtFOSAA IS	1544	1.33	1 µg/L		
13C9-PFDA IS	24430	0.90	1 µg/L		

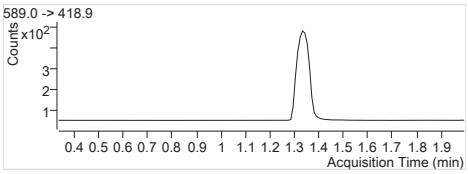
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	543	1.31	0.83	0.83 µg/L	100.56
EtFOSAA 1	560	1.33	0.83	0.89 µg/L	107.61
D3-MeFOSAA	1789	1.31	100.00	99.86 µg/L	99.86
D5-EtFOSAA	1555	1.33	100.00	97.61 µg/L	97.61
13C9-PFDA	23540	0.90	100.00	99.28 µg/L	99.28



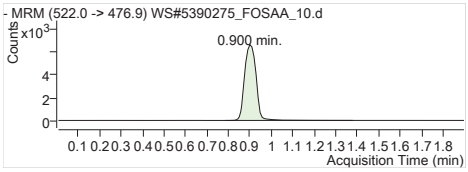


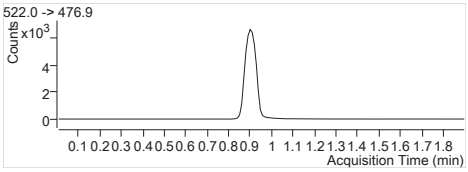
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: CC



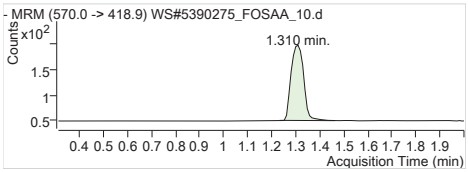


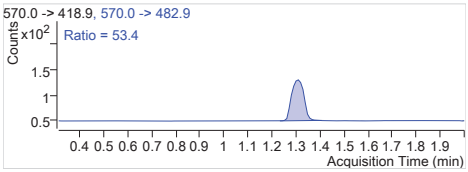
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: CC



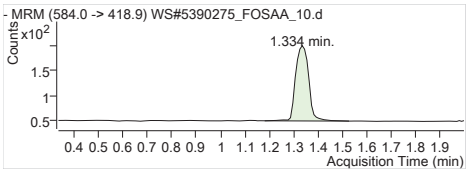


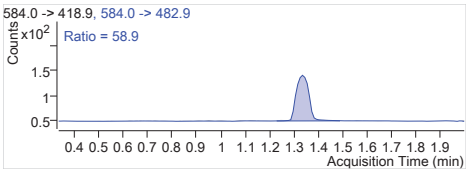
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.900 (0.900)
Concentration: 1 µg/L
Sample type: CC



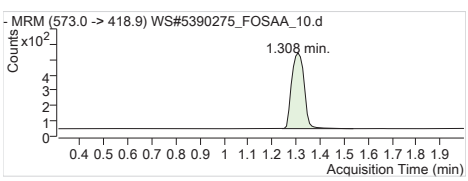


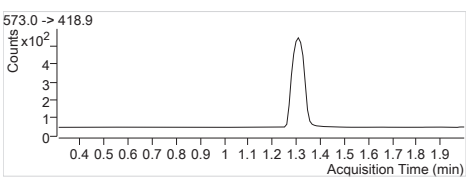
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 0.83 µg/L
Area ratio: 0.30958
Sample type: CC



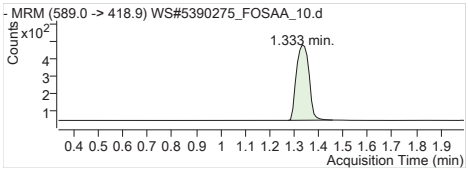


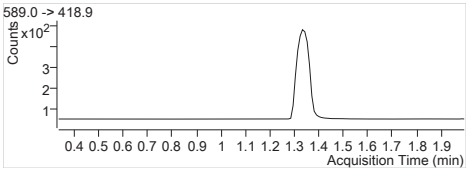
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.334)
Calc. conc. 0.89 µg/L
Area ratio: 0.36269
Sample type: CC



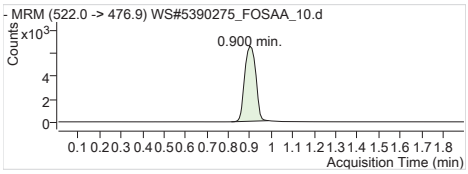


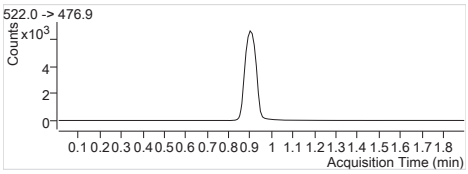
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 99.86 µg/L
Area ratio: 0.07323
Sample type: CC





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	97.61 µg/L
Area ratio:	0.06365
Sample type:	CC





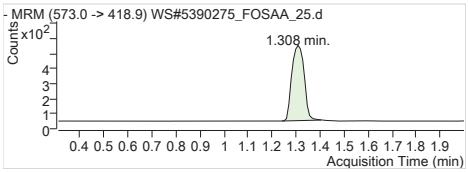
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.900 (0.900)
Calc. conc.	99.28 µg/L
Area ratio:	0
Sample type:	CC

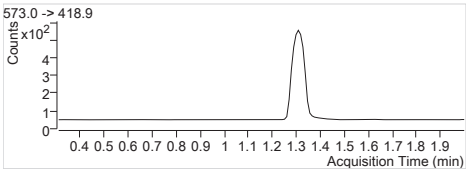
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**CCV**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_25.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A5
Acq. Date	2018/02/10 1:25:49 AM	**Injection Volume**	Per Method
Sample Annotation	-		

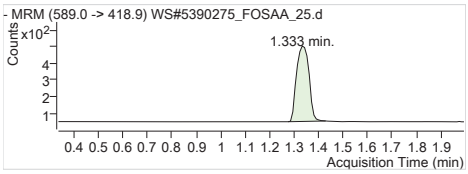
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1794	1.31	1 µg/L		
D5-EtFOSAA IS	1605	1.33	1 µg/L		
13C9-PFDA IS	25073	0.90	1 µg/L		

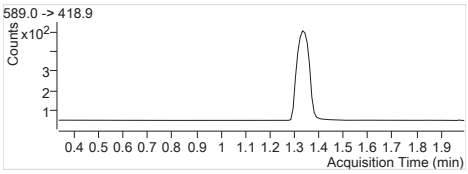
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	8076	1.31	12.50	12.95 µg/L	103.59
EtFOSAA 1	8502	1.33	12.50	12.81 µg/L	102.44
D3-MeFOSAA	1832	1.31	100.00	99.64 µg/L	99.64
D5-EtFOSAA	1629	1.33	100.00	99.63 µg/L	99.63
13C9-PFDA	24170	0.90	100.00	101.94 µg/L	101.94



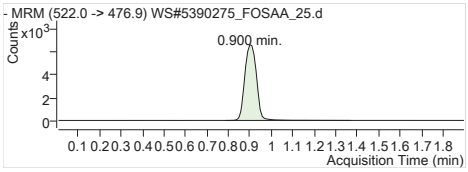


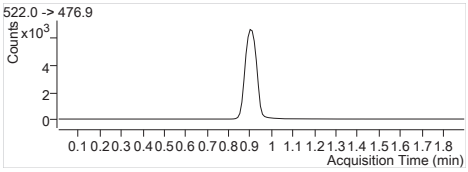
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: CC



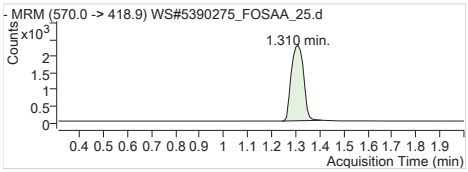


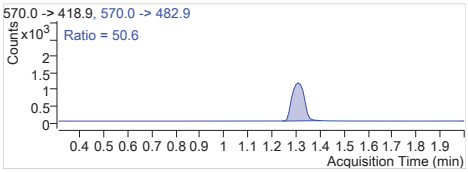
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: CC



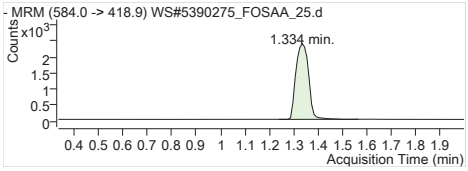


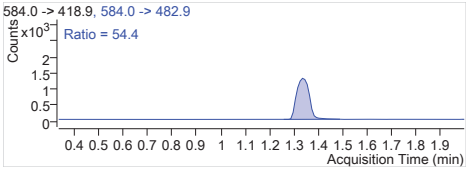
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.900 (0.900)
Concentration: 1 µg/L
Sample type: CC



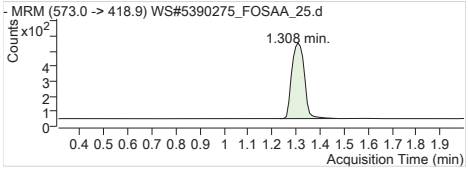


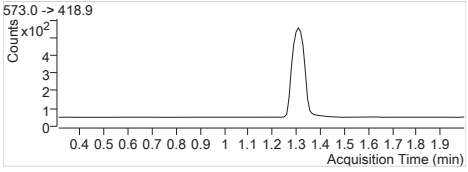
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 12.95 µg/L
Area ratio: 4.50167
Sample type: CC



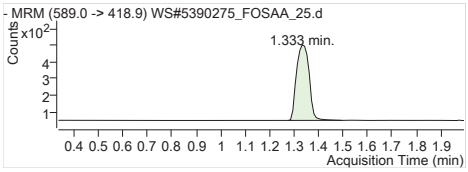


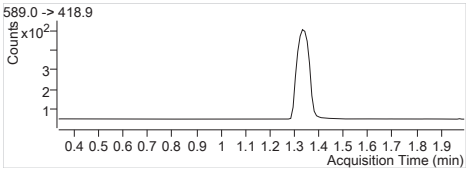
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.334)
Calc. conc. 12.81 µg/L
Area ratio: 5.29720
Sample type: CC



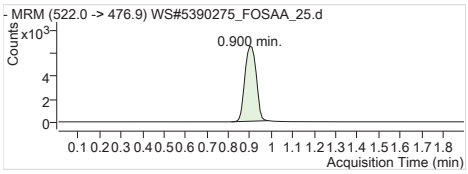


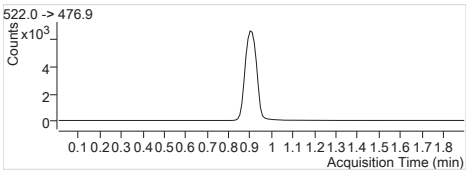
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 99.64 µg/L
Area ratio: 0.07307
Sample type: CC





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	99.63 µg/L
Area ratio:	0.06497
Sample type:	CC





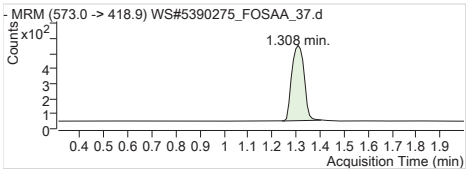
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.900 (0.900)
Calc. conc.	101.94 µg/L
Area ratio:	0
Sample type:	CC

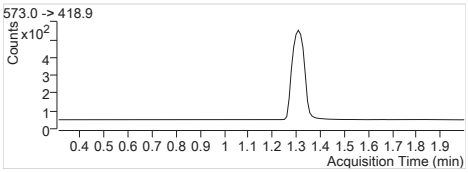
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**CCV**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_37.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A5
Acq. Date	2018/02/10 1:54:47 AM	**Injection Volume**	Per Method
Sample Annotation	-		

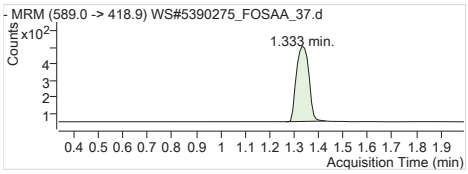
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1793	1.31	1 µg/L		
D5-EtFOSAA IS	1621	1.33	1 µg/L		
13C9-PFDA IS	25106	0.90	1 µg/L		

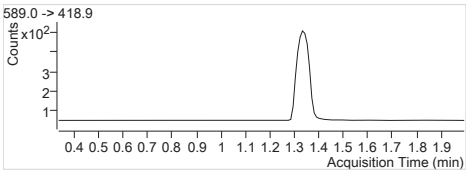
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	8128	1.31	12.50	13.04 µg/L	104.32
EtFOSAA 1	8602	1.33	12.50	12.83 µg/L	102.63
D3-MeFOSAA	1826	1.31	100.00	99.18 µg/L	99.18
D5-EtFOSAA	1648	1.33	100.00	100.66 µg/L	100.66
13C9-PFDA	24363	0.90	100.00	102.75 µg/L	102.75



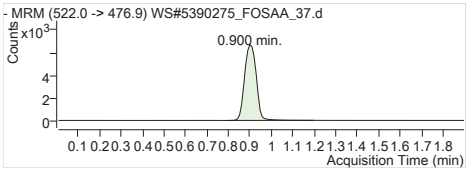


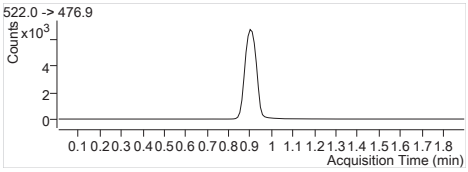
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: CC



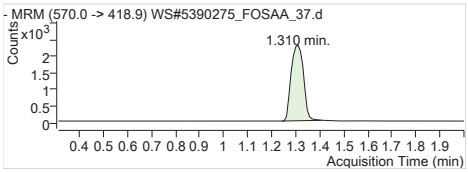


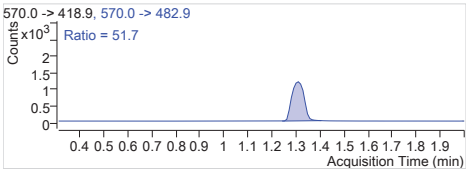
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: CC



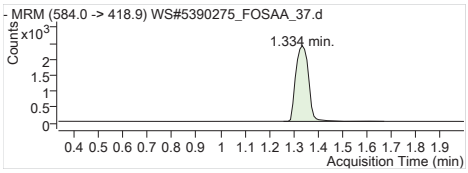


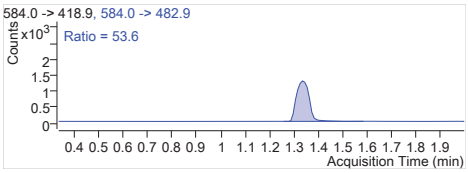
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.900 (0.900)
Concentration: 1 µg/L
Sample type: CC



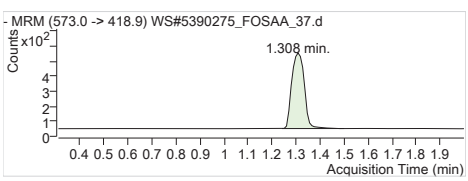


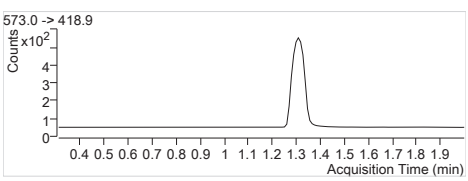
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 13.04 µg/L
Area ratio: 4.53318
Sample type: CC



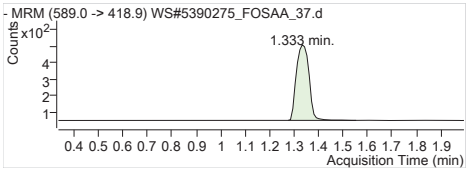


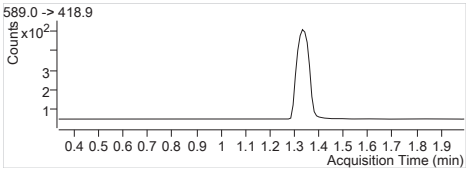
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.334)
Calc. conc. 12.83 µg/L
Area ratio: 5.30660
Sample type: CC



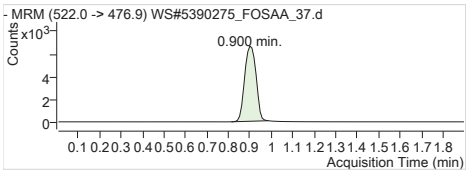


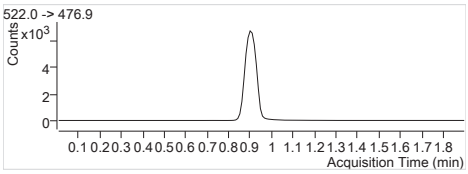
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 99.18 µg/L
Area ratio: 0.07273
Sample type: CC





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	100.66 µg/L
Area ratio:	0.06564
Sample type:	CC





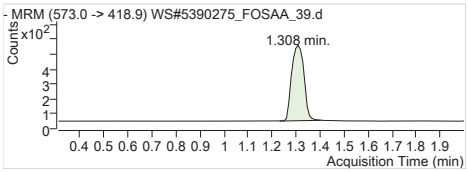
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.900 (0.900)
Calc. conc.	102.75 µg/L
Area ratio:	0
Sample type:	CC

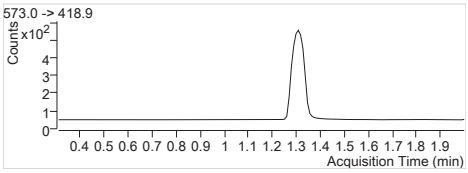
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**CCV**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_39.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A5
Acq. Date	2018/02/10 1:59:37 AM	**Injection Volume**	Per Method
Sample Annotation	-		

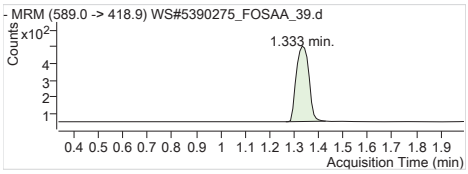
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1812	1.31	1 µg/L		
D5-EtFOSAA IS	1626	1.33	1 µg/L		
13C9-PFDA IS	25357	0.90	1 µg/L		

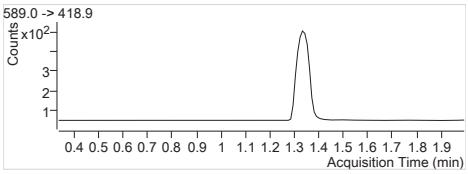
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	8338	1.31	12.50	13.24 µg/L	105.90
EtFOSAA 1	8572	1.33	12.50	12.74 µg/L	101.96
D3-MeFOSAA	1840	1.31	100.00	98.95 µg/L	98.95
D5-EtFOSAA	1635	1.33	100.00	98.88 µg/L	98.88
13C9-PFDA	24641	0.90	100.00	103.92 µg/L	103.92



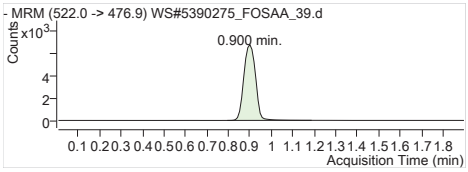


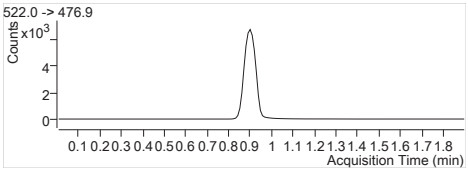
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: CC



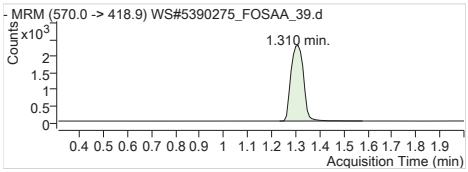


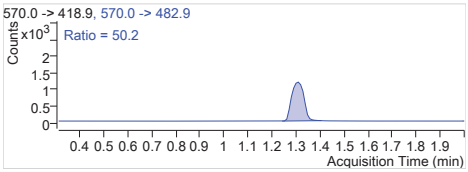
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: CC



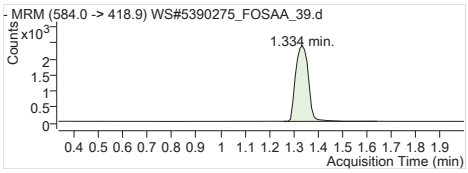


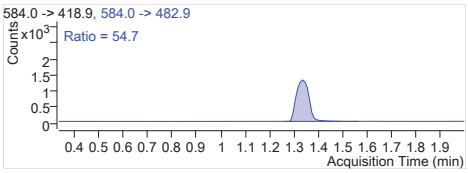
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.900 (0.900)
Concentration: 1 µg/L
Sample type: CC



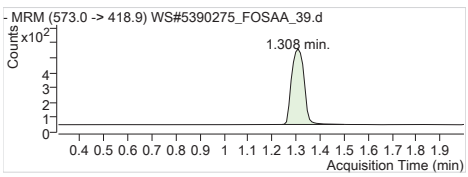


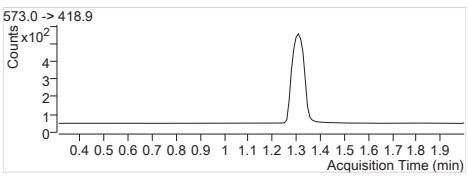
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 13.24 µg/L
Area ratio: 4.60155
Sample type: CC



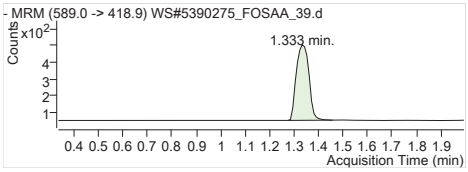


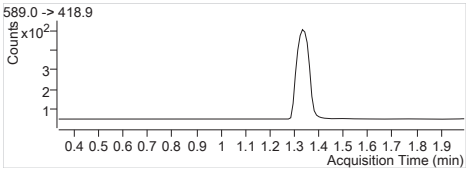
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.334)
Calc. conc. 12.74 µg/L
Area ratio: 5.27183
Sample type: CC



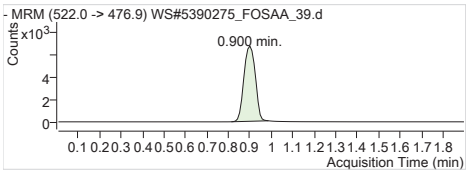


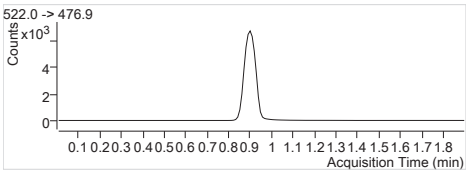
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 98.95 µg/L
Area ratio: 0.07256
Sample type: CC





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	98.88 µg/L
Area ratio:	0.06448
Sample type:	CC





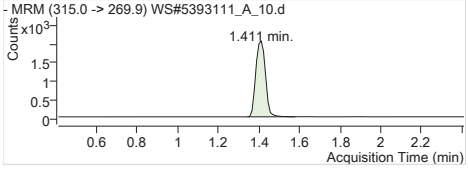
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.900 (0.900)
Calc. conc.	103.92 µg/L
Area ratio:	0
Sample type:	CC

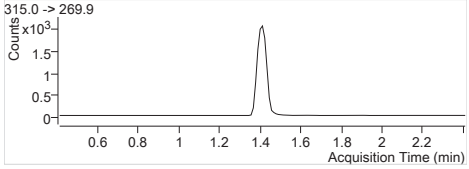
Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**ISC**	**Instrument**	LCMS04
Data File	WS#5393111_A_10.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A2
Acq. Date	2018/02/13 1:50:54 PM	**Injection Volume**	Per Method
Sample Annotation	-		

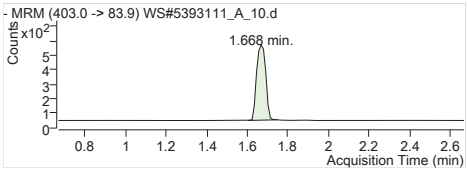
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6692	1.41	1 µg/L		
MPFHxS	1626	1.67	1 µg/L		
MPFHpA	8641	1.68	1 µg/L		
MPFOA	9130	1.86	1 µg/L		
MPFOS	2007	1.97	1 µg/L		
MPFNA	8843	2.00	1 µg/L		
MPFDA	7436	2.12	1 µg/L		
MPFUnA	8953	2.22	1 µg/L		
MPFDoA	11069	2.31	1 µg/L		
MPFTeDA	12815	2.46	1 µg/L		
13C6-PFHxA IS	24665	1.41	1 µg/L		
13C9-PFDA IS	32190	2.12	1 µg/L		

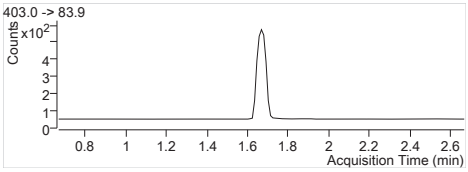
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	656	1.05	0.83	1.00 µg/L	120.22
PFHxA 1	2191	1.41	0.83	0.89 µg/L	107.70
PFHxS 1	625	1.67	0.83	0.81 µg/L	97.37
PFHpA 1	2726	1.68	0.83	0.74 µg/L	89.64
PFOA 1	3413	1.86	0.83	0.92 µg/L	110.80
PFOS 1	608	1.96	0.83	0.86 µg/L	103.84
PFNA 1	2804	2.00	0.83	0.89 µg/L	106.84
PFDA 1	3018	2.12	0.83	0.93 µg/L	112.54
PFUnA 1	3329	2.22	0.83	0.84 µg/L	101.73
PFDoA 1	4220	2.31	0.83	0.95 µg/L	114.58
PFTrDA 1	4934	2.39	0.83	0.91 µg/L	109.98
PFTeDA 1	4153	2.46	0.83	0.92 µg/L	111.41
13C2-PFHxA	6692	1.41	100.00	95.88 µg/L	95.88
18O2-PFHxS	1626	1.67	100.00	95.45 µg/L	95.45
13C4-PFHpA	8641	1.68	100.00	96.93 µg/L	96.93
13C4-PFOA	9130	1.86	100.00	96.48 µg/L	96.48
13C4-PFOS	2007	1.97	100.00	96.98 µg/L	96.98
13C5-PFNA	8842	2.00	100.00	96.88 µg/L	96.88
13C2-PFDA	7326	2.12	100.00	91.93 µg/L	91.93
13C2-PFUnA	8953	2.22	100.00	96.51 µg/L	96.51
13C2-PFDoA	11069	2.31	100.00	91.98 µg/L	91.98
13C2-PFTeDA	13010	2.46	100.00	94.18 µg/L	94.18
13C6-PFHxA	24665	1.41	100.00	105.62 µg/L	105.62
13C9-PFDA	32190	2.12	100.00	106.43 µg/L	106.43



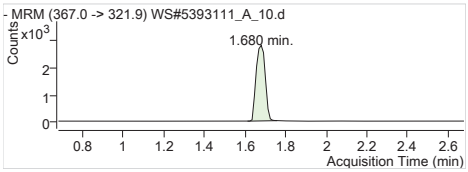


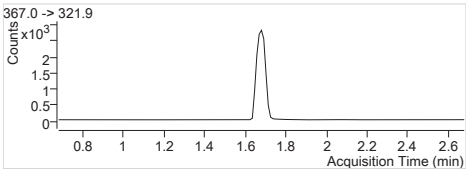
MPFHxA Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: CC



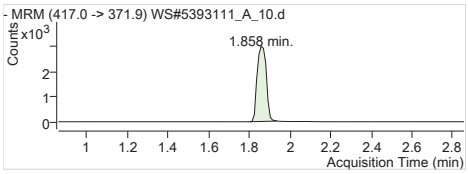


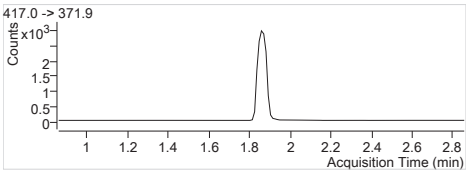
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: CC



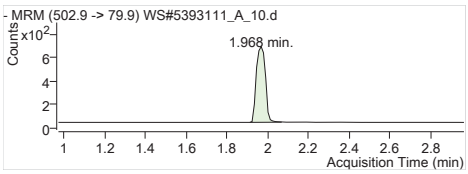


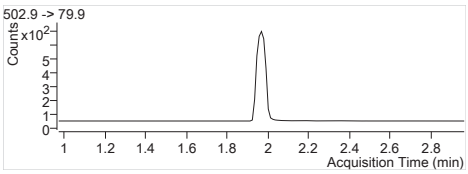
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: CC



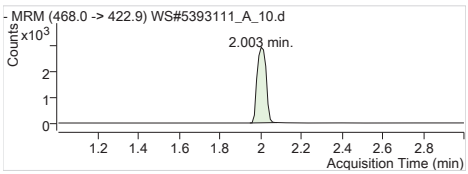


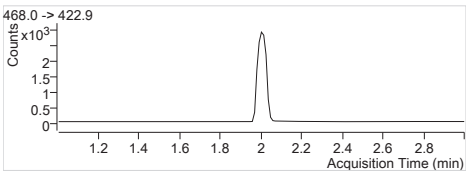
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: CC



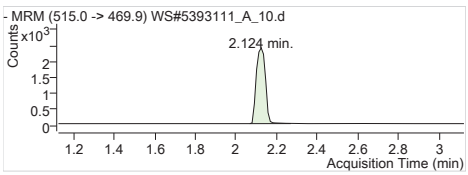


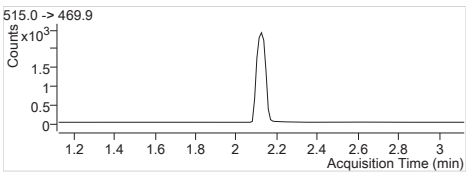
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: CC



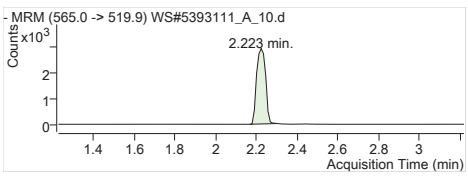


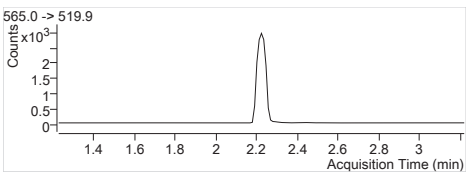
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: CC



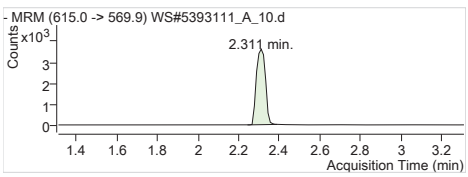


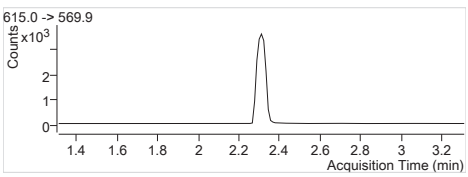
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: CC



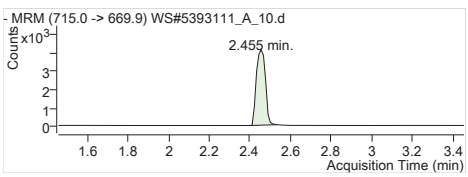


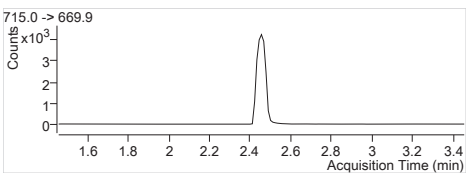
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: CC



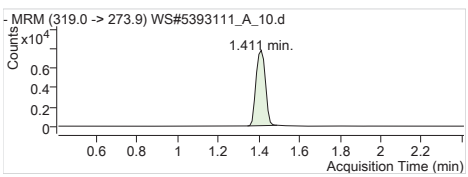


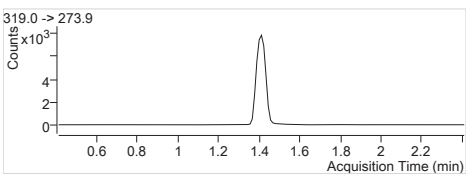
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: CC



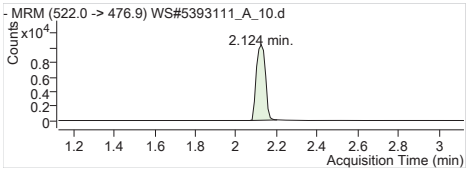


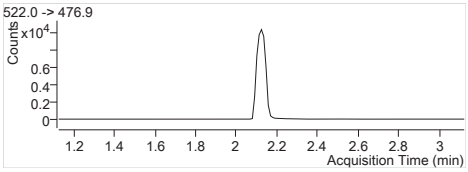
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: CC



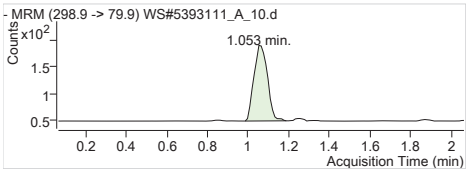


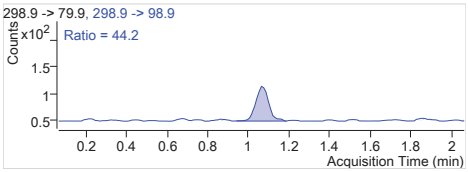
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: CC



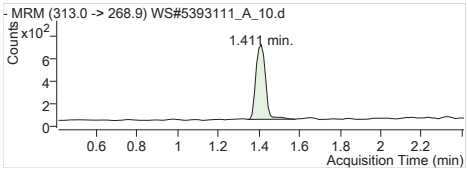


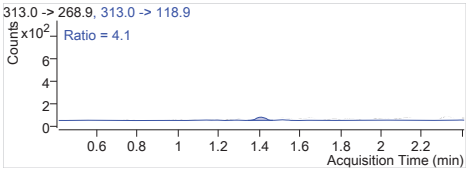
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: CC



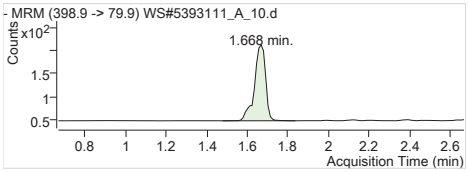


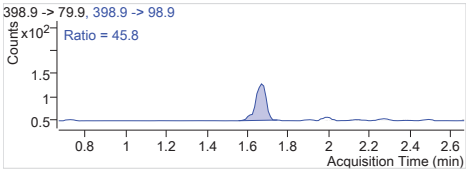
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.053 (1.064)
Calc. conc. 1.00 µg/L
Area ratio: 0.40344
Sample type: CC



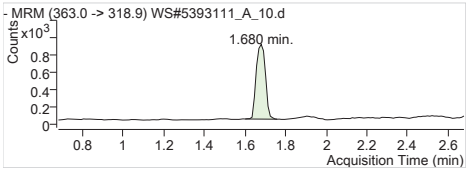


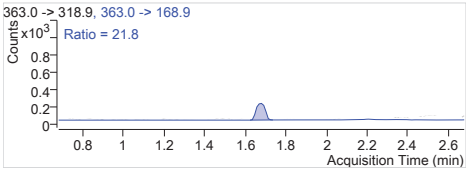
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 0.89 µg/L
Area ratio: 0.32741
Sample type: CC



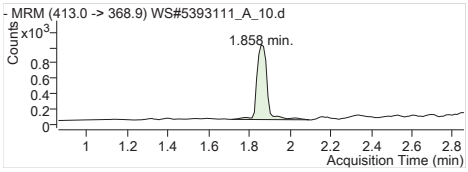


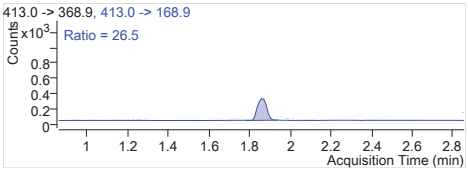
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 0.81 µg/L
Area ratio: 0.38438
Sample type: CC



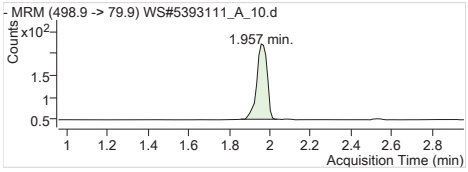


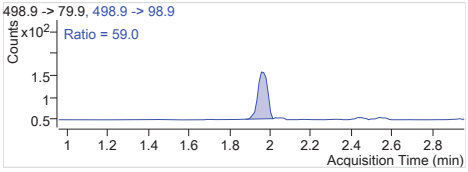
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 0.74 µg/L
Area ratio: 0.31547
Sample type: CC



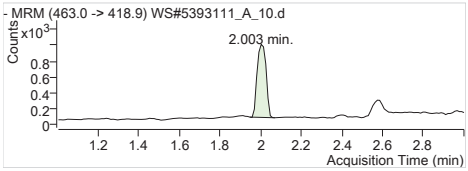


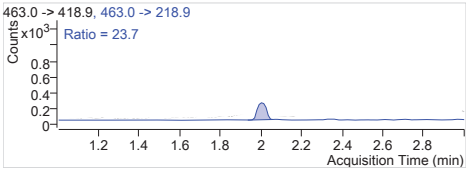
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 0.92 µg/L
Area ratio: 0.37382
Sample type: CC



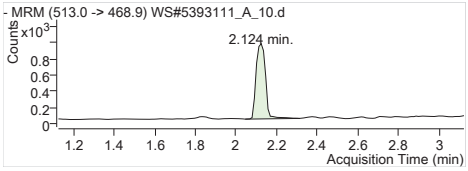


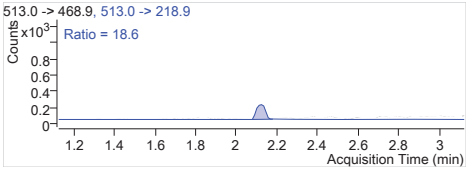
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.957 (1.957)
Calc. conc. 0.86 µg/L
Area ratio: 0.30294
Sample type: CC



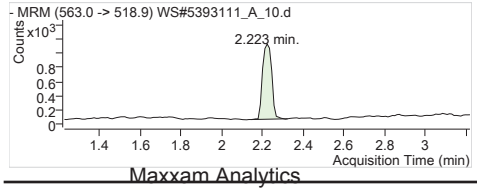


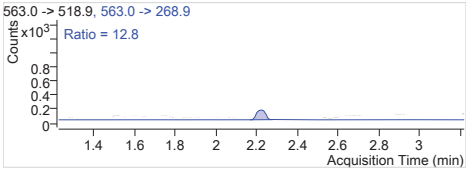
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 0.89 µg/L
Area ratio: 0.31709
Sample type: CC



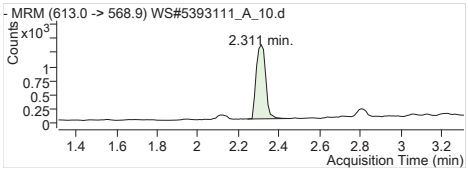


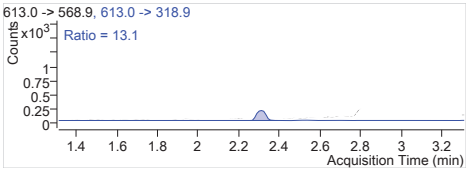
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 0.93 µg/L
Area ratio: 0.40586
Sample type: CC



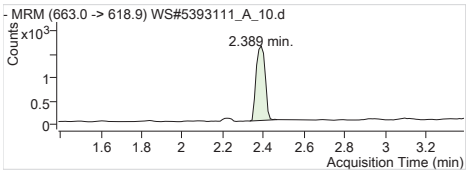


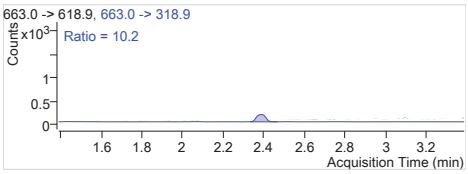
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 0.84 µg/L
Area ratio: 0.37183
Sample type: CC



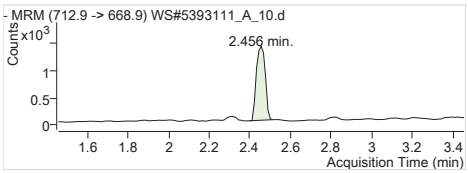


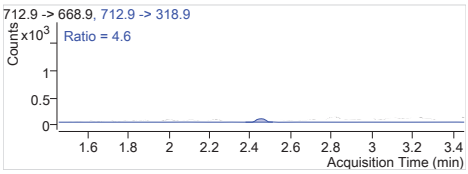
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 0.95 µg/L
Area ratio: 0.38124
Sample type: CC



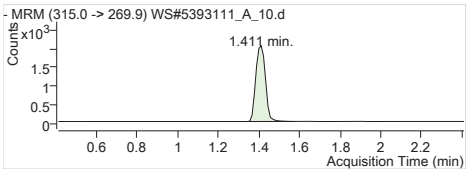


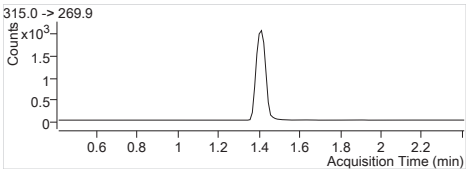
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.389 (2.389)
Calc. conc. 0.91 µg/L
Area ratio: 0.38502
Sample type: CC



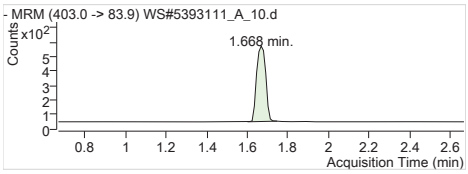


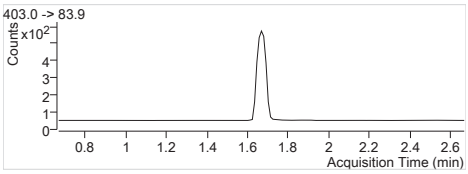
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.456 (2.456)
Calc. conc. 0.92 µg/L
Area ratio: 0.32407
Sample type: CC



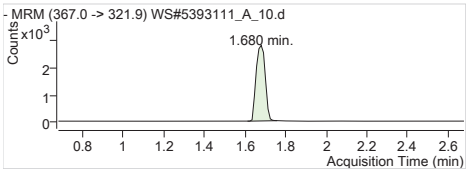


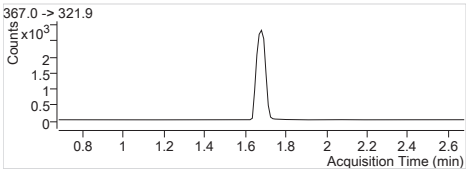
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 95.88 µg/L
Area ratio: 0.27132
Sample type: CC



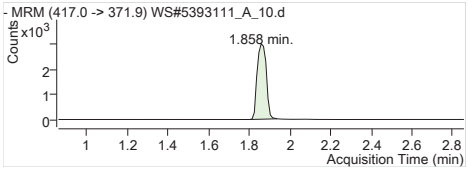


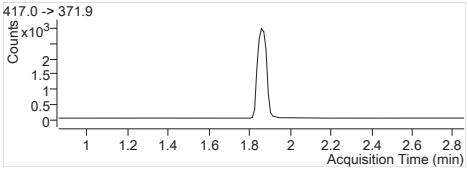
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 95.45 µg/L
Area ratio: 0.06592
Sample type: CC



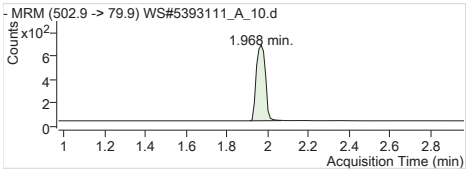


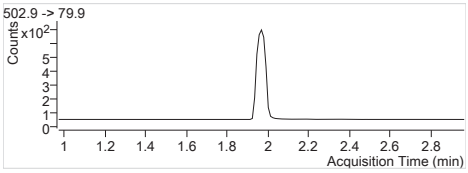
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 96.93 µg/L
Area ratio: 0.35033
Sample type: CC



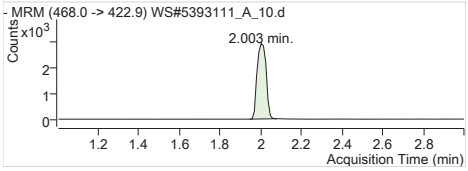


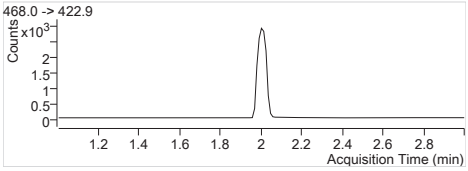
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 96.48 µg/L
Area ratio: 0.37016
Sample type: CC



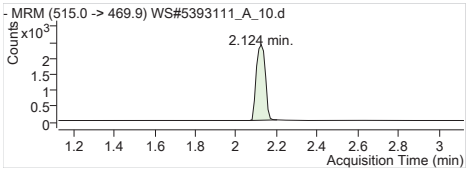


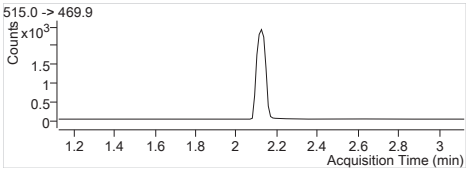
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 96.98 µg/L
Area ratio: 0.08137
Sample type: CC



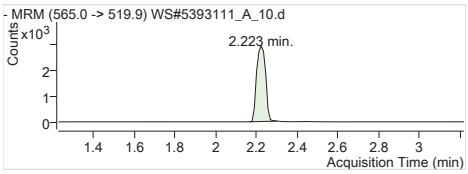


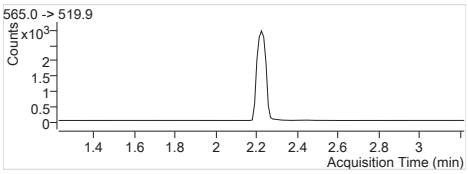
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 96.88 µg/L
Area ratio: 0.35848
Sample type: CC



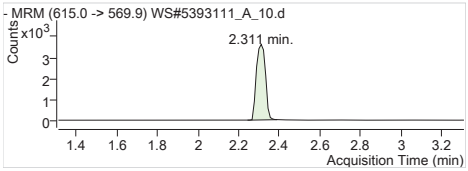


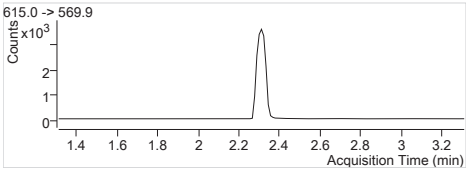
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 91.93 µg/L
Area ratio: 0.22759
Sample type: CC



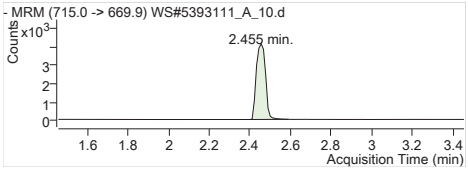


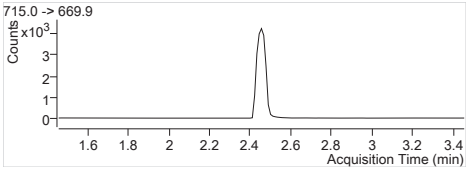
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 96.51 µg/L
Area ratio: 0.27813
Sample type: CC



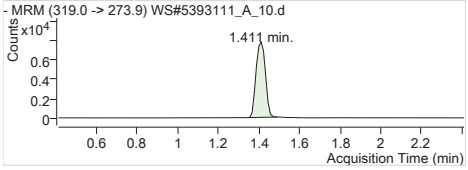


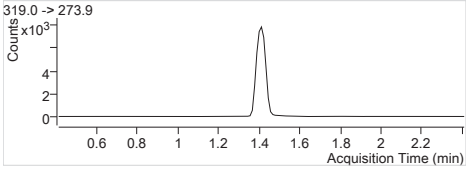
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 91.98 µg/L
Area ratio: 0.34386
Sample type: CC



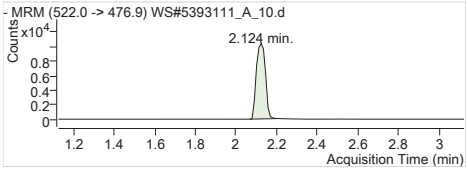


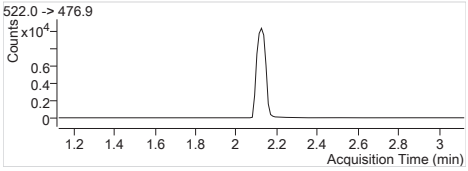
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 94.18 µg/L
Area ratio: 0.40416
Sample type: CC





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 105.62 µg/L
Area ratio: 0
Sample type: CC





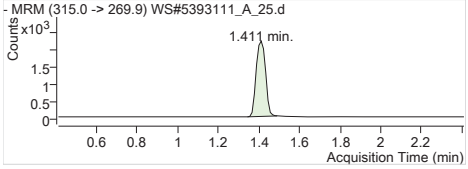
13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 106.43 µg/L
Area ratio: 0
Sample type: CC

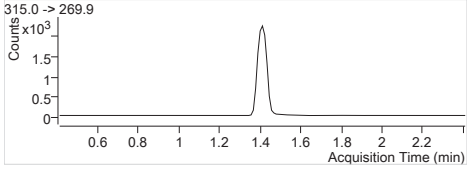
Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**CCV**	**Instrument**	LCMS04
Data File	WS#5393111_A_25.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A5
Acq. Date	2018/02/13 3:04:54 PM	**Injection Volume**	Per Method
Sample Annotation	-		

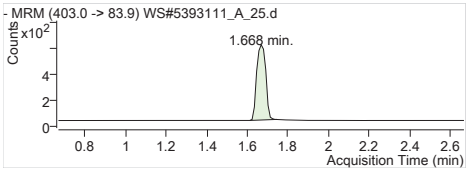
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	7033	1.41	1 µg/L		
MPFHxS	1804	1.67	1 µg/L		
MPFHpA	9086	1.68	1 µg/L		
MPFOA	9632	1.86	1 µg/L		
MPFOS	1980	1.97	1 µg/L		
MPFNA	9329	2.00	1 µg/L		
MPFDA	7621	2.12	1 µg/L		
MPFUnA	9204	2.22	1 µg/L		
MPFDoA	12186	2.31	1 µg/L		
MPFTeDA	14657	2.46	1 µg/L		
13C6-PFHxA IS	24562	1.41	1 µg/L		
13C9-PFDA IS	32675	2.12	1 µg/L		

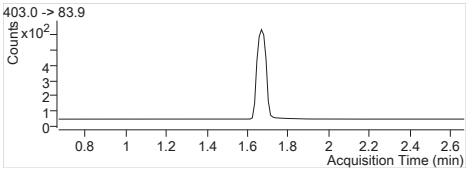
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	9512	1.06	12.50	10.13 µg/L	81.05
PFHxA 1	35492	1.41	12.50	11.53 µg/L	92.25
PFHxS 1	9572	1.67	12.50	10.41 µg/L	83.28
PFHpA 1	44402	1.68	12.50	11.49 µg/L	91.94
PFOA 1	52979	1.86	12.50	12.12 µg/L	96.93
PFOS 1	9608	1.96	12.50	12.34 µg/L	98.73
PFNA 1	43452	2.00	12.50	11.25 µg/L	90.02
PFDA 1	46603	2.12	12.50	12.46 µg/L	99.71
PFUnA 1	51225	2.22	12.50	12.04 µg/L	96.33
PFDoA 1	65017	2.31	12.50	11.53 µg/L	92.20
PFTrDA 1	70949	2.39	12.50	10.81 µg/L	86.47
PFTeDA 1	60950	2.46	12.50	11.35 µg/L	90.80
13C2-PFHxA	7033	1.41	100.00	101.19 µg/L	101.19
18O2-PFHxS	1804	1.67	100.00	106.34 µg/L	106.34
13C4-PFHpA	9086	1.68	100.00	102.35 µg/L	102.35
13C4-PFOA	9632	1.86	100.00	102.21 µg/L	102.21
13C4-PFOS	1980	1.97	100.00	96.08 µg/L	96.08
13C5-PFNA	9330	2.00	100.00	102.65 µg/L	102.65
13C2-PFDA	7484	2.12	100.00	92.51 µg/L	92.51
13C2-PFUnA	9204	2.22	100.00	97.74 µg/L	97.74
13C2-PFDoA	12186	2.31	100.00	99.76 µg/L	99.76
13C2-PFTeDA	14741	2.46	100.00	105.13 µg/L	105.13
13C6-PFHxA	24562	1.41	100.00	105.18 µg/L	105.18
13C9-PFDA	32675	2.12	100.00	108.04 µg/L	108.04



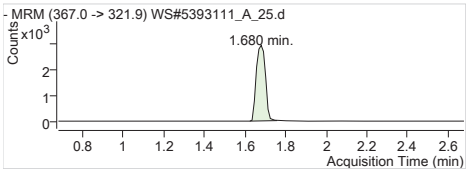


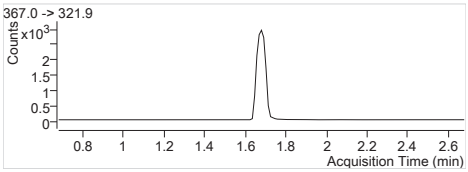
MPFHxA	Internal Standard
RT (Exp. RT):	1.411 (1.411)
Concentration:	1 µg/L
Sample type:	CC



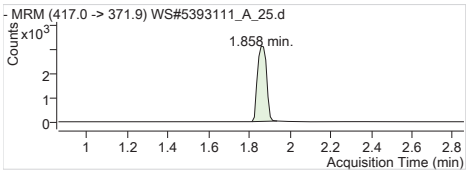


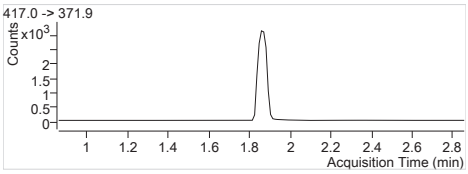
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: CC



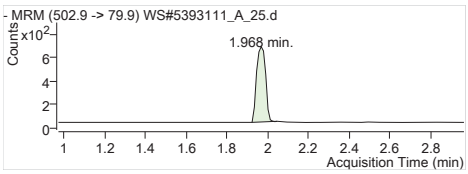


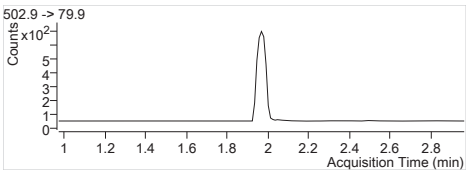
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: CC



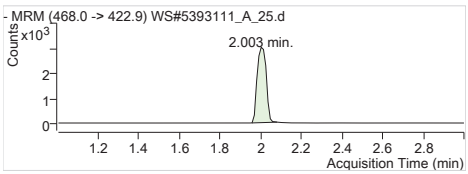


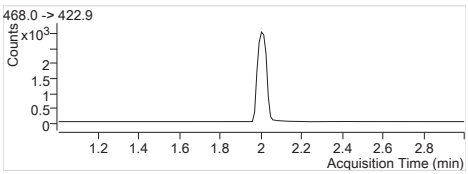
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: CC



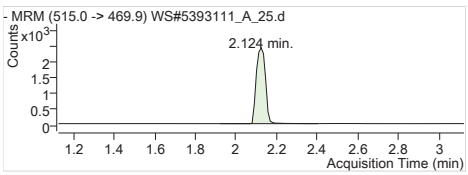


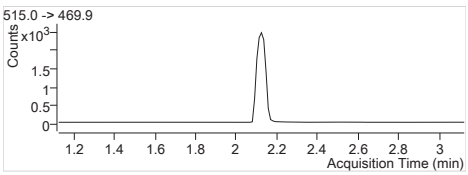
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: CC



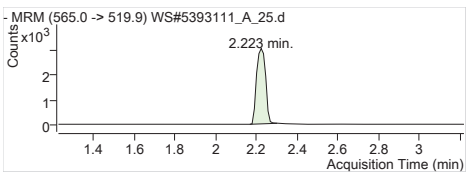


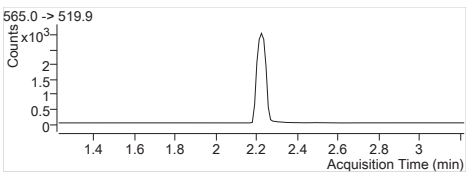
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: CC



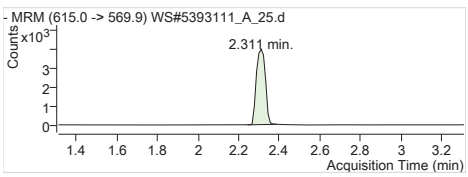


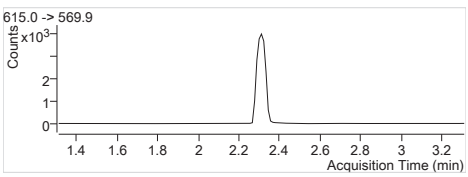
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: CC



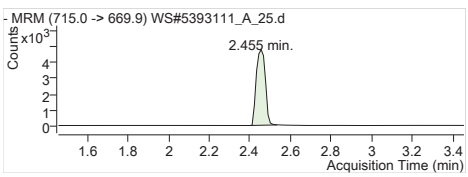


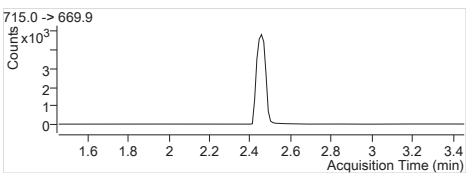
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: CC



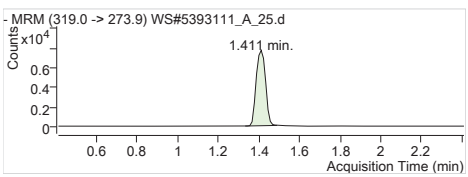


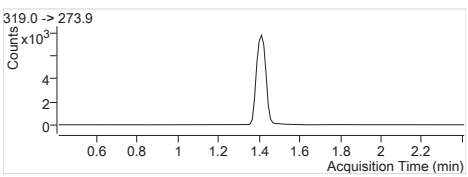
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: CC



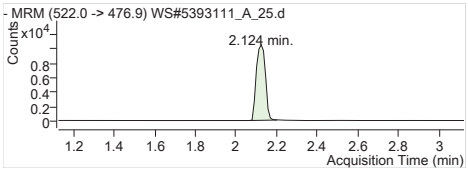


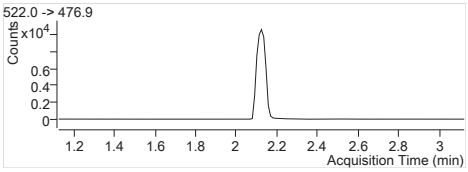
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: CC



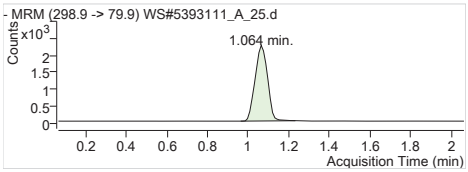


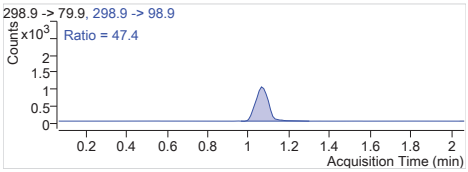
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: CC



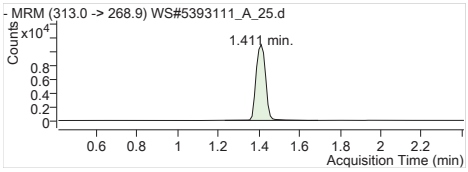


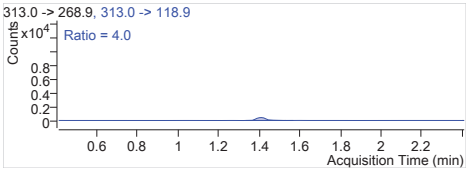
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: CC



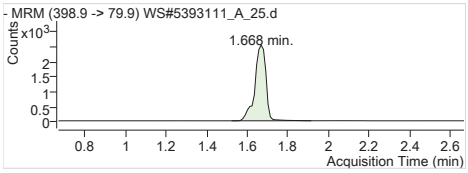


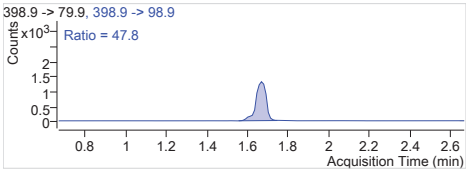
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.064 (1.064)
Calc. conc. 10.13 µg/L
Area ratio: 5.27273
Sample type: CC



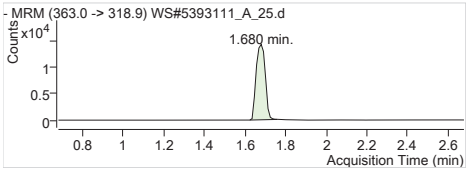


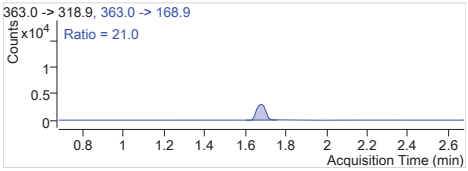
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 11.53 µg/L
Area ratio: 5.04650
Sample type: CC



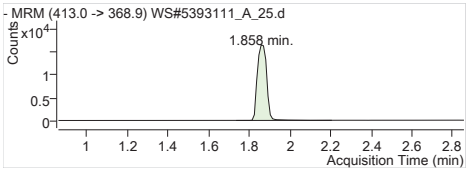


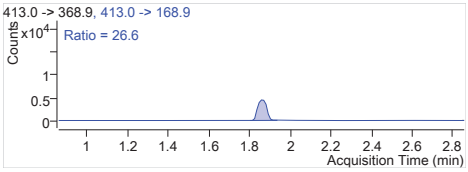
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 10.41 µg/L
Area ratio: 5.30599
Sample type: CC



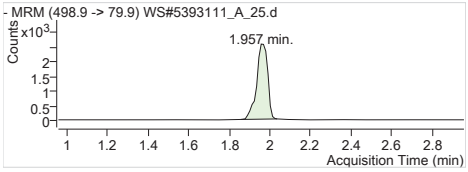


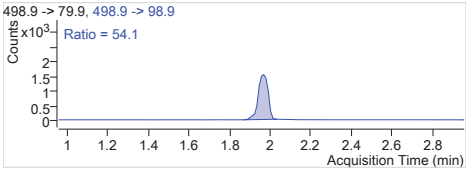
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 11.49 µg/L
Area ratio: 4.88686
Sample type: CC



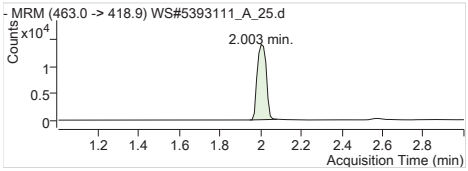


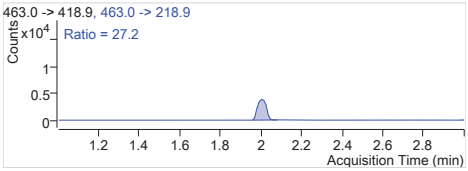
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 12.12 µg/L
Area ratio: 5.50031
Sample type: CC



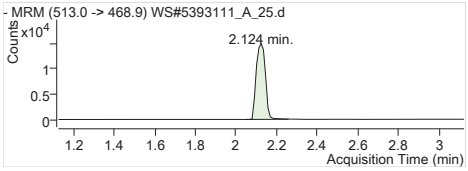


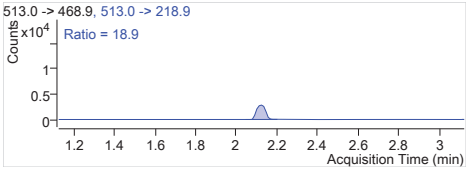
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.957 (1.957)
Calc. conc. 12.34 µg/L
Area ratio: 4.85253
Sample type: CC



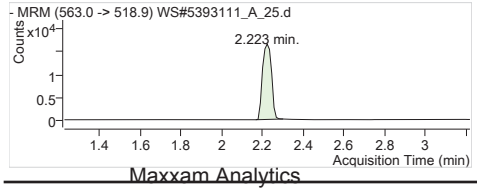


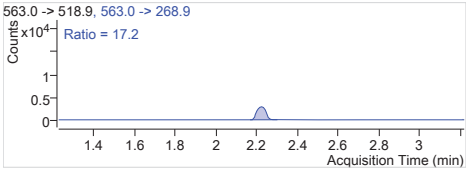
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 11.25 µg/L
Area ratio: 4.65773
Sample type: CC



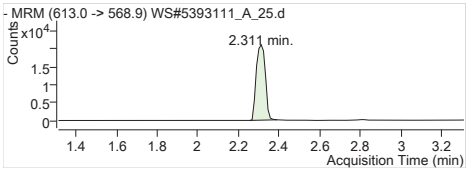


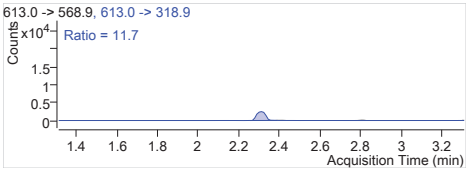
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 12.46 µg/L
Area ratio: 6.11508
Sample type: CC



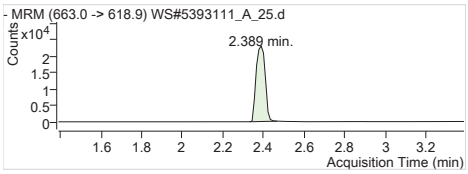


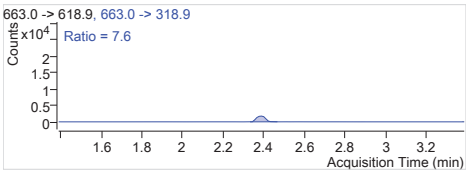
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 12.04 µg/L
Area ratio: 5.56551
Sample type: CC



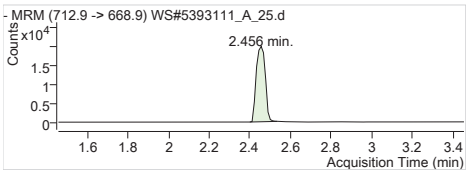


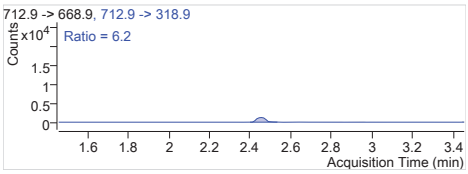
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 11.53 µg/L
Area ratio: 5.33538
Sample type: CC



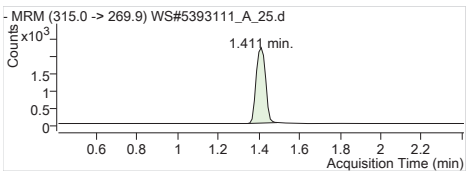


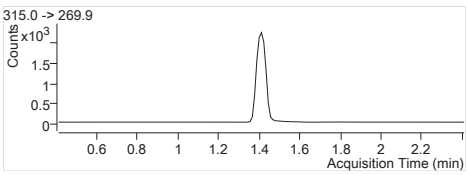
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.389 (2.389)
Calc. conc. 10.81 µg/L
Area ratio: 4.84062
Sample type: CC



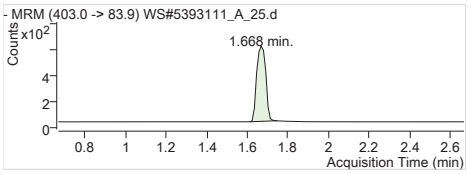


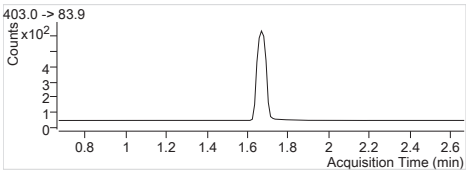
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.456 (2.456)
Calc. conc. 11.35 µg/L
Area ratio: 4.15842
Sample type: CC



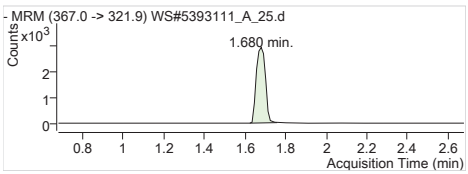


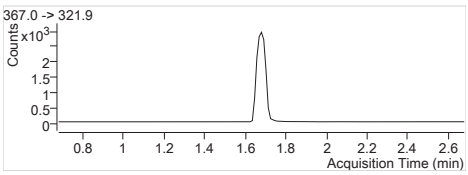
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 101.19 µg/L
Area ratio: 0.28634
Sample type: CC



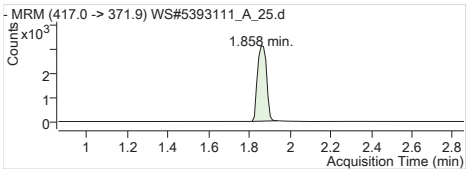


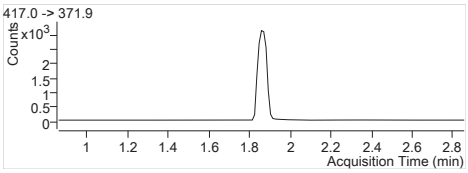
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 106.34 µg/L
Area ratio: 0.07345
Sample type: CC



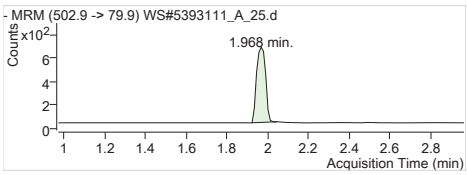


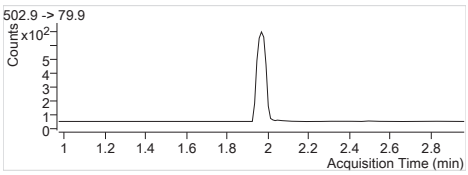
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 102.35 µg/L
Area ratio: 0.36992
Sample type: CC



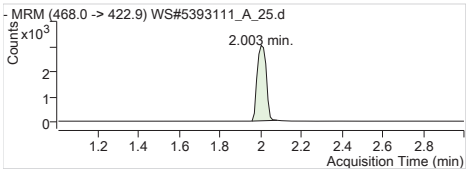


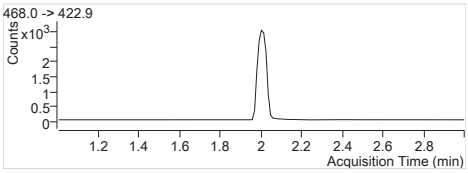
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 102.21 µg/L
Area ratio: 0.39215
Sample type: CC



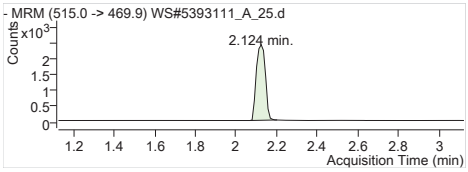


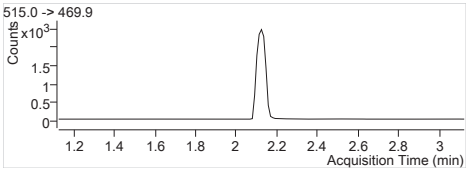
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 96.08 µg/L
Area ratio: 0.08061
Sample type: CC



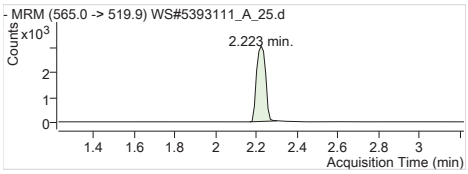


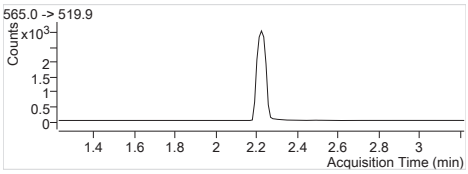
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 102.65 µg/L
Area ratio: 0.37986
Sample type: CC



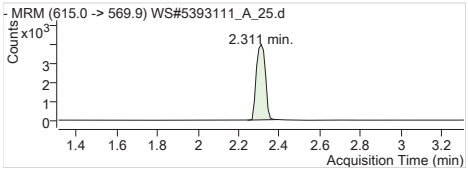


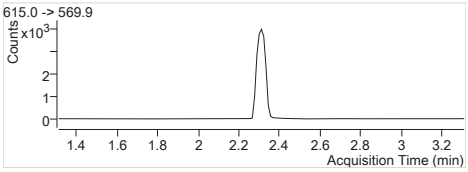
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 92.51 µg/L
Area ratio: 0.22904
Sample type: CC



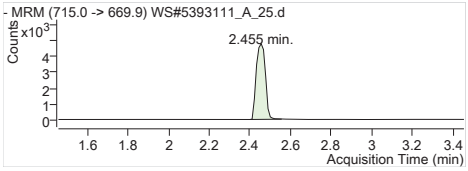


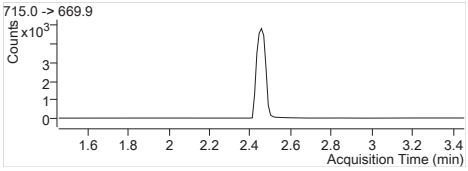
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 97.74 µg/L
Area ratio: 0.28168
Sample type: CC



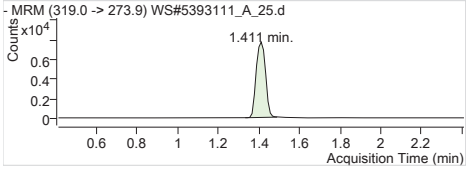


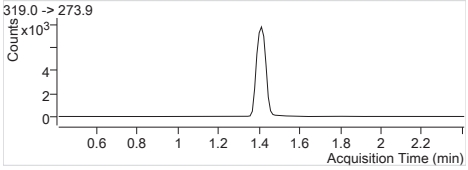
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 99.76 µg/L
Area ratio: 0.37295
Sample type: CC



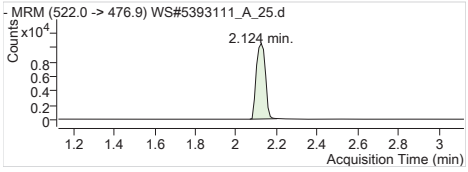


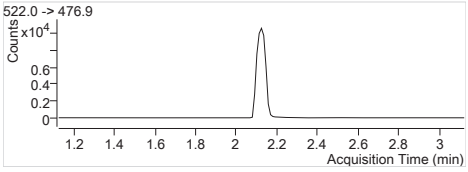
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 105.13 µg/L
Area ratio: 0.45114
Sample type: CC





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 105.18 µg/L
Area ratio: 0
Sample type: CC





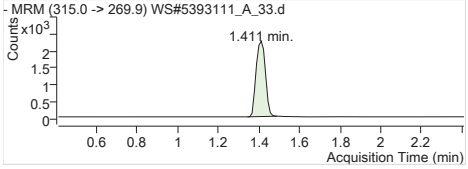
13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 108.04 µg/L
Area ratio: 0
Sample type: CC

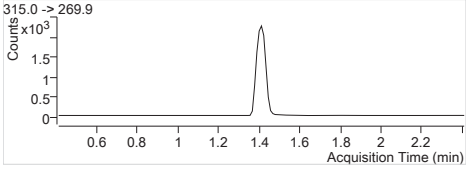
Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**CCV**	**Instrument**	LCMS04
Data File	WS#5393111_A_33.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A5
Acq. Date	2018/02/13 3:44:22 PM	**Injection Volume**	Per Method
Sample Annotation	-		

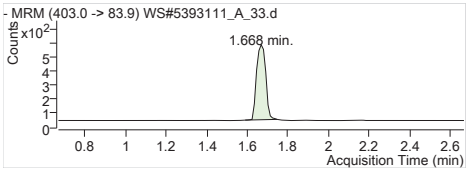
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	7113	1.41	1 µg/L		
MPFHxS	1675	1.67	1 µg/L		
MPFHpA	8459	1.68	1 µg/L		
MPFOA	8866	1.86	1 µg/L		
MPFOS	2051	1.97	1 µg/L		
MPFNA	9229	2.00	1 µg/L		
MPFDA	7476	2.12	1 µg/L		
MPFUnA	8441	2.22	1 µg/L		
MPFDoA	12036	2.31	1 µg/L		
MPFTeDA	13577	2.46	1 µg/L		
13C6-PFHxA IS	24980	1.41	1 µg/L		
13C9-PFDA IS	31567	2.12	1 µg/L		

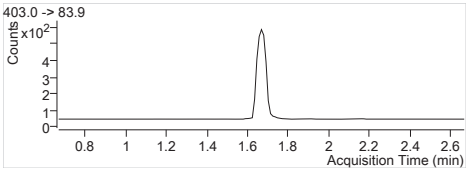
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	9633	1.06	12.50	11.03 µg/L	88.22
PFHxA 1	33874	1.41	12.50	10.89 µg/L	87.13
PFHxS 1	9580	1.67	12.50	11.22 µg/L	89.73
PFHpA 1	45718	1.68	12.50	12.71 µg/L	101.68
PFOA 1	49438	1.86	12.50	12.28 µg/L	98.26
PFOS 1	9477	1.96	12.50	11.76 µg/L	94.05
PFNA 1	43777	2.00	12.50	11.46 µg/L	91.66
PFDA 1	46750	2.12	12.50	12.74 µg/L	101.94
PFUnA 1	50232	2.22	12.50	12.87 µg/L	102.98
PFDoA 1	62527	2.31	12.50	11.23 µg/L	89.81
PFTrDA 1	73349	2.39	12.50	12.06 µg/L	96.45
PFTeDA 1	61153	2.46	12.50	12.29 µg/L	98.32
13C2-PFHxA	7113	1.41	100.00	100.63 µg/L	100.63
18O2-PFHxS	1675	1.67	100.00	97.08 µg/L	97.08
13C4-PFHpA	8459	1.68	100.00	93.69 µg/L	93.69
13C4-PFOA	8866	1.86	100.00	92.51 µg/L	92.51
13C4-PFOS	2051	1.97	100.00	97.86 µg/L	97.86
13C5-PFNA	9230	2.00	100.00	99.85 µg/L	99.85
13C2-PFDA	7334	2.12	100.00	93.84 µg/L	93.84
13C2-PFUnA	8441	2.22	100.00	92.79 µg/L	92.79
13C2-PFDoA	12036	2.31	100.00	101.99 µg/L	101.99
13C2-PFTeDA	13715	2.46	100.00	101.25 µg/L	101.25
13C6-PFHxA	24980	1.41	100.00	106.97 µg/L	106.97
13C9-PFDA	31567	2.12	100.00	104.37 µg/L	104.37



