



**Groundwater Sample Results,
Level 4 Data Report, Electronic Data Deliverable,
Data Validation Report, Sample Location Report,
SDG 20D083**

NS

Treasure Island, CA

April 2021



1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889

Date: 05-06-2020
EMAX Batch No.: 20D083

Attn: Sevda Aleckson

NOREAS
16361 Scientific Way
Irvine, CA 92618

Subject: Laboratory Report
Project: TREASURE ISLAND, IR SITE 6

Enclosed is the Laboratory report for samples received on 04/13/20.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
06-MW25-0420	D083-01	04/08/20	WATER	PFCS
06-MW26-0420	D083-02	04/08/20	WATER	PFCS
06-MW30-0420	D083-03	04/08/20	WATER	PFCS
06-MW31-0420	D083-04	04/08/20	WATER	PFCS
06-MW32-0420	D083-05	04/08/20	WATER	PFCS
06-MW32-0420 DUP	D083-06	04/08/20	WATER	PFCS
06-MW33-0420	D083-07	04/08/20	WATER	PFCS
06-MW34-0420	D083-08	04/08/20	WATER	PFCS
06-MW35-0420	D083-09	04/08/20	WATER	PFCS
06-MW36-0420	D083-10	04/08/20	WATER	PFCS
QCFB-0420	D083-11	04/08/20	WATER	PFCS
06-MW30-0420MS	D083-03M	04/08/20	WATER	PFCS
06-MW30-0420MSD	D083-03S	04/08/20	WATER	PFCS

Note: PFCS was subcontracted to Bureau Veritas.

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912018-15
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

CHAIN-OF-CUSTODY RECORD

Project Name/No:	Former Naval Station Treasure Island, San Francisco, CA	Purchase Order No.	17023	Laboratory SDG No:	200083
Project Location:	IR Site 6 - 2020 PFAS Groundwater Event	Laboratory Name:	EMAX, Inc.	ANALYSES REQUIRED	
Company Name:	NOREAS, Inc.	Laboratory Contact:	Richard Beauvil		
Address:	16361 Scientific Way Irvine, CA 92618	Laboratory Address:	1835 W. 205th Street Torrance, CA 90501		
Project Manager:	Hamlet Hamparsumian	Laboratory Phone:	(310) 618-8889, ext. 118		
Phone/Fax No.	(949) 877-3720	Airbill No.	COURIER		
Project Contact:	Ryley Robitaille				
Contact Phone:	(714) 273-5132				

Sample ID	Sampling Location	Date	Time	Matrix	QC Level (3/4)	Unpreserved	Preserved	# of Containers	PFAS Table B-15 Compliant											MS/MSD			
1 06-MW25-0420	06-MW25	4/8/2020	1355	w	4	2	-	2	X														
2 06-MW26-0420	06-MW26	4/8/2020	1149	w	4	2	-	2	X														
3 06-MW30-0420	06-MW30	4/8/2020	1258	w	4	6	-	6	X														X
4 06-MW31-0420	06-MW31	4/8/2020	1430	w	4	2	-	2	X														
5 06-MW32-0420	06-MW32	4/8/2020	0941	w	4	2	-	2	X														
6 06-MW32-0420 Dup	06-MW32	4/8/2020	0946	w	4	2	-	2	X														
7 06-MW33-0420	06-MW33	4/8/2020	0904	w	4	2	-	2	X														
8 06-MW34-0420	06-MW34	4/8/2020	1056	w	4	2	-	2	X														
9 06-MW35-0420	06-MW35	4/8/2020	1016	w	4	2	-	2	X														
10 06-MW36-0420	06-MW36	4/8/2020	0822	w	4	2	-	2	X														
11 QCFB-0420	Field Blank	4/8/2020	1445	w	4	2	-	2	X														

Special Instructions: All analytical and QC requirements specified in the Final Sampling and Analysis Plan (May 2017) must be followed.

Turnaround Time: 24 HR 48 HR 72 HR
 STANDARD OR _____

Sampler(s) Name(s): Michael Price				Matrix: W: Groundwater or Drinking water; S: Soil; W: Waste			
Relinquished By (signature): <i>[Signature]</i>	Date: 4/13/2020	Received By (signature): <i>[Signature]</i>	Date: 4-13-20	Sample Condition Upon Receipt (For Laboratory Use)			
Company: NOREAS, Inc.	Time: 0850	Company: EMAX	Time: 0850	Cooler Temp (°C):			
Relinquished By (signature): <i>[Signature]</i>	Date: 4-13-20	Received By (signature): <i>[Signature]</i>	Date: 4/13/2020	Sample Condition:			
Company: Emax	Time: 1400	Company: Emax	Time: 1400	Cooler Seal: <input type="checkbox"/> Intact <input type="checkbox"/> Broken			
				<input type="checkbox"/> Intact <input type="checkbox"/> Broken			

Type of Delivery <input type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others <input checked="" type="checkbox"/> EMAX Courier <input type="checkbox"/> Client Delivery	Airbill / Tracking Number	ECN <u>200083</u> Recipient <u>Rene Carrillo</u> Date <u>4/13/2000</u> Time <u>14:00</u>
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COC INSPECTION

<input checked="" type="checkbox"/> Client Name	<input checked="" type="checkbox"/> Client PM/FC	<input checked="" type="checkbox"/> Sampler Name	<input checked="" type="checkbox"/> Sampling Date/Time	<input checked="" type="checkbox"/> Sample ID	<input checked="" type="checkbox"/> Matrix
<input checked="" type="checkbox"/> Address	<input checked="" type="checkbox"/> Tel # / Fax #	<input type="checkbox"/> Courier Signature	<input checked="" type="checkbox"/> Analysis Required	<input type="checkbox"/> Preservative (if any)	<input checked="" type="checkbox"/> TAT
Safety Issues (if any)	<input type="checkbox"/> High concentrations expected	<input type="checkbox"/> From Superfund Site	<input type="checkbox"/> Rad screening required		

Note: _____

PACKAGING INSPECTION

Container	<input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> Box	<input checked="" type="checkbox"/> Other <u>bags</u>
Condition	<input type="checkbox"/> Custody Seal	<input type="checkbox"/> Intact	<input type="checkbox"/> Damaged
Packaging	<input type="checkbox"/> Bubble Pack	<input type="checkbox"/> Styrofoam	<input type="checkbox"/> Popcorn
Temperatures (Cool, ≤ 6 °C but not frozen)	<input type="checkbox"/> Cooler 1 _____ °C	<input type="checkbox"/> Cooler 2 _____ °C	<input type="checkbox"/> Cooler 3 _____ °C
	<input type="checkbox"/> Cooler 4 _____ °C	<input type="checkbox"/> Cooler 5 _____ °C	<input type="checkbox"/> Cooler 6 _____ °C
	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 8 _____ °C	<input checked="" type="checkbox"/> Cooler 9 <u>4.8</u> °C
	<input type="checkbox"/> Cooler 10 _____ °C		

Thermometer: A - S/N 192301464 B - S/N _____ C - S/N 192301462 D - S/N _____

Comments: Temperature is out of range. PM was informed IMMEDIATELY.

Note: _____

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
<i>[Table content is crossed out with a large diagonal line]</i>				

pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS: label reads; ANALYSIS PFOS (All samples)

LEGEND:

<p>Code Description-Sample Management</p> <p>D1 Analysis is not indicated in _____</p> <p>D2 Analysis mismatch COC vs label</p> <p>D3 Sample ID mismatch COC vs label</p> <p>D4 Sample ID is not indicated in _____</p> <p>D5 Container -[improper] [leaking] [broken]</p> <p>D6 Date/Time is not indicated in _____</p> <p>D7 Date/Time mismatch COC vs label</p> <p>D8 Sample listed in COC is not received</p> <p>D9 Sample received is not listed in COC</p> <p>D10 No initial/date on corrections in COC/label</p> <p>D11 Container count mismatch COC vs received</p> <p>D12 Container size mismatch COC vs received</p>	<p>Code Description-Sample Management</p> <p>D13 Out of Holding Time</p> <p>D14 Bubble is >6mm</p> <p>D15 No trip blank in cooler</p> <p>D16 Preservation not indicated in _____</p> <p>D17 Preservation mismatch COC vs label</p> <p>D18 Insufficient chemical preservative</p> <p>D19 Insufficient Sample</p> <p>D20 No filtration info for dissolved analysis</p> <p>D21 No sample for moisture determination</p> <p>D22 _____</p> <p>D23 _____</p> <p>D24 _____</p>	<p><input type="checkbox"/> Continue to next page.</p> <p>Code Description-Sample Management</p> <p>R1 Proceed as indicated in <input type="checkbox"/> COC <input type="checkbox"/> Label</p> <p>R2 Refer to attached instruction</p> <p>R3 Cancel the analysis</p> <p>R4 Use vial with smallest bubble first</p> <p>R5 Log-in with latest sampling date and time+1 min</p> <p>R6 Adjust pH as necessary</p> <p>R7 Filter and preserved as necessary</p> <p>R8 _____</p> <p>R9 _____</p> <p>R10 _____</p> <p>R11 _____</p> <p>R12 _____</p>
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REVISIONS:

Sample Labeling [Signature] Date 4/14/2000

SRF [Signature] Date 4/14/2000

PM [Signature] Date 4/15/2000



Confirmation of Sample Receipt

BV Labs Job Number: C095296
Job Received: 2020/04/16 12:45
Final Report Due: 2020/04/30 18:00

Invoice Information

Attn: Richard Beauvil
EMAX Laboratories Inc
1835 W 205th St
Torrance, CA, 90501
Email to:
rbeauvil@emaxlabs.com

Report Information

Attn: Richard Beauvil
EMAX Laboratories Inc
1835 W 205th St
Torrance, CA, 90501
Email to:
rbeauvil@emaxlabs.com

Project Information

Quote #: C01739
PO/AFE#: 20D083
Project #: TREASURE ISLAND, IR SITE 6
Site Location: T10000006825
Sampled By:
Task Order: NORI

Analytical Summary

A: Due On 2020/04/30 18:00

Lab ID	Client Sample ID	Sampling Date/Time	Matrix	PFAS (QSM 5.3)
COC# 20D083				
MLP496	06-MW25-0420	2020/04/08 13:55	W	A
MLP497	06-MW26-0420	2020/04/08 11:49	W	A
MLP498	06-MW30-0420	2020/04/08 12:58	W	A
MLP499	06-MW31-0420	2020/04/08 14:30	W	A
MLP500	06-MW32-0420	2020/04/08 09:41	W	A
MLP501	06-MW32-0420 DUP	2020/04/08 09:46	W	A
MLP502	06-MW33-0420	2020/04/08 09:04	W	A
MLP503	06-MW34-0420	2020/04/08 10:56	W	A
MLP504	06-MW35-0420	2020/04/08 10:16	W	A
MLP505	06-MW36-0420	2020/04/08 08:22	W	A
MLP506	QCFB-0420	2020/04/08 14:45	W	A

Include Criteria on CofA: Yes

Criteria : DOD

Sample Inspection Observations & Comments

of Samples Received: 11

Details: Sample(s) received in good condition.

Average Temperature: Package 1: 0.5 °C

Additional Notes

- Unless special storage arrangements are made, all samples will be disposed 30 days after receipt. Additional fees may be applied for extended storage.
- Additional fees may be applied for the disposal of hazardous samples.

The contents of this report are subject to change. For up to date information, please refer to the Customer Portal.



Confirmation of Sample Receipt

BV Labs Job Number: C095296
Job Received: 2020/04/16 12:45
Final Report Due: 2020/04/30 18:00

Parameter Summary

Package/Test

PFAS (QSM 5.3)

Parameter	RDL *	Unit	Samples
Perfluorohexanoic acid (PFHxA)	0.02	ug/L	All
Perfluoroheptanoic acid (PFHpA)	0.02	ug/L	All
Perfluorooctanoic acid (PFOA)	0.02	ug/L	All
Perfluorononanoic acid (PFNA)	0.02	ug/L	All
Perfluorodecanoic acid (PFDA)	0.02	ug/L	All
Perfluoroundecanoic acid (PFUnA)	0.02	ug/L	All
Perfluorododecanoic acid (PFDoA)	0.02	ug/L	All
Perfluorotridecanoic acid (PFTRDA)	0.02	ug/L	All
Perfluorotetradecanoic acid (PFTEDA)	0.02	ug/L	All
Perfluorobutanesulfonic acid (PFBS)	0.02	ug/L	All
Perfluorohexanesulfonic acid (PFHxS)	0.02	ug/L	All
Perfluorooctanesulfonic acid (PFOS)	0.02	ug/L	All
EtFOSA	0.04	ug/L	All
MeFOSA	0.04	ug/L	All

*RDLs are subject to change based on interferences present at the time of analysis.

LABORATORY REPORT FOR

NOREAS

TREASURE ISLAND, IR SITE 6

PFCS

SDG#: 20D083



Prepared for: EMAX Laboratories Inc

Project: 20D083
TREASURE ISLAND, IR SITE 6

Analytical Data Package (Level IV)

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

Bureau Veritas Job #: C095296

Bureau Veritas Canada (2019) Inc.
6740 Campobello Rd.
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.bvlabs.com



**BUREAU
VERITAS**

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**Bureau Veritas Canada (2019)
Inc.
6740 Campobello Rd.
Mississauga, Ontario, Canada
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1-800-668-0639
www.bvlabs.com**

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**BUREAU
VERITAS**

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:

Steph Pollen

Project Manager



**BUREAU
VERITAS**

Stephanie

Pollen

2020.05.06

13:04:55 -04'00'

Bureau Veritas Canada (2019)

Inc.

6740 Campobello Rd.

Mississauga, Ontario, Canada

L5N 2L8

1-800-668-0639

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Glossary of Terms

- **Detection Limit (DL)** this can also be called **Method Detection Limit (MDL)**: The lowest concentration or amount of the target analyte that can be identified, measured, and reported with confidence that the analyte concentration is not a false positive value. (Clarification): The smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration at the 99% level of confidence. At the DL, the false positive rate (Type I error) is 1%.
- **Limit of Detection (LOD)**: An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. (Clarification): The smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.
- **Limits of Quantitation (LOQ)** this can also be called **Reporting Detection Limit (RDL)**: The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. (Clarification): The lowest concentration that produces a quantitative result within specified limits of precision and bias. For DoD projects, the LOQ shall be set at or above the concentration of the lowest initial calibration standard.
- **Acceptance Criteria** are values used by the laboratory to determine that a process is in control.
- **Accuracy** is the degree of agreement of a measured value with the true or expected value.
- **Calibration Standards** are a set of solutions containing the analytes of interest at a specified concentration.
- **Calibration Verification Standard** consists of a calibration standard solution of intermediate concentration (mid-point initial calibration level) used to assess 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

**Bureau Veritas Canada (2019)
Inc.
6740 Campobello Rd.
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.bvlabs.com**

Bureau Veritas Job: C095296

Sample Analysis

Samples were initially pre-screened and estimated concentrations were obtained so that appropriate sample volumes could be extracted on QC batch 6690934 (2020/04/21). Due to high concentrations, the following samples were analyzed for selected analytes using reduced sample extraction volumes:

MLP496	06-MW25-0420	<i>Perfluorohexanoic acid (PFHxA), Perfluorohexanesulfonic acid (PFHxS), Perfluorooctanoic acid (PFOA) & Perfluorooctanesulfonic acid (PFOS)</i>
MLP497	06-MW26-0420	<i>Perfluorooctanesulfonic acid (PFOS)</i>
MLP500	06-MW32-0420	<i>Perfluorobutanesulfonic acid (PFBS), Perfluorohexanoic acid (PFHxA), Perfluorohexanesulfonic acid (PFHxS), Perfluoroheptanoic acid (PFHpA), Perfluorooctanoic acid (PFOA), Perfluorooctanesulfonic acid (PFOS), Perfluorononanoic acid (PFNA), Perfluorodecanoic acid (PFDA), Perfluoroundecanoic acid (PFUnA), Perfluorododecanoic acid (PFDoA), Perfluorotridecanoic acid (PFTTrDA), Perfluorotetradecanoic acid (PFTeDA), Methylperfluorooctane sulfonamide (MeFOSA) & Ethylperfluorooctane sulfonamide (EtFOSA)</i>
MLP501	06-MW32-0420 DUP	<i>Perfluorobutanesulfonic acid (PFBS), Perfluorohexanoic acid (PFHxA), Perfluorohexanesulfonic acid (PFHxS), Perfluoroheptanoic acid (PFHpA), Perfluorooctanoic acid (PFOA), Perfluorooctanesulfonic acid (PFOS), Perfluorononanoic acid (PFNA), Perfluorodecanoic acid (PFDA), Perfluoroundecanoic acid (PFUnA), Perfluorododecanoic acid (PFDoA), Perfluorotridecanoic acid (PFTTrDA), Perfluorotetradecanoic acid (PFTeDA), Methylperfluorooctane sulfonamide (MeFOSA) & Ethylperfluorooctane sulfonamide (EtFOSA)</i>
MLP502	06-MW33-0420	<i>Perfluorobutanesulfonic acid (PFBS), Perfluorohexanoic acid (PFHxA), Perfluorohexanesulfonic acid (PFHxS), Perfluoroheptanoic acid (PFHpA), Perfluorooctanoic acid (PFOA), Perfluorooctanesulfonic acid (PFOS), Perfluorononanoic acid (PFNA), Perfluorodecanoic acid (PFDA), Perfluoroundecanoic acid (PFUnA), Perfluorododecanoic acid (PFDoA), Perfluorotridecanoic acid (PFTTrDA), Perfluorotetradecanoic acid (PFTeDA), Methylperfluorooctane sulfonamide (MeFOSA) & Ethylperfluorooctane sulfonamide (EtFOSA)</i>
MLP503	06-MW34-0420	<i>Perfluorooctanesulfonic acid (PFOS)</i>
MLP504	06-MW35-0420	<i>Perfluorohexanesulfonic acid (PFHxS) & Perfluorooctanesulfonic acid (PFOS)</i>

Detection limits were adjusted accordingly.

Sample Re-Analysis

Sample MLP496 (06-MW25-0420) was re-extracted and re-analyzed for all target parameters on QC batch 6692764 (2020/04/23) to confirm the original results. Results were confirmed and reported from the re-analyzed QC batch.

Manual Integrations

Due to poor automated integration, manual integration was performed for selected analytes in the following sample(s):

BV Sample ID	Client Sample ID	Parameter	Manual Integration (MI) Code
ICAL STD 1	N/A	Perfluorohexanesulfonic acid (PFHxS) & Perfluorooctanesulfonic acid (PFOS)	MI-c
ISC	N/A	Perfluorohexanesulfonic acid (PFHxS)	MI-c
Matrix Spike	N/A	Perfluorooctanoic acid (PFOA)	MI-f
Matrix Spike Dup	N/A	Perfluorooctanoic acid (PFOA)	MI-f
MLP496	06-MW25-0420	Perfluorooctanoic acid (PFOA)	MI-f
MLP497	06-MW26-0420	Perfluorooctanoic acid (PFOA)	MI-f
MLP498	06-MW30-0420	Perfluorooctanoic acid (PFOA)	MI-f
MLP499	06-MW31-0420	Perfluorooctanoic acid (PFOA)	MI-f
MLP500	06-MW32-0420	Perfluorooctanoic acid (PFOA)	MI-f
MLP501	06-MW32-0420 DUP	Perfluorooctanoic acid (PFOA)	MI-f
MLP502	06-MW33-0420	Perfluorooctanoic acid (PFOA)	MI-f
MLP503	06-MW34-0420	Perfluorooctanoic acid (PFOA)	MI-f
MLP504	06-MW35-0420	Perfluorooctanoic acid (PFOA)	MI-f
MLP505	06-MW36-0420	Perfluorooctanoic acid (PFOA)	MI-f

MI-a: Peak missed by automated integration due to a slight shift in retention time.

MI-b: Misidentification of peak by the integration software.

MI-c: Noisy baseline resulting in the automated integration of negative peak(s).

MI-d: Noisy baseline resulting in poor automated baseline construction and the integration of area (noise) not associated with recognized analyte peak area.

MI-e: Matrix interference peak partially co-eluting with analyte peak and area incorporated by automated integration.

MI-f: Integration of PFAS branched isomer peak(s) not incorporated by automated integration. All identified branched and linear isomer peaks integrated and areas summed.

Extracted Internal Standard Analytes

The extracted internal standard analyte ¹³C₂-Perfluorotetradecanoic acid (¹³C₂-PFTeDA) is used to quantify native Perfluorotridecanoic acid (PFTTrDA) & Perfluorotetradecanoic acid (PFTeDA). The recovery observed for this extracted internal standard analyte was below the defined lower control limit (LCL) for the following sample:

MLP498 06-MW30-0420

This recovery was confirmed by re-extraction and re-analysis of the sample on QC batch 6692764 (2020/04/23).

The extracted internal standard analytes D₃-Methylperfluorooctanesulfonamide (D₃-MeFOSA) & D₅-Ethylperfluorooctanesulfonamide (D₅-EtFOSA) are used to quantify native Methylperfluorooctane sulfonamide (MeFOSA) & Ethylperfluorooctane sulfonamide (EtFOSA) respectively. The recoveries observed for selected extracted internal standard analytes were below the defined lower control limit (LCL) for the following samples:

MLP502 06-MW33-0420 (D₃-MeFOSA)

MLP506 QCFB-0420 (D₃-MeFOSA & D₅-EtFOSA)

These samples were re-extracted and re-analyzed for the associated native analytes on QC batch 6692764 (2020/04/23). Acceptable extracted internal standard analyte recoveries were obtained on re-analysis.

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).

Precision and Bias

Water – Standard Analysis

Analytes	Abbreviation	Aqueous (µg/L)				
		Average Concentration (n=9) (\bar{a})	Spike Concentration (µg/L) (T)	Bias (%) (B)	Standard Deviation (σ)	Precision (%)
Perfluorohexanoic acid	PFHxA	0.019	0.02	-5.6	0.0016	8.2
Perfluoroheptanoic acid	PFHpA	0.019	0.02	-6.2	0.00087	4.4
Perfluorooctanoic acid	PFOA	0.020	0.02	0.87	0.0012	6.1
Perfluorononanoic acid	PFNA	0.020	0.02	-0.0056	0.0019	9.7
Perfluorodecanoic acid	PFDA	0.021	0.02	3.6	0.0011	5.4
Perfluoroundecanoic acid	PFUnA	0.019	0.02	-3.5	0.0017	8.6
Perfluorododecanoic acid	PFDoA	0.019	0.02	-3.6	0.0012	6.1
Perfluorotridecanoic acid	PFTTrDA	0.021	0.02	3.0	0.0012	5.8
Perfluorotetradecanoic acid	PFTeDA	0.021	0.02	7.0	0.0016	8.2
Perfluorobutane sulfonic acid	PFBS	0.018	0.02	-9.0	0.0013	6.7
Perfluorohexane sulfonic acid	PFHxS	0.019	0.02	-3.5	0.0014	6.8
Perfluorooctane sulfonic acid	PFOS	0.020	0.02	-0.58	0.0021	10
Methylperfluorooctanesulfonamide	MeFOSA	0.040	0.04	-0.65	0.0026	6.5
Ethylperfluorooctanesulfonamide	EtFOSA	0.038	0.04	-4.4	0.0017	4.3

Bias is expressed as a percentage of the value of the standard: $\%B = [100 (\bar{a} - T)] / T$

Precision is expressed as a percentage of the spiked value: $\%RSD = (\sigma/T)*100$

Adam Robinson

Adam.Robinson@bvlabs.com

Office 905 817 5700, ext. 7064057

PROJECT NARRATIVE

Bureau Veritas

Client Project #: TREASURE ISLAND, IR SITE 6



Client: EMAX Laboratories Inc

Client Project: TREASURE ISLAND, IR SITE 6

I. SAMPLE RECEIPT/ANALYSIS

a) Sample Listing

Bureau Veritas ID	Client Sample ID	Date Sampled	Date Received	Date Prepped	Date Run	Initial Calibration
PFAS in water by SPE/LC-MS/MS						
MLP496	06-MW25-0420	2020/04/08	2020/04/16	2020/04/22	2020/04/23	2020/04/23
MLP497	06-MW26-0420	2020/04/08	2020/04/16	2020/04/21	2020/04/22	2020/04/21
MLP498	06-MW30-0420	2020/04/08	2020/04/16	2020/04/21	2020/04/22	2020/04/21 & 2020/04/23
MLP499	06-MW31-0420	2020/04/08	2020/04/16	2020/04/21	2020/04/22	2020/04/21
MLP500	06-MW32-0420	2020/04/08	2020/04/16	2020/04/21	2020/04/22	2020/04/21
MLP501	06-MW32-0420 DUP	2020/04/08	2020/04/16	2020/04/21	2020/04/22	2020/04/21
MLP502	06-MW33-0420	2020/04/08	2020/04/16	2020/04/21	2020/04/22	2020/04/21 & 2020/04/23
MLP503	06-MW34-0420	2020/04/08	2020/04/16	2020/04/21	2020/04/22	2020/04/21
MLP504	06-MW35-0420	2020/04/08	2020/04/16	2020/04/21	2020/04/22	2020/04/21
MLP505	06-MW36-0420	2020/04/08	2020/04/16	2020/04/21	2020/04/22	2020/04/21
MLP506	QCFB-0420	2020/04/08	2020/04/16	2020/04/22	2020/04/23	2020/04/21 & 2020/04/23

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.

Project Manager- Site Assessment
and Remediation/Ultra Trace

2020/05/06

Date



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2. Sample Management Records

**Bureau Veritas Canada (2019)
Inc.
6740 Campobello Rd.
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.bvlabs.com**



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2.1 Sample Custody

**Bureau Veritas Canada (2019)
Inc.
6740 Campobello Rd.
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.bvlabs.com**

CHAIN OF CUSTODY

EMAX LABORATORIES, INC. 1835 W. 205th Street, Torrance, CA 90501 Tel #: 310-618-8889 FAX#: 310-618-0818 Email: info@emaxlabs.com		PO NUMBER: 20D083 (1) EMAX CONTROL NO.: 20D083 (1) PROJECT CODE: CDM1802	
CUSTOMER: NOREAS PROJECT: TREASURE ISLAND, IR SITE 6 COORDINATOR: _____ TEL: _____ FAX: _____ EMAIL: _____ SEND REPORT TO: RICHARD BEAUVIL (RBEAUVIL@EMAXLABS.COM) COMPANY: EMAX ADDRESS: _____ EMAX PM: _____		ANALYSIS REQUIRED: <input type="checkbox"/> Rush 24_hrs. <input type="checkbox"/> Rush 48_hrs. <input type="checkbox"/> Rush 72_hrs. <input type="checkbox"/> 7 days <input type="checkbox"/> 14 days <input type="checkbox"/> 21 days <input type="checkbox"/> 30 days <input checked="" type="checkbox"/> 30 days STANDARD	
MATRIX CODE: DW=Drinking Water GW=Ground Water WP=Well Water SD=Solid Waste, Sludge SS=Soil Sediment WP=Vapes PPs/Pur Products AP=Air D=WATER		PRESERVATIVE CODE: IC=Ice HC=HCl RW=RNH3 SH=NH4OH SF=Na2S2O3 ZA/Zac Acetate HS=H2SO4	
CONTAINER: NO. SIZE TYPE 1 125 ML POLY O 2 125 ML POLY O 3 125 ML POLY O 4 125 ML POLY O 5 125 ML POLY O 6 125 ML POLY O 7 125 ML POLY O 8 125 ML POLY O 9 125 ML POLY O 0 125 ML POLY O		PRESERVATIVE CODE: 20D083-01 20D083-02 20D083-03 MSMSD 20D083-04 20D083-05 20D083-06 20D083-07 20D083-08 20D083-09 20D083-10	
SAMPLING: DATE TIME 4/8/2020 13:55 4/8/2020 11:49 4/8/2020 12:58 4/8/2020 14:30 4/8/2020 9:41 4/8/2020 9:46 4/8/2020 9:04 4/8/2020 10:56 4/8/2020 10:16 4/8/2020 8:22		COMMENTS: X X X X X X X X X X	
DATA PACKAGE: LEVEL 4 DSD QSM 5.3 EDD: NEDD/EDF		Temp. (C): 0.5 / 0.6 MAXXAM/BVLABS (PEDEX DEPOT): 299 Cayuga Rd Cheektowaga, NY 14225 USA Attn: Stephanie Pollen 800-668-0639	
SAMPLER: RELINQUISHED BY: <i>Christina Lee</i> Date: 4/8/20 15:05 RECEIVED BY: <i>STANISHA PATEL</i> Date: 4/8/20 12:45		COURIER/AIRBILL: RECEIVED BY: <i>STANISHA PATEL</i> Date: 4/8/20 12:45	

NOTICE: Turnaround time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepancies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associated with sample disposal. Samples shall be disposed of as soon as practicable (prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be \$5.00 per sample. EMAX will return hazardous air

16-Apr-20 12:45

Stephanie Pollen
 C095296

URE ENV-1370



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3. Analytical Results

**Bureau Veritas Canada (2019)
Inc.
6740 Campobello Rd.
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.bvlabs.com**



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3.1 Summary Report

**Bureau Veritas Canada (2019)
Inc.
6740 Campobello Rd.
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.bvlabs.com**



Your P.O. #: 20D083
 Your Project #: TREASURE ISLAND, IR SITE 6
 Site Location: SITE 6(T10000006825)
 Your C.O.C. #: 20D083

Attention: Richard Beauvil

EMAX Laboratories Inc
 1835 W 205th St
 Torrance, CA
 USA 90501

Report Date: 2020/04/30
 Report #: R6160351
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C095296

Received: 2020/04/16, 12:45

Sample Matrix: Water
 # Samples Received: 11

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
PFAS in water by SPE/LC-MS/MS (1)	10	2020/04/21	2020/04/22	CAM SOP-00894	EPA 537 m
PFAS in water by SPE/LC-MS/MS (1)	1	2020/04/22	2020/04/23	CAM SOP-00894	EPA 537 m

Remarks:

Bureau Veritas Laboratories are accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by BV Labs are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in BV Labs profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and BV Labs 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. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

BV Labs liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. BV Labs 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 BV Labs, unless otherwise agreed in writing. BV Labs is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

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. When sampling is not conducted by BV Labs, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Per- and polyfluoroalkyl substances (PFAS) identified as surrogates on the certificate of analysis represent the extracted internal standard.



Your P.O. #: 20D083
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Attention: Richard Beauvil

EMAX Laboratories Inc
1835 W 205th St
Torrance, CA
USA 90501

Report Date: 2020/04/30
Report #: R6160351
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C095296

Received: 2020/04/16, 12:45

Encryption Key

Stephanie Pollen
Project Manager
30 Apr 2020 17:35:50

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Stephanie Pollen, Project Manager
Email: Stephanie.Pollen@bvlabs.com
Phone# (905)817-5830

=====
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



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BV Labs Job #: C095296
Report Date: 2020/04/30

EMAX Laboratories Inc
Client Project #: TREASURE ISLAND, IR SITE 6
Site Location: SITE 6(T10000006825)
Your P.O. #: 20D083

RESULTS OF ANALYSES OF WATER

BV Labs ID		MLP496						MLP497				
Sampling Date		2020/04/08 13:55						2020/04/08 11:49				
COC Number		20D083						20D083				
	UNITS	06-MW25-0420	DL	LOD	LOQ	QC Batch	06-MW26-0420	DL	LOD	LOQ	QC Batch	

Miscellaneous Parameters											
Perfluorohexanoic acid (PFHxA)	ug/L	1.2 (1)	0.064	0.15	0.20	6692764	0.24	0.0064	0.015	0.020	6690634
Perfluoroheptanoic acid (PFHpA)	ug/L	0.33	0.0071	0.015	0.020	6692764	0.15	0.0071	0.015	0.020	6690634
Perfluorooctanoic acid (PFOA)	ug/L	1.1 (1)	0.074	0.15	0.20	6692764	0.31	0.0074	0.015	0.020	6690634
Perfluorononanoic acid (PFNA)	ug/L	0.055	0.0049	0.010	0.020	6692764	0.0073 J	0.0049	0.010	0.020	6690634
Perfluorodecanoic acid (PFDA)	ug/L	0.011 J	0.0041	0.010	0.020	6692764	0.010 U	0.0041	0.010	0.020	6690634
Perfluoroundecanoic acid (PFUnA)	ug/L	0.010 U	0.0043	0.010	0.020	6692764	0.010 U	0.0043	0.010	0.020	6690634
Perfluorododecanoic acid (PFDoA)	ug/L	0.015 U	0.0068	0.015	0.020	6692764	0.015 U	0.0068	0.015	0.020	6690634
Perfluorotridecanoic acid (PFTRDA)	ug/L	0.015 U	0.0069	0.015	0.020	6692764	0.015 U	0.0069	0.015	0.020	6690634
Perfluorotetradecanoic acid (PFTEDA)	ug/L	0.015 U	0.0067	0.015	0.020	6692764	0.015 U	0.0067	0.015	0.020	6690634
Perfluorobutanesulfonic acid (PFBS)	ug/L	0.074	0.0051	0.015	0.020	6692764	0.020 J	0.0051	0.015	0.020	6690634
Perfluorohexanesulfonic acid (PFHxS)	ug/L	1.4 (1)	0.052	0.15	0.20	6692764	0.53	0.0052	0.015	0.020	6690634
Perfluorooctanesulfonic acid (PFOS)	ug/L	9.9 (1)	0.052	0.15	0.20	6692764	2.2 (2)	0.052	0.15	0.20	6690634
EtFOSA	ug/L	0.019 U	0.0090	0.019	0.040	6692764	0.019 U	0.0090	0.019	0.040	6690634
MeFOSA	ug/L	0.010 U	0.0035	0.010	0.040	6692764	0.010 U	0.0035	0.010	0.040	6690634

Surrogate Recovery (%)											
13C2-Perfluorodecanoic acid	%	98				6692764	99				6690634
13C2-Perfluorododecanoic acid	%	89				6692764	93				6690634
13C2-Perfluorohexanoic acid	%	110				6692764	105				6690634
13C2-perfluorotetradecanoic acid	%	83				6692764	91				6690634
13C2-Perfluoroundecanoic acid	%	95				6692764	97				6690634
13C3-Perfluorobutanesulfonic acid	%	103				6692764	101				6690634
13C4-Perfluoroheptanoic acid	%	101				6692764	105				6690634
13C4-Perfluorooctanesulfonic acid	%	103				6692764	96				6690634
13C4-Perfluorooctanoic acid	%	107				6692764	101				6690634
13C5-Perfluorononanoic acid	%	102				6692764	102				6690634
18O2-Perfluorohexanesulfonic acid	%	109				6692764	101				6690634
D3-MeFOSA	%	72				6692764	68				6690634

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



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BV Labs Job #: C095296
Report Date: 2020/04/30

EMAX Laboratories Inc
Client Project #: TREASURE ISLAND, IR SITE 6
Site Location: SITE 6(T10000006825)
Your P.O. #: 20D083

RESULTS OF ANALYSES OF WATER

BV Labs ID		MLP496					MLP497				
Sampling Date		2020/04/08 13:55					2020/04/08 11:49				
COC Number		20D083					20D083				
	UNITS	06-MW25-0420	DL	LOD	LOQ	QC Batch	06-MW26-0420	DL	LOD	LOQ	QC Batch
D5-EtFOSA	%	72				6692764	70				6690634

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



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VERITAS

BV Labs Job #: C095296
Report Date: 2020/04/30

EMAX Laboratories Inc
Client Project #: TREASURE ISLAND, IR SITE 6
Site Location: SITE 6(T10000006825)
Your P.O. #: 20D083

RESULTS OF ANALYSES OF WATER

BV Labs ID		MLP498		MLP499				
Sampling Date		2020/04/08 12:58		2020/04/08 14:30				
COC Number		20D083		20D083				
	UNITS	06-MW30-0420	QC Batch	06-MW31-0420	DL	LOD	LOQ	QC Batch
Miscellaneous Parameters								
Perfluorohexanoic acid (PFHxA)	ug/L	0.0067 J	6690634	0.42	0.0064	0.015	0.020	6690634
Perfluoroheptanoic acid (PFHpA)	ug/L	0.015 U	6690634	0.33	0.0071	0.015	0.020	6690634
Perfluorooctanoic acid (PFOA)	ug/L	0.026	6690634	0.16	0.0074	0.015	0.020	6690634
Perfluorononanoic acid (PFNA)	ug/L	0.010 U	6690634	0.015 J	0.0049	0.010	0.020	6690634
Perfluorodecanoic acid (PFDA)	ug/L	0.010 U	6690634	0.010 U	0.0041	0.010	0.020	6690634
Perfluoroundecanoic acid (PFUnA)	ug/L	0.010 U	6690634	0.010 U	0.0043	0.010	0.020	6690634
Perfluorododecanoic acid (PFDoA)	ug/L	0.015 U	6690634	0.015 U	0.0068	0.015	0.020	6690634
Perfluorotridecanoic acid (PFTRDA)	ug/L	0.015 U	6692764	0.015 U	0.0069	0.015	0.020	6690634
Perfluorotetradecanoic acid (PFTEDA)	ug/L	0.015 U	6692764	0.015 U	0.0067	0.015	0.020	6690634
Perfluorobutanesulfonic acid (PFBS)	ug/L	0.015 U	6690634	0.020	0.0051	0.015	0.020	6690634
Perfluorohexanesulfonic acid (PFHxS)	ug/L	0.065	6690634	0.69	0.0052	0.015	0.020	6690634
Perfluorooctanesulfonic acid (PFOS)	ug/L	0.15	6690634	0.39	0.0052	0.015	0.020	6690634
EtFOSA	ug/L	0.019 U	6690634	0.019 U	0.0090	0.019	0.040	6690634
MeFOSA	ug/L	0.010 U	6690634	0.010 U	0.0035	0.010	0.040	6690634
Surrogate Recovery (%)								
13C2-Perfluorodecanoic acid	%	102	6690634	96				6690634
13C2-Perfluorododecanoic acid	%	62	6690634	91				6690634
13C2-Perfluoroheptanoic acid	%	110	6690634	97				6690634
13C2-perfluorotetradecanoic acid	%	46 (1)	6692764	90				6690634
13C2-Perfluoroundecanoic acid	%	92	6690634	94				6690634
13C3-Perfluorobutanesulfonic acid	%	109	6690634	94				6690634
13C4-Perfluoroheptanoic acid	%	104	6690634	99				6690634
13C4-Perfluorooctanesulfonic acid	%	82	6690634	96				6690634
13C4-Perfluorooctanoic acid	%	60	6690634	96				6690634
13C5-Perfluorononanoic acid	%	67	6690634	100				6690634
18O2-Perfluorohexanesulfonic acid	%	106	6690634	96				6690634
DL = Detection Limit LOD = Limit of Detection LOQ = Limit of Quantitation QC Batch = Quality Control Batch N/A = Not Applicable (1) Extracted internal standard analyte recovery was below the defined lower control limit (LCL). Laboratory spiked water resulted in satisfactory recovery of the extracted internal standard analyte. When considered together, these QC data suggest that matrix interferences may be increasing the variability of the associated native analyte result (Perfluorotetradecanoic acid - PFTEDA). Results were confirmed by re-analysis.								



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BV Labs Job #: C095296

Report Date: 2020/04/30

EMAX Laboratories Inc

Client Project #: TREASURE ISLAND, IR SITE 6

Site Location: SITE 6(T10000006825)

Your P.O. #: 20D083

RESULTS OF ANALYSES OF WATER

BV Labs ID		MLP498		MLP499				
Sampling Date		2020/04/08 12:58		2020/04/08 14:30				
COC Number		20D083		20D083				
	UNITS	06-MW30-0420	QC Batch	06-MW31-0420	DL	LOD	LOQ	QC Batch
D3-MeFOSA	%	55	6690634	69				6690634
D5-EtFOSA	%	53	6690634	67				6690634

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



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BV Labs Job #: C095296
Report Date: 2020/04/30

EMAX Laboratories Inc
Client Project #: TREASURE ISLAND, IR SITE 6
Site Location: SITE 6(T10000006825)
Your P.O. #: 20D083

RESULTS OF ANALYSES OF WATER

BV Labs ID		MLP500	MLP501				
Sampling Date		2020/04/08 09:41	2020/04/08 09:46				
COC Number		20D083	20D083				
	UNITS	06-MW32-0420	06-MW32-0420 DUP	DL	LOD	LOQ	QC Batch
Miscellaneous Parameters							
Perfluorohexanoic acid (PFHxA)	ug/L	2.8 (1)	3.0 (1)	0.032	0.075	0.10	6690634
Perfluoroheptanoic acid (PFHpA)	ug/L	1.7 (1)	1.8 (1)	0.036	0.075	0.10	6690634
Perfluorooctanoic acid (PFOA)	ug/L	2.0 (1)	2.1 (1)	0.037	0.075	0.10	6690634
Perfluorononanoic acid (PFNA)	ug/L	0.11 (1)	0.12 (1)	0.025	0.050	0.10	6690634
Perfluorodecanoic acid (PFDA)	ug/L	0.050 U (1)	0.050 U (1)	0.021	0.050	0.10	6690634
Perfluoroundecanoic acid (PFUnA)	ug/L	0.050 U (1)	0.050 U (1)	0.022	0.050	0.10	6690634
Perfluorododecanoic acid (PFDoA)	ug/L	0.075 U (1)	0.075 U (1)	0.034	0.075	0.10	6690634
Perfluorotridecanoic acid (PFTRDA)	ug/L	0.075 U (1)	0.075 U (1)	0.035	0.075	0.10	6690634
Perfluorotetradecanoic acid (PFTEDA)	ug/L	0.075 U (1)	0.075 U (1)	0.034	0.075	0.10	6690634
Perfluorobutanesulfonic acid (PFBS)	ug/L	0.15 (1)	0.17 (1)	0.026	0.075	0.10	6690634
Perfluorohexanesulfonic acid (PFHxS)	ug/L	9.2 (2)	8.1 (2)	0.26	0.75	1.0	6690634
Perfluorooctanesulfonic acid (PFOS)	ug/L	30 (2)	27 (2)	0.26	0.75	1.0	6690634
EtFOSA	ug/L	0.095 U (1)	0.095 U (1)	0.045	0.095	0.20	6690634
MeFOSA	ug/L	0.050 U (1)	0.050 U (1)	0.018	0.050	0.20	6690634
Surrogate Recovery (%)							
13C2-Perfluorodecanoic acid	%	103	105				6690634
13C2-Perfluorododecanoic acid	%	98	97				6690634
13C2-Perfluorohexanoic acid	%	110	110				6690634
13C2-perfluorotetradecanoic acid	%	95	95				6690634
13C2-Perfluoroundecanoic acid	%	101	105				6690634
13C3-Perfluorobutanesulfonic acid	%	109	109				6690634
13C4-Perfluoroheptanoic acid	%	107	108				6690634
13C4-Perfluorooctanesulfonic acid	%	97	102				6690634
13C4-Perfluorooctanoic acid	%	104	106				6690634
13C5-Perfluorononanoic acid	%	108	109				6690634
18O2-Perfluorohexanesulfonic acid	%	107	115				6690634
D3-MeFOSA	%	60	57				6690634
DL = Detection Limit LOD = Limit of Detection LOQ = Limit of Quantitation QC Batch = Quality Control Batch N/A = Not Applicable (1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (5x). (2) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (50x).							



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BV Labs Job #: C095296
Report Date: 2020/04/30

EMAX Laboratories Inc
Client Project #: TREASURE ISLAND, IR SITE 6
Site Location: SITE 6(T10000006825)
Your P.O. #: 20D083

RESULTS OF ANALYSES OF WATER

BV Labs ID		MLP500	MLP501				
Sampling Date		2020/04/08 09:41	2020/04/08 09:46				
COC Number		20D083	20D083				
	UNITS	06-MW32-0420	06-MW32-0420 DUP	DL	LOD	LOQ	QC Batch
D5-EtFOSA	%	61	59				6690634
DL = Detection Limit LOD = Limit of Detection LOQ = Limit of Quantitation QC Batch = Quality Control Batch N/A = Not Applicable							



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BV Labs Job #: C095296
Report Date: 2020/04/30

EMAX Laboratories Inc
Client Project #: TREASURE ISLAND, IR SITE 6
Site Location: SITE 6(T10000006825)
Your P.O. #: 20D083

RESULTS OF ANALYSES OF WATER

BV Labs ID		MLP502						MLP503				
Sampling Date		2020/04/08 09:04						2020/04/08 10:56				
COC Number		20D083						20D083				
	UNITS	06-MW33-0420	DL	LOD	LOQ	QC Batch	06-MW34-0420	DL	LOD	LOQ	QC Batch	

Miscellaneous Parameters											
Perfluorohexanoic acid (PFHxA)	ug/L	1.8 (1)	0.013	0.030	0.040	6690634	0.15	0.0064	0.015	0.020	6690634
Perfluoroheptanoic acid (PFHpA)	ug/L	0.87 (1)	0.014	0.030	0.040	6690634	0.054	0.0071	0.015	0.020	6690634
Perfluorooctanoic acid (PFOA)	ug/L	2.0 (1)	0.015	0.030	0.040	6690634	0.10	0.0074	0.015	0.020	6690634
Perfluorononanoic acid (PFNA)	ug/L	0.059 (1)	0.0098	0.020	0.040	6690634	0.010 U	0.0049	0.010	0.020	6690634
Perfluorodecanoic acid (PFDA)	ug/L	0.020 U (1)	0.0082	0.020	0.040	6690634	0.010 U	0.0041	0.010	0.020	6690634
Perfluoroundecanoic acid (PFUnA)	ug/L	0.020 U (1)	0.0086	0.020	0.040	6690634	0.010 U	0.0043	0.010	0.020	6690634
Perfluorododecanoic acid (PFDoA)	ug/L	0.030 U (1)	0.014	0.030	0.040	6690634	0.015 U	0.0068	0.015	0.020	6690634
Perfluorotridecanoic acid (PFTRDA)	ug/L	0.030 U (1)	0.014	0.030	0.040	6690634	0.015 U	0.0069	0.015	0.020	6690634
Perfluorotetradecanoic acid (PFTEDA)	ug/L	0.030 U (1)	0.013	0.030	0.040	6690634	0.015 U	0.0067	0.015	0.020	6690634
Perfluorobutanesulfonic acid (PFBS)	ug/L	0.12 (1)	0.010	0.030	0.040	6690634	0.014 J	0.0051	0.015	0.020	6690634
Perfluorohexanesulfonic acid (PFHxS)	ug/L	2.9 (2)	0.10	0.30	0.40	6690634	0.46	0.0052	0.015	0.020	6690634
Perfluorooctanesulfonic acid (PFOS)	ug/L	11 (2)	0.10	0.30	0.40	6690634	1.8 (3)	0.052	0.15	0.20	6690634
EtFOSA	ug/L	0.038 U (1)	0.018	0.038	0.080	6690634	0.019 U	0.0090	0.019	0.040	6690634
MeFOSA	ug/L	0.010 U	0.0035	0.010	0.040	6692764	0.010 U	0.0035	0.010	0.040	6690634

Surrogate Recovery (%)											
13C2-Perfluorodecanoic acid	%	90				6690634	101				6690634
13C2-Perfluorododecanoic acid	%	84				6690634	96				6690634
13C2-Perfluorohexanoic acid	%	99				6690634	110				6690634
13C2-perfluorotetradecanoic acid	%	82				6690634	94				6690634
13C2-Perfluoroundecanoic acid	%	87				6690634	97				6690634
13C3-Perfluorobutanesulfonic acid	%	97				6690634	107				6690634
13C4-Perfluoroheptanoic acid	%	99				6690634	108				6690634
13C4-Perfluorooctanesulfonic acid	%	104				6690634	98				6690634
13C4-Perfluorooctanoic acid	%	94				6690634	104				6690634
13C5-Perfluorononanoic acid	%	97				6690634	104				6690634
18O2-Perfluorohexanesulfonic acid	%	111				6690634	107				6690634

DL = Detection Limit
 LOD = Limit of Detection
 LOQ = Limit of Quantitation
 QC Batch = Quality Control Batch
 N/A = Not Applicable
 (1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (2x).
 (2) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (20x).
 (3) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x).



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BV Labs Job #: C095296
Report Date: 2020/04/30

EMAX Laboratories Inc
Client Project #: TREASURE ISLAND, IR SITE 6
Site Location: SITE 6(T10000006825)
Your P.O. #: 20D083

RESULTS OF ANALYSES OF WATER

BV Labs ID		MLP502					MLP503				
Sampling Date		2020/04/08 09:04					2020/04/08 10:56				
COC Number		20D083					20D083				
	UNITS	06-MW33-0420	DL	LOD	LOQ	QC Batch	06-MW34-0420	DL	LOD	LOQ	QC Batch
D3-MeFOSA	%	70				6692764	71				6690634
D5-EtFOSA	%	53				6690634	73				6690634

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



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VERITAS

BV Labs Job #: C095296
Report Date: 2020/04/30

EMAX Laboratories Inc
Client Project #: TREASURE ISLAND, IR SITE 6
Site Location: SITE 6(T10000006825)
Your P.O. #: 20D083

RESULTS OF ANALYSES OF WATER

BV Labs ID		MLP504				MLP505				
Sampling Date		2020/04/08 10:16				2020/04/08 08:22				
COC Number		20D083				20D083				
	UNITS	06-MW35-0420	DL	LOD	LOQ	06-MW36-0420	DL	LOD	LOQ	QC Batch
Miscellaneous Parameters										
Perfluorohexanoic acid (PFHxA)	ug/L	0.29	0.0064	0.015	0.020	0.16	0.0064	0.015	0.020	6690634
Perfluoroheptanoic acid (PFHpA)	ug/L	0.16	0.0071	0.015	0.020	0.078	0.0071	0.015	0.020	6690634
Perfluorooctanoic acid (PFOA)	ug/L	0.21	0.0074	0.015	0.020	0.081	0.0074	0.015	0.020	6690634
Perfluorononanoic acid (PFNA)	ug/L	0.026	0.0049	0.010	0.020	0.010 U	0.0049	0.010	0.020	6690634
Perfluorodecanoic acid (PFDA)	ug/L	0.010 U	0.0041	0.010	0.020	0.010 U	0.0041	0.010	0.020	6690634
Perfluoroundecanoic acid (PFUnA)	ug/L	0.010 U	0.0043	0.010	0.020	0.010 U	0.0043	0.010	0.020	6690634
Perfluorododecanoic acid (PFDoA)	ug/L	0.015 U	0.0068	0.015	0.020	0.015 U	0.0068	0.015	0.020	6690634
Perfluorotridecanoic acid (PFTRDA)	ug/L	0.015 U	0.0069	0.015	0.020	0.015 U	0.0069	0.015	0.020	6690634
Perfluorotetradecanoic acid (PFTEDA)	ug/L	0.015 U	0.0067	0.015	0.020	0.015 U	0.0067	0.015	0.020	6690634
Perfluorobutanesulfonic acid (PFBS)	ug/L	0.026	0.0051	0.015	0.020	0.015 J	0.0051	0.015	0.020	6690634
Perfluorohexanesulfonic acid (PFHxS)	ug/L	1.2 (1)	0.052	0.15	0.20	0.58	0.0052	0.015	0.020	6690634
Perfluorooctanesulfonic acid (PFOS)	ug/L	4.1 (1)	0.052	0.15	0.20	0.77	0.0052	0.015	0.020	6690634
EtFOSA	ug/L	0.019 U	0.0090	0.019	0.040	0.019 U	0.0090	0.019	0.040	6690634
MeFOSA	ug/L	0.010 U	0.0035	0.010	0.040	0.010 U	0.0035	0.010	0.040	6690634
Surrogate Recovery (%)										
13C2-Perfluorodecanoic acid	%	94				106				6690634
13C2-Perfluorododecanoic acid	%	90				98				6690634
13C2-Perfluorohexanoic acid	%	100				110				6690634
13C2-perfluorotetradecanoic acid	%	90				96				6690634
13C2-Perfluoroundecanoic acid	%	94				105				6690634
13C3-Perfluorobutanesulfonic acid	%	98				107				6690634
13C4-Perfluoroheptanoic acid	%	100				108				6690634
13C4-Perfluorooctanesulfonic acid	%	102				102				6690634
13C4-Perfluorooctanoic acid	%	95				107				6690634
13C5-Perfluorononanoic acid	%	97				108				6690634
18O2-Perfluorohexanesulfonic acid	%	113				110				6690634
D3-MeFOSA	%	64				74				6690634
D5-EtFOSA	%	65				74				6690634
DL = Detection Limit LOD = Limit of Detection LOQ = Limit of Quantitation QC Batch = Quality Control Batch N/A = Not Applicable (1) Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was adjusted accordingly (10x).										



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BV Labs Job #: C095296
Report Date: 2020/04/30

EMAX Laboratories Inc
Client Project #: TREASURE ISLAND, IR SITE 6
Site Location: SITE 6(T10000006825)
Your P.O. #: 20D083

RESULTS OF ANALYSES OF WATER

BV Labs ID		MLP506				
Sampling Date		2020/04/08 14:45				
COC Number		20D083				
	UNITS	QCFB-0420	DL	LOD	LOQ	QC Batch
Miscellaneous Parameters						
Perfluorohexanoic acid (PFHxA)	ug/L	0.015 U	0.0064	0.015	0.020	6690634
Perfluoroheptanoic acid (PFHpA)	ug/L	0.015 U	0.0071	0.015	0.020	6690634
Perfluorooctanoic acid (PFOA)	ug/L	0.015 U	0.0074	0.015	0.020	6690634
Perfluorononanoic acid (PFNA)	ug/L	0.010 U	0.0049	0.010	0.020	6690634
Perfluorodecanoic acid (PFDA)	ug/L	0.010 U	0.0041	0.010	0.020	6690634
Perfluoroundecanoic acid (PFUnA)	ug/L	0.010 U	0.0043	0.010	0.020	6690634
Perfluorododecanoic acid (PFDoA)	ug/L	0.015 U	0.0068	0.015	0.020	6690634
Perfluorotridecanoic acid (PFTRDA)	ug/L	0.015 U	0.0069	0.015	0.020	6690634
Perfluorotetradecanoic acid (PFTEDA)	ug/L	0.015 U	0.0067	0.015	0.020	6690634
Perfluorobutanesulfonic acid (PFBS)	ug/L	0.015 U	0.0051	0.015	0.020	6690634
Perfluorohexanesulfonic acid (PFHxS)	ug/L	0.015 U	0.0052	0.015	0.020	6690634
Perfluorooctanesulfonic acid (PFOS)	ug/L	0.015 U	0.0052	0.015	0.020	6690634
EtFOSA	ug/L	0.019 U	0.0090	0.019	0.040	6692764
MeFOSA	ug/L	0.010 U	0.0035	0.010	0.040	6692764
Surrogate Recovery (%)						
13C2-Perfluorodecanoic acid	%	100				6690634
13C2-Perfluorododecanoic acid	%	89				6690634
13C2-Perfluorohexanoic acid	%	112				6690634
13C2-perfluorotetradecanoic acid	%	82				6690634
13C2-Perfluoroundecanoic acid	%	95				6690634
13C3-Perfluorobutanesulfonic acid	%	108				6690634
13C4-Perfluoroheptanoic acid	%	112				6690634
13C4-Perfluorooctanesulfonic acid	%	101				6690634
13C4-Perfluorooctanoic acid	%	106				6690634
13C5-Perfluorononanoic acid	%	109				6690634
18O2-Perfluorohexanesulfonic acid	%	110				6690634
D3-MeFOSA	%	75				6692764
D5-EtFOSA	%	75				6692764
DL = Detection Limit LOD = Limit of Detection LOQ = Limit of Quantitation QC Batch = Quality Control Batch N/A = Not Applicable						



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BV Labs Job #: C095296
Report Date: 2020/04/30

EMAX Laboratories Inc
Client Project #: TREASURE ISLAND, IR SITE 6
Site Location: SITE 6(T10000006825)
Your P.O. #: 20D083

TEST SUMMARY

BV Labs ID: MLP496
Sample ID: 06-MW25-0420
Matrix: Water

Collected: 2020/04/08
Shipped:
Received: 2020/04/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFAS in water by SPE/LC-MS/MS	LCMS	6692764	2020/04/22	2020/04/23	Adnan Khan

BV Labs ID: MLP497
Sample ID: 06-MW26-0420
Matrix: Water

Collected: 2020/04/08
Shipped:
Received: 2020/04/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFAS in water by SPE/LC-MS/MS	LCMS	6690634	2020/04/21	2020/04/22	Adnan Khan

BV Labs ID: MLP498
Sample ID: 06-MW30-0420
Matrix: Water

Collected: 2020/04/08
Shipped:
Received: 2020/04/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFAS in water by SPE/LC-MS/MS	LCMS	6690634	2020/04/21	2020/04/22	Adnan Khan

BV Labs ID: MLP499
Sample ID: 06-MW31-0420
Matrix: Water

Collected: 2020/04/08
Shipped:
Received: 2020/04/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFAS in water by SPE/LC-MS/MS	LCMS	6690634	2020/04/21	2020/04/22	Adnan Khan

BV Labs ID: MLP500
Sample ID: 06-MW32-0420
Matrix: Water

Collected: 2020/04/08
Shipped:
Received: 2020/04/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFAS in water by SPE/LC-MS/MS	LCMS	6690634	2020/04/21	2020/04/22	Adnan Khan

BV Labs ID: MLP501
Sample ID: 06-MW32-0420 DUP
Matrix: Water

Collected: 2020/04/08
Shipped:
Received: 2020/04/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFAS in water by SPE/LC-MS/MS	LCMS	6690634	2020/04/21	2020/04/22	Adnan Khan

BV Labs ID: MLP502
Sample ID: 06-MW33-0420
Matrix: Water

Collected: 2020/04/08
Shipped:
Received: 2020/04/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFAS in water by SPE/LC-MS/MS	LCMS	6690634	2020/04/21	2020/04/22	Adnan Khan



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VERITAS

BV Labs Job #: C095296
Report Date: 2020/04/30

EMAX Laboratories Inc
Client Project #: TREASURE ISLAND, IR SITE 6
Site Location: SITE 6(T10000006825)
Your P.O. #: 20D083

TEST SUMMARY

BV Labs ID: MLP503
Sample ID: 06-MW34-0420
Matrix: Water

Collected: 2020/04/08
Shipped:
Received: 2020/04/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFAS in water by SPE/LC-MS/MS	LCMS	6690634	2020/04/21	2020/04/22	Adnan Khan

BV Labs ID: MLP504
Sample ID: 06-MW35-0420
Matrix: Water

Collected: 2020/04/08
Shipped:
Received: 2020/04/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFAS in water by SPE/LC-MS/MS	LCMS	6690634	2020/04/21	2020/04/22	Adnan Khan

BV Labs ID: MLP505
Sample ID: 06-MW36-0420
Matrix: Water

Collected: 2020/04/08
Shipped:
Received: 2020/04/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFAS in water by SPE/LC-MS/MS	LCMS	6690634	2020/04/21	2020/04/22	Adnan Khan

BV Labs ID: MLP506
Sample ID: QCFB-0420
Matrix: Water

Collected: 2020/04/08
Shipped:
Received: 2020/04/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PFAS in water by SPE/LC-MS/MS	LCMS	6692764	2020/04/22	2020/04/23	Adnan Khan



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VERITAS

BV Labs Job #: C095296
Report Date: 2020/04/30

EMAX Laboratories Inc
Client Project #: TREASURE ISLAND, IR SITE 6
Site Location: SITE 6(T10000006825)
Your P.O. #: 20D083

GENERAL COMMENTS

Sample MLP498, PFAS in water by SPE/LC-MS/MS: Test repeated.
Sample MLP502, PFAS in water by SPE/LC-MS/MS: Test repeated.
Sample MLP506, PFAS in water by SPE/LC-MS/MS: Test repeated.

Results relate only to the items tested.



BUREAU
VERITAS

BV Labs Job #: C095296
Report Date: 2020/04/30

EMAX Laboratories Inc
Client Project #: TREASURE ISLAND, IR SITE 6
Site Location: SITE 6(T10000006825)
Your P.O. #: 20D083

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
6690634	AKH	Matrix Spike(MLP498)	13C2-Perfluorodecanoic acid	2020/04/21	101	%	50 - 150		
			13C2-Perfluorododecanoic acid	2020/04/21	58	%	50 - 150		
			13C2-Perfluorohexanoic acid	2020/04/21	102	%	50 - 150		
			13C2-perfluorotetradecanoic acid	2020/04/21	41 (1)	%	50 - 150		
			13C2-Perfluoroundecanoic acid	2020/04/21	84	%	50 - 150		
			13C3-Perfluorobutanesulfonic acid	2020/04/21	104	%	50 - 150		
			13C4-Perfluoroheptanoic acid	2020/04/21	99	%	50 - 150		
			13C4-Perfluorooctanesulfonic acid	2020/04/21	85	%	50 - 150		
			13C4-Perfluorooctanoic acid	2020/04/21	56	%	50 - 150		
			13C5-Perfluorononanoic acid	2020/04/21	64	%	50 - 150		
			18O2-Perfluorohexanesulfonic acid	2020/04/21	106	%	50 - 150		
			D3-MeFOSA	2020/04/21	47 (2)	%	50 - 150		
			D5-EtFOSA	2020/04/21	45 (3)	%	50 - 150		
			Perfluorohexanoic acid (PFHxA)	2020/04/21	117	%	72 - 129		
			Perfluoroheptanoic acid (PFHpA)	2020/04/21	121	%	72 - 130		
			Perfluorooctanoic acid (PFOA)	2020/04/21	113	%	71 - 133		
			Perfluorononanoic acid (PFNA)	2020/04/21	113	%	69 - 130		
			Perfluorodecanoic acid (PFDA)	2020/04/21	116	%	71 - 129		
			Perfluoroundecanoic acid (PFUnA)	2020/04/21	120	%	69 - 133		
			Perfluorododecanoic acid (PFDoA)	2020/04/21	117	%	72 - 134		
			Perfluorotridecanoic acid (PFTRDA)	2020/04/21	127	%	65 - 144		
			Perfluorotetradecanoic acid(PFTEDA)	2020/04/21	109	%	71 - 132		
			Perfluorobutanesulfonic acid (PFBS)	2020/04/21	117	%	72 - 130		
			Perfluorohexanesulfonic acid(PFHxS)	2020/04/21	116	%	68 - 131		
			Perfluorooctanesulfonic acid (PFOS)	2020/04/21	111	%	65 - 140		
			EtFOSA	2020/04/21	116	%	67 - 135		
			MeFOSA	2020/04/21	115	%	68 - 141		
6690634	AKH	Matrix Spike DUP(MLP498)	13C2-Perfluorodecanoic acid	2020/04/21	102	%	50 - 150		
			13C2-Perfluorododecanoic acid	2020/04/21	57	%	50 - 150		
			13C2-Perfluorohexanoic acid	2020/04/21	107	%	50 - 150		
			13C2-perfluorotetradecanoic acid	2020/04/21	36 (1)	%	50 - 150		
			13C2-Perfluoroundecanoic acid	2020/04/21	85	%	50 - 150		
			13C3-Perfluorobutanesulfonic acid	2020/04/21	107	%	50 - 150		
			13C4-Perfluoroheptanoic acid	2020/04/21	104	%	50 - 150		
			13C4-Perfluorooctanesulfonic acid	2020/04/21	81	%	50 - 150		
			13C4-Perfluorooctanoic acid	2020/04/21	58	%	50 - 150		
			13C5-Perfluorononanoic acid	2020/04/21	66	%	50 - 150		
			18O2-Perfluorohexanesulfonic acid	2020/04/21	109	%	50 - 150		
			D3-MeFOSA	2020/04/21	53	%	50 - 150		
			D5-EtFOSA	2020/04/21	48 (3)	%	50 - 150		
			Perfluorohexanoic acid (PFHxA)	2020/04/21	113	%	72 - 129		
			Perfluoroheptanoic acid (PFHpA)	2020/04/21	116	%	72 - 130		
			Perfluorooctanoic acid (PFOA)	2020/04/21	108	%	71 - 133		
			Perfluorononanoic acid (PFNA)	2020/04/21	111	%	69 - 130		
			Perfluorodecanoic acid (PFDA)	2020/04/21	115	%	71 - 129		
			Perfluoroundecanoic acid (PFUnA)	2020/04/21	114	%	69 - 133		
			Perfluorododecanoic acid (PFDoA)	2020/04/21	110	%	72 - 134		
			Perfluorotridecanoic acid (PFTRDA)	2020/04/21	126	%	65 - 144		
			Perfluorotetradecanoic acid(PFTEDA)	2020/04/21	105	%	71 - 132		
			Perfluorobutanesulfonic acid (PFBS)	2020/04/21	113	%	72 - 130		
			Perfluorohexanesulfonic acid(PFHxS)	2020/04/21	116	%	68 - 131		



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VERITAS

BV Labs Job #: C095296
Report Date: 2020/04/30

EMAX Laboratories Inc
Client Project #: TREASURE ISLAND, IR SITE 6
Site Location: SITE 6(T10000006825)
Your P.O. #: 20D083

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
6690634	AKH	MS/MSD RPD	Perfluorooctanesulfonic acid (PFOS)	2020/04/21			120	%	65 - 140
			EtFOSA	2020/04/21			110	%	67 - 135
			MeFOSA	2020/04/21			104	%	68 - 141
			Perfluorohexanoic acid (PFHxA)	2020/04/21	3.7		%	30	
			Perfluoroheptanoic acid (PFHpA)	2020/04/21	4.7		%	30	
			Perfluorooctanoic acid (PFOA)	2020/04/21	4.1		%	30	
			Perfluorononanoic acid (PFNA)	2020/04/21	2.4		%	30	
			Perfluorodecanoic acid (PFDA)	2020/04/21	0.74		%	30	
			Perfluoroundecanoic acid (PFUnA)	2020/04/21	5.3		%	30	
			Perfluorododecanoic acid (PFDoA)	2020/04/21	6.2		%	30	
			Perfluorotridecanoic acid (PFTRDA)	2020/04/21	0.98		%	30	
			Perfluorotetradecanoic acid(PFTEDA)	2020/04/21	3.8		%	30	
			Perfluorobutanesulfonic acid (PFBS)	2020/04/21	3.9		%	30	
			Perfluorohexanesulfonic acid(PFHxS)	2020/04/21	0.0079		%	30	
			6690634	AKH	Spiked Blank	Perfluorooctanesulfonic acid (PFOS)	2020/04/21	7.7	
EtFOSA	2020/04/21	5.4					%	30	
MeFOSA	2020/04/21	10					%	30	
13C2-Perfluorodecanoic acid	2020/04/21					101	%	50 - 150	
13C2-Perfluorododecanoic acid	2020/04/21					91	%	50 - 150	
13C2-Perfluorohexanoic acid	2020/04/21					107	%	50 - 150	
13C2-perfluorotetradecanoic acid	2020/04/21					90	%	50 - 150	
13C2-Perfluoroundecanoic acid	2020/04/21					99	%	50 - 150	
13C3-Perfluorobutanesulfonic acid	2020/04/21					105	%	50 - 150	
13C4-Perfluoroheptanoic acid	2020/04/21					104	%	50 - 150	
13C4-Perfluorooctanesulfonic acid	2020/04/21					98	%	50 - 150	
13C4-Perfluorooctanoic acid	2020/04/21					104	%	50 - 150	
13C5-Perfluorononanoic acid	2020/04/21					104	%	50 - 150	
18O2-Perfluorohexanesulfonic acid	2020/04/21					107	%	50 - 150	
D3-MeFOSA	2020/04/21					75	%	50 - 150	
D5-EtFOSA	2020/04/21					78	%	50 - 150	
Perfluorohexanoic acid (PFHxA)	2020/04/21					111	%	72 - 129	
Perfluoroheptanoic acid (PFHpA)	2020/04/21					115	%	72 - 130	
Perfluorooctanoic acid (PFOA)	2020/04/21					108	%	71 - 133	
Perfluorononanoic acid (PFNA)	2020/04/21					113	%	69 - 130	
Perfluorodecanoic acid (PFDA)	2020/04/21					115	%	71 - 129	
Perfluoroundecanoic acid (PFUnA)	2020/04/21					113	%	69 - 133	
Perfluorododecanoic acid (PFDoA)	2020/04/21					108	%	72 - 134	
Perfluorotridecanoic acid (PFTRDA)	2020/04/21					105	%	65 - 144	
Perfluorotetradecanoic acid(PFTEDA)	2020/04/21					101	%	71 - 132	
Perfluorobutanesulfonic acid (PFBS)	2020/04/21					111	%	72 - 130	
Perfluorohexanesulfonic acid(PFHxS)	2020/04/21					110	%	68 - 131	
Perfluorooctanesulfonic acid (PFOS)	2020/04/21					121	%	65 - 140	
EtFOSA	2020/04/21					100	%	67 - 135	
MeFOSA	2020/04/21					97	%	68 - 141	
6690634	AKH	Method Blank	13C2-Perfluorodecanoic acid	2020/04/21		91	%	50 - 150	
			13C2-Perfluorododecanoic acid	2020/04/21		85	%	50 - 150	
			13C2-Perfluorohexanoic acid	2020/04/21		102	%	50 - 150	
			13C2-perfluorotetradecanoic acid	2020/04/21		85	%	50 - 150	
			13C2-Perfluoroundecanoic acid	2020/04/21		89	%	50 - 150	
			13C3-Perfluorobutanesulfonic acid	2020/04/21		97	%	50 - 150	
			13C4-Perfluoroheptanoic acid	2020/04/21		101	%	50 - 150	



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EMAX Laboratories Inc
Client Project #: TREASURE ISLAND, IR SITE 6
Site Location: SITE 6(T10000006825)
Your P.O. #: 20D083

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			13C4-Perfluorooctanesulfonic acid	2020/04/21		90	%	50 - 150
			13C4-Perfluorooctanoic acid	2020/04/21		97	%	50 - 150
			13C5-Perfluorononanoic acid	2020/04/21		97	%	50 - 150
			18O2-Perfluorohexanesulfonic acid	2020/04/21		103	%	50 - 150
			D3-MeFOSA	2020/04/21		69	%	50 - 150
			D5-EtFOSA	2020/04/21		75	%	50 - 150
			Perfluorohexanoic acid (PFHxA)	2020/04/21	0.015 U, LOD=0.015		ug/L	
			Perfluoroheptanoic acid (PFHpA)	2020/04/21	0.015 U, LOD=0.015		ug/L	
			Perfluorooctanoic acid (PFOA)	2020/04/21	0.015 U, LOD=0.015		ug/L	
			Perfluorononanoic acid (PFNA)	2020/04/21	0.010 U, LOD=0.010		ug/L	
			Perfluorodecanoic acid (PFDA)	2020/04/21	0.010 U, LOD=0.010		ug/L	
			Perfluoroundecanoic acid (PFUnA)	2020/04/21	0.010 U, LOD=0.010		ug/L	
			Perfluorododecanoic acid (PFDoA)	2020/04/21	0.015 U, LOD=0.015		ug/L	
			Perfluorotridecanoic acid (PFTRDA)	2020/04/21	0.015 U, LOD=0.015		ug/L	
			Perfluorotetradecanoic acid(PFTEDA)	2020/04/21	0.015 U, LOD=0.015		ug/L	
			Perfluorobutanesulfonic acid (PFBS)	2020/04/21	0.015 U, LOD=0.015		ug/L	
			Perfluorohexanesulfonic acid(PFHxS)	2020/04/21	0.015 U, LOD=0.015		ug/L	
			Perfluorooctanesulfonic acid (PFOS)	2020/04/21	0.015 U, LOD=0.015		ug/L	
			EtFOSA	2020/04/21	0.019 U, LOD=0.019		ug/L	
			MeFOSA	2020/04/21	0.010 U, LOD=0.010		ug/L	
6692764	AKH	Matrix Spike(MLP498)	13C2-Perfluorodecanoic acid	2020/04/23		102	%	50 - 150
			13C2-Perfluorododecanoic acid	2020/04/23		61	%	50 - 150
			13C2-Perfluorohexanoic acid	2020/04/23		100	%	50 - 150
			13C2-perfluorotetradecanoic acid	2020/04/23		44 (4)	%	50 - 150
			13C2-Perfluoroundecanoic acid	2020/04/23		89	%	50 - 150
			13C3-Perfluorobutanesulfonic acid	2020/04/23		100	%	50 - 150
			13C4-Perfluoroheptanoic acid	2020/04/23		93	%	50 - 150
			13C4-Perfluorooctanesulfonic acid	2020/04/23		82	%	50 - 150
			13C4-Perfluorooctanoic acid	2020/04/23		56	%	50 - 150
			13C5-Perfluorononanoic acid	2020/04/23		67	%	50 - 150
			18O2-Perfluorohexanesulfonic acid	2020/04/23		98	%	50 - 150
			D3-MeFOSA	2020/04/23		54	%	50 - 150
			D5-EtFOSA	2020/04/23		51	%	50 - 150
			Perfluorohexanoic acid (PFHxA)	2020/04/23		118	%	72 - 129
			Perfluoroheptanoic acid (PFHpA)	2020/04/23		121	%	72 - 130
			Perfluorooctanoic acid (PFOA)	2020/04/23		113	%	71 - 133
			Perfluorononanoic acid (PFNA)	2020/04/23		117	%	69 - 130
			Perfluorodecanoic acid (PFDA)	2020/04/23		119	%	71 - 129



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EMAX Laboratories Inc
Client Project #: TREASURE ISLAND, IR SITE 6
Site Location: SITE 6(T10000006825)
Your P.O. #: 20D083

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Perfluoroundecanoic acid (PFUnA)	2020/04/23		121	%	69 - 133
			Perfluorododecanoic acid (PFDoA)	2020/04/23		126	%	72 - 134
			Perfluorotridecanoic acid (PFTRDA)	2020/04/23		129	%	65 - 144
			Perfluorotetradecanoic acid(PFTEDA)	2020/04/23		112	%	71 - 132
			Perfluorobutanesulfonic acid (PFBS)	2020/04/23		120	%	72 - 130
			Perfluorohexanesulfonic acid(PFHxS)	2020/04/23		119	%	68 - 131
			Perfluorooctanesulfonic acid (PFOS)	2020/04/23		112	%	65 - 140
			EtFOSA	2020/04/23		121	%	67 - 135
			MeFOSA	2020/04/23		116	%	68 - 141
6692764	AKH	Matrix Spike DUP(MLP498)	13C2-Perfluorodecanoic acid	2020/04/23		95	%	50 - 150
			13C2-Perfluorododecanoic acid	2020/04/23		63	%	50 - 150
			13C2-Perfluorohexanoic acid	2020/04/23		97	%	50 - 150
			13C2-perfluorotetradecanoic acid	2020/04/23		46 (1)	%	50 - 150
			13C2-Perfluoroundecanoic acid	2020/04/23		85	%	50 - 150
			13C3-Perfluorobutanesulfonic acid	2020/04/23		98	%	50 - 150
			13C4-Perfluoroheptanoic acid	2020/04/23		90	%	50 - 150
			13C4-Perfluorooctanesulfonic acid	2020/04/23		80	%	50 - 150
			13C4-Perfluorooctanoic acid	2020/04/23		57	%	50 - 150
			13C5-Perfluorononanoic acid	2020/04/23		68	%	50 - 150
			18O2-Perfluorohexanesulfonic acid	2020/04/23		92	%	50 - 150
			D3-MeFOSA	2020/04/23		56	%	50 - 150
			D5-EtFOSA	2020/04/23		53	%	50 - 150
			Perfluorohexanoic acid (PFHxA)	2020/04/23		122	%	72 - 129
			Perfluoroheptanoic acid (PFHpA)	2020/04/23		126	%	72 - 130
			Perfluorooctanoic acid (PFOA)	2020/04/23		115	%	71 - 133
			Perfluorononanoic acid (PFNA)	2020/04/23		121	%	69 - 130
			Perfluorodecanoic acid (PFDA)	2020/04/23		121	%	71 - 129
			Perfluoroundecanoic acid (PFUnA)	2020/04/23		121	%	69 - 133
			Perfluorododecanoic acid (PFDoA)	2020/04/23		118	%	72 - 134
			Perfluorotridecanoic acid (PFTRDA)	2020/04/23		121	%	65 - 144
			Perfluorotetradecanoic acid(PFTEDA)	2020/04/23		109	%	71 - 132
			Perfluorobutanesulfonic acid (PFBS)	2020/04/23		121	%	72 - 130
			Perfluorohexanesulfonic acid(PFHxS)	2020/04/23		126	%	68 - 131
			Perfluorooctanesulfonic acid (PFOS)	2020/04/23		113	%	65 - 140
			EtFOSA	2020/04/23		113	%	67 - 135
			MeFOSA	2020/04/23		110	%	68 - 141
6692764	AKH	MS/MSD RPD	Perfluorohexanoic acid (PFHxA)	2020/04/23	2.8		%	30
			Perfluoroheptanoic acid (PFHpA)	2020/04/23	3.4		%	30
			Perfluorooctanoic acid (PFOA)	2020/04/23	1.9		%	30
			Perfluorononanoic acid (PFNA)	2020/04/23	3.0		%	30
			Perfluorodecanoic acid (PFDA)	2020/04/23	1.8		%	30
			Perfluoroundecanoic acid (PFUnA)	2020/04/23	0.063		%	30
			Perfluorododecanoic acid (PFDoA)	2020/04/23	6.4		%	30
			Perfluorotridecanoic acid (PFTRDA)	2020/04/23	5.8		%	30
			Perfluorotetradecanoic acid(PFTEDA)	2020/04/23	2.8		%	30
			Perfluorobutanesulfonic acid (PFBS)	2020/04/23	0.72		%	30
			Perfluorohexanesulfonic acid(PFHxS)	2020/04/23	5.4		%	30
			Perfluorooctanesulfonic acid (PFOS)	2020/04/23	0.76		%	30
			EtFOSA	2020/04/23	6.6		%	30
			MeFOSA	2020/04/23	4.8		%	30
6692764	AKH	Spiked Blank	13C2-Perfluorodecanoic acid	2020/04/23		93	%	50 - 150



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EMAX Laboratories Inc
Client Project #: TREASURE ISLAND, IR SITE 6
Site Location: SITE 6(T10000006825)
Your P.O. #: 20D083

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			13C2-Perfluorododecanoic acid	2020/04/23		86	%	50 - 150
			13C2-Perfluorohexanoic acid	2020/04/23		94	%	50 - 150
			13C2-perfluorotetradecanoic acid	2020/04/23		81	%	50 - 150
			13C2-Perfluoroundecanoic acid	2020/04/23		91	%	50 - 150
			13C3-Perfluorobutanesulfonic acid	2020/04/23		95	%	50 - 150
			13C4-Perfluoroheptanoic acid	2020/04/23		92	%	50 - 150
			13C4-Perfluorooctanesulfonic acid	2020/04/23		92	%	50 - 150
			13C4-Perfluorooctanoic acid	2020/04/23		93	%	50 - 150
			13C5-Perfluorononanoic acid	2020/04/23		92	%	50 - 150
			18O2-Perfluorohexanesulfonic acid	2020/04/23		93	%	50 - 150
			D3-MeFOSA	2020/04/23		68	%	50 - 150
			D5-EtFOSA	2020/04/23		70	%	50 - 150
			Perfluorohexanoic acid (PFHxA)	2020/04/23		121	%	72 - 129
			Perfluoroheptanoic acid (PFHpA)	2020/04/23		125	%	72 - 130
			Perfluorooctanoic acid (PFOA)	2020/04/23		118	%	71 - 133
			Perfluorononanoic acid (PFNA)	2020/04/23		125	%	69 - 130
			Perfluorodecanoic acid (PFDA)	2020/04/23		121	%	71 - 129
			Perfluoroundecanoic acid (PFUnA)	2020/04/23		123	%	69 - 133
			Perfluorododecanoic acid (PFDoA)	2020/04/23		124	%	72 - 134
			Perfluorotridecanoic acid (PFTEDA)	2020/04/23		119	%	65 - 144
			Perfluorotetradecanoic acid(PFTEDA)	2020/04/23		114	%	71 - 132
			Perfluorobutanesulfonic acid (PFBS)	2020/04/23		122	%	72 - 130
			Perfluorohexanesulfonic acid(PFHxS)	2020/04/23		122	%	68 - 131
			Perfluorooctanesulfonic acid (PFOS)	2020/04/23		128	%	65 - 140
			EtFOSA	2020/04/23		123	%	67 - 135
			MeFOSA	2020/04/23		113	%	68 - 141
6692764	AKH	Method Blank	13C2-Perfluorodecanoic acid	2020/04/23		95	%	50 - 150
			13C2-Perfluorododecanoic acid	2020/04/23		87	%	50 - 150
			13C2-Perfluorohexanoic acid	2020/04/23		104	%	50 - 150
			13C2-perfluorotetradecanoic acid	2020/04/23		83	%	50 - 150
			13C2-Perfluoroundecanoic acid	2020/04/23		91	%	50 - 150
			13C3-Perfluorobutanesulfonic acid	2020/04/23		101	%	50 - 150
			13C4-Perfluoroheptanoic acid	2020/04/23		100	%	50 - 150
			13C4-Perfluorooctanesulfonic acid	2020/04/23		96	%	50 - 150
			13C4-Perfluorooctanoic acid	2020/04/23		98	%	50 - 150
			13C5-Perfluorononanoic acid	2020/04/23		98	%	50 - 150
			18O2-Perfluorohexanesulfonic acid	2020/04/23		95	%	50 - 150
			D3-MeFOSA	2020/04/23		69	%	50 - 150
			D5-EtFOSA	2020/04/23		72	%	50 - 150
			Perfluorohexanoic acid (PFHxA)	2020/04/23	0.015 U, LOD=0.015		ug/L	
			Perfluoroheptanoic acid (PFHpA)	2020/04/23	0.015 U, LOD=0.015		ug/L	
			Perfluorooctanoic acid (PFOA)	2020/04/23	0.015 U, LOD=0.015		ug/L	
			Perfluorononanoic acid (PFNA)	2020/04/23	0.010 U, LOD=0.010		ug/L	
			Perfluorodecanoic acid (PFDA)	2020/04/23	0.010 U, LOD=0.010		ug/L	
			Perfluoroundecanoic acid (PFUnA)	2020/04/23	0.010 U, LOD=0.010		ug/L	



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BV Labs Job #: C095296
Report Date: 2020/04/30

EMAX Laboratories Inc
Client Project #: TREASURE ISLAND, IR SITE 6
Site Location: SITE 6(T10000006825)
Your P.O. #: 20D083

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Perfluorododecanoic acid (PFDoA)	2020/04/23	0.015 U, LOD=0.015		ug/L	
			Perfluorotridecanoic acid (PFTRDA)	2020/04/23	0.015 U, LOD=0.015		ug/L	
			Perfluorotetradecanoic acid(PFTEDA)	2020/04/23	0.015 U, LOD=0.015		ug/L	
			Perfluorobutanesulfonic acid (PFBS)	2020/04/23	0.015 U, LOD=0.015		ug/L	
			Perfluorohexanesulfonic acid(PFHxS)	2020/04/23	0.015 U, LOD=0.015		ug/L	
			Perfluorooctanesulfonic acid (PFOS)	2020/04/23	0.015 U, LOD=0.015		ug/L	
			EtFOSA	2020/04/23	0.019 U, LOD=0.019		ug/L	
			MeFOSA	2020/04/23	0.010 U, LOD=0.010		ug/L	

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

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

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

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

(1) Extracted internal standard analyte recovery was below the defined lower control limit (LCL). Laboratory spiked water resulted in satisfactory recovery of the extracted internal standard analyte. When considered together, these QC data suggest that matrix interferences may be increasing the variability of the associated native analyte result (Perfluorotetradecanoic acid - PFTeDA).

(2) Extracted internal standard analyte recovery was below the defined lower control limit (LCL). Laboratory spiked water resulted in satisfactory recovery of the extracted internal standard analyte. When considered together, these QC data suggest that matrix interferences may be increasing the variability of the associated native analyte result (N-Methylperfluorooctanesulfonamide - MeFOSA).

(3) Extracted internal standard analyte recovery was below the defined lower control limit (LCL). Laboratory spiked water resulted in satisfactory recovery of the extracted internal standard analyte. When considered together, these QC data suggest that matrix interferences may be increasing the variability of the associated native analyte result (N-Ethylperfluorooctanesulfonamide - EtFOSA).

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



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Your P.O. #: 20D083

VALIDATION SIGNATURE PAGE

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

Adam Robinson, Supervisor, LC/MS/MS

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



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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)**

**Bureau Veritas Canada (2019)
Inc.
6740 Campobello Rd.
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.bvlabs.com**



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3.2 Sample Chromatograms

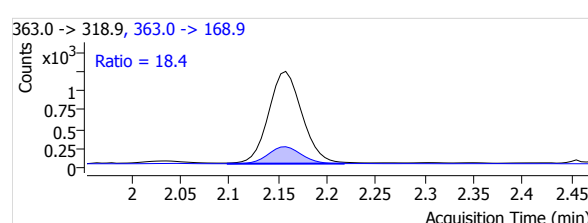
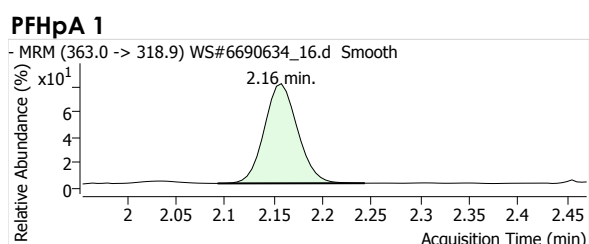
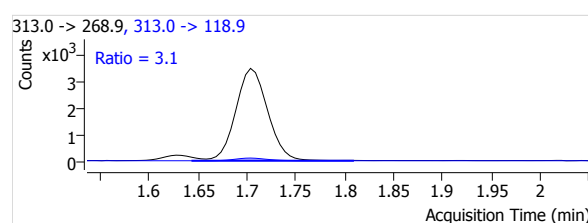
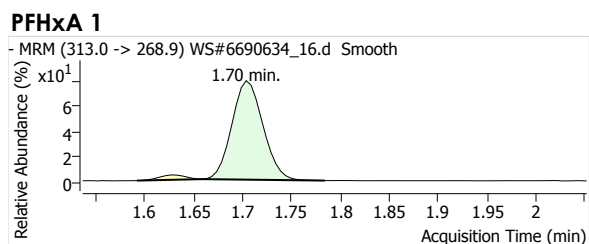
**Bureau Veritas Canada (2019)
Inc.
6740 Campobello Rd.
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.bvlabs.com**

Quantitative Analysis Report

Batch Data Path File Name T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_ML.batch.
bin

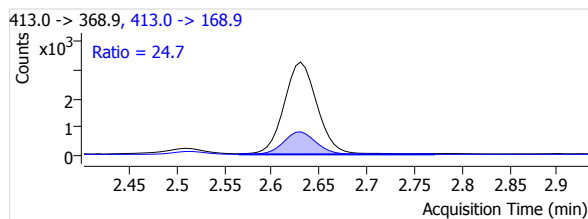
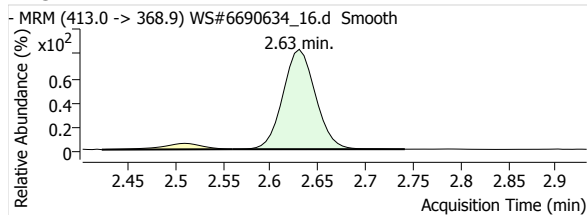
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Type	Sample	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-B5
Acq. Date-Time	2020/04/21 11:44:35 PM	Dil.	0.2
Comment	Dilution doesnot match screening. Reworked to confirm result.		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	1.2030	--	7460	1.70	143552	0.9257	233	1.70	1328	3.1
PFHpA 1	µg/L	--	0.3271	--	2833	2.16	3766	0.2611	522	2.16	2648	18.4
PFOA 1	µg/L	--	1.0172	--	7636	2.63	5908	0.7369	1889	2.63	14754	24.7
PFNA 1	µg/L	--	0.0152	--	435	3.07	405	0.0534	89	3.07	808	20.5
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.0218	--	93	1.36	279	0.0525	45	1.36	401	48.4
PFHxS 1	µg/L	--	1.3635	--	1159	2.08	187775	1.0253	606	2.09	3777	52.3
PFOS 1	µg/L	--	10.6082	--	6639	2.90	148905	6.8164	3482	2.89	13580	52.4
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	114.7352	--	8059	1.70	1204	--	--	--	--	--
13C4-PFHpA	µg/L	--	112.2607	--	10850	2.16	1081	--	--	--	--	--
13C4-PFOA	µg/L	--	107.5558	--	10363	2.63	1213	--	--	--	--	--
13C5-PFNA	µg/L	--	107.7340	--	8149	3.07	955	--	--	--	--	--
13C2-PFDA	µg/L	--	102.8147	--	6721	3.46	1073	--	--	--	--	--
13C2-PFUnA	µg/L	--	104.3439	--	8119	3.80	724	--	--	--	--	--
13C2-PFDaA	µg/L	--	100.2076	--	10136	4.11	1485	--	--	--	--	--
13C2-PFTeDA	µg/L	--	94.4896	--	11849	4.60	2163	--	--	--	--	--
13C3-PFBS	µg/L	--	114.8412	--	1772	1.36	464	--	--	--	--	--
18O2-PFHxS	µg/L	--	111.2205	--	1130	2.11	528	--	--	--	--	--
13C4-PFOS	µg/L	--	101.1423	--	974	2.95	290	--	--	--	--	--
D3-MeFOSA	µg/L	--	47.4290	--	1153	5.21	63	--	--	--	--	--
D5-EtFOSA	µg/L	--	46.9183	--	982	5.33	72	--	--	--	--	--

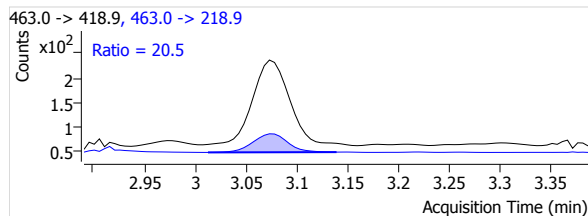
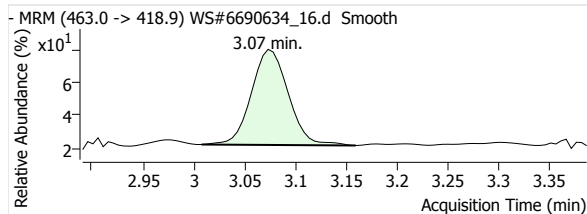


Quantitative Analysis Report

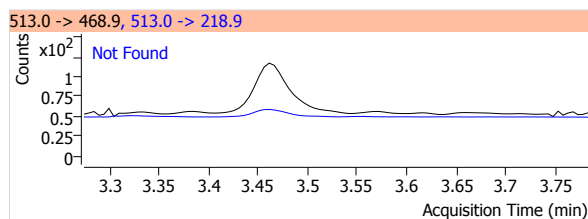
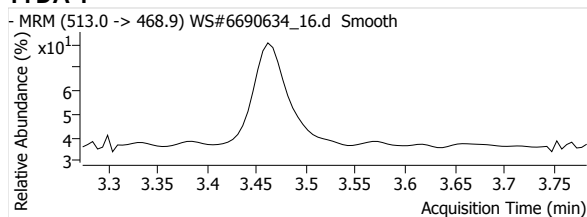
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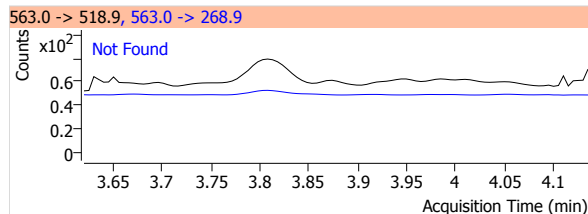
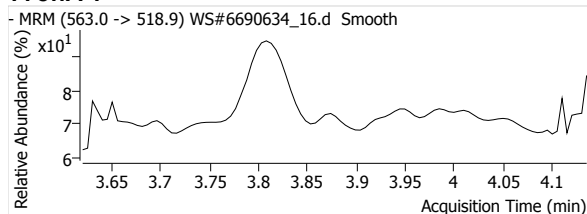
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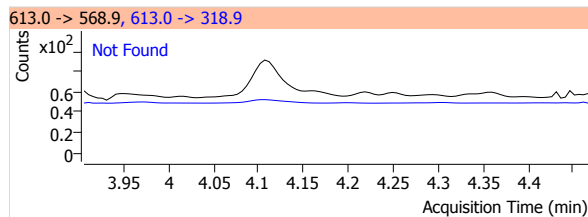
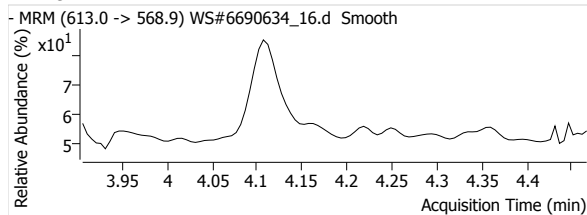
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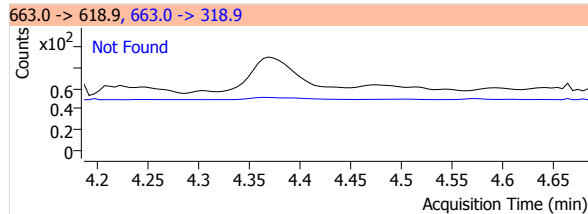
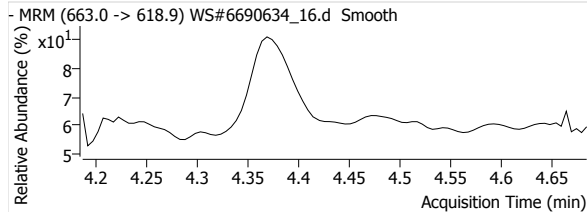
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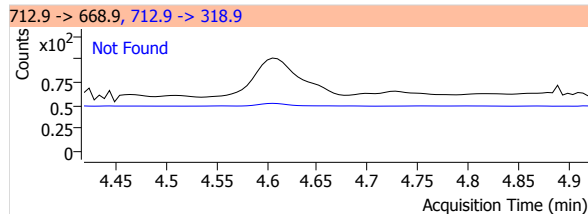
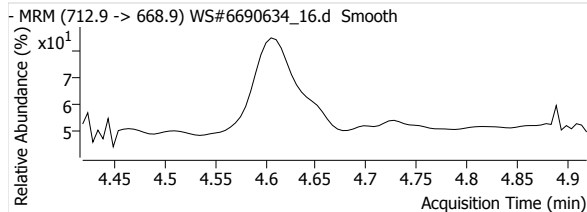
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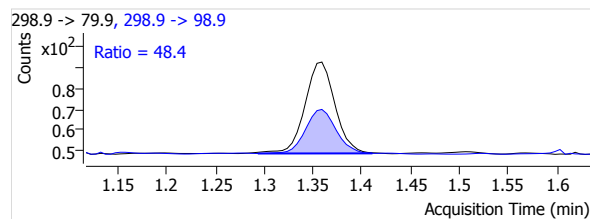
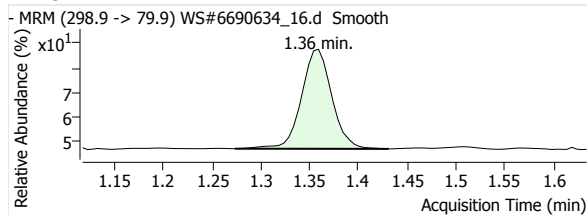


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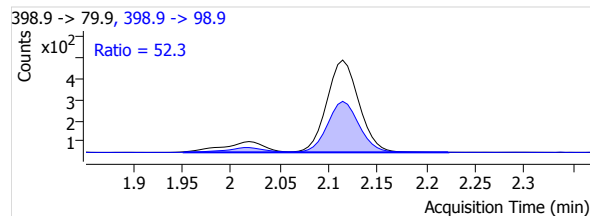
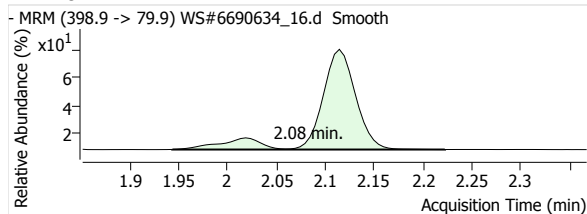


Quantitative Analysis Report

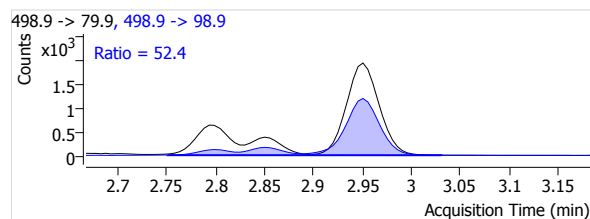
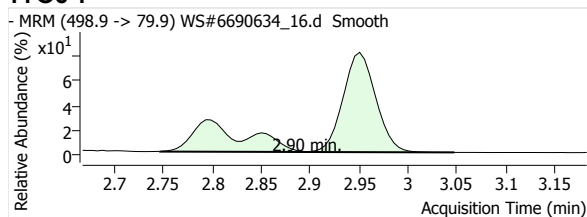
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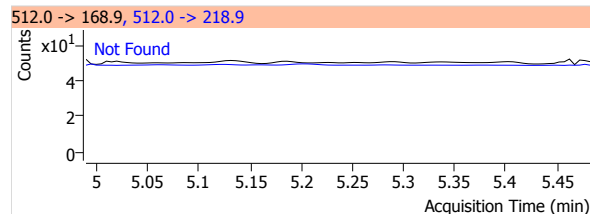
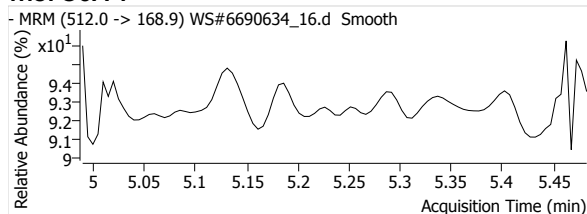
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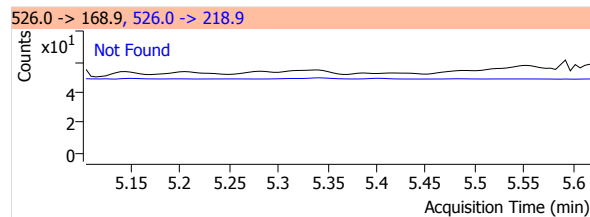
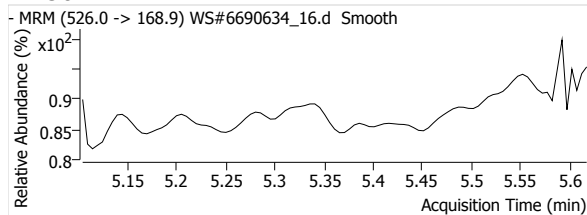
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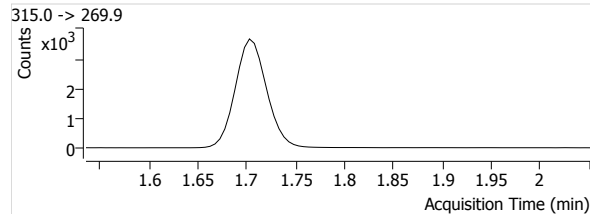
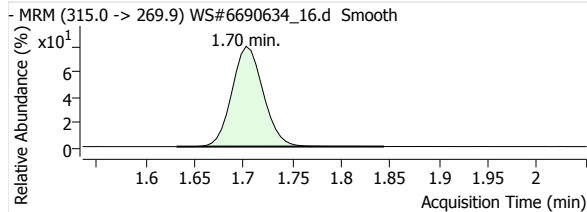
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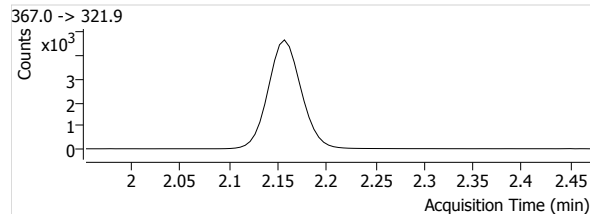
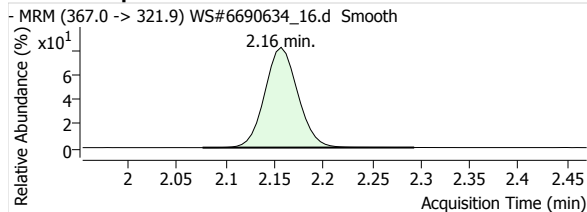
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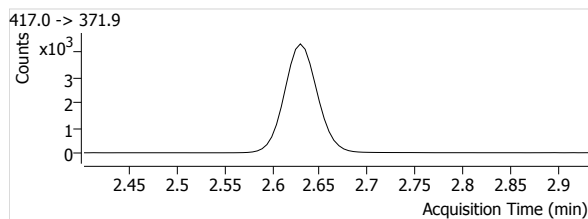
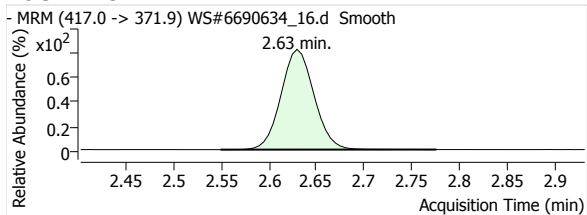


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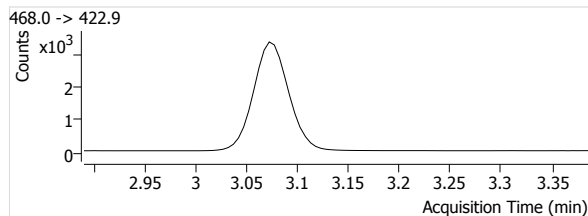
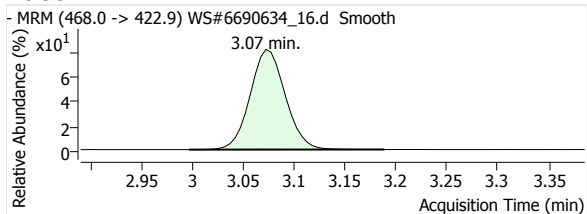


Quantitative Analysis Report

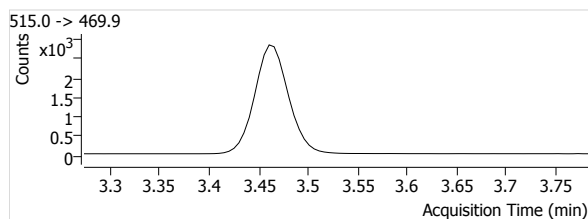
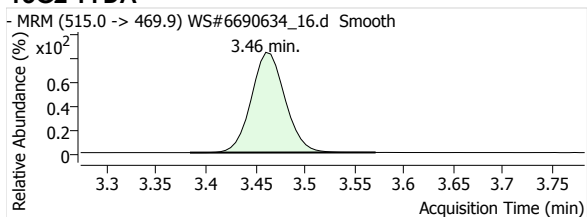
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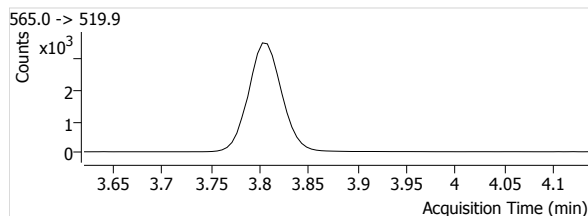
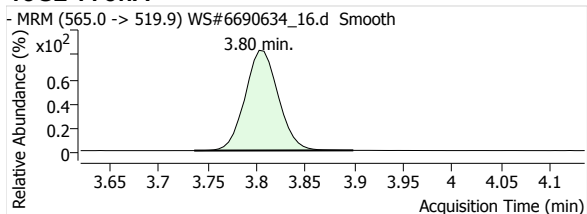
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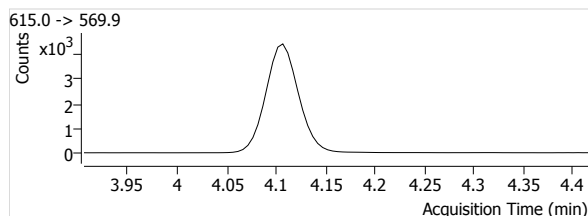
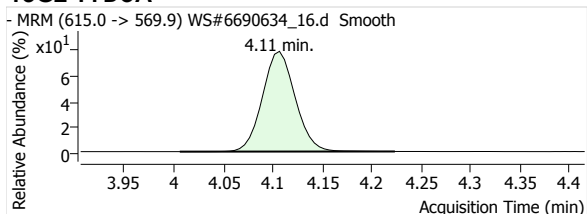
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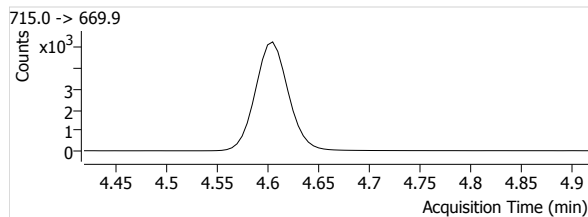
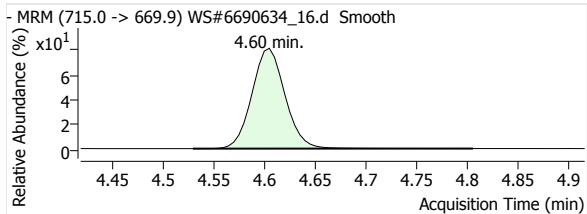
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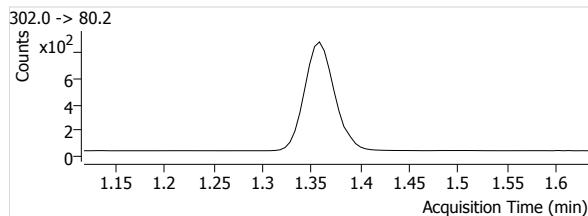
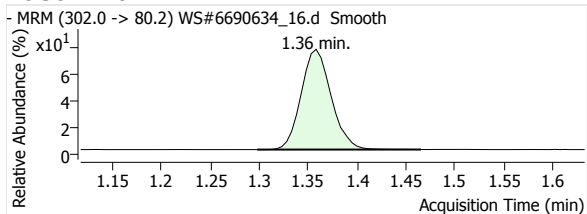
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13C2-PFTeDA

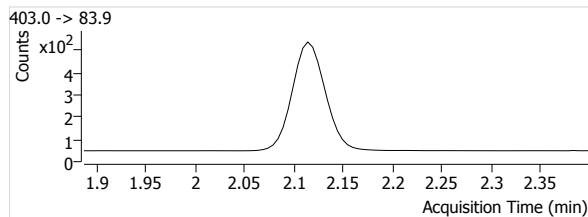
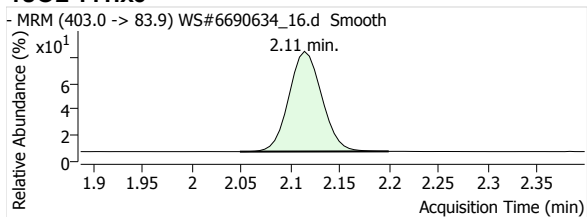


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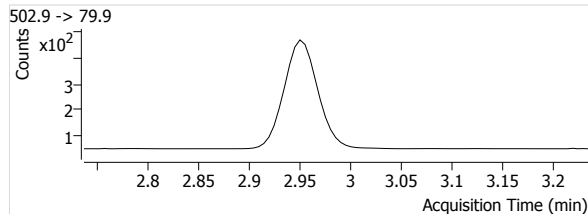
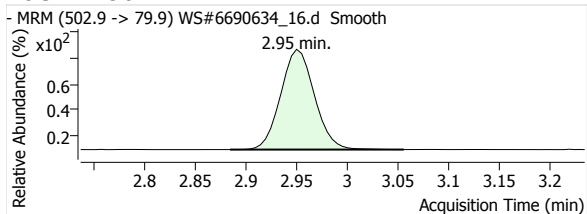


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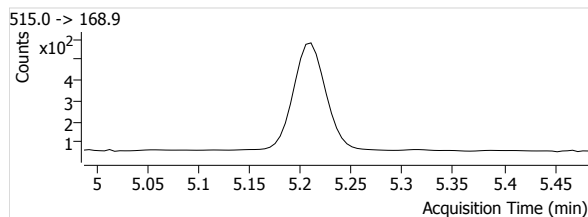
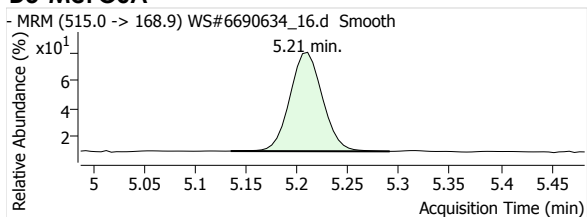
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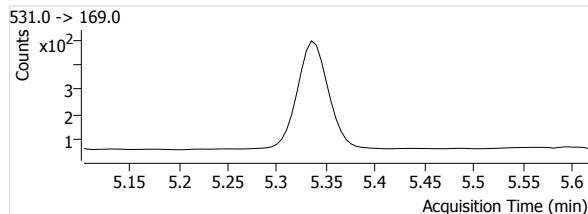
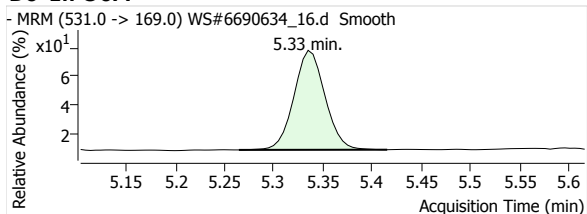
13C4-PFOS



D3-MeFOSA



D5-EtFOSA

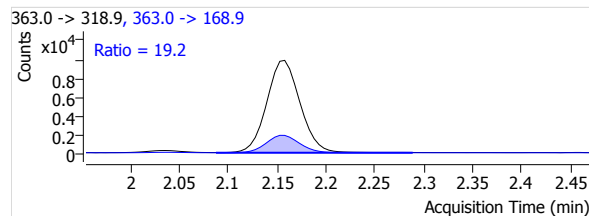
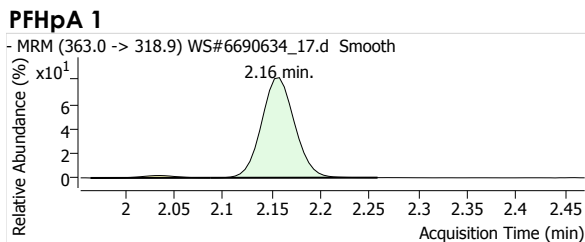
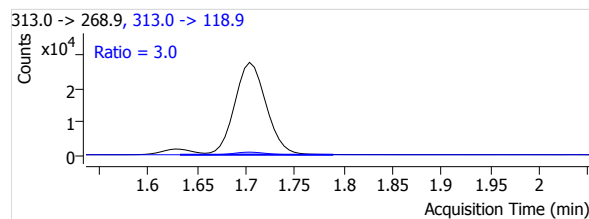
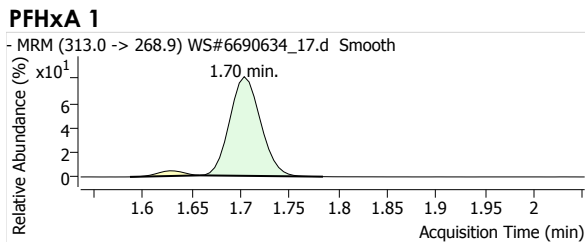


Quantitative Analysis Report

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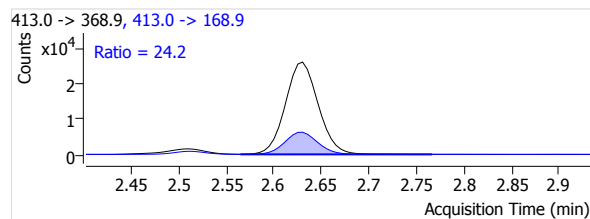
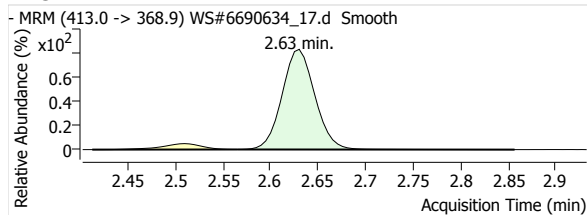
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Type	Sample	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-B6
Acq. Date-Time	2020/04/21 11:51:31 PM	Dil.	0.0
Comment	Dilution doesnot match screening. Reworked to confirm result.		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	1.0794	--	59867	1.70	31504	8.0208	1773	1.70	5526	3.0
PFHpA 1	µg/L	--	0.3178	--	23151	2.16	11087	2.2214	4435	2.15	11927	19.2
PFOA 1	µg/L	--	0.9088	--	62824	2.63	46284	6.3324	15223	2.63	54590	24.2
PFNA 1	µg/L	--	0.0499	--	3184	3.07	8671	0.3933	685	3.07	15912	21.5
PFDA 1	µg/L	--	0.0099	--	902	3.46	923	0.1341	147	3.46	4621	16.3
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.0657	--	746	1.36	1937	0.4516	328	1.36	1236	44.0
PFHxS 1	µg/L	--	1.2463	--	9510	2.08	34849	9.0052	5011	2.09	56742	52.7
PFOS 1	µg/L	--	8.8716	--	50158	2.90	39032	56.6762	26428	2.89	11246	52.7
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	106.2642	--	7464	1.70	852	--	--	--	--	--
13C4-PFHpA	µg/L	--	107.8324	--	10422	2.16	1909	--	--	--	--	--
13C4-PFOA	µg/L	--	102.9683	--	9921	2.63	1399	--	--	--	--	--
13C5-PFNA	µg/L	--	107.0201	--	8095	3.07	1005	--	--	--	--	--
13C2-PFDA	µg/L	--	102.8912	--	6726	3.46	2074	--	--	--	--	--
13C2-PFUnA	µg/L	--	102.4418	--	7971	3.80	1167	--	--	--	--	--
13C2-PFDaA	µg/L	--	97.1033	--	9822	4.11	1132	--	--	--	--	--
13C2-PFTeDA	µg/L	--	93.7400	--	11755	4.60	1158	--	--	--	--	--
13C3-PFBS	µg/L	--	107.0642	--	1652	1.36	309	--	--	--	--	--
18O2-PFHxS	µg/L	--	103.9370	--	1056	2.11	679	--	--	--	--	--
13C4-PFOS	µg/L	--	91.9003	--	885	2.95	223	--	--	--	--	--
D3-MeFOSA	µg/L	--	69.8067	--	1697	5.21	120	--	--	--	--	--
D5-EtFOSA	µg/L	--	70.4252	--	1474	5.33	90	--	--	--	--	--

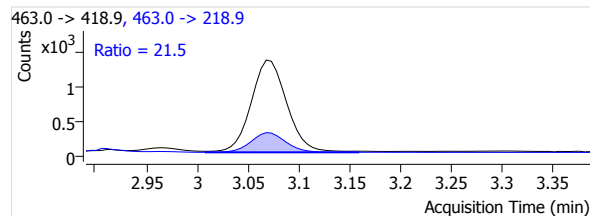
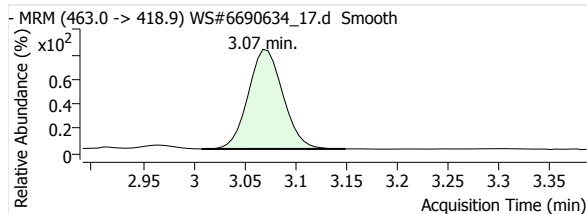


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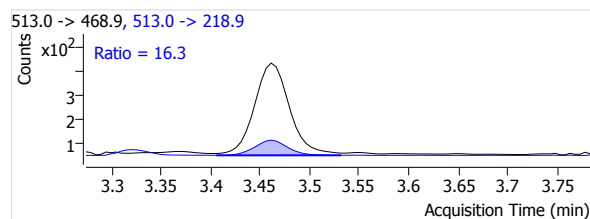
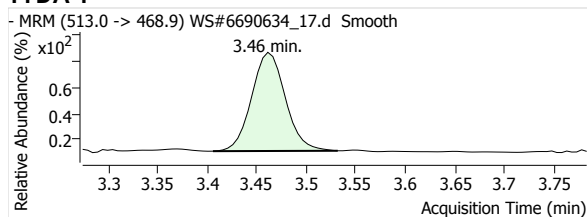
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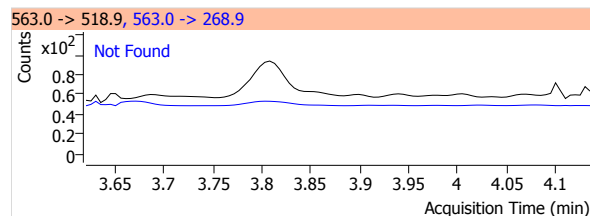
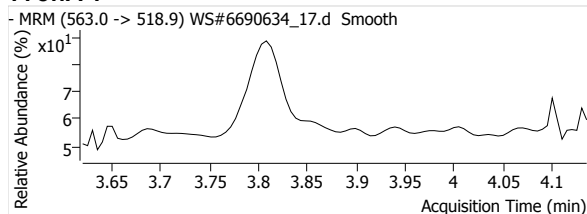
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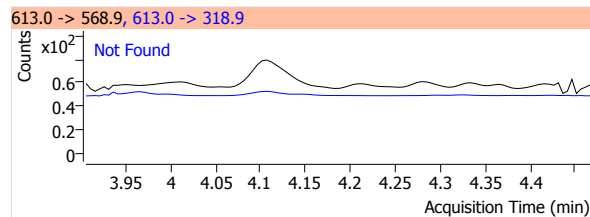
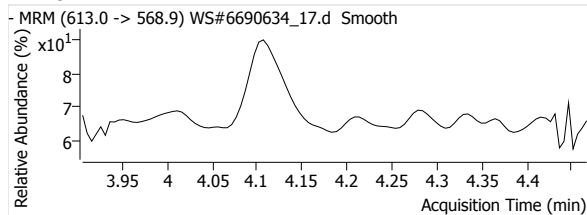
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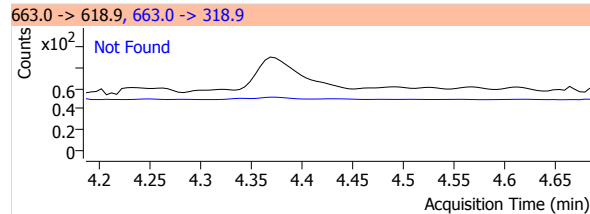
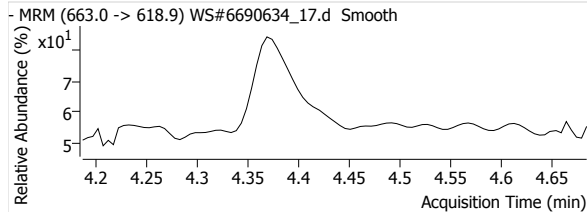
PFUnA 1



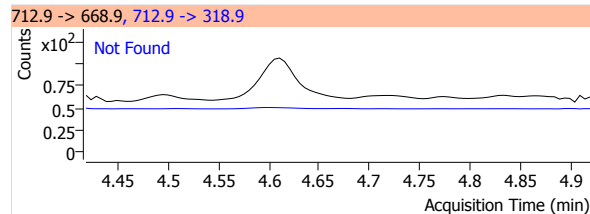
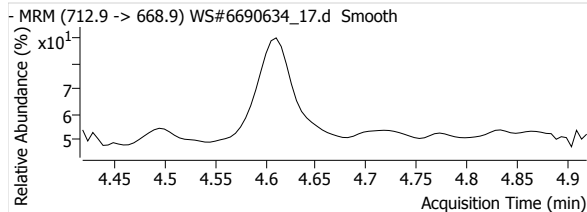
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PFTrDA 1

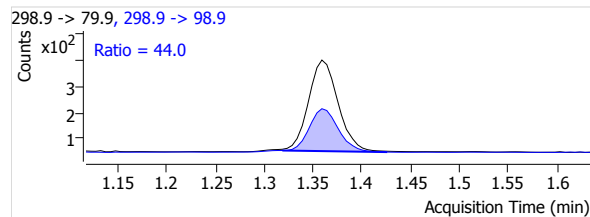
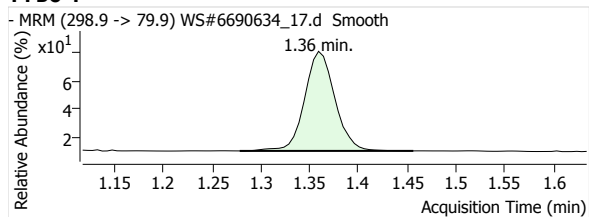


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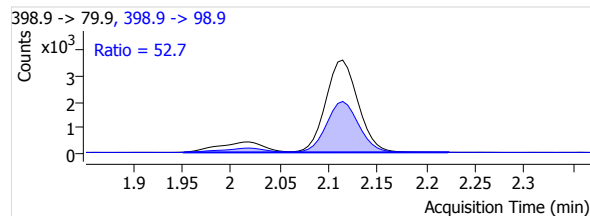
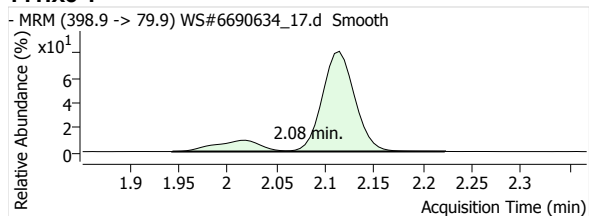


Quantitative Analysis Report

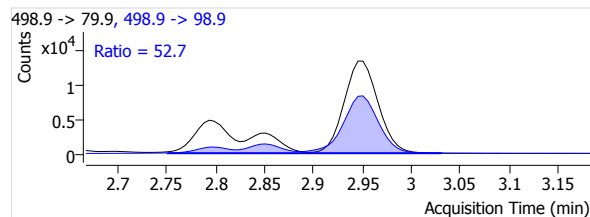
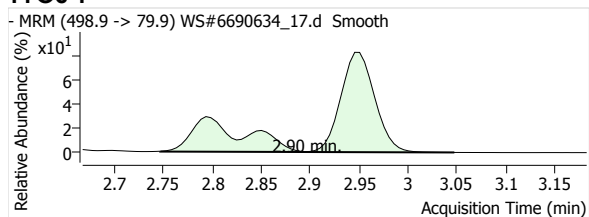
PFBS 1



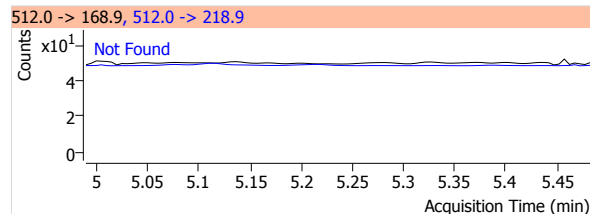
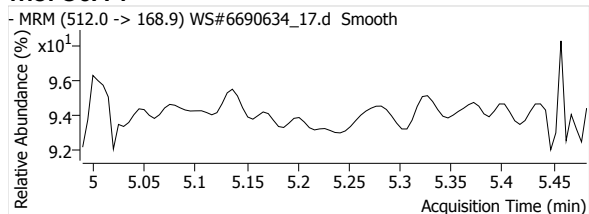
PFHxS 1



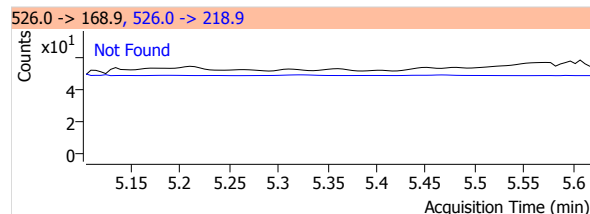
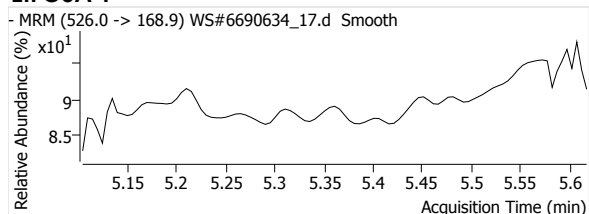
PFOS 1



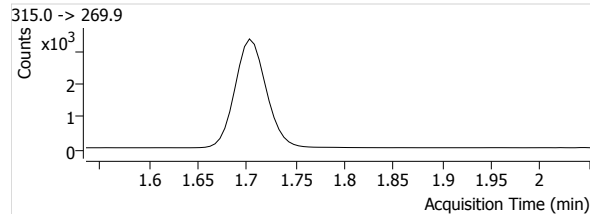
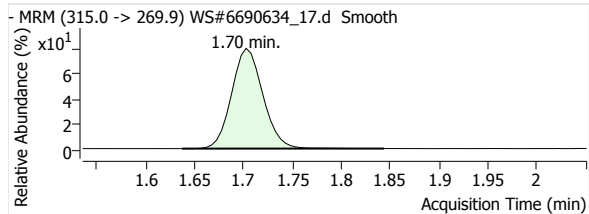
MeFOSA 1



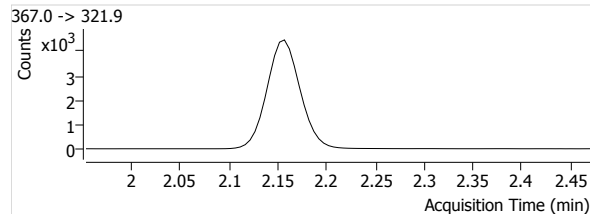
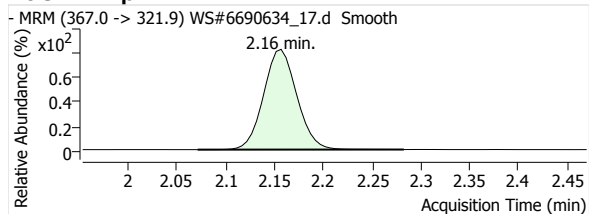
eFOSA 1



13C2-PFHxA

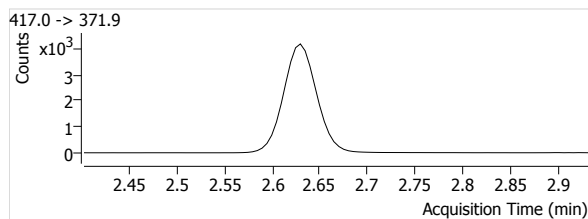
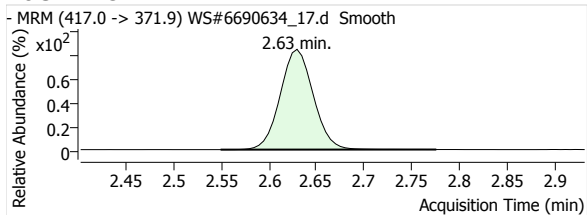


13C4-PFHpA

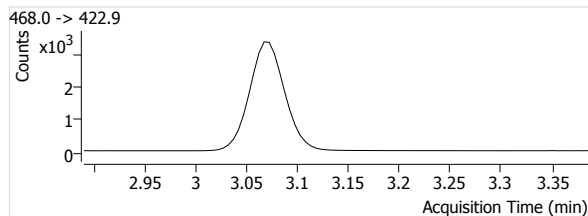
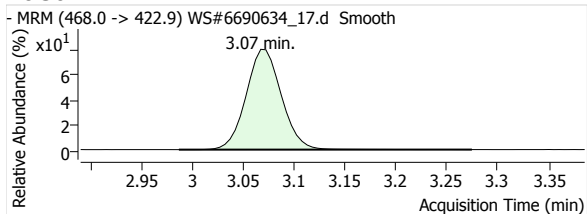


Quantitative Analysis Report

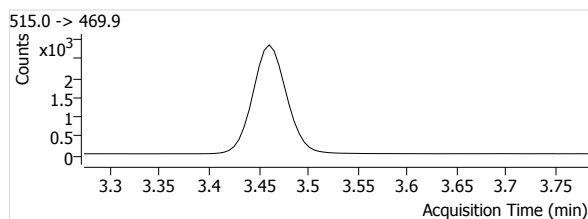
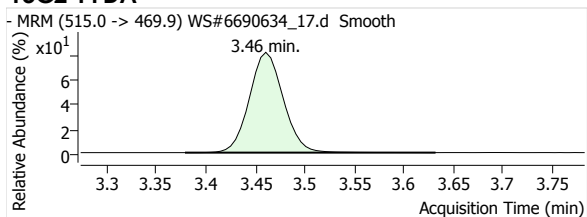
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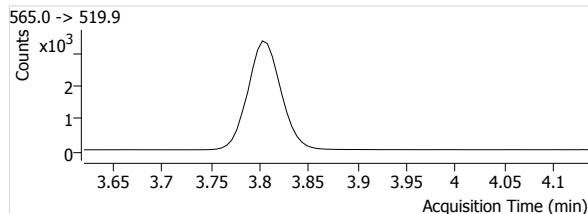
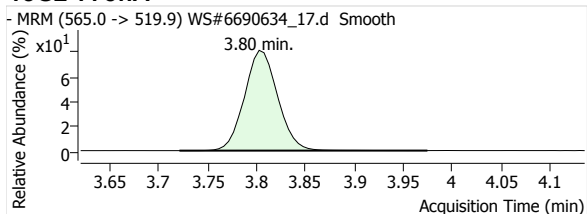
13C5-PFNA



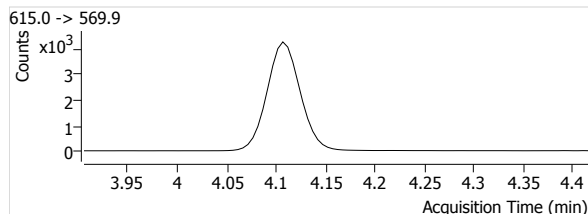
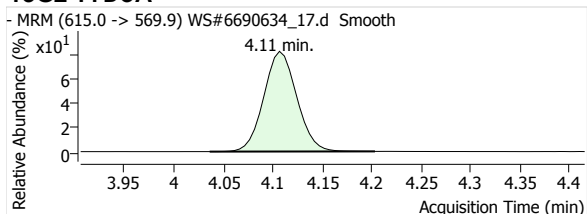
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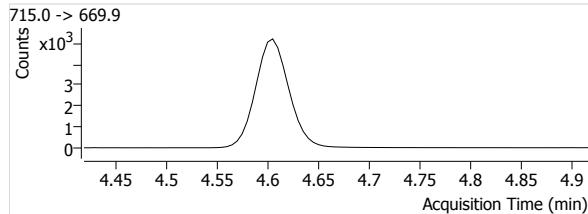
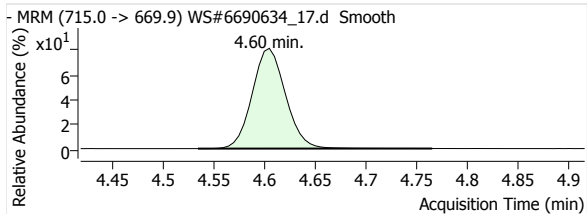
13C2-PFUnA



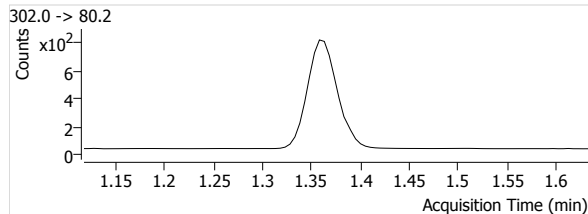
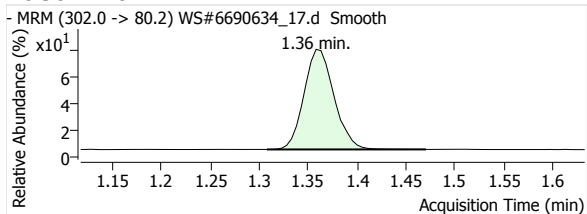
13C2-PFDoA



13C2-PFTeDA

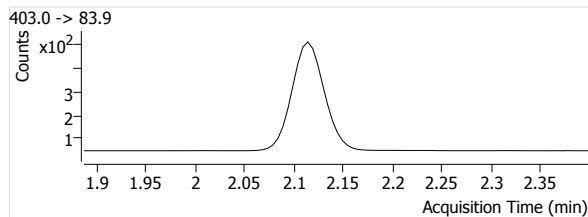
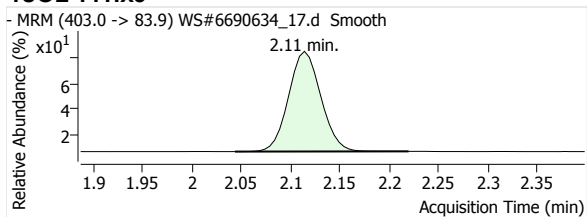


13C3-PFBS

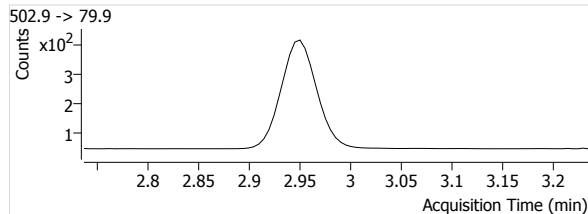
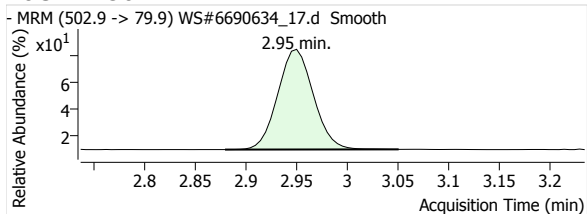


Quantitative Analysis Report

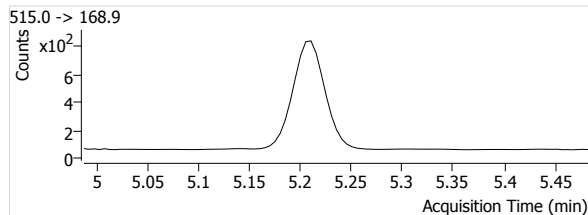
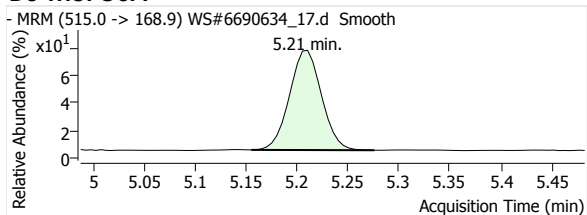
18O2-PFHxs



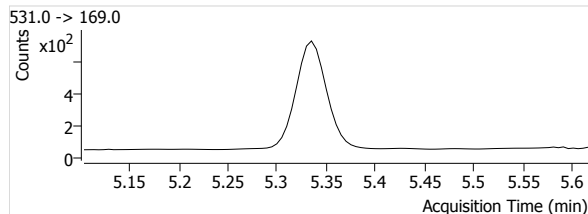
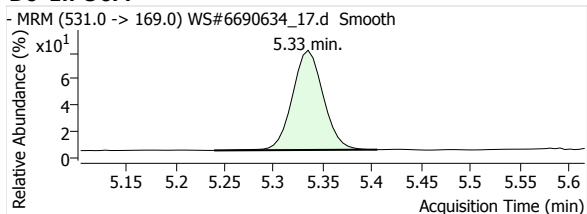
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

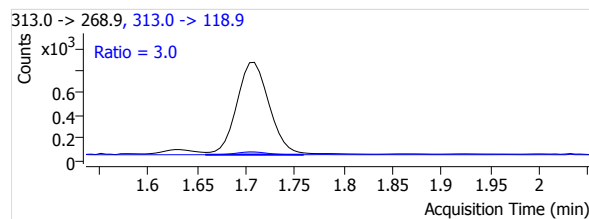
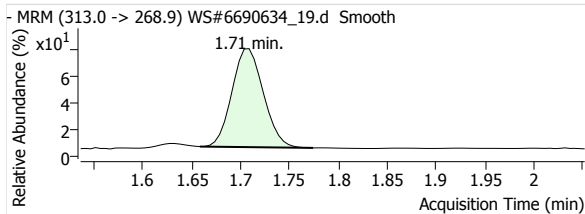
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Sample Name 6690634:MLP497-01:10x
 Type Sample
 Acq. Method File PFAS.m
 Acq. Date-Time 2020/04/22 12:05:25 AM
 Comment Reported for PFOS only.
 User Defined

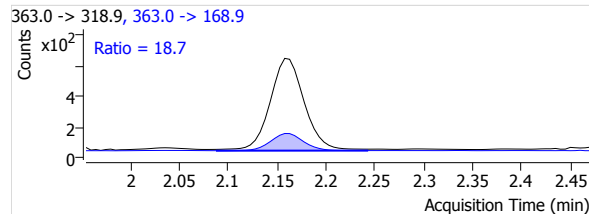
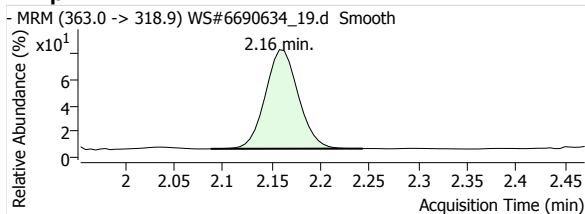
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 Position P1-B7
 Dil. 0.2

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	0.2680	--	1812	1.71	3258	0.2340	54	1.70	318	3.0
PFHpA 1	µg/L	--	0.1415	--	1388	2.16	6962	0.1335	260	2.16	1421	18.7
PFOA 1	µg/L	--	0.3306	--	2604	2.63	4093	0.2608	617	2.63	4149	23.7
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	0.6207	--	529	2.08	22302	0.4913	271	2.09	8687	51.2
PFOS 1	µg/L	--	2.1671	--	1314	2.90	3306	1.4281	747	2.89	2412	56.9
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	110.2363	--	7743	1.71	1378	--	--	--	--	--
13C4-PFHpA	µg/L	--	107.5944	--	10399	2.16	2167	--	--	--	--	--
13C4-PFOA	µg/L	--	103.6326	--	9985	2.63	1224	--	--	--	--	--
13C5-PFNA	µg/L	--	102.3665	--	7743	3.07	1434	--	--	--	--	--
13C2-PFDA	µg/L	--	98.1184	--	6414	3.46	709	--	--	--	--	--
13C2-PFUnA	µg/L	--	97.1983	--	7563	3.80	832	--	--	--	--	--
13C2-PFDaA	µg/L	--	94.9975	--	9609	4.11	1052	--	--	--	--	--
13C2-PFTeDA	µg/L	--	92.8628	--	11645	4.60	1763	--	--	--	--	--
13C3-PFBS	µg/L	--	107.8419	--	1664	1.36	420	--	--	--	--	--
18O2-PFHxS	µg/L	--	106.0039	--	1077	2.12	663	--	--	--	--	--
13C4-PFOS	µg/L	--	95.5348	--	920	2.95	382	--	--	--	--	--
D3-MeFOSA	µg/L	--	35.7055	--	868	5.21	43	--	--	--	--	--
D5-EtFOSA	µg/L	--	36.6937	--	768	5.33	46	--	--	--	--	--

PFHxA 1

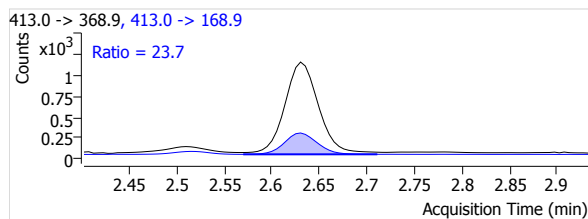
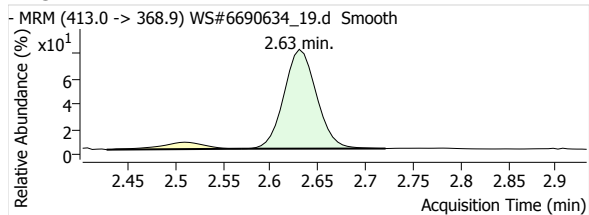


PFHpA 1

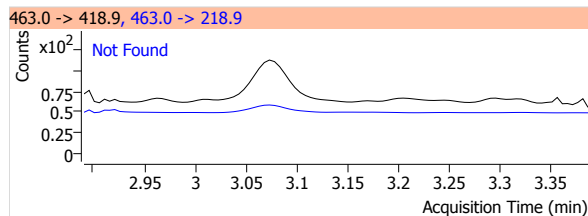
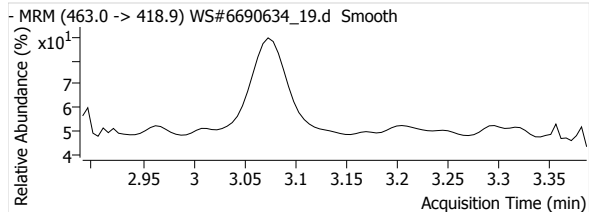


Quantitative Analysis Report

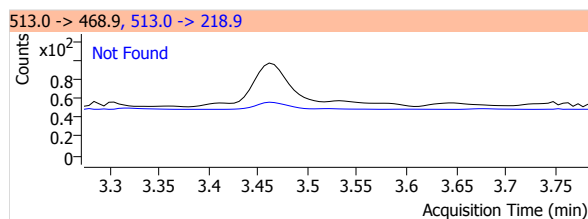
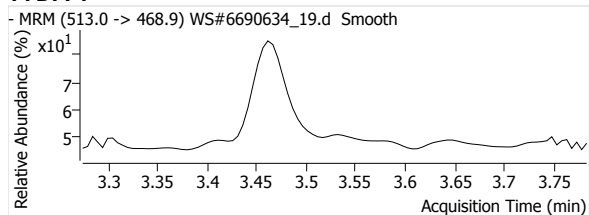
PFOA 1



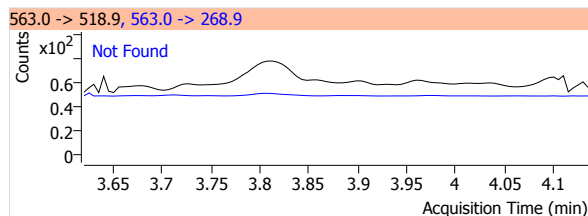
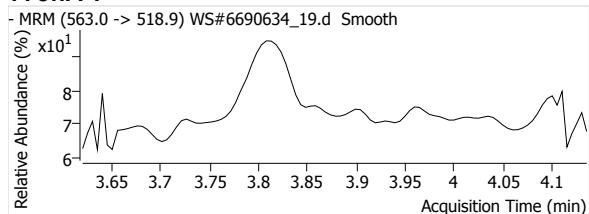
PFNA 1



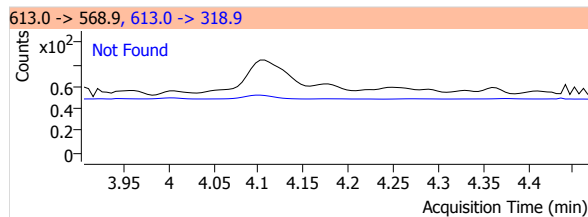
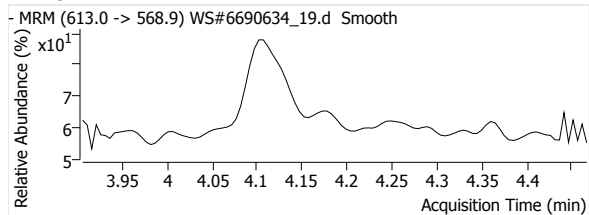
PFDA 1



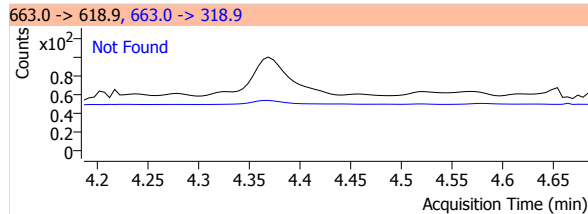
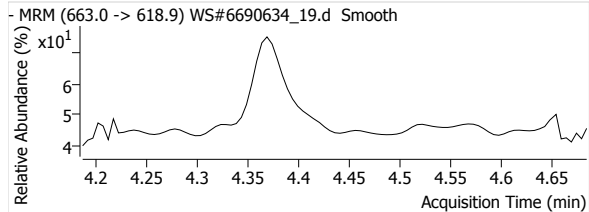
PFUnA 1



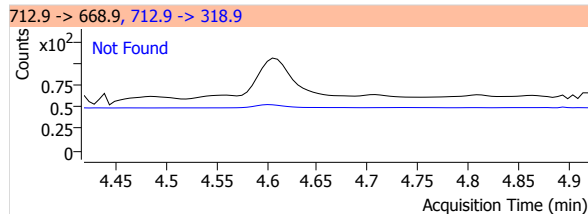
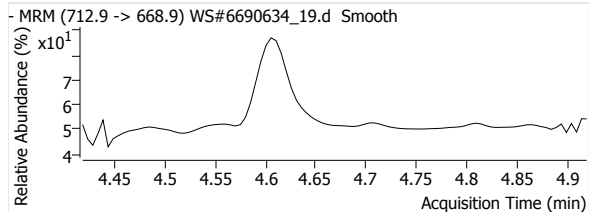
PFDoA 1



PFTrDA 1

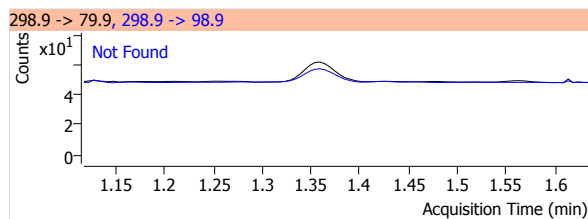
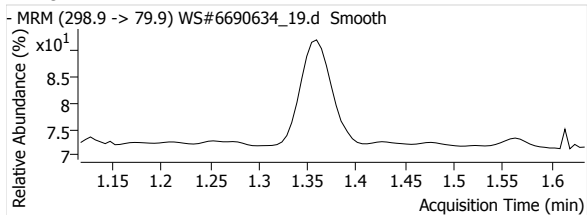


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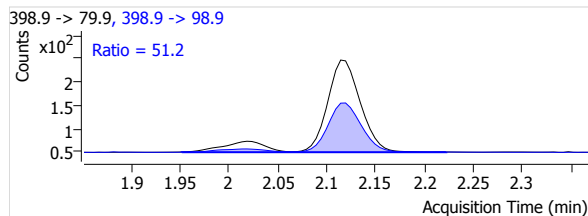
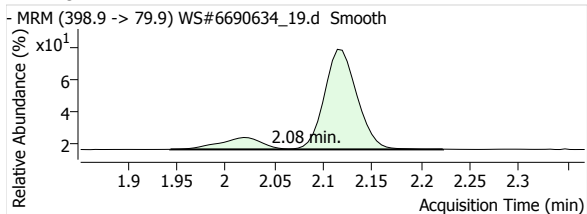


Quantitative Analysis Report

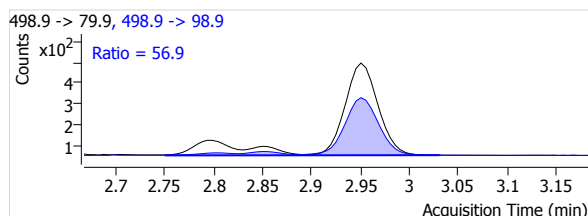
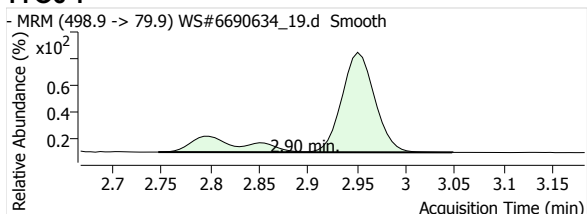
PFBS 1



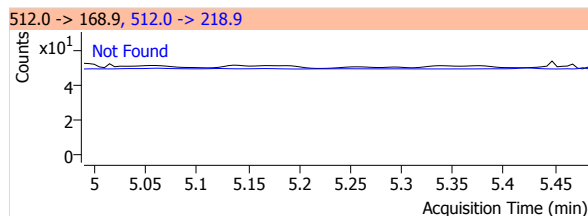
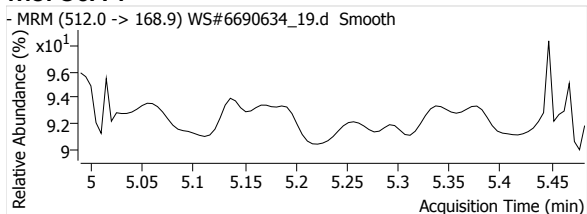
PFHxS 1



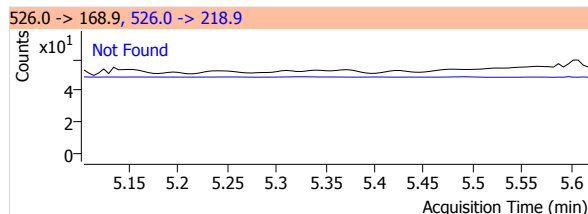
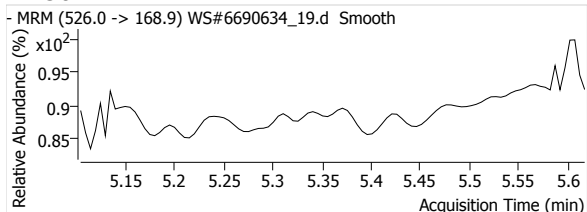
PFOS 1



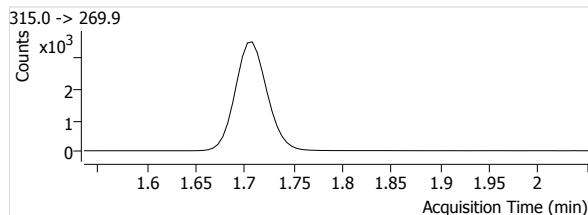
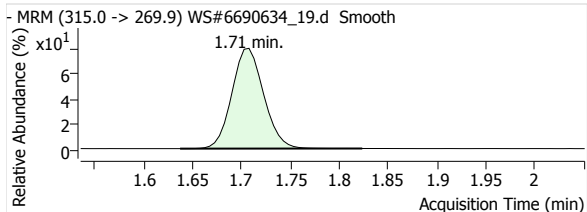
MeFOSA 1



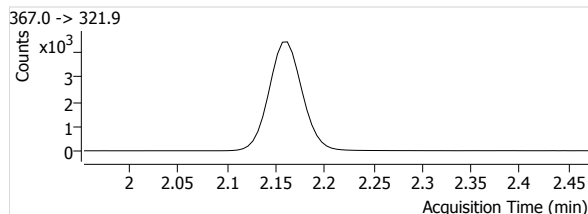
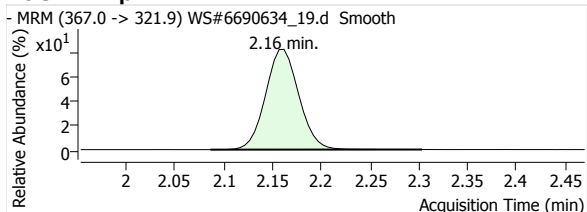
eFOSA 1



13C2-PFHxA

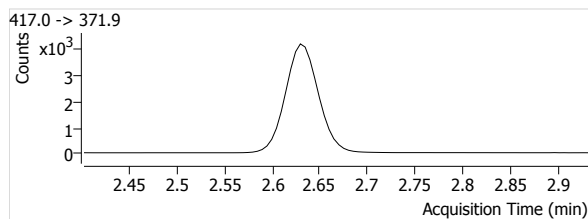
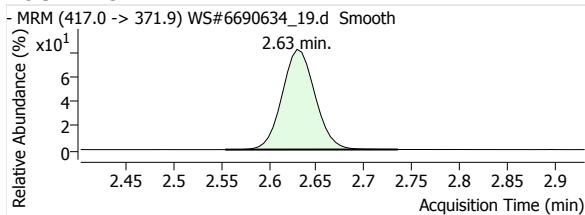


13C4-PFHpA

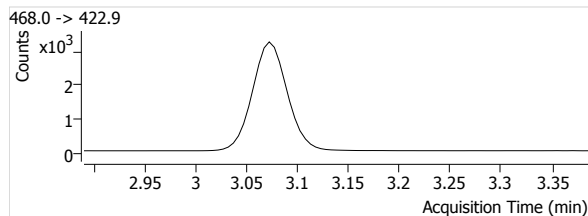
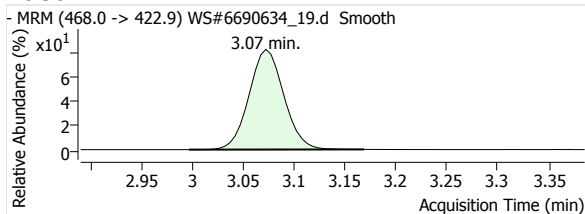


Quantitative Analysis Report

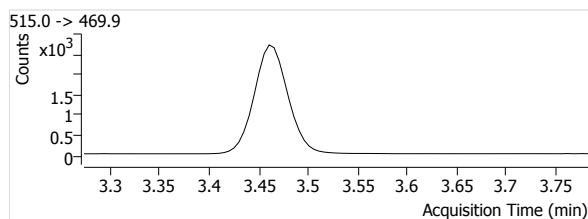
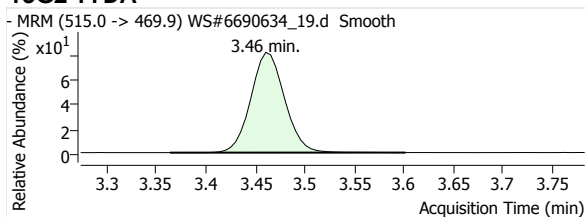
13C4-PFOA



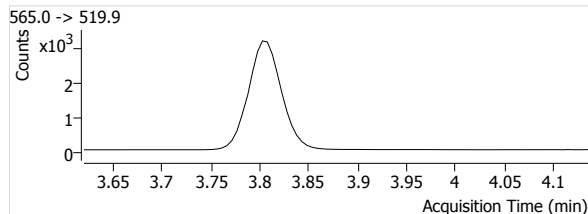
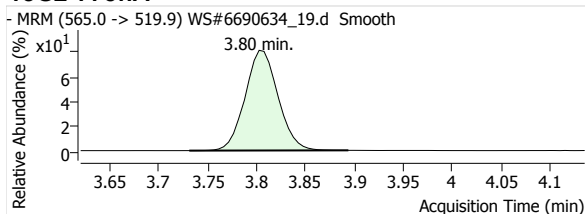
13C5-PFNA



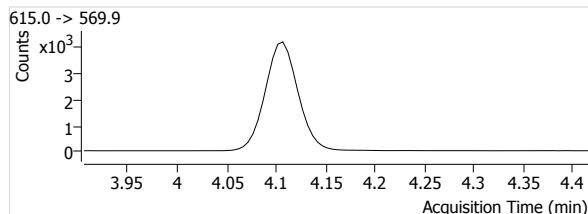
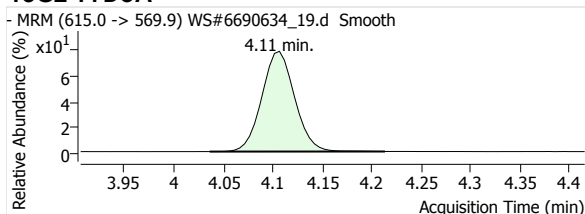
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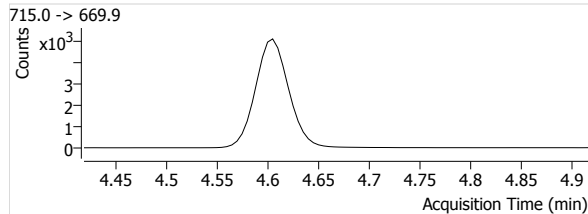
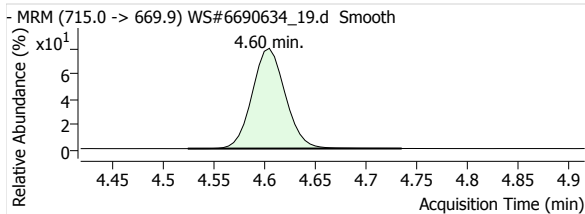
13C2-PFUnA



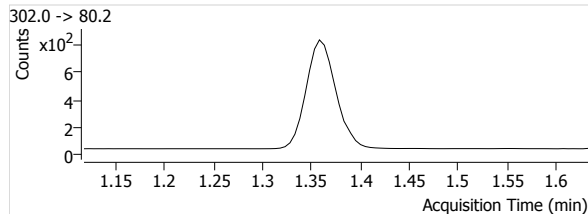
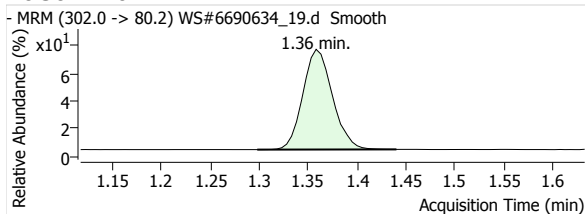
13C2-PFDoA



13C2-PFTeDA

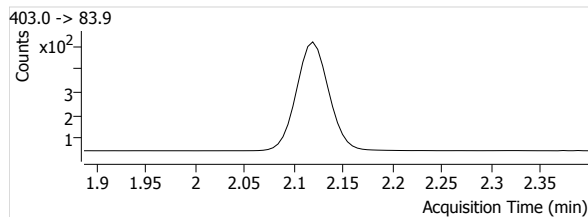
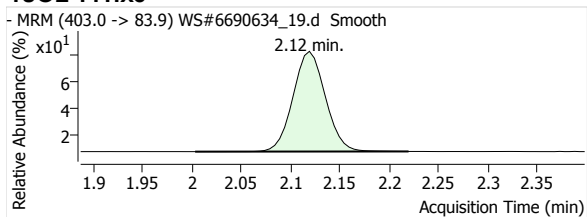


13C3-PFBS

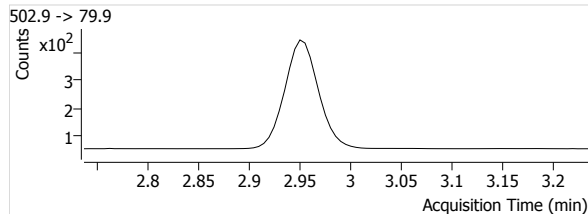
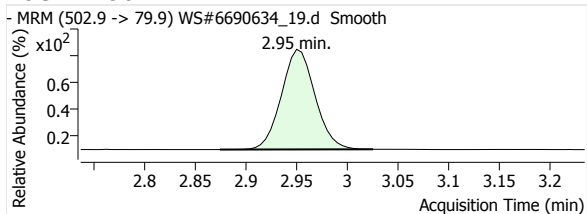


Quantitative Analysis Report

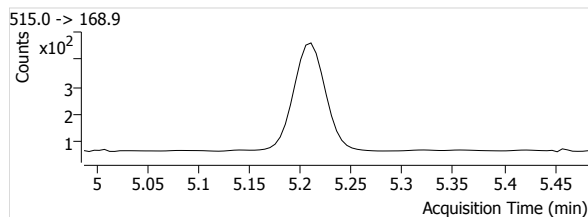
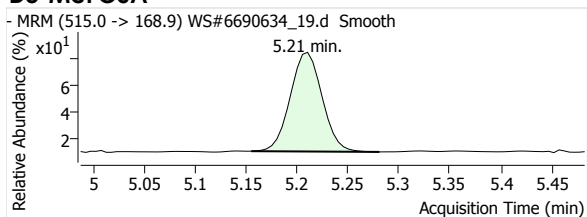
18O2-PFHxs



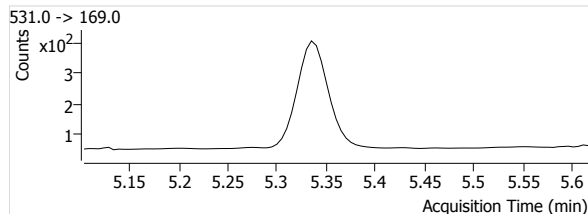
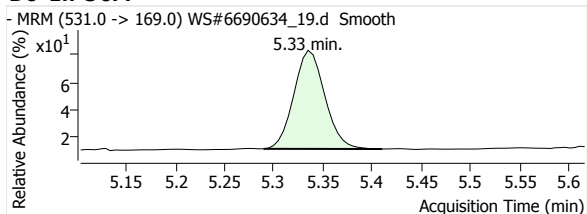
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

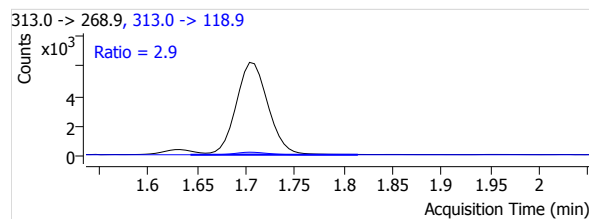
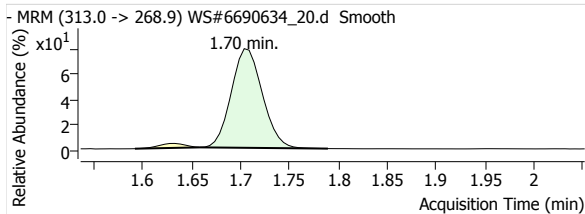
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Sample Name 6690634:MLP497-01
Type Sample
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/22 12:12:22 AM
Comment Reported for all except PFOS.
User Defined MI PFOA

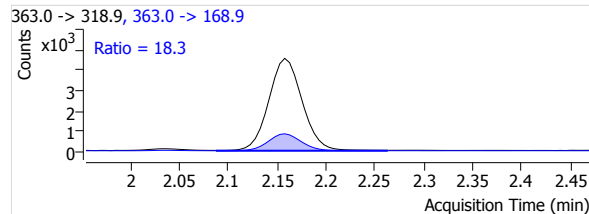
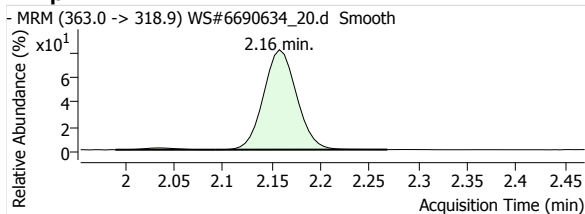
Data File WS#6690634_20.d
Instrument LCMS04
Position P1-B8
Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	0.2450	--	13624	1.70	11683	1.8481	392	1.70	1178	2.9
PFHpA 1	µg/L	--	0.1473	--	10647	2.16	30762	1.0491	1953	2.16	17386	18.3
PFOA 1	µg/L	--	0.3124	--	21323	2.63	28618	2.1978	5506	2.63	28287	25.8
PFNA 1	µg/L	--	0.0073	--	728	3.07	6999	0.0939	157	3.07	3153	21.6
PFDA 1	µg/L	--	0.0020	--	438	3.47	436	0.0679	65	3.47	925	14.8
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.0200	--	257	1.36	3051	0.1642	114	1.36	2026	44.4
PFHxS 1	µg/L	--	0.5267	--	3935	2.08	126451	3.8315	2055	2.09	72465	52.2
PFOS 1	µg/L	--	1.6111	--	9658	2.90	49703	10.3291	5414	2.89	138182	56.1
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	104.9544	--	7372	1.70	1471	--	--	--	--	--
13C4-PFHpA	µg/L	--	105.0078	--	10149	2.16	2074	--	--	--	--	--
13C4-PFOA	µg/L	--	100.6954	--	9702	2.63	1167	--	--	--	--	--
13C5-PFNA	µg/L	--	102.4722	--	7751	3.07	915	--	--	--	--	--
13C2-PFDA	µg/L	--	98.6691	--	6450	3.47	747	--	--	--	--	--
13C2-PFUnA	µg/L	--	96.7870	--	7531	3.81	1146	--	--	--	--	--
13C2-PFDoA	µg/L	--	93.0895	--	9416	4.11	1679	--	--	--	--	--
13C2-PFTeDA	µg/L	--	91.4274	--	11465	4.60	1910	--	--	--	--	--
13C3-PFBS	µg/L	--	101.4258	--	1565	1.36	210	--	--	--	--	--
18O2-PFHxS	µg/L	--	101.0827	--	1027	2.11	556	--	--	--	--	--
13C4-PFOS	µg/L	--	97.0924	--	935	2.95	255	--	--	--	--	--
D3-MeFOSA	µg/L	--	68.3258	--	1661	5.21	88	--	--	--	--	--
D5-EtFOSA	µg/L	--	70.4730	--	1475	5.33	92	--	--	--	--	--

PFHxA 1

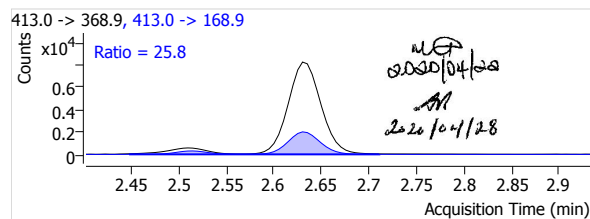
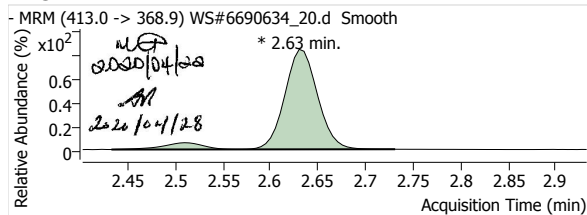


PFHpA 1

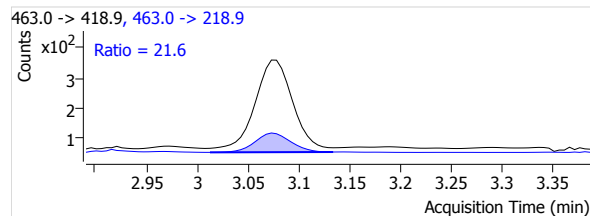
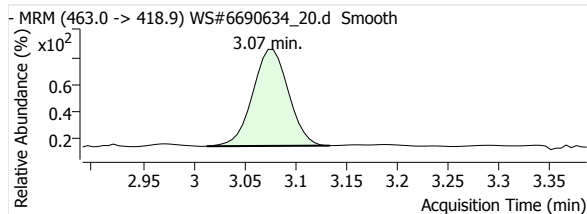


Quantitative Analysis Report

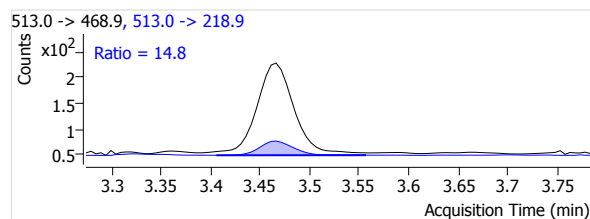
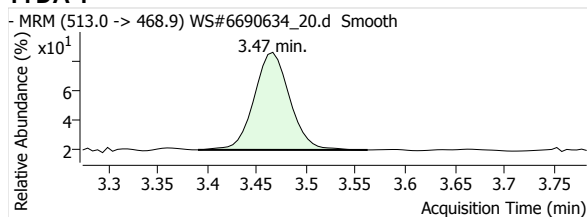
PFOA 1



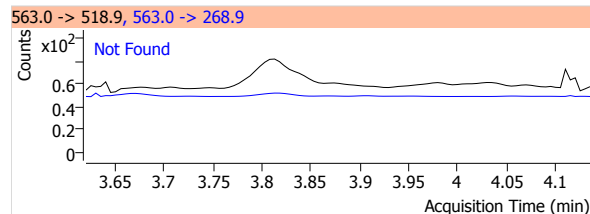
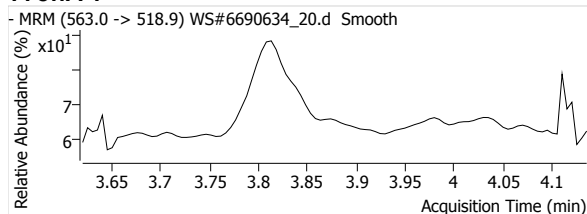
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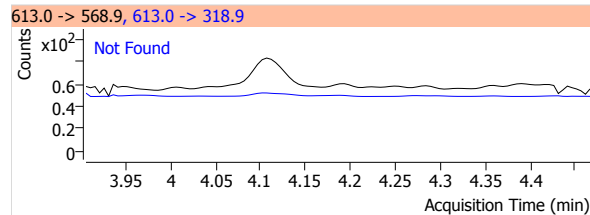
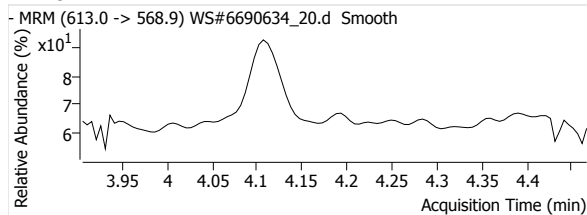
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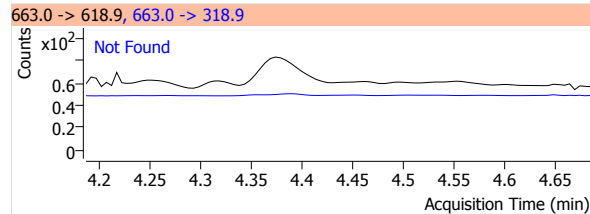
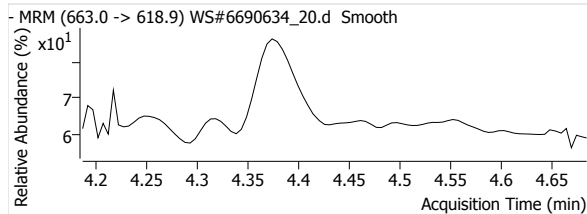
PFUnA 1



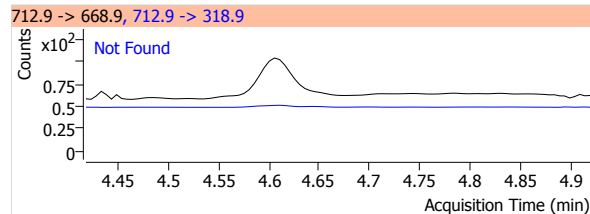
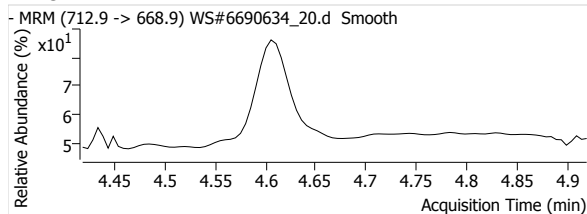
PFDoA 1



PFTrDA 1

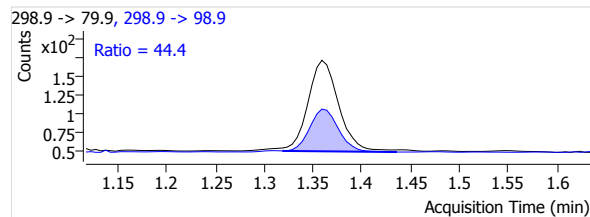
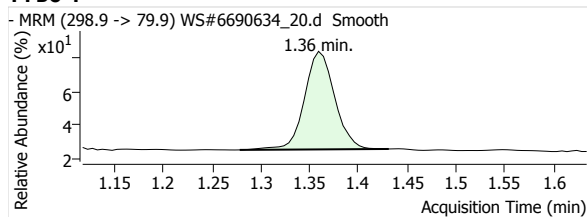


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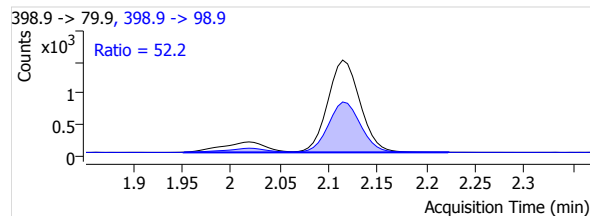
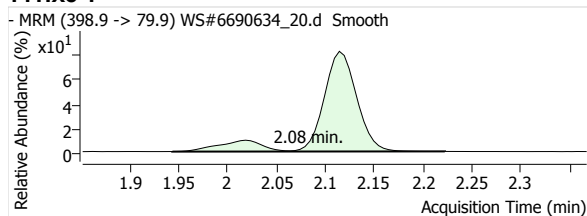


Quantitative Analysis Report

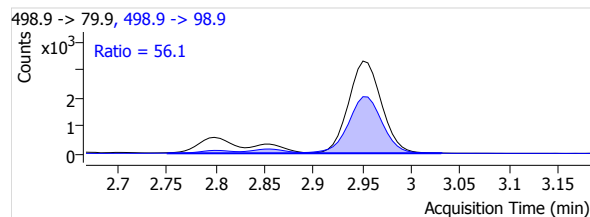
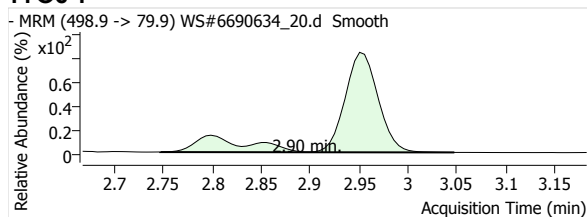
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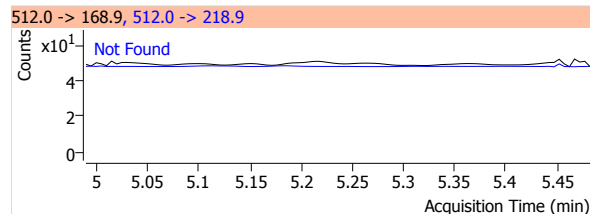
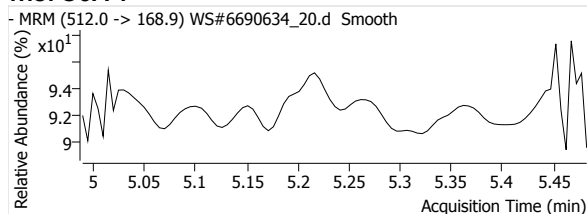
PFHxS 1



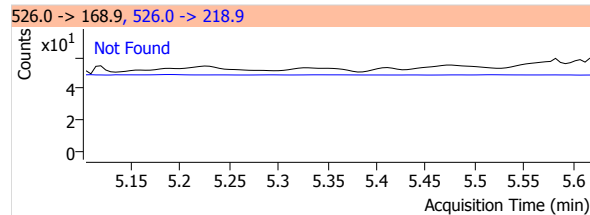
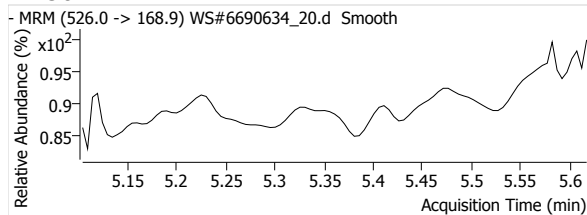
PFOS 1



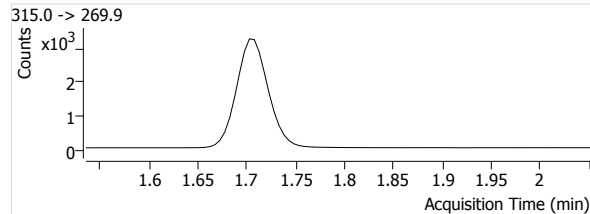
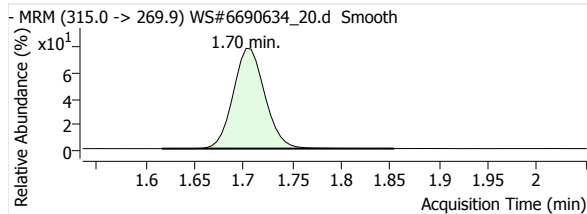
MeFOSA 1



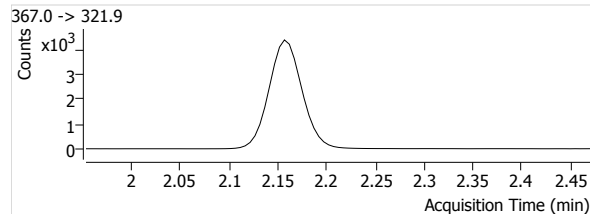
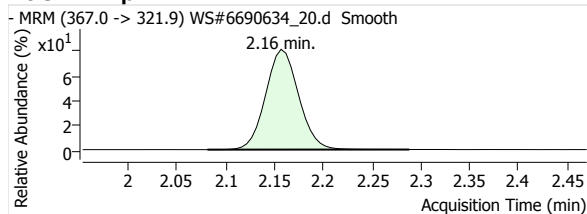
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13C2-PFHxA

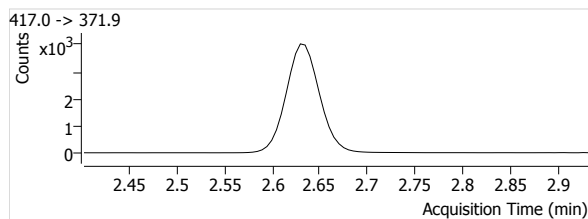
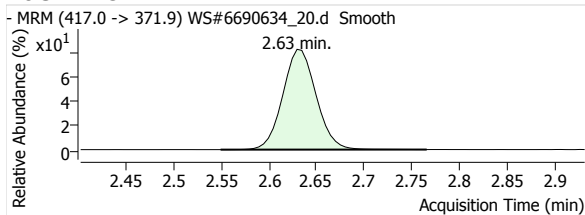


13C4-PFHpA

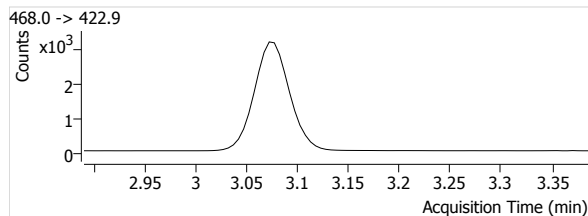
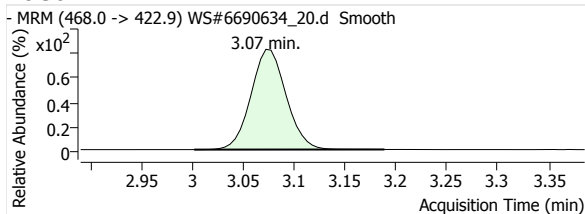


Quantitative Analysis Report

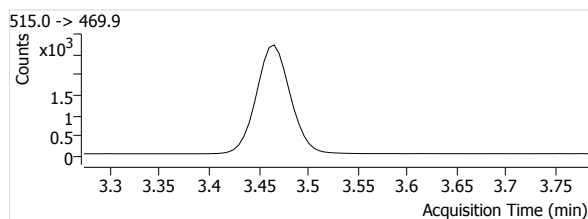
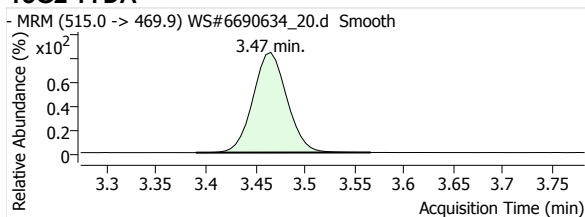
13C4-PFOA



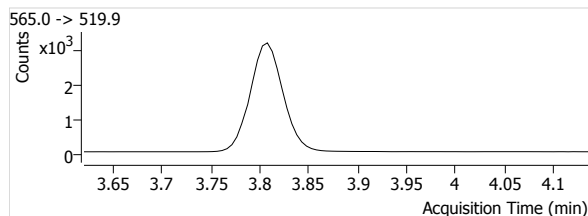
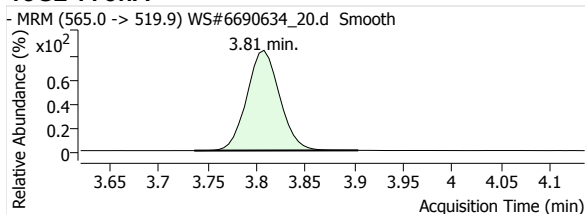
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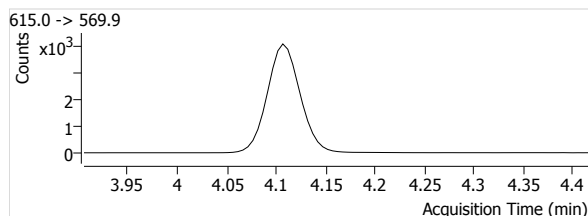
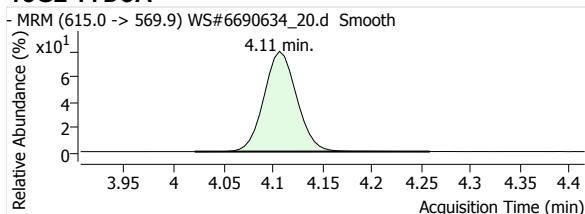
13C2-PFDA



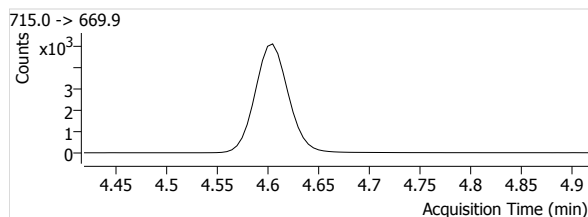
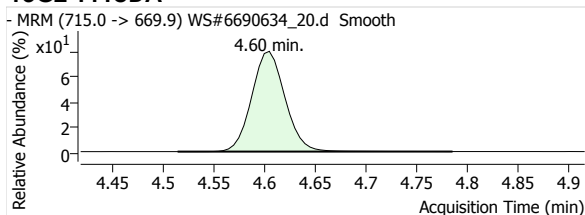
13C2-PFUnA



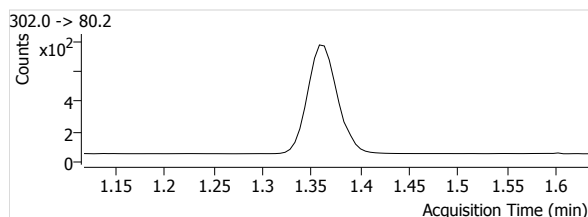
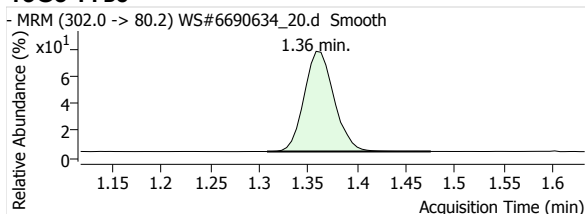
13C2-PFDoA



13C2-PFTeDA

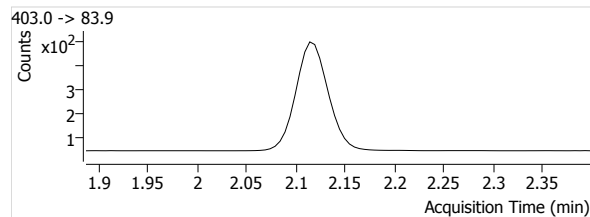
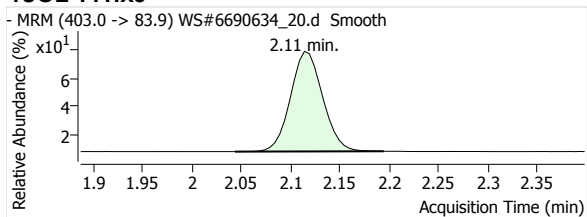


13C3-PFBS

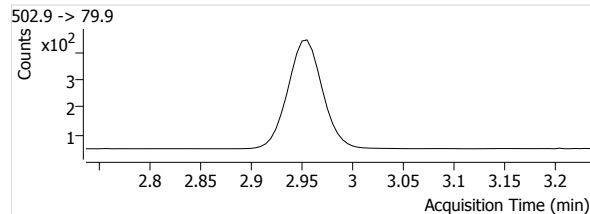
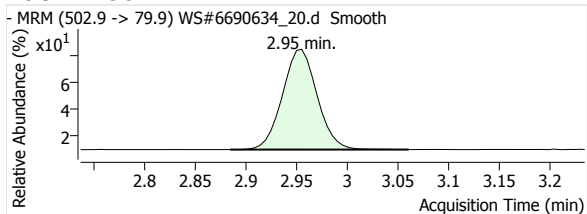


Quantitative Analysis Report

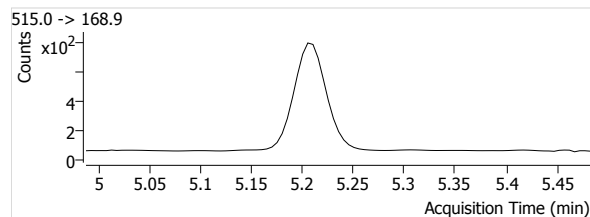
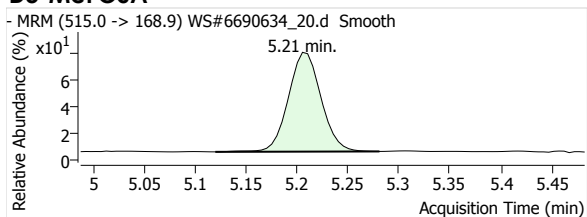
18O2-PFHxs



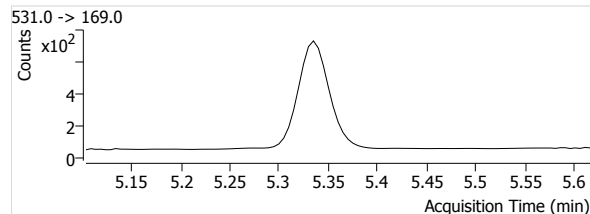
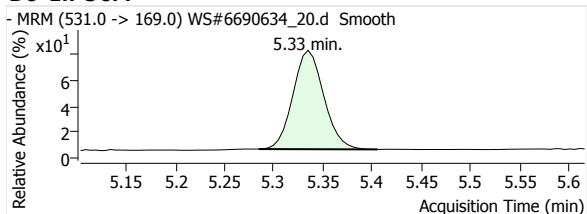
13C4-PFOS



D3-MeFOFA



D5-EtFOFA



Quantitative Analysis Report

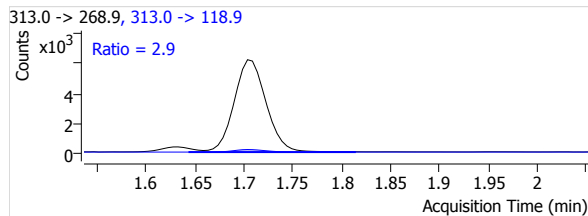
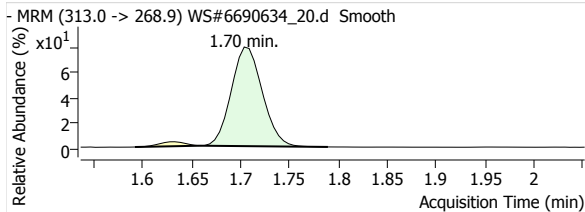
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Type Sample
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/22 12:12:22 AM
Comment Reported for all except PFOS.
User Defined MI PFOA

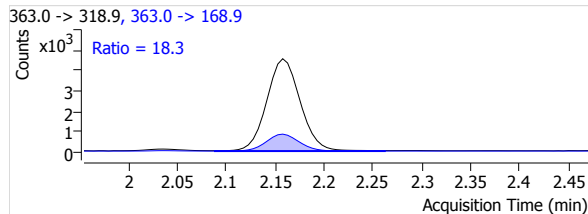
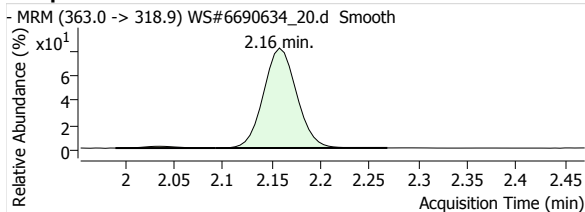
Data File WS#6690634_20.d
Instrument LCMS04
Position P1-B8
Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	0.2450	--	13624	1.70	11683	1.8481	392	1.70	1178	2.9
PFHpA 1	µg/L	--	0.1473	--	10647	2.16	30762	1.0491	1953	2.16	17386	18.3
PFOA 1	µg/L	--	0.2878	--	19669	2.63	28627	2.0273	4778	2.63	28298	24.3
PFNA 1	µg/L	--	0.0073	--	728	3.07	6999	0.0939	157	3.07	3153	21.6
PFDA 1	µg/L	--	0.0020	--	438	3.47	436	0.0679	65	3.47	925	14.8
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.0200	--	257	1.36	3051	0.1642	114	1.36	2026	44.4
PFHxS 1	µg/L	--	0.5266	--	3935	2.08	126451	3.8315	2055	2.09	72465	52.2
PFOS 1	µg/L	--	1.6111	--	9658	2.90	49703	10.3291	5414	2.89	138182	56.1
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	104.9544	--	7372	1.70	1471	--	--	--	--	--
13C4-PFHpA	µg/L	--	105.0078	--	10149	2.16	2074	--	--	--	--	--
13C4-PFOA	µg/L	--	100.6954	--	9702	2.63	1167	--	--	--	--	--
13C5-PFNA	µg/L	--	102.4722	--	7751	3.07	915	--	--	--	--	--
13C2-PFDA	µg/L	--	98.6691	--	6450	3.47	747	--	--	--	--	--
13C2-PFUnA	µg/L	--	96.7870	--	7531	3.81	1146	--	--	--	--	--
13C2-PFDoA	µg/L	--	93.0895	--	9416	4.11	1679	--	--	--	--	--
13C2-PFTeDA	µg/L	--	91.4274	--	11465	4.60	1910	--	--	--	--	--
13C3-PFBS	µg/L	--	101.4258	--	1565	1.36	210	--	--	--	--	--
18O2-PFHxS	µg/L	--	101.0827	--	1027	2.11	556	--	--	--	--	--
13C4-PFOS	µg/L	--	97.0924	--	935	2.95	255	--	--	--	--	--
D3-MeFOSA	µg/L	--	68.3258	--	1661	5.21	88	--	--	--	--	--
D5-EtFOSA	µg/L	--	70.4730	--	1475	5.33	92	--	--	--	--	--

PFHxA 1

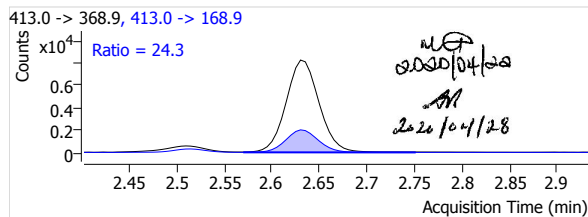
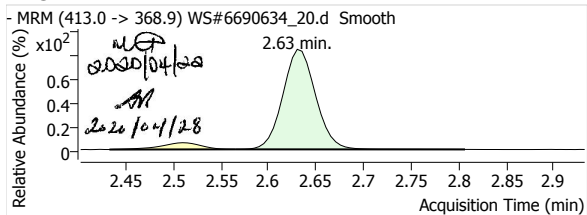


PFHpA 1

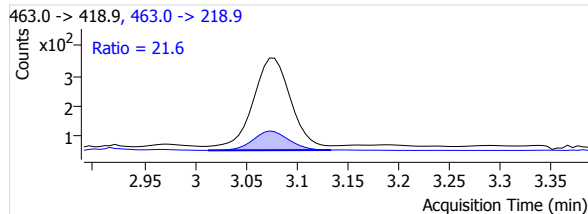
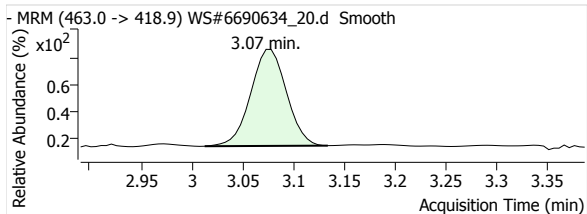


Quantitative Analysis Report

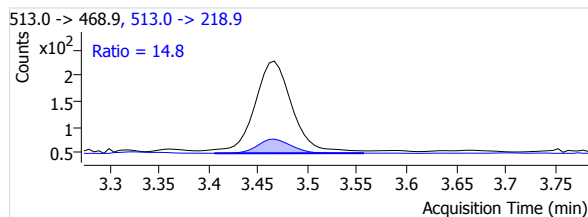
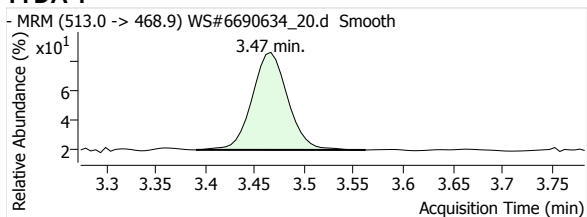
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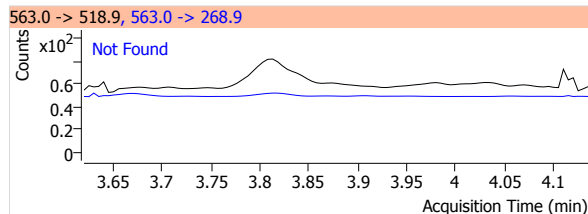
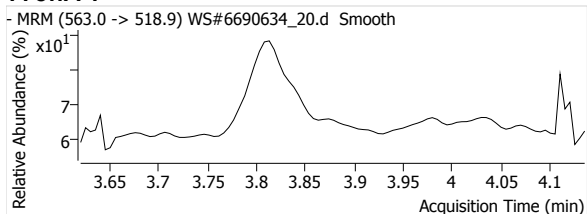
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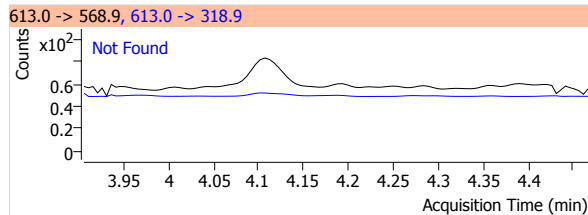
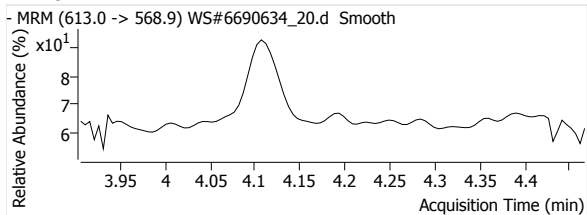
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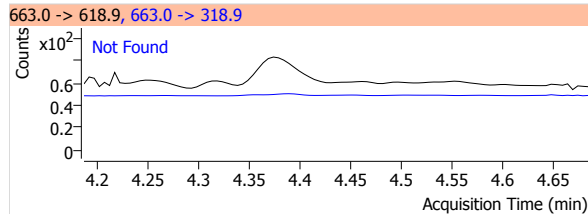
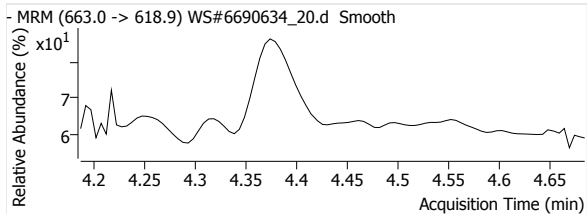
PFUnA 1



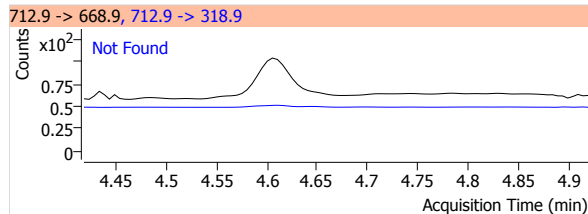
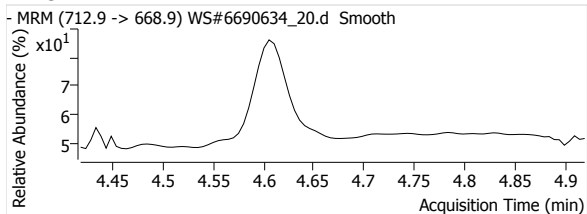
PFDoA 1



PFTrDA 1

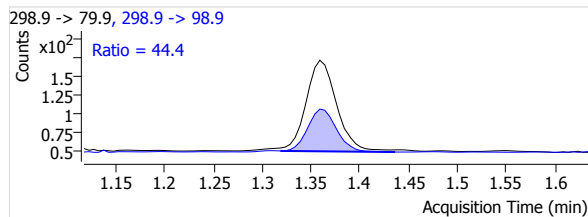
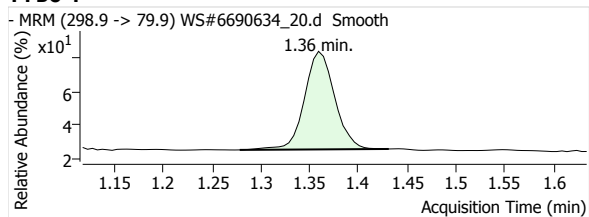


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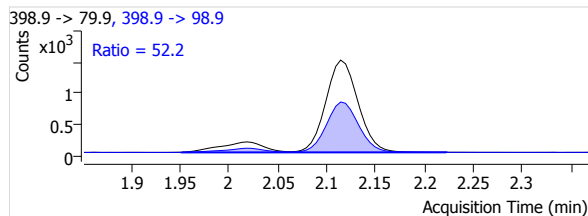
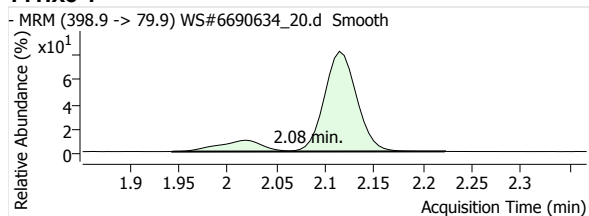


Quantitative Analysis Report

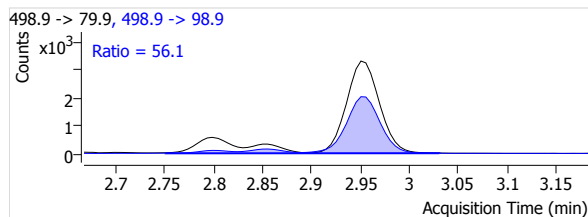
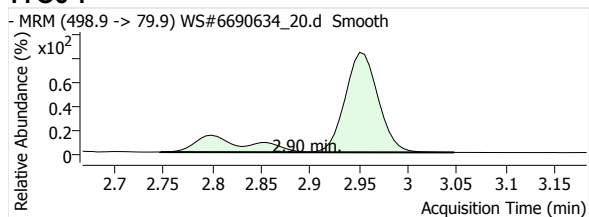
PFBS 1



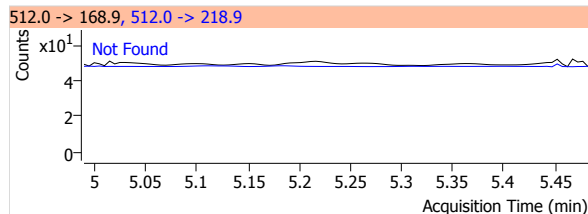
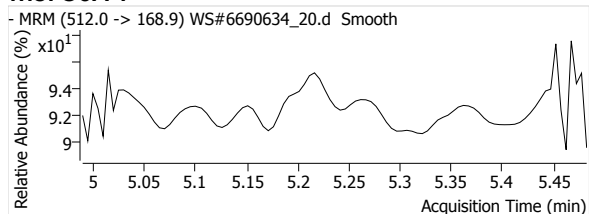
PFHxS 1



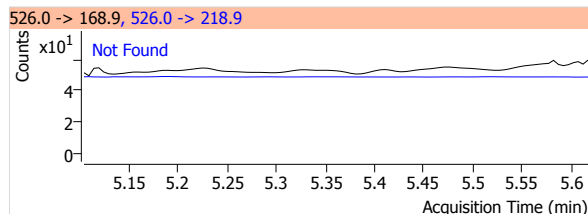
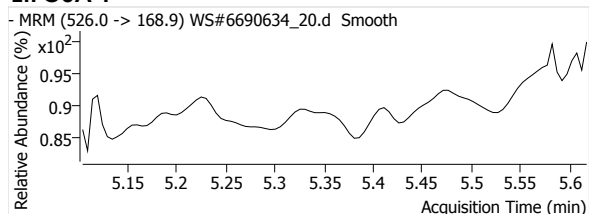
PFOS 1



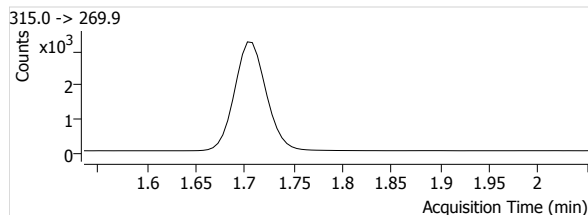
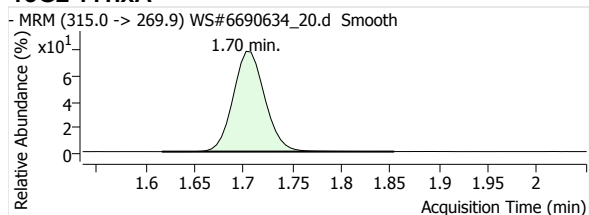
MeFOSA 1



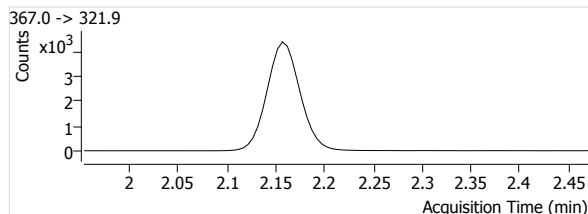
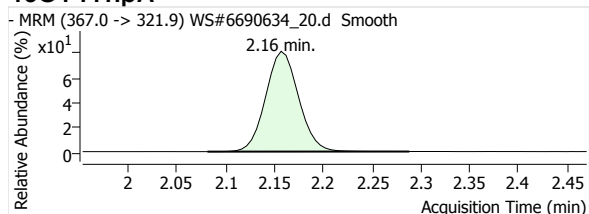
eFOSA 1



13C2-PFHxA

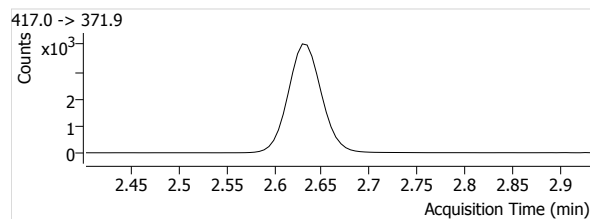
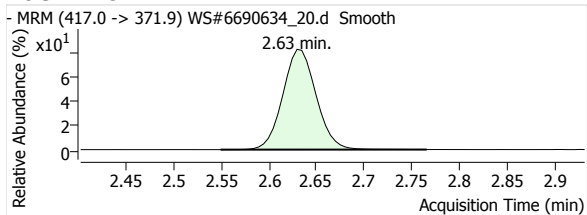


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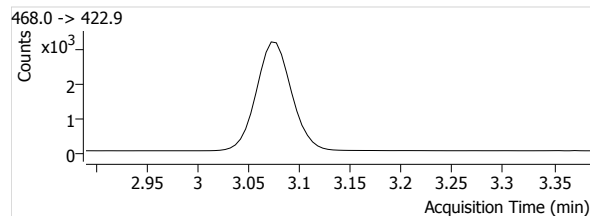
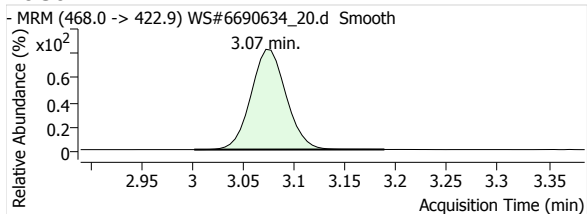


Quantitative Analysis Report

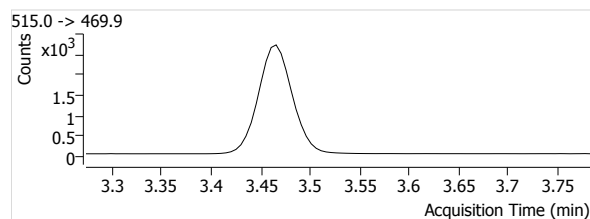
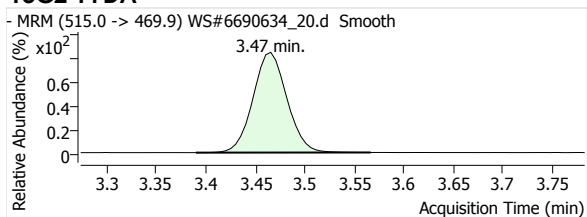
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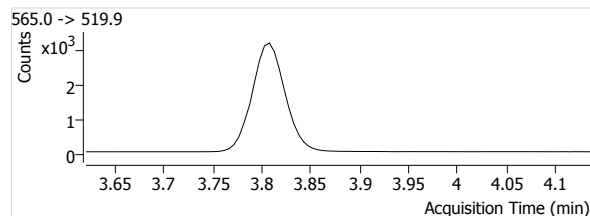
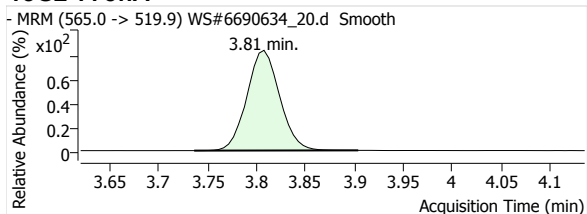
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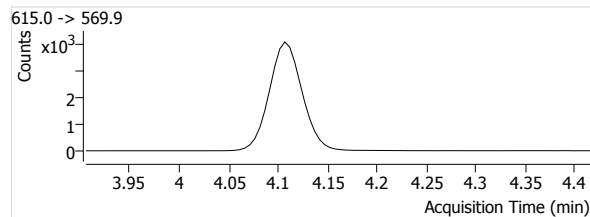
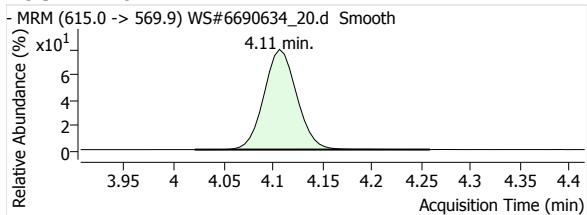
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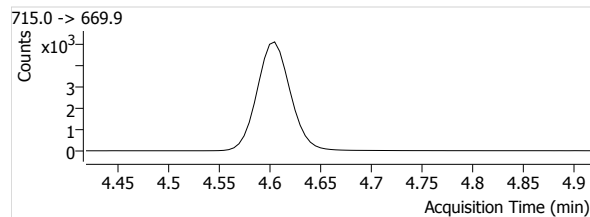
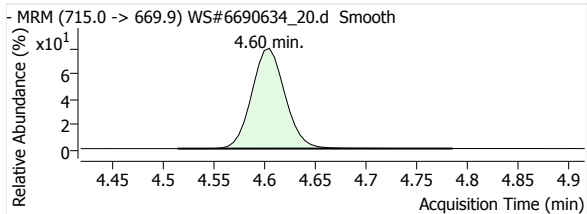
13C2-PFUnA



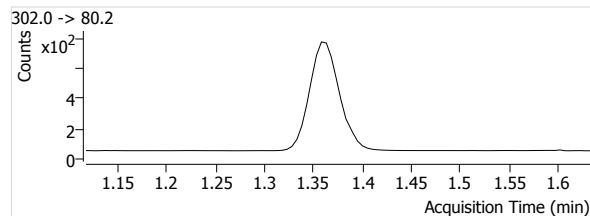
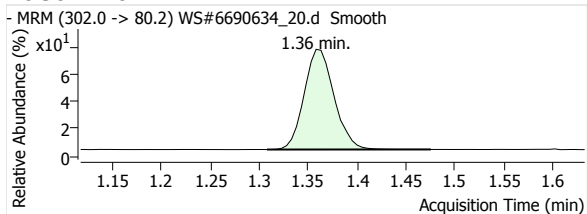
13C2-PFDoA



13C2-PFTeDA

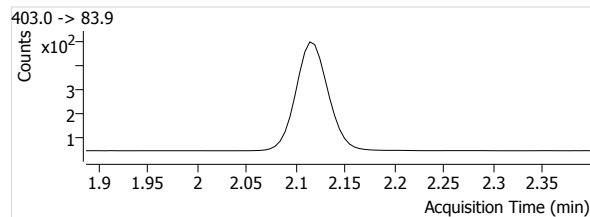
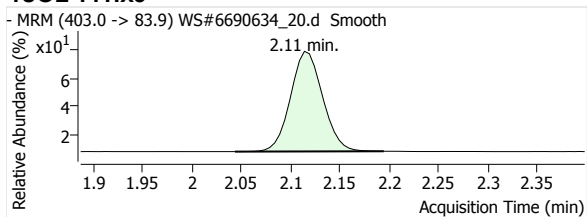


13C3-PFBS

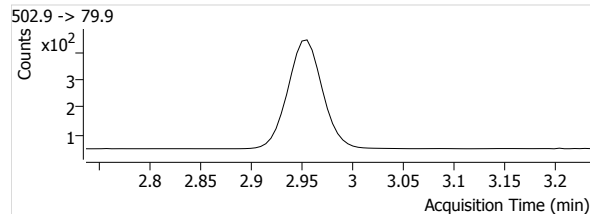
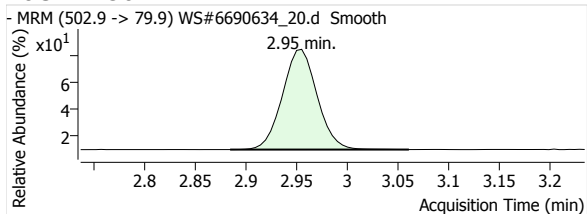


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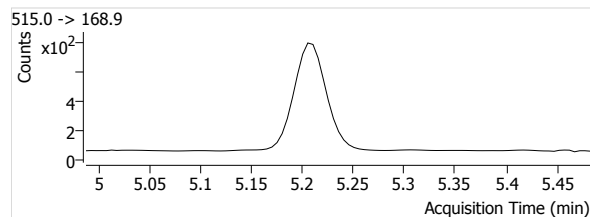
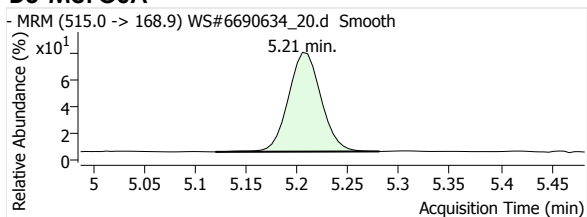
18O2-PFHxs



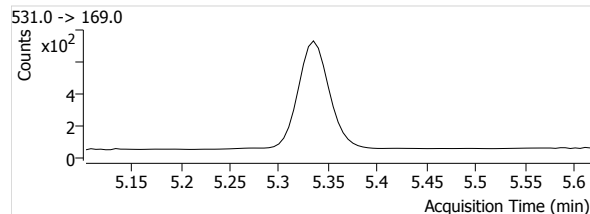
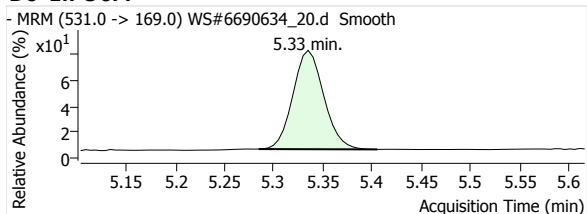
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



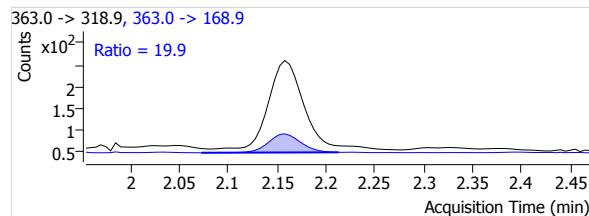
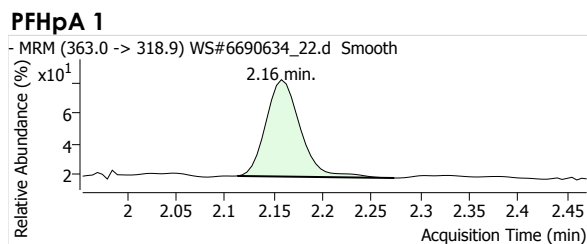
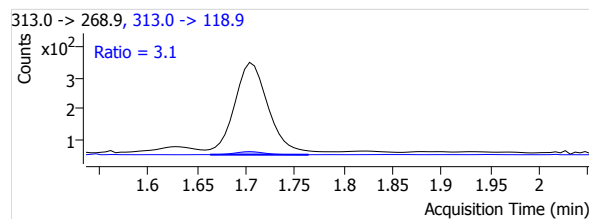
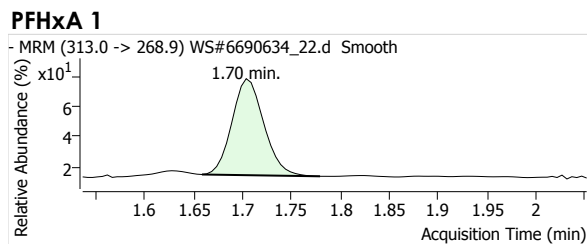
Quantitative Analysis Report

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bin

Sample Name 6690634:MLP498-01
Type Sample
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/22 12:26:16 AM
Comment -
User Defined MI PFOA

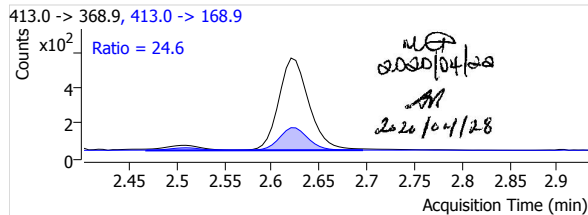
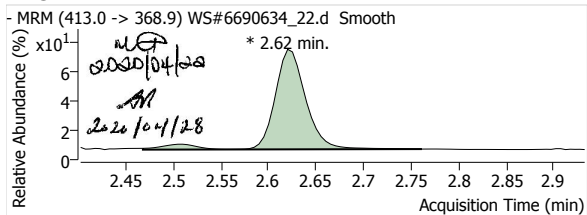
Data File WS#6690634_22.d
Instrument LCMS04
Position P1-B9
Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	0.0067	--	655	1.70	562	0.0850	20	1.70	393	3.1
PFHpA 1	µg/L	--	0.0018	--	492	2.16	826	0.0487	98	2.16	182	19.9
PFOA 1	µg/L	--	0.0263	--	1226	2.62	47781	0.2137	302	2.62	7951	24.6
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.0000	--	54	1.36	189	0.0321	28	1.36	112	51.9
PFHxS 1	µg/L	--	0.0649	--	553	2.08	10134	0.5113	302	2.09	5323	54.6
PFOS 1	µg/L	--	0.1459	--	774	2.90	7566	0.9758	437	2.89	7263	56.4
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	109.6953	--	7705	1.70	1325	--	--	--	--	--
13C4-PFHpA	µg/L	--	104.4490	--	10095	2.16	797	--	--	--	--	--
13C4-PFOA	µg/L	--	59.5330	--	5736	2.62	1092	--	--	--	--	--
13C5-PFNA	µg/L	--	66.5918	--	5037	3.06	1691	--	--	--	--	--
13C2-PFDA	µg/L	--	102.0805	--	6673	3.46	1825	--	--	--	--	--
13C2-PFUnA	µg/L	--	91.6592	--	7132	3.81	1415	--	--	--	--	--
13C2-PFDoA	µg/L	--	61.7103	--	6242	4.11	971	--	--	--	--	--
13C2-PFTeDA	µg/L	--	41.6746	--	5226	4.60	560	--	--	--	--	--
13C3-PFBS	µg/L	--	109.1380	--	1684	1.36	69	--	--	--	--	--
18O2-PFHxS	µg/L	--	106.4961	--	1082	2.11	604	--	--	--	--	--
13C4-PFOS	µg/L	--	82.3468	--	793	2.95	344	--	--	--	--	--
D3-MeFOSA	µg/L	--	55.1213	--	1340	5.21	52	--	--	--	--	--
D5-EtFOSA	µg/L	--	52.7950	--	1105	5.33	67	--	--	--	--	--

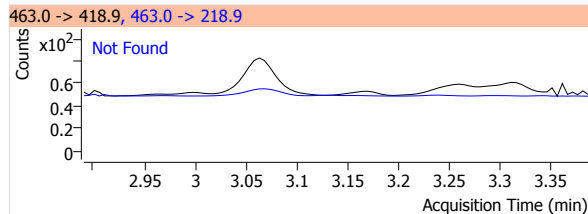
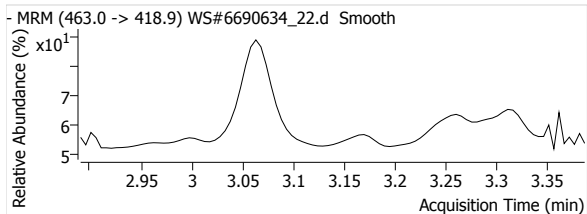


Quantitative Analysis Report

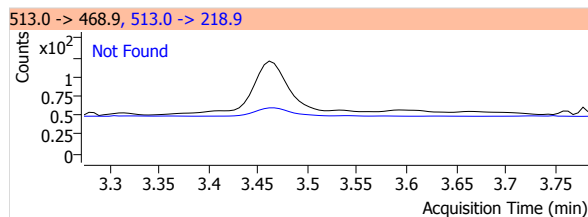
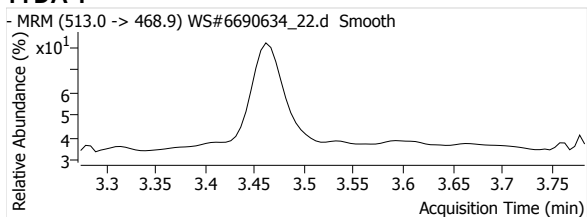
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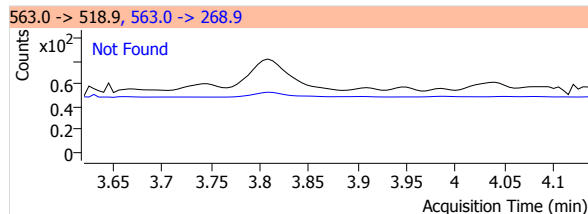
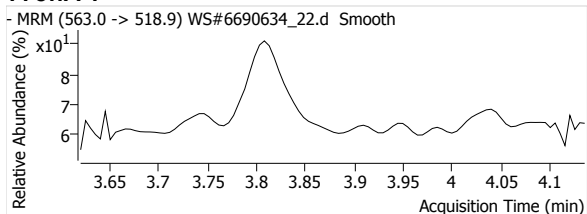
PFNA 1



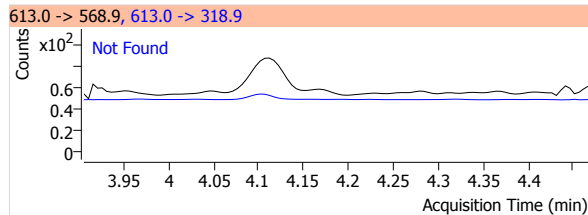
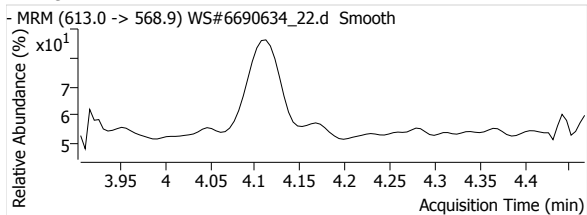
PFDA 1



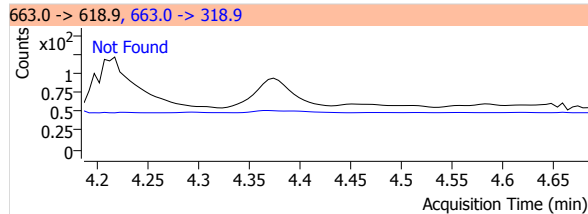
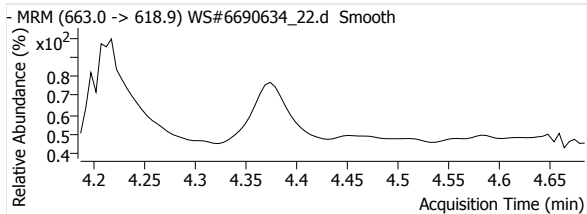
PFUnA 1



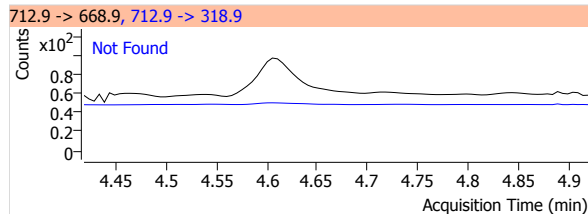
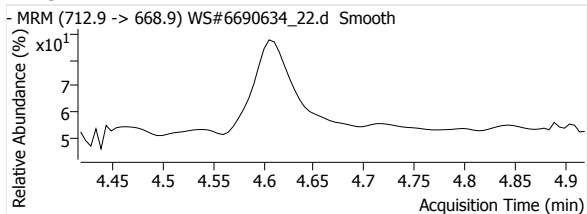
PFDoA 1



PFTrDA 1

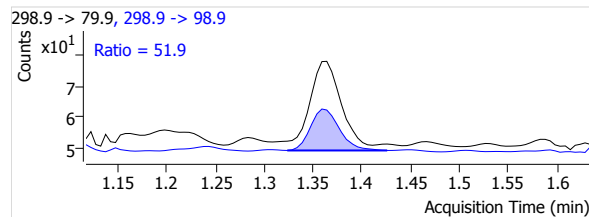
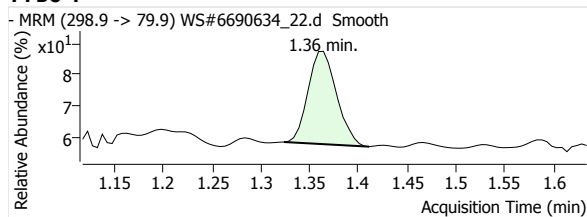


PFTeDA 1

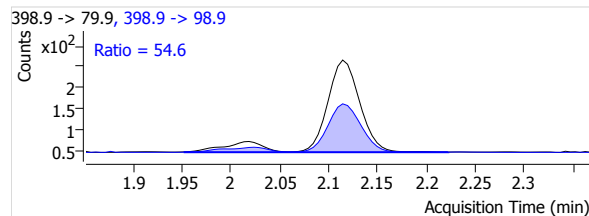
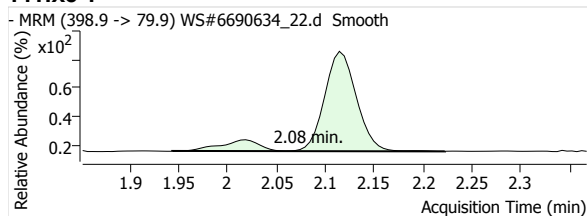


Quantitative Analysis Report

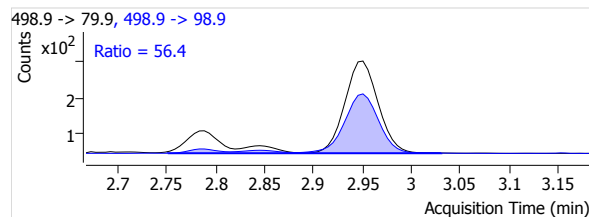
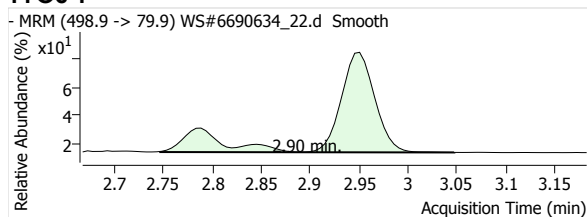
PFBS 1



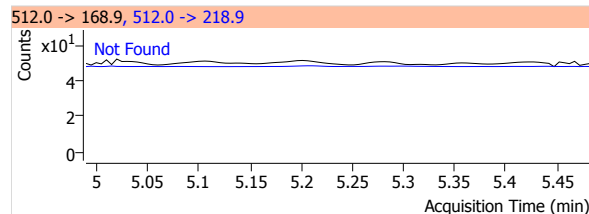
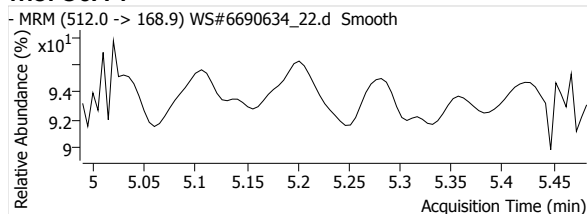
PFHxS 1



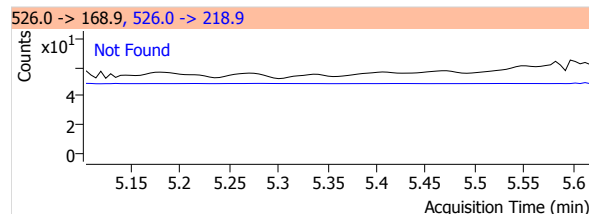
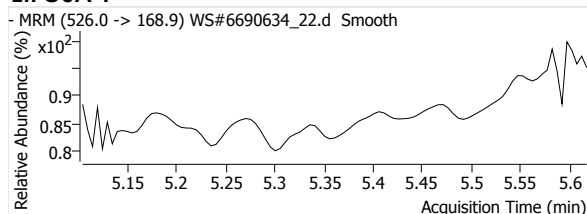
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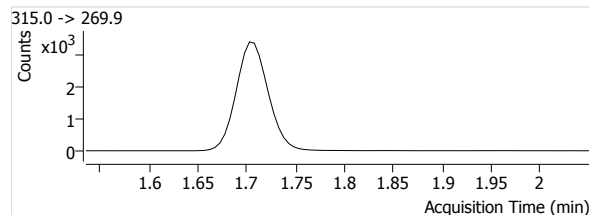
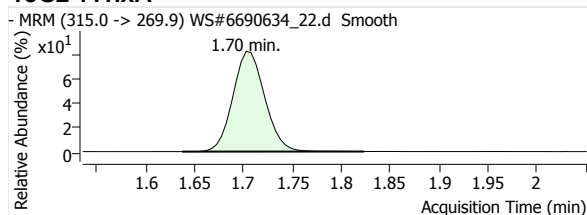
MeFOSA 1



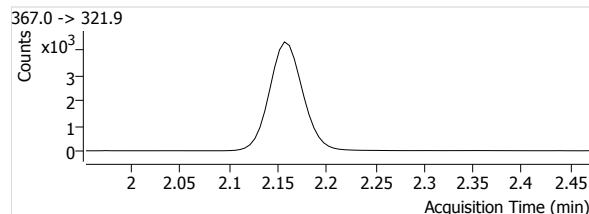
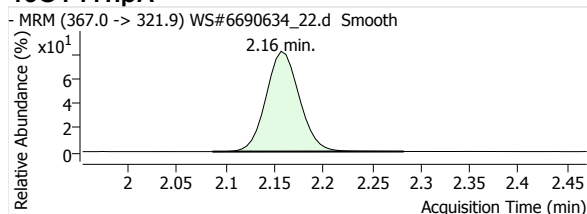
eFOSA 1



13C2-PFHxA

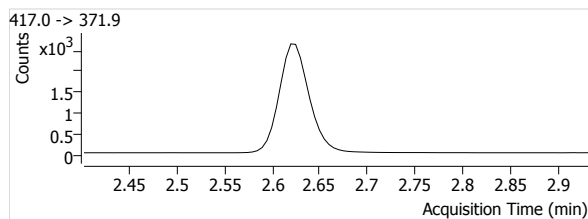
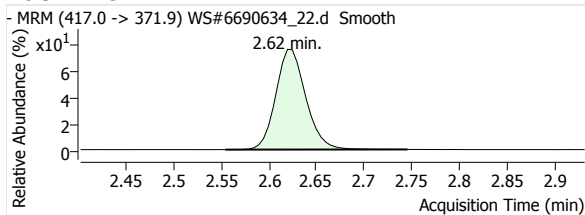


13C4-PFHpA

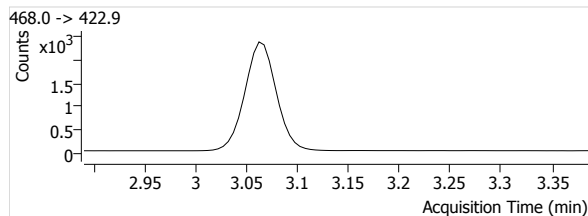
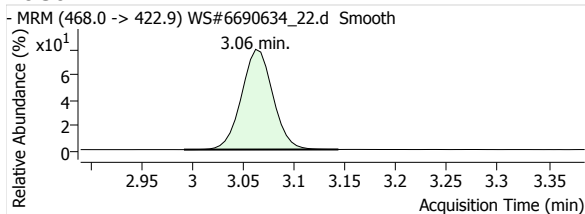


Quantitative Analysis Report

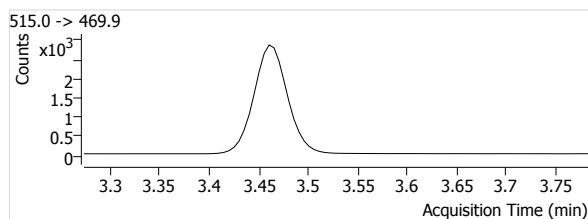
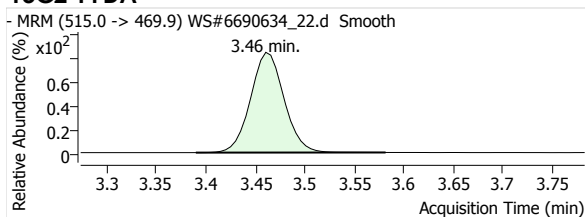
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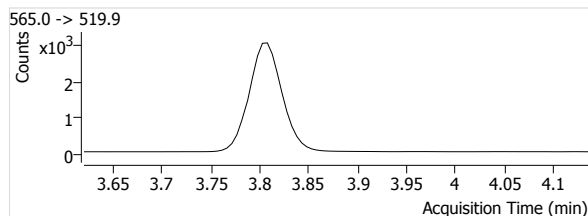
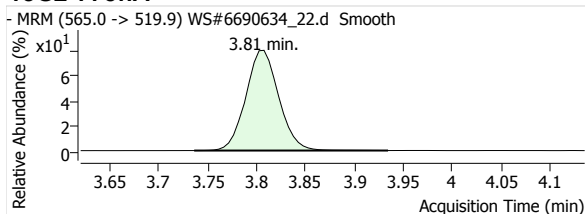
13C5-PFNA



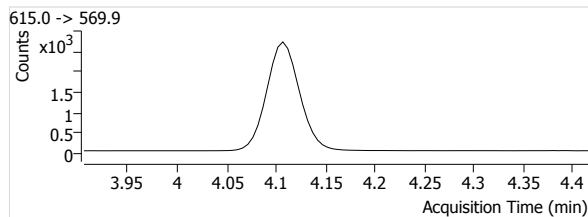
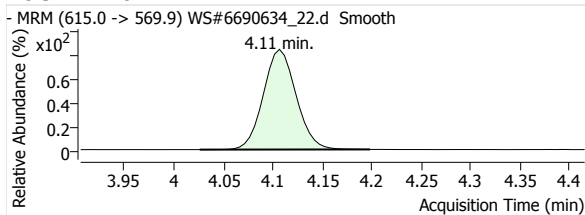
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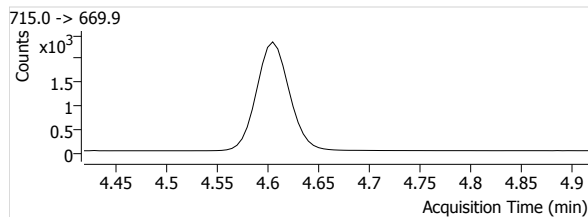
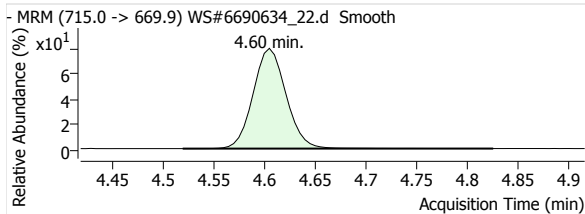
13C2-PFUnA



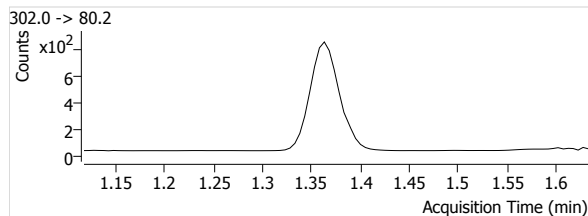
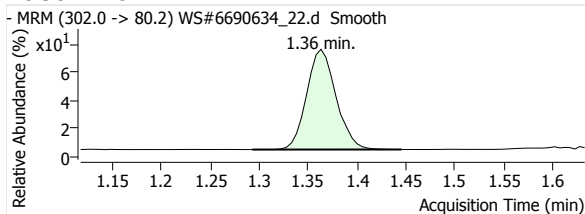
13C2-PFDoA



13C2-PFTeDA

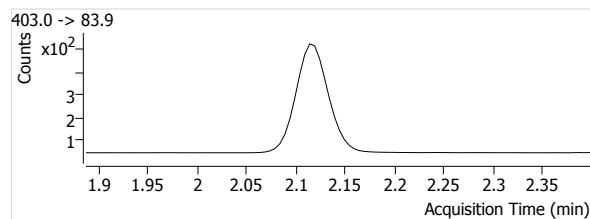
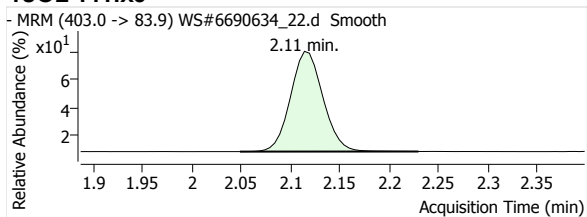


13C3-PFBS

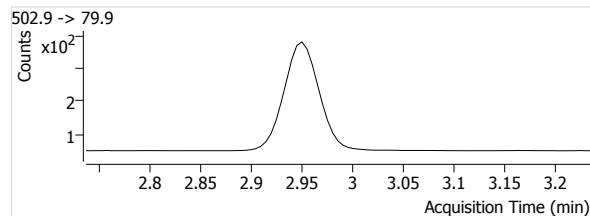
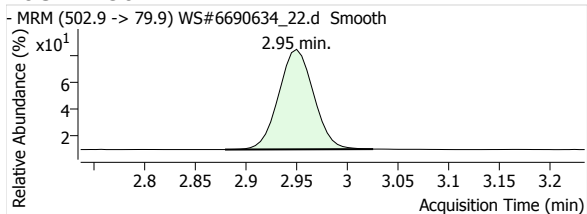


Quantitative Analysis Report

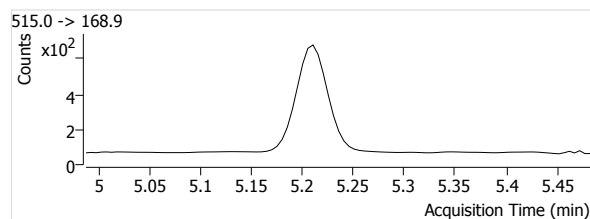
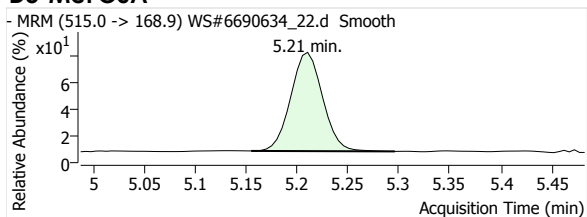
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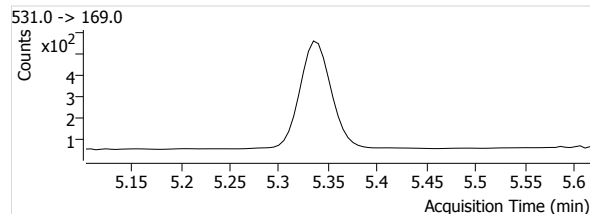
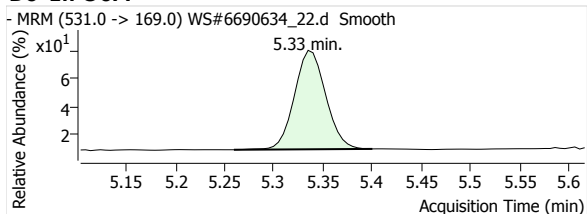
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

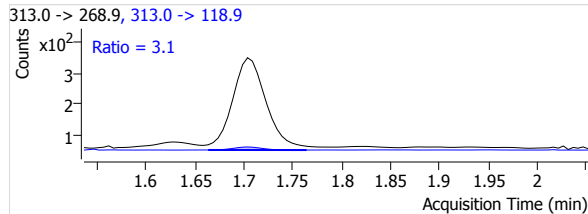
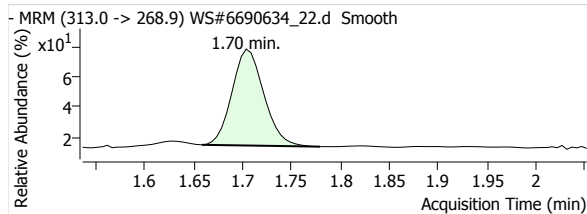
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Sample Name 6690634:MLP498-01
 Type Sample
 Acq. Method File PFAS.m
 Acq. Date-Time 2020/04/22 12:26:16 AM
 Comment -
 User Defined MI PFOA

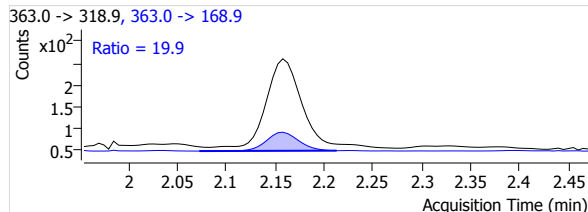
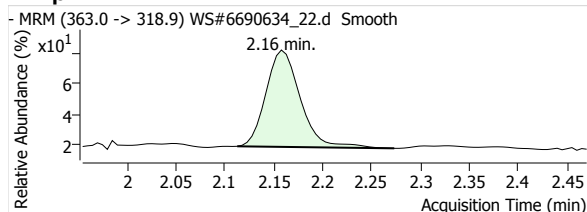
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 Instrument LCMS04
 Position P1-B9
 Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	0.0067	--	655	1.70	562	0.0850	20	1.70	393	3.1
PFHpA 1	µg/L	--	0.0018	--	492	2.16	826	0.0487	98	2.16	182	19.9
PFOA 1	µg/L	--	0.0242	--	1145	2.62	47735	0.1996	266	2.62	7980	23.2
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.0000	--	54	1.36	189	0.0321	28	1.36	112	51.9
PFHxS 1	µg/L	--	0.0655	--	553	2.08	10134	0.5113	302	2.09	5323	54.6
PFOS 1	µg/L	--	0.1459	--	774	2.90	7566	0.9758	437	2.89	7263	56.4
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	109.6953	--	7705	1.70	1325	--	--	--	--	--
13C4-PFHpA	µg/L	--	104.4490	--	10095	2.16	797	--	--	--	--	--
13C4-PFOA	µg/L	--	59.5330	--	5736	2.62	1092	--	--	--	--	--
13C5-PFNA	µg/L	--	66.5918	--	5037	3.06	1691	--	--	--	--	--
13C2-PFDA	µg/L	--	102.0805	--	6673	3.46	1825	--	--	--	--	--
13C2-PFUnA	µg/L	--	91.6592	--	7132	3.81	1415	--	--	--	--	--
13C2-PFDaA	µg/L	--	61.7103	--	6242	4.11	971	--	--	--	--	--
13C2-PFTeDA	µg/L	--	41.6746	--	5226	4.60	560	--	--	--	--	--
13C3-PFBS	µg/L	--	109.1380	--	1684	1.36	69	--	--	--	--	--
18O2-PFHxS	µg/L	--	106.4961	--	1082	2.11	604	--	--	--	--	--
13C4-PFOS	µg/L	--	82.3468	--	793	2.95	344	--	--	--	--	--
D3-MeFOSA	µg/L	--	55.1213	--	1340	5.21	52	--	--	--	--	--
D5-EtFOSA	µg/L	--	52.7950	--	1105	5.33	67	--	--	--	--	--

PFHxA 1

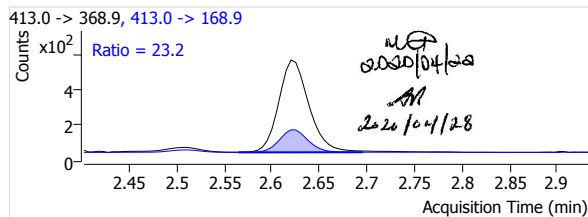
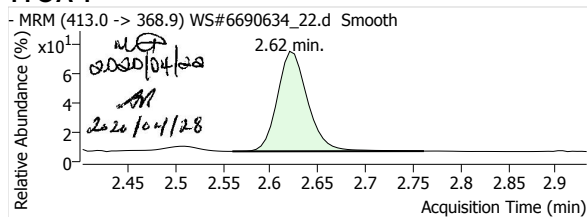


PFHpA 1

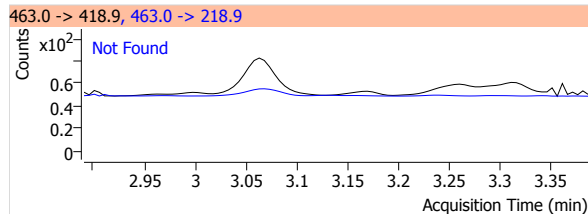
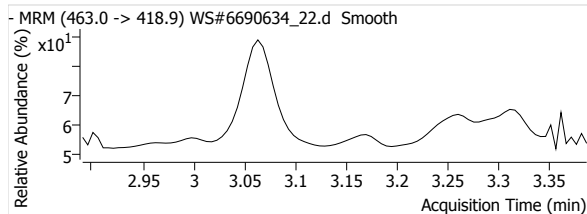


Quantitative Analysis Report

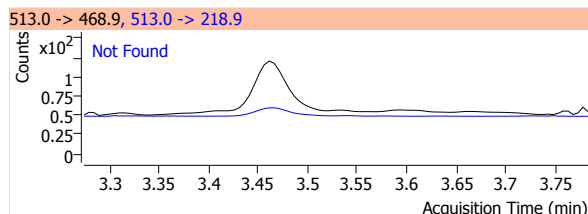
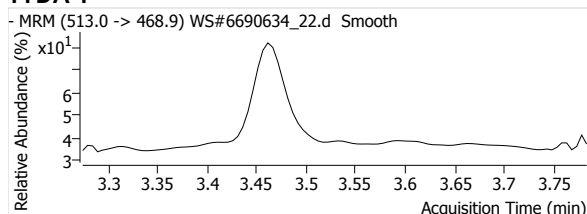
PFOA 1



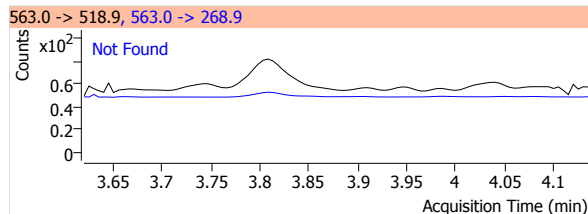
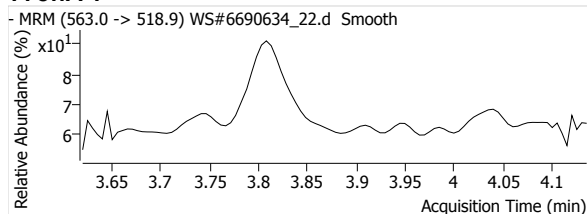
PFNA 1



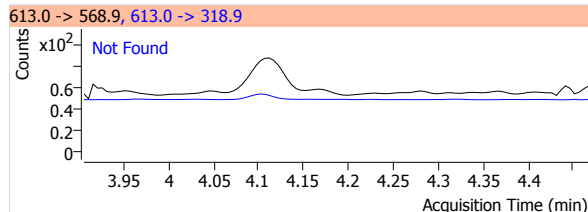
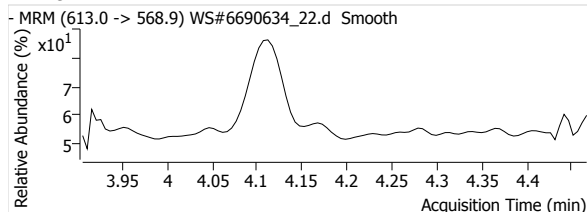
PFDA 1



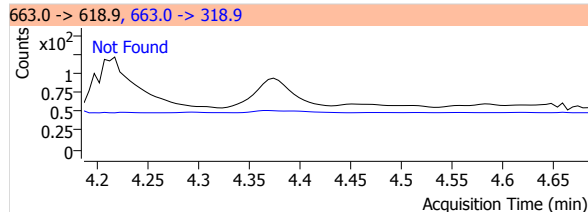
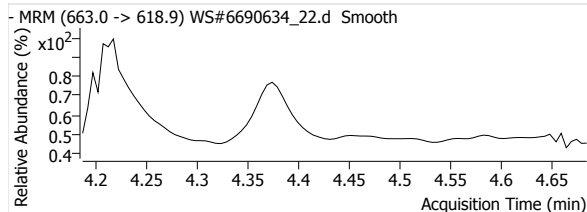
PFUnA 1



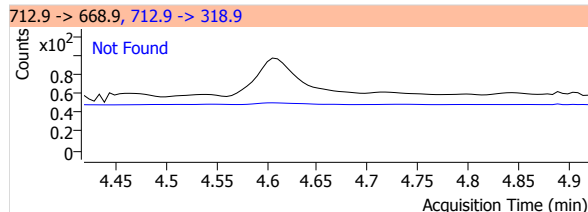
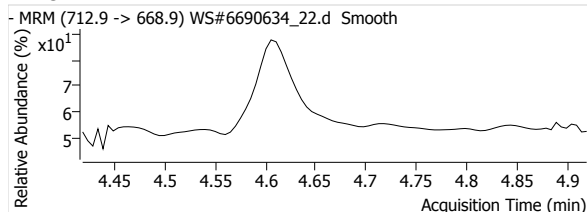
PFDaA 1



PFTrDA 1

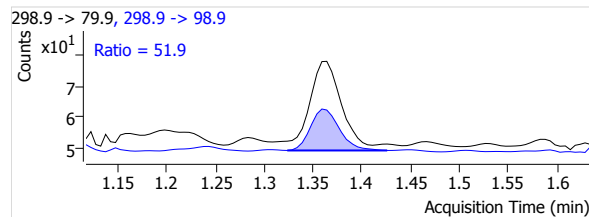
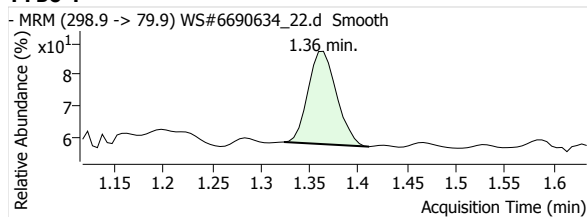


PFTeDA 1

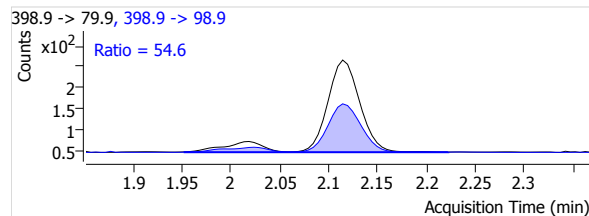
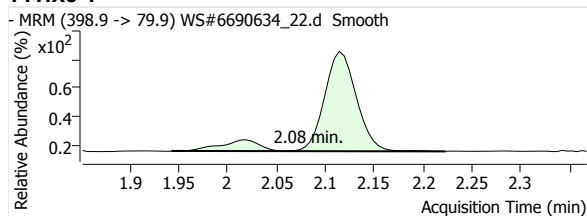


Quantitative Analysis Report

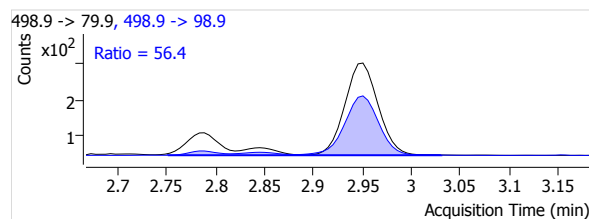
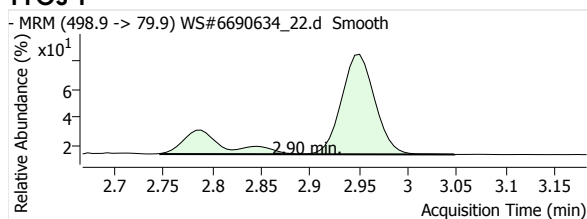
PFBS 1



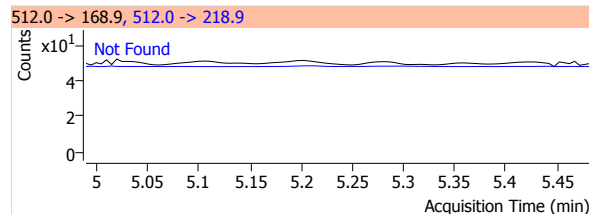
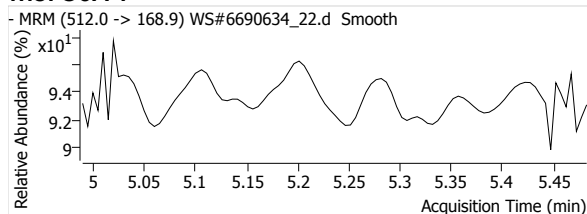
PFHxS 1



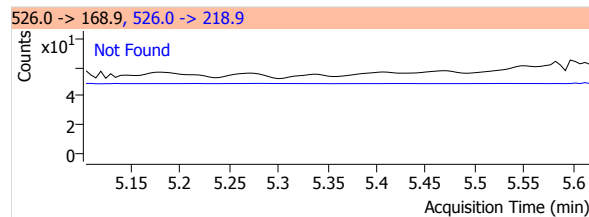
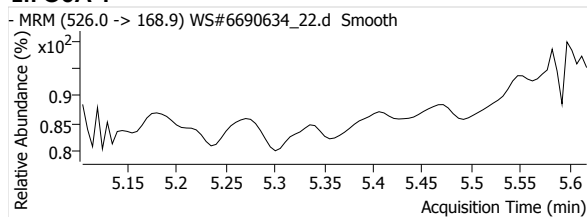
PFOS 1



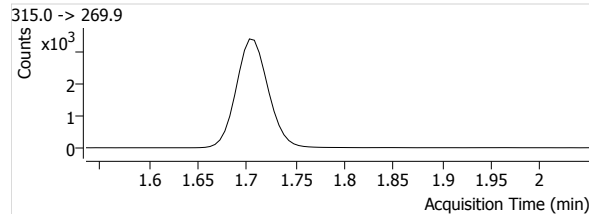
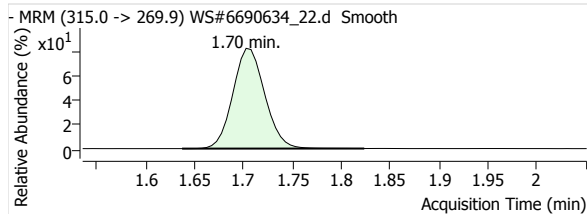
MeFOSA 1



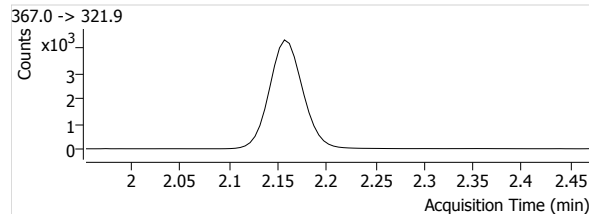
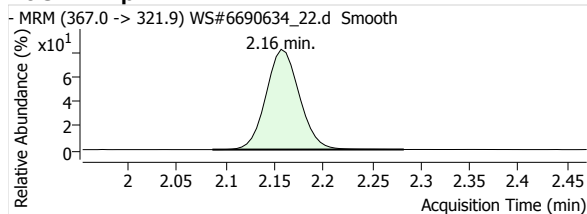
eFOSA 1



13C2-PFHxA

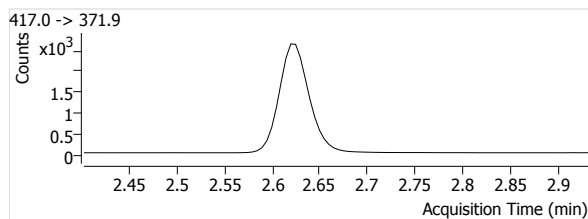
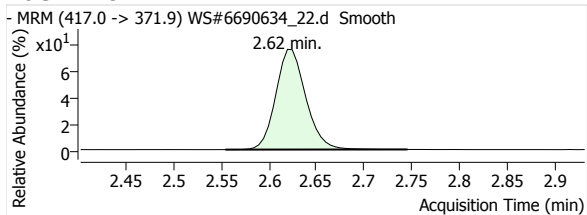


13C4-PFHpA

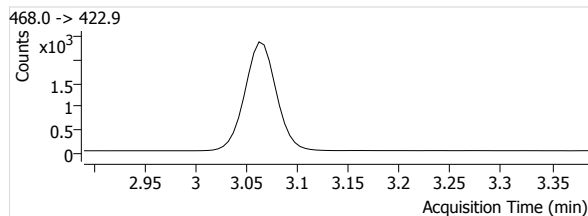
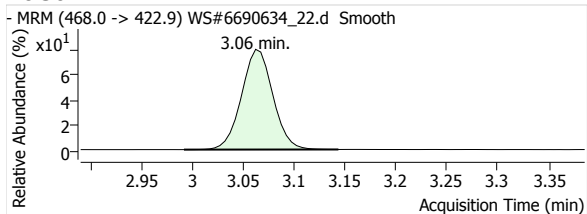


Quantitative Analysis Report

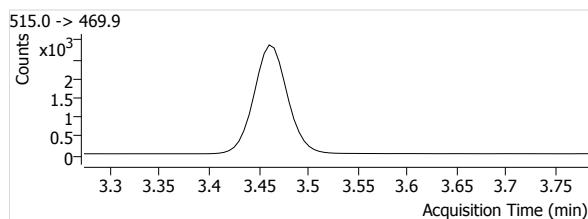
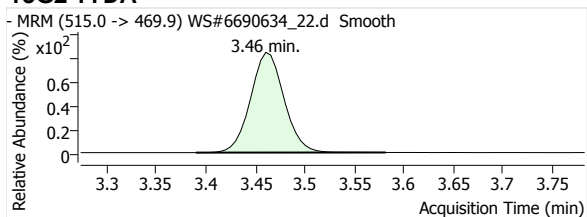
13C4-PFOA



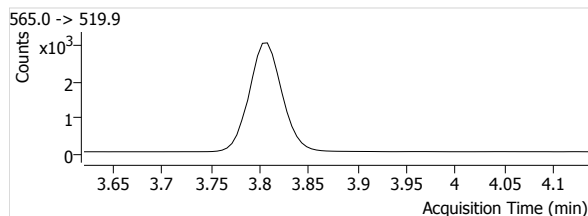
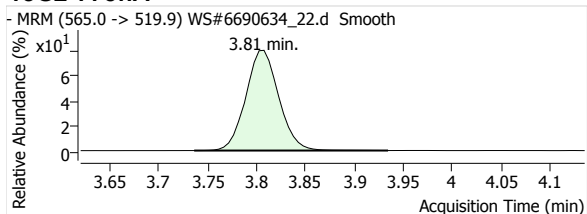
13C5-PFNA



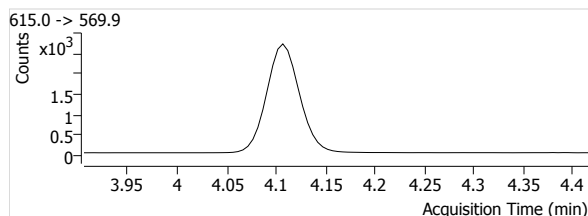
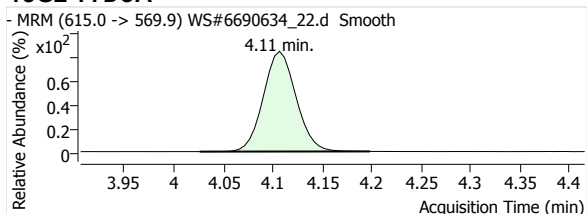
13C2-PFDA



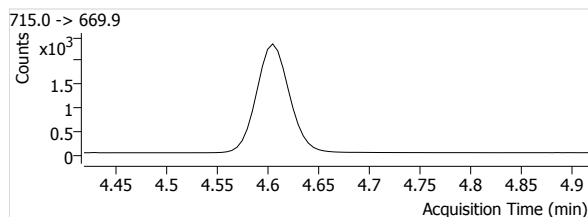
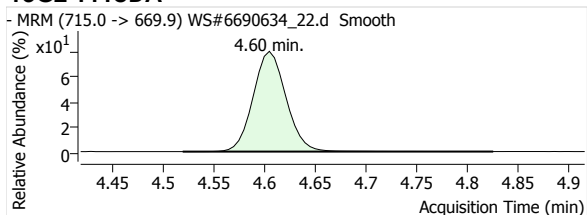
13C2-PFUnA



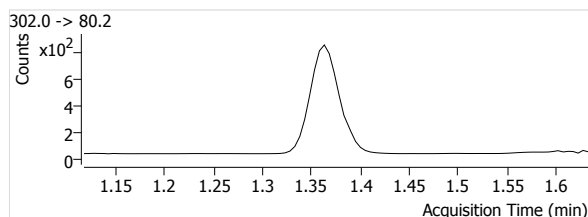
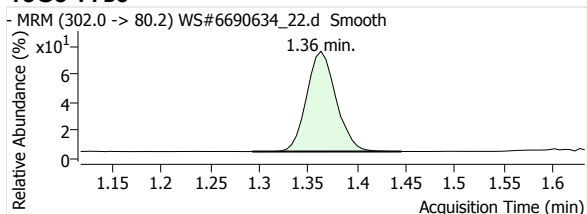
13C2-PFDoA



13C2-PFTeDA

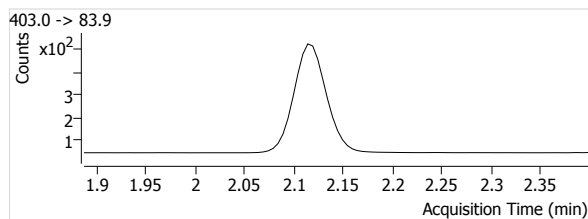
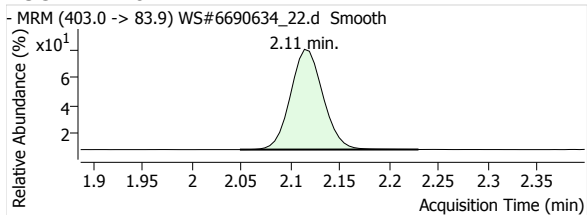


13C3-PFBS

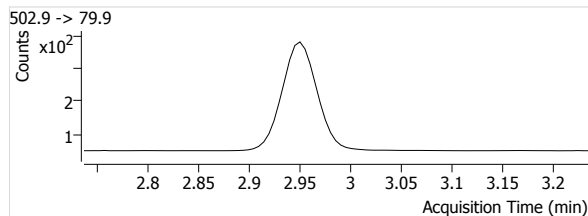
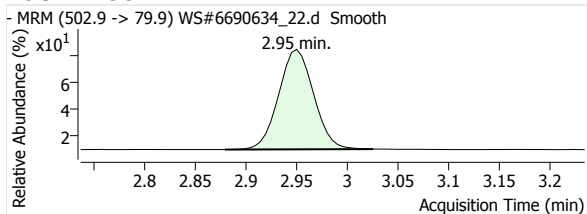


Quantitative Analysis Report

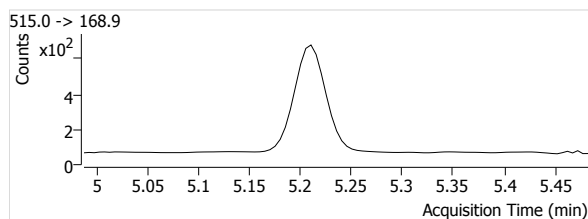
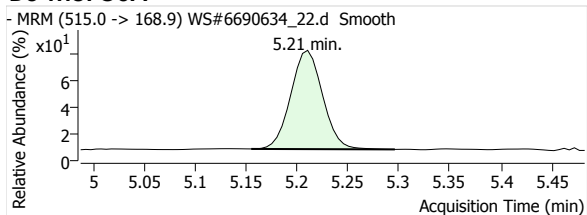
18O2-PFHxs



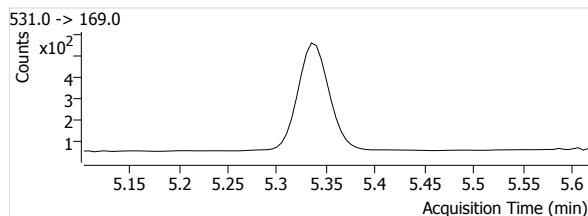
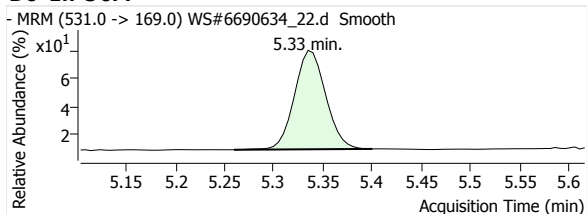
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

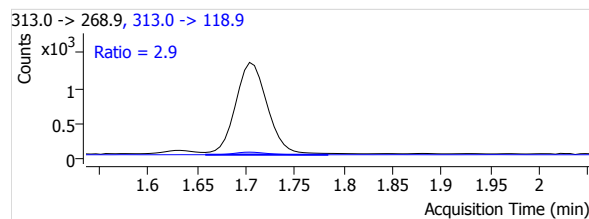
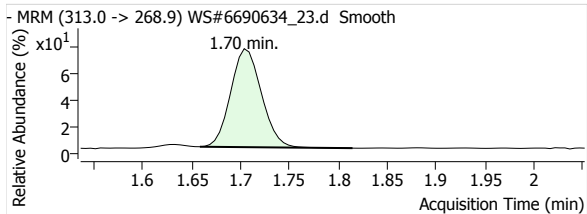
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bin

Sample Name 6690634:MLP499-01:10x
Type Sample
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/22 12:33:13 AM
Comment NOT USED.
User Defined

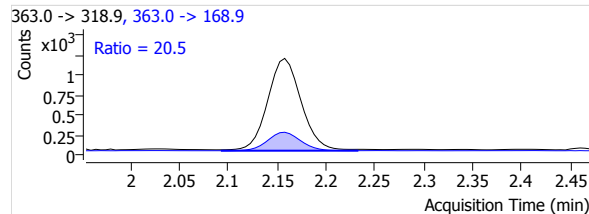
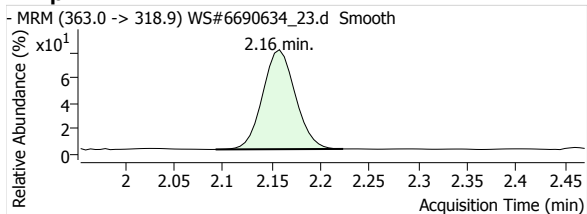
Data File WS#6690634_23.d
Instrument LCMS04
Position P1-C1
Dil. 0.2

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	0.4240	--	2824	1.70	2036	0.3494	83	1.70	287	2.9
PFHpA 1	µg/L	--	0.3018	--	2667	2.16	2236	0.2437	546	2.16	2559	20.5
PFOA 1	µg/L	--	0.1246	--	1229	2.63	1854	0.1179	307	2.63	4985	25.0
PFNA 1	µg/L	--	0.0000	--	161	3.07	155	0.0191	39	3.07	750	24.2
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	0.6959	--	631	2.08	3834	0.5454	334	2.09	146298	53.0
PFOS 1	µg/L	--	0.4061	--	300	2.90	3046	0.3039	163	2.89	1037	54.2
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	115.0769	--	8083	1.70	1025	--	--	--	--	--
13C4-PFHpA	µg/L	--	113.2230	--	10943	2.16	911	--	--	--	--	--
13C4-PFOA	µg/L	--	108.1474	--	10420	2.63	2816	--	--	--	--	--
13C5-PFNA	µg/L	--	111.1978	--	8411	3.07	1798	--	--	--	--	--
13C2-PFDA	µg/L	--	104.1303	--	6807	3.46	1014	--	--	--	--	--
13C2-PFUnA	µg/L	--	101.1053	--	7867	3.81	1747	--	--	--	--	--
13C2-PFDoA	µg/L	--	96.1246	--	9723	4.11	1062	--	--	--	--	--
13C2-PFTeDA	µg/L	--	93.7002	--	11750	4.60	3024	--	--	--	--	--
13C3-PFBS	µg/L	--	111.7952	--	1725	1.36	362	--	--	--	--	--
18O2-PFHxS	µg/L	--	113.7795	--	1156	2.11	464	--	--	--	--	--
13C4-PFOS	µg/L	--	102.3884	--	986	2.95	790	--	--	--	--	--
D3-MeFOSA	µg/L	--	29.0004	--	705	5.21	47	--	--	--	--	--
D5-EtFOSA	µg/L	--	29.0970	--	609	5.33	59	--	--	--	--	--

PFHxA 1

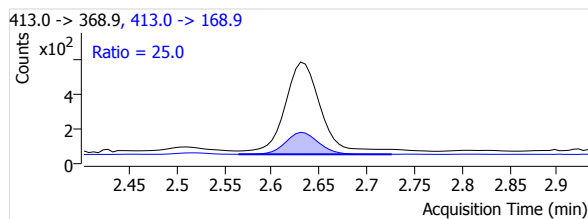
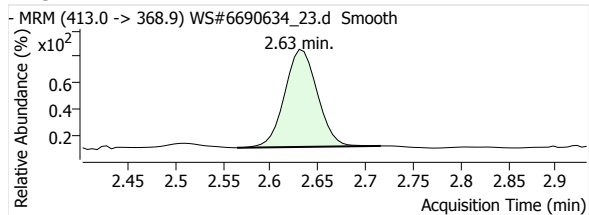


PFHpA 1

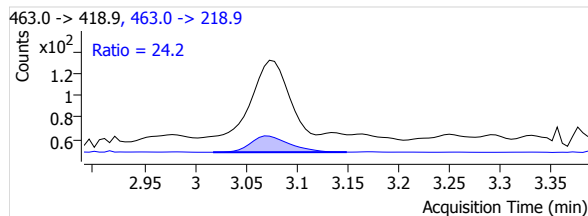
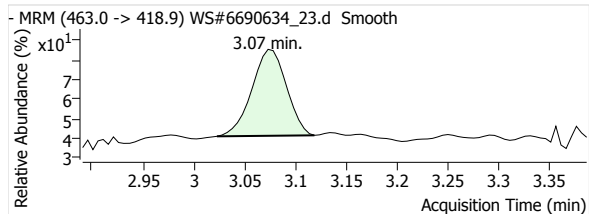


Quantitative Analysis Report

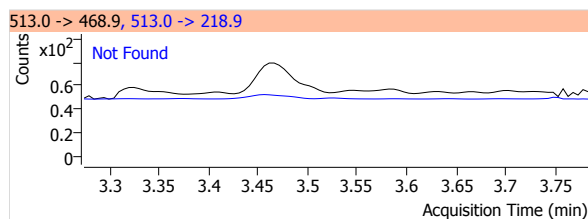
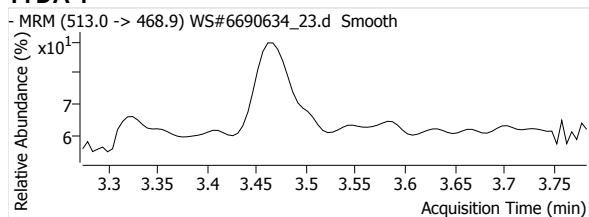
PFOA 1



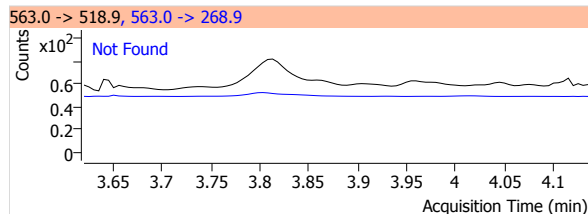
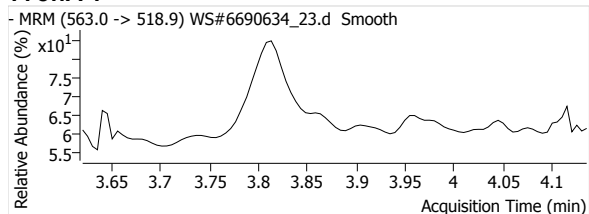
PFNA 1



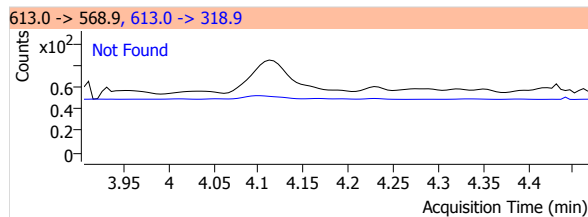
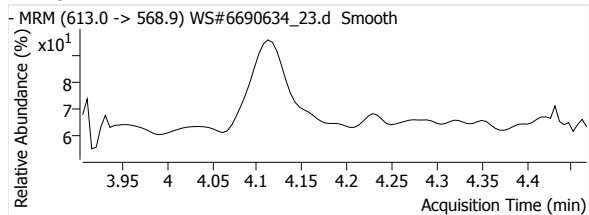
PFDA 1



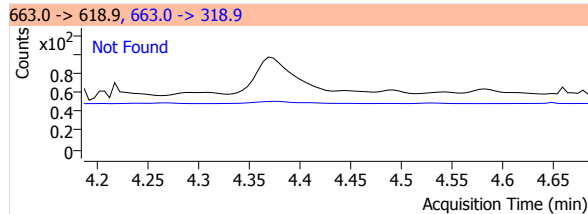
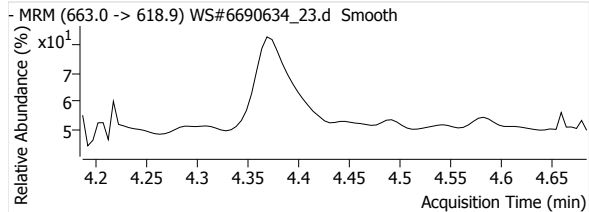
PFUnA 1



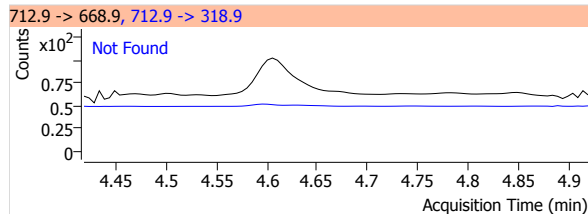
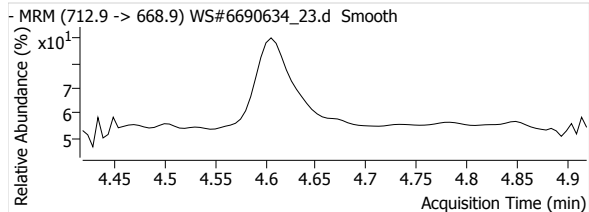
PFDaA 1



PFTrDA 1

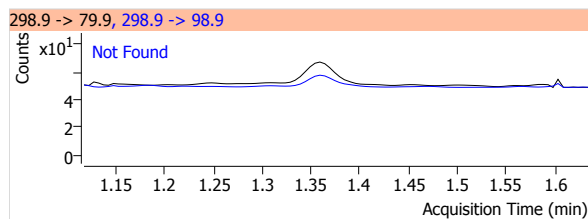
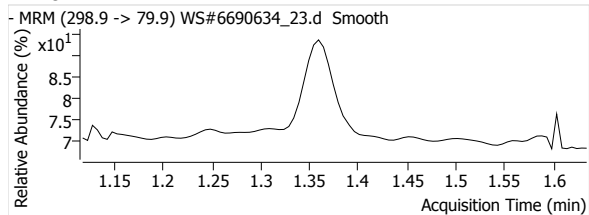


PFTeDA 1

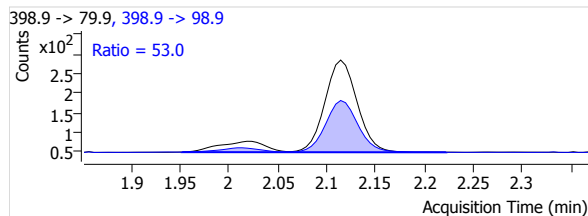
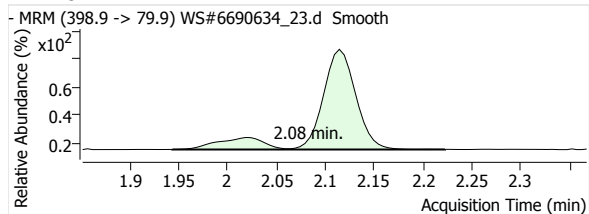


Quantitative Analysis Report

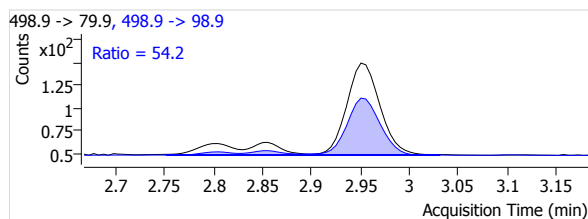
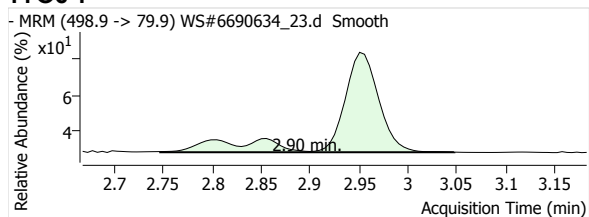
PFBS 1



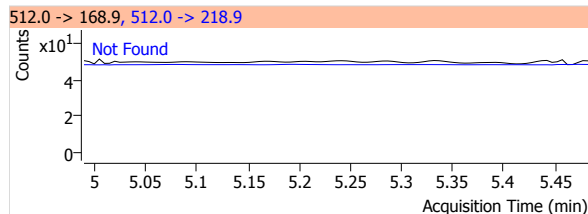
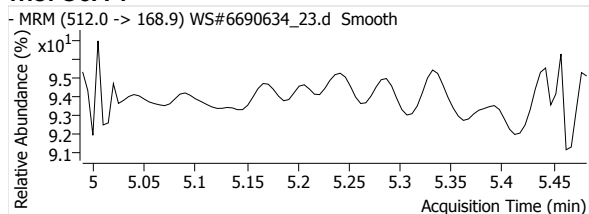
PFHxS 1



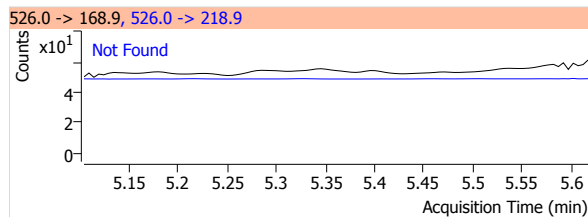
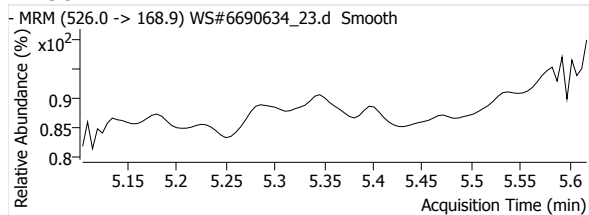
PFOS 1



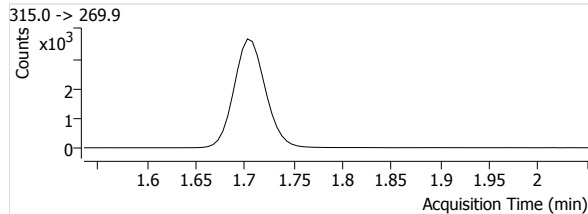
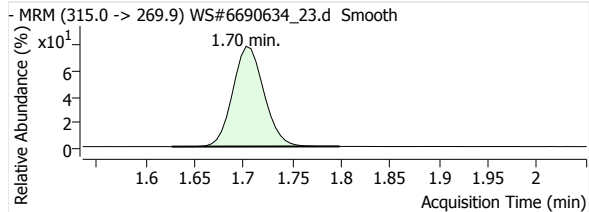
MeFOSA 1



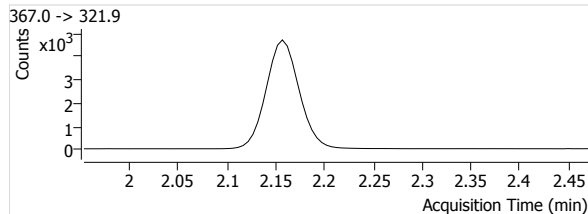
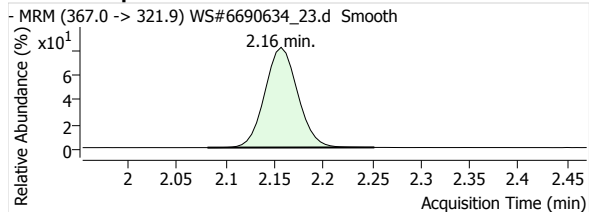
eFOSA 1



13C2-PFHxA

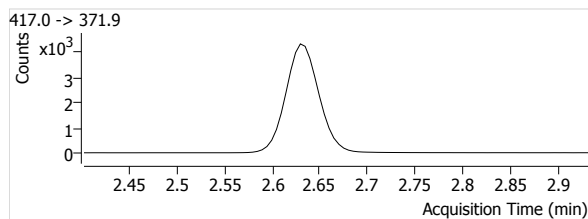
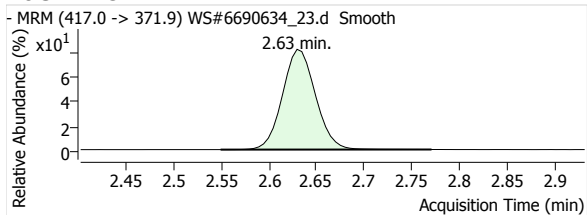


13C4-PFHpA

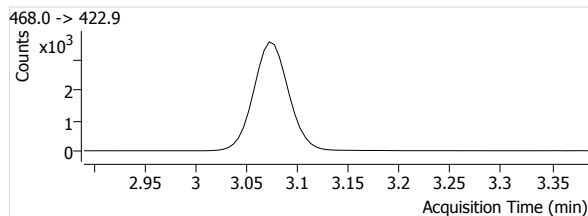
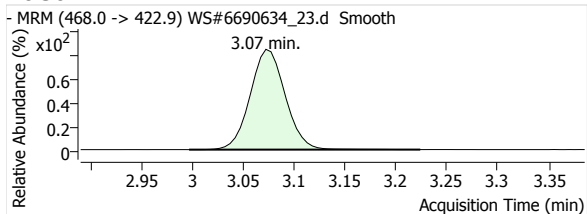


Quantitative Analysis Report

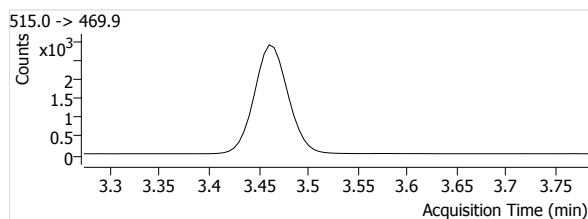
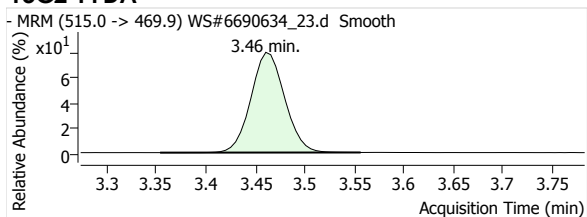
13C4-PFOA



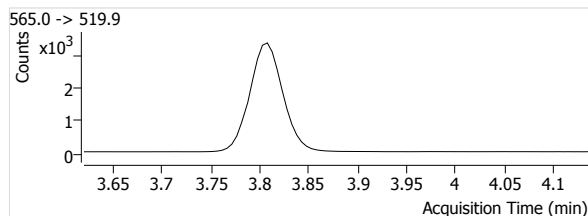
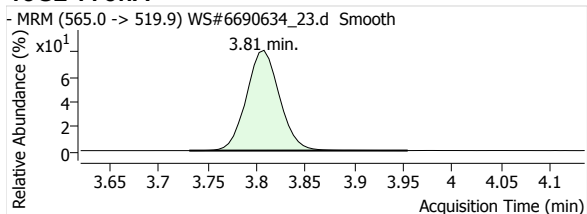
13C5-PFNA



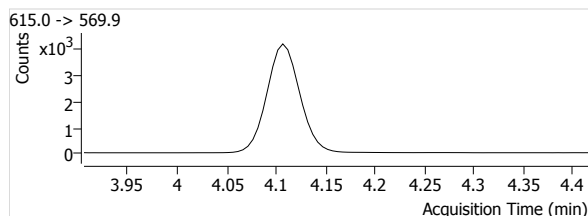
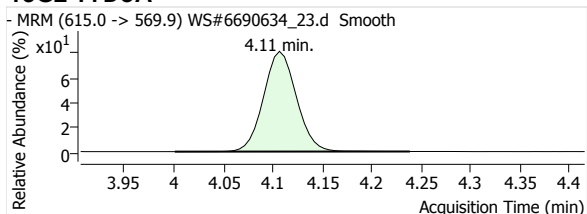
13C2-PFDA



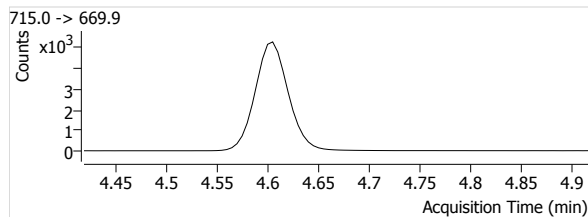
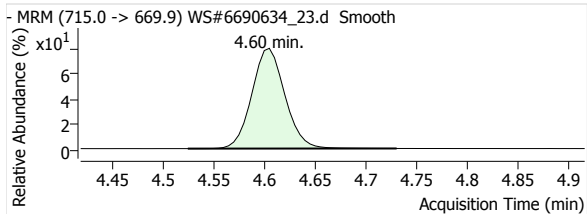
13C2-PFUnA



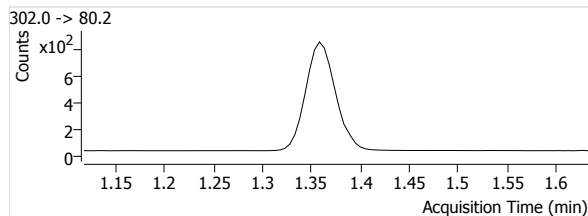
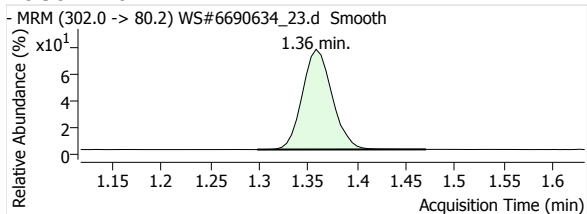
13C2-PFDoA



13C2-PFTeDA

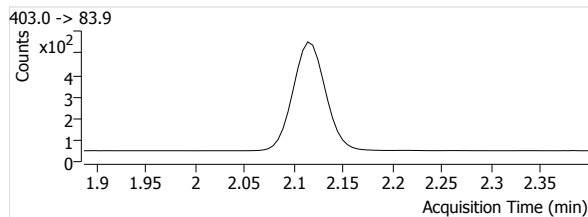
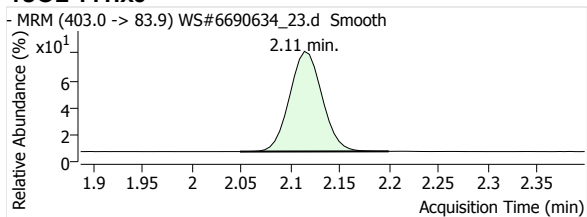


13C3-PFBS

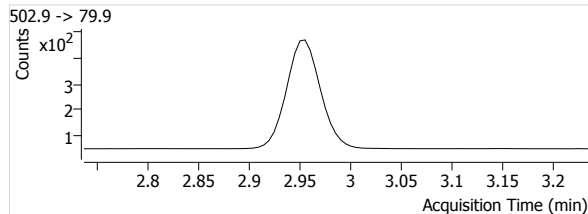
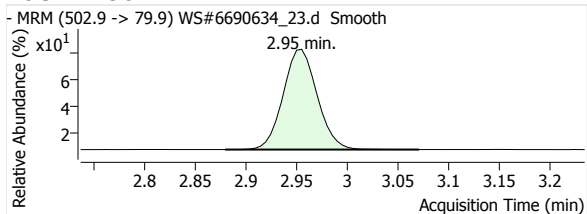


Quantitative Analysis Report

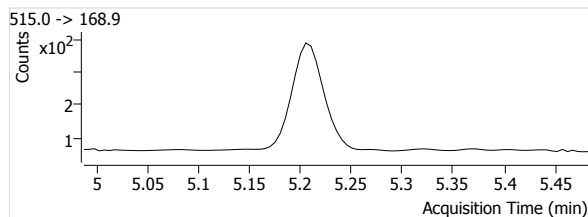
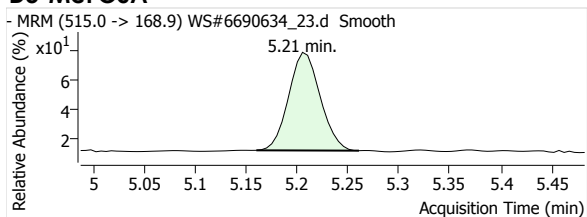
18O2-PFHxS



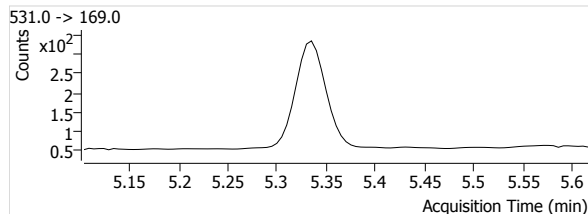
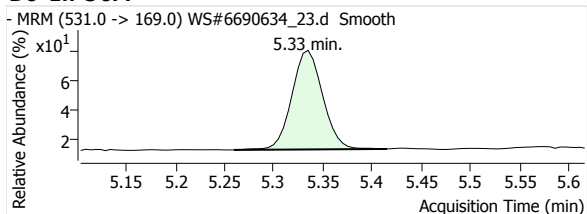
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

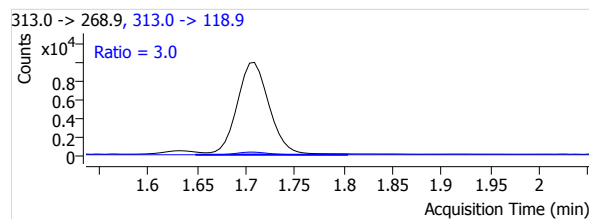
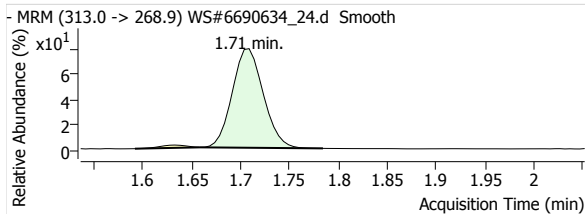
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bin

Sample Name 6690634:MLP499-01
Type Sample
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/22 12:40:09 AM
Comment -
User Defined MI PFOA

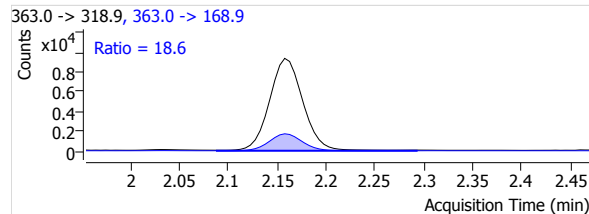
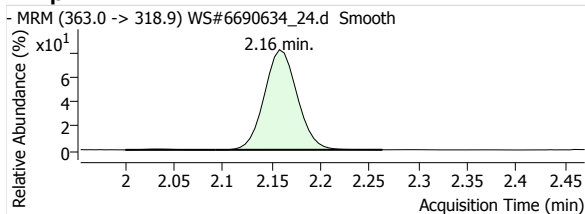
Data File WS#6690634_24.d
Instrument LCMS04
Position P1-C2
Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	0.4184	--	21404	1.71	3816	3.1311	640	1.70	6760	3.0
PFHpA 1	µg/L	--	0.3253	--	21684	2.16	16254	2.2732	4036	2.16	10748	18.6
PFOA 1	µg/L	--	0.1582	--	10454	2.63	11269	1.1287	2655	2.63	6892	25.4
PFNA 1	µg/L	--	0.0147	--	1101	3.07	369	0.1460	226	3.07	1861	20.5
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.0202	--	240	1.36	727	0.1659	112	1.36	445	46.7
PFHxS 1	µg/L	--	0.6912	--	4914	2.08	14276	5.0143	2581	2.09	10328	52.5
PFOS 1	µg/L	--	0.3920	--	2356	2.90	5108	2.5473	1289	2.89	3952	54.7
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	97.3235	--	6836	1.71	942	--	--	--	--	--
13C4-PFHpA	µg/L	--	98.6963	--	9539	2.16	1438	--	--	--	--	--
13C4-PFOA	µg/L	--	96.1287	--	9262	2.63	885	--	--	--	--	--
13C5-PFNA	µg/L	--	99.6827	--	7540	3.07	1048	--	--	--	--	--
13C2-PFDA	µg/L	--	95.5331	--	6245	3.47	1442	--	--	--	--	--
13C2-PFUnA	µg/L	--	94.4994	--	7353	3.81	969	--	--	--	--	--
13C2-PFDoA	µg/L	--	90.8552	--	9190	4.11	1211	--	--	--	--	--
13C2-PFTeDA	µg/L	--	89.6651	--	11244	4.60	1998	--	--	--	--	--
13C3-PFBS	µg/L	--	93.7784	--	1447	1.36	133	--	--	--	--	--
18O2-PFHxS	µg/L	--	96.4567	--	980	2.11	726	--	--	--	--	--
13C4-PFOS	µg/L	--	96.0540	--	925	2.95	240	--	--	--	--	--
D3-MeFOSA	µg/L	--	68.9840	--	1677	5.21	124	--	--	--	--	--
D5-EtFOSA	µg/L	--	66.9374	--	1401	5.33	76	--	--	--	--	--

PFHxA 1

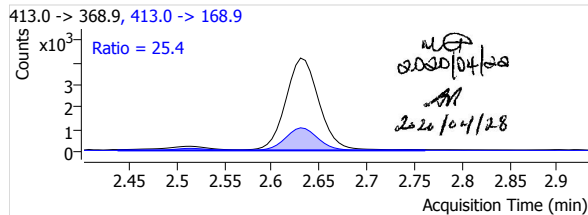
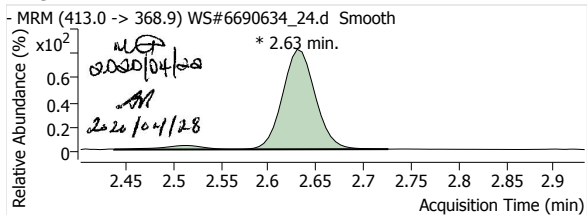


PFHpA 1

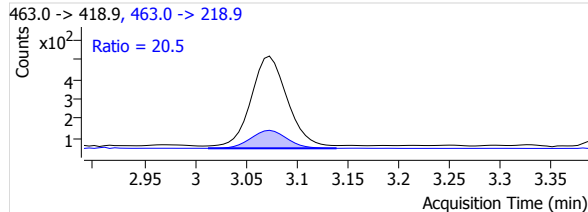
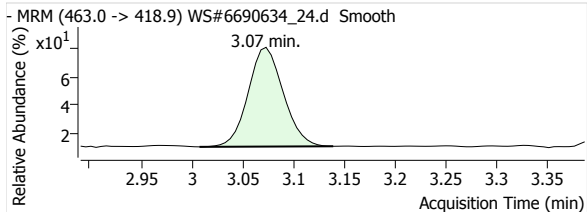


Quantitative Analysis Report

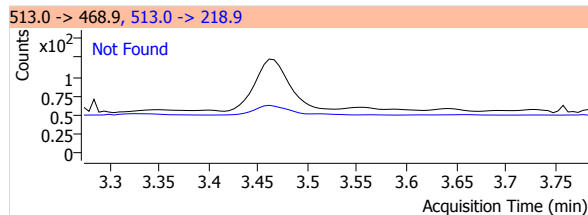
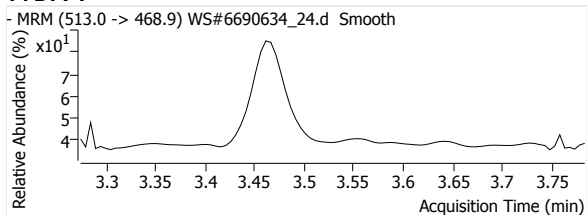
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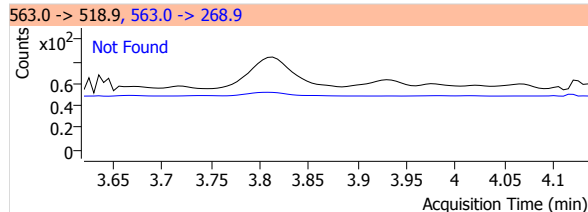
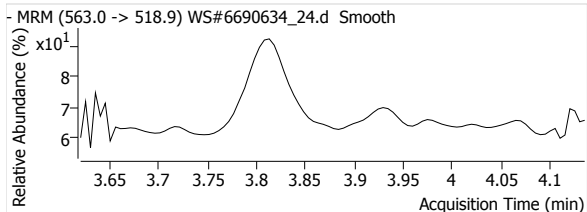
PFNA 1



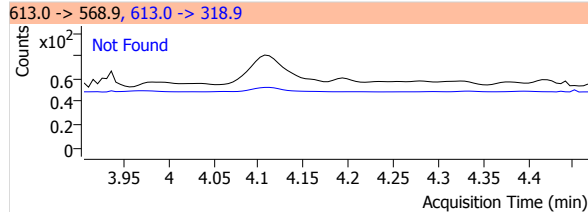
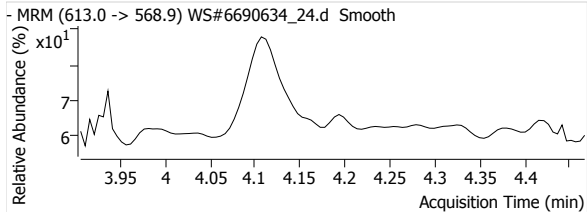
PFDA 1



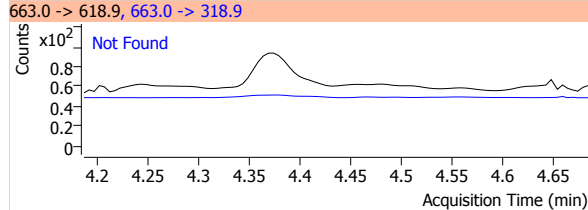
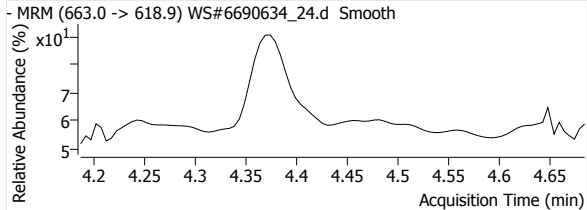
PFUnA 1



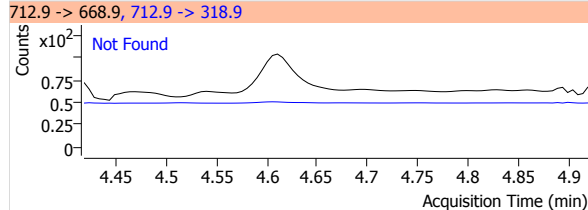
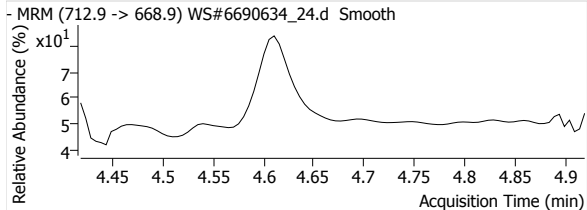
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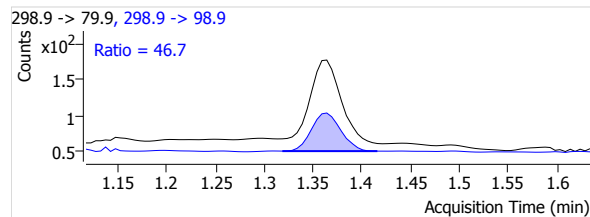
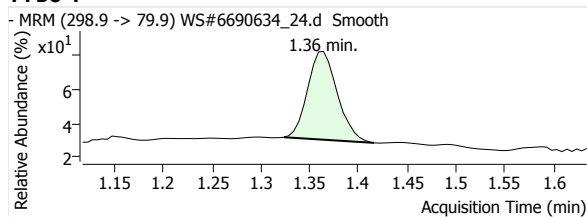


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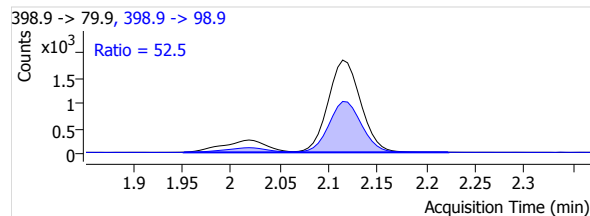
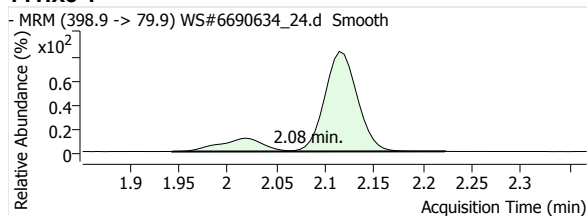


Quantitative Analysis Report

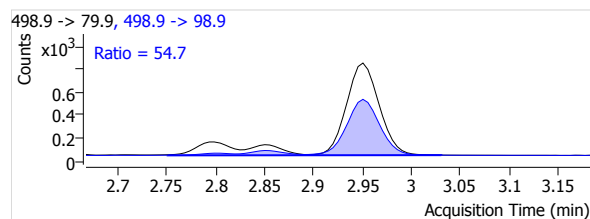
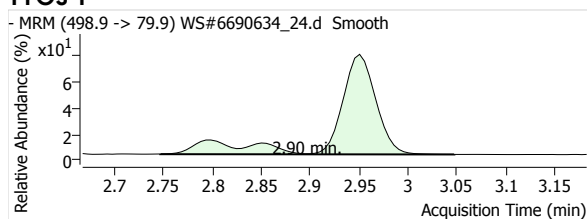
PFBS 1



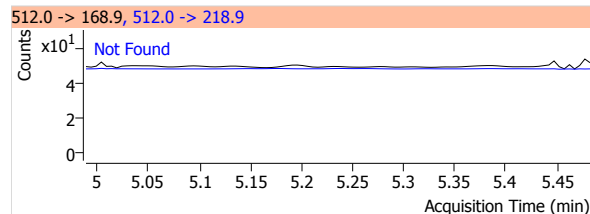
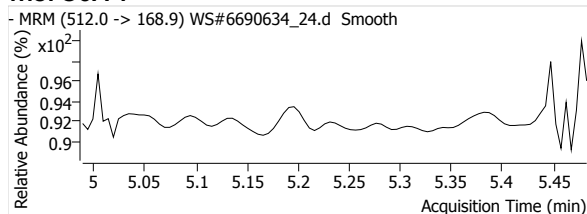
PFHxS 1



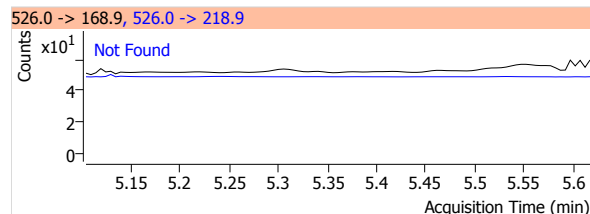
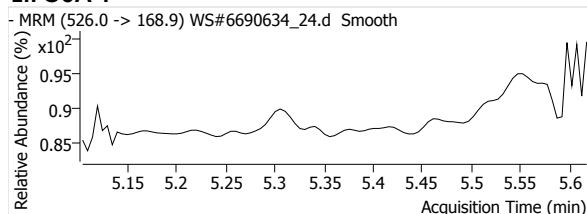
PFOS 1



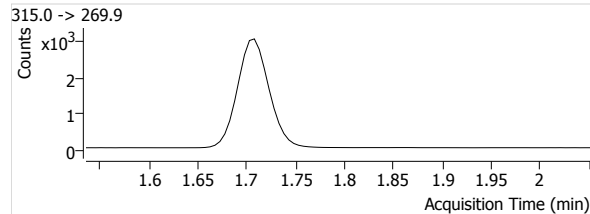
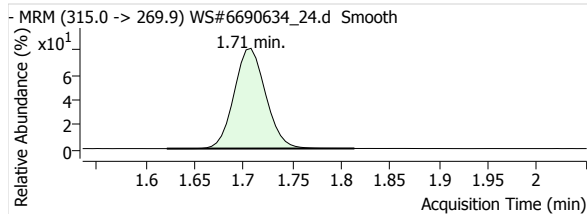
MeFOSA 1



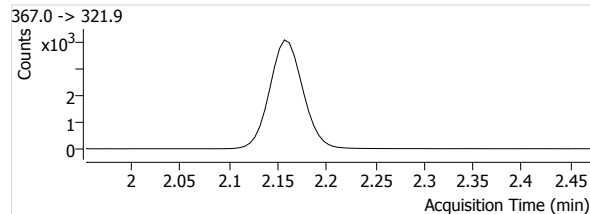
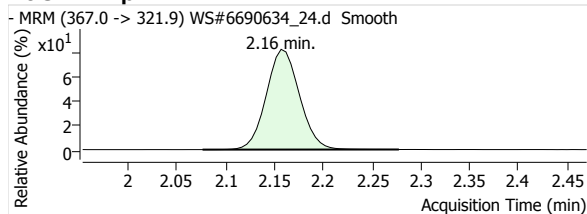
eFOSA 1



13C2-PFHxA

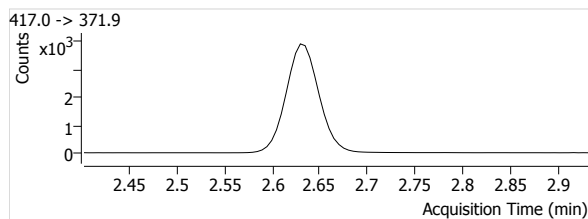
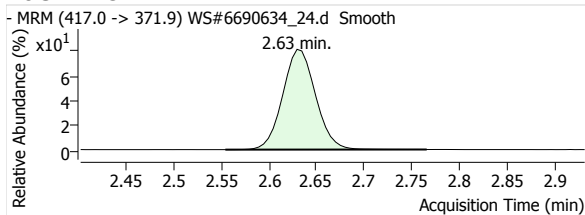


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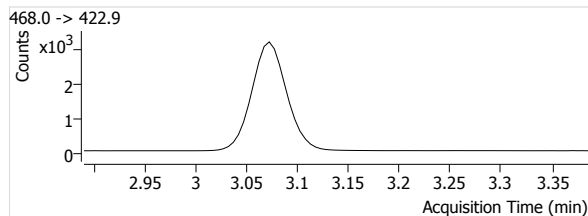
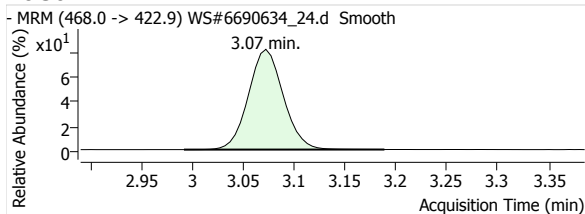


Quantitative Analysis Report

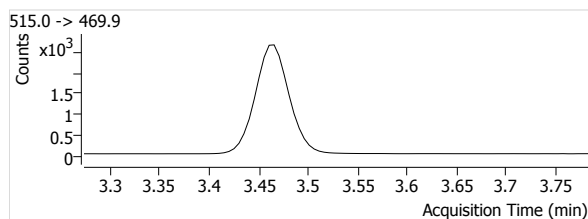
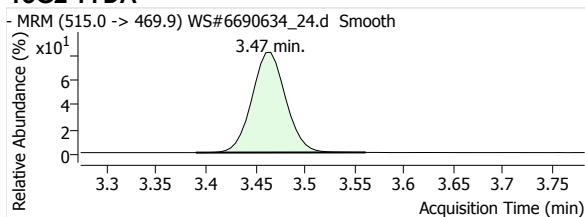
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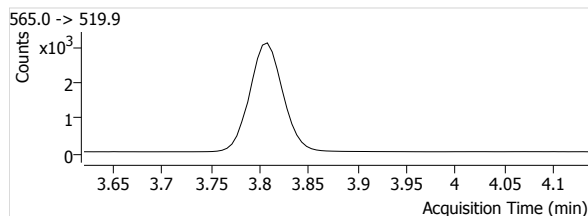
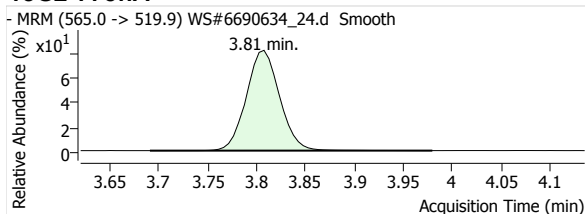
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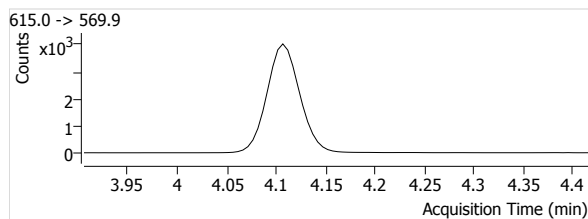
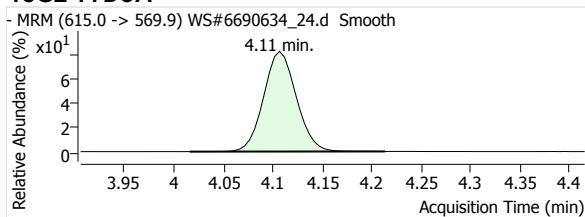
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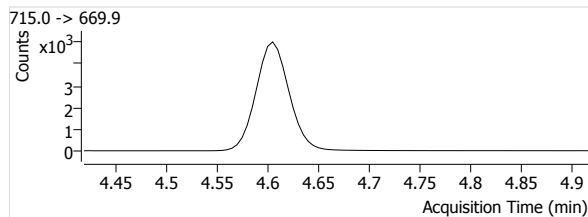
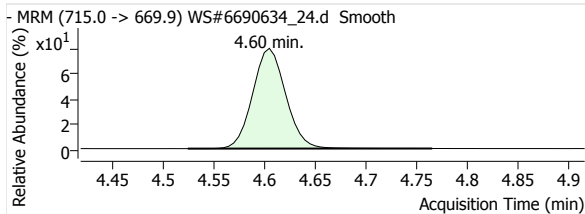
13C2-PFUnA



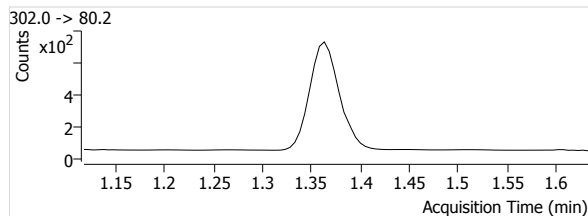
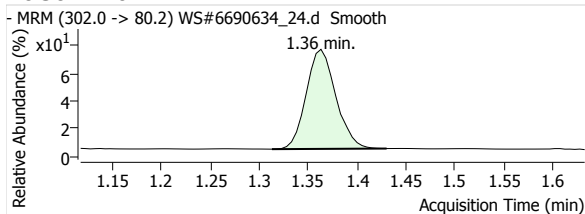
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13C2-PFTeDA

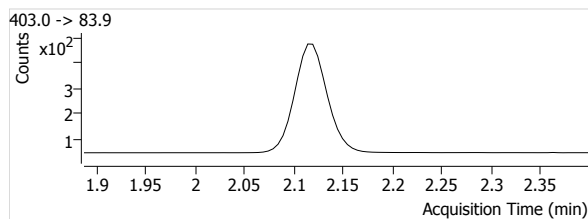
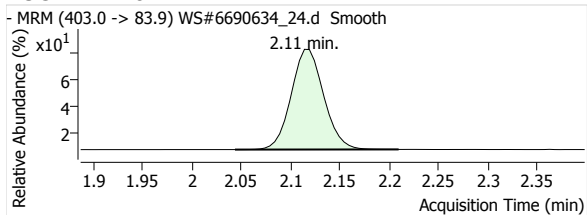


13C3-PFBS

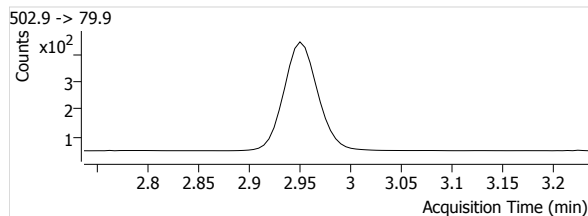
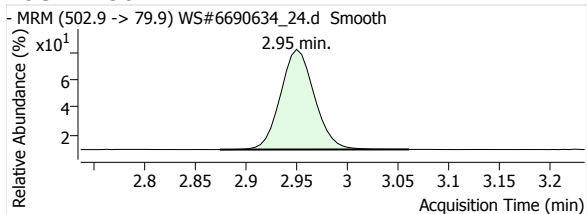


Quantitative Analysis Report

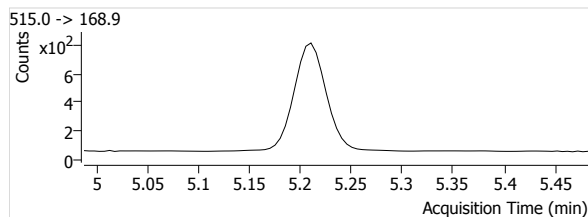
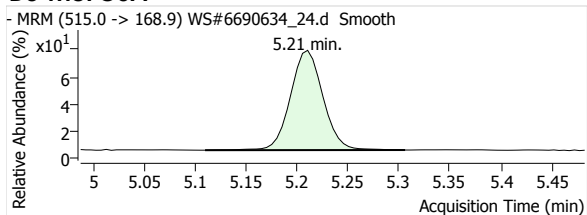
18O2-PFHxs



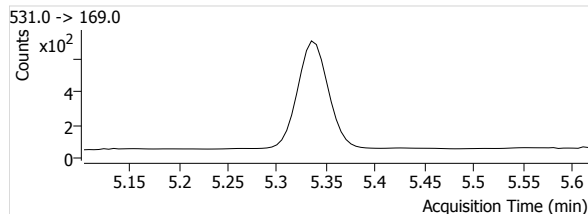
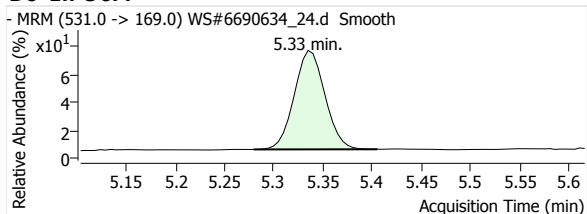
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



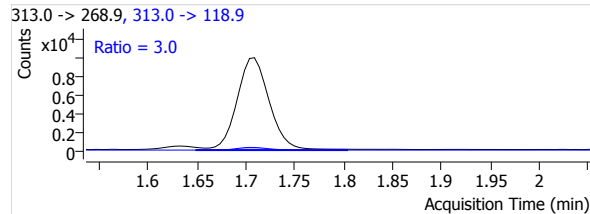
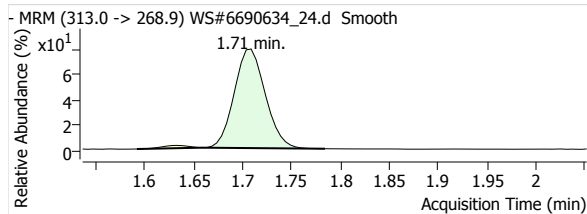
Quantitative Analysis Report

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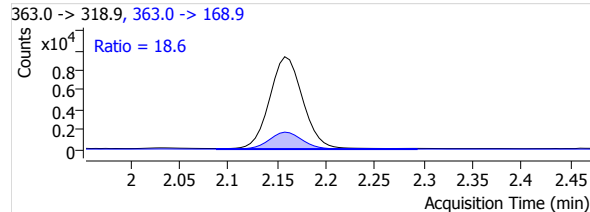
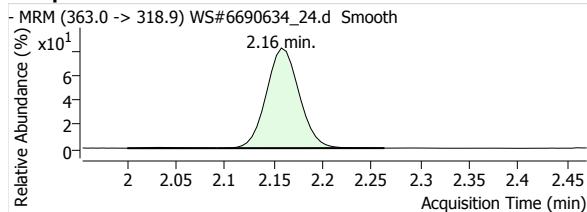
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Type	Sample	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-C2
Acq. Date-Time	2020/04/22 12:40:09 AM	Dil.	0.0
Comment	-		
User Defined	MI PFOA		

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	0.4184	--	21404	1.71	3816	3.1311	640	1.70	6760	3.0
PFHpA 1	µg/L	--	0.3253	--	21684	2.16	16254	2.2732	4036	2.16	10748	18.6
PFOA 1	µg/L	--	0.1491	--	9867	2.63	11262	1.0653	2413	2.63	6888	24.5
PFNA 1	µg/L	--	0.0147	--	1101	3.07	369	0.1460	226	3.07	1861	20.5
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.0202	--	240	1.36	727	0.1659	112	1.36	445	46.7
PFHxS 1	µg/L	--	0.6909	--	4914	2.08	14276	5.0143	2581	2.09	10328	52.5
PFOS 1	µg/L	--	0.3920	--	2356	2.90	5108	2.5473	1289	2.89	3952	54.7
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	97.3235	--	6836	1.71	942	--	--	--	--	--
13C4-PFHpA	µg/L	--	98.6963	--	9539	2.16	1438	--	--	--	--	--
13C4-PFOA	µg/L	--	96.1287	--	9262	2.63	885	--	--	--	--	--
13C5-PFNA	µg/L	--	99.6827	--	7540	3.07	1048	--	--	--	--	--
13C2-PFDA	µg/L	--	95.5331	--	6245	3.47	1442	--	--	--	--	--
13C2-PFUnA	µg/L	--	94.4994	--	7353	3.81	969	--	--	--	--	--
13C2-PFDaA	µg/L	--	90.8552	--	9190	4.11	1211	--	--	--	--	--
13C2-PFTeDA	µg/L	--	89.6651	--	11244	4.60	1998	--	--	--	--	--
13C3-PFBS	µg/L	--	93.7784	--	1447	1.36	133	--	--	--	--	--
18O2-PFHxS	µg/L	--	96.4567	--	980	2.11	726	--	--	--	--	--
13C4-PFOS	µg/L	--	96.0540	--	925	2.95	240	--	--	--	--	--
D3-MeFOSA	µg/L	--	68.9840	--	1677	5.21	124	--	--	--	--	--
D5-EtFOSA	µg/L	--	66.9374	--	1401	5.33	76	--	--	--	--	--

PFHxA 1

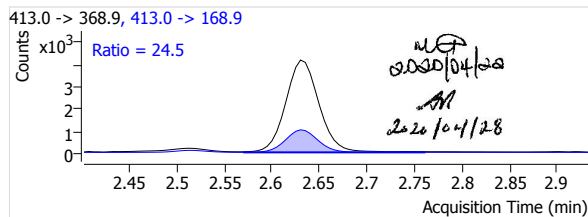
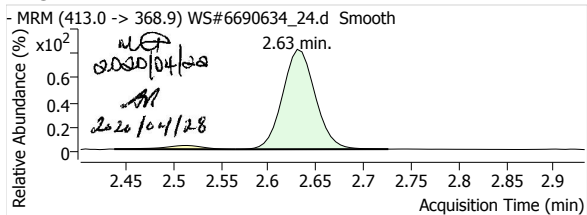


PFHpA 1

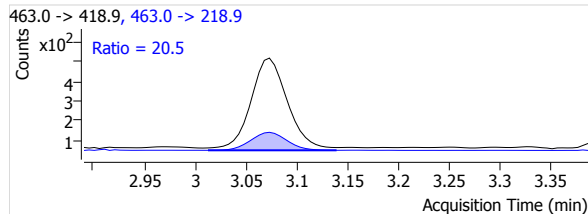
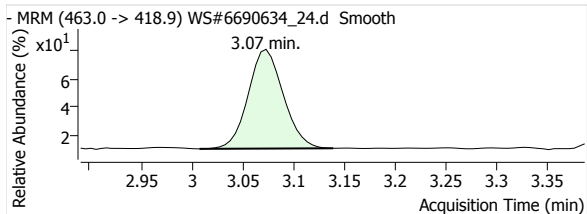


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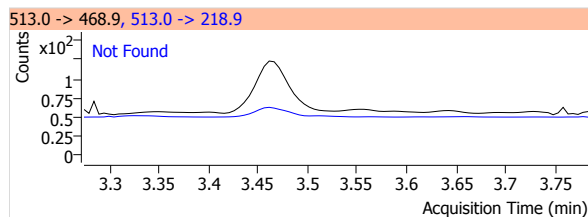
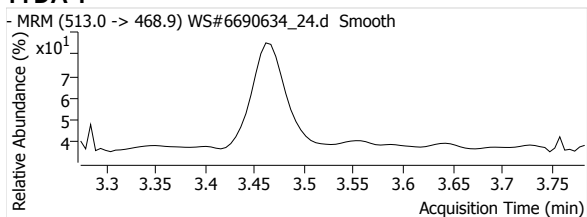
PFOA 1



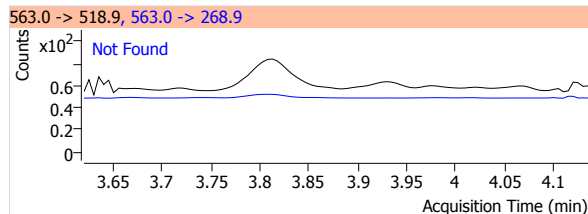
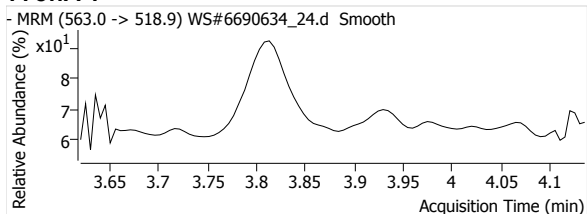
PFNA 1



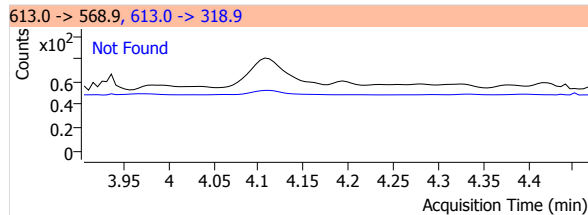
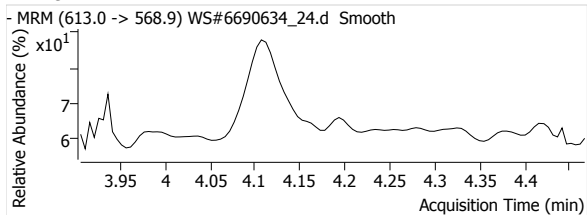
PFDA 1



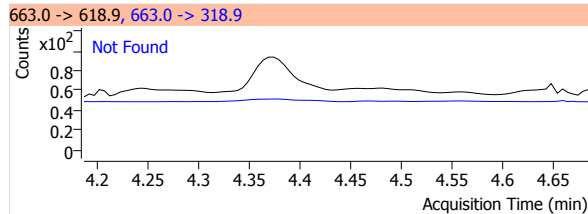
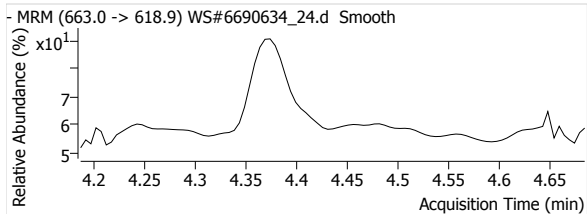
PFUnA 1