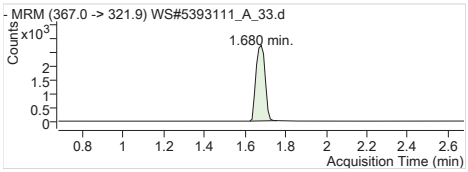


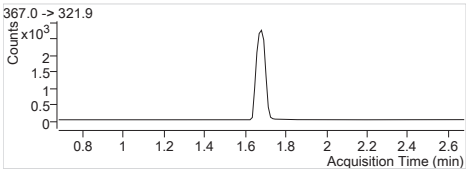
MPFHxA Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: CC



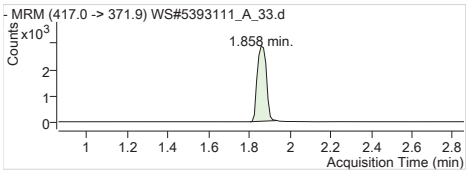


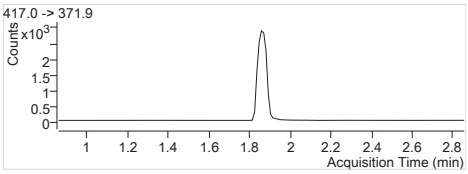
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: CC



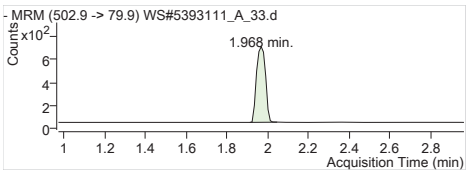


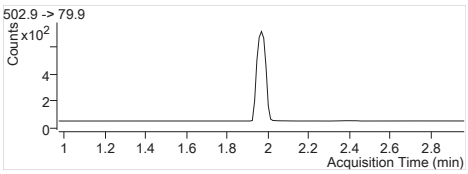
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: CC



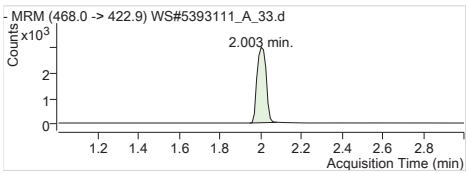


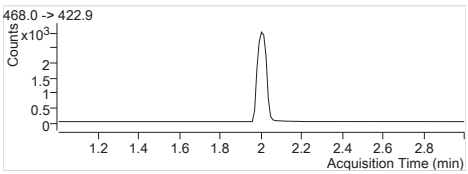
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: CC



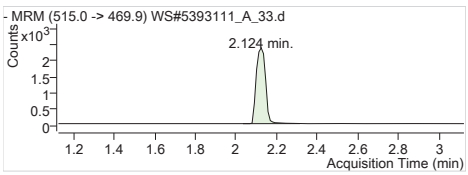


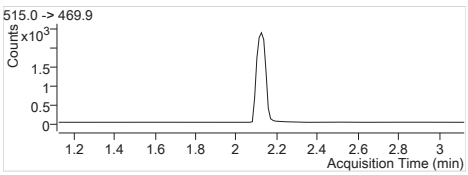
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: CC



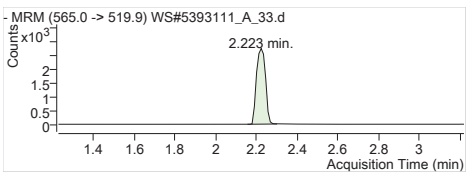


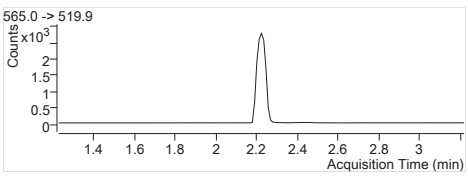
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: CC



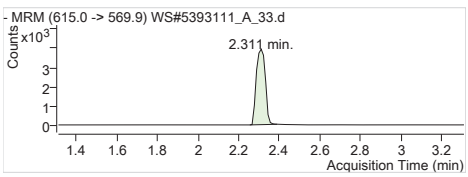


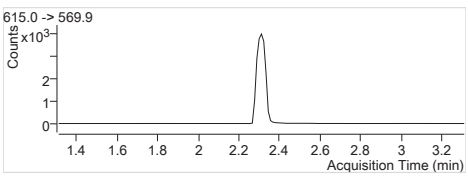
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: CC



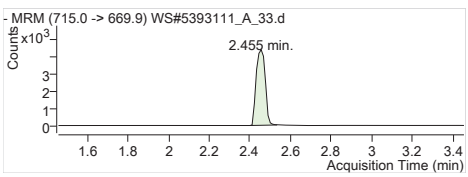


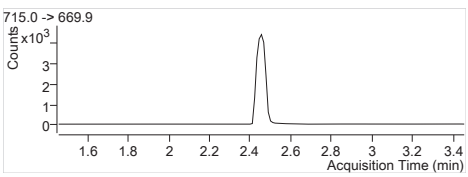
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: CC



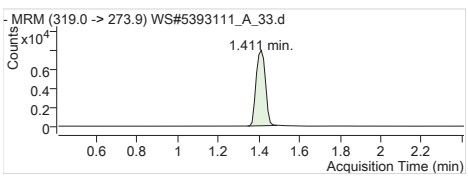


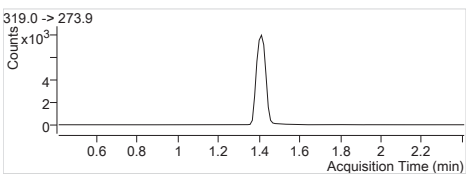
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: CC



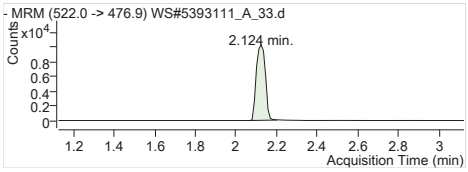


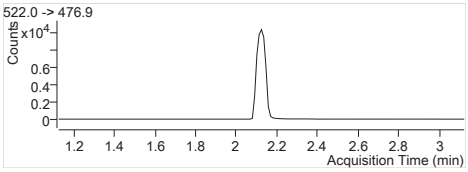
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: CC



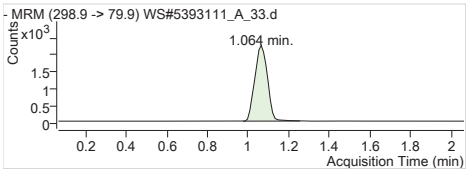


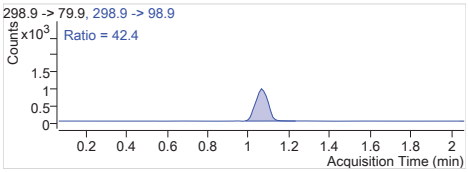
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: CC



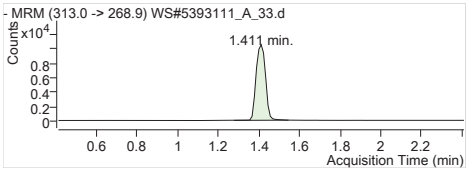


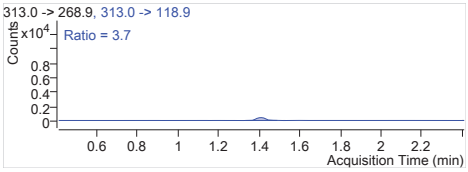
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: CC



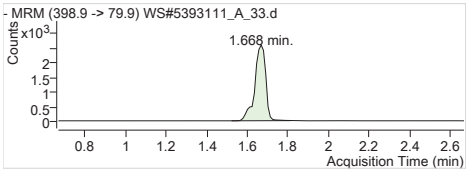


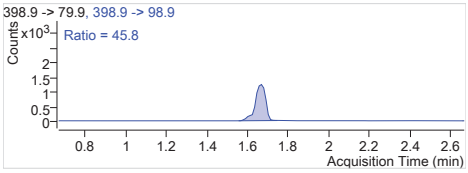
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.064 (1.064)
Calc. conc. 11.03 µg/L
Area ratio: 5.75104
Sample type: CC



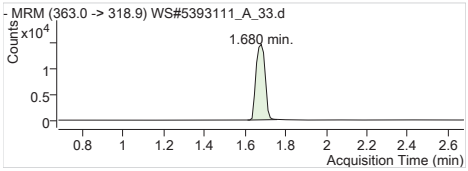


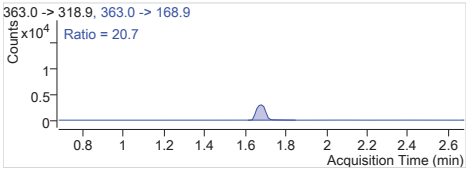
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 10.89 µg/L
Area ratio: 4.76227
Sample type: CC



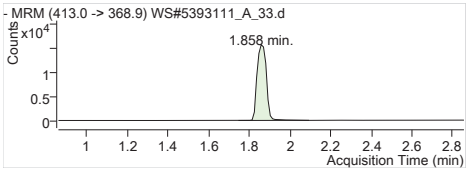


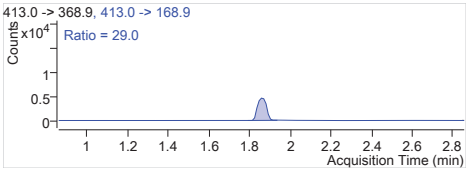
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 11.22 µg/L
Area ratio: 5.71940
Sample type: CC



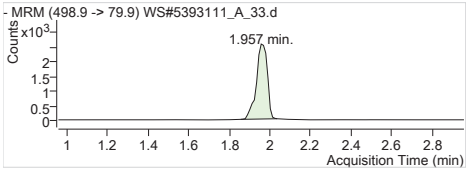


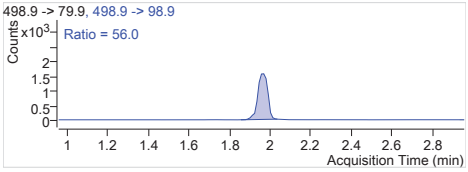
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 12.71 µg/L
Area ratio: 5.40466
Sample type: CC



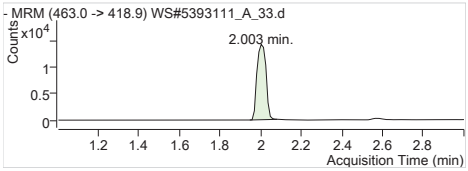


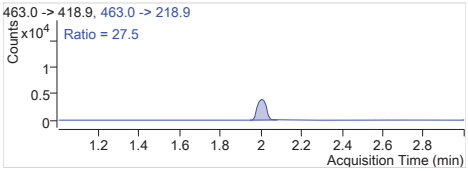
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 12.28 µg/L
Area ratio: 5.57613
Sample type: CC



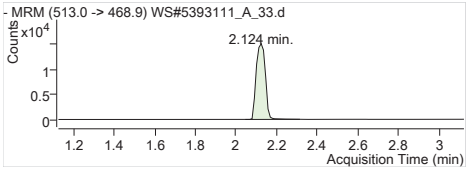


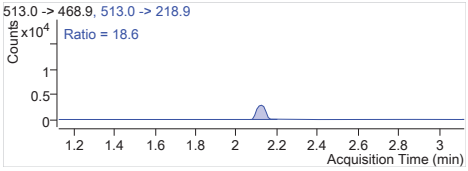
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.957 (1.957)
Calc. conc. 11.76 µg/L
Area ratio: 4.62067
Sample type: CC



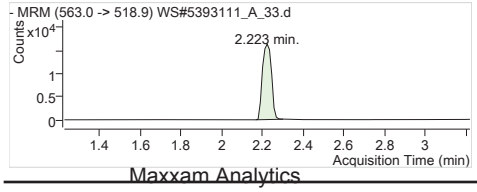


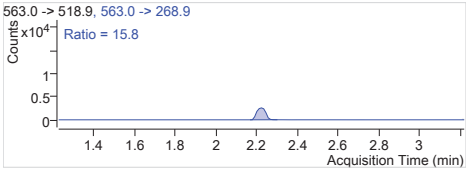
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 11.46 µg/L
Area ratio: 4.74342
Sample type: CC



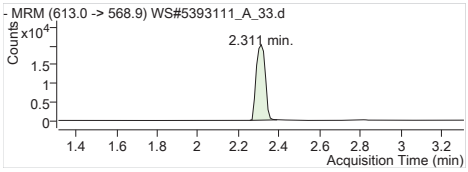


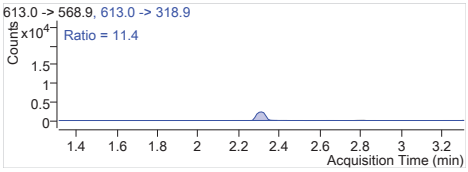
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 12.74 µg/L
Area ratio: 6.25334
Sample type: CC



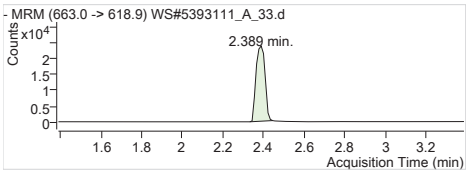


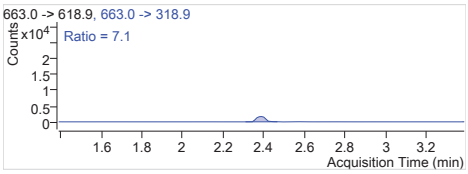
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 12.87 µg/L
Area ratio: 5.95095
Sample type: CC



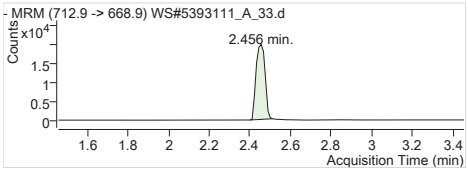


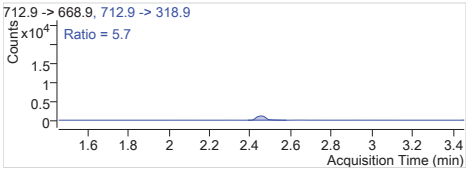
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 11.23 µg/L
Area ratio: 5.19500
Sample type: CC



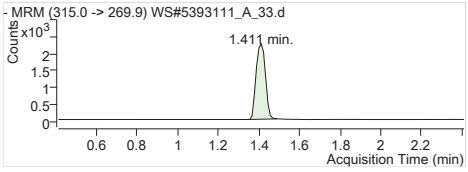


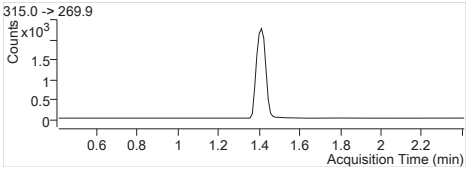
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.389 (2.389)
Calc. conc. 12.06 µg/L
Area ratio: 5.40245
Sample type: CC



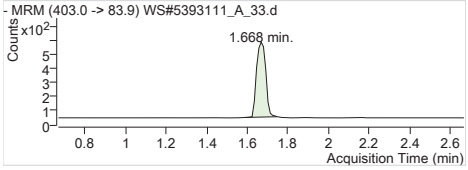


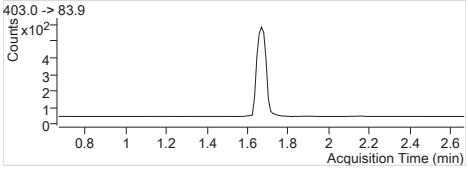
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.456 (2.456)
Calc. conc. 12.29 µg/L
Area ratio: 4.50416
Sample type: CC



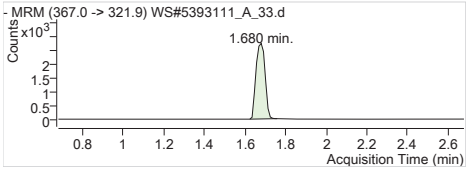


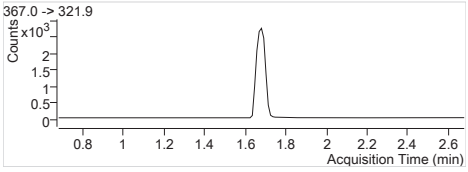
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 100.63 µg/L
Area ratio: 0.28475
Sample type: CC



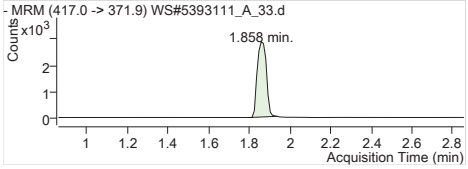


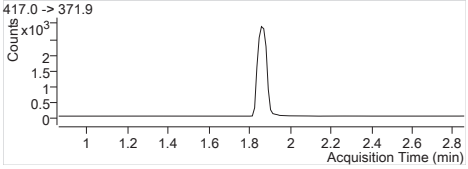
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 97.08 µg/L
Area ratio: 0.06705
Sample type: CC



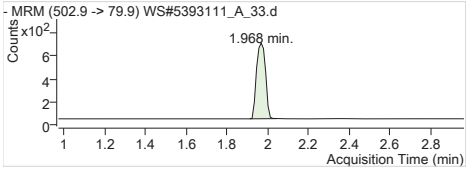


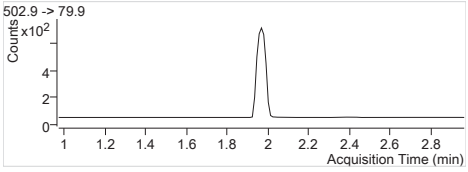
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 93.69 µg/L
Area ratio: 0.33863
Sample type: CC



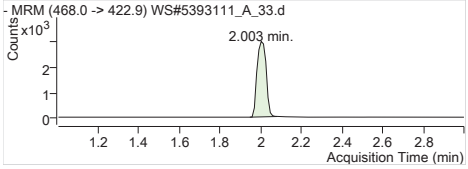


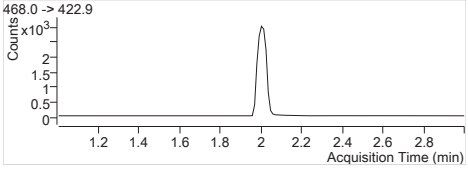
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 92.51 µg/L
Area ratio: 0.35492
Sample type: CC



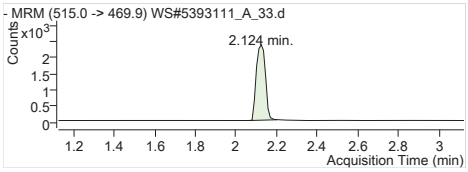


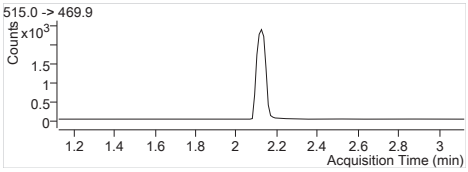
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 97.86 µg/L
Area ratio: 0.08211
Sample type: CC



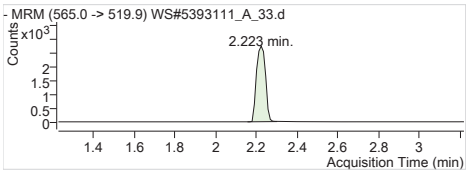


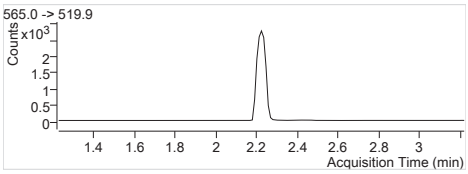
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 99.85 µg/L
Area ratio: 0.36950
Sample type: CC



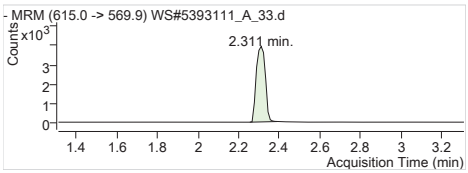


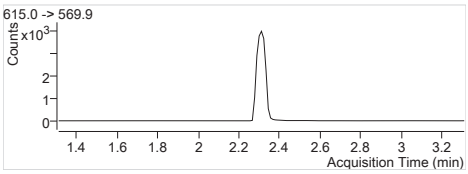
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 93.84 µg/L
Area ratio: 0.23233
Sample type: CC



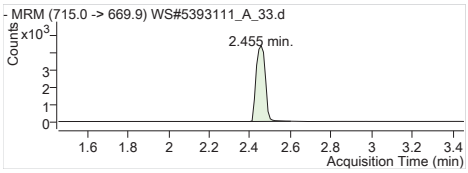


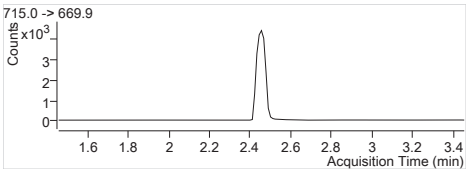
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 92.79 µg/L
Area ratio: 0.26740
Sample type: CC



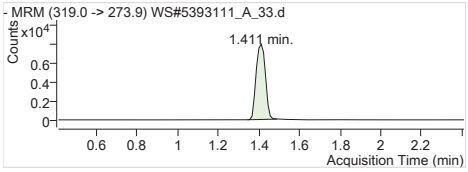


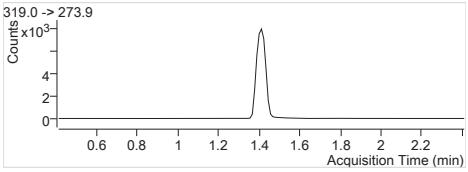
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 101.99 µg/L
Area ratio: 0.38128
Sample type: CC



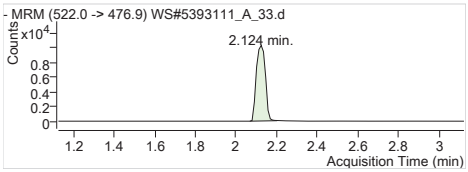


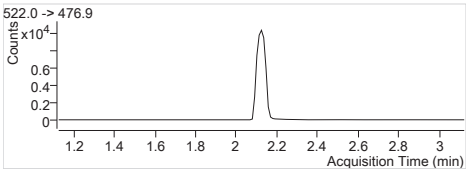
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 101.25 µg/L
Area ratio: 0.43447
Sample type: CC





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 106.97 µg/L
Area ratio: 0
Sample type: CC





13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 104.37 µg/L
Area ratio: 0
Sample type: CC

Quantitation Results

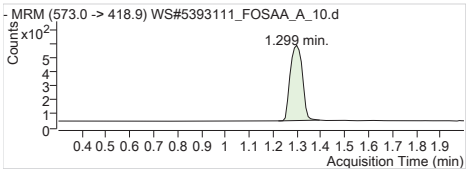
Agilent Technologies

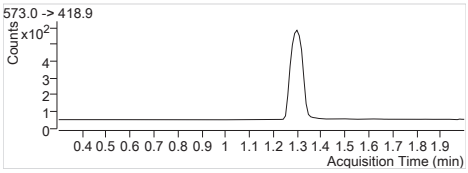
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**ISC**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_10.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A2
Acq. Date	2018/02/13 11:48:46 AM	**Injection Volume**	Per Method
Sample Annotation	-		

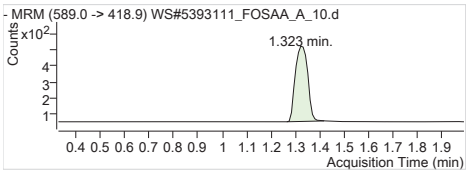
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1892	1.30	1 µg/L		
D5-EtFOSAA IS	1686	1.32	1 µg/L		
13C9-PFDA IS	27258	0.87	1 µg/L		

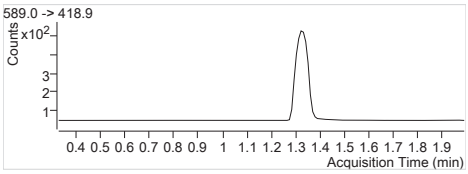
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	648	1.30	0.83	0.89 µg/L	107.29
EtFOSAA 1	620	1.32	0.83	0.82 µg/L	98.68
D3-MeFOSAA	1910	1.30	100.00	93.44 µg/L	93.44
D5-EtFOSAA	1722	1.32	100.00	98.31 µg/L	98.31
13C9-PFDA	26627	0.87	100.00	104.37 µg/L	104.37



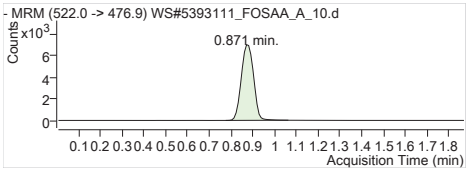


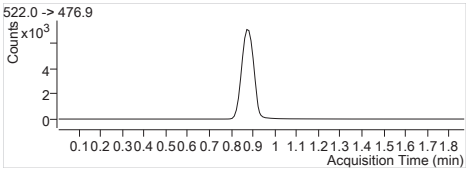
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: CC



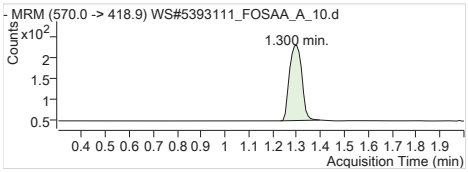


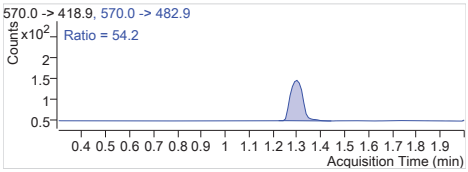
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: CC



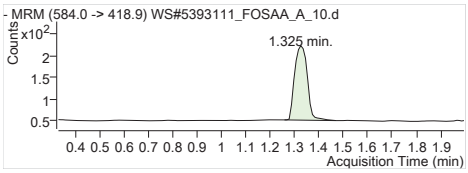


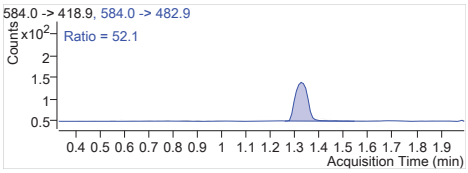
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.871 (0.871)
Concentration: 1 µg/L
Sample type: CC



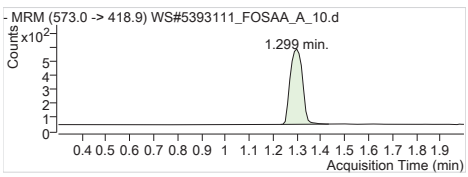


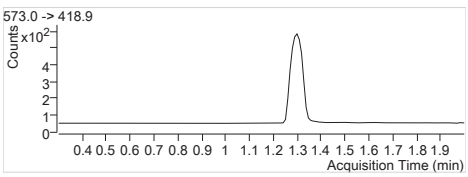
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.300 (1.300)
Calc. conc. 0.89 µg/L
Area ratio: 0.34249
Sample type: CC



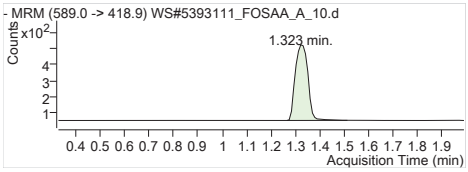


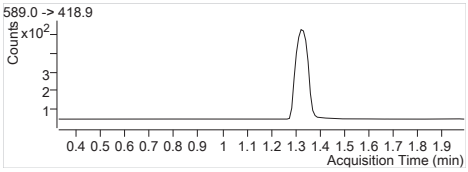
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.325 (1.325)
Calc. conc. 0.82 µg/L
Area ratio: 0.36773
Sample type: CC



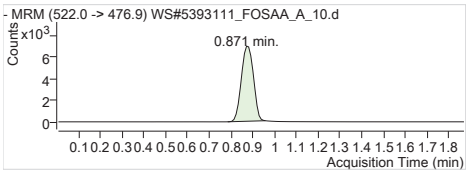


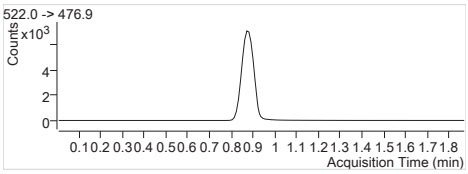
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 93.44 µg/L
Area ratio: 0.07007
Sample type: CC





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	98.31 µg/L
Area ratio:	0.06317
Sample type:	CC





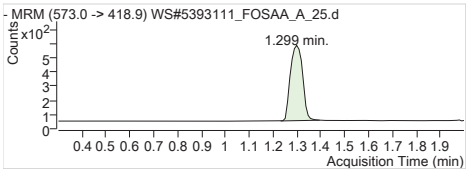
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.871 (0.871)
Calc. conc.	104.37 µg/L
Area ratio:	0
Sample type:	CC

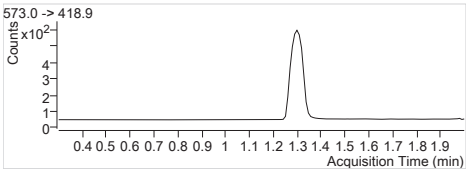
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**CCV**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_25.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A5
Acq. Date	2018/02/13 12:24:55 PM	**Injection Volume**	Per Method
Sample Annotation	-		

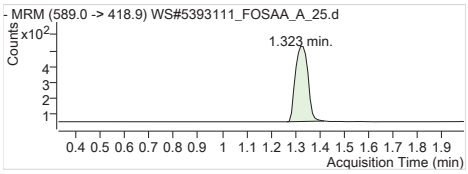
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1934	1.30	1 µg/L		
D5-EtFOSAA IS	1718	1.32	1 µg/L		
13C9-PFDA IS	27346	0.88	1 µg/L		

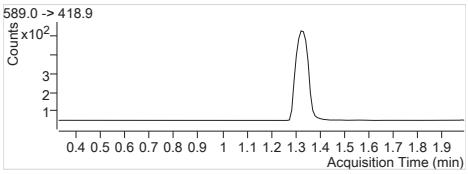
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	9126	1.30	12.50	12.14 µg/L	97.15
EtFOSAA 1	9384	1.32	12.50	12.04 µg/L	96.34
D3-MeFOSAA	1952	1.30	100.00	95.19 µg/L	95.19
D5-EtFOSAA	1737	1.32	100.00	98.85 µg/L	98.85
13C9-PFDA	26983	0.88	100.00	105.76 µg/L	105.76



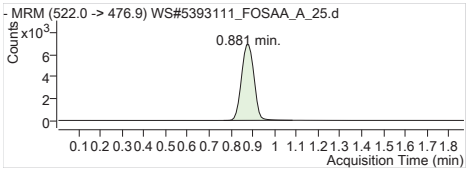


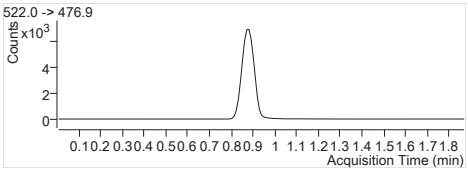
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: CC



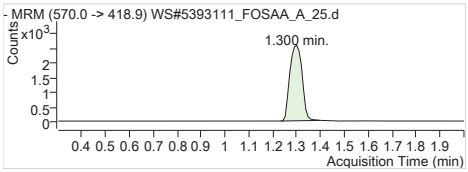


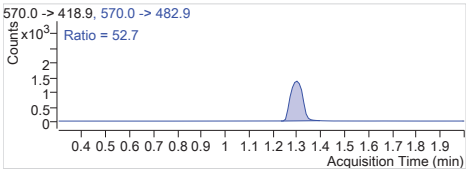
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: CC



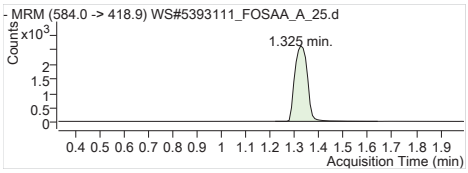


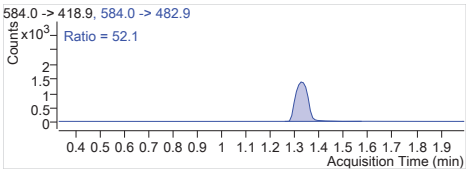
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.881 (0.871)
Concentration: 1 µg/L
Sample type: CC



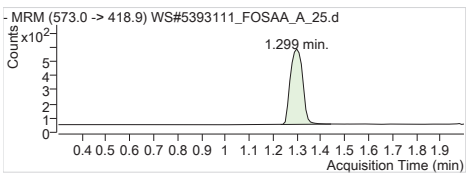


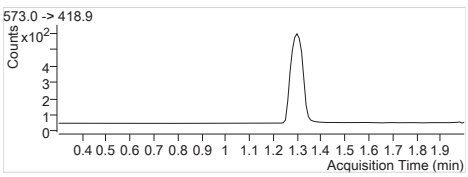
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.300 (1.300)
Calc. conc. 12.14 µg/L
Area ratio: 4.71872
Sample type: CC



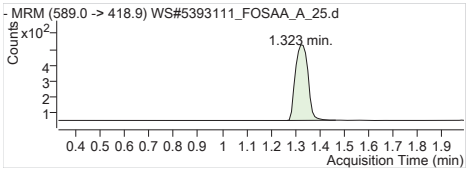


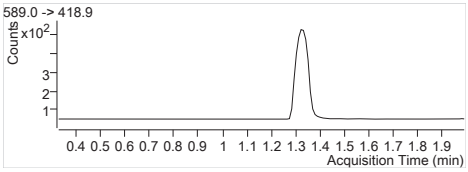
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.325 (1.325)
Calc. conc. 12.04 µg/L
Area ratio: 5.46217
Sample type: CC



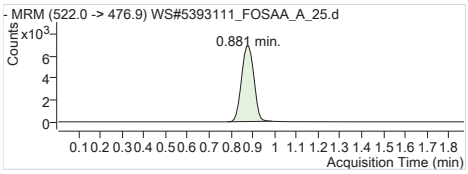


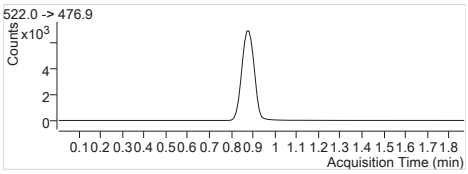
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 95.19 µg/L
Area ratio: 0.07138
Sample type: CC





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	98.85 µg/L
Area ratio:	0.06352
Sample type:	CC





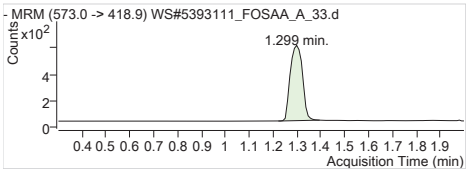
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.881 (0.871)
Calc. conc.	105.76 µg/L
Area ratio:	0
Sample type:	CC

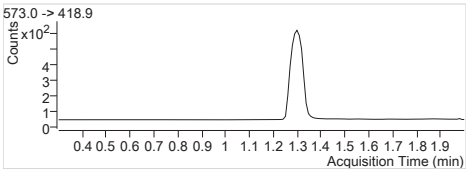
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**CCV**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_33.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A5
Acq. Date	2018/02/13 12:44:16 PM	**Injection Volume**	Per Method
Sample Annotation	-		

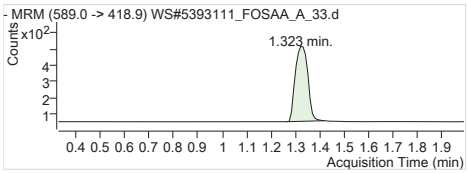
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	2008	1.30	1 µg/L		
D5-EtFOSAA IS	1674	1.32	1 µg/L		
13C9-PFDA IS	27597	0.87	1 µg/L		

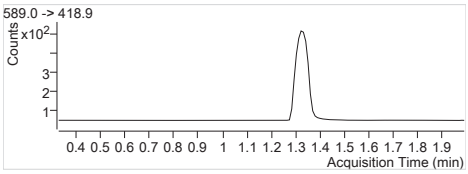
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	9196	1.30	12.50	11.79 µg/L	94.29
EtFOSAA 1	9406	1.32	12.50	12.39 µg/L	99.10
D3-MeFOSAA	2015	1.30	100.00	97.37 µg/L	97.37
D5-EtFOSAA	1713	1.32	100.00	96.60 µg/L	96.60
13C9-PFDA	27109	0.87	100.00	106.25 µg/L	106.25



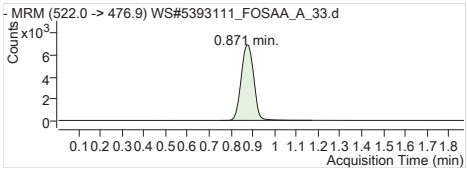


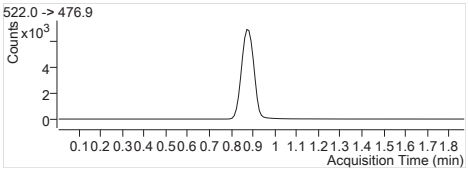
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: CC



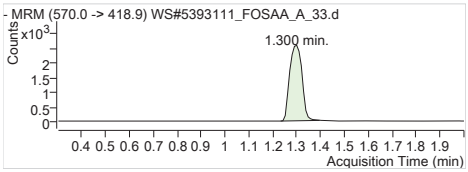


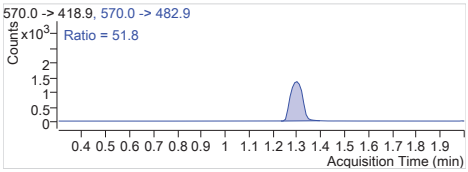
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: CC



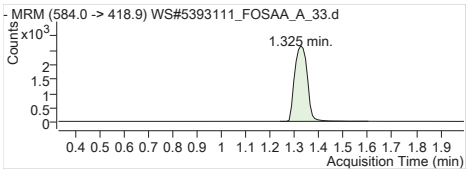


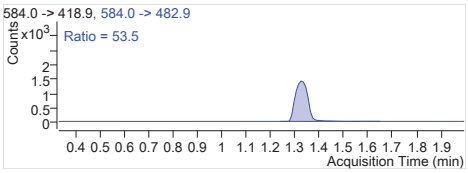
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.871 (0.871)
Concentration: 1 µg/L
Sample type: CC



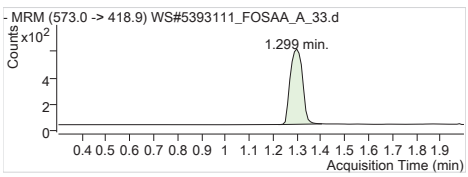


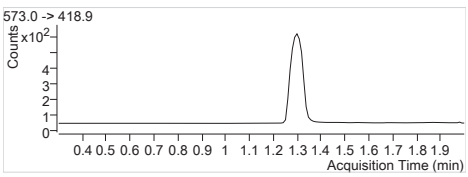
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.300 (1.300)
Calc. conc. 11.79 µg/L
Area ratio: 4.57968
Sample type: CC



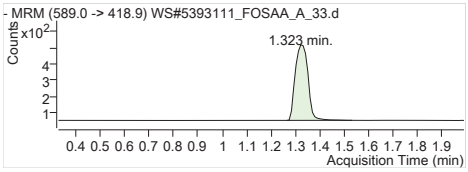


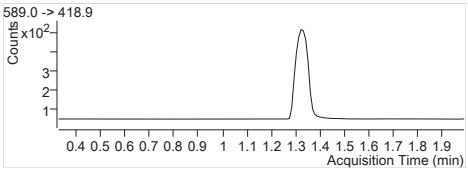
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.325 (1.325)
Calc. conc. 12.39 µg/L
Area ratio: 5.61888
Sample type: CC



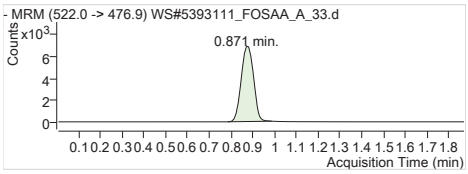


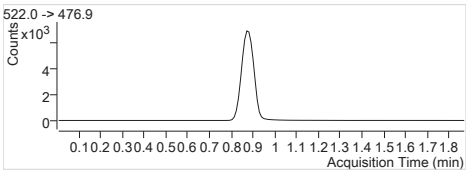
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 97.37 µg/L
Area ratio: 0.07302
Sample type: CC





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	96.60 µg/L
Area ratio:	0.06207
Sample type:	CC





13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.871 (0.871)
Calc. conc.	106.25 µg/L
Area ratio:	0
Sample type:	CC



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6740 Campobello Rd.
Mississauga, Ontario, Canada
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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"
OLD-002-51A-0118,"ES37","RA0","FZA783","MAXXAM","13C2PFDOA","13C2-Perfluorododecanoic acid","106","%","","-99","NA","","SUR","106","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","IN","FZA783","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","88","%","","-99","NA","","SUR","88","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","RA0","FZA783","MAXXAM","13C2PFTDA","13C2-Perfluorotetradecanoic acid","108","%","","-99","NA","","SUR","108","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","IN","FZA783","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","83","%","","-99","NA","","SUR","83","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","IN","FZA783","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","87","%","","-99","NA","","SUR","87","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","IN","FZA783","MAXXAM","1763-23-1 13","13C4-Perfluorooctanesulfonate","95","%","","-99","NA","","SUR","95","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","IN","FZA783","MAXXAM","335-67-1 13C","13C4-Perfluorooctanoic acid","90","%","","-99","NA","","SUR","90","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","IN","FZA783","MAXXAM","13C4PFNA","13C5-Perfluorononanoic acid","91","%","","-99","NA","","SUR","91","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","IN","FZA783","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","88","%","","-99","NA","","SUR","88","","-99","NA","YES","-99","","1","1","-99","TEST"
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"
OLD-002-51A-0118,"ES37","RA0","FZA783","MAXXAM","DS-ETFOSAA","DS-ETFOSAA","112","%","","-99","NA","","SUR","112","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","RA0","FZA783","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","FZA783","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","FZA783","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","FZA783","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","FZA783","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","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"
OLD-002-51A-0118,"ES37","IN","FZA783","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.0089","ug/L","J","0.0056","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
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"
OLD-002-51A-0118,"ES37","RA0","FZA783","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","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"
OLD-002-51A-0118,"ES37","RA0","FZA783","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","FZA783","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-002-51A-0118,"ES37","IN","FZA784","MAXXAM","13C2PFDA","13C2-Perfluorodecanoic acid","107","%","","-99","NA","","SUR","107","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","RA0","FZA784","MAXXAM","13C2PFDOA","13C2-Perfluorododecanoic acid","91","%","","-99","NA","","SUR","91","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","IN","FZA784","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","110","%","","-99","NA","","SUR","110","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","RA0","FZA784","MAXXAM","13C2PFTDA","13C2-Perfluorotetradecanoic acid","102","%","","-99","NA","","SUR","102","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","IN","FZA784","MAXXAM","13C2PFUA","13C2-Perfluoroundecanoic acid","91","%","","-99","NA","","SUR","91","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","IN","FZA784","MAXXAM","13C4PFHPA","13C4-Perfluoroheptanoic acid","114","%","","-99","NA","","SUR","114","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","IN","FZA784","MAXXAM","1763-23-1 13","13C4-Perfluorooctanesulfonate","122","%","","-99","NA","","SUR","122","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","IN","FZA784","MAXXAM","335-67-1 13C","13C4-Perfluorooctanoic acid","111","%","","-99","NA","","SUR","111","","-99","NA","YES","-99","","1","1","-99","TEST"
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"
OLD-002-51A-0118,"ES37","IN","FZA784","MAXXAM","18O2PFHXS","18O2-Perfluorohexanesulfonate","114","%","","-99","NA","","SUR","114","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","RA0","FZA784","MAXXAM","D3-MEFOSAA","N-METHYL-D3-PERFLUOROOCTANESULFONAMIDOACETIC ACID","104","%","","-99","NA","","SUR","104","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","RA0","FZA784","MAXXAM","DS-ETFOSAA","DS-ETFOSAA","103","%","","-99","NA","","SUR","103","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","RA0","FZA784","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","FZA784","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","FZA784","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","FZA784","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","FZA784","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","FZA784","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","FZA784","MAXXAM","355-46-4","Perfluorohexanesulfonic acid","0.0087","ug/L","J","0.0056","MDL","","NM","","","0.020","PQL","YES","-99","","1","1","0.020","TEST"
OLD-002-51A-0118,"ES37","IN","FZA784","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-002-51A-0118,"ES37","IN","FZA784","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","FZA784","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","FZA784","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","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"
OLD-002-51A-0118,"ES37","IN","FZA785","MAXXAM","13C2PFDA","13C2-Perfluorodecanoic acid","95","%","","-99","NA","","SUR","95","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","RA0","FZA785","MAXXAM","13C2PFDOA","13C2-Perfluorododecanoic acid","94","%","","-99","NA","","SUR","94","","-99","NA","YES","-99","","1","1","-99","TEST"
OLD-002-51A-0118,"ES37","IN","FZA785","MAXXAM","13C2PFHXA","13C2-Perfluorohexanoic acid","82","%","","-99","NA","","SUR","82","","-99","NA","YES","-99","","1","1","-99","TEST"
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",""
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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",""
JM11 NTC Orlando,"JM11 NTC ORLANDO","OLD-002-03A-0118","01/22/2018 15:01","W","FZA786","NM","647124-01-01","3.201","ES37","ES37","IN","02/03/2018 11:08","02/06/2018 19:35","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-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",""
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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",""
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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","IN","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",""
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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",""
JM11 NTC Orlando,"JM11 NTC ORLANDO","FB-OLD-012418-5","01/24/2018 10:00","W","FZA808","NM","647124-02-01","3.201","ES37","ES37","DL1","02/07/2018 14:49","02/09/2018 01:06","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","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",""
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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",
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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) B821961

SAMPLES: 12/Aqueous/PFAS

DI BLANK	EB-GW-012518-3	EB-GW-012618-4
FB-OLD-012518-6	FB-OLD-012618-7	OLD-OU1-101TW-0118
OLD-OU1-102TW-0118	OLD-OU1-102TW-0118-D	OLD-OU1-103TW-0118
OLD-SA2-01ATW-0118	OLD-SA2-04ATW-0118	OLD-SA2-06ATW-0118

Overview

The sample set for NTC Orlando, SDG B821961 consisted of seven (7) aqueous environmental samples, one (1) distilled water blank, two (2) equipment blanks, and two (2) Field Reagent Blanks (FRBs). All twelve (12) samples were analyzed for polyfluoroalkyl substances (PFAS). One field duplicate sample pair was included in this SDG: OLD-OU1-102TW-0118/OLD-OU1-TW12-0118-D.

The samples were collected by Tetra Tech, Inc. on January 25-26, 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/Laboratory Control Sample Duplicate Recoveries
• 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

The difference between the detected results for perfluorooctane sulfonic acid (PFOS) exceeded 2X the Limit of Quantitation (LOQ) in the field duplicate pair, OLD-OU1-102TW-0118/OLD-OU1-TW12-0118-D. The detected results for this compound in the field duplicate pair were qualified as estimated, (J), due to field duplicate imprecision.

Additional Comments

The laboratory labeled samples OLD-OU1-101TW-0118, OLD-OU1-102TW-0118, OLD-OU1-102TW-0118-D, and OLD-OU1-103TW-0118 as OLD-OV1-101TW-0118, OLD-OV1-102TW-0118, OLD-OV1-102TW-0118-D, and OLD-OV1-103TW-0118. The sample identifications were corrected in the database.

Sample OLD-SA2-06ATW-0118 was analyzed at a reduced sample volume because of the discolored and turbid appearance. The reporting limits were adjusted accordingly.

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.

Other Factors Affecting Data Quality: Field duplicate imprecision was noted for one compound. One sample was analyzed at a reduced volume. 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.

for Tetra Tech, Inc.
Michelle L. Woeber
Chemist/Data Validator

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	DI BLANK			EB-GW-012518-3			EB-GW-012618-4			FB-OLD-012518-6		
SDG: B821961	LAB_ID	FZT431			FZT424			FZT430			FZT425		
FRACTION: PFAS	SAMP_DATE	1/26/2018			1/25/2018			1/26/2018			1/25/2018		
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	U		0.0033	U		0.0038	U	
N-METHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID		0.0029	U		0.0029	U		0.0029	U		0.0033	U	
PENTADECAFLUOROOCTANOIC ACID		0.0033	U		0.0033	U		0.0033	U		0.0038	U	
PERFLUOROBUTANESULFONIC ACID		0.0054	U		0.0054	U		0.0054	U		0.0062	U	
PERFLUORODECANOIC ACID		0.0061	U		0.0061	U		0.0061	U		0.007	U	
PERFLUORODODECANOIC ACID		0.005	U		0.005	U		0.005	U		0.0058	U	
PERFLUOROHEPTANOIC ACID		0.0074	U		0.0074	U		0.0074	U		0.0085	U	
PERFLUOROHEXANESULFONIC ACID		0.0056	U		0.0056	U		0.0056	U		0.0064	U	
PERFLUOROHEXANOIC ACID		0.0035	U		0.0035	U		0.0035	U		0.004	U	
PERFLUORONONANOIC ACID		0.0087	U		0.0087	U		0.0087	U		0.01	U	
PERFLUOROOCTANE SULFONIC ACID		0.006	U		0.006	U		0.006	U		0.0069	U	
PERFLUOROTETRADECANOIC ACID		0.0027	U		0.0027	U		0.0027	U		0.0031	U	
PERFLUOROTRIDECANOIC ACID		0.0038	U		0.0038	U		0.0038	U		0.0044	U	
PERFLUOROUNDECANOIC ACID		0.0025	U		0.0025	U		0.0025	U		0.0029	U	

PROJ_NO: 08005-JM11	NSAMPLE	FB-OLD-012618-7			OLD-OU1-101TW-0118			OLD-OU1-102TW-0118			OLD-OU1-102TW-0118-D		
SDG: B821961	LAB_ID	FZT428			FZT419			FZT420			FZT421		
FRACTION: PFAS	SAMP_DATE	1/26/2018			1/25/2018			1/25/2018			1/25/2018		
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										OLD-OU1-102TW-0118		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
N-ETHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID		0.0033	U		0.0035	U		0.0033	U		0.0033	U	
N-METHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID		0.0029	U		0.003	U		0.0029	U		0.0029	U	
PENTADECAFLUOROOCTANOIC ACID		0.0033	U		0.069			0.0085	J	P	0.0057	J	P
PERFLUOROBUTANESULFONIC ACID		0.0054	U		0.016	J	P	0.0054	U		0.018	J	P
PERFLUORODECANOIC ACID		0.0061	U		0.0064	U		0.0061	U		0.0061	U	
PERFLUORODODECANOIC ACID		0.005	U		0.0053	U		0.005	U		0.005	U	
PERFLUOROHEPTANOIC ACID		0.0074	U		0.015	J	P	0.0074	U		0.0074	U	
PERFLUOROHEXANESULFONIC ACID		0.0056	U		0.47			0.046			0.031		
PERFLUOROHEXANOIC ACID		0.0035	U		0.039			0.0035	U		0.0074	J	P
PERFLUORONONANOIC ACID		0.0087	U		0.0091	U		0.0087	U		0.0087	U	
PERFLUOROOCTANE SULFONIC ACID		0.006	U		0.14			0.011	J	GP	0.11	J	G
PERFLUOROTETRADECANOIC ACID		0.0027	U		0.0028	U		0.0027	U		0.0027	U	
PERFLUOROTRIDECANOIC ACID		0.0038	U		0.004	U		0.0038	U		0.0038	U	
PERFLUOROUNDECANOIC ACID		0.0025	U		0.0026	U		0.0025	U		0.0025	U	

PROJ_NO: 08005-JM11	NSAMPLE	OLD-OU1-103TW-0118			OLD-SA2-01ATW-0118			OLD-SA2-04ATW-0118			OLD-SA2-06ATW-0118		
SDG: B821961	LAB_ID	FZT422			FZT427			FZT423			FZT426		
FRACTION: PFAS	SAMP_DATE	1/25/2018			1/26/2018			1/25/2018			1/26/2018		
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	U		0.0038	U		0.033	U	
N-METHYL PERFLUOROOCTANE SULFONAMIDOACETIC ACID		0.0029	U		0.0029	U		0.0033	U		0.029	U	
PENTADECAFLUOROOCTANOIC ACID		0.0098	J	P	0.0033	U		0.011	J	P	0.033	U	
PERFLUOROBUTANESULFONIC ACID		0.012	J	P	0.0054	U		0.0062	U		0.054	U	
PERFLUORODECANOIC ACID		0.0061	U		0.0061	U		0.007	U		0.061	U	
PERFLUORODODECANOIC ACID		0.005	U		0.005	U		0.0058	U		0.05	U	
PERFLUOROHEPTANOIC ACID		0.0074	U		0.0074	U		0.0085	U		0.074	U	
PERFLUOROHEXANESULFONIC ACID		0.0056	U		0.0056	U		0.31			0.056	U	
PERFLUOROHEXANOIC ACID		0.0035	U		0.0035	U		0.024			0.035	U	
PERFLUORONONANOIC ACID		0.0087	U		0.0087	U		0.01	U		0.087	U	
PERFLUOROOCTANE SULFONIC ACID		0.019	J	P	0.006	U		0.31			0.06	U	
PERFLUOROTETRADECANOIC ACID		0.0027	U		0.0027	U		0.0031	U		0.027	U	
PERFLUOROTRIDECANOIC ACID		0.0038	U		0.0038	U		0.0044	U		0.038	U	
PERFLUOROUNDECANOIC ACID		0.0025	U		0.0025	U		0.0029	U		0.025	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

Maxxam Job #: B821961
Report Date: 2018/02/14

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

RESULTS OF ANALYSES OF WATER

Maxxam ID		FZT419				FZT420				
Sampling Date		2018/01/25 10:15				2018/01/25 13:10				
COC Number		647124-03-01				647124-03-01				
	UNITS	OLD-OV1-101TW-0118	DL	LOD	LOQ	OLD-OV1-102TW-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	5390275
MeFOSAA	ug/L	0.011 U	0.0030	0.011	0.021	0.010 U	0.0029	0.010	0.020	5390275
Perfluorobutane Sulfonate (PFBS)	ug/L	0.016 J	0.0057	0.016	0.021	0.015 U	0.0054	0.015	0.020	5390275
Perfluoroheptanoic Acid (PFHpA)	ug/L	0.015 J	0.0078	0.016	0.021	0.015 U	0.0074	0.015	0.020	5390275
Perfluorohexanoic Acid (PFHxA)	ug/L	0.039	0.0037	0.011	0.021	0.010 U	0.0035	0.010	0.020	5390275
Perfluorohexane Sulfonate (PFHxS)	ug/L	0.47	0.0059	0.016	0.021	0.046	0.0056	0.015	0.020	5390275
Perfluorononanoic Acid (PFNA)	ug/L	0.019 U	0.0091	0.019	0.021	0.018 U	0.0087	0.018	0.020	5390275
Perfluorotetradecanoic Acid	ug/L	0.011 U	0.0028	0.011	0.021	0.010 U	0.0027	0.010	0.020	5390275
Perfluorotridecanoic Acid	ug/L	0.011 U	0.0040	0.011	0.021	0.010 U	0.0038	0.010	0.020	5390275
Perfluoroundecanoic Acid (PFUnA)	ug/L	0.011 U	0.0026	0.011	0.021	0.010 U	0.0025	0.010	0.020	5390275
Perfluorodecanoic Acid (PFDA)	ug/L	0.016 U	0.0064	0.016	0.021	0.015 U	0.0061	0.015	0.020	5390275
Perfluorododecanoic Acid (PFDoA)	ug/L	0.011 U	0.0053	0.011	0.021	0.010 U	0.0050	0.010	0.020	5390275
Perfluoro-n-Octanoic Acid (PFOA)	ug/L	0.069	0.0035	0.011	0.021	0.0085 J	0.0033	0.010	0.020	5390275
Perfluorooctane Sulfonate (PFOS)	ug/L	0.14	0.0063	0.016	0.021	0.011 J	0.0060	0.015	0.020	5390275
Surrogate Recovery (%)										
13C2-Perfluorodecanoic acid	%	103				94				5390275
13C2-Perfluorododecanoic acid	%	74				88				5390275
13C2-Perfluorohexanoic acid	%	94				92				5390275
13C2-perfluorotetradecanoic acid	%	79				87				5390275
13C2-Perfluoroundecanoic acid	%	82				86				5390275
13C4-Perfluoroheptanoic acid	%	96				93				5390275
13C4-Perfluorooctanesulfonate	%	82				91				5390275
13C4-Perfluorooctanoic acid	%	101				88				5390275
13C5-Perfluorononanoic acid	%	95				89				5390275
18O2-Perfluorohexanesulfonate	%	100				99				5390275
D3-MeFOSAA	%	87				90				5390275
D5-EtFOSAA	%	87				90				5390275

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

Maxxam Job #: B821961
Report Date: 2018/02/14

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

RESULTS OF ANALYSES OF WATER

Maxxam ID		FZT421	FZT422				
Sampling Date		2018/01/25 13:10	2018/01/25 14:04				
COC Number		647124-03-01	647124-03-01				
	UNITS	OLD-OV1-102TW-0118-D	OLD-OV1-103TW-0118	DL	LOD	LOQ	QC Batch
Miscellaneous Parameters							
EtFOSAA	ug/L	0.010 U	0.010 U	0.0033	0.010	0.020	5390275
MeFOSAA	ug/L	0.010 U	0.010 U	0.0029	0.010	0.020	5390275
Perfluorobutane Sulfonate (PFBS)	ug/L	0.018 J	0.012 J	0.0054	0.015	0.020	5390275
Perfluoroheptanoic Acid (PFHpA)	ug/L	0.015 U	0.015 U	0.0074	0.015	0.020	5390275
Perfluorohexanoic Acid (PFHxA)	ug/L	0.0074 J	0.010 U	0.0035	0.010	0.020	5390275
Perfluorohexane Sulfonate (PFHxS)	ug/L	0.031	0.015 U	0.0056	0.015	0.020	5390275
Perfluorononanoic Acid (PFNA)	ug/L	0.018 U	0.018 U	0.0087	0.018	0.020	5390275
Perfluorotetradecanoic Acid	ug/L	0.010 U	0.010 U	0.0027	0.010	0.020	5390275
Perfluorotridecanoic Acid	ug/L	0.010 U	0.010 U	0.0038	0.010	0.020	5390275
Perfluoroundecanoic Acid (PFUnA)	ug/L	0.010 U	0.010 U	0.0025	0.010	0.020	5390275
Perfluorodecanoic Acid (PFDA)	ug/L	0.015 U	0.015 U	0.0061	0.015	0.020	5390275
Perfluorododecanoic Acid (PFDoA)	ug/L	0.010 U	0.010 U	0.0050	0.010	0.020	5390275
Perfluoro-n-Octanoic Acid (PFOA)	ug/L	0.0057 J	0.0098 J	0.0033	0.010	0.020	5390275
Perfluorooctane Sulfonate (PFOS)	ug/L	0.11	0.019 J	0.0060	0.015	0.020	5390275
Surrogate Recovery (%)							
13C2-Perfluorodecanoic acid	%	108	94				5390275
13C2-Perfluorododecanoic acid	%	86	88				5390275
13C2-Perfluorohexanoic acid	%	109	94				5390275
13C2-perfluorotetradecanoic acid	%	70	77				5390275
13C2-Perfluoroundecanoic acid	%	100	86				5390275
13C4-Perfluoroheptanoic acid	%	107	94				5390275
13C4-Perfluorooctanesulfonate	%	101	84				5390275
13C4-Perfluorooctanoic acid	%	106	92				5390275
13C5-Perfluorononanoic acid	%	105	96				5390275
18O2-Perfluorohexanesulfonate	%	111	90				5390275
D3-MeFOSAA	%	101	95				5390275
D5-EtFOSAA	%	96	93				5390275

DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
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 Job #: B821961
Report Date: 2018/02/14

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

RESULTS OF ANALYSES OF WATER

Maxxam ID		FZT423				FZT424				
Sampling Date		2018/01/25 15:45				2018/01/25 12:10				
COC Number		647124-03-01				647124-03-01				
	UNITS	OLD-SA2-04ATW-0118	DL	LOD	LOQ	EB-GW-012518-3	DL	LOD	LOQ	QC Batch
Miscellaneous Parameters										
EtFOSAA	ug/L	0.012 U	0.0038	0.012	0.023	0.010 U	0.0033	0.010	0.020	5390275
MeFOSAA	ug/L	0.012 U	0.0033	0.012	0.023	0.010 U	0.0029	0.010	0.020	5390275
Perfluorobutane Sulfonate (PFBS)	ug/L	0.017 U	0.0062	0.017	0.023	0.015 U	0.0054	0.015	0.020	5390275
Perfluoroheptanoic Acid (PFHpA)	ug/L	0.017 U	0.0085	0.017	0.023	0.015 U	0.0074	0.015	0.020	5390275
Perfluorohexanoic Acid (PFHxA)	ug/L	0.024	0.0040	0.012	0.023	0.010 U	0.0035	0.010	0.020	5390275
Perfluorohexane Sulfonate (PFHxS)	ug/L	0.31	0.0064	0.017	0.023	0.015 U	0.0056	0.015	0.020	5390275
Perfluorononanoic Acid (PFNA)	ug/L	0.021 U	0.010	0.021	0.023	0.018 U	0.0087	0.018	0.020	5390275
Perfluorotetradecanoic Acid	ug/L	0.012 U	0.0031	0.012	0.023	0.010 U	0.0027	0.010	0.020	5390275
Perfluorotridecanoic Acid	ug/L	0.012 U	0.0044	0.012	0.023	0.010 U	0.0038	0.010	0.020	5390275
Perfluoroundecanoic Acid (PFUnA)	ug/L	0.012 U	0.0029	0.012	0.023	0.010 U	0.0025	0.010	0.020	5390275
Perfluorodecanoic Acid (PFDA)	ug/L	0.017 U	0.0070	0.017	0.023	0.015 U	0.0061	0.015	0.020	5390275
Perfluorododecanoic Acid (PFDoA)	ug/L	0.012 U	0.0058	0.012	0.023	0.010 U	0.0050	0.010	0.020	5390275
Perfluoro-n-Octanoic Acid (PFOA)	ug/L	0.011 J	0.0038	0.012	0.023	0.010 U	0.0033	0.010	0.020	5390275
Perfluorooctane Sulfonate (PFOS)	ug/L	0.31	0.0069	0.017	0.023	0.015 U	0.0060	0.015	0.020	5390275
Surrogate Recovery (%)										
13C2-Perfluorodecanoic acid	%	96				104				5390275
13C2-Perfluorododecanoic acid	%	87				87				5390275
13C2-Perfluorohexanoic acid	%	97				99				5390275
13C2-perfluorotetradecanoic acid	%	72				83				5390275
13C2-Perfluoroundecanoic acid	%	85				99				5390275
13C4-Perfluoroheptanoic acid	%	96				98				5390275
13C4-Perfluorooctanesulfonate	%	85				91				5390275
13C4-Perfluorooctanoic acid	%	90				97				5390275
13C5-Perfluorononanoic acid	%	99				107				5390275
18O2-Perfluorohexanesulfonate	%	99				99				5390275
D3-MeFOSAA	%	91				85				5390275
D5-EtFOSAA	%	88				83				5390275

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

Maxxam Job #: B821961
Report Date: 2018/02/14

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

RESULTS OF ANALYSES OF WATER

Maxxam ID		FZT425					FZT426				
Sampling Date		2018/01/25 12:15					2018/01/26 10:36				
COC Number		647124-03-01					647124-03-01				
	UNITS	FB-OLD-012518-6	DL	LOD	LOQ	QC Batch	OLD-SA2-06ATW-0118	DL	LOD	LOQ	QC Batch
Miscellaneous Parameters											
EtFOSAA	ug/L	0.012 U	0.0038	0.012	0.023	5390275	0.10 U (1)	0.033	0.10	0.20	5393111
MeFOSAA	ug/L	0.012 U	0.0033	0.012	0.023	5390275	0.10 U (1)	0.029	0.10	0.20	5393111
Perfluorobutane Sulfonate (PFBS)	ug/L	0.017 U	0.0062	0.017	0.023	5390275	0.15 U (1)	0.054	0.15	0.20	5393111
Perfluoroheptanoic Acid (PFHpA)	ug/L	0.017 U	0.0085	0.017	0.023	5390275	0.15 U (1)	0.074	0.15	0.20	5393111
Perfluorohexanoic Acid (PFHxA)	ug/L	0.012 U	0.0040	0.012	0.023	5390275	0.10 U (1)	0.035	0.10	0.20	5393111
Perfluorohexane Sulfonate (PFHxS)	ug/L	0.017 U	0.0064	0.017	0.023	5390275	0.15 U (1)	0.056	0.15	0.20	5393111
Perfluorononanoic Acid (PFNA)	ug/L	0.021 U	0.010	0.021	0.023	5390275	0.18 U (1)	0.087	0.18	0.20	5393111
Perfluorotetradecanoic Acid	ug/L	0.012 U	0.0031	0.012	0.023	5390275	0.10 U (1)	0.027	0.10	0.20	5393111
Perfluorotridecanoic Acid	ug/L	0.012 U	0.0044	0.012	0.023	5390275	0.10 U (1)	0.038	0.10	0.20	5393111
Perfluoroundecanoic Acid (PFUnA)	ug/L	0.012 U	0.0029	0.012	0.023	5390275	0.10 U (1)	0.025	0.10	0.20	5393111
Perfluorodecanoic Acid (PFDA)	ug/L	0.017 U	0.0070	0.017	0.023	5390275	0.15 U (1)	0.061	0.15	0.20	5393111
Perfluorododecanoic Acid (PFDoA)	ug/L	0.012 U	0.0058	0.012	0.023	5390275	0.10 U (1)	0.050	0.10	0.20	5393111
Perfluoro-n-Octanoic Acid (PFOA)	ug/L	0.012 U	0.0038	0.012	0.023	5390275	0.10 U (1)	0.033	0.10	0.20	5393111
Perfluorooctane Sulfonate (PFOS)	ug/L	0.017 U	0.0069	0.017	0.023	5390275	0.15 U (1)	0.060	0.15	0.20	5393111
Surrogate Recovery (%)											
13C2-Perfluorodecanoic acid	%	95				5390275	98				5393111
13C2-Perfluorododecanoic acid	%	86				5390275	101				5393111
13C2-Perfluorohexanoic acid	%	96				5390275	98				5393111
13C2-perfluorotetradecanoic acid	%	75				5390275	103				5393111
13C2-Perfluoroundecanoic acid	%	83				5390275	96				5393111
13C4-Perfluoroheptanoic acid	%	96				5390275	104				5393111
13C4-Perfluorooctanesulfonate	%	83				5390275	103				5393111
13C4-Perfluorooctanoic acid	%	92				5390275	103				5393111
13C5-Perfluorononanoic acid	%	91				5390275	101				5393111
18O2-Perfluorohexanesulfonate	%	103				5390275	101				5393111
D3-MeFOSAA	%	77				5390275	91				5393111
D5-EtFOSAA	%	79				5390275	95				5393111

DL = Detection Limit
LOD = Limit of Detection
LOQ = Limit of Quantitation
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Due to the sample matrix, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x).

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 #: B821961
Report Date: 2018/02/14

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

RESULTS OF ANALYSES OF WATER

Maxxam ID		FZT427	FZT428	FZT430				
Sampling Date		2018/01/26 11:48	2018/01/26 10:55	2018/01/26 10:50				
COC Number		647124-03-01	647124-03-01	647897-01-01				
	UNITS	OLD-SA2-01ATW-0118	FB-OLD-012618-7	EB-GW-012618-4	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	5393111
MeFOSAA	ug/L	0.010 U	0.010 U	0.010 U	0.0029	0.010	0.020	5393111
Perfluorobutane Sulfonate (PFBS)	ug/L	0.015 U	0.015 U	0.015 U	0.0054	0.015	0.020	5393111
Perfluoroheptanoic Acid (PFHpA)	ug/L	0.015 U	0.015 U	0.015 U	0.0074	0.015	0.020	5393111
Perfluorohexanoic Acid (PFHxA)	ug/L	0.010 U	0.010 U	0.010 U	0.0035	0.010	0.020	5393111
Perfluorohexane Sulfonate (PFHxS)	ug/L	0.015 U	0.015 U	0.015 U	0.0056	0.015	0.020	5393111
Perfluorononanoic Acid (PFNA)	ug/L	0.018 U	0.018 U	0.018 U	0.0087	0.018	0.020	5393111
Perfluorotetradecanoic Acid	ug/L	0.010 U	0.010 U	0.010 U	0.0027	0.010	0.020	5393111
Perfluorotridecanoic Acid	ug/L	0.010 U	0.010 U	0.010 U	0.0038	0.010	0.020	5393111
Perfluoroundecanoic Acid (PFUnA)	ug/L	0.010 U	0.010 U	0.010 U	0.0025	0.010	0.020	5393111
Perfluorodecanoic Acid (PFDA)	ug/L	0.015 U	0.015 U	0.015 U	0.0061	0.015	0.020	5393111
Perfluorododecanoic Acid (PFDoA)	ug/L	0.010 U	0.010 U	0.010 U	0.0050	0.010	0.020	5393111
Perfluoro-n-Octanoic Acid (PFOA)	ug/L	0.010 U	0.010 U	0.010 U	0.0033	0.010	0.020	5393111
Perfluorooctane Sulfonate (PFOS)	ug/L	0.015 U	0.015 U	0.015 U	0.0060	0.015	0.020	5393111
Surrogate Recovery (%)								
13C2-Perfluorodecanoic acid	%	93	83	81				5393111
13C2-Perfluorododecanoic acid	%	89	81	70				5393111
13C2-Perfluorohexanoic acid	%	93	94	87				5393111
13C2-perfluorotetradecanoic acid	%	64	78	70				5393111
13C2-Perfluoroundecanoic acid	%	82	75	76				5393111
13C4-Perfluoroheptanoic acid	%	97	88	93				5393111
13C4-Perfluorooctanesulfonate	%	104	94	89				5393111
13C4-Perfluorooctanoic acid	%	99	91	87				5393111
13C5-Perfluorononanoic acid	%	93	90	83				5393111
18O2-Perfluorohexanesulfonate	%	90	99	91				5393111
D3-MeFOSAA	%	78	76	74				5393111
D5-EtFOSAA	%	77	76	74				5393111

DL = Detection Limit
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LOQ = Limit of Quantitation
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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 Job #: B821961
Report Date: 2018/02/14

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

RESULTS OF ANALYSES OF WATER

Maxxam ID		FZT431				
Sampling Date		2018/01/26 11:00				
COC Number		647897-01-01				
	UNITS	DI BLANK	DL	LOD	LOQ	QC Batch
Miscellaneous Parameters						
EtFOSAA	ug/L	0.010 U	0.0033	0.010	0.020	5393111
MeFOSAA	ug/L	0.010 U	0.0029	0.010	0.020	5393111
Perfluorobutane Sulfonate (PFBS)	ug/L	0.015 U	0.0054	0.015	0.020	5393111
Perfluoroheptanoic Acid (PFHpA)	ug/L	0.015 U	0.0074	0.015	0.020	5393111
Perfluorohexanoic Acid (PFHxA)	ug/L	0.010 U	0.0035	0.010	0.020	5393111
Perfluorohexane Sulfonate (PFHxS)	ug/L	0.015 U	0.0056	0.015	0.020	5393111
Perfluorononanoic Acid (PFNA)	ug/L	0.018 U	0.0087	0.018	0.020	5393111
Perfluorotetradecanoic Acid	ug/L	0.010 U	0.0027	0.010	0.020	5393111
Perfluorotridecanoic Acid	ug/L	0.010 U	0.0038	0.010	0.020	5393111
Perfluoroundecanoic Acid (PFUnA)	ug/L	0.010 U	0.0025	0.010	0.020	5393111
Perfluorodecanoic Acid (PFDA)	ug/L	0.015 U	0.0061	0.015	0.020	5393111
Perfluorododecanoic Acid (PFDoA)	ug/L	0.010 U	0.0050	0.010	0.020	5393111
Perfluoro-n-Octanoic Acid (PFOA)	ug/L	0.010 U	0.0033	0.010	0.020	5393111
Perfluorooctane Sulfonate (PFOS)	ug/L	0.015 U	0.0060	0.015	0.020	5393111
Surrogate Recovery (%)						
13C2-Perfluorodecanoic acid	%	85				5393111
13C2-Perfluorododecanoic acid	%	80				5393111
13C2-Perfluorohexanoic acid	%	95				5393111
13C2-perfluorotetradecanoic acid	%	74				5393111
13C2-Perfluoroundecanoic acid	%	75				5393111
13C4-Perfluoroheptanoic acid	%	91				5393111
13C4-Perfluorooctanesulfonate	%	83				5393111
13C4-Perfluorooctanoic acid	%	90				5393111
13C5-Perfluorononanoic acid	%	91				5393111
18O2-Perfluorohexanesulfonate	%	86				5393111
D3-MeFOSAA	%	75				5393111
D5-EtFOSAA	%	73				5393111

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

APPENDIX C

SUPPORT DOCUMENTATION

NTC ORLANDO
SDG 821961

SAMPLE IDENTIFICATION	OLD-OV1-101TW-0118 (FTZ419)	
COMPOUND	PERFLUOROHEXANESULFONIC ACID	
EXTRACTION	3ml/120ml	
INTERNAL STANDARD CONCENTRATION	1	

CONCENTRATION USING CALIBRATION CURVE

AREA*(IS CONCENTRATION/IS AREA)

11464*(1/1382) = 8.295224313

CALIBRATION CURVE y = 0.448448 * x - 0.046404 p. 611 data package

8.29522431259045 0.448448 * x - 0.046404

x = 18.60110495

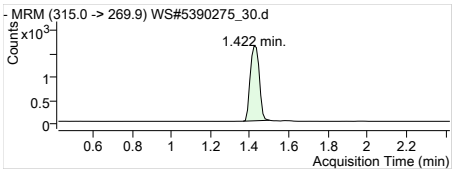
PFDA RESULT CONC = X/EXTRACTION	0.47	µg/L
DILUTION FACTOR	1	
FINAL RESULT	0.47	µg/L
	465	ng/L

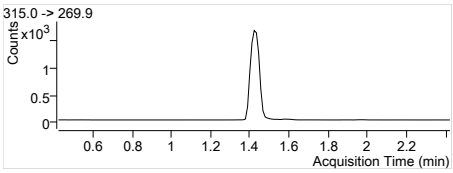
Batch Path	T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_ETOxics

Sample Name	**5390275:FZT419-01**	**Instrument**	LCMS04
Data File	WS#5390275_30.d	**Operator**	
Sample Type	Sample	**Dilution**	0.025
Acq. Method	PFC_Water_Low.m	**Position**	P2-C9
Acq. Date	2018/02/09 6:57:18 PM	**Injection Volume**	Per Method
Sample Annotation	Reported for all.		

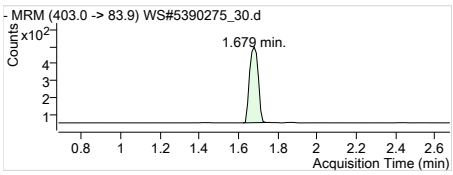
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	5164	1.42	1 µg/L		
MPFHxS	1382	1.68	1 µg/L		
MPFHpA	6866	1.69	1 µg/L		
MPFOA	7648	1.87	1 µg/L		
MPFOS	1426	1.98	1 µg/L		
MPFNA	7131	2.01	1 µg/L		
MPFDA	6608	2.14	1 µg/L		
MPFUnA	6606	2.23	1 µg/L		
MPFDoA	7704	2.32	1 µg/L		
MPFTeDA	9312	2.47	1 µg/L		
13C6-PFHxA IS	22054	1.42	1 µg/L		
13C9-PFDA IS	30454	2.13	1 µg/L		

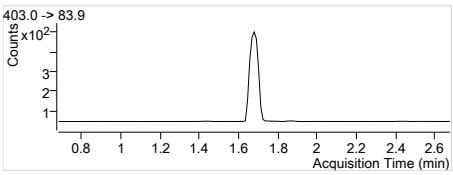
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	334	1.09	-	0.02 µg/L	-
PFHxA 1	3233	1.42	-	0.04 µg/L	-
PFHxS 1	11464	1.68	-	0.47 µg/L	-
PFHpA 1	1127	1.69	-	0.02 µg/L	-
PFOA 1	8681	1.87	-	0.07 µg/L	-
PFOS 1	2837	1.96	-	0.14 µg/L	-
PFNA 1			-	ND	-
PFDA 1			-	ND	-
PFUnA 1			-	ND	-
PFDoA 1			-	ND	-
PFTrDA 1			-	ND	-
PFTeDA 1			-	ND	-
13C2-PFHxA	5164	1.42	-	93.82 µg/L	-
18O2-PFHxS	1382	1.68	-	100.23 µg/L	-
13C4-PFHpA	6866	1.69	-	95.71 µg/L	-
13C4-PFOA	7648	1.87	-	100.51 µg/L	-
13C4-PFOS	1426	1.98	-	82.43 µg/L	-
13C5-PFNA	7131	2.01	-	94.82 µg/L	-
13C2-PFDA	6531	2.14	-	102.92 µg/L	-
13C2-PFUnA	6606	2.23	-	82.32 µg/L	-
13C2-PFDoA	7704	2.32	-	74.21 µg/L	-
13C2-PFTeDA	9557	2.47	-	79.35 µg/L	-
13C6-PFHxA	22054	1.42	-	2.35 µg/L	-
13C9-PFDA	30454	2.13	-	2.46 µg/L	-



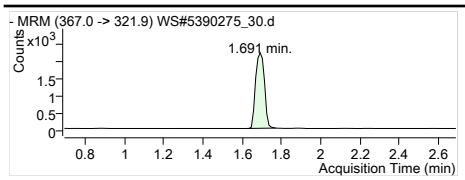


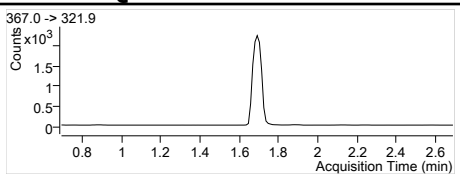
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



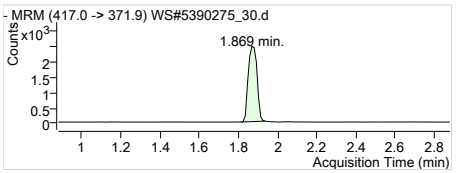


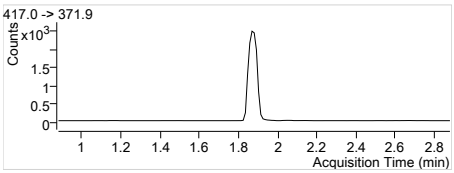
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: Sample



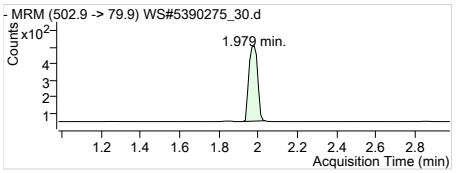


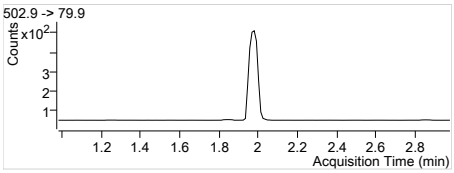
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: Sample



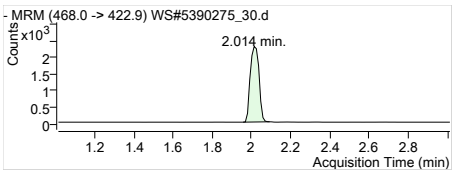


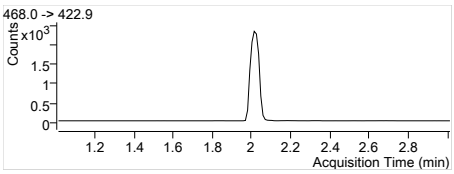
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: Sample



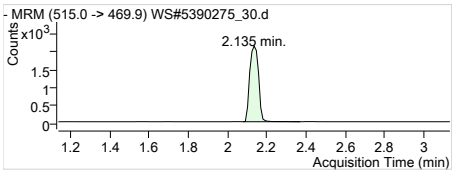


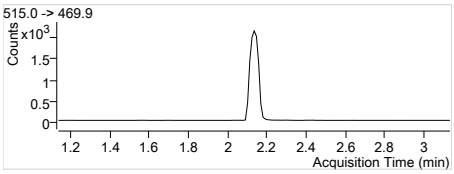
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: Sample



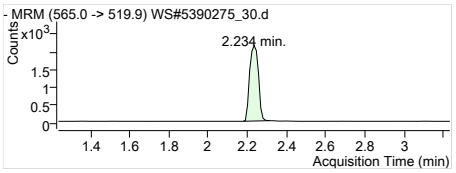


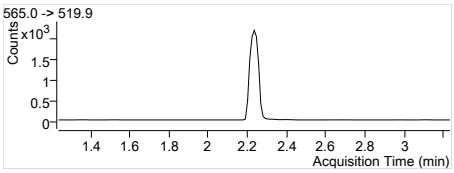
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: Sample



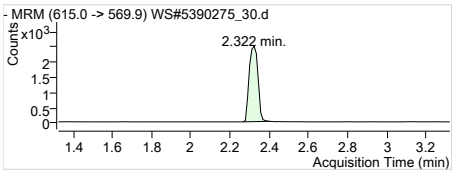


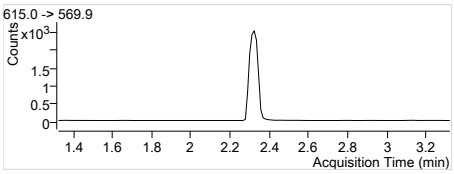
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



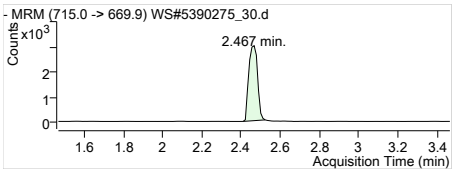


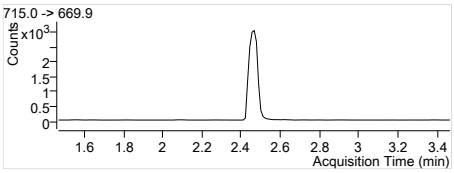
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: Sample



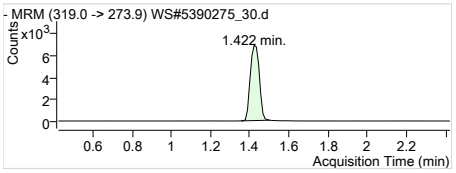


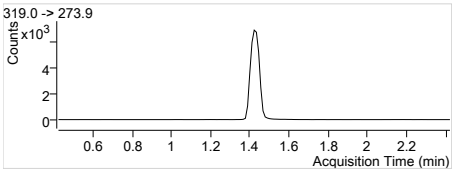
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: Sample



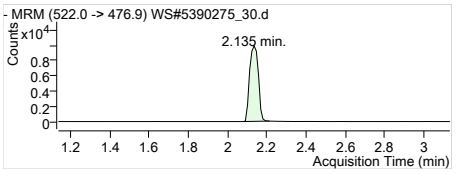


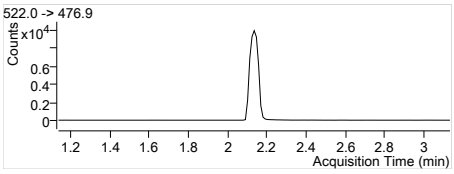
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: Sample



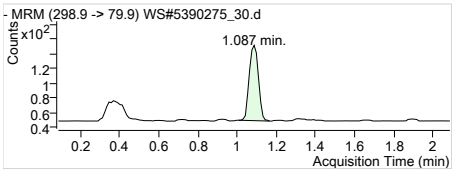


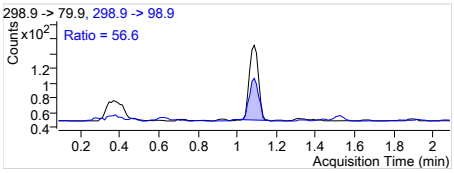
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: Sample



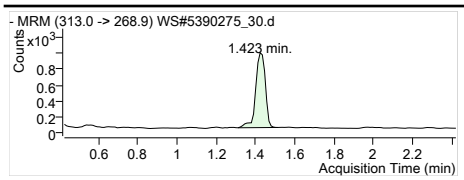


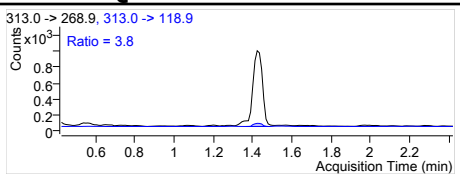
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: Sample



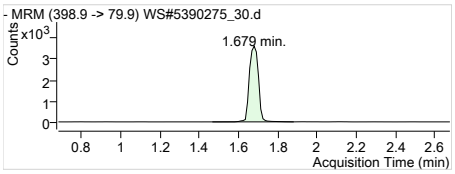


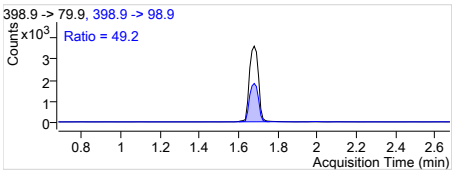
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 0.02 µg/L
Area ratio: 0.24168
Sample type: Sample



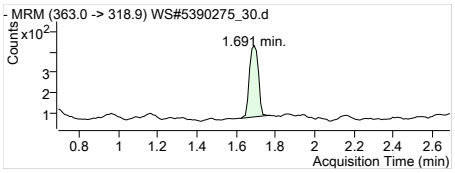


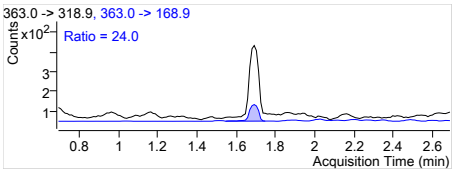
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 0.04 µg/L
Area ratio: 0.62607
Sample type: Sample



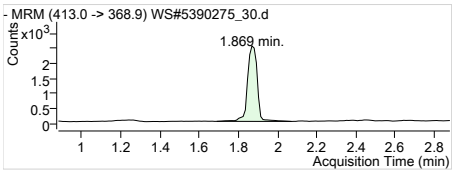


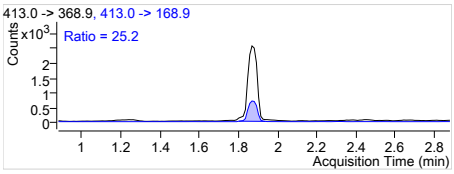
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 0.47 µg/L
Area ratio: 8.29522
Sample type: Sample



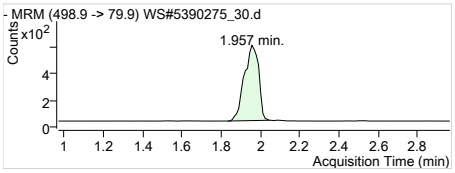


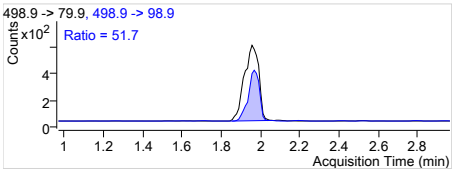
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 0.02 µg/L
Area ratio: 0.16414
Sample type: Sample



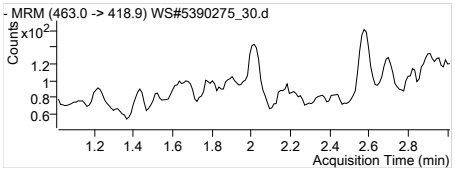


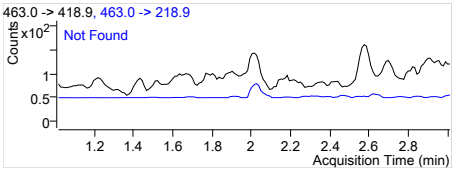
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 0.07 µg/L
Area ratio: 1.13507
Sample type: Sample



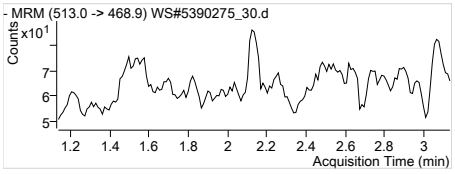


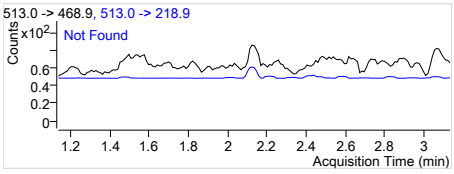
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.957 (1.968)
Calc. conc. 0.14 µg/L
Area ratio: 1.98948
Sample type: Sample



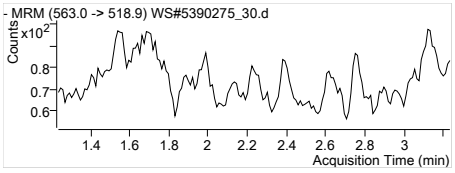


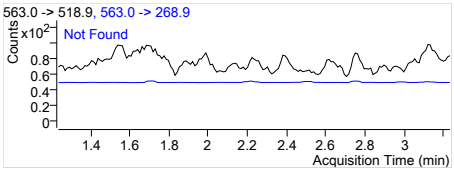
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 0.000 (2.014)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



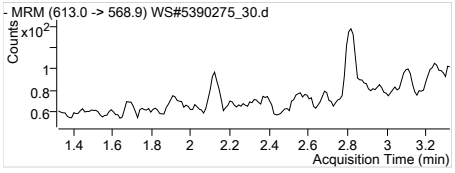


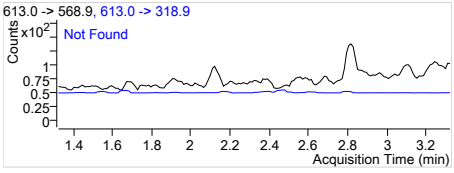
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 0.000 (2.135)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



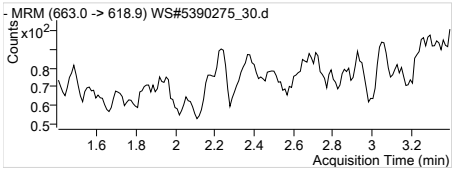


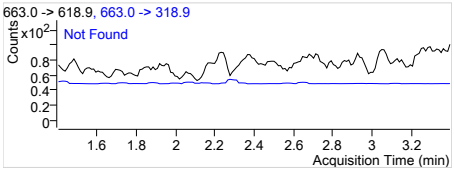
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 0.000 (2.234)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



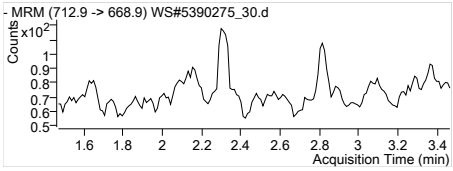


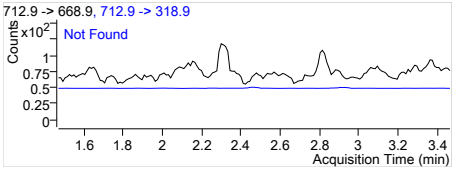
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 0.000 (2.323)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



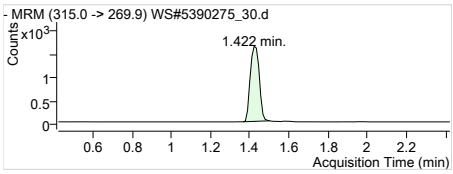


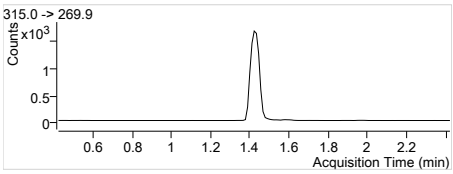
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 0.000 (2.400)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



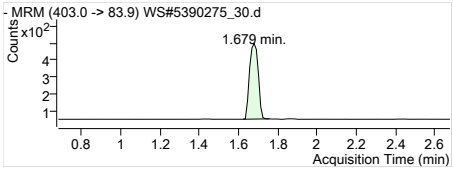


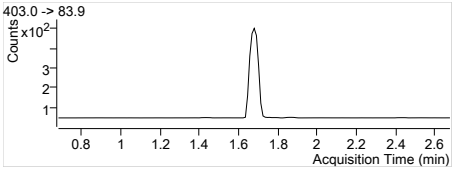
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 0.000 (2.467)
Calc. conc. N.D.
Area ratio: 0
Sample type: Sample



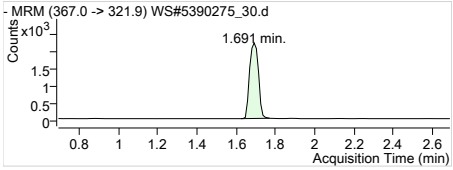


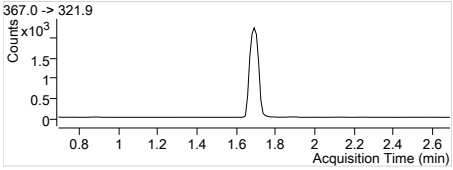
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 93.82 µg/L
Area ratio: 0.23415
Sample type: Sample



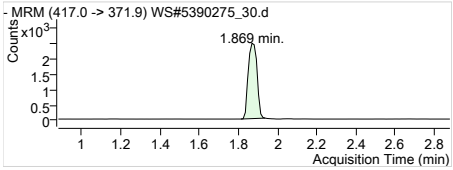


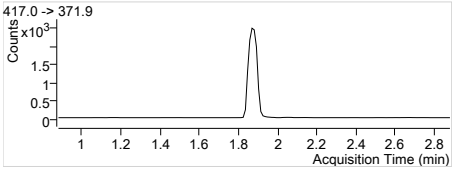
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 100.23 µg/L
Area ratio: 0.06266
Sample type: Sample



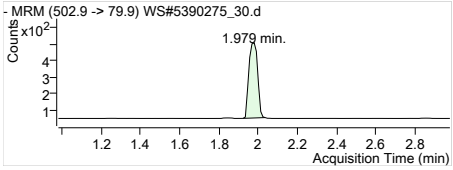


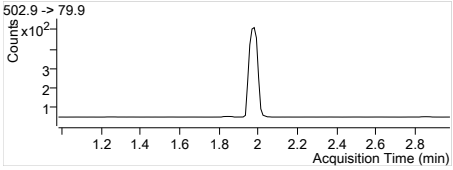
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 95.71 µg/L
Area ratio: 0.31133
Sample type: Sample



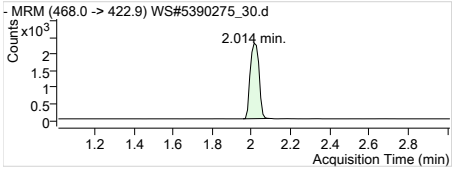


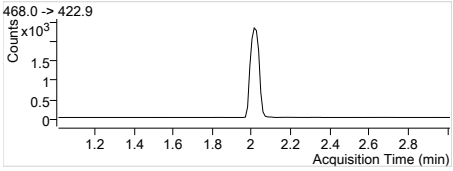
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 100.51 µg/L
Area ratio: 0.34679
Sample type: Sample



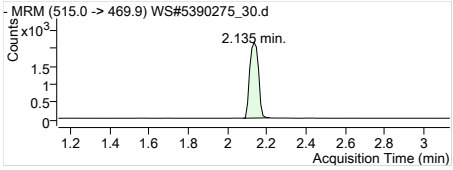


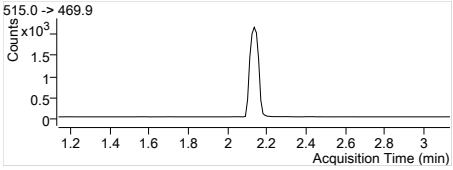
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 82.43 µg/L
Area ratio: 0.06466
Sample type: Sample



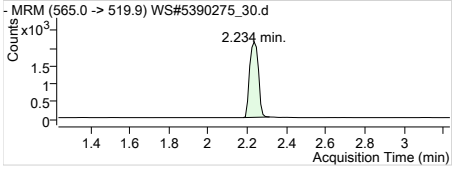


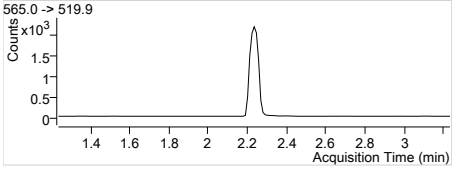
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 94.82 µg/L
Area ratio: 0.32334
Sample type: Sample



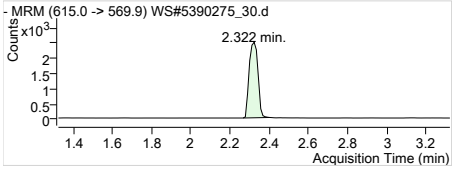


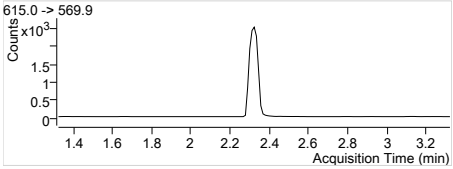
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 102.92 µg/L
Area ratio: 0.21445
Sample type: Sample



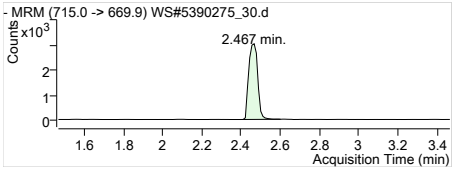


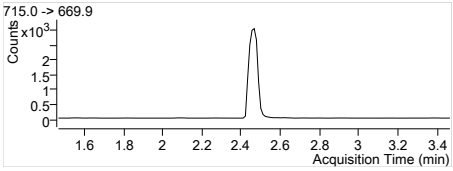
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 82.32 µg/L
Area ratio: 0.21692
Sample type: Sample



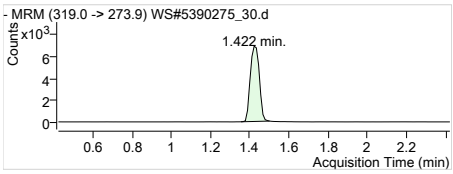


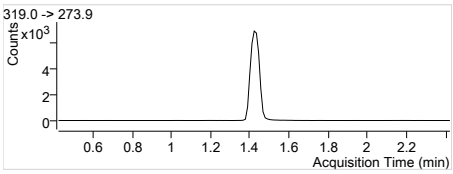
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 74.21 µg/L
Area ratio: 0.25297
Sample type: Sample



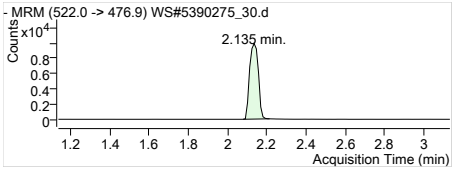


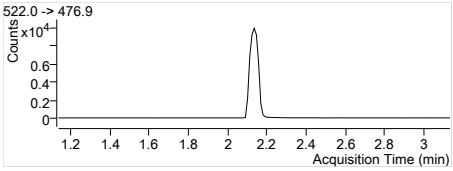
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	79.35 µg/L
Area ratio:	0.31382
Sample type:	Sample





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	2.35 µg/L
Area ratio:	0
Sample type:	Sample





13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	2.46 µg/L
Area ratio:	0
Sample type:	Sample

ANALYTE	ORIGINAL	DUPLICATE	RL	RPD	RPD > 30%	ORIGINAL SAMPLE CONC >2xRL	DUPLICATE SAMPLE CONC >2xRL	DIFFERENCE >2xRL
PENTADECAFLUOROOCTANOIC ACID	0.0085	0.0057	0.02	39.44	TRUE	FALSE	FALSE	FALSE
PERFLUOROBUTANESULFONIC ACID	0.0054	0.018	0.02	107.69	TRUE	FALSE	FALSE	FALSE
PERFLUOROHEXANESULFONIC ACID	0.046	0.031	0.02	38.96	TRUE	TRUE	FALSE	FALSE
PERFLUOROHEXANOIC ACID	0.0035	0.0074	0.02	71.56	TRUE	FALSE	FALSE	FALSE
PERFLUOROOCTANE SULFONIC ACID	0.011	0.11	0.02	163.64	TRUE	FALSE	TRUE	TRUE

SDG B821961

OLD-OU1-102TW-0118/OLD-OU1-102TW-0118-D

Maxxam Analytics

Maxxam Analytics International Corporation o/a Maxxam Analytics
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 of

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 Andersen Drive	Project	JM11 NTC Orlando	COC #:	Project Manager:
	Logan UT 84321		Pittsburgh, PA 15220	Project Name		C#647124-03-01	Stephanie Pollen
Tel	(781) 455-0653 x	Tel	412-921-8291	Site #			
Email	rcarr@earthtoxics.com	Email	Ron.Kotun@tetratech.com	Sampled By	Grzywacz		

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 ☐ Agr/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

30-Jan-18 15:50
Stephanie Pollen
B821961
TSP ENV-1261

specified).
for most tests.
tain tests such as BOD and Dioxins/Furans are > 5
er for details.
lies to entire submission)
Time Required
(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		OLD-OU1-101TW-0118	01/25/18	1015	GW		X							2	
2		OLD-OU1-102TW-0118	01/25/18	1310	GW		X							2	
3		OLD-OU1-102TW-0118-D	01/25/18	1310	GW		X							2	
4		OLD-OU1-103TW-0118	01/25/18	1404	GW		X							2	
5		OLD-SA2-04ATW-0118	01/25/18	1545	GW		X							2	
6		EB-GW-012518-[illegible]	01/25/18	1210	W		X							2	
7		FB-OLD-012518-6	01/25/18	1215	W		X							2	
8		OLD-SA2-04ATW-0118	1/25/18	1038	GW		X							2	
9		OLD-SA2-01ATW-0118	1/28/18	1148	GW		X							2	
10		FB-OLD-012618-7	1/26/18	1055	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
	18/01/29	1300	GUNPARTRAK	2018/01/30	15:50	

Laboratory Use Only				
Time Sensitive	Temperature (°C) on Recei	Custody Seal Present	Yes	No
	1.5 2.1 1.5	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

417032

Maxxam Analytics International Corporation o/a Maxxam Analytics

Maxxam
A Bureau Veritas Group Company

Maxxam Analytics International Corporation o/a Maxxam Analytics
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 of

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 #: 647897
Attention:	Accounts Payable	Attention:	Ron Kotun	P.O. #:			
Address:	PO Box 3382	Address:	661 Anderson Drive	Project:	JM11 NTC Orlando		
	Logan UT 84321		Pittsburgh, PA 15220	Project Name:		COC #:	Project Manager:
Tel:	(781) 455-0653 x Fax:	Tel:	412-921-8291 Fax: 412-921-4040	Site #:		C#647897-01-01	Stephanie Pollen
Email:	rcarr@earthtoxics.com	Email:	Ron.Kotun@tetratech.com	Sampled By:	Grzegorz		

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)

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		EB-GW-012618-4	1/26/18	1050	W		X									2	
2		DI BLANK	1/26/18	1100	W		X									2	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Recei	Custody Seal Present	Yes	No
[signature]	18/01/29	1300	[signature] Gumka	2018/01/30	15:50			1.5/2.1/1.5	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

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Maxxam Analytics International Corporation o/a Maxxam Analytics

Maxxam Job: B821961

Sample Analysis

Samples were analyzed on QC batches 5390275 (2018/02/09-10) and 5393111 (2018/02/13). A reduced sample volume was extracted for the following sample:

FZT426 *OLD-SA2-06ATW-0118*

This was due to the discolored and turbid appearance of the sample matrix, which would likely have resulted in clogging of the solid phase extraction (SPE) cartridge if the full sample volume had been extracted. Detection limits were adjusted accordingly.

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						
FZT419	OLD-OV1-101TW-0118	2018/01/25	2018/01/30	2018/02/08	2018/02/10	2018/02/09-10
FZT420	OLD-OV1-102TW-0118	2018/01/25	2018/01/30	2018/02/08	2018/02/10	2018/02/09-10
FZT421	OLD-OV1-102TW-0118-D	2018/01/25	2018/01/30	2018/02/08	2018/02/10	2018/02/09-10
FZT422	OLD-OV1-103TW-0118	2018/01/25	2018/01/30	2018/02/08	2018/02/10	2018/02/09-10
FZT423	OLD-SA2-04ATW-0118	2018/01/25	2018/01/30	2018/02/08	2018/02/10	2018/02/09-10
FZT424	EB-GW-012518-3	2018/01/25	2018/01/30	2018/02/08	2018/02/10	2018/02/09-10
FZT425	FB-OLD-012518-6	2018/01/25	2018/01/30	2018/02/08	2018/02/10	2018/02/09-10
FZT426	OLD-SA2-06ATW-0118	2018/01/26	2018/01/30	2018/02/09	2018/02/13	2018/02/13
FZT427	OLD-SA2-01ATW-0118	2018/01/26	2018/01/30	2018/02/09	2018/02/13	2018/02/13
FZT428	FB-OLD-012618-7	2018/01/26	2018/01/30	2018/02/09	2018/02/13	2018/02/13
FZT430	EB-GW-012618-4	2018/01/26	2018/01/30	2018/02/09	2018/02/13	2018/02/13
FZT431	DI BLANK	2018/01/26	2018/01/30	2018/02/09	2018/02/13	2018/02/13

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: all within recommended hold times

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 Fallon

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.

GENERAL COMMENTS

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

Package 1	1.7°C

Results relate only to the items tested.

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

INJECTION INTERNAL STANDARD PEAK AREAS

Sample Name	Analyte	13C6-PFHxA	13C9-PFDA
	Mass labeled IS	STD 4	STD 4
	IS Area	24336	31660
		IS Peak Area	IS Peak Area
STD 1		23265	31397
STD 2		23676	30926
STD 3		23144	30938
STD 4		24336	31660
STD 5		23276	31734
STD 6		22811	29039
IB		20118	26942
ICV		24288	32215
ISC		23804	32182
5390275:BLANK		25220	33519
5390275:SPIKE		20746	27176
5390275:SPIKE:D1		23523	30943
5390275:FZH306-01:10x		25064	32842
5390275:FZH306-01		21947	29926
IB		20823	26431
5390275:FZH307-01		24072	31080
5390275:FZH308-01		23890	32295
5390275:FZH309-01		24803	32633
5390275:FZH310-01		25338	32529
5390275:FZH311-01		23258	30398
5390275:FZH312-01		22201	31529
5390275:FZH313-01		22997	30369
5390275:FZH314-01		24707	31608
CCV		24806	32186
5390275:FZH315-01		23762	32357
5390275:FZH316-01		24654	33518
5390275:FZH317-01		24651	33318
5390275:FZT419-01:10x		22782	30367
5390275:FZT419-01		22054	30454
IB		20118	26900
5390275:FZT420-01		24368	32418
5390275:FZT421-01		23233	30895
5390275:FZT422-01		24155	31821
5390275:FZT423-01		23594	31236
5390275:FZT424-01		23008	31282
CCV		24204	32789
5390275:FZT425-01		23542	31050
CCV		24535	32723

INJECTION INTERNAL STANDARD PEAK AREAS

Sample Name	Analyte	13C9-PFDA
	Mass labeled IS	STD 4
	IS Area	25154
		IS Peak Area
STD 1		24231
STD 2		24810
STD 3		24721
STD 4		25154
STD 5		24748
STD 6		23294
IB		21134
ICV		24598
ISC		24430
5390275:BLANK		25518
5390275:SPIKE		21375
5390275:SPIKE:D1		23768
5390275:FZH306-01:10x		25178
5390275:FZH306-01		22234
IB		21079
5390275:FZH307-01		24082
5390275:FZH308-01		25352
5390275:FZH309-01		24562
5390275:FZH310-01		25998
5390275:FZH311-01		22685
5390275:FZH312-01		23193
5390275:FZH313-01		24051
5390275:FZH314-01		24450
CCV		25073
5390275:FZH315-01		24471
5390275:FZH316-01		24664
5390275:FZH317-01		24614
5390275:FZT419-01:10x		23518
5390275:FZT419-01		22422
IB		20276
5390275:FZT420-01		24424
5390275:FZT421-01		24873
5390275:FZT422-01		24737
5390275:FZT423-01		23957
5390275:FZT424-01		24401
CCV		25106
5390275:FZT425-01		24107
CCV		25357

INJECTION INTERNAL STANDARD PEAK AREAS

Sample Name	Analyte	13C6-PFHxA	13C9-PFDA
	Mass labeled IS	STD 4	STD 4
	IS Area	23942	30523
		IS Peak Area	IS Peak Area
STD 1		22616	31562
STD 2		24047	29599
STD 3		23970	31810
STD 4		23942	30523
STD 5		23146	29646
STD 6		22396	28323
IB		21095	26482
ICV		20366	26857
ISC		24665	32190
5393111:BLANK		27425	36016
5393111:SPIKE		26060	34077
5393111:SPIKE:D1		25038	32181
5393111:FZJ946-01		21291	27574
5393111:FZT426-01:10x		22258	27193
IB		21822	27149
5393111:FZT427-01		21220	27515
5393111:FZT428-01		22774	29834
5393111:FZT430-01		24793	32238
5393111:FZT431-01		24201	30395
5393111:GAC647-01		17046	22445
5393111:GAC649-01		24274	30656
5393111:GAC651-01		23512	29890
5393111:GAD929-01		26772	34716
CCV		24562	32675
5393111:GAD930-01		21975	27304
5393111:GAD931-01		23894	31328
5393111:GAD932-01		23670	31124
5393111:GAD933-01:100x		24115	30477
IB		21391	27144
5393111:GAD934-01:100x		23200	31287
IB		20837	26749
CCV		24980	31567

INJECTION INTERNAL STANDARD PEAK AREAS

Sample Name	Analyte	13C9-PFDA
	Mass labeled IS	STD 4
	IS Area	27486
		IS Peak Area
STD 1		27159
STD 2		26366
STD 3		26149
STD 4		27486
STD 5		25687
STD 6		24440
IB		23133
ICV		22491
ISC		27258
5393111:BLANK		30049
5393111:SPIKE		29721
5393111:SPIKE:D1		27367
5393111:FZJ946-01		23186
5393111:FZT426-01:10x		24008
IB		23243
5393111:FZT427-01		23191
5393111:FZT428-01		24825
5393111:FZT430-01		26318
5393111:FZT431-01		25423
5393111:GAC647-01		18893
5393111:GAC649-01		24794
5393111:GAC651-01		25501
5393111:GAD929-01		27675
CCV		27346
5393111:GAD930-01		23268
5393111:GAD931-01		26192
5393111:GAD932-01		25389
5393111:GAD933-01:100x		26594
IB		23271
5393111:GAD934-01:100x		26498
IB		23555
CCV		27597

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
5390275	M_G	Spiked Blank	13C2-Perfluorodecanoic acid	2018/02/10		112	%	50 - 150
			13C2-Perfluorododecanoic acid	2018/02/10		110	%	50 - 150
			13C2-Perfluorohexanoic acid	2018/02/10		115	%	50 - 150
			13C2-perfluorotetradecanoic acid	2018/02/10		101	%	50 - 150
			13C2-Perfluoroundecanoic acid	2018/02/10		105	%	50 - 150
			13C4-Perfluoroheptanoic acid	2018/02/10		116	%	50 - 150
			13C4-Perfluorooctanesulfonate	2018/02/10		111	%	50 - 150
			13C4-Perfluorooctanoic acid	2018/02/10		114	%	50 - 150
			13C5-Perfluorononanoic acid	2018/02/10		113	%	50 - 150
			18O2-Perfluorohexanesulfonate	2018/02/10		114	%	50 - 150
			D3-MeFOSAA	2018/02/10		91	%	50 - 150
			D5-EtFOSAA	2018/02/10		98	%	50 - 150
			EtFOSAA	2018/02/10		99	%	73 - 128
			MeFOSAA	2018/02/10		100	%	77 - 127
			Perfluorobutane Sulfonate (PFBS)	2018/02/10		99	%	65 - 135
			Perfluoroheptanoic Acid (PFHpA)	2018/02/10		95	%	73 - 129
			Perfluorohexanoic Acid (PFHxA)	2018/02/10		97	%	74 - 129
			Perfluorohexane Sulfonate (PFHxS)	2018/02/10		91	%	67 - 132
			Perfluorononanoic Acid (PFNA)	2018/02/10		99	%	72 - 131
			Perfluorotetradecanoic Acid	2018/02/10		97	%	70 - 134
			Perfluorotridecanoic Acid	2018/02/10		100	%	67 - 143
			Perfluoroundecanoic Acid (PFUnA)	2018/02/10		108	%	71 - 133
			Perfluorodecanoic Acid (PFDA)	2018/02/10		94	%	71 - 133
			Perfluorododecanoic Acid (PFDoA)	2018/02/10		92	%	71 - 131
			Perfluoro-n-Octanoic Acid (PFOA)	2018/02/10		97	%	71 - 130
			Perfluorooctane Sulfonate (PFOS)	2018/02/10		93	%	72 - 131
5390275	M_G	Spiked Blank DUP	13C2-Perfluorodecanoic acid	2018/02/10		102	%	50 - 150
			13C2-Perfluorododecanoic acid	2018/02/10		93	%	50 - 150
			13C2-Perfluorohexanoic acid	2018/02/10		105	%	50 - 150
			13C2-perfluorotetradecanoic acid	2018/02/10		86	%	50 - 150
			13C2-Perfluoroundecanoic acid	2018/02/10		90	%	50 - 150
			13C4-Perfluoroheptanoic acid	2018/02/10		104	%	50 - 150
			13C4-Perfluorooctanesulfonate	2018/02/10		90	%	50 - 150
			13C4-Perfluorooctanoic acid	2018/02/10		98	%	50 - 150
			13C5-Perfluorononanoic acid	2018/02/10		104	%	50 - 150
			18O2-Perfluorohexanesulfonate	2018/02/10		99	%	50 - 150
			D3-MeFOSAA	2018/02/10		87	%	50 - 150
			D5-EtFOSAA	2018/02/10		86	%	50 - 150
			EtFOSAA	2018/02/10		99	%	73 - 128
			MeFOSAA	2018/02/10		95	%	77 - 127
			Perfluorobutane Sulfonate (PFBS)	2018/02/10		100	%	65 - 135
			Perfluoroheptanoic Acid (PFHpA)	2018/02/10		90	%	73 - 129
			Perfluorohexanoic Acid (PFHxA)	2018/02/10		91	%	74 - 129
			Perfluorohexane Sulfonate (PFHxS)	2018/02/10		92	%	67 - 132
			Perfluorononanoic Acid (PFNA)	2018/02/10		93	%	72 - 131
			Perfluorotetradecanoic Acid	2018/02/10		102	%	70 - 134
			Perfluorotridecanoic Acid	2018/02/10		100	%	67 - 143
			Perfluoroundecanoic Acid (PFUnA)	2018/02/10		110	%	71 - 133
			Perfluorodecanoic Acid (PFDA)	2018/02/10		89	%	71 - 133
			Perfluorododecanoic Acid (PFDoA)	2018/02/10		94	%	71 - 131
			Perfluoro-n-Octanoic Acid (PFOA)	2018/02/10		100	%	71 - 130
			Perfluorooctane Sulfonate (PFOS)	2018/02/10		99	%	72 - 131
5390275	M_G	RPD	EtFOSAA	2018/02/10	0.58		%	30
			MeFOSAA	2018/02/10	4.7		%	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)	2018/02/10	1.1		%	30
			Perfluoroheptanoic Acid (PFHpA)	2018/02/10	5.6		%	30
			Perfluorohexanoic Acid (PFHxA)	2018/02/10	5.8		%	30
			Perfluorohexane Sulfonate (PFHxS)	2018/02/10	1.1		%	30
			Perfluorononanoic Acid (PFNA)	2018/02/10	5.8		%	30
			Perfluorotetradecanoic Acid	2018/02/10	5.5		%	30
			Perfluorotridecanoic Acid	2018/02/10	0.25		%	30
			Perfluoroundecanoic Acid (PFUnA)	2018/02/10	2.5		%	30
			Perfluorodecanoic Acid (PFDA)	2018/02/10	5.7		%	30
			Perfluorododecanoic Acid (PFDoA)	2018/02/10	2.7		%	30
			Perfluoro-n-Octanoic Acid (PFOA)	2018/02/10	3.5		%	30
			Perfluorooctane Sulfonate (PFOS)	2018/02/10	6.4		%	30
5390275	M_G	Method Blank	13C2-Perfluorodecanoic acid	2018/02/10		95	%	50 - 150
			13C2-Perfluorododecanoic acid	2018/02/10		87	%	50 - 150
			13C2-Perfluorohexanoic acid	2018/02/10		96	%	50 - 150
			13C2-perfluorotetradecanoic acid	2018/02/10		83	%	50 - 150
			13C2-Perfluoroundecanoic acid	2018/02/10		85	%	50 - 150
			13C4-Perfluoroheptanoic acid	2018/02/10		96	%	50 - 150
			13C4-Perfluorooctanesulfonate	2018/02/10		91	%	50 - 150
			13C4-Perfluorooctanoic acid	2018/02/10		91	%	50 - 150
			13C5-Perfluorononanoic acid	2018/02/10		100	%	50 - 150
			18O2-Perfluorohexanesulfonate	2018/02/10		94	%	50 - 150
			D3-MeFOSAA	2018/02/10		81	%	50 - 150
			D5-EtFOSAA	2018/02/10		79	%	50 - 150
			EtFOSAA	2018/02/10	0.010 U, LOD=0.010		ug/L	
			MeFOSAA	2018/02/10	0.010 U, LOD=0.010		ug/L	
			Perfluorobutane Sulfonate (PFBS)	2018/02/10	0.015 U, LOD=0.015		ug/L	
			Perfluoroheptanoic Acid (PFHpA)	2018/02/10	0.015 U, LOD=0.015		ug/L	
			Perfluorohexanoic Acid (PFHxA)	2018/02/10	0.010 U, LOD=0.010		ug/L	
			Perfluorohexane Sulfonate (PFHxS)	2018/02/10	0.015 U, LOD=0.015		ug/L	
			Perfluorononanoic Acid (PFNA)	2018/02/10	0.018 U, LOD=0.018		ug/L	
			Perfluorotetradecanoic Acid	2018/02/10	0.010 U, LOD=0.010		ug/L	
			Perfluorotridecanoic Acid	2018/02/10	0.010 U, LOD=0.010		ug/L	
			Perfluoroundecanoic Acid (PFUnA)	2018/02/10	0.010 U, LOD=0.010		ug/L	
			Perfluorodecanoic Acid (PFDA)	2018/02/10	0.015 U, LOD=0.015		ug/L	
			Perfluorododecanoic Acid (PFDoA)	2018/02/10	0.010 U, LOD=0.010		ug/L	
			Perfluoro-n-Octanoic Acid (PFOA)	2018/02/10	0.010 U, LOD=0.010		ug/L	
			Perfluorooctane Sulfonate (PFOS)	2018/02/10	0.015 U, LOD=0.015		ug/L	
5393111	KC1	Spiked Blank	13C2-Perfluorodecanoic acid	2018/02/13		79	%	50 - 150
			13C2-Perfluorododecanoic acid	2018/02/13		79	%	50 - 150

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			13C2-Perfluorohexanoic acid	2018/02/13		89	%	50 - 150
			13C2-perfluorotetradecanoic acid	2018/02/13		78	%	50 - 150
			13C2-Perfluoroundecanoic acid	2018/02/13		81	%	50 - 150
			13C4-Perfluoroheptanoic acid	2018/02/13		89	%	50 - 150
			13C4-Perfluorooctanesulfonate	2018/02/13		93	%	50 - 150
			13C4-Perfluorooctanoic acid	2018/02/13		93	%	50 - 150
			13C5-Perfluorononanoic acid	2018/02/13		95	%	50 - 150
			18O2-Perfluorohexanesulfonate	2018/02/13		84	%	50 - 150
			D3-MeFOSAA	2018/02/13		70	%	50 - 150
			D5-EtFOSAA	2018/02/13		69	%	50 - 150
			EtFOSAA	2018/02/13		104	%	73 - 128
			MeFOSAA	2018/02/13		102	%	77 - 127
			Perfluorobutane Sulfonate (PFBS)	2018/02/13		107	%	65 - 135
			Perfluoroheptanoic Acid (PFHpA)	2018/02/13		102	%	73 - 129
			Perfluorohexanoic Acid (PFHxA)	2018/02/13		101	%	74 - 129
			Perfluorohexane Sulfonate (PFHxS)	2018/02/13		103	%	67 - 132
			Perfluorononanoic Acid (PFNA)	2018/02/13		95	%	72 - 131
			Perfluorotetradecanoic Acid	2018/02/13		102	%	70 - 134
			Perfluorotridecanoic Acid	2018/02/13		100	%	67 - 143
			Perfluoroundecanoic Acid (PFUnA)	2018/02/13		108	%	71 - 133
			Perfluorodecanoic Acid (PFDA)	2018/02/13		115	%	71 - 133
			Perfluorododecanoic Acid (PFDoA)	2018/02/13		96	%	71 - 131
			Perfluoro-n-Octanoic Acid (PFOA)	2018/02/13		98	%	71 - 130
			Perfluorooctane Sulfonate (PFOS)	2018/02/13		98	%	72 - 131
5393111	KC1	Spiked Blank DUP	13C2-Perfluorodecanoic acid	2018/02/13		77	%	50 - 150
			13C2-Perfluorododecanoic acid	2018/02/13		80	%	50 - 150
			13C2-Perfluorohexanoic acid	2018/02/13		85	%	50 - 150
			13C2-perfluorotetradecanoic acid	2018/02/13		79	%	50 - 150
			13C2-Perfluoroundecanoic acid	2018/02/13		76	%	50 - 150
			13C4-Perfluoroheptanoic acid	2018/02/13		83	%	50 - 150
			13C4-Perfluorooctanesulfonate	2018/02/13		88	%	50 - 150
			13C4-Perfluorooctanoic acid	2018/02/13		84	%	50 - 150
			13C5-Perfluorononanoic acid	2018/02/13		86	%	50 - 150
			18O2-Perfluorohexanesulfonate	2018/02/13		83	%	50 - 150
			D3-MeFOSAA	2018/02/13		71	%	50 - 150
			D5-EtFOSAA	2018/02/13		71	%	50 - 150
			EtFOSAA	2018/02/13		105	%	73 - 128
			MeFOSAA	2018/02/13		105	%	77 - 127
			Perfluorobutane Sulfonate (PFBS)	2018/02/13		99	%	65 - 135
			Perfluoroheptanoic Acid (PFHpA)	2018/02/13		105	%	73 - 129
			Perfluorohexanoic Acid (PFHxA)	2018/02/13		94	%	74 - 129
			Perfluorohexane Sulfonate (PFHxS)	2018/02/13		96	%	67 - 132
			Perfluorononanoic Acid (PFNA)	2018/02/13		99	%	72 - 131
			Perfluorotetradecanoic Acid	2018/02/13		99	%	70 - 134
			Perfluorotridecanoic Acid	2018/02/13		99	%	67 - 143
			Perfluoroundecanoic Acid (PFUnA)	2018/02/13		108	%	71 - 133
			Perfluorodecanoic Acid (PFDA)	2018/02/13		109	%	71 - 133
			Perfluorododecanoic Acid (PFDoA)	2018/02/13		97	%	71 - 131
			Perfluoro-n-Octanoic Acid (PFOA)	2018/02/13		100	%	71 - 130
			Perfluorooctane Sulfonate (PFOS)	2018/02/13		92	%	72 - 131
5393111	KC1	RPD	EtFOSAA	2018/02/13	0.91		%	30
			MeFOSAA	2018/02/13	2.7		%	30
			Perfluorobutane Sulfonate (PFBS)	2018/02/13	8.3		%	30
			Perfluoroheptanoic Acid (PFHpA)	2018/02/13	2.9		%	30

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Perfluorohexanoic Acid (PFHxA)	2018/02/13	7.4		%	30
			Perfluorohexane Sulfonate (PFHxS)	2018/02/13	7.0		%	30
			Perfluorononanoic Acid (PFNA)	2018/02/13	4.1		%	30
			Perfluorotetradecanoic Acid	2018/02/13	3.0		%	30
			Perfluorotridecanoic Acid	2018/02/13	0.62		%	30
			Perfluoroundecanoic Acid (PFUnA)	2018/02/13	0.0075		%	30
			Perfluorodecanoic Acid (PFDA)	2018/02/13	5.7		%	30
			Perfluorododecanoic Acid (PFDoA)	2018/02/13	1.3		%	30
			Perfluoro-n-Octanoic Acid (PFOA)	2018/02/13	1.7		%	30
			Perfluorooctane Sulfonate (PFOS)	2018/02/13	5.5		%	30
5393111	KC1	Method Blank	13C2-Perfluorodecanoic acid	2018/02/13		77	%	50 - 150
			13C2-Perfluorododecanoic acid	2018/02/13		72	%	50 - 150
			13C2-Perfluorohexanoic acid	2018/02/13		82	%	50 - 150
			13C2-perfluorotetradecanoic acid	2018/02/13		73	%	50 - 150
			13C2-Perfluoroundecanoic acid	2018/02/13		72	%	50 - 150
			13C4-Perfluoroheptanoic acid	2018/02/13		81	%	50 - 150
			13C4-Perfluorooctanesulfonate	2018/02/13		86	%	50 - 150
			13C4-Perfluorooctanoic acid	2018/02/13		82	%	50 - 150
			13C5-Perfluorononanoic acid	2018/02/13		86	%	50 - 150
			18O2-Perfluorohexanesulfonate	2018/02/13		86	%	50 - 150
			D3-MeFOSAA	2018/02/13		70	%	50 - 150
			D5-EtFOSAA	2018/02/13		69	%	50 - 150
			EtFOSAA	2018/02/13	0.010 U, LOD=0.010		ug/L	
			MeFOSAA	2018/02/13	0.010 U, LOD=0.010		ug/L	
			Perfluorobutane Sulfonate (PFBS)	2018/02/13	0.015 U, LOD=0.015		ug/L	
			Perfluoroheptanoic Acid (PFHpA)	2018/02/13	0.015 U, LOD=0.015		ug/L	
			Perfluorohexanoic Acid (PFHxA)	2018/02/13	0.010 U, LOD=0.010		ug/L	
			Perfluorohexane Sulfonate (PFHxS)	2018/02/13	0.015 U, LOD=0.015		ug/L	
			Perfluorononanoic Acid (PFNA)	2018/02/13	0.018 U, LOD=0.018		ug/L	
			Perfluorotetradecanoic Acid	2018/02/13	0.010 U, LOD=0.010		ug/L	
			Perfluorotridecanoic Acid	2018/02/13	0.010 U, LOD=0.010		ug/L	
			Perfluoroundecanoic Acid (PFUnA)	2018/02/13	0.010 U, LOD=0.010		ug/L	
			Perfluorodecanoic Acid (PFDA)	2018/02/13	0.015 U, LOD=0.015		ug/L	
			Perfluorododecanoic Acid (PFDoA)	2018/02/13	0.010 U, LOD=0.010		ug/L	
			Perfluoro-n-Octanoic Acid (PFOA)	2018/02/13	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)	2018/02/13	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.

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.

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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

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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: 2018/02/09

Worksheet # (s): 5390075

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: MC Date: 2018/02/10

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: 2018/02/13

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 # 5390275 | Testcode: PFOS 4LCM-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: 2018/02/08

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# : 5390275

Page #: 1/2

Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Thursday, February 08, 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	% Moisture (centrifuged sediment +5)	Wt or Vol	Final Vol (mL)	DF or AF	# Cont	Expiry Date	Test DeadLine	Criteria	Extract Date	envi (ANA (ng)
5,3		SPIKE	0	PFOS		0	125	3	1X					2018/02/08	26
5,4		SPIKE	1	PFOS		0	125	3	1X					2018/02/08	35
5,1		BLANK				0	125	3	1X					2018/02/08	25
5,6	B819794	*FZH306-01R	[redacted]		*	<0.1	115/12.5	3	1X/10X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	29/26
5,8	B819794	*FZH307-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	31
5,10	B819794	*FZH308-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	28
5,12	B819794	*FZH309-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	29
5,14	B819794	*FZH310-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	26
5,16	B819794	*FZH311-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	29
5,18	B819794	*FZH312-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	25
5,20	B819794	*FZH313-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	28
5,22	B819794	*FZH314-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	28
5,24	B819794	*FZH315-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	32
6,1	B819794	*FZH316-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	30
6,3	B819794	*FZH317-01R	[redacted]			0	125	3	1X	2	2018/02/08	2018/02/09 18:00	DOD	2018/02/08	29
6,5	B821961	*FZT419-01R	OLD-OV1-101TW-*			0	120/12.5	3	1X/10X	2	2018/02/08	2018/02/12 23:00	DOD	2018/02/08	27/27
6,7	B821961	*FZT420-01R	OLD-OV1-102TW-*		*	<0.1	115	3	1X	2	2018/02/08	2018/02/12 23:00	DOD	2018/02/08	25
6,9	B821961	*FZT421-01R	OLD-OV1-102TW-*		*	<0.1	125	3	1X	2	2018/02/08	2018/02/12 23:00	DOD	2018/02/08	35
6,11	B821961	*FZT422-01R	OLD-OV1-103TW-*		*	<0.1	125	3	1X	2	2018/02/08	2018/02/12 23:00	DOD	2018/02/08	28
6,14	B821961	*FZT423-01R	OLD-SA2-04ATW-*		*	<0.1	110	3	1X	2	2018/02/08	2018/02/12 23:00	DOD	2018/02/08	29
6,16	B821961	*FZT424-01R	EB-GW-012518-3			0	125	3	1X	2	2018/02/08	2018/02/12 23:00	DOD	2018/02/08	29
6,18	B821961	*FZT425-01R	FB-OLD-012518-6			0	110	3	1X	2	2018/02/08	2018/02/12 23:00	DOD	2018/02/08	30

2018/02/08 DM3

Remarks: Spike + spike dup were analyzed due to lack of bottles available per sample.

Samples extracted by: Daniella McLean DM3 2018/02/08

Instrumentation performed by: [signature] Date: 2018/02/09

Calculations performed by: [signature] Date: 2018/02/12

Validated by: AD Date: 2018/02/13

Job No.	Rep / Client Name / Remarks	Contact	Client Tier	National
GB819794	[redacted]			
GB821961	SP8 Earth Toxics Inc	Rick Carr	Tier 5 (Enviro.) AECOM	

nreg, PFOSALCM-W Level IV Data Package and TetraTech EDD required Project #: JM11 NTC Orlando

Job	Sample	Lab Comments
	SPIKE	
	SPIKE	
	BLANK	
B819794	FZH306-01R	
B819794	FZH307-01R	
B819794	FZH308-01R	
B819794	FZH309-01R	
B819794	FZH310-01R	
B819794	FZH311-01R	
B819794	FZH312-01R	
B819794	FZH313-01R	
B819794	FZH314-01R	
B819794	FZH315-01R	
B819794	FZH316-01R	
B819794	FZH317-01R	
B821961	FZT419-01R	
B821961	FZT420-01R	
B821961	FZT421-01R	
B821961	FZT422-01R	
B821961	FZT423-01R	
B821961	FZT424-01R	
B821961	FZT425-01R	

S1 25
S2 50 } SH-7377
S3 150

S4 37.5
S5 75 } I-5297
S6 125

ICV 62.5 - I-5299

IB 2850µL MeOH + 150µL IS

2018/02/08

Folder: 2018/02/09

Worksheet Reagent Tracking Record Worksheet # 5390275

Volume (µL)

Surrogate/Spike solutions	√	Solution ID #	Conc.	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) SAD	1ug/mL	75	21 62.5	75	21 62.5	NA	NA
PFC Internal Standard Solution	✓	SI-6763 (3/4) SAD	50/125 ng/mL	200	100 150	200	100 150	200	100 150
PFC Injection IS	✓	SI-6770 (1/2) LS	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	✓	SHB37527	2018/02/08	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-108-346	
0.2% Formic Acid				Leachate Fluid			
0.05M KOH				Reagent Water	✓	57297	2018/02/08
0.05M HCl							

*Spiked by: DM3
Spike Date: 2018/02/08
Spike Syringe/Pipette ID#: G24390G
Int. Std Syringe/Pipette ID#: M41011F
*Spiking Witnessed by: SAD
Final pH:

Equipment & ID	√	Equipment	ID#	√	Equipment	Lot #
Pipettor K55191G	✓	SPE Cartridge	00347247A	✓	QC Balance ID	
K39732F	✓	Filter			Thermometer ID &Temp	
Dispenser		Centrifuge	42148683	✓		
		Sonicator				

Bottle Tracking
Bottle# 18801
Cap# 18778
Systems plus Lot# 18-01-31

Comments: envi CARB lot # 92806V
250 mL cylinder # 3026

* - SPIKING OF QC's & SAMPLES MUST BE WITNESSED AT ALL TIMES.

Worksheet Number: **5390275**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

Parameter Name	Units	SPIKE	SPIKE Dup1	BLANK	DL	B819794 FZH306	DL
6:2 Fluorotelomer sulfonate	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
8:2 Fluorotelomer sulfonate	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
N-ethylperfluorooctane sulfonamide	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
EtFOSAA	ug/L	98.73704	99.31378	0	0.02	0	0.022
N-ethylperfluorooctane sulfonamidoe	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
N-methylperfluorooctane sulfonamide	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
MeFOSAA	ug/L	99.94997	95.35731	0	0.02	0	0.022
N-methylperfluorooctanesulfonamidol	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
Perfluorobutanoic acid	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
Perfluorobutane Sulfonate (PFBS)	ug/L	98.71117	99.84753	0	0.02	0.01357358	0.022
Perfluorodecane Sulfonate	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
Perfluoroheptanoic Acid (PFHpA)	ug/L	95.13685	89.95128	0	0.02	0.02015355	0.022
Perfluoroheptane sulfonate	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
Perfluorohexanoic Acid (PFHxA)	ug/L	96.82719	91.38624	0	0.02	0.16301726	0.022
Perfluorohexane Sulfonate (PFHxS)	ug/L	91.36893	92.42372	0	0.02	0.64080552	0.022
Perfluorononanoic Acid (PFNA)	ug/L	99.07054	93.45820	0	0.02	0	0.022
Perfluorooctane Sulfonamide (PFOSA)	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
Perfluoropentanoic Acid (PFPeA)	ug/L	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.022
Perfluorotetradecanoic Acid	ug/L	96.67494	102.15326	0	0.02	0	0.022
Perfluorotridecanoic Acid	ug/L	100.06429	99.81234	0	0.02	0	0.022
Perfluoroundecanoic Acid (PFUnA)	ug/L	107.58542	110.34205	0	0.02	0	0.022
Perfluorodecanoic Acid (PFDA)	ug/L	93.73946	88.53687	0	0.02	0	0.022
Perfluorododecanoic Acid (PFDoA)	ug/L	91.67334	94.14593	0	0.02	0	0.022
Perfluoro-n-Octanoic Acid (PFOA)	ug/L	96.91656	100.37079	0	0.02	1.09614430	0.2
Perfluorooctane Sulfonate (PFOS)	ug/L	92.78330	98.89724	0	0.02	0.11318006	0.022
13C2-6:2 Fluorotelomer sulfonate	ug/L	N/A*******	N/A*******	N/A*******		N/A*******	
13C2-8:2 Fluorotelomer sulfonate	ug/L	N/A*******	N/A*******	N/A*******		N/A*******	
13C2-perfluorotetradecanoic acid	ug/L	100.961424	86.1290054	82.6856916		80.6911563	
13C4-Perfluorobutanoic acid	ug/L	N/A*******	N/A*******	N/A*******		N/A*******	
D3-MeFOSAA	ug/L	90.5262279	86.5754492	80.7450641		89.6046952	
D5-EtFOSAA	ug/L	97.7875566	85.7484354	78.5457727		88.3538321	
N-methyl-d3-perfluorooctane sulfona	ug/L	N/A*******	N/A*******	N/A*******		N/A*******	
N-ethyl-d5-perfluorooctane sulfonam	ug/L	N/A*******	N/A*******	N/A*******		N/A*******	
13C2-Perfluorodecanoic acid	ug/L	112.120079	101.665566	94.7114312		98.8181289	
13C2-Perfluorododecanoic acid	ug/L	109.599957	93.4889055	87.3455978		87.4807351	
13C2-Perfluorohexanoic acid	ug/L	114.602431	104.803279	95.6065762		100.937394	
13C2-Perfluoroundecanoic acid	ug/L	104.550078	90.3995058	84.6522273		93.0658351	
13C4-Perfluoroheptanoic acid	ug/L	115.926395	104.449446	96.0316232		106.865082	
13C5-Perfluorononanoic acid	ug/L	113.395072	103.848013	99.6858785		105.506174	
13C4-Perfluorooctanoic acid	ug/L	114.477035	97.5740708	91.1349364		97.6113475	
13C4-Perfluorooctanesulfonate	ug/L	110.603717	90.3930272	90.5278272		95.8385808	
13C5-Perfluoropentanoic acid	ug/L	N/A*******	N/A*******	N/A*******		N/A*******	
13C8-Perfluorooctane Sulfonamide	ug/L	N/A*******	N/A*******	N/A*******		N/A*******	
18O2-Perfluorohexanesulfonate	ug/L	114.418335	98.8027438	94.3743446		98.8281409	

Worksheet Number: **5390275**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

Parameter Name	B819794 FZH307	B819794 FZH308	B819794 FZH309	B819794 FZH310	B819794 FZH311	B819794 FZH312	B819794 FZH313
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)	0	0	0	0	0.03091633	0.02861117	0
Perfluorodecane Sulfonate	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluoroheptanoic Acid (PFHpA)	0	0	0	0	0.01428181	0.01411075	0
Perfluoroheptane sulfonate	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluorohexanoic Acid (PFHxA)	0	0	0	0	0.06534061	0.05476750	0
Perfluorohexane Sulfonate (PFHxS)	0	0	0	0	0.29583622	0.24908969	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	0	0	0	0.07670963	0.07203558	0
Perfluorooctane Sulfonate (PFOS)	0	0	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	88.0680000	86.8608573	87.8905475	80.2040040	59.0255218	60.1080556	89.1723513
13C4-Perfluorobutanoic acid	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
D3-MeFOSAA	77.8589063	85.2540841	89.9948050	75.3728576	81.8120912	81.3136404	85.5567451
D5-EtFOSAA	82.7199877	82.8709282	90.2189944	74.7361183	77.0654875	80.0720739	84.1656061
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	97.1254937	98.0335657	96.7975758	86.3813110	94.0630577	88.4513128	97.8507278
13C2-Perfluorododecanoic acid	83.4585883	88.2851841	87.0291522	81.1838849	82.9666300	78.3342783	91.8266736
13C2-Perfluorohexanoic acid	98.9676811	100.677600	101.236272	95.1771456	84.7393485	100.179614	108.419969
13C2-Perfluoroundecanoic acid	90.9778388	89.3646980	91.9394437	86.9135767	86.3275143	82.7734182	93.1827909
13C4-Perfluoroheptanoic acid	95.3241259	102.536042	101.389379	93.7037731	94.4569724	100.878913	106.932048
13C5-Perfluorononanoic acid	99.3476708	102.154490	99.9785099	92.4394284	95.2594350	99.6626902	99.8473345
13C4-Perfluorooctanoic acid	97.6243949	98.2225352	100.741919	92.5064257	91.5326895	95.2639531	99.5033583
13C4-Perfluorooctanesulfonate	87.5900801	88.3640832	93.5916978	92.4205221	93.2316865	97.2111351	97.3939925
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	91.1006299	94.1380657	102.925923	90.9678119	88.7183475	109.153130	104.470782

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

Parameter Name	B819794 FZH314	B819794 FZH315	B819794 FZH316	B819794 FZH317	DL	B821961 FZT419	DL
6:2 Fluorotelomer sulfonate	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
8:2 Fluorotelomer sulfonate	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
N-ethylperfluorooctane sulfonamide	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
EtFOSAA	0	0	0	0	0.02	0	0.021
N-ethylperfluorooctane sulfonamidoe	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
N-methylperfluorooctane sulfonamide	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
MeFOSAA	0	0	0	0	0.02	0	0.021
N-methylperfluorooctanesulfonamidol	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
Perfluorobutanoic acid	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
Perfluorobutane Sulfonate (PFBS)	0	0	0	0	0.02	0.01637505	0.021
Perfluorodecane Sulfonate	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
Perfluoroheptanoic Acid (PFHpA)	0	0	0	0	0.02	0.01515964	0.021
Perfluoroheptane sulfonate	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
Perfluorohexanoic Acid (PFHxA)	0	0	0	0	0.02	0.03886198	0.021
Perfluorohexane Sulfonate (PFHxS)	0	0	0	0	0.02	0.46502754	0.021
Perfluorononanoic Acid (PFNA)	0	0	0	0	0.02	0	0.021
Perfluorooctane Sulfonamide (PFOSA)	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
Perfluoropentanoic Acid (PFPeA)	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.021
Perfluorotetradecanoic Acid	0	0	0	0	0.02	0	0.021
Perfluorotridecanoic Acid	0	0	0	0	0.02	0	0.021
Perfluoroundecanoic Acid (PFUnA)	0	0	0	0	0.02	0	0.021
Perfluorodecanoic Acid (PFDA)	0	0	0	0	0.02	0	0.021
Perfluorododecanoic Acid (PFDoA)	0	0	0	0	0.02	0	0.021
Perfluoro-n-Octanoic Acid (PFOA)	0	0	0	0	0.02	0.06906087	0.021
Perfluorooctane Sulfonate (PFOS)	0	0	0	0	0.02	0.14107697	0.021
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	78.7571411	72.3625690	87.8858723	77.6140902		79.3502833	
13C4-Perfluorobutanoic acid	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******	
D3-MeFOSAA	80.0333858	79.6860818	83.2091605	82.7687800		87.3329729	
D5-EtFOSAA	77.8998452	79.1490116	81.4519800	79.4368201		87.4078359	
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	95.3056650	95.1759882	93.5115361	88.9018089		102.919802	
13C2-Perfluorododecanoic acid	85.0529923	79.9925542	84.5824690	84.1392722		74.2118853	
13C2-Perfluorohexanoic acid	91.5104518	91.0355458	96.9239060	92.4985039		93.8165650	
13C2-Perfluoroundecanoic acid	80.0332319	75.1899144	86.1605817	88.6140805		82.3182802	
13C4-Perfluoroheptanoic acid	96.5572929	90.8104079	98.1240645	91.0772973		95.7105483	
13C5-Perfluorononanoic acid	95.4886893	88.0432392	96.5384998	88.5559449		94.8219681	
13C4-Perfluorooctanoic acid	92.1239120	88.8106051	98.1530635	90.5342635		100.511857	
13C4-Perfluorooctanesulfonate	88.4346366	84.6019347	90.6930047	77.4138830		82.4259096	
13C5-Perfluoropentanoic acid	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******	
13C8-Perfluorooctane Sulfonamide	N/A*******	N/A*******	N/A*******	N/A*******		N/A*******	
18O2-Perfluorohexanesulfonate	93.9384731	99.3572278	94.9838535	100.835294		100.234394	

Worksheet Number: **5390275**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

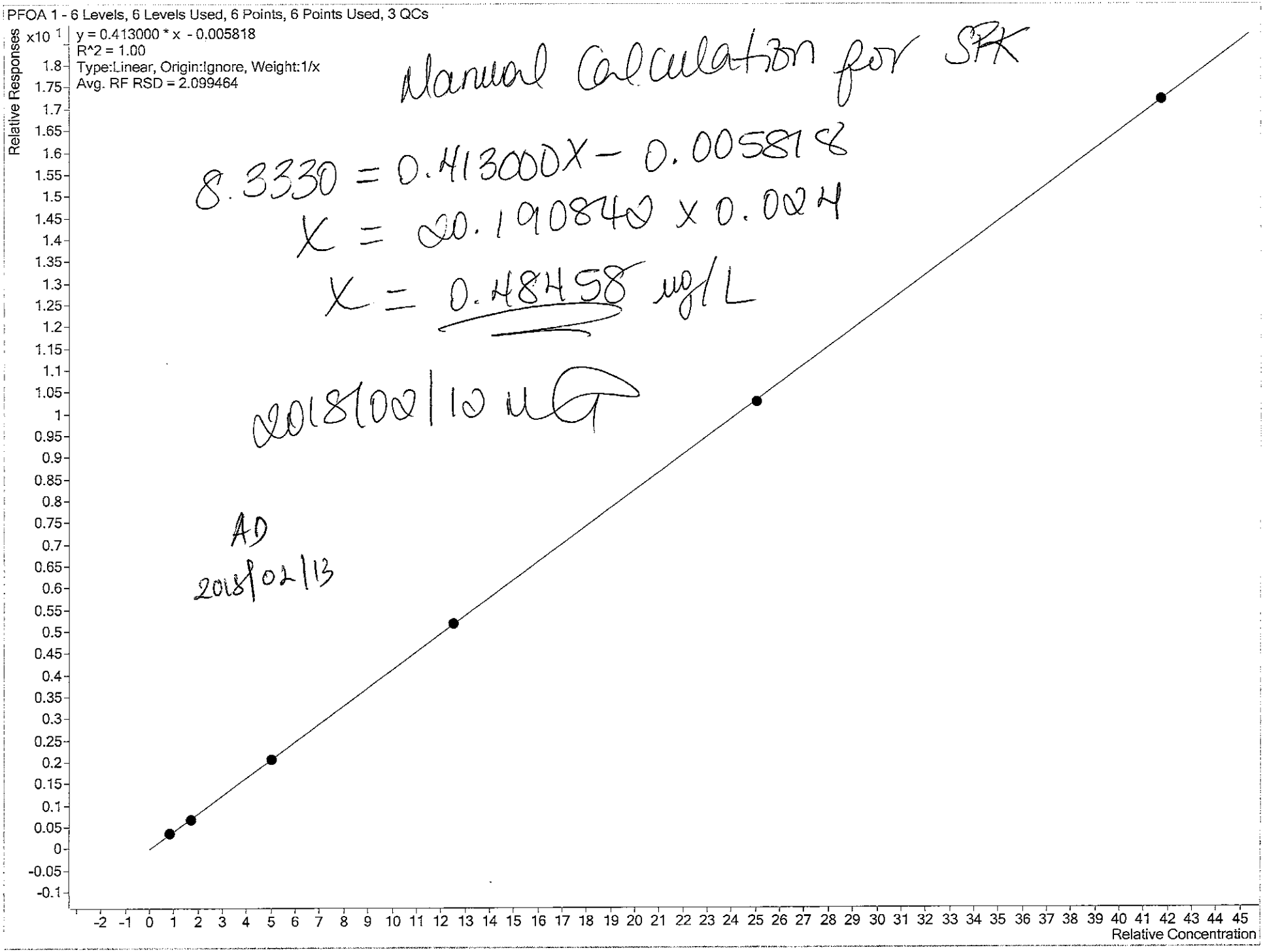
Parameter Name	B821961 FZT420	B821961 FZT421	B821961 FZT422	DL	B821961 FZT423	DL	B821961 FZT424
6:2 Fluorotelomer sulfonate	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
8:2 Fluorotelomer sulfonate	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
N-ethylperfluorooctane sulfonamide	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
EtFOSAA	0	0	0	0.02	0	0.023	0
N-ethylperfluorooctane sulfonamidoe	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
N-methylperfluorooctane sulfonamide	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
MeFOSAA	0	0	0	0.02	0	0.023	0
N-methylperfluorooctanesulfonamidol	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
Perfluorobutanoic acid	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
Perfluorobutane Sulfonate (PFBS)	0	0.01838361	0.01171140	0.02	0	0.023	0
Perfluorodecane Sulfonate	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
Perfluoroheptanoic Acid (PFHpA)	0	0	0	0.02	0	0.023	0
Perfluoroheptane sulfonate	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
Perfluorohexanoic Acid (PFHxA)	0	0.00744255	0	0.02	0.02421384	0.023	0
Perfluorohexane Sulfonate (PFHxS)	0.04631918	0.03075768	0	0.02	0.31160970	0.023	0
Perfluorononanoic Acid (PFNA)	0	0	0	0.02	0	0.023	0
Perfluorooctane Sulfonamide (PFOSA)	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
Perfluoropentanoic Acid (PFPeA)	N/A*******	N/A*******	N/A*******	0.02	N/A*******	0.023	N/A*******
Perfluorotetradecanoic Acid	0	0	0	0.02	0	0.023	0
Perfluorotridecanoic Acid	0	0	0	0.02	0	0.023	0
Perfluoroundecanoic Acid (PFUnA)	0	0	0	0.02	0	0.023	0
Perfluorodecanoic Acid (PFDA)	0	0	0	0.02	0	0.023	0
Perfluorododecanoic Acid (PFDoA)	0	0	0	0.02	0	0.023	0
Perfluoro-n-Octanoic Acid (PFOA)	0.00852015	0.00573303	0.00983033	0.02	0.01080789	0.023	0
Perfluorooctane Sulfonate (PFOS)	0.01088635	0.10852173	0.01926183	0.02	0.31025114	0.023	0
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	87.1318776	70.2788267	76.7996558		71.6972452		83.2556952
13C4-Perfluorobutanoic acid	N/A*******	N/A*******	N/A*******		N/A*******		N/A*******
D3-MeFOSAA	89.9449742	100.656693	94.8155504		91.4706144		85.1678129
D5-EtFOSAA	89.9125032	95.6879850	92.9903949		88.1445306		83.2725982
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	94.4935643	107.508859	93.9890425		96.4099639		103.632135
13C2-Perfluorododecanoic acid	87.8506711	86.3701723	87.7841053		86.6857719		87.2522678
13C2-Perfluorohexanoic acid	92.0600584	109.388101	94.0495412		97.0669334		98.5813930
13C2-Perfluoroundecanoic acid	86.2512627	100.084052	85.5319788		84.6068275		98.5789910
13C4-Perfluoroheptanoic acid	93.4975655	106.745638	93.6602120		95.9393122		97.6345691
13C5-Perfluorononanoic acid	89.3677775	105.131647	96.4810608		98.5513872		107.064702
13C4-Perfluorooctanoic acid	88.3623509	106.426906	91.5293614		89.8237945		96.9993103
13C4-Perfluorooctanesulfonate	90.8681164	101.342869	83.8587624		84.6100157		91.1974207
13C5-Perfluoropentanoic acid	N/A*******	N/A*******	N/A*******		N/A*******		N/A*******
13C8-Perfluorooctane Sulfonamide	N/A*******	N/A*******	N/A*******		N/A*******		N/A*******
18O2-Perfluorohexanesulfonate	99.0525028	110.638603	89.6618555		99.3867513		98.9286610

Worksheet Number: **5390275**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

Parameter Name	DL	B821961 FZT425	DL	RDL	MDL	IDL	
6:2 Fluorotelomer sulfonate	0.02	N/A*******	0.023	0.02	0.0066	0	
8:2 Fluorotelomer sulfonate	0.02	N/A*******	0.023	0.02	0.0066	0	
N-ethylperfluorooctane sulfonamide	0.02	N/A*******	0.023	0.02	0.01	0	
EtFOSAA	0.02	0	0.023	0.02	0.0033	0	
N-ethylperfluorooctane sulfonamidoe	0.02	N/A*******	0.023	0.02	0.0079	0	
N-methylperfluorooctane sulfonamide	0.02	N/A*******	0.023	0.02	0.013	0	
MeFOSAA	0.02	0	0.023	0.02	0.0029	0	
N-methylperfluorooctanesulfonamidol	0.02	N/A*******	0.023	0.02	0.012	0	
Perfluorobutanoic acid	0.02	N/A*******	0.023	0.02	0.0055	0	
Perfluorobutane Sulfonate (PFBS)	0.02	0	0.023	0.02	0.0054	0	
Perfluorodecane Sulfonate	0.02	N/A*******	0.023	0.02	0.006	0	
Perfluoroheptanoic Acid (PFHpA)	0.02	0	0.023	0.02	0.0074	0	
Perfluoroheptane sulfonate	0.02	N/A*******	0.023	0.02	0.008	0	
Perfluorohexanoic Acid (PFHxA)	0.02	0	0.023	0.02	0.0035	0	
Perfluorohexane Sulfonate (PFHxS)	0.02	0	0.023	0.02	0.0056	0	
Perfluorononanoic Acid (PFNA)	0.02	0	0.023	0.02	0.0087	0	
Perfluorooctane Sulfonamide (PFOSA)	0.02	N/A*******	0.023	0.02	0.0034	0	
Perfluoropentanoic Acid (PFPeA)	0.02	N/A*******	0.023	0.02	0.0075	0	
Perfluorotetradecanoic Acid	0.02	0	0.023	0.02	0.0027	0	
Perfluorotridecanoic Acid	0.02	0	0.023	0.02	0.0038	0	
Perfluoroundecanoic Acid (PFUnA)	0.02	0	0.023	0.02	0.0025	0	
Perfluorodecanoic Acid (PFDA)	0.02	0	0.023	0.02	0.0061	0	
Perfluorododecanoic Acid (PFDoA)	0.02	0	0.023	0.02	0.005	0	
Perfluoro-n-Octanoic Acid (PFOA)	0.02	0	0.023	0.02	0.0033	0	
Perfluorooctane Sulfonate (PFOS)	0.02	0	0.023	0.02	0.006	0	
13C2-6:2 Fluorotelomer sulfonate		N/A*******					
13C2-8:2 Fluorotelomer sulfonate		N/A*******					
13C2-perfluorotetradecanoic acid		74.5209169					
13C4-Perfluorobutanoic acid		N/A*******					
D3-MeFOSAA		76.9862401					
D5-EtFOSAA		79.2626771					
N-methyl-d3-perfluorooctane sulfona		N/A*******					
N-ethyl-d5-perfluorooctane sulfonam		N/A*******					
13C2-Perfluorodecanoic acid		95.2873130					
13C2-Perfluorododecanoic acid		85.5610968					
13C2-Perfluorohexanoic acid		95.6475003					
13C2-Perfluoroundecanoic acid		82.7670369					
13C4-Perfluoroheptanoic acid		96.0336964					
13C5-Perfluorononanoic acid		90.8217031					
13C4-Perfluorooctanoic acid		92.1028542					
13C4-Perfluorooctanesulfonate		83.4431857					
13C5-Perfluoropentanoic acid		N/A*******					
13C8-Perfluorooctane Sulfonamide		N/A*******					
18O2-Perfluorohexanesulfonate		103.207324					



Manual Calculation for SPK

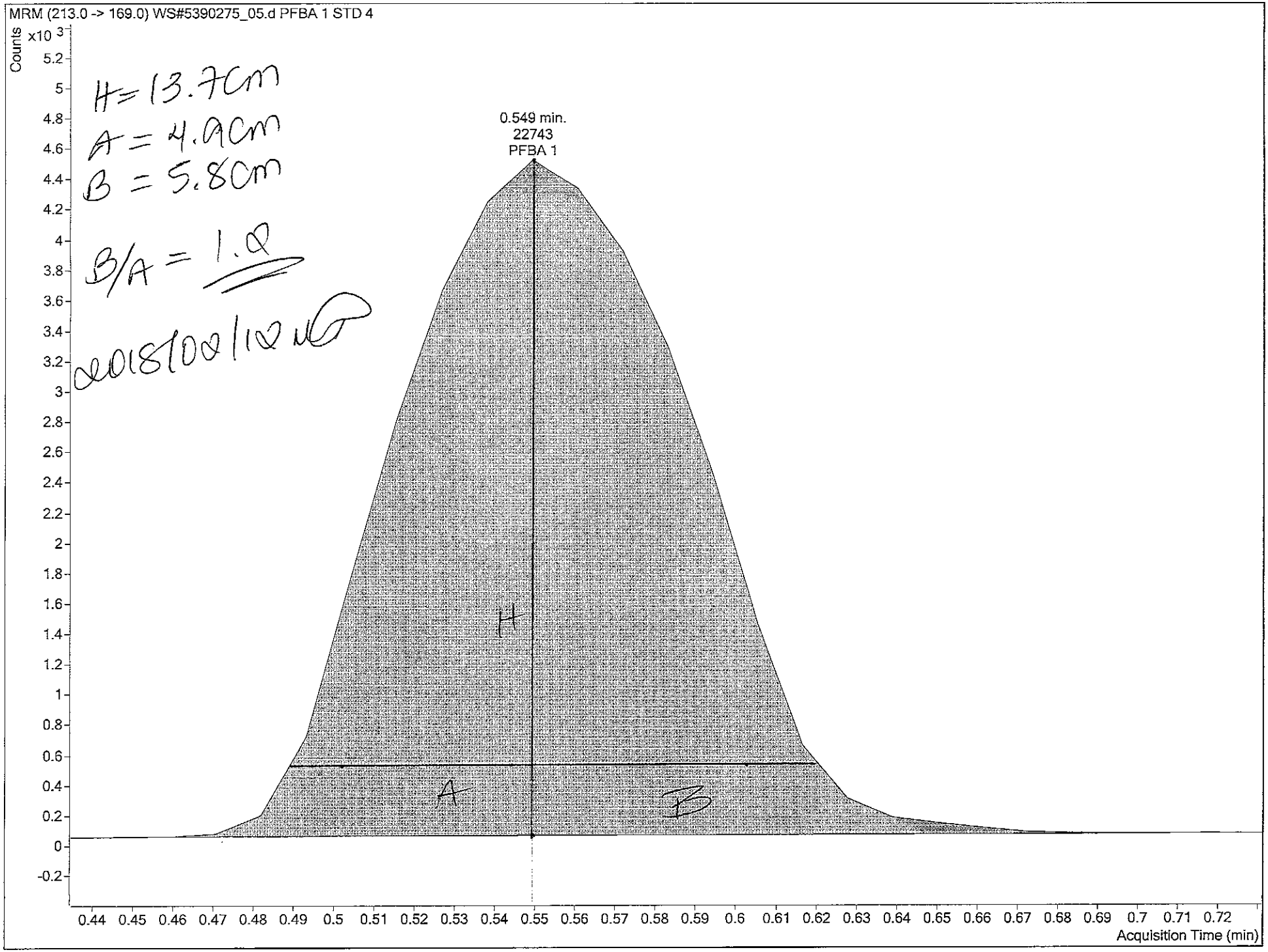
$8.3330 = 0.413000X - 0.005818$

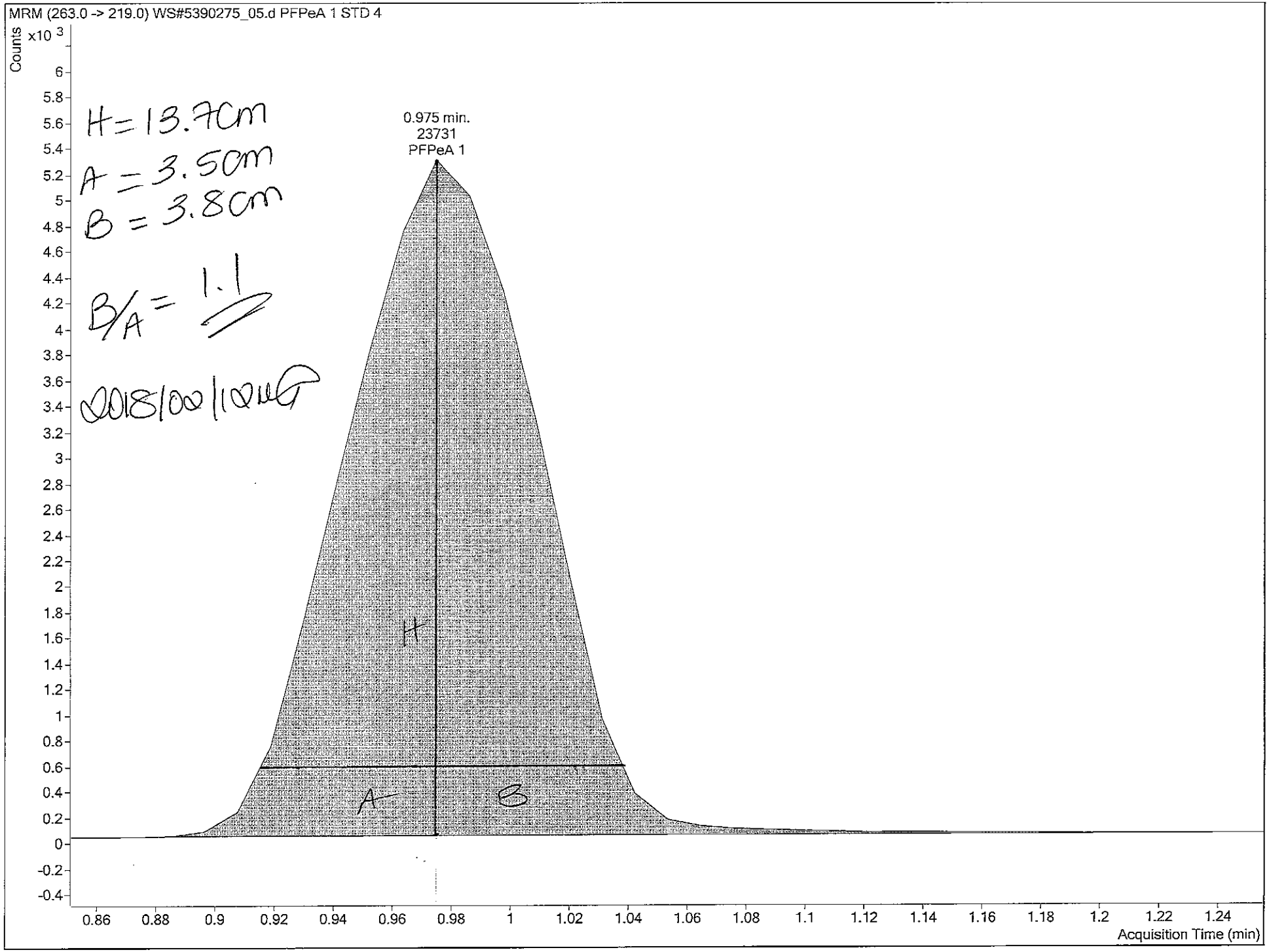
$X = 20.190840 \times 0.024$

$X = \underline{0.48458}$ ug/L

2018/02/10 MG

AD
2018/02/13


MRM (213.0 -> 169.0) WS#5390275_05.d PFBA 1 STD 4
Counts
x10 3
0.549 min.
22743
PFBA 1
H
A
B
Acquisition Time (min)
H = 13.7cm
A = 4.9cm
B = 5.8cm
B/A = 1.0
2018/02/12 NG


MRM (263.0 -> 219.0) WS#5390275_05.d PFPeA 1 STD 4
Counts
x10 3
0.975 min.
23731
PFPeA 1
H
A
B
Acquisition Time (min)
H = 13.7cm
A = 3.5cm
B = 3.8cm
B/A = 1.1
2018/02/10 MG

Report Name: Worksheet - Parameter Lists

Report Date: 2018/02/08

Test Code: **PFOSALCM-W**

Worksheet Number: **5390275**

Sample Number	Parameter Code	Parameter	
FZH306-01	ETFOSAA	EtFOSAA	*
FZH311-01	MEFOSAA	MeFOSAA	*
FZH312-01	PFBS	Perfluorobutane Sulfonate (PFBS)	
FZT419-01	PFHPA	Perfluoroheptanoic Acid (PFHpA)	
FZT420-01	PFHXA	Perfluorohexanoic Acid (PFHxA)	
FZT421-01	PFHXS	Perfluorohexane Sulfonate (PFHxS)	
FZT422-01	PFNA	Perfluorononanoic Acid (PFNA)	
FZT423-01	PFTEDA	Perfluorotetradecanoic Acid	
FZT424-01	PFTRDA	Perfluorotridecanoic Acid	
FZT425-01	PFUNA	Perfluoroundecanoic Acid (PFUnA)	
	PFDA	Perfluorodecanoic Acid (PFDA)	
	PFDOA	Perfluorododecanoic Acid (PFDoA)	
	PFOA	Perfluoro-n-Octanoic Acid (PFOA)	
	PFOS	Perfluorooctane Sulfonate (PFOS)	
FZH307-01	NONE	NONE	
FZH308-01			
FZH309-01			
FZH310-01			
FZH313-01			
FZH314-01			
FZH315-01			
FZH316-01			
FZH317-01			

* - This parameter is usually off, but will be reported for this group of samples!