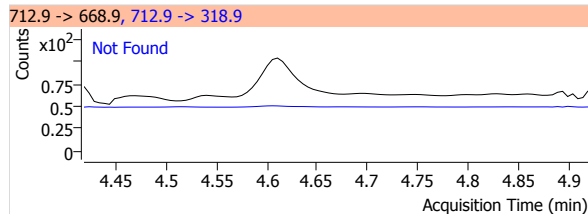
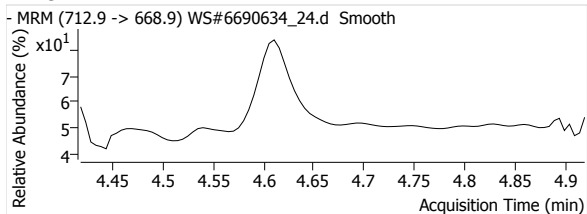
PFDaA 1



PFTrDA 1

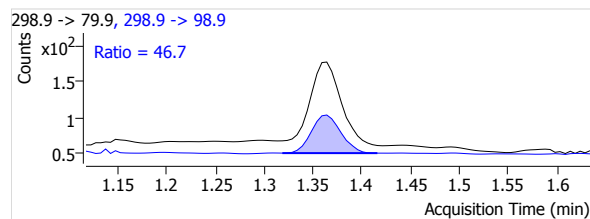
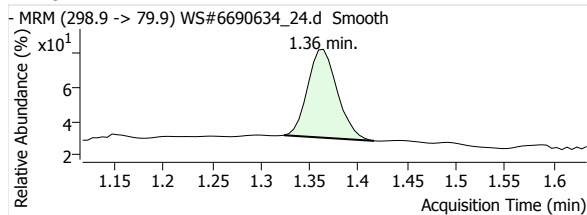


PFTeDA 1

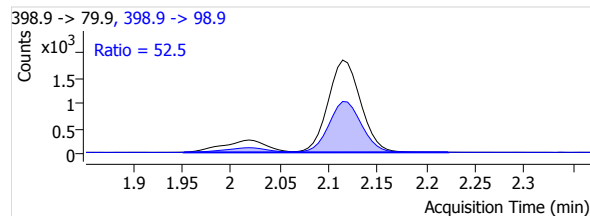
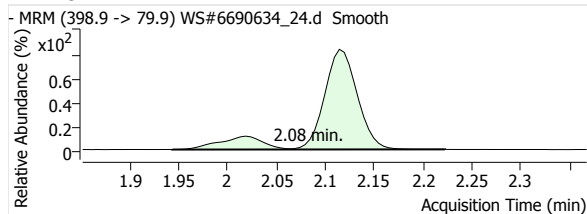


Quantitative Analysis Report

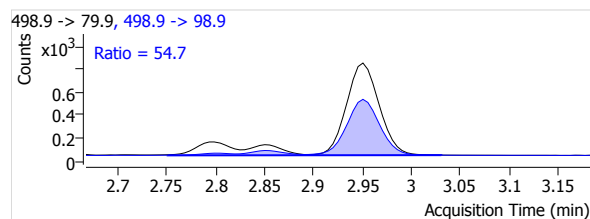
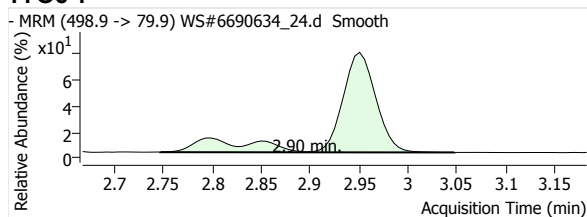
PFBS 1



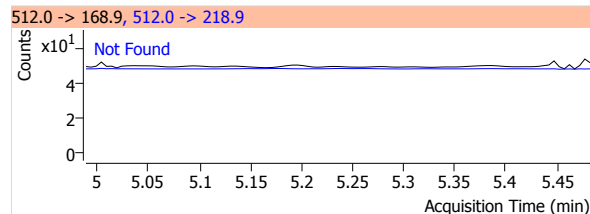
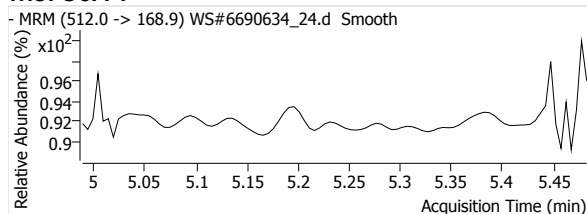
PFHxS 1



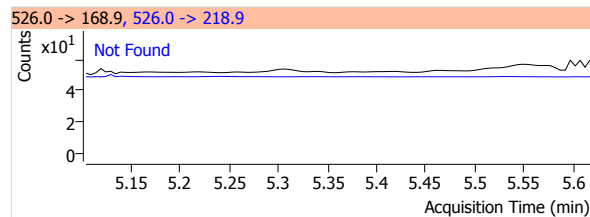
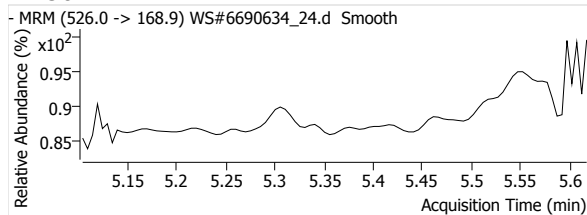
PFOS 1



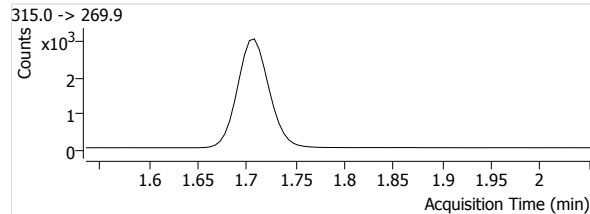
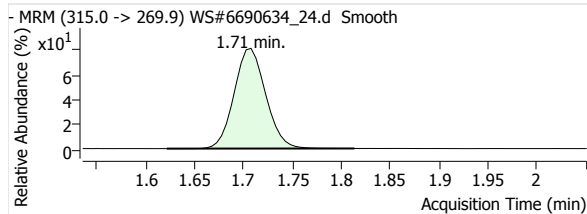
MeFOSA 1



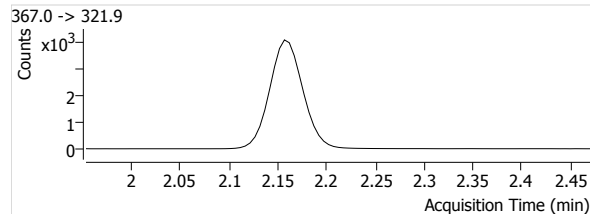
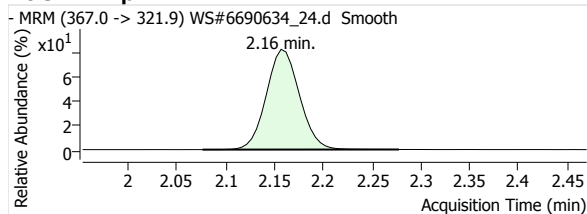
eFOSA 1



13C2-PFHxA

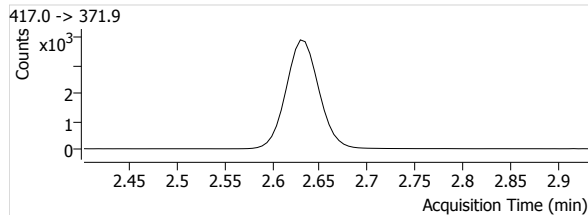
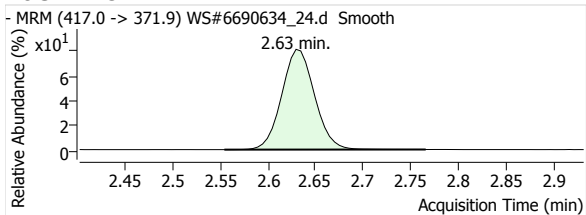


13C4-PFHpA

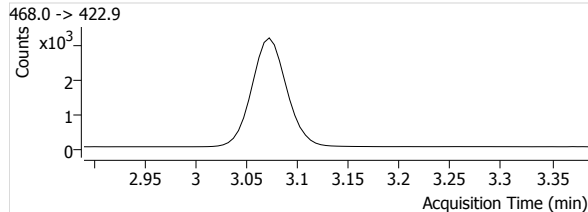
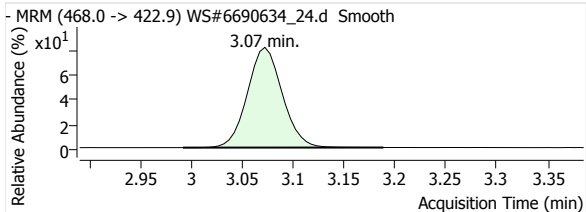


Quantitative Analysis Report

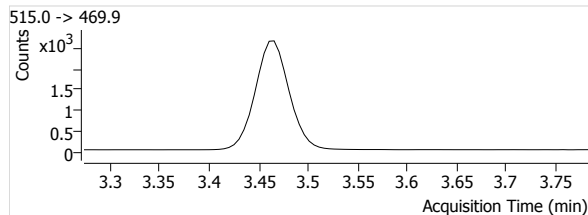
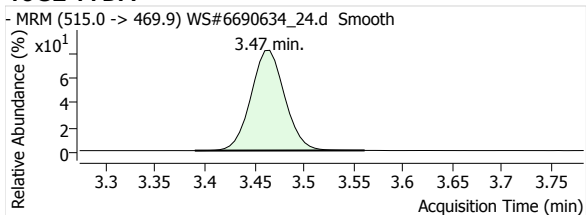
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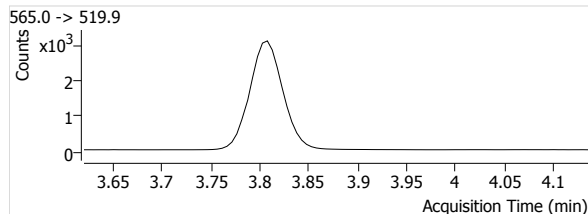
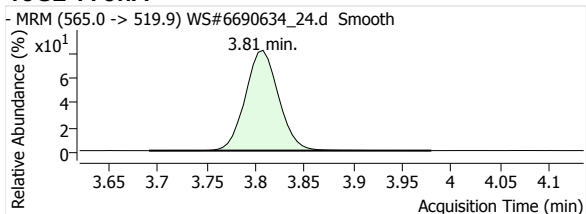
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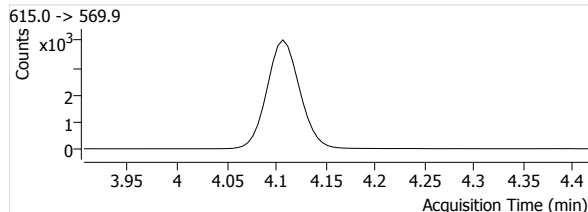
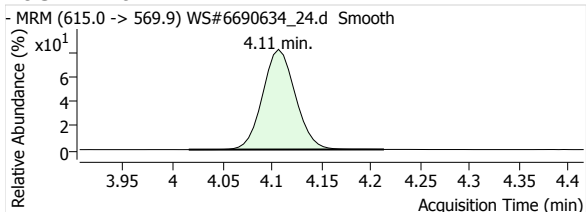
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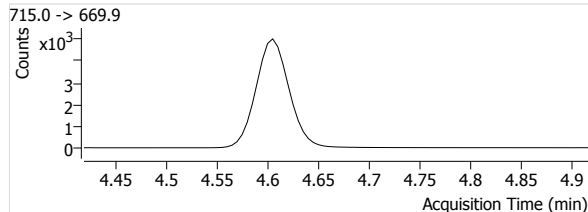
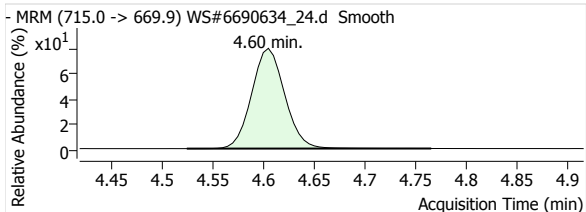
13C2-PFUnA



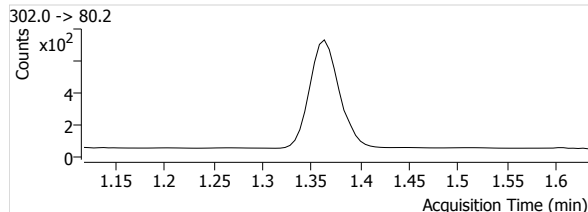
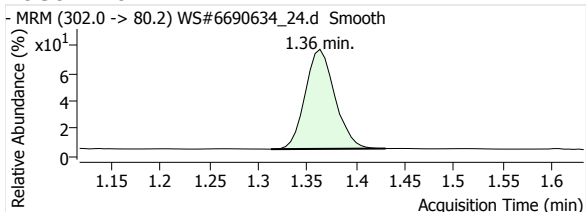
13C2-PFDoA



13C2-PFTeDA

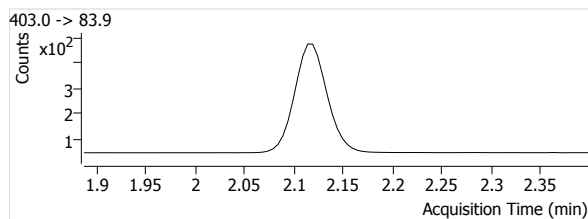
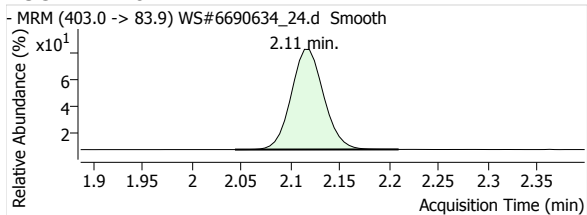


13C3-PFBS

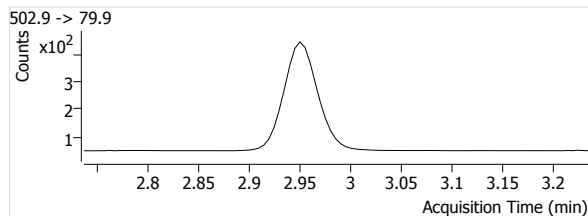
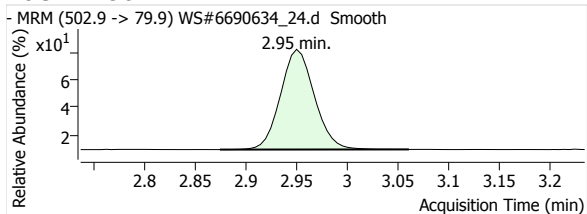


Quantitative Analysis Report

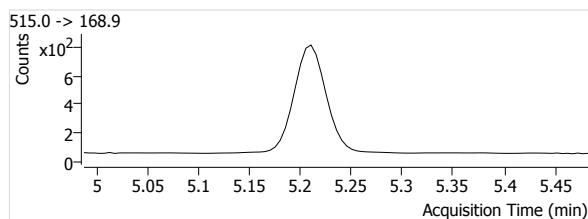
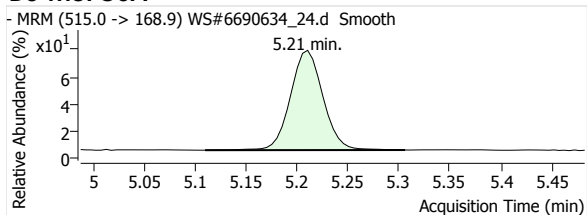
18O2-PFHxS



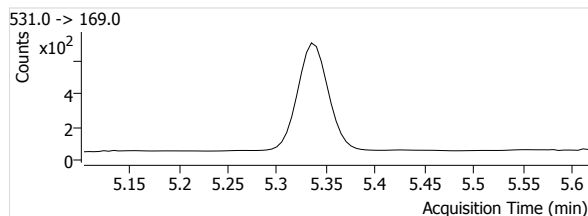
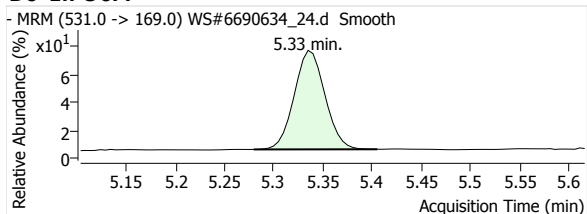
13C4-PFOS



D3-MeFOFA



D5-EtFOFA



Quantitative Analysis Report

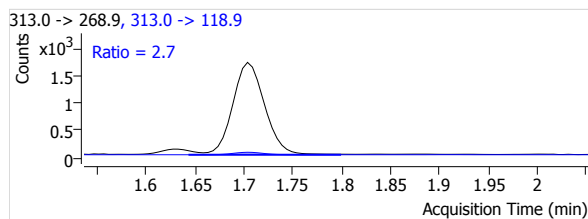
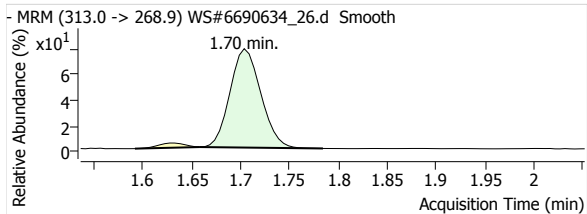
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 Type Sample
 Acq. Method File PFAS.m
 Acq. Date-Time 2020/04/22 12:54:03 AM
 Comment Reported for PFHxS & PFOS only.
 User Defined

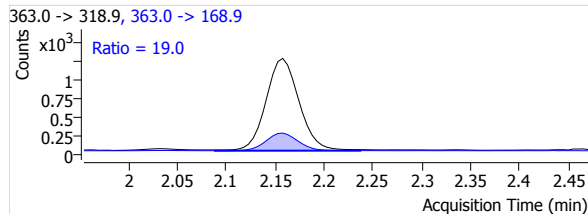
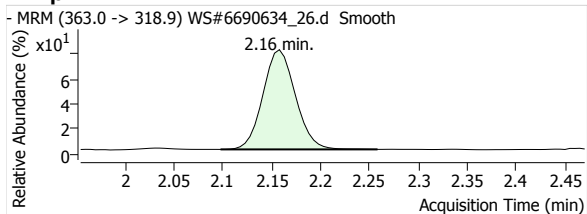
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 Instrument LCMS04
 Position P1-C3
 Dil. 1.2

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	3.1085	--	3641	1.70	23895	0.4956	98	1.70	1063	2.7
PFHpA 1	µg/L	--	1.7662	--	2851	2.16	4206	0.2791	543	2.16	3349	19.0
PFOA 1	µg/L	--	1.7347	--	2688	2.63	1666	0.2721	678	2.63	2183	25.2
PFNA 1	µg/L	--	0.0000	--	220	3.07	159	0.0284	41	3.07	563	18.6
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	9.2204	--	1489	2.08	17744	1.3709	788	2.09	152897	52.9
PFOS 1	µg/L	--	29.6636	--	3567	2.90	7197	3.8319	1936	2.89	7924	54.3
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	104.5843	--	7346	1.70	741	--	--	--	--	--
13C4-PFHpA	µg/L	--	105.6906	--	10215	2.16	1180	--	--	--	--	--
13C4-PFOA	µg/L	--	102.5221	--	9878	2.63	1896	--	--	--	--	--
13C5-PFNA	µg/L	--	102.5119	--	7754	3.07	1080	--	--	--	--	--
13C2-PFDA	µg/L	--	97.1700	--	6352	3.47	787	--	--	--	--	--
13C2-PFUnA	µg/L	--	92.9186	--	7230	3.81	1063	--	--	--	--	--
13C2-PFDoA	µg/L	--	87.5531	--	8856	4.11	1403	--	--	--	--	--
13C2-PFTeDA	µg/L	--	84.6172	--	10611	4.60	3124	--	--	--	--	--
13C3-PFBS	µg/L	--	103.8237	--	1602	1.36	295	--	--	--	--	--
18O2-PFHxS	µg/L	--	106.8898	--	1086	2.11	647	--	--	--	--	--
13C4-PFOS	µg/L	--	96.6771	--	931	2.95	586	--	--	--	--	--
D3-MeFOSA	µg/L	--	68.7783	--	1672	5.21	103	--	--	--	--	--
D5-EtFOSA	µg/L	--	68.9441	--	1443	5.33	78	--	--	--	--	--

PFHxA 1

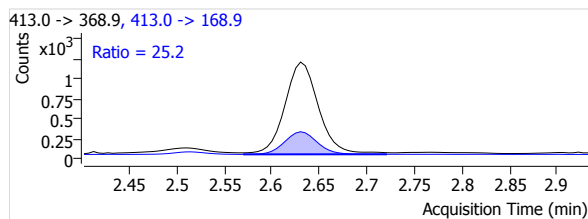
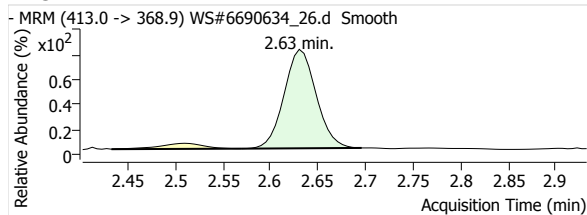


PFHpA 1

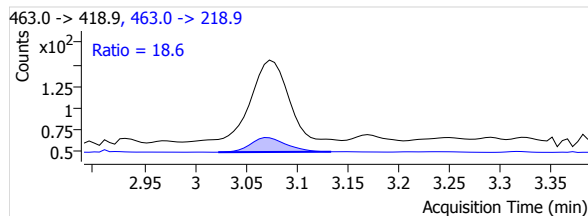
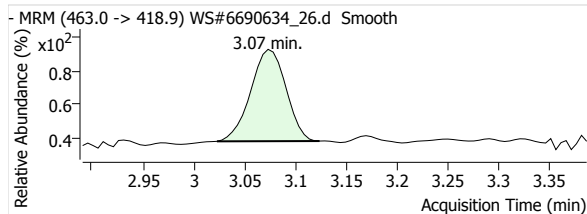


Quantitative Analysis Report

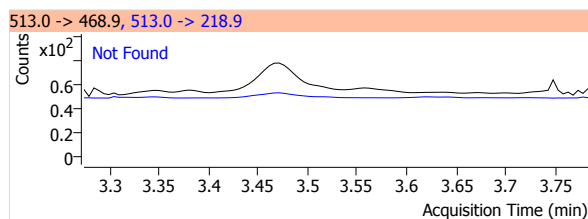
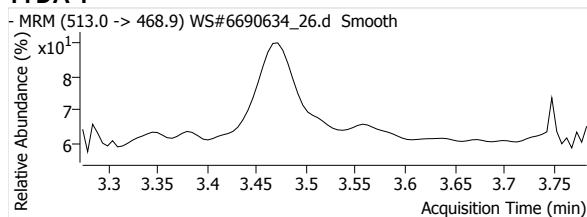
PFOA 1



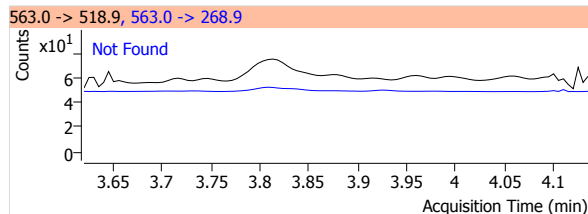
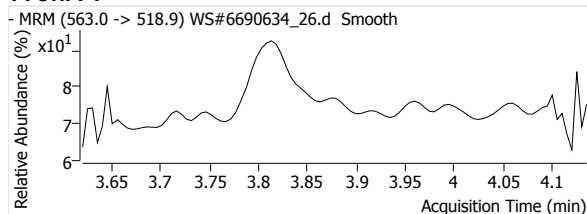
PFNA 1



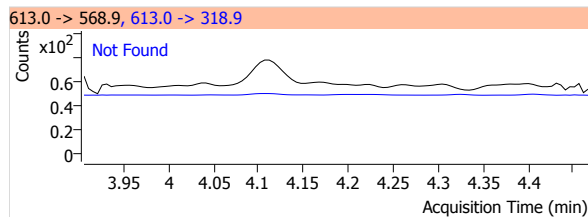
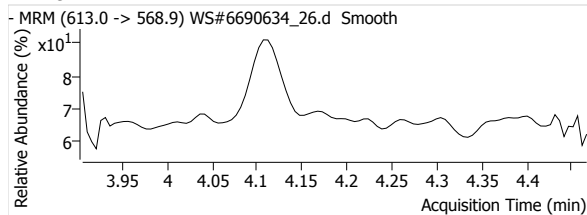
PFDA 1



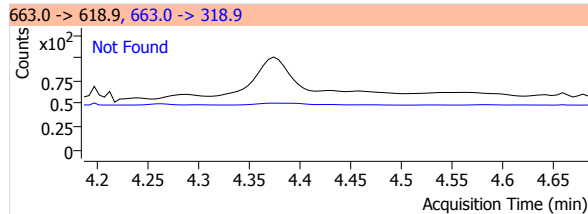
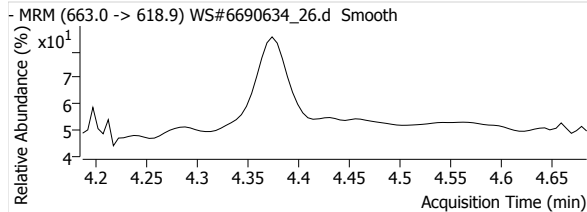
PFUnA 1



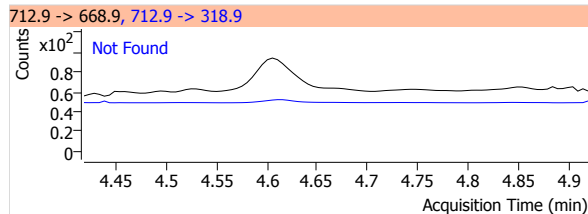
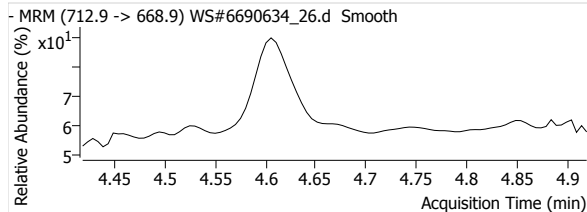
PFDaA 1



PFTrDA 1

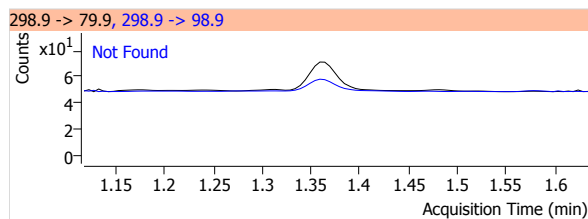
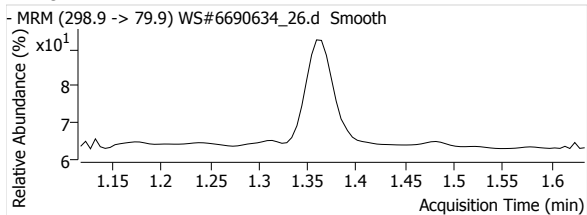


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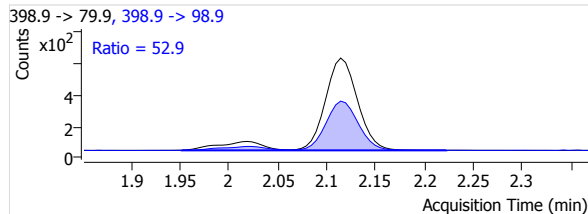
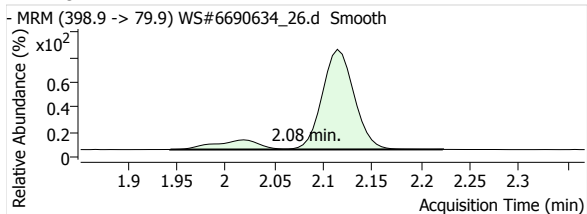


Quantitative Analysis Report

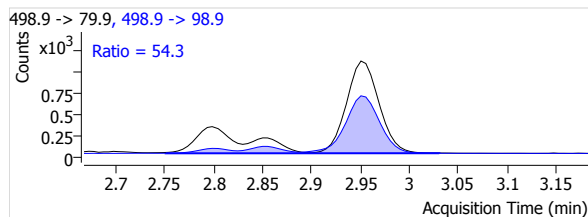
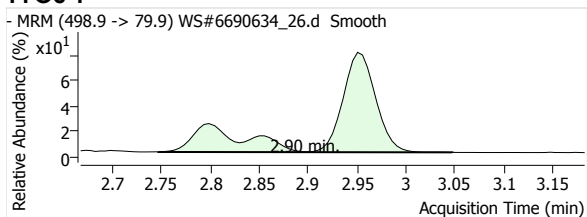
PFBS 1



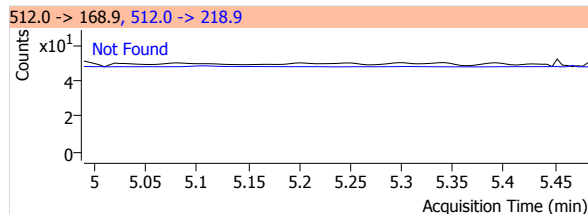
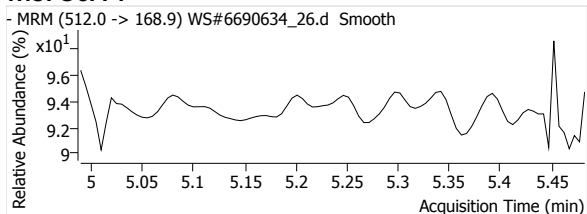
PFHxS 1



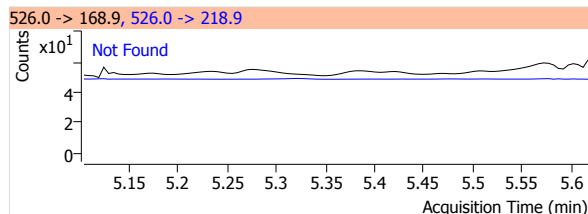
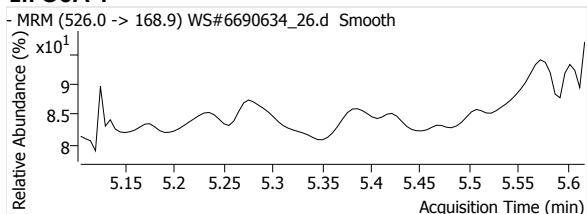
PFOS 1



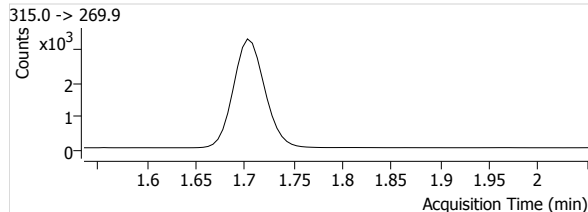
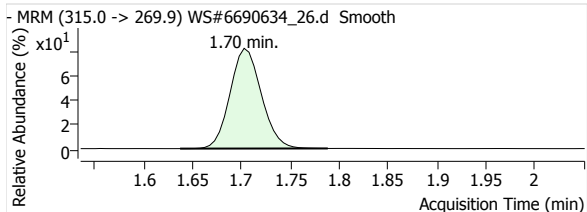
MeFOSA 1



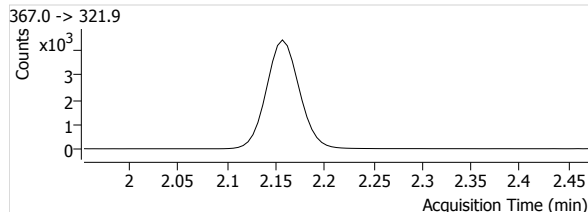
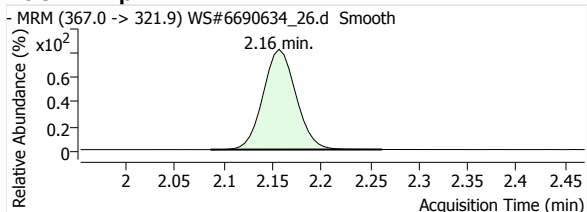
eFOSA 1



13C2-PFHxA

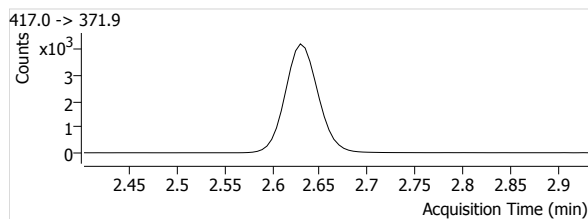
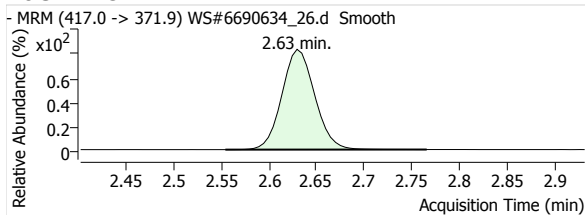


13C4-PFHpA

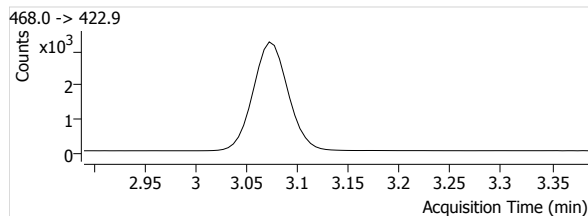
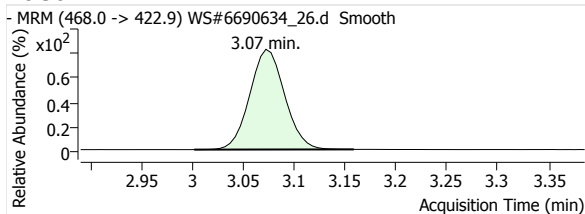


Quantitative Analysis Report

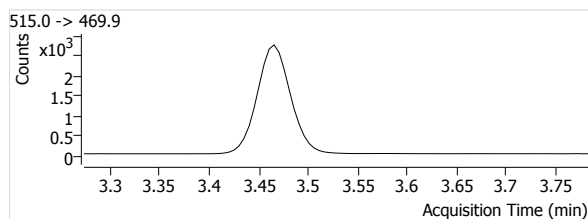
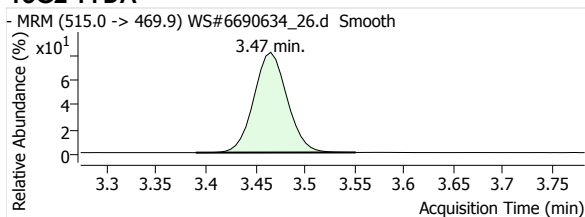
13C4-PFOA



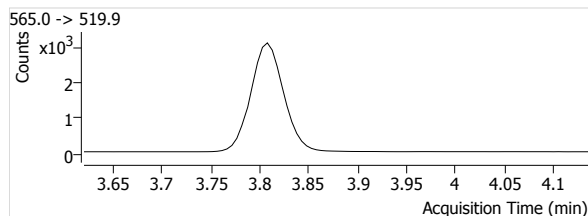
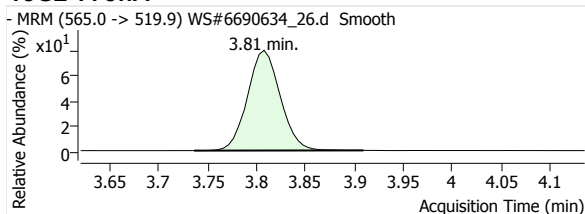
13C5-PFNA



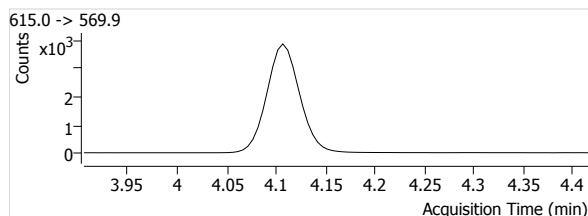
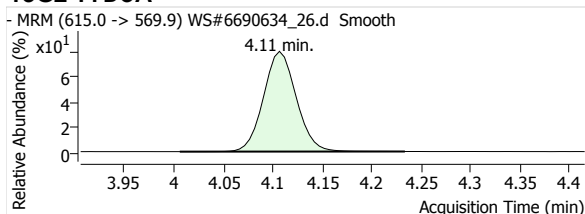
13C2-PFDA



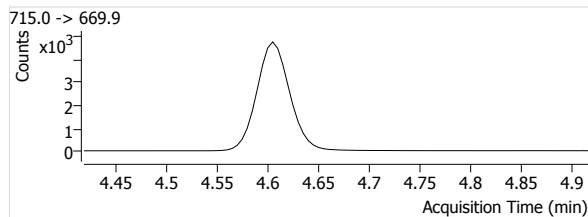
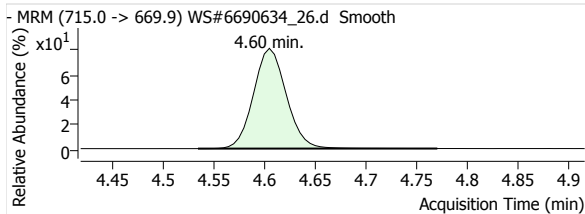
13C2-PFUnA



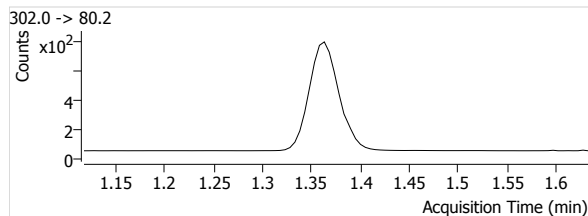
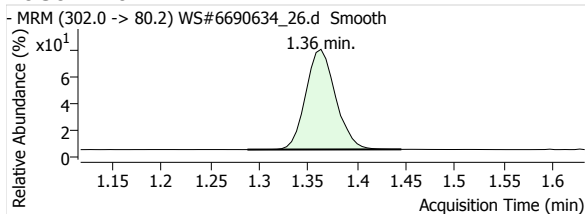
13C2-PFDoA



13C2-PFTeDA

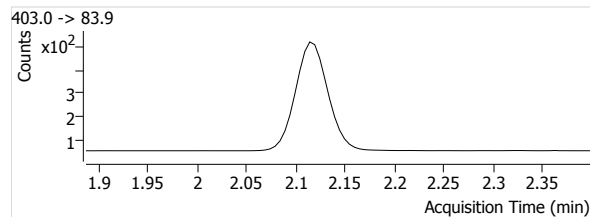
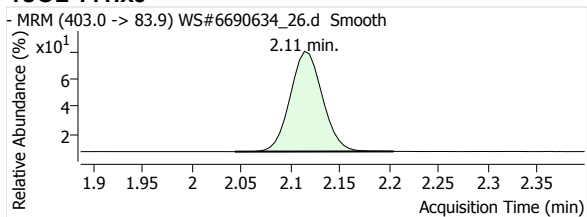


13C3-PFBS

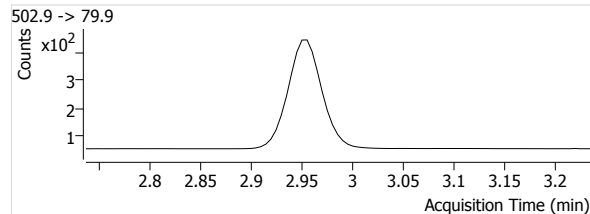
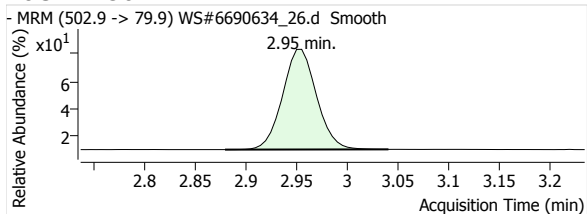


Quantitative Analysis Report

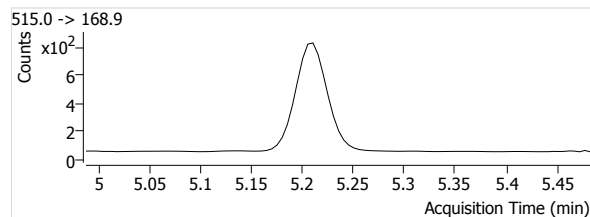
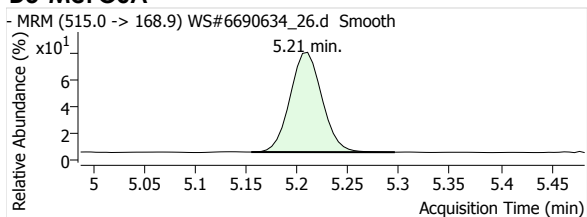
18O2-PFHxs



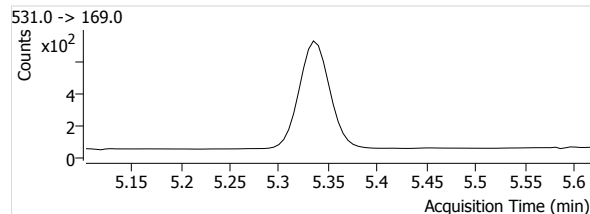
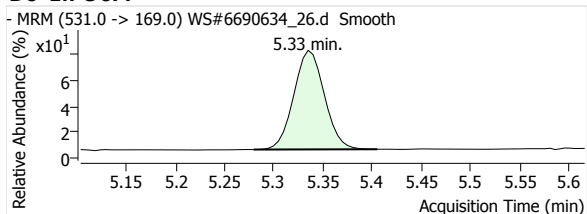
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



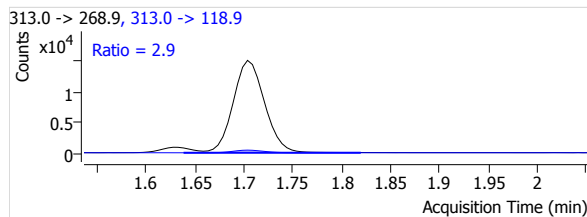
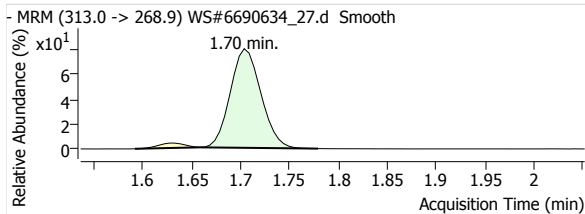
Quantitative Analysis Report

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bin

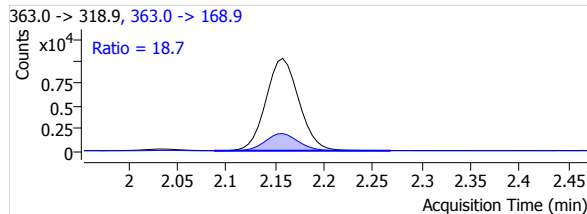
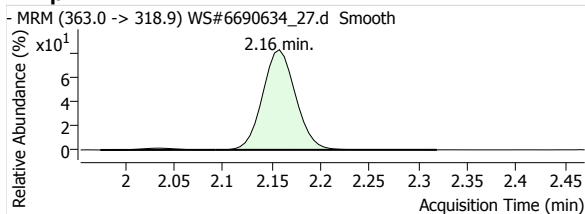
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Type	Sample	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-C4
Acq. Date-Time	2020/04/22 1:01:00 AM	Dil.	0.1
Comment	Reported for all except PFHxS & PFOS.		
User Defined	MI PFOA		

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	2.8248	--	32477	1.70	10207	4.2151	948	1.70	13204	2.9
PFHpA 1	µg/L	--	1.6714	--	24246	2.16	23424	2.3349	4546	2.16	16915	18.7
PFOA 1	µg/L	--	1.9807	--	27840	2.63	22870	2.7781	7200	2.63	51269	25.9
PFNA 1	µg/L	--	0.1129	--	1641	3.07	678	0.2012	332	3.07	3503	20.2
PFDA 1	µg/L	--	0.0000	--	304	3.46	271	0.0450	49	3.46	1299	16.1
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.1476	--	378	1.36	1622	0.2243	179	1.36	1816	47.4
PFHxS 1	µg/L	--	9.1754	--	13847	2.08	687985	13.2382	7383	2.09	14671	53.3
PFOS 1	µg/L	--	32.9698	--	36491	2.90	44491	42.1371	19136	2.89	30718	52.4
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	109.6953	--	7705	1.70	1267	--	--	--	--	--
13C4-PFHpA	µg/L	--	107.4392	--	10384	2.16	2651	--	--	--	--	--
13C4-PFOA	µg/L	--	104.0062	--	10021	2.63	2370	--	--	--	--	--
13C5-PFNA	µg/L	--	107.8398	--	8157	3.07	1934	--	--	--	--	--
13C2-PFDA	µg/L	--	103.2737	--	6751	3.46	1396	--	--	--	--	--
13C2-PFUnA	µg/L	--	101.0796	--	7865	3.80	1220	--	--	--	--	--
13C2-PFDoA	µg/L	--	98.2304	--	9936	4.10	2571	--	--	--	--	--
13C2-PFTeDA	µg/L	--	94.5614	--	11858	4.60	2347	--	--	--	--	--
13C3-PFBS	µg/L	--	109.2029	--	1685	1.36	282	--	--	--	--	--
18O2-PFHxS	µg/L	--	102.9528	--	1046	2.11	381	--	--	--	--	--
13C4-PFOS	µg/L	--	89.9273	--	866	2.95	410	--	--	--	--	--
D3-MeFOSA	µg/L	--	60.2221	--	1464	5.21	107	--	--	--	--	--
D5-EtFOSA	µg/L	--	60.5351	--	1267	5.33	73	--	--	--	--	--

PFHxA 1

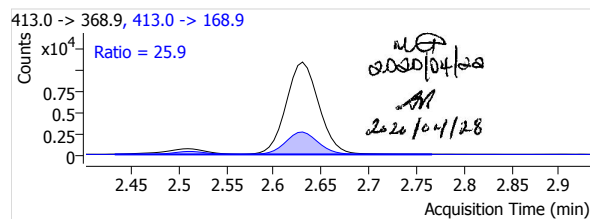
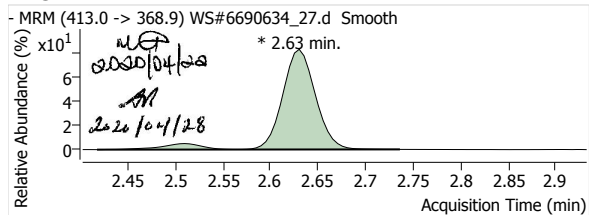


PFHpA 1

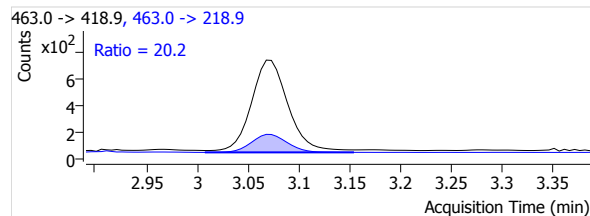
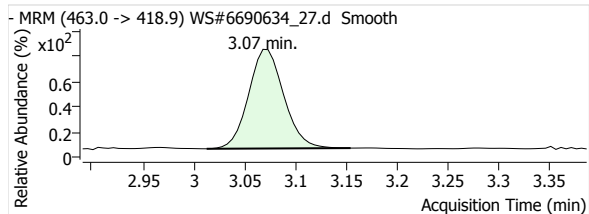


Quantitative Analysis Report

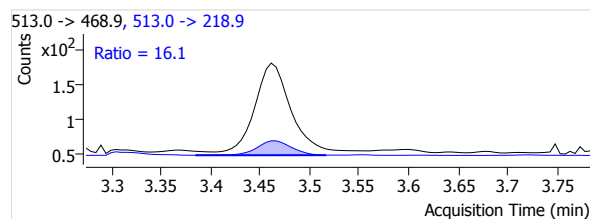
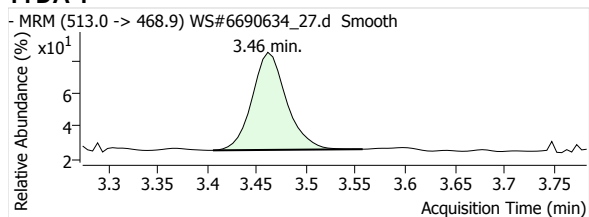
PFOA 1



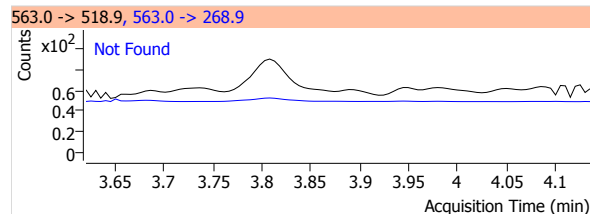
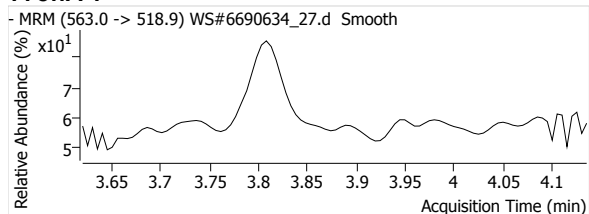
PFNA 1



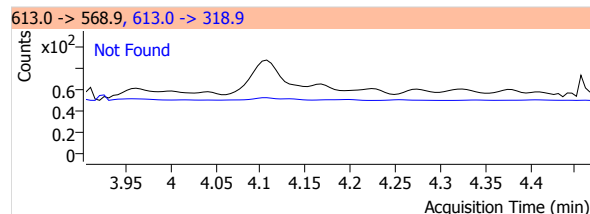
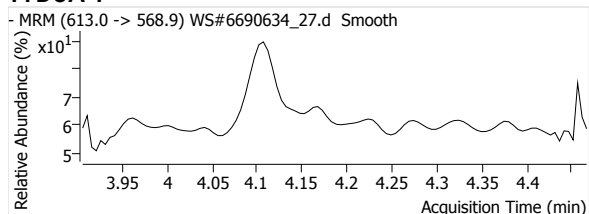
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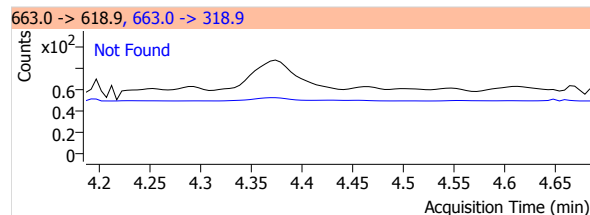
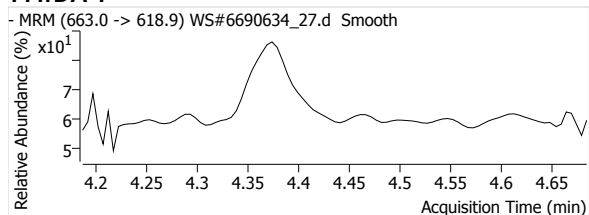
PFUnA 1



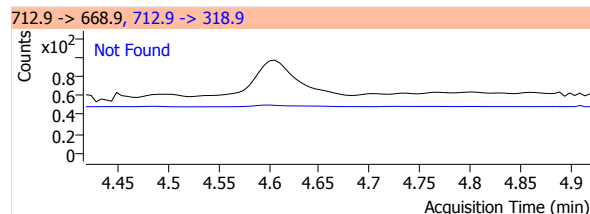
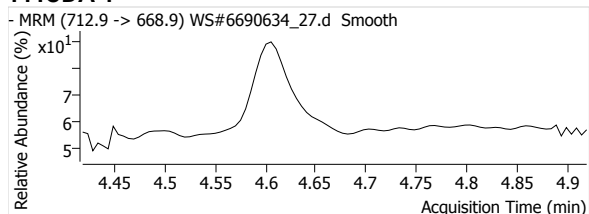
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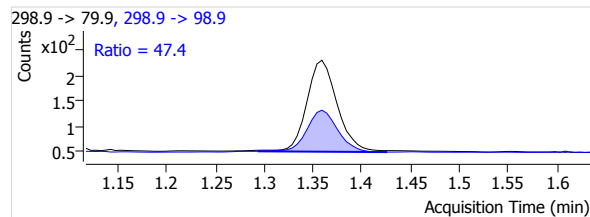
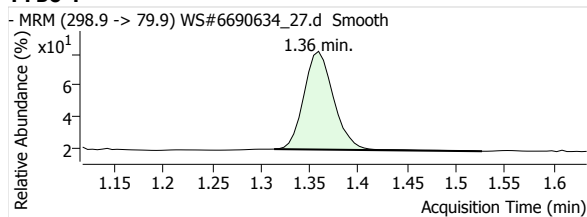


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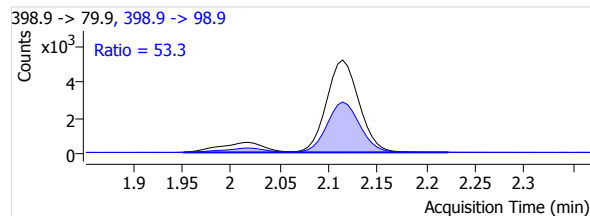
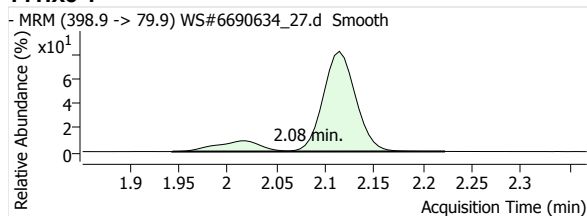


Quantitative Analysis Report

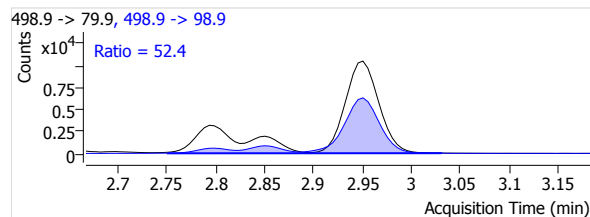
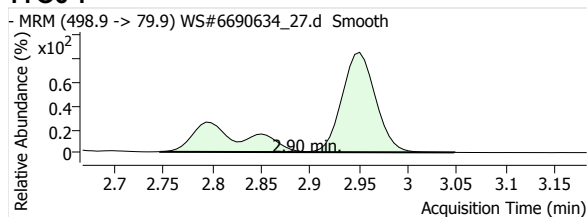
PFBS 1



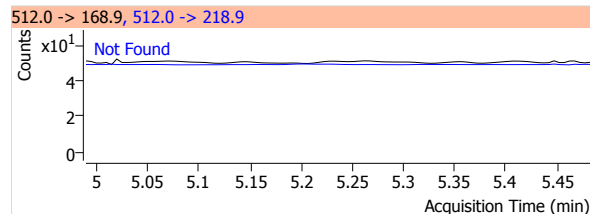
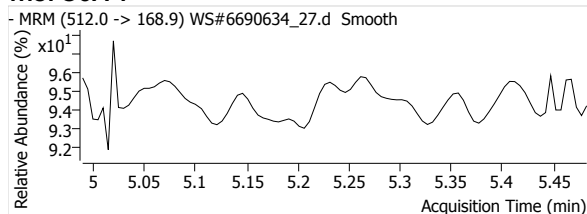
PFHxS 1



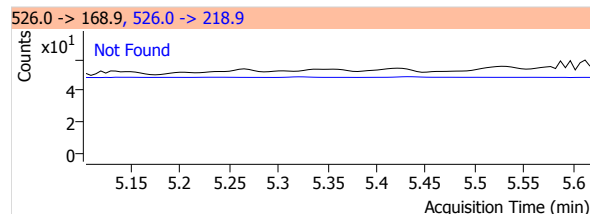
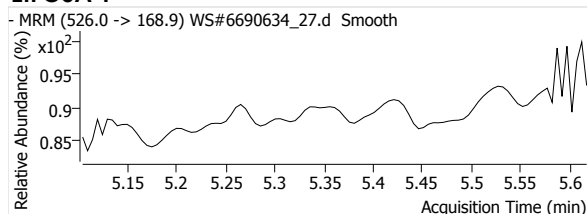
PFOS 1



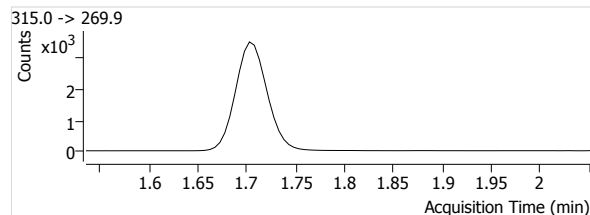
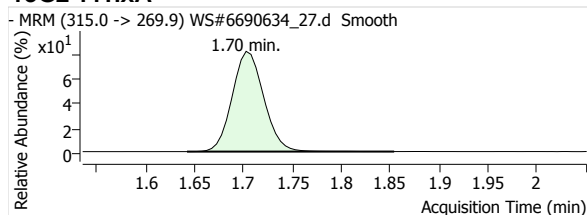
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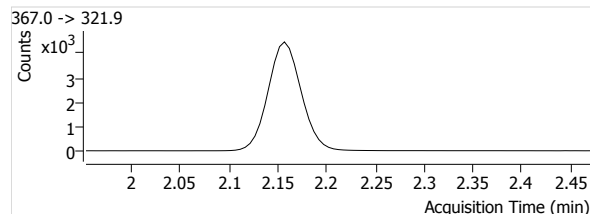
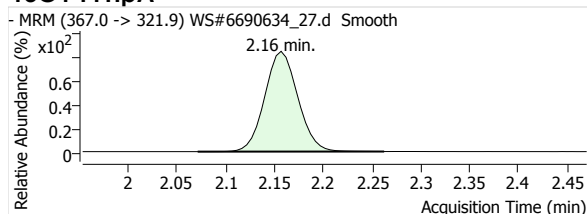
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13C2-PFHxA

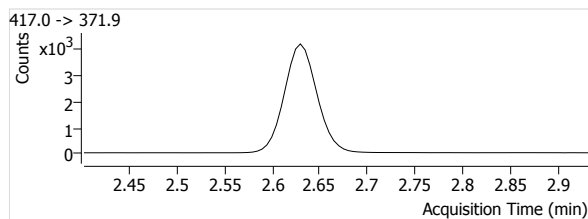
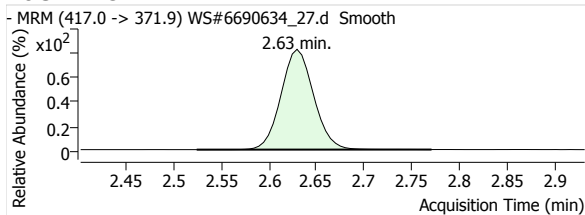


13C4-PFHpA

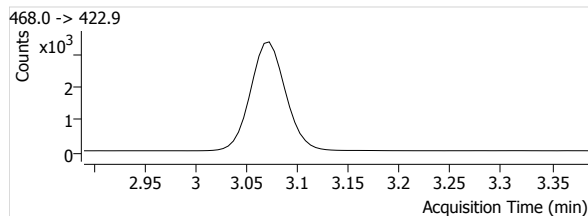
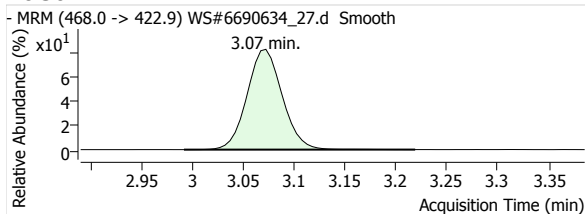


Quantitative Analysis Report

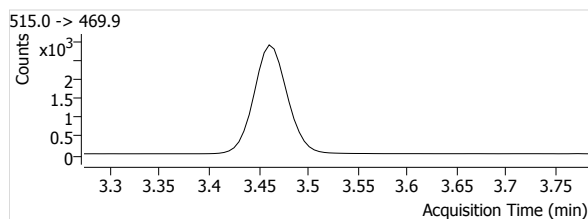
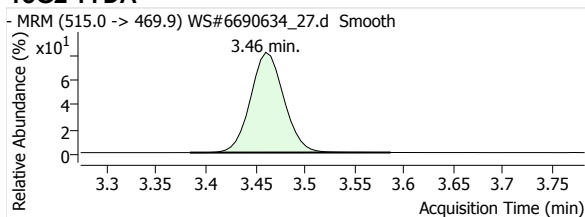
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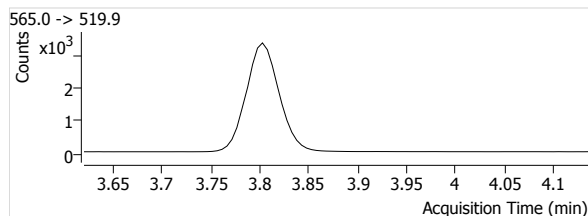
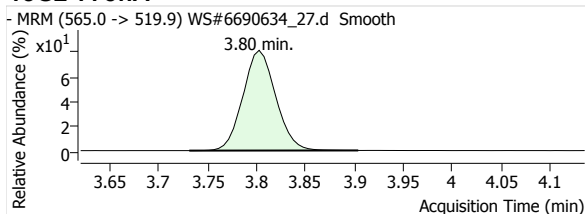
13C5-PFNA



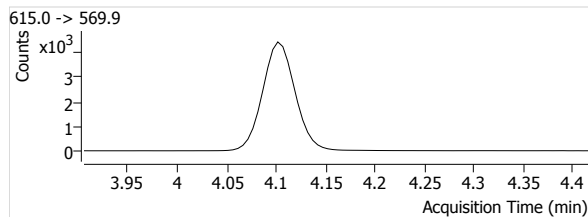
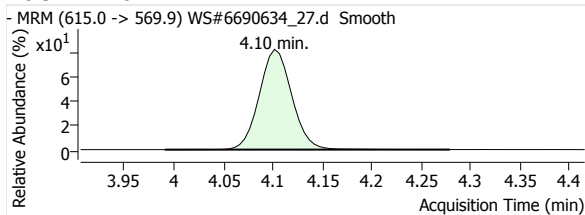
13C2-PFDA



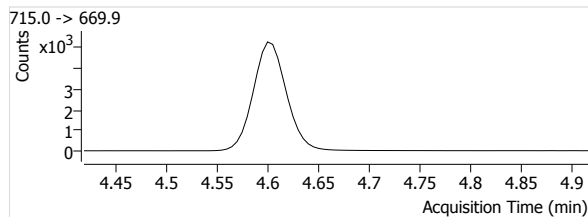
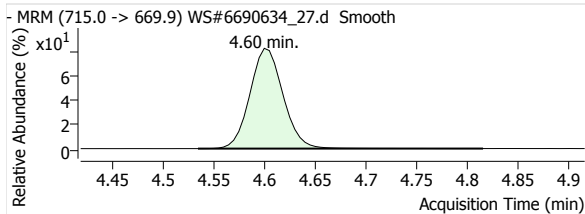
13C2-PFUnA



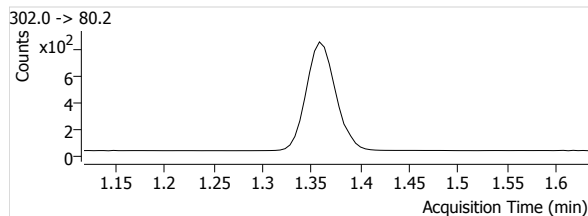
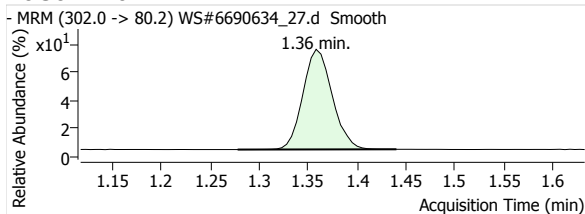
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13C2-PFTeDA

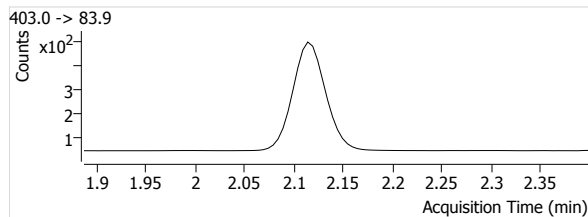
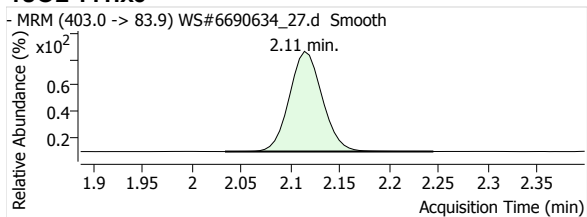


13C3-PFBS

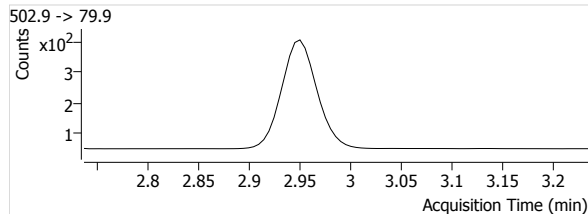
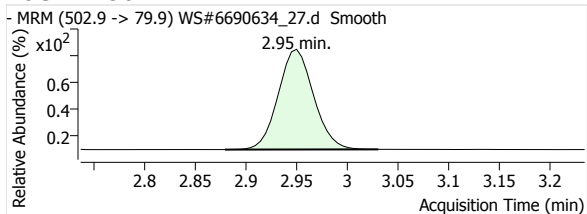


Quantitative Analysis Report

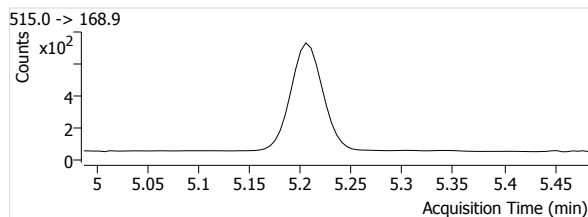
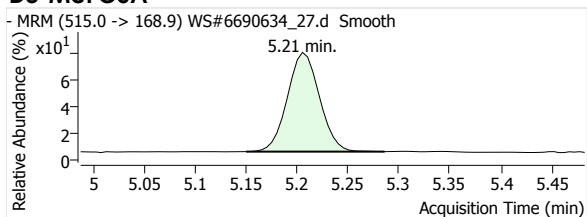
18O2-PFHxs



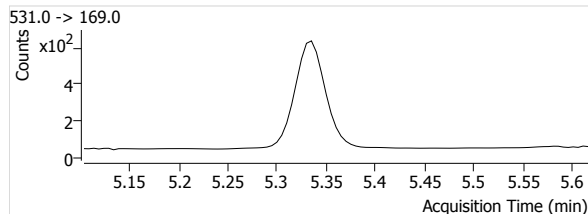
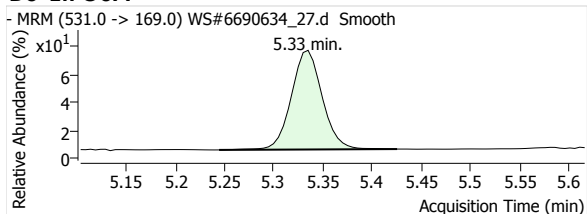
13C4-PFOS



D3-MeFOSA



D5-EtFOSA

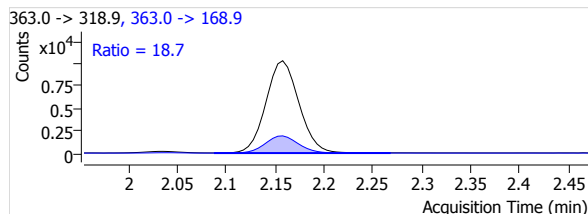
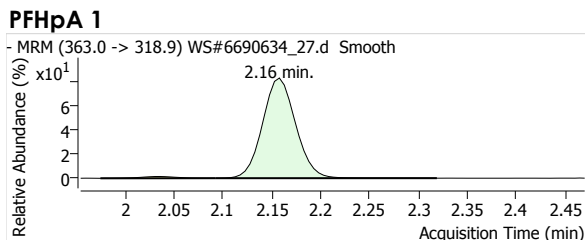
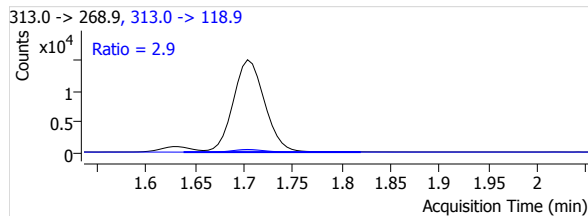
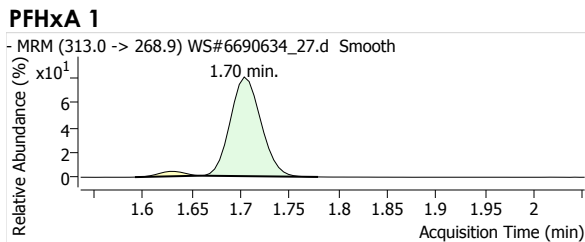


Quantitative Analysis Report

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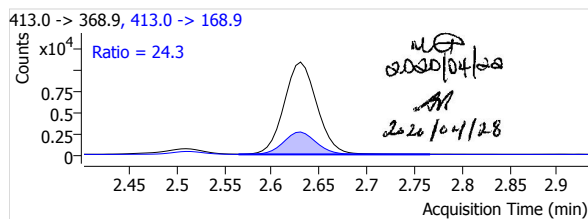
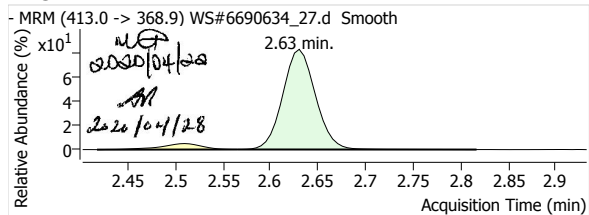
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Type	Sample	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-C4
Acq. Date-Time	2020/04/22 1:01:00 AM	Dil.	0.1
Comment	Reported for all except PFHxS & PFOS.		
User Defined	MI PFOA		

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	2.8248	--	32477	1.70	10207	4.2151	948	1.70	13204	2.9
PFHpA 1	µg/L	--	1.6714	--	24246	2.16	23424	2.3349	4546	2.16	16915	18.7
PFOA 1	µg/L	--	1.8404	--	25890	2.63	22877	2.5836	6301	2.63	51219	24.3
PFNA 1	µg/L	--	0.1129	--	1641	3.07	678	0.2012	332	3.07	3503	20.2
PFDA 1	µg/L	--	0.0000	--	304	3.46	271	0.0450	49	3.46	1299	16.1
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.1476	--	378	1.36	1622	0.2243	179	1.36	1816	47.4
PFHxS 1	µg/L	--	9.1659	--	13847	2.08	687985	13.2382	7383	2.09	14671	53.3
PFOS 1	µg/L	--	32.9698	--	36491	2.90	44491	42.1371	19136	2.89	30718	52.4
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	109.6953	--	7705	1.70	1267	--	--	--	--	--
13C4-PFHpA	µg/L	--	107.4392	--	10384	2.16	2651	--	--	--	--	--
13C4-PFOA	µg/L	--	104.0062	--	10021	2.63	2370	--	--	--	--	--
13C5-PFNA	µg/L	--	107.8398	--	8157	3.07	1934	--	--	--	--	--
13C2-PFDA	µg/L	--	103.2737	--	6751	3.46	1396	--	--	--	--	--
13C2-PFUnA	µg/L	--	101.0796	--	7865	3.80	1220	--	--	--	--	--
13C2-PFDaA	µg/L	--	98.2304	--	9936	4.10	2571	--	--	--	--	--
13C2-PFTeDA	µg/L	--	94.5614	--	11858	4.60	2347	--	--	--	--	--
13C3-PFBS	µg/L	--	109.2029	--	1685	1.36	282	--	--	--	--	--
18O2-PFHxS	µg/L	--	102.9528	--	1046	2.11	381	--	--	--	--	--
13C4-PFOS	µg/L	--	89.9273	--	866	2.95	410	--	--	--	--	--
D3-MeFOSA	µg/L	--	60.2221	--	1464	5.21	107	--	--	--	--	--
D5-EtFOSA	µg/L	--	60.5351	--	1267	5.33	73	--	--	--	--	--

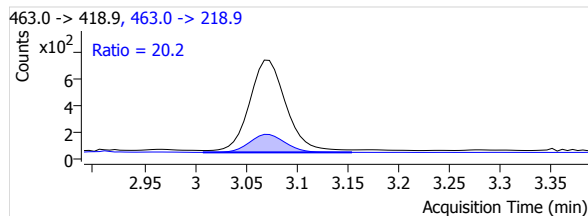
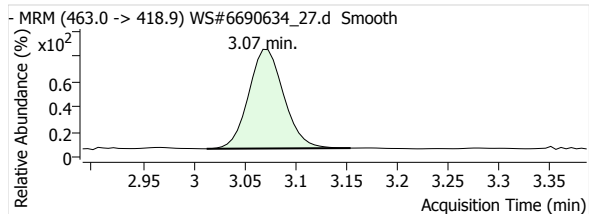


Quantitative Analysis Report

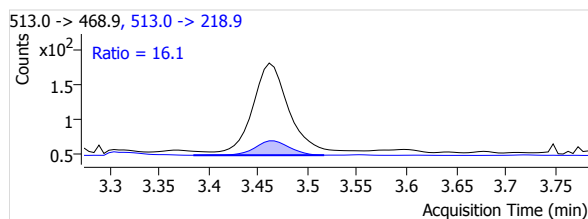
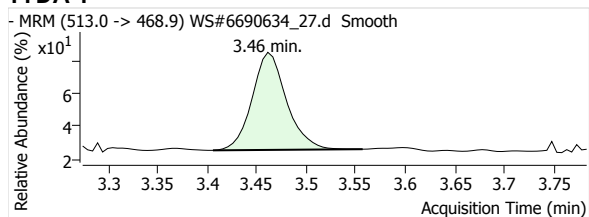
PFOA 1



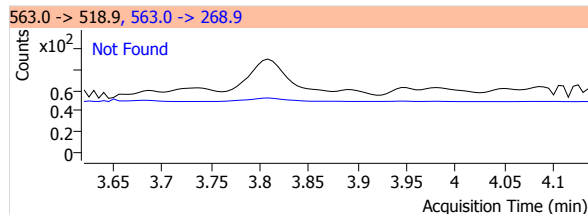
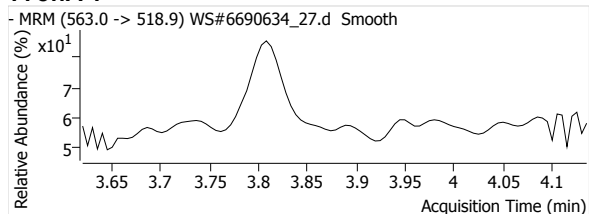
PFNA 1



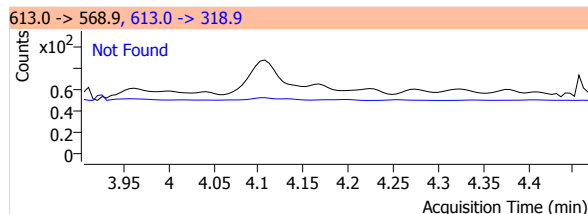
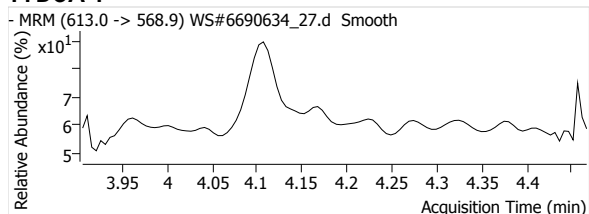
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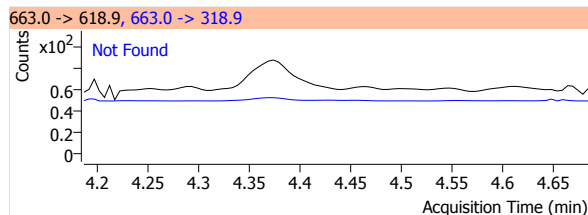
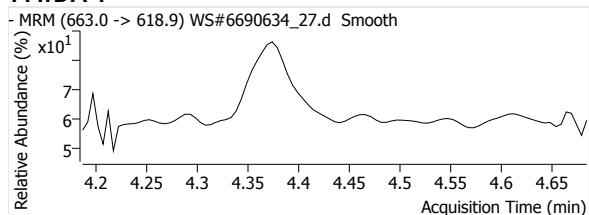
PFUnA 1



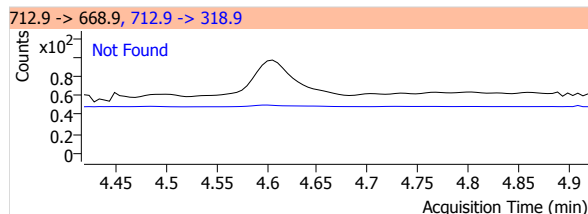
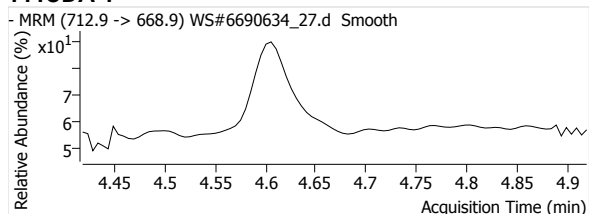
PFDoA 1



PFTrDA 1

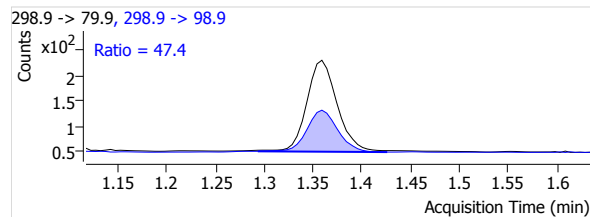
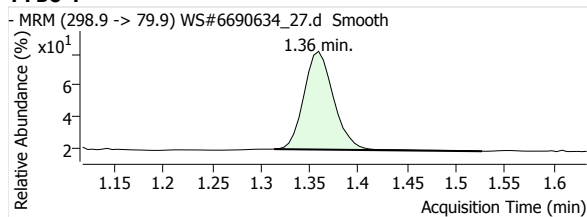


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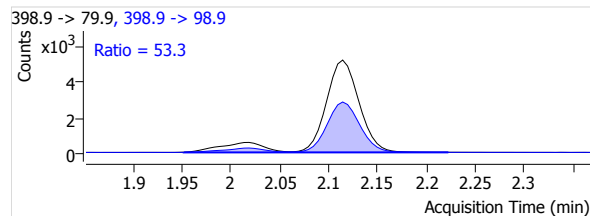
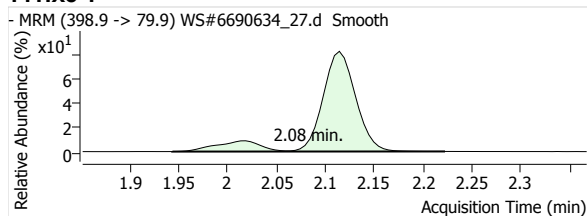


Quantitative Analysis Report

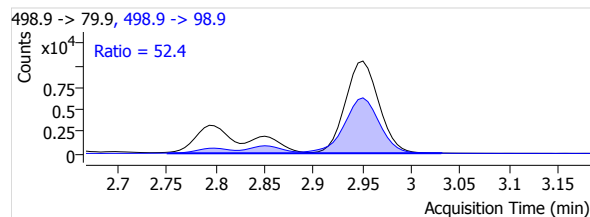
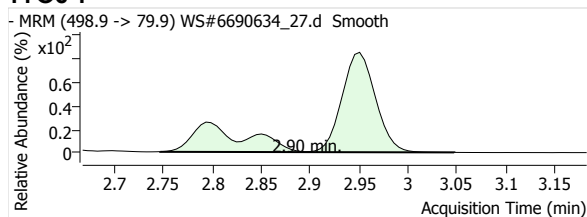
PFBS 1



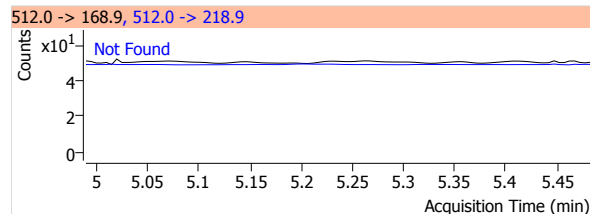
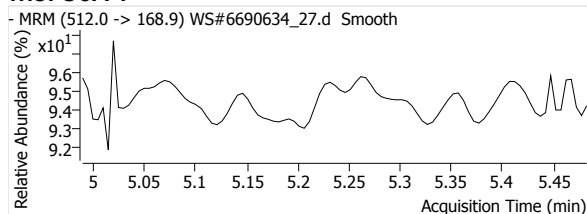
PFHxS 1



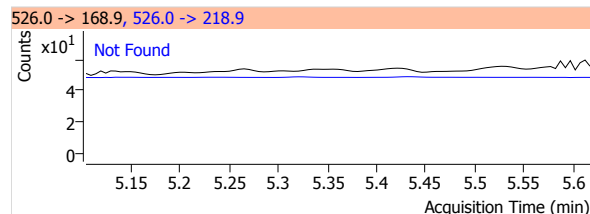
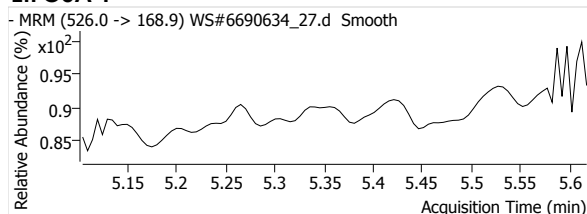
PFOS 1



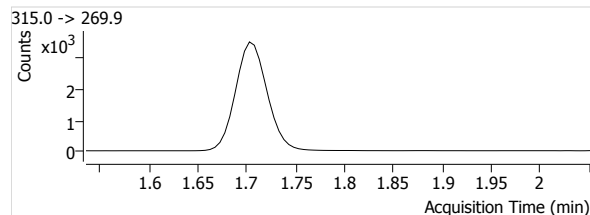
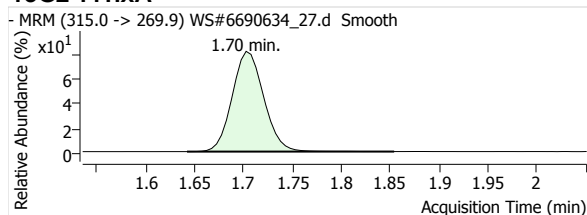
MeFOSA 1



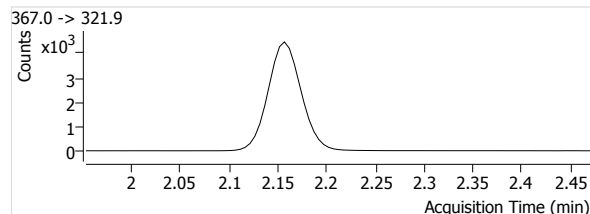
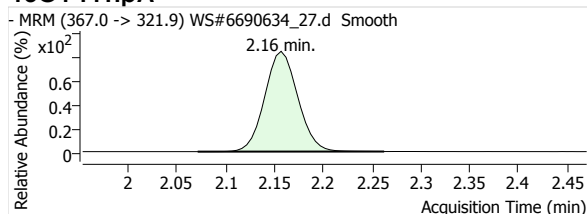
eFOSA 1



13C2-PFHxA

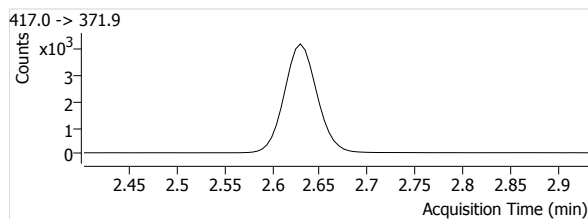
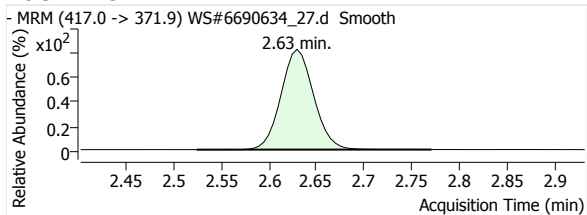


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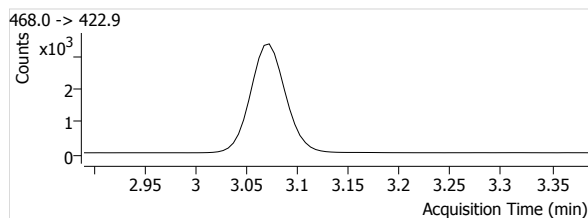
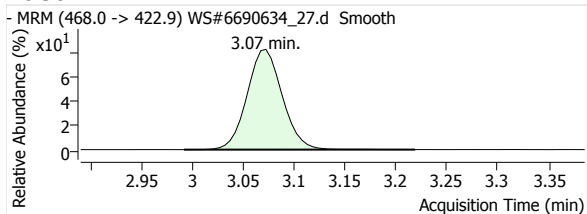


Quantitative Analysis Report

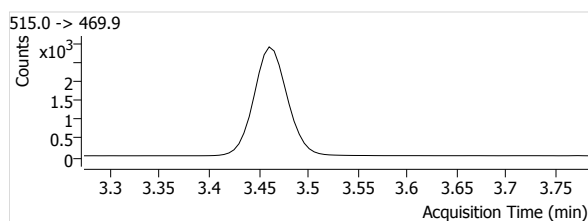
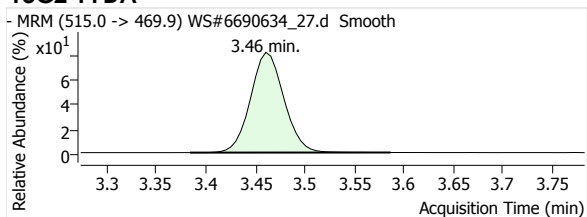
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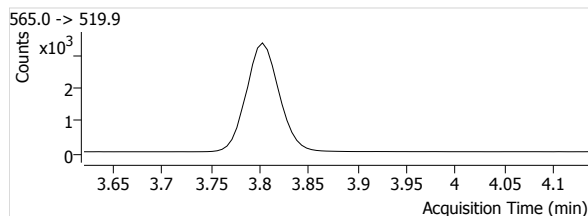
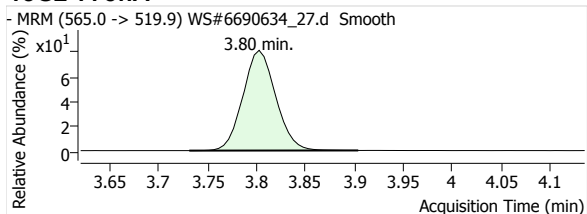
13C5-PFNA



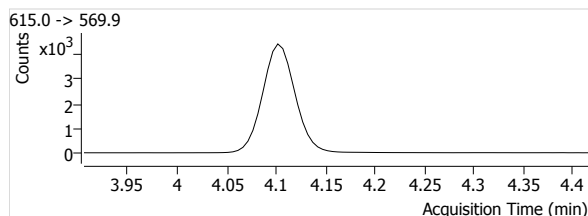
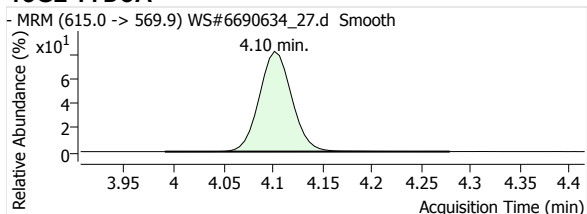
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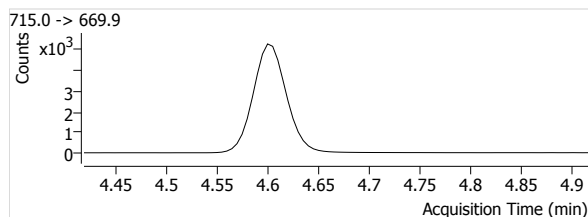
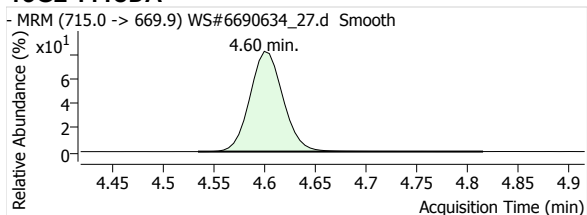
13C2-PFUnA



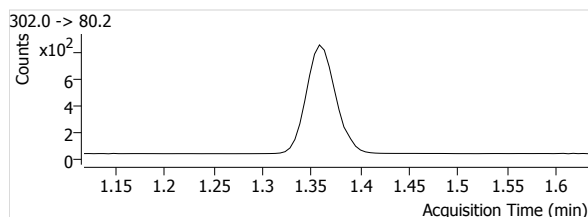
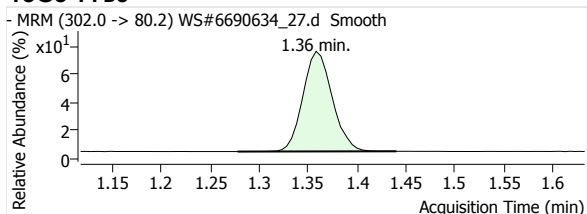
13C2-PFDoA



13C2-PFTeDA

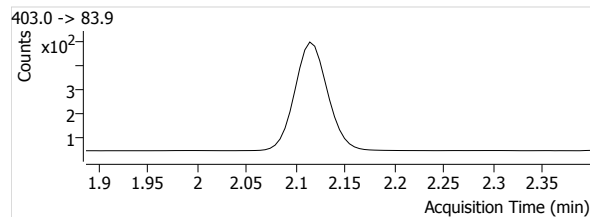
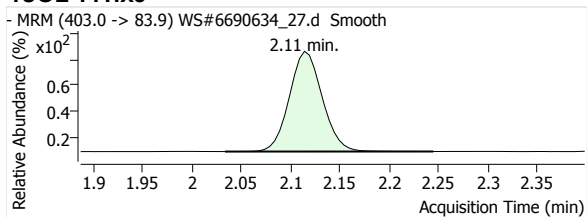


13C3-PFBS

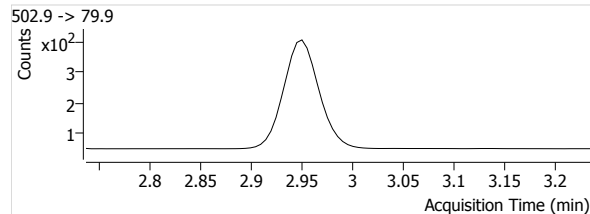
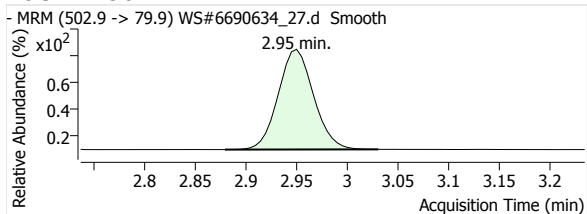


Quantitative Analysis Report

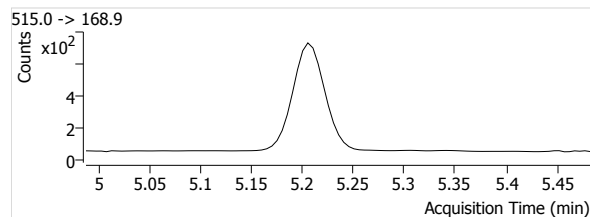
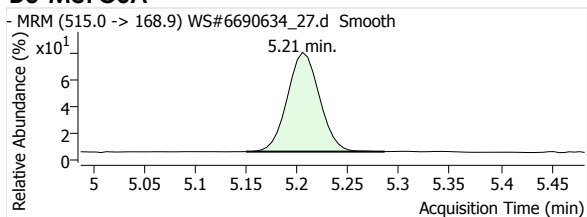
18O2-PFHxs



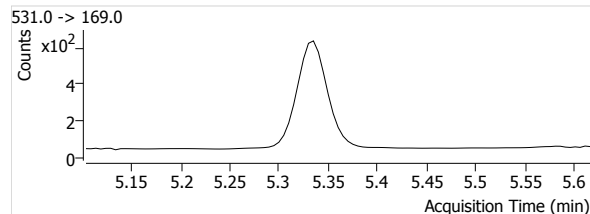
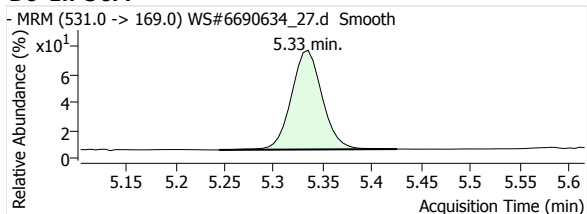
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



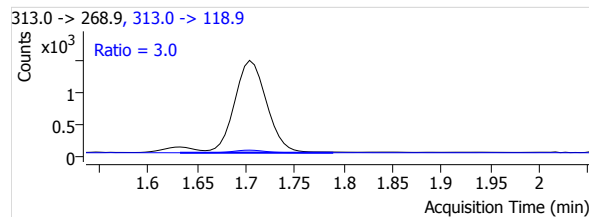
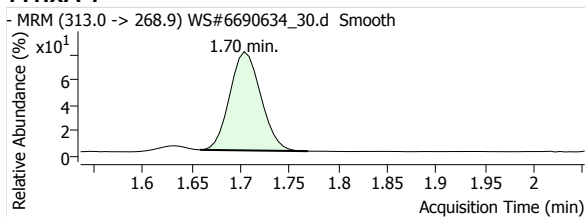
Quantitative Analysis Report

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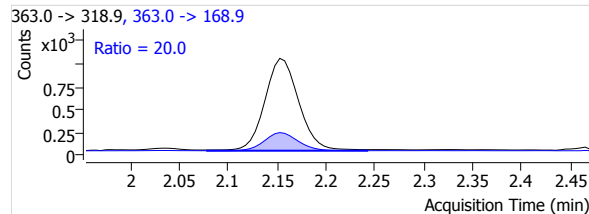
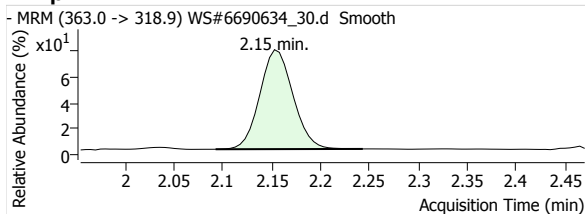
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Acq. Date-Time	2020/04/22 1:21:51 AM	Dil.	1.2
Comment	Reported for PFHxS & PFOS only.		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	2.3833	--	3141	1.70	1775	0.3884	94	1.70	1920	3.0
PFHpA 1	µg/L	--	1.3035	--	2370	2.15	1677	0.2155	474	2.15	2946	20.0
PFOA 1	µg/L	--	1.4514	--	2479	2.63	1490	0.2328	615	2.63	5394	24.8
PFNA 1	µg/L	--	0.0000	--	195	3.07	111	0.0233	40	3.07	655	20.5
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	8.0736	--	1413	2.08	10885	1.2060	766	2.09	257037	54.2
PFOS 1	µg/L	--	27.1179	--	3447	2.90	7647	3.5069	1838	2.89	14895	53.3
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	115.1481	--	8088	1.70	1464	--	--	--	--	--
13C4-PFHpA	µg/L	--	113.8127	--	11000	2.15	1278	--	--	--	--	--
13C4-PFOA	µg/L	--	110.5034	--	10647	2.63	1166	--	--	--	--	--
13C5-PFNA	µg/L	--	110.6822	--	8372	3.07	1404	--	--	--	--	--
13C2-PFDA	µg/L	--	103.1666	--	6744	3.46	1132	--	--	--	--	--
13C2-PFUnA	µg/L	--	99.5502	--	7746	3.80	1441	--	--	--	--	--
13C2-PFDaA	µg/L	--	98.7346	--	9987	4.10	1853	--	--	--	--	--
13C2-PFTeDA	µg/L	--	97.3046	--	12202	4.60	2216	--	--	--	--	--
13C3-PFBS	µg/L	--	111.8600	--	1726	1.36	936	--	--	--	--	--
18O2-PFHxS	µg/L	--	115.3543	--	1172	2.11	906	--	--	--	--	--
13C4-PFOS	µg/L	--	102.0768	--	983	2.95	475	--	--	--	--	--
D3-MeFOSA	µg/L	--	66.7215	--	1622	5.21	82	--	--	--	--	--
D5-EtFOSA	µg/L	--	70.2341	--	1470	5.33	107	--	--	--	--	--

PFHxA 1

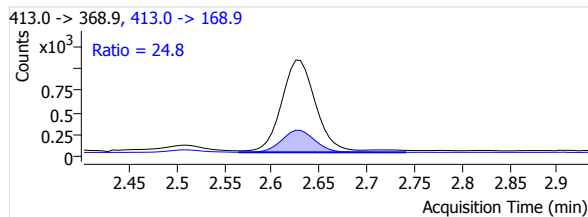
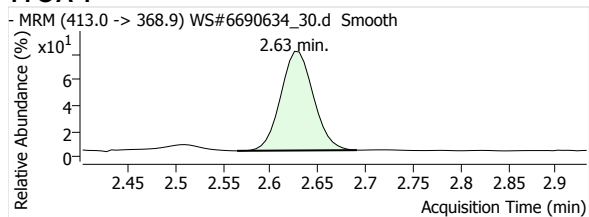


PFHpA 1

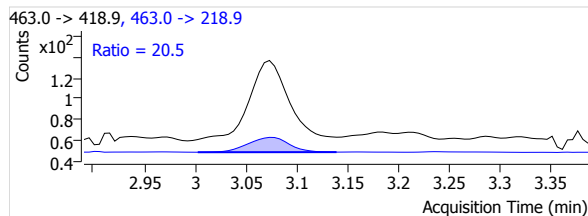
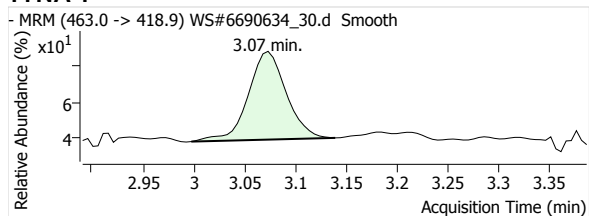


Quantitative Analysis Report

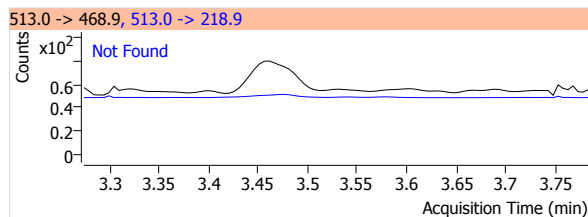
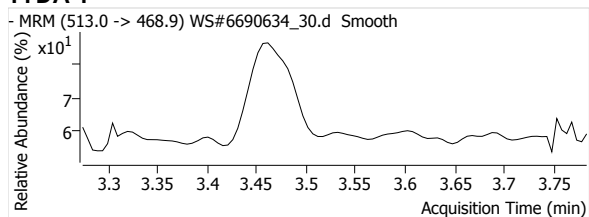
PFOA 1



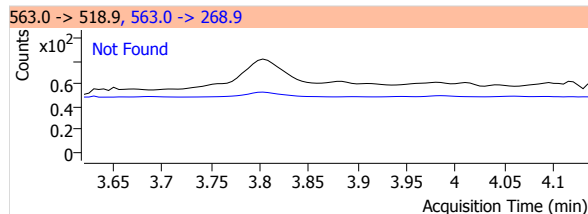
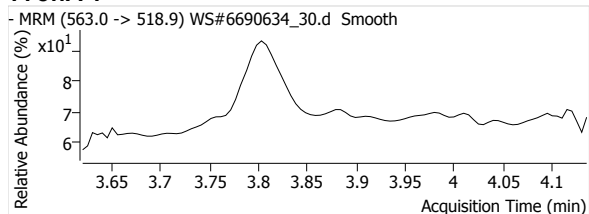
PFNA 1



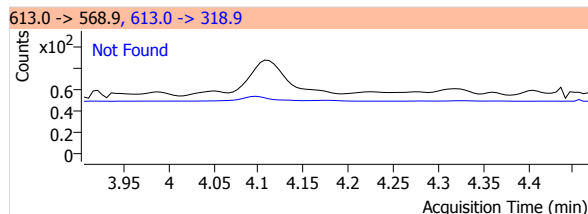
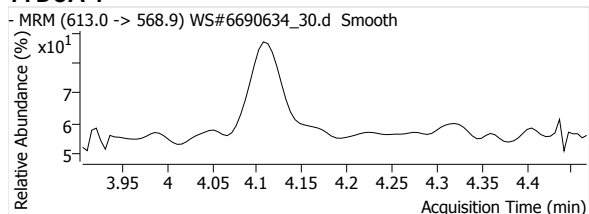
PFDA 1



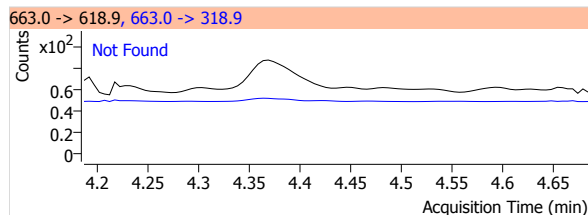
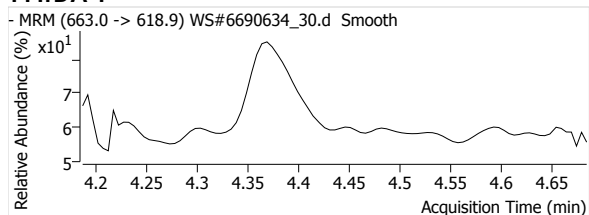
PFUnA 1



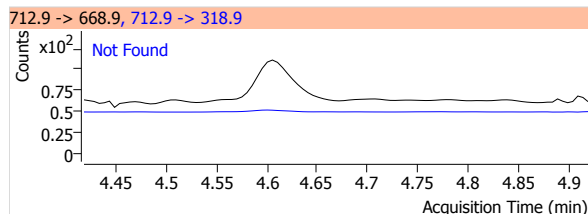
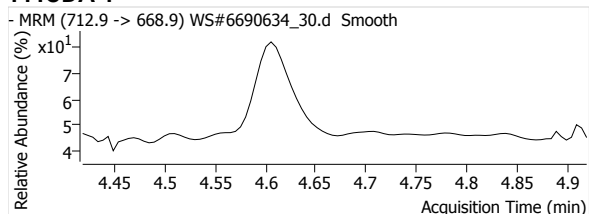
PFDaA 1



PFTrDA 1

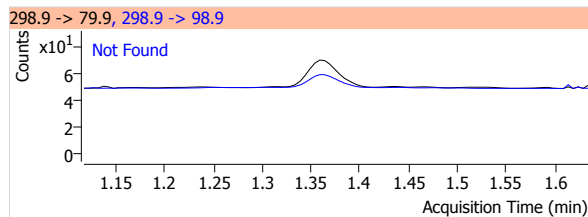
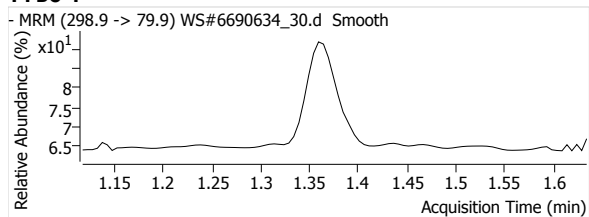


PFTeDA 1

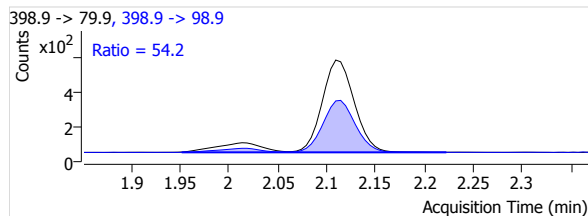
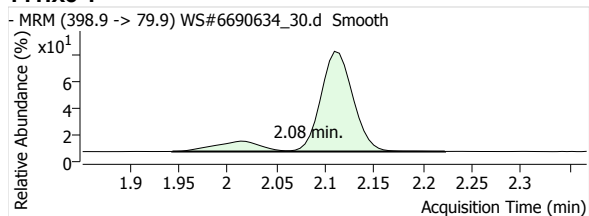


Quantitative Analysis Report

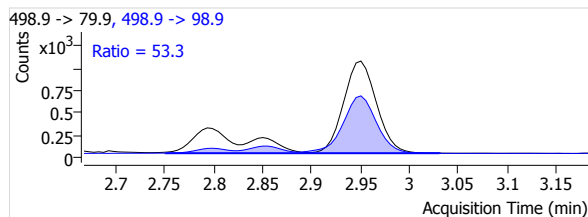
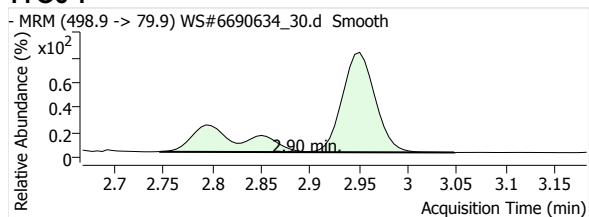
PFBS 1



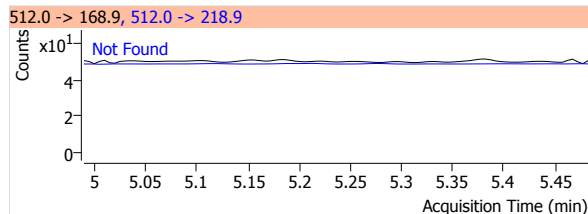
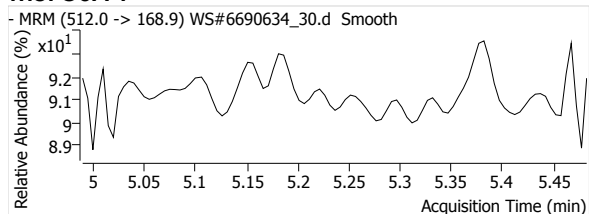
PFHxS 1



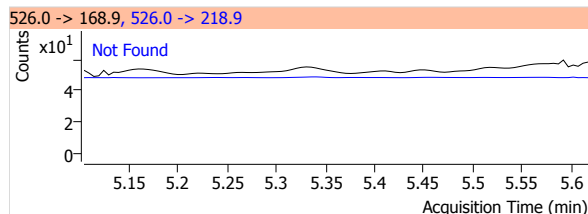
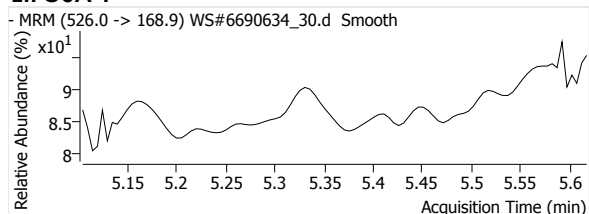
PFOS 1



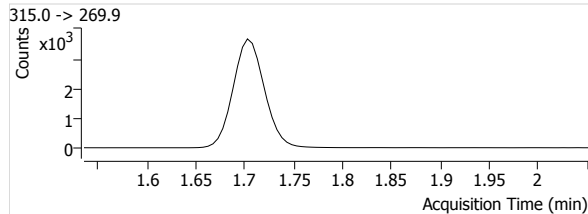
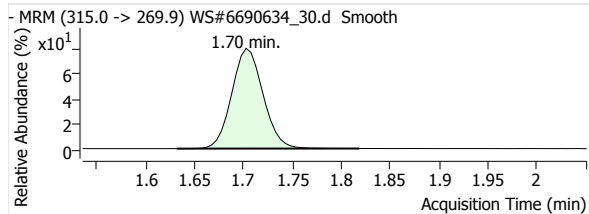
MeFOSA 1



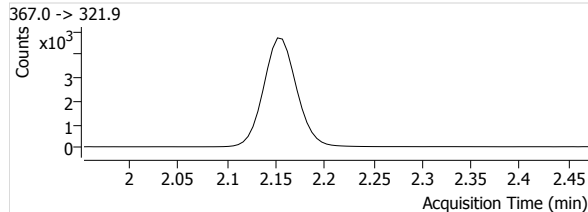
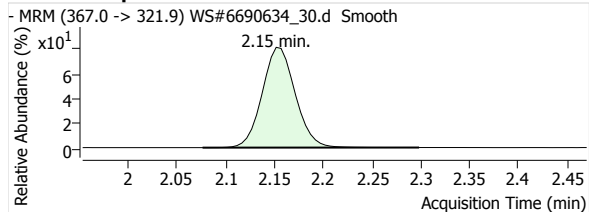
eFOSA 1



13C2-PFHxA

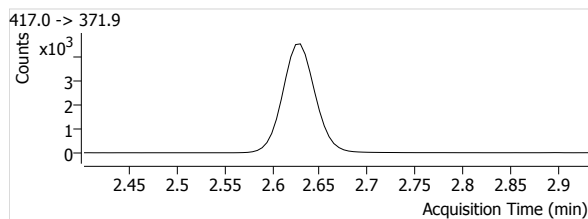
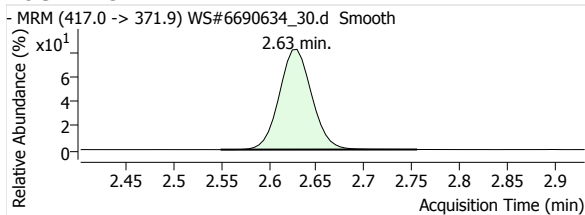


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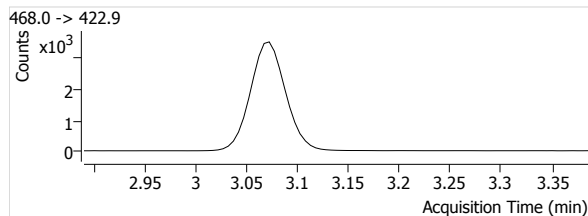
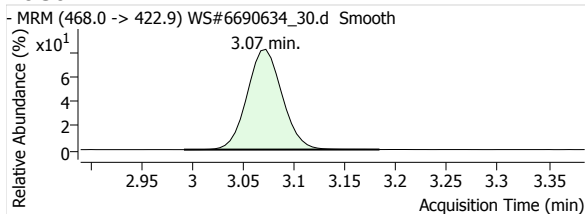


Quantitative Analysis Report

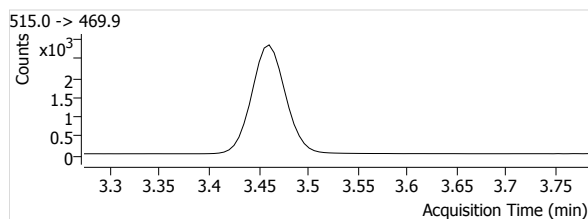
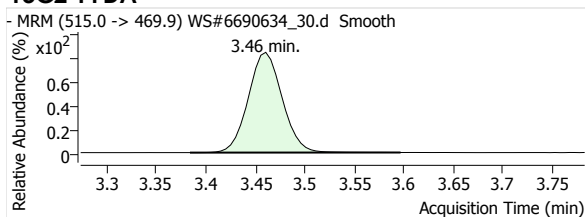
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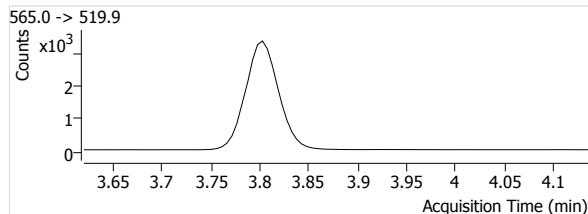
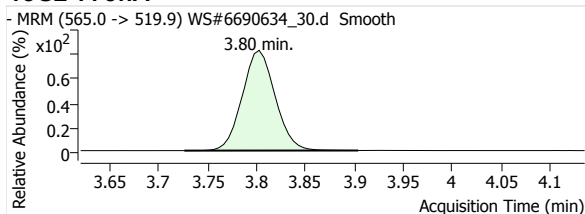
13C5-PFNA



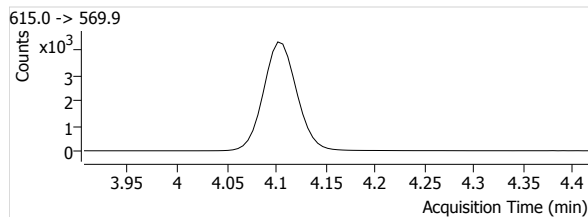
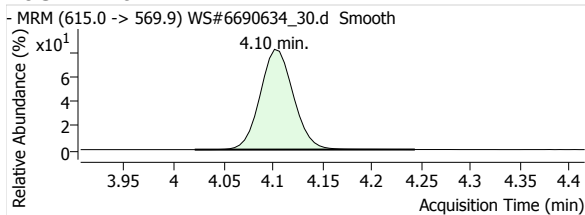
13C2-PFDA



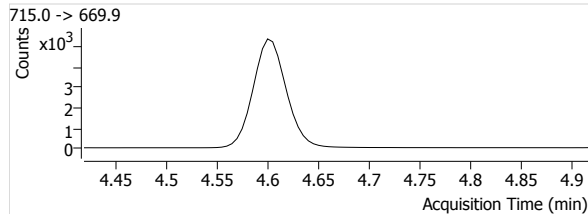
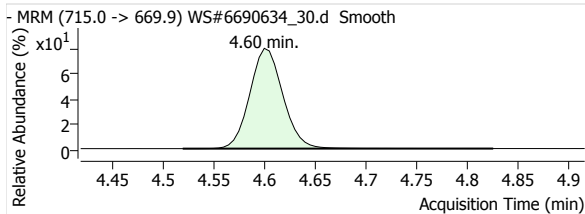
13C2-PFUnA



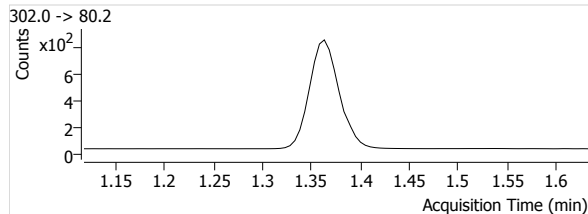
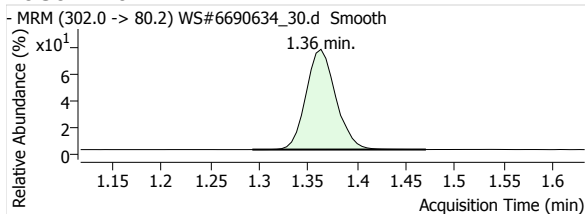
13C2-PFDoA



13C2-PFTeDA

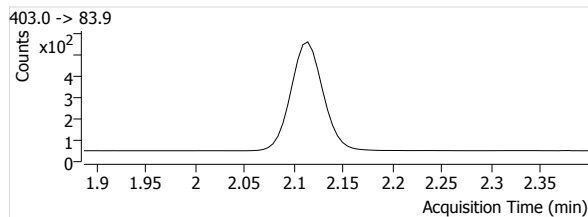
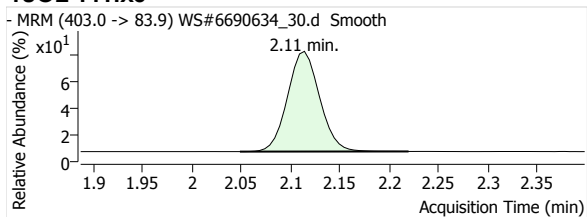


13C3-PFBS

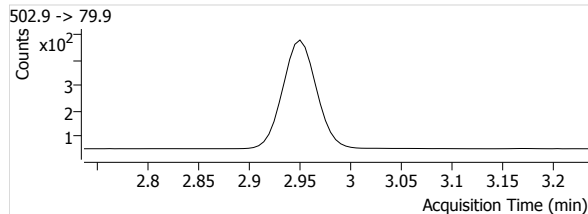
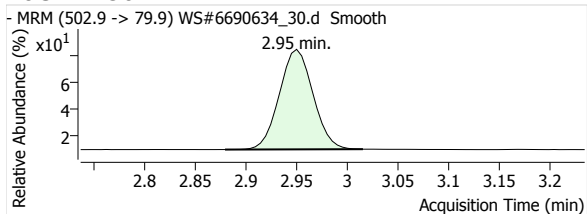


Quantitative Analysis Report

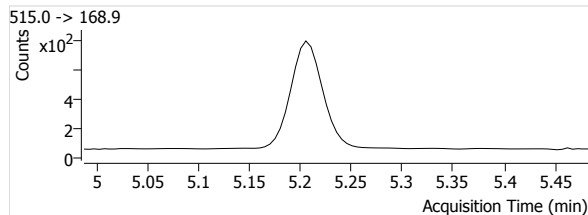
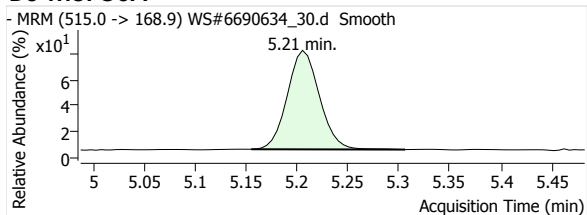
18O2-PFHxS



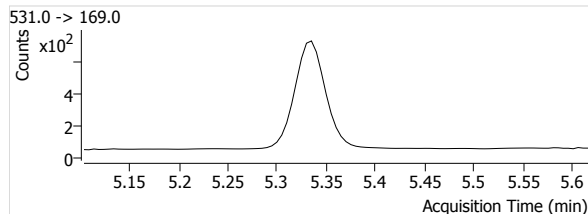
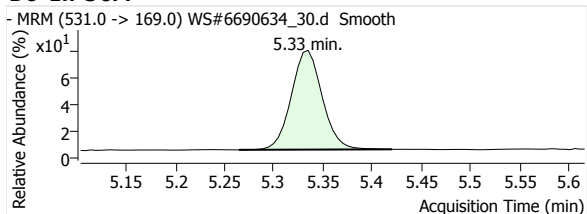
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



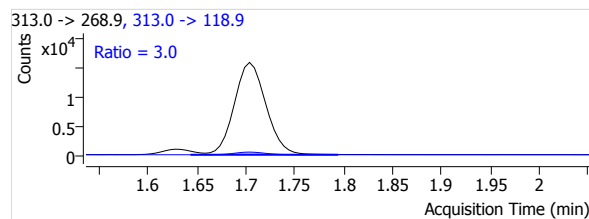
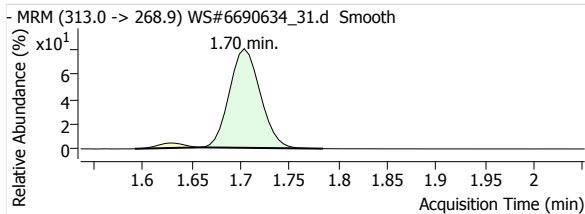
Quantitative Analysis Report

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bin

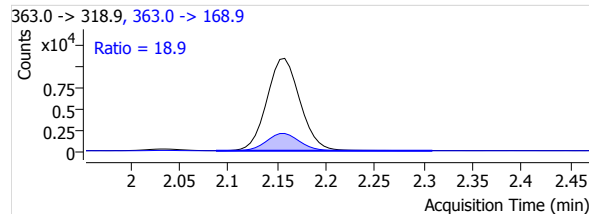
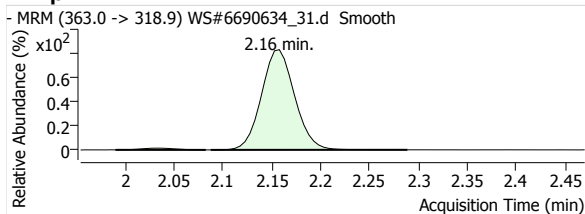
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Acq. Method File	PFAS.m	Position	P1-C6
Acq. Date-Time	2020/04/22 1:28:47 AM	Dil.	0.1
Comment	Reported for all except PFHxS & PFOS.		
User Defined	MI PFOA		

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	2.9984	--	34510	1.70	24111	4.4719	1029	1.70	7817	3.0
PFHpA 1	µg/L	--	1.7729	--	25945	2.16	18218	2.4745	4891	2.16	49964	18.9
PFOA 1	µg/L	--	2.0775	--	29783	2.63	222789	2.9124	7772	2.63	227951	26.1
PFNA 1	µg/L	--	0.1215	--	1763	3.07	675	0.2133	358	3.07	1744	20.3
PFDA 1	µg/L	--	0.0000	--	316	3.46	172	0.0460	50	3.47	504	15.8
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.1673	--	418	1.36	4369	0.2491	186	1.36	657	44.5
PFHxS 1	µg/L	--	9.6435	--	14969	2.08	381635	13.9112	7928	2.09	32167	53.0
PFOS 1	µg/L	--	34.2143	--	38741	2.90	16769	43.7260	20187	2.89	42574	52.1
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	109.8662	--	7717	1.70	842	--	--	--	--	--
13C4-PFHpA	µg/L	--	108.4842	--	10485	2.16	1499	--	--	--	--	--
13C4-PFOA	µg/L	--	106.1339	--	10226	2.63	1135	--	--	--	--	--
13C5-PFNA	µg/L	--	109.2940	--	8267	3.07	1465	--	--	--	--	--
13C2-PFDA	µg/L	--	105.0329	--	6866	3.46	1175	--	--	--	--	--
13C2-PFUnA	µg/L	--	105.0251	--	8172	3.80	1920	--	--	--	--	--
13C2-PFDoA	µg/L	--	97.3010	--	9842	4.11	572	--	--	--	--	--
13C2-PFTeDA	µg/L	--	94.6651	--	11871	4.60	1595	--	--	--	--	--
13C3-PFBS	µg/L	--	108.7492	--	1678	1.36	266	--	--	--	--	--
18O2-PFHxS	µg/L	--	105.9055	--	1076	2.11	358	--	--	--	--	--
13C4-PFOS	µg/L	--	92.0042	--	886	2.95	460	--	--	--	--	--
D3-MeFOSA	µg/L	--	56.8079	--	1381	5.21	58	--	--	--	--	--
D5-EtFOSA	µg/L	--	58.5284	--	1225	5.33	71	--	--	--	--	--

PFHxA 1

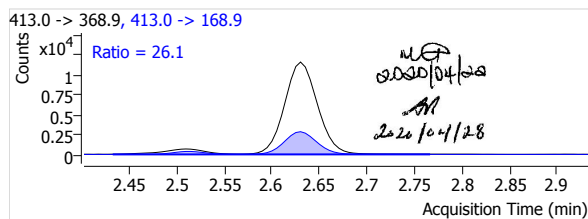
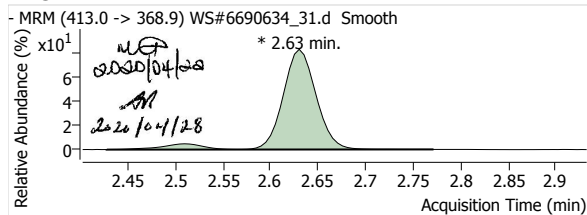


PFHpA 1

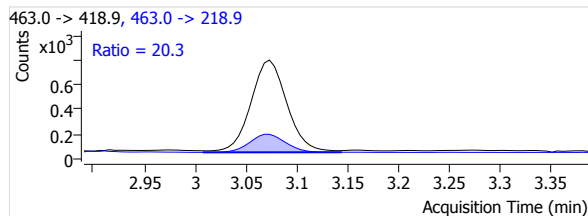
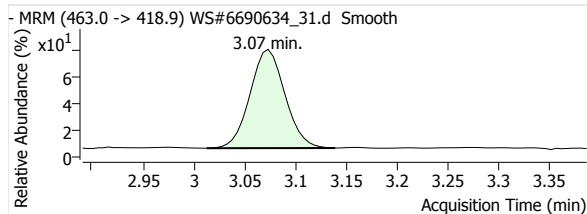


Quantitative Analysis Report

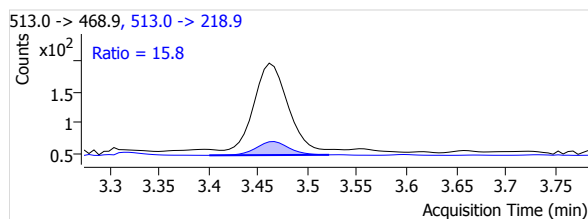
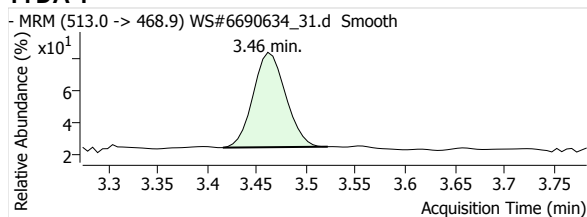
PFOA 1



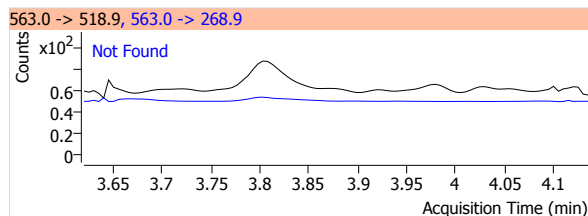
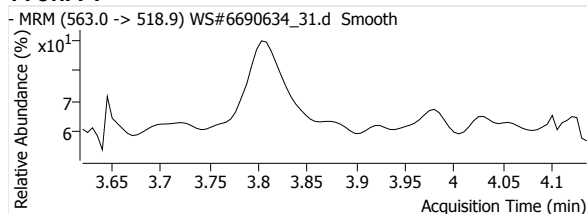
PFNA 1



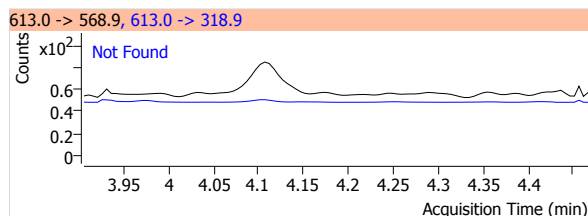
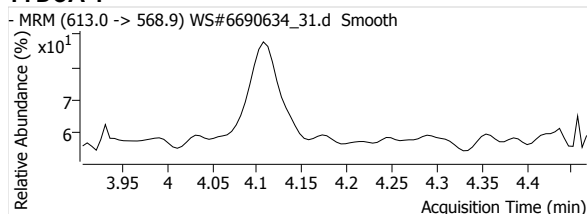
PFDA 1



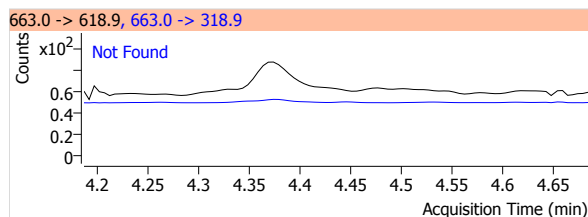
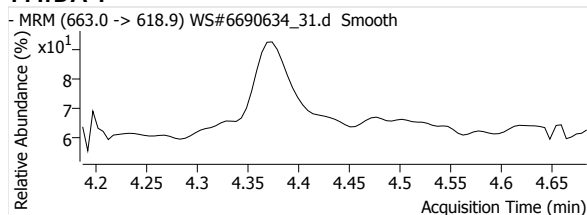
PFUnA 1



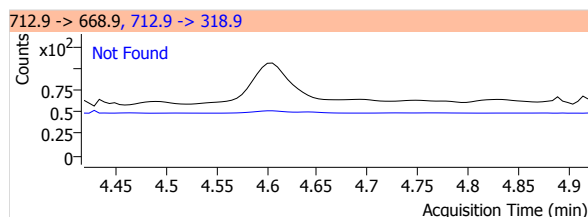
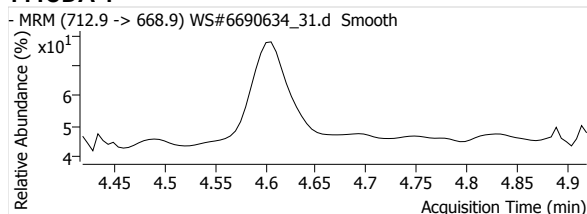
PFDoA 1



PFTrDA 1

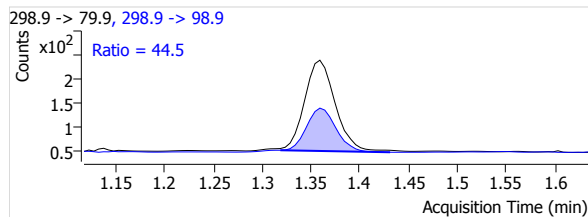
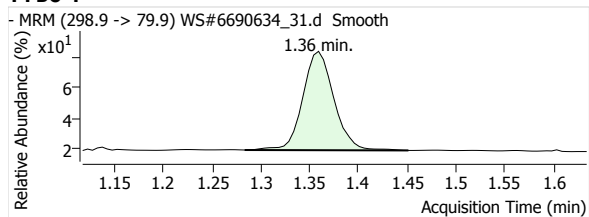


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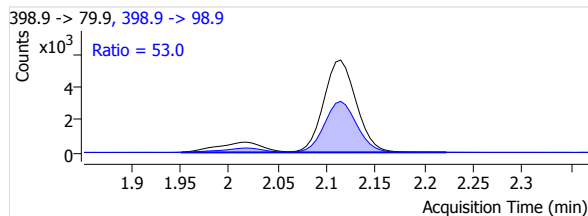
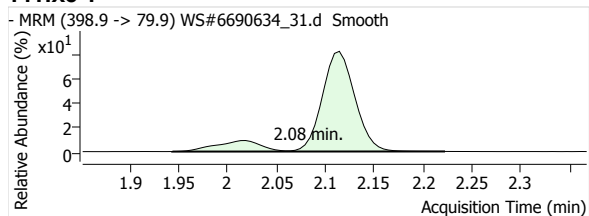


Quantitative Analysis Report

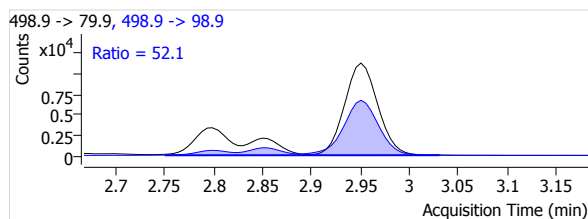
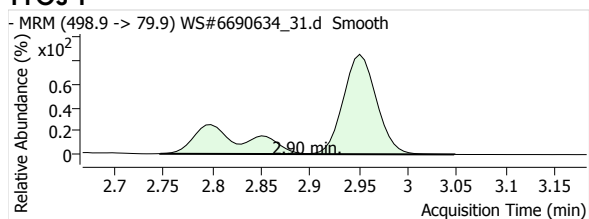
PFBS 1



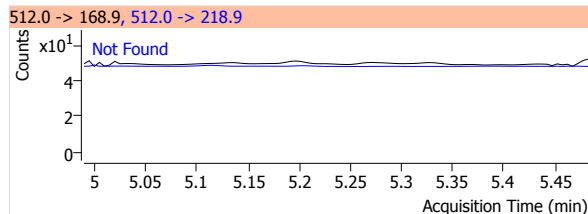
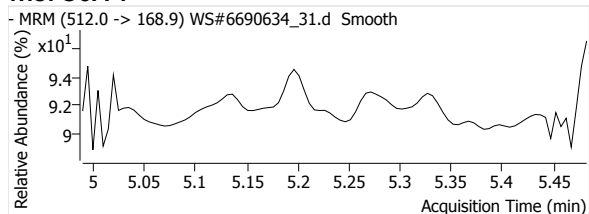
PFHxS 1



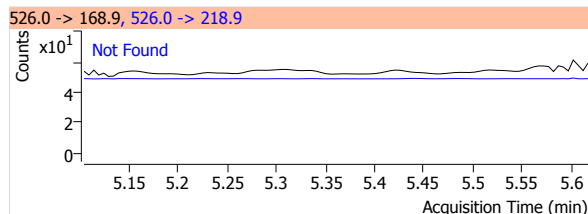
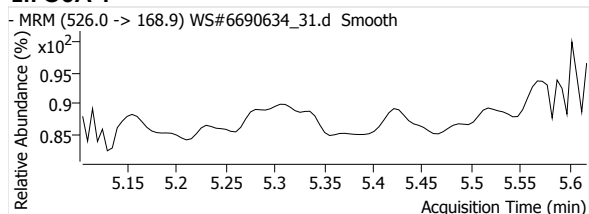
PFOS 1



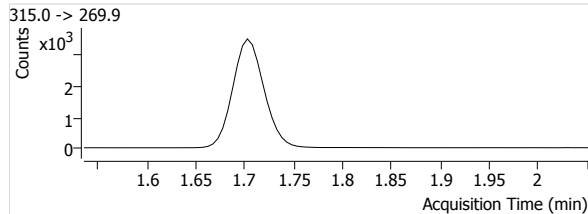
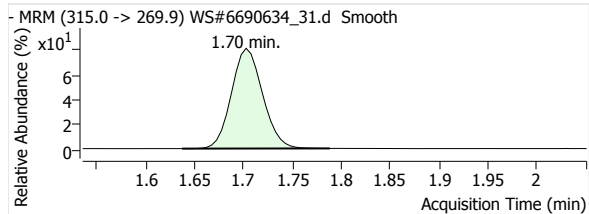
MeFOSA 1



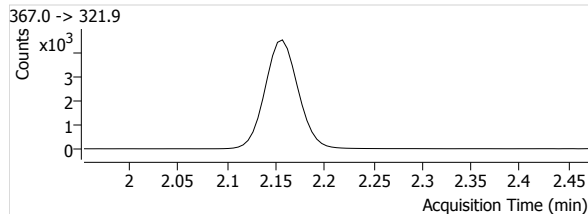
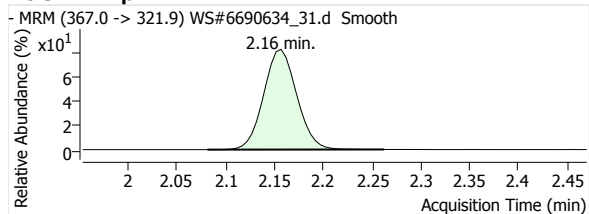
eFOSA 1



13C2-PFHxA

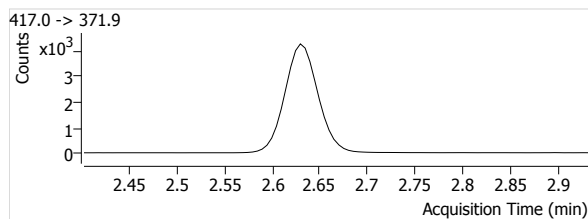
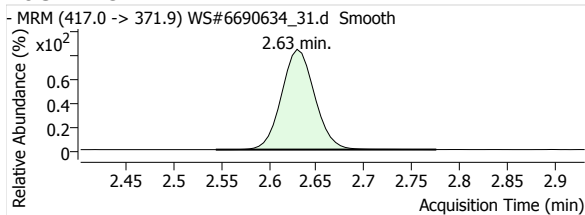


13C4-PFHpA

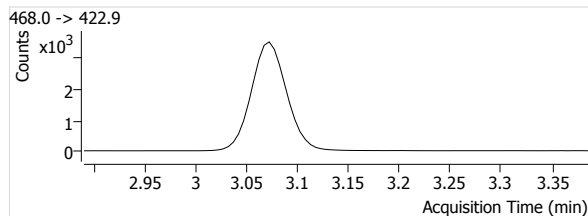
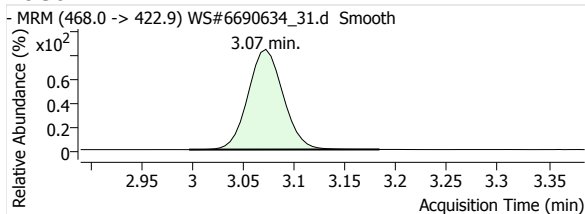


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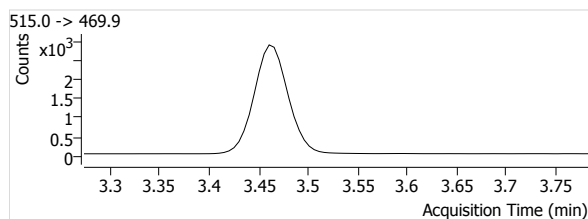
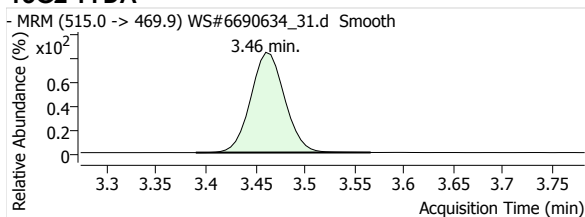
13C4-PFOA



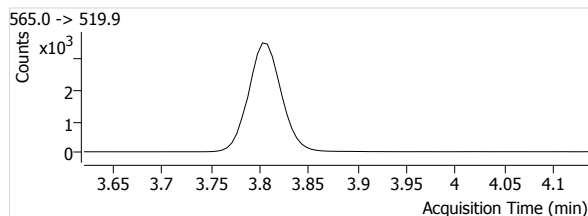
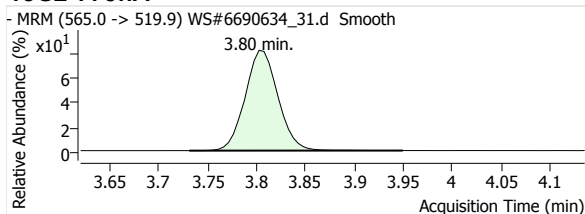
13C5-PFNA



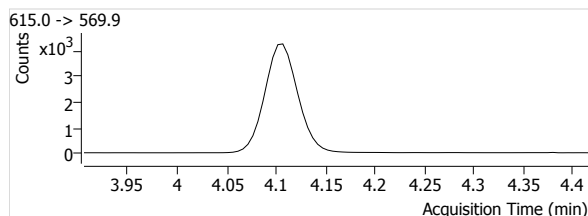
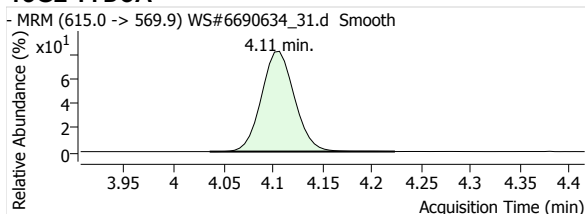
13C2-PFDA



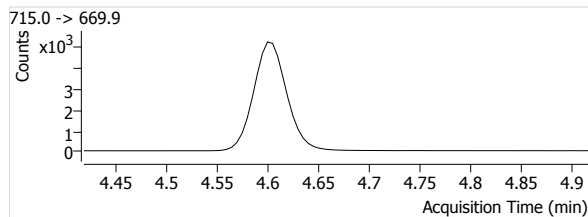
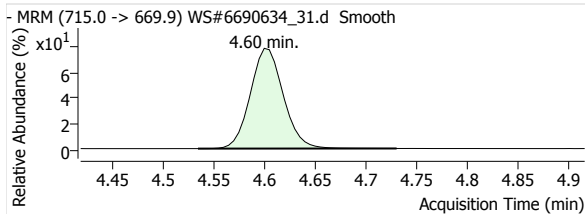
13C2-PFUnA



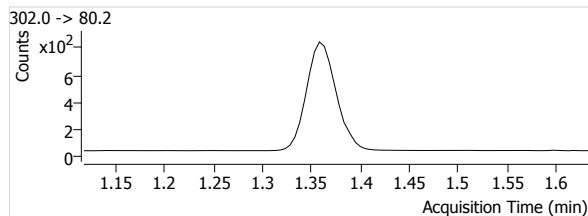
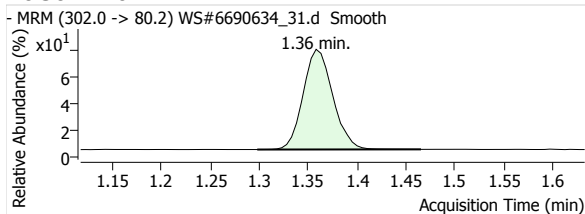
13C2-PFDoA



13C2-PFTeDA

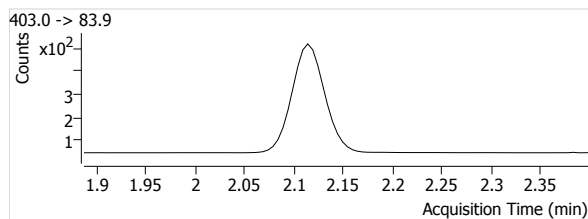
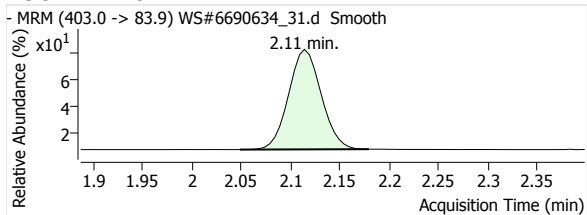


13C3-PFBS

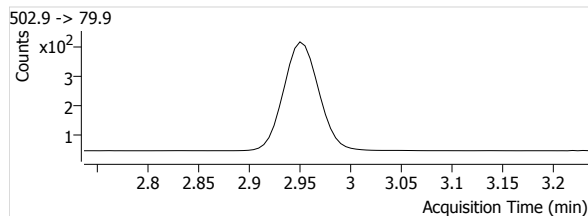
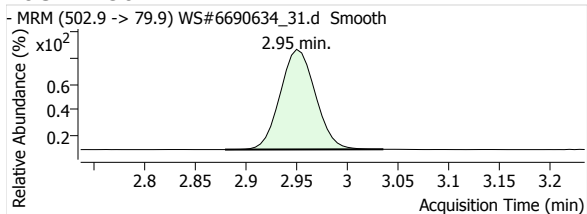


Quantitative Analysis Report

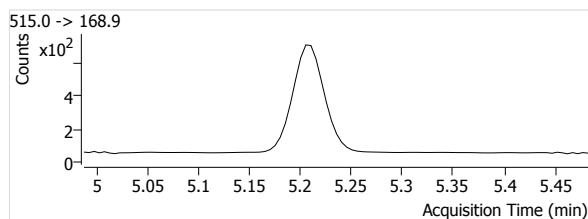
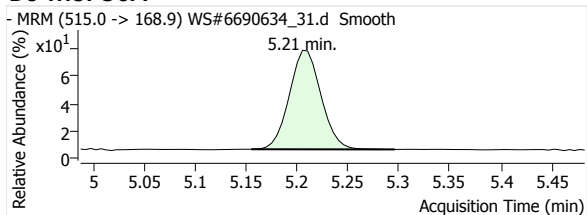
18O2-PFHxs



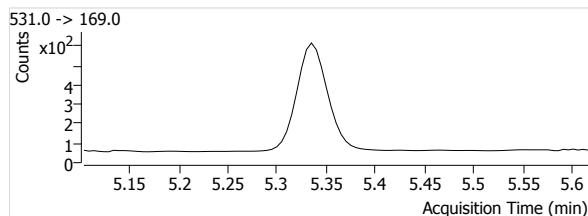
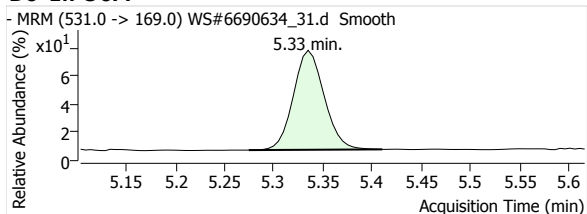
13C4-PFOS



D3-MeFOSA



D5-EtFOSA





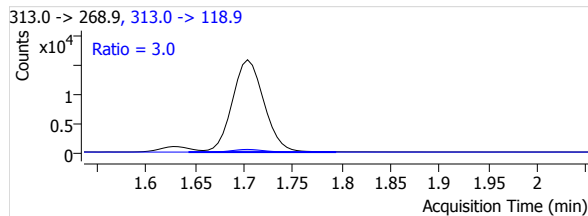
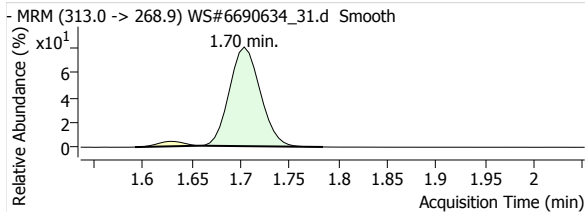
Quantitative Analysis Report

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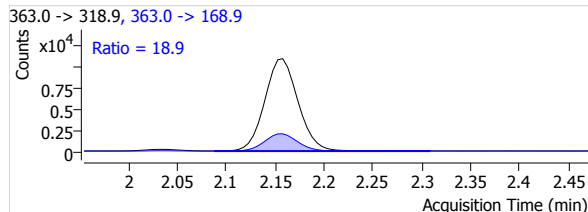
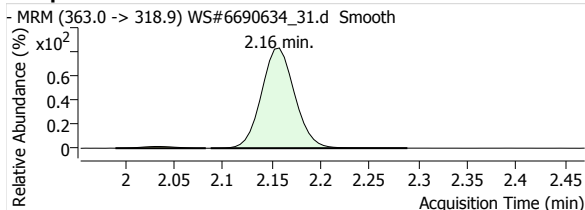
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Type	Sample	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-C6
Acq. Date-Time	2020/04/22 1:28:47 AM	Dil.	0.1
Comment	Reported for all except PFHxS & PFOS.		
User Defined	MI PFOA		

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	2.9984	--	34510	1.70	24111	4.4719	1029	1.70	7817	3.0
PFHpA 1	µg/L	--	1.7729	--	25945	2.16	18218	2.4745	4891	2.16	49964	18.9
PFOA 1	µg/L	--	1.9199	--	27547	2.63	222617	2.6938	6800	2.63	227721	24.7
PFNA 1	µg/L	--	0.1215	--	1763	3.07	675	0.2133	358	3.07	1744	20.3
PFDA 1	µg/L	--	0.0000	--	316	3.46	172	0.0460	50	3.47	504	15.8
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.1673	--	418	1.36	4369	0.2491	186	1.36	657	44.5
PFHxS 1	µg/L	--	9.6333	--	14969	2.08	381635	13.9112	7928	2.09	32167	53.0
PFOS 1	µg/L	--	34.2143	--	38741	2.90	16769	43.7260	20187	2.89	42574	52.1
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	109.8662	--	7717	1.70	842	--	--	--	--	--
13C4-PFHpA	µg/L	--	108.4842	--	10485	2.16	1499	--	--	--	--	--
13C4-PFOA	µg/L	--	106.1339	--	10226	2.63	1135	--	--	--	--	--
13C5-PFNA	µg/L	--	109.2940	--	8267	3.07	1465	--	--	--	--	--
13C2-PFDA	µg/L	--	105.0329	--	6866	3.46	1175	--	--	--	--	--
13C2-PFUnA	µg/L	--	105.0251	--	8172	3.80	1920	--	--	--	--	--
13C2-PFDoA	µg/L	--	97.3010	--	9842	4.11	572	--	--	--	--	--
13C2-PFTeDA	µg/L	--	94.6651	--	11871	4.60	1595	--	--	--	--	--
13C3-PFBS	µg/L	--	108.7492	--	1678	1.36	266	--	--	--	--	--
18O2-PFHxS	µg/L	--	105.9055	--	1076	2.11	358	--	--	--	--	--
13C4-PFOS	µg/L	--	92.0042	--	886	2.95	460	--	--	--	--	--
D3-MeFOSA	µg/L	--	56.8079	--	1381	5.21	58	--	--	--	--	--
D5-EtFOSA	µg/L	--	58.5284	--	1225	5.33	71	--	--	--	--	--

PFHxA 1

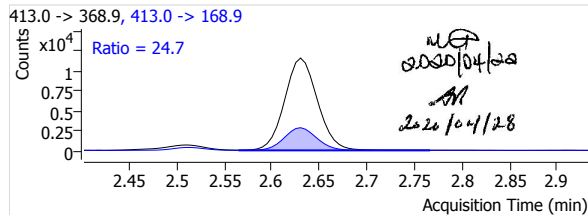
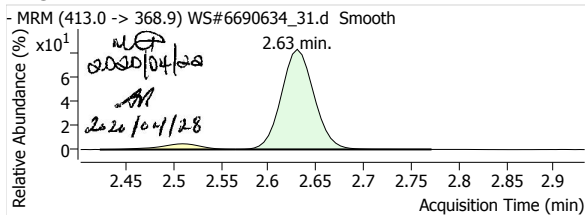


PFHpA 1

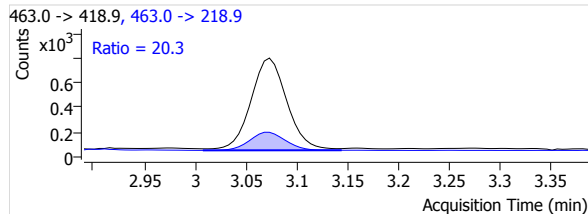
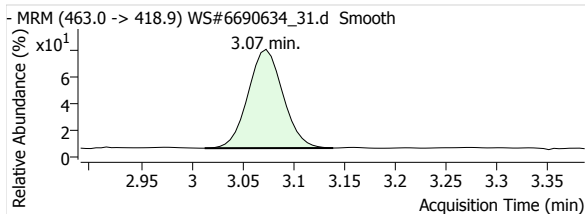


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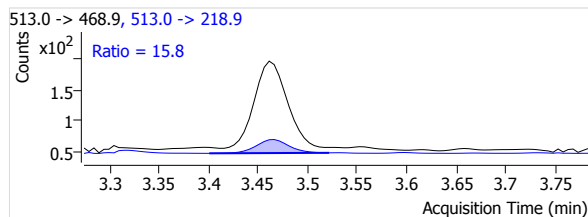
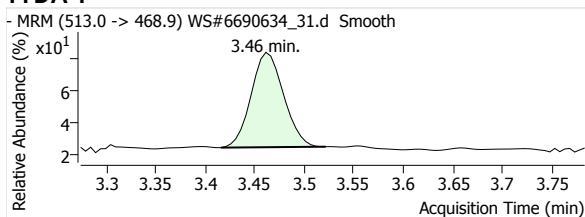
PFOA 1



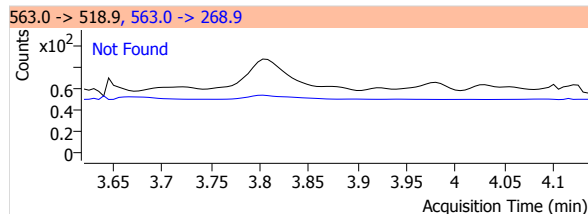
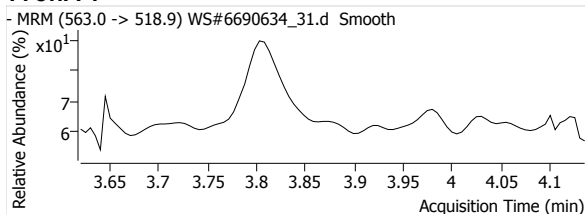
PFNA 1



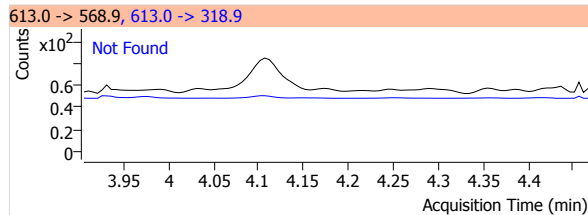
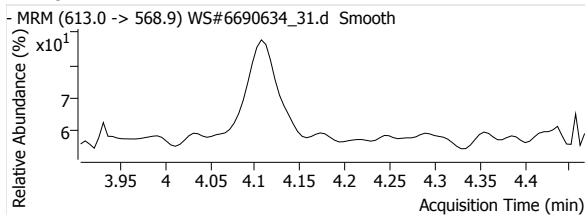
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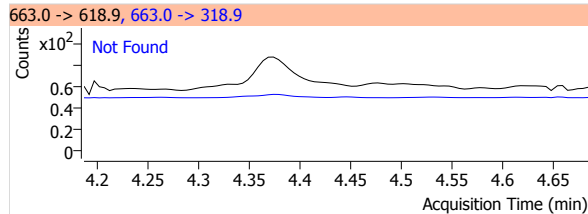
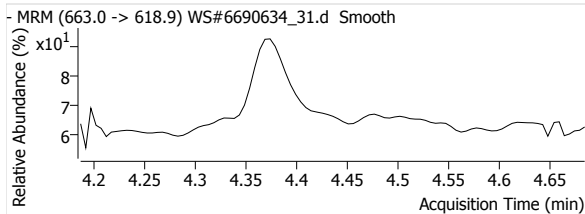
PFUnA 1



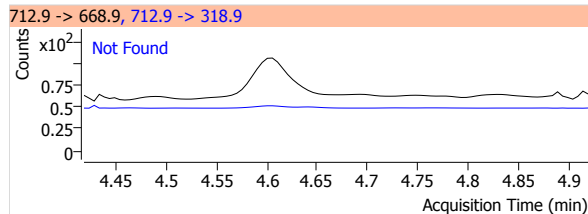
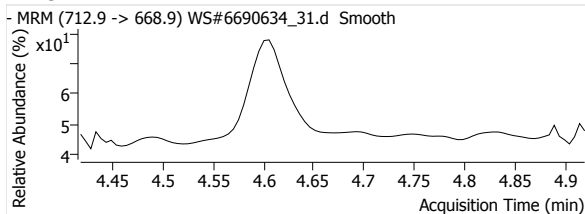
PFDoA 1



PFTrDA 1

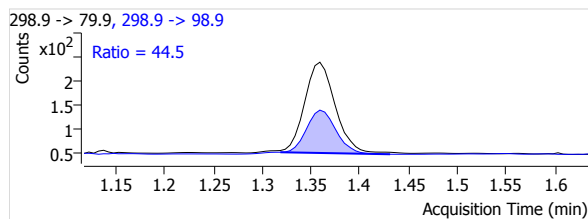
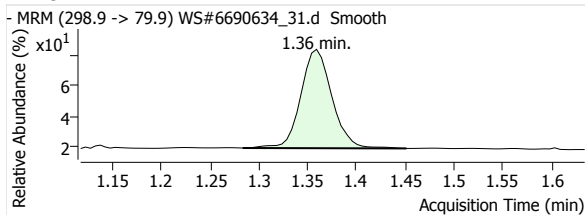


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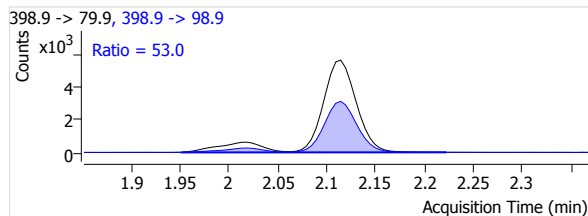
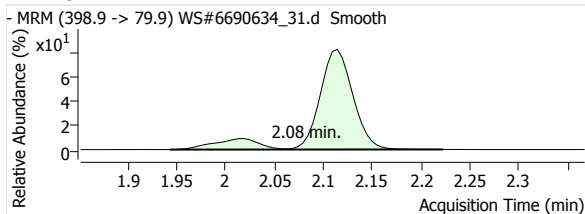


Quantitative Analysis Report

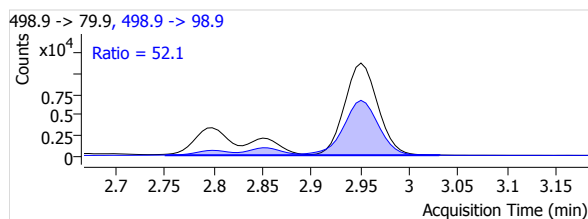
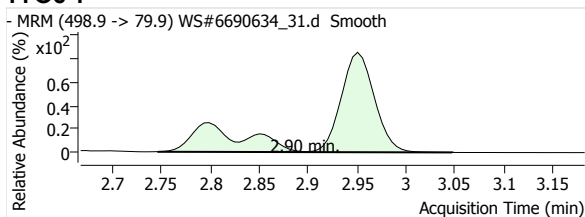
PFBS 1



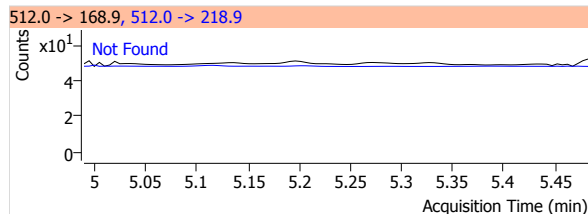
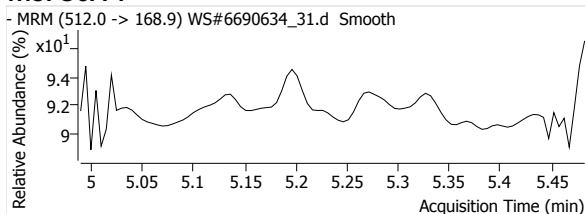
PFHxS 1



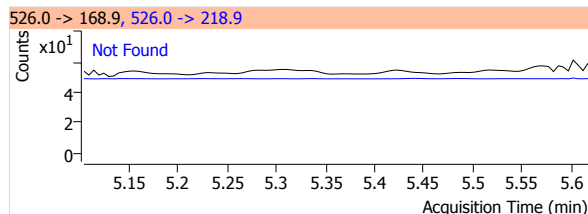
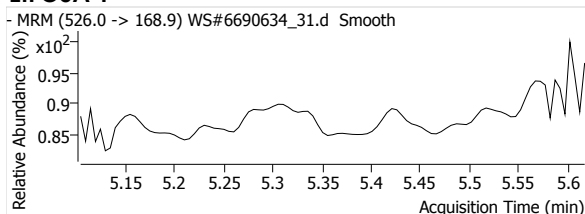
PFOS 1



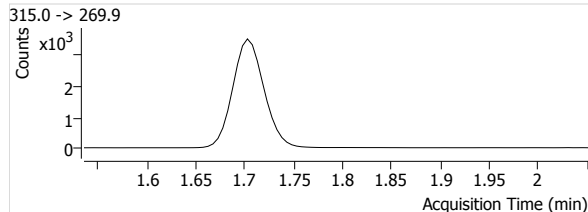
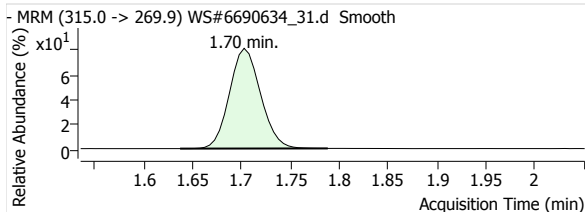
MeFOSA 1



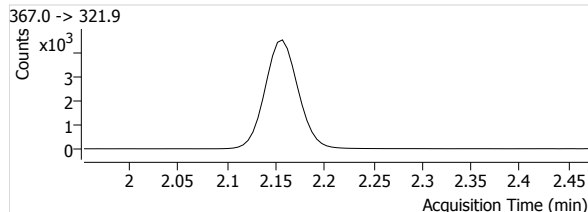
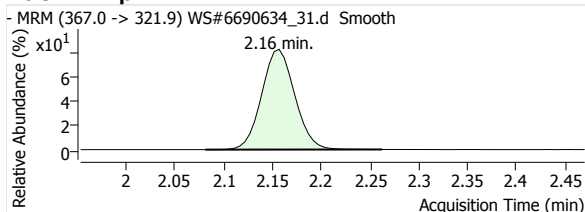
eFOSA 1



13C2-PFHxA

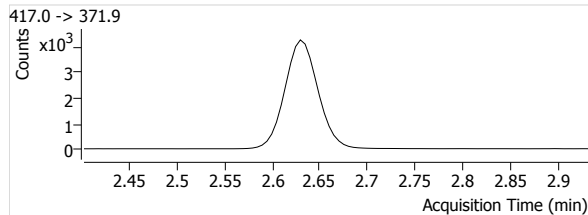
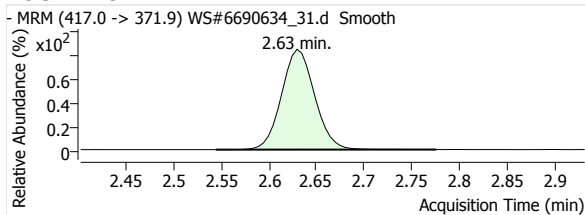


13C4-PFHpA

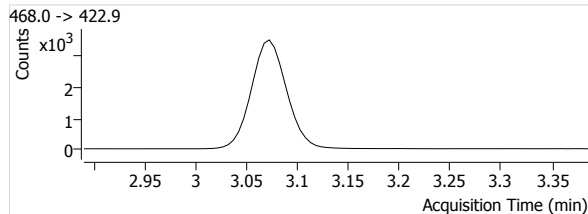
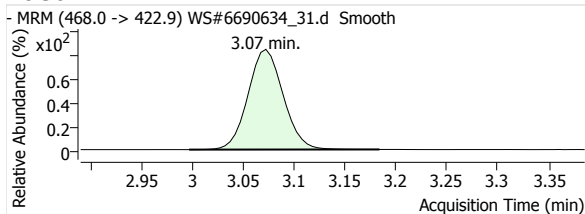


Quantitative Analysis Report

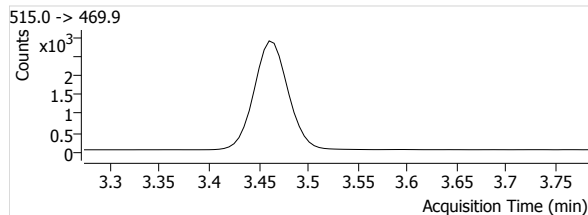
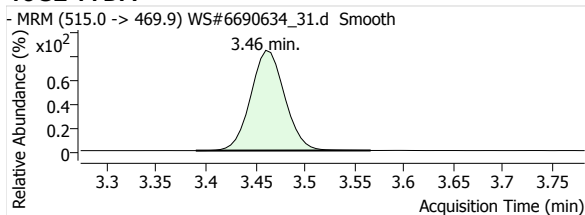
13C4-PFOA



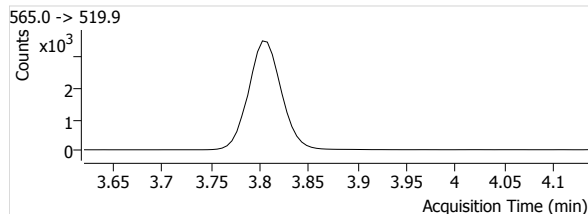
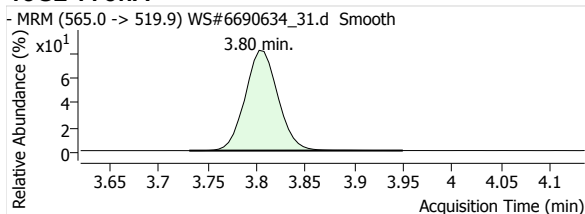
13C5-PFNA



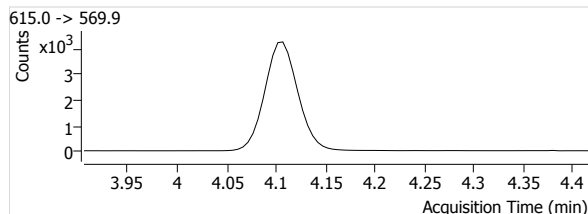
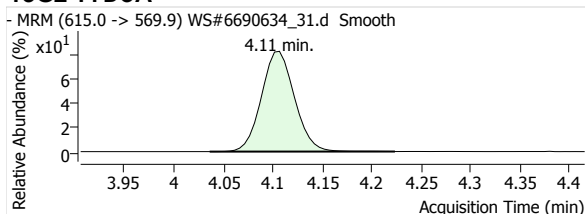
13C2-PFDA



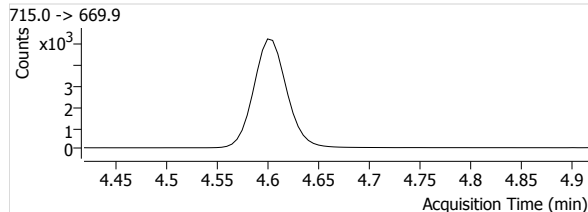
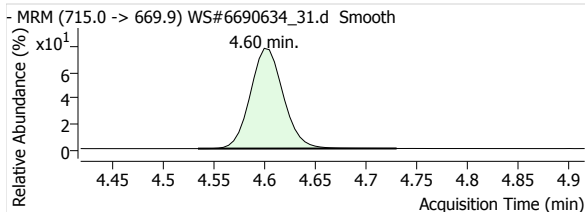
13C2-PFUnA



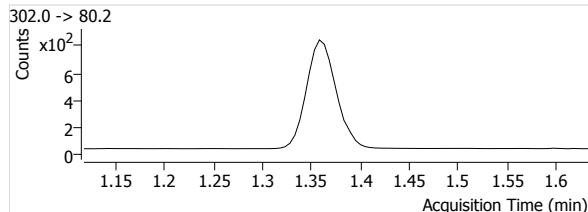
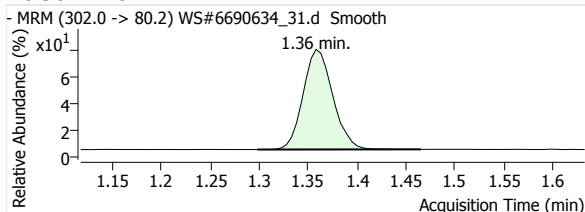
13C2-PFDoA



13C2-PFTeDA

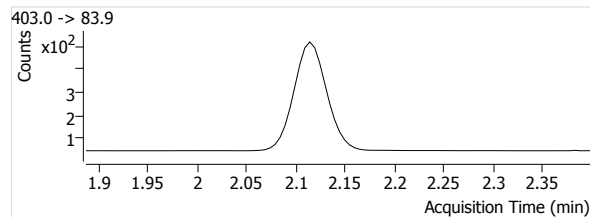
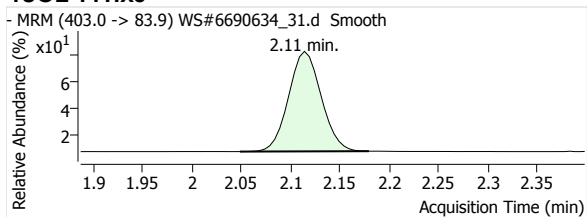


13C3-PFBS

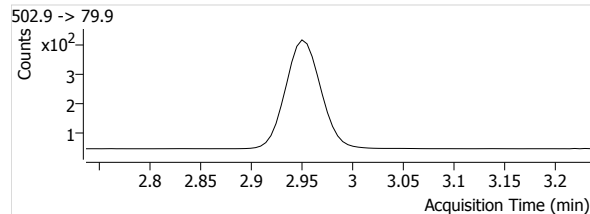
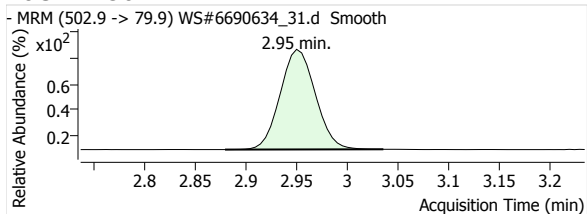


Quantitative Analysis Report

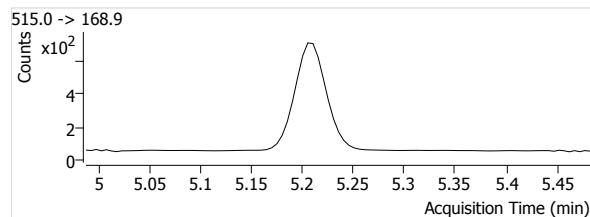
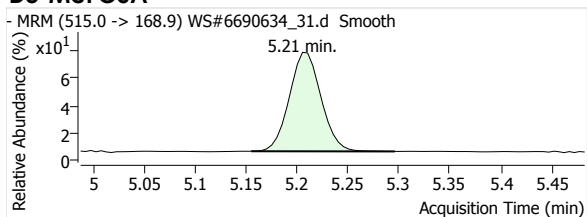
18O2-PFHxs



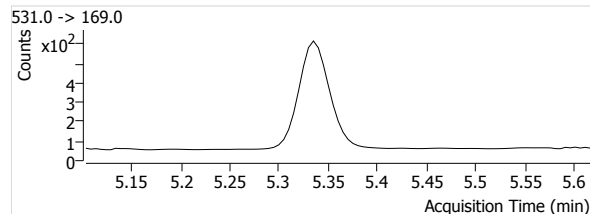
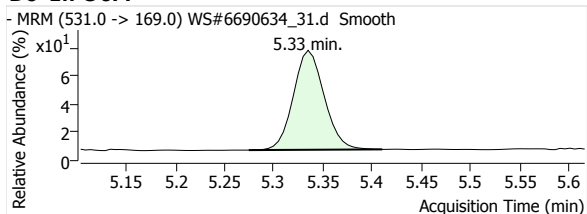
13C4-PFOS



D3-MeFOSA



D5-EtFOSA

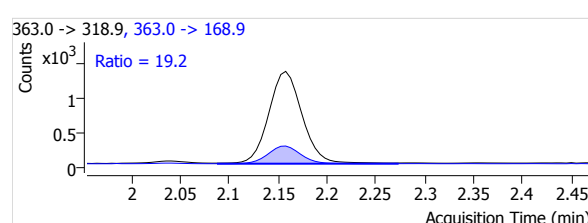
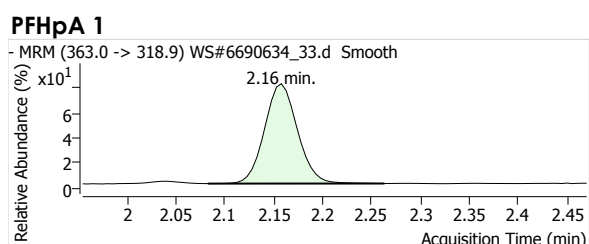
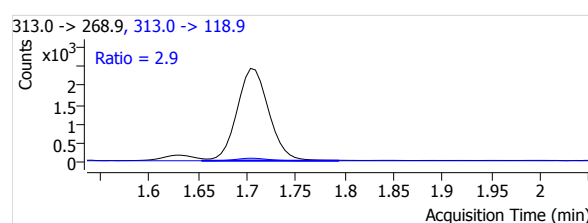
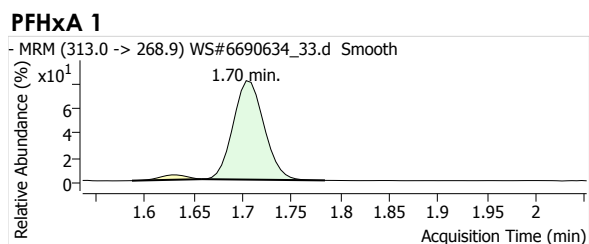


Quantitative Analysis Report

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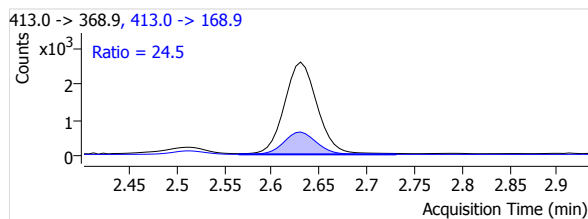
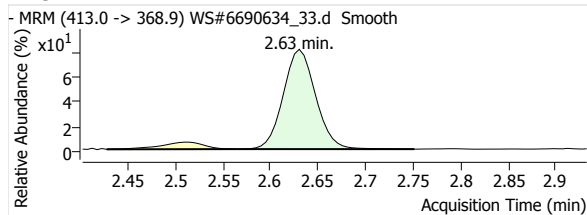
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Type	Sample	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-C7
Acq. Date-Time	2020/04/22 1:42:42 AM	Dil.	0.5
Comment	Reported for PFHxS & PFOS only.		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	1.6389	--	5188	1.70	10539	0.6419	149	1.70	3404	2.9
PFHpA 1	µg/L	--	0.7104	--	3078	2.16	7447	0.2805	590	2.16	7932	19.2
PFOA 1	µg/L	--	1.5441	--	6018	2.63	5633	0.5669	1476	2.63	14028	24.5
PFNA 1	µg/L	--	0.0000	--	219	3.07	340	0.0263	48	3.07	649	21.9
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.0000	--	59	1.36	657	0.0338	31	1.36	493	52.5
PFHxS 1	µg/L	--	2.9002	--	1225	2.08	119369	1.0876	663	2.09	4170	54.2
PFOS 1	µg/L	--	11.0115	--	3549	2.90	8003	3.5593	1976	2.89	5134	55.7
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	115.0626	--	8082	1.70	1174	--	--	--	--	--
13C4-PFHpA	µg/L	--	113.5541	--	10975	2.16	1663	--	--	--	--	--
13C4-PFOA	µg/L	--	110.1816	--	10616	2.63	3352	--	--	--	--	--
13C5-PFNA	µg/L	--	109.9286	--	8315	3.07	1241	--	--	--	--	--
13C2-PFDA	µg/L	--	105.2012	--	6877	3.46	1106	--	--	--	--	--
13C2-PFUnA	µg/L	--	103.5728	--	8059	3.80	897	--	--	--	--	--
13C2-PFDaA	µg/L	--	101.3841	--	10255	4.10	1286	--	--	--	--	--
13C2-PFTeDA	µg/L	--	99.4418	--	12470	4.60	2119	--	--	--	--	--
13C3-PFBS	µg/L	--	113.0914	--	1745	1.36	947	--	--	--	--	--
18O2-PFHxS	µg/L	--	110.8268	--	1126	2.11	280	--	--	--	--	--
13C4-PFOS	µg/L	--	103.5306	--	997	2.95	308	--	--	--	--	--
D3-MeFOSA	µg/L	--	43.4800	--	1057	5.21	72	--	--	--	--	--
D5-EtFOSA	µg/L	--	43.1438	--	903	5.33	45	--	--	--	--	--

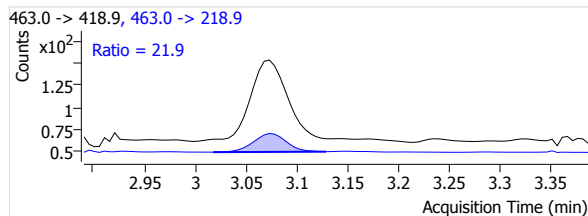
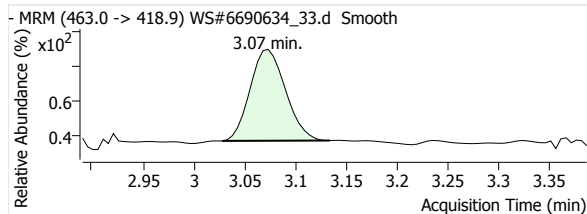


Quantitative Analysis Report

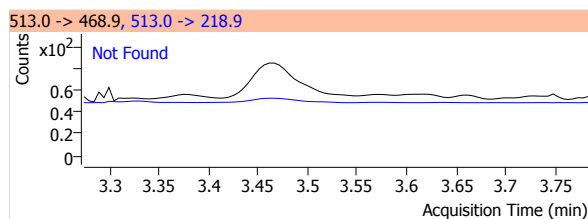
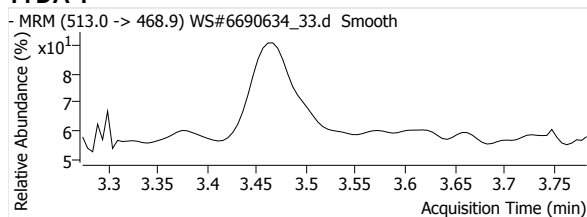
PFOA 1



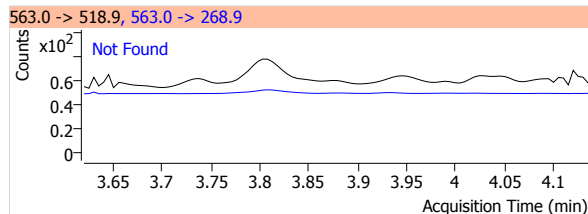
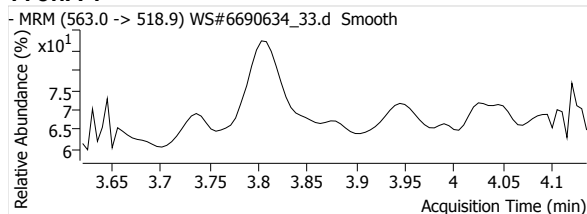
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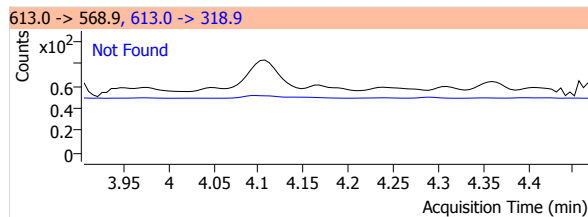
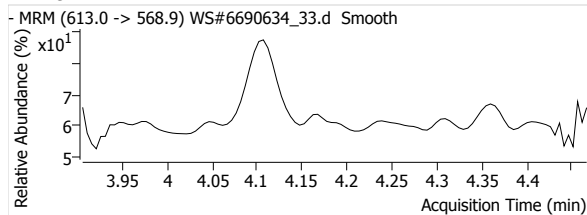
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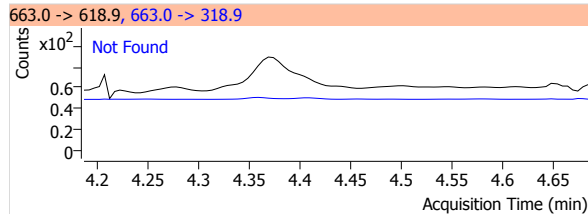
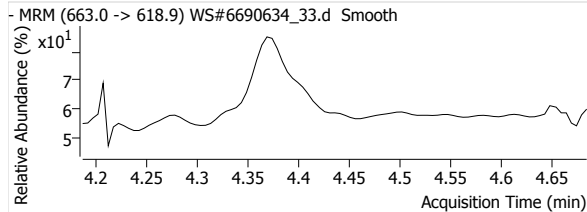
PFUnA 1



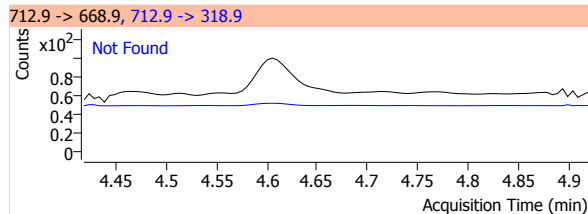
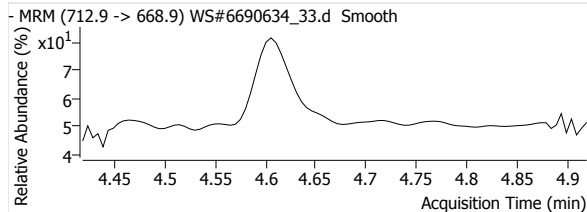
PFDoA 1



PFTrDA 1

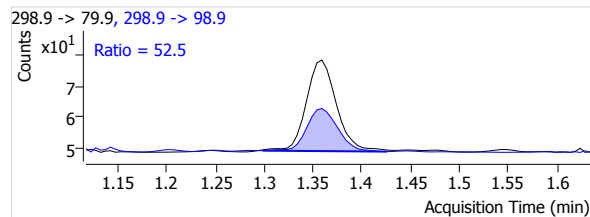
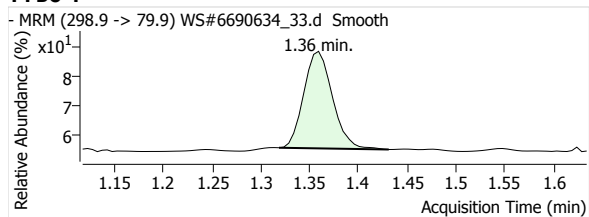


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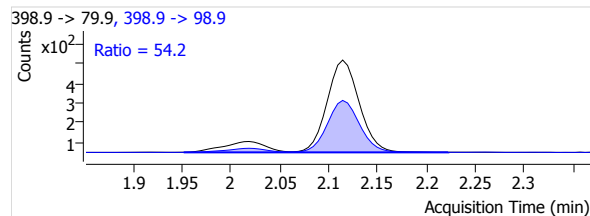
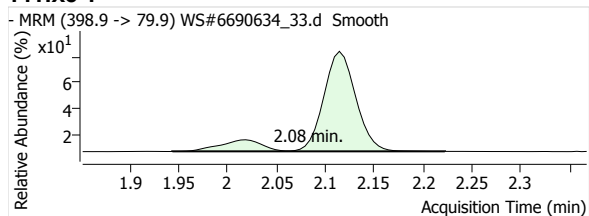


Quantitative Analysis Report

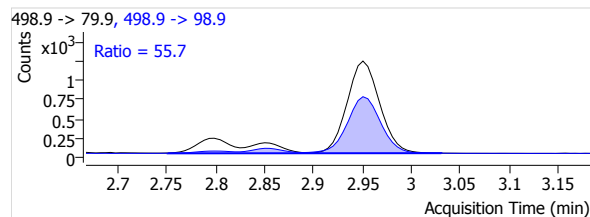
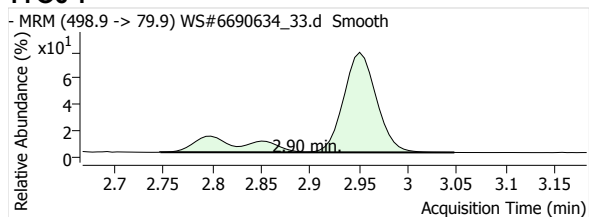
PFBS 1



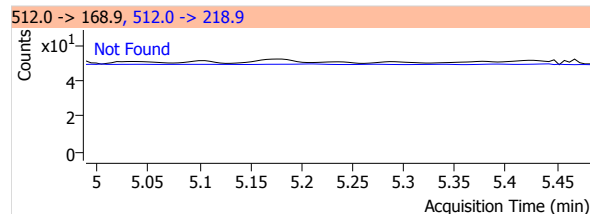
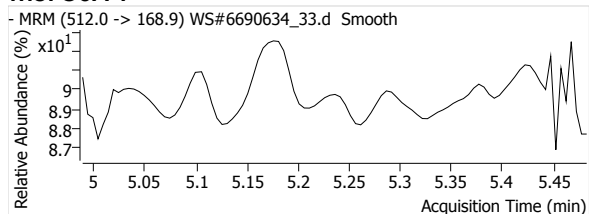
PFHxS 1



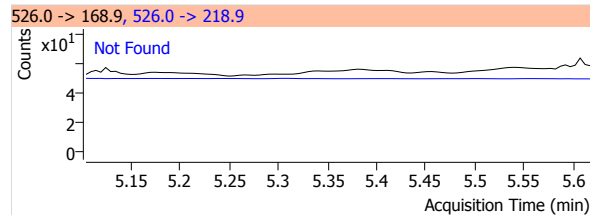
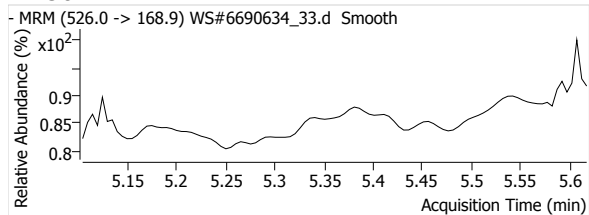
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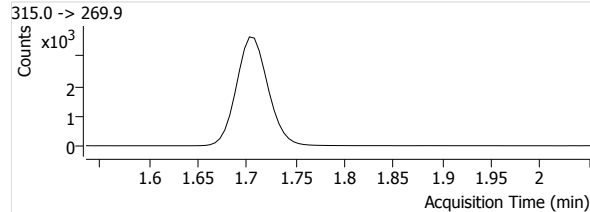
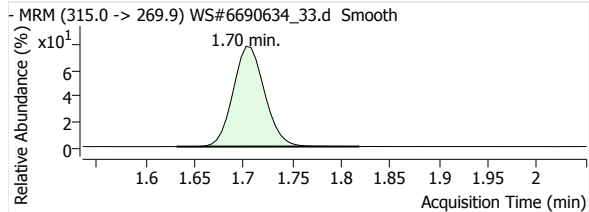
MeFOSA 1



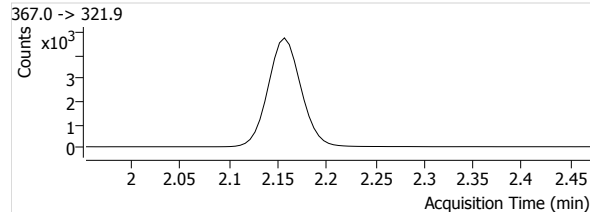
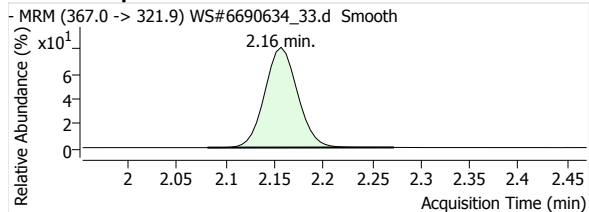
eFOSA 1



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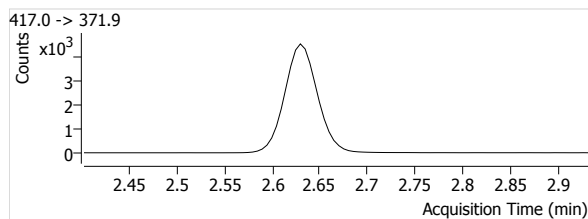
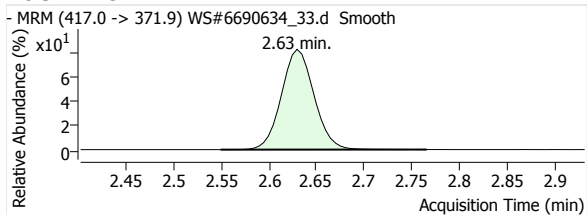


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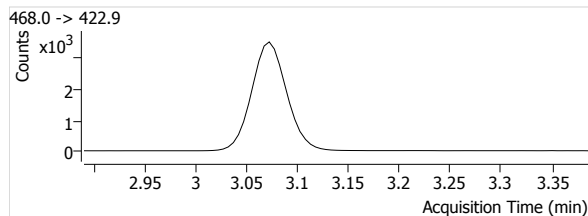
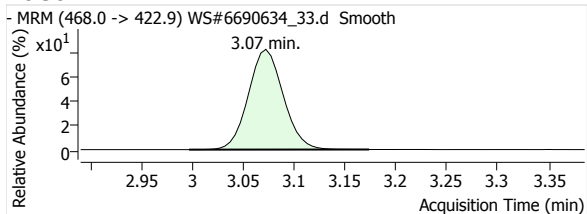


Quantitative Analysis Report

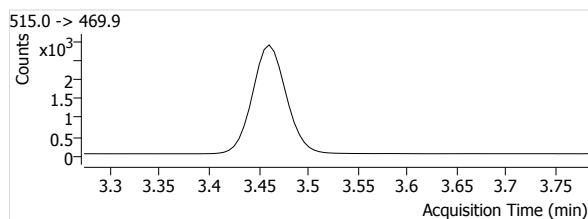
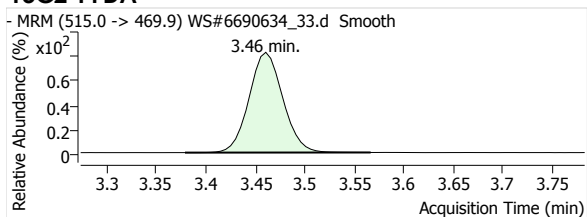
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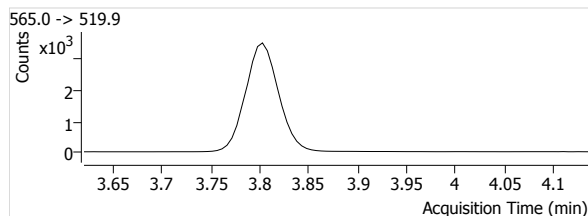
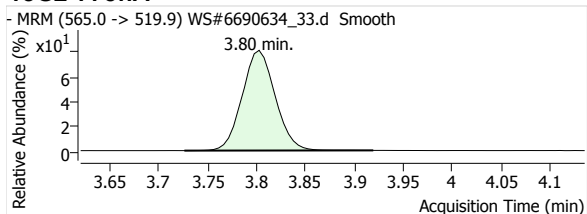
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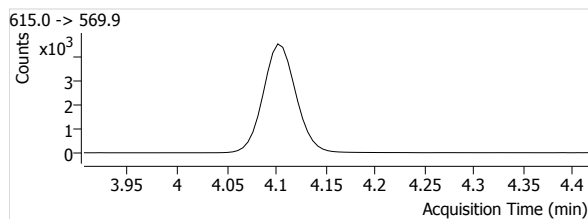
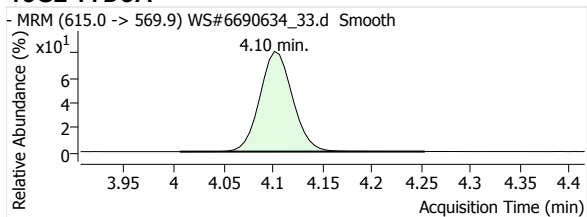
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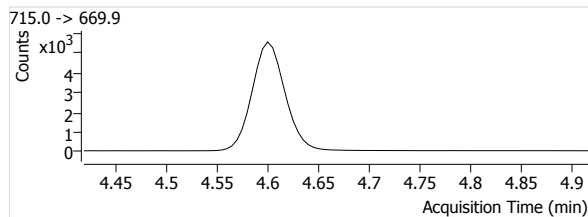
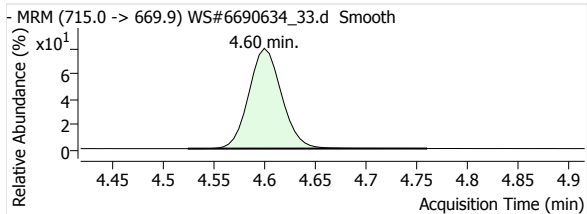
13C2-PFUnA



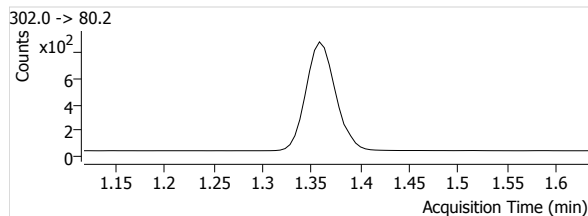
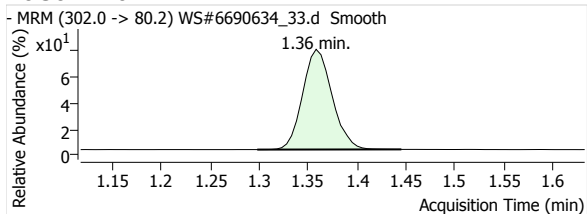
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13C2-PFTeDA

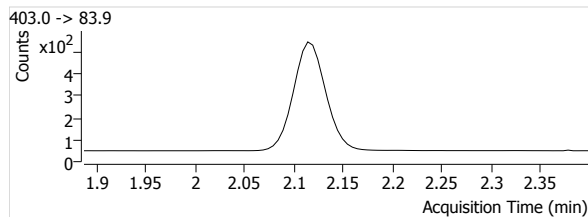
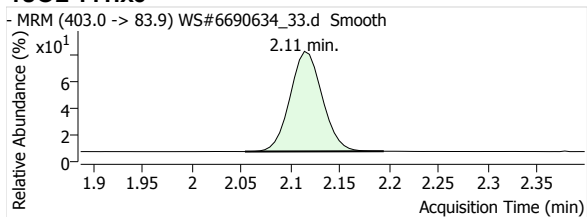


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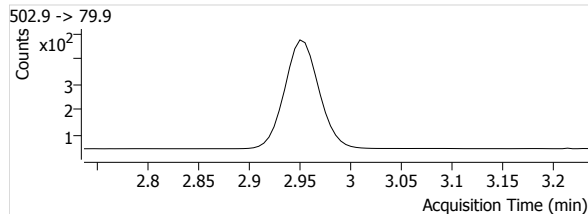
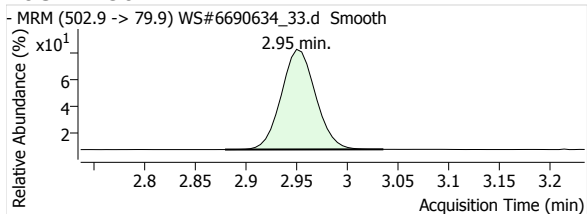


Quantitative Analysis Report

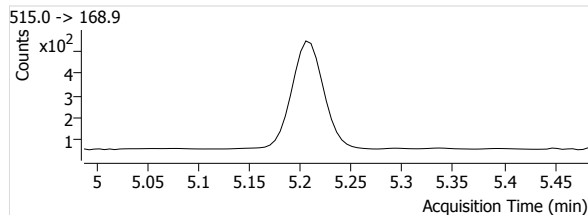
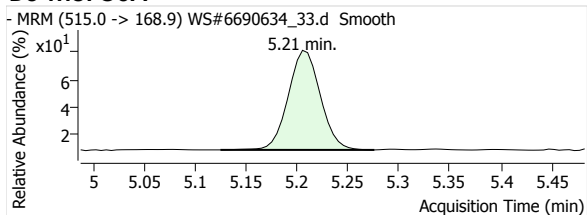
18O2-PFHxs



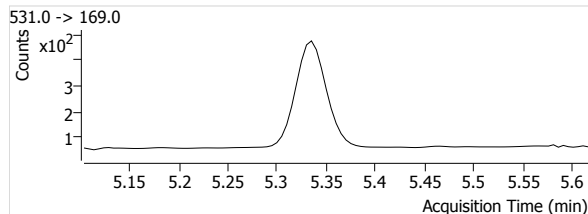
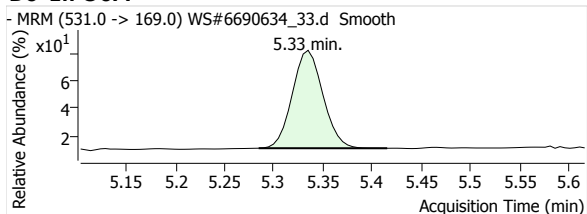
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



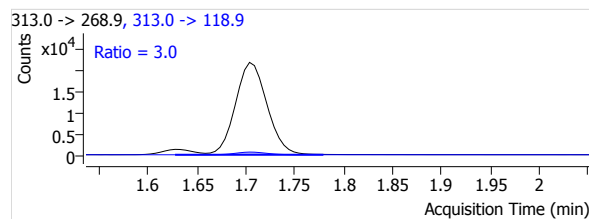
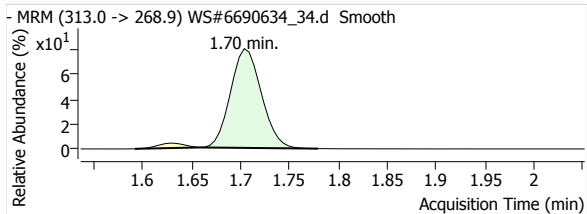
Quantitative Analysis Report

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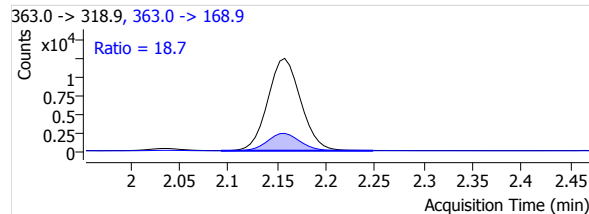
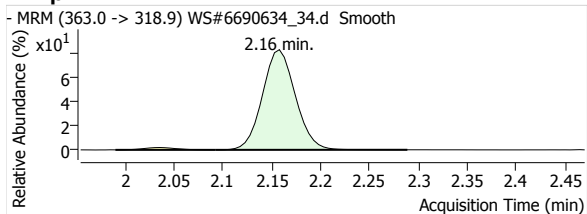
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Acq. Date-Time	2020/04/22 1:49:39 AM	Dil.	0.0
Comment	Reported for all except PFHxS & PFOS.		
User Defined	MI PFOA		

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	1.8472	--	47630	1.70	20102	6.8681	1415	1.70	4738	3.0
PFHpA 1	µg/L	--	0.8691	--	28973	2.16	43580	3.0243	5423	2.16	10204	18.7
PFOA 1	µg/L	--	1.9855	--	62529	2.63	23771	6.9147	16389	2.63	45722	26.2
PFNA 1	µg/L	--	0.0592	--	1836	3.07	1504	0.2505	417	3.07	5282	22.7
PFDA 1	µg/L	--	0.0042	--	403	3.46	952	0.0685	63	3.46	209	15.6
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.1160	--	606	1.36	3152	0.4035	272	1.36	1741	44.9
PFHxS 1	µg/L	--	3.2292	--	11595	2.08	37289	11.6530	6104	2.09	22843	52.6
PFOS 1	µg/L	--	13.2143	--	33017	2.90	21500	42.2214	17949	2.89	21761	54.4
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	98.7329	--	6935	1.70	941	--	--	--	--	--
13C4-PFHpA	µg/L	--	99.1205	--	9580	2.16	1307	--	--	--	--	--
13C4-PFOA	µg/L	--	93.8557	--	9043	2.63	1912	--	--	--	--	--
13C5-PFNA	µg/L	--	96.8932	--	7329	3.07	1206	--	--	--	--	--
13C2-PFDA	µg/L	--	89.9495	--	5880	3.46	1113	--	--	--	--	--
13C2-PFUnA	µg/L	--	87.3538	--	6797	3.80	829	--	--	--	--	--
13C2-PFDoA	µg/L	--	83.5887	--	8455	4.11	897	--	--	--	--	--
13C2-PFTeDA	µg/L	--	82.4242	--	10336	4.60	2765	--	--	--	--	--
13C3-PFBS	µg/L	--	97.3428	--	1502	1.36	199	--	--	--	--	--
18O2-PFHxS	µg/L	--	97.9331	--	995	2.11	576	--	--	--	--	--
13C4-PFOS	µg/L	--	81.2046	--	782	2.95	185	--	--	--	--	--
D3-MeFOSA	µg/L	--	49.0745	--	1193	5.21	72	--	--	--	--	--
D5-EtFOSA	µg/L	--	53.4639	--	1119	5.33	67	--	--	--	--	--

PFHxA 1

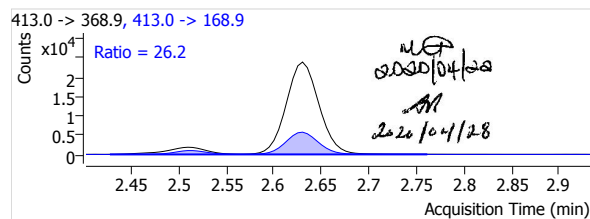
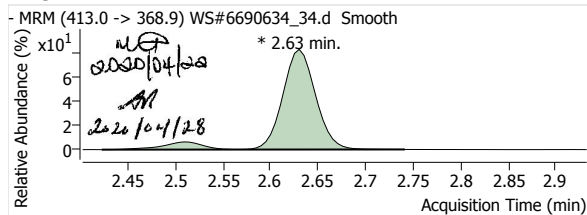


PFHpA 1

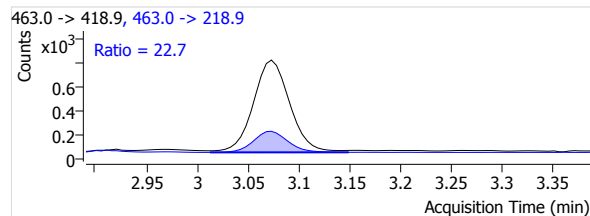
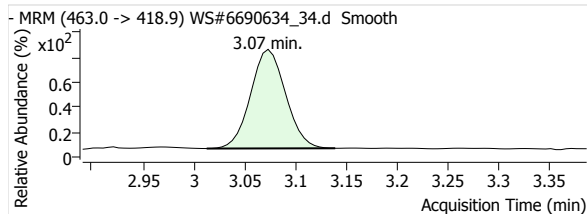


Quantitative Analysis Report

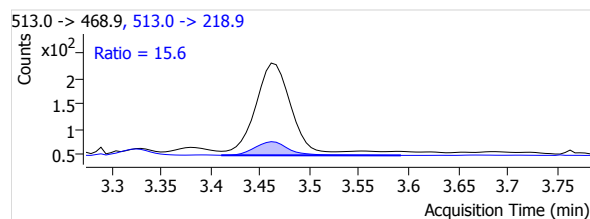
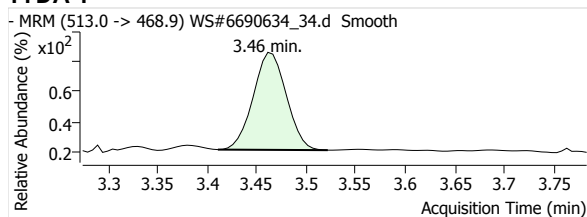
PFOA 1



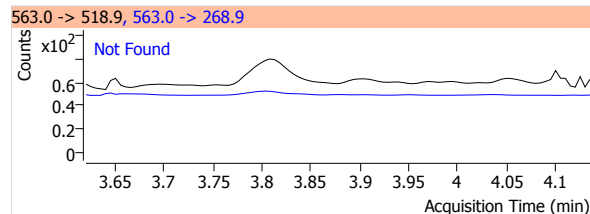
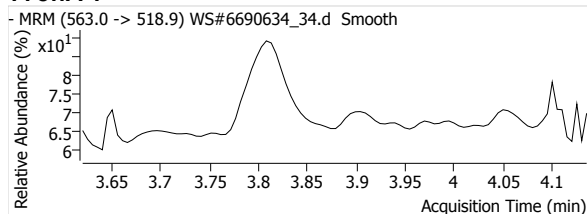
PFNA 1



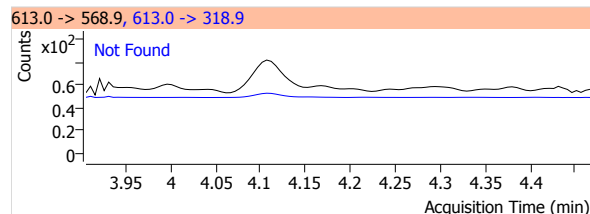
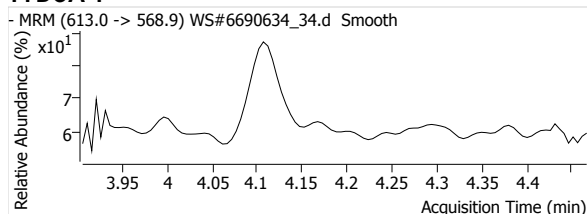
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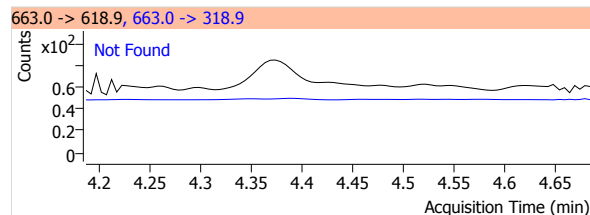
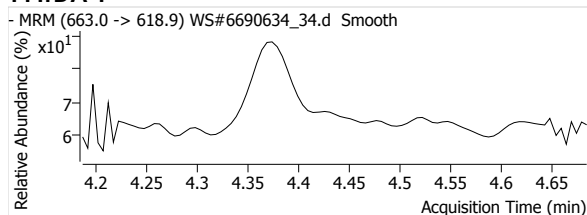
PFUnA 1



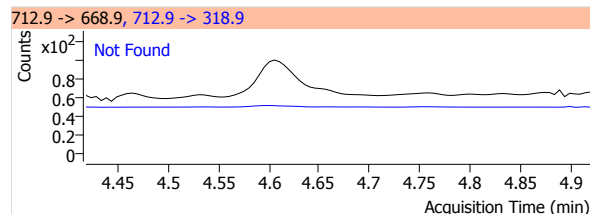
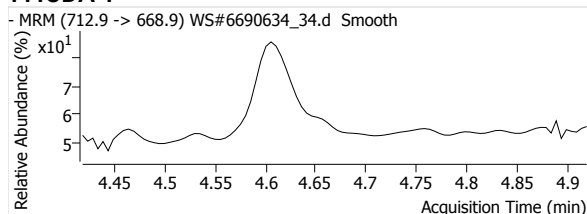
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PFTrDA 1

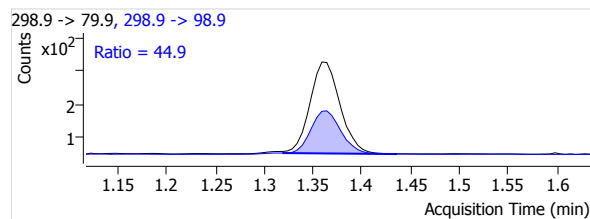
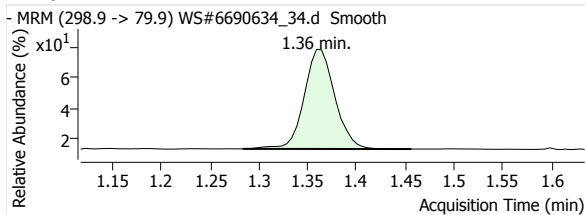


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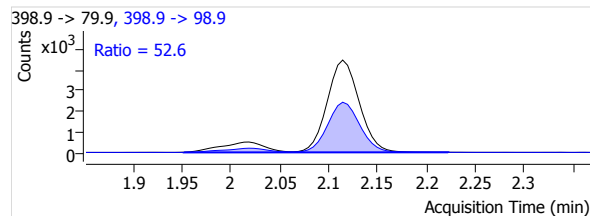
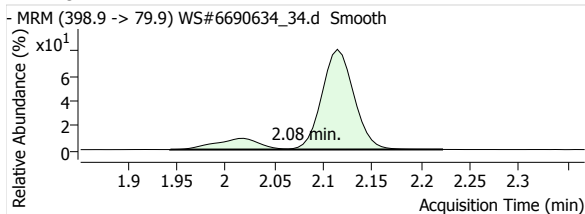


Quantitative Analysis Report

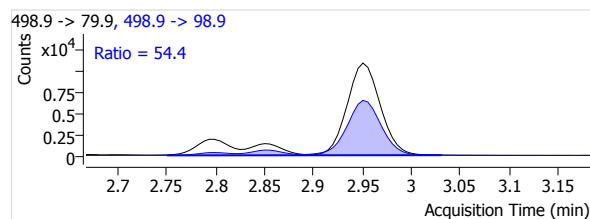
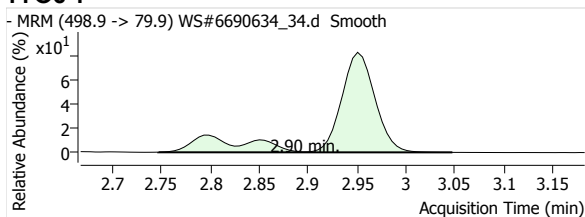
PFBS 1



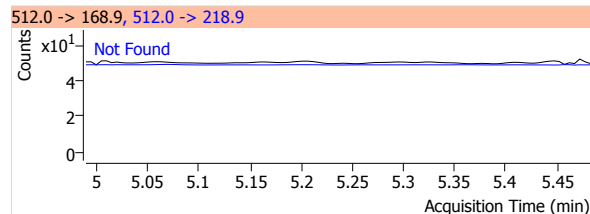
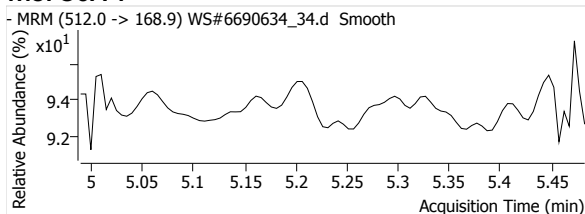
PFHxS 1



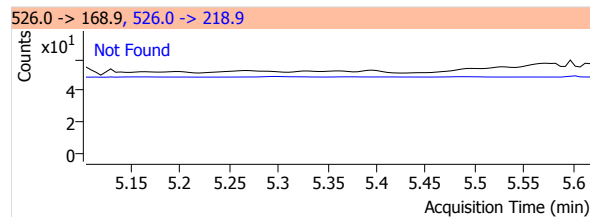
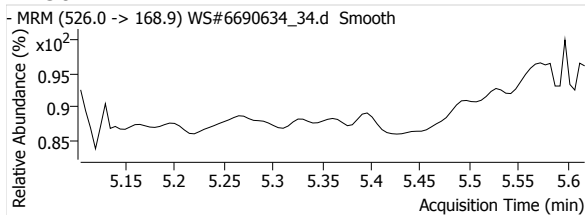
PFOS 1



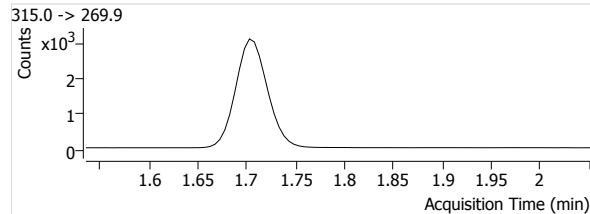
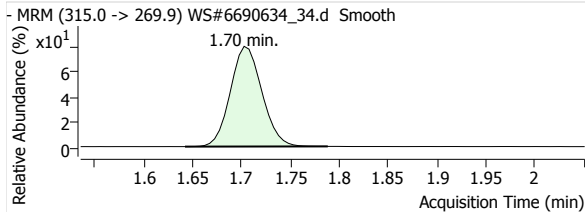
MeFOSA 1



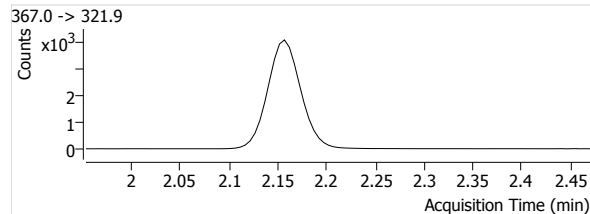
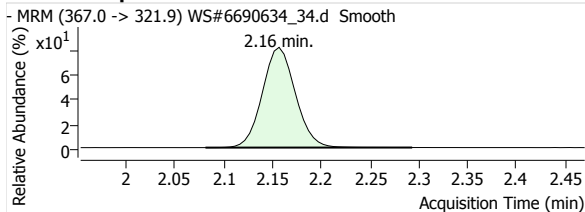
eFOSA 1



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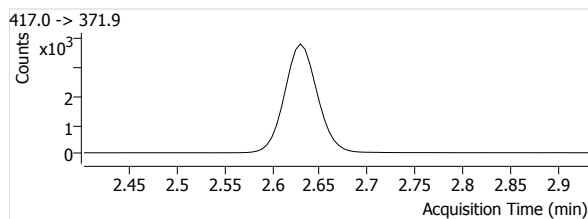
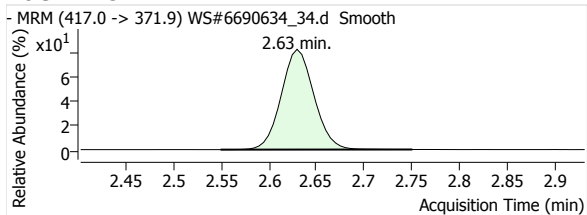


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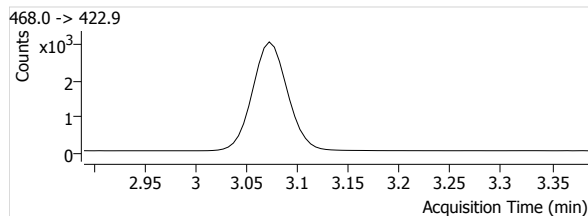
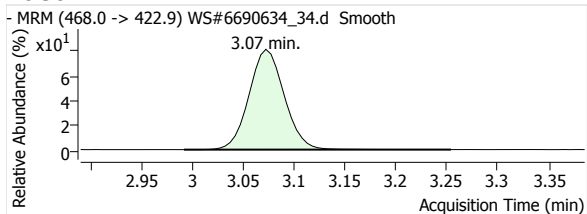


Quantitative Analysis Report

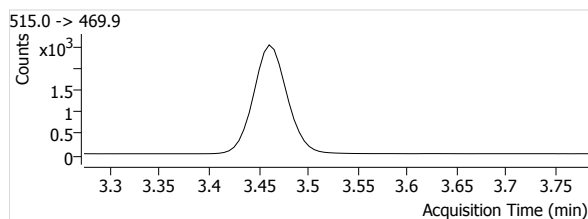
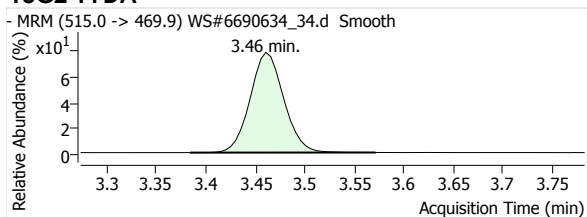
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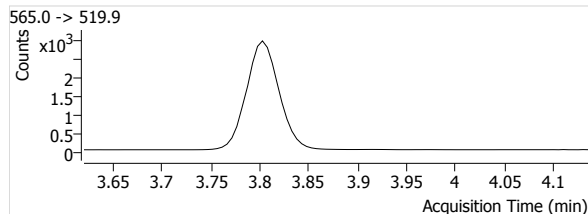
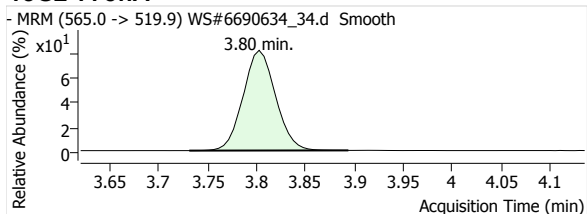
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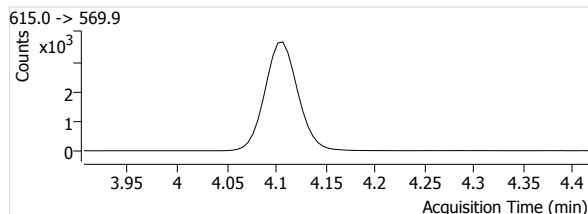
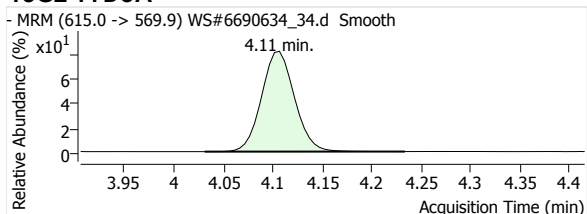
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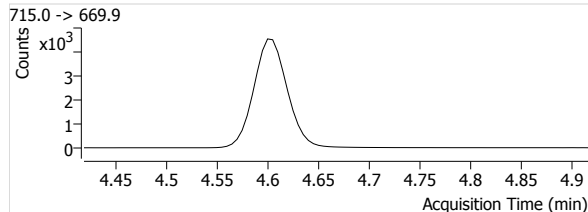
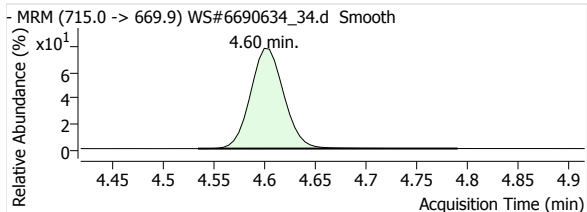
13C2-PFUnA



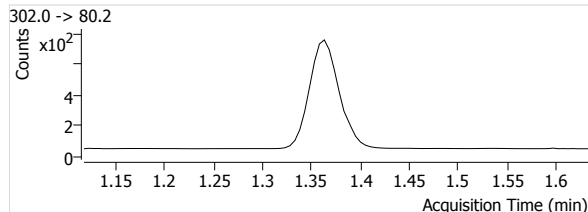
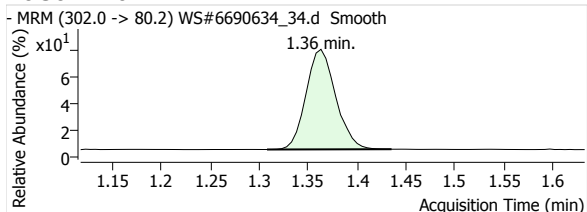
13C2-PFDoA



13C2-PFTeDA

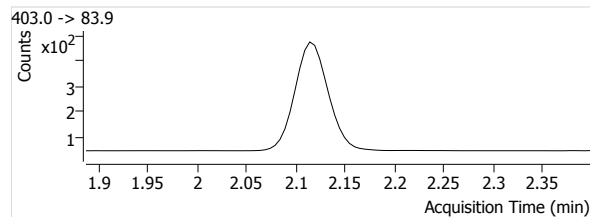
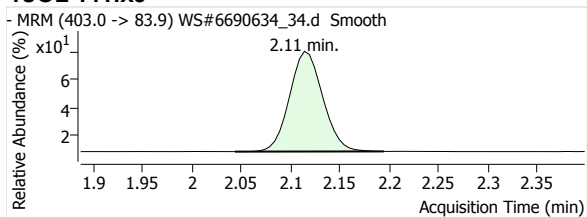


13C3-PFBS

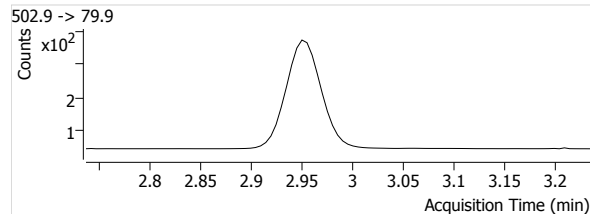
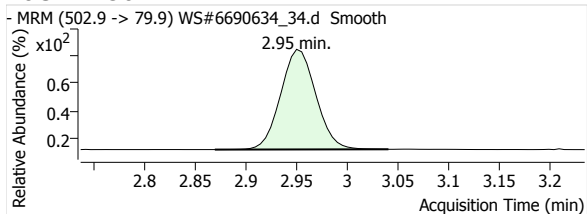


Quantitative Analysis Report

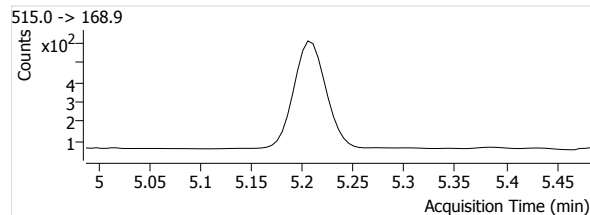
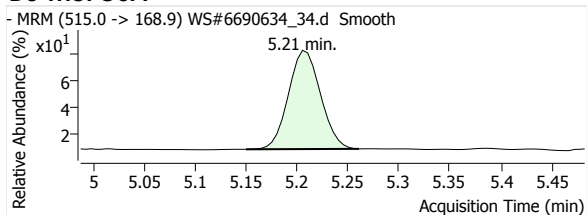
18O2-PFHxS



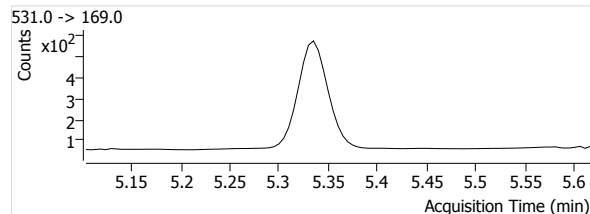
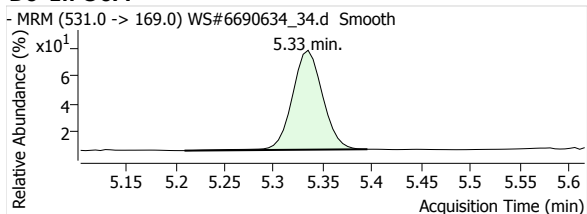
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



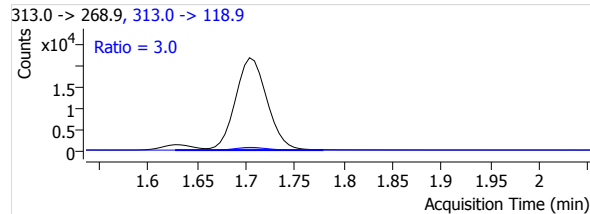
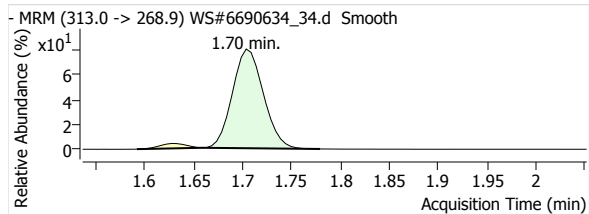
Quantitative Analysis Report

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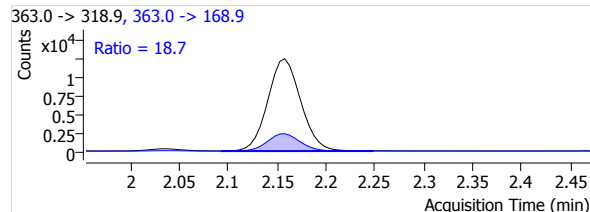
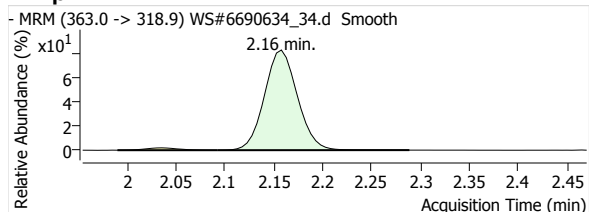
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Type	Sample	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-C8
Acq. Date-Time	2020/04/22 1:49:39 AM	Dil.	0.0
Comment	Reported for all except PFHxS & PFOS.		
User Defined	MI PFOA		

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	1.8472	--	47630	1.70	20102	6.8681	1415	1.70	4738	3.0
PFHpA 1	µg/L	--	0.8691	--	28973	2.16	43580	3.0243	5423	2.16	10204	18.7
PFOA 1	µg/L	--	1.8050	--	56871	2.63	23764	6.2890	13775	2.63	45636	24.2
PFNA 1	µg/L	--	0.0592	--	1836	3.07	1504	0.2505	417	3.07	5282	22.7
PFDA 1	µg/L	--	0.0042	--	403	3.46	952	0.0685	63	3.46	209	15.6
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.1160	--	606	1.36	3152	0.4035	272	1.36	1741	44.9
PFHxS 1	µg/L	--	3.2260	--	11595	2.08	37289	11.6530	6104	2.09	22843	52.6
PFOS 1	µg/L	--	13.2143	--	33017	2.90	21500	42.2214	17949	2.89	21761	54.4
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	98.7329	--	6935	1.70	941	--	--	--	--	--
13C4-PFHpA	µg/L	--	99.1205	--	9580	2.16	1307	--	--	--	--	--
13C4-PFOA	µg/L	--	93.8557	--	9043	2.63	1912	--	--	--	--	--
13C5-PFNA	µg/L	--	96.8932	--	7329	3.07	1206	--	--	--	--	--
13C2-PFDA	µg/L	--	89.9495	--	5880	3.46	1113	--	--	--	--	--
13C2-PFUnA	µg/L	--	87.3538	--	6797	3.80	829	--	--	--	--	--
13C2-PFDaA	µg/L	--	83.5887	--	8455	4.11	897	--	--	--	--	--
13C2-PFTeDA	µg/L	--	82.4242	--	10336	4.60	2765	--	--	--	--	--
13C3-PFBS	µg/L	--	97.3428	--	1502	1.36	199	--	--	--	--	--
18O2-PFHxS	µg/L	--	97.9331	--	995	2.11	576	--	--	--	--	--
13C4-PFOS	µg/L	--	81.2046	--	782	2.95	185	--	--	--	--	--
D3-MeFOSA	µg/L	--	49.0745	--	1193	5.21	72	--	--	--	--	--
D5-EtFOSA	µg/L	--	53.4639	--	1119	5.33	67	--	--	--	--	--

PFHxA 1

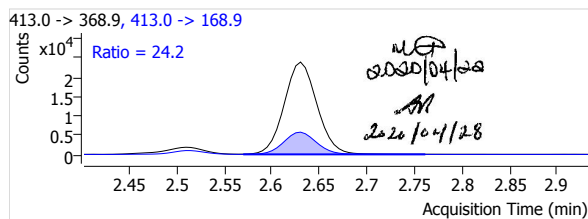
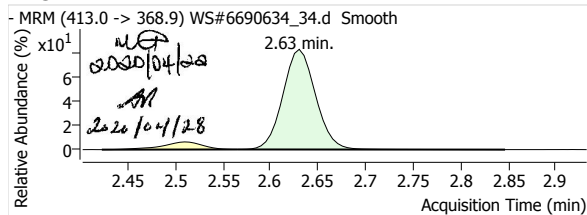


PFHpA 1

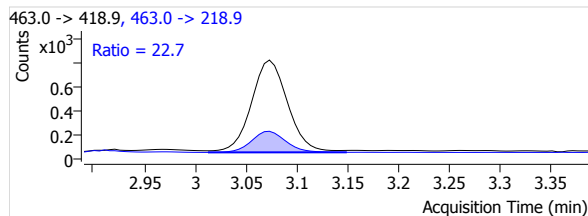
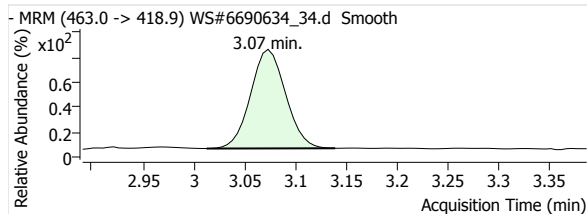


Quantitative Analysis Report

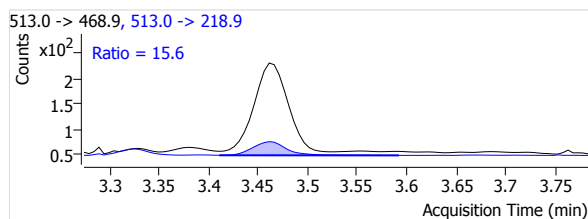
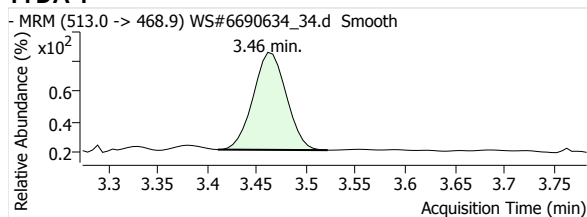
PFOA 1



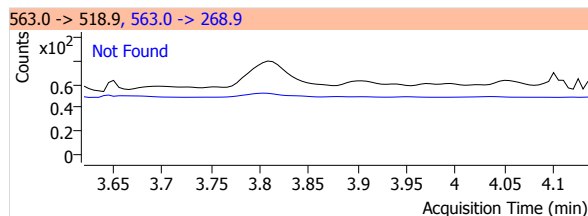
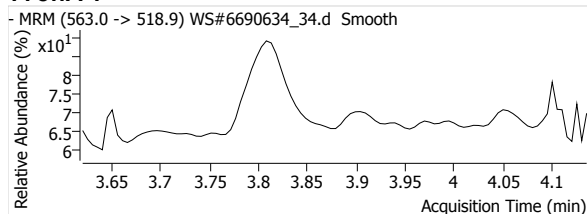
PFNA 1



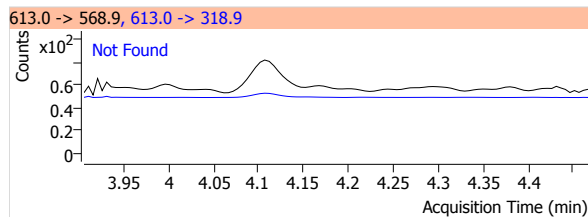
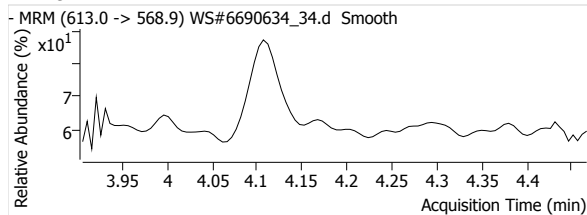
PFDA 1



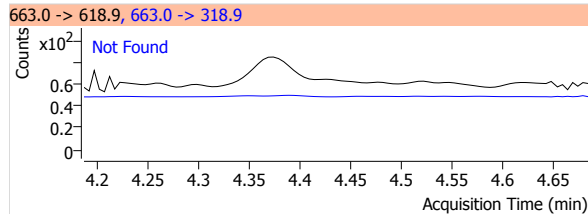
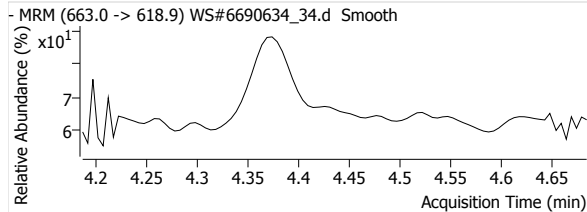
PFUnA 1



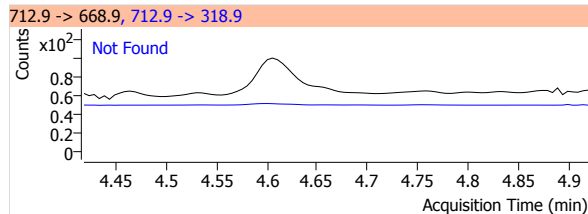
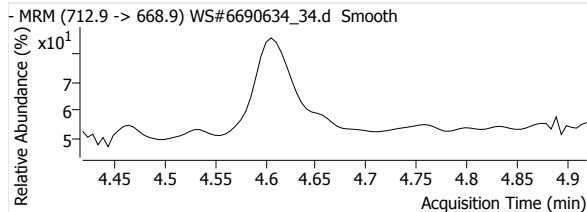
PFDoA 1



PFTrDA 1

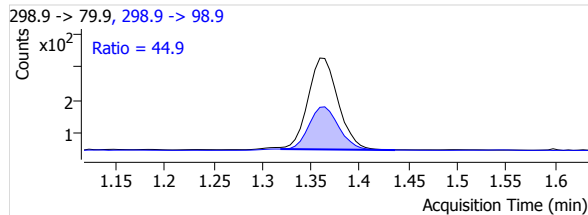
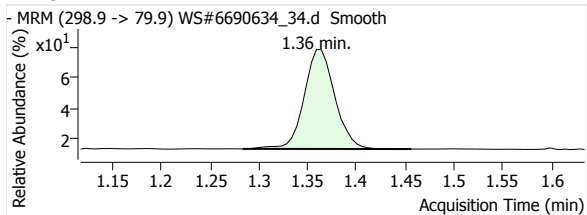


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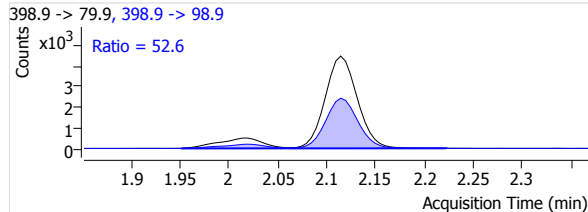
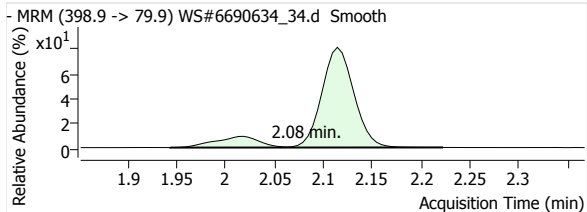


Quantitative Analysis Report

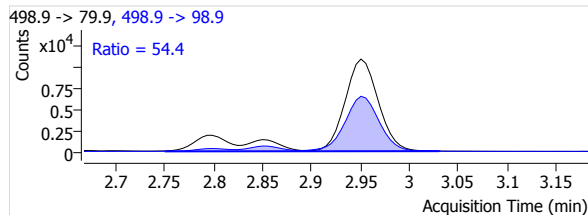
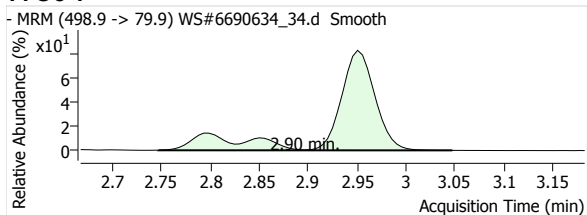
PFBS 1



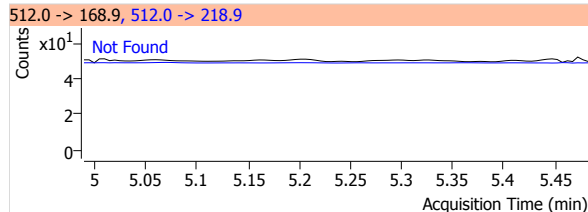
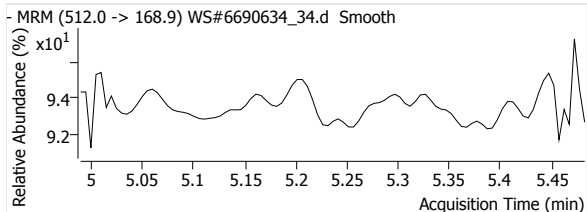
PFHxS 1



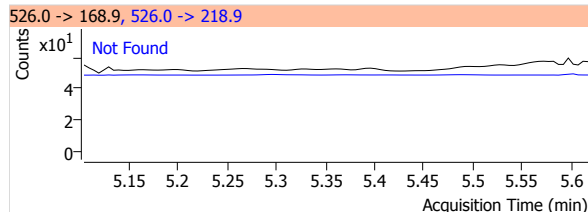
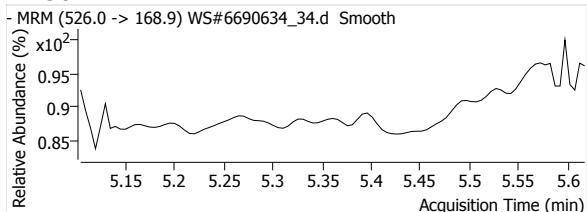
PFOS 1



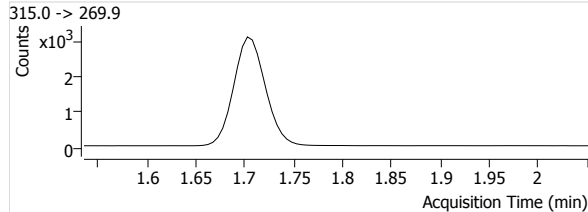
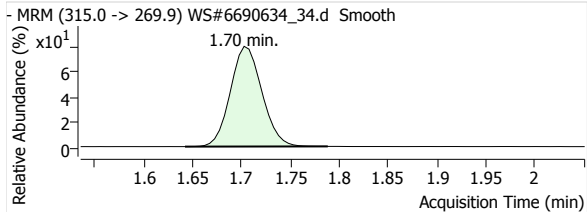
MeFOSA 1



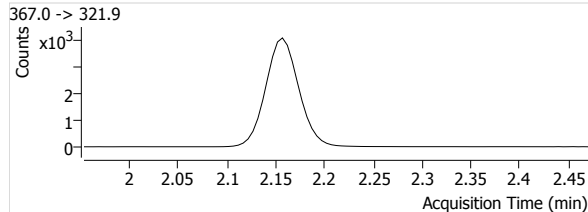
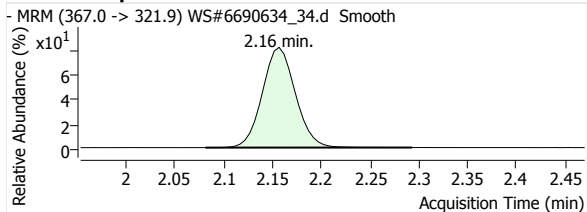
eFOSA 1



13C2-PFHxA

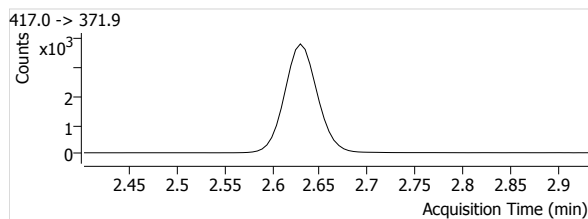
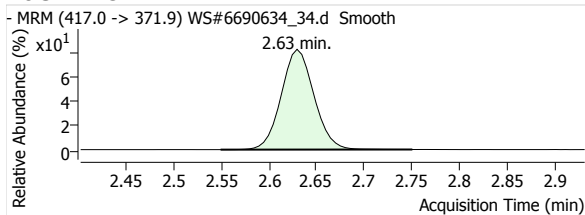


13C4-PFHpA

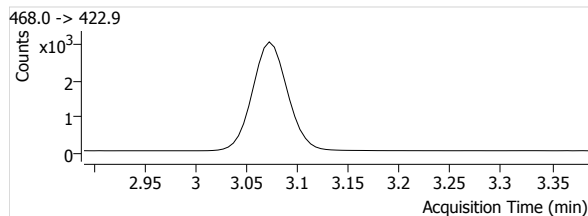
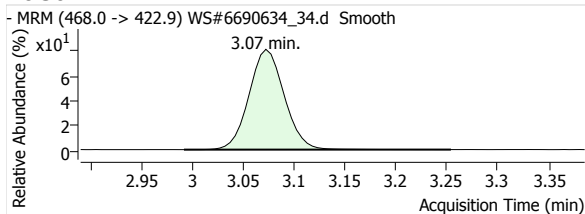


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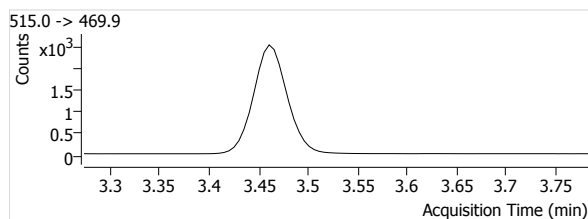
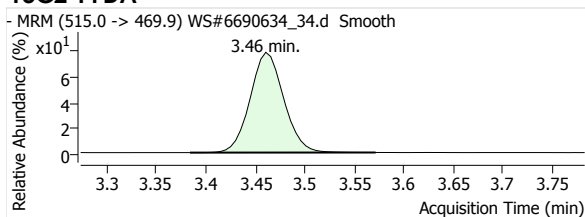
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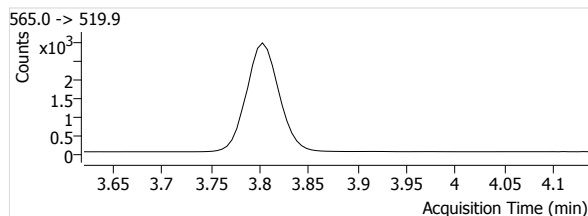
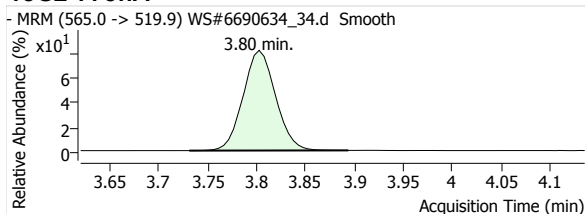
13C5-PFNA



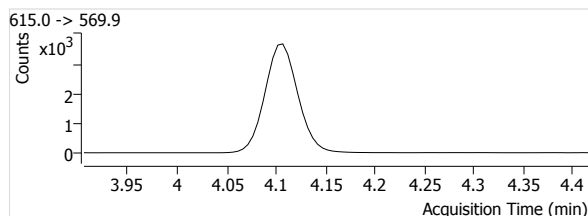
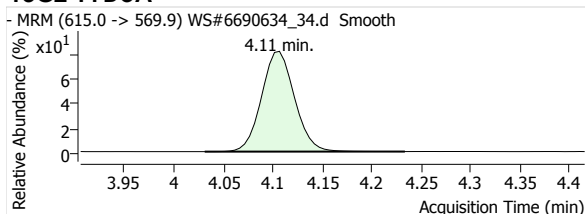
13C2-PFDA



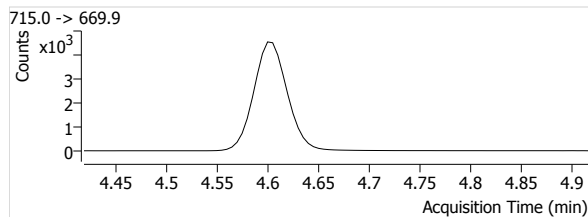
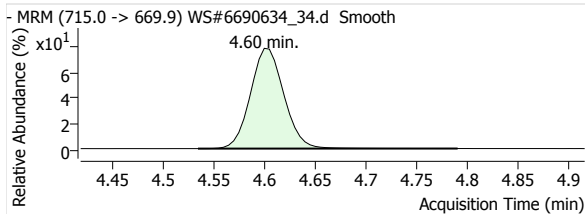
13C2-PFUnA



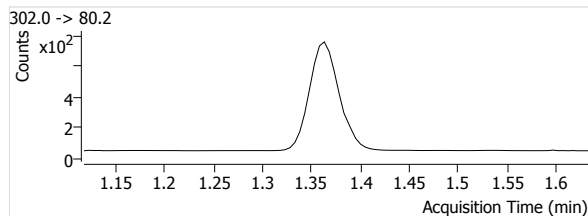
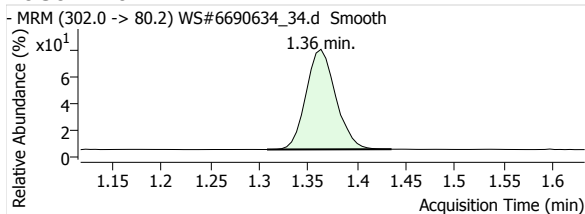
13C2-PFDoA



13C2-PFTeDA

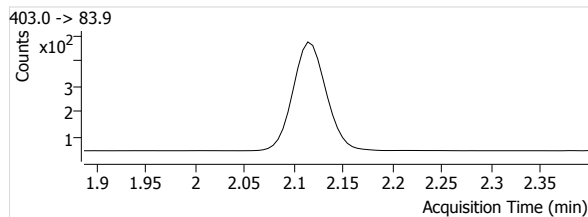
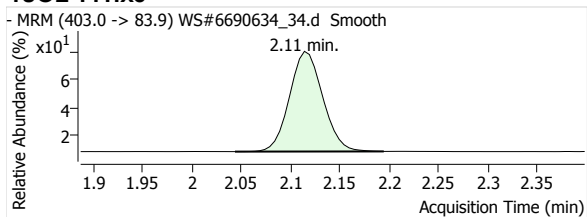


13C3-PFBS

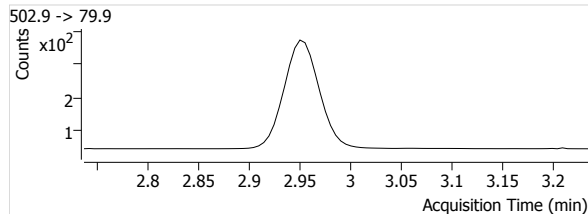
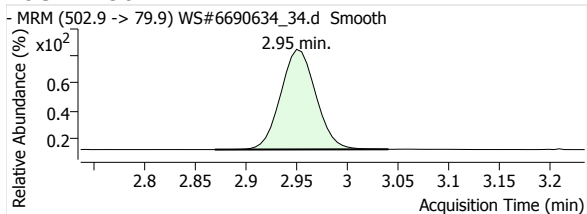


Quantitative Analysis Report

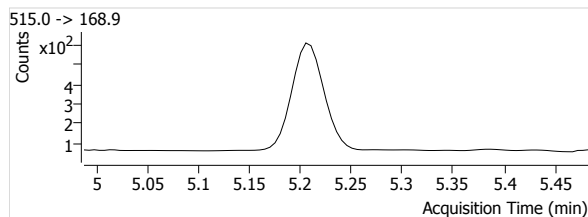
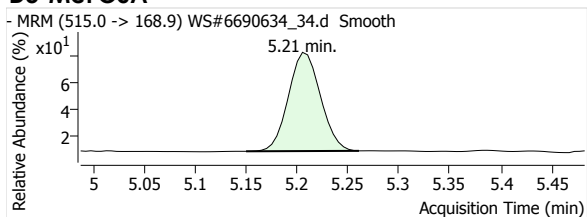
18O2-PFHxs



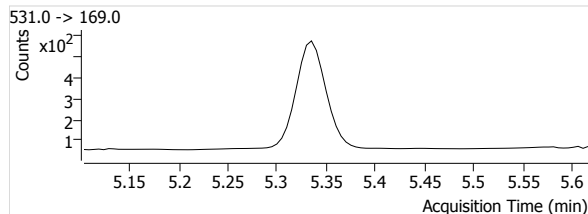
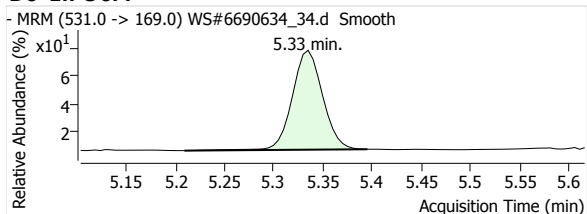
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

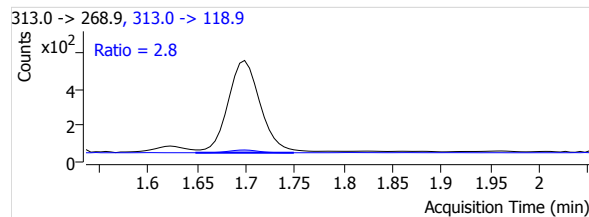
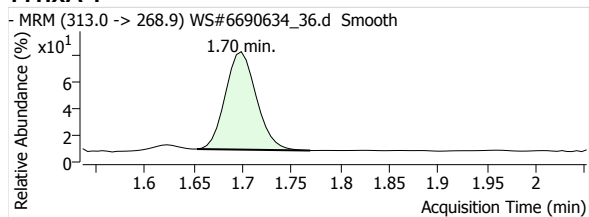
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bin

Sample Name 6690634:MLP503-01:10x
Type Sample
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/22 2:03:35 AM
Comment Reported for PFOS only.
User Defined

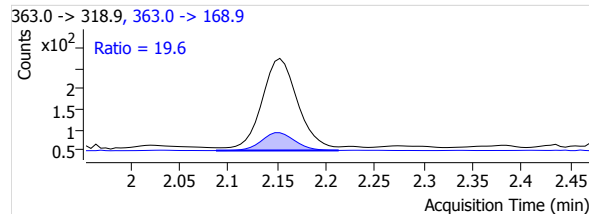
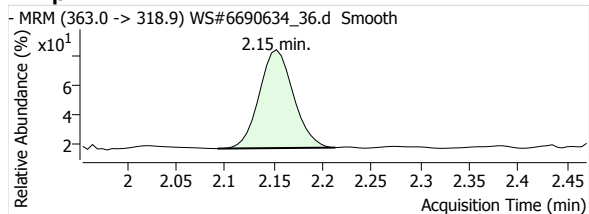
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Instrument LCMS04
Position P1-C9
Dil. 0.2

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	0.1410	--	1101	1.70	1426	0.1400	31	1.70	213	2.8
PFHpA 1	µg/L	--	0.0193	--	530	2.15	602	0.0494	104	2.15	700	19.6
PFOA 1	µg/L	--	0.0841	--	917	2.63	1010	0.0899	222	2.63	1351	24.2
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	0.4718	--	432	2.08	4013	0.3842	241	2.09	8821	55.8
PFOS 1	µg/L	--	1.8074	--	1128	2.90	3093	1.1985	618	2.89	4565	54.8
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	111.9448	--	7863	1.70	920	--	--	--	--	--
13C4-PFHpA	µg/L	--	110.9467	--	10723	2.15	2589	--	--	--	--	--
13C4-PFOA	µg/L	--	105.8848	--	10202	2.62	1038	--	--	--	--	--
13C5-PFNA	µg/L	--	103.4902	--	7828	3.06	2339	--	--	--	--	--
13C2-PFDA	µg/L	--	96.3439	--	6298	3.46	1411	--	--	--	--	--
13C2-PFUnA	µg/L	--	91.5049	--	7120	3.80	1357	--	--	--	--	--
13C2-PFDoA	µg/L	--	88.2452	--	8926	4.10	814	--	--	--	--	--
13C2-PFTeDA	µg/L	--	89.3860	--	11209	4.60	1927	--	--	--	--	--
13C3-PFBS	µg/L	--	108.8140	--	1679	1.35	336	--	--	--	--	--
18O2-PFHxS	µg/L	--	110.6299	--	1124	2.11	380	--	--	--	--	--
13C4-PFOS	µg/L	--	97.7155	--	941	2.94	678	--	--	--	--	--
D3-MeFOSA	µg/L	--	33.6898	--	819	5.21	46	--	--	--	--	--
D5-EtFOSA	µg/L	--	33.2059	--	695	5.33	36	--	--	--	--	--

PFHxA 1

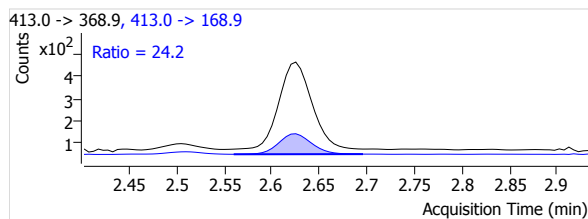
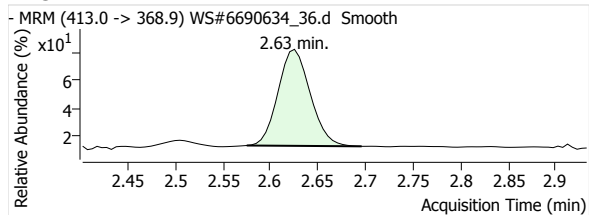


PFHpA 1

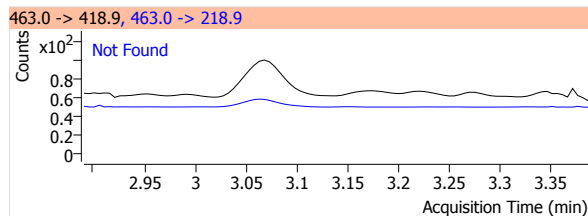
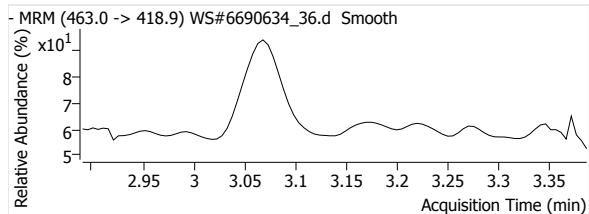


Quantitative Analysis Report

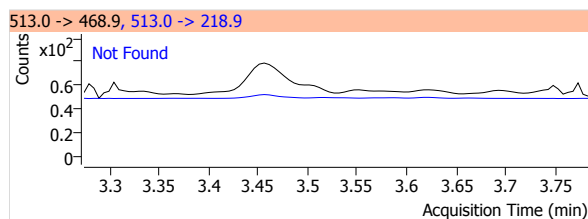
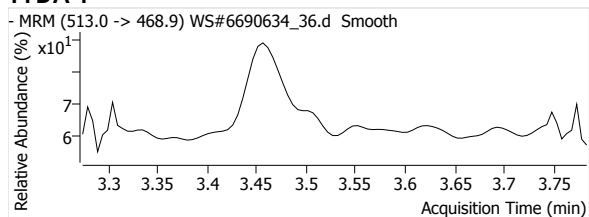
PFOA 1



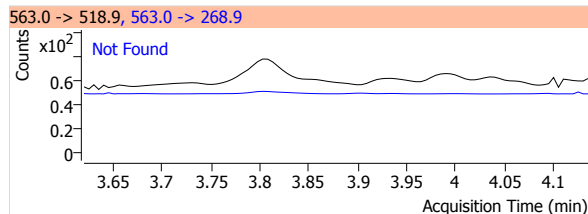
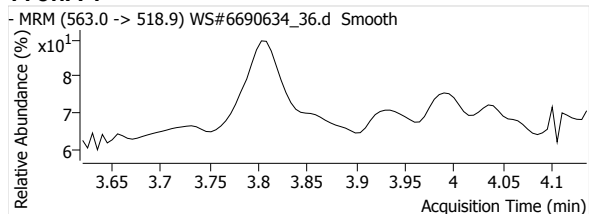
PFNA 1



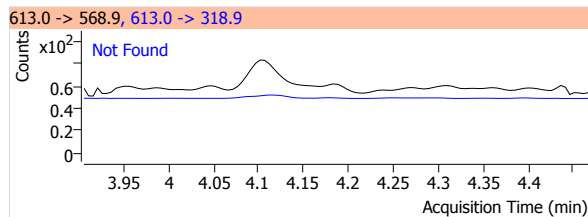
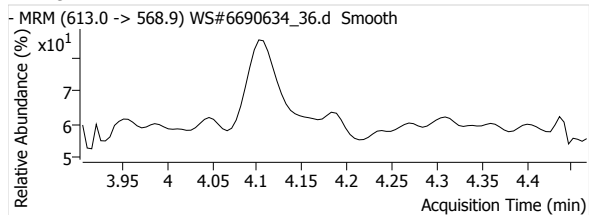
PFDA 1



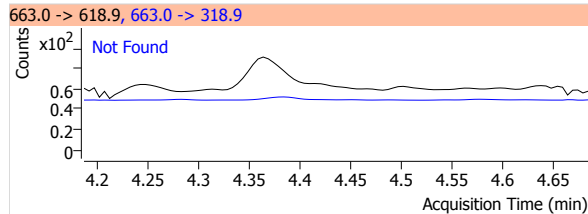
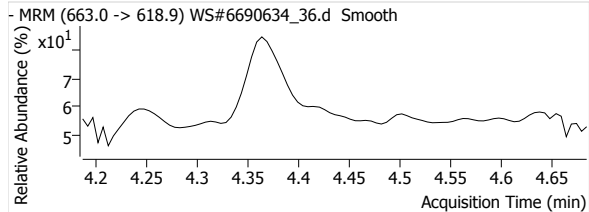
PFUnA 1



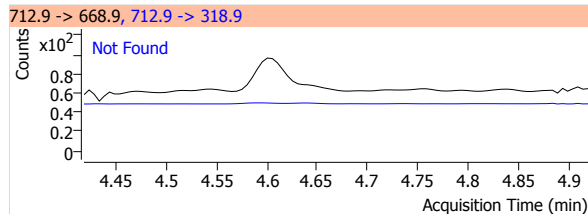
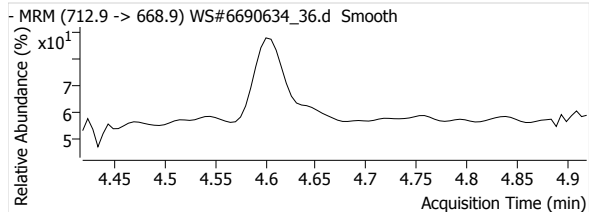
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PFTrDA 1

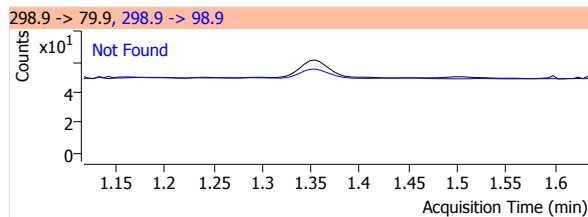
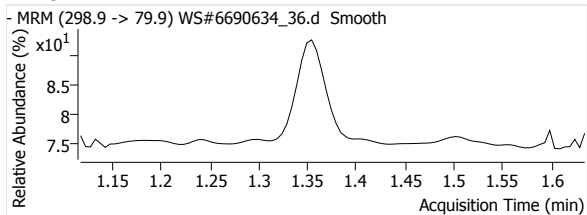


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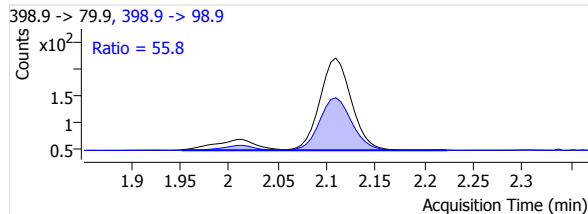
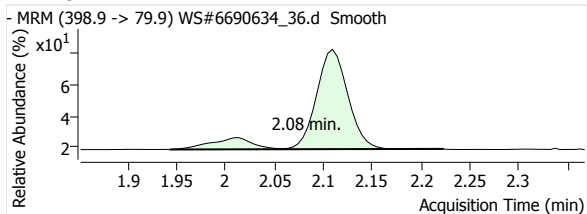


Quantitative Analysis Report

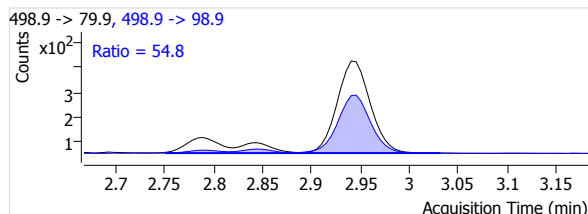
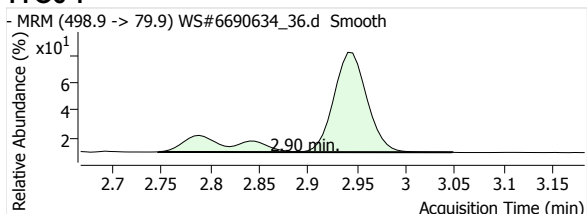
PFBS 1



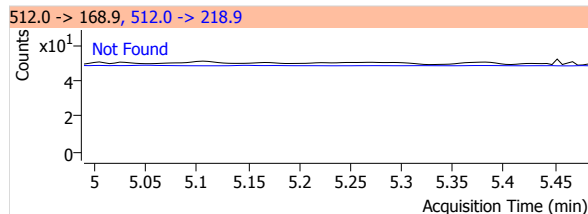
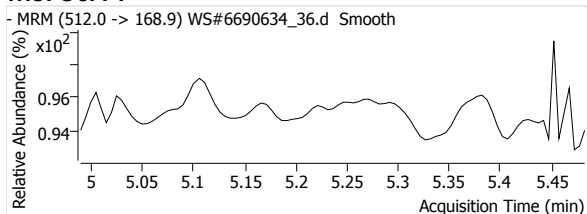
PFHxS 1



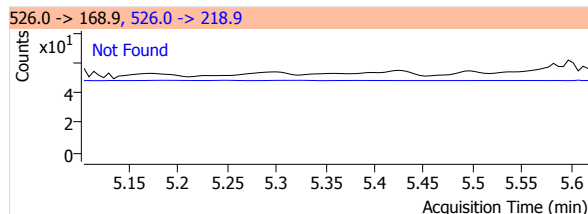
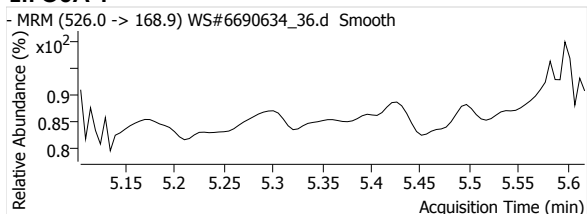
PFOS 1



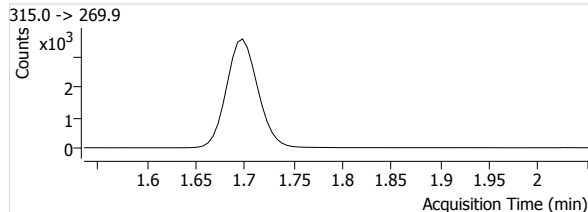
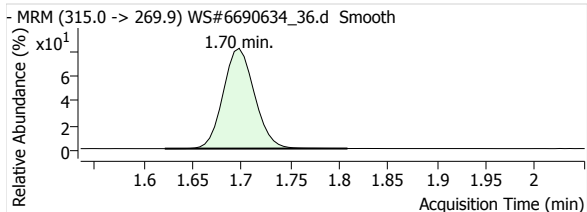
MeFOSA 1



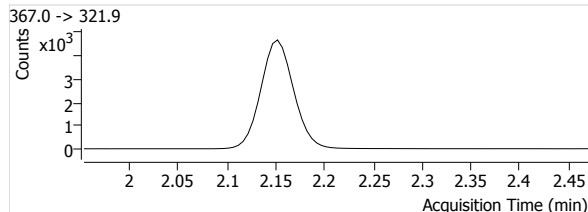
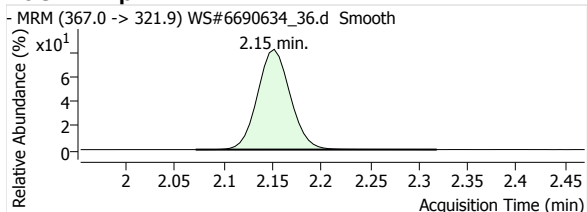
eFOSA 1



13C2-PFHxA

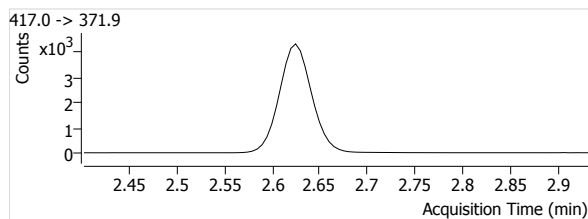
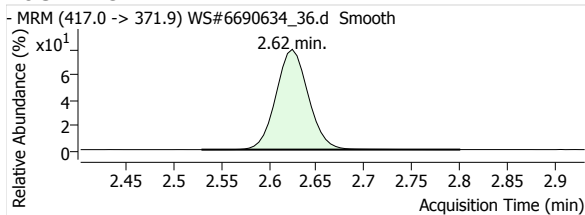


13C4-PFHpA

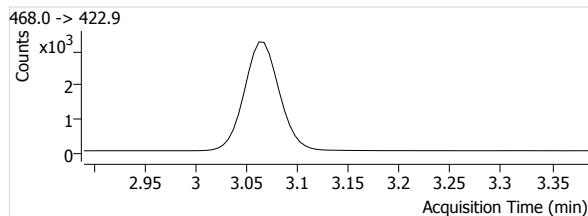
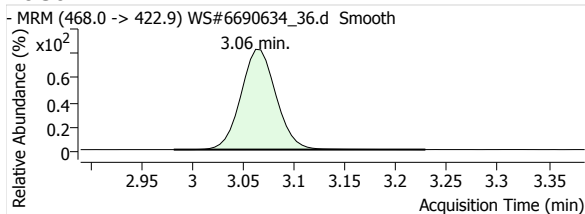


Quantitative Analysis Report

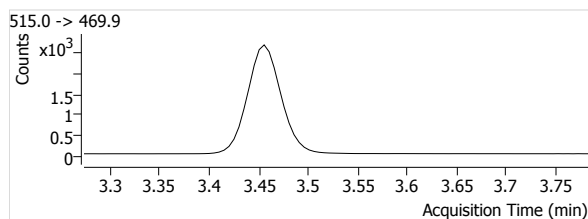
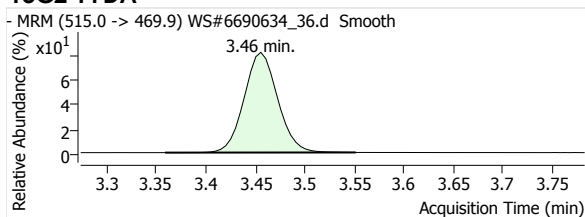
13C4-PFOA



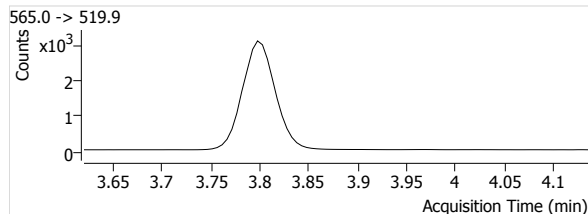
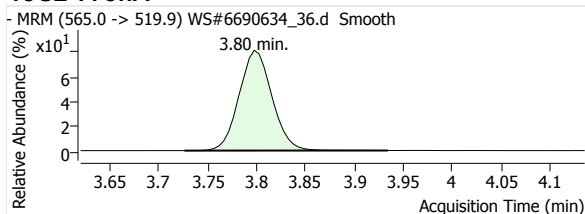
13C5-PFNA



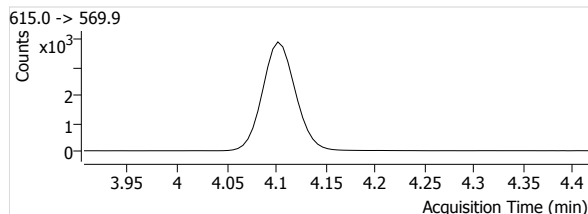
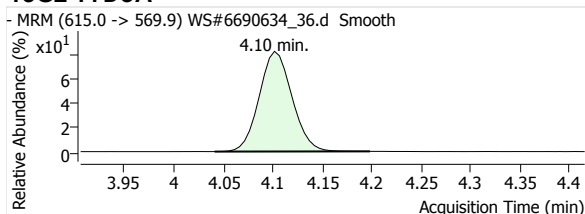
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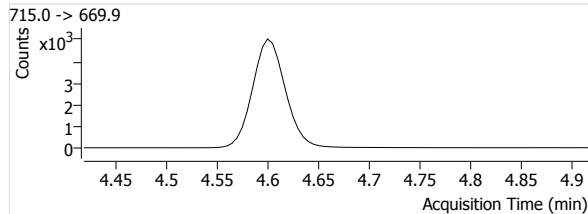
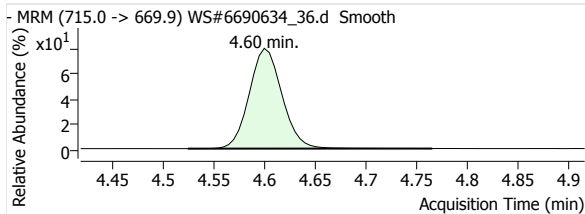
13C2-PFUnA



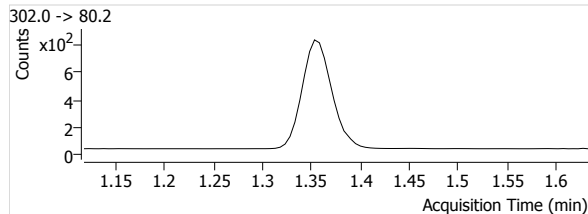
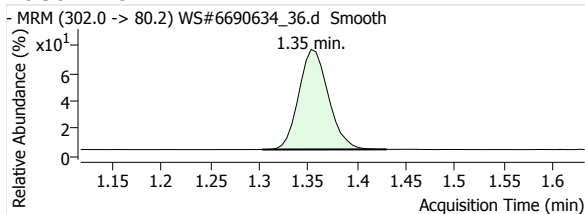
13C2-PFDoA



13C2-PFTeDA

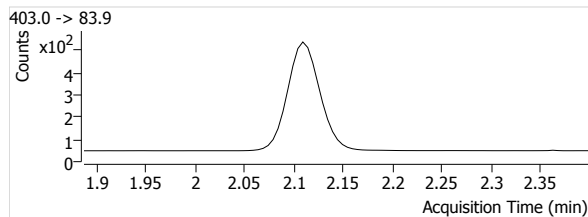
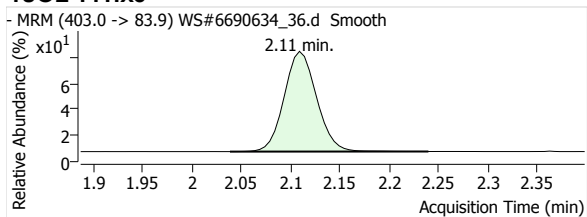


13C3-PFBS

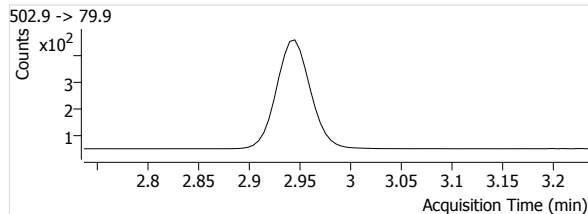
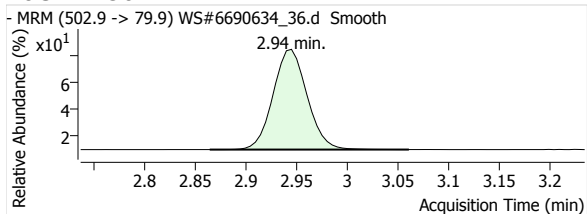


Quantitative Analysis Report

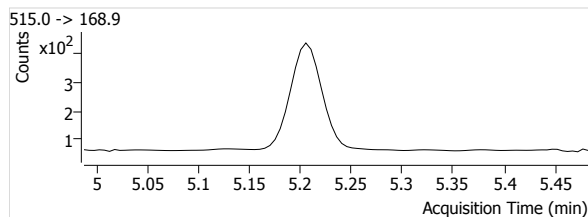
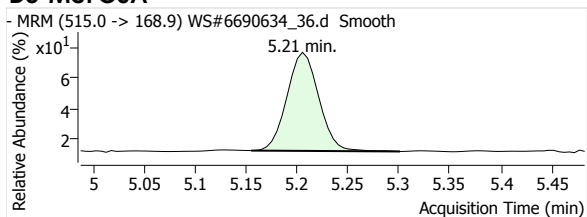
18O2-PFHxS



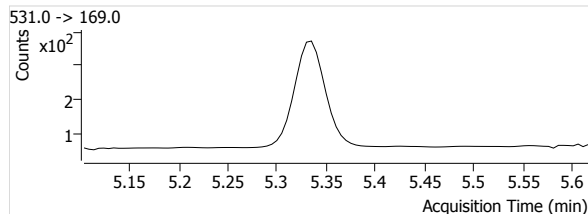
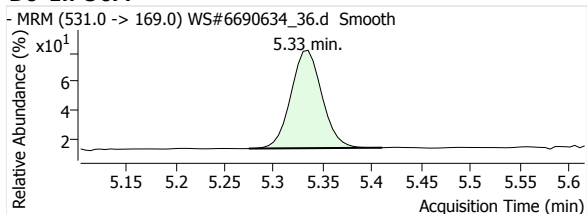
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

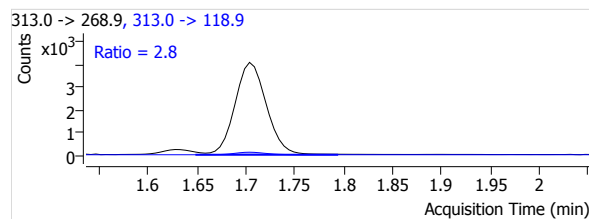
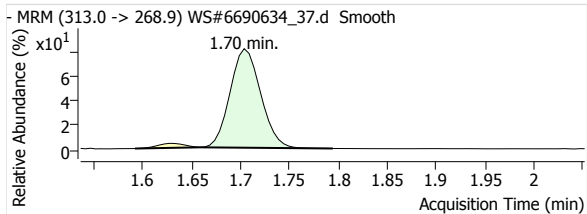
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Sample Name 6690634:MLP503-01
Type Sample
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/22 2:10:32 AM
Comment Reported for all except PFOS.
User Defined MI PFOA

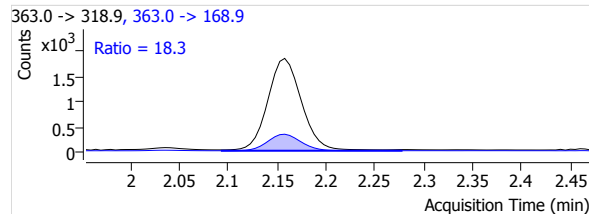
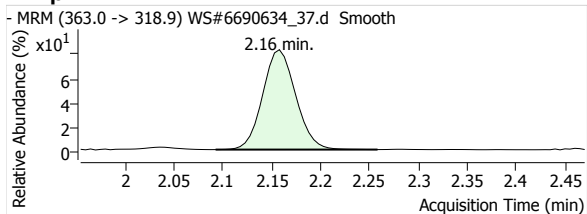
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Instrument LCMS04
Position P1-D1
Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	0.1483	--	8718	1.70	12976	1.1331	247	1.70	702	2.8
PFHpA 1	µg/L	--	0.0540	--	4247	2.16	5009	0.4078	777	2.16	33184	18.3
PFOA 1	µg/L	--	0.1010	--	7356	2.63	10001	0.7322	1938	2.63	7008	26.3
PFNA 1	µg/L	--	0.0019	--	442	3.07	649	0.0559	91	3.07	1205	20.6
PFDA 1	µg/L	--	0.0000	--	209	3.46	462	0.0316	33	3.46	407	15.8
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.0144	--	213	1.36	609	0.1295	101	1.36	475	47.4
PFHxS 1	µg/L	--	0.4582	--	3616	2.08	38158	3.3393	1931	2.09	36909	53.4
PFOS 1	µg/L	--	1.4667	--	8909	2.90	12199	9.4076	4885	2.89	98174	54.8
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	109.5387	--	7694	1.70	1134	--	--	--	--	--
13C4-PFHpA	µg/L	--	107.7600	--	10415	2.16	1319	--	--	--	--	--
13C4-PFOA	µg/L	--	104.2761	--	10047	2.63	2065	--	--	--	--	--
13C5-PFNA	µg/L	--	104.4421	--	7900	3.07	1183	--	--	--	--	--
13C2-PFDA	µg/L	--	101.0249	--	6604	3.46	1519	--	--	--	--	--
13C2-PFUnA	µg/L	--	97.2754	--	7569	3.80	1328	--	--	--	--	--
13C2-PFDaA	µg/L	--	95.5610	--	9666	4.10	1264	--	--	--	--	--
13C2-PFTeDA	µg/L	--	94.3062	--	11826	4.60	2389	--	--	--	--	--
13C3-PFBS	µg/L	--	106.6105	--	1645	1.36	330	--	--	--	--	--
18O2-PFHxS	µg/L	--	106.5945	--	1083	2.11	457	--	--	--	--	--
13C4-PFOS	µg/L	--	98.3385	--	947	2.95	840	--	--	--	--	--
D3-MeFOSA	µg/L	--	71.4521	--	1737	5.20	111	--	--	--	--	--
D5-EtFOSA	µg/L	--	72.5275	--	1518	5.33	91	--	--	--	--	--

PFHxA 1

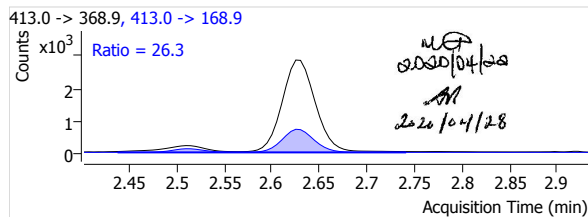
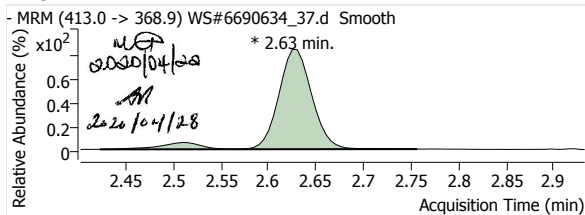


PFHpA 1

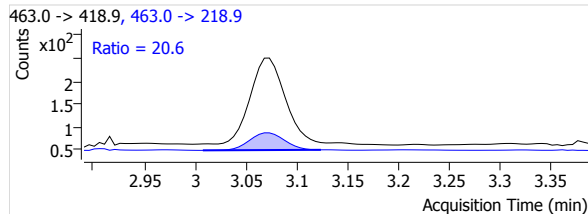
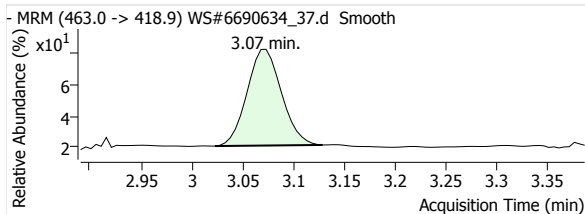


Quantitative Analysis Report

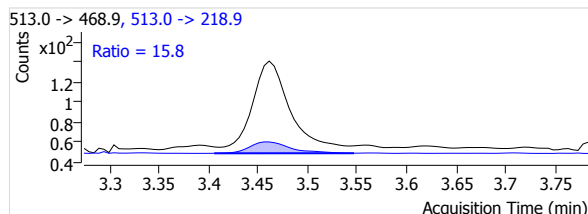
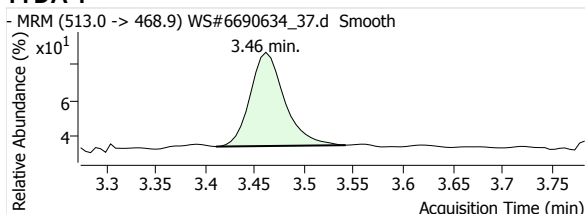
PFOA 1



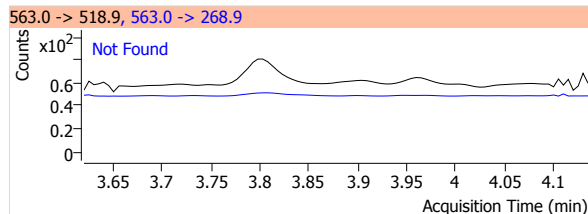
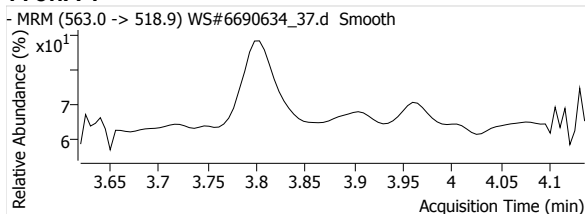
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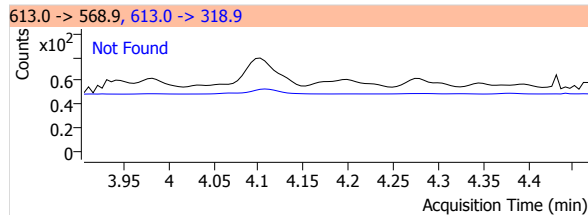
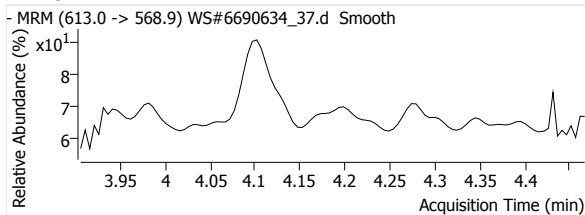
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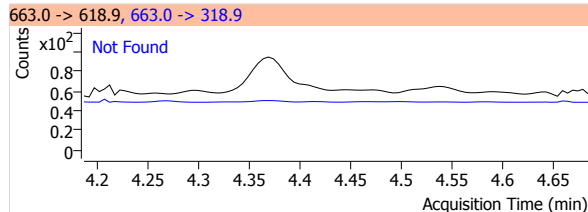
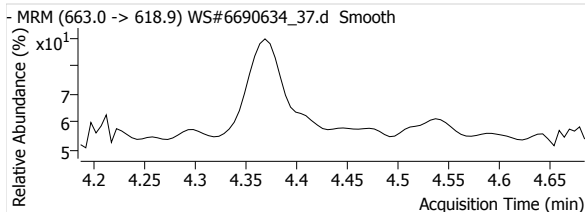
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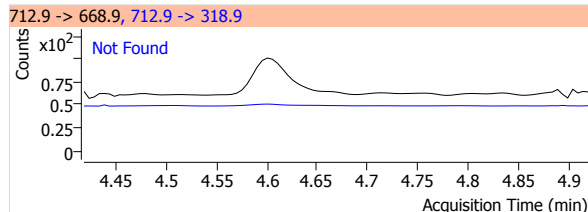
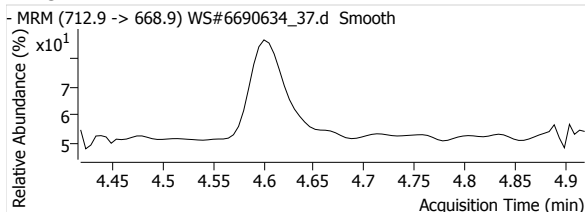
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PFTrDA 1

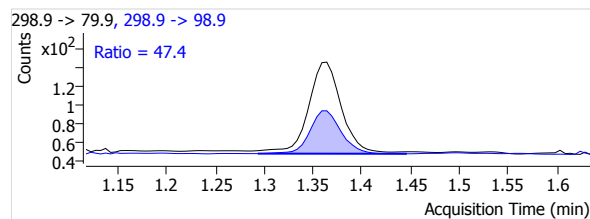
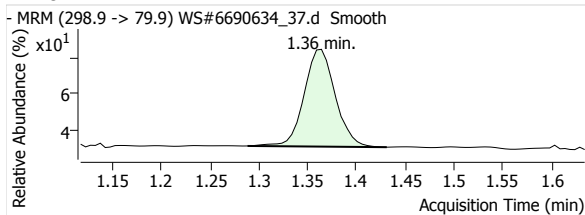


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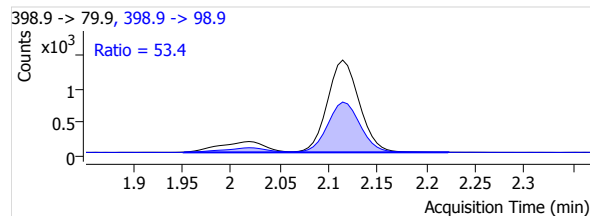
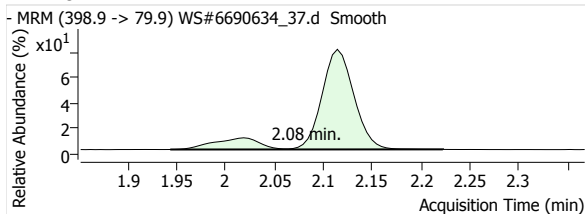


Quantitative Analysis Report

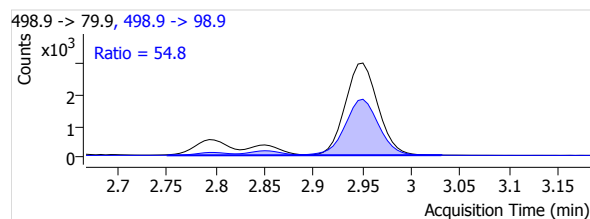
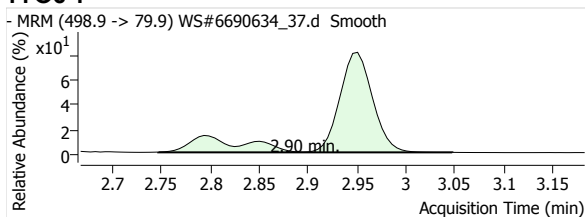
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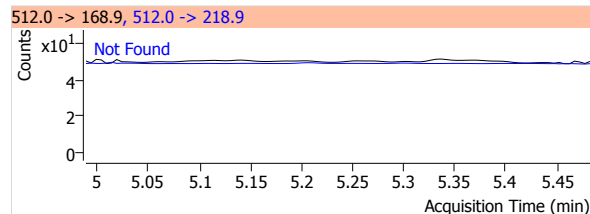
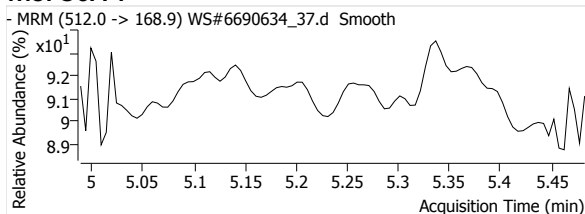
PFHxS 1



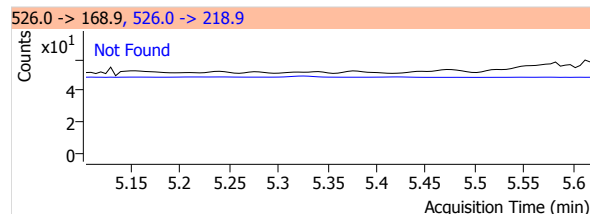
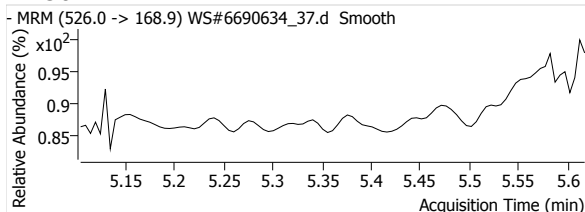
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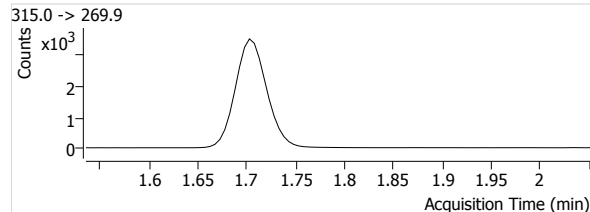
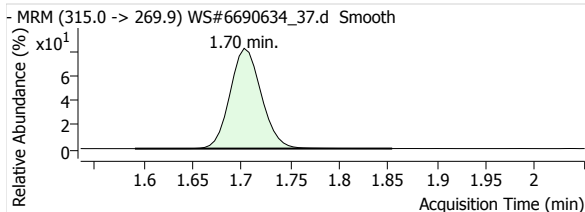
MeFOSA 1



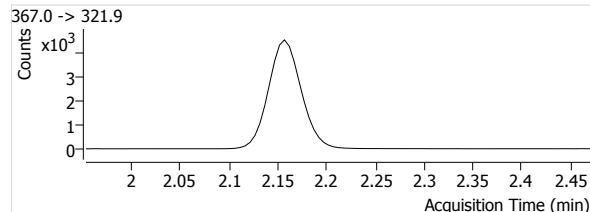
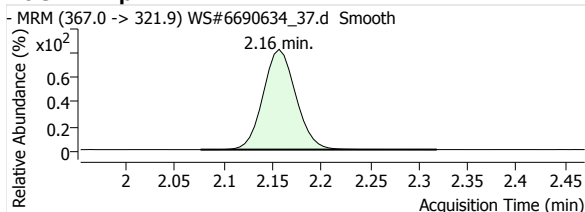
eFOSA 1



13C2-PFHxA

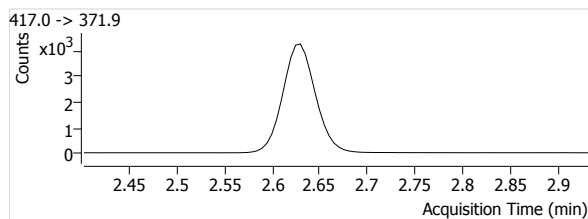
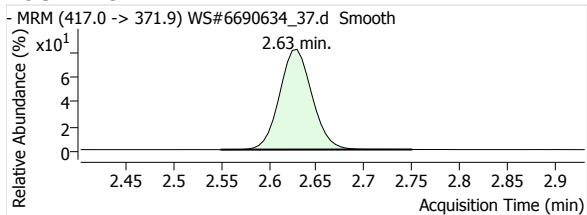


13C4-PFHpA

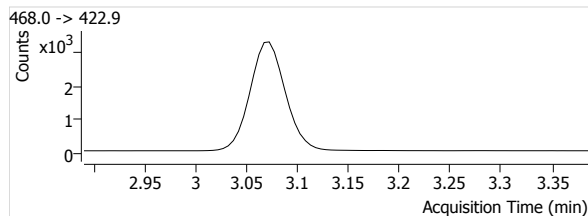
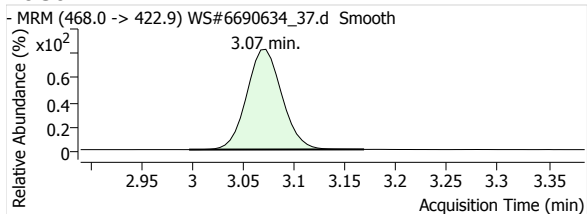


Quantitative Analysis Report

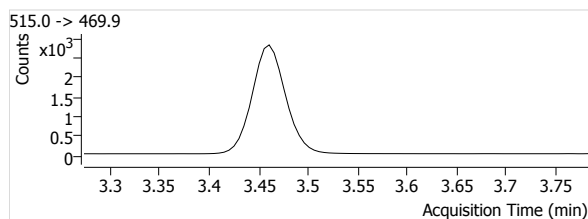
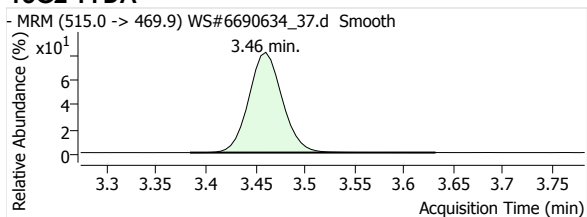
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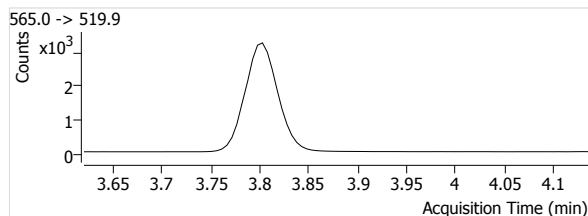
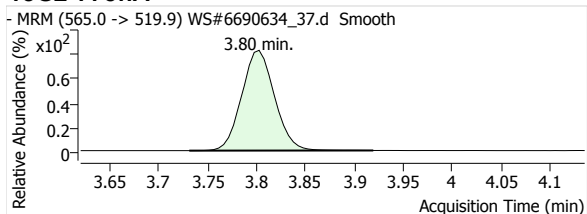
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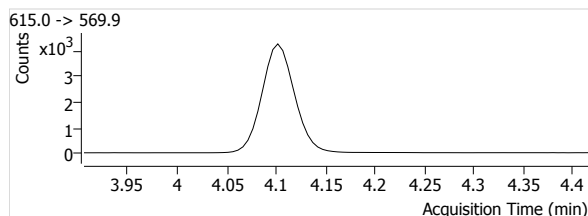
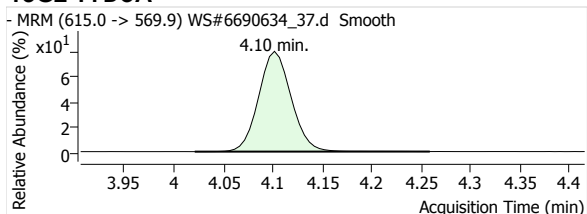
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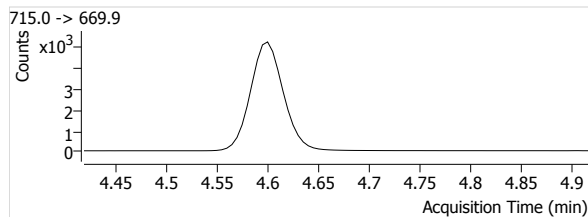
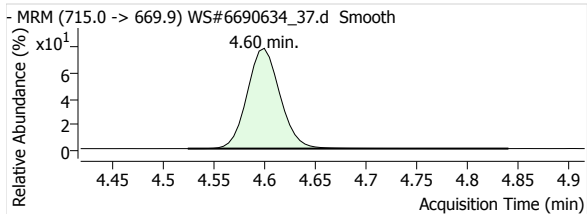
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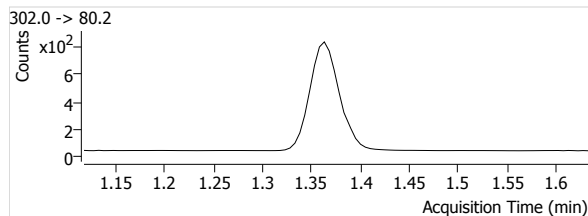
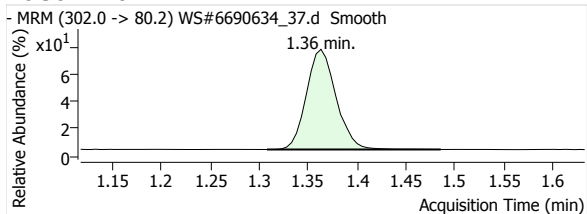
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13C2-PFTeDA

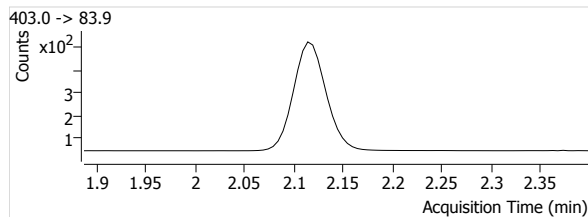
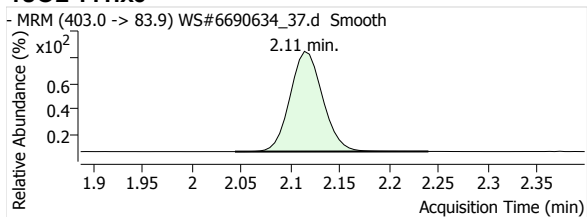


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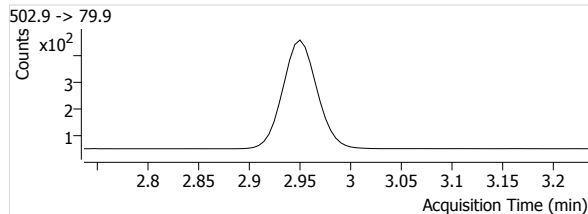
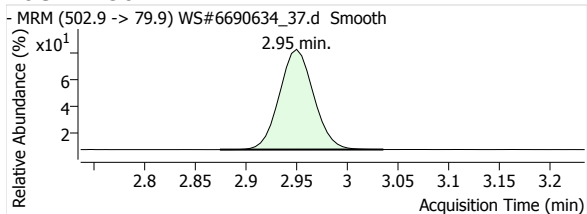


Quantitative Analysis Report

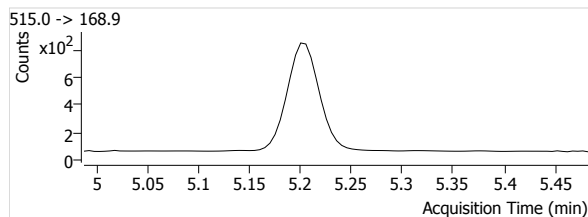
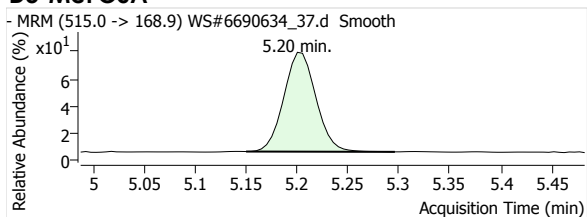
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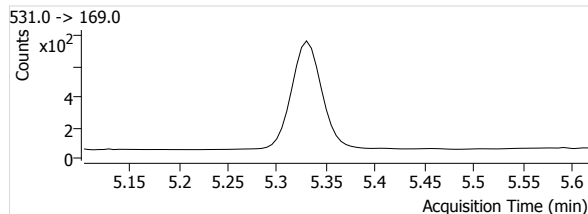
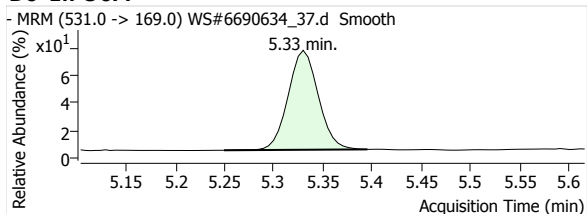
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

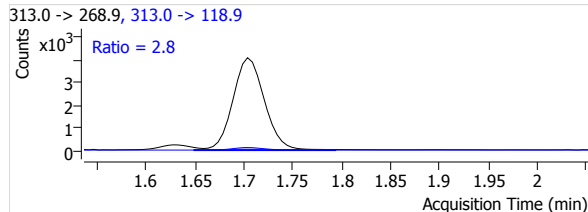
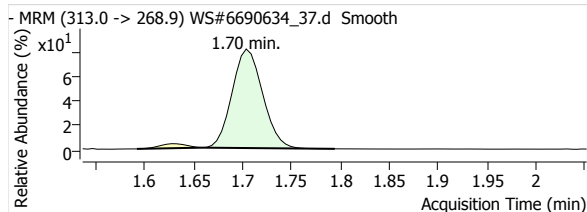
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Type Sample
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Acq. Date-Time 2020/04/22 2:10:32 AM
Comment Reported for all except PFOS.
User Defined MI PFOA

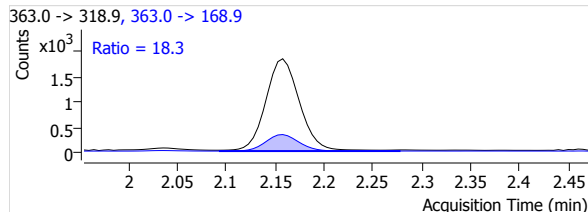
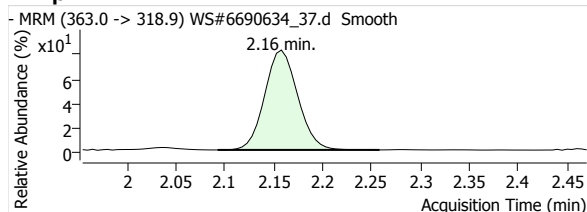
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Instrument LCMS04
Position P1-D1
Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	0.1483	--	8718	1.70	12976	1.1331	247	1.70	702	2.8
PFHpA 1	µg/L	--	0.0540	--	4247	2.16	5009	0.4078	777	2.16	33184	18.3
PFOA 1	µg/L	--	0.0921	--	6734	2.63	9994	0.6702	1655	2.63	6999	24.6
PFNA 1	µg/L	--	0.0019	--	442	3.07	649	0.0559	91	3.07	1205	20.6
PFDA 1	µg/L	--	0.0000	--	209	3.46	462	0.0316	33	3.46	407	15.8
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.0144	--	213	1.36	609	0.1295	101	1.36	475	47.4
PFHxS 1	µg/L	--	0.4583	--	3616	2.08	38158	3.3393	1931	2.09	36909	53.4
PFOS 1	µg/L	--	1.4667	--	8909	2.90	12199	9.4076	4885	2.89	98174	54.8
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	109.5387	--	7694	1.70	1134	--	--	--	--	--
13C4-PFHpA	µg/L	--	107.7600	--	10415	2.16	1319	--	--	--	--	--
13C4-PFOA	µg/L	--	104.2761	--	10047	2.63	2065	--	--	--	--	--
13C5-PFNA	µg/L	--	104.4421	--	7900	3.07	1183	--	--	--	--	--
13C2-PFDA	µg/L	--	101.0249	--	6604	3.46	1519	--	--	--	--	--
13C2-PFUnA	µg/L	--	97.2754	--	7569	3.80	1328	--	--	--	--	--
13C2-PFDoA	µg/L	--	95.5610	--	9666	4.10	1264	--	--	--	--	--
13C2-PFTeDA	µg/L	--	94.3062	--	11826	4.60	2389	--	--	--	--	--
13C3-PFBS	µg/L	--	106.6105	--	1645	1.36	330	--	--	--	--	--
18O2-PFHxS	µg/L	--	106.5945	--	1083	2.11	457	--	--	--	--	--
13C4-PFOS	µg/L	--	98.3385	--	947	2.95	840	--	--	--	--	--
D3-MeFOSA	µg/L	--	71.4521	--	1737	5.20	111	--	--	--	--	--
D5-EtFOSA	µg/L	--	72.5275	--	1518	5.33	91	--	--	--	--	--

PFHxA 1

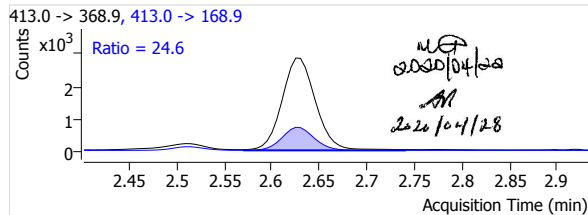
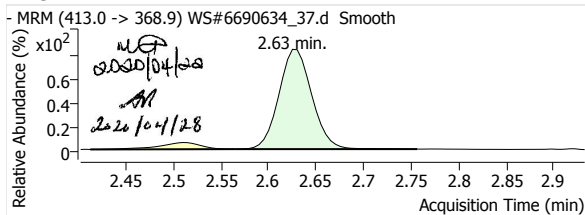


PFHpA 1

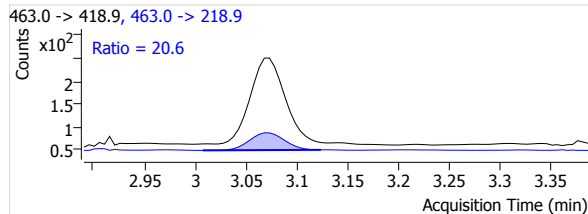
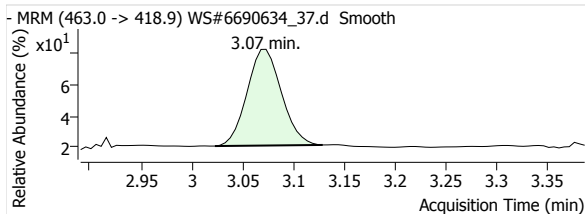


Quantitative Analysis Report

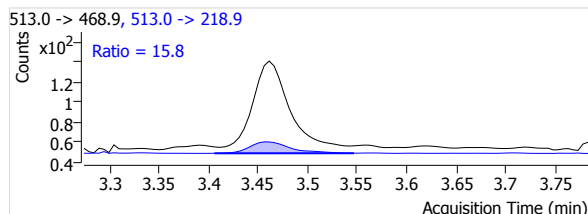
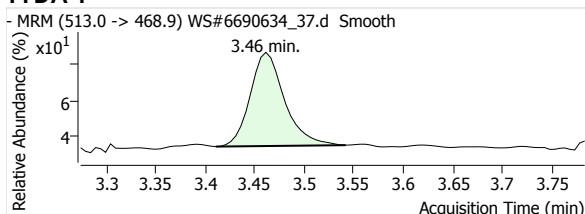
PFOA 1



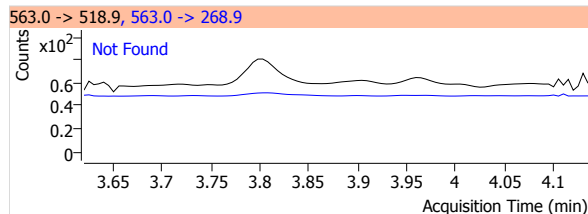
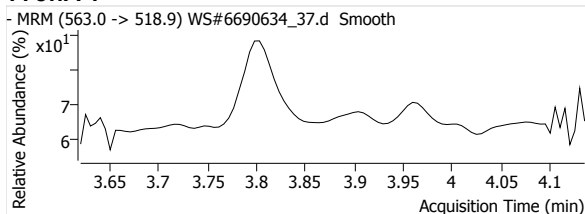
PFNA 1



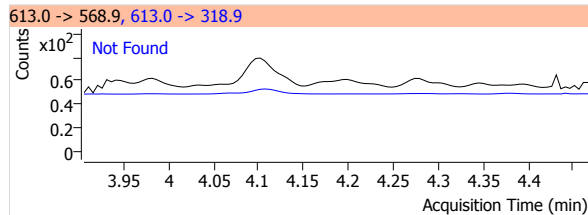
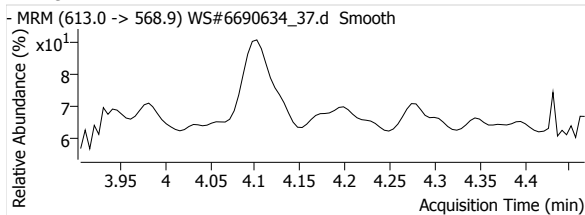
PFDA 1



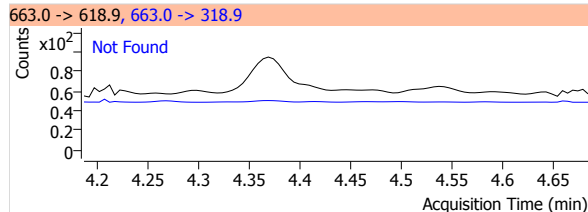
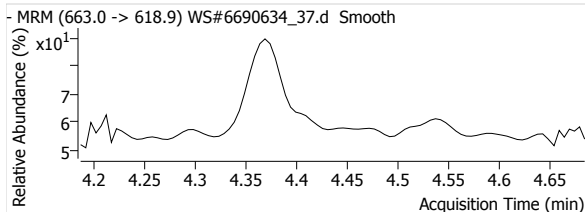
PFUnA 1



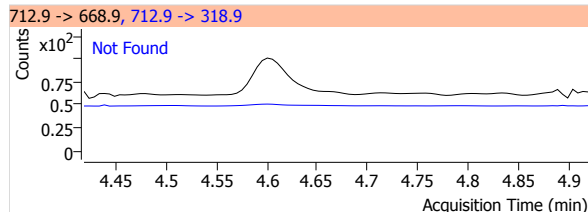
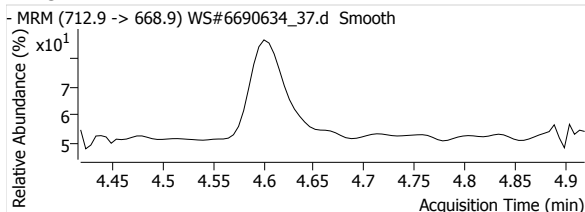
PFDoA 1



PFTrDA 1

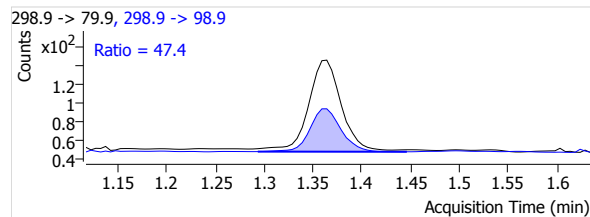
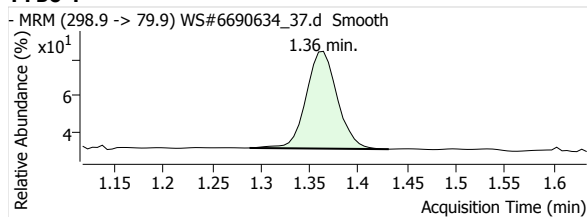


PFTeDA 1

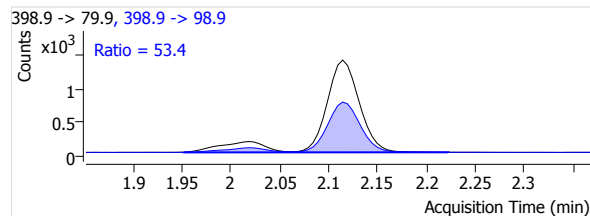
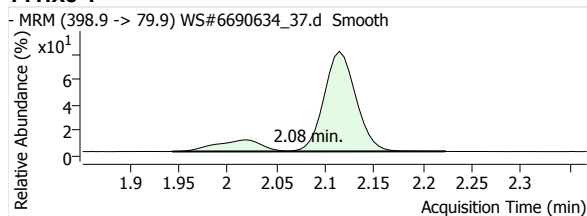


Quantitative Analysis Report

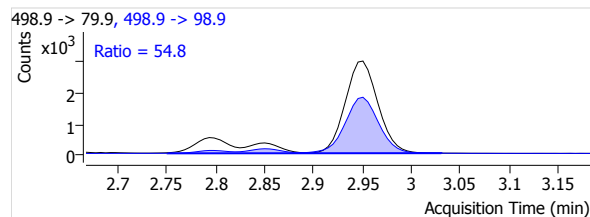
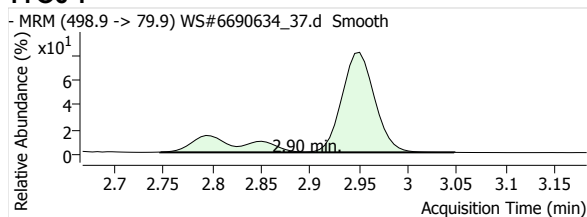
PFBS 1



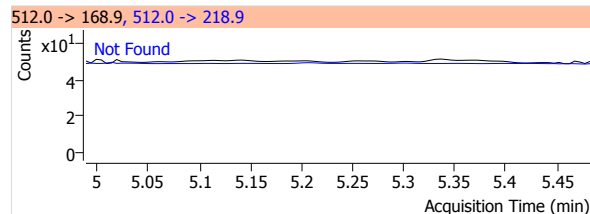
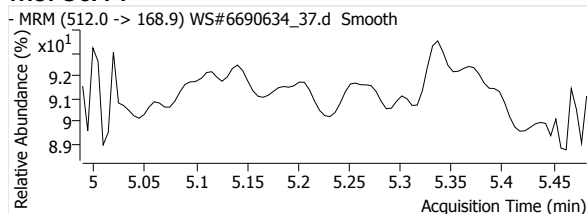
PFHxS 1



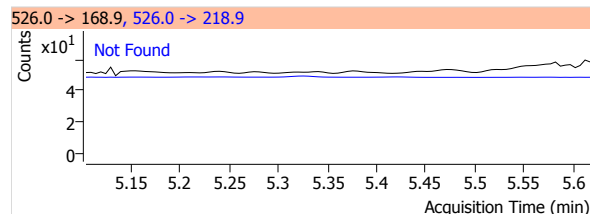
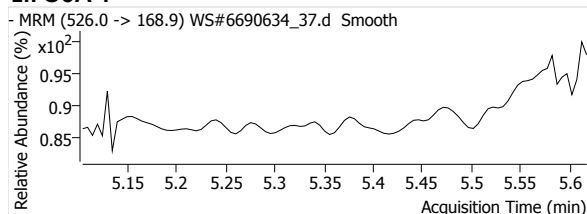
PFOS 1



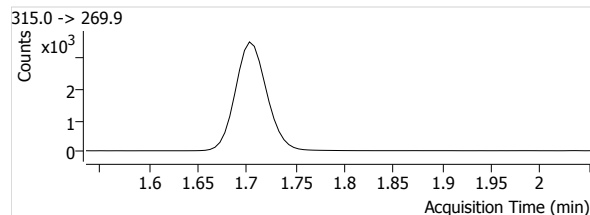
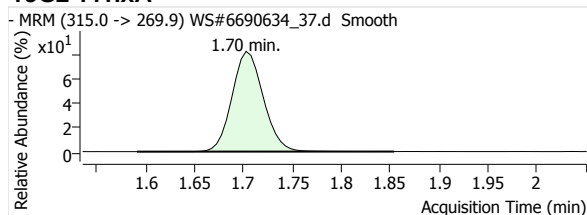
MeFOSA 1



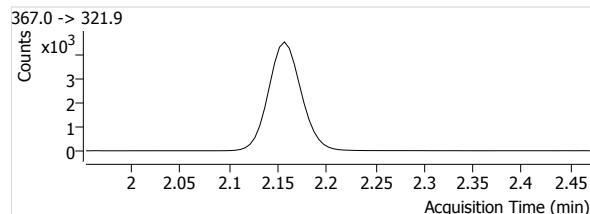
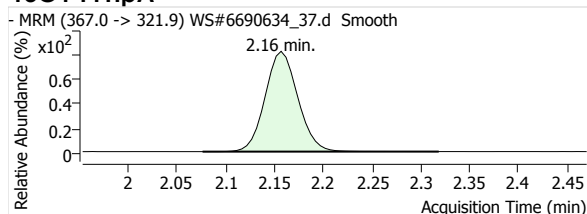
eFOSA 1



13C2-PFHxA

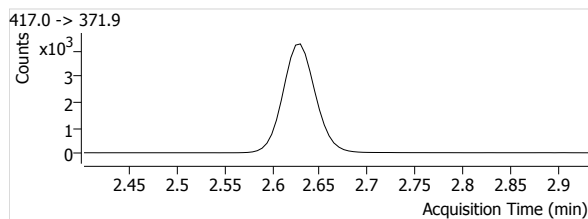
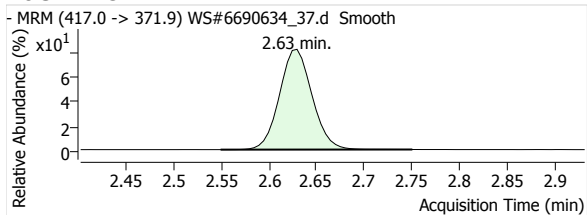


13C4-PFHpA

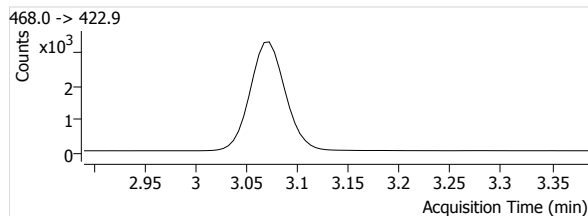
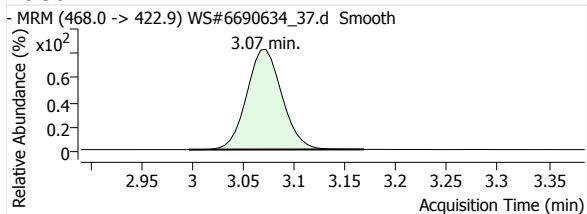


Quantitative Analysis Report

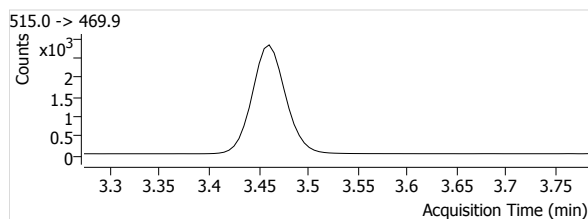
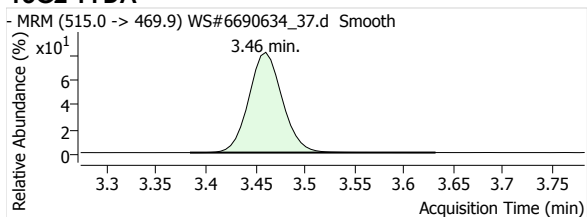
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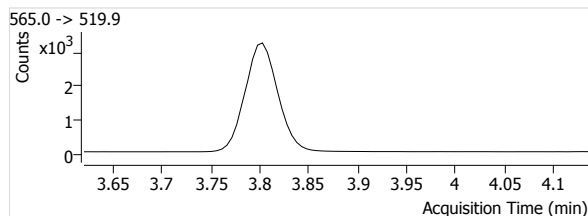
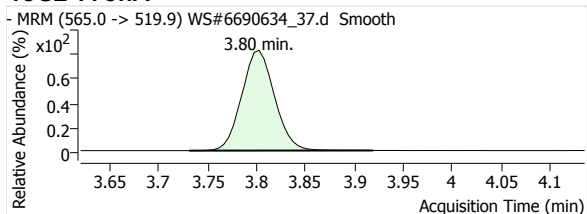
13C5-PFNA



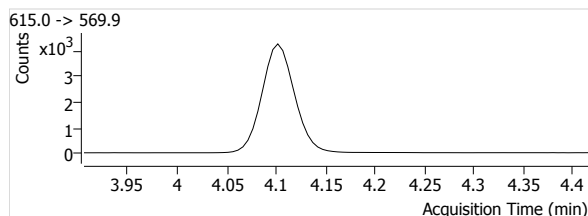
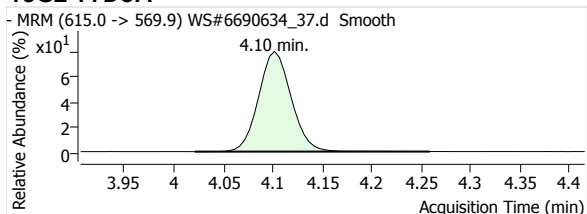
13C2-PFDA



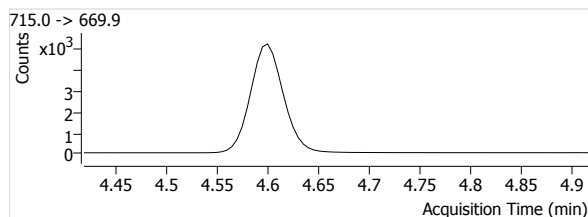
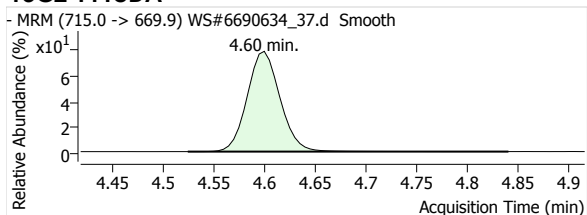
13C2-PFUnA



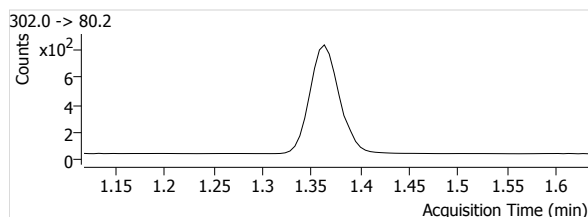
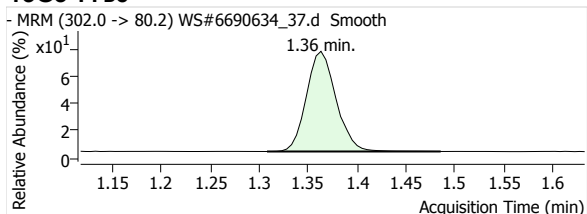
13C2-PFDoA



13C2-PFTeDA

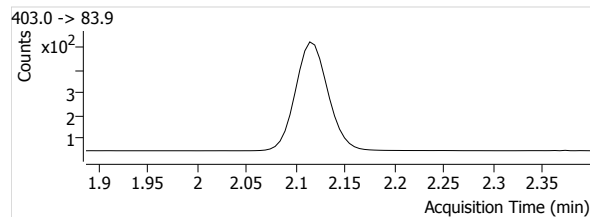
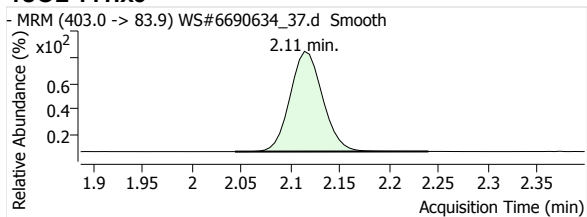


13C3-PFBS

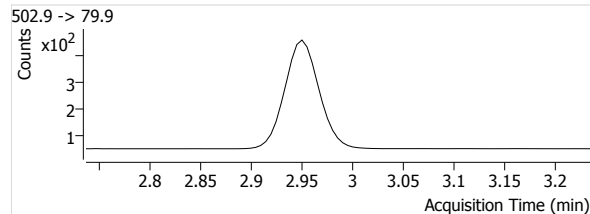
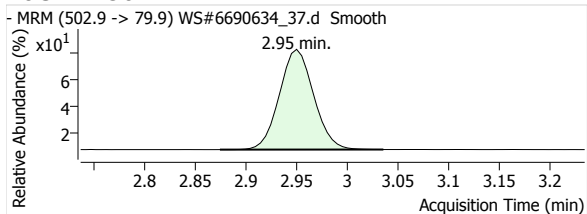


Quantitative Analysis Report

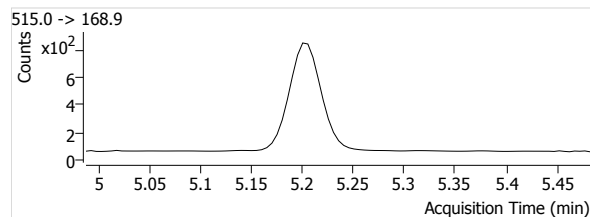
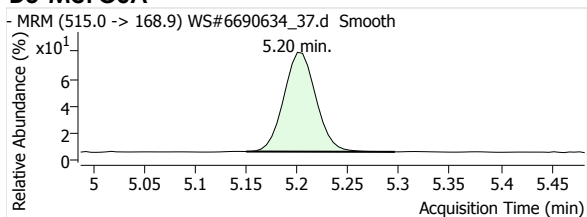
18O2-PFHxs



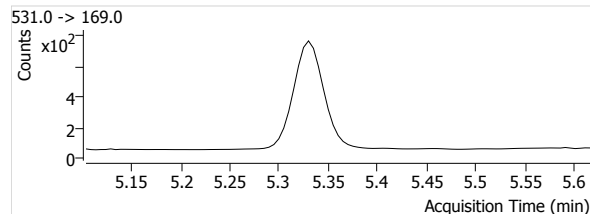
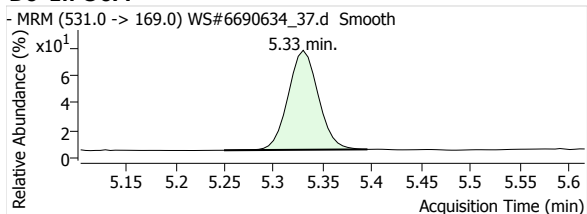
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

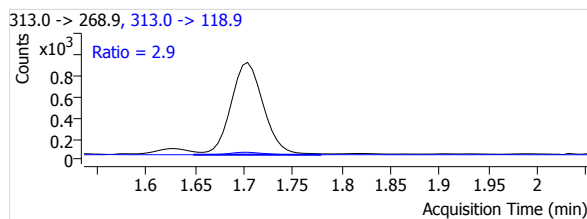
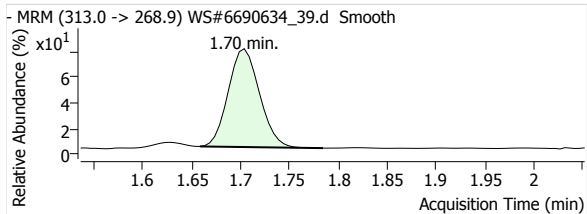
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Sample Name 6690634:MLP504-01:10x
 Type Sample
 Acq. Method File PFAS.m
 Acq. Date-Time 2020/04/22 2:24:26 AM
 Comment Reported for PFHxS & PFOS only.
 User Defined