WorkSheet 5390275 Instrument Sequences

1.	5390275:SPIKE	SPIKE
2.	5390275:SPIKE:D1	SPIKE :D1
3.	5390275:BLANK	BLANK
4.	5390275:FZH306-01	[redacted]
5.	5390275:FZH307-01	[redacted]
6.	5390275:FZH308-01	[redacted]
7.	5390275:FZH309-01	[redacted]
8.	5390275:FZH310-01	[redacted]
9.	5390275:FZH311-01	[redacted]
10.	5390275:FZH312-01	[redacted]
11.	5390275:FZH313-01	[redacted]
12.	5390275:FZH314-01	[redacted]
13.	5390275:FZH315-01	[redacted]
14.	5390275:FZH316-01	[redacted]
15.	5390275:FZH317-01	[redacted]
16.	5390275:FZT419-01	OLD-OV1-101TW-0118
17.	5390275:FZT420-01	OLD-OV1-102TW-0118
18.	5390275:FZT421-01	OLD-OV1-102TW-0118-D
19.	5390275:FZT422-01	OLD-OV1-103TW-0118
20.	5390275:FZT423-01	OLD-SA2-04ATW-0118
21.	5390275:FZT424-01	EB-GW-012518-3
22.	5390275:FZT425-01	FB-OLD-012518-6

Worklist Report

Agilent Technologies

Instrument Name: LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180209_Low_B.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\20180209\WS#5390275
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

2018/02/09

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#5390275_01.d	Sample		As Method	-
2	STD 1	P2-A2	PFC_Water_Low.m	WS#5390275_02.d	Calibration	STD 1	As Method	-
3	STD 2	P2-A3	PFC_Water_Low.m	WS#5390275_03.d	Calibration	STD 2	As Method	-
4	STD 3	P2-A4	PFC_Water_Low.m	WS#5390275_04.d	Calibration	STD 3	As Method	-
5	STD 4	P2-A5	PFC_Water_Low.m	WS#5390275_05.d	Calibration	STD 4	As Method	-
6	STD 5	P2-A6	PFC_Water_Low.m	WS#5390275_06.d	Calibration	STD 5	As Method	-
7	STD 6	P2-A7	PFC_Water_Low.m	WS#5390275_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#5390275_08.d	Sample		As Method	-
9	ICV	P2-A9	PFC_Water_Low.m	WS#5390275_09.d	QC	ICV	As Method	-
10	ISC	P2-A2	PFC_Water_Low.m	WS#5390275_10.d	ConCal	STD 1	As Method	-
11	5390275:BLANK	P2-B1	PFC_Water_Low.m	WS#5390275_11.d	Sample		As Method	-
12	5390275:SPIKE	P2-B2	PFC_Water_Low.m	WS#5390275_12.d	QC	ICV	As Method	-
13	5390275:SPIKE:D1	P2-B3	PFC_Water_Low.m	WS#5390275_13.d	QC	ICV	As Method	-
14	5390275:FZH306-01:10x	P2-B4	PFC_Water_Low.m	WS#5390275_14.d	QC	ICV	As Method	-
15	5390275:FZH306-01	P2-B5	PFC_Water_Low.m	WS#5390275_15.d	Sample		As Method	-
16	IB	P2-A8	PFC_Water_Low.m	WS#5390275_16.d	Sample		As Method	-
17	5390275:FZH307-01	P2-B6	PFC_Water_Low.m	WS#5390275_17.d	Sample		As Method	-
18	5390275:FZH308-01	P2-B7	PFC_Water_Low.m	WS#5390275_18.d	Sample		As Method	-
19	5390275:FZH309-01	P2-B8	PFC_Water_Low.m	WS#5390275_19.d	Sample		As Method	-
20	5390275:FZH310-01	P2-B9	PFC_Water_Low.m	WS#5390275_20.d	Sample		As Method	-
21	5390275:FZH311-01	P2-C1	PFC_Water_Low.m	WS#5390275_21.d	Sample		As Method	-
22	5390275:FZH312-01	P2-C2	PFC_Water_Low.m	WS#5390275_22.d	Sample		As Method	-
23	5390275:FZH313-01	P2-C3	PFC_Water_Low.m	WS#5390275_23.d	Sample		As Method	-
24	5390275:FZH314-01	P2-C4	PFC_Water_Low.m	WS#5390275_24.d	Sample		As Method	-
25	CCV	P2-A5	PFC_Water_Low.m	WS#5390275_25.d	ConCal	STD 4	As Method	-
26	5390275:FZH315-01	P2-C5	PFC_Water_Low.m	WS#5390275_26.d	Sample		As Method	-
27	5390275:FZH316-01	P2-C6	PFC_Water_Low.m	WS#5390275_27.d	Sample		As Method	-
28	5390275:FZH317-01	P2-C7	PFC_Water_Low.m	WS#5390275_28.d	Sample		As Method	-
29	5390275:FZT419-01:10x	P2-C8	PFC_Water_Low.m	WS#5390275_29.d	Sample		As Method	-
30	5390275:FZT419-01	P2-C9	PFC_Water_Low.m	WS#5390275_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	IB	P2-A8	PFC_Water_Low.m	WS#5390275_31.d	Sample		As Method	-
32	5390275:FZT420-01	P2-D1	PFC_Water_Low.m	WS#5390275_32.d	Sample		As Method	-
33	5390275:FZT421-01	P2-D2	PFC_Water_Low.m	WS#5390275_33.d	Sample		As Method	-
34	5390275:FZT422-01	P2-D3	PFC_Water_Low.m	WS#5390275_34.d	Sample		As Method	-
35	5390275:FZT423-01	P2-D4	PFC_Water_Low.m	WS#5390275_35.d	Sample		As Method	-
36	5390275:FZT424-01	P2-D5	PFC_Water_Low.m	WS#5390275_36.d	Sample		As Method	-
37	CCV	P2-A5	PFC_Water_Low.m	WS#5390275_37.d	ConCal	STD 4	As Method	-
38	5390275:FZT425-01	P2-D6	PFC_Water_Low.m	WS#5390275_38.d	Sample		As Method	-
39	CCV	P2-A5	PFC_Water_Low.m	WS#5390275_39.d	ConCal	STD 4	As Method	-

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Worklist Report

Agilent Technologies

Maxxam Analytics

Instrument Name: LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180209_Low_B_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\20180209\WS#5390275_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)

2018/02/09

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#5390275_FOSAA_01.d	Sample		As Method	-
2	STD 1	P2-A2	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_02.d	Calibration	STD 1	As Method	-
3	STD 2	P2-A3	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_03.d	Calibration	STD 2	As Method	-
4	STD 3	P2-A4	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_04.d	Calibration	STD 3	As Method	-
5	STD 4	P2-A5	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_05.d	Calibration	STD 4	As Method	-
6	STD 5	P2-A6	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_06.d	Calibration	STD 5	As Method	-
7	STD 6	P2-A7	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_07.d	Calibration	STD 6	As Method	-
8	IB	P2-A8	PFC_Water_Low_FOSAA.m	WS#5390275_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#5390275_FOSAA_09.d	QC	ICV	As Method	-
10	ISC	P2-A2	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_10.d	ConCal	STD 1	As Method	-
11	5390275:BLANK	P2-B1	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_11.d	Sample		As Method	-
12	5390275:SPIKE	P2-B2	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_12.d	QC	ICV	As Method	-
13	5390275:SPIKE:D1	P2-B3	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_13.d	QC	ICV	As Method	-
14	5390275:FZH306-01:10x	P2-B4	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_14.d	QC	ICV	As Method	-
15	5390275:FZH306-01	P2-B5	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_15.d	Sample		As Method	-
16	IB	P2-A8	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_16.d	Sample		As Method	-
17	5390275:FZH307-01	P2-B6	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_17.d	Sample		As Method	-
18	5390275:FZH308-01	P2-B7	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_18.d	Sample		As Method	-
19	5390275:FZH309-01	P2-B8	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_19.d	Sample		As Method	-
20	5390275:FZH310-01	P2-B9	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_20.d	Sample		As Method	-
21	5390275:FZH311-01	P2-C1	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_21.d	Sample		As Method	-
22	5390275:FZH312-01	P2-C2	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_22.d	Sample		As Method	-
23	5390275:FZH313-01	P2-C3	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_23.d	Sample		As Method	-
24	5390275:FZH314-01	P2-C4	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_24.d	Sample		As Method	-
25	CCV	P2-A5	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_25.d	ConCal	STD 4	As Method	-
26	5390275:FZH315-01	P2-C5	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_26.d	Sample		As Method	-
27	5390275:FZH316-01	P2-C6	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_27.d	Sample		As Method	-
28	5390275:FZH317-01	P2-C7	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_28.d	Sample		As Method	-
29	5390275:FZT419-01:10x	P2-C8	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_29.d	Sample		As Method	-
30	5390275:FZT419-01	P2-C9	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_30.d	Sample		As Method	-
31	IB	P2-A8	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_31.d	Sample		As Method	-
32	5390275:FZT420-01	P2-D1	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_32.d	Sample		As Method	-
33	5390275:FZT421-01	P2-D2	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_33.d	Sample		As Method	-
34	5390275:FZT422-01	P2-D3	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_34.d	Sample		As Method	-

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D:\MassHunter\Worklists\PFCs\PFC_180209_Low_B_FOSAA.wkl

Report generation date: 09-Feb-2018 10:31:26 AM

Worklist Report

Agilent Technologies

	Sample Name	Sample Position	Method	Data File	Sample Type	Level Name	Inj Vol (µl)	Comment
35	5390275:FZT423-01	P2-D4	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_35.d	Sample		As Method	-
36	5390275:FZT424-01	P2-D5	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_36.d	Sample		As Method	-
37	CCV	P2-A5	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_37.d	ConCal	STD 4	As Method	-
38	5390275:FZT425-01	P2-D6	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_38.d	Sample		As Method	-
39	CCV	P2-A5	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_39.d	ConCal	STD 4	As Method	-

Maxxam Analytics

FINAL INJECTION SEQUENCE

Sample					
Name	Comment	Acq. Date-Time	Acq. Method File	Data File	Pos.
STD 1	-	2018/02/09 4:39 PM	PFC_Water_Low.m	WS#5390275_02.d	P2-A2
STD 2	-	2018/02/09 4:44 PM	PFC_Water_Low.m	WS#5390275_03.d	P2-A3
STD 3	-	2018/02/09 4:49 PM	PFC_Water_Low.m	WS#5390275_04.d	P2-A4
STD 4	-	2018/02/09 4:53 PM	PFC_Water_Low.m	WS#5390275_05.d	P2-A5
STD 5	-	2018/02/09 4:58 PM	PFC_Water_Low.m	WS#5390275_06.d	P2-A6
STD 6	-	2018/02/09 5:03 PM	PFC_Water_Low.m	WS#5390275_07.d	P2-A7
IB	-	2018/02/09 5:08 PM	PFC_Water_Low.m	WS#5390275_08.d	P2-A8
ICV	-	2018/02/09 5:13 PM	PFC_Water_Low.m	WS#5390275_09.d	P2-A9
ISC	-	2018/02/09 5:18 PM	PFC_Water_Low.m	WS#5390275_10.d	P2-A2
5390275:BLANK	-	2018/02/09 5:23 PM	PFC_Water_Low.m	WS#5390275_11.d	P2-B1
5390275:SPIKE	-	2018/02/09 5:28 PM	PFC_Water_Low.m	WS#5390275_12.d	P2-B2
5390275:SPIKE:D1	-	2018/02/09 5:33 PM	PFC_Water_Low.m	WS#5390275_13.d	P2-B3
5390275:FZH306-01:10x	Reported for PFOA only.	2018/02/09 5:38 PM	PFC_Water_Low.m	WS#5390275_14.d	P2-B4
5390275:FZH306-01	Reported for all except PFOA.	2018/02/09 5:43 PM	PFC_Water_Low.m	WS#5390275_15.d	P2-B5
IB	-	2018/02/09 5:48 PM	PFC_Water_Low.m	WS#5390275_16.d	P2-A8
5390275:FZH307-01	-	2018/02/09 5:53 PM	PFC_Water_Low.m	WS#5390275_17.d	P2-B6
5390275:FZH308-01	-	2018/02/09 5:58 PM	PFC_Water_Low.m	WS#5390275_18.d	P2-B7
5390275:FZH309-01	-	2018/02/09 6:03 PM	PFC_Water_Low.m	WS#5390275_19.d	P2-B8
5390275:FZH310-01	-	2018/02/09 6:07 PM	PFC_Water_Low.m	WS#5390275_20.d	P2-B9
5390275:FZH311-01	-	2018/02/09 6:12 PM	PFC_Water_Low.m	WS#5390275_21.d	P2-C1
5390275:FZH312-01	-	2018/02/09 6:17 PM	PFC_Water_Low.m	WS#5390275_22.d	P2-C2
5390275:FZH313-01	-	2018/02/09 6:22 PM	PFC_Water_Low.m	WS#5390275_23.d	P2-C3
5390275:FZH314-01	-	2018/02/09 6:27 PM	PFC_Water_Low.m	WS#5390275_24.d	P2-C4
CCV	-	2018/02/09 6:32 PM	PFC_Water_Low.m	WS#5390275_25.d	P2-A5
5390275:FZH315-01	-	2018/02/09 6:37 PM	PFC_Water_Low.m	WS#5390275_26.d	P2-C5
5390275:FZH316-01	-	2018/02/09 6:42 PM	PFC_Water_Low.m	WS#5390275_27.d	P2-C6
5390275:FZH317-01	-	2018/02/09 6:47 PM	PFC_Water_Low.m	WS#5390275_28.d	P2-C7
5390275:FZT419-01:10x	not used.	2018/02/09 6:52 PM	PFC_Water_Low.m	WS#5390275_29.d	P2-C8
5390275:FZT419-01	Reported for all.	2018/02/09 6:57 PM	PFC_Water_Low.m	WS#5390275_30.d	P2-C9
IB	-	2018/02/09 7:02 PM	PFC_Water_Low.m	WS#5390275_31.d	P2-A8
5390275:FZT420-01	-	2018/02/09 7:07 PM	PFC_Water_Low.m	WS#5390275_32.d	P2-D1
5390275:FZT421-01	-	2018/02/09 7:12 PM	PFC_Water_Low.m	WS#5390275_33.d	P2-D2
5390275:FZT422-01	-	2018/02/09 7:17 PM	PFC_Water_Low.m	WS#5390275_34.d	P2-D3

FINAL INJECTION SEQUENCE

Sample					
Name	Comment	Acq. Date-Time	Acq. Method File	Data File	Pos.
5390275:FZT423-01	-	2018/02/09 7:21 PM	PFC_Water_Low.m	WS#5390275_35.d	P2-D4
5390275:FZT424-01	-	2018/02/09 7:26 PM	PFC_Water_Low.m	WS#5390275_36.d	P2-D5
CCV	-	2018/02/09 7:31 PM	PFC_Water_Low.m	WS#5390275_37.d	P2-A5
5390275:FZT425-01	-	2018/02/09 7:36 PM	PFC_Water_Low.m	WS#5390275_38.d	P2-D6
CCV	-	2018/02/09 7:41 PM	PFC_Water_Low.m	WS#5390275_39.d	P2-A5

FINAL INJECTION SEQUENCE

Sample					
Name	Comment	Acq. Date-Time	Acq. Method File	Data File	Pos.
STD 1	-	2018/02/10 12:30 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_02.d	P2-A2
STD 2	-	2018/02/10 12:32 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_03.d	P2-A3
STD 3	-	2018/02/10 12:35 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_04.d	P2-A4
STD 4	-	2018/02/10 12:37 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_05.d	P2-A5
STD 5	-	2018/02/10 12:39 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_06.d	P2-A6
STD 6	-	2018/02/10 12:42 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_07.d	P2-A7
IB	-	2018/02/10 12:44 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_08.d	P2-A8
ICV	-	2018/02/10 12:47 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_09.d	P2-A9
ISC	-	2018/02/10 12:49 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_10.d	P2-A2
5390275:BLANK	-	2018/02/10 12:52 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_11.d	P2-B1
5390275:SPIKE	-	2018/02/10 12:54 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_12.d	P2-B2
5390275:SPIKE:D1	-	2018/02/10 12:56 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_13.d	P2-B3
5390275:FZH306-01:10x	not used.	2018/02/10 12:59 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_14.d	P2-B4
5390275:FZH306-01	Reported for all.	2018/02/10 1:01 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_15.d	P2-B5
IB	-	2018/02/10 1:04 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_16.d	P2-A8
5390275:FZH307-01	-	2018/02/10 1:06 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_17.d	P2-B6
5390275:FZH308-01	-	2018/02/10 1:08 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_18.d	P2-B7
5390275:FZH309-01	-	2018/02/10 1:11 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_19.d	P2-B8
5390275:FZH310-01	-	2018/02/10 1:13 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_20.d	P2-B9
5390275:FZH311-01	-	2018/02/10 1:16 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_21.d	P2-C1
5390275:FZH312-01	-	2018/02/10 1:18 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_22.d	P2-C2
5390275:FZH313-01	-	2018/02/10 1:20 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_23.d	P2-C3
5390275:FZH314-01	-	2018/02/10 1:23 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_24.d	P2-C4
CCV	-	2018/02/10 1:25 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_25.d	P2-A5
5390275:FZH315-01	-	2018/02/10 1:28 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_26.d	P2-C5
5390275:FZH316-01	-	2018/02/10 1:30 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_27.d	P2-C6
5390275:FZH317-01	-	2018/02/10 1:33 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_28.d	P2-C7
5390275:FZT419-01:10x	not used.	2018/02/10 1:35 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_29.d	P2-C8
5390275:FZT419-01	Reported for all.	2018/02/10 1:37 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_30.d	P2-C9
IB	-	2018/02/10 1:40 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_31.d	P2-A8
5390275:FZT420-01	-	2018/02/10 1:42 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_32.d	P2-D1
5390275:FZT421-01	-	2018/02/10 1:45 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_33.d	P2-D2
5390275:FZT422-01	-	2018/02/10 1:47 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_34.d	P2-D3

Maxxam Analytics

FINAL INJECTION SEQUENCE

Sample					
Name	Comment	Acq. Date-Time	Acq. Method File	Data File	Pos.
5390275:FZT423-01	-	2018/02/10 1:49 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_35.d	P2-D4
5390275:FZT424-01	-	2018/02/10 1:52 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_36.d	P2-D5
CCV	-	2018/02/10 1:54 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_37.d	P2-A5
5390275:FZT425-01	-	2018/02/10 1:57 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_38.d	P2-D6
CCV	-	2018/02/10 1:59 AM	PFC_Water_Low_FOSAA.m	WS#5390275_FOSAA_39.d	P2-A5

Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics.batch.bin
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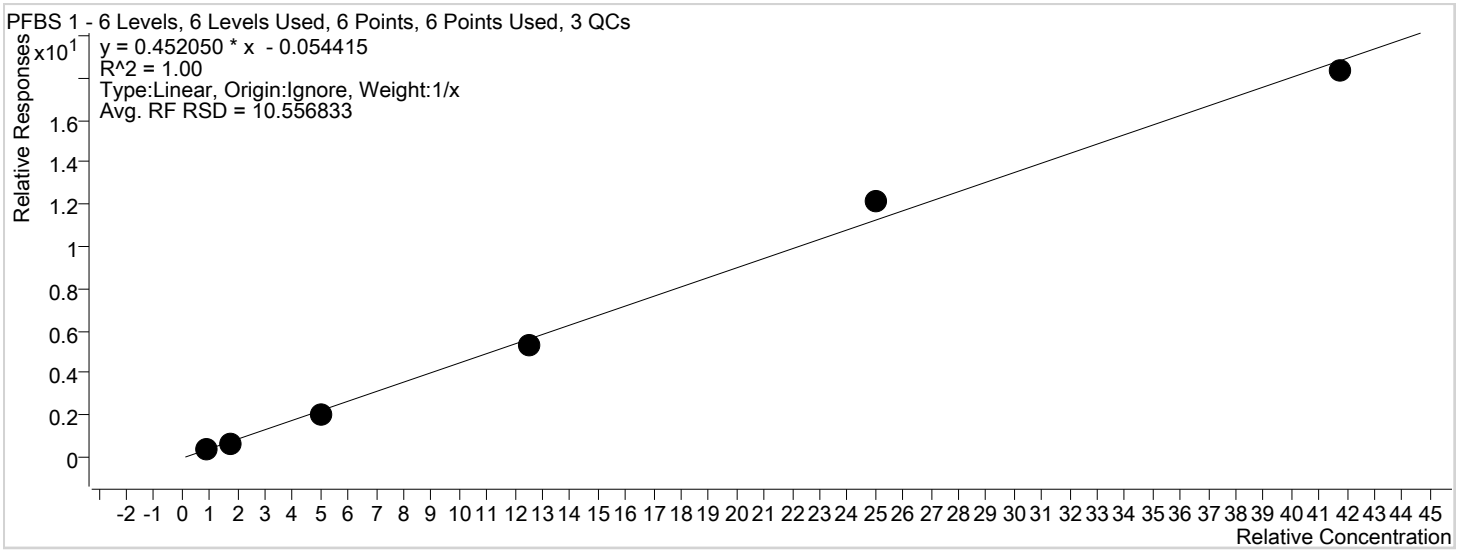
Instrument: LCMS04

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 4:39:10 PM	0.83	0.99	541	0.4737	44	119.3
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.48	1012	0.3619	150	87.1
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	4.66	3027	0.4102	369	93.1
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	11.80	7920	0.4224	126	94.4
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	27.12	16645	0.4881	1529	108.5
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	40.69	26131	0.4397	119	97.6

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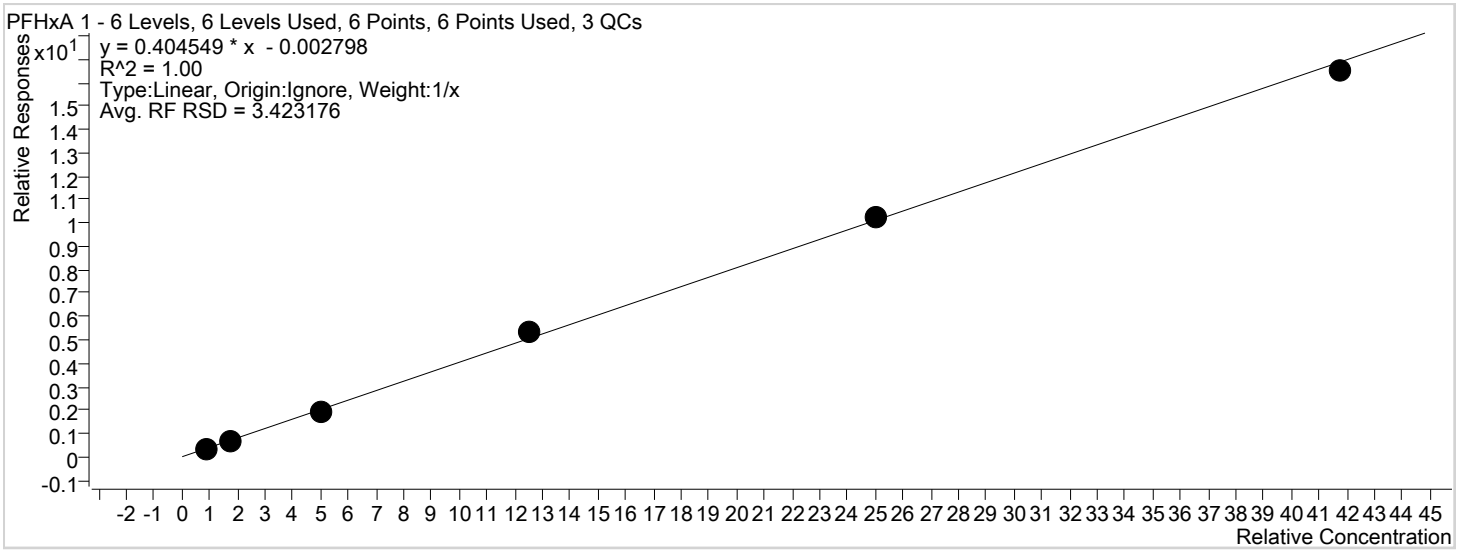
Instrument: LCMS04

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 4:39:10 PM	0.83	0.85	1974	0.4086	125	101.8
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.65	3942	0.3909	743	97.0
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	4.82	11350	0.3893	612	96.4
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	13.12	30189	0.4243	2466	104.9
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	25.48	59511	0.4123	4146	101.9
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	40.82	99005	0.3959	13336	97.9

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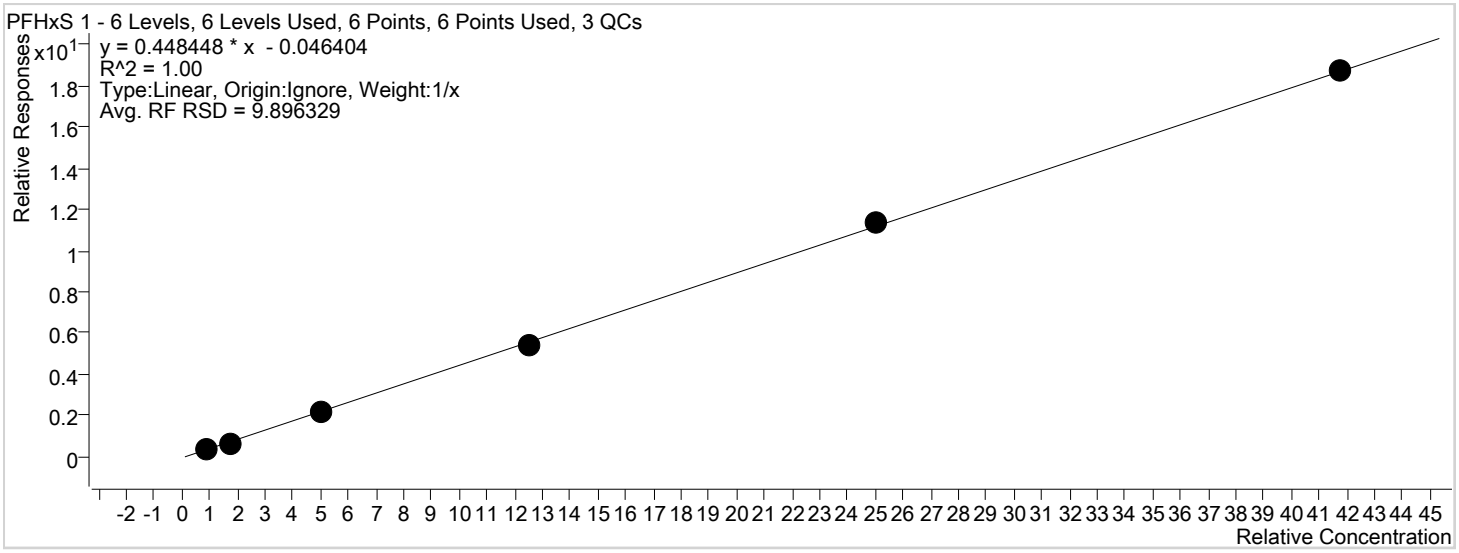
Instrument: LCMS04

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 4:39:10 PM	0.83	0.98	539	0.4719	168	117.7
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.43	979	0.3501	123	84.2
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	4.97	3224	0.4369	441	99.5
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	12.07	8047	0.4292	376	96.5
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	25.46	15508	0.4548	1375	101.8
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	41.83	26662	0.4487	2102	100.3

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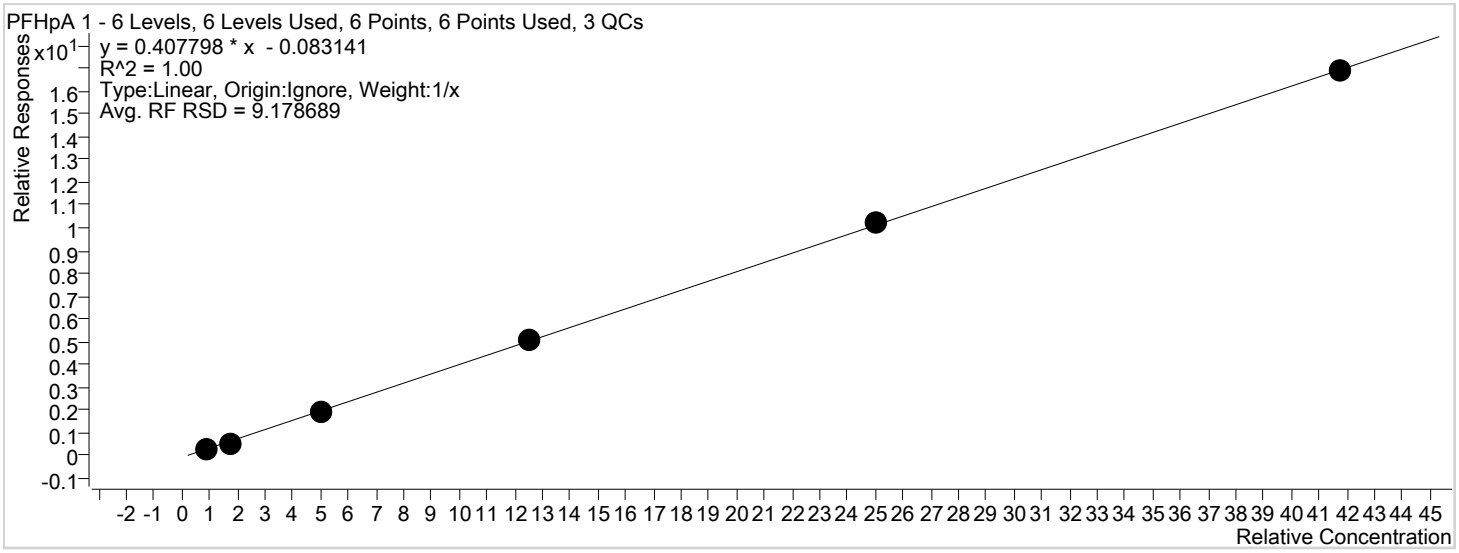
Instrument: LCMS04

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 4:39:10 PM	0.83	0.92	2221	0.3516	29	110.8
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.55	4423	0.3225	64	91.1
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	4.85	14826	0.3792	199	97.1
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	12.53	38723	0.4023	213	100.3
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	25.23	76118	0.4083	283	100.9
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	41.64	119160	0.4052	232	99.9

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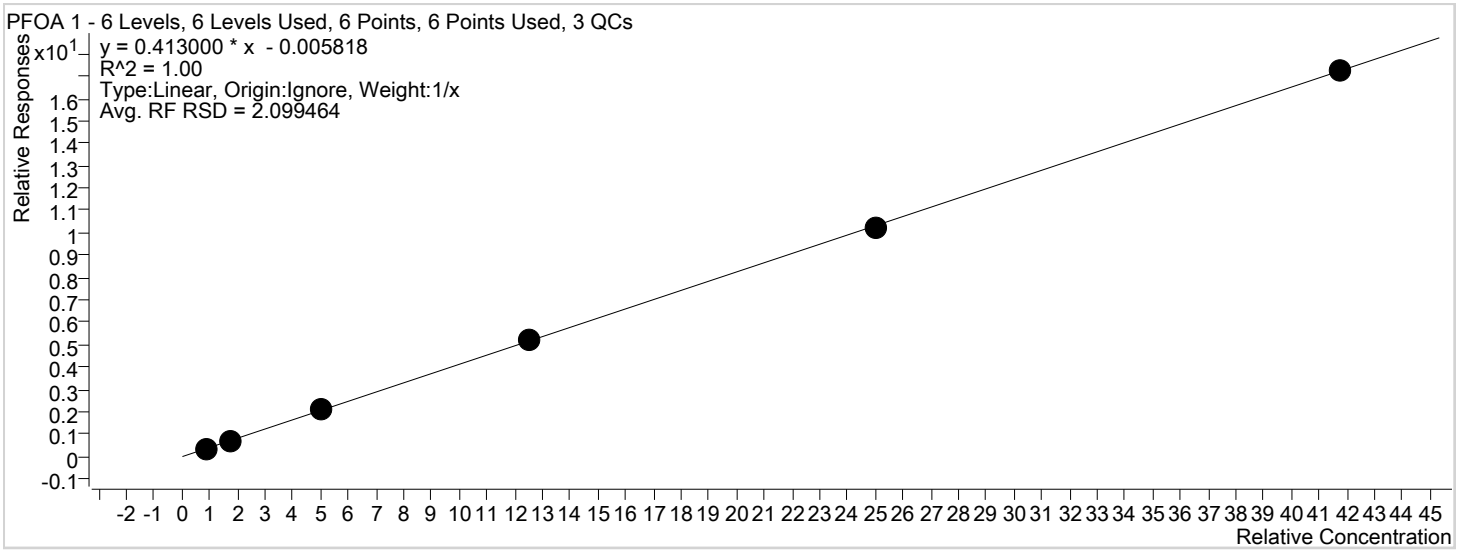
Instrument: LCMS04

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 4:39:10 PM	0.83	0.86	2822	0.4187	26	103.1
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.64	5249	0.3940	48	96.2
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	5.02	16529	0.4139	138	100.5
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	12.56	42521	0.4144	393	100.4
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	24.91	85172	0.4112	929	99.6
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	41.75	138298	0.4134	1754	100.1

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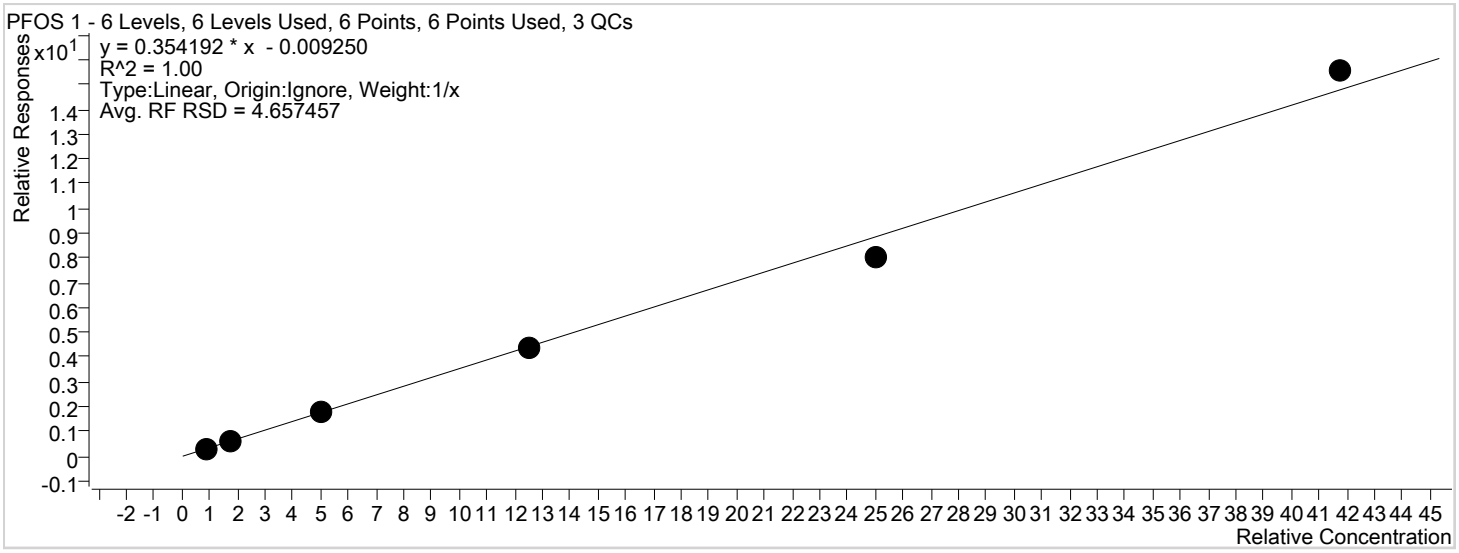
Instrument: LCMS04

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 4:39:10 PM	0.83	0.87	546	0.3595	109	104.6
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.69	1079	0.3470	208	99.5
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	4.99	3104	0.3513	167	99.7
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	12.44	8505	0.3516	191	99.5
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	22.84	15876	0.3232	331	91.3
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	43.91	26409	0.3728	236	105.3

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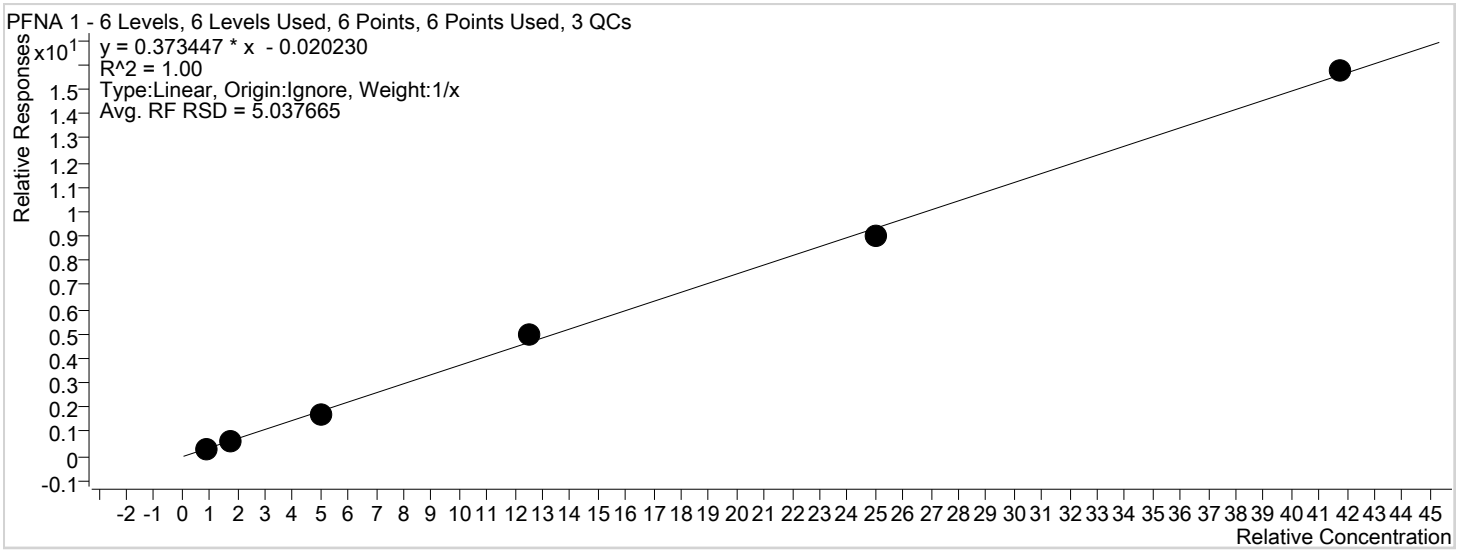
Instrument: LCMS04

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 4:39:10 PM	0.83	0.88	2426	0.3708	49	105.8
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.66	5019	0.3533	70	97.8
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	4.64	13528	0.3426	238	92.8
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	13.25	38764	0.3941	331	106.0
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	24.09	73172	0.3590	1390	96.4
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	42.21	121875	0.3776	2584	101.2

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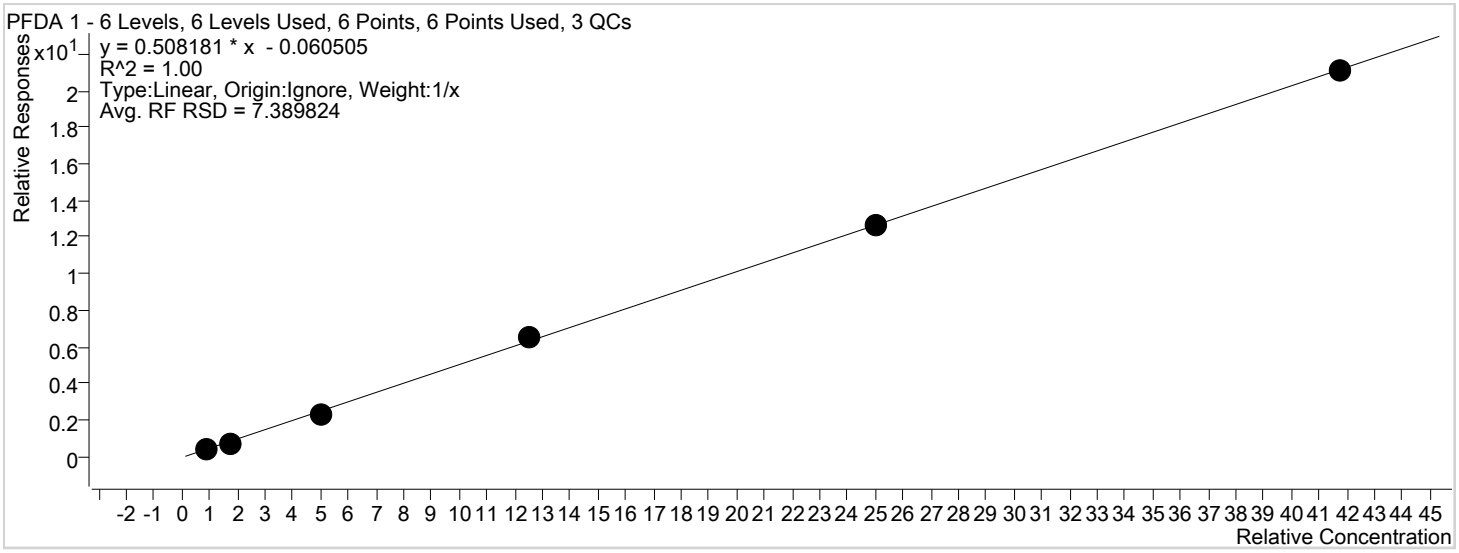
Instrument: LCMS04

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 4:39:10 PM	0.83	0.93	2665	0.4994	31	112.6
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.58	4849	0.4367	65	92.9
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	4.51	15458	0.4465	136	90.2
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	13.01	41655	0.5240	355	104.1
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	25.09	81955	0.5075	1213	100.4
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	41.61	133055	0.5056	1146	99.8

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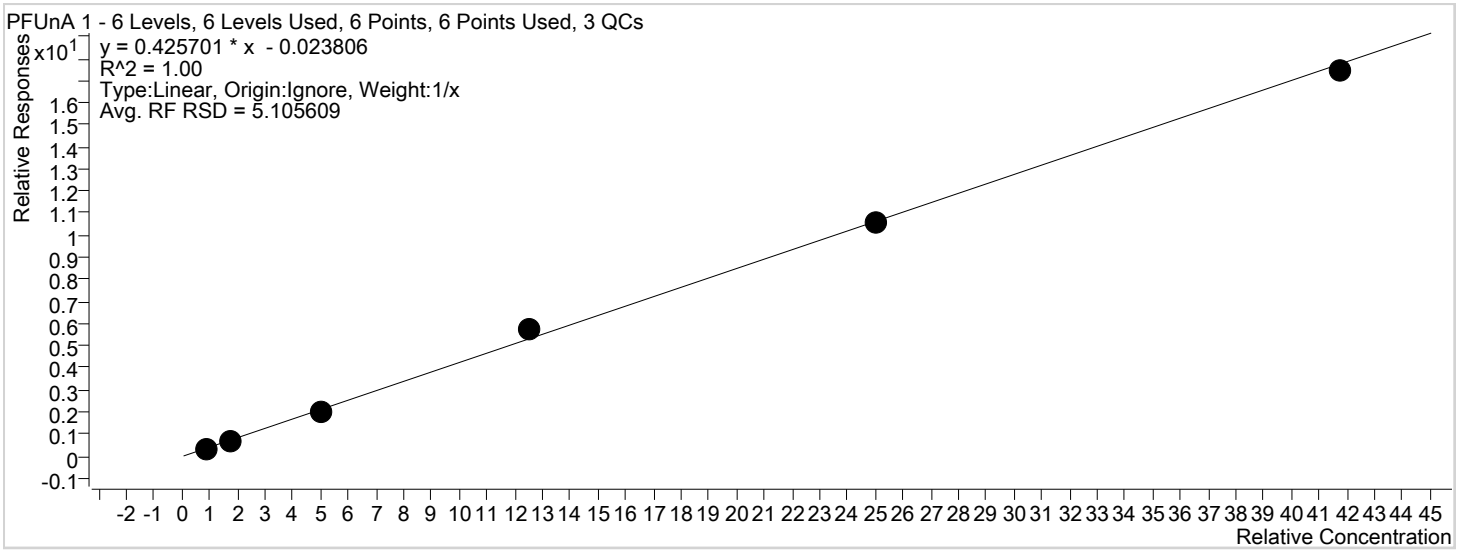
Instrument: LCMS04

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 4:39:10 PM	0.83	0.82	2635	0.3922	22	98.9
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.67	5562	0.4050	60	98.4
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	4.87	17037	0.4095	153	97.3
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	13.40	45808	0.4545	142	107.2
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	24.95	85920	0.4239	310	99.8
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	41.02	143281	0.4182	256	98.4

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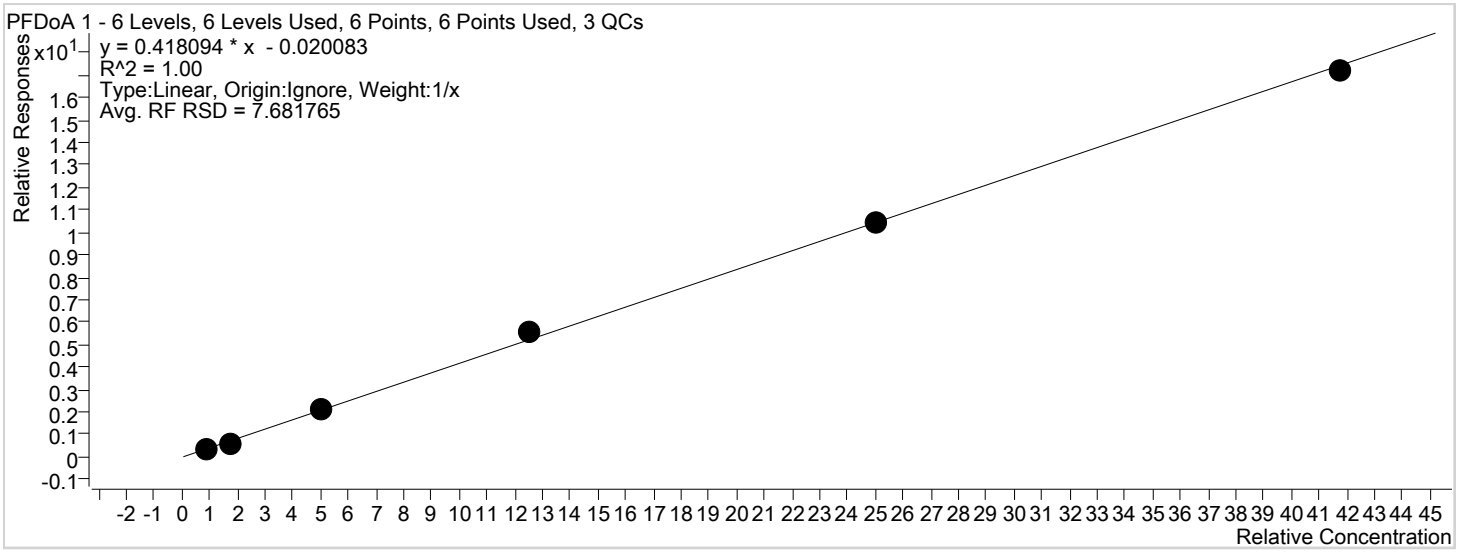
Instrument: LCMS04

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 4:39:10 PM	0.83	0.90	3757	0.4277	70	108.1
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.47	6436	0.3504	175	86.6
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	5.05	21697	0.4180	498	100.9
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	13.26	57043	0.4419	2640	106.1
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	24.89	110949	0.4154	4130	99.6
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	41.17	179920	0.4123	4038	98.7

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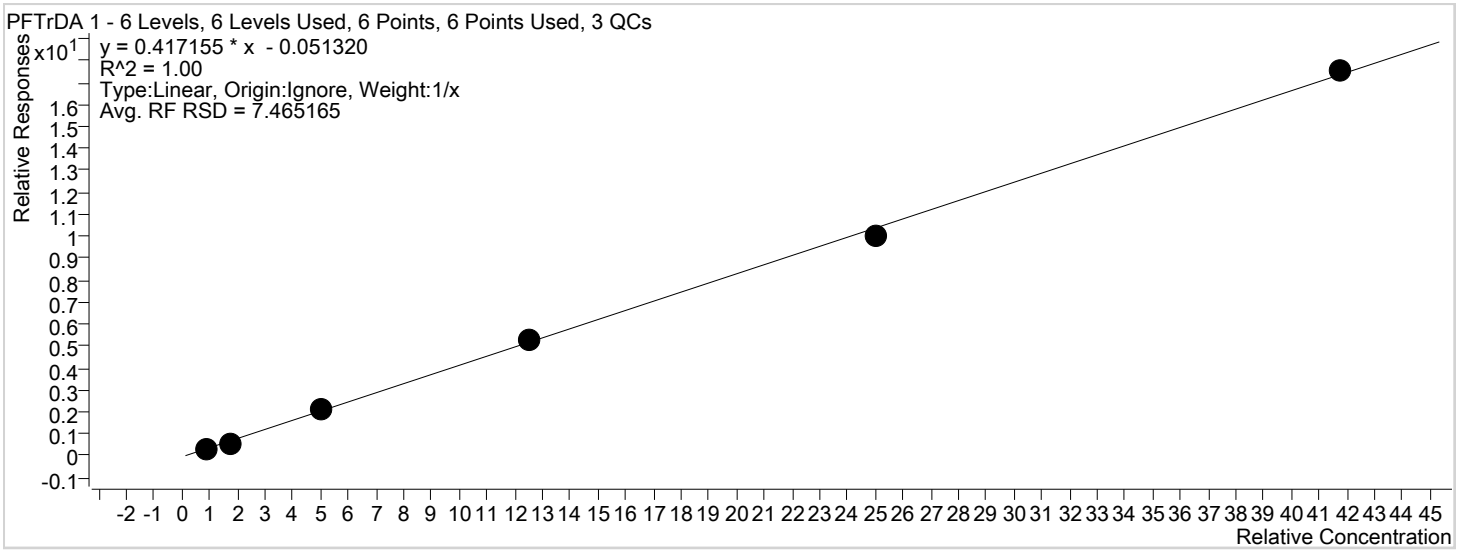
Instrument: LCMS04

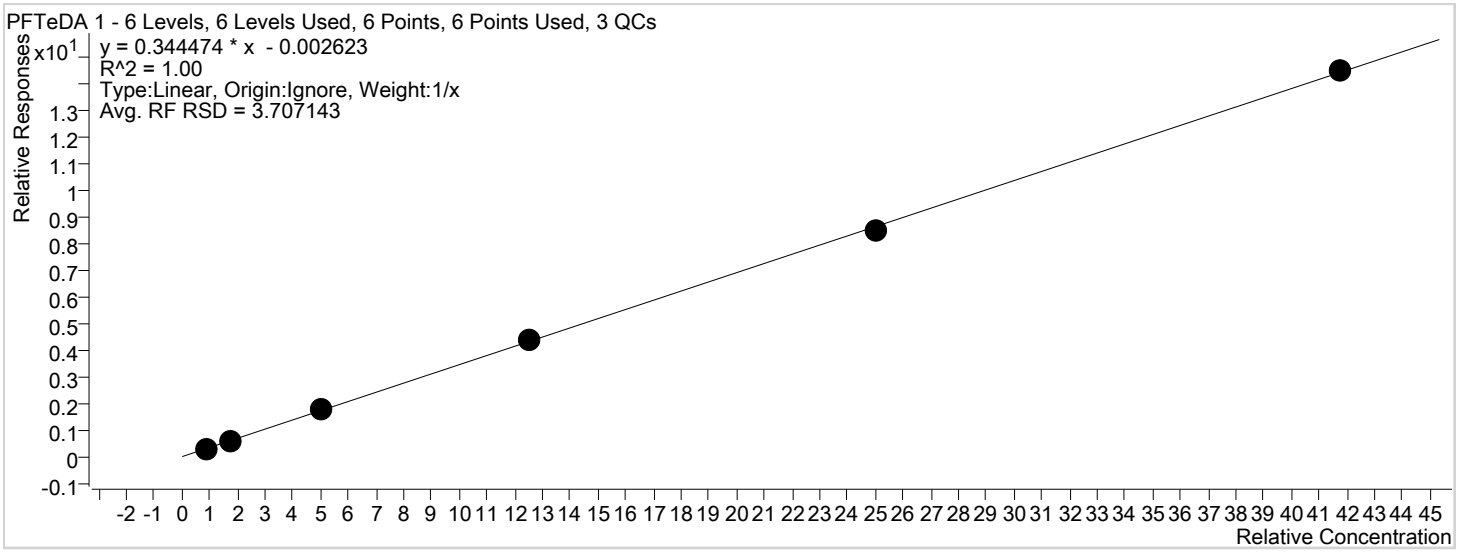
Analyte: PFTrDA 1
Internal Standard: MPFTeDA



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/09 4:39:10 PM	0.83	0.88	3728	0.3787	28	105.6
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.54	6964	0.3487	36	90.8
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	5.19	24331	0.4226	121	103.8
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	12.72	64478	0.4204	121	101.8
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	24.24	123420	0.4024	136	97.0
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	42.17	208563	0.4206	140	101.1

Batch Path T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics.batch.bin
Last Calib Update 2018/02/15 1:03:31 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	2018/02/09 4:39:10 PM	0.83	0.86	3469	0.3524	18	103.2
STD 2	STD 2	x	2018/02/09 4:44:06 PM	1.70	1.59	6403	0.3206	41	93.5
STD 3	STD 3	x	2018/02/09 4:49:02 PM	5.00	5.17	20492	0.3559	89	103.5
STD 4	STD 4	x	2018/02/09 4:53:58 PM	12.50	12.63	53350	0.3478	126	101.0
STD 5	STD 5	x	2018/02/09 4:58:54 PM	25.00	24.56	103773	0.3383	124	98.2
STD 6	STD 6	x	2018/02/09 5:03:50 PM	41.70	41.92	171694	0.3462	134	100.5

Agilent Technologies

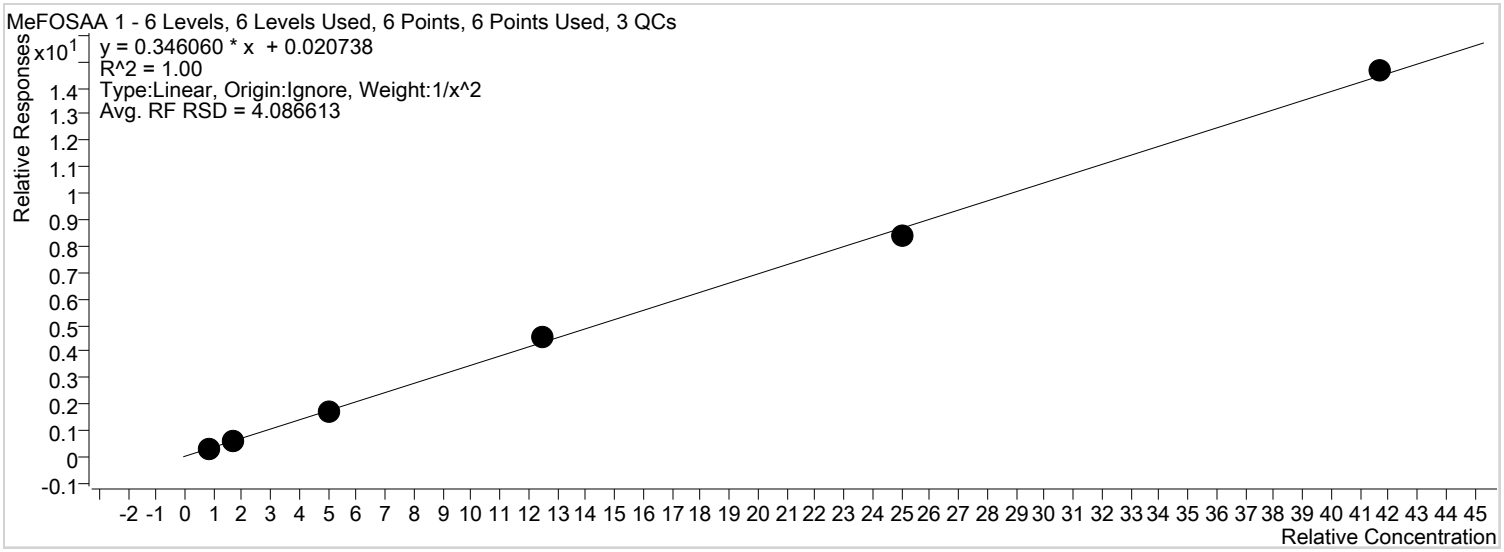
Batch Path T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_EToxics.batch.bin

Last Calib Update 2018/02/12 2:10:54 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	2018/02/10 12:30:18 AM	0.83	0.84	553	0.3766	118	101.6
STD 2	STD 2	x	2018/02/10 12:32:43 AM	1.70	1.64	1050	0.3456	265	96.4
STD 3	STD 3	x	2018/02/10 12:35:07 AM	5.00	4.99	3076	0.3495	261	99.8
STD 4	STD 4	x	2018/02/10 12:37:32 AM	12.50	13.04	8045	0.3626	302	104.3
STD 5	STD 5	x	2018/02/10 12:39:57 AM	25.00	24.14	15384	0.3350	257	96.6
STD 6	STD 6	x	2018/02/10 12:42:22 AM	41.70	42.27	24332	0.3513	252	101.4

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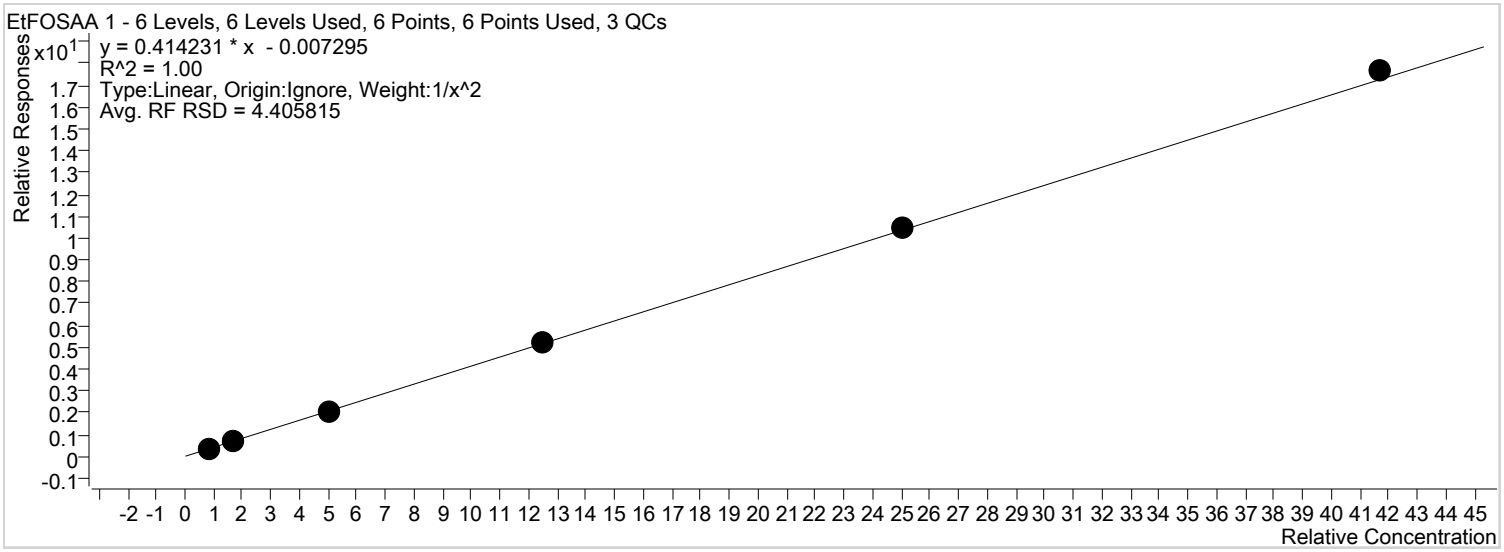
Batch Path T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_EToxics.batch.bin

Last Calib Update 2018/02/12 2:10:54 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	2018/02/10 12:30:18 AM	0.83	0.86	536	0.4218	80	103.9
STD 2	STD 2	x	2018/02/10 12:32:43 AM	1.70	1.56	1058	0.3758	124	91.8
STD 3	STD 3	x	2018/02/10 12:35:07 AM	5.00	4.97	3185	0.4104	400	99.4
STD 4	STD 4	x	2018/02/10 12:37:32 AM	12.50	12.63	8482	0.4181	880	101.1
STD 5	STD 5	x	2018/02/10 12:39:57 AM	25.00	25.36	16586	0.4199	1369	101.4
STD 6	STD 6	x	2018/02/10 12:42:22 AM	41.70	42.68	26753	0.4238	2940	102.3

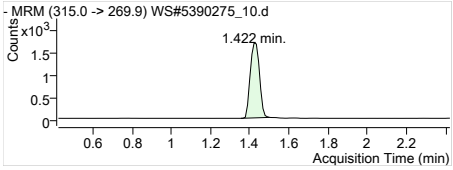
Quantitation Results

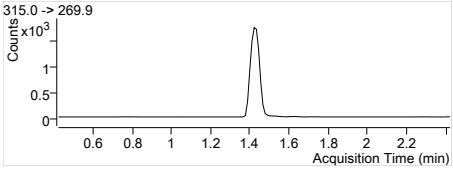
Agilent Technologies

Batch Path	T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics		
Sample Name	**ISC**	**Instrument**	LCMS04
Data File	WS#5390275_10.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A2
Acq. Date	2018/02/09 5:18:37 PM	**Injection Volume**	Per Method
Sample Annotation	-		

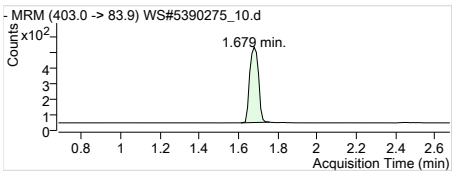
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	5486	1.42	1 µg/L		
MPFHxS	1497	1.68	1 µg/L		
MPFHpA	7297	1.69	1 µg/L		
MPFOA	7985	1.87	1 µg/L		
MPFOS	1771	1.98	1 µg/L		
MPFNA	7879	2.01	1 µg/L		
MPFDA	6673	2.14	1 µg/L		
MPFUnA	8214	2.23	1 µg/L		
MPFDoA	10218	2.32	1 µg/L		
MPFTeDA	12294	2.47	1 µg/L		
13C6-PFHxA IS	23804	1.42	1 µg/L		
13C9-PFDA IS	32182	2.13	1 µg/L		

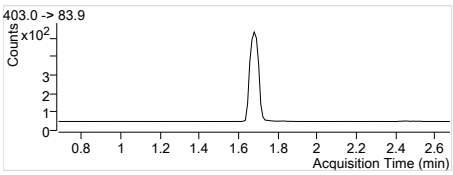
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	615	1.09	0.83	1.03 µg/L	124.00
PFHxA 1	1861	1.42	0.83	0.85 µg/L	101.86
PFHxS 1	505	1.68	0.83	0.86 µg/L	103.10
PFHpA 1	2492	1.69	0.83	1.04 µg/L	125.46
PFOA 1	2791	1.87	0.83	0.86 µg/L	103.66
PFOS 1	526	1.97	0.83	0.86 µg/L	104.18
PFNA 1	2605	2.01	0.83	0.94 µg/L	113.19
PFDA 1	2978	2.14	0.83	1.00 µg/L	120.15
PFUnA 1	2764	2.23	0.83	0.85 µg/L	101.97
PFDoA 1	3640	2.32	0.83	0.90 µg/L	108.44
PFTrDA 1	4076	2.40	0.83	0.92 µg/L	110.58
PFTeDA 1	3554	2.47	0.83	0.85 µg/L	102.03
13C2-PFHxA	5486	1.42	100.00	92.34 µg/L	92.34
18O2-PFHxS	1497	1.68	100.00	100.59 µg/L	100.59
13C4-PFHpA	7297	1.69	100.00	94.24 µg/L	94.24
13C4-PFOA	7985	1.87	100.00	97.23 µg/L	97.23
13C4-PFOS	1771	1.98	100.00	94.84 µg/L	94.84
13C5-PFNA	7880	2.01	100.00	97.08 µg/L	97.08
13C2-PFDA	6538	2.14	100.00	97.50 µg/L	97.50
13C2-PFUnA	8214	2.23	100.00	96.86 µg/L	96.86
13C2-PFDoA	10218	2.32	100.00	93.14 µg/L	93.14
13C2-PFTeDA	12560	2.47	100.00	98.68 µg/L	98.68
13C6-PFHxA	23804	1.42	100.00	101.65 µg/L	101.65
13C9-PFDA	32182	2.13	100.00	103.98 µg/L	103.98



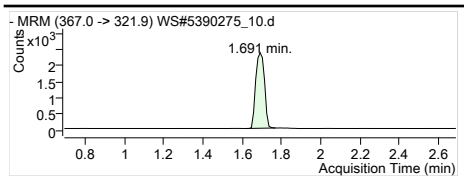


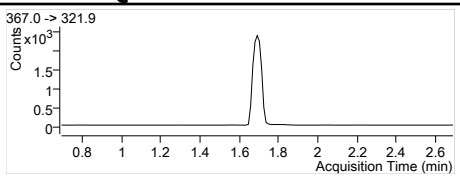
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: CC



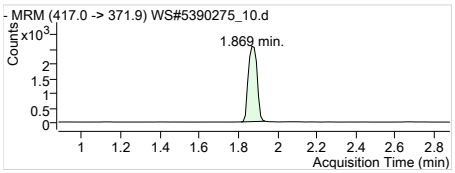


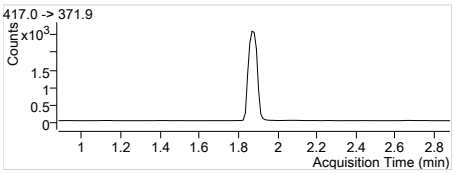
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: CC



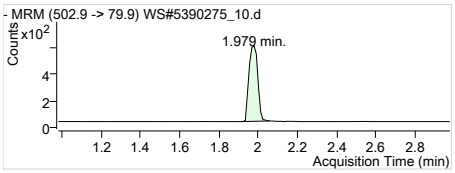


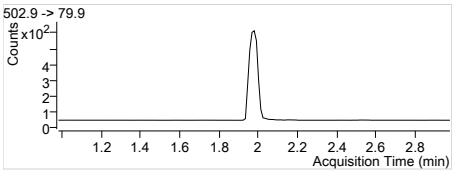
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: CC



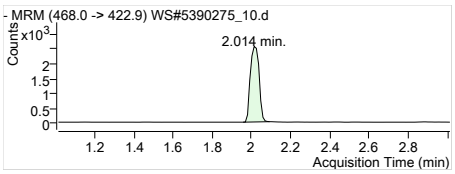


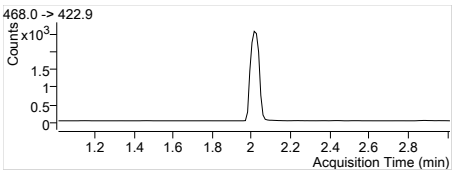
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: CC



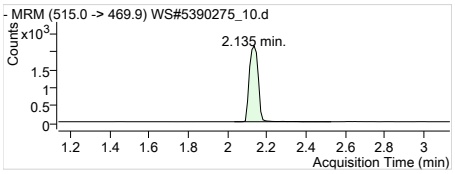


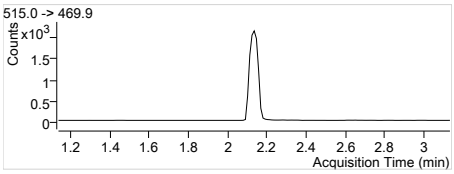
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



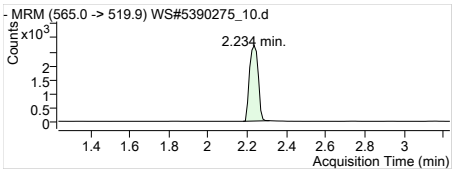


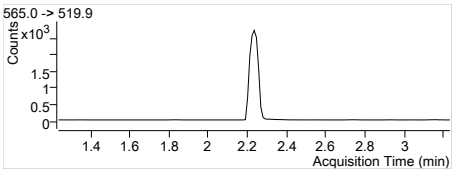
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: CC



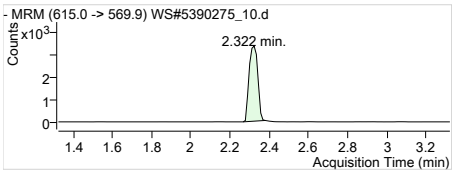


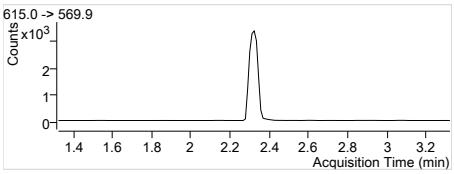
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



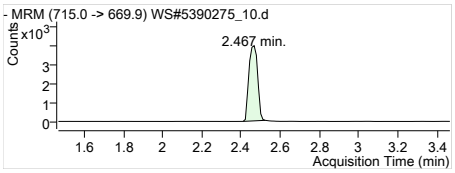


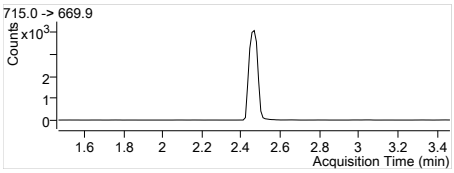
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: CC



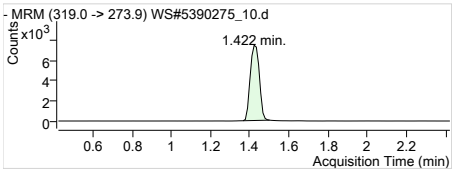


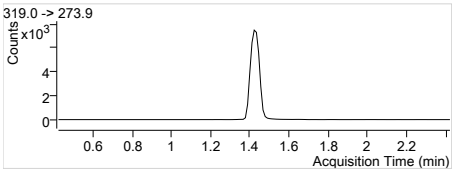
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



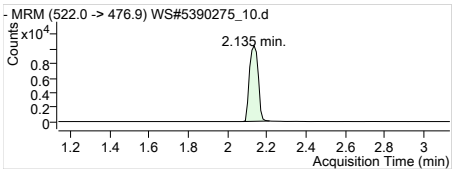


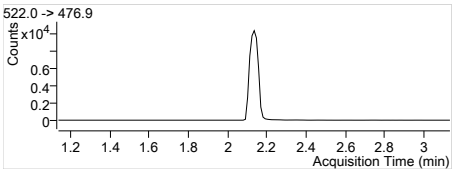
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



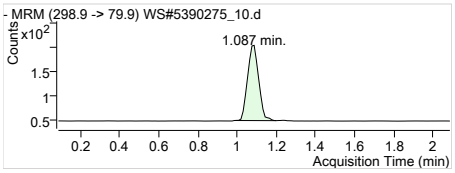


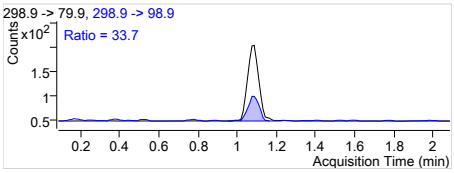
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: CC



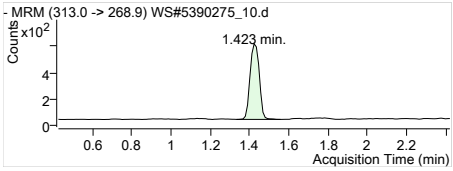


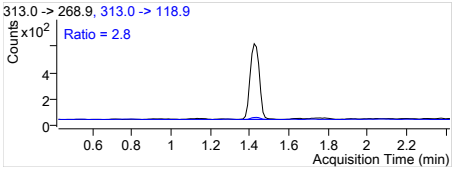
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



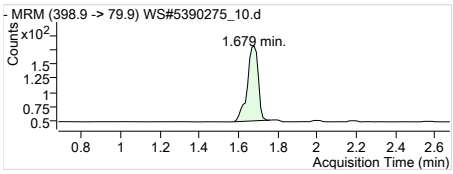


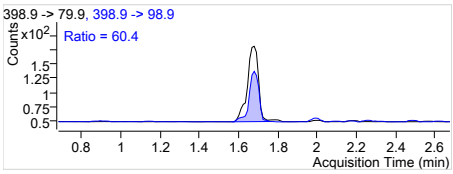
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 1.03 µg/L
Area ratio: 0.41082
Sample type: CC



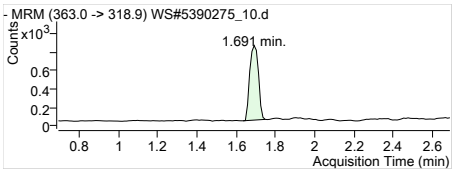


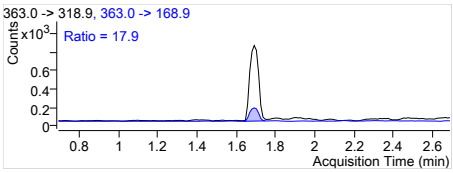
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 0.85 µg/L
Area ratio: 0.33923
Sample type: CC



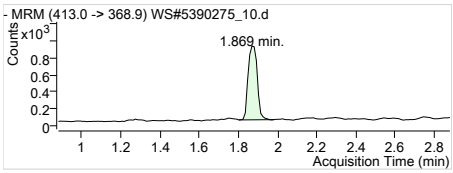


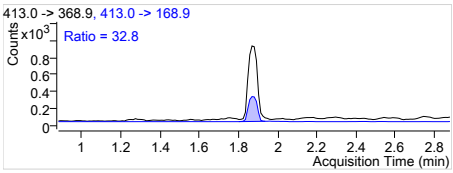
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 0.86 µg/L
Area ratio: 0.33734
Sample type: CC



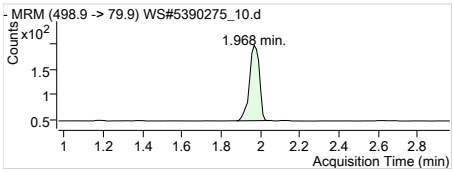


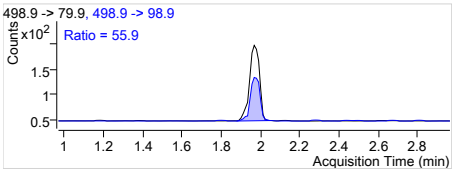
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 1.04 µg/L
Area ratio: 0.34151
Sample type: CC



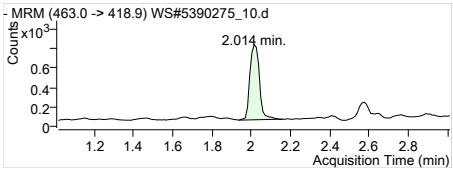


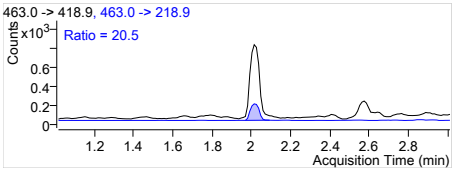
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 0.86 µg/L
Area ratio: 0.34953
Sample type: CC



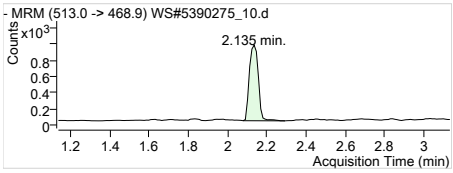


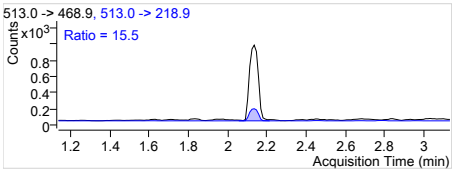
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 0.86 µg/L
Area ratio: 0.29701
Sample type: CC



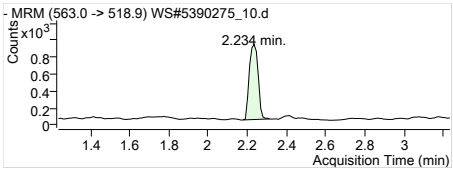


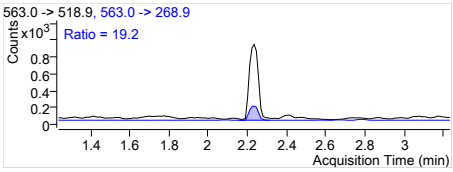
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 0.94 µg/L
Area ratio: 0.33063
Sample type: CC



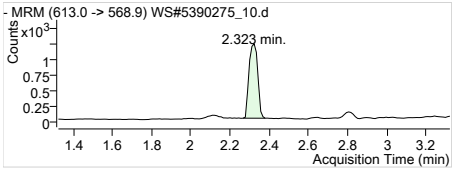


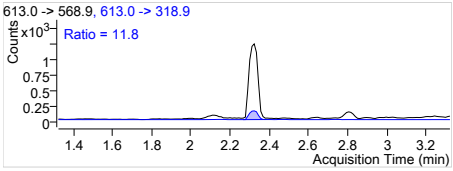
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 1.00 µg/L
Area ratio: 0.44628
Sample type: CC



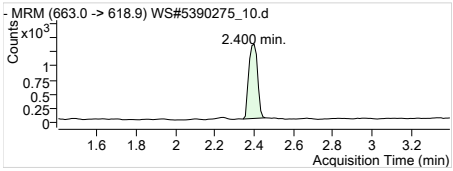


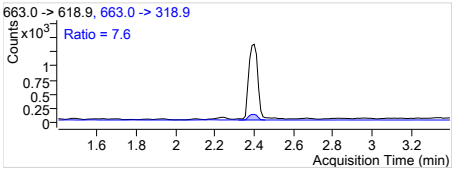
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 0.85 µg/L
Area ratio: 0.33650
Sample type: CC



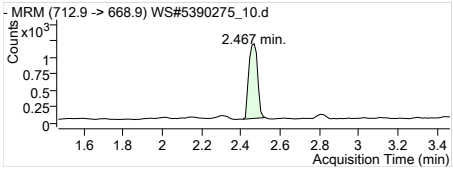


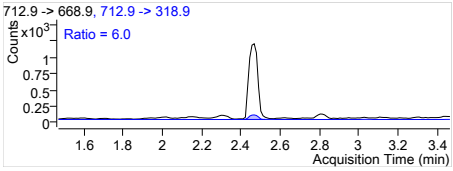
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 0.90 µg/L
Area ratio: 0.35623
Sample type: CC



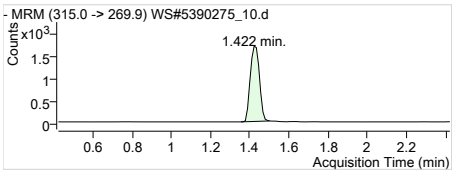


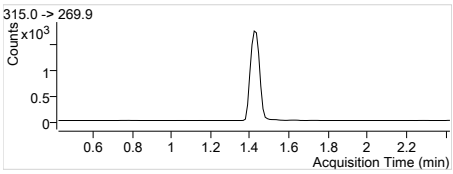
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 0.92 µg/L
Area ratio: 0.33154
Sample type: CC



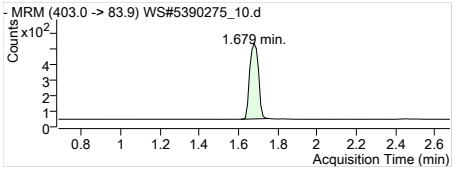


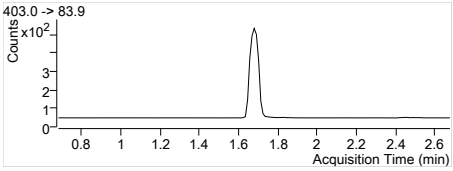
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 0.85 µg/L
Area ratio: 0.28908
Sample type: CC



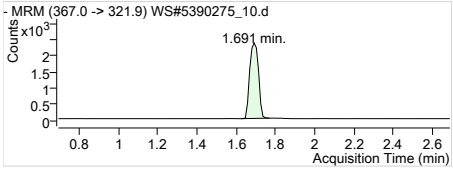


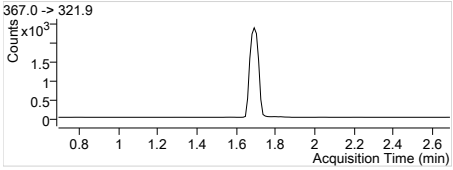
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 92.34 µg/L
Area ratio: 0.23047
Sample type: CC



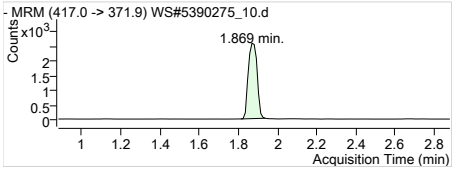


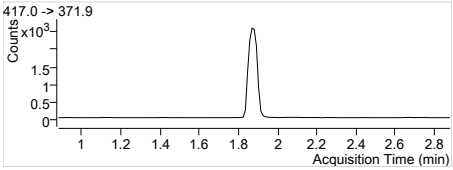
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 100.59 µg/L
Area ratio: 0.06289
Sample type: CC



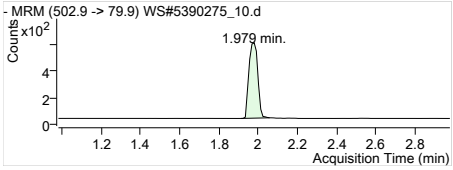


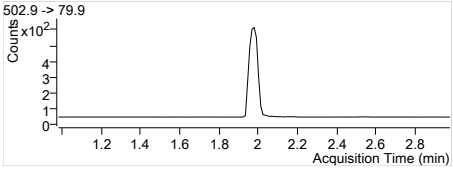
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 94.24 µg/L
Area ratio: 0.30655
Sample type: CC



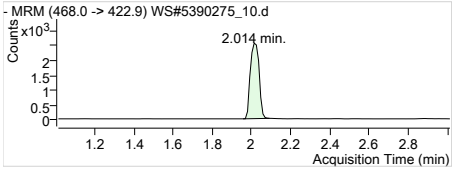


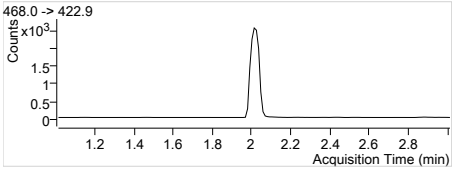
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 97.23 µg/L
Area ratio: 0.33545
Sample type: CC



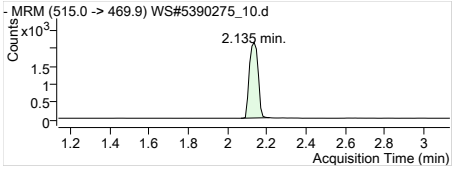


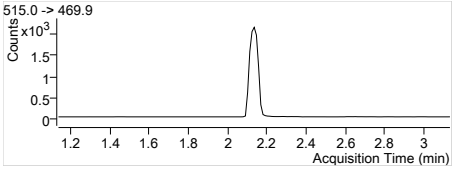
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 94.84 µg/L
Area ratio: 0.07440
Sample type: CC



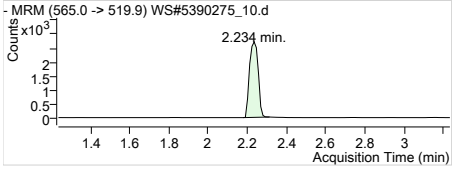


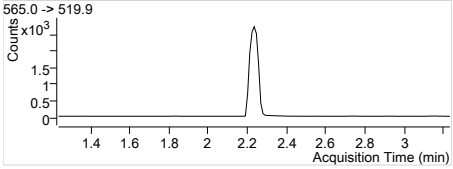
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 97.08 µg/L
Area ratio: 0.33104
Sample type: CC



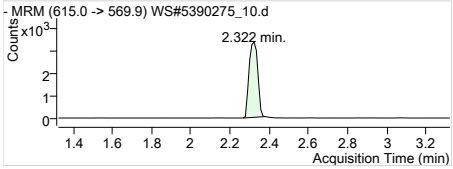


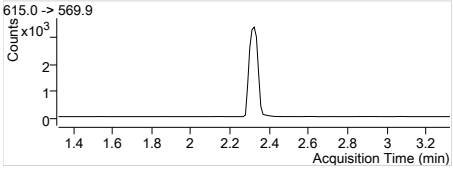
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 97.50 µg/L
Area ratio: 0.20316
Sample type: CC



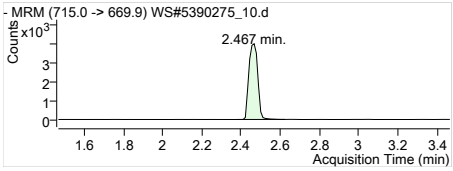


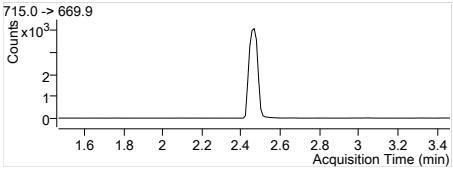
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 96.86 µg/L
Area ratio: 0.25524
Sample type: CC



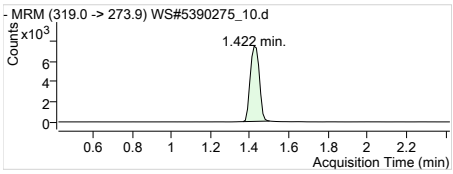


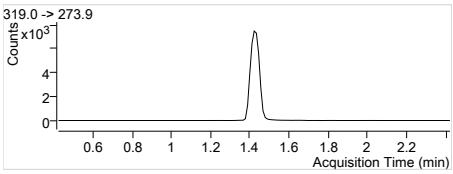
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 93.14 µg/L
Area ratio: 0.31751
Sample type: CC



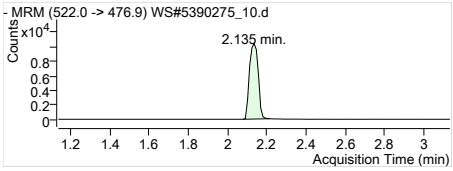


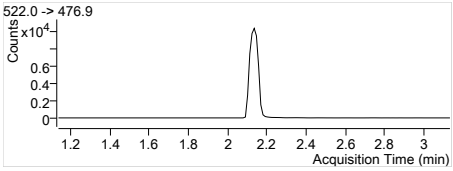
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	98.68 µg/L
Area ratio:	0.39028
Sample type:	CC





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	101.65 µg/L
Area ratio:	0
Sample type:	CC





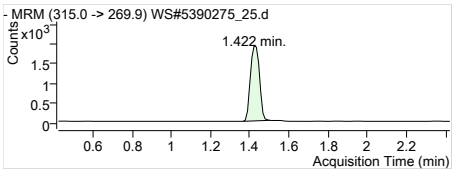
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	103.98 µg/L
Area ratio:	0
Sample type:	CC

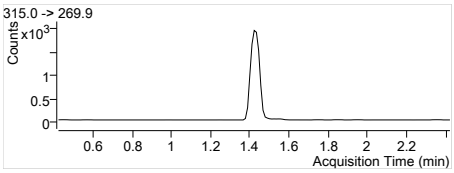
Batch Path	T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_EToxics

Sample Name	**CCV**	**Instrument**	LCMS04
Data File	WS#5390275_25.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A5
Acq. Date	2018/02/09 6:32:37 PM	**Injection Volume**	Per Method
Sample Annotation	-		

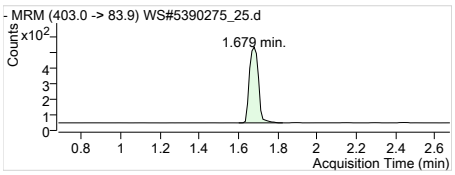
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6106	1.42	1 µg/L		
MPFHxS	1563	1.68	1 µg/L		
MPFHpA	7952	1.69	1 µg/L		
MPFOA	8125	1.87	1 µg/L		
MPFOS	1819	1.98	1 µg/L		
MPFNA	8226	2.01	1 µg/L		
MPFDA	6769	2.14	1 µg/L		
MPFUnA	7787	2.23	1 µg/L		
MPFDoA	11004	2.32	1 µg/L		
MPFTeDA	12407	2.47	1 µg/L		
13C6-PFHxA IS	24806	1.42	1 µg/L		
13C9-PFDA IS	32186	2.13	1 µg/L		

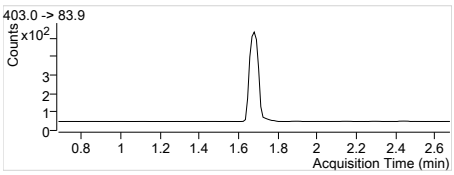
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	8292	1.09	12.50	11.86 µg/L	94.85
PFHxA 1	31560	1.42	12.50	12.78 µg/L	102.27
PFHxS 1	8083	1.68	12.50	11.64 µg/L	93.08
PFHpA 1	39494	1.69	12.50	12.38 µg/L	99.06
PFOA 1	43665	1.87	12.50	13.03 µg/L	104.21
PFOS 1	8485	1.97	12.50	13.20 µg/L	105.57
PFNA 1	38502	2.01	12.50	12.59 µg/L	100.70
PFDA 1	41272	2.14	12.50	12.12 µg/L	96.94
PFUnA 1	46680	2.23	12.50	14.14 µg/L	113.10
PFDoA 1	57396	2.32	12.50	12.52 µg/L	100.19
PFTrDA 1	63873	2.40	12.50	12.46 µg/L	99.71
PFTeDA 1	54735	2.47	12.50	12.81 µg/L	102.52
13C2-PFHxA	6106	1.42	100.00	98.62 µg/L	98.62
18O2-PFHxS	1563	1.68	100.00	100.79 µg/L	100.79
13C4-PFHpA	7952	1.69	100.00	98.55 µg/L	98.55
13C4-PFOA	8125	1.87	100.00	94.93 µg/L	94.93
13C4-PFOS	1819	1.98	100.00	93.48 µg/L	93.48
13C5-PFNA	8225	2.01	100.00	97.24 µg/L	97.24
13C2-PFDA	6712	2.14	100.00	100.08 µg/L	100.08
13C2-PFUnA	7787	2.23	100.00	91.81 µg/L	91.81
13C2-PFDoA	11004	2.32	100.00	100.30 µg/L	100.30
13C2-PFTeDA	12642	2.47	100.00	99.32 µg/L	99.32
13C6-PFHxA	24806	1.42	100.00	105.93 µg/L	105.93
13C9-PFDA	32186	2.13	100.00	104.00 µg/L	104.00



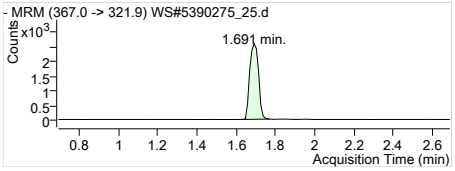


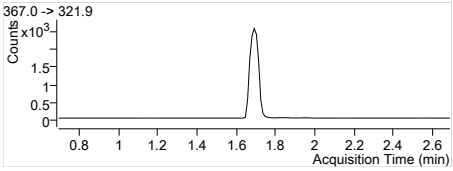
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: CC



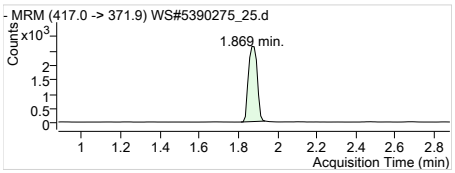


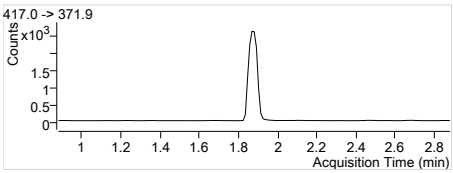
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: CC



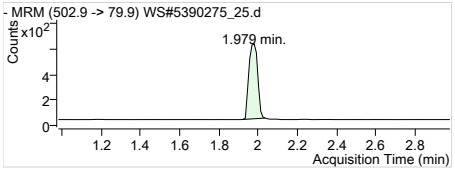


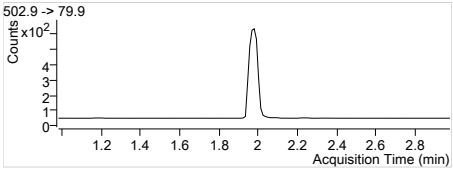
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: CC



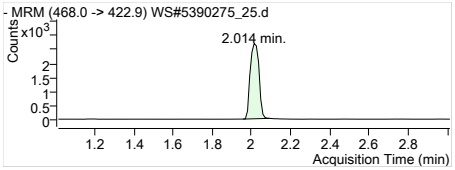


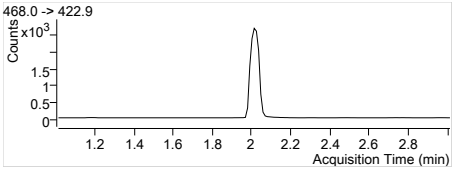
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: CC



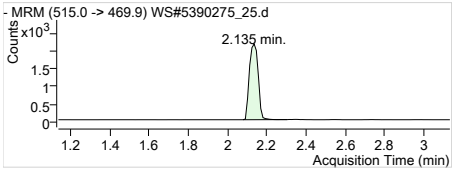


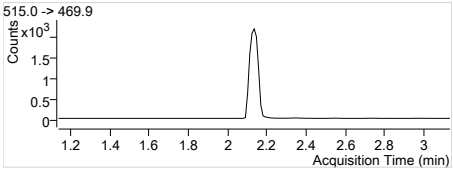
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



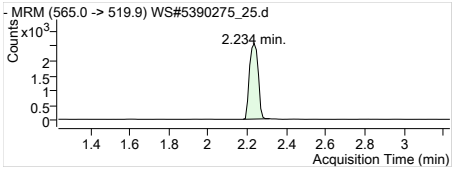


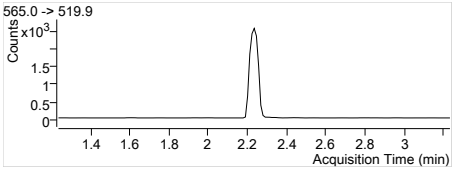
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: CC



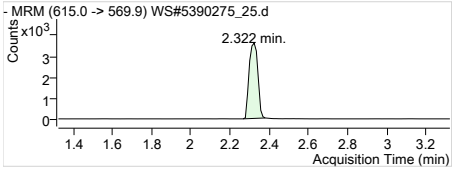


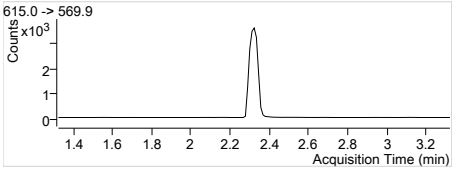
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



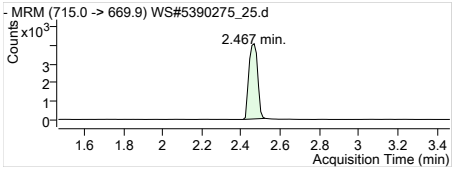


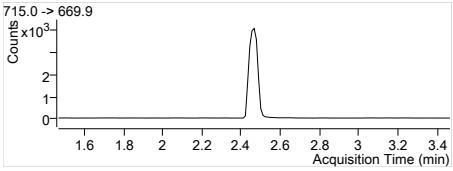
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: CC



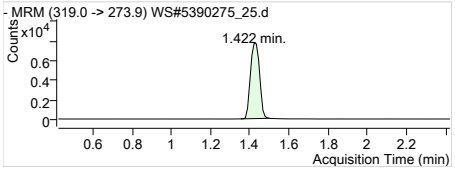


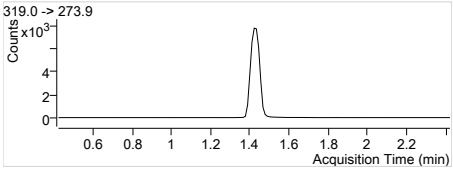
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



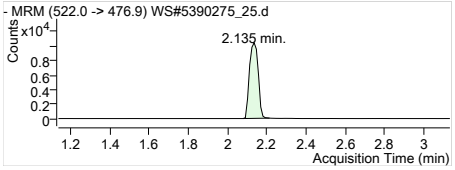


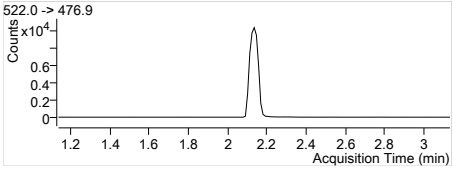
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



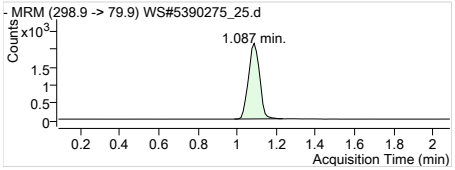


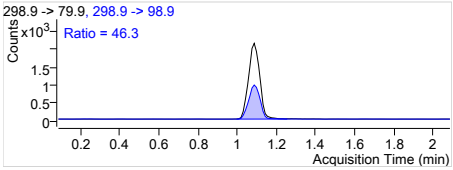
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: CC



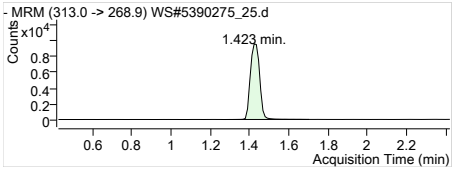


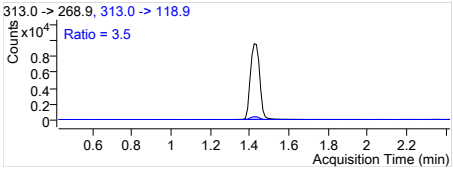
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



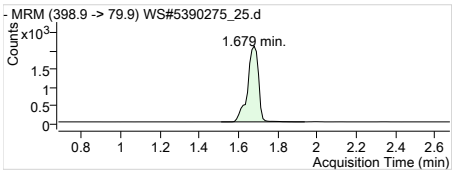


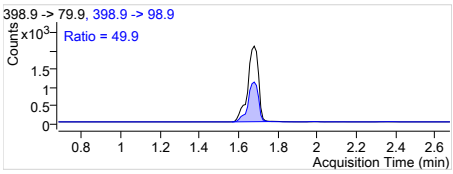
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 11.86 µg/L
Area ratio: 5.30518
Sample type: CC



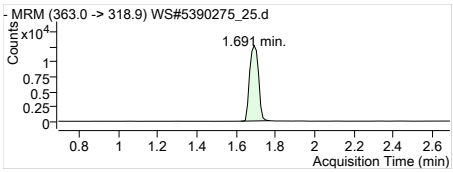


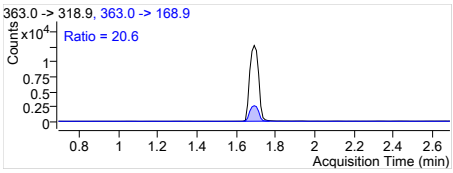
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 12.78 µg/L
Area ratio: 5.16869
Sample type: CC



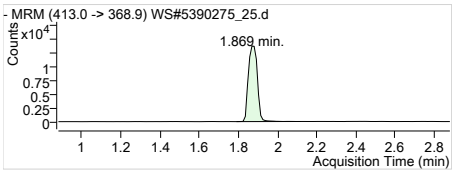


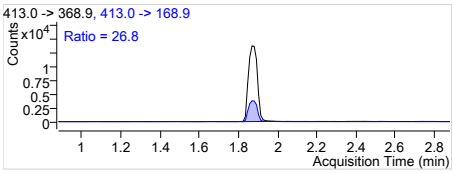
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 11.64 µg/L
Area ratio: 5.17147
Sample type: CC



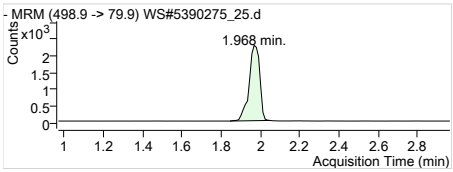


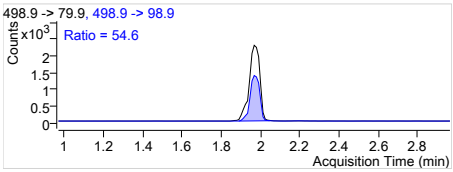
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 12.38 µg/L
Area ratio: 4.96655
Sample type: CC



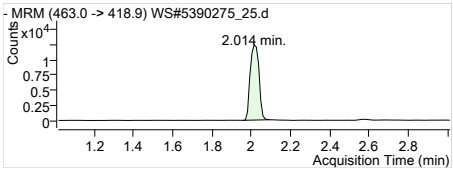


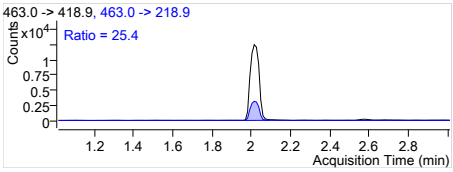
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 13.03 µg/L
Area ratio: 5.37415
Sample type: CC



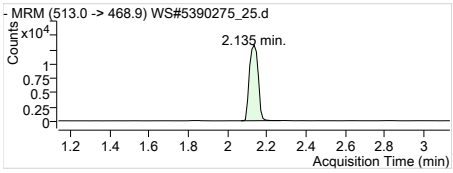


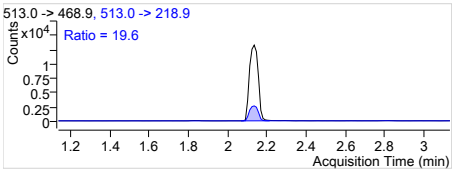
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 13.20 µg/L
Area ratio: 4.66465
Sample type: CC



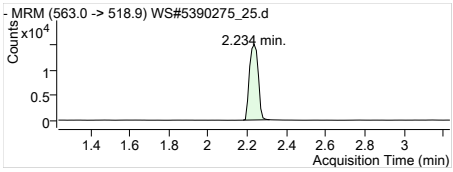


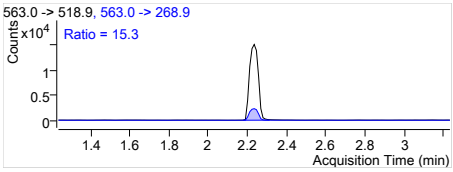
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 12.59 µg/L
Area ratio: 4.68053
Sample type: CC



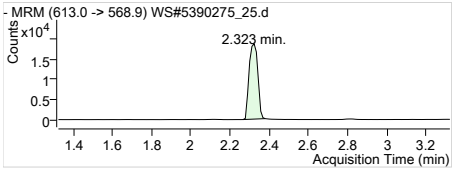


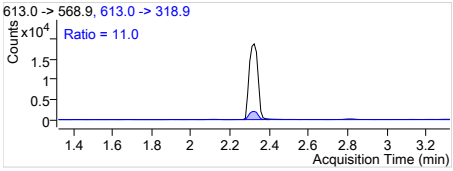
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 12.12 µg/L
Area ratio: 6.09721
Sample type: CC



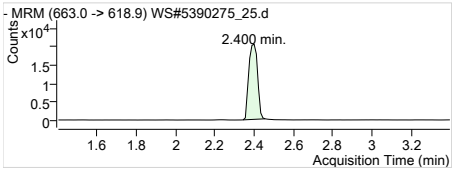


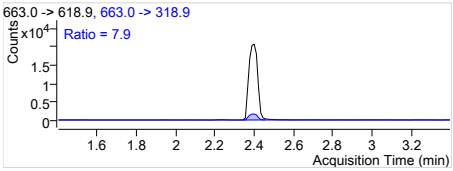
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 14.14 µg/L
Area ratio: 5.99461
Sample type: CC



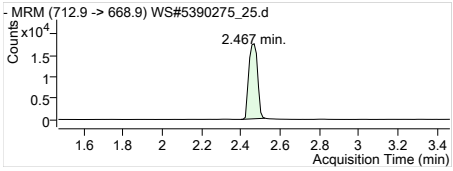


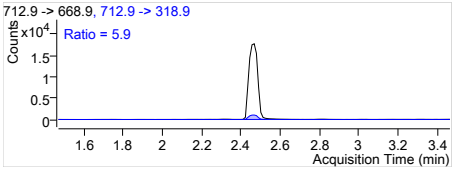
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 12.52 µg/L
Area ratio: 5.21592
Sample type: CC



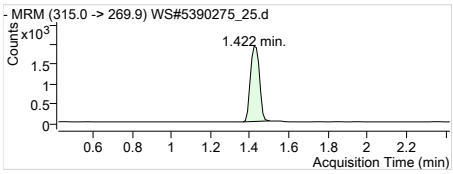


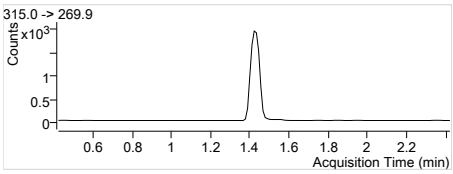
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 12.46 µg/L
Area ratio: 5.14814
Sample type: CC



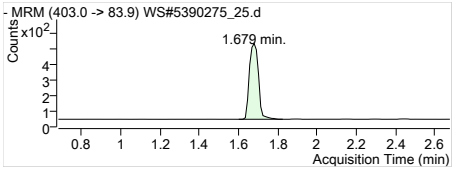


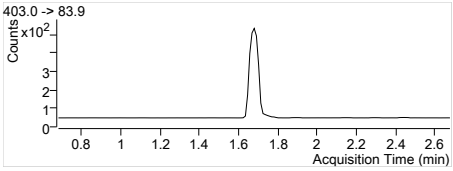
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 12.81 µg/L
Area ratio: 4.41162
Sample type: CC



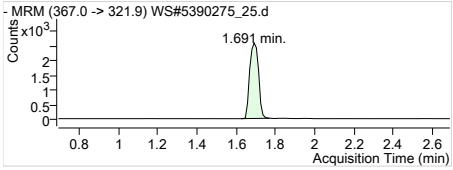


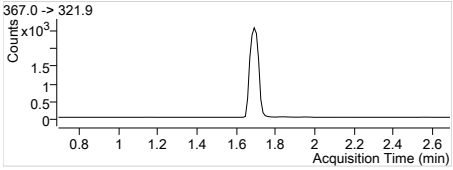
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 98.62 µg/L
Area ratio: 0.24615
Sample type: CC



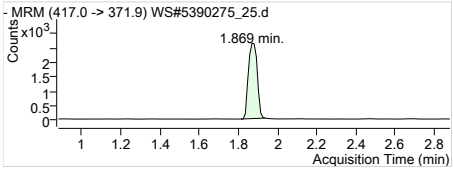


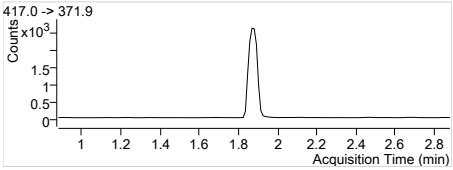
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 100.79 µg/L
Area ratio: 0.06301
Sample type: CC



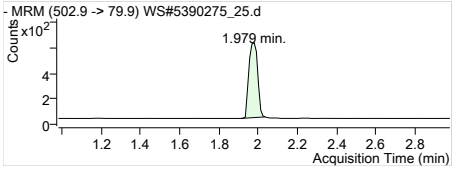


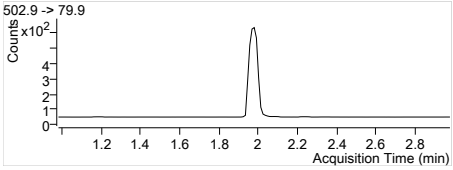
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 98.55 µg/L
Area ratio: 0.32057
Sample type: CC



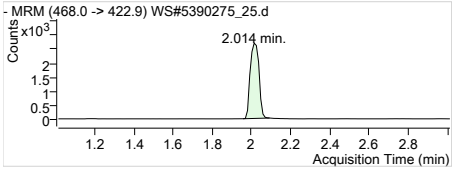


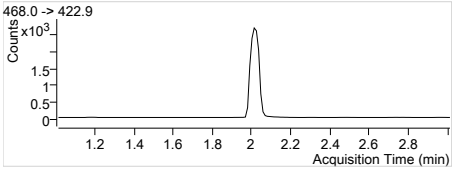
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 94.93 µg/L
Area ratio: 0.32754
Sample type: CC



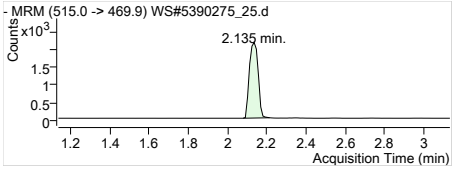


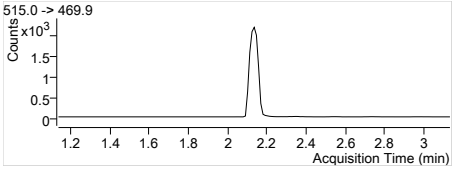
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 93.48 µg/L
Area ratio: 0.07333
Sample type: CC



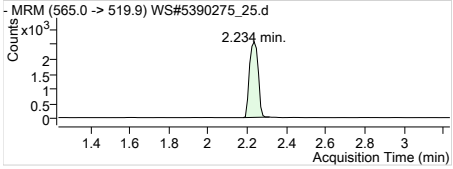


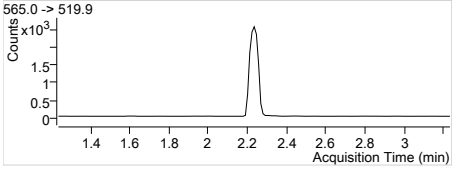
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 97.24 µg/L
Area ratio: 0.33157
Sample type: CC



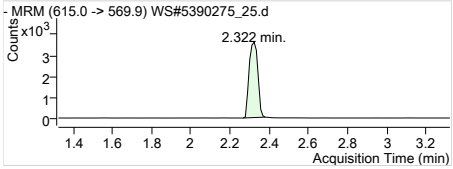


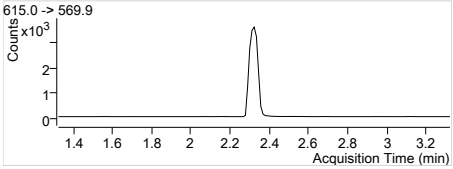
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 100.08 µg/L
Area ratio: 0.20854
Sample type: CC



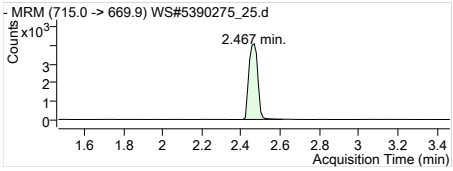


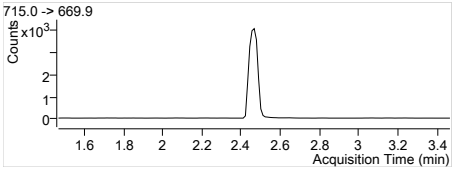
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 91.81 µg/L
Area ratio: 0.24194
Sample type: CC



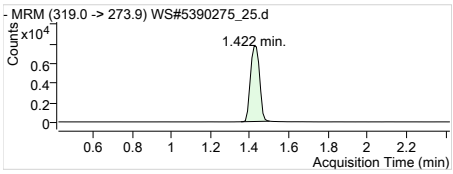


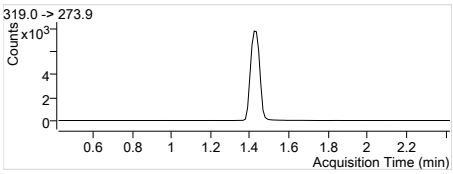
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 100.30 µg/L
Area ratio: 0.34189
Sample type: CC



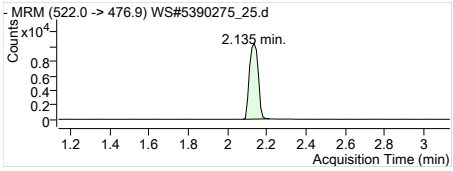


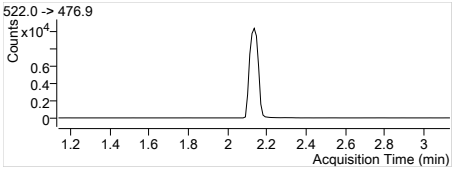
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	99.32 µg/L
Area ratio:	0.39278
Sample type:	CC





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	105.93 µg/L
Area ratio:	0
Sample type:	CC





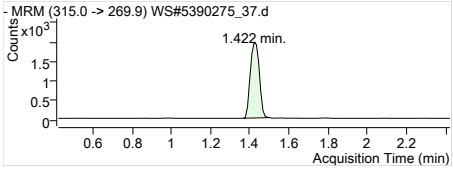
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	104.00 µg/L
Area ratio:	0
Sample type:	CC

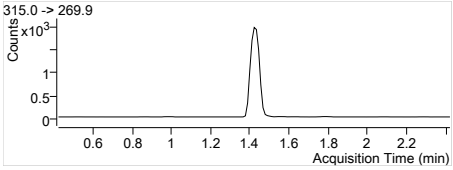
Batch Path	T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_ETOxics

Sample Name	**CCV**	**Instrument**	LCMS04
Data File	WS#5390275_37.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A5
Acq. Date	2018/02/09 7:31:50 PM	**Injection Volume**	Per Method
Sample Annotation	-		

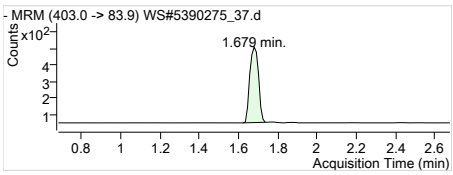
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6167	1.42	1 µg/L		
MPFHxS	1420	1.68	1 µg/L		
MPFHpA	7953	1.69	1 µg/L		
MPFOA	8588	1.88	1 µg/L		
MPFOS	1772	1.98	1 µg/L		
MPFNA	8159	2.01	1 µg/L		
MPFDA	6721	2.14	1 µg/L		
MPFUnA	8037	2.23	1 µg/L		
MPFDoA	10877	2.32	1 µg/L		
MPFTeDA	11979	2.47	1 µg/L		
13C6-PFHxA IS	24204	1.42	1 µg/L		
13C9-PFDA IS	32789	2.13	1 µg/L		

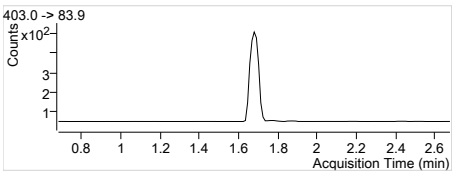
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	8447	1.09	12.50	13.28 µg/L	106.24
PFHxA 1	30714	1.42	12.50	12.32 µg/L	98.54
PFHxS 1	8101	1.68	12.50	12.82 µg/L	102.60
PFHpA 1	39324	1.69	12.50	12.33 µg/L	98.63
PFOA 1	44189	1.88	12.50	12.47 µg/L	99.78
PFOS 1	8034	1.97	12.50	12.83 µg/L	102.61
PFNA 1	37403	2.01	12.50	12.33 µg/L	98.64
PFDA 1	41383	2.14	12.50	12.24 µg/L	97.88
PFUnA 1	44635	2.23	12.50	13.10 µg/L	104.82
PFDoA 1	55933	2.32	12.50	12.35 µg/L	98.78
PFTrDA 1	66477	2.40	12.50	13.43 µg/L	107.41
PFTeDA 1	52273	2.47	12.50	12.68 µg/L	101.40
13C2-PFHxA	6167	1.42	100.00	102.09 µg/L	102.09
18O2-PFHxS	1420	1.68	100.00	93.84 µg/L	93.84
13C4-PFHpA	7953	1.69	100.00	101.02 µg/L	101.02
13C4-PFOA	8588	1.88	100.00	102.84 µg/L	102.84
13C4-PFOS	1772	1.98	100.00	93.33 µg/L	93.33
13C5-PFNA	8158	2.01	100.00	98.84 µg/L	98.84
13C2-PFDA	6586	2.14	100.00	96.40 µg/L	96.40
13C2-PFUnA	8037	2.23	100.00	93.02 µg/L	93.02
13C2-PFDoA	10877	2.32	100.00	97.32 µg/L	97.32
13C2-PFTeDA	12223	2.47	100.00	94.26 µg/L	94.26
13C6-PFHxA	24204	1.42	100.00	103.36 µg/L	103.36
13C9-PFDA	32789	2.13	100.00	105.95 µg/L	105.95



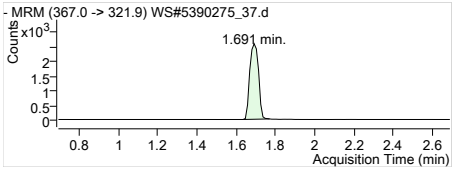


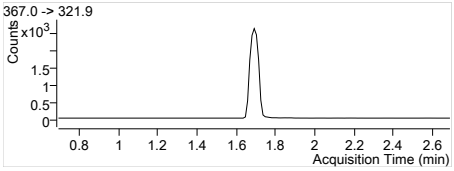
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: CC



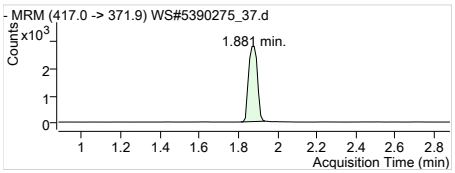


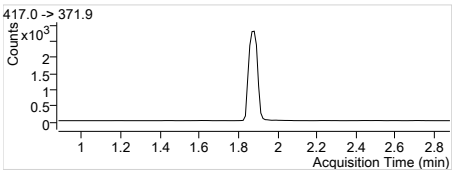
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: CC



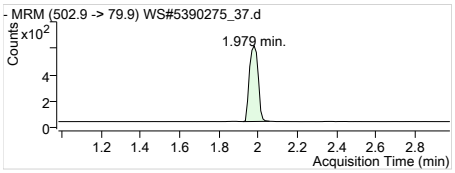


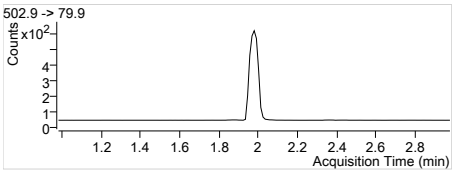
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: CC



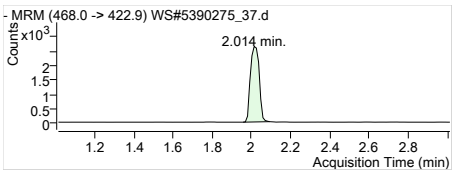


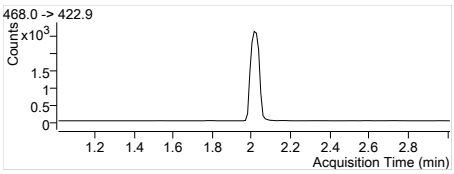
MPFOA Internal Standard
RT (Exp. RT): 1.881 (1.881)
Concentration: 1 µg/L
Sample type: CC



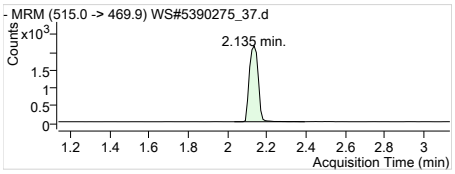


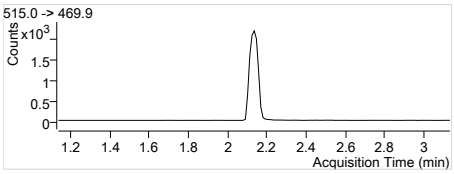
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



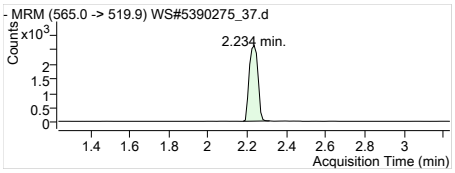


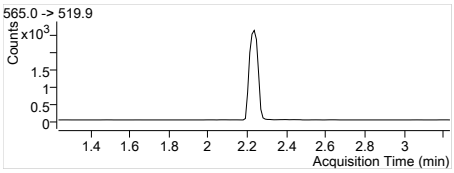
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: CC



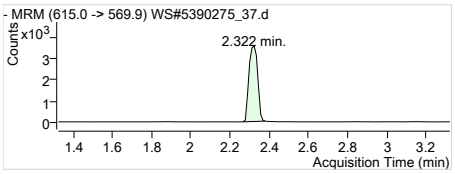


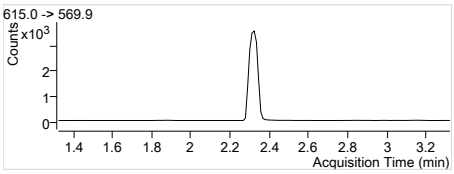
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



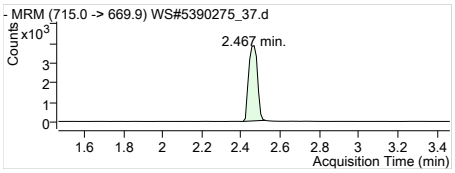


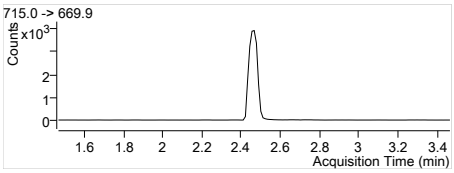
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: CC



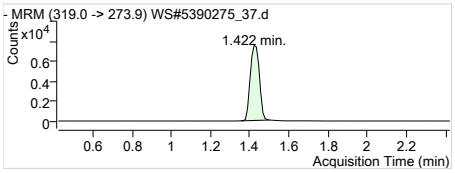


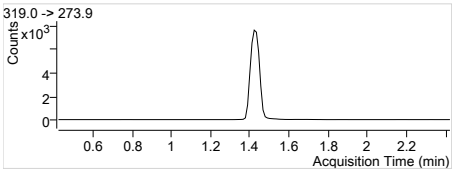
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



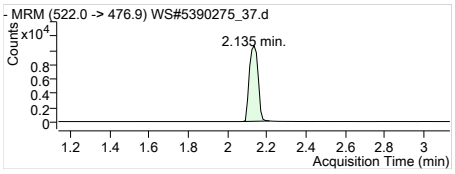


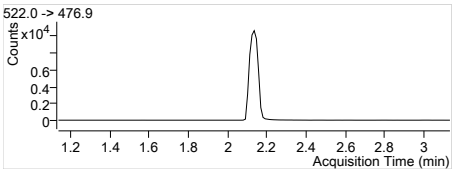
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



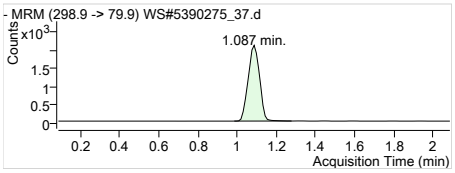


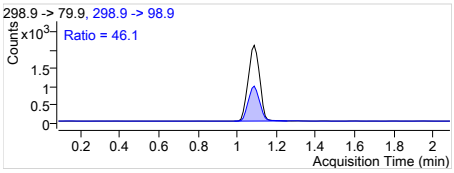
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: CC



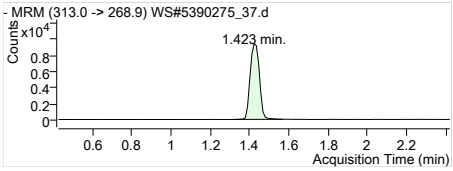


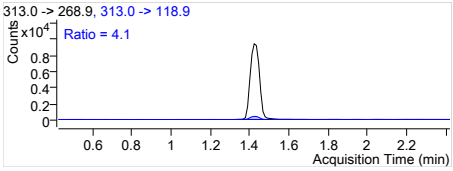
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



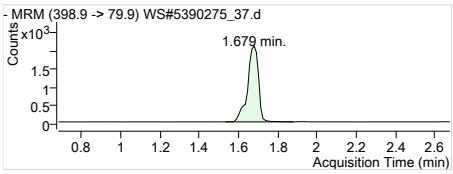


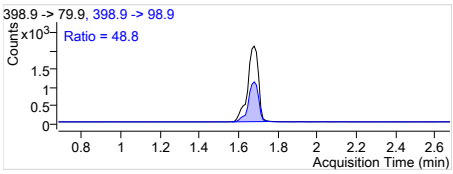
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 13.28 µg/L
Area ratio: 5.94859
Sample type: CC



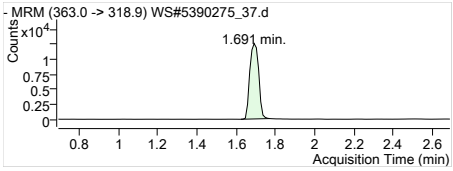


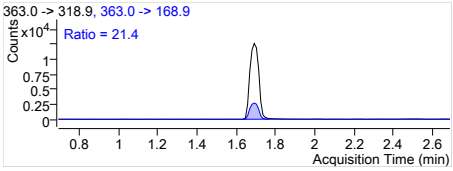
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 12.32 µg/L
Area ratio: 4.98038
Sample type: CC



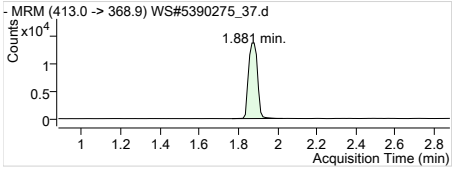


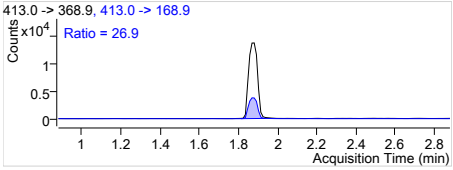
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 12.82 µg/L
Area ratio: 5.70493
Sample type: CC



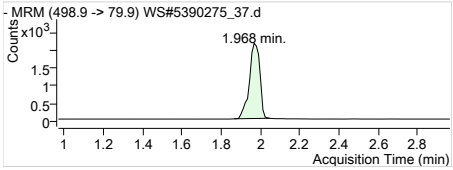


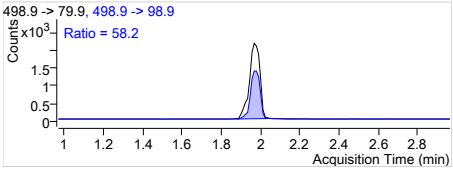
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 12.33 µg/L
Area ratio: 4.94455
Sample type: CC



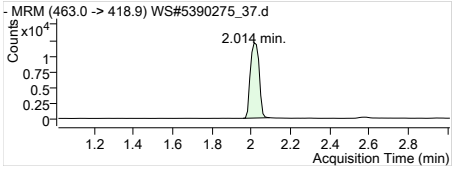


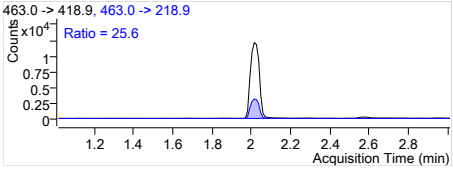
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 12.47 µg/L
Area ratio: 5.14544
Sample type: CC



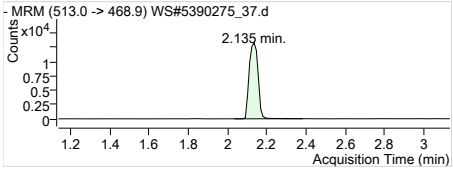


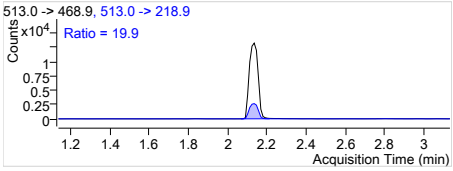
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 12.83 µg/L
Area ratio: 4.53386
Sample type: CC



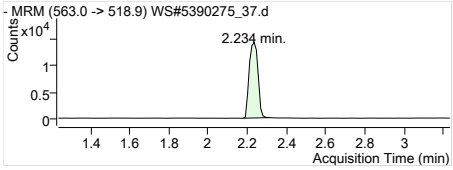


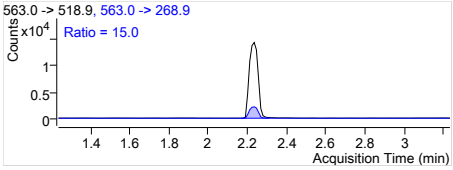
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 12.33 µg/L
Area ratio: 4.58426
Sample type: CC



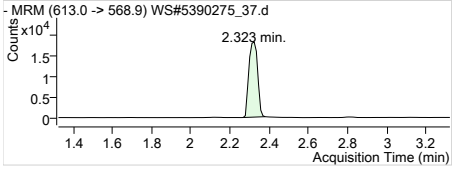


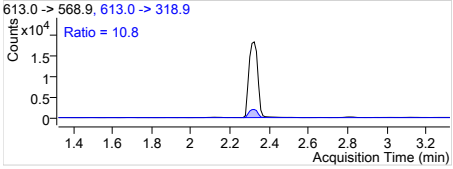
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 12.24 µg/L
Area ratio: 6.15727
Sample type: CC



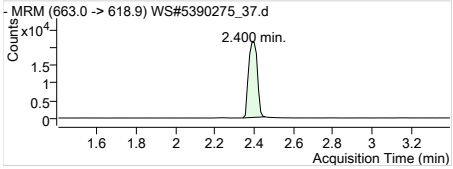


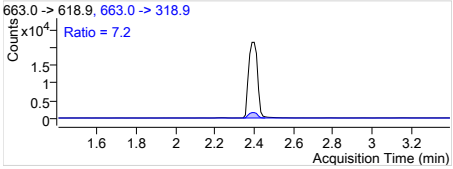
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 13.10 µg/L
Area ratio: 5.55369
Sample type: CC



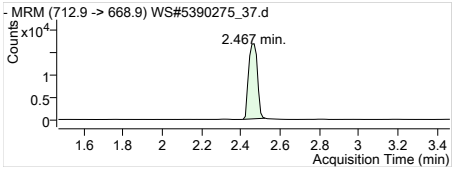


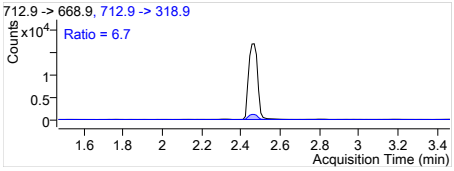
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 12.35 µg/L
Area ratio: 5.14232
Sample type: CC



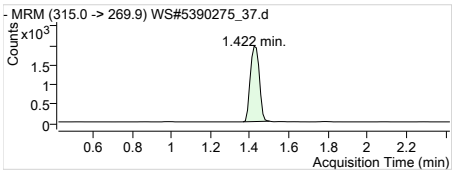


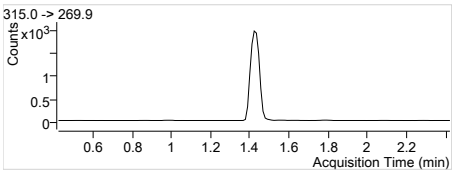
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 13.43 µg/L
Area ratio: 5.54946
Sample type: CC



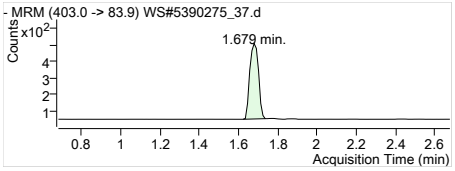


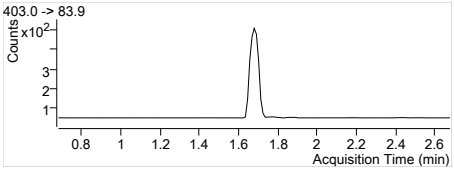
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 12.68 µg/L
Area ratio: 4.36372
Sample type: CC



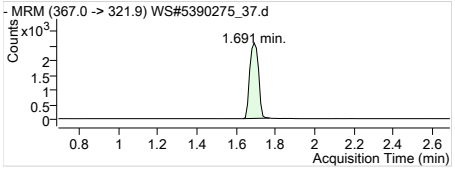


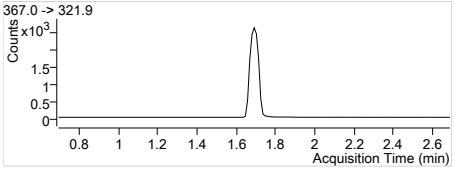
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 102.09 µg/L
Area ratio: 0.25479
Sample type: CC



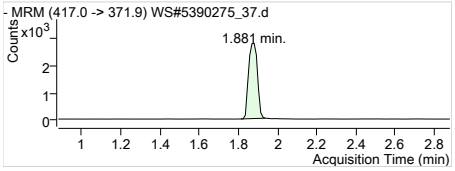


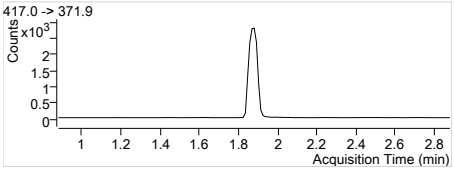
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 93.84 µg/L
Area ratio: 0.05867
Sample type: CC



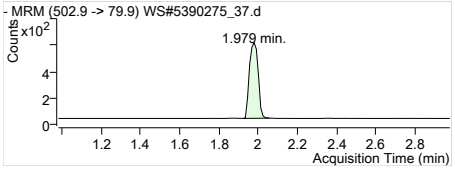


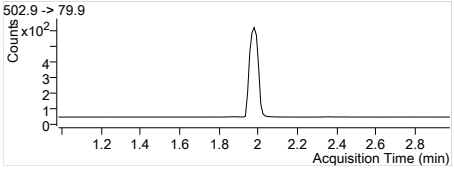
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 101.02 µg/L
Area ratio: 0.32858
Sample type: CC



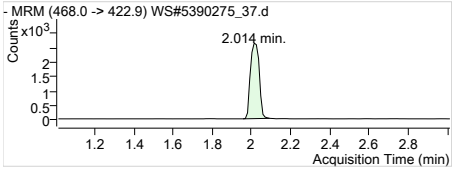


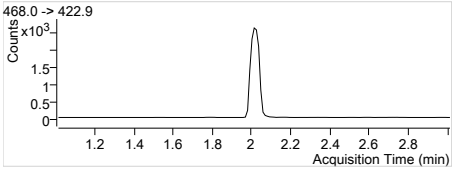
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.881 (1.881)
Calc. conc. 102.84 µg/L
Area ratio: 0.35482
Sample type: CC



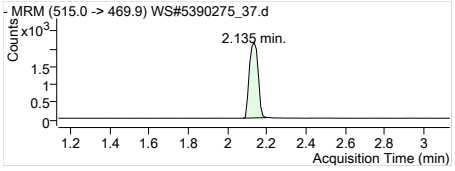


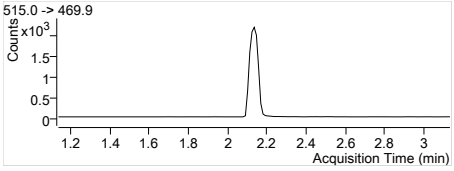
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 93.33 µg/L
Area ratio: 0.07321
Sample type: CC



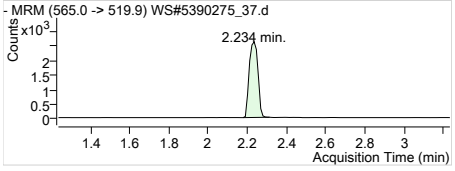


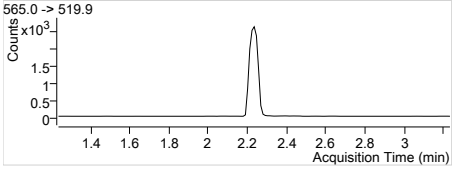
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 98.84 µg/L
Area ratio: 0.33705
Sample type: CC



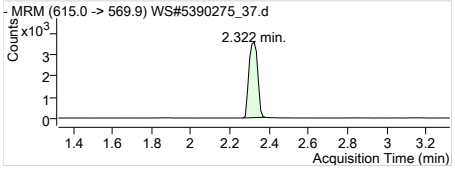


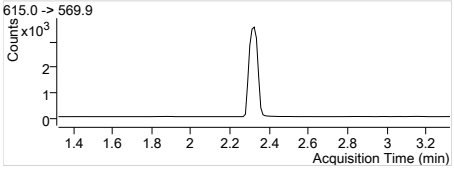
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 96.40 µg/L
Area ratio: 0.20086
Sample type: CC



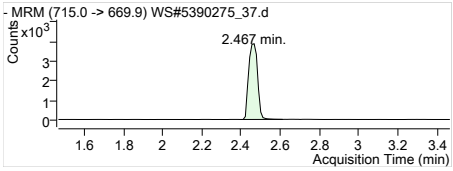


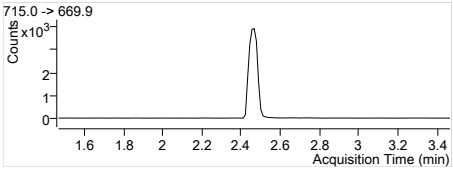
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 93.02 µg/L
Area ratio: 0.24511
Sample type: CC



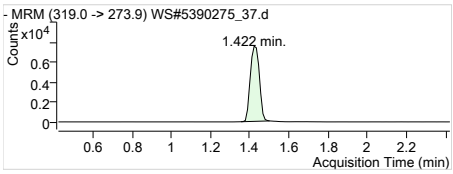


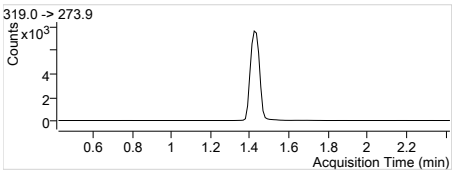
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 97.32 µg/L
Area ratio: 0.33173
Sample type: CC



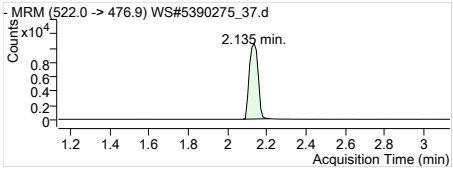


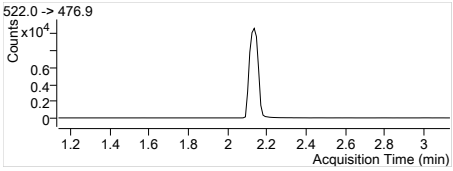
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	94.26 µg/L
Area ratio:	0.37278
Sample type:	CC





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	103.36 µg/L
Area ratio:	0
Sample type:	CC





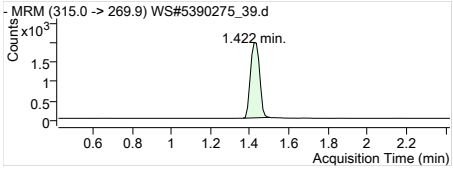
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	105.95 µg/L
Area ratio:	0
Sample type:	CC

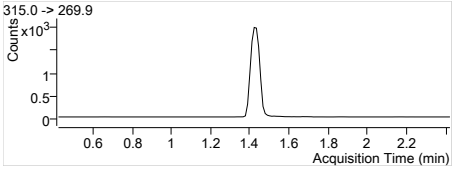
Batch Path	T:\lcms4\PFC\20180209\WS#5390275\QuantResults\PFC_Water_Low_180209_WS#5390275_ETOxics

Sample Name	**CCV**	**Instrument**	LCMS04
Data File	WS#5390275_39.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A5
Acq. Date	2018/02/09 7:41:41 PM	**Injection Volume**	Per Method
Sample Annotation	-		

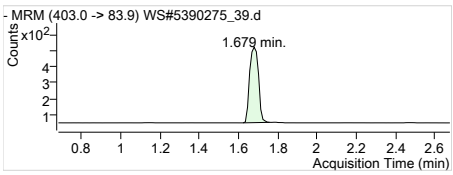
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6281	1.42	1 µg/L		
MPFHxS	1480	1.68	1 µg/L		
MPFHpA	8013	1.69	1 µg/L		
MPFOA	8179	1.87	1 µg/L		
MPFOS	1782	1.98	1 µg/L		
MPFNA	8557	2.01	1 µg/L		
MPFDA	7058	2.14	1 µg/L		
MPFUnA	8042	2.23	1 µg/L		
MPFDoA	10771	2.32	1 µg/L		
MPFTeDA	12470	2.47	1 µg/L		
13C6-PFHxA IS	24535	1.42	1 µg/L		
13C9-PFDA IS	32723	2.13	1 µg/L		

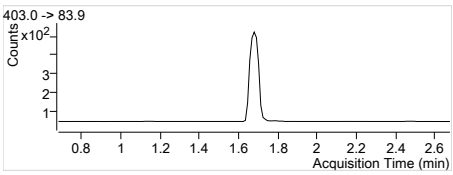
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	8507	1.09	12.50	12.84 µg/L	102.69
PFHxA 1	31206	1.42	12.50	12.29 µg/L	98.30
PFHxS 1	7842	1.68	12.50	11.92 µg/L	95.35
PFHpA 1	40071	1.69	12.50	12.47 µg/L	99.73
PFOA 1	44844	1.87	12.50	13.29 µg/L	106.32
PFOS 1	8191	1.97	12.50	13.00 µg/L	104.03
PFNA 1	38957	2.01	12.50	12.25 µg/L	97.96
PFDA 1	42848	2.14	12.50	12.07 µg/L	96.52
PFUnA 1	45949	2.23	12.50	13.48 µg/L	107.82
PFDoA 1	58582	2.32	12.50	13.06 µg/L	104.45
PFTrDA 1	63959	2.40	12.50	12.42 µg/L	99.35
PFTeDA 1	54825	2.47	12.50	12.77 µg/L	102.17
13C2-PFHxA	6281	1.42	100.00	102.57 µg/L	102.57
18O2-PFHxS	1480	1.68	100.00	96.49 µg/L	96.49
13C4-PFHpA	8013	1.69	100.00	100.40 µg/L	100.40
13C4-PFOA	8179	1.87	100.00	96.62 µg/L	96.62
13C4-PFOS	1782	1.98	100.00	92.59 µg/L	92.59
13C5-PFNA	8558	2.01	100.00	102.29 µg/L	102.29
13C2-PFDA	7014	2.14	100.00	102.87 µg/L	102.87
13C2-PFUnA	8042	2.23	100.00	93.26 µg/L	93.26
13C2-PFDoA	10771	2.32	100.00	96.56 µg/L	96.56
13C2-PFTeDA	12715	2.47	100.00	98.25 µg/L	98.25
13C6-PFHxA	24535	1.42	100.00	104.77 µg/L	104.77
13C9-PFDA	32723	2.13	100.00	105.73 µg/L	105.73



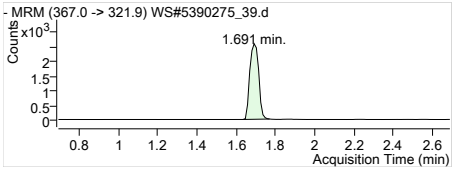


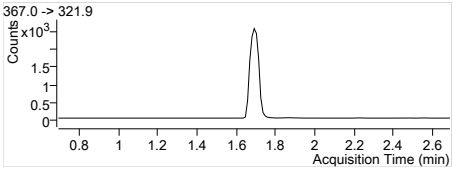
MPFHxA Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: CC



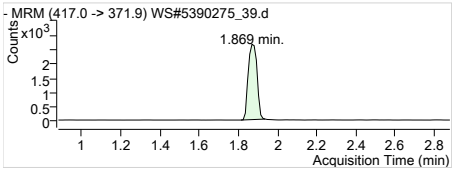


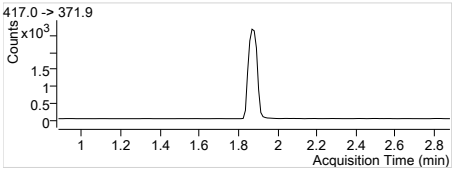
MPFHxS Internal Standard
RT (Exp. RT): 1.679 (1.679)
Concentration: 1 µg/L
Sample type: CC



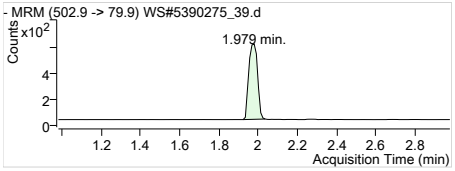


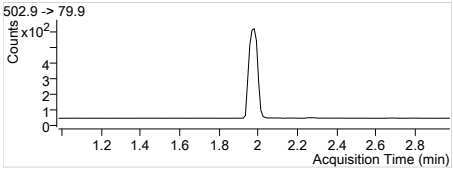
MPFHpA Internal Standard
RT (Exp. RT): 1.691 (1.691)
Concentration: 1 µg/L
Sample type: CC



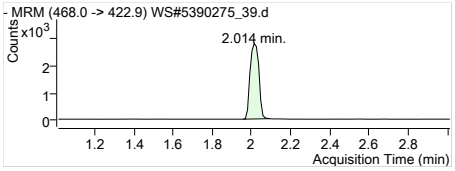


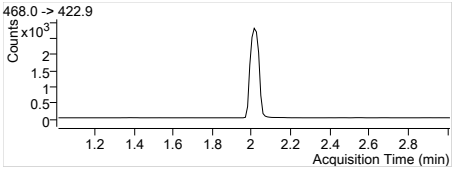
MPFOA Internal Standard
RT (Exp. RT): 1.869 (1.881)
Concentration: 1 µg/L
Sample type: CC



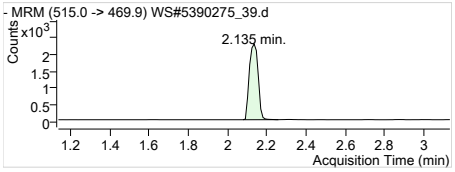


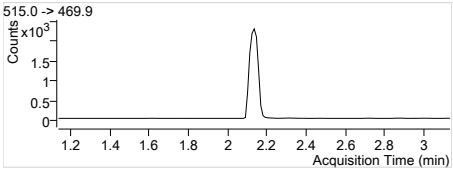
MPFOS Internal Standard
RT (Exp. RT): 1.979 (1.979)
Concentration: 1 µg/L
Sample type: CC



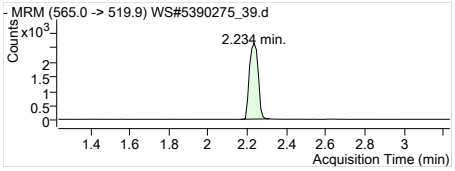


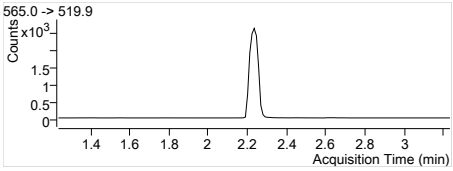
MPFNA Internal Standard
RT (Exp. RT): 2.014 (2.014)
Concentration: 1 µg/L
Sample type: CC



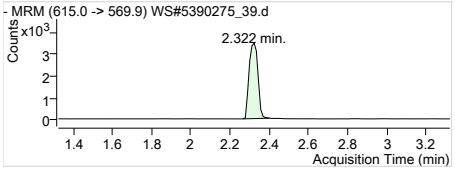


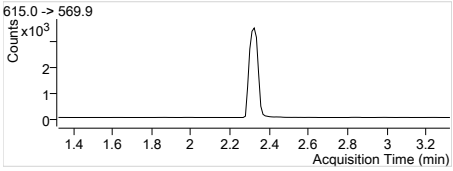
MPFDA Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



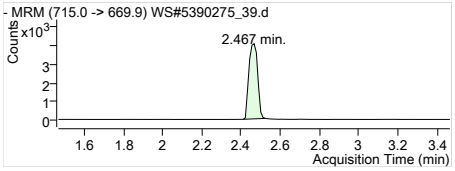


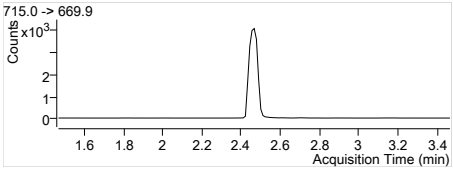
MPFUnA Internal Standard
RT (Exp. RT): 2.234 (2.234)
Concentration: 1 µg/L
Sample type: CC



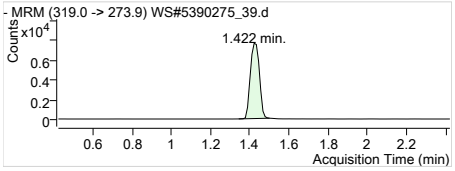


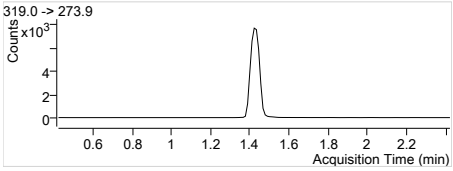
MPFDoA Internal Standard
RT (Exp. RT): 2.322 (2.322)
Concentration: 1 µg/L
Sample type: CC



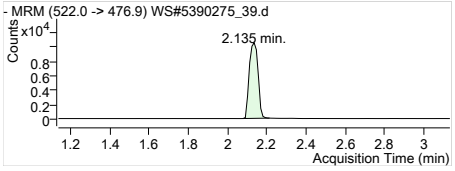


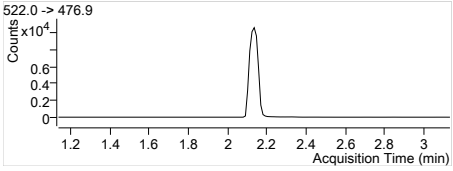
MPFTeDA Internal Standard
RT (Exp. RT): 2.467 (2.467)
Concentration: 1 µg/L
Sample type: CC



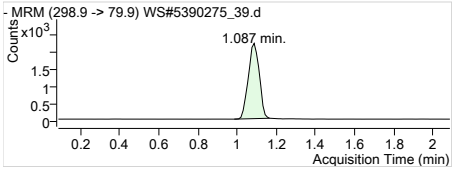


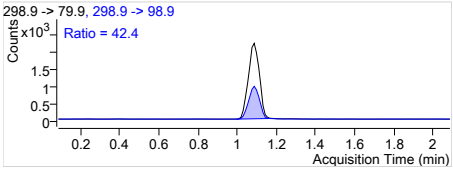
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.422 (1.422)
Concentration: 1 µg/L
Sample type: CC



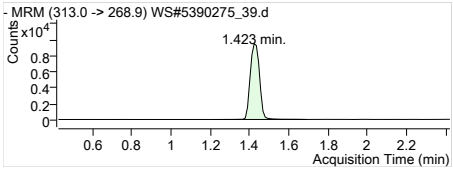


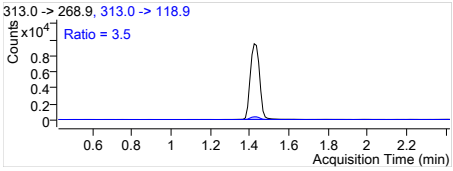
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.135 (2.135)
Concentration: 1 µg/L
Sample type: CC



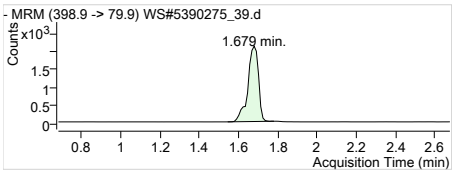


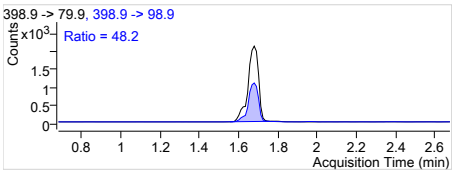
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.087 (1.087)
Calc. conc. 12.84 µg/L
Area ratio: 5.74797
Sample type: CC



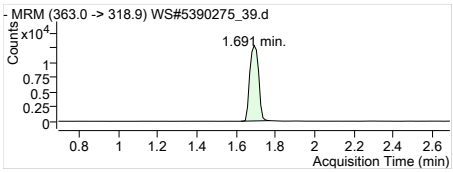


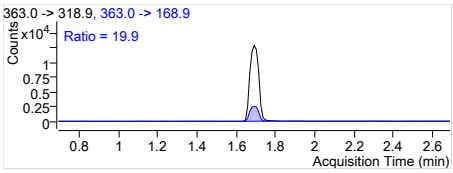
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.423 (1.423)
Calc. conc. 12.29 µg/L
Area ratio: 4.96832
Sample type: CC