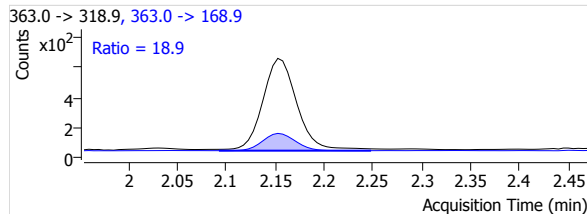
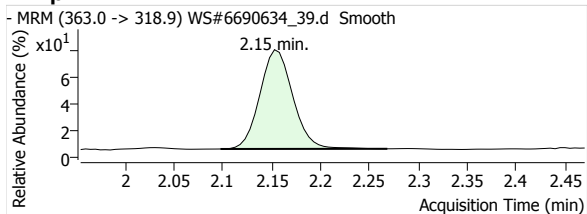
Data File WS#6690634_39.d
 Instrument LCMS04
 Position P1-D2
 Dil. 0.2

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	0.2714	--	1914	1.70	4827	0.2365	55	1.70	2897	2.9
PFHpA 1	µg/L	--	0.1360	--	1411	2.15	2205	0.1297	266	2.15	1234	18.9
PFOA 1	µg/L	--	0.1757	--	1611	2.63	1335	0.1534	386	2.63	3215	24.0
PFNA 1	µg/L	--	0.0000	--	218	3.07	779	0.0264	48	3.07	216	22.0
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	1.2300	--	1066	2.08	7710	0.9294	544	2.09	11700	51.0
PFOS 1	µg/L	--	4.1482	--	2647	2.90	34117	2.6927	1454	2.89	17006	54.9
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	115.2192	--	8093	1.70	839	--	--	--	--	--
13C4-PFHpA	µg/L	--	112.5711	--	10880	2.15	1202	--	--	--	--	--
13C4-PFOA	µg/L	--	109.0296	--	10505	2.62	817	--	--	--	--	--
13C5-PFNA	µg/L	--	109.2147	--	8261	3.07	1743	--	--	--	--	--
13C2-PFDA	µg/L	--	104.2221	--	6813	3.46	1102	--	--	--	--	--
13C2-PFUnA	µg/L	--	102.3776	--	7966	3.80	1294	--	--	--	--	--
13C2-PFDaA	µg/L	--	98.4676	--	9960	4.10	1032	--	--	--	--	--
13C2-PFTeDA	µg/L	--	94.6491	--	11869	4.60	1905	--	--	--	--	--
13C3-PFBS	µg/L	--	111.9248	--	1727	1.36	722	--	--	--	--	--
18O2-PFHxS	µg/L	--	112.8937	--	1147	2.11	950	--	--	--	--	--
13C4-PFOS	µg/L	--	102.0768	--	983	2.94	636	--	--	--	--	--
D3-MeFOSA	µg/L	--	49.5269	--	1204	5.21	59	--	--	--	--	--
D5-EtFOSA	µg/L	--	50.4539	--	1056	5.33	63	--	--	--	--	--

PFHxA 1

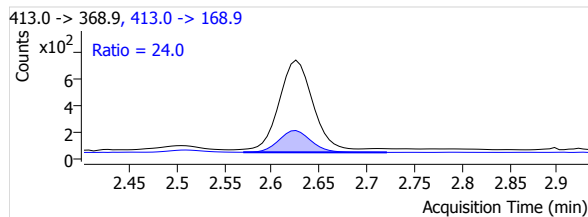
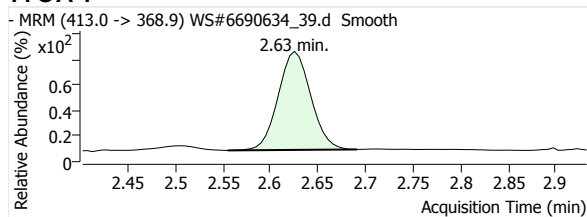


PFHpA 1

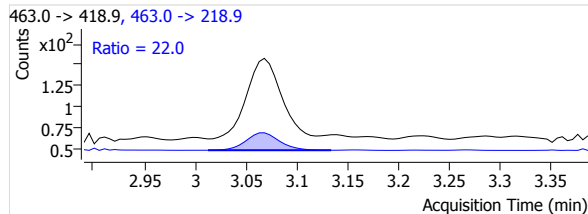
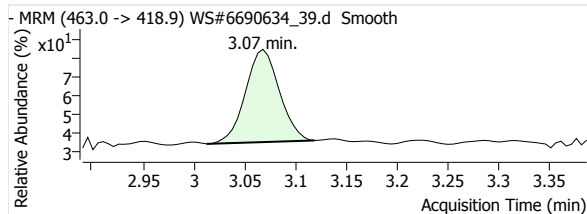


Quantitative Analysis Report

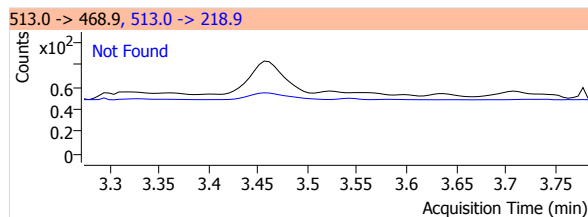
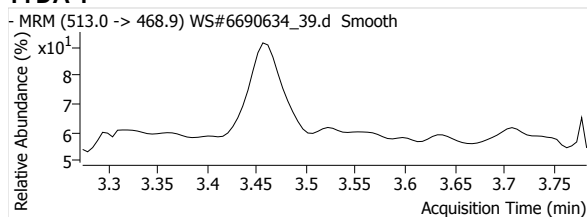
PFOA 1



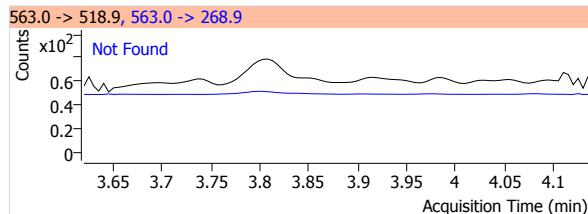
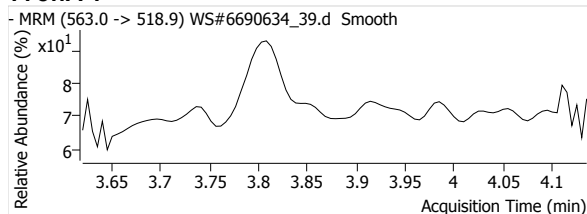
PFNA 1



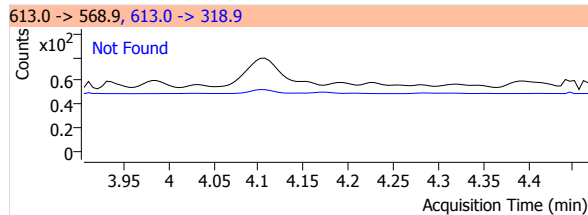
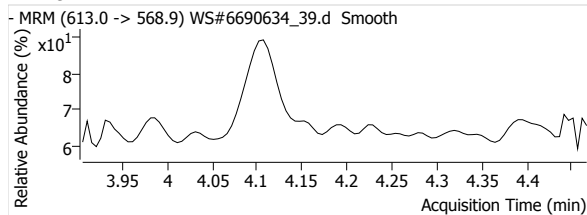
PFDA 1



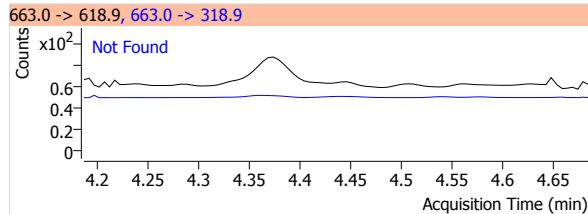
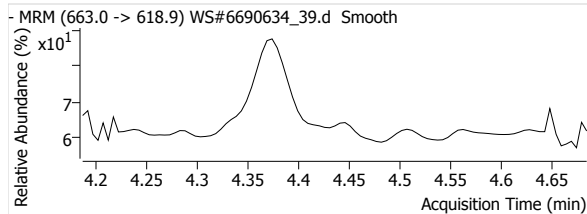
PFUnA 1



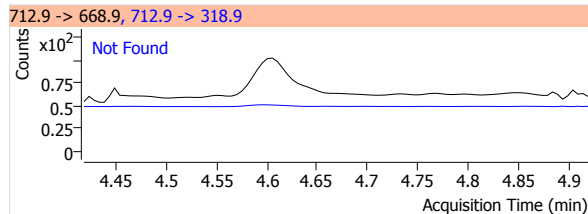
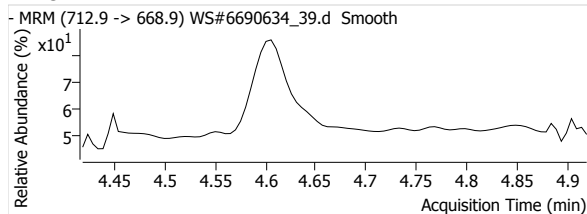
PFDaA 1



PFTrDA 1

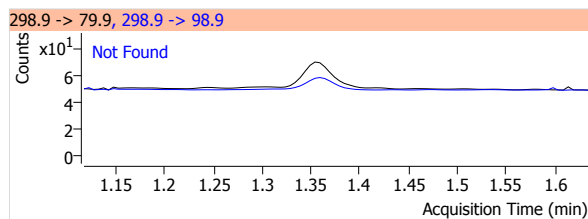
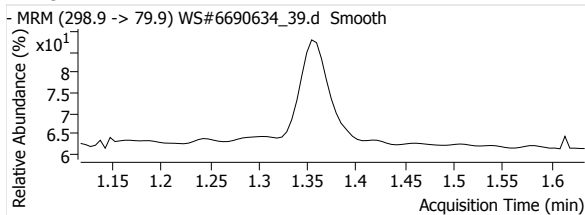


PFTeDA 1

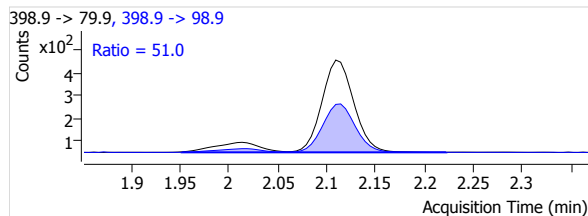
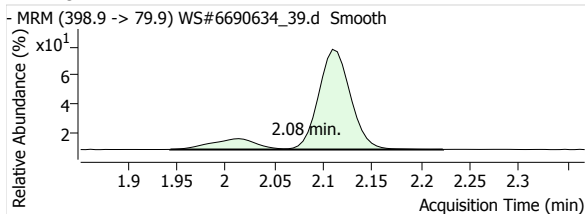


Quantitative Analysis Report

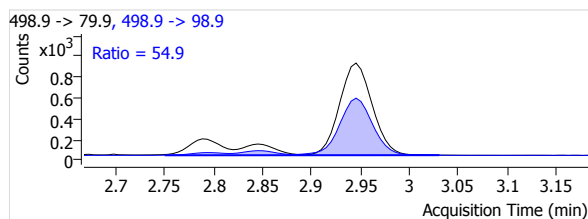
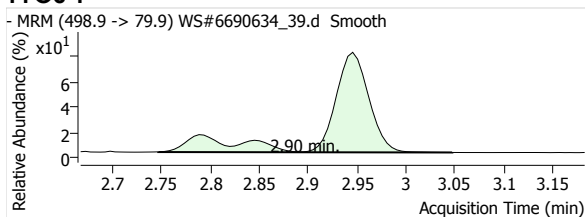
PFBS 1



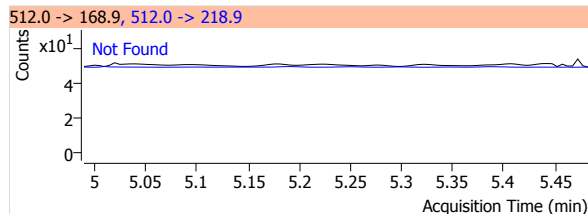
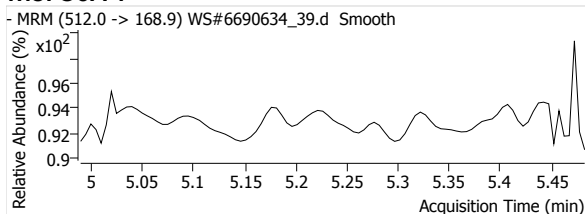
PFHxS 1



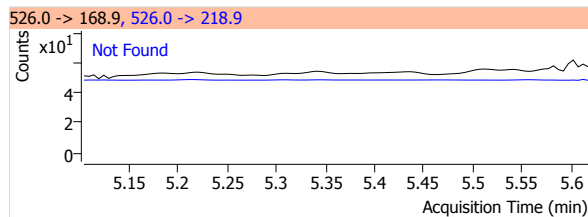
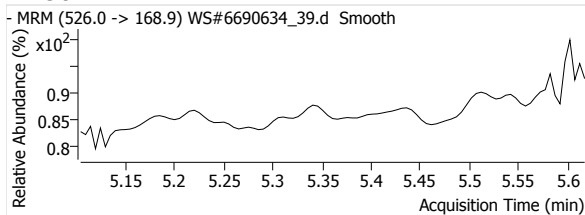
PFOS 1



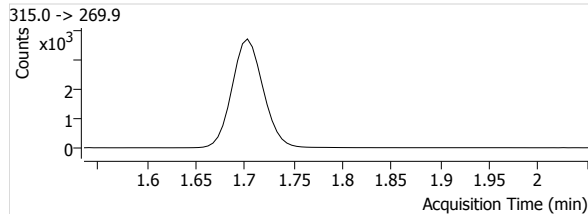
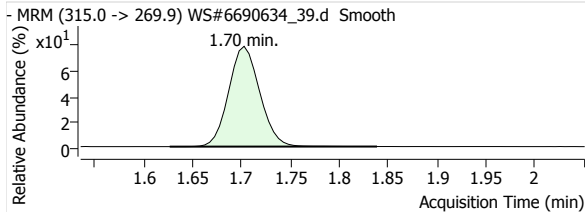
MeFOSA 1



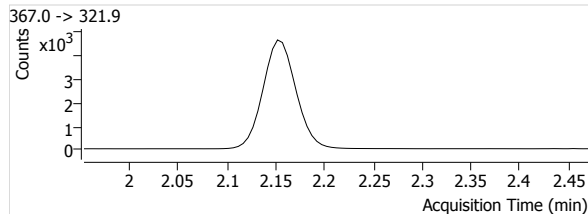
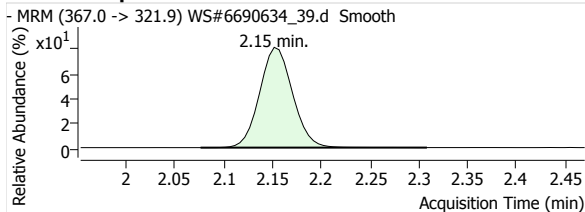
eFOSA 1



13C2-PFHxA

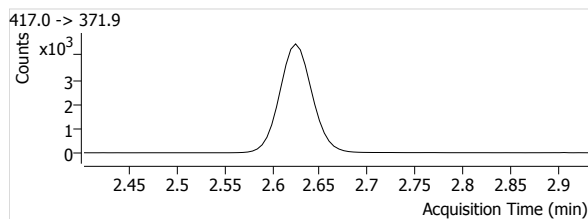
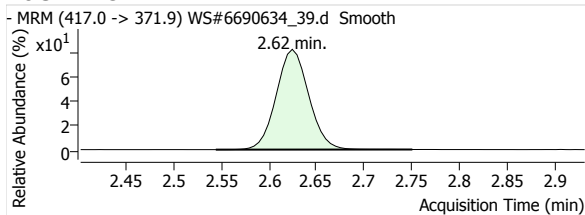


13C4-PFHpA

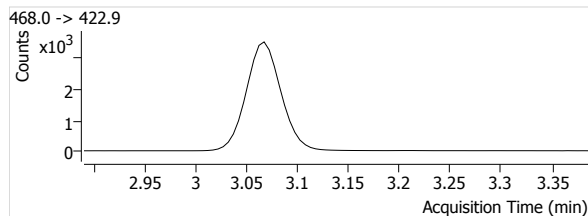
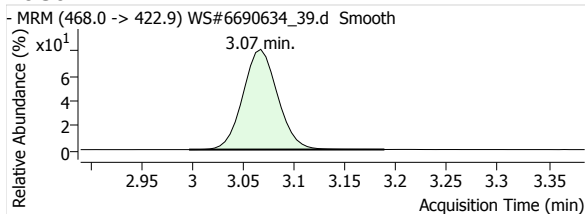


Quantitative Analysis Report

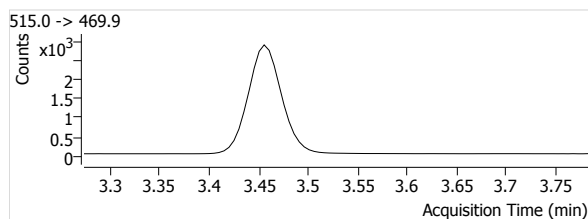
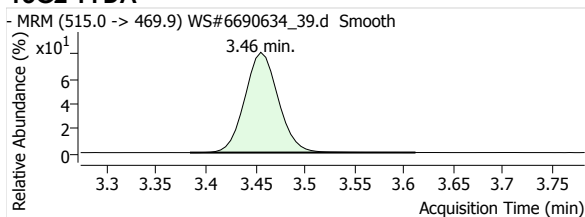
13C4-PFOA



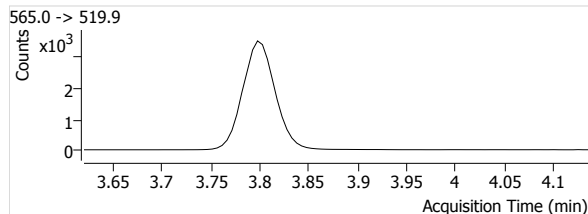
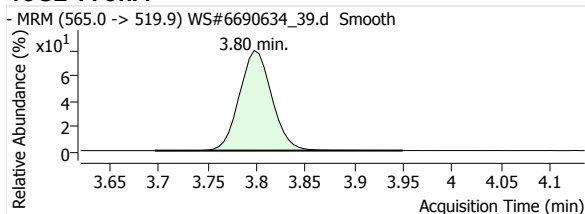
13C5-PFNA



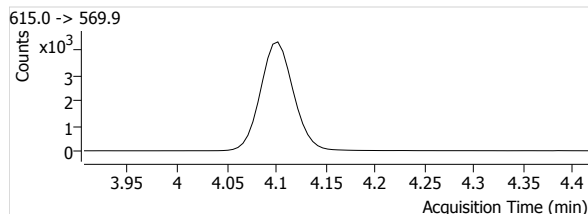
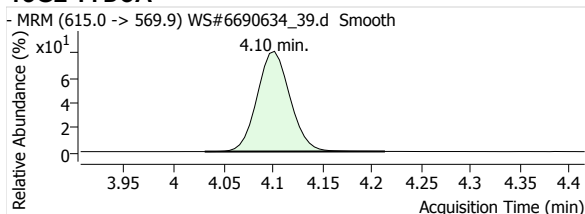
13C2-PFDA



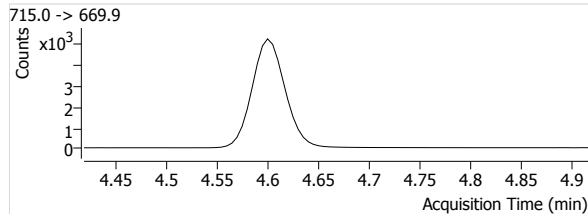
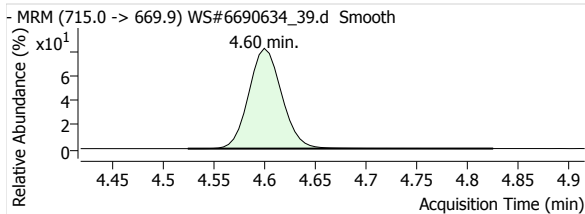
13C2-PFUnA



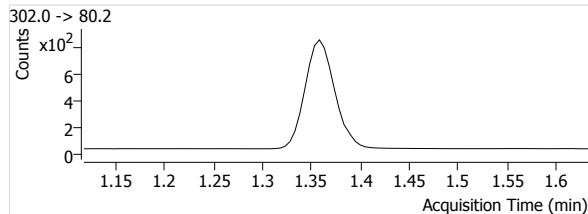
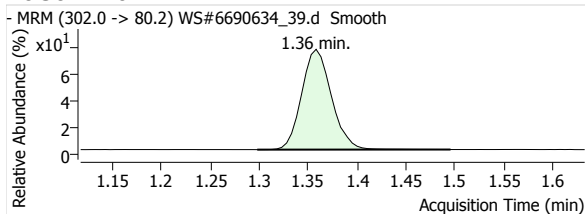
13C2-PFDoA



13C2-PFTeDA

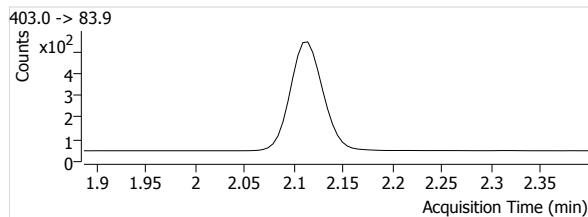
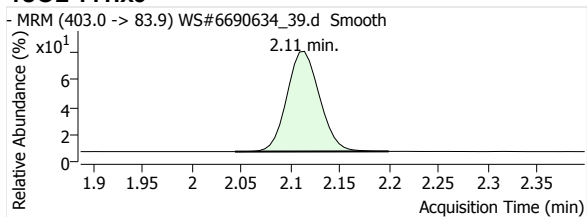


13C3-PFBS

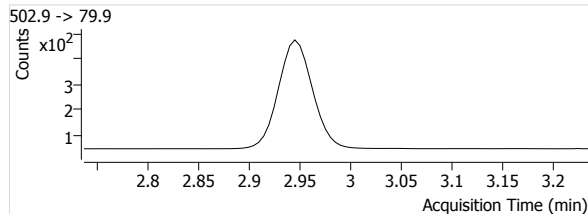
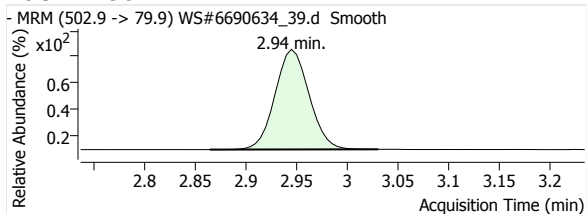


Quantitative Analysis Report

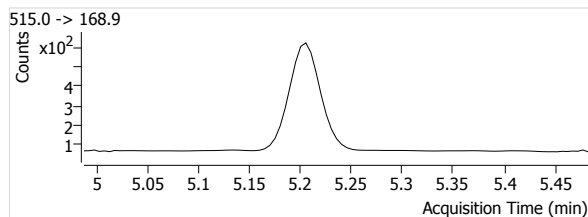
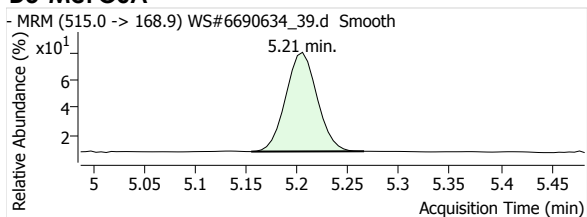
18O2-PFHxs



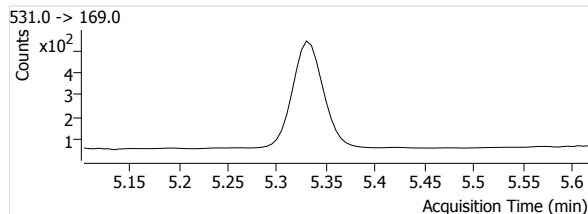
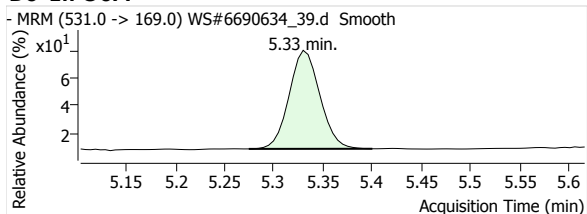
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



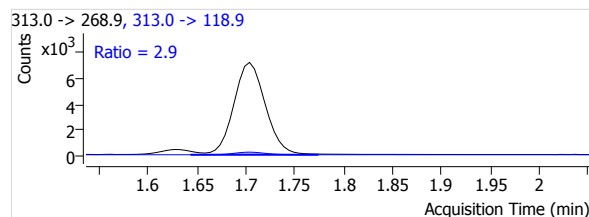
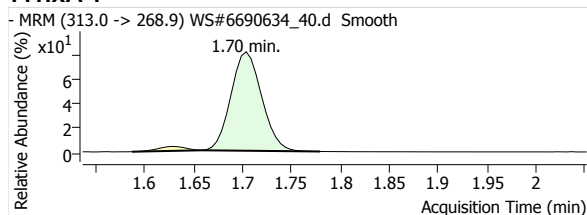
Quantitative Analysis Report

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bin

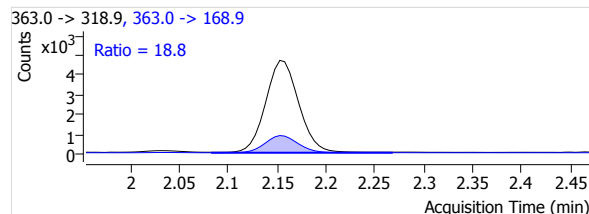
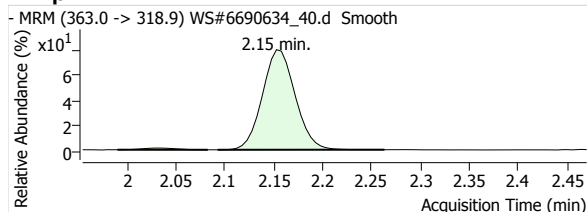
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Type	Sample	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-D3
Acq. Date-Time	2020/04/22 2:31:22 AM	Dil.	0.0
Comment	Reported for all except PFHxS & PFOS.		
User Defined	MI PFOA		

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	0.2948	--	15512	1.70	58153	2.2166	455	1.70	5203	2.9
PFHpA 1	µg/L	--	0.1588	--	10868	2.15	16065	1.1282	2044	2.15	8767	18.8
PFOA 1	µg/L	--	0.2100	--	13563	2.63	177021	1.4873	3491	2.63	39268	25.7
PFNA 1	µg/L	--	0.0256	--	1639	3.07	2644	0.2225	315	3.07	4106	19.2
PFDA 1	µg/L	--	0.0000	--	256	3.46	225	0.0415	46	3.46	381	18.0
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.0263	--	310	1.36	713	0.2042	152	1.36	906	49.0
PFHxS 1	µg/L	--	1.1193	--	8003	2.08	33828	8.0921	4310	2.09	57616	53.9
PFOS 1	µg/L	--	3.5039	--	19902	2.90	80719	22.4119	11111	2.89	52684	55.8
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	99.6298	--	6998	1.70	705	--	--	--	--	--
13C4-PFHpA	µg/L	--	99.6689	--	9633	2.15	1191	--	--	--	--	--
13C4-PFOA	µg/L	--	94.6445	--	9119	2.62	1564	--	--	--	--	--
13C5-PFNA	µg/L	--	97.3823	--	7366	3.07	620	--	--	--	--	--
13C2-PFDA	µg/L	--	94.3093	--	6165	3.46	1057	--	--	--	--	--
13C2-PFUnA	µg/L	--	93.5227	--	7277	3.80	557	--	--	--	--	--
13C2-PFDaA	µg/L	--	90.4301	--	9147	4.10	1426	--	--	--	--	--
13C2-PFTeDA	µg/L	--	90.4545	--	11343	4.60	1983	--	--	--	--	--
13C3-PFBS	µg/L	--	98.3798	--	1518	1.36	184	--	--	--	--	--
18O2-PFHxS	µg/L	--	97.3425	--	989	2.11	1192	--	--	--	--	--
13C4-PFOS	µg/L	--	92.2118	--	888	2.94	271	--	--	--	--	--
D3-MeFOSA	µg/L	--	64.2123	--	1561	5.21	101	--	--	--	--	--
D5-EtFOSA	µg/L	--	64.5963	--	1352	5.33	78	--	--	--	--	--

PFHxA 1

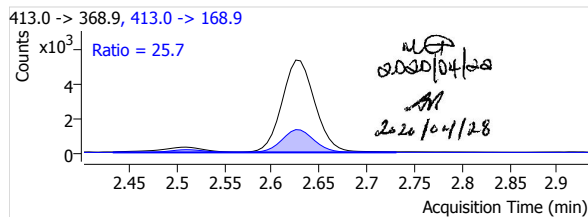
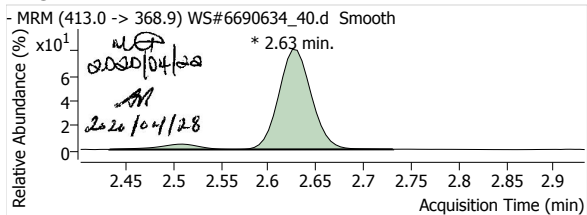


PFHpA 1

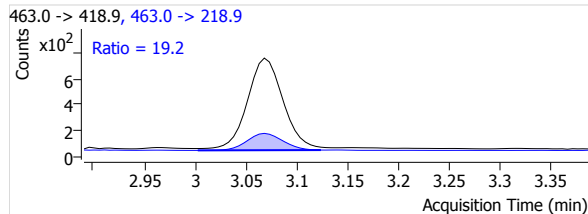
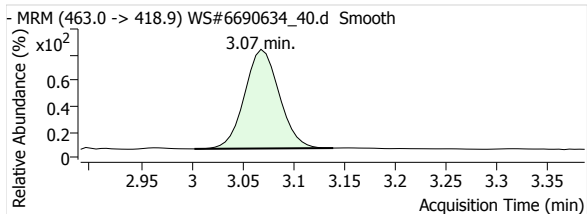


Quantitative Analysis Report

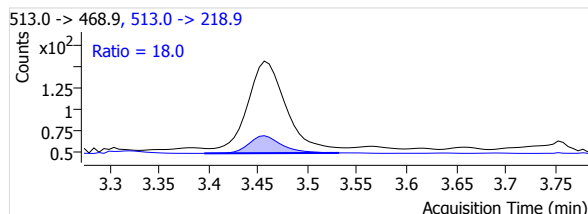
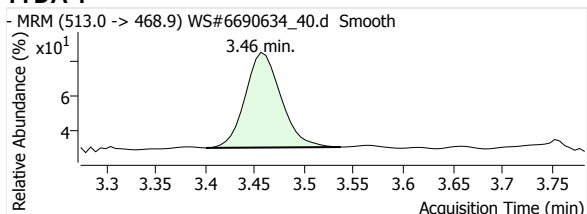
PFOA 1



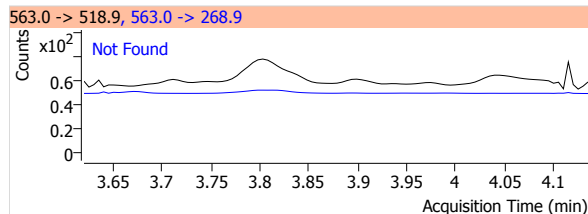
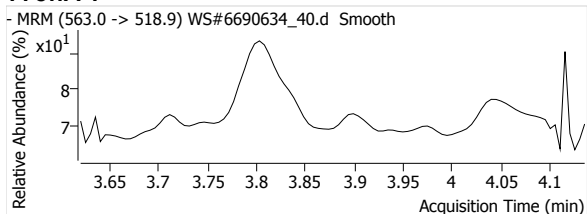
PFNA 1



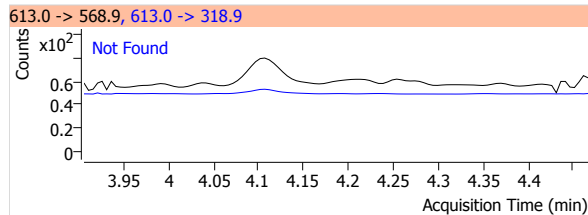
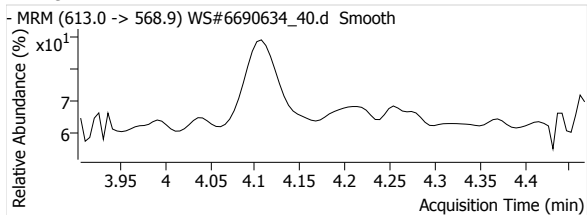
PFDA 1



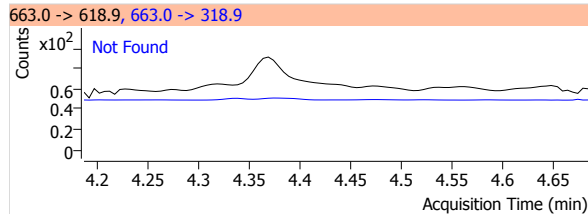
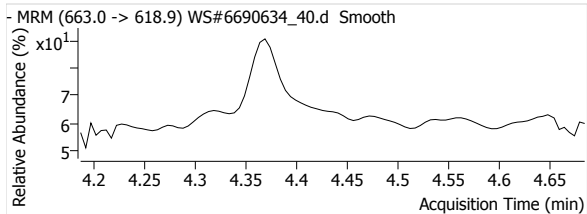
PFUnA 1



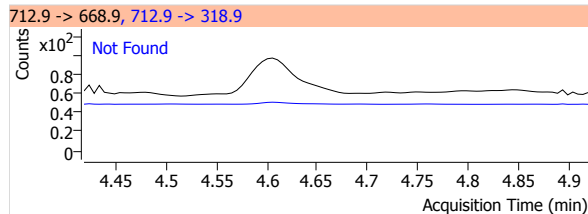
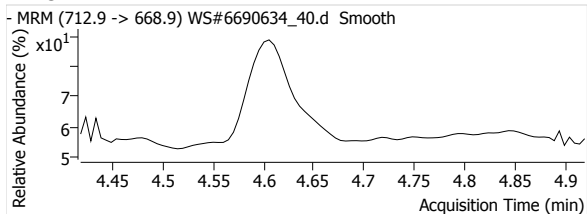
PFDoA 1



PFTrDA 1

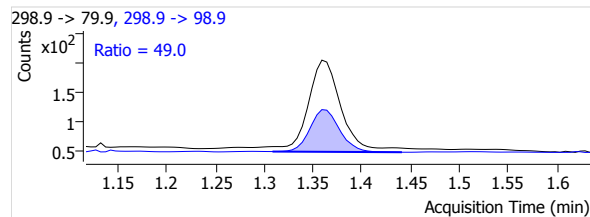
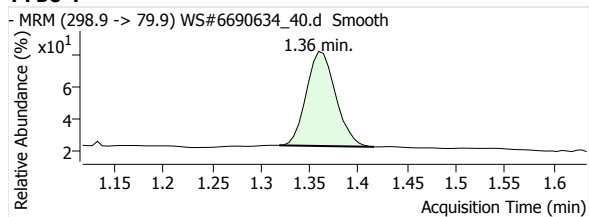


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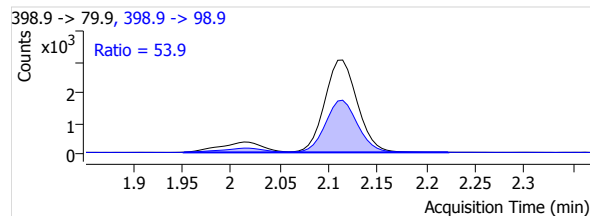
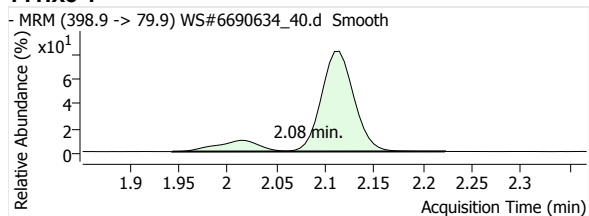


Quantitative Analysis Report

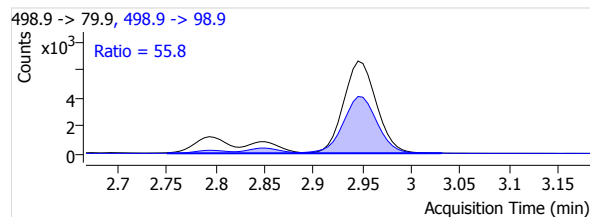
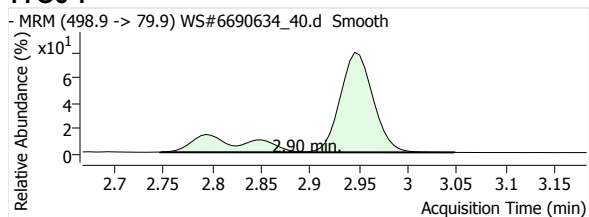
PFBS 1



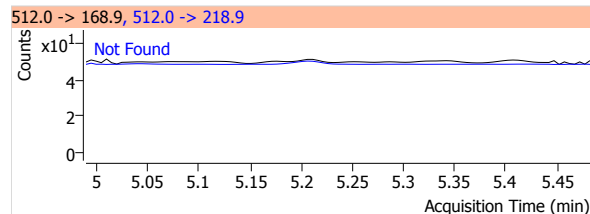
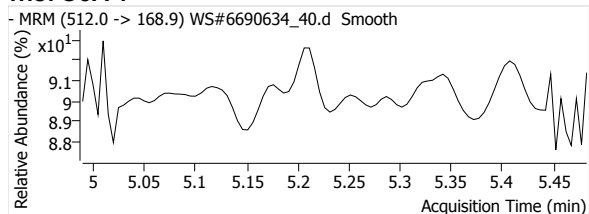
PFHxS 1



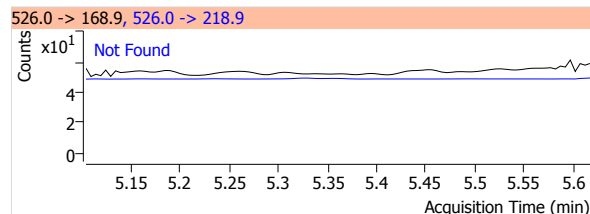
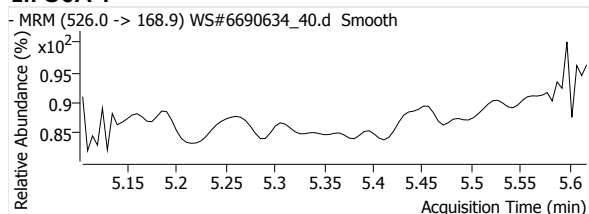
PFOS 1



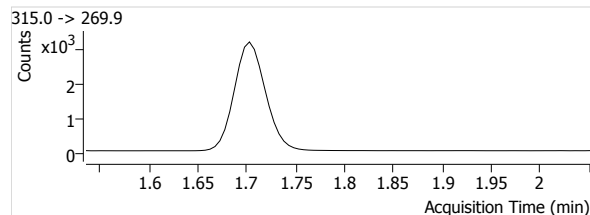
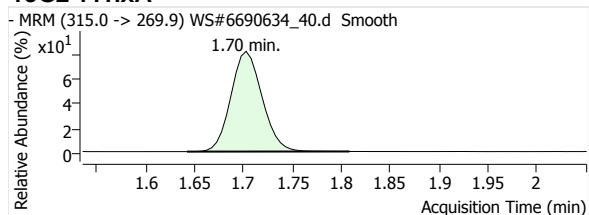
MeFOSA 1



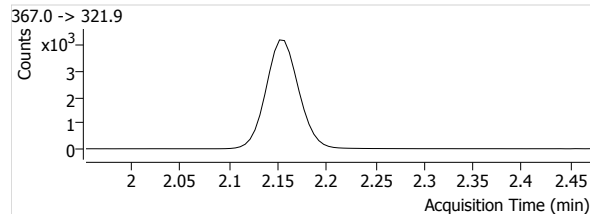
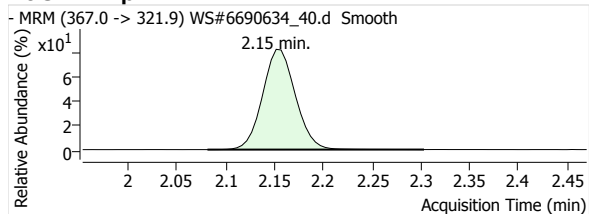
eFOSA 1



13C2-PFHxA

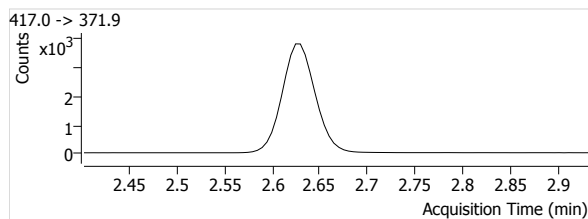
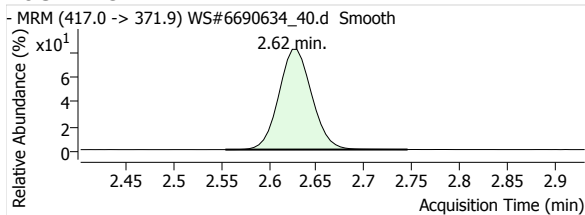


13C4-PFHpA

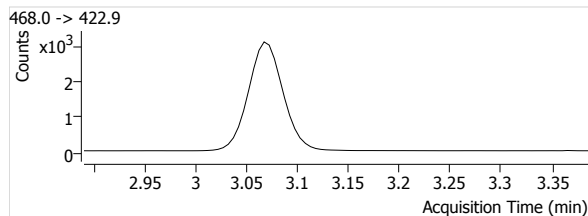
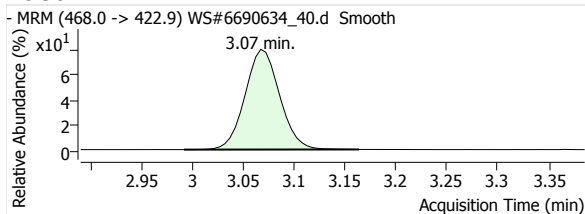


Quantitative Analysis Report

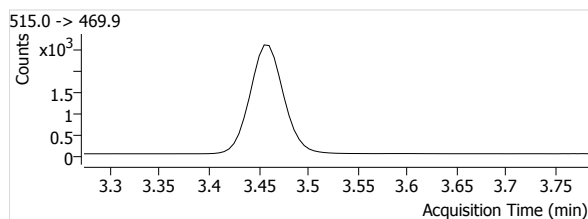
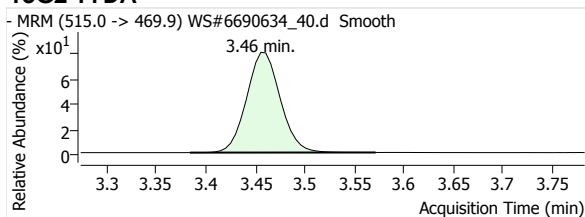
13C4-PFOA



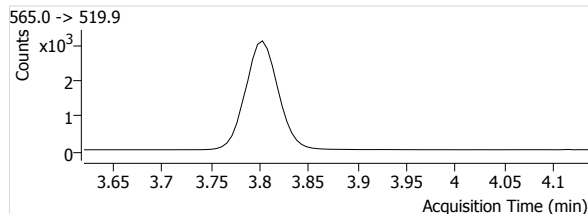
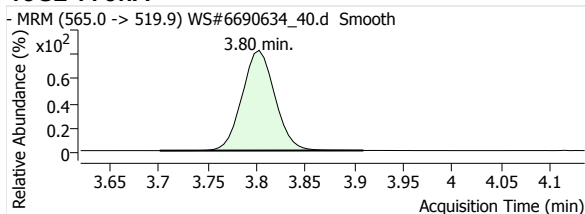
13C5-PFNA



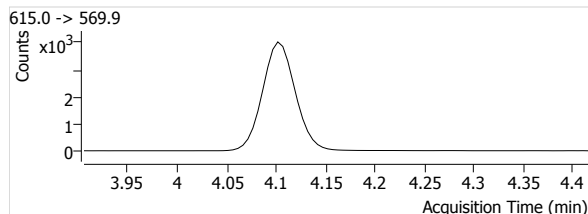
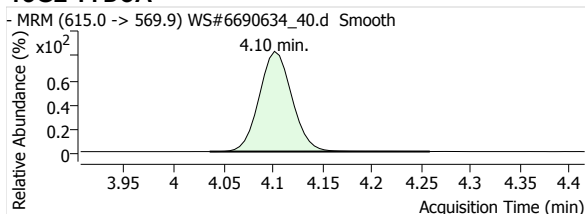
13C2-PFDA



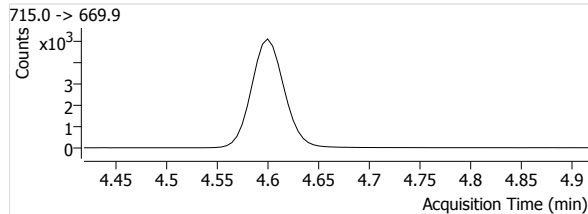
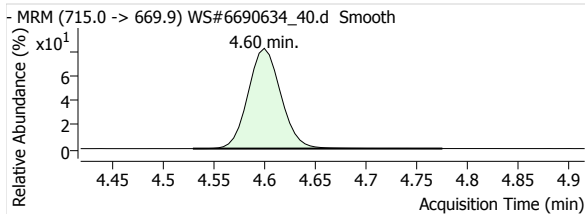
13C2-PFUnA



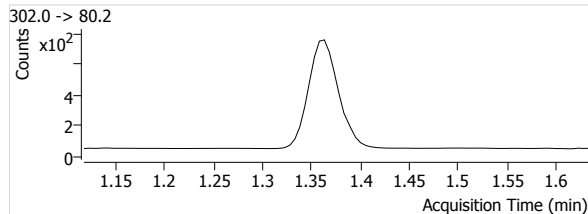
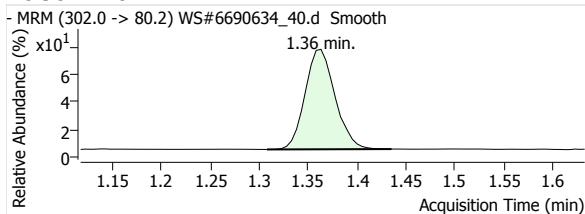
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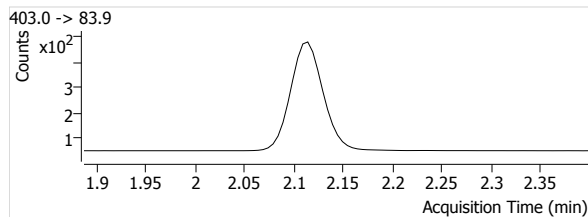
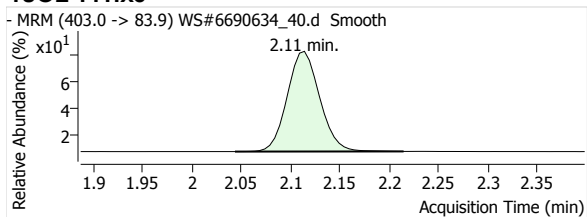


13C3-PFBS

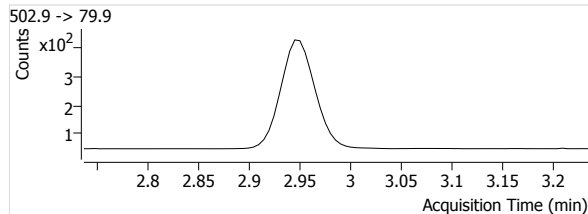
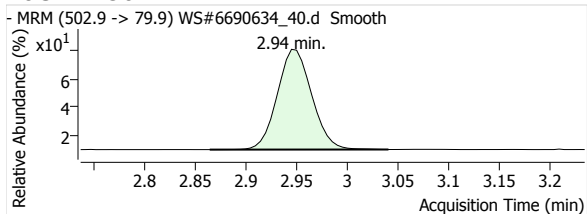


Quantitative Analysis Report

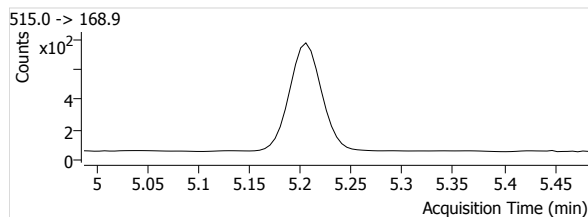
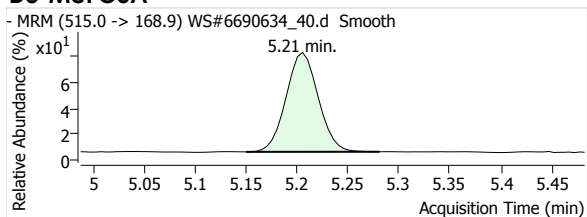
18O2-PFHxS



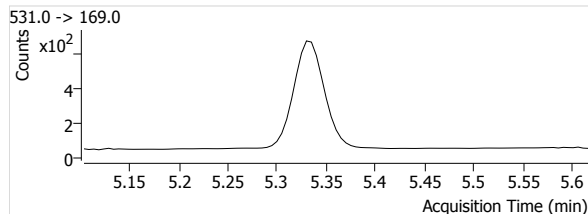
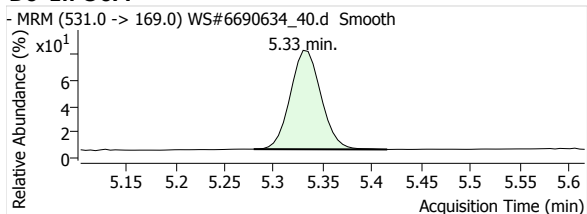
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



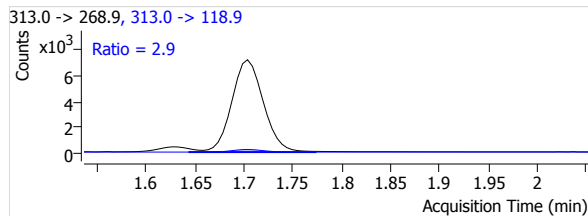
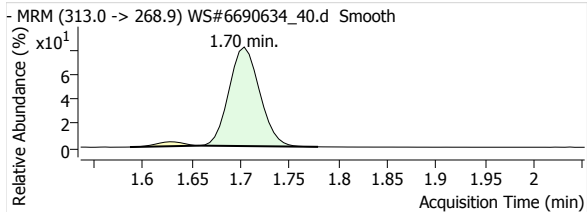
Quantitative Analysis Report

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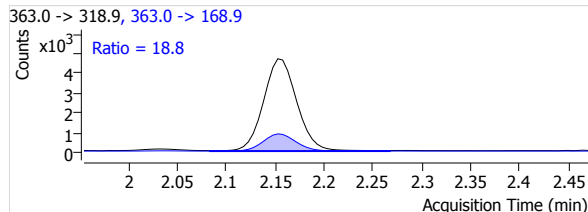
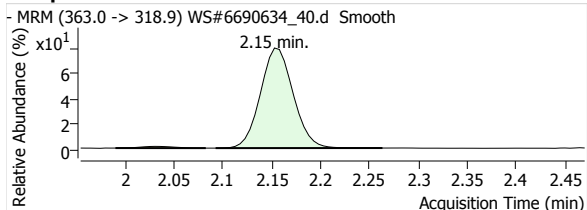
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Type	Sample	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-D3
Acq. Date-Time	2020/04/22 2:31:22 AM	Dil.	0.0
Comment	Reported for all except PFHxS & PFOS.		
User Defined	MI PFOA		

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	0.2948	--	15512	1.70	58153	2.2166	455	1.70	5203	2.9
PFHpA 1	µg/L	--	0.1588	--	10868	2.15	16065	1.1282	2044	2.15	8767	18.8
PFOA 1	µg/L	--	0.1947	--	12600	2.63	176923	1.3817	3078	2.63	39244	24.4
PFNA 1	µg/L	--	0.0256	--	1639	3.07	2644	0.2225	315	3.07	4106	19.2
PFDA 1	µg/L	--	0.0000	--	256	3.46	225	0.0415	46	3.46	381	18.0
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.0263	--	310	1.36	713	0.2042	152	1.36	906	49.0
PFHxS 1	µg/L	--	1.1184	--	8003	2.08	33828	8.0921	4310	2.09	57616	53.9
PFOS 1	µg/L	--	3.5039	--	19902	2.90	80719	22.4119	11111	2.89	52684	55.8
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	99.6298	--	6998	1.70	705	--	--	--	--	--
13C4-PFHpA	µg/L	--	99.6689	--	9633	2.15	1191	--	--	--	--	--
13C4-PFOA	µg/L	--	94.6445	--	9119	2.62	1564	--	--	--	--	--
13C5-PFNA	µg/L	--	97.3823	--	7366	3.07	620	--	--	--	--	--
13C2-PFDA	µg/L	--	94.3093	--	6165	3.46	1057	--	--	--	--	--
13C2-PFUnA	µg/L	--	93.5227	--	7277	3.80	557	--	--	--	--	--
13C2-PFDoA	µg/L	--	90.4301	--	9147	4.10	1426	--	--	--	--	--
13C2-PFTeDA	µg/L	--	90.4545	--	11343	4.60	1983	--	--	--	--	--
13C3-PFBS	µg/L	--	98.3798	--	1518	1.36	184	--	--	--	--	--
18O2-PFHxS	µg/L	--	97.3425	--	989	2.11	1192	--	--	--	--	--
13C4-PFOS	µg/L	--	92.2118	--	888	2.94	271	--	--	--	--	--
D3-MeFOSA	µg/L	--	64.2123	--	1561	5.21	101	--	--	--	--	--
D5-EtFOSA	µg/L	--	64.5963	--	1352	5.33	78	--	--	--	--	--

PFHxA 1

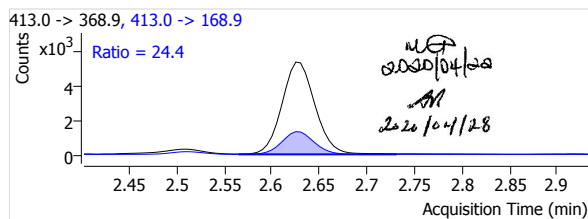
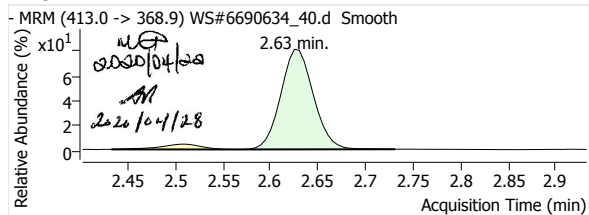


PFHpA 1

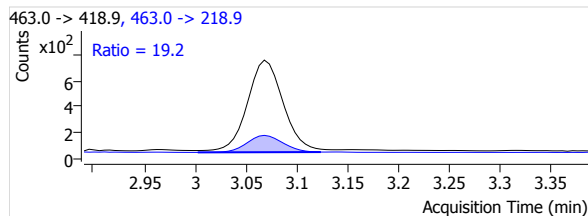
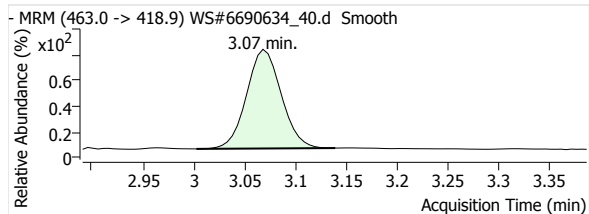


Quantitative Analysis Report

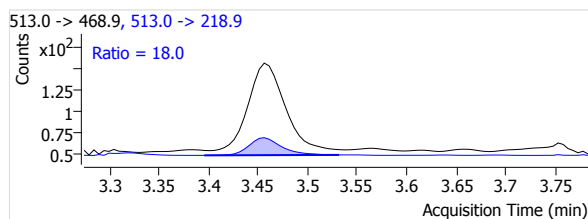
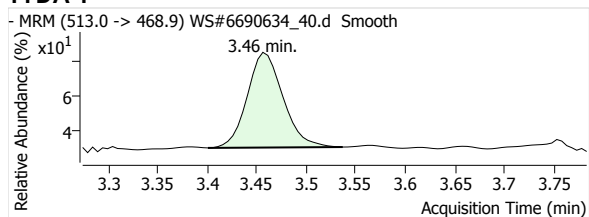
PFOA 1



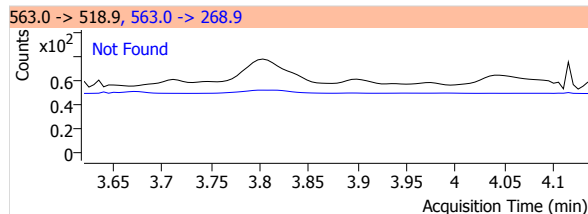
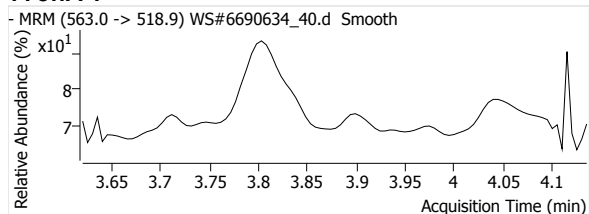
PFNA 1



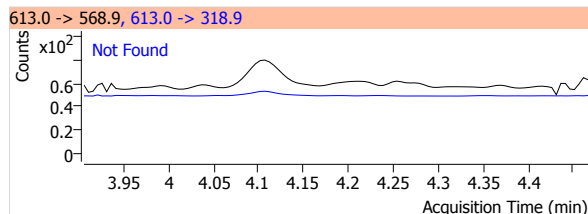
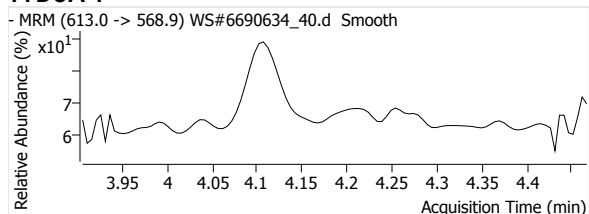
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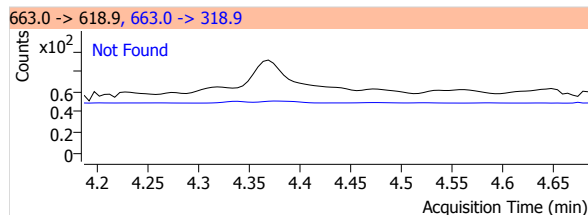
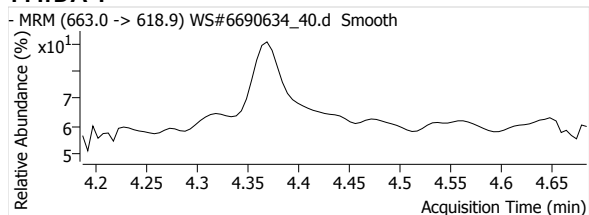
PFUnA 1



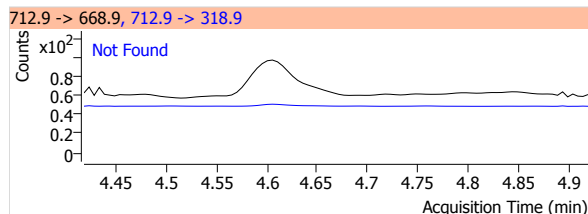
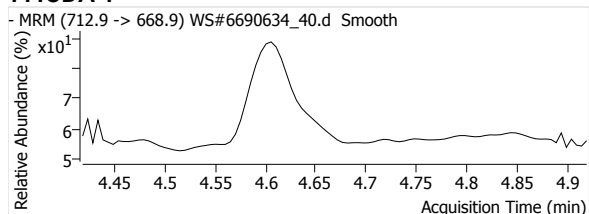
PFDoA 1



PFTrDA 1

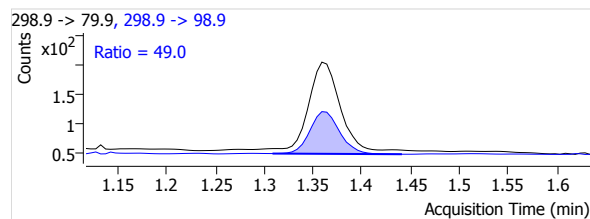
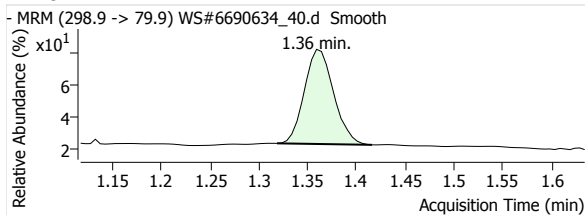


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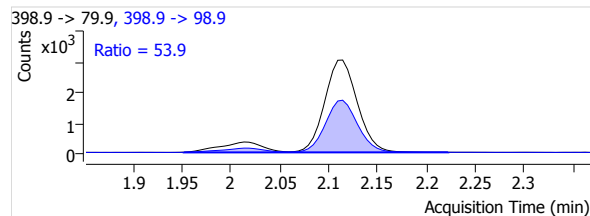
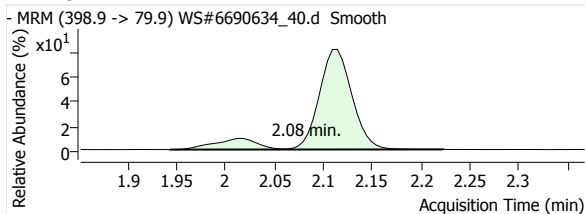


Quantitative Analysis Report

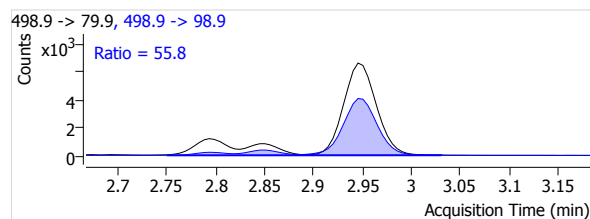
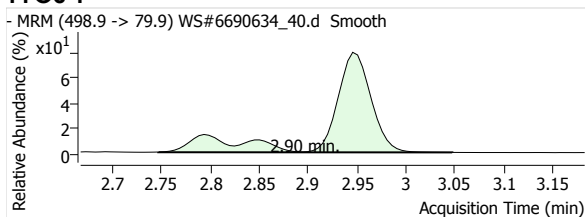
PFBS 1



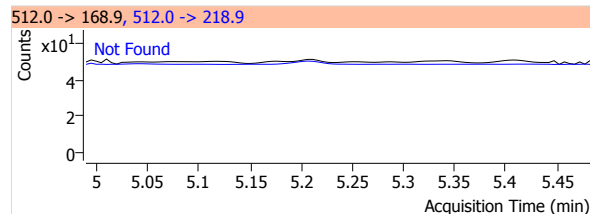
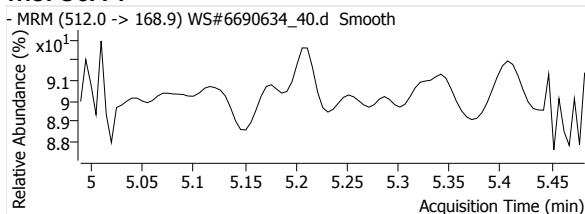
PFHxS 1



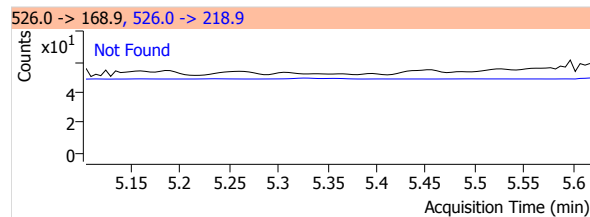
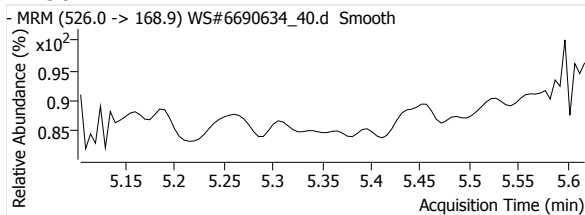
PFOS 1



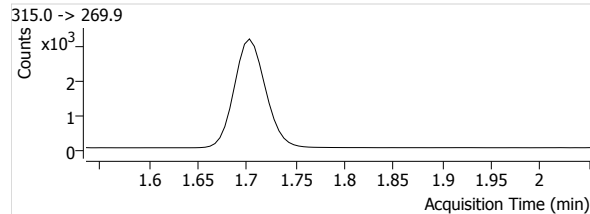
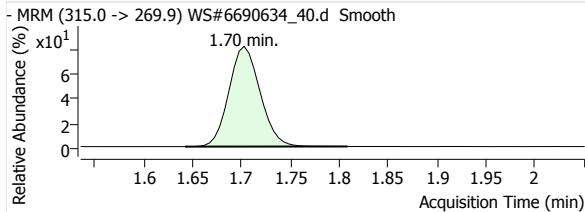
MeFOSA 1



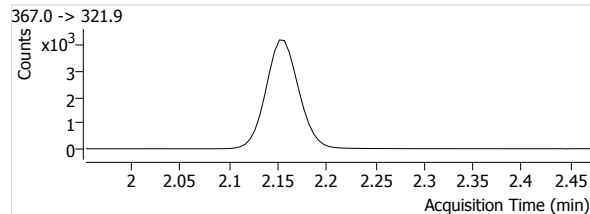
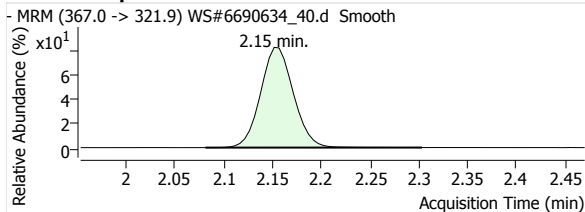
eFOSA 1



13C2-PFHxA

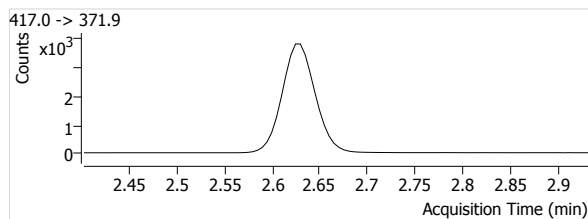
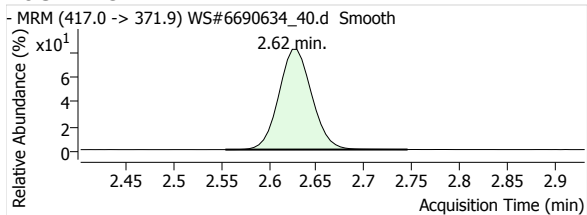


13C4-PFHpA

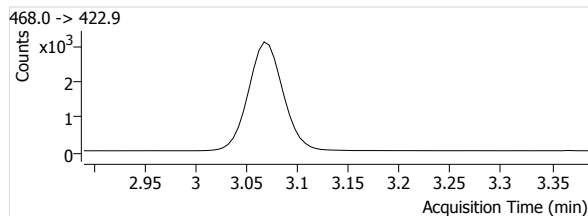
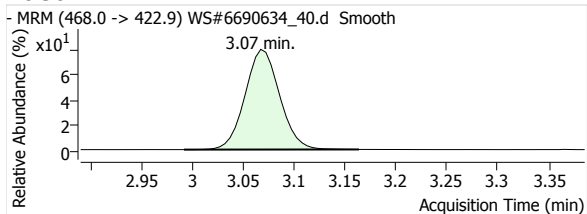


Quantitative Analysis Report

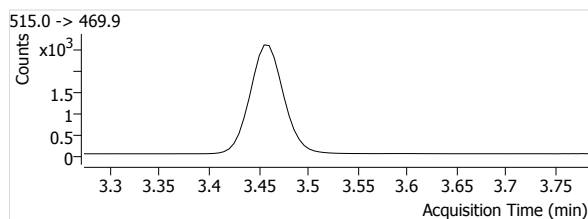
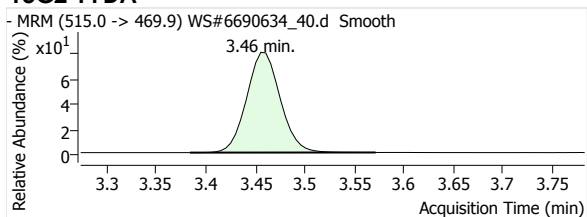
13C4-PFOA



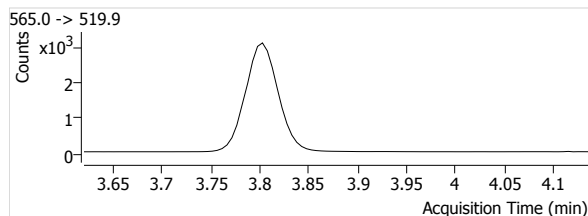
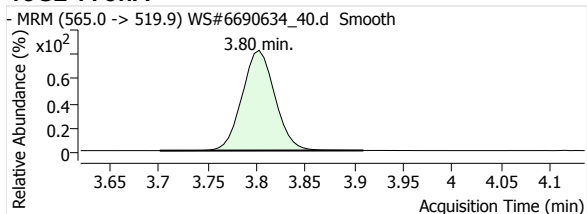
13C5-PFNA



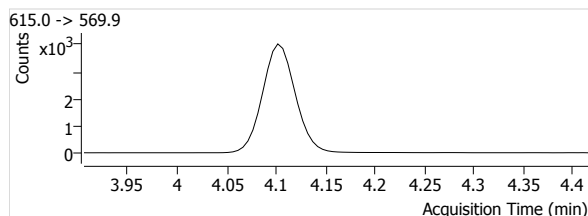
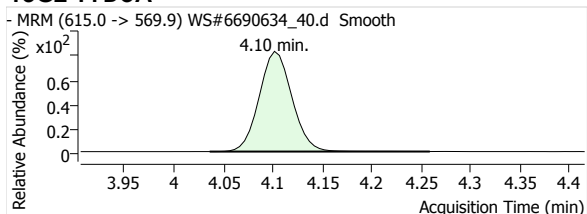
13C2-PFDA



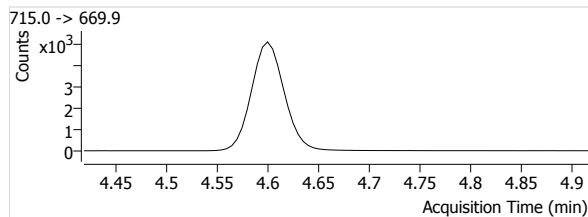
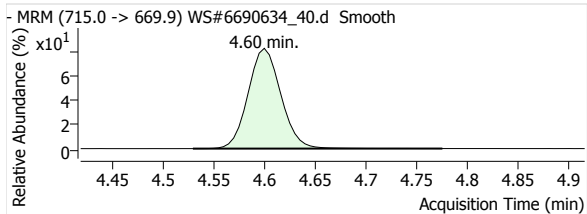
13C2-PFUnA



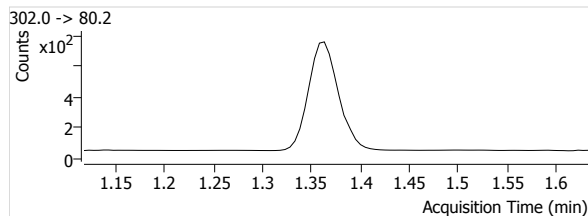
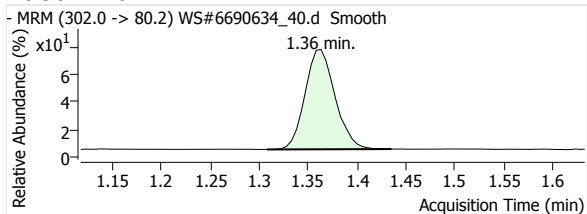
13C2-PFDoA



13C2-PFTeDA

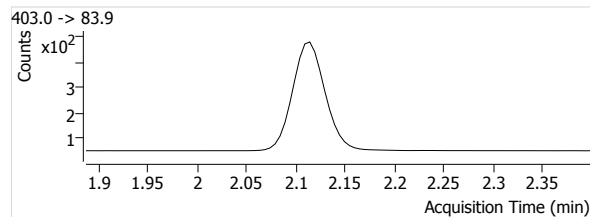
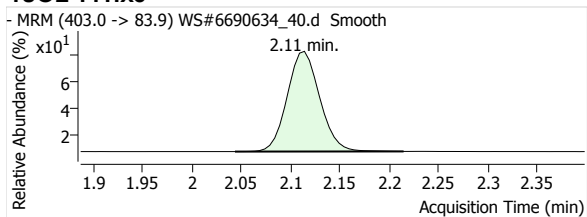


13C3-PFBS

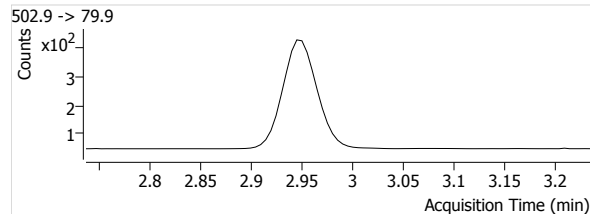
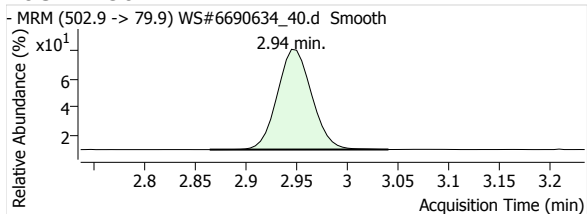


Quantitative Analysis Report

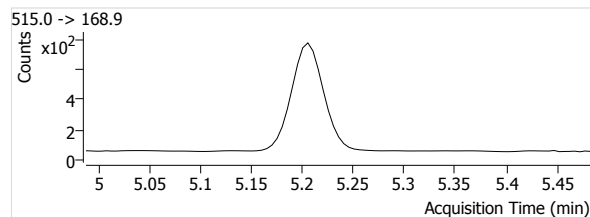
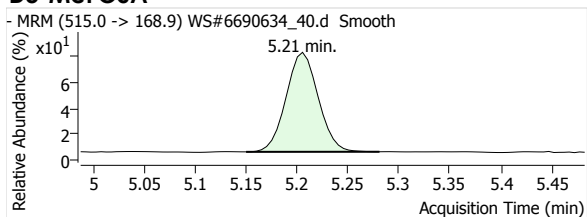
18O2-PFHxS



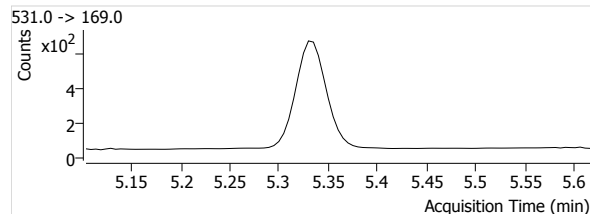
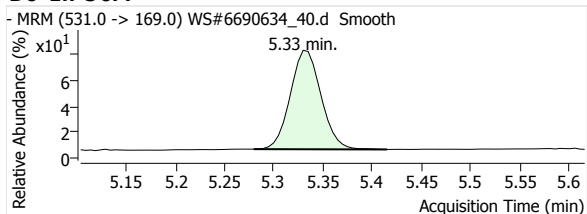
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

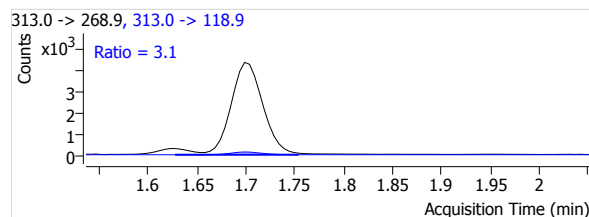
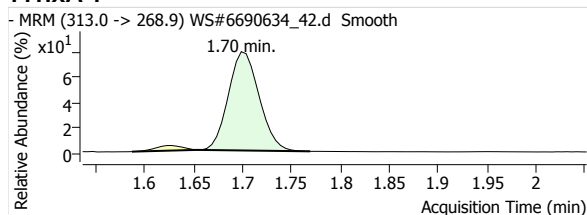
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Sample Name 6690634:MLP505-01
Type Sample
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/22 2:45:16 AM
Comment -
User Defined MI PFOA

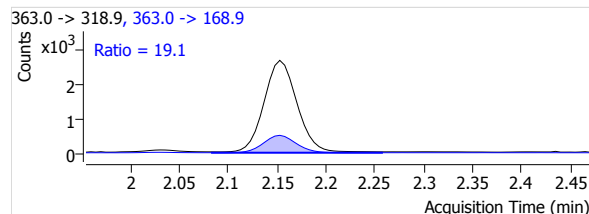
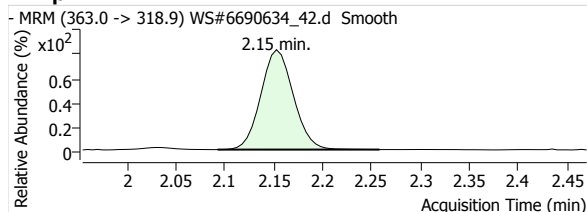
Data File WS#6690634_42.d
Instrument LCMS04
Position P1-D4
Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	0.1585	--	9296	1.70	5875	1.2079	286	1.70	2310	3.1
PFHpA 1	µg/L	--	0.0783	--	6023	2.15	12781	0.5748	1152	2.15	4719	19.1
PFOA 1	µg/L	--	0.0812	--	6104	2.63	4888	0.5944	1565	2.63	7994	25.6
PFNA 1	µg/L	--	0.0030	--	520	3.07	278	0.0634	122	3.07	998	23.5
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.0146	--	216	1.36	216	0.1303	111	1.36	437	51.4
PFHxS 1	µg/L	--	0.5842	--	4729	2.08	13847	4.2453	2380	2.09	15744	50.3
PFOS 1	µg/L	--	0.7744	--	4884	2.90	40250	4.9883	2673	2.89	9901	54.7
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	109.5672	--	7696	1.70	1187	--	--	--	--	--
13C4-PFHpA	µg/L	--	108.4118	--	10478	2.15	1639	--	--	--	--	--
13C4-PFOA	µg/L	--	106.5906	--	10270	2.62	1188	--	--	--	--	--
13C5-PFNA	µg/L	--	108.4082	--	8200	3.07	1401	--	--	--	--	--
13C2-PFDA	µg/L	--	106.2414	--	6945	3.46	951	--	--	--	--	--
13C2-PFUnA	µg/L	--	104.8194	--	8156	3.80	1379	--	--	--	--	--
13C2-PFDaA	µg/L	--	98.2501	--	9938	4.10	1485	--	--	--	--	--
13C2-PFTeDA	µg/L	--	95.6300	--	11992	4.60	2257	--	--	--	--	--
13C3-PFBS	µg/L	--	107.4530	--	1658	1.36	198	--	--	--	--	--
18O2-PFHxS	µg/L	--	109.6457	--	1114	2.11	572	--	--	--	--	--
13C4-PFOS	µg/L	--	101.6615	--	979	2.95	445	--	--	--	--	--
D3-MeFOSA	µg/L	--	73.5500	--	1788	5.21	131	--	--	--	--	--
D5-EtFOSA	µg/L	--	74.4386	--	1558	5.33	105	--	--	--	--	--

PFHxA 1

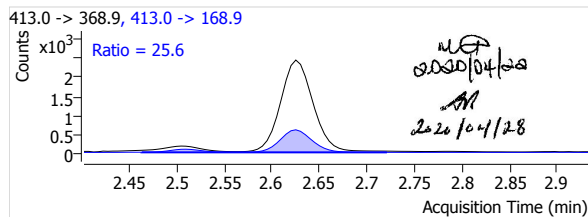
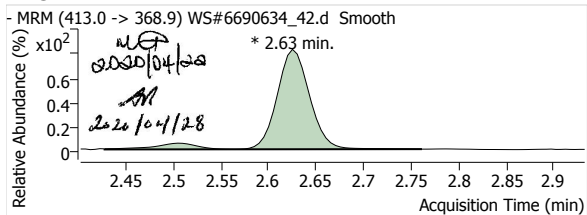


PFHpA 1

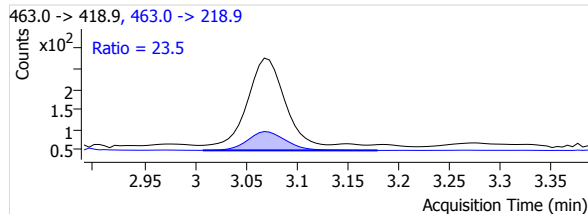
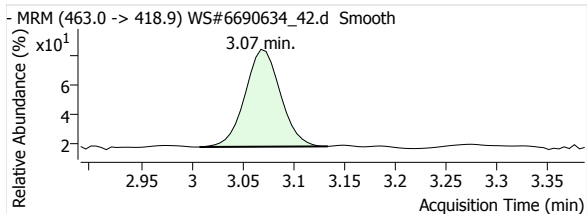


Quantitative Analysis Report

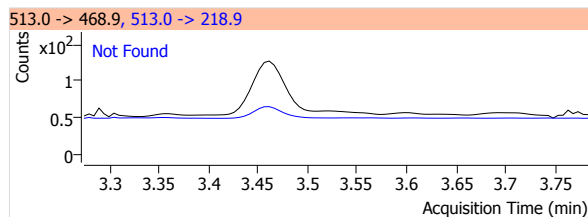
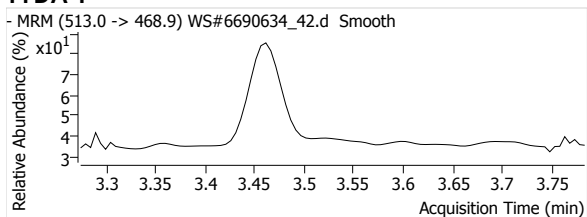
PFOA 1



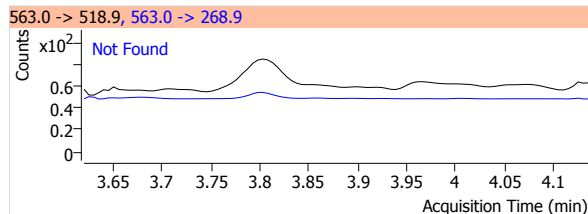
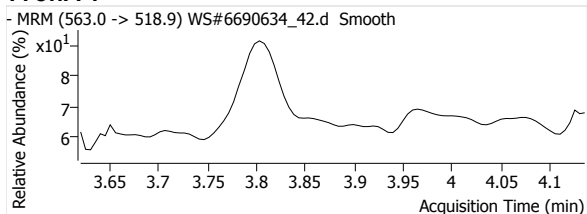
PFNA 1



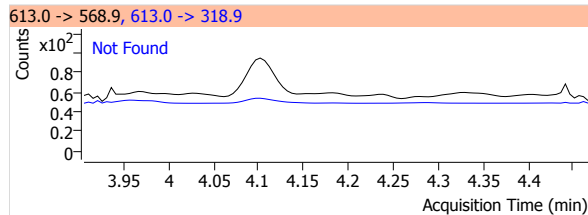
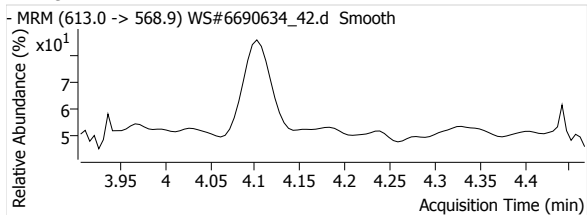
PFDA 1



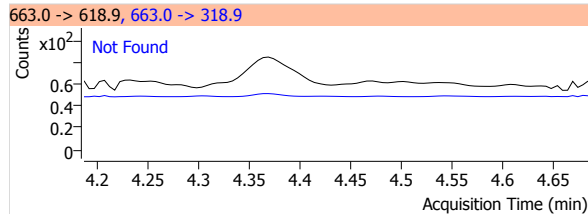
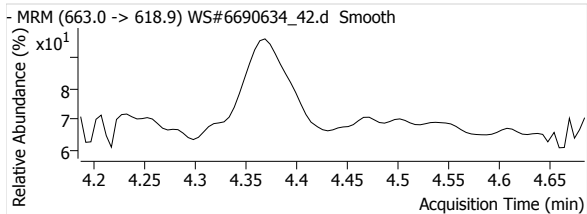
PFUnA 1



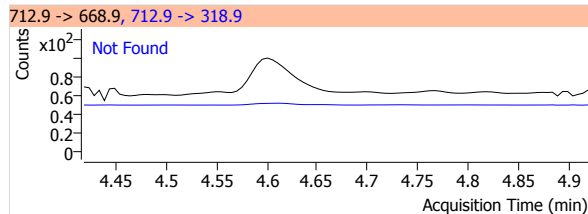
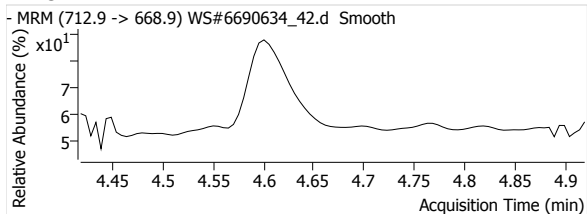
PFDoA 1



PFTrDA 1

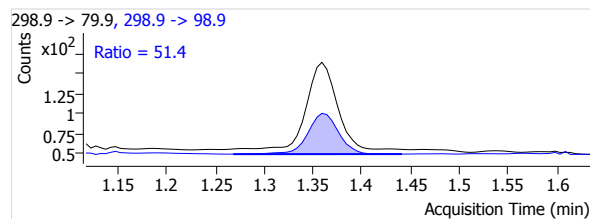
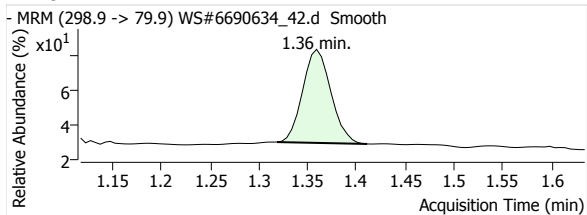


PFTeDA 1

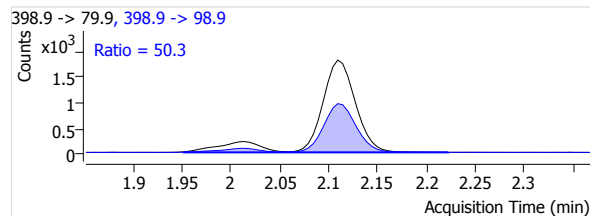
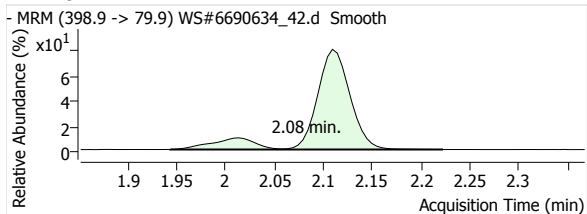


Quantitative Analysis Report

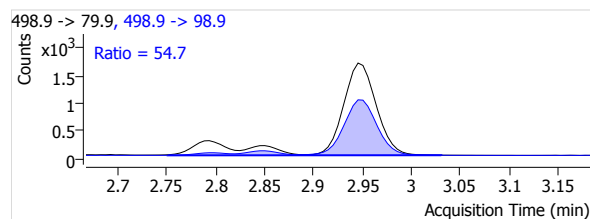
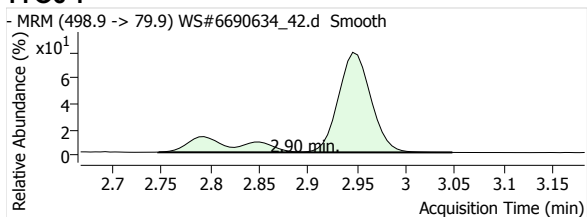
PFBS 1



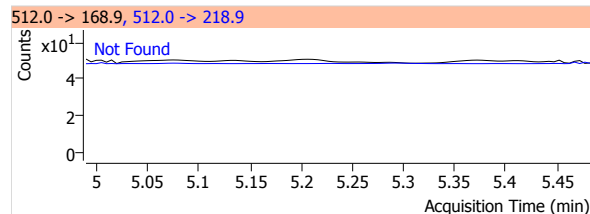
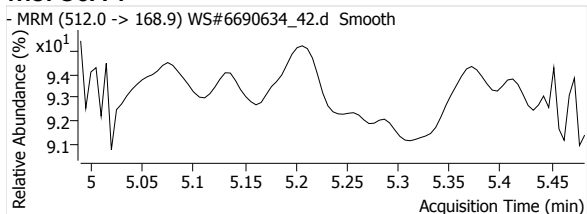
PFHxS 1



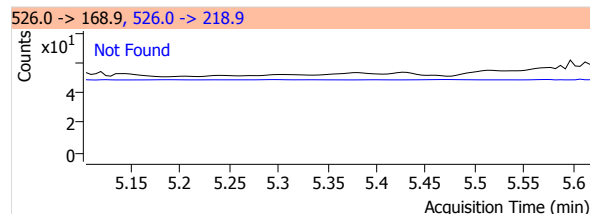
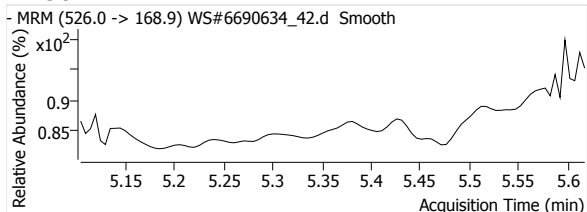
PFOS 1



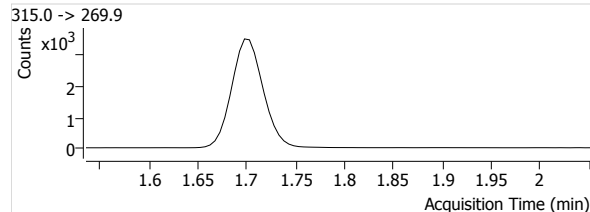
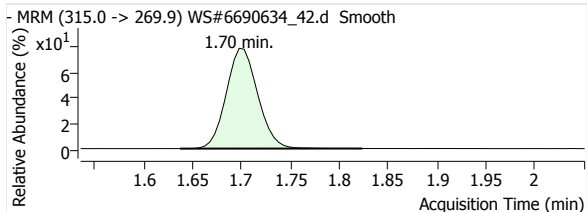
MeFOSA 1



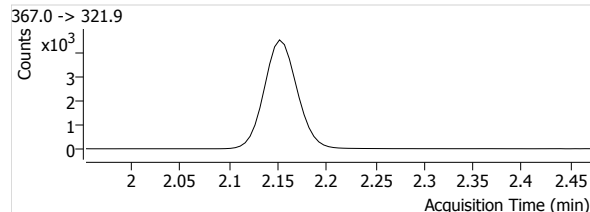
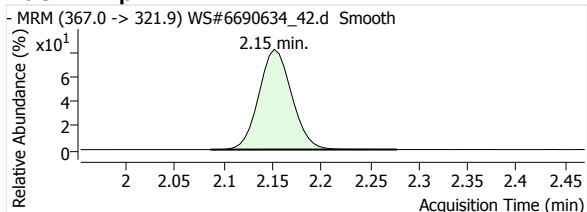
eFOSA 1



13C2-PFHxA

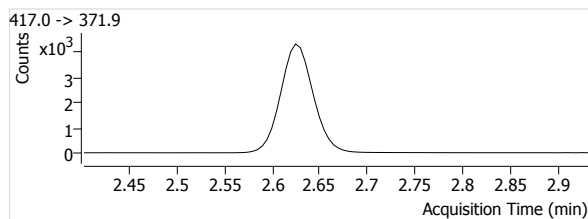
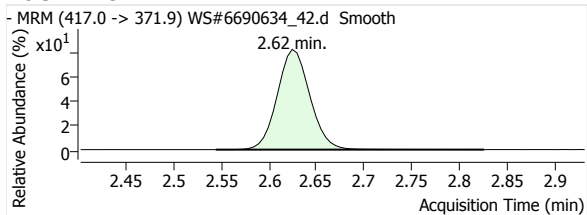


13C4-PFHpA

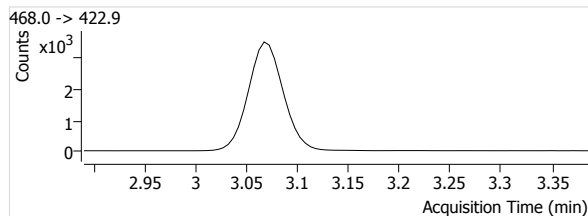
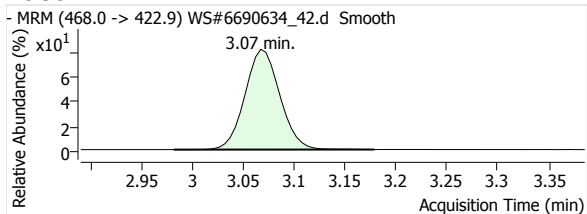


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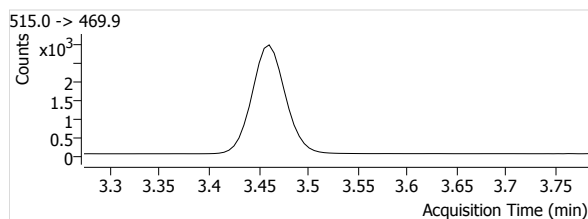
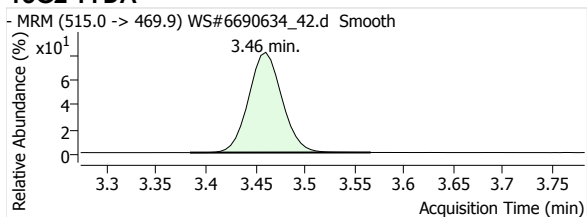
13C4-PFOA



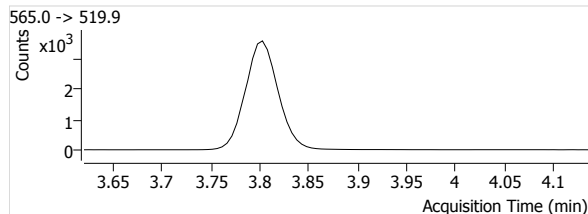
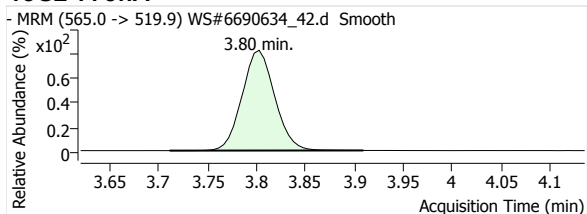
13C5-PFNA



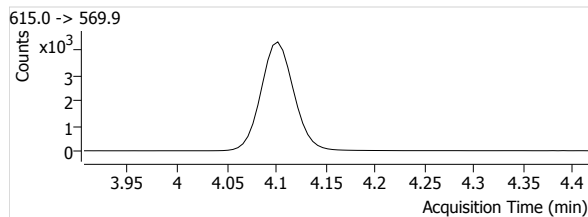
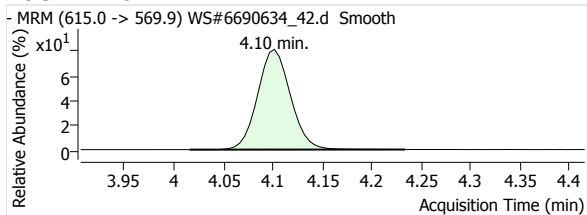
13C2-PFDA



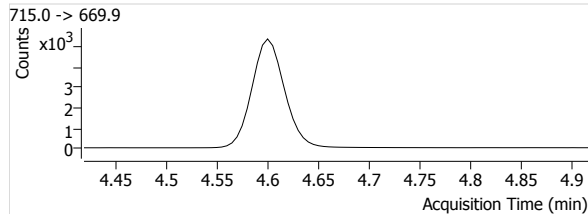
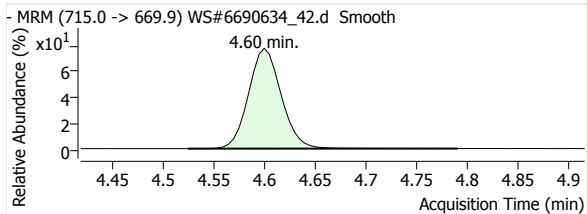
13C2-PFUnA



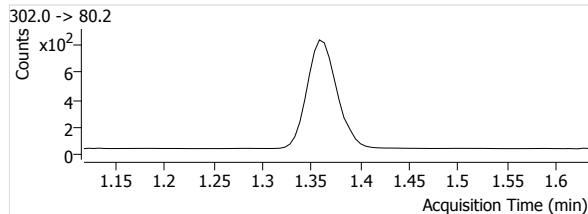
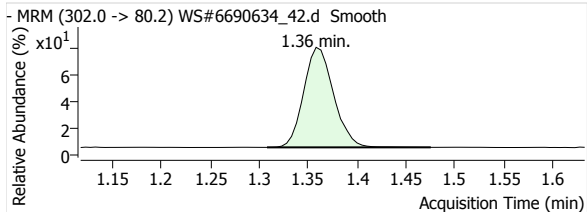
13C2-PFDoA



13C2-PFTeDA

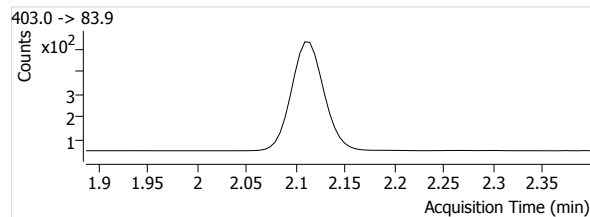
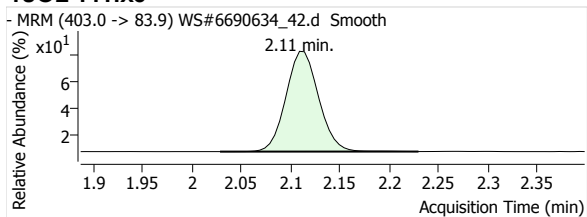


13C3-PFBS

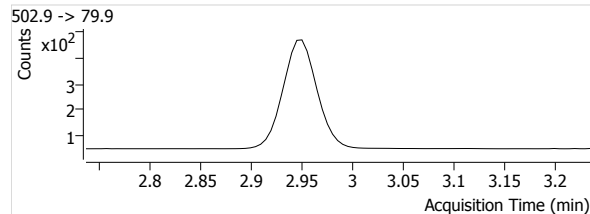
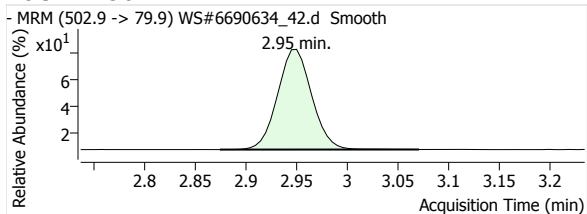


Quantitative Analysis Report

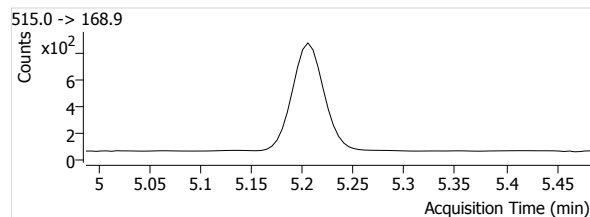
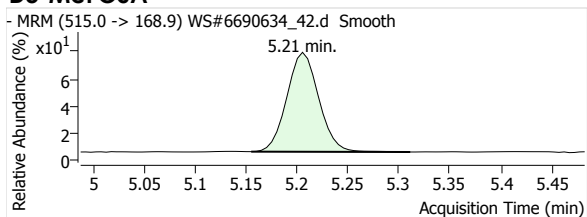
18O2-PFHxS



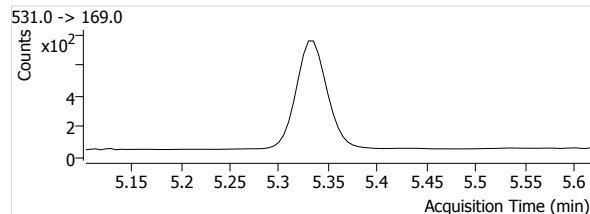
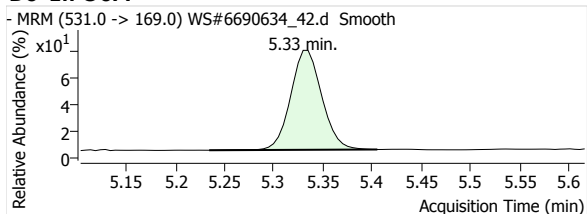
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

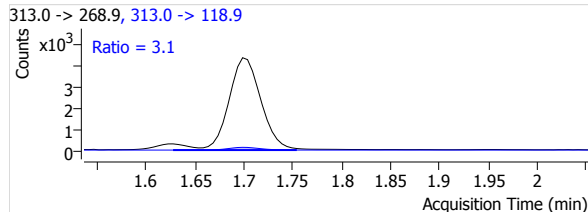
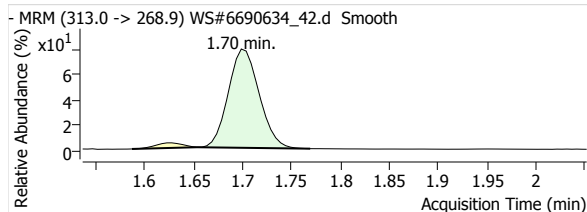
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Sample Name 6690634:MLP505-01
 Type Sample
 Acq. Method File PFAS.m
 Acq. Date-Time 2020/04/22 2:45:16 AM
 Comment -
 User Defined MI PFOA

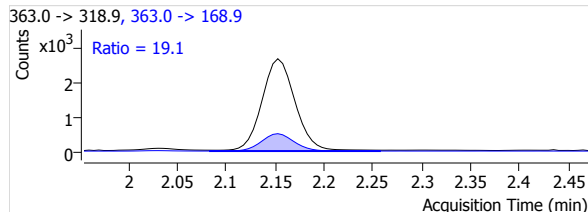
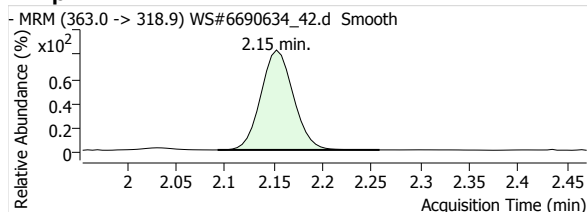
Data File WS#6690634_42.d
 Instrument LCMS04
 Position P1-D4
 Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	0.1585	--	9296	1.70	5875	1.2079	286	1.70	2310	3.1
PFHpA 1	µg/L	--	0.0783	--	6023	2.15	12781	0.5748	1152	2.15	4719	19.1
PFOA 1	µg/L	--	0.0743	--	5614	2.63	4888	0.5466	1371	2.63	7993	24.4
PFNA 1	µg/L	--	0.0030	--	520	3.07	278	0.0634	122	3.07	998	23.5
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.0146	--	216	1.36	216	0.1303	111	1.36	437	51.4
PFHxS 1	µg/L	--	0.5841	--	4729	2.08	13847	4.2453	2380	2.09	15744	50.3
PFOS 1	µg/L	--	0.7744	--	4884	2.90	40250	4.9883	2673	2.89	9901	54.7
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	109.5672	--	7696	1.70	1187	--	--	--	--	--
13C4-PFHpA	µg/L	--	108.4118	--	10478	2.15	1639	--	--	--	--	--
13C4-PFOA	µg/L	--	106.5906	--	10270	2.62	1188	--	--	--	--	--
13C5-PFNA	µg/L	--	108.4082	--	8200	3.07	1401	--	--	--	--	--
13C2-PFDA	µg/L	--	106.2414	--	6945	3.46	951	--	--	--	--	--
13C2-PFUnA	µg/L	--	104.8194	--	8156	3.80	1379	--	--	--	--	--
13C2-PFDaA	µg/L	--	98.2501	--	9938	4.10	1485	--	--	--	--	--
13C2-PFTeDA	µg/L	--	95.6300	--	11992	4.60	2257	--	--	--	--	--
13C3-PFBS	µg/L	--	107.4530	--	1658	1.36	198	--	--	--	--	--
18O2-PFHxS	µg/L	--	109.6457	--	1114	2.11	572	--	--	--	--	--
13C4-PFOS	µg/L	--	101.6615	--	979	2.95	445	--	--	--	--	--
D3-MeFOSA	µg/L	--	73.5500	--	1788	5.21	131	--	--	--	--	--
D5-EtFOSA	µg/L	--	74.4386	--	1558	5.33	105	--	--	--	--	--

PFHxA 1

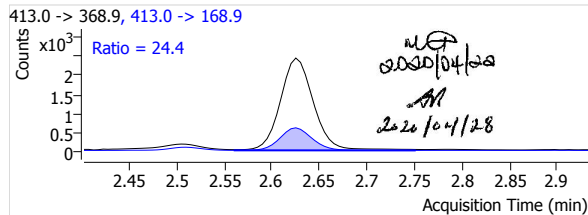
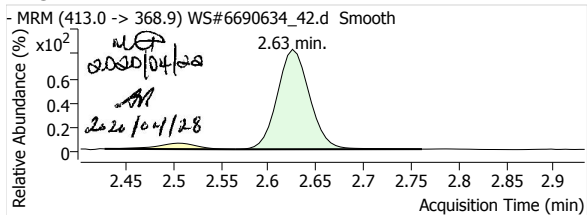


PFHpA 1

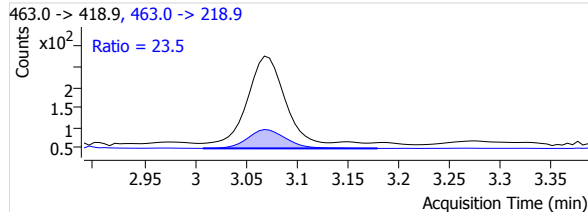
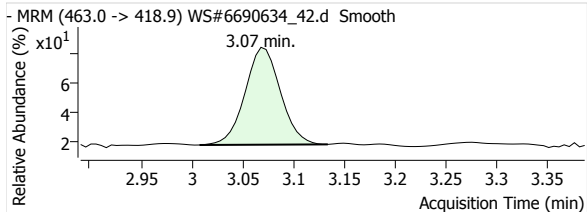


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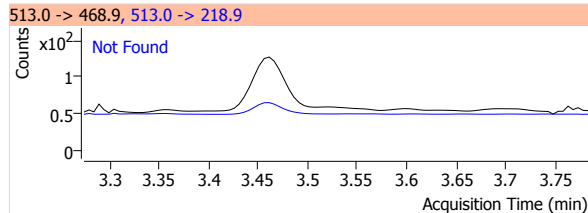
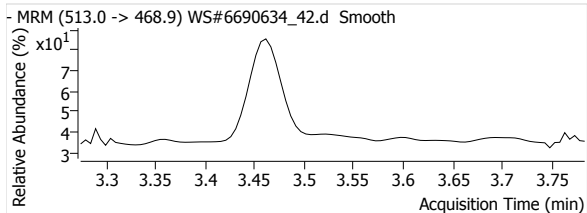
PFOA 1



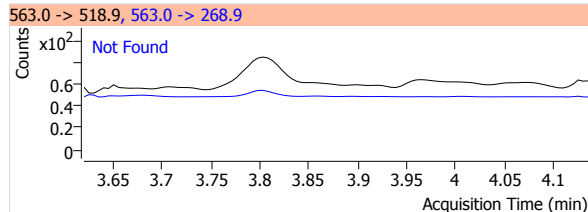
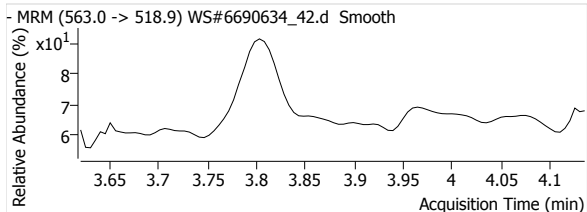
PFNA 1



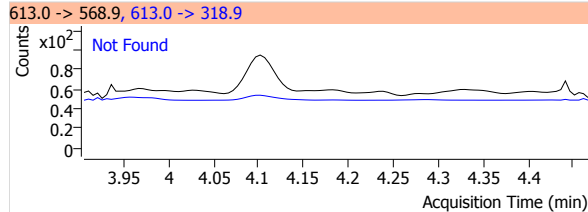
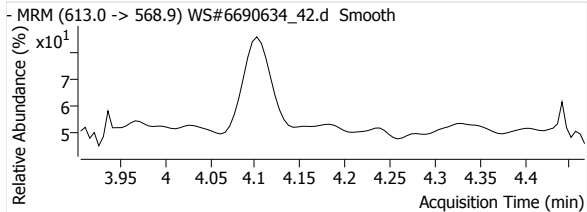
PFDA 1



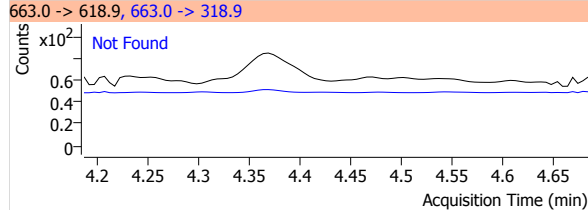
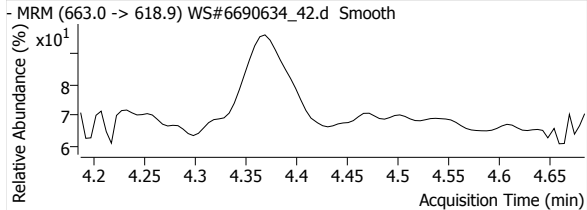
PFUnA 1



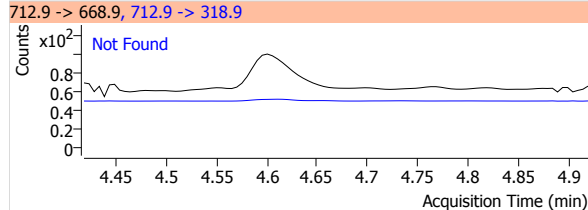
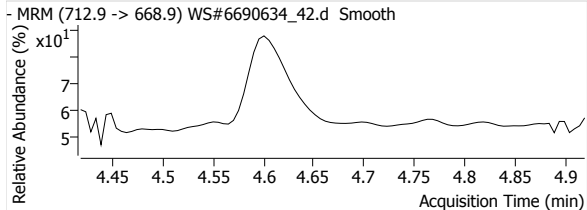
PFDoA 1



PFTrDA 1

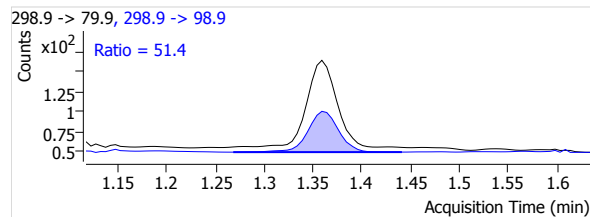
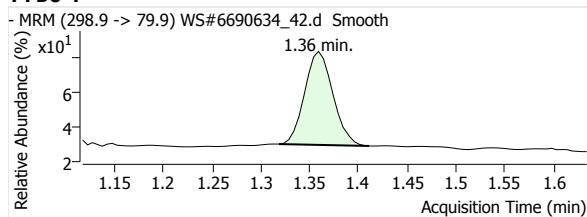


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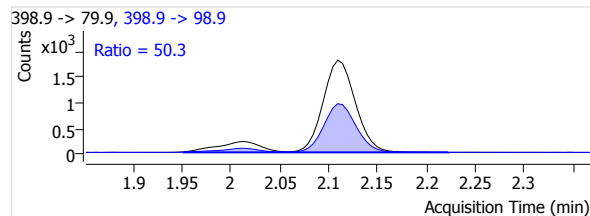
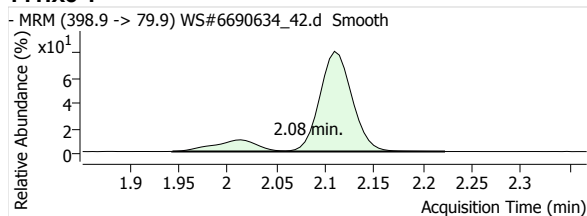


Quantitative Analysis Report

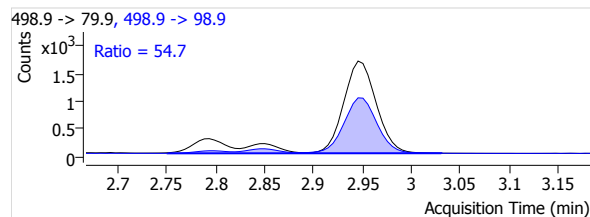
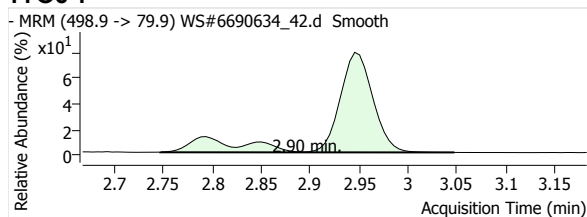
PFBS 1



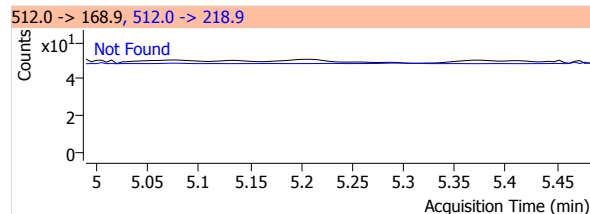
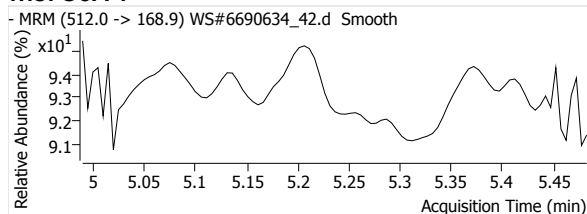
PFHxS 1



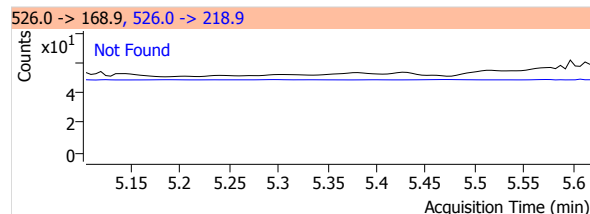
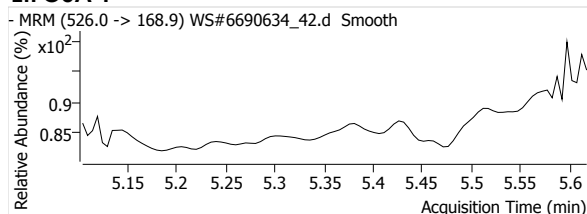
PFOS 1



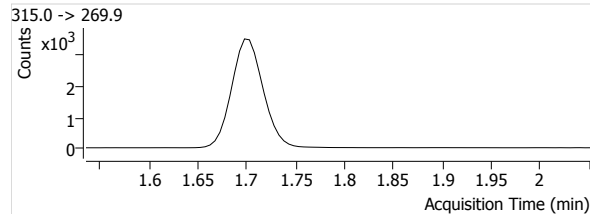
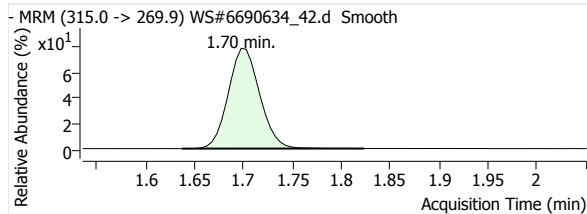
MeFOSA 1



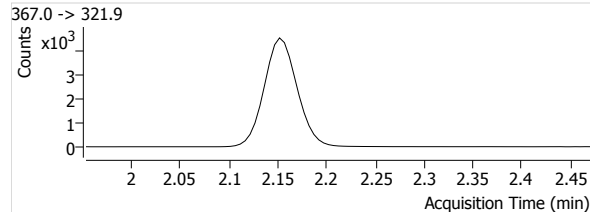
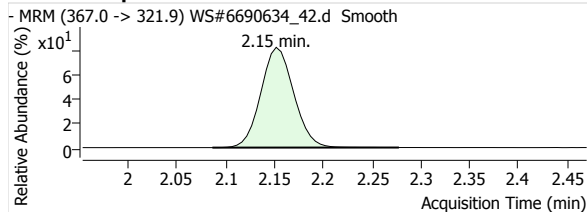
eFOSA 1



13C2-PFHxA

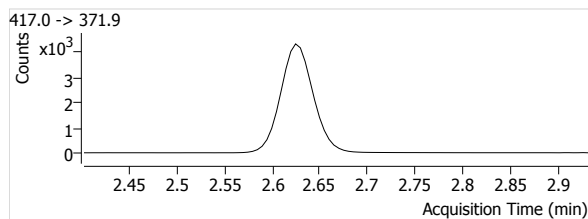
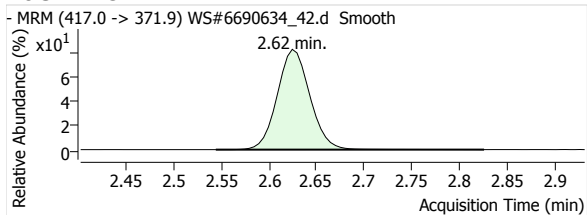


13C4-PFHpA

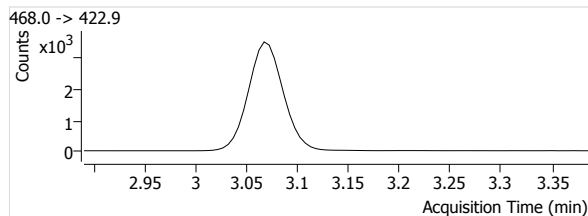
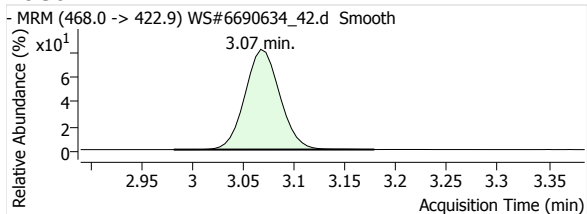


Quantitative Analysis Report

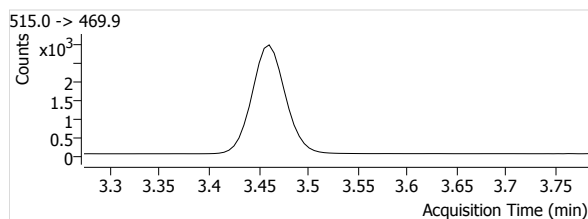
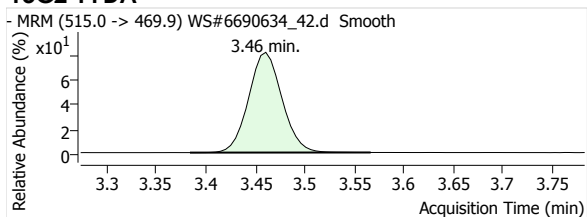
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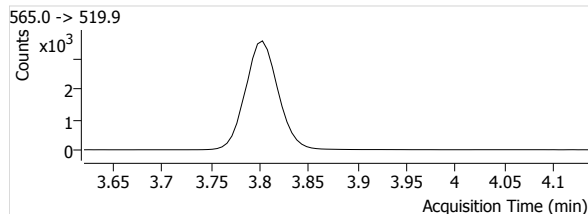
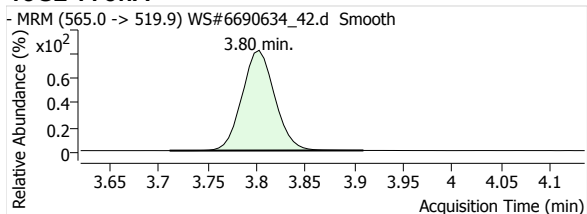
13C5-PFNA



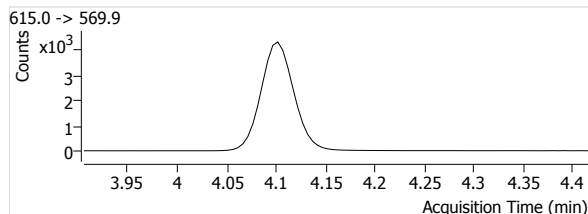
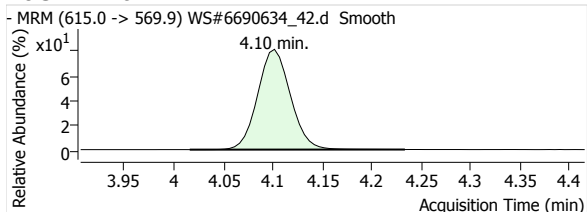
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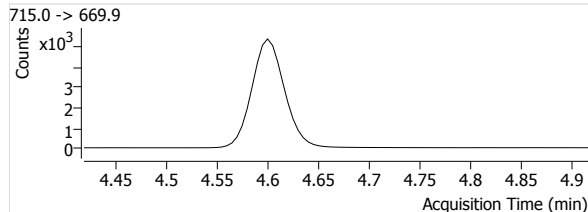
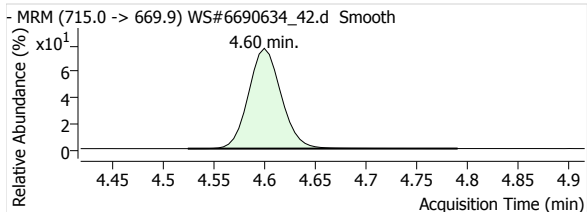
13C2-PFUnA



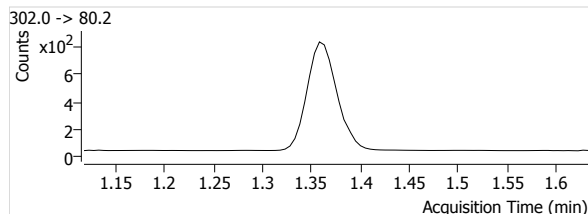
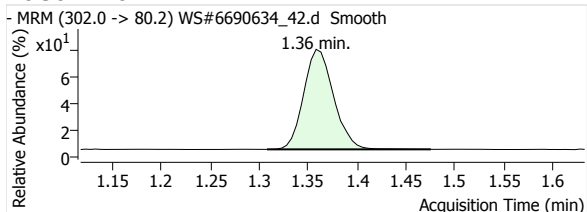
13C2-PFDoA



13C2-PFTeDA

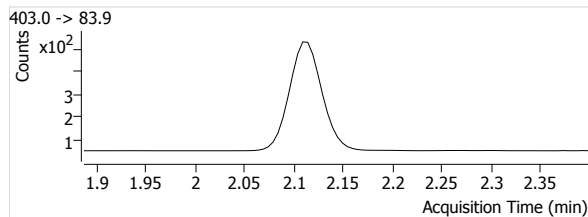
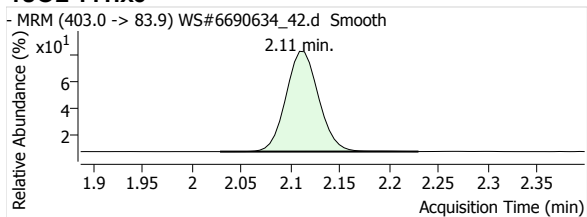


13C3-PFBS

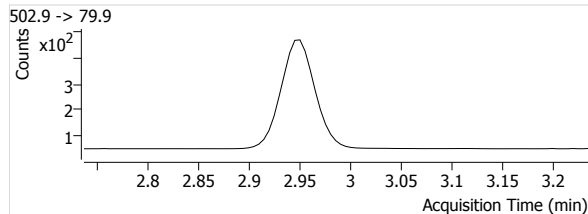
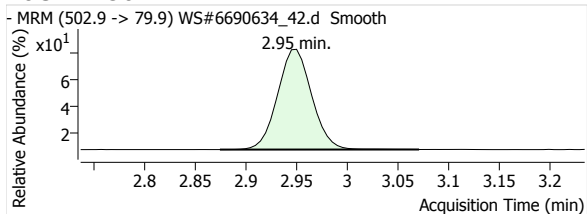


Quantitative Analysis Report

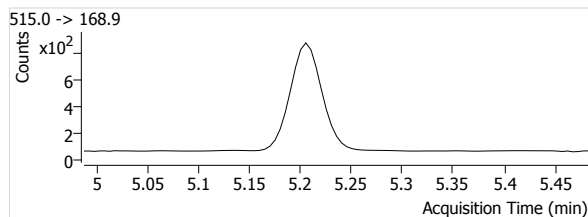
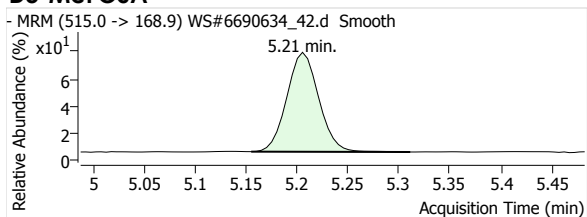
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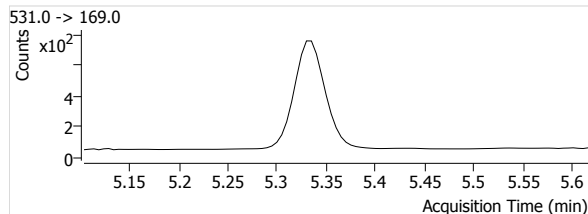
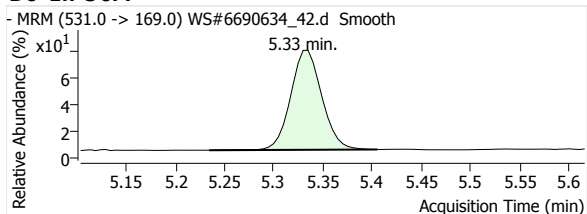
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

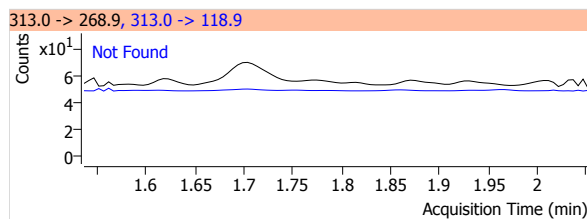
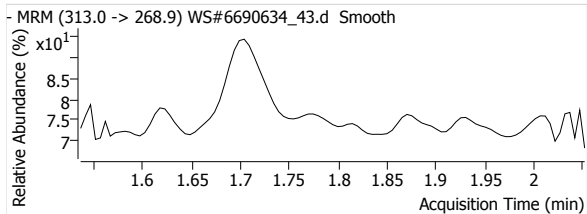
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Sample Name 6690634:MLP506-01
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Acq. Method File PFAS.m
Acq. Date-Time 2020/04/22 2:52:12 AM
Comment -
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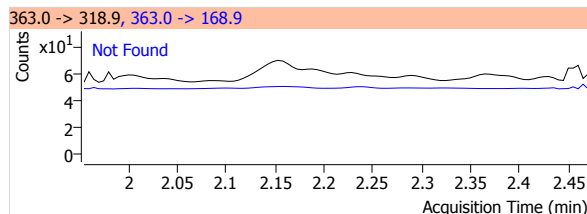
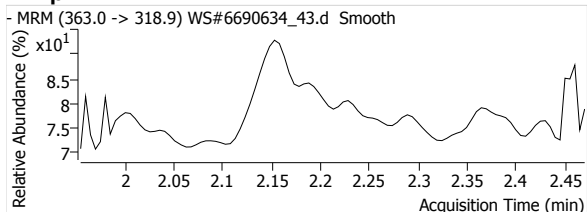
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Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHpA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	112.4573	--	7899	1.70	1080	--	--	--	--	--
13C4-PFHpA	µg/L	--	111.5468	--	10781	2.16	1503	--	--	--	--	--
13C4-PFOA	µg/L	--	106.2065	--	10233	2.63	1189	--	--	--	--	--
13C5-PFNA	µg/L	--	108.6727	--	8220	3.07	1153	--	--	--	--	--
13C2-PFDA	µg/L	--	99.6176	--	6512	3.46	1518	--	--	--	--	--
13C2-PFUnA	µg/L	--	94.8079	--	7377	3.80	1143	--	--	--	--	--
13C2-PFDaA	µg/L	--	88.8878	--	8991	4.10	1544	--	--	--	--	--
13C2-PFTeDA	µg/L	--	81.8341	--	10262	4.60	3775	--	--	--	--	--
13C3-PFBS	µg/L	--	108.1659	--	1669	1.36	797	--	--	--	--	--
18O2-PFHxS	µg/L	--	109.9409	--	1117	2.11	1482	--	--	--	--	--
13C4-PFOS	µg/L	--	100.5192	--	968	2.95	747	--	--	--	--	--
D3-MeFOSA	µg/L	--	45.4957	--	1106	5.21	53	--	--	--	--	--
D5-EtFOSA	µg/L	--	45.3416	--	949	5.33	52	--	--	--	--	--

PFHxA 1

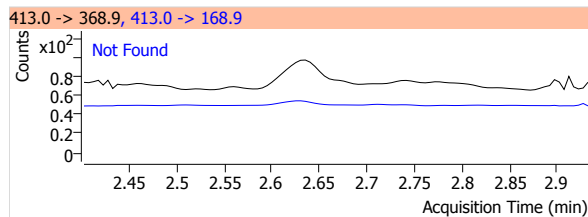
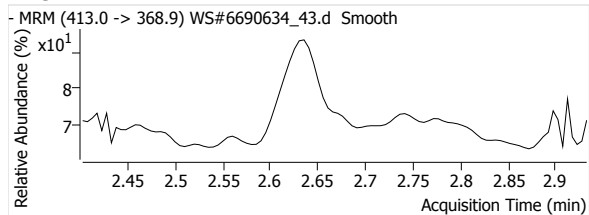


PFHpA 1

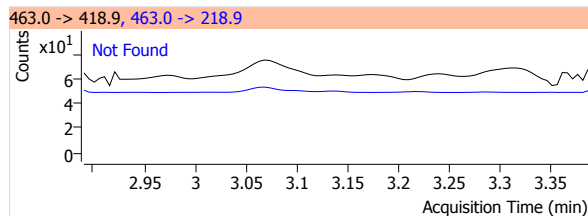
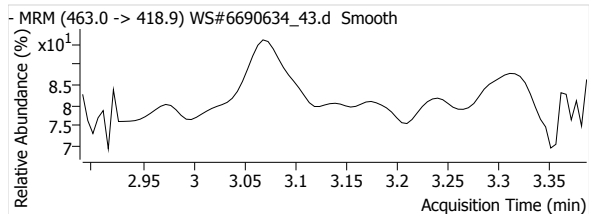


Quantitative Analysis Report

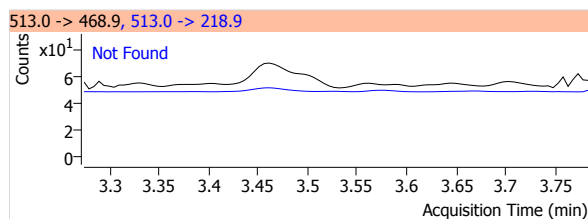
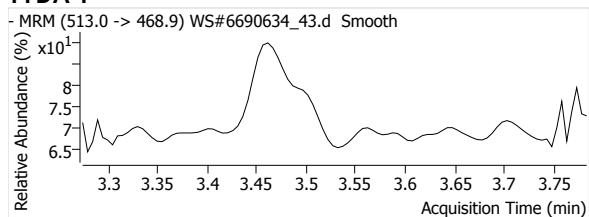
PFOA 1



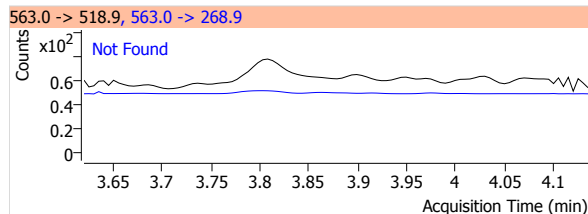
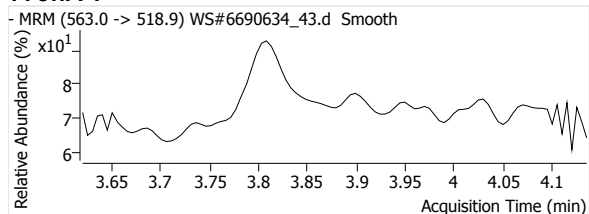
PFNA 1



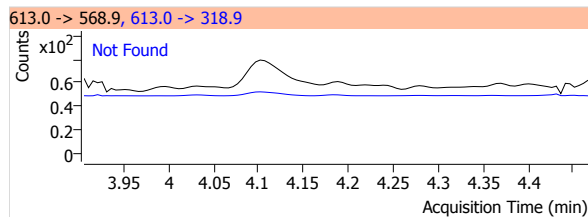
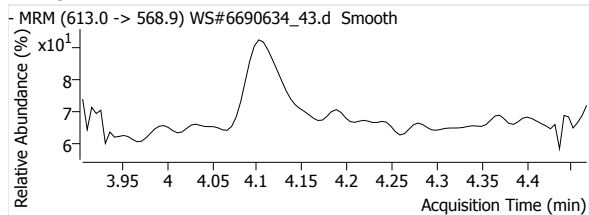
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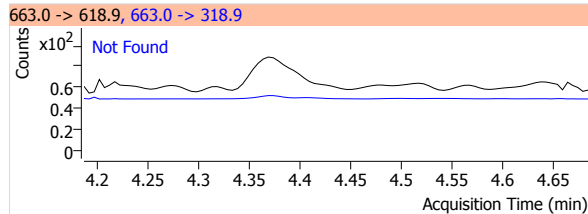
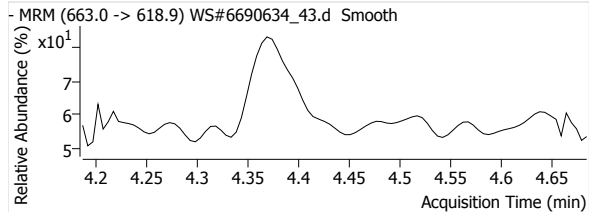
PFUnA 1



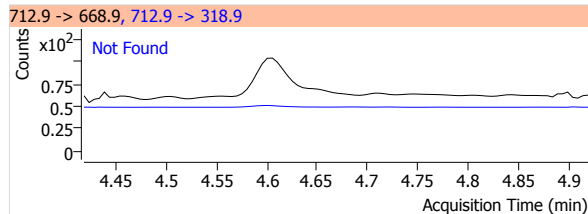
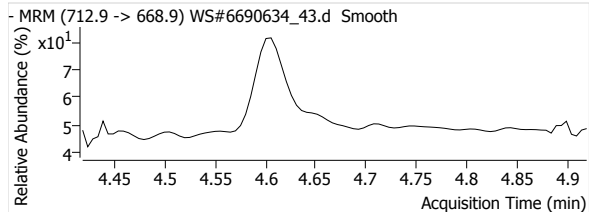
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PFTrDA 1

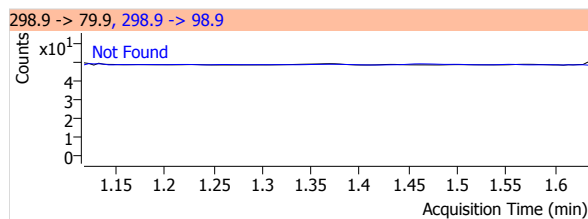
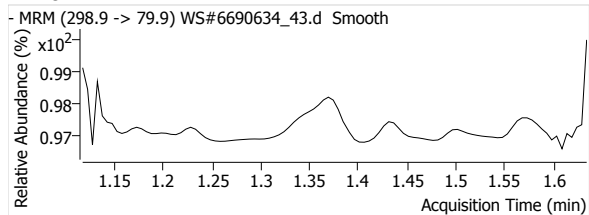


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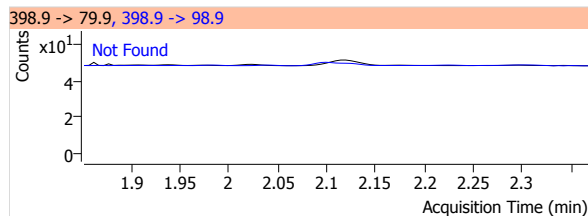
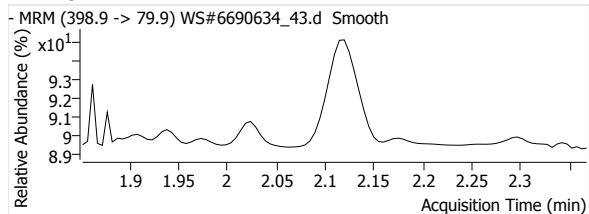


Quantitative Analysis Report

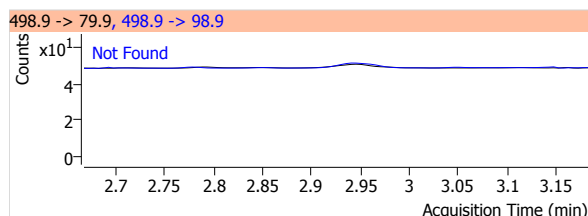
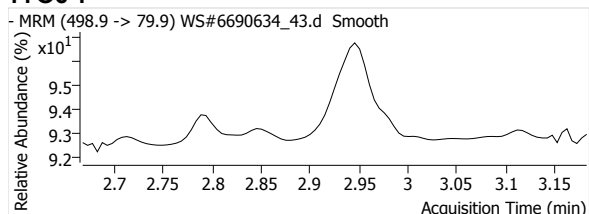
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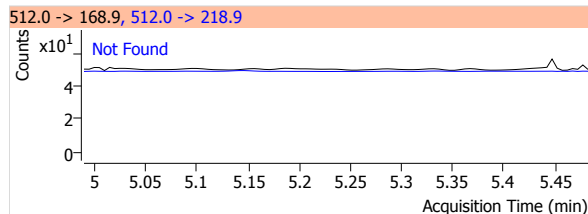
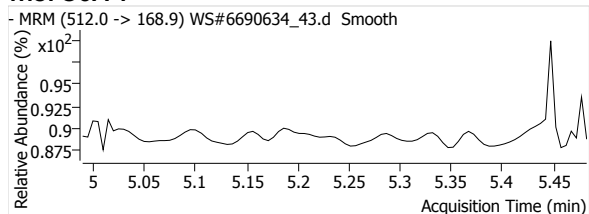
PFHxS 1



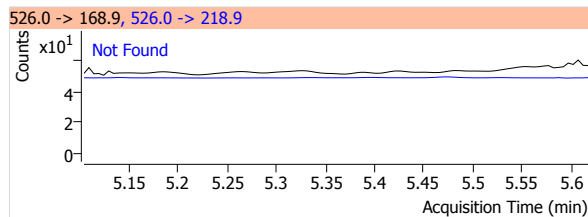
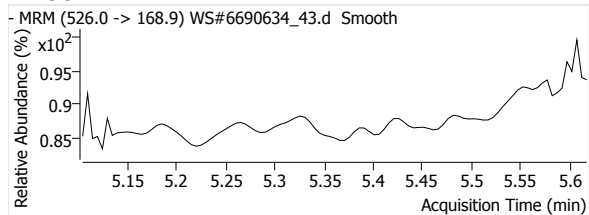
PFOS 1



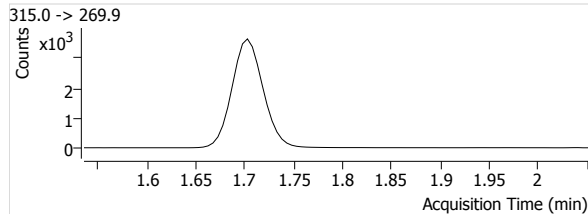
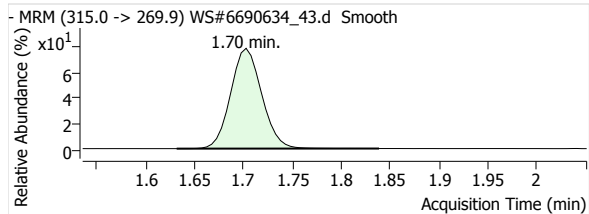
MeFOSA 1



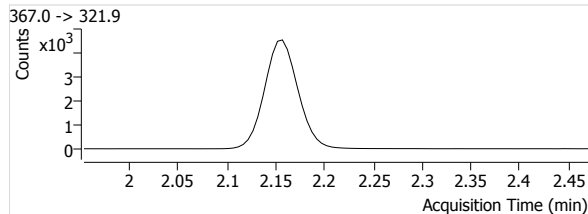
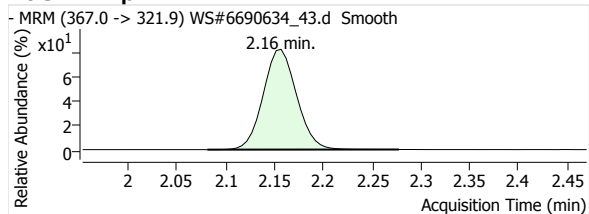
eFOSA 1



13C2-PFHxA

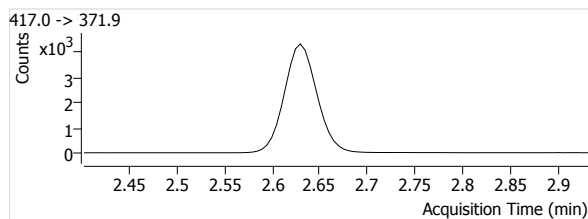
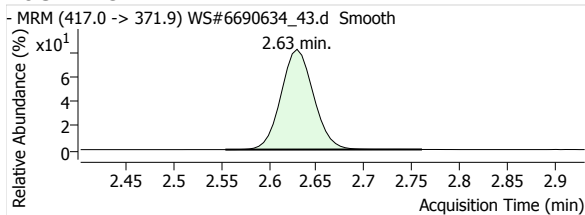


13C4-PFHpA

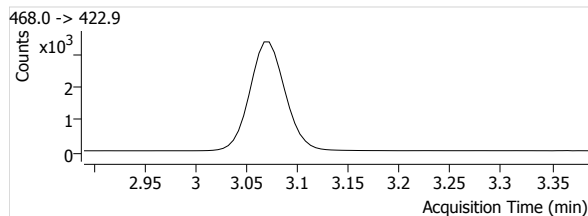
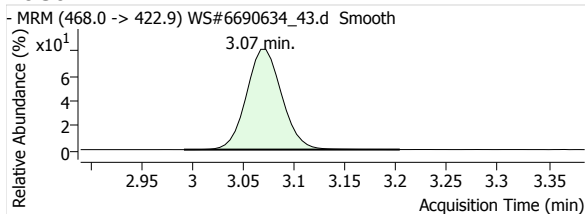


Quantitative Analysis Report

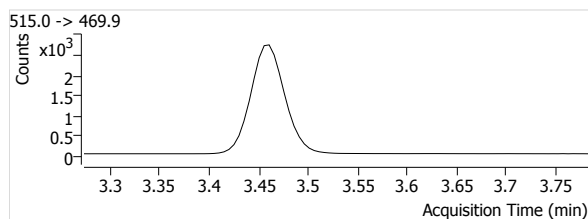
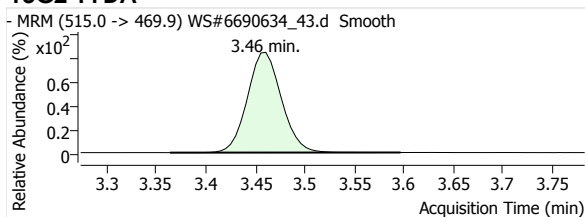
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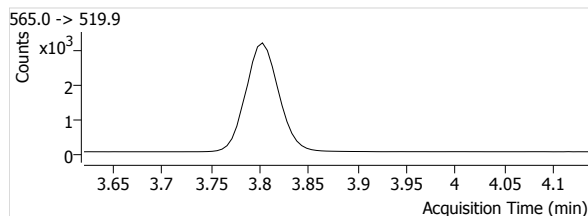
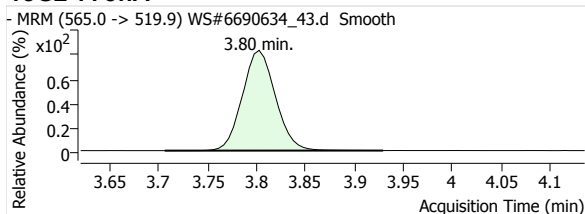
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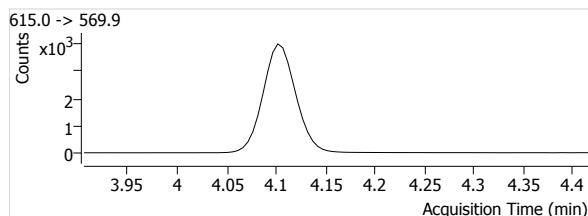
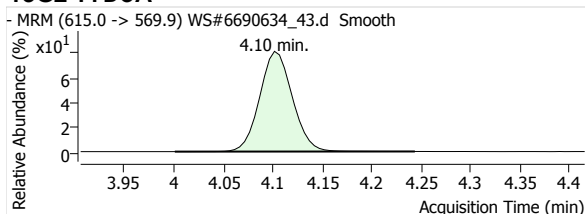
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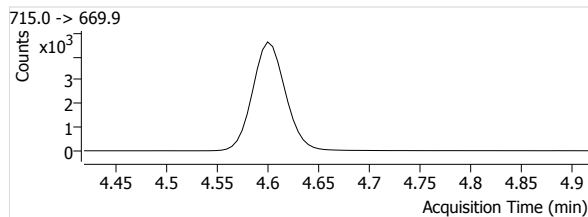
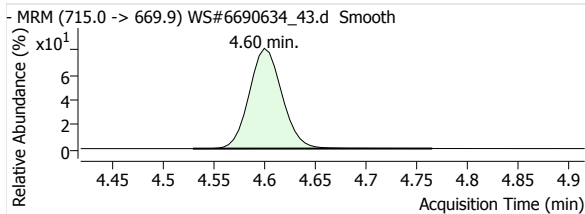
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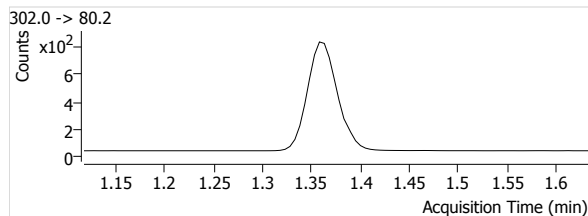
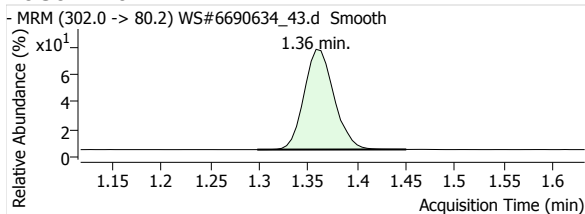
13C2-PFDoA



13C2-PFTeDA

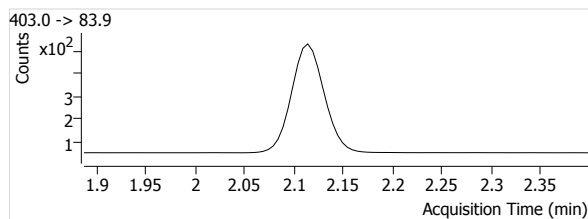
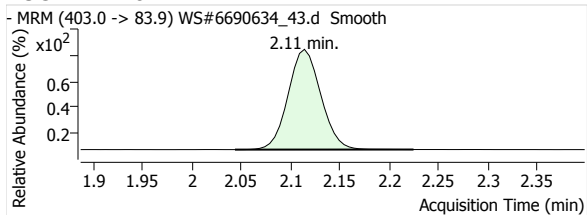


13C3-PFBS

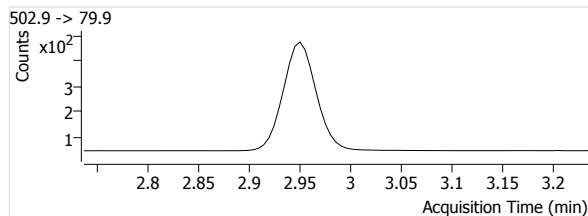
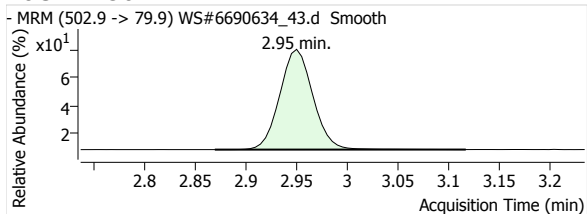


Quantitative Analysis Report

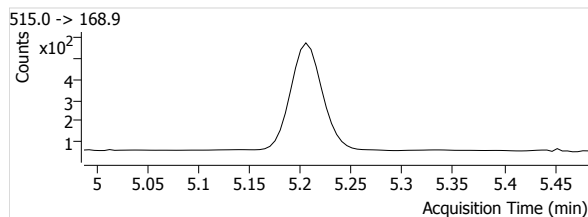
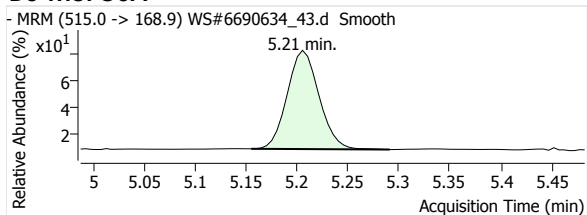
18O2-PFHxs



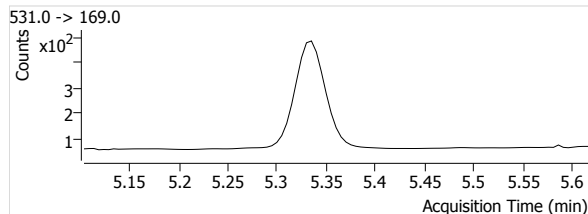
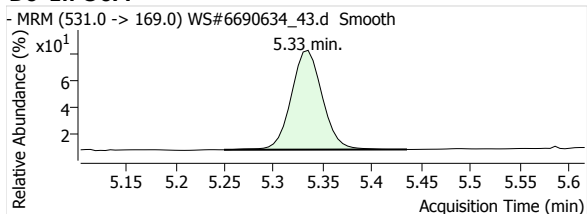
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

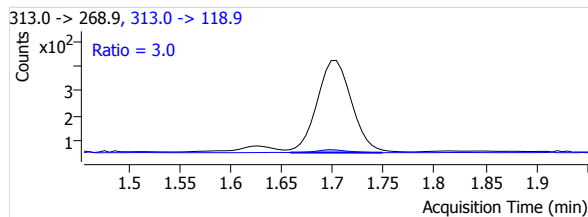
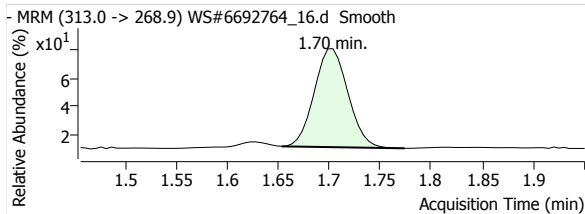
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bin

Sample Name 6692764:MLP496-01:100x
Type Sample
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/23 3:38:49 AM
Comment NOT USED
User Defined

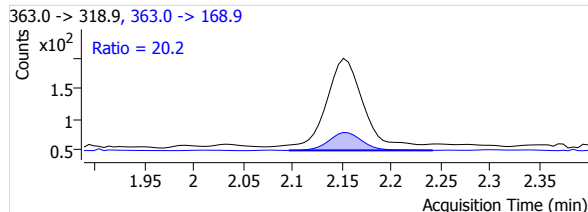
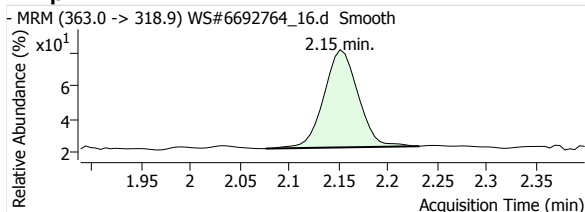
Data File WS#6692764_16.d
Instrument LCMS04
Position P1-B5
Dil. 2.4

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	0.7372	--	847	1.70	1059	0.0985	25	1.70	151	3.0
PFHpA 1	µg/L	--	0.0000	--	347	2.15	35	0.0294	70	2.15	17	20.2
PFOA 1	µg/L	--	0.6766	--	933	2.63	331	0.0834	234	2.63	90	25.1
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	1.1484	--	137	2.08	3742	0.1124	63	2.09	1622	46.2
PFOS 1	µg/L	--	9.2268	--	725	2.90	5243	0.6567	364	2.89	2016	50.2
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	107.0344	--	8597	1.70	1581	--	--	--	--	--
13C4-PFHpA	µg/L	--	105.7758	--	11794	2.15	2302	--	--	--	--	--
13C4-PFOA	µg/L	--	103.6005	--	11193	2.63	1913	--	--	--	--	--
13C5-PFNA	µg/L	--	105.0570	--	9037	3.07	1112	--	--	--	--	--
13C2-PFDA	µg/L	--	102.4420	--	7635	3.46	1010	--	--	--	--	--
13C2-PFUnA	µg/L	--	99.2022	--	8704	3.80	743	--	--	--	--	--
13C2-PFDoA	µg/L	--	96.7733	--	10317	4.10	763	--	--	--	--	--
13C2-PFTeDA	µg/L	--	92.8474	--	12968	4.60	2250	--	--	--	--	--
13C3-PFBS	µg/L	--	107.1303	--	1833	1.36	1059	--	--	--	--	--
18O2-PFHxS	µg/L	--	106.6550	--	1218	2.11	1062	--	--	--	--	--
13C4-PFOS	µg/L	--	104.3478	--	1104	2.95	1170	--	--	--	--	--
D3-MeFOSA	µg/L	--	81.4226	--	2152	5.21	120	--	--	--	--	--
D5-EtFOSA	µg/L	--	84.4858	--	1906	5.34	120	--	--	--	--	--

PFHxA 1

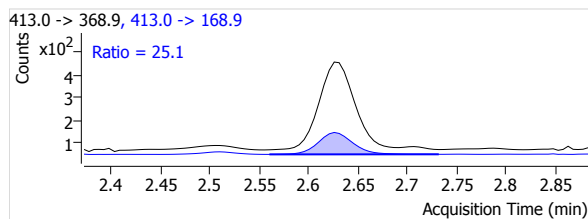
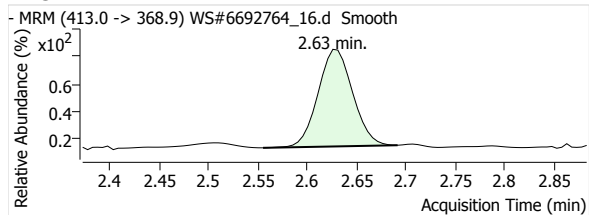


PFHpA 1

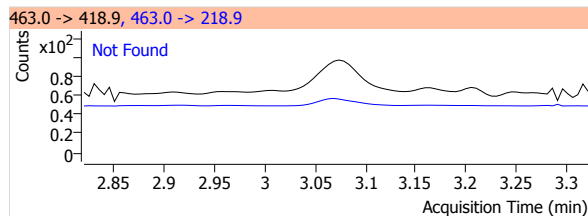
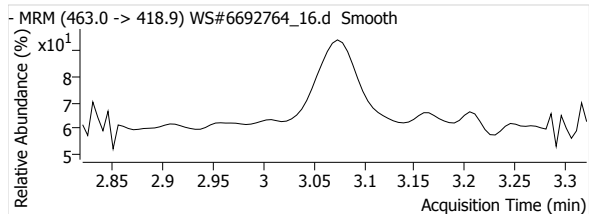


Quantitative Analysis Report

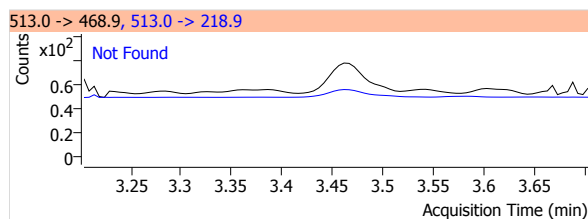
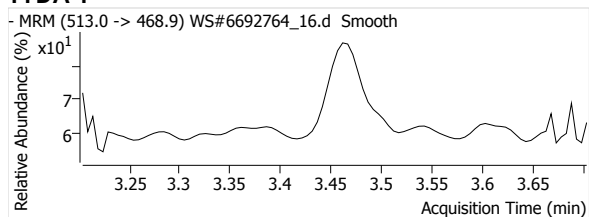
PFOA 1



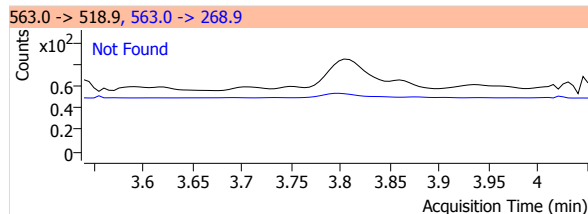
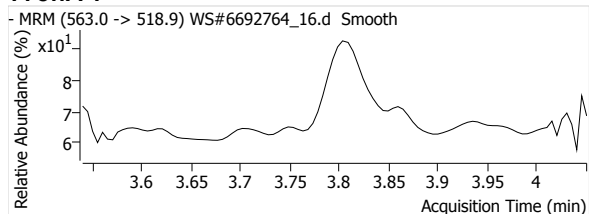
PFNA 1



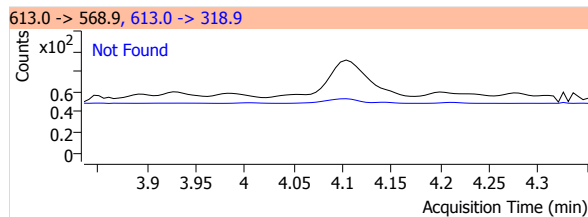
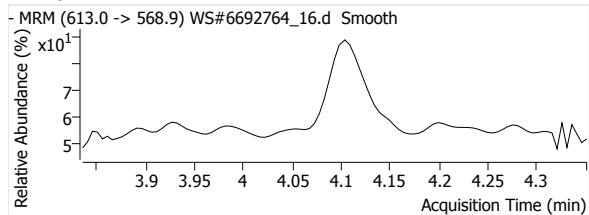
PFDA 1



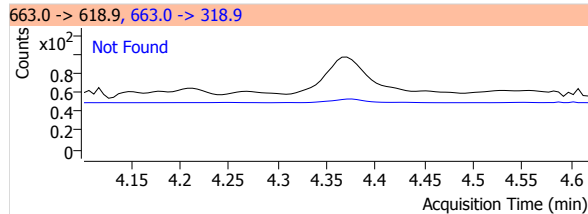
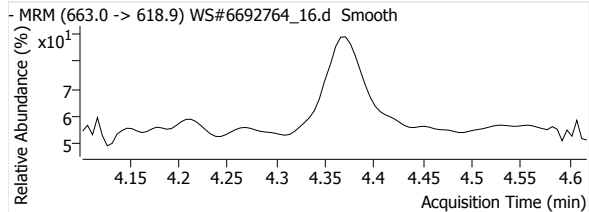
PFUnA 1



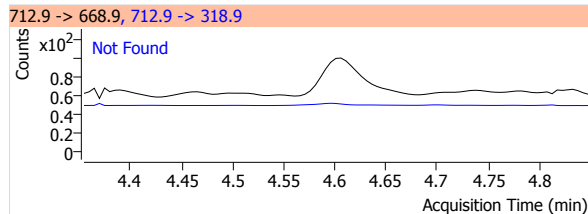
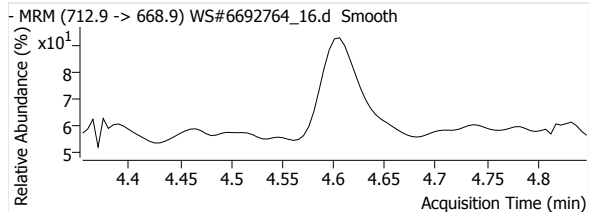
PFDaA 1



PFTrDA 1

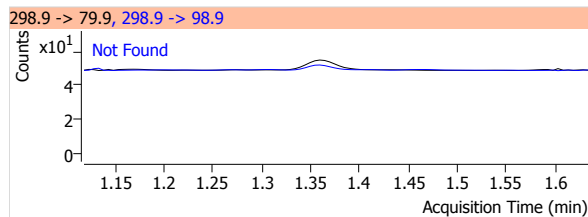
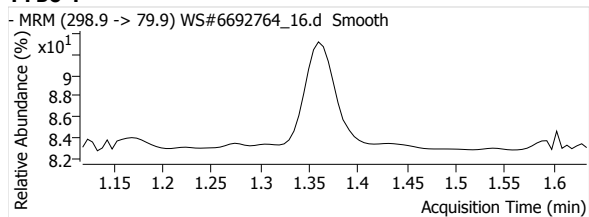


PFTeDA 1

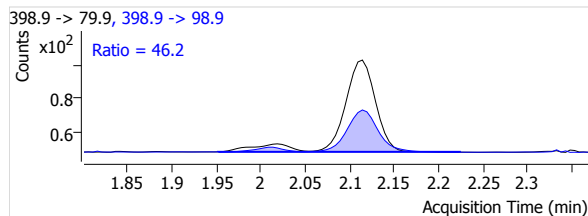
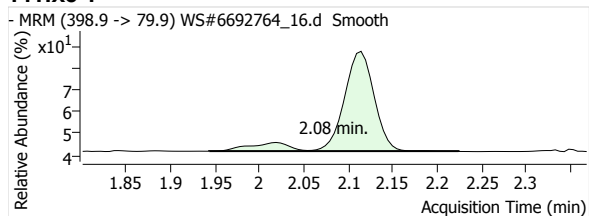


Quantitative Analysis Report

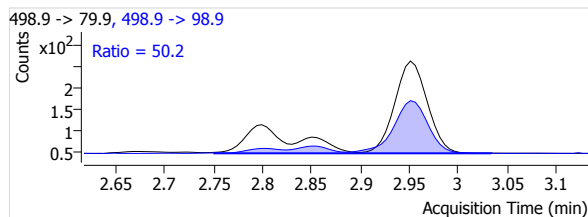
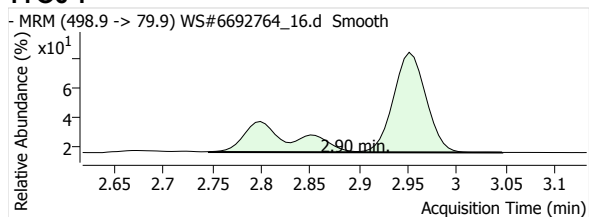
PFBS 1



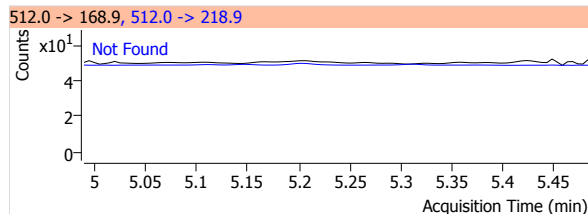
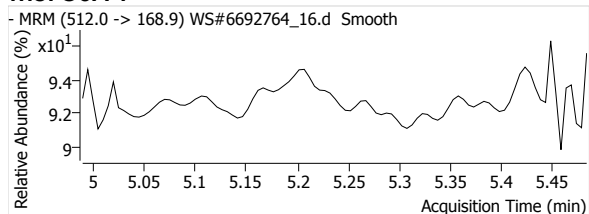
PFHxS 1



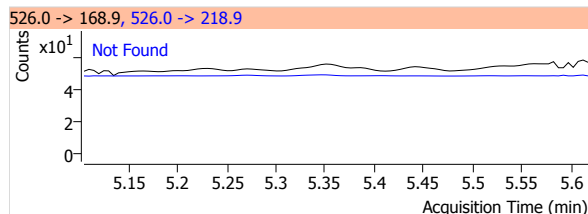
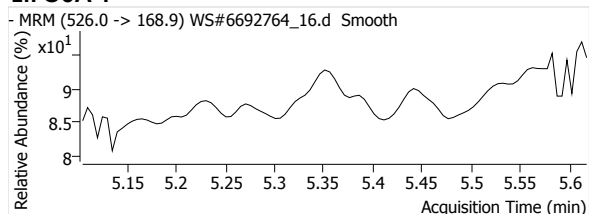
PFOS 1



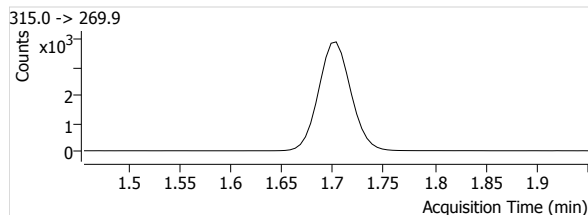
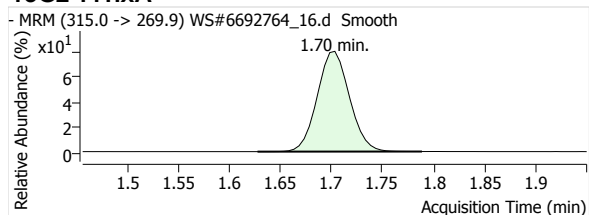
MeFOSA 1



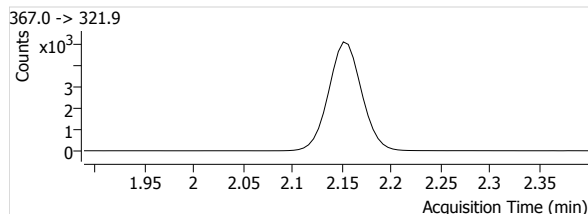
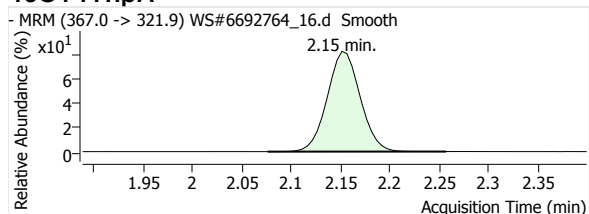
eFOSA 1



13C2-PFHxA

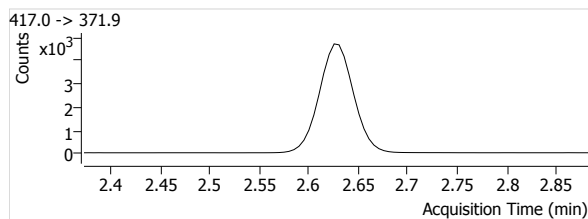
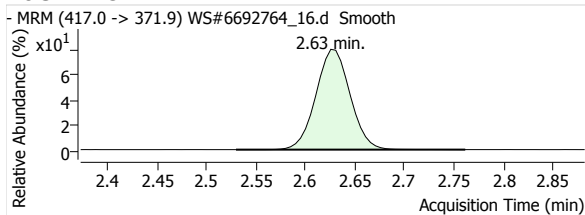


13C4-PFHpA

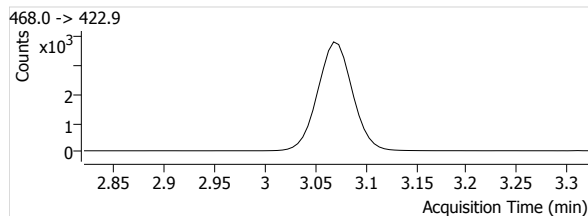
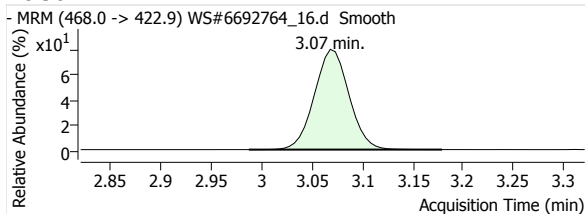


Quantitative Analysis Report

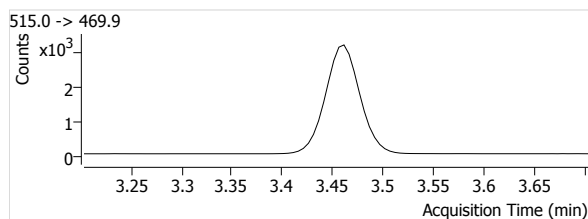
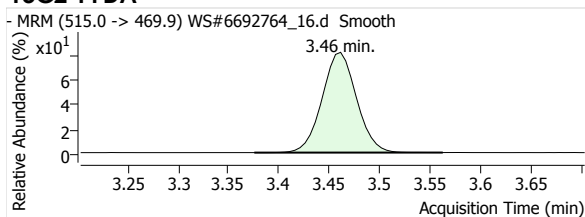
13C4-PFOA



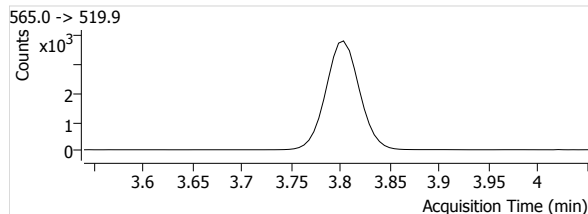
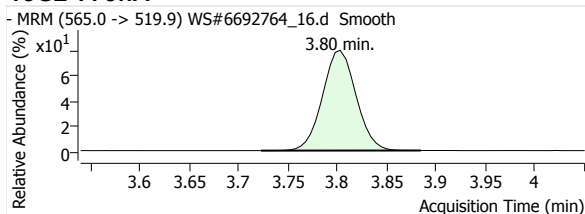
13C5-PFNA



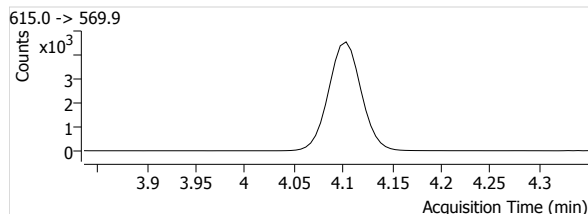
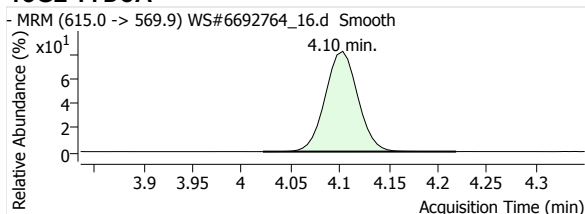
13C2-PFDA



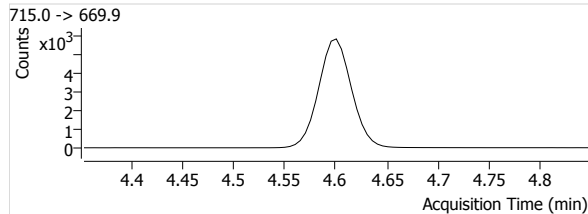
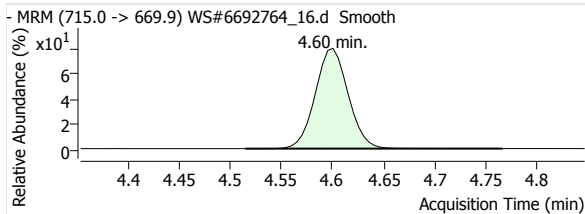
13C2-PFUnA



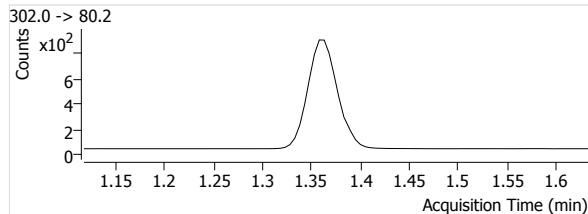
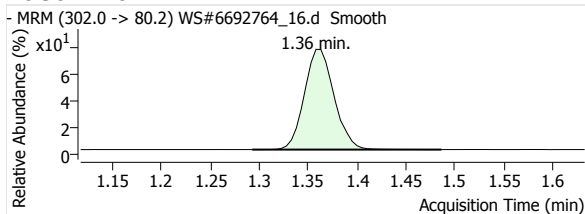
13C2-PFDoA



13C2-PFTeDA

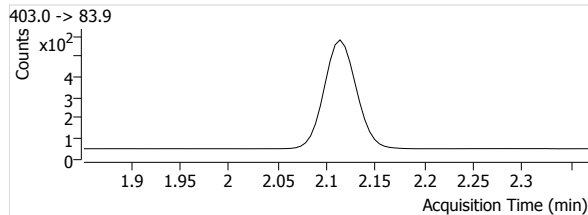
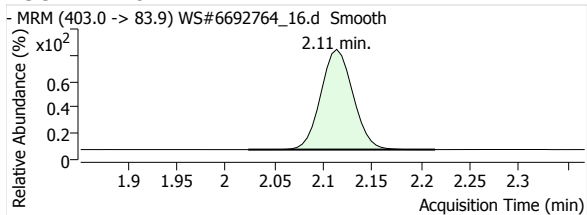


13C3-PFBS

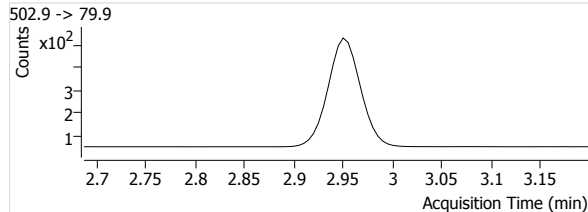
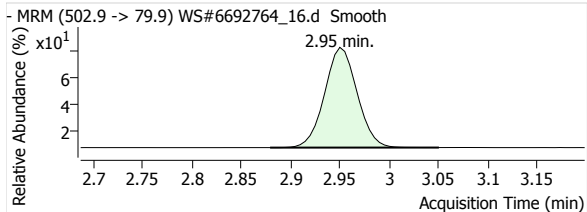


Quantitative Analysis Report

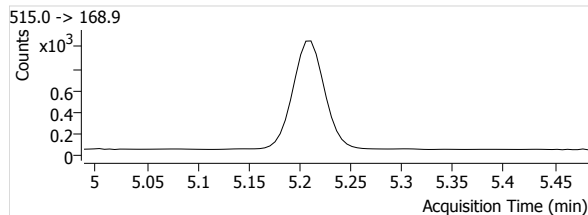
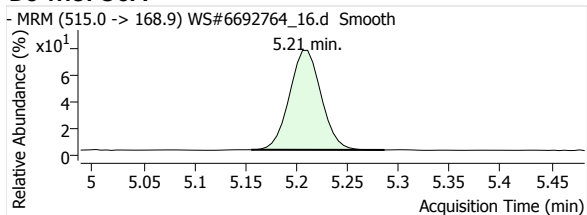
18O2-PFHxs



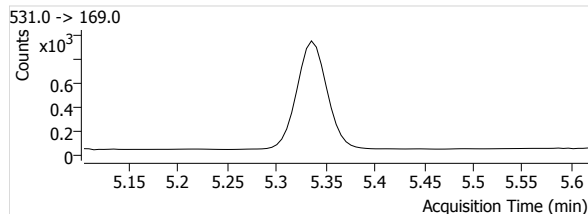
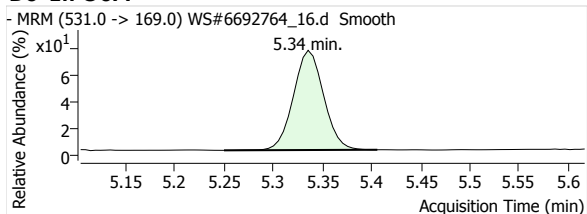
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



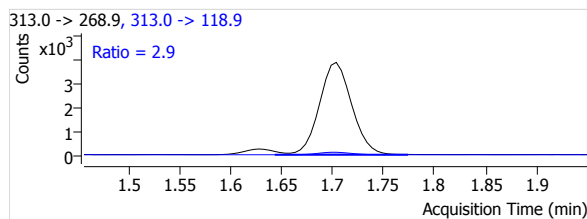
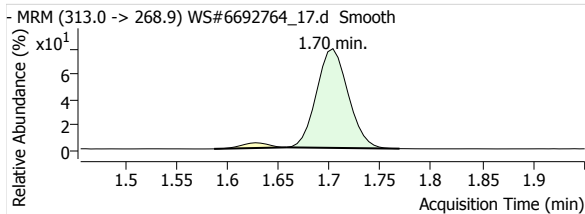
Quantitative Analysis Report

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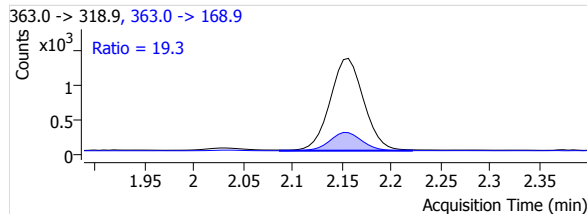
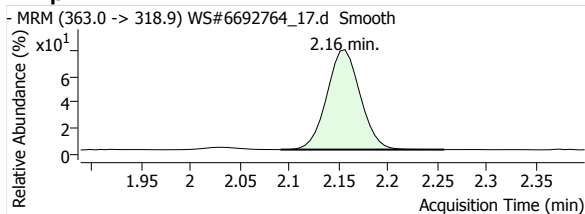
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Acq. Method File	PFAS.m	Position	P1-B6
Acq. Date-Time	2020/04/23 3:45:45 AM	Dil.	0.2
Comment	Reported for PFOA, PFHxA, PFHxS & PFOS only.		
User Defined	MI PFOA		

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	1.1526	--	8236	1.70	7595	0.9280	238	1.70	1831	2.9
PFHpA 1	µg/L	--	0.3116	--	3114	2.16	379	0.2575	600	2.15	115	19.3
PFOA 1	µg/L	--	1.0696	--	9357	2.63	5804	0.8121	2375	2.63	2482	25.4
PFNA 1	µg/L	--	0.0253	--	497	3.07	695	0.0547	95	3.07	227	19.1
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.0250	--	97	1.35	3036	0.0520	46	1.36	1989	47.4
PFHxS 1	µg/L	--	1.3930	--	1351	2.08	39398	1.0843	690	2.09	5654	51.1
PFOS 1	µg/L	--	9.9119	--	7305	2.90	1664	6.6838	3813	2.89	705	52.2
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	110.4955	--	8875	1.70	944	--	--	--	--	--
13C4-PFHpA	µg/L	--	108.4574	--	12093	2.16	1764	--	--	--	--	--
13C4-PFOA	µg/L	--	106.6457	--	11522	2.63	1517	--	--	--	--	--
13C5-PFNA	µg/L	--	105.6963	--	9092	3.07	1532	--	--	--	--	--
13C2-PFDA	µg/L	--	103.7166	--	7730	3.46	857	--	--	--	--	--
13C2-PFUnA	µg/L	--	104.9464	--	9208	3.80	1387	--	--	--	--	--
13C2-PFDoA	µg/L	--	102.1949	--	10895	4.10	1264	--	--	--	--	--
13C2-PFTeDA	µg/L	--	95.4536	--	13332	4.60	4549	--	--	--	--	--
13C3-PFBS	µg/L	--	109.0590	--	1866	1.36	541	--	--	--	--	--
18O2-PFHxS	µg/L	--	109.1068	--	1246	2.11	934	--	--	--	--	--
13C4-PFOS	µg/L	--	103.3081	--	1093	2.95	487	--	--	--	--	--
D3-MeFOSA	µg/L	--	55.2024	--	1459	5.21	58	--	--	--	--	--
D5-EtFOSA	µg/L	--	57.8014	--	1304	5.34	65	--	--	--	--	--

PFHxA 1

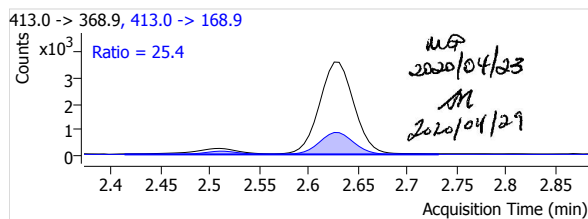
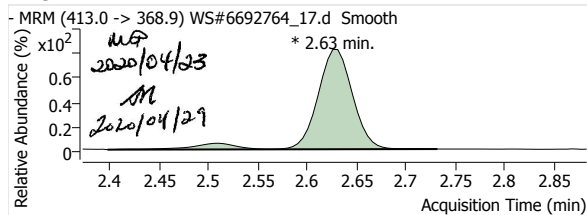


PFHpA 1

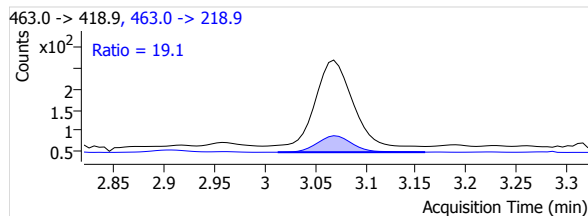
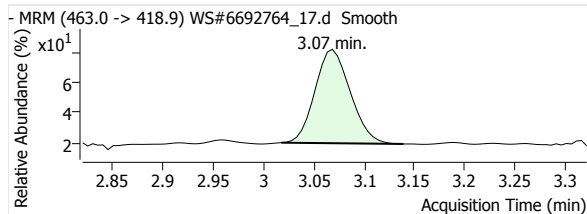


Quantitative Analysis Report

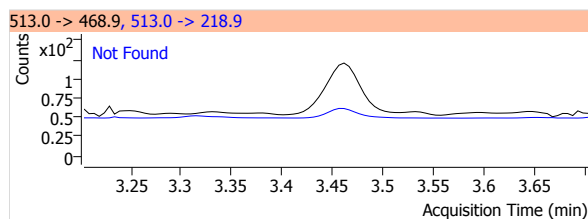
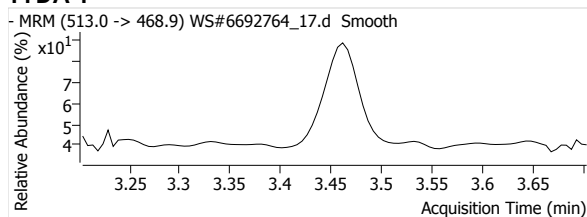
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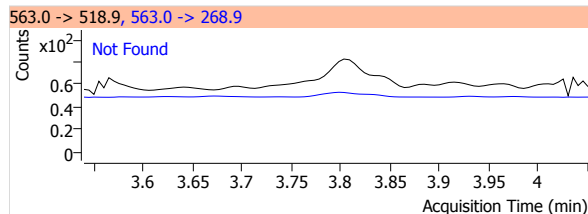
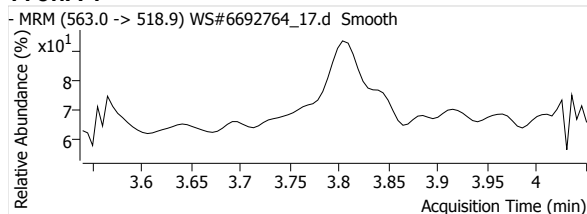
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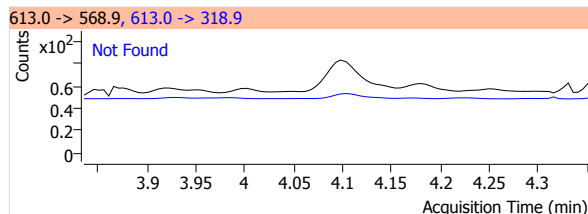
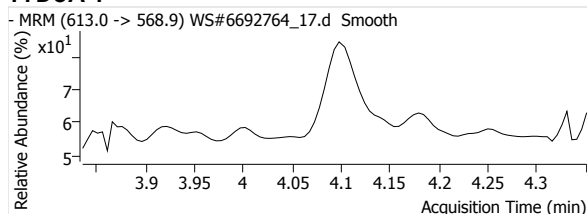
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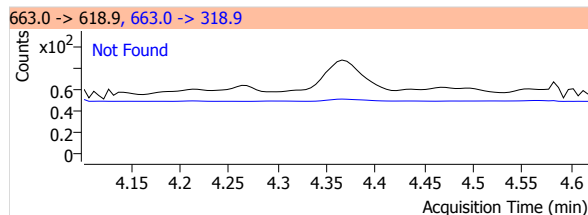
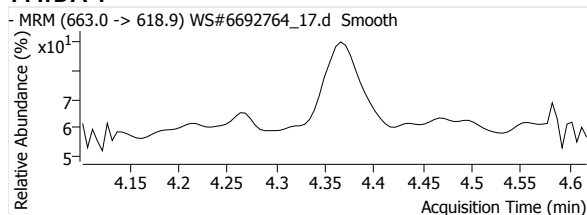
PFUnA 1



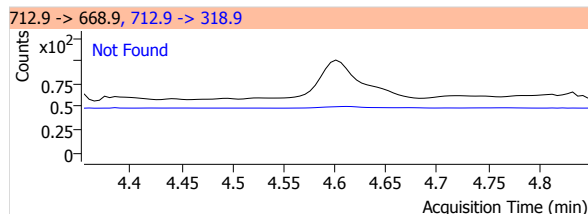
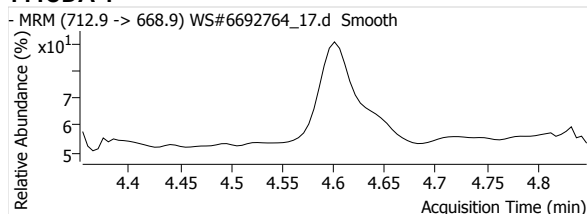
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PFTrDA 1

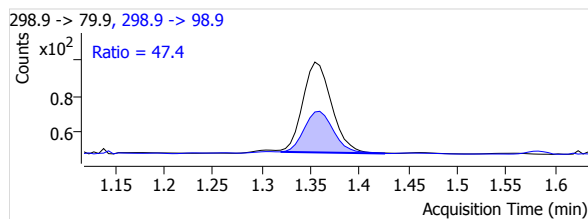
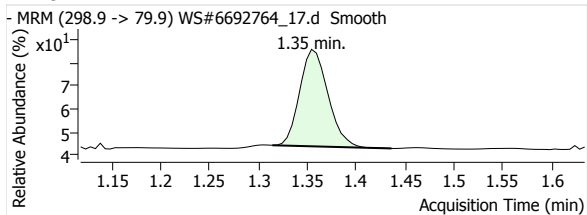


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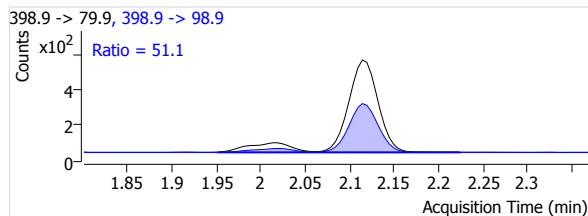
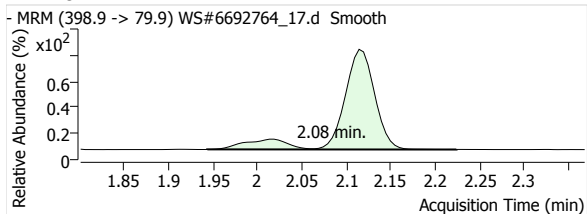


Quantitative Analysis Report

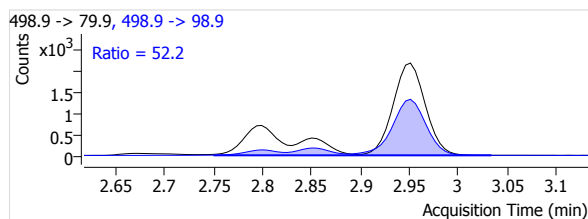
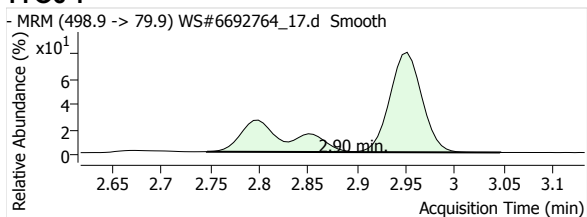
PFBS 1



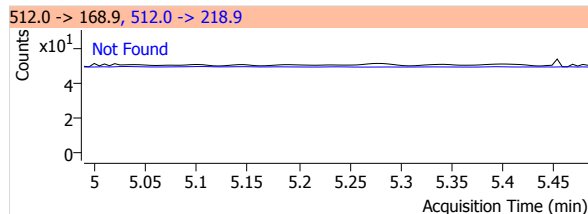
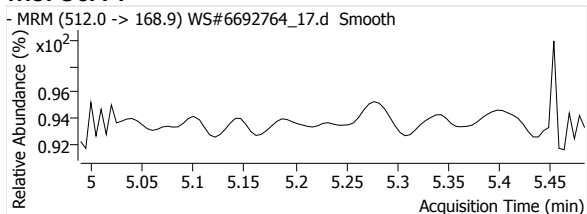
PFHxS 1



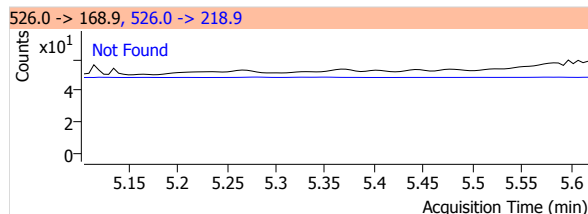
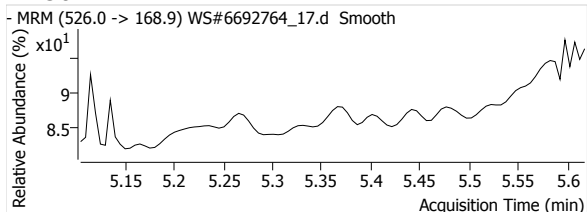
PFOS 1



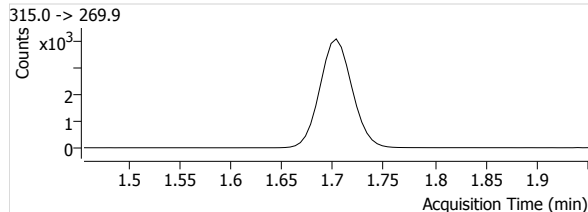
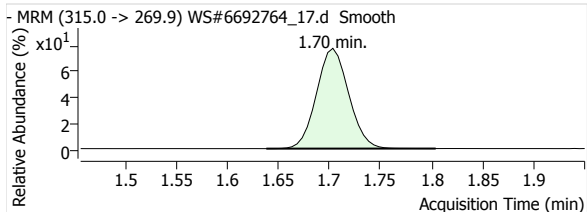
MeFOSA 1



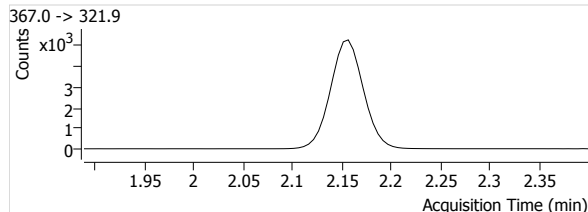
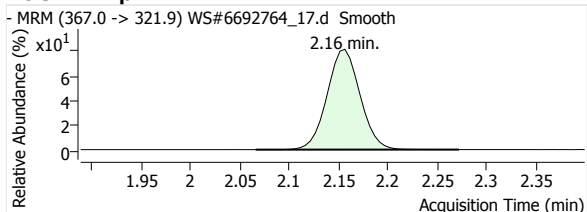
eFOSA 1



13C2-PFHxA

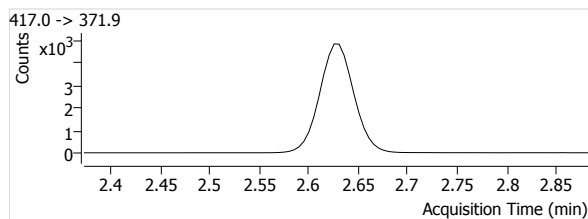
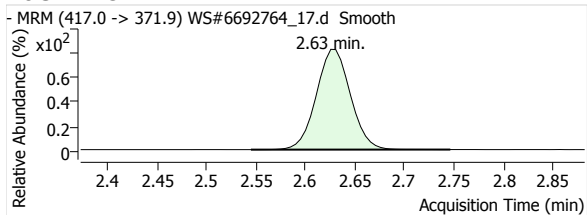


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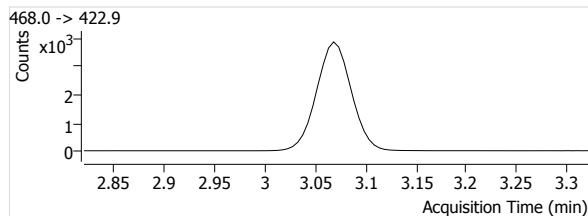
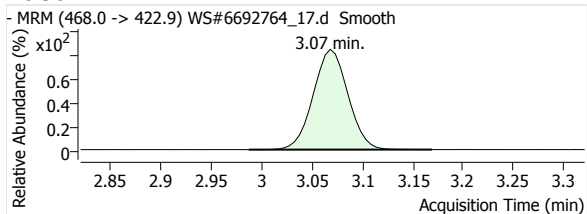


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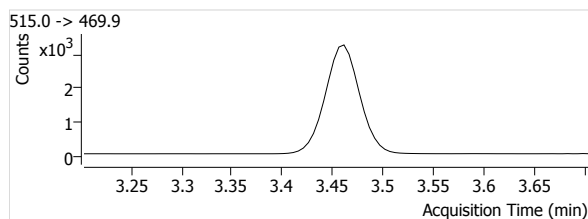
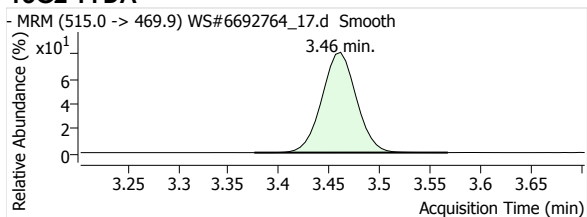
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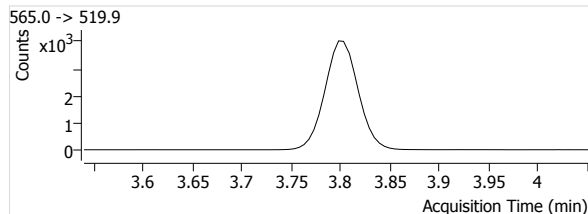
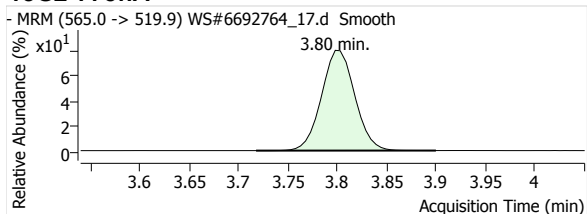
13C5-PFNA



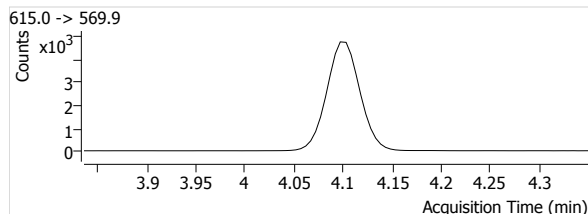
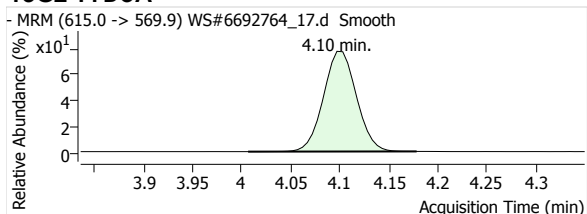
13C2-PFDA



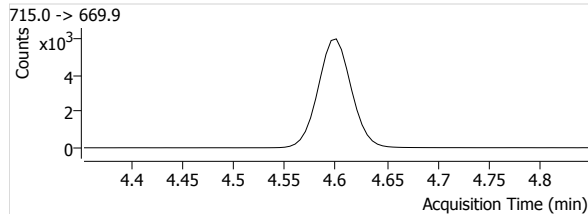
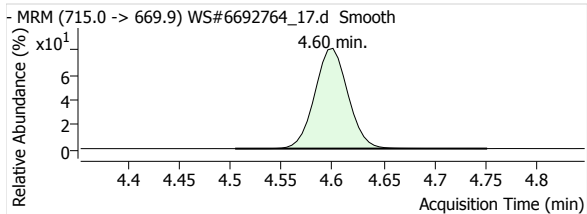
13C2-PFUnA



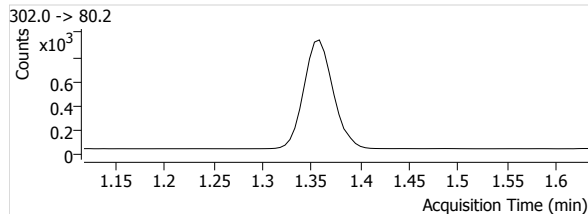
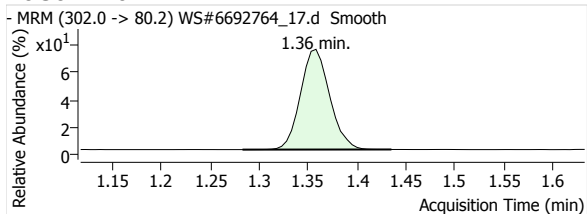
13C2-PFDoA



13C2-PFTeDA

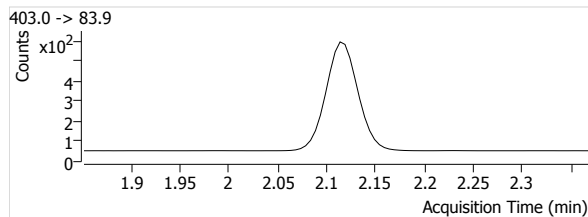
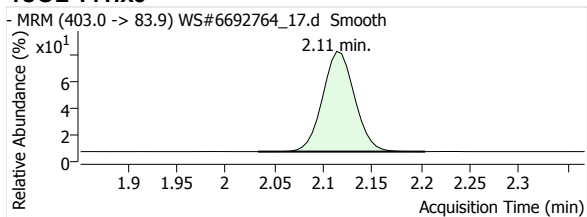


13C3-PFBS

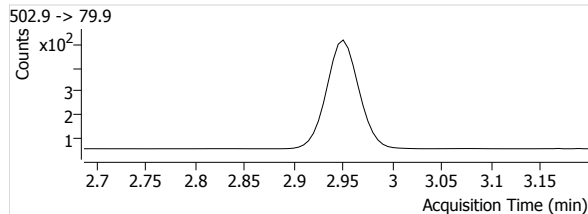
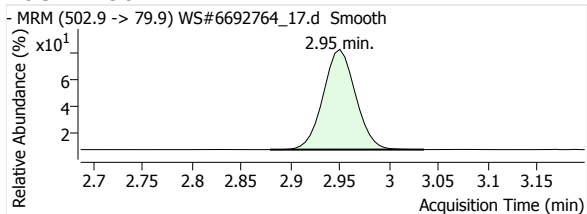


Quantitative Analysis Report

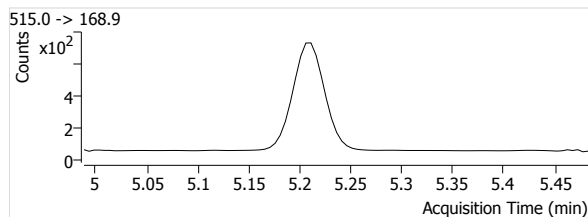
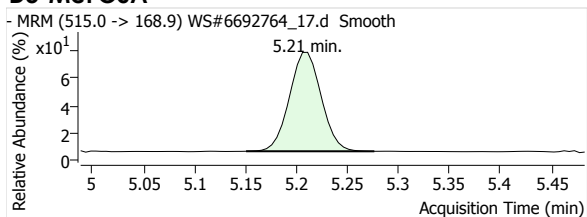
18O2-PFHxs



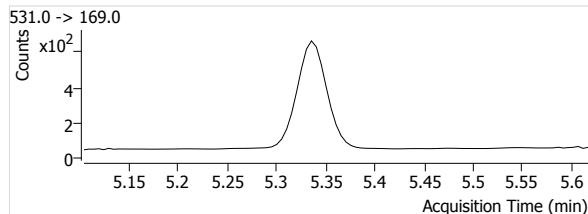
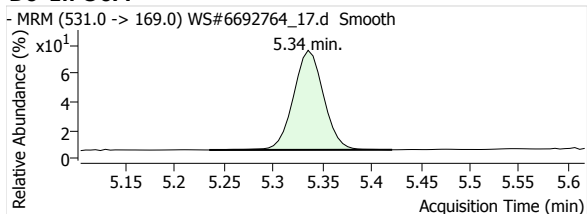
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



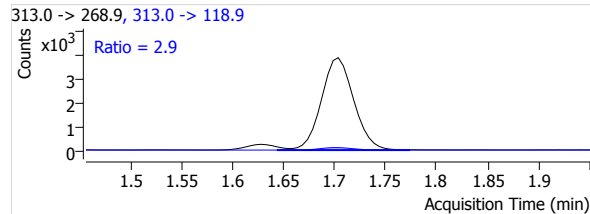
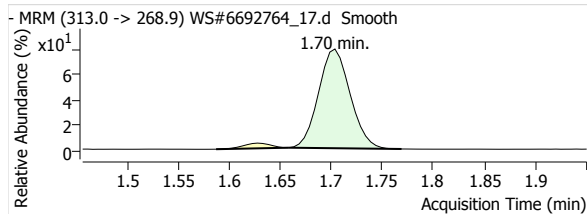
Quantitative Analysis Report

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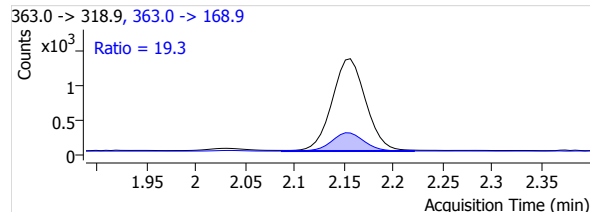
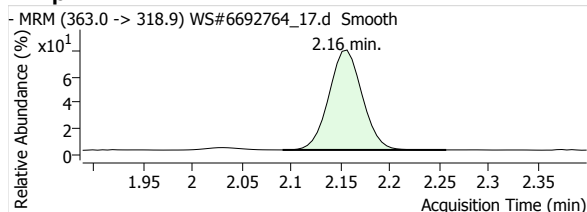
Sample Name 6692764:MLP496-01:10x **Data File** WS#6692764_17.d
Type Sample **Instrument** LCMS04
Acq. Method File PFAS.m **Position** P1-B6
Acq. Date-Time 2020/04/23 3:45:45 AM **Dil.** 0.2
Comment Reported for PFOA, PFHxA, PFHxS & PFOS only.
User Defined

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	1.1526	--	8236	1.70	7595	0.9280	238	1.70	1831	2.9
PFHpA 1	µg/L	--	0.3116	--	3114	2.16	379	0.2575	600	2.15	115	19.3
PFOA 1	µg/L	--	0.9767	--	8578	2.63	5797	0.7445	2059	2.63	2481	24.0
PFNA 1	µg/L	--	0.0253	--	497	3.07	695	0.0547	95	3.07	227	19.1
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.0250	--	97	1.35	3036	0.0520	46	1.36	1989	47.4
PFHxS 1	µg/L	--	1.3972	--	1351	2.08	39398	1.0843	690	2.09	5654	51.1
PFOS 1	µg/L	--	9.9044	--	7305	2.90	1664	6.6838	3813	2.89	705	52.2
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	110.4955	--	8875	1.70	944	--	--	--	--	--
13C4-PFHpA	µg/L	--	108.4574	--	12093	2.16	1764	--	--	--	--	--
13C4-PFOA	µg/L	--	106.6457	--	11522	2.63	1517	--	--	--	--	--
13C5-PFNA	µg/L	--	105.6963	--	9092	3.07	1532	--	--	--	--	--
13C2-PFDA	µg/L	--	103.7166	--	7730	3.46	857	--	--	--	--	--
13C2-PFUnA	µg/L	--	104.9464	--	9208	3.80	1387	--	--	--	--	--
13C2-PFDoA	µg/L	--	102.1949	--	10895	4.10	1264	--	--	--	--	--
13C2-PFTeDA	µg/L	--	95.4536	--	13332	4.60	4549	--	--	--	--	--
13C3-PFBS	µg/L	--	109.0590	--	1866	1.36	541	--	--	--	--	--
18O2-PFHxS	µg/L	--	109.1068	--	1246	2.11	934	--	--	--	--	--
13C4-PFOS	µg/L	--	103.3081	--	1093	2.95	487	--	--	--	--	--
D3-MeFOSA	µg/L	--	55.2024	--	1459	5.21	58	--	--	--	--	--
D5-EtFOSA	µg/L	--	57.8014	--	1304	5.34	65	--	--	--	--	--

PFHxA 1

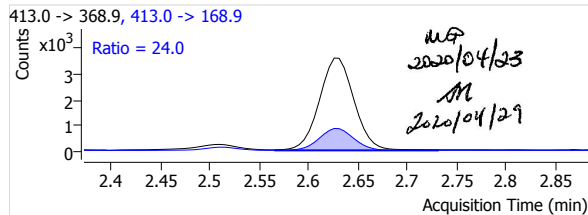
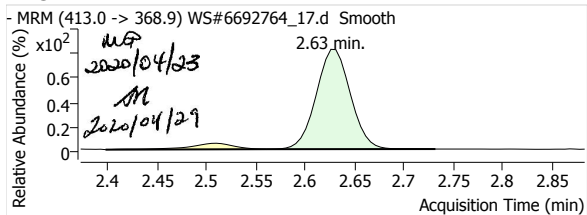


PFHpA 1

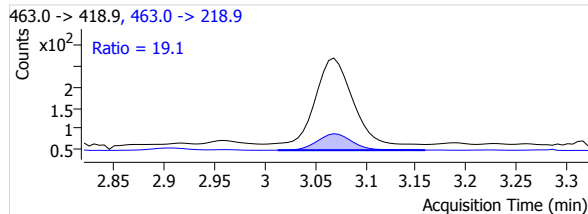
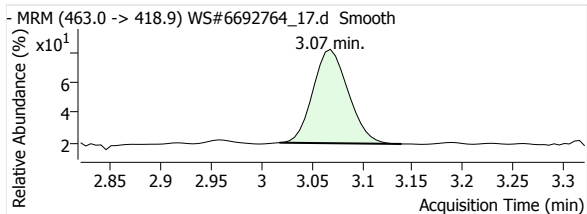


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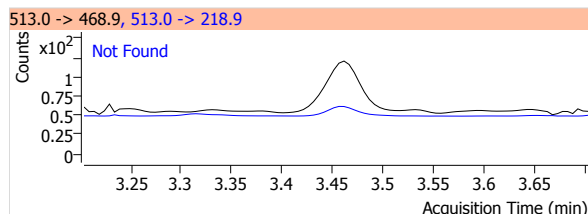
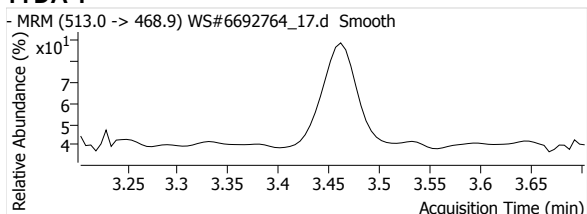
PFOA 1



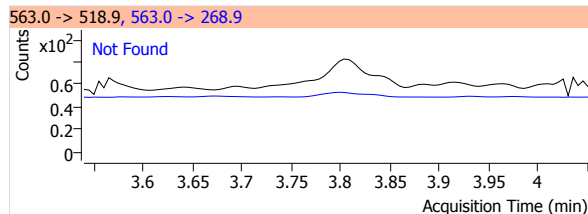
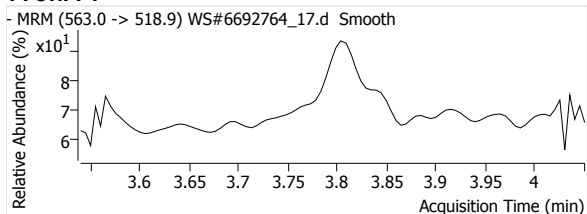
PFNA 1



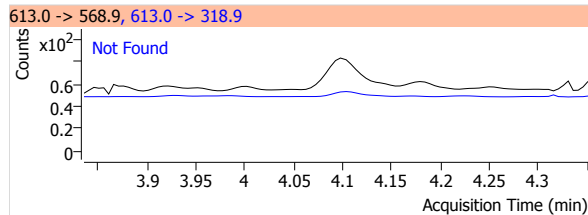
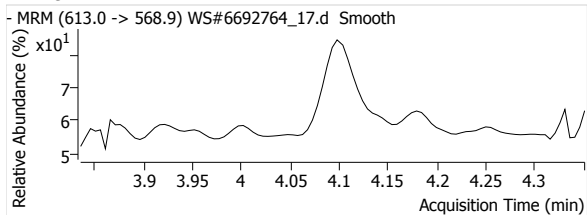
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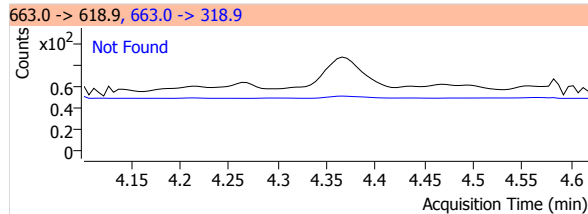
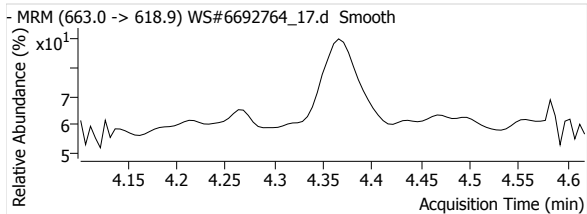
PFUnA 1



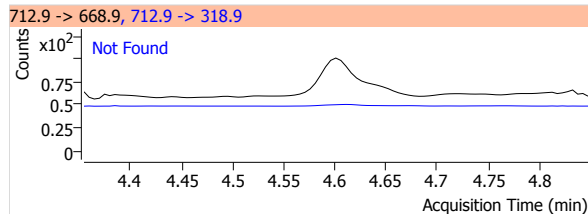
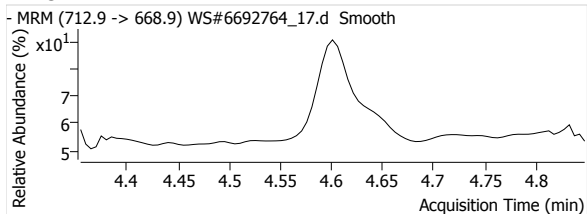
PFDaA 1



PFTrDA 1

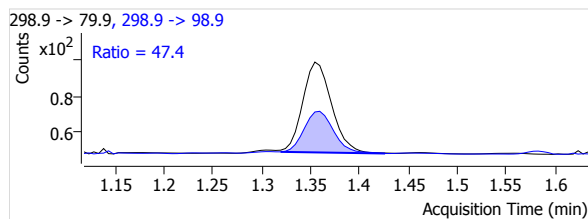
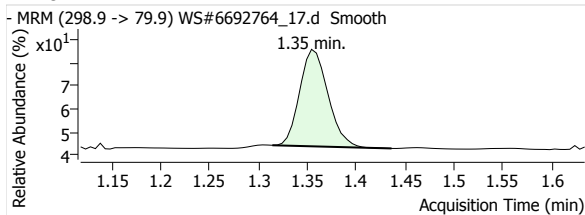


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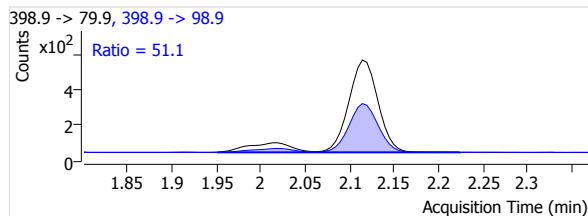
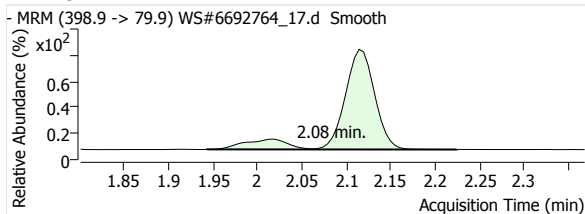


Quantitative Analysis Report

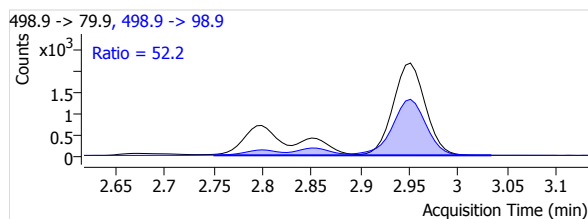
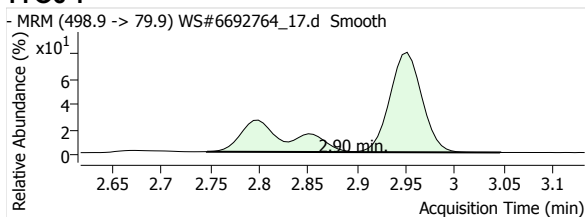
PFBS 1



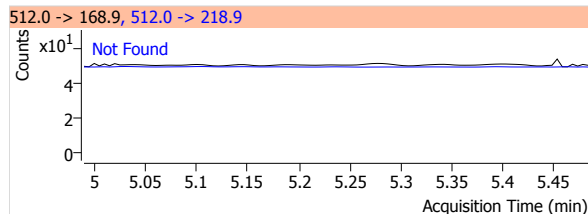
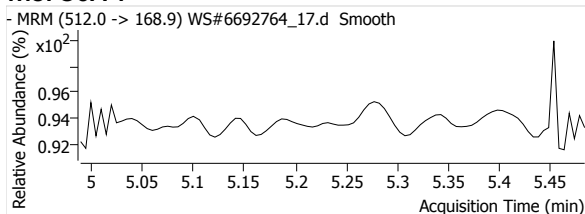
PFHxS 1



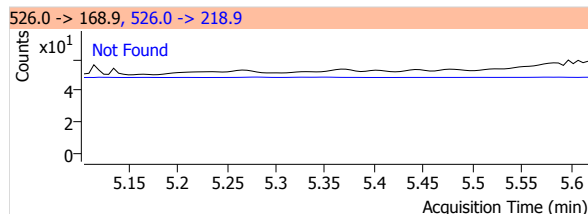
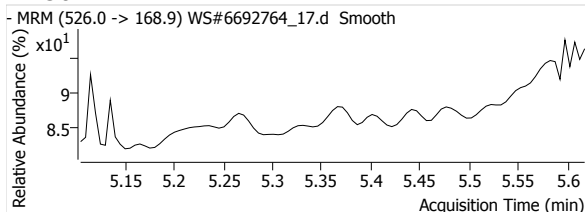
PFOS 1



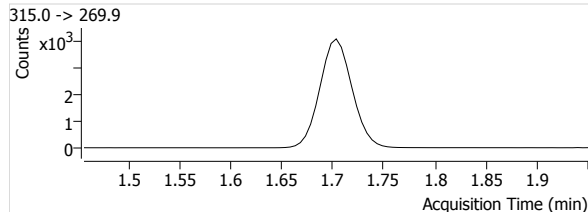
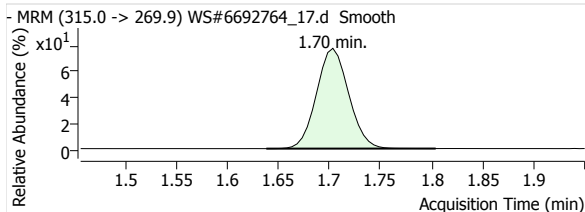
MeFOSA 1



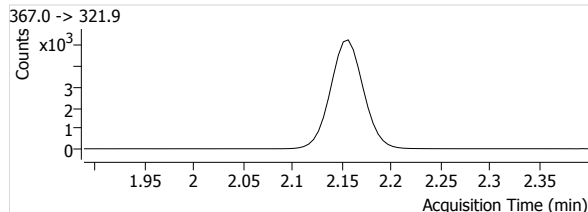
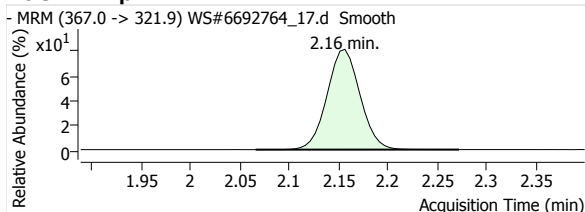
eFOSA 1



13C2-PFHxA

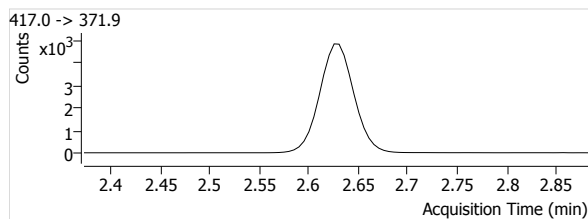
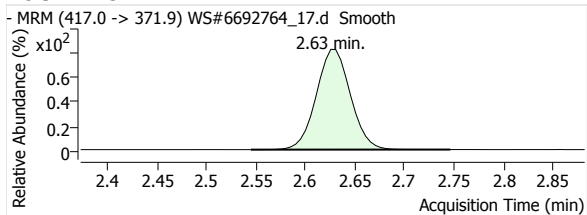


13C4-PFHpA

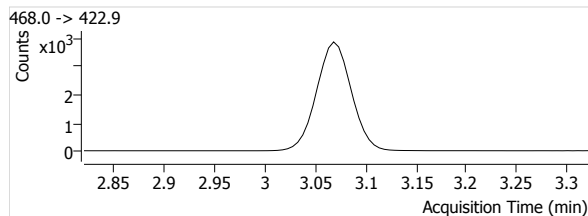
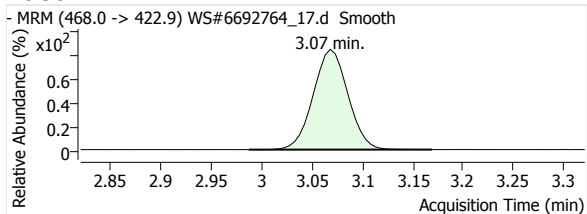


Quantitative Analysis Report

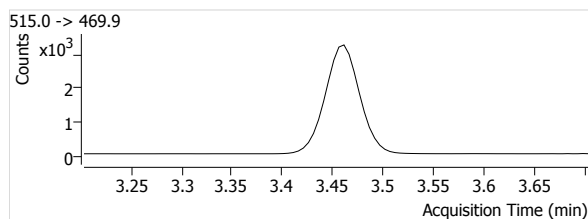
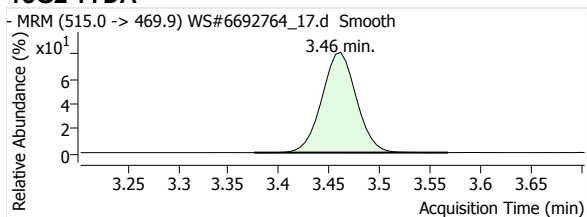
13C4-PFOA



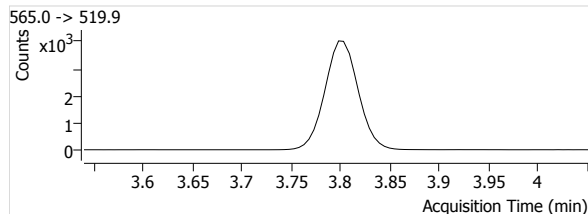
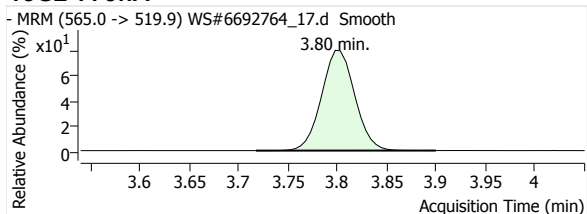
13C5-PFNA



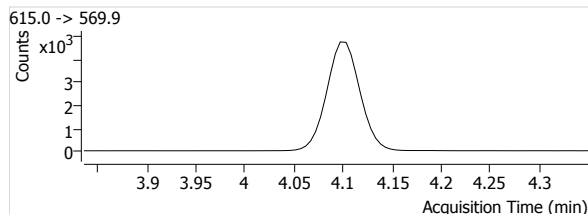
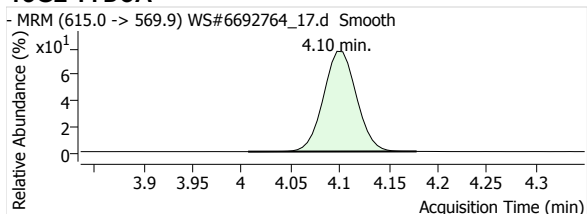
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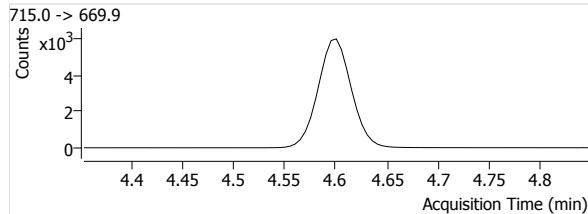
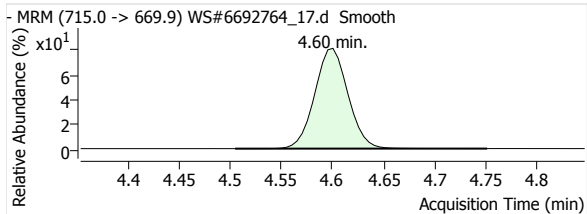
13C2-PFUnA



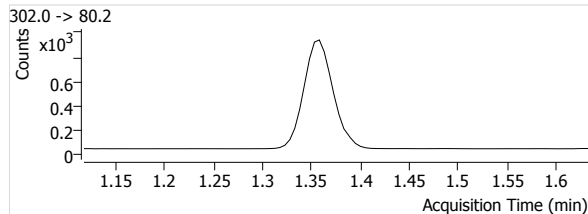
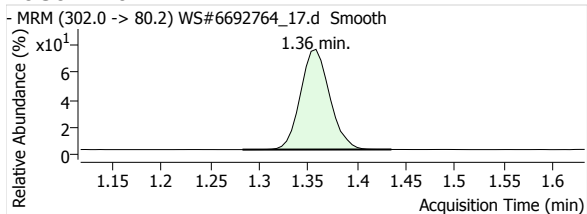
13C2-PFDoA



13C2-PFTeDA

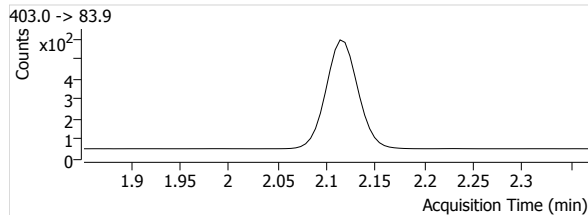
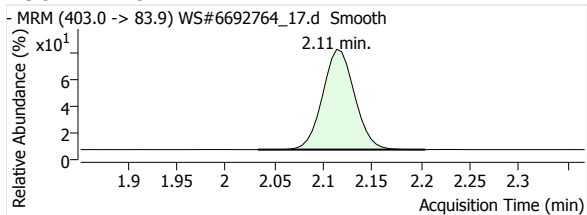


13C3-PFBS

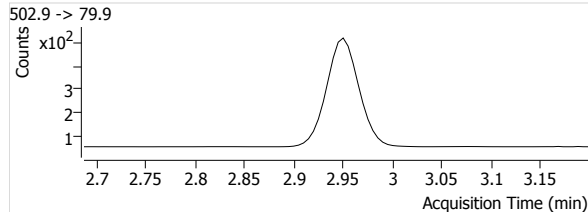
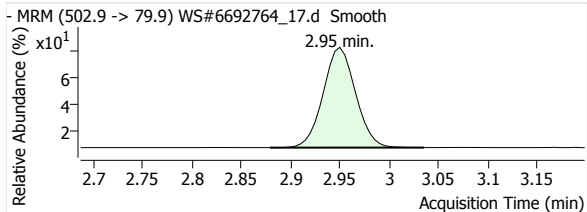


Quantitative Analysis Report

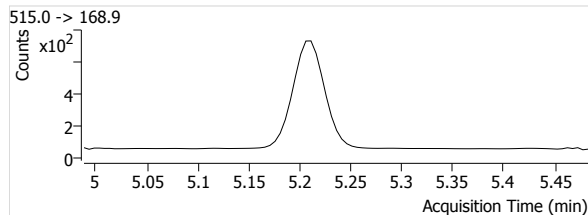
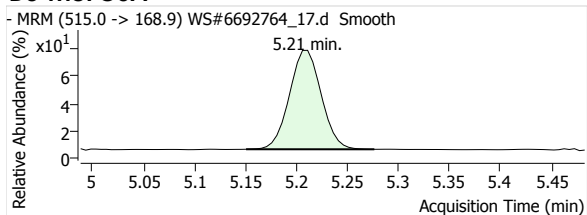
18O2-PFHxs



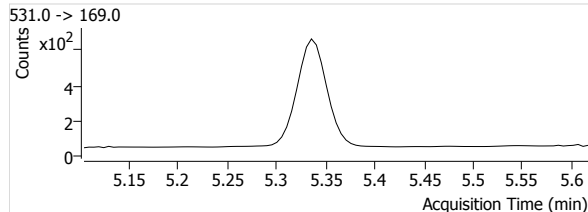
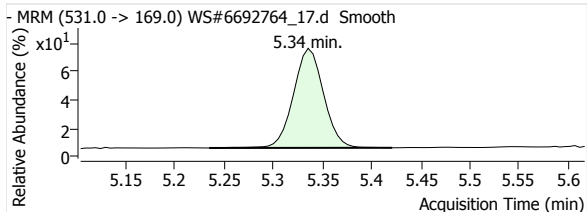
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



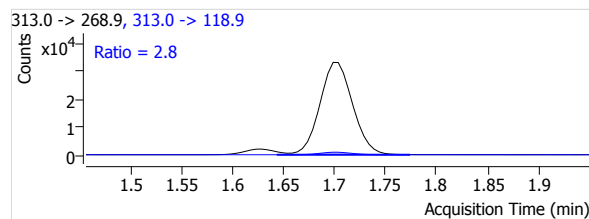
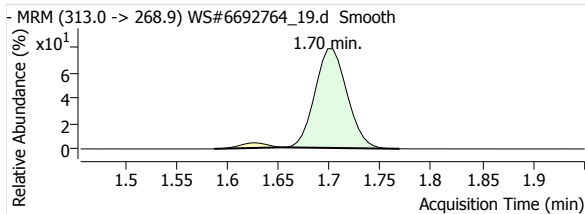
Quantitative Analysis Report

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bin

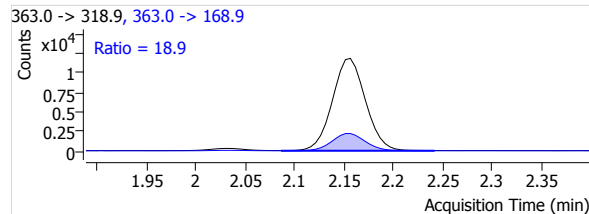
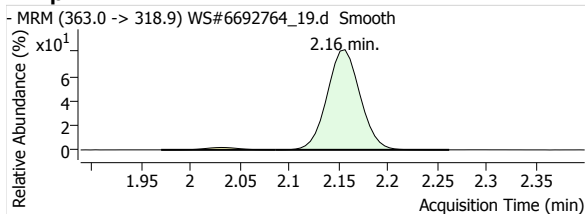
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Type	Sample	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-B7
Acq. Date-Time	2020/04/23 3:59:41 AM	Dil.	0.0
Comment	Reported for all except PFOA, PFHxA, PFHxS & PFOS.		
User Defined	MI PFOA		

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	1.1231	--	71818	1.70	55070	8.6768	2018	1.70	24672	2.8
PFHpA 1	µg/L	--	0.3340	--	27432	2.16	1563	2.4283	5184	2.16	615	18.9
PFOA 1	µg/L	--	1.0106	--	80228	2.63	5663	7.3841	20619	2.63	22215	25.7
PFNA 1	µg/L	--	0.0554	--	3904	3.07	5559	0.4466	837	3.07	9157	21.4
PFDA 1	µg/L	--	0.0114	--	1079	3.46	118	0.1475	176	3.46	157	16.3
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBs 1	µg/L	--	0.0736	--	903	1.36	2263	0.5148	392	1.36	1914	43.4
PFHxS 1	µg/L	--	1.2576	--	11198	2.08	35287	9.5869	5952	2.09	51086	53.2
PFOS 1	µg/L	--	9.6424	--	59254	2.90	3749	64.6880	31027	2.89	2401	52.4
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	103.0503	--	8277	1.70	700	--	--	--	--	--
13C4-PFHpA	µg/L	--	101.3184	--	11297	2.16	1619	--	--	--	--	--
13C4-PFOA	µg/L	--	100.5646	--	10865	2.63	1634	--	--	--	--	--
13C5-PFNA	µg/L	--	101.6275	--	8742	3.07	2376	--	--	--	--	--
13C2-PFDA	µg/L	--	98.1618	--	7316	3.46	781	--	--	--	--	--
13C2-PFUnA	µg/L	--	94.5521	--	8296	3.80	804	--	--	--	--	--
13C2-PFDoA	µg/L	--	88.9691	--	9485	4.10	970	--	--	--	--	--
13C2-PFTeDA	µg/L	--	82.6376	--	11542	4.60	2474	--	--	--	--	--
13C3-PFBs	µg/L	--	102.5132	--	1754	1.36	238	--	--	--	--	--
18O2-PFHxS	µg/L	--	102.2767	--	1168	2.11	1195	--	--	--	--	--
13C4-PFOS	µg/L	--	86.5784	--	916	2.95	275	--	--	--	--	--
D3-MeFOSA	µg/L	--	71.7367	--	1896	5.21	174	--	--	--	--	--
D5-EtFOSA	µg/L	--	72.1188	--	1627	5.34	112	--	--	--	--	--

PFHxA 1

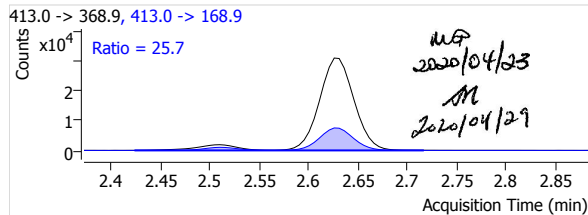
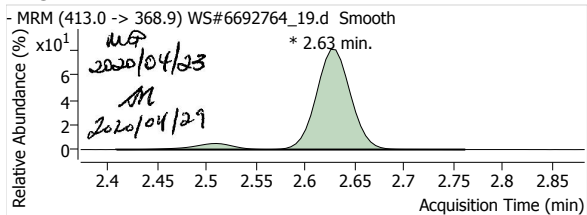


PFHpA 1

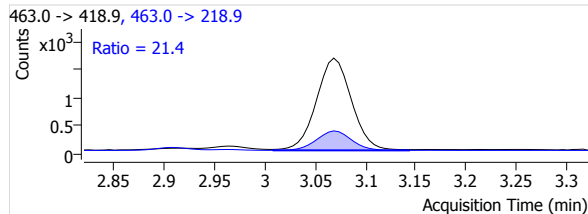
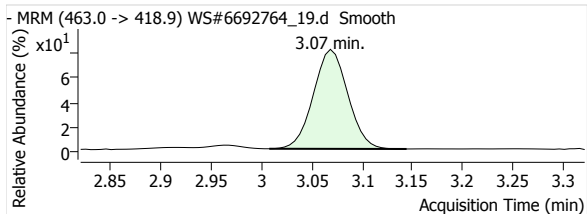


Quantitative Analysis Report

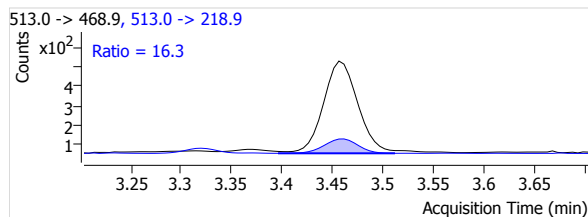
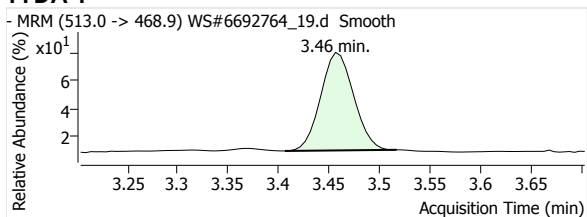
PFOA 1



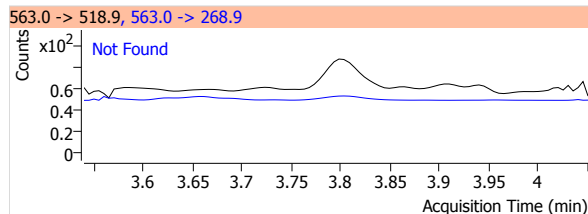
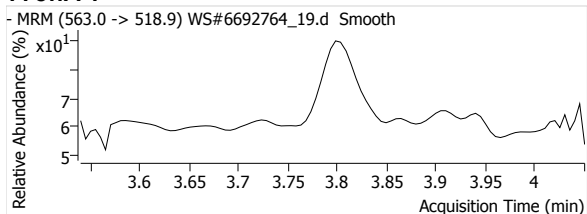
PFNA 1



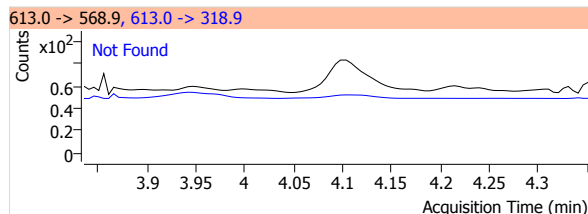
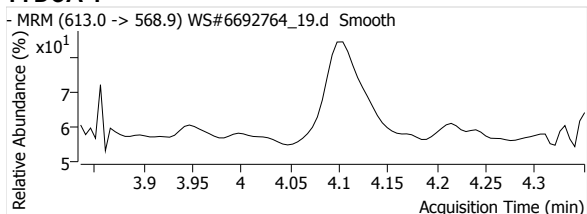
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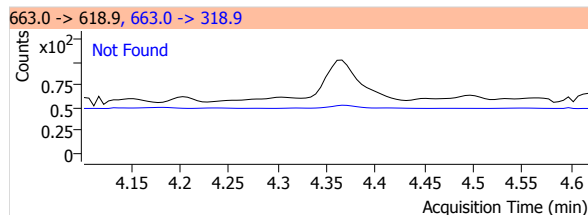
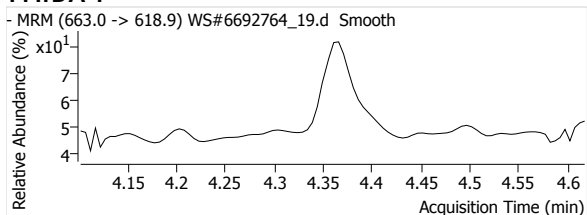
PFUnA 1



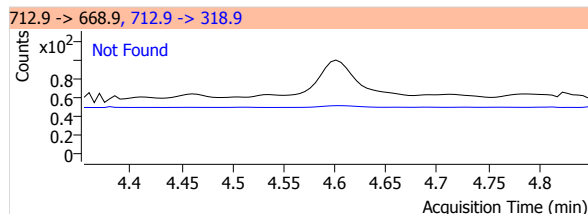
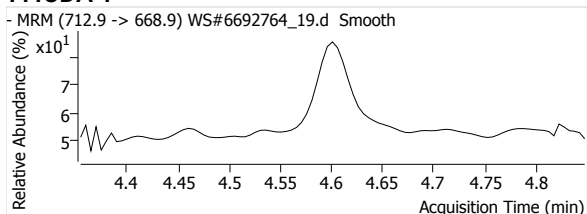
PFDaA 1



PFTrDA 1

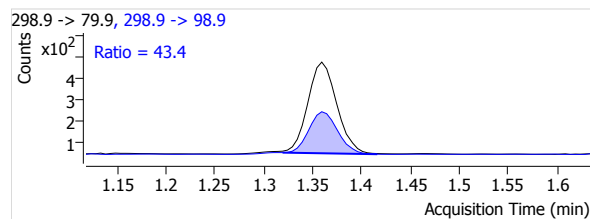
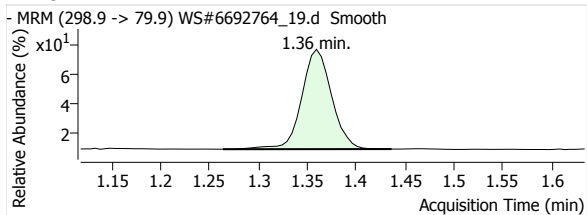


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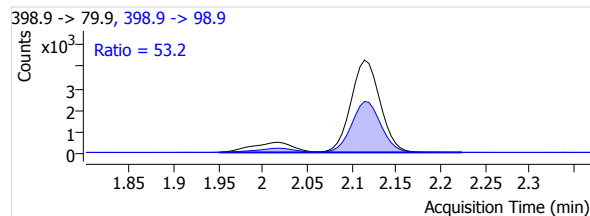
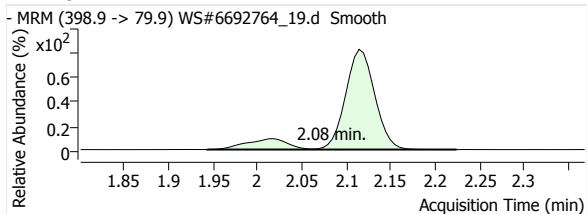


Quantitative Analysis Report

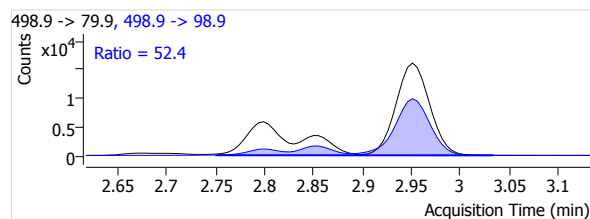
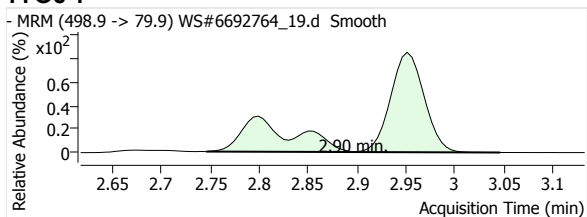
PFBS 1



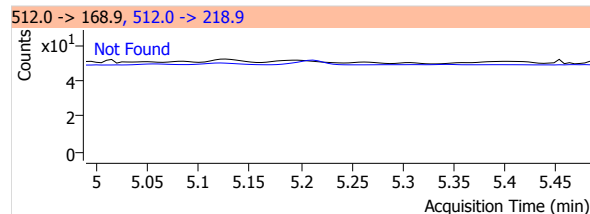
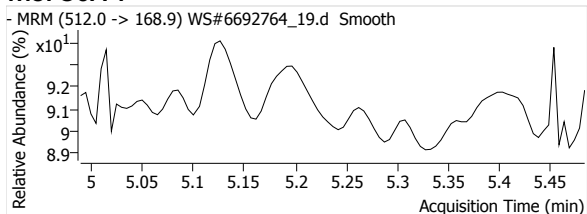
PFHxS 1



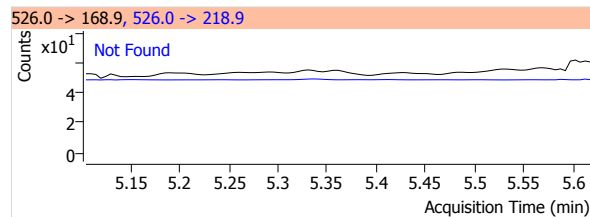
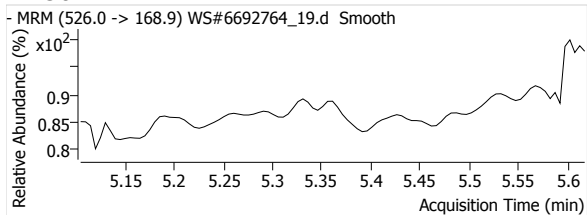
PFOS 1



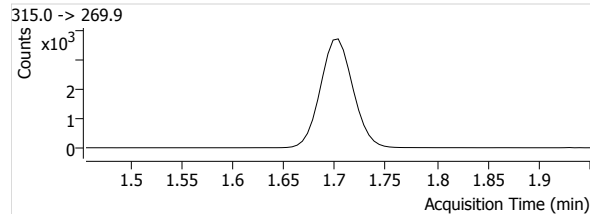
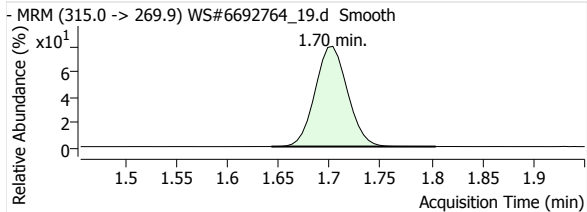
MeFOSA 1



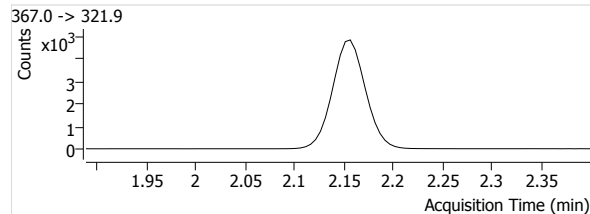
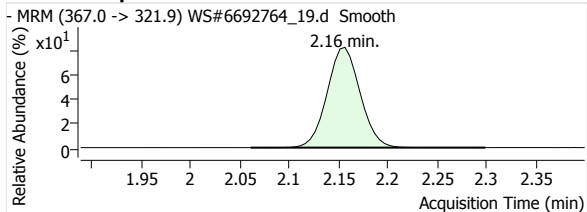
eFOSA 1



13C2-PFHxA

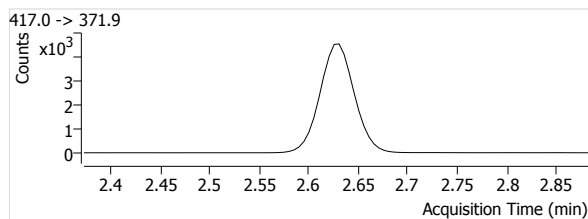
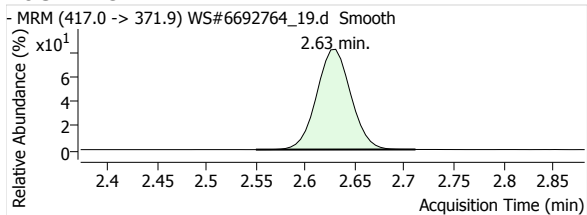


13C4-PFHpA

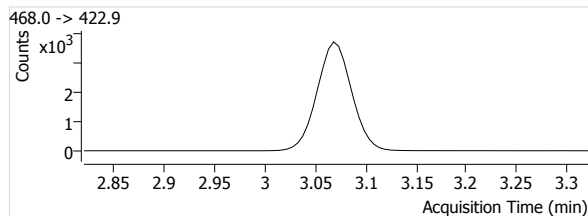
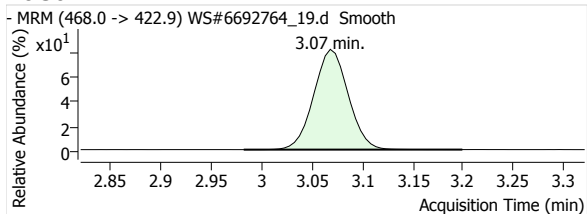


Quantitative Analysis Report

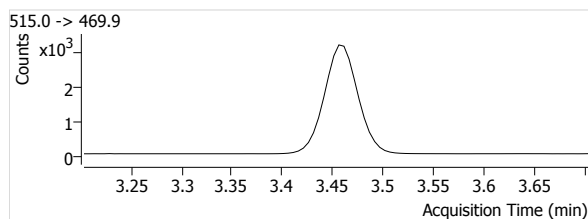
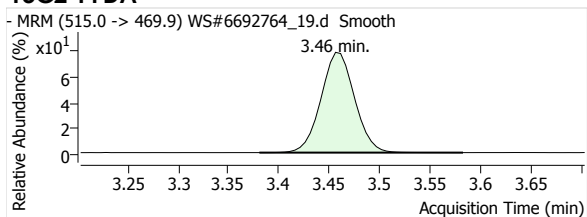
13C4-PFOA



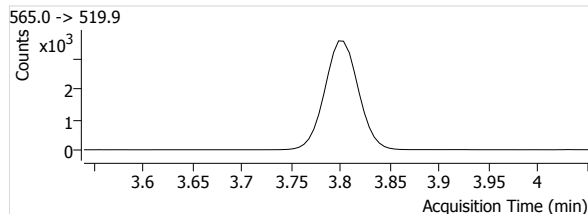
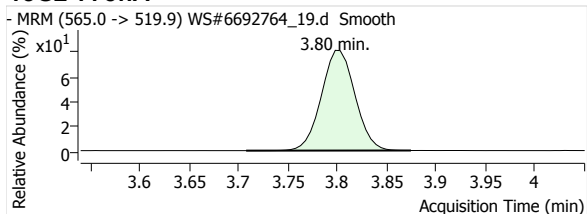
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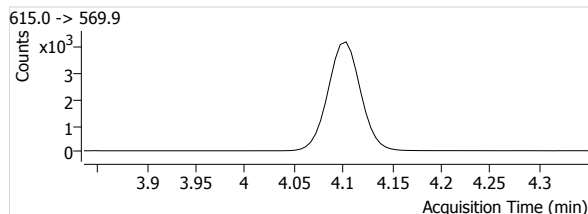
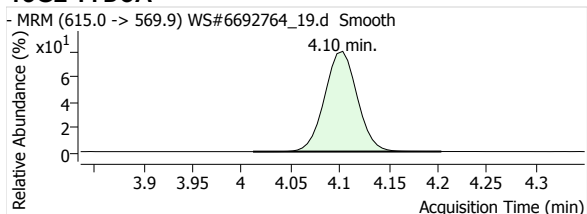
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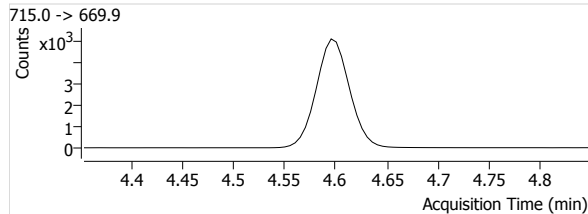
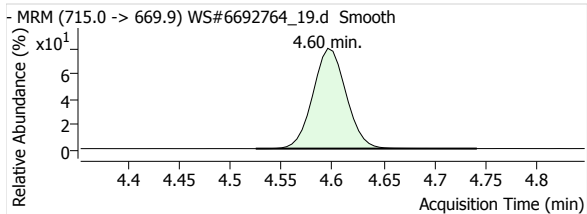
13C2-PFUnA



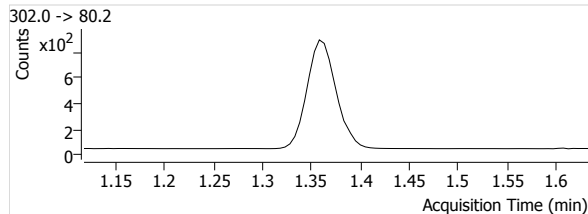
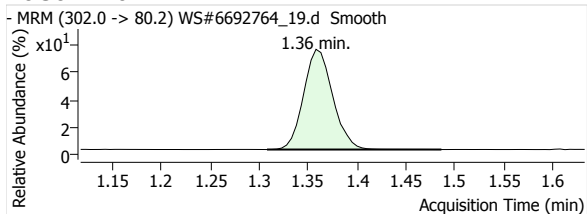
13C2-PFDoA



13C2-PFTeDA

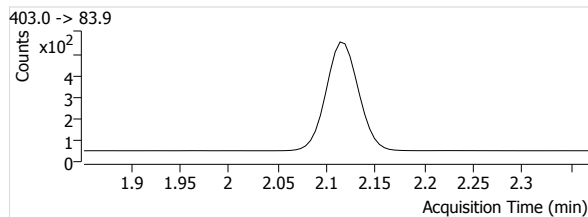
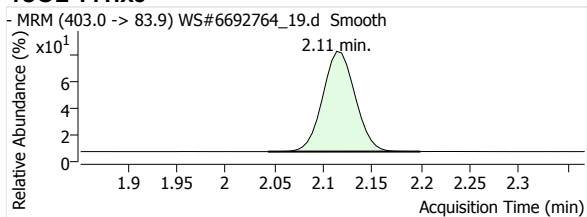


13C3-PFBS

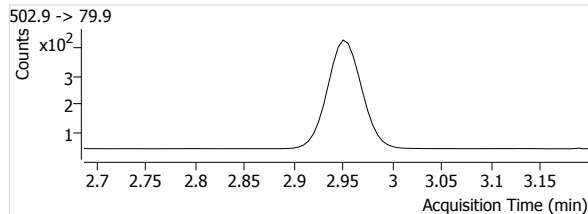
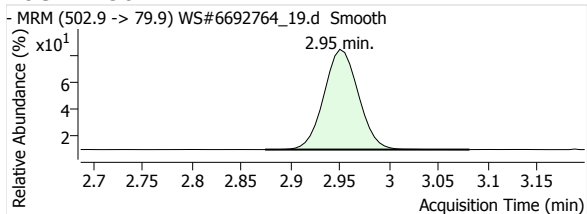


Quantitative Analysis Report

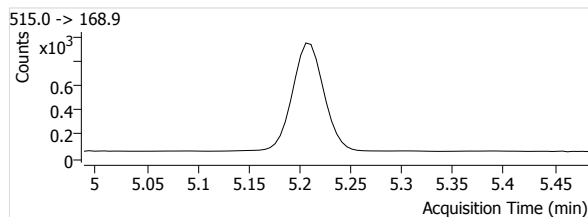
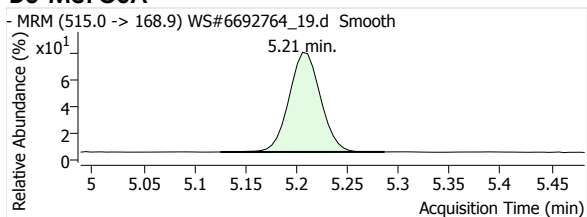
18O2-PFHxs



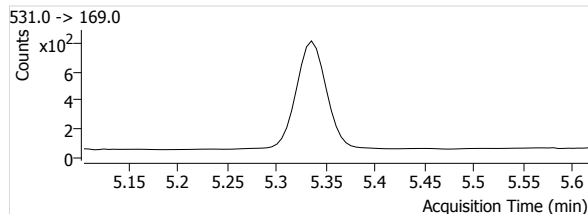
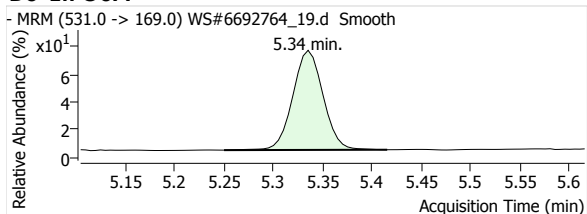
13C4-PFOS



D3-MeFOFA



D5-EtFOFA



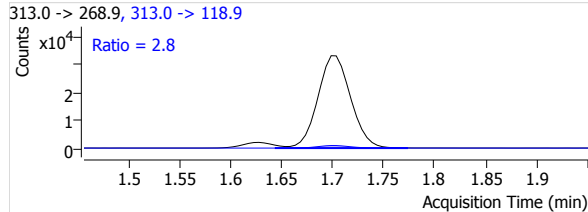
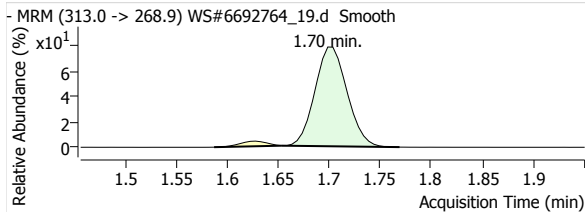
Quantitative Analysis Report

Batch Data Path File Name T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764.batch.bin

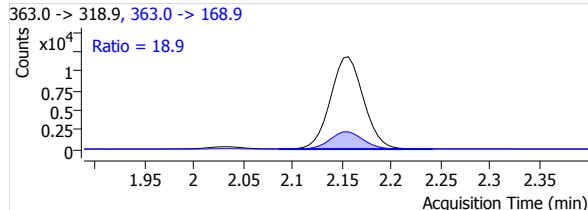
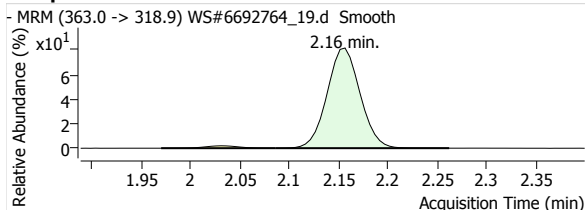
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Type	Sample	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-B7
Acq. Date-Time	2020/04/23 3:59:41 AM	Dil.	0.0
Comment	Reported for all except PFHxS & PFOS.		
User Defined	MI PFOA		

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	1.1231	--	71818	1.70	55070	8.6768	2018	1.70	24672	2.8
PFHpA 1	µg/L	--	0.3340	--	27432	2.16	1563	2.4283	5184	2.16	615	18.9
PFOA 1	µg/L	--	0.9379	--	74488	2.63	5660	6.8558	17994	2.63	22192	24.2
PFNA 1	µg/L	--	0.0554	--	3904	3.07	5559	0.4466	837	3.07	9157	21.4
PFDA 1	µg/L	--	0.0114	--	1079	3.46	118	0.1475	176	3.46	157	16.3
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.0736	--	903	1.36	2263	0.5148	392	1.36	1914	43.4
PFHxS 1	µg/L	--	1.2567	--	11198	2.08	35287	9.5869	5952	2.09	51086	53.2
PFOS 1	µg/L	--	9.6283	--	59254	2.90	3749	64.6880	31027	2.89	2401	52.4
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	103.0503	--	8277	1.70	700	--	--	--	--	--
13C4-PFHpA	µg/L	--	101.3184	--	11297	2.16	1619	--	--	--	--	--
13C4-PFOA	µg/L	--	100.5646	--	10865	2.63	1634	--	--	--	--	--
13C5-PFNA	µg/L	--	101.6275	--	8742	3.07	2376	--	--	--	--	--
13C2-PFDA	µg/L	--	98.1618	--	7316	3.46	781	--	--	--	--	--
13C2-PFUnA	µg/L	--	94.5521	--	8296	3.80	804	--	--	--	--	--
13C2-PFDoA	µg/L	--	88.9691	--	9485	4.10	970	--	--	--	--	--
13C2-PFTeDA	µg/L	--	82.6376	--	11542	4.60	2474	--	--	--	--	--
13C3-PFBS	µg/L	--	102.5132	--	1754	1.36	238	--	--	--	--	--
18O2-PFHxS	µg/L	--	102.2767	--	1168	2.11	1195	--	--	--	--	--
13C4-PFOS	µg/L	--	86.5784	--	916	2.95	275	--	--	--	--	--
D3-MeFOSA	µg/L	--	71.7367	--	1896	5.21	174	--	--	--	--	--
D5-EtFOSA	µg/L	--	72.1188	--	1627	5.34	112	--	--	--	--	--

PFHxA 1

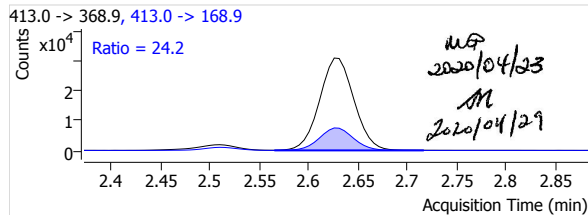
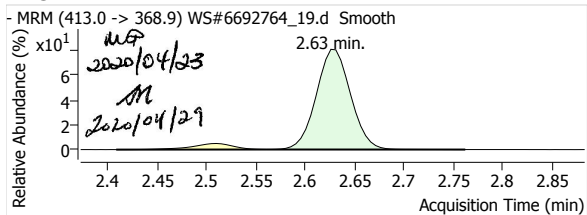


PFHpA 1

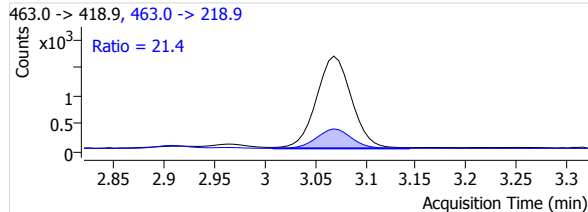
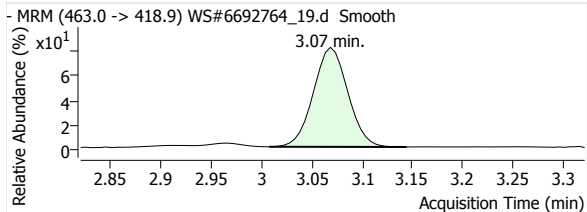


Quantitative Analysis Report

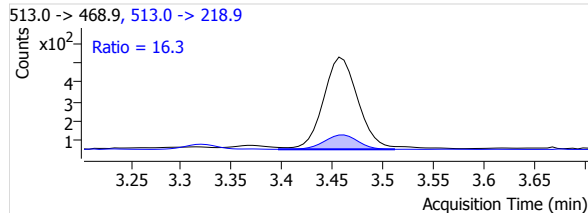
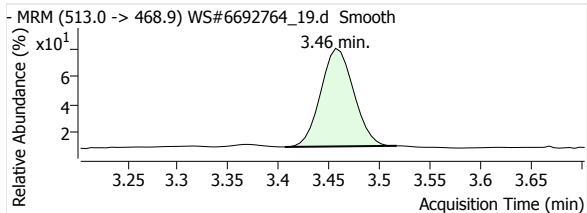
PFOA 1



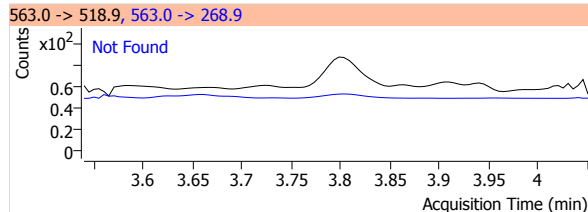
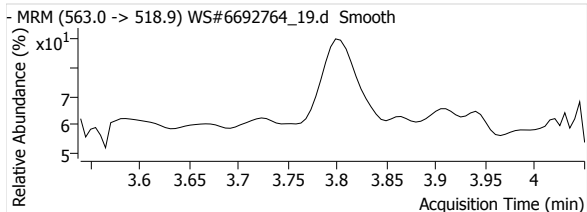
PFNA 1



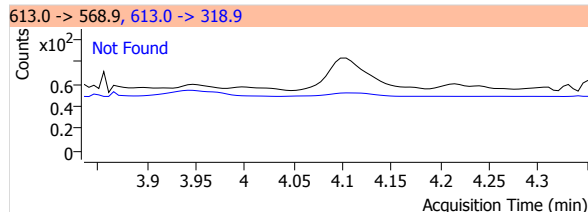
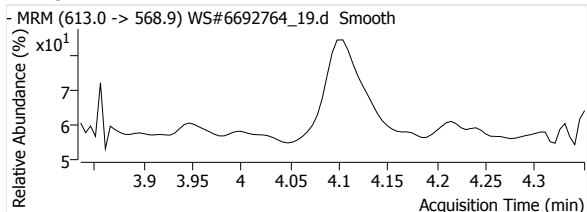
PFDA 1



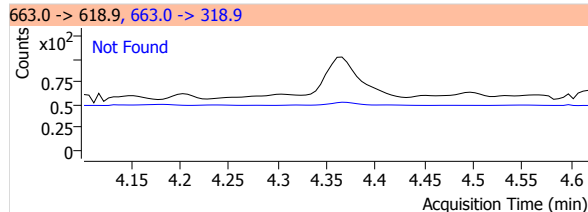
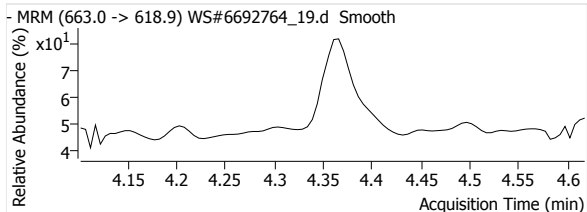
PFUnA 1



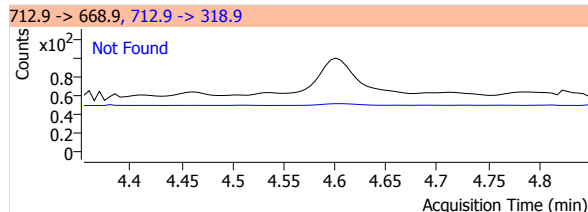
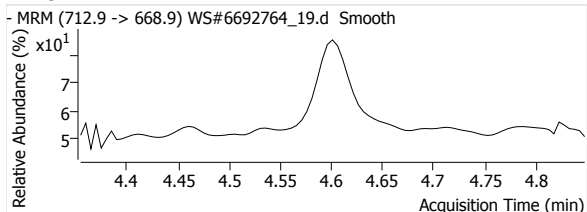
PFDaA 1



PFTrDA 1

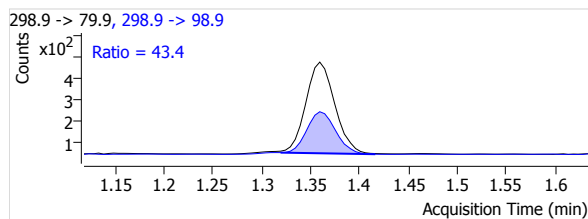
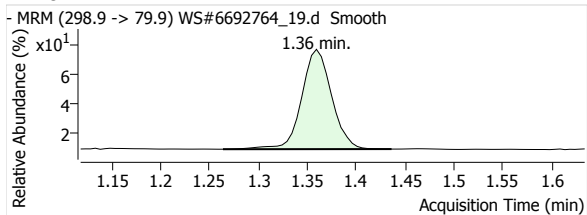


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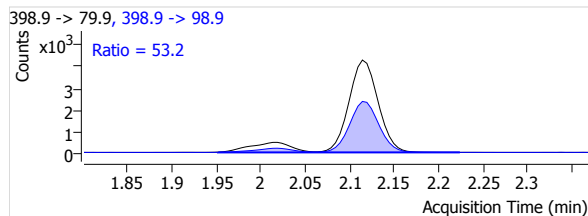
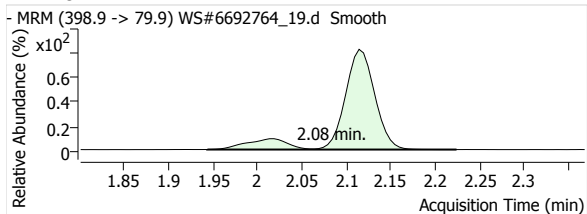


Quantitative Analysis Report

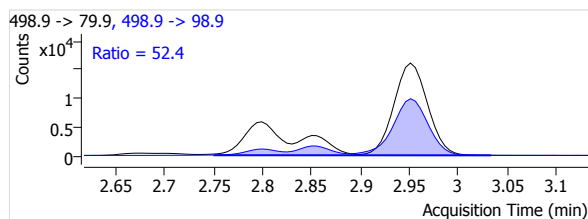
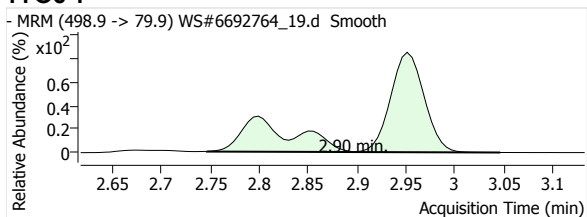
PFBS 1



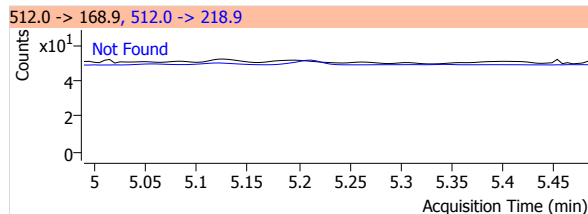
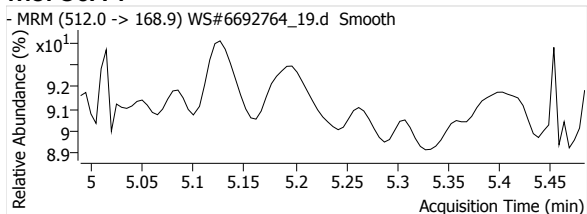
PFHxS 1



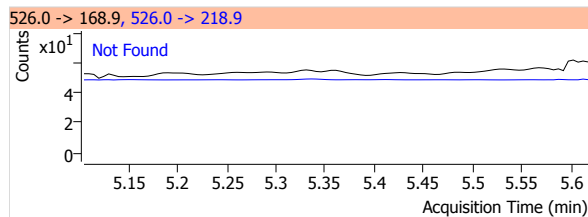
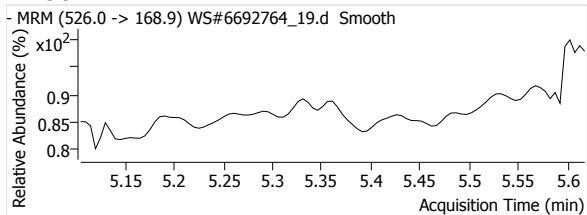
PFOS 1



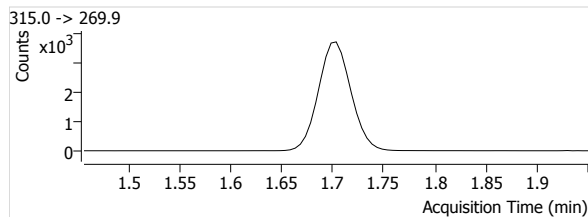
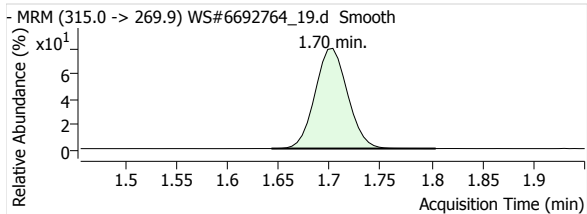
MeFOSA 1



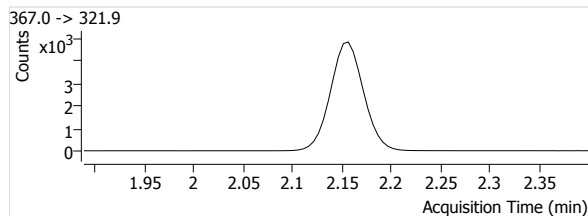
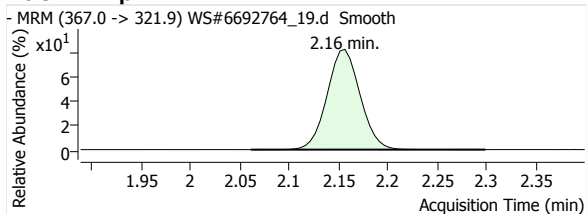
eFOSA 1



13C2-PFHxA

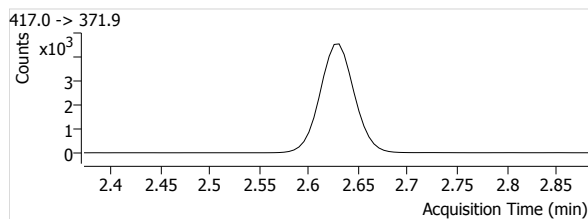
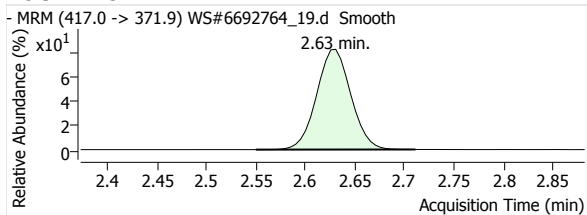


13C4-PFHpA

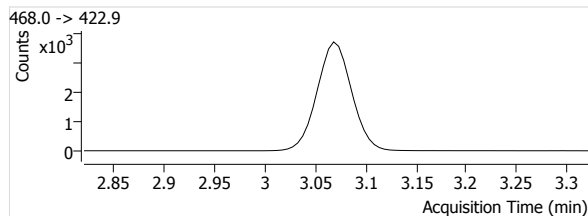
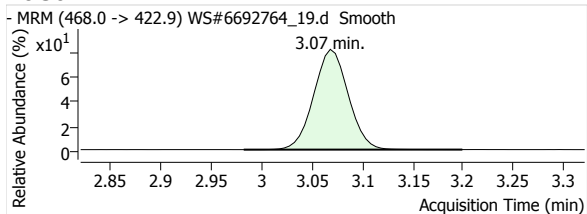


Quantitative Analysis Report

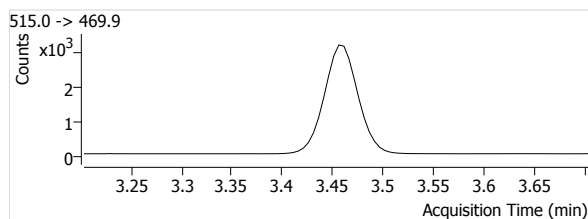
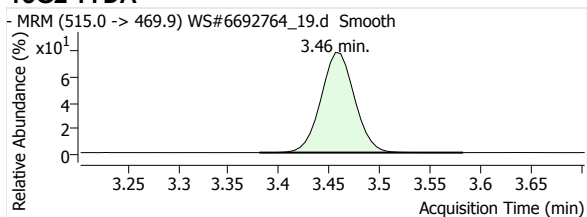
13C4-PFOA



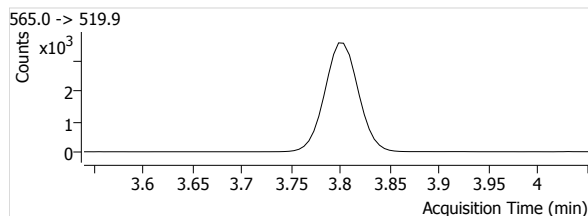
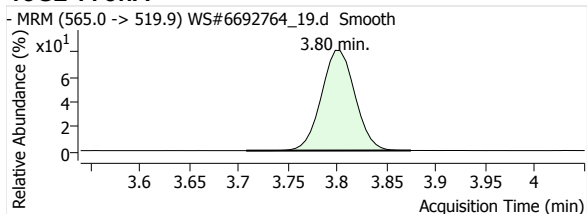
13C5-PFNA



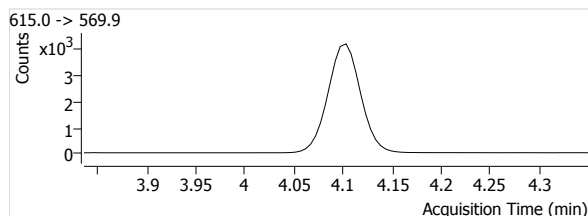
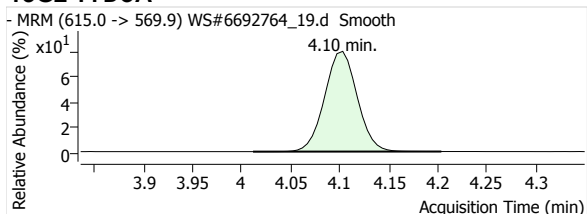
13C2-PFDA



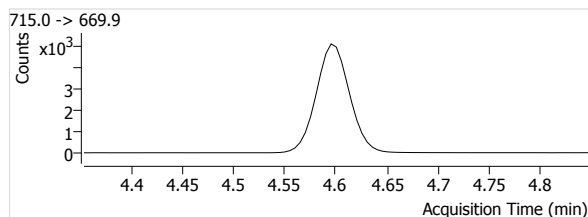
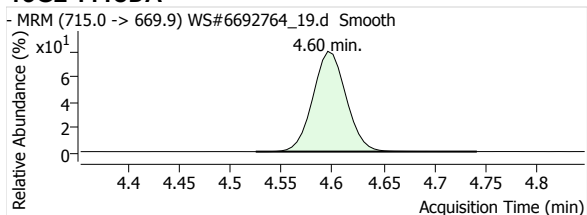
13C2-PFUnA



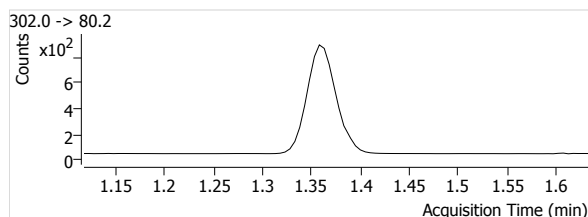
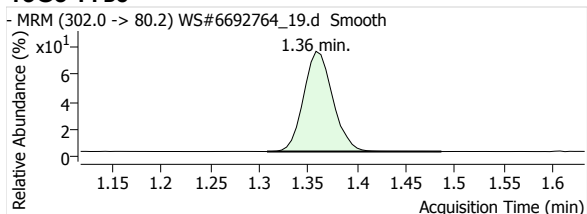
13C2-PFDoA



13C2-PFTeDA

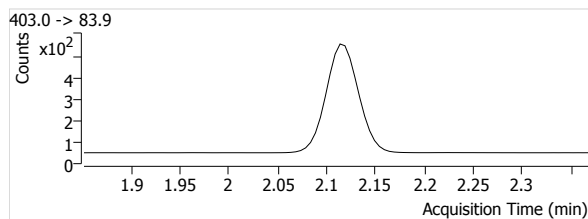
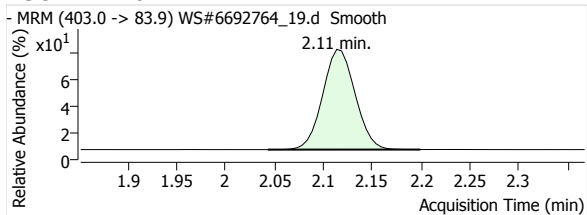


13C3-PFBS

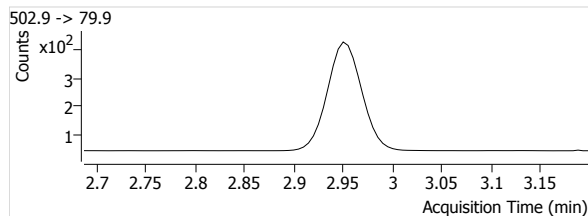
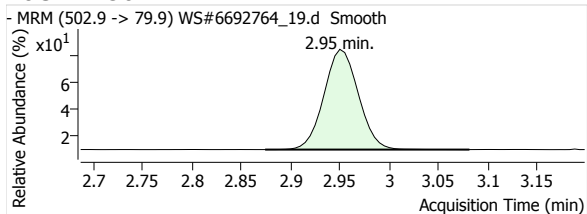


Quantitative Analysis Report

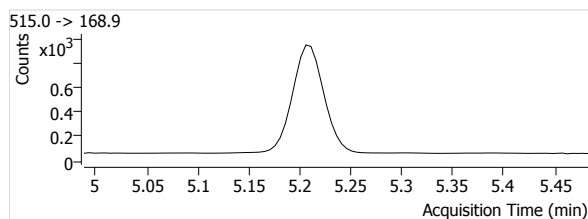
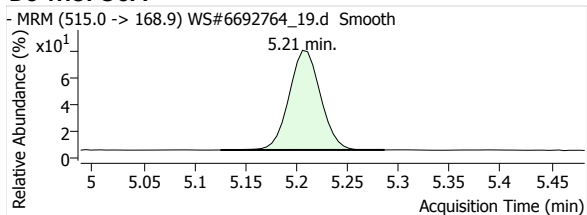
18O2-PFHxs



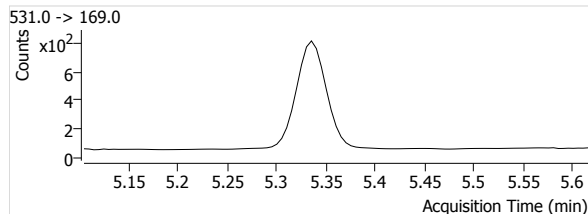
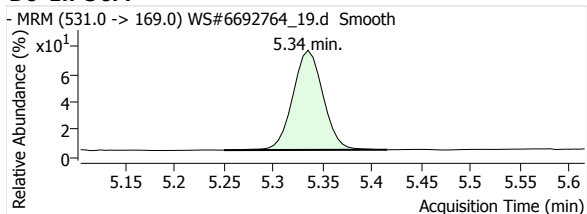
13C4-PFOS



D3-MeFOSA



D5-EtFOSA

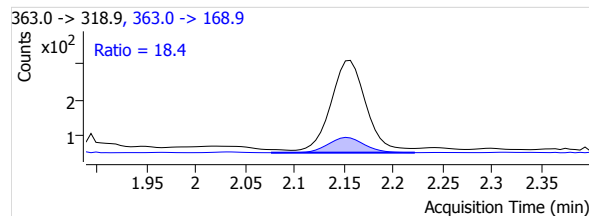
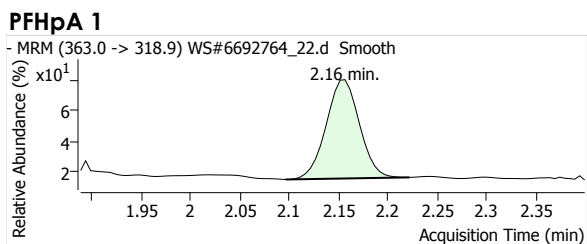
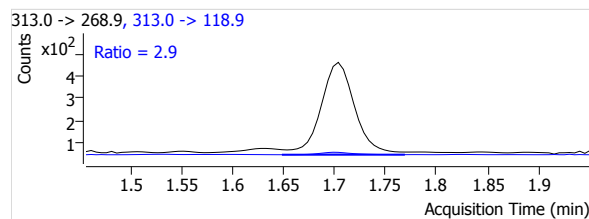
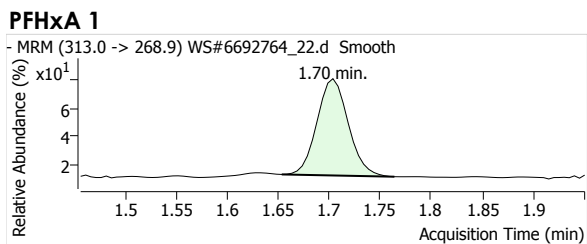


Quantitative Analysis Report

Batch Data Path File Name T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_ML.batch.bin

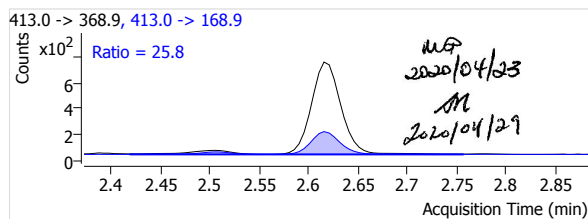
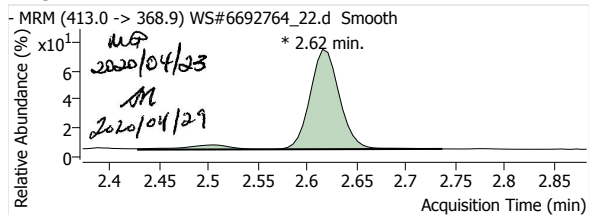
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Type	Sample	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-B8
Acq. Date-Time	2020/04/23 4:20:32 AM	Dil.	0.0
Comment	Reported for PFTeDa & PFTeDA only.		
User Defined	MI PFOA		

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	0.0077	--	842	1.70	431	0.1009	24	1.70	262	2.9
PFHpA 1	µg/L	--	0.0030	--	597	2.16	24	0.0560	110	2.15	31	18.4
PFOA 1	µg/L	--	0.0312	--	1566	2.62	9974	0.2611	404	2.62	7226	25.8
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	0.0000	--	208	3.46	44	0.0276	33	3.46	220	15.9
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBs 1	µg/L	--	0.0007	--	70	1.36	144	0.0402	32	1.36	222	45.7
PFHxS 1	µg/L	--	0.0760	--	670	2.08	2563	0.6029	360	2.09	8915	53.7
PFOS 1	µg/L	--	0.1595	--	959	2.90	904	1.1075	536	2.89	301	55.9
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	103.9467	--	8349	1.70	1464	--	--	--	--	--
13C4-PFHpA	µg/L	--	95.5785	--	10657	2.15	923	--	--	--	--	--
13C4-PFOA	µg/L	--	55.5165	--	5998	2.62	2158	--	--	--	--	--
13C5-PFNA	µg/L	--	67.1007	--	5772	3.06	1182	--	--	--	--	--
13C2-PFDA	µg/L	--	101.1271	--	7537	3.46	1629	--	--	--	--	--
13C2-PFUnA	µg/L	--	93.7771	--	8228	3.80	862	--	--	--	--	--
13C2-PFDaA	µg/L	--	68.7365	--	7328	4.10	1243	--	--	--	--	--
13C2-PFTeDA	µg/L	--	46.4309	--	6485	4.60	1859	--	--	--	--	--
13C3-PFBs	µg/L	--	101.6949	--	1740	1.36	84	--	--	--	--	--
18O2-PFHxS	µg/L	--	97.2855	--	1111	2.11	739	--	--	--	--	--
13C4-PFOS	µg/L	--	81.8526	--	866	2.95	330	--	--	--	--	--
D3-MeFOSA	µg/L	--	57.8131	--	1528	5.21	67	--	--	--	--	--
D5-EtFOSA	µg/L	--	52.2606	--	1179	5.34	70	--	--	--	--	--

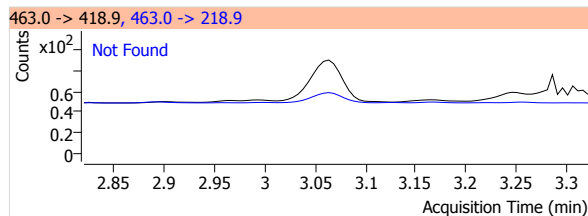
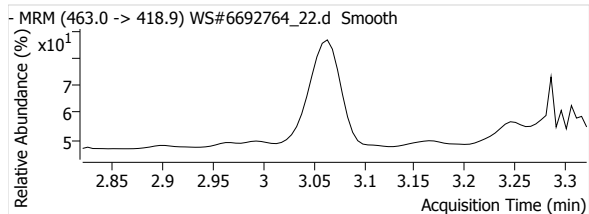


Quantitative Analysis Report

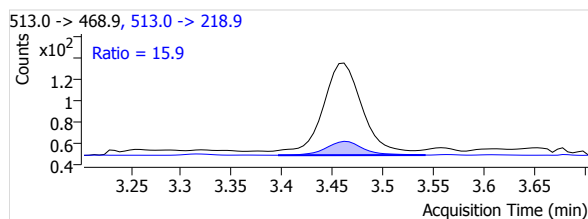
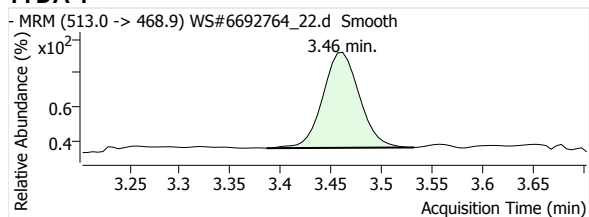
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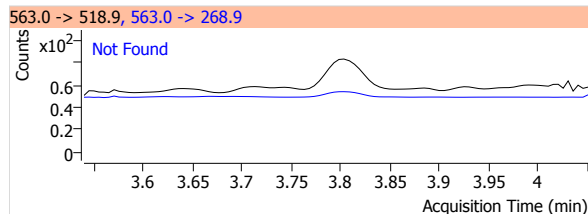
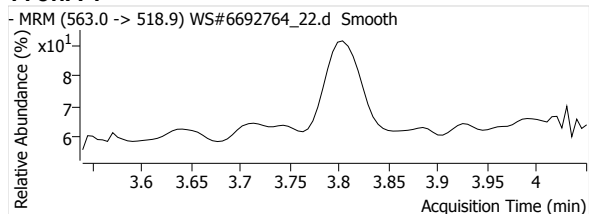
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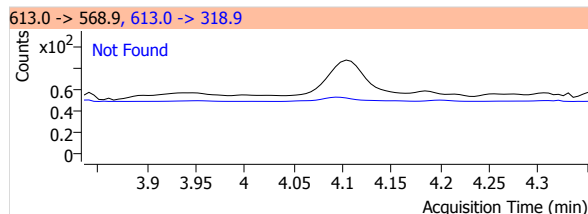
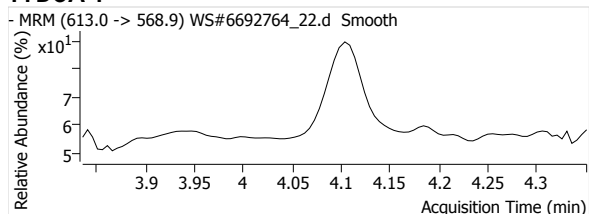
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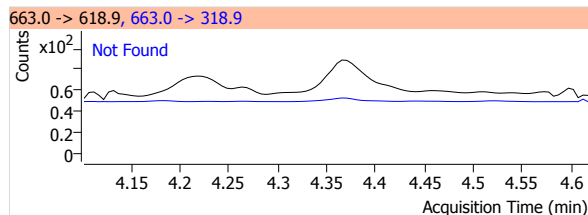
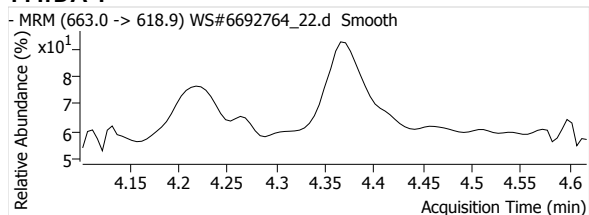
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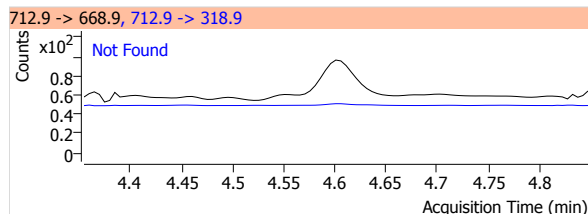
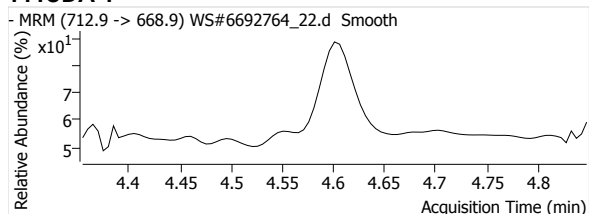
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PFTrDA 1

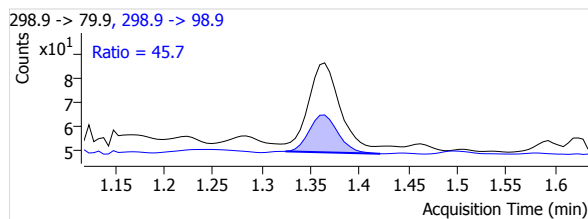
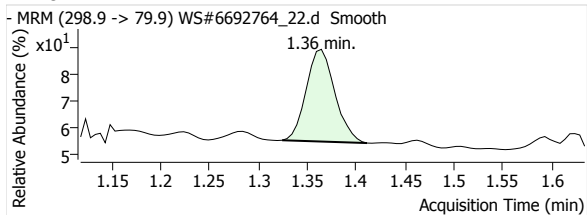


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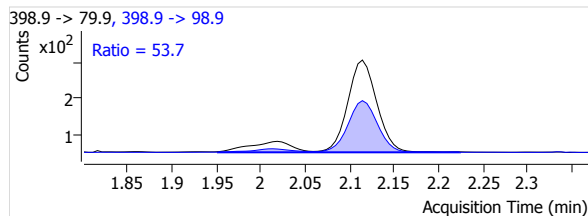
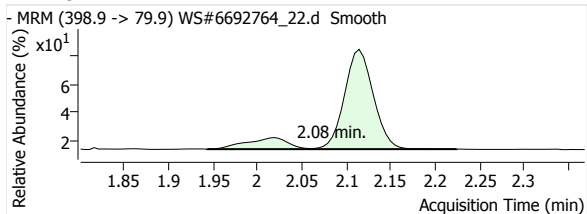


Quantitative Analysis Report

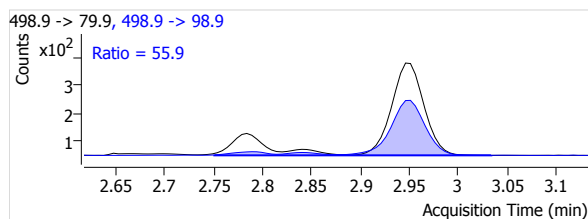
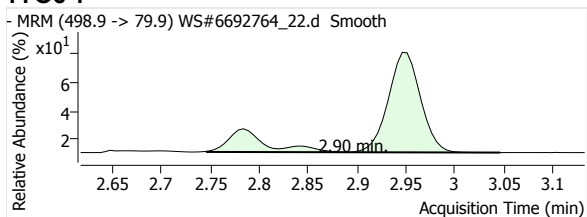
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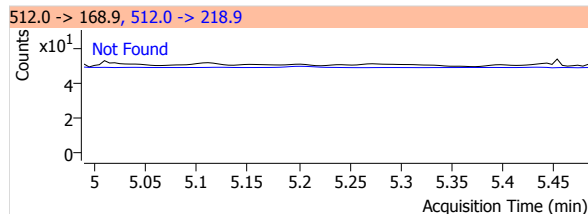
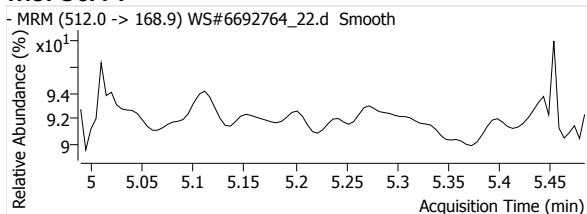
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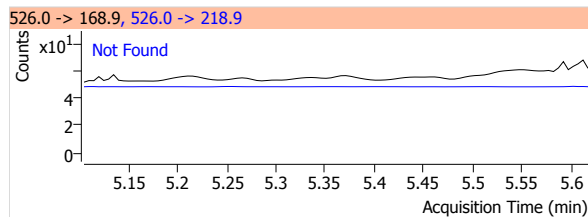
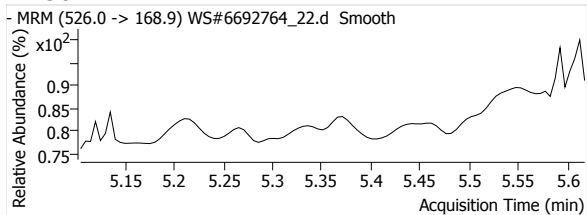
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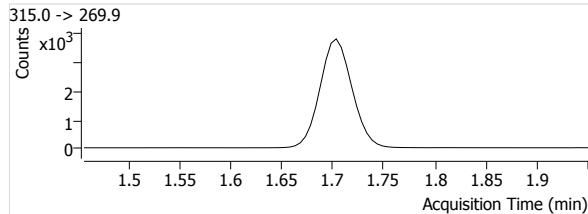
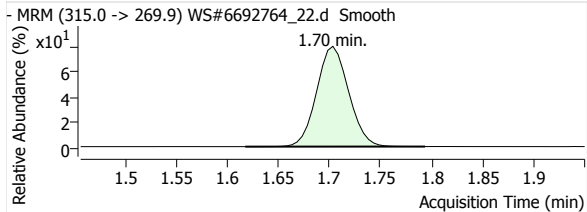
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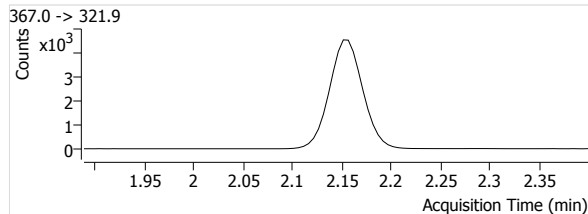
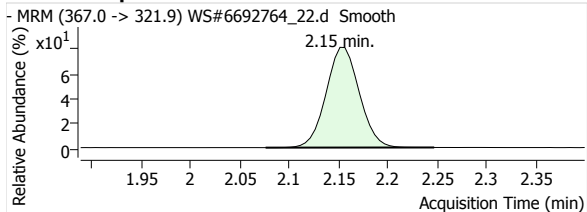
eFOSA 1



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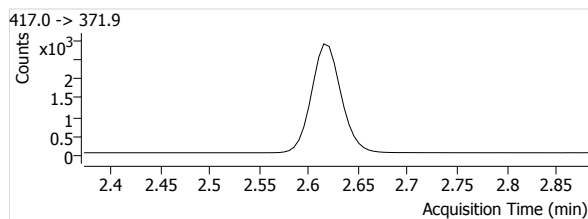
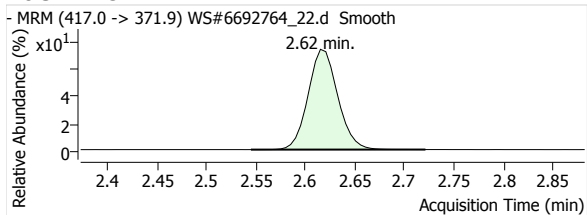


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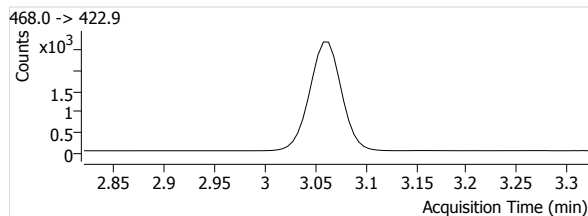
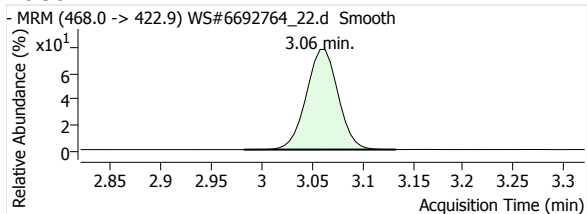


Quantitative Analysis Report

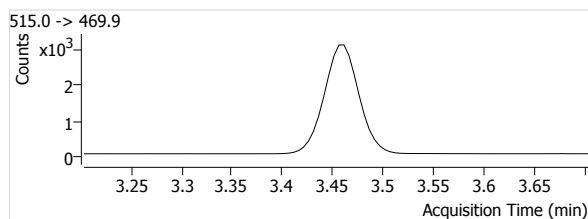
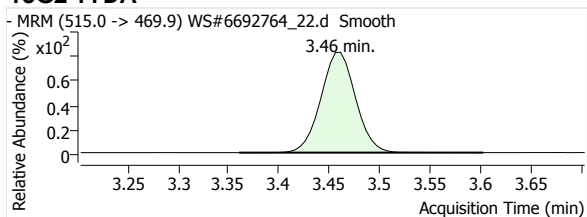
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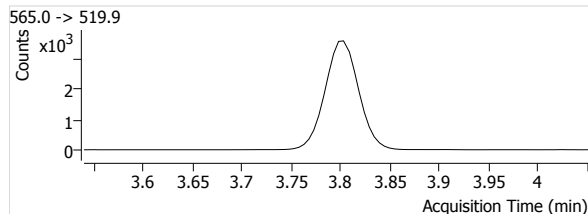
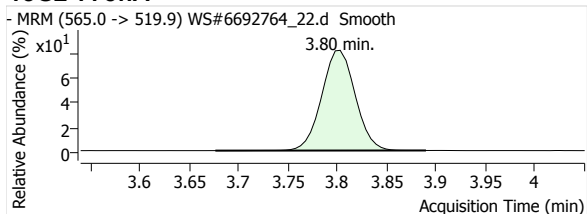
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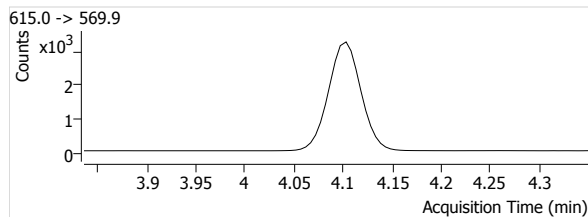
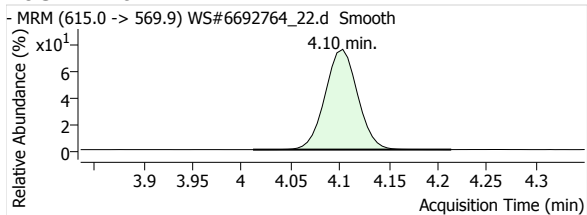
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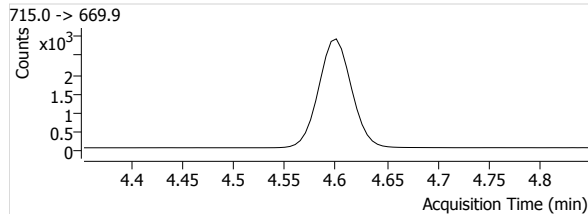
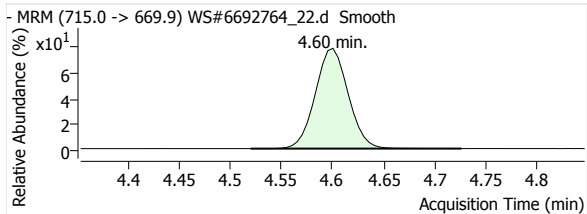
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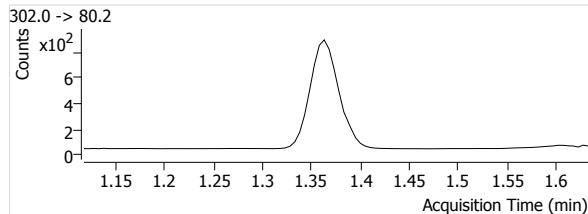
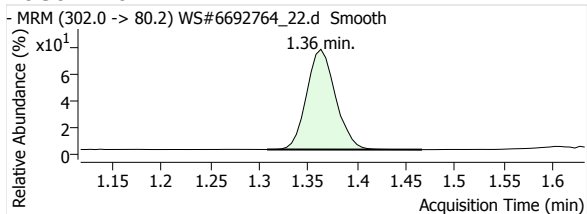
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13C2-PFTeDA

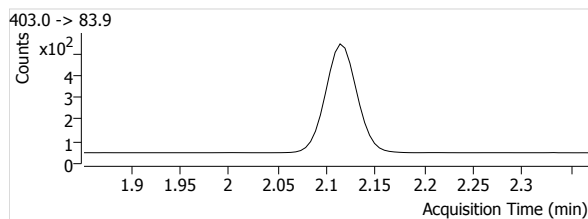
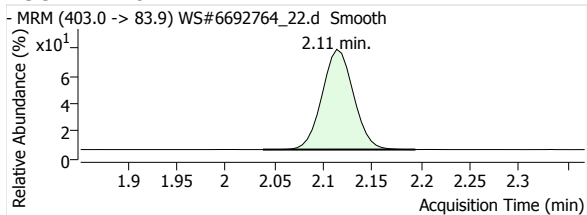


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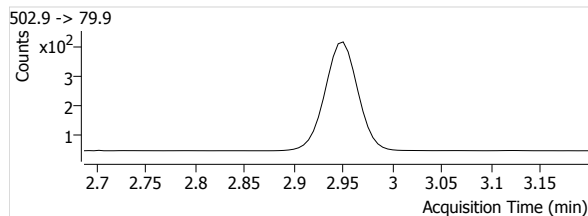
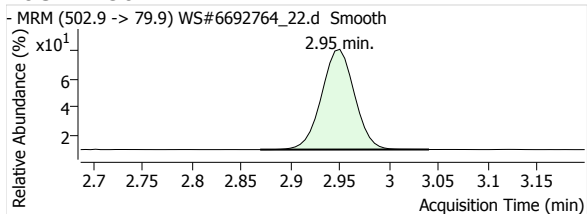


Quantitative Analysis Report

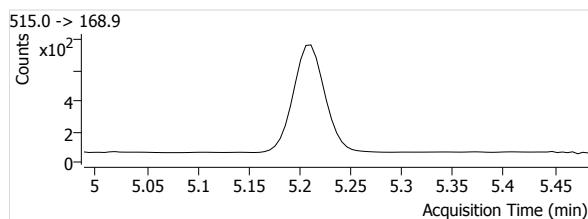
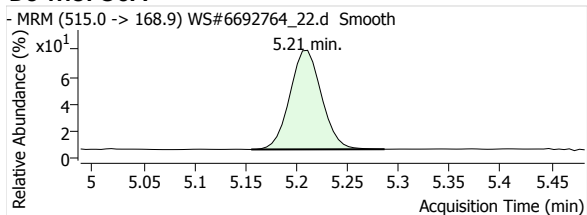
18O2-PFHxs



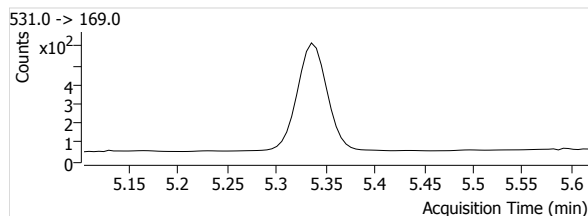
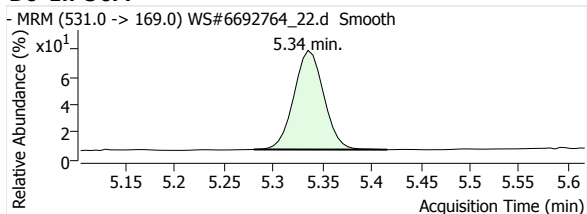
13C4-PFOS



D3-MeFOSA



D5-EtFOSA





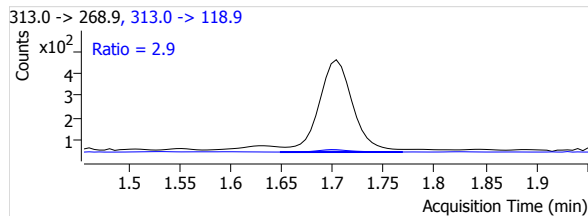
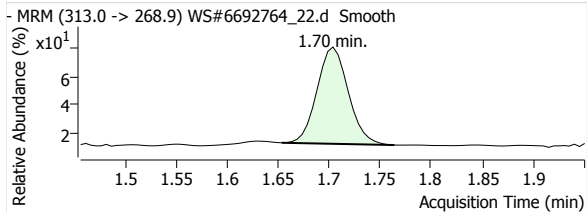
Quantitative Analysis Report

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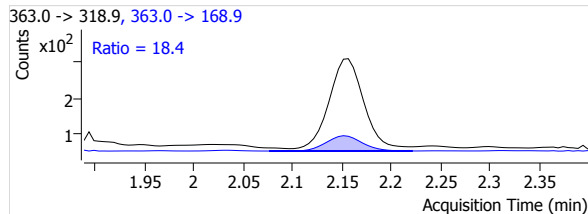
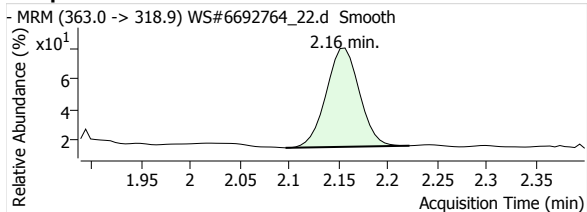
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Type	Sample	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-B8
Acq. Date-Time	2020/04/23 4:20:32 AM	Dil.	0.0
Comment	Reported for PFTTrDa & PFTeDA only.		
User Defined	MI PFOA		

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	0.0077	--	842	1.70	431	0.1009	24	1.70	262	2.9
PFHpA 1	µg/L	--	0.0030	--	597	2.16	24	0.0560	110	2.15	31	18.4
PFOA 1	µg/L	--	0.0288	--	1459	2.62	9971	0.2432	360	2.62	7224	24.7
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	0.0000	--	208	3.46	44	0.0276	33	3.46	220	15.9
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.0007	--	70	1.36	144	0.0402	32	1.36	222	45.7
PFHxS 1	µg/L	--	0.0765	--	670	2.08	2563	0.6029	360	2.09	8915	53.7
PFOS 1	µg/L	--	0.1600	--	959	2.90	904	1.1075	536	2.89	301	55.9
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	103.9467	--	8349	1.70	1464	--	--	--	--	--
13C4-PFHpA	µg/L	--	95.5785	--	10657	2.15	923	--	--	--	--	--
13C4-PFOA	µg/L	--	55.5165	--	5998	2.62	2158	--	--	--	--	--
13C5-PFNA	µg/L	--	67.1007	--	5772	3.06	1182	--	--	--	--	--
13C2-PFDA	µg/L	--	101.1271	--	7537	3.46	1629	--	--	--	--	--
13C2-PFUnA	µg/L	--	93.7771	--	8228	3.80	862	--	--	--	--	--
13C2-PFDaA	µg/L	--	68.7365	--	7328	4.10	1243	--	--	--	--	--
13C2-PFTeDA	µg/L	--	46.4309	--	6485	4.60	1859	--	--	--	--	--
13C3-PFBS	µg/L	--	101.6949	--	1740	1.36	84	--	--	--	--	--
18O2-PFHxS	µg/L	--	97.2855	--	1111	2.11	739	--	--	--	--	--
13C4-PFOS	µg/L	--	81.8526	--	866	2.95	330	--	--	--	--	--
D3-MeFOSA	µg/L	--	57.8131	--	1528	5.21	67	--	--	--	--	--
D5-EtFOSA	µg/L	--	52.2606	--	1179	5.34	70	--	--	--	--	--

PFHxA 1

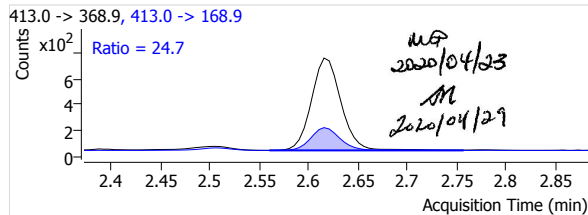
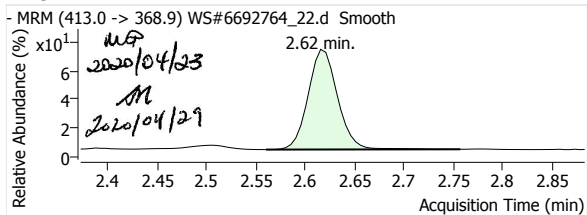


PFHpA 1

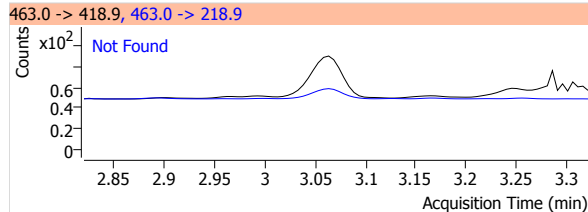
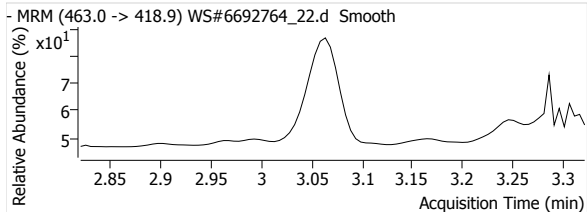


Quantitative Analysis Report

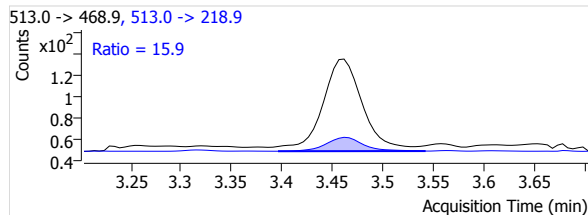
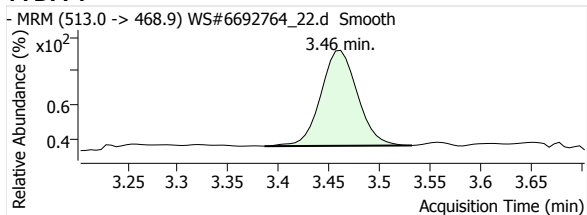
PFOA 1



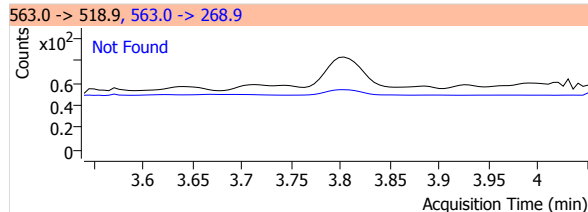
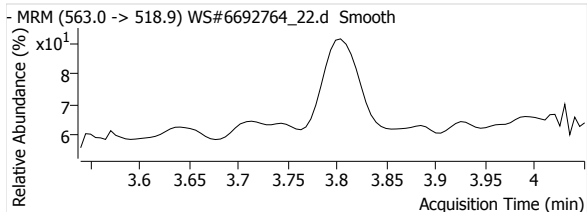
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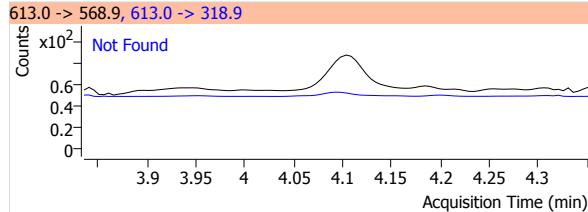
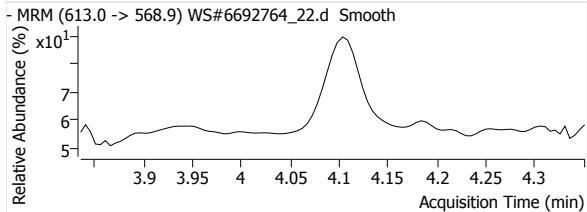
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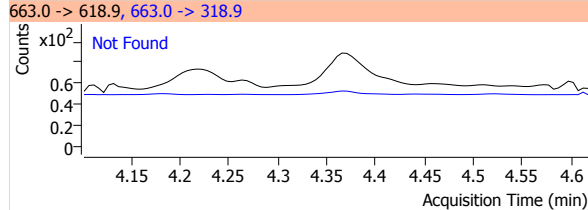
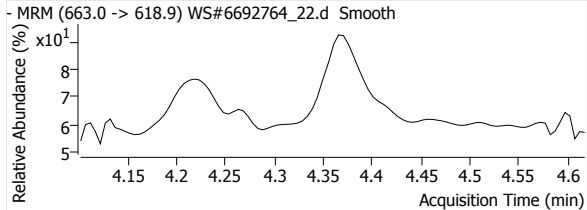
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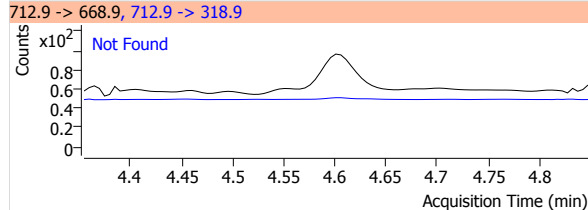
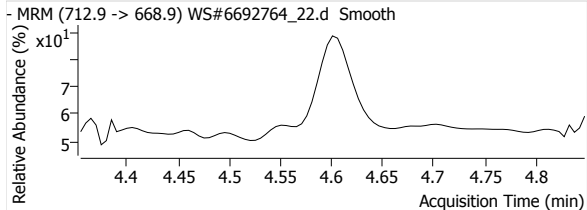
PFDaA 1



PFTrDA 1

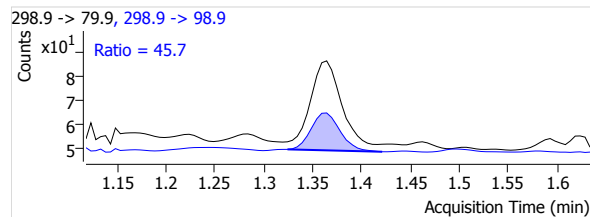
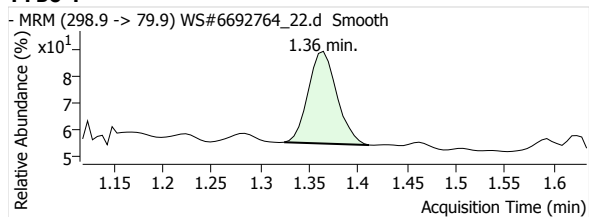


PFTeDA 1

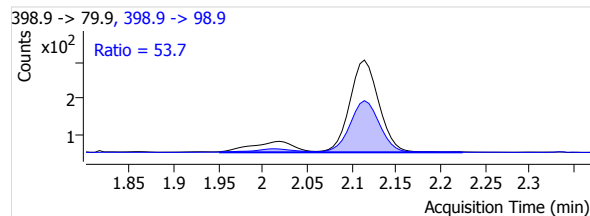
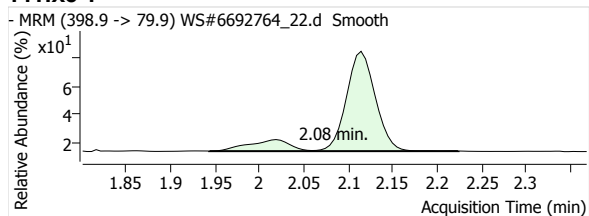


Quantitative Analysis Report

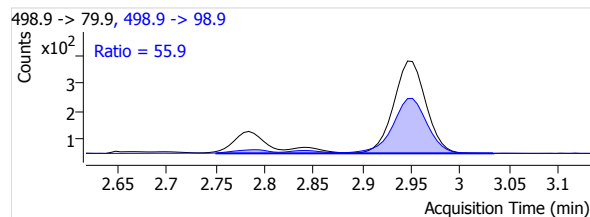
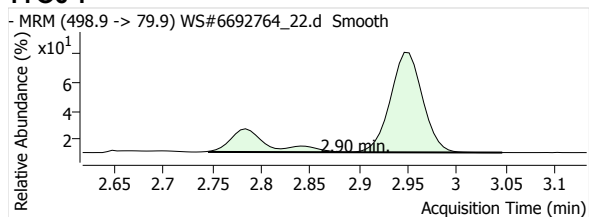
PFBS 1



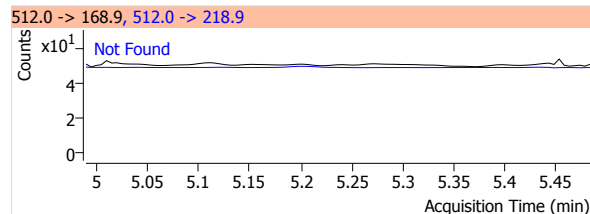
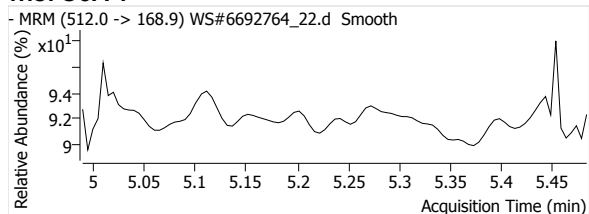
PFHxS 1



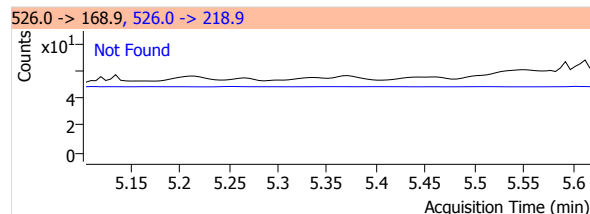
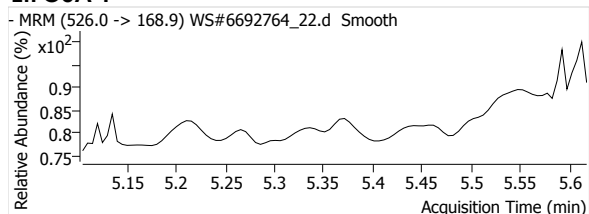
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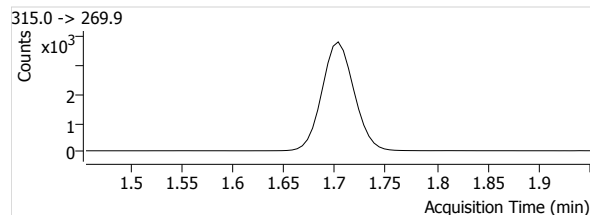
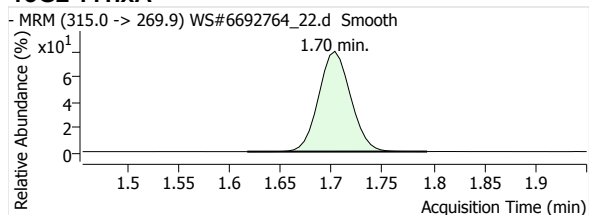
MeFOSA 1



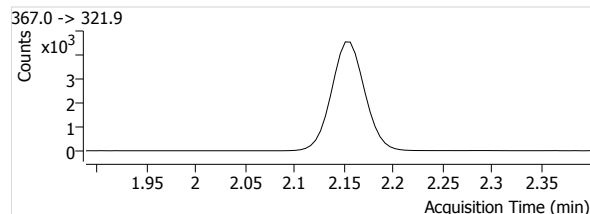
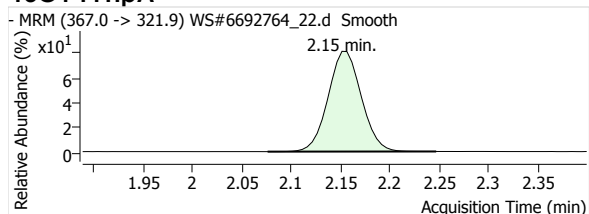
eFOSA 1



13C2-PFHxA

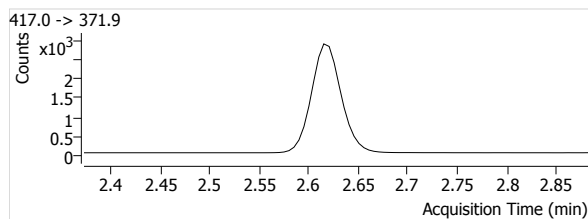
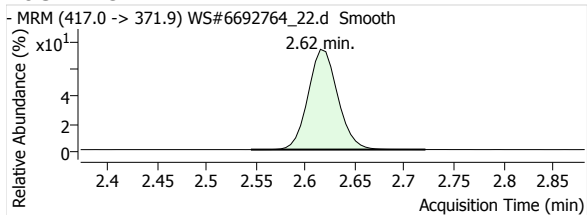


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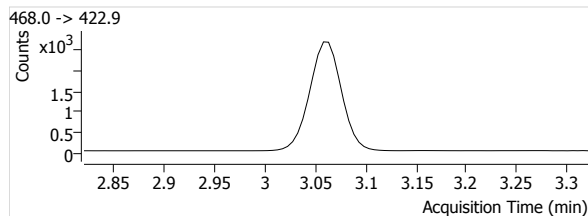
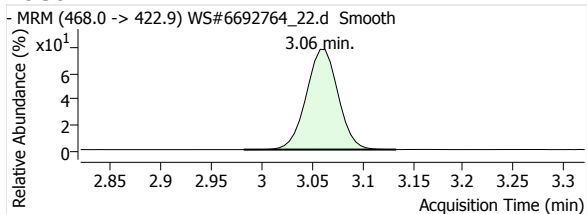


Quantitative Analysis Report

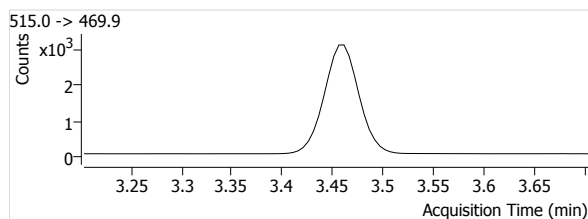
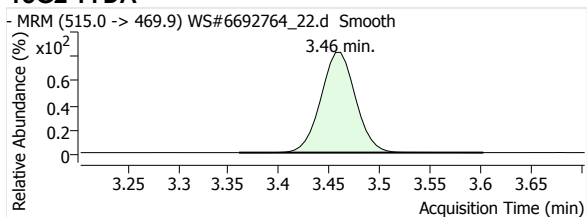
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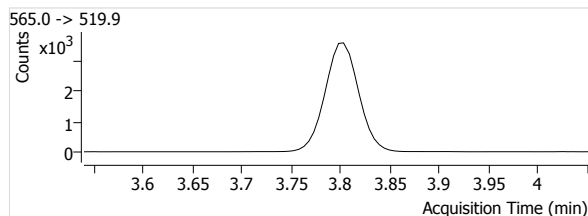
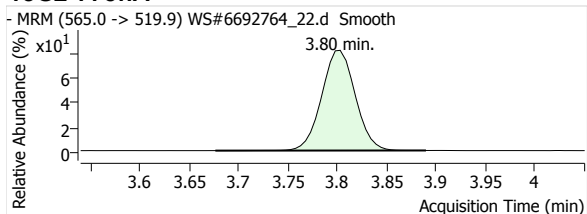
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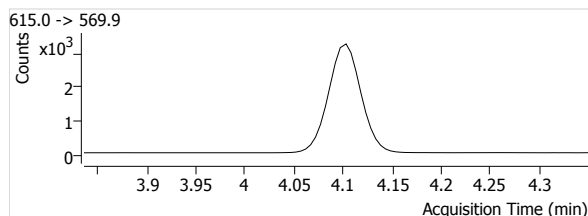
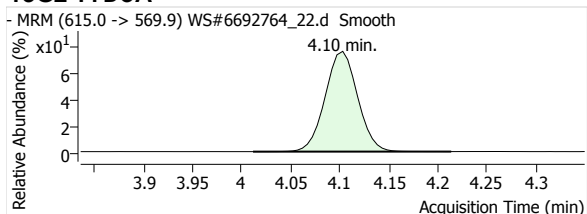
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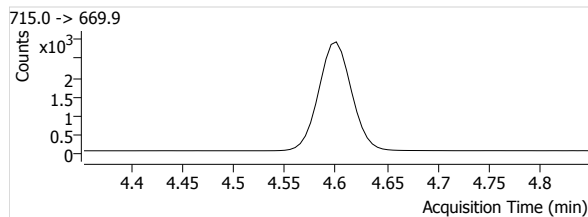
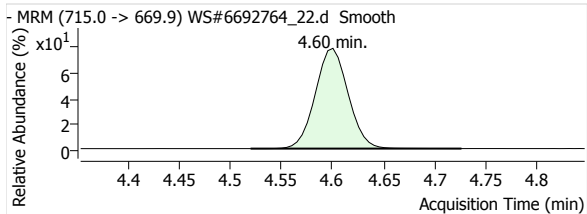
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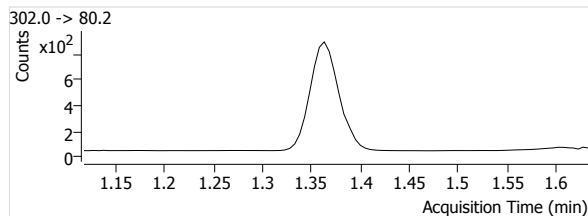
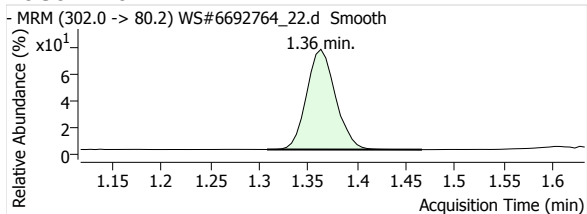
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13C2-PFTeDA