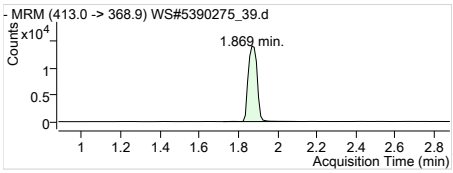


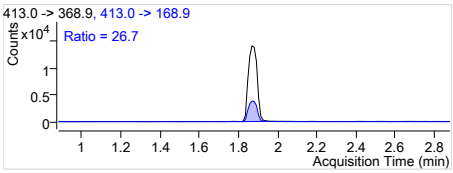
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 11.92 µg/L
Area ratio: 5.29865
Sample type: CC



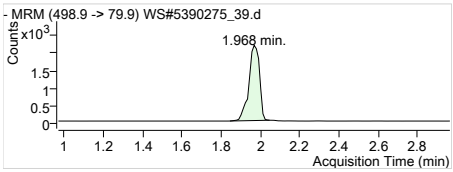


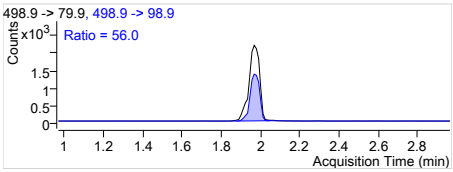
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 12.47 µg/L
Area ratio: 5.00075
Sample type: CC



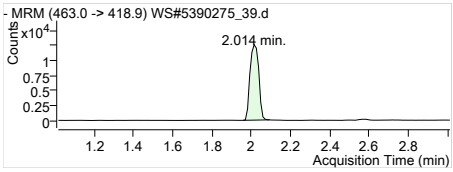


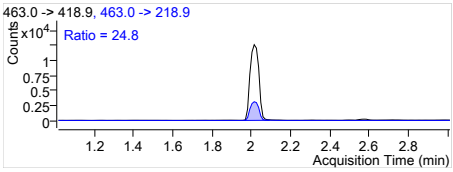
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 13.29 µg/L
Area ratio: 5.48282
Sample type: CC



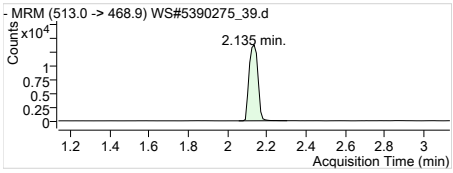


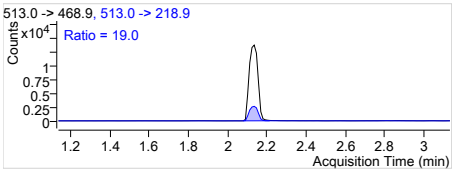
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 13.00 µg/L
Area ratio: 4.59652
Sample type: CC



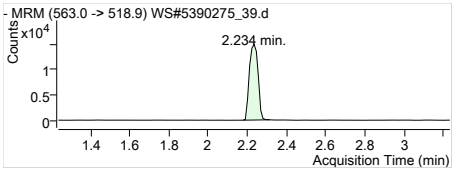


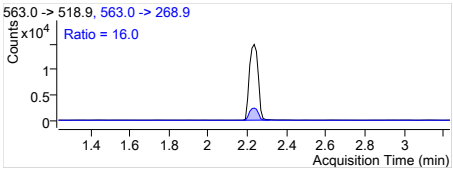
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 12.25 µg/L
Area ratio: 4.55265
Sample type: CC



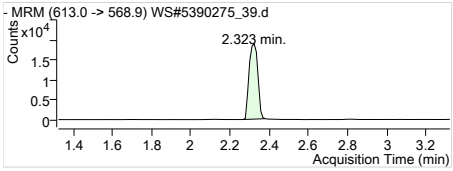


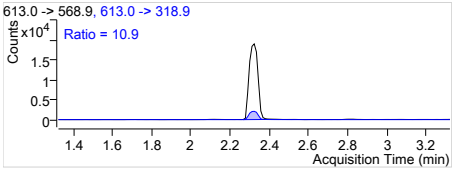
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 12.07 µg/L
Area ratio: 6.07084
Sample type: CC



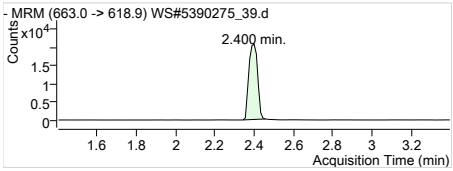


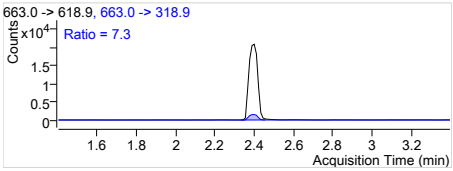
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 13.48 µg/L
Area ratio: 5.71363
Sample type: CC



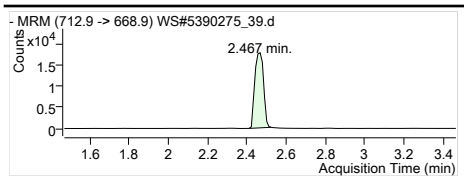


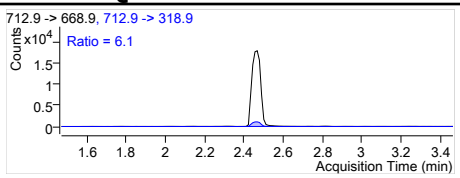
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.323 (2.323)
Calc. conc. 13.06 µg/L
Area ratio: 5.43886
Sample type: CC



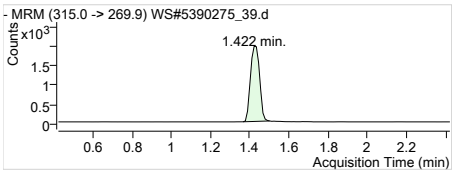


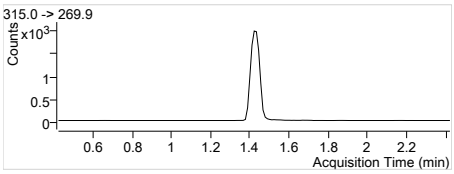
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.400 (2.400)
Calc. conc. 12.42 µg/L
Area ratio: 5.12903
Sample type: CC



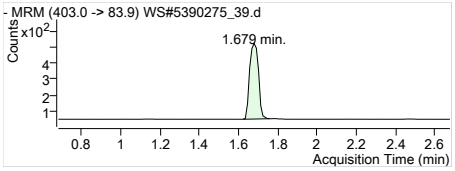


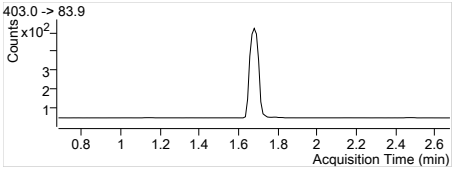
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.467 (2.467)
Calc. conc. 12.77 µg/L
Area ratio: 4.39655
Sample type: CC



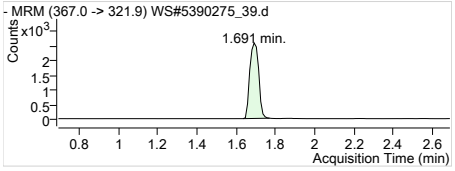


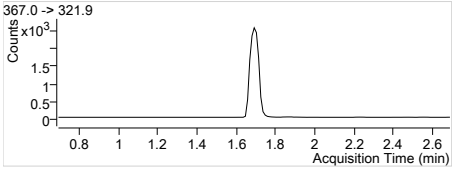
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.422 (1.422)
Calc. conc. 102.57 µg/L
Area ratio: 0.25600
Sample type: CC



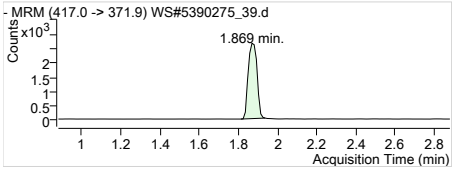


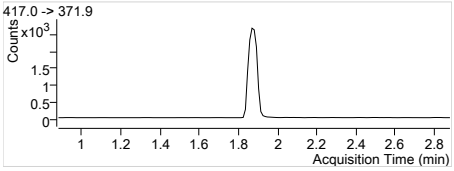
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.679 (1.679)
Calc. conc. 96.49 µg/L
Area ratio: 0.06032
Sample type: CC



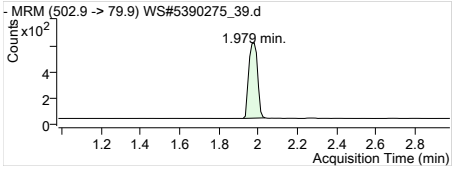


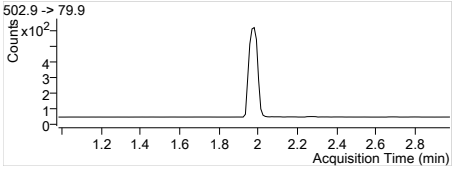
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.691 (1.691)
Calc. conc. 100.40 µg/L
Area ratio: 0.32659
Sample type: CC



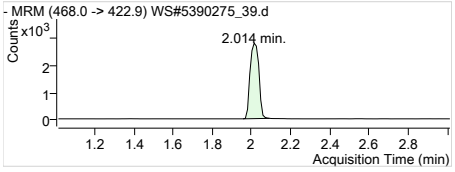


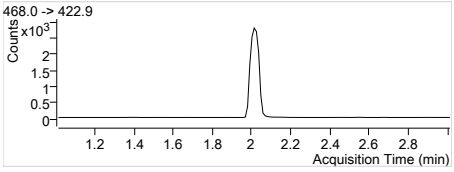
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.869 (1.881)
Calc. conc. 96.62 µg/L
Area ratio: 0.33336
Sample type: CC



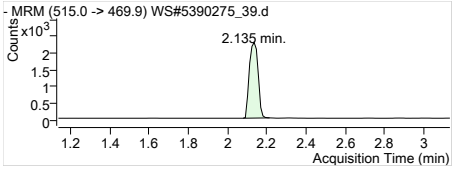


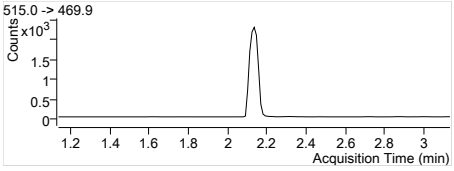
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.979 (1.979)
Calc. conc. 92.59 µg/L
Area ratio: 0.07263
Sample type: CC



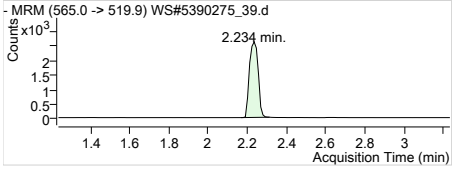


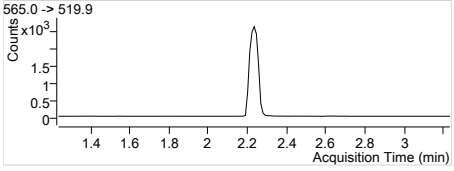
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.014 (2.014)
Calc. conc. 102.29 µg/L
Area ratio: 0.34881
Sample type: CC



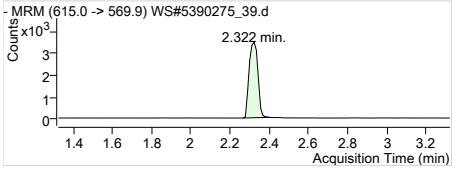


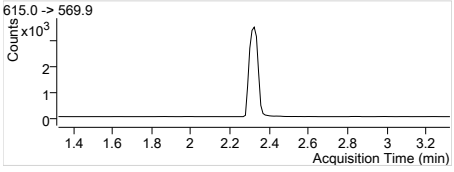
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.135 (2.135)
Calc. conc. 102.87 µg/L
Area ratio: 0.21434
Sample type: CC



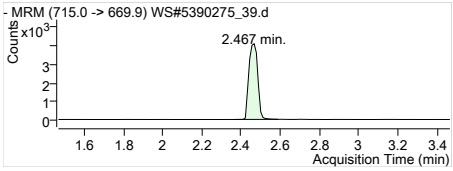


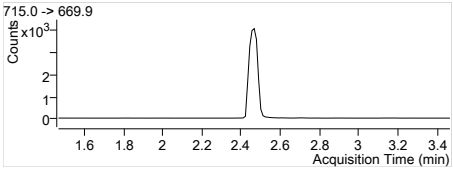
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.234 (2.234)
Calc. conc. 93.26 µg/L
Area ratio: 0.24576
Sample type: CC



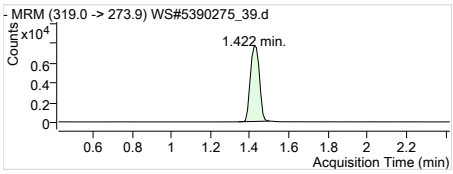


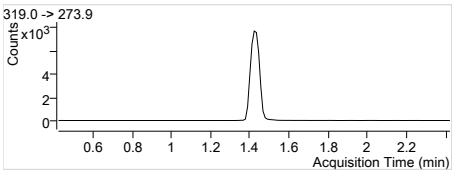
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.322 (2.322)
Calc. conc. 96.56 µg/L
Area ratio: 0.32916
Sample type: CC



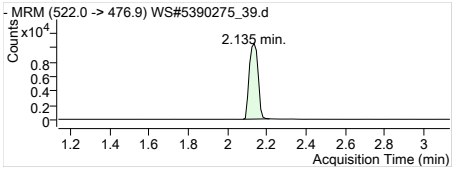


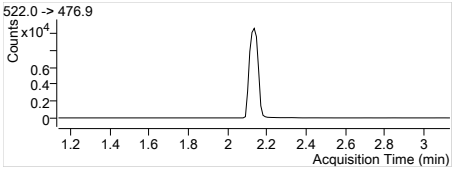
13C2-PFTeDA	715.0 -> 669.9
RT (Exp. RT):	2.467 (2.467)
Calc. conc.	98.25 µg/L
Area ratio:	0.38856
Sample type:	CC





13C6-PFHxA	319.0 -> 273.9
RT (Exp. RT):	1.422 (1.422)
Calc. conc.	104.77 µg/L
Area ratio:	0
Sample type:	CC





13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	2.135 (2.135)
Calc. conc.	105.73 µg/L
Area ratio:	0
Sample type:	CC

Quantitation Results

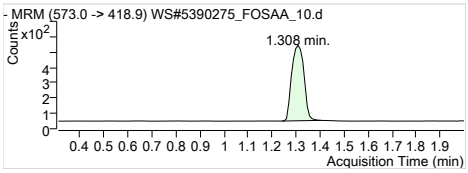
Agilent Technologies

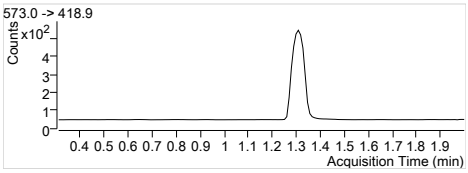
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**ISC**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_10.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A2
Acq. Date	2018/02/10 12:49:37 AM	**Injection Volume**	Per Method
Sample Annotation	-		

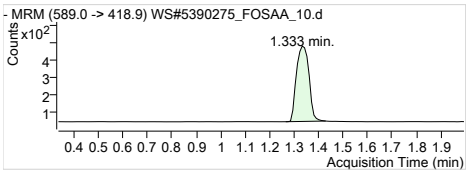
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1754	1.31	1 µg/L		
D5-EtFOSAA IS	1544	1.33	1 µg/L		
13C9-PFDA IS	24430	0.90	1 µg/L		

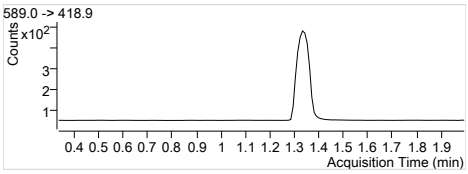
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	543	1.31	0.83	0.83 µg/L	100.56
EtFOSAA 1	560	1.33	0.83	0.89 µg/L	107.61
D3-MeFOSAA	1789	1.31	100.00	99.86 µg/L	99.86
D5-EtFOSAA	1555	1.33	100.00	97.61 µg/L	97.61
13C9-PFDA	23540	0.90	100.00	99.28 µg/L	99.28



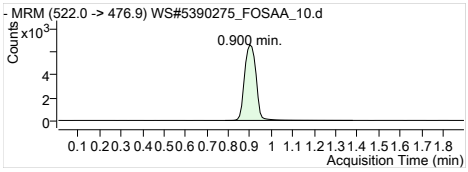


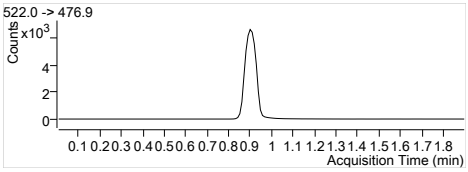
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: CC



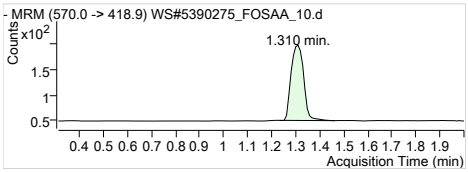


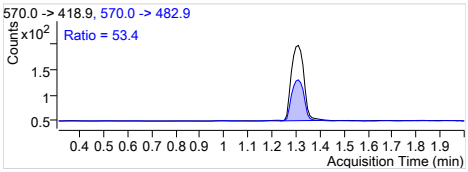
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: CC



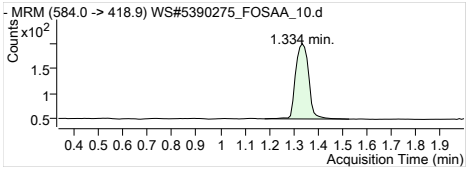


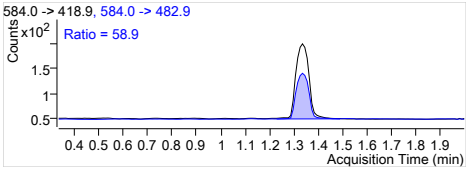
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.900 (0.900)
Concentration: 1 µg/L
Sample type: CC



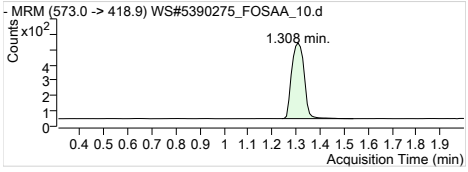


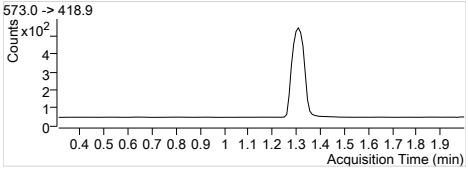
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 0.83 µg/L
Area ratio: 0.30958
Sample type: CC



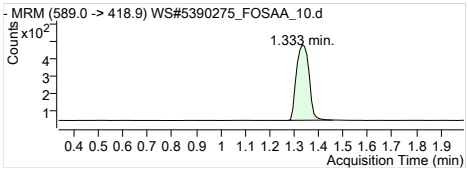


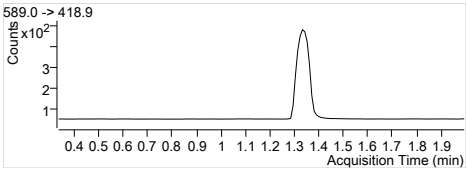
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.334)
Calc. conc. 0.89 µg/L
Area ratio: 0.36269
Sample type: CC



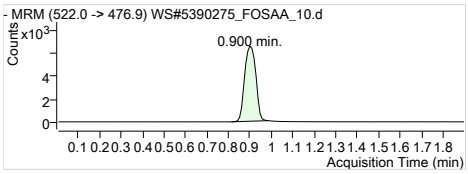


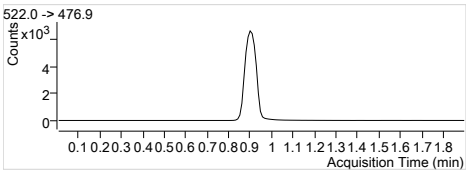
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 99.86 µg/L
Area ratio: 0.07323
Sample type: CC





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	97.61 µg/L
Area ratio:	0.06365
Sample type:	CC





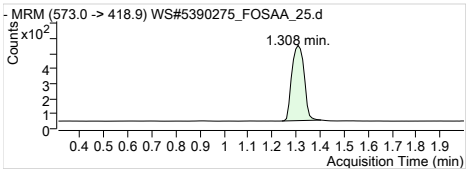
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.900 (0.900)
Calc. conc.	99.28 µg/L
Area ratio:	0
Sample type:	CC

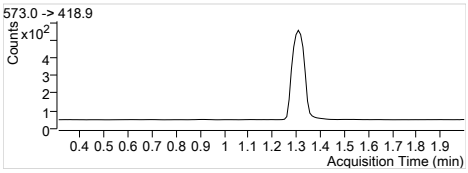
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**CCV**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_25.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A5
Acq. Date	2018/02/10 1:25:49 AM	**Injection Volume**	Per Method
Sample Annotation	-		

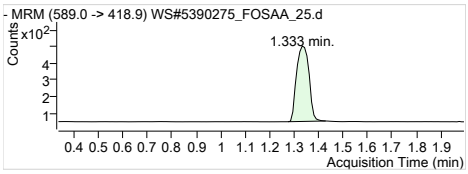
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1794	1.31	1 µg/L		
D5-EtFOSAA IS	1605	1.33	1 µg/L		
13C9-PFDA IS	25073	0.90	1 µg/L		

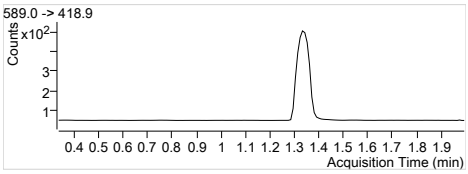
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	8076	1.31	12.50	12.95 µg/L	103.59
EtFOSAA 1	8502	1.33	12.50	12.81 µg/L	102.44
D3-MeFOSAA	1832	1.31	100.00	99.64 µg/L	99.64
D5-EtFOSAA	1629	1.33	100.00	99.63 µg/L	99.63
13C9-PFDA	24170	0.90	100.00	101.94 µg/L	101.94



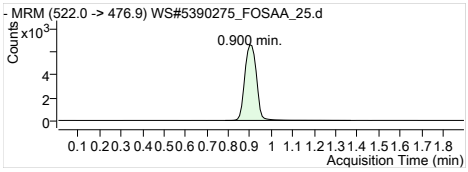


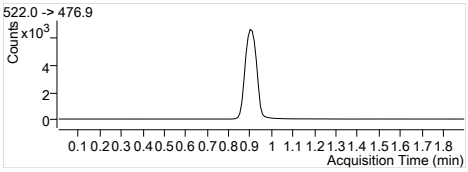
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: CC



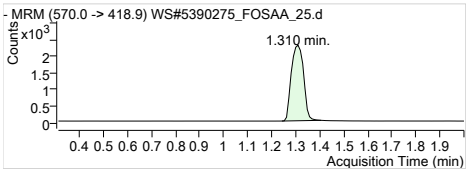


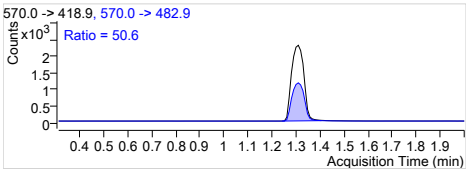
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: CC



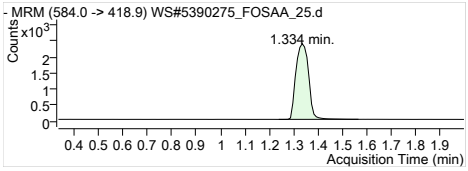


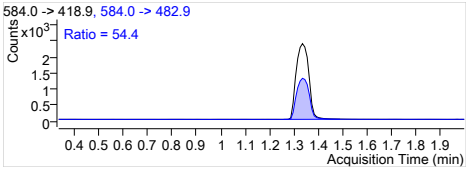
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.900 (0.900)
Concentration: 1 µg/L
Sample type: CC



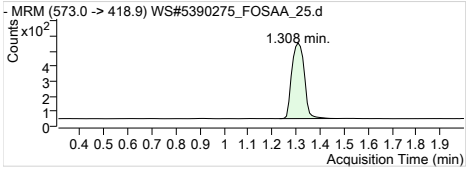


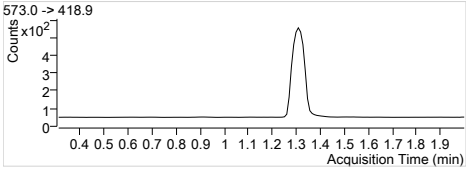
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 12.95 µg/L
Area ratio: 4.50167
Sample type: CC



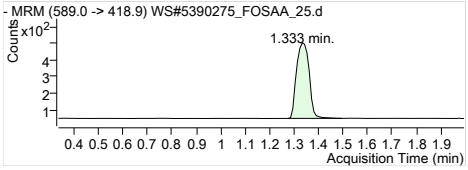


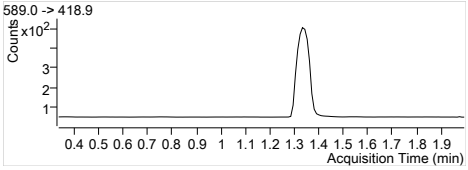
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.334)
Calc. conc. 12.81 µg/L
Area ratio: 5.29720
Sample type: CC



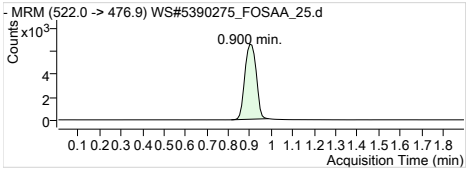


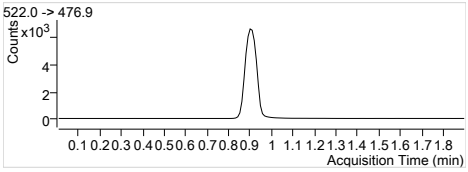
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 99.64 µg/L
Area ratio: 0.07307
Sample type: CC





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	99.63 µg/L
Area ratio:	0.06497
Sample type:	CC





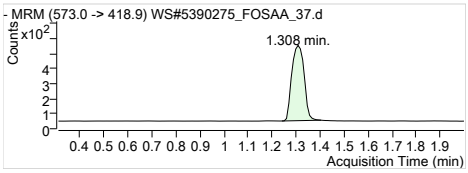
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.900 (0.900)
Calc. conc.	101.94 µg/L
Area ratio:	0
Sample type:	CC

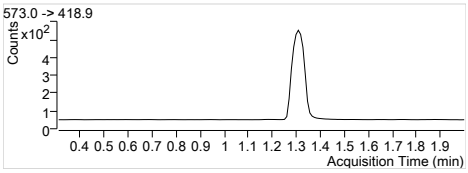
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**CCV**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_37.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A5
Acq. Date	2018/02/10 1:54:47 AM	**Injection Volume**	Per Method
Sample Annotation	-		

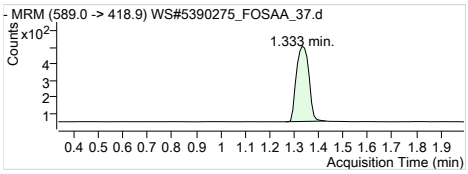
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1793	1.31	1 µg/L		
D5-EtFOSAA IS	1621	1.33	1 µg/L		
13C9-PFDA IS	25106	0.90	1 µg/L		

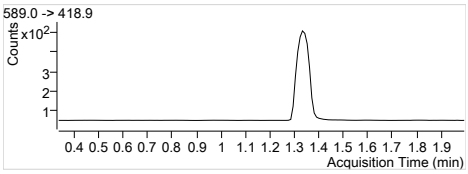
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	8128	1.31	12.50	13.04 µg/L	104.32
EtFOSAA 1	8602	1.33	12.50	12.83 µg/L	102.63
D3-MeFOSAA	1826	1.31	100.00	99.18 µg/L	99.18
D5-EtFOSAA	1648	1.33	100.00	100.66 µg/L	100.66
13C9-PFDA	24363	0.90	100.00	102.75 µg/L	102.75



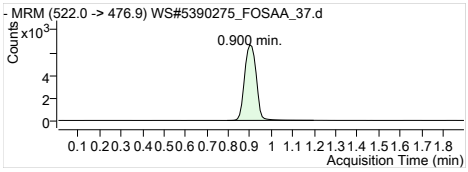


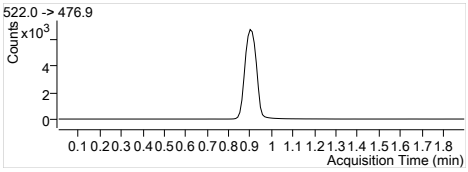
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: CC



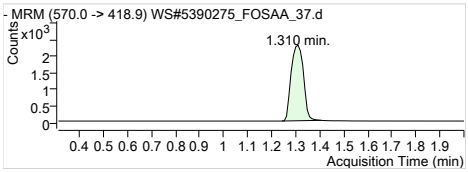


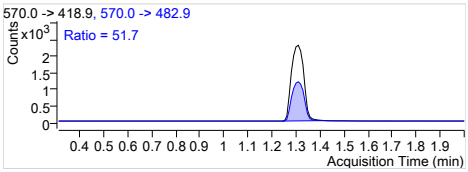
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: CC



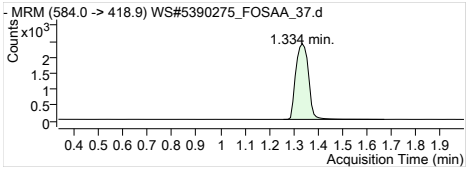


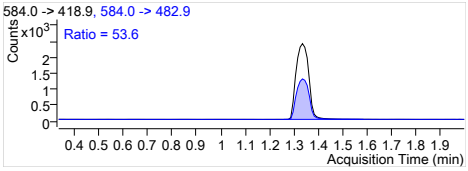
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.900 (0.900)
Concentration: 1 µg/L
Sample type: CC



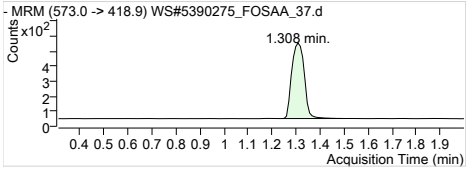


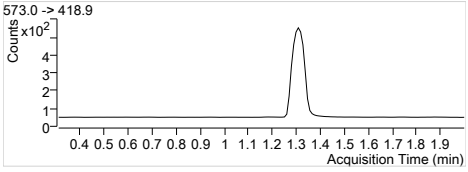
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 13.04 µg/L
Area ratio: 4.53318
Sample type: CC



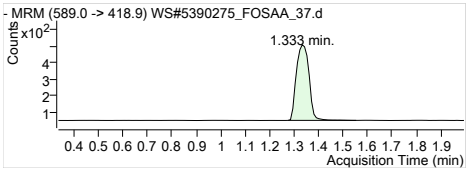


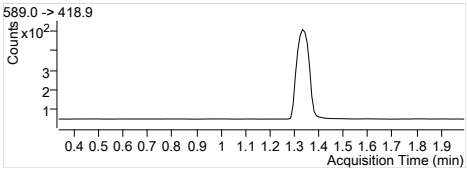
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.334)
Calc. conc. 12.83 µg/L
Area ratio: 5.30660
Sample type: CC



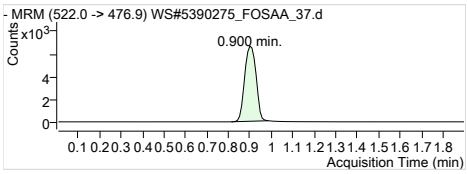


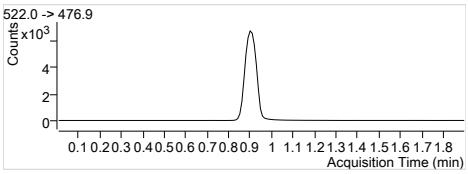
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 99.18 µg/L
Area ratio: 0.07273
Sample type: CC





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	100.66 µg/L
Area ratio:	0.06564
Sample type:	CC





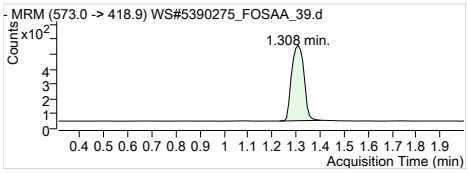
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.900 (0.900)
Calc. conc.	102.75 µg/L
Area ratio:	0
Sample type:	CC

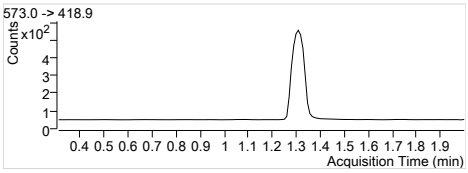
Batch Path	T:\lcms4\PFC\20180209\WS#5390275_FOSAA\QuantResults\PFC_Water_Low_180209_WS#5390275_FOSAA_ETOxics

Sample Name	**CCV**	**Instrument**	LCMS04
Data File	WS#5390275_FOSAA_39.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A5
Acq. Date	2018/02/10 1:59:37 AM	**Injection Volume**	Per Method
Sample Annotation	-		

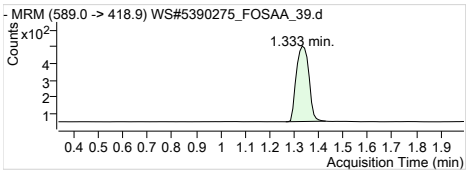
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1812	1.31	1 µg/L		
D5-EtFOSAA IS	1626	1.33	1 µg/L		
13C9-PFDA IS	25357	0.90	1 µg/L		

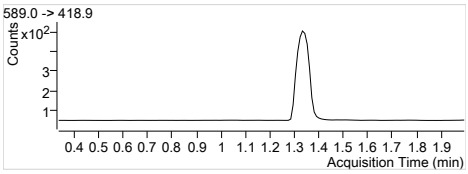
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	8338	1.31	12.50	13.24 µg/L	105.90
EtFOSAA 1	8572	1.33	12.50	12.74 µg/L	101.96
D3-MeFOSAA	1840	1.31	100.00	98.95 µg/L	98.95
D5-EtFOSAA	1635	1.33	100.00	98.88 µg/L	98.88
13C9-PFDA	24641	0.90	100.00	103.92 µg/L	103.92



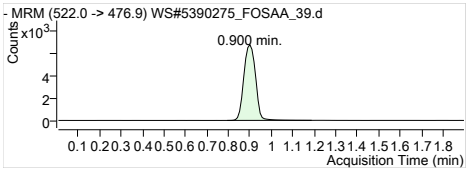


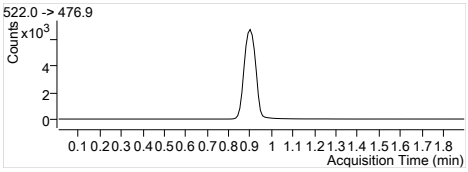
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.308 (1.308)
Concentration: 1 µg/L
Sample type: CC



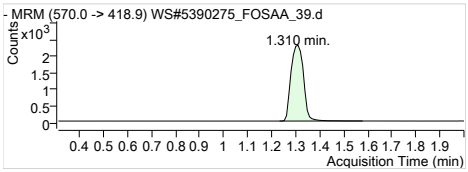


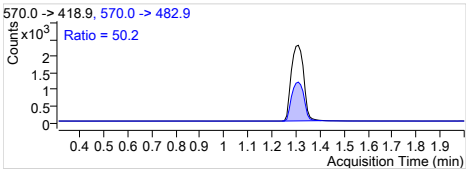
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.333 (1.333)
Concentration: 1 µg/L
Sample type: CC



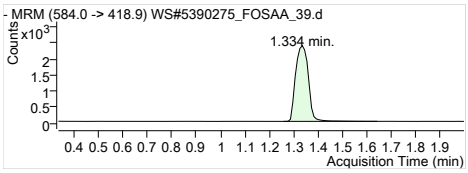


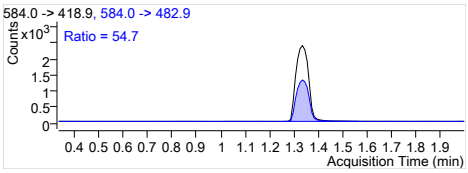
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.900 (0.900)
Concentration: 1 µg/L
Sample type: CC



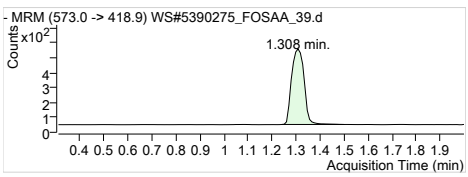


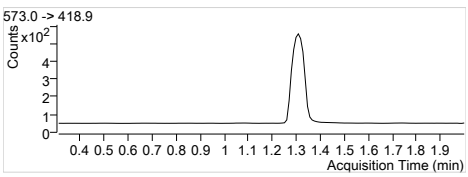
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.310 (1.310)
Calc. conc. 13.24 µg/L
Area ratio: 4.60155
Sample type: CC



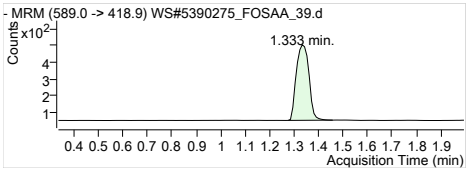


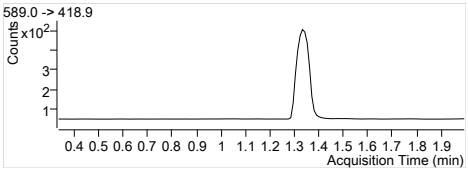
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.334 (1.334)
Calc. conc. 12.74 µg/L
Area ratio: 5.27183
Sample type: CC



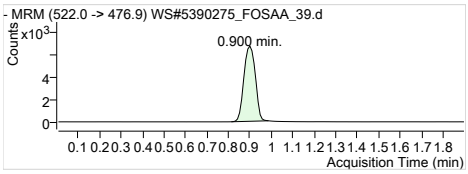


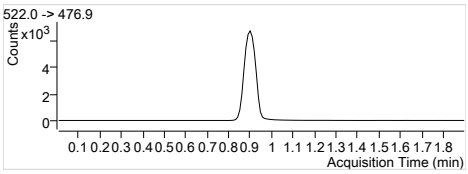
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.308 (1.308)
Calc. conc. 98.95 µg/L
Area ratio: 0.07256
Sample type: CC





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.333 (1.333)
Calc. conc.	98.88 µg/L
Area ratio:	0.06448
Sample type:	CC





13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.900 (0.900)
Calc. conc.	103.92 µg/L
Area ratio:	0
Sample type:	CC

DoD Projects - Internal Data Validation Checklist

Run date: 2018/02/13

Worksheet # (s): 5393111

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: MCP Date: 2018/02/13

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: CM Date: 2018/02/14

Comments: GAD933 + 934 sent for rework by High level analysis due to high levels of analytes on 2018/02/14

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 # 5393111 Testcode: PROSACM-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: 2018/02/09

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 BL-FCD-01126 2018/02/13

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# : 5393111

Page #: 1/2

RUSH

Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Friday, February 09, 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	(mg)
7-3		SPIKE	0	PFOS		0	125	3	1X					2018/02/09	27
7-2		SPIKE	1	PFOS		0	125	3	1X					2018/02/09	29
7-1		BLANK				0	125	3	1X					2018/02/09	30
7-4	B820260	*FZJ946-01R		[redacted]		0	125	3	1X	2	2018/02/09	2018/02/09 23:00	DOD	2018/02/09	31
7-5	B821961	*FZT426-01R		OLD-SA2-06ATW-*		<0.1	12.5	3	10X	2	2018/02/09	2018/02/12 23:00	DOD	2018/02/09	32
7-7	B821961	*FZT427-01R		OLD-SA2-01ATW-*		<0.1	125	3	1X	2	2018/02/09	2018/02/12 23:00	DOD	2018/02/09	25
7-9	B821961	*FZT428-01R		FB-OLD-012618-7		0	125	3	1X	2	2018/02/09	2018/02/12 23:00	DOD	2018/02/09	26
7-10	B821961	*FZT430-01R		EB-GW-012618-4		0	125	3	1X	2	2018/02/09	2018/02/12 23:00	DOD	2018/02/09	28
7-12	B821961	*FZT431-01R		DI BLANK		0	125	3	1X	2	2018/02/09	2018/02/12 23:00	DOD	2018/02/09	29
7-14	B823886*	*GAC647-01R		[redacted]		0	125	3	1X	2	2018/02/13	2018/02/08 17:00	DOD	2018/02/09	32
7-16	B823886*	*GAC649-01R		[redacted]		0	125	3	1X	2	2018/02/13	2018/02/08 17:00	DOD	2018/02/09	31
7-18	B823886*	*GAC651-01R		[redacted]		0	125	3	1X	2	2018/02/13	2018/02/08 17:00	DOD	2018/02/09	30
7-19	B824213	*GAD929-01R		[redacted]		0	125	3	1X	2	2018/02/09	2018/02/14 23:00	DOD	2018/02/09	28
7-20	B824213	*GAD930-01R		[redacted]		0	125	3	1X	2	2018/02/09	2018/02/14 23:00	DOD	2018/02/09	26
7-21	B824213	*GAD931-01R		[redacted]		<0.1	125	3	1X	2	2018/02/09	2018/02/14 23:00	DOD	2018/02/09	27
7-22	B824213	*GAD932-01R		[redacted]		0	125	3	1X	2	2018/02/09	2018/02/14 23:00	DOD	2018/02/09	29
7-23	B824213	*GAD933-01R		[redacted]		<0.1	1.25	3	100X	2	2018/02/09	2018/02/14 23:00	DOD	2018/02/09	32
7-24	B824213	*GAD934-01R		[redacted]		<0.1	1.25	3	100X	2	2018/02/09	2018/02/14 23:00	DOD	2018/02/09	30

2018/02/09 SSV.

Remarks: • Carbon clean up done.
• 9 did 10x for FZT426 because sample is very bad. dark brown in colour and Turbid.

Samples extracted by: Shivani Shivani

Instrumentation performed by: FC Date: 2018/02/12

Calculations performed by: Date: 2018/02/13

Validated by: Date: 2018/02/14

Job No.	Rep / Client Name / Remarks	Contact	Client Tier	National
GB820260	[redacted]			
GB821961	SP8 Earth Toxics Inc nreg, PFOSALCM-W Level IV Data Package and TetraTech EDD required F/C by NGV - 2018/02/08 Project #: JM11 NTC Orlando	Rick Carr	Tier 5 (Enviro.)	AECOM
GB823886	[redacted]			
GB824213				

Job	Sample	Lab Comments
	SPIKE	Spk/Spk Dup prepared due to insufficient amount of sample
	SPIKE	
	BLANK	
B820260	FZJ946-01R	
B821961	FZT426-01R	
B821961	FZT427-01R	Centrifuged at 4000 rpm -
B821961	FZT428-01R	
B821961	FZT430-01R	
B821961	FZT431-01R	
B823886	GAC647-01R	〃
B823886	GAC649-01R	〃
B823886	GAC651-01R	
B824213	GAD929-01R	
B824213	GAD930-01R	
B824213	GAD931-01R	〃
B824213	GAD932-01R	
B824213	GAD933-01R	Sample we are dosing as a high also.
B824213	GAD934-01R	〃

Calibration Standard Preparation#

	Mean (ng)	Spk (ng)		IS
S_1	2825	25	SK7377	
S_2	2800	50		
S_3	2700	150		
S_4	2813	37.5	I-5297	
S_5	2775	75		
S_6	2725	125		
ICV	2788	62.5	I-5299	
IB	2850			150 (ng)

JHS 20180209

Worksheet Reagent Tracking Record

Worksheet # 5393111

Volume (µL)

Surrogate/Spike solutions	√	Solution ID #	Conc.	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(4/4) JPB	50/125 ng/mL	200	100 150	200	100 150	200	100 150
PFC Injection IS	✓	SI-6770(1/2) JPB	~~400 ng/mL~~ 100	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	✓	SHB0545	2018/02/09	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	108349
0.2% Formic Acid				Leachate Fluid			
0.05M KOH				Reagent Water	✓	57297	2018/02/09
0.05M HCl							

*Spiked by: SSU

Spike Date: 2 18/02/09

Spike Syringe/Pipette ID#: G24390G

Int. Std Syringe/Pipette ID#: Internal std# K19865F Injection IS# G24390G

*Spiking Witnessed by: JPB

Final pH

Equipment & ID	√	Equipment	ID#	√	Equipment	Lot #
Pipettor K55191G K39732F	✓	SPE Cartridge	003437247A	✓	QC Balance ID	FC-1
	✓	Filter			Thermometer ID &Temp	
Dispenser		Centrifuge	42148683	9:30-9:35		
		Sonicator				

Bottle Tracking
Bottle# 18801
Cap# 18778
Systems plus Lot# 18/01/31

Comments: 850 ml volumetric Cylinder #3026
Envi Carb# 92806V

* - SPIKING OF QC's & SAMPLES MUST BE WITNESSED AT ALL TIMES.

Worksheet: 539311 **Dilution and Column Cleanup Worksheet**

Maxxam Analytics

Job Number	Sample ID	Sample: Initial Final Volume	Dilution Required	Sample added mL	Solvent Added mL	Int Stan Added uL	New Effective Final Volume	INITIAL SSV. DATE	Column Clean Up
B821961	FZT426	1	10X	12.5	-	150	125	2 18/02/04	-
B824213	GAD933	-	100X	1.25	123.75	150	125	2 18/02/05	-
	GBD934	-	100X	1.25	123.75	150	125	2 18/02/05	-

2 18/02/09 SSV

10ml # K551916

250ml volumetric cylinder # 3026

LCMS4_0 # 57297

Worksheet Number: **5393111**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

Parameter Name	Units	SPIKE	SPIKE Dup1	BLANK	B820260 FZJ946	DL	B821961 FZT426
6:2 Fluorotelomer sulfonate	ug/L	105.69287	106.76411	0	0	0.02	N/A*******
8:2 Fluorotelomer sulfonate	ug/L	101.42034	104.21074	0	0	0.02	N/A*******
N-ethylperfluorooctane sulfonamide	ug/L	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******
EtFOSAA	ug/L	104.15328	105.10459	0	N/A*******	0.02	0
N-ethylperfluorooctane sulfonamidoe	ug/L	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******
N-methylperfluorooctane sulfonamide	ug/L	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******
MeFOSAA	ug/L	101.90288	104.67266	0	N/A*******	0.02	0
N-methylperfluorooctanesulfonamidol	ug/L	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******
Perfluorobutanoic acid	ug/L	96.81029	104.98966	0	0	0.02	N/A*******
Perfluorobutane Sulfonate (PFBS)	ug/L	107.00695	98.52294	0	0	0.02	0
Perfluorodecane Sulfonate	ug/L	104.79485	102.96079	0	0	0.02	N/A*******
Perfluoroheptanoic Acid (PFHpA)	ug/L	101.81802	104.83022	0	0	0.02	0
Perfluoroheptane sulfonate	ug/L	99.40149	96.84953	0	N/A*******	0.02	N/A*******
Perfluorohexanoic Acid (PFHxA)	ug/L	101.44902	94.16447	0	0	0.02	0
Perfluorohexane Sulfonate (PFHxS)	ug/L	102.56776	95.58329	0	0	0.02	0
Perfluorononanoic Acid (PFNA)	ug/L	94.58887	98.51440	0	0	0.02	0
Perfluorooctane Sulfonamide (PFOSA)	ug/L	98.01192	97.80571	0	0	0.02	N/A*******
Perfluoropentanoic Acid (PFPeA)	ug/L	111.45918	107.15878	0	0	0.02	N/A*******
Perfluorotetradecanoic Acid	ug/L	102.19269	99.13740	0	0	0.02	0
Perfluorotridecanoic Acid	ug/L	99.78780	99.17589	0	0	0.02	0
Perfluoroundecanoic Acid (PFUnA)	ug/L	107.82925	107.82118	0	0	0.02	0
Perfluorodecanoic Acid (PFDA)	ug/L	115.34391	108.96260	0	0	0.02	0
Perfluorododecanoic Acid (PFDoA)	ug/L	95.85328	97.10967	0	0	0.02	0
Perfluoro-n-Octanoic Acid (PFOA)	ug/L	98.21271	99.91137	0	0	0.02	0
Perfluorooctane Sulfonate (PFOS)	ug/L	97.55814	92.35321	0	0	0.02	0
13C2-6:2 Fluorotelomer sulfonate	ug/L	86.6777179	80.6630225	89.7940994	104.654840		N/A*******
13C2-8:2 Fluorotelomer sulfonate	ug/L	83.2276206	77.0906257	85.9065722	100.954615		N/A*******
13C2-perfluorotetradecanoic acid	ug/L	77.9719025	78.8074986	72.6418162	80.5230889		103.135320
13C4-Perfluorobutanoic acid	ug/L	95.7828537	81.8678722	82.5117476	104.013416		N/A*******
D3-MeFOSAA	ug/L	69.6808388	70.5580714	69.9853279	N/A*******		91.0947184
D5-EtFOSAA	ug/L	69.2740254	70.6266166	68.6214440	N/A*******		95.0929083
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	79.0950256	76.8141603	77.3264715	91.3326560		97.5437155
13C2-Perfluorododecanoic acid	ug/L	79.2750111	79.6398802	71.9099347	88.4543326		100.711089
13C2-Perfluorohexanoic acid	ug/L	88.9887591	84.6180257	81.7761702	100.356479		98.0923416
13C2-Perfluoroundecanoic acid	ug/L	81.3910058	76.1475850	72.0955109	83.8490214		96.2276267
13C4-Perfluoroheptanoic acid	ug/L	89.3336735	83.3770847	81.4167937	102.482051		103.934368
13C5-Perfluorononanoic acid	ug/L	95.4453505	85.5366455	85.8861557	104.385366		101.137320
13C4-Perfluorooctanoic acid	ug/L	92.7042064	83.9236045	81.8081538	101.300808		103.433938
13C4-Perfluorooctanesulfonate	ug/L	92.7490334	87.8238736	86.0467372	90.3489945		102.541223
13C5-Perfluoropentanoic acid	ug/L	87.0563413	83.7976020	86.4858595	99.2311615		N/A*******
13C8-Perfluorooctane Sulfonamide	ug/L	84.8568322	81.0758076	76.2852142	92.8788435		N/A*******
18O2-Perfluorohexanesulfonate	ug/L	84.3361519	83.2682194	86.0512907	111.590941		101.148786

Worksheet Number: **5393111**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

Parameter Name	DL	B821961 FZT427	B821961 FZT428	B821961 FZT430	B821961 FZT431	B823886 GAC647	B823886 GAC649
6:2 Fluorotelomer sulfonate	0.2	N/A*******	N/A*******	N/A*******	N/A*******	0	0
8:2 Fluorotelomer sulfonate	0.2	N/A*******	N/A*******	N/A*******	N/A*******	0	0
N-ethylperfluorooctane sulfonamide	0.2	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
EtFOSAA	0.2	0	0	0	0	N/A*******	N/A*******
N-ethylperfluorooctane sulfonamidoe	0.2	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
N-methylperfluorooctane sulfonamide	0.2	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
MeFOSAA	0.2	0	0	0	0	N/A*******	N/A*******
N-methylperfluorooctanesulfonamidol	0.2	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluorobutanoic acid	0.2	N/A*******	N/A*******	N/A*******	N/A*******	0	0
Perfluorobutane Sulfonate (PFBS)	0.2	0	0	0	0	0	0
Perfluorodecane Sulfonate	0.2	N/A*******	N/A*******	N/A*******	N/A*******	0	0
Perfluoroheptanoic Acid (PFHpA)	0.2	0	0	0	0	0	0
Perfluoroheptane sulfonate	0.2	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******
Perfluorohexanoic Acid (PFHxA)	0.2	0	0	0	0	0	0
Perfluorohexane Sulfonate (PFHxS)	0.2	0	0	0	0	0	0
Perfluorononanoic Acid (PFNA)	0.2	0	0	0	0	0	0
Perfluorooctane Sulfonamide (PFOSA)	0.2	N/A*******	N/A*******	N/A*******	N/A*******	0	0
Perfluoropentanoic Acid (PFPeA)	0.2	N/A*******	N/A*******	N/A*******	N/A*******	0	0
Perfluorotetradecanoic Acid	0.2	0	0	0	0	0	0
Perfluorotridecanoic Acid	0.2	0	0	0	0	0	0
Perfluoroundecanoic Acid (PFUnA)	0.2	0	0	0	0	0	0
Perfluorodecanoic Acid (PFDA)	0.2	0	0	0	0	0	0
Perfluorododecanoic Acid (PFDoA)	0.2	0	0	0	0	0	0
Perfluoro-n-Octanoic Acid (PFOA)	0.2	0	0	0	0	0	0
Perfluorooctane Sulfonate (PFOS)	0.2	0	0	0	0	0	0
13C2-6:2 Fluorotelomer sulfonate		N/A*******	N/A*******	N/A*******	N/A*******	116.517392	81.2705514
13C2-8:2 Fluorotelomer sulfonate		N/A*******	N/A*******	N/A*******	N/A*******	122.094329	76.1050920
13C2-perfluorotetradecanoic acid		64.1128099	78.3443888	70.3914851	73.6783156	111.444959	77.3155084
13C4-Perfluorobutanoic acid		N/A*******	N/A*******	N/A*******	N/A*******	76.3475598	63.2048365
D3-MeFOSAA		77.7432242	76.2251821	73.7251123	75.0092066	N/A*******	N/A*******
D5-EtFOSAA		77.1035814	75.6644729	74.2104118	72.9664901	N/A*******	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		93.4515519	82.9247189	81.0760738	84.8227009	114.758855	86.3140535
13C2-Perfluorododecanoic acid		89.4800847	81.0991644	70.3717362	79.6903254	109.573159	78.9507751
13C2-Perfluorohexanoic acid		93.2477634	93.6197216	87.0079188	95.2841229	124.954541	88.9701396
13C2-Perfluoroundecanoic acid		81.9605712	74.9965870	75.5501112	74.5941791	114.496458	85.0631486
13C4-Perfluoroheptanoic acid		96.5532240	88.3975993	93.1177153	90.9481709	125.097886	83.1060895
13C5-Perfluorononanoic acid		92.9035897	89.6257384	83.1882254	91.1526005	125.640415	88.8856718
13C4-Perfluorooctanoic acid		98.7533050	90.8016729	86.5821224	90.1970791	124.769560	87.4776965
13C4-Perfluorooctanesulfonate		103.625548	94.2519294	88.8359476	82.7354861	121.308951	91.4718284
13C5-Perfluoropentanoic acid		N/A*******	N/A*******	N/A*******	N/A*******	119.713803	81.8153443
13C8-Perfluorooctane Sulfonamide		N/A*******	N/A*******	N/A*******	N/A*******	127.853116	84.8445384
18O2-Perfluorohexanesulfonate		90.4038486	98.9841635	91.4490289	85.7293043	134.709157	92.3903242

Worksheet Number: **5393111**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

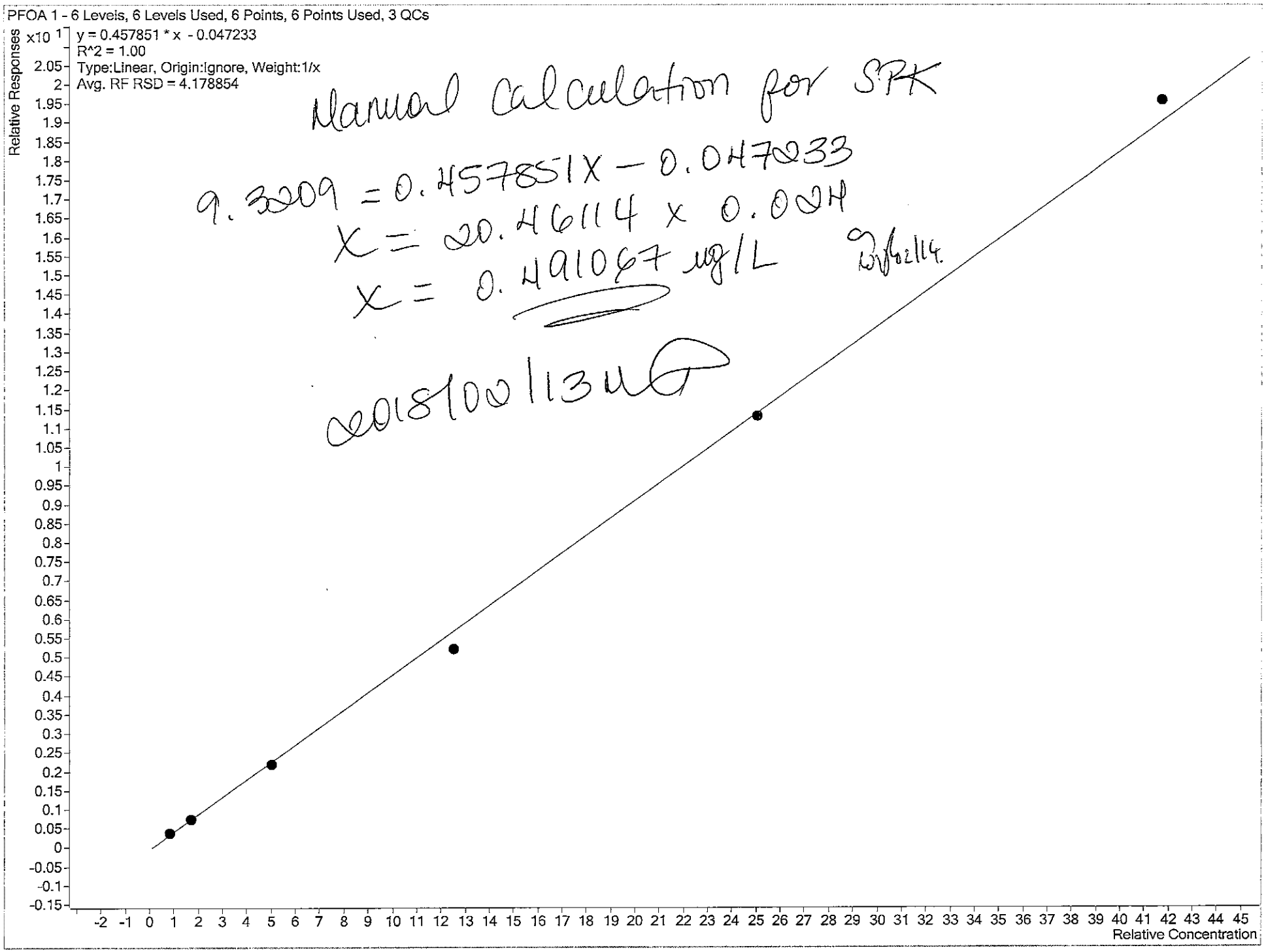
Parameter Name	B823886 GAC651	B824213 GAD929	B824213 GAD930	B824213 GAD931	B824213 GAD932	DL	B824213 GAD933
6:2 Fluorotelomer sulfonate	0	0	0	0	0	0.02	N/A*******
8:2 Fluorotelomer sulfonate	0	0	0	0	0	0.02	N/A*******
N-ethylperfluorooctane sulfonamide	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******
EtFOSAA	N/A*******	0	0	0	0	0.02	0
N-ethylperfluorooctane sulfonamidoe	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******
N-methylperfluorooctane sulfonamide	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******
MeFOSAA	N/A*******	0	0	0	0	0.02	0
N-methylperfluorooctanesulfonamidol	N/A*******	N/A*******	N/A*******	N/A*******	N/A*******	0.02	N/A*******
Perfluorobutanoic acid	0	0	0	0	0	0.02	N/A*******
Perfluorobutane Sulfonate (PFBS)	0	0	0	0	0	0.02	1.54195164
Perfluorodecane Sulfonate	0	0	0	0	0	0.02	N/A*******
Perfluoroheptanoic Acid (PFHpA)	0	0	0	0	0	0.02	1.18944524
Perfluoroheptane sulfonate	N/A*******	0	0	0	0	0.02	N/A*******
Perfluorohexanoic Acid (PFHxA)	0	0	0	0	0	0.02	4.39839741
Perfluorohexane Sulfonate (PFHxS)	0	0	0	0	0	0.02	31.6427107
Perfluorononanoic Acid (PFNA)	0	0	0	0	0	0.02	0
Perfluorooctane Sulfonamide (PFOSA)	0	0	0	0	0	0.02	N/A*******
Perfluoropentanoic Acid (PFPeA)	0	0	0	0	0	0.02	N/A*******
Perfluorotetradecanoic Acid	0	0	0	0	0	0.02	0
Perfluorotridecanoic Acid	0	0	0	0	0	0.02	0
Perfluoroundecanoic Acid (PFUnA)	0	0	0	0	0	0.02	0
Perfluorodecanoic Acid (PFDA)	0	0	0	0	0	0.02	0
Perfluorododecanoic Acid (PFDoA)	0	0	0	0	0	0.02	0
Perfluoro-n-Octanoic Acid (PFOA)	0	0	0	0	0	0.02	5.76491697
Perfluorooctane Sulfonate (PFOS)	0	0	0	0.02278008	0	0.02	240.451900
13C2-6:2 Fluorotelomer sulfonate	104.575378	91.5911860	99.5687772	99.8204014	100.886305		N/A*******
13C2-8:2 Fluorotelomer sulfonate	94.0289644	80.6138466	95.9500274	89.9974499	89.7788706		N/A*******
13C2-perfluorotetradecanoic acid	78.4003134	71.6298248	80.3805289	60.8990572	68.2389077		79.6429256
13C4-Perfluorobutanoic acid	95.5756973	84.5243044	97.2382628	93.5251213	96.3160936		85.6527749
D3-MeFOSAA	N/A*******	73.0012565	74.9642190	66.9518255	77.0005286		70.1518910
D5-EtFOSAA	N/A*******	76.4197875	78.8549114	70.5865209	75.8225004		70.0461846
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	85.7828367	84.0615846	82.3983130	82.6575460	82.5763946		79.6908372
13C2-Perfluorododecanoic acid	84.8939026	72.2911348	84.8713935	70.5288286	76.2423837		73.4461017
13C2-Perfluorohexanoic acid	92.9808857	90.3314663	96.8950305	91.0506578	91.9571033		91.0222568
13C2-Perfluoroundecanoic acid	89.9132019	76.3745169	83.0895864	80.2146710	75.7011233		74.1657675
13C4-Perfluoroheptanoic acid	98.7676559	86.5651227	100.601624	95.7180050	86.3839934		85.6275015
13C5-Perfluorononanoic acid	98.2143785	90.5550384	96.6598776	91.3058643	82.7508580		82.1539656
13C4-Perfluorooctanoic acid	96.3986447	88.3889896	99.0135260	90.0033548	86.6597525		88.4435680
13C4-Perfluorooctanesulfonate	94.5377183	90.5494851	103.536361	95.0215201	86.9077260		N/A*******
13C5-Perfluoropentanoic acid	97.0517626	86.3602265	97.1930848	91.2605374	91.8654017		N/A*******
13C8-Perfluorooctane Sulfonamide	88.5105163	85.4631847	95.4302078	82.8952047	93.7823091		N/A*******
18O2-Perfluorohexanesulfonate	98.9561350	93.5581677	109.632889	91.9206618	89.6098577		89.2170716

Worksheet Number: **5393111**

PFOS and PFOA in water by SPE/LCMS - Water

ug/L

Parameter Name	B824213 GAD934	DL	RDL	MDL	IDL		
6:2 Fluorotelomer sulfonate	N/A*******	2	0.02	0.0066	0		
8:2 Fluorotelomer sulfonate	N/A*******	2	0.02	0.0066	0		
N-ethylperfluorooctane sulfonamide	N/A*******	2	0.02	0.01	0		
EtFOSAA	0	2	0.02	0.0033	0		
N-ethylperfluorooctane sulfonamidoe	N/A*******	2	0.02	0.0079	0		
N-methylperfluorooctane sulfonamide	N/A*******	2	0.02	0.013	0		
MeFOSAA	0	2	0.02	0.0029	0		
N-methylperfluorooctanesulfonamidol	N/A*******	2	0.02	0.012	0		
Perfluorobutanoic acid	N/A*******	2	0.02	0.0055	0		
Perfluorobutane Sulfonate (PFBS)	32.1664698	2	0.02	0.0054	0		
Perfluorodecane Sulfonate	N/A*******	2	0.02	0.006	0		
Perfluoroheptanoic Acid (PFHpA)	9.01235455	2	0.02	0.0074	0		
Perfluoroheptane sulfonate	N/A*******	2	0.02	0.008	0		
Perfluorohexanoic Acid (PFHxA)	52.6657501	2	0.02	0.0035	0		
Perfluorohexane Sulfonate (PFHxS)	226.751200	2	0.02	0.0056	0		
Perfluorononanoic Acid (PFNA)	0	2	0.02	0.0087	0		
Perfluorooctane Sulfonamide (PFOSA)	N/A*******	2	0.02	0.0034	0		
Perfluoropentanoic Acid (PFPeA)	N/A*******	2	0.02	0.0075	0		
Perfluorotetradecanoic Acid	0	2	0.02	0.0027	0		
Perfluorotridecanoic Acid	0	2	0.02	0.0038	0		
Perfluoroundecanoic Acid (PFUnA)	0	2	0.02	0.0025	0		
Perfluorodecanoic Acid (PFDA)	0	2	0.02	0.0061	0		
Perfluorododecanoic Acid (PFDoA)	0	2	0.02	0.005	0		
Perfluoro-n-Octanoic Acid (PFOA)	28.8674964	2	0.02	0.0033	0		
Perfluorooctane Sulfonate (PFOS)	1126.27380	2	0.02	0.006	0		
13C2-6:2 Fluorotelomer sulfonate	N/A*******						
13C2-8:2 Fluorotelomer sulfonate	N/A*******						
13C2-perfluorotetradecanoic acid	53.7912963						
13C4-Perfluorobutanoic acid	95.9061312						
D3-MeFOSAA	75.5392952						
D5-EtFOSAA	72.3555102						
N-methyl-d3-perfluorooctane sulfona	N/A*******						
N-ethyl-d5-perfluorooctane sulfonam	N/A*******						
13C2-Perfluorodecanoic acid	86.3161082						
13C2-Perfluorododecanoic acid	78.8717989						
13C2-Perfluorohexanoic acid	93.9266583						
13C2-Perfluoroundecanoic acid	81.6063245						
13C4-Perfluoroheptanoic acid	87.6927476						
13C5-Perfluorononanoic acid	94.2584877						
13C4-Perfluorooctanoic acid	94.1786479						
13C4-Perfluorooctanesulfonate	N/A*******						
13C5-Perfluoropentanoic acid	N/A*******						
13C8-Perfluorooctane Sulfonamide	N/A*******						
18O2-Perfluorohexanesulfonate	N/A*******						



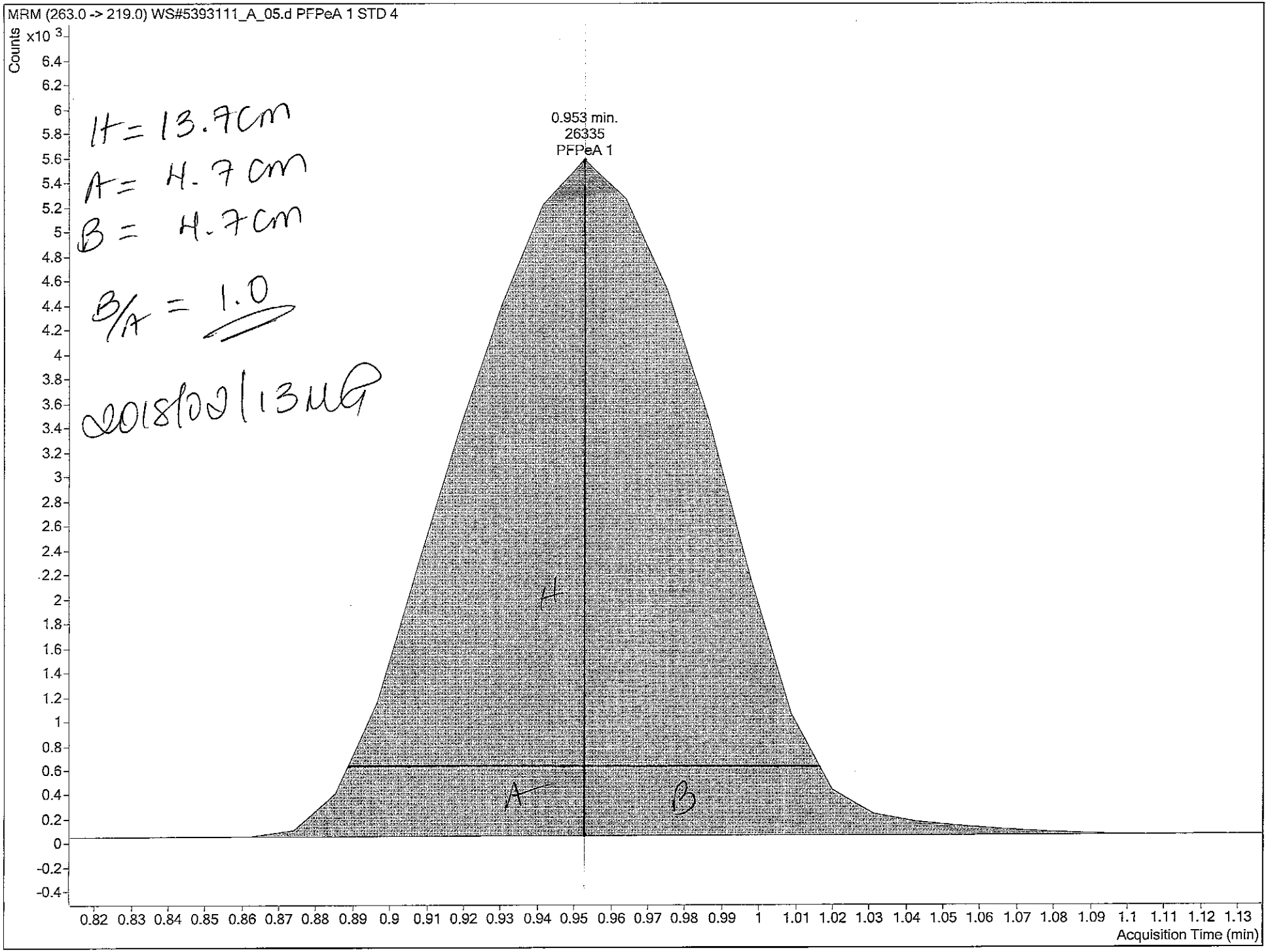
Manual calculation for SPK

$9.3209 = 0.457851X - 0.047233$

$X = 20.46114 \times 0.024$

$X = 0.491067$ ug/L

2018/02/13 MG



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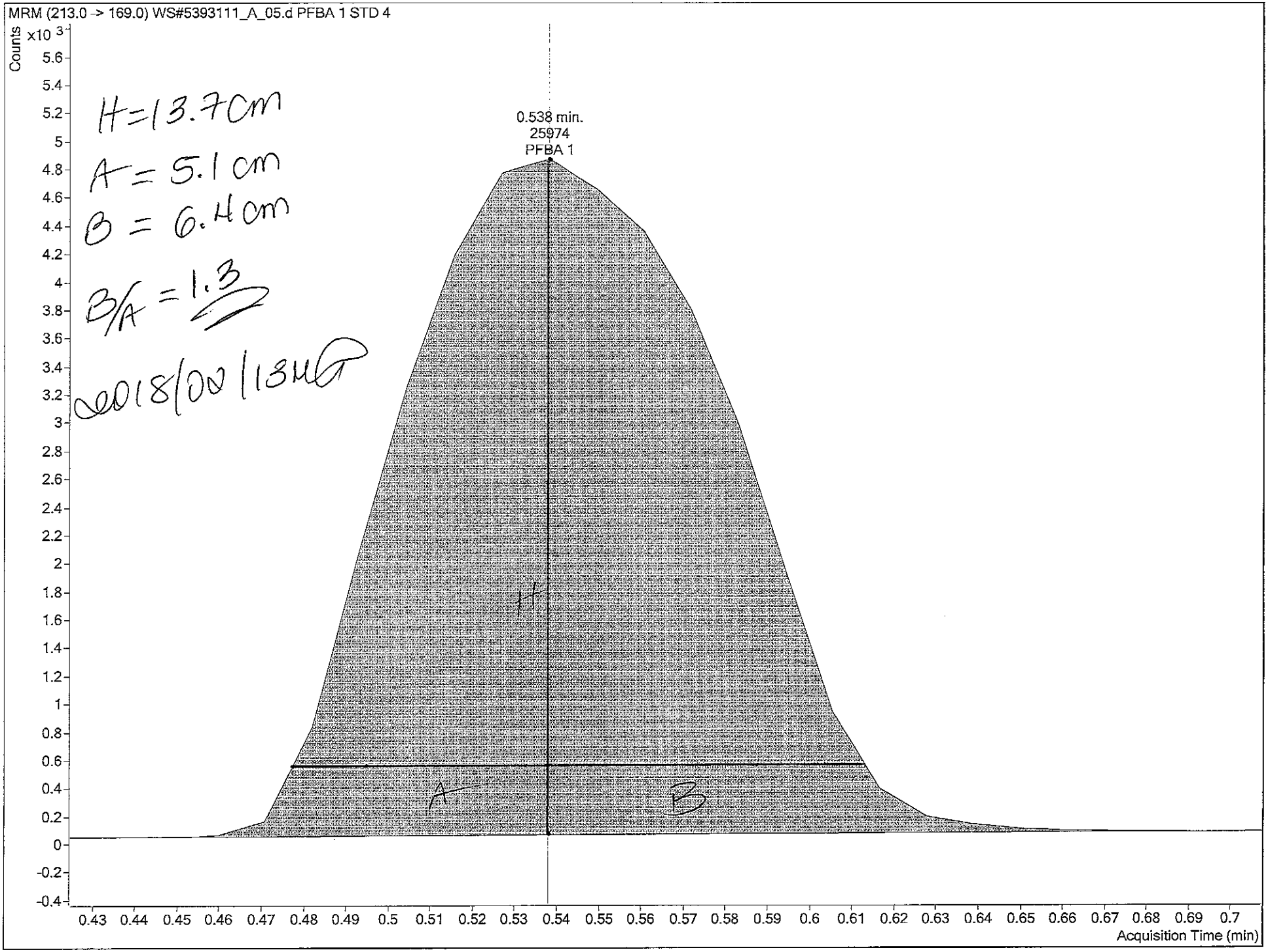
MRM (213.0 -> 169.0) WS#5393111_A_05.d PFBA 1 STD 4
Counts
x10 3
0.538 min.
25974
PFBA 1
H=13.7cm
A=5.1cm
B=6.4cm
B/A=1.3
2018/02/13MG
H
A
B
Acquisition Time (min)

Report Name: Worksheet - Parameter Lists

Report Date: 2018/02/09

Test Code: **PFOSALCM-W**

Worksheet Number: **5393111**

Sample Number	Parameter Code	Parameter	
FZJ946-01	6:2FTS	6:2 Fluorotelomer sulfonate	*
GAC647-01	8:2FTS	8:2 Fluorotelomer sulfonate	*
GAC649-01	PFBA	Perfluorobutanoic acid	
GAC651-01	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 (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)	
FZT426-01	ETFOSAA	EtFOSAA	*
FZT427-01	MEFOSAA	MeFOSAA	*
FZT428-01	PFBS	Perfluorobutane Sulfonate (PFBS)	
FZT430-01	PFHPA	Perfluoroheptanoic Acid (PFHpA)	
FZT431-01	PFHXA	Perfluorohexanoic Acid (PFHxA)	
GAD933-01	PFHXS	Perfluorohexane Sulfonate (PFHxS)	
GAD934-01	PFNA	Perfluorononanoic Acid	

* - This parameter is usually off, but will be reported for this group of samples!

Report Name: Worksheet - Parameter Lists

Report Date: 2018/02/09

Test Code: **PFOSALCM-W**

Worksheet Number: **5393111**

Sample Number	Parameter Code	Parameter
		(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)
GAD929-01	NONE	NONE
GAD930-01		
GAD931-01		
GAD932-01		

* - This parameter is usually off, but will be reported for this group of samples!

WorkSheet 5393111 Instrument Sequences

1.	5393111:SPIKE	SPIKE
2.	5393111:SPIKE:D1	SPIKE :D1
3.	5393111:BLANK	BLANK
4.	5393111:FZJ946-01	[redacted]
5.	5393111:FZT426-01	OLD-SA2-06ATW-0118
6.	5393111:FZT427-01	OLD-SA2-01ATW-0118
7.	5393111:FZT428-01	FB-OLD-012618-7
8.	5393111:FZT430-01	EB-GW-012618-4
9.	5393111:FZT431-01	DI BLANK
10.	5393111:GAC647-01	[redacted]
11.	5393111:GAC649-01	[redacted]
12.	5393111:GAC651-01	[redacted]
13.	5393111:GAD929-01	[redacted]
14.	5393111:GAD930-01	[redacted]
15.	5393111:GAD931-01	[redacted]
16.	5393111:GAD932-01	[redacted]
17.	5393111:GAD933-01	[redacted]
18.	5393111:GAD934-01	[redacted]

Worklist Report

Agilent Technologies

Instrument Name: LCMS04 **Worklist Path:** D:\MassHunter\Worklists\PFCs\PFC_180212_Low.wkl

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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\20180212\WS#5393111
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# SHBJ5451, Sigma

cc 2018/02/12

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#5393111_01.d	Sample		As Method	-
2	STD 1	P2-A2	PFC_Water_Low.m	WS#5393111_02.d	Calibration	STD 1	As Method	-
3	STD 2	P2-A3	PFC_Water_Low.m	WS#5393111_03.d	Calibration	STD 2	As Method	-
4	STD 3	P2-A4	PFC_Water_Low.m	WS#5393111_04.d	Calibration	STD 3	As Method	-
5	STD 4	P2-A5	PFC_Water_Low.m	WS#5393111_05.d	Calibration	STD 4	As Method	-
6	STD 5	P2-A6	PFC_Water_Low.m	WS#5393111_06.d	Calibration	STD 5	As Method	-
7	STD 6	P2-A7	PFC_Water_Low.m	WS#5393111_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#5393111_08.d	Sample		As Method	-
9	ICV	P2-A9	PFC_Water_Low.m	WS#5393111_09.d	QC	ICV	As Method	-
10	ISC	P2-A2	PFC_Water_Low.m	WS#5393111_10.d	ConCal	STD 1	As Method	-
11	5393111:BLANK	P2-B1	PFC_Water_Low.m	WS#5393111_11.d	Sample		As Method	-
12	5393111:SPIKE	P2-B2	PFC_Water_Low.m	WS#5393111_12.d	QC	ICV	As Method	-
13	5393111:SPIKE:D1	P2-B3	PFC_Water_Low.m	WS#5393111_13.d	QC	ICV	As Method	-
14	5393111:FZJ946-01	P2-B4	PFC_Water_Low.m	WS#5393111_14.d	Sample		As Method	-
15	5393111:FZT426-01:10x	P2-B5	PFC_Water_Low.m	WS#5393111_15.d	Sample		As Method	-
16	IB	P2-A8	PFC_Water_Low.m	WS#5393111_16.d	Sample		As Method	-
17	5393111:FZT427-01	P2-B6	PFC_Water_Low.m	WS#5393111_17.d	Sample		As Method	-
18	5393111:FZT428-01	P2-B7	PFC_Water_Low.m	WS#5393111_18.d	Sample		As Method	-
19	5393111:FZT430-01	P2-B8	PFC_Water_Low.m	WS#5393111_19.d	Sample		As Method	-
20	5393111:FZT431-01	P2-B9	PFC_Water_Low.m	WS#5393111_20.d	Sample		As Method	-
21	5393111:GAC647-01	P2-C1	PFC_Water_Low.m	WS#5393111_21.d	Sample		As Method	-
22	5393111:GAC649-01	P2-C2	PFC_Water_Low.m	WS#5393111_22.d	Sample		As Method	-
23	5393111:GAC651-01	P2-C3	PFC_Water_Low.m	WS#5393111_23.d	Sample		As Method	-
24	5393111:GAD929-01	P2-C4	PFC_Water_Low.m	WS#5393111_24.d	Sample		As Method	-
25	CCV	P2-A5	PFC_Water_Low.m	WS#5393111_25.d	ConCal	STD 4	As Method	-
26	5393111:GAD930-01	P2-C5	PFC_Water_Low.m	WS#5393111_26.d	Sample		As Method	-
27	5393111:GAD931-01	P2-C6	PFC_Water_Low.m	WS#5393111_27.d	Sample		As Method	-
28	5393111:GAD932-01	P2-C7	PFC_Water_Low.m	WS#5393111_28.d	Sample		As Method	-
29	5393111:GAD933-01:100x	P2-C8	PFC_Water_Low.m	WS#5393111_29.d	Sample		As Method	-
30	IB	P2-A8	PFC_Water_Low.m	WS#5393111_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	5393111:GAD934-01:100x	P2-C9	PFC_Water_Low.m	WS#5393111_31.d	Sample		As Method	-
32	IB	P2-A8	PFC_Water_Low.m	WS#5393111_32.d	Sample		As Method	-
33	CCV	P2-A5	PFC_Water_Low.m	WS#5393111_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_180212_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\20180212\WS#5393111_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)

cc 2018/02/12

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#5393111_FOSAA_01.d	Sample		As Method	-
2	STD 1	P2-A2	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_02.d	Calibration	STD 1	As Method	-
3	STD 2	P2-A3	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_03.d	Calibration	STD 2	As Method	-
4	STD 3	P2-A4	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_04.d	Calibration	STD 3	As Method	-
5	STD 4	P2-A5	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_05.d	Calibration	STD 4	As Method	-
6	STD 5	P2-A6	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_06.d	Calibration	STD 5	As Method	-
7	STD 6	P2-A7	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_07.d	Calibration	STD 6	As Method	-
8	IB	P2-A8	PFC_Water_Low_FOSAA.m	WS#5393111_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#5393111_FOSAA_09.d	QC	ICV	As Method	-
10	ISC	P2-A2	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_10.d	ConCal	STD 1	As Method	-
11	5393111:BLANK	P2-B1	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_11.d	Sample		As Method	-
12	5393111:SPIKE	P2-B2	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_12.d	QC	ICV	As Method	-
13	5393111:SPIKE:D1	P2-B3	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_13.d	QC	ICV	As Method	-
14	5393111:FZJ946-01	P2-B4	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_14.d	Sample		As Method	-
15	5393111:FZT426-01:10x	P2-B5	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_15.d	Sample		As Method	-
16	IB	P2-A8	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_16.d	Sample		As Method	-
17	5393111:FZT427-01	P2-B6	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_17.d	Sample		As Method	-
18	5393111:FZT428-01	P2-B7	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_18.d	Sample		As Method	-
19	5393111:FZT430-01	P2-B8	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_19.d	Sample		As Method	-
20	5393111:FZT431-01	P2-B9	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_20.d	Sample		As Method	-
21	5393111:GAC647-01	P2-C1	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_21.d	Sample		As Method	-
22	5393111:GAC649-01	P2-C2	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_22.d	Sample		As Method	-
23	5393111:GAC651-01	P2-C3	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_23.d	Sample		As Method	-
24	5393111:GAD929-01	P2-C4	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_24.d	Sample		As Method	-
25	CCV	P2-A5	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_25.d	ConCal	STD 4	As Method	-
26	5393111:GAD930-01	P2-C5	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_26.d	Sample		As Method	-
27	5393111:GAD931-01	P2-C6	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_27.d	Sample		As Method	-
28	5393111:GAD932-01	P2-C7	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_28.d	Sample		As Method	-
29	5393111:GAD933-01:100x	P2-C8	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_29.d	Sample		As Method	-
30	IB	P2-A8	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_30.d	Sample		As Method	-
31	5393111:GAD934-01:100x	P2-C9	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_31.d	Sample		As Method	-
32	IB	P2-A8	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_32.d	Sample		As Method	-
33	CCV	P2-A5	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_33.d	ConCal	STD 4	As Method	-

Maxxam Analytics

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FINAL INJECTION SEQUENCE

Sample					
Name	Comment	Acq. Date-Time	Acq. Method File	Data File	Pos.
STD 1	-	2018/02/13 1:11 PM	PFC_Water_Low.m	WS#5393111_A_02.d	P2-A2
STD 2	-	2018/02/13 1:16 PM	PFC_Water_Low.m	WS#5393111_A_03.d	P2-A3
STD 3	-	2018/02/13 1:21 PM	PFC_Water_Low.m	WS#5393111_A_04.d	P2-A4
STD 4	-	2018/02/13 1:26 PM	PFC_Water_Low.m	WS#5393111_A_05.d	P2-A5
STD 5	-	2018/02/13 1:31 PM	PFC_Water_Low.m	WS#5393111_A_06.d	P2-A6
STD 6	-	2018/02/13 1:36 PM	PFC_Water_Low.m	WS#5393111_A_07.d	P2-A7
IB	-	2018/02/13 1:41 PM	PFC_Water_Low.m	WS#5393111_A_08.d	P2-A8
ICV	-	2018/02/13 1:45 PM	PFC_Water_Low.m	WS#5393111_A_09.d	P2-A9
ISC	-	2018/02/13 1:50 PM	PFC_Water_Low.m	WS#5393111_A_10.d	P2-A2
5393111:BLANK	-	2018/02/13 1:55 PM	PFC_Water_Low.m	WS#5393111_A_11.d	P2-B1
5393111:SPIKE	-	2018/02/13 2:00 PM	PFC_Water_Low.m	WS#5393111_A_12.d	P2-B2
5393111:SPIKE:D1	-	2018/02/13 2:05 PM	PFC_Water_Low.m	WS#5393111_A_13.d	P2-B3
5393111:FZJ946-01	-	2018/02/13 2:10 PM	PFC_Water_Low.m	WS#5393111_A_14.d	P2-B4
5393111:FZT426-01:10x	-	2018/02/13 2:15 PM	PFC_Water_Low.m	WS#5393111_A_15.d	P2-B5
IB	-	2018/02/13 2:20 PM	PFC_Water_Low.m	WS#5393111_A_16.d	P2-A8
5393111:FZT427-01	-	2018/02/13 2:25 PM	PFC_Water_Low.m	WS#5393111_A_17.d	P2-B6
5393111:FZT428-01	-	2018/02/13 2:30 PM	PFC_Water_Low.m	WS#5393111_A_18.d	P2-B7
5393111:FZT430-01	-	2018/02/13 2:35 PM	PFC_Water_Low.m	WS#5393111_A_19.d	P2-B8
5393111:FZT431-01	-	2018/02/13 2:40 PM	PFC_Water_Low.m	WS#5393111_A_20.d	P2-B9
5393111:GAC647-01	-	2018/02/13 2:45 PM	PFC_Water_Low.m	WS#5393111_A_21.d	P2-C1
5393111:GAC649-01	-	2018/02/13 2:50 PM	PFC_Water_Low.m	WS#5393111_A_22.d	P2-C2
5393111:GAC651-01	-	2018/02/13 2:55 PM	PFC_Water_Low.m	WS#5393111_A_23.d	P2-C3
5393111:GAD929-01	-	2018/02/13 2:59 PM	PFC_Water_Low.m	WS#5393111_A_24.d	P2-C4
CCV	-	2018/02/13 3:04 PM	PFC_Water_Low.m	WS#5393111_A_25.d	P2-A5
5393111:GAD930-01	-	2018/02/13 3:09 PM	PFC_Water_Low.m	WS#5393111_A_26.d	P2-C5
5393111:GAD931-01	-	2018/02/13 3:14 PM	PFC_Water_Low.m	WS#5393111_A_27.d	P2-C6
5393111:GAD932-01	-	2018/02/13 3:19 PM	PFC_Water_Low.m	WS#5393111_A_28.d	P2-C7
5393111:GAD933-01:100x	Reported for all except PFOS.	2018/02/13 3:24 PM	PFC_Water_Low.m	WS#5393111_A_29.d	P2-C8
IB	-	2018/02/13 3:29 PM	PFC_Water_Low.m	WS#5393111_A_30.d	P2-A8
5393111:GAD934-01:100x	Reported for all except PFHxS, PFOS.	2018/02/13 3:34 PM	PFC_Water_Low.m	WS#5393111_A_31.d	P2-C9
IB	-	2018/02/13 3:39 PM	PFC_Water_Low.m	WS#5393111_A_32.d	P2-A8
CCV	-	2018/02/13 3:44 PM	PFC_Water_Low.m	WS#5393111_A_33.d	P2-A5

FINAL INJECTION SEQUENCE

Sample					
Name	Comment	Acq. Date-Time	Acq. Method File	Data File	Pos.
STD 1	-	2018/02/13 11:29 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_02.d	P2-A2
STD 2	-	2018/02/13 11:31 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_03.d	P2-A3
STD 3	-	2018/02/13 11:34 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_04.d	P2-A4
STD 4	-	2018/02/13 11:36 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_05.d	P2-A5
STD 5	-	2018/02/13 11:39 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_06.d	P2-A6
STD 6	-	2018/02/13 11:41 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_07.d	P2-A7
IB	-	2018/02/13 11:43 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_08.d	P2-A8
ICV	-	2018/02/13 11:46 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_09.d	P2-A9
ISC	-	2018/02/13 11:48 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_10.d	P2-A2
5393111:BLANK	-	2018/02/13 11:51 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_11.d	P2-B1
5393111:SPIKE	-	2018/02/13 11:53 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_12.d	P2-B2
5393111:SPIKE:D1	-	2018/02/13 11:56 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_13.d	P2-B3
5393111:FZJ946-01	-	2018/02/13 11:58 AM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_14.d	P2-B4
5393111:FZT426-01:10x	-	2018/02/13 12:00 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_15.d	P2-B5
IB	-	2018/02/13 12:03 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_16.d	P2-A8
5393111:FZT427-01	-	2018/02/13 12:05 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_17.d	P2-B6
5393111:FZT428-01	-	2018/02/13 12:08 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_18.d	P2-B7
5393111:FZT430-01	-	2018/02/13 12:10 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_19.d	P2-B8
5393111:FZT431-01	-	2018/02/13 12:12 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_20.d	P2-B9
5393111:GAC647-01	-	2018/02/13 12:15 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_21.d	P2-C1
5393111:GAC649-01	-	2018/02/13 12:17 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_22.d	P2-C2
5393111:GAC651-01	-	2018/02/13 12:20 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_23.d	P2-C3
5393111:GAD929-01	-	2018/02/13 12:22 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_24.d	P2-C4
CCV	-	2018/02/13 12:24 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_25.d	P2-A5
5393111:GAD930-01	-	2018/02/13 12:27 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_26.d	P2-C5
5393111:GAD931-01	-	2018/02/13 12:29 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_27.d	P2-C6
5393111:GAD932-01	-	2018/02/13 12:32 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_28.d	P2-C7
5393111:GAD933-01:100x	-	2018/02/13 12:34 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_29.d	P2-C8
IB	-	2018/02/13 12:37 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_30.d	P2-A8
5393111:GAD934-01:100x	-	2018/02/13 12:39 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_31.d	P2-C9
IB	-	2018/02/13 12:41 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_32.d	P2-A8
CCV	-	2018/02/13 12:44 PM	PFC_Water_Low_FOSAA.m	WS#5393111_FOSAA_A_33.d	P2-A5

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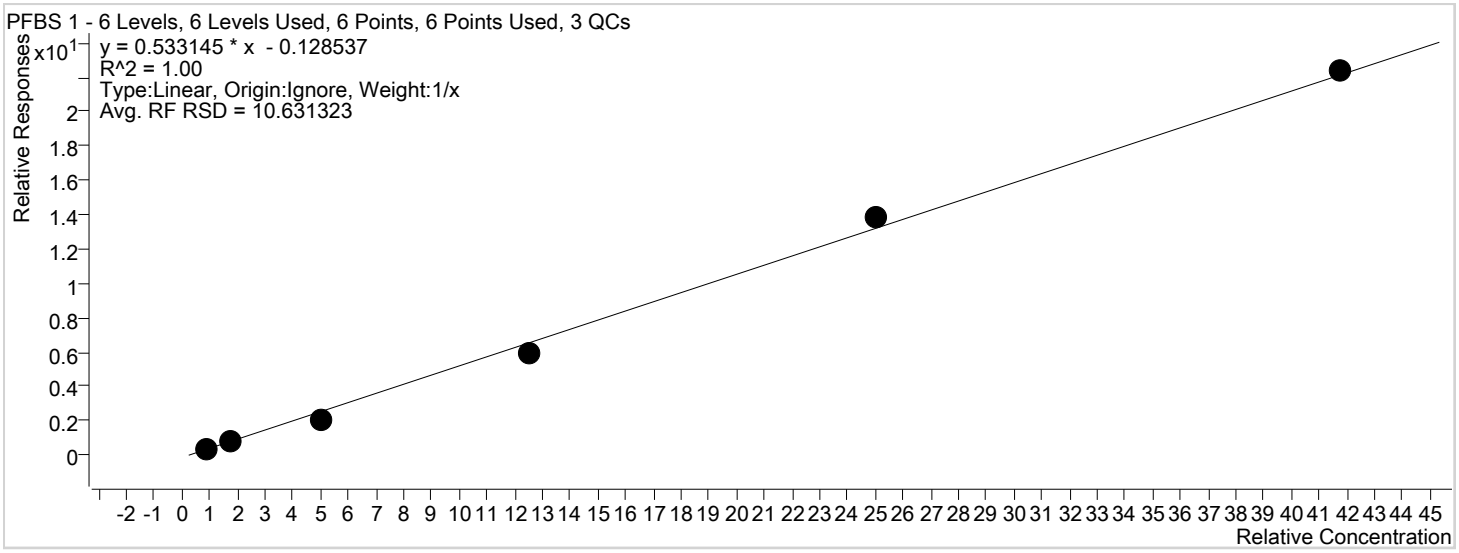
Analyte: PFBS 1
Internal Standard: MPFHxS



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 1:11:26 PM	0.83	0.95	645	0.4526	61	113.9
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.80	1309	0.4886	100	105.8
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	4.12	3744	0.4132	130	82.3
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	11.51	9973	0.4806	541	92.1
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	26.15	19908	0.5526	1003	104.6
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	42.20	32955	0.5365	864	101.2

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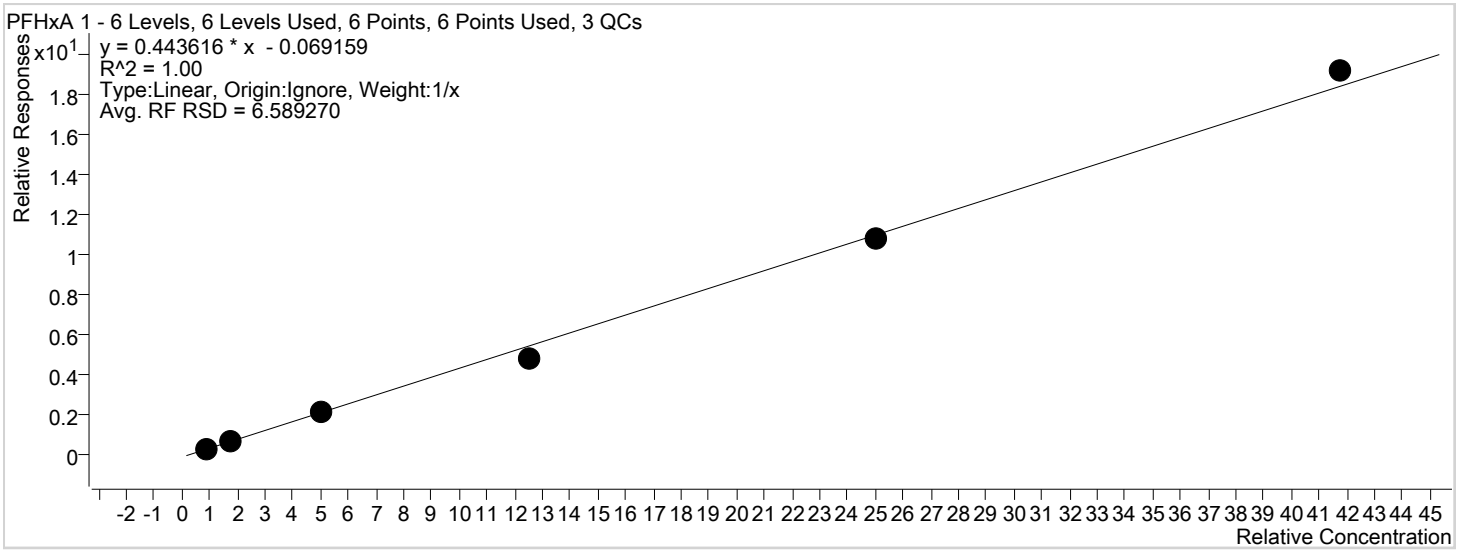
Instrument: LCMS04

Analyte: PFHxA 1
Internal Standard: MPFHxA



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 1:11:26 PM	0.83	0.93	2199	0.4145	48	112.2
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.65	4661	0.3900	94	97.1
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	4.96	13895	0.4262	417	99.2
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	11.11	33716	0.3887	718	88.9
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	24.59	70129	0.4336	1292	98.4
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	43.49	121135	0.4610	2059	104.3

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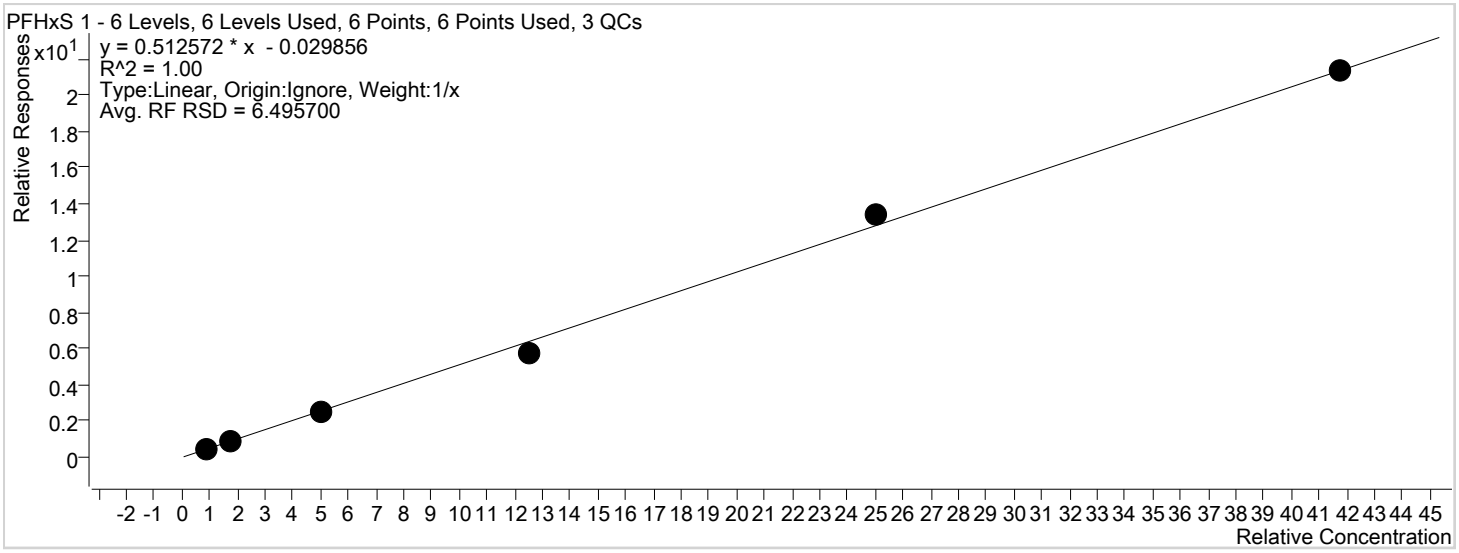
Instrument: LCMS04

Analyte: PFHxS 1
Internal Standard: MPFHxS



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 1:11:26 PM	0.83	0.93	765	0.5368	80	111.7
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.62	1264	0.4718	239	95.5
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	4.86	4457	0.4919	512	97.1
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	11.30	9564	0.4609	1226	90.4
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	26.30	19383	0.5380	1224	105.2
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	41.72	31458	0.5121	524	100.1

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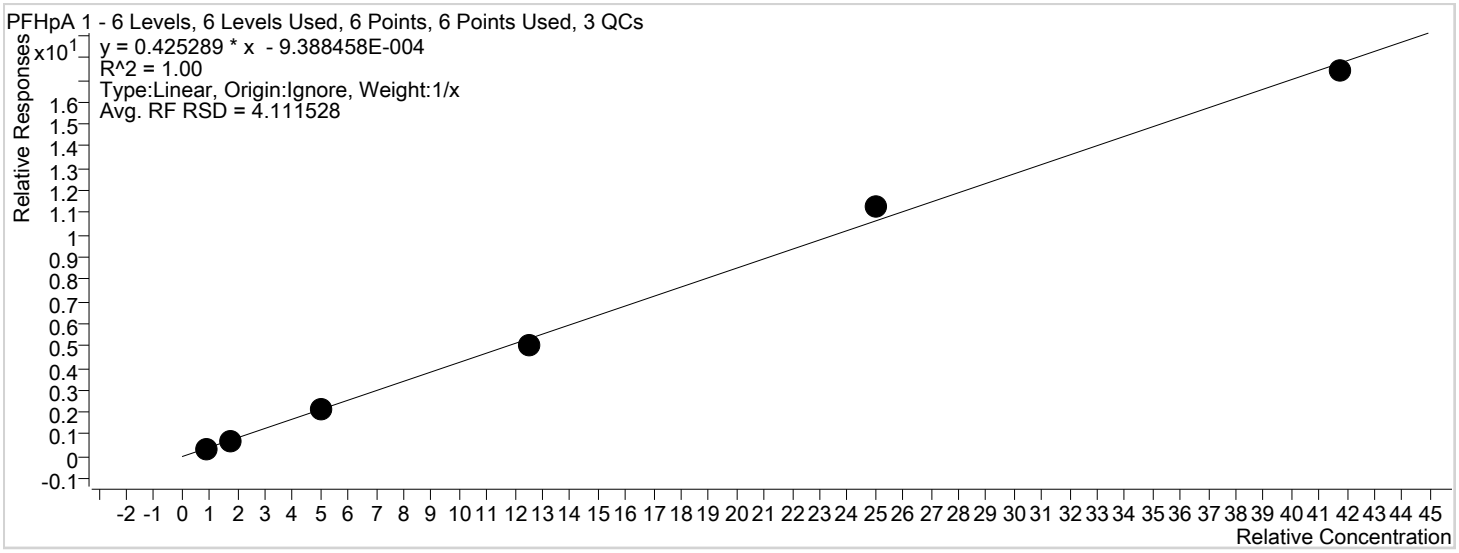
Instrument: LCMS04

Analyte: PFHpA 1
Internal Standard: MPFHpA



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 1:11:26 PM	0.83	0.83	2910	0.4251	27	100.2
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.72	6372	0.4290	57	101.0
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	5.05	18779	0.4297	142	101.1
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	11.69	44837	0.3975	186	93.5
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	26.51	88396	0.4510	227	106.1
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	40.93	140439	0.4174	246	98.1

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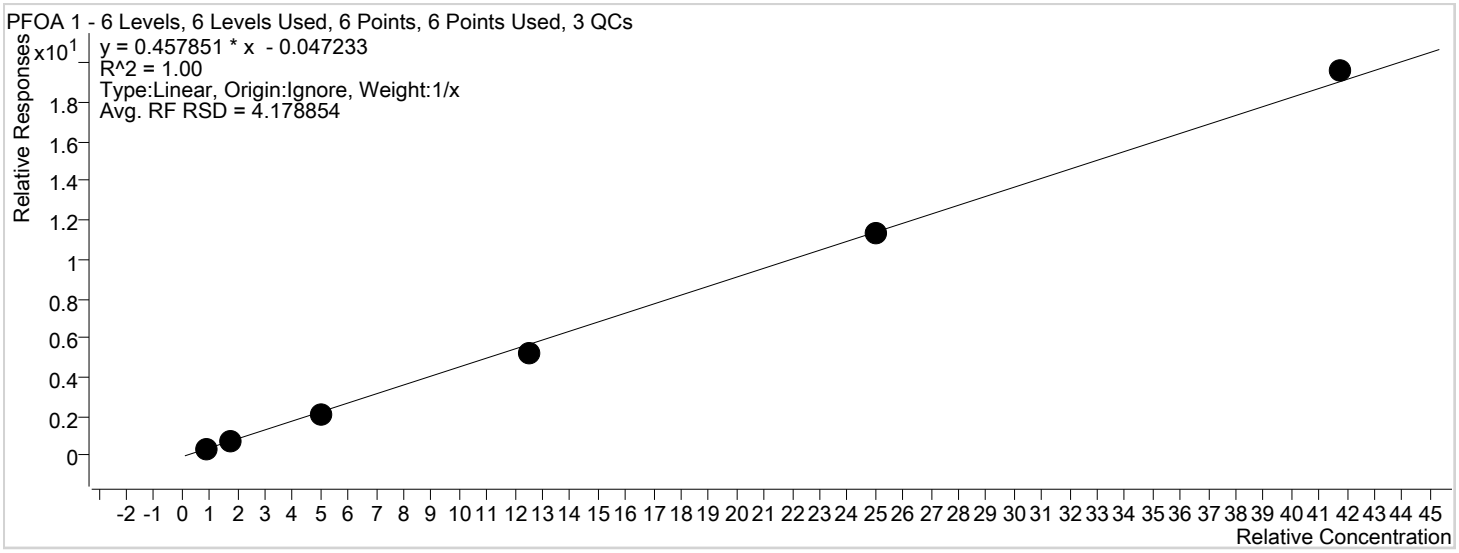
Instrument: LCMS04

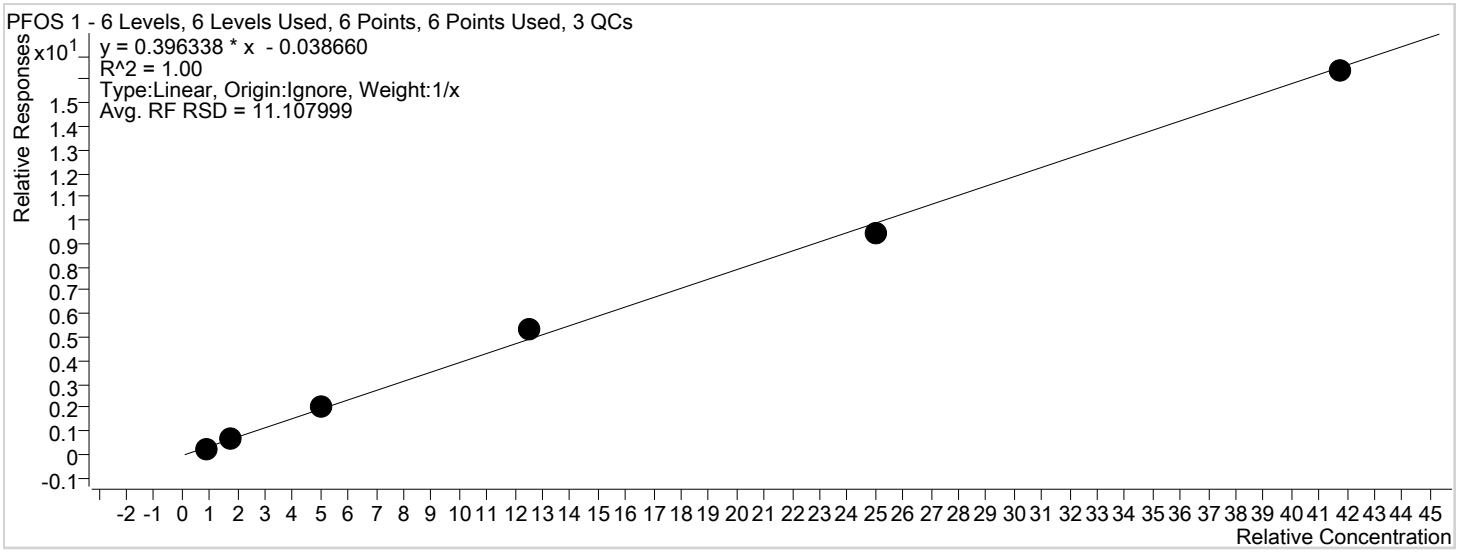
Analyte: PFOA 1
Internal Standard: MPFOA



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 1:11:26 PM	0.83	0.89	3151	0.4340	29	107.2
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.73	6828	0.4382	48	101.8
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	4.84	20184	0.4336	215	96.8
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	11.49	49745	0.4170	439	91.9
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	24.84	97428	0.4529	935	99.3
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	42.95	164903	0.4704	1266	103.0

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
Last Calib Update 2018/02/26 2:51:40 PM
Instrument: LCMS04

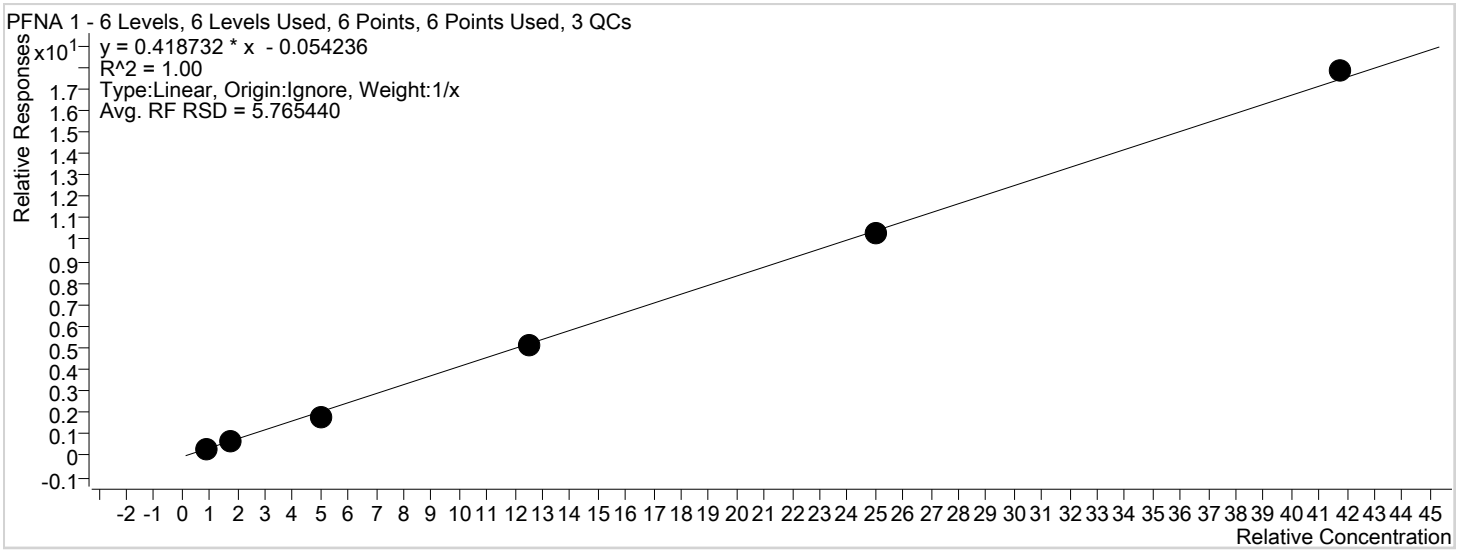
Analyte: PFOS 1
Internal Standard: MPFOS



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 1:11:26 PM	0.83	0.74	495	0.3047	69	88.6
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.74	1317	0.3818	103	102.1
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	5.25	3935	0.4082	138	104.9
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	13.64	9992	0.4295	161	109.2
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	23.99	19043	0.3788	137	96.0
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	41.38	32051	0.3923	179	99.2

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
Last Calib Update 2018/02/26 2:51:40 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	2018/02/13 1:11:26 PM	0.83	0.90	2710	0.3866	45	107.9
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.77	6137	0.4035	105	104.0
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	4.44	17071	0.3607	350	88.7
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	12.30	42617	0.4077	1235	98.4
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	24.64	85811	0.4105	1734	98.6
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	42.69	147522	0.4274	4300	102.4

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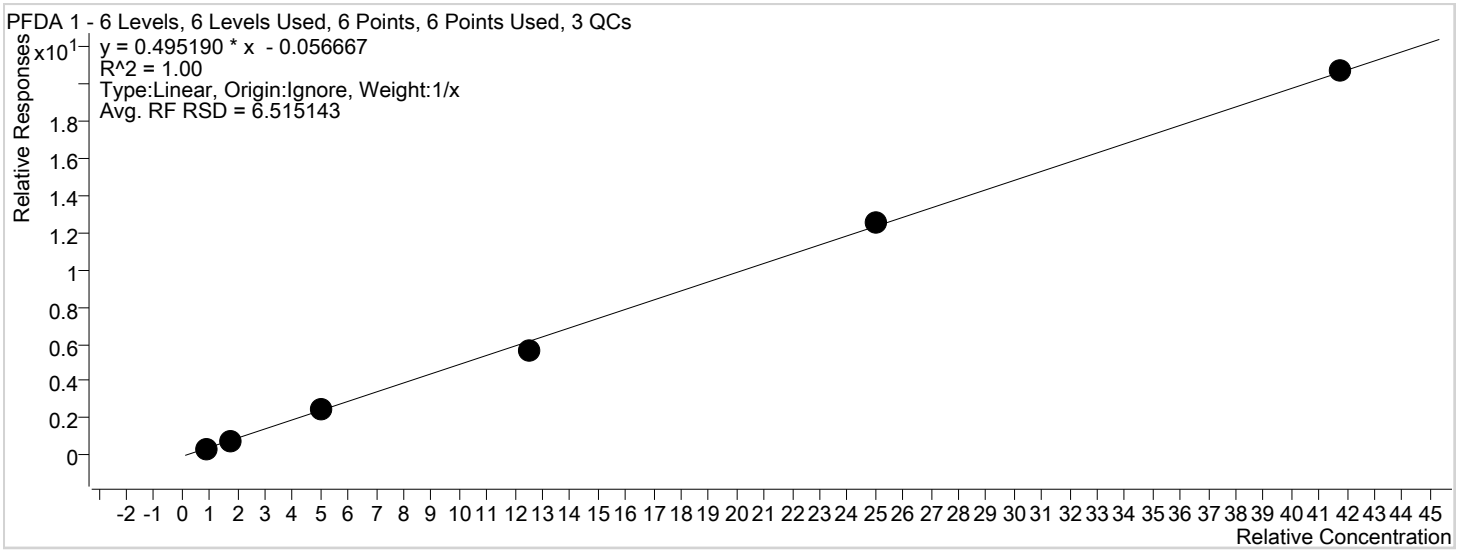
Last Calib Update 2018/02/26 2:51:40 PM
Instrument: LCMS04

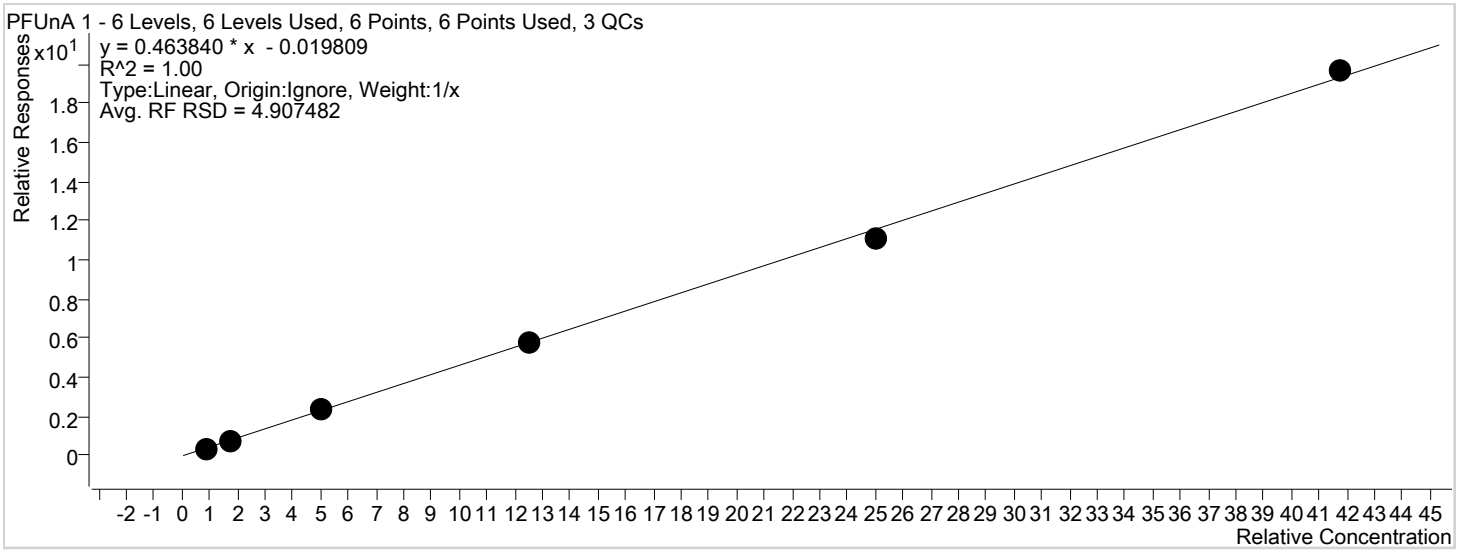
Analyte: PFDA 1
Internal Standard: MPFDA



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 1:11:26 PM	0.83	0.83	2544	0.4288	20	100.4
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.71	6095	0.4660	76	100.8
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	5.19	18530	0.5028	193	103.8
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	11.53	46555	0.4523	387	92.2
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	25.55	91770	0.5038	889	102.2
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	41.91	156573	0.4963	1026	100.5

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
Last Calib Update 2018/02/26 2:51:40 PM
Instrument: LCMS04

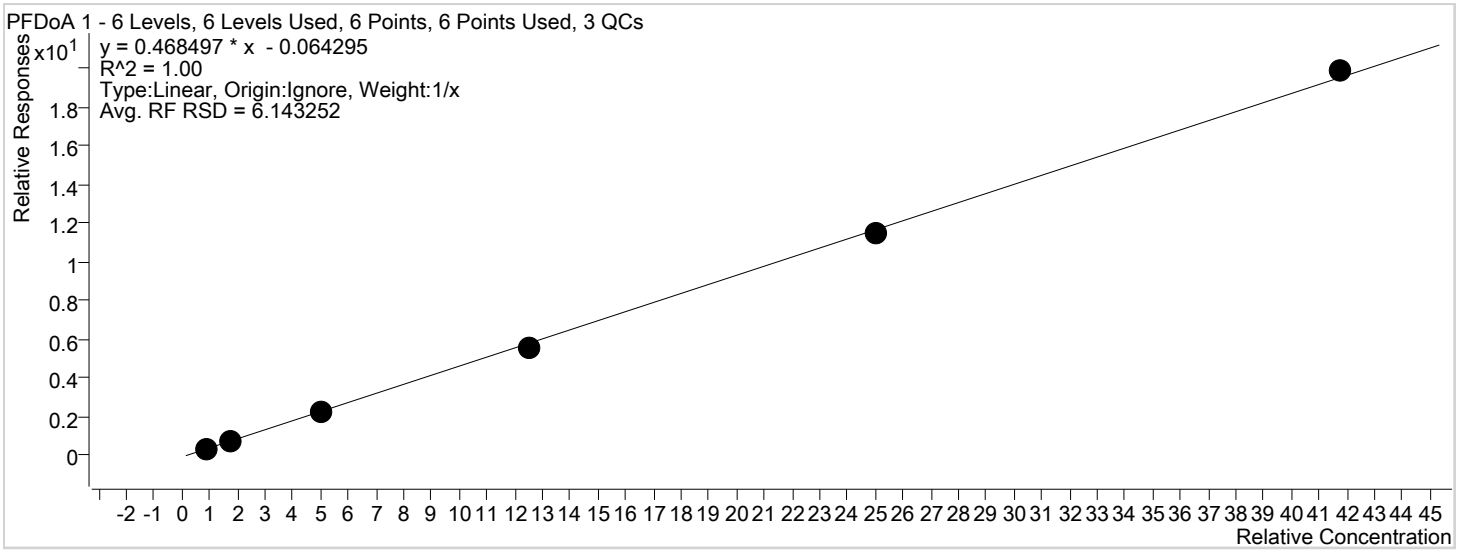
Analyte: PFUnA 1
Internal Standard: MPFUnA



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 1:11:26 PM	0.83	0.79	2954	0.4197	23	95.6
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.72	6714	0.4586	46	101.4
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	5.22	20287	0.4804	131	104.4
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	12.66	52123	0.4681	231	101.3
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	23.86	100268	0.4419	206	95.4
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	42.47	170577	0.4720	303	101.9

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
Last Calib Update 2018/02/26 2:51:40 PM
Instrument: LCMS04

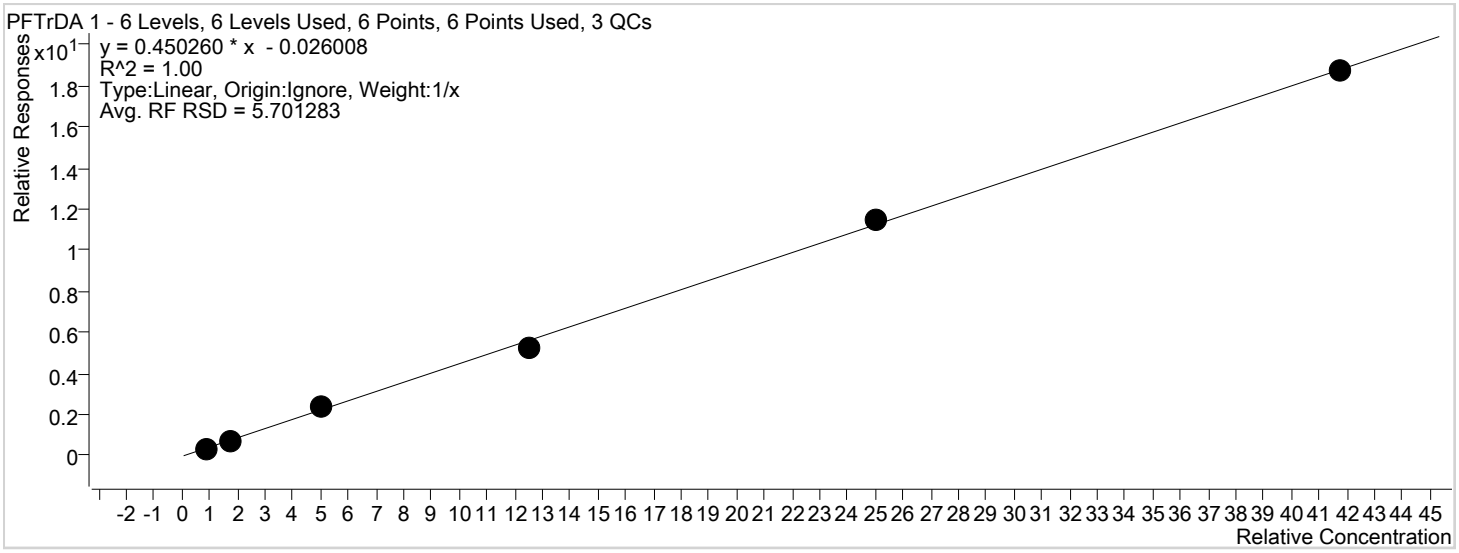
Analyte: PFDoA 1
Internal Standard: MPFDoA



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 1:11:26 PM	0.83	0.90	3878	0.4300	92	108.3
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.59	8135	0.4002	218	93.5
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	5.08	26456	0.4635	314	101.7
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	11.98	65485	0.4440	1350	95.9
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	24.69	127517	0.4601	3578	98.8
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	42.49	210940	0.4758	4994	101.9

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
Last Calib Update 2018/02/26 2:51:40 PM
Instrument: LCMS04

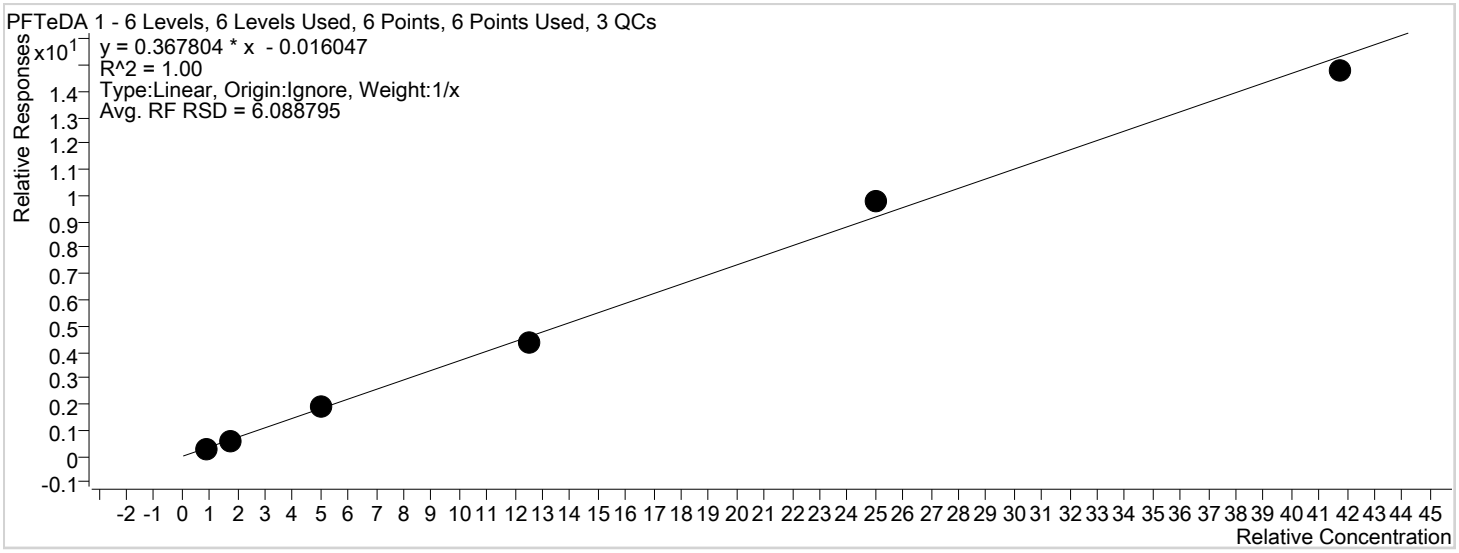
Analyte: PFTrDA 1
Internal Standard: MPFTeDA



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 1:11:26 PM	0.83	0.81	4216	0.4086	25	97.7
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.71	9538	0.4375	43	100.6
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	5.32	30071	0.4735	142	106.3
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	11.63	71180	0.4167	229	93.0
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	25.65	143058	0.4608	267	102.6
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	41.62	238756	0.4488	270	99.8

Batch Path T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics.batch.bin
Last Calib Update 2018/02/26 2:51:40 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	2018/02/13 1:11:26 PM	0.83	0.80	3463	0.3356	32	96.5
STD 2	STD 2	x	2018/02/13 1:16:22 PM	1.70	1.68	7730	0.3546	80	99.0
STD 3	STD 3	x	2018/02/13 1:21:18 PM	5.00	5.27	24409	0.3843	432	105.4
STD 4	STD 4	x	2018/02/13 1:26:14 PM	12.50	11.94	59763	0.3499	559	95.5
STD 5	STD 5	x	2018/02/13 1:31:10 PM	25.00	26.78	122099	0.3933	1172	107.1
STD 6	STD 6	x	2018/02/13 1:36:06 PM	41.70	40.26	188733	0.3548	1877	96.6

By Compound Report

Agilent Technologies

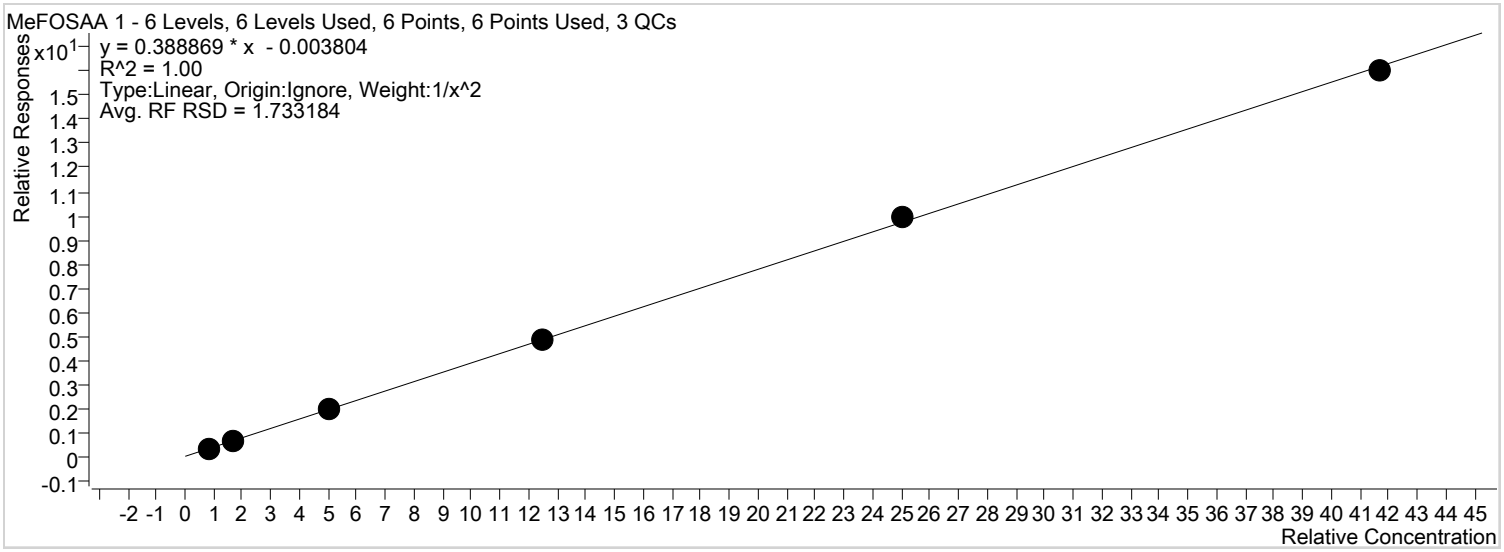
Batch Path T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_ETOxics.batch.bin

Last Calib Update 2018/02/14 10:03:30 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	2018/02/13 11:29:26 AM	0.83	0.84	624	0.3883	118	101.0
STD 2	STD 2	x	2018/02/13 11:31:51 AM	1.70	1.66	1301	0.3779	154	97.8
STD 3	STD 3	x	2018/02/13 11:34:16 AM	5.00	5.00	3918	0.3883	260	100.1
STD 4	STD 4	x	2018/02/13 11:36:41 AM	12.50	12.47	9346	0.3876	277	99.8
STD 5	STD 5	x	2018/02/13 11:39:06 AM	25.00	25.63	18424	0.3986	260	102.5
STD 6	STD 6	x	2018/02/13 11:41:31 AM	41.70	41.23	29587	0.3844	279	98.9

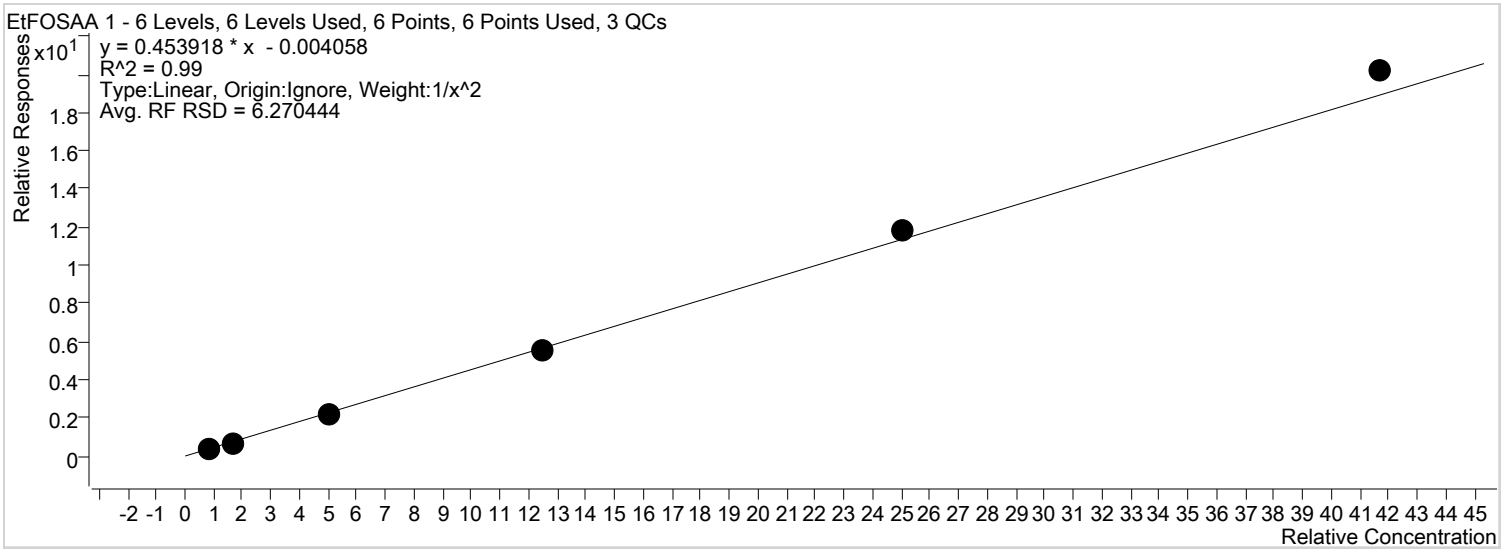
Batch Path T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_ETOxics.batch.bin

Last Calib Update 2018/02/14 10:03:30 AM

Instrument: LCMS04

Analyte: EtFOSAA 1

Internal Standard: D5-EtFOSAA IS



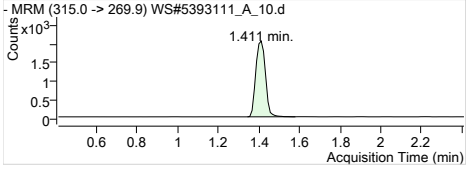
Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2018/02/13 11:29:26 AM	0.83	0.87	627	0.4713	63	104.9
STD 2	STD 2	x	2018/02/13 11:31:51 AM	1.70	1.56	1241	0.4129	165	91.5
STD 3	STD 3	x	2018/02/13 11:34:16 AM	5.00	4.74	3779	0.4294	394	94.8
STD 4	STD 4	x	2018/02/13 11:36:41 AM	12.50	12.20	9377	0.4428	1055	97.6
STD 5	STD 5	x	2018/02/13 11:39:06 AM	25.00	26.12	18917	0.4741	1135	104.5
STD 6	STD 6	x	2018/02/13 11:41:31 AM	41.70	44.50	31142	0.4843	3193	106.7

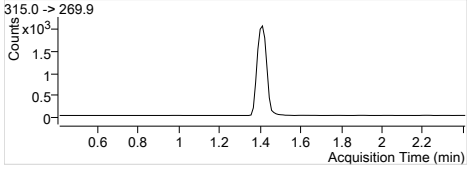
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**ISC**	**Instrument**	LCMS04
Data File	WS#5393111_A_10.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A2
Acq. Date	2018/02/13 1:50:54 PM	**Injection Volume**	Per Method
Sample Annotation	-		

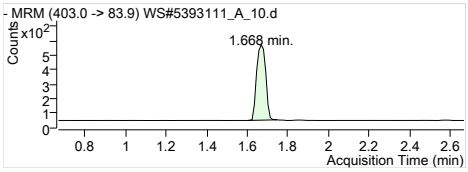
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	6692	1.41	1 µg/L		
MPFHxS	1626	1.67	1 µg/L		
MPFHpA	8641	1.68	1 µg/L		
MPFOA	9130	1.86	1 µg/L		
MPFOS	2007	1.97	1 µg/L		
MPFNA	8843	2.00	1 µg/L		
MPFDA	7436	2.12	1 µg/L		
MPFUnA	8953	2.22	1 µg/L		
MPFDoA	11069	2.31	1 µg/L		
MPFTeDA	12815	2.46	1 µg/L		
13C6-PFHxA IS	24665	1.41	1 µg/L		
13C9-PFDA IS	32190	2.12	1 µg/L		

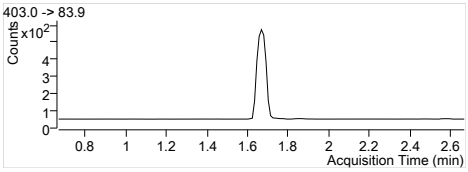
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	656	1.05	0.83	1.00 µg/L	120.22
PFHxA 1	2191	1.41	0.83	0.89 µg/L	107.70
PFHxS 1	625	1.67	0.83	0.81 µg/L	97.37
PFHpA 1	2726	1.68	0.83	0.74 µg/L	89.64
PFOA 1	3413	1.86	0.83	0.92 µg/L	110.80
PFOS 1	608	1.96	0.83	0.86 µg/L	103.84
PFNA 1	2804	2.00	0.83	0.89 µg/L	106.84
PFDA 1	3018	2.12	0.83	0.93 µg/L	112.54
PFUnA 1	3329	2.22	0.83	0.84 µg/L	101.73
PFDoA 1	4220	2.31	0.83	0.95 µg/L	114.58
PFTrDA 1	4934	2.39	0.83	0.91 µg/L	109.98
PFTeDA 1	4153	2.46	0.83	0.92 µg/L	111.41
13C2-PFHxA	6692	1.41	100.00	95.88 µg/L	95.88
18O2-PFHxS	1626	1.67	100.00	95.45 µg/L	95.45
13C4-PFHpA	8641	1.68	100.00	96.93 µg/L	96.93
13C4-PFOA	9130	1.86	100.00	96.48 µg/L	96.48
13C4-PFOS	2007	1.97	100.00	96.98 µg/L	96.98
13C5-PFNA	8842	2.00	100.00	96.88 µg/L	96.88
13C2-PFDA	7326	2.12	100.00	91.93 µg/L	91.93
13C2-PFUnA	8953	2.22	100.00	96.51 µg/L	96.51
13C2-PFDoA	11069	2.31	100.00	91.98 µg/L	91.98
13C2-PFTeDA	13010	2.46	100.00	94.18 µg/L	94.18
13C6-PFHxA	24665	1.41	100.00	105.62 µg/L	105.62
13C9-PFDA	32190	2.12	100.00	106.43 µg/L	106.43



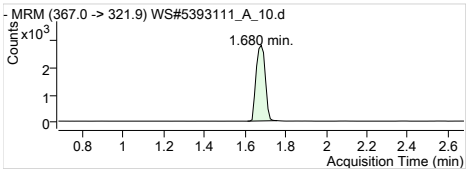


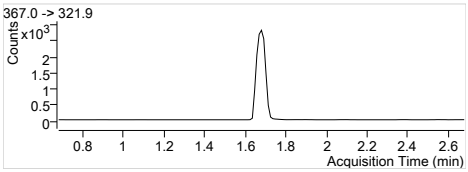
MPFHxA	Internal Standard
RT (Exp. RT):	1.411 (1.411)
Concentration:	1 µg/L
Sample type:	CC



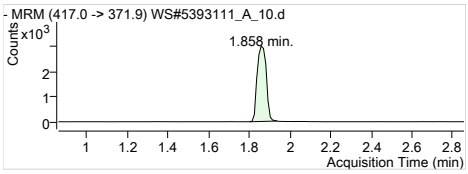


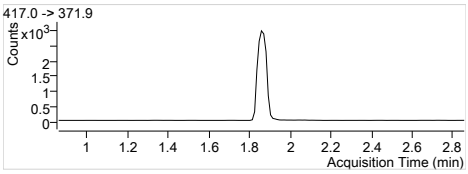
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: CC



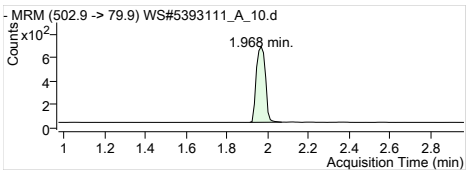


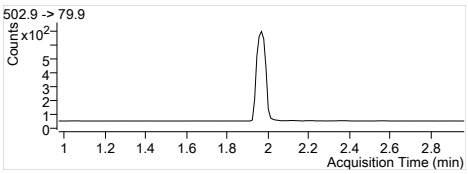
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: CC



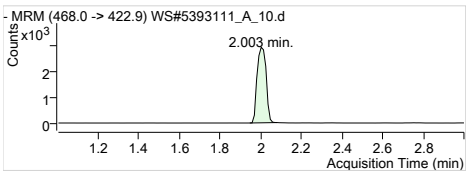


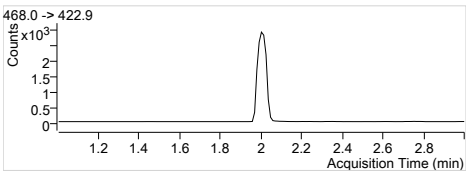
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: CC



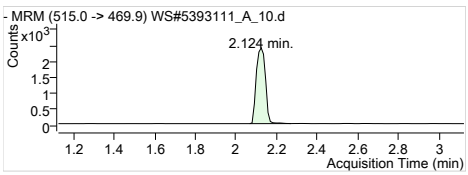


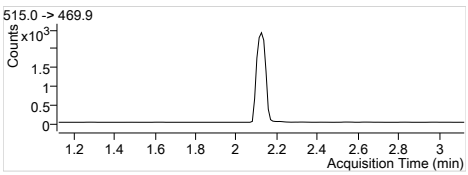
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: CC



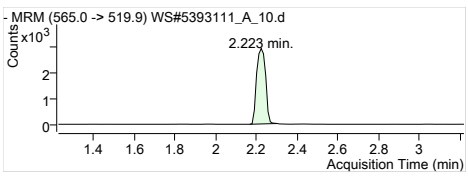


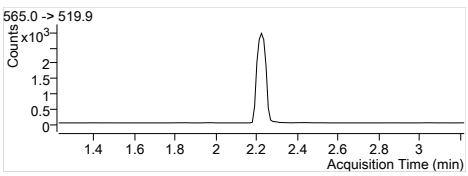
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: CC



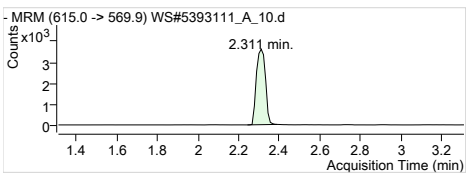


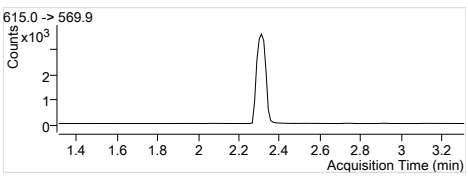
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: CC



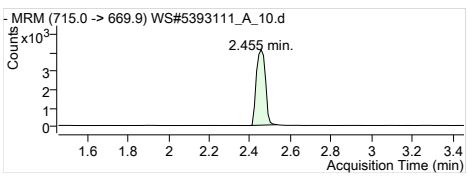


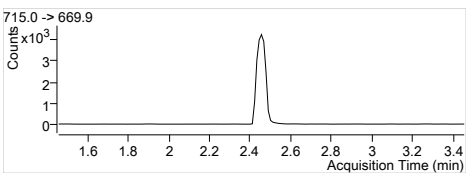
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: CC



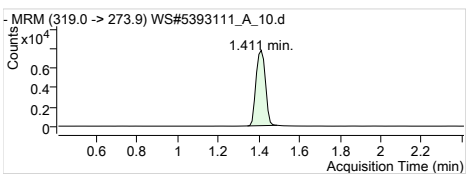


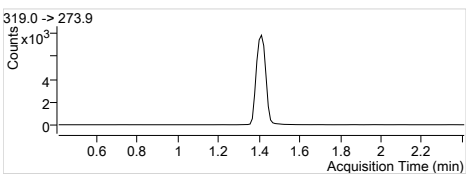
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: CC



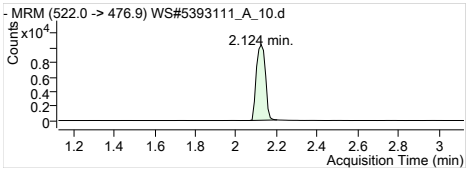


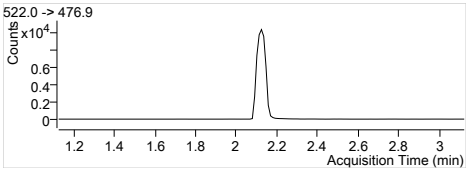
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: CC



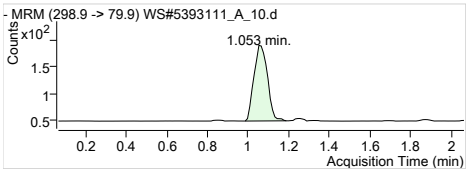


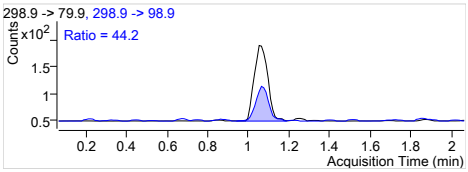
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: CC



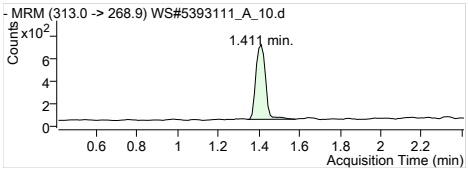


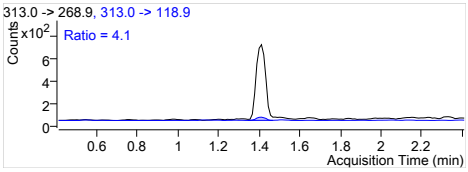
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: CC



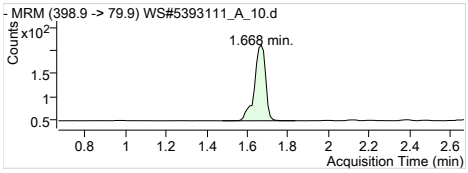


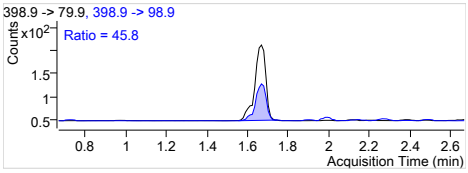
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.053 (1.064)
Calc. conc. 1.00 µg/L
Area ratio: 0.40344
Sample type: CC



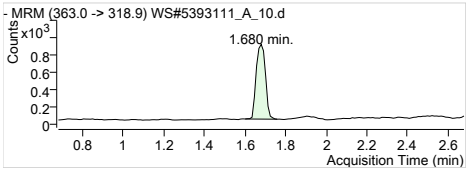


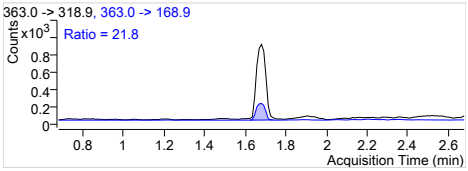
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 0.89 µg/L
Area ratio: 0.32741
Sample type: CC



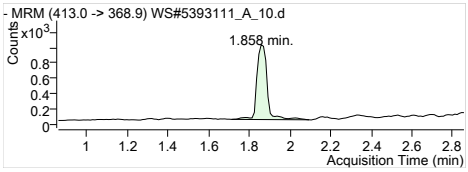


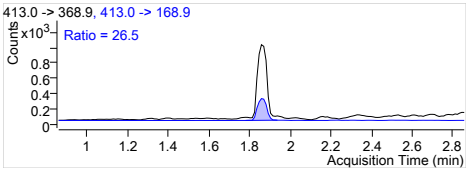
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 0.81 µg/L
Area ratio: 0.38438
Sample type: CC



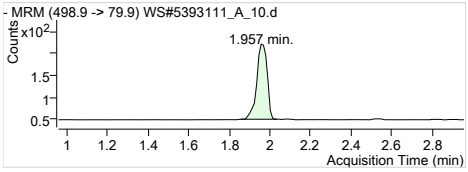


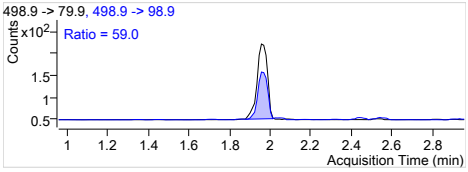
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 0.74 µg/L
Area ratio: 0.31547
Sample type: CC



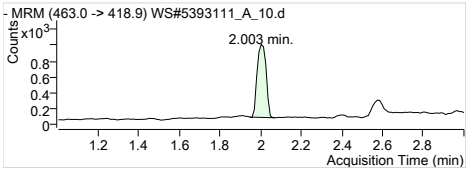


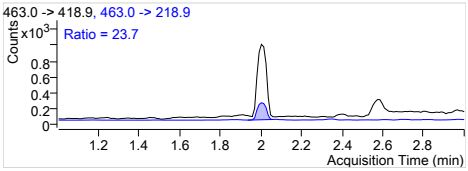
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 0.92 µg/L
Area ratio: 0.37382
Sample type: CC



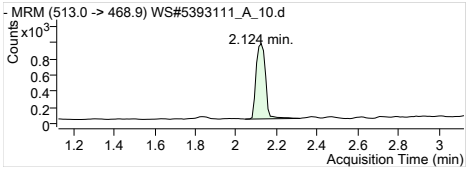


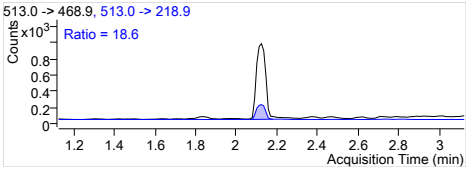
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.957 (1.957)
Calc. conc. 0.86 µg/L
Area ratio: 0.30294
Sample type: CC



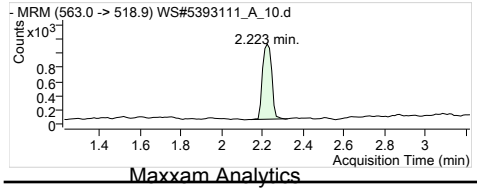


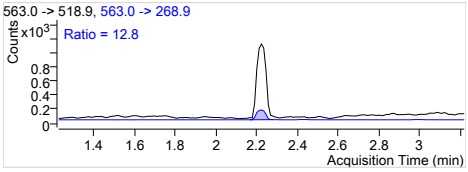
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 0.89 µg/L
Area ratio: 0.31709
Sample type: CC



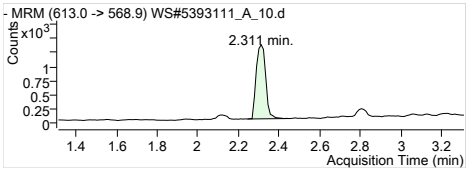


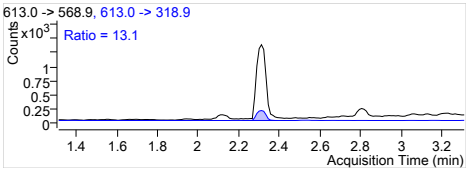
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 0.93 µg/L
Area ratio: 0.40586
Sample type: CC



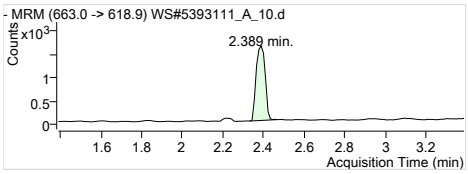


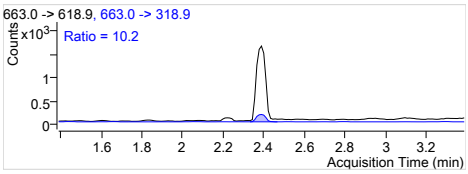
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 0.84 µg/L
Area ratio: 0.37183
Sample type: CC



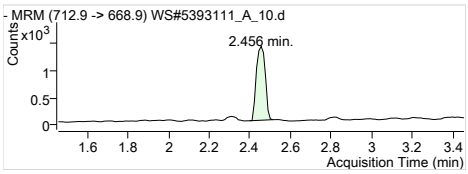


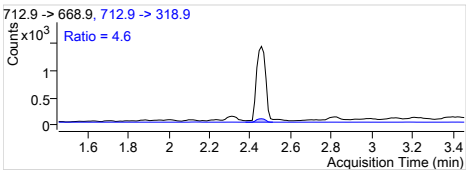
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 0.95 µg/L
Area ratio: 0.38124
Sample type: CC



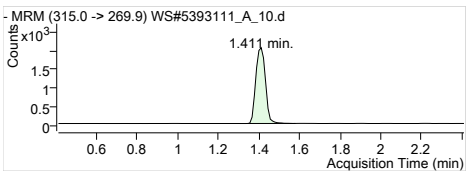


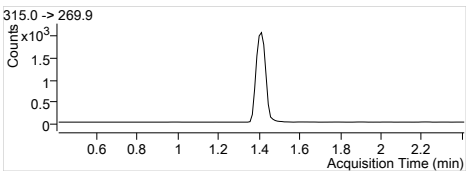
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.389 (2.389)
Calc. conc. 0.91 µg/L
Area ratio: 0.38502
Sample type: CC



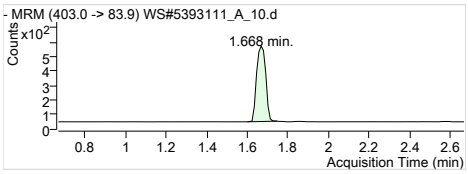


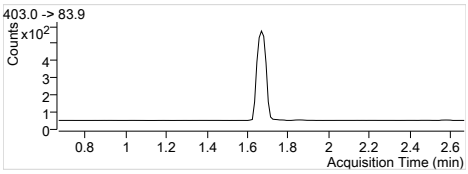
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.456 (2.456)
Calc. conc. 0.92 µg/L
Area ratio: 0.32407
Sample type: CC



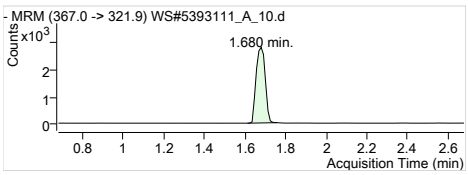


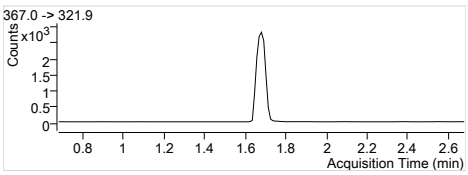
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 95.88 µg/L
Area ratio: 0.27132
Sample type: CC



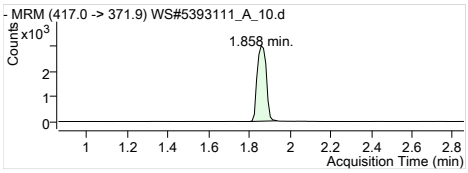


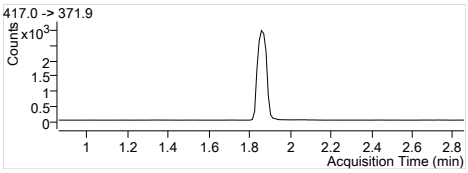
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 95.45 µg/L
Area ratio: 0.06592
Sample type: CC



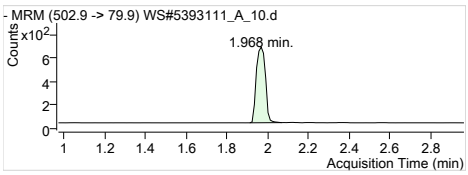


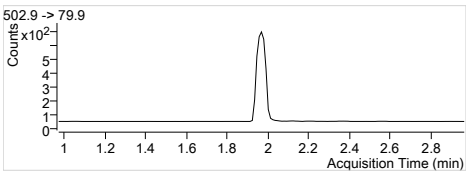
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 96.93 µg/L
Area ratio: 0.35033
Sample type: CC



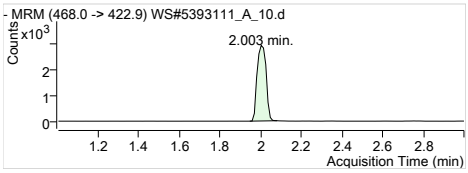


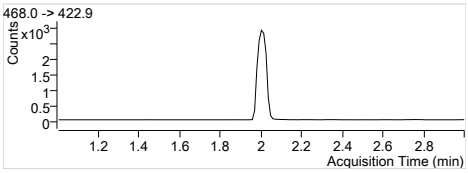
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 96.48 µg/L
Area ratio: 0.37016
Sample type: CC



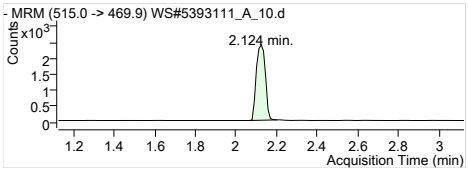


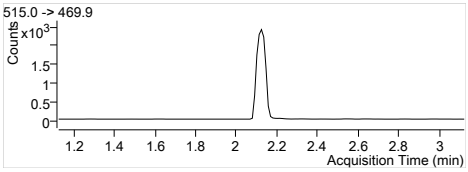
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 96.98 µg/L
Area ratio: 0.08137
Sample type: CC



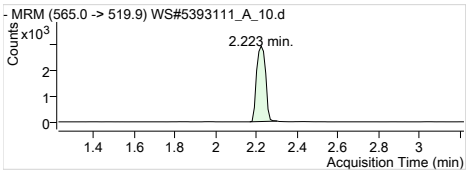


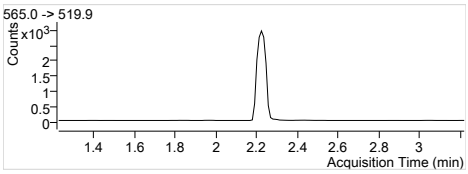
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 96.88 µg/L
Area ratio: 0.35848
Sample type: CC