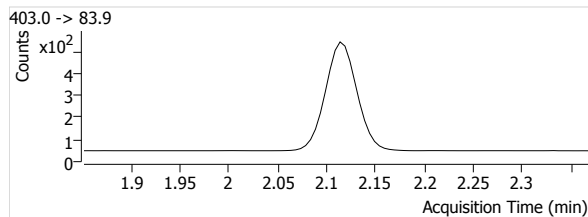
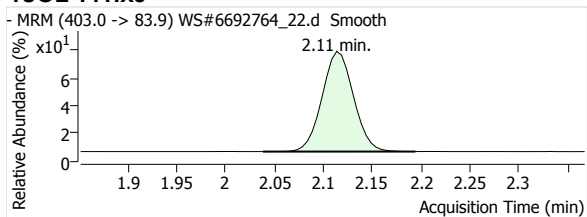


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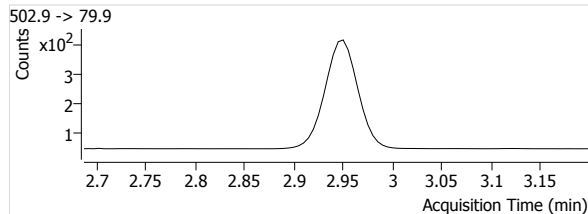
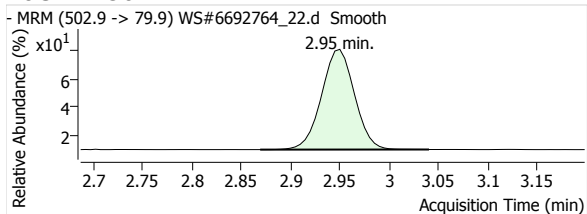


Quantitative Analysis Report

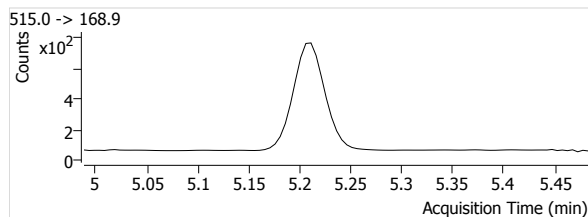
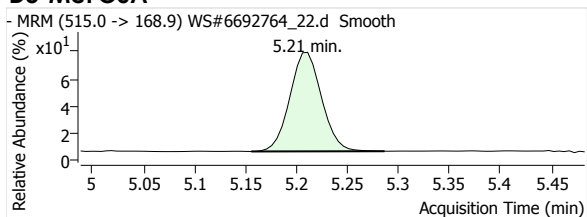
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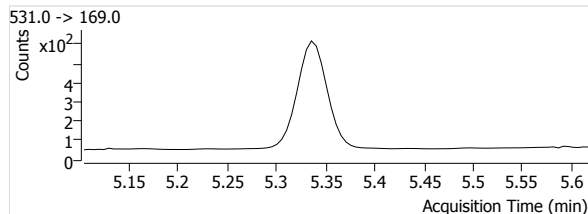
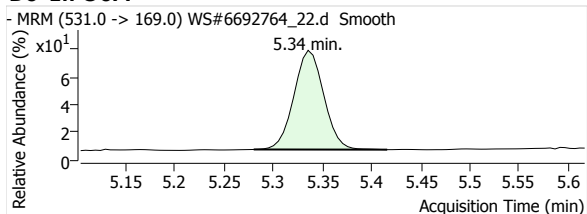
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



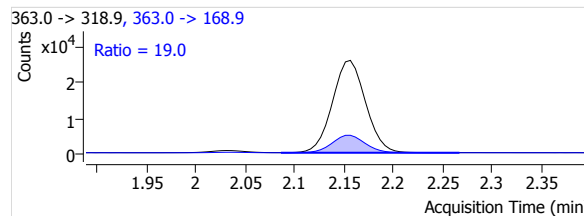
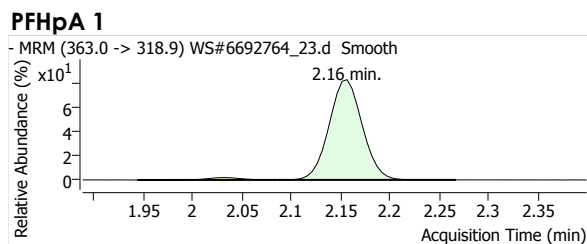
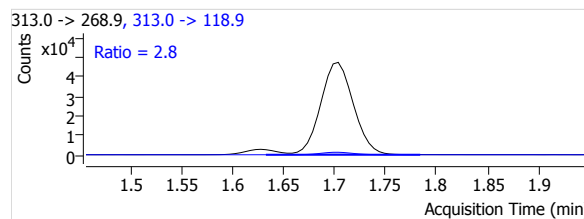
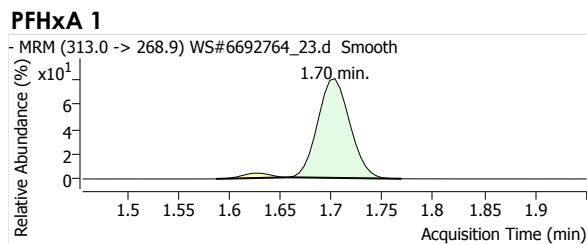
Quantitative Analysis Report

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Sample Name 6692764:MLP502-01
Type Sample
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/23 4:27:28 AM
Comment Reported for EtFOSA only.
User Defined

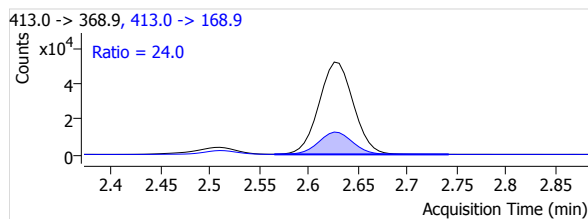
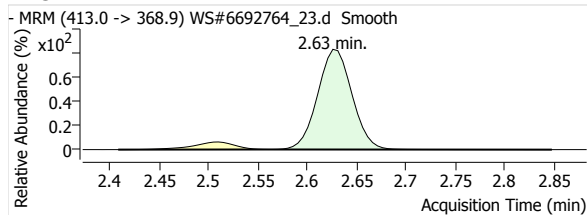
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Instrument LCMS04
Position P1-B9
Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	1.6686	--	103031	1.70	25355	12.8708	2909	1.70	28660	2.8
PFHpA 1	µg/L	--	0.7849	--	61773	2.16	5496	5.6600	11717	2.16	1091	19.0
PFOA 1	µg/L	--	1.6346	--	125899	2.63	11108	11.9223	30241	2.63	88111	24.0
PFNA 1	µg/L	--	0.0615	--	4306	3.07	27126	0.4918	917	3.07	2815	21.3
PFDA 1	µg/L	--	0.0127	--	1198	3.46	1805	0.1594	182	3.46	1553	15.2
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	0.1026	--	1222	1.36	10173	0.7039	575	1.36	3194	47.1
PFHxS 1	µg/L	--	2.9075	--	24589	2.08	32289	22.1323	13115	2.09	30020	53.3
PFOS 1	µg/L	--	13.6094	--	73850	2.90	4295	91.2858	41001	2.89	3505	55.5
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	99.6638	--	8005	1.70	1674	--	--	--	--	--
13C4-PFHpA	µg/L	--	97.8834	--	10914	2.16	2104	--	--	--	--	--
13C4-PFOA	µg/L	--	97.7416	--	10560	2.63	1804	--	--	--	--	--
13C5-PFNA	µg/L	--	101.7787	--	8755	3.07	1616	--	--	--	--	--
13C2-PFDA	µg/L	--	100.8319	--	7515	3.46	653	--	--	--	--	--
13C2-PFUnA	µg/L	--	96.1363	--	8435	3.80	1366	--	--	--	--	--
13C2-PFDoA	µg/L	--	93.7905	--	9999	4.10	1282	--	--	--	--	--
13C2-PFTeDA	µg/L	--	87.0838	--	12163	4.60	3014	--	--	--	--	--
13C3-PFBS	µg/L	--	101.4611	--	1736	1.36	307	--	--	--	--	--
18O2-PFHxS	µg/L	--	97.2855	--	1111	2.11	549	--	--	--	--	--
13C4-PFOS	µg/L	--	76.4650	--	809	2.95	262	--	--	--	--	--
D3-MeFOSA	µg/L	--	69.6935	--	1842	5.21	117	--	--	--	--	--
D5-EtFOSA	µg/L	--	71.4539	--	1612	5.34	99	--	--	--	--	--

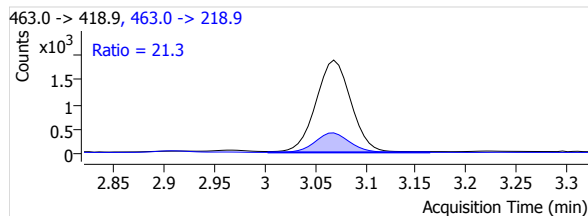
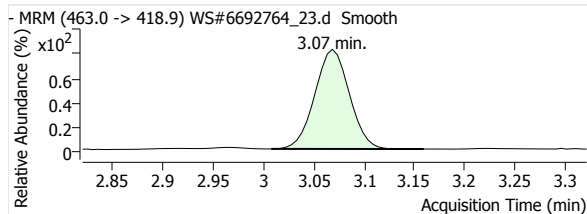


Quantitative Analysis Report

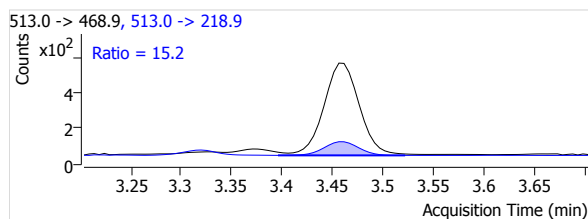
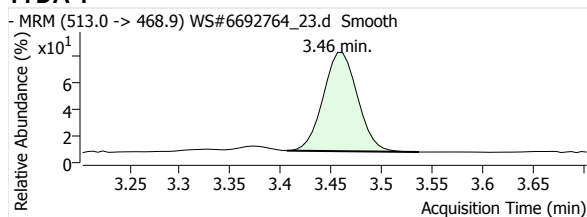
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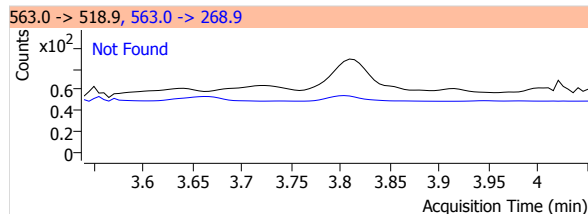
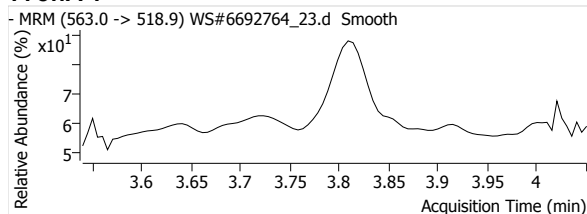
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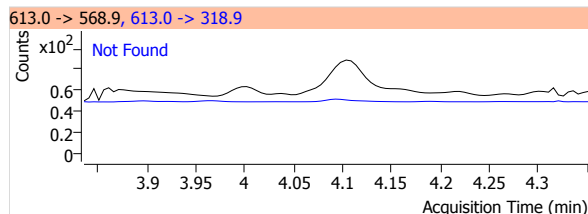
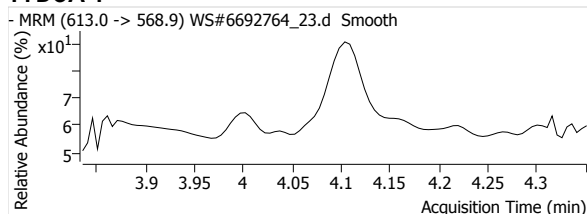
PFDA 1



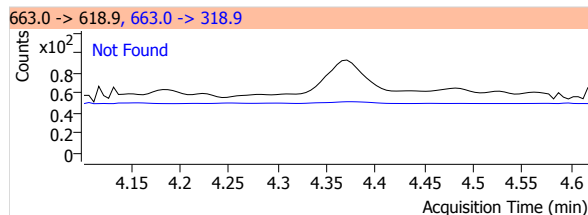
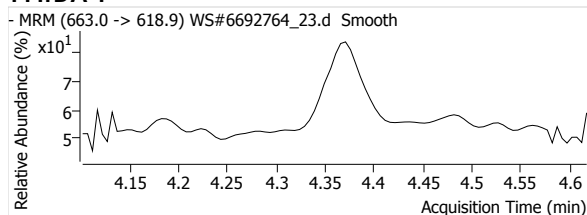
PFUnA 1



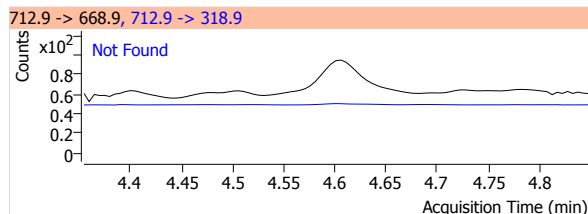
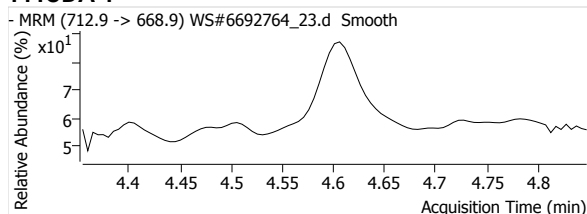
PFDaA 1



PFTrDA 1

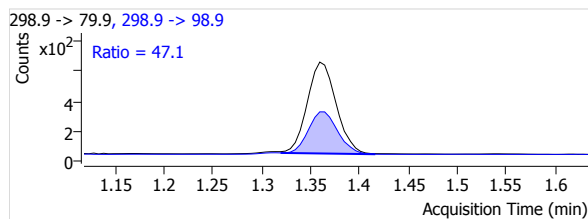
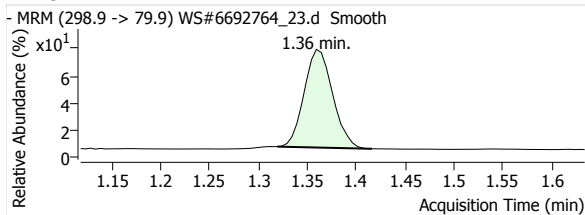


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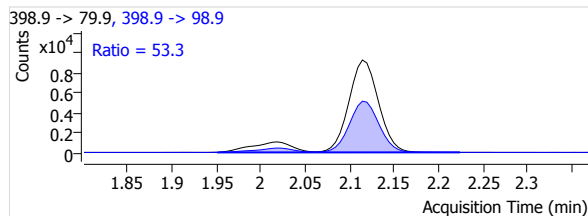
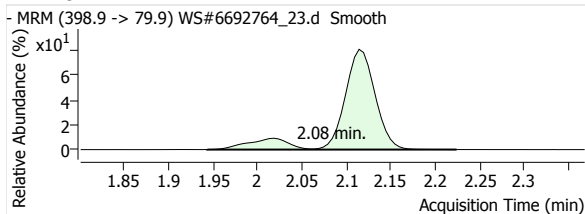


Quantitative Analysis Report

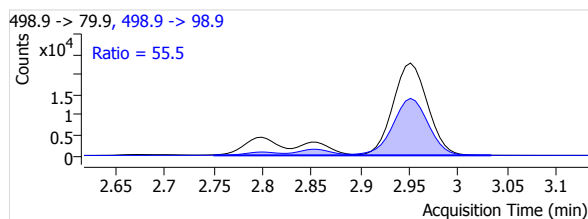
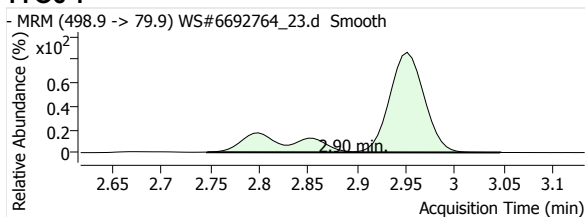
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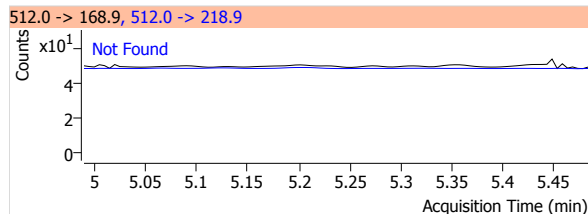
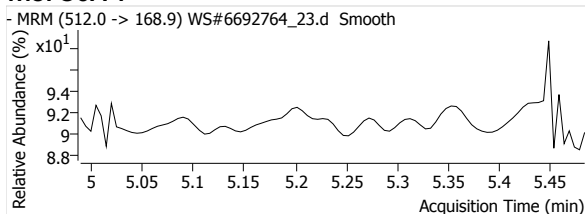
PFHxS 1



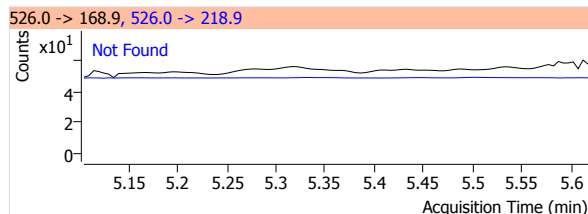
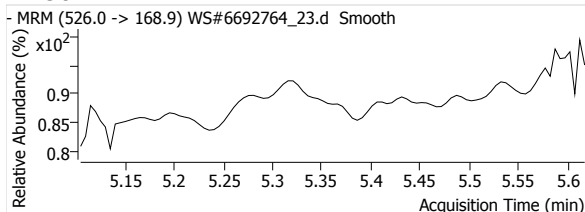
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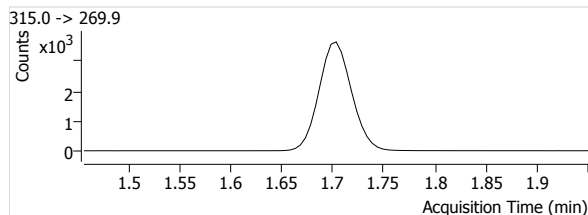
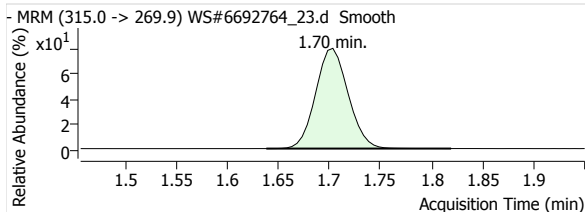
MeFOSA 1



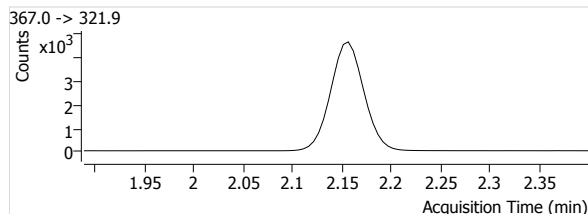
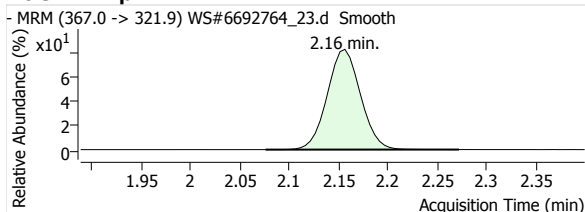
eFOSA 1



13C2-PFHxA

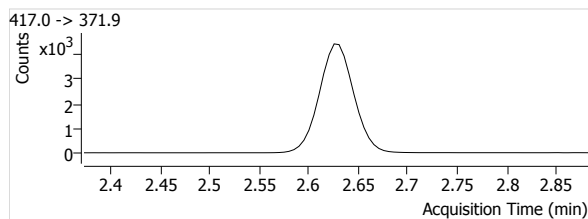
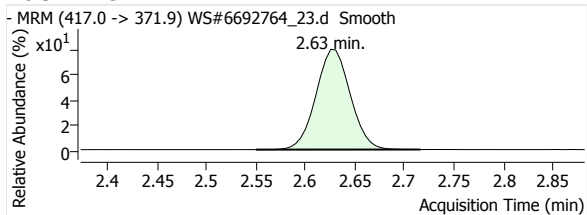


13C4-PFHpA

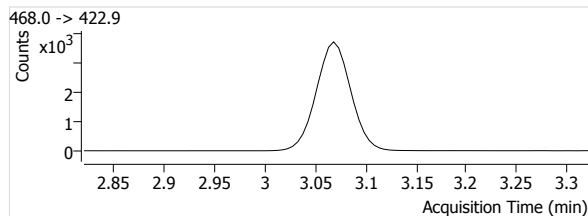
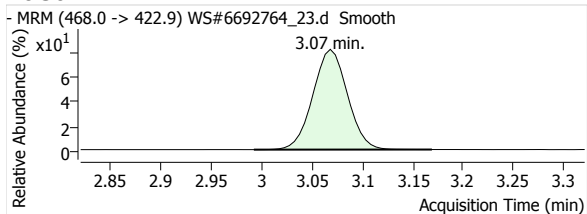


Quantitative Analysis Report

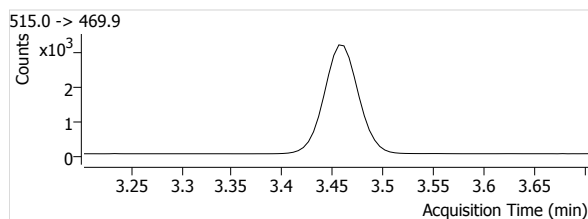
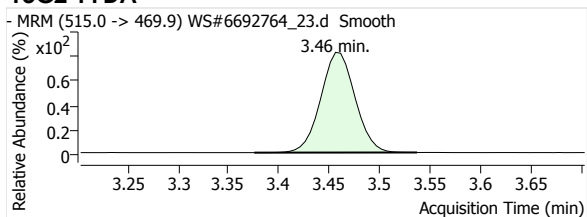
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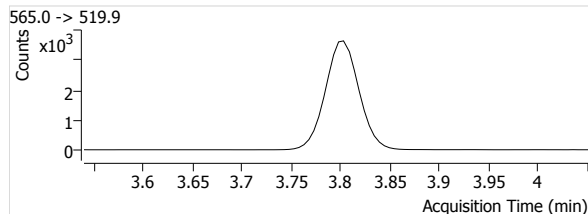
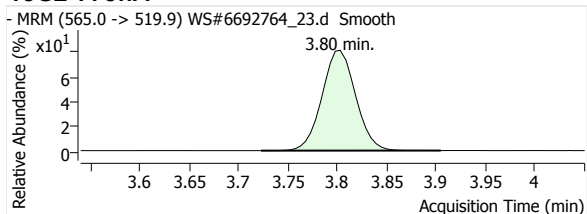
13C5-PFNA



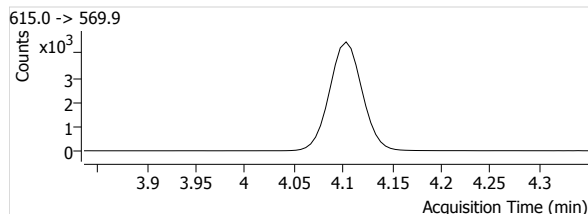
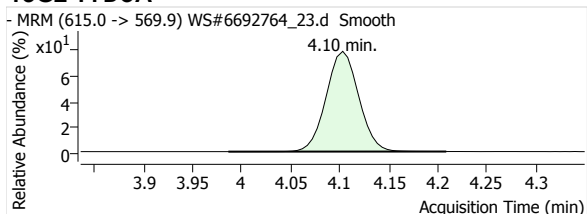
13C2-PFDA



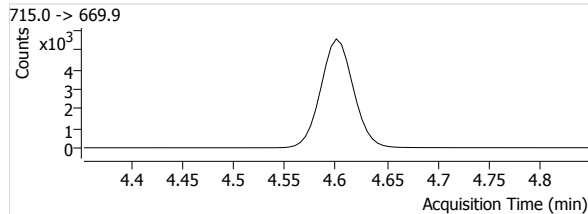
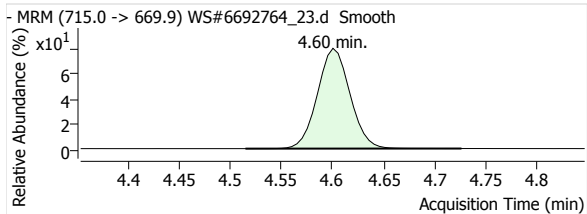
13C2-PFUnA



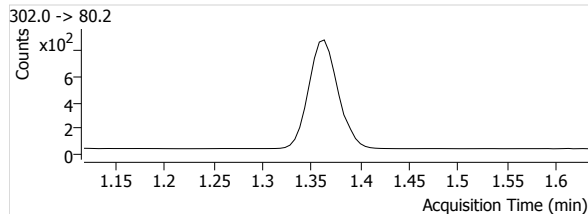
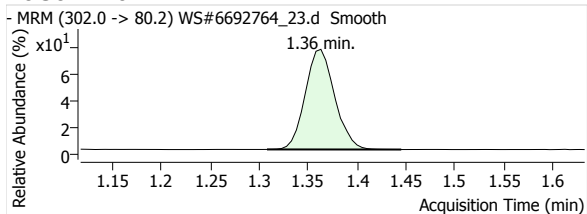
13C2-PFDoA



13C2-PFTeDA

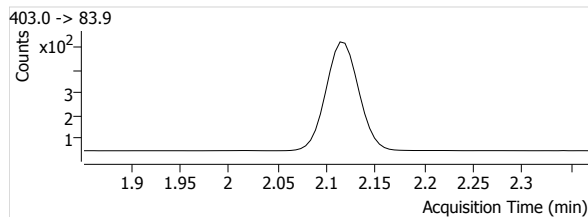
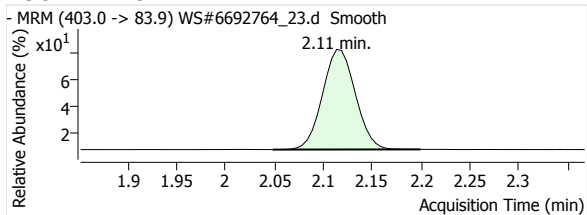


13C3-PFBS

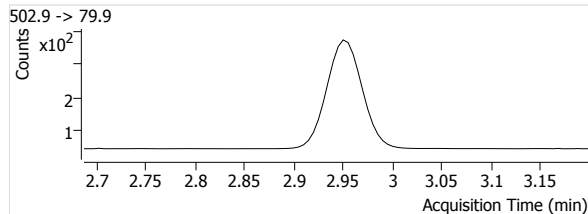
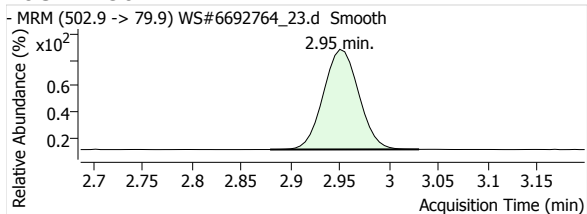


Quantitative Analysis Report

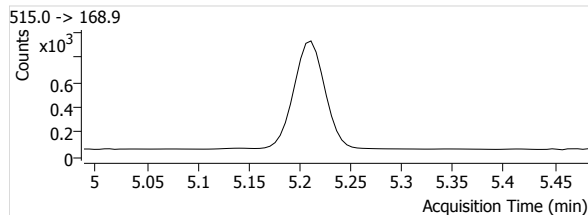
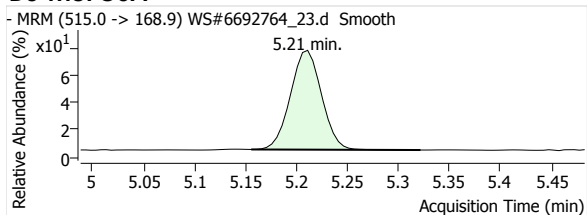
18O2-PFHxs



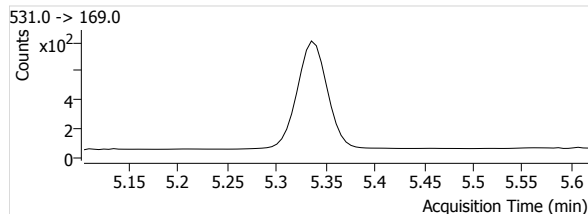
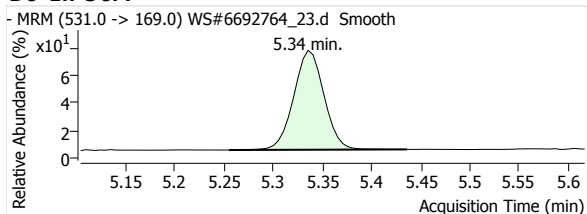
13C4-PFOS



D3-MeFOXA



D5-EtFOXA



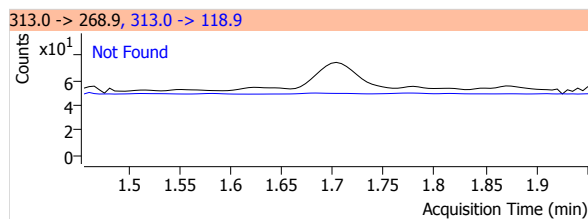
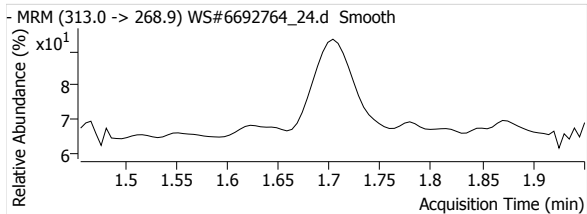
Quantitative Analysis Report

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bin

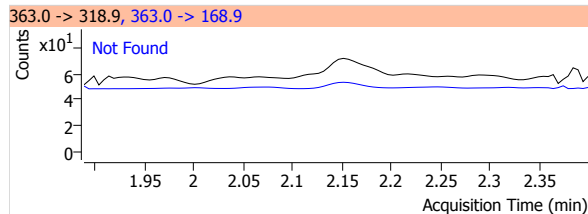
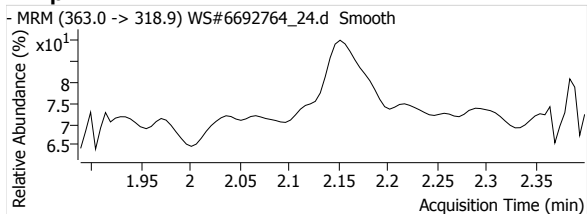
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Type	Sample	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-C1
Acq. Date-Time	2020/04/23 4:34:25 AM	Dil.	0.0
Comment	Reported for EtFOSA & MeFOSA only.		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHpA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	111.3421	--	8943	1.70	2653	--	--	--	--	--
13C4-PFHpA	µg/L	--	106.3767	--	11861	2.16	2402	--	--	--	--	--
13C4-PFOA	µg/L	--	106.9882	--	11559	2.63	1604	--	--	--	--	--
13C5-PFNA	µg/L	--	103.1272	--	8871	3.07	1151	--	--	--	--	--
13C2-PFDA	µg/L	--	100.8319	--	7515	3.46	1407	--	--	--	--	--
13C2-PFUnA	µg/L	--	98.1764	--	8614	3.80	1823	--	--	--	--	--
13C2-PFDaA	µg/L	--	93.7811	--	9998	4.10	1954	--	--	--	--	--
13C2-PFTeDA	µg/L	--	82.1866	--	11479	4.60	2471	--	--	--	--	--
13C3-PFBS	µg/L	--	109.4097	--	1872	1.36	791	--	--	--	--	--
18O2-PFHxS	µg/L	--	107.4431	--	1227	2.11	337	--	--	--	--	--
13C4-PFOS	µg/L	--	105.2930	--	1114	2.95	485	--	--	--	--	--
D3-MeFOSA	µg/L	--	75.1419	--	1986	5.21	85	--	--	--	--	--
D5-EtFOSA	µg/L	--	75.0887	--	1694	5.34	84	--	--	--	--	--

PFHxA 1

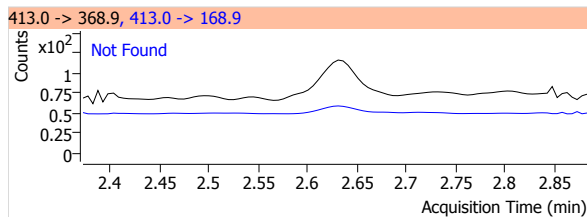
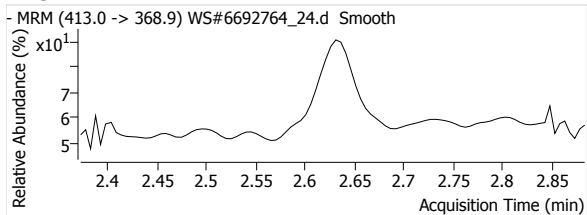


PFHpA 1

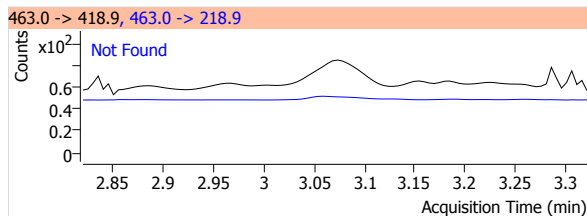
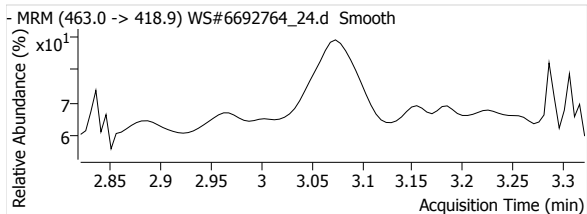


Quantitative Analysis Report

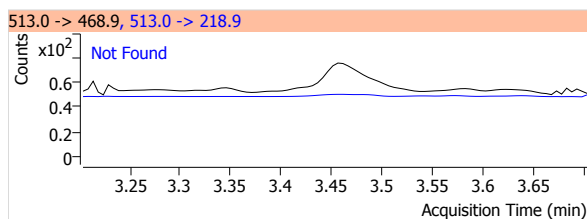
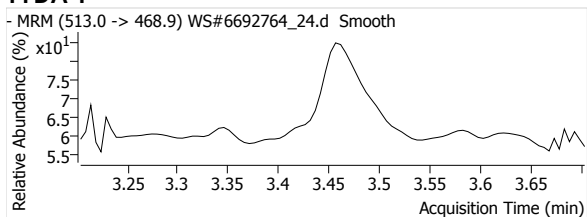
PFOA 1



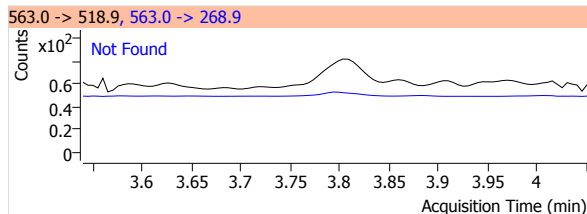
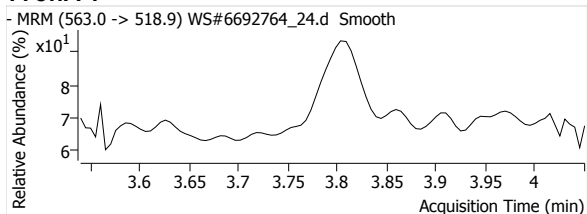
PFNA 1



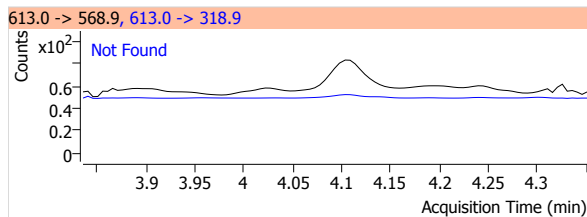
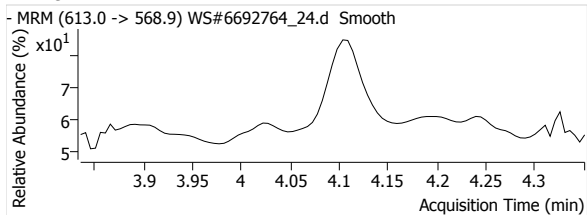
PFDA 1



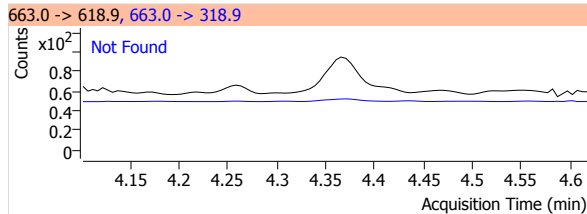
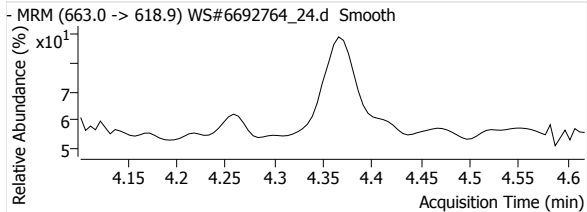
PFUnA 1



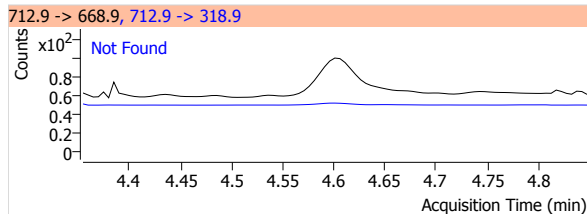
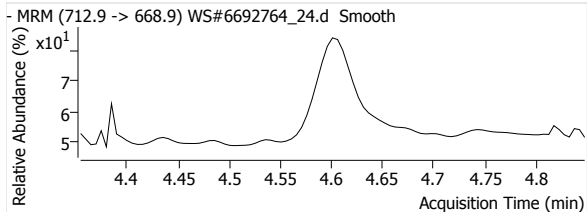
PFDaA 1



PFTrDA 1

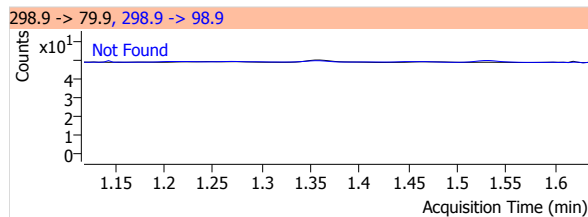
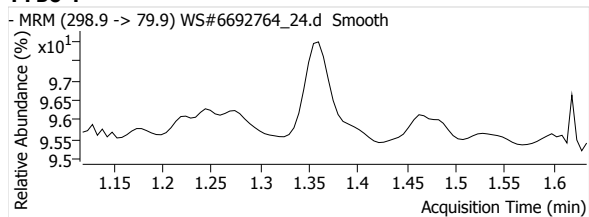


PFTeDA 1

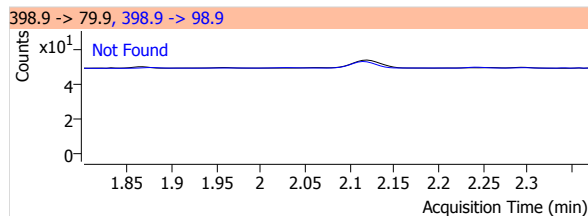
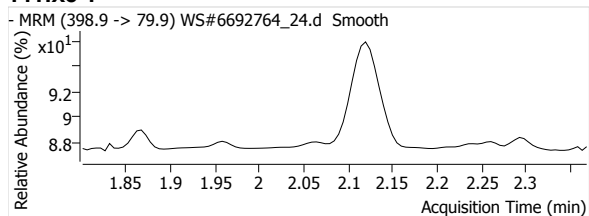


Quantitative Analysis Report

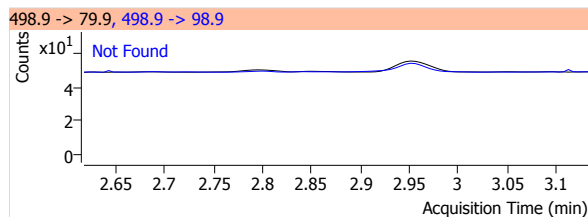
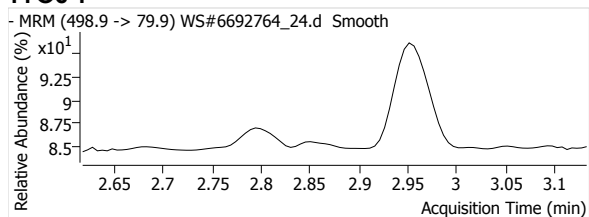
PFBS 1



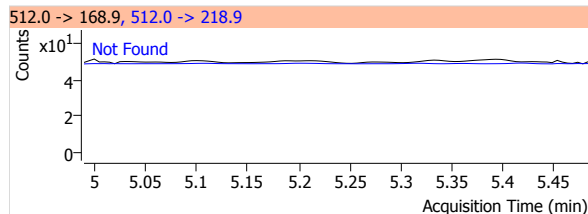
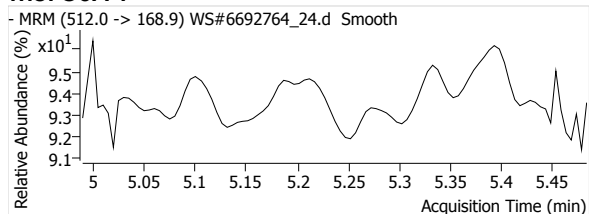
PFHxS 1



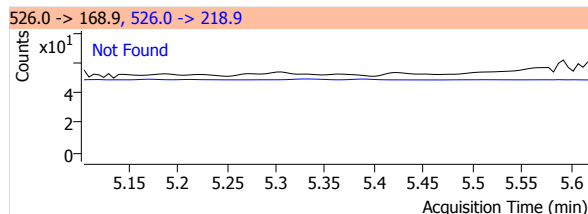
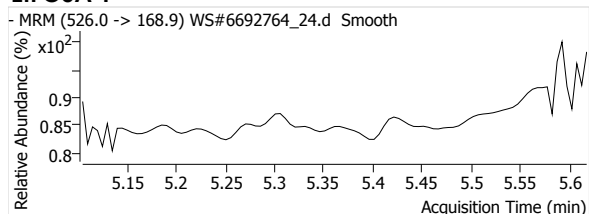
PFOS 1



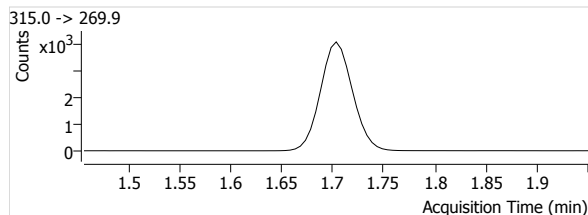
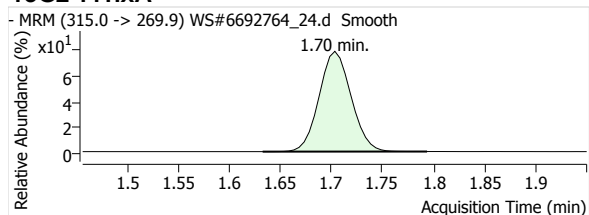
MeFOSA 1



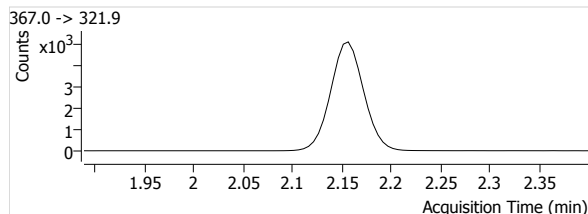
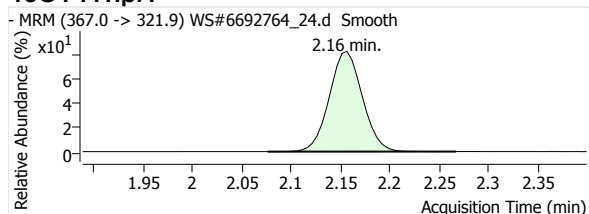
eFOSA 1



13C2-PFHxA

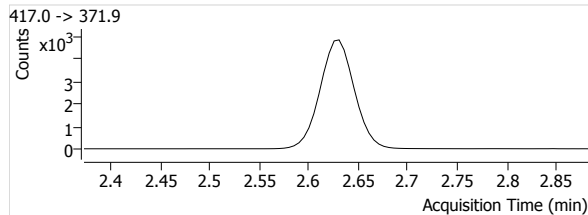
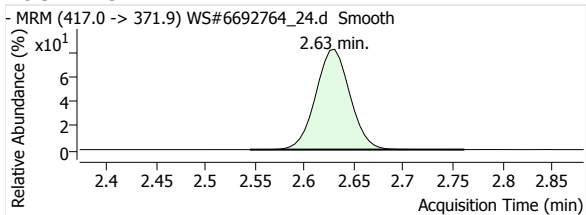


13C4-PFHpA

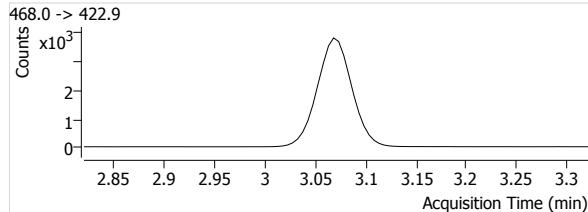
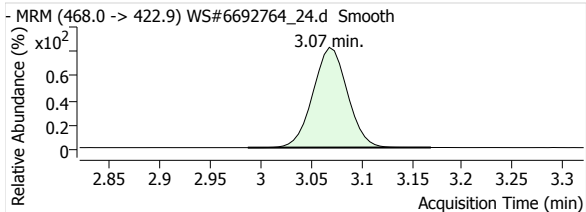


Quantitative Analysis Report

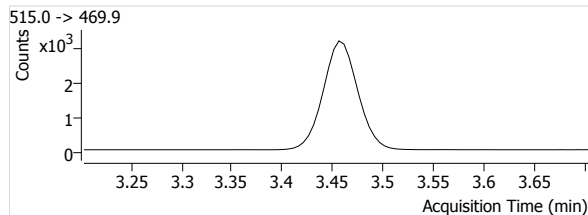
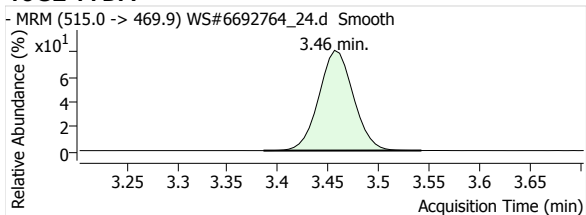
13C4-PFOA



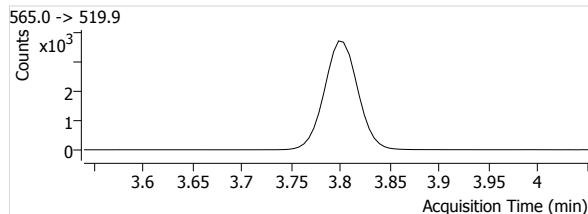
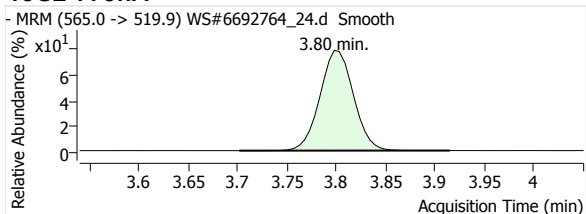
13C5-PFNA



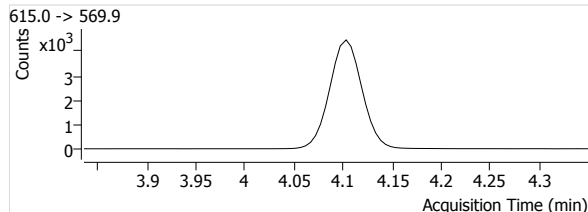
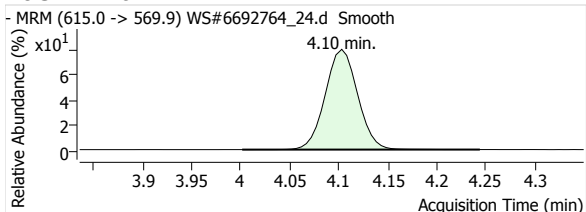
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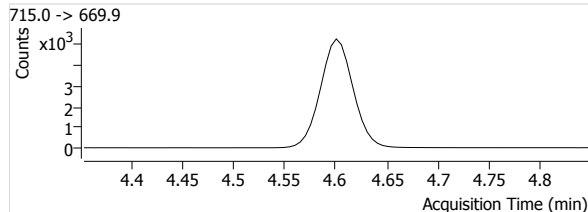
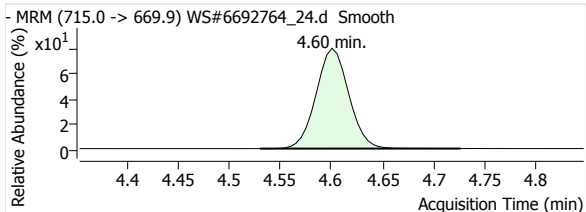
13C2-PFUnA



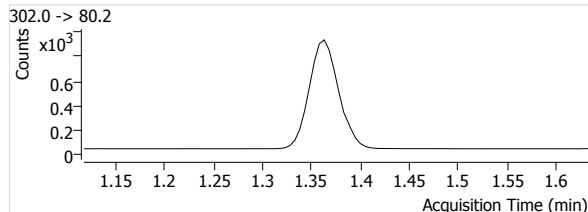
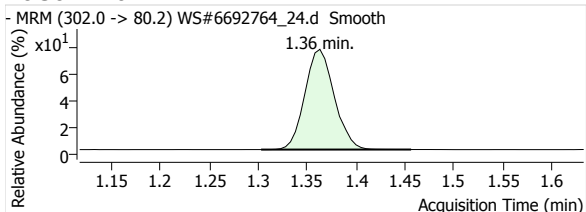
13C2-PFDoA



13C2-PFTeDA

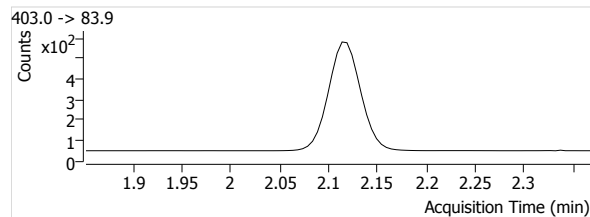
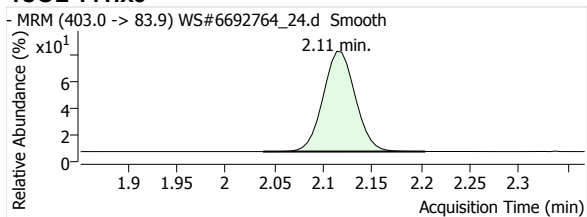


13C3-PFBS

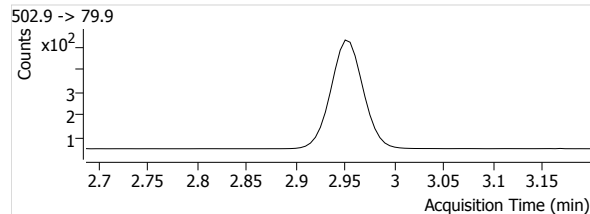
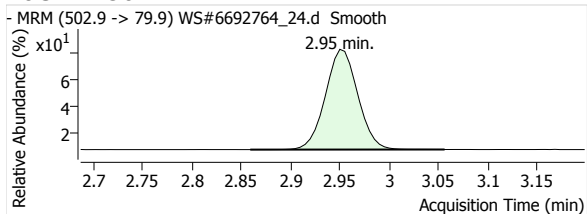


Quantitative Analysis Report

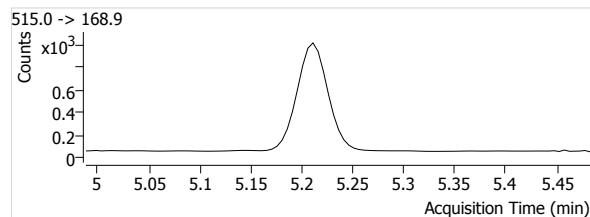
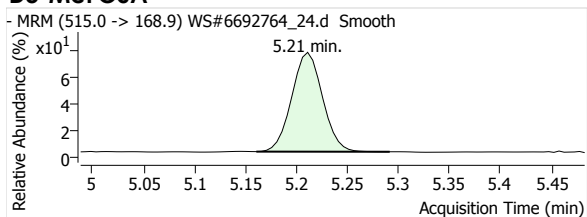
18O2-PFHxs



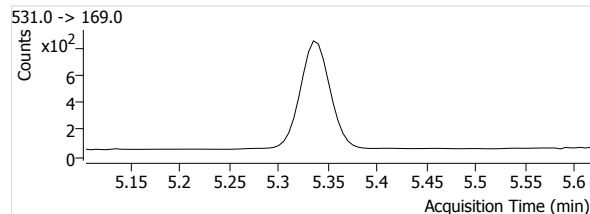
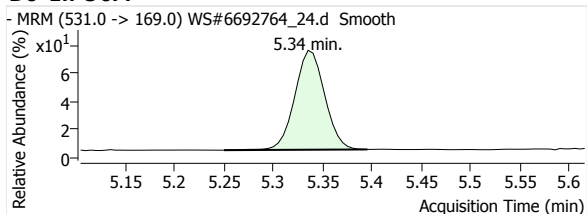
13C4-PFOS



D3-MeFOSA



D5-EtFOSA





**BUREAU
VERITAS**

4. QA/QC Data

**Bureau Veritas Canada (2019)
Inc.
6740 Campobello Rd.
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.bvlabs.com**

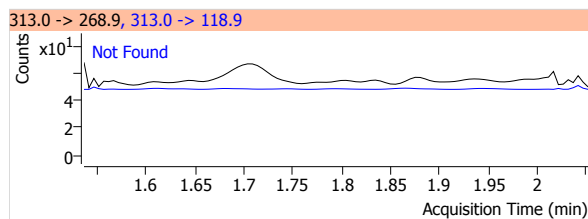
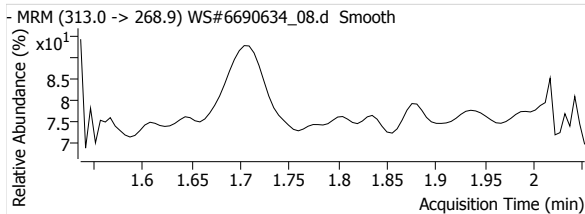
Quantitative Analysis Report

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bin

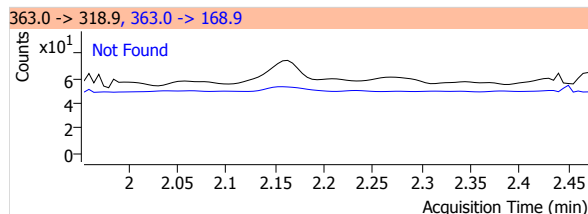
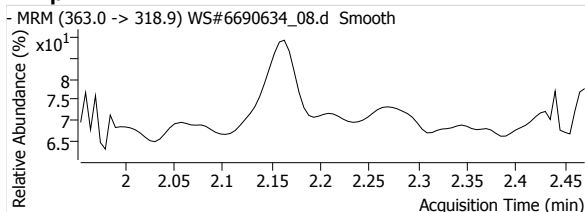
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Type	Sample	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-A8
Acq. Date-Time	2020/04/21 10:49:04 PM	Dil.	0.0
Comment	-		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHpA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	111.5746	--	7837	1.70	1973	--	--	--	--	--
13C4-PFHpA	µg/L	--	110.2535	--	10656	2.16	1141	--	--	--	--	--
13C4-PFOA	µg/L	--	106.2065	--	10233	2.63	1897	--	--	--	--	--
13C5-PFNA	µg/L	--	106.9672	--	8091	3.07	2182	--	--	--	--	--
13C2-PFDA	µg/L	--	108.0006	--	7060	3.46	1117	--	--	--	--	--
13C2-PFUnA	µg/L	--	108.5336	--	8445	3.80	661	--	--	--	--	--
13C2-PFDaA	µg/L	--	103.3811	--	10457	4.11	781	--	--	--	--	--
13C2-PFTeDA	µg/L	--	105.1994	--	13192	4.60	1727	--	--	--	--	--
13C3-PFBS	µg/L	--	111.4712	--	1720	1.37	465	--	--	--	--	--
18O2-PFHxS	µg/L	--	108.0709	--	1098	2.11	1068	--	--	--	--	--
13C4-PFOS	µg/L	--	103.8422	--	1000	2.95	664	--	--	--	--	--
D3-MeFOSA	µg/L	--	104.1135	--	2531	5.21	153	--	--	--	--	--
D5-EtFOSA	µg/L	--	109.9379	--	2301	5.33	129	--	--	--	--	--

PFHxA 1

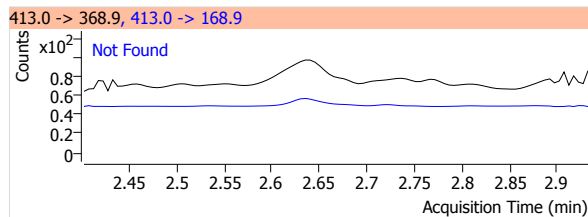
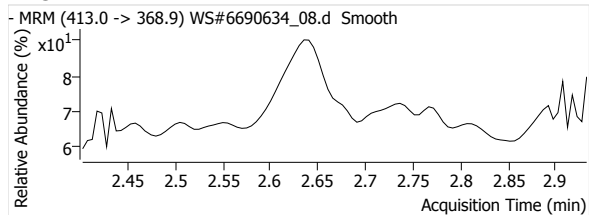


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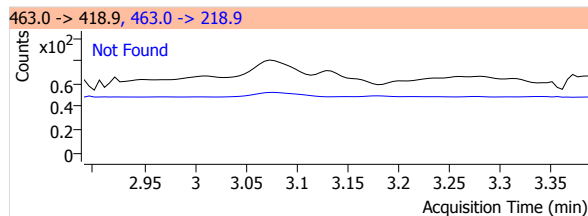
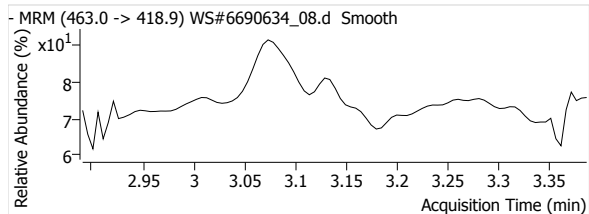


Quantitative Analysis Report

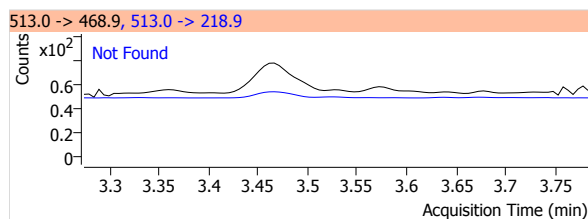
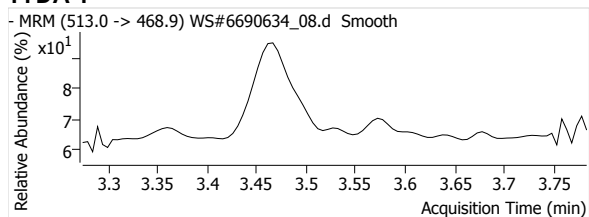
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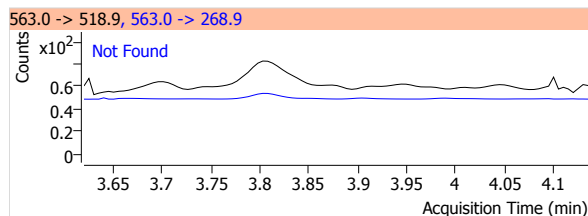
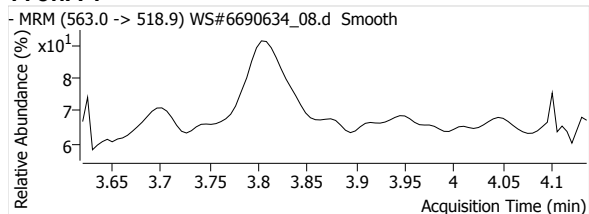
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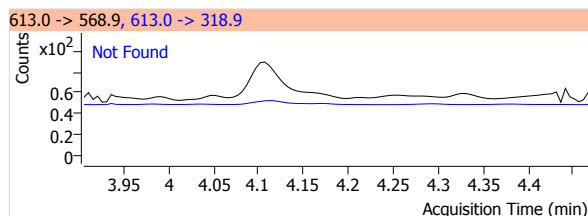
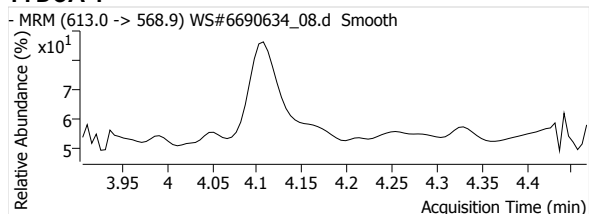
PFDA 1



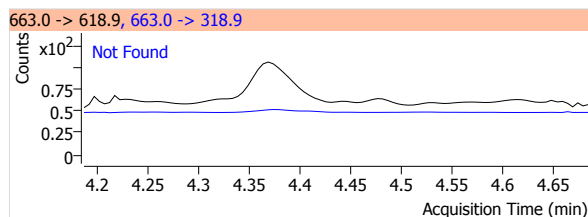
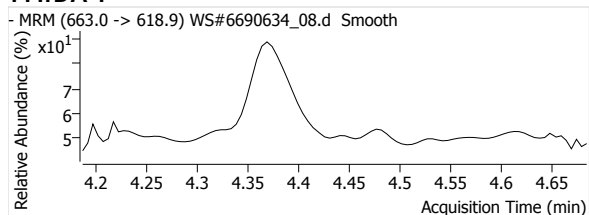
PFUnA 1



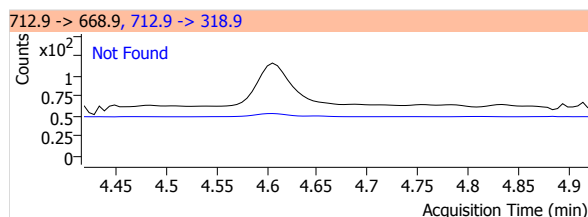
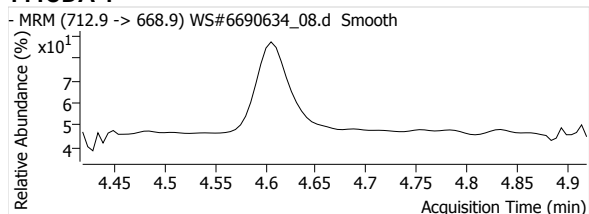
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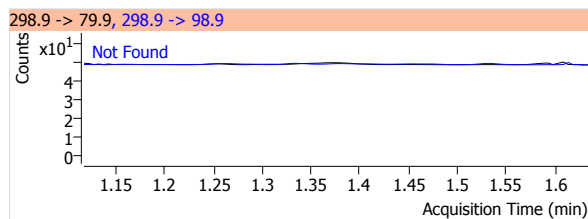
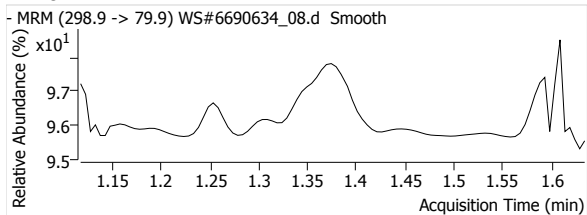


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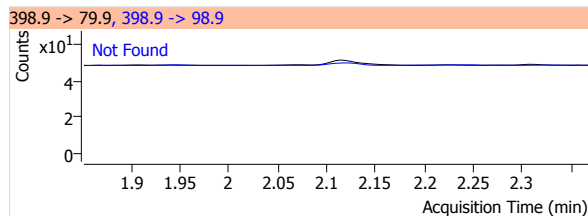
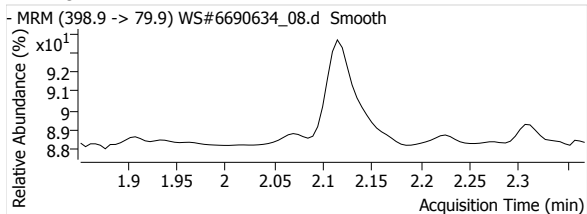


Quantitative Analysis Report

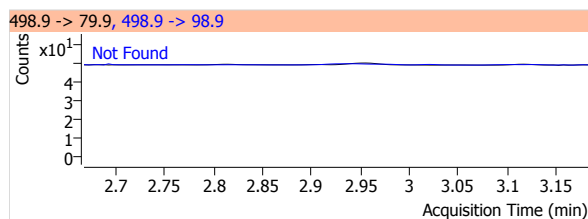
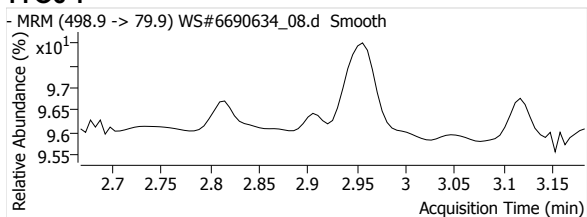
PFBS 1



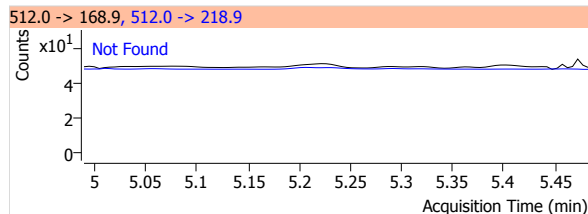
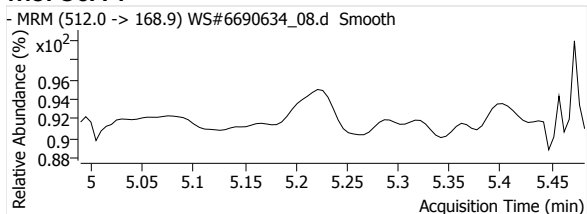
PFHxS 1



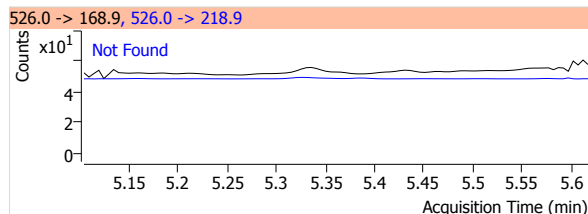
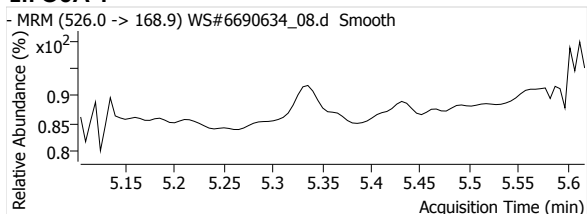
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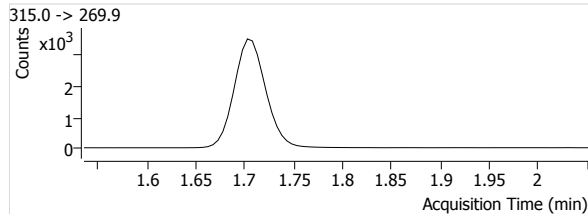
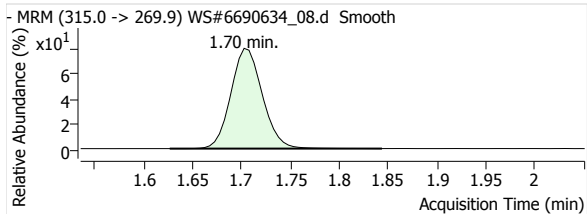
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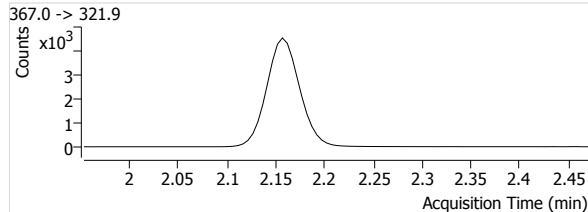
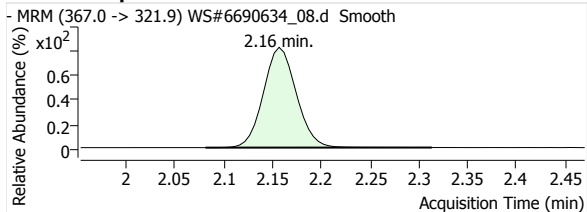
eFOSA 1



13C2-PFHxA

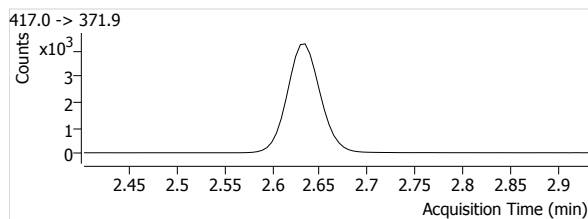
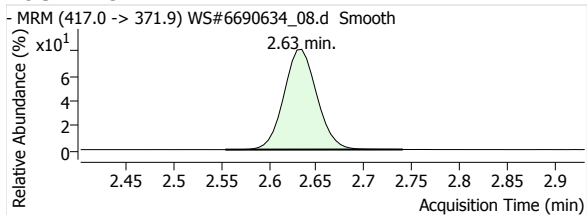


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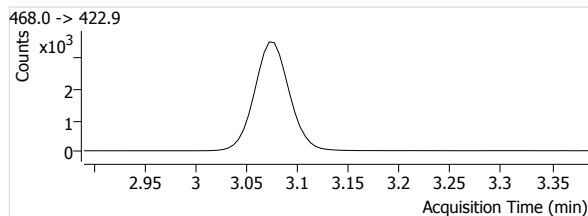
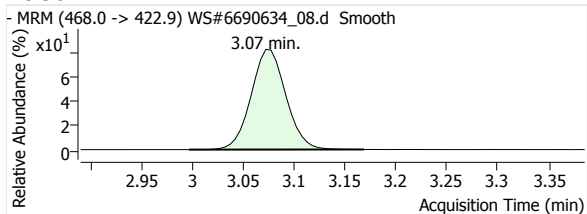


Quantitative Analysis Report

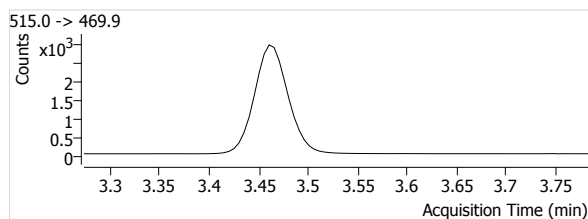
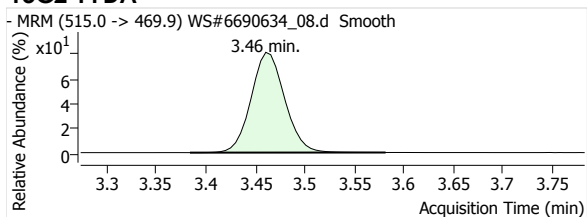
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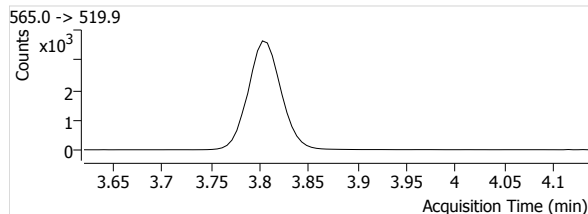
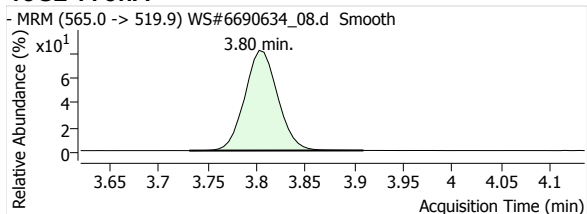
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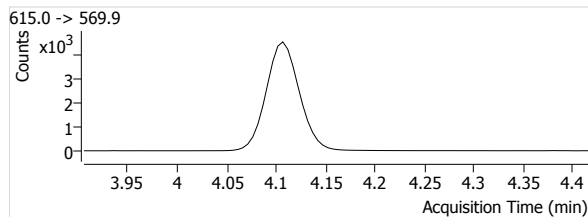
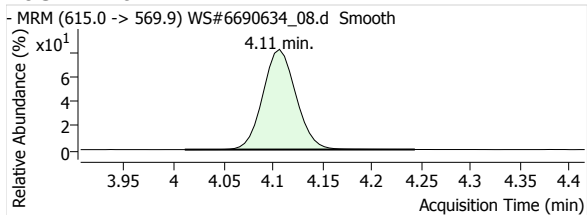
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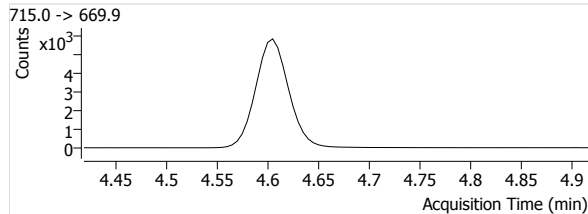
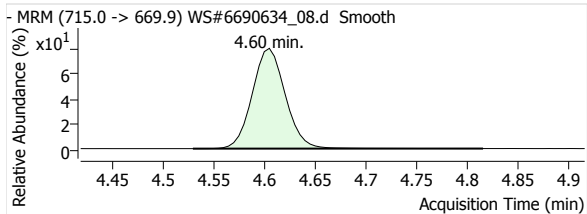
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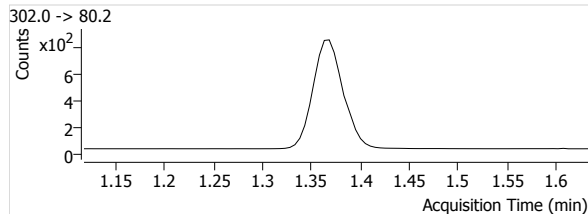
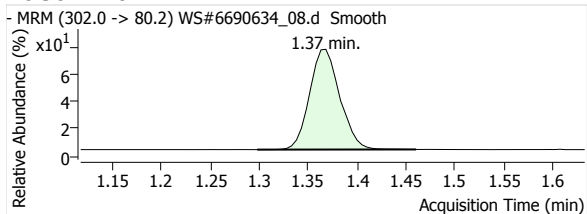
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13C2-PFTeDA

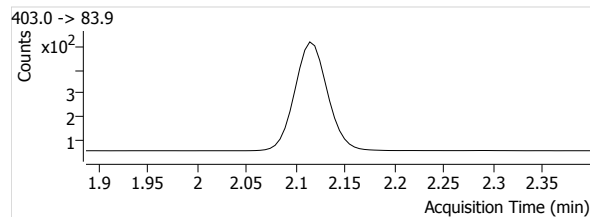
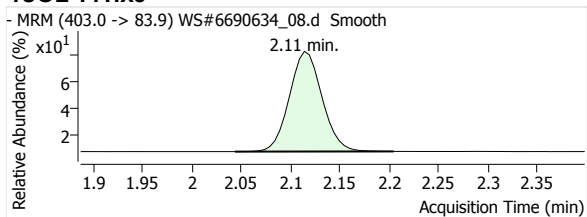


13C3-PFBS

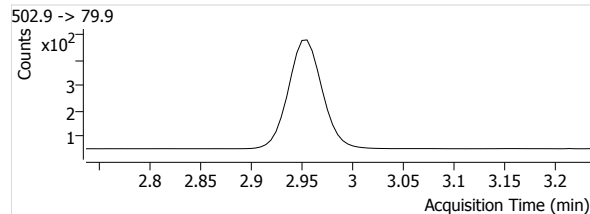
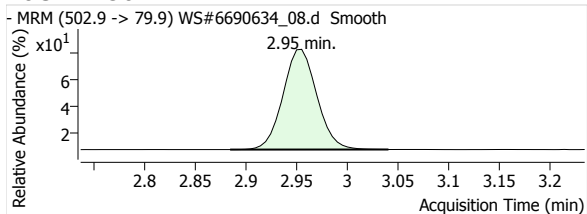


Quantitative Analysis Report

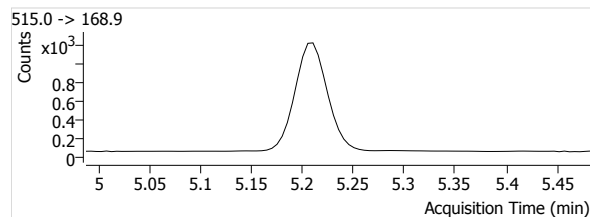
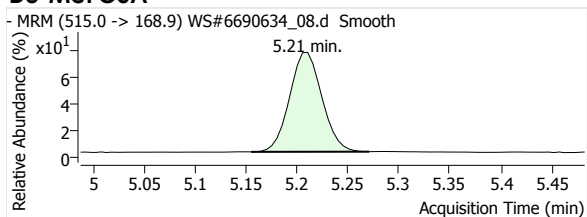
18O2-PFHxS



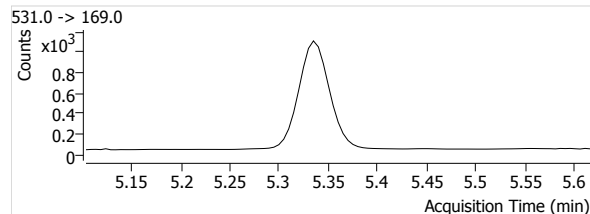
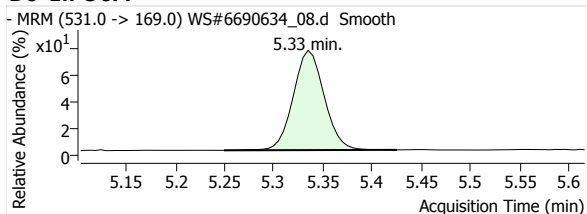
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



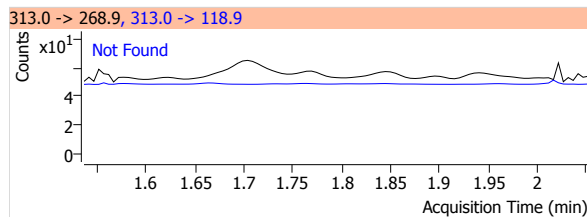
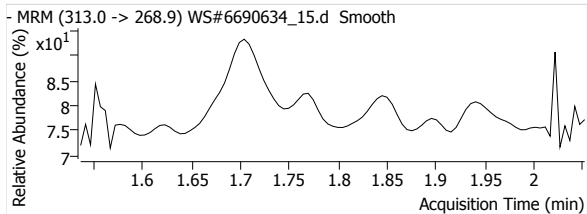
Quantitative Analysis Report

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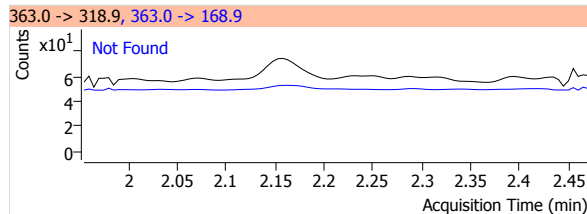
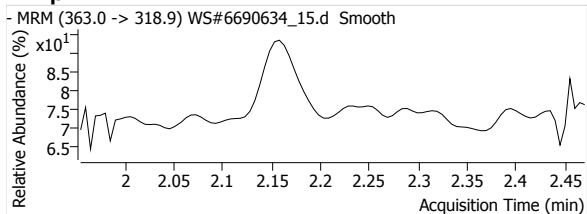
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Acq. Method File	PFAS.m	Position	P1-A8
Acq. Date-Time	2020/04/21 11:37:38 PM	Dil.	0.0
Comment	-		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHpA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	114.1230	--	8016	1.70	727	--	--	--	--	--
13C4-PFHpA	µg/L	--	112.3539	--	10859	2.16	1213	--	--	--	--	--
13C4-PFOA	µg/L	--	108.7390	--	10477	2.63	2016	--	--	--	--	--
13C5-PFNA	µg/L	--	111.7927	--	8456	3.07	1577	--	--	--	--	--
13C2-PFDA	µg/L	--	109.7139	--	7172	3.46	833	--	--	--	--	--
13C2-PFUnA	µg/L	--	110.8983	--	8629	3.80	620	--	--	--	--	--
13C2-PFDaA	µg/L	--	106.0306	--	10725	4.11	1223	--	--	--	--	--
13C2-PFTeDA	µg/L	--	108.6364	--	13623	4.60	1985	--	--	--	--	--
13C3-PFBS	µg/L	--	111.4064	--	1719	1.37	1086	--	--	--	--	--
18O2-PFHxS	µg/L	--	112.4016	--	1142	2.11	413	--	--	--	--	--
13C4-PFOS	µg/L	--	107.5805	--	1036	2.95	914	--	--	--	--	--
D3-MeFOSA	µg/L	--	108.9264	--	2648	5.21	115	--	--	--	--	--
D5-EtFOSA	µg/L	--	110.0334	--	2303	5.33	188	--	--	--	--	--

PFHxA 1

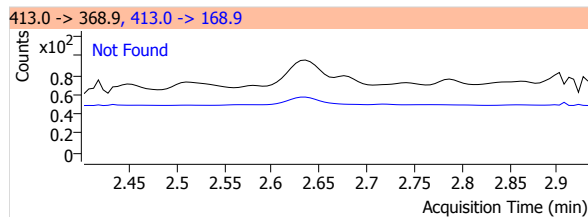
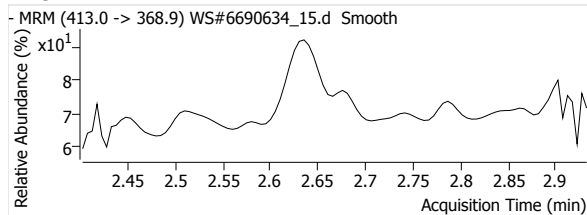


PFHpA 1

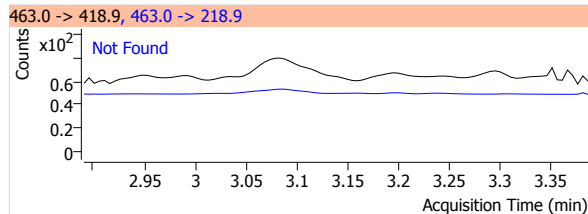
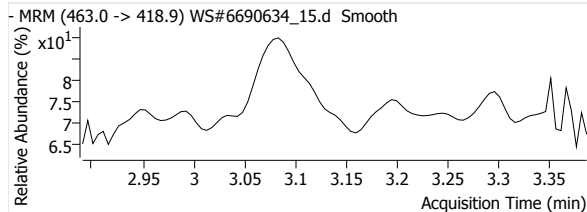


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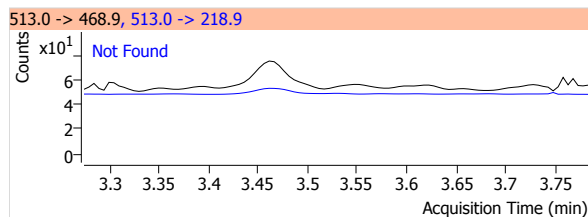
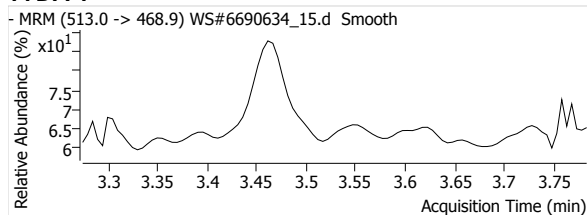
PFOA 1



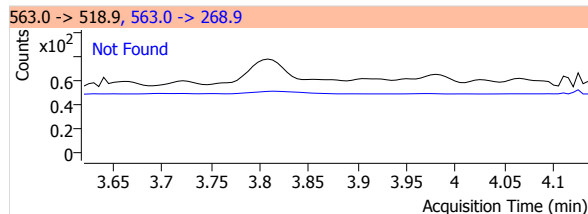
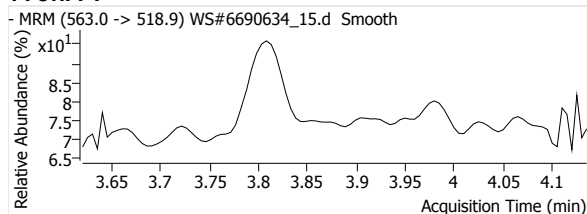
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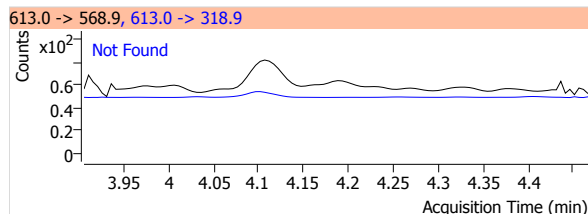
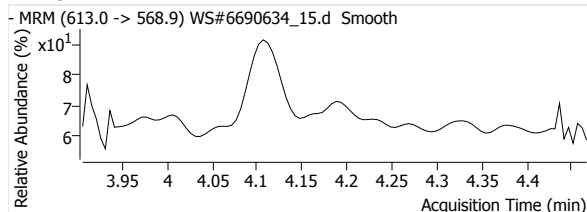
PFDA 1



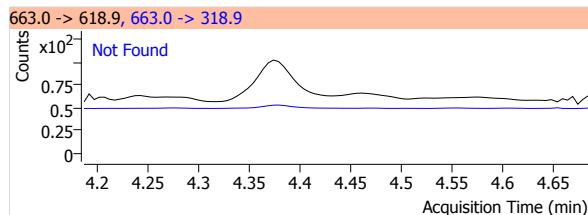
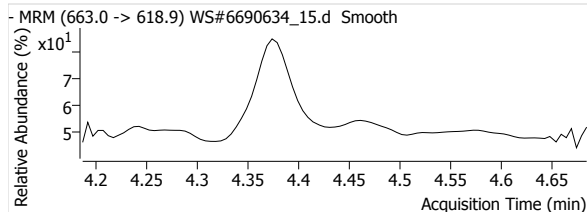
PFUnA 1



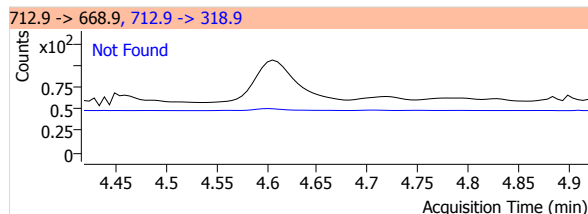
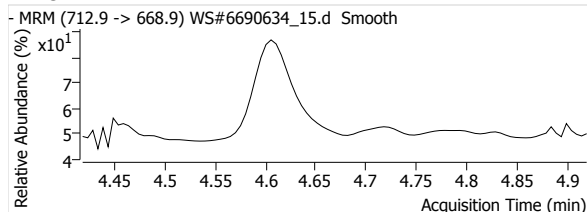
PFDoA 1



PFTrDA 1

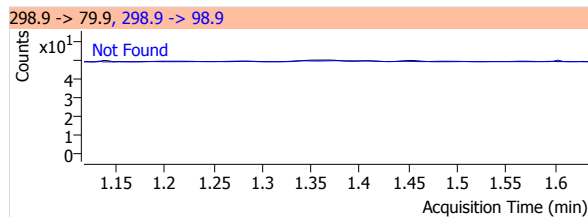
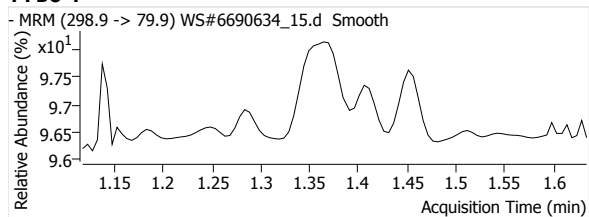


PFTeDA 1

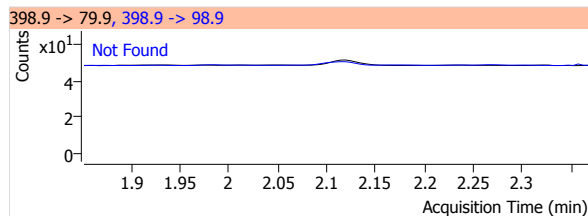
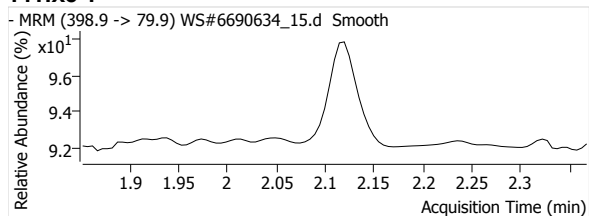


Quantitative Analysis Report

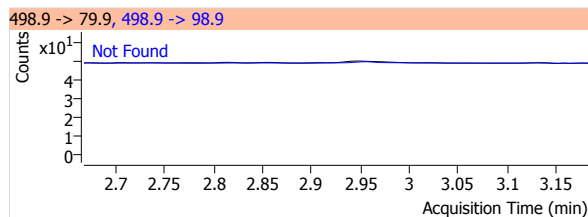
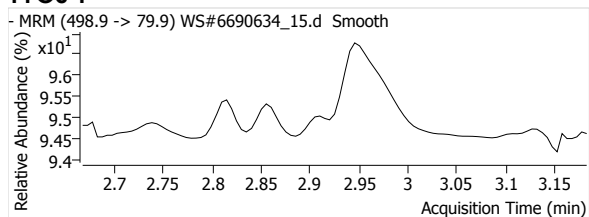
PFBS 1



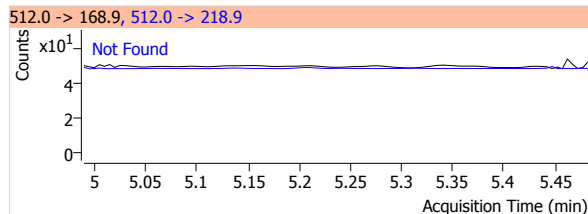
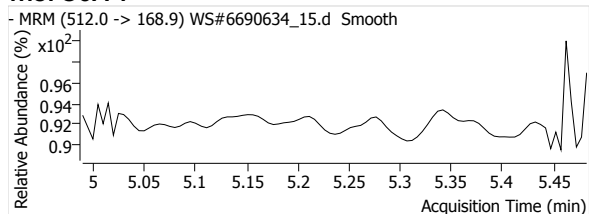
PFHxS 1



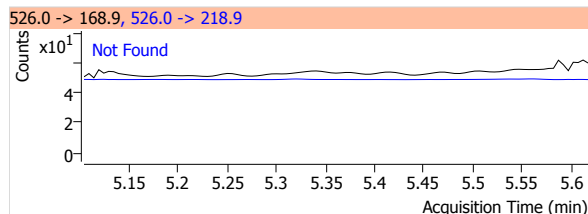
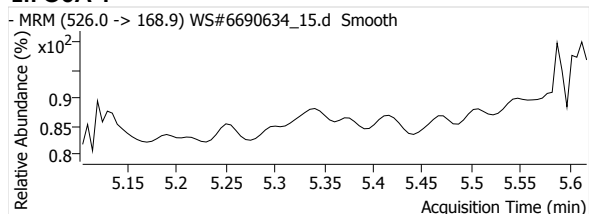
PFOS 1



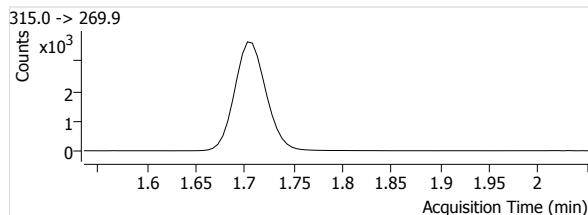
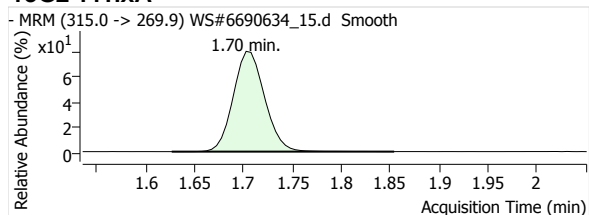
MeFOSA 1



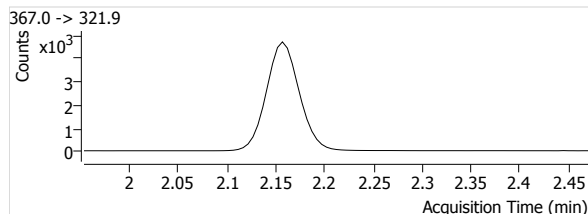
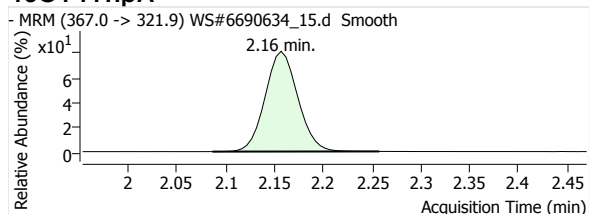
eFOSA 1



13C2-PFHxA

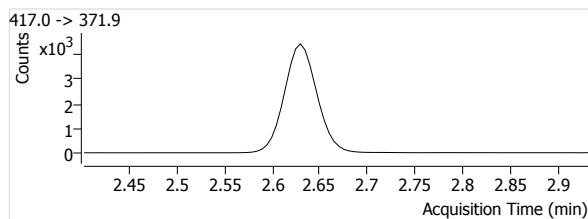
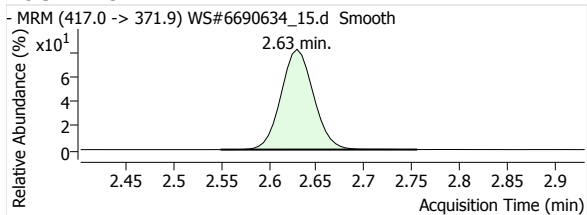


13C4-PFHpA

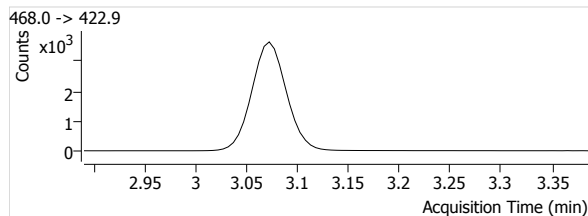
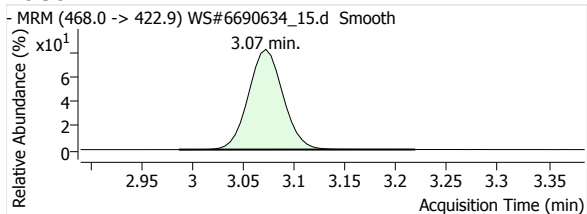


Quantitative Analysis Report

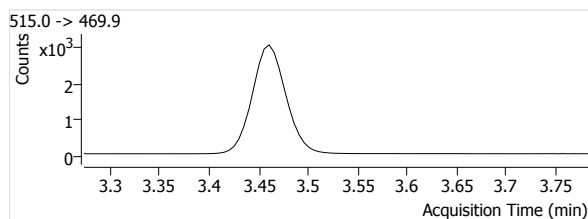
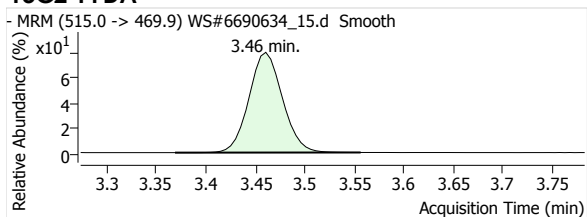
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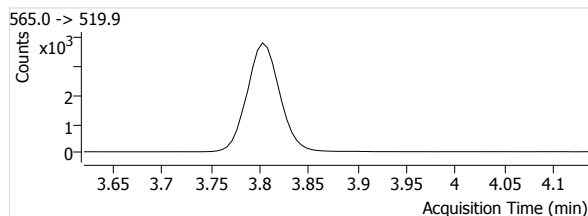
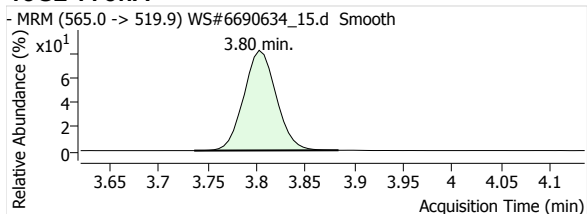
13C5-PFNA



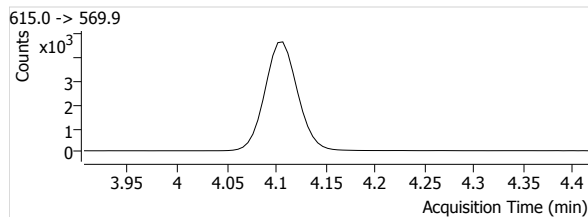
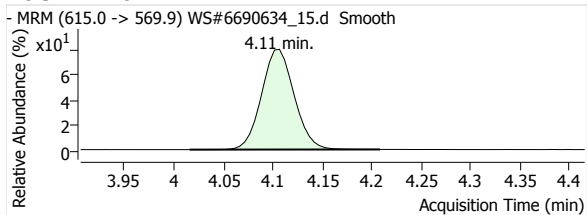
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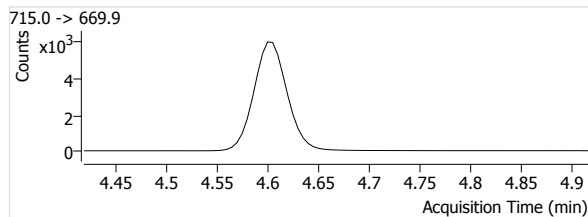
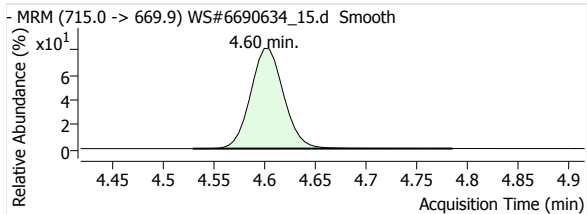
13C2-PFUnA



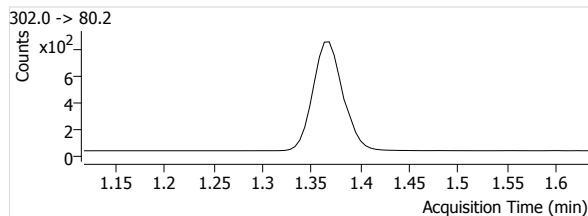
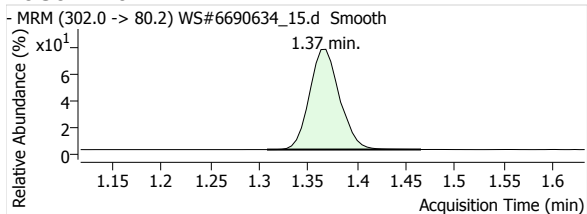
13C2-PFDoA



13C2-PFTeDA

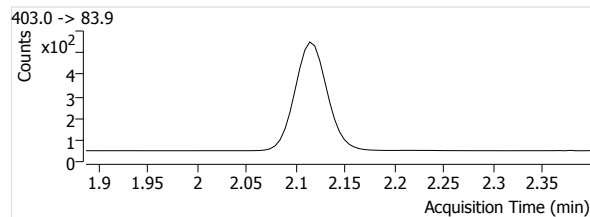
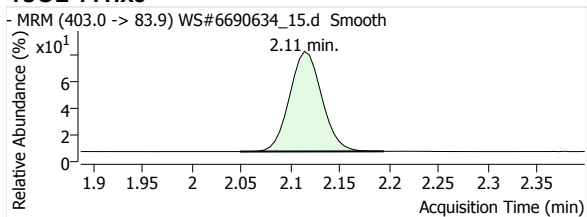


13C3-PFBS

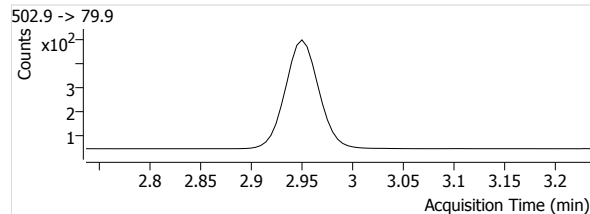
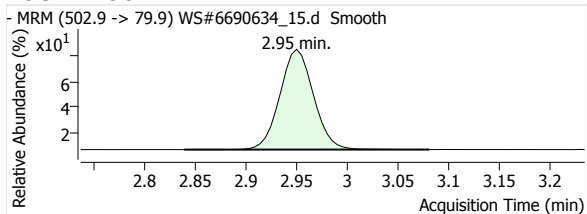


Quantitative Analysis Report

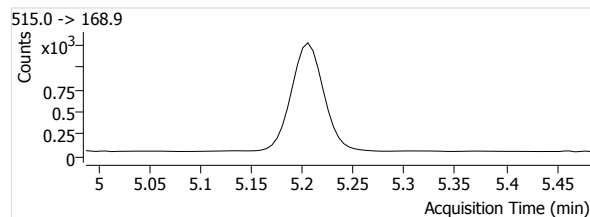
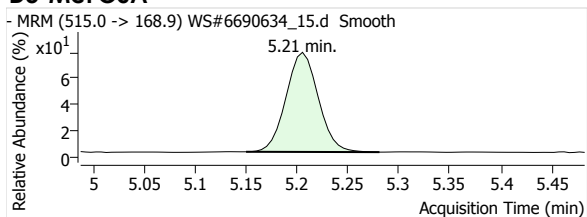
18O2-PFHxs



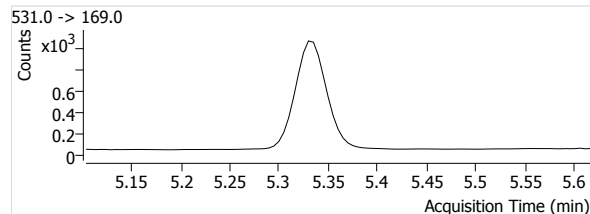
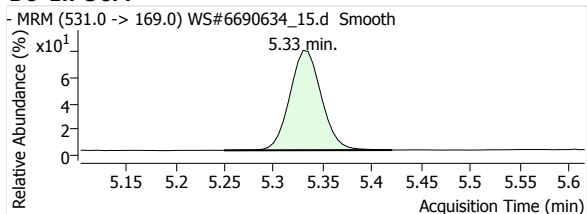
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



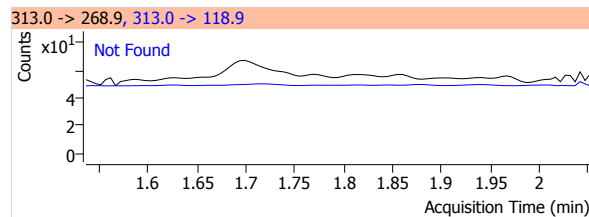
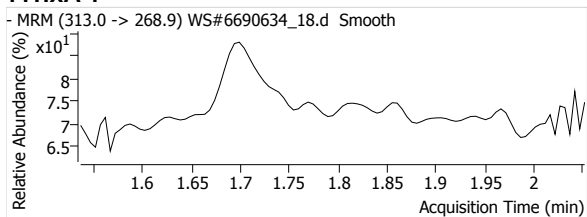
Quantitative Analysis Report

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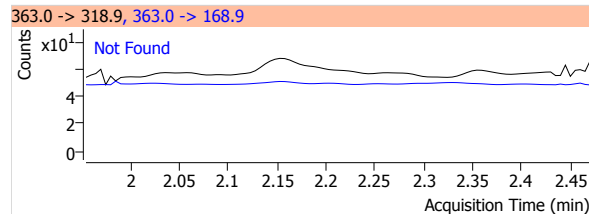
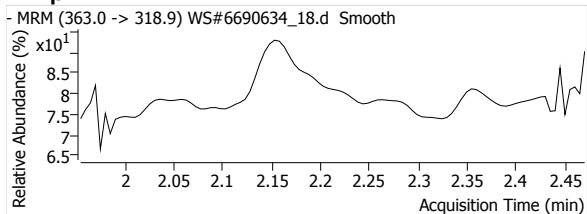
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Acq. Method File	PFAS.m	Position	P1-A8
Acq. Date-Time	2020/04/21 11:58:27 PM	Dil.	0.0
Comment	-		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHpA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	111.9590	--	7864	1.70	882	--	--	--	--	--
13C4-PFHpA	µg/L	--	110.9984	--	10728	2.16	991	--	--	--	--	--
13C4-PFOA	µg/L	--	109.0296	--	10505	2.63	1865	--	--	--	--	--
13C5-PFNA	µg/L	--	110.6557	--	8370	3.07	1330	--	--	--	--	--
13C2-PFDA	µg/L	--	110.2035	--	7204	3.46	1483	--	--	--	--	--
13C2-PFUnA	µg/L	--	110.0116	--	8560	3.80	992	--	--	--	--	--
13C2-PFDaA	µg/L	--	108.1562	--	10940	4.10	1027	--	--	--	--	--
13C2-PFTeDA	µg/L	--	108.7959	--	13643	4.60	1468	--	--	--	--	--
13C3-PFBS	µg/L	--	109.5269	--	1690	1.37	677	--	--	--	--	--
18O2-PFHxS	µg/L	--	110.2362	--	1120	2.11	615	--	--	--	--	--
13C4-PFOS	µg/L	--	107.3728	--	1034	2.95	513	--	--	--	--	--
D3-MeFOSA	µg/L	--	108.4739	--	2637	5.21	140	--	--	--	--	--
D5-EtFOSA	µg/L	--	108.0745	--	2262	5.33	237	--	--	--	--	--

PFHxA 1

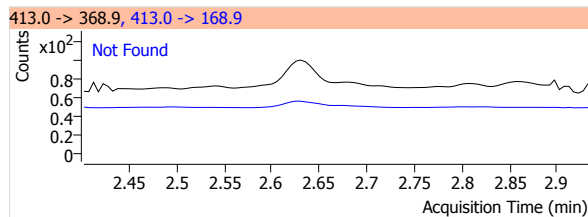
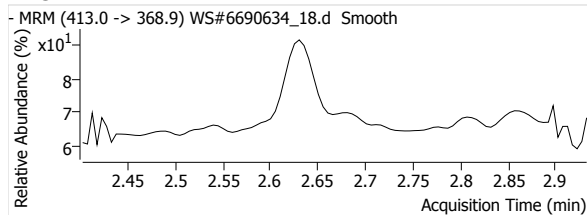


PFHpA 1

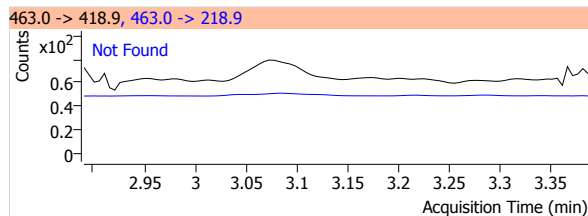
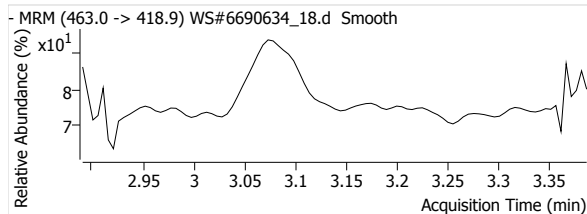


Quantitative Analysis Report

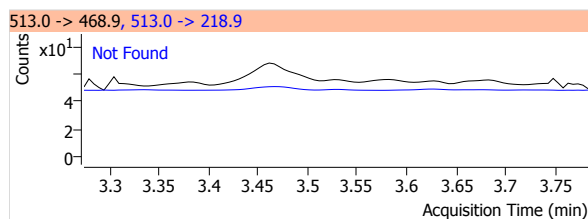
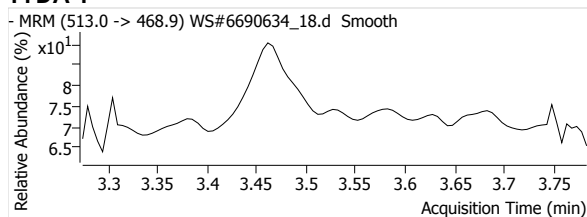
PFOA 1



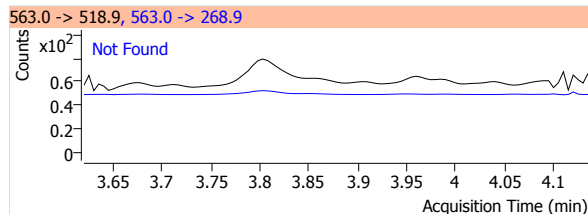
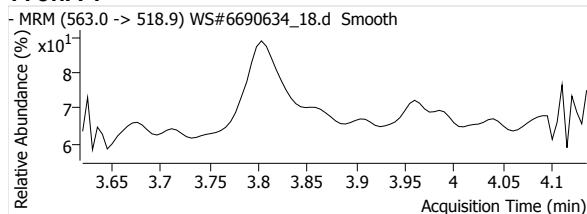
PFNA 1



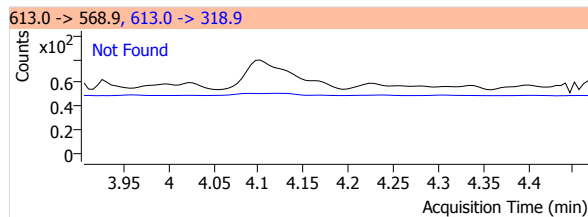
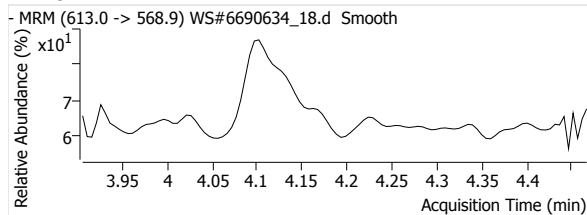
PFDA 1



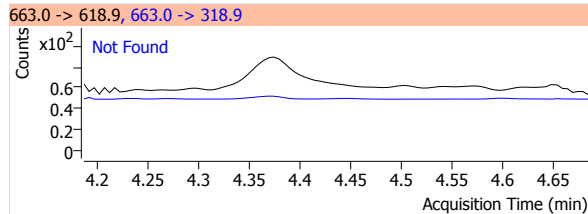
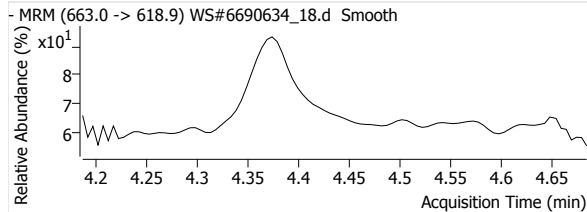
PFUnA 1



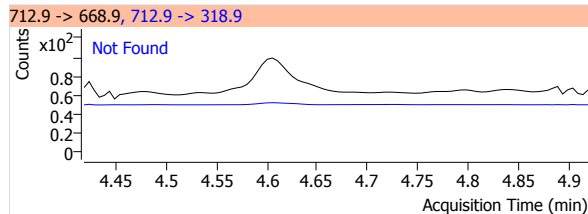
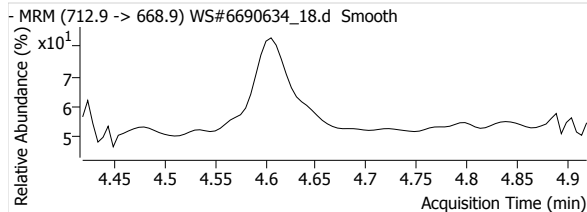
PFDaA 1



PFTrDA 1

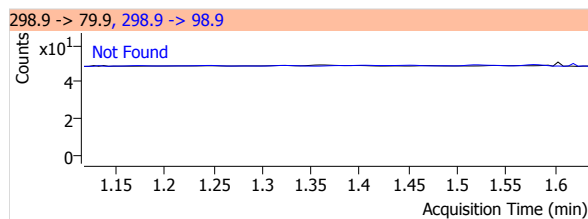
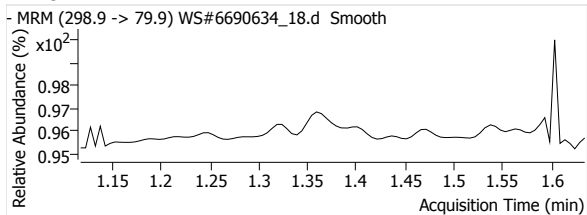


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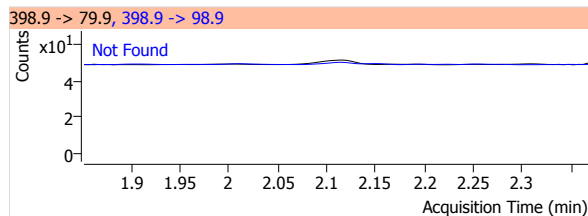
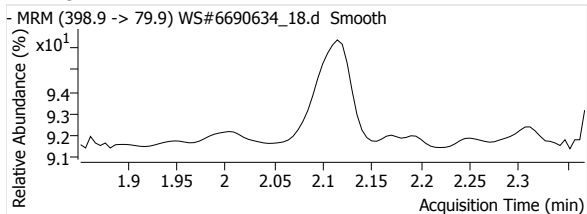


Quantitative Analysis Report

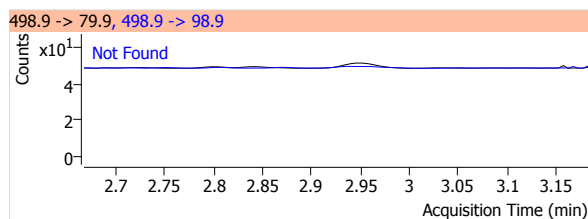
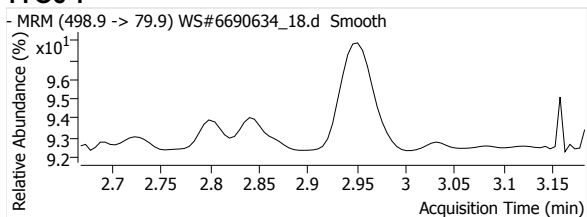
PFBS 1



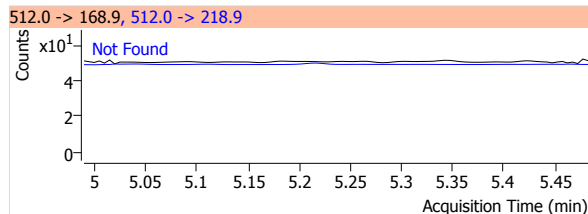
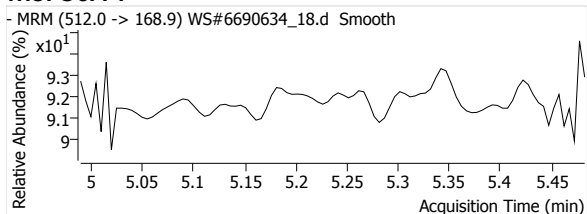
PFHxS 1



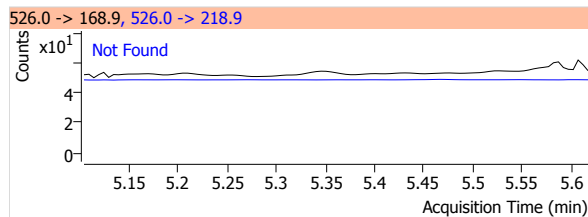
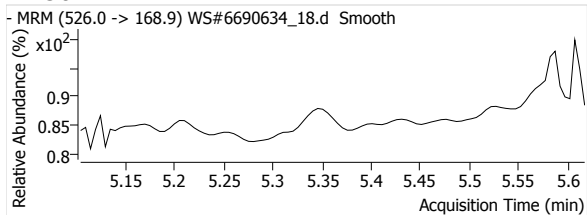
PFOS 1



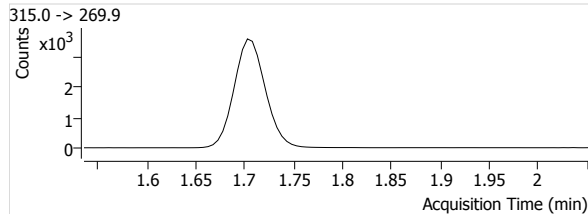
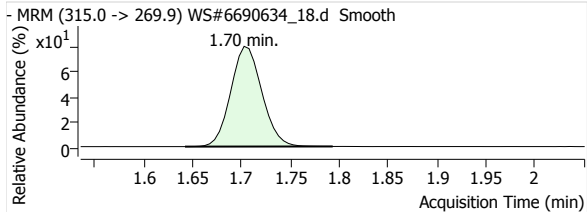
MeFOSA 1



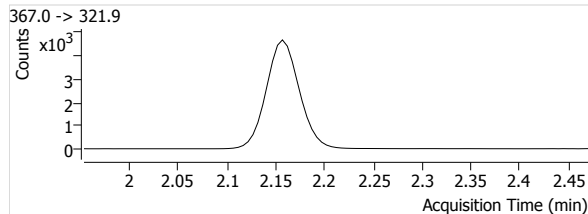
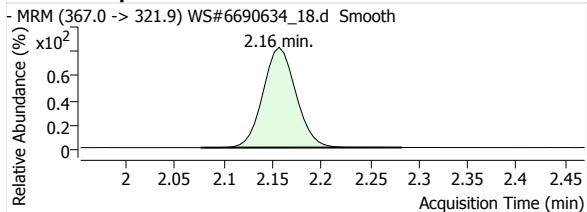
eFOSA 1



13C2-PFHxA

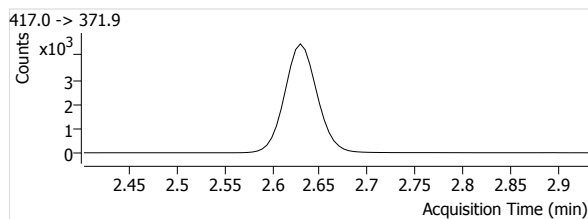
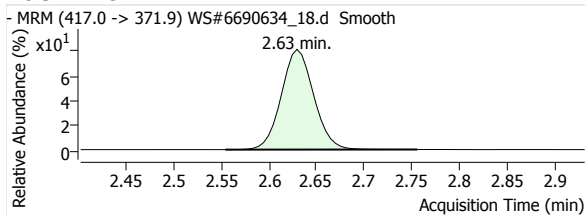


13C4-PFHpA

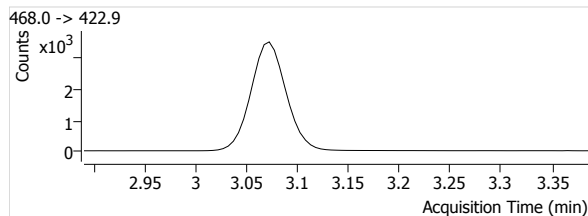
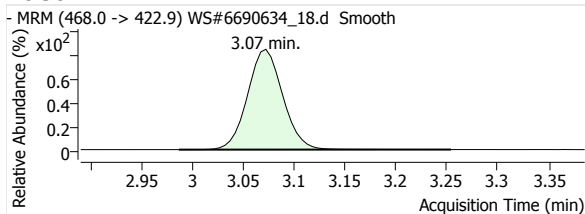


Quantitative Analysis Report

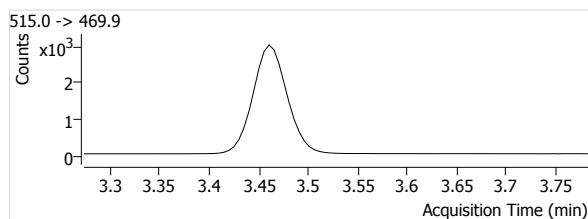
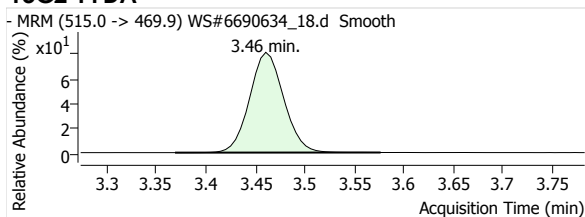
13C4-PFOA



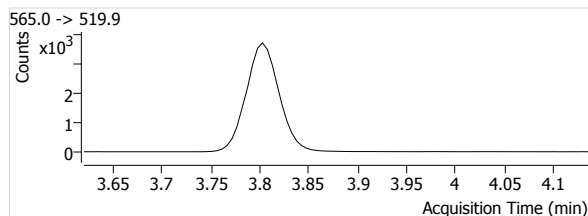
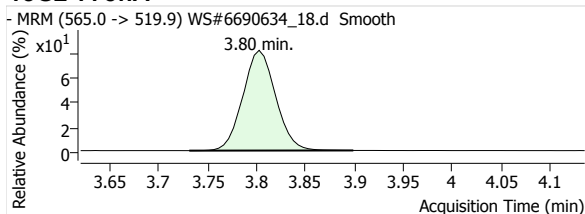
13C5-PFNA



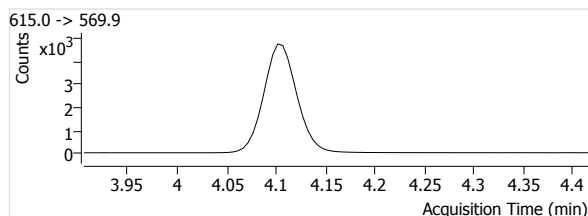
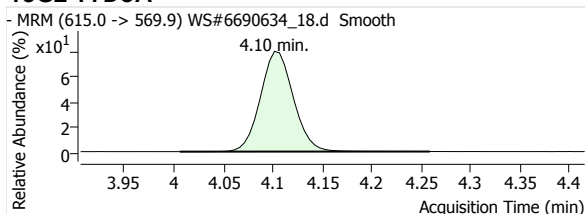
13C2-PFDA



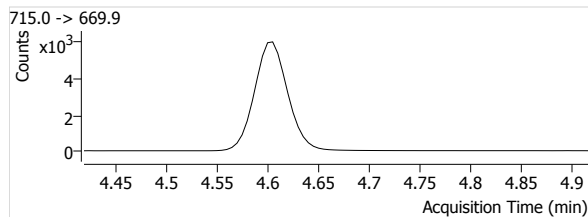
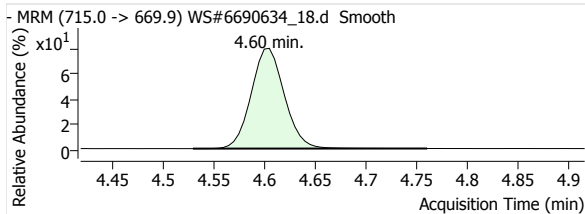
13C2-PFUnA



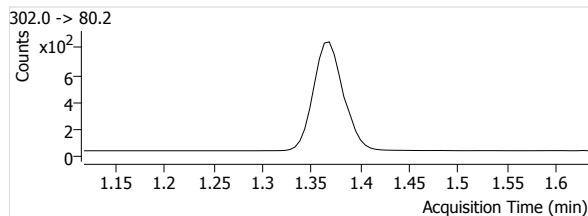
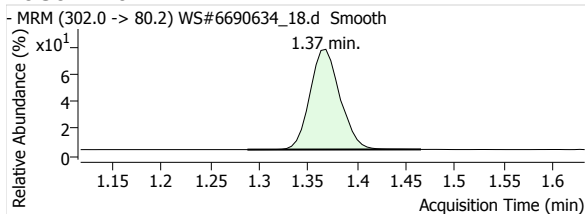
13C2-PFDoA



13C2-PFTeDA

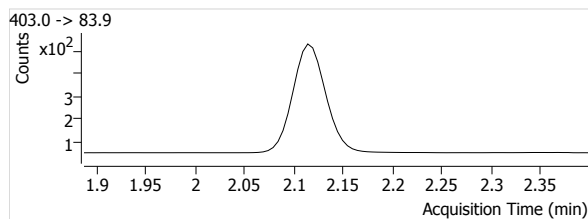
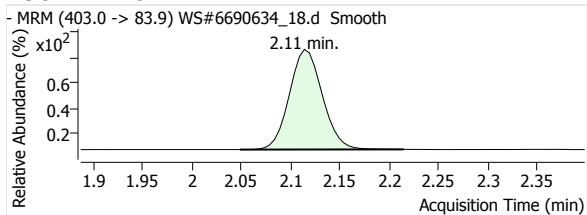


13C3-PFBS

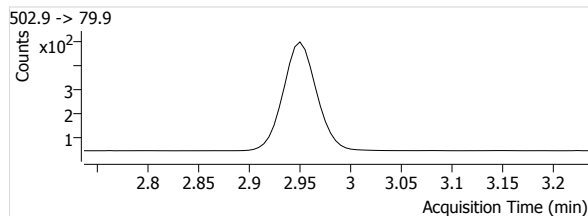
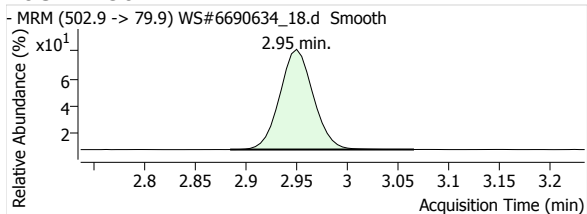


Quantitative Analysis Report

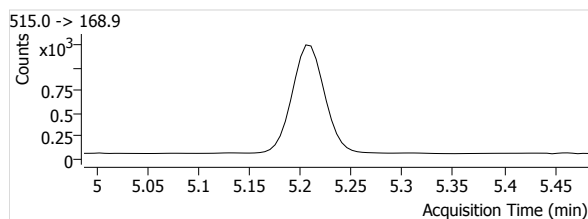
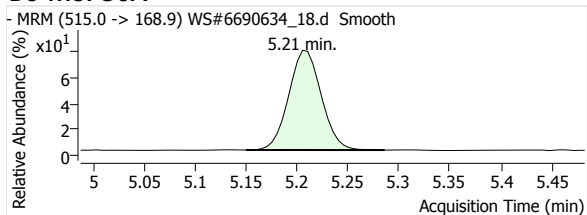
18O2-PFHxS



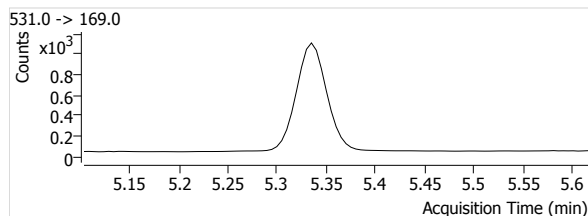
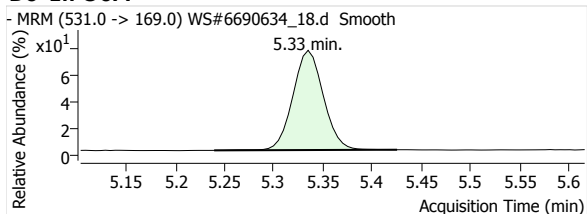
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

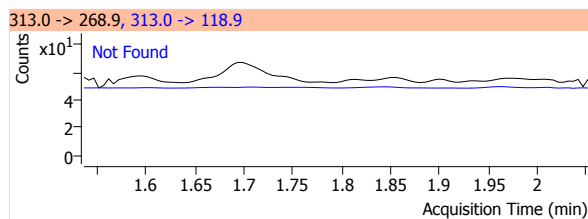
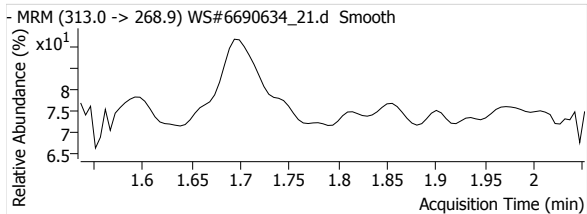
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Sample Name IB
Type Sample
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/22 12:19:18 AM
Comment -
User Defined

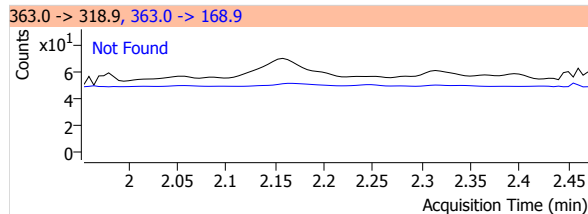
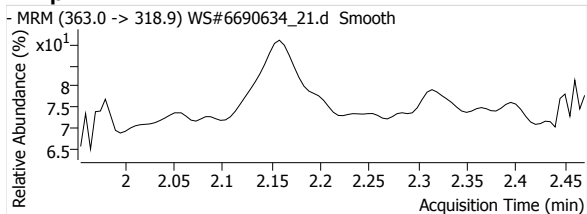
Data File WS#6690634_21.d
Instrument LCMS04
Position P1-A8
Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHpA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	112.6566	--	7913	1.70	1048	--	--	--	--	--
13C4-PFHpA	µg/L	--	110.8329	--	10712	2.16	1638	--	--	--	--	--
13C4-PFOA	µg/L	--	108.2408	--	10429	2.63	1841	--	--	--	--	--
13C5-PFNA	µg/L	--	109.4130	--	8276	3.08	1252	--	--	--	--	--
13C2-PFDA	µg/L	--	109.8516	--	7181	3.47	1471	--	--	--	--	--
13C2-PFUnA	µg/L	--	110.6028	--	8606	3.81	1248	--	--	--	--	--
13C2-PFDaA	µg/L	--	109.5798	--	11084	4.11	1275	--	--	--	--	--
13C2-PFTeDA	µg/L	--	109.6890	--	13755	4.60	1816	--	--	--	--	--
13C3-PFBS	µg/L	--	109.1380	--	1684	1.36	828	--	--	--	--	--
18O2-PFHxS	µg/L	--	108.3661	--	1101	2.11	405	--	--	--	--	--
13C4-PFOS	µg/L	--	108.0997	--	1041	2.95	1009	--	--	--	--	--
D3-MeFOSA	µg/L	--	108.6384	--	2641	5.21	132	--	--	--	--	--
D5-EtFOSA	µg/L	--	108.5523	--	2272	5.33	163	--	--	--	--	--

PFHxA 1

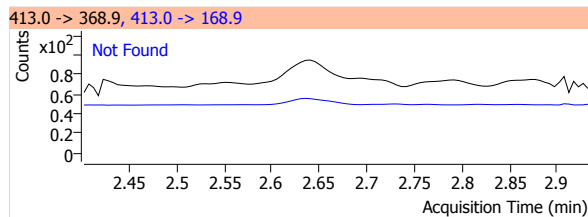
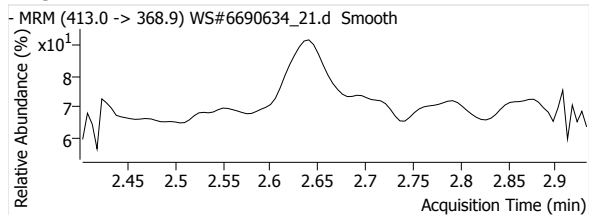


PFHpA 1

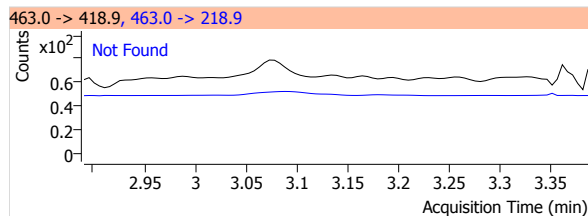
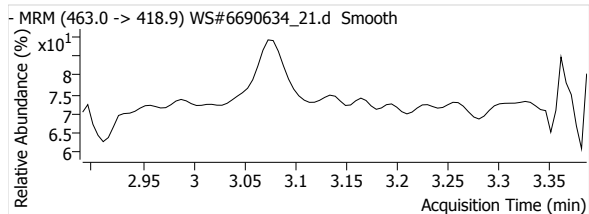


Quantitative Analysis Report

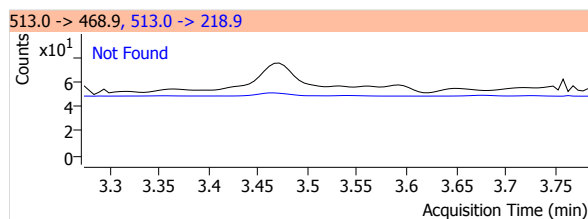
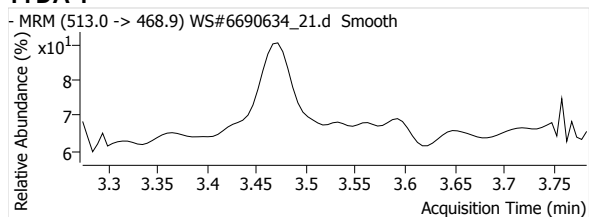
PFOA 1



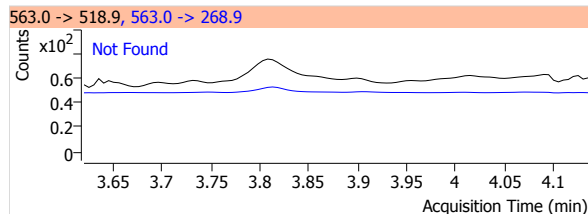
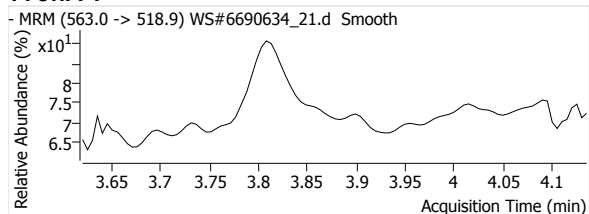
PFNA 1



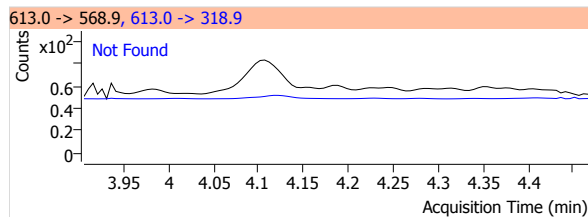
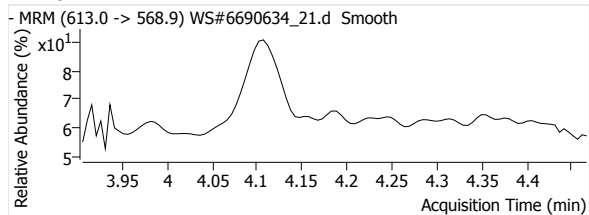
PFDA 1



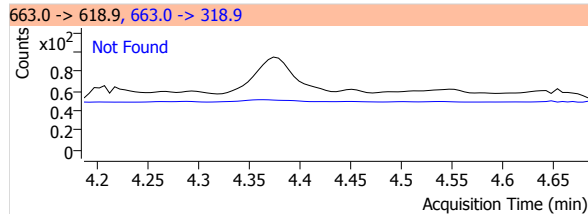
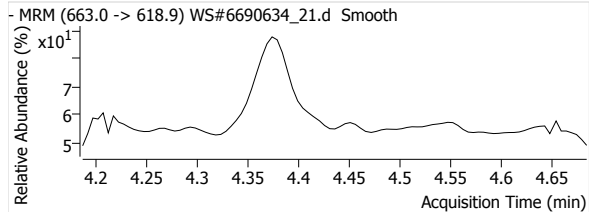
PFUnA 1



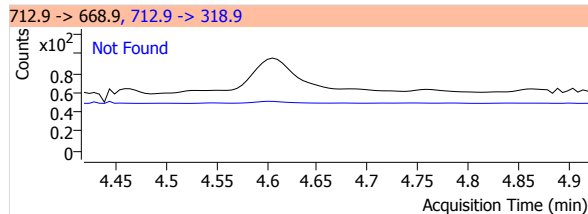
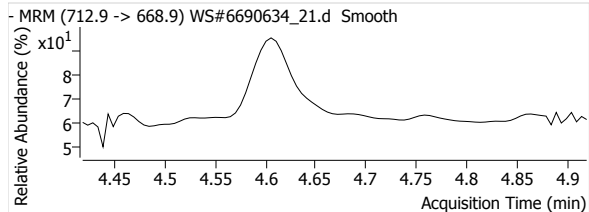
PFDaA 1



PFTrDA 1

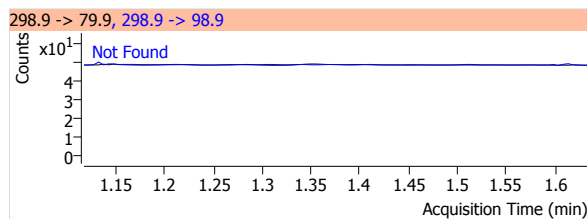
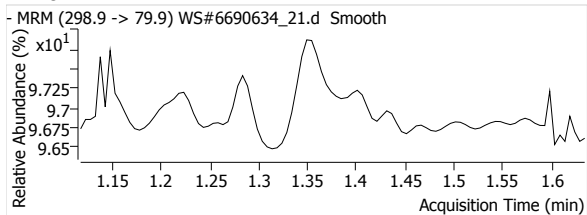


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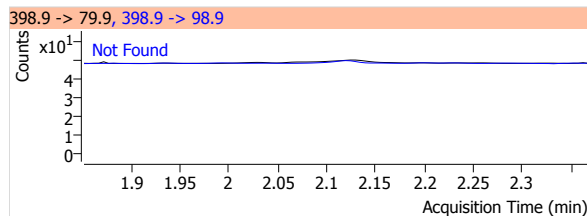
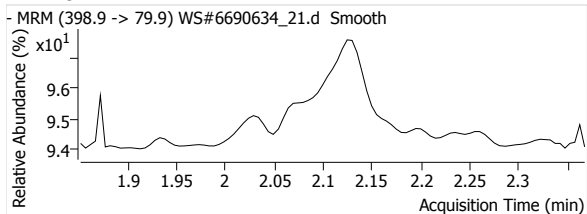


Quantitative Analysis Report

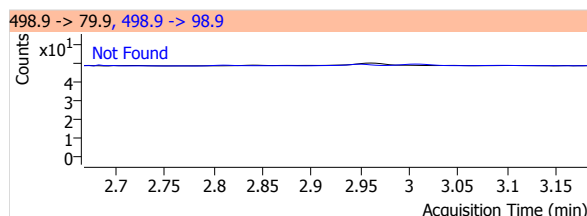
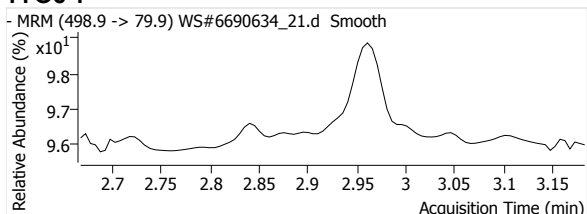
PFBS 1



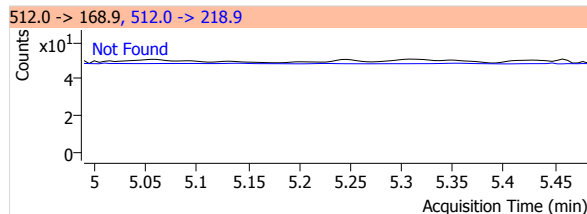
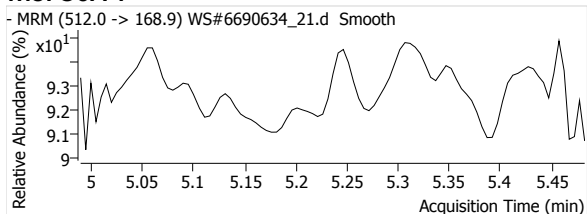
PFHxS 1



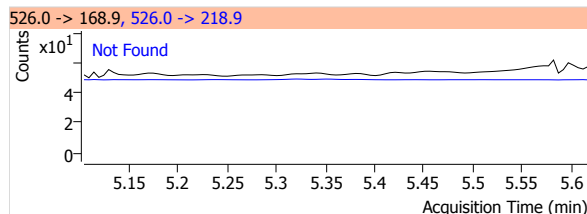
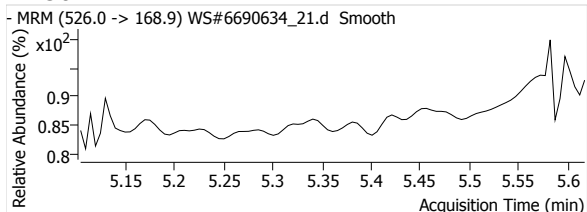
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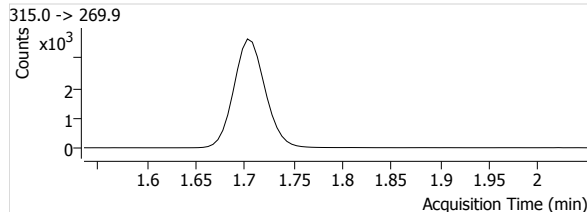
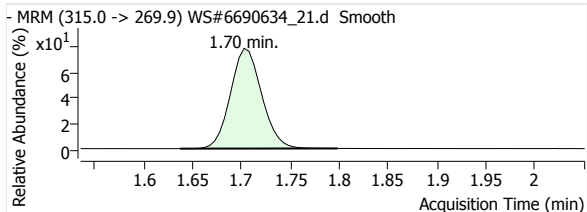
MeFOSA 1



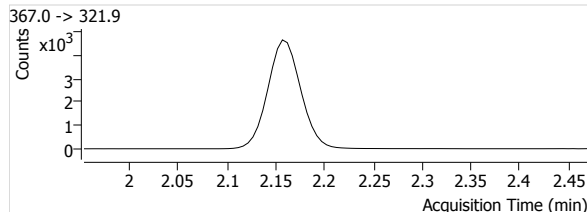
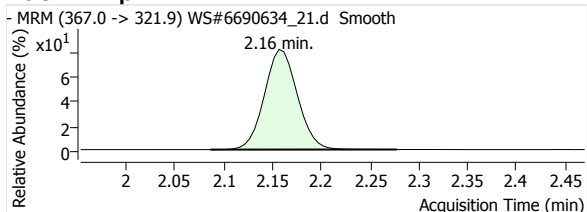
eFOSA 1



13C2-PFHxA

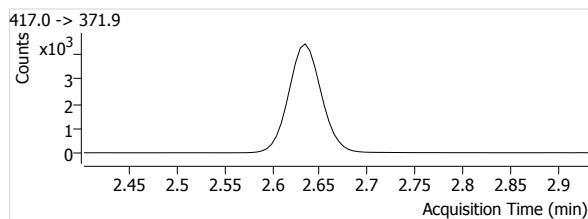
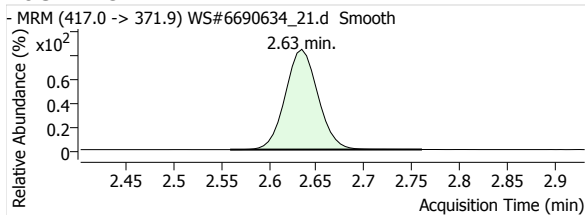


13C4-PFHpA

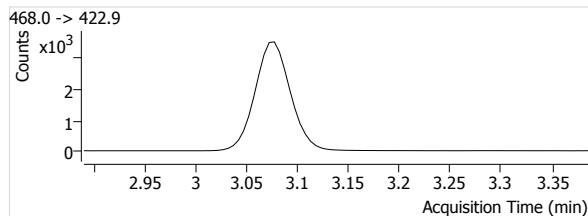
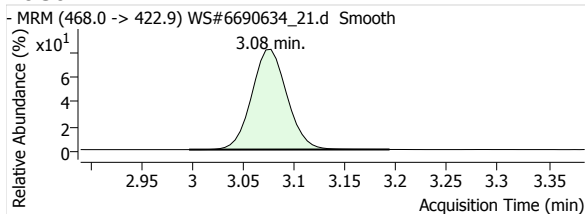


Quantitative Analysis Report

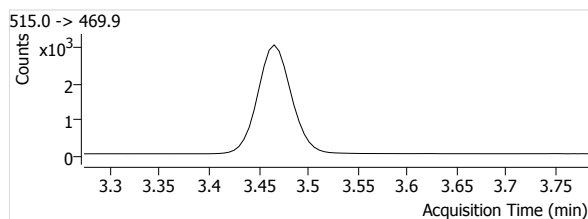
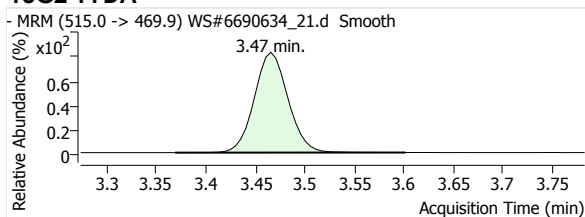
13C4-PFOA



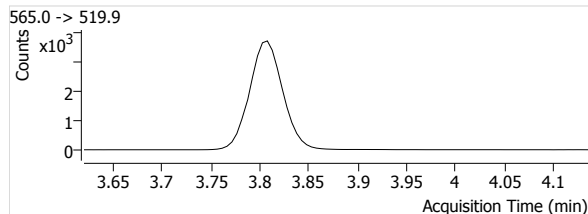
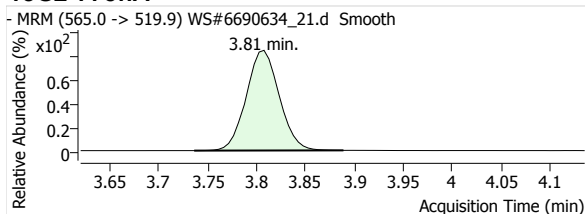
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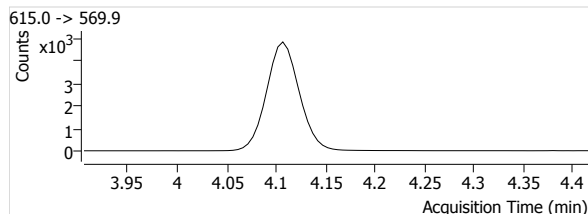
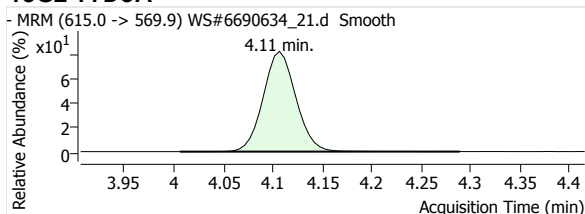
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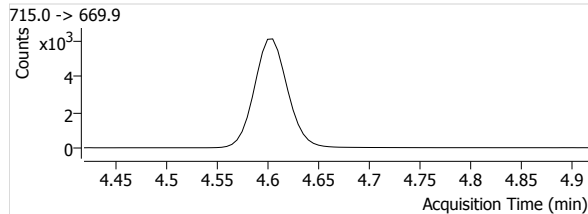
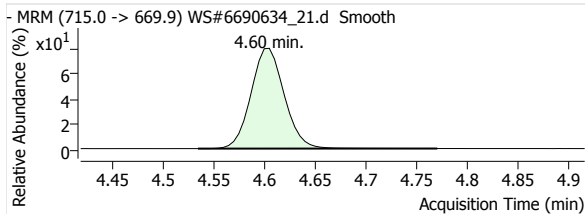
13C2-PFUnA



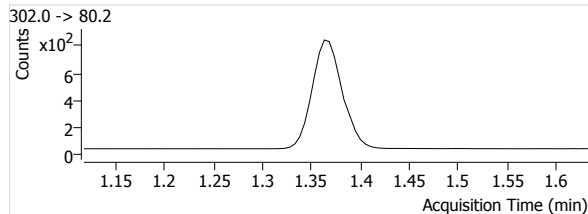
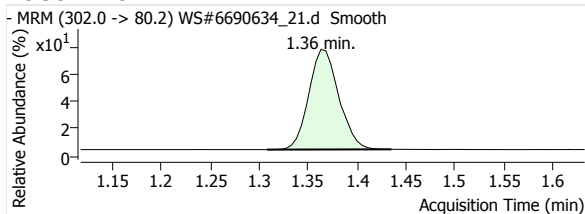
13C2-PFDoA



13C2-PFTeDA

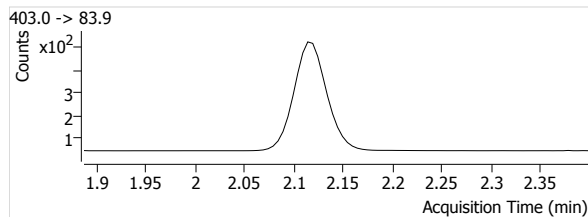
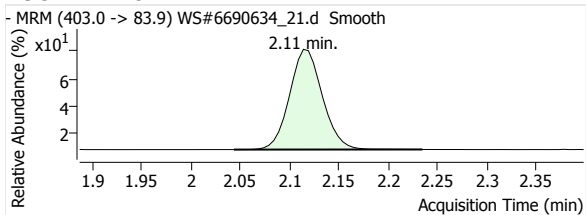


13C3-PFBS

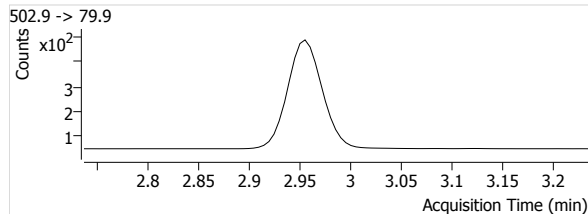
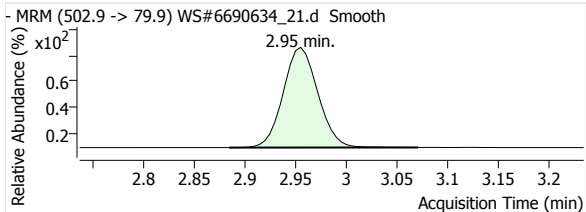


Quantitative Analysis Report

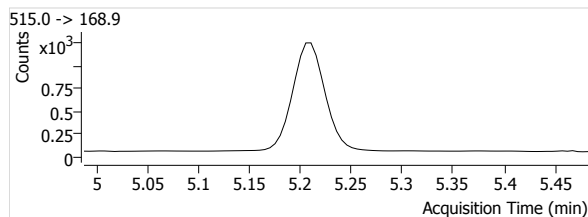
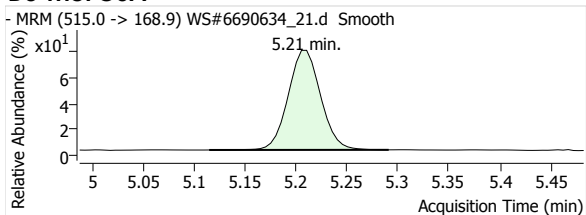
18O2-PFHxs



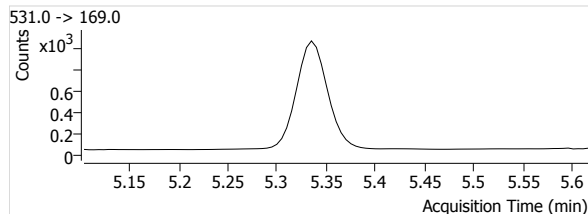
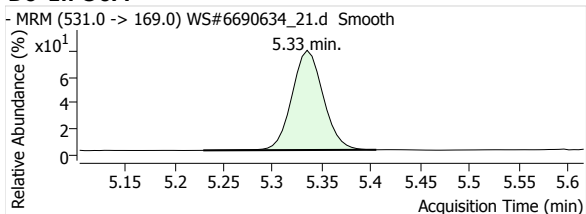
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



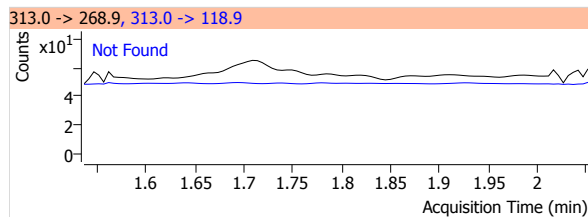
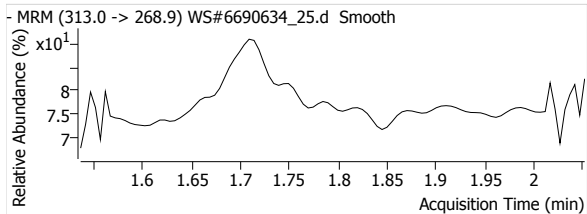
Quantitative Analysis Report

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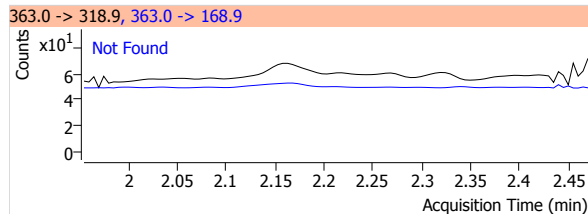
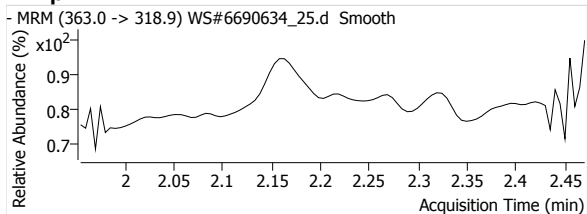
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Acq. Date-Time	2020/04/22 12:47:06 AM	Dil.	0.0
Comment	-		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHpA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	113.0125	--	7938	1.71	875	--	--	--	--	--
13C4-PFHpA	µg/L	--	113.7093	--	10990	2.16	2405	--	--	--	--	--
13C4-PFOA	µg/L	--	108.6975	--	10473	2.63	1417	--	--	--	--	--
13C5-PFNA	µg/L	--	111.2110	--	8412	3.07	1469	--	--	--	--	--
13C2-PFDA	µg/L	--	109.9893	--	7190	3.47	1321	--	--	--	--	--
13C2-PFUnA	µg/L	--	111.5795	--	8682	3.81	1003	--	--	--	--	--
13C2-PFDoA	µg/L	--	107.9684	--	10921	4.11	1519	--	--	--	--	--
13C2-PFTeDA	µg/L	--	108.9075	--	13657	4.60	3502	--	--	--	--	--
13C3-PFBS	µg/L	--	108.4251	--	1673	1.37	408	--	--	--	--	--
18O2-PFHxS	µg/L	--	108.8583	--	1106	2.11	801	--	--	--	--	--
13C4-PFOS	µg/L	--	109.0343	--	1050	2.95	1154	--	--	--	--	--
D3-MeFOSA	µg/L	--	108.6384	--	2641	5.21	98	--	--	--	--	--
D5-EtFOSA	µg/L	--	107.7879	--	2256	5.33	169	--	--	--	--	--

PFHxA 1

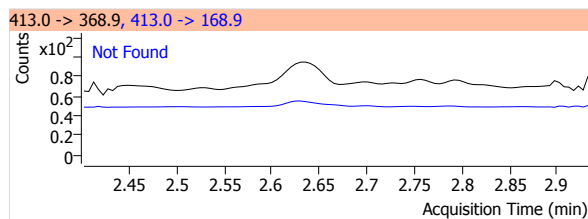
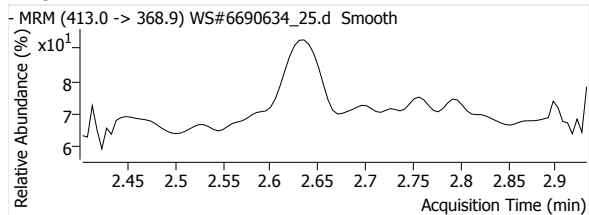


PFHpA 1

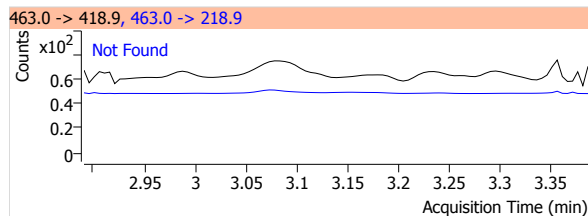
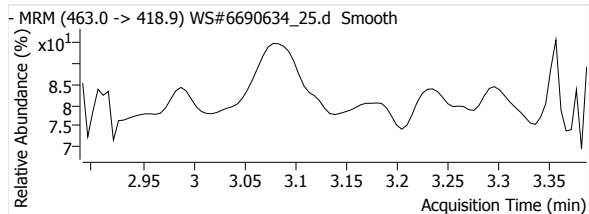


Quantitative Analysis Report

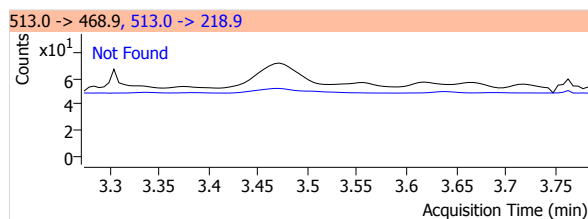
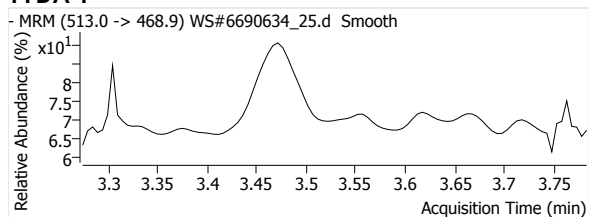
PFOA 1



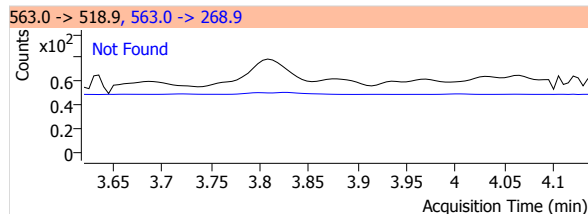
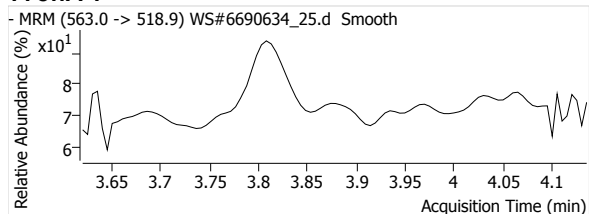
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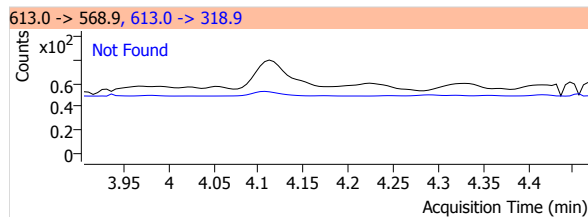
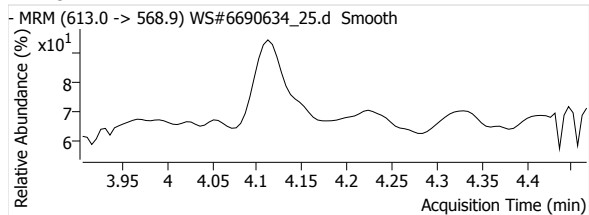
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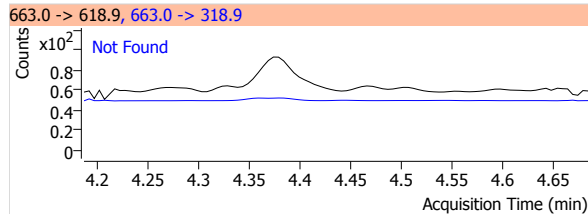
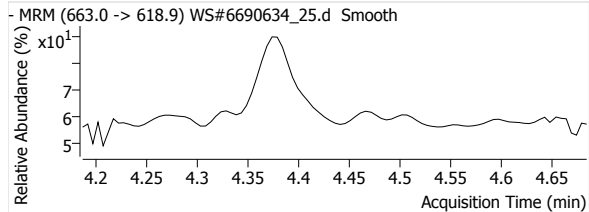
PFUnA 1



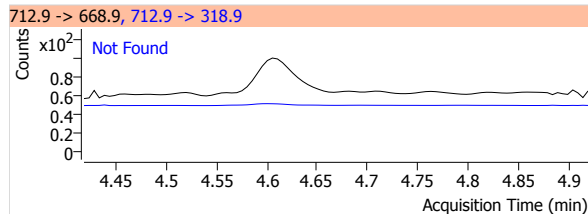
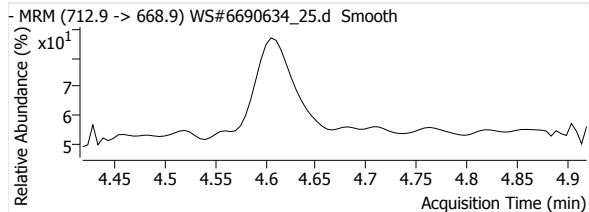
PFDoA 1



PFTrDA 1

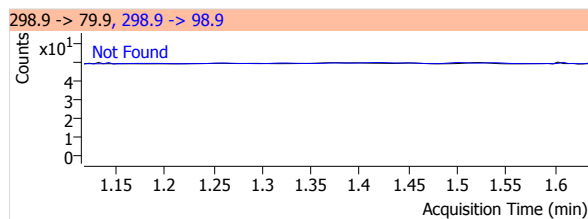
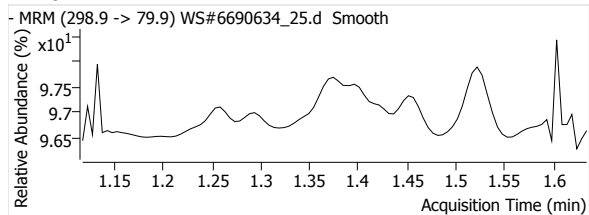


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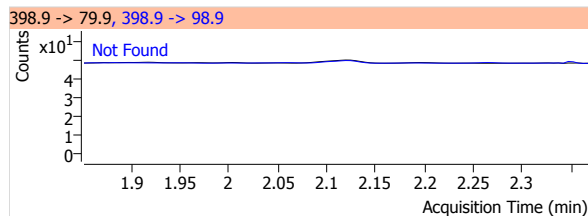
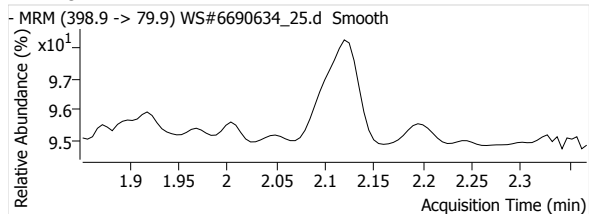


Quantitative Analysis Report

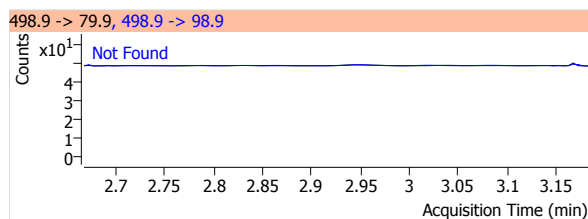
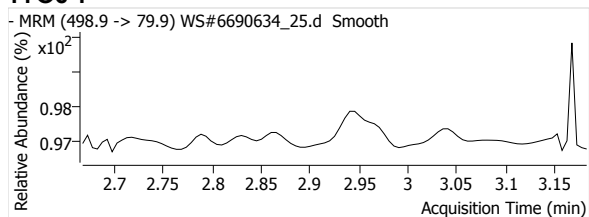
PFBS 1



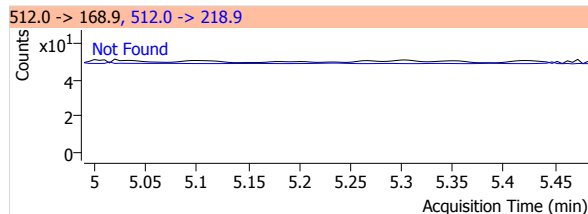
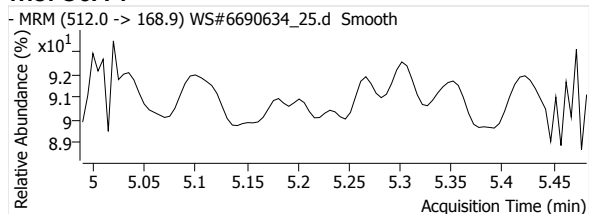
PFHxS 1



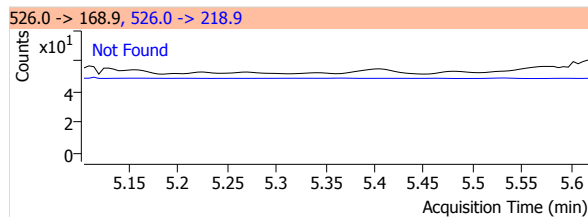
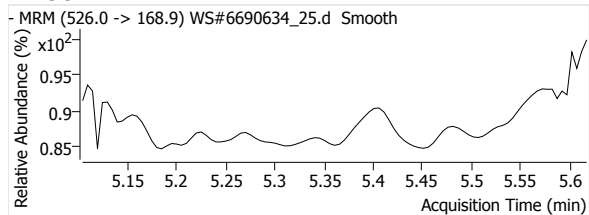
PFOS 1



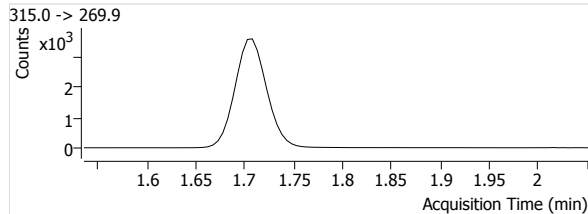
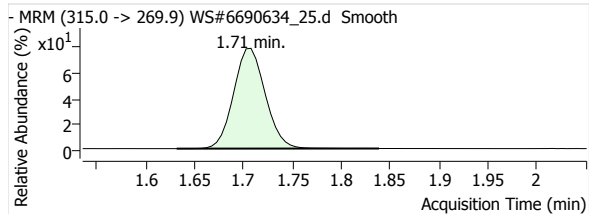
MeFOSA 1



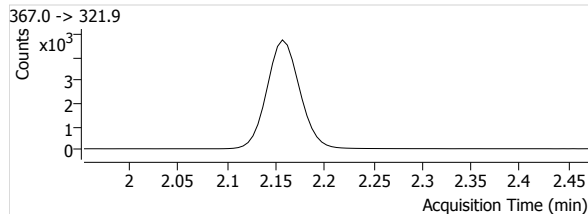
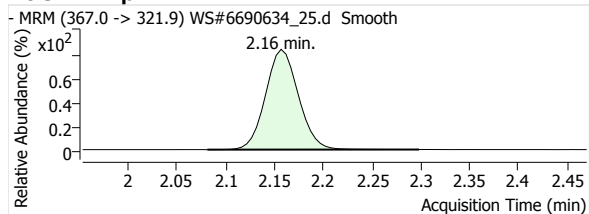
eFOSA 1



13C2-PFHxA

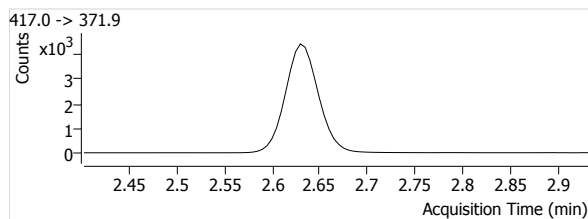
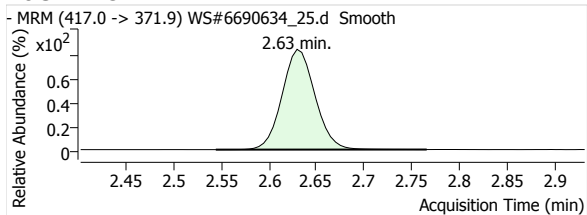


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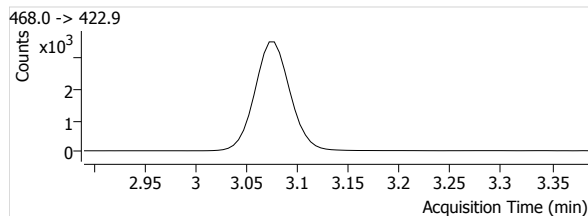
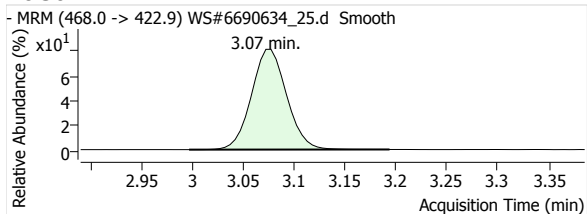


Quantitative Analysis Report

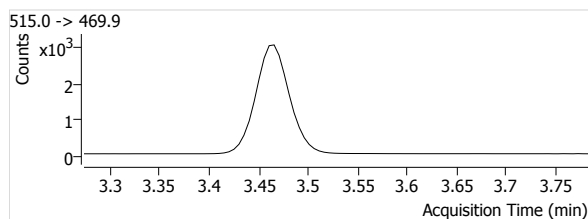
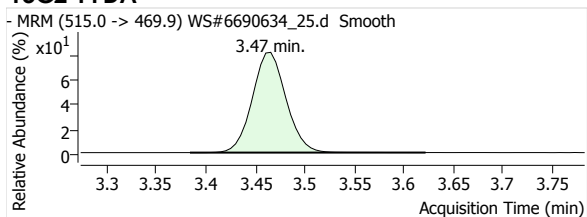
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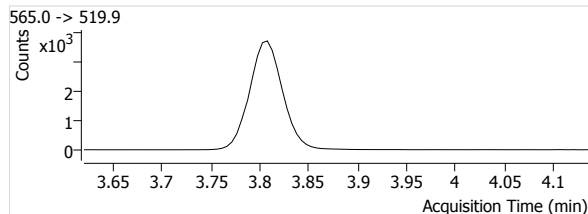
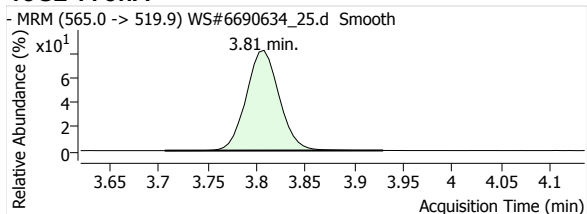
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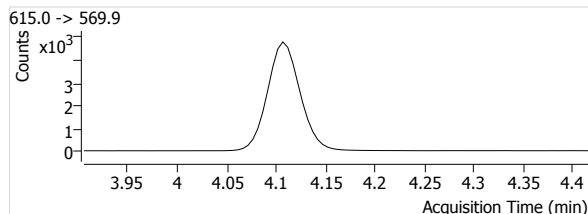
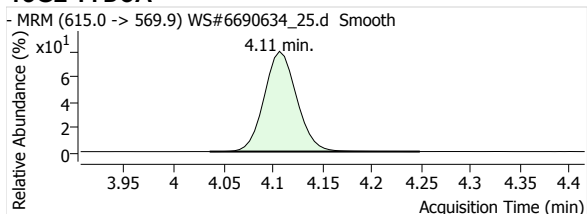
13C2-PFDA



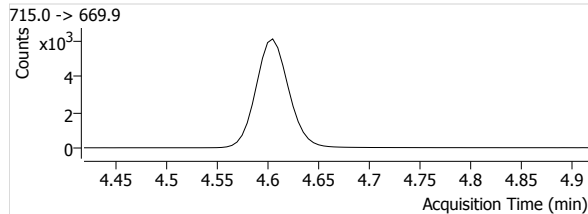
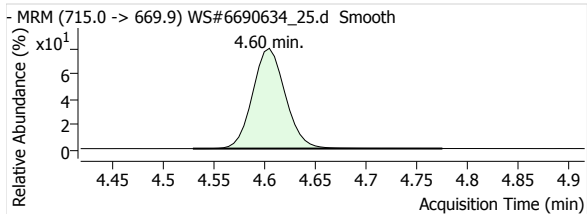
13C2-PFUnA



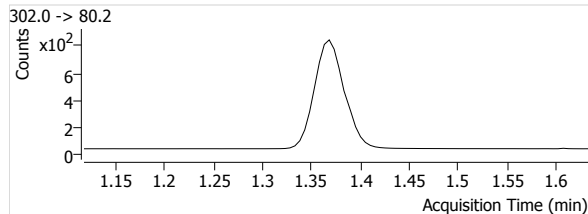
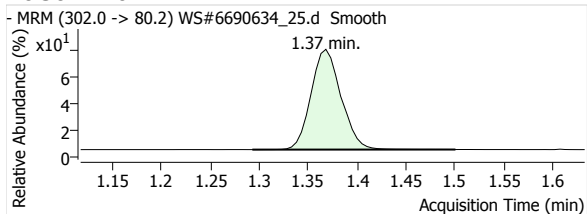
13C2-PFDoA



13C2-PFTeDA

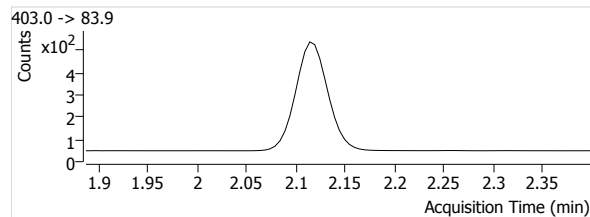
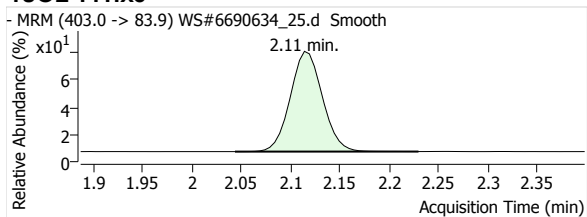


13C3-PFBS

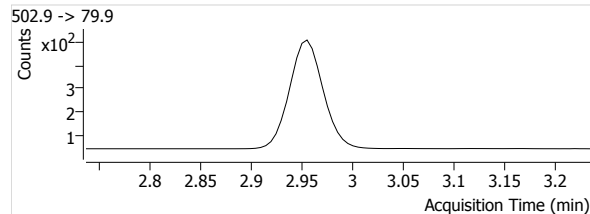
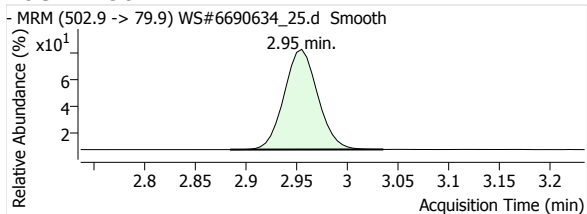


Quantitative Analysis Report

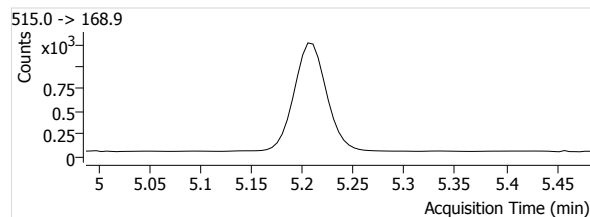
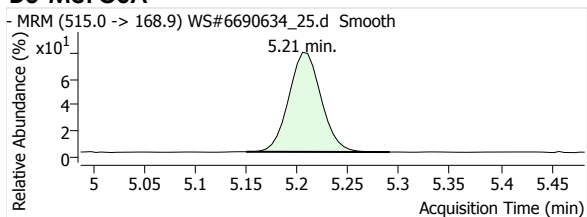
18O2-PFHxs



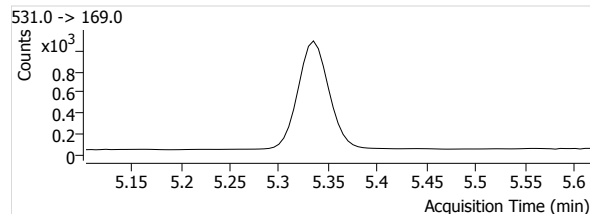
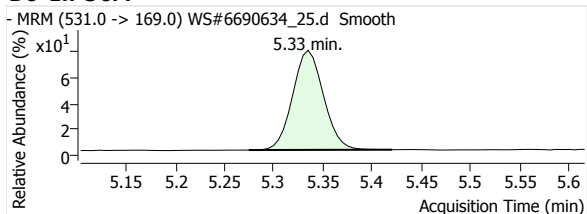
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



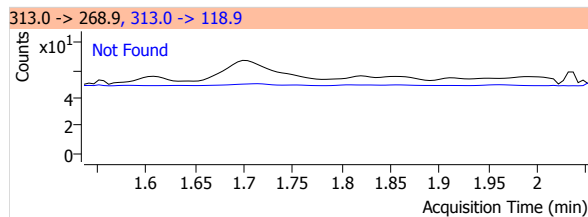
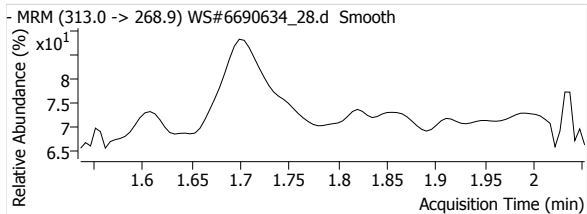
Quantitative Analysis Report

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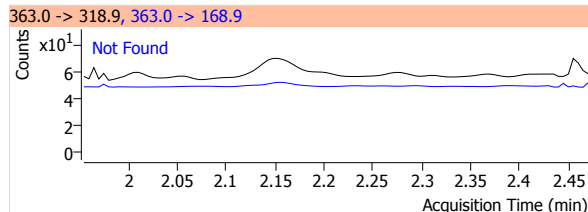
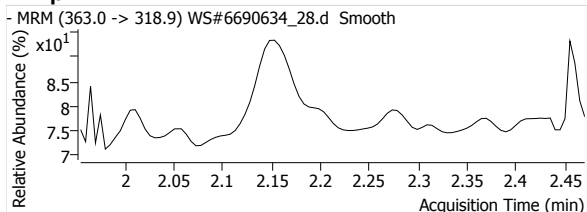
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Acq. Method File	PFAS.m	Position	P1-A8
Acq. Date-Time	2020/04/22 1:07:56 AM	Dil.	0.0
Comment	-		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHpA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	112.1298	--	7876	1.70	970	--	--	--	--	--
13C4-PFHpA	µg/L	--	114.4542	--	11062	2.15	945	--	--	--	--	--
13C4-PFOA	µg/L	--	109.9429	--	10593	2.63	1380	--	--	--	--	--
13C5-PFNA	µg/L	--	110.9730	--	8394	3.07	1014	--	--	--	--	--
13C2-PFDA	µg/L	--	109.6374	--	7167	3.46	902	--	--	--	--	--
13C2-PFUnA	µg/L	--	110.8469	--	8625	3.80	930	--	--	--	--	--
13C2-PFDaA	µg/L	--	108.6406	--	10989	4.10	1144	--	--	--	--	--
13C2-PFTeDA	µg/L	--	109.5215	--	13734	4.60	2066	--	--	--	--	--
13C3-PFBS	µg/L	--	109.5269	--	1690	1.36	562	--	--	--	--	--
18O2-PFHxS	µg/L	--	112.9921	--	1148	2.11	601	--	--	--	--	--
13C4-PFOS	µg/L	--	105.9190	--	1020	2.95	230	--	--	--	--	--
D3-MeFOSA	µg/L	--	107.8980	--	2623	5.21	113	--	--	--	--	--
D5-EtFOSA	µg/L	--	107.3101	--	2246	5.33	143	--	--	--	--	--

PFHxA 1

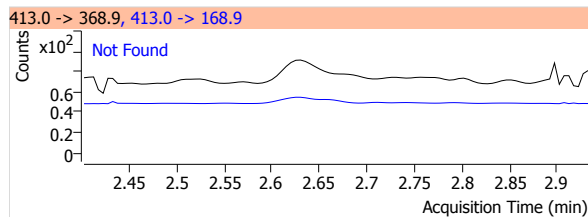
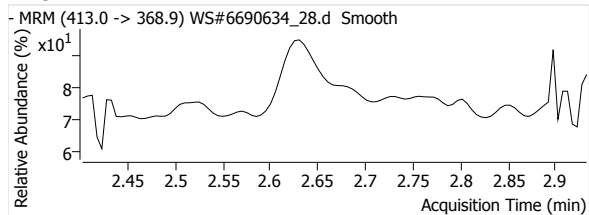


PFHpA 1

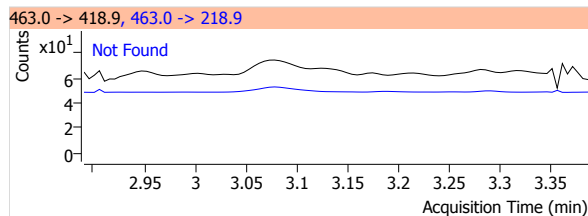
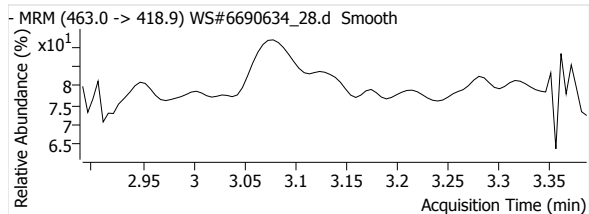


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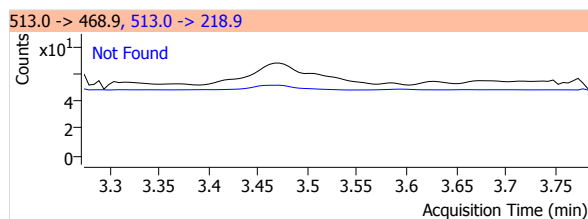
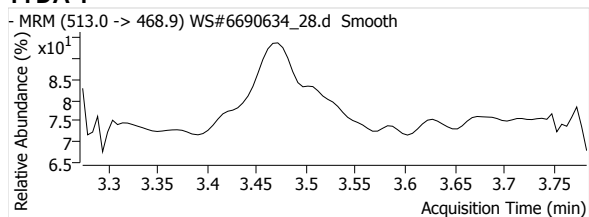
PFOA 1



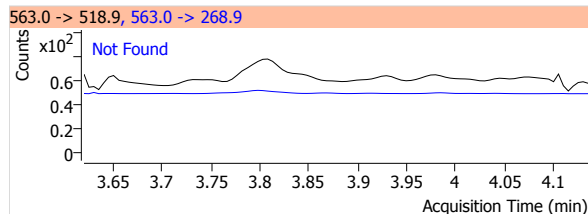
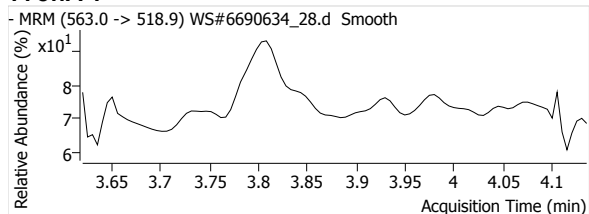
PFNA 1



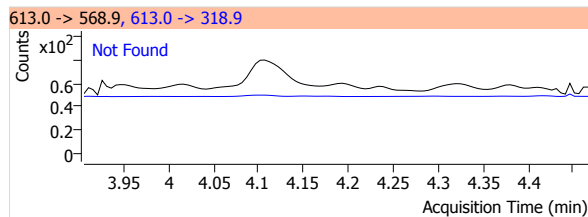
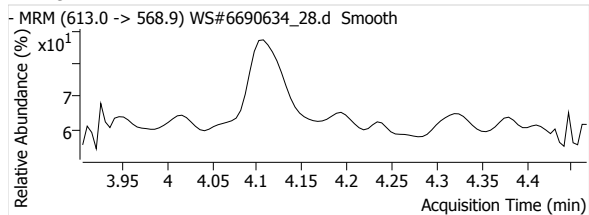
PFDA 1



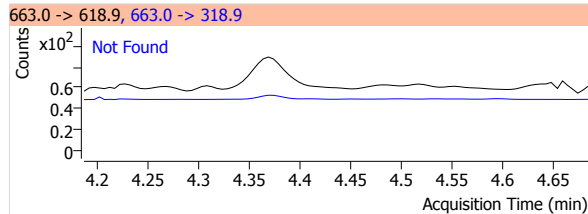
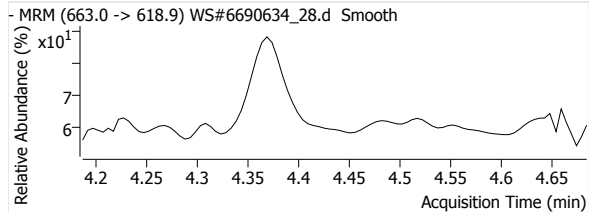
PFUnA 1



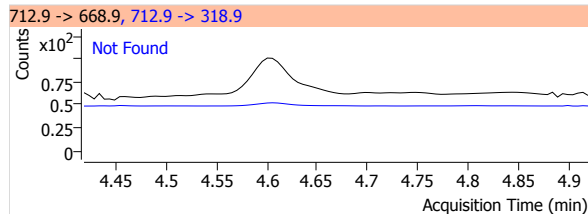
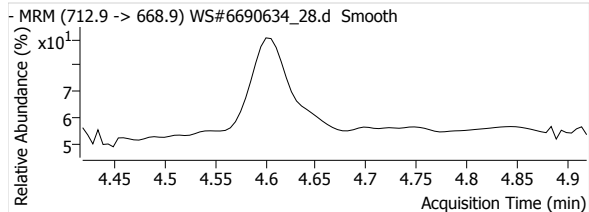
PFDoA 1



PFTrDA 1

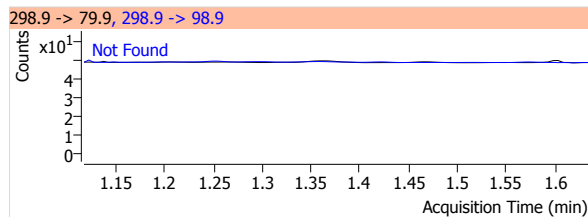
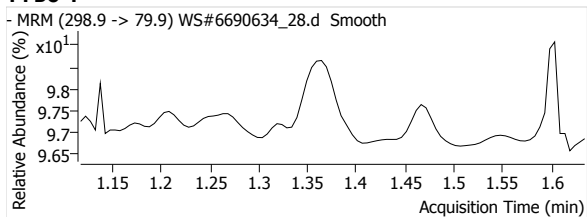


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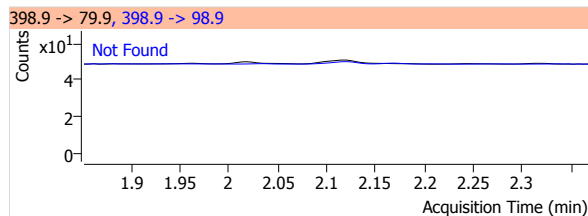
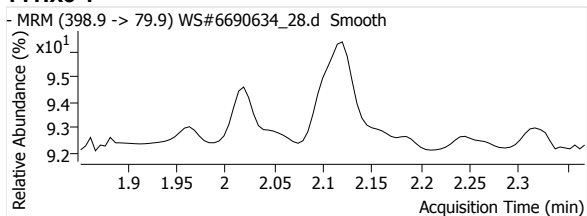


Quantitative Analysis Report

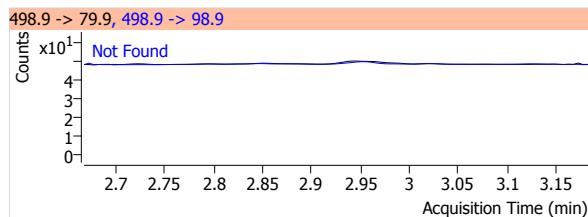
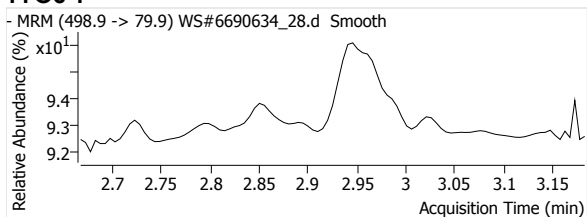
PFBS 1



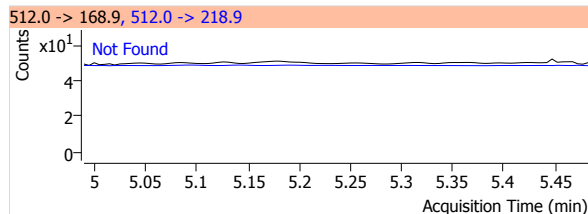
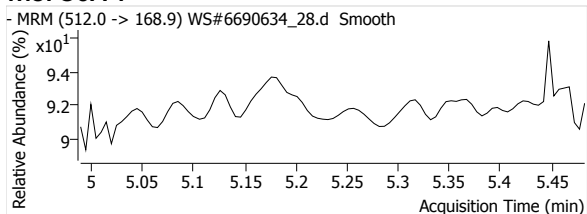
PFHxS 1



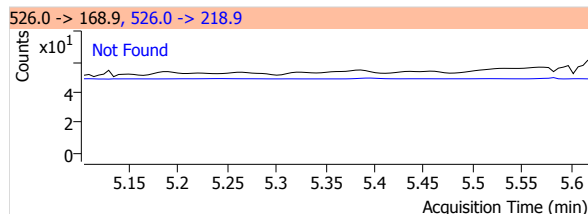
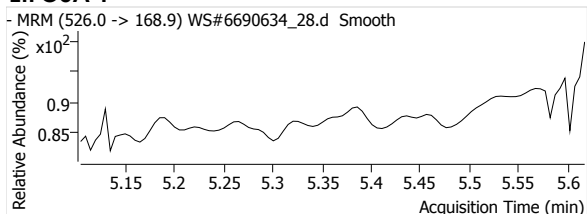
PFOS 1



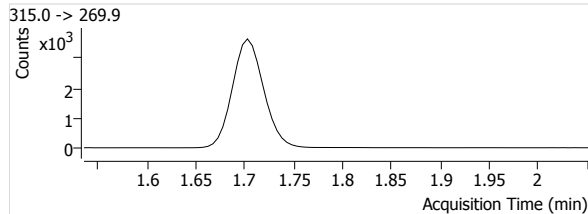
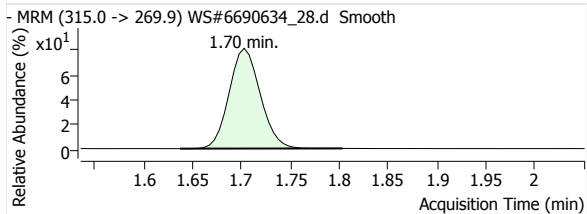
MeFOSA 1



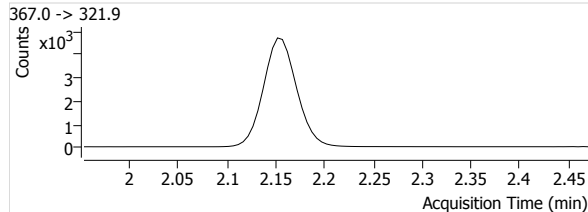
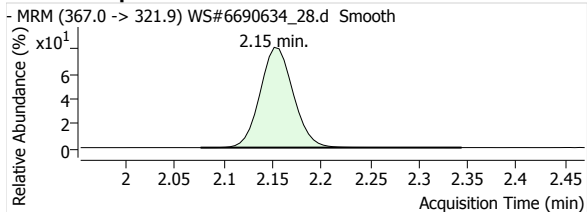
eFOSA 1



13C2-PFHxA

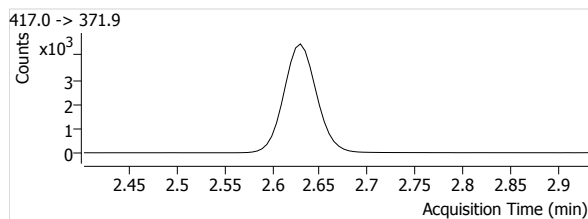
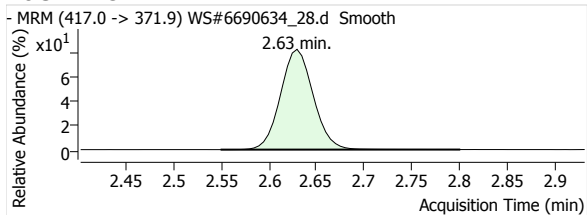


13C4-PFHpA

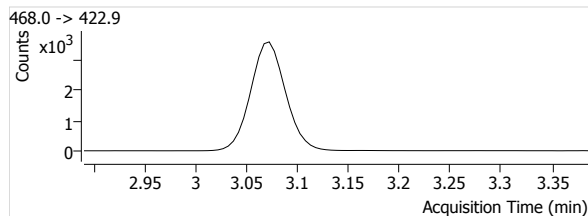
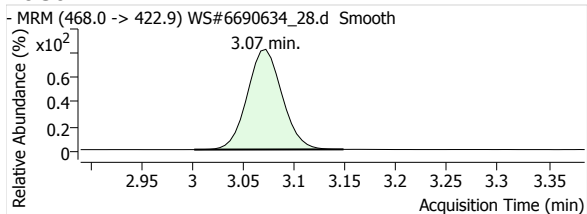


Quantitative Analysis Report

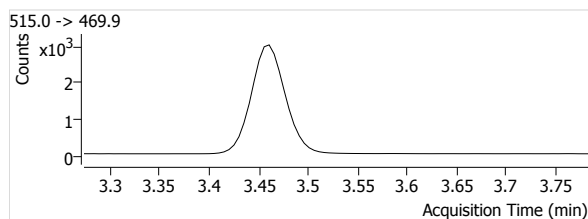
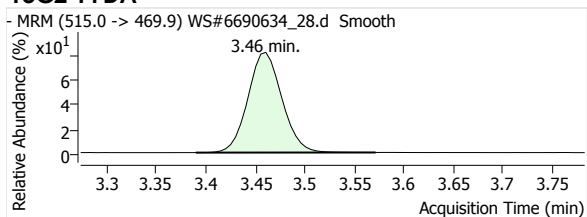
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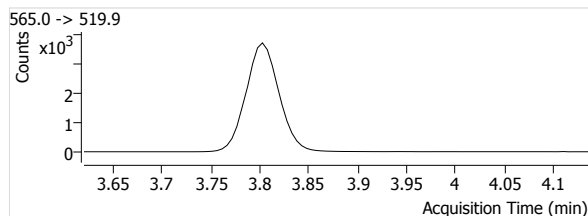
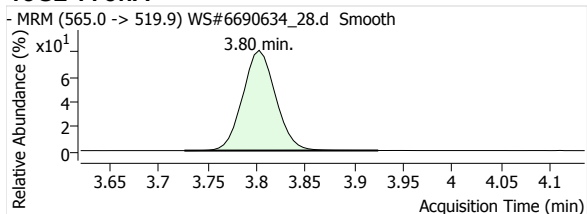
13C5-PFNA



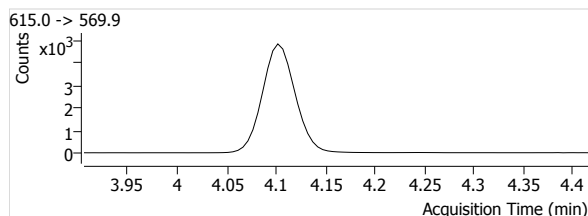
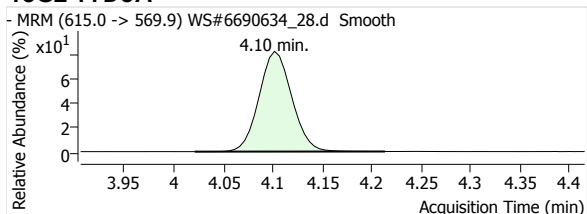
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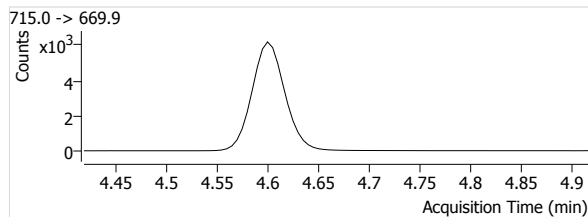
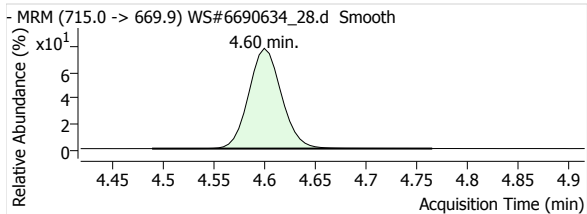
13C2-PFUnA



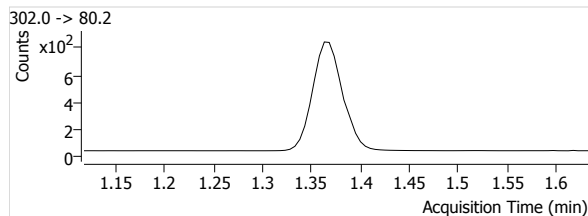
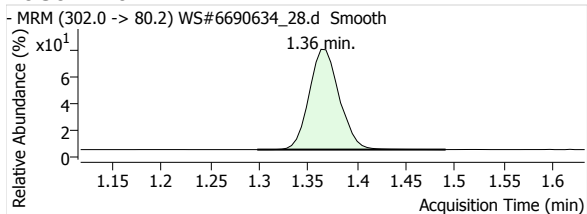
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13C2-PFTeDA

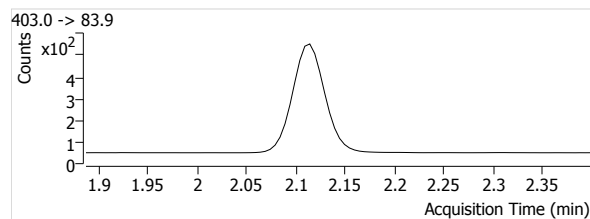
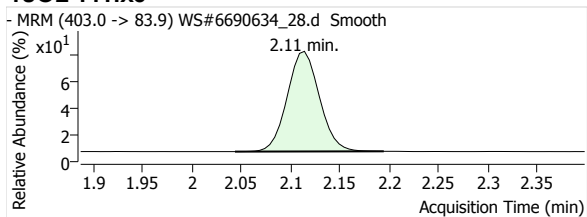


13C3-PFBS

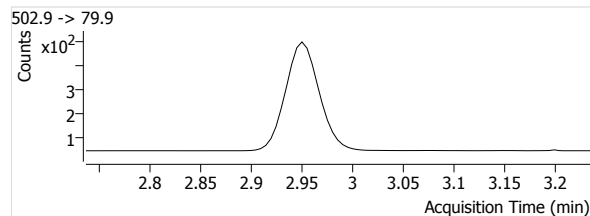
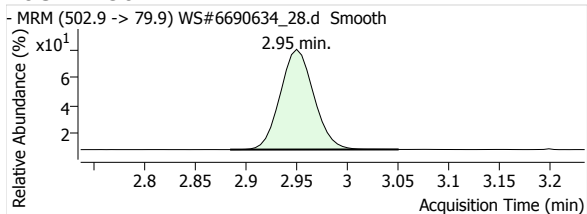


Quantitative Analysis Report

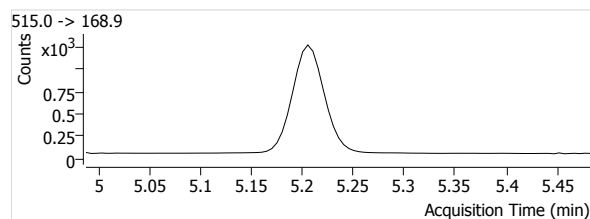
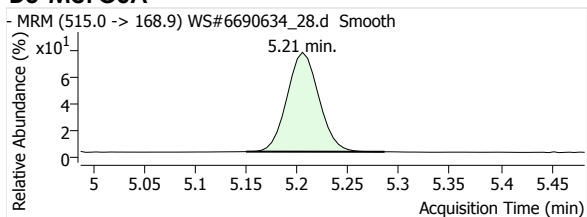
18O2-PFHxS



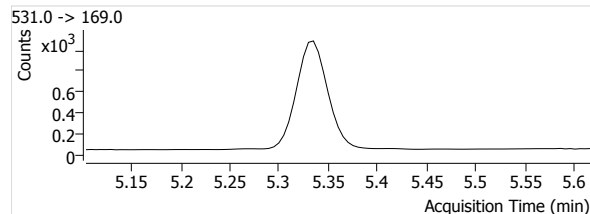
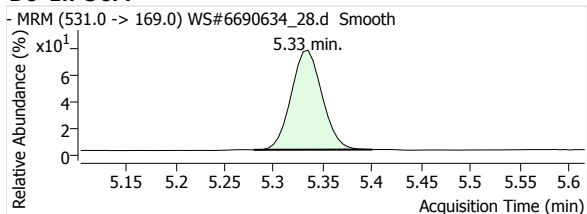
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

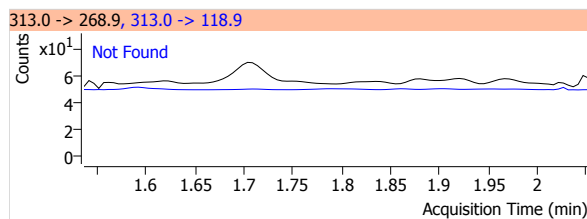
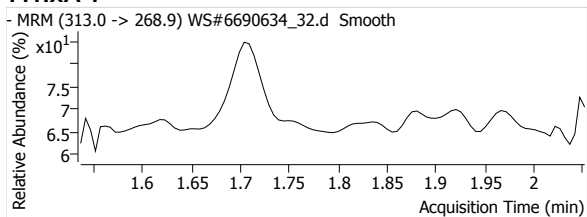
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Sample Name IB
 Type Sample
 Acq. Method File PFAS.m
 Acq. Date-Time 2020/04/22 1:35:44 AM
 Comment -
 User Defined -

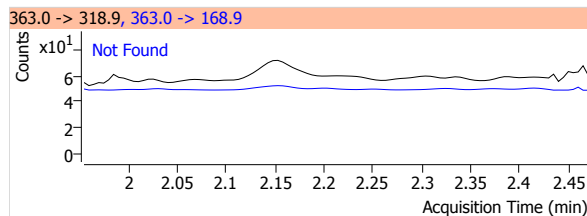
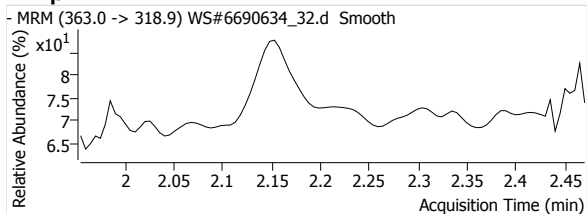
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 Position P1-A8
 Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHpA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	114.1942	--	8021	1.70	815	--	--	--	--	--
13C4-PFHpA	µg/L	--	113.1609	--	10937	2.16	1369	--	--	--	--	--
13C4-PFOA	µg/L	--	109.5070	--	10551	2.63	1338	--	--	--	--	--
13C5-PFNA	µg/L	--	110.8144	--	8382	3.07	766	--	--	--	--	--
13C2-PFDA	µg/L	--	108.6584	--	7103	3.46	1129	--	--	--	--	--
13C2-PFUnA	µg/L	--	111.3353	--	8663	3.80	1866	--	--	--	--	--
13C2-PFDaA	µg/L	--	108.5615	--	10981	4.11	1227	--	--	--	--	--
13C2-PFTeDA	µg/L	--	109.0510	--	13675	4.60	2737	--	--	--	--	--
13C3-PFBS	µg/L	--	110.6286	--	1707	1.37	827	--	--	--	--	--
18O2-PFHxS	µg/L	--	113.6811	--	1155	2.11	582	--	--	--	--	--
13C4-PFOS	µg/L	--	108.2035	--	1042	2.95	771	--	--	--	--	--
D3-MeFOSA	µg/L	--	109.1320	--	2653	5.21	148	--	--	--	--	--
D5-EtFOSA	µg/L	--	107.8834	--	2258	5.33	112	--	--	--	--	--

PFHxA 1

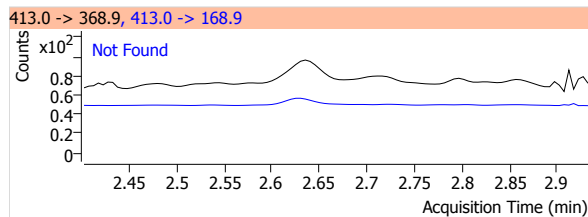
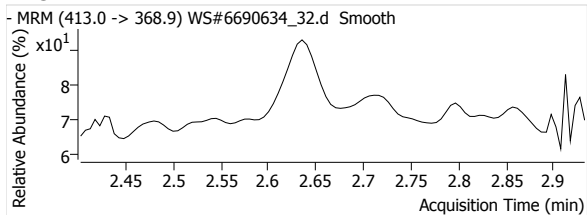


PFHpA 1

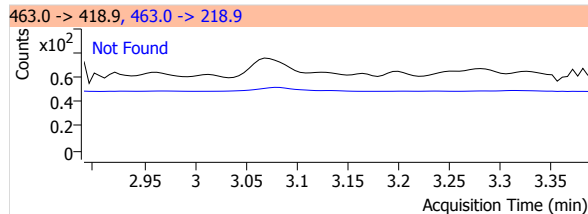
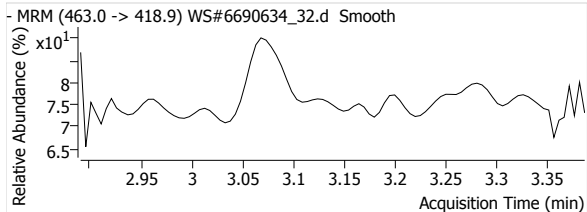


Quantitative Analysis Report

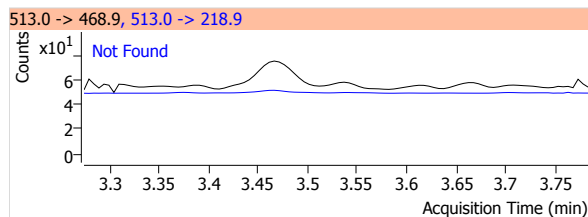
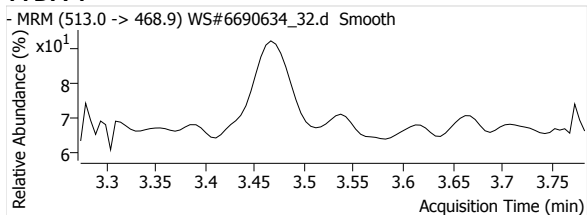
PFOA 1



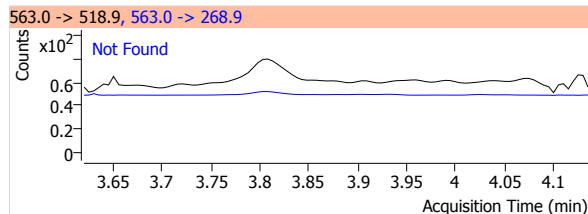
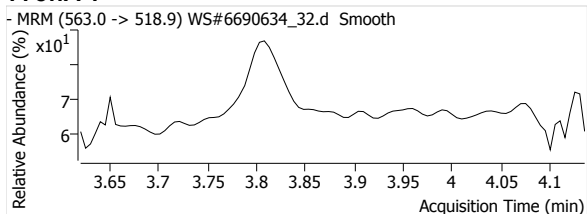
PFNA 1



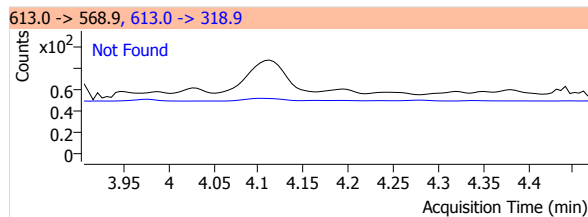
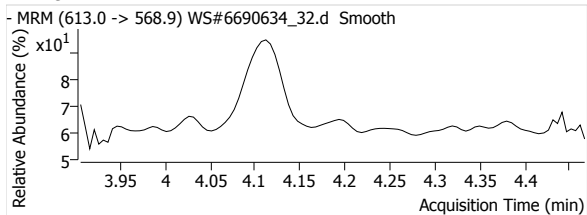
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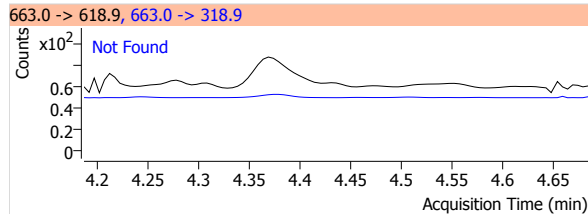
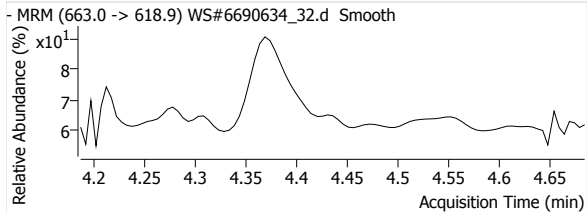
PFUnA 1



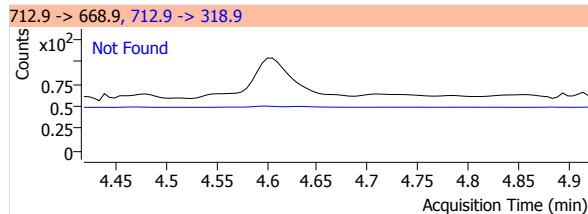
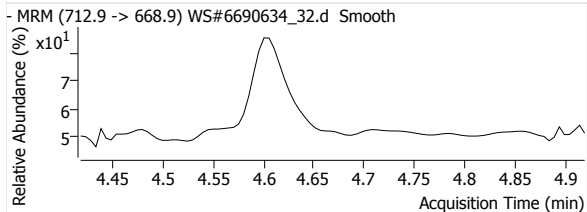
PFDaA 1



PFTrDA 1

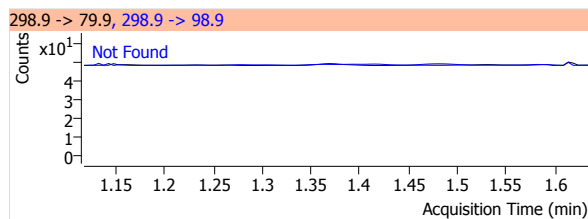
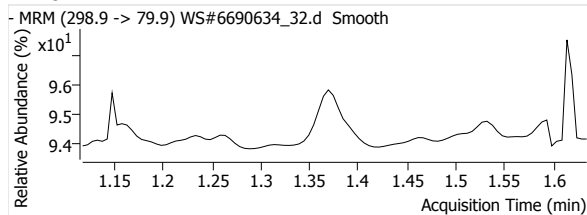


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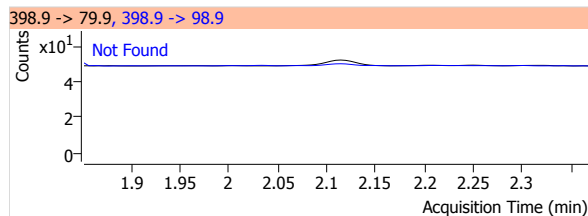
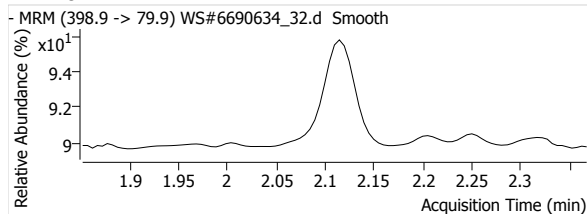


Quantitative Analysis Report

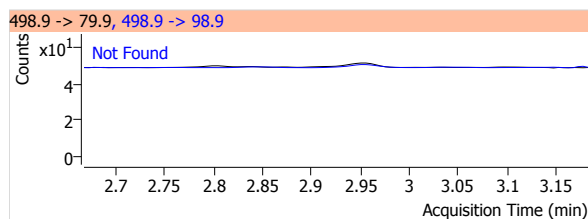
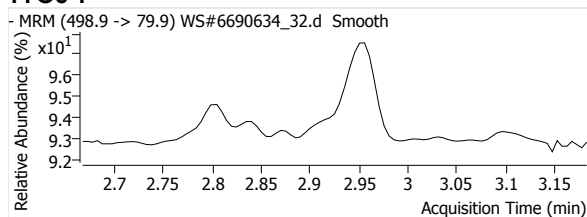
PFBS 1



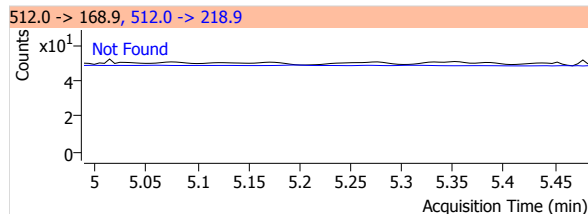
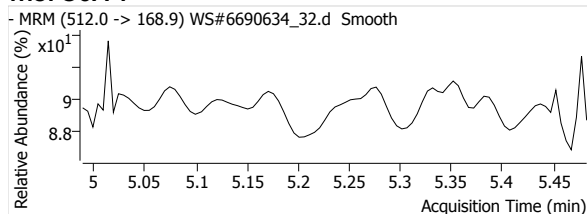
PFHxS 1



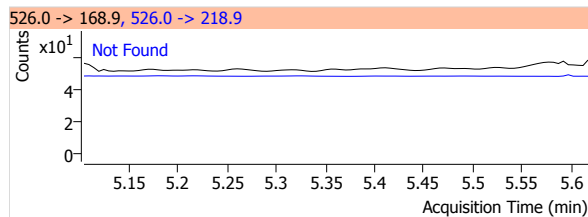
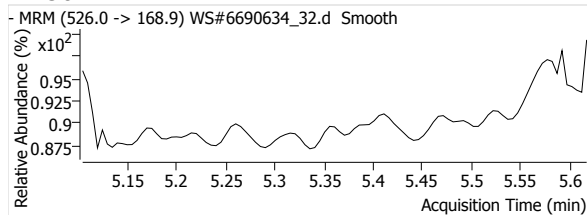
PFOS 1



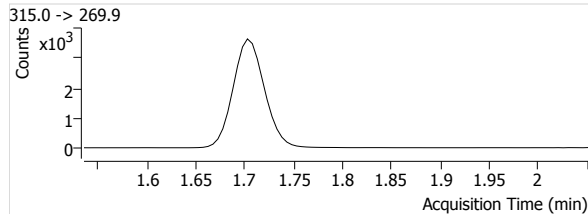
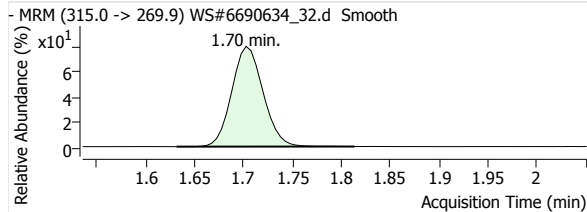
MeFOSA 1



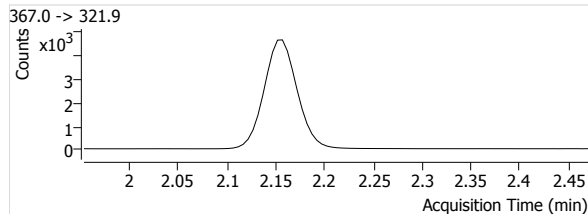
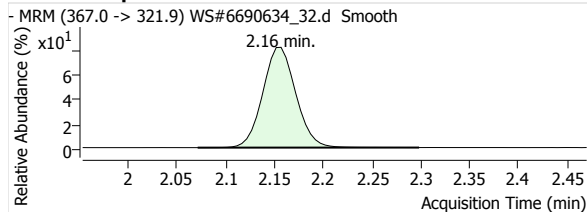
eFOSA 1



13C2-PFHxA

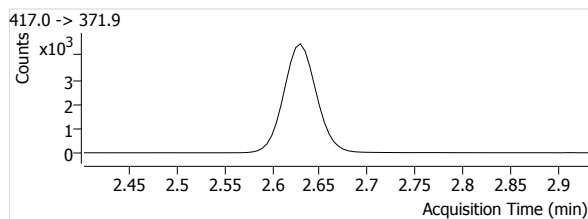
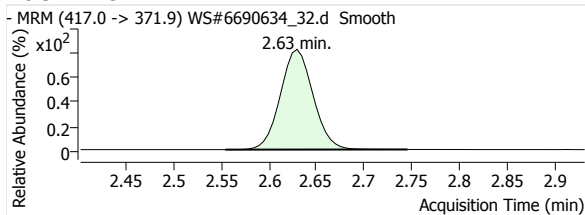


13C4-PFHpA

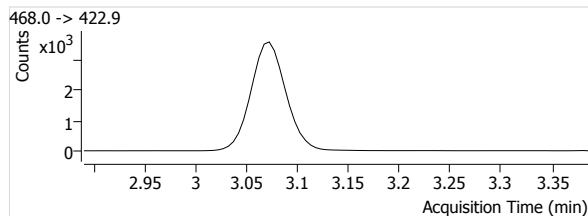
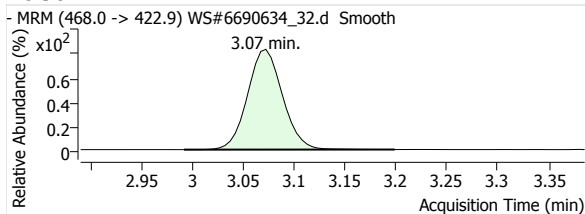


Quantitative Analysis Report

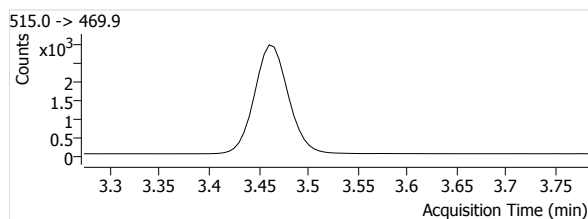
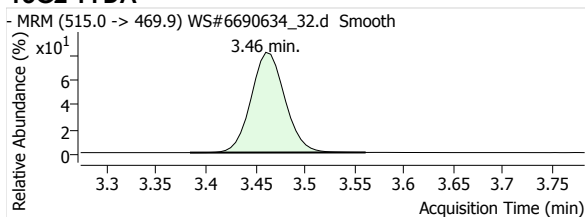
13C4-PFOA



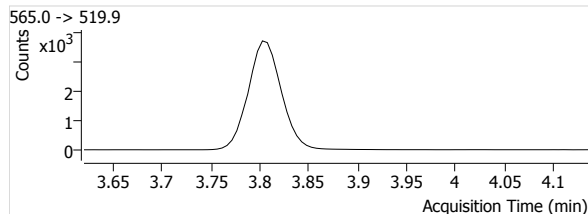
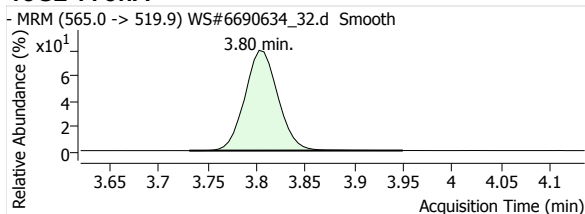
13C5-PFNA



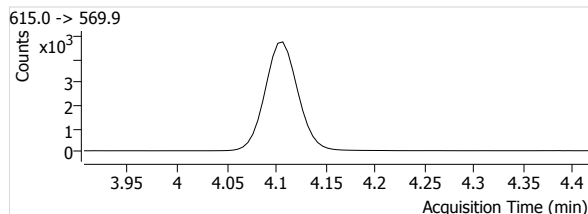
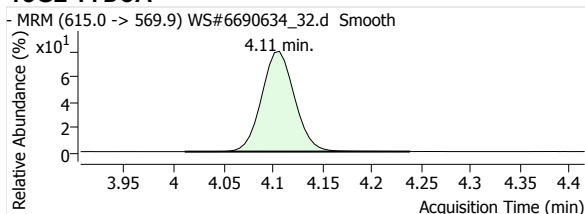
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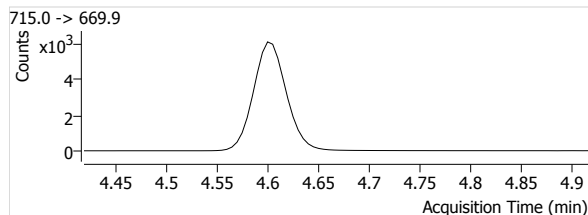
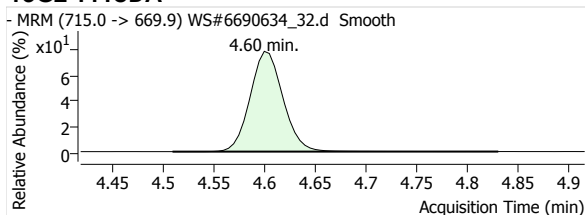
13C2-PFUnA



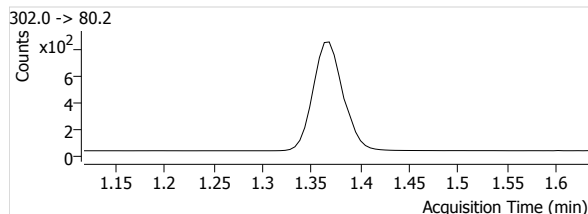
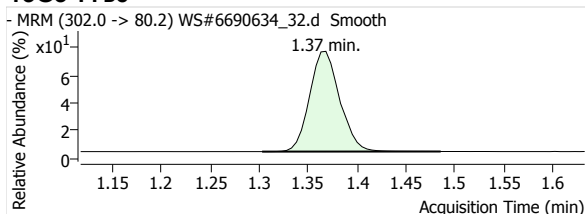
13C2-PFDoA



13C2-PFTeDA

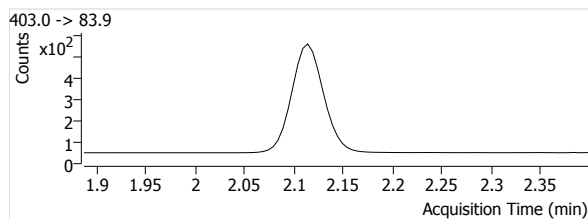
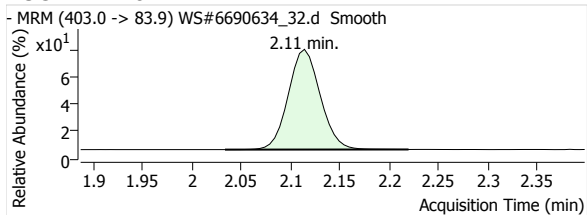


13C3-PFBS

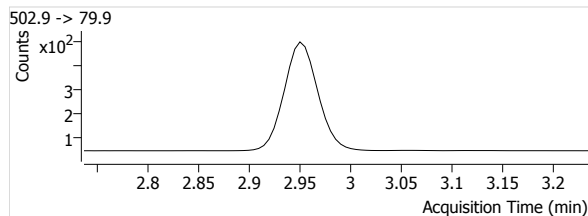
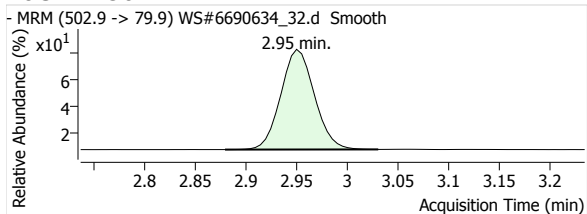


Quantitative Analysis Report

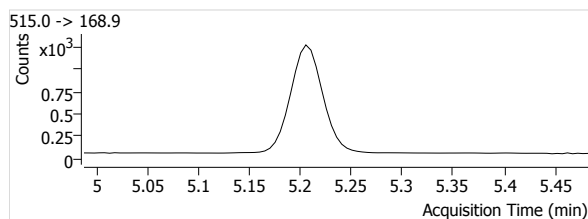
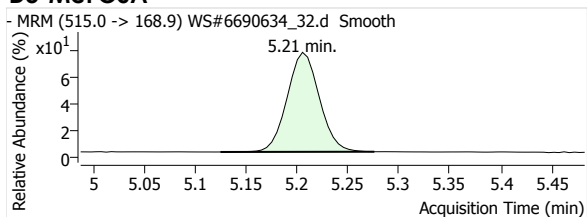
18O2-PFHxS



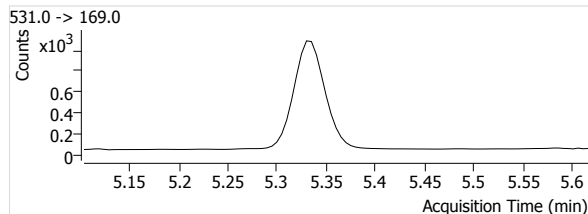
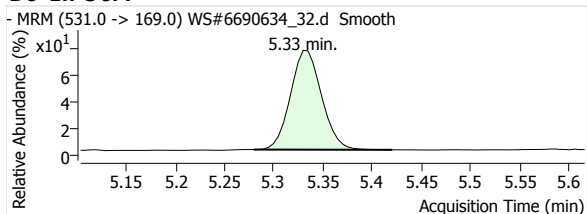
13C4-PFOS



D3-MeFOFA



D5-EtFOFA



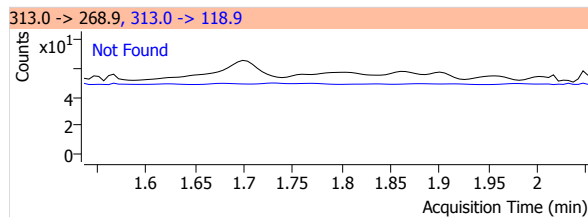
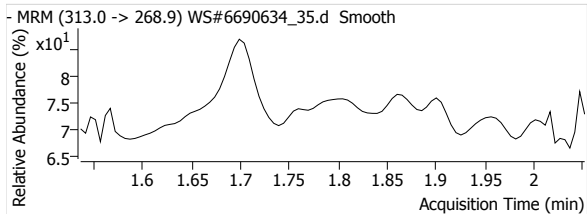
Quantitative Analysis Report

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bin

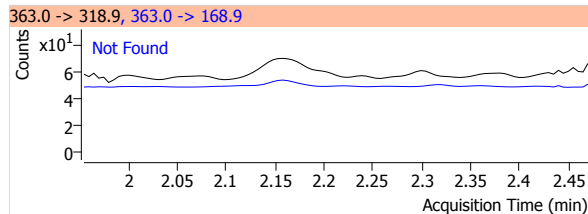
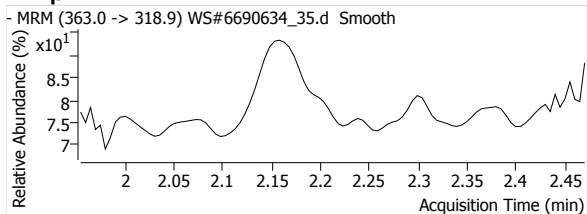
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Acq. Method File	PFAS.m	Position	P1-A8
Acq. Date-Time	2020/04/22 1:56:37 AM	Dil.	0.0
Comment	-		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHpA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	114.9772	--	8076	1.70	1622	--	--	--	--	--
13C4-PFHpA	µg/L	--	113.5437	--	10974	2.15	1145	--	--	--	--	--
13C4-PFOA	µg/L	--	108.0955	--	10415	2.63	1427	--	--	--	--	--
13C5-PFNA	µg/L	--	110.4839	--	8357	3.07	1870	--	--	--	--	--
13C2-PFDA	µg/L	--	109.8822	--	7183	3.46	845	--	--	--	--	--
13C2-PFUnA	µg/L	--	109.5875	--	8527	3.80	1217	--	--	--	--	--
13C2-PFDaA	µg/L	--	107.6223	--	10886	4.10	1522	--	--	--	--	--
13C2-PFTeDA	µg/L	--	108.6922	--	13630	4.60	2854	--	--	--	--	--
13C3-PFBS	µg/L	--	110.8879	--	1711	1.36	750	--	--	--	--	--
18O2-PFHxS	µg/L	--	110.6299	--	1124	2.11	840	--	--	--	--	--
13C4-PFOS	µg/L	--	112.0457	--	1079	2.95	619	--	--	--	--	--
D3-MeFOSA	µg/L	--	107.1575	--	2605	5.21	139	--	--	--	--	--
D5-EtFOSA	µg/L	--	108.1701	--	2264	5.33	149	--	--	--	--	--

PFHxA 1

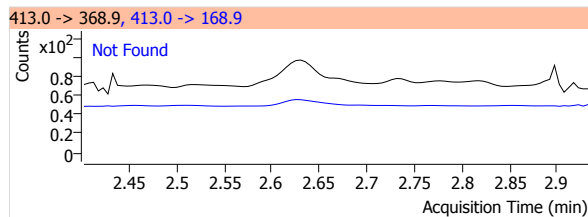
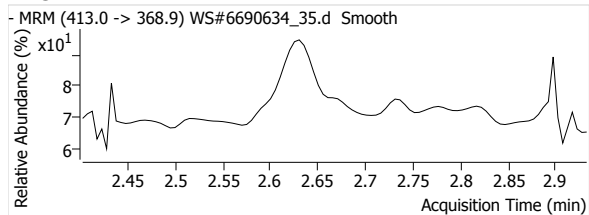


PFHpA 1

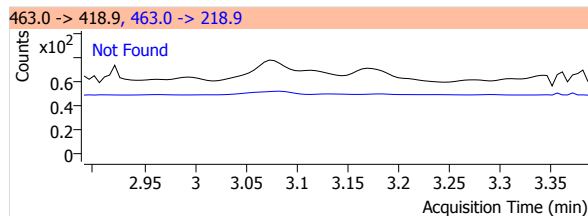
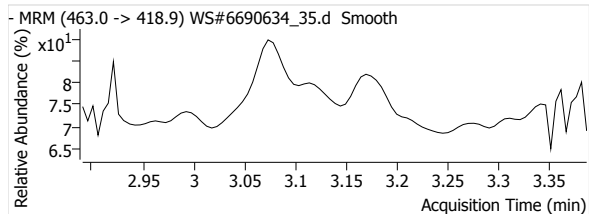


Quantitative Analysis Report

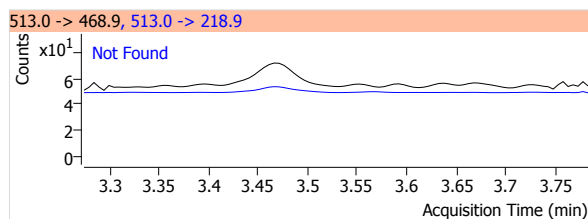
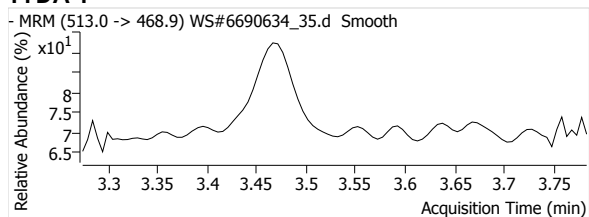
PFOA 1



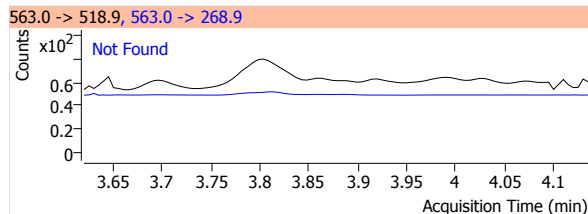
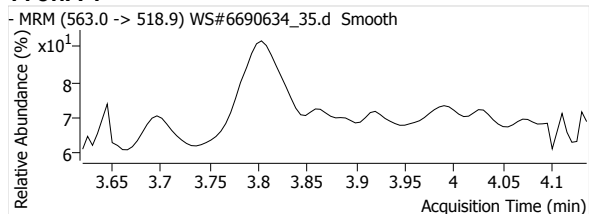
PFNA 1



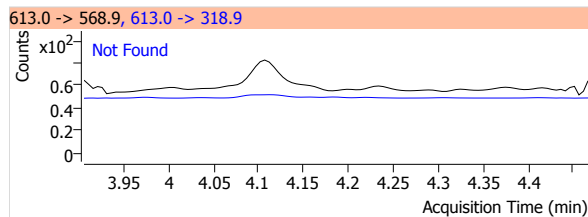
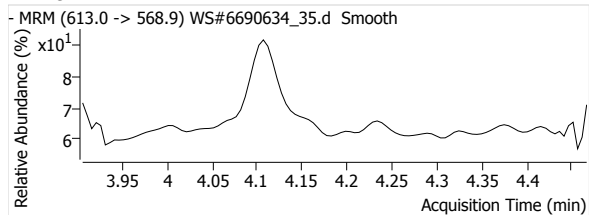
PFDA 1



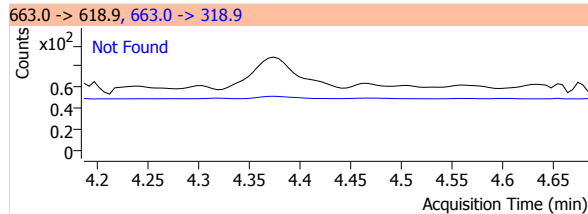
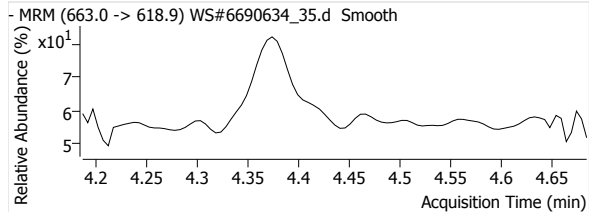
PFUnA 1



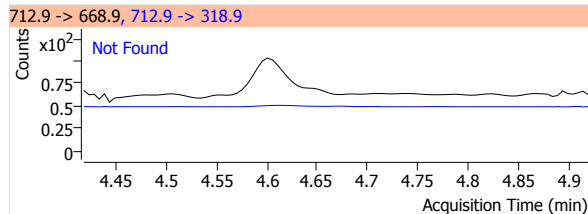
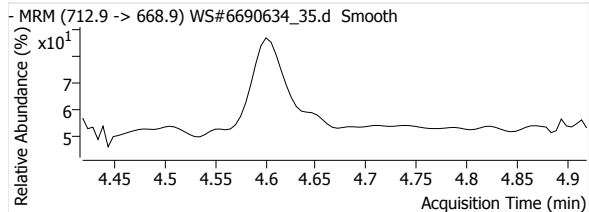
PFDoA 1



PFTrDA 1

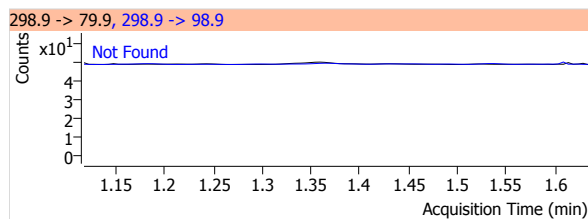
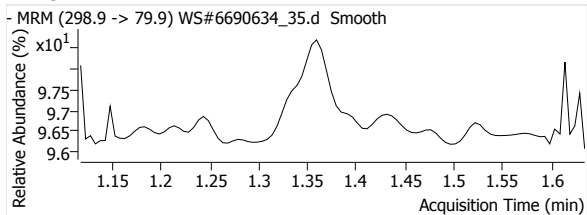


PFTeDA 1

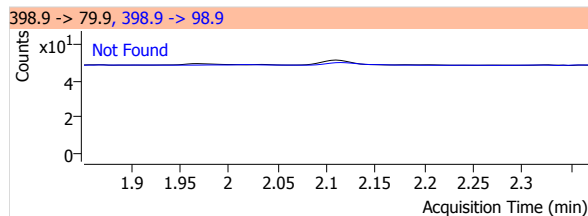
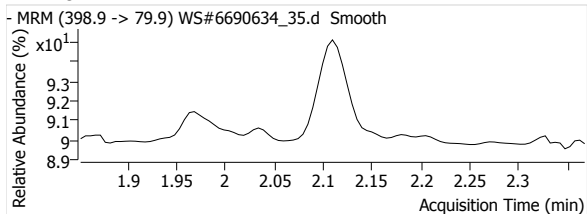


Quantitative Analysis Report

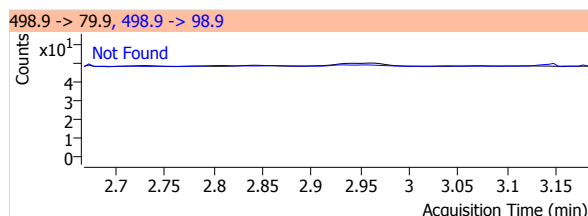
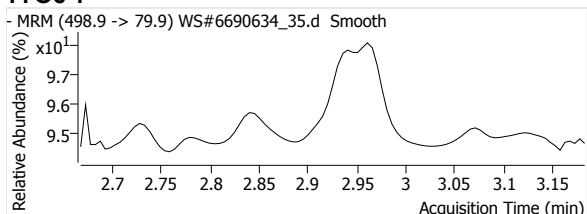
PFBS 1



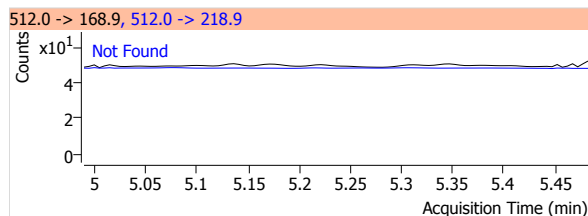
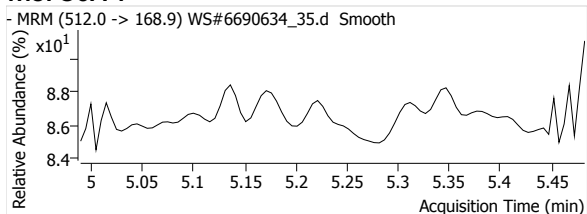
PFHxS 1



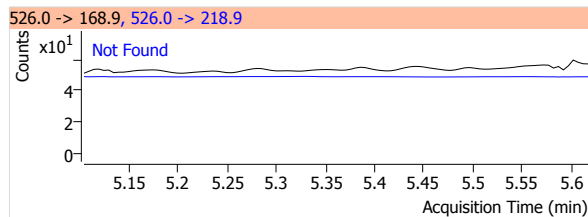
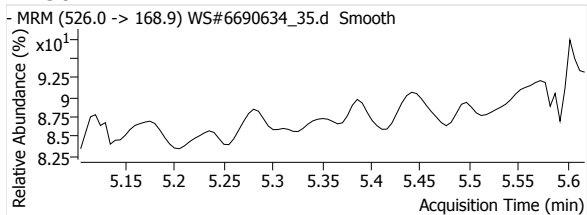
PFOS 1



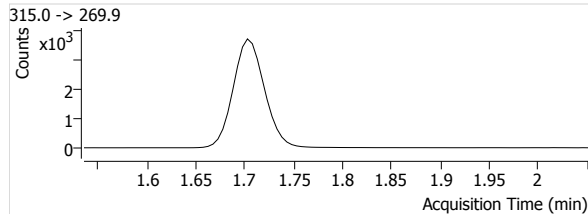
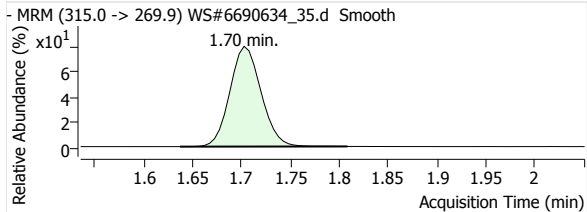
MeFOSA 1



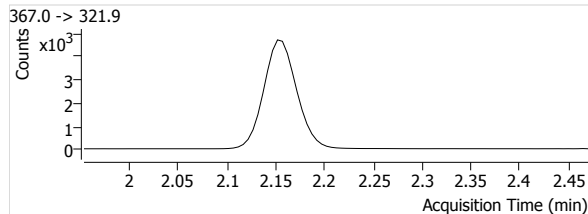
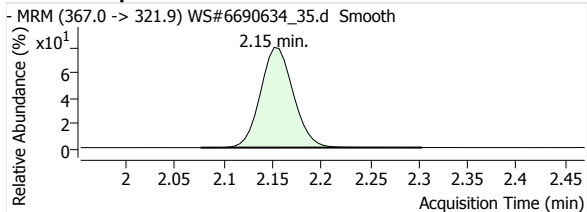
eFOSA 1



13C2-PFHxA

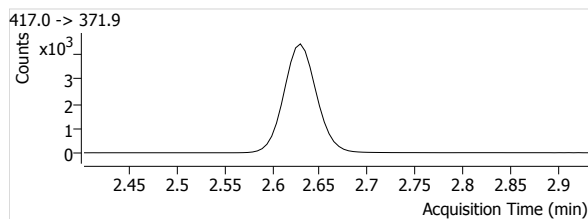
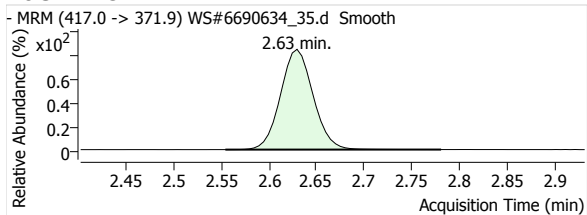


13C4-PFHpA

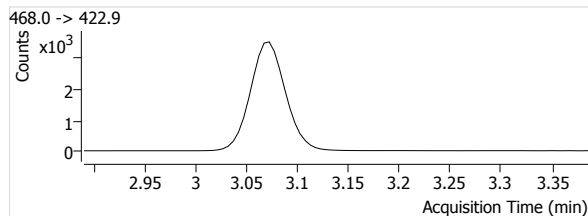
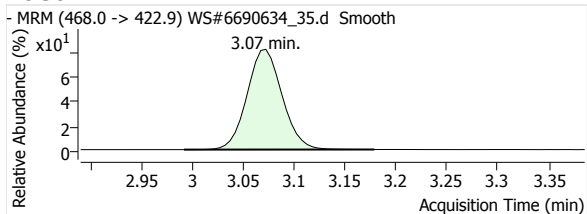


Quantitative Analysis Report

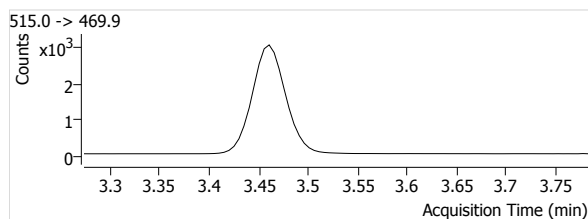
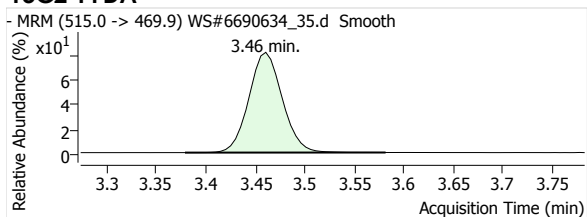
13C4-PFOA



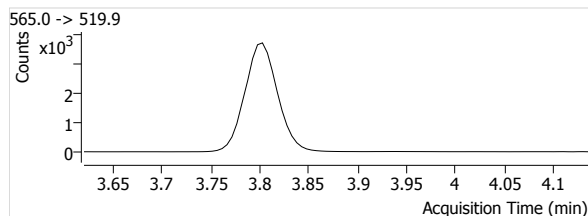
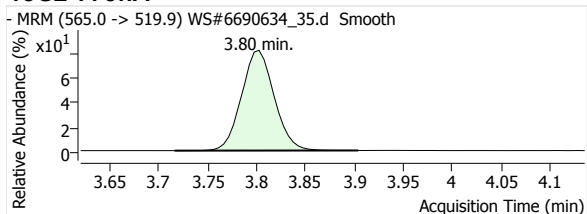
13C5-PFNA



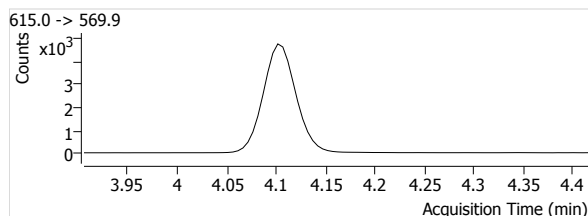
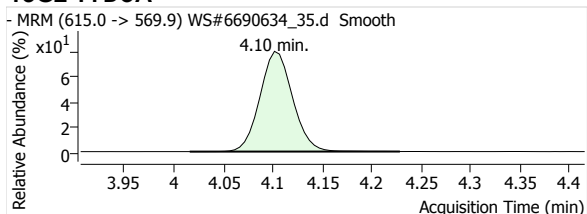
13C2-PFDA



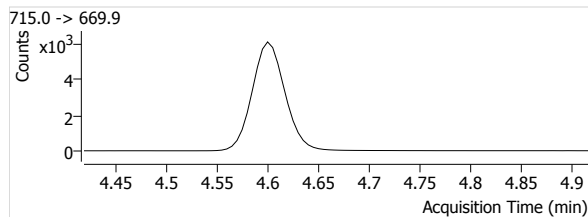
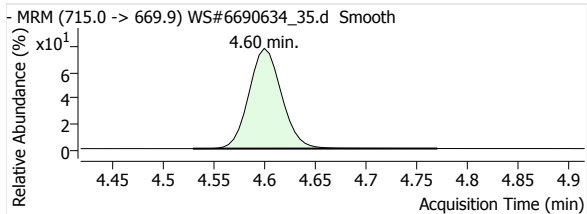
13C2-PFUnA



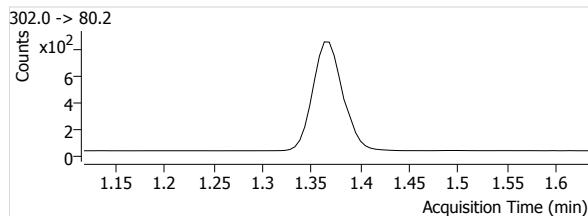
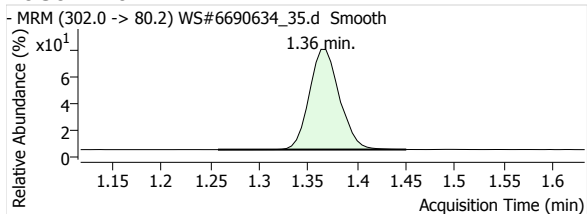
13C2-PFDoA



13C2-PFTeDA

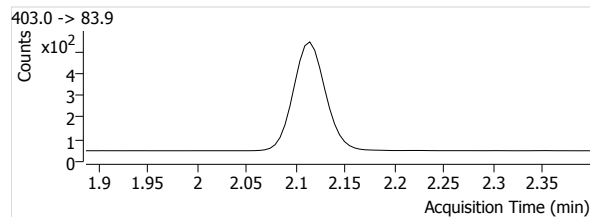
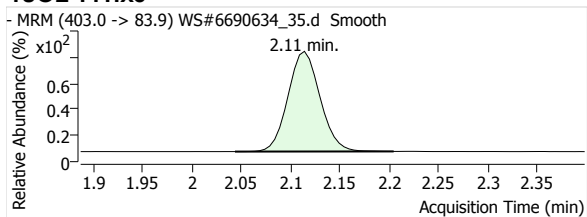


13C3-PFBS

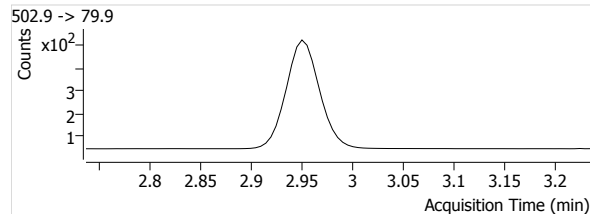
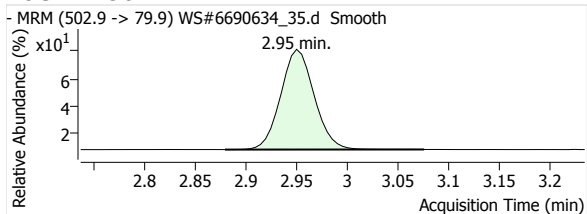


Quantitative Analysis Report

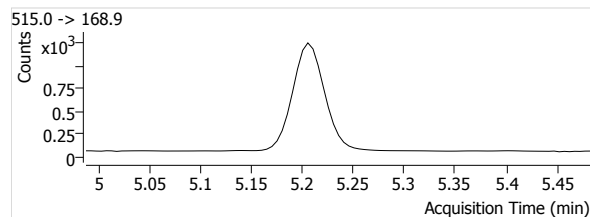
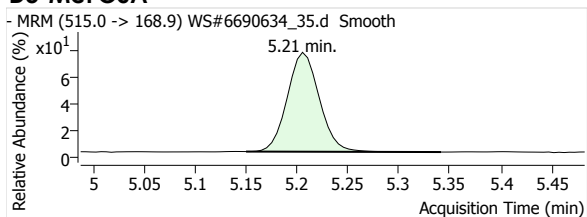
18O2-PFHxs



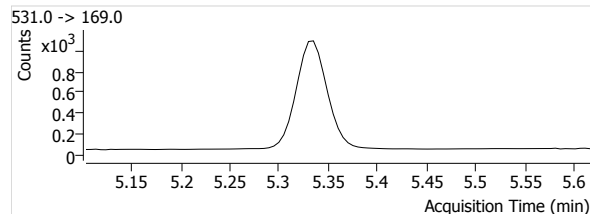
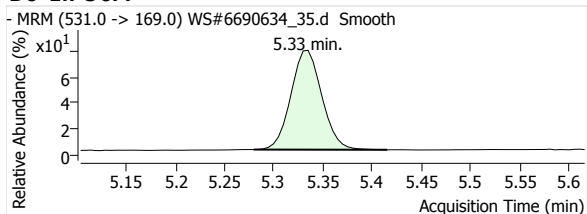
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



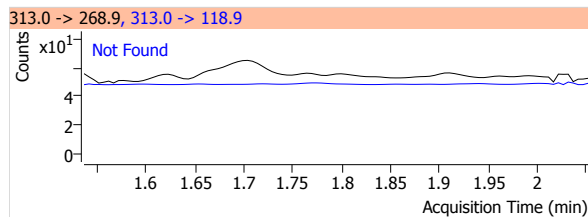
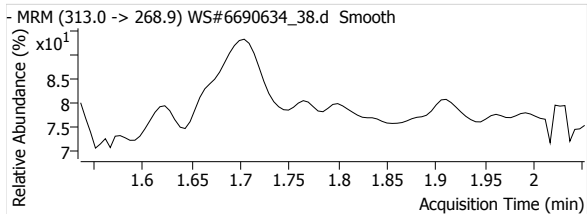
Quantitative Analysis Report

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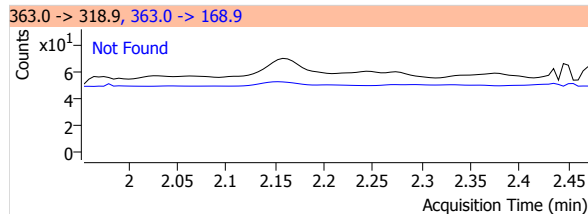
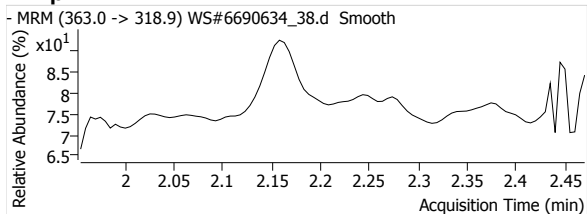
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Type	Sample	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-A8
Acq. Date-Time	2020/04/22 2:17:29 AM	Dil.	0.0
Comment	-		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHpA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	113.6674	--	7984	1.70	882	--	--	--	--	--
13C4-PFHpA	µg/L	--	111.5365	--	10780	2.15	1852	--	--	--	--	--
13C4-PFOA	µg/L	--	108.7286	--	10476	2.62	1442	--	--	--	--	--
13C5-PFNA	µg/L	--	110.4839	--	8357	3.07	1493	--	--	--	--	--
13C2-PFDA	µg/L	--	107.1287	--	7003	3.46	1385	--	--	--	--	--
13C2-PFUnA	µg/L	--	109.6132	--	8529	3.80	1870	--	--	--	--	--
13C2-PFDaA	µg/L	--	107.2269	--	10846	4.10	1439	--	--	--	--	--
13C2-PFTeDA	µg/L	--	107.3206	--	13458	4.60	2315	--	--	--	--	--
13C3-PFBS	µg/L	--	109.2029	--	1685	1.36	633	--	--	--	--	--
18O2-PFHxS	µg/L	--	110.6299	--	1124	2.11	303	--	--	--	--	--
13C4-PFOS	µg/L	--	111.4226	--	1073	2.94	518	--	--	--	--	--
D3-MeFOSA	µg/L	--	109.2143	--	2655	5.20	142	--	--	--	--	--
D5-EtFOSA	µg/L	--	106.9279	--	2238	5.33	129	--	--	--	--	--

PFHxA 1

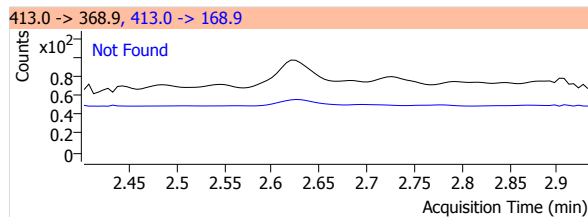
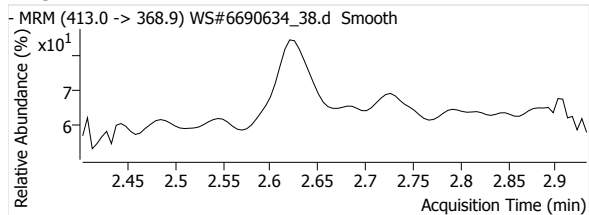


PFHpA 1

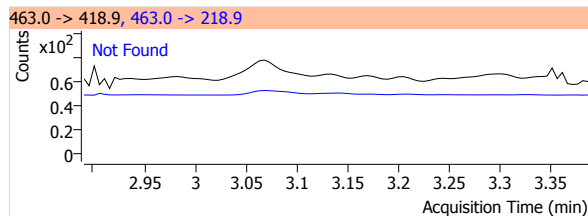
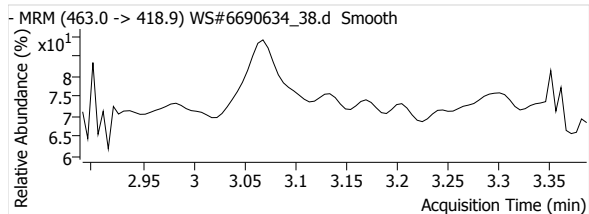


Quantitative Analysis Report

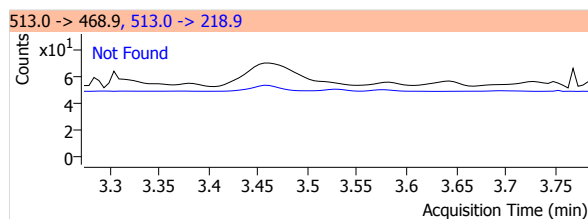
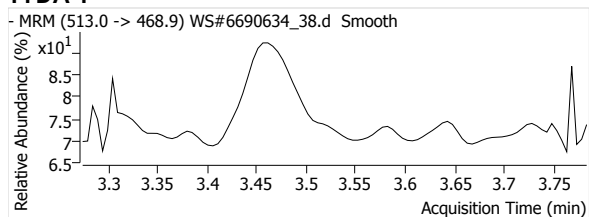
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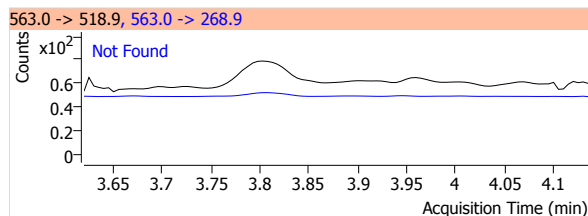
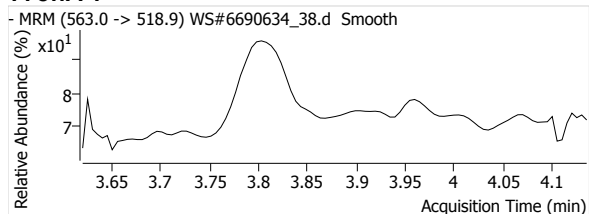
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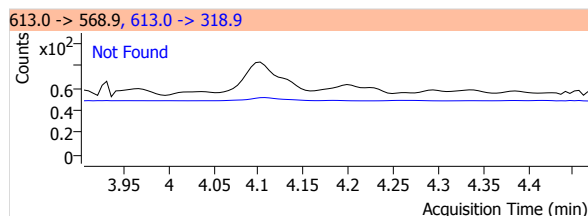
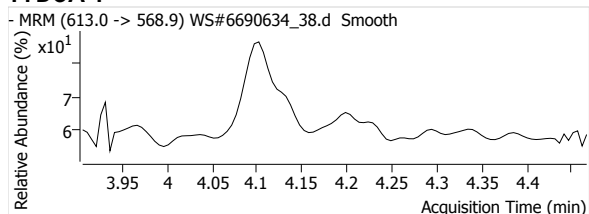
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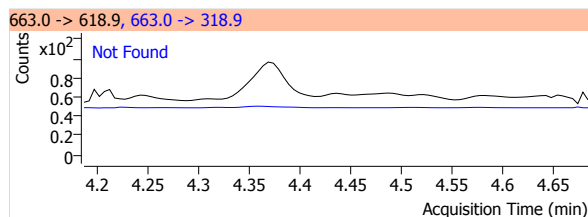
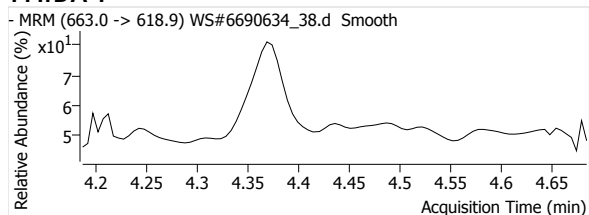
PFUnA 1



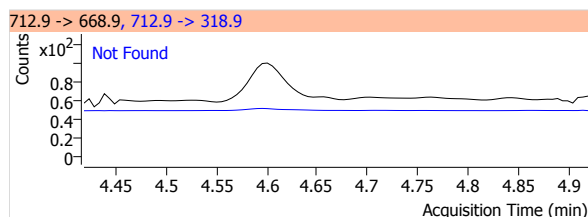
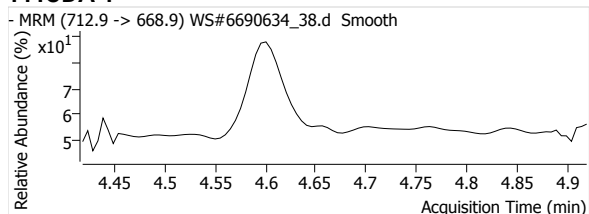
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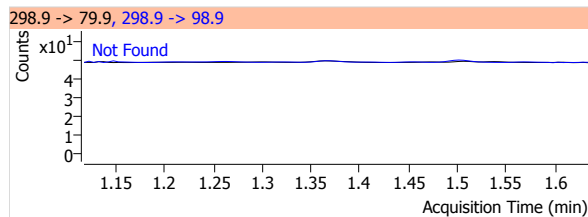
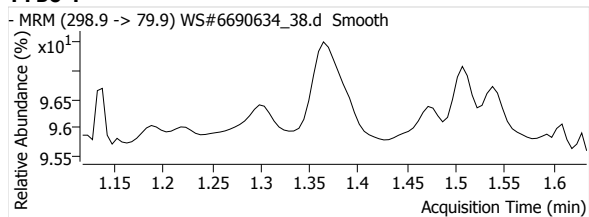


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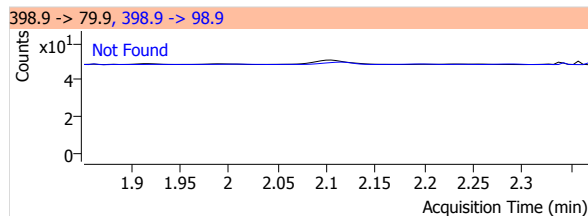
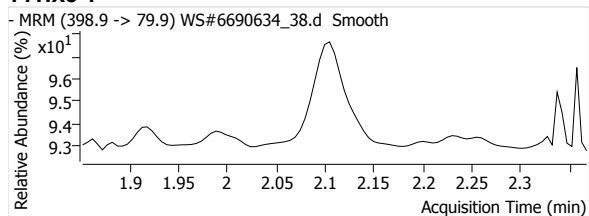


Quantitative Analysis Report

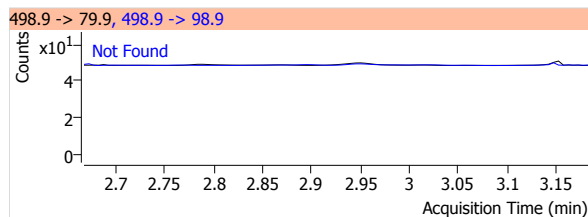
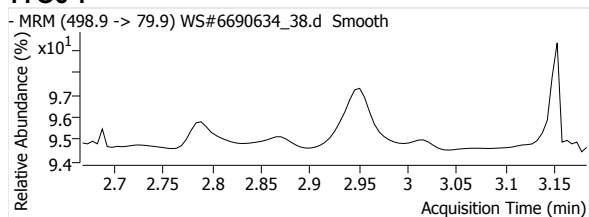
PFBS 1



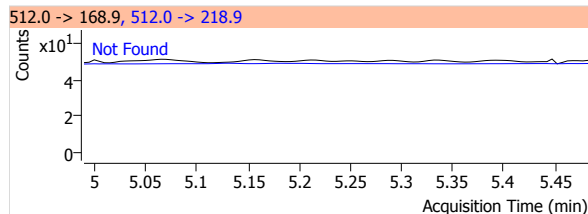
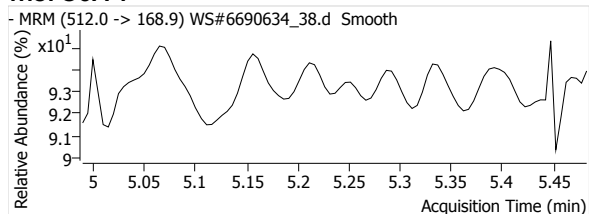
PFHxA 1



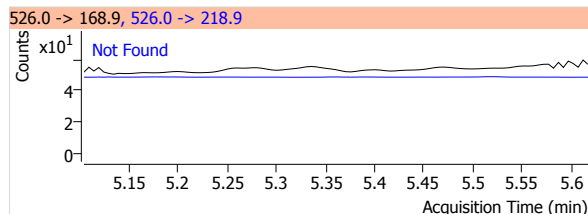
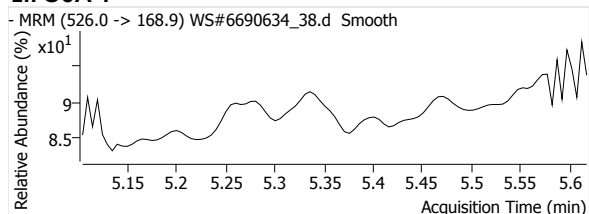
PFOS 1



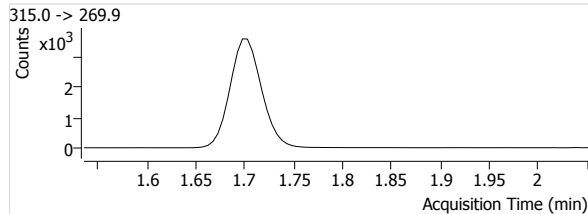
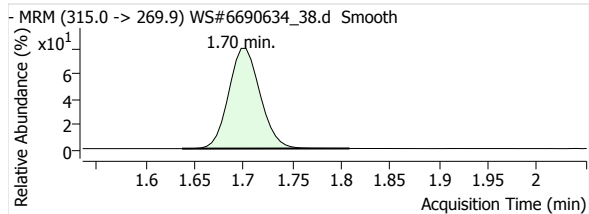
MeFOSA 1



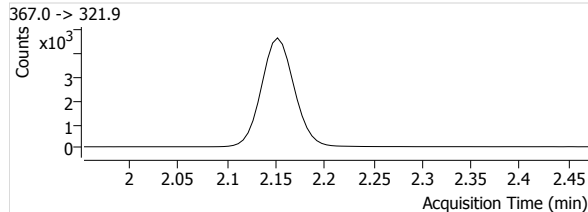
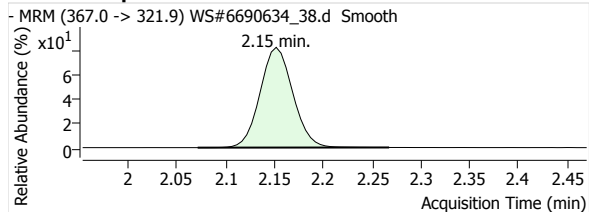
eFOSA 1



13C2-PFHxA

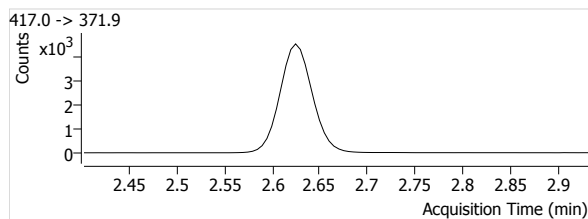
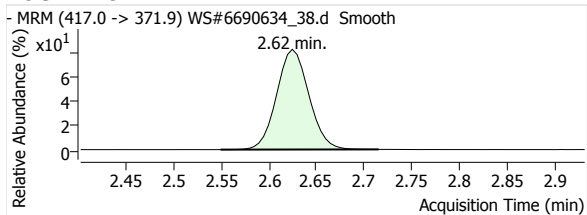


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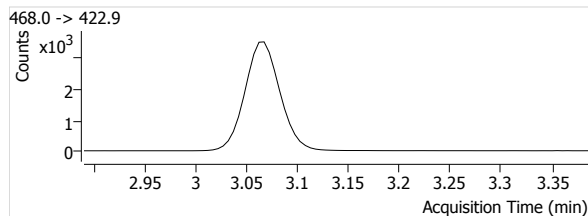
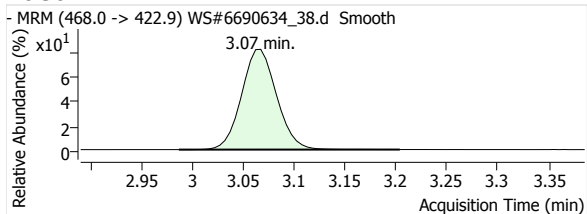


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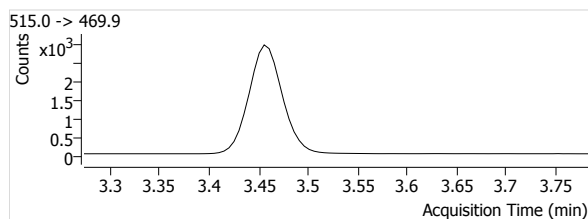
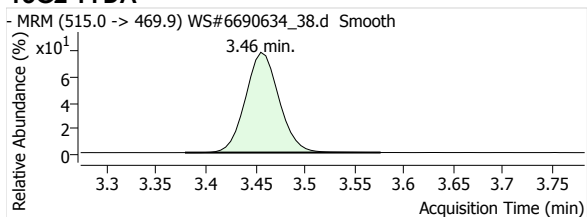
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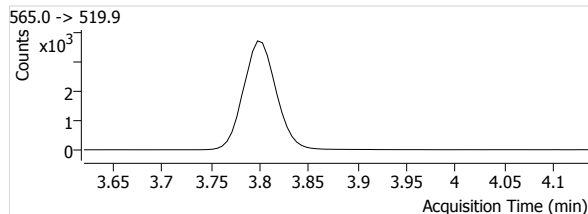
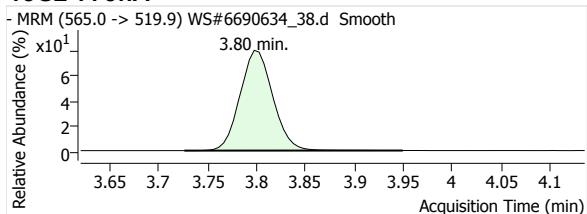
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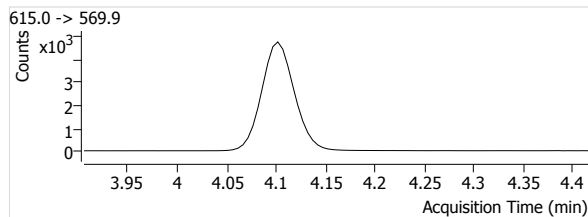
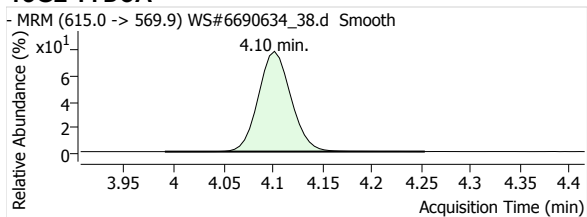
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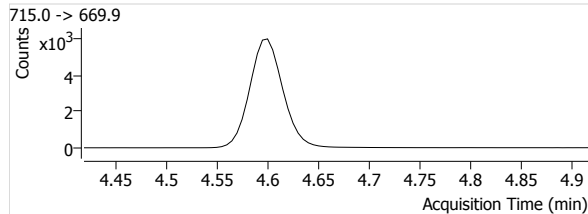
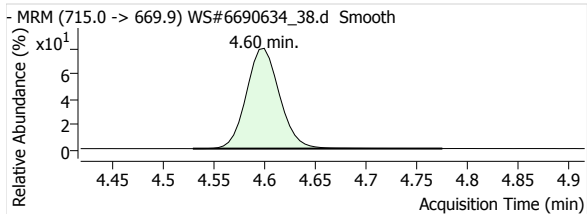
13C2-PFUnA



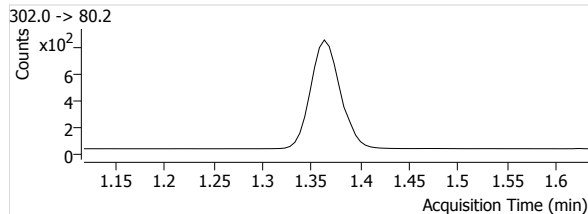
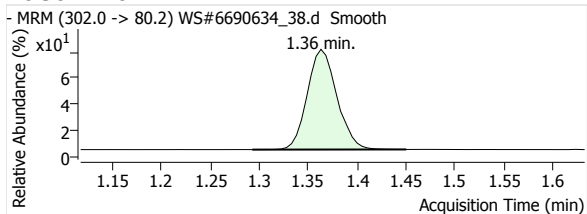
13C2-PFDoA



13C2-PFTeDA

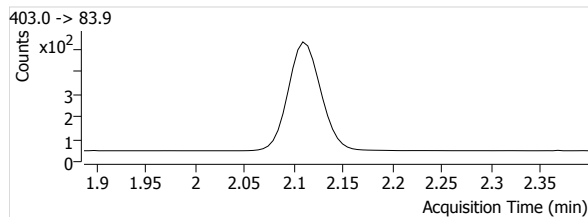
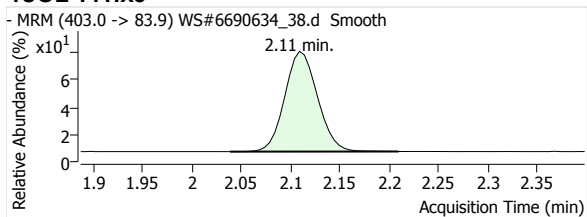


13C3-PFBS

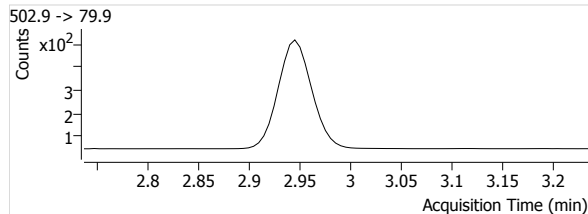
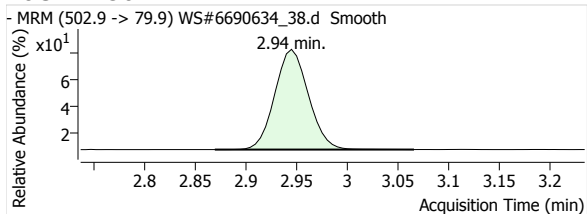


Quantitative Analysis Report

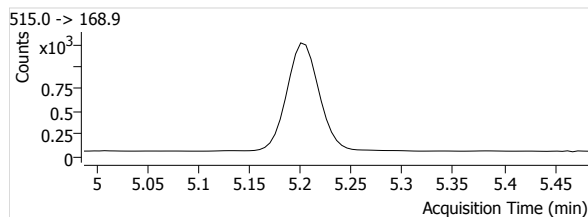
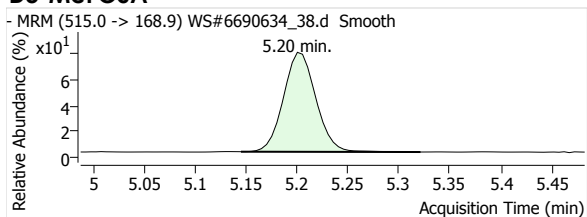
18O2-PFHxs



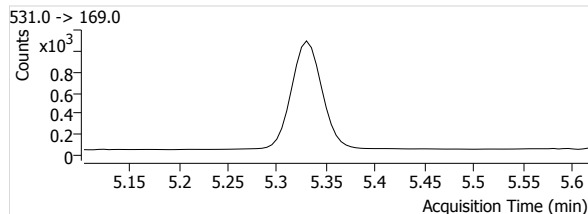
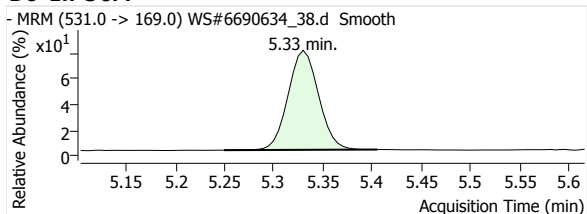
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



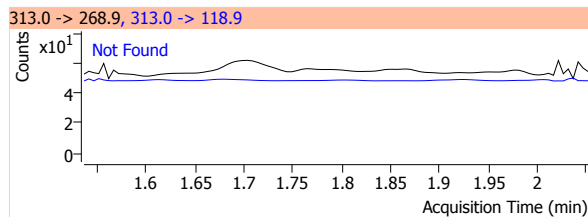
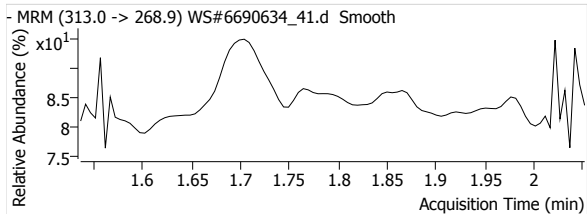
Quantitative Analysis Report

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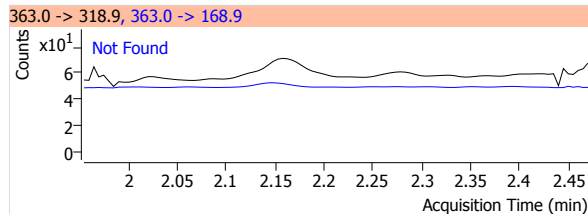
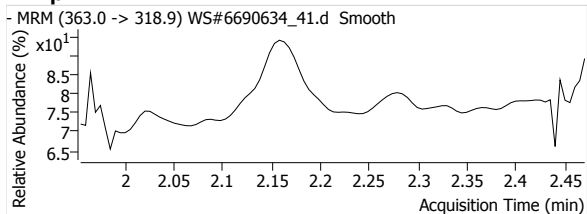
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Type	Sample	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-A8
Acq. Date-Time	2020/04/22 2:38:18 AM	Dil.	0.0
Comment	-		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHpA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	114.9487	--	8074	1.70	1125	--	--	--	--	--
13C4-PFHpA	µg/L	--	112.7988	--	10902	2.15	1632	--	--	--	--	--
13C4-PFOA	µg/L	--	108.5937	--	10463	2.63	1433	--	--	--	--	--
13C5-PFNA	µg/L	--	112.2686	--	8492	3.07	1285	--	--	--	--	--
13C2-PFDA	µg/L	--	110.6930	--	7236	3.46	2068	--	--	--	--	--
13C2-PFUnA	µg/L	--	109.8702	--	8549	3.80	1392	--	--	--	--	--
13C2-PFDaA	µg/L	--	108.3638	--	10961	4.10	1070	--	--	--	--	--
13C2-PFTeDA	µg/L	--	110.0797	--	13804	4.60	2502	--	--	--	--	--
13C3-PFBS	µg/L	--	110.9527	--	1712	1.36	1086	--	--	--	--	--
18O2-PFHxS	µg/L	--	112.1063	--	1139	2.11	675	--	--	--	--	--
13C4-PFOS	µg/L	--	105.6075	--	1017	2.94	698	--	--	--	--	--
D3-MeFOSA	µg/L	--	107.8568	--	2622	5.21	214	--	--	--	--	--
D5-EtFOSA	µg/L	--	109.2690	--	2287	5.33	131	--	--	--	--	--

PFHxA 1

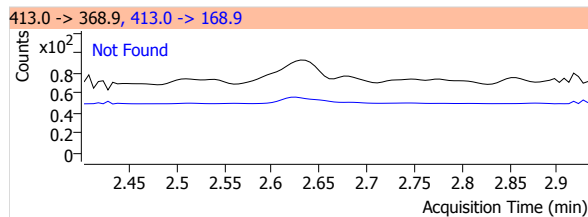
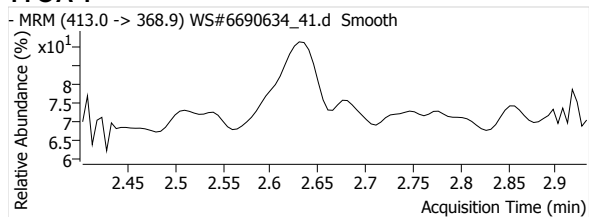


PFHpA 1

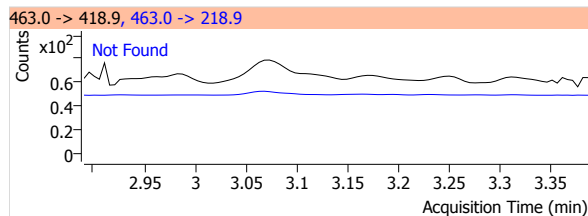
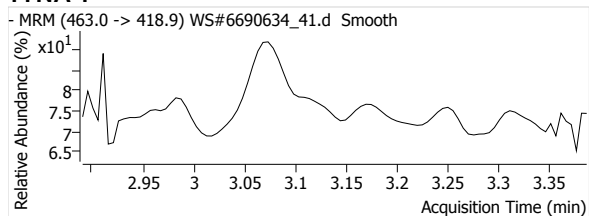


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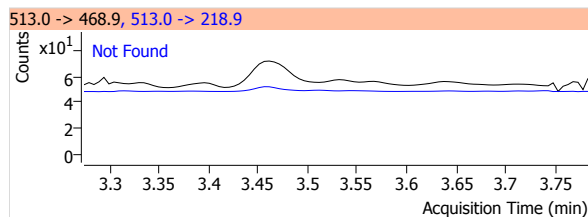
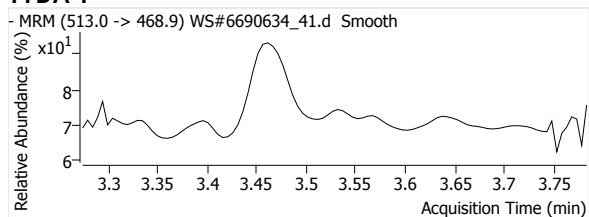
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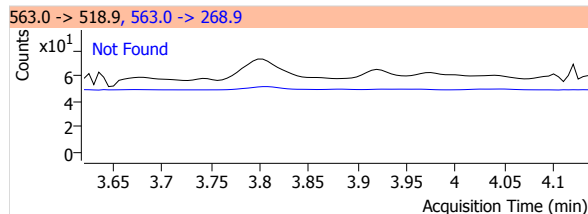
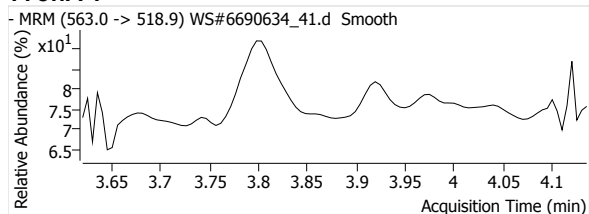
PFNA 1



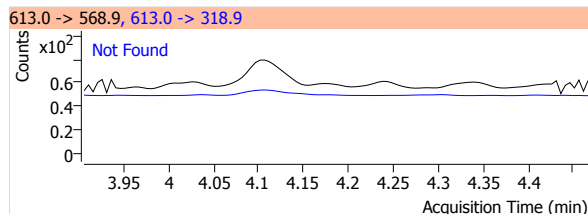
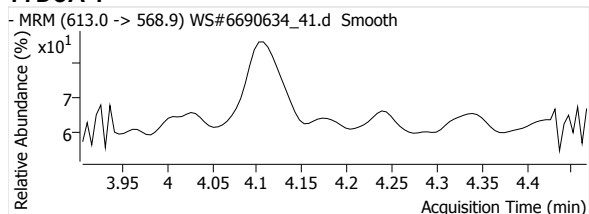
PFDA 1



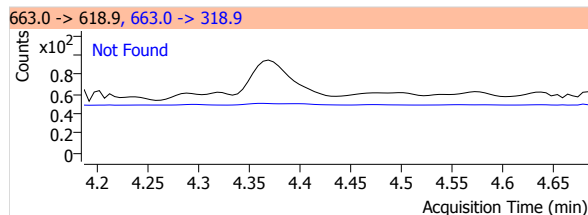
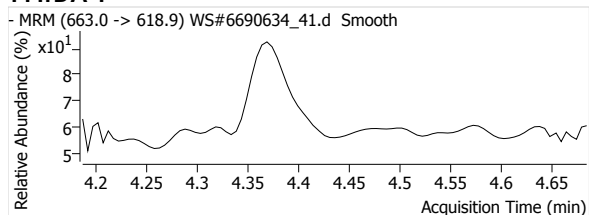
PFUnA 1



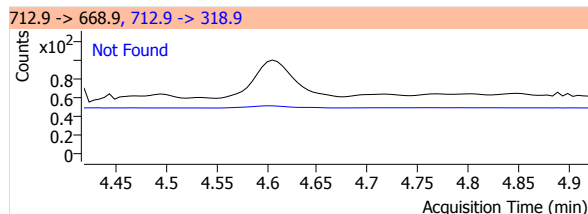
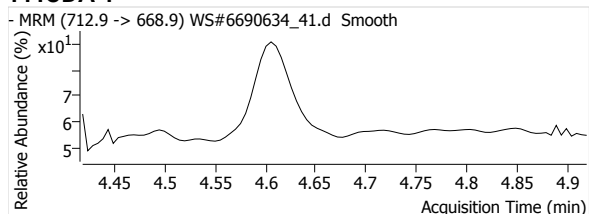
PFDoA 1



PFTrDA 1

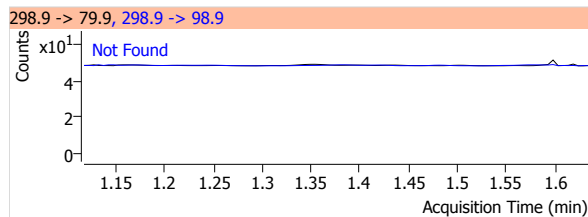
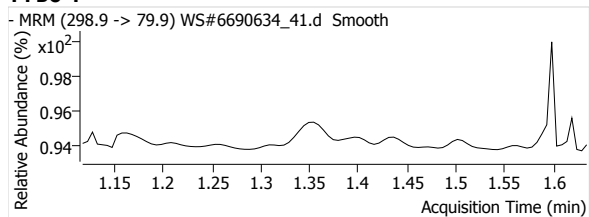


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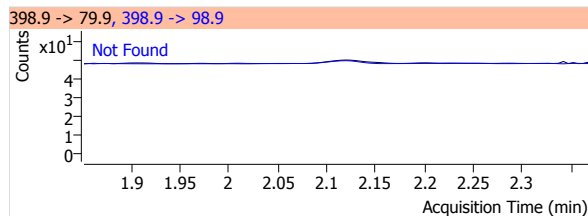
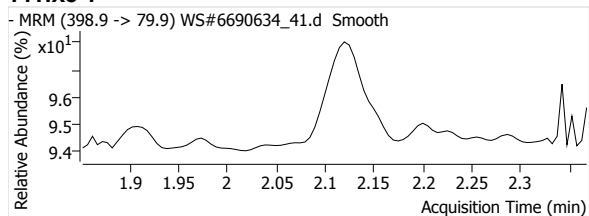


Quantitative Analysis Report

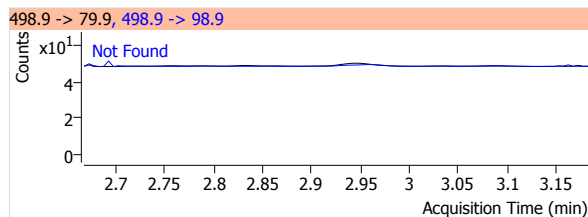
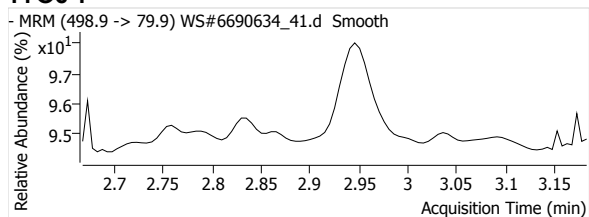
PFBS 1



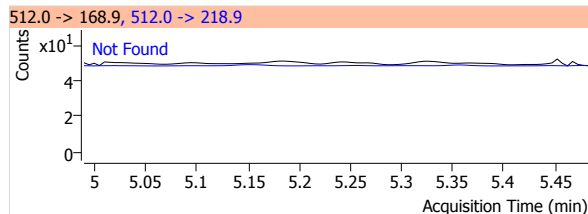
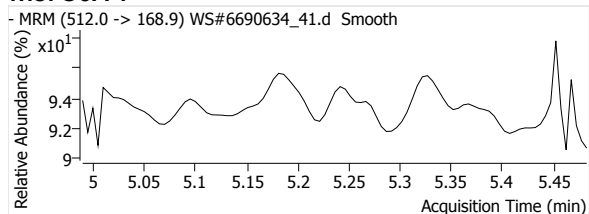
PFHxS 1



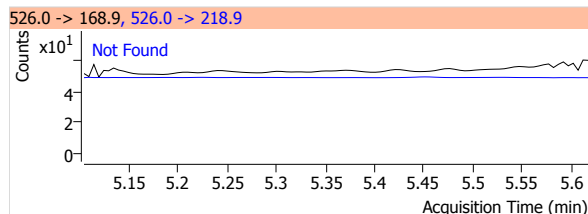
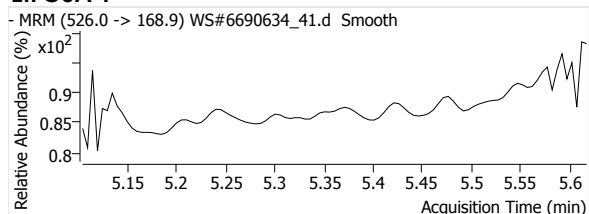
PFOS 1



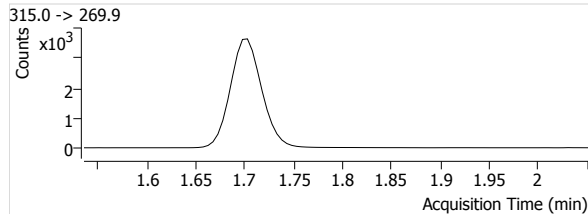
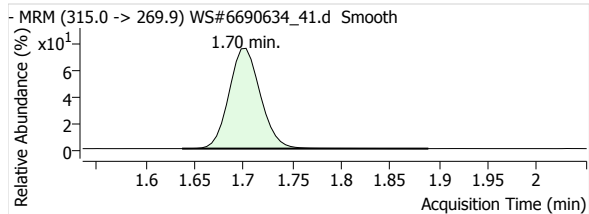
MeFOSA 1



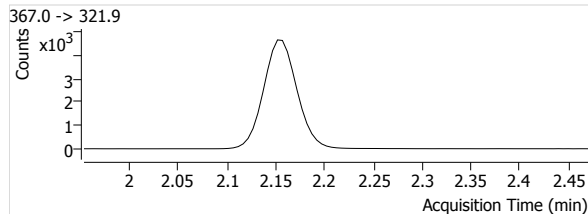
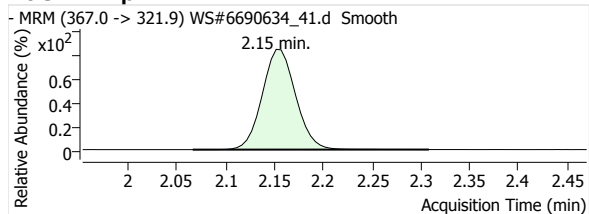
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13C2-PFHxA

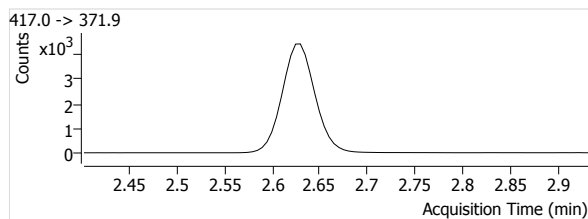
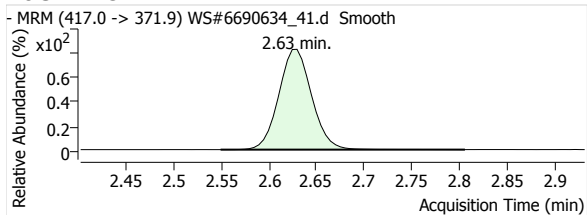


13C4-PFHpA

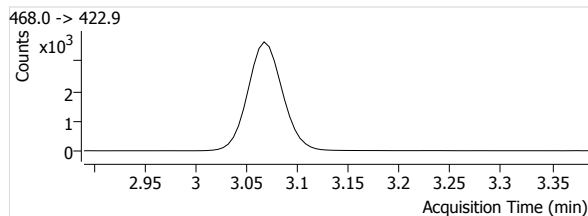
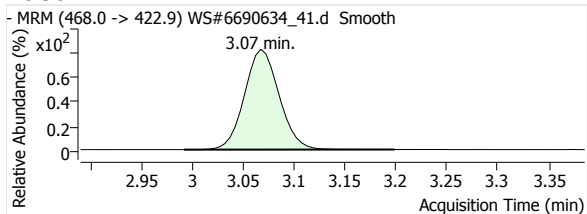


Quantitative Analysis Report

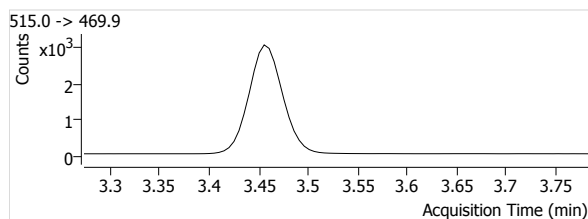
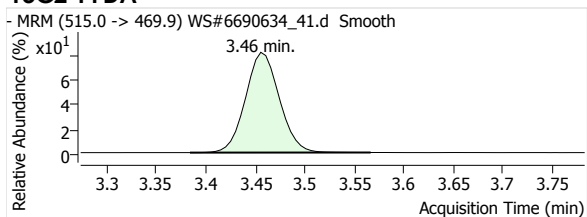
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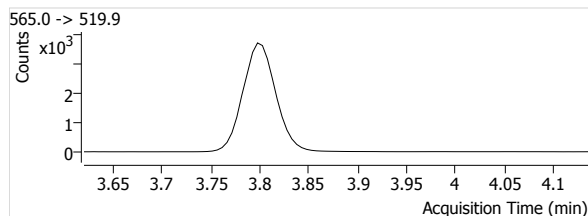
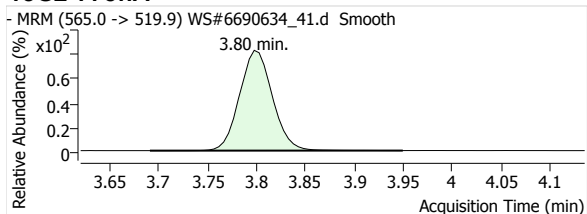
13C5-PFNA



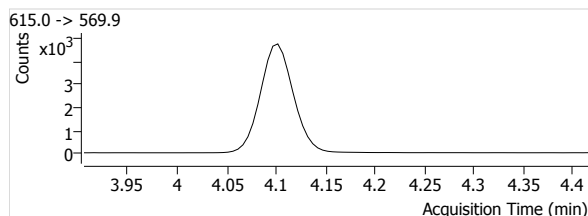
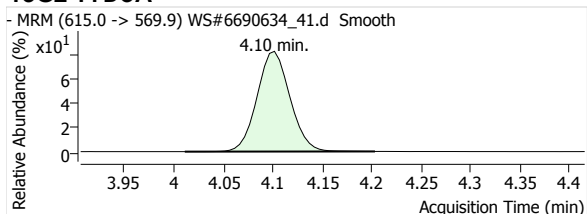
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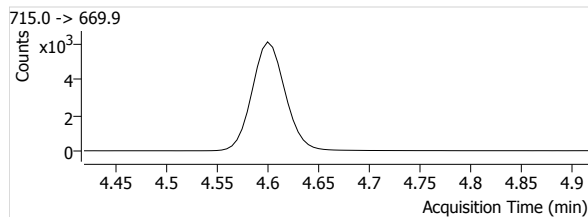
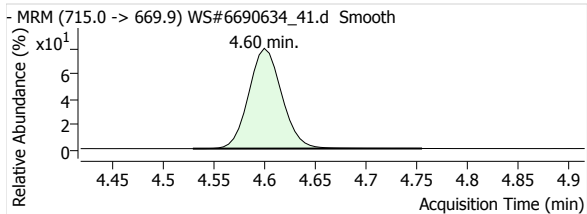
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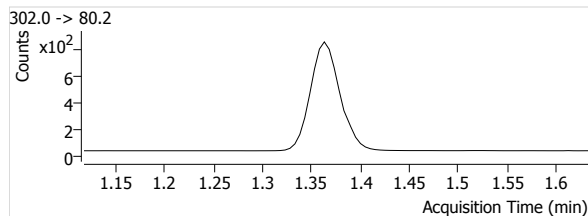
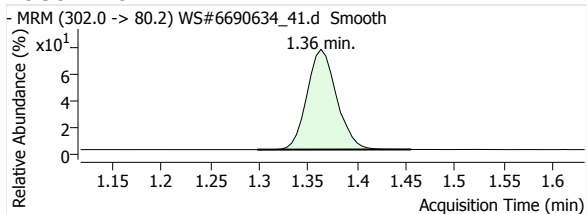
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13C2-PFTeDA

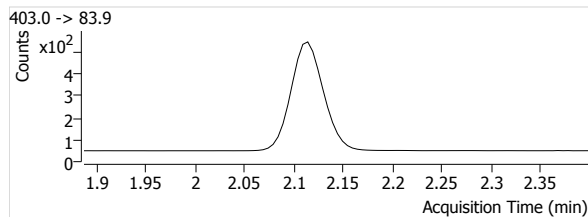
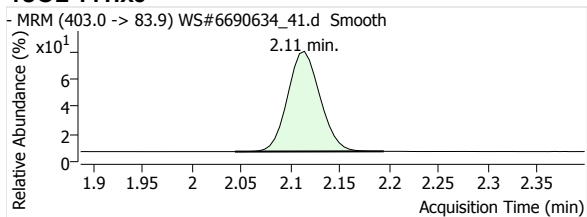


13C3-PFBS

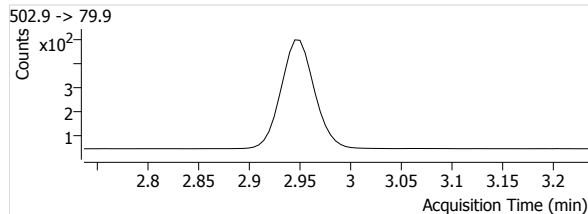
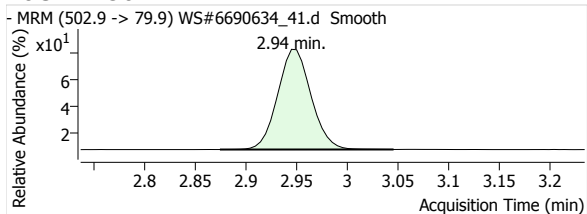


Quantitative Analysis Report

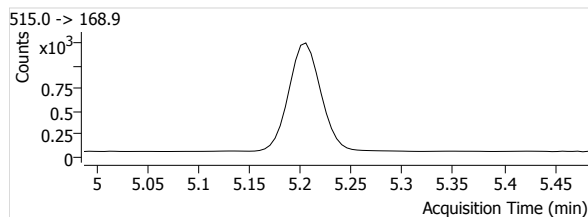
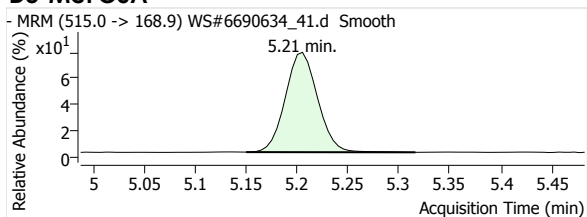
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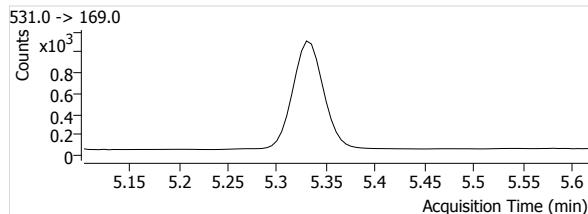
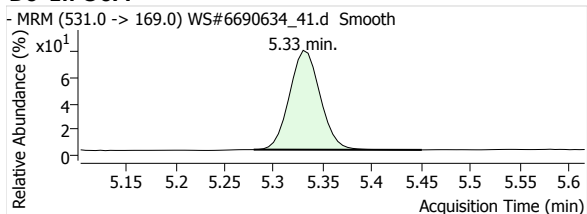
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

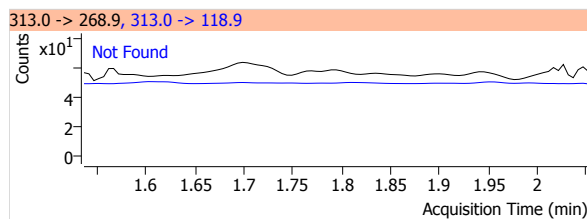
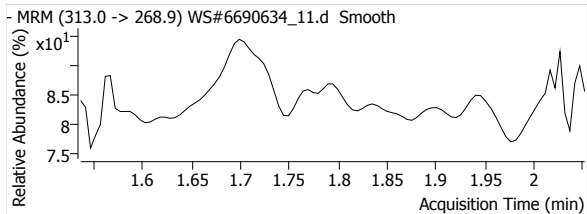
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Sample Name 6690634:BLANK
Type Sample
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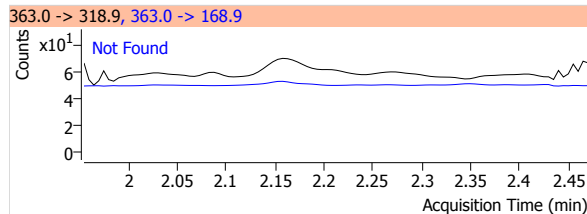
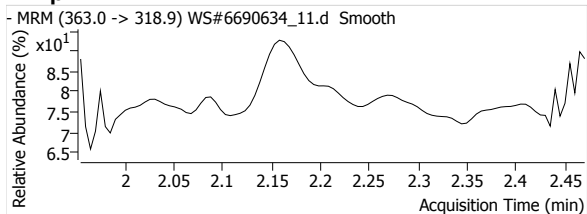
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Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHpA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	101.7796	--	7149	1.70	994	--	--	--	--	--
13C4-PFHpA	µg/L	--	100.5070	--	9714	2.16	736	--	--	--	--	--
13C4-PFOA	µg/L	--	96.6476	--	9312	2.63	1063	--	--	--	--	--
13C5-PFNA	µg/L	--	96.6023	--	7307	3.08	1437	--	--	--	--	--
13C2-PFDA	µg/L	--	91.0662	--	5953	3.47	1515	--	--	--	--	--
13C2-PFUnA	µg/L	--	88.7161	--	6903	3.81	1886	--	--	--	--	--
13C2-PFDaA	µg/L	--	84.5872	--	8556	4.11	1234	--	--	--	--	--
13C2-PFTeDA	µg/L	--	85.4466	--	10715	4.60	3298	--	--	--	--	--
13C3-PFBS	µg/L	--	97.2780	--	1501	1.36	534	--	--	--	--	--
18O2-PFHxS	µg/L	--	102.5591	--	1042	2.11	664	--	--	--	--	--
13C4-PFOS	µg/L	--	90.4465	--	871	2.95	415	--	--	--	--	--
D3-MeFOSA	µg/L	--	69.4364	--	1688	5.21	116	--	--	--	--	--
D5-EtFOSA	µg/L	--	75.4897	--	1580	5.33	127	--	--	--	--	--

PFHxA 1

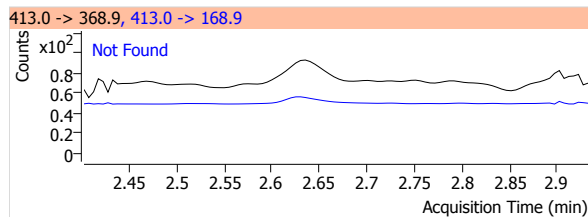
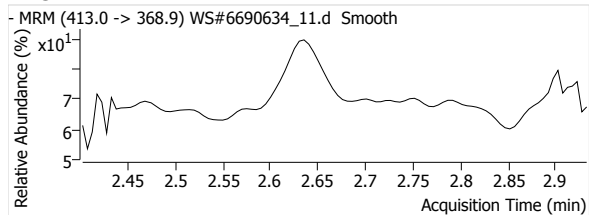


PFHpA 1

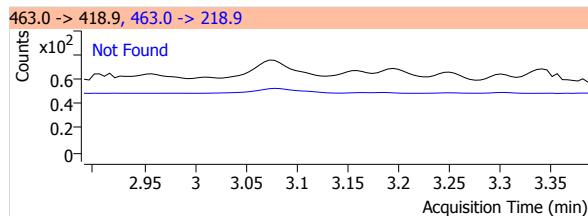
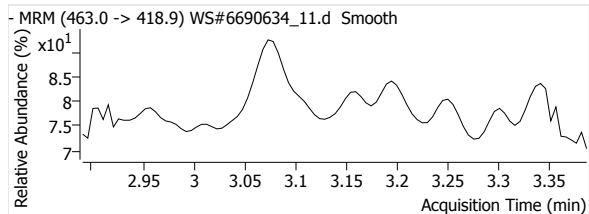


Quantitative Analysis Report

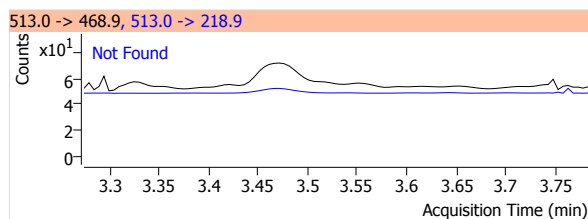
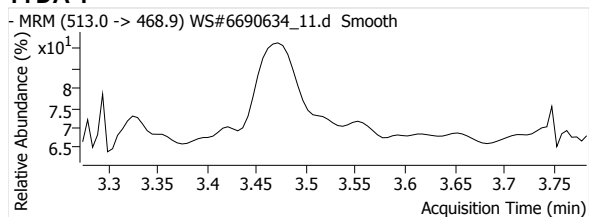
PFOA 1



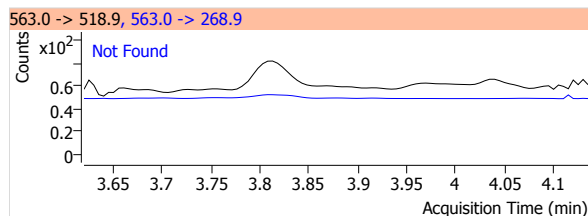
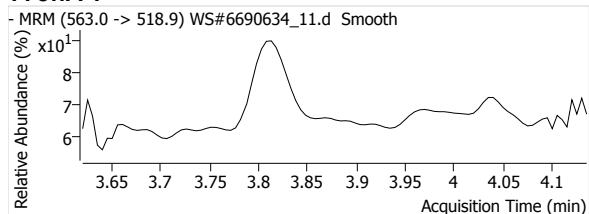
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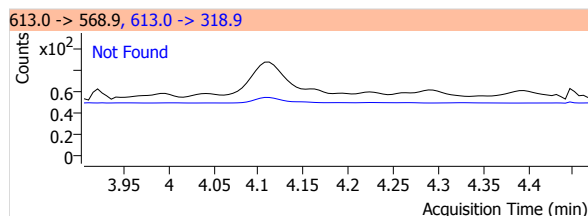
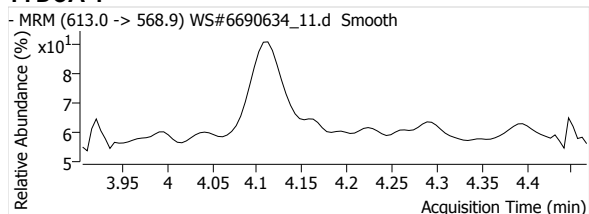
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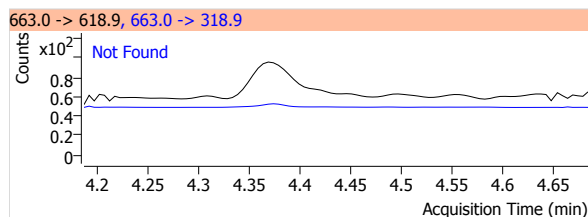
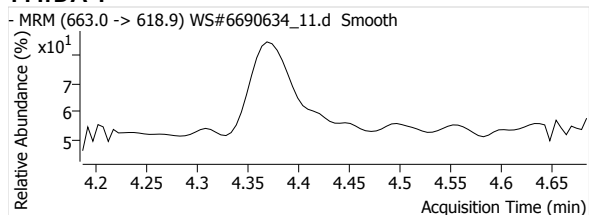
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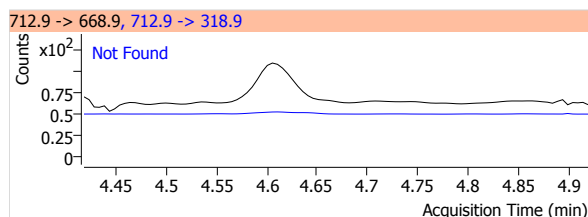
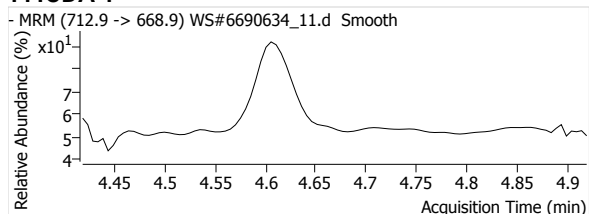
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PFTrDA 1

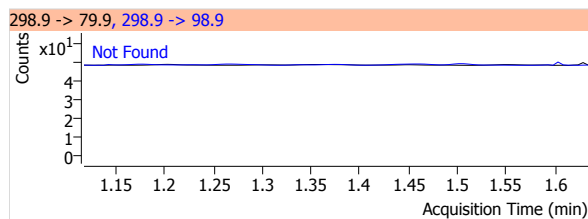
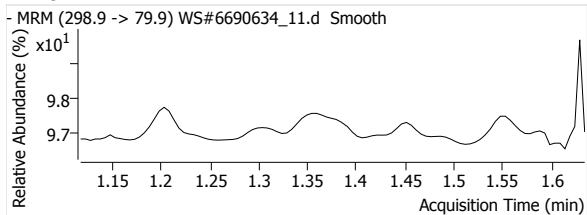


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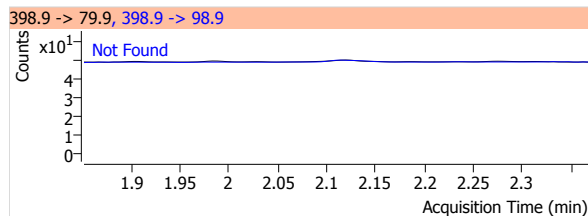
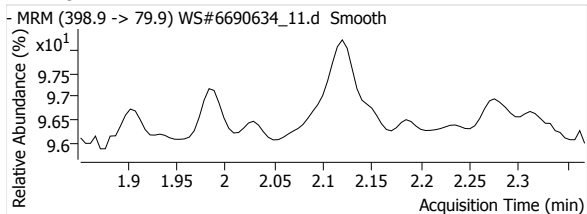


Quantitative Analysis Report

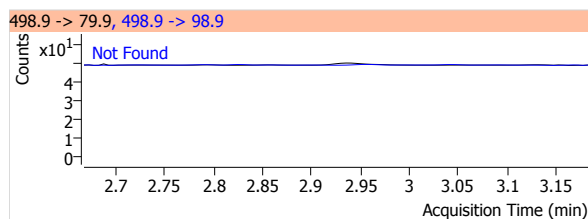
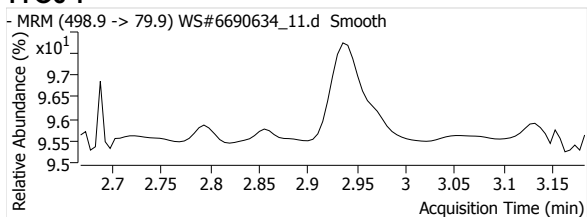
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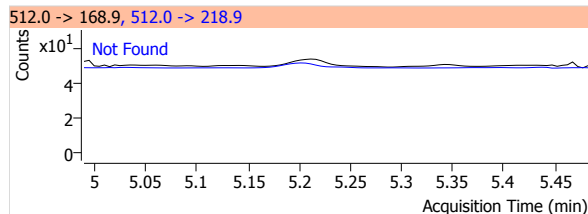
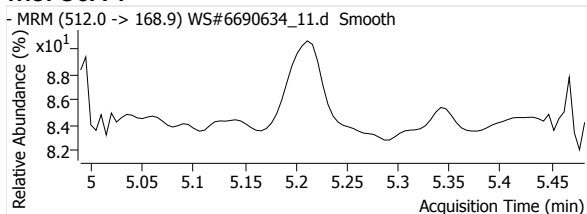
PFHxS 1



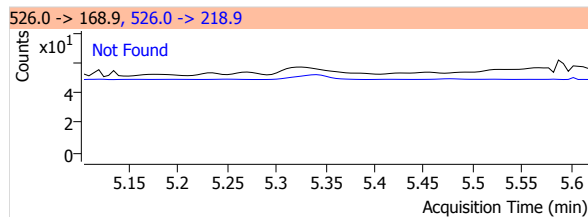
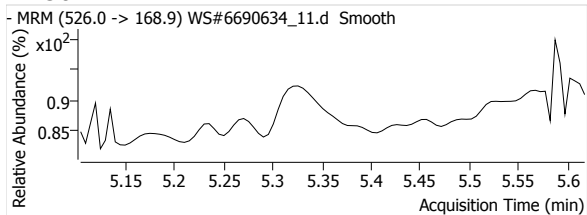
PFOS 1



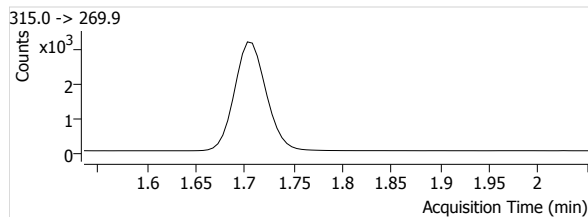
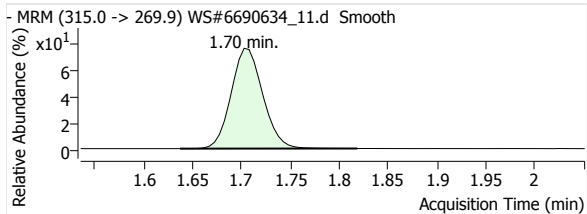
MeFOSA 1



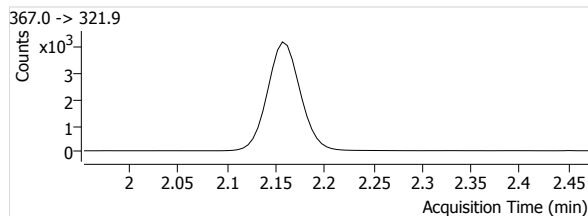
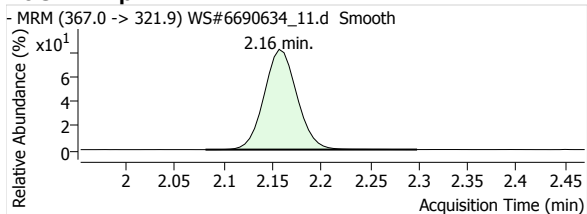
eFOSA 1



13C2-PFHxA

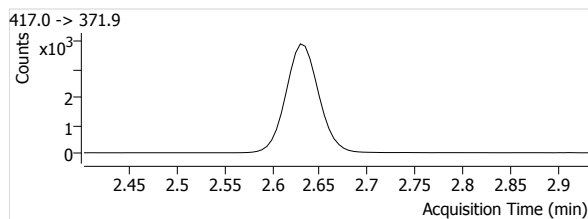
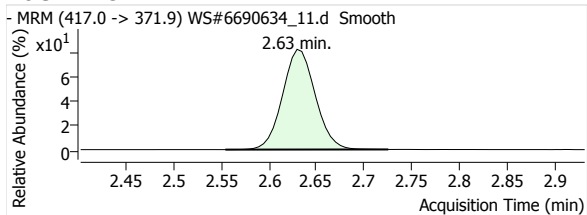


13C4-PFHpA

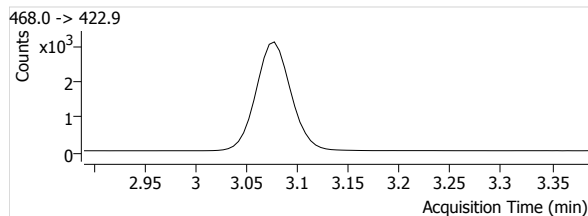
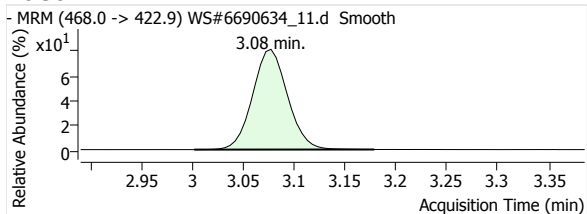


Quantitative Analysis Report

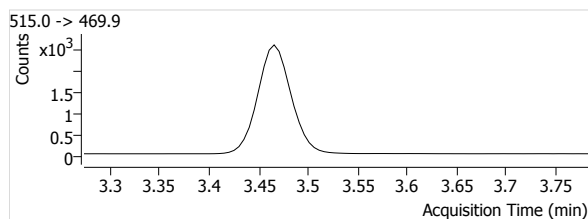
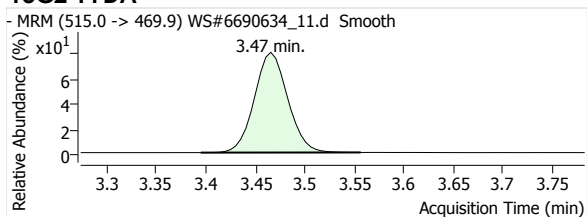
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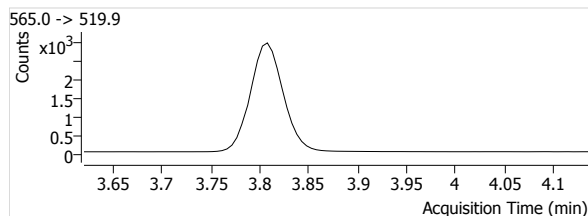
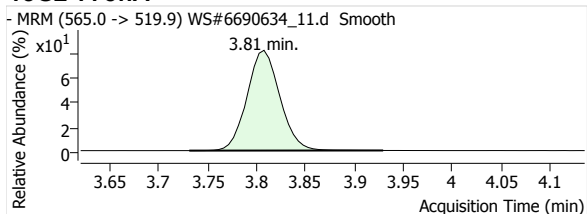
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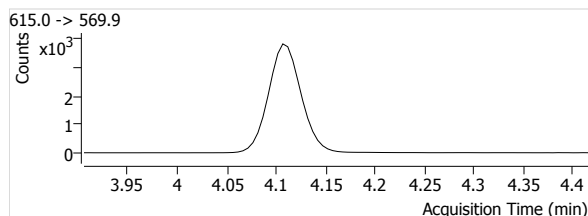
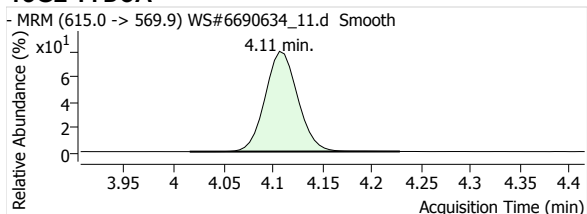
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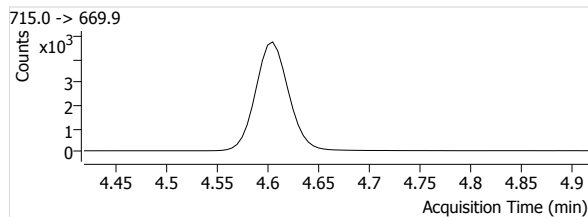
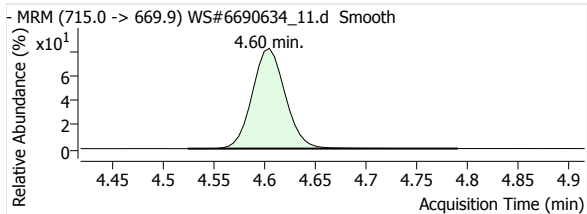
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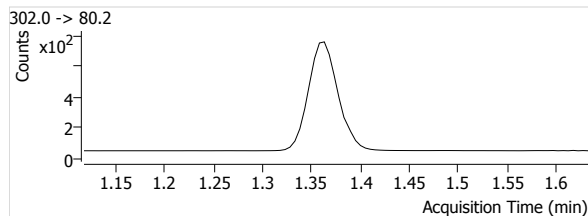
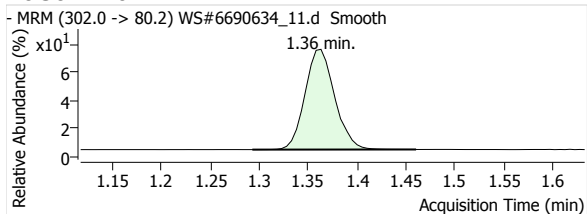
13C2-PFDoA



13C2-PFTeDA

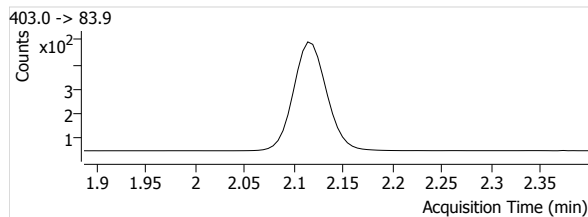
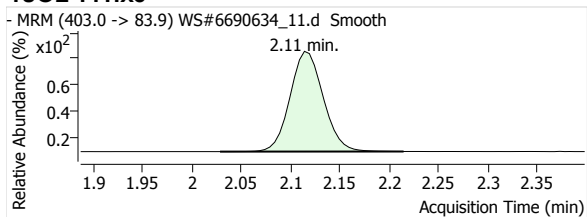


13C3-PFBS

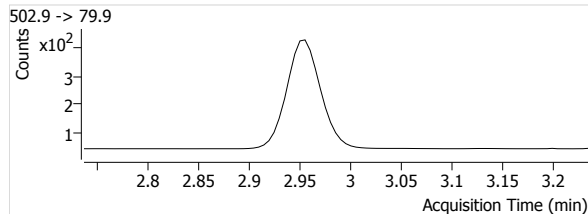
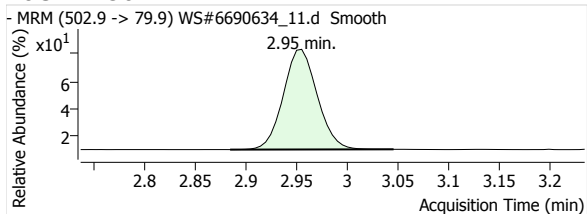


Quantitative Analysis Report

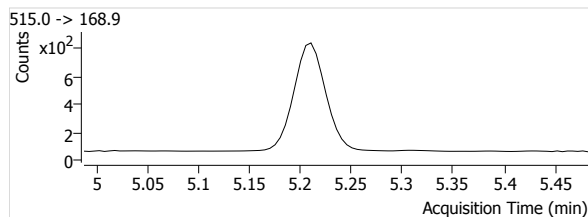
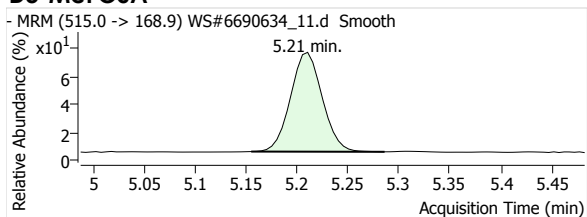
18O2-PFHxs



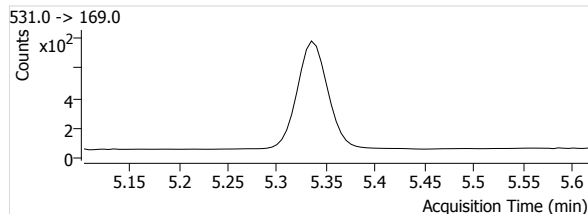
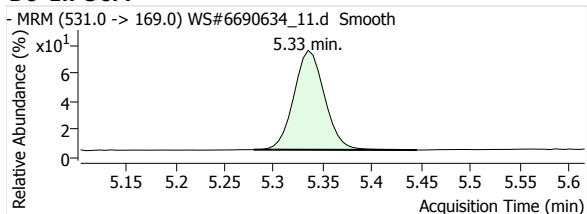
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

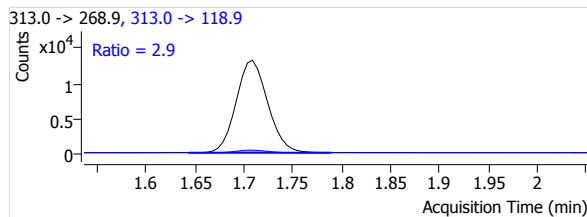
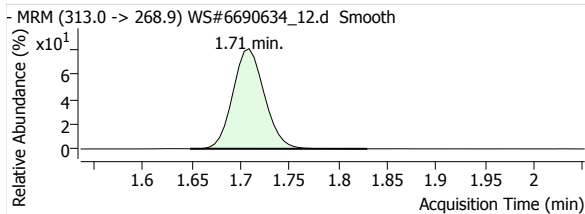
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bin

Sample Name 6690634:SPIKE
Type QC
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/21 11:16:50 PM
Comment -
User Defined

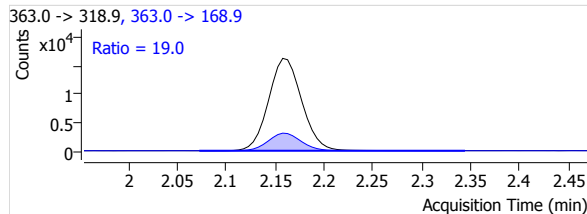
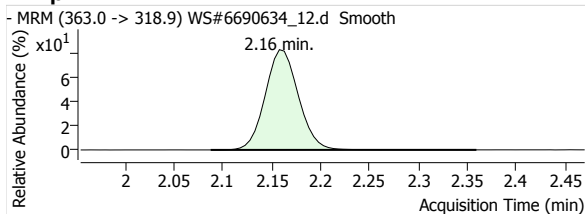
Data File WS#6690634_12.d
Instrument LCMS04
Position P1-B2
Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	20.000	0.5311	110.7	29696	1.71	19084	3.9648	852	1.71	9122	2.9
PFHpA 1	µg/L	20.000	0.5516	114.9	38491	2.16	75472	3.8292	7299	2.16	18155	19.0
PFOA 1	µg/L	20.000	0.5206	108.5	36512	2.63	18111	3.6414	8841	2.63	40640	24.2
PFNA 1	µg/L	20.000	0.5434	113.2	30442	3.08	26763	3.8588	6433	3.07	41003	21.1
PFDA 1	µg/L	20.000	0.5500	114.6	30892	3.47	15734	4.6764	4941	3.46	91098	16.0
PFUnA 1	µg/L	20.000	0.5406	112.6	28463	3.80	85776	3.6855	4015	3.80	126564	14.1
PFDoA 1	µg/L	20.000	0.5194	108.2	29927	4.11	25651	3.2558	3503	4.11	6416	11.7
PFTrDA 1	µg/L	20.000	0.5018	104.5	34535	4.37	31264	3.0570	2618	4.37	17570	7.6
PFTeDA 1	µg/L	20.000	0.4835	100.7	36759	4.61	89975	3.2539	1814	4.60	63575	4.9
PFBS 1	µg/L	20.000	0.5328	111.0	5507	1.36	7089	3.3889	2542	1.36	25419	46.2
PFHxS 1	µg/L	20.000	0.5302	110.5	4200	2.08	47681	3.8569	2286	2.09	37421	54.4
PFOS 1	µg/L	20.000	0.5796	120.8	3531	2.90	18992	3.7448	1950	2.89	17682	55.2
MeFOSA 1	µg/L	20.000	0.4650	96.9	2444	5.21	151	1.3384	2284	5.21	843	93.5
EtFOSA 1	µg/L	20.000	0.4793	99.9	2663	5.33	149	1.6398	2451	5.33	1143	92.0
13C2-PFHxA	µg/L	100.000	106.6344	106.6	7490	1.71	1355		--	--	--	--
13C4-PFHpA	µg/L	100.000	104.0041	104.0	10052	2.16	1149		--	--	--	--
13C4-PFOA	µg/L	100.000	104.0685	104.1	10027	2.63	1818		--	--	--	--
13C5-PFNA	µg/L	100.000	104.2967	104.3	7889	3.08	1166		--	--	--	--
13C2-PFDA	µg/L	100.000	101.0555	101.1	6606	3.47	919		--	--	--	--
13C2-PFUnA	µg/L	100.000	99.2546	99.3	7723	3.81	1125		--	--	--	--
13C2-PFDoA	µg/L	100.000	90.8749	90.9	9192	4.11	2113		--	--	--	--
13C2-PFTeDA	µg/L	100.000	90.0877	90.1	11297	4.60	1789		--	--	--	--
13C3-PFBS	µg/L	100.000	105.3143	105.3	1625	1.36	642		--	--	--	--
18O2-PFHxS	µg/L	100.000	107.1850	107.2	1089	2.12	911		--	--	--	--
13C4-PFOS	µg/L	100.000	97.9232	97.9	943	2.95	850		--	--	--	--
D3-MeFOSA	µg/L	100.000	75.1131	75.1	1826	5.21	117		--	--	--	--
D5-EtFOSA	µg/L	100.000	77.5920	77.6	1624	5.33	107		--	--	--	--

PFHxA 1

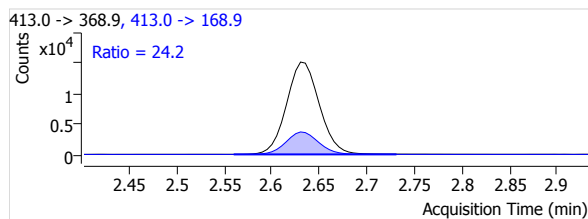
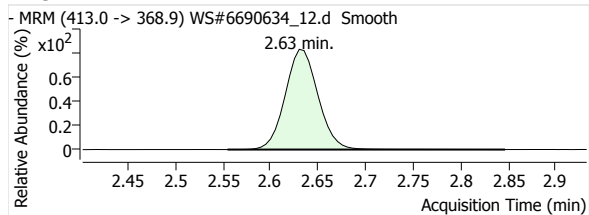


PFHpA 1

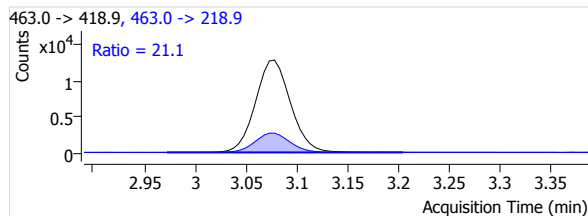
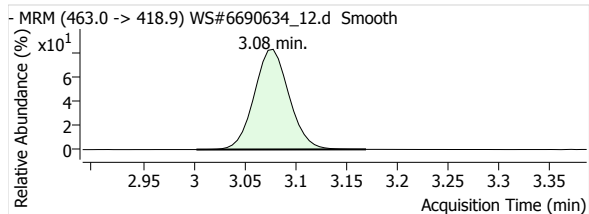


Quantitative Analysis Report

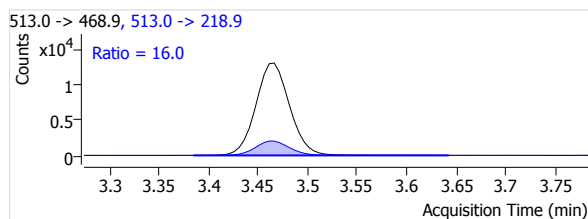
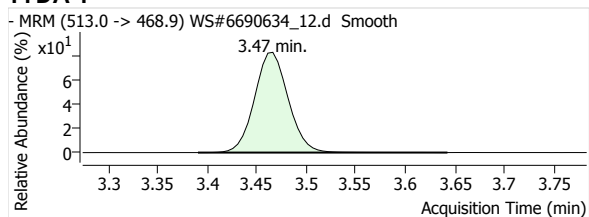
PFOA 1



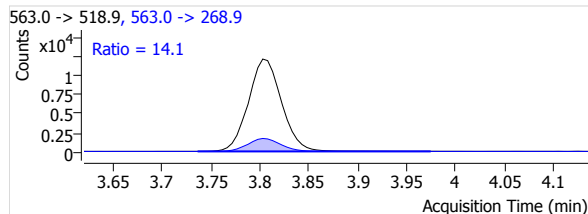
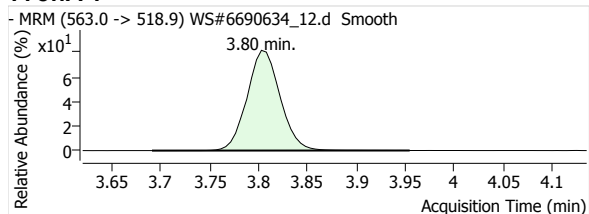
PFNA 1



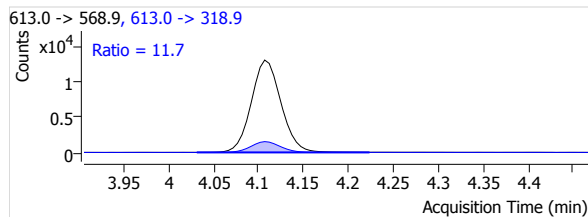
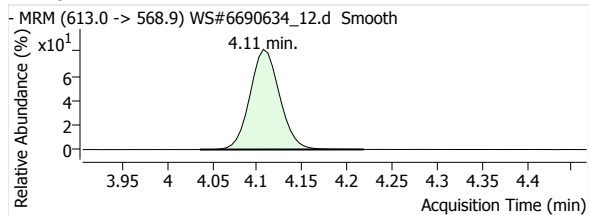
PFDA 1



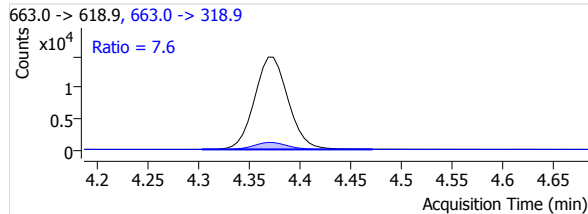
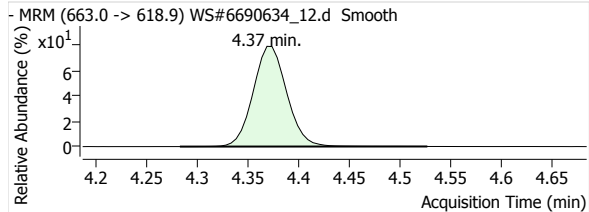
PFUnA 1



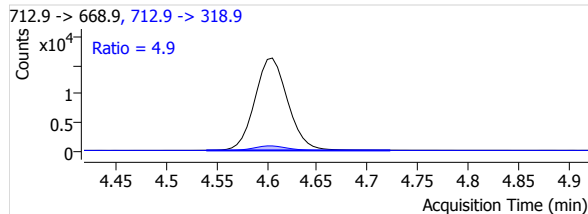
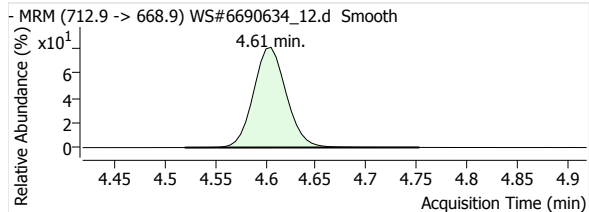
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PFTrDA 1

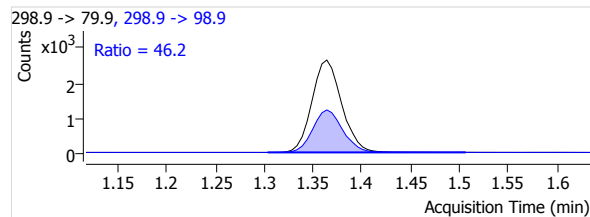
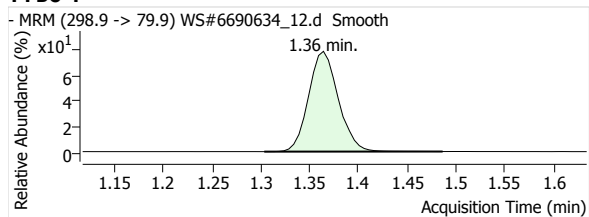


PFTeDA 1

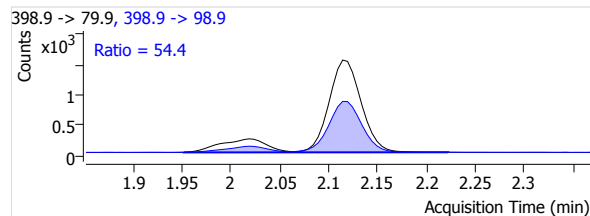
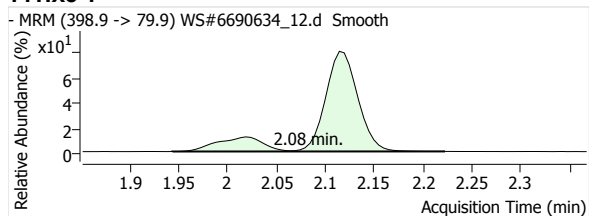


Quantitative Analysis Report

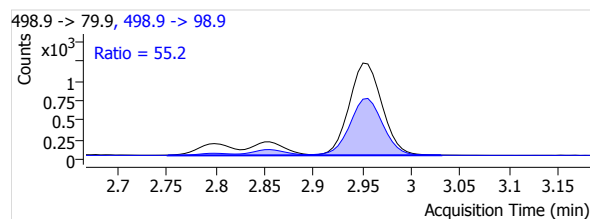
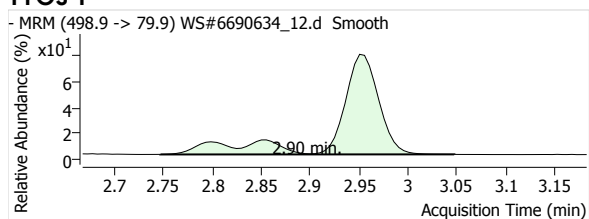
PFBS 1



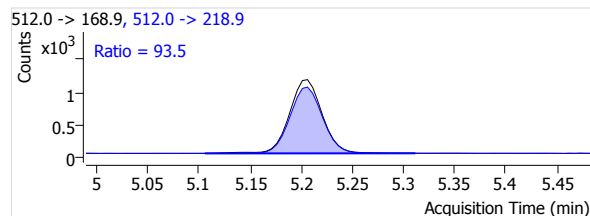
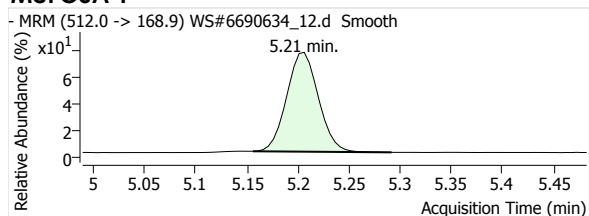
PFHxS 1



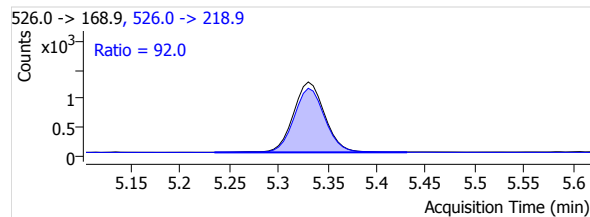
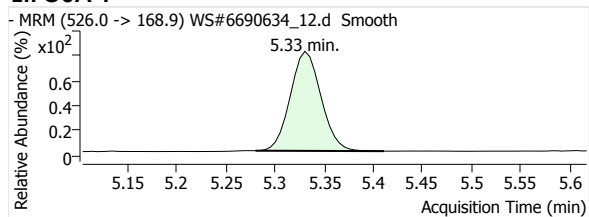
PFOS 1



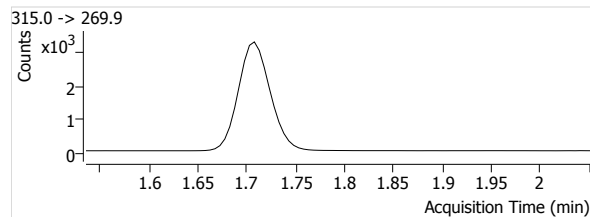
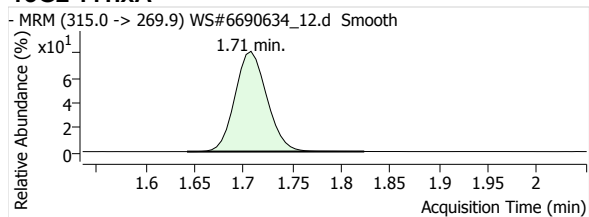
MeFOSA 1



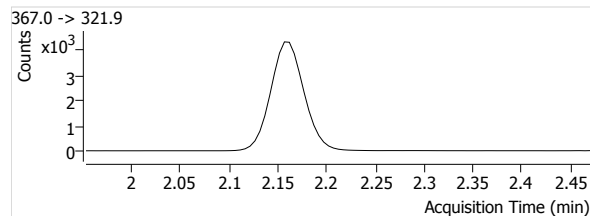
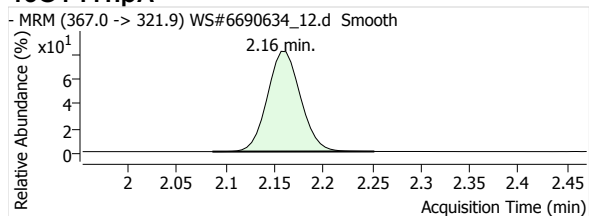
eFOSA 1



13C2-PFHxA

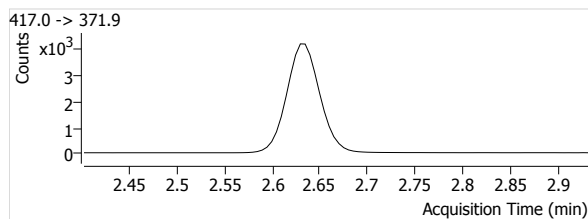
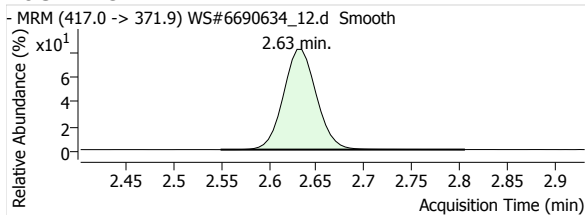


13C4-PFHpA

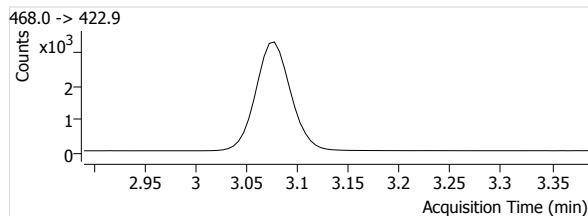
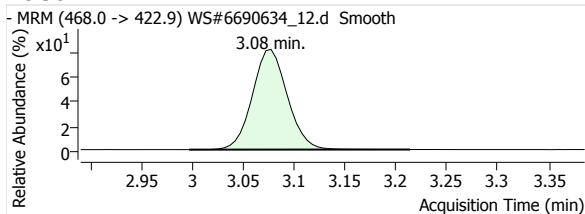


Quantitative Analysis Report

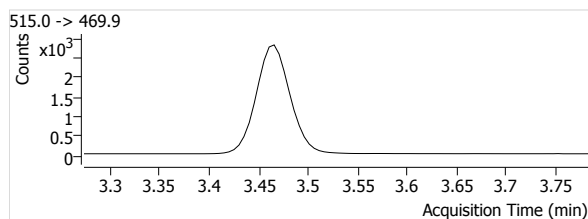
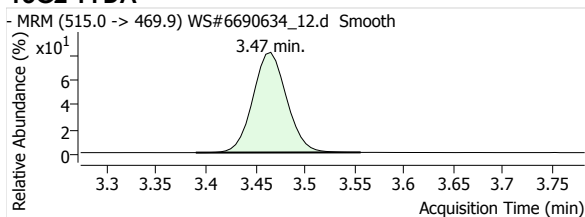
13C4-PFOA



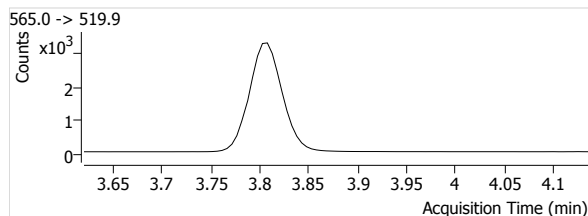
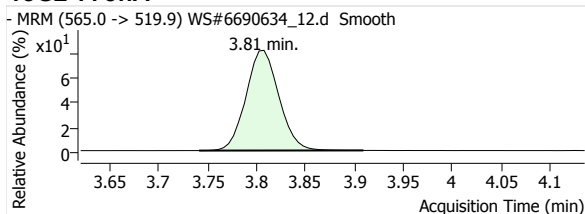
13C5-PFNA



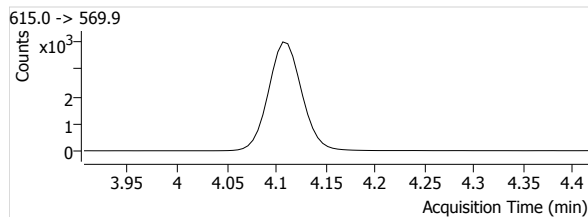
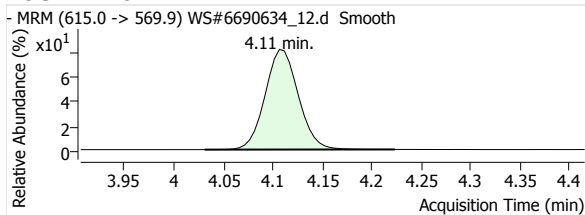
13C2-PFDA



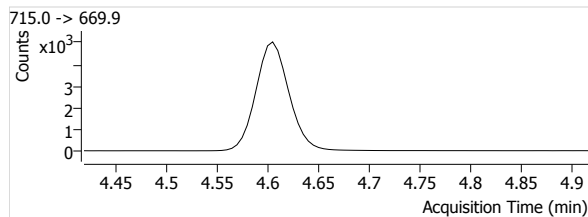
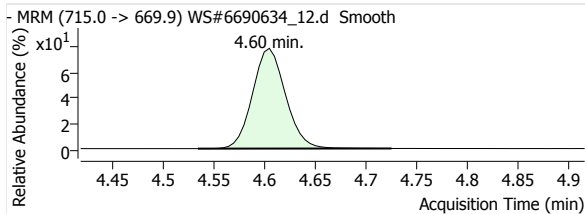
13C2-PFUnA



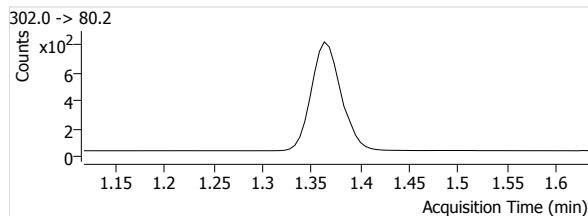
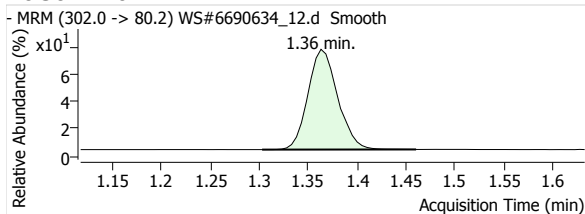
13C2-PFDoA



13C2-PFTeDA

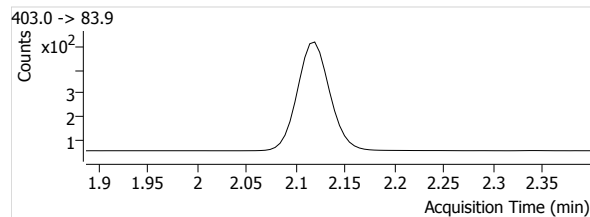
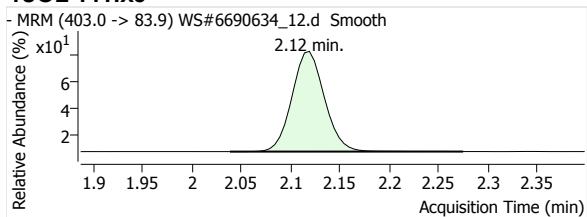


13C3-PFBS

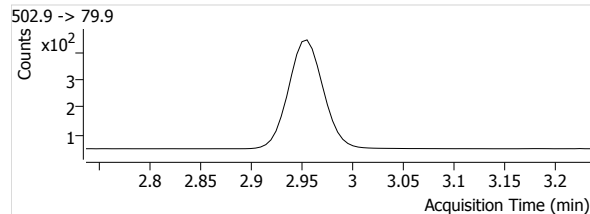
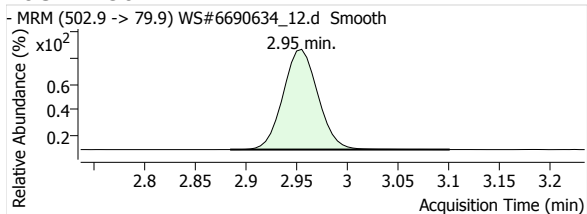


Quantitative Analysis Report

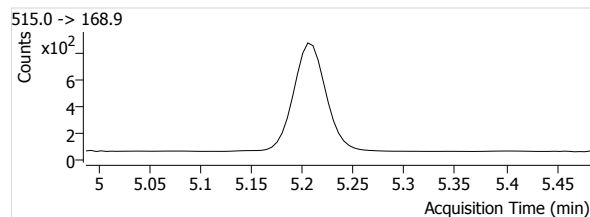
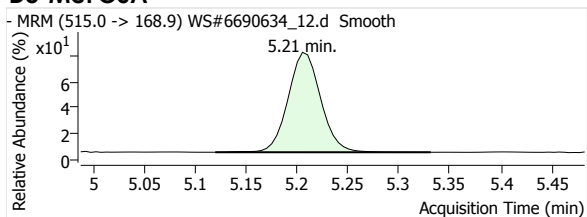
18O2-PFHxs



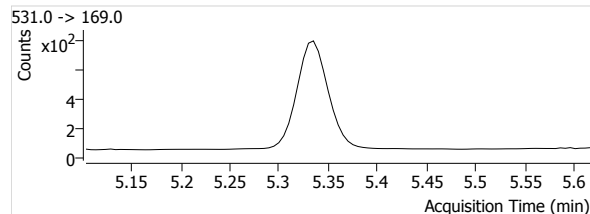
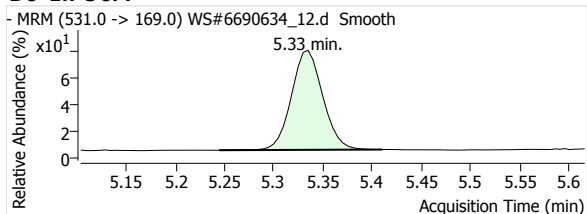
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

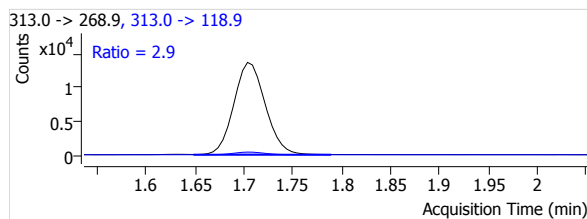
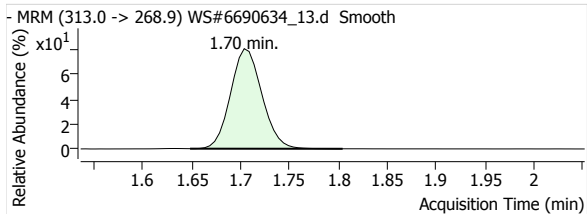
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Sample Name 6690634:MTRX SPK
Type QC
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/21 11:23:46 PM
Comment MLP498-01
User Defined MI PFOA

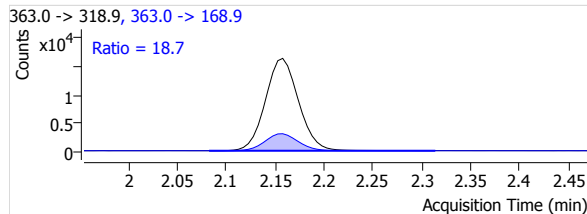
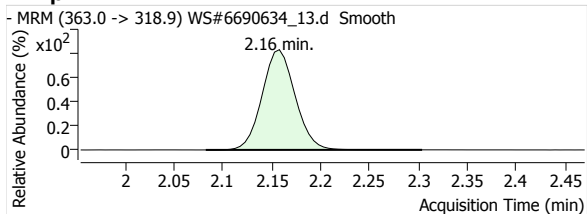
Data File WS#6690634_13.d
Instrument LCMS04
Position P1-B3
Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	20.000	0.5703	118.8	30588	1.70	199540	4.2542	891	1.70	2981	2.9
PFHpA 1	µg/L	20.000	0.5840	121.7	38610	2.16	27628	4.0523	7207	2.16	19557	18.7
PFOA 1	µg/L	20.000	0.5681	118.3	21578	2.62	251150	3.9703	5273	2.62	23918	24.4
PFNA 1	µg/L	20.000	0.5437	113.3	18621	3.06	87250	3.8609	3955	3.06	4358	21.2
PFDA 1	µg/L	20.000	0.5565	115.9	31231	3.46	29355	4.7313	5121	3.46	13495	16.4
PFUnA 1	µg/L	20.000	0.5755	119.9	25530	3.80	67125	3.9205	3540	3.80	24374	13.9
PFDoA 1	µg/L	20.000	0.5607	116.8	20676	4.10	22175	3.5121	2422	4.10	7131	11.7
PFTeDA 1	µg/L	20.000	0.6085	126.8	18798	4.37	47265	3.6968	1423	4.37	7407	7.6
PFTeDA 1	µg/L	20.000	0.5235	109.1	17902	4.60	121546	3.5206	898	4.60	17773	5.0
PFBS 1	µg/L	20.000	0.5620	117.1	5741	1.36	50190	3.5725	2650	1.36	16148	46.2
PFHxS 1	µg/L	20.000	0.6223	129.7	4872	2.08	16756	4.5194	2611	2.09	18835	53.6
PFOS 1	µg/L	20.000	0.6785	141.4	3593	2.90	20460	4.3760	2003	2.89	15535	55.8
MeFOSA 1	µg/L	20.000	0.5531	115.2	1806	5.20	96	1.5898	1635	5.21	687	90.5
EtFOSA 1	µg/L	20.000	0.5550	115.6	1800	5.33	98	1.8967	1642	5.33	991	91.2
13C2-PFHxA	µg/L	100.000	102.3633	102.4	7190	1.70	1022		--	--	--	--
13C4-PFHpA	µg/L	100.000	98.5825	98.6	9528	2.16	1043		--	--	--	--
13C4-PFOA	µg/L	100.000	56.4089	56.4	5435	2.62	2033		--	--	--	--
13C5-PFNA	µg/L	100.000	63.7626	63.8	4823	3.06	927		--	--	--	--
13C2-PFDA	µg/L	100.000	100.9790	101.0	6601	3.46	1000		--	--	--	--
13C2-PFUnA	µg/L	100.000	83.6910	83.7	6512	3.80	729		--	--	--	--
13C2-PFDoA	µg/L	100.000	58.2007	58.2	5887	4.10	1323		--	--	--	--
13C2-PFTeDA	µg/L	100.000	40.5502	40.6	5085	4.60	1273		--	--	--	--
13C3-PFBS	µg/L	100.000	104.1478	104.1	1607	1.36	64		--	--	--	--
18O2-PFHxS	µg/L	100.000	106.1024	106.1	1078	2.11	1116		--	--	--	--
13C4-PFOS	µg/L	100.000	85.2544	85.3	821	2.94	345		--	--	--	--
D3-MeFOSA	µg/L	100.000	46.7297	46.7	1136	5.21	51		--	--	--	--
D5-EtFOSA	µg/L	100.000	45.3416	45.3	949	5.33	84		--	--	--	--

PFHxA 1

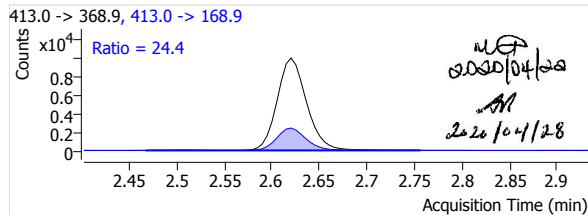
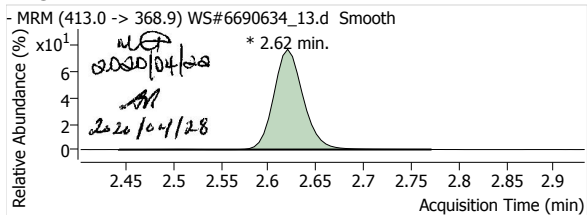


PFHpA 1

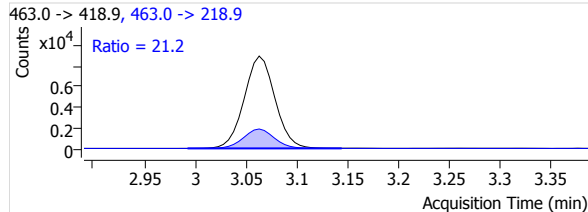
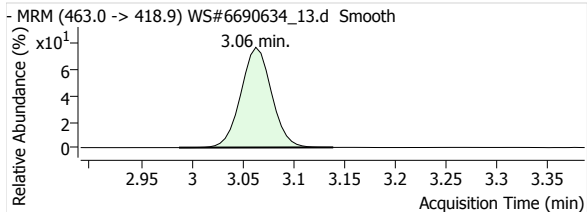


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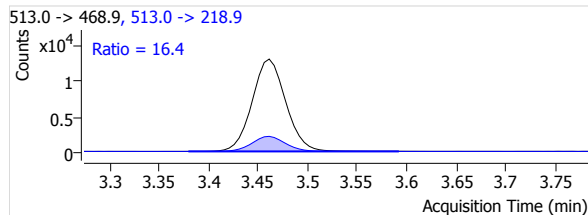
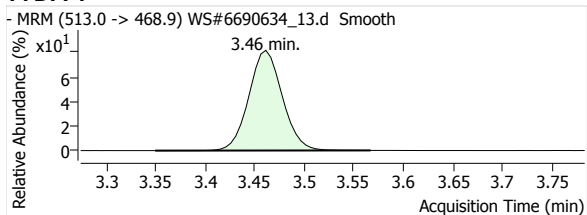
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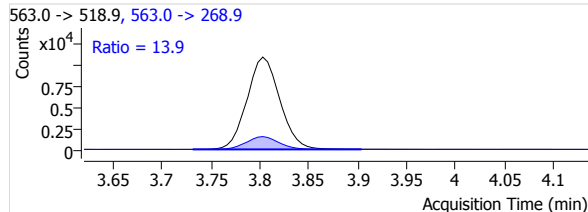
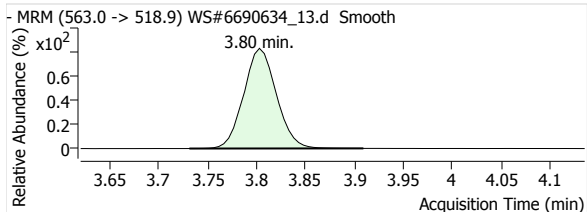
PFNA 1



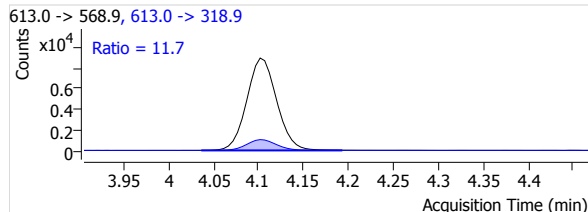
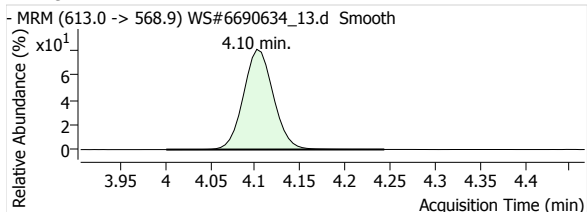
PFDA 1



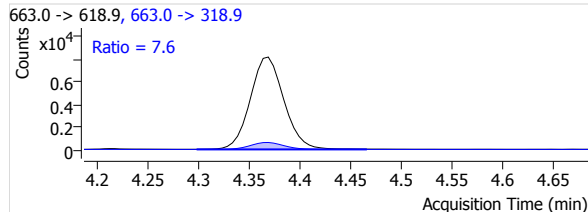
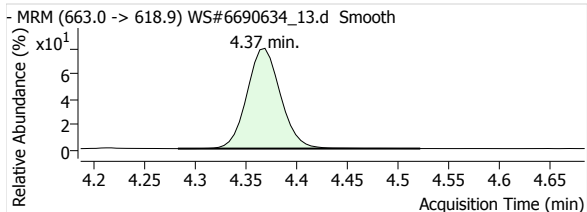
PFUnA 1



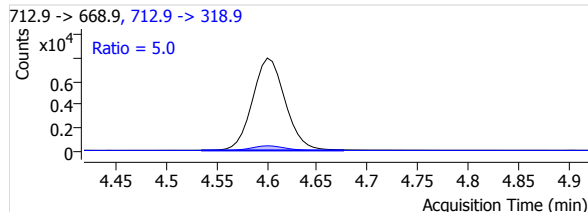
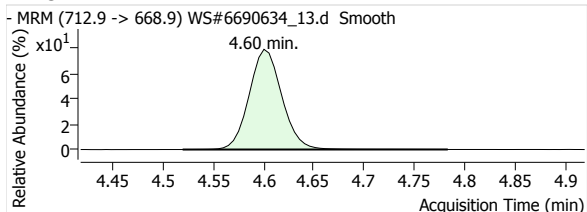
PFDaA 1



PFTrDA 1

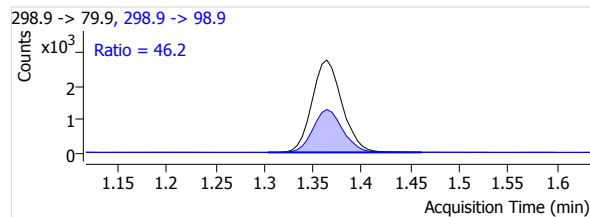
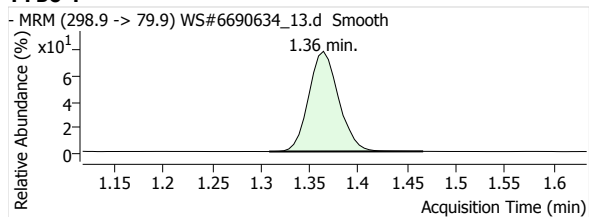


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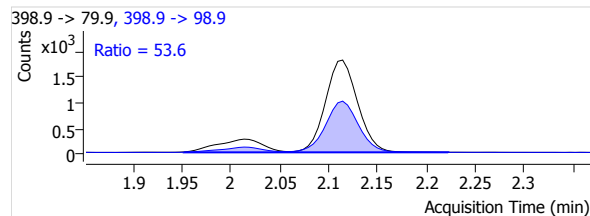
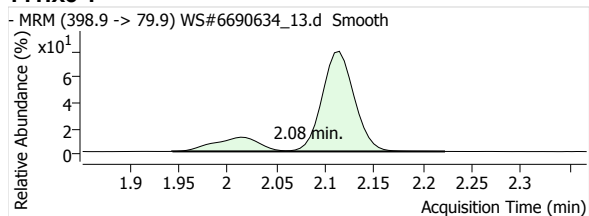


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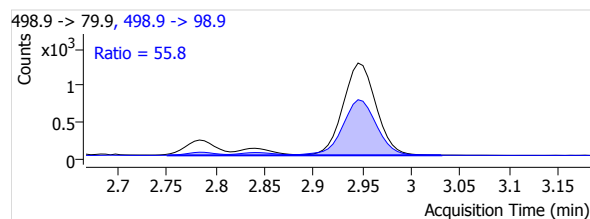
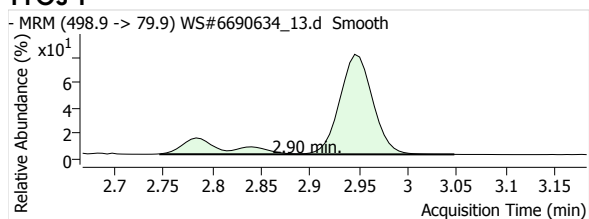
PFBS 1



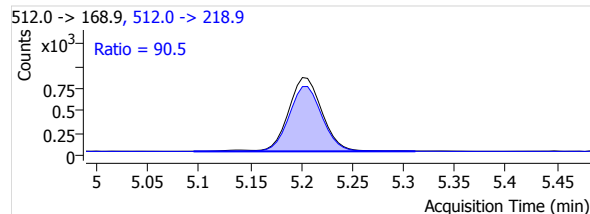
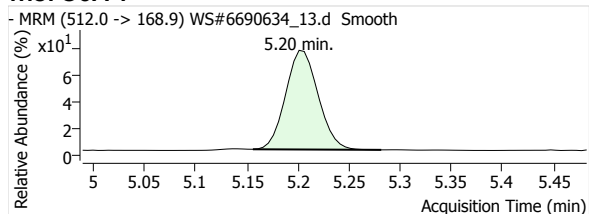
PFHxS 1



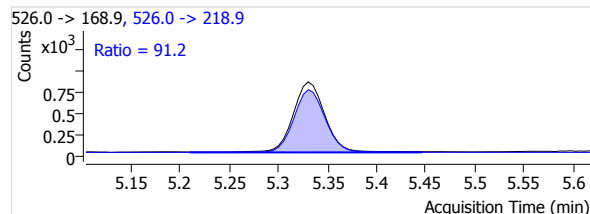
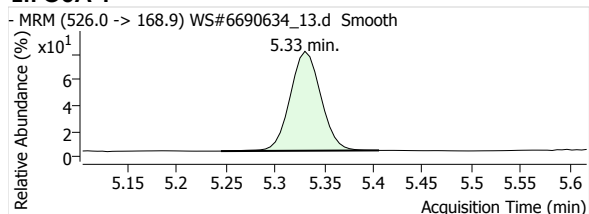
PFOS 1



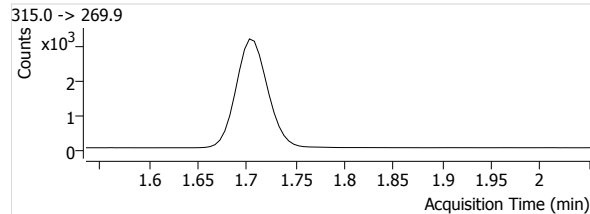
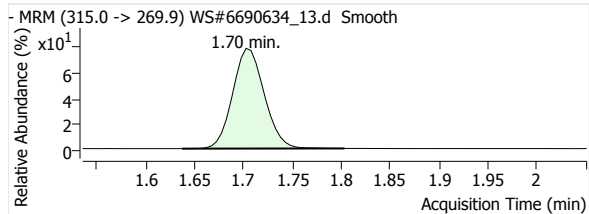
MeFOSA 1



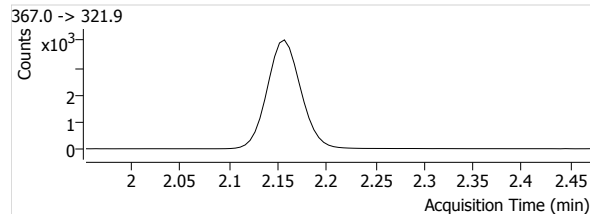
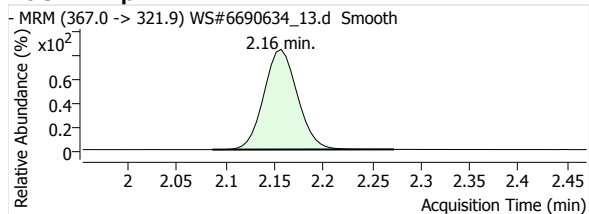
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13C2-PFHxA

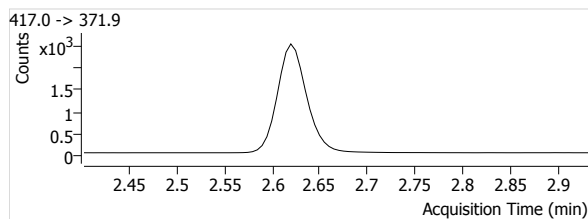
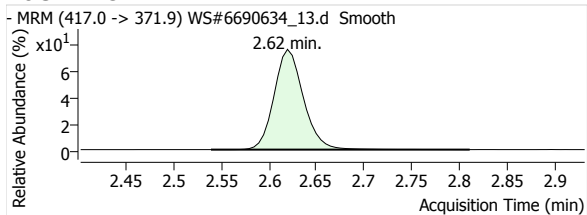


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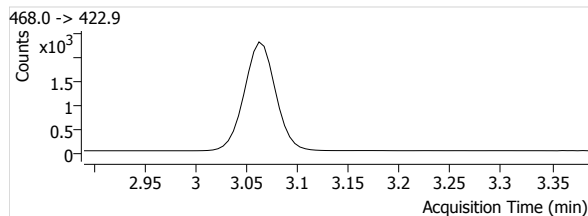
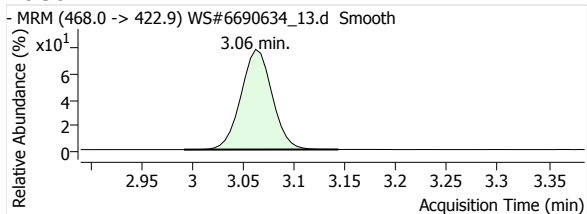


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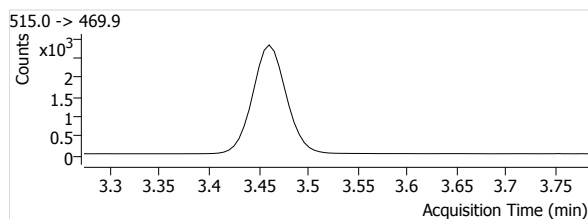
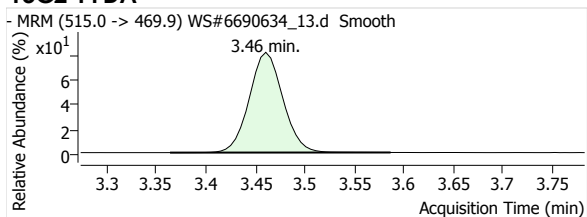
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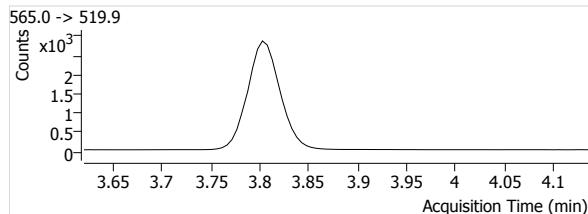
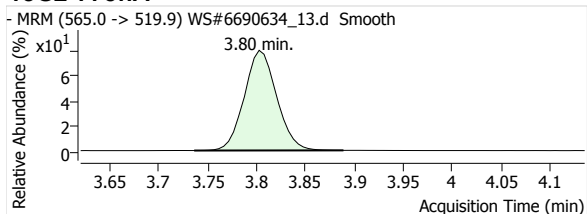
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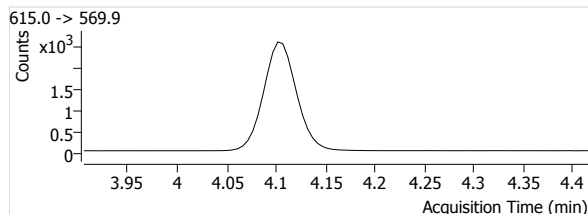
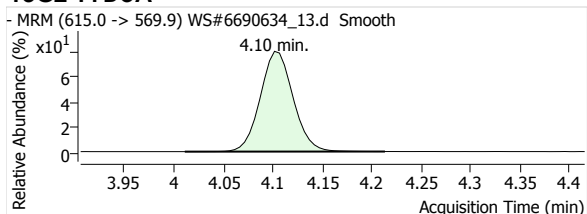
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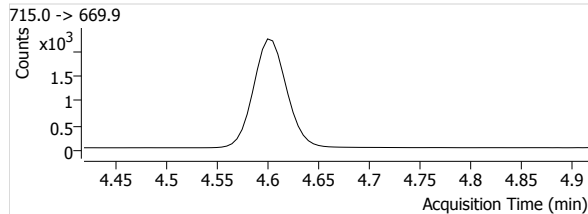
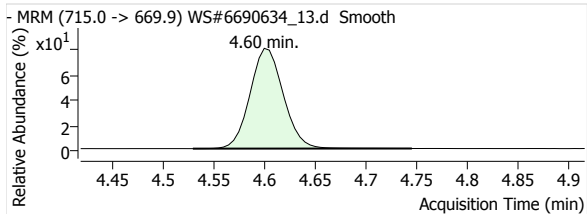
13C2-PFUnA



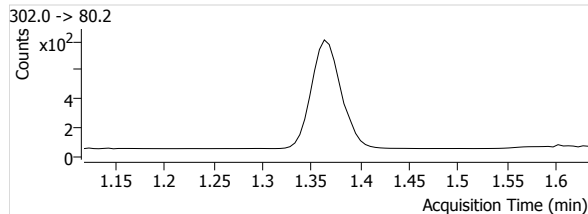
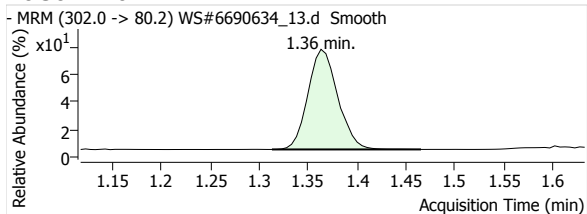
13C2-PFDoA



13C2-PFTeDA

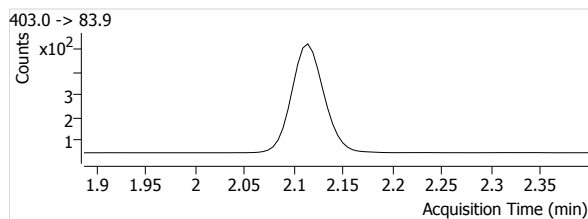
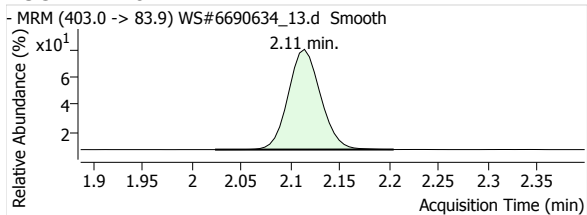


13C3-PFBS

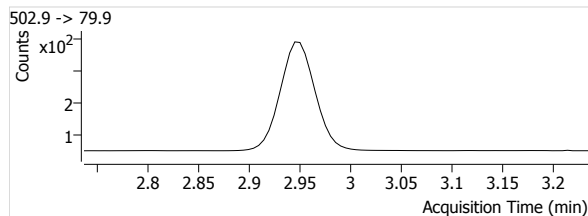
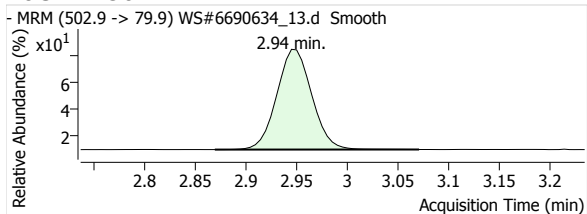


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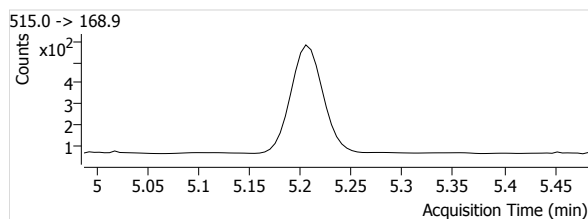
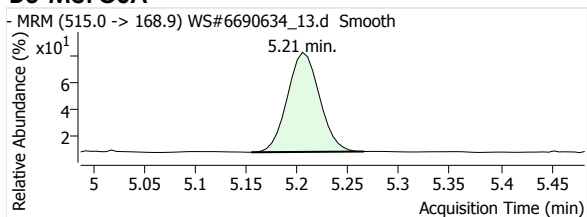
18O2-PFHxs



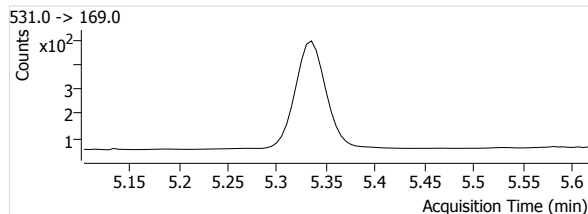
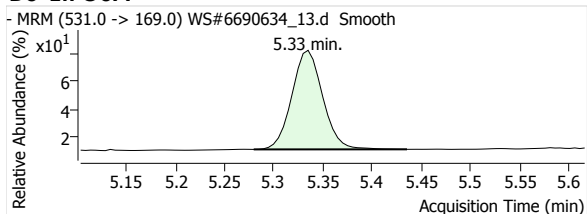
13C4-PFOS



D3-MeFOFA



D5-EtFOFA



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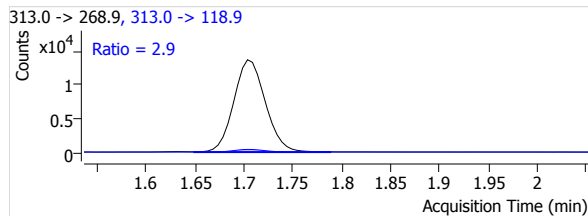
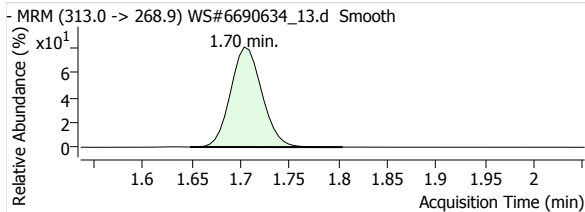
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Sample Name 6690634:MTRX SPK
Type QC
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/21 11:23:46 PM
Comment MLP498-01
User Defined MI PFOA

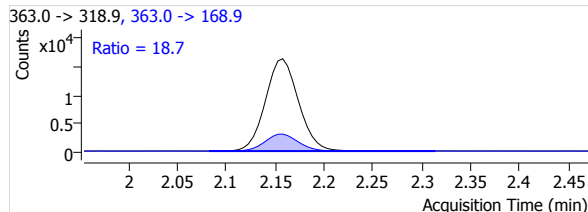
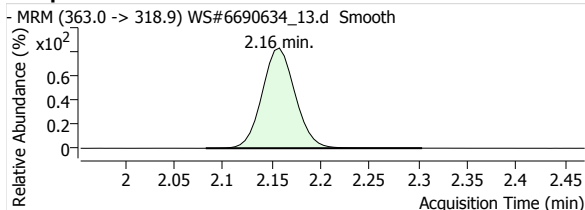
Data File WS#6690634_13.d
Instrument LCMS04
Position P1-B3
Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	20.000	0.5703	118.8	30588	1.70	199540	4.2542	891	1.70	2981	2.9
PFHpA 1	µg/L	20.000	0.5840	121.7	38610	2.16	27628	4.0523	7207	2.16	19557	18.7
PFOA 1	µg/L	20.000	0.5648	117.7	21456	2.62	251194	3.9477	5202	2.62	23914	24.2
PFNA 1	µg/L	20.000	0.5437	113.3	18621	3.06	87250	3.8609	3955	3.06	4358	21.2
PFDA 1	µg/L	20.000	0.5565	115.9	31231	3.46	29355	4.7313	5121	3.46	13495	16.4
PFUnA 1	µg/L	20.000	0.5755	119.9	25530	3.80	67125	3.9205	3540	3.80	24374	13.9
PFDaA 1	µg/L	20.000	0.5607	116.8	20676	4.10	22175	3.5121	2422	4.10	7131	11.7
PFTrDA 1	µg/L	20.000	0.6085	126.8	18798	4.37	47265	3.6968	1423	4.37	7407	7.6
PFTeDA 1	µg/L	20.000	0.5235	109.1	17902	4.60	121546	3.5206	898	4.60	17773	5.0
PFBS 1	µg/L	20.000	0.5620	117.1	5741	1.36	50190	3.5725	2650	1.36	16148	46.2
PFHxS 1	µg/L	20.000	0.6222	129.6	4872	2.08	16756	4.5194	2611	2.09	18835	53.6
PFOS 1	µg/L	20.000	0.6785	141.4	3593	2.90	20460	4.3760	2003	2.89	15535	55.8
MeFOSA 1	µg/L	20.000	0.5531	115.2	1806	5.20	96	1.5898	1635	5.21	687	90.5
EtFOSA 1	µg/L	20.000	0.5550	115.6	1800	5.33	98	1.8967	1642	5.33	991	91.2
13C2-PFHxA	µg/L	100.000	102.3633	102.4	7190	1.70	1022		--	--	--	--
13C4-PFHpA	µg/L	100.000	98.5825	98.6	9528	2.16	1043		--	--	--	--
13C4-PFOA	µg/L	100.000	56.4089	56.4	5435	2.62	2033		--	--	--	--
13C5-PFNA	µg/L	100.000	63.7626	63.8	4823	3.06	927		--	--	--	--
13C2-PFDA	µg/L	100.000	100.9790	101.0	6601	3.46	1000		--	--	--	--
13C2-PFUnA	µg/L	100.000	83.6910	83.7	6512	3.80	729		--	--	--	--
13C2-PFDaA	µg/L	100.000	58.2007	58.2	5887	4.10	1323		--	--	--	--
13C2-PFTeDA	µg/L	100.000	40.5502	40.6	5085	4.60	1273		--	--	--	--
13C3-PFBS	µg/L	100.000	104.1478	104.1	1607	1.36	64		--	--	--	--
18O2-PFHxS	µg/L	100.000	106.1024	106.1	1078	2.11	1116		--	--	--	--
13C4-PFOS	µg/L	100.000	85.2544	85.3	821	2.94	345		--	--	--	--
D3-MeFOSA	µg/L	100.000	46.7297	46.7	1136	5.21	51		--	--	--	--
D5-EtFOSA	µg/L	100.000	45.3416	45.3	949	5.33	84		--	--	--	--

PFHxA 1

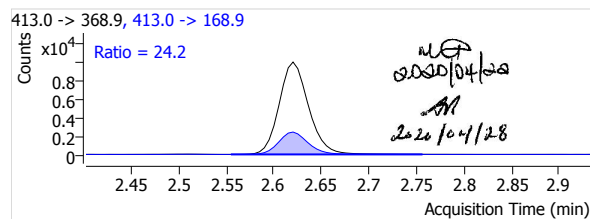
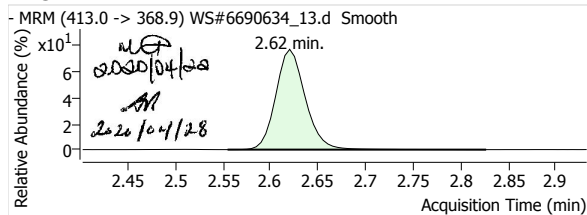


PFHpA 1

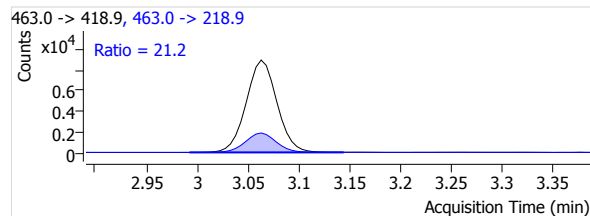
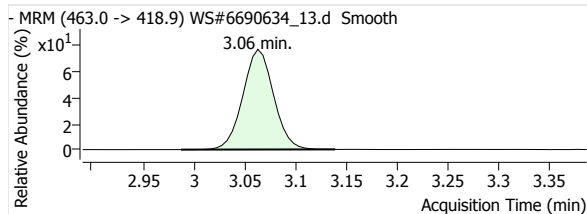


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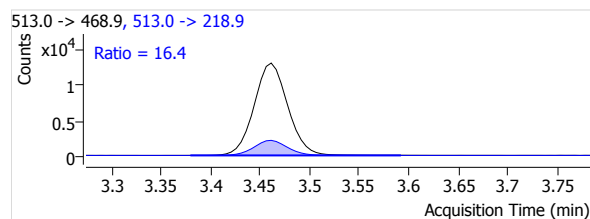
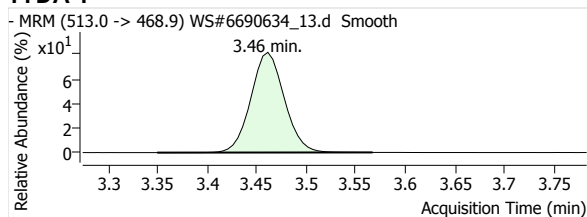
PFOA 1



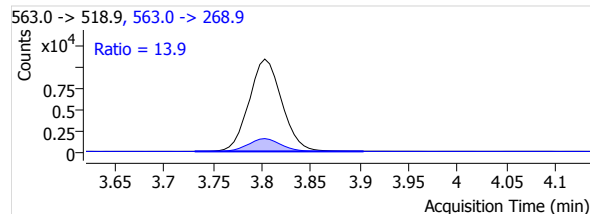
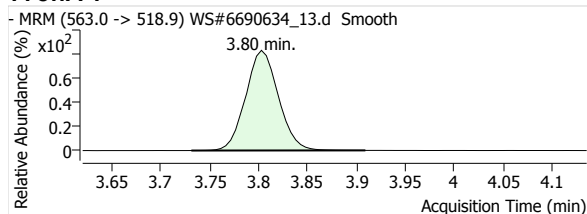
PFNA 1



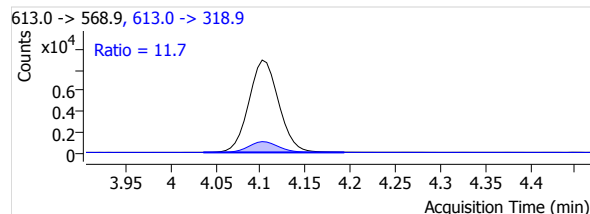
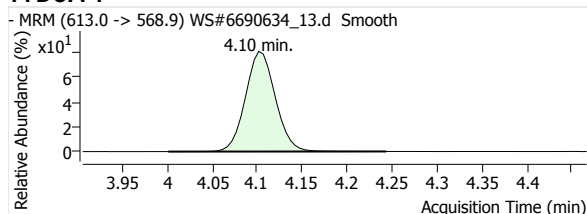
PFDA 1



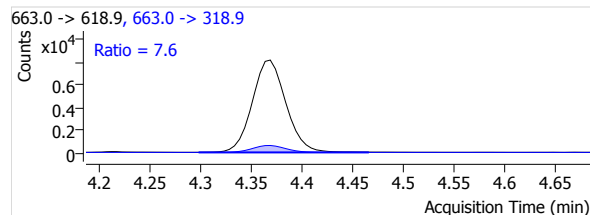
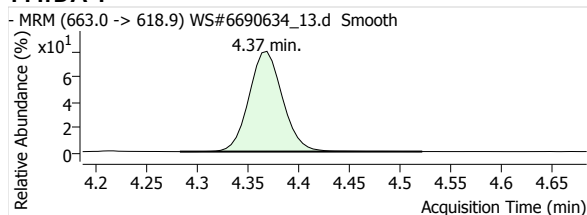
PFUnA 1



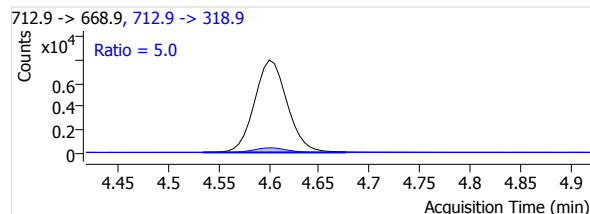
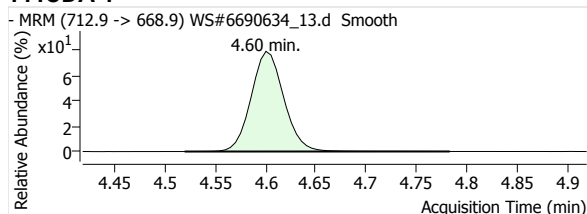
PFDaA 1



PFTrDA 1

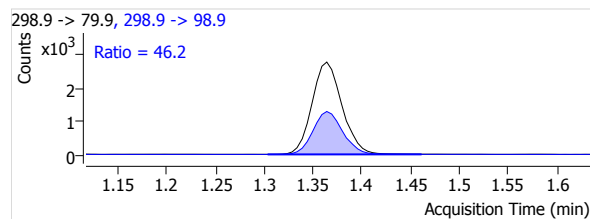
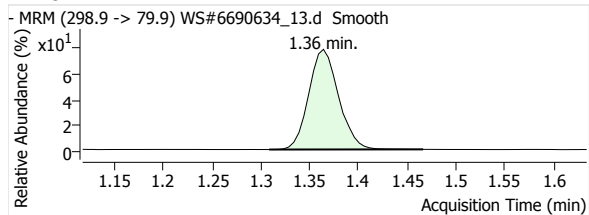


PFTeDA 1

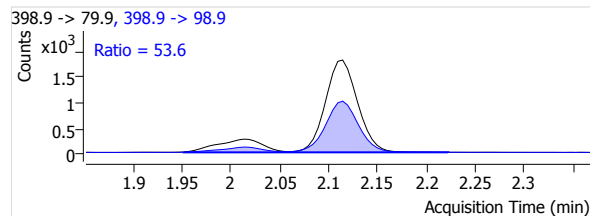
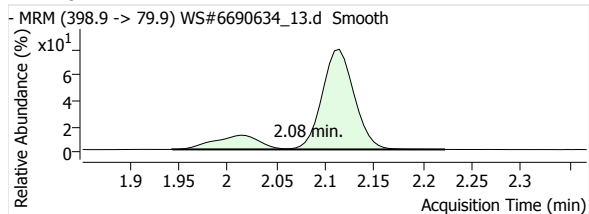


Quantitative Analysis Report

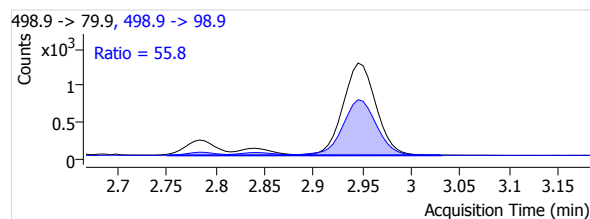
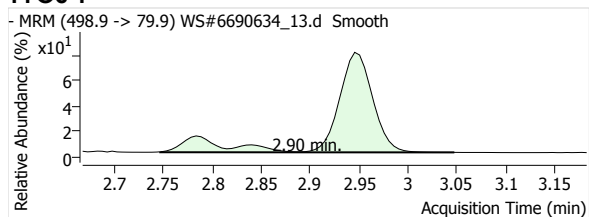
PFBS 1



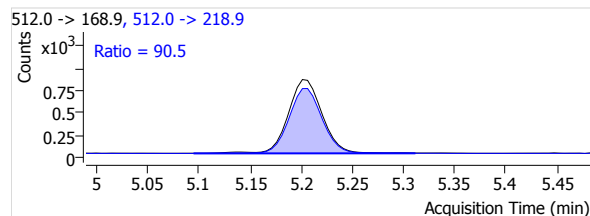
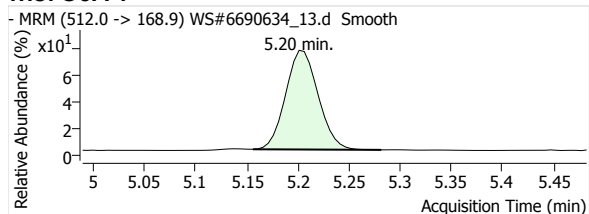
PFHxS 1



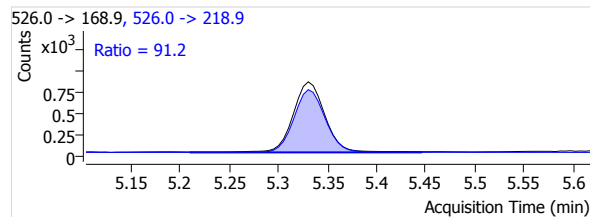
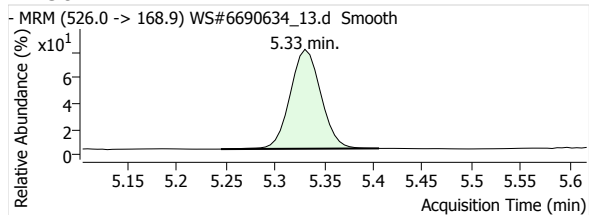
PFOS 1



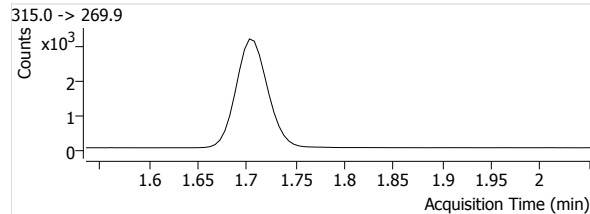
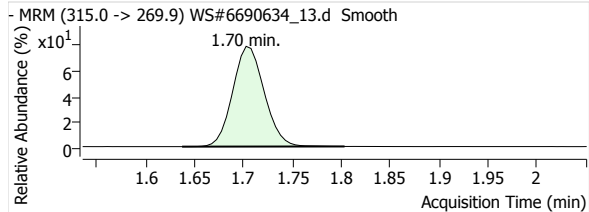
MeFOSA 1



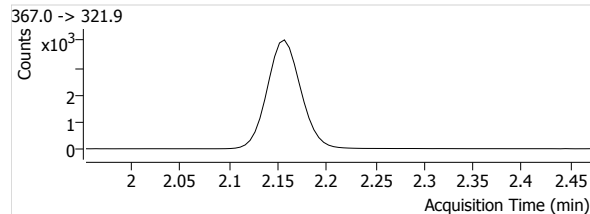
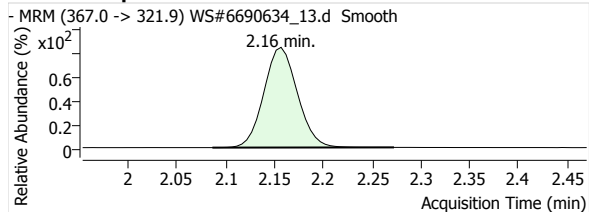
eFOSA 1



13C2-PFHxA

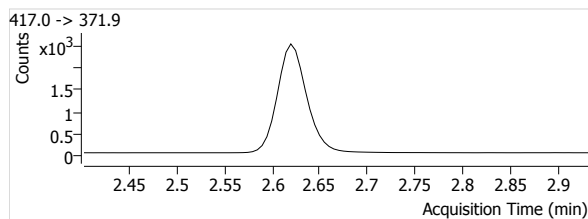
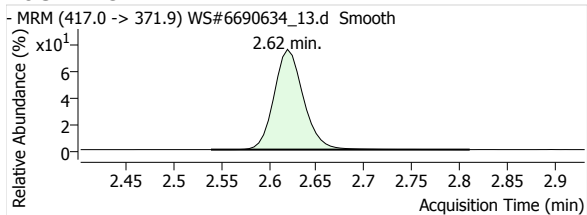


13C4-PFHpA

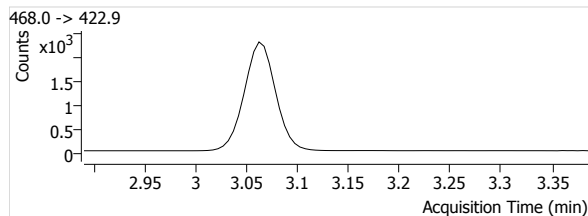
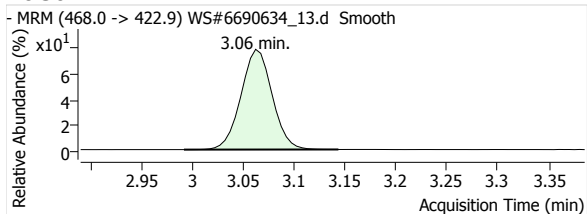


Quantitative Analysis Report

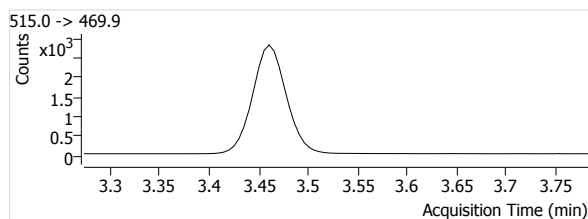
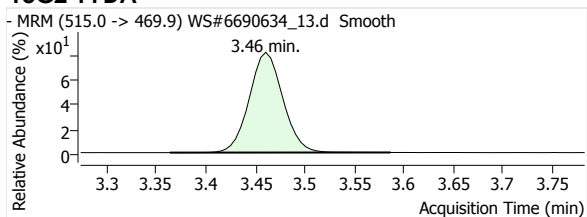
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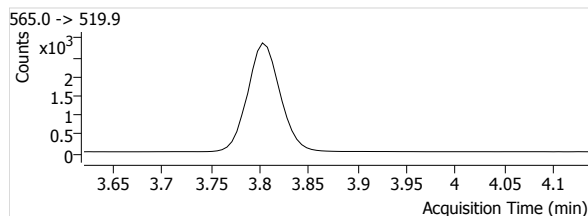
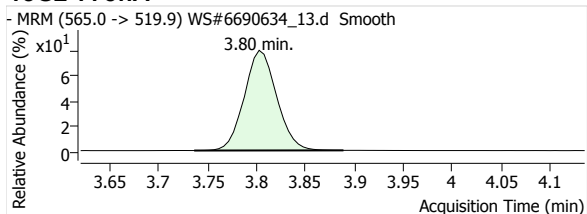
13C5-PFNA



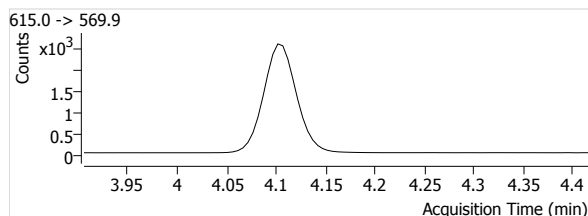
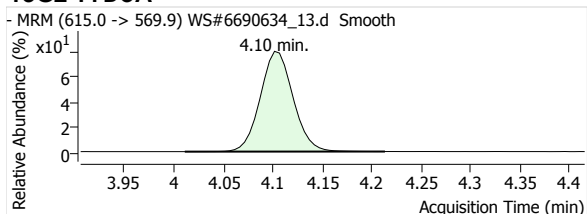
13C2-PFDA



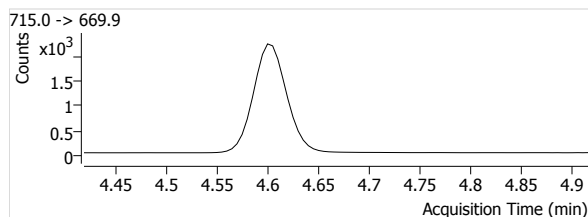
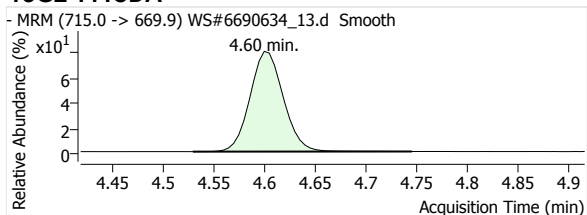
13C2-PFUnA



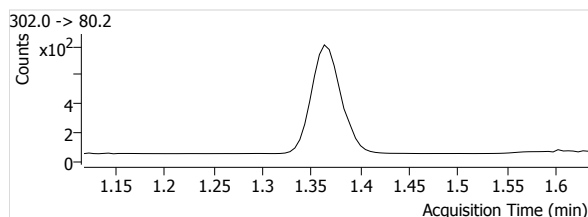
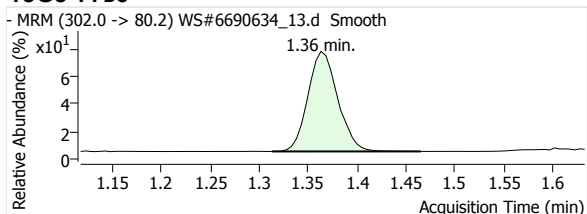
13C2-PFDoA



13C2-PFTeDA

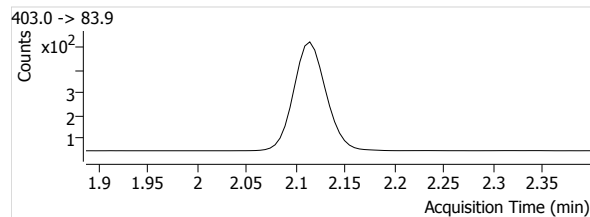
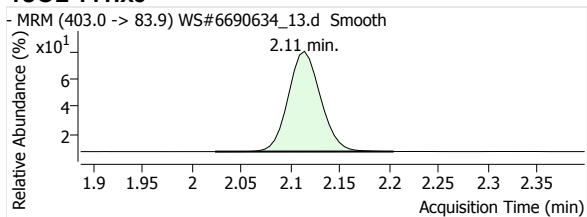


13C3-PFBS

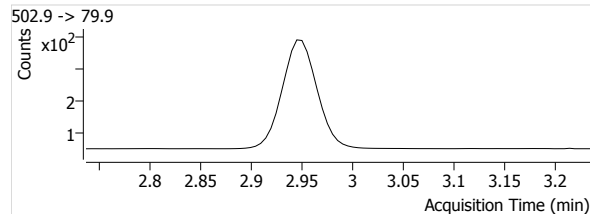
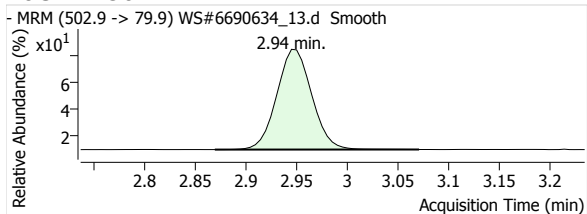


Quantitative Analysis Report

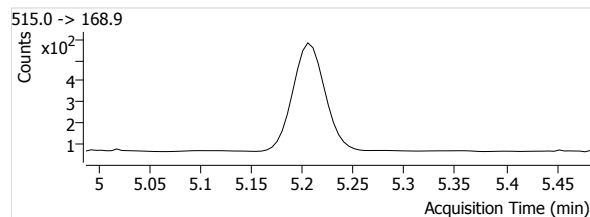
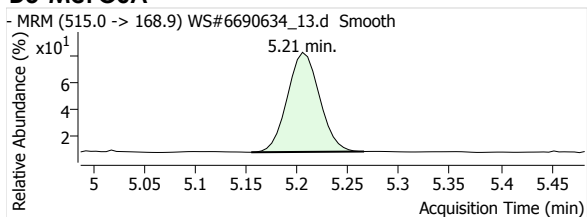
18O2-PFHxS



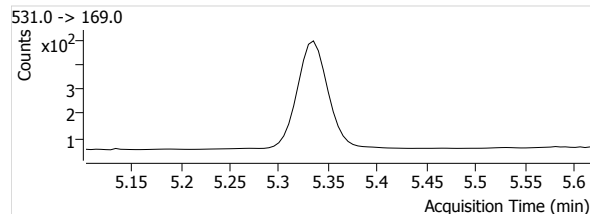
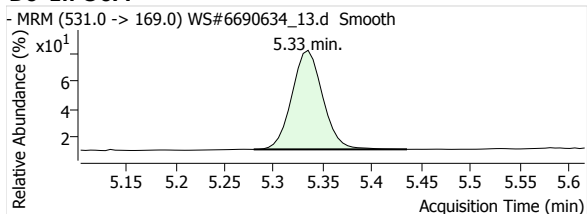
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

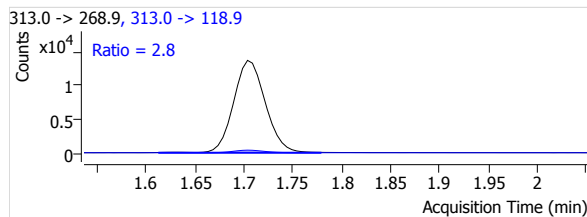
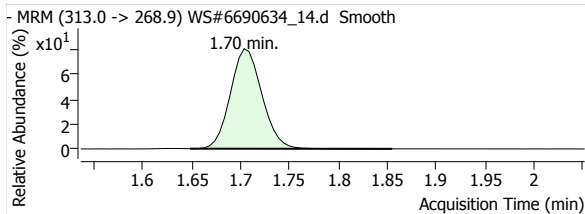
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Sample Name 6690634:MTRX SPK:D1
Type QC
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/21 11:30:42 PM
Comment MLP498-01
User Defined MI PFOA

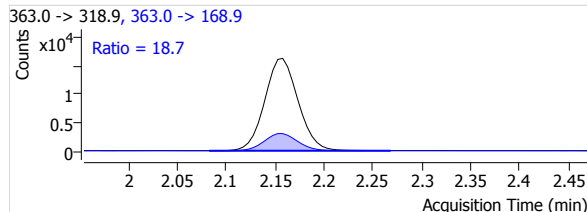
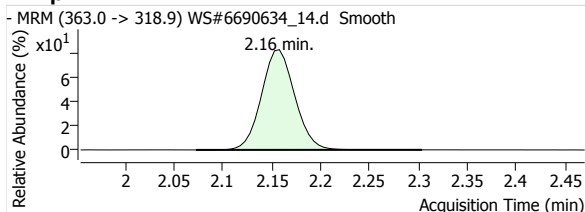
Data File WS#6690634_14.d
Instrument LCMS04
Position P1-B4
Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	20.000	0.5500	114.6	30744	1.70	33928	4.1047	865	1.70	5117	2.8
PFHpA 1	µg/L	20.000	0.5573	116.1	38767	2.16	22458	3.8682	7268	2.16	65637	18.7
PFOA 1	µg/L	20.000	0.5462	113.8	21290	2.62	83329	3.8188	5268	2.62	32916	24.7
PFNA 1	µg/L	20.000	0.5311	110.6	18728	3.06	37220	3.7720	3999	3.06	7894	21.4
PFDA 1	µg/L	20.000	0.5524	115.1	31331	3.46	19352	4.6966	5060	3.46	57333	16.2
PFUnA 1	µg/L	20.000	0.5456	113.7	24492	3.80	423451	3.7188	3578	3.80	13373	14.6
PFDoA 1	µg/L	20.000	0.5271	109.8	18928	4.11	18265	3.3039	2192	4.11	12442	11.6
PFTeDA 1	µg/L	20.000	0.6025	125.5	16640	4.37	13509	3.6612	1251	4.37	17423	7.5
PFTeDA 1	µg/L	20.000	0.5039	105.0	15407	4.61	25455	3.3899	787	4.61	8292	5.1
PFBS 1	µg/L	20.000	0.5403	112.6	5656	1.36	7841	3.4362	2628	1.36	18314	46.5
PFHxS 1	µg/L	20.000	0.6224	129.7	4994	2.08	37537	4.5197	2689	2.09	12435	53.8
PFOS 1	µg/L	20.000	0.7211	150.2	3635	2.90	29589	4.6482	2036	2.89	13459	56.0
MeFOSA 1	µg/L	20.000	0.4982	103.8	1843	5.21	124	1.4331	1683	5.21	428	91.3
EtFOSA 1	µg/L	20.000	0.5259	109.6	1805	5.33	89	1.7978	1617	5.33	481	89.6
13C2-PFHxA	µg/L	100.000	106.6344	106.6	7490	1.70	632		--	--	--	--
13C4-PFHpA	µg/L	100.000	103.6937	103.7	10022	2.16	1304		--	--	--	--
13C4-PFOA	µg/L	100.000	57.8620	57.9	5575	2.62	845		--	--	--	--
13C5-PFNA	µg/L	100.000	65.6399	65.6	4965	3.06	730		--	--	--	--
13C2-PFDA	µg/L	100.000	102.0499	102.0	6671	3.47	1121		--	--	--	--
13C2-PFUnA	µg/L	100.000	84.6421	84.6	6586	3.81	726		--	--	--	--
13C2-PFDoA	µg/L	100.000	56.6387	56.6	5729	4.11	929		--	--	--	--
13C2-PFTeDA	µg/L	100.000	36.2440	36.2	4545	4.60	1287		--	--	--	--
13C3-PFBS	µg/L	100.000	106.6753	106.7	1646	1.36	93		--	--	--	--
18O2-PFHxS	µg/L	100.000	108.7598	108.8	1105	2.11	650		--	--	--	--
13C4-PFOS	µg/L	100.000	81.2046	81.2	782	2.95	345		--	--	--	--
D3-MeFOSA	µg/L	100.000	52.9000	52.9	1286	5.21	51		--	--	--	--
D5-EtFOSA	µg/L	100.000	47.9694	48.0	1004	5.33	45		--	--	--	--

PFHxA 1

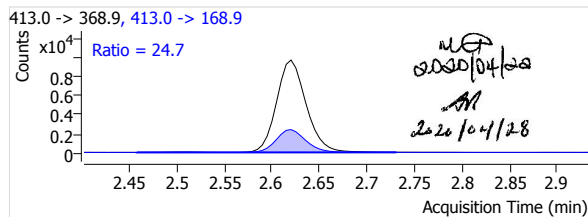
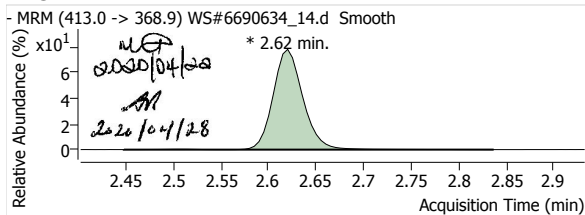


PFHpA 1

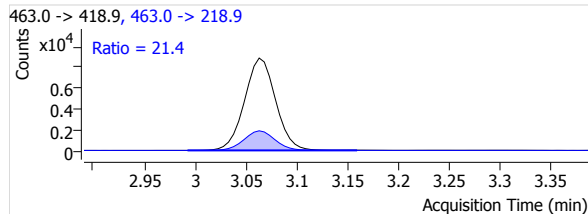
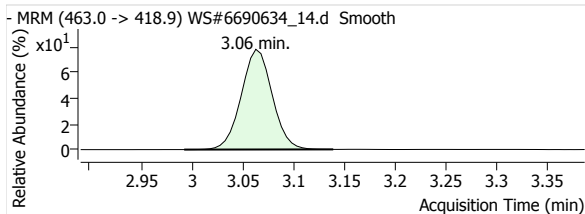


Quantitative Analysis Report

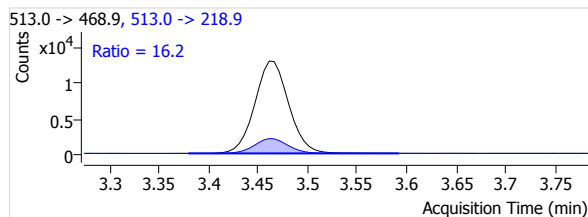
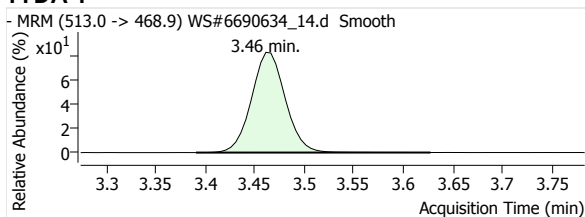
PFOA 1



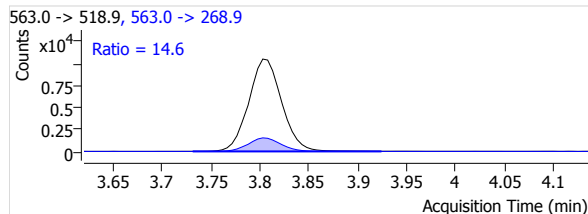
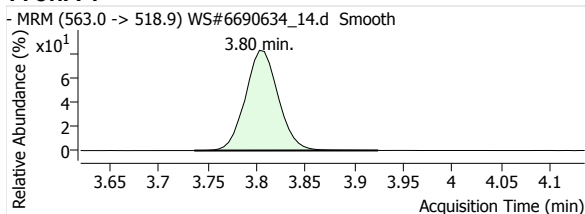
PFNA 1



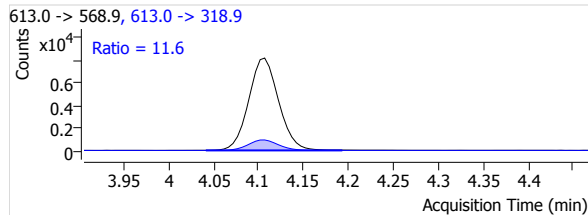
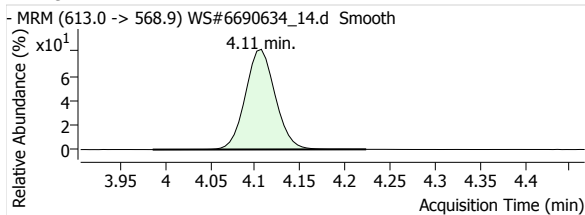
PFDA 1



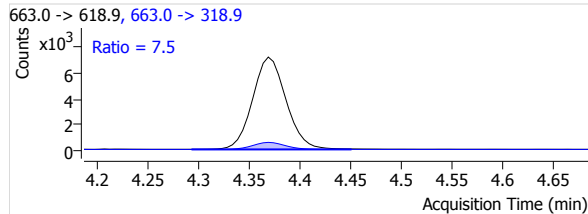
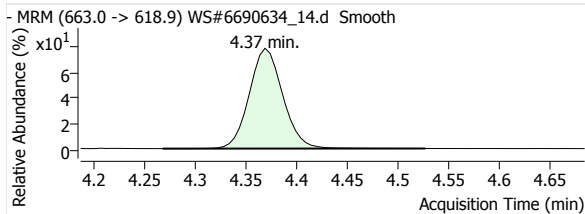
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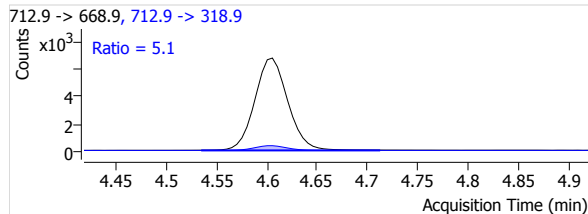
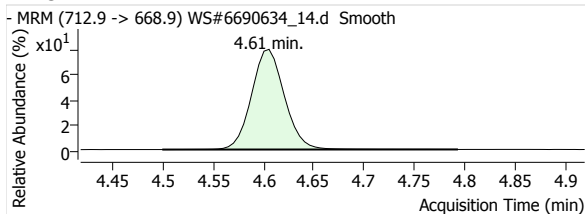
PFDaA 1



PFTrDA 1

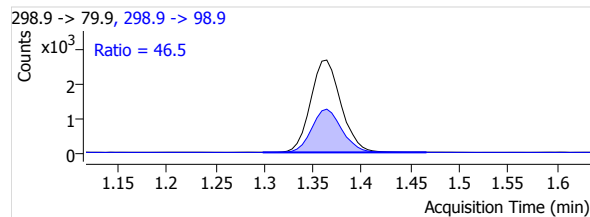
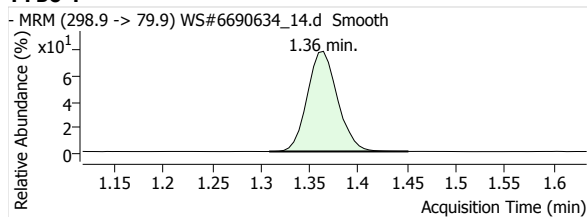


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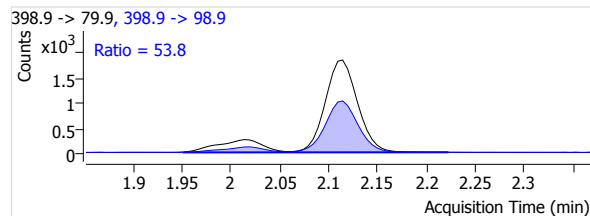
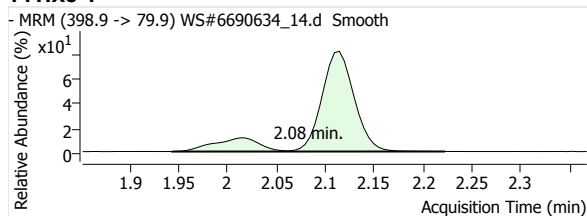


Quantitative Analysis Report

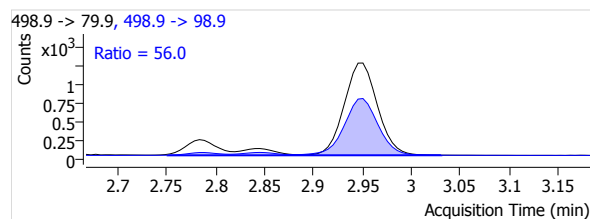
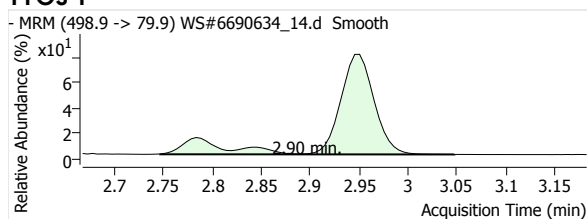
PFBS 1



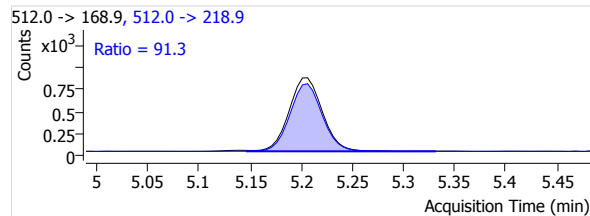
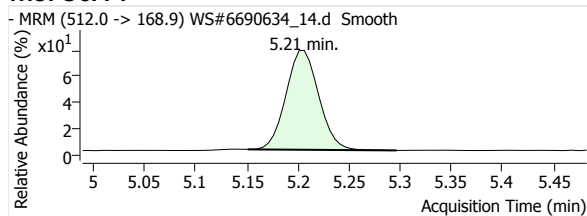
PFHxS 1



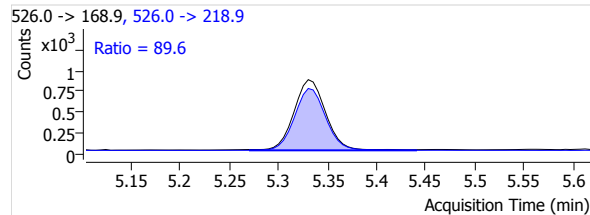
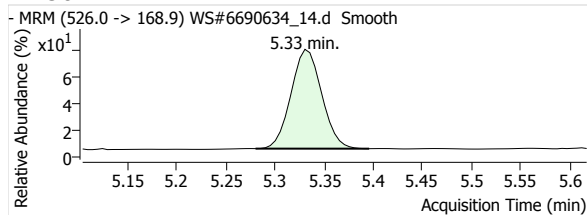
PFOS 1



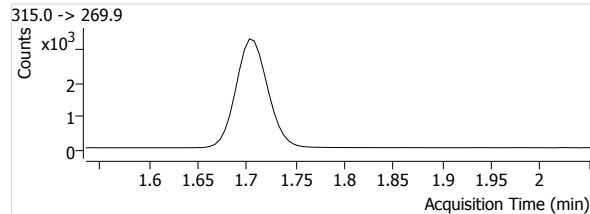
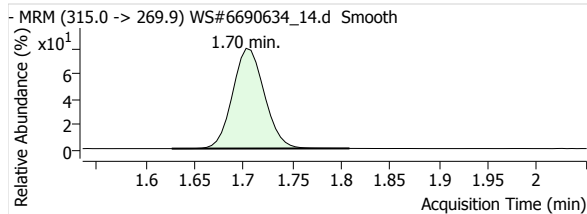
MeFOSA 1



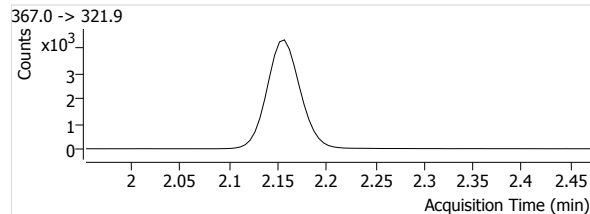
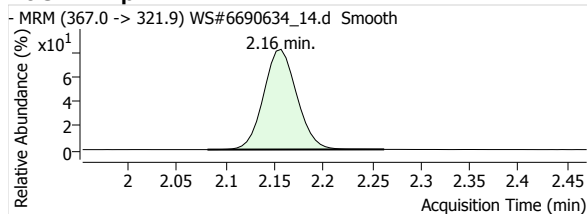
eFOSA 1



13C2-PFHxA

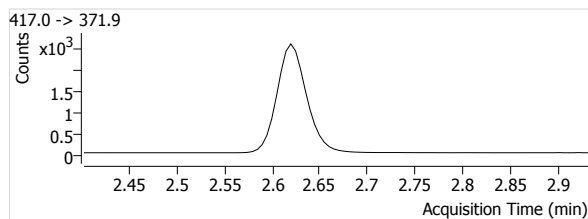
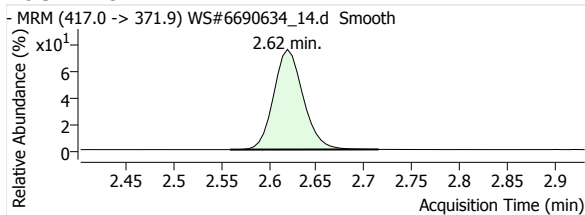


13C4-PFHpA

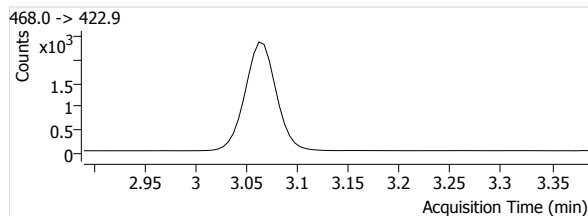
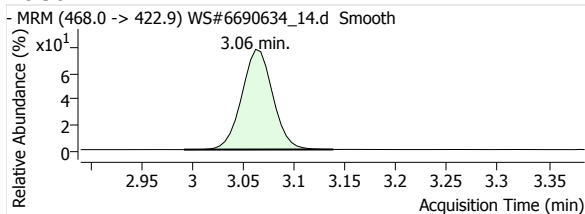


Quantitative Analysis Report

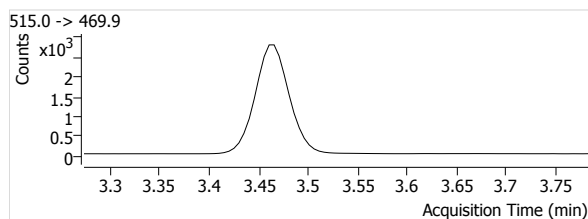
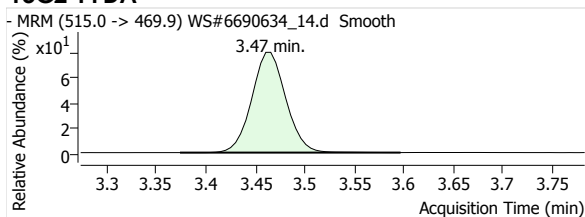
13C4-PFOA



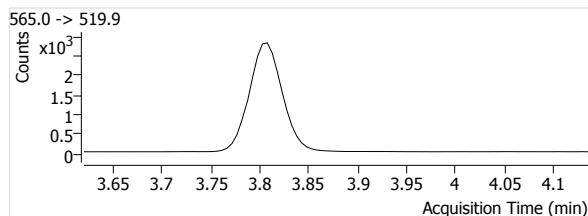
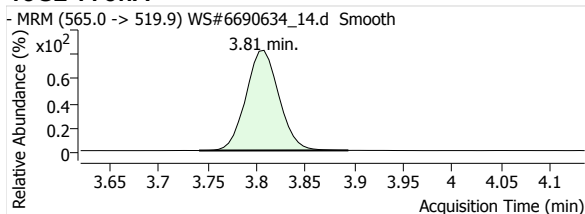
13C5-PFNA



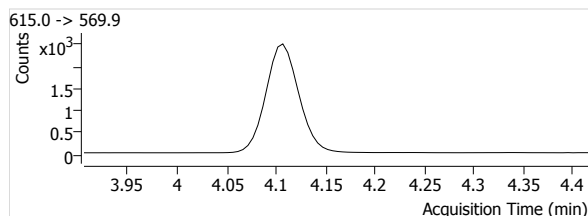
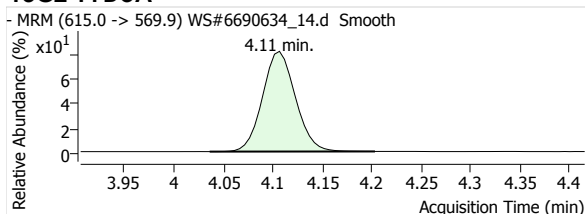
13C2-PFDA



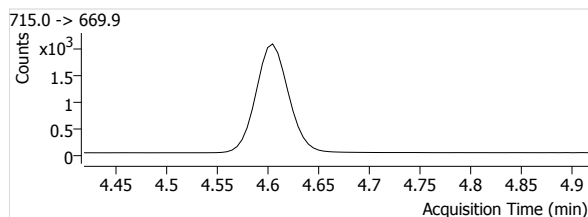
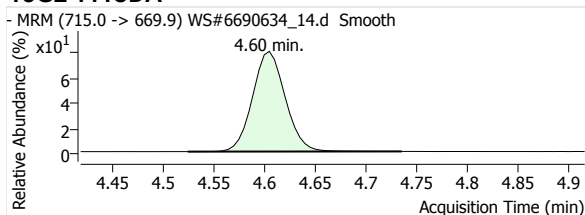
13C2-PFUnA



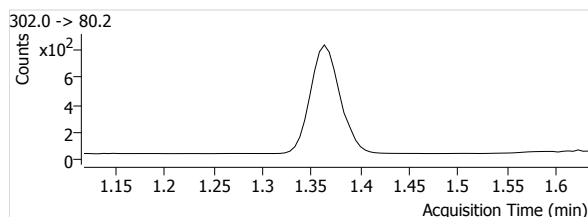
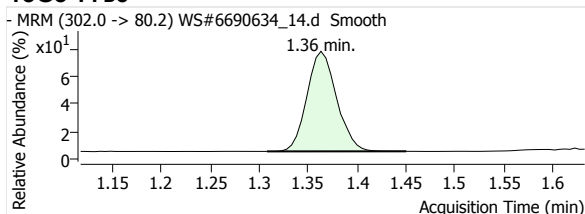
13C2-PFDoA



13C2-PFTeDA

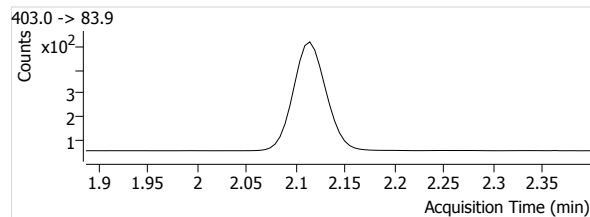
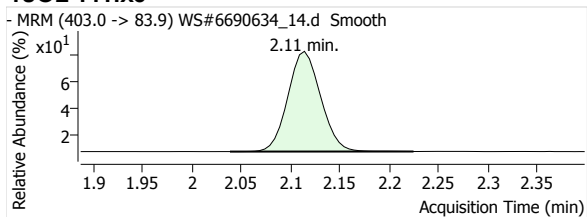


13C3-PFBS

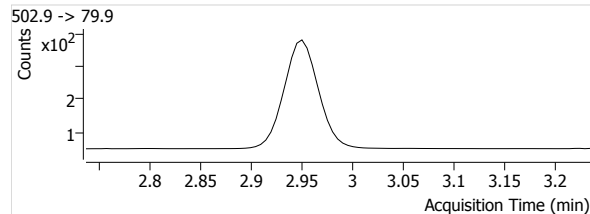
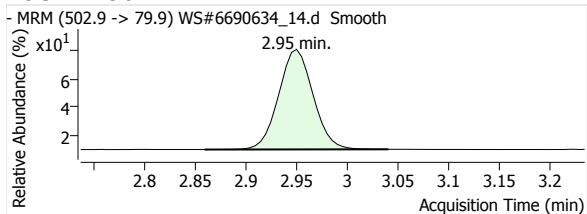


Quantitative Analysis Report

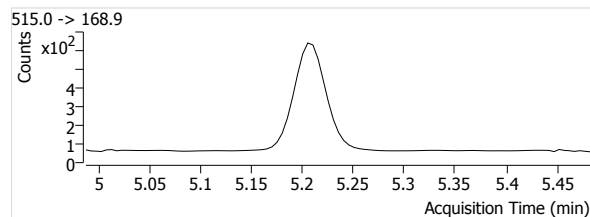
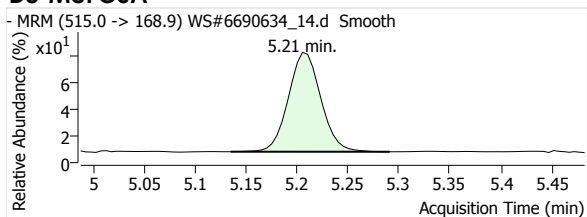
18O2-PFHxs



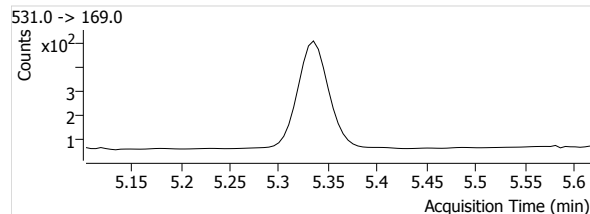
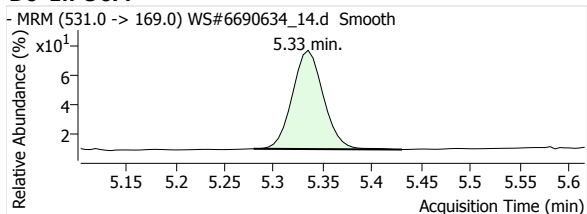
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

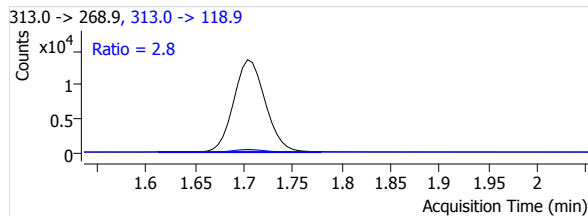
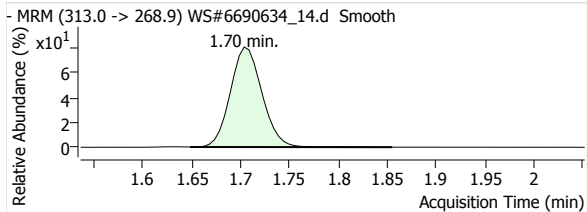
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Sample Name 6690634:MTRX SPK:D1
Type QC
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/21 11:30:42 PM
Comment MLP498-01
User Defined MI PFOA

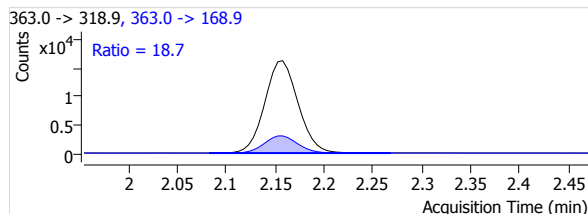
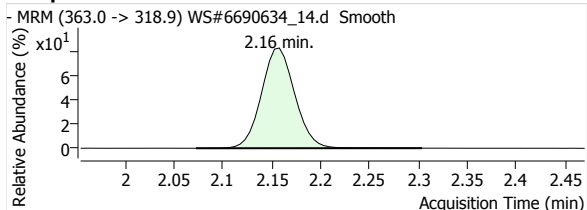
Data File WS#6690634_14.d
Instrument LCMS04
Position P1-B4
Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	20.000	0.5500	114.6	30744	1.70	33928	4.1047	865	1.70	5117	2.8
PFHpA 1	µg/L	20.000	0.5573	116.1	38767	2.16	22458	3.8682	7268	2.16	65637	18.7
PFOA 1	µg/L	20.000	0.5413	112.8	21101	2.62	83324	3.7849	5199	2.62	32908	24.6
PFNA 1	µg/L	20.000	0.5311	110.6	18728	3.06	37220	3.7720	3999	3.06	7894	21.4
PFDA 1	µg/L	20.000	0.5524	115.1	31331	3.46	19352	4.6966	5060	3.46	57333	16.2
PFUnA 1	µg/L	20.000	0.5456	113.7	24492	3.80	423451	3.7188	3578	3.80	13373	14.6
PFDaA 1	µg/L	20.000	0.5271	109.8	18928	4.11	18265	3.3039	2192	4.11	12442	11.6
PFTrDA 1	µg/L	20.000	0.6025	125.5	16640	4.37	13509	3.6612	1251	4.37	17423	7.5
PFTeDA 1	µg/L	20.000	0.5039	105.0	15407	4.61	25455	3.3899	787	4.61	8292	5.1
PFBS 1	µg/L	20.000	0.5403	112.6	5656	1.36	7841	3.4362	2628	1.36	18314	46.5
PFHxS 1	µg/L	20.000	0.6222	129.6	4994	2.08	37537	4.5197	2689	2.09	12435	53.8
PFOS 1	µg/L	20.000	0.7211	150.2	3635	2.90	29589	4.6482	2036	2.89	13459	56.0
MeFOSA 1	µg/L	20.000	0.4982	103.8	1843	5.21	124	1.4331	1683	5.21	428	91.3
EtFOSA 1	µg/L	20.000	0.5259	109.6	1805	5.33	89	1.7978	1617	5.33	481	89.6
13C2-PFHxA	µg/L	100.000	106.6344	106.6	7490	1.70	632		--	--	--	--
13C4-PFHpA	µg/L	100.000	103.6937	103.7	10022	2.16	1304		--	--	--	--
13C4-PFOA	µg/L	100.000	57.8620	57.9	5575	2.62	845		--	--	--	--
13C5-PFNA	µg/L	100.000	65.6399	65.6	4965	3.06	730		--	--	--	--
13C2-PFDA	µg/L	100.000	102.0499	102.0	6671	3.46	1121		--	--	--	--
13C2-PFUnA	µg/L	100.000	84.6421	84.6	6586	3.81	726		--	--	--	--
13C2-PFDaA	µg/L	100.000	56.6387	56.6	5729	4.11	929		--	--	--	--
13C2-PFTeDA	µg/L	100.000	36.2440	36.2	4545	4.60	1287		--	--	--	--
13C3-PFBS	µg/L	100.000	106.6753	106.7	1646	1.36	93		--	--	--	--
18O2-PFHxS	µg/L	100.000	108.7598	108.8	1105	2.11	650		--	--	--	--
13C4-PFOS	µg/L	100.000	81.2046	81.2	782	2.95	345		--	--	--	--
D3-MeFOSA	µg/L	100.000	52.9000	52.9	1286	5.21	51		--	--	--	--
D5-EtFOSA	µg/L	100.000	47.9694	48.0	1004	5.33	45		--	--	--	--

PFHxA 1

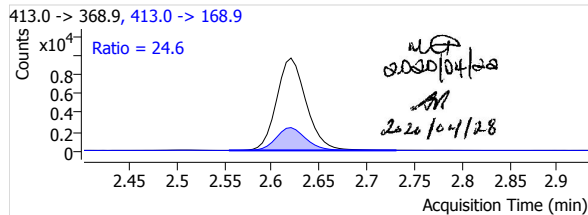
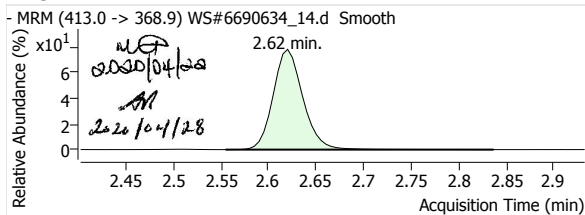


PFHpA 1

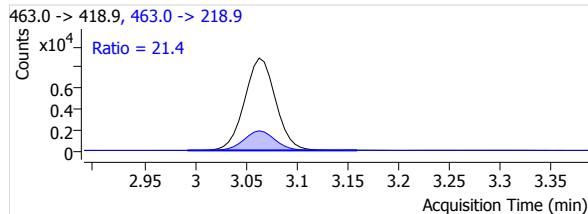
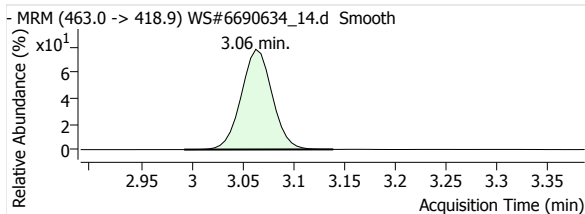


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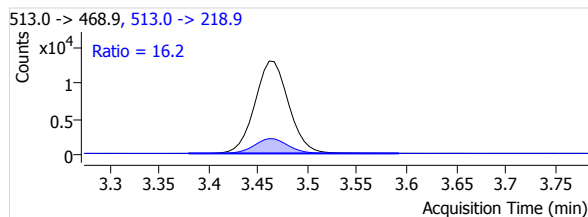
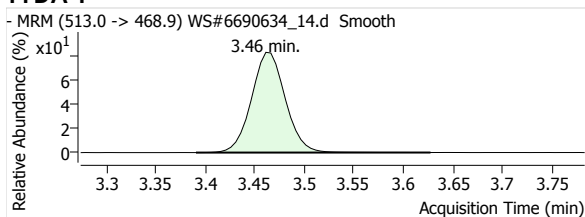
PFOA 1



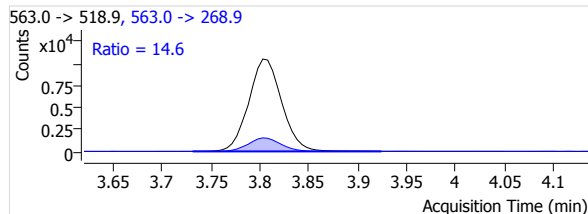
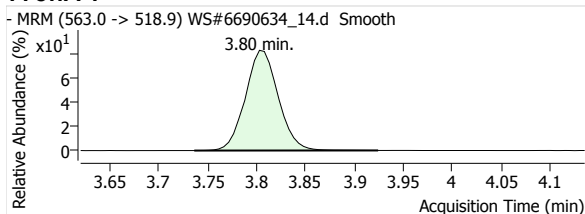
PFNA 1



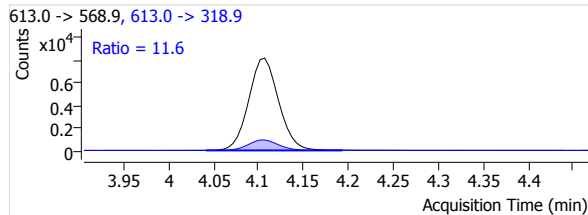
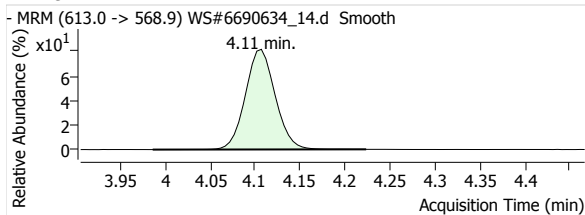
PFDA 1



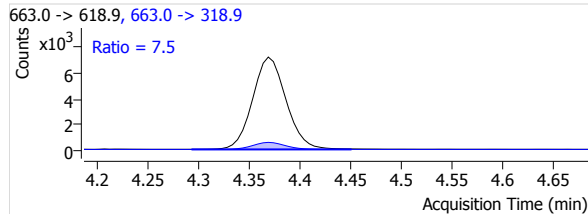
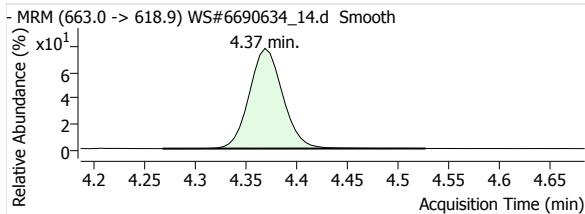
PFUnA 1



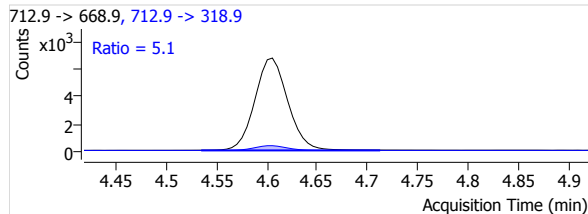
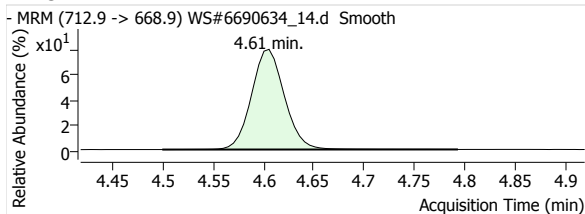
PFDaA 1



PFTrDA 1

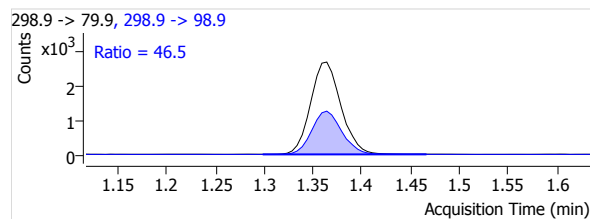
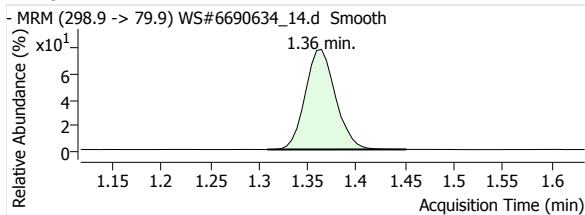


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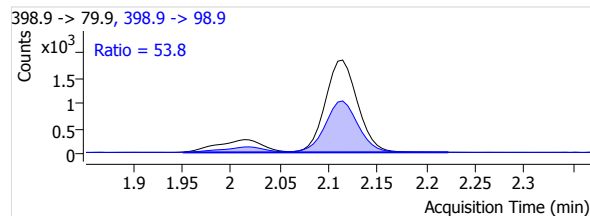
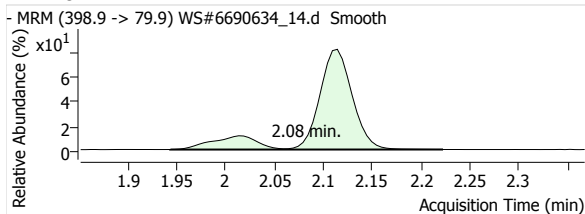


Quantitative Analysis Report

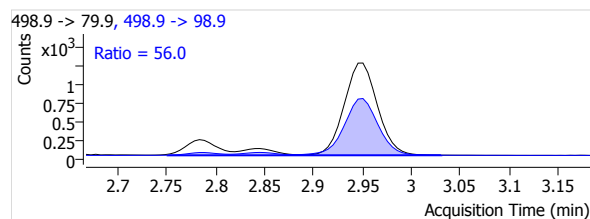
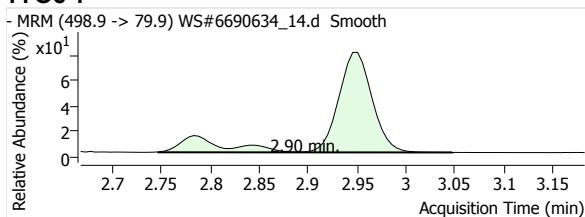
PFBS 1



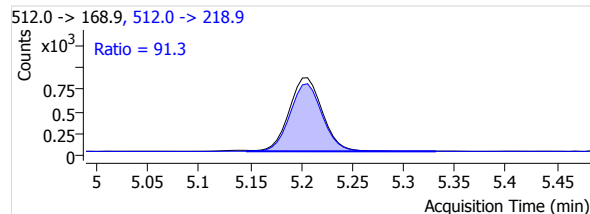
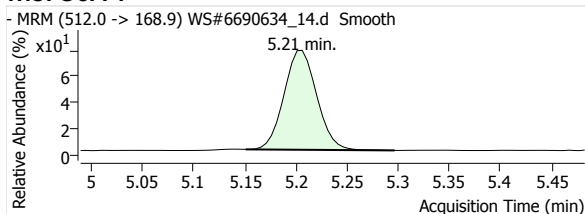
PFHxS 1



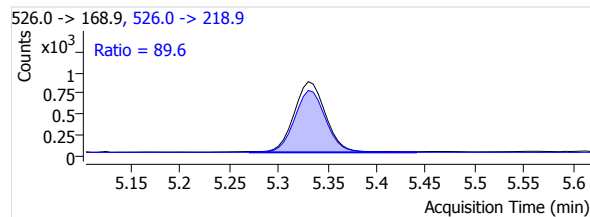
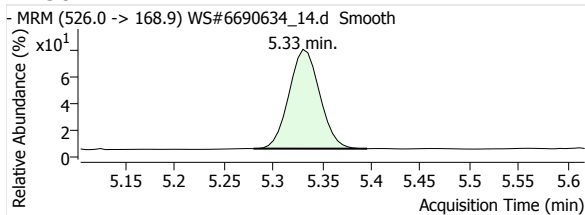
PFOS 1



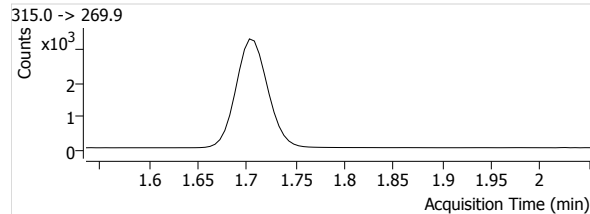
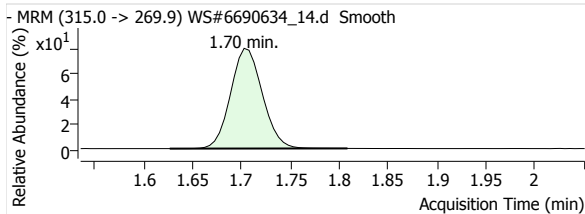
MeFOSA 1



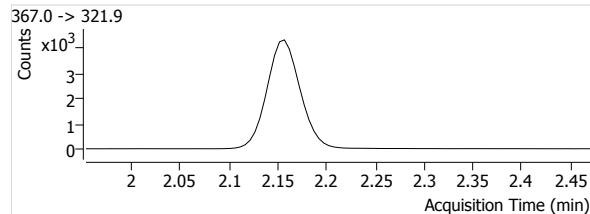
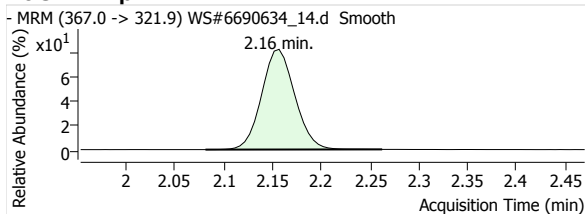
eFOSA 1



13C2-PFHxA

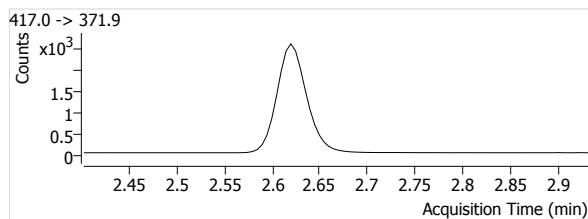
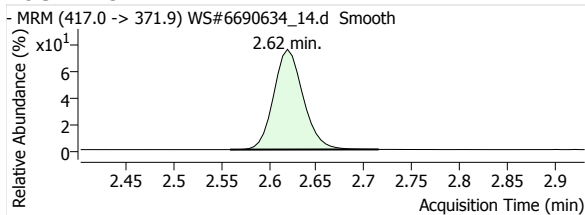


13C4-PFHpA

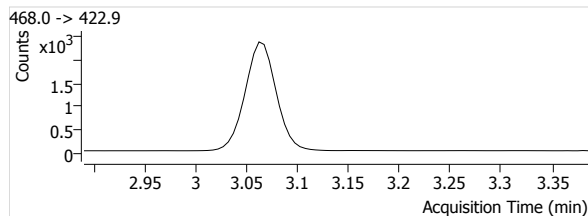
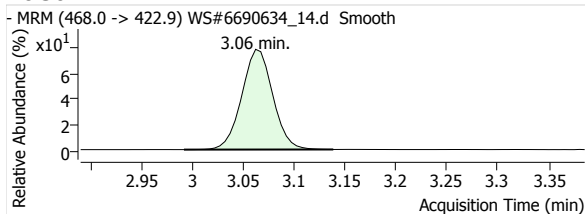


Quantitative Analysis Report

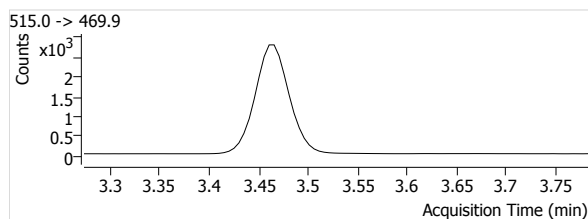
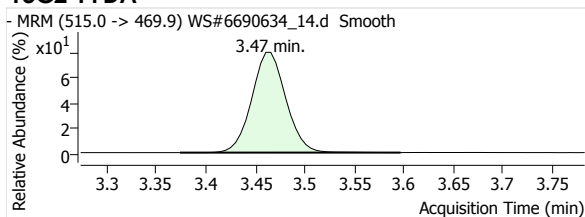
13C4-PFOA



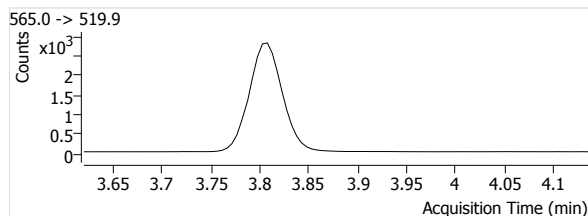
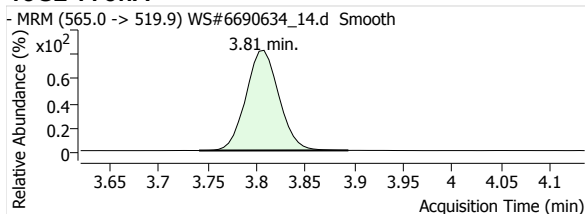
13C5-PFNA



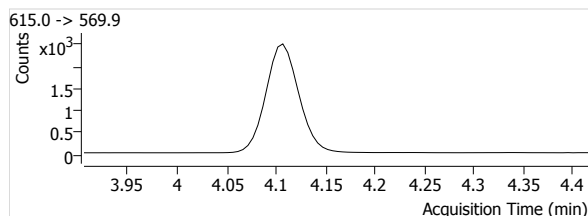
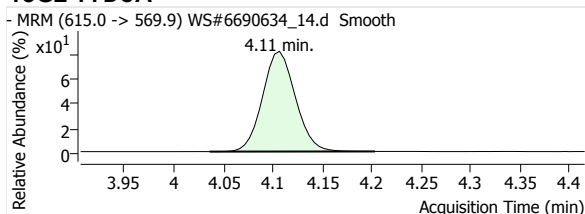
13C2-PFDA



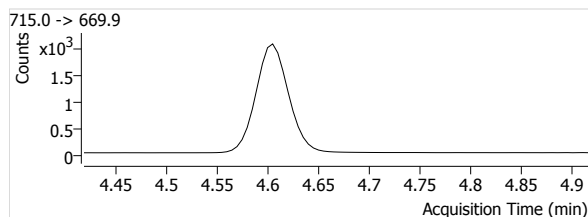
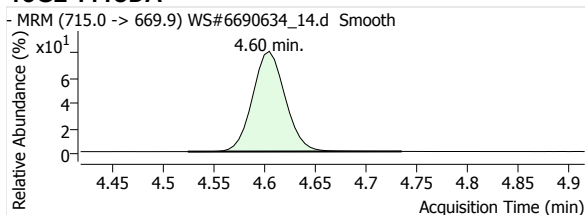
13C2-PFUnA



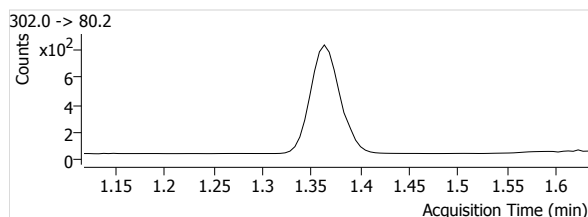
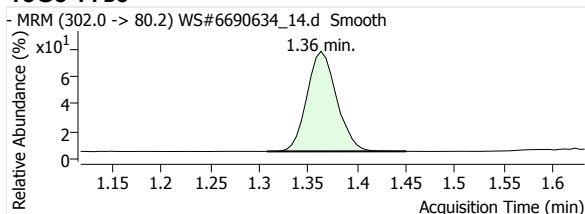
13C2-PFDoA



13C2-PFTeDA

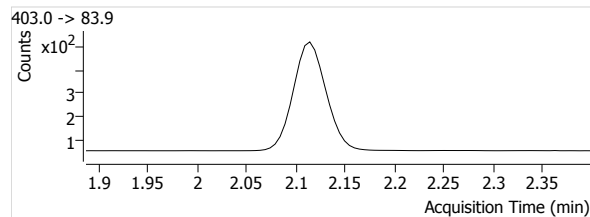
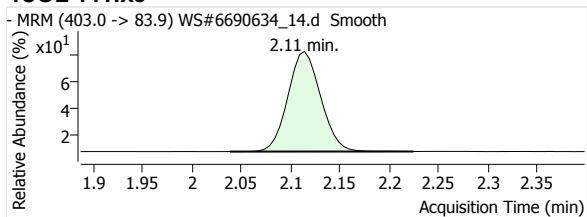


13C3-PFBS

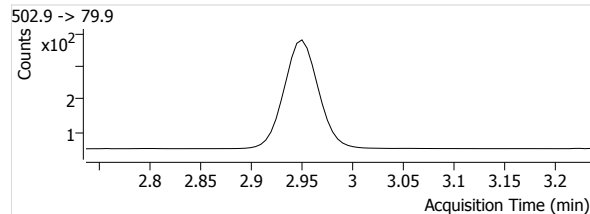
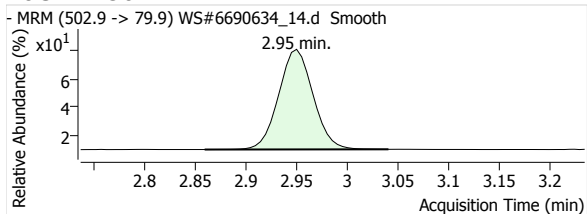


Quantitative Analysis Report

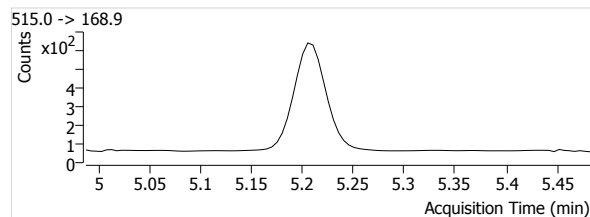
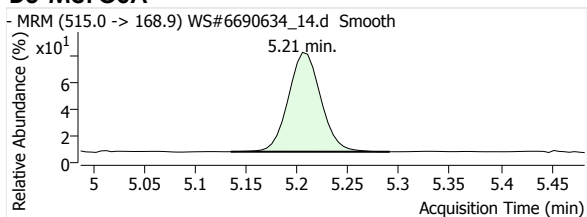
18O2-PFHxS



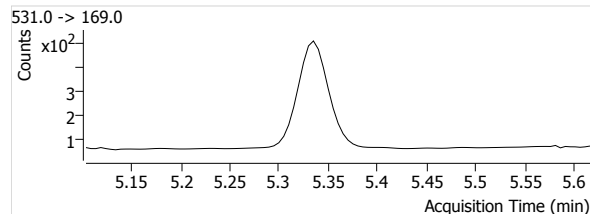
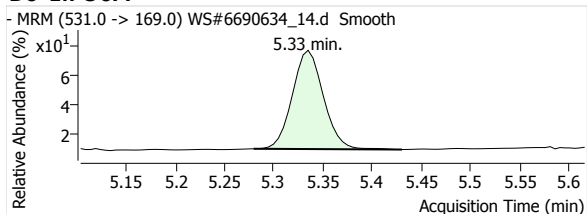
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



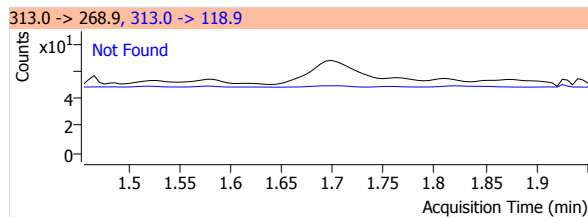
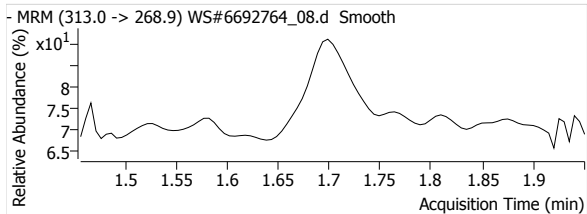
Quantitative Analysis Report

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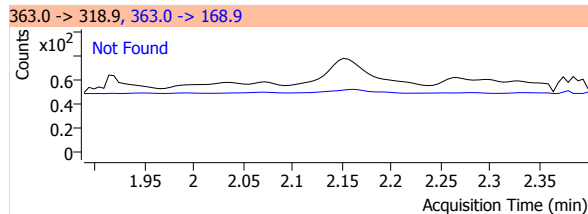
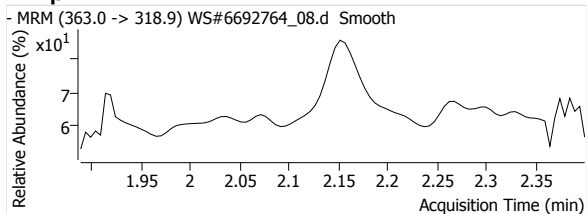
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Acq. Method File	PFAS.m	Position	P1-A8
Acq. Date-Time	2020/04/23 2:43:20 AM	Dil.	0.0
Comment	-		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHpA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	105.6648	--	8487	1.70	2021	--	--	--	--	--
13C4-PFHpA	µg/L	--	102.7265	--	11454	2.15	1588	--	--	--	--	--
13C4-PFOA	µg/L	--	101.8234	--	11001	2.63	2309	--	--	--	--	--
13C5-PFNA	µg/L	--	101.0695	--	8694	3.07	997	--	--	--	--	--
13C2-PFDA	µg/L	--	100.4964	--	7490	3.46	1249	--	--	--	--	--
13C2-PFUnA	µg/L	--	101.5956	--	8914	3.80	917	--	--	--	--	--
13C2-PFDoA	µg/L	--	101.0881	--	10777	4.10	2305	--	--	--	--	--
13C2-PFTeDA	µg/L	--	99.9642	--	13962	4.60	3685	--	--	--	--	--
13C3-PFBS	µg/L	--	102.2794	--	1750	1.36	344	--	--	--	--	--
18O2-PFHxS	µg/L	--	99.9124	--	1141	2.11	1131	--	--	--	--	--
13C4-PFOS	µg/L	--	99.2439	--	1050	2.95	1627	--	--	--	--	--
D3-MeFOSA	µg/L	--	100.7946	--	2664	5.21	138	--	--	--	--	--
D5-EtFOSA	µg/L	--	99.5124	--	2245	5.34	119	--	--	--	--	--

PFHxA 1

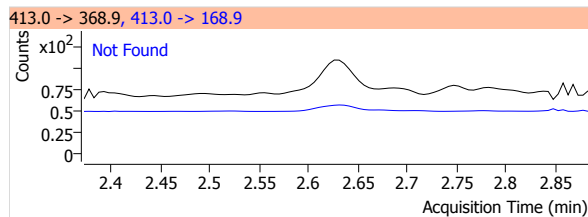
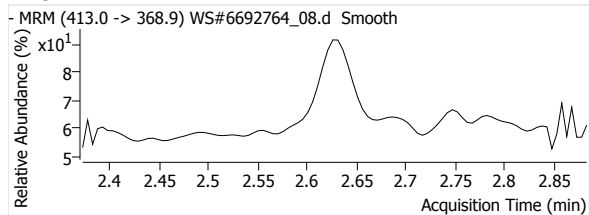


PFHpA 1

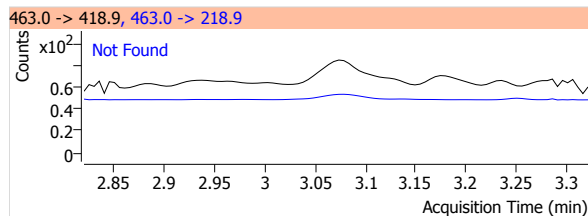
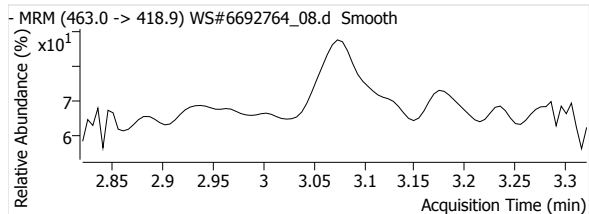


Quantitative Analysis Report

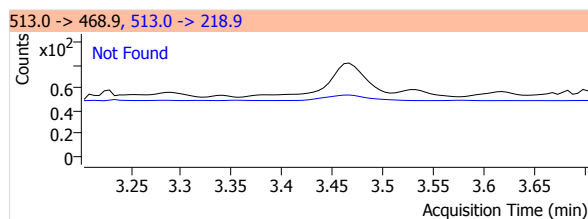
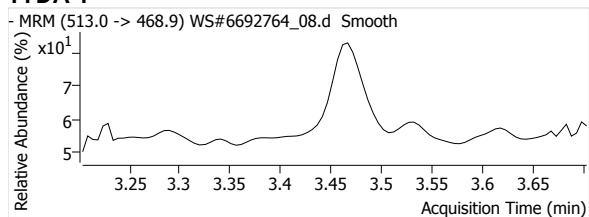
PFOA 1



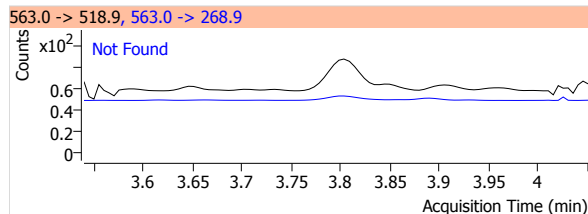
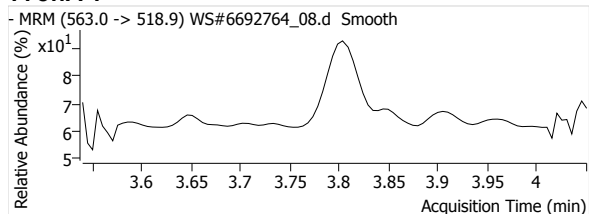
PFNA 1



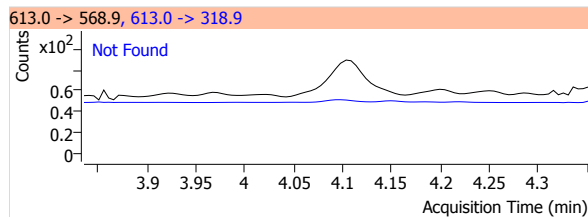
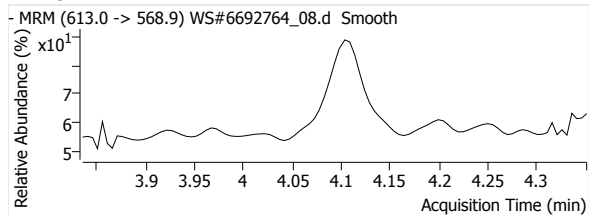
PFDA 1



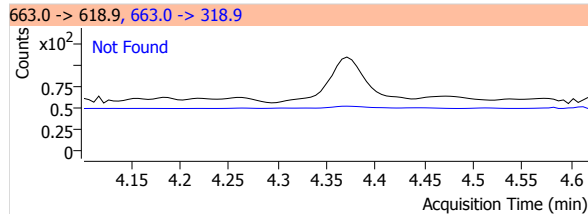
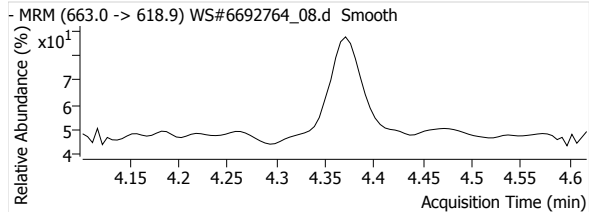
PFUnA 1



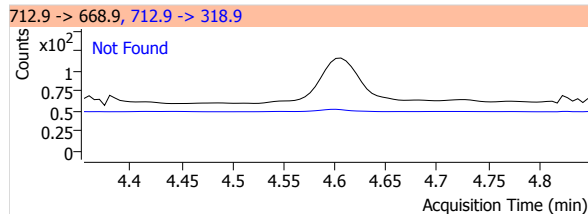
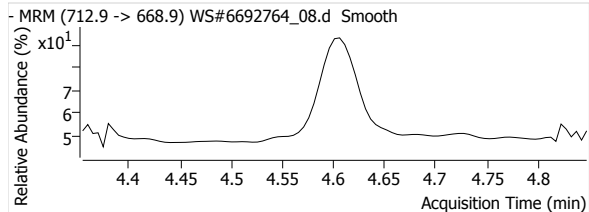
PFDaA 1



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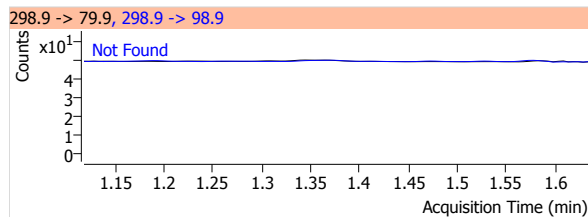
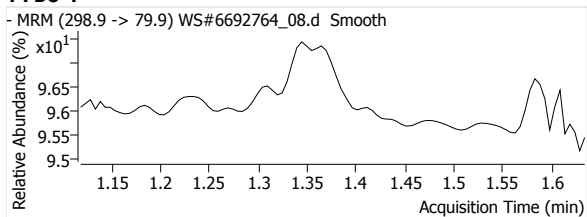


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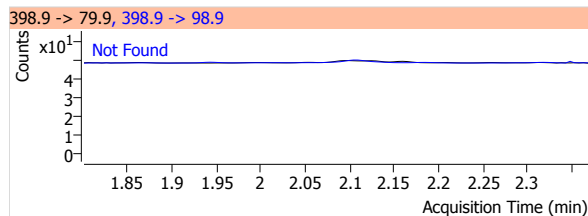
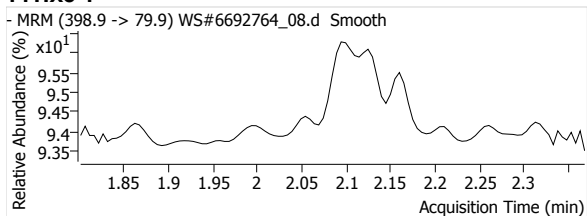


Quantitative Analysis Report

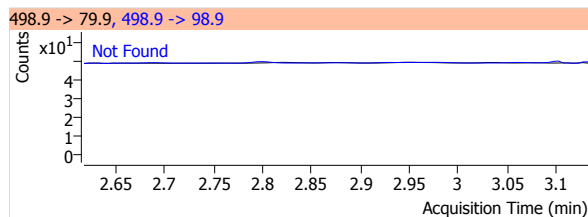
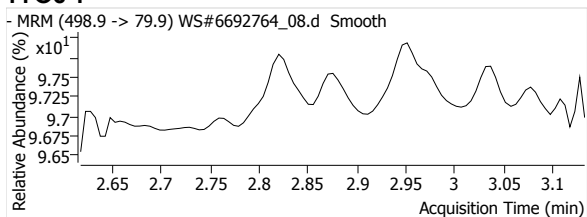
PFBS 1



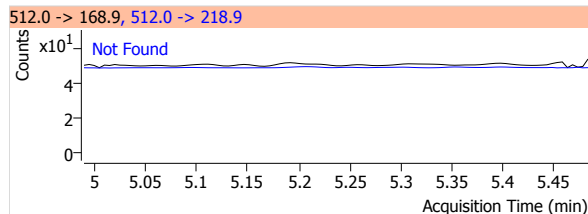
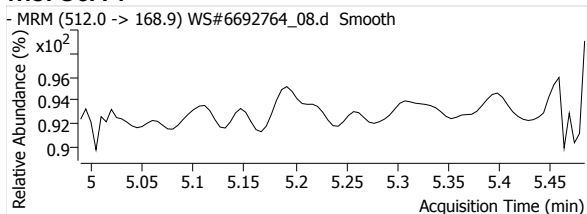
PFHxS 1



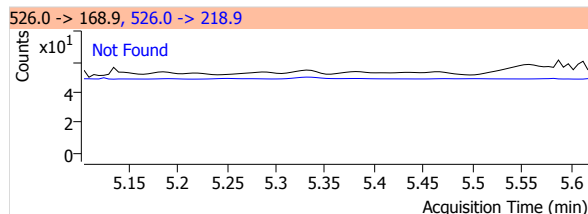
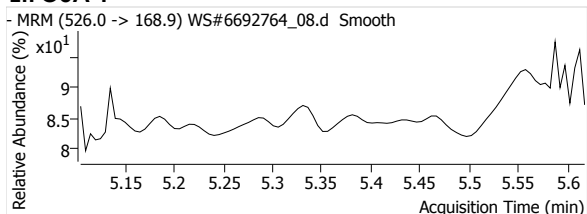
PFOS 1



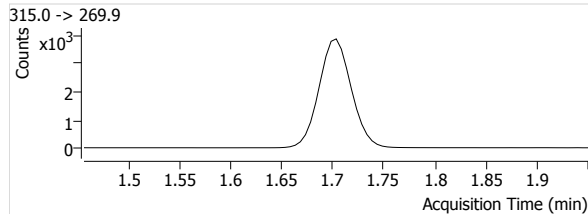
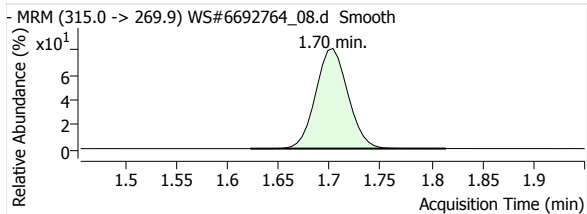
MeFOSA 1



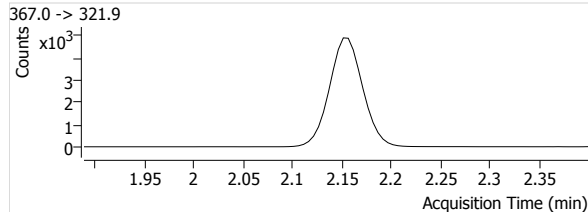
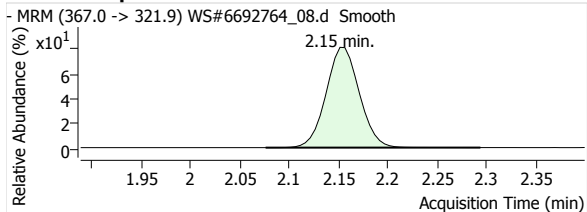
eFOSA 1



13C2-PFHxA

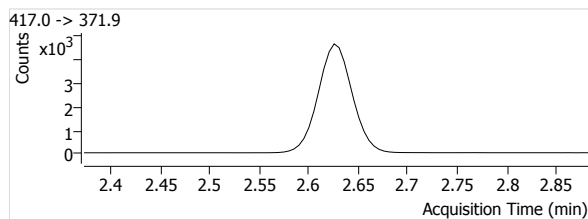
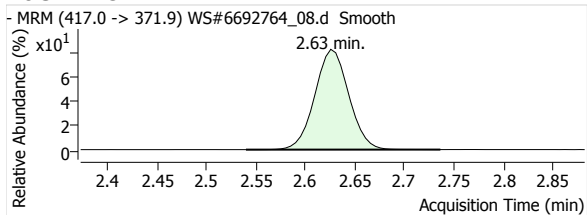


13C4-PFHpA

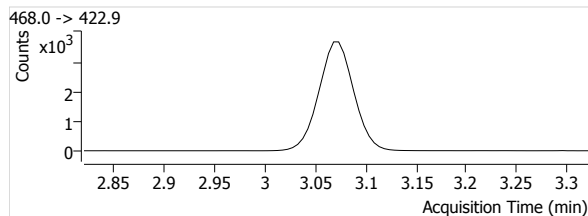
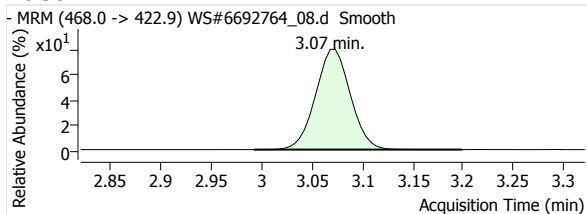


Quantitative Analysis Report

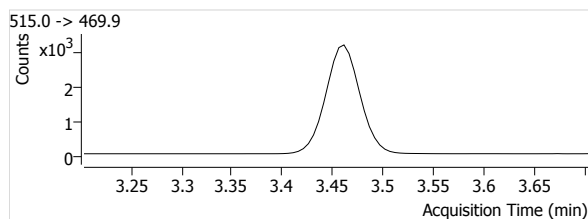
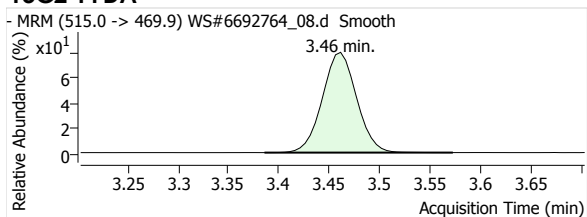
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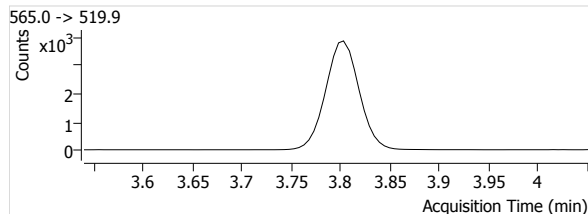
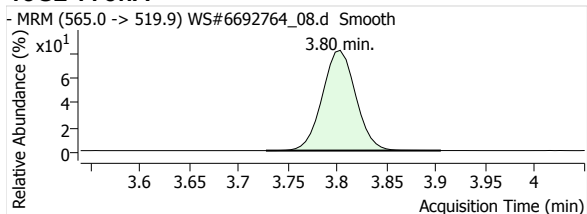
13C5-PFNA



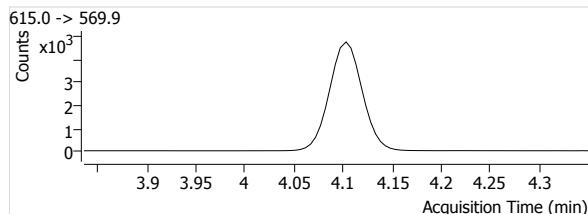
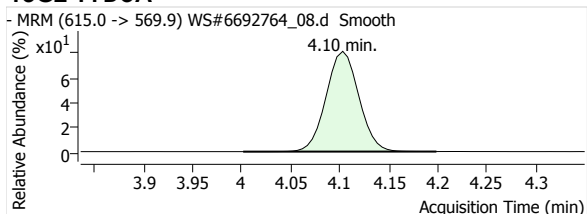
13C2-PFDA



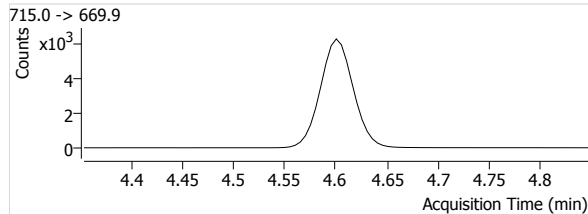
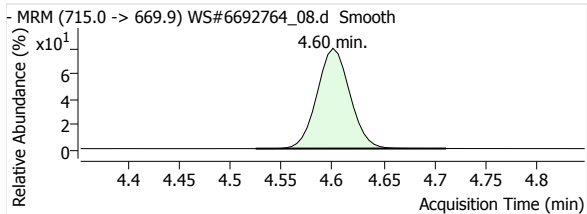
13C2-PFUnA



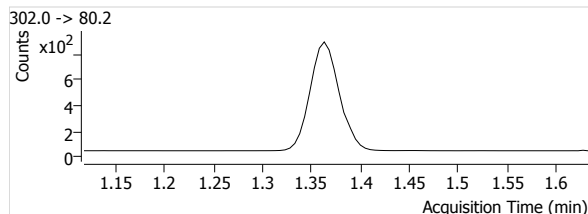
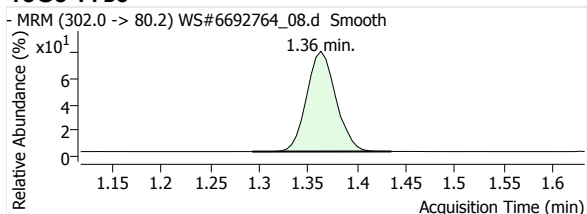
13C2-PFDoA



13C2-PFTeDA

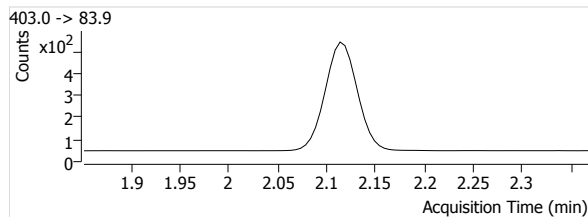
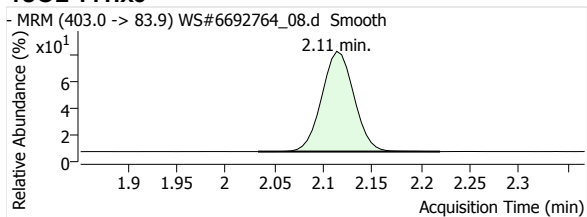


13C3-PFBS

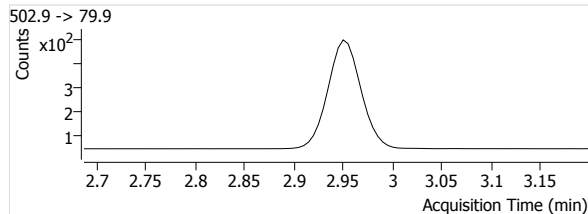
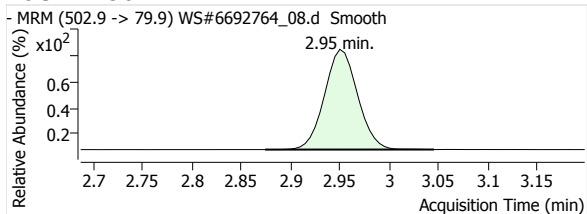


Quantitative Analysis Report

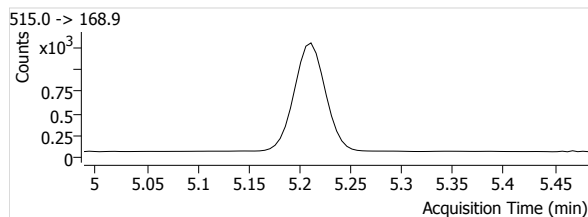
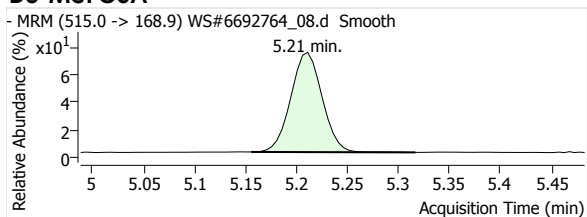
18O2-PFHxs



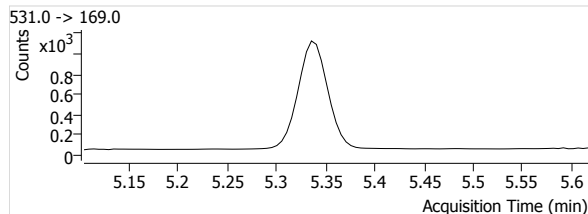
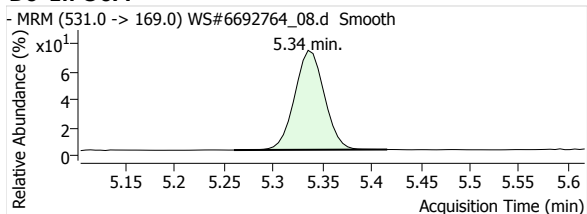
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



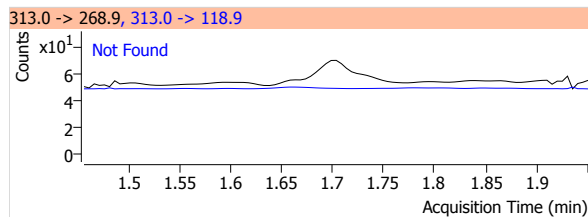
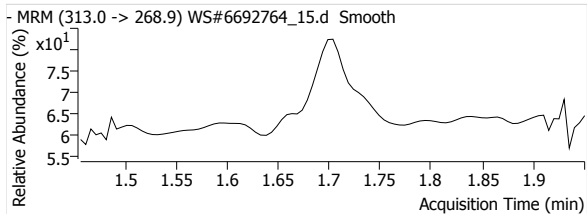
Quantitative Analysis Report

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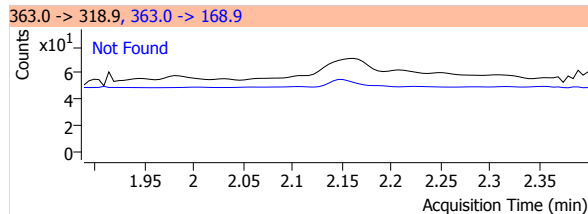
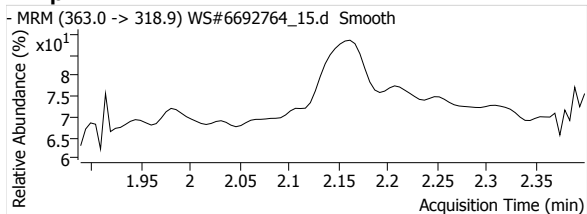
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Acq. Date-Time	2020/04/23 3:31:54 AM	Dil.	0.0
Comment	-		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHpA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	105.5279	--	8476	1.70	1874	--	--	--	--	--
13C4-PFHpA	µg/L	--	105.1031	--	11719	2.15	2367	--	--	--	--	--
13C4-PFOA	µg/L	--	104.2577	--	11264	2.63	2358	--	--	--	--	--
13C5-PFNA	µg/L	--	103.7317	--	8923	3.07	1891	--	--	--	--	--
13C2-PFDA	µg/L	--	101.0734	--	7533	3.46	1363	--	--	--	--	--
13C2-PFUnA	µg/L	--	105.1288	--	9224	3.80	1364	--	--	--	--	--
13C2-PFDaA	µg/L	--	103.3299	--	11016	4.10	2009	--	--	--	--	--
13C2-PFTeDA	µg/L	--	102.4701	--	14312	4.60	1857	--	--	--	--	--
13C3-PFBS	µg/L	--	103.2145	--	1766	1.36	859	--	--	--	--	--
18O2-PFHxS	µg/L	--	102.7145	--	1173	2.11	404	--	--	--	--	--
13C4-PFOS	µg/L	--	101.7013	--	1076	2.95	358	--	--	--	--	--
D3-MeFOSA	µg/L	--	102.0053	--	2696	5.21	120	--	--	--	--	--
D5-EtFOSA	µg/L	--	107.1809	--	2418	5.34	120	--	--	--	--	--

PFHxA 1

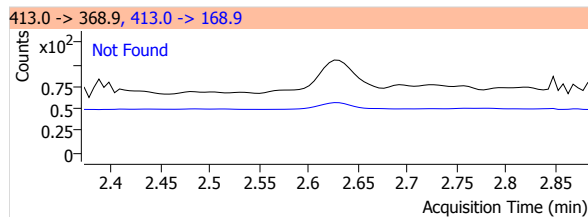
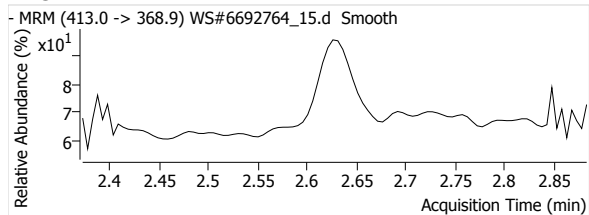


PFHpA 1

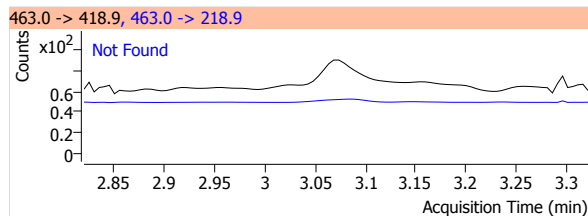
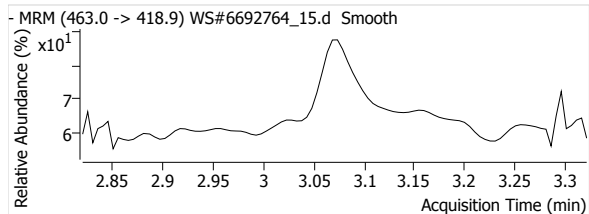


Quantitative Analysis Report

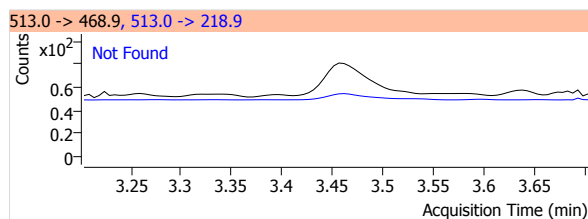
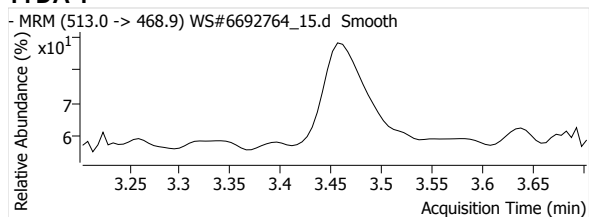
PFOA 1



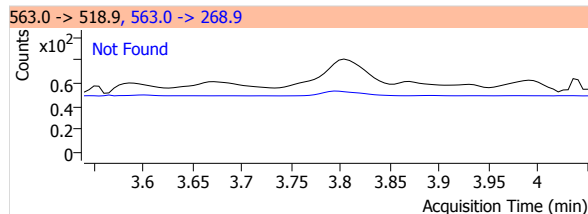
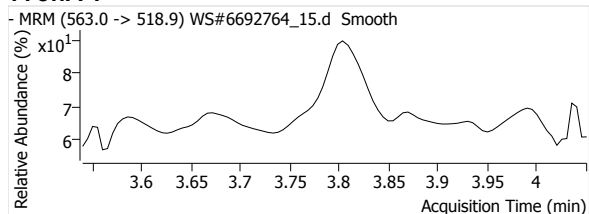
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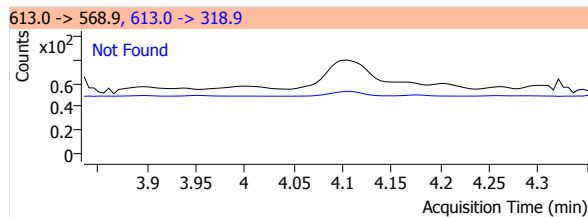
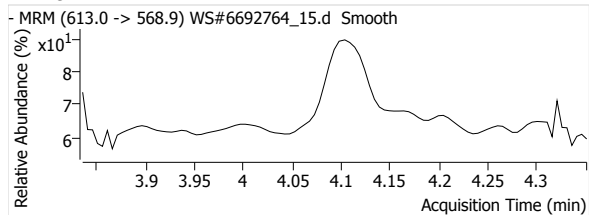
PFDA 1



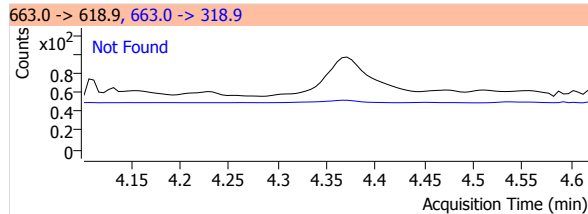
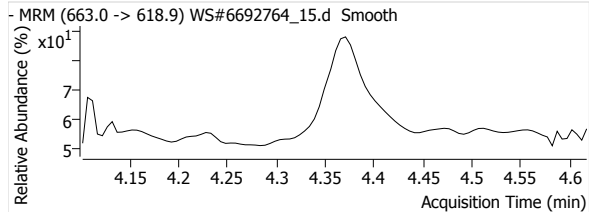
PFUnA 1



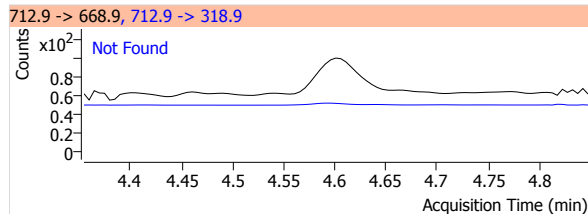
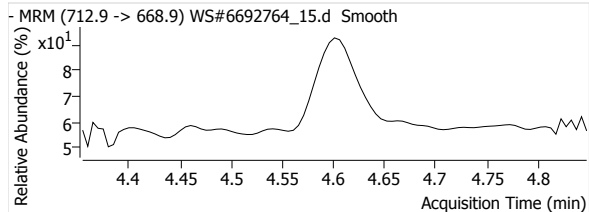
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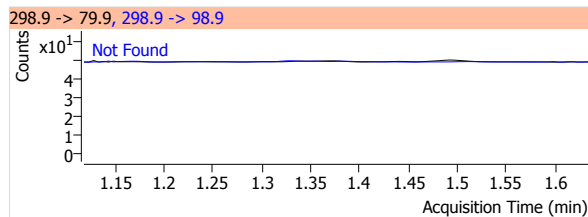
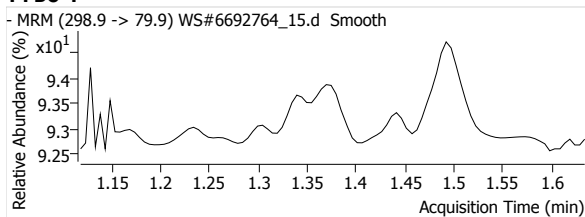


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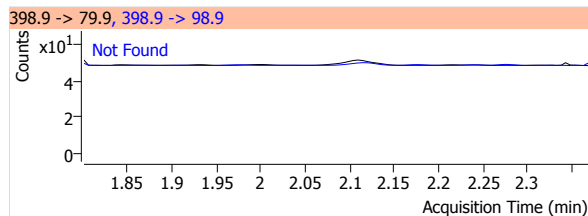
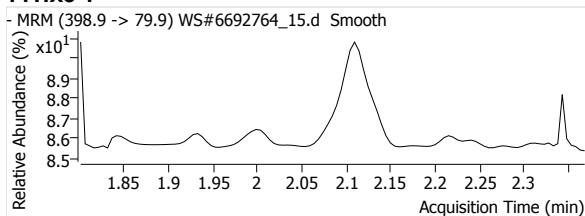


Quantitative Analysis Report

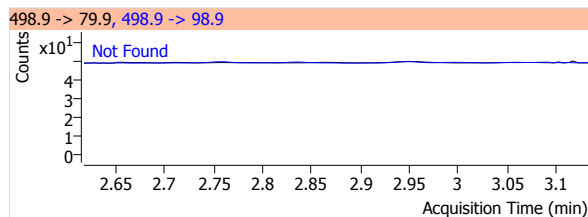
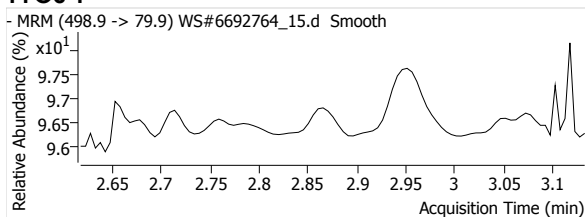
PFBS 1



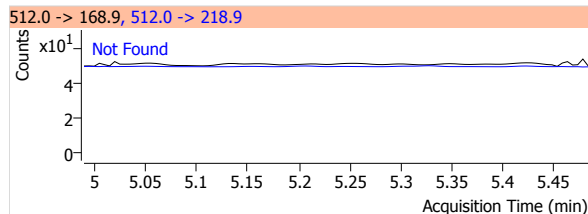
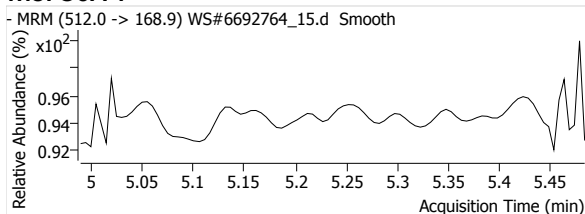
PFHxS 1



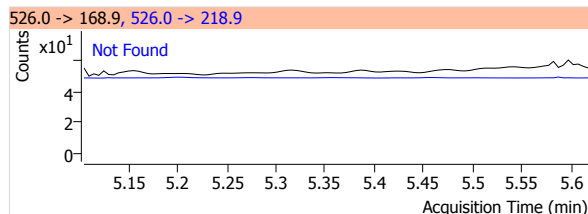
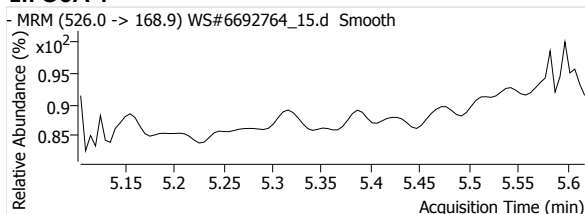
PFOS 1



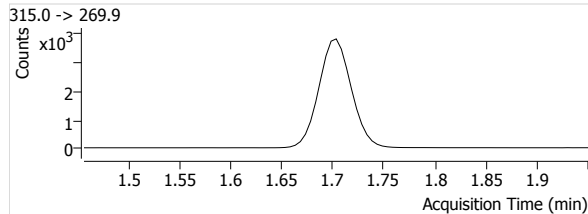
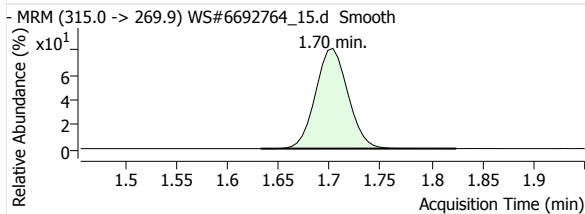
MeFOSA 1



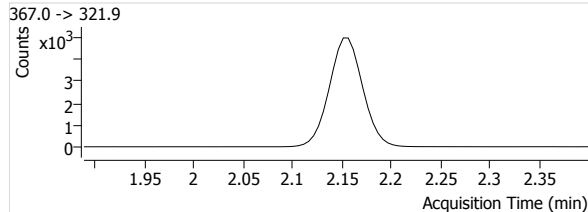
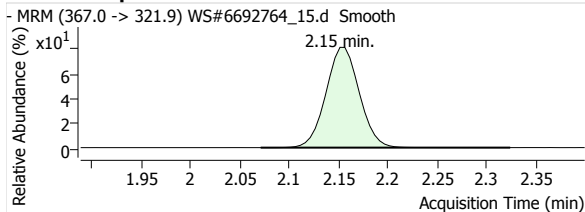
eFOSA 1



13C2-PFHxA

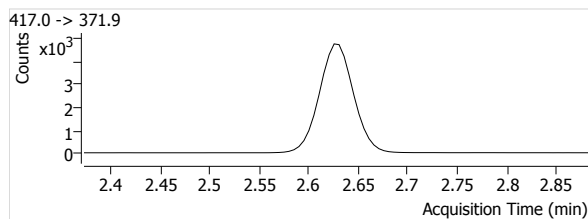
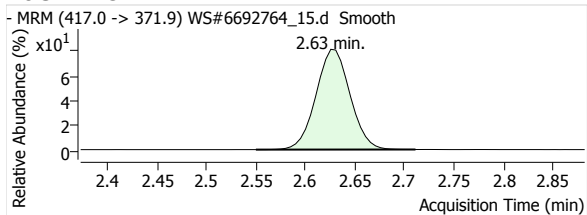


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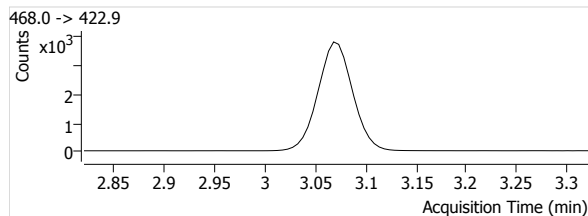
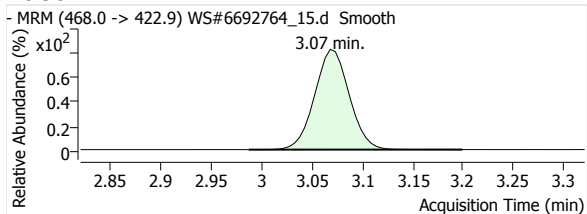


Quantitative Analysis Report

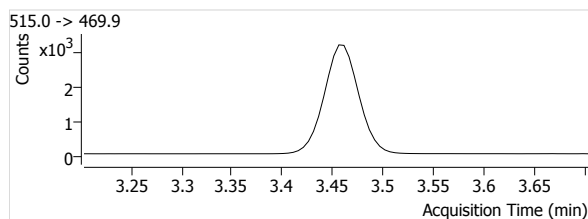
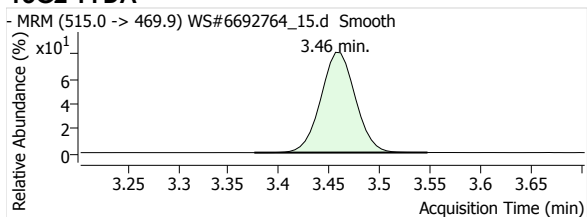
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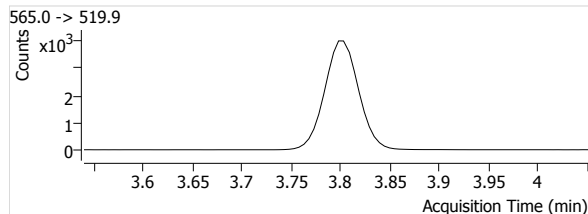
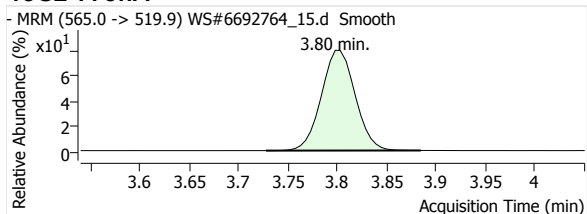
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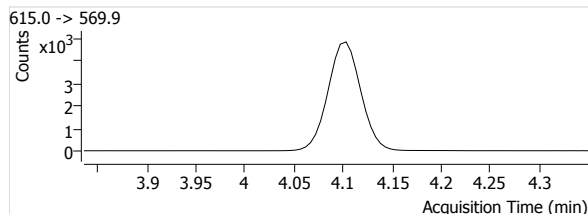
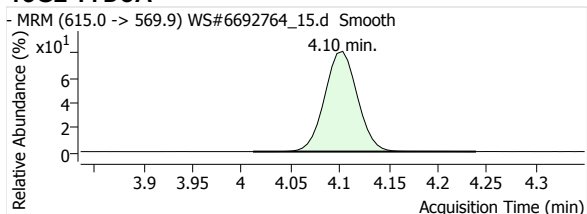
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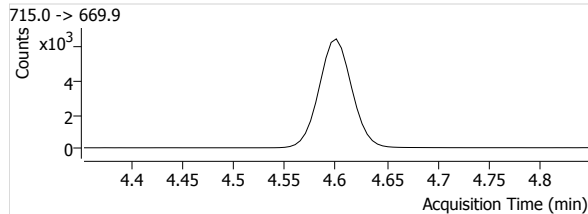
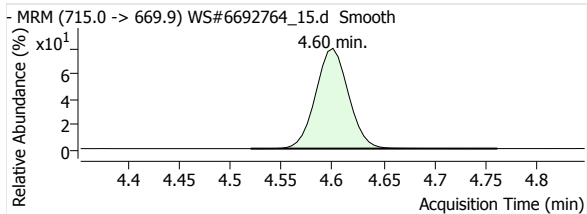
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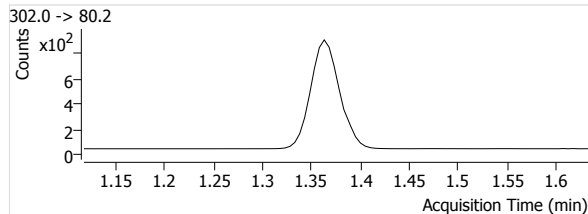
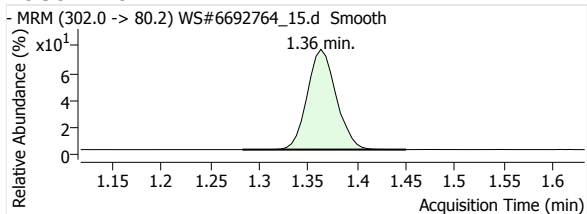
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13C2-PFTeDA

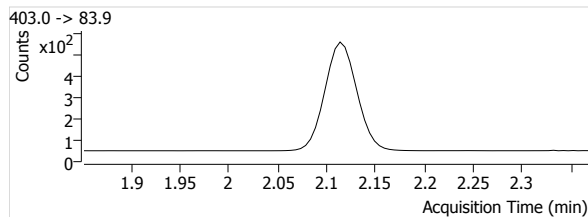
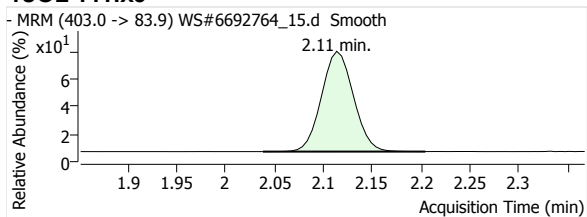


13C3-PFBS

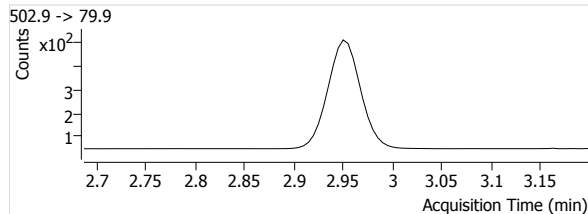
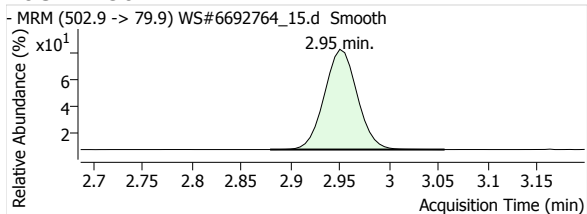


Quantitative Analysis Report

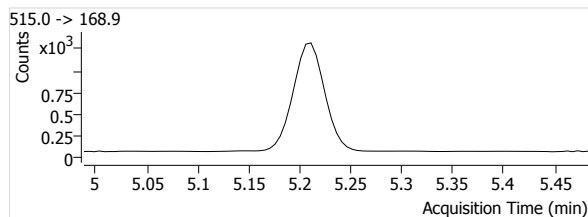
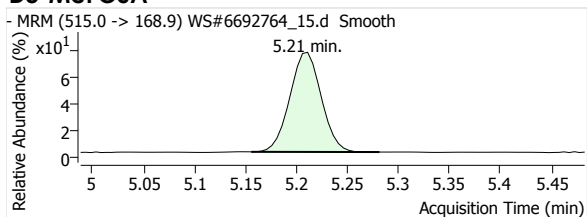
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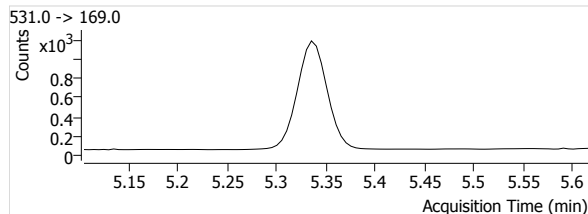
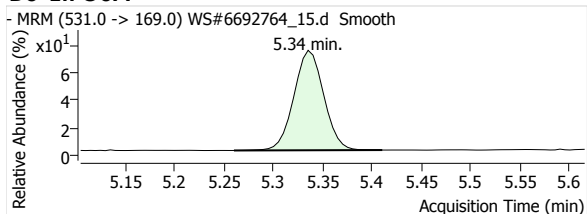
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



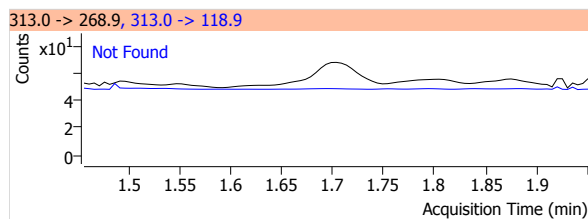
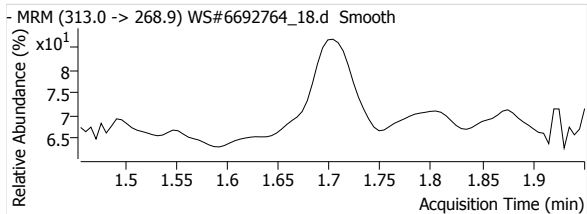
Quantitative Analysis Report

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bin

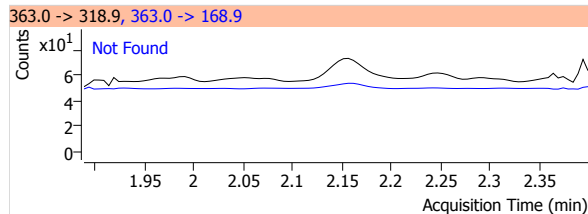
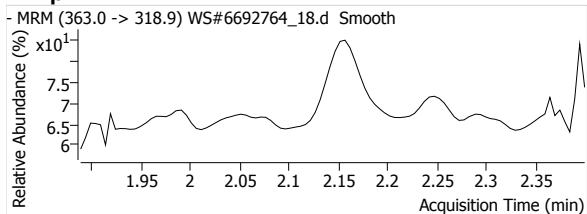
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Type	Sample	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-A8
Acq. Date-Time	2020/04/23 3:52:43 AM	Dil.	0.0
Comment	-		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHpA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	102.9507	--	8269	1.70	1596	--	--	--	--	--
13C4-PFHpA	µg/L	--	100.7534	--	11234	2.16	3423	--	--	--	--	--
13C4-PFOA	µg/L	--	101.2588	--	10940	2.63	1519	--	--	--	--	--
13C5-PFNA	µg/L	--	99.6745	--	8574	3.07	1501	--	--	--	--	--
13C2-PFDA	µg/L	--	100.8050	--	7513	3.46	1381	--	--	--	--	--
13C2-PFUnA	µg/L	--	101.5614	--	8911	3.80	1188	--	--	--	--	--
13C2-PFDaA	µg/L	--	99.8405	--	10644	4.10	1215	--	--	--	--	--
13C2-PFTeDA	µg/L	--	101.0596	--	14115	4.60	2089	--	--	--	--	--
13C3-PFBS	µg/L	--	102.0456	--	1746	1.36	1103	--	--	--	--	--
18O2-PFHxS	µg/L	--	102.6270	--	1172	2.11	1008	--	--	--	--	--
13C4-PFOS	µg/L	--	101.7013	--	1076	2.95	431	--	--	--	--	--
D3-MeFOSA	µg/L	--	101.2486	--	2676	5.21	115	--	--	--	--	--
D5-EtFOSA	µg/L	--	104.1223	--	2349	5.34	115	--	--	--	--	--

PFHxA 1

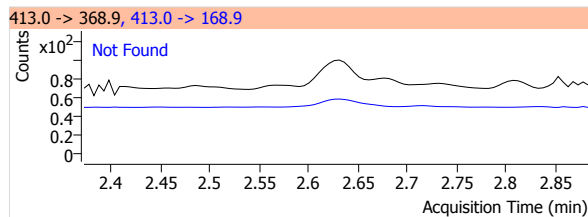
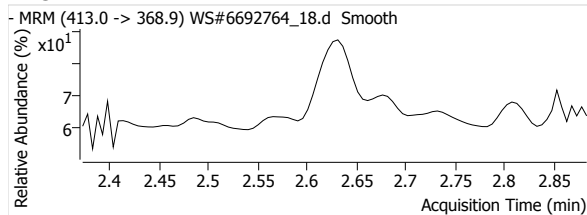


PFHpA 1

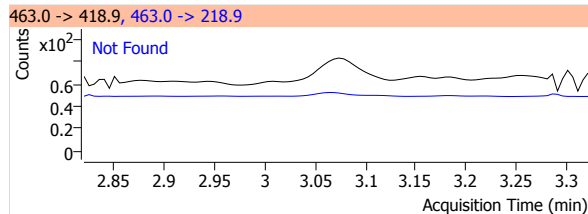
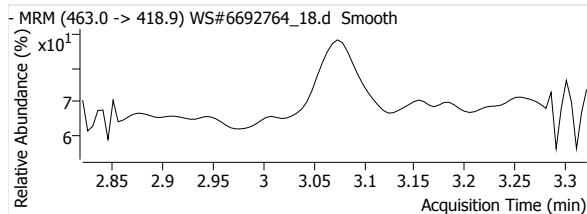


Quantitative Analysis Report

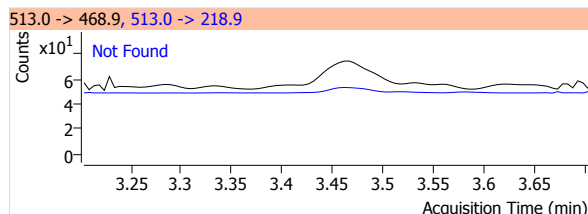
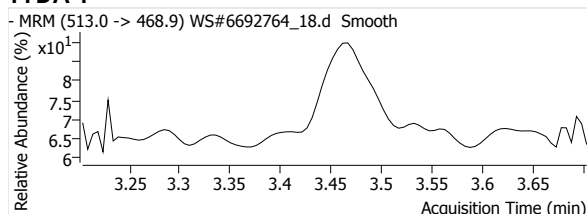
PFOA 1



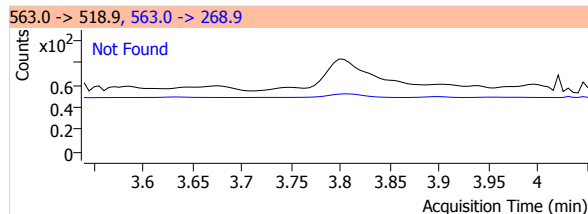
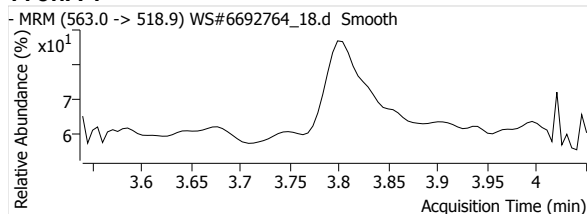
PFNA 1



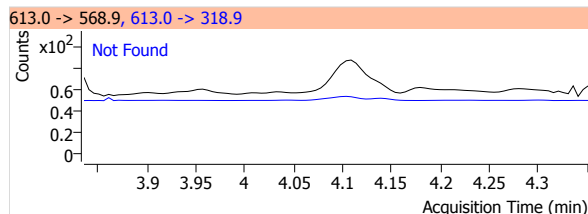
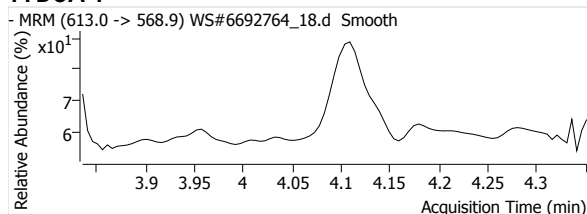
PFDA 1



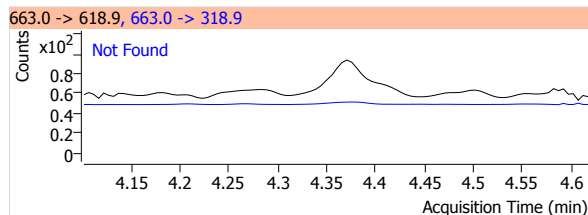
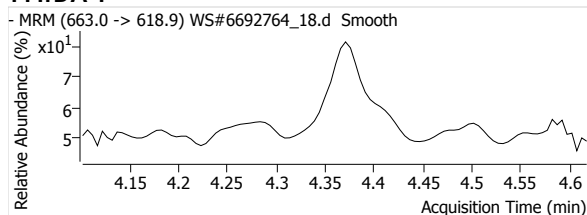
PFUnA 1



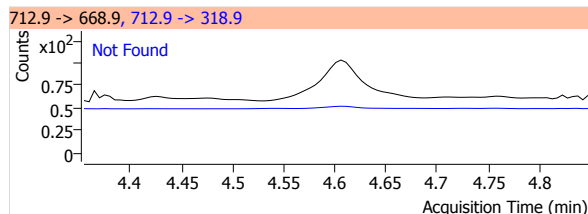
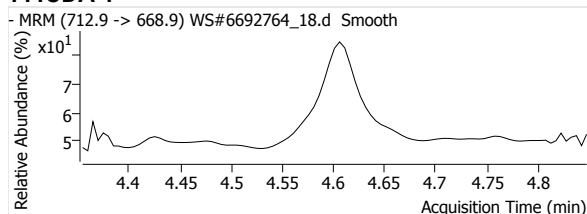
PFDaA 1



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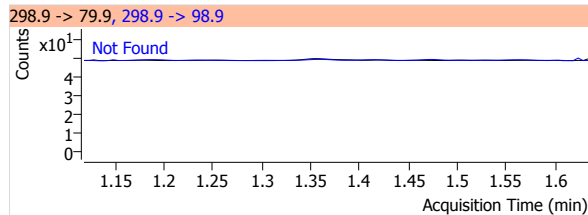
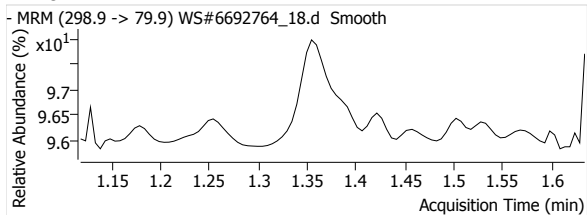


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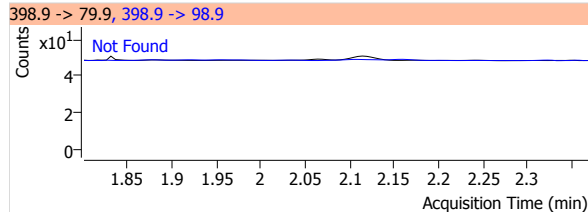
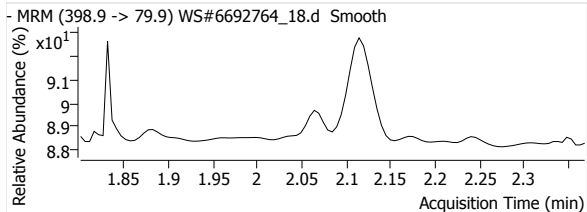


Quantitative Analysis Report

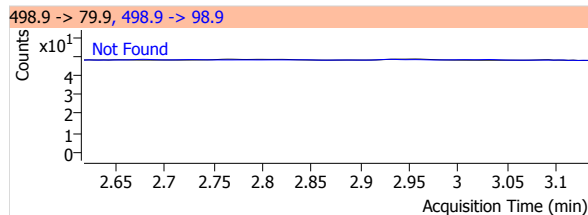
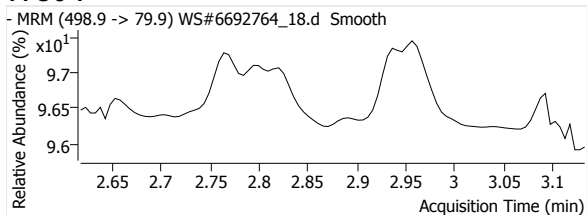
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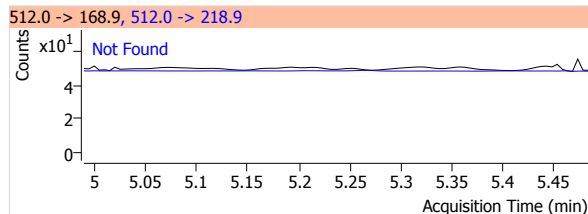
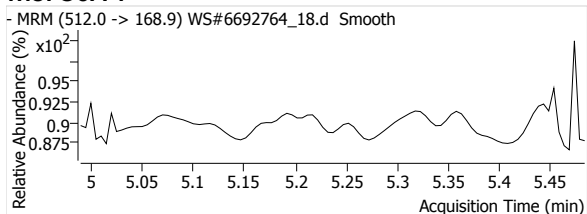
PFHxS 1



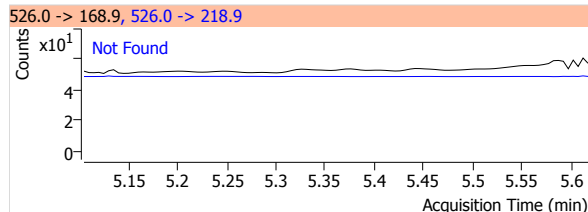
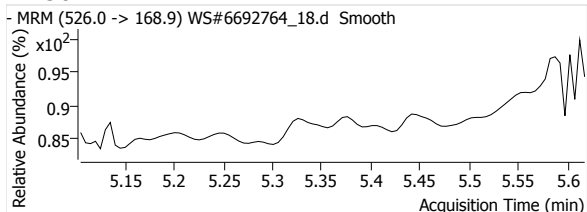
PFOS 1



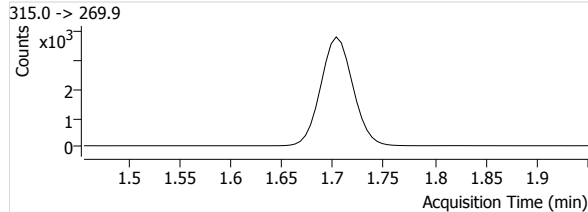
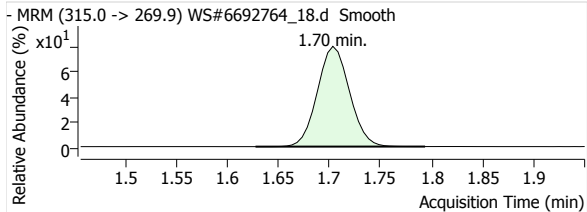
MeFOSA 1



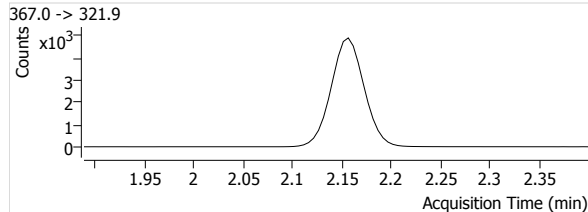
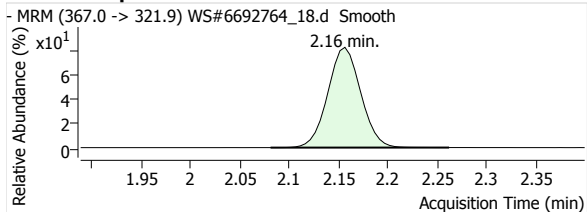
eFOSA 1



13C2-PFHxA

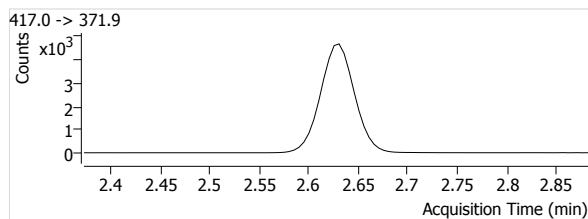
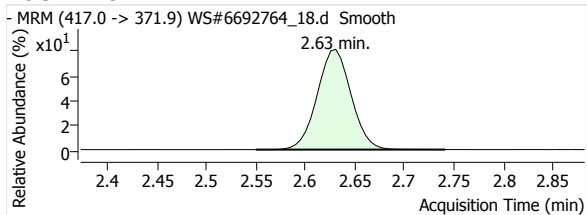


13C4-PFHpA

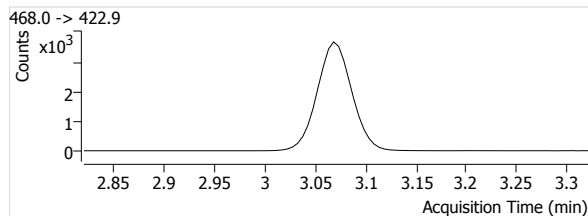
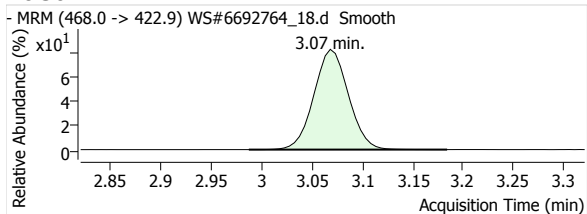


Quantitative Analysis Report

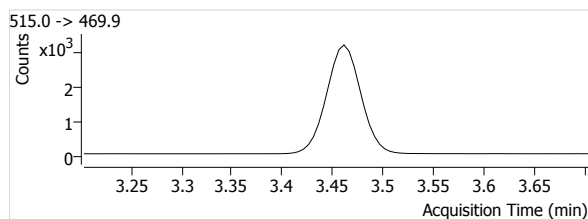
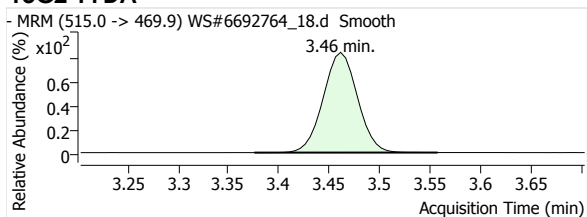
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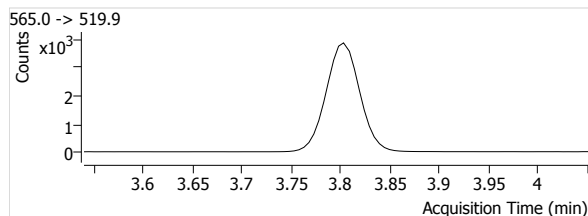
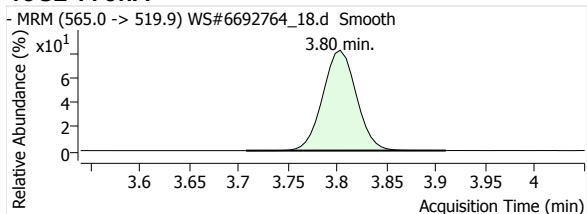
13C5-PFNA



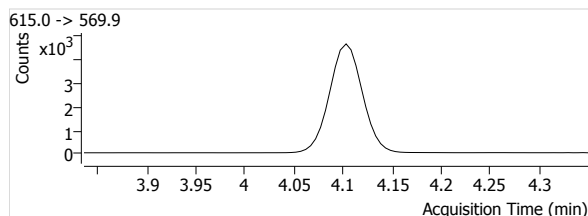
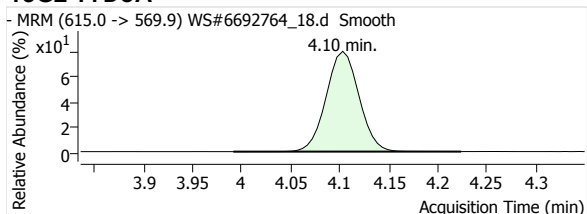
13C2-PFDA



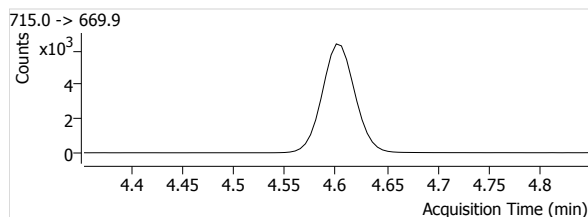
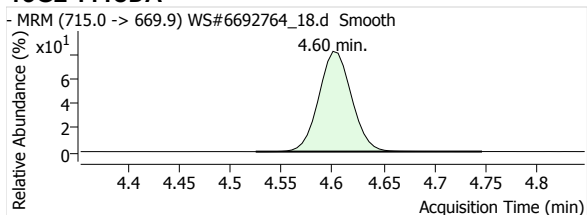
13C2-PFUnA



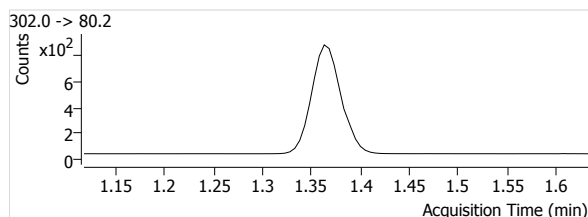
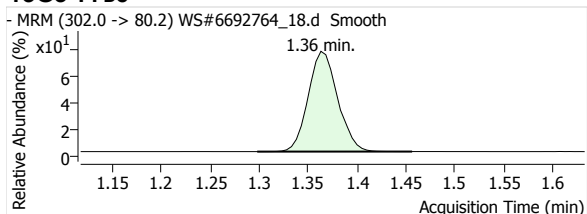
13C2-PFDoA



13C2-PFTeDA

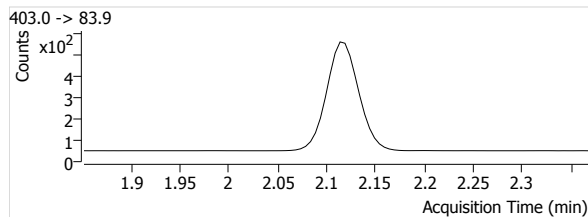
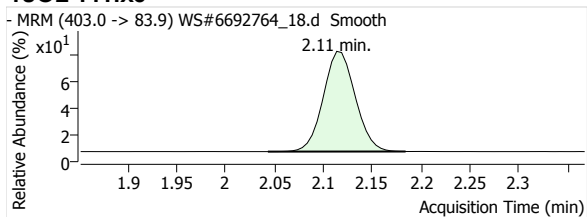


13C3-PFBS

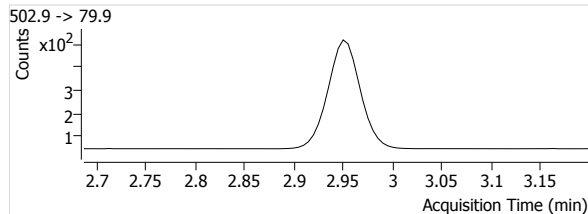
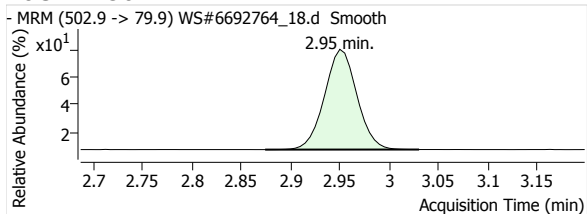


Quantitative Analysis Report

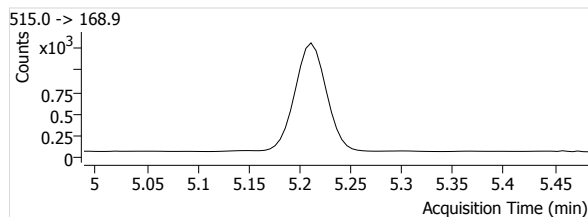
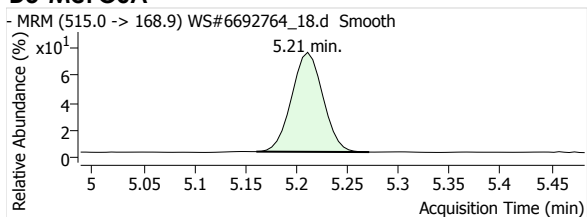
18O2-PFHxs



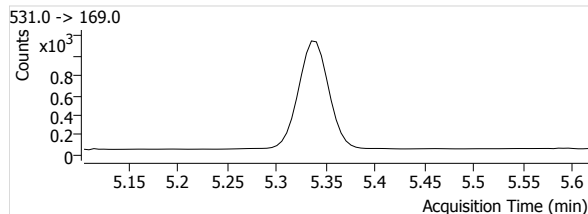
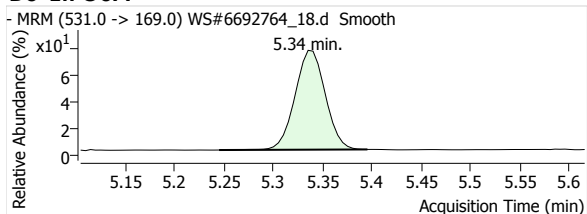
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



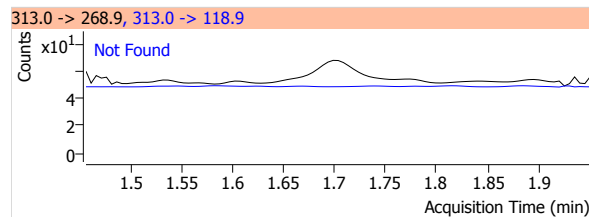
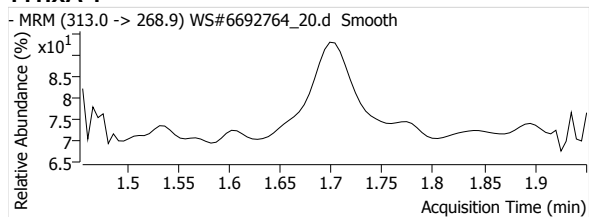
Quantitative Analysis Report

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bin

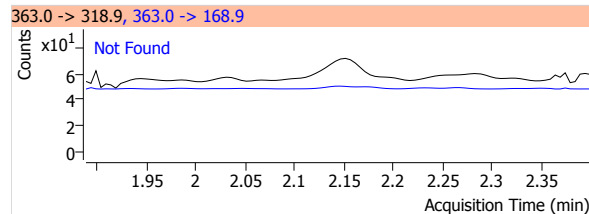
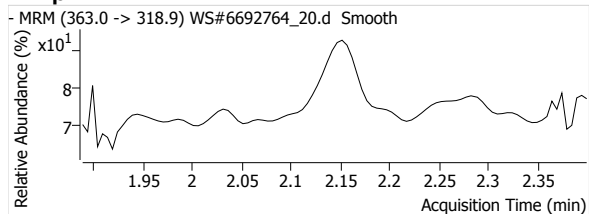
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Acq. Method File	PFAS.m	Position	P1-A8
Acq. Date-Time	2020/04/23 4:06:37 AM	Dil.	0.0
Comment	-		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHpA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	104.0090	--	8354	1.70	2326	--	--	--	--	--
13C4-PFHpA	µg/L	--	103.1121	--	11497	2.16	2624	--	--	--	--	--
13C4-PFOA	µg/L	--	101.5457	--	10971	2.63	1818	--	--	--	--	--
13C5-PFNA	µg/L	--	99.4769	--	8557	3.07	2036	--	--	--	--	--
13C2-PFDA	µg/L	--	99.6511	--	7427	3.46	1110	--	--	--	--	--
13C2-PFUnA	µg/L	--	101.3677	--	8894	3.80	1638	--	--	--	--	--
13C2-PFDaA	µg/L	--	101.0318	--	10771	4.10	1314	--	--	--	--	--
13C2-PFTeDA	µg/L	--	101.0525	--	14114	4.60	4893	--	--	--	--	--
13C3-PFBS	µg/L	--	100.8182	--	1725	1.36	778	--	--	--	--	--
18O2-PFHxS	µg/L	--	99.5622	--	1137	2.11	539	--	--	--	--	--
13C4-PFOS	µg/L	--	103.2136	--	1092	2.95	772	--	--	--	--	--
D3-MeFOSA	µg/L	--	102.1188	--	2699	5.21	163	--	--	--	--	--
D5-EtFOSA	µg/L	--	107.5798	--	2427	5.34	208	--	--	--	--	--

PFHxA 1

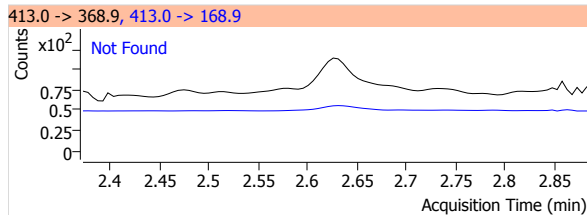
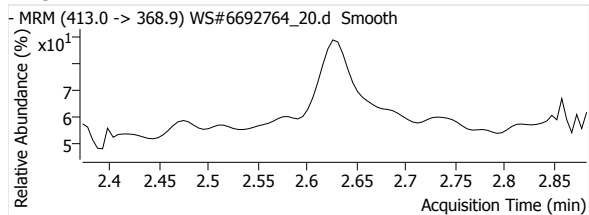


PFHpA 1

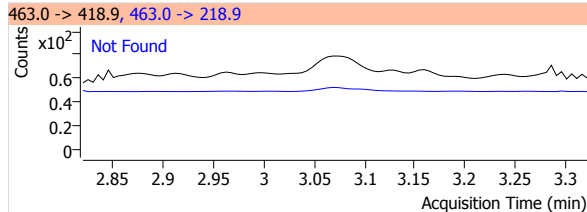
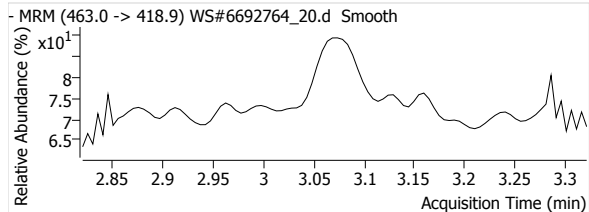


Quantitative Analysis Report

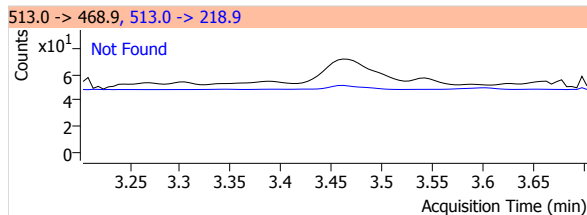
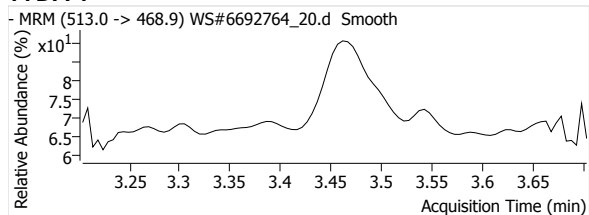
PFOA 1



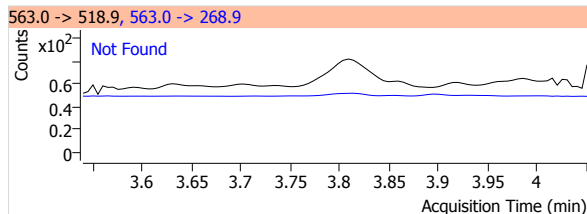
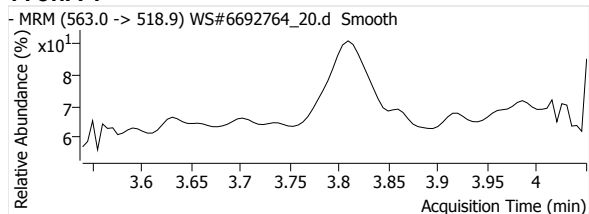
PFNA 1



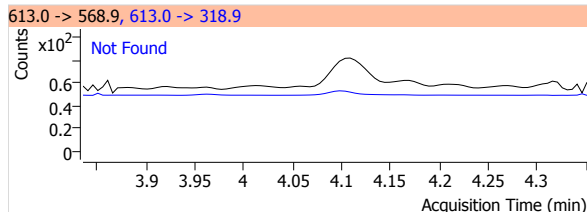
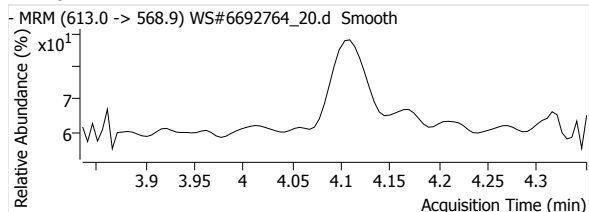
PFDA 1



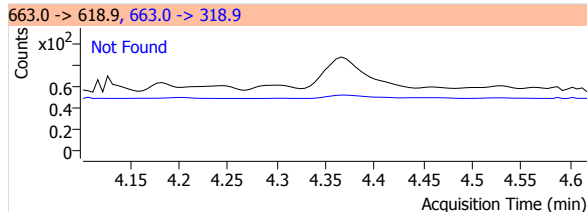
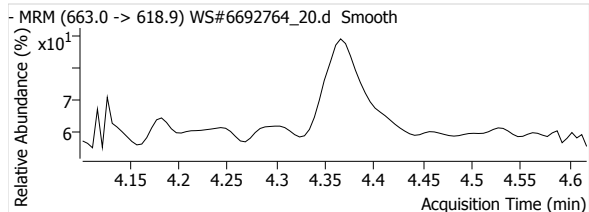
PFUnA 1



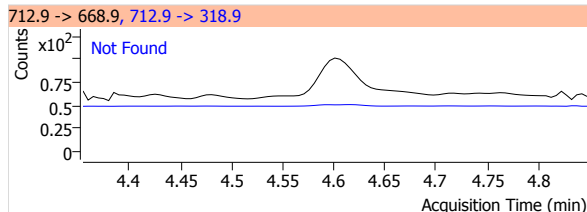
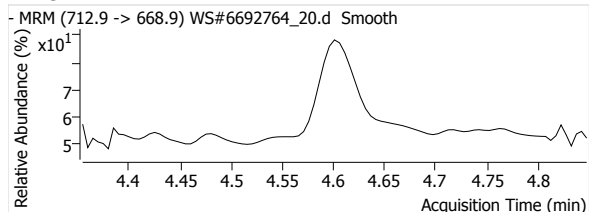
PFDaA 1



PFTrDA 1

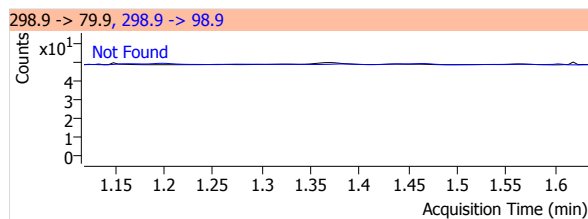
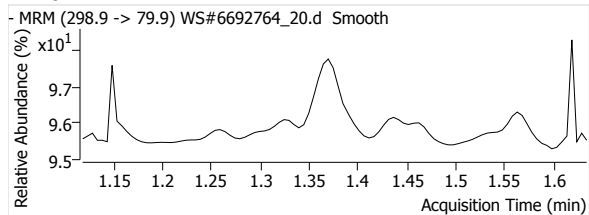


PFTeDA 1

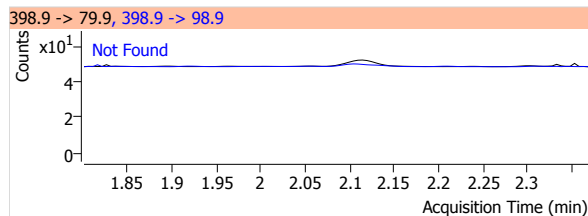
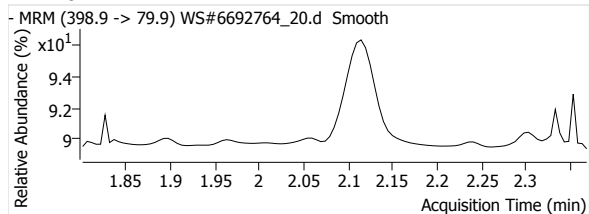


Quantitative Analysis Report

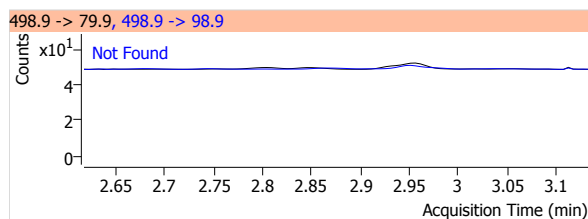
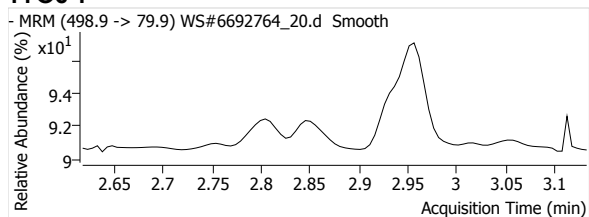
PFBS 1



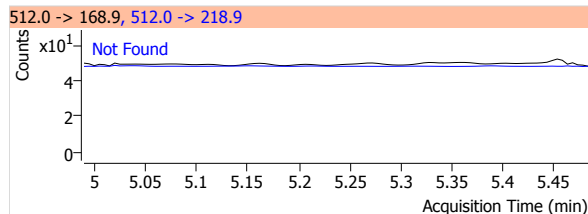
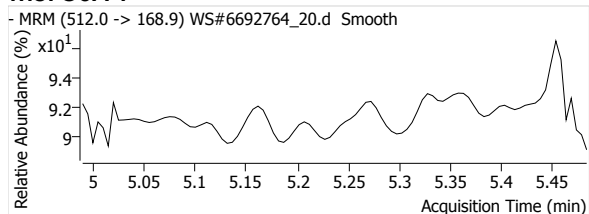
PFHxS 1



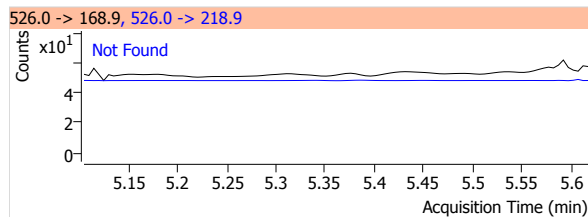
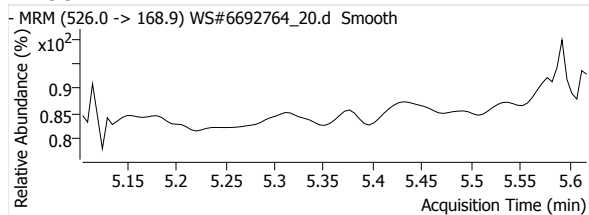
PFOS 1



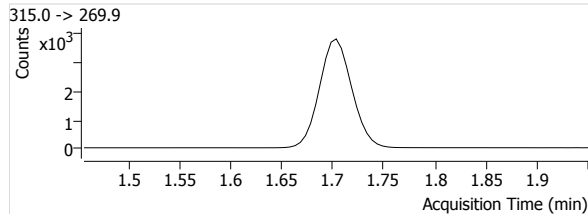
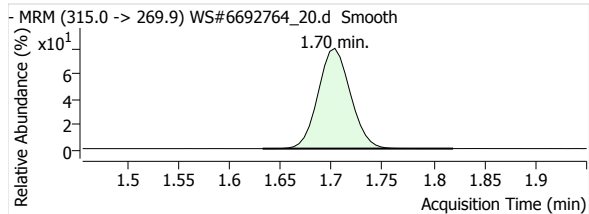
MeFOSA 1



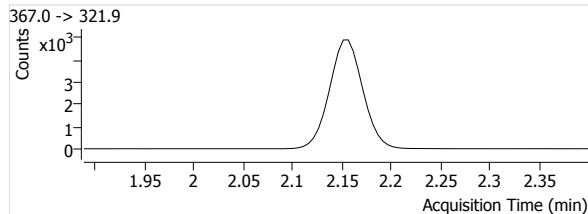
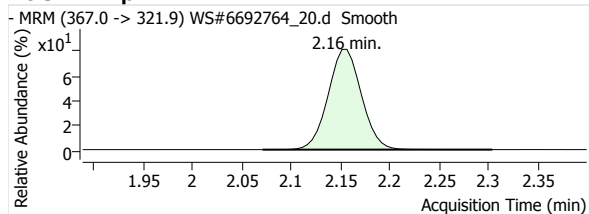
eFOSA 1



13C2-PFHxA

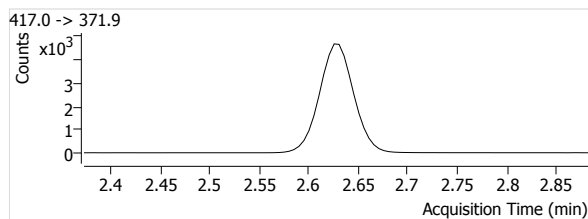
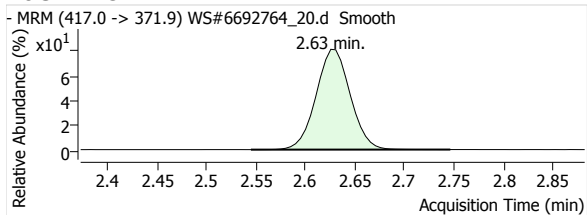


13C4-PFHpA

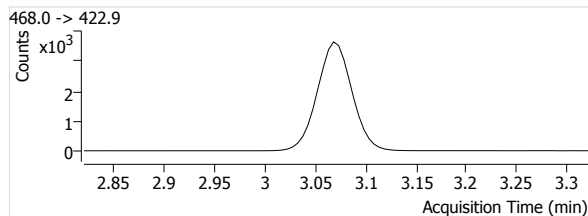
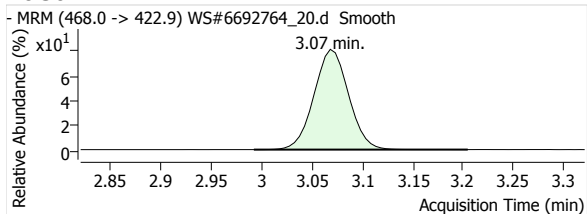


Quantitative Analysis Report

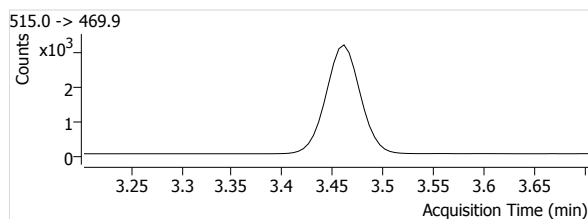
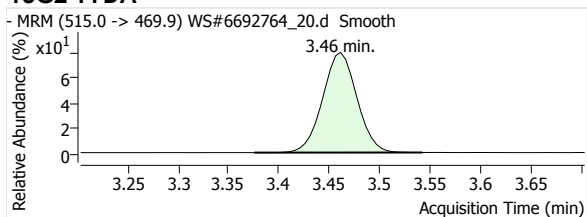
13C4-PFOA



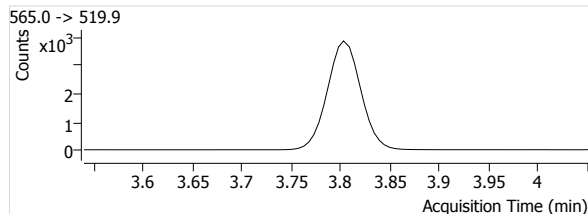
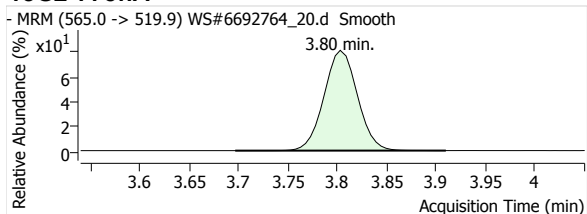
13C5-PFNA



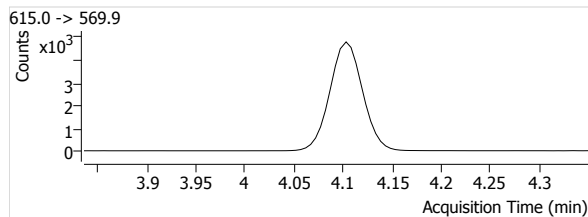
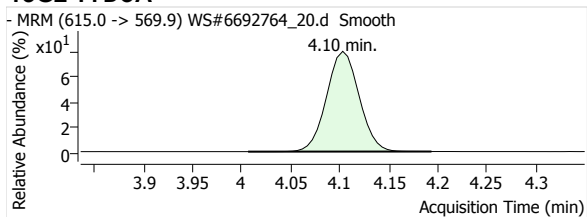
13C2-PFDA



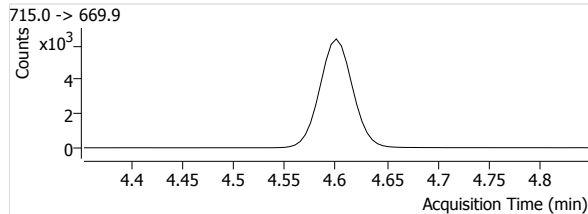
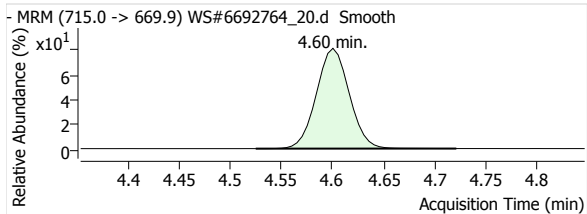
13C2-PFUnA



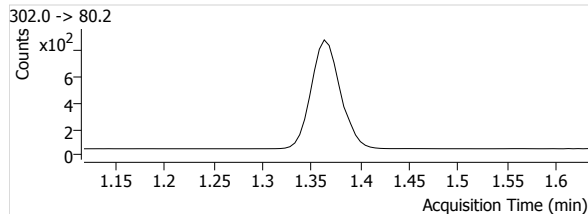
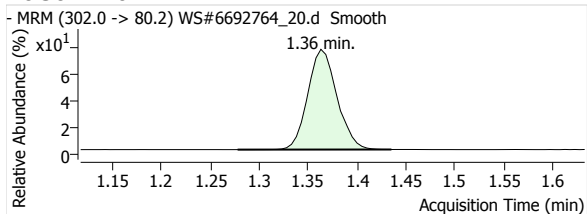
13C2-PFDoA



13C2-PFTeDA

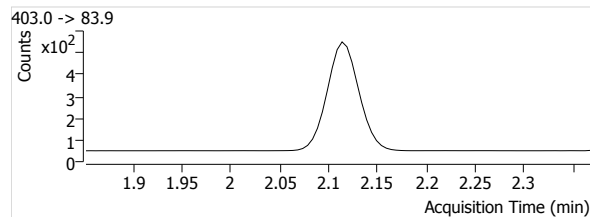
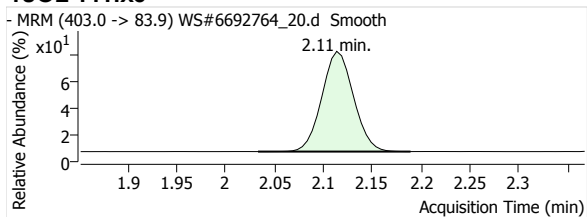


13C3-PFBS

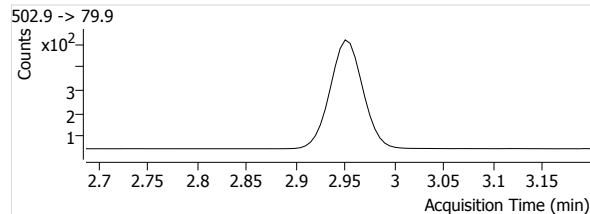
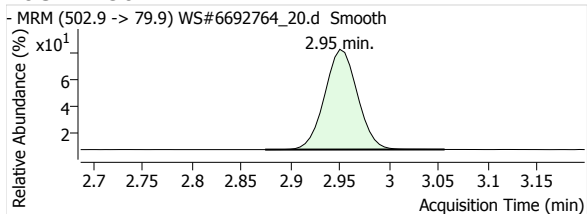


Quantitative Analysis Report

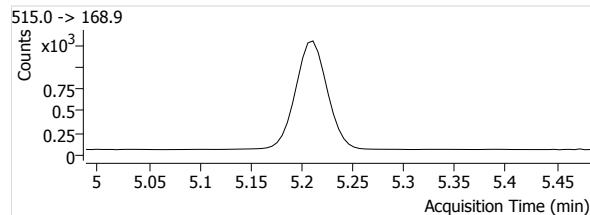
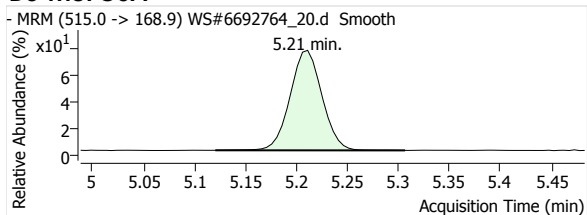
18O2-PFHxs



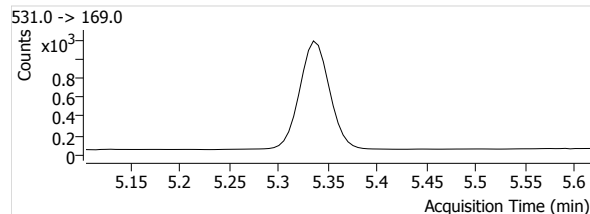
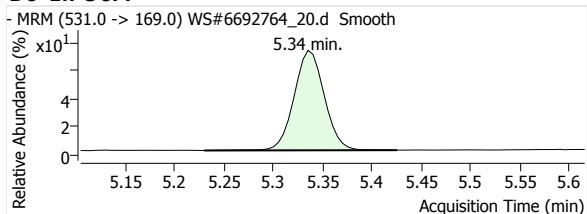
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



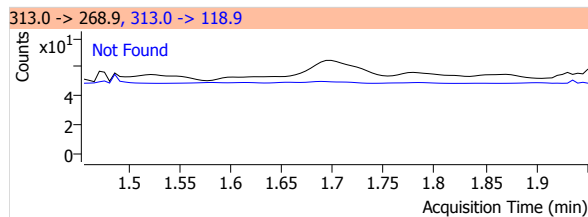
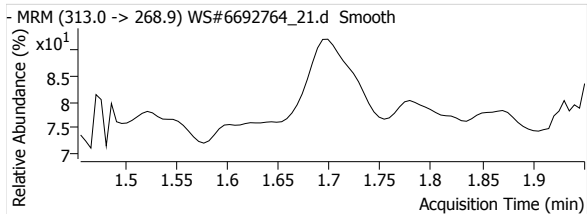
Quantitative Analysis Report

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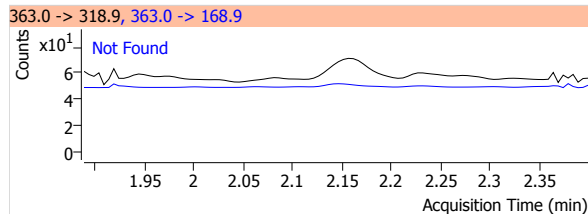
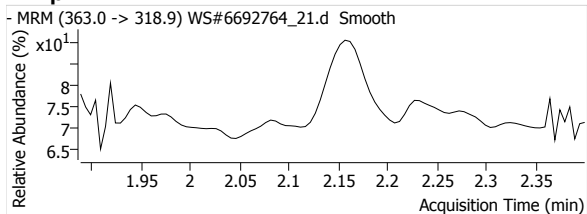
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Type	Sample	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-A8
Acq. Date-Time	2020/04/23 4:13:35 AM	Dil.	0.0
Comment	-		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHpA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDaA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	101.9547	--	8189	1.70	1592	--	--	--	--	--
13C4-PFHpA	µg/L	--	100.4036	--	11195	2.16	2696	--	--	--	--	--
13C4-PFOA	µg/L	--	100.1573	--	10821	2.63	2278	--	--	--	--	--
13C5-PFNA	µg/L	--	99.1630	--	8530	3.07	1211	--	--	--	--	--
13C2-PFDA	µg/L	--	99.7451	--	7434	3.46	1924	--	--	--	--	--
13C2-PFUnA	µg/L	--	102.8835	--	9027	3.80	2665	--	--	--	--	--
13C2-PFDaA	µg/L	--	100.4502	--	10709	4.10	1452	--	--	--	--	--
13C2-PFTeDA	µg/L	--	98.9475	--	13820	4.60	1938	--	--	--	--	--
13C3-PFBS	µg/L	--	102.7469	--	1758	1.36	1960	--	--	--	--	--
18O2-PFHxS	µg/L	--	103.4151	--	1181	2.11	644	--	--	--	--	--
13C4-PFOS	µg/L	--	98.3932	--	1041	2.95	775	--	--	--	--	--
D3-MeFOSA	µg/L	--	103.1404	--	2726	5.21	165	--	--	--	--	--
D5-EtFOSA	µg/L	--	102.0833	--	2303	5.34	185	--	--	--	--	--

PFHxA 1

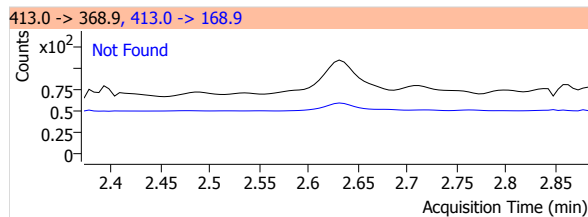
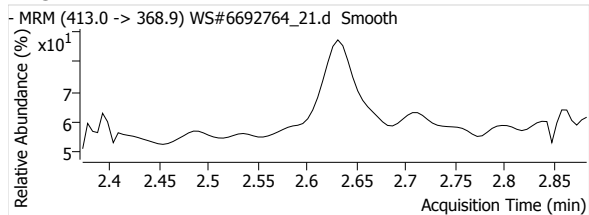


PFHpA 1

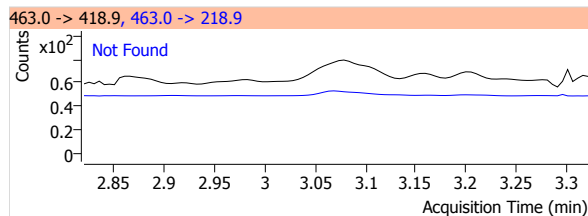
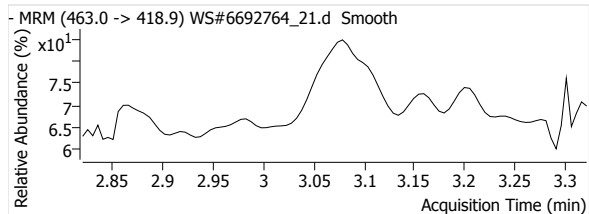


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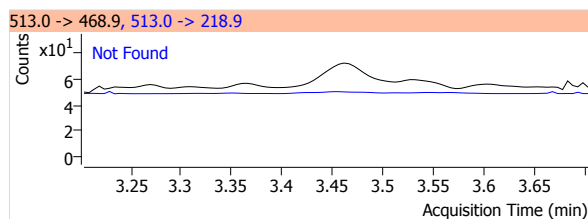
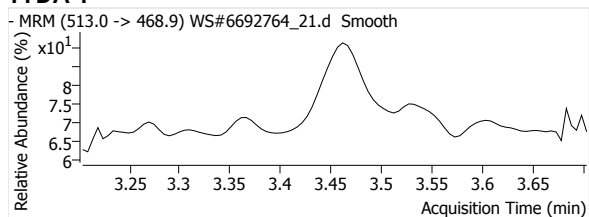
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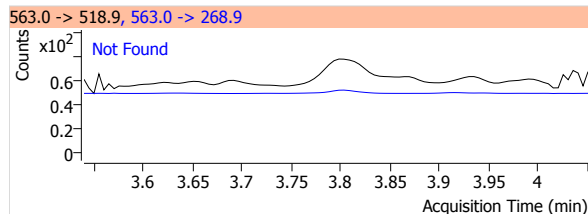
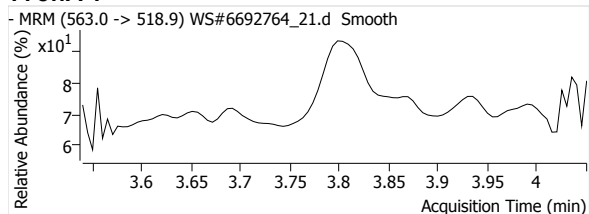
PFNA 1



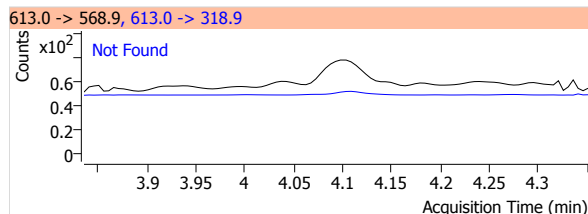
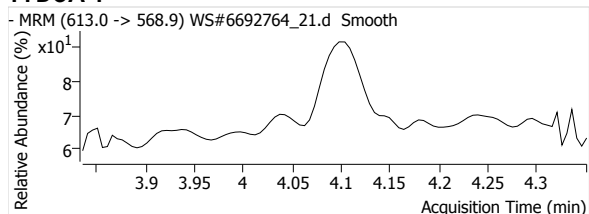
PFDA 1



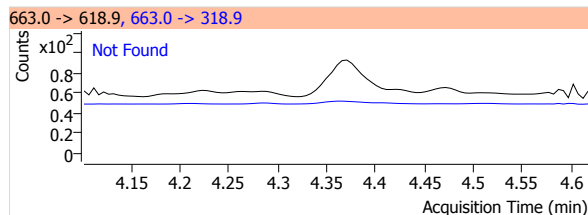
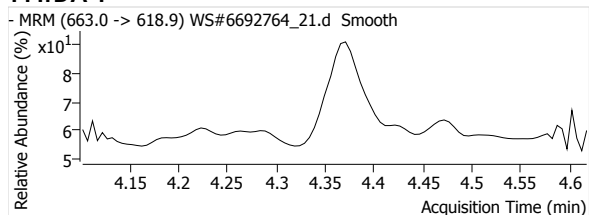
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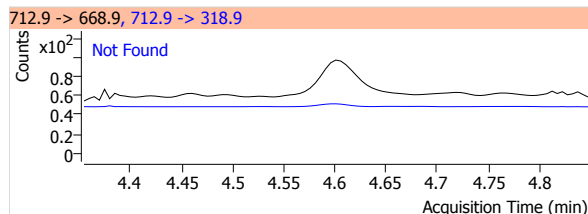
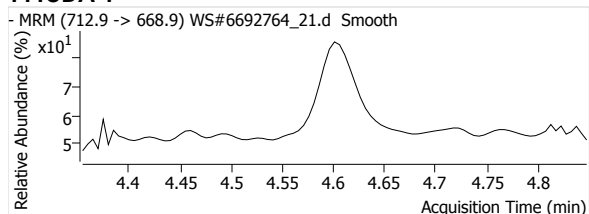
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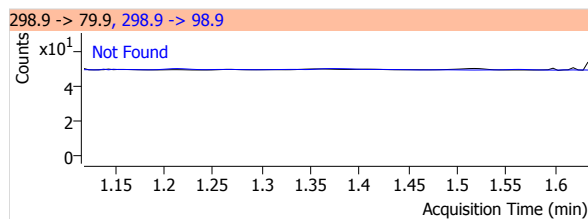
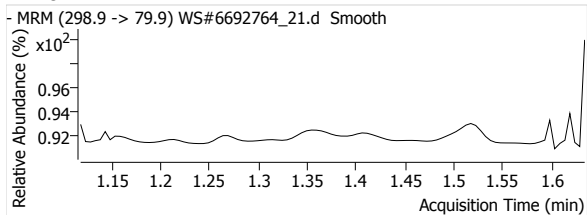


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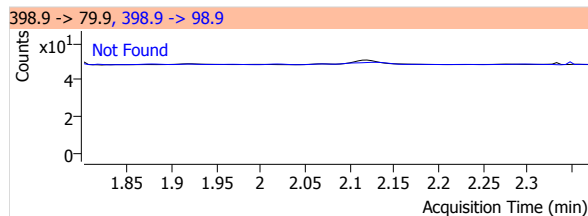
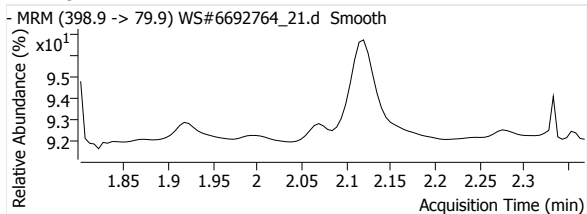


Quantitative Analysis Report

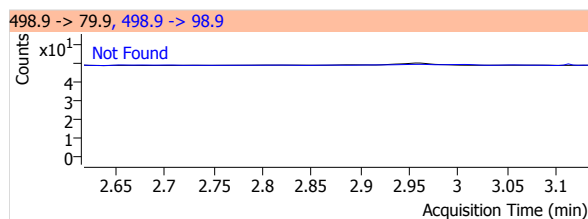
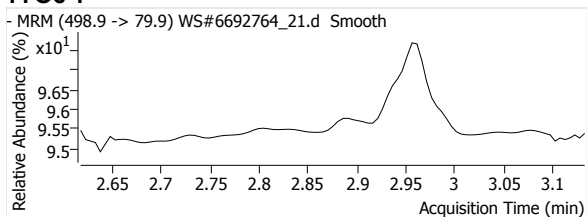
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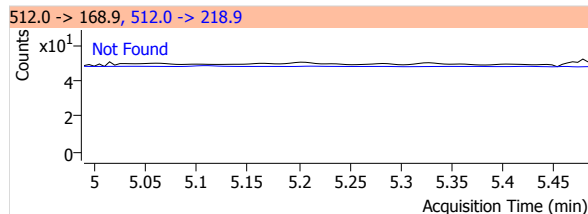
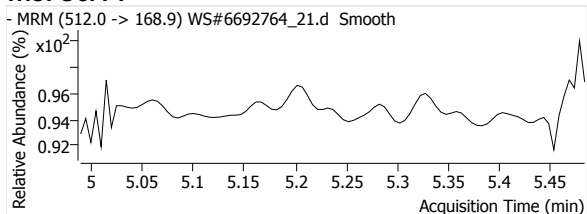
PFHxS 1



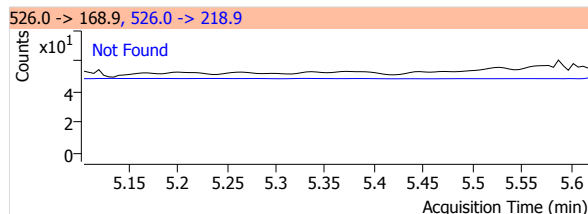
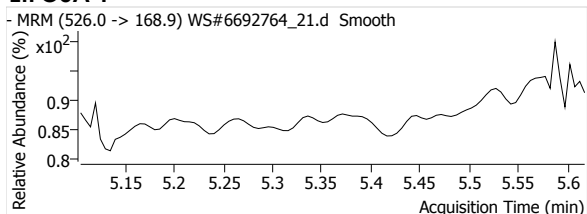
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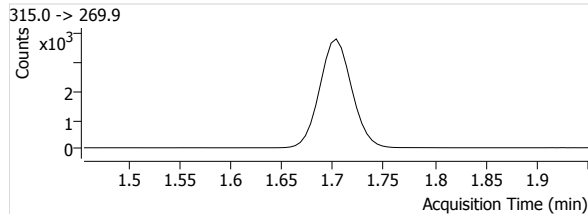
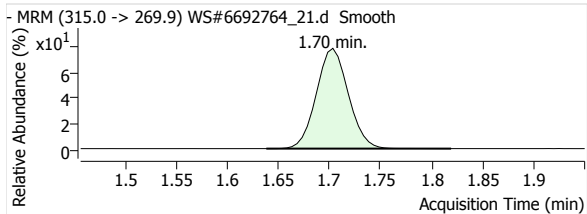
MeFOSA 1



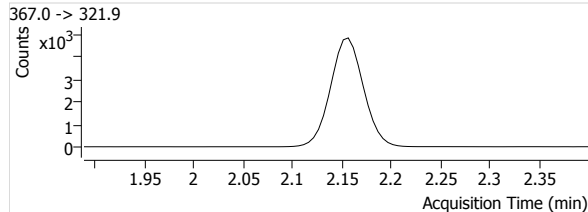
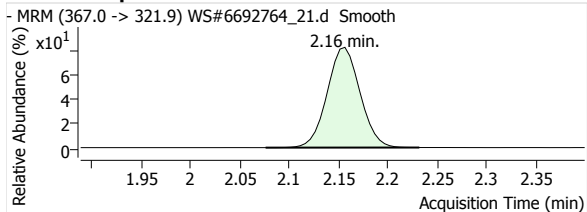
eFOSA 1



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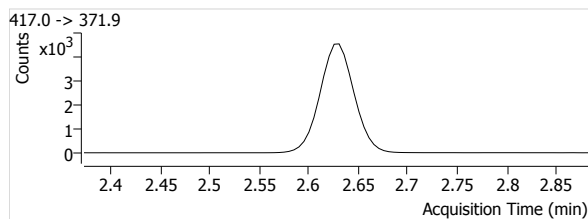
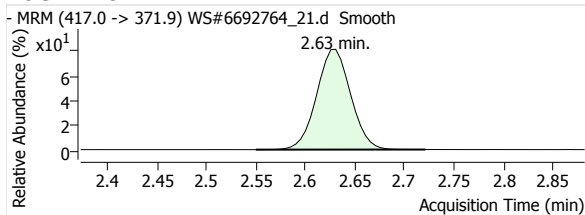


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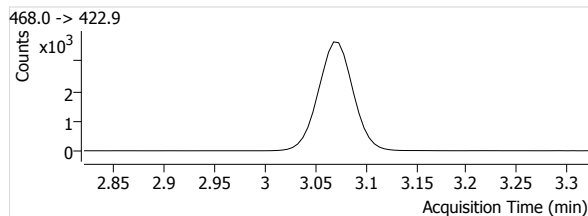
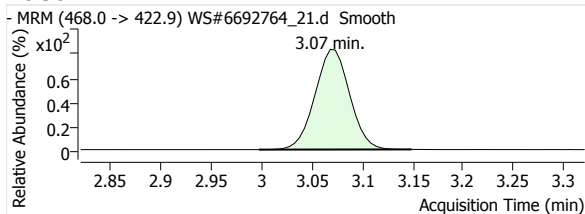


Quantitative Analysis Report

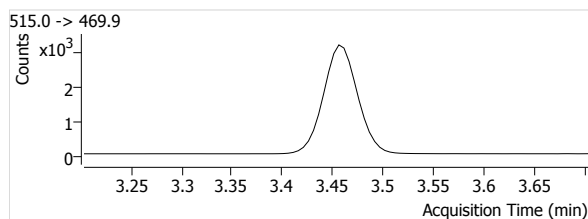
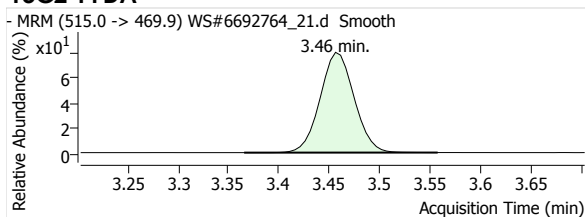
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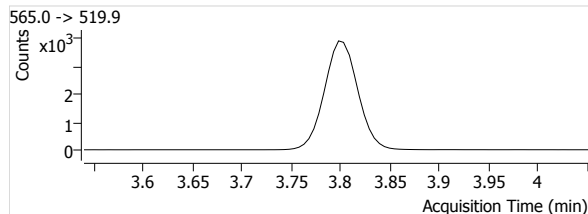
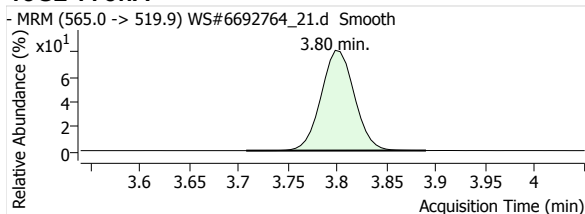
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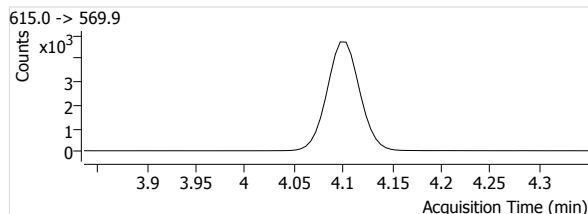
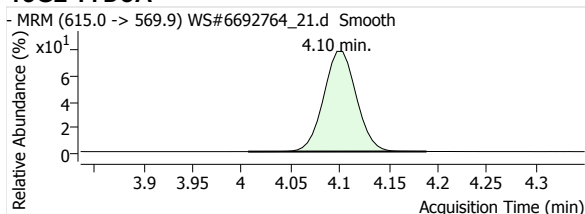
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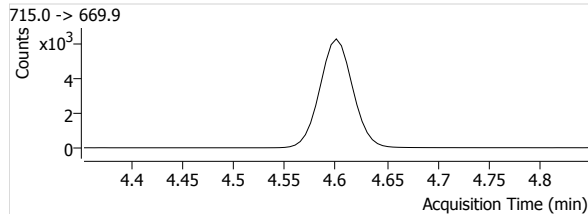
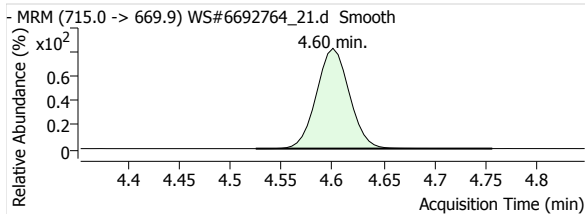
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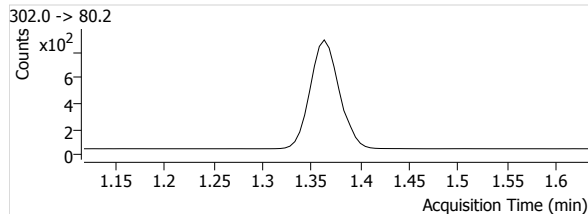
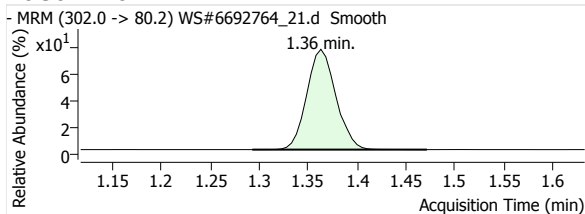
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13C2-PFTeDA

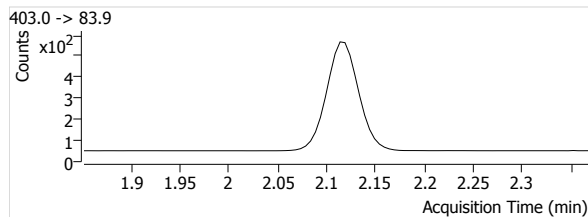
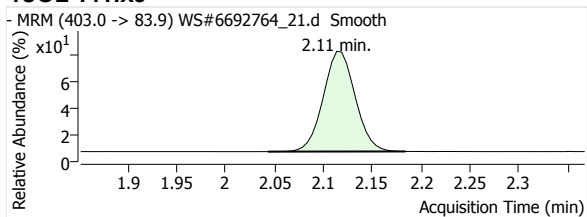


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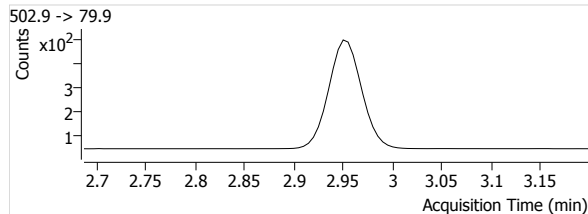
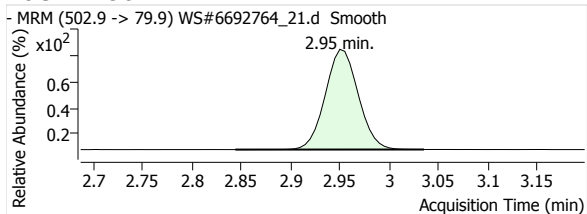


Quantitative Analysis Report

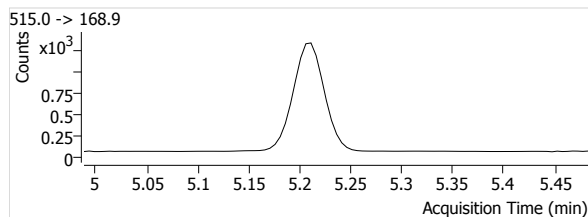
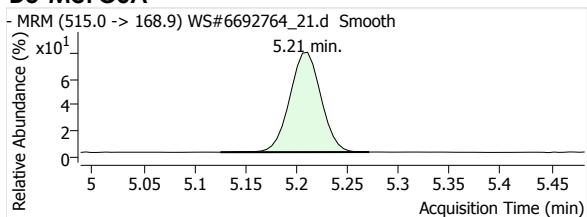
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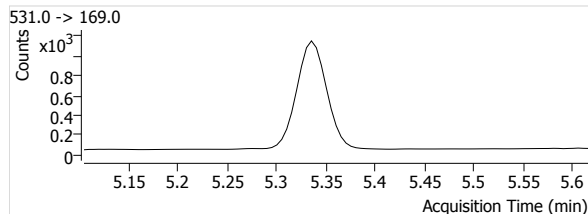
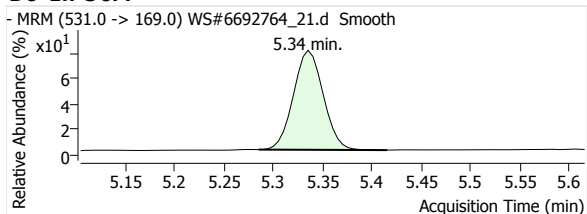
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

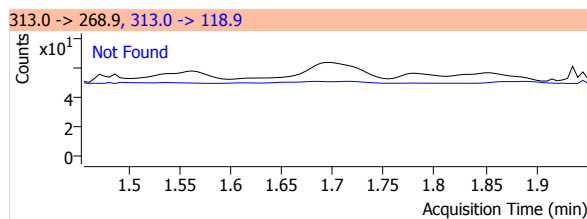
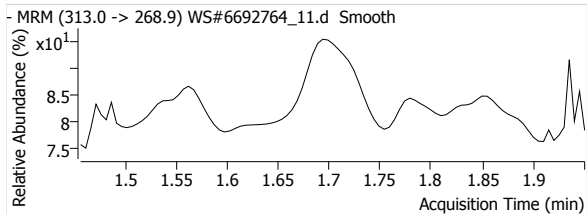
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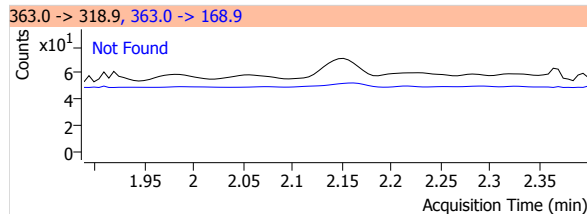
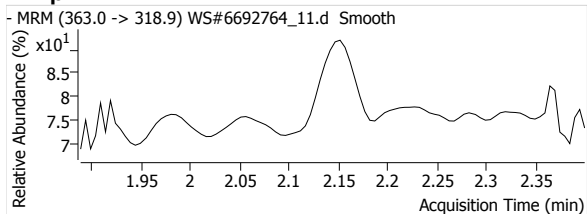
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Instrument LCMS04
Position P1-B1
Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHpA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFNA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFUnA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFDoA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTTrDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFTeDA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFBS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFHxS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
PFOS 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
MeFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
EtFOSA 1	µg/L	--	--	--	--	--	--	--	--	--	--	--
13C2-PFHxA	µg/L	--	103.7724	--	8335	1.70	2235	--	--	--	--	--
13C4-PFHpA	µg/L	--	99.7040	--	11117	2.15	1665	--	--	--	--	--
13C4-PFOA	µg/L	--	98.2136	--	10611	2.63	3641	--	--	--	--	--
13C5-PFNA	µg/L	--	97.8028	--	8413	3.07	1822	--	--	--	--	--
13C2-PFDA	µg/L	--	94.9416	--	7076	3.46	2143	--	--	--	--	--
13C2-PFUnA	µg/L	--	90.5060	--	7941	3.80	2028	--	--	--	--	--
13C2-PFDoA	µg/L	--	87.4965	--	9328	4.10	1827	--	--	--	--	--
13C2-PFTeDA	µg/L	--	82.8668	--	11574	4.60	2369	--	--	--	--	--
13C3-PFBS	µg/L	--	100.7013	--	1723	1.36	1455	--	--	--	--	--
18O2-PFHxS	µg/L	--	95.4466	--	1090	2.11	1218	--	--	--	--	--
13C4-PFOS	µg/L	--	95.8412	--	1014	2.95	1475	--	--	--	--	--
D3-MeFOSA	µg/L	--	68.8611	--	1820	5.21	75	--	--	--	--	--
D5-EtFOSA	µg/L	--	71.7199	--	1618	5.34	144	--	--	--	--	--

PFHxA 1

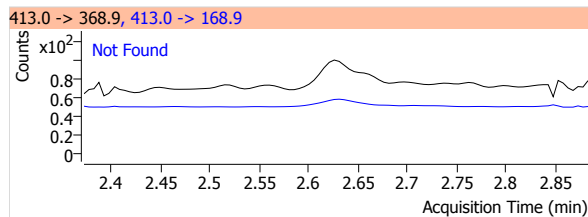
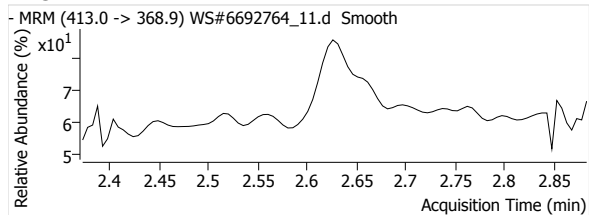


PFHpA 1

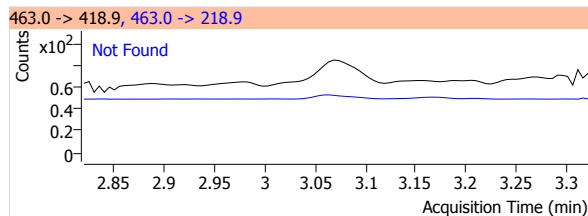
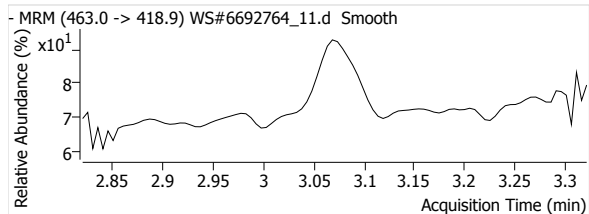


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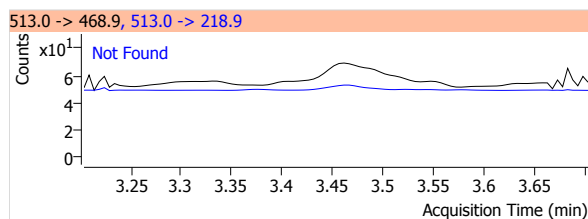
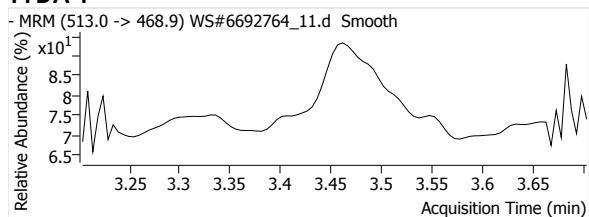
PFOA 1



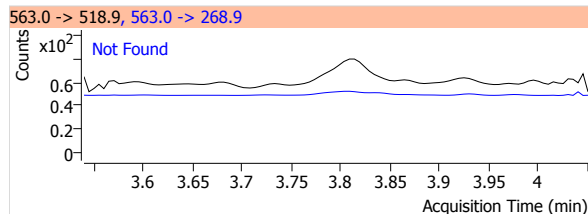
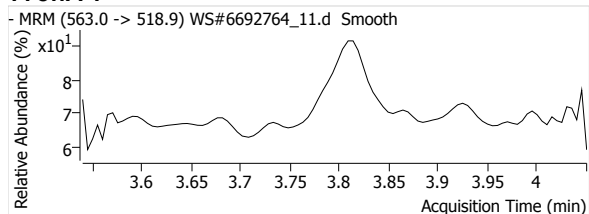
PFNA 1



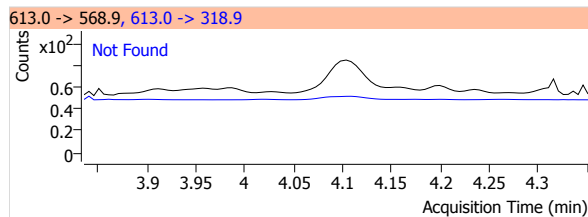
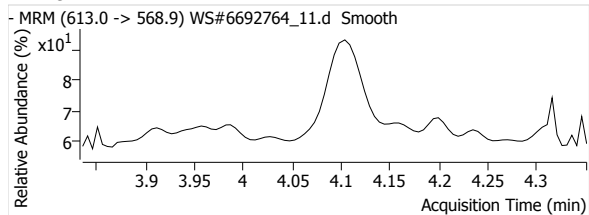
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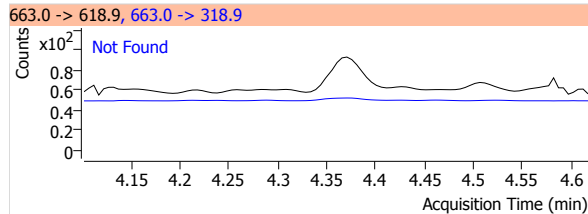
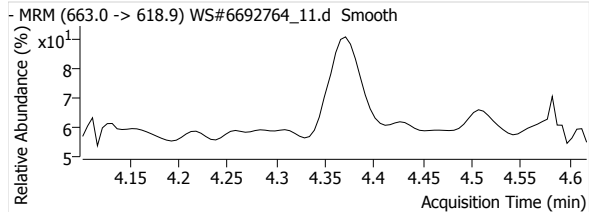
PFUnA 1



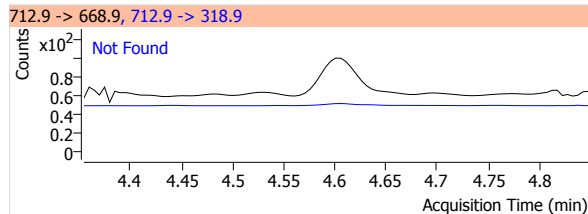
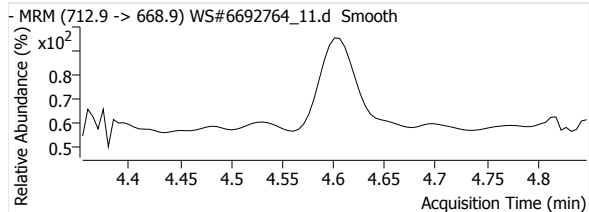
PFDaA 1



PFTrDA 1

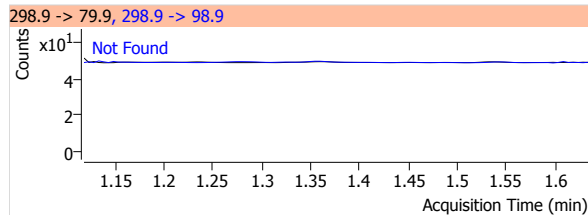
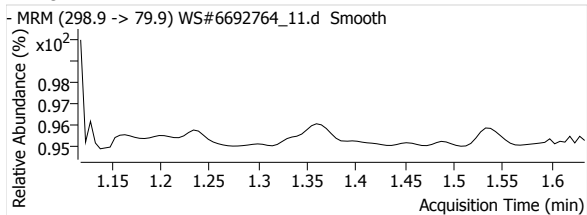


PFTeDA 1

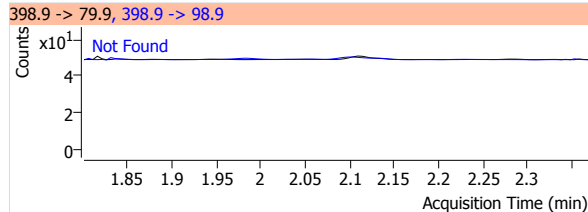
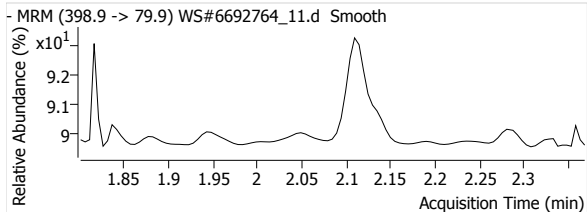


Quantitative Analysis Report

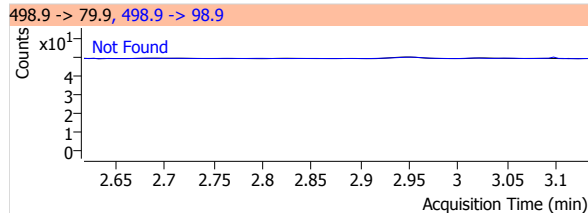
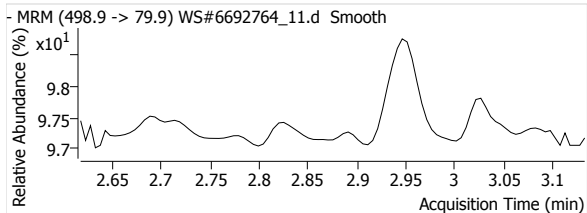
PFBS 1



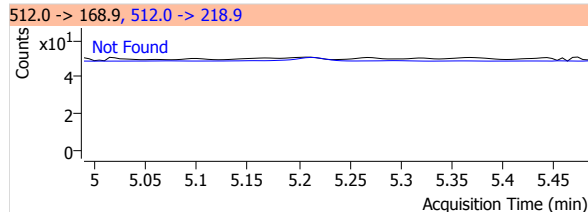
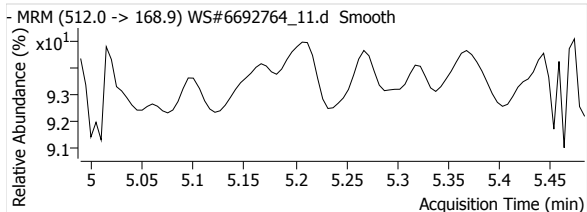
PFHxS 1



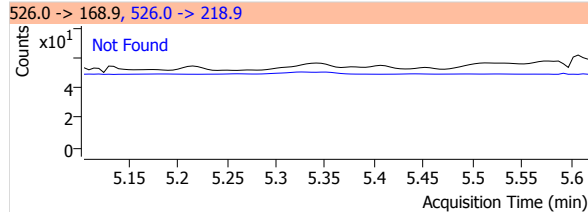
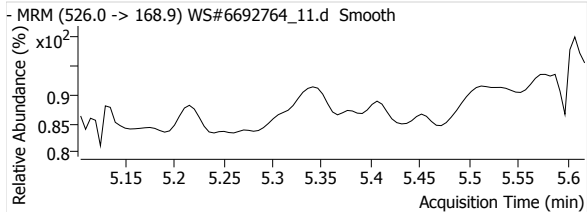
PFOS 1



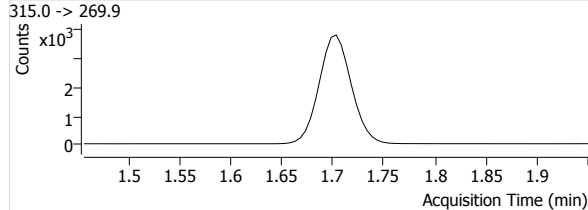
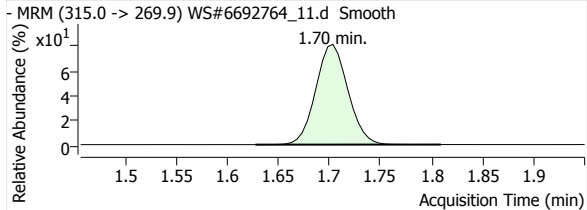
MeFOSA 1



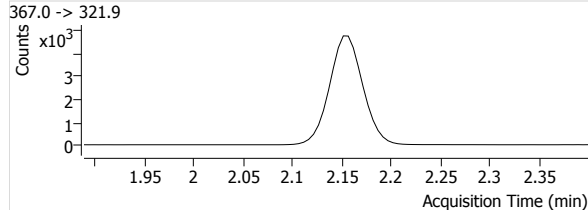
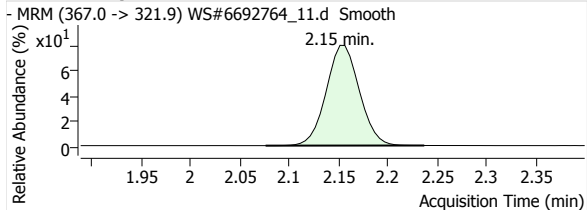
eFOSA 1



13C2-PFHxA

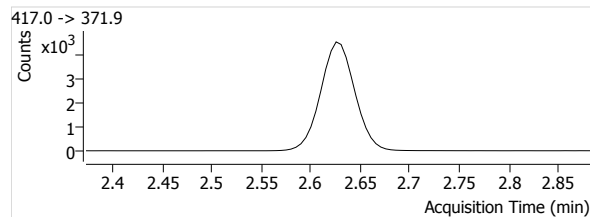
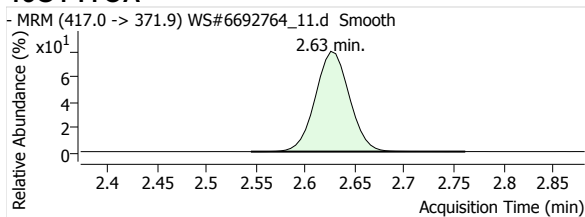


13C4-PFHpA

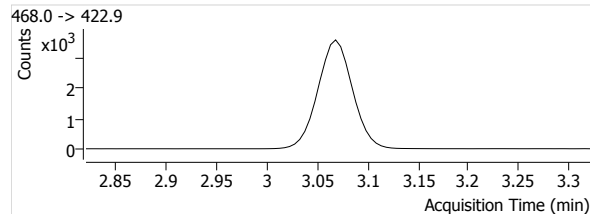
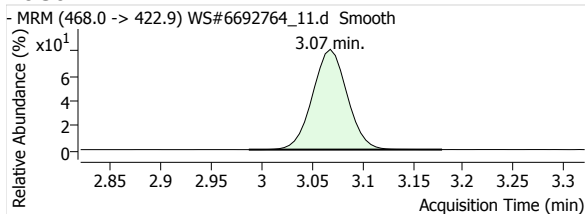


Quantitative Analysis Report

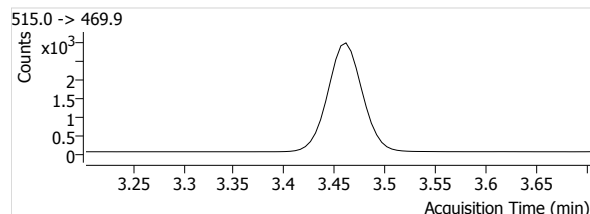
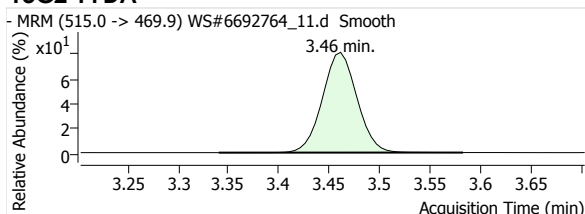
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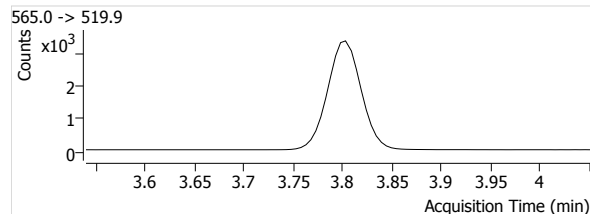
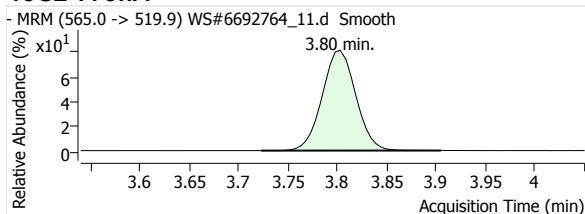
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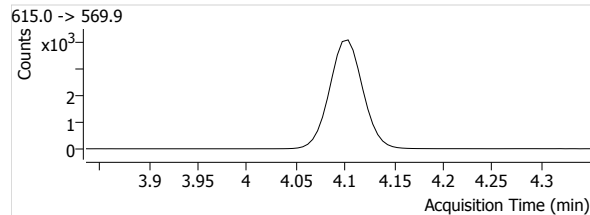
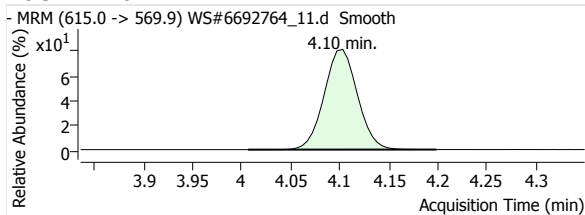
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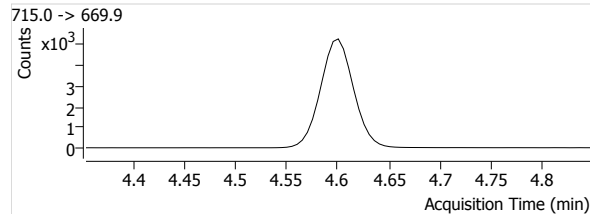
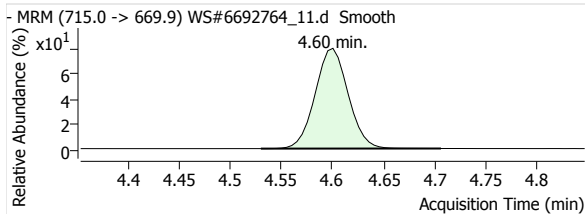
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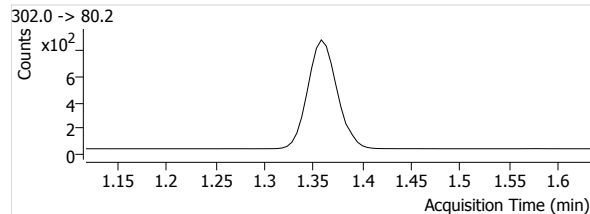
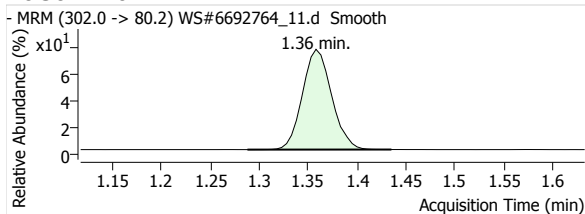
13C2-PFDoA



13C2-PFTeDA

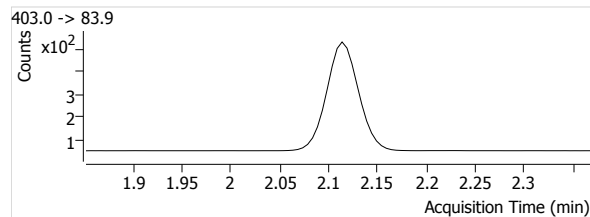
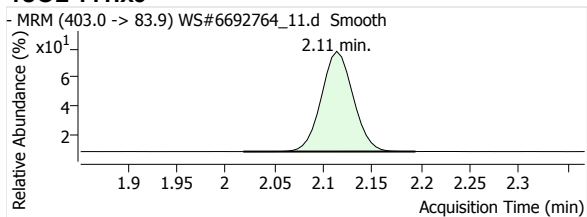


13C3-PFBS

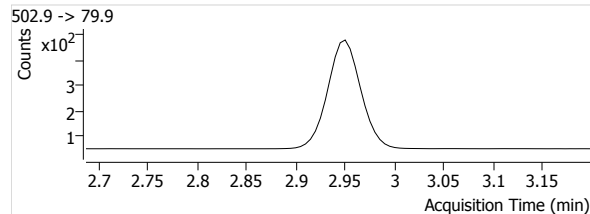
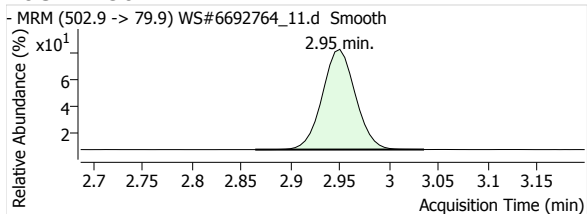


Quantitative Analysis Report

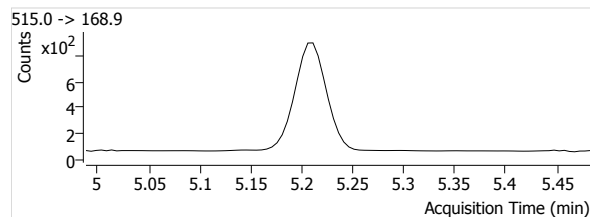
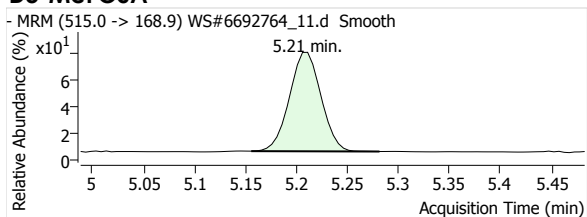
18O2-PFHxs



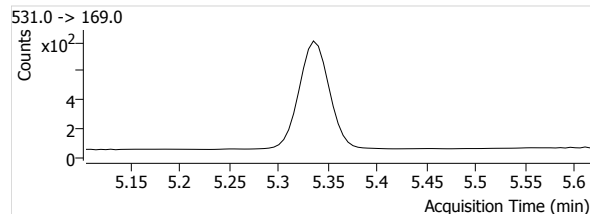
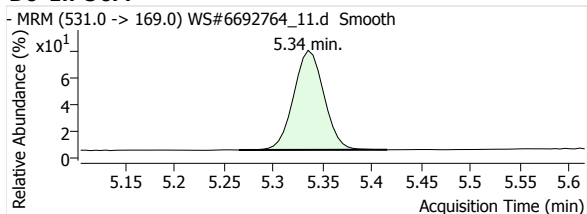
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

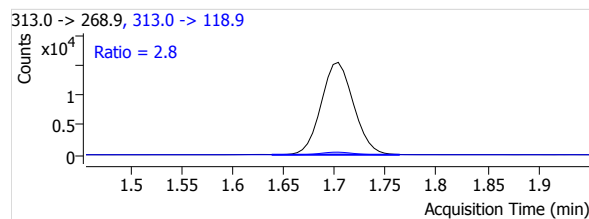
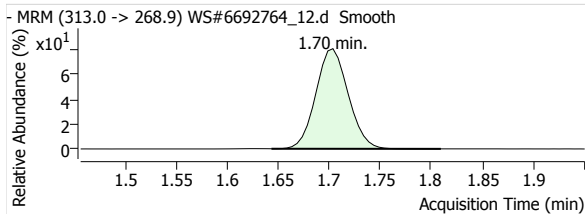
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Acq. Method File PFAS.m
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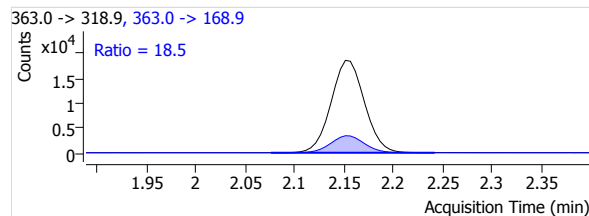
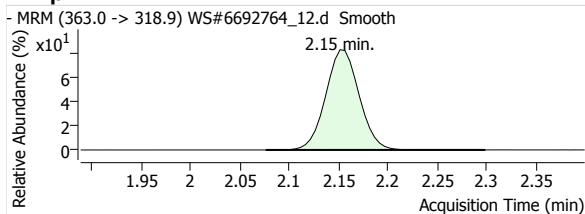
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Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	20.000	0.5825	121.4	34072	1.70	26903	4.5206	948	1.70	1648	2.8
PFHpA 1	µg/L	20.000	0.5992	124.8	44267	2.15	2535	4.3293	8169	2.15	3647	18.5
PFOA 1	µg/L	20.000	0.5654	117.8	41830	2.63	2151	4.1465	10001	2.63	12140	23.9
PFNA 1	µg/L	20.000	0.6004	125.1	35404	3.07	9654	4.4849	7273	3.07	9180	20.5
PFDA 1	µg/L	20.000	0.5831	121.5	35800	3.46	10348	5.1794	5776	3.46	19585	16.1
PFUnA 1	µg/L	20.000	0.5899	122.9	33352	3.80	34333	4.1617	4782	3.80	12235	14.3
PFDoA 1	µg/L	20.000	0.5973	124.4	35653	4.10	13886	3.8838	4043	4.10	62856	11.3
PFTrDA 1	µg/L	20.000	0.5728	119.3	41500	4.37	26709	3.6625	3010	4.37	11362	7.3
PFTeDA 1	µg/L	20.000	0.5460	113.7	43055	4.60	46353	3.7998	2082	4.60	13128	4.8
PFBS 1	µg/L	20.000	0.5840	121.7	6211	1.36	16699	3.8387	2857	1.36	3822	46.0
PFHxS 1	µg/L	20.000	0.5835	121.6	4729	2.08	45497	4.4615	2619	2.09	19689	55.4
PFOS 1	µg/L	20.000	0.6143	128.0	4036	2.90	9994	4.1568	2203	2.89	2878	54.6
MeFOSA 1	µg/L	20.000	0.5439	113.3	2939	5.21	149	1.6310	2651	5.21	679	90.2
EtFOSA 1	µg/L	20.000	0.5918	123.3	3272	5.33	241	2.0579	2851	5.33	1183	87.1
13C2-PFHxA	µg/L	100.000	93.8372	93.8	7537	1.70	1105		--	--	--	--
13C4-PFHpA	µg/L	100.000	91.7040	91.7	10225	2.15	934		--	--	--	--
13C4-PFOA	µg/L	100.000	93.3728	93.4	10088	2.63	1723		--	--	--	--
13C5-PFNA	µg/L	100.000	91.7694	91.8	7894	3.07	1570		--	--	--	--
13C2-PFDA	µg/L	100.000	92.7412	92.7	6912	3.46	1297		--	--	--	--
13C2-PFUnA	µg/L	100.000	91.3380	91.3	8014	3.80	2061		--	--	--	--
13C2-PFDoA	µg/L	100.000	86.1082	86.1	9180	4.10	1314		--	--	--	--
13C2-PFTeDA	µg/L	100.000	81.1269	81.1	11331	4.60	2841		--	--	--	--
13C3-PFBS	µg/L	100.000	94.5646	94.6	1618	1.36	563		--	--	--	--
18O2-PFHxS	µg/L	100.000	92.8196	92.8	1060	2.11	395		--	--	--	--
13C4-PFOS	µg/L	100.000	91.7769	91.8	971	2.95	640		--	--	--	--
D3-MeFOSA	µg/L	100.000	68.1801	68.2	1802	5.21	90		--	--	--	--
D5-EtFOSA	µg/L	100.000	70.4787	70.5	1590	5.34	82		--	--	--	--

PFHxA 1

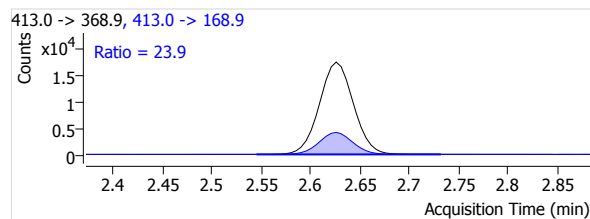
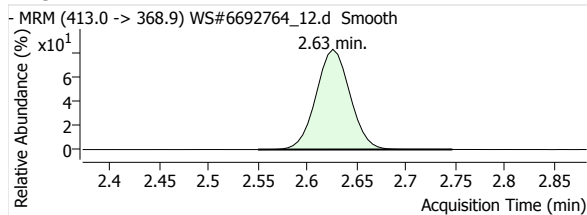


PFHpA 1

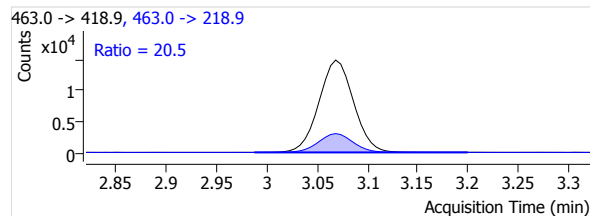
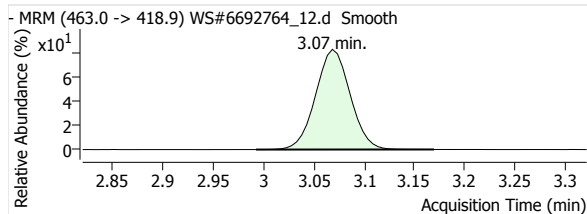


Quantitative Analysis Report

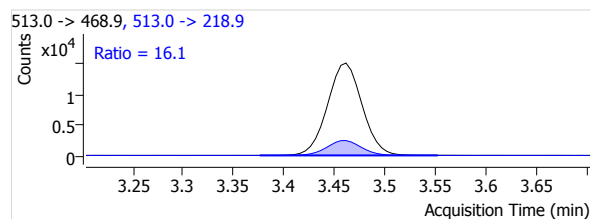
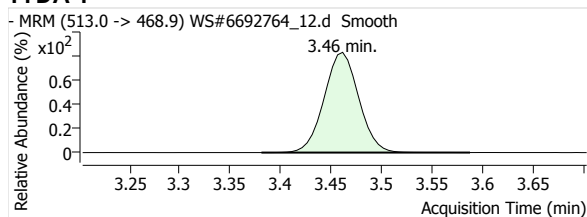
PFOA 1



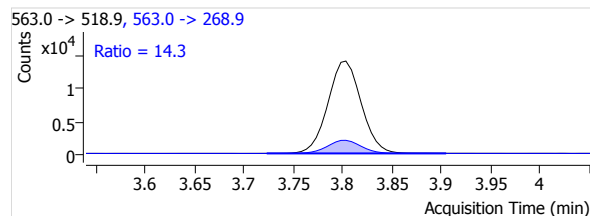
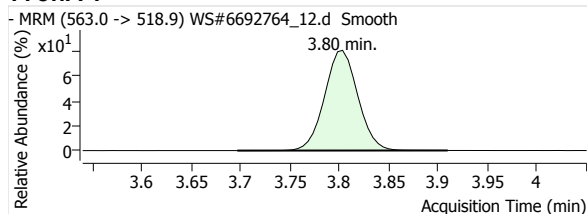
PFNA 1



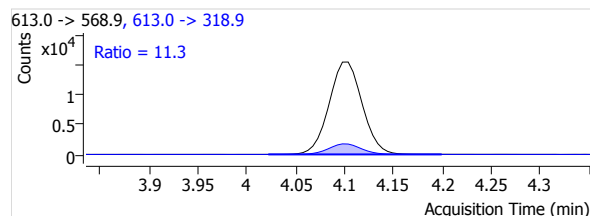
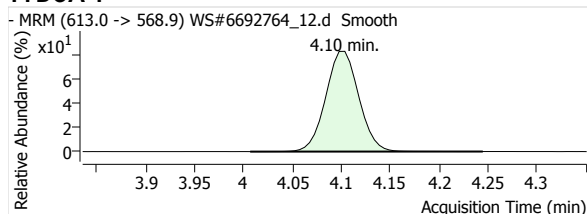
PFDA 1



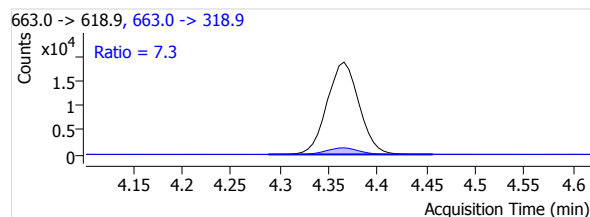
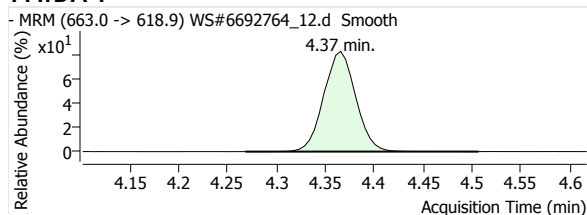
PFUnA 1



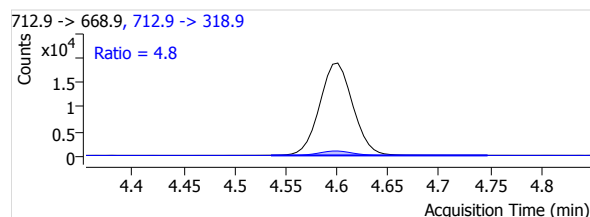
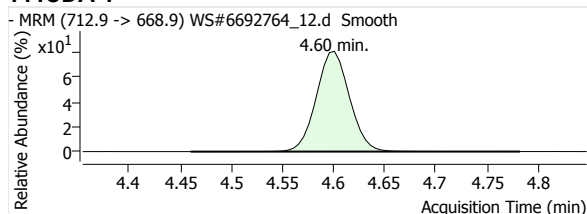
PFDaA 1



PFTrDA 1

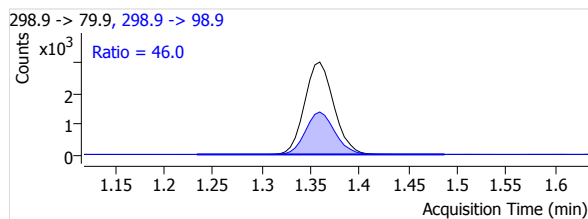
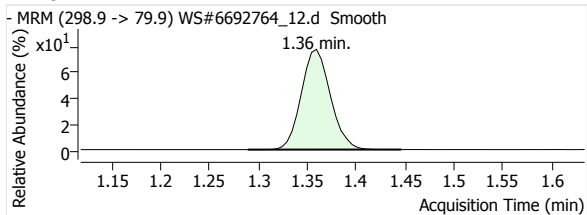


PFTeDA 1

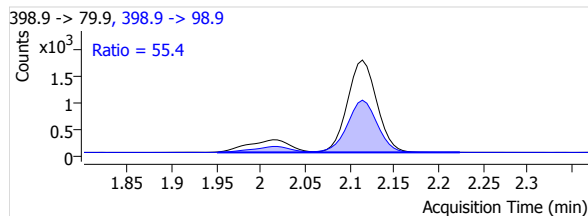
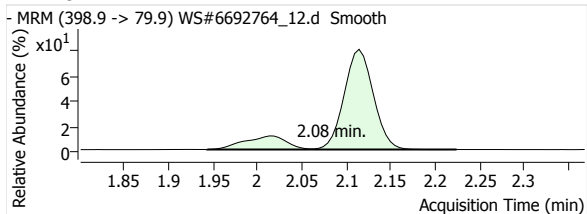


Quantitative Analysis Report

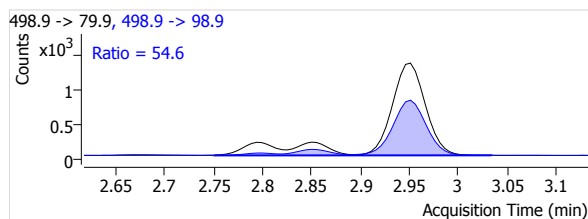
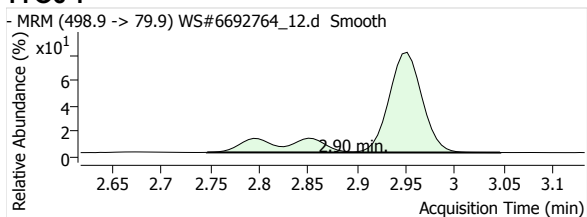
PFBS 1



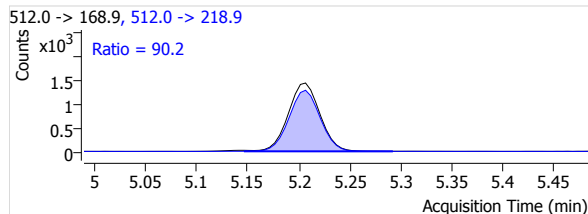
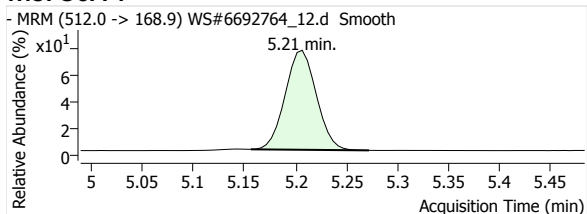
PFHxS 1



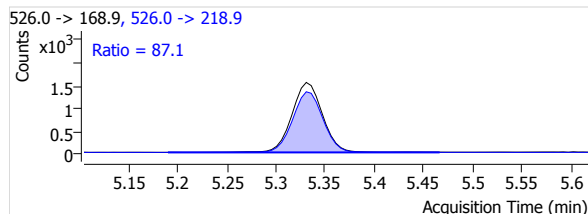
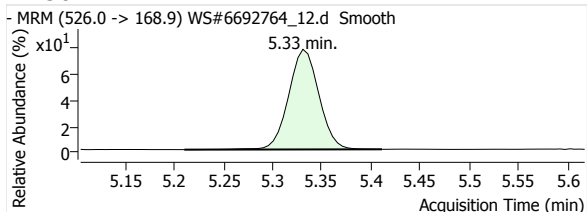
PFOS 1



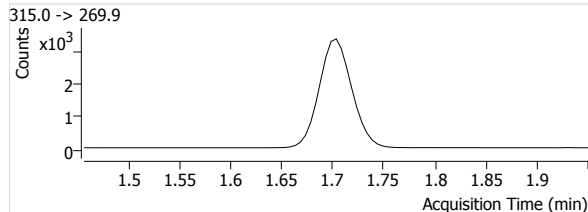
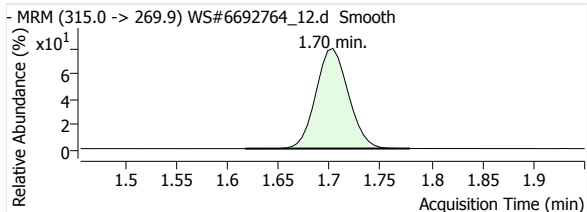
MeFOSA 1



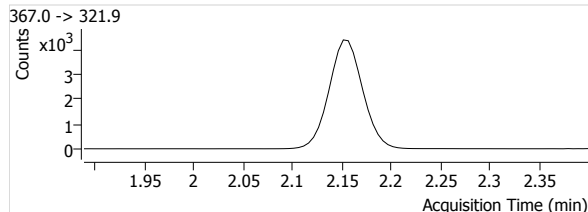
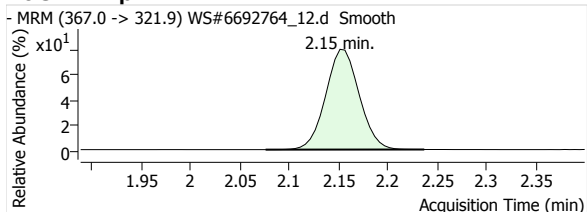
eFOSA 1



13C2-PFHxA

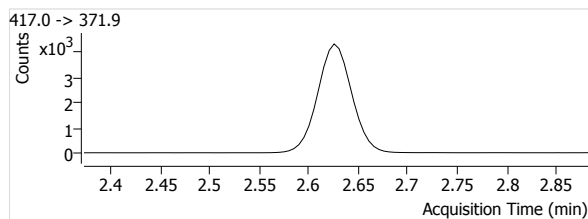
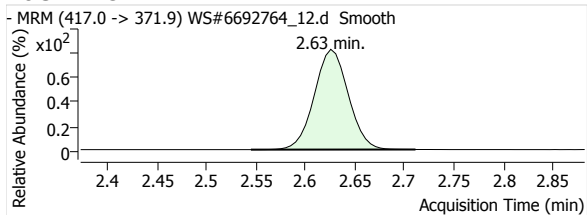


13C4-PFHpA

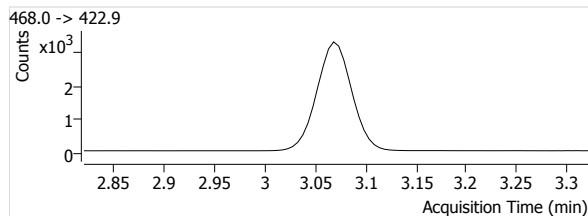
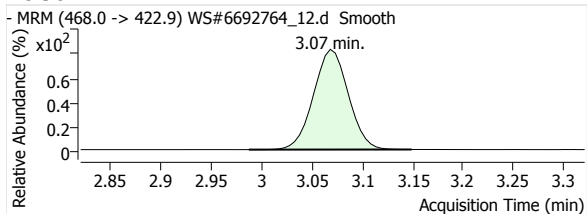


Quantitative Analysis Report

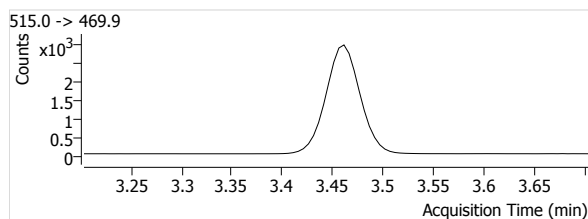
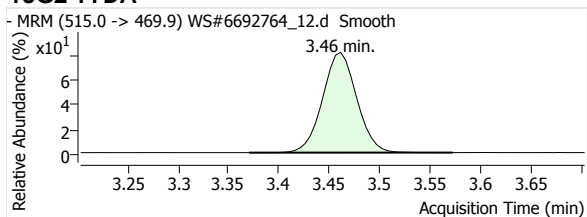
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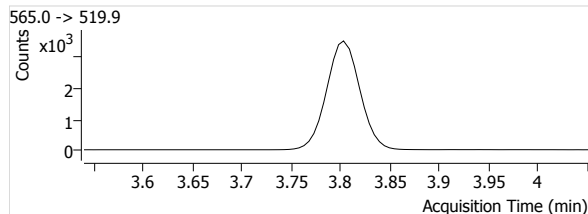
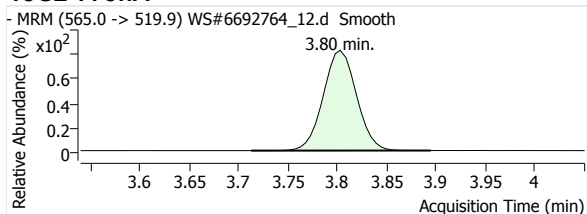
13C5-PFNA



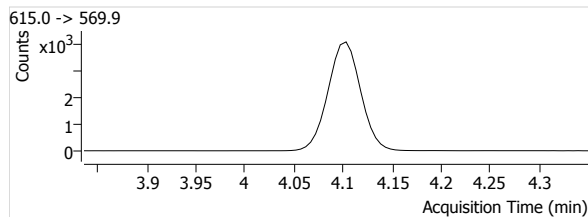
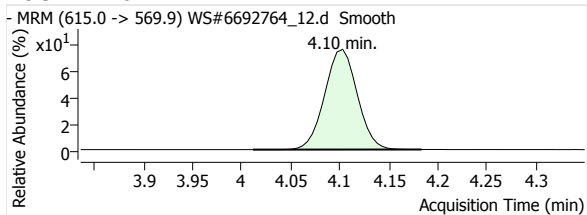
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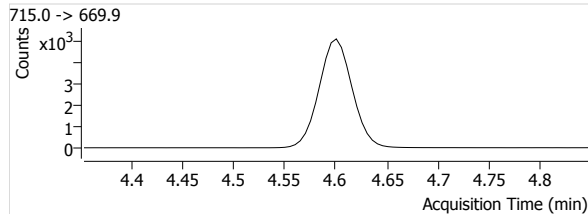
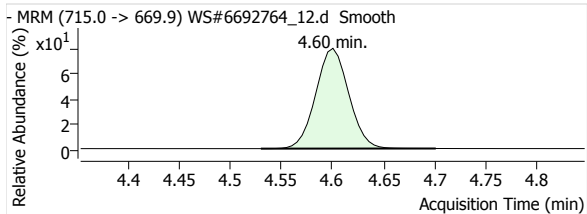
13C2-PFUnA



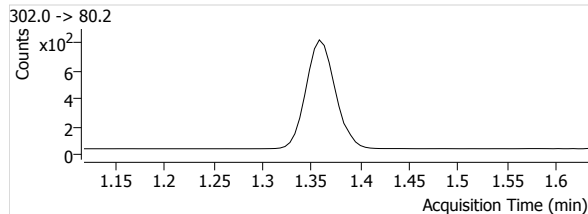
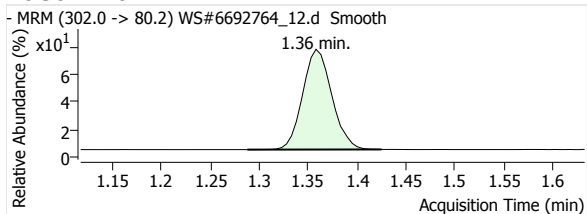
13C2-PFDoA



13C2-PFTeDA

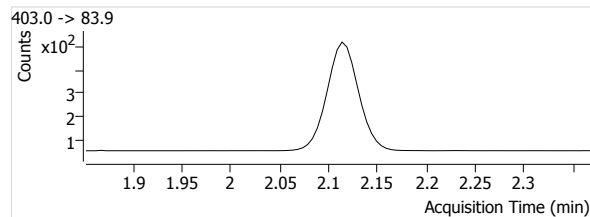
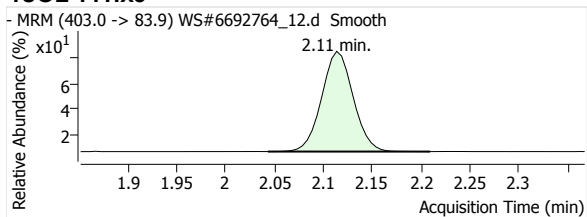


13C3-PFBS

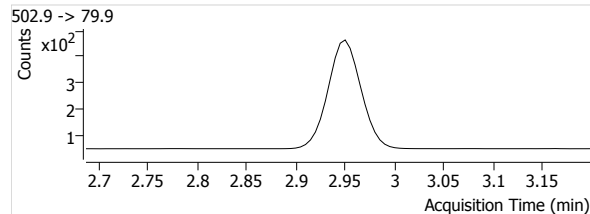
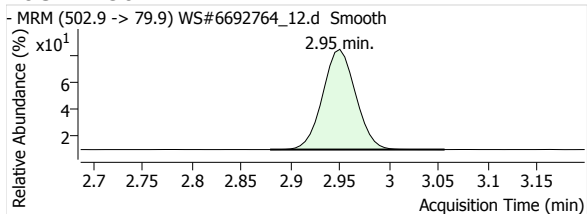


Quantitative Analysis Report

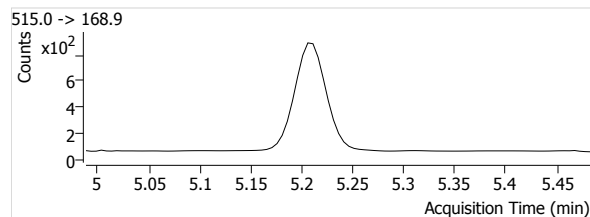
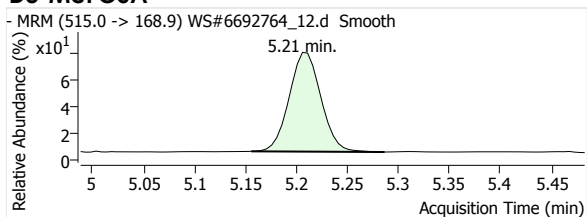
18O2-PFHxs



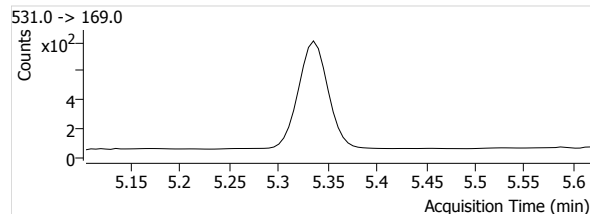
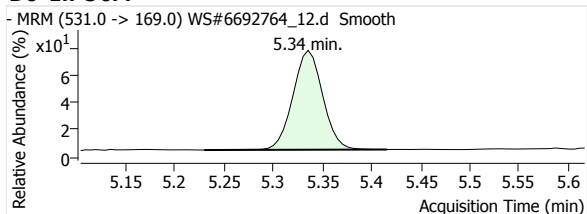
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

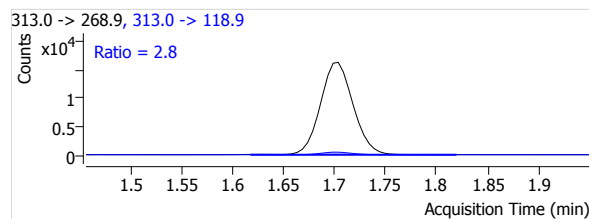
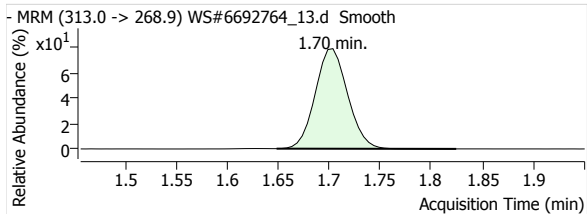
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bin

Sample Name 6692764:MTRX SPK
Type QC
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/23 3:18:02 AM
Comment MLP498
User Defined MI PFOA

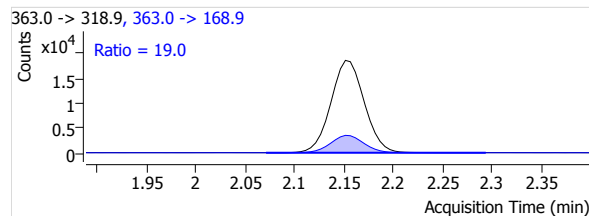
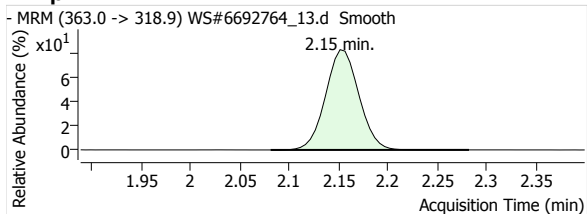
Data File WS#6692764_13.d
Instrument LCMS04
Position P1-B3
Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	20.000	0.5752	119.8	35954	1.70	236513	4.4641	999	1.70	4167	2.8
PFHpA 1	µg/L	20.000	0.5860	122.1	43858	2.15	3199	4.2342	8328	2.15	2260	19.0
PFOA 1	µg/L	20.000	0.5748	119.8	25684	2.62	167088	4.2147	6200	2.62	7310	24.1
PFNA 1	µg/L	20.000	0.5622	117.1	24368	3.06	20019	4.2021	5058	3.06	152278	20.8
PFDA 1	µg/L	20.000	0.5709	118.9	38387	3.46	7730	5.0723	6041	3.46	6268	15.7
PFUnA 1	µg/L	20.000	0.5805	120.9	31912	3.80	56865	4.0960	4457	3.80	3229	14.0
PFDoA 1	µg/L	20.000	0.6055	126.1	25695	4.10	1149	3.9367	2977	4.10	565	11.6
PFTrDA 1	µg/L	20.000	0.6173	128.6	24105	4.37	43335	3.9452	1733	4.37	6124	7.2
PFTeDA 1	µg/L	20.000	0.5387	112.2	22911	4.60	28503	3.7498	1137	4.60	9408	5.0
PFBS 1	µg/L	20.000	0.5769	120.2	6492	1.36	14887	3.7921	3041	1.36	8910	46.8
PFHxS 1	µg/L	20.000	0.6490	135.2	5550	2.08	20546	4.9598	3074	2.09	19876	55.4
PFOS 1	µg/L	20.000	0.6975	145.3	4069	2.90	847	4.7148	2309	2.89	8474	56.8
MeFOSA 1	µg/L	20.000	0.5558	115.8	2373	5.21	135	1.6664	2176	5.21	969	91.7
EtFOSA 1	µg/L	20.000	0.5785	120.5	2334	5.33	123	2.0121	2094	5.33	555	89.7
13C2-PFHxA	µg/L	100.000	100.2739	100.3	8054	1.70	2038		--	--	--	--
13C4-PFHpA	µg/L	100.000	92.8969	92.9	10358	2.15	915		--	--	--	--
13C4-PFOA	µg/L	100.000	56.4050	56.4	6094	2.62	1370		--	--	--	--
13C5-PFNA	µg/L	100.000	67.4146	67.4	5799	3.06	828		--	--	--	--
13C2-PFDA	µg/L	100.000	101.5430	101.5	7568	3.46	1792		--	--	--	--
13C2-PFUnA	µg/L	100.000	88.7964	88.8	7791	3.80	1285		--	--	--	--
13C2-PFDoA	µg/L	100.000	61.2231	61.2	6527	4.10	1389		--	--	--	--
13C2-PFTeDA	µg/L	100.000	43.7460	43.7	6110	4.60	1731		--	--	--	--
13C3-PFBS	µg/L	100.000	100.0584	100.1	1712	1.36	89		--	--	--	--
18O2-PFHxS	µg/L	100.000	97.9860	98.0	1119	2.11	497		--	--	--	--
13C4-PFOS	µg/L	100.000	81.5690	81.6	863	2.95	275		--	--	--	--
D3-MeFOSA	µg/L	100.000	53.8782	53.9	1424	5.21	59		--	--	--	--
D5-EtFOSA	µg/L	100.000	51.4184	51.4	1160	5.34	85		--	--	--	--

PFHxA 1

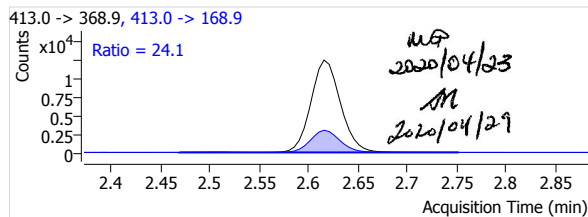
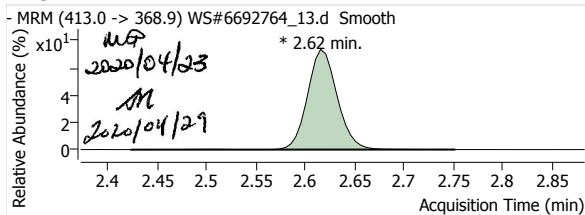


PFHpA 1

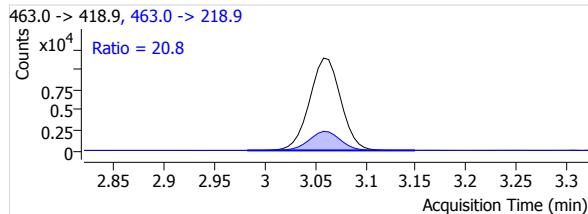
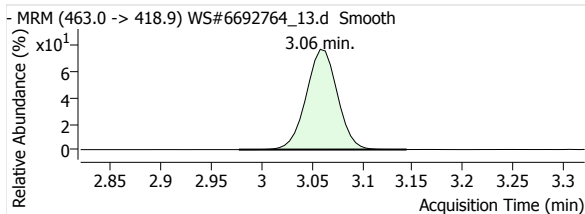


Quantitative Analysis Report

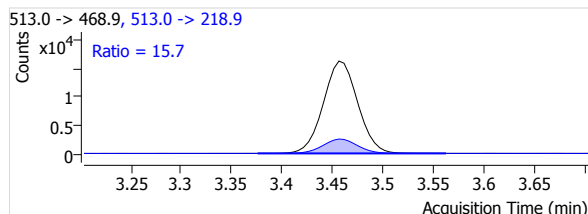
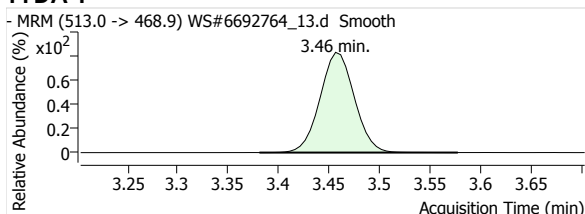
PFOA 1



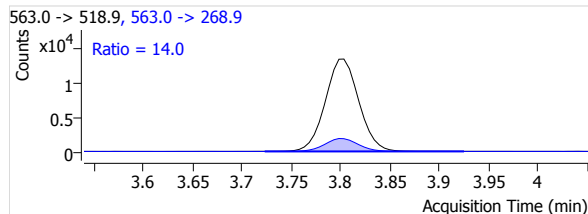
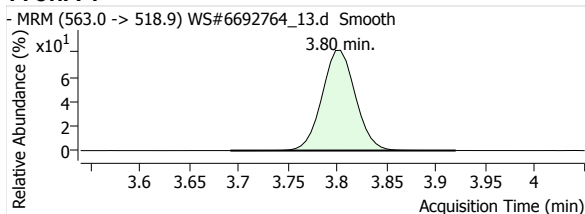
PFNA 1



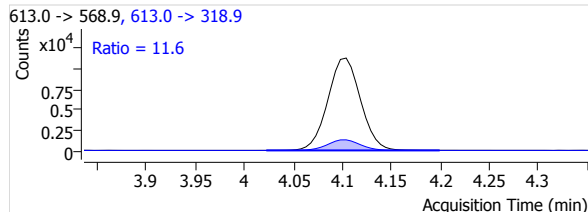
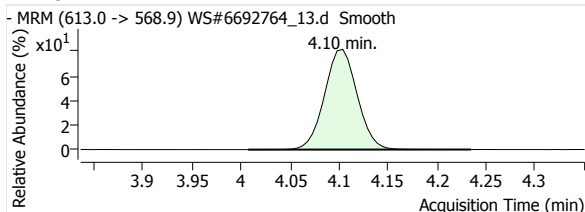
PFDA 1



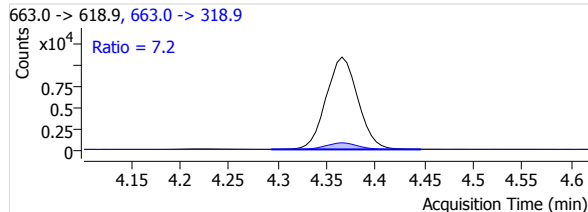
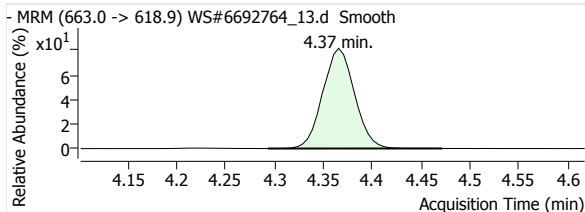
PFUnA 1



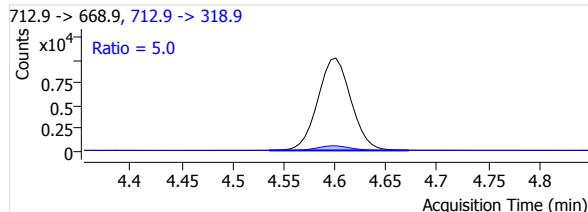
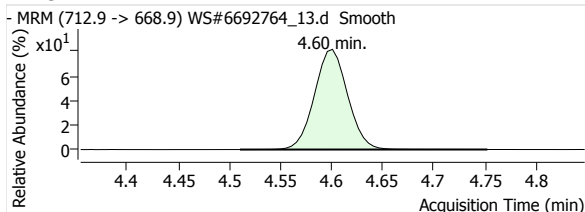
PFDaA 1



PFTrDA 1

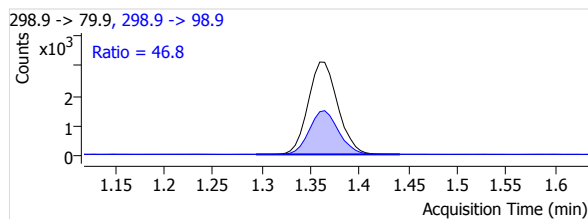
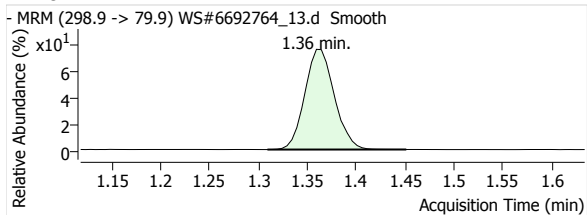


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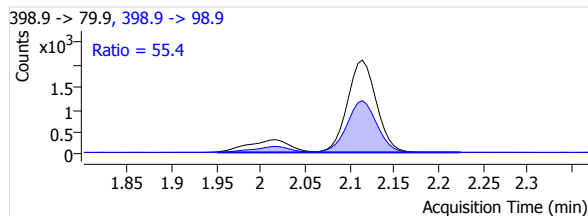
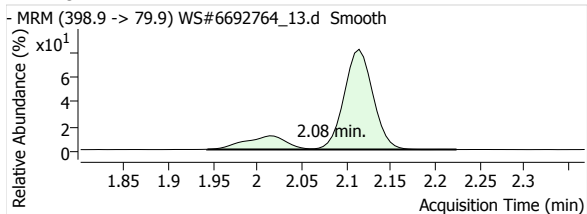


Quantitative Analysis Report

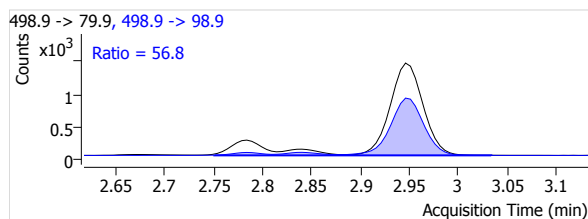
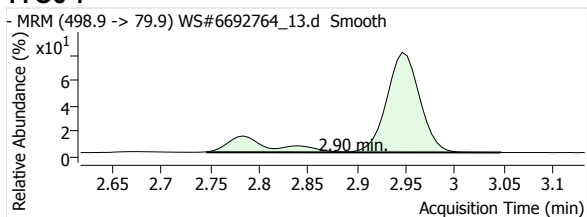
PFBS 1



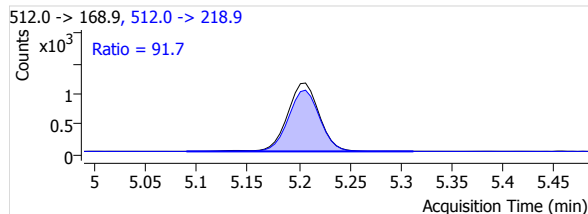
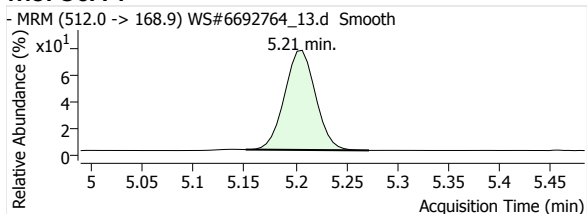
PFHxS 1



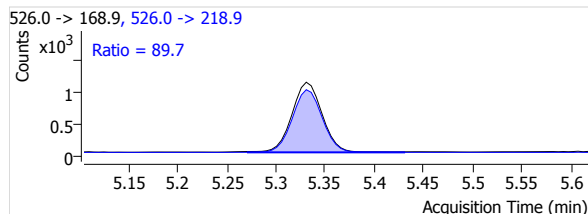
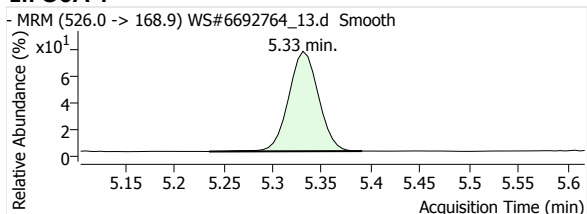
PFOS 1



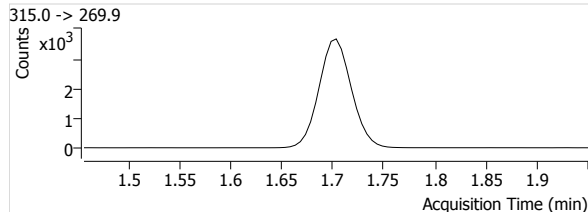
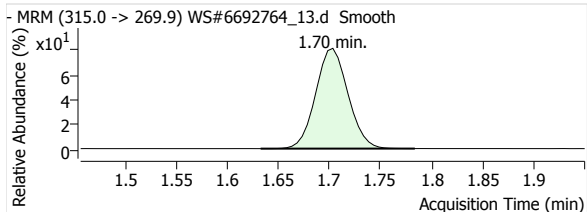
MeFOSA 1



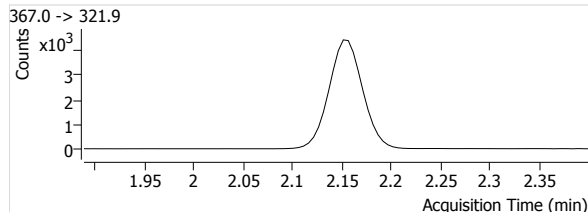
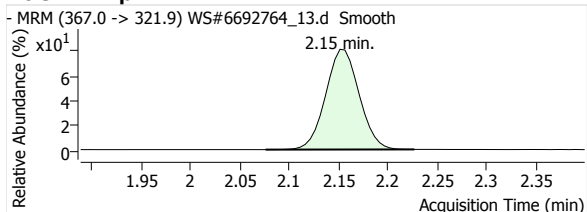
eFOSA 1



13C2-PFHxA

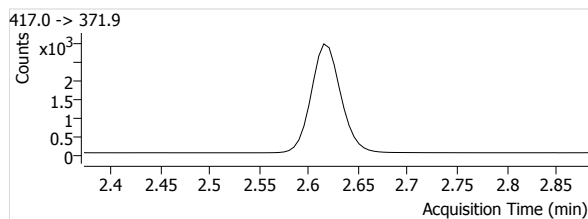
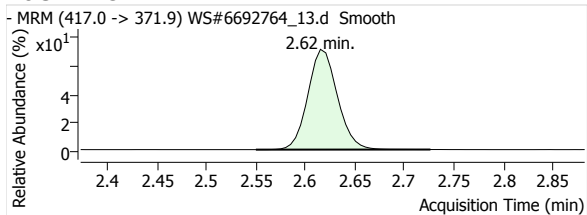


13C4-PFHpA

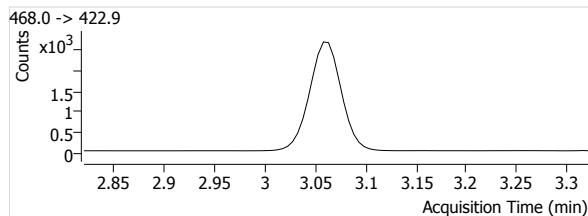
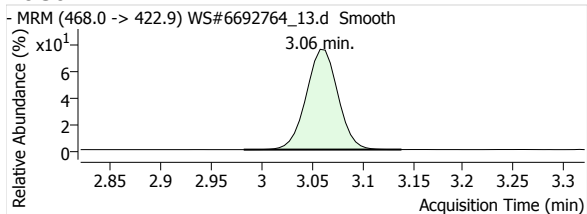


Quantitative Analysis Report

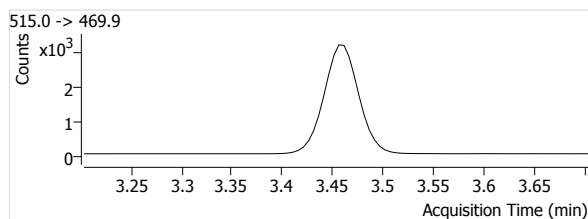
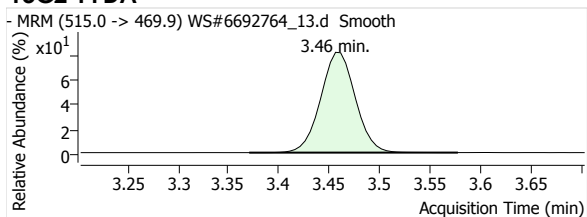
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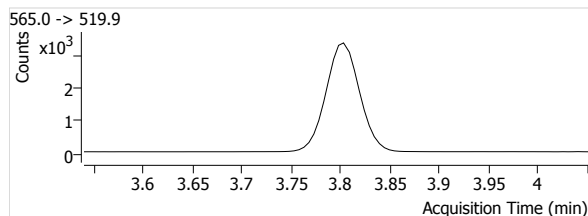
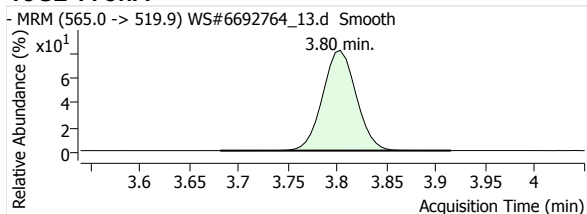
13C5-PFNA



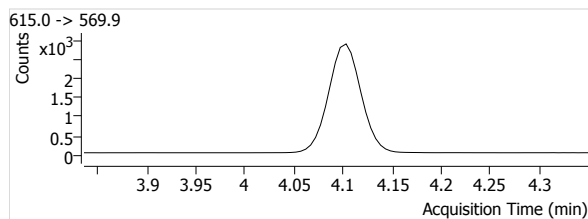
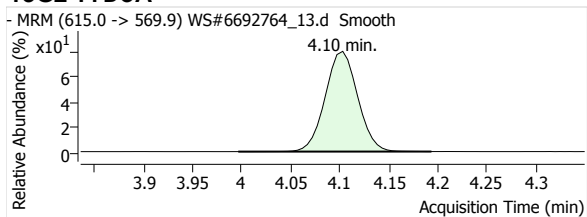
13C2-PFDA



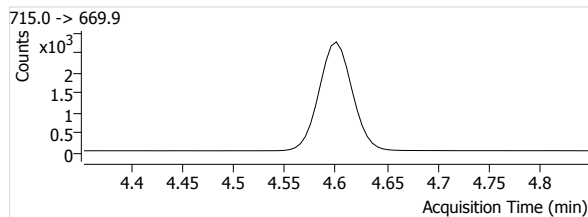
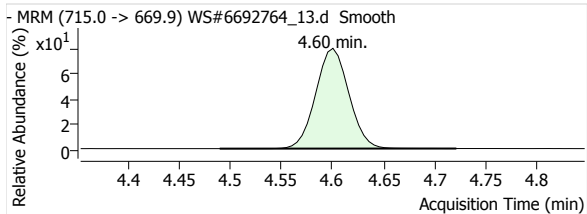
13C2-PFUnA



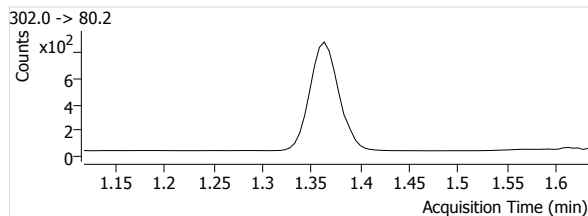
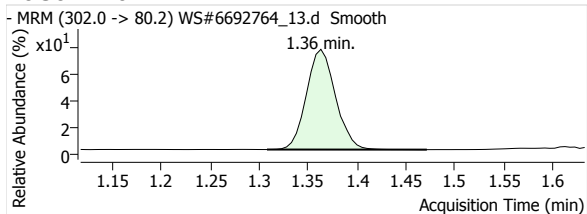
13C2-PFDoA



13C2-PFTeDA

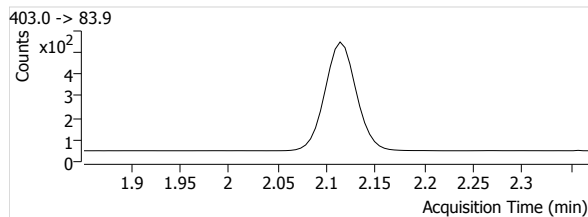
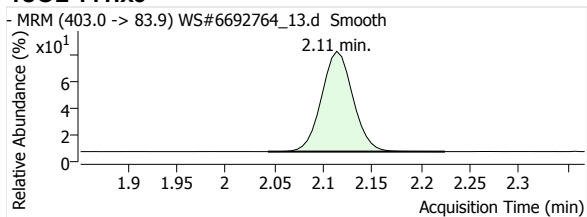


13C3-PFBS

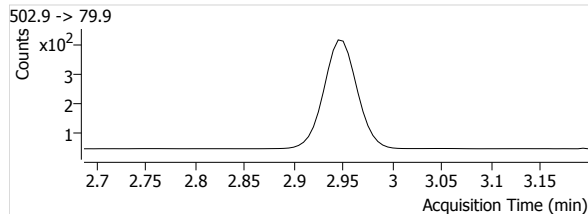
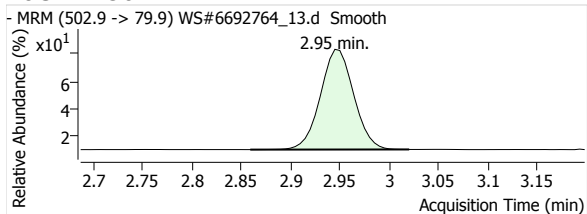


Quantitative Analysis Report

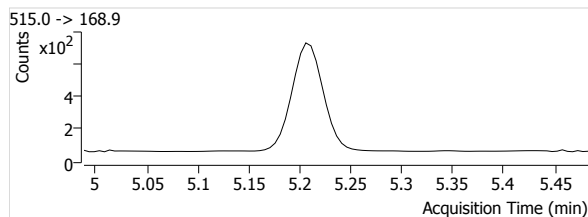
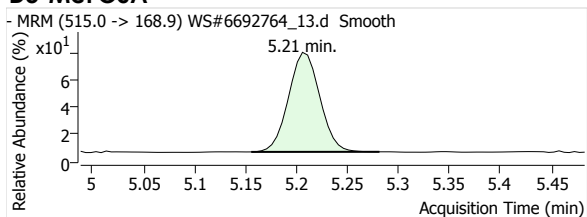
18O2-PFHxs



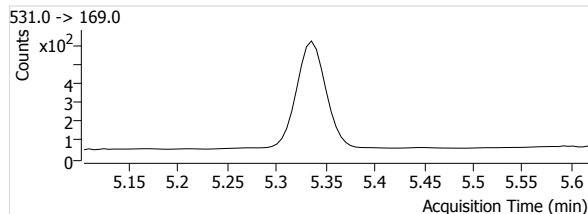
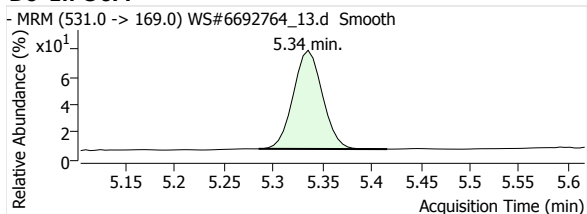
13C4-PFOS



D3-MeFOXA



D5-EtFOXA





Quantitative Analysis Report

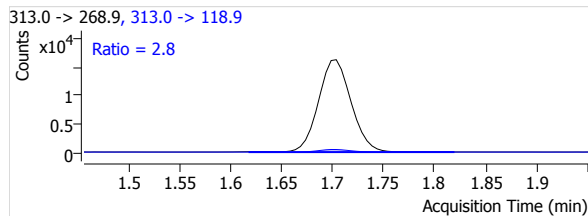
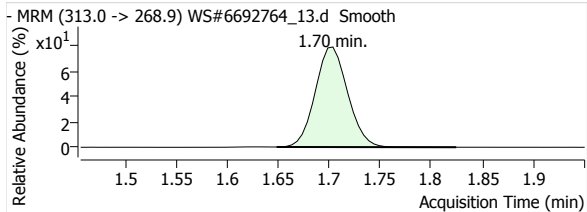
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Sample Name 6692764:MTRX SPK
Type QC
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/23 3:18:02 AM
Comment MLP498
User Defined MI PFOA

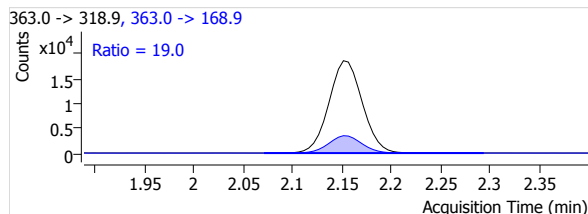
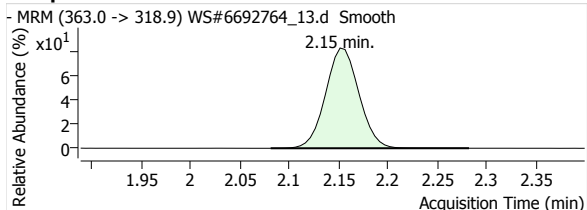
Data File WS#6692764_13.d
Instrument LCMS04
Position P1-B3
Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	20.000	0.5752	119.8	35954	1.70	236513	4.4641	999	1.70	4167	2.8
PFHpA 1	µg/L	20.000	0.5860	122.1	43858	2.15	3199	4.2342	8328	2.15	2260	19.0
PFOA 1	µg/L	20.000	0.5714	119.0	25535	2.62	167091	4.1902	6147	2.62	7310	24.1
PFNA 1	µg/L	20.000	0.5622	117.1	24368	3.06	20019	4.2021	5058	3.06	152278	20.8
PFDA 1	µg/L	20.000	0.5709	118.9	38387	3.46	7730	5.0723	6041	3.46	6268	15.7
PFUnA 1	µg/L	20.000	0.5805	120.9	31912	3.80	56865	4.0960	4457	3.80	3229	14.0
PFDoA 1	µg/L	20.000	0.6055	126.1	25695	4.10	1149	3.9367	2977	4.10	565	11.6
PFTTrDA 1	µg/L	20.000	0.6173	128.6	24105	4.37	43335	3.9452	1733	4.37	6124	7.2
PFTeDA 1	µg/L	20.000	0.5387	112.2	22911	4.60	28503	3.7498	1137	4.60	9408	5.0
PFBS 1	µg/L	20.000	0.5769	120.2	6492	1.36	14887	3.7921	3041	1.36	8910	46.8
PFHxS 1	µg/L	20.000	0.6488	135.2	5550	2.08	20546	4.9598	3074	2.09	19876	55.4
PFOS 1	µg/L	20.000	0.6972	145.3	4069	2.90	847	4.7148	2309	2.89	8474	56.8
MeFOSA 1	µg/L	20.000	0.5558	115.8	2373	5.21	135	1.6664	2176	5.21	969	91.7
EtFOSA 1	µg/L	20.000	0.5785	120.5	2334	5.33	123	2.0121	2094	5.33	555	89.7
13C2-PFHxA	µg/L	100.000	100.2739	100.3	8054	1.70	2038		--	--	--	--
13C4-PFHpA	µg/L	100.000	92.8969	92.9	10358	2.15	915		--	--	--	--
13C4-PFOA	µg/L	100.000	56.4050	56.4	6094	2.62	1370		--	--	--	--
13C5-PFNA	µg/L	100.000	67.4146	67.4	5799	3.06	828		--	--	--	--
13C2-PFDA	µg/L	100.000	101.5430	101.5	7568	3.46	1792		--	--	--	--
13C2-PFUnA	µg/L	100.000	88.7964	88.8	7791	3.80	1285		--	--	--	--
13C2-PFDoA	µg/L	100.000	61.2231	61.2	6527	4.10	1389		--	--	--	--
13C2-PFTeDA	µg/L	100.000	43.7460	43.7	6110	4.60	1731		--	--	--	--
13C3-PFBS	µg/L	100.000	100.0584	100.1	1712	1.36	89		--	--	--	--
18O2-PFHxS	µg/L	100.000	97.9860	98.0	1119	2.11	497		--	--	--	--
13C4-PFOS	µg/L	100.000	81.5690	81.6	863	2.95	275		--	--	--	--
D3-MeFOSA	µg/L	100.000	53.8782	53.9	1424	5.21	59		--	--	--	--
D5-EtFOSA	µg/L	100.000	51.4184	51.4	1160	5.34	85		--	--	--	--

PFHxA 1

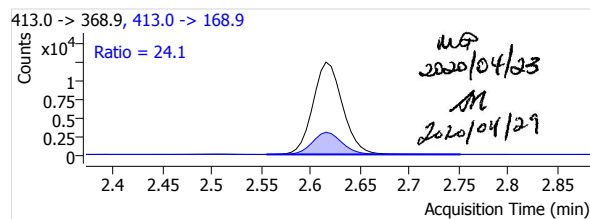
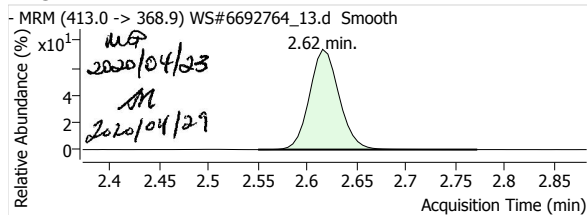


PFHpA 1

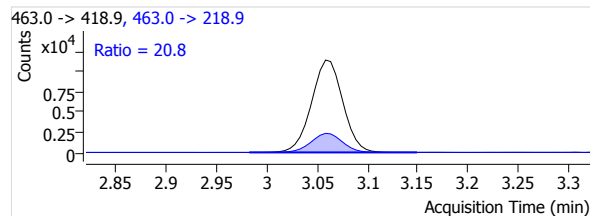
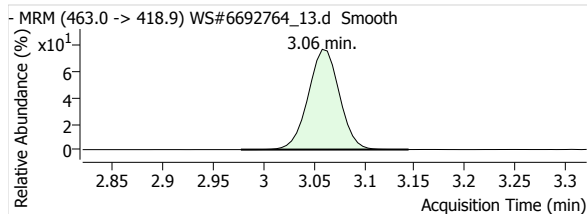


Quantitative Analysis Report

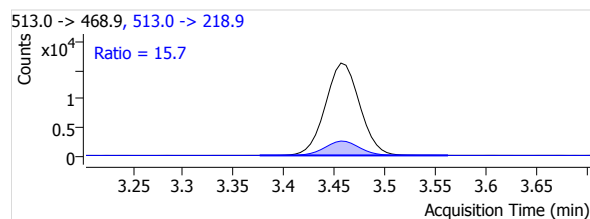
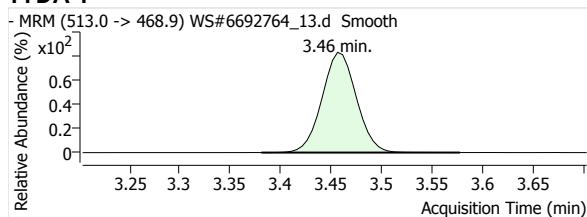
PFOA 1



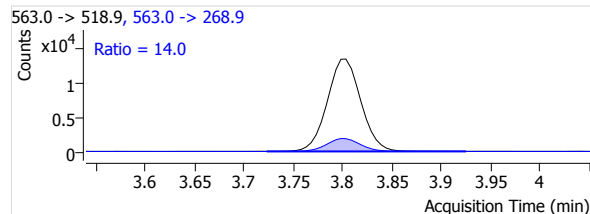
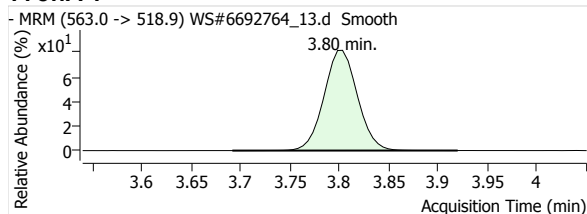
PFNA 1



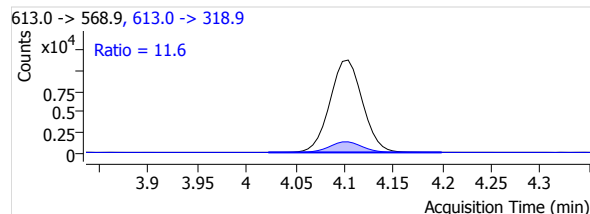
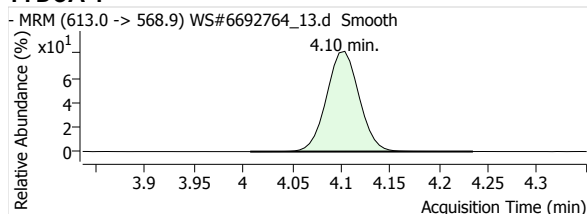
PFDA 1



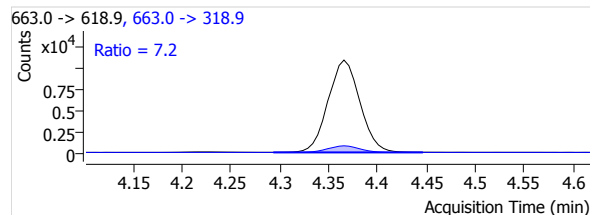
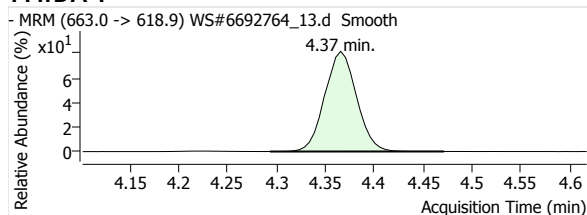
PFUnA 1



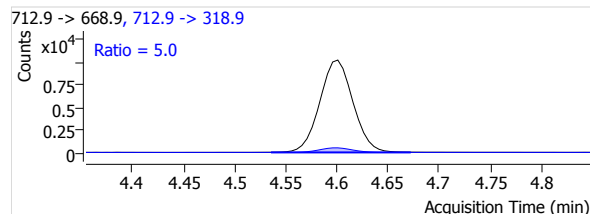
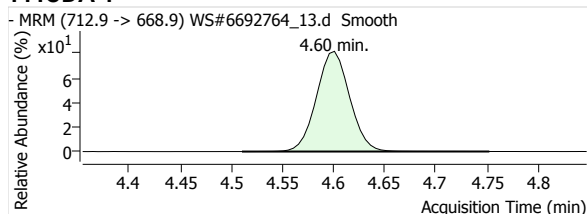
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PFTrDA 1

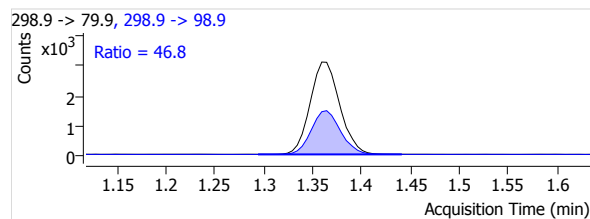
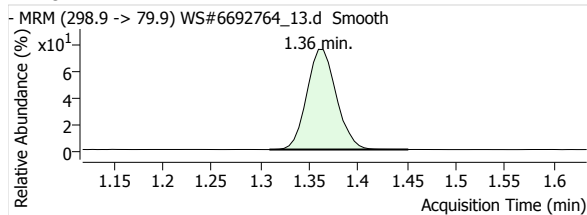


PFTeDA 1

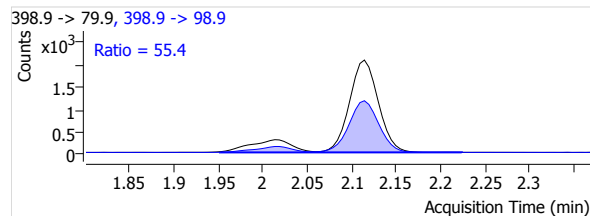
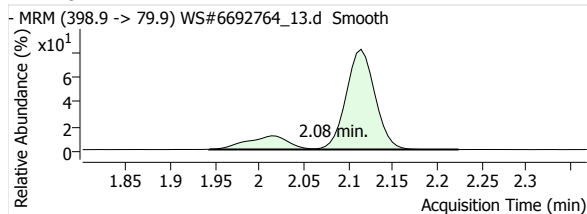


Quantitative Analysis Report

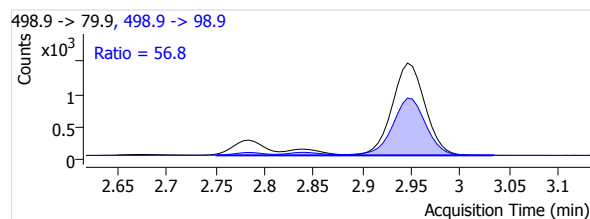
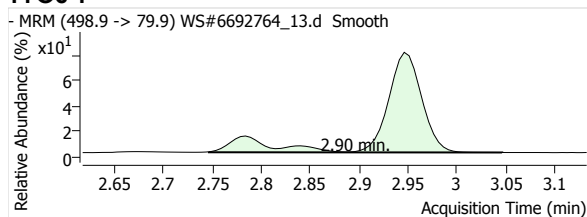
PFBS 1



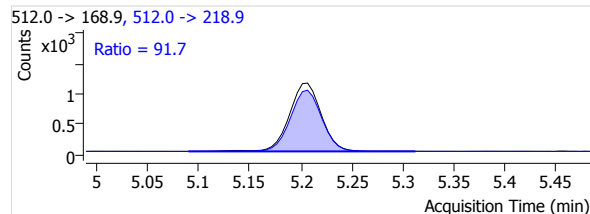
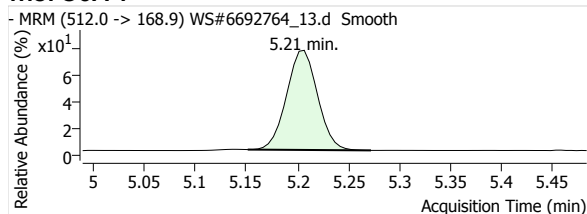
PFHxS 1



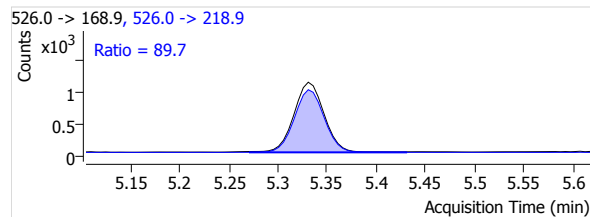
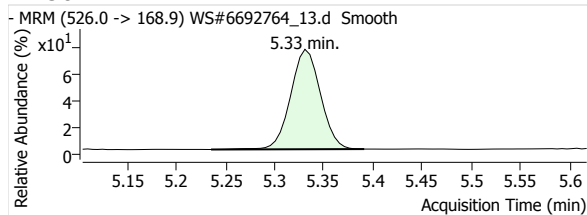
PFOS 1



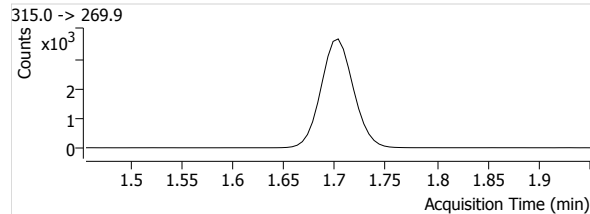
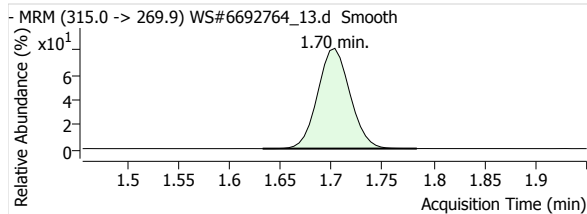
MeFOSA 1



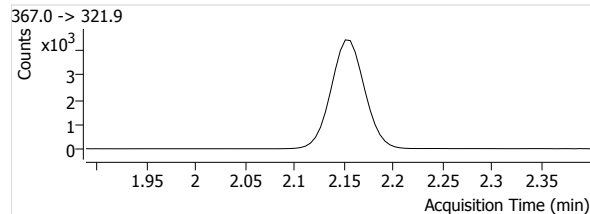
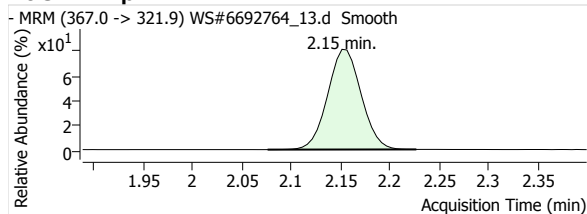
eFOSA 1



13C2-PFHxA

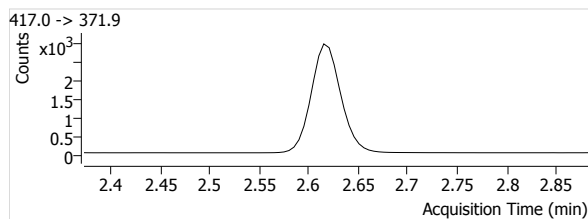
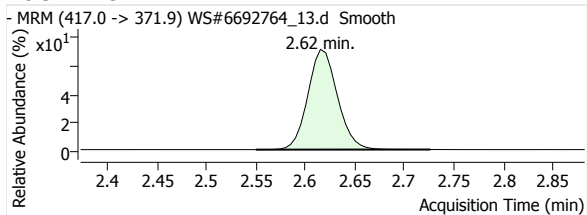


13C4-PFHpA

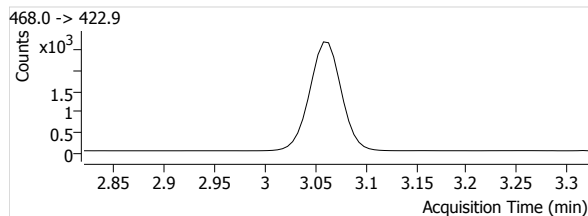
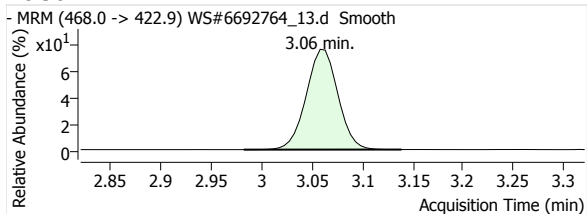


Quantitative Analysis Report

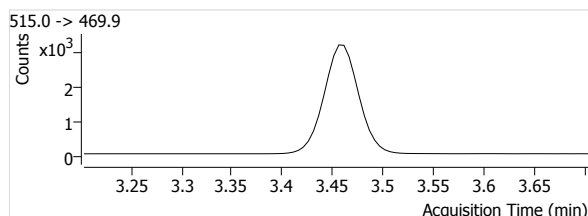
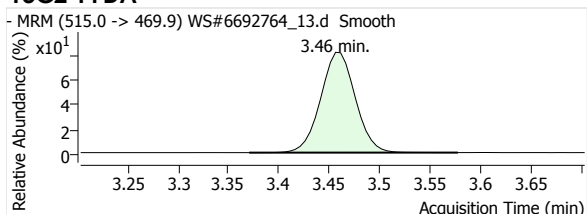
13C4-PFOA



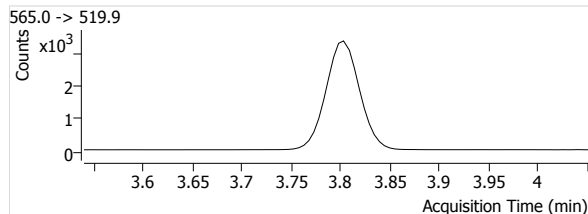
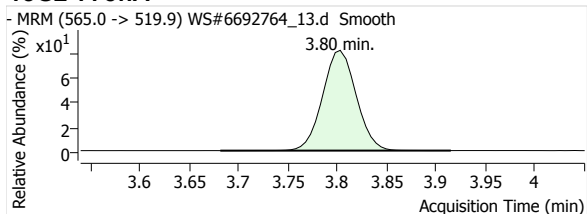
13C5-PFNA



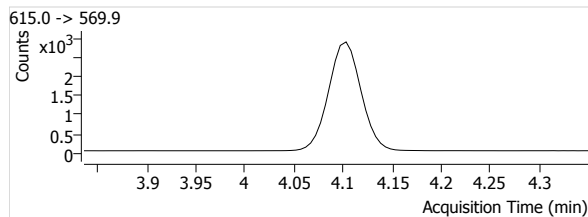
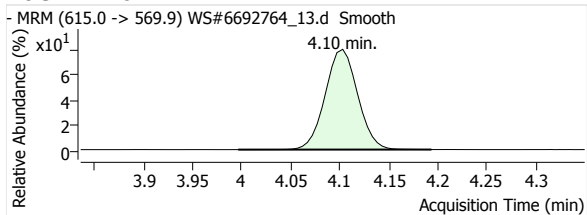
13C2-PFDA



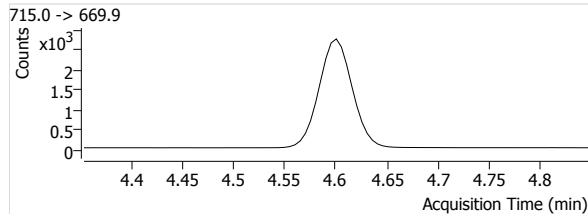
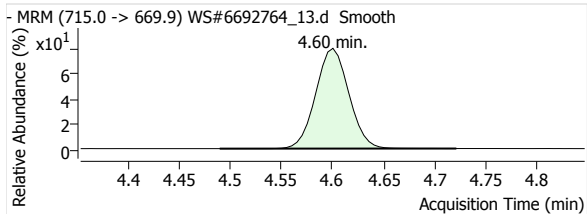
13C2-PFUnA



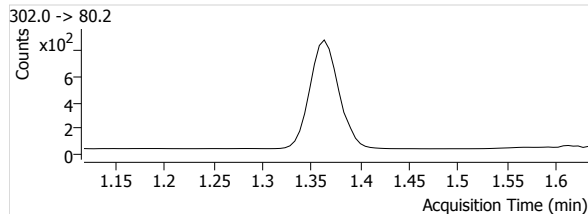
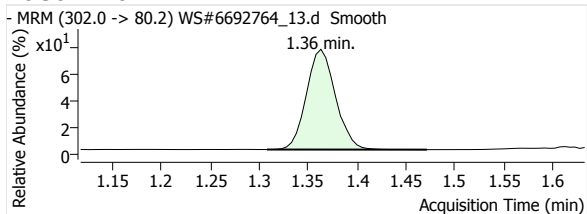
13C2-PFDoA



13C2-PFTeDA

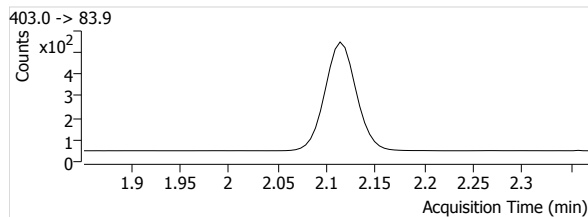
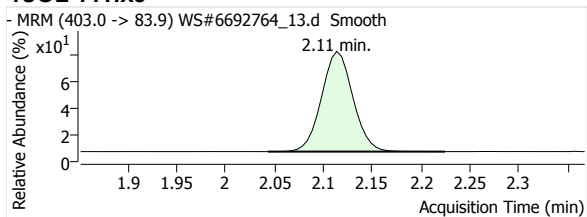


13C3-PFBS

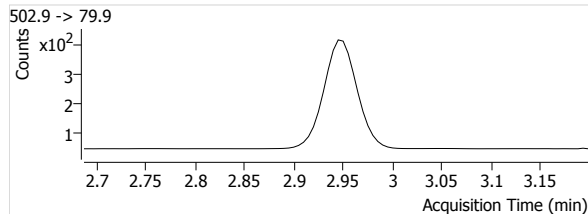
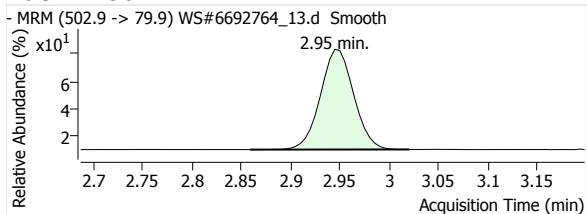


Quantitative Analysis Report

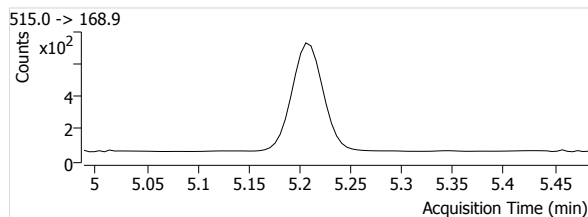
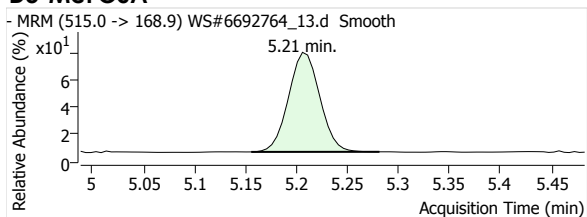
18O2-PFHxs



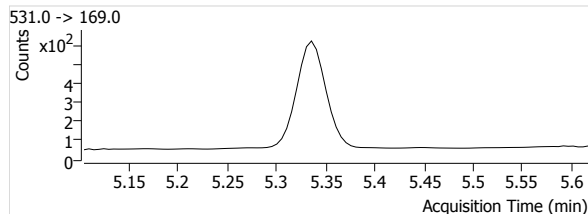
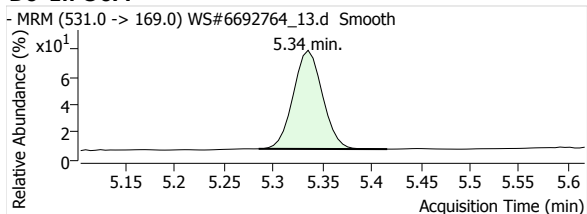
13C4-PFOS



D3-MeFOFA



D5-EtFOFA



Quantitative Analysis Report

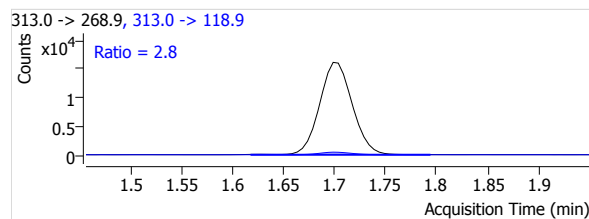
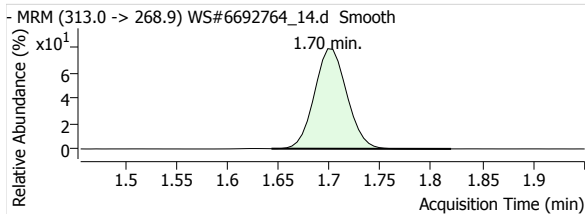
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Sample Name 6692764:MTRX SPK:D1
Type QC
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/23 3:24:58 AM
Comment MLP498
User Defined MI PFOA

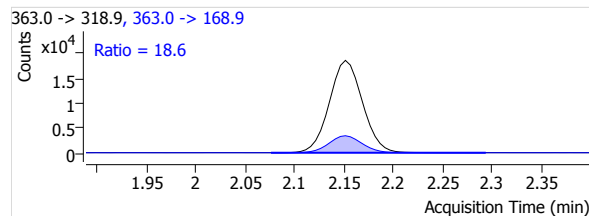
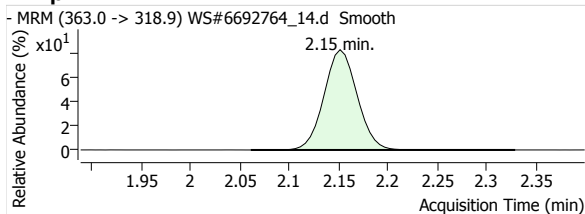
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Instrument LCMS04
Position P1-B4
Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	20.000	0.5915	123.2	35652	1.70	35116	4.5896	1003	1.70	4600	2.8
PFHpA 1	µg/L	20.000	0.6060	126.2	43849	2.15	6197	4.3775	8137	2.15	2328	18.6
PFOA 1	µg/L	20.000	0.5850	121.9	26504	2.62	24804	4.2887	6471	2.62	15347	24.4
PFNA 1	µg/L	20.000	0.5796	120.8	25228	3.06	93851	4.3310	5263	3.06	23226	20.9
PFDA 1	µg/L	20.000	0.5813	121.1	36479	3.46	6452	5.1633	5823	3.46	33852	16.0
PFUnA 1	µg/L	20.000	0.5802	120.9	30533	3.80	3432	4.0934	4268	3.80	17057	14.0
PFDoA 1	µg/L	20.000	0.5677	118.3	24982	4.10	1810	3.6934	2963	4.10	762	11.9
PFTeDA 1	µg/L	20.000	0.5826	121.4	24145	4.37	57127	3.7249	1788	4.37	10181	7.4
PFTeDA 1	µg/L	20.000	0.5239	109.1	23643	4.60	58960	3.6475	1174	4.60	75282	5.0
PFBS 1	µg/L	20.000	0.5810	121.1	6401	1.36	10211	3.8192	2989	1.36	8135	46.7
PFHxS 1	µg/L	20.000	0.6807	141.8	5486	2.08	36827	5.2005	2987	2.09	13038	54.4
PFOS 1	µg/L	20.000	0.7016	146.2	4022	2.90	1279	4.7423	2241	2.89	1255	55.7
MeFOSA 1	µg/L	20.000	0.5299	110.4	2336	5.21	139	1.5891	2119	5.21	608	90.7
EtFOSA 1	µg/L	20.000	0.5413	112.8	2253	5.33	136	1.8838	2125	5.33	1031	94.3
13C2-PFHxA	µg/L	100.000	96.7131	96.7	7768	1.70	980		--	--	--	--
13C4-PFHpA	µg/L	100.000	89.8386	89.8	10017	2.15	827		--	--	--	--
13C4-PFOA	µg/L	100.000	57.2010	57.2	6180	2.62	1512		--	--	--	--
13C5-PFNA	µg/L	100.000	67.7168	67.7	5825	3.06	915		--	--	--	--
13C2-PFDA	µg/L	100.000	94.7940	94.8	7065	3.46	1415		--	--	--	--
13C2-PFUnA	µg/L	100.000	85.0125	85.0	7459	3.80	1618		--	--	--	--
13C2-PFDoA	µg/L	100.000	63.4462	63.4	6764	4.10	1174		--	--	--	--
13C2-PFTeDA	µg/L	100.000	46.4094	46.4	6482	4.60	2341		--	--	--	--
13C3-PFBS	µg/L	100.000	97.9544	98.0	1676	1.36	106		--	--	--	--
18O2-PFHxS	µg/L	100.000	92.3818	92.4	1055	2.11	187		--	--	--	--
13C4-PFOS	µg/L	100.000	80.1512	80.2	848	2.95	224		--	--	--	--
D3-MeFOSA	µg/L	100.000	55.6186	55.6	1470	5.21	70		--	--	--	--
D5-EtFOSA	µg/L	100.000	53.0142	53.0	1196	5.34	91		--	--	--	--

PFHxA 1

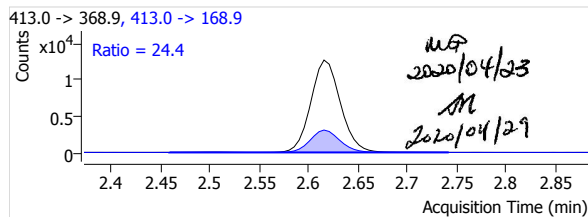
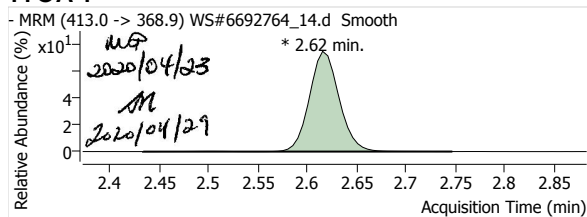


PFHpA 1

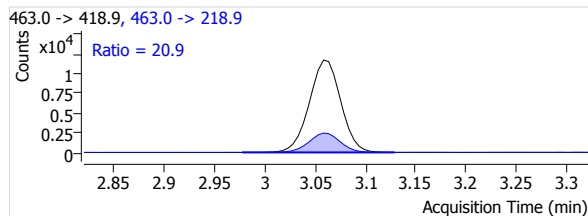
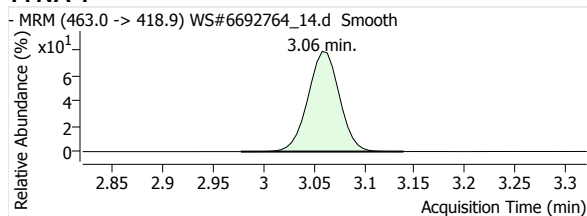


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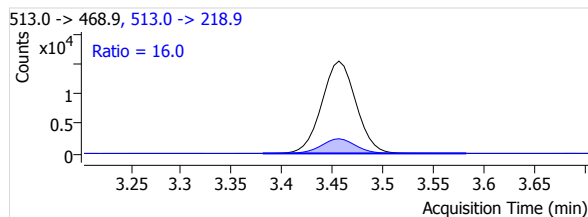
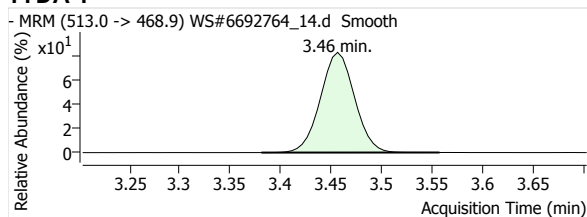
PFOA 1



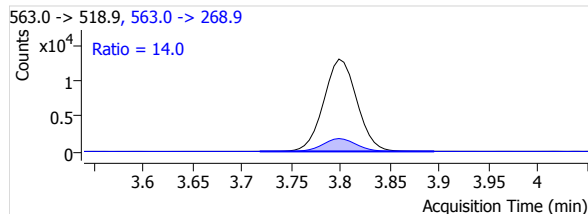
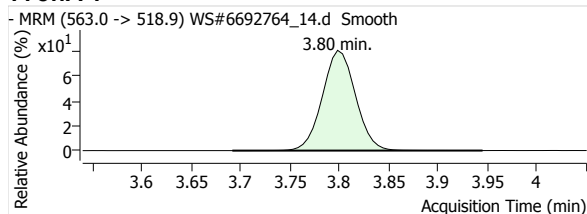
PFNA 1



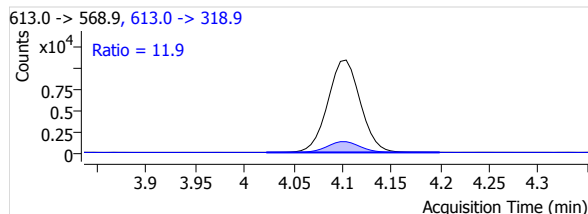
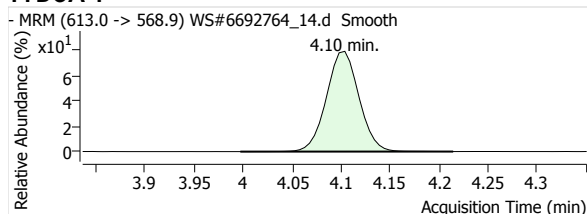
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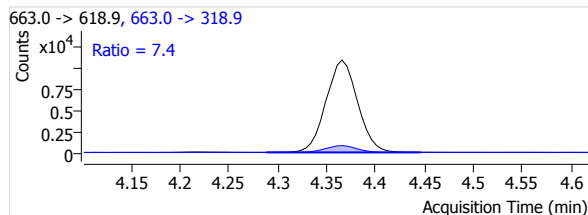
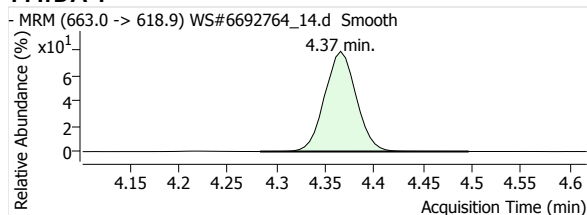
PFUnA 1



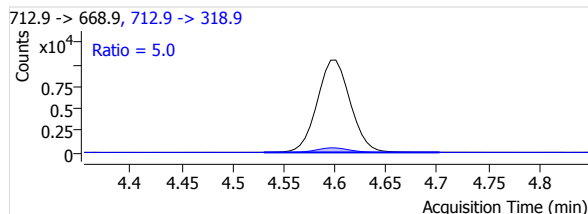
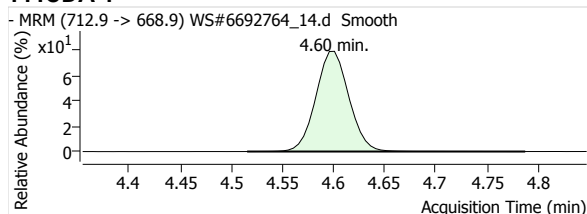
PFDaA 1



PFTrDA 1

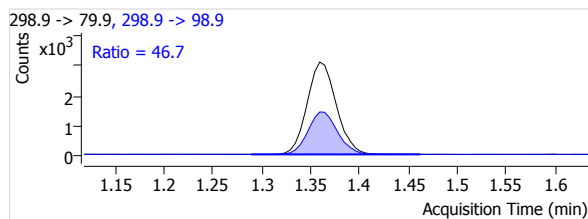
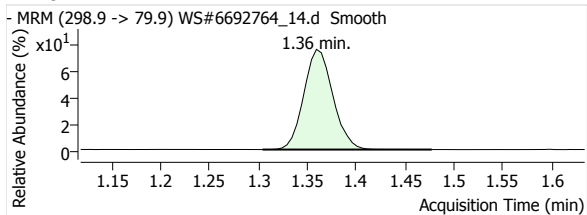


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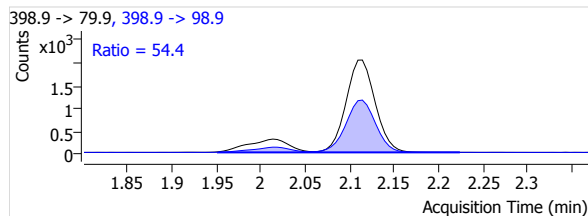
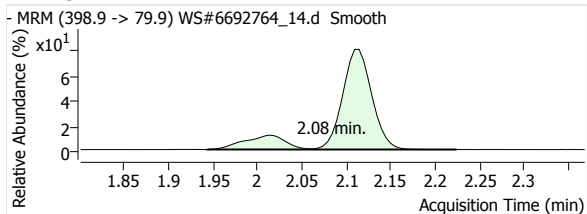


Quantitative Analysis Report

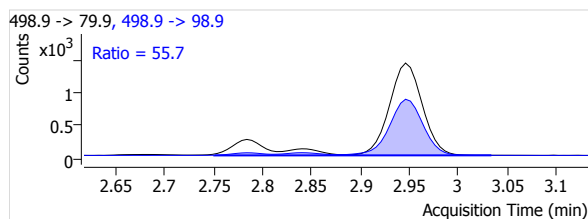
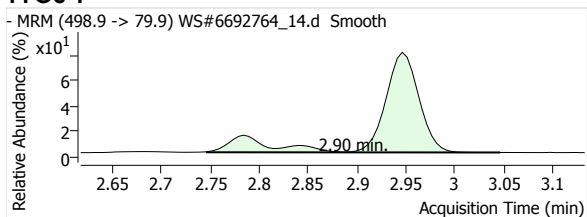
PFBS 1



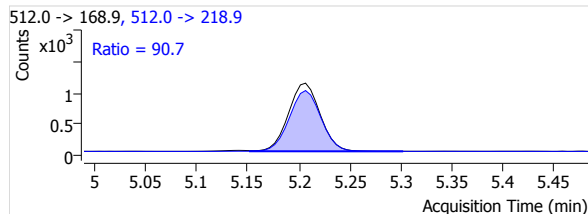
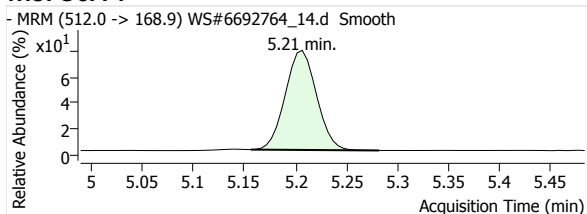
PFHxS 1



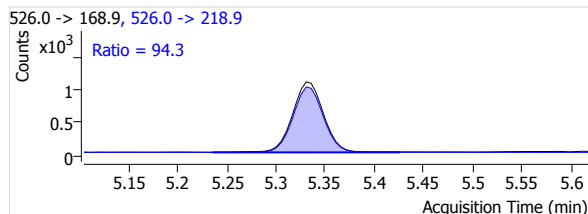
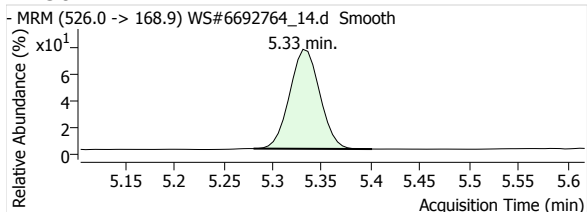
PFOS 1



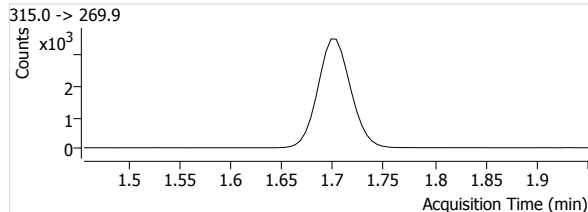
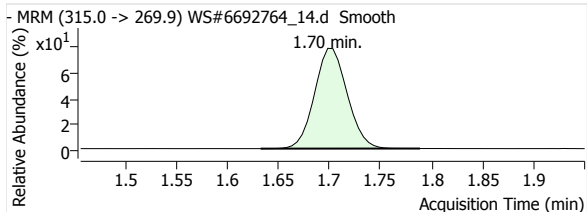
MeFOSA 1



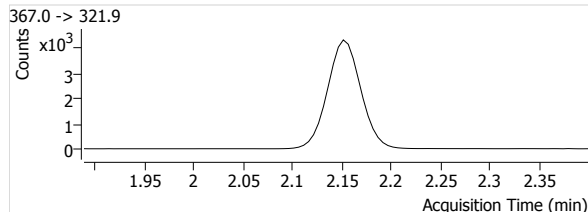
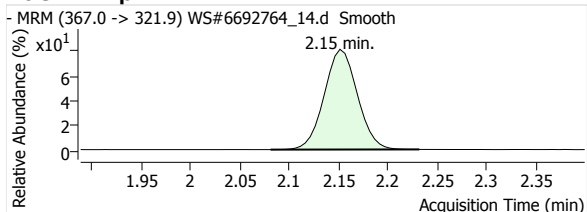
eFOSA 1



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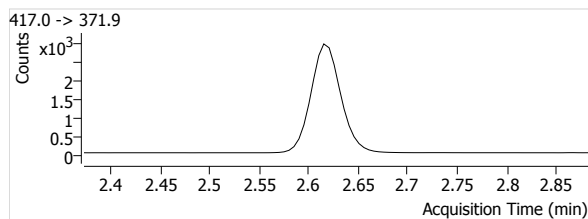
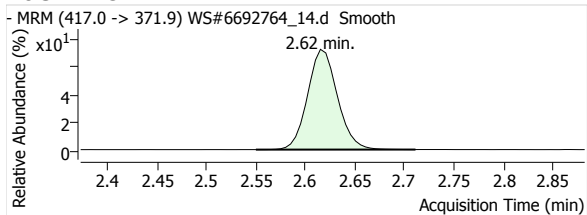


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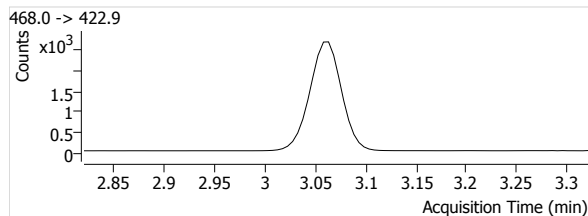
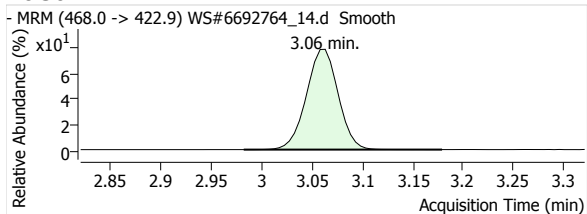


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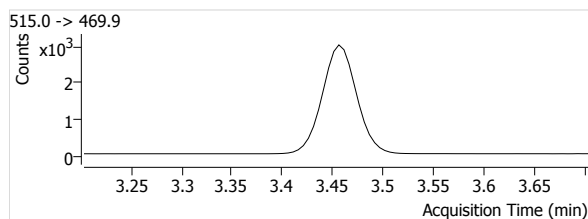
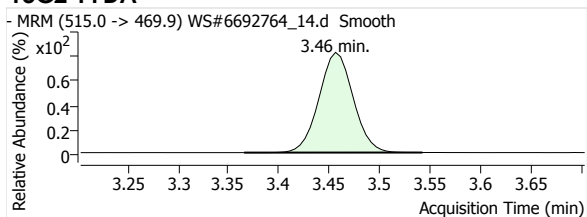
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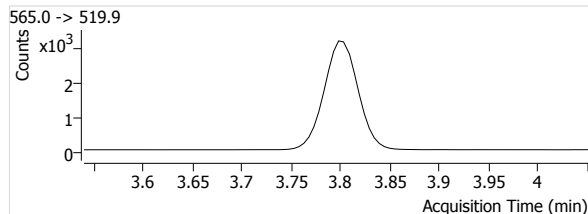
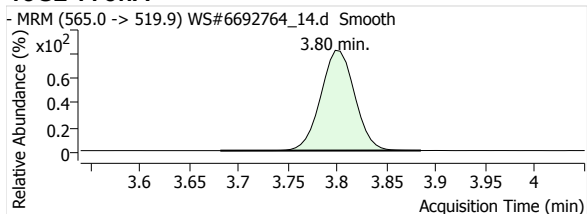
13C5-PFNA



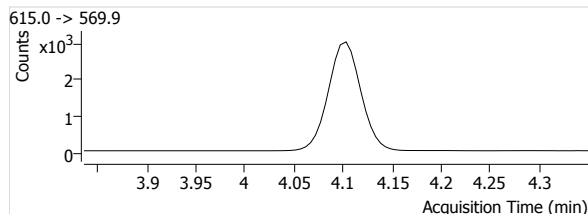
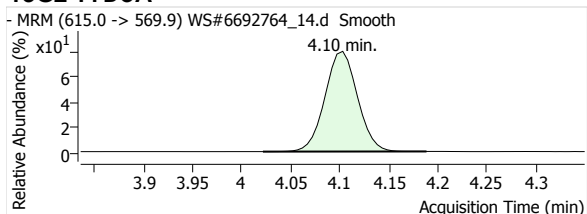
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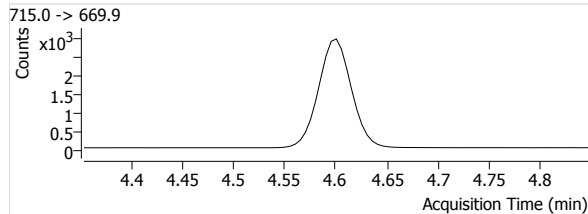
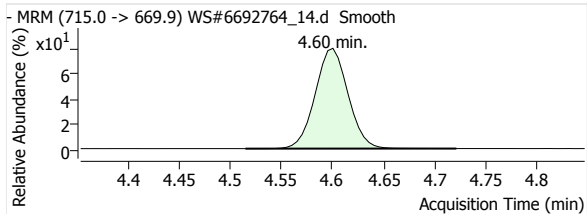
13C2-PFUnA



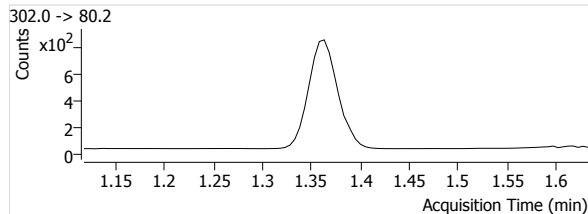
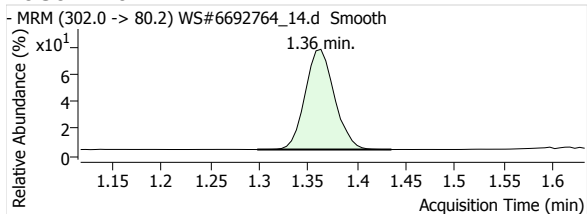
13C2-PFDoA



13C2-PFTeDA

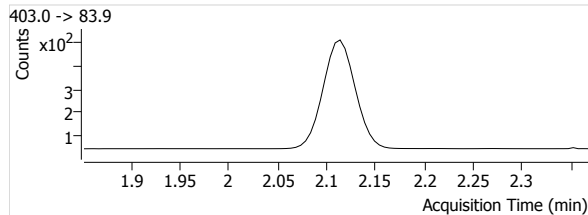
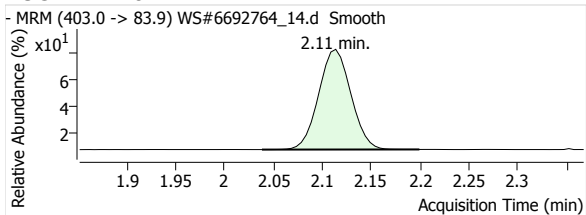


13C3-PFBS

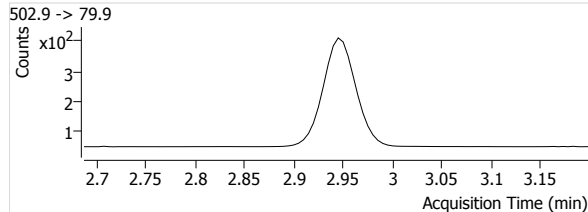
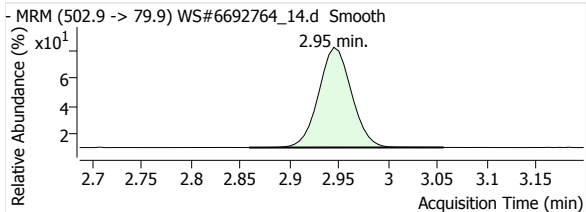


Quantitative Analysis Report

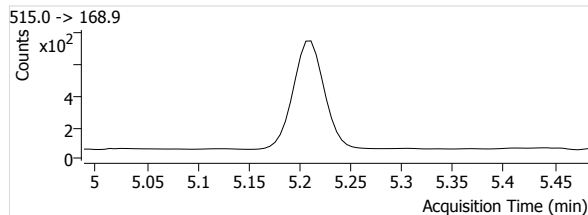
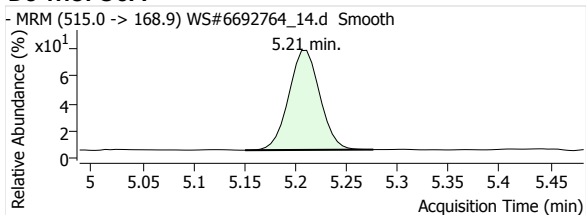
18O2-PFHxs



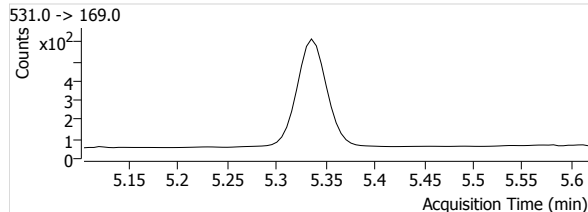
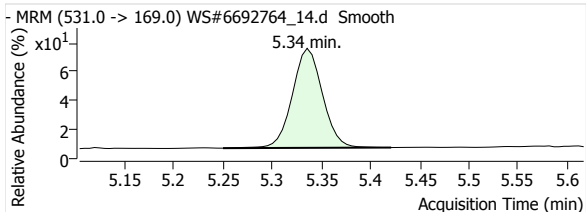
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



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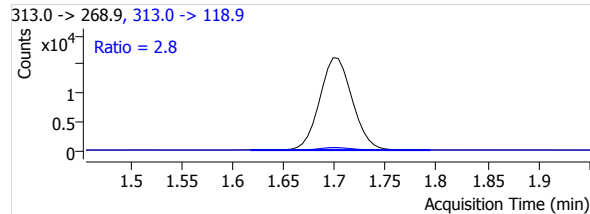
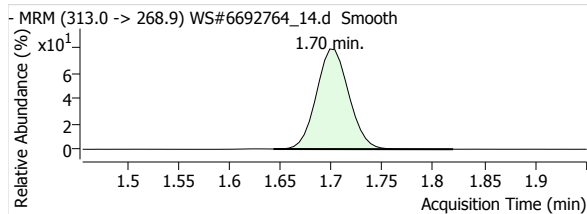
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Sample Name 6692764:MTRX SPK:D1
Type QC
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/23 3:24:58 AM
Comment MLP498
User Defined MI PFOA

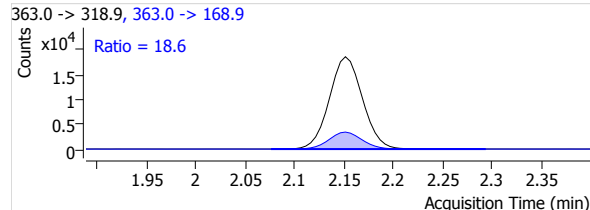
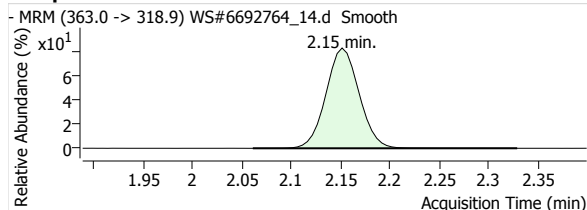
Data File WS#6692764_14.d
Instrument LCMS04
Position P1-B4
Dil. 0.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	20.000	0.5915	123.2	35652	1.70	35116	4.5896	1003	1.70	4600	2.8
PFHpA 1	µg/L	20.000	0.6060	126.2	43849	2.15	6197	4.3775	8137	2.15	2328	18.6
PFOA 1	µg/L	20.000	0.5816	121.2	26353	2.62	24804	4.2642	6408	2.62	15344	24.3
PFNA 1	µg/L	20.000	0.5796	120.8	25228	3.06	93851	4.3310	5263	3.06	23226	20.9
PFDA 1	µg/L	20.000	0.5813	121.1	36479	3.46	6452	5.1633	5823	3.46	33852	16.0
PFUnA 1	µg/L	20.000	0.5802	120.9	30533	3.80	3432	4.0934	4268	3.80	17057	14.0
PFDoA 1	µg/L	20.000	0.5677	118.3	24982	4.10	1810	3.6934	2963	4.10	762	11.9
PFTrDA 1	µg/L	20.000	0.5826	121.4	24145	4.37	57127	3.7249	1788	4.37	10181	7.4
PFTeDA 1	µg/L	20.000	0.5239	109.1	23643	4.60	58960	3.6475	1174	4.60	75282	5.0
PFBS 1	µg/L	20.000	0.5810	121.1	6401	1.36	10211	3.8192	2989	1.36	8135	46.7
PFHxS 1	µg/L	20.000	0.6804	141.8	5486	2.08	36827	5.2005	2987	2.09	13038	54.4
PFOS 1	µg/L	20.000	0.7013	146.1	4022	2.90	1279	4.7423	2241	2.89	1255	55.7
MeFOSA 1	µg/L	20.000	0.5299	110.4	2336	5.21	139	1.5891	2119	5.21	608	90.7
EtFOSA 1	µg/L	20.000	0.5413	112.8	2253	5.33	136	1.8838	2125	5.33	1031	94.3
13C2-PFHxA	µg/L	100.000	96.7131	96.7	7768	1.70	980		--	--	--	--
13C4-PFHpA	µg/L	100.000	89.8386	89.8	10017	2.15	827		--	--	--	--
13C4-PFOA	µg/L	100.000	57.2010	57.2	6180	2.62	1512		--	--	--	--
13C5-PFNA	µg/L	100.000	67.7168	67.7	5825	3.06	915		--	--	--	--
13C2-PFDA	µg/L	100.000	94.7940	94.8	7065	3.46	1415		--	--	--	--
13C2-PFUnA	µg/L	100.000	85.0125	85.0	7459	3.80	1618		--	--	--	--
13C2-PFDoA	µg/L	100.000	63.4462	63.4	6764	4.10	1174		--	--	--	--
13C2-PFTeDA	µg/L	100.000	46.4094	46.4	6482	4.60	2341		--	--	--	--
13C3-PFBS	µg/L	100.000	97.9544	98.0	1676	1.36	106		--	--	--	--
18O2-PFHxS	µg/L	100.000	92.3818	92.4	1055	2.11	187		--	--	--	--
13C4-PFOS	µg/L	100.000	80.1512	80.2	848	2.95	224		--	--	--	--
D3-MeFOSA	µg/L	100.000	55.6186	55.6	1470	5.21	70		--	--	--	--
D5-EtFOSA	µg/L	100.000	53.0142	53.0	1196	5.34	91		--	--	--	--

PFHxA 1

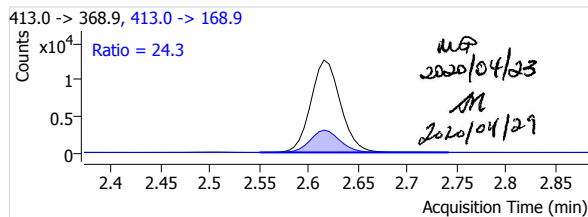
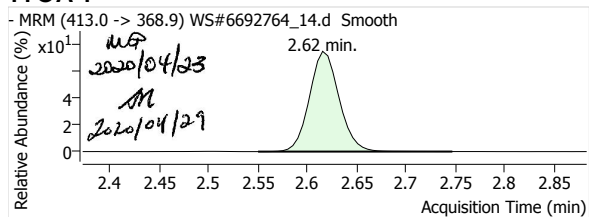


PFHpA 1

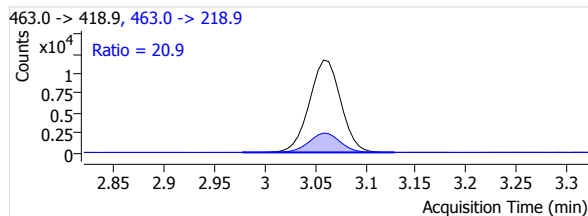
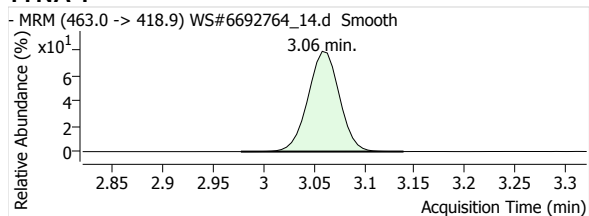


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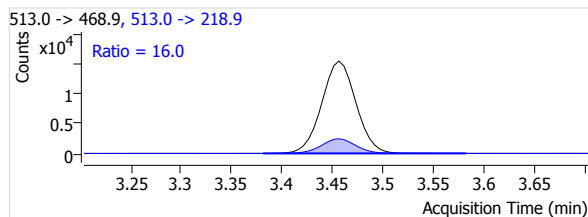
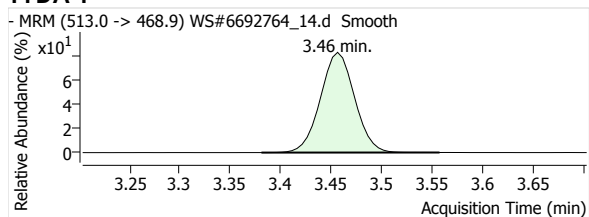
PFOA 1



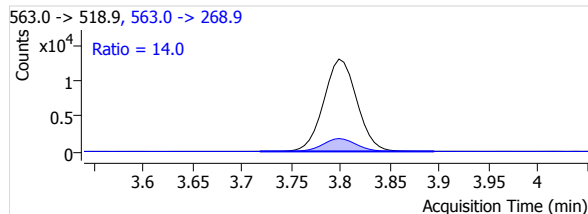
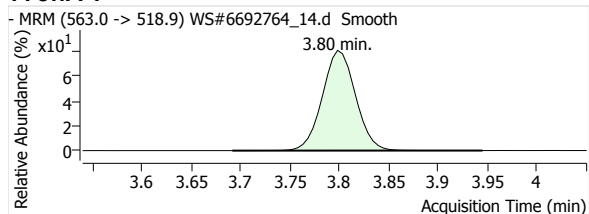
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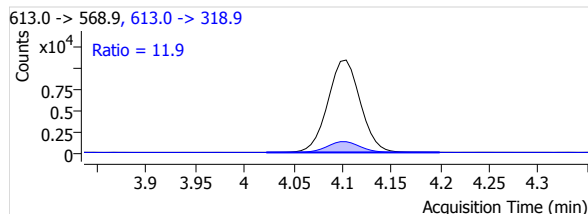
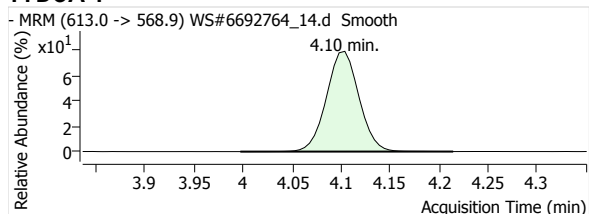
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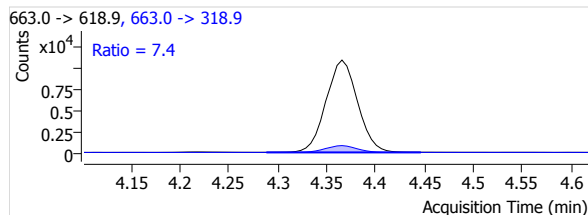
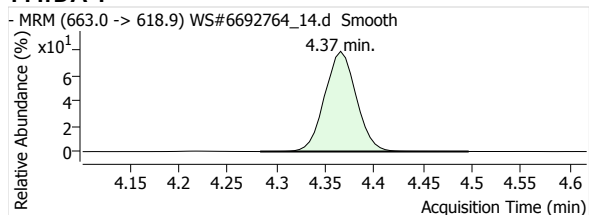
PFUnA 1



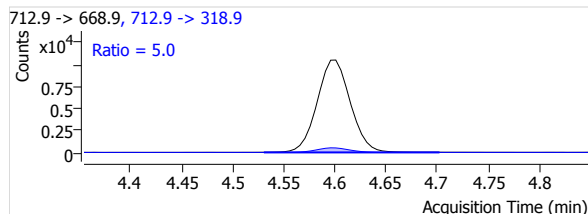
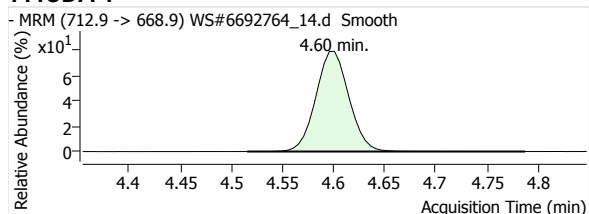
PFDaA 1



PFTrDA 1

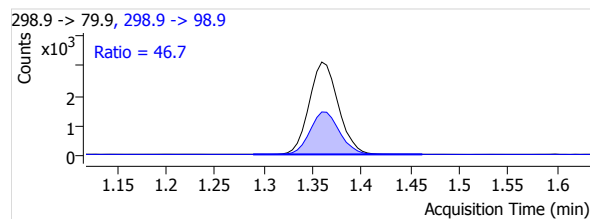
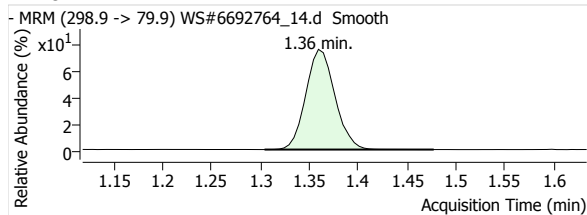


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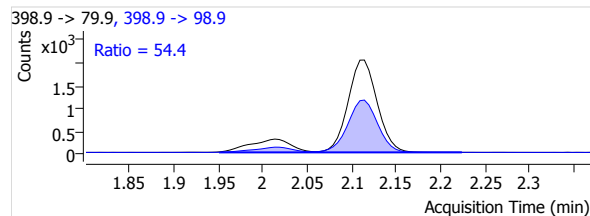
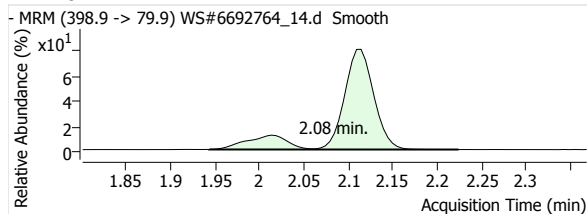


Quantitative Analysis Report

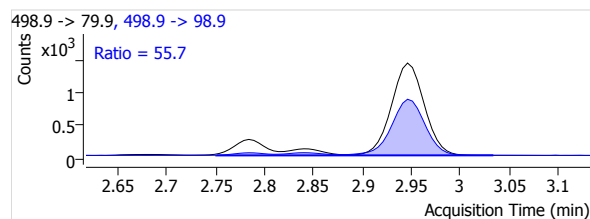
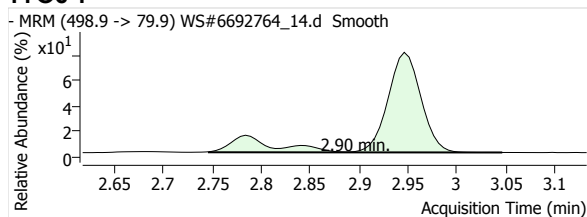
PFBS 1



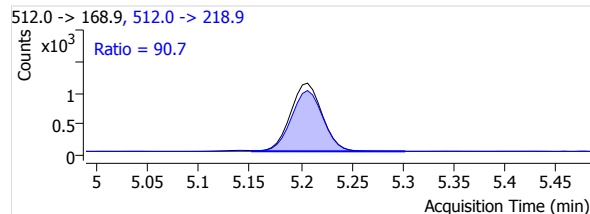
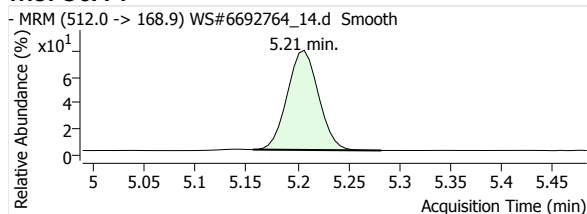
PFHxS 1



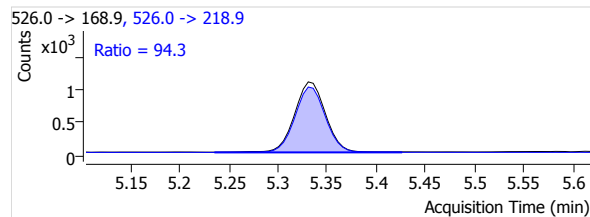
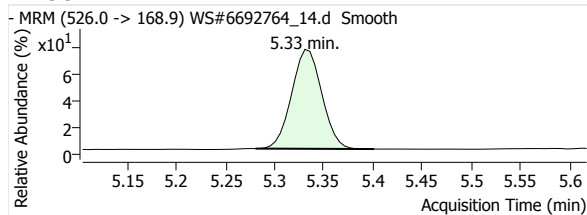
PFOS 1



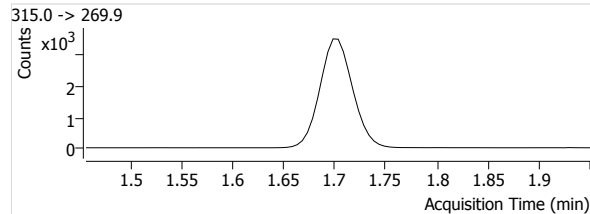
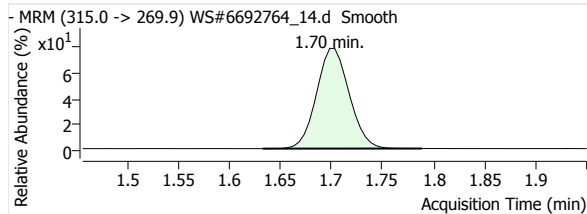
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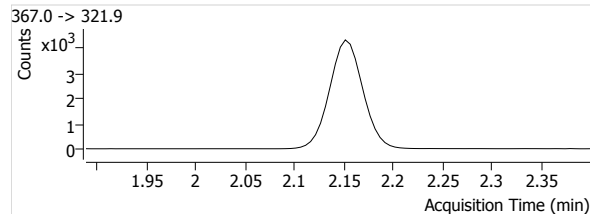
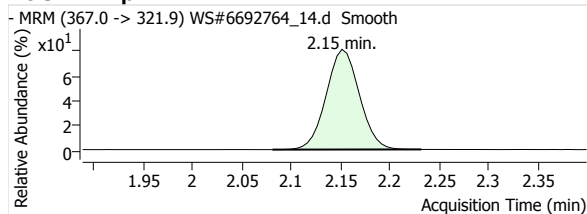
eFOSA 1



13C2-PFHxA

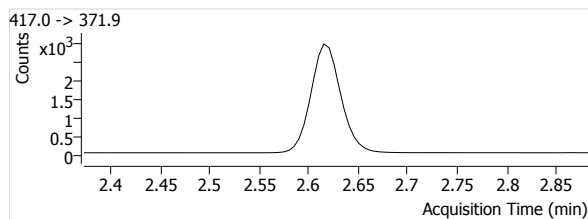
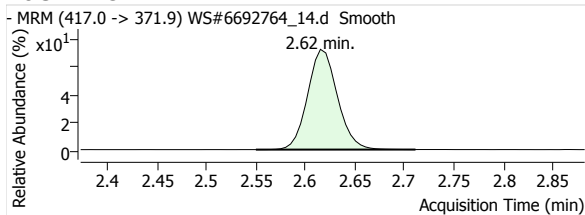


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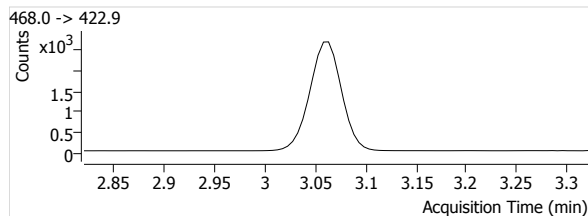
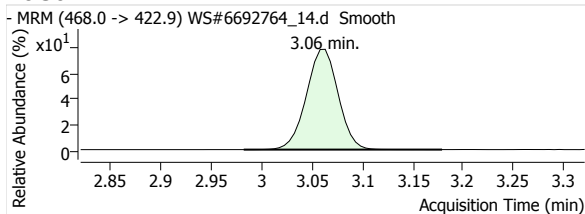


Quantitative Analysis Report

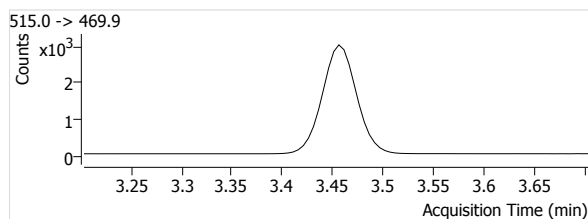
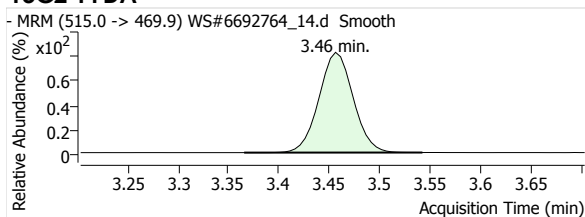
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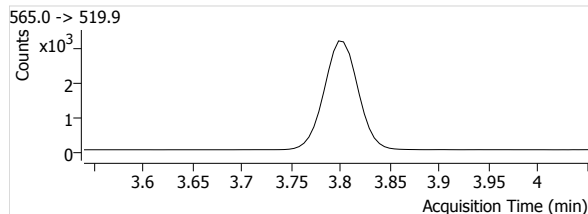
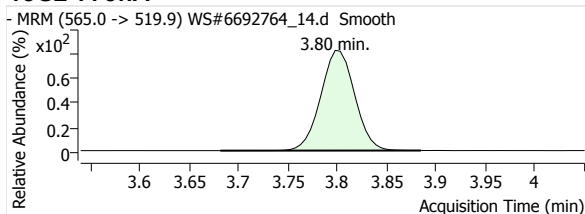
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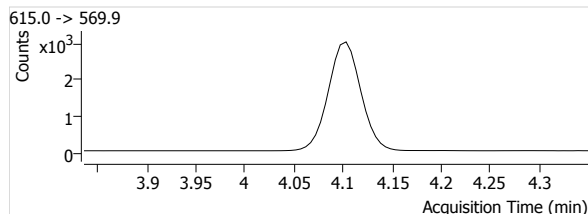
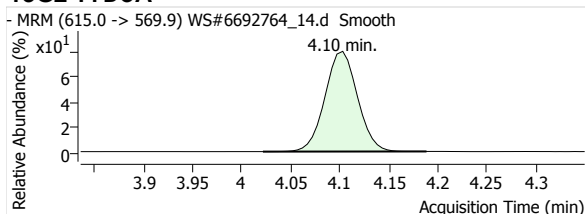
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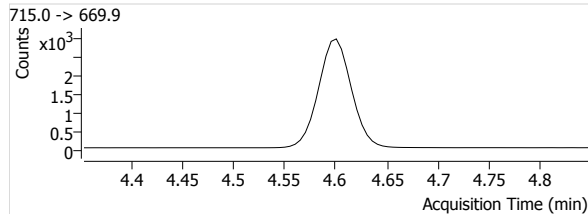
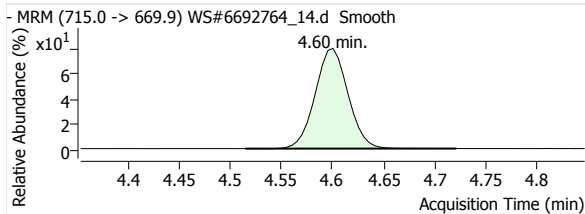
13C2-PFUnA



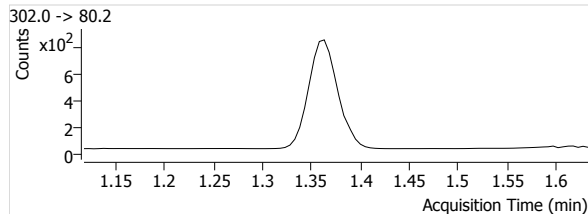
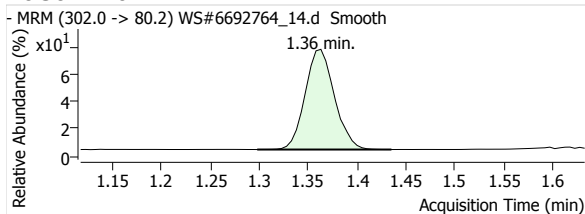
13C2-PFDoA



13C2-PFTeDA

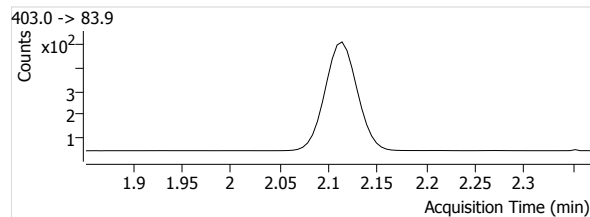
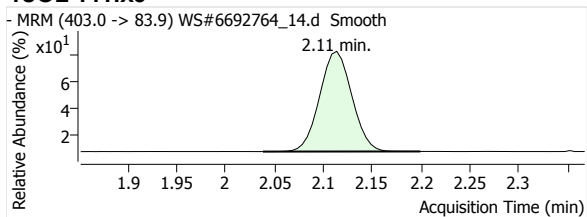


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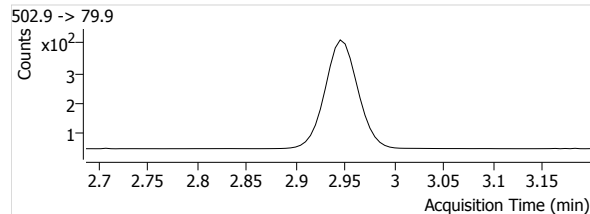
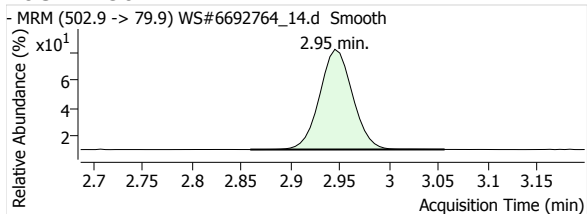


Quantitative Analysis Report

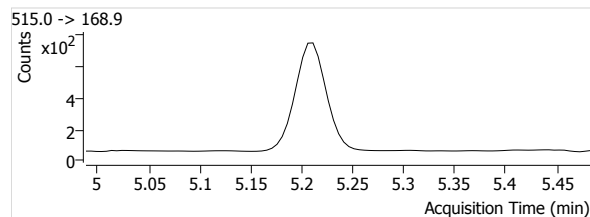
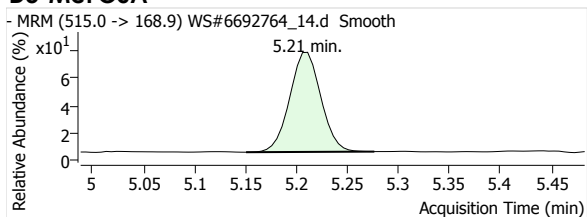
18O2-PFHxs



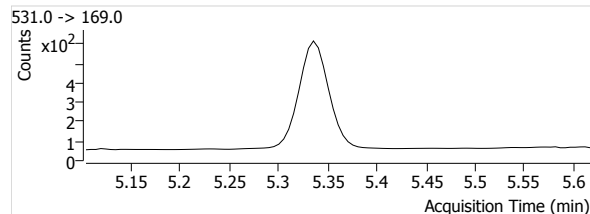
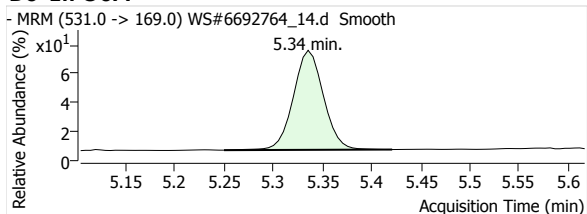
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



DoD Projects - Internal Data Validation Checklist					
Run date:		2020/04/22			
Worksheet # (s):		6690634			
Analysis:		PFC DOD-W			
Primary review by the analyst - 1st 100 % analysis review		1st 100% review			*2nd 100% review
		yes	no	n/a	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, imprinter 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:		MLP			Date: 2020/04/22
Comments: * MLP498, MLP502, MLP506 are reworked for low extracted IS. (PFTyDA, PFTeDA, EtFDSA & MeFDSA). * MLP496 reworked, dilution did not match prescreening result.					
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:		M			Date: 2020/04/28
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 # 6690634 Testcode: FCD01 W

Sample Preparation

	yes	no	n/a
1 Samples extracted within hold time	<input checked="" type="checkbox"/>		
2 Client sample ID verified against Lab ID (waters & oils)	<input checked="" type="checkbox"/>		
3 Parameter list and Client comments reviewed, (Spiking solutions matched to parameter list)	<input checked="" type="checkbox"/>		
4 Height of sediment or if sample was decanted, recorded on worksheet	<input checked="" type="checkbox"/>		
5 Method required QC processed with samples, maximum batch size = 20 client samples.	<input checked="" type="checkbox"/>		
6 Sample, duplicate, matrix spike appear similar, initial sample as well as final extract	<input checked="" type="checkbox"/>		
7 Sample weight or initial volume and extract final volume, aliquot factor clearly recorded.	<input checked="" type="checkbox"/>		
8 If performed any additional dilution clearly recorded	<input checked="" type="checkbox"/>		
9 Matrix spike / Duplicate performed on IOL samples if present	<input checked="" type="checkbox"/>		
10 Spiking solutions valid (haven't expired), ID and volume used clearly identified on worksheet	<input checked="" type="checkbox"/>		
11 Spiking process witnessed and signed off	<input checked="" type="checkbox"/>		
12 Extraction type recorded (N3A2B = neutral, 3 x acidic, 2 x basic)	<input checked="" type="checkbox"/>		
13 Sample prep deviations documented within CompliantPro as a Policy Deviation			<input checked="" type="checkbox"/>
14 Job Remarks reviewed on 2nd page of worksheet.			
15 Worksheet and reagent tracking record completed and authorized.	<input checked="" type="checkbox"/>		

Reviewed by: [Signature] Date: 2020/4/21

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			

Refer to
 BEL for 0002
 2020/04/21

Reviewed by: [Signature] Date: 2020/04/21

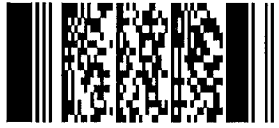
Comments:

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:



Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Tuesday, April 21, 2020

Assigned to : Shahbaz Ahmad

Test Code : PFCOD-W

Instrument Id:

Test Description : Per- and Polyfluoroalkyl Substances (PFAS) in Water by SPE/LC-MS/MS

Sediment out ml ml SAH 2020-04-21

Job Number	Sample Number	D	Sample ID	F	% Moisture	Wt or Vol	Final Vol	DF or AF	# Cont	Expiry Date	Test DeadLine	Criteria	Extract Date
	MTRX SPK	0	LL PFCODW ML*		LOI	125	3	1X					2020/04/21
	MTRX SPK	1	LL PFCODW ML*		LOI	125	3	1X					2020/04/21
	SPIKE		LL PFCODW		0	125	3	1X					2020/04/21
	BLANK				0	125	3	1X					2020/04/21
C095296	*MLP496-01R		06-MW25-0420		LOI	125	3	1X	2	2020/04/22	2020/04/29 23:00	DOD	2020/04/21
C095296	*MLP497-01R		06-MW26-0420		LOI	125	3	1X	2	2020/04/22	2020/04/29 23:00	DOD	2020/04/21
C095296	*MLP498-01R		06-MW30-0420		LOI	125	3	1X	6	2020/04/22	2020/04/29 23:00	DOD	2020/04/21
C095296	*MLP499-01R		06-MW31-0420		LOI	125	3	1X	2	2020/04/22	2020/04/29 23:00	DOD	2020/04/21
C095296	*MLP500-01R		06-MW32-0420		LOI	125	3	5X	2	2020/04/22	2020/04/29 23:00	DOD	2020/04/21
C095296	*MLP501-01R		06-MW32-0420 DUP		LOI	125	3	5X	2	2020/04/22	2020/04/29 23:00	DOD	2020/04/21
C095296	*MLP502-01R		06-MW33-0420		LOI	125	3	2X	2	2020/04/22	2020/04/29 23:00	DOD	2020/04/21
C095296	*MLP503-01R		06-MW34-0420		LOI	125	3	1X	2	2020/04/22	2020/04/29 23:00	DOD	2020/04/21
C095296	*MLP504-01R		06-MW35-0420		LOI	125	3	1X	2	2020/04/22	2020/04/29 23:00	DOD	2020/04/21
C095296	*MLP505-01R		06-MW36-0420		LOI	125	3	1X	2	2020/04/22	2020/04/29 23:00	DOD	2020/04/21
C095296	*MLP506-01R		QCFB-0420		LOI	125	3	1X	2	2020/04/22	2020/04/29 23:00	DOD	2020/04/21

SAH 2020-04-21

Remarks:

Samples extracted by:

Shahbaz Ahmad

SAH 2020-04-21

Instrumentation performed by:

SAH

Date:

2020/04/21

Calculations performed by:

[Signature]

Date:

2020/04/22

Validated by:
Bureau Veritas Laboratories

[Signature]

Date:

2020/04/28

Job No. GC095296	Rep	Client Name	Contact Richard Beauvil	Client Tier Tier 4 (Enviro.)	National
	Remarks SP8 EMAX Laboratories Inc				
DKN, nreg, PFCODD-W MS/MSD required on MLP498 Level IV Data Package and NEDD EDD and EDF EDD required PM: manually add WO#17023 to EDF (see generation instructions) Project #: TREASURE ISLAND, IR SITE 6					

Job	Sample	Lab Comments
	MTRX SPK	
	MTRX SPK	
	SPIKE	
	BLANK	
C095296	MLP496-01R	
C095296	MLP497-01R	
C095296	MLP498-01R	
C095296	MLP499-01R	
C095296	MLP500-01R	
C095296	MLP501-01R	
C095296	MLP502-01R	
C095296	MLP503-01R	
C095296	MLP504-01R	
C095296	MLP505-01R	
C095296	MLP506-01R	

Folder: 2020/04/01

2020/04/00 UG

LCMS Calibration Standard Preparation Sheet

Worksheet: 6690634 Initial SAD Date 7/20/09-21

Witnessed by: OSZ

PFOSALCM-W (SPE)					
Calib. Std.	Volume of MeOH (uL)	Amount Spiked (uL)	Solution Conc.	Solution ID#	Internal Standard A (uL) 125/250ng/mL
S1	2825	25	100 ng/mL	SR959312	150
S2	2760	90			150
S3	2826	24			150
S4	2802	48	1 ug/mL	I597014	150
S5	2760	90			150
S6	2725	125			150
*ICV	2790	60	1 ug/mL	I507113	150
IB	2850	NA			150

PFOSALCM-W (High)						
Calib. Std.	Volume of MeOH (uL)	Volume of Water (mL)	Amount Spiked (uL)	Solution Conc.	Solution ID#	Internal Standard A (uL) 125/250ng/mL
S1	480	0.75	20	30 ng/mL		100
S2	425	0.75	75			100
S3	477	0.75	23			100
S4	452	0.75	48	300 ng/mL		100
S5	473	0.75	27			100
S6	463	0.75	37.5			100
*ICV	482	0.75	18	1 ug/mL		100
IB	500	0.75	NA			100

PFOSALCM-S					
Calib. Std.	Volume of MeOH (uL)	Amount Spiked (uL)	Solution Conc.	Solution ID#	Internal Standard A (uL) 125/250ng/mL
S1	1885	15	100 ng/mL		100
S2	1840	60			100
S3	1750	150			100
S4	1870	30	1 ug/mL		100
S5	1846	54			100
S6	1825	75			100
*ICV	1864	36	1 ug/mL		100
IB	1900	NA			100

PFOSLOW-W (SPE)					
Calib. Std.	Volume of MeOH (uL)	Amount Spiked (uL)	Solution Conc.	Solution ID#	Internal Standard B (uL) 12.5/25ng/mL
S1	1475	25	100 ng/mL		1500
S2	1410	90			1500
S3	1476	24			1500
S4	1452	48	1 ug/mL		1500
S5	1410	90			1500
S6	1375	125			1500
*ICV	1440	60	1 ug/mL		1500
IB	1500	NA			1500

PFCTI					
Calib. Std.	Volume of MeOH (uL)	Amount Spiked (uL)	Solution Conc.	Solution ID#	Internal Standard (uL)
S1	1890	10	100 ng/mL		100
S2	1880	20			100
S3	1840	60			100
S4	1885	15	1 ug/mL		100
S5	1870	30			100
S6	1850	50			100
*ICV	1875	25	1 ug/mL		100

MORPH-L						
Calib. Std.	Volume of DI Water (mL)	Methanol (mL)	Solution Conc.	Solution ID#	Amount Spiked (uL)	Internal Standard (uL)
S1	1	1	200 ug/L		20	50
S2	1	1			50	50
S3	1	1	2500 ug/L		20	50
S4	1	1			80	50
S5	1	1			200	50
S6	1	1			400	50
*ICV	1	1	2500 ug/L		80	50

PFAADW-W						
Calib. Std.	Volume of 96:4 (MeOH: Water) (uL)	Amount Spiked (uL)	Solution Conc.	Solution ID#	Surrogate (25/200 ng/mL)	Internal Standard (uL) 50/100/200 ng/mL
S1	780	20	6.25/25/50 ng/mL DWB		100	100
S2	728	72			100	100
S3	608	192			100	100
S4	762	38.4	62.5/250/500 ng/mL DWA		100	100
S5	728	72			100	100
S6	700	100			100	100
*ICV	752	48	62.5/250/500 ng/mL DWA		100	100
tPFOA	800	100	50 ng/mL		N/A	100

STERIL-S					
Calib. Std.	Volume of 60:40 Water: MEOH (mL)	Amount Spiked (uL)	Solution Conc.	Solution ID#	Internal Standard (uL)
S1	5	20	**	Solution B	50
S2	5	30			50
S3	5	40			50
S4	5	80	**	Solution A	50
S5	5	22			50
S6	5	40			50
*ICV	5	20	**		50

CLO4LCMS-W/ CLO4LCMS-S				
Calib. Std.	Volume of Water (mL)	Amount Spiked (uL)	Solution Conc.	Solution ID#
S1	9.95	50	10ug/L	
S2	9.9	100		
S3	9.75	250		
S4	9.5	500		
S5	9	1000		
S6	8	2000		
*ICV	9	1000	10 ug/L	

* ICV are prepared using second source

** Concentration of Individual Parameters in Solution A & B Varies

PFAS worksheet reagent tracking sheet

Worksheet # 6690634

Date: 2020/4/21

Spiked by: SAD

Spiking Witness checklist				Yes	Initial
1	Verify that the Solution ID on the bottle matches the documented solution ID in the tracking sheet.			/	
2	Verify that the syringe ID documented on the tracking sheet matches the syringe ID used for spiking.			/	
3	Verify the volume spiking solution required matches the documented volume on the tracking sheet.			/	
4	Observe each spiking event to ensure that the appropriate QC samples are spiked.			/	657
5	Was the spiking information such as solution ID, syringe ID and spike volume recorded before spiking event occurred?			/	

Test code	Surrogate / Spike / IS solutions	Solution ID#	Conc.	Spike	MS	Sample	Syringe ID	Witness
PFOSALCM-W PFASBC-W	PFAS Second Source Solution A	IS971 V2	1ug/mL	60	60	N/A	0365 RBD	657
	PFAS Internal Standard Solution A	SI 7982 95	125/250 ng/mL	150	150	150	0365 RBD	
	PFC Injection IS		100 ng/mL	20	20	20	0365 RBD	
PFOSALCM-W	PFAS Second Source Solution A		1ug/mL	18	18	N/A		
	PFAS Internal Standard Solution A		125/250 ng/mL	100	100	100		
	PFAS Second Source Solution D		30 ng/mL	N/A	N/A	10		
	PFC Injection IS		100 ng/mL	20	20	20		
PFOSLOW-W PFASDOD-W PFCODW-W PFASLOBC-W	PFAS Second Source Solution C		100 ng/mL	60	60	N/A		
	PFAS Internal Standard Solution B		12.5/25 ng/mL	150	150	150		
	PFC Injection IS		100 ng/mL	15	15	15		
	Second Source Spiking Solution DWB		6.25/25/50 ng/mL	40	40	N/A		
PFAADW-W	Second Source Spiking Solution DWA		62.5/250/500 ng/mL	48/80	48/80	N/A		
	PFAA Internal Standard Solution		50/100/200 ng/mL	100	100	100		
	PFAA Surrogate solution		25/200 ng/mL	100	100	100		
	PFAS Internal Standard Solution A		125/250 ng/mL	150	150	150		
PFOS_OX-W PFOS_OX-S	PFC Injection IS		100 ng/mL	20	20	20		
	PFAS Second Source Solution A		1ug/mL	72	72	N/A		
PFOSALCM-S PFASDOD-S PFASBC-S	PFAS Internal Standard Solution A		125/250 ng/mL	200	200	200		
	PFC Injection IS		100 ng/mL	20	20	20		
	PFAS Second Source Solution C		100 ng/mL	72	72	N/A		
PFOSLOW-S	PFAS Internal Standard Solution A		125/250 ng/mL	20	20	20		
	PFC Injection IS		100 ng/mL	15	15	15		

NS # 6690634

Solvent/Reagent	✓	Lot No.	Date Opened	Solvent/Reagent	✓	Lot No.	Date Opened/Prepared
0.2% NH ₄ OH in Methanol	✓	PRURE137-150		Blank Mat.			
0.5% NH ₄ OH in 70:30 Methanol:Water				Env. Carb.	✓	122394	2020-03-11
1% NH ₄ OH in methanol				Leachate Fluid			
10mM KOH in Methanol				Methanol	✓	SABL 8027	2020-04-20
2% Formic Acid	✓	PRURE137-147		Ottawa Sand			
60:40 Water: Methanol	✓	PRURE137-139		Reagent Water	✓	59324	2020-4-21
60:40 Water:Acetonitrile				Ref. Mat.			
96:4 Methanol: Water				Trizma			
0.2 % Formic Acid							

Equipment & ID	✓	Equipment	ID#	✓	Bottle Tracking
Pipettor M41011E	✓	SPE Cartridge	005239317A	✓	Bottle# 22524
Thermometer ID &Temp		QC Balance ID			Cap# 22514
Dispenser		Centrifuge	42148683	✓	Systems plus Lot# 20-04-01
Measuring cylinder 250mL M55	✓	Sonicator			
Shaker					
Comments:					

Dilution and Column Cleanup Worksheet

Worksheet: 6690634

Job Number	Sample ID	Sample: Initial Final Volume	Dilution Required	Sample Added mL	Solvent Added mL	Int Std Added uL	New Effective Final Volume	Initials and Date	Column Cleanup
C095296	MLP 496	1X	10X	12.5	-	150	12.5		-
"	MLP 497	1X	10X	12.5	-	150	12.5		-
"	MLP 499	1X	10X	12.5	-	150	12.5		-
"	MLP 500	1X	5X	2.5	-	150	2.5		-
"	"	1X	50X	2.5	122.5	150	12.5		-
"	MLP 501	1X	5X	2.5	-	150	2.5		-
"	"	1X	50X	2.5	122.5	150	12.5		-
"	MLP 502	1X	2X	62.5	-	150	62.5		-
"	"	1X	20X	6.25	-	150	6.25		-
"	MLP 503	1X	10X	12.5	-	150	12.5		-
"	MLP 504	1X	10X	12.5	-	150	12.5		-
Blank rows									

PFAS in water by SPE/LC-MS/MS - Water
ug/L

Parameter Name	Units	MTRX SPK	MTRX SPK Dup1	SPIKE	BLANK	C095296 MLP496	DL
Perfluorobutanoic acid (PFBA)	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	0.02
Perfluoropentanoic acid (PFPeA)	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	0.02
Perfluorohexanoic acid (PFHxA)	ug/L	117.41636	113.20411	110.65128	0	1.07941967	0.02
Perfluoroheptanoic acid (PFHpA)	ug/L	121.29109	115.71428	114.91289	0	0.31776976	0.02
Perfluorooctanoic acid (PFOA)	ug/L	112.87662	108.32559	108.46642	0	0.90876830	0.02
Perfluorononanoic acid (PFNA)	ug/L	113.27922	110.64257	113.21738	0	0.04993423	0.02
Perfluorodecanoic acid (PFDA)	ug/L	115.94473	115.08626	114.58483	0	0.00992054	0.02
Perfluoroundecanoic acid (PFUnA)	ug/L	119.89802	113.66103	112.63072	0	0	0.02
Perfluorododecanoic acid (PFDoA)	ug/L	116.80643	109.82216	108.20812	0	0	0.02
Perfluorotridecanoic acid (PFTRDA)	ug/L	126.76055	125.52468	104.54454	0	0	0.02
Perfluorotetradecanoic acid (PFTEDA)	ug/L	109.07198	104.97930	100.71953	0	0	0.02
Perfluorobutanesulfonic acid (PFBS)	ug/L	117.1	112.6	111.00232	0	0.06565518	0.02
Perfluoropentanesulfonic acid (PFPeS)	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	0.02
Perfluorohexanesulfonic acid (PFHxS)	ug/L	116.14418	116.15341	110.45777	0	1.24629562	0.02
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	0.02
Perfluorooctanesulfonic acid (PFOS)	ug/L	110.96888	119.85130	120.75597	0	8.87158045	0.02
Perfluorononanesulfonic acid (PFNS)	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	0.02
Perfluorodecanesulfonic acid (PFDS)	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	0.02
Perfluorooctane Sulfonamide (PFOSA)	ug/L	N/A*****	N/A*****	107.24326	N/A*****	N/A*****	0.02
EtFOSA	ug/L	115.62661	109.55799	99.86349	0	0	0.04
MeFOSA	ug/L	115.21887	103.78925	96.88160	0	0	0.04
EtFOSE	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	0.04
MeFOSE	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	0.04
EtFOSAA	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	0.02
MeFOSAA	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	0.02
4:2 Fluorotelomer sulfonic acid	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	0.02
6:2 Fluorotelomer sulfonic acid	ug/L	N/A*****	N/A*****	111.57545	N/A*****	N/A*****	0.02
8:2 Fluorotelomer sulfonic acid	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	0.02
Hexafluoropropyleneoxide dimer acid	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	0.02
4,8-Dioxa-3H-perfluorononanoic acid	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	0.02
9CI-PF3ONS (F-53B Major)	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	0.02
11CI-PF3OUdS (F-53B Minor)	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	0.02
13C4-Perfluorobutanoic acid	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	
13C5-Perfluoropentanoic acid	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	
13C2-Perfluorohexanoic acid	ug/L	102.363325	106.634396	106.634396	101.779612	106.264236	
13C4-Perfluoroheptanoic acid	ug/L	98.5825142	103.693740	104.004138	100.506983	107.832384	
13C4-Perfluorooctanoic acid	ug/L	56.4089257	57.8619615	104.068500	96.6476388	102.968344	
13C5-Perfluorononanoic acid	ug/L	63.7625594	65.6398730	104.296668	96.6023268	107.020095	
13C2-Perfluorodecanoic acid	ug/L	100.979042	102.049869	101.055530	91.0662383	102.891234	
13C2-Perfluoroundecanoic acid	ug/L	83.6910422	84.6420768	99.2545945	88.7161033	102.441845	
13C2-Perfluorododecanoic acid	ug/L	58.2006920	56.6386554	90.8749382	84.5872466	97.1033119	
13C2-perfluorotetradecanoic acid	ug/L	!! 40.5502	!! 36.2440	90.0877192	85.4465709	93.7400318	
13C3-Perfluorobutanesulfonic acid	ug/L	104.147764	106.675307	105.314322	97.2780298	107.064160	
18O2-Perfluorohexanesulfonic acid	ug/L	106.102362	108.759842	107.185039	102.559055	103.937007	
13C4-Perfluorooctanesulfonic acid	ug/L	85.2544132	81.2045690	97.9231568	90.4465212	91.9003115	
13C8-Perfluorooctane Sulfonamide	ug/L	N/A*****	N/A*****	91.3283405	N/A*****	N/A*****	
D5-EtFOSA	ug/L	!! 45.3416	!! 47.9694	77.5919732	75.4897276	70.4252269	
D3-MeFOSA	ug/L	!! 46.7297	52.9000411	75.1131221	69.4364459	69.8066639	
D9-EtFOSE	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	
D7-MeFOSE	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	
D5-EtFOSAA	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	
D3-MeFOSAA	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	
13C2-4:2-Fluorotelomersulfonic Acid	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	
13C2-6:2-Fluorotelomersulfonic Acid	ug/L	N/A*****	N/A*****	97.8518518	N/A*****	N/A*****	
13C2-8:2-Fluorotelomersulfonic Acid	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	
13C3-HFPO-DA	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	N/A*****	

PFAS in water by SPE/LC-MS/MS - Water
ug/L

Parameter Name	C095296 MLP497	DL	C095296 MLP498	C095296 MLP499	DL	C095296 MLP500	C095296 MLP501
Perfluorobutanoic acid (PFBA)	N/A*****	0.02	N/A*****	N/A*****	0.02	N/A*****	N/A*****
Perfluoropentanoic acid (PFPeA)	N/A*****	0.02	N/A*****	N/A*****	0.02	N/A*****	N/A*****
Perfluorohexanoic acid (PFHxA)	0.24499255	0.02	0.00666083	0.41842861	0.02	2.82481034	2.99844275
Perfluoroheptanoic acid (PFHpA)	0.14729424	0.02	0.00182501	0.32530774	0.02	1.67143315	1.77289990
Perfluorooctanoic acid (PFOA)	0.31243613	0.02	0.02626691	0.15823880	0.02	1.98066253	2.07752606
Perfluorononanoic acid (PFNA)	0.00729646	0.02	0	0.01471561	0.02	0.11285111	0.12145299
Perfluorodecanoic acid (PFDA)	0.00204923	0.02	0	0	0.02	0	0
Perfluoroundecanoic acid (PFUnA)	0	0.02	0	0	0.02	0	0
Perfluorododecanoic acid (PFDoA)	0	0.02	0	0	0.02	0	0
Perfluorotridecanoic acid (PFTRDA)	0	0.02	0	0	0.02	0	0
Perfluorotetradecanoic acid (PFTEDA)	0	0.02	0	0	0.02	0	0
Perfluorobutanesulfonic acid (PFBS)	0.01995400	0.02	0	0.02021532	0.02	0.14757352	0.16727359
Perfluoropentanesulfonic acid PFPes	N/A*****	0.02	N/A*****	N/A*****	0.02	N/A*****	N/A*****
Perfluorohexanesulfonic acid (PFHxS)	0.52667400	0.02	0.06485263	0.69118490	0.02	9.22040935	8.07355016
Perfluoroheptanesulfonic acid PFHpS	N/A*****	0.02	N/A*****	N/A*****	0.02	N/A*****	N/A*****
Perfluorooctanesulfonic acid (PFOS)	2.16712929	0.2	0.14586147	0.39204108	0.02	29.6635878	27.1178658
Perfluorononanesulfonic acid (PFNS)	N/A*****	0.02	N/A*****	N/A*****	0.02	N/A*****	N/A*****
Perfluorodecanesulfonic acid (PFDS)	N/A*****	0.02	N/A*****	N/A*****	0.02	N/A*****	N/A*****
Perfluorooctane Sulfonamide (PFOSA)	N/A*****	0.02	N/A*****	N/A*****	0.02	N/A*****	N/A*****
EtFOSA	0	0.04	0	0	0.04	0	0
MeFOSA	0	0.04	0	0	0.04	0	0
EtFOSE	N/A*****	0.04	N/A*****	N/A*****	0.04	N/A*****	N/A*****
MeFOSE	N/A*****	0.04	N/A*****	N/A*****	0.04	N/A*****	N/A*****
EtFOSAA	N/A*****	0.02	N/A*****	N/A*****	0.02	N/A*****	N/A*****
MeFOSAA	N/A*****	0.02	N/A*****	N/A*****	0.02	N/A*****	N/A*****
4:2 Fluorotelomer sulfonic acid	N/A*****	0.02	N/A*****	N/A*****	0.02	N/A*****	N/A*****
6:2 Fluorotelomer sulfonic acid	N/A*****	0.02	N/A*****	N/A*****	0.02	N/A*****	N/A*****
8:2 Fluorotelomer sulfonic acid	N/A*****	0.02	N/A*****	N/A*****	0.02	N/A*****	N/A*****
Hexafluoropropyleneoxide dimer acid	N/A*****	0.02	N/A*****	N/A*****	0.02	N/A*****	N/A*****
4,8-Dioxa-3H-perfluorononanoic acid	N/A*****	0.02	N/A*****	N/A*****	0.02	N/A*****	N/A*****
9Cl-PF3ONS (F-53B Major)	N/A*****	0.02	N/A*****	N/A*****	0.02	N/A*****	N/A*****
11Cl-PF3OUdS (F-53B Minor)	N/A*****	0.02	N/A*****	N/A*****	0.02	N/A*****	N/A*****
13C4-Perfluorobutanoic acid	N/A*****		N/A*****	N/A*****		N/A*****	N/A*****
13C5-Perfluoropentanoic acid	N/A*****		N/A*****	N/A*****		N/A*****	N/A*****
13C2-Perfluorohexanoic acid	104.954441		109.695330	97.3234624		109.695330	109.866173
13C4-Perfluoroheptanoic acid	105.007759		104.449042	98.6963269		107.439213	108.484221
13C4-Perfluorooctanoic acid	100.695381		59.5329527	96.1286974		104.006227	106.133886
13C5-Perfluorononanoic acid	102.472236		66.5917503	99.6827075		107.839767	109.294024
13C2-Perfluorodecanoic acid	98.6691142		102.080465	95.5331191		103.273672	105.032889
13C2-Perfluoroundecanoic acid	96.7870453		91.6591697	94.4994216		101.079552	105.025061
13C2-Perfluorododecanoic acid	93.0894710		61.7103311	90.8551655		98.2303509	97.3010380
13C2-perfluorotetradecanoic acid	91.4274322		114.16746	89.6650717		94.5614035	94.6650717
13C3-Perfluorobutanesulfonic acid	101.425793		109.138042	93.7783538		109.202851	108.749189
18O2-Perfluorohexanesulfonic acid	101.082677		106.496062	96.4566929		106.889763	115.354330
13C4-Perfluorooctanesulfonic acid	95.5347871		82.3468328	96.0539979		96.6770508	102.076843
13C8-Perfluorooctane Sulfonamide	N/A*****		N/A*****	N/A*****		N/A*****	N/A*****
D5-EtFOSA	70.4730052		52.7950310	66.9374104		60.5351170	58.5284280
D3-MeFOSA	68.3257918		55.1213492	68.9839572		60.2221308	56.8078979
D9-EtFOSE	N/A*****		N/A*****	N/A*****		N/A*****	N/A*****
D7-MeFOSE	N/A*****		N/A*****	N/A*****		N/A*****	N/A*****
D5-EtFOSAA	N/A*****		N/A*****	N/A*****		N/A*****	N/A*****
D3-MeFOSAA	N/A*****		N/A*****	N/A*****		N/A*****	N/A*****
13C2-4:2-Fluorotelomersulfonic Acid	N/A*****		N/A*****	N/A*****		N/A*****	N/A*****
13C2-6:2-Fluorotelomersulfonic Acid	N/A*****		N/A*****	N/A*****		N/A*****	N/A*****
13C2-8:2-Fluorotelomersulfonic Acid	N/A*****		N/A*****	N/A*****		N/A*****	N/A*****
13C3-HFPO-DA	N/A*****		N/A*****	N/A*****		N/A*****	N/A*****

PFAS in water by SPE/LC-MS/MS - Water
ug/L

Parameter Name	DL	C095296 MLP502	DL	C095296 MLP503	DL	C095296 MLP504	DL
Perfluorobutanoic acid (PFBA)	0.1	N/A*****	0.04	N/A*****	0.02	N/A*****	0.02
Perfluoropentanoic acid (PFPeA)	0.1	N/A*****	0.04	N/A*****	0.02	N/A*****	0.02
Perfluorohexanoic acid (PFHxA)	0.1	1.84719285	0.04	0.14834084	0.02	0.29481458	0.02
Perfluoroheptanoic acid (PFHpA)	0.1	0.86907478	0.04	0.05403699	0.02	0.15880231	0.02
Perfluorooctanoic acid (PFOA)	0.1	1.98549119	0.04	0.10104626	0.02	0.20995807	0.02
Perfluorononanoic acid (PFNA)	0.1	0.05919176	0.04	0.00188866	0.02	0.02560805	0.02
Perfluorodecanoic acid (PFDA)	0.1	0.00424838	0.04	0	0.02	0	0.02
Perfluoroundecanoic acid (PFUnA)	0.1	0	0.04	0	0.02	0	0.02
Perfluorododecanoic acid (PFDoA)	0.1	0	0.04	0	0.02	0	0.02
Perfluorotridecanoic acid (PFTRDA)	0.1	0	0.04	0	0.02	0	0.02
Perfluorotetradecanoic acid (PFTEDA)	0.1	0	0.04	0	0.02	0	0.02
Perfluorobutanesulfonic acid (PFBS)	0.1	0.11600697	0.04	0.01442991	0.02	0.02631541	0.02
Perfluoropentanesulfonic acid PFPes	0.1	N/A*****	0.04	N/A*****	0.02	N/A*****	0.02
Perfluorohexanesulfonic acid (PFHxS)	1	2.90015122	0.4	0.45820845	0.02	1.23001909	0.2
Perfluoroheptanesulfonic acid PFHpS	0.1	N/A*****	0.04	N/A*****	0.02	N/A*****	0.02
Perfluorooctanesulfonic acid (PFOS)	1	11.0115254	0.4	1.80736198	0.2	4.14816389	0.2
Perfluorononanesulfonic acid (PFNS)	0.1	N/A*****	0.04	N/A*****	0.02	N/A*****	0.02
Perfluorodecanesulfonic acid (PFDS)	0.1	N/A*****	0.04	N/A*****	0.02	N/A*****	0.02
Perfluorooctane Sulfonamide (PFOSA)	0.1	N/A*****	0.04	N/A*****	0.02	N/A*****	0.02
EtFOSA	0.2	0	0.08	0	0.04	0	0.04
MeFOSA	0.2	0	0.08	0	0.04	0	0.04
EtFOSE	0.2	N/A*****	0.08	N/A*****	0.04	N/A*****	0.04
MeFOSE	0.2	N/A*****	0.08	N/A*****	0.04	N/A*****	0.04
EtFOSAA	0.1	N/A*****	0.04	N/A*****	0.02	N/A*****	0.02
MeFOSAA	0.1	N/A*****	0.04	N/A*****	0.02	N/A*****	0.02
4:2 Fluorotelomer sulfonic acid	0.1	N/A*****	0.04	N/A*****	0.02	N/A*****	0.02
6:2 Fluorotelomer sulfonic acid	0.1	N/A*****	0.04	N/A*****	0.02	N/A*****	0.02
8:2 Fluorotelomer sulfonic acid	0.1	N/A*****	0.04	N/A*****	0.02	N/A*****	0.02
Hexafluoropropyleneoxide dimer acid	0.1	N/A*****	0.04	N/A*****	0.02	N/A*****	0.02
4,8-Dioxa-3H-perfluorononanoic acid	0.1	N/A*****	0.04	N/A*****	0.02	N/A*****	0.02
9Cl-PF3ONS (F-53B Major)	0.1	N/A*****	0.04	N/A*****	0.02	N/A*****	0.02
11Cl-PF3OUdS (F-53B Minor)	0.1	N/A*****	0.04	N/A*****	0.02	N/A*****	0.02
13C4-Perfluorobutanoic acid		N/A*****		N/A*****		N/A*****	
13C5-Perfluoropentanoic acid		N/A*****		N/A*****		N/A*****	
13C2-Perfluorohexanoic acid		98.7329157		109.538724		99.6298405	
13C4-Perfluoroheptanoic acid		99.1205380		107.759958		99.6689084	
13C4-Perfluorooctanoic acid		93.8557343		104.276076		94.6445251	
13C5-Perfluorononanoic acid		96.8931782		104.442094		97.3823373	
13C2-Perfluorodecanoic acid		89.9495181		101.024934		94.3093162	
13C2-Perfluoroundecanoic acid		87.3538105		97.2754144		93.5226834	
13C2-Perfluorododecanoic acid		83.5887296		95.5610479		90.4300543	
13C2-perfluorotetradecanoic acid		82.4242424		94.3062200		90.4545454	
13C3-Perfluorobutanesulfonic acid		97.3428386		106.610499		98.3797796	
18O2-Perfluorohexanesulfonic acid		110.826771		106.594488		112.893700	
13C4-Perfluorooctanesulfonic acid		103.530633		97.7154724		102.076843	
13C8-Perfluorooctane Sulfonamide		N/A*****		N/A*****		N/A*****	
D5-EtFOSA		53.4639273		72.5274725		64.5962732	
D3-MeFOSA		1149.0744		71.4520773		64.2122583	
D9-EtFOSE		N/A*****		N/A*****		N/A*****	
D7-MeFOSE		N/A*****		N/A*****		N/A*****	
D5-EtFOSAA		N/A*****		N/A*****		N/A*****	
D3-MeFOSAA		N/A*****		N/A*****		N/A*****	
13C2-4:2-Fluorotelomersulfonic Acid		N/A*****		N/A*****		N/A*****	
13C2-6:2-Fluorotelomersulfonic Acid		N/A*****		N/A*****		N/A*****	
13C2-8:2-Fluorotelomersulfonic Acid		N/A*****		N/A*****		N/A*****	
13C3-HFPO-DA		N/A*****		N/A*****		N/A*****	

PFAS in water by SPE/LC-MS/MS - Water
ug/L

Parameter Name	C095296 MLP505	C095296 MLP506	DL	RDL	MDL	IDL
Perfluorobutanoic acid (PFBA)	N/A*****	N/A*****	0.02	0.02	0.007	0
Perfluoropentanoic acid (PFPeA)	N/A*****	N/A*****	0.02	0.02	0.0041	0
Perfluorohexanoic acid (PFHxA)	0.15845362	0	0.02	0.02	0.0064	0
Perfluoroheptanoic acid (PFHpA)	0.07832901	0	0.02	0.02	0.0071	0
Perfluorooctanoic acid (PFOA)	0.08117282	0	0.02	0.02	0.0074	0
Perfluorononanoic acid (PFNA)	0.00295178	0	0.02	0.02	0.0049	0
Perfluorodecanoic acid (PFDA)	0	0	0.02	0.02	0.0041	0
Perfluoroundecanoic acid (PFUnA)	0	0	0.02	0.02	0.0043	0
Perfluorododecanoic acid (PFDoA)	0	0	0.02	0.02	0.0068	0
Perfluorotridecanoic acid (PFTRDA)	0	0	0.02	0.02	0.0069	0
Perfluorotetradecanoic acid(PFTEDA)	0	0	0.02	0.02	0.0067	0
Perfluorobutanesulfonic acid (PFBS)	0.01455621	0	0.02	0.02	0.0051	0
Perfluoropentanesulfonic acid PFPes	N/A*****	N/A*****	0.02	0.02	0.0074	0
Perfluorohexanesulfonic acid(PFHxS)	0.58422235	0	0.02	0.02	0.0052	0
Perfluoroheptanesulfonic acid PFHpS	N/A*****	N/A*****	0.02	0.02	0.0033	0
Perfluorooctanesulfonic acid (PFOS)	0.77443881	0	0.02	0.02	0.0052	0
Perfluorononanesulfonic acid (PFNS)	N/A*****	N/A*****	0.02	0.02	0.007	0
Perfluorodecanesulfonic acid (PFDS)	N/A*****	N/A*****	0.02	0.02	0.0072	0
Perfluorooctane Sulfonamide (PFOSA)	N/A*****	N/A*****	0.02	0.02	0.0076	0
EtFOSA	0	0	0.04	0.04	0.009	0
MeFOSA	0	0	0.04	0.04	0.0035	0
EtFOSE	N/A*****	N/A*****	0.04	0.04	0.0094	0
MeFOSE	N/A*****	N/A*****	0.04	0.04	0.0066	0
EtFOSAA	N/A*****	N/A*****	0.02	0.02	0.0081	0
MeFOSAA	N/A*****	N/A*****	0.02	0.02	0.007	0
4:2 Fluorotelomer sulfonic acid	N/A*****	N/A*****	0.02	0.02	0.0066	0
6:2 Fluorotelomer sulfonic acid	N/A*****	N/A*****	0.02	0.02	0.0059	0
8:2 Fluorotelomer sulfonic acid	N/A*****	N/A*****	0.02	0.02	0.0073	0
Hexafluoropropyleneoxide dimer acid	N/A*****	N/A*****	0.02	0.02	0.0047	0
4,8-Dioxa-3H-perfluorononanoic acid	N/A*****	N/A*****	0.02	0.02	0.0048	0
9CI-PF3ONS (F-53B Major)	N/A*****	N/A*****	0.02	0.02	0.0093	0
11CI-PF3OUdS (F-53B Minor)	N/A*****	N/A*****	0.02	0.02	0.0053	0
13C4-Perfluorobutanoic acid	N/A*****	N/A*****				
13C5-Perfluoropentanoic acid	N/A*****	N/A*****				
13C2-Perfluorohexanoic acid	109.567198	112.457289				
13C4-Perfluoroheptanoic acid	108.411795	111.546818				
13C4-Perfluorooctanoic acid	106.590555	106.206538				
13C5-Perfluorononanoic acid	108.408249	108.672659				
13C2-Perfluorodecanoic acid	106.241395	99.6175615				
13C2-Perfluoroundecanoic acid	104.819431	94.8078653				
13C2-Perfluorododecanoic acid	98.2501235	88.8877904				
13C2-perfluorotetradecanoic acid	95.6299840	81.8341307				
13C3-Perfluorobutanesulfonic acid	107.453013	108.165910				
18O2-Perfluorohexanesulfonic acid	109.645669	109.940944				
13C4-Perfluorooctanesulfonic acid	101.661474	100.519210				
13C8-Perfluorooctane Sulfonamide	N/A*****	N/A*****				
D5-EtFOSA	74.4386048	!! 45.3416				
D3-MeFOSA	73.5499794	!! 45.4956				
D9-EtFOSE	N/A*****	N/A*****				
D7-MeFOSE	N/A*****	N/A*****				
D5-EtFOSAA	N/A*****	N/A*****				
D3-MeFOSAA	N/A*****	N/A*****				
13C2-4:2-Fluorotelomersulfonic Acid	N/A*****	N/A*****				
13C2-6:2-Fluorotelomersulfonic Acid	N/A*****	N/A*****				
13C2-8:2-Fluorotelomersulfonic Acid	N/A*****	N/A*****				
13C3-HFPO-DA	N/A*****	N/A*****				

Calibration Curve Window

Data Path D:\MassHunter\Data\PFC\20200421\WS#6690634
 Data File WS#6690634_12.d
 Acq Operator
 Acq. Date-Time 2020/04/21 11:16 PM
 Instrument Name LCMS04

PFOA 1 - 6 Levels, 6 Levels Used, 6 Points, 6 Points Used, 5 QCs

$y = 0.166402 * x + 0.031570$

R² = 1.00

Type: Linear, Origin: Ignore, Weight: 1/x

Avg. RF RSD = 8.261276

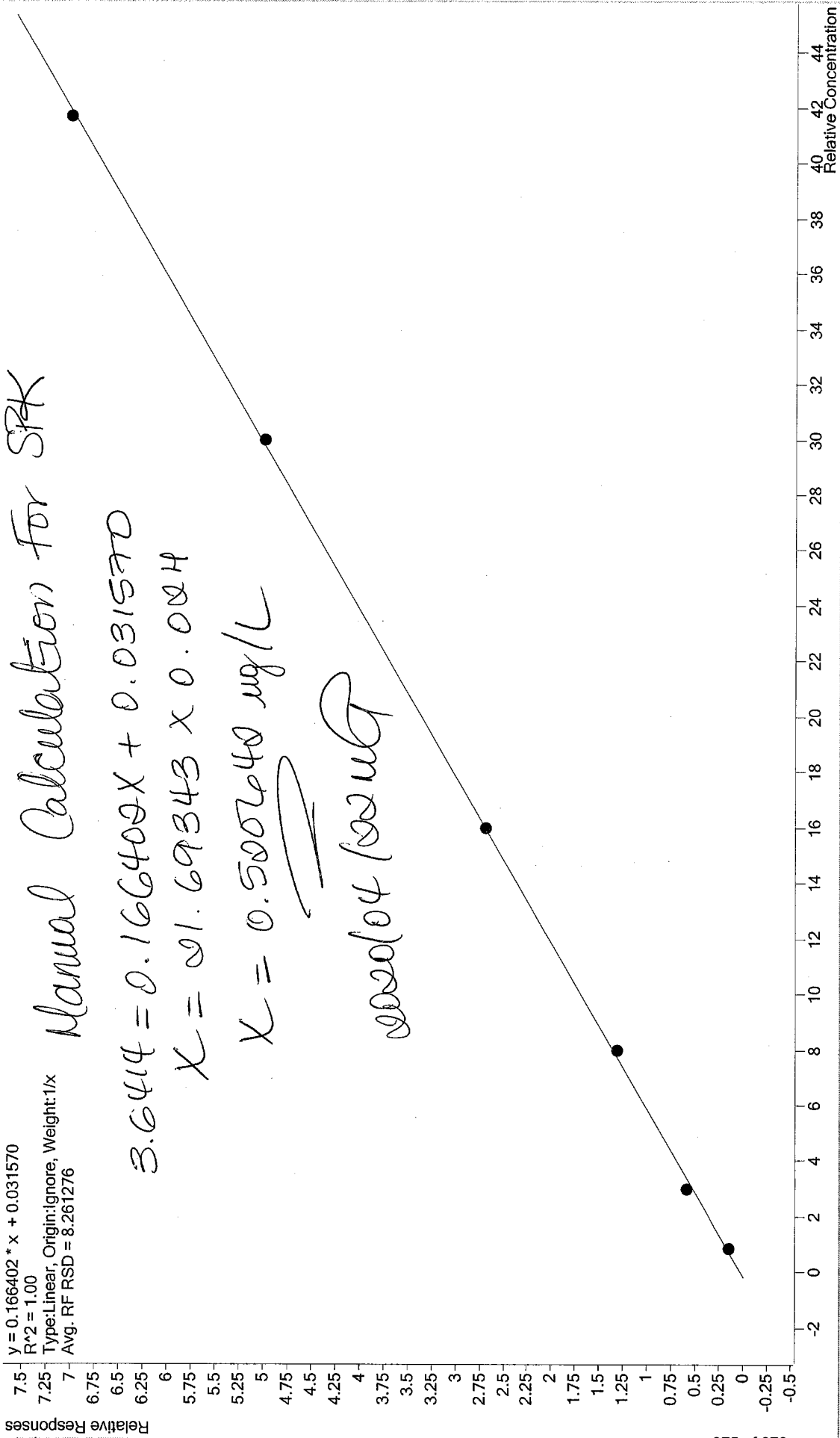
Manual Calculation for SPK

$3.6414 = 0.166402X + 0.031570$

$X = \frac{3.6414 - 0.031570}{0.166402}$

$X = 0.5007640 \text{ mg/L}$

0.5007640 mg/L



Report Name: Worksheet - Parameter Lists
















Report Date: 2020/04/21

Test Code: PFCOD-W

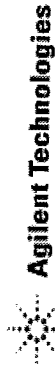
Worksheet Number: 6690634

<u>Sample Number</u>	<u>Parameter Code</u>	<u>Parameter</u>
MLP496-01	PFHXA	Perfluorohexanoic acid (PFHxA)
MLP497-01	PFHPA	Perfluoroheptanoic acid (PFHpA)
MLP498-01	PFOA1	Perfluorooctanoic acid (PFOA)
MLP499-01	PFNA	Perfluorononanoic acid (PFNA)
MLP500-01	PFDA	Perfluorodecanoic acid (PFDA)
MLP501-01	PFUNA	Perfluoroundecanoic acid (PFUnA)
MLP502-01	PFDOA	Perfluorododecanoic acid (PFDoA)
MLP503-01	PFTRDA	Perfluorotridecanoic acid (PFTRDA)
MLP504-01	PFTEDA	Perfluorotetradecanoic acid (PFTEDA)
MLP505-01	PFBSA	Perfluorobutanesulfonic acid (PFBS)
MLP506-01	PFHXA	Perfluorohexanesulfonic acid (PFHxS)
	PFOS2	Perfluorooctanesulfonic acid (PFOS)
	ETFOSA	EtFOSA
	MEFOSA	MeFOSA

WorkSheet 6690634 Instrument Sequences

1.	 6690634:MTRX SPK	MTRX SPK
2.	 6690634:MTRX SPK:D1	MTRX SPK :D1
3.	 6690634:SPIKE	SPIKE
4.	 6690634:BLANK	BLANK
5.	 6690634:MLP496-01	06-MW25-0420
6.	 6690634:MLP497-01	06-MW26-0420
7.	 6690634:MLP498-01	06-MW30-0420
8.	 6690634:MLP499-01	06-MW31-0420
9.	 6690634:MLP500-01	06-MW32-0420
10.	 6690634:MLP501-01	06-MW32-0420 DUP
11.	 6690634:MLP502-01	06-MW33-0420
12.	 6690634:MLP503-01	06-MW34-0420
13.	 6690634:MLP504-01	06-MW35-0420
14.	 6690634:MLP505-01	06-MW36-0420
15.	 6690634:MLP506-01	QCFB-0420

Worklist Report



Instrument Name: LCMS04

Worklist Path: D:\MassHunter\Worklists\PFCs\PFC_200421_Water_Low_DOD_A.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\20200421\WS#6690634

Pre-Worklist Script: ---

Post-Worklist Script: SCP_InstrumentStandby()\{MH_Acq_Scripts.exe}

Acquisition Clean Up Script: ---

Overlapped Injection: No

Clear Sample Selection After Run: Yes

Wait Time for Ready(Min): 10

Threshold Disk Value(GB): 10

Comment: Column #415 MP A1:Solution #92 [FSRE19]
MP B1:Methanol, Sigma (SHBL8027)

Plate Barcode:

Plate	Barcode
P1	

*Agilent per se /
New Agilent per se /
New Agilent per se /
New Agilent per se /*

Worklist Table

Sample Name	Sample Position	Method	Data File	Sample Type	Level Name	Inj Vol (µl)	Comment
1 MeOH RINSE	P1-A1	PFAS.m	WS#6690634_01.d	Sample		As Method	-
2 STD 1	P1-A2	PFAS.m	WS#6690634_02.d	Calibration	STD 1	As Method	-
3 STD 2	P1-A3	PFAS.m	WS#6690634_03.d	Calibration	STD 2	As Method	-
4 STD 3	P1-A4	PFAS.m	WS#6690634_04.d	Calibration	STD 3	As Method	-
5 STD 4	P1-A5	PFAS.m	WS#6690634_05.d	Calibration	STD 4	As Method	-
6 STD 5	P1-A6	PFAS.m	WS#6690634_06.d	Calibration	STD 5	As Method	-
7 STD 6	P1-A7	PFAS.m	WS#6690634_07.d	Calibration	STD 6	As Method	-
8 IB	P1-A8	PFAS.m	WS#6690634_08.d	Sample		As Method	-
9 ICV	P1-A9	PFAS.m	WS#6690634_09.d	QC	ICV	As Method	-
10 ISC	P1-A2	PFAS.m	WS#6690634_10.d	QC	STD 1	As Method	-
11 6690634:BLANK	P1-B1	PFAS.m	WS#6690634_11.d	Sample		As Method	-
12 6690634:SPIKE	P1-B2	PFAS.m	WS#6690634_12.d	QC	ICV	As Method	-
13 6690634:MTRX SPK	P1-B3	PFAS.m	WS#6690634_13.d	QC	ICV	As Method	-
14 6690634:MTRX CO	P1-B4	PFAS.m	WS#6690634_14.d	QC	ICV	As Method	-

D:\MassHunter\Worklists\PFCs\PFC_200421_Water_Low_DOD_A.wkl

Worklist Report



Sample Name	Sample Position	Method	Data File	Sample Type	Level Name	Inj Vol (µl)	Comment
15	IB	PFAS.m	WS#6690634_15.d	Sample		As Method	-
16	6690634:MLP496-01:10x	PFAS.m	WS#6690634_16.d	Sample		As Method	-
17	6690634:MLP496-01	PFAS.m	WS#6690634_17.d	Sample		As Method	-
18	IB	PFAS.m	WS#6690634_18.d	Sample		As Method	-
19	6690634:MLP497-01:10x	PFAS.m	WS#6690634_19.d	Sample		As Method	-
20	6690634:MLP497-01	PFAS.m	WS#6690634_20.d	Sample		As Method	-
21	IB	PFAS.m	WS#6690634_21.d	Sample		As Method	-
22	6690634:MLP499-01	PFAS.m	WS#6690634_22.d	Sample		As Method	-
23	6690634:MLP499-01:10x	PFAS.m	WS#6690634_23.d	Sample		As Method	-
24	6690634:MLP499-01	PFAS.m	WS#6690634_24.d	Sample		As Method	-
25	IB	PFAS.m	WS#6690634_25.d	Sample		As Method	-
26	6690634:MLP500-01:50x	PFAS.m	WS#6690634_26.d	Sample		As Method	-
27	6690634:MLP500-01:5x	PFAS.m	WS#6690634_27.d	Sample		As Method	-
28	IB	PFAS.m	WS#6690634_28.d	Sample		As Method	-
29	CCV	PFAS.m	WS#6690634_29.d	ConCal	STD 4	As Method	-
30	6690634:MLP501-01:50x	PFAS.m	WS#6690634_30.d	Sample		As Method	-
31	6690634:MLP501-01:5x	PFAS.m	WS#6690634_31.d	Sample		As Method	-
32	IB	PFAS.m	WS#6690634_32.d	Sample		As Method	-
33	6690634:MLP502-01:20x	PFAS.m	WS#6690634_33.d	Sample		As Method	-
34	6690634:MLP502-01:2x	PFAS.m	WS#6690634_34.d	Sample		As Method	-
35	IB	PFAS.m	WS#6690634_35.d	Sample		As Method	-
36	6690634:MLP503-01:10x	PFAS.m	WS#6690634_36.d	Sample		As Method	-
37	6690634:MLP503-01	PFAS.m	WS#6690634_37.d	Sample		As Method	-
38	IB	PFAS.m	WS#6690634_38.d	Sample		As Method	-
39	6690634:MLP504-01:10x	PFAS.m	WS#6690634_39.d	Sample		As Method	-
40	6690634:MLP504-01	PFAS.m	WS#6690634_40.d	Sample		As Method	-
41	IB	PFAS.m	WS#6690634_41.d	Sample		As Method	-
42	6690634:MLP505-01	PFAS.m	WS#6690634_42.d	Sample		As Method	-
43	6690634:MLP506-01	PFAS.m	WS#6690634_43.d	Sample		As Method	-
44	CCV	PFAS.m	WS#6690634_44.d	ConCal	STD 4	As Method	-

FINAL INJECTION SEQUENCE

Sample						
Name	Comment	Acq. Date-Time	Data File	Acq. Method File	Pos.	
STD 1	-	2020/04/21 22:07	WS#6690634_02.d	PFAS.m	P1-A2	
STD 2	-	2020/04/21 22:14	WS#6690634_03.d	PFAS.m	P1-A3	
STD 3	-	2020/04/21 22:21	WS#6690634_04.d	PFAS.m	P1-A4	
STD 4	-	2020/04/21 22:28	WS#6690634_05.d	PFAS.m	P1-A5	
STD 5	-	2020/04/21 22:35	WS#6690634_06.d	PFAS.m	P1-A6	
STD 6	-	2020/04/21 22:42	WS#6690634_07.d	PFAS.m	P1-A7	
IB	-	2020/04/21 22:49	WS#6690634_08.d	PFAS.m	P1-A8	
ICV	-	2020/04/21 22:56	WS#6690634_09.d	PFAS.m	P1-A9	
ISC	-	2020/04/21 23:02	WS#6690634_10.d	PFAS.m	P1-A2	
6690634:BLANK	-	2020/04/21 23:09	WS#6690634_11.d	PFAS.m	P1-B1	
6690634:SPIKE	-	2020/04/21 23:16	WS#6690634_12.d	PFAS.m	P1-B2	
6690634:MTRX SPK	MLP498-01	2020/04/21 23:23	WS#6690634_13.d	PFAS.m	P1-B3	
6690634:MTRX SPK:D1	MLP498-01	2020/04/21 23:30	WS#6690634_14.d	PFAS.m	P1-B4	
IB	-	2020/04/21 23:37	WS#6690634_15.d	PFAS.m	P1-A8	
6690634:MLP496-01:10x	Dilution doesnot match screening. Reworked to confirm result.	2020/04/21 23:44	WS#6690634_16.d	PFAS.m	P1-B5	
6690634:MLP496-01	Dilution doesnot match screening. Reworked to confirm result.	2020/04/21 23:51	WS#6690634_17.d	PFAS.m	P1-B6	
IB	-	2020/04/21 23:58	WS#6690634_18.d	PFAS.m	P1-A8	
6690634:MLP497-01:10x	Reported for PFOS only.	2020/04/22 0:05	WS#6690634_19.d	PFAS.m	P1-B7	
6690634:MLP497-01	Reported for all except PFOS.	2020/04/22 0:12	WS#6690634_20.d	PFAS.m	P1-B8	
IB	-	2020/04/22 0:19	WS#6690634_21.d	PFAS.m	P1-A8	
6690634:MLP498-01	-	2020/04/22 0:26	WS#6690634_22.d	PFAS.m	P1-B9	
6690634:MLP499-01:10x	NOT USED.	2020/04/22 0:33	WS#6690634_23.d	PFAS.m	P1-C1	
6690634:MLP499-01	-	2020/04/22 0:40	WS#6690634_24.d	PFAS.m	P1-C2	
IB	-	2020/04/22 0:47	WS#6690634_25.d	PFAS.m	P1-A8	
6690634:MLP500-01:50x	Reported for PFHXS & PFOS only.	2020/04/22 0:54	WS#6690634_26.d	PFAS.m	P1-C3	
6690634:MLP500-01:5x	Reported for all except PFHXS & PFOS.	2020/04/22 1:01	WS#6690634_27.d	PFAS.m	P1-C4	
IB	-	2020/04/22 1:07	WS#6690634_28.d	PFAS.m	P1-A8	
CCV	-	2020/04/22 1:14	WS#6690634_29.d	PFAS.m	P1-A5	
6690634:MLP501-01:50x	Reported for PFHXS & PFOS only.	2020/04/22 1:21	WS#6690634_30.d	PFAS.m	P1-C5	
6690634:MLP501-01:5x	Reported for all except PFHXS & PFOS.	2020/04/22 1:28	WS#6690634_31.d	PFAS.m	P1-C6	
IB	-	2020/04/22 1:35	WS#6690634_32.d	PFAS.m	P1-A8	
6690634:MLP502-01:20x	Reported for PFHXS & PFOS only.	2020/04/22 1:42	WS#6690634_33.d	PFAS.m	P1-C7	

LCMS04

FINAL INJECTION SEQUENCE

Sample						
Name	Comment	Acq. Date-Time	Data File	Acq. Method File	Pos.	
6690634:MLP502-01:2x	Reported for all except PFHxS & PFOS.	2020/04/22 1:49	WS#6690634_34.d	PFAS.m	P1-C8	
IB	-	2020/04/22 1:56	WS#6690634_35.d	PFAS.m	P1-A8	
6690634:MLP503-01:10x	Reported for PFOS only.	2020/04/22 2:03	WS#6690634_36.d	PFAS.m	P1-C9	
6690634:MLP503-01	Reported for all except PFOS.	2020/04/22 2:10	WS#6690634_37.d	PFAS.m	P1-D1	
IB	-	2020/04/22 2:17	WS#6690634_38.d	PFAS.m	P1-A8	
6690634:MLP504-01:10x	Reported for PFHxS & PFOS only.	2020/04/22 2:24	WS#6690634_39.d	PFAS.m	P1-D2	
6690634:MLP504-01	Reported for all except PFHxS & PFOS.	2020/04/22 2:31	WS#6690634_40.d	PFAS.m	P1-D3	
IB	-	2020/04/22 2:38	WS#6690634_41.d	PFAS.m	P1-A8	
6690634:MLP505-01	-	2020/04/22 2:45	WS#6690634_42.d	PFAS.m	P1-D4	
6690634:MLP506-01	-	2020/04/22 2:52	WS#6690634_43.d	PFAS.m	P1-D5	
CCV	-	2020/04/22 2:59	WS#6690634_44.d	PFAS.m	P1-A5	

DoD Projects - Internal Data Validation Checklist					
Run date:		2020/04/23			
Worksheet # (s):		6692764			
Analysis:		PFCDDO-W			
Primary review by the analyst - 1st 100 % analysis review		1st 100% review			2nd 100% review
		yes	no	n/a	
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, imprinter 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:		Date: 2020/04/23			
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:		Date: 2020/04/29			
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 # **6692764**

Testcode: **PFCDD-11**

Sample Preparation

	yes	no	n/a
1 Samples extracted within hold time	/		
2 Client sample ID verified against Lab ID (waters & oils)	/		
3 Parameter list and Client comments reviewed, (Spiking solutions matched to parameter list)	/		
4 Height of sediment or if sample was decanted, recorded on worksheet	/		
5 Method required QC processed with samples, maximum batch size = 20 client samples.	/		
6 Sample, duplicate, matrix spike appear similar, initial sample as well as final extract	/		
7 Sample weight or initial volume and extract final volume, aliquot factor clearly recorded.	/		
8 If performed any additional dilution clearly recorded	/		
9 Matrix spike / Duplicate performed on IOL samples if present			
10 Spiking solutions valid (haven't expired), ID and volume used clearly identified on worksheet			-
11 Spiking process witnessed and signed off	/		
12 Extraction type recorded (N3A2B = neutral, 3 x acidic, 2 x basic)	/		
13 Sample prep deviations documented within CompliantPro as a Policy Deviation			/
14 Job Remarks reviewed on 2nd page of worksheet.			/
15 Worksheet and reagent tracking record completed and authorized.	/		

Reviewed by: **[Signature]**

Date: **2020-04-22**

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			

Refer to 00002
 BRL-FCD-00002
 2020/04/03 MGA

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:



Report Name : Worksheet - (Liquids and Solids)

Assignment Date : Wednesday, April 22, 2020

Assigned to : Shahbaz Ahmad

Test Code : PFCODD-W

Instrument Id:

Test Description : Per- and Polyfluoroalkyl Substances (PFAS) in Water by SPE/LC-MS/MS

sediment on ml ml 8/29 2020-04-22

Job Number	Sample Number	D	Sample ID	F	% Moisture	Wt or Vol	Final Vol	DF or AF	# Cont	Expiry Date	Test DeadLine	Criteria	Extract Date
	MTRX SPK	0	LL PFCODD W ML*		LO-1	125	3	1X					2020/04/22
	MTRX SPK	1	LL PFCODD W ML*		LO-1	125	3	1X					2020/04/22
	SPIKE		LL PFCODD W		0	125	3	1X					2020/04/22
	BLANK				0	125	3	1X					2020/04/22
C095296	*MLP496-01R		06-MW25-0420		LO-1	125	3	1X	2	2020/04/22	2020/04/29 23:00	DOD	2020/04/22
C095296	*MLP498-01R		06-MW30-0420		LO-1	125	3	1X	6	2020/04/22	2020/04/29 23:00	DOD	2020/04/22
C095296	*MLP502-01R		06-MW33-0420		LO-1	125	3	1X	2	2020/04/22	2020/04/29 23:00	DOD	2020/04/22
C095296	*MLP506-01R		QCFB-0420		0	125	3	1X	2	2020/04/22	2020/04/29 23:00	DOD	2020/04/22
<i>8/29 2020-04-22</i>													

Remarks:

Samples extracted by: Shahbaz Ahmad *8/29 2020-04-22*

Instrumentation performed by: AKH

Date: 2020/04/22

Calculations performed by: *MA*

Date: 2020/04/23

Validated by: *MA*
Bureau Veritas Laboratories

Date: 2020/04/29

Handwritten notes:
 2/20-2/22
 2/20-2/22

Job No.	Rep Client Name	Contact	Client Tier	National
GC095296	SP8 EMAX Laboratories Inc	Richard Beauvil	Tier 4 (Enviro.)	
Remarks: DKN, nreg, PFCODD-W MS/MSD required on MLP498 Level IV Data Package and NEDD EDD and EDF EDD required PM: manually add WO#17023 to EDF (see generation instructions) Project #: TREASURE ISLAND, IR SITE 6				

Job	Sample	Lab Comments
	MTRX SPK	
	MTRX SPK	
	SPIKE	
	BLANK	
C095296	MLP496-01R	
C095296	MLP498-01R	
C095296	MLP502-01R	
C095296	MLP506-01R	

Folder: 2020/04/02

2020/04/04

LCMS Calibration Standard Preparation Sheet
Worksheet: 6602764 Initial: SAD Date: 2/20/14/22

Witnessed by: GSZ

PFOSALCM-W (SPE)					
Calib. Std.	Volume of MeOH (uL)	Amount Spiked (uL)	Solution Conc.	Solution ID#	Internal Standard A (uL) 125/250ng/mL
S1	2825	25	100 ng/mL	SK9593	150
S2	2760	90			150
S3	2826	24			150
S4	2802	48			150
S5	2760	90			150
S6	2725	125			150
*ICV	2790	60	1 ug/mL	JS971	150
IB	2850	NA			150

PFOSALCM-W (High)						
Calib. Std.	Volume of MeOH (uL)	Volume of Water (mL)	Amount Spiked (uL)	Solution Conc.	Solution ID#	Internal Standard A (uL) 125/250ng/mL
S1	480	0.75	20	30 ng/mL		100
S2	425	0.75	75			100
S3	477	0.75	23			100
S4	452	0.75	48	300 ng/mL		100
S5	473	0.75	27			100
S6	463	0.75	37.5	1 ug/mL		100
*ICV	482	0.75	18	1 ug/mL		100
IB	500	0.75	NA			100

PFOSALCM-S					
Calib. Std.	Volume of MeOH (uL)	Amount Spiked (uL)	Solution Conc.	Solution ID#	Internal Standard A (uL) 125/250ng/mL
S1	1885	15	100 ng/mL		100
S2	1840	60			100
S3	1750	150			100
S4	1870	30			100
S5	1846	54	1 ug/mL		100
S6	1825	75			100
*ICV	1864	36	1 ug/mL		100
IB	1900	NA			100

PFOSLOW-W (SPE)					
Calib. Std.	Volume of MeOH (uL)	Amount Spiked (uL)	Solution Conc.	Solution ID#	Internal Standard B (uL) 12.5/25ng/mL
S1	1475	25	100 ng/mL		1500
S2	1410	90			1500
S3	1476	24			1500
S4	1452	48			1500
S5	1410	90			1500
S6	1375	125			1500
*ICV	1440	60	1 ug/mL		1500
IB	1500	NA			1500

PFC-TI					
Calib. Std.	Volume of MeOH (uL)	Amount Spiked (uL)	Solution Conc.	Solution ID#	Internal Standard (uL)
S1	1890	10	100 ng/mL		100
S2	1880	20			100
S3	1840	60			100
S4	1885	15			100
S5	1870	30			100
S6	1850	50			100
*ICV	1875	25	1 ug/mL		100

MORPH-L						
Calib. Std.	Volume of DI Water (mL)	Methanol (mL)	Solution Conc.	Solution ID#	Amount Spiked (uL)	Internal Standard (uL)
S1	1	1	200 ug/L		20	50
S2	1	1			50	50
S3	1	1	2500 ug/L		20	50
S4	1	1			80	50
S5	1	1			200	50
S6	1	1			400	50
*ICV	1	1	2500 ug/L		80	50

PFAADW-W						
Calib. Std.	Volume of 96:4 (MeOH : Water) (uL)	Amount Spiked (uL)	Solution Conc.	Solution ID#	Surrogate (25/200 ng/mL)	Internal Standard (uL) 50/100/200 ng/mL
S1	780	20	6.25/25/50 ng/mL	DWB	100	100
S2	728	72			100	100
S3	608	192			100	100
S4	762	38.4	62.5/250/500 ng/mL	DWA	100	100
S5	728	72			100	100
S6	700	100			100	100
*ICV	752	48	62.5/250/500 ng/mL DWA		100	100
tPFOA	800	100	50 ng/mL		N/A	100

STERIL-S					
Calib. Std.	Volume of 60:40 Water ; MEOH (mL)	Amount Spiked (uL)	Solution Conc.	Solution ID#	Internal Standard (uL)
S1	5	20	**		50
S2	5	30	Solution B		50
S3	5	40			50
S4	5	80			50
S5	5	22	**		50
S6	5	40	Solution A		50
*ICV	5	20	**		50

CLO4LCMS-W/ CLO4LCMS-S				
Calib. Std.	Volume of Water (mL)	Amount Spiked (uL)	Solution Conc.	Solution ID#
S1	9.95	50	10ug/L	
S2	9.9	100		
S3	9.75	250		
S4	9.5	500		
S5	9	1000		
S6	8	2000		
*ICV	9	1000	10 ug/L	

* ICV are prepared using second source

** Concentration of Individual Parameters in Solution A & B Varies

PFAS worksheet reagent tracking sheet

Worksheet # 6692764 Date 30/10/14/22

Spiked by: [Signature]

Spiking Witness checklist			
	Yes	Initial	
1	<input checked="" type="checkbox"/>		YPL
2	<input checked="" type="checkbox"/>		
3	<input checked="" type="checkbox"/>		
4	<input checked="" type="checkbox"/>		
5	<input checked="" type="checkbox"/>		

Test code	Surrogate / Spike / IS solutions	Solution ID#	Conc.	Spike	MS	Sample	Syringe ID	Witness
PFOSALCM-W PFCDOD-W PFASBC-W	PFAS Second Source Solution A	15971V3	1ug/mL	60	60	N/A	030588A	YPL
	PFAS Internal Standard Solution A	517982315	125/250 ng/mL	150	150	250	040174G	
	PFC Injection IS		100 ng/mL	20	20	20		
PFOSALCM-W	PFAS Second Source Solution A		1ug/mL	18	18	N/A		
	PFAS Internal Standard Solution A		125/250 ng/mL	100	100	100		
	PFAS Second Source Solution D		30 ng/mL	N/A	N/A	10		
	PFC Injection IS		100 ng/mL	20	20	20		
PFOSLOW-W PFASDOD-W PFCODW-W PFASLOBC-W	PFAS Second Source Solution C		100 ng/mL	60	60	N/A		
	PFAS Internal Standard Solution B		12.5/25 ng/mL	150	150	150		
	PFC Injection IS		100 ng/mL	15	15	15		
	Second Source Spiking Solution DWB		6.25/25/50 ng/mL	40	40	N/A		
PFAADW-W	Second Source Spiking Solution DWA		62.5/250/500 ng/mL	48/80	48/80	N/A		
	PFAA Internal Standard Solution		50/100/200 ng/mL	100	100	100		
	PFAA Surrogate solution		25/200 ng/mL	100	100	100		
	PFAS Internal Standard Solution A		125/250 ng/mL	150	150	150		
PFOS_OX-W PFOS_OX-S	PFC Injection IS		100 ng/mL	20	20	20		
	PFAS Second Source Solution A		1ug/mL	72	72	N/A		
PFOSALCM-S PFASDOD-S PFASBC-S	PFAS Internal Standard Solution A		125/250 ng/mL	200	200	200		
	PFC Injection IS		100 ng/mL	20	20	20		
	PFAS Second Source Solution C		100 ng/mL	72	72	N/A		
PFOSLOW-S	PFAS Internal Standard Solution A		125/250 ng/mL	20	20	20		
	PFC Injection IS		100 ng/mL	15	15	15		
	PFAS Second Source Solution A		100 ng/mL	15	15	15		

NS # 6692764

Solvent/Reagent	✓	Lot No.	Date Opened	Solvent/Reagent	✓	Lot No.	Date Opened/Prepared
0.2% NH ₄ OH in Methanol	✓	PRURE137-152		Blank Mat.			
0.5% NH ₄ OH in 70:30 Methanol:Water				Env. Carb.	✓	122394	2020-03-11
1% NH ₄ OH in methanol				Leachate Fluid			
10mM KOH in Methanol				Methanol	✓	SHBL 8027	2020-04-22
2% Formic Acid	✓	PRURE137-147		Ottawa Sand			
60:40 Water: Methanol	✓	PRURE137-139		Reagent Water	✓	59324	2020-04-21
60:40 Water:Acetonitrile				Ref. Mat.			
96:4 Methanol: Water				Trizma			
0.2 % Formic Acid							

Equipment & ID	✓	Equipment	ID#	✓	Bottle Tracking
Pipettor 036583D MU1011F	✓	SPE Cartridge	00529317A	✓	Bottle# 22524
Thermometer ID & Temp		QC Balance ID			Cap# 22514
Dispenser		Centrifuge	02148683	✓	Systems plus Lot# 20-04-01
Measuring cylinder 250mL 1755	✓	Sonicator			
Shaker					
Comments:					

Dilution and Column Cleanup Worksheet

Worksheet: 6692764

Job Number	Sample ID	Sample: Initial Final Volume	Dilution Required	Sample Added mL	Solvent Added mL	Int Std Added uL	New Effective Final Volume	Initials and Date	Column Cleanup
C095296	MLP496-01	1X	10X	12.5	-	150	12.5	MSB 2020-11-22	-
U	U	U	100X	12.5	123.75	150	12.5		-

MSB
2020-11-22

PFAS in water by SPE/LC-MS/MS - Water
ug/L

Parameter Name	Units	MTRX SPK	MTRX SPK Dup1	SPIKE	BLANK	DL	C095296 MLP496 ReWork
Perfluorobutanoic acid (PFBA)	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	0.02	N/A*****
Perfluoropentanoic acid (PFPeA)	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	0.02	N/A*****
Perfluorohexanoic acid (PFHxA)	ug/L	118.23140	121.63157	121.36167	0	0.02	1.15258377
Perfluoroheptanoic acid (PFHpA)	ug/L	121.44237	125.60584	124.84022	0	0.02	0.33400896
Perfluorooctanoic acid (PFOA)	ug/L	113.25149	115.36992	117.79745	0	0.02	1.06964667
Perfluorononanoic acid (PFNA)	ug/L	117.13086	120.75438	125.08231	0	0.02	0.05541718
Perfluorodecanoic acid (PFDA)	ug/L	118.94200	121.09741	121.47750	0	0.02	0.01139396
Perfluoroundecanoic acid (PFUnA)	ug/L	120.94768	120.87129	122.90526	0	0.02	0
Perfluorododecanoic acid (PFDoA)	ug/L	126.14396	118.27339	124.43123	0	0.02	0
Perfluorotridecanoic acid (PFTRDA)	ug/L	128.61097	121.37476	119.32417	0	0.02	0
Perfluorotetradecanoic acid(PFTEDA)	ug/L	112.23322	109.14778	113.74166	0	0.02	0
Perfluorobutanesulfonic acid (PFBS)	ug/L	120.03779	120.90665	121.67449	0	0.02	0.07357944
Perfluoropentanesulfonic acid PFPes	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	0.02	N/A*****
Perfluorohexanesulfonic acid(PFHxS)	ug/L	119.37572	125.97040	121.55670	0	0.02	1.39298615
Perfluoroheptanesulfonic acid PFHpS	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	0.02	N/A*****
Perfluorooctanesulfonic acid (PFOS)	ug/L	112.08656	112.94204	127.97886	0	0.02	9.91192468
Perfluorononanesulfonic acid (PFNS)	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	0.02	N/A*****
Perfluorodecanesulfonic acid (PFDS)	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	0.02	N/A*****
Perfluorooctane Sulfonamide (PFOSA)	ug/L	N/A*****	N/A*****	117.09500	N/A*****	0.02	N/A*****
EtFOSA	ug/L	120.51859	112.77707	123.28191	0	0.04	0
MeFOSA	ug/L	115.80093	110.39173	113.31961	0	0.04	0
EtFOSE	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	0.04	N/A*****
MeFOSE	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	0.04	N/A*****
EtFOSAA	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	0.02	N/A*****
MeFOSAA	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	0.02	N/A*****
4:2 Fluorotelomer sulfonic acid	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	0.02	N/A*****
6:2 Fluorotelomer sulfonic acid	ug/L	N/A*****	N/A*****	121.56099	N/A*****	0.02	N/A*****
8:2 Fluorotelomer sulfonic acid	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	0.02	N/A*****
Hexafluoropropyleneoxide dimer acid	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	0.02	N/A*****
4,8-Dioxa-3H-perfluorononanoic acid	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	0.02	N/A*****
9Cl-PF3ONS (F-53B Major)	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	0.02	N/A*****
11Cl-PF3OUdS (F-53B Minor)	ug/L	N/A*****	N/A*****	N/A*****	N/A*****	0.02	N/A*****
13C4-Perfluorobutanoic acid	ug/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C5-Perfluoropentanoic acid	ug/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C2-Perfluorohexanoic acid	ug/L	100.273904	96.7131474	93.8371513	103.772410		110.495517
13C4-Perfluoroheptanoic acid	ug/L	92.8968609	89.8385650	91.7040358	99.7040358		101.318385
13C4-Perfluorooctanoic acid	ug/L	56.4050351	57.2010366	93.3728248	98.2136245		106.645686
13C5-Perfluorononanoic acid	ug/L	67.4145547	67.7168100	91.7693559	97.8028365		101.627528
13C2-Perfluorodecanoic acid	ug/L	101.543002	94.7940426	92.7411780	94.9416342		98.1618140
13C2-Perfluoroundecanoic acid	ug/L	88.7964440	85.0125370	91.3380442	90.5060405		94.5520857
13C2-Perfluorododecanoic acid	ug/L	61.2231497	63.4462057	86.1082450	87.4964825		88.9691398
13C2-perfluorotetradecanoic acid	ug/L	1143.7459	1146.4093	81.1269420	82.8667573		82.6376458
13C3-Perfluorobutanesulfonic acid	ug/L	100.058445	97.9544126	94.5645821	100.701344		102.513150
18O2-Perfluorohexanesulfonic acid	ug/L	97.9859894	92.3817863	92.8196147	95.4465849		109.106830
13C4-Perfluorooctanesulfonic acid	ug/L	81.5689981	80.1512287	91.7769376	95.8412098		103.308128
13C8-Perfluorooctane Sulfonamide	ug/L	N/A*****	N/A*****	83.8174273	N/A*****		N/A*****
D5-EtFOSA	ug/L	51.4184397	53.0141843	70.4787234	71.7198581		72.1187943
D3-MeFOSA	ug/L	53.8781687	55.6186152	68.1800983	68.8611426		71.7366628
D9-EtFOSE	ug/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
D7-MeFOSE	ug/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
D5-EtFOSAA	ug/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
D3-MeFOSAA	ug/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C2-4:2-Fluorotelomersulfonic Acid	ug/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C2-6:2-Fluorotelomersulfonic Acid	ug/L	N/A*****	N/A*****	91.8939393	N/A*****		N/A*****
13C2-8:2-Fluorotelomersulfonic Acid	ug/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****
13C3-HFPO-DA	ug/L	N/A*****	N/A*****	N/A*****	N/A*****		N/A*****

PFAS in water by SPE/LC-MS/MS - Water
ug/L

Parameter Name	DL	C095296 MLP498 ReWork	C095296 MLP502 ReWork	C095296 MLP506 ReWork	DL	RDL	MDL
Perfluorobutanoic acid (PFBA)	0.02	N/A*****	N/A*****	N/A*****	0.02	0.02	0.007
Perfluoropentanoic acid (PFPeA)	0.02	N/A*****	N/A*****	N/A*****	0.02	0.02	0.0041
Perfluorohexanoic acid (PFHxA)	0.2	0.00767470	N/A*****	N/A*****	0.02	0.02	0.0064
Perfluoroheptanoic acid (PFHpA)	0.02	0.00304513	N/A*****	N/A*****	0.02	0.02	0.0071
Perfluorooctanoic acid (PFOA)	0.2	0.03119808	N/A*****	N/A*****	0.02	0.02	0.0074
Perfluorononanoic acid (PFNA)	0.02	0	N/A*****	N/A*****	0.02	0.02	0.0049
Perfluorodecanoic acid (PFDA)	0.02	0	N/A*****	N/A*****	0.02	0.02	0.0041
Perfluoroundecanoic acid (PFUnA)	0.02	0	N/A*****	N/A*****	0.02	0.02	0.0043
Perfluorododecanoic acid (PFDoA)	0.02	0	N/A*****	N/A*****	0.02	0.02	0.0068
Perfluorotridecanoic acid (PFTRDA)	0.02	0	N/A*****	N/A*****	0.02	0.02	0.0069
Perfluorotetradecanoic acid(PFTEDA)	0.02	0	N/A*****	N/A*****	0.02	0.02	0.0067
Perfluorobutanesulfonic acid (PFBS)	0.02	0.00069444	N/A*****	N/A*****	0.02	0.02	0.0051
Perfluoropentanesulfonic acid PFPes	0.02	N/A*****	N/A*****	N/A*****	0.02	0.02	0.0074
Perfluorohexanesulfonic acid(PFHxS)	0.2	0.07599750	N/A*****	N/A*****	0.02	0.02	0.0052
Perfluoroheptanesulfonic acid PFHpS	0.02	N/A*****	N/A*****	N/A*****	0.02	0.02	0.0033
Perfluorooctanesulfonic acid (PFOS)	0.2	0.15950829	N/A*****	N/A*****	0.02	0.02	0.0052
Perfluoronanesulfonic acid (PFNS)	0.02	N/A*****	N/A*****	N/A*****	0.02	0.02	0.007
Perfluorodecanesulfonic acid (PFDS)	0.02	N/A*****	N/A*****	N/A*****	0.02	0.02	0.0072
Perfluorooctane Sulfonamide (PFOSA)	0.02	N/A*****	N/A*****	N/A*****	0.02	0.02	0.0076
EtFOSA	0.04	0	N/A*****	0	0.04	0.04	0.009
MeFOSA	0.04	0	0	0	0.04	0.04	0.0035
EtFOSE	0.04	N/A*****	N/A*****	N/A*****	0.04	0.04	0.0094
MeFOSE	0.04	N/A*****	N/A*****	N/A*****	0.04	0.04	0.0066
EtFOSAA	0.02	N/A*****	N/A*****	N/A*****	0.02	0.02	0.0081
MeFOSAA	0.02	N/A*****	N/A*****	N/A*****	0.02	0.02	0.007
4:2 Fluorotelomer sulfonic acid	0.02	N/A*****	N/A*****	N/A*****	0.02	0.02	0.0066
6:2 Fluorotelomer sulfonic acid	0.02	N/A*****	N/A*****	N/A*****	0.02	0.02	0.0059
8:2 Fluorotelomer sulfonic acid	0.02	N/A*****	N/A*****	N/A*****	0.02	0.02	0.0073
Hexafluoropropyleneoxide dimer acid	0.02	N/A*****	N/A*****	N/A*****	0.02	0.02	0.0047
4,8-Dioxa-3H-perfluorononanoic acid	0.02	N/A*****	N/A*****	N/A*****	0.02	0.02	0.0048
9CI-PF3ONS (F-53B Major)	0.02	N/A*****	N/A*****	N/A*****	0.02	0.02	0.0093
11CI-PF3OUdS (F-53B Minor)	0.02	N/A*****	N/A*****	N/A*****	0.02	0.02	0.0053
13C4-Perfluorobutanoic acid		N/A*****	N/A*****	N/A*****			
13C5-Perfluoropentanoic acid		N/A*****	N/A*****	N/A*****			
13C2-Perfluorohexanoic acid		103.946713	N/A*****	N/A*****			
13C4-Perfluoroheptanoic acid		95.5784753	N/A*****	N/A*****			
13C4-Perfluorooctanoic acid		55.5164753	N/A*****	N/A*****			
13C5-Perfluorononanoic acid		67.1006742	N/A*****	N/A*****			
13C2-Perfluorodecanoic acid		101.127062	N/A*****	N/A*****			
13C2-Perfluoroundecanoic acid		93.7770686	N/A*****	N/A*****			
13C2-Perfluorododecanoic acid		68.7365162	N/A*****	N/A*****			
13C2-perfluorotetradecanoic acid		!! 46.4308	N/A*****	N/A*****			
13C3-Perfluorobutanesulfonic acid		101.694915	N/A*****	N/A*****			
18O2-Perfluorohexanesulfonic acid		97.2854640	N/A*****	N/A*****			
13C4-Perfluorooctanesulfonic acid		81.8525519	N/A*****	N/A*****			
13C8-Perfluorooctane Sulfonamide		N/A*****	N/A*****	N/A*****			
D5-EtFOSA		52.2606382	N/A*****	75.0886524			
D3-MeFOSA		57.8130911	69.6935300	75.1418842			
D9-EtFOSE		N/A*****	N/A*****	N/A*****			
D7-MeFOSE		N/A*****	N/A*****	N/A*****			
D5-EtFOSAA		N/A*****	N/A*****	N/A*****			
D3-MeFOSAA		N/A*****	N/A*****	N/A*****			
13C2-4:2-Fluorotelomersulfonic Acid		N/A*****	N/A*****	N/A*****			
13C2-6:2-Fluorotelomersulfonic Acid		N/A*****	N/A*****	N/A*****			
13C2-8:2-Fluorotelomersulfonic Acid		N/A*****	N/A*****	N/A*****			
13C3-HFPO-DA		N/A*****	N/A*****	N/A*****			

PFAS in water by SPE/LC-MS/MS - Water
ug/L

Parameter Name	IDL						
Perfluorobutanoic acid (PFBA)	0						
Perfluoropentanoic acid (PFPeA)	0						
Perfluorohexanoic acid (PFHxA)	0						
Perfluoroheptanoic acid (PFHpA)	0						
Perfluorooctanoic acid (PFOA)	0						
Perfluorononanoic acid (PFNA)	0						
Perfluorodecanoic acid (PFDA)	0						
Perfluoroundecanoic acid (PFUnA)	0						
Perfluorododecanoic acid (PFDoA)	0						
Perfluorotridecanoic acid (PFTRDA)	0						
Perfluorotetradecanoic acid (PFTEDA)	0						
Perfluorobutanesulfonic acid (PFBS)	0						
Perfluoropentanesulfonic acid (PFPS)	0						
Perfluorohexanesulfonic acid (PFHxS)	0						
Perfluoroheptanesulfonic acid (PFHpS)	0						
Perfluorooctanesulfonic acid (PFOS)	0						
Perfluoronanesulfonic acid (PFNS)	0						
Perfluorodecanesulfonic acid (PFDS)	0						
Perfluorooctane Sulfonamide (PFOSA)	0						
EtFOSA	0						
MeFOSA	0						
EtFOSE	0						
MeFOSE	0						
EtFOSAA	0						
MeFOSAA	0						
4:2 Fluorotelomer sulfonic acid	0						
6:2 Fluorotelomer sulfonic acid	0						
8:2 Fluorotelomer sulfonic acid	0						
Hexafluoropropyleneoxide dimer acid	0						
4,8-Dioxa-3H-perfluorononanoic acid	0						
9Cl-PF3ONS (F-53B Major)	0						
11Cl-PF3OUdS (F-53B Minor)	0						
13C4-Perfluorobutanoic acid							
13C5-Perfluoropentanoic acid							
13C2-Perfluorohexanoic acid							
13C4-Perfluoroheptanoic acid							
13C4-Perfluorooctanoic acid							
13C5-Perfluorononanoic acid							
13C2-Perfluorodecanoic acid							
13C2-Perfluoroundecanoic acid							
13C2-Perfluorododecanoic acid							
13C2-perfluorotetradecanoic acid							
13C3-Perfluorobutanesulfonic acid							
18O2-Perfluorohexanesulfonic acid							
13C4-Perfluorooctanesulfonic acid							
13C8-Perfluorooctane Sulfonamide							
D5-EtFOSA							
D3-MeFOSA							
D9-EtFOSE							
D7-MeFOSE							
D5-EtFOSAA							
D3-MeFOSAA							
13C2-4:2-Fluorotelomersulfonic Acid							
13C2-6:2-Fluorotelomersulfonic Acid							
13C2-8:2-Fluorotelomersulfonic Acid							
13C3-HFPO-DA							

Calibration Curve Window

Data Path: D:\MassHunter\Data\PFC\20200422\WS#6692764
 Data File: WS#6692764_12.d
 Acq Operator: 2020/04/23 3:11 AM
 Acq. Date-Time: LCMS04
 Instrument Name: PFOA 1 - 6 Levels, 6 Levels Used, 6 Points, 6 Points Used, 5 QCs

$y = 0.174552 * x + 0.034148$
 $R^2 = 1.00$
 Type: Linear, Origin: Ignore, Weight: 1/x
 Avg. RF RSD = 9.454658

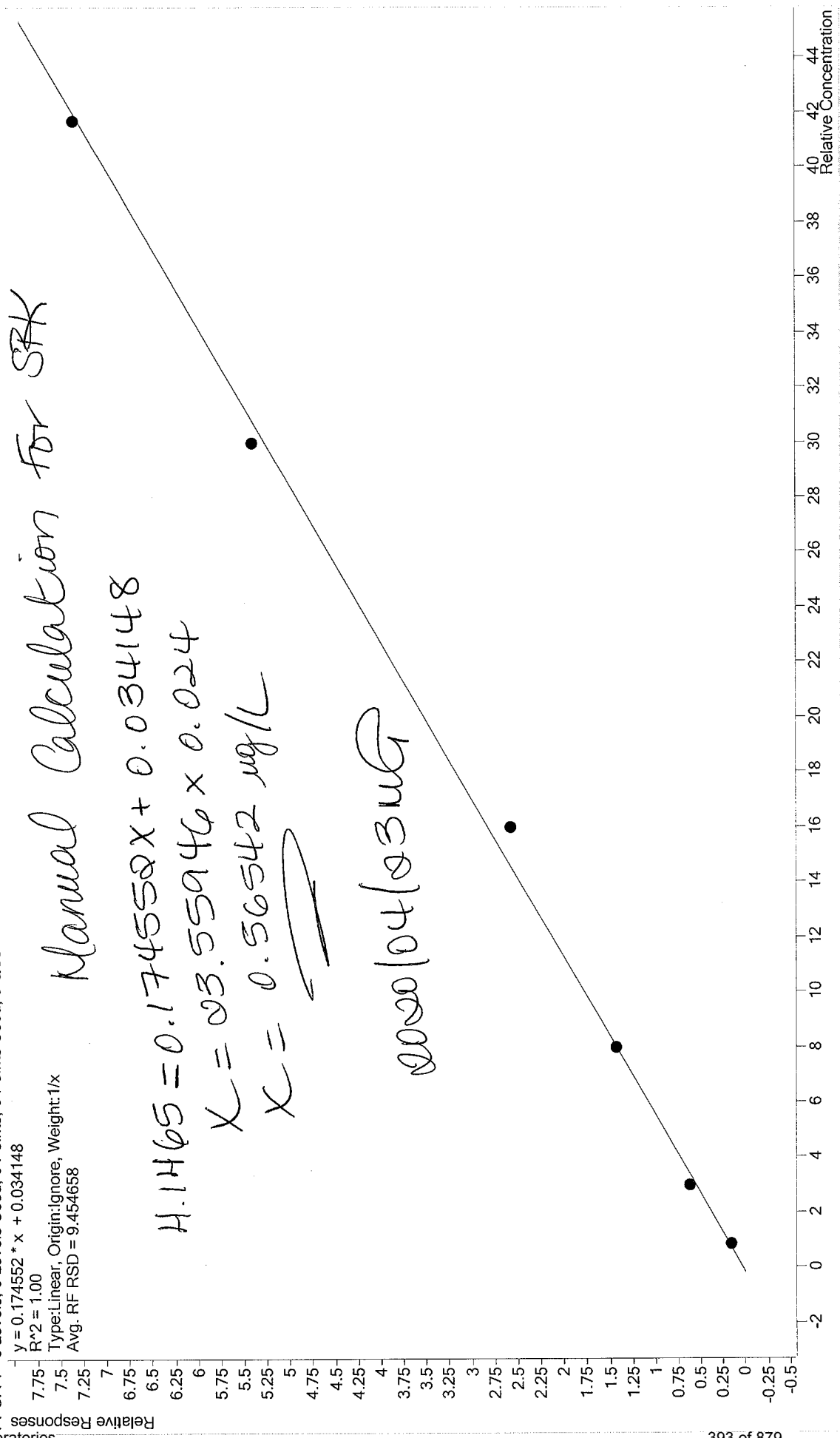
Manual Calculation for SPK

$H.1465 = 0.174552x + 0.034148$

$x = 23.55946 \times 0.024$

$x = 0.56542 \text{ } \mu\text{g/L}$

0020104(03ug)



Report Name: Worksheet - Parameter Lists









Report Date: 2020/04/22

Test Code: PFCOD-W

Worksheet Number: 6692764

<u>Sample Number</u>	<u>Parameter Code</u>	<u>Parameter</u>
MLP496-01	PFHXA	Perfluorohexanoic acid (PFHxA)
	PFHPA	Perfluoroheptanoic acid (PFHpA)
	PFOA1	Perfluorooctanoic acid (PFOA)
	PFNA	Perfluorononanoic acid (PFNA)
	PFDA	Perfluorodecanoic acid (PFDA)
	PFUNA	Perfluoroundecanoic acid (PFUnA)
	PFDOA	Perfluorododecanoic acid (PFDoA)
	PFTRDA	Perfluorotridecanoic acid (PFTRDA)
	PFTEDA	Perfluorotetradecanoic acid (PFTEDA)
	PFBSA	Perfluorobutanesulfonic acid (PFBS)
	PFHXSA	Perfluorohexanesulfonic acid (PFHxS)
	PFOS2	Perfluorooctanesulfonic acid (PFOS)
	ETFOSA	EtFOSA
	MEFOSA	MeFOSA
MLP498-01	PFTRDA	Perfluorotridecanoic acid (PFTRDA)
	PFTEDA	Perfluorotetradecanoic acid (PFTEDA)
MLP502-01	MEFOSA	MeFOSA
MLP506-01	ETFOSA	EtFOSA
	MEFOSA	MeFOSA

WorkSheet 6692764 Instrument Sequences

- | | | |
|----|--|--------------|
| 1. | 
6692764:MTRX SPK | MTRX SPK |
| 2. | 
6692764:MTRX SPK:D1 | MTRX SPK :D1 |
| 3. | 
6692764:SPIKE | SPIKE |
| 4. | 
6692764:BLANK | BLANK |
| 5. | 
6692764:MLP496-01 | 06-MW25-0420 |
| 6. | 
6692764:MLP498-01 | 06-MW30-0420 |
| 7. | 
6692764:MLP502-01 | 06-MW33-0420 |
| 8. | 
6692764:MLP506-01 | QCFB-0420 |

Worklist Report

Instrument Name: LCMS04 Worklist Path: D:\MassHunter\Worklists\PFCS\PF_C_200422_Water_DOD.w
 KI

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\PF_C\20200422\WS#6692764
 Pre-Worklist Script: ---
 Post-Worklist Script: SCP_InstrumentStandby()\{MH_Acq_Scripts.exe}
 Acquisition Clean Up Script: ---
 Overlapped Injection: No
 Clear Sample Selection After Run: Yes
 Wait Time for Ready(Min): 10
 Threshold Disk Value(GB): 10
 Comment: Column #415 MP A1: Solution #92 [FSRE19]
 MP B1: Methanol, Sigma (SHBL8027)

*And how/22
 verified by vpl
 2020/04/23*

Plate	Barcode
P1	

Worklist Table

Sample Name	Sample Position	Method	Data File	Sample Type	Level Name	Inj Vol (µl)	Comment
1	MeOH RINSE	PFAS.m	WS#6692764_01.d	Sample		As Method	-
2	STD 1	PFAS.m	WS#6692764_02.d	Calibration	STD 1	As Method	-
3	STD 2	PFAS.m	WS#6692764_03.d	Calibration	STD 2	As Method	-
4	STD 3	PFAS.m	WS#6692764_04.d	Calibration	STD 3	As Method	-
5	STD 4	PFAS.m	WS#6692764_05.d	Calibration	STD 4	As Method	-
6	STD 5	PFAS.m	WS#6692764_06.d	Calibration	STD 5	As Method	-
7	STD 6	PFAS.m	WS#6692764_07.d	Calibration	STD 6	As Method	-
8	IB	PFAS.m	WS#6692764_08.d	Sample		As Method	-
9	ICV	PFAS.m	WS#6692764_09.d	QC	ICV	As Method	-
10	ISC	PFAS.m	WS#6692764_10.d	QC	STD 1	As Method	-
11	6692764:BLANK	PFAS.m	WS#6692764_11.d	Sample		As Method	-
12	6692764:SPIKE	PFAS.m	WS#6692764_12.d	QC	ICV	As Method	-
13	6692764:ITRX SPK	PFAS.m	WS#6692764_13.d	QC	ICV	As Method	-
14	6692764:ITRX SPK:D1	PFAS.m	WS#6692764_14.d	QC	ICV	As Method	-

D:\MassHunter\Worklists\PFCS\PF_C_200422_Water_DOD.wkl

Worklist Report

	Sample Name	Sample Position	Method	Data File	Sample Type	Level Name	Inj Vol (ul)	Comment
15	IB	P1-A8	PFAS.m	WS#6692764_15.d	Sample		As Method	-
16	6692764:MLP496-01:100x	P1-B5	PFAS.m	WS#6692764_16.d	Sample		As Method	-
17	6692764:MLP496-01:10x	P1-B6	PFAS.m	WS#6692764_17.d	Sample		As Method	-
18	IB	P1-A8	PFAS.m	WS#6692764_18.d	Sample		As Method	-
19	6692764:MLP496-01	P1-B7	PFAS.m	WS#6692764_19.d	Sample		As Method	-
20	IB	P1-A8	PFAS.m	WS#6692764_20.d	Sample		As Method	-
21	IB	P1-A8	PFAS.m	WS#6692764_21.d	Sample		As Method	-
22	6692764:MLP498-01	P1-B8	PFAS.m	WS#6692764_22.d	Sample		As Method	-
23	6692764:MLP502-01	P1-B9	PFAS.m	WS#6692764_23.d	Sample		As Method	-
24	6692764:MLP506-01	P1-C1	PFAS.m	WS#6692764_24.d	Sample		As Method	-
25	CCV	P1-A5	PFAS.m	WS#6692764_25.d	ConCal	STD 4	As Method	-

FINAL INJECTION SEQUENCE

Sample						
Name	Comment	Acq. Date-Time	Data File	Acq. Method File	Pos.	
STD 1	-	2020/04/23 2:01	WS#6692764_02.d	PFAS.m	P1-A2	
STD 2	-	2020/04/23 2:08	WS#6692764_03.d	PFAS.m	P1-A3	
STD 3	-	2020/04/23 2:15	WS#6692764_04.d	PFAS.m	P1-A4	
STD 4	-	2020/04/23 2:22	WS#6692764_05.d	PFAS.m	P1-A5	
STD 5	-	2020/04/23 2:29	WS#6692764_06.d	PFAS.m	P1-A6	
STD 6	-	2020/04/23 2:36	WS#6692764_07.d	PFAS.m	P1-A7	
IB	-	2020/04/23 2:43	WS#6692764_08.d	PFAS.m	P1-A8	
ICV	-	2020/04/23 2:50	WS#6692764_09.d	PFAS.m	P1-A9	
ISC	-	2020/04/23 2:57	WS#6692764_10.d	PFAS.m	P1-A2	
6692764:BLANK	-	2020/04/23 3:04	WS#6692764_11.d	PFAS.m	P1-B1	
6692764:SPIKE	-	2020/04/23 3:11	WS#6692764_12.d	PFAS.m	P1-B2	
6692764:MTRX SPK	MLP498	2020/04/23 3:18	WS#6692764_13.d	PFAS.m	P1-B3	
6692764:MTRX SPK:D1	MLP498	2020/04/23 3:24	WS#6692764_14.d	PFAS.m	P1-B4	
IB	-	2020/04/23 3:31	WS#6692764_15.d	PFAS.m	P1-A8	
6692764:MLP496-01:100x	NOT USED	2020/04/23 3:38	WS#6692764_16.d	PFAS.m	P1-B5	
6692764:MLP496-01:10x	Reported for PFOA, PFHxA, PFHxS & PFOS only.	2020/04/23 3:45	WS#6692764_17.d	PFAS.m	P1-B6	
IB	-	2020/04/23 3:52	WS#6692764_18.d	PFAS.m	P1-A8	
6692764:MLP496-01	Reported for all except PFOA, PFHxA, PFHxS & PFOS.	2020/04/23 3:59	WS#6692764_19.d	PFAS.m	P1-B7	
IB	-	2020/04/23 4:06	WS#6692764_20.d	PFAS.m	P1-A8	
IB	-	2020/04/23 4:13	WS#6692764_21.d	PFAS.m	P1-A8	
6692764:MLP498-01	Reported for PFTrDa & PFTeDA only.	2020/04/23 4:20	WS#6692764_22.d	PFAS.m	P1-B8	
6692764:MLP502-01	Reported for EtFOSA only.	2020/04/23 4:27	WS#6692764_23.d	PFAS.m	P1-B9	
6692764:MLP506-01	Reported for EtFOSA & MeFOSA only.	2020/04/23 4:34	WS#6692764_24.d	PFAS.m	P1-C1	
CCV	-	2020/04/23 4:41	WS#6692764_25.d	PFAS.m	P1-A5	

Certificate of Analysis

Supelclean™ ENVI-Carb™

Catalog #: 57210-U

Supelco Lot #: 122394

Test Date: 06/11/2019

<u>Test</u>	<u>Specification</u>	<u>Results</u>
Atrazine Recovery	88 - 104%	97.2%
Flow Rate	>10 mL/min	12.3 mL/min
Fines Test	Proprietary	PASS

Received on
2020-08-02
TK9
1 container
Room temperature

Lot Approved: _____



Quality Manager

T500096(4)

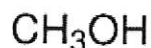
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The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada.



Certificate of Analysis

Product Name:
Methanol - for HPLC, ≥99.9%



Product Number: 34860
 Batch Number: SHBL3027
 Brand: SIGALD
 CAS Number: 67-56-1
 MDL Number: MFCD00004595
 Formula: CH4O
 Formula Weight: 32.04 g/mol
 Quality Release Date: 12 DEC 2019
 Expiration Date: NOV 2024

USZ 2020/03/19
 12 X 4L
Shelf

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	0.06
UV Absorbance 220nm	< 0.30	0.14
UV Absorbance 210nm	< 0.60	0.31
UV Absorbance 205nm	< 1.00	0.61
Fluorescence 254nm	< 1.0 ppt	0.1 ppb
Fluorescence 365nm	< 1.0 ppb	0.4 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 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.

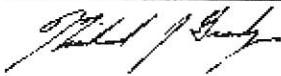
2020/04/13 (4x4L) : HPLC

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com

Certificate of Analysis

Product Number: 34860
Batch Number: SHBL8027



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.

REAGENT PREPARATION FORM

Reagent # 15 Replaced Reagent # ^{PRLRE 131 -} 580 Analyst: GSZ
 Reagent Name: 0.3% NH₄OH in MeOH Preparation date: 2020/03/17 Expiry date: daily
 Final Volume: 250 ml Oven No.: - Temp.: - Final Conc.: 0.3% v/v
 Balance ID: - Pipette/Syringe/Cylinder ID: K26250F Storage: -

CHEMICAL NAME	VOLUME/WEIGHT	DATE RECEIVED	DATE OPENED	SUPPLIER	LOT NUMBER	EXPIRY DATE
NH ₄ OH	0.75 ml	2019/12/23	2020/01/14	Fisher	192764	2022/08/31
MeOH	249.25 ml	2020/03/11	2020/03/17	Sigma	SHBL5863	2024/08/31
652, 2020/03/17						
 						
 						

NOTES: 250ml class A Vol. cylinder (1755)

Reagent # 16 Replaced Reagent # 06 Analyst: RAK
 Reagent Name: 5% NH₄OH Preparation date: 2020-03-18 Expiry date: Daily
 Final Volume: 100ml Oven No.: - Temp.: - Final Conc.: 5% (v/v)
 Balance ID: - Pipette/Syringe/Cylinder ID: 1755 Storage: shelf
6361642

CHEMICAL NAME	VOLUME/WEIGHT	DATE RECEIVED	DATE OPENED	SUPPLIER	LOT NUMBER	EXPIRY DATE
NH ₄ OH	5ml	2019-12-23	2020-01-14	Fisher	192764	2022-08-31
DI H ₂ O	95ml	← Am house →				
RAK 2020-03-16						
 						

NOTES:

Certificate of Analysis

1 Reagent Lane
 Fair Lawn, NJ 07410
 201.796.7100 tel
 201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System
 Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

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. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	A669	Quality Test / Release Date	09/13/2019
Lot Number	192764	Expiration Date	Aug/2022
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.		
Comment	This product is free from genetically modified substances and is gluten free.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Colorless and free from suspended matter
ALUMINUM	ppm	<= 0.3	0.002
ARSENIC AND ANTIMONY	ppm	<= 0.05	<0.05
ASSAY	w/w %	Inclusive Between 28.0 - 30.0	29.89
BORON (B)	ppm	<= 0.1	0.001
CALCIUM (Ca)	ppm	<= 0.3	0.032
CARBON DIOXIDE	%	<= 0.002	<0.002
CHLORIDE	ppm	<= 0.5	<0.5
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
IRON (Fe)	ppm	<= 0.1	0.002
LEAD (Pb)	ppm	<= 0.2	0.001
MAGNESIUM (Mg)	ppm	<= 0.3	0.002
MANGANESE (Mn)	ppm	<= 0.2	0.001
NICKEL (Ni)	ppm	<= 0.1	0.001
NITRATE (NO3)	ppm	<= 2	<2
PHOSPHATE (PO4)	ppm	<= 0.4	<0.4
POTASSIUM (K)	ppm	<= 0.3	0.006
RESIDUE AFTER IGNITION	ppm	<= 3	<3
SODIUM (Na)	ppm	>= 0	0.090

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.

If there are any questions with this certificate, please call at (800) 227-6701.

*Based on suggested storage condition.

Certificate of Analysis

1 Reagent Lane
 Fair Lawn, NJ 07410
 201.796.7100 tel
 201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System
 Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

SUBSTANCES REDUCING KMNO4	PASS/FAIL	= PASS TEST	PASS TEST
SULFATE (SO4)	ppm	<= 2	<2
TIN (Sn)	ppm	<= 0.3	0.001
TITANIUM (Ti)	ppm	<= 0.3	0.001
ZINC (Zn)	ppm	<= 0.3	0.003



Peter Yang - Quality Control Manager - Bridgewater

Date received: 2019/09/27 1X500 ml HPLC

Date received: 2019/12/23 1X500 ml HPLC

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.

If there are any questions with this certificate, please call at (800) 227-6701.

*Based on suggested storage condition.

3050 Spruce Street, Saint Louis, MO 63103, USA
 Website: www.sigmaaldrich.com
 Email USA: techserv@sigma.com
 Outside USA: eurtechserv@sigma.com

Certificate of Analysis

HPLC
 Rec'd 2020/02/07 JLG
 Qty 4 X 2L

Product Name:
 Methanol -for HPLC, ≥99.9%



Product Number: 34866
 Batch Number: SHBL5863
 Brand: SIGALD
 CAS Number: 67-56-1
 MDL Number: MFCD0004595
 Formula: CH4O
 Formula Weight: 32.04 g/mol
 Quality Release Date: 25 SEP 2019
 Expiration Date: AUG 2024

Test	Specification	Result
Appearance (Color)	Colorless	Colorless
Appearance (Form)	Liquid	Liquid
UV Absorbance 400nm	< 0.01	< 0.01
UV Absorbance 289nm	< 0.01	< 0.01
UV Absorbance 260nm	< 0.04	< 0.01
UV Absorbance 240nm	< 0.10	0.02
UV Absorbance 235nm	< 0.10	0.04
UV Absorbance 230nm	< 0.20	0.06
UV Absorbance 220nm	< 0.30	0.14
UV Absorbance 210nm	< 0.60	0.32
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 %	99.98 %
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.

SIGMA-ALDRICH

sigmaaldrich.com

3660 Spruce Street, Saint Louis, MO 63103, USA

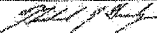
Website: www.sigmaaldrich.com

Email USA: techserv@sigma.com

Outside USA: outtechserv@sigma.com

Certificate of Analysis

Product Number: 34966
Batch Number: SHBL5863


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 conform 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

Page 2 of 2

Received 2020/02/07 (4x4L) :JLE-scanned by MGH
2020/02/24 (8x4L) :JLE
2020/02/29 (4x4L) :JLE
2020/03/02 (4x4L) :JLE
2020/03/09 (4x4L) :JLE
2020/03/11 (4x4L) :JLE
2020/03/19 (4x4L) :JLE

REAGENT PREPARATION FORM

Reagent # 57 Replaced Reagent # 27 Analyst: JD3
 Reagent Name: 0.3% NH₄OH in MeOH Preparation date: 2020/03/25 Expiry date: Daily
 Final Volume: 100 mL Oven No.: - Temp.: - Final Conc.: 0.3% V/V
 Balance ID: - Pipette/Syringe/Cylinder ID: K26250F Storage: -
1775

CHEMICAL NAME	VOLUME/ WEIGHT	DATE RECEIVED	DATE OPENED	SUPPLIER	LOT NUMBER	EXPIRY DATE
NH ₄ OH	0.3 mL	2019/12/23	2020/01/24	Fisher	192764	2022/08/31 2020/08/31
MeOH	2020 99.7 703 mL	2020/03/11	2020/03/25	Sigma	SHBL5863	2024/08/31 2022/04/08
JD3 2020/03/25						

NOTES:

Reagent # 58 Replaced Reagent # 48 Analyst: EG1
 Reagent Name: FMOC Preparation date: 2020/03/26 Expiry date: Daily
 Final Volume: 50 mL Oven No.: - Temp.: - Final Conc.: -
 Balance ID: FC-1 Pipette/Syringe/Cylinder ID: 1975 Storage: -

CHEMICAL NAME	VOLUME/ WEIGHT	DATE RECEIVED	DATE OPENED	SUPPLIER	LOT NUMBER	EXPIRY DATE
FMOC	0.072g	2019/11/29	2020/01/03	Sigma	WXBC6764V	2024/03/28
ACN	50 mL	2019/12/21	2020/03/24	Fisher	196045	2024/11/31
2020/03/26 EG1						

NOTES:

PCB
2019/12/11
5x1
6X

Certificate of Analysis

1 Reagent Lane
 Fair Lawn, NJ 07410
 201.796.7100 tel
 201.796.1329 fax

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 Standard ISO9001:2015 by SAI Global Certificate Number CERT - 0120682

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Catalog Number	A688	Quality Test / Release Date	08/13/2019
Lot Number	192764	Expiration Date	Aug/2022
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.		
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	0.002
ARSENIC AND ANTIMONY	ppm	<= 0.05	<0.05
ASSAY	wt/w %	Inclusive Between 28.0 - 30.0	29.89
BORON (B)	ppm	<= 0.1	0.001
CALCIUM (Ca)	ppm	<= 0.3	0.032
CARBON DIOXIDE	%	<= 0.002	<0.002
CHLORIDE	ppm	<= 0.5	<0.5
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
IRON (Fe)	ppm	<= 0.1	0.002
LEAD (Pb)	ppm	<= 0.2	0.001
MAGNESIUM (Mg)	ppm	<= 0.3	0.002
MANGANESE (Mn)	ppm	<= 0.2	0.001
NICKEL (Ni)	ppm	<= 0.1	0.001
NITRATE (NO3)	ppm	<= 2	<2
PHOSPHATE (PO4)	ppm	<= 0.4	<0.4
POTASSIUM (K)	ppm	<= 0.3	0.006
RESIDUE AFTER IGNITION	ppm	<= 3	<3
SODIUM (Na)	ppm	>= 0	0.090

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
 If there are any questions with this certificate, please call at (800) 227-8701.
 *Based on suggested storage condition.

Date Received: 2019-12-23 6X
 Date Received: 2019-09-27 1X
 Nusrat Naz received 1 bottle on 2020/02/07

Kelly Huckabone
Kelly Huckabone
 Regulatory Affairs

Certificate of Analysis

Product Name:
Methanol - for HPLC, ≥99.9%

Product Number: 34860
 Batch Number: SHBL5863
 Brand: SIGALD
 CAS Number: 67-56-1
 MDL Number: MFCD00004695
 Formula: CH4O
 Formula Weight: 32.04 g/mol
 Quality Release Date: 25 SEP 2019
 Expiration Date: AUG 2024



HPLC
 Rec'd 2020/02/07
 Qty 4 X 4L

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	0.04
UV Absorbance 230nm	0.20	0.06
UV Absorbance 220nm	0.30	0.14
UV Absorbance 210nm	0.60	0.32
UV Absorbance 205nm	1.00	0.66
Fluorescence 254nm	1.0 ppb	0.1 ppb
Fluorescence 365nm	1.0 ppb	0.1 ppb
Purity (GC)	99.90 %	99.98 %
Color Test	10 APHA	< 5 APHA
Water (by Karl Fischer)	0.03 %	< 0.01 %
Residue on Evaporation	0.0005 %	0.0001 %
Expiration Date Period		

Received 2020/02/07 (4x4L) :JLE-scanned by MGH
2020/02/24 (8x4L) :JLE
2020/02/29 (4x4L) :JLE
2020/03/02 (4x4L) :JLE
2020/03/09 (4x4L) :JLE
2020/03/11 (4x4L) :JLE

REAGENT PREPARATION FORM

Reagent # 59 Replaced Reagent # 57 Analyst: JDB
 Reagent Name: 0.3% NH₄OH in MeOH Preparation date: 2020/03/26 Expiry date: Daily
 Final Volume: 100ml Oven No.: - Temp.: - Final Conc.: 0.3% V/V
 Balance ID: - Pipette/Syringe/Cylinder ID: 1755 Storage: -
K26250F

CHEMICAL NAME	VOLUME/WEIGHT	DATE RECEIVED	DATE OPENED	SUPPLIER	LOT NUMBER	EXPIRY DATE
NH ₄ OH	300µl	2019-12-23	2020-01-24	Fisher	192764	2022-08-31
MeOH	TK4 99.7ml	2020-03-11	2020-03-25	Sigma	SHBLS863	2024-08-31
JDB 2020/03/26						

NOTES:

Reagent # 60 Replaced Reagent # 44 Analyst: EG1
 Reagent Name: DNPH Preparation date: 2020/03/26 Expiry date: Daily
 Final Volume: 10-1 Oven No.: - Temp.: - Final Conc.: -
 Balance ID: FC-1 Pipette/Syringe/Cylinder ID: G36164E Storage: D-18K

CHEMICAL NAME	VOLUME/WEIGHT	DATE RECEIVED	DATE OPENED	SUPPLIER	LOT NUMBER	EXPIRY DATE
DNPH	0.05 g	2016/01/15	2016/05/15	Spectra	ZEK0212	2020/08/13
ASN	10-1	2020/11/21	2020/03/24	Fisher	196025	2024/10/13
EG1 2020/03/26						

NOTES:

PLB
2019/12/11
501
6X

Certificate of Analysis

1 Reagent Laine
 Fair Lawn, NJ 07410
 201.796.7100 tel
 201.796.1329 fax

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 Standard ISO9001:2015 by SAI Global Certificate Number CERT - 0120632

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Catalog Number	A669	Quality Test / Release Date	09/13/2019
Lot Number	192764	Expiration Date	Aug/2022
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.		
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	0.002
ARSENIC AND ANTIMONY	ppm	<= 0.05	<0.05
ASSAY	w/w %	Inclusive Between 28.0 - 30.0	29.89
BORON (B)	ppm	<= 0.1	0.001
CALCIUM (Ca)	ppm	<= 0.3	0.032
CARBON DIOXIDE	%	<= 0.002	<0.002
CHLORIDE	ppm	<= 0.5	<0.5
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
IRON (Fe)	ppm	<= 0.1	0.002
LEAD (Pb)	ppm	<= 0.2	0.001
MAGNESIUM (Mg)	ppm	<= 0.3	0.002
MANGANESE (Mn)	ppm	<= 0.2	0.001
NICKEL (Ni)	ppm	<= 0.1	0.001
NITRATE (NO3)	ppm	<= 2	<2
PHOSPHATE (PO4)	ppm	<= 0.4	<0.4
POTASSIUM (K)	ppm	<= 0.3	0.006
RESIDUE AFTER IGNITION	ppm	<= 3	<3
SODIUM (Na)	ppm	>= 0	0.030

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
 If there are any questions with this certificate, please call at (800) 227-8701.
 *Based on suggested storage condition.

Date Received: 2019-12-23 6X
 Date Received: 2019-09-27 1X
 Nusrat Naz received 1 bottle on 2020/02/07

Kelly Huckabone
Kelly Huckabone
 Regulatory Affairs

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: SHBL5863
 Brand: SIGALD
 CAS Number: 67-56-1
 MDL Number: MFCD00004696
 Formula: CH4O
 Formula Weight: 32.04 g/mol
 Quality Release Date: 25 SEP 2019
 Expiration Date: AUG 2024



HPLC
 Rec'd 2020/02/07
 Qty 4 x 4L

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	0.04
UV Absorbance 230nm	< 0.20	0.06
UV Absorbance 220nm	< 0.30	0.14
UV Absorbance 210nm	< 0.60	0.32
UV Absorbance 205nm	< 1.00	0.66
Fluorescence 254nm	< 1.0 ppb	0.1 ppb
Fluorescence 365nm	< 1.0 ppb	0.1 ppb
Purity (GC)	≥ 99.90 %	99.98 %
Color Test	< 10 APHA	< 5 APHA
Water (by Karl Fischer)	< 0.03 %	< 0.01 %
Residue on Evaporation	< 0.0005 %	0.0001 %
Expiration Date Period		

Received 2020/02/07 (4x4L) :JLE-scanned by MGH

2020/02/24 (8x4L) :JLE

2020/02/29 (4x4L) :JLE

2020/03/02 (4x4L) :JLE

2020/03/09 (4x4L) :JLE

2020/03/11 (4x4L) :JLE

REAGENT PREPARATION FORM

Reagent # 139 Replaced Reagent # 100 Analyst: TK4
 Reagent Name: 60:40 (LCMS:MeOH) Preparation date: 2020-04-16 Expiry date: 2020-06-16
 Final Volume: 1L Oven No.: - Temp.: - Final Conc.: 60:40 (V/V)
 Balance ID: - Pipette/Syringe/Cylinder ID: 14439 Storage: Shelf

CHEMICAL NAME	VOLUME/ WEIGHT	DATE RECEIVED	DATE OPENED	SUPPLIER	LOT NUMBER	EXPIRY DATE
LCMS Water	600ml	2020-03-19	2020-04-15	Omni	60003	2021-01-31
Methanol	400ml	2020-03-19	2020-04-16	Sigma	SHBL8027	2024-11-30
TK4 2020-04-16						

NOTES:

Reagent # 140 Replaced Reagent # 133 Analyst: TK4
 Reagent Name: 0.5% NH₄OH in 70:30 (MeOH:LCMS) Preparation date: 2020-04-16 Expiry date: Daily
 Final Volume: 100ml Oven No.: - Temp.: - Final Conc.: 0.5% (V/V)
 Balance ID: - Pipette/Syringe/Cylinder ID: Q28793G Storage: Shelf
14270

CHEMICAL NAME	VOLUME/ WEIGHT	DATE RECEIVED	DATE OPENED	SUPPLIER	LOT NUMBER	EXPIRY DATE
NH ₄ OH	0.5 ml	2019-12-23	2020-01-14	Fisher	192764	2022-08-31
70:30 (MeOH:LCMSH ₂ O)	99.5 ml	←	PRLRE-137-132	→		
TK4 2020-04-16						

NOTES:

Certificate of Analysis



Date of Release: 1/3/2020
 Name: Water
 OmniSolv® For LC/MS
 Item No: WX0001 all size codes
 Lot / Batch No: 60003
 Country of Origin: USA

652 2020/03/19
 12 X 4L
 Sheff

Characteristic	Requirement		Results	Units
	Min.	Max.		
#Expiration date			31-JAN-2021	
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	< 0.05	mAU
Gradient at 254 nm		0.5	0.06	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	0.003	AU
UV Abs. at 210 nm		0.01	0.002	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

Heather Sinn,

Quality Control Manager

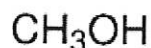
This document has been produced electronically and is valid without a signature.

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.

Certificate of Analysis

Product Name:
Methanol - for HPLC, ≥99.9%



Product Number: 34860
 Batch Number: SHBL3027
 Brand: SIGALD
 CAS Number: 67-56-1
 MDL Number: MFCD00004595
 Formula: CH4O
 Formula Weight: 32.04 g/mol
 Quality Release Date: 12 DEC 2019
 Expiration Date: NOV 2024

USZ 2020/03/19
12 X 4L
Shelf

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	0.06
UV Absorbance 220nm	< 0.30	0.14
UV Absorbance 210nm	< 0.60	0.31
UV Absorbance 205nm	< 1.00	0.61
Fluorescence 254nm	< 1.0 ppt	0.1 ppb
Fluorescence 365nm	< 1.0 ppb	0.4 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 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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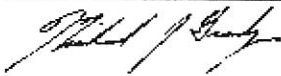
Website: www.sigmaaldrich.com

Email USA: techserv@sial.com

Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Number: 34860
Batch Number: SHBL8027



Michael Grady, Manager
Quality Control
Sheboygan Falls, WI US

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REAGENT PREPARATION FORM

Reagent # 147 Replaced Reagent # 125 Analyst: TK4
 Reagent Name: 2% Formic Acid Preparation date: 2020-04-20 Expiry date: 2020-06-20
 Final Volume: 1L Oven No.: - Temp.: - Final Conc.: 2% (V/V)
 Balance ID: - Pipette/Syringe/Cylinder ID: G361641 Storage: Shelf
14439

CHEMICAL NAME	VOLUME/WEIGHT	DATE RECEIVED	DATE OPENED	SUPPLIER	LOT NUMBER	EXPIRY DATE
LCMS H ₂ O	980ml	2020-03-11	2020-04-20	Omni	59324	2020-11-30
Formic Acid	20 ml	2020-01-31	2020-04-20	Sigma Fisher TK4 2020-04-20	SHBLS 365	2020-09-30
TK4 2020-04-20						

NOTES:

Reagent # 148 Replaced Reagent # 129 Analyst: TK4
 Reagent Name: Acid water (pH 4.5) Preparation date: 2020-04-20 Expiry date: Daily
 Final Volume: 1L Oven No.: - Temp.: - Final Conc.: -
 Balance ID: - Pipette/Syringe/Cylinder ID: Q2879396 Storage: Shelf

CHEMICAL NAME	VOLUME/WEIGHT	DATE RECEIVED	DATE OPENED	SUPPLIER	LOT NUMBER	EXPIRY DATE
LCMS H ₂ O	1L	2020-03-11	2020-04-20	Omni	59324	2020-11-30
2% Formic Acid	800µl	←	PRLRE-137	→	147	→
TK4 2020-04-20						

NOTES:

Certificate of Analysis



HPLC
2020/02/04
303
4 Bottles

Date of Release: 11/16/2019
Name: Water
OmniSolve®, For LC/MS
Item No: WX0001 all size codes
Lot / Batch No: 59324
Country of Origin: USA

Characteristic	Requirement		Results	Units
	Min.	Max.		
Expiration date			30-NOV-2020	
Evaporation residue		1	<0.5	ppm
Filtered through 0.2 µm filter			Passes last	
Fluorescence as quinine at 254 nm		1	< 1	ppb
Fluorescence as quinine at 365 nm		1	< 1	ppb
Gradient at 210 nm		2	0.12	mAU
Gradient at 254 nm		0.5	0.08	mAU
LC/MS Purity (p-nitrophenol)		50	<50	ppb
LC/MS Purity (reserpine)		50	<50	ppb
Metals, suitable for LC/MS			Conforms	
UV Abs. at 200 nm		0.01	< 0.001	AU
UV Abs. at 210 nm		0.01	< 0.001	AU
UV Abs. at 220 nm		0.01	< 0.001	AU
UV Abs. at 230 nm		0.01	< 0.001	AU
UV Abs. at 240 nm		0.01	< 0.001	AU
UV Abs. at 250 nm		0.005	< 0.001	AU
UV Abs. at 270 nm		0.005	< 0.001	AU
UV Abs. at 400-280 nm		0.005	0.001	AU
UV Cut-off		190	<190	nm

Heather Sinn,

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.

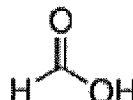
Date Received: 2019/02/24- P4- 4x4L
Date Received: 2020/02/24- P4- 4x4L

Date Received: 2020/02/29- P4- 4x4L
Date Received: 2020/03/03- P4- 4x4L
Date Received: 2020/03/05- P4- 4x4L
Date Received: 2020/03/09- P4- 4x4L
Date Received: 2020/03/11- P4- 4x4L
Date Received: 2020/03/11- P3- 4x4L


Certificate of Analysis

Product Name:
Formic acid - reagent grade, ≥95%

Product Number: F0507
 Batch Number: SHBL5365
 Brand: SIGALD
 CAS Number: 64-18-6
 MDL Number: MFCD00009297
 Formula: CH2O2
 Formula Weight: 46.03 g/mol
 Quality Release Date: 07 OCT 2019
 Expiration Date: SEP 2020



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 - 2.9 %	2.2 %
Titration with NaOH	≥ 95.0 %	97.3 %
Expiration Date Period		
1 Year		



Michael Grady, Manager
 Quality Control
 Sheboygan Falls, WI US

662 2020/01/31
 1 X 500ml

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.

REAGENT PREPARATION FORM

Reagent # 149 Replaced Reagent # 144 Analyst: GSZ
 Reagent Name: 0.5% NH₄OH in 70:30 MeOH/H₂O Preparation date: 2020/04/20 Expiry date: Daily
 Final Volume: 200ml Oven No.: - Temp.: - Final Conc.: 0.5% v/v
 Balance ID: - Pipette/Syringe/Cylinder ID: K26250F/1755 Storage: -

CHEMICAL NAME	VOLUME/WEIGHT	DATE RECEIVED	DATE OPENED	SUPPLIER	LOT NUMBER	EXPIRY DATE
NH ₄ OH	1 ml	2019/12/23	2020/01/14	Fisher	192764	2022/08/31
70:30 MeOH: H ₂ O	199 ml			PRURE	137-132	
GSZ 2020/04/20						
 						
 						

NOTES:

Reagent # 150 Replaced Reagent # 146 Analyst: SAD
 Reagent Name: 0.2% NH₄OH in MeOH Preparation date: 2020/4/21 Expiry date: Daily
 Final Volume: 500ml Oven No.: - Temp.: - Final Conc.: 0.2% v/v
 Balance ID: - Pipette/Syringe/Cylinder ID: 14439 Storage: shelf

CHEMICAL NAME	VOLUME/WEIGHT	DATE RECEIVED	DATE OPENED	SUPPLIER	LOT NUMBER	EXPIRY DATE
NH ₄ OH	1 ml	2019-12-23	2020-1-14	Fisher	192764	2022-8-31
MeOH	999 ml	2020-4-13	2020-4-20	Sigma	5748L 6027	2024-11-30
SAD 2020/4/21						
 						

NOTES:

Certificate of Analysis

1 Reagent Lane
 Fair Lawn, NJ 07410
 201.796.7100 tel
 201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System
 Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

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. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	A669	Quality Test / Release Date	09/13/2019
Lot Number	192764	Expiration Date	Aug/2022
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.		
Comment	This product is free from genetically modified substances and is gluten free.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Colorless and free from suspended matter
ALUMINUM	ppm	<= 0.3	0.002
ARSENIC AND ANTIMONY	ppm	<= 0.05	<0.05
ASSAY	w/w %	Inclusive Between 28.0 - 30.0	29.89
BORON (B)	ppm	<= 0.1	0.001
CALCIUM (Ca)	ppm	<= 0.3	0.032
CARBON DIOXIDE	%	<= 0.002	<0.002
CHLORIDE	ppm	<= 0.5	<0.5
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
IRON (Fe)	ppm	<= 0.1	0.002
LEAD (Pb)	ppm	<= 0.2	0.001
MAGNESIUM (Mg)	ppm	<= 0.3	0.002
MANGANESE (Mn)	ppm	<= 0.2	0.001
NICKEL (Ni)	ppm	<= 0.1	0.001
NITRATE (NO3)	ppm	<= 2	<2
PHOSPHATE (PO4)	ppm	<= 0.4	<0.4
POTASSIUM (K)	ppm	<= 0.3	0.006
RESIDUE AFTER IGNITION	ppm	<= 3	<3
SODIUM (Na)	ppm	>= 0	0.090

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
 If there are any questions with this certificate, please call at (800) 227-6701.

*Based on suggested storage condition.

Certificate of Analysis

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 201.796.1329 fax

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SUBSTANCES REDUCING KMNO4	PASS/FAIL	= PASS TEST	PASS TEST
SULFATE (SO4)	ppm	<= 2	<2
TIN (Sn)	ppm	<= 0.3	0.001
TITANIUM (Ti)	ppm	<= 0.3	0.001
ZINC (Zn)	ppm	<= 0.3	0.003



Peter Yang - Quality Control Manager - Bridgewater

Date received: 2019/09/27 1X500 ml HPLC

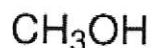
Date received: 2019/12/23 1X500 ml HPLC

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
 If there are any questions with this certificate, please call at (800) 227-6701.

*Based on suggested storage condition.

Certificate of Analysis

Product Name:
Methanol - for HPLC, ≥99.9%



Product Number: 34860
 Batch Number: SHBL3027
 Brand: SIGALD
 CAS Number: 67-56-1
 MDL Number: MFCD00004595
 Formula: CH4O
 Formula Weight: 32.04 g/mol
 Quality Release Date: 12 DEC 2019
 Expiration Date: NOV 2024

USZ 2020/03/19
12 X 4L
Shelf

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	0.06
UV Absorbance 220nm	< 0.30	0.14
UV Absorbance 210nm	< 0.60	0.31
UV Absorbance 205nm	< 1.00	0.61
Fluorescence 254nm	< 1.0 ppt	0.1 ppb
Fluorescence 365nm	< 1.0 ppb	0.4 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 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.

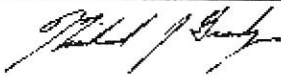
2020/04/13 (4x4L) : HPLC

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com

Certificate of Analysis

Product Number: 34860
Batch Number: SHBL8027



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.

REAGENT PREPARATION FORM

Reagent # 151 Replaced Reagent # 121 Analyst: GSZ
 Reagent Name: Fmoc Preparation date: 2020/04/21 Expiry date: Daily
 Final Volume: 50ml Oven No.: - Temp.: - Final Conc.: See Below
 Balance ID: Fc-1 Pipette/Syringe/Cylinder ID: G36164I Storage: -

CHEMICAL NAME	VOLUME/WEIGHT	DATE RECEIVED	DATE OPENED	SUPPLIER	LOT NUMBER	EXPIRY DATE
Fmoc	0.0750 g	2019/11/29	2020/01/03	Sigma	WXBC6764V	2024/03/28
ACN	50ml	2020/03/19	2020/04/04	Fisher	196045	2024/10/31
GSZ 2020/04/21						
 						
 						

NOTES:

Reagent # 152 Replaced Reagent # 150 Analyst: TK4
 Reagent Name: 0.2% NH₄OH in MeOH Preparation date: 2020-04-22 Expiry date: Daily
 Final Volume: 1L Oven No.: - Temp.: - Final Conc.: 0.2% (v/v)
 Balance ID: - Pipette/Syringe/Cylinder ID: G36164I Storage: shelf
14 439

CHEMICAL NAME	VOLUME/WEIGHT	DATE RECEIVED	DATE OPENED	SUPPLIER	LOT NUMBER	EXPIRY DATE
NH ₄ OH	2.0 ml	2019-12-23 202TK4	2020-01-14	Fisher	192764	2022-08-31
MeOH	998ml	2020-03-19	2020-04-22	Sigma	SHBL8027	2024-11-30
TK4 2020-04-22						
 						
 						

NOTES:

Certificate of Analysis

1 Reagent Lane
 Fair Lawn, NJ 07410
 201.796.7100 tel
 201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System
 Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

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. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	A669	Quality Test / Release Date	09/13/2019
Lot Number	192764	Expiration Date	Aug/2022
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.		
Comment	This product is free from genetically modified substances and is gluten free.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Colorless and free from suspended matter
ALUMINUM	ppm	<= 0.3	0.002
ARSENIC AND ANTIMONY	ppm	<= 0.05	<0.05
ASSAY	w/w %	Inclusive Between 28.0 - 30.0	29.89
BORON (B)	ppm	<= 0.1	0.001
CALCIUM (Ca)	ppm	<= 0.3	0.032
CARBON DIOXIDE	%	<= 0.002	<0.002
CHLORIDE	ppm	<= 0.5	<0.5
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
IRON (Fe)	ppm	<= 0.1	0.002
LEAD (Pb)	ppm	<= 0.2	0.001
MAGNESIUM (Mg)	ppm	<= 0.3	0.002
MANGANESE (Mn)	ppm	<= 0.2	0.001
NICKEL (Ni)	ppm	<= 0.1	0.001
NITRATE (NO3)	ppm	<= 2	<2
PHOSPHATE (PO4)	ppm	<= 0.4	<0.4
POTASSIUM (K)	ppm	<= 0.3	0.006
RESIDUE AFTER IGNITION	ppm	<= 3	<3
SODIUM (Na)	ppm	>= 0	0.090

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
 If there are any questions with this certificate, please call at (800) 227-6701.

*Based on suggested storage condition.

Certificate of Analysis

1 Reagent Lane
 Fair Lawn, NJ 07410
 201.796.7100 tel
 201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System
 Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

SUBSTANCES REDUCING KMNO4	PASS/FAIL	= PASS TEST	PASS TEST
SULFATE (SO4)	ppm	<= 2	<2
TIN (Sn)	ppm	<= 0.3	0.001
TITANIUM (Ti)	ppm	<= 0.3	0.001
ZINC (Zn)	ppm	<= 0.3	0.003



Peter Yang - Quality Control Manager - Bridgewater

Date received: 2019/09/27 1X500 ml HPLC

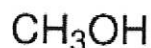
Date received: 2019/12/23 1X500 ml HPLC

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
 If there are any questions with this certificate, please call at (800) 227-6701.

*Based on suggested storage condition.

Certificate of Analysis

Product Name:
Methanol - for HPLC, ≥99.9%



Product Number: 34860
 Batch Number: SHBL3027
 Brand: SIGALD
 CAS Number: 67-56-1
 MDL Number: MFCD00004595
 Formula: CH4O
 Formula Weight: 32.04 g/mol
 Quality Release Date: 12 DEC 2019
 Expiration Date: NOV 2024

USZ 2020/03/19
12 X 4L
Shelf

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	0.06
UV Absorbance 220nm	< 0.30	0.14
UV Absorbance 210nm	< 0.60	0.31
UV Absorbance 205nm	< 1.00	0.61
Fluorescence 254nm	< 1.0 ppt	0.1 ppb
Fluorescence 365nm	< 1.0 ppb	0.4 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 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.

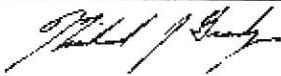
2020/04/13 (4x4L) : HPLC

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com

Certificate of Analysis

Product Number: 34860
Batch Number: SHBL8027



Michael Grady, Manager
Quality Control
Sheboygan Falls, WI US

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REAGENT PREPARATION FORM

SOLUTION # 91 REAGENT NAME: 95/5 ACN / 0.1% Formic Acid
 ANALYST: XIN DATE PREPARED: 2020/04/01 EXPIRY DATE: 2020/04/01
06 XIN 2020/04/01
 STORAGE: RT BALANCE ID: - PIPET/SYRINGE ID: K19865F

CHEMICAL NAME	VOLUME/WEIGHT	DATE RECEIVED	DATE OPENED	SUPPLIER	LOT NUMBER	EXPIRY DATE
ACN	950ml	2020/03/14	2020/03/24	Fisher	196045	2024/10/31
Formic Acid	50 µl	2020/03/31	2020/04/01	Sigma	SHBL7977	2020/12/31
RODI H ₂ O	50ml	-	-	In house	-	-
XIN 2020/04/01						

NOTES:

SOLUTION # 92 REAGENT NAME: 20mM Ammonium Acetate
 ANALYST: YPL DATE PREPARED: 2020/04/03 EXPIRY DATE: 2020/06/03
 STORAGE: R.T. BALANCE ID: 28650560 (FC1) PIPET/SYRINGE ID: N/A

CHEMICAL NAME	VOLUME/WEIGHT	DATE RECEIVED	DATE OPENED	SUPPLIER	LOT NUMBER	EXPIRY DATE
Ammonium Acetate	6.1644g	2019/10/17	2019/11/07	Sigma-Aldrich	BC6Z5836	2020/10/31
LIMS Water	4L	2020/03/27	2020/04/03	Omnisolv	60064	2021/03/31
YPL 2020/04/03						

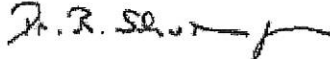
NOTES:

Certificate of Analysis

Product Name: AMMONIUM ACETATE
reagent grade, >= 99.8 %
Product Number: A7262
Batch Number: BCBZ5836
Brand: Sigma-Aldrich
CAS Number: 631-81-8
Formula: CH₃CO₂NH₄
Formula Weight: 77.08
Storage Temperature: 2-8 C
Quality Release Date: 08 NOV 2018
Recommended Retest Date: OCT 2020

*Date received
2019/10/17
L2
1X500gr.*

TEST	SPECIFICATION	RESULT
APPEARANCE (COLOR)	WHITE	WHITE
APPEARANCE (FORM)	MOIST CRYSTALS	MOIST CRYSTALS
TITRATION	≥ 99.8 %	99.8 %
TITRATION (METHOD)	TITRATION WITH NaOH	TITRATION WITH NaOH
SOLUBILITY (COLOR)	COLORLESS	COLORLESS
SOLUBILITY (TURBIDITY)	CLEAR	CLEAR
SOLUBILITY (METHOD)	1 G/ML H ₂ O	1 G/ML H ₂ O



Dr. Reinhold Schweizer
Catalytic Assurance
Buchs, Switzerland

Certificate of Analysis



Date of Release: 3/2/2020
 Name: Water
 OmniSolv®, For LC/MS
 Item No: WX0001 all size codes
 Lot / Batch No: 60064
 Country of Origin: USA

Received on:
 2020-03-27
 TK4
 4LX Bottles received.

Characteristic	Requirement		Results	Units
	Min.	Max.		
#Expiration date			31-MAR-2021	
Evaporation residue		1	< 0.5	ppm
Filtered through 0.2 µm filter			Passes test	
Fluorescence as quinine at 254 nm		1	< 0.1	ppb
Fluorescence as quinine at 365 nm		1	0.2	ppb
Gradient at 210 nm		2	0.25	mAU
Gradient at 254 nm		0.5	0.06	mAU
LC/MS Purity (p-nitrophenol)		50	< 50	ppb
LC/MS Purity (reserpine)		50	< 50	ppb
Metals, suitable for LC/MS			Conforms	
UV Abs. at 200 nm		0.01	0.001	AU
UV Abs. at 210 nm		0.01	< 0.001	AU
UV Abs. at 220 nm		0.01	< 0.001	AU
UV Abs. at 230 nm		0.01	< 0.001	AU
UV Abs. at 240 nm		0.01	< 0.001	AU
UV Abs. at 250 nm		0.005	< 0.001	AU
UV Abs. at 270 nm		0.005	< 0.001	AU
UV Abs. at 400-280 nm		0.005	< 0.001	AU
UV Cut-off		190	<190	nm

Heather Sinn,

Quality Control Manager

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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.

Certificate of Analysis



HPLC
2020/02/04
303
4 Bottles

Date of Release: 11/16/2019
Name: Water
OmniSolve®, For LC/MS
Item No: WX0001 all size codes
Lot / Batch No: 59324
Country of Origin: USA

Characteristic	Requirement		Results	Units
	Min.	Max.		
Expiration date			30-NOV-2020	
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	0.12	mAU
Gradient at 254 nm		0.5	0.08	mAU
LC/MS Purity (p-nitrophenol)		50	<50	ppb
LC/MS Purity (reserpine)		50	<50	ppb
Metals, suitable for LC/MS			Conforms	
UV Abs. at 200 nm		0.01	< 0.001	AU
UV Abs. at 210 nm		0.01	< 0.001	AU
UV Abs. at 220 nm		0.01	< 0.001	AU
UV Abs. at 230 nm		0.01	< 0.001	AU
UV Abs. at 240 nm		0.01	< 0.001	AU
UV Abs. at 250 nm		0.005	< 0.001	AU
UV Abs. at 270 nm		0.005	< 0.001	AU
UV Abs. at 400-280 nm		0.005	0.001	AU
UV Cut-off		190	<190	nm

Heather Sinn,

Quality Control Manager

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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: 2019/02/24- P4- 4x4L
Date Received: 2020/02/24- P4- 4x4L

Date Received: 2020/02/29- P4- 4x4L
Date Received: 2020/03/03- P4- 4x4L
Date Received: 2020/03/05- P4- 4x4L
Date Received: 2020/03/09- P4- 4x4L
Date Received: 2020/03/11- P4- 4x4L
Date Received: 2020/03/11- P3- 4x4L

PREPARATION OF STANDARDS OF INTERMEDIARY CONCENTRATION

PRLST 150 PG. 325

Solution No.: I-5970 Date: 2020/03/25 Expiry Date: 2021/03/25 Discard Date: _____
 Replaces Solution No.: I-5957 Replaced by Solution: _____ Chemist: JDZ
 Compound(s)/Solution Name: Compd. PFAS working sol. 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
 Pipette/Syringe ID K26250F
 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: PFAS Volumetric Flask: CLASS A 25mL
(Identify by serial number or other unique ID)
 Solvent Supplier: PRLRG 137 57 Lot No.: PRLRG 137 57
 Date Opened: PRLRG 137 57
 Storage Location: FZ-11 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

I-5970 (See PRLST 150 325)

Compound Name	ID#	Conc. (ug/mL)	Vol. of Stock standard (uL)	Final Conc. (ug/mL)	Exp. date
PFBA	S4779-1	50	500	1	2024/07/10
L-PFBS	S4779-2	44.4	562.5	1	2024/07/10
PFPeA	S4779-3	50	500	1	2024/09/04
L-PFPeS	S4779-4	47	532.5	1	2024/07/08
PFHxA	S4779-5	50	500	1	2024/08/08
br-PFHxSk	S4779-6	45.7	547.5	1	2023/10/23
PFHpA	S4779-7	50	500	1	2024/10/23
L-PFHpS	S4779-8	47.7	525	1	2024/08/16
PFOA	S4779-9	50	500	1	2024/09/06
brPFOSK	S4779-10	46.5	537.5	1	2024/06/07
PFNA	S4779-11	50	500	1	2024/07/08
L-PFNS	S4779-12	48.1	520	1	2024/11/14
PFDA	S4779-13	50	500	1	2024/05/01
L-PFDS	S4779-14	48.2	517.5	1	2024/04/04
PFUdA	S4779-15	50	500	1	2024/03/19
PFDoA	S4779-16	50	500	1	2024/10/23
PFTTrDA	S4779-17	50	500	1	2024/09/26
PFTeDA	S4779-18	50	500	1	2024/03/11
PFOSA (FOSA-I)	S4779-19	50	500	1	2024/09/12
N-MeFOSA-M	S4779-20	50	500	1	2024/12/24
N-EtFOSA-M	S4779-21	50	500	1	2024/05/07
N-MeFOSE-M	S4779-22	50	500	1	2025/01/06
N-EtFOSE-M	S4779-23	50	500	1	2025/01/06
br-NMeFOSAA	S4779-24	50	500	1	2024/12/02
br-NEtFOSAA	S4779-25	50	500	1	2024/08/20
4:2FTS	S4779-26	46.9	532.5	1	2024/10/29
6:2FTS	S4779-27	47.6	525	1	2024/09/09
8:2FTS	S4779-28	48	520	1	2024/09/11
HFPO-DA	S4779-29	50	500	1	2023/01/23
NaDONA	S4779-30	47.3	527.5	1	2024/07/15
9CI-PF3ONS	S4779-31	46.7	535	1	2024/10/30
11CI-PF3OUdS	S4779-32	47.2	530	1	2024/10/23

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JDZ, 2020/03/25

PREPARATION OF CONCENTRATED STOCK STANDARDS

Solution No.: S-4779 Date: 2020/03/05 Expiry Date: See Below Discard Date: _____
 Replaces Solution: _____ Replaced by Solution: _____ Chemist: GSZ

S-4779 (PRLST 151 g. 28C)

Solution ID#	Compound Name	Lot#	Received date	Exp. date	Replaces Solution	Replaced by Solution	Conc. (ug/mL)	Solvent	Storage
S4779-1	PFBA	PFBA0619	2020/02/19	2024/07/10	S4754-1		50	MeOH	FZ-11
S4779-2	L-PFBS	LPFBS0719	2020/02/19	2024/07/10	S4754-2		44.4	MeOH	FZ-11
S4779-3	PFPeA	PFPeA0919	2020/02/19	2024/09/04	S4754-3		50	MeOH	FZ-11
S4779-4	L-PFPeS	LPFPeS0619	2020/02/19	2024/07/08	S4754-4		47	MeOH	FZ-11
S4779-5	PFHxA	PFHxA0719	2020/02/19	2024/08/08	S4754-5		50	MeOH	FZ-11
S4779-6	br-PFHxSk	brPFHxSK1019	2020/02/19	2023/10/23	S4754-6		45.7	MeOH	FZ-11
S4779-7	PFHpA	PFHpA1019	2020/02/19	2024/10/23	S4754-7		50	MeOH	FZ-11
S4779-8	L-PFHpS	LPFHpS0819	2020/02/19	2024/08/16	S4754-8		47.7	MeOH	FZ-11
S4779-9	PFOA	PFOA0919	2020/02/19	2024/09/06	S4754-9		50	MeOH	FZ-11
S4779-10	brPFOSK	brPFOSK0619	2020/02/19	2024/06/07	S4754-10		46.5	MeOH	FZ-11
S4779-11	PFNA	PFNA0619	2020/02/19	2024/07/08	S4754-11		50	MeOH	FZ-11
S4779-12	L-PFNS	LPFNS1119	2020/02/19	2024/11/14	S4754-12		48.1	MeOH	FZ-11
S4779-13	PFDA	PFDA0419	2020/02/19	2024/05/01	S4754-13		50	MeOH	FZ-11
S4779-14	L-PFDS	LPFDS0419	2020/02/19	2024/04/04	S4754-14		48.2	MeOH	FZ-11
S4779-15	PFUdA	PFUdA0319	2020/02/19	2024/03/19	S4754-15		50	MeOH	FZ-11
S4779-16	PFDaA	PFDaA1019	2020/02/19	2024/10/23	S4754-16		50	MeOH	FZ-11
S4779-17	PFTrDA	PFTrDA0919	2020/02/19	2024/09/26	S4754-17		50	MeOH	FZ-11
S4779-18	PFTeDA	PFTeDA0319	2020/02/19	2024/03/11	S4754-18		50	IPA	FD-59
S4779-19	PFOSA (FOSA-I)	FOSA0919I	2020/02/19	2024/09/12	S4754-19		50	MeOH	FZ-11
S4779-20	N-MeFOSA-M	NMeFOSA1219M	2020/02/19	2024/12/24	S4754-20		50	MeOH	FZ-11
S4779-21	N-EtFOSA-M	NEtFOSA0519M	2020/02/19	2024/05/07	S4754-21		50	MeOH	FZ-11
S4779-22	N-MeFOSE-M	NMeFOSE1219M	2020/02/19	2025/01/06	S4754-22		50	MeOH	FZ-11
S4779-23	N-EtFOSE-M	NEtFOSE1219M	2020/02/19	2025/01/06	S4754-23		50	MeOH	FZ-11
S4779-24	br-NMeFOSAA	br-NMeFOSAA1119	2020/02/19	2024/12/02	S4754-24		50	MeOH	FD-59
S4779-25	br-NEtFOSAA	br-NEtFOSAA0819	2020/02/19	2024/08/20	S4754-25		50	MeOH	FD-59
S4779-26	4:2FTS	42FTS1019	2020/02/19	2024/10/29	S4754-26		46.9	MeOH	FD-59
S4779-27	6:2FTS	62FTS0919	2020/02/19	2024/09/09	S4754-27		47.6	MeOH	FD-59
S4779-28	8:2FTS	82FTS0919	2020/02/21	2024/09/11	S4754-28		48	MeOH	FD-59
S4779-29	HFPO-DA	HFPODA0120	2020/02/19	2023/01/23	S4754-29		50	MeOH	FD-59
S4779-30	NaDONA	NaDONA0719	2020/02/19	2024/07/15	S4754-30		47.3	MeOH	FZ-11
S4779-31	9Cl-PF3ONS	9ClPF3ONS1019	2020/02/19	2024/10/30	S4754-31		46.7	MeOH	FZ-11
S4779-32	11Cl-PF3OUdS	11Cl-PF3OUdS1019	2020/02/19	2024/10/23	S4754-32		47.2	MeOH	FZ-11
Date Opened (All compounds): <u>2020/03/05</u>			Supplier (All compounds): <u>Wellington</u>			Chemist: <u>GSZ</u>			

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Notes/Comments



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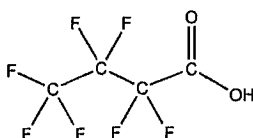
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFBA
COMPOUND: Perfluoro-n-butanoic acid

LOT NUMBER: PFBA0619

STRUCTURE:

CAS #: 375-22-4



MOLECULAR FORMULA: C₄HF₇O₂
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 214.04
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 07/10/2019
EXPIRY DATE: (mm/dd/yyyy) 07/10/2024
RECOMMENDED STORAGE: Store ampoules in a cool, dark place

TTH 2020-02-19
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.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager

Date: 07/22/2019
(mm/dd/yyyy)

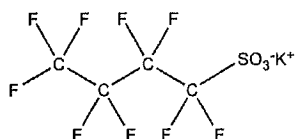
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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: L-PFBS **LOT NUMBER:** LPFBS0719
COMPOUND: Potassium perfluoro-1-butanesulfonate
STRUCTURE: **CAS #:** 29420-49-3



MOLECULAR FORMULA: C₄F₉SO₃K **MOLECULAR WEIGHT:** 338.19
CONCENTRATION: 50.0 ± 2.5 µg/ml (K salt) **SOLVENT(S):** Methanol
44.2 ± 2.2 µg/ml (PFBS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 07/10/2019
EXPIRY DATE: (mm/dd/yyyy) 07/10/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

Lampoules
TTM 2020-02-19


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 ~ 0.2% of sodium perfluoro-1-nonanesulfonate (L-PFNS).

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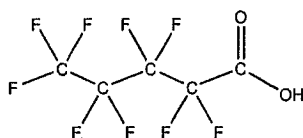
Certified By:  **Date:** 08/06/2019
B.G. Chittim, General Manager (mm/dd/yyyy)

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PRODUCT CODE: PFPeA **LOT NUMBER:** PFPeA0919
COMPOUND: Perfluoro-n-pentanoic acid

STRUCTURE: **CAS #:** 2706-90-3



MOLECULAR FORMULA: C₅HF₉O₂ **MOLECULAR WEIGHT:** 264.05
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 09/04/2019
EXPIRY DATE: (mm/dd/yyyy) 09/04/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

*2 ampoules
FTM 2020-02-19*

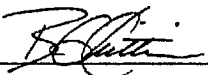
DOCUMENTATION/ DATA ATTACHED:

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 C₉H₂F₈O₂ (hydrido - derivative) as measured by ¹⁹F NMR.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager **Date:** 09/05/2019
(mm/dd/yyyy)

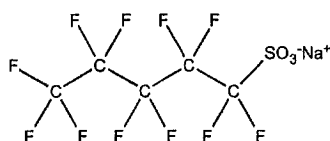
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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: L-PFPeS **LOT NUMBER:** LPFPeS0619
COMPOUND: Sodium perfluoro-1-pentanesulfonate
STRUCTURE: **CAS #:** 630402-22-1



MOLECULAR FORMULA: $C_5F_{11}SO_3Na$ **MOLECULAR WEIGHT:** 372.09
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
46.9 ± 2.3 µg/ml (PFPeS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 07/08/2019
EXPIRY DATE: (mm/dd/yyyy) 07/08/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
TTM 2020-02-19

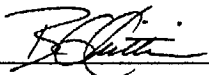
DOCUMENTATION/ DATA ATTACHED:

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 ~ 0.3% of sodium perfluoro-1-nonanesulfonate (L-PFNS).

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Certified By: 
B.G. Chittim, General Manager **Date:** 07/11/2019
(mm/dd/yyyy)

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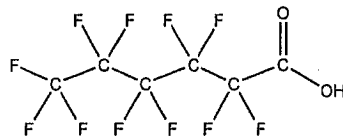


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFHxA **LOT NUMBER:** PFHxA0719
COMPOUND: Perfluoro-n-hexanoic acid

STRUCTURE: **CAS #:** 307-24-4



MOLECULAR FORMULA: $C_6HF_{11}O_2$ **MOLECULAR WEIGHT:** 314.05
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$ **SOLVENT(S):** Methanol
Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 08/08/2019
EXPIRY DATE: (mm/dd/yyyy) 08/08/2024
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)

2 ampoules
TTM 2020-02-19

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 1.0% of branched isomers.

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Certified By: 
B.G. Chittim, General Manager **Date:** 08/15/2019
(mm/dd/yyyy)

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br-PFHxSK

**Potassium Perfluorohexanesulfonate
Solution/Mixture of Linear and
Branched Isomers**

PRODUCT CODE: br-PFHxSK
LOT NUMBER: brPFHxSK1019
CONCENTRATION: 50.0 ± 2.5 µg/ml (total potassium salt)
45.5 ± 2.3 µg/ml (total PFHxS anion)
SOLVENT(S): Methanol
DATE PREPARED: (mm/dd/yyyy) 10/21/2019
LAST TESTED: (mm/dd/yyyy) 10/23/2019
EXPIRY DATE: (mm/dd/yyyy) 10/23/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

Sampoules
TTH 2020-02-19

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 ¹⁹F-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)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 0.3% of perfluoro-n-hexanoic acid and ~ 0.3% of perfluoro-1-pentanesulfonate.
- CAS#: 3871-99-6 (for linear isomer; potassium salt).

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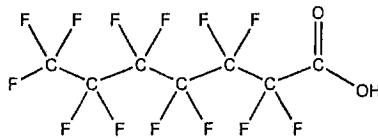
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFHpA
COMPOUND: Perfluoro-n-heptanoic acid

LOT NUMBER: PFHpA1019

STRUCTURE:

CAS #: 375-85-9



MOLECULAR FORMULA: C₇HF₁₃O₂
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 364.06
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/23/2019
EXPIRY DATE: (mm/dd/yyyy) 10/23/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

*2 ampoules.
TJM 2020-02-19*

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager

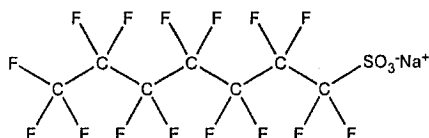
Date: 10/24/2019
(mm/dd/yyyy)

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PRODUCT CODE: L-PFHpS **LOT NUMBER:** LPFHpS0819
COMPOUND: Sodium perfluoro-1-heptanesulfonate

STRUCTURE: **CAS #:** 21934-50-9



MOLECULAR FORMULA: C₇F₁₆SO₃Na **MOLECULAR WEIGHT:** 472.10
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
47.6 ± 2.4 µg/ml (PFHpS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 08/16/2019
EXPIRY DATE: (mm/dd/yyyy) 08/16/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

Ampoules

TTM 2020-02-19

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:** 08/29/2019
B.G. Chittim, General Manager (mm/dd/yyyy)

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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:

PFOA

LOT NUMBER:

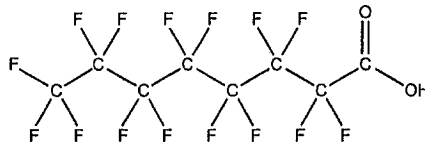
PFOA0919

COMPOUND:

Perfluoro-n-octanoic acid

STRUCTURE:**CAS #:**

335-67-1

**MOLECULAR FORMULA:** $C_8H_{15}O_2$ **MOLECULAR WEIGHT:**

414.07

CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$ **SOLVENT(S):**

Methanol

Water (<1%)

CHEMICAL PURITY:

>98%

LAST TESTED: (mm/dd/yyyy)

09/06/2019

EXPIRY DATE: (mm/dd/yyyy)

09/06/2024

RECOMMENDED STORAGE:

Store ampoule in a cool, dark place

TTM 2020-02-19

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.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By:

B.G. Chittim, General Manager

Date: 09/09/2019

(mm/dd/yyyy)

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br-PFOSK

**Potassium Perfluorooctanesulfonate
Solution/Mixture of Linear and
Branched Isomers**

PRODUCT CODE: br-PFOSK
LOT NUMBER: brPFOSK0619
CONCENTRATION: 50 ± 2.5 µg/ml (total potassium salt)
46.4 ± 2.3 µg/ml (total PFOS anion)
SOLVENT(S): Methanol
DATE PREPARED: (mm/dd/yyyy) 06/03/2019
LAST TESTED: (mm/dd/yyyy) 06/07/2019
EXPIRY DATE: (mm/dd/yyyy) 06/07/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

*Ampoules
TTM
2020-02-19*

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 ¹⁹F-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)

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).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE



PRODUCT CODE:

PFNA

LOT NUMBER:

PFNA0619

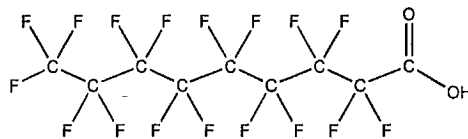
COMPOUND:

Perfluoro-n-nonanoic acid

STRUCTURE:

CAS #:

375-95-1



MOLECULAR FORMULA:

$C_9H_{17}O_2$

MOLECULAR WEIGHT:

464.08

CONCENTRATION:

$50 \pm 2.5 \mu\text{g/ml}$

SOLVENT(S):

Methanol

Water (<1%)

CHEMICAL PURITY:

>98%

LAST TESTED: (mm/dd/yyyy)

07/08/2019

EXPIRY DATE: (mm/dd/yyyy)

07/08/2024

RECOMMENDED STORAGE:

Store ampoule in a cool, dark place

*2 ampoules
TTM 2020-02-19*

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 ~ 0.2% 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: 07/11/2019

(mm/dd/yyyy)

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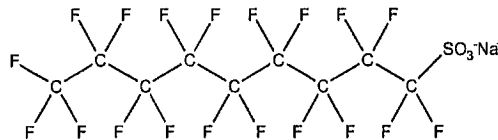


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CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: L-PFNS **LOT NUMBER:** LPFNS1119
COMPOUND: Sodium perfluoro-1-nonanesulfonate

STRUCTURE: **CAS #:** 98789-57-2



MOLECULAR FORMULA: C₉F₁₉SO₃Na **MOLECULAR WEIGHT:** 572.12
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
 48.0 ± 2.4 µg/ml (PFNS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 11/14/2019
EXPIRY DATE: (mm/dd/yyyy) 11/14/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
JTH 2020-02-19

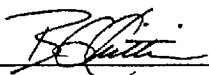
DOCUMENTATION/ DATA ATTACHED:

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:** 11/28/2019
 B.G. Chittim, General Manager (mm/dd/yyyy)

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PRODUCT CODE:

PFDA

LOT NUMBER:

PFDA0419

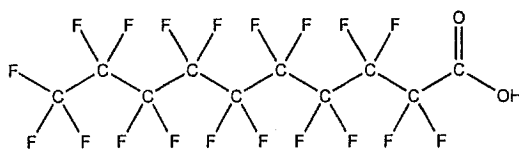
COMPOUND:

Perfluoro-n-decanoic acid

STRUCTURE:

CAS #:

335-76-2



MOLECULAR FORMULA:

$C_{10}H_{19}O_2$

MOLECULAR WEIGHT:

514.08

CONCENTRATION:

$50 \pm 2.5 \mu\text{g/ml}$

SOLVENT(S):

Methanol

Water (<1%)

CHEMICAL PURITY:

>98%

LAST TESTED: (mm/dd/yyyy)

05/01/2019

EXPIRY DATE: (mm/dd/yyyy)

05/01/2024

RECOMMENDED STORAGE:

Store ampoule in a cool, dark place

ampoules

TTM 2020-02-19

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 ~ 0.2% of perfluoro-n-nonanoic acid (PFNA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By:

B.G. Chittim, General Manager

Date: 05/02/2019

(mm/dd/yyyy)

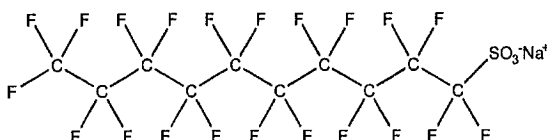


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: L-PFDS **LOT NUMBER:** LPFDS0419
COMPOUND: Sodium perfluoro-1-decanesulfonate

STRUCTURE: **CAS #:** 2806-15-7



MOLECULAR FORMULA: $C_{10}F_{21}SO_3Na$ **MOLECULAR WEIGHT:** 622.13
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
48.2 ± 2.4 µg/ml (PFDS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 04/04/2019
EXPIRY DATE: (mm/dd/yyyy) 04/04/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
TTM 2020-02-19

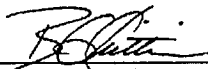
DOCUMENTATION/ DATA ATTACHED:

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 ~ 0.9% of sodium perfluoro-1-dodecanesulfonate (L-PFDoS).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager **Date:** 04/30/2019
(mm/dd/yyyy)

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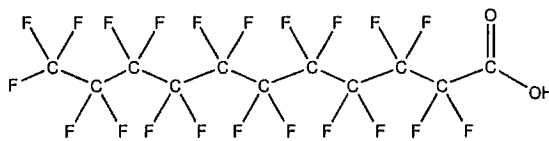


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CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: PFUdA **LOT NUMBER:** PFUdA0319
COMPOUND: Perfluoro-n-undecanoic acid

STRUCTURE: **CAS #:** 2058-94-8



MOLECULAR FORMULA: C₁₁HF₂₁O₂ **MOLECULAR WEIGHT:** 564.09
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
 Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 03/19/2019
EXPIRY DATE: (mm/dd/yyyy) 03/19/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
TTM 2020-02-19

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 pefluoro-n-dodecanoic acid (PFDoA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
 B.G. Chittim, General Manager **Date:** 03/21/2019
 (mm/dd/yyyy)

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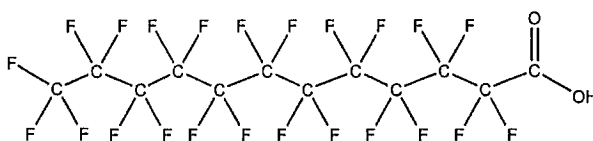


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFD0A **LOT NUMBER:** PFD0A1019
COMPOUND: Perfluoro-n-dodecanoic acid

STRUCTURE: **CAS #:** 307-55-1



MOLECULAR FORMULA: $C_{12}HF_{23}O_2$ **MOLECULAR WEIGHT:** 614.10
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$ **SOLVENT(S):** Methanol
Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/23/2019
EXPIRY DATE: (mm/dd/yyyy) 10/23/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
TTM
2020-02-19

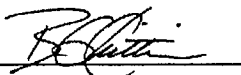
DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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Certified By: 
B.G. Chittim, General Manager **Date:** 10/24/2019
(mm/dd/yyyy)

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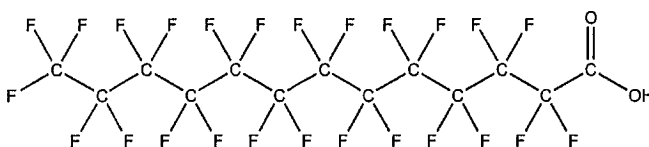


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFTTrDA **LOT NUMBER:** PFTTrDA0919
COMPOUND: Perfluoro-n-tridecanoic acid

STRUCTURE: **CAS #:** 72629-94-8



MOLECULAR FORMULA: $C_{13}HF_{25}O_2$ **MOLECULAR WEIGHT:** 664.11
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$ **SOLVENT(S):** Methanol
 Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 09/26/2019
EXPIRY DATE: (mm/dd/yyyy) 09/26/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules

TTM 2020-02-19

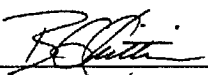
DOCUMENTATION/ DATA ATTACHED:

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 PFDDoA ($C_{12}HF_{23}O_2$), and ~ 0.1% of PFTeDA ($C_{14}HF_{27}O_2$).

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Certified By: 
 B.G. Chittim, General Manager **Date:** 10/03/2019
 (mm/dd/yyyy)

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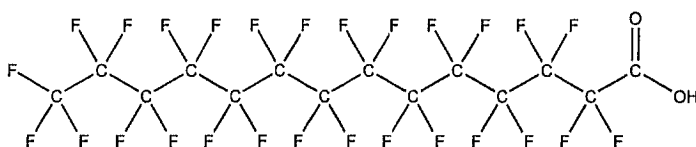


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFTeDA **LOT NUMBER:** PFTeDA0319
COMPOUND: Perfluoro-n-tetradecanoic acid

STRUCTURE: **CAS #:** 376-06-7



MOLECULAR FORMULA: $C_{14}HF_{27}O_2$ **MOLECULAR WEIGHT:** 714.11
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$ **SOLVENT(S):** Methanol
 Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 03/11/2019
EXPIRY DATE: (mm/dd/yyyy) 03/11/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
TTM 2020-02-19

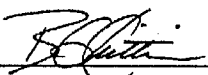
DOCUMENTATION/ DATA ATTACHED:

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 PFDoA ($C_{12}HF_{23}O_2$), ~ 0.1% of PFTrDA ($C_{13}HF_{25}O_2$), and ~ 0.1% of PFHxDA ($C_{16}HF_{31}O_2$).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
 B.G. Chittim, General Manager **Date:** 03/28/2019
(mm/dd/yyyy)

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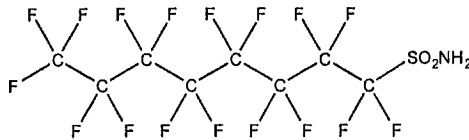
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: FOSA-I
COMPOUND: Perfluoro-1-octanesulfonamide

LOT NUMBER: FOSA0919I

STRUCTURE:

CAS #: 754-91-6



MOLECULAR FORMULA: C₈H₂F₁₇NO₂S
CONCENTRATION: 50 ± 2.5 µg/ml
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 09/12/2019
EXPIRY DATE: (mm/dd/yyyy) 09/12/2024
RECOMMENDED STORAGE: Refrigerate ampoule

MOLECULAR WEIGHT: 499.14
SOLVENT(S): Isopropanol

2 ampoules

19 TTM

TTM 2020-02-19 2020-02-19


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, General Manager

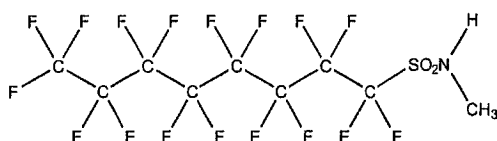
Date: 09/13/2019
(mm/dd/yyyy)

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PRODUCT CODE: N-MeFOSA-M **LOT NUMBER:** NMeFOSA1219M
COMPOUND: N-methylperfluoro-1-octanesulfonamide

STRUCTURE: **CAS #:** 31506-32-8



MOLECULAR FORMULA: C₉H₄F₁₇NO₂S **MOLECULAR WEIGHT:** 513.17
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 12/24/2019
EXPIRY DATE: (mm/dd/yyyy) 12/24/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

Ampoules
TTM 2020-02-19

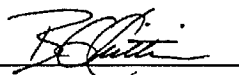
DOCUMENTATION/ DATA ATTACHED:

- 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, General Manager **Date:** 01/02/2020
(mm/dd/yyyy)

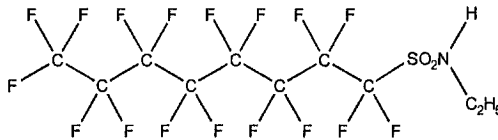


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: N-EtFOSA-M **LOT NUMBER:** NEtFOSA0519M
COMPOUND: N-ethylperfluoro-1-octanesulfonamide

STRUCTURE: **CAS #:** 4151-50-2



MOLECULAR FORMULA: C₁₀H₆F₁₇NO₂S **MOLECULAR WEIGHT:** 527.20
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 05/07/2019
EXPIRY DATE: (mm/dd/yyyy) 05/07/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules

TTM 2020-02-19

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 ~ 0.5% branched isomers of N-ethylperfluorooctanesulfonamide.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

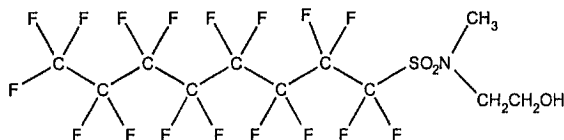
Certified By:  **Date:** 05/09/2019
B.G. Chittim, General Manager (mm/dd/yyyy)

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PRODUCT CODE: N-MeFOSE-M **LOT NUMBER:** NMeFOSE1219M
COMPOUND: 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol

STRUCTURE: **CAS #:** 24448-09-7



MOLECULAR FORMULA: C₁₁H₈F₁₇NO₃S **MOLECULAR WEIGHT:** 557.22
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/06/2020 (HRGC/LRMS)
12/27/2019 (LC/MS)
EXPIRY DATE: (mm/dd/yyyy) 01/06/2025
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

Lampoules
TTM 2020-02-19

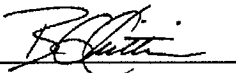
DOCUMENTATION/ DATA ATTACHED:

- Figure 1: HRGC/LRMS Data (TIC and Mass Spectrum)
- Figure 2: LC/MS Data (TIC and Mass Spectrum)
- Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- In order to see the molecular ion (adduct free), the LC mobile phase should be free of ammonium acetate buffer.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager **Date:** 01/07/2020
(mm/dd/yyyy)

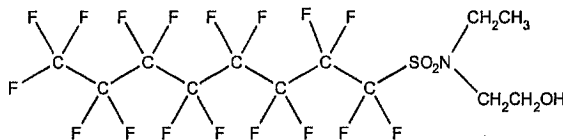


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: N-EtFOSE-M **LOT NUMBER:** NEtFOSE1219M
COMPOUND: 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol

STRUCTURE: **CAS #:** 1691-99-2



MOLECULAR FORMULA: C₁₂H₁₀F₁₇NO₃S **MOLECULAR WEIGHT:** 571.25
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/06/2020 (HRGC/LRMS) 12/27/2019 (LC/MS) TTM 2020-02-19
EXPIRY DATE: (mm/dd/yyyy) 01/06/2025 2 ampoules
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

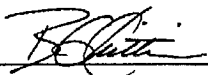
DOCUMENTATION/ DATA ATTACHED:

- 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)

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: 
B.G. Chittim, General Manager **Date:** 01/07/2020
(mm/dd/yyyy)

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br-NMeFOSAA

**N-Methylperfluorooctanesulfonamidoacetic
Acid Solution/Mixture of Linear and
Branched Isomers**

PRODUCT CODE: br-NMeFOSAA
LOT NUMBER: brNMeFOSAA1119
CONCENTRATION: 50.0 ± 2.5 µg/ml
SOLVENT(S): Methanol/Water (<1%)
DATE PREPARED: (mm/dd/yyyy) 11/27/2019
LAST TESTED: (mm/dd/yyyy) 12/02/2019
EXPIRY DATE: (mm/dd/yyyy) 12/02/2024
RECOMMENDED STORAGE: Refrigerate ampoule

DESCRIPTION:

The chemical purity has been determined to be ≥98% N-methylperfluorooctanesulfonamidoacetic acid (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 ¹⁹F-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)

2 ampoules

TTM

2020-02-19

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the acetic acid moiety to its respective methyl ester.

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br-NEtFOSAA

**N-Ethylperfluorooctanesulfonamidoacetic
Acid Solution/Mixture of Linear and
Branched Isomers**

PRODUCT CODE: br-NEtFOSAA
LOT NUMBER: brNEtFOSAA0819
CONCENTRATION: 50.0 ± 2.5 µg/ml
SOLVENT(S): Methanol/Water (<1%)
DATE PREPARED: (mm/dd/yyyy) 08/20/2019
LAST TESTED: (mm/dd/yyyy) 08/20/2019
EXPIRY DATE: (mm/dd/yyyy) 08/20/2024
RECOMMENDED STORAGE: Refrigerate ampoule

2 ampoules

ITM 2020-02-19

DESCRIPTION:

The chemical purity has been determined to be ≥98% N-ethylperfluorooctanesulfonamidoacetic acid (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 ¹⁹F-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)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the acetic acid moiety to its respective methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

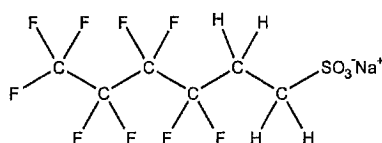


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: 4:2FTS **LOT NUMBER:** 42FTS1019
COMPOUND: Sodium 1H,1H,2H,2H-perfluorohexane sulfonate

STRUCTURE: **CAS #:** 27619-93-8



MOLECULAR FORMULA: C₆H₄F₉SO₃Na **MOLECULAR WEIGHT:** 350.13
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
46.7 ± 2.3 µg/ml (4:2FTS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/29/2019
EXPIRY DATE: (mm/dd/yyyy) 10/29/2024
RECOMMENDED STORAGE: Refrigerate ampoule

TTM 2020-02-19
2 ampoules.

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager

Date: 11/14/2019
(mm/dd/yyyy)

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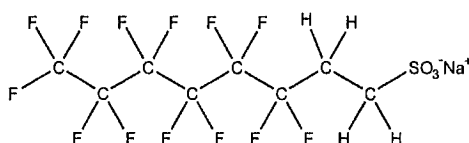


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: 6:2FTS **LOT NUMBER:** 62FTS0919
COMPOUND: Sodium 1H,1H,2H,2H-perfluorooctane sulfonate

STRUCTURE: **CAS #:** 27619-94-9



MOLECULAR FORMULA: C₈H₄F₁₃SO₃Na **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) 09/09/2019
EXPIRY DATE: (mm/dd/yyyy) 09/09/2024
RECOMMENDED STORAGE: Refrigerate ampoule

TTM 2020-02-19
2 ampoules.

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
 Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: Date: 09/09/2019
 B.G. Chittim, General Manager (mm/dd/yyyy)

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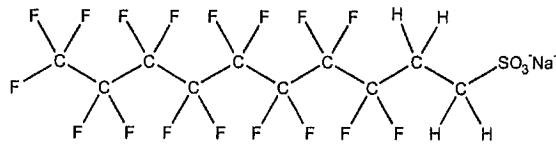


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: 8:2FTS **LOT NUMBER:** 82FTS0919
COMPOUND: Sodium 1H,1H,2H,2H-perfluorodecane sulfonate

STRUCTURE: **CAS #:** 27619-96-1



MOLECULAR FORMULA: C₁₀H₄F₁₇SO₃Na **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: (mm/dd/yyyy) 09/11/2019
EXPIRY DATE: (mm/dd/yyyy) 09/11/2024
RECOMMENDED STORAGE: Refrigerate ampoule

Handwritten mark

*TTM 2020-02-21
2 ampoules*

DOCUMENTATION/ DATA ATTACHED:

- Figure 1: LC/MS Data (TIC and Mass Spectrum)
- Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: *B.G. Chittim* Date: 09/11/2019
 B.G. Chittim, General Manager (mm/dd/yyyy)

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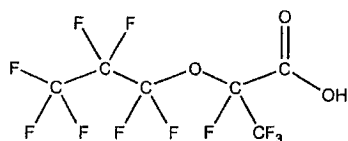


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: HFPO-DA **LOT NUMBER:** HFPODA0120
COMPOUND: 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid

STRUCTURE: **CAS #:** 13252-13-6



MOLECULAR FORMULA: C₆H₁₁F₁₁O₃ **MOLECULAR WEIGHT:** 330.05
CONCENTRATION: 50.0 ± 2.5 µg/ml **SOLVENT(S):** Methanol
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/23/2020
EXPIRY DATE: (mm/dd/yyyy) 01/23/2023
RECOMMENDED STORAGE: Refrigerate ampoule

2 ampoules
TTM 2020-02-19


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.
- Product is commercially known as GenX.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager **Date:** 01/24/2020
(mm/dd/yyyy)

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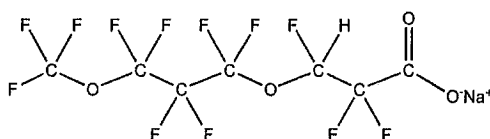


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: NaDONA **LOT NUMBER:** NaDONA0719
COMPOUND: Sodium dodecafluoro-3H-4,8-dioxanonanoate

STRUCTURE: **CAS #:** 958445-44-8
(ammonium salt)



MOLECULAR FORMULA: $C_7HF_{12}O_4Na$ **MOLECULAR WEIGHT:** 400.05
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$ (Na Salt) **SOLVENT(S):** Methanol
 $47.1 \pm 2.4 \mu\text{g/ml}$ (NaDONA anion) Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 07/15/2019
EXPIRY DATE: (mm/dd/yyyy) 07/15/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

Ampoules

JTM 2020-02-19

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.
- Product is commercially known as ADONA.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager

Date: 07/25/2019
(mm/dd/yyyy)

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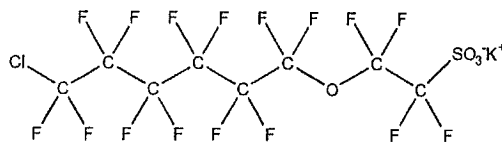


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: 9CI-PF3ONS **LOT NUMBER:** 9CIPF3ONS1019
COMPOUND: Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate

STRUCTURE: **CAS #:** 73606-19-6



MOLECULAR FORMULA: C₈F₁₆ClSO₄K **MOLECULAR WEIGHT:** 570.67
CONCENTRATION: 50.0 ± 2.5 µg/ml (K Salt) **SOLVENT(S):** Methanol
46.6 ± 2.3 µg/ml (9CI-PF3ONS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/30/2019
EXPIRY DATE: (mm/dd/yyyy) 10/30/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
TTM 2020-02-19

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.
- This compound is the major component of the commercial formulation known as F-53B.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: Date: 11/04/2019
(mm/dd/yyyy)
B.G. Chittim, General Manager

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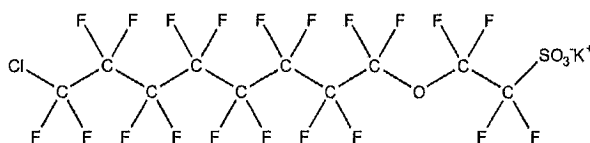


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CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: 11CI-PF3OUdS **LOT NUMBER:** 11CIPF3OUdS1019
COMPOUND: Potassium 11-chloroeicosfluoro-3-oxaundecane-1-sulfonate

STRUCTURE: **CAS #:** 83329-89-9



MOLECULAR FORMULA: C₁₀F₂₀ClSO₄K **MOLECULAR WEIGHT:** 670.69
CONCENTRATION: 50.0 ± 2.5 µg/ml (K Salt) **SOLVENT(S):** Methanol
 47.1 ± 2.4 µg/ml (11CI-PF3OUdS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/23/2019
EXPIRY DATE: (mm/dd/yyyy) 10/23/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
TTM 2020-02-19

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.
- This compound is a minor component of the commercial formulation known as F-53B.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: *B.G. Chittim* **Date:** 11/14/2019
 B.G. Chittim, General Manager (mm/dd/yyyy)

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PREPARATION OF STANDARDS OF INTERMEDIARY CONCENTRATION

PRLST 150 PG. 326

Solution No.: I-5971 Date: 2020/03/26 Expiry Date: 2024/03/26 Discard Date: -
 Replaces Solution No.: I-5956 Replaced by Solution: - Chemist: J03
 Compound(s)/Solution Name: PFAS second source spiking sol. 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
 Pipette/Syringe ID: K86250F
 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: PFAS Volumetric Flask: CLASS A 25mL
(identify by serial number or other unique ID)
 Solvent Supplier: PRLRE 137 59 Lot No.: PRLRE 137 59
 Date Opened: PRLRE 137 59
 Storage Location: FZ-11 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-5971 (See PRLST 150 326)

Compound Name	ID#	Conc. (ug/mL)	Vol. of Stock standard (uL)	Final Conc. (ug/mL)	Exp. date
PFBA	S4780-1	50	500	1	2024/07/10
L-PFBS	S4780-2	44.4	562.5	1	2024/07/10
PFPeA	S4780-3	50	500	1	2024/09/04
L-PFPeS	S4780-4	47	532.5	1	2024/07/08
PFHxA	S4780-5	50	500	1	2024/08/08
br-PFHxSk	S4780-6	45.7	547.5	1	2023/10/23
PFHpA	S4780-7	50	500	1	2024/10/23
L-PFHpS	S4780-8	47.7	525	1	2024/08/16
PFOA	S4780-9	50	500	1	2024/09/06
brPFOSK	S4780-10	46.5	537.5	1	2024/06/07
PFNA	S4780-11	50	500	1	2024/07/08
L-PFNS	S4780-12	48.1	520	1	2024/11/14
PFDA	S4780-13	50	500	1	2024/05/01
L-PFDS	S4780-14	48.2	517.5	1	2024/04/04
PFUdA	S4780-15	50	500	1	2024/03/19
PFDoA	S4780-16	50	500	1	2024/10/23
PFTrDA	S4780-17	50	500	1	2024/09/26
PFTeDA	S4780-18	50	500	1	2024/03/11
PFOSA (FOSA-I)	S4780-19	50	500	1	2024/09/12
N-MeFOSA-M	S4780-20	50	500	1	2024/12/24
N-EtFOSA-M	S4780-21	50	500	1	2024/05/07
N-MeFOSE-M	S4780-22	50	500	1	2025/01/06
N-EtFOSE-M	S4780-23	50	500	1	2025/01/06
br-NMeFOSAA	S4780-24	50	500	1	2024/12/02
br-NEtFOSAA	S4780-25	50	500	1	2024/08/20
4:2FTS	S4780-26	46.9	532.5	1	2024/10/29
6:2FTS	S4780-27	47.6	525	1	2024/09/09
8:2FTS	S4780-28	48	520	1	2024/09/11
HFPO-DA	S4780-29	50	500	1	2023/01/23
NaDONA	S4780-30	47.3	527.5	1	2024/07/15
9Cl-PF3ONS	S4780-31	46.7	535	1	2024/10/30
11Cl-PF3OUs	S4780-32	47.2	530	1	2024/10/23

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Bureau Veritas Laboratories

203.2020 103126

PRLST 151 PG 281

PREPARATION OF CONCENTRATED STOCK STANDARDS

Solution No.: S-4780 Date: 2020/03/06 Expiry Date: 2024/03/06 Discard Date: _____
 Replaces Solution: S-4760 Replaced by Solution: _____ Chemist: JD3
 Compound: _____ Purity: _____

S-4780 cpg. 281) PRLST151

Solution ID#	Compound Name	Lot#	Received date	Exp. date	Replaces Solution	Replaced by Solution	Conc. (ug/mL)	Solvent	Storage
S4780-1	PFBA	PFBA0619	2020/02/19	2024/07/10	S4760-1		50	MeOH	FZ-11
S4780-2	L-PFBS	LPFBS0719	2020/02/19	2024/07/10	S4760-2		44.4	MeOH	FZ-11
S4780-3	PFPeA	PFPeA0919	2020/02/19	2024/09/04	S4760-3		50	MeOH	FZ-11
S4780-4	L-PFPeS	LPFPeS0619	2020/02/19	2024/07/08	S4760-4		47	MeOH	FZ-11
S4780-5	PFHxA	PFHxA0719	2020/02/19	2024/08/08	S4760-5		50	MeOH	FZ-11
S4780-6	br-PFHxSk	brPFHxSK1019	2020/02/19	2023/10/23	S4760-6		45.7	MeOH	FZ-11
S4780-7	PFHpA	PFHpA1019	2020/02/19	2024/10/23	S4760-7		50	MeOH	FZ-11
S4780-8	L-PFHpS	LPFHpS0819	2020/02/19	2024/08/16	S4760-8		47.7	MeOH	FZ-11
S4780-9	PFOA	PFOA0919	2020/02/19	2024/09/06	S4760-9		50	MeOH	FZ-11
S4780-10	brPFOSK	brPFOSK0619	2020/02/19	2024/06/07	S4760-10		46.5	MeOH	FZ-11
S4780-11	PFNA	PFNA0619	2020/02/19	2024/07/08	S4760-11		50	MeOH	FZ-11
S4780-12	L-PFNS	LPFNS1119	2020/02/19	2024/11/14	S4760-12		48.1	MeOH	FZ-11
S4780-13	PFDA	PFDA0419	2020/02/19	2024/05/01	S4760-13		50	MeOH	FZ-11
S4780-14	L-PFDS	LPFDS0419	2020/02/19	2024/04/04	S4760-14		48.2	MeOH	FZ-11
S4780-15	PFUdA	PFUdA0319	2020/02/19	2024/03/19	S4760-15		50	MeOH	FZ-11
S4780-16	PFDoA	PFDoA1019	2020/02/19	2024/10/23	S4760-16		50	MeOH	FZ-11
S4780-17	PFTrDA	PFTrDA0919	2020/02/19	2024/09/26	S4760-17		50	MeOH	FZ-11
S4780-18	PFTeDA	PFTeDA0319	2020/02/19	2024/03/11	S4760-18		50	MeOH	FZ-11
S4780-19	PFOSA (FOSA-I)	FOSA0919I	2020/02/19	2024/09/12	S4760-19		50	IPA	FD-59
S4780-20	N-MeFOSA-M	NMeFOSA1219M	2020/02/19	2024/12/24	S4760-20		50	MeOH	FZ-11
S4780-21	N-EtFOSA-M	NEtFOSA0519M	2020/02/19	2024/05/07	S4760-21		50	MeOH	FZ-11
S4780-22	N-MeFOSE-M	NMeFOSE1219M	2020/02/19	2025/01/06	S4760-22		50	MeOH	FZ-11
S4780-23	N-EtFOSE-M	NEtFOSE1219M	2020/02/19	2025/01/06	S4760-23		50	MeOH	FZ-11
S4780-24	br-NMeFOSAA	br-NMeFOSAA1119	2020/02/19	2024/12/02	S4760-24		50	MeOH	FD-59
S4780-25	br-NEtFOSAA	br-NEtFOSAA0819	2020/02/19	2024/08/20	S4760-25		50	MeOH	FD-59
S4780-26	4:2FTS	42FTS1019	2020/02/19	2024/10/29	S4760-26		46.9	MeOH	FD-59
S4780-27	6:2FTS	62FTS0919	2020/02/19	2024/09/09	S4760-27		47.6	MeOH	FD-59
S4780-28	8:2FTS	82FTS0919	2020/02/21	2024/09/11	S4760-28		48	MeOH	FD-59
S4780-29	HFPO-DA	HFPODA0120	2020/02/19	2023/01/23	S4760-29		50	MeOH	FD-59
S4780-30	NaDONA	NaDONA0719	2020/02/19	2024/07/15	S4760-30		47.3	MeOH	FZ-11
S4780-31	9Cl-PF3ONS	9ClPF3ONS1019	2020/02/19	2024/10/30	S4760-31		46.7	MeOH	FZ-11
S4780-32	11Cl-PF3OUdS	11Cl-PF3OUdS1019	2020/02/19	2024/10/23	S4760-32		47.2	MeOH	FZ-11

Date Opened (All compounds): 2020/03/06 Supplier (All compounds): Wellington Chemist: JD3

AND WRITING ON BOTTOM PAGE

Balance Used: _____
 (specify model and serial no.)
 Solvent Used: _____
 Solvent Supplier: _____ Lot No(s): _____
 Date Opened: _____
 Storage Location / Conditions: _____
 Notes/Comments _____



WELLINGTON LABORATORIES

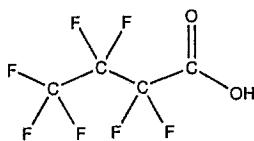
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFBA
COMPOUND: Perfluoro-n-butanoic acid

LOT NUMBER: PFBA0619

STRUCTURE:

CAS #: 375-22-4



MOLECULAR FORMULA: C₄HF₇O₂
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 214.04
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 07/10/2019
EXPIRY DATE: (mm/dd/yyyy) 07/10/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

*JTH 2020-02-19
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.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager

Date: 07/22/2019
(mm/dd/yyyy)

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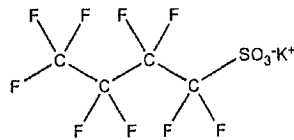


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: L-PFBS **LOT NUMBER:** LPFBS0719
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) **SOLVENT(S):** Methanol
44.2 ± 2.2 µg/ml (PFBS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 07/10/2019
EXPIRY DATE: (mm/dd/yyyy) 07/10/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

Lampoules
TTM 2020-02-19

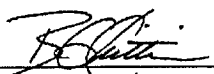
DOCUMENTATION/ DATA ATTACHED:

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 ~ 0.2% of sodium perfluoro-1-nonanesulfonate (L-PFNS).

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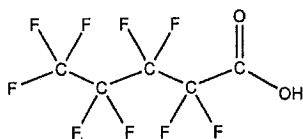
Certified By: 
B.G. Chittim, General Manager **Date:** 08/06/2019
(mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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PRODUCT CODE: PFPeA **LOT NUMBER:** PFPeA0919
COMPOUND: Perfluoro-n-pentanoic acid

STRUCTURE: **CAS #:** 2706-90-3



MOLECULAR FORMULA: $C_5HF_9O_2$ **MOLECULAR WEIGHT:** 264.05
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$ **SOLVENT(S):** Methanol
Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 09/04/2019
EXPIRY DATE: (mm/dd/yyyy) 09/04/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

*2 ampoules
FTM 2020-02-19*

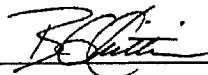
DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.3% of Perfluoro-n-heptanoic acid (PFHpA) and ~ 0.2% of $C_5H_2F_8O_2$ (hydrido - derivative) as measured by ^{19}F NMR.

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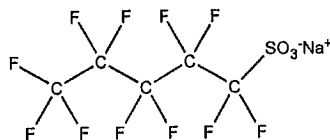
Certified By:  **Date:** 09/05/2019
(mm/dd/yyyy)
B.G. Chittim, General Manager



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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: L-PFPeS **LOT NUMBER:** LPFPeS0619
COMPOUND: Sodium perfluoro-1-pentanesulfonate
STRUCTURE: **CAS #:** 630402-22-1



MOLECULAR FORMULA: $C_5F_{11}SO_3Na$ **MOLECULAR WEIGHT:** 372.09
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
46.9 ± 2.3 µg/ml (PFPeS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 07/08/2019
EXPIRY DATE: (mm/dd/yyyy) 07/08/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
TTM 2020-02-19

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 ~ 0.3% of sodium perfluoro-1-nonanesulfonate (L-PFNS).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

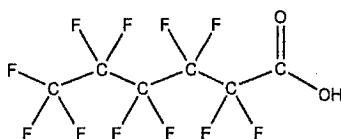
Certified By: 
B.G. Chittim, General Manager

Date: 07/11/2019
(mm/dd/yyyy)

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PRODUCT CODE: PFHxA **LOT NUMBER:** PFHxA0719
COMPOUND: Perfluoro-n-hexanoic acid
STRUCTURE: **CAS #:** 307-24-4



MOLECULAR FORMULA: $C_6HF_{11}O_2$ **MOLECULAR WEIGHT:** 314.05
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$ **SOLVENT(S):** Methanol
Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 08/08/2019
EXPIRY DATE: (mm/dd/yyyy) 08/08/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
TTM 2020-02-19

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 ~ 1.0% of branched isomers.

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Certified By: Date: 08/15/2019
B.G. Chittim, General Manager (mm/dd/yyyy)

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br-PFHxSK

**Potassium Perfluorohexanesulfonate
Solution/Mixture of Linear and
Branched Isomers**

PRODUCT CODE: br-PFHxSK
LOT NUMBER: brPFHxSK1019
CONCENTRATION: 50.0 ± 2.5 µg/ml (total potassium salt)
45.5 ± 2.3 µg/ml (total PFHxS anion)
SOLVENT(S): Methanol
DATE PREPARED: (mm/dd/yyyy) 10/21/2019
LAST TESTED: (mm/dd/yyyy) 10/23/2019
EXPIRY DATE: (mm/dd/yyyy) 10/23/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

Ampoules
TTH 2020-02-19

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 ¹⁹F-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)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 0.3% of perfluoro-n-hexanoic acid and ~ 0.3% of perfluoro-1-pentanesulfonate.
- CAS#: 3871-99-6 (for linear isomer; potassium salt).

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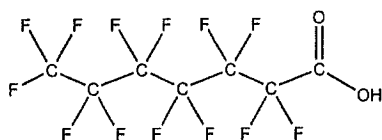


PRODUCT CODE: PFHpA
COMPOUND: Perfluoro-n-heptanoic acid

LOT NUMBER: PFHpA1019

STRUCTURE:

CAS #: 375-85-9



MOLECULAR FORMULA: $C_7HF_{13}O_2$
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$

MOLECULAR WEIGHT: 364.06
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/23/2019
EXPIRY DATE: (mm/dd/yyyy) 10/23/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules.
TTM 2020-02-19

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager

Date: 10/24/2019
(mm/dd/yyyy)

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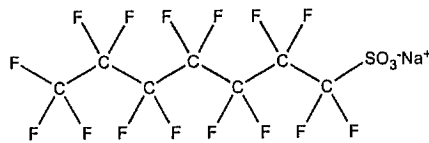
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: L-PFHpS
COMPOUND: Sodium perfluoro-1-heptanesulfonate

LOT NUMBER: LPFHpS0819

STRUCTURE:

CAS #: 21934-50-9



MOLECULAR FORMULA: C₇F₁₆SO₃Na
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt)
47.6 ± 2.4 µg/ml (PFHpS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 08/16/2019
EXPIRY DATE: (mm/dd/yyyy) 08/16/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

MOLECULAR WEIGHT: 472.10
SOLVENT(S): Methanol

Ampoules
TTM 2020-02-19

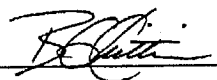
DOCUMENTATION/ DATA ATTACHED:

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, General Manager
Date: 08/29/2019
(mm/dd/yyyy)

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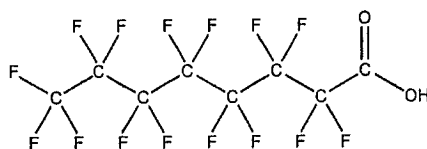
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFOA
COMPOUND: Perfluoro-n-octanoic acid

LOT NUMBER: PFOA0919

STRUCTURE:

CAS #: 335-67-1



MOLECULAR FORMULA: $C_8HF_{15}O_2$
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$

MOLECULAR WEIGHT: 414.07
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 09/06/2019
EXPIRY DATE: (mm/dd/yyyy) 09/06/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

TTM 2020-02-19
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.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager

Date: 09/09/2019
(mm/dd/yyyy)

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br-PFOSK

**Potassium Perfluorooctanesulfonate
Solution/Mixture of Linear and
Branched Isomers**

PRODUCT CODE: br-PFOSK
LOT NUMBER: brPFOSK0619
CONCENTRATION: 50 ± 2.5 µg/ml (total potassium salt)
46.4 ± 2.3 µg/ml (total PFOS anion)
SOLVENT(S): Methanol
DATE PREPARED: (mm/dd/yyyy) 06/03/2019
LAST TESTED: (mm/dd/yyyy) 06/07/2019
EXPIRY DATE: (mm/dd/yyyy) 06/07/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

*Lampoules
TTM
2020-02-19*

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 ¹⁹F-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)

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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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:

PFNA

LOT NUMBER:

PFNA0619

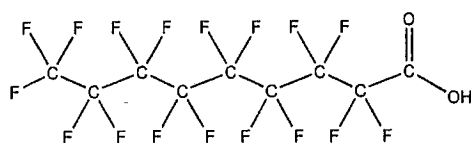
COMPOUND:

Perfluoro-n-nonanoic acid

STRUCTURE:

CAS #:

375-95-1



MOLECULAR FORMULA:

$C_9H_{17}O_2$

MOLECULAR WEIGHT:

464.08

CONCENTRATION:

$50 \pm 2.5 \mu\text{g/ml}$

SOLVENT(S):

Methanol

Water (<1%)

CHEMICAL PURITY:

>98%

LAST TESTED: (mm/dd/yyyy)

07/08/2019

EXPIRY DATE: (mm/dd/yyyy)

07/08/2024

RECOMMENDED STORAGE:

Store ampoule in a cool, dark place

*2 ampoules
TTM 2020-02-19*

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 ~ 0.2% 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:

B.G. Chittim, General Manager

Date: 07/11/2019
(mm/dd/yyyy)

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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:

L-PFNS

LOT NUMBER:

LPFNS1119

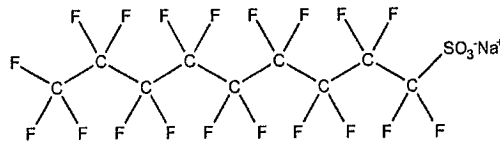
COMPOUND:

Sodium perfluoro-1-nonanesulfonate

STRUCTURE:

CAS #:

98789-57-2



MOLECULAR FORMULA:

C₉F₁₉SO₃Na

MOLECULAR WEIGHT:

572.12

CONCENTRATION:

50.0 ± 2.5 µg/ml (Na salt)
48.0 ± 2.4 µg/ml (PFNS anion)

SOLVENT(S):

Methanol

CHEMICAL PURITY:

>98%

LAST TESTED: (mm/dd/yyyy)

11/14/2019

EXPIRY DATE: (mm/dd/yyyy)

11/14/2024

RECOMMENDED STORAGE:

Store ampoule in a cool, dark place

2 ampoules

JTH 2020-02-19

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, General Manager

Date: 11/28/2019
(mm/dd/yyyy)

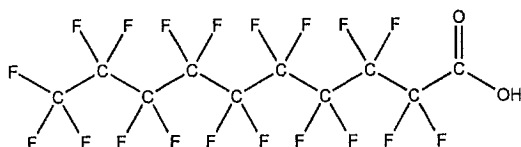
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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFDA **LOT NUMBER:** PFDA0419
COMPOUND: Perfluoro-n-decanoic acid
STRUCTURE: **CAS #:** 335-76-2



MOLECULAR FORMULA: $C_{10}HF_{19}O_2$ **MOLECULAR WEIGHT:** 514.08
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$ **SOLVENT(S):** Methanol
Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 05/01/2019
EXPIRY DATE: (mm/dd/yyyy) 05/01/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

ampoules

TTM 2020-02-19

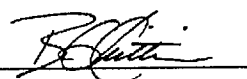
DOCUMENTATION/ DATA ATTACHED:

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 ~ 0.2% of perfluoro-n-nonanoic acid (PFNA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By:  Date: 05/02/2019
(mm/dd/yyyy)
B.G. Chittim, General Manager

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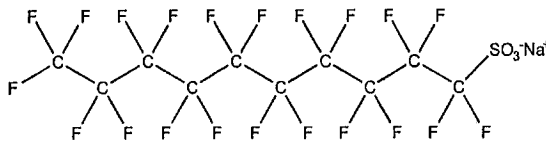


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: L-PFDS **LOT NUMBER:** LPFDS0419
COMPOUND: Sodium perfluoro-1-decanesulfonate

STRUCTURE: **CAS #:** 2806-15-7



MOLECULAR FORMULA: C₁₀F₂₁SO₃Na **MOLECULAR WEIGHT:** 622.13
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
48.2 ± 2.4 µg/ml (PFDS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 04/04/2019
EXPIRY DATE: (mm/dd/yyyy) 04/04/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

Lampoules
TTM 2020-02-19


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 ~ 0.9% of sodium perfluoro-1-dodecanesulfonate (L-PFDoS).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By:  Date: 04/30/2019
(mm/dd/yyyy)
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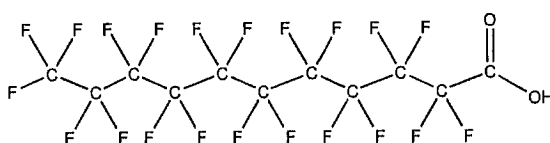


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFUdA **LOT NUMBER:** PFUdA0319
COMPOUND: Perfluoro-n-undecanoic acid

STRUCTURE: **CAS #:** 2058-94-8



MOLECULAR FORMULA: $C_{11}HF_{21}O_2$ **MOLECULAR WEIGHT:** 564.09
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$ **SOLVENT(S):** Methanol
Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 03/19/2019
EXPIRY DATE: (mm/dd/yyyy) 03/19/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
TTM 2019-02-19

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-dodecanoic acid (PFDoA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

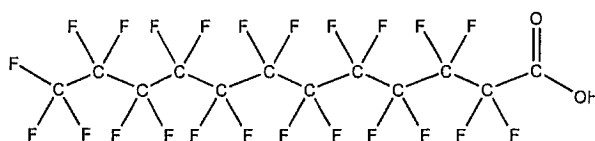
Certified By:  **Date:** 03/21/2019
(mm/dd/yyyy)
B.G. Chittim, General Manager

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PRODUCT CODE: PFD0A **LOT NUMBER:** PFD0A1019
COMPOUND: Perfluoro-n-dodecanoic acid

STRUCTURE: **CAS #:** 307-55-1



MOLECULAR FORMULA: $C_{12}H_{23}O_2$ **MOLECULAR WEIGHT:** 614.10
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$ **SOLVENT(S):** Methanol
Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/23/2019
EXPIRY DATE: (mm/dd/yyyy) 10/23/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
TTM
2020-02-19


DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager

Date: 10/24/2019
(mm/dd/yyyy)

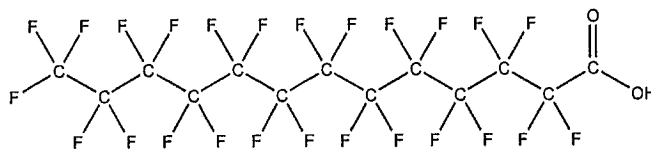


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFTTrDA **LOT NUMBER:** PFTTrDA0919
COMPOUND: Perfluoro-n-tridecanoic acid

STRUCTURE: **CAS #:** 72629-94-8



MOLECULAR FORMULA: $C_{13}H_{25}O_2$ **MOLECULAR WEIGHT:** 664.11
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$ **SOLVENT(S):** Methanol
 Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 09/26/2019
EXPIRY DATE: (mm/dd/yyyy) 09/26/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
TTM 2020-02-19

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 ($C_{11}H_{21}O_2$), ~ 0.4% of PFDaA ($C_{12}H_{23}O_2$), and ~ 0.1% of PFTeDA ($C_{14}H_{27}O_2$).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: **Date:** 10/03/2019
(mm/dd/yyyy)
 B.G. Chittim, General Manager

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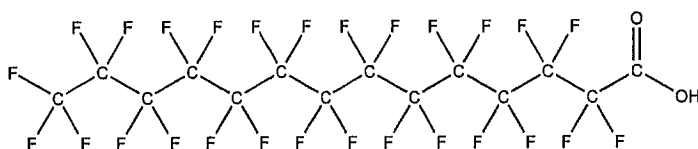


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFTeDA **LOT NUMBER:** PFTeDA0319
COMPOUND: Perfluoro-n-tetradecanoic acid

STRUCTURE: **CAS #:** 376-06-7



MOLECULAR FORMULA: $C_{14}HF_{27}O_2$ **MOLECULAR WEIGHT:** 714.11
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$ **SOLVENT(S):** Methanol
 Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 03/11/2019
EXPIRY DATE: (mm/dd/yyyy) 03/11/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
TTH 2020-02-19

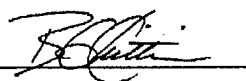
DOCUMENTATION/ DATA ATTACHED:

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 PFDa ($C_{12}HF_{23}O_2$), ~ 0.1% of PFTeDA ($C_{13}HF_{26}O_2$), and ~ 0.1% of PFHxDA ($C_{16}HF_{31}O_2$).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By:  Date: 03/28/2019
(mm/dd/yyyy)
 B.G. Chittim, General Manager

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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:

FOSA-I

LOT NUMBER:

FOSA0919I

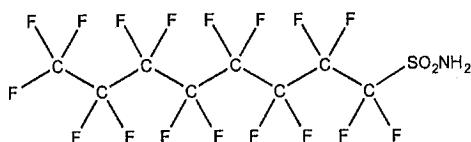
COMPOUND:

Perfluoro-1-octanesulfonamide

STRUCTURE:

CAS #:

754-91-6



MOLECULAR FORMULA:

$C_8H_2F_{17}NO_2S$

MOLECULAR WEIGHT:

499.14

CONCENTRATION:

$50 \pm 2.5 \mu\text{g/ml}$

SOLVENT(S):

Isopropanol

CHEMICAL PURITY:

>98%

LAST TESTED: (mm/dd/yyyy)

09/12/2019

EXPIRY DATE: (mm/dd/yyyy)

09/12/2024

RECOMMENDED STORAGE:

Refrigerate ampoule

2 ampoules

*19 TTM
TTM 2020-02-19 2020-02-19*

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, General Manager

Date: 09/13/2019

(mm/dd/yyyy)

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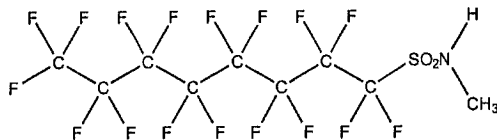
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: N-MeFOSA-M
COMPOUND: N-methylperfluoro-1-octanesulfonamide

LOT NUMBER: NMeFOSA1219M

STRUCTURE:

CAS #: 31506-32-8



MOLECULAR FORMULA: C₉H₄F₁₇NO₂S
CONCENTRATION: 50 ± 2.5 µg/ml
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 12/24/2019
EXPIRY DATE: (mm/dd/yyyy) 12/24/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

MOLECULAR WEIGHT: 513.17
SOLVENT(S): Methanol

Ampoules
TTM 2020-02-19

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, General Manager

Date: 01/02/2020
(mm/dd/yyyy)

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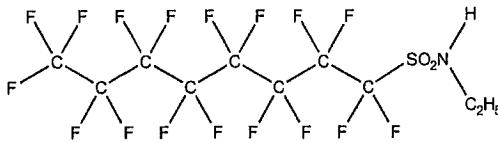
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: N-EtFOSA-M
COMPOUND: N-ethylperfluoro-1-octanesulfonamide

LOT NUMBER: NEtFOSA0519M

STRUCTURE:

CAS #: 4151-50-2



MOLECULAR FORMULA: C₁₀H₆F₁₇NO₂S
CONCENTRATION: 50 ± 2.5 µg/ml
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 05/07/2019
EXPIRY DATE: (mm/dd/yyyy) 05/07/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

MOLECULAR WEIGHT: 527.20
SOLVENT(S): Methanol

2 ampoules

TTM 2020-02-19

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 ~ 0.5% branched isomers of N-ethylperfluorooctanesulfonamide.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager

Date: 05/09/2019
(mm/dd/yyyy)

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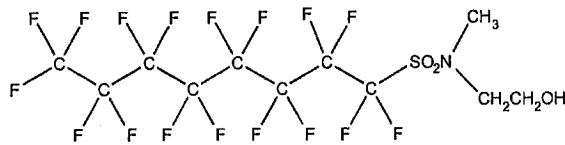


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: N-MeFOSE-M **LOT NUMBER:** NMeFOSE1219M
COMPOUND: 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol

STRUCTURE: **CAS #:** 24448-09-7



MOLECULAR FORMULA: C₁₁H₈F₁₇NO₃S **MOLECULAR WEIGHT:** 557.22
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/06/2020 (HRGC/LRMS)
12/27/2019 (LC/MS)
EXPIRY DATE: (mm/dd/yyyy) 01/06/2025
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

Ampoules
TTM 2020-02-19

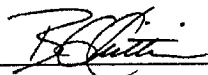
DOCUMENTATION/ DATA ATTACHED:

- Figure 1: HRGC/LRMS Data (TIC and Mass Spectrum)
- Figure 2: LC/MS Data (TIC and Mass Spectrum)
- Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- In order to see the molecular ion (adduct free), the LC mobile phase should be free of ammonium acetate buffer.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager **Date:** 01/07/2020
(mm/dd/yyyy)

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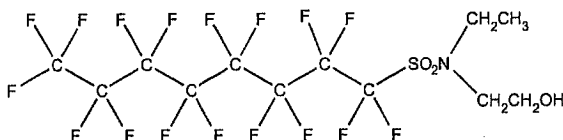


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: N-EtFOSE-M **LOT NUMBER:** NEtFOSE1219M
COMPOUND: 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol

STRUCTURE: **CAS #:** 1691-99-2



MOLECULAR FORMULA: C₁₂H₁₀F₁₇NO₃S **MOLECULAR WEIGHT:** 571.25
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/06/2020 (HRGC/LRMS) *TTM 2020-02-19*
 12/27/2019 (LC/MS)
EXPIRY DATE: (mm/dd/yyyy) 01/06/2025 *2 ampoules*
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)

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:** 01/07/2020
 B.G. Chittim, General Manager (mm/dd/yyyy)

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br-NMeFOSAA

**N-Methylperfluorooctanesulfonamidoacetic
Acid Solution/Mixture of Linear and
Branched Isomers**

PRODUCT CODE: br-NMeFOSAA
LOT NUMBER: brNMeFOSAA1119
CONCENTRATION: 50.0 ± 2.5 µg/ml
SOLVENT(S): Methanol/Water (<1%)
DATE PREPARED: (mm/dd/yyyy) 11/27/2019
LAST TESTED: (mm/dd/yyyy) 12/02/2019
EXPIRY DATE: (mm/dd/yyyy) 12/02/2024
RECOMMENDED STORAGE: Refrigerate ampoule

DESCRIPTION:

The chemical purity has been determined to be ≥98% N-methylperfluorooctanesulfonamidoacetic acid (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 ¹⁹F-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)

2 ampoules

TTM

2020-02-19

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the acetic acid moiety to its respective methyl ester.

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br-NEtFOSAA

**N-Ethylperfluorooctanesulfonamidoacetic
Acid Solution/Mixture of Linear and
Branched Isomers**

PRODUCT CODE: br-NEtFOSAA
LOT NUMBER: brNEtFOSAA0819
CONCENTRATION: 50.0 ± 2.5 µg/ml
SOLVENT(S): Methanol/Water (<1%)
DATE PREPARED: (mm/dd/yyyy) 08/20/2019
LAST TESTED: (mm/dd/yyyy) 08/20/2019
EXPIRY DATE: (mm/dd/yyyy) 08/20/2024
RECOMMENDED STORAGE: Refrigerate ampoule

2 ampoules

ITM 2020-02-19

DESCRIPTION:

The chemical purity has been determined to be ≥98% N-ethylperfluorooctanesulfonamidoacetic acid (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 ¹⁹F-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)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the acetic acid moiety to its respective methyl ester.

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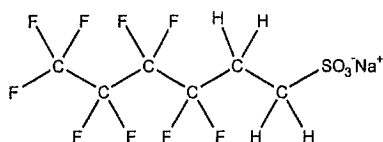


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: 4:2FTS **LOT NUMBER:** 42FTS1019
COMPOUND: Sodium 1H,1H,2H,2H-perfluorohexane sulfonate

STRUCTURE: **CAS #:** 27619-93-8



MOLECULAR FORMULA: C₆H₄F₉SO₃Na **MOLECULAR WEIGHT:** 350.13
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
 46.7 ± 2.3 µg/ml (4:2FTS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/29/2019
EXPIRY DATE: (mm/dd/yyyy) 10/29/2024
RECOMMENDED STORAGE: Refrigerate ampoule

TTM 2020-02-19
2 ampoules.

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
 Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: Date: 11/14/2019
 B.G. Chittim, General Manager (mm/dd/yyyy)

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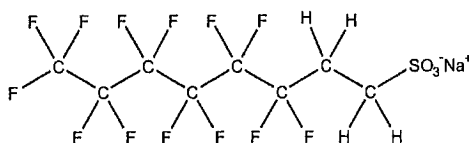


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: 6:2FTS **LOT NUMBER:** 62FTS0919
COMPOUND: Sodium 1H,1H,2H,2H-perfluorooctane sulfonate

STRUCTURE: **CAS #:** 27619-94-9



MOLECULAR FORMULA: C₈H₄F₁₃SO₃Na **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) 09/09/2019
EXPIRY DATE: (mm/dd/yyyy) 09/09/2024
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)

TTH 2020-02-19
2 ampoules.

ADDITIONAL INFORMATION:

- See page 2 for further details.

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Certified By: 
B.G. Chittim, General Manager **Date:** 09/09/2019
(mm/dd/yyyy)

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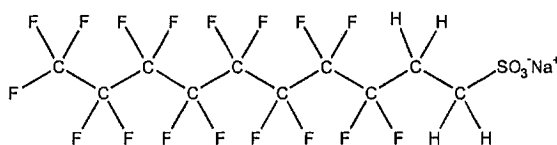


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: 8:2FTS **LOT NUMBER:** 82FTS0919
COMPOUND: Sodium 1H,1H,2H,2H-perfluorodecane sulfonate

STRUCTURE: **CAS #:** 27619-96-1



MOLECULAR FORMULA: C₁₀H₄F₁₇SO₃Na **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: (mm/dd/yyyy) 09/11/2019
EXPIRY DATE: (mm/dd/yyyy) 09/11/2024
RECOMMENDED STORAGE: Refrigerate ampoule

8.
 TTM 2020-02-21
 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: *B.G. Chittim* **Date:** 09/11/2019
 B.G. Chittim, General Manager (mm/dd/yyyy)

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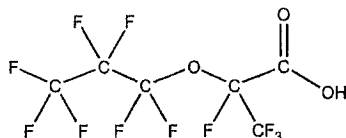


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: HFPO-DA **LOT NUMBER:** HFPODA0120
COMPOUND: 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid

STRUCTURE: **CAS #:** 13252-13-6



MOLECULAR FORMULA: C₆H₁₁O₃ **MOLECULAR WEIGHT:** 330.05
CONCENTRATION: 50.0 ± 2.5 µg/ml **SOLVENT(S):** Methanol
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/23/2020
EXPIRY DATE: (mm/dd/yyyy) 01/23/2023
RECOMMENDED STORAGE: Refrigerate ampoule

2 ampoules
TTM 2020-02-19

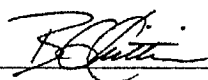
DOCUMENTATION/ DATA ATTACHED:

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.
- Product is commercially known as GenX.

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Certified By: 
B.G. Chittim, General Manager **Date:** 01/24/2020
(mm/dd/yyyy)

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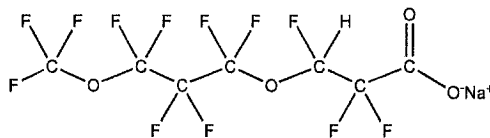


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: NaDONA **LOT NUMBER:** NaDONA0719
COMPOUND: Sodium dodecafluoro-3H-4,8-dioxanonanoate

STRUCTURE: **CAS #:** 958445-44-8
(ammonium salt)



MOLECULAR FORMULA: $C_7HF_{12}O_4Na$
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$ (Na Salt)
 $47.1 \pm 2.4 \mu\text{g/ml}$ (NaDONA anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 07/15/2019
EXPIRY DATE: (mm/dd/yyyy) 07/15/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

MOLECULAR WEIGHT: 400.05
SOLVENT(S): Methanol
Water (<1%)

Ampoules
TTM 2020-02-19


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.
- Product is commercially known as ADONA.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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Certified By: 
B.G. Chittim, General Manager **Date:** 07/25/2019
(mm/dd/yyyy)

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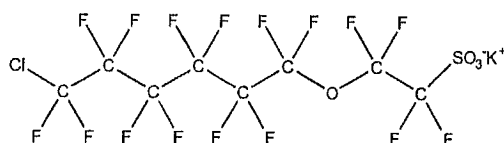


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: 9CI-PF3ONS **LOT NUMBER:** 9CIPF3ONS1019
COMPOUND: Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate

STRUCTURE: **CAS #:** 73606-19-6



MOLECULAR FORMULA: C₉F₁₆ClSO₃K **MOLECULAR WEIGHT:** 570.67
CONCENTRATION: 50.0 ± 2.5 µg/ml (K Salt) **SOLVENT(S):** Methanol
 46.6 ± 2.3 µg/ml (9CI-PF3ONS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/30/2019
EXPIRY DATE: (mm/dd/yyyy) 10/30/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
TTM 2020-02-19

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.
- This compound is the major component of the commercial formulation known as F-53B.

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Certified By: 
 B.G. Chittim, General Manager **Date:** 11/04/2019
(mm/dd/yyyy)

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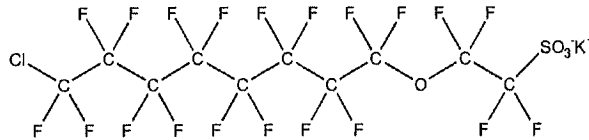


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: 11CI-PF3OUdS **LOT NUMBER:** 11CIPF3OUdS1019
COMPOUND: Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate

STRUCTURE: **CAS #:** 83329-89-9



MOLECULAR FORMULA: C₁₀F₂₀ClSO₄K **MOLECULAR WEIGHT:** 670.69
CONCENTRATION: 50.0 ± 2.5 µg/ml (K Salt) **SOLVENT(S):** Methanol
 47.1 ± 2.4 µg/ml (11CI-PF3OUdS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/23/2019
EXPIRY DATE: (mm/dd/yyyy) 10/23/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
TTM 2020-02-19

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.
- This compound is a minor component of the commercial formulation known as F-53B.

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Certified By: 
 B.G. Chittim, General Manager **Date:** 11/14/2019
(mm/dd/yyyy)

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161 PG 211

PREPARATION OF SURROGATE / INTERNAL STANDARD SPIKING SOLUTION

Solution No.: SI-7982 Prep'n Date: 2020/03/17 Expiry Date: 2023/01/08 Discard Date: _____
 Replaces Solution No.: SI-7963 Replaced by Solution: _____ Chemist: GSZ
 Sol'n. Name: PFAS I.S. SPIKING SOLUTION A
 Solution Used As: Internal Std: / Surrogate Spike: _____
 Spike Volume: - uL or mL (for I.S. uL per mL) For Instrument/Analysis: LCMS/MS
 Solvent(s): 0.3% NH₄OH in MeOH Supplier(s): See PRERE 137-15 Lot No(s): See PRERE 137-15
 Date Solvent Opened: See PRERE 131-15
 Volumetric Flask Used: 200ml Class A (5640) Syringe ID: Pipette K26250F
 Storage Location and Conditions: FZ11
 Ampule supplier; Mix Name; Catalogue No.; Lot No.; Date Rec'd.; Date Opened, Ampule Expiry Date: _____

SI-7982 (PRIST 161 p. 211)

Compound Name	ID#	Conc. (ug/mL)	Vol. of Stock standard (uL)	Dilution volume (mL)	Final Conc. (ng/mL)	Exp. date
MPFBA	S4788-1	50	500	200	125	2024/11/15
M3PFBS	S4788-2	50	500	200	125	2024/10/29
M5PFPeA	S4788-3	50	500	200	125	2025/01/22
MPFHxA	S4788-4	50	500	200	125	2024/10/11
MPFHxS	S4788-5	50	500	200	125	2024/01/10
M4PFHpA	S4788-6	50	500	200	125	2025/01/08
MPFOA	S4788-7	50	500	200	125	2024/07/10
MPFOS	S4788-8	50	500	200	125	2024/11/01
MPFNA	S4788-9	50	500	200	125	2024/12/02
MPFDA	S4788-10	50	500	200	125	2024/09/05
MPFUdA	S4788-11	50	500	200	125	2024/12/04
MPFDoA	S4788-12	50	500	200	125	2024/11/22
M2PFTeDA	S4788-13	50	500	200	125	2024/11/14
MPFOSA	S4788-14	50	500	200	125	2025/02/28
D3-N-MeFOSAA	S4788-15	50	500	200	125	2024/12/02
D5-N-EtFOSAA	S4788-16	50	500	200	125	2024/07/25
M3HFPO-DA	S4788-17	50	500	200	125	2023/01/08
D-N-MeFOSA-M	S4788-18	50	1000	200	250	2024/11/21
D-N-EtFOSA-M	S4788-19	50	1000	200	250	2024/10/18
D7-N-MeFOSE-M	S4788-20	50	1000	200	250	2024/12/16
D9-N-EtFOSE-M	S4788-21	50	1000	200	250	2024/08/15
M2-4:2FTS	S4788-22	50	1000	200	250	2024/10/29
M2-6:2FTS	S4788-23	50	1000	200	250	2024/11/21
M2-8:2FTS	S4788-24	50	1000	200	250	2024/12/24

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GSZ, 2020/03/17

PRLST 151 PG 286

PREPARATION OF CONCENTRATED STOCK STANDARDS

Solution No.: S-4788 Date: 2020/03/17 Expiry Date: See Below Discard Date: _____
Replaces Solution: _____ Replaced by Solution: _____ Chemist: GSZ

S-4788 (PRLST 151 p. 286)

Solution ID#	Compound Name	Lot#	Received date	Exp. date	Replaces Solution	Replaced by Solution	Conc (ug/mL)	Solvent	Storage
S4788-1	MPFBA	MPFBA1119	2020/03/12	2024/11/15	S4767-1		50	MeOH	FZ-11
S4788-2	M3PFBS	M3PFBS1019	2020/03/12	2024/10/29	S4767-2		50	MeOH	FZ-11
S4788-3	M5PFPeA	M5PFPeA0120	2020/03/12	2025/01/22	S4767-3		50	MeOH	FZ-11
S4788-4	MPFHxA	MPFHxA1019	2020/03/12	2024/10/11	S4767-4		50	MeOH	FZ-11
S4788-5	MPFHxS	MPFHxS0119	2020/03/12	2024/01/10	S4767-5		50	MeOH	FZ-11
S4788-6	M4PFHpA	M4PFHpA0120	2020/03/12	2025/01/08	S4767-6		50	MeOH	FZ-11
S4788-7	MPFOA	MPFOA0619	2020/03/12	2024/07/10	S4767-7		50	MeOH	FZ-11
S4788-8	MPFOS	MPFOS1119	2020/03/12	2024/11/01	S4767-8		50	MeOH	FZ-11
S4788-9	MPFNA	MPFNA1119	2020/03/12	2024/12/02	S4767-9		50	MeOH	FZ-11
S4788-10	MPFDA	MPFDA0919	2020/03/12	2024/09/05	S4767-10		50	MeOH	FZ-11
S4788-11	MPFUdA	MPFUdA1219	2020/03/12	2024/12/04	S4767-11		50	MeOH	FZ-11
S4788-12	MPFDoA	MPFDoA1119	2020/03/12	2024/11/22	S4767-12		50	MeOH	FZ-11
S4788-13	M2PFTeDA	M2PFTeDA1119	2020/03/12	2024/11/14	S4767-13		50	MeOH	FZ-11
S4788-14	MPFOA	M8FOA0220I	2020/03/12	2025/02/28	S4767-14		50	IPA	FD-59
S4788-15	D3-N-MeFOSAA	d3NMeFOSAA1119	2020/03/12	2024/12/02	S4767-15		50	MeOH	FD-59
S4788-16	D5-N-EtFOSAA	d5NEtFOSAA0719	2020/03/12	2024/07/25	S4767-16		50	MeOH	FD-59
S4788-17	M3HFPO-DA	M3HFPODA0120	2020/03/12	2023/01/08	S4767-17		50	MeOH	FD-59
S4788-18	D-N-MeFOSA-M	dNMeFOSA1119M	2020/03/12	2024/11/21	S4778-1		50	MeOH	FZ-11
S4788-19	D-N-EtFOSA-M	dNEtFOSA1019M	2020/03/12	2024/10/18	S4778-2		50	MeOH	FZ-11
S4788-20	D7-N-MeFOSE-M	d7NMeFOSE1119M	2020/03/12	2024/12/16	S4778-3		50	MeOH	FZ-11
S4788-21	D9-N-EtFOSE-M	d9NEtFOSE0819M	2020/03/12	2024/08/15	S4778-4		50	MeOH	FZ-11
S4788-22	M2-4:2FTS	M242FTS1019	2020/03/12	2024/10/29	S4778-5		50	MeOH	FD-59
S4788-23	M2-6:2FTS	M262FTS1119	2020/03/12	2024/11/21	S4778-6		50	MeOH	FD-59
S4788-24	M2-8:2FTS	M282FTS1219	2020/03/12	2024/12/24	S4778-7		50	MeOH	FD-59
Date opened (All compounds): <u>2020/03/17</u>			Supplier: Wellington			Chemist: <u>GSZ</u>			

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Notes/Comments



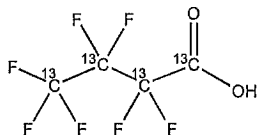
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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: MPFBA
COMPOUND: Perfluoro-n-[1,2,3,4-¹³C₄]butanoic acid

LOT NUMBER: MPFBA1119

STRUCTURE:



CAS #: Not available

Received on:
2020-03-12
ATN
1x ampoule
FZ-11

MOLECULAR FORMULA: ¹³C₄HF₇O₂
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 218.01
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%

ISOTOPIC PURITY: ≥99%¹³C
(1,2,3,4-¹³C₄)

LAST TESTED: (mm/dd/yyyy) 11/15/2019

EXPIRY DATE: (mm/dd/yyyy) 11/15/2024

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, General Manager

Date: 11/15/2019
(mm/dd/yyyy)

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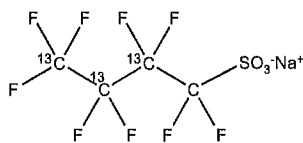


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M3PFBS **LOT NUMBER:** M3PFBS1019
COMPOUND: Sodium perfluoro-1-[2,3,4-¹³C₃]butanesulfonate

STRUCTURE: **CAS #:** Not available



Received on:
2020-03-12
ATN
1x ampoule
FB-11

MOLECULAR FORMULA: ¹³C₃¹²CF₉SO₃Na **MOLECULAR WEIGHT:** 325.06
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
46.5 ± 2.3 µg/ml (M3PFBS anion)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99% ¹³C
LAST TESTED: (mm/dd/yyyy) 10/29/2019 (2,3,4-¹³C₃)
EXPIRY DATE: (mm/dd/yyyy) 10/29/2024
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 < 0.1% of perfluoro-1-butanesulfonate.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager **Date:** 11/08/2019
(mm/dd/yyyy)

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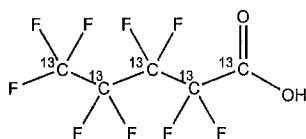
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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M5PFPeA
COMPOUND: Perfluoro-n-[¹³C₅]pentanoic acid

LOT NUMBER: M5PFPeA0120

STRUCTURE:



CAS #: Not available

Received on:
2020-03-12
ATN
1x ampoule
FZ-11

MOLECULAR FORMULA: ¹³C₅HF₉O₂
CONCENTRATION: 50.0 ± 2.5 µg/ml

MOLECULAR WEIGHT: 269.01
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/22/2020
EXPIRY DATE: (mm/dd/yyyy) 01/22/2025

ISOTOPIC PURITY: ≥99% ¹³C
(¹³C₅)

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 ~ 0.25% of perfluoro-n-pentanoic acid.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager

Date: 01/24/2020
(mm/dd/yyyy)

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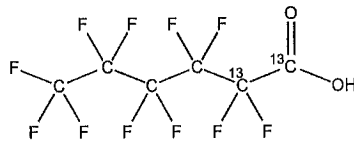
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: MPFHxA
COMPOUND: Perfluoro-n-[1,2-¹³C₂]hexanoic acid

LOT NUMBER: MPFHxA1019

STRUCTURE:



CAS #: Not available

Received on:
2020-03-12
ATN
1x ampoule
FZ-11

MOLECULAR FORMULA: ¹³C₂¹²C₄HF₁₁O₂
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 316.04
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/11/2019
EXPIRY DATE: (mm/dd/yyyy) 10/11/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

ISOTOPIC PURITY: ≥99%¹³C
(1,2-¹³C₂)

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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Certified By: 
B.G. Chittim, General Manager

Date: 10/22/2019
(mm/dd/yyyy)

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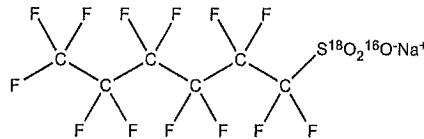
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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: MPFHxS
COMPOUND: Sodium perfluoro-1-hexane^[18O₂]sulfonate

LOT NUMBER: MPFHxS0119

STRUCTURE:



CAS #: 1585941-14-5

Received on:
2020-03-12
ATN
1x ampoule
FZ-II

MOLECULAR FORMULA: C₆F₁₃S¹⁸O₂¹⁶ONa
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt)
47.3 ± 2.4 µg/ml (MPFHxS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/10/2019
EXPIRY DATE: (mm/dd/yyyy) 01/10/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

MOLECULAR WEIGHT: 426.10
SOLVENT(S): Methanol
ISOTOPIC PURITY: >94% (¹⁸O₂)

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 (C₆F₁₃S¹⁸O₂¹⁶O) has been observed to be up to 10% lower than for PFHxS (C₆F₁₃S¹⁶O₃) when both compounds are injected together. This difference may vary between instruments.
- Contains ~ 0.6% of sodium perfluoro-1-octane^[18O₂]sulfonate (¹⁸O₂-PFOS) and ~ 0.2% of sodium perfluoro-1-heptane^[18O₂]sulfonate (¹⁸O₂-PFHpS).
- Due to the isotopic purity of the starting material (¹⁸O₂ >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, General Manager
Date: 01/21/2019
(mm/dd/yyyy)

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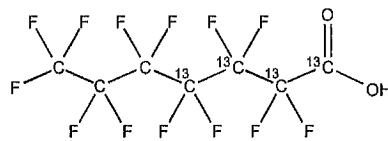
WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M4PFHpA
COMPOUND: Perfluoro-n-[1,2,3,4-¹³C₄]heptanoic acid

LOT NUMBER: M4PFHpA0120

STRUCTURE:



CAS #: Not available

Received on:
2020-03-12
ATN
1x ampoule
FZ-11

MOLECULAR FORMULA: ¹³C₄¹²C₃HF₁₃O₂
CONCENTRATION: 50.0 ± 2.5 µg/ml

MOLECULAR WEIGHT: 368.03
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/08/2020
EXPIRY DATE: (mm/dd/yyyy) 01/08/2025
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

ISOTOPIC PURITY: ≥99%¹³C
(1,2,3,4-¹³C₄)

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 ~ 0.03% of perfluoro-n-heptanoic acid.

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Certified By: 
B.G. Chittim, General Manager

Date: 01/24/2020
(mm/dd/yyyy)

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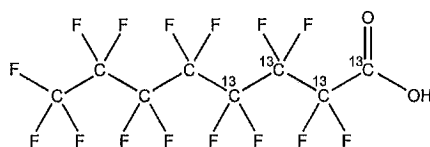
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: MPFOA
COMPOUND: Perfluoro-n-[1,2,3,4-¹³C₄]octanoic acid

LOT NUMBER: MPFOA0619

STRUCTURE:

CAS #: 960315-48-4



Received on:
2020-03-12
ATN
1x ampoule
FZ-11

MOLECULAR FORMULA: ¹³C₄¹²C₄HF₁₅O₂
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 418.04
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%

ISOTOPIC PURITY: ≥99% ¹³C
(1,2,3,4-¹³C₄)

LAST TESTED: (mm/dd/yyyy) 07/10/2019

EXPIRY DATE: (mm/dd/yyyy) 07/10/2024

RECOMMENDED STORAGE: Store ampoule in a cool, dark place

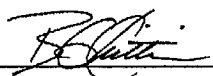
DOCUMENTATION/ DATA ATTACHED:

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 native perfluoro-n-octanoic acid (PFOA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager

Date: 07/11/2019
(mm/dd/yyyy)

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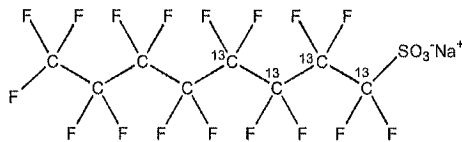


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LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFOS **LOT NUMBER:** MPFOS1119
COMPOUND: Sodium perfluoro-1-[1,2,3,4-¹³C₄]octanesulfonate

STRUCTURE: **CAS #:** 960315-53-1



Received on:
2020/03/12
ATN
1x ampoule
FZ-11

MOLECULAR FORMULA:	¹³ C ₄ ¹² C ₄ F ₁₇ SO ₃ Na	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- ¹³ C ₄)
LAST TESTED: (mm/dd/yyyy)	11/01/2019		
EXPIRY DATE: (mm/dd/yyyy)	11/01/2024		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

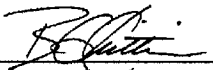
DOCUMENTATION/ DATA ATTACHED:

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 ~ 0.3% Sodium perfluoro-1-[1,2,3-¹³C₃]heptanesulfonate.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By:  **Date:** 11/05/2019
 B.G. Chittim, General Manager (mm/dd/yyyy)

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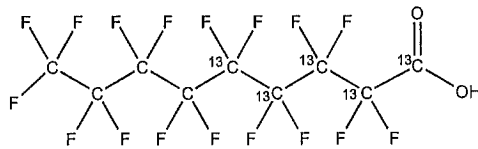
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: MPFNA
COMPOUND: Perfluoro-n-[1,2,3,4,5-¹³C₆]nonanoic acid

LOT NUMBER: MPFNA1119

STRUCTURE:

CAS #: Not available



Received: on:
2020-03-12
ATN
1x ampoule
FZ-11

MOLECULAR FORMULA: ¹³C₆¹²C₄HF₁₇O₂
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 469.04
SOLVENT(S): Methanol
Water (<1%)
ISOTOPIC PURITY: ≥99%¹³C
(1,2,3,4,5-¹³C₆)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 12/02/2019
EXPIRY DATE: (mm/dd/yyyy) 12/02/2024
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-[1,2,3,4-¹³C₄]octanoic acid (MPFOA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager

Date: 12/05/2019
(mm/dd/yyyy)

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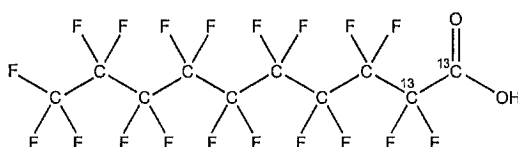
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: MPFDA
COMPOUND: Perfluoro-n-[1,2-¹³C₂]decanoic acid

LOT NUMBER: MPFDA0919

STRUCTURE:

CAS #: Not available



Received on:
2020-03-12
ATN
1x ampoule
FZ-11

MOLECULAR FORMULA: ¹³C₂¹²C₈HF₁₉O₂
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 516.07
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%

ISOTOPIC PURITY: ≥99% ¹³C
(1,2-¹³C₂)

LAST TESTED: (mm/dd/yyyy) 09/05/2019

EXPIRY DATE: (mm/dd/yyyy) 09/05/2024

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, General Manager

Date: 09/09/2019
(mm/dd/yyyy)

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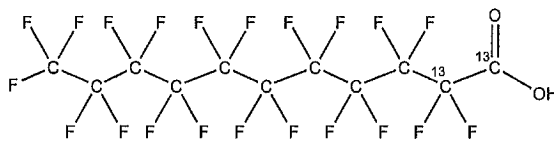
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: MPFUdA
COMPOUND: Perfluoro-n-[1,2-¹³C₂]undecanoic acid

LOT NUMBER: MPFUdA1219

STRUCTURE:

CAS #: Not available



Received on:
2020-03-12
ATN
1x ampoule
FZ-11

MOLECULAR FORMULA: ¹³C₂¹²C₉HF₂₁O₂
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 566.08
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%

ISOTOPIC PURITY: ≥99% ¹³C
(1,2-¹³C₂)

LAST TESTED: (mm/dd/yyyy) 12/04/2019

EXPIRY DATE: (mm/dd/yyyy) 12/04/2024

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.
- Presence of 1-¹³C₁-PFUdA and 2-¹³C₁-PFUdA (~0.6% total; see Figure 2) are due to the isotopic purity of the ¹³C-precursor.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager

Date: 12/06/2019
(mm/dd/yyyy)

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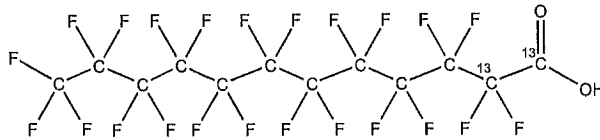
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFDoA
COMPOUND: Perfluoro-n-[1,2-¹³C₂]dodecanoic acid

LOT NUMBER: MPFDoA1119

STRUCTURE:

CAS #: Not available



Received on:
2020-03-12
ATN
1x ampoule
FZ-11

MOLECULAR FORMULA: ¹³C₂¹²C₁₀HF₂₃O₂
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 616.08
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 11/22/2019
EXPIRY DATE: (mm/dd/yyyy) 11/22/2024

ISOTOPIC PURITY: ≥99% ¹³C
(1,2-¹³C₂)

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, General Manager
Date: 11/27/2019
(mm/dd/yyyy)

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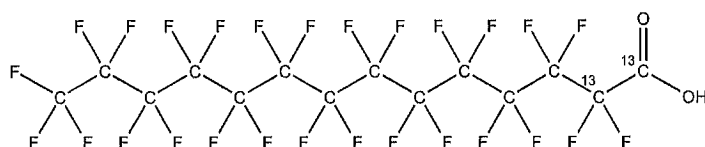


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M2PFTeDA **LOT NUMBER:** M2PFTeDA1119
COMPOUND: Perfluoro-n-[1,2-¹³C₂]tetradecanoic acid

STRUCTURE: **CAS #:** Not available



Received on:
2020-03-12
ATN
1x ampoule
FZ-11

MOLECULAR FORMULA: ¹³C₂¹²C₁₂HF₂₇O₂ **MOLECULAR WEIGHT:** 716.10
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
Water (<1%)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99% ¹³C
(1,2-¹³C₂)
LAST TESTED: (mm/dd/yyyy) 11/14/2019
EXPIRY DATE: (mm/dd/yyyy) 11/14/2024
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-tetradecanoic acid.

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Certified By: 
B.G. Chittim, General Manager **Date:** 11/26/2019
(mm/dd/yyyy)

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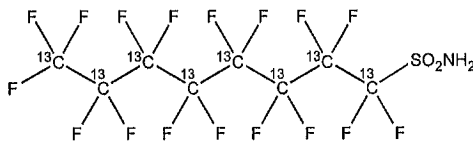
CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M8FOSA-I
COMPOUND: Perfluoro-1-[¹³C₈]octanesulfonamide

LOT NUMBER: M8FOSA0220I

STRUCTURE:

CAS #: 1365803-60-6



Received on:
2020-03-12
ATN
1x ampoule
FD-59

MOLECULAR FORMULA: ¹³C₈H₂F₁₇NO₂S
CONCENTRATION: 50.0 ± 2.5 µg/ml
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 02/28/2020
EXPIRY DATE: (mm/dd/yyyy) 02/28/2025
RECOMMENDED STORAGE: Refrigerate ampoule

MOLECULAR WEIGHT: 507.09
SOLVENT(S): Isopropanol
ISOTOPIC PURITY: ≥99% ¹³C
(¹³C₈)

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 1.2% of perfluoro-1-[¹³C₄]octanesulfonamide and ~ 0.03% of perfluoro-1-[¹³C₇]heptanesulfonamide.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager

Date: 03/03/2020
(mm/dd/yyyy)

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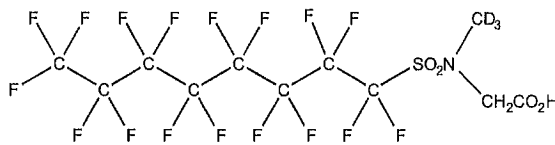


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: d3-N-MeFOSAA **LOT NUMBER:** d3NMeFOSAA1119
COMPOUND: N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid

STRUCTURE: **CAS #:** 1400690-70-1



Received on:
2020-03-12
ATN
1 x ampoule
FD-59

MOLECULAR FORMULA: C₁₁D₃H₃F₁₇NO₄S **MOLECULAR WEIGHT:** 574.23
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
Water (<1%)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥98% ²H₃
LAST TESTED: (mm/dd/yyyy) 12/02/2019
EXPIRY DATE: (mm/dd/yyyy) 12/02/2024
RECOMMENDED STORAGE: Refrigerate ampoule

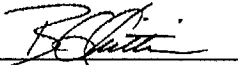
DOCUMENTATION/ DATA ATTACHED:

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, General Manager **Date:** 12/04/2019
(mm/dd/yyyy)

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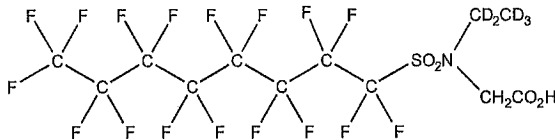


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: d5-N-EtFOSAA **LOT NUMBER:** d5NEtFOSAA0719
COMPOUND: N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid

STRUCTURE: **CAS #:** Not available



Received on:
2020-03-12
ATN
1x ampoule
FD-59

MOLECULAR FORMULA: C₁₂D₅H₃F₁₇NO₄S
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 590.26
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 07/25/2019
EXPIRY DATE: (mm/dd/yyyy) 07/25/2024
RECOMMENDED STORAGE: Refrigerate ampoule

ISOTOPIC PURITY: ≥98% ²H₅

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, General Manager

Date: 07/26/2019
(mm/dd/yyyy)

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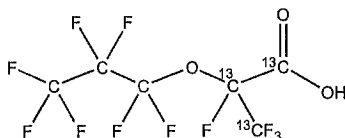


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M3HFPO-DA **LOT NUMBER:** M3HFPODA0120
COMPOUND: 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-¹³C₃-propanoic acid

STRUCTURE: **CAS #:** Not available



Received on:
2020-03-12
ATN
1 x ampoule
FD-59

MOLECULAR FORMULA: ¹³C₃¹²C₃HF₁₁O₃ **MOLECULAR WEIGHT:** 333.03
CONCENTRATION: 50.0 ± 2.5 µg/ml **SOLVENT(S):** Methanol
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99% ¹³C
LAST TESTED: (mm/dd/yyyy) 01/08/2020 **(¹³C₃)**
EXPIRY DATE: (mm/dd/yyyy) 01/08/2023
RECOMMENDED STORAGE: Refrigerate ampoule


DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 1.9% of the linear M3HFPO-DA isomer.
- Product is commercially known as GenX.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager **Date:** 01/13/2020
(mm/dd/yyyy)

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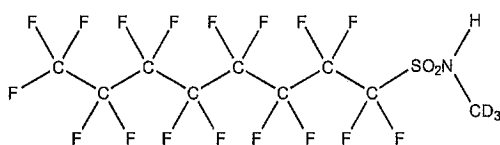
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: d-N-MeFOSA-M
COMPOUND: N-methyl-d₃-perfluoro-1-octanesulfonamide

LOT NUMBER: dNMeFOSA1119M

STRUCTURE:

CAS #: Not available



Received on:
2020/03/12
ATN
2x ampoule
FZ-11

MOLECULAR FORMULA: C₉D₃HF₁₇NO₂S
CONCENTRATION: 50 ± 2.5 µg/ml
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 11/21/2019
EXPIRY DATE: (mm/dd/yyyy) 11/21/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

MOLECULAR WEIGHT: 516.19
SOLVENT(S): Methanol
ISOTOPIC PURITY: ≥98% ²H₃

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, General Manager

Date: 11/25/2019
(mm/dd/yyyy)

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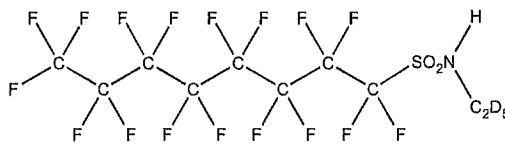
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: d-N-EtFOSA-M
COMPOUND: N-ethyl-d₅-perfluoro-1-octanesulfonamide

LOT NUMBER: dNEtFOSA1019M

STRUCTURE:

CAS #: Not available



Received on:
2020/03/12
ATN
2x ampoule
FZ-11

MOLECULAR FORMULA: C₁₀D₅HF₁₇NO₂S
CONCENTRATION: 50 ± 2.5 µg/ml
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/18/2019
EXPIRY DATE: (mm/dd/yyyy) 10/18/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

MOLECULAR WEIGHT: 532.23
SOLVENT(S): Methanol
ISOTOPIC PURITY: ≥98% ²H₅

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, General Manager

Date: 10/21/2019
(mm/dd/yyyy)

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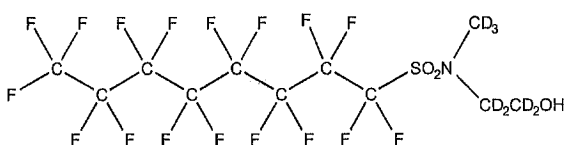


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: d7-N-MeFOSE-M **LOT NUMBER:** d7NMeFOSE1119M
COMPOUND: 2-(N-methyl-d3-perfluoro-1-octanesulfonamido)ethan-d4-ol

STRUCTURE: **CAS #:** 1265205-95-5



Received on: 2020/03/12
 ATN
 2x Ampoule
 FZ-11

MOLECULAR FORMULA: C₁₁D₇HF₁₇NO₃S **MOLECULAR WEIGHT:** 564.27
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥98% ²H₇
LAST TESTED: (mm/dd/yyyy) 12/16/2019 (HRGC/LRMS)
 12/03/2019 (LC/MS)
EXPIRY DATE: (mm/dd/yyyy) 12/16/2024
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)

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: 
 B.G. Chittim, General Manager **Date:** 12/18/2019
 (mm/dd/yyyy)

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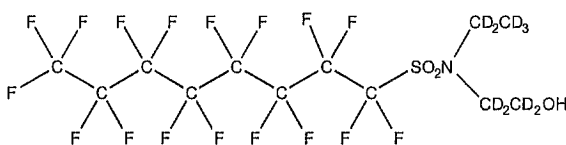


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: d9-N-EtFOSE-M **LOT NUMBER:** d9NEtFOSE0819M
COMPOUND: 2-(N-ethyl-d5-perfluoro-1-octanesulfonamido)ethan-d4-ol

STRUCTURE: **CAS #:** Not available



*Received On:
2010-03-12
Tx4
2x Ampoules
FZ-11*

MOLECULAR FORMULA: C₁₂D₉HF₁₇NO₃S
CONCENTRATION: 50 ± 2.5 µg/ml
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 08/15/2019 (HRGC/LRMS)
 08/14/2019 (LC/MS)
EXPIRY DATE: (mm/dd/yyyy) 08/15/2024
RECOMMENDED STORAGE: Store ampoules in a cool, dark place

MOLECULAR WEIGHT: 580.31
SOLVENT(S): Methanol
ISOTOPIC PURITY: ≥98% ²H₉

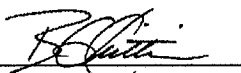
DOCUMENTATION/ DATA ATTACHED:

- 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: 
 B.G. Chittim, General Manager **Date:** 08/15/2019
 (mm/dd/yyyy)

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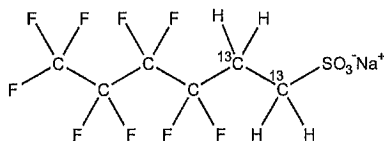


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M2-4:2FTS **LOT NUMBER:** M242FTS1019
COMPOUND: Sodium 1H,1H,2H,2H-perfluoro-[1,2-¹³C₂]hexane sulfonate

STRUCTURE:



CAS #: Not available

Received on:
2020-03-12
ATN
2x ampoule
FD-59

MOLECULAR FORMULA: ¹³C₂¹²C₄H₄F₉SO₃Na
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt)
46.7 ± 2.3 µg/ml (M2-4:2FTS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/29/2019
EXPIRY DATE: (mm/dd/yyyy) 10/29/2024
RECOMMENDED STORAGE: Refrigerate ampoule

MOLECULAR WEIGHT: 352.12
SOLVENT(S): Methanol
ISOTOPIC PURITY: ≥99% ¹³C
(1,2-¹³C₂)

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 4:2FTS contains 4.22% of ³⁴S (due to natural isotopic abundance) therefore both native 4:2FTS and M2-4:2FTS will produce signals in the m/z 329 to m/z 309 channel during SRM analysis. We recommend using the m/z 329 to m/z 81 transition to monitor for M2-4:2FTS 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, General Manager

Date: 11/05/2019
(mm/dd/yyyy)

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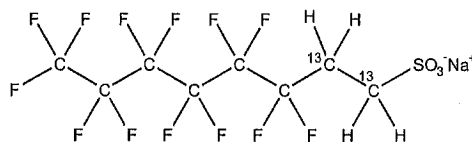


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M2-6:2FTS **LOT NUMBER:** M262FTS1119
COMPOUND: Sodium 1H,1H,2H,2H-perfluoro-[1,2-¹³C₂]octane sulfonate

STRUCTURE: **CAS #:** Not available



Received on:
2020-03-12
ATN
2x ampoule
FD-59

MOLECULAR FORMULA: ¹³C₂¹²C₆H₄F₁₃SO₃Na **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% ¹³C
LAST TESTED: (mm/dd/yyyy) 11/21/2019 (1,2-¹³C₂)
EXPIRY DATE: (mm/dd/yyyy) 11/21/2024
RECOMMENDED STORAGE: Refrigerate ampoule

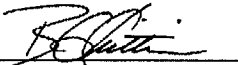
DOCUMENTATION/ DATA ATTACHED:

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.
- The native 6:2FTS contains 4.22% of ³⁴S (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, General Manager **Date:** 11/25/2019
(mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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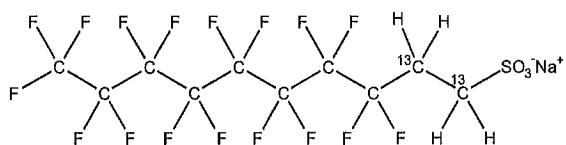


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M2-8:2FTS **LOT NUMBER:** M282FTS1219
COMPOUND: Sodium 1H,1H,2H,2H-perfluoro-[1,2-¹³C₂]decane sulfonate

STRUCTURE: **CAS #:** Not available



Received on:
2020-03-12
ATN
2x ampoule
FD-59

MOLECULAR FORMULA: ¹³C₂¹²C₈H₄F₁₇SO₃Na **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% ¹³C
LAST TESTED: (mm/dd/yyyy) 12/24/2019 (1,2-¹³C₂)
EXPIRY DATE: (mm/dd/yyyy) 12/24/2024
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.
- The native 8:2FTS contains 4.22% of ³⁴S (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:** 01/02/2020
 B.G. Chittim, General Manager (mm/dd/yyyy)

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PREPARATION OF SPIKING STANDARD SOLUTION

2021 10 20 10:11

Solution No.: SK-9592 Prep'n Date: 2020/03/25 Expiry Date: 03/25 Discard Date: _____

Replaces Solution No.: SK-9581 Replaced by Solution: SK-9592 Chemist: EG

Solution Name: Acrylamide w.s. B Solvent(s): D; H₂O

Solvent Supplier(s): J - H₂O Solvent Lot No(s): _____

Date Opened: _____ Volumetric Flask Used: 10-100A Volume: 10 mL Spike Volume: _____ uL / mL *

Syringe ID: Pipette K26250F

Storage Location and Conditions: _____

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)*
<u>Acrylamide w.s. A</u>	<u>SK-9591</u>	<u>10</u>	<u>1</u>	<u>1</u>	<u>-</u>

Notes: _____

Solution No.: SK-9593 Prep'n Date: 2020/03/25 Expiry Date: 03/25 Discard Date: _____

Replaces Solution No.: SK-9547 Replaced by Solution: _____ Chemist: J03

Solution Name: Comp. PFAS working sol. C Solvent(s): 0.3% NH₄OH in MeOH

Solvent Supplier(s): PRLRE 137 57 Solvent Lot No(s): PRLRE 137 57

Date Opened: PRLRE 137 57

Volumetric Flask Used: CLASS A (5630) Volume: 10 mL Spike Volume: _____ uL / mL *

Syringe ID: K26250F

Storage Location and Conditions: FZ-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)*
<u>Comp. PFAS working sol. A</u>	<u>1-5970</u>	<u>1</u>	<u>1</u>	<u>100ug/ml</u>	<u>-</u>

Notes: _____

* = Specify Units

PREPARATION OF STANDARDS OF INTERMEDIARY CONCENTRATION

PRLST 150 PG. 325

Solution No.: I-5970 Date: 2020/03/25 Expiry Date: 2021/03/25 Discard Date: _____
 Replaces Solution No.: I-5957 Replaced by Solution: _____ Chemist: JDZ
 Compound(s)/Solution Name: Compd. PFAS working sol. 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
 Pipette/Syringe ID K26250F
 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: PFAS Volumetric Flask: CLASS A 25mL
 (Identify by serial number or other unique ID)
 Solvent Supplier: PRLRG 137 57 Lot No.: PRLRG 137 57
 Date Opened: PRLRG 137 57
 Storage Location: FZ-11 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

I-5970 (See PRLST 150 325)

Compound Name	ID#	Conc. (ug/mL)	Vol. of Stock standard (uL)	Final Conc. (ug/mL)	Exp. date
PFBA	S4779-1	50	500	1	2024/07/10
L-PFBS	S4779-2	44.4	562.5	1	2024/07/10
PFPeA	S4779-3	50	500	1	2024/09/04
L-PFPeS	S4779-4	47	532.5	1	2024/07/08
PFHxA	S4779-5	50	500	1	2024/08/08
br-PFHxSk	S4779-6	45.7	547.5	1	2023/10/23
PFHpA	S4779-7	50	500	1	2024/10/23
L-PFHpS	S4779-8	47.7	525	1	2024/08/16
PFOA	S4779-9	50	500	1	2024/09/06
brPFOSK	S4779-10	46.5	537.5	1	2024/06/07
PFNA	S4779-11	50	500	1	2024/07/08
L-PFNS	S4779-12	48.1	520	1	2024/11/14
PFDA	S4779-13	50	500	1	2024/05/01
L-PFDS	S4779-14	48.2	517.5	1	2024/04/04
PFUdA	S4779-15	50	500	1	2024/03/19
PFDoA	S4779-16	50	500	1	2024/10/23
PFTTrDA	S4779-17	50	500	1	2024/09/26
PFTeDA	S4779-18	50	500	1	2024/03/11
PFOSA (FOSA-I)	S4779-19	50	500	1	2024/09/12
N-MeFOSA-M	S4779-20	50	500	1	2024/12/24
N-EtFOSA-M	S4779-21	50	500	1	2024/05/07
N-MeFOSE-M	S4779-22	50	500	1	2025/01/06
N-EtFOSE-M	S4779-23	50	500	1	2025/01/06
br-NMeFOSAA	S4779-24	50	500	1	2024/12/02
br-NEtFOSAA	S4779-25	50	500	1	2024/08/20
4:2FTS	S4779-26	46.9	532.5	1	2024/10/29
6:2FTS	S4779-27	47.6	525	1	2024/09/09
8:2FTS	S4779-28	48	520	1	2024/09/11
HFPO-DA	S4779-29	50	500	1	2023/01/23
NaDONA	S4779-30	47.3	527.5	1	2024/07/15
9CI-PF3ONS	S4779-31	46.7	535	1	2024/10/30
11CI-PF3OUDS	S4779-32	47.2	530	1	2024/10/23

no writing on bottom page

JDZ, 2020/03/25

PRLST 151 PG 28C

PREPARATION OF CONCENTRATED STOCK STANDARDS

Solution No.: S-4779 Date: 2020/03/05 Expiry Date: See Below Discard Date: _____
Replaces Solution: _____ Replaced by Solution: _____ Chemist: GSZ

S-4779 (PRLST 151 g. 28C)

Solution ID#	Compound Name	Lot#	Received date	Exp. date	Replaces Solution	Replaced by Solution	Conc. (ug/mL)	Solvent	Storage
S4779-1	PFBA	PFBA0619	2020/02/19	2024/07/10	S4754-1		50	MeOH	FZ-11
S4779-2	L-PFBS	LPFBS0719	2020/02/19	2024/07/10	S4754-2		44.4	MeOH	FZ-11
S4779-3	PFPeA	PFPeA0919	2020/02/19	2024/09/04	S4754-3		50	MeOH	FZ-11
S4779-4	L-PFPeS	LPFPeS0619	2020/02/19	2024/07/08	S4754-4		47	MeOH	FZ-11
S4779-5	PFHxA	PFHxA0719	2020/02/19	2024/08/08	S4754-5		50	MeOH	FZ-11
S4779-6	br-PFHxSk	brPFHxSK1019	2020/02/19	2023/10/23	S4754-6		45.7	MeOH	FZ-11
S4779-7	PFHpA	PFHpA1019	2020/02/19	2024/10/23	S4754-7		50	MeOH	FZ-11
S4779-8	L-PFHpS	LPFHpS0819	2020/02/19	2024/08/16	S4754-8		47.7	MeOH	FZ-11
S4779-9	PFOA	PFOA0919	2020/02/19	2024/09/06	S4754-9		50	MeOH	FZ-11
S4779-10	brPFOSK	brPFOSK0619	2020/02/19	2024/06/07	S4754-10		46.5	MeOH	FZ-11
S4779-11	PFNA	PFNA0619	2020/02/19	2024/07/08	S4754-11		50	MeOH	FZ-11
S4779-12	L-PFNS	LPFNS1119	2020/02/19	2024/11/14	S4754-12		48.1	MeOH	FZ-11
S4779-13	PFDA	PFDA0419	2020/02/19	2024/05/01	S4754-13		50	MeOH	FZ-11
S4779-14	L-PFDS	LPFDS0419	2020/02/19	2024/04/04	S4754-14		48.2	MeOH	FZ-11
S4779-15	PFUdA	PFUdA0319	2020/02/19	2024/03/19	S4754-15		50	MeOH	FZ-11
S4779-16	PFDaA	PFDaA1019	2020/02/19	2024/10/23	S4754-16		50	MeOH	FZ-11
S4779-17	PFTrDA	PFTrDA0919	2020/02/19	2024/09/26	S4754-17		50	MeOH	FZ-11
S4779-18	PFTeDA	PFTeDA0319	2020/02/19	2024/03/11	S4754-18		50	IPA	FD-59
S4779-19	PFOSA (FOSA-I)	FOSA0919I	2020/02/19	2024/09/12	S4754-19		50	MeOH	FZ-11
S4779-20	N-MeFOSA-M	NMeFOSA1219M	2020/02/19	2024/12/24	S4754-20		50	MeOH	FZ-11
S4779-21	N-EtFOSA-M	NEtFOSA0519M	2020/02/19	2024/05/07	S4754-21		50	MeOH	FZ-11
S4779-22	N-MeFOSE-M	NMeFOSE1219M	2020/02/19	2025/01/06	S4754-22		50	MeOH	FZ-11
S4779-23	N-EtFOSE-M	NEtFOSE1219M	2020/02/19	2025/01/06	S4754-23		50	MeOH	FZ-11
S4779-24	br-NMeFOSAA	br-NMeFOSAA1119	2020/02/19	2024/12/02	S4754-24		50	MeOH	FD-59
S4779-25	br-NEtFOSAA	br-NEtFOSAA0819	2020/02/19	2024/08/20	S4754-25		50	MeOH	FD-59
S4779-26	4:2FTS	42FTS1019	2020/02/19	2024/10/29	S4754-26		46.9	MeOH	FD-59
S4779-27	6:2FTS	62FTS0919	2020/02/19	2024/09/09	S4754-27		47.6	MeOH	FD-59
S4779-28	8:2FTS	82FTS0919	2020/02/21	2024/09/11	S4754-28		48	MeOH	FD-59
S4779-29	HFPO-DA	HFPODA0120	2020/02/19	2023/01/23	S4754-29		50	MeOH	FD-59
S4779-30	NaDONA	NaDONA0719	2020/02/19	2024/07/15	S4754-30		47.3	MeOH	FZ-11
S4779-31	9Cl-PF3ONS	9ClPF3ONS1019	2020/02/19	2024/10/30	S4754-31		46.7	MeOH	FZ-11
S4779-32	11Cl-PF3OUdS	11Cl-PF3OUdS1019	2020/02/19	2024/10/23	S4754-32		47.2	MeOH	FZ-11
Date Opened (All compounds): <u>2020/03/05</u>			Supplier (All compounds): <u>Wellington</u>			Chemist: <u>GSZ</u>			

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Notes/Comments



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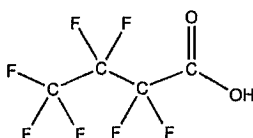
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFBA
COMPOUND: Perfluoro-n-butanoic acid

LOT NUMBER: PFBA0619

STRUCTURE:

CAS #: 375-22-4



MOLECULAR FORMULA: C₄HF₇O₂
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 214.04
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 07/10/2019
EXPIRY DATE: (mm/dd/yyyy) 07/10/2024
RECOMMENDED STORAGE: Store ampoules in a cool, dark place

TTH 2020-02-19
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.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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Certified By: 
B.G. Chittim, General Manager

Date: 07/22/2019
(mm/dd/yyyy)

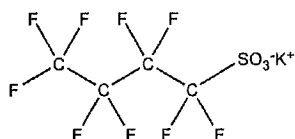
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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: L-PFBS **LOT NUMBER:** LPFBS0719
COMPOUND: Potassium perfluoro-1-butanesulfonate
STRUCTURE: **CAS #:** 29420-49-3



MOLECULAR FORMULA: C₄F₉SO₃K **MOLECULAR WEIGHT:** 338.19
CONCENTRATION: 50.0 ± 2.5 µg/ml (K salt) **SOLVENT(S):** Methanol
44.2 ± 2.2 µg/ml (PFBS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 07/10/2019
EXPIRY DATE: (mm/dd/yyyy) 07/10/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

Lampoules
TTM 2020-02-19


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 ~ 0.2% of sodium perfluoro-1-nonanesulfonate (L-PFNS).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By:  **Date:** 08/06/2019
B.G. Chittim, General Manager (mm/dd/yyyy)

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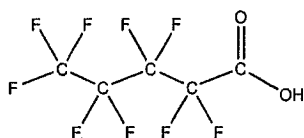


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFPeA **LOT NUMBER:** PFPeA0919
COMPOUND: Perfluoro-n-pentanoic acid

STRUCTURE: **CAS #:** 2706-90-3



MOLECULAR FORMULA: C₅HF₉O₂ **MOLECULAR WEIGHT:** 264.05
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 09/04/2019
EXPIRY DATE: (mm/dd/yyyy) 09/04/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

*2 ampoules
FTM 2020-02-19*

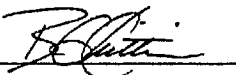
DOCUMENTATION/ DATA ATTACHED:

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 C₉H₂F₈O₂ (hydrido - derivative) as measured by ¹⁹F NMR.

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Certified By: 
B.G. Chittim, General Manager **Date:** 09/05/2019
(mm/dd/yyyy)

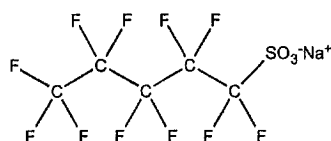
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WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: L-PFPeS **LOT NUMBER:** LPFPeS0619
COMPOUND: Sodium perfluoro-1-pentanesulfonate
STRUCTURE: **CAS #:** 630402-22-1



MOLECULAR FORMULA: C₅F₁₁SO₃Na **MOLECULAR WEIGHT:** 372.09
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
46.9 ± 2.3 µg/ml (PFPeS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 07/08/2019
EXPIRY DATE: (mm/dd/yyyy) 07/08/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
TTM 2020-02-19

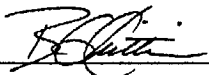
DOCUMENTATION/ DATA ATTACHED:

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 ~ 0.3% of sodium perfluoro-1-nonanesulfonate (L-PFNS).

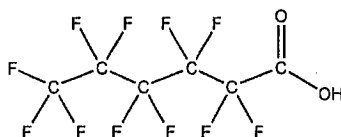
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Certified By: 
B.G. Chittim, General Manager **Date:** 07/11/2019
(mm/dd/yyyy)

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PRODUCT CODE: PFHxA **LOT NUMBER:** PFHxA0719
COMPOUND: Perfluoro-n-hexanoic acid
STRUCTURE: **CAS #:** 307-24-4



MOLECULAR FORMULA: C₆HF₁₁O₂ **MOLECULAR WEIGHT:** 314.05
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 08/08/2019
EXPIRY DATE: (mm/dd/yyyy) 08/08/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

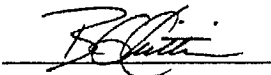
Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

2 ampoules
TTM 2020-02-19

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 1.0% of branched isomers.

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Certified By: 
B.G. Chittim, General Manager Date: 08/15/2019
(mm/dd/yyyy)

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br-PFHxSK

**Potassium Perfluorohexanesulfonate
Solution/Mixture of Linear and
Branched Isomers**

PRODUCT CODE: br-PFHxSK
LOT NUMBER: brPFHxSK1019
CONCENTRATION: 50.0 ± 2.5 µg/ml (total potassium salt)
45.5 ± 2.3 µg/ml (total PFHxS anion)
SOLVENT(S): Methanol
DATE PREPARED: (mm/dd/yyyy) 10/21/2019
LAST TESTED: (mm/dd/yyyy) 10/23/2019
EXPIRY DATE: (mm/dd/yyyy) 10/23/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

Sampoules
TTH 2020-02-19

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 ¹⁹F-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)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 0.3% of perfluoro-n-hexanoic acid and ~ 0.3% of perfluoro-1-pentanesulfonate.
- CAS#: 3871-99-6 (for linear isomer; potassium salt).

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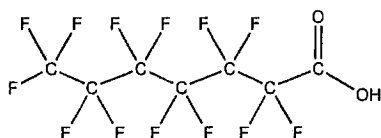


PRODUCT CODE: PFHpA
COMPOUND: Perfluoro-n-heptanoic acid

LOT NUMBER: PFHpA1019

STRUCTURE:

CAS #: 375-85-9



MOLECULAR FORMULA: C₇HF₁₃O₂
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 364.06
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/23/2019
EXPIRY DATE: (mm/dd/yyyy) 10/23/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules.
TJM 2020-02-19

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager

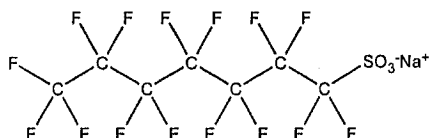
Date: 10/24/2019
(mm/dd/yyyy)

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PRODUCT CODE: L-PFHpS **LOT NUMBER:** LPFHpS0819
COMPOUND: Sodium perfluoro-1-heptanesulfonate

STRUCTURE: **CAS #:** 21934-50-9



MOLECULAR FORMULA: $C_7F_{16}SO_3Na$ **MOLECULAR WEIGHT:** 472.10
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
47.6 ± 2.4 µg/ml (PFHpS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 08/16/2019
EXPIRY DATE: (mm/dd/yyyy) 08/16/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

Lampoules
TTM 2020-02-19

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:** 08/29/2019
B.G. Chittim, General Manager (mm/dd/yyyy)

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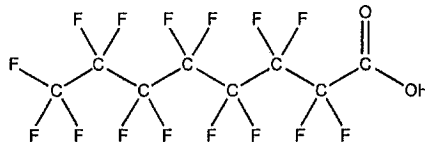
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFOA
COMPOUND: Perfluoro-n-octanoic acid

LOT NUMBER: PFOA0919

STRUCTURE:

CAS #: 335-67-1



MOLECULAR FORMULA: $C_8H_{15}F_{15}O_2$
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$

MOLECULAR WEIGHT: 414.07
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 09/06/2019
EXPIRY DATE: (mm/dd/yyyy) 09/06/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

TTM 2020-02-19
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.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager

Date: 09/09/2019
(mm/dd/yyyy)

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br-PFOSK

**Potassium Perfluorooctanesulfonate
Solution/Mixture of Linear and
Branched Isomers**

PRODUCT CODE: br-PFOSK
LOT NUMBER: brPFOSK0619
CONCENTRATION: 50 ± 2.5 µg/ml (total potassium salt)
46.4 ± 2.3 µg/ml (total PFOS anion)
SOLVENT(S): Methanol
DATE PREPARED: (mm/dd/yyyy) 06/03/2019
LAST TESTED: (mm/dd/yyyy) 06/07/2019
EXPIRY DATE: (mm/dd/yyyy) 06/07/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

*Ampoules
TTM
2020-02-19*

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 ¹⁹F-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)

ADDITIONAL INFORMATION:

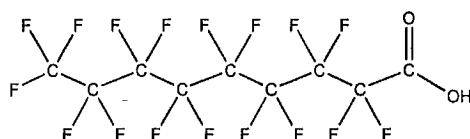
- See page 2 for further details.
- A 5-point calibration curve was generated using linear PFOS (potassium salt) and mass-labelled PFOS as an internal standard to enable quantitation of br-PFOSK using isotopic dilution.
- CAS#: 2795-39-3 (for linear isomer; potassium salt).

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PRODUCT CODE: PFNA **LOT NUMBER:** PFNA0619
COMPOUND: Perfluoro-n-nonanoic acid

STRUCTURE: **CAS #:** 375-95-1



MOLECULAR FORMULA: C₉HF₁₇O₂ **MOLECULAR WEIGHT:** 464.08
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
 Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 07/08/2019
EXPIRY DATE: (mm/dd/yyyy) 07/08/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

*2 ampoules
TTM 2020-02-19*

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 ~ 0.2% 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* **Date:** 07/11/2019
 B.G. Chittim, General Manager (mm/dd/yyyy)

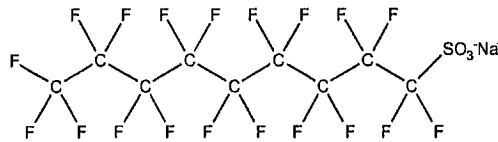


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DOCUMENTATION

PRODUCT CODE: L-PFNS **LOT NUMBER:** LPFNS1119
COMPOUND: Sodium perfluoro-1-nonanesulfonate

STRUCTURE: **CAS #:** 98789-57-2



MOLECULAR FORMULA: C₉F₁₉SO₃Na **MOLECULAR WEIGHT:** 572.12
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
 48.0 ± 2.4 µg/ml (PFNS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 11/14/2019
EXPIRY DATE: (mm/dd/yyyy) 11/14/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
JTH 2020-02-19

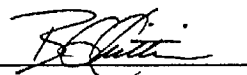
DOCUMENTATION/ DATA ATTACHED:

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:** 11/28/2019
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PRODUCT CODE:

PFDA

LOT NUMBER:

PFDA0419

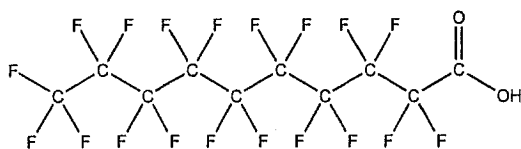
COMPOUND:

Perfluoro-n-decanoic acid

STRUCTURE:

CAS #:

335-76-2



MOLECULAR FORMULA:

$C_{10}H_{19}O_2$

MOLECULAR WEIGHT:

514.08

CONCENTRATION:

$50 \pm 2.5 \mu\text{g/ml}$

SOLVENT(S):

Methanol

Water (<1%)

CHEMICAL PURITY:

>98%

LAST TESTED: (mm/dd/yyyy)

05/01/2019

EXPIRY DATE: (mm/dd/yyyy)

05/01/2024

RECOMMENDED STORAGE:

Store ampoule in a cool, dark place

ampoules

TTM 2020-02-19

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 ~ 0.2% of perfluoro-n-nonanoic acid (PFNA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By:

B.G. Chittim, General Manager

Date: 05/02/2019

(mm/dd/yyyy)

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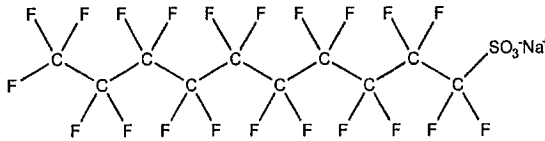


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: L-PFDS **LOT NUMBER:** LPFDS0419
COMPOUND: Sodium perfluoro-1-decanesulfonate

STRUCTURE: **CAS #:** 2806-15-7



MOLECULAR FORMULA: C₁₀F₂₁SO₃Na **MOLECULAR WEIGHT:** 622.13
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
48.2 ± 2.4 µg/ml (PFDS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 04/04/2019
EXPIRY DATE: (mm/dd/yyyy) 04/04/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
TTM 2020-02-19

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 ~ 0.9% of sodium perfluoro-1-dodecanesulfonate (L-PFDoS).

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Certified By: 
B.G. Chittim, General Manager **Date:** 04/30/2019
(mm/dd/yyyy)

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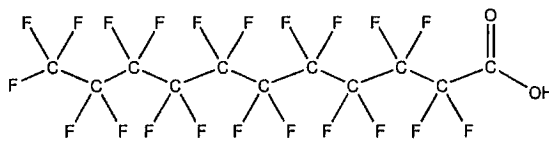


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**CERTIFICATE OF ANALYSIS
DOCUMENTATION**

PRODUCT CODE: PFUdA **LOT NUMBER:** PFUdA0319
COMPOUND: Perfluoro-n-undecanoic acid

STRUCTURE: **CAS #:** 2058-94-8



MOLECULAR FORMULA: C₁₁HF₂₁O₂ **MOLECULAR WEIGHT:** 564.09
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
 Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 03/19/2019
EXPIRY DATE: (mm/dd/yyyy) 03/19/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
TTM 2020-02-19

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 pefluoro-n-dodecanoic acid (PFDoA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
 B.G. Chittim, General Manager **Date:** 03/21/2019
 (mm/dd/yyyy)

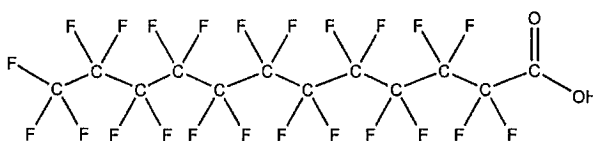
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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFD0A **LOT NUMBER:** PFD0A1019
COMPOUND: Perfluoro-n-dodecanoic acid
STRUCTURE: **CAS #:** 307-55-1



MOLECULAR FORMULA: $C_{12}HF_{23}O_2$ **MOLECULAR WEIGHT:** 614.10
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$ **SOLVENT(S):** Methanol
Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/23/2019
EXPIRY DATE: (mm/dd/yyyy) 10/23/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
TTM
2020-02-19

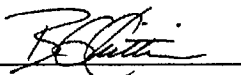
DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By:  **Date:** 10/24/2019
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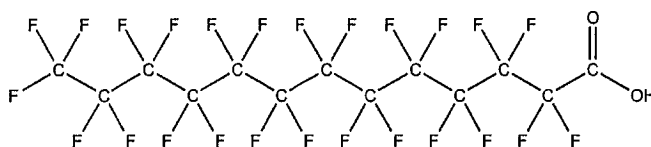


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFTTrDA **LOT NUMBER:** PFTTrDA0919
COMPOUND: Perfluoro-n-tridecanoic acid

STRUCTURE: **CAS #:** 72629-94-8



MOLECULAR FORMULA: $C_{13}HF_{25}O_2$ **MOLECULAR WEIGHT:** 664.11
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$ **SOLVENT(S):** Methanol
 Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 09/26/2019
EXPIRY DATE: (mm/dd/yyyy) 09/26/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules

TTM 2020-02-19

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 PFDaA ($C_{12}HF_{23}O_2$), and ~ 0.1% of PFTeDA ($C_{14}HF_{27}O_2$).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
 B.G. Chittim, General Manager

Date: 10/03/2019
 (mm/dd/yyyy)

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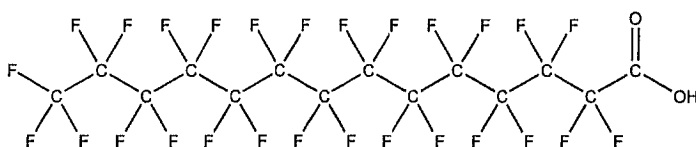


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: PFTeDA **LOT NUMBER:** PFTeDA0319
COMPOUND: Perfluoro-n-tetradecanoic acid

STRUCTURE: **CAS #:** 376-06-7



MOLECULAR FORMULA: $C_{14}HF_{27}O_2$ **MOLECULAR WEIGHT:** 714.11
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$ **SOLVENT(S):** Methanol
 Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 03/11/2019
EXPIRY DATE: (mm/dd/yyyy) 03/11/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

*2 ampoules
TTH 2020-02-19*

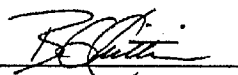
DOCUMENTATION/ DATA ATTACHED:

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 PFDaA ($C_{12}HF_{23}O_2$), ~ 0.1% of PFTrDA ($C_{13}HF_{25}O_2$), and ~ 0.1% of PFHxDA ($C_{16}HF_{31}O_2$).

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Certified By: 
 B.G. Chittim, General Manager **Date:** 03/28/2019
 (mm/dd/yyyy)

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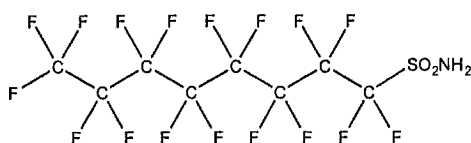


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: FOSA-I **LOT NUMBER:** FOSA0919I
COMPOUND: Perfluoro-1-octanesulfonamide

STRUCTURE: **CAS #:** 754-91-6



MOLECULAR FORMULA: C₈H₂F₁₇NO₂S **MOLECULAR WEIGHT:** 499.14
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Isopropanol
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 09/12/2019
EXPIRY DATE: (mm/dd/yyyy) 09/12/2024
RECOMMENDED STORAGE: Refrigerate ampoule

2 ampoules
 19 TTM
 TTM 2020-02-19 ~~19~~ 2020-02-19

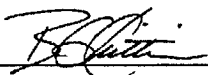
DOCUMENTATION/ DATA ATTACHED:

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:** 09/13/2019
 B.G. Chittim, General Manager (mm/dd/yyyy)

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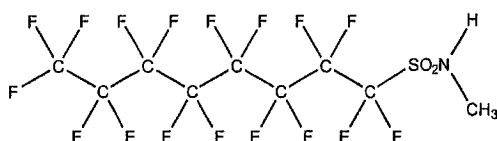
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: N-MeFOSA-M
COMPOUND: N-methylperfluoro-1-octanesulfonamide

LOT NUMBER: NMeFOSA1219M

STRUCTURE:

CAS #: 31506-32-8



MOLECULAR FORMULA: C₉H₄F₁₇NO₂S
CONCENTRATION: 50 ± 2.5 µg/ml
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 12/24/2019
EXPIRY DATE: (mm/dd/yyyy) 12/24/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

MOLECULAR WEIGHT: 513.17
SOLVENT(S): Methanol

*2 ampoules
TTM 2020-02-19*

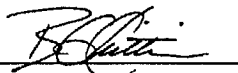
DOCUMENTATION/ DATA ATTACHED:

- 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, General Manager

Date: 01/02/2020
(mm/dd/yyyy)

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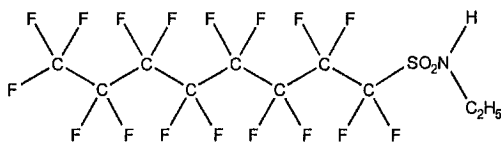


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: N-EtFOSA-M **LOT NUMBER:** NEtFOSA0519M
COMPOUND: N-ethylperfluoro-1-octanesulfonamide

STRUCTURE: **CAS #:** 4151-50-2



MOLECULAR FORMULA: C₁₀H₆F₁₇NO₂S
CONCENTRATION: 50 ± 2.5 µg/ml
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 05/07/2019
EXPIRY DATE: (mm/dd/yyyy) 05/07/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

MOLECULAR WEIGHT: 527.20
SOLVENT(S): Methanol

2 ampoules

TTM 2020-02-19

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 ~ 0.5% branched isomers of N-ethylperfluorooctanesulfonamide.

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Certified By: 
B.G. Chittim, General Manager

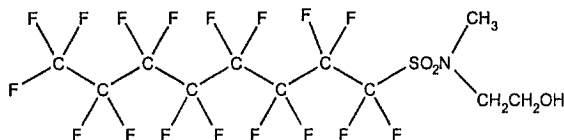
Date: 05/09/2019
(mm/dd/yyyy)

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PRODUCT CODE: N-MeFOSE-M **LOT NUMBER:** NMeFOSE1219M
COMPOUND: 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol

STRUCTURE: **CAS #:** 24448-09-7



MOLECULAR FORMULA: C₁₁H₈F₁₇NO₃S **MOLECULAR WEIGHT:** 557.22
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/06/2020 (HRGC/LRMS)
12/27/2019 (LC/MS)
EXPIRY DATE: (mm/dd/yyyy) 01/06/2025
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

Lampoules
TTM 2020-02-19

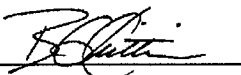
DOCUMENTATION/ DATA ATTACHED:

- 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: 
B.G. Chittim, General Manager **Date:** 01/07/2020
(mm/dd/yyyy)

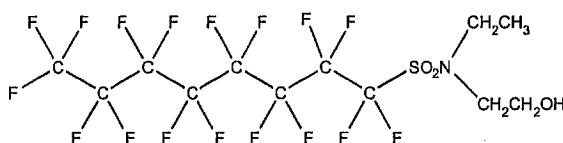


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: N-EtFOSE-M **LOT NUMBER:** NEtFOSE1219M
COMPOUND: 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol

STRUCTURE: **CAS #:** 1691-99-2



MOLECULAR FORMULA: C₁₂H₁₀F₁₇NO₃S **MOLECULAR WEIGHT:** 571.25
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/06/2020 (HRGC/LRMS) 12/27/2019 (LC/MS)
EXPIRY DATE: (mm/dd/yyyy) 01/06/2025
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

TTM 2020-02-19
2 ampoules

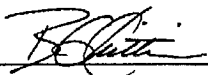
DOCUMENTATION/ DATA ATTACHED:

- 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: 
B.G. Chittim, General Manager **Date:** 01/07/2020
(mm/dd/yyyy)

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br-NMeFOSAA

**N-Methylperfluorooctanesulfonamidoacetic
Acid Solution/Mixture of Linear and
Branched Isomers**

PRODUCT CODE: br-NMeFOSAA
LOT NUMBER: brNMeFOSAA1119
CONCENTRATION: 50.0 ± 2.5 µg/ml
SOLVENT(S): Methanol/Water (<1%)
DATE PREPARED: (mm/dd/yyyy) 11/27/2019
LAST TESTED: (mm/dd/yyyy) 12/02/2019
EXPIRY DATE: (mm/dd/yyyy) 12/02/2024
RECOMMENDED STORAGE: Refrigerate ampoule

DESCRIPTION:

The chemical purity has been determined to be ≥98% N-methylperfluorooctanesulfonamidoacetic acid (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 ¹⁹F-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)

2 ampoules

TTM

2020-02-19

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the acetic acid moiety to its respective methyl ester.

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br-NEtFOSAA

**N-Ethylperfluorooctanesulfonamidoacetic
Acid Solution/Mixture of Linear and
Branched Isomers**

PRODUCT CODE: br-NEtFOSAA
LOT NUMBER: brNEtFOSAA0819
CONCENTRATION: 50.0 ± 2.5 µg/ml
SOLVENT(S): Methanol/Water (<1%)
DATE PREPARED: (mm/dd/yyyy) 08/20/2019
LAST TESTED: (mm/dd/yyyy) 08/20/2019
EXPIRY DATE: (mm/dd/yyyy) 08/20/2024
RECOMMENDED STORAGE: Refrigerate ampoule

2 ampoules

ITM 2020-02-19

DESCRIPTION:

The chemical purity has been determined to be ≥98% N-ethylperfluorooctanesulfonamidoacetic acid (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 ¹⁹F-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)

ADDITIONAL INFORMATION:

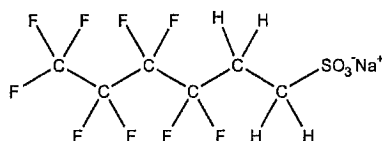
- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the acetic acid moiety to its respective methyl ester.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE



PRODUCT CODE: 4:2FTS **LOT NUMBER:** 42FTS1019
COMPOUND: Sodium 1H,1H,2H,2H-perfluorohexane sulfonate

STRUCTURE: **CAS #:** 27619-93-8



MOLECULAR FORMULA: C₆H₄F₉SO₃Na **MOLECULAR WEIGHT:** 350.13
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
46.7 ± 2.3 µg/ml (4:2FTS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/29/2019
EXPIRY DATE: (mm/dd/yyyy) 10/29/2024
RECOMMENDED STORAGE: Refrigerate ampoule

TTM 2020-02-19
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: 
B.G. Chittim, General Manager

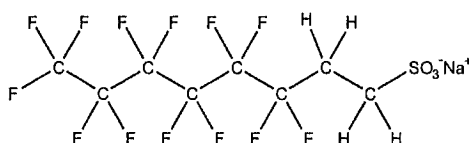
Date: 11/14/2019
(mm/dd/yyyy)

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PRODUCT CODE: 6:2FTS **LOT NUMBER:** 62FTS0919
COMPOUND: Sodium 1H,1H,2H,2H-perfluorooctane sulfonate

STRUCTURE: **CAS #:** 27619-94-9



MOLECULAR FORMULA: C₈H₄F₁₃SO₃Na **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) 09/09/2019
EXPIRY DATE: (mm/dd/yyyy) 09/09/2024
RECOMMENDED STORAGE: Refrigerate ampoule

TTM 2020-02-19
2 ampoules.

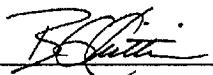
DOCUMENTATION/ DATA ATTACHED:

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: 
B.G. Chittim, General Manager **Date:** 09/09/2019
(mm/dd/yyyy)

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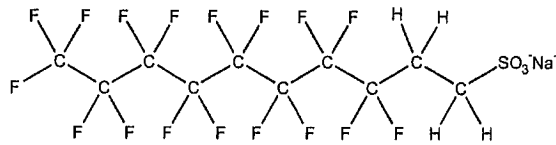


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: 8:2FTS **LOT NUMBER:** 82FTS0919
COMPOUND: Sodium 1H,1H,2H,2H-perfluorodecane sulfonate

STRUCTURE: **CAS #:** 27619-96-1



MOLECULAR FORMULA: C₁₀H₄F₁₇SO₃Na **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: (mm/dd/yyyy) 09/11/2019
EXPIRY DATE: (mm/dd/yyyy) 09/11/2024
RECOMMENDED STORAGE: Refrigerate ampoule

Handwritten mark

*TTM 2020-02-21
2 ampoules*

DOCUMENTATION/ DATA ATTACHED:

- Figure 1: LC/MS Data (TIC and Mass Spectrum)
- Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: *B.G. Chittim* Date: 09/11/2019
 B.G. Chittim, General Manager (mm/dd/yyyy)

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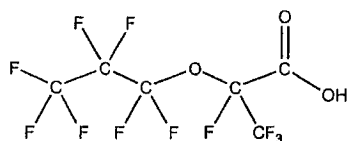


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: HFPO-DA **LOT NUMBER:** HFPODA0120
COMPOUND: 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid

STRUCTURE: **CAS #:** 13252-13-6



MOLECULAR FORMULA: C₆H₁₁F₁₁O₃ **MOLECULAR WEIGHT:** 330.05
CONCENTRATION: 50.0 ± 2.5 µg/ml **SOLVENT(S):** Methanol
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/23/2020
EXPIRY DATE: (mm/dd/yyyy) 01/23/2023
RECOMMENDED STORAGE: Refrigerate ampoule

2 ampoules
TTM 2020-02-19

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.
- Product is commercially known as GenX.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager **Date:** 01/24/2020
(mm/dd/yyyy)

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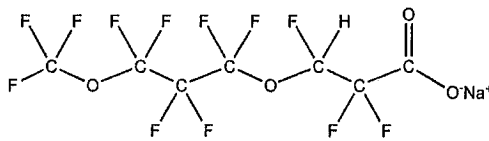


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: NaDONA **LOT NUMBER:** NaDONA0719
COMPOUND: Sodium dodecafluoro-3H-4,8-dioxanonanoate

STRUCTURE: **CAS #:** 958445-44-8
(ammonium salt)



MOLECULAR FORMULA: C₇HF₁₂O₄Na **MOLECULAR WEIGHT:** 400.05
CONCENTRATION: 50 ± 2.5 µg/ml (Na Salt) **SOLVENT(S):** Methanol
47.1 ± 2.4 µg/ml (NaDONA anion) Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 07/15/2019
EXPIRY DATE: (mm/dd/yyyy) 07/15/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

Ampoules
TTM 2020-02-19

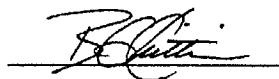
DOCUMENTATION/ DATA ATTACHED:

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.
- Product is commercially known as ADONA.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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Certified By: 
B.G. Chittim, General Manager **Date:** 07/25/2019
(mm/dd/yyyy)

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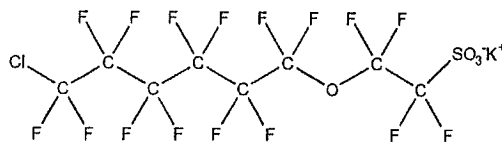


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: 9CI-PF3ONS **LOT NUMBER:** 9CIPF3ONS1019
COMPOUND: Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate

STRUCTURE: **CAS #:** 73606-19-6



MOLECULAR FORMULA: $C_8F_{16}ClSO_4K$ **MOLECULAR WEIGHT:** 570.67
CONCENTRATION: 50.0 ± 2.5 µg/ml (K Salt) **SOLVENT(S):** Methanol
46.6 ± 2.3 µg/ml (9CI-PF3ONS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/30/2019
EXPIRY DATE: (mm/dd/yyyy) 10/30/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules
TTM 2020-02-19

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.
- This compound is the major component of the commercial formulation known as F-53B.

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Certified By: **Date:** 11/04/2019
(mm/dd/yyyy)
B.G. Chittim, General Manager

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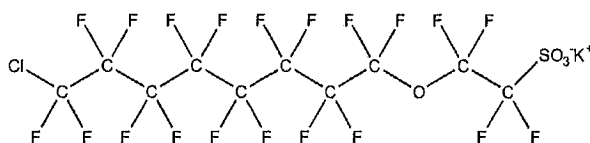


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: 11CI-PF3OUdS **LOT NUMBER:** 11CIPF3OUdS1019
COMPOUND: Potassium 11-chloroeicosfluoro-3-oxaundecane-1-sulfonate

STRUCTURE: **CAS #:** 83329-89-9



MOLECULAR FORMULA: C₁₀F₂₀ClSO₄K **MOLECULAR WEIGHT:** 670.69
CONCENTRATION: 50.0 ± 2.5 µg/ml (K Salt) **SOLVENT(S):** Methanol
47.1 ± 2.4 µg/ml (11CI-PF3OUdS anion)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/23/2019
EXPIRY DATE: (mm/dd/yyyy) 10/23/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

2 ampoules

TTM 2020-02-19


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.
- This compound is a minor component of the commercial formulation known as F-53B.

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Certified By: 
B.G. Chittim, General Manager **Date:** 11/14/2019
(mm/dd/yyyy)

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TUNE CHECK

Instrument: Agilent 6470 LC/MS/MS

Instrument Serial Number: SG1611G001

Maxxam Instrument Identification: LCMS04

Mass Calibration Performed: November 15, 2019

Tune Check Performed: November 15-16, 2019

Mass Assignment Reference Table	Page 2
Tune Check Summary Table	Page 5
Analyte Precursor Ion Verification	Page 8
Analyte Product Ion Verification	Page 41
Extracted and Injection Internal Standard Precursor Ion Verification	Page 78
Extracted and Injection Internal Standard Product Ion Verification	Page 105
Mass Calibration Report	Page 136
Check Tune Report	Page 149

Reviewed by:

Adam Robinson, Supervisor – Liquid Chromatography

2019/11/18

Date

Mass Assignments – Analytes & Extracted 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	213.0	$[\text{CF}_3(\text{CF}_2)_2\text{CO}_2]^-$	169.0	$[\text{CF}_3(\text{CF}_2)_2]^-$	¹ N/A	N/A
Perfluorobutanesulfonic acid	PFBS	298.9	$[\text{CF}_3(\text{CF}_2)_3\text{SO}_3]^-$	80.0	$[\text{SO}_3]^-$	99.0	$[\text{FSO}_3]^-$
Perfluoropentanoic acid	PFPeA	263.0	$[\text{CF}_3(\text{CF}_2)_3\text{CO}_2]^-$	219.0	$[\text{CF}_3(\text{CF}_2)_3]^-$	¹ N/A	N/A
Perfluoropentanesulfonic acid	PFPeS	349.0	$[\text{CF}_3(\text{CF}_2)_4\text{SO}_3]^-$	80.0	$[\text{SO}_3]^-$	99.0	$[\text{FSO}_3]^-$
Perfluorohexanoic acid	PFHxA	313.0	$[\text{CF}_3(\text{CF}_2)_4\text{CO}_2]^-$	269.0	$[\text{CF}_3(\text{CF}_2)_4]^-$	119.0	$[\text{CF}_3(\text{CF}_2)]^-$
Perfluorohexanesulfonic acid	PFHxS	398.9	$[\text{CF}_3(\text{CF}_2)_5\text{SO}_3]^-$	80.0	$[\text{SO}_3]^-$	99.0	$[\text{FSO}_3]^-$
Perfluoroheptanoic acid	PFHpA	363.0	$[\text{CF}_3(\text{CF}_2)_5\text{CO}_2]^-$	319.0	$[\text{CF}_3(\text{CF}_2)_5]^-$	169.0	$[\text{CF}_3(\text{CF}_2)_2]^-$
Perfluoroheptanesulfonic acid	PFHpS	448.9	$[\text{CF}_3(\text{CF}_2)_6\text{SO}_3]^-$	80.0	$[\text{SO}_3]^-$	99.0	$[\text{FSO}_3]^-$
Perfluorooctanoic acid	PFOA	413.0	$[\text{CF}_3(\text{CF}_2)_6\text{CO}_2]^-$	369.0	$[\text{CF}_3(\text{CF}_2)_6]^-$	169.0	$[\text{CF}_3(\text{CF}_2)_2]^-$
Perfluorooctanesulfonic acid	PFOS	498.9	$[\text{CF}_3(\text{CF}_2)_7\text{SO}_3]^-$	80.0	$[\text{SO}_3]^-$	99.0	$[\text{FSO}_3]^-$
Perfluorononanoic acid	PFNA	463.0	$[\text{CF}_3(\text{CF}_2)_7\text{CO}_2]^-$	419.0	$[\text{CF}_3(\text{CF}_2)_7]^-$	219.0	$[\text{CF}_3(\text{CF}_2)_3]^-$
Perfluorononanesulfonic acid	PFNS	549.0	$[\text{CF}_3(\text{CF}_2)_8\text{SO}_3]^-$	80.0	$[\text{SO}_3]^-$	99.0	$[\text{FSO}_3]^-$
Perfluorodecanoic acid	PFDA	513.0	$[\text{CF}_3(\text{CF}_2)_8\text{CO}_2]^-$	469.0	$[\text{CF}_3(\text{CF}_2)_8]^-$	219.0	$[\text{CF}_3(\text{CF}_2)_3]^-$
Perfluorodecanesulfonic acid	PFDS	598.9	$[\text{CF}_3(\text{CF}_2)_9\text{SO}_3]^-$	80.0	$[\text{SO}_3]^-$	99.0	$[\text{FSO}_3]^-$
Perfluoroundecanoic acid	PFUnA	563.0	$[\text{CF}_3(\text{CF}_2)_9\text{CO}_2]^-$	519.0	$[\text{CF}_3(\text{CF}_2)_9]^-$	269.0	$[\text{CF}_3(\text{CF}_2)_4]^-$
Perfluorododecanoic acid	PFDoA	613.0	$[\text{CF}_3(\text{CF}_2)_{10}\text{CO}_2]^-$	569.0	$[\text{CF}_3(\text{CF}_2)_{10}]^-$	319.0	$[\text{CF}_3(\text{CF}_2)_5]^-$
Perfluorotridecanoic acid	PFTTrDA	663.0	$[\text{CF}_3(\text{CF}_2)_{11}\text{CO}_2]^-$	619.0	$[\text{CF}_3(\text{CF}_2)_{11}]^-$	319.0	$[\text{CF}_3(\text{CF}_2)_5]^-$
Perfluorotetradecanoic acid	PFTeDA	713.0	$[\text{CF}_3(\text{CF}_2)_{12}\text{CO}_2]^-$	669.0	$[\text{CF}_3(\text{CF}_2)_{12}]^-$	319.0	$[\text{CF}_3(\text{CF}_2)_5]^-$
Perfluorooctane sulfonamide	PFOSA	498.0	$[\text{CF}_3(\text{CF}_2)_7\text{SO}_2\text{NH}]^-$	78.0	$[\text{SO}_2\text{N}]^-$	477.9	$[(\text{CF}_2)_8\text{SO}_2\text{N}]^-$
N-methylperfluorooctane sulfonamide	MeFOSA	512.0	$[\text{CF}_3(\text{CF}_2)_7\text{SO}_2\text{N}(\text{CH}_3)]^-$	169.0	$[\text{CF}_3(\text{CF}_2)_2]^-$	219.0	$[\text{CF}_3(\text{CF}_2)_3]^-$
N-ethylperfluorooctane sulfonamide	EtFOSA	526.0	$[\text{CF}_3(\text{CF}_2)_7\text{SO}_2\text{N}(\text{C}_2\text{H}_5)]^-$	169.0	$[\text{CF}_3(\text{CF}_2)_2]^-$	219.0	$[\text{CF}_3(\text{CF}_2)_3]^-$
N-methylperfluorooctane sulfonamidoethanol	MeFOSE	616.0	$[\text{CF}_3(\text{CF}_2)_7\text{SO}_2\text{N}(\text{CH}_3)\text{C}_2\text{H}_4\text{OH}\text{CH}_2\text{CO}_2]^-$	59.0	$[\text{CH}_3\text{CO}_2]^-$	¹ N/A	N/A
N-ethylperfluorooctane sulfonamidoethanol	EtFOSE	630.0	$[\text{CF}_3(\text{CF}_2)_7\text{SO}_2\text{N}(\text{C}_2\text{H}_5)\text{C}_2\text{H}_4\text{OH}\text{CH}_2\text{CO}_2]^-$	59.0	$[\text{CH}_3\text{CO}_2]^-$	¹ N/A	N/A
N-methylperfluorooctanesulfonamidoacetic acid	MeFOSAA	570.0	$[\text{CF}_3(\text{CF}_2)_7\text{SO}_2\text{N}(\text{CH}_3)\text{CH}_2\text{CO}_2]^-$	419.0	$[\text{CF}_3(\text{CF}_2)_7]^-$	482.9	$[\text{CF}_3(\text{CF}_2)_7\text{SO}_2]^-$
N-ethylperfluorooctanesulfonamidoacetic acid	EtFOSAA	584.0	$[\text{CF}_3(\text{CF}_2)_7\text{SO}_2\text{N}(\text{C}_2\text{H}_5)\text{CH}_2\text{CO}_2]^-$	419.0	$[\text{CF}_3(\text{CF}_2)_7]^-$	482.9	$[\text{CF}_3(\text{CF}_2)_7\text{SO}_2]^-$
4:2-Fluorotelomersulfonic acid	4:2FTS	327.0	$[\text{CF}_3(\text{CF}_2)_3\text{CH}_2\text{CH}_2\text{SO}_3]^-$	307.0	$[\text{CF}_3(\text{CF}_2)_2\text{CFCHCH}_2\text{SO}_3]^-$	81.0	$[\text{SO}_2\text{OH}]^-$
6:2 Fluorotelomersulfonic acid	6:2FTS	427.0	$[\text{CF}_3(\text{CF}_2)_5\text{CH}_2\text{CH}_2\text{SO}_3]^-$	407.0	$[\text{CF}_3(\text{CF}_2)_4\text{CFCHCH}_2\text{SO}_3]^-$	81.0	$[\text{SO}_2\text{OH}]^-$

Compound	Abbreviation	Precursor Ion (m/z)	Precursor Ion Formula	Quant Ion (m/z)	Quantitation Ion Formula	Confirmation Ion (m/z)	Confirmation Ion Formula
8:2 Fluorotelomersulfonic acid	8:2FTS	527.0	$[\text{CF}_3(\text{CF}_2)_7\text{CH}_2\text{CH}_2\text{SO}_3]^-$	507.0	$[\text{CF}_3(\text{CF}_2)_6\text{CFCHCH}_2\text{SO}_3]^-$	81.0	$[\text{SO}_2\text{OH}]^-$
Hexafluoropropylene oxide dimer acid	HFPO-DA	285.0	$[\text{CF}_3(\text{CF}_2)_2\text{OCFCF}_3]^-$	169.0	$[\text{CF}_3(\text{CF}_2)_2]^-$	185.0	$[\text{CF}_3(\text{CF}_2)_2\text{O}]^-$
4,8-dioxa-3H-perfluorononanoic acid	ADONA	377.0	$[\text{CF}_3\text{O}(\text{CF}_2)_3\text{OCF}_2\text{CO}_2]^-$	251.0	$[\text{CF}_3\text{O}(\text{CF}_2)_3\text{O}]^-$	85.0	$[\text{CF}_3\text{O}]^-$
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid	9Cl-PF3ONS	531.0	$[\text{Cl}(\text{CF}_2)_6\text{OCF}_2\text{SO}_3]^-$	351.0	$[\text{Cl}(\text{CF}_2)_6\text{O}]^-$	83.0	$[\text{FSO}_2]^-$
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	631.0	$[\text{Cl}(\text{CF}_2)_8\text{OCF}_2\text{SO}_3]^-$	451.0	$[\text{Cl}(\text{CF}_2)_8\text{O}]^-$	99.0	$[\text{FSO}_3]^-$
Mass-labeled Extracted Internal Standards							
$^{13}\text{C}_4$ -Perfluorobutanoic acid	13C4-PFBA	217.0	$^{13}\text{CF}_3(^{13}\text{CF}_2)_2^{13}\text{CO}_2]^-$	172.0	$^{13}\text{CF}_3(^{13}\text{CF}_2)_2]^-$	N/A	N/A
$^{13}\text{C}_3$ -Perfluorobutanesulfonic acid	13C3-PFBS	302.0	$^{13}\text{CF}_3(^{13}\text{CF}_2)_2\text{SO}_3]^-$	80.0	$[\text{SO}_3]^-$	N/A	N/A
$^{13}\text{C}_5$ -Perfluoropentanoic acid	13C5-PFPeA	268.0	$^{13}\text{CF}_3(^{13}\text{CF}_2)_3^{13}\text{CO}_2]^-$	223.0	$^{13}\text{CF}_3(^{13}\text{CF}_2)_3]^-$	N/A	N/A
$^{13}\text{C}_2$ -Perfluorohexanoic acid	13C2-PFHxA	315.0	$[\text{CF}_3(\text{CF}_2)_3(^{13}\text{CF}_2)^{13}\text{CO}_2]^-$	270.0	$[\text{CF}_3(\text{CF}_2)_3^{13}\text{CF}_2]^-$	N/A	N/A
$^{18}\text{O}_2$ -Perfluorohexanesulfonic acid	18O2-PFHxS	402.9	$[\text{CF}_3(\text{CF}_2)_5\text{S}(^{18}\text{O})_2\text{O}]^-$	84.0	$[\text{S}(^{18}\text{O})_2\text{O}]^-$	N/A	N/A
$^{13}\text{C}_4$ -Perfluoroheptanoic acid	13C4-PFHpA	367.0	$[\text{CF}_3\text{CF}_2(^{13}\text{CF}_2)_3^{13}\text{CO}_2]^-$	322.0	$[\text{CF}_3\text{CF}_2(^{13}\text{CF}_2)_4]^-$	N/A	N/A
$^{13}\text{C}_4$ -Perfluorooctanoic acid	13C4PFOA	417.0	$[\text{CF}_3(\text{CF}_2)_3(^{13}\text{CF}_2)_3^{13}\text{CO}_2]^-$	372.0	$[\text{CF}_3(\text{CF}_2)_3(^{13}\text{CF}_2)_3]^-$	N/A	N/A
$^{13}\text{C}_4$ -Perfluorooctanesulfonic acid	13C4-PFOS	502.9	$[\text{CF}_3(\text{CF}_2)_3(^{13}\text{CF}_2)_4\text{SO}_3]^-$	80.0	$[\text{SO}_3]^-$	N/A	N/A
$^{13}\text{C}_5$ -Perfluorononanoic acid	13C5-PFNA	468.0	$[\text{CF}_3(\text{CF}_2)_3(^{13}\text{CF}_2)_4^{13}\text{CO}_2]^-$	423.0	$[\text{CF}_3(\text{CF}_2)_3(^{13}\text{CF}_2)_4]^-$	N/A	N/A
$^{13}\text{C}_2$ -Perfluorodecanoic acid	13C2-PFDA	515.0	$[\text{CF}_3(\text{CF}_2)_7(^{13}\text{CF}_2)^{13}\text{CO}_2]^-$	470.0	$[\text{CF}_3(\text{CF}_2)_7^{13}\text{CF}_2]^-$	N/A	N/A
$^{13}\text{C}_2$ -Perfluoroundecanoic acid	13C2-PFUnA	565.0	$[\text{CF}_3(\text{CF}_2)_8(^{13}\text{CF}_2)^{13}\text{CO}_2]^-$	520.0	$[\text{CF}_3(\text{CF}_2)_8^{13}\text{CF}_2]^-$	N/A	N/A
$^{13}\text{C}_2$ -Perfluorododecanoic acid	13C2-PFDoA	615.0	$[\text{CF}_3(\text{CF}_2)_9(^{13}\text{CF}_2)^{13}\text{CO}_2]^-$	570.0	$[\text{CF}_3(\text{CF}_2)_9^{13}\text{CF}_2]^-$	N/A	N/A
$^{13}\text{C}_2$ -Perfluorotetradecanoic acid	13C2-PFTeDA	715.0	$[\text{CF}_3(\text{CF}_2)_{12}(^{13}\text{CF}_2)^{13}\text{CO}_2]^-$	669.9	$[\text{CF}_3(\text{CF}_2)_{12}]^-$	N/A	N/A
$^{13}\text{C}_8$ -Perfluorooctane sulfonamide	13C8-PFOSA	506.0	$^{13}\text{CF}_3(^{13}\text{CF}_2)_7\text{SO}_2\text{NH}]^-$	78.0	$[\text{SO}_2\text{N}]^-$	N/A	N/A
N-methyl- d_3 -perfluorooctanesulfonamide	D3-MeFOSA	515.0	$[\text{CF}_3(\text{CF}_2)_7\text{SO}_2\text{N}(\text{CD}_3)]^-$	169.0	$[\text{CF}_3(\text{CF}_2)_2]^-$	N/A	N/A
N-ethyl- d_5 -perfluorooctanesulfonamide	D5-EtFOSA	531.0	$[\text{CF}_3(\text{CF}_2)_7\text{SO}_2\text{N}(\text{C}_2\text{D}_5)]^-$	169.0	$[\text{CF}_3(\text{CF}_2)_2]^-$	N/A	N/A
N-methyl- d_3 -perfluorooctanesulfonamidoethanol- d_4	D7-MeFOSE	623.0	$[\text{CF}_3(\text{CF}_2)_7\text{SO}_2\text{N}(\text{CD}_3)\text{CD}_2\text{CD}_2\text{OH} \cdot \text{CH}_3\text{CO}_2]^-$	59.0	$[\text{CH}_3\text{CO}_2]^-$	N/A	N/A
N-ethyl- d_5 -perfluorooctanesulfonamidoethanol- d_4	D9-EtFOSE	639.0	$[\text{CF}_3(\text{CF}_2)_7\text{SO}_2\text{N}(\text{CD}_2\text{CD}_3)\text{CD}_2\text{CD}_2\text{OH} \cdot \text{CH}_3\text{CO}_2]^-$	59.0	$[\text{CH}_3\text{CO}_2]^-$	N/A	N/A
N-methyl- d_3 -perfluorooctanesulfonamidoacetic acid	D3-MeFOSAA	573.0	$[\text{CF}_3(\text{CF}_2)_7\text{SO}_2\text{N}(\text{CD}_3)\text{CH}_2\text{CO}_2]^-$	419.0	$[\text{CF}_3(\text{CF}_2)_7]^-$	N/A	N/A
N-ethyl- d_5 -perfluorooctanesulfonamidoacetic acid	D5-EtFOSAA	589.0	$[\text{CF}_3(\text{CF}_2)_7\text{SO}_2\text{N}(\text{CD}_2\text{CD}_3)\text{CH}_2\text{CO}_2]^-$	419.0	$[\text{CF}_3(\text{CF}_2)_7]^-$	N/A	N/A
$^{13}\text{C}_2$ -4:2 Fluorotelomersulfonic acid	13C2-4:2FTS	329.0	$[\text{CF}_3(\text{CF}_2)_3(^{13}\text{CH}_2)_2\text{SO}_3]^-$	81.0	$[\text{SO}_2\text{OH}]^-$	N/A	N/A
$^{13}\text{C}_2$ -6:2 Fluorotelomersulfonic acid	13C2-6:2FTS	429.0	$[\text{CF}_3(\text{CF}_2)_5(^{13}\text{CH}_2)_2\text{SO}_3]^-$	81.0	$[\text{SO}_2\text{OH}]^-$	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 ₂ -8:2 Fluorotelomersulfonic acid	13C2-8:2FTS	529.0	[CF ₃ (CF ₂) ₇ (¹³ CH ₂) ₂ SO ₃] ⁻	81.0	[SO ₂ OH] ⁻	N/A	N/A
¹³ C ₃ -Hexafluoropropylene oxide dimer acid	13C3-HFPO-DA	287.0	[CF ₃ (CF ₂) ₂ O ¹³ CF ¹³ CF ₃] ⁻	169.0	[CF ₃ (CF ₂) ₂] ⁻	N/A	N/A

¹ Confirmation ion not monitored.

m/z = mass-to-charge ratio and represents the mass of the ion divided by its electronic charge.

Tune Check Summary Table

Compound	Abbreviation	Precursor Ion (m/z)			Quantitation Ion (m/z)			Confirmation Ion (m/z)		
		Target	Monitored	±0.5 amu	Target	Monitored	±0.5 amu	Target	Monitored	±0.5 amu
Native Analytes										
Perfluorobutanoic acid	PFBA	213.0	212.9	212.5 – 213.5	169.0	169.0	168.5 – 169.5	¹ N/A	N/A	N/A
Perfluorobutane sulfonic acid	PFBS	299.0	298.9	298.4 – 299.4	80.0	80.1	79.5 – 80.5	99.0	99.0	98.5 – 99.5
Perfluoropentanoic acid	PFPeA	263.0	262.9	268.5 – 269.5	219.0	219.0	218.5 – 219.5	¹ N/A	N/A	N/A
Perfluoropentane sulfonic acid	PFPeS	349.0	348.9	348.5 – 349.5	80.0	80.0	79.5 – 80.5	99.0	98.9	98.5 – 99.5
Perfluorohexanoic acid	PFHxA	313.0	312.9	312.5 – 313.5	269.0	269.0	268.5 – 269.5	119.0	119.0	118.5 – 119.5
Perfluorohexane sulfonic acid	PFHxS	399.0	398.9	398.4 – 399.4	80.0	80.0	79.5 – 80.5	99.0	99.0	98.5 – 99.5
Perfluoroheptanoic acid	PFHpA	363.0	363.0	362.5 – 363.5	319.0	319.0	318.5 – 319.5	169.0	168.9	168.5 – 169.5
Perfluoroheptane sulfonic acid	PFHpS	449.0	448.9	448.4 – 449.4	80.0	80.0	79.5 – 80.5	99.0	99.0	98.5 – 99.5
Perfluorooctanoic acid	PFOA	413.0	412.9	412.5 – 413.5	369.0	369.0	368.5 – 369.5	169.0	168.9	168.5 – 169.5
Perfluorooctane sulfonic acid	PFOS	499.0	498.9	498.4 – 499.4	80.0	79.9	79.5 – 80.5	99.0	99.0	98.5 – 99.5
Perfluorononanoic acid	PFNA	463.0	462.9	462.5 – 463.5	419.0	418.9	418.5 – 419.5	219.0	219.0	218.5 – 219.5
Perfluorononane sulfonic acid	PFNS	549.0	548.9	548.5 – 549.5	80.0	80.0	79.5 – 80.5	99.0	98.9	98.5 – 99.5
Perfluorodecanoic acid	PFDA	513.0	512.9	512.5 – 513.5	469.0	468.9	468.5 – 469.5	219.0	219.0	218.5 – 219.5
Perfluorodecane sulfonic acid	PFDS	599.0	598.9	598.4 – 599.4	80.0	80.0	79.5 – 80.5	99.0	98.9	98.5 – 99.5
Perfluoroundecanoic acid	PFUnA	563.0	562.9	562.5 – 563.5	519.0	518.9	518.5 – 519.5	269.0	268.9	268.5 – 269.5
Perfluorododecanoic acid	PFDoA	613.0	612.9	612.5 – 613.5	569.0	568.9	568.5 – 569.5	319.0	318.9	318.5 – 319.5
Perfluorotridecanoic acid	PFTTrDA	663.0	662.9	662.5 – 663.5	619.0	619.0	618.5 – 619.5	319.0	318.9	318.5 – 319.5
Perfluorotetradecanoic acid	PFTeDA	713.0	712.9	712.5 – 713.5	669.0	668.9	668.5 – 669.5	319.0	318.9	318.5 – 319.5
Perfluorooctane sulfonamide	PFOSA	498.0	497.9	497.5 – 498.5	78.0	78.0	77.5 – 78.5	478.0	477.9	477.4 – 478.4
N-methylperfluorooctane sulfonamide	MeFOSA	512.0	512.0	511.5 – 512.5	169.0	168.9	168.5 – 169.5	219.0	218.9	218.5 – 219.5
N-ethylperfluorooctane sulfonamide	EtFOSA	526.0	526.0	525.5 – 526.5	169.0	168.9	168.5 – 169.5	219.0	218.9	218.5 – 219.5
N-methylperfluorooctane sulfonamidoethanol	MeFOSE	616.0	615.9	615.5 – 616.5	59.0	59.1	58.5 – 59.5	¹ N/A	N/A	N/A
N-ethylperfluorooctane sulfonamidoethanol	EtFOSE	630.0	630.0	629.5 – 630.5	59.0	59.1	58.5 – 59.5	¹ N/A	N/A	N/A
N-methylperfluorooctanesulfonamidoacetic acid	MeFOSAA	570.0	569.9	569.5 – 570.5	419.0	419.0	418.5 – 419.5	483.0	482.9	482.4 – 483.4

Compound	Abbreviation	Precursor Ion (m/z)			Quantitation Ion (m/z)			Confirmation Ion (m/z)		
		Target	Monitored	±0.5 amu	Target	Monitored	±0.5 amu	Target	Monitored	±0.5 amu
N-ethylperfluorooctanesulfonamidoacetic acid	EtFOSAA	584.0	583.9	583.5 – 584.5	419.0	418.9	418.5 – 419.5	483.0	482.8	482.4 – 483.4
4:2 Fluorotelomer sulfonic acid	4:2FTS	327.0	326.9	326.5 – 327.5	307.0	306.9	306.5 – 307.5	81.0	81.0	80.5 – 81.5
6:2 Fluorotelomer sulfonic acid	6:2FTS	427.0	426.9	426.5 – 427.5	407.0	406.9	406.5 – 407.5	81.0	81.0	80.5 – 81.5
8:2 Fluorotelomer sulfonic acid	8:2FTS	527.0	526.9	526.5 – 527.5	507.0	506.9	506.5 – 507.5	81.0	81.0	80.5 – 81.5
Hexafluoropropylene oxide dimer acid	HFPO-DA	285.0	284.9	284.5 – 285.5	169.0	169.0	168.5 – 169.5	185.0	185.0	184.5 – 185.5
4,8-dioxa-3H-perfluorononanoic acid	ADONA	377.0	377.0	376.5 – 377.5	251.0	250.9	250.5 – 251.5	85.0	85.0	84.5 – 85.5
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid	9Cl-PF3ONS	531.0	530.9	530.5 – 531.5	351.0	350.9	350.5 – 351.5	83.0	83.1	82.5 – 83.5
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	631.0	630.9	630.5 – 631.5	451.0	450.9	450.5 – 451.5	99.0	99.0	98.5 – 99.5
Mass-labeled Extracted Internal Standards										
¹³ C ₄ -Perfluorobutanoic acid	13C4-PFBA	217.0	217.0	216.5 – 217.5	172.0	172.0	171.5 – 172.5	N/A	N/A	N/A
¹³ C ₃ -Perfluorobutane sulfonic acid	13C3-PFBS	302.0	301.9	301.5 – 302.5	80.0	80.0	79.5 – 80.5	N/A	N/A	N/A
¹³ C ₅ -Perfluoropentanoic acid	13C5-PFPeA	268.0	268.0	267.5 – 268.5	223.0	223.0	222.5 – 223.5	N/A	N/A	N/A
¹³ C ₂ -Perfluorohexanoic acid	13C2-PFHxA	315.0	315.0	314.5 – 315.5	270.0	270.0	269.5 – 270.5	N/A	N/A	N/A
¹⁸ O ₂ -Perfluorohexane sulfonic acid	18O2-PFHxS	402.9	402.9	402.4 – 403.4	84.0	84.0	83.5 – 84.5	N/A	N/A	N/A
¹³ C ₄ -Perfluoroheptanoic acid	13C4-PFHpA	367.0	367.0	366.5 – 367.5	322.0	322.0	321.5 – 322.5	N/A	N/A	N/A
¹³ C ₄ -Perfluorooctanoic acid	13C4-PFOA	417.0	416.9	416.5 – 417.5	372.0	372.0	371.5 – 372.5	N/A	N/A	N/A
¹³ C ₄ -Perfluorooctane sulfonic acid	13C4-PFOS	502.9	502.9	502.4 – 503.4	80.0	80.0	79.5 – 80.5	N/A	N/A	N/A
¹³ C ₅ -Perfluorononanoic acid	13C5-PFNA	468.0	468.0	467.5 – 468.5	423.0	423.0	422.5 – 423.5	N/A	N/A	N/A
¹³ C ₂ -Perfluorodecanoic acid	13C2-PFDA	515.0	514.9	514.5 – 515.5	470.0	470.0	469.5 – 470.5	N/A	N/A	N/A
¹³ C ₂ -Perfluoroundecanoic acid	13C2-PFUnA	565.0	564.9	564.5 – 565.5	520.0	519.9	519.5 – 520.5	N/A	N/A	N/A
¹³ C ₂ -Perfluorododecanoic acid	13C2-PFDoA	615.0	614.9	614.5 – 615.5	570.0	569.9	569.5 – 570.5	N/A	N/A	N/A
¹³ C ₂ -Perfluorotetradecanoic acid	13C2-PFTeDA	715.0	714.9	714.5 – 715.5	670.0	669.9	669.5 – 670.5	N/A	N/A	N/A
¹³ C ₈ -Perfluorooctane sulfonamide	13C8-PFOSA	506.0	506.0	505.5 – 506.5	78.0	78.0	77.5 – 78.5	N/A	N/A	N/A
N-methyl-d ₃ -perfluorooctanesulfonamide	D3-MeFOSA	515.0	515.0	514.5 – 515.5	169.0	168.9	168.5 – 169.5	N/A	N/A	N/A
N-ethyl-d ₅ -perfluorooctanesulfonamide	D5-EtFOSA	531.0	531.0	530.5 – 531.5	169.0	168.9	168.5 – 169.5	N/A	N/A	N/A
N-methyl-d ₃ -perfluorooctanesulfonamidoethanol-d ₄	D7-MeFOSE	623.0	623.0	622.5 – 623.5	59.0	59.1	58.5 – 59.5	N/A	N/A	N/A
N-ethyl-d ₅ -perfluorooctanesulfonamidoethanol-d ₄	D9-EtFOSE	639.0	639.0	638.5 – 639.5	59.0	59.2	58.5 – 59.5	N/A	N/A	N/A
N-methyl-d ₃ -perfluorooctanesulfonamidoacetic acid	D3-MeFOSAA	573.0	572.9	572.5 – 573.5	419.0	419.0	418.5 – 419.5	N/A	N/A	N/A
N-ethyl-d ₅ -perfluorooctanesulfonamidoacetic acid	D5-EtFOSAA	589.0	589.0	588.5 – 589.5	419.0	419.0	418.5 – 419.5	N/A	N/A	N/A

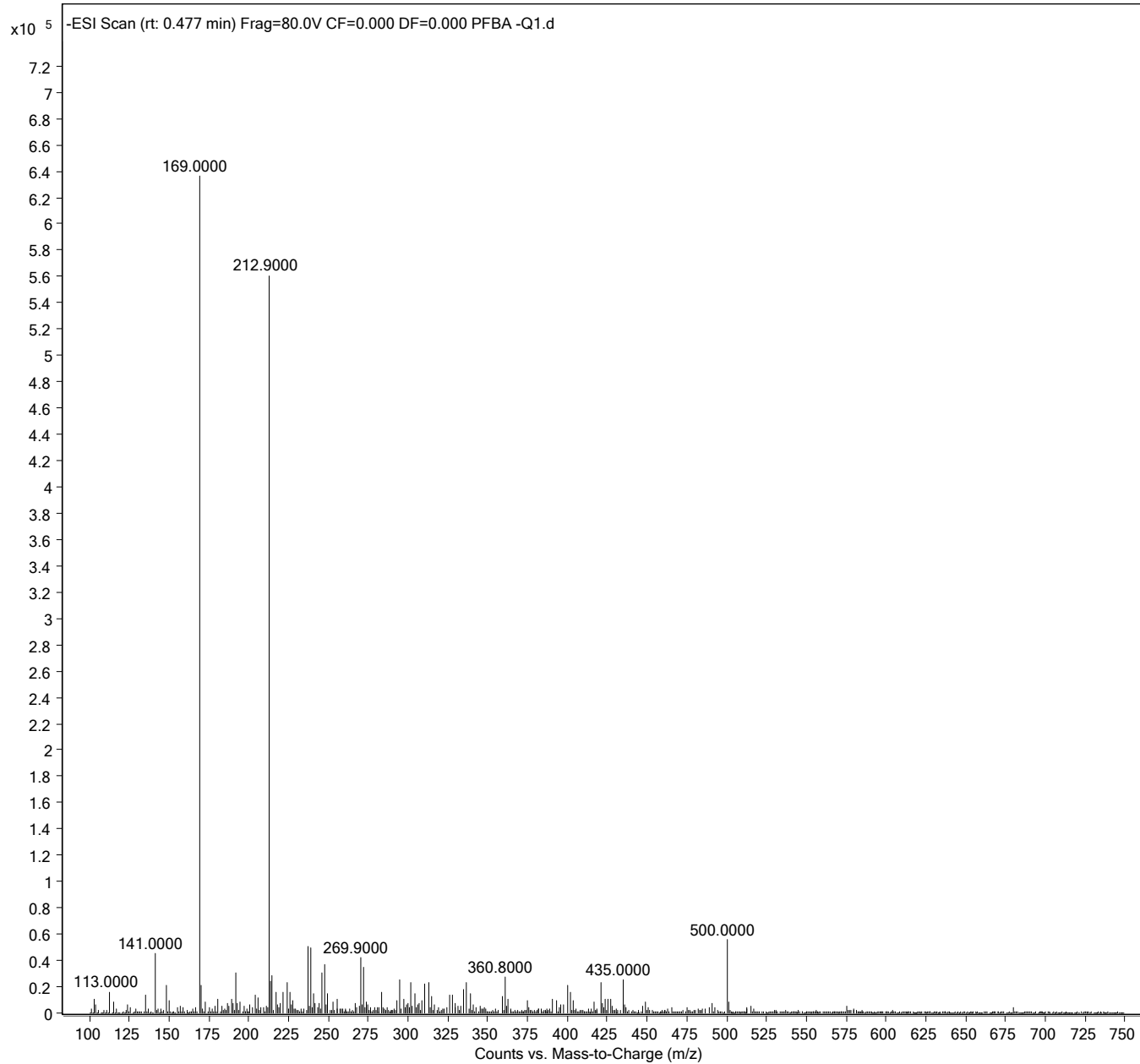
Compound	Abbreviation	Precursor Ion (m/z)			Quantitation Ion (m/z)			Confirmation Ion (m/z)		
		Target	Monitored	±0.5 amu	Target	Monitored	±0.5 amu	Target	Monitored	±0.5 amu
¹³ C ₂ -4:2 Fluorotelomer sulfonic acid	13C2-4:2FTS	329.0	329.0	328.5 – 329.5	81.0	81.0	80.5 – 81.5	N/A	N/A	N/A
¹³ C ₂ -6:2 Fluorotelomer sulfonic acid	13C2-6:2FTS	429.0	428.9	428.5 – 429.5	81.0	81.0	80.5 – 81.5	N/A	N/A	N/A
¹³ C ₂ -8:2 Fluorotelomer sulfonic acid	13C2-8:2FTS	529.0	528.9	528.5 – 529.5	81.0	81.0	80.5 – 81.5	N/A	N/A	N/A
¹³ C ₃ -Hexafluoropropylene oxide dimer acid	13C3-HFPO-DA	287.0	287.0	286.5 – 287.5	169.0	169.0	168.5 – 169.5	N/A	N/A	N/A

¹ Confirmation ion not monitored.

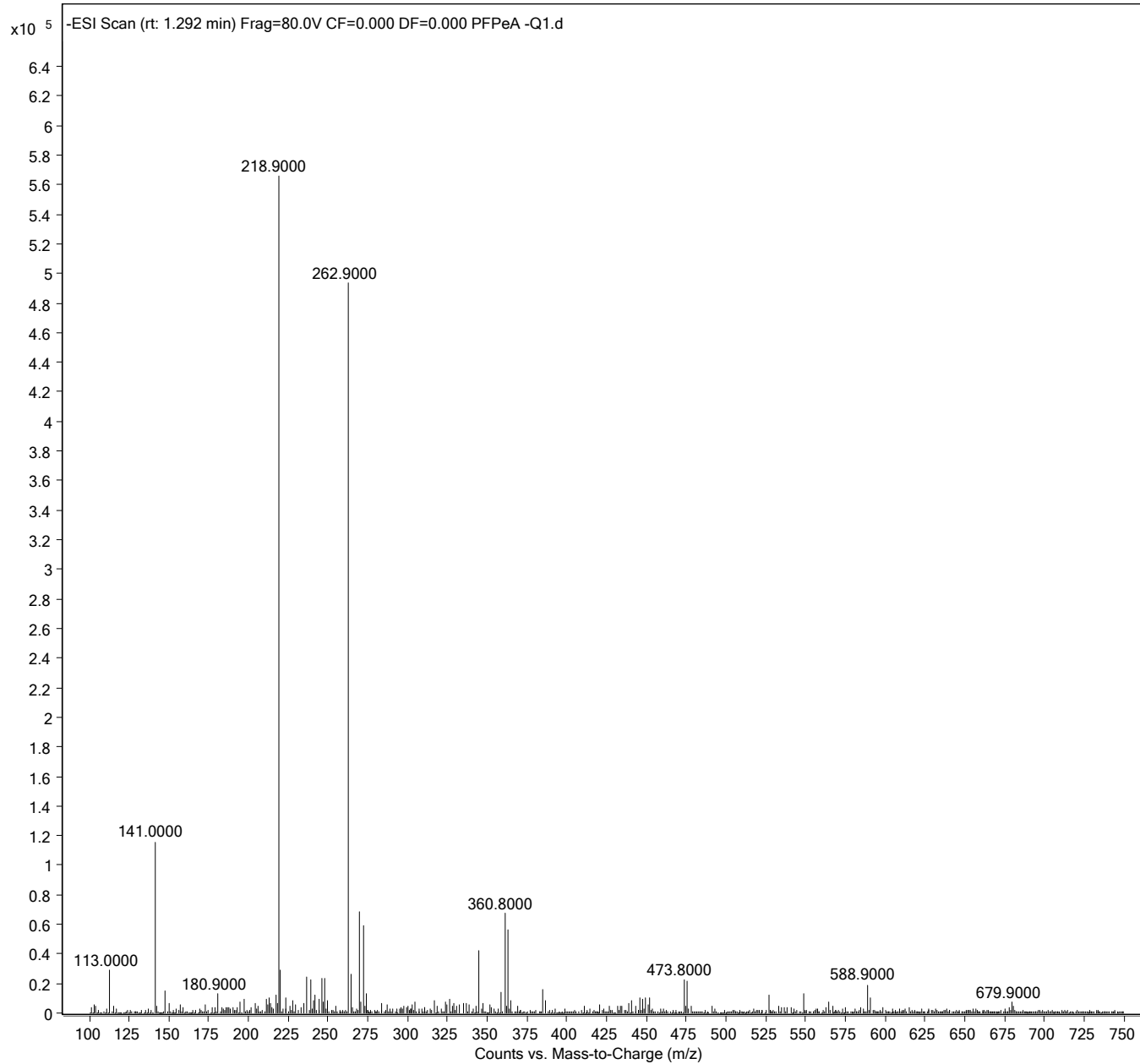
m/z = mass-to-charge ratio and represents the mass of the ion divided by its electronic charge.

Analyte Precursor Ion Verification

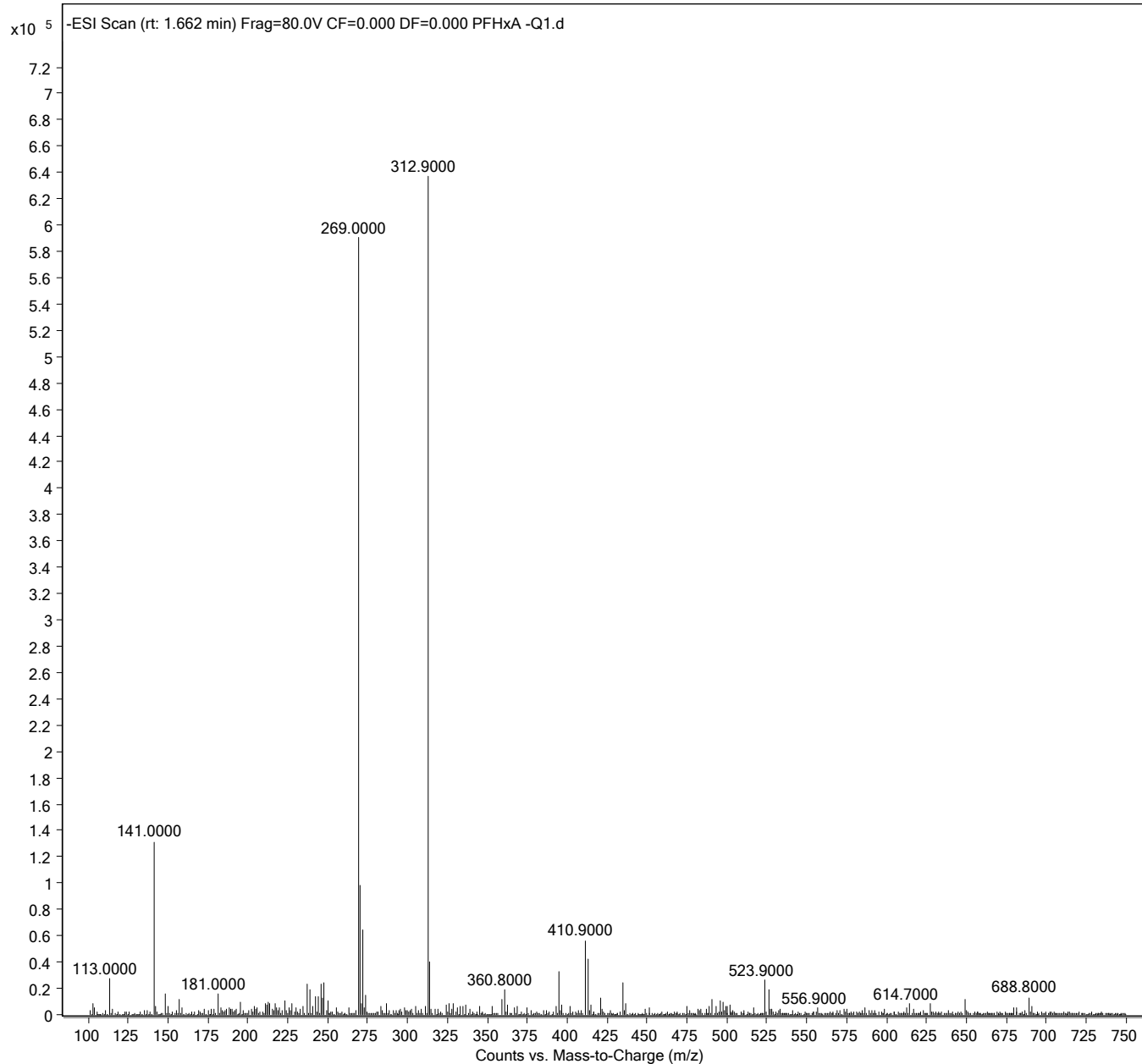
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User Name		Inj Vol	1.5	InjPosition	
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ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 10:29:21 AM



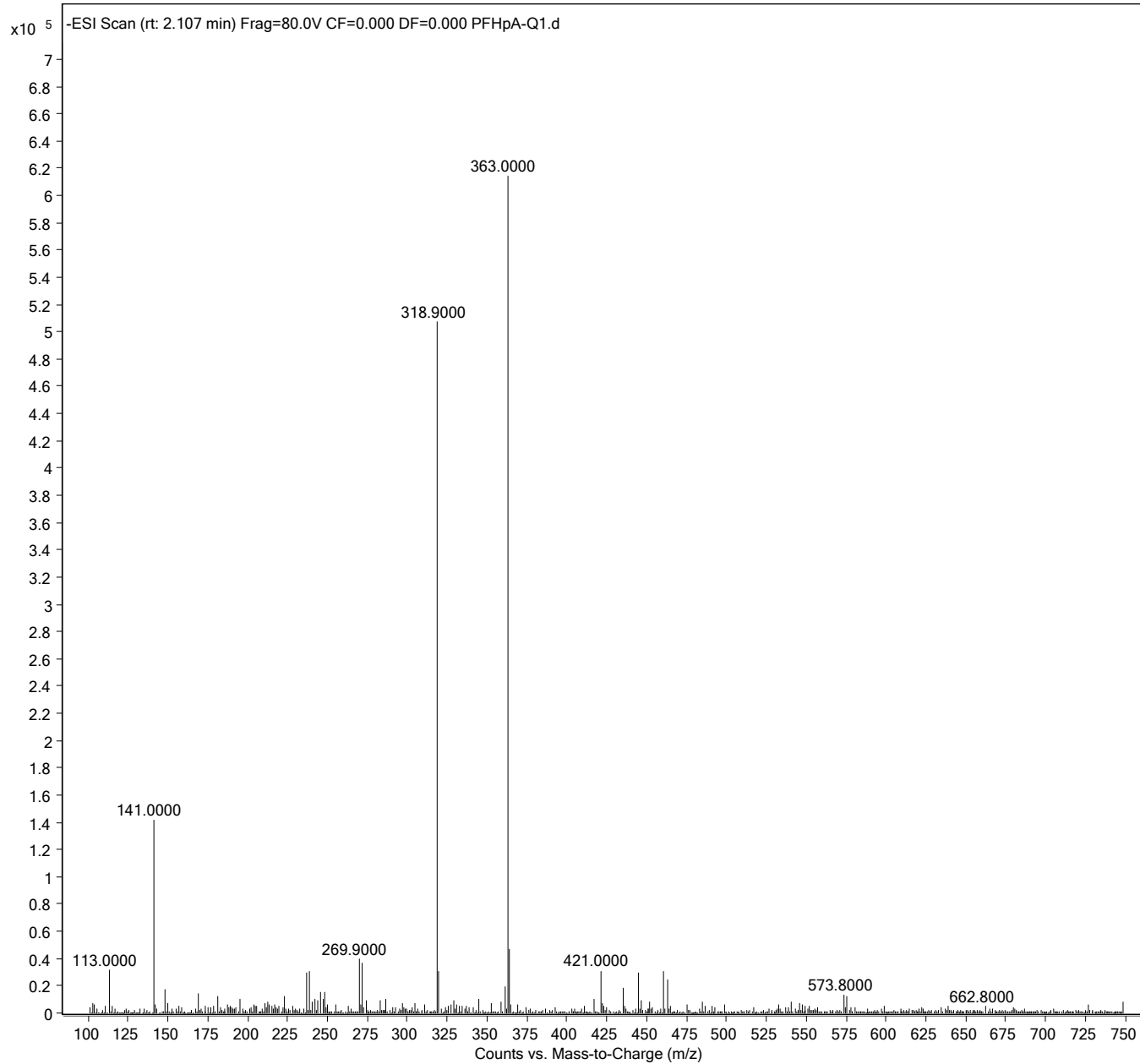
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Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFPeA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 10:36:16 AM



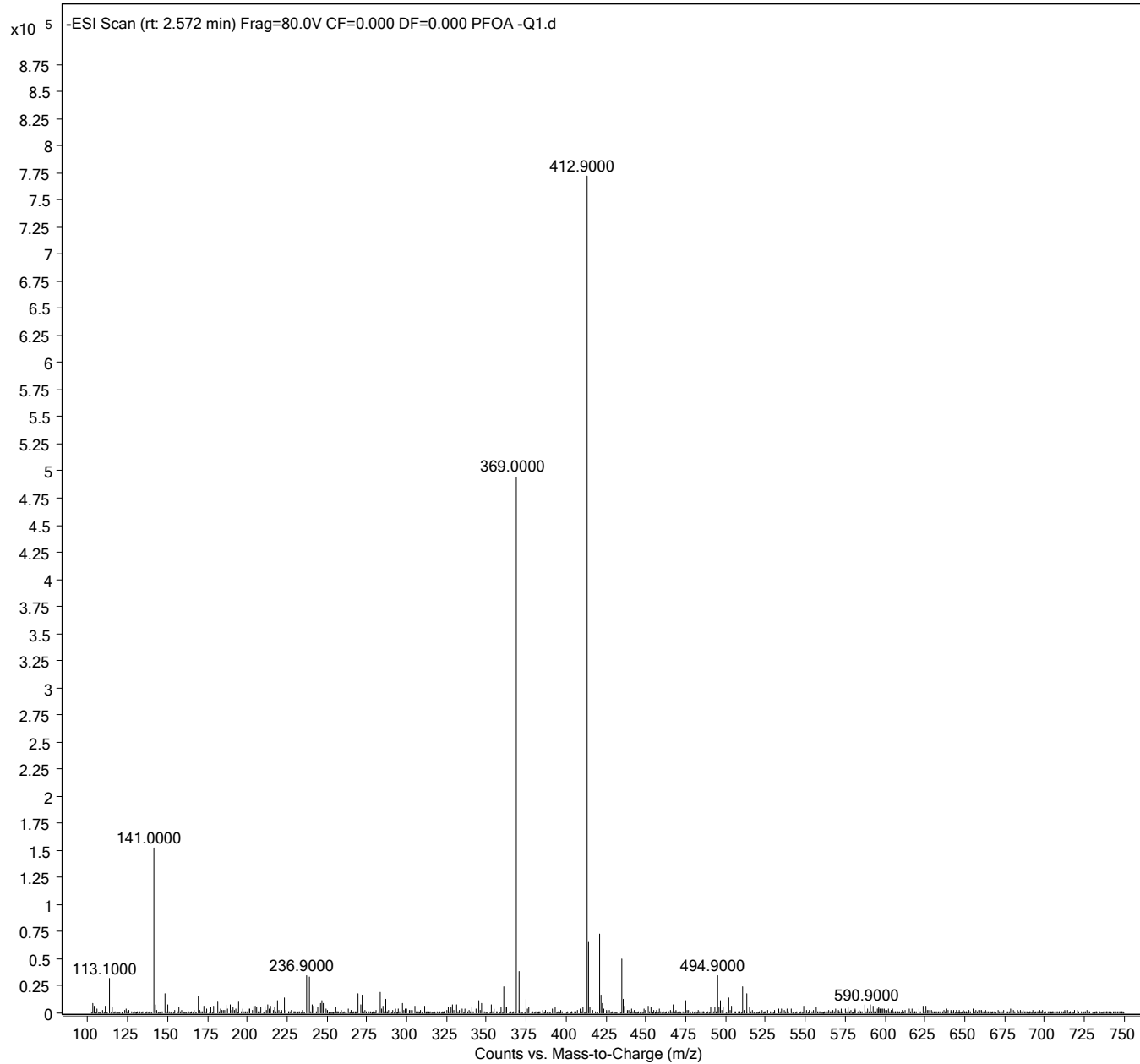
Sample Name	PFHxA -Q1	Position	P1-A3	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFHxA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 10:43:10 AM



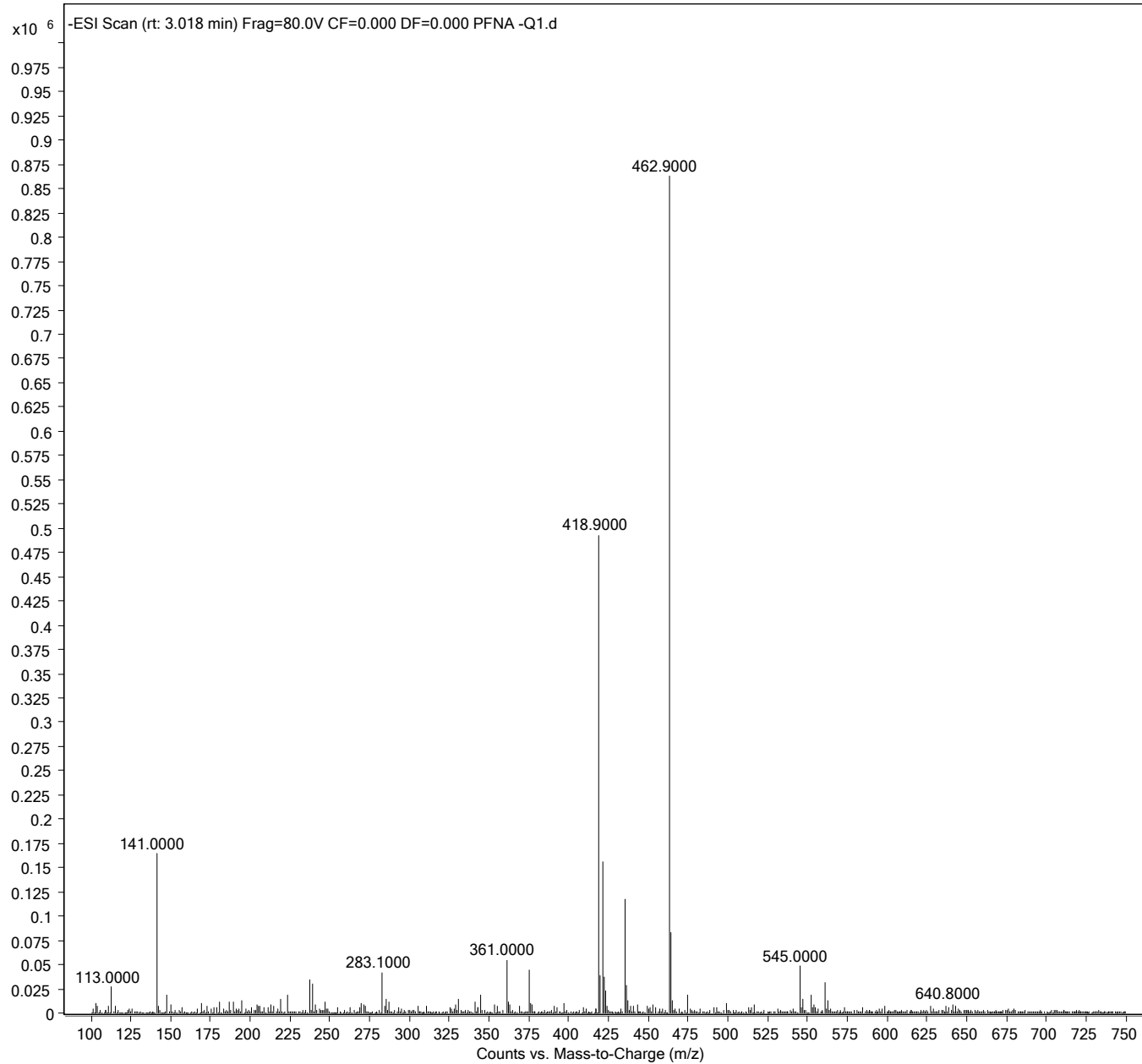
Sample Name	PFHpA-Q1	Position	P1-A4	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFHpA-Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 10:50:05 AM



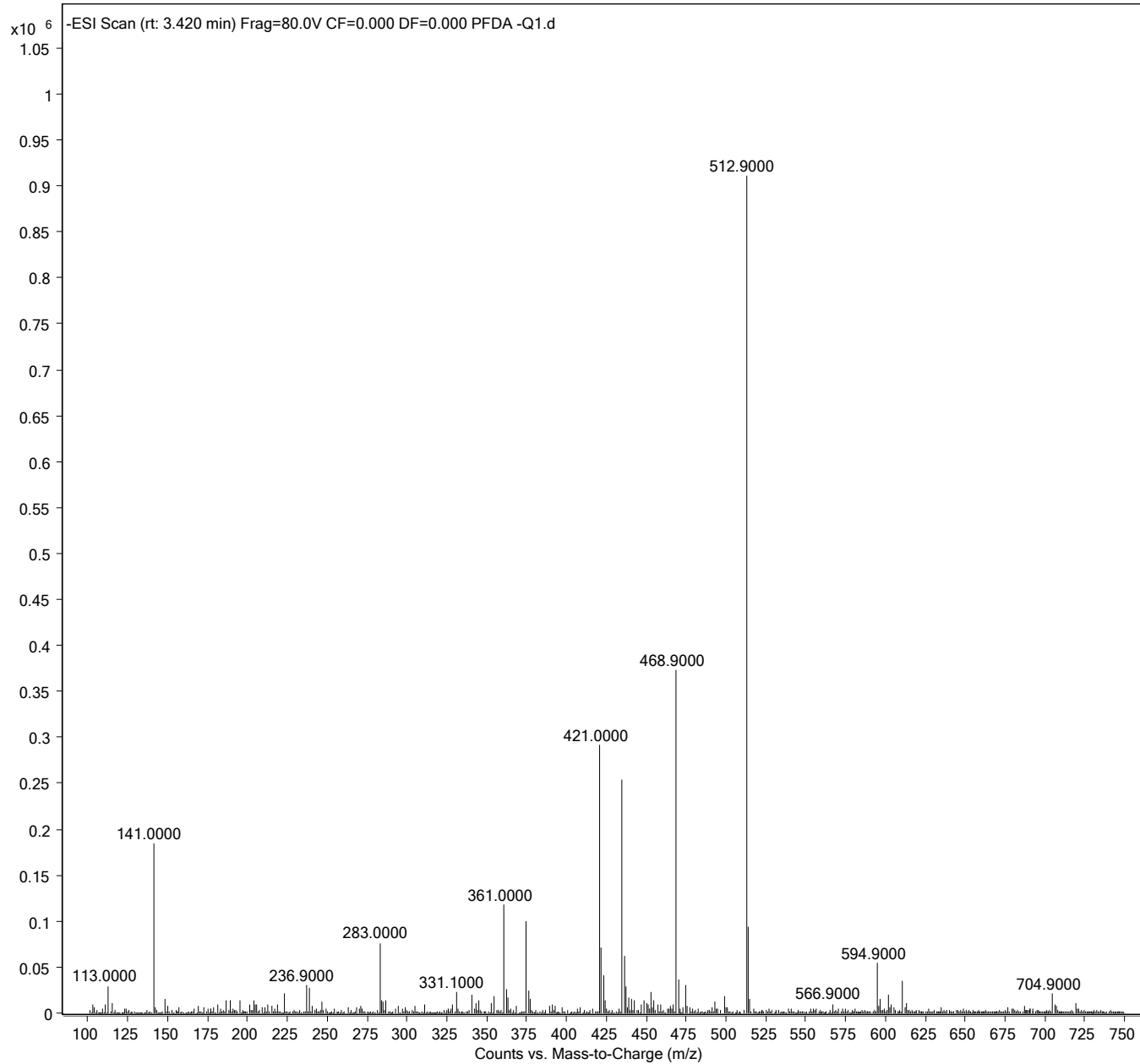
Sample Name	PFOA -Q1	Position	P1-A5	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFOA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 10:56:59 AM



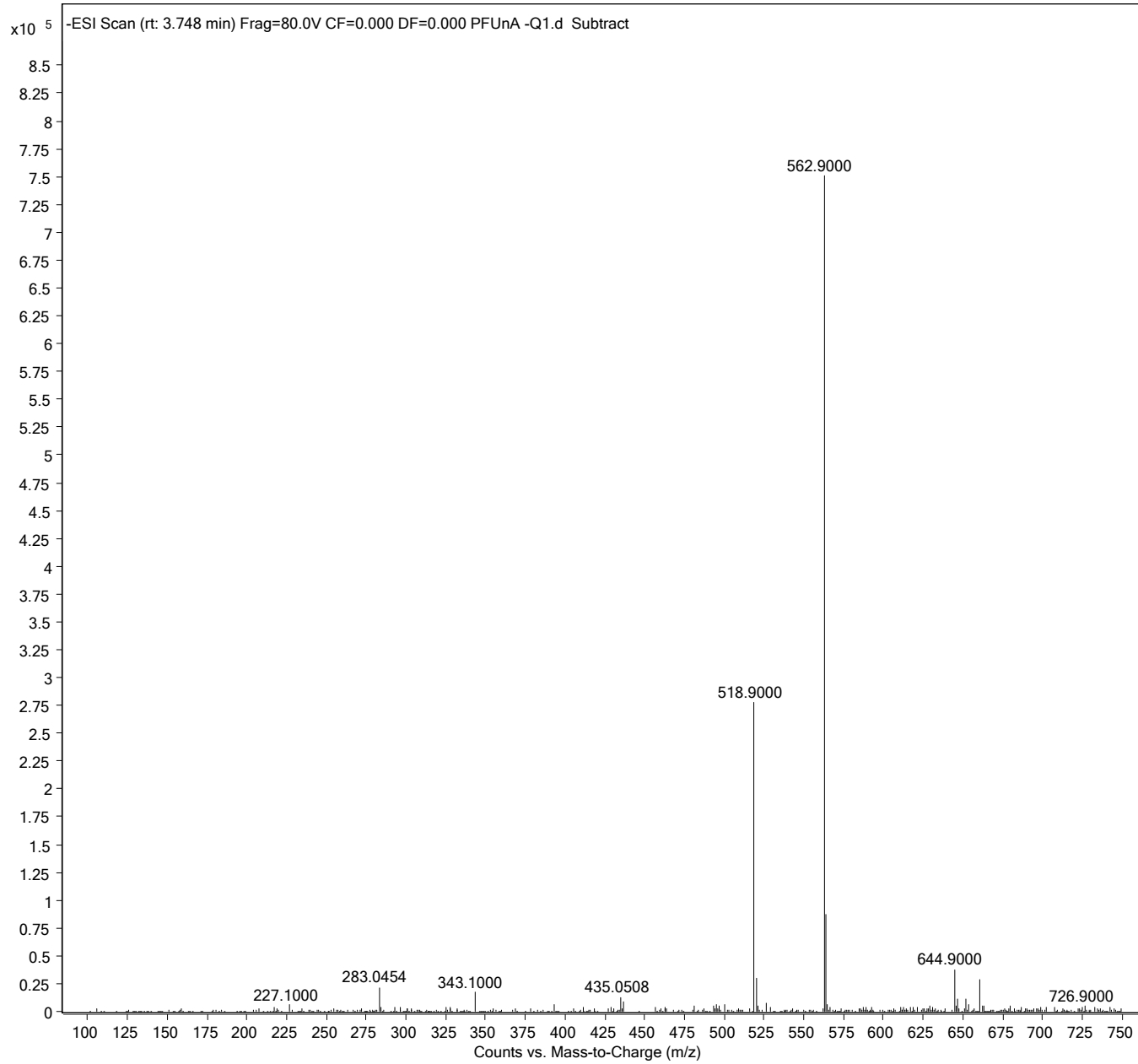
Sample Name	PFNA -Q1	Position	P1-A6	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFNA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 11:03:54 AM



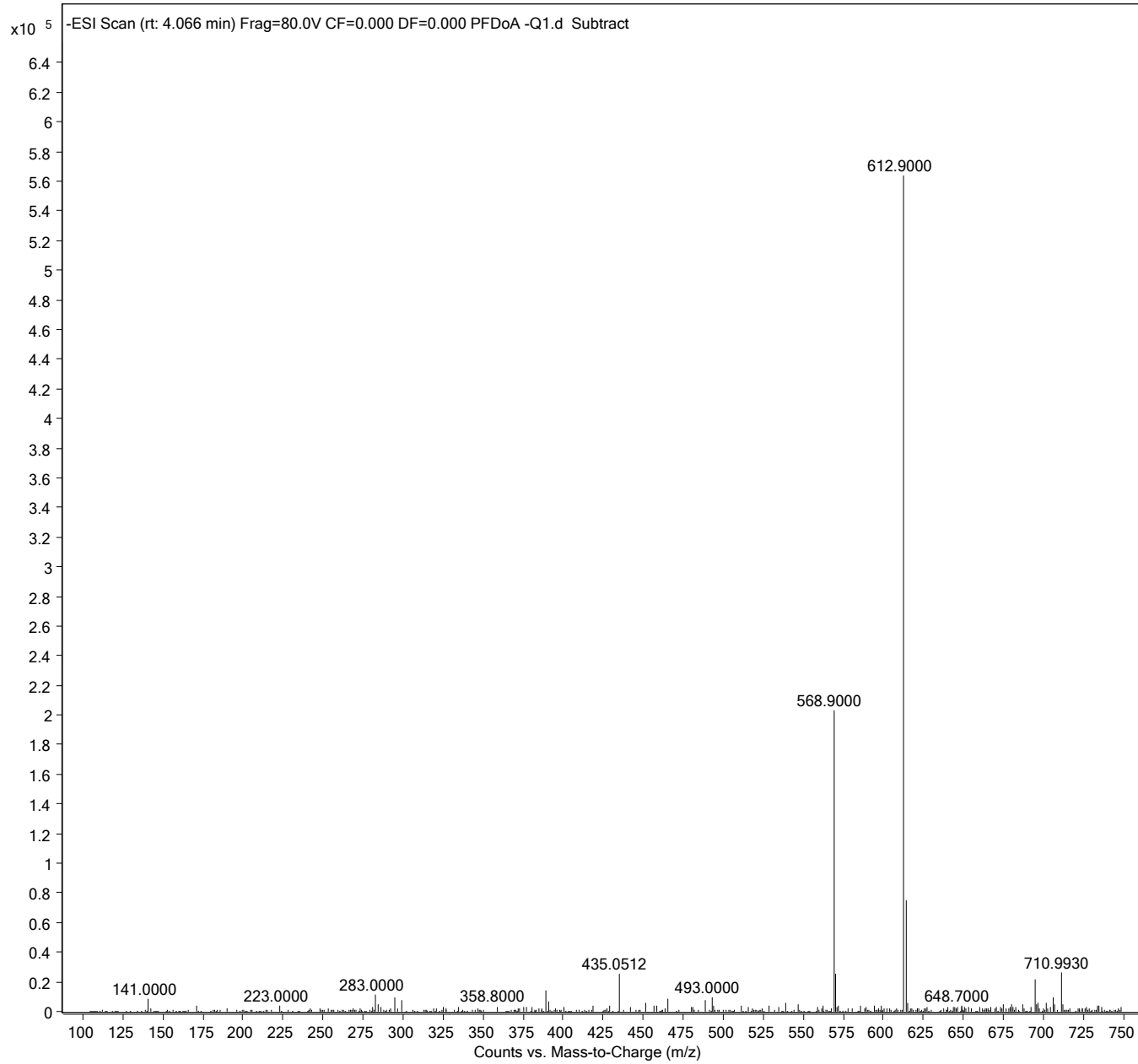
Sample Name	PFDA -Q1	Position	P1-A7	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFDA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 11:10:48 AM



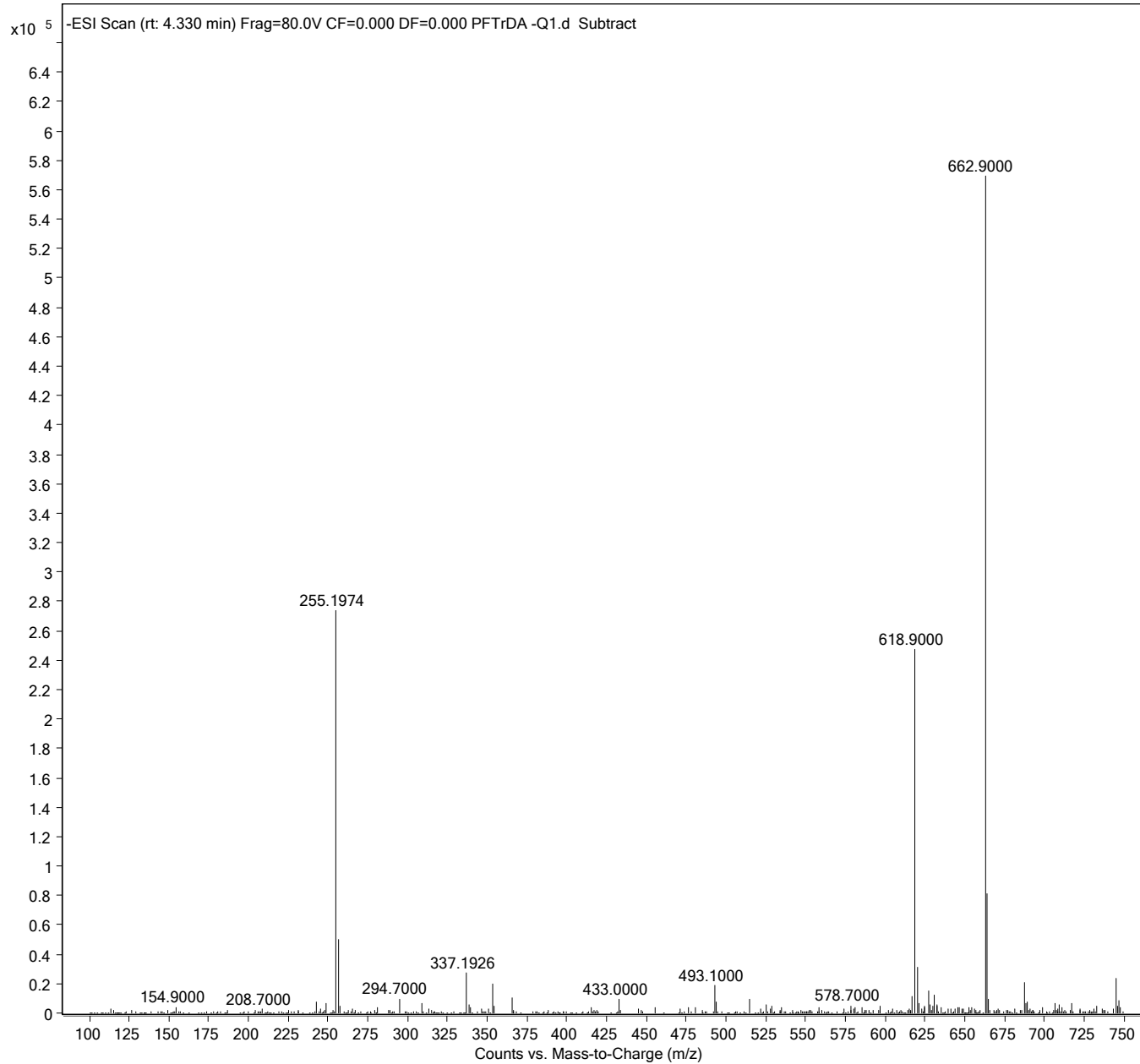
Sample Name	PFUnA -Q1	Position	P1-A8	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFUnA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 11:17:43 AM



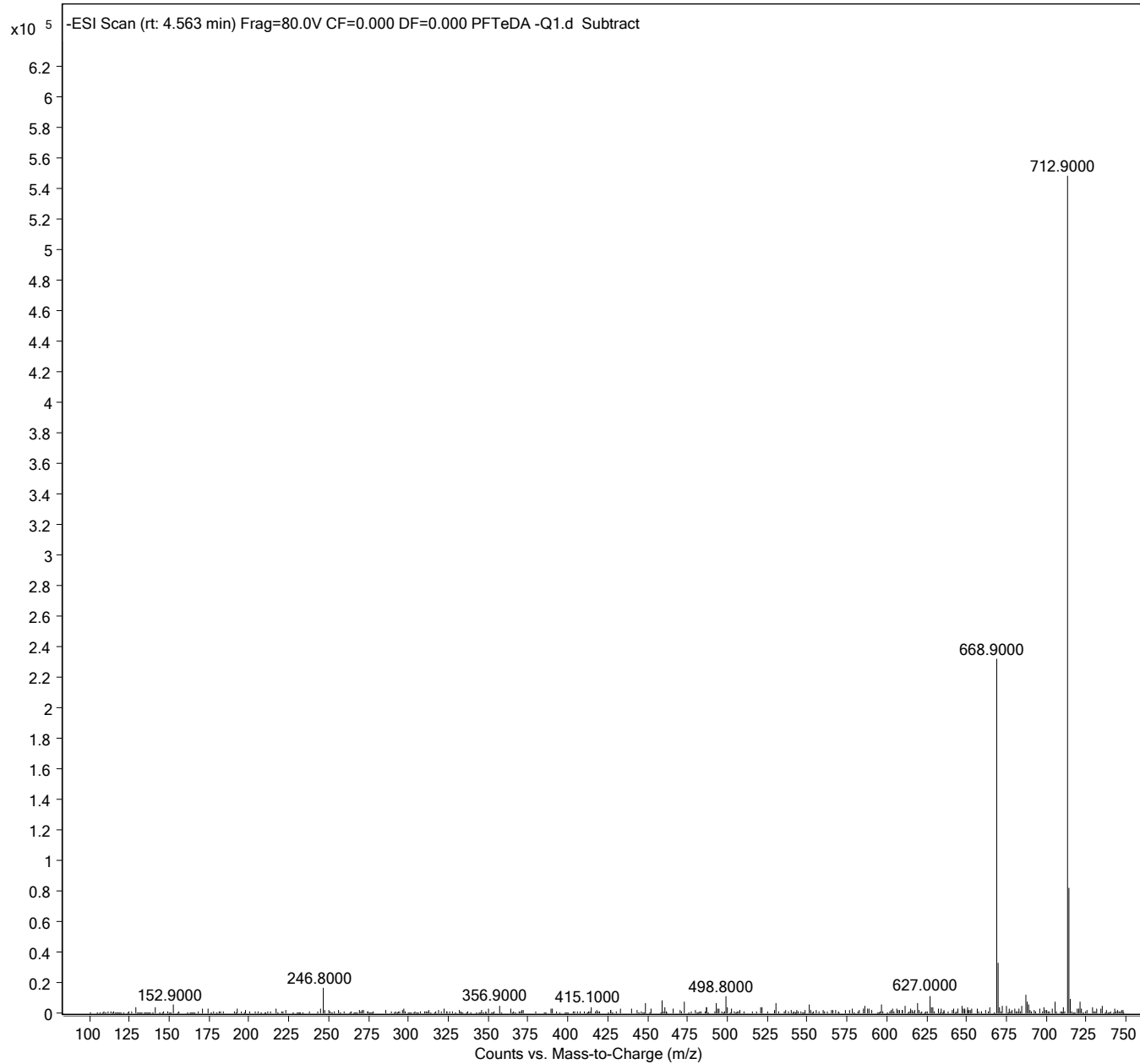
Sample Name	PFDoA -Q1	Position	P1-A9	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFDoA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 11:24:36 AM



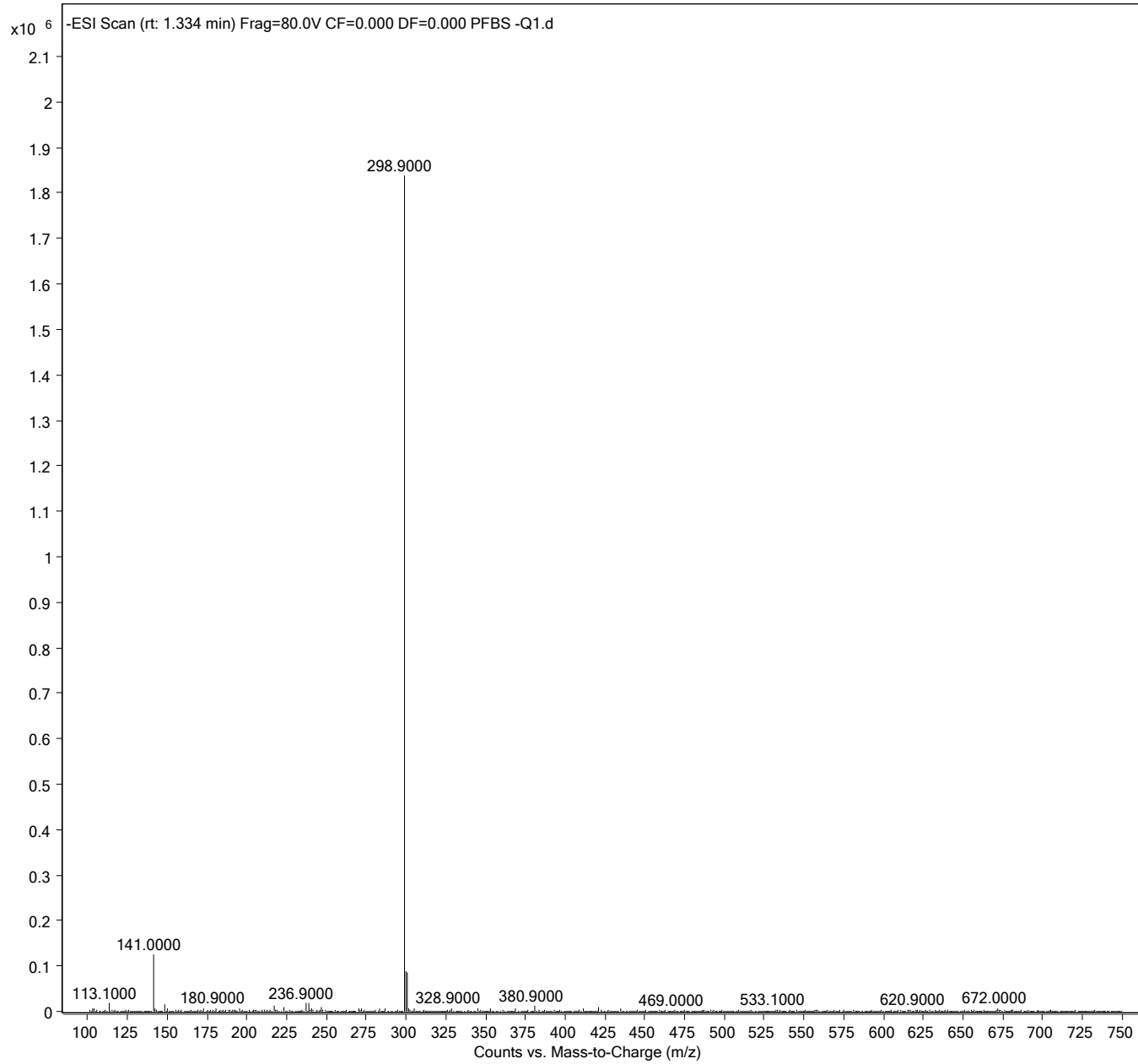
Sample Name	PFTTrDA -Q1	Position	P1-B1	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFTTrDA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 11:31:30 AM



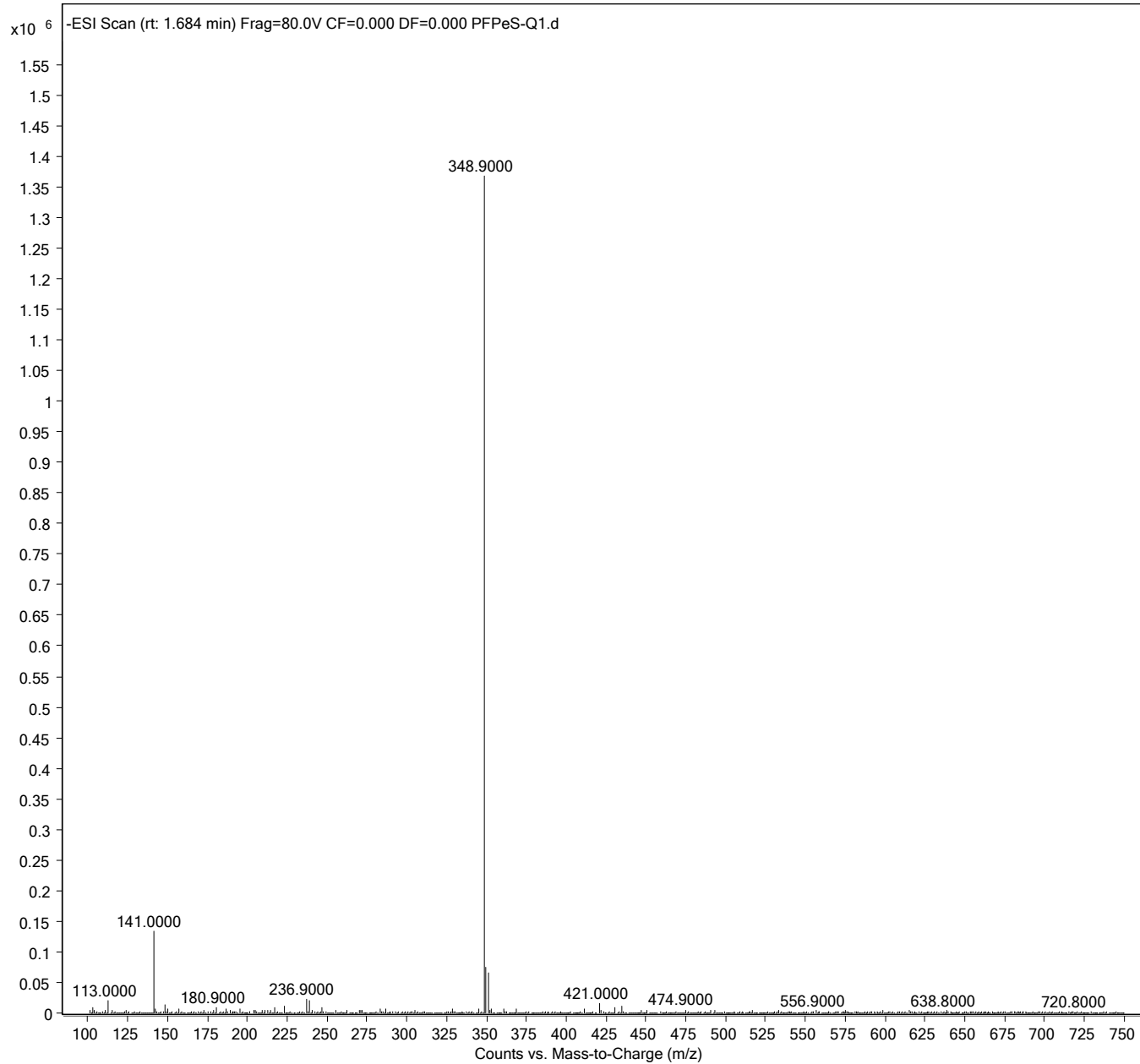
Sample Name	PFTeDA -Q1	Position	P1-B2	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFTeDA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 11:38:24 AM



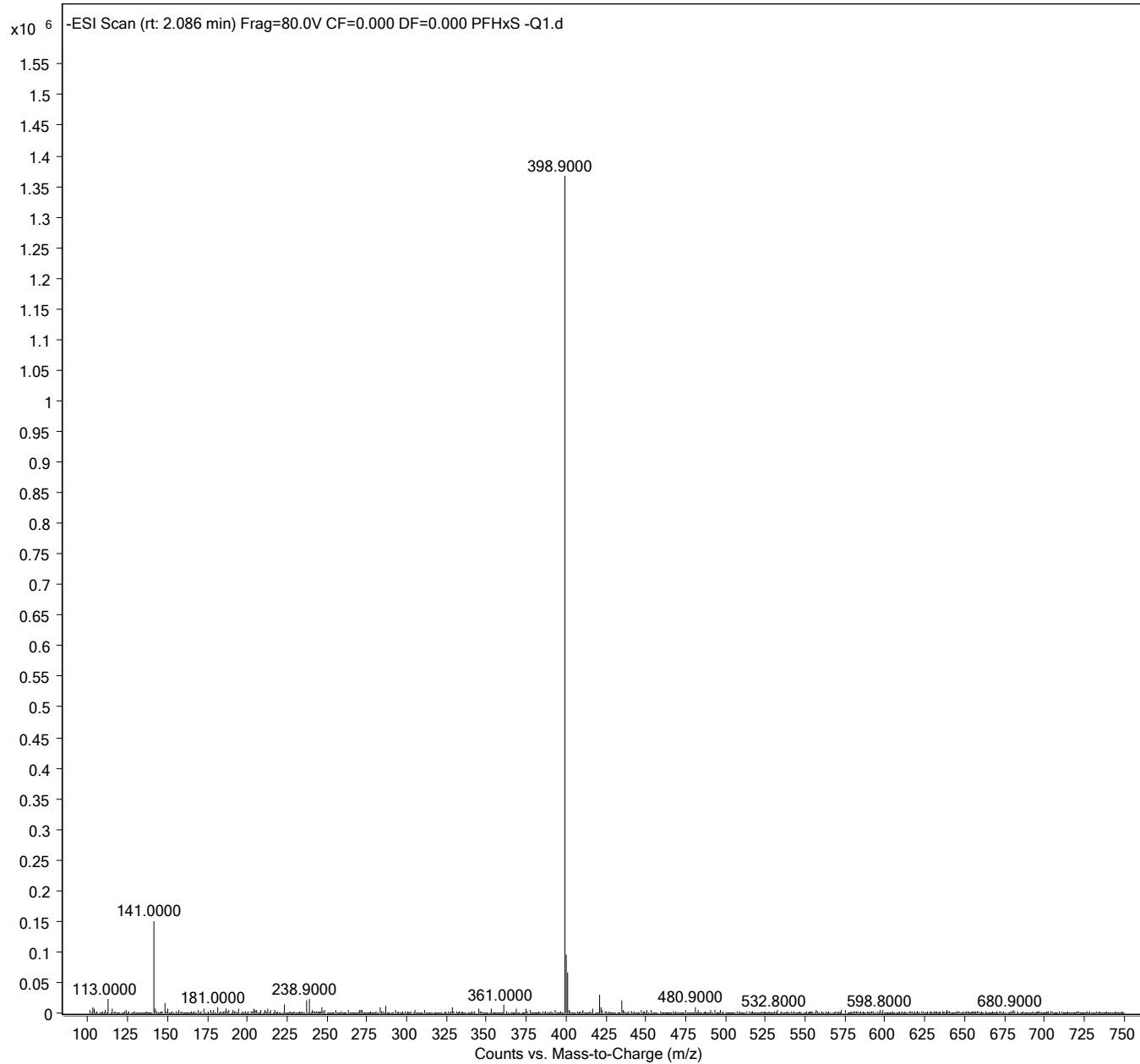
Sample Name	PFBS -Q1	Position	P1-B3	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFBS -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 11:45:18 AM



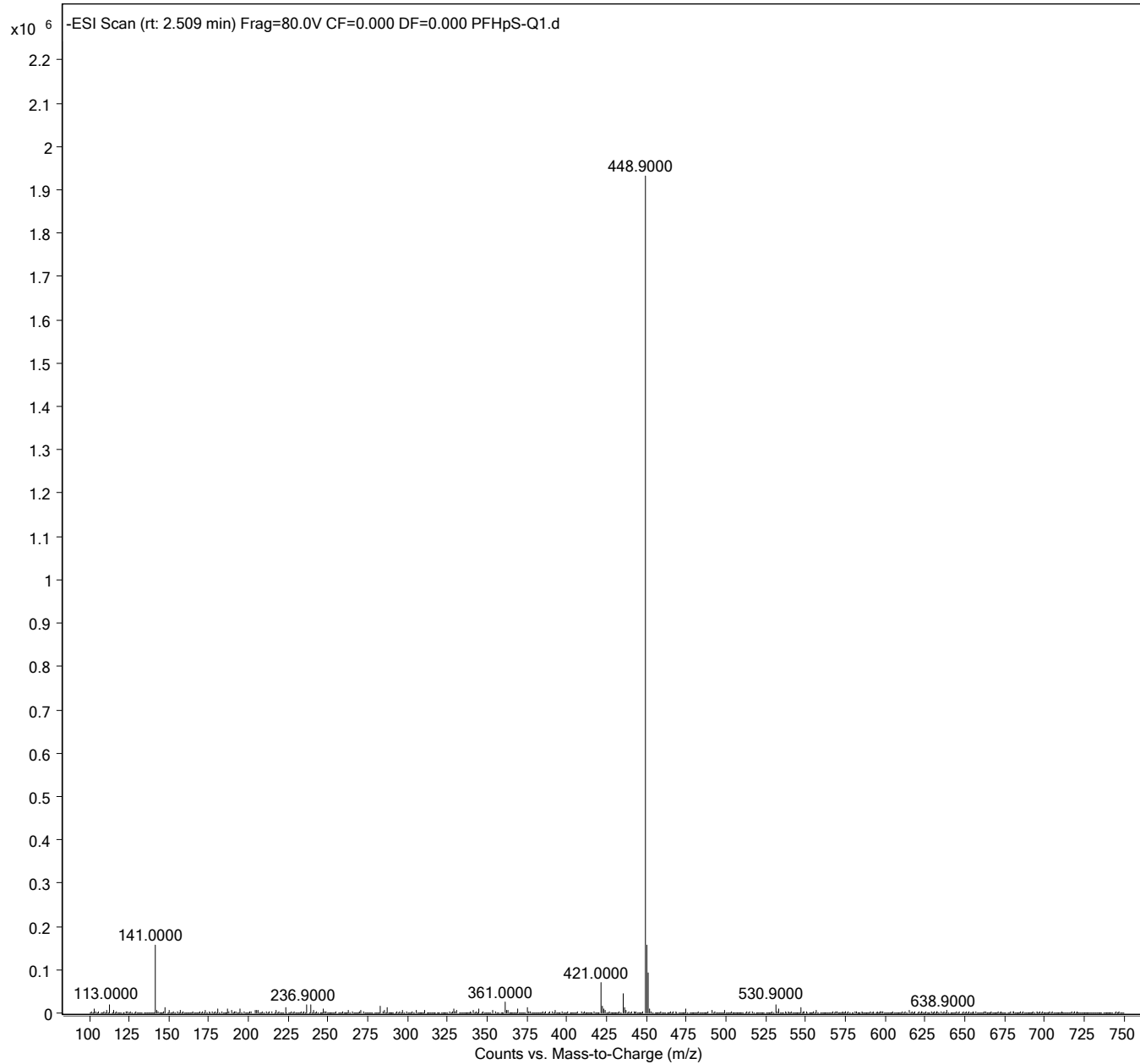
Sample Name	PFPeS-Q1	Position	P1-B4	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFPeS-Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 11:52:12 AM



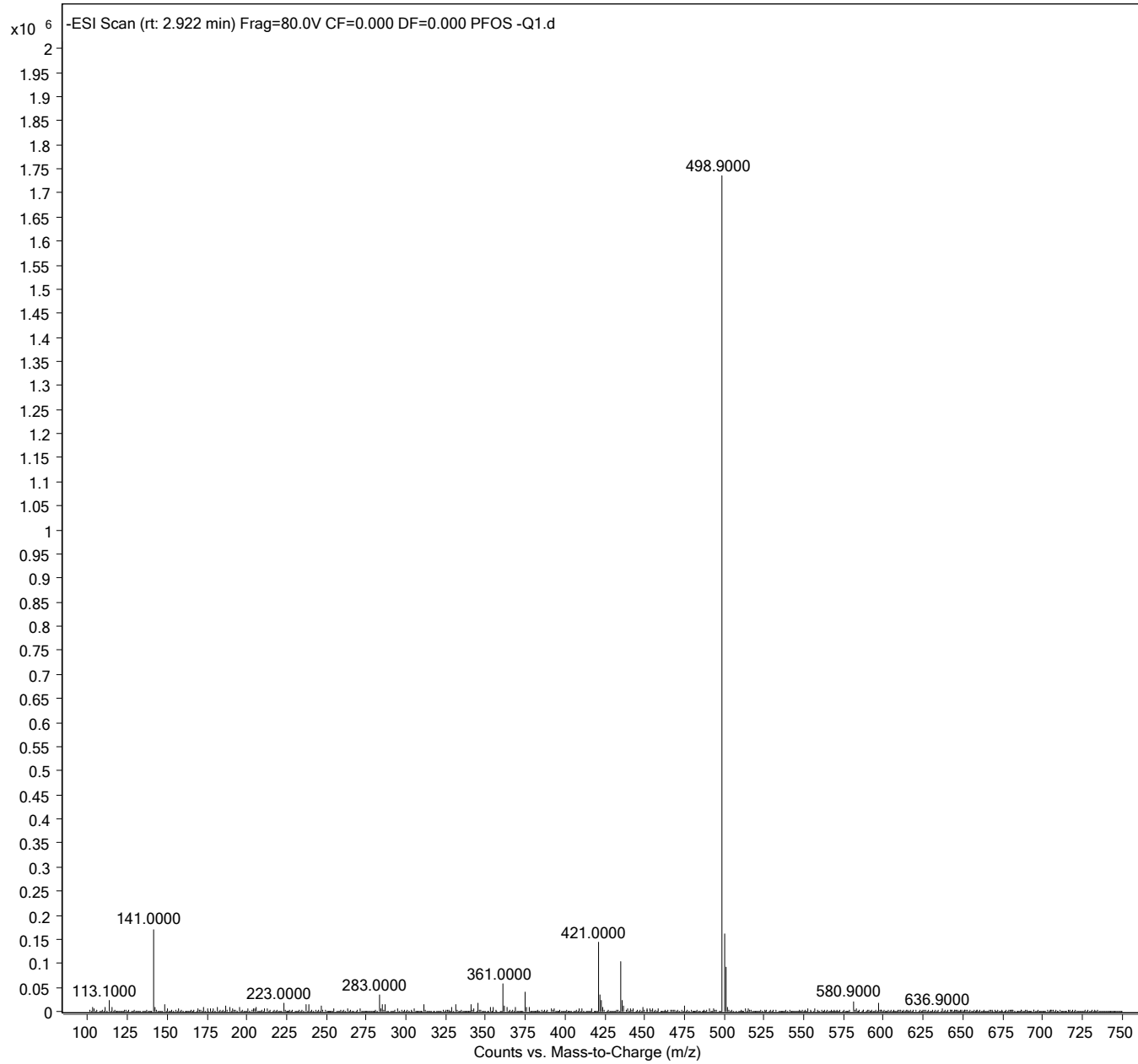
Sample Name	PFHxS -Q1	Position	P1-B5	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFHxS -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 11:59:07 AM



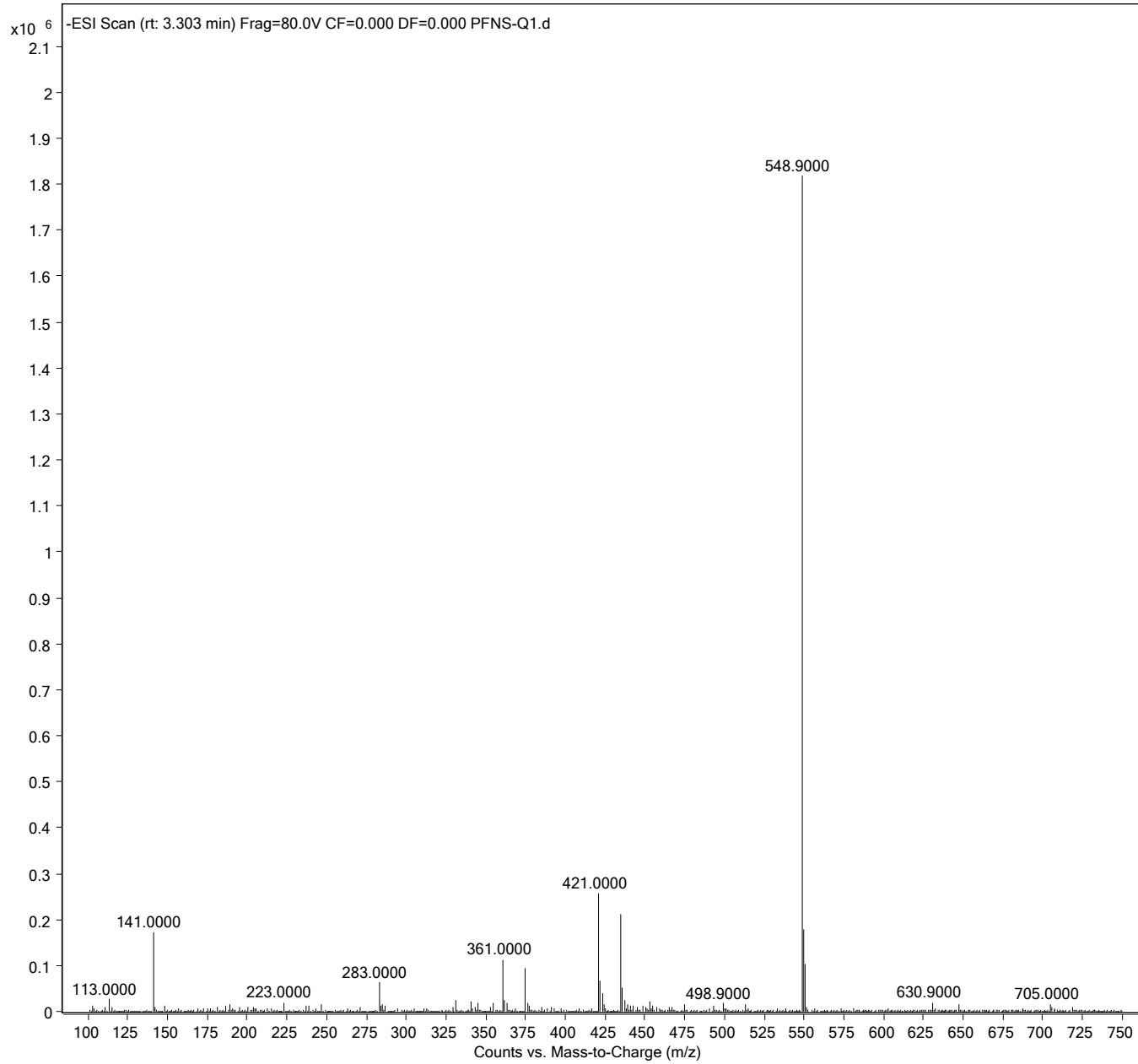
Sample Name	PFHpS-Q1	Position	P1-B6	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFHpS-Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 12:06:01 PM



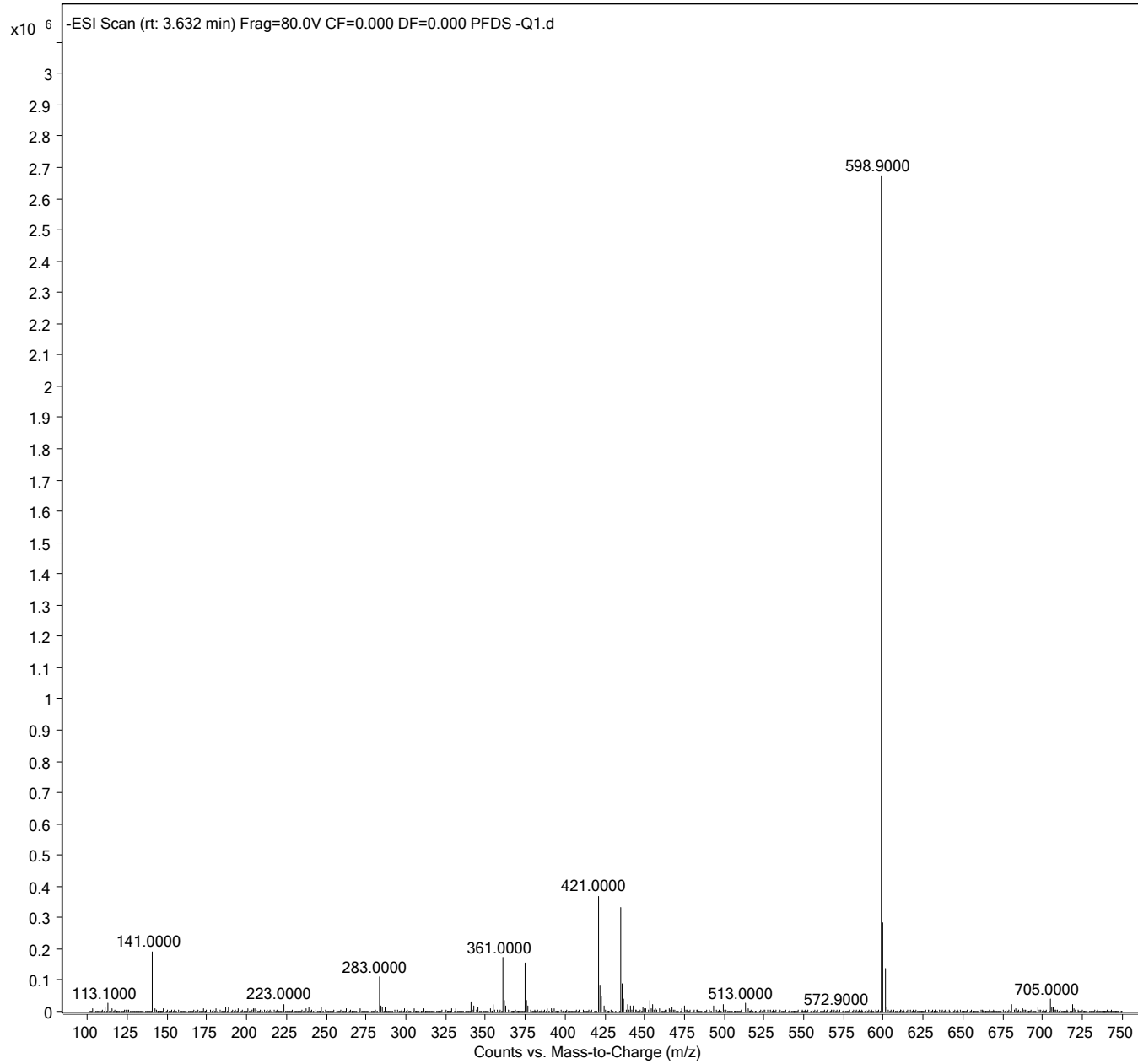
Sample Name	PFOS -Q1	Position	P1-B7	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFOS -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 12:12:56 PM



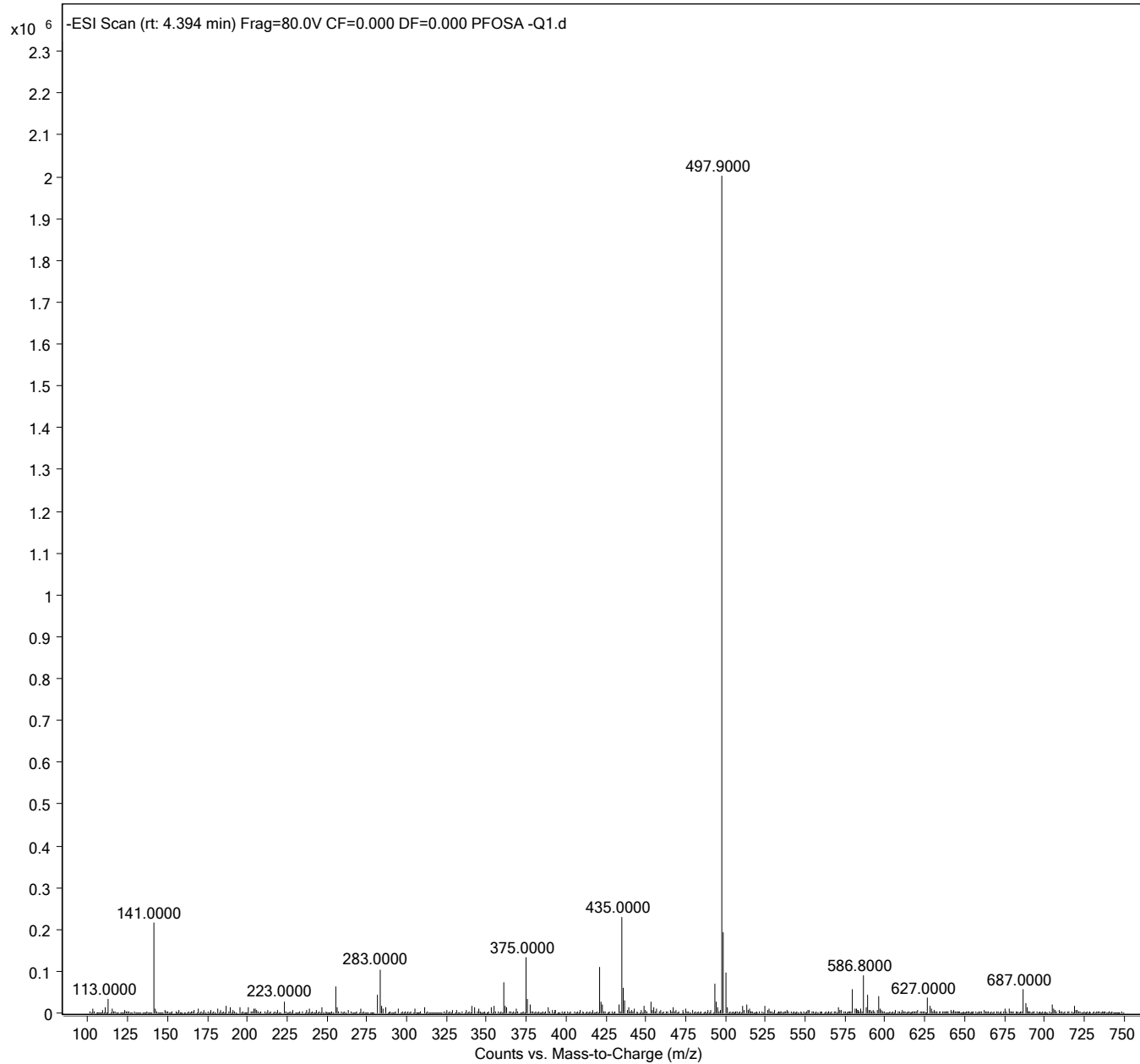
Sample Name	PFNS-Q1	Position	P1-B8	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFNS-Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 12:19:51 PM



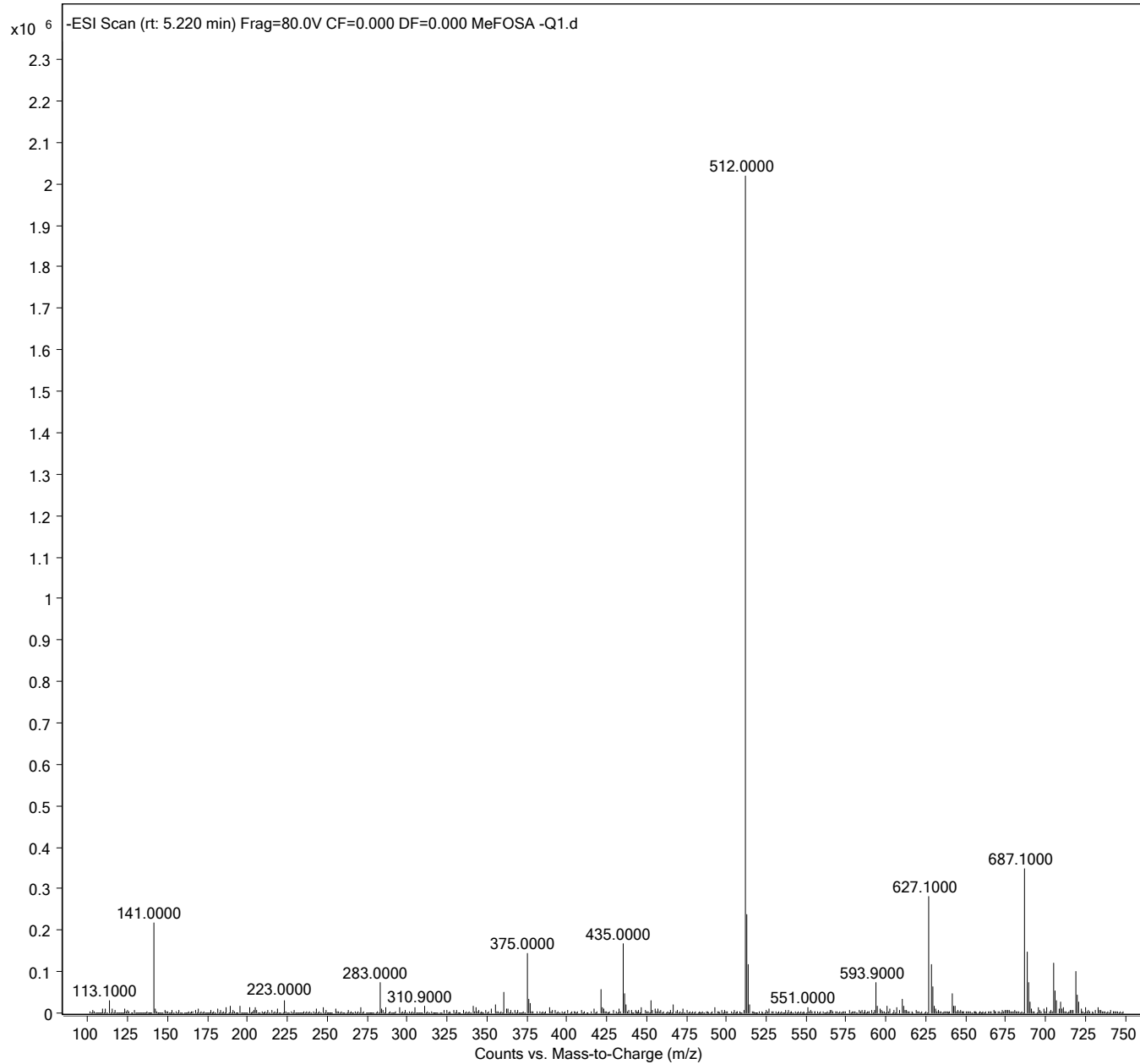
Sample Name	PFDS -Q1	Position	P1-B9	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFDS -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 12:26:46 PM



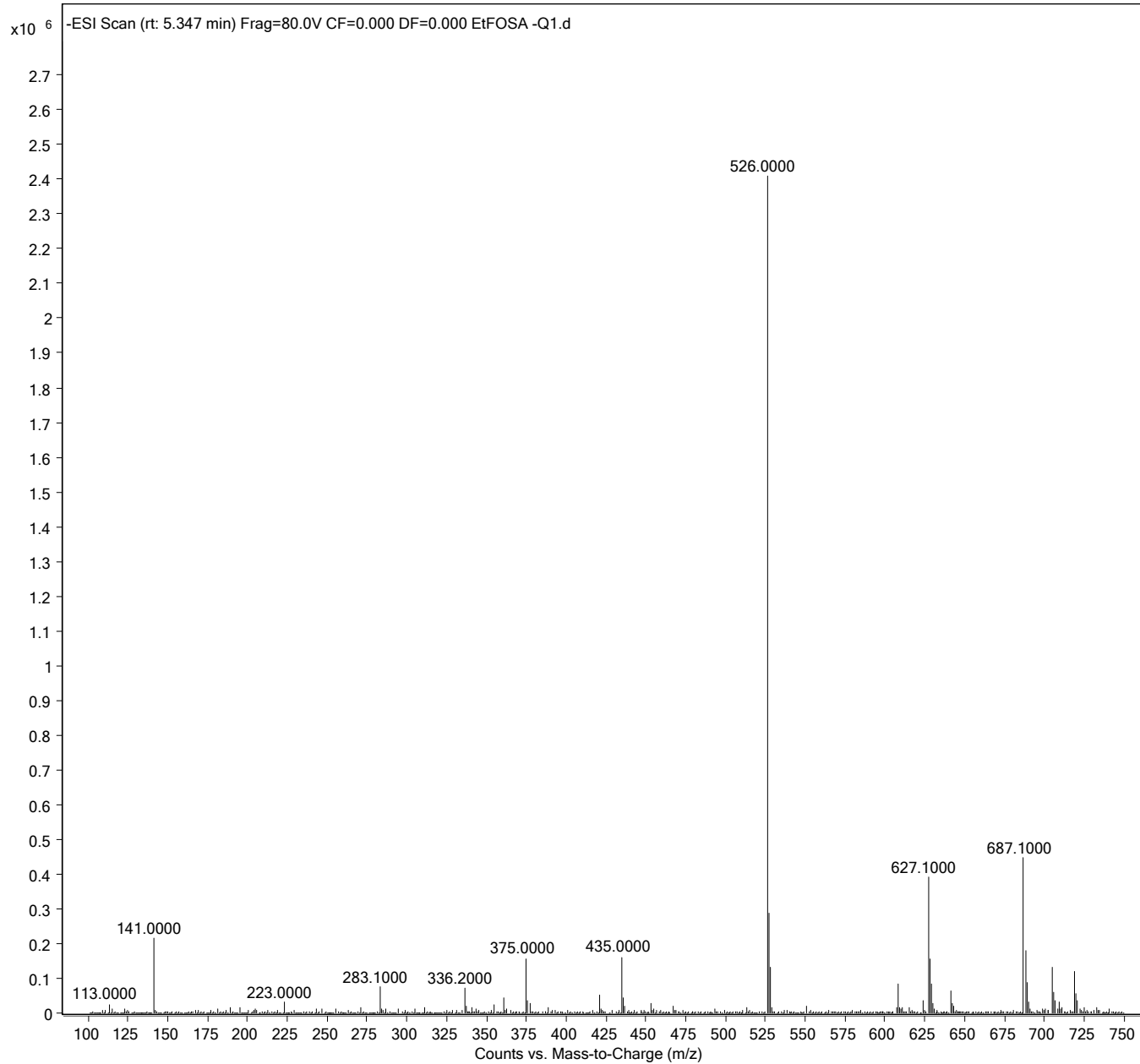
Sample Name	PFOSA -Q1	Position	P1-C1	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFOSA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 12:33:40 PM



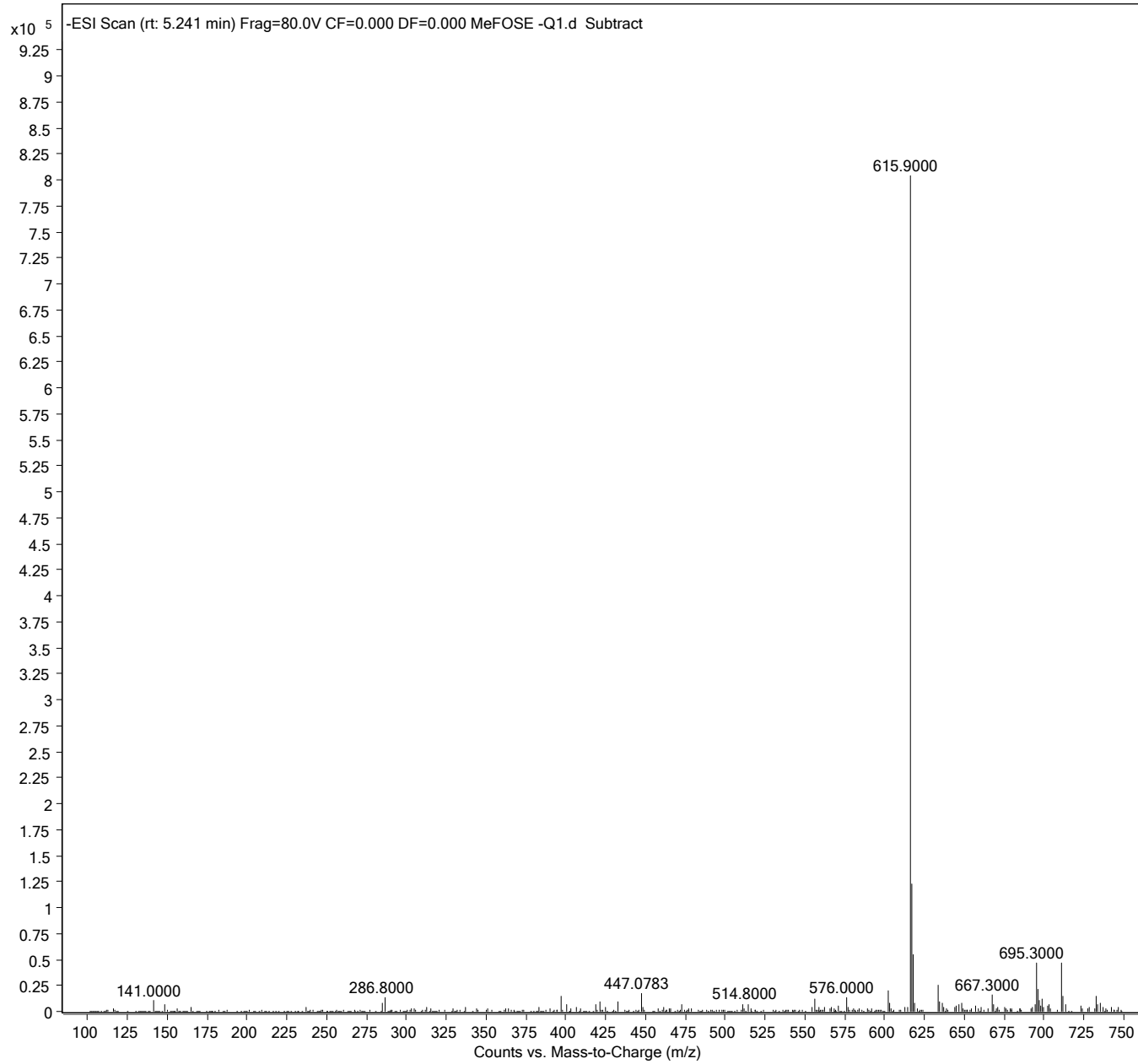
Sample Name	MeFOSA -Q1	Position	P1-C2	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	MeFOSA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 12:40:34 PM



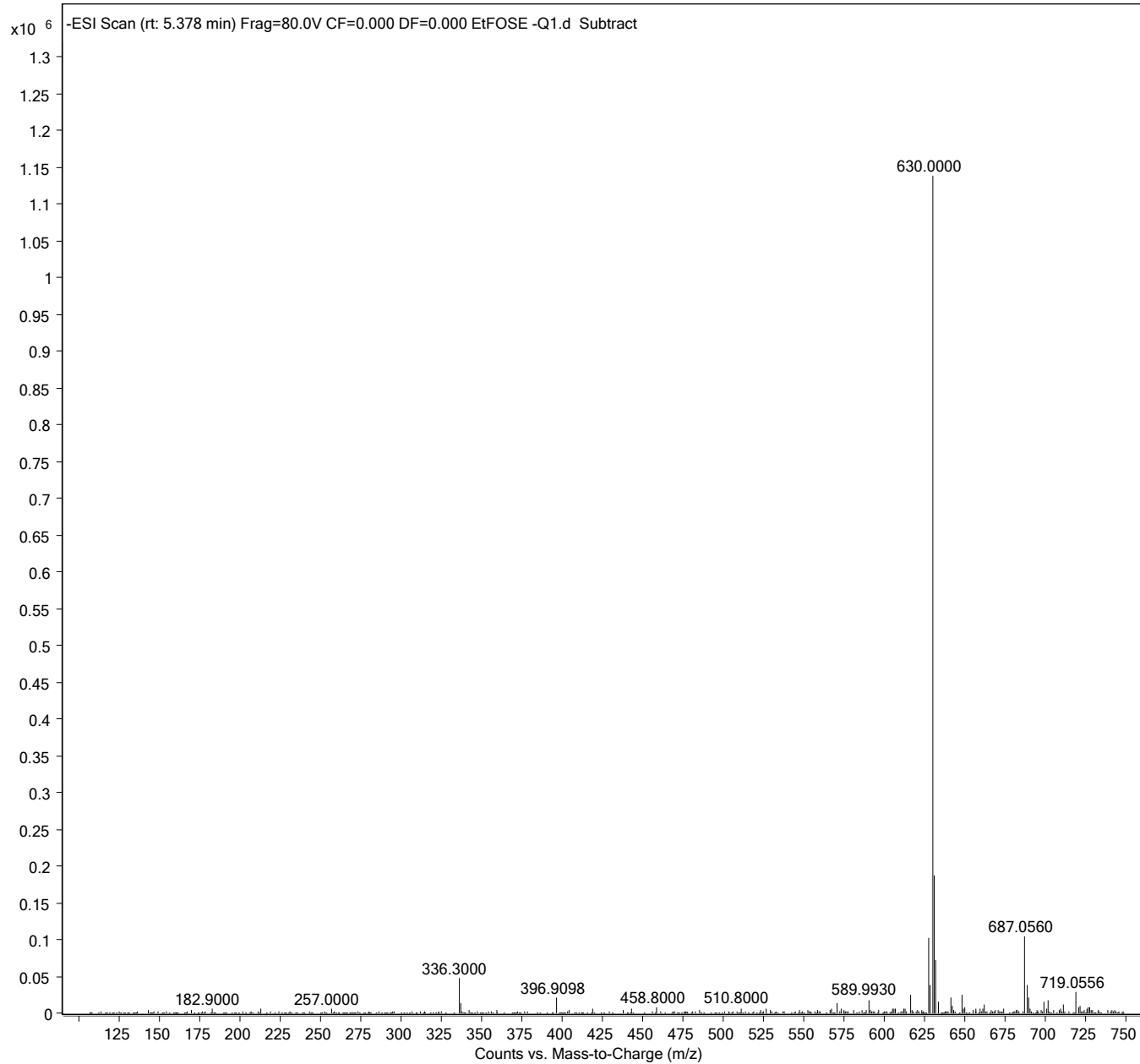
Sample Name	EtFOSA -Q1	Position	P1-C3	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	EtFOSA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 12:47:28 PM



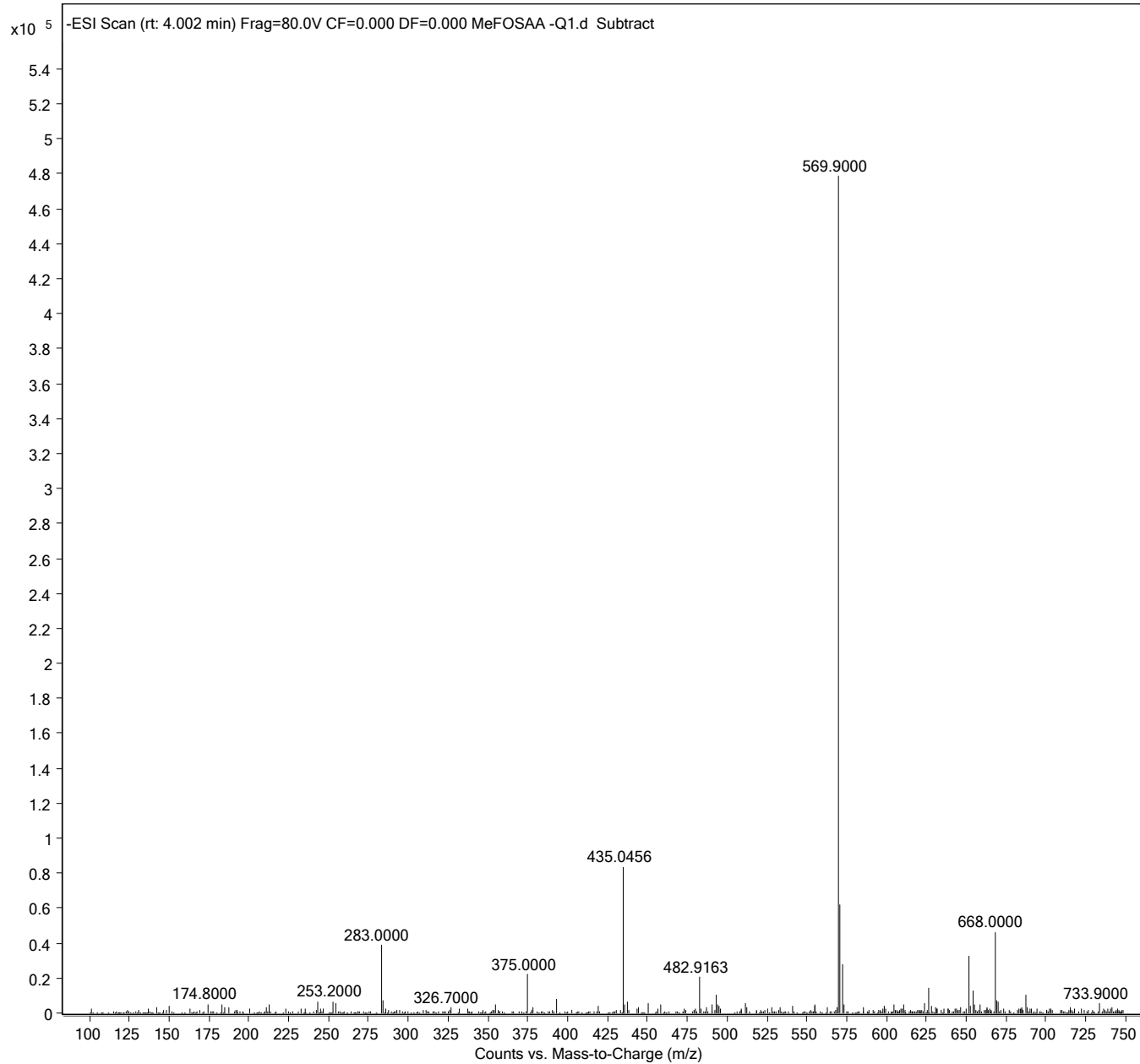
Sample Name	MeFOSE -Q1	Position	P1-C4	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	MeFOSE -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 12:54:23 PM



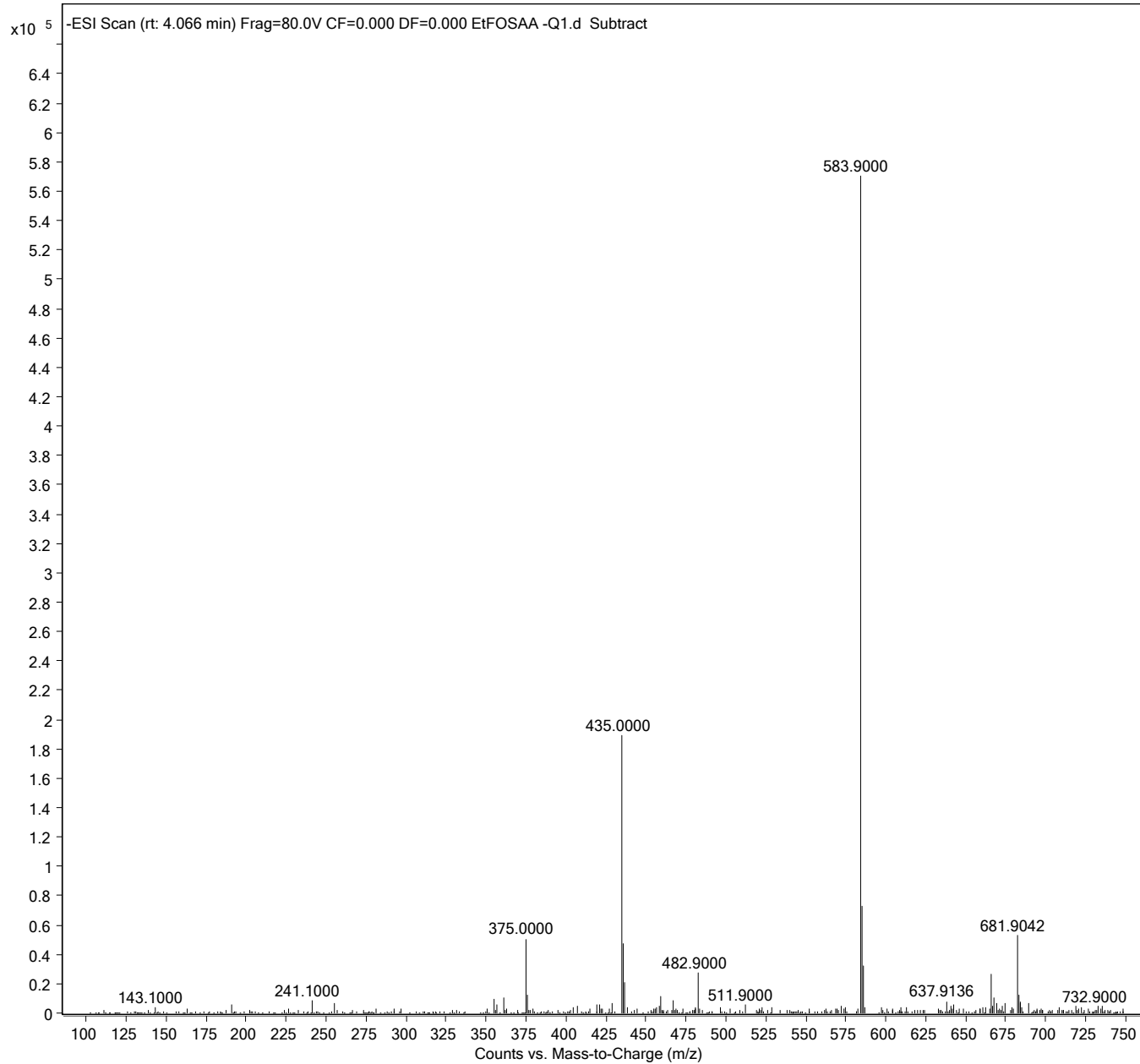
Sample Name	EtFOSE -Q1	Position	P1-C5	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	EtFOSE -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 1:01:18 PM



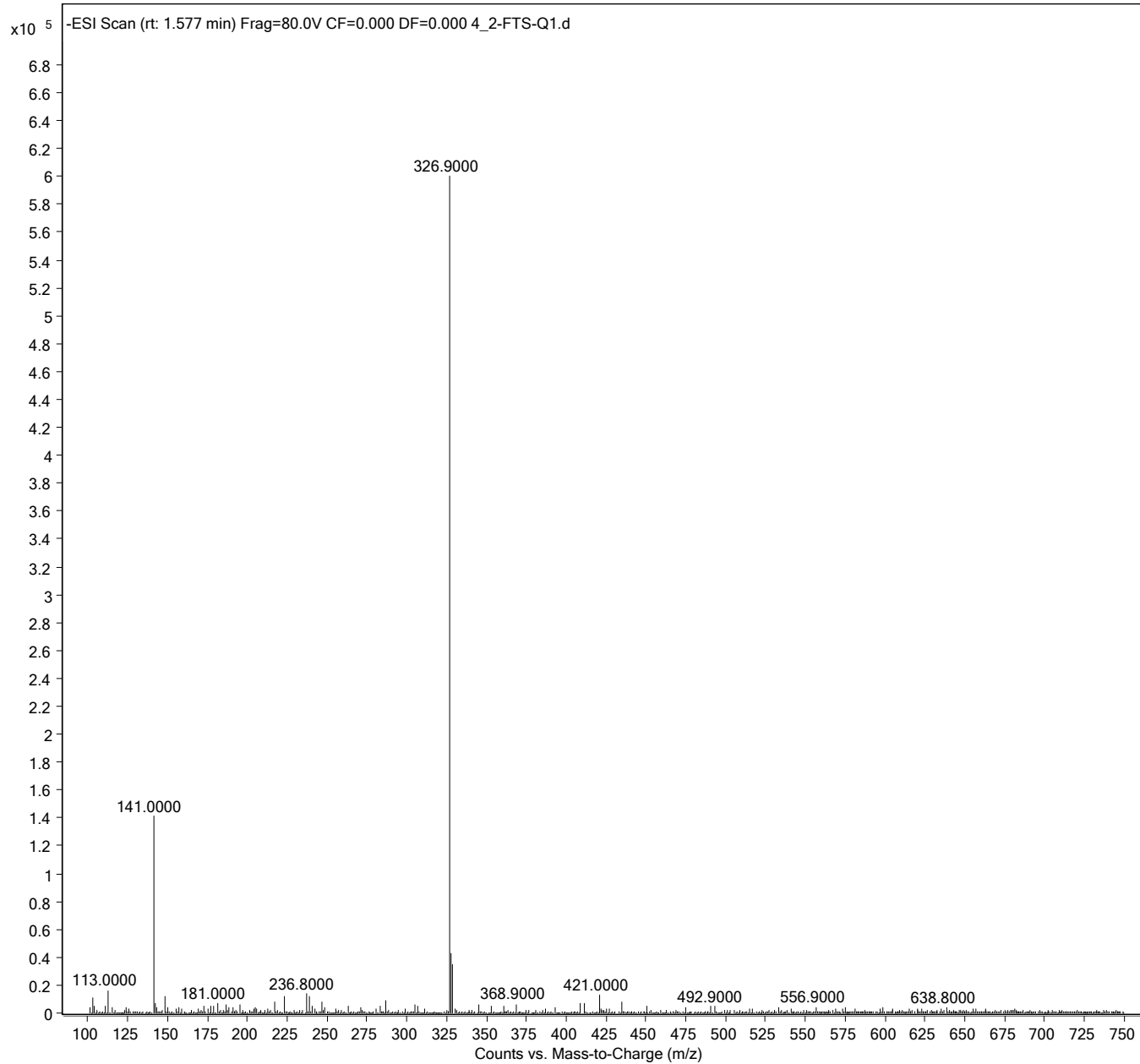
Sample Name	MeFOSAA -Q1	Position	P1-C6	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	MeFOSAA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 1:08:13 PM



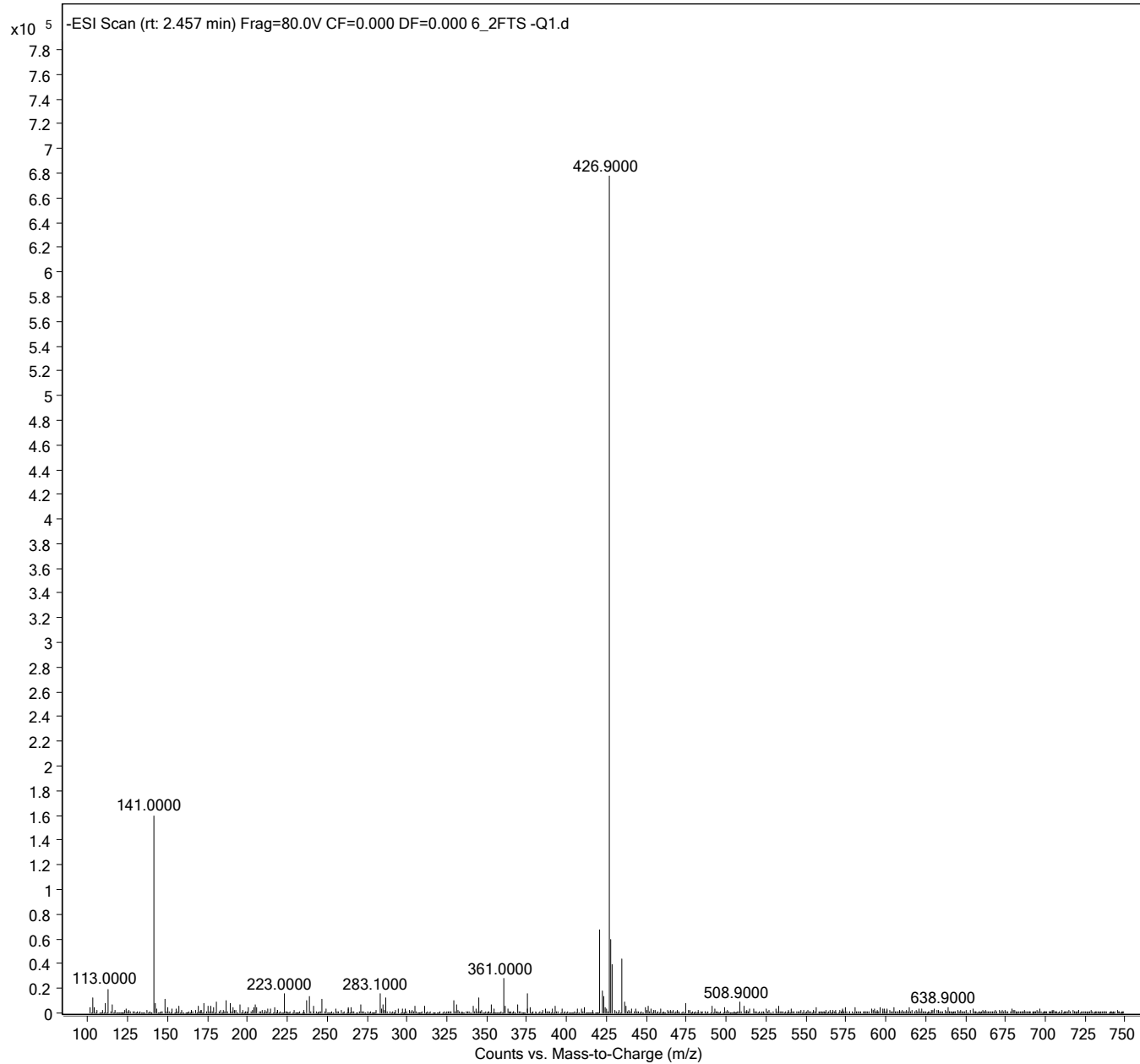
Sample Name	EtFOSAA -Q1	Position	P1-C7	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	EtFOSAA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 1:15:07 PM



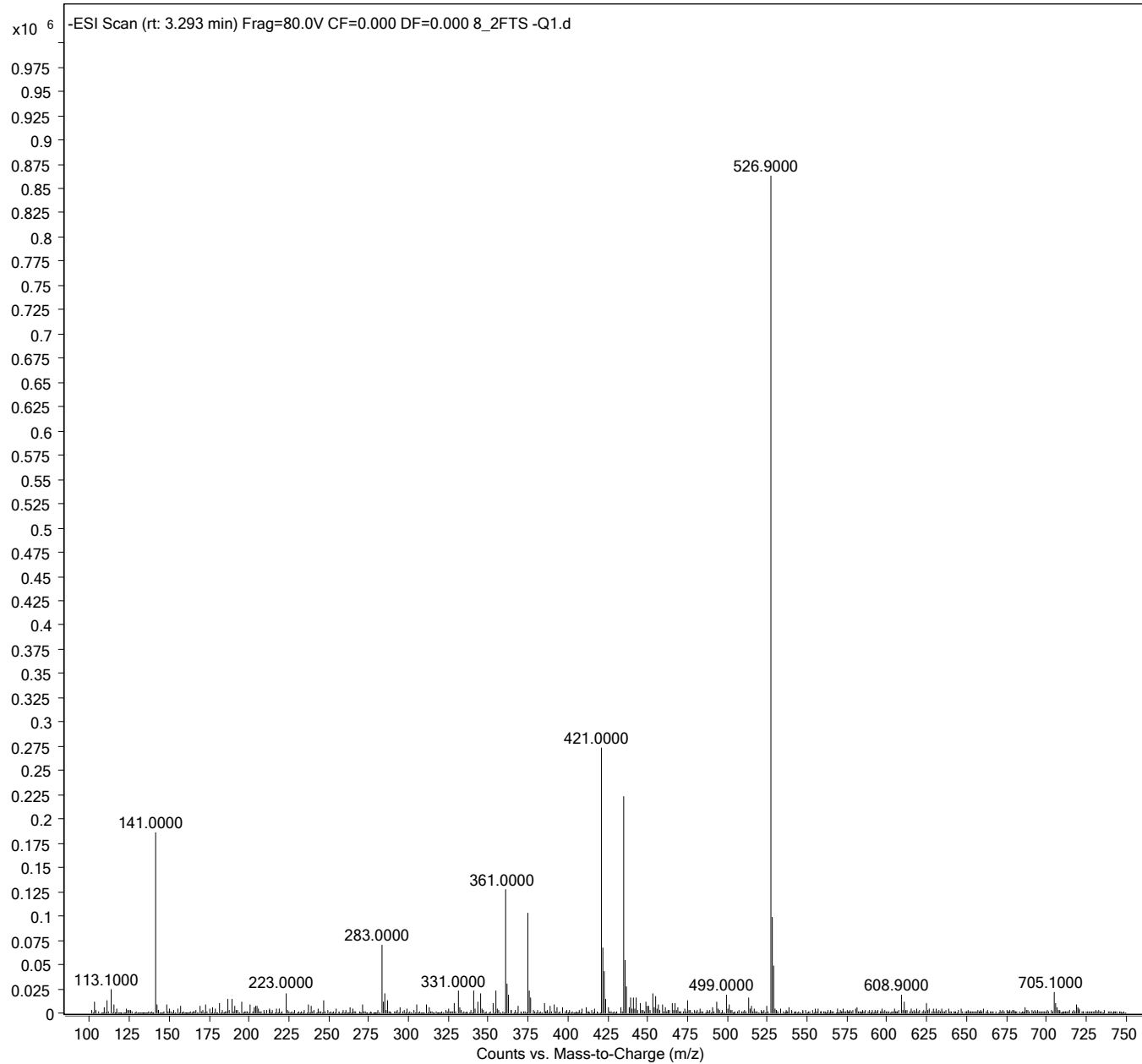
Sample Name	4:2-FTS-Q1	Position	P1-C8	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	4_2-FTS-Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 1:22:02 PM



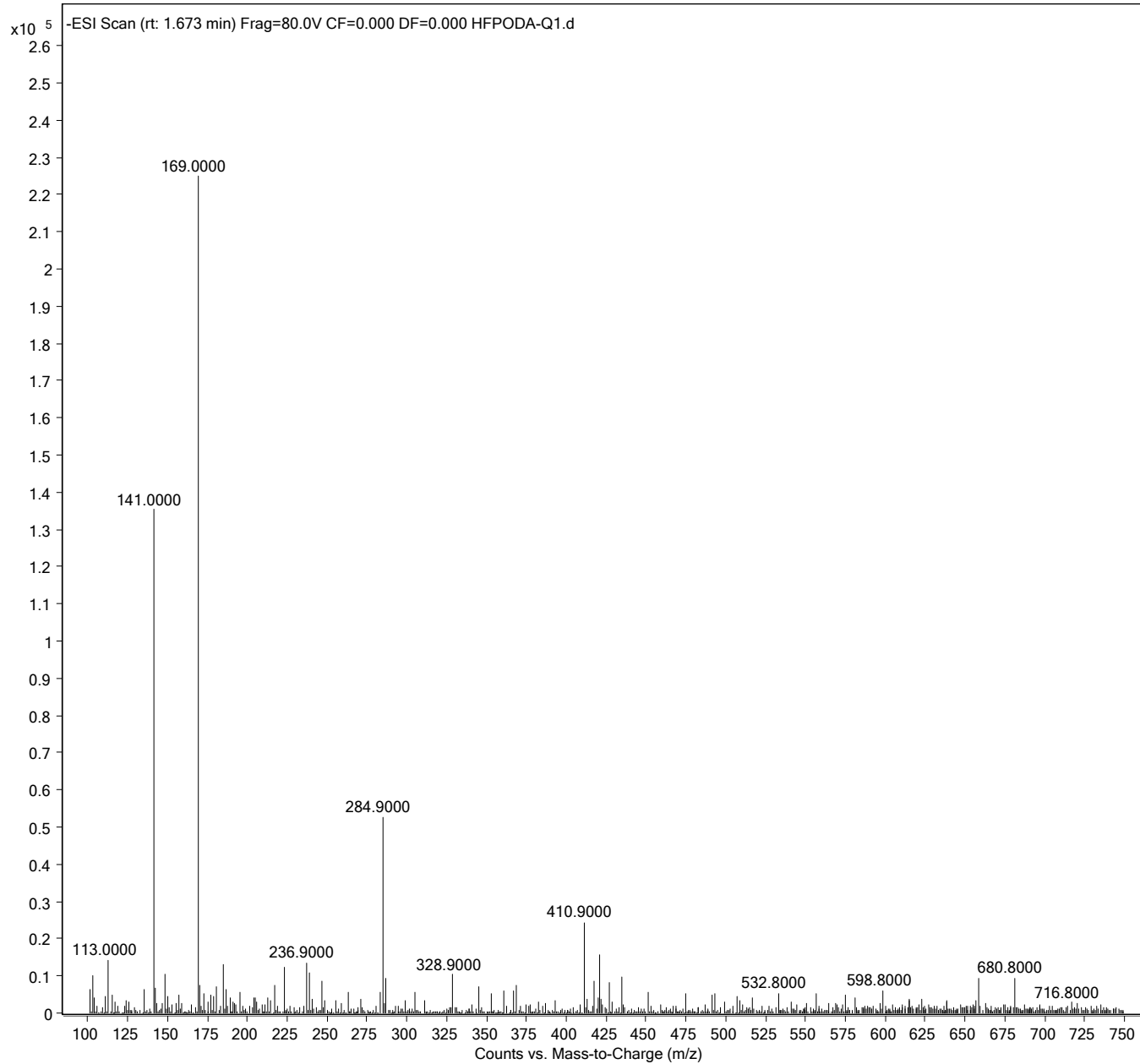
Sample Name	6:2FTS -Q1	Position	P1-C9	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	6_2FTS -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 1:28:57 PM



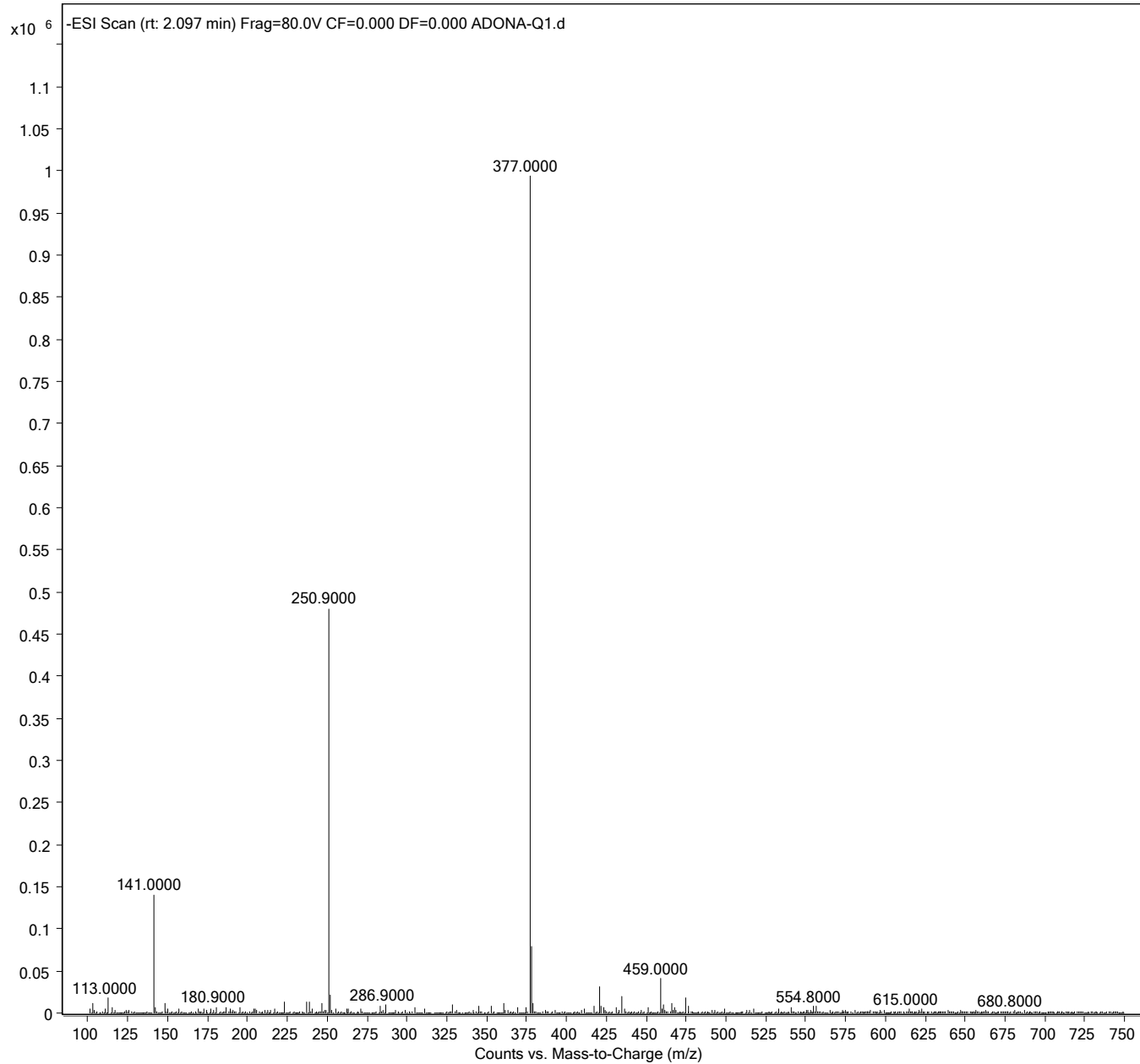
Sample Name	8:2FTS -Q1	Position	P1-D1	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	8_2FTS -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 1:35:50 PM



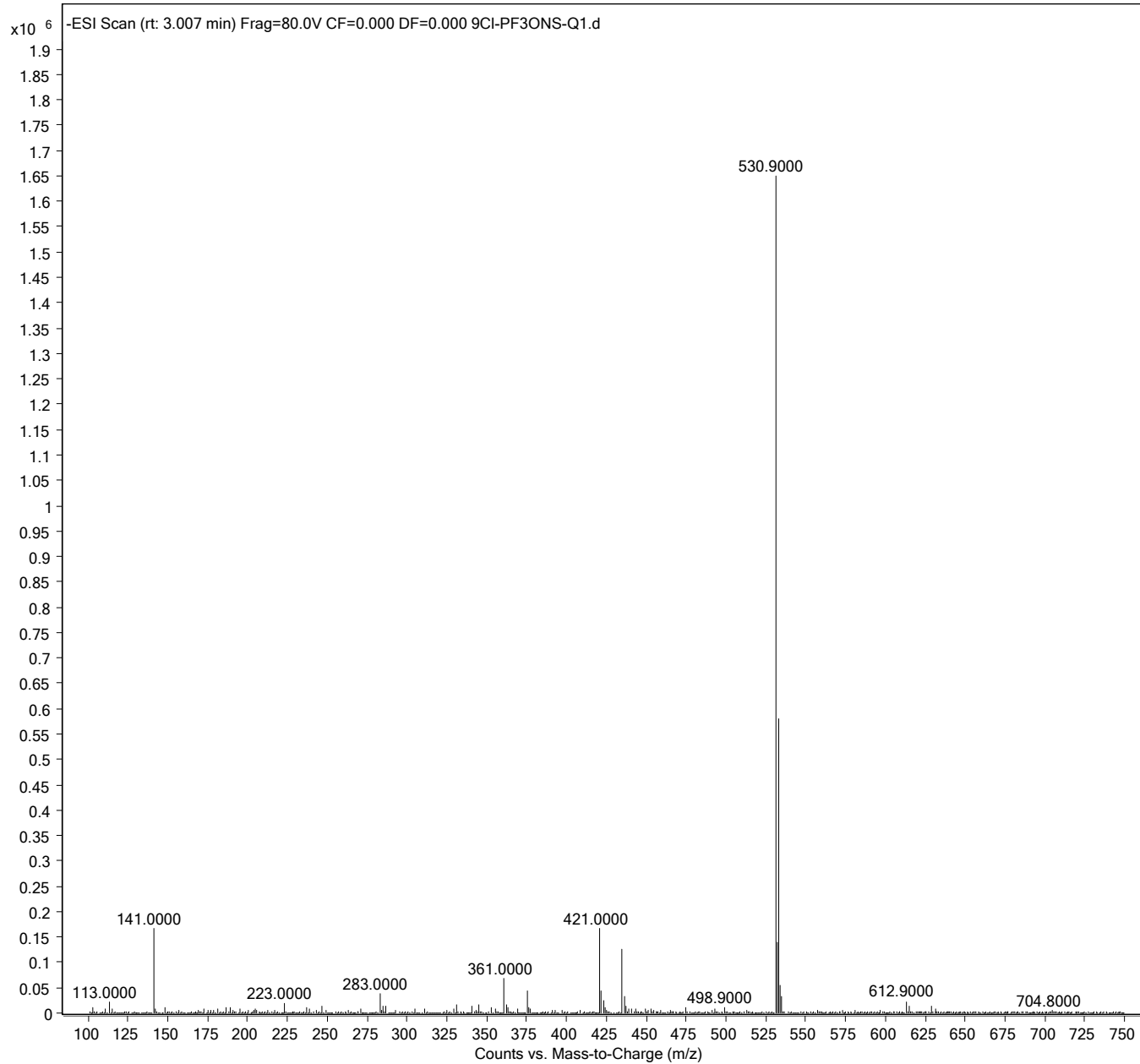
Sample Name	HFPODA-Q1	Position	P1-D2	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	HFPODA-Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 1:42:46 PM



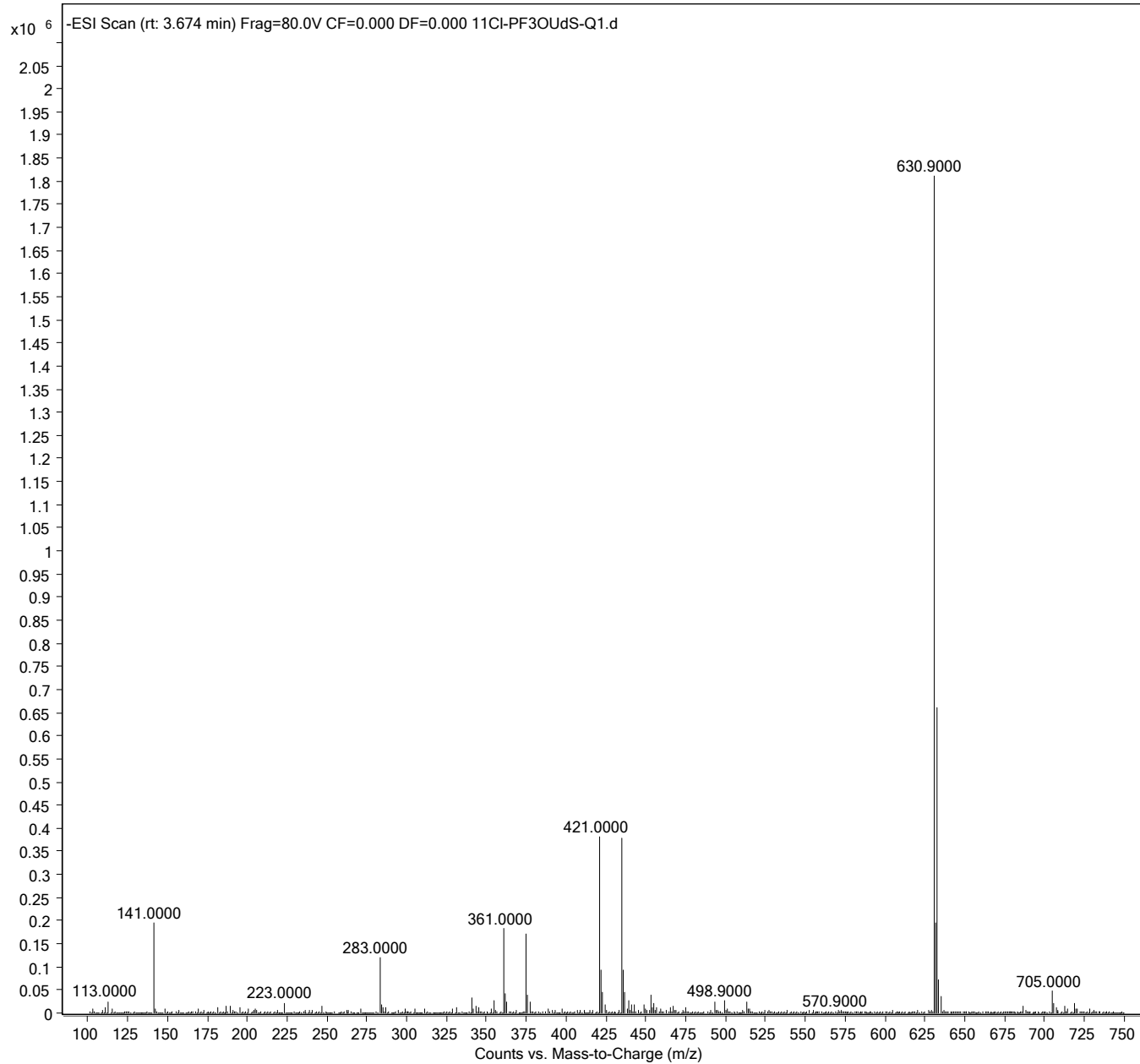
Sample Name	ADONA-Q1	Position	P1-D3	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	ADONA-Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 1:49:40 PM



Sample Name	9CI-PF3ONS-Q1	Position	P1-D4	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	9CI-PF3ONS-Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 1:56:35 PM

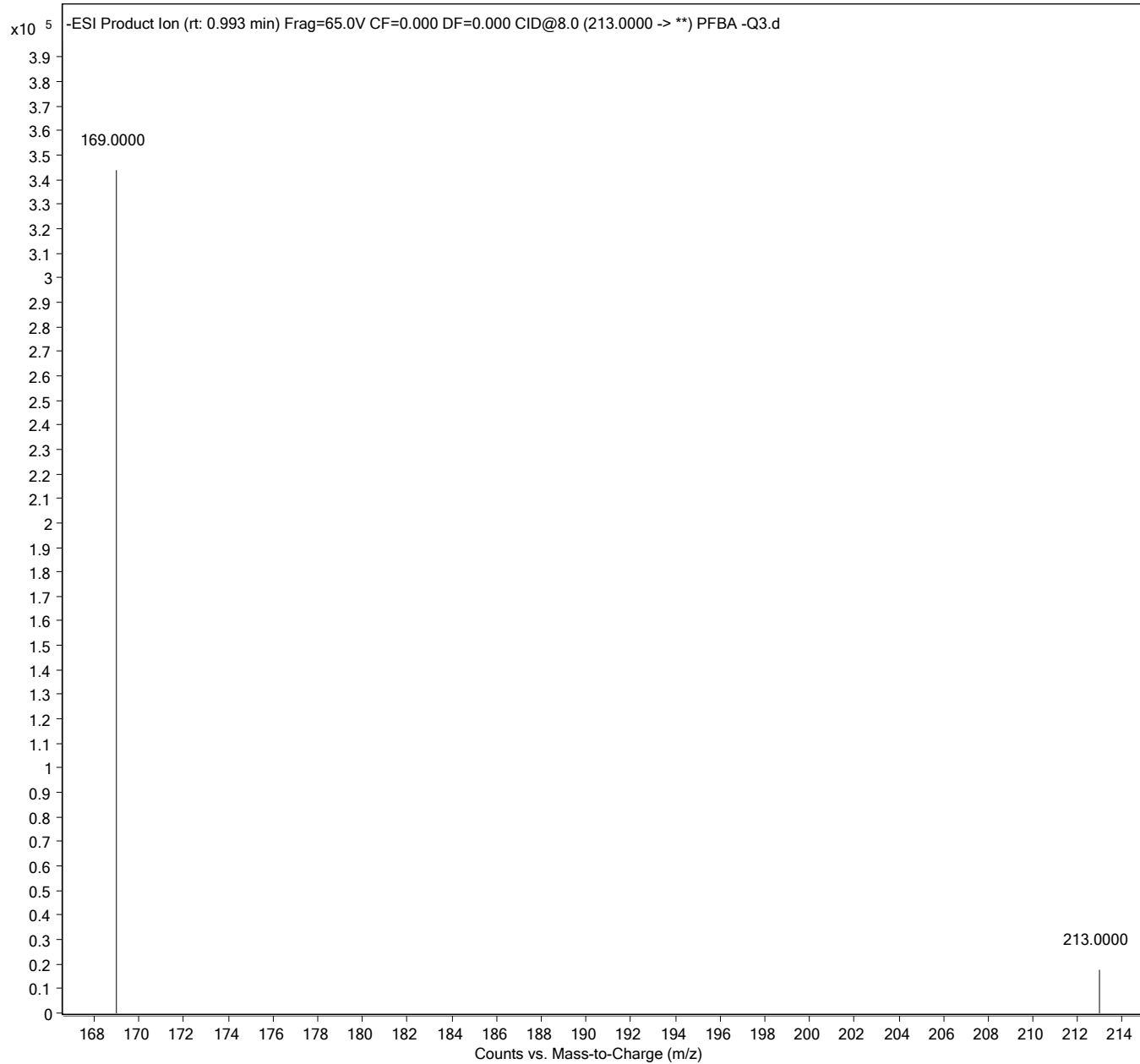


Sample Name	11CI-PF3OUdS-Q1	Position	P1-D5	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	11CI-PF3OUdS-Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 2:03:30 PM

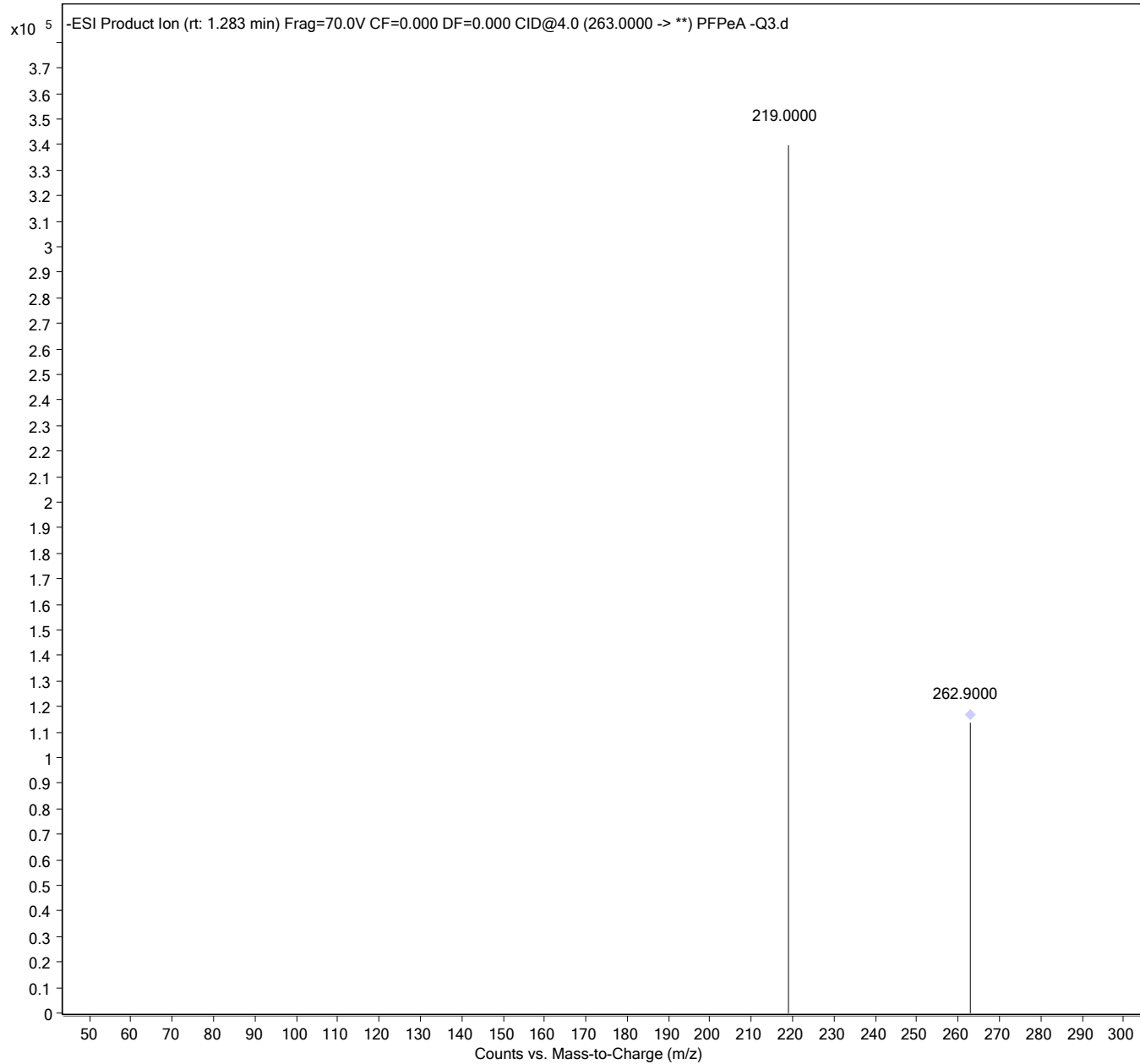


Analyte Product Ion Verification

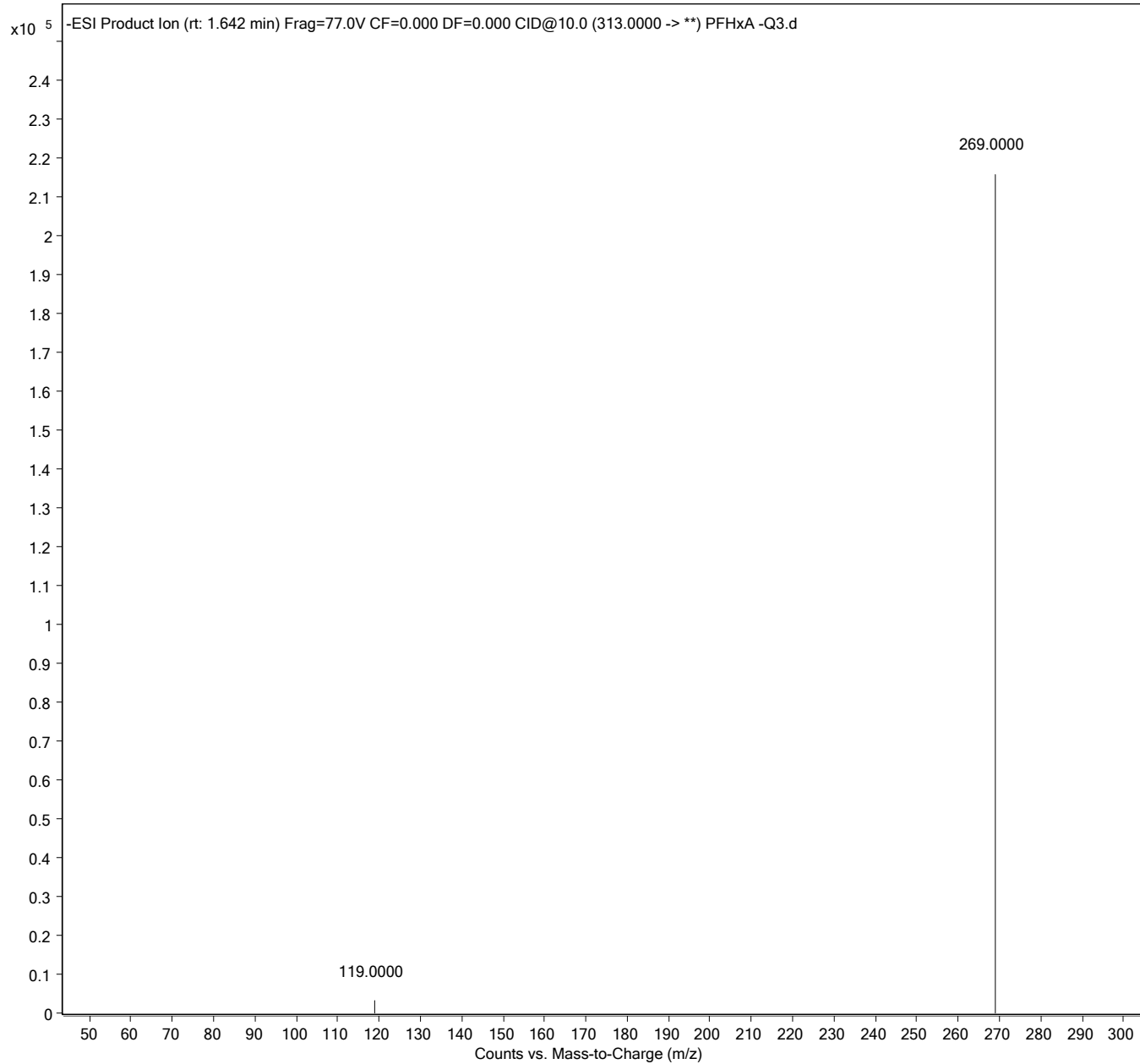
Sample Name	PFBA -Q3	Position	P1-A1	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFBA -Q3.d
ACQ Method	PFASDOD_MassVerification-PFBA-Q3.m	Comment		Acquired Time	11/15/2019 8:09:43 PM



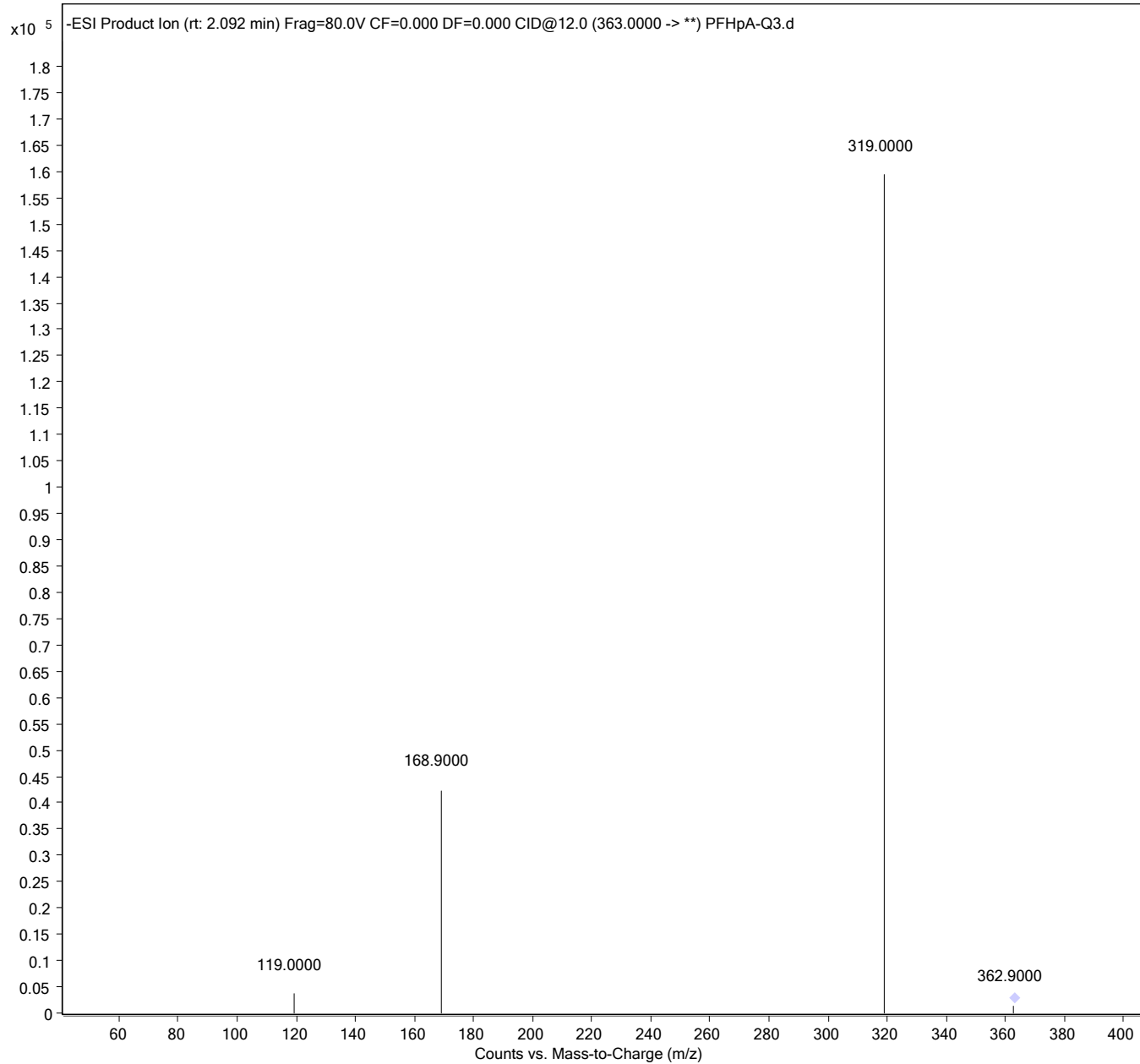
Sample Name	PFPeA -Q3	Position	P1-A2	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFPeA -Q3.d
ACQ Method	PFASDOD_MassVerification-PFPeA-Q3.m	Comment		Acquired Time	11/15/2019 8:16:38 PM



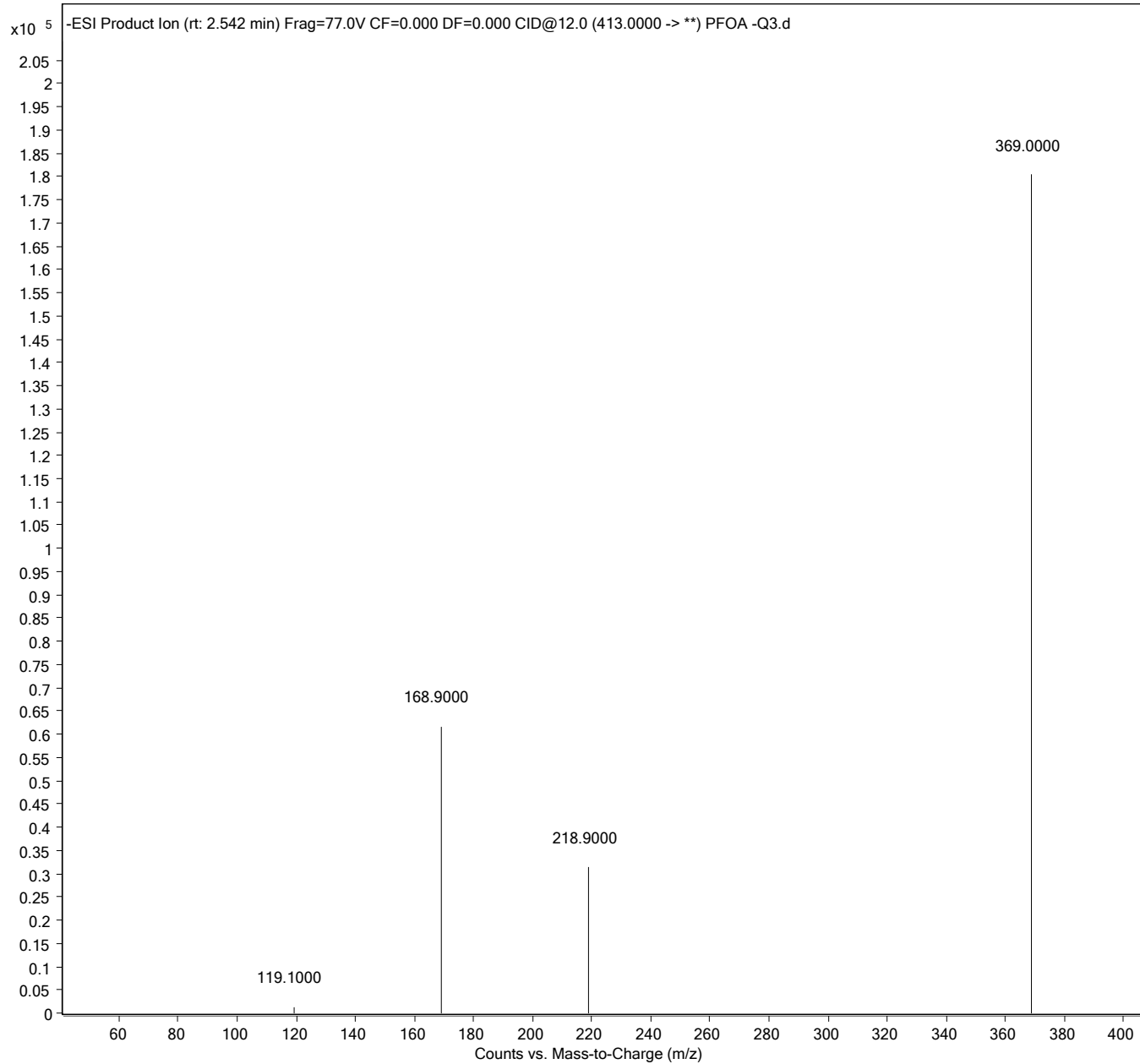
Sample Name	PFHxA -Q3	Position	P1-A3	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFHxA -Q3.d
ACQ Method	PFASDOD_MassVerification-PFHxA-Q3.m	Comment		Acquired Time	11/15/2019 8:23:34 PM



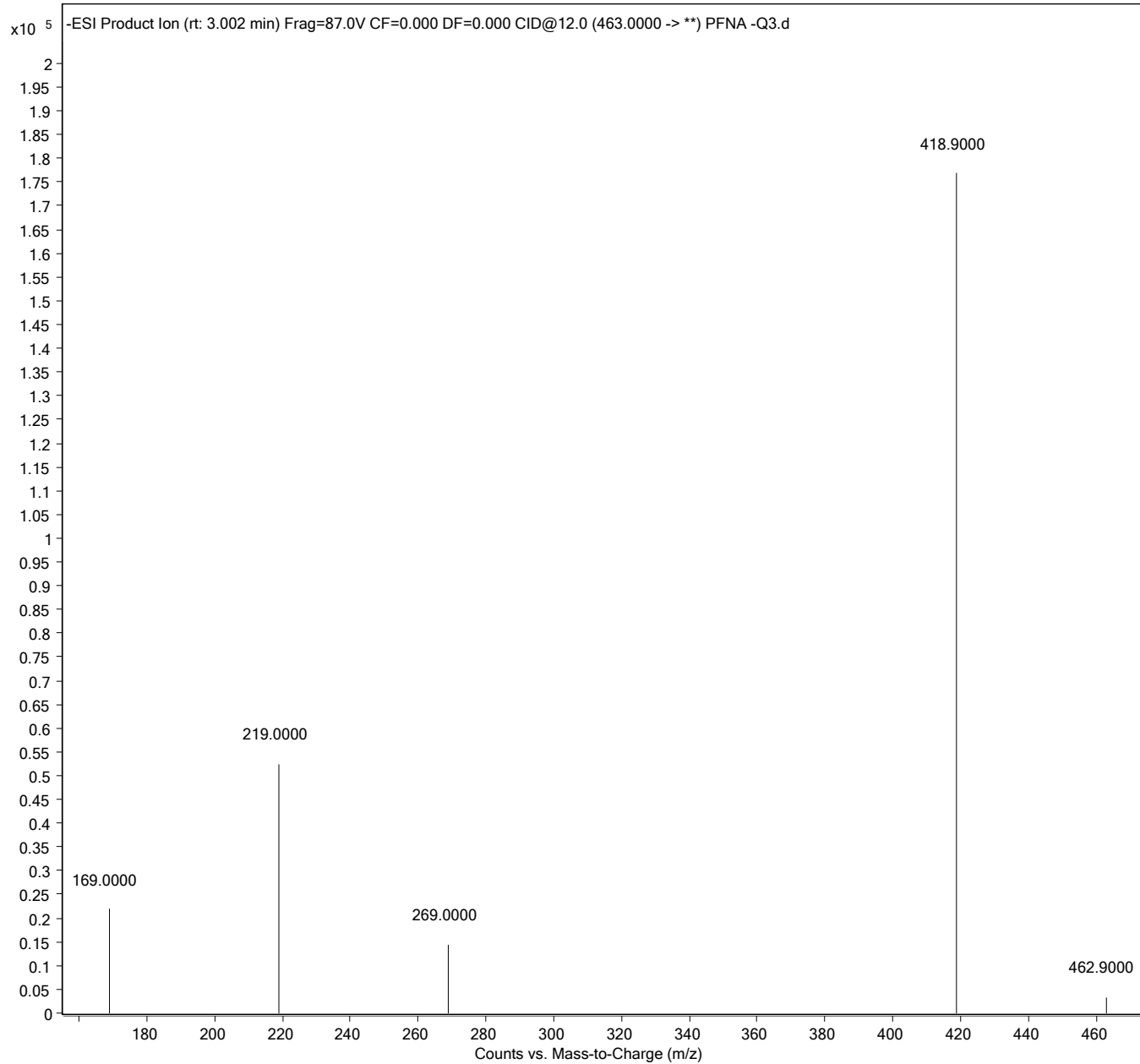
Sample Name	PFHpA-Q3	Position	P1-A4	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFHpA-Q3.d
ACQ Method	PFASDOD_MassVerification-PFHpA-Q3.m	Comment		Acquired Time	11/15/2019 8:30:30 PM



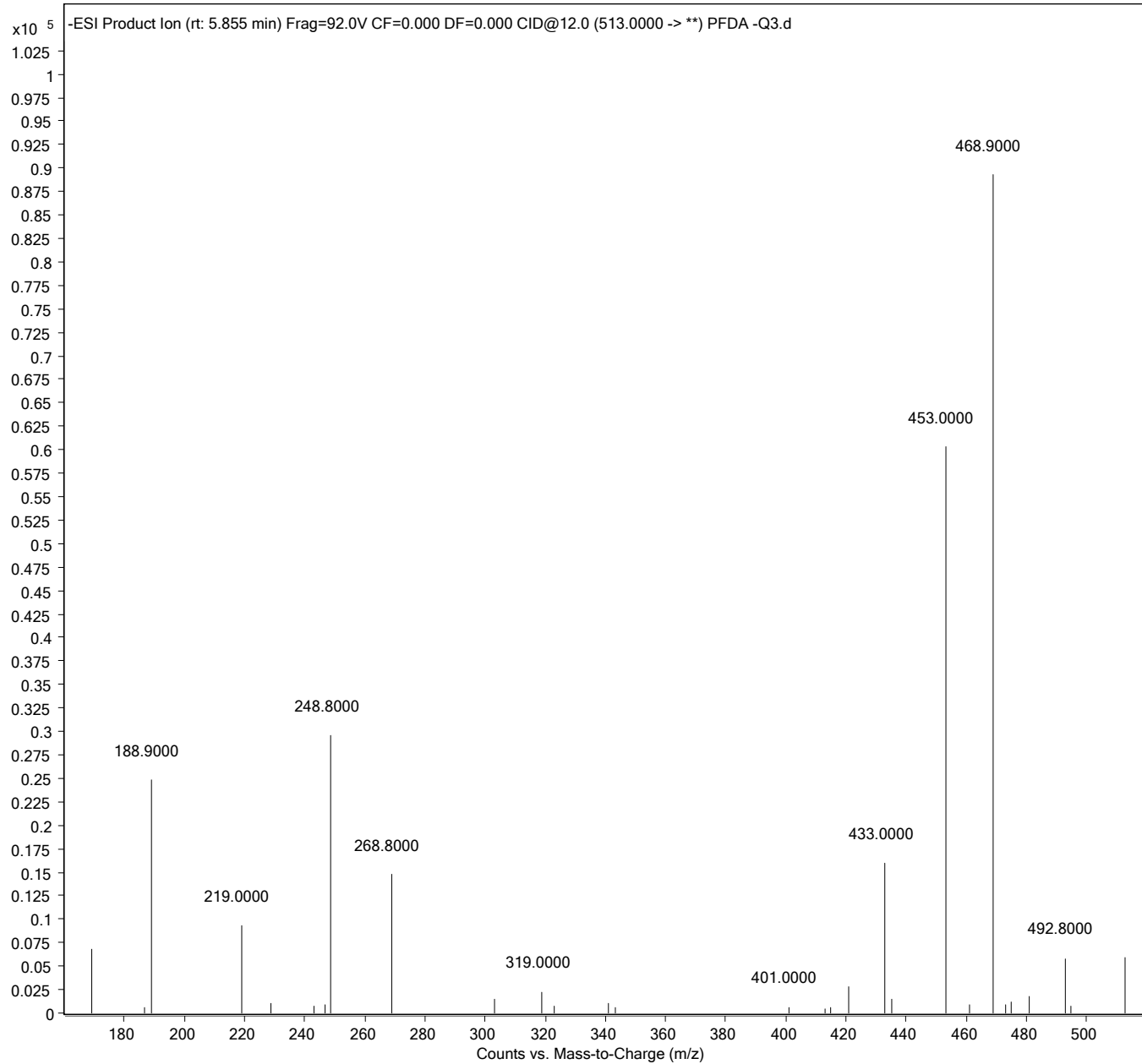
Sample Name	PFOA -Q3	Position	P1-A5	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFOA -Q3.d
ACQ Method	PFASDOD_MassVerification-PFOA-Q3.m	Comment		Acquired Time	11/15/2019 8:37:27 PM



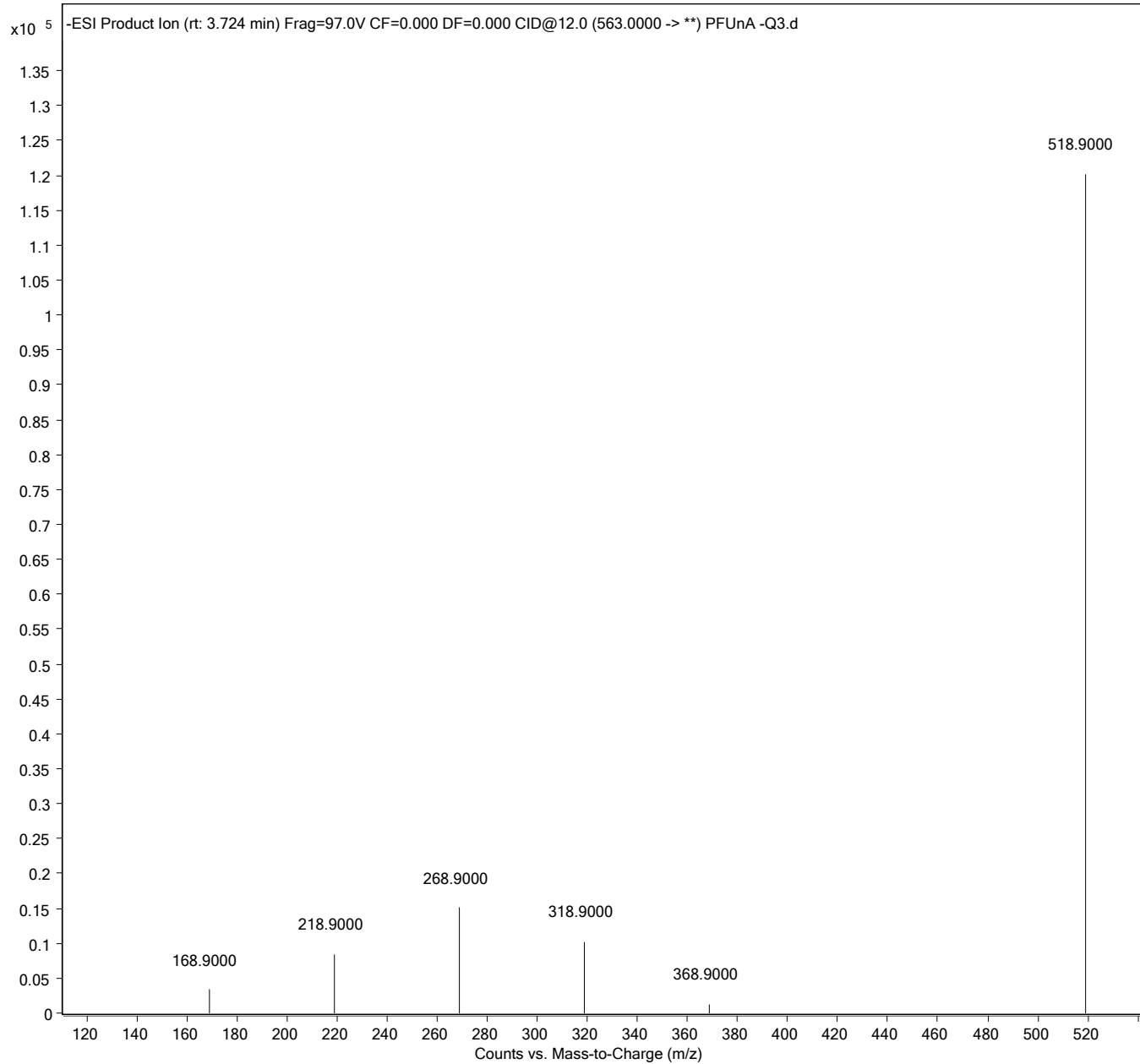
Sample Name	PFNA -Q3	Position	P1-A6	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFNA -Q3.d
ACQ Method	PFASDOD_MassVerification-PFNA-Q3.m	Comment		Acquired Time	11/15/2019 8:44:23 PM



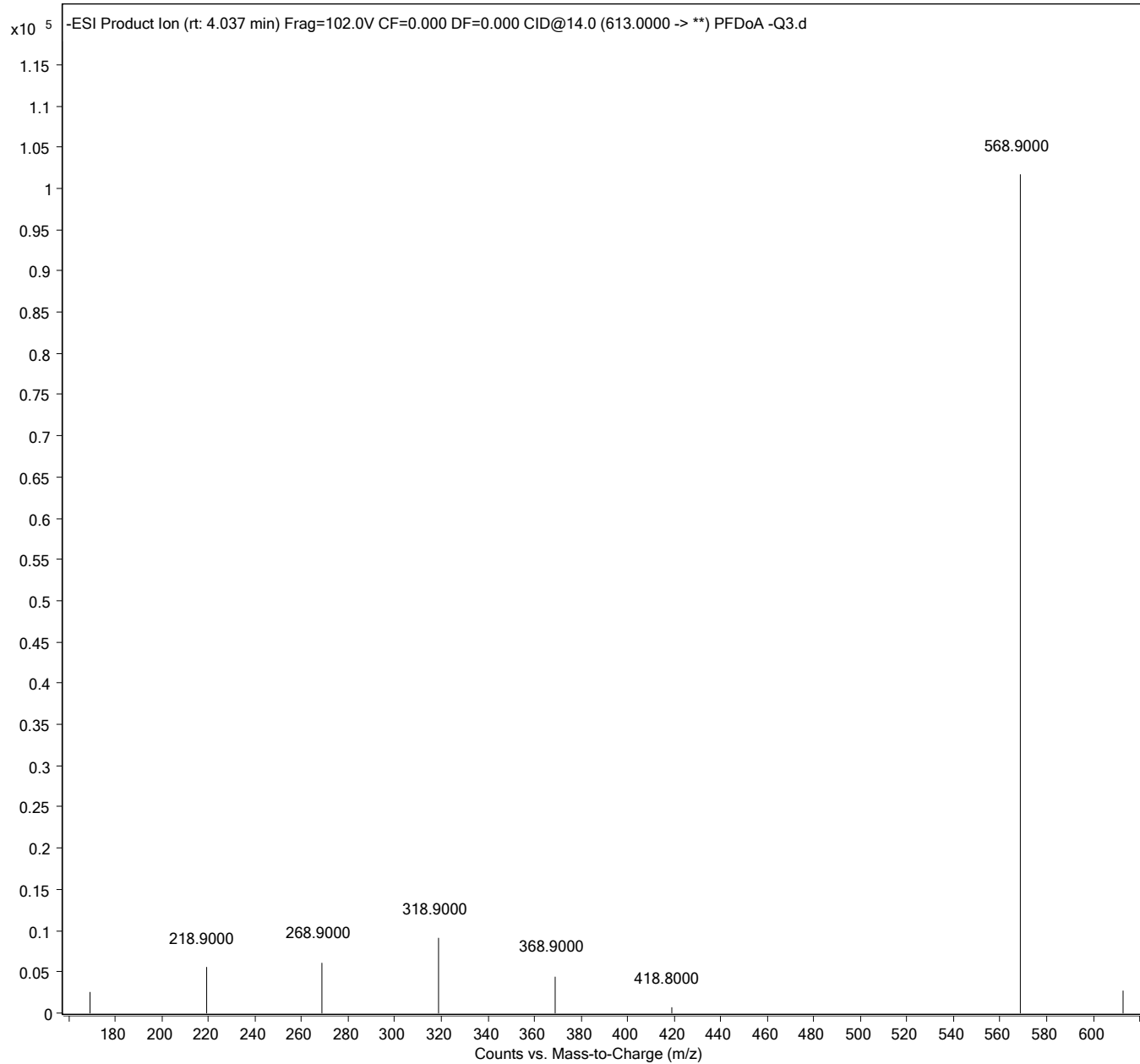
Sample Name	PFDA -Q3	Position	P1-A7	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFDA -Q3.d
ACQ Method	PFASDOD_MassVerification-PFDA-Q3.m	Comment		Acquired Time	11/15/2019 8:51:20 PM



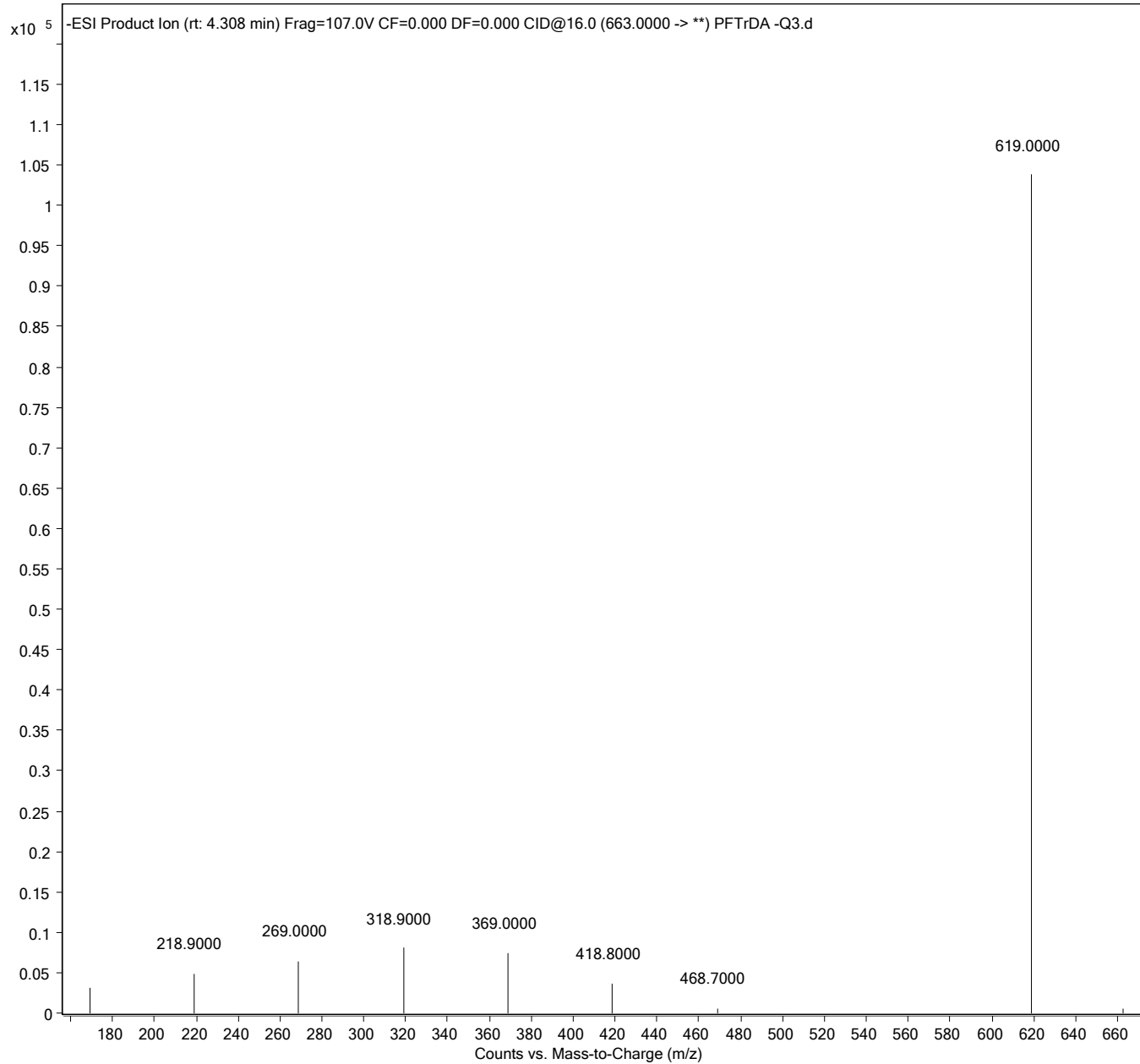
Sample Name	PFUnA -Q3	Position	P1-A8	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFUnA -Q3.d
ACQ Method	PFASDOD_MassVerification-PFUnA-Q3.m	Comment		Acquired Time	11/15/2019 8:58:17 PM



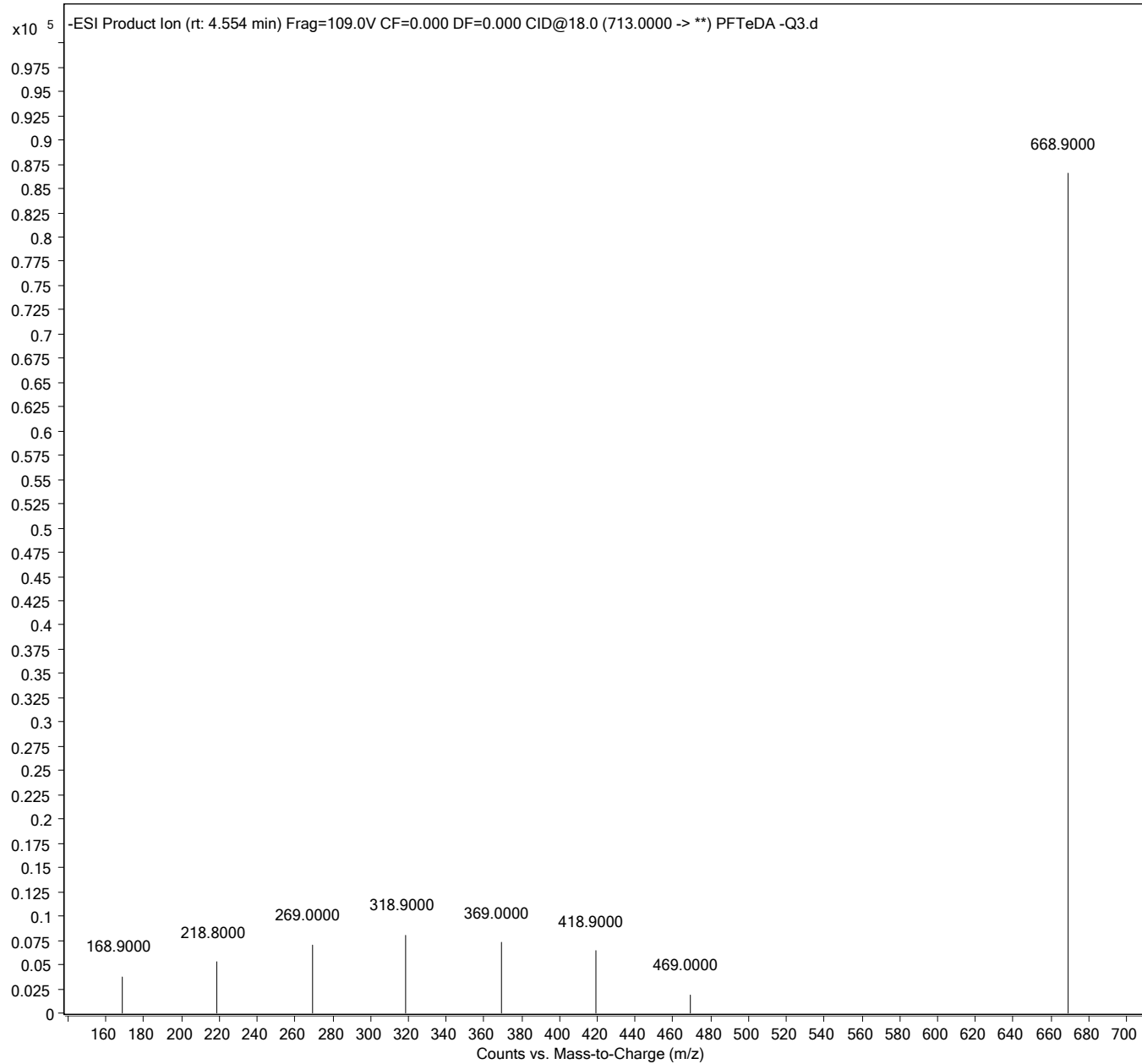
Sample Name	PFDoA -Q3	Position	P1-A9	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFDoA -Q3.d
ACQ Method	PFASDOD_MassVerification-PFDoA-Q3.m	Comment		Acquired Time	11/15/2019 9:05:13 PM



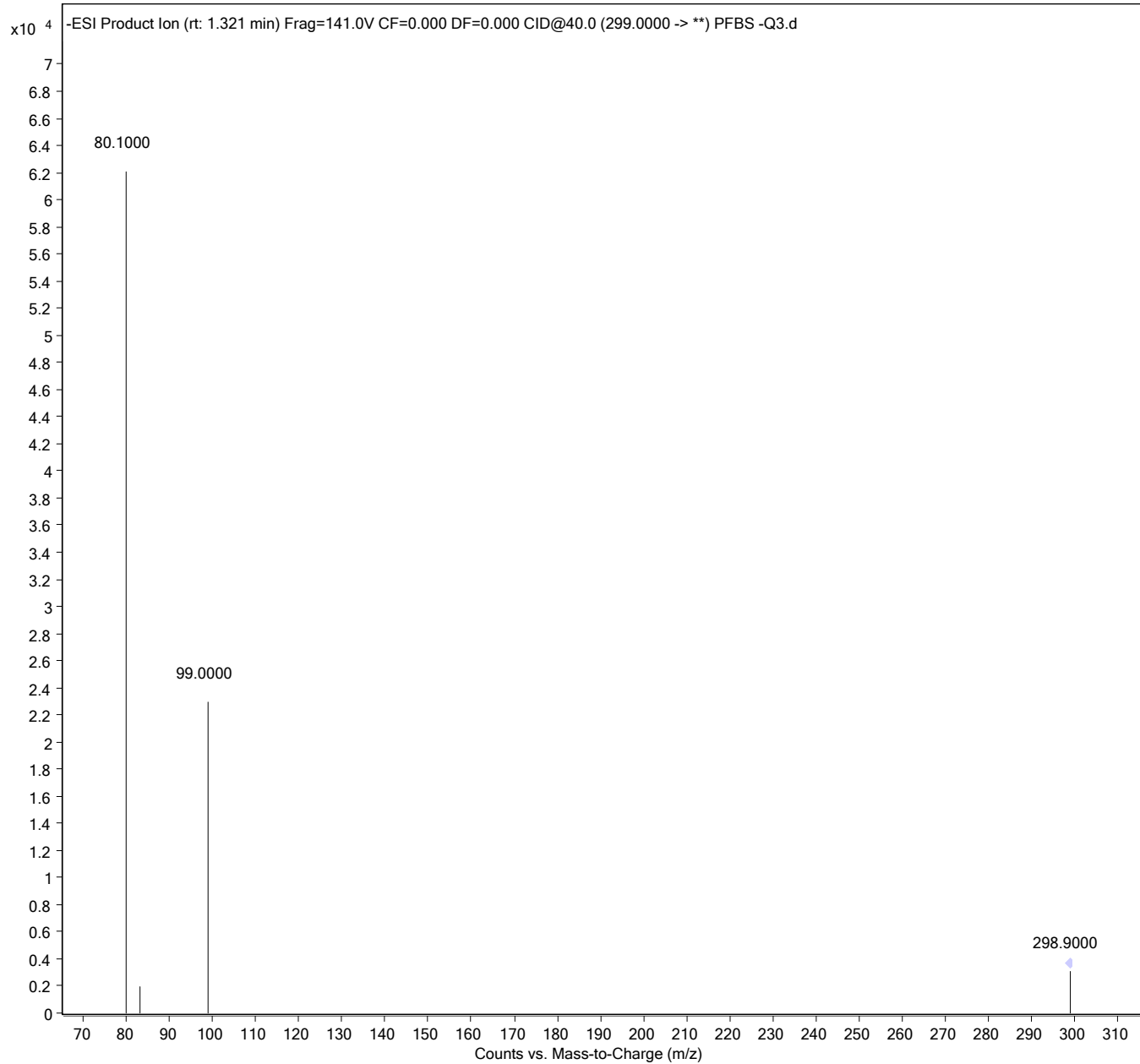
Sample Name	PFTTrDA -Q3	Position	P1-B1	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFTTrDA -Q3.d
ACQ Method	PFASDOD_MassVerification-PFTTrDA-Q3.m	Comment		Acquired Time	11/15/2019 9:12:09 PM



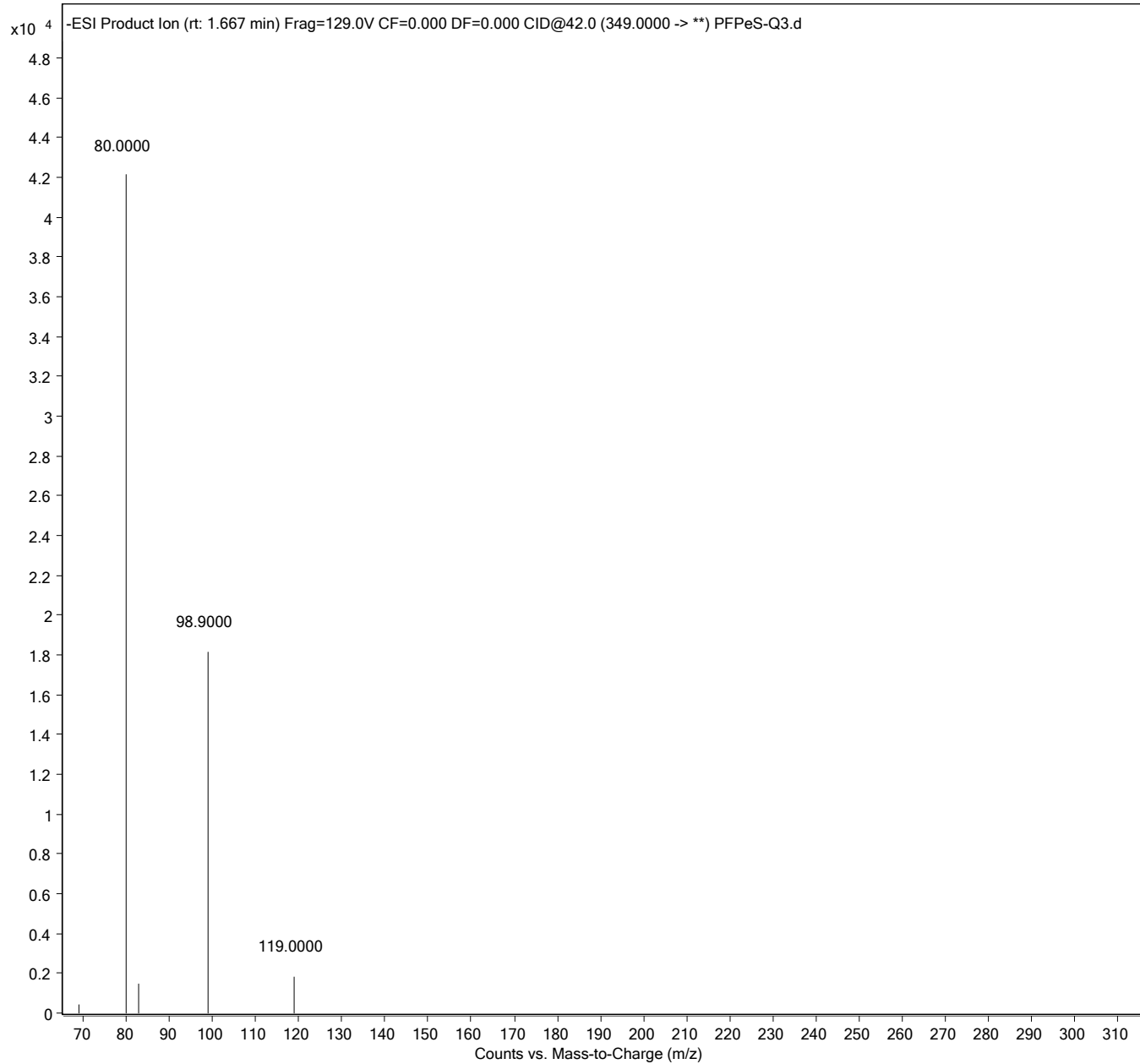
Sample Name	PFTeDA -Q3	Position	P1-B2	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFTeDA -Q3.d
ACQ Method	PFASDOD_MassVerification-PFTeDA-Q3.m	Comment		Acquired Time	11/15/2019 9:19:05 PM



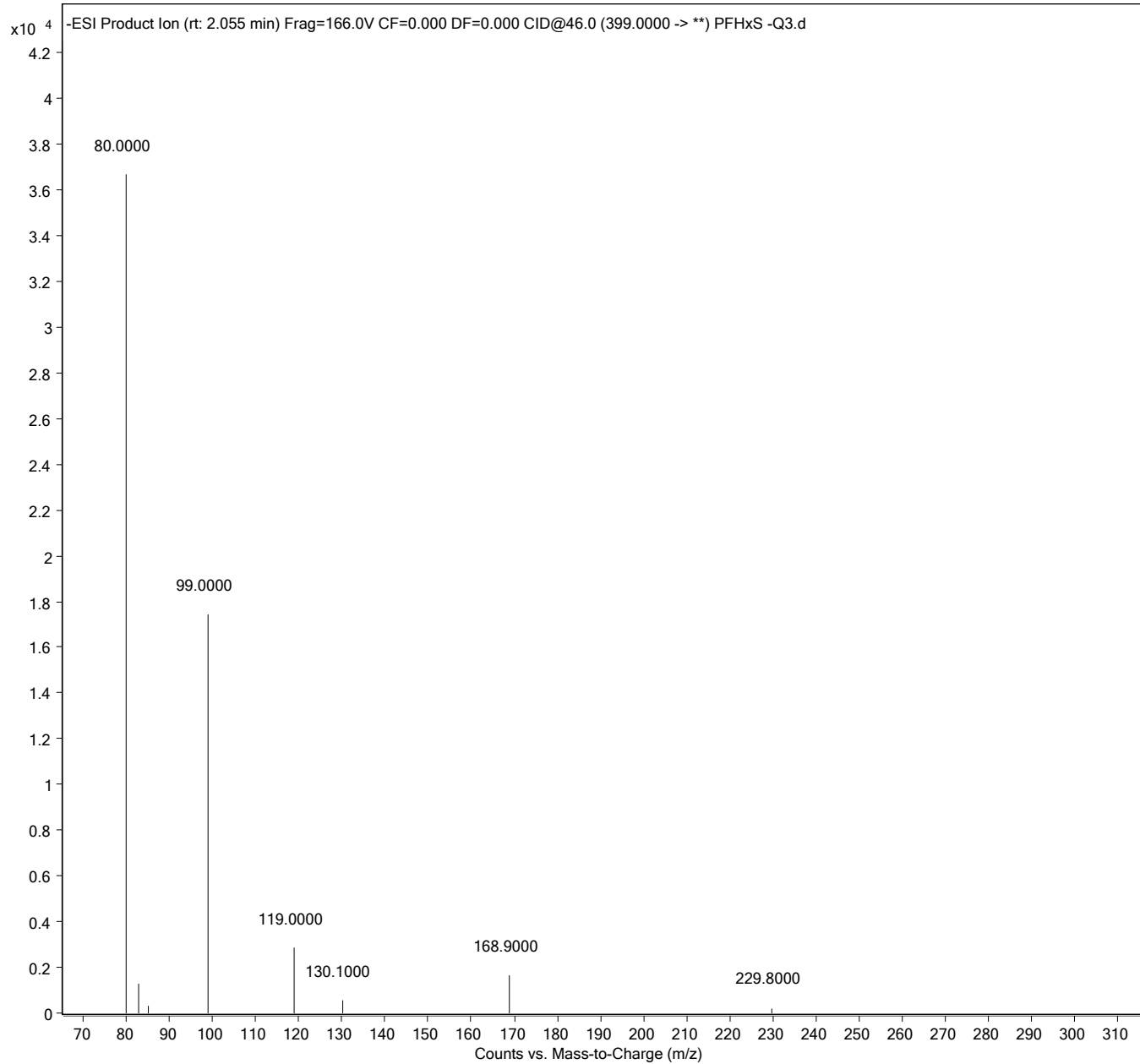
Sample Name	PFBS -Q3	Position	P1-B3	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFBS -Q3.d
ACQ Method	PFASDOD_MassVerification-PFBS-Q3.m	Comment		Acquired Time	11/15/2019 9:26:01 PM



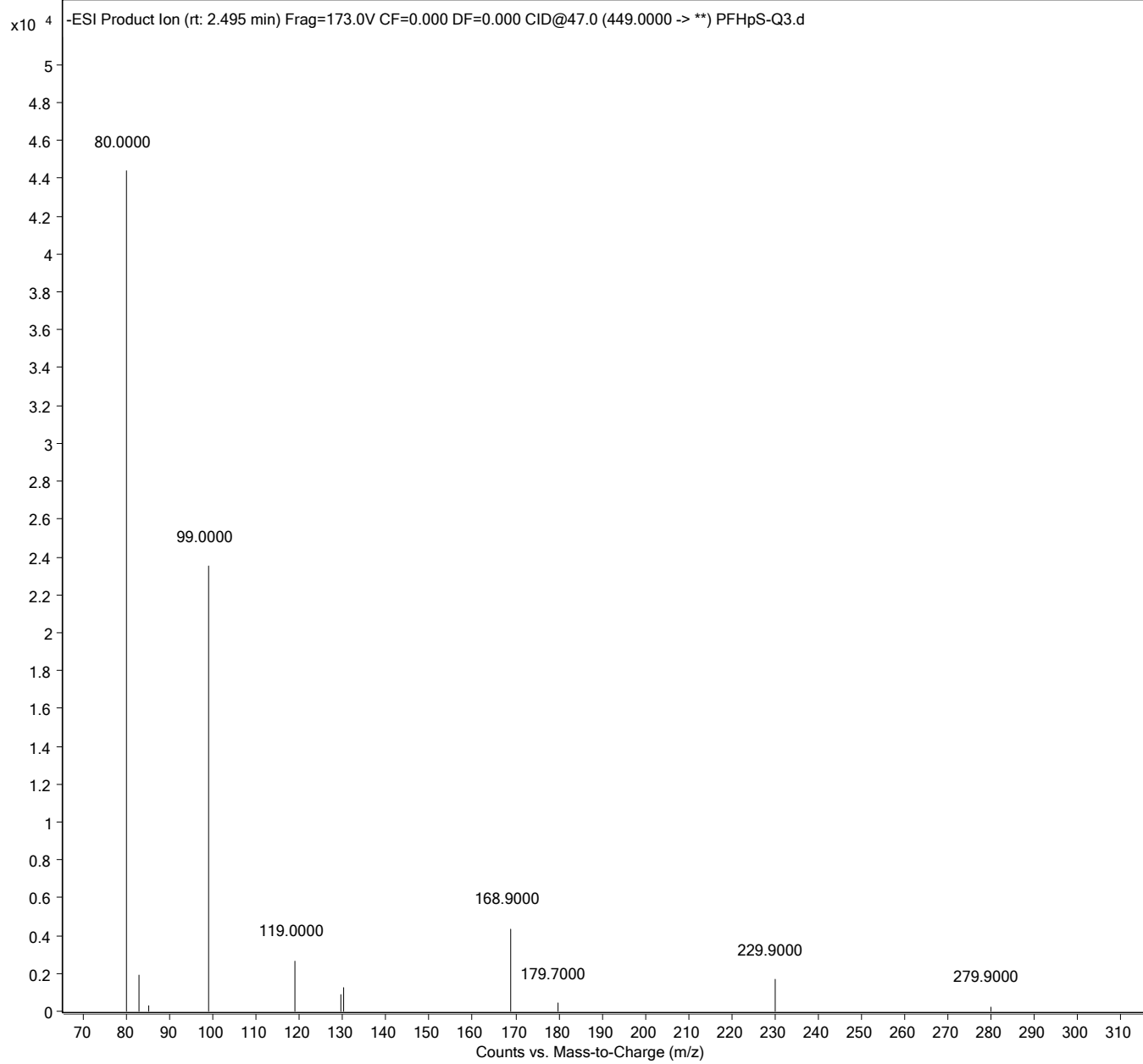
Sample Name	PFPeS-Q3	Position	P1-B4	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFPeS-Q3.d
ACQ Method	PFASDOD_MassVerification-PFPeS-Q3.m	Comment		Acquired Time	11/15/2019 9:32:57 PM



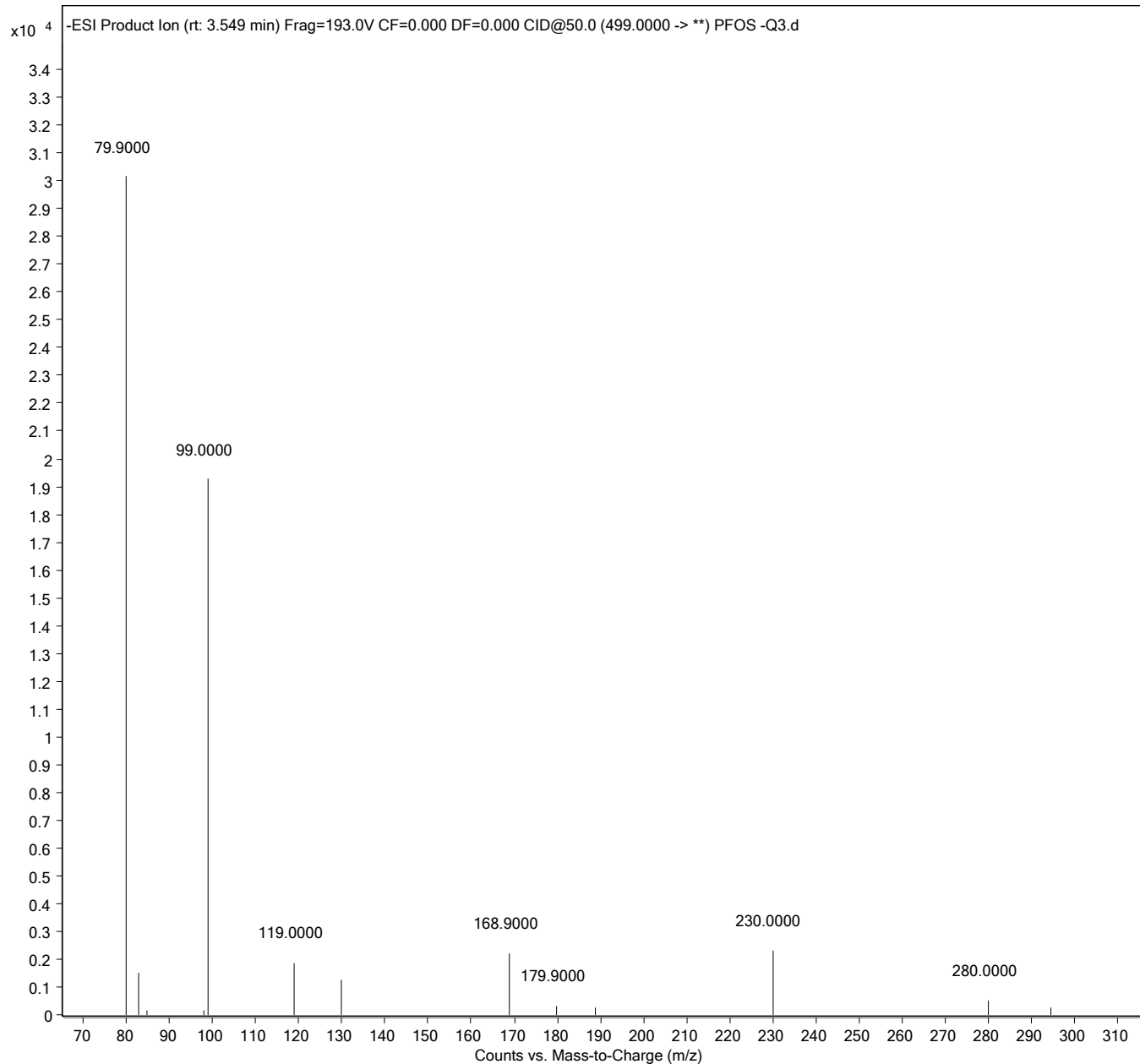
Sample Name	PFHxS -Q3	Position	P1-B5	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFHxS -Q3.d
ACQ Method	PFASDOD_MassVerification-PFHxS-Q3.m	Comment		Acquired Time	11/15/2019 9:39:53 PM



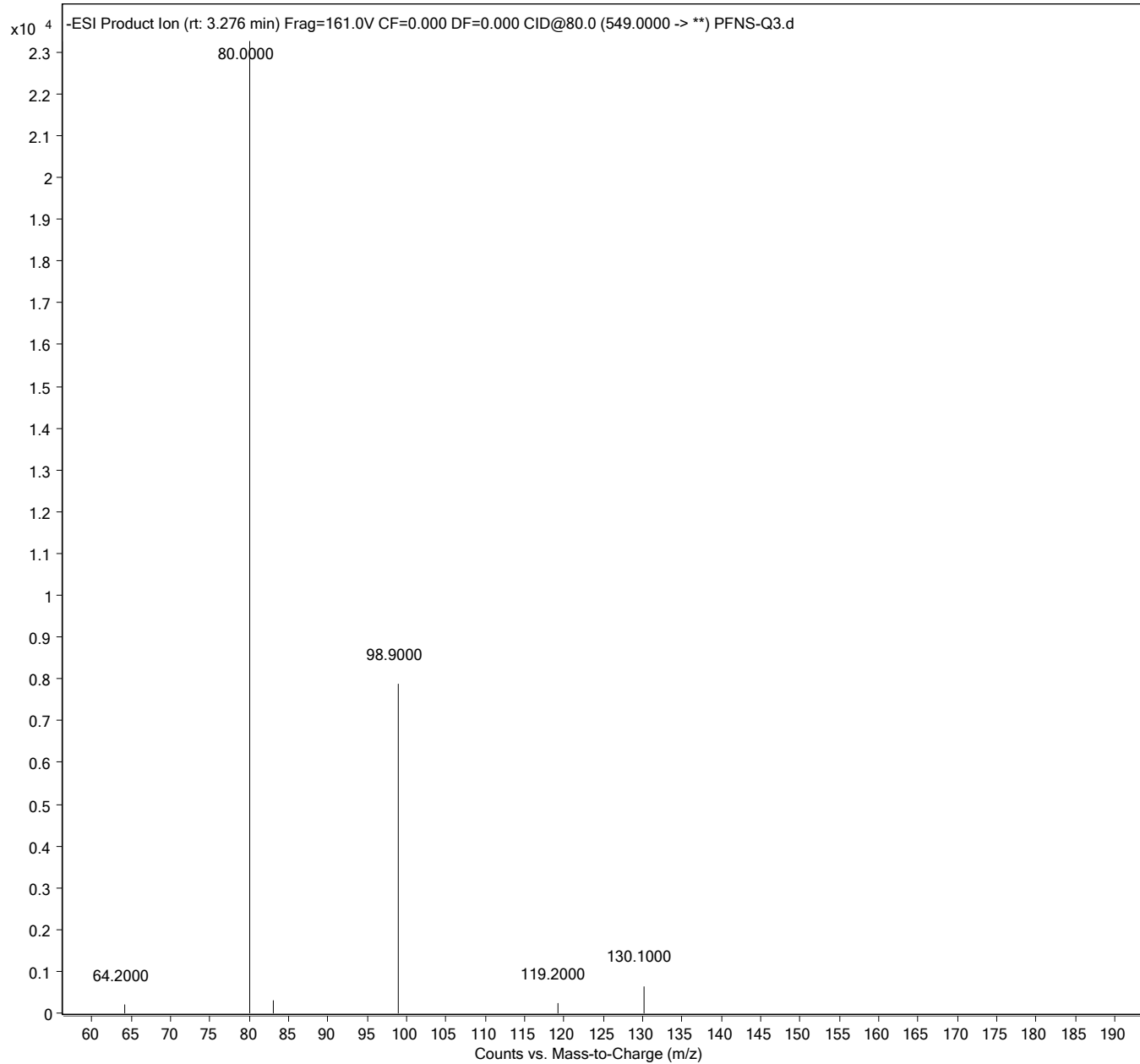
Sample Name	PFHpS-Q3	Position	P1-B6	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFHpS-Q3.d
ACQ Method	PFASDOD_MassVerification-PFHpS-Q3.m	Comment		Acquired Time	11/15/2019 9:46:50 PM



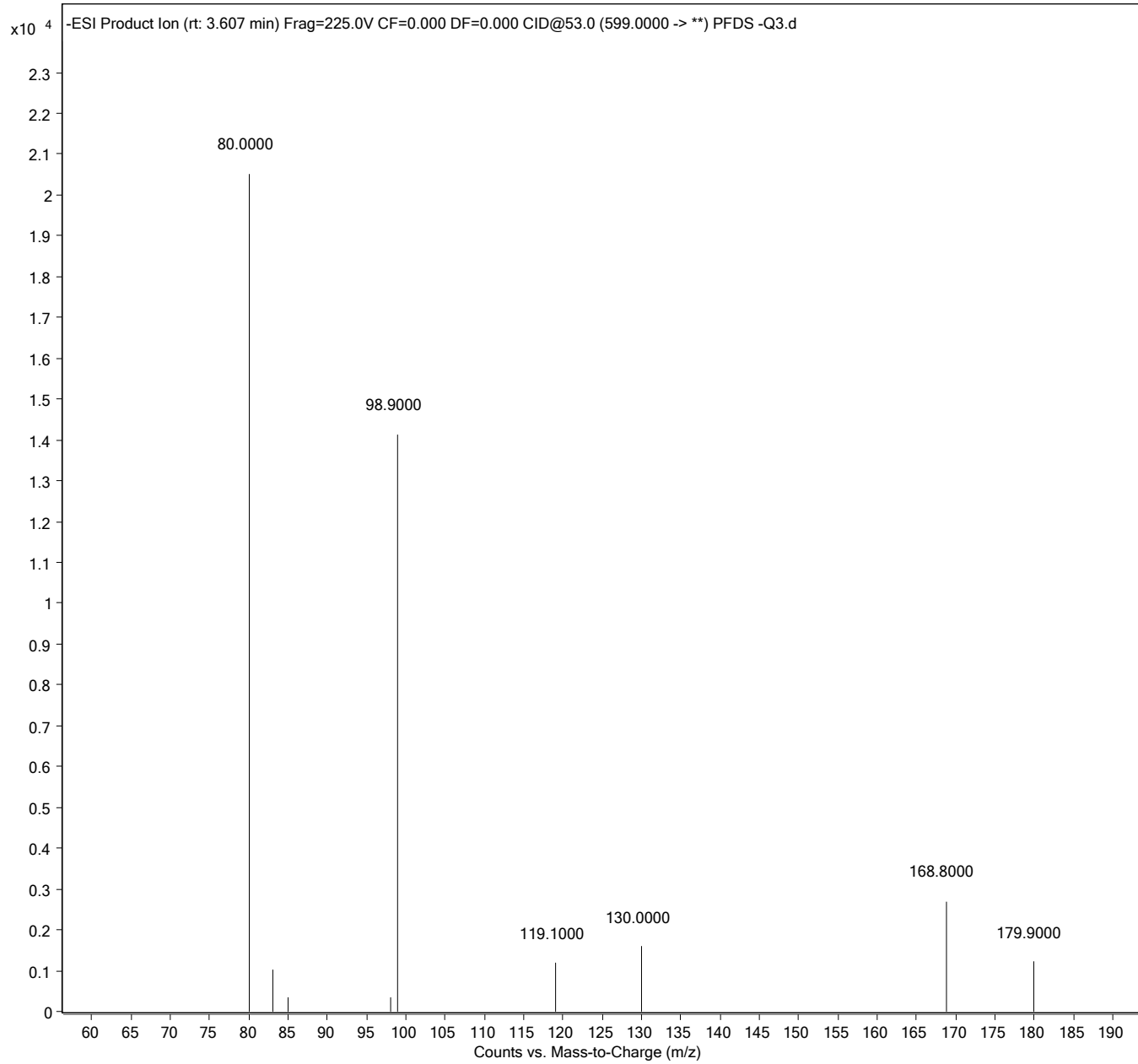
Sample Name	PFOS -Q3	Position	P1-B7	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFOS -Q3.d
ACQ Method	PFASDOD_MassVerification-PFOS-Q3.m	Comment		Acquired Time	11/15/2019 9:53:47 PM



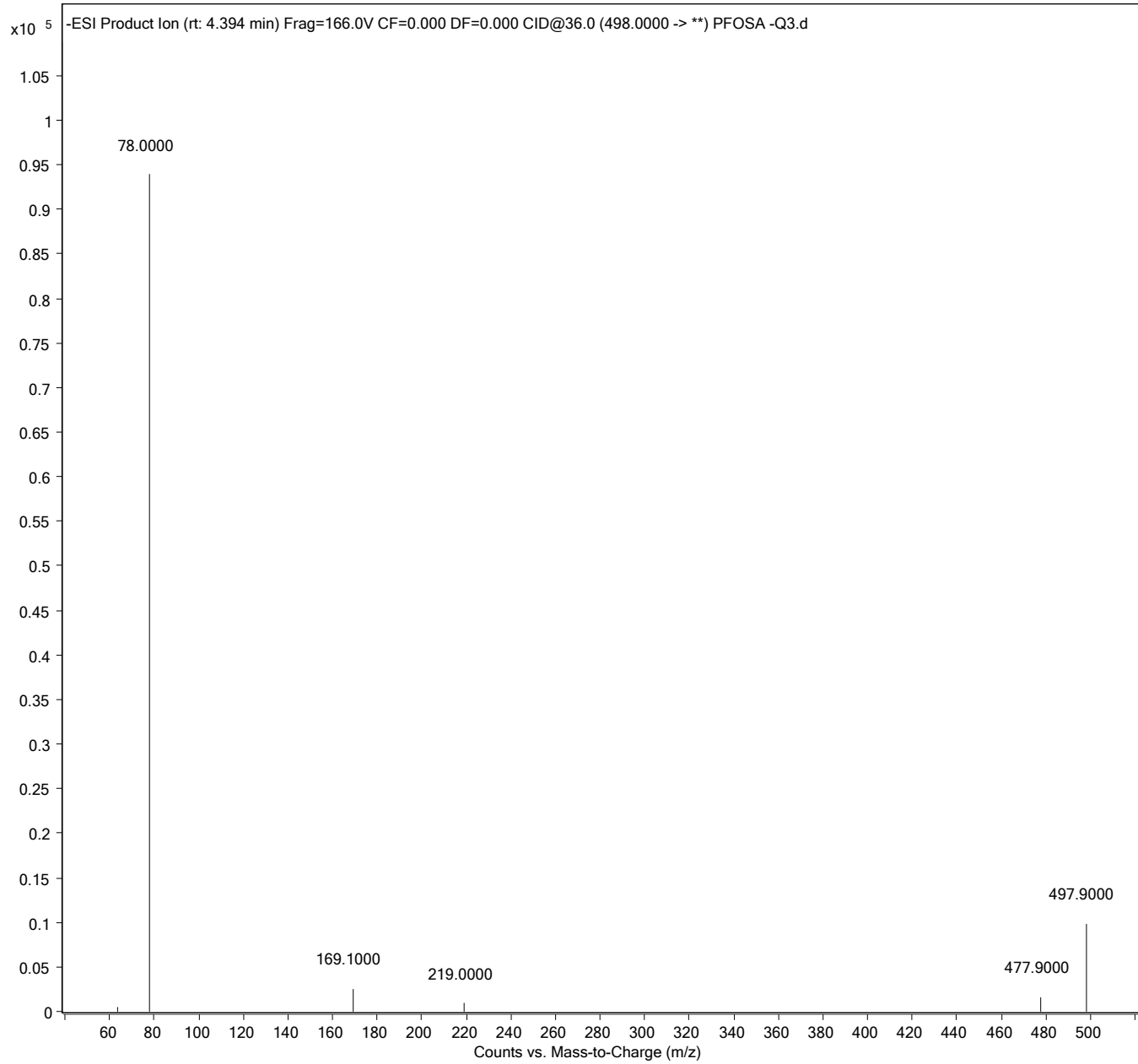
Sample Name	PFNS-Q3	Position	P1-B8	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFNS-Q3.d
ACQ Method	PFASDOD_MassVerification-PFNS-Q3.m	Comment		Acquired Time	11/15/2019 10:00:45 PM



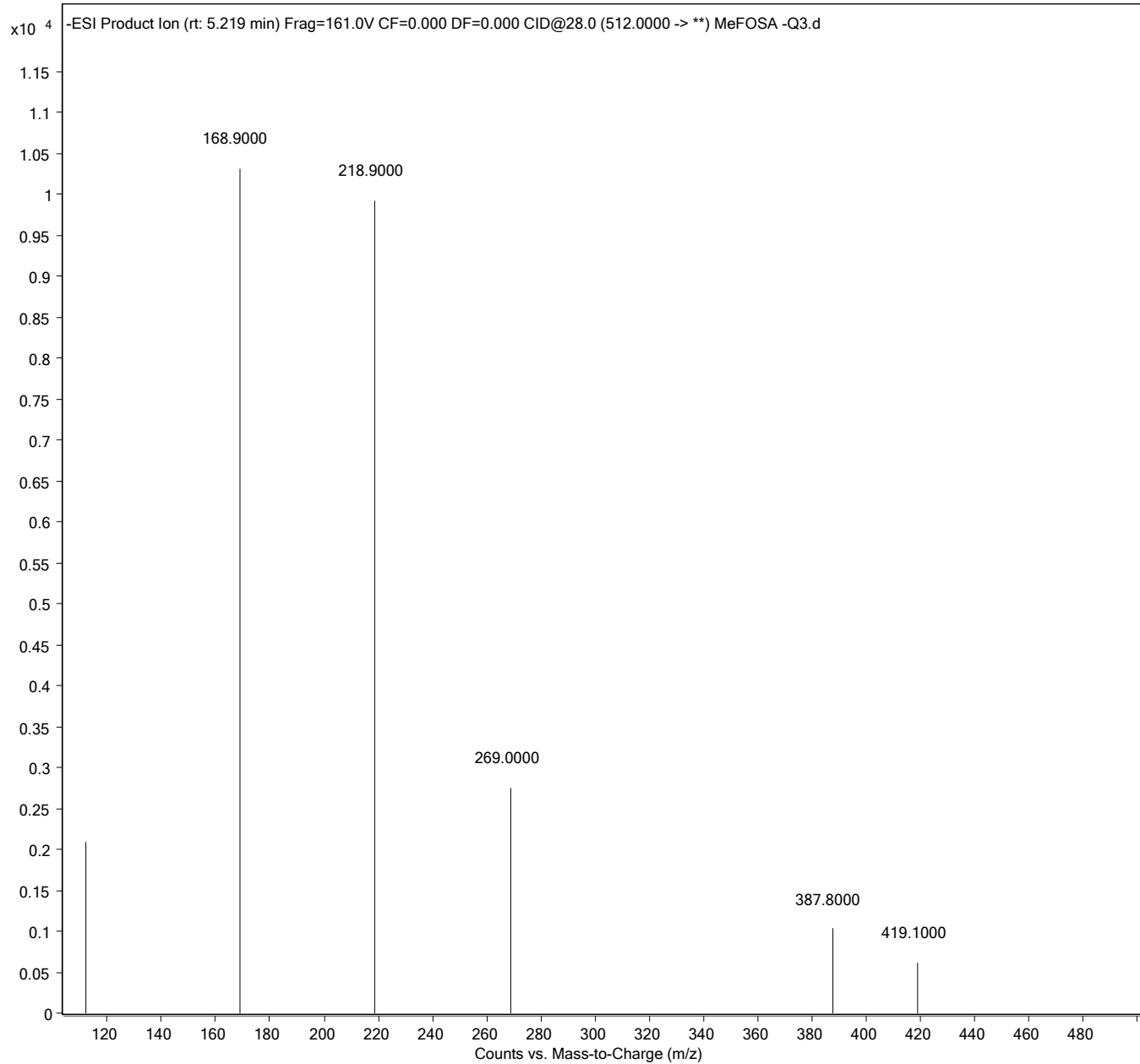
Sample Name	PFDS -Q3	Position	P1-B9	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFDS -Q3.d
ACQ Method	PFASDOD_MassVerification-PFDS-Q3.m	Comment		Acquired Time	11/15/2019 10:07:41 PM



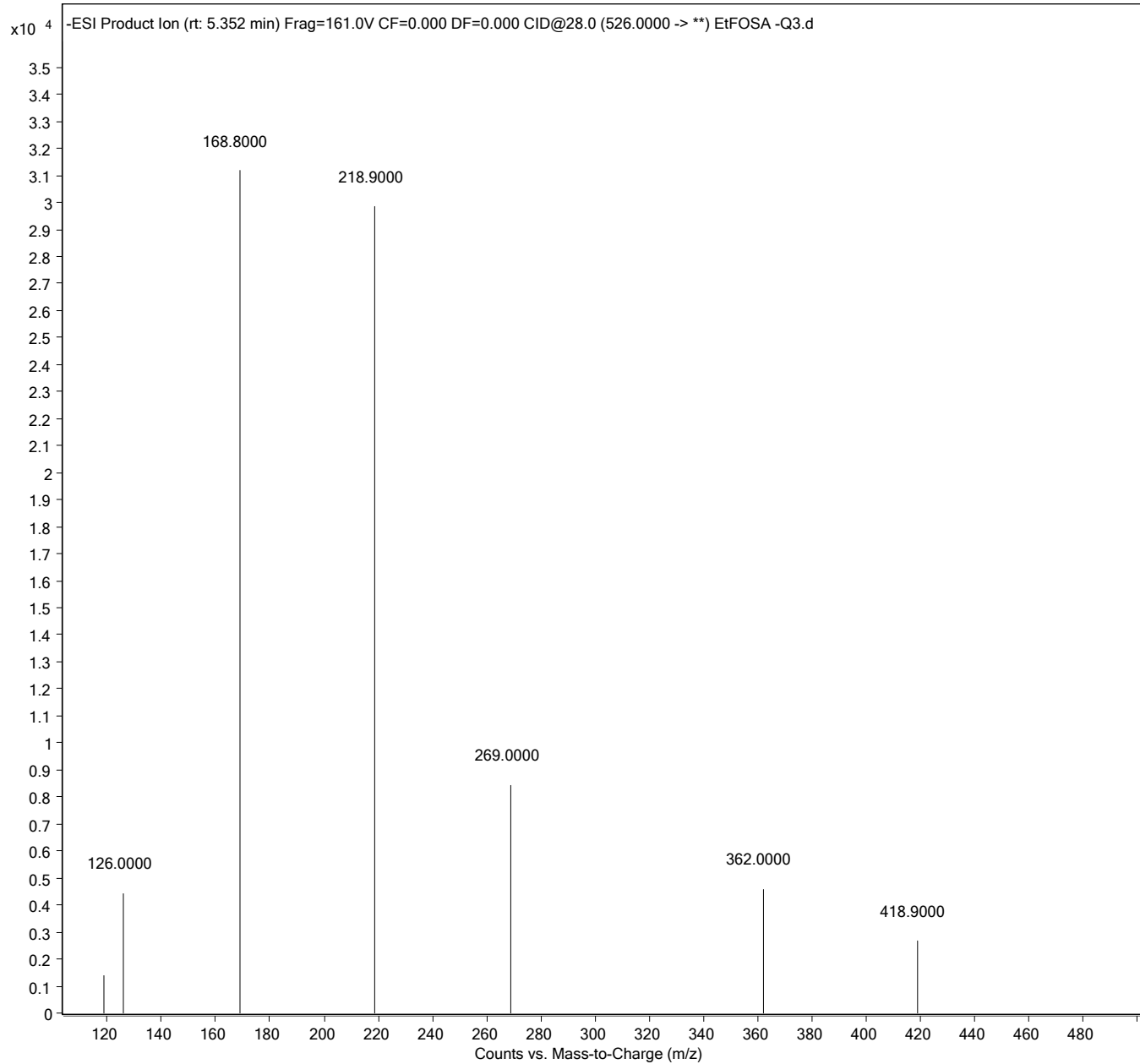
Sample Name	PFOSA -Q3	Position	P1-C1	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	PFOSA -Q3.d
ACQ Method	PFASDOD_MassVerification-PFOSA-Q3.m	Comment		Acquired Time	11/15/2019 10:14:37 PM



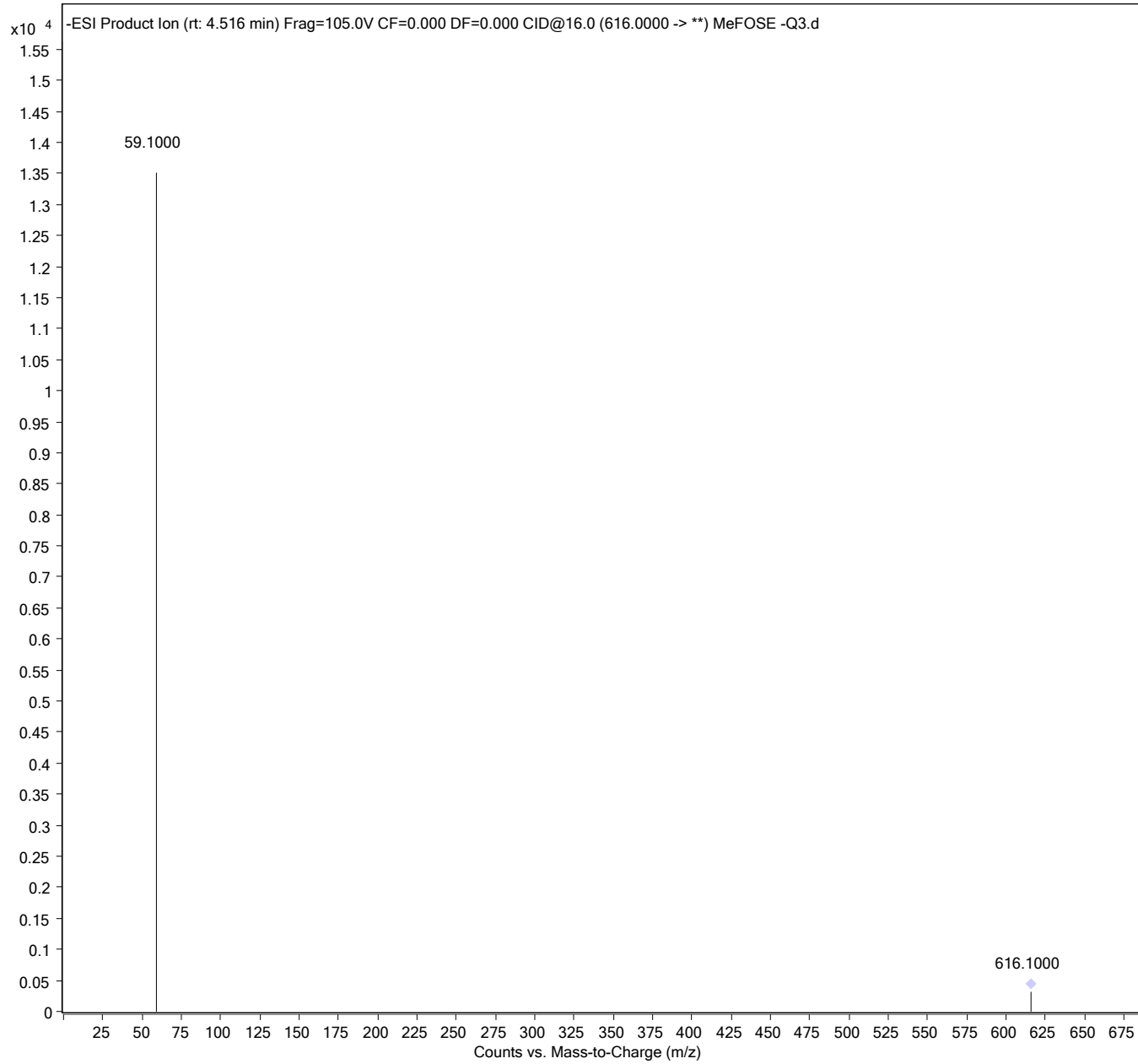
Sample Name	MeFOSA -Q3	Position	P1-C2	Instrument Name	LCMS04
User Name		Inj Vol	0.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	MeFOSA -Q3.d
ACQ Method	PFASDOD_MassVerification-MeFOSA-Q3.m	Comment		Acquired Time	11/15/2019 10:21:34 PM



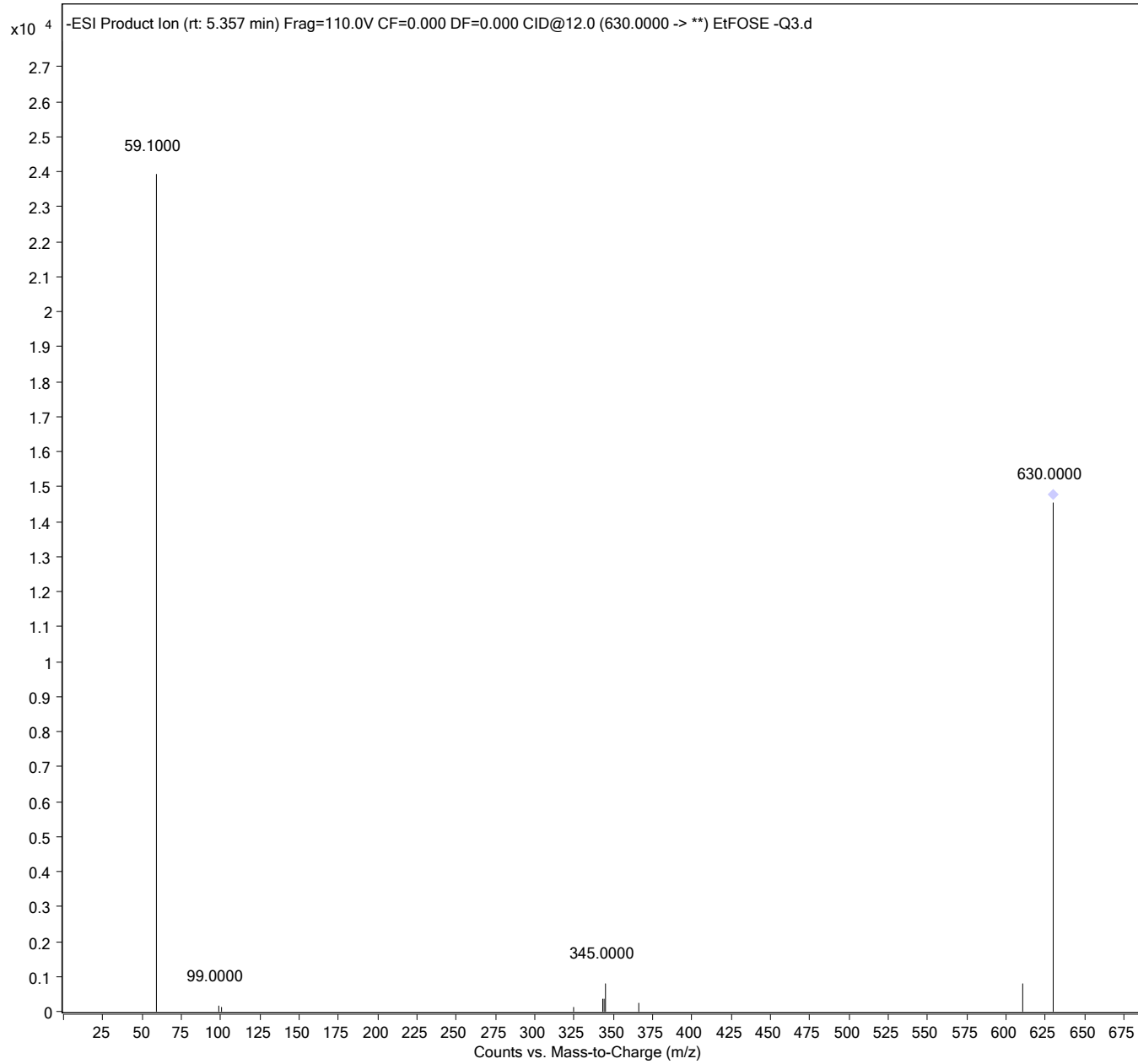
Sample Name	EtFOSA -Q3	Position	P1-C3	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	EtFOSA -Q3.d
ACQ Method	PFASDOD_MassVerification-EtFOSA-Q3.m	Comment		Acquired Time	11/15/2019 10:28:31 PM



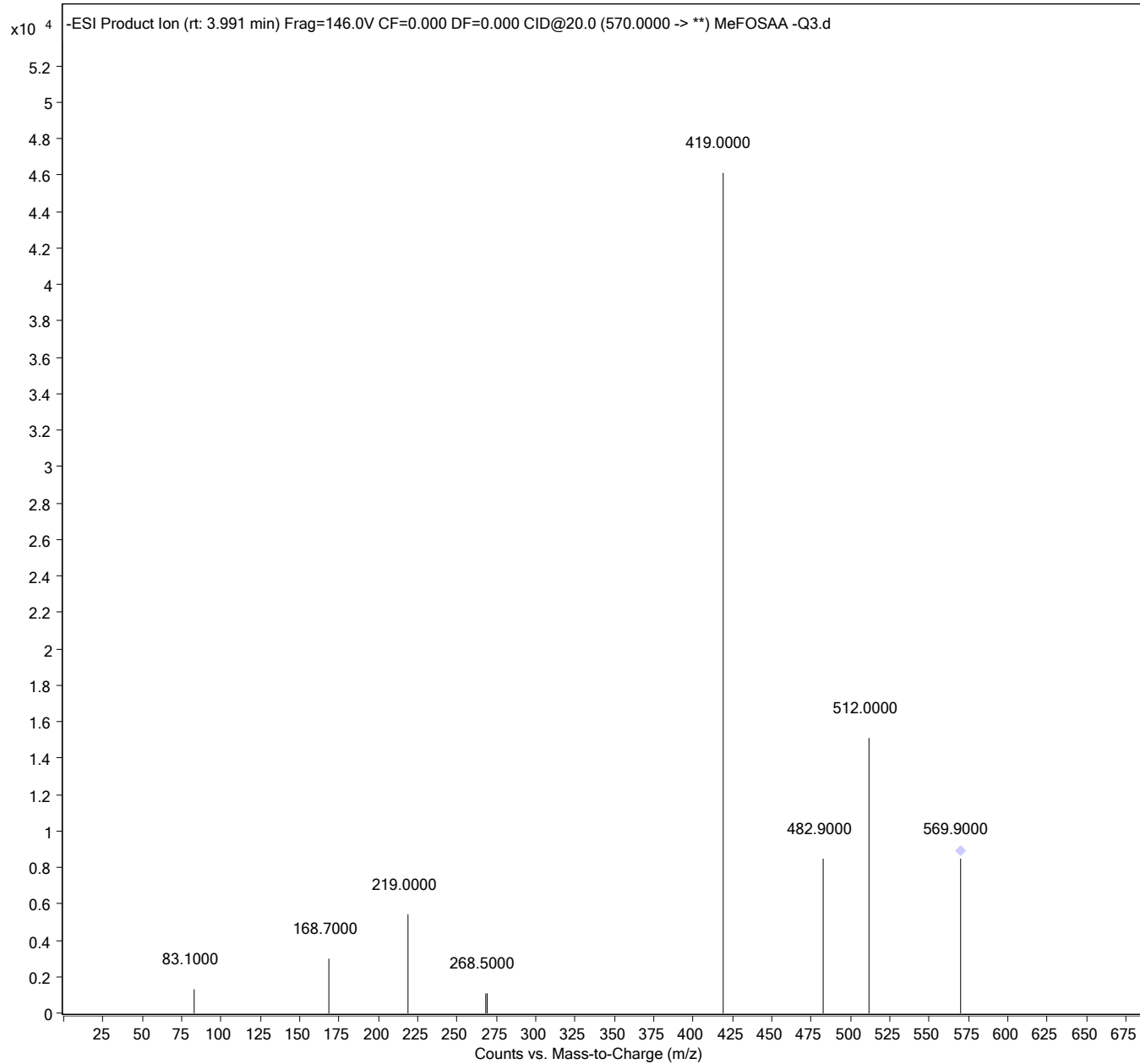
Sample Name	MeFOSE -Q3	Position	P1-C4	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	MeFOSE -Q3.d
ACQ Method	PFASDOD_MassVerification-MeFOSE-Q3.m	Comment		Acquired Time	11/15/2019 10:35:27 PM



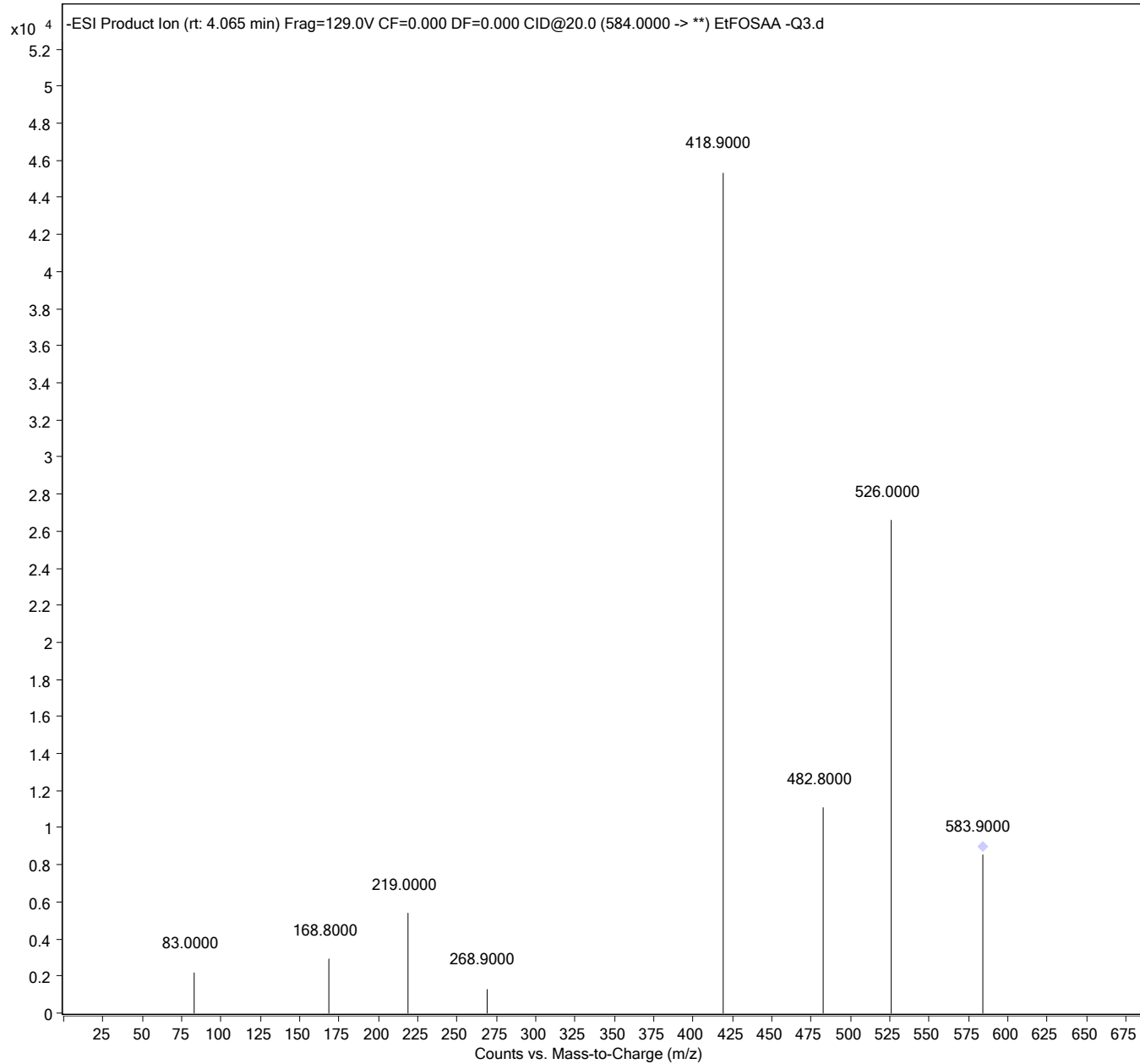
Sample Name	EtFOSE -Q3	Position	P1-C5	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	EtFOSE -Q3.d
ACQ Method	PFASDOD_MassVerification-EtFOSE-Q3.m	Comment		Acquired Time	11/15/2019 10:42:24 PM



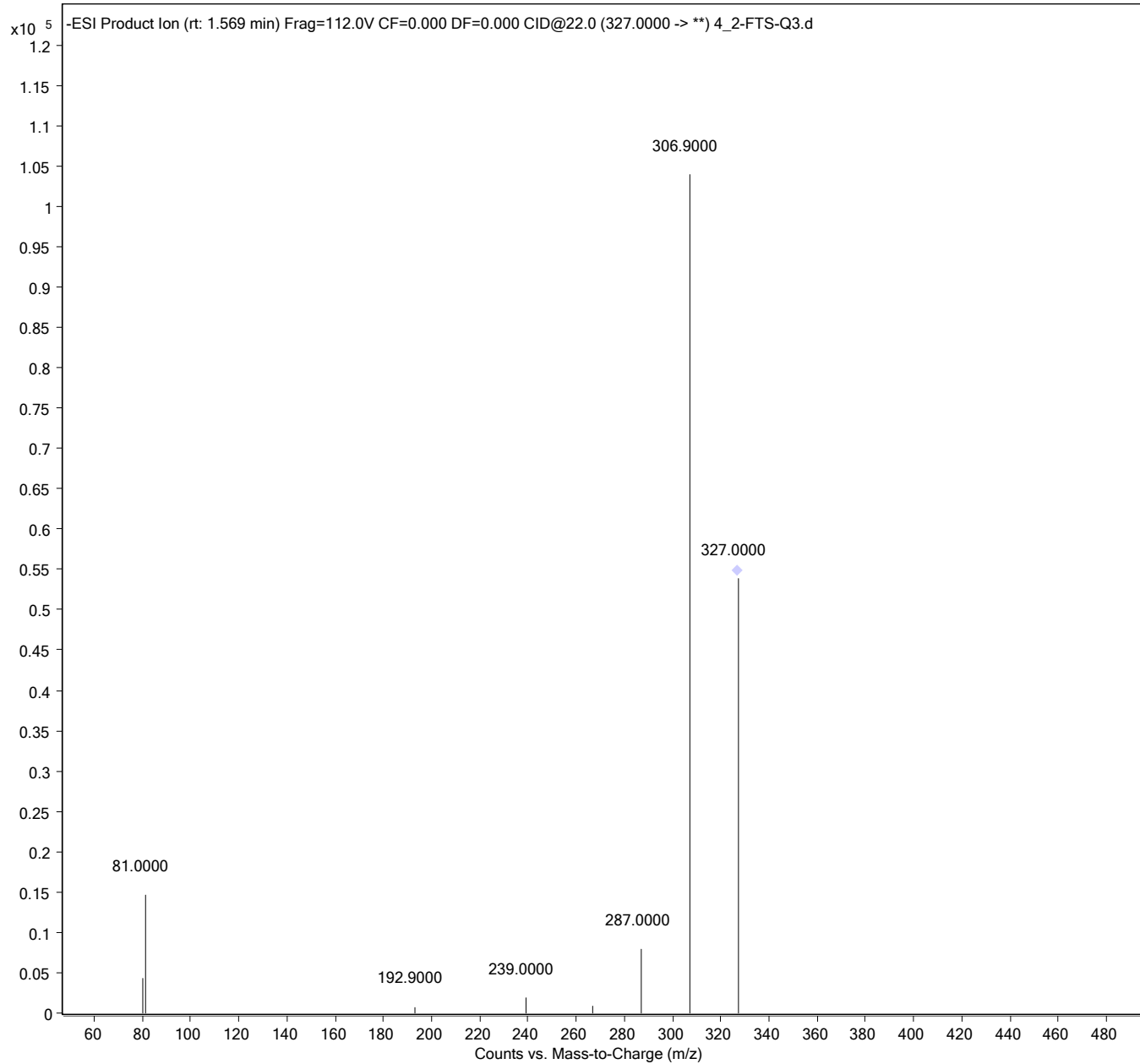
Sample Name	MeFOSAA -Q3	Position	P1-C6	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	MeFOSAA -Q3.d
ACQ Method	PFASDOD_MassVerification-brMeFOSAA-Q3.m	Comment		Acquired Time	11/15/2019 10:49:21 PM



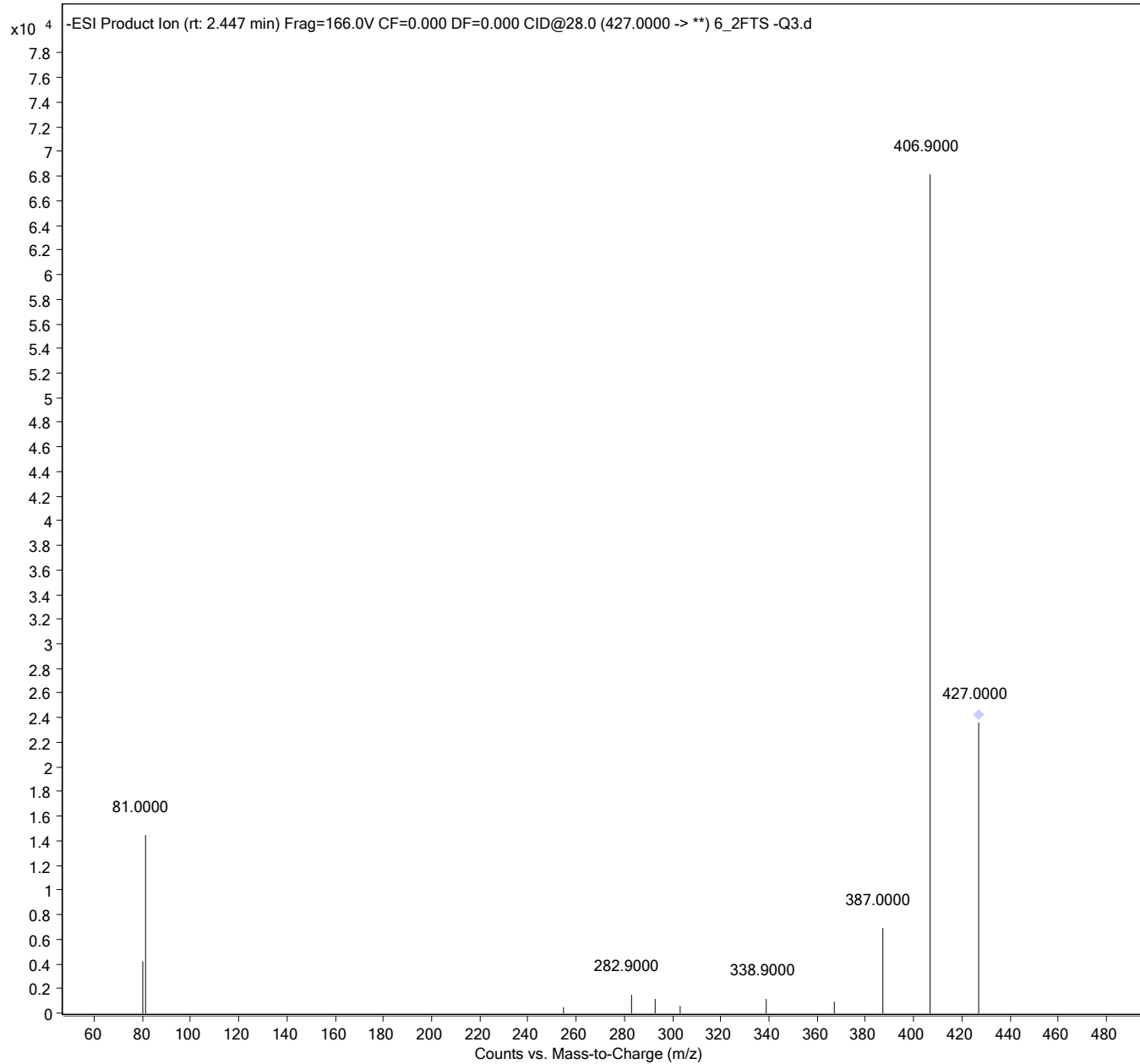
Sample Name	EtFOSAA -Q3	Position	P1-C7	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	EtFOSAA -Q3.d
ACQ Method	PFASDOD_MassVerification-brEtFOSAA-Q3.m	Comment		Acquired Time	11/15/2019 10:56:15 PM



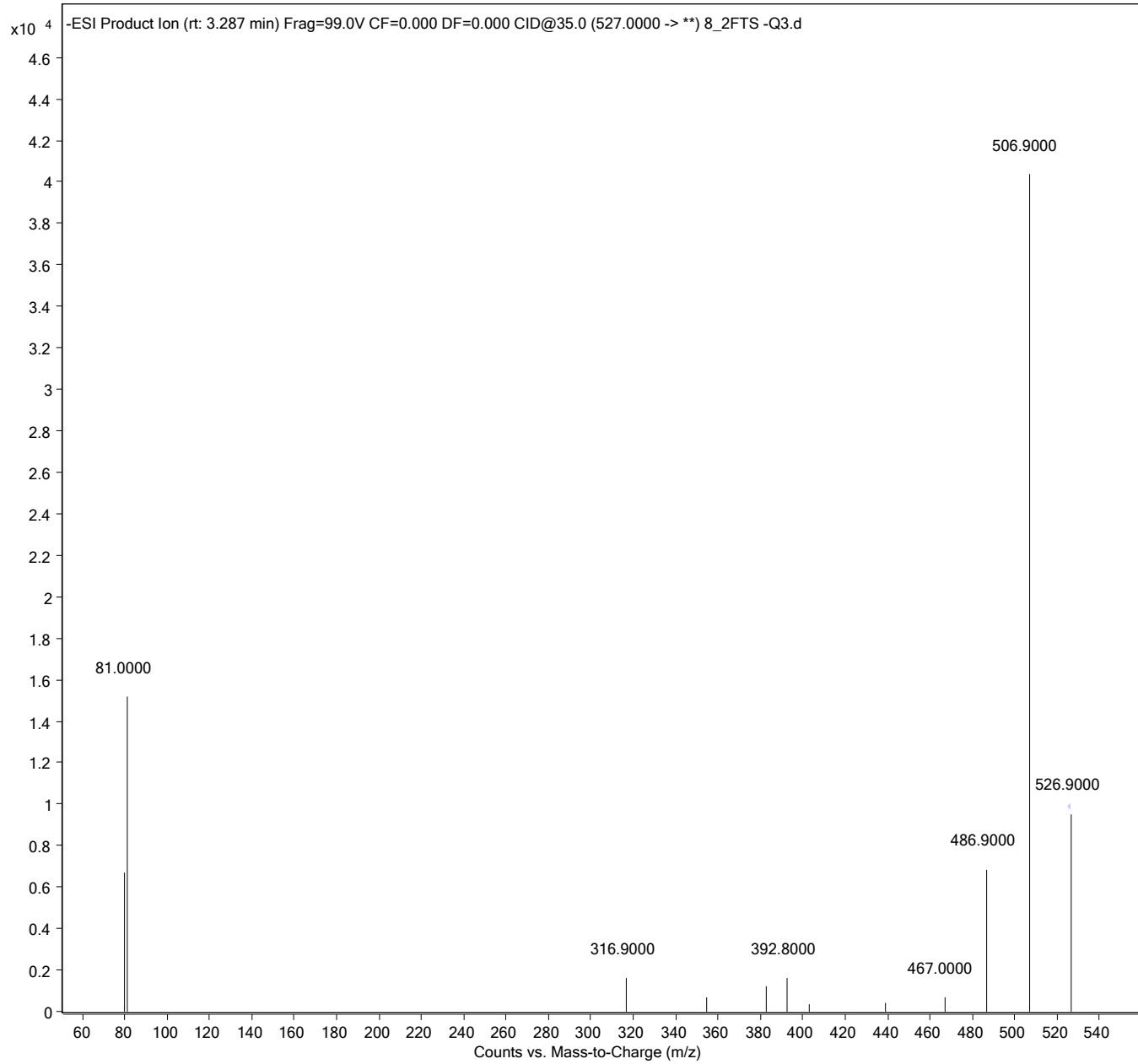
Sample Name	4:2-FTS-Q3	Position	P1-C8	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	4_2-FTS-Q3.d
ACQ Method	PFASDOD_MassVerification-4-2FTS-Q3.m	Comment		Acquired Time	11/15/2019 11:03:10 PM



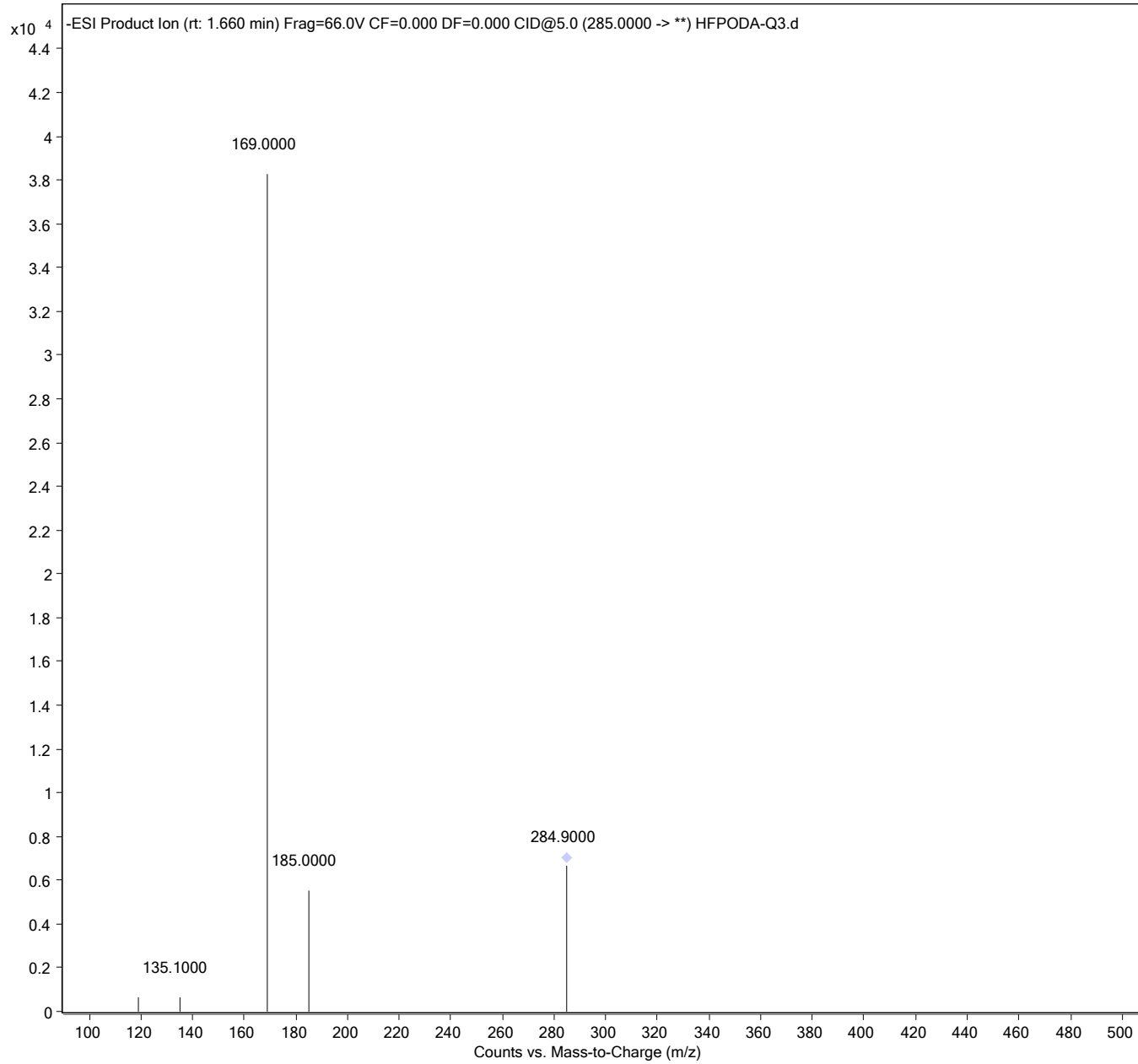
Sample Name	6:2FTS -Q3	Position	P1-C9	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	6_2FTS -Q3.d
ACQ Method	PFASDOD_MassVerification-6-2FTS-Q3.m	Comment		Acquired Time	11/15/2019 11:10:06 PM



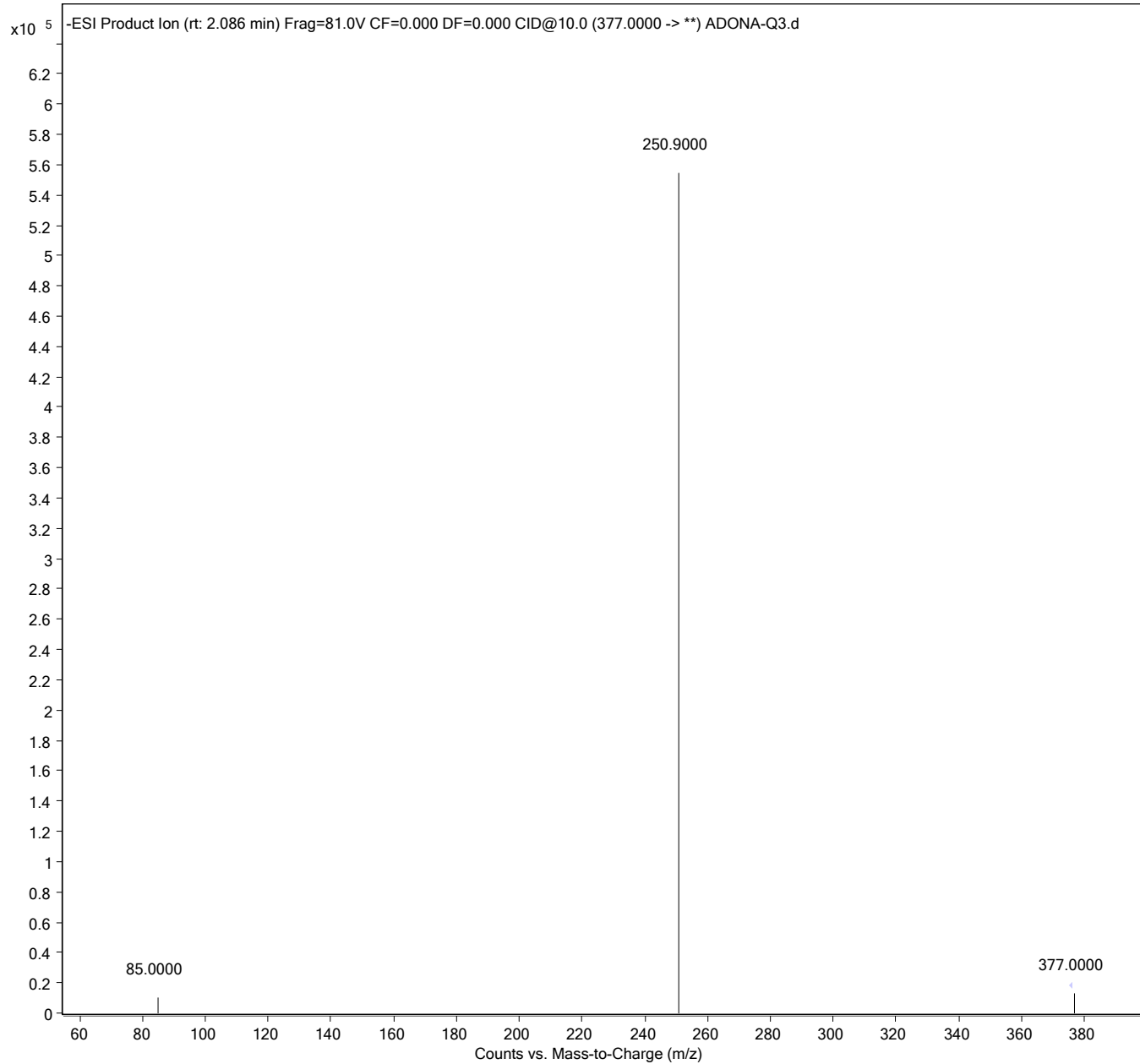
Sample Name	8:2FTS -Q3	Position	P1-D1	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	8_2FTS -Q3.d
ACQ Method	PFASDOD_MassVerification-8-2FTS-Q3.m	Comment		Acquired Time	11/15/2019 11:17:01 PM



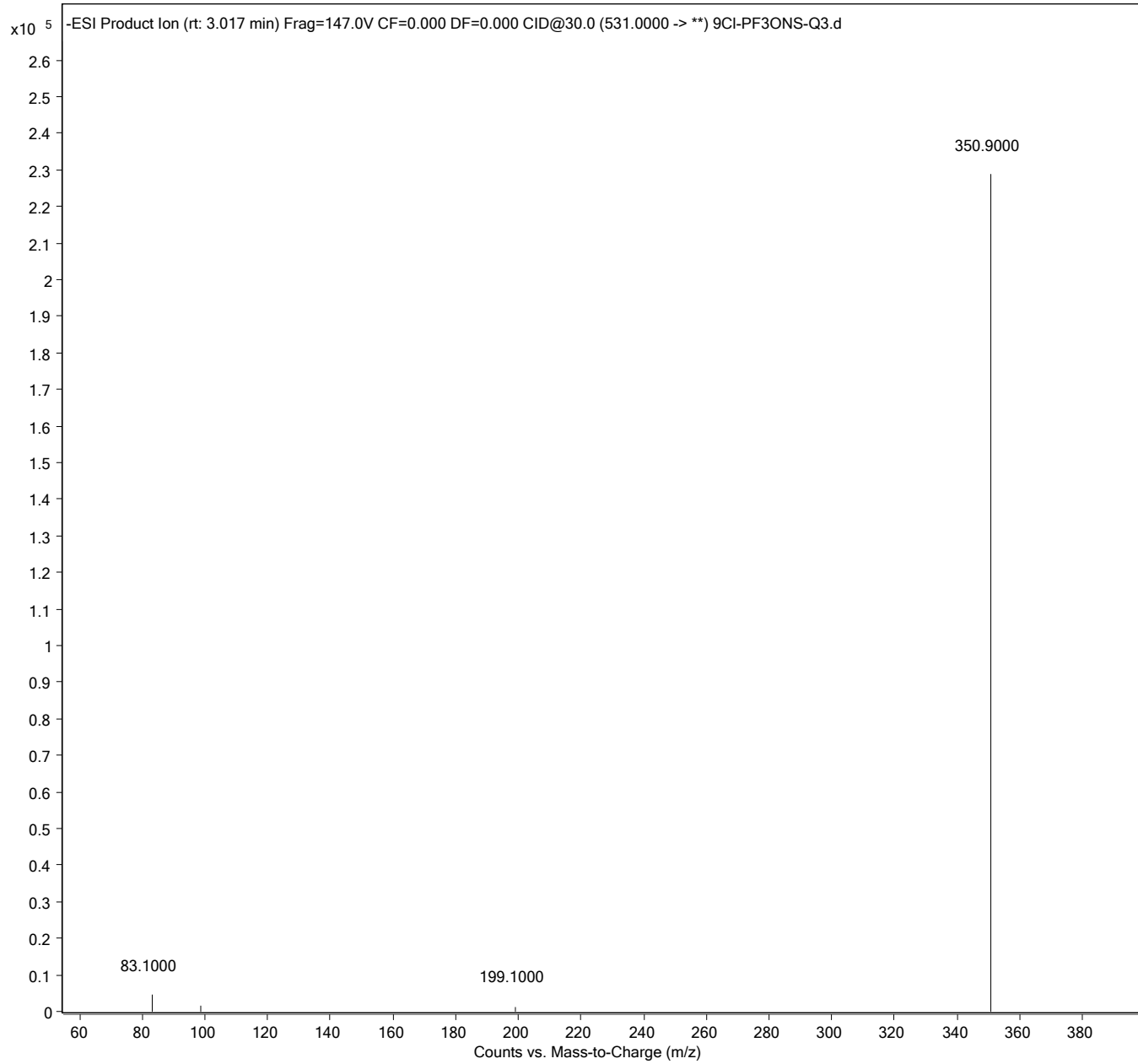
Sample Name	HFPODA-Q3	Position	P1-D2	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	HFPODA-Q3.d
ACQ Method	PFASDOD_MassVerification-HFPODA-Q3.m	Comment		Acquired Time	11/15/2019 11:23:58 PM



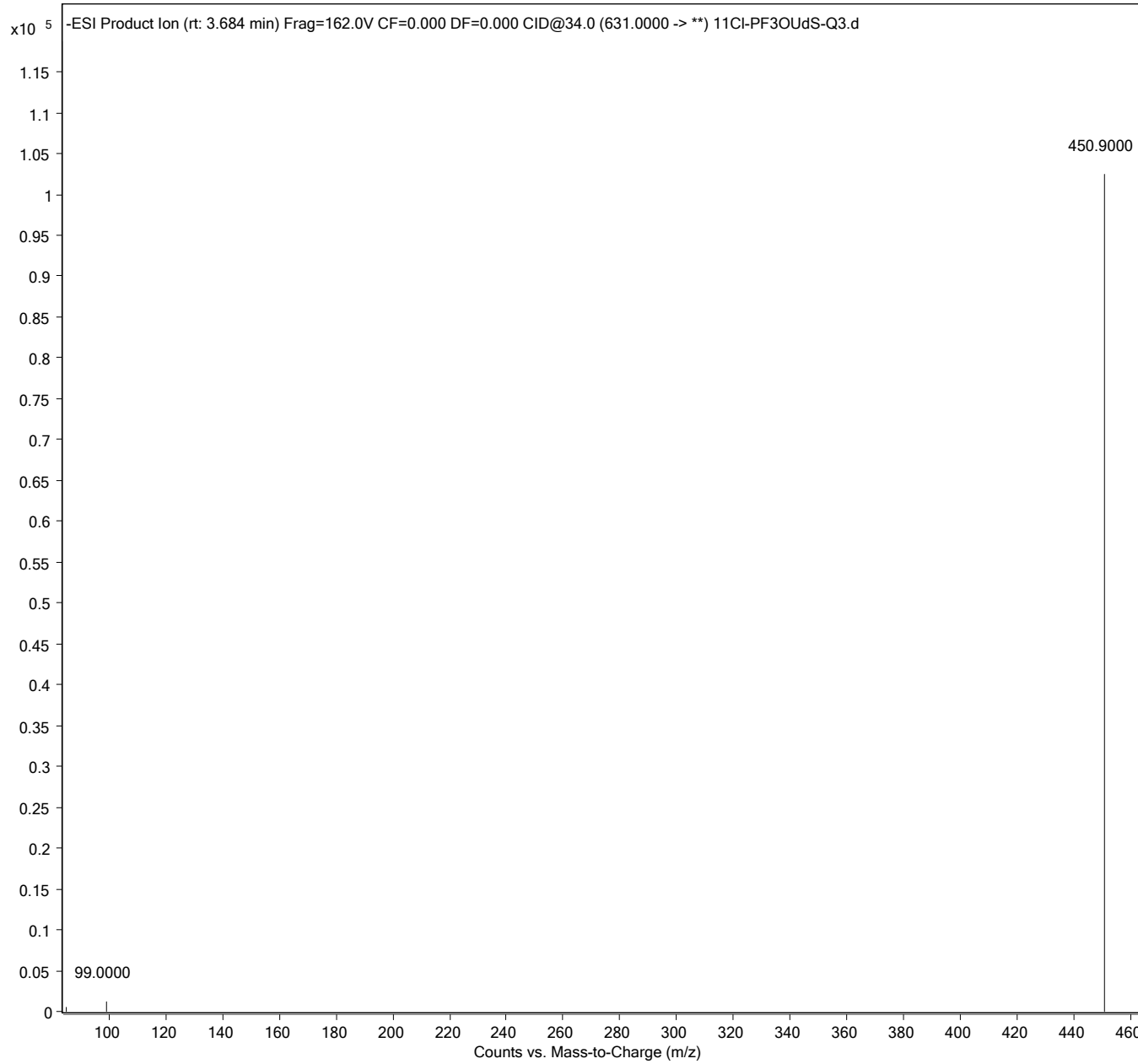
Sample Name	ADONA-Q3	Position	P1-D3	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	ADONA-Q3.d
ACQ Method	PFASDOD_MassVerification-ADONA-Q3.m	Comment		Acquired Time	11/15/2019 11:30:52 PM



Sample Name	9CI-PF3ONS-Q3	Position	P1-D4	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	9CI-PF3ONS-Q3.d
ACQ Method	PFASDOD_MassVerification-9CI-PF3ONS-Q3.m	Comment		Acquired Time	11/15/2019 11:37:47 PM



Sample Name	11Cl-PF3OUdS-Q3	Position	P1-D5	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	11Cl-PF3OUdS-Q3.d
ACQ Method	PFASDOD_MassVerification-11Cl-PF3OUdS-Q3	Comment		Acquired Time	11/15/2019 11:44:42 PM



Worklist Report



Instrument Name: LCMS04 Worklist Path: D:\MassHunter\Worklists\PFCs\MassVerificaion\Mass Verification_Q1&Q3_191115.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\PFC_Mass Verification
 DA Method Path: D:\MassHunter\methods
 Data File Path: D:\MassHunter\data\Mass Verification\20191109
 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: ---

*Column #388
 MPA = Soln # 46, FREI9
 MPB = Methanol Sigma # SHBL1476
 on 2019/11/18*

Plate Barcode:

Plate	Barcode
P1	

Worklist Table

	Sample Name	Sample Position	Method	Data File	Sample Type	Inj Vol (µl)	Sample Group
1	PFBA -Q1	P1-A1	PFASDOD_MassVerification_Q1.m	PFBA -Q1.d	Sample	As Method	PFAS-Q1
2	PFPeA -Q1	P1-A2	PFASDOD_MassVerification_Q1.m	PFPeA -Q1.d	Sample	As Method	PFAS-Q1
3	PFHxA -Q1	P1-A3	PFASDOD_MassVerification_Q1.m	PFHxA -Q1.d	Sample	As Method	PFAS-Q1
4	PFHpA -Q1	P1-A4	PFASDOD_MassVerification_Q1.m	PFHpA -Q1.d	Sample	As Method	PFAS-Q1
5	PFOA -Q1	P1-A5	PFASDOD_MassVerification_Q1.m	PFOA -Q1.d	Sample	As Method	PFAS-Q1
6	PFNA -Q1	P1-A6	PFASDOD_MassVerification_Q1.m	PFNA -Q1.d	Sample	As Method	PFAS-Q1
7	PFDA -Q1	P1-A7	PFASDOD_MassVerification_Q1.m	PFDA -Q1.d	Sample	As Method	PFAS-Q1
8	PFUnA -Q1	P1-A8	PFASDOD_MassVerification_Q1.m	PFUnA -Q1.d	Sample	As Method	PFAS-Q1
9	PFDoA -Q1	P1-A9	PFASDOD_MassVerification_Q1.m	PFDoA -Q1.d	Sample	As Method	PFAS-Q1

D:\MassHunter\Worklists\PFCs\MassVerificaion\Mass Verification_Q1&Q3_191115.wkl

Worklist Report

	Sample Name	Sample Position	Method	Data File	Sample Type	Inj Vol (µl)	Sample Group
10	PFTrDA -Q1	P1-B1	PFASDOD_MassVerification_Q1.m	PFTrDA -Q1.d	Sample	As Method	PFAS-Q1
11	PFTeDA -Q1	P1-B2	PFASDOD_MassVerification_Q1.m	PFTeDA -Q1.d	Sample	As Method	PFAS-Q1
12	PFBS -Q1	P1-B3	PFASDOD_MassVerification_Q1.m	PFBS -Q1.d	Sample	As Method	PFAS-Q1
13	PFPeS-Q1	P1-B4	PFASDOD_MassVerification_Q1.m	PFPeS-Q1.d	Sample	As Method	PFAS-Q1
14	PFHxS -Q1	P1-B5	PFASDOD_MassVerification_Q1.m	PFHxS -Q1.d	Sample	As Method	PFAS-Q1
15	PFHpS-Q1	P1-B6	PFASDOD_MassVerification_Q1.m	PFHpS-Q1.d	Sample	As Method	PFAS-Q1
16	PFOS -Q1	P1-B7	PFASDOD_MassVerification_Q1.m	PFOS -Q1.d	Sample	As Method	PFAS-Q1
17	PFNS-Q1	P1-B8	PFASDOD_MassVerification_Q1.m	PFNS-Q1.d	Sample	As Method	PFAS-Q1
18	PFDS -Q1	P1-B9	PFASDOD_MassVerification_Q1.m	PFDS -Q1.d	Sample	As Method	PFAS-Q1
19	PFOSA -Q1	P1-C1	PFASDOD_MassVerification_Q1.m	PFOSA -Q1.d	Sample	As Method	PFAS-Q1
20	MeFOSA -Q1	P1-C2	PFASDOD_MassVerification_Q1.m	MeFOSA -Q1.d	Sample	As Method	PFAS-Q1
21	EtFOSA -Q1	P1-C3	PFASDOD_MassVerification_Q1.m	EtFOSA -Q1.d	Sample	As Method	PFAS-Q1
22	MeFOSE -Q1	P1-C4	PFASDOD_MassVerification_Q1.m	MeFOSE -Q1.d	Sample	As Method	PFAS-Q1
23	EtFOSE -Q1	P1-C5	PFASDOD_MassVerification_Q1.m	EtFOSE -Q1.d	Sample	As Method	PFAS-Q1
24	MeFOSAA -Q1	P1-C6	PFASDOD_MassVerification_Q1.m	MeFOSAA -Q1.d	Sample	As Method	PFAS-Q1
25	EtFOSAA -Q1	P1-C7	PFASDOD_MassVerification_Q1.m	EtFOSAA -Q1.d	Sample	As Method	PFAS-Q1
26	4:2-FTS-Q1	P1-C8	PFASDOD_MassVerification_Q1.m	4_2-FTS-Q1.d	Sample	As Method	PFAS-Q1
27	6:2FTS -Q1	P1-C9	PFASDOD_MassVerification_Q1.m	6_2FTS -Q1.d	Sample	As Method	PFAS-Q1
28	8:2FTS -Q1	P1-D1	PFASDOD_MassVerification_Q1.m	8_2FTS -Q1.d	Sample	As Method	PFAS-Q1
29	HFPODA-Q1	P1-D2	PFASDOD_MassVerification_Q1.m	HFPODA-Q1.d	Sample	As Method	PFAS-Q1
30	ADONA-Q1	P1-D3	PFASDOD_MassVerification_Q1.m	ADONA-Q1.d	Sample	As Method	PFAS-Q1
31	9Cl-PF3ONS-Q1	P1-D4	PFASDOD_MassVerification_Q1.m	9Cl-PF3ONS-Q1.d	Sample	As Method	PFAS-Q1
32	11Cl-PF3OUdS-Q1	P1-D5	PFASDOD_MassVerification_Q1.m	11Cl-PF3OUdS-Q1.d	Sample	As Method	PFAS-Q1
33	PFBA -Q3	P1-A1	PFASDOD_MassVerification-PFBA-Q3.m	PFBA -Q3.d	Sample	As Method	PFAS-Q3
34	PFPeA -Q3	P1-A2	PFASDOD_MassVerification-PFPeA-Q3.m	PFPeA -Q3.d	Sample	As Method	PFAS-Q3

D:\MassHunterWorklists\PFCS\MassVerification\Mass Verification_Q1&Q3_191115.wkl

Worklist Report

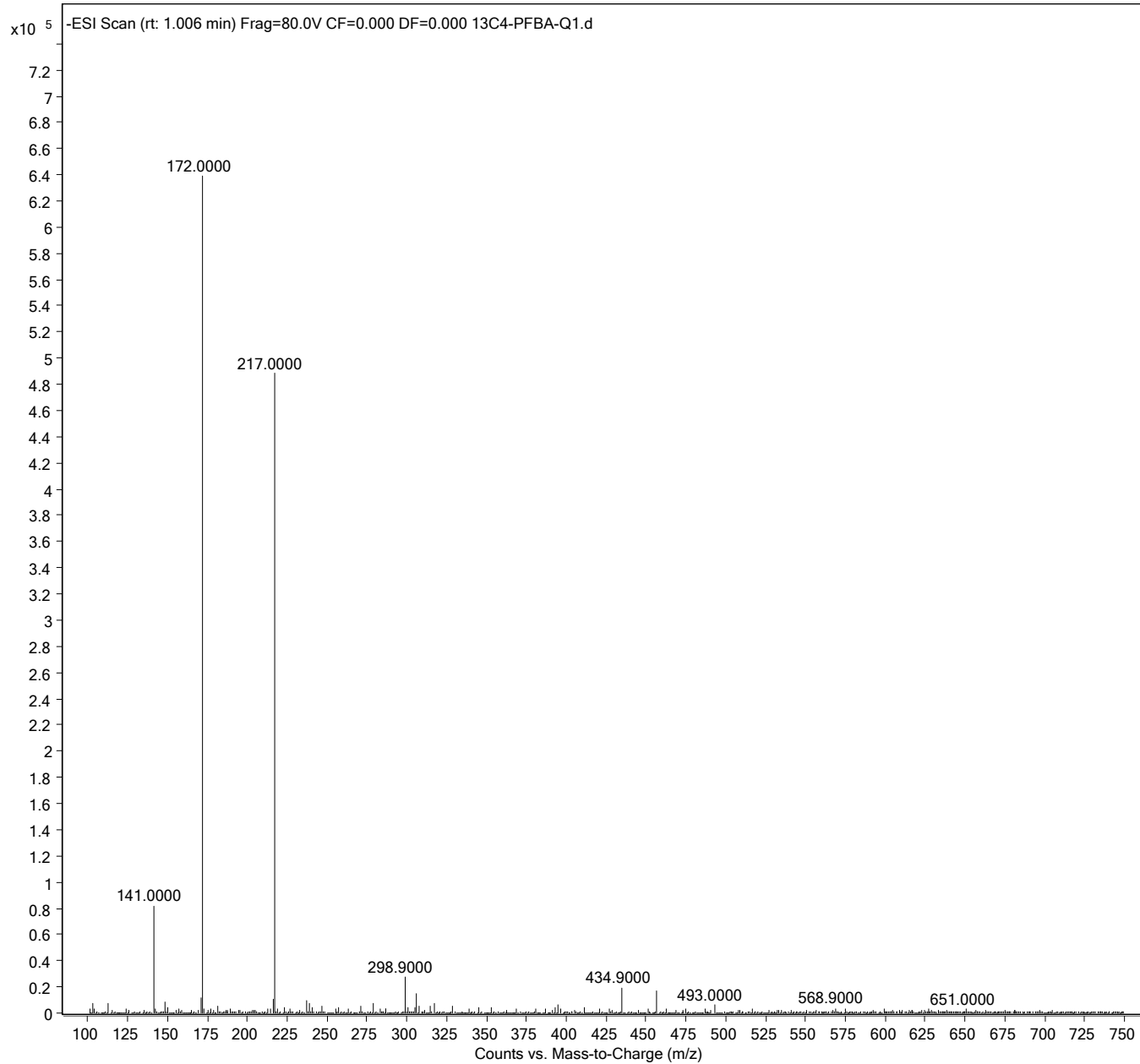
	Sample Name	Sample Position	Method	Data File	Sample Type	Inj Vol (µl)	Sample Group
35	PFHxA -Q3	P1-A3	PFASDOD_MassVerification-PFHxA-Q3.m	PFHxA -Q3.d	Sample	As Method	PFAS-Q3
36	PFHpA -Q3	P1-A4	PFASDOD_MassVerification-PFHpA-Q3.m	PFHpA -Q3.d	Sample	As Method	PFAS-Q3
37	PFOA -Q3	P1-A5	PFASDOD_MassVerification-PFOA-Q3.m	PFOA -Q3.d	Sample	As Method	PFAS-Q3
38	PFNA -Q3	P1-A6	PFASDOD_MassVerification-PFNA-Q3.m	PFNA -Q3.d	Sample	As Method	PFAS-Q3
39	PFDA -Q3	P1-A7	PFASDOD_MassVerification-PFDA-Q3.m	PFDA -Q3.d	Sample	As Method	PFAS-Q3
40	PFUnA -Q3	P1-A8	PFASDOD_MassVerification-PFUnA-Q3.m	PFUnA -Q3.d	Sample	As Method	PFAS-Q3
41	PFDoA -Q3	P1-A9	PFASDOD_MassVerification-PFDoA-Q3.m	PFDoA -Q3.d	Sample	As Method	PFAS-Q3
42	PFTrDA -Q3	P1-B1	PFASDOD_MassVerification-PFTrDA-Q3.m	PFTrDA -Q3.d	Sample	As Method	PFAS-Q3
43	PFTeDA -Q3	P1-B2	PFASDOD_MassVerification-PFTeDA-Q3.m	PFTeDA -Q3.d	Sample	As Method	PFAS-Q3
44	PFBS -Q3	P1-B3	PFASDOD_MassVerification-PFBS-Q3.m	PFBS -Q3.d	Sample	As Method	PFAS-Q3
45	PFPeS -Q3	P1-B4	PFASDOD_MassVerification-PFPeS-Q3.m	PFPeS -Q3.d	Sample	As Method	PFAS-Q3
46	PFHxS -Q3	P1-B5	PFASDOD_MassVerification-PFHxS-Q3.m	PFHxS -Q3.d	Sample	As Method	PFAS-Q3
47	PFHpS -Q3	P1-B6	PFASDOD_MassVerification-PFHpS-Q3.m	PFHpS -Q3.d	Sample	As Method	PFAS-Q3
48	PFOS -Q3	P1-B7	PFASDOD_MassVerification-PFOS-Q3.m	PFOS -Q3.d	Sample	As Method	PFAS-Q3
49	PFNS -Q3	P1-B8	PFASDOD_MassVerification-PFNS-Q3.m	PFNS -Q3.d	Sample	As Method	PFAS-Q3
50	PFDS -Q3	P1-B9	PFASDOD_MassVerification-PFDS-Q3.m	PFDS -Q3.d	Sample	As Method	PFAS-Q3
51	PFOSA -Q3	P1-C1	PFASDOD_MassVerification-PFOSA-Q3.m	PFOSA -Q3.d	Sample	As Method	PFAS-Q3
52	MeFOSA -Q3	P1-C2	PFASDOD_MassVerification-MeFOSA-Q3.m	MeFOSA -Q3.d	Sample	As Method	PFAS-Q3
53	EtFOSA -Q3	P1-C3	PFASDOD_MassVerification-EtFOSA-Q3.m	EtFOSA -Q3.d	Sample	As Method	PFAS-Q3
54	MeFOSE -Q3	P1-C4	PFASDOD_MassVerification-MeFOSE-Q3.m	MeFOSE -Q3.d	Sample	As Method	PFAS-Q3
55	EtFOSE -Q3	P1-C5	PFASDOD_MassVerification-EtFOSE-Q3.m	EtFOSE -Q3.d	Sample	As Method	PFAS-Q3
56	MeFOSAA -Q3	P1-C6	PFASDOD_MassVerification-brMeFOSAA-Q3.m	MeFOSAA -Q3.d	Sample	As Method	PFAS-Q3
57	EtFOSAA -Q3	P1-C7	PFASDOD_MassVerification-brEtFOSAA-Q3.m	EtFOSAA -Q3.d	Sample	As Method	PFAS-Q3
58	4:2-FTS -Q3	P1-C8	PFASDOD_MassVerification-4:2FTS-Q3.m	4_2-FTS-Q3.d	Sample	As Method	PFAS-Q3

Worklist Report

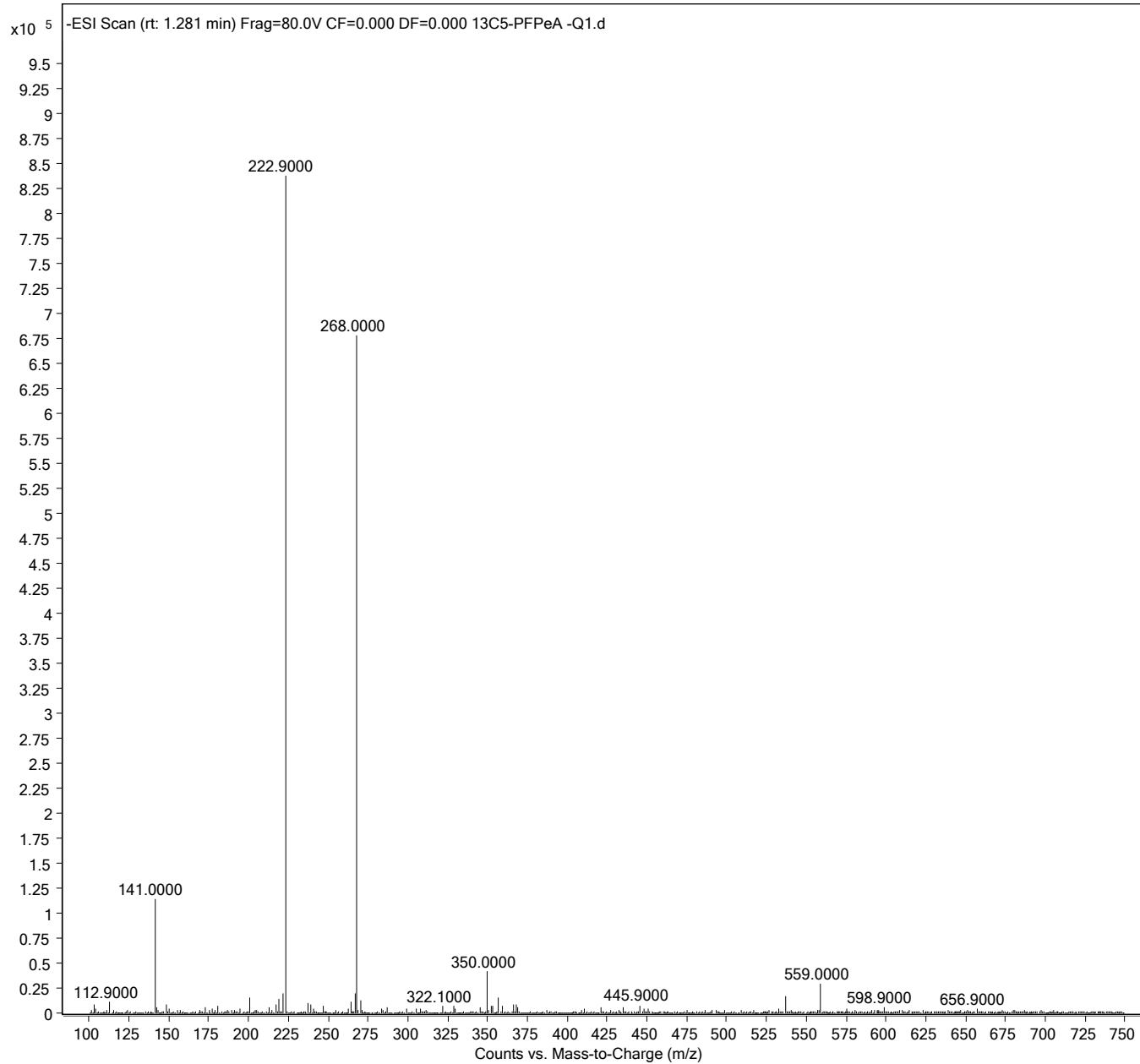
	Sample Name	Sample Position	Method	Data File	Sample Type	Inj Vol (µl)	Sample Group
59	6:2FTS -Q3	P1-C9	PFASDOD_MassVerification-6-2FTS-Q3.m	6_2FTS -Q3.d	Sample	As Method	PFAS-Q3
60	8:2FTS -Q3	P1-D1	PFASDOD_MassVerification-8-2FTS-Q3.m	8_2FTS -Q3.d	Sample	As Method	PFAS-Q3
61	HFPODA-Q3	P1-D2	PFASDOD_MassVerification-HFPODA-Q3.m	HFPODA-Q3.d	Sample	As Method	PFAS-Q3
62	ADONA-Q3	P1-D3	PFASDOD_MassVerification-ADONA-Q3.m	ADONA-Q3.d	Sample	As Method	PFAS-Q3
63	9CI-PF3ONS-Q3	P1-D4	PFASDOD_MassVerification-9CI-PF3ONS-Q3.m	9CI-PF3ONS-Q3.d	Sample	As Method	PFAS-Q3
64	11CI-PF3OUdS-Q3	P1-D5	PFASDOD_MassVerification-11CI-PF3OUdS-Q3.m	11CI-PF3OUdS-Q3.d	Sample	As Method	PFAS-Q3

Extracted and Injection Internal Standard Precursor Ion Verification

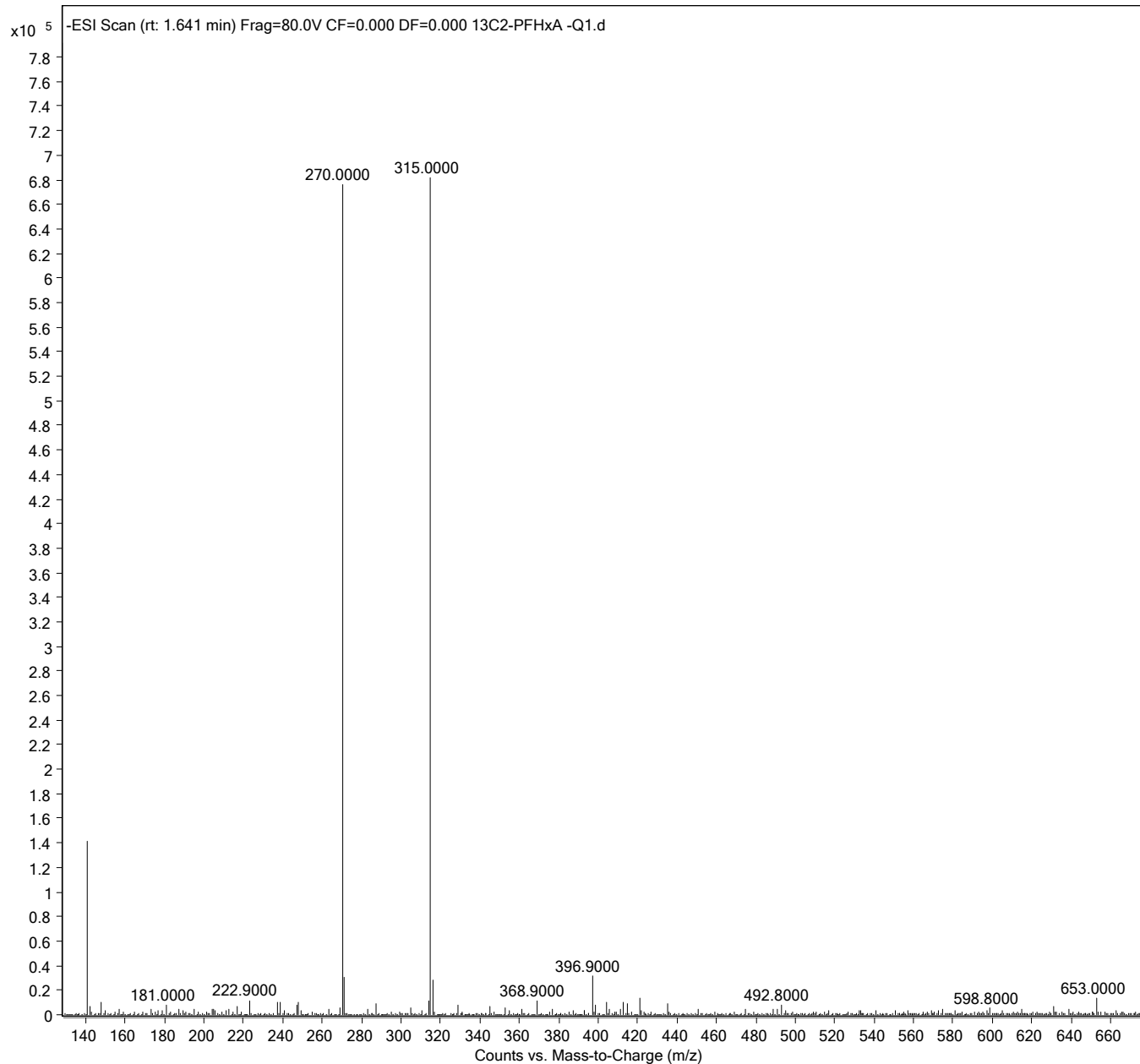
Sample Name	13C4-PFBA-Q1	Position	P3-A1	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C4-PFBA-Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 2:10:41 PM



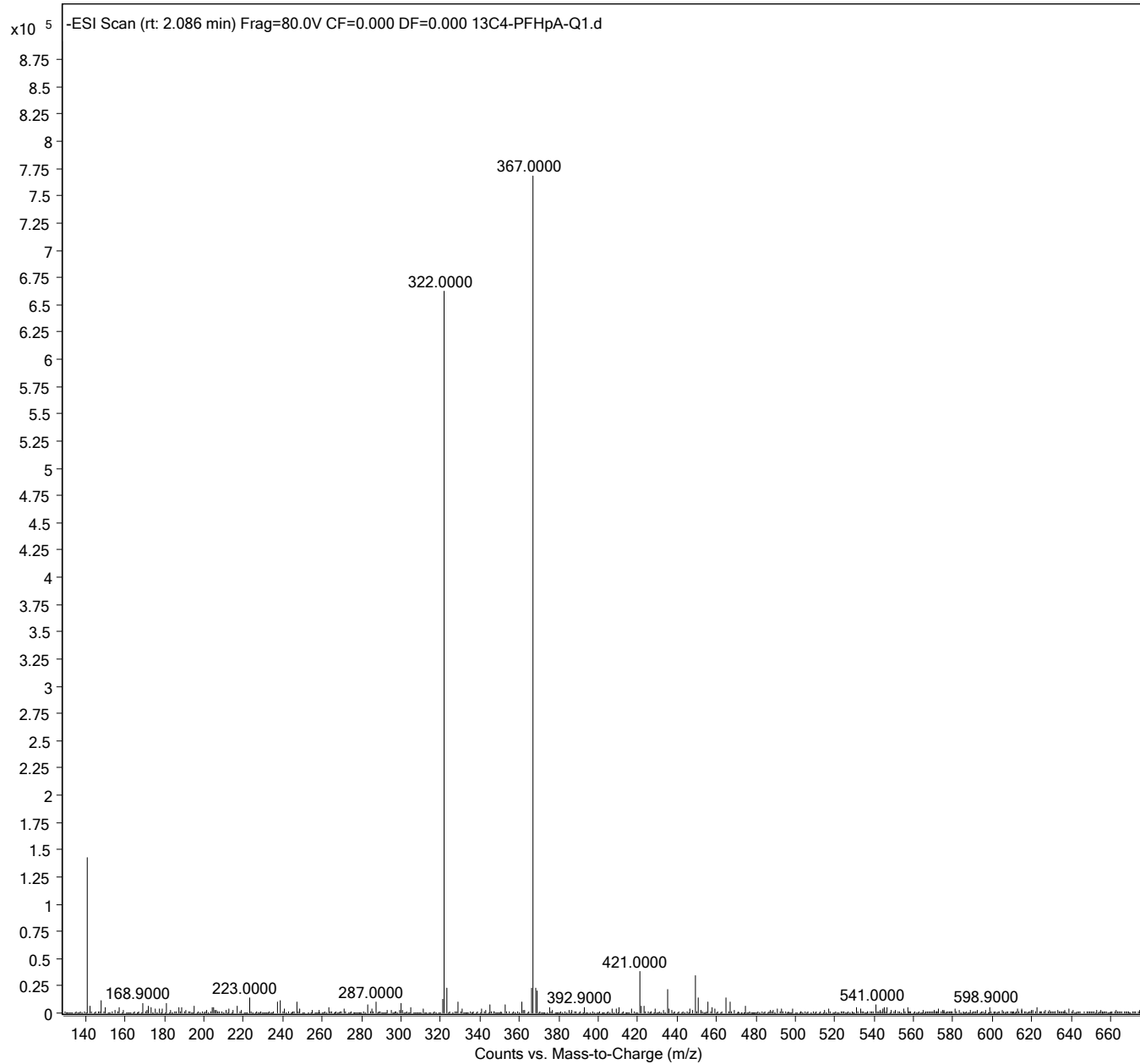
Sample Name	13C5-PFPeA -Q1	Position	P3-A2	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C5-PFPeA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 2:17:35 PM



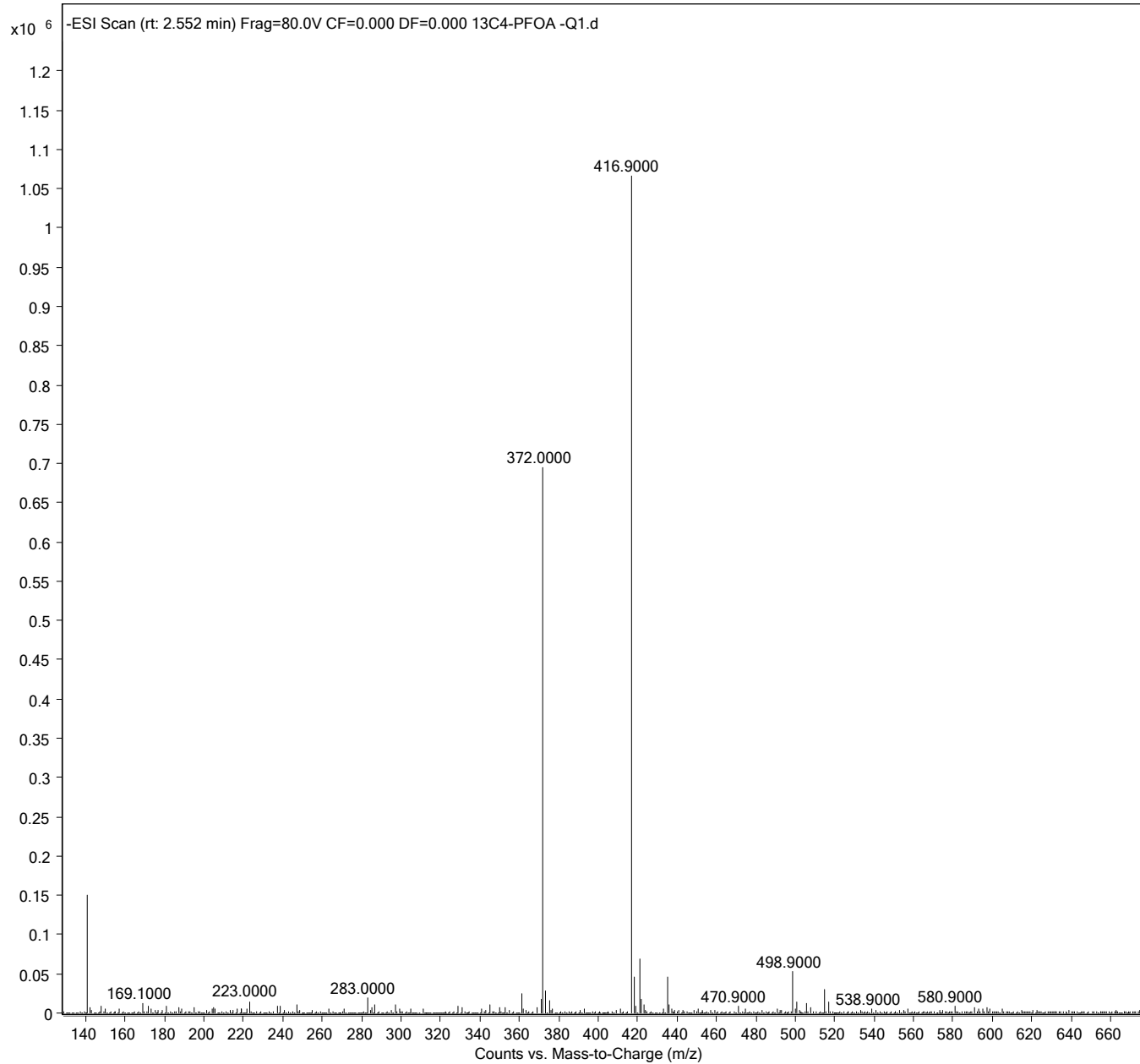
Sample Name	13C2-PFHxA -Q1	Position	P3-A3	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C2-PFHxA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 2:24:30 PM



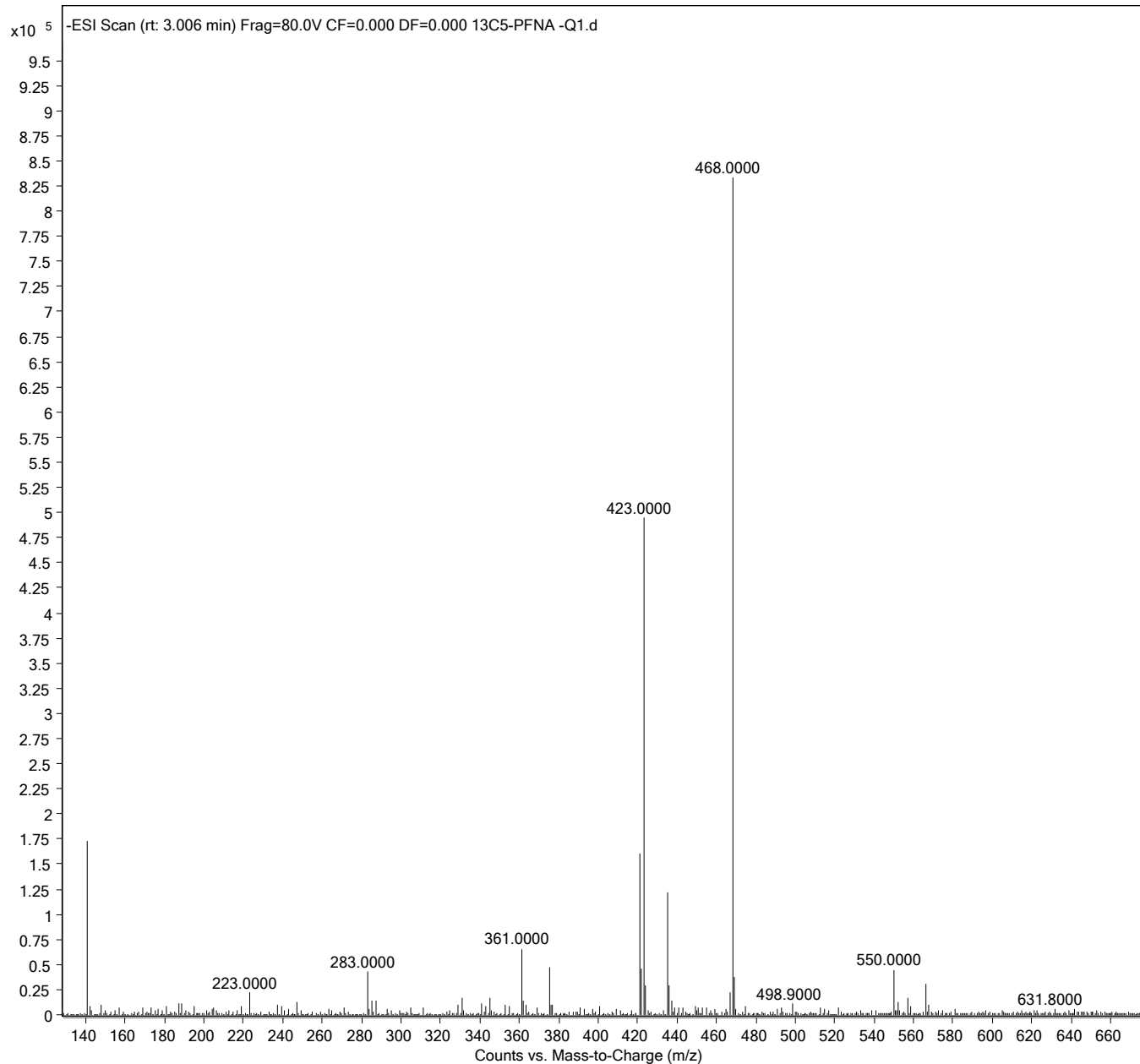
Sample Name	13C4-PFHpA-Q1	Position	P3-A4	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C4-PFHpA-Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 2:31:24 PM



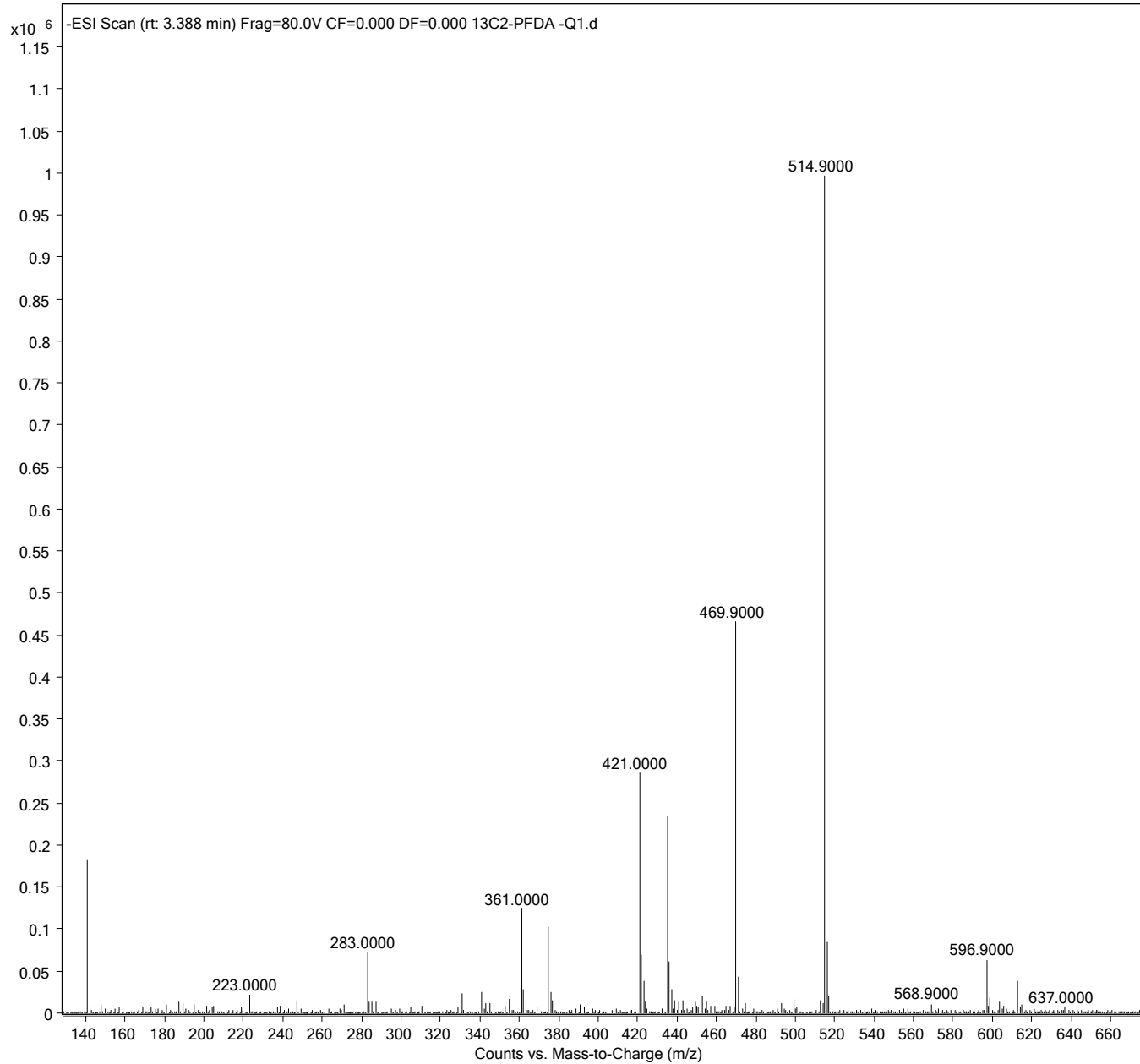
Sample Name	13C4-PFOA -Q1	Position	P3-A5	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C4-PFOA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 2:38:19 PM



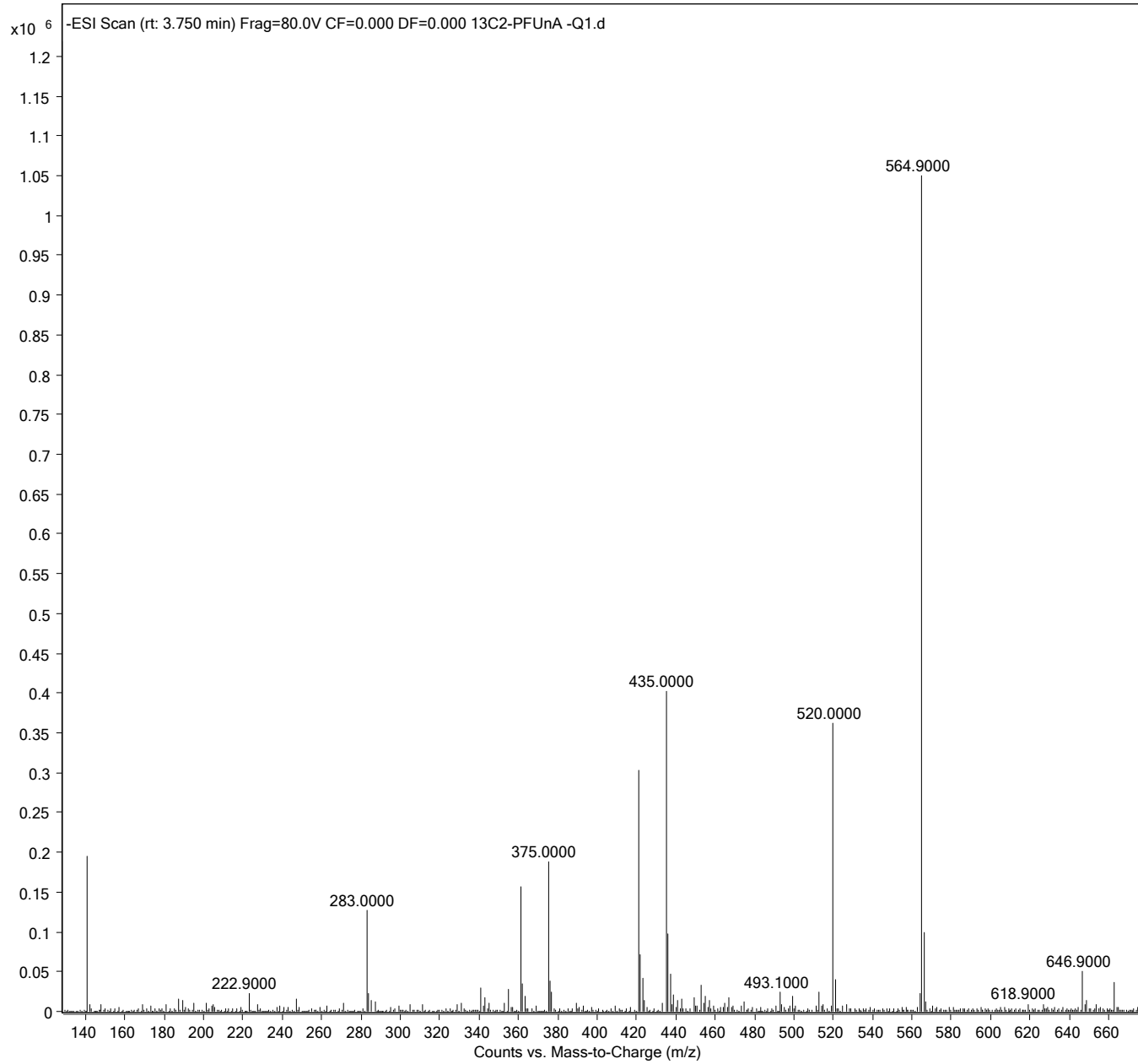
Sample Name	13C5-PFNA -Q1	Position	P3-A6	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C5-PFNA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 2:45:13 PM



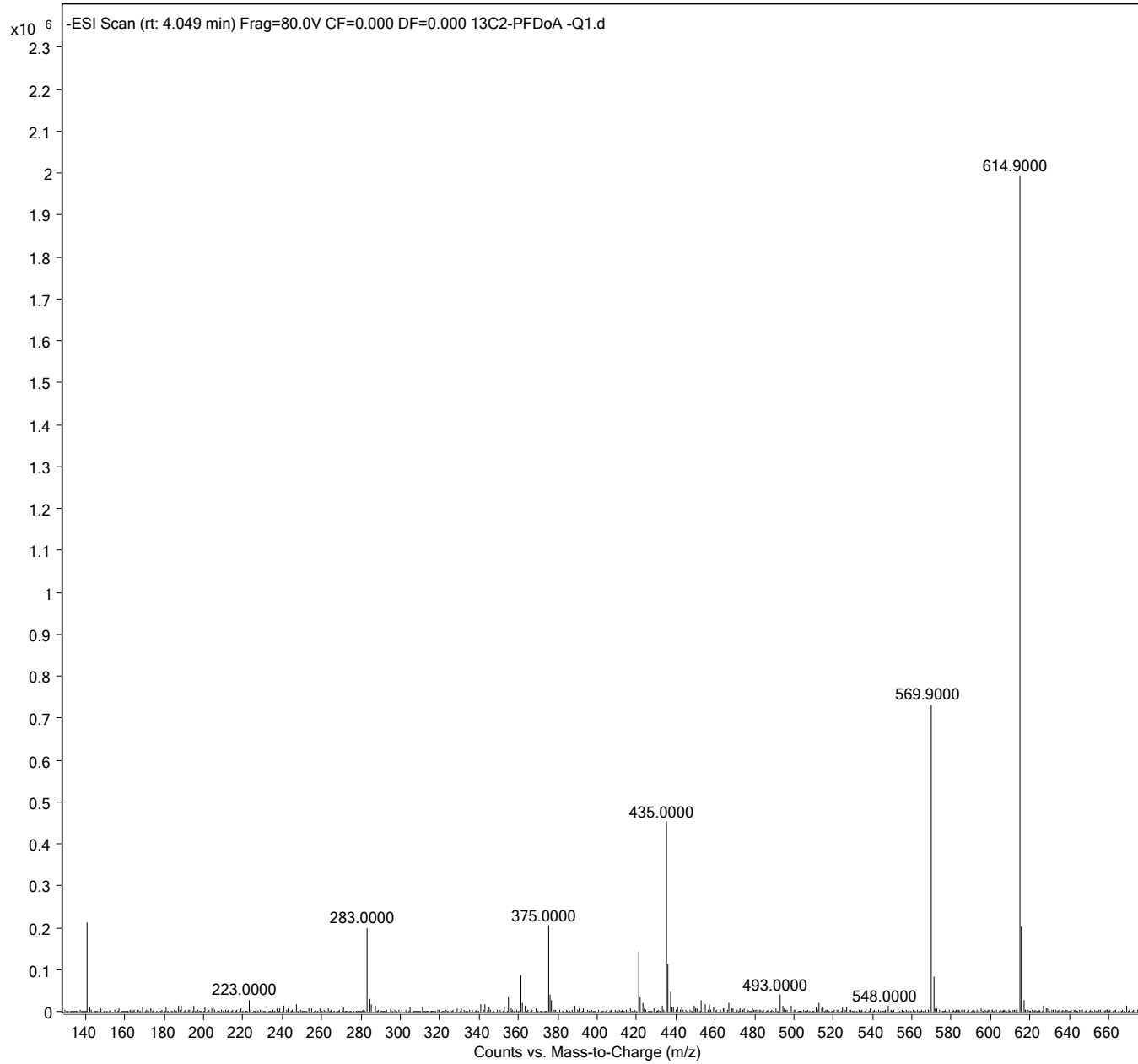
Sample Name	13C2-PFDA -Q1	Position	P3-A7	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C2-PFDA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 2:52:08 PM



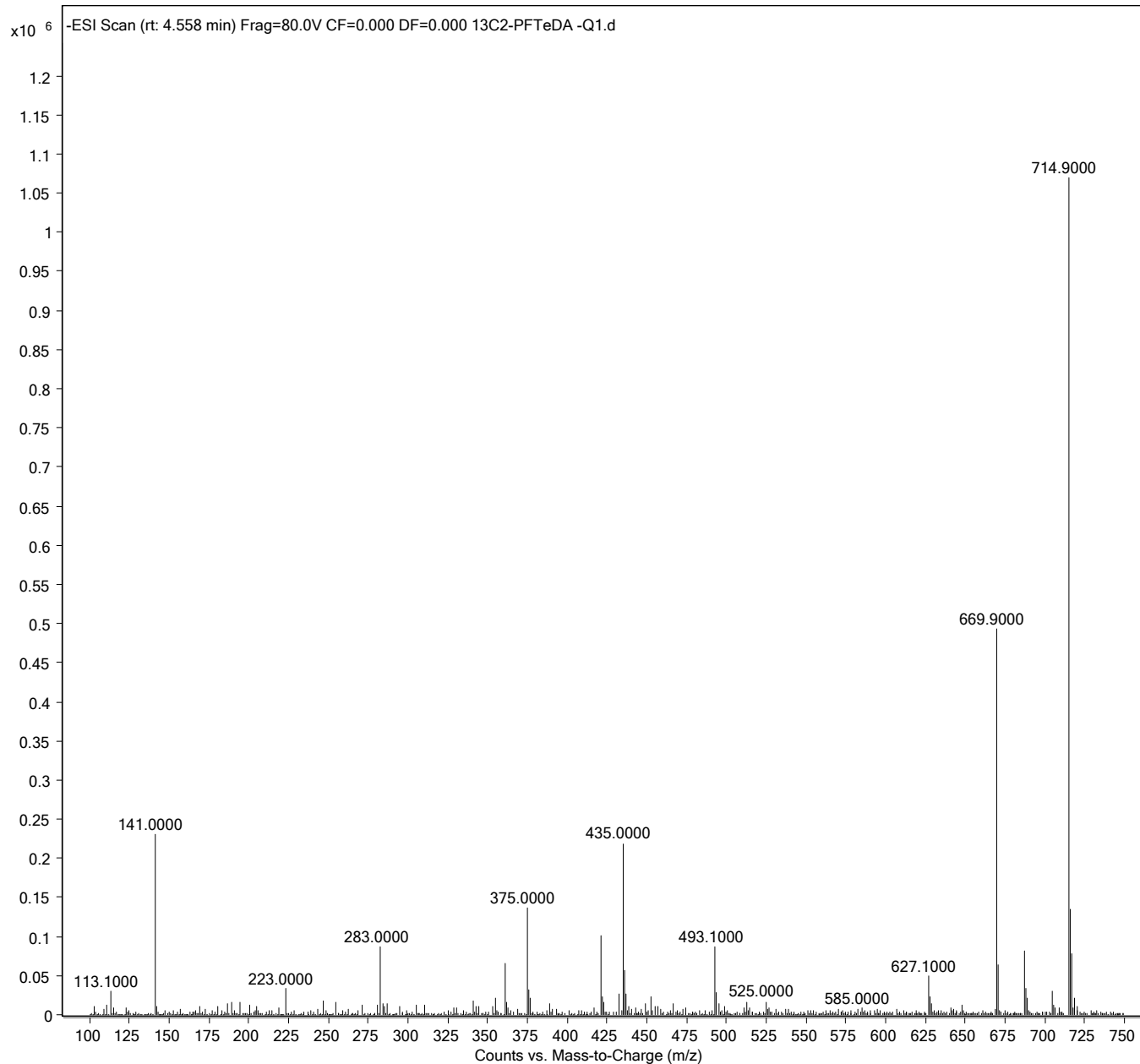
Sample Name	13C2-PFUnA -Q1	Position	P3-A8	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C2-PFUnA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 2:59:03 PM



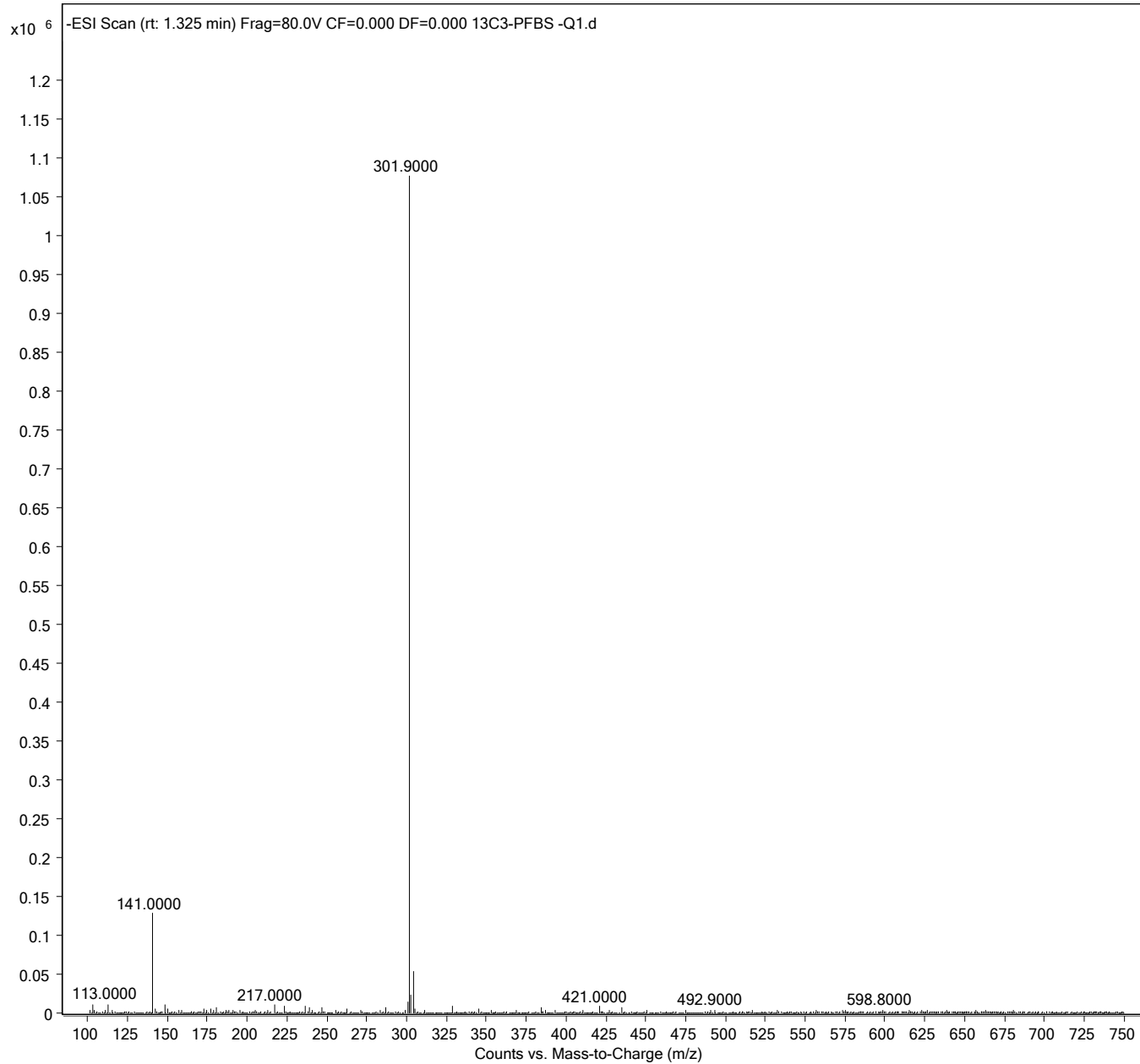
Sample Name	13C2-PFDoA -Q1	Position	P3-A9	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C2-PFDoA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 3:05:57 PM



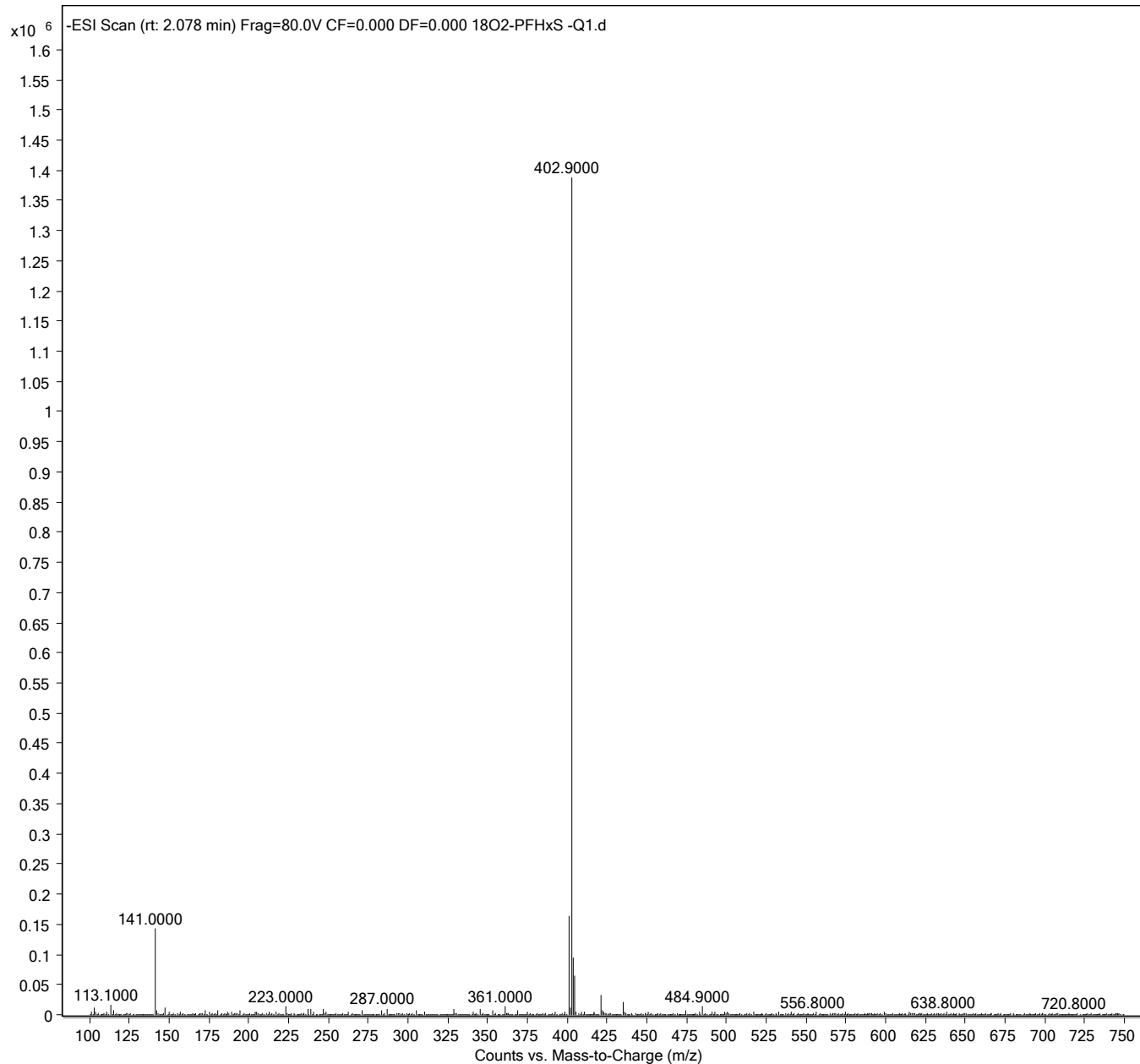
Sample Name	13C2-PFTeDA -Q1	Position	P3-B1	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C2-PFTeDA -Q1.d
ACQ Method	PFA5DOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 3:12:52 PM



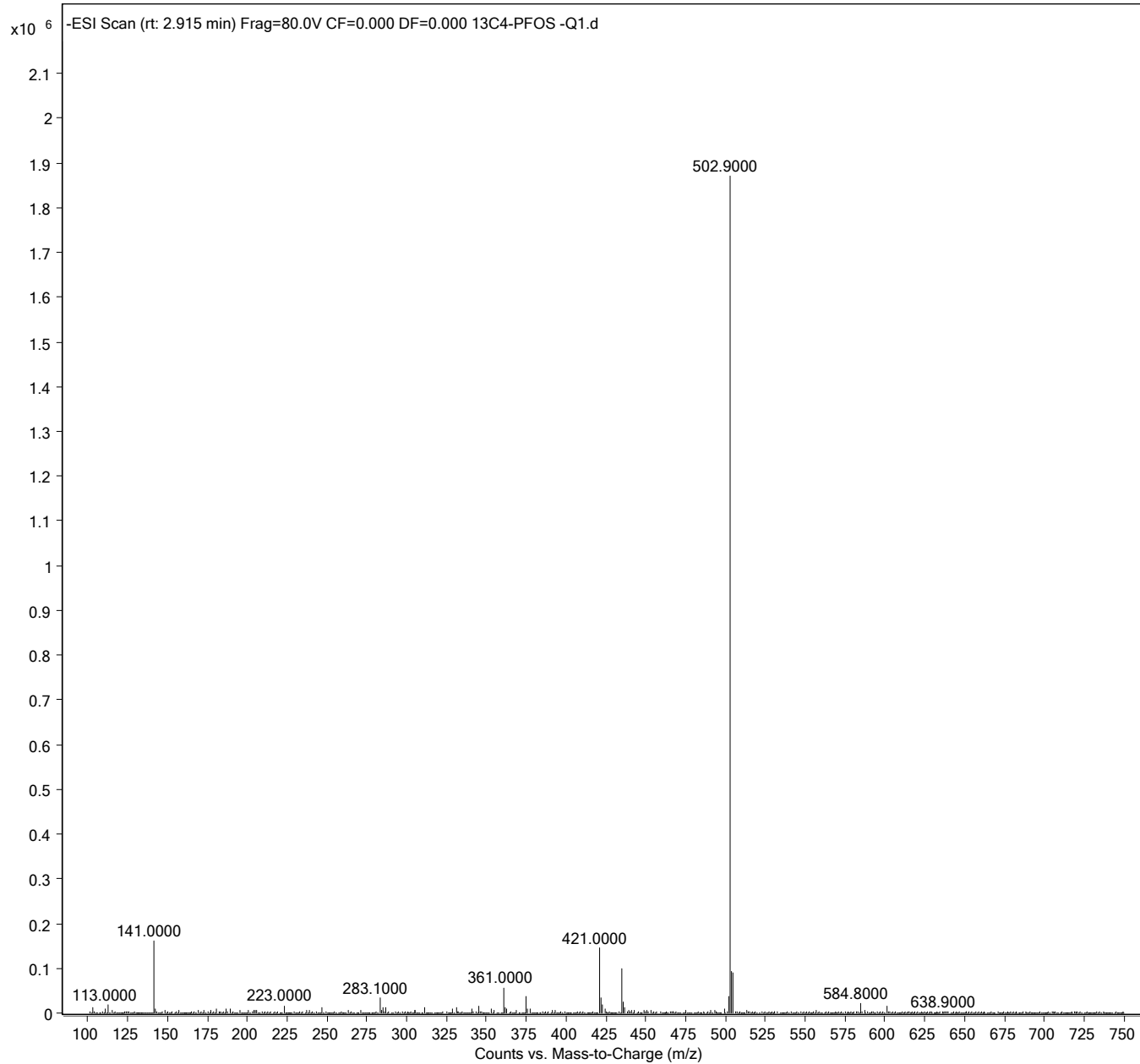
Sample Name	13C3-PFBS -Q1	Position	P3-B2	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C3-PFBS -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 3:19:46 PM



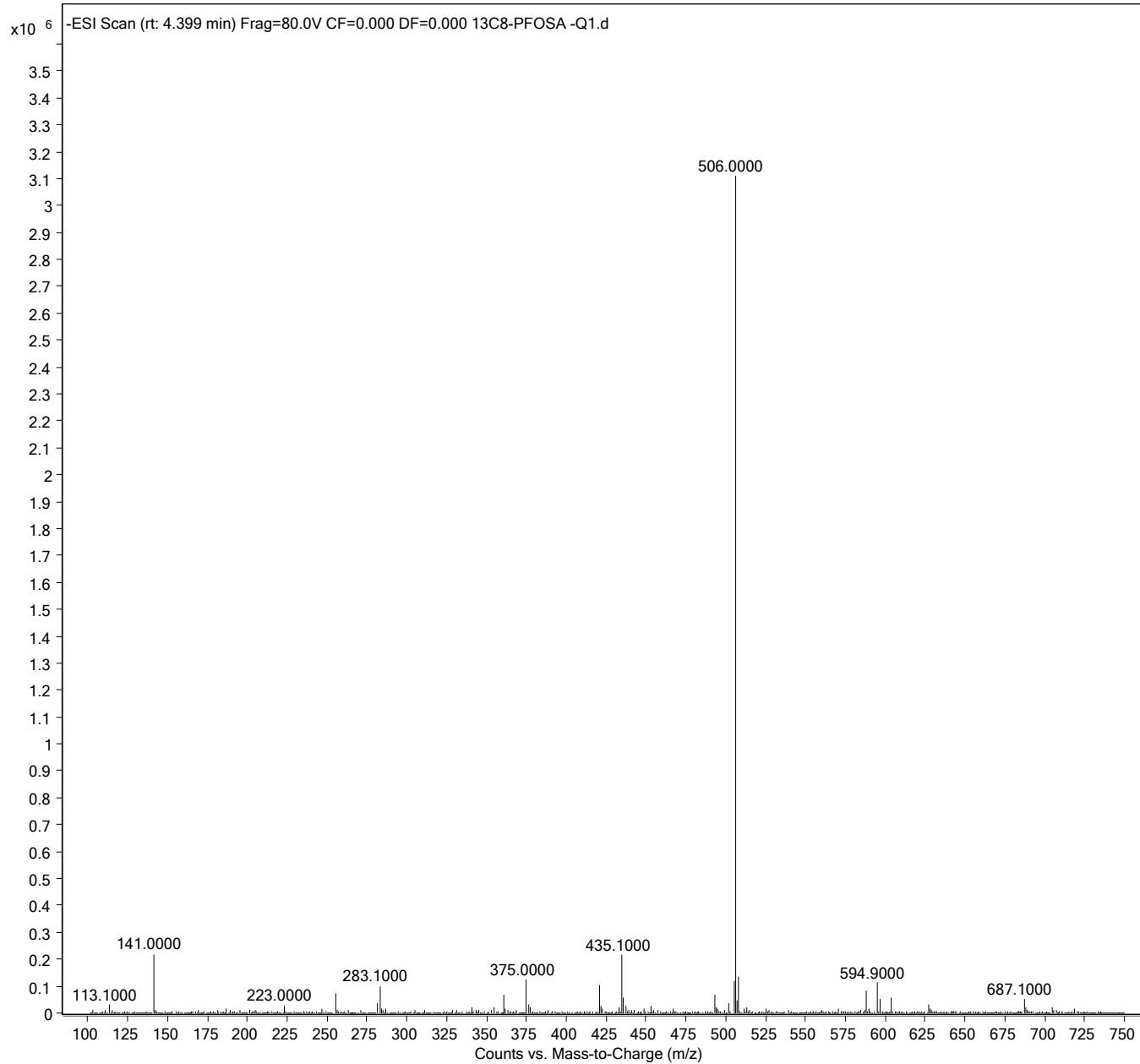
Sample Name	1802-PFHxS -Q1	Position	P3-B3	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	1802-PFHxS -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 3:26:41 PM



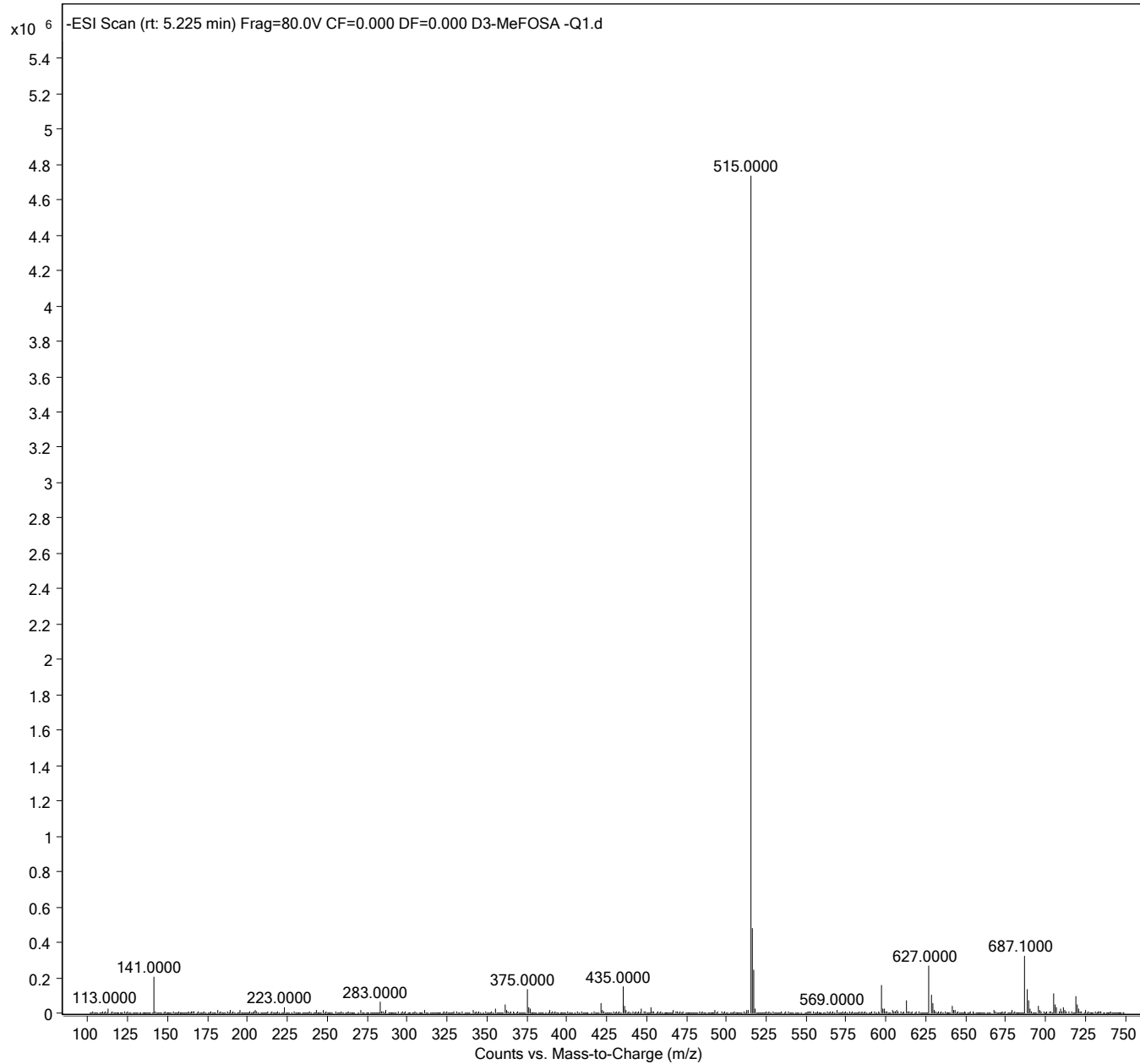
Sample Name	13C4-PFOS -Q1	Position	P3-B4	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C4-PFOS -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 3:33:36 PM



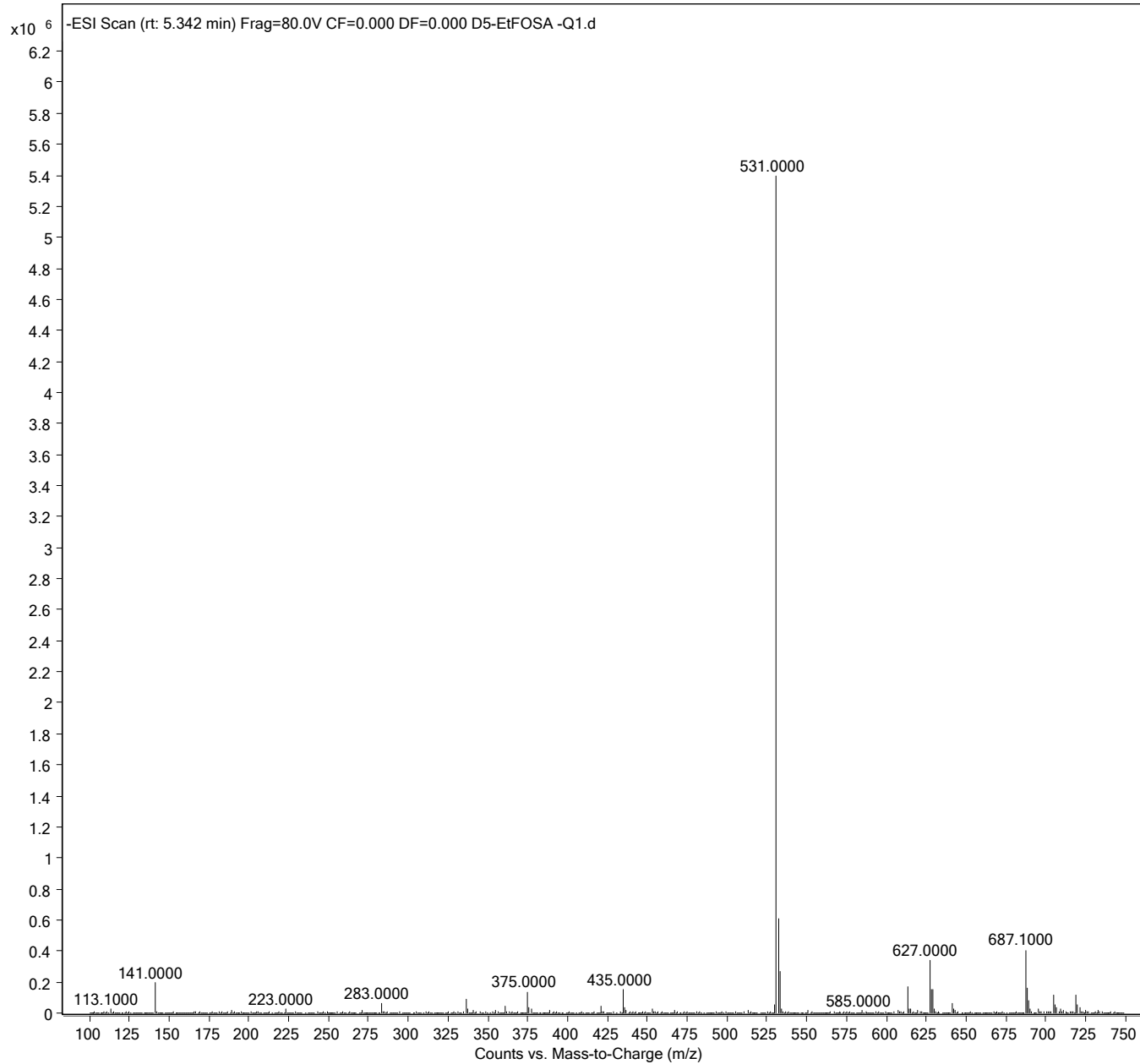
Sample Name	13C8-PFOA -Q1	Position	P3-B5	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C8-PFOA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 3:40:31 PM



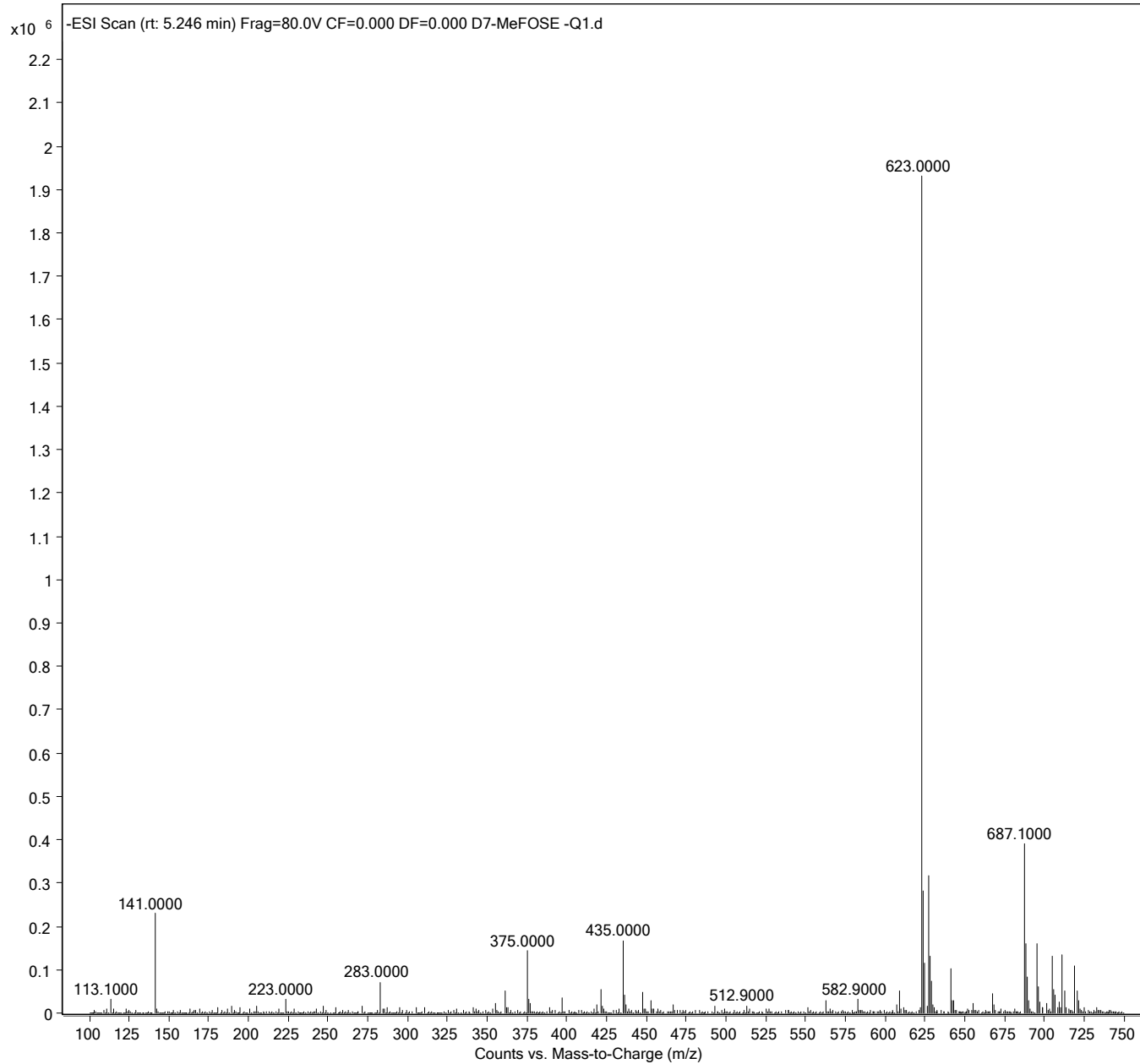
Sample Name	D3-MeFOSA -Q1	Position	P3-B6	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	D3-MeFOSA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 3:47:25 PM



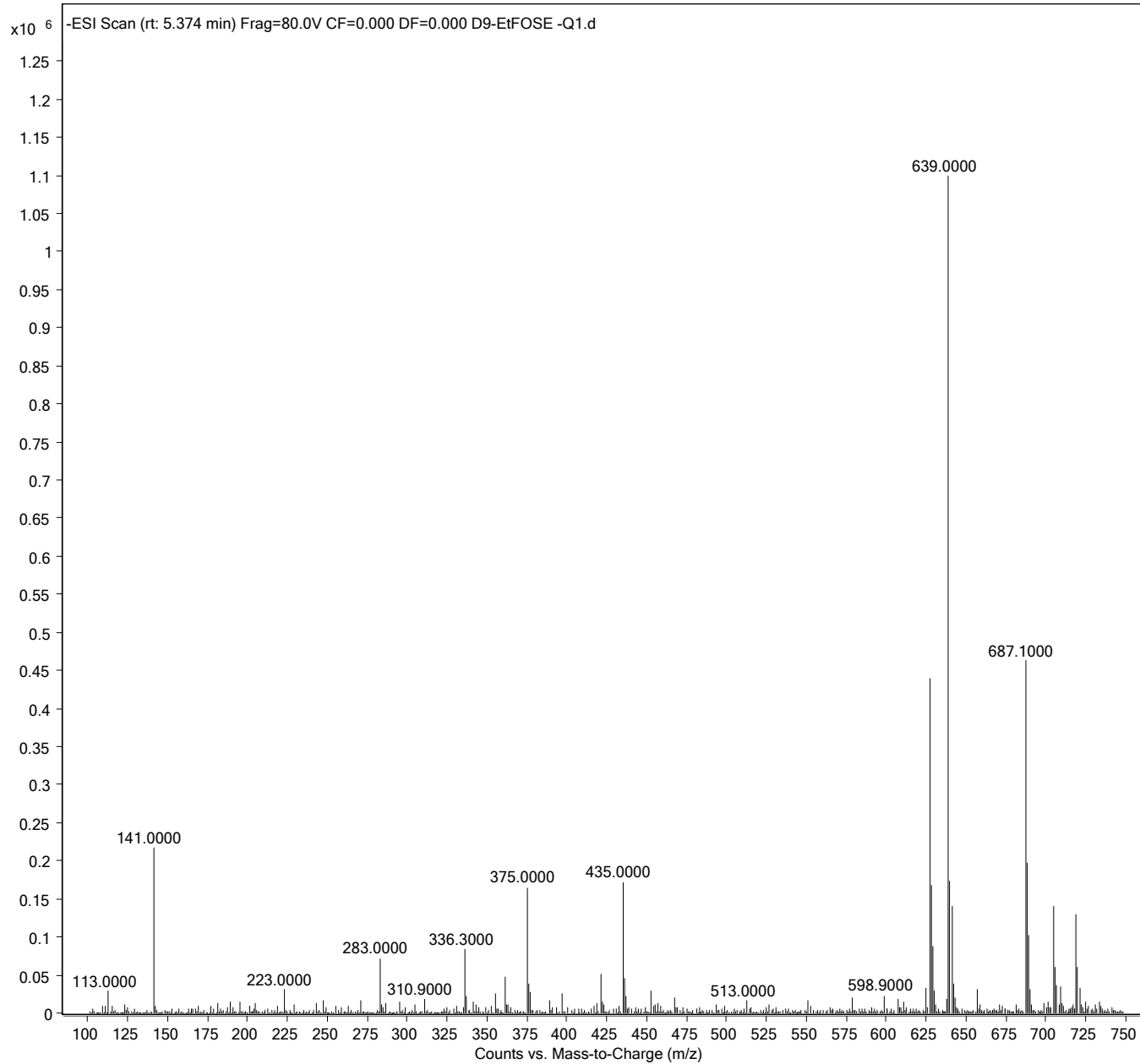
Sample Name	D5-EtFOSA -Q1	Position	P3-B7	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	D5-EtFOSA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 3:54:19 PM



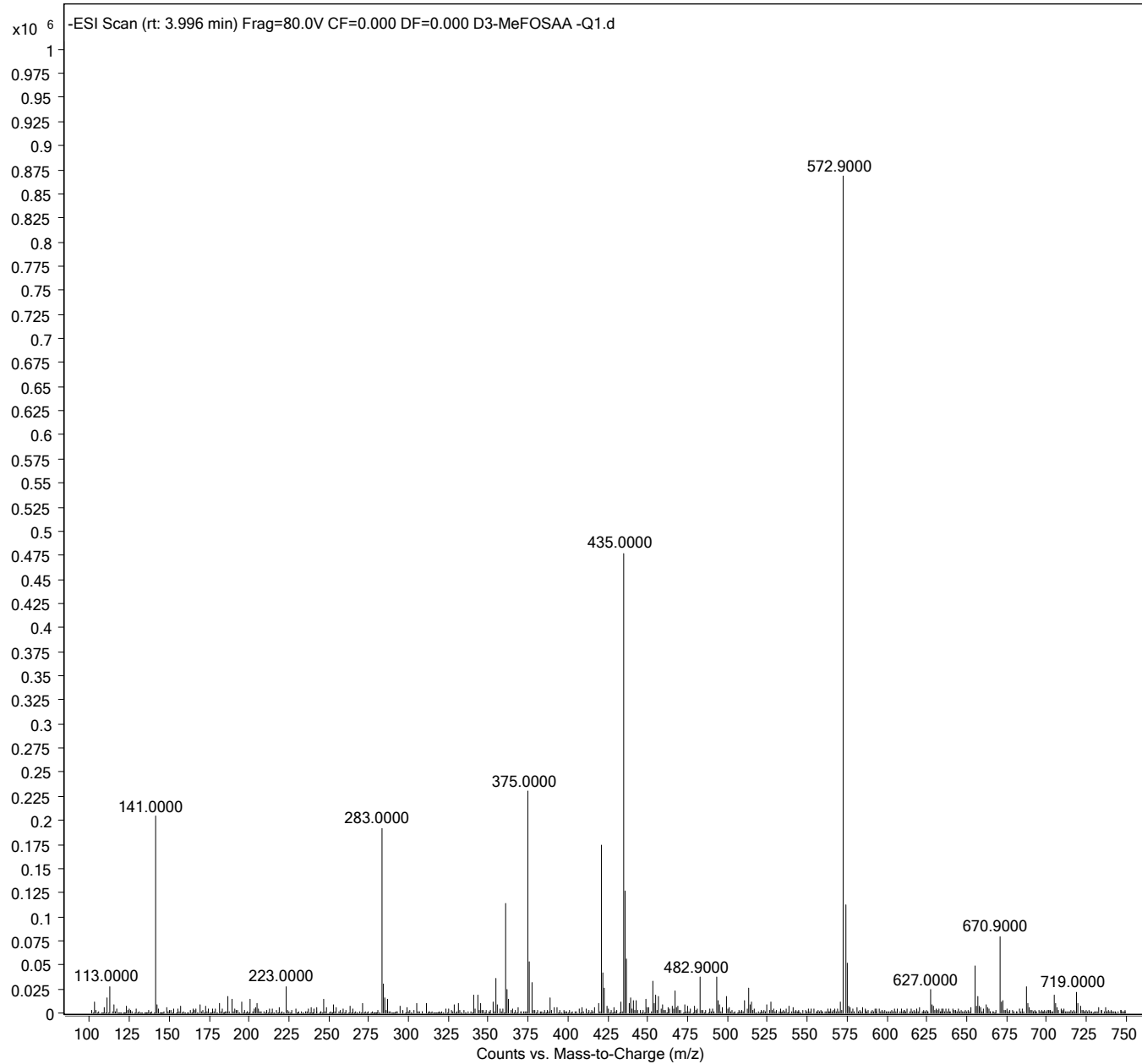
Sample Name	D7-MeFOSE -Q1	Position	P3-B8	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	D7-MeFOSE -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 4:01:14 PM



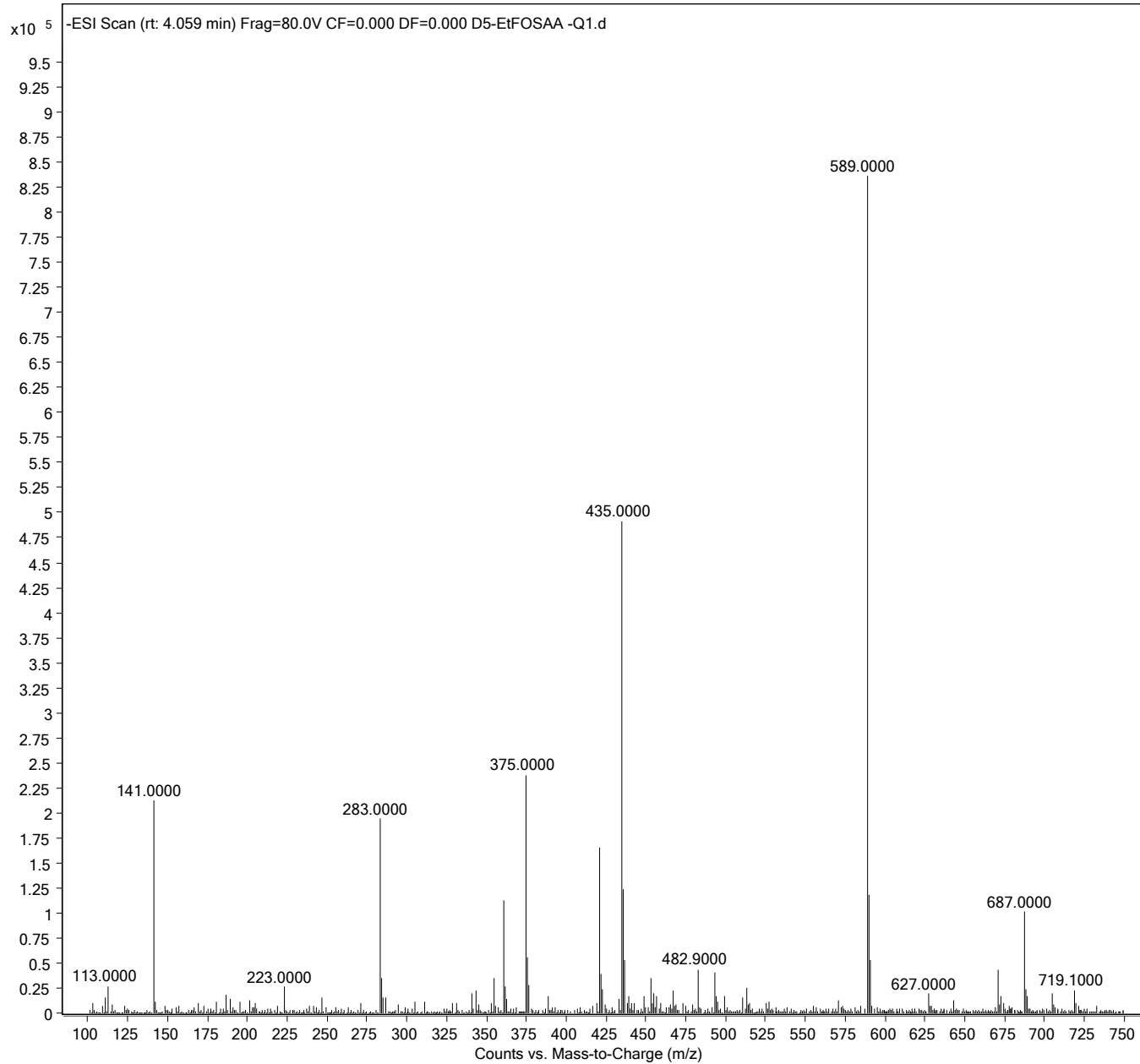
Sample Name	D9-EtFOSE -Q1	Position	P3-B9	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	D9-EtFOSE -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 4:08:09 PM



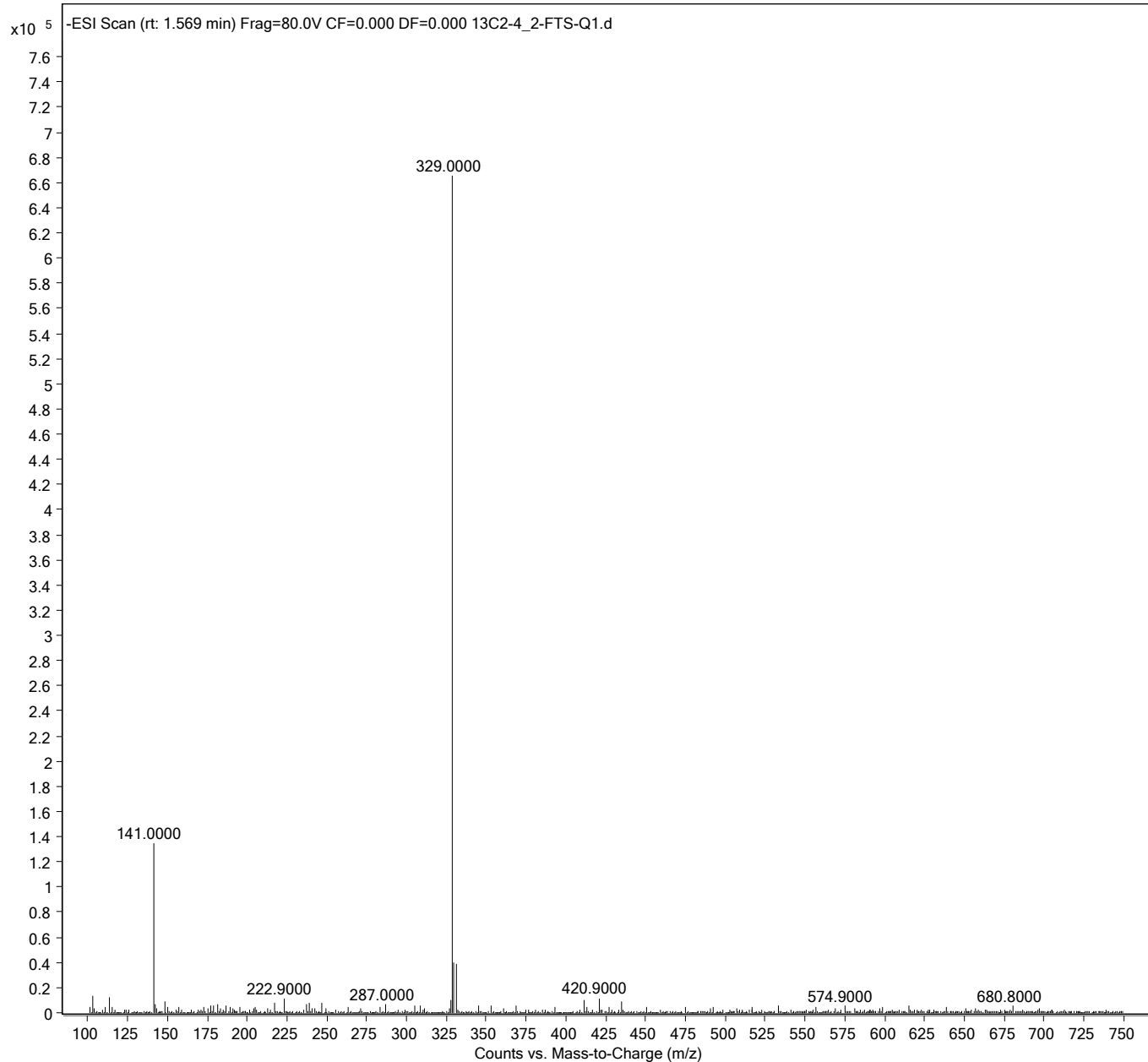
Sample Name	D3-MeFOSAA -Q1	Position	P3-C1	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	D3-MeFOSAA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 4:15:03 PM



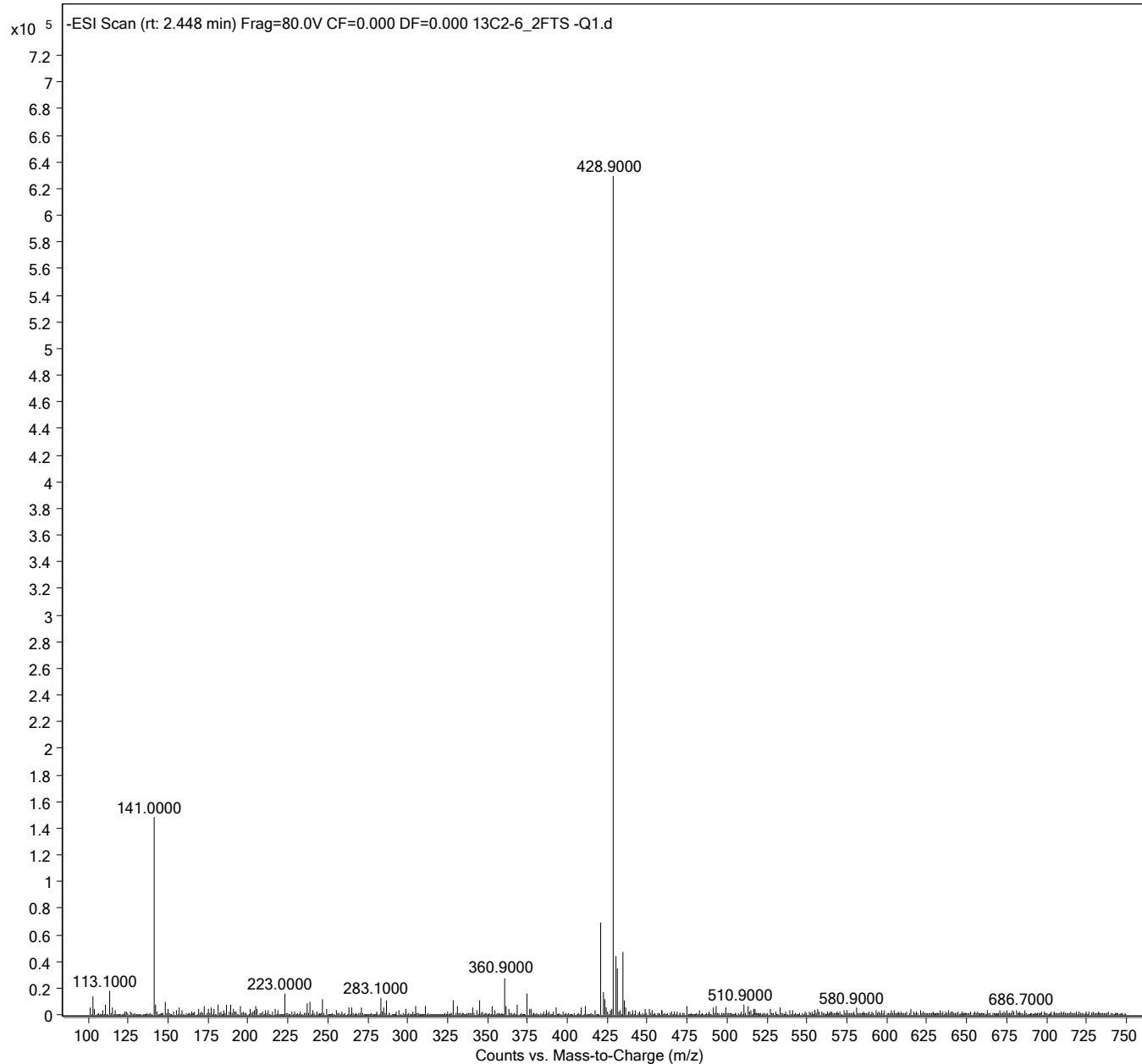
Sample Name	D5-EtFOSAA -Q1	Position	P3-C2	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	D5-EtFOSAA -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 4:21:57 PM



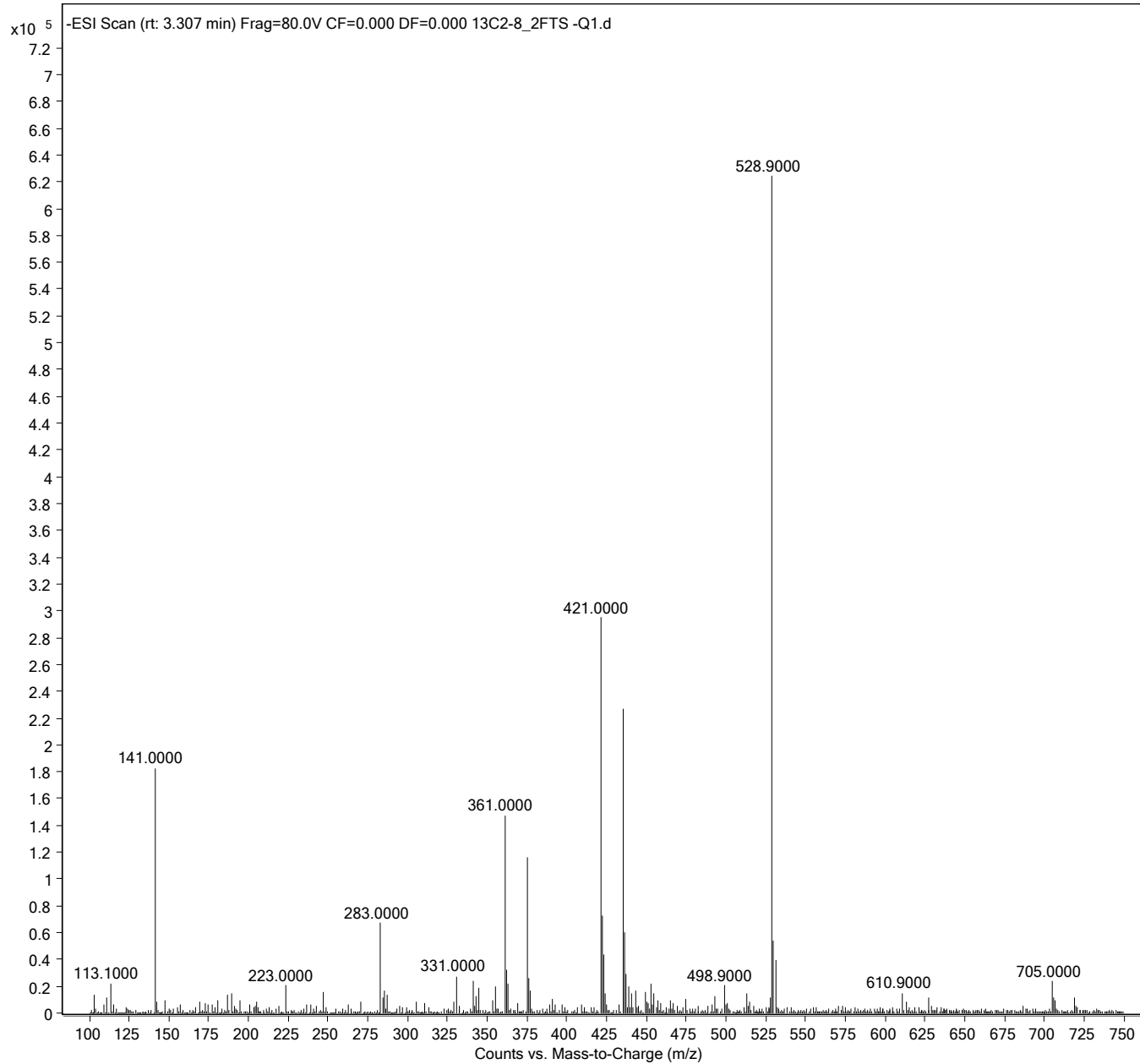
Sample Name	13C2-4:2-FTS-Q1	Position	P3-C3	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C2-4_2-FTS-Q1.d
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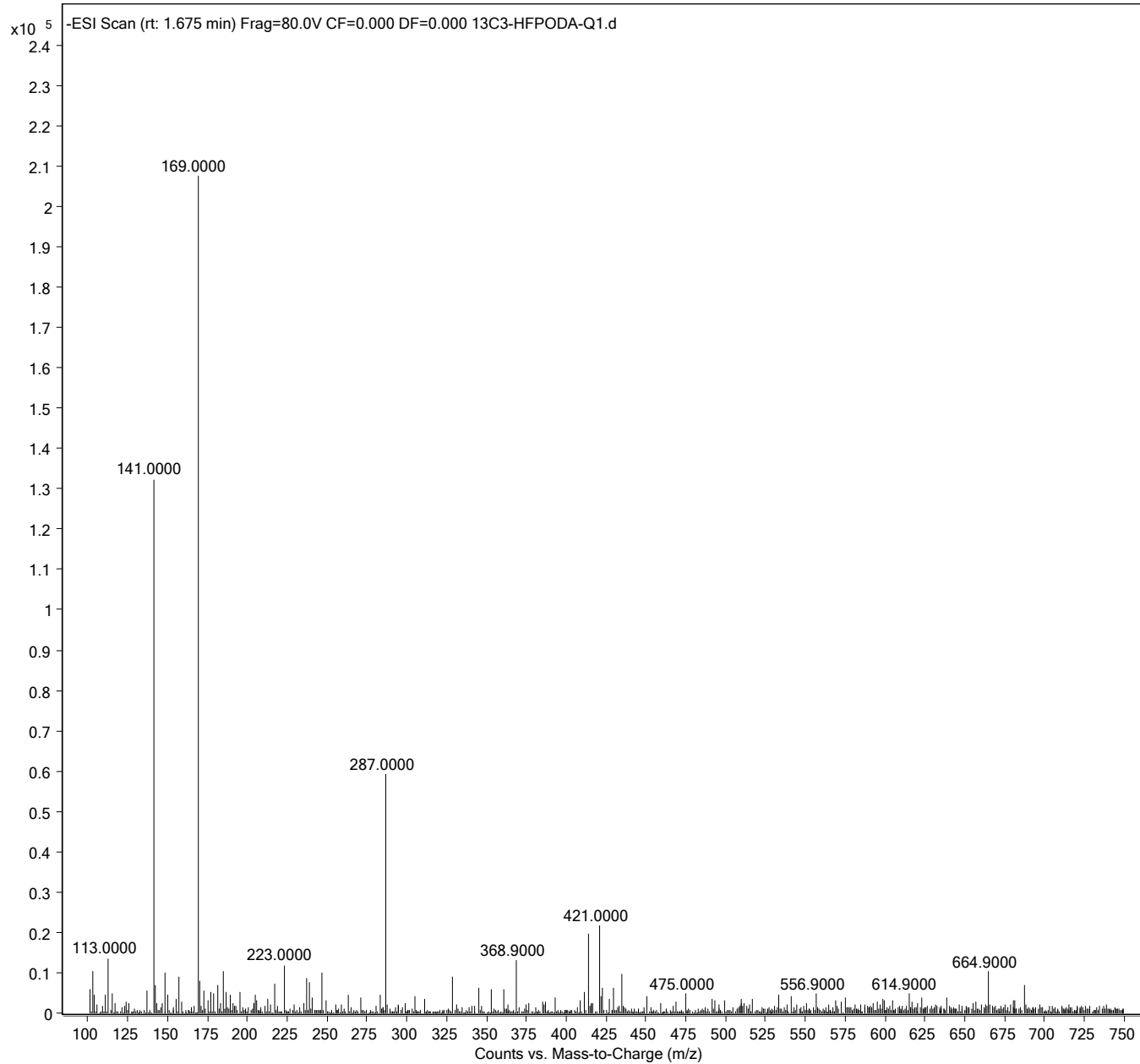
Sample Name	13C2-6:2FTS -Q1	Position	P3-C4	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C2-6_2FTS -Q1.d
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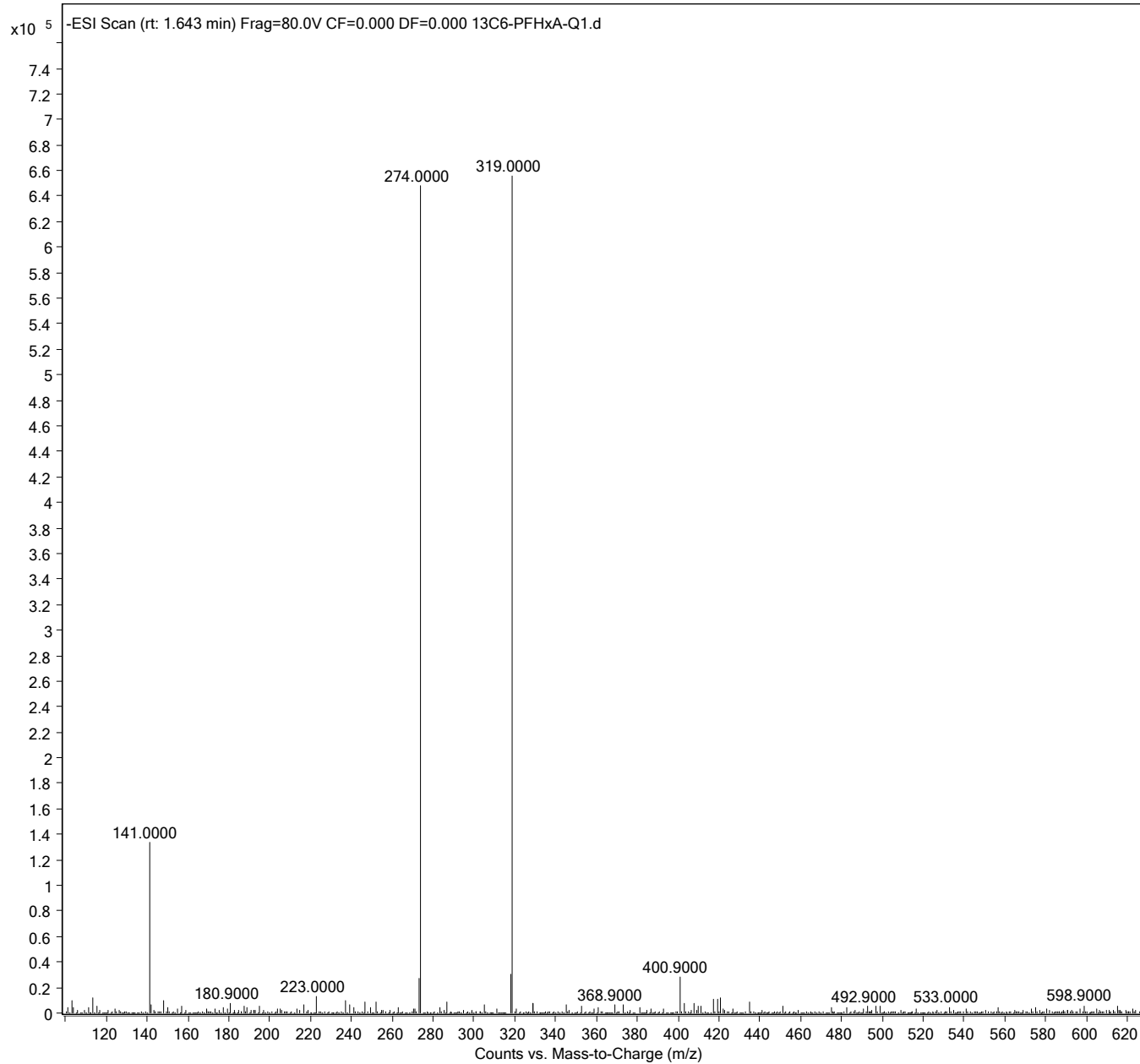
Sample Name	13C2-8:2FTS -Q1	Position	P3-C5	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C2-8_2FTS -Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 4:42:39 PM



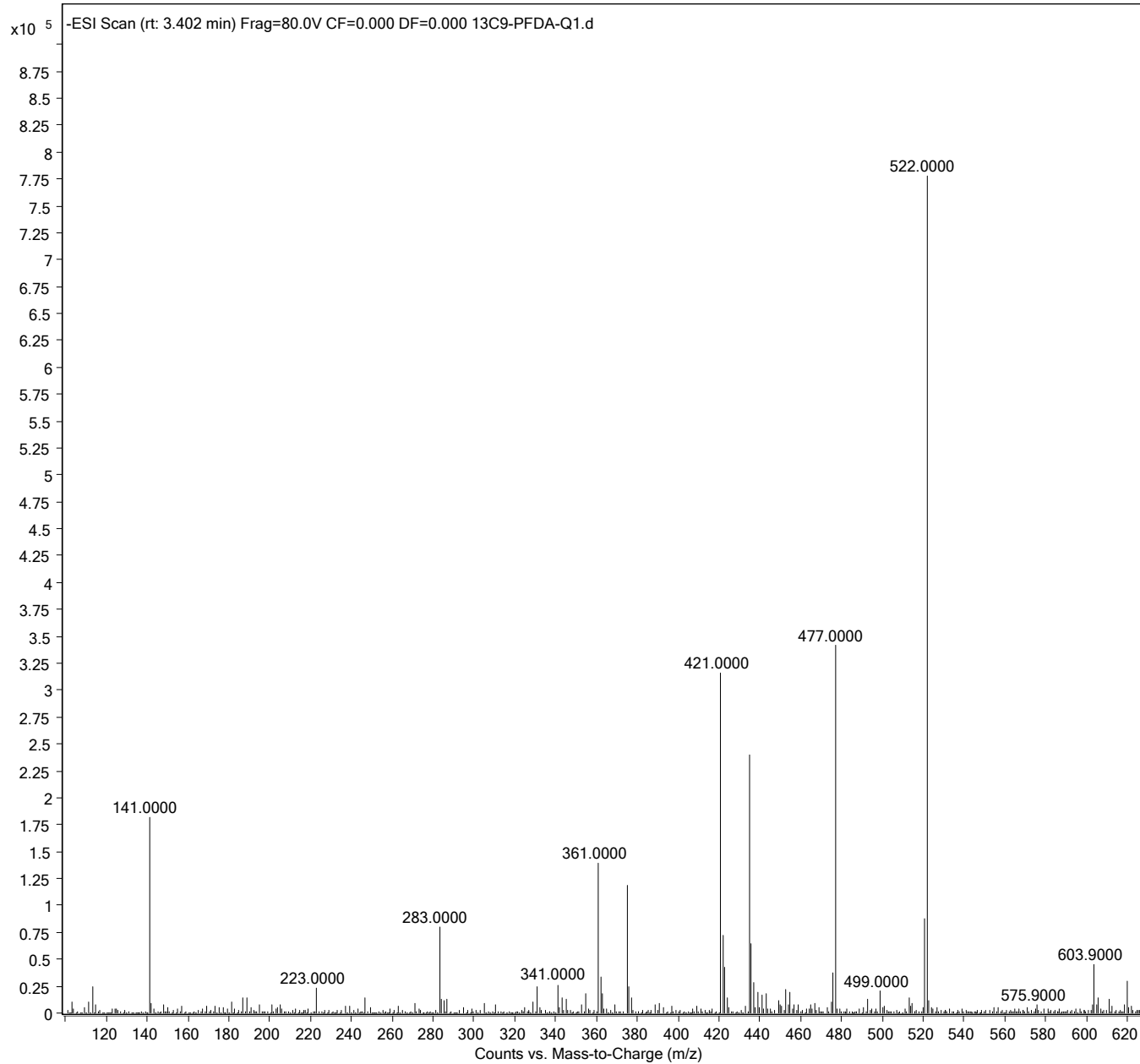
Sample Name	13C3-HFPODA-Q1	Position	P3-C6	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C3-HFPODA-Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 4:49:33 PM



Sample Name	13C6-PFHxA-Q1	Position	P3-C7	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C6-PFHxA-Q1.d
ACQ Method	PFASDOD_MassVerification_Q1.m	Comment		Acquired Time	11/15/2019 4:56:28 PM

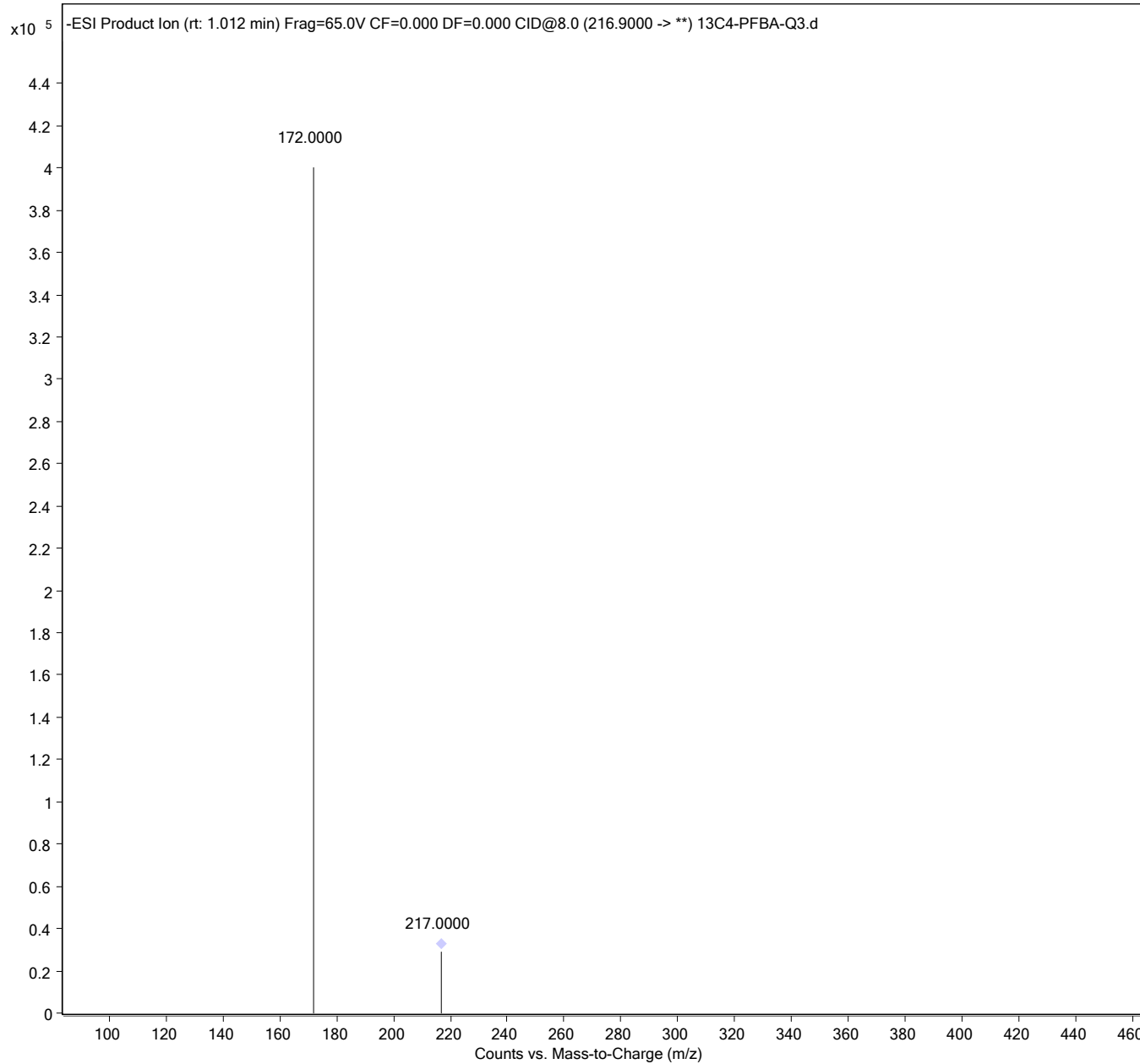


Sample Name	13C9-PFDA-Q1	Position	P3-C8	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C9-PFDA-Q1.d
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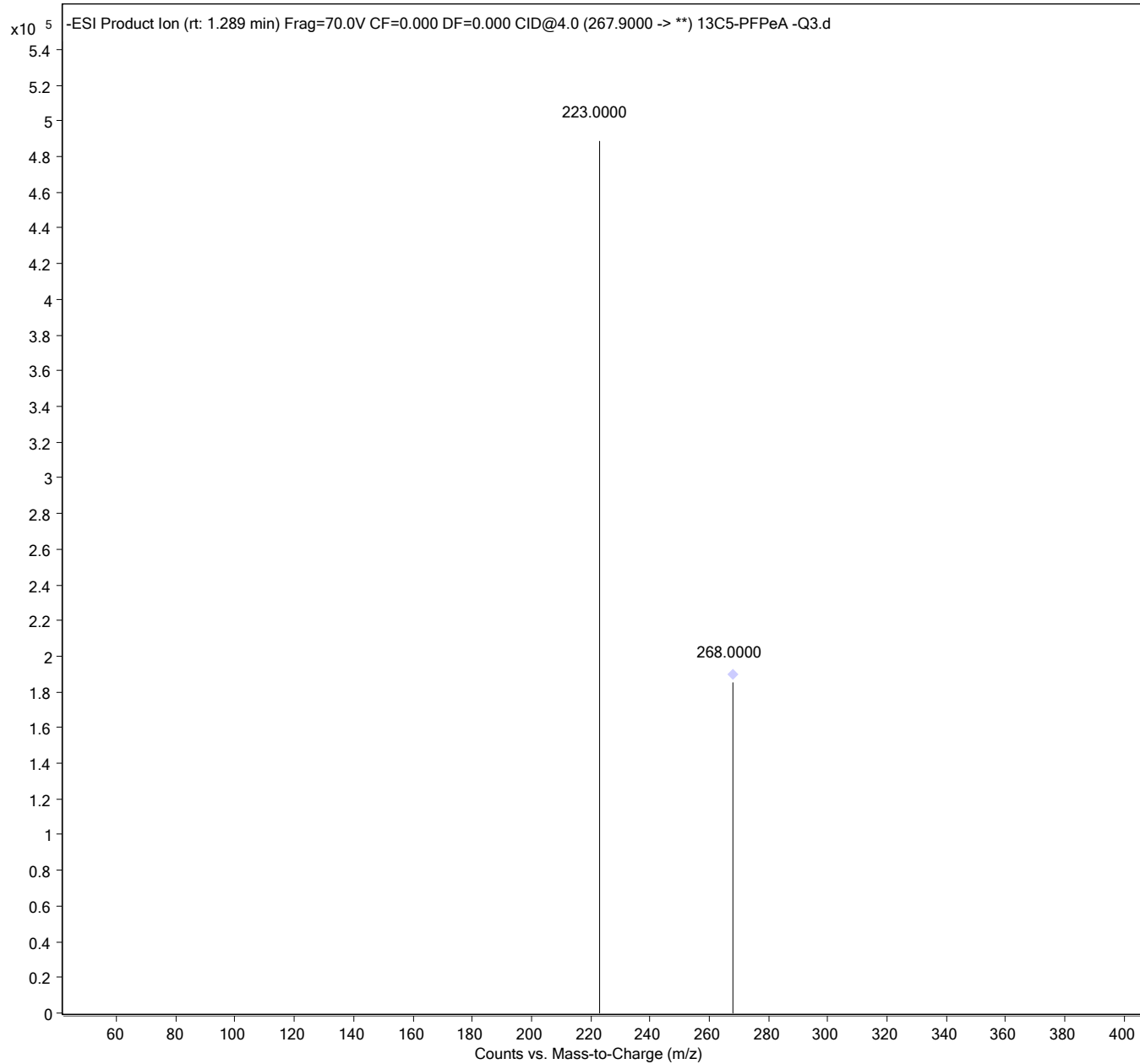


Extracted and Injection Internal Standard Product Ion Verification

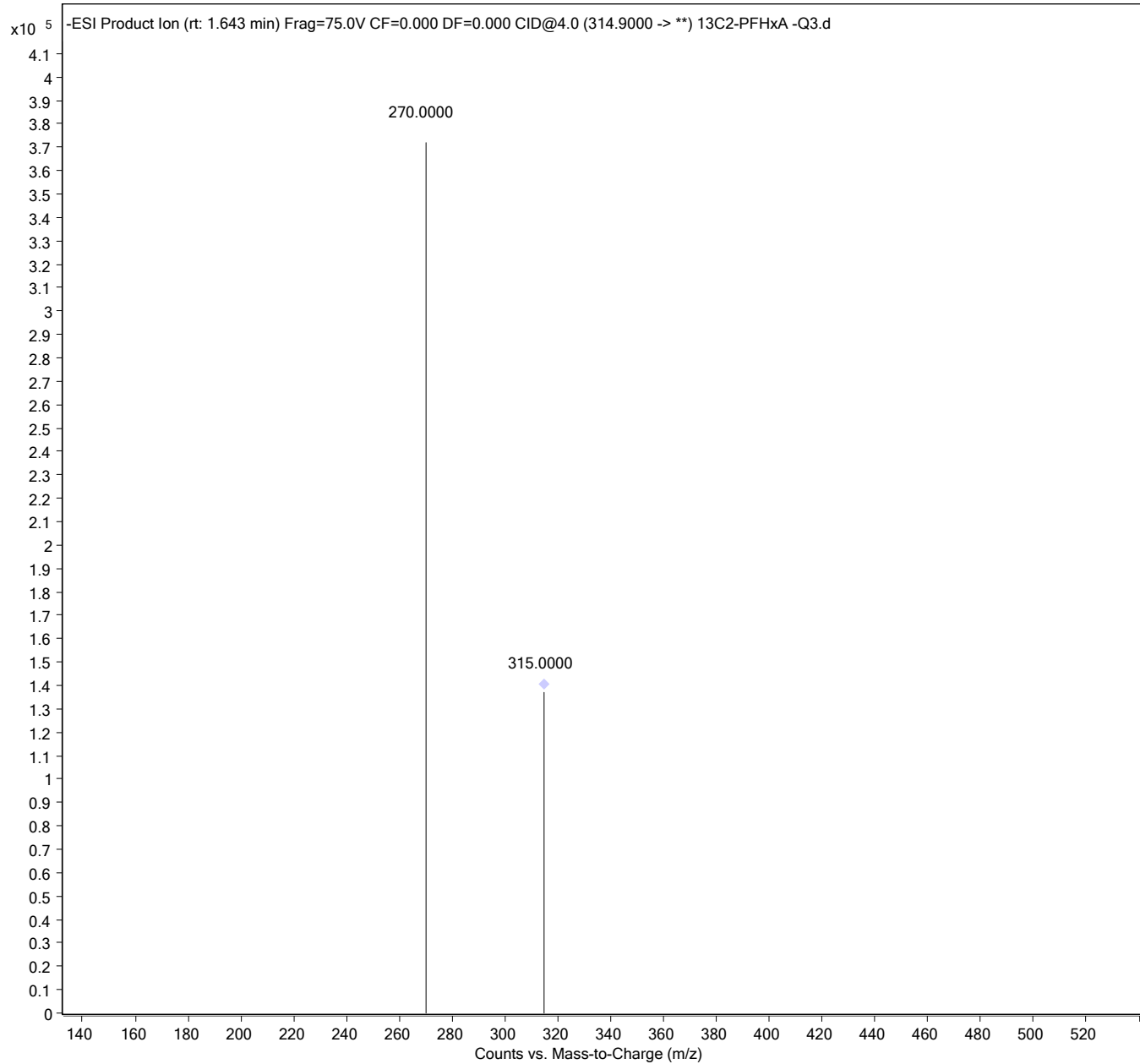
Sample Name	13C4-PFBA-Q3	Position	P3-A1	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C4-PFBA-Q3.d
ACQ Method	PFASDOD_MassVerification-13C4-PFBA-Q3.m	Comment		Acquired Time	11/15/2019 5:10:20 PM



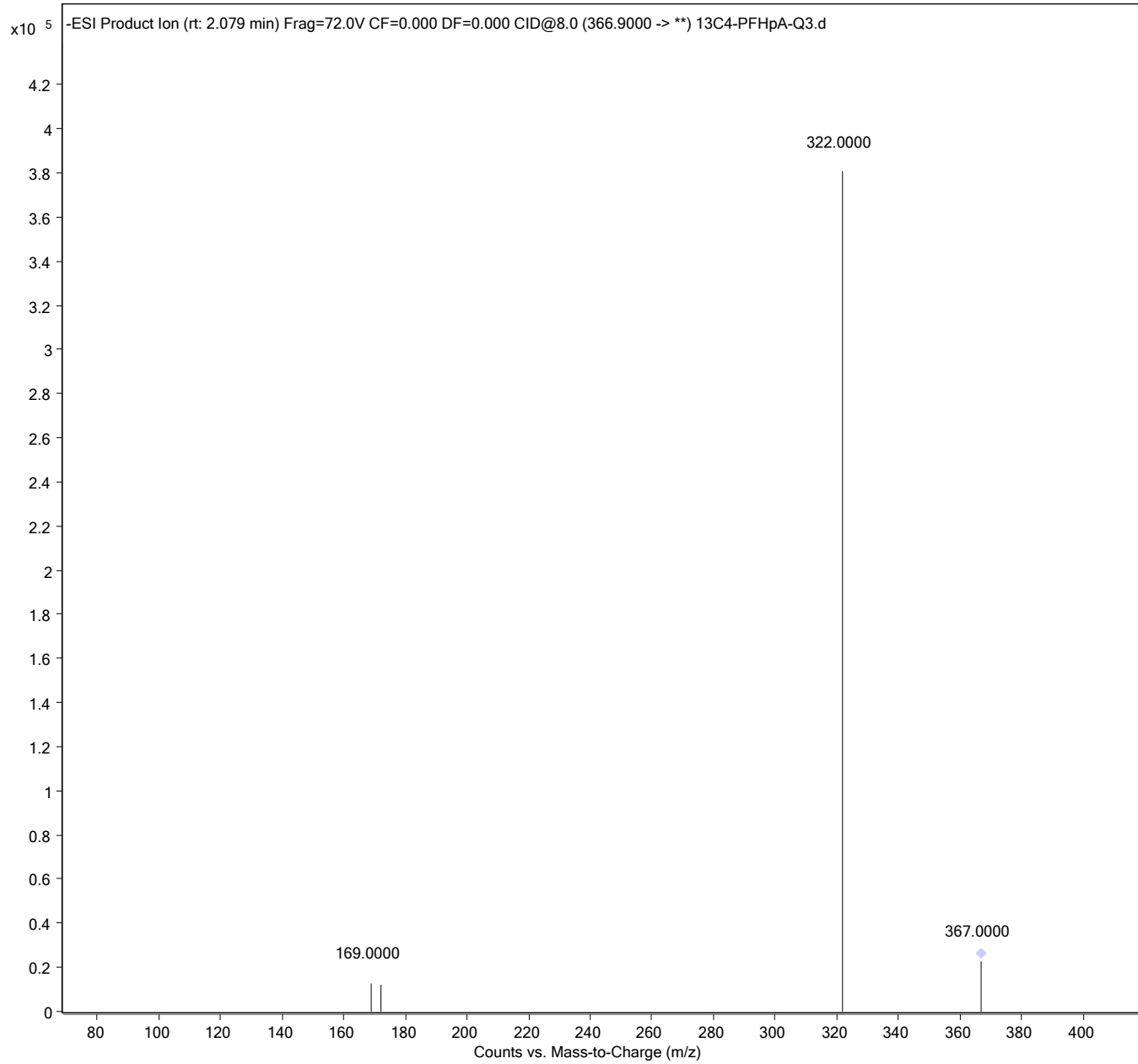
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User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C5-PFPeA -Q3.d
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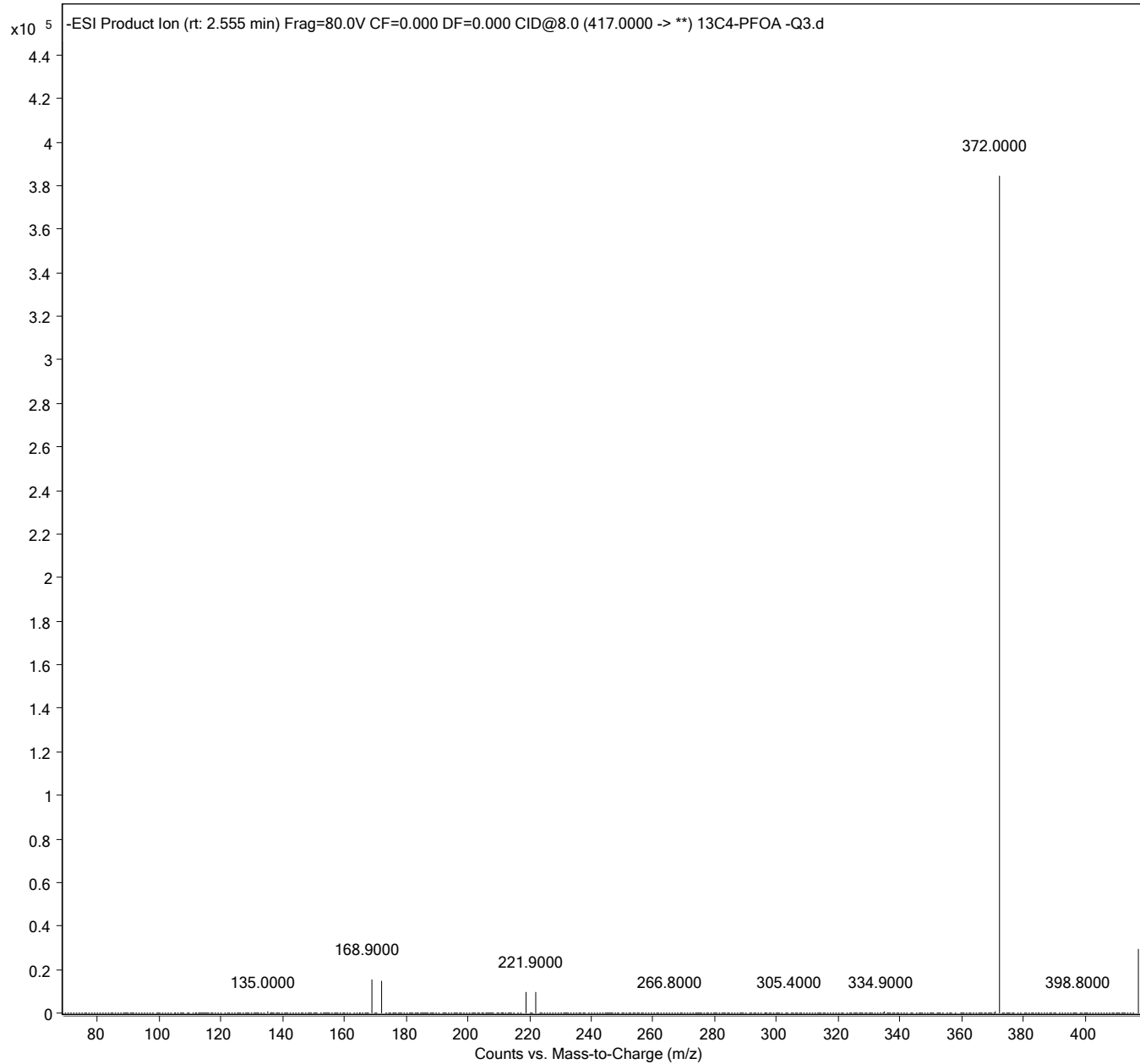
Sample Name	13C2-PFHxA -Q3	Position	P3-A3	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C2-PFHxA -Q3.d
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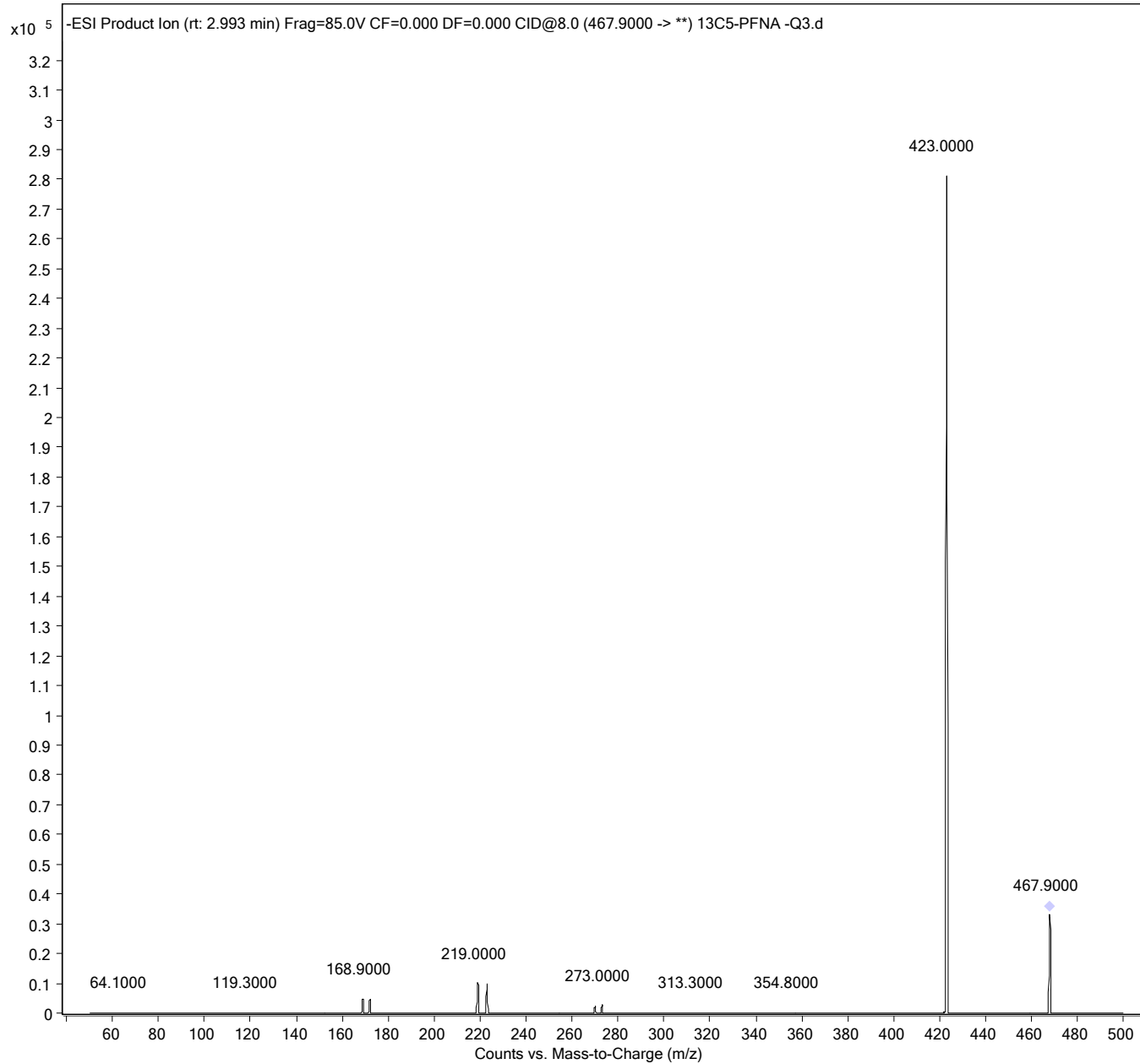
Sample Name	13C4-PFHpA-Q3	Position	P3-A4	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C4-PFHpA-Q3.d
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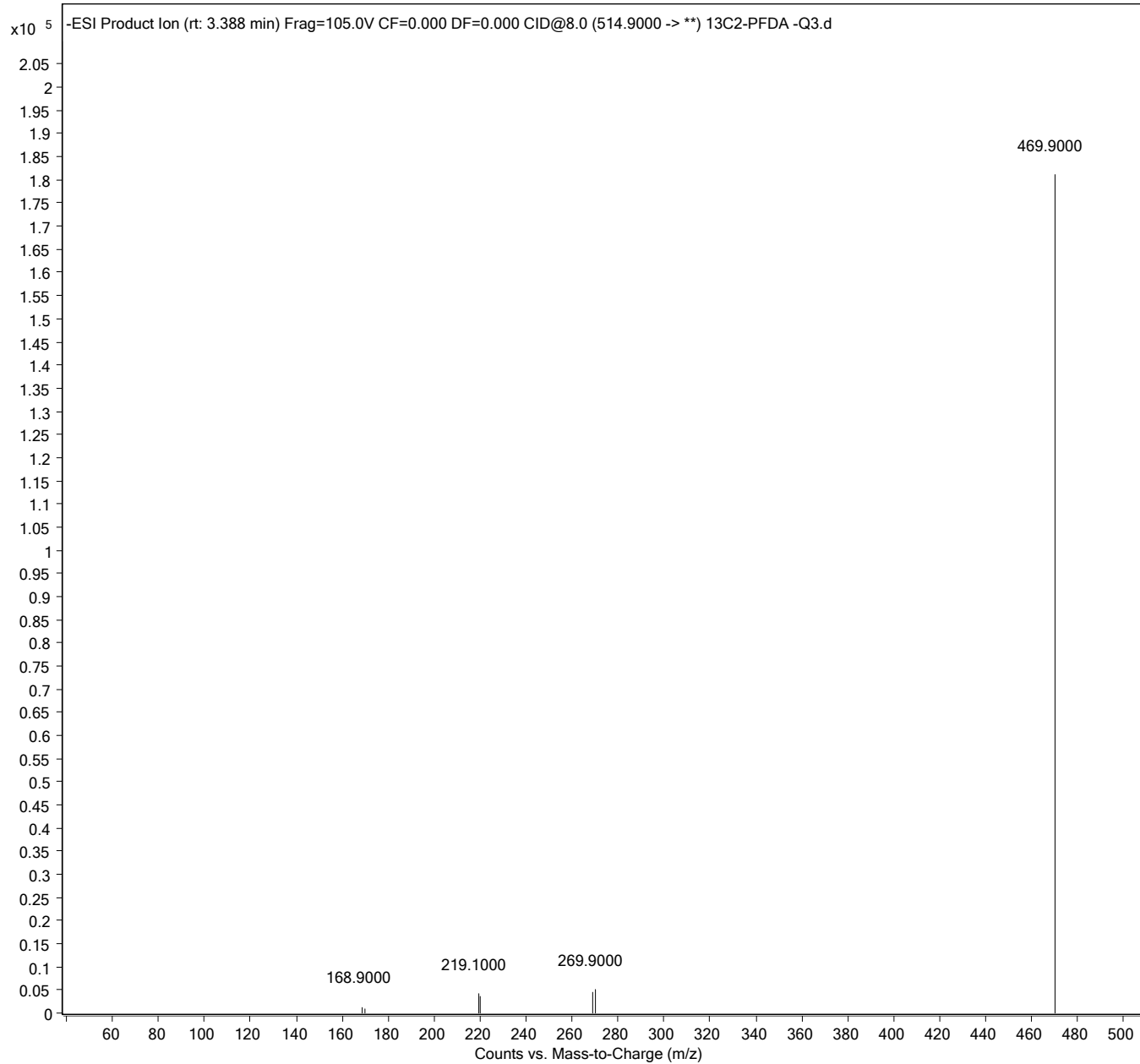
Sample Name	13C4-PFOA -Q3	Position	P3-A5	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C4-PFOA -Q3.d
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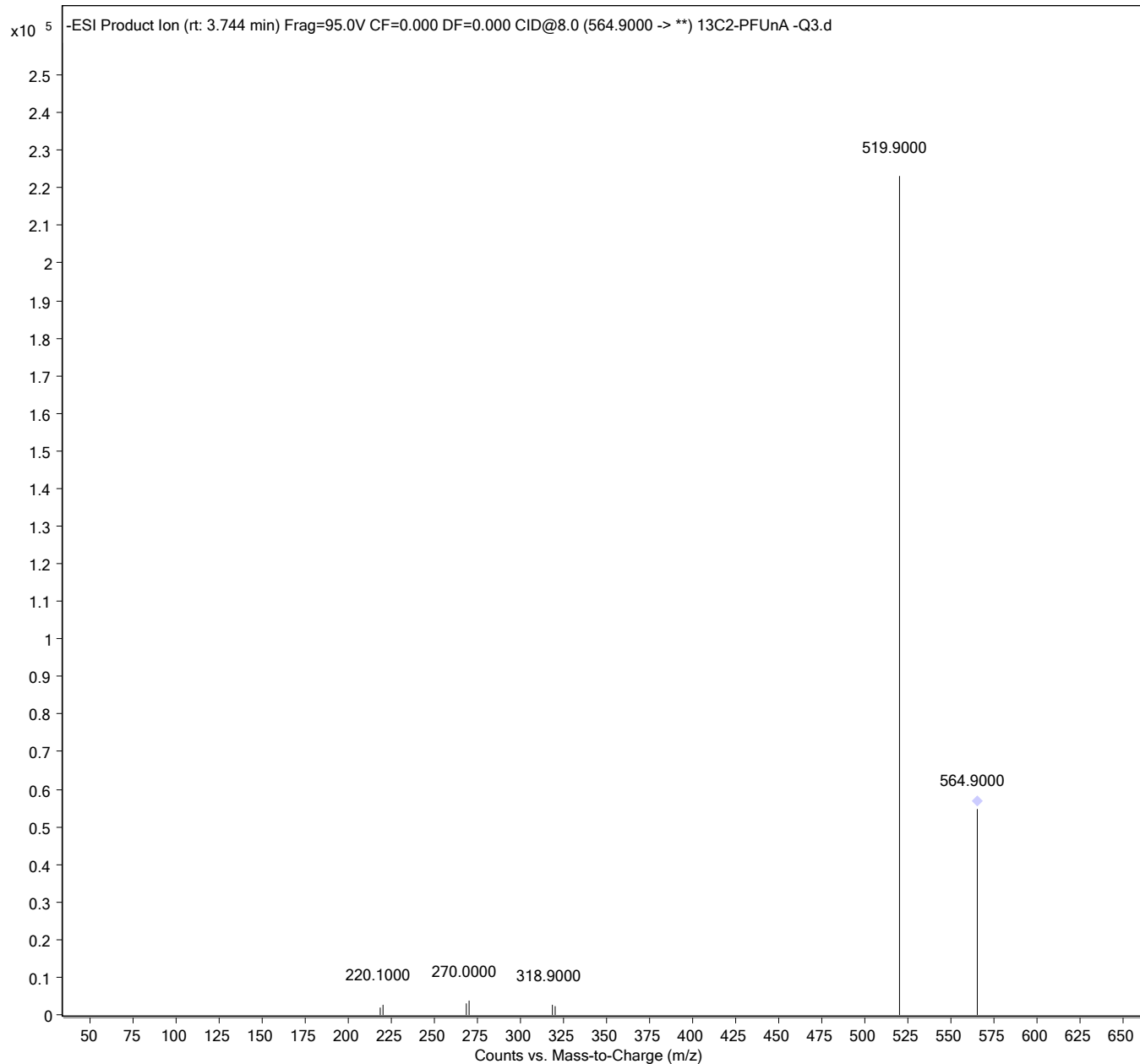
Sample Name	13C5-PFNA -Q3	Position	P3-A6	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C5-PFNA -Q3.d
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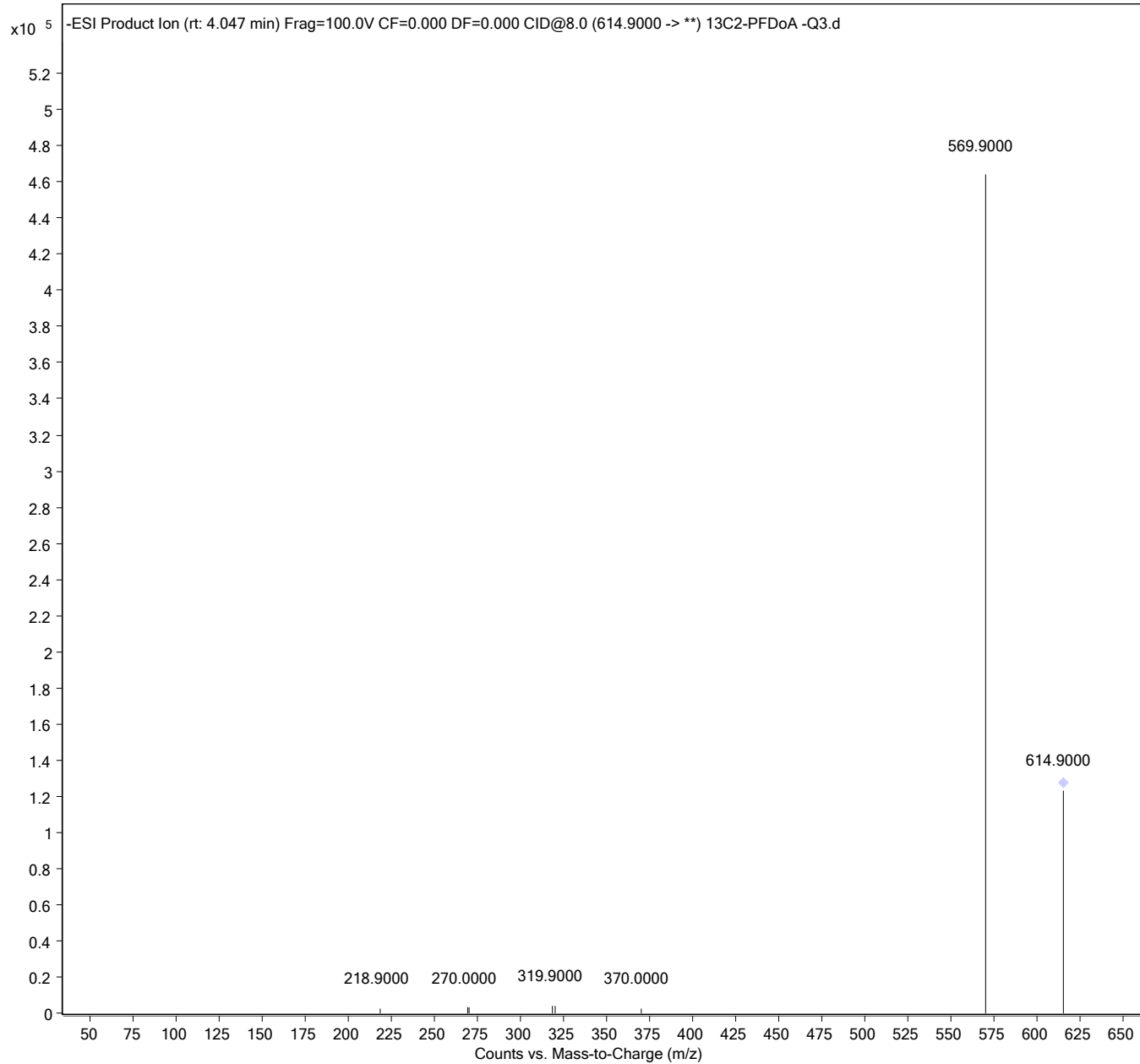
Sample Name	13C2-PFDA -Q3	Position	P3-A7	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C2-PFDA -Q3.d
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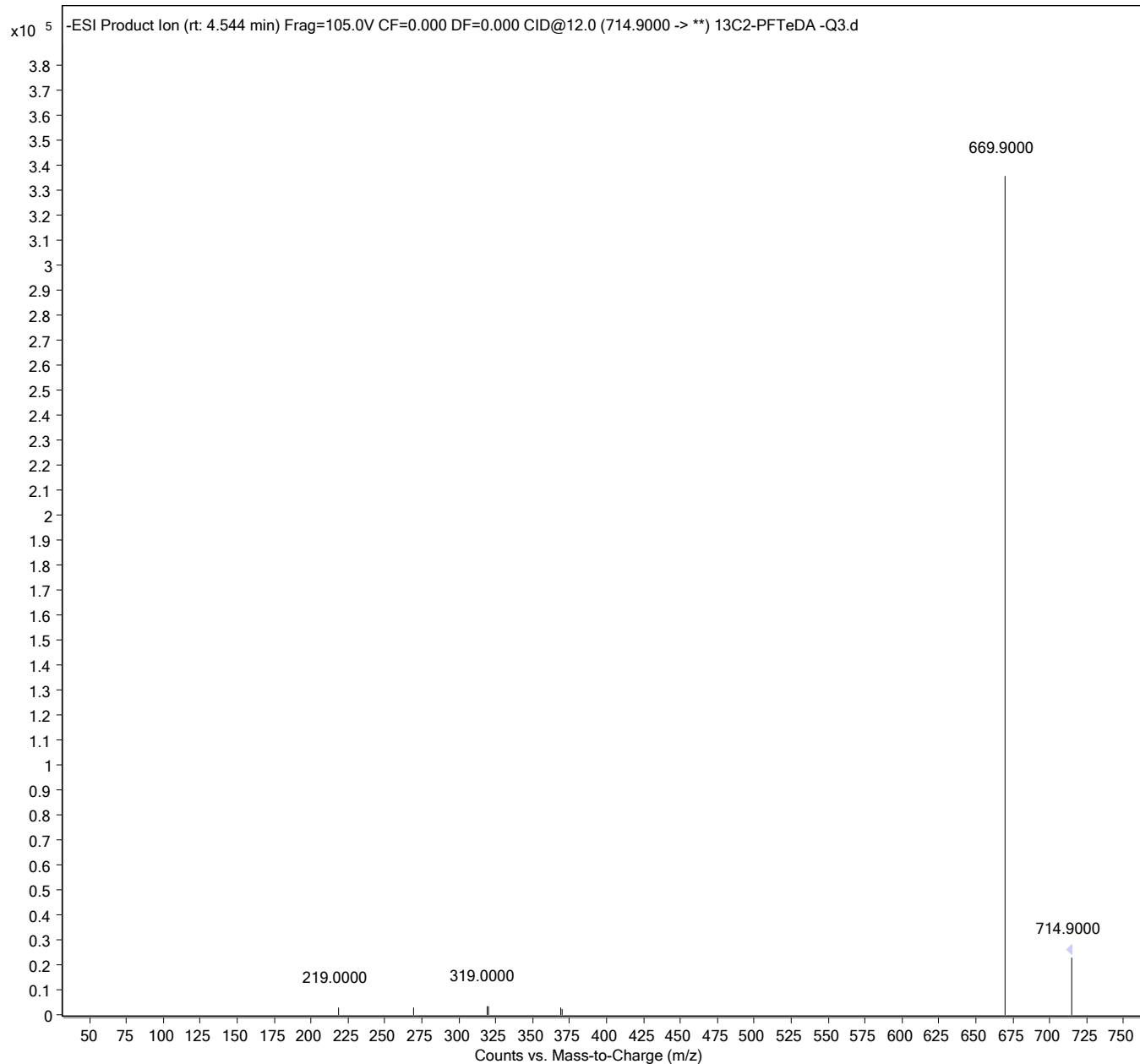
Sample Name	13C2-PFUnA -Q3	Position	P3-A8	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C2-PFUnA -Q3.d
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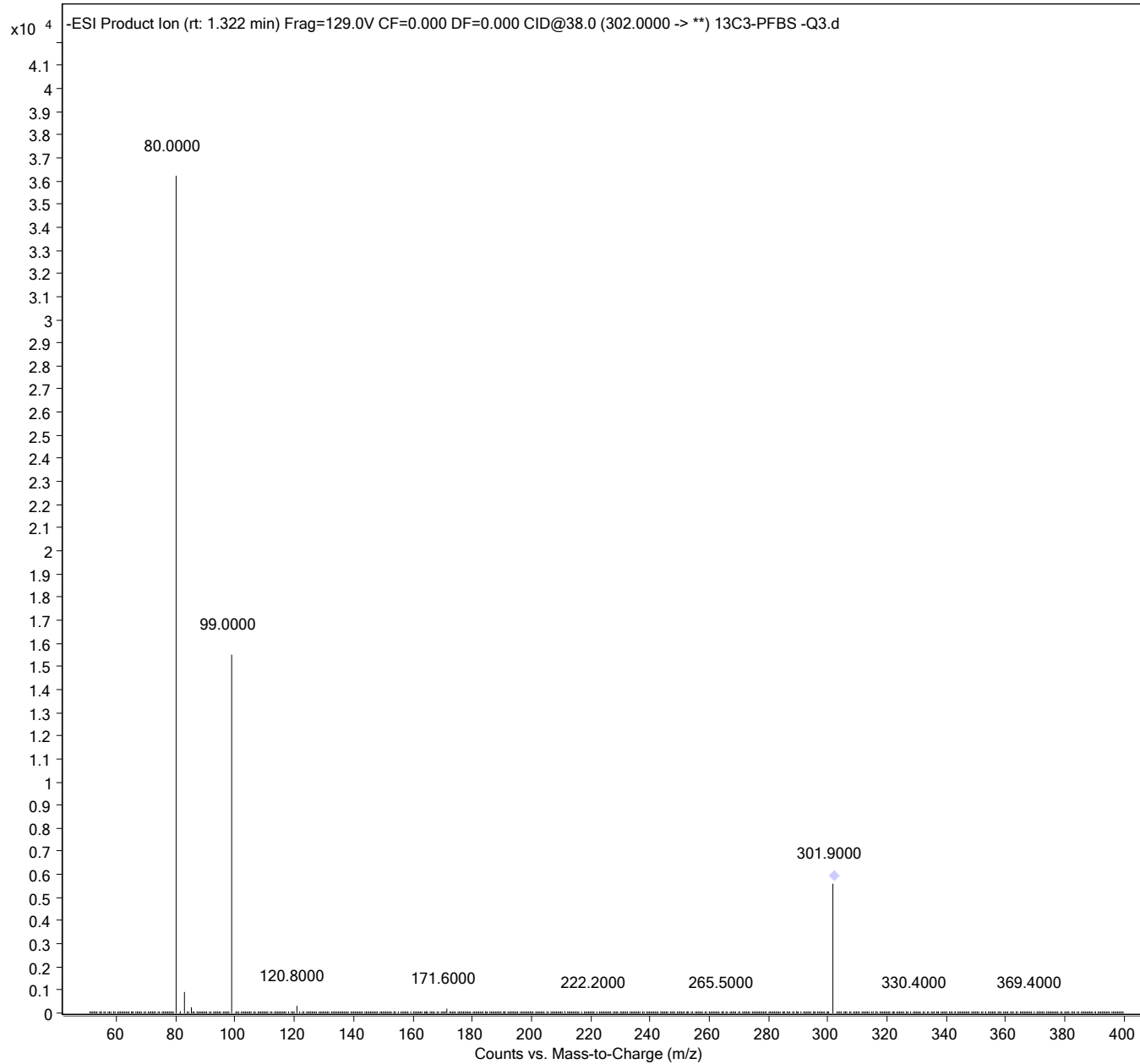
Sample Name	13C2-PFDoA -Q3	Position	P3-A9	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C2-PFDoA -Q3.d
ACQ Method	PFASDOD_MassVerification-13C2-PFDoA-Q3.m	Comment		Acquired Time	11/15/2019 6:05:57 PM



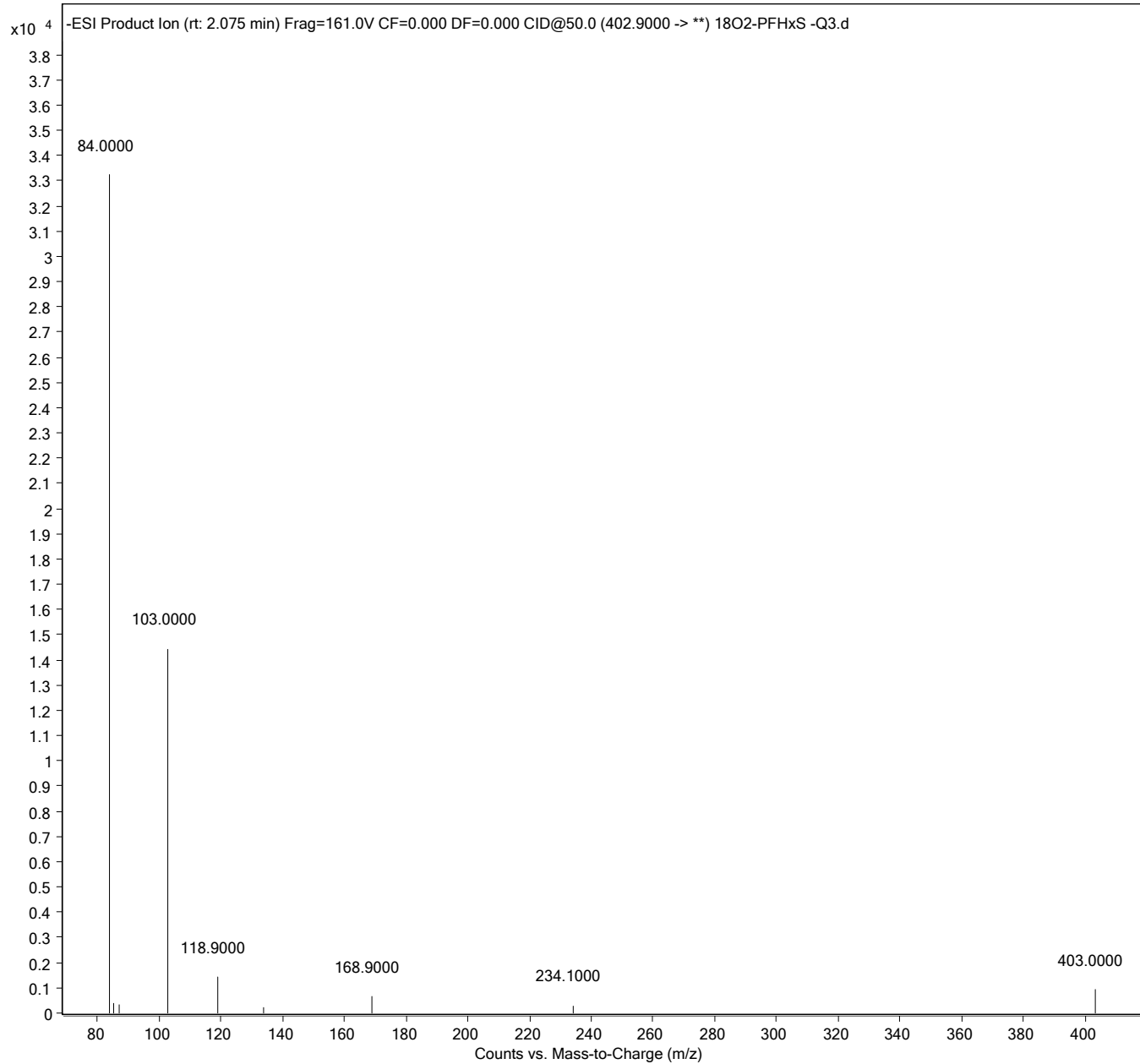
Sample Name	13C2-PFTeDA -Q3	Position	P3-B1	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C2-PFTeDA -Q3.d
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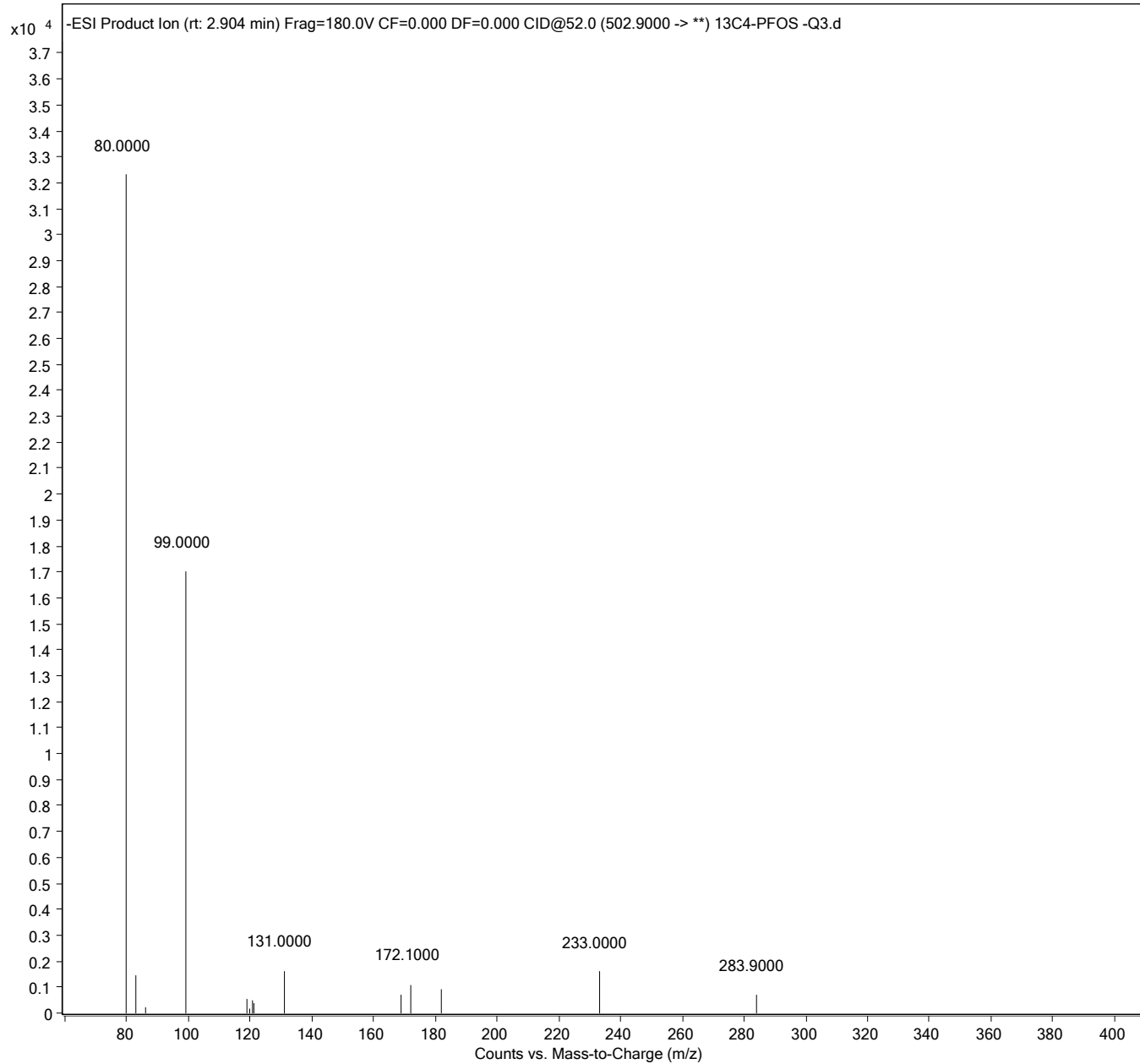
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User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C3-PFBS -Q3.d
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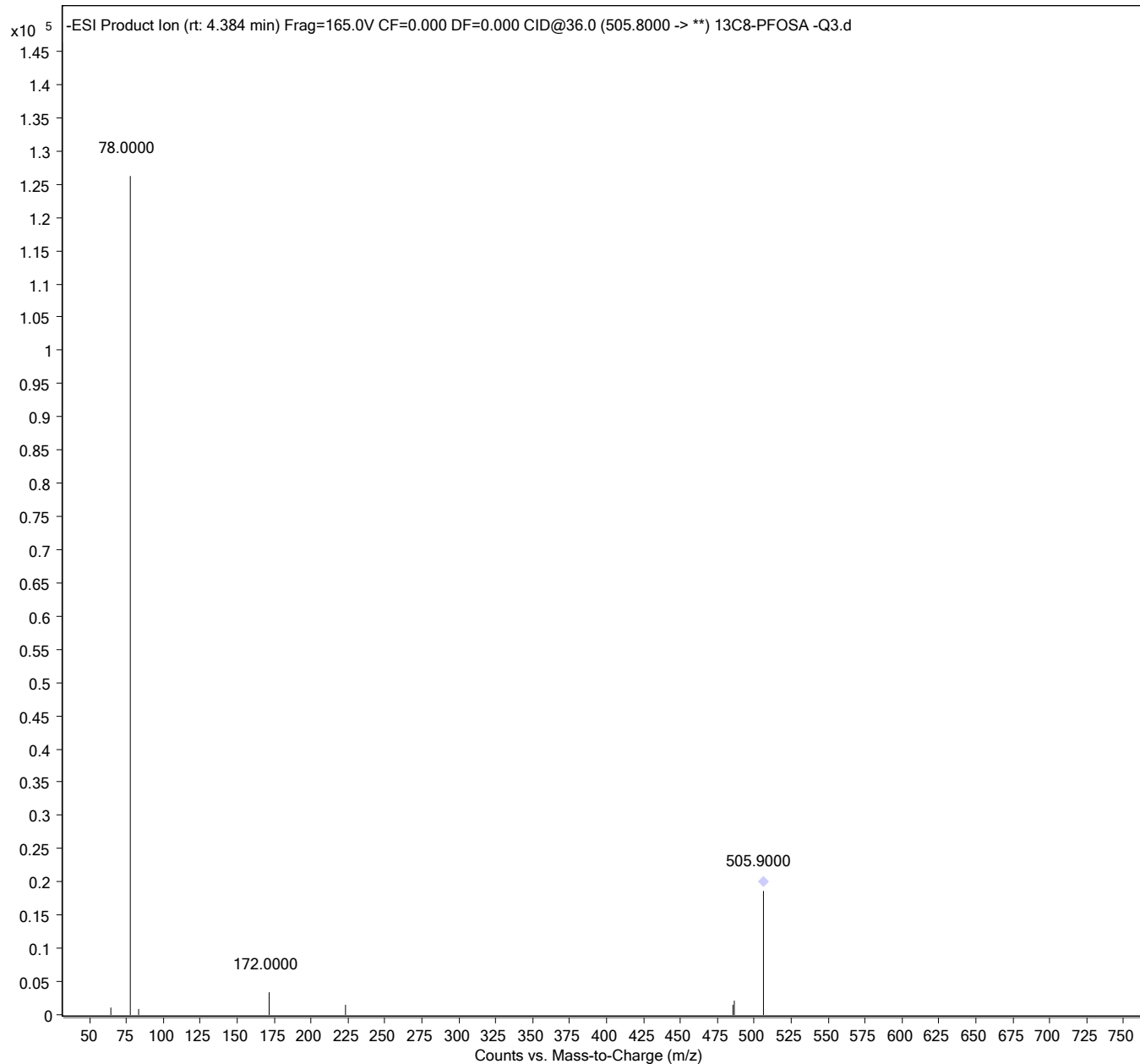
Sample Name	1802-PFHxS -Q3	Position	P3-B3	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	1802-PFHxS -Q3.d
ACQ Method	PFASDOD_MassVerification-1802-PFHxS-Q3.m	Comment		Acquired Time	11/15/2019 6:26:47 PM



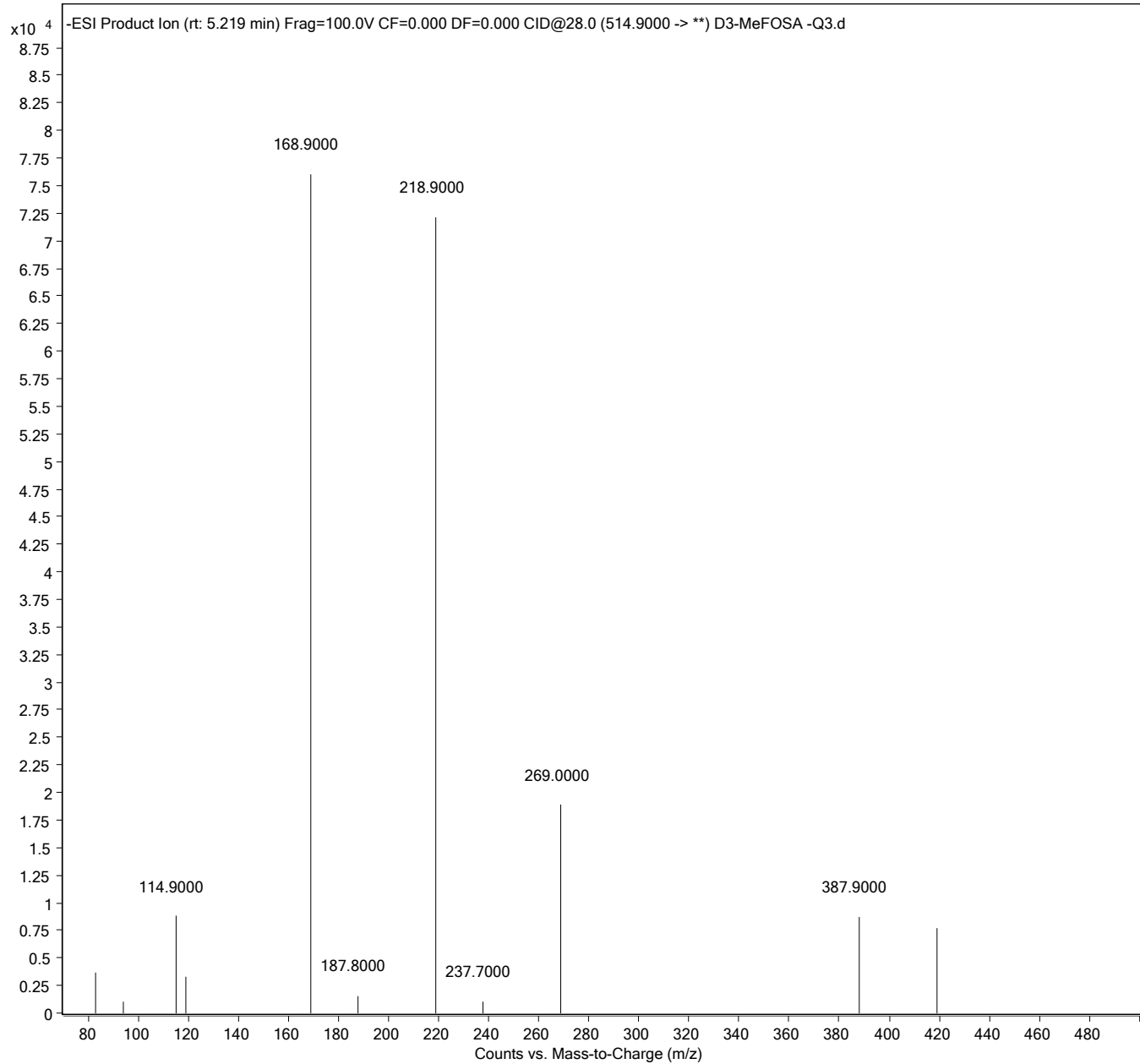
Sample Name	13C4-PFOS -Q3	Position	P3-B4	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C4-PFOS -Q3.d
ACQ Method	PFASDOD_MassVerification-13C4-PFOS-Q3.m	Comment		Acquired Time	11/15/2019 6:33:44 PM



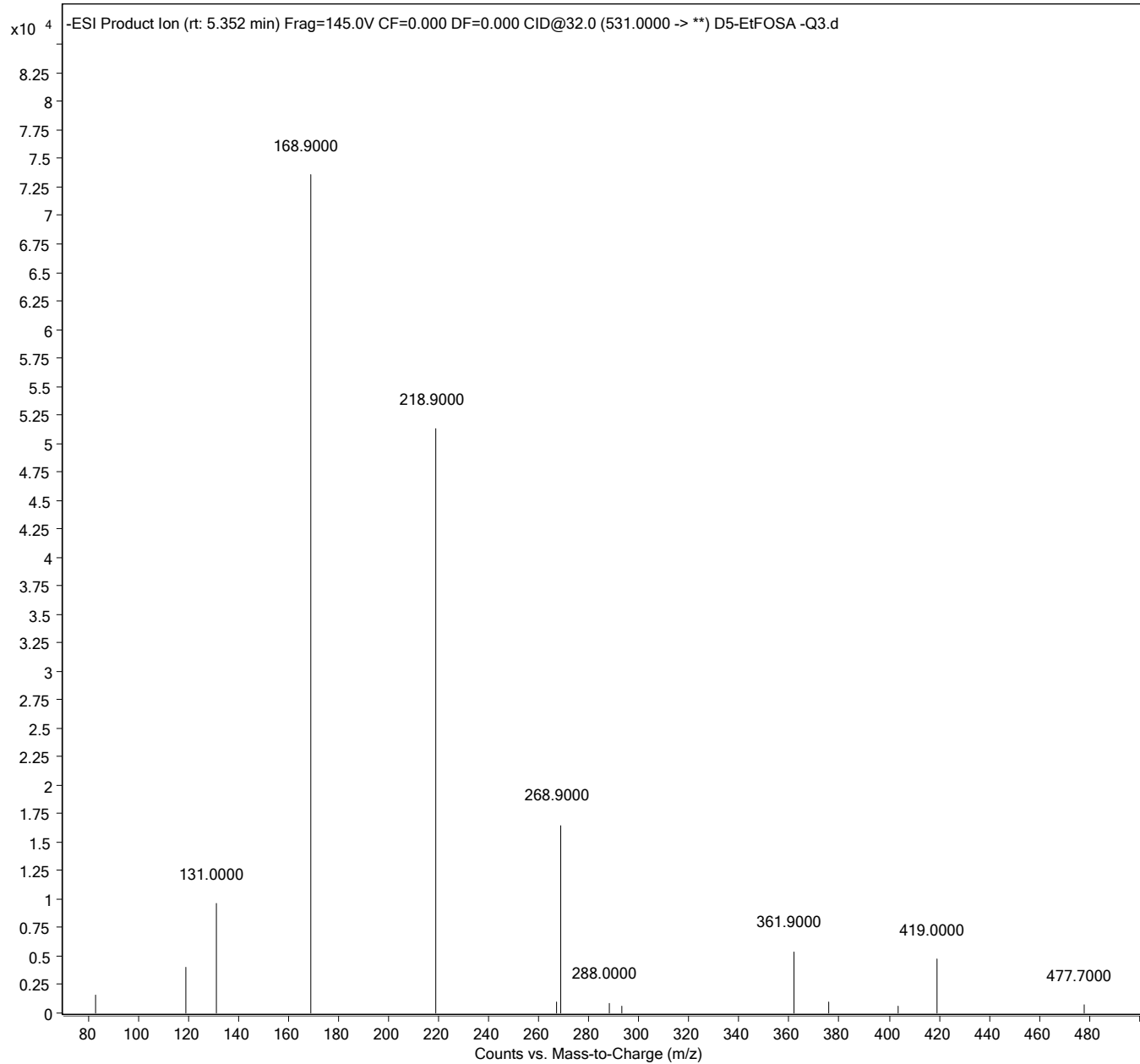
Sample Name	13C8-PFOA -Q3	Position	P3-B5	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C8-PFOA -Q3.d
ACQ Method	PFASDOD_MassVerification-13C8-PFOA-Q3.m	Comment		Acquired Time	11/15/2019 6:40:40 PM



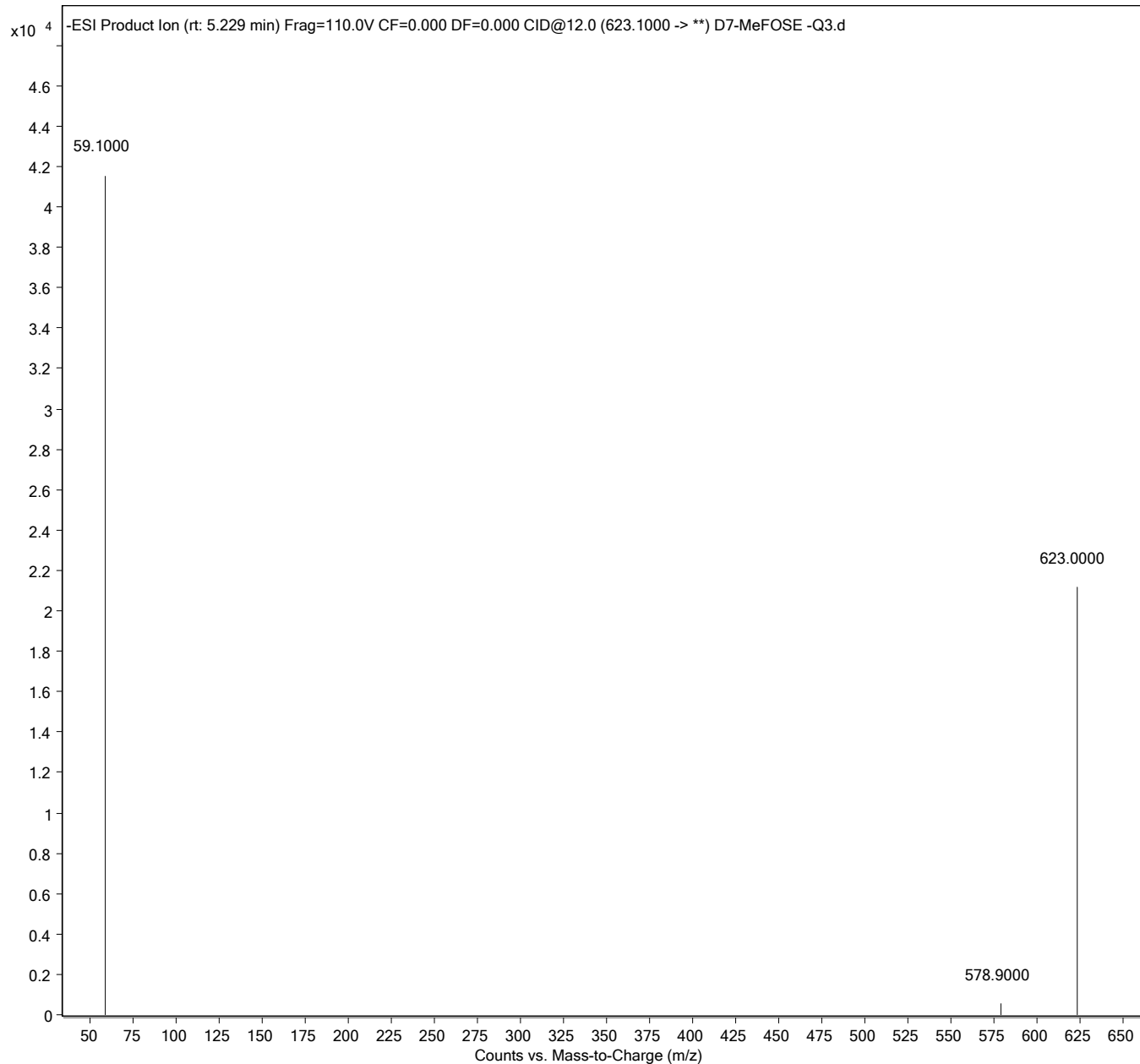
Sample Name	D3-MeFOSA -Q3	Position	P3-B6	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	D3-MeFOSA -Q3.d
ACQ Method	PFASDOD_MassVerification-D3-MeFOSA-Q3.m	Comment		Acquired Time	11/15/2019 6:47:36 PM



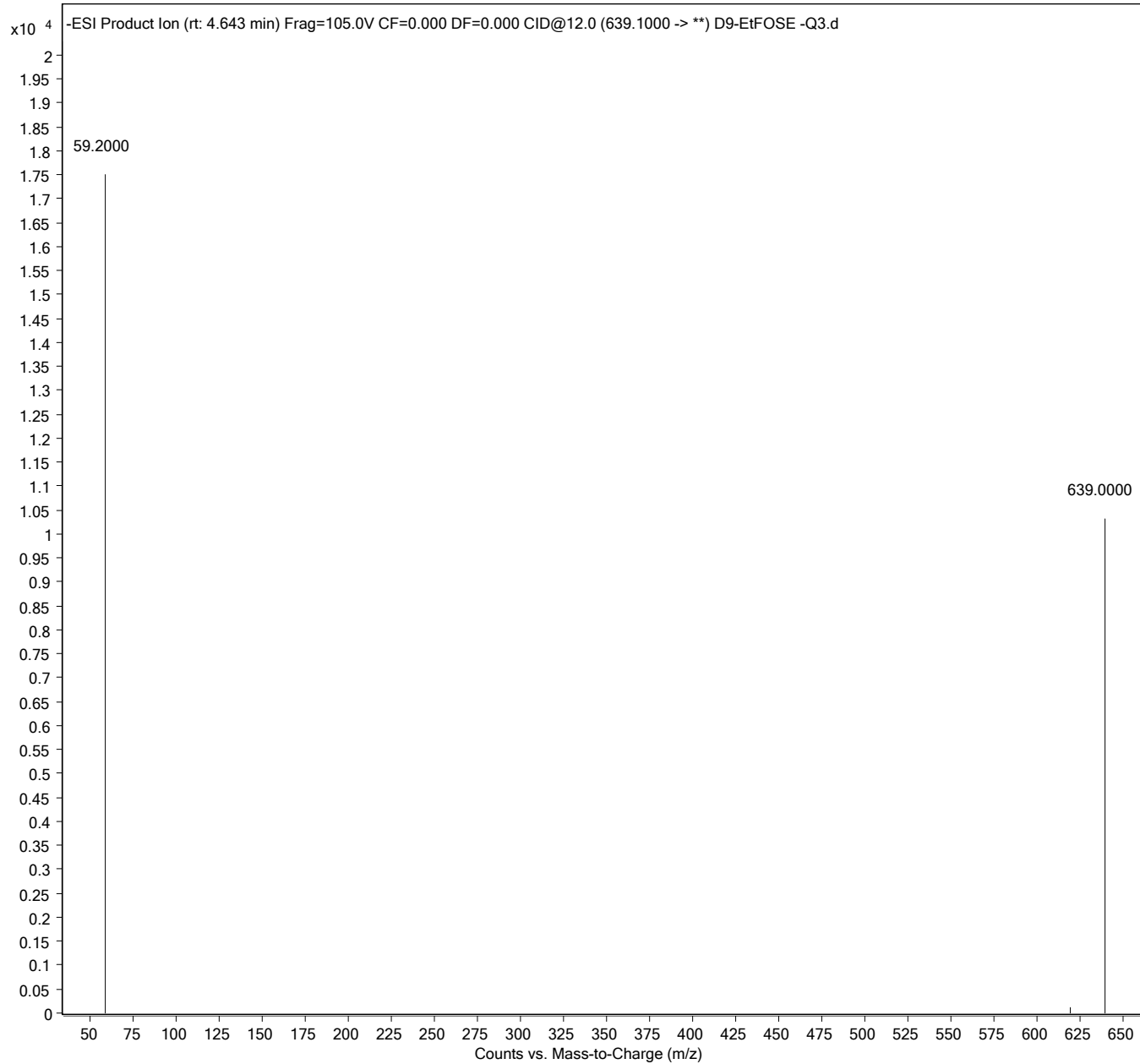
Sample Name	D5-EtFOSA -Q3	Position	P3-B7	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	D5-EtFOSA -Q3.d
ACQ Method	PFASDOD_MassVerification-D5-EtFOSA-Q3.m	Comment		Acquired Time	11/15/2019 6:54:32 PM



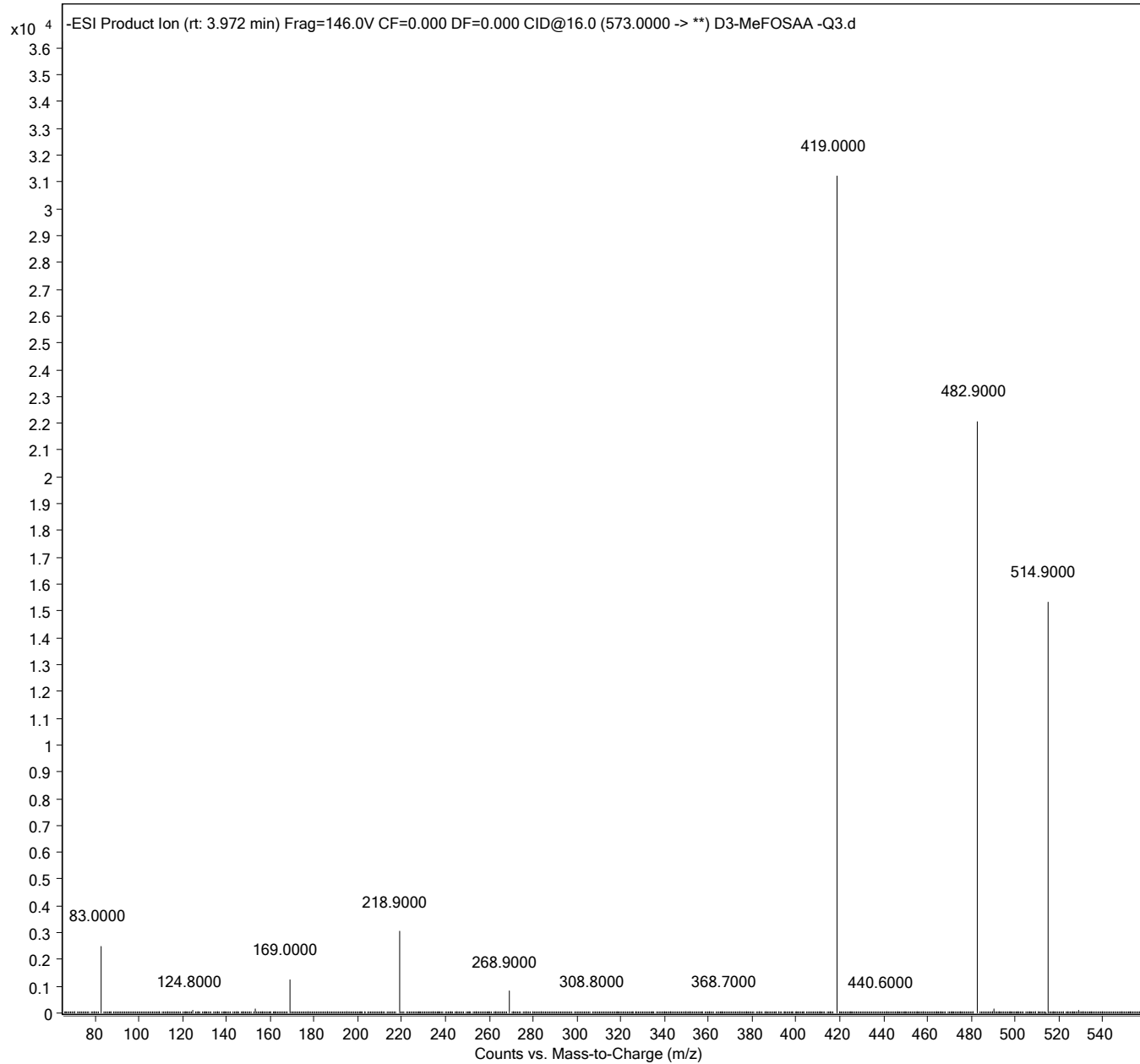
Sample Name	D7-MeFOSE -Q3	Position	P3-B8	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	D7-MeFOSE -Q3.d
ACQ Method	PFASDOD_MassVerification-D7-MeFOSE-Q3.m	Comment		Acquired Time	11/15/2019 7:01:29 PM



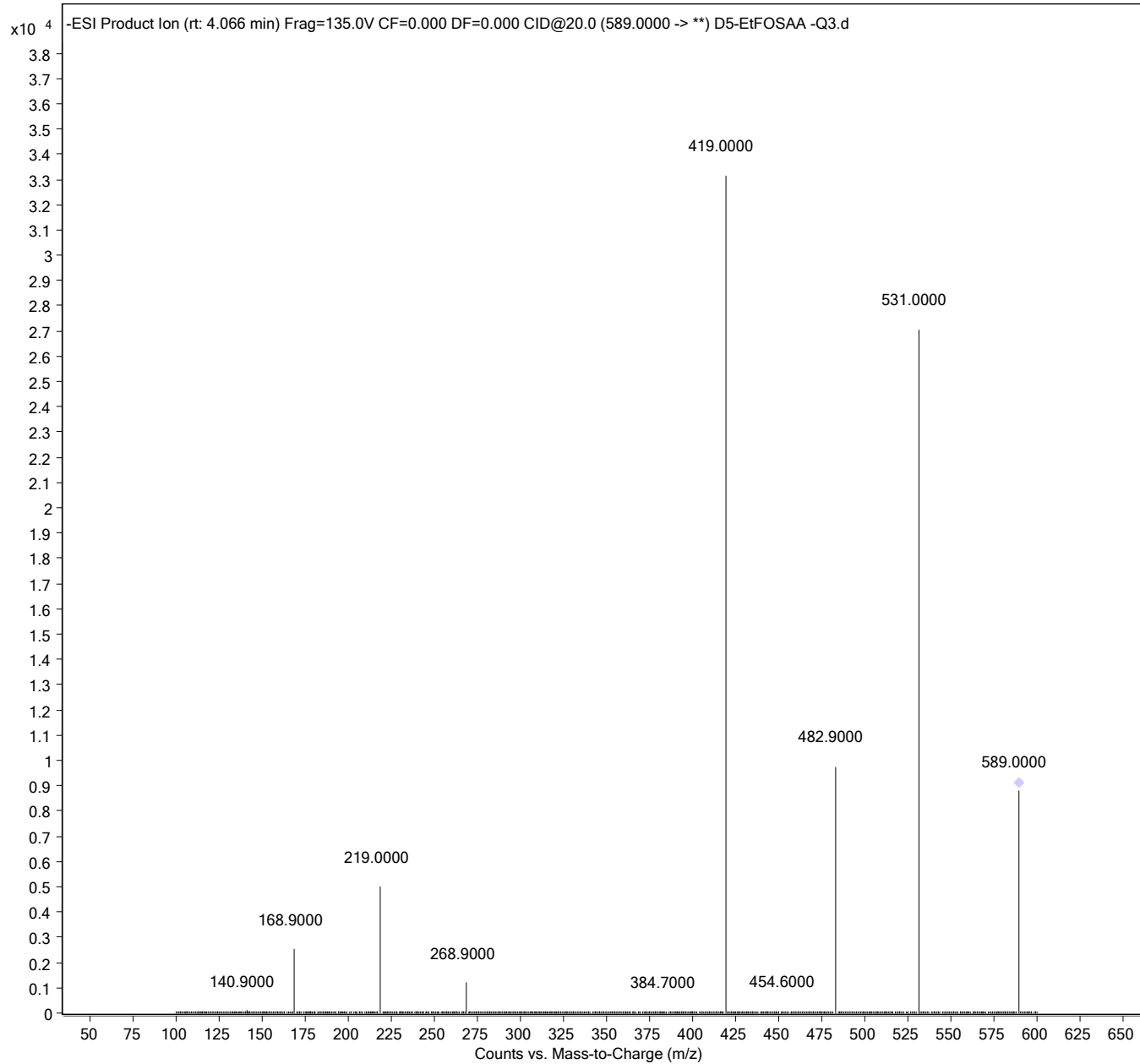
Sample Name	D9-EtFOSE -Q3	Position	P3-B9	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	D9-EtFOSE -Q3.d
ACQ Method	PFASDOD_MassVerification-D9-EtFOSE-Q3.m	Comment		Acquired Time	11/15/2019 7:08:26 PM



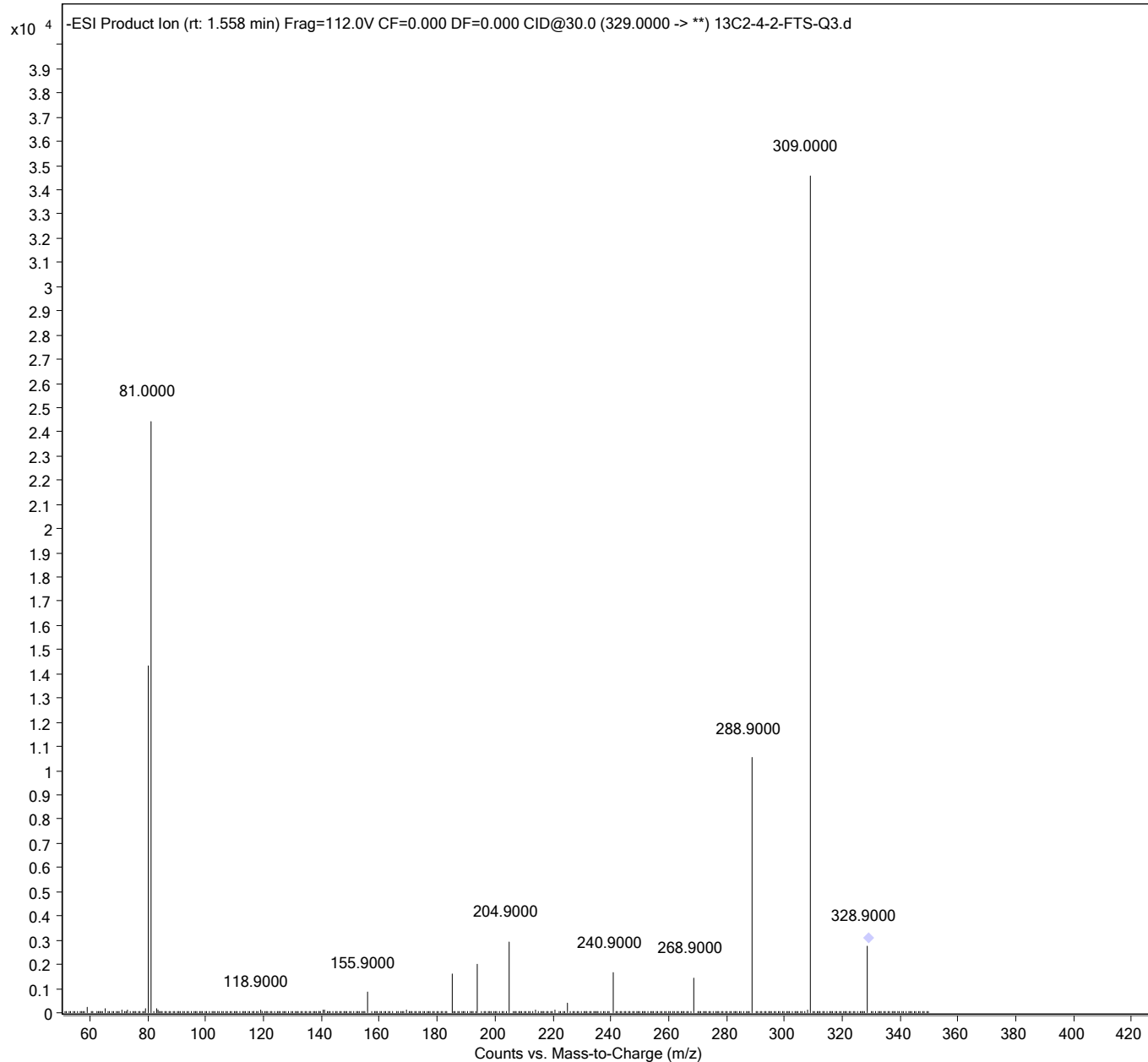
Sample Name	D3-MeFOSAA -Q3	Position	P3-C1	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	D3-MeFOSAA -Q3.d
ACQ Method	PFASDOD_MassVerification-D3-MeFOSAA-Q3.m	Comment		Acquired Time	11/15/2019 7:15:23 PM



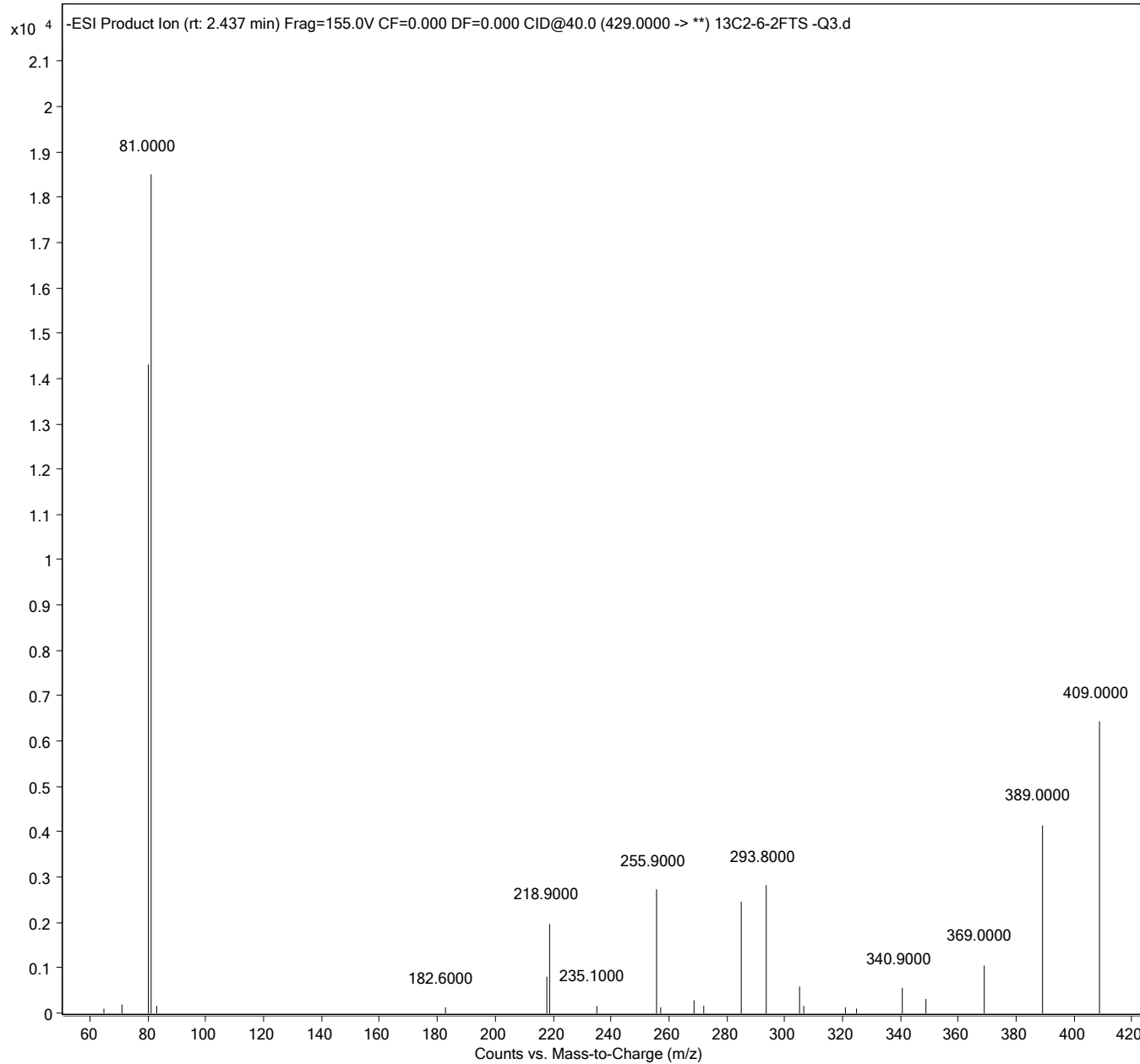
Sample Name	D5-EtFOSAA -Q3	Position	P3-C2	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	D5-EtFOSAA -Q3.d
ACQ Method	PFASDOD_MassVerification-D5-EtFOSAA-Q3.m	Comment		Acquired Time	11/15/2019 7:22:20 PM



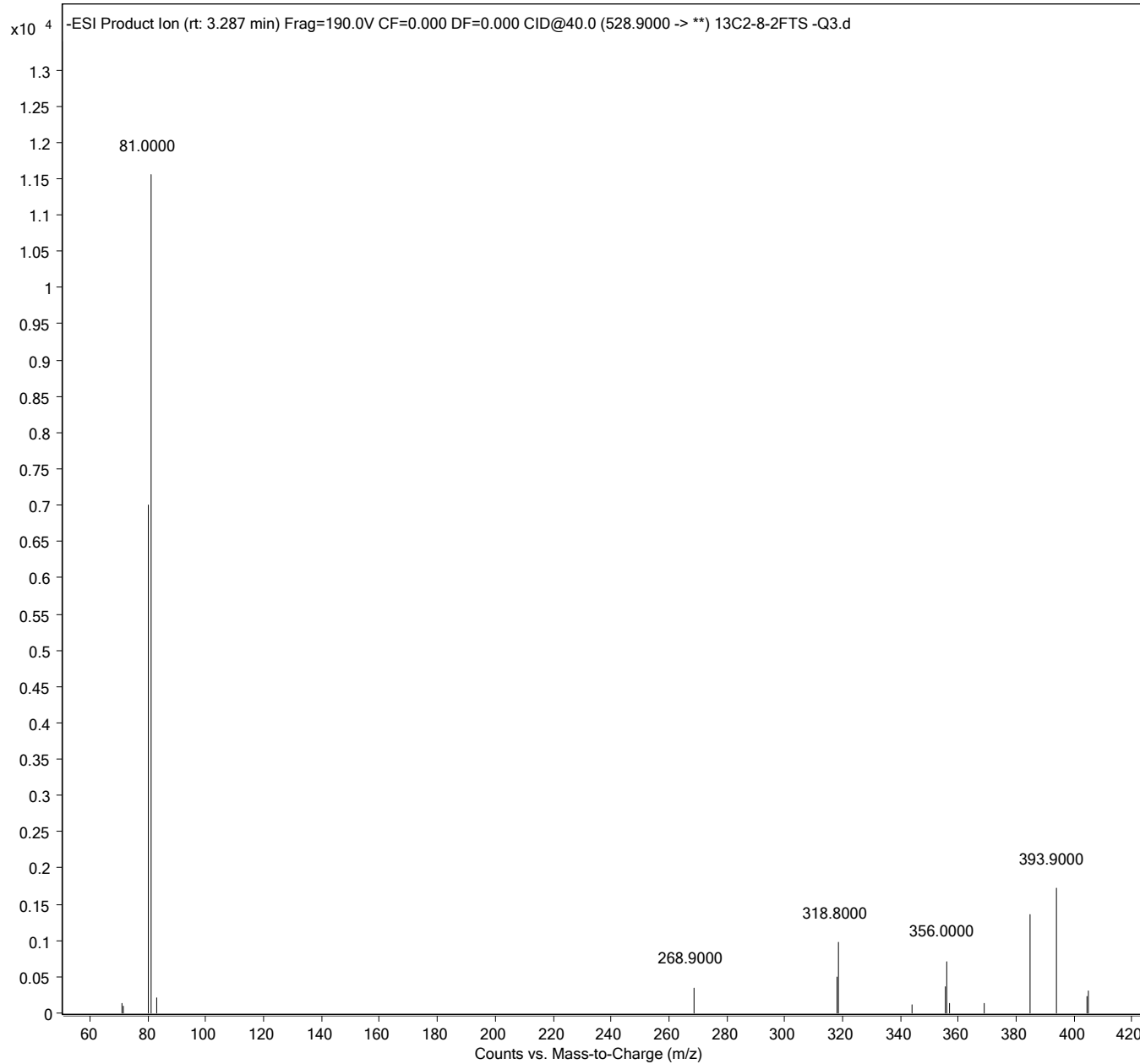
Sample Name	13C2-4:2-FTS-Q3	Position	P3-C3	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C2-4-2-FTS-Q3.d
ACQ Method	PFASDOD_MassVerification-13C2-4-2FTS-Q3.	Comment		Acquired Time	11/15/2019 7:29:16 PM



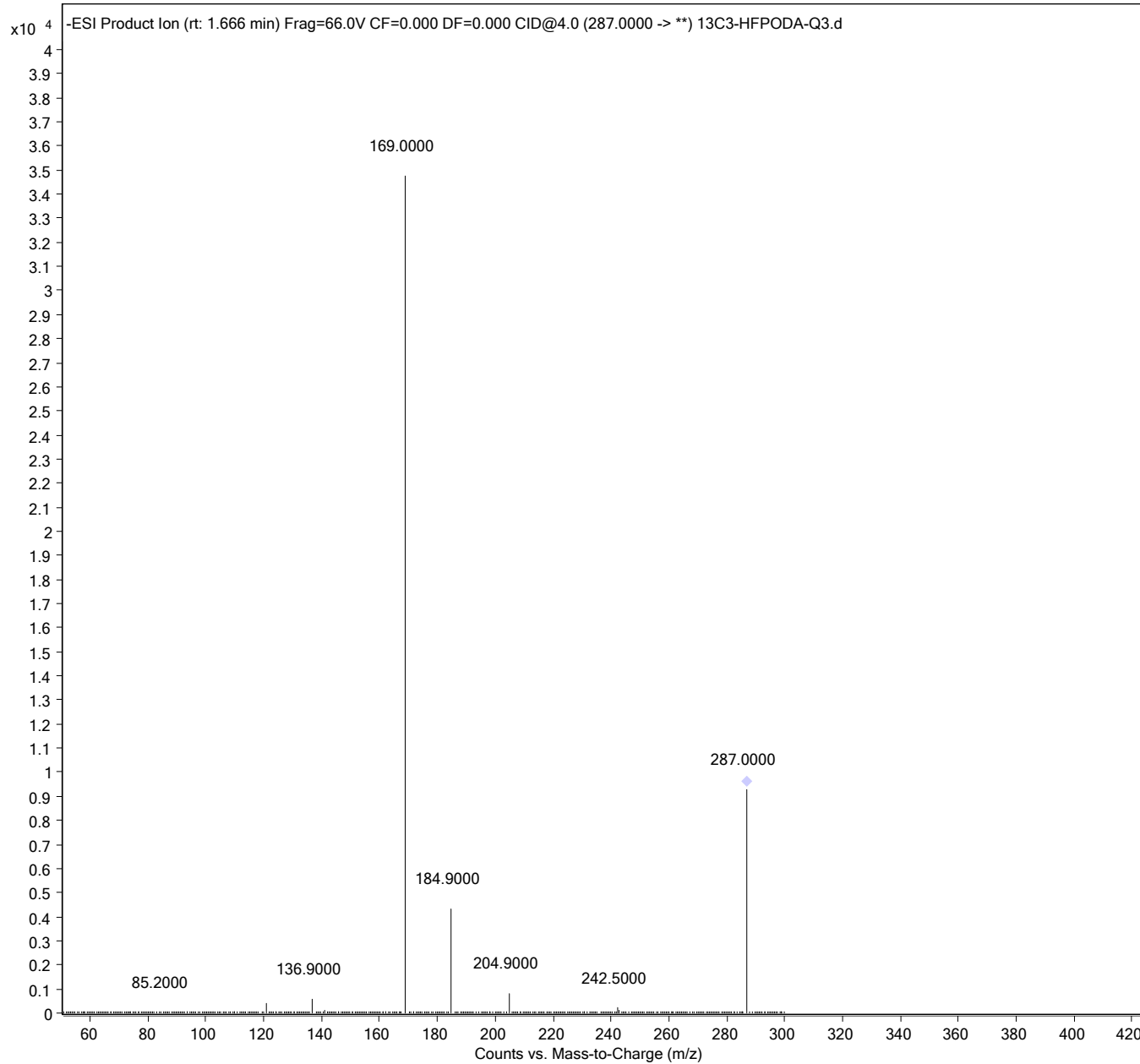
Sample Name	13C2-6:2FTS -Q3	Position	P3-C4	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C2-6-2FTS -Q3.d
ACQ Method	PFASDOD_MassVerification-13C2-6_2FTS-Q3.	Comment		Acquired Time	11/15/2019 7:36:13 PM



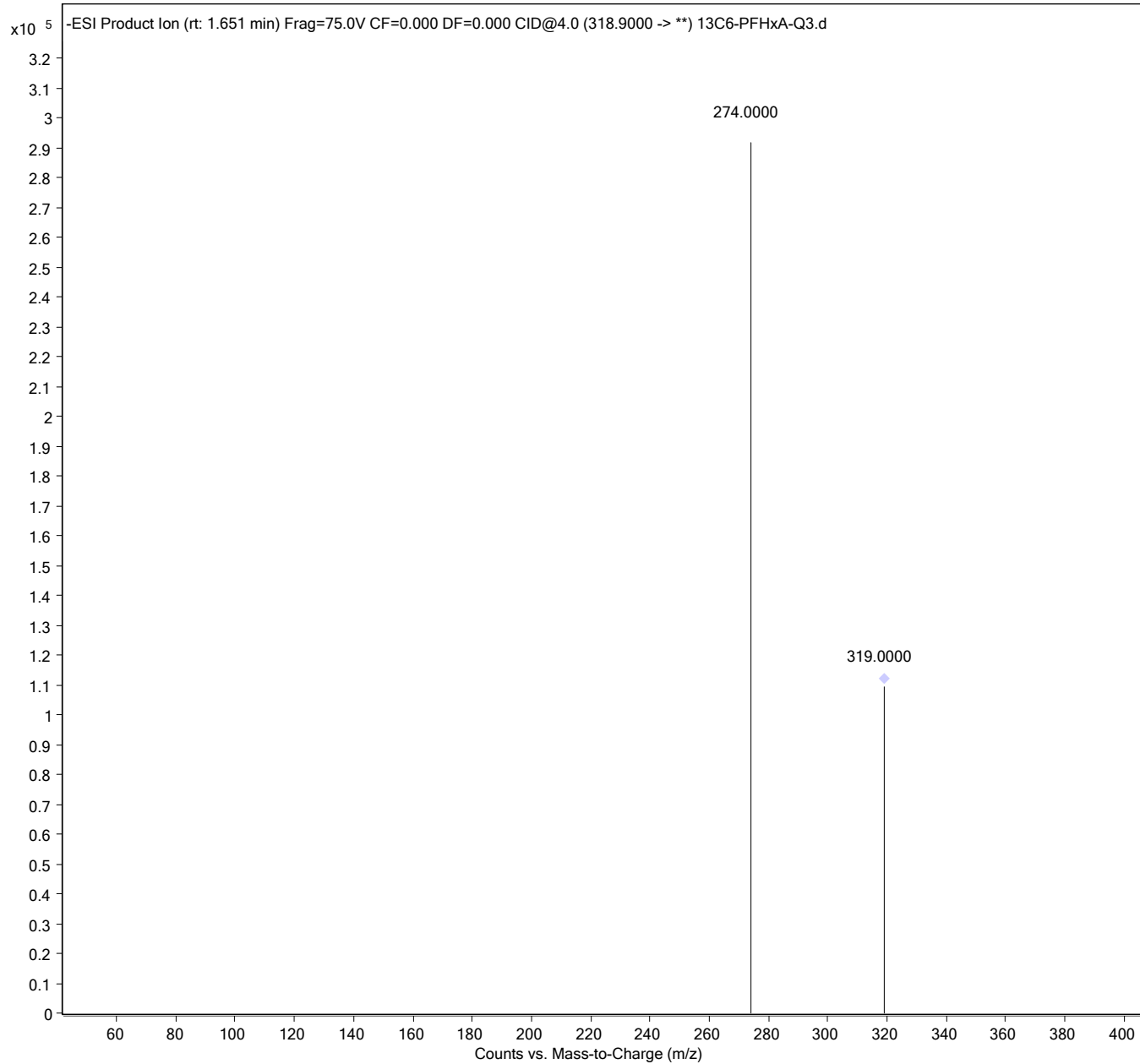
Sample Name	13C2-8:2FTS -Q3	Position	P3-C5	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C2-8-2FTS -Q3.d
ACQ Method	PFASDOD_MassVerification-13C2-8_2FTS-Q3.	Comment		Acquired Time	11/15/2019 7:43:09 PM



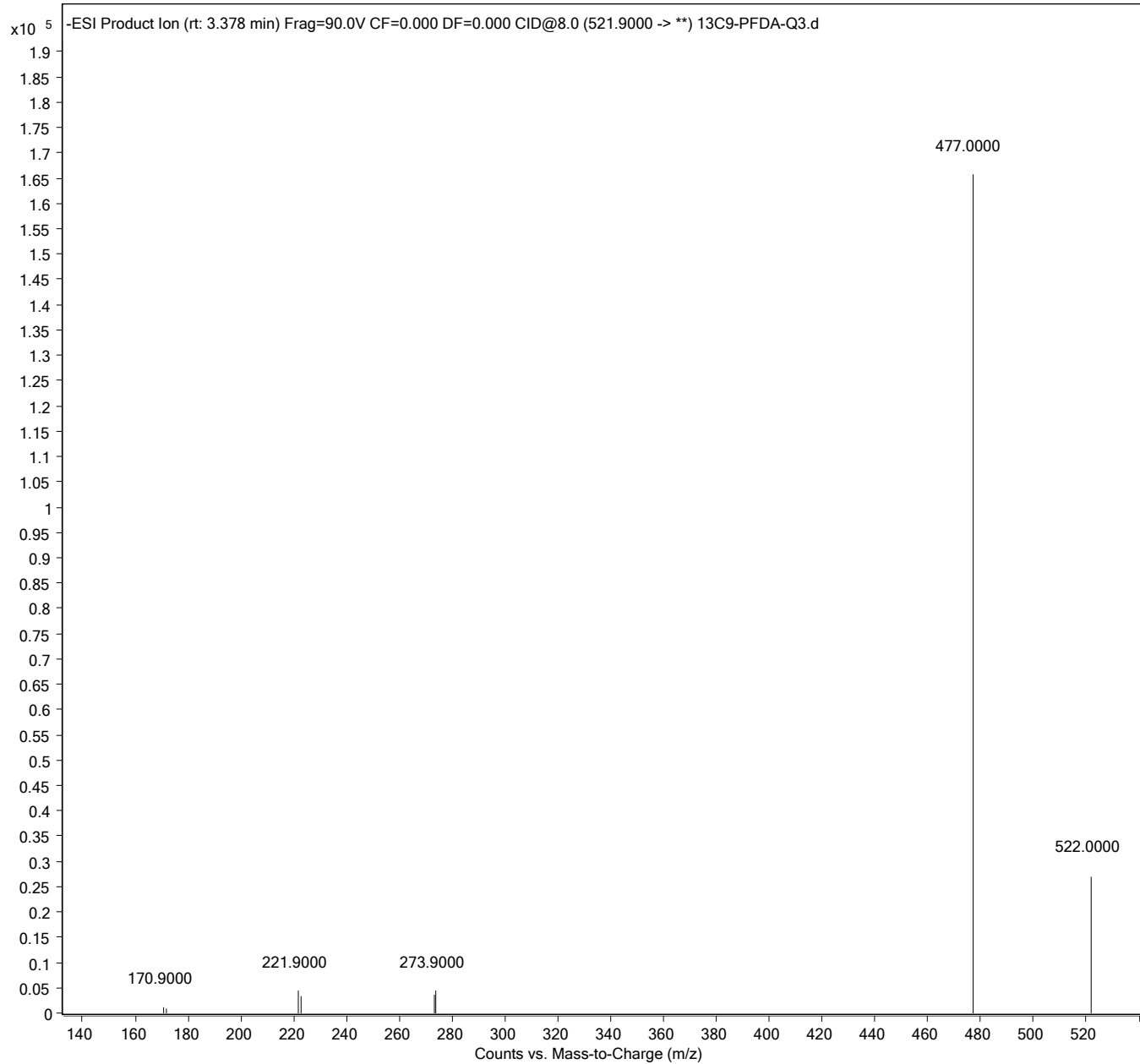
Sample Name	13C3-HFPODA-Q3	Position	P3-C6	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C3-HFPODA-Q3.d
ACQ Method	PFASDOD_MassVerification-13C3-HFPODA-Q3.	Comment		Acquired Time	11/15/2019 7:50:07 PM



Sample Name	13C6-PFHxA-Q3	Position	P3-C7	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C6-PFHxA-Q3.d
ACQ Method	PFASDOD_MassVerification-13C6-PFHxA-Q3.m	Comment		Acquired Time	11/15/2019 7:57:04 PM



Sample Name	13C9-PFDA-Q3	Position	P3-C8	Instrument Name	LCMS04
User Name		Inj Vol	1.5	InjPosition	
Sample Type	Sample	IRM Calibration Status	Not Applicable	Data Filename	13C9-PFDA-Q3.d
ACQ Method	PFASDOD_MassVerification-13C9-PFDA-Q3.m	Comment		Acquired Time	11/15/2019 8:02:30 PM



Worklist Report



Instrument Name: LCMS04

Worklist Path: D:\MassHunter\Worklists\PFCs\MassVerificaion\Mass Verification_IS_Q1&Q3_191115.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\PFC_Mass Verification
DA Method Path: D:\MassHunter\methods
Data File Path: D:\MassHunter\data\Mass Verification\20191115_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: ---

*Column # 388
 MPA = Soln # 46, FSRE19
 MPB = Methanol Sigma # SHBL1476
 on 2019/11/20.*

Plate Barcode:

Plate	Barcode
P3	

Worklist Table

	Sample Name	Sample Position	Method	Data File	Sample Type	Inj Vol (µl)	Sample Group
1	13C4-PFBA-Q1	P3-A1	PFASDOD_MassVerification_Q1.m	13C4-PFBA-Q1.d	Sample	As Method	PFAS-Q1
2	13C5-PFPeA -Q1	P3-A2	PFASDOD_MassVerification_Q1.m	13C5-PFPeA -Q1.d	Sample	As Method	PFAS-Q1
3	13C2-PFHxA -Q1	P3-A3	PFASDOD_MassVerification_Q1.m	13C2-PFHxA -Q1.d	Sample	As Method	PFAS-Q1
4	13C4-PFHpA-Q1	P3-A4	PFASDOD_MassVerification_Q1.m	13C4-PFHpA-Q1.d	Sample	As Method	PFAS-Q1
5	13C4-PFOA -Q1	P3-A5	PFASDOD_MassVerification_Q1.m	13C4-PFOA -Q1.d	Sample	As Method	PFAS-Q1
6	13C5-PFNA -Q1	P3-A6	PFASDOD_MassVerification_Q1.m	13C5-PFNA -Q1.d	Sample	As Method	PFAS-Q1
7	13C2-PFDA -Q1	P3-A7	PFASDOD_MassVerification_Q1.m	13C2-PFDA -Q1.d	Sample	As Method	PFAS-Q1
8	13C2-PFUnA -Q1	P3-A8	PFASDOD_MassVerification_Q1.m	13C2-PFUnA -Q1.d	Sample	As Method	PFAS-Q1
9	13C2-PFDoA -Q1	P3-A9	PFASDOD_MassVerification_Q1.m	13C2-PFDoA -Q1.d	Sample	As Method	PFAS-Q1

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Worklist Report



	Sample Name	Sample Position	Method	Data File	Sample Type	Inj Vol (µl)	Sample Group
10	13C2-PFTeDA -Q1	P3-B1	PFASDOD_MassVerification_Q1.m	13C2-PFTeDA -Q1.d	Sample	As Method	PFAS-Q1
11	13C3-PFBS -Q1	P3-B2	PFASDOD_MassVerification_Q1.m	13C3-PFBS -Q1.d	Sample	As Method	PFAS-Q1
12	18O2-PFHxS -Q1	P3-B3	PFASDOD_MassVerification_Q1.m	18O2-PFHxS -Q1.d	Sample	As Method	PFAS-Q1
13	13C4-PFOS -Q1	P3-B4	PFASDOD_MassVerification_Q1.m	13C4-PFOS -Q1.d	Sample	As Method	PFAS-Q1
14	13C8-PFOSA -Q1	P3-B5	PFASDOD_MassVerification_Q1.m	13C8-PFOSA -Q1.d	Sample	As Method	PFAS-Q1
15	D3-MeFOSA -Q1	P3-B6	PFASDOD_MassVerification_Q1.m	D3-MeFOSA -Q1.d	Sample	As Method	PFAS-Q1
16	D5-EtFOSA -Q1	P3-B7	PFASDOD_MassVerification_Q1.m	D5-EtFOSA -Q1.d	Sample	As Method	PFAS-Q1
17	D7-MeFOSE -Q1	P3-B8	PFASDOD_MassVerification_Q1.m	D7-MeFOSE -Q1.d	Sample	As Method	PFAS-Q1
18	D9-EtFOSE -Q1	P3-B9	PFASDOD_MassVerification_Q1.m	D9-EtFOSE -Q1.d	Sample	As Method	PFAS-Q1
19	D3-MeFOSAA -Q1	P3-C1	PFASDOD_MassVerification_Q1.m	D3-MeFOSAA -Q1.d	Sample	As Method	PFAS-Q1
20	D5-EtFOSAA -Q1	P3-C2	PFASDOD_MassVerification_Q1.m	D5-EtFOSAA -Q1.d	Sample	As Method	PFAS-Q1
21	13C2-4:2-FTS-Q1	P3-C3	PFASDOD_MassVerification_Q1.m	13C2-4_2-FTS-Q1.d	Sample	As Method	PFAS-Q1
22	13C2-6:2FTS -Q1	P3-C4	PFASDOD_MassVerification_Q1.m	13C2-6_2FTS -Q1.d	Sample	As Method	PFAS-Q1
23	13C2-8:2FTS -Q1	P3-C5	PFASDOD_MassVerification_Q1.m	13C2-8_2FTS -Q1.d	Sample	As Method	PFAS-Q1
24	13C3-HFPODA-Q1	P3-C6	PFASDOD_MassVerification_Q1.m	13C3-HFPODA-Q1.d	Sample	As Method	PFAS-Q1
25	13C6-PFHxA-Q1	P3-C7	PFASDOD_MassVerification_Q1.m	13C6-PFHxA-Q1.d	Sample	As Method	PFAS-Q1
26	13C9-PFDA-Q1	P3-C8	PFASDOD_MassVerification_Q1.m	13C9-PFDA-Q1.d	Sample	As Method	PFAS-Q1
27	13C4-PFBA-Q3	P3-A1	PFASDOD_MassVerification-13C4-PFBA-Q3.m	13C4-PFBA-Q3.d	Sample	As Method	PFAS-Q3
28	13C5-PFPeA -Q3	P3-A2	PFASDOD_MassVerification-13C5-PFPeA-Q3.m	13C5-PFPeA -Q3.d	Sample	As Method	PFAS-Q3
29	13C2-PFHxA -Q3	P3-A3	PFASDOD_MassVerification-13C2-PFHxA-Q3.m	13C2-PFHxA -Q3.d	Sample	As Method	PFAS-Q3
30	13C4-PFHpA-Q3	P3-A4	PFASDOD_MassVerification-13C4-PFHpA-Q3.m	13C4-PFHpA-Q3.d	Sample	As Method	PFAS-Q3
31	13C4-PFOA -Q3	P3-A5	PFASDOD_MassVerification-13C4-PFOA-Q3.m	13C4-PFOA -Q3.d	Sample	As Method	PFAS-Q3
32	13C5-PFNA -Q3	P3-A6	PFASDOD_MassVerification-13C5-PFNA-Q3.m	13C5-PFNA -Q3.d	Sample	As Method	PFAS-Q3

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Worklist Report



	Sample Name	Sample Position	Method	Data File	Sample Type	Inj Vol (µl)	Sample Group
33	13C2-PFDA -Q3	P3-A7	PFASDOD_MassVerification-13C2-PFDA-Q3.m	13C2-PFDA -Q3.d	Sample	As Method	PFAS-Q3
34	13C2-PFUnA -Q3	P3-A8	PFASDOD_MassVerification-13C2-PFUnA-Q3.m	13C2-PFUnA -Q3.d	Sample	As Method	PFAS-Q3
35	13C2-PFDoA -Q3	P3-A9	PFASDOD_MassVerification-13C2-PFDoA-Q3.m	13C2-PFDoA -Q3.d	Sample	As Method	PFAS-Q3
36	13C2-PFTeDA -Q3	P3-B1	PFASDOD_MassVerification-13C2-PFTeDA-Q3.m	13C2-PFTeDA -Q3.d	Sample	As Method	PFAS-Q3
37	13C3-PFBS -Q3	P3-B2	PFASDOD_MassVerification-13C3-PFBS-Q3.m	13C3-PFBS -Q3.d	Sample	As Method	PFAS-Q3
38	18O2-PFHxS -Q3	P3-B3	PFASDOD_MassVerification-18O2-PFHxS-Q3.m	18O2-PFHxS -Q3.d	Sample	As Method	PFAS-Q3
39	13C4-PFOS -Q3	P3-B4	PFASDOD_MassVerification-13C4-PFOS-Q3.m	13C4-PFOS -Q3.d	Sample	As Method	PFAS-Q3
40	13C8-PFOSA -Q3	P3-B5	PFASDOD_MassVerification-13C8-PFOSA-Q3.m	13C8-PFOSA -Q3.d	Sample	As Method	PFAS-Q3
41	D3-MeFOSA -Q3	P3-B6	PFASDOD_MassVerification-D3-MeFOSA-Q3.m	D3-MeFOSA -Q3.d	Sample	As Method	PFAS-Q3
42	D5-EtFOSA -Q3	P3-B7	PFASDOD_MassVerification-D5-EtFOSA-Q3.m	D5-EtFOSA -Q3.d	Sample	As Method	PFAS-Q3
43	D7-MeFOSE -Q3	P3-B8	PFASDOD_MassVerification-D7-MeFOSE-Q3.m	D7-MeFOSE -Q3.d	Sample	As Method	PFAS-Q3
44	D9-EtFOSE -Q3	P3-B9	PFASDOD_MassVerification-D9-EtFOSE-Q3.m	D9-EtFOSE -Q3.d	Sample	As Method	PFAS-Q3
45	D3-MeFOSAA -Q3	P3-C1	PFASDOD_MassVerification-D3-MeFOSAA-Q3.m	D3-MeFOSAA -Q3.d	Sample	As Method	PFAS-Q3
46	D5-EtFOSAA -Q3	P3-C2	PFASDOD_MassVerification-D5-EtFOSAA-Q3.m	D5-EtFOSAA -Q3.d	Sample	As Method	PFAS-Q3
47	13C2-4:2-FTS-Q3	P3-C3	PFASDOD_MassVerification-13C2-4-2-FTS-Q3.m	13C2-4-2-FTS-Q3.d	Sample	As Method	PFAS-Q3
48	13C2-6:2FTS -Q3	P3-C4	PFASDOD_MassVerification-13C2-6_2FTS-Q3.m	13C2-6-2FTS -Q3.d	Sample	As Method	PFAS-Q3
49	13C2-8:2FTS -Q3	P3-C5	PFASDOD_MassVerification-13C2-8_2FTS-Q3.m	13C2-8-2FTS -Q3.d	Sample	As Method	PFAS-Q3
50	13C3-HFPODA-Q3	P3-C6	PFASDOD_MassVerification-13C3-HFPODA-Q3.m	13C3-HFPODA-Q3.d	Sample	As Method	PFAS-Q3

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Worklist Report

	Sample Name	Sample Position	Method	Data File	Sample Type	Inj Vol (µl)	Sample Group
51	13C6-PFHxA-Q3	P3-C7	PFASDOD_MassVerification-13C6-PFHxA-Q3.m	13C6-PFHxA-Q3.d	Sample	As Method	PFAS-Q3
52	13C9-PFDA-Q3	P3-C8	PFASDOD_MassVerification-13C9-PFDA-Q3.m	13C9-PFDA-Q3.d	Sample	As Method	PFAS-Q3

Instrument Name LCMS04
MS Model G6470A
MS Instrument Serial SG1611G001
Software_Firmware Version B.08.00.B8023.5 SP1, FW: A.00.08.24
Tune Date & Time 11:15:19 08:38:28
Data Path D:\MassHunter\Tune\QQQ\G6470A\atunes.TUNE.XML
Ion Source AJS ESI
Ionization Mode AJS ESI
Tuned Resolution All
Vacuum Pressure 1.06E+0[R]; 2.57E-5[H]

Source Parameters

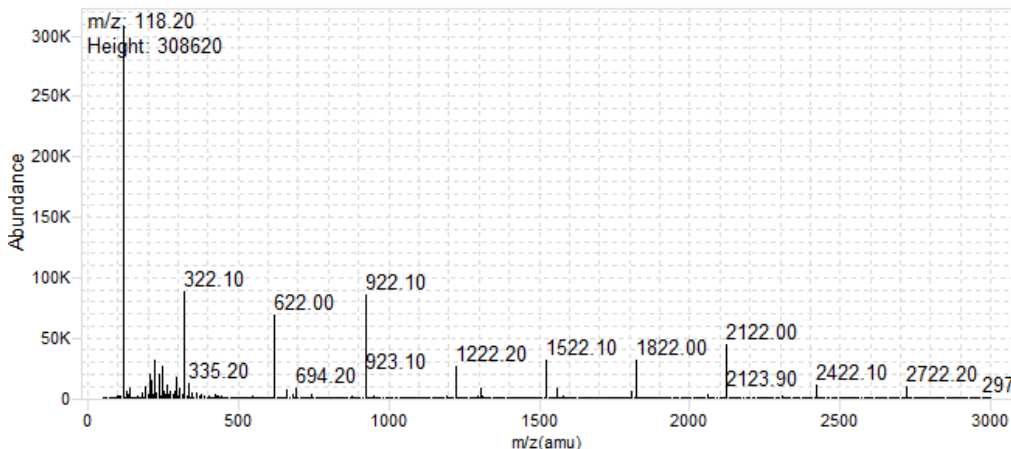
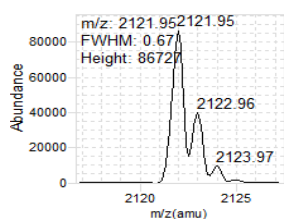
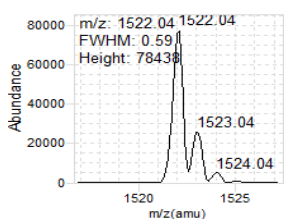
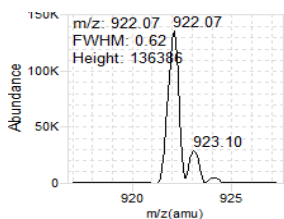
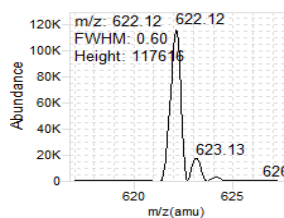
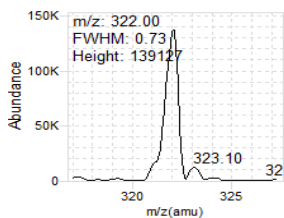
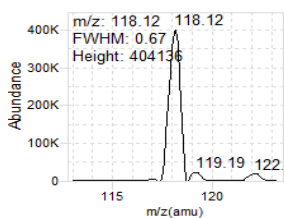
Parameter	Value
Gas Temp	300
Gas Flow	8
Nebulizer	15
Capillary	4000
Nozzle Voltage	1500
Sheath Gas Temp	250
Sheath Gas Flow	7

Positive Results

Analyzer: MS1

Polarity: Positive

Width: Unit

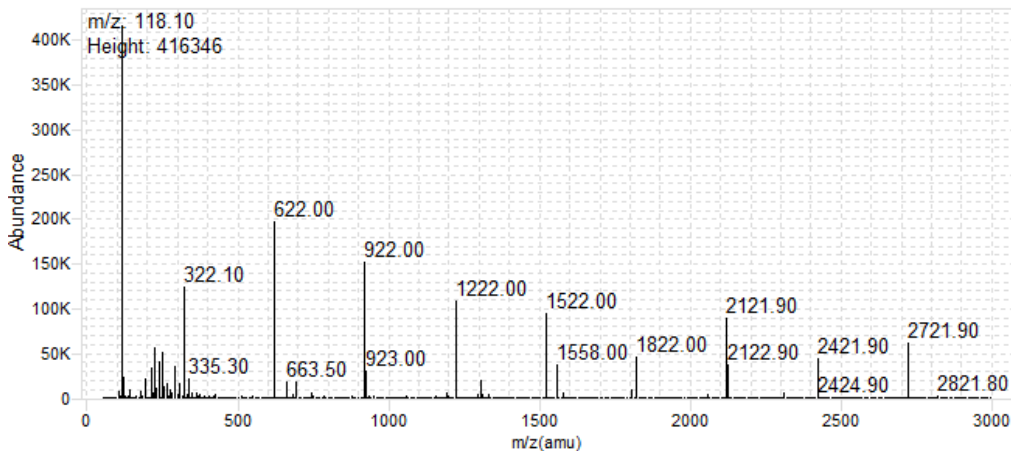
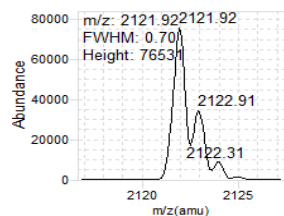
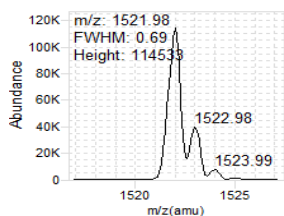
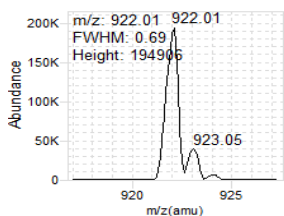
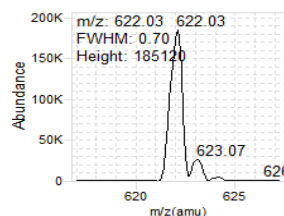
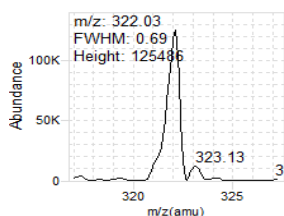
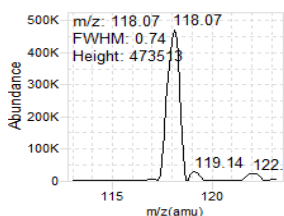


m/z	m/z Expected	FWHM	FWHM Expected	Abundance
118.12	118.09	0.67	0.70	404136
322.00	322.05	0.73	0.70	139127
622.12	622.03	0.60	0.70	117616
922.06	922.01	0.62	0.70	136386
1522.04	1521.97	0.59	0.70	78438
2121.96	2121.93	0.67	0.70	86727

Analyzer: MS2

Polarity: Positive

Width: Unit

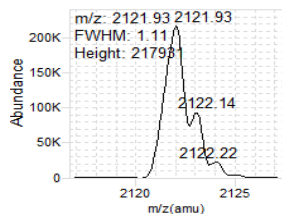
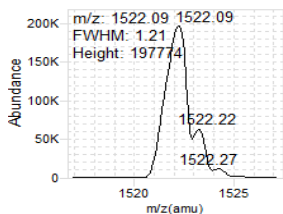
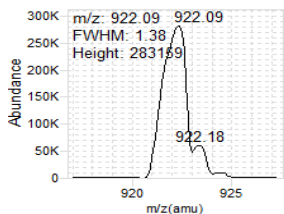
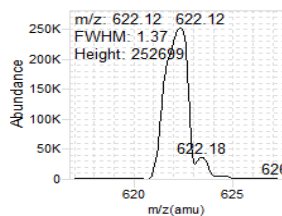
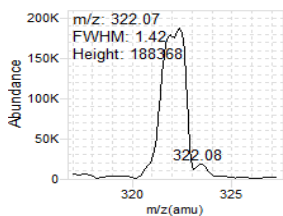
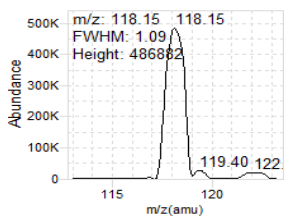


m/z	m/z Expected	FWHM	FWHM Expected	Abundance
58.15	58.07	0.67	0.70	113944
118.07	118.09	0.74	0.70	473513
322.03	322.05	0.69	0.70	125486
622.03	622.03	0.70	0.70	185120
922.01	922.01	0.69	0.70	194906
1521.98	1521.97	0.69	0.70	114533
2121.92	2121.93	0.70	0.70	76531

Analyzer: MS1

Polarity: Positive

Width: Wide

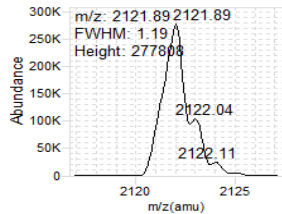
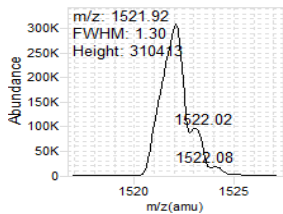
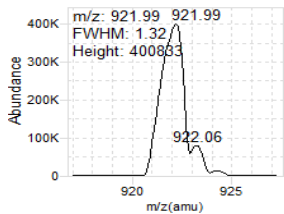
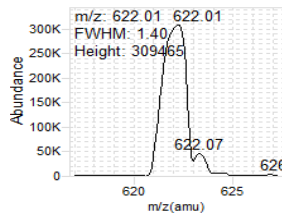
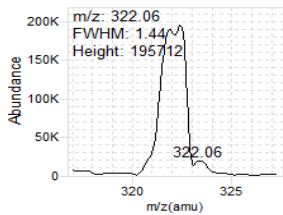
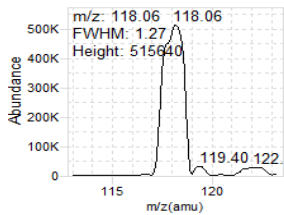


m/z	m/z Expected	FWHM	FWHM Expected	Abundance
118.15	118.09	1.09	1.20	486882
322.07	322.05	1.42	1.20	188368
622.12	622.03	1.37	1.20	252699
922.09	922.01	1.38	1.20	283159
1522.08	1521.97	1.21	1.20	197774
2121.93	2121.93	1.11	1.20	217931

Analyzer: MS2

Polarity: Positive

Width: Wide

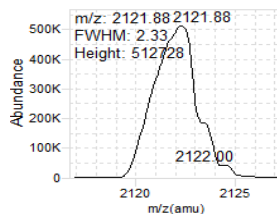
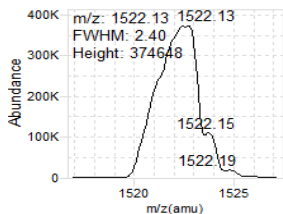
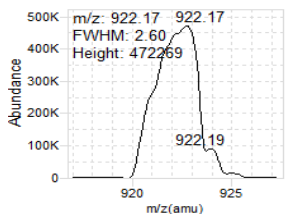
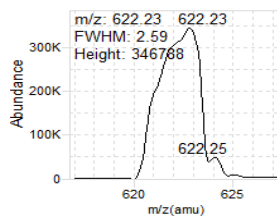
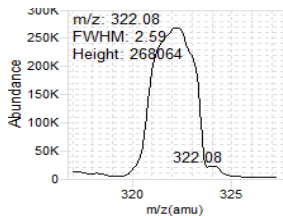
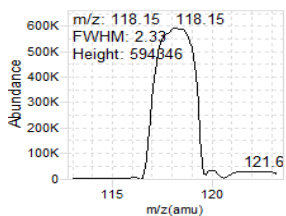


m/z	m/z Expected	FWHM	FWHM Expected	Abundance
58.15	58.07	1.13	1.20	158566
118.06	118.09	1.27	1.20	515640
322.07	322.05	1.44	1.20	195712
622.00	622.03	1.40	1.20	309465
921.98	922.01	1.32	1.20	400833
1521.91	1521.97	1.30	1.20	310413
2121.89	2121.93	1.19	1.20	277808

Analyzer: MS1

Polarity: Positive

Width: Widest

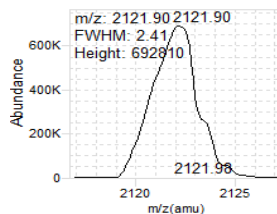
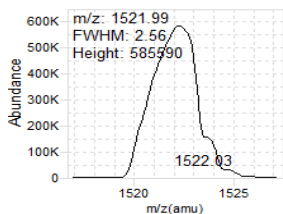
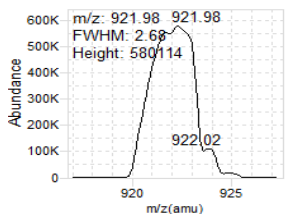
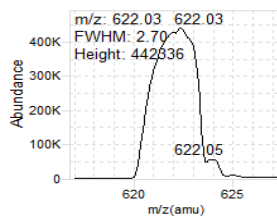
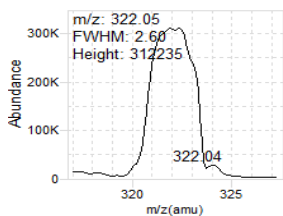
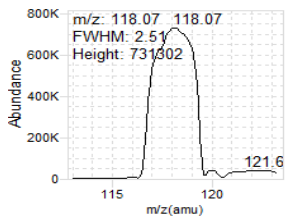


m/z	m/z Expected	FWHM	FWHM Expected	Abundance
118.15	118.09	2.33	2.50	594346
322.08	322.05	2.59	2.50	268064
622.23	622.03	2.58	2.50	346788
922.16	922.01	2.60	2.50	472269
1522.13	1521.97	2.39	2.50	374648
2121.89	2121.93	2.33	2.50	512728

Analyzer: MS2

Polarity: Positive

Width: Widest



m/z	m/z Expected	FWHM	FWHM Expected	Abundance
58.16	58.07	2.37	2.50	205865
118.07	118.09	2.51	2.50	731302
322.05	322.05	2.60	2.50	312235
622.03	622.03	2.70	2.50	442336
921.97	922.01	2.68	2.50	580114
1521.99	1521.97	2.56	2.50	585590
2121.90	2121.93	2.41	2.50	692810

Positive Results

Tune Parameters

Parameters	Setting
Fragmentor	135
Skimmer	15
Octopole DC	5
Octopole RF	600
Lens 1	3.50
MS1 PreFilter	-20
MS1 DC	3.00
MS1 PostFilter	2.00
MS1 Axis Offset	0.94
MS1 Axis Gain	-18.05
MS1 Width Offset	0.14
MS1 Width Gain	7
MS1 Heater	100
MS2 DC	-10
MS2 PreFilter	-30
MS2 Axis Offset	0.92
MS2 Axis Gain	19
MS2 Width Offset	0.06
MS2 Width Gain	-28
MS2 Heater	100
Cell Entry	1
Hexapole DC	0.00
Hexapole RF	500
Hexapole Accel	5
Cell Exit	-7
Collision Gas	1
Iris	-150
HED	-10
EMV	1040
Collision Energy	0
Lens 1[MS2]	4.00
MS1 PreFilter[MS2]	1.80

Dynamic Ramp Tables

MS1 PreFilter

m/z	Setting
118.09	-10.8
322.05	-12.8
622.03	-12.6
922.01	-19.8
1521.97	-12
2121.93	-19.4

MS1 Axis Offset

m/z	Setting
118.09	0.944
322.05	1.049
622.03	1.217
922.01	1.234
1521.97	1.113
2121.93	0.944

MS1 Width Offset

m/z	Setting
118.09	0.14
322.05	-0.04
622.03	-0.21
922.01	-0.18
1521.97	-0.07
2121.93	0.14

MS2 PreFilter

m/z	Setting
79	-21
117.97	-30
118	-12.46471
154	-15.8
290	-28.4

MS2 Axis Offset

m/z	Setting
118.09	0.924
322.05	0.982
622.03	1.039
922.01	1.022
1521.97	0.988
2121.93	0.924

MS2 Width Offset

m/z	Setting
118.09	0.06
322.05	-0.1
622.03	-0.09
922.01	-0.07
1521.97	-0.06
2121.93	0.06

MS1 Calibrations

Resolution	Mass Gain	Mass Offset	Width Gain	Width Offset
Unit	-18.05	0.944	7.2	0.14
Wide	-18.25	1.106	7.5	0.49
Widest	-18.55	1.508	8	1.49

MS2 Calibrations

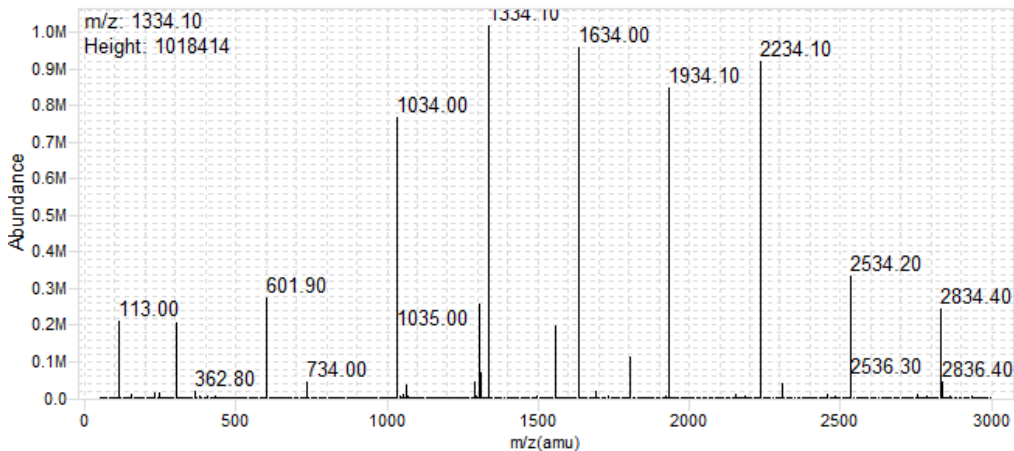
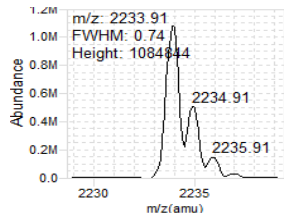
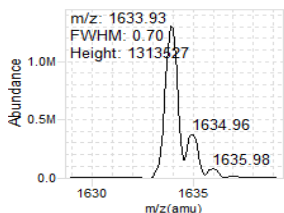
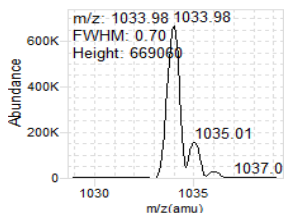
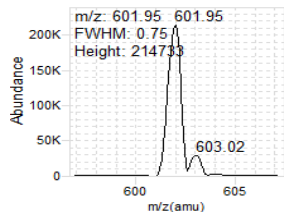
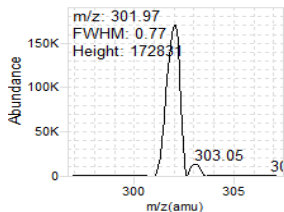
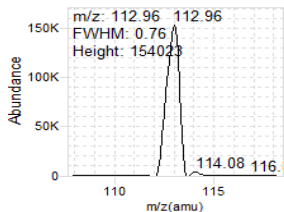
Resolution	Mass Gain	Mass Offset	Width Gain	Width Offset
Unit	19.2	0.924	-28.2	0.06
Wide	19	1.084	-27.7	0.44
Widest	18.65	1.514	-27.1	1.42

Negative Results

Analyzer: MS1

Polarity: Negative

Width: Unit

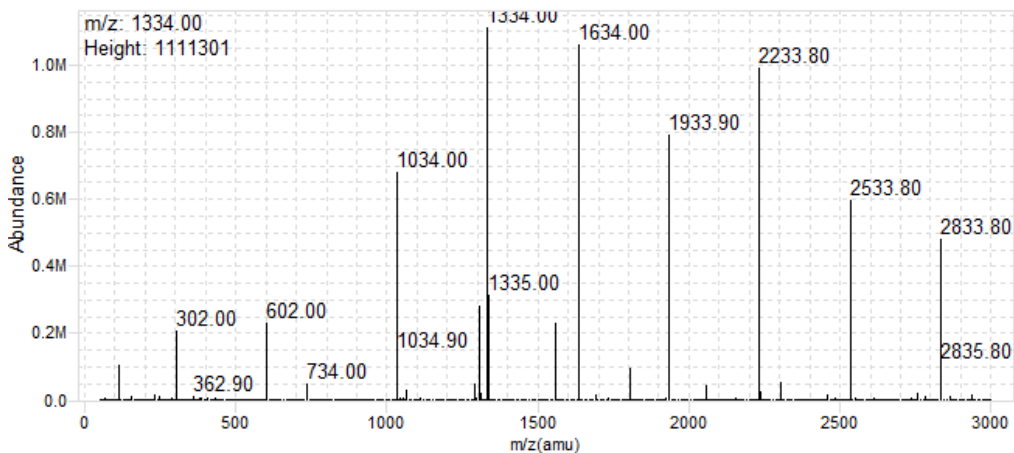
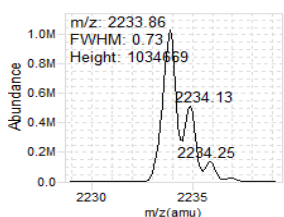
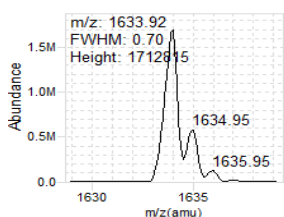
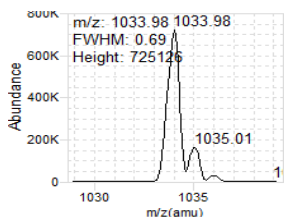
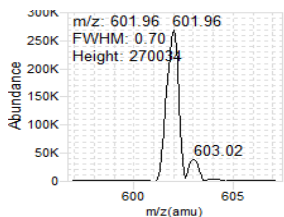
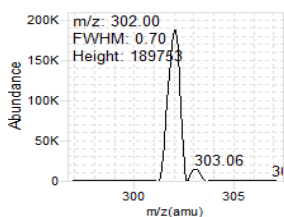
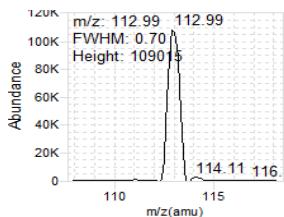


m/z	m/z Expected	FWHM	FWHM Expected	Abundance
112.96	112.99	0.76	0.70	154023
301.97	302.00	0.77	0.70	172831
601.95	601.98	0.75	0.70	214733
1033.98	1033.99	0.70	0.70	669060
1633.92	1633.95	0.70	0.70	1313527
2233.91	2233.91	0.74	0.70	1084845

Analyzer: MS2

Polarity: Negative

Width: Unit

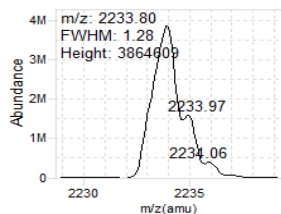
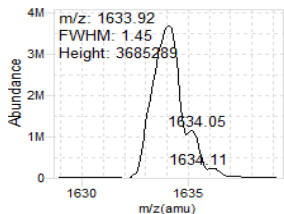
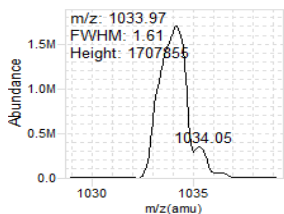
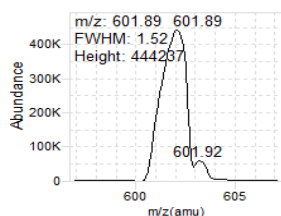
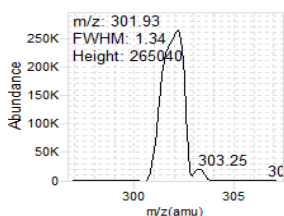
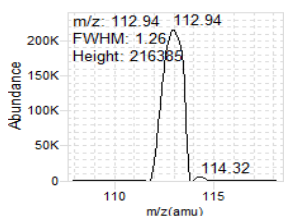


m/z	m/z Expected	FWHM	FWHM Expected	Abundance
69.13	69.00	0.56	0.70	31877
112.99	112.99	0.70	0.70	109015
302.00	302.00	0.70	0.70	189753
601.96	601.98	0.70	0.70	270034
1033.98	1033.99	0.69	0.70	725126
1633.92	1633.95	0.70	0.70	1712815
2233.87	2233.91	0.73	0.70	1034669

Analyzer: MS1

Polarity: Negative

Width: Wide

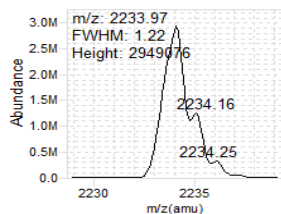
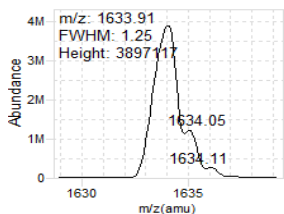
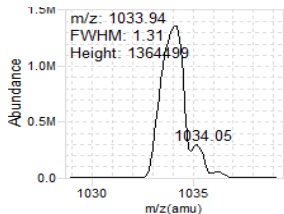
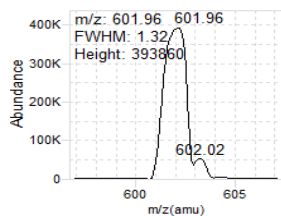
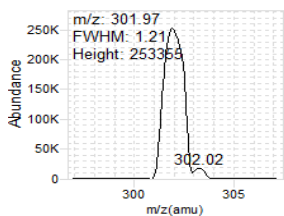
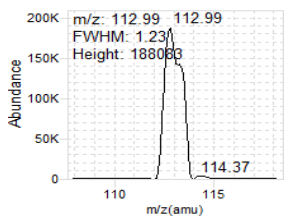


m/z	m/z Expected	FWHM	FWHM Expected	Abundance
112.94	112.99	1.26	1.20	216385
301.93	302.00	1.34	1.20	265040
601.89	601.98	1.52	1.20	444237
1033.97	1033.99	1.61	1.20	1707855
1633.92	1633.95	1.45	1.20	3685288
2233.81	2233.91	1.29	1.20	3864609

Analyzer: MS2

Polarity: Negative

Width: Wide

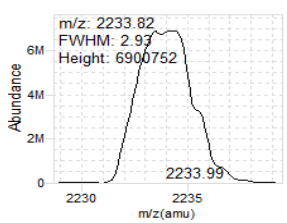
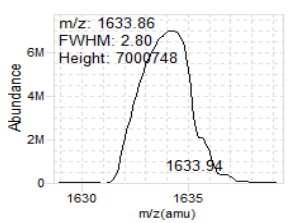
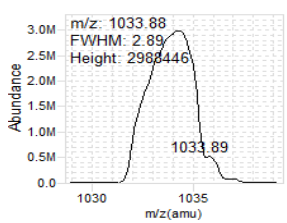
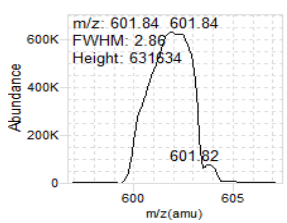
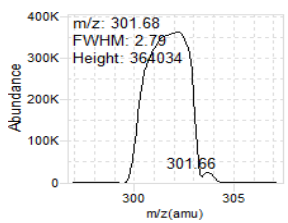
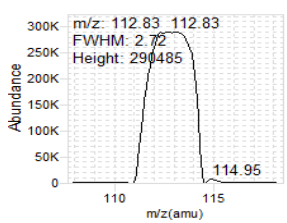


m/z	m/z Expected	FWHM	FWHM Expected	Abundance
69.10	69.00	1.04	1.20	40674
112.99	112.99	1.23	1.20	188083
301.97	302.00	1.21	1.20	253355
601.96	601.98	1.32	1.20	393860
1033.94	1033.99	1.31	1.20	1364499
1633.91	1633.95	1.25	1.20	3897117
2233.97	2233.91	1.22	1.20	2949076

Analyzer: MS1

Polarity: Negative

Width: Widest

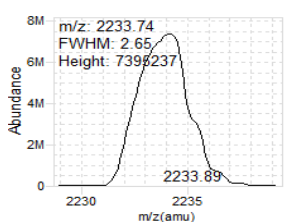
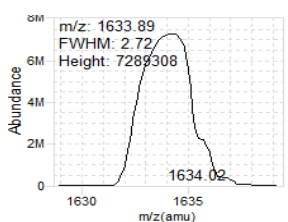
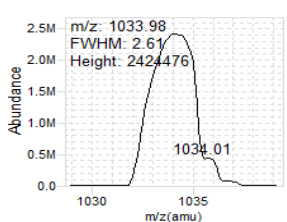
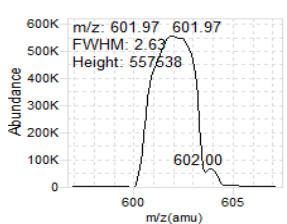
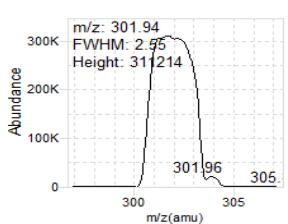
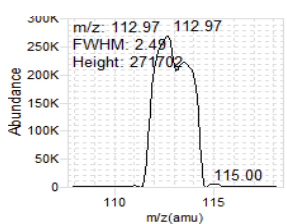


m/z	m/z Expected	FWHM	FWHM Expected	Abundance
112.83	112.99	2.72	2.50	290485
301.68	302.00	2.79	2.50	364034
601.84	601.98	2.86	2.50	631634
1033.88	1033.99	2.89	2.50	2988446
1633.86	1633.95	2.80	2.50	7000748
2233.83	2233.91	2.94	2.50	6900751

Analyzer: MS2

Polarity: Negative

Width: Widest



m/z	m/z Expected	FWHM	FWHM Expected	Abundance
69.08	69.00	2.35	2.50	48379
112.97	112.99	2.49	2.50	271702
301.94	302.00	2.55	2.50	311214
601.97	601.98	2.63	2.50	557538
1033.98	1033.99	2.61	2.50	2424476
1633.89	1633.95	2.72	2.50	7289308
2233.74	2233.91	2.65	2.50	7395237

Negative Results

Tune Parameters

Parameters	Setting
Fragmentor	115
Skimmer	15
Octopole DC	5
Octopole RF	600
Lens 1	-3.50
MS1 PreFilter	27
MS1 DC	-3.00
MS1 PostFilter	-2.00
MS1 Axis Offset	0.85
MS1 Axis Gain	-18
MS1 Width Offset	0.26
MS1 Width Gain	7
MS1 Heater	100
MS2 DC	10
MS2 PreFilter	30
MS2 Axis Offset	0.95
MS2 Axis Gain	19.15
MS2 Width Offset	-0.09
MS2 Width Gain	-28
MS2 Heater	100
Cell Entry	0
Hexapole DC	0.00
Hexapole RF	500
Hexapole Accel	5
Cell Exit	7.00
Collision Gas	1
Iris	150
HED	18
EMV	1075
Collision Energy	0
Lens 1[MS2]	-3.50
MS1 PreFilter[MS2]	-2.60

Dynamic Ramp Tables

MS1 PreFilter

m/z	Setting
112.99	9
302	10.4
601.98	10
1033.99	20.1
1633.95	27.9
2233.91	30.1

MS1 Axis Offset

m/z	Setting
112.99	0.848
302	1.015
601.98	1.139
1033.99	1.161
1633.95	1.043
2233.91	0.848

MS1 Width Offset

m/z	Setting
112.99	0.26
302	0.21
601.98	-0.01
1033.99	-0.05
1633.95	0.07
2233.91	0.26

MS2 PreFilter

m/z	Setting
69	17.6
112.97	30
113	9.157253
207	20.22406
232	23.16735
302	31.40859

MS2 Axis Offset

m/z	Setting
112.99	0.954
302	1.028
601.98	1.048
1033.99	1.048
1633.95	1.01
2233.91	0.954

MS2 Width Offset

m/z	Setting
112.99	-0.09
302	-0.09
601.98	-0.15
1033.99	-0.18
1633.95	-0.13
2233.91	-0.09

MS1 Calibrations

Resolution	Mass Gain	Mass Offset	Width Gain	Width Offset
Unit	-17.9	0.848	7.1	0.26
Wide	-18.2	1.018	7.5	0.66
Widest	-18.25	1.434	7.8	1.75

MS2 Calibrations

Resolution	Mass Gain	Mass Offset	Width Gain	Width Offset
Unit	19.15	0.954	-27.8	-0.09
Wide	19.15	1.134	-27.6	0.33
Widest	18.6	1.568	-27.1	1.33

```

Instrument Name      LCMS04
MS Model            G6470A
MS Instrument Serial SG1611G001
Software_Firmware Version B.08.00.B8023.5 SP1, FW: A.00.08.24
Tune Date & Time    11:15:19 08:38:28
Data Path           D:\MassHunter\Tune\QQQ\G6470A\atunes.TUNE.XML
Ion Source          AJS ESI
Ionization Mode     AJS ESI
Tuned Resolution    All
Vacuum Pressure     1.06E+0[R]; 2.57E-5[H]
    
```

Source Parameters

Parameter	Value
Gas Temp	300
Gas Flow	8
Nebulizer	15
Capillary	4000
Nozzle Voltage	1500
Sheath Gas Temp	250
Sheath Gas Flow	7

Positive Results

Analyzer: MS1 Polarity: Positive Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.12	0.03	Pass	0.70	0.67	-0.03	Pass	404136
322.05	322.00	-0.05	Pass	0.70	0.73	0.03	Pass	139127
622.03	622.12	0.09	Pass	0.70	0.60	-0.10	Pass	117616
922.01	922.06	0.05	Pass	0.70	0.62	-0.08	Pass	136386
1521.97	1522.04	0.07	Pass	0.70	0.59	-0.11	Pass	78438
2121.93	2121.96	0.03	Pass	0.70	0.67	-0.03	Pass	86727

Analyzer: MS2 Polarity: Positive Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
58.07	58.15	0.08	Pass	0.70	0.67	-0.03	Pass	113944
118.09	118.07	-0.02	Pass	0.70	0.74	0.04	Pass	473513
322.05	322.03	-0.02	Pass	0.70	0.69	-0.01	Pass	125486
622.03	622.03	0.00	Pass	0.70	0.70	0.00	Pass	185120
922.01	922.01	0.00	Pass	0.70	0.69	-0.01	Pass	194906
1521.97	1521.98	0.01	Pass	0.70	0.69	-0.01	Pass	114533
2121.93	2121.92	-0.01	Pass	0.70	0.70	0.00	Pass	76531

Analyzer: MS1 Polarity: Positive Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.15	0.06	Pass	1.20	1.09	-0.11	Pass	486882
322.05	322.07	0.02	Pass	1.20	1.42	0.22	Pass	188368
622.03	622.12	0.09	Pass	1.20	1.37	0.17	Pass	252699
922.01	922.09	0.08	Pass	1.20	1.38	0.18	Pass	283159
1521.97	1522.08	0.11	Pass	1.20	1.21	0.01	Pass	197774
2121.93	2121.93	0.00	Pass	1.20	1.11	-0.09	Pass	217931

Analyzer: MS2 Polarity: Positive Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
58.07	58.15	0.08	Pass	1.20	1.13	-0.07	Pass	158566
118.09	118.06	-0.03	Pass	1.20	1.27	0.07	Pass	515640
322.05	322.07	0.02	Pass	1.20	1.44	0.24	Pass	195712
622.03	622.00	-0.03	Pass	1.20	1.40	0.20	Pass	309465
922.01	921.98	-0.03	Pass	1.20	1.32	0.12	Pass	400833
1521.97	1521.91	-0.06	Pass	1.20	1.30	0.10	Pass	310413
2121.93	2121.89	-0.04	Pass	1.20	1.19	-0.01	Pass	277808

Analyzer: MS1 Polarity: Positive Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
118.09	118.15	0.06	Pass	2.50	2.33	-0.17	Pass	594346
322.05	322.08	0.03	Pass	2.50	2.59	0.09	Pass	268064
622.03	622.23	0.20	Pass	2.50	2.58	0.08	Pass	346788
922.01	922.16	0.15	Pass	2.50	2.60	0.10	Pass	472269
1521.97	1522.13	0.16	Pass	2.50	2.39	-0.11	Pass	374648
2121.93	2121.89	-0.04	Pass	2.50	2.33	-0.17	Pass	512728

Analyzer: MS2 Polarity: Positive Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
58.07	58.16	0.09	Pass	2.50	2.37	-0.13	Pass	205865
118.09	118.07	-0.02	Pass	2.50	2.51	0.01	Pass	731302
322.05	322.05	0.00	Pass	2.50	2.60	0.10	Pass	312235
622.03	622.03	0.00	Pass	2.50	2.70	0.20	Pass	442336
922.01	921.97	-0.04	Pass	2.50	2.68	0.18	Pass	580114
1521.97	1521.99	0.02	Pass	2.50	2.56	0.06	Pass	585590
2121.93	2121.90	-0.03	Pass	2.50	2.41	-0.09	Pass	692810

Negative Results

Analyzer: MS1 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.96	-0.03	Pass	0.70	0.76	0.06	Pass	154023
302.00	301.97	-0.03	Pass	0.70	0.77	0.07	Pass	172831
601.98	601.95	-0.03	Pass	0.70	0.75	0.05	Pass	214733
1033.99	1033.98	-0.01	Pass	0.70	0.70	0.00	Pass	669060
1633.95	1633.92	-0.03	Pass	0.70	0.70	0.00	Pass	1313527
2233.91	2233.91	0.00	Pass	0.70	0.74	0.04	Pass	1084845

Analyzer: MS2 Polarity: Negative Width: Unit

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.13	0.13	Pass	0.70	0.56	-0.14	Pass	31877
112.99	112.99	0.00	Pass	0.70	0.70	0.00	Pass	109015
302.00	302.00	0.00	Pass	0.70	0.70	0.00	Pass	189753
601.98	601.96	-0.02	Pass	0.70	0.70	0.00	Pass	270034
1033.99	1033.98	-0.01	Pass	0.70	0.69	-0.01	Pass	725126
1633.95	1633.92	-0.03	Pass	0.70	0.70	0.00	Pass	1712815
2233.91	2233.87	-0.04	Pass	0.70	0.73	0.03	Pass	1034669

Analyzer: MS1 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.94	-0.05	Pass	1.20	1.26	0.06	Pass	216385
302.00	301.93	-0.07	Pass	1.20	1.34	0.14	Pass	265040
601.98	601.89	-0.09	Pass	1.20	1.52	0.32	Pass	444237
1033.99	1033.97	-0.02	Pass	1.20	1.61	0.41	Pass	1707855
1633.95	1633.92	-0.03	Pass	1.20	1.45	0.25	Pass	3685288
2233.91	2233.81	-0.10	Pass	1.20	1.29	0.09	Pass	3864609

Analyzer: MS2 Polarity: Negative Width: Wide

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.10	0.10	Pass	1.20	1.04	-0.16	Pass	40674
112.99	112.99	0.00	Pass	1.20	1.23	0.03	Pass	188083
302.00	301.97	-0.03	Pass	1.20	1.21	0.01	Pass	253355
601.98	601.96	-0.02	Pass	1.20	1.32	0.12	Pass	393860
1033.99	1033.94	-0.05	Pass	1.20	1.31	0.11	Pass	1364499
1633.95	1633.91	-0.04	Pass	1.20	1.25	0.05	Pass	3897117
2233.91	2233.97	0.06	Pass	1.20	1.22	0.02	Pass	2949076

Analyzer: MS1 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
112.99	112.83	-0.16	Pass	2.50	2.72	0.22	Pass	290485
302.00	301.68	-0.32	Pass	2.50	2.79	0.29	Pass	364034
601.98	601.84	-0.14	Pass	2.50	2.86	0.36	Pass	631634
1033.99	1033.88	-0.11	Pass	2.50	2.89	0.39	Pass	2988446
1633.95	1633.86	-0.09	Pass	2.50	2.80	0.30	Pass	7000748
2233.91	2233.83	-0.08	Pass	2.50	2.94	0.44	Pass	6900751

Analyzer: MS2 Polarity: Negative Width: Widest

m/z Expected	m/z Measured	Delta	Result	FWHM Expected	FWHM Measured	Delta	Result	Abundance
69.00	69.08	0.08	Pass	2.50	2.35	-0.15	Pass	48379
112.99	112.97	-0.02	Pass	2.50	2.49	-0.01	Pass	271702
302.00	301.94	-0.06	Pass	2.50	2.55	0.05	Pass	311214
601.98	601.97	-0.01	Pass	2.50	2.63	0.13	Pass	557538
1033.99	1033.98	-0.01	Pass	2.50	2.61	0.11	Pass	2424476
1633.95	1633.89	-0.06	Pass	2.50	2.72	0.22	Pass	7289308
2233.91	2233.74	-0.17	Pass	2.50	2.65	0.15	Pass	7395237



**BUREAU
VERITAS**

5. Initial Calibration

**Bureau Veritas Canada (2019)
Inc.
6740 Campobello Rd.
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.bvlabs.com**

Quantitative Analysis Report

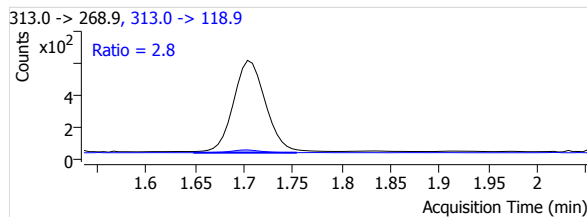
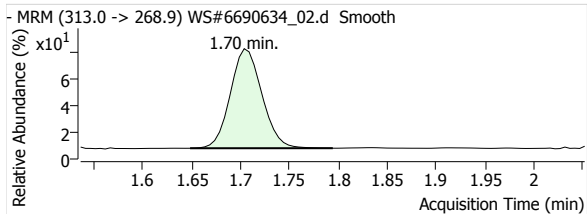
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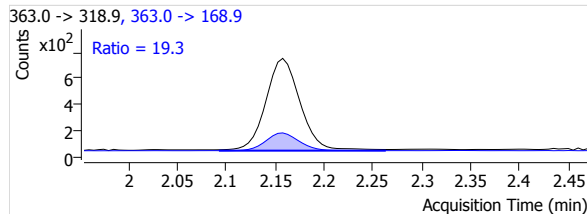
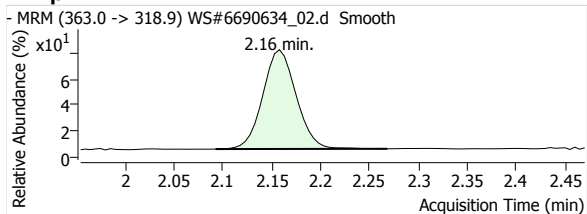
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PFHxA 1	µg/L	0.830	0.7530	90.7	1267	1.70	3865	0.1694	36	1.70	166	2.8
PFHpA 1	µg/L	0.830	0.7582	91.3	1654	2.16	13597	0.1613	320	2.16	2949	19.3
PFOA 1	µg/L	0.830	0.7554	91.0	1575	2.63	1896	0.1573	387	2.63	2498	24.6
PFNA 1	µg/L	0.830	0.7543	90.9	1335	3.07	932	0.1698	288	3.07	6654	21.6
PFDA 1	µg/L	0.830	0.7697	92.7	1378	3.47	2744	0.2060	223	3.46	2977	16.2
PFUnA 1	µg/L	0.830	0.7584	91.4	1336	3.80	4028	0.1665	192	3.80	1100	14.4
PFDoA 1	µg/L	0.830	0.7881	95.0	1509	4.11	622	0.1468	181	4.11	5402	12.0
PFTeDA 1	µg/L	0.830	0.7255	87.4	1959	4.37	6727	0.1509	133	4.37	2232	6.8
PFTeDA 1	µg/L	0.830	0.7478	90.1	2044	4.60	2554	0.1575	105	4.60	2856	5.1
PFBS 1	µg/L	0.830	0.7514	90.5	241	1.36	3575	0.1521	116	1.36	237	48.1
PFHxS 1	µg/L	0.830	0.7610	91.7	186	2.11	2709	0.1764	101	2.11	1690	54.1
PFOS 1	µg/L	0.830	0.7293	87.9	153	2.90	9405	0.1565	82	2.89	7147	53.7
MeFOSA 1	µg/L	0.830	0.7889	95.0	161	5.21	21	0.0646	154	5.21	125	95.7
EtFOSA 1	µg/L	0.830	0.8059	97.1	172	5.33	15	0.0776	155	5.33	115	90.1
13C2-PFHxA	µg/L	100.000	106.4636	106.5	7478	1.70	1775		--	--	--	--
13C4-PFHpA	µg/L	100.000	106.0838	106.1	10253	2.16	1756		--	--	--	--
13C4-PFOA	µg/L	100.000	103.9440	103.9	10015	2.63	1394		--	--	--	--
13C5-PFNA	µg/L	100.000	103.9397	103.9	7862	3.07	1578		--	--	--	--
13C2-PFDA	µg/L	100.000	102.3099	102.3	6688	3.47	954		--	--	--	--
13C2-PFUnA	µg/L	100.000	103.1487	103.1	8026	3.81	1329		--	--	--	--
13C2-PFDoA	µg/L	100.000	101.6411	101.6	10281	4.11	1139		--	--	--	--
13C2-PFTeDA	µg/L	100.000	103.5088	103.5	12980	4.60	1818		--	--	--	--
13C3-PFBS	µg/L	100.000	102.6572	102.7	1584	1.36	535		--	--	--	--
18O2-PFHxS	µg/L	100.000	103.9370	103.9	1056	2.11	537		--	--	--	--
13C4-PFOS	µg/L	100.000	101.4538	101.5	977	2.95	514		--	--	--	--
D3-MeFOSA	µg/L	100.000	102.5504	102.6	2493	5.21	141		--	--	--	--
D5-EtFOSA	µg/L	100.000	105.9245	105.9	2217	5.33	183		--	--	--	--

PFHxA 1

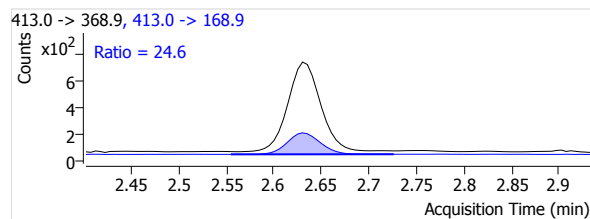
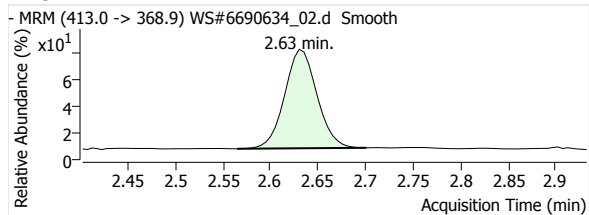


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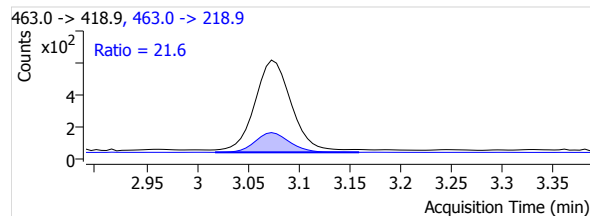
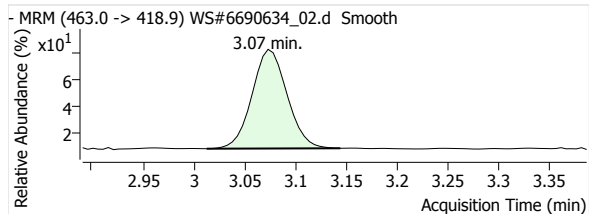


Quantitative Analysis Report

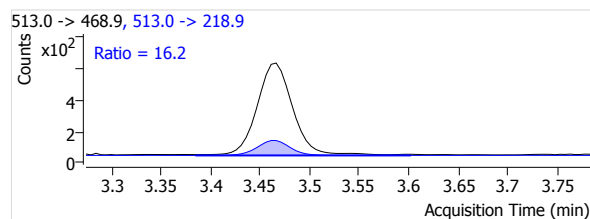
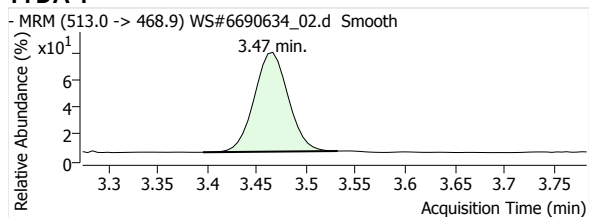
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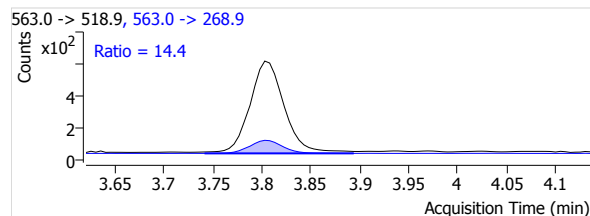
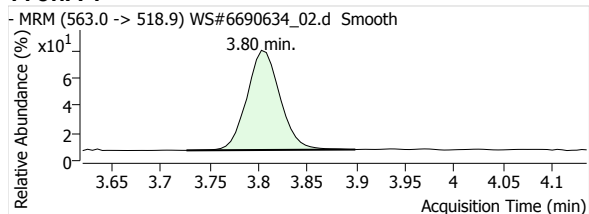
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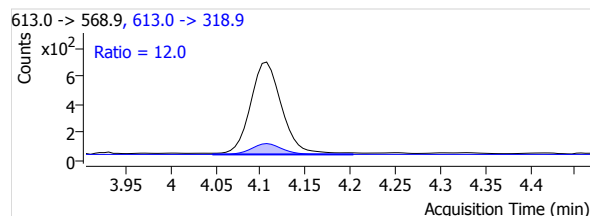
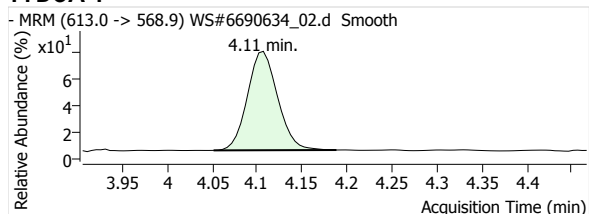
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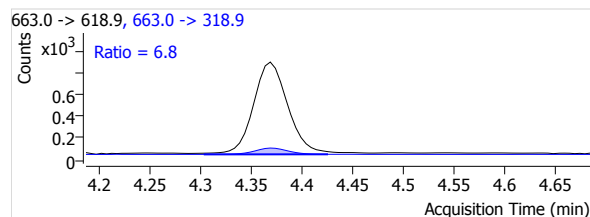
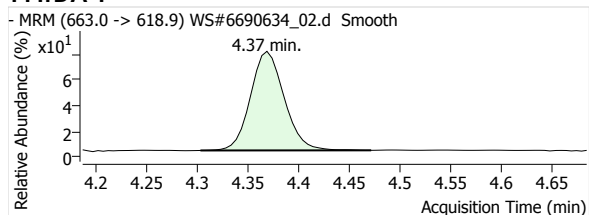
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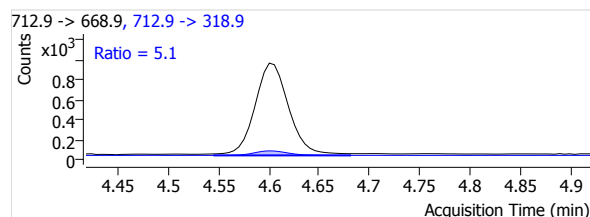
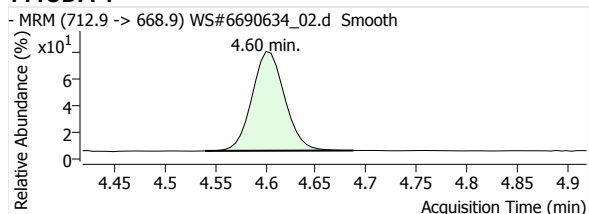
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PFTrDA 1

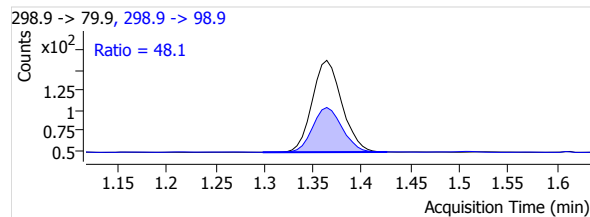
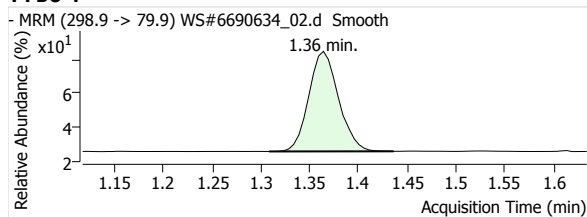


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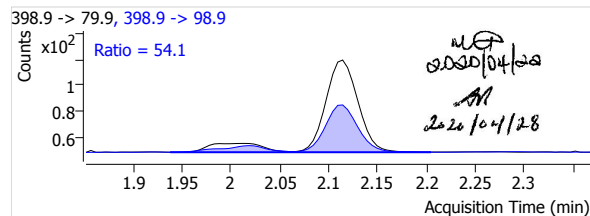
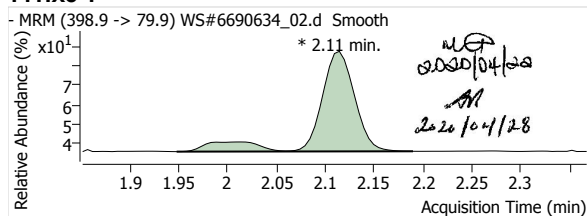


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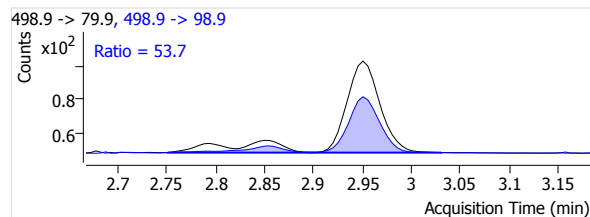
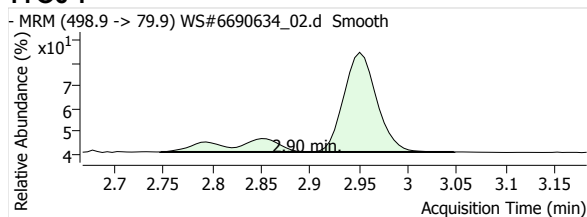
PFBS 1



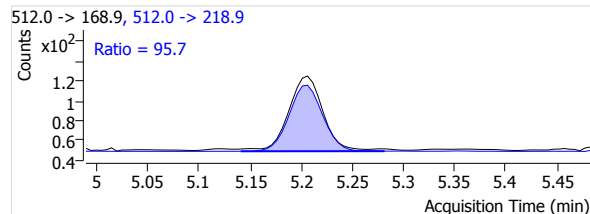
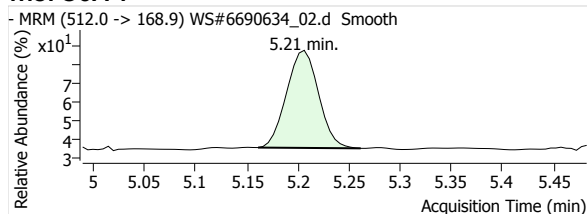
PFHxS 1



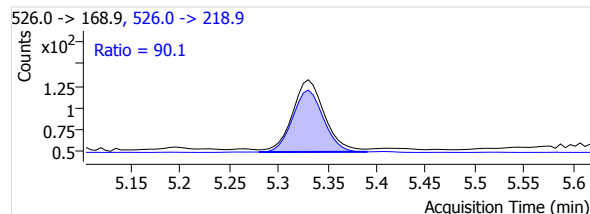
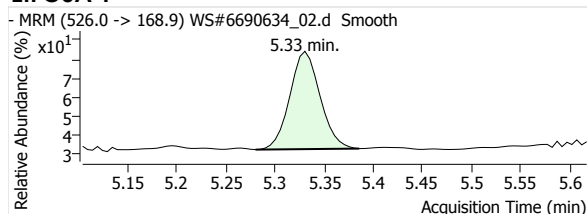
PFOS 1



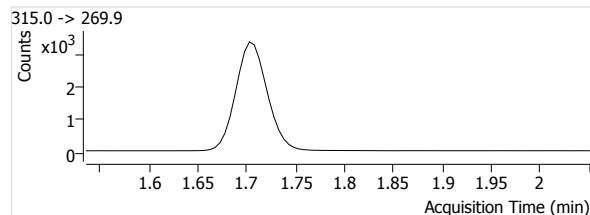
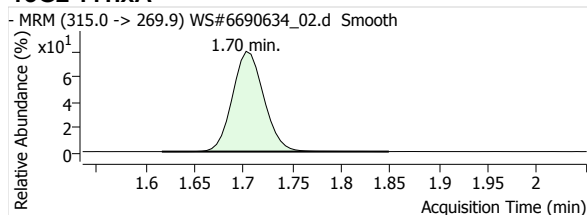
MeFOSA 1



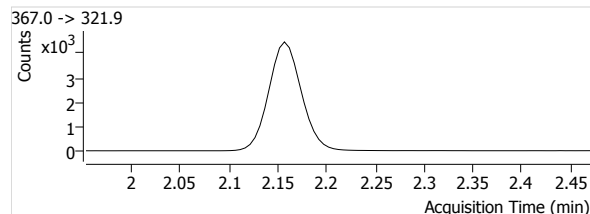
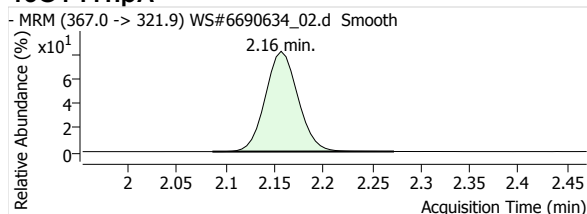
eFOSA 1



13C2-PFHxA

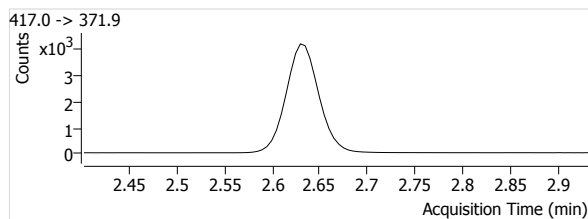
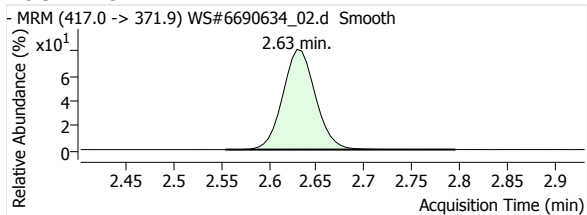


13C4-PFHpA

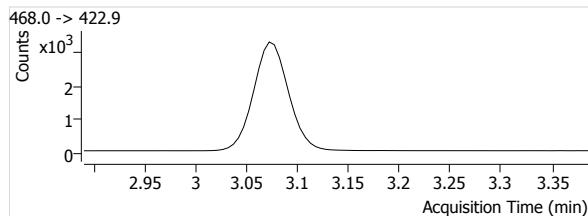
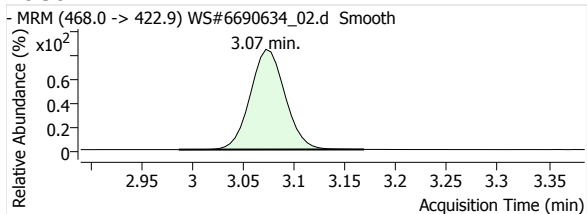


Quantitative Analysis Report

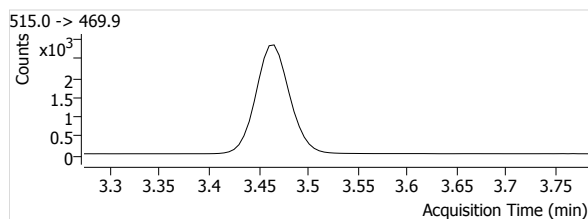
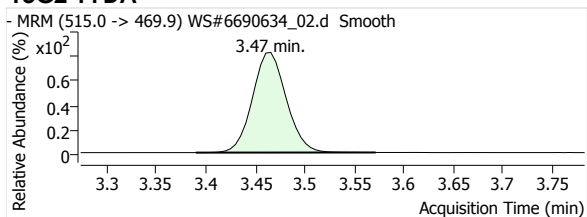
13C4-PFOA



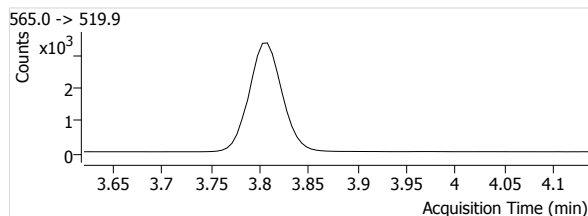
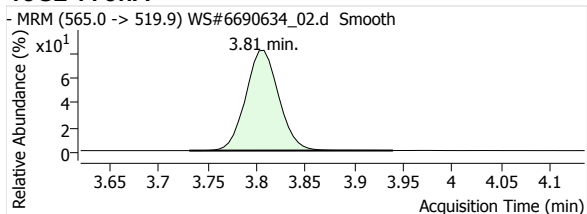
13C5-PFNA



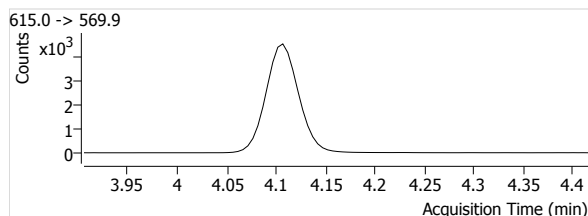
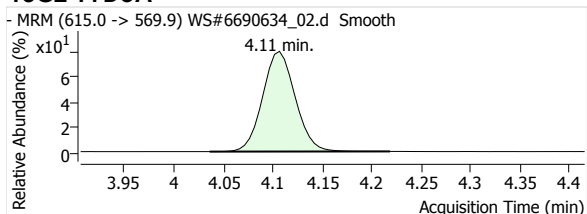
13C2-PFDA



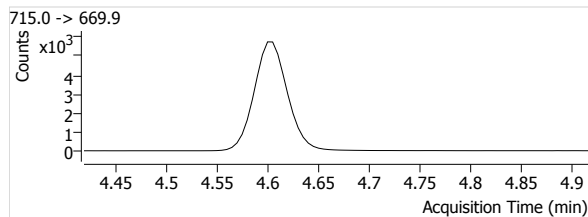
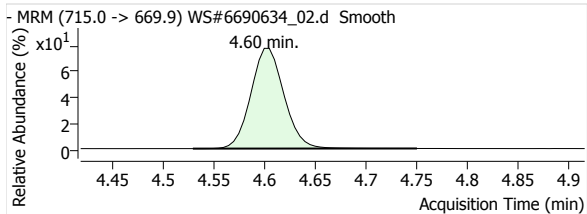
13C2-PFUnA



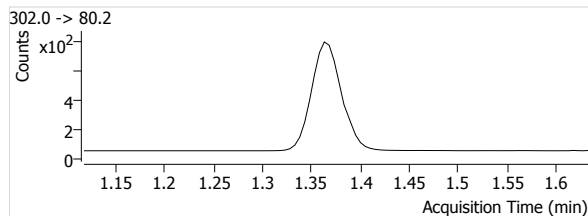
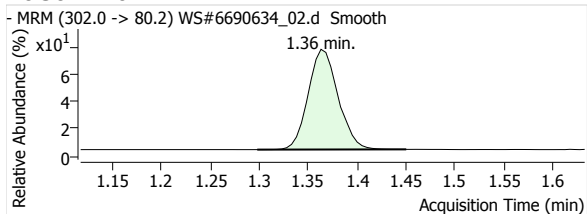
13C2-PFDoA



13C2-PFTeDA

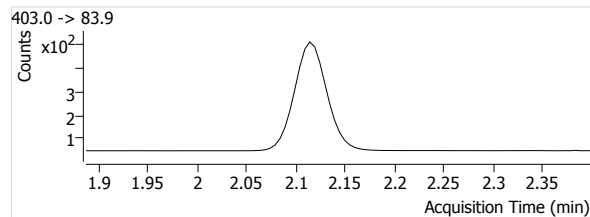
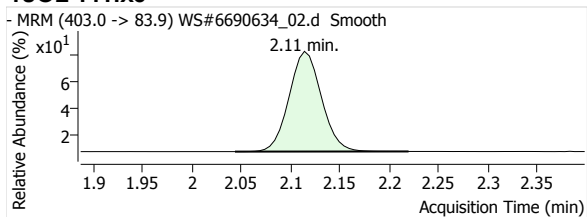


13C3-PFBS

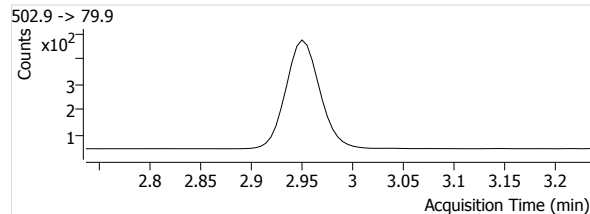
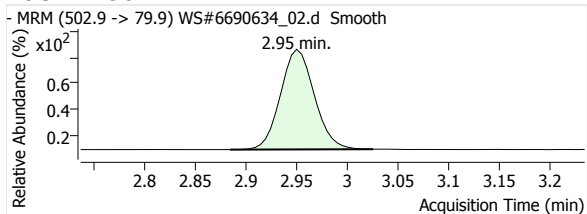


Quantitative Analysis Report

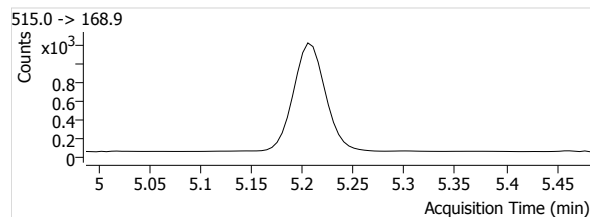
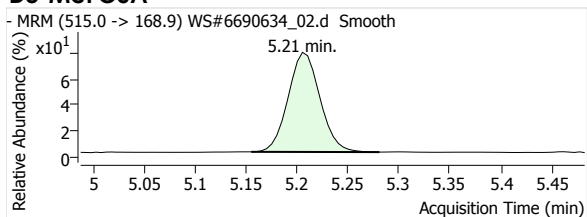
18O2-PFHxs



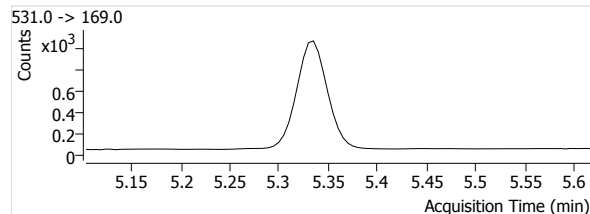
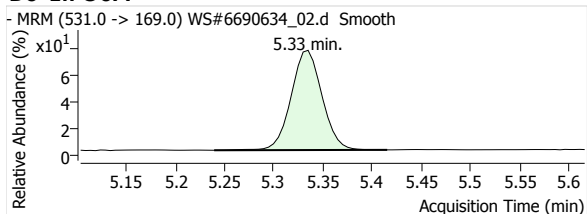
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



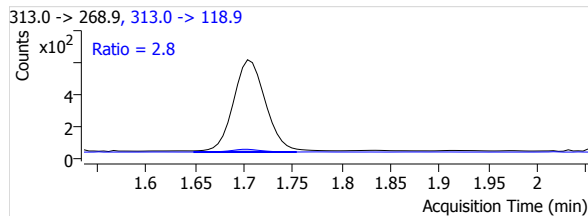
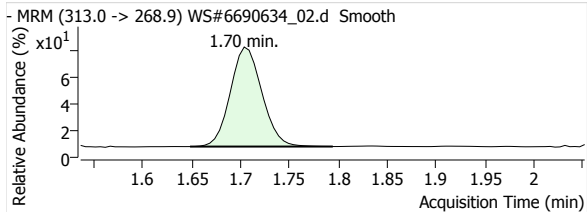
Quantitative Analysis Report

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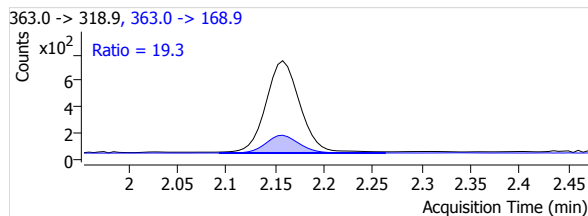
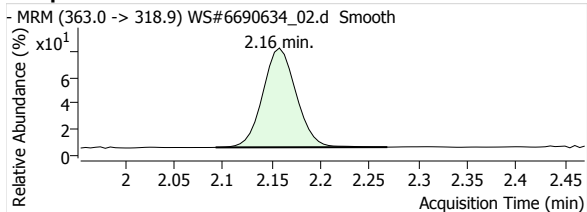
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Type	Calibration	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-A2
Acq. Date-Time	2020/04/21 10:07:29 PM	Dil.	1.0
Comment	-		
User Defined	MI PFHxS		

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	0.830	0.7530	90.7	1267	1.70	3865	0.1694	36	1.70	166	2.8
PFHpA 1	µg/L	0.830	0.7582	91.3	1654	2.16	13597	0.1613	320	2.16	2949	19.3
PFOA 1	µg/L	0.830	0.7554	91.0	1575	2.63	1896	0.1573	387	2.63	2498	24.6
PFNA 1	µg/L	0.830	0.7543	90.9	1335	3.07	932	0.1698	288	3.07	6654	21.6
PFDA 1	µg/L	0.830	0.7697	92.7	1378	3.47	2744	0.2060	223	3.46	2977	16.2
PFUnA 1	µg/L	0.830	0.7584	91.4	1336	3.80	4028	0.1665	192	3.80	1100	14.4
PFDoA 1	µg/L	0.830	0.7881	95.0	1509	4.11	622	0.1468	181	4.11	5402	12.0
PFTrDA 1	µg/L	0.830	0.7255	87.4	1959	4.37	6727	0.1509	133	4.37	2232	6.8
PFTeDA 1	µg/L	0.830	0.7478	90.1	2044	4.60	2554	0.1575	105	4.60	2856	5.1
PFBS 1	µg/L	0.830	0.7514	90.5	241	1.36	3575	0.1521	116	1.36	237	48.1
PFHxS 1	µg/L	0.830	0.7527	90.7	180	2.08	2653	0.1700	94	2.09	1682	52.6
PFOS 1	µg/L	0.830	0.7293	87.9	153	2.90	9405	0.1565	82	2.89	7147	53.7
MeFOSA 1	µg/L	0.830	0.7889	95.0	161	5.21	21	0.0646	154	5.21	125	95.7
EtFOSA 1	µg/L	0.830	0.8059	97.1	172	5.33	15	0.0776	155	5.33	115	90.1
13C2-PFHxA	µg/L	100.000	106.4636	106.5	7478	1.70	1775		--	--	--	--
13C4-PFHpA	µg/L	100.000	106.0838	106.1	10253	2.16	1756		--	--	--	--
13C4-PFOA	µg/L	100.000	103.9440	103.9	10015	2.63	1394		--	--	--	--
13C5-PFNA	µg/L	100.000	103.9397	103.9	7862	3.07	1578		--	--	--	--
13C2-PFDA	µg/L	100.000	102.3099	102.3	6688	3.47	954		--	--	--	--
13C2-PFUnA	µg/L	100.000	103.1487	103.1	8026	3.81	1329		--	--	--	--
13C2-PFDoA	µg/L	100.000	101.6411	101.6	10281	4.11	1139		--	--	--	--
13C2-PFTeDA	µg/L	100.000	103.5088	103.5	12980	4.60	1818		--	--	--	--
13C3-PFBS	µg/L	100.000	102.6572	102.7	1584	1.36	535		--	--	--	--
18O2-PFHxS	µg/L	100.000	103.9370	103.9	1056	2.11	537		--	--	--	--
13C4-PFOS	µg/L	100.000	101.4538	101.5	977	2.95	514		--	--	--	--
D3-MeFOSA	µg/L	100.000	102.5504	102.6	2493	5.21	141		--	--	--	--
D5-EtFOSA	µg/L	100.000	105.9245	105.9	2217	5.33	183		--	--	--	--

PFHxA 1

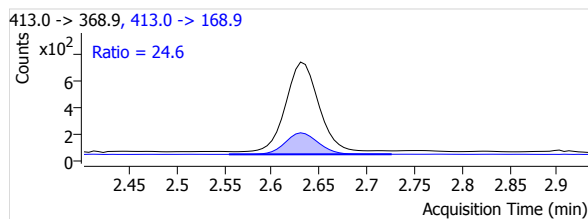
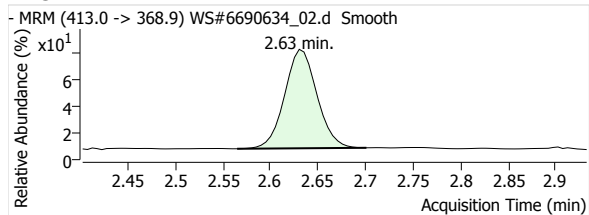


PFHpA 1

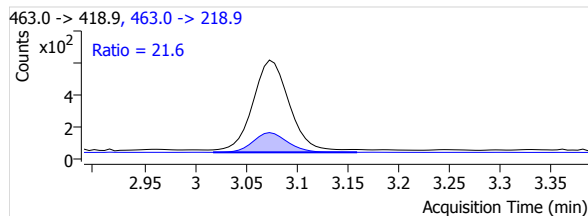