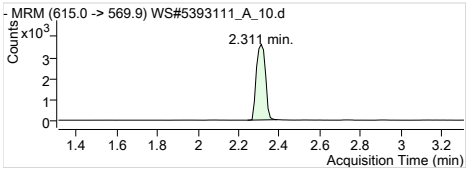


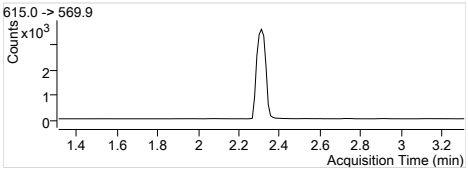
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 91.93 µg/L
Area ratio: 0.22759
Sample type: CC



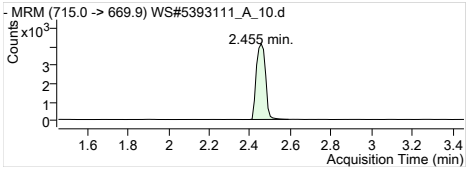


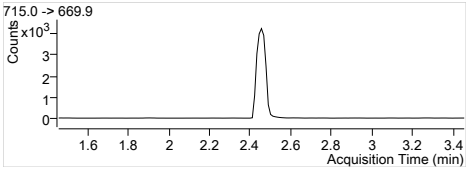
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 96.51 µg/L
Area ratio: 0.27813
Sample type: CC



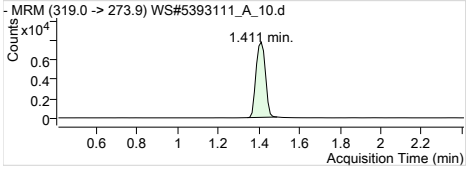


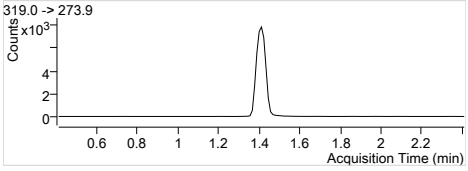
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 91.98 µg/L
Area ratio: 0.34386
Sample type: CC



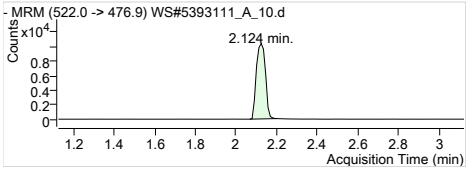


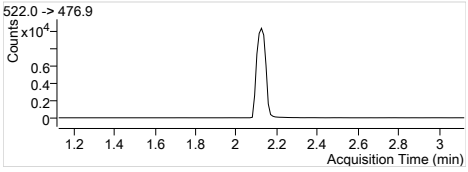
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 94.18 µg/L
Area ratio: 0.40416
Sample type: CC





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 105.62 µg/L
Area ratio: 0
Sample type: CC





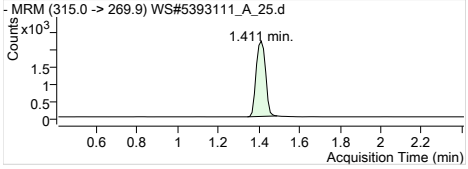
13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 106.43 µg/L
Area ratio: 0
Sample type: CC

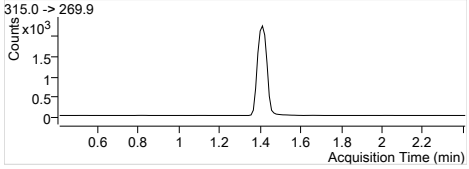
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**CCV**	**Instrument**	LCMS04
Data File	WS#5393111_A_25.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A5
Acq. Date	2018/02/13 3:04:54 PM	**Injection Volume**	Per Method
Sample Annotation	-		

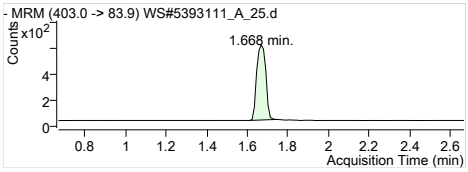
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	7033	1.41	1 µg/L		
MPFHxS	1804	1.67	1 µg/L		
MPFHpA	9086	1.68	1 µg/L		
MPFOA	9632	1.86	1 µg/L		
MPFOS	1980	1.97	1 µg/L		
MPFNA	9329	2.00	1 µg/L		
MPFDA	7621	2.12	1 µg/L		
MPFUnA	9204	2.22	1 µg/L		
MPFDoA	12186	2.31	1 µg/L		
MPFTeDA	14657	2.46	1 µg/L		
13C6-PFHxA IS	24562	1.41	1 µg/L		
13C9-PFDA IS	32675	2.12	1 µg/L		

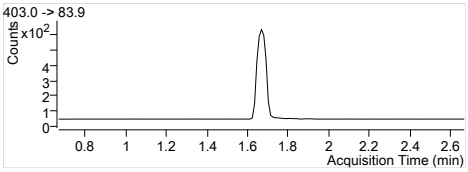
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	9512	1.06	12.50	10.13 µg/L	81.05
PFHxA 1	35492	1.41	12.50	11.53 µg/L	92.25
PFHxS 1	9572	1.67	12.50	10.41 µg/L	83.28
PFHpA 1	44402	1.68	12.50	11.49 µg/L	91.94
PFOA 1	52979	1.86	12.50	12.12 µg/L	96.93
PFOS 1	9608	1.96	12.50	12.34 µg/L	98.73
PFNA 1	43452	2.00	12.50	11.25 µg/L	90.02
PFDA 1	46603	2.12	12.50	12.46 µg/L	99.71
PFUnA 1	51225	2.22	12.50	12.04 µg/L	96.33
PFDoA 1	65017	2.31	12.50	11.53 µg/L	92.20
PFTrDA 1	70949	2.39	12.50	10.81 µg/L	86.47
PFTeDA 1	60950	2.46	12.50	11.35 µg/L	90.80
13C2-PFHxA	7033	1.41	100.00	101.19 µg/L	101.19
18O2-PFHxS	1804	1.67	100.00	106.34 µg/L	106.34
13C4-PFHpA	9086	1.68	100.00	102.35 µg/L	102.35
13C4-PFOA	9632	1.86	100.00	102.21 µg/L	102.21
13C4-PFOS	1980	1.97	100.00	96.08 µg/L	96.08
13C5-PFNA	9330	2.00	100.00	102.65 µg/L	102.65
13C2-PFDA	7484	2.12	100.00	92.51 µg/L	92.51
13C2-PFUnA	9204	2.22	100.00	97.74 µg/L	97.74
13C2-PFDoA	12186	2.31	100.00	99.76 µg/L	99.76
13C2-PFTeDA	14741	2.46	100.00	105.13 µg/L	105.13
13C6-PFHxA	24562	1.41	100.00	105.18 µg/L	105.18
13C9-PFDA	32675	2.12	100.00	108.04 µg/L	108.04



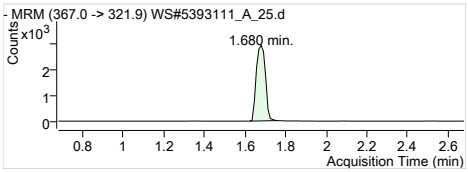


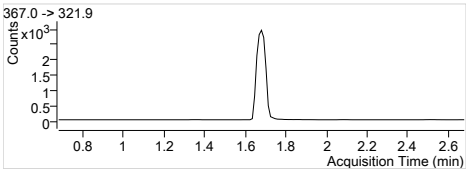
MPFHxA	Internal Standard
RT (Exp. RT):	1.411 (1.411)
Concentration:	1 µg/L
Sample type:	CC



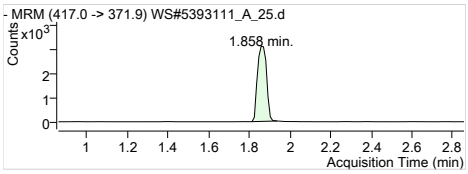


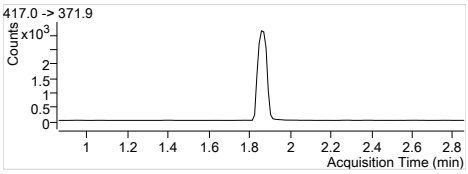
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: CC



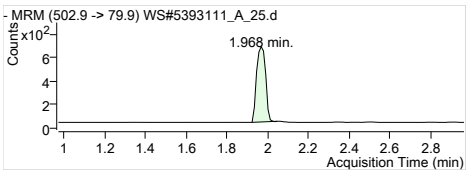


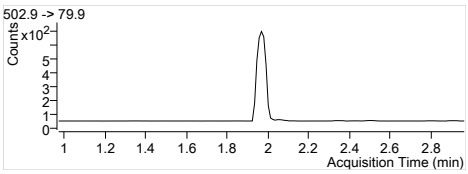
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: CC



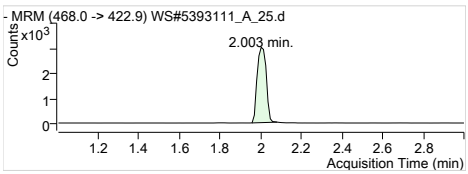


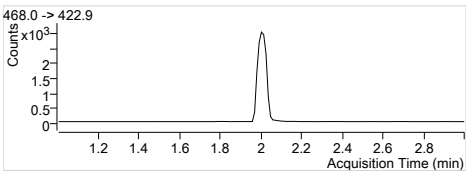
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: CC



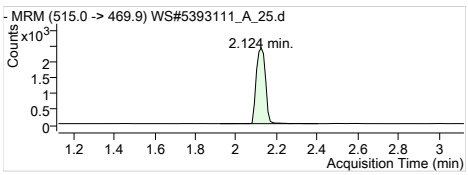


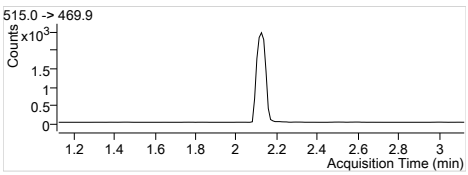
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: CC



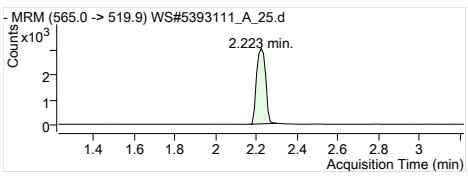


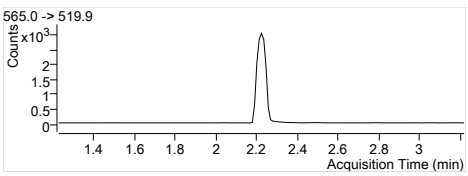
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: CC



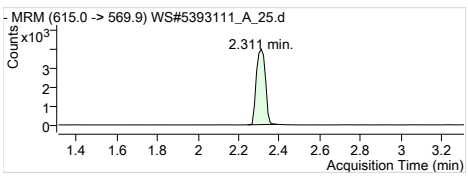


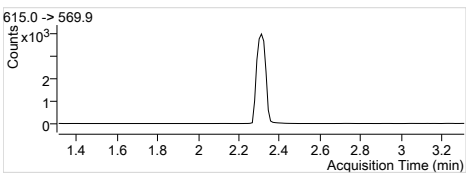
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: CC



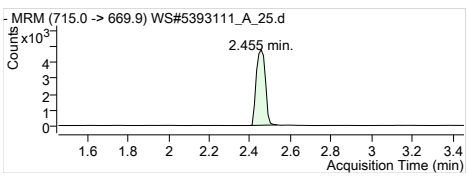


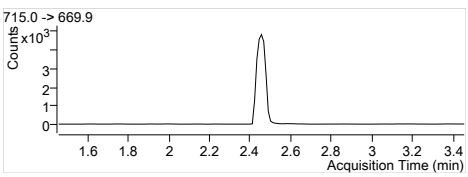
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: CC



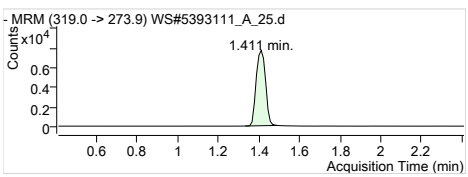


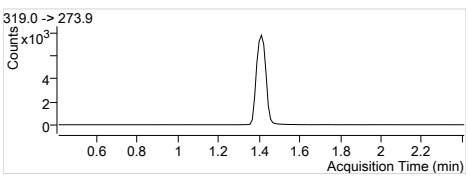
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: CC



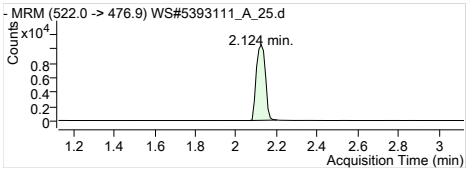


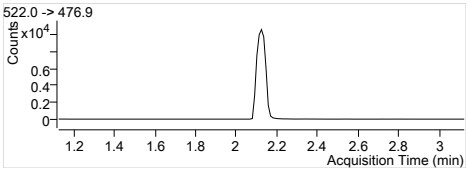
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: CC



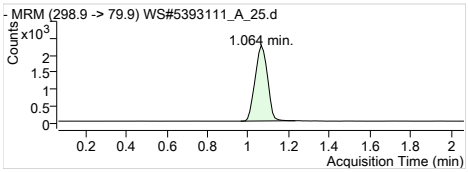


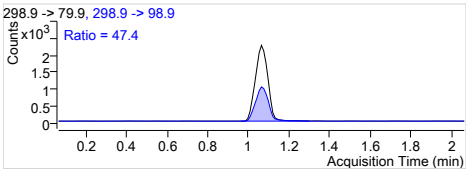
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: CC



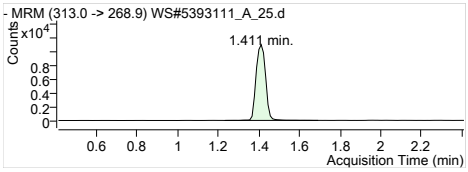


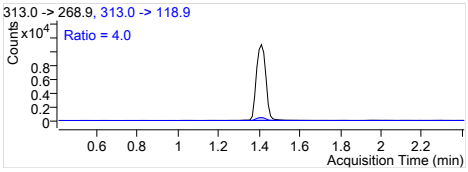
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: CC



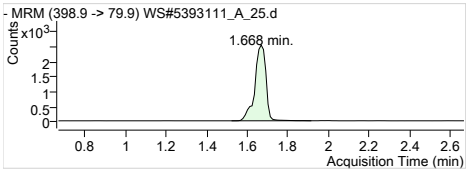


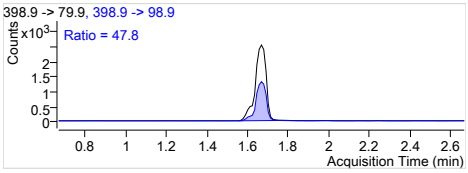
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.064 (1.064)
Calc. conc. 10.13 µg/L
Area ratio: 5.27273
Sample type: CC



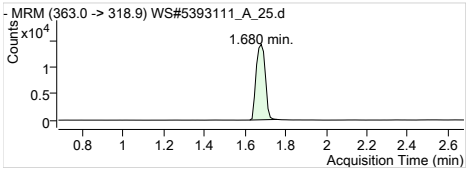


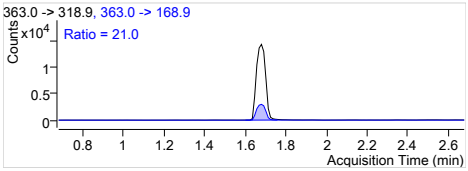
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 11.53 µg/L
Area ratio: 5.04650
Sample type: CC



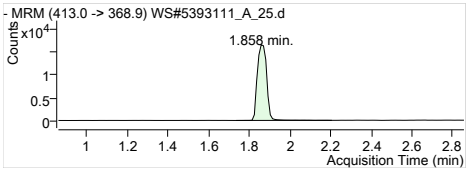


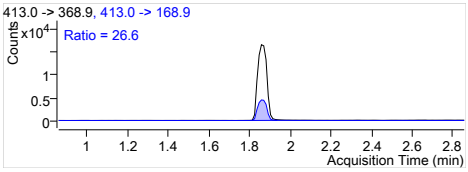
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 10.41 µg/L
Area ratio: 5.30599
Sample type: CC



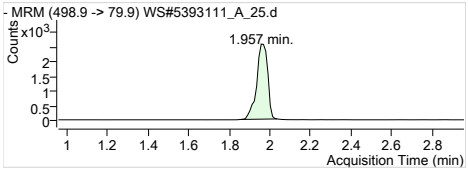


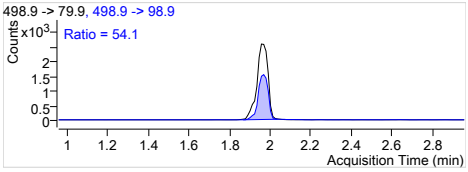
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 11.49 µg/L
Area ratio: 4.88686
Sample type: CC



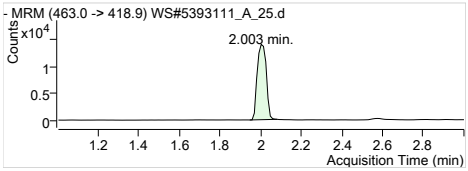


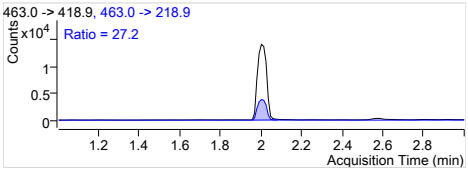
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 12.12 µg/L
Area ratio: 5.50031
Sample type: CC



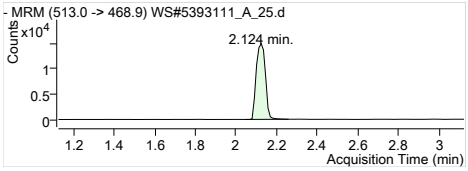


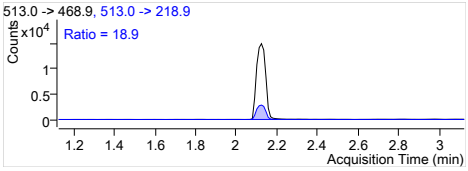
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.957 (1.957)
Calc. conc. 12.34 µg/L
Area ratio: 4.85253
Sample type: CC



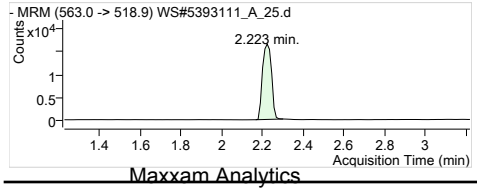


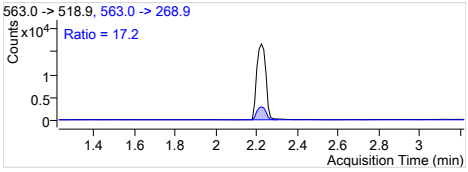
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 11.25 µg/L
Area ratio: 4.65773
Sample type: CC



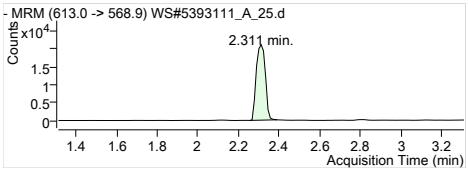


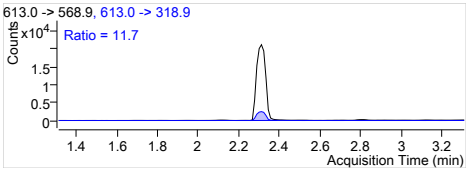
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 12.46 µg/L
Area ratio: 6.11508
Sample type: CC



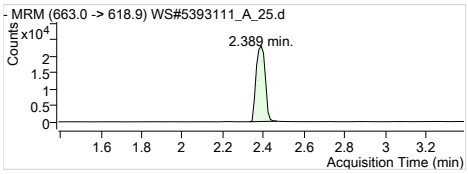


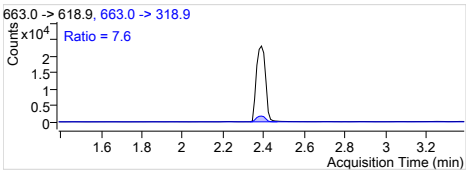
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 12.04 µg/L
Area ratio: 5.56551
Sample type: CC



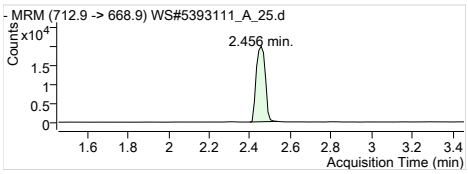


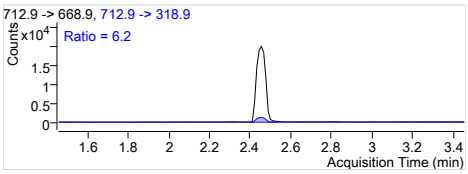
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 11.53 µg/L
Area ratio: 5.33538
Sample type: CC



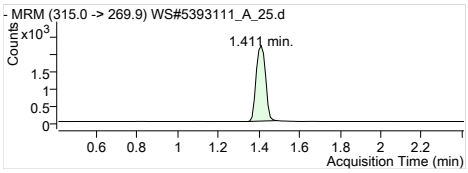


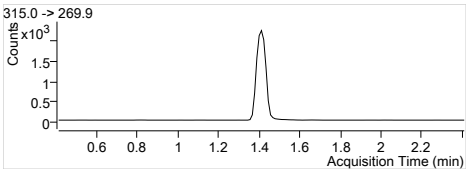
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.389 (2.389)
Calc. conc. 10.81 µg/L
Area ratio: 4.84062
Sample type: CC



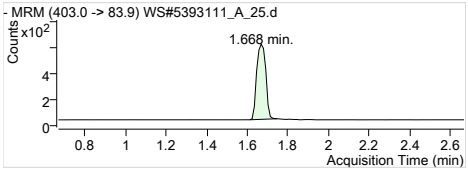


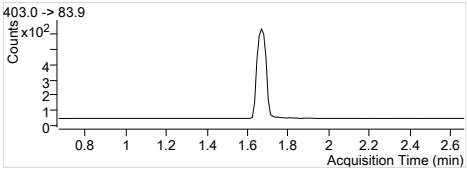
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.456 (2.456)
Calc. conc. 11.35 µg/L
Area ratio: 4.15842
Sample type: CC



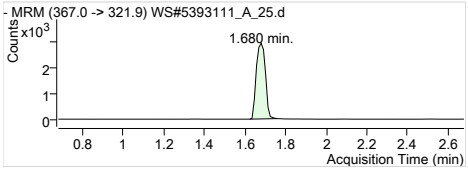


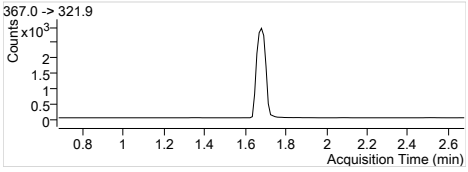
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 101.19 µg/L
Area ratio: 0.28634
Sample type: CC



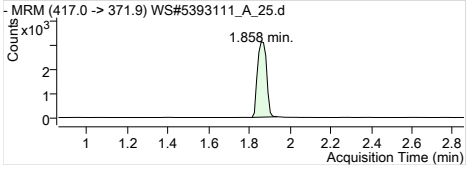


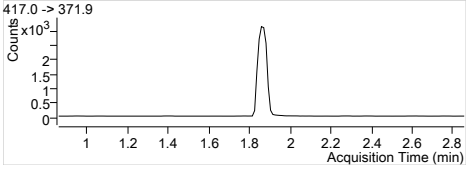
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 106.34 µg/L
Area ratio: 0.07345
Sample type: CC



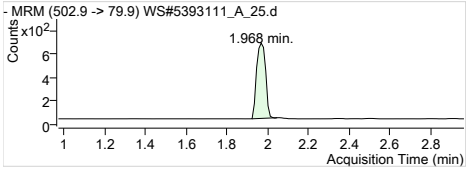


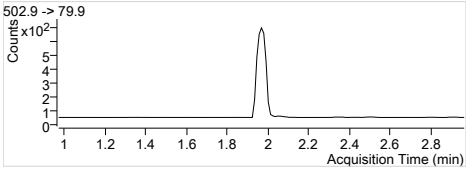
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 102.35 µg/L
Area ratio: 0.36992
Sample type: CC



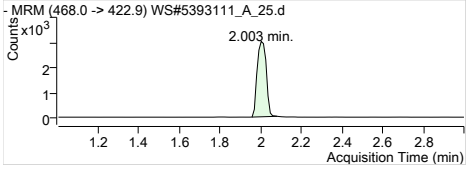


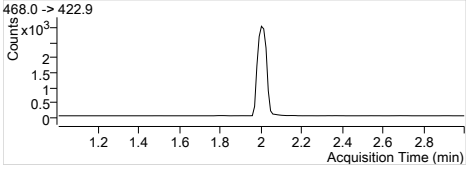
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 102.21 µg/L
Area ratio: 0.39215
Sample type: CC



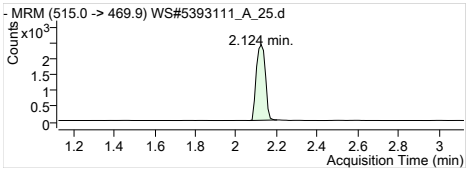


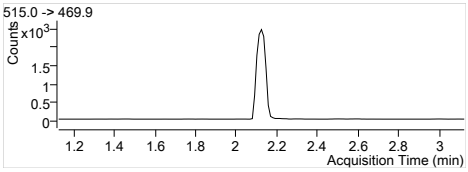
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 96.08 µg/L
Area ratio: 0.08061
Sample type: CC



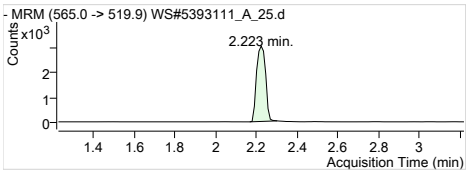


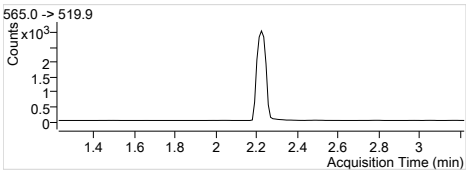
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 102.65 µg/L
Area ratio: 0.37986
Sample type: CC



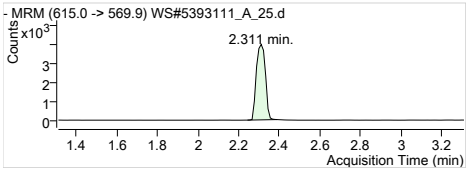


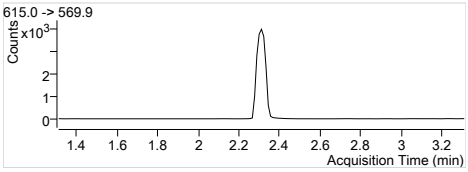
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 92.51 µg/L
Area ratio: 0.22904
Sample type: CC



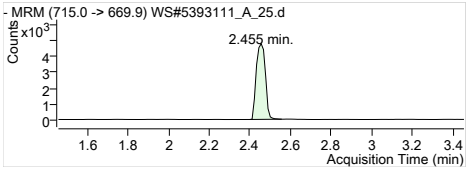


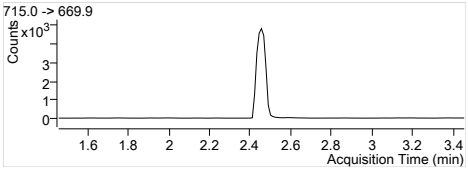
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 97.74 µg/L
Area ratio: 0.28168
Sample type: CC



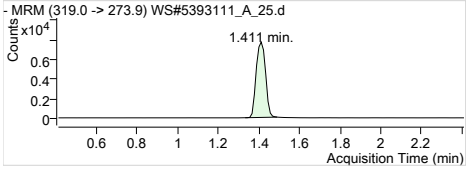


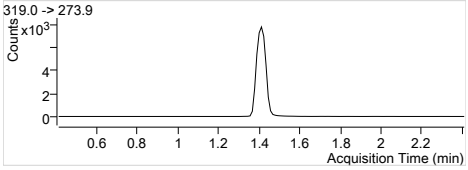
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 99.76 µg/L
Area ratio: 0.37295
Sample type: CC



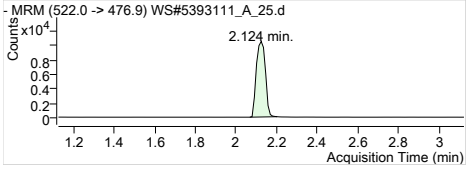


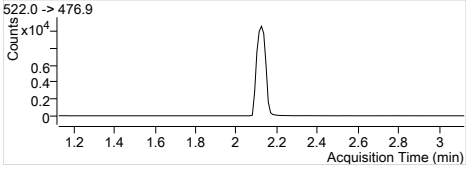
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 105.13 µg/L
Area ratio: 0.45114
Sample type: CC





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 105.18 µg/L
Area ratio: 0
Sample type: CC





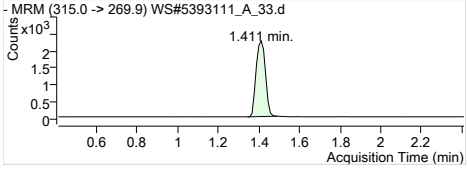
13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 108.04 µg/L
Area ratio: 0
Sample type: CC

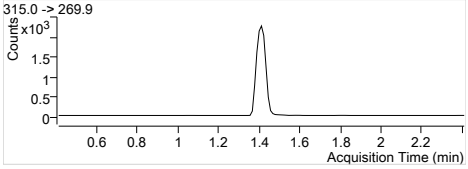
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_A\QuantResults\PFC_Water_Low_180213_WS#5393111_EToxics

Sample Name	**CCV**	**Instrument**	LCMS04
Data File	WS#5393111_A_33.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low.m	**Position**	P2-A5
Acq. Date	2018/02/13 3:44:22 PM	**Injection Volume**	Per Method
Sample Annotation	-		

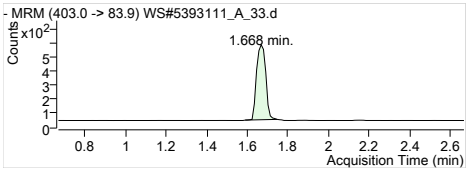
ISTD Compounds	Response	RT	Target conc.		
MPFHxA	7113	1.41	1 µg/L		
MPFHxS	1675	1.67	1 µg/L		
MPFHpA	8459	1.68	1 µg/L		
MPFOA	8866	1.86	1 µg/L		
MPFOS	2051	1.97	1 µg/L		
MPFNA	9229	2.00	1 µg/L		
MPFDA	7476	2.12	1 µg/L		
MPFUnA	8441	2.22	1 µg/L		
MPFDoA	12036	2.31	1 µg/L		
MPFTeDA	13577	2.46	1 µg/L		
13C6-PFHxA IS	24980	1.41	1 µg/L		
13C9-PFDA IS	31567	2.12	1 µg/L		

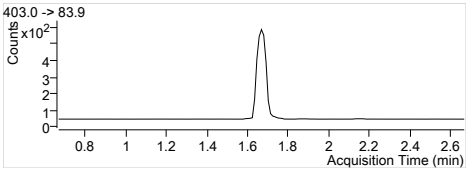
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
PFBS 1	9633	1.06	12.50	11.03 µg/L	88.22
PFHxA 1	33874	1.41	12.50	10.89 µg/L	87.13
PFHxS 1	9580	1.67	12.50	11.22 µg/L	89.73
PFHpA 1	45718	1.68	12.50	12.71 µg/L	101.68
PFOA 1	49438	1.86	12.50	12.28 µg/L	98.26
PFOS 1	9477	1.96	12.50	11.76 µg/L	94.05
PFNA 1	43777	2.00	12.50	11.46 µg/L	91.66
PFDA 1	46750	2.12	12.50	12.74 µg/L	101.94
PFUnA 1	50232	2.22	12.50	12.87 µg/L	102.98
PFDoA 1	62527	2.31	12.50	11.23 µg/L	89.81
PFTrDA 1	73349	2.39	12.50	12.06 µg/L	96.45
PFTeDA 1	61153	2.46	12.50	12.29 µg/L	98.32
13C2-PFHxA	7113	1.41	100.00	100.63 µg/L	100.63
18O2-PFHxS	1675	1.67	100.00	97.08 µg/L	97.08
13C4-PFHpA	8459	1.68	100.00	93.69 µg/L	93.69
13C4-PFOA	8866	1.86	100.00	92.51 µg/L	92.51
13C4-PFOS	2051	1.97	100.00	97.86 µg/L	97.86
13C5-PFNA	9230	2.00	100.00	99.85 µg/L	99.85
13C2-PFDA	7334	2.12	100.00	93.84 µg/L	93.84
13C2-PFUnA	8441	2.22	100.00	92.79 µg/L	92.79
13C2-PFDoA	12036	2.31	100.00	101.99 µg/L	101.99
13C2-PFTeDA	13715	2.46	100.00	101.25 µg/L	101.25
13C6-PFHxA	24980	1.41	100.00	106.97 µg/L	106.97
13C9-PFDA	31567	2.12	100.00	104.37 µg/L	104.37



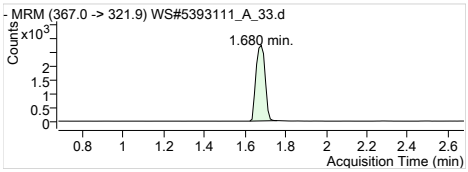


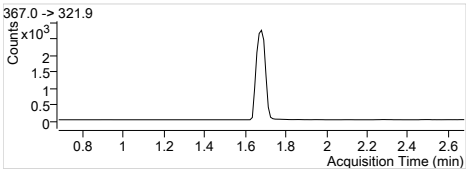
MPFHxA	Internal Standard
RT (Exp. RT):	1.411 (1.411)
Concentration:	1 µg/L
Sample type:	CC



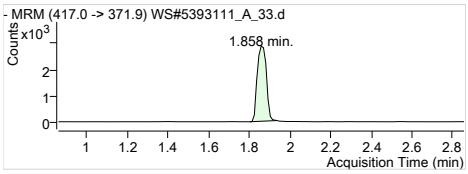


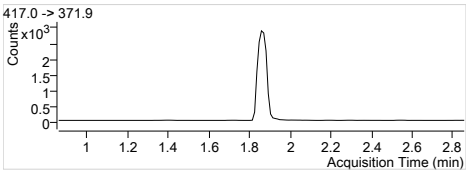
MPFHxS Internal Standard
RT (Exp. RT): 1.668 (1.668)
Concentration: 1 µg/L
Sample type: CC



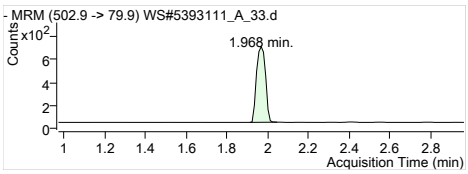


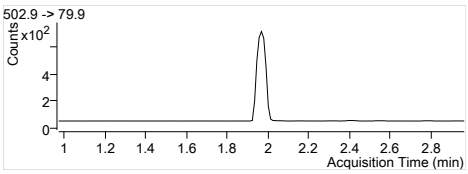
MPFHpA Internal Standard
RT (Exp. RT): 1.680 (1.680)
Concentration: 1 µg/L
Sample type: CC



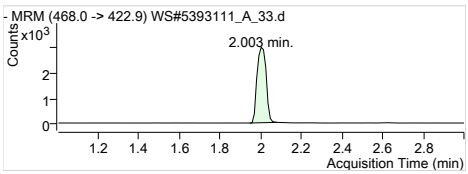


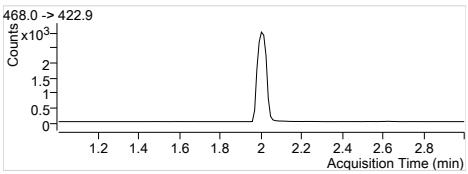
MPFOA Internal Standard
RT (Exp. RT): 1.858 (1.858)
Concentration: 1 µg/L
Sample type: CC



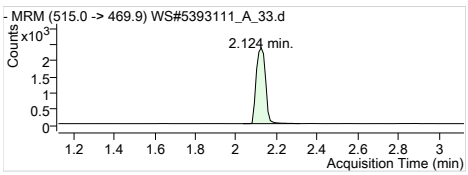


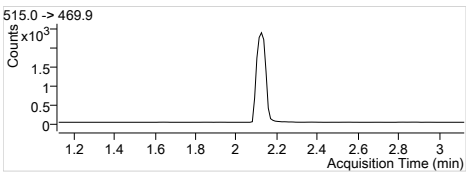
MPFOS Internal Standard
RT (Exp. RT): 1.968 (1.968)
Concentration: 1 µg/L
Sample type: CC



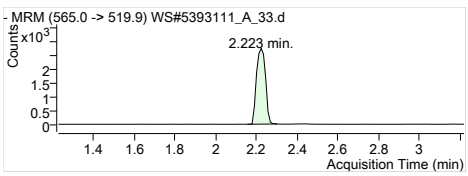


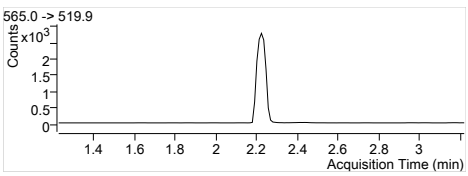
MPFNA Internal Standard
RT (Exp. RT): 2.003 (2.003)
Concentration: 1 µg/L
Sample type: CC



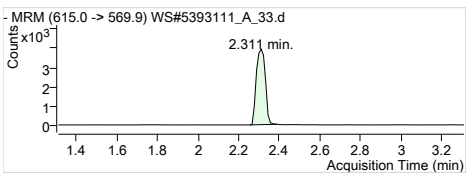


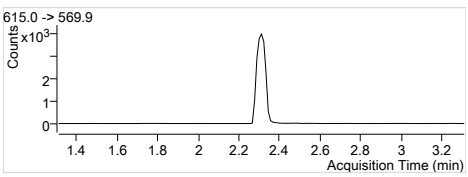
MPFDA Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: CC



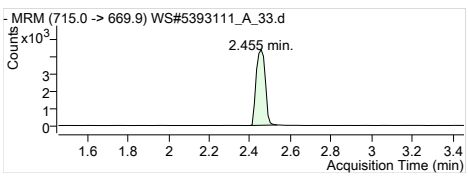


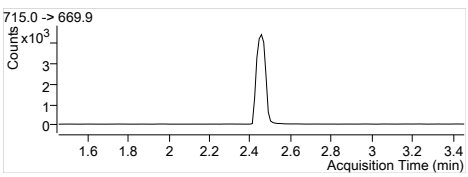
MPFUnA Internal Standard
RT (Exp. RT): 2.223 (2.223)
Concentration: 1 µg/L
Sample type: CC



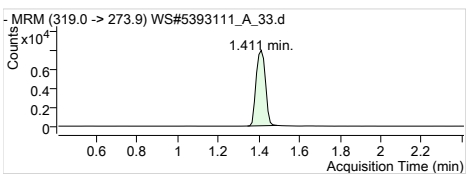


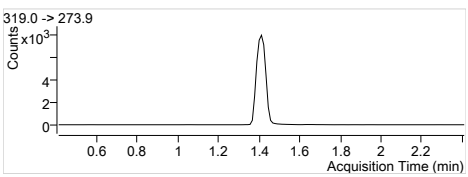
MPFDoA Internal Standard
RT (Exp. RT): 2.311 (2.311)
Concentration: 1 µg/L
Sample type: CC



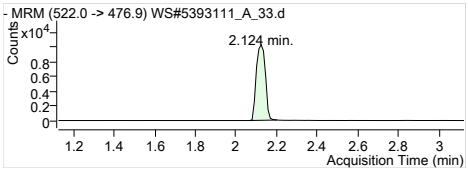


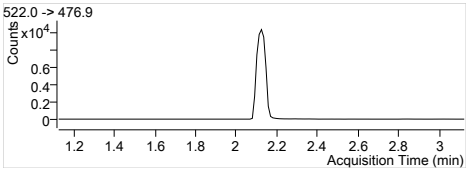
MPFTeDA Internal Standard
RT (Exp. RT): 2.455 (2.455)
Concentration: 1 µg/L
Sample type: CC



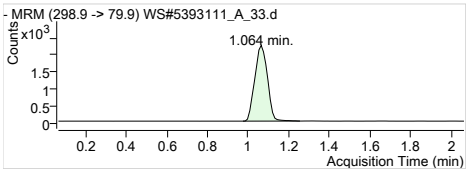


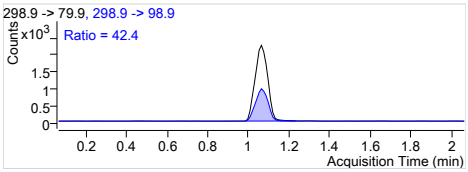
13C6-PFHxA IS Internal Standard
RT (Exp. RT): 1.411 (1.411)
Concentration: 1 µg/L
Sample type: CC



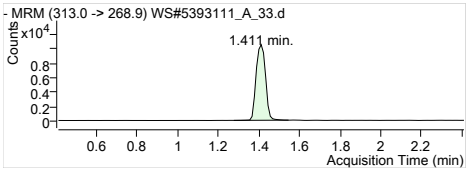


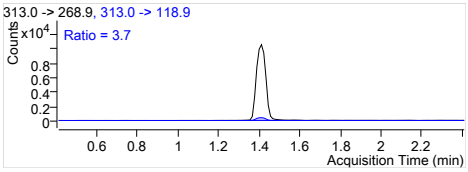
13C9-PFDA IS Internal Standard
RT (Exp. RT): 2.124 (2.124)
Concentration: 1 µg/L
Sample type: CC



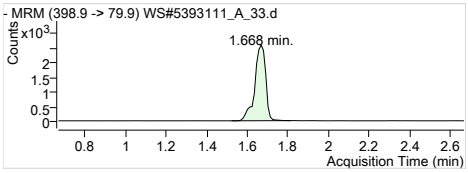


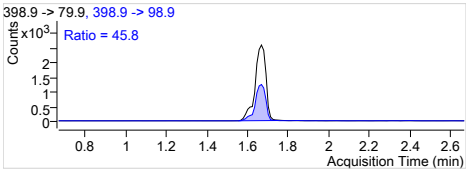
PFBS 1 298.9 -> 79.9
RT (Exp. RT): 1.064 (1.064)
Calc. conc. 11.03 µg/L
Area ratio: 5.75104
Sample type: CC



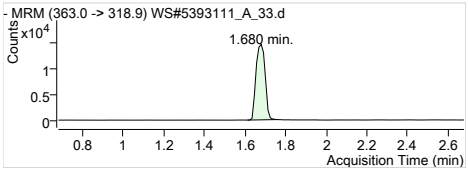


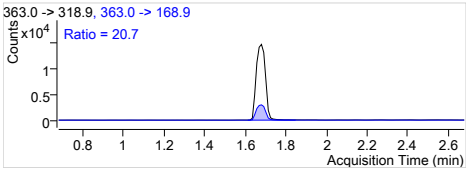
PFHxA 1 313.0 -> 268.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 10.89 µg/L
Area ratio: 4.76227
Sample type: CC



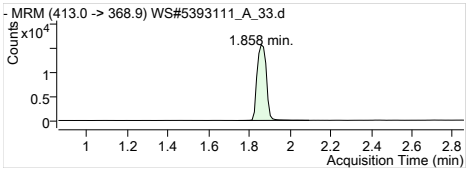


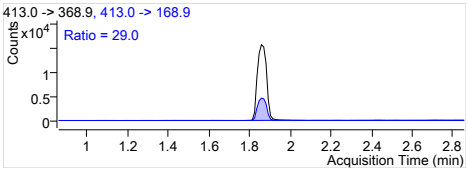
PFHxS 1 398.9 -> 79.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 11.22 µg/L
Area ratio: 5.71940
Sample type: CC



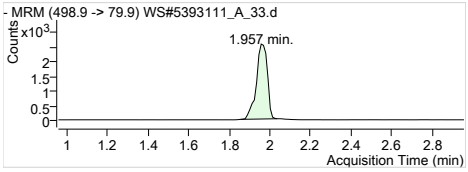


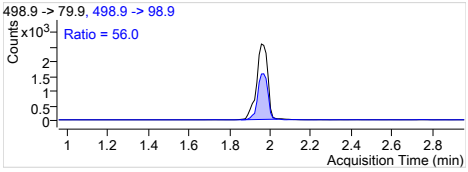
PFHpA 1 363.0 -> 318.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 12.71 µg/L
Area ratio: 5.40466
Sample type: CC



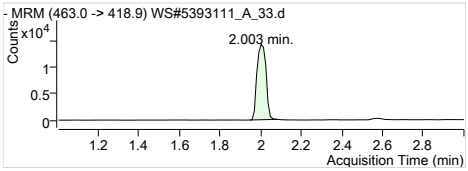


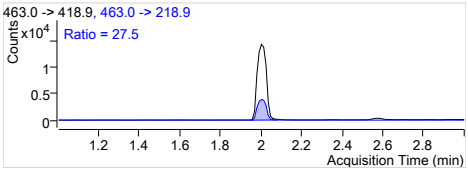
PFOA 1 413.0 -> 368.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 12.28 µg/L
Area ratio: 5.57613
Sample type: CC



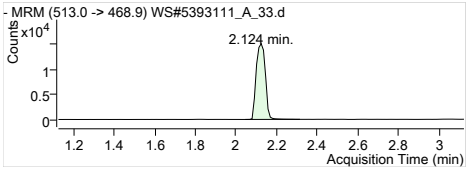


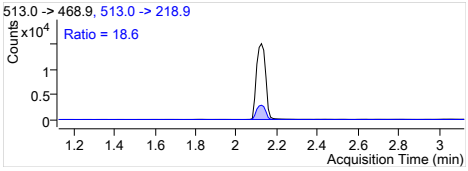
PFOS 1 498.9 -> 79.9
RT (Exp. RT): 1.957 (1.957)
Calc. conc. 11.76 µg/L
Area ratio: 4.62067
Sample type: CC



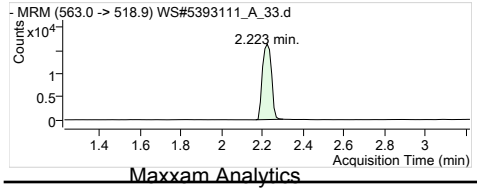


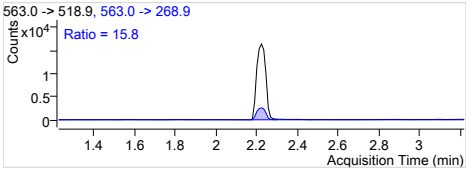
PFNA 1 463.0 -> 418.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 11.46 µg/L
Area ratio: 4.74342
Sample type: CC



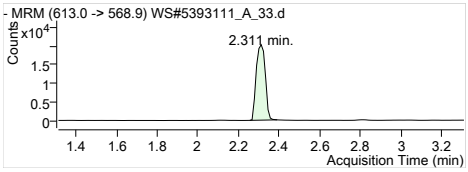


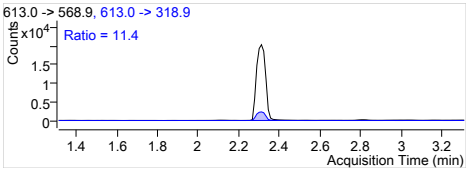
PFDA 1 513.0 -> 468.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 12.74 µg/L
Area ratio: 6.25334
Sample type: CC



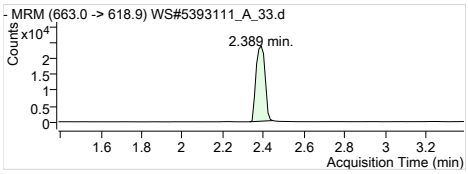


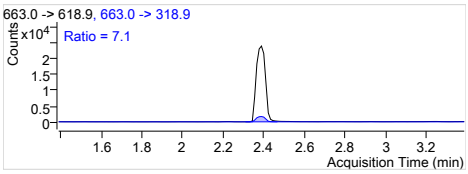
PFUnA 1 563.0 -> 518.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 12.87 µg/L
Area ratio: 5.95095
Sample type: CC



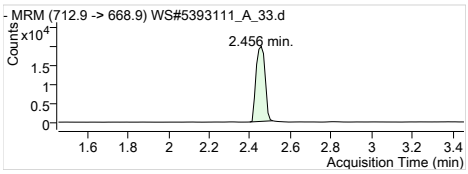


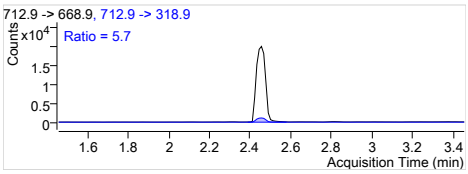
PFDoA 1 613.0 -> 568.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 11.23 µg/L
Area ratio: 5.19500
Sample type: CC



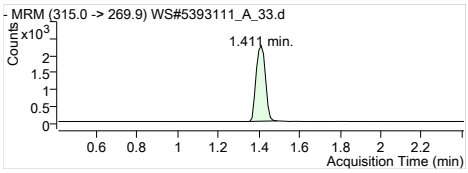


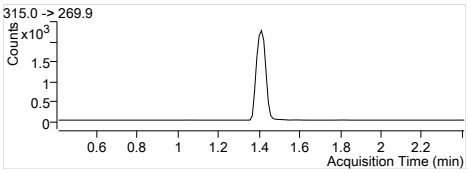
PFTrDA 1 663.0 -> 618.9
RT (Exp. RT): 2.389 (2.389)
Calc. conc. 12.06 µg/L
Area ratio: 5.40245
Sample type: CC



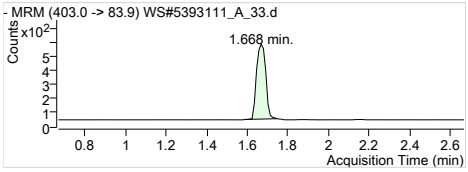


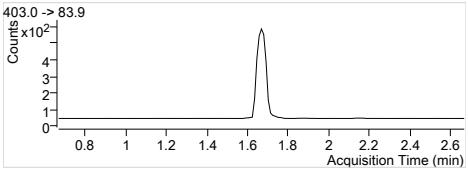
PFTeDA 1 712.9 -> 668.9
RT (Exp. RT): 2.456 (2.456)
Calc. conc. 12.29 µg/L
Area ratio: 4.50416
Sample type: CC



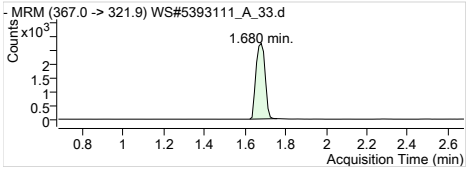


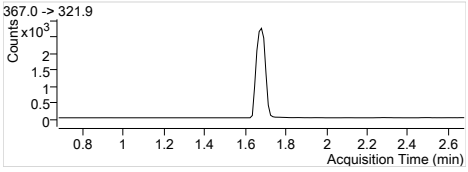
13C2-PFHxA 315.0 -> 269.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 100.63 µg/L
Area ratio: 0.28475
Sample type: CC



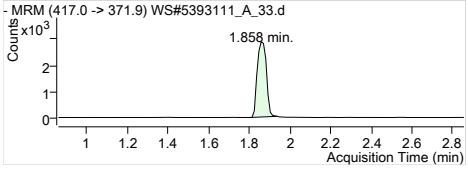


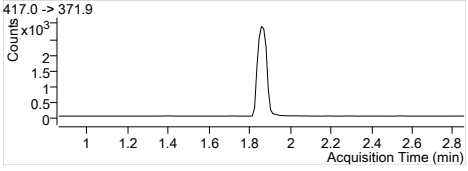
18O2-PFHxS 403.0 -> 83.9
RT (Exp. RT): 1.668 (1.668)
Calc. conc. 97.08 µg/L
Area ratio: 0.06705
Sample type: CC



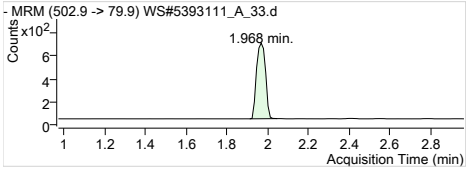


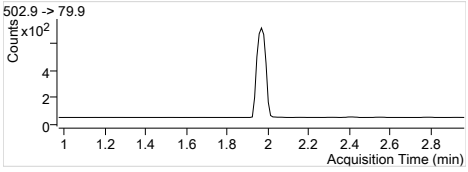
13C4-PFHpA 367.0 -> 321.9
RT (Exp. RT): 1.680 (1.680)
Calc. conc. 93.69 µg/L
Area ratio: 0.33863
Sample type: CC



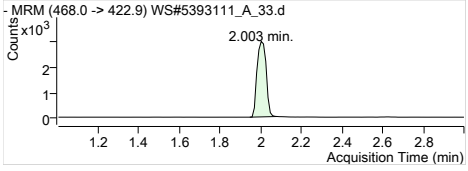


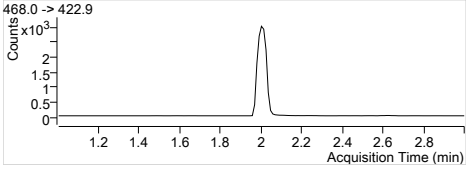
13C4-PFOA 417.0 -> 371.9
RT (Exp. RT): 1.858 (1.858)
Calc. conc. 92.51 µg/L
Area ratio: 0.35492
Sample type: CC



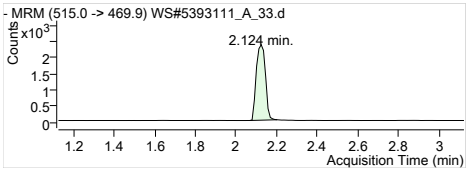


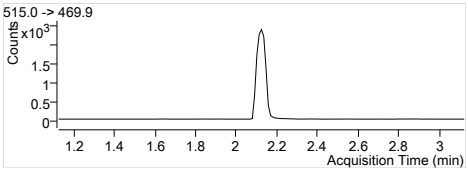
13C4-PFOS 502.9 -> 79.9
RT (Exp. RT): 1.968 (1.968)
Calc. conc. 97.86 µg/L
Area ratio: 0.08211
Sample type: CC



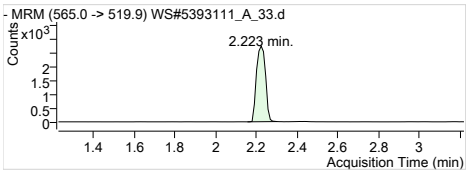


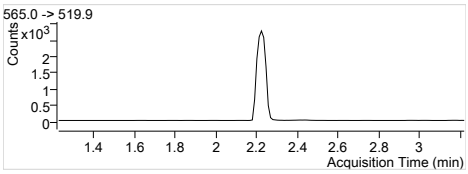
13C5-PFNA 468.0 -> 422.9
RT (Exp. RT): 2.003 (2.003)
Calc. conc. 99.85 µg/L
Area ratio: 0.36950
Sample type: CC



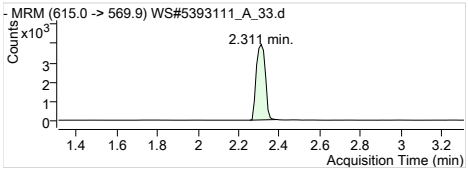


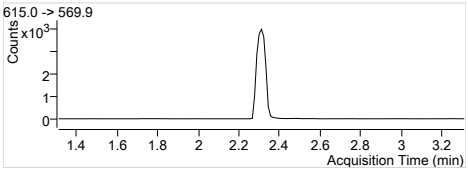
13C2-PFDA 515.0 -> 469.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 93.84 µg/L
Area ratio: 0.23233
Sample type: CC



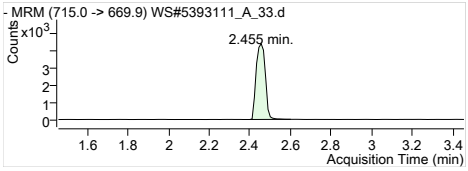


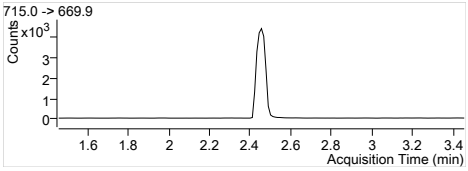
13C2-PFUnA 565.0 -> 519.9
RT (Exp. RT): 2.223 (2.223)
Calc. conc. 92.79 µg/L
Area ratio: 0.26740
Sample type: CC



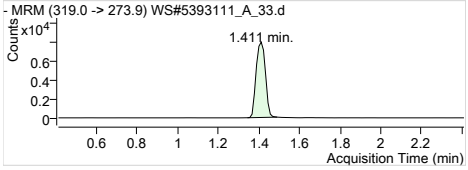


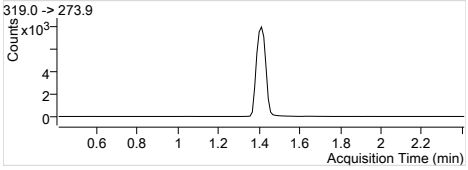
13C2-PFDoA 615.0 -> 569.9
RT (Exp. RT): 2.311 (2.311)
Calc. conc. 101.99 µg/L
Area ratio: 0.38128
Sample type: CC



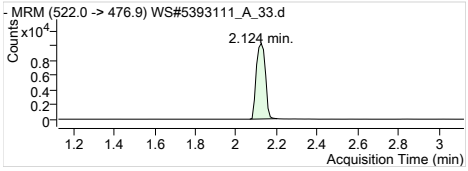


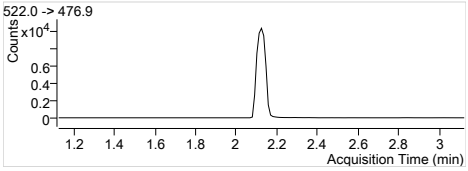
13C2-PFTeDA 715.0 -> 669.9
RT (Exp. RT): 2.455 (2.455)
Calc. conc. 101.25 µg/L
Area ratio: 0.43447
Sample type: CC





13C6-PFHxA 319.0 -> 273.9
RT (Exp. RT): 1.411 (1.411)
Calc. conc. 106.97 µg/L
Area ratio: 0
Sample type: CC





13C9-PFDA 522.0 -> 476.9
RT (Exp. RT): 2.124 (2.124)
Calc. conc. 104.37 µg/L
Area ratio: 0
Sample type: CC

Quantitation Results

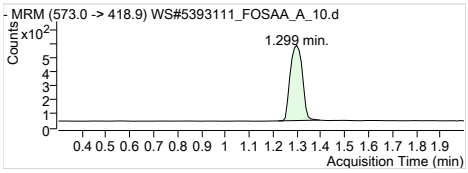
Agilent Technologies

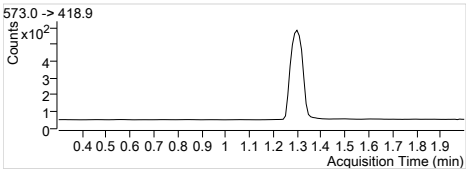
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**ISC**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_10.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A2
Acq. Date	2018/02/13 11:48:46 AM	**Injection Volume**	Per Method
Sample Annotation	-		

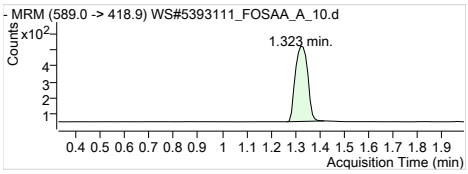
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1892	1.30	1 µg/L		
D5-EtFOSAA IS	1686	1.32	1 µg/L		
13C9-PFDA IS	27258	0.87	1 µg/L		

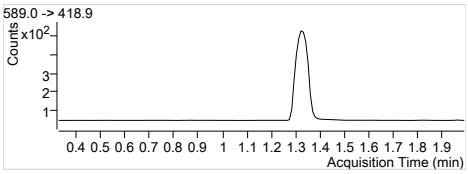
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	648	1.30	0.83	0.89 µg/L	107.29
EtFOSAA 1	620	1.32	0.83	0.82 µg/L	98.68
D3-MeFOSAA	1910	1.30	100.00	93.44 µg/L	93.44
D5-EtFOSAA	1722	1.32	100.00	98.31 µg/L	98.31
13C9-PFDA	26627	0.87	100.00	104.37 µg/L	104.37



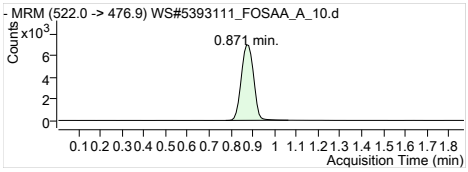


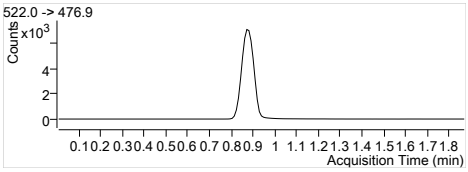
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: CC



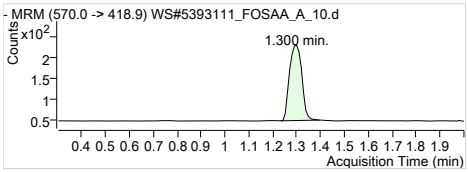


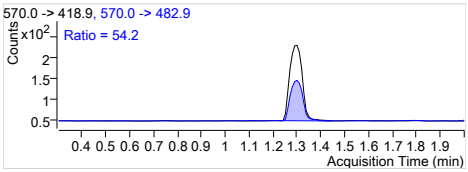
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: CC



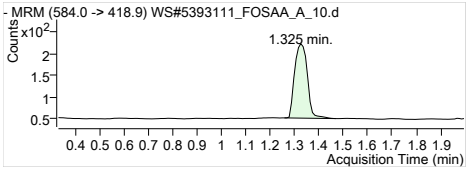


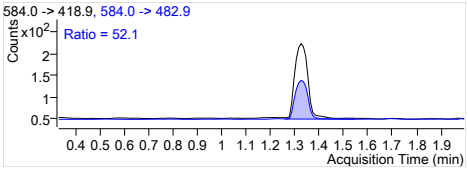
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.871 (0.871)
Concentration: 1 µg/L
Sample type: CC



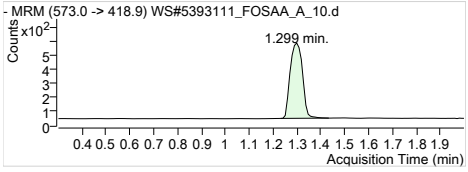


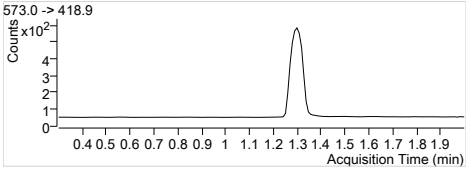
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.300 (1.300)
Calc. conc. 0.89 µg/L
Area ratio: 0.34249
Sample type: CC



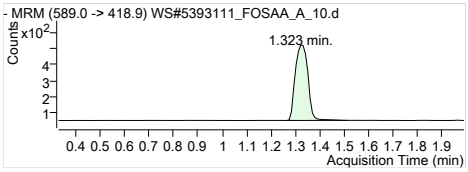


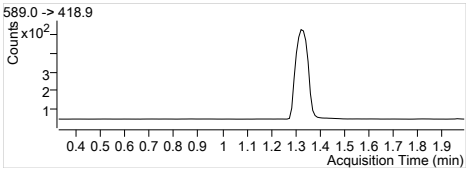
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.325 (1.325)
Calc. conc. 0.82 µg/L
Area ratio: 0.36773
Sample type: CC



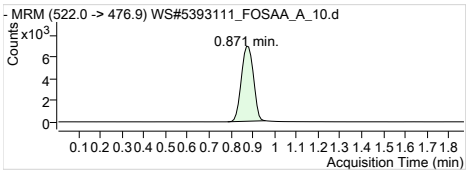


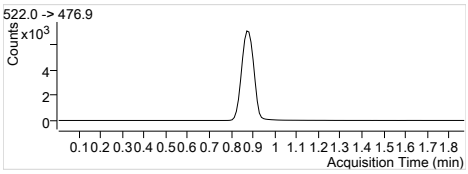
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 93.44 µg/L
Area ratio: 0.07007
Sample type: CC





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	98.31 µg/L
Area ratio:	0.06317
Sample type:	CC





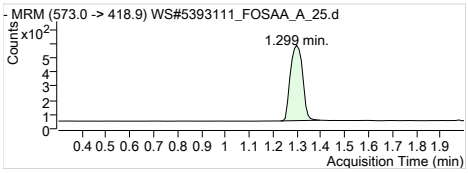
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.871 (0.871)
Calc. conc.	104.37 µg/L
Area ratio:	0
Sample type:	CC

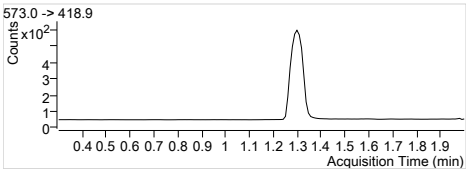
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**CCV**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_25.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A5
Acq. Date	2018/02/13 12:24:55 PM	**Injection Volume**	Per Method
Sample Annotation	-		

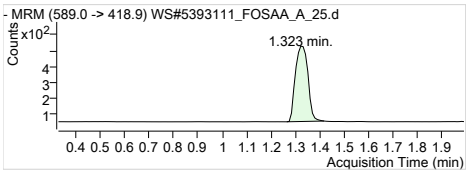
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	1934	1.30	1 µg/L		
D5-EtFOSAA IS	1718	1.32	1 µg/L		
13C9-PFDA IS	27346	0.88	1 µg/L		

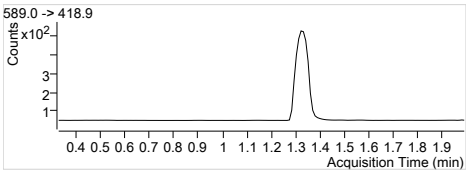
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	9126	1.30	12.50	12.14 µg/L	97.15
EtFOSAA 1	9384	1.32	12.50	12.04 µg/L	96.34
D3-MeFOSAA	1952	1.30	100.00	95.19 µg/L	95.19
D5-EtFOSAA	1737	1.32	100.00	98.85 µg/L	98.85
13C9-PFDA	26983	0.88	100.00	105.76 µg/L	105.76



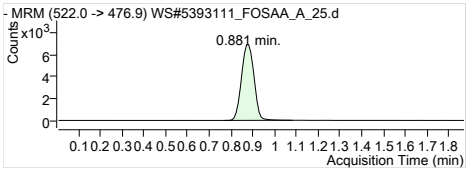


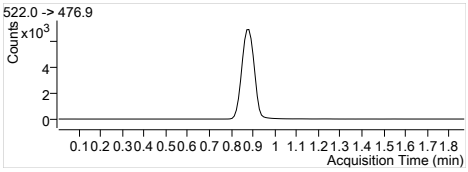
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: CC



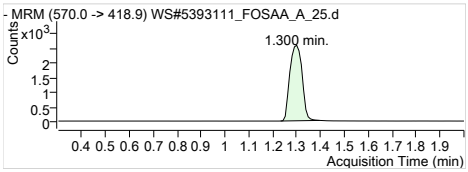


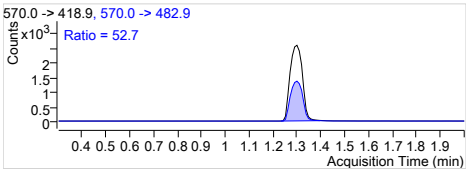
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: CC



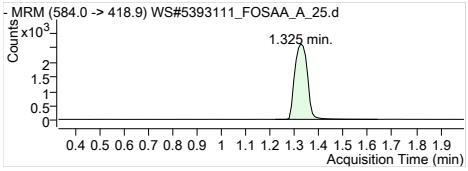


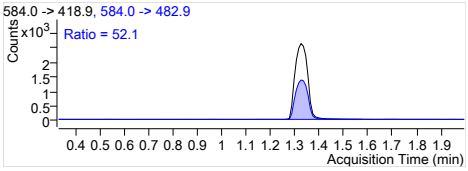
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.881 (0.871)
Concentration: 1 µg/L
Sample type: CC



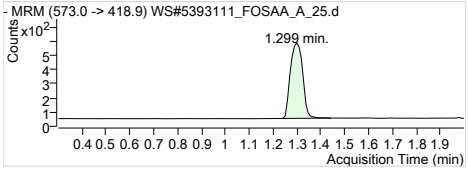


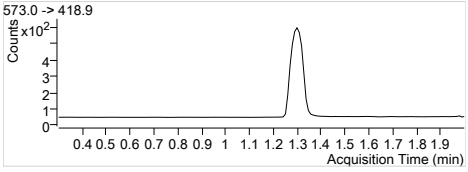
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.300 (1.300)
Calc. conc. 12.14 µg/L
Area ratio: 4.71872
Sample type: CC



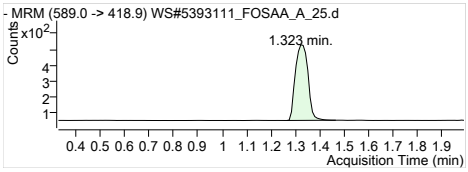


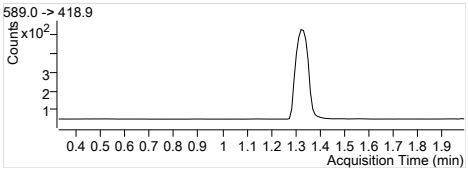
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.325 (1.325)
Calc. conc. 12.04 µg/L
Area ratio: 5.46217
Sample type: CC



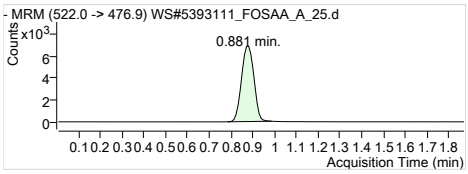


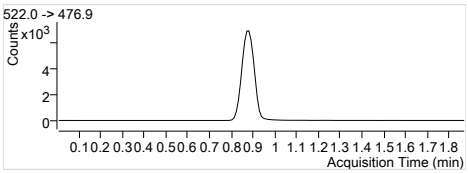
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 95.19 µg/L
Area ratio: 0.07138
Sample type: CC





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	98.85 µg/L
Area ratio:	0.06352
Sample type:	CC





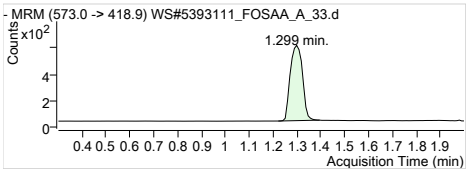
13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.881 (0.871)
Calc. conc.	105.76 µg/L
Area ratio:	0
Sample type:	CC

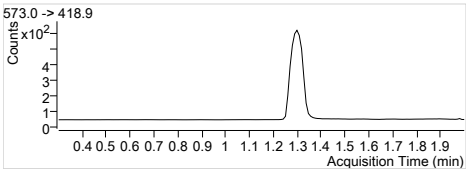
Batch Path	T:\lcms4\PFC\20180212\WS#5393111_FOSAA_A\QuantResults\PFC_Water_Low_180212_WS#5393111_FOSAA_A_EToxics

Sample Name	**CCV**	**Instrument**	LCMS04
Data File	WS#5393111_FOSAA_A_33.d	**Operator**	
Sample Type	CC	**Dilution**	1
Acq. Method	PFC_Water_Low_FOSAA.m	**Position**	P2-A5
Acq. Date	2018/02/13 12:44:16 PM	**Injection Volume**	Per Method
Sample Annotation	-		

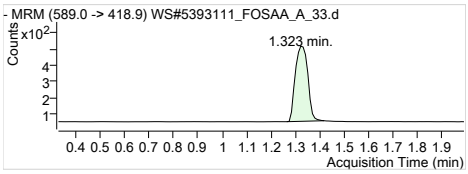
ISTD Compounds	Response	RT	Target conc.		
D3-MeFOSAA IS	2008	1.30	1 µg/L		
D5-EtFOSAA IS	1674	1.32	1 µg/L		
13C9-PFDA IS	27597	0.87	1 µg/L		

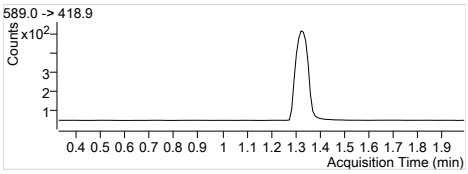
Compound	Response	RT	Target Conc.	Calc. Conc.	Accuracy
MeFOSAA 1	9196	1.30	12.50	11.79 µg/L	94.29
EtFOSAA 1	9406	1.32	12.50	12.39 µg/L	99.10
D3-MeFOSAA	2015	1.30	100.00	97.37 µg/L	97.37
D5-EtFOSAA	1713	1.32	100.00	96.60 µg/L	96.60
13C9-PFDA	27109	0.87	100.00	106.25 µg/L	106.25



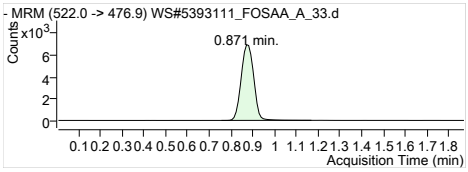


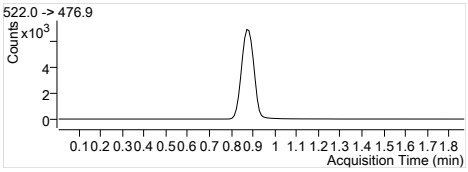
D3-MeFOSAA IS Internal Standard
RT (Exp. RT): 1.299 (1.299)
Concentration: 1 µg/L
Sample type: CC



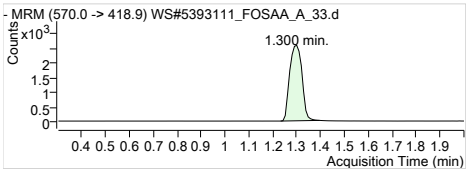


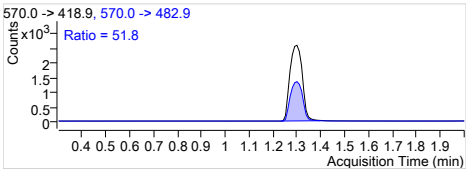
D5-EtFOSAA IS Internal Standard
RT (Exp. RT): 1.323 (1.323)
Concentration: 1 µg/L
Sample type: CC



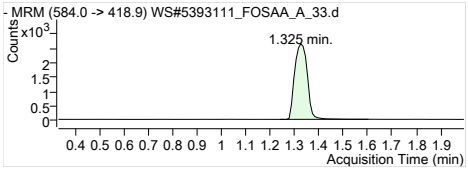


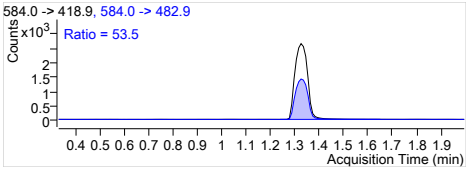
13C9-PFDA IS Internal Standard
RT (Exp. RT): 0.871 (0.871)
Concentration: 1 µg/L
Sample type: CC



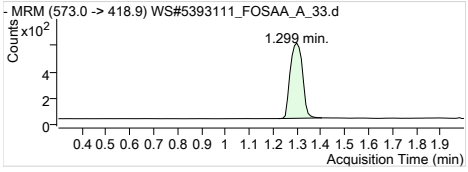


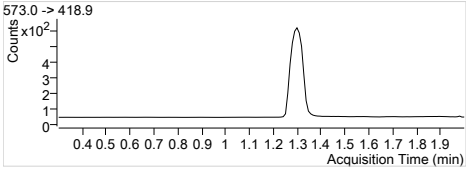
MeFOSAA 1 570.0 -> 418.9
RT (Exp. RT): 1.300 (1.300)
Calc. conc. 11.79 µg/L
Area ratio: 4.57968
Sample type: CC



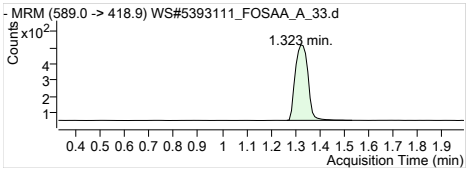


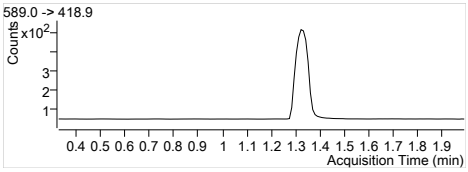
EtFOSAA 1 584.0 -> 418.9
RT (Exp. RT): 1.325 (1.325)
Calc. conc. 12.39 µg/L
Area ratio: 5.61888
Sample type: CC



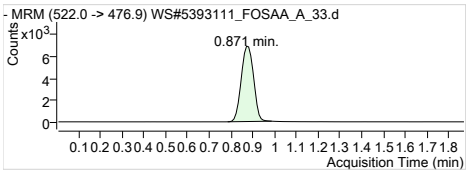


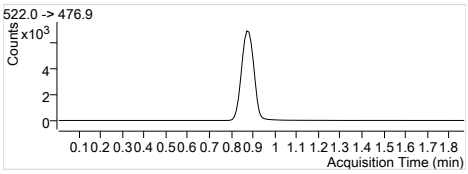
D3-MeFOSAA 573.0 -> 418.9
RT (Exp. RT): 1.299 (1.299)
Calc. conc. 97.37 µg/L
Area ratio: 0.07302
Sample type: CC





D5-EtFOSAA	589.0 -> 418.9
RT (Exp. RT):	1.323 (1.323)
Calc. conc.	96.60 µg/L
Area ratio:	0.06207
Sample type:	CC





13C9-PFDA	522.0 -> 476.9
RT (Exp. RT):	0.871 (0.871)
Calc. conc.	106.25 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	B821961							N6247016D9008	JM11	TETRA TECH, INC.	DI_BLANK	Water for QC samples	QC Sample	26-Jan-18	537	Perfluoroalkyl Compounds	20190208094821.00
SOUTHEAST	ORLANDO_NTC	B821961							N6247016D9008	JM11	TETRA TECH, INC.	FB-OLD-012518-6	Water for QC samples	QC Sample	25-Jan-18	537	Perfluoroalkyl Compounds	20190208094821.00
SOUTHEAST	ORLANDO_NTC	B821961							N6247016D9008	JM11	TETRA TECH, INC.	EB-GW-012518-3	Water for QC samples	QC Sample	25-Jan-18	537	Perfluoroalkyl Compounds	20190208094821.00
SOUTHEAST	ORLANDO_NTC	B821961							N6247016D9008	JM11	TETRA TECH, INC.	FB-OLD-012618-7	Water for QC samples	QC Sample	26-Jan-18	537	Perfluoroalkyl Compounds	20190208094821.00
SOUTHEAST	ORLANDO_NTC	B821961							N6247016D9008	JM11	TETRA TECH, INC.	EB-GW-012618-4	Water for QC samples	QC Sample	26-Jan-18	537	Perfluoroalkyl Compounds	20190208094821.00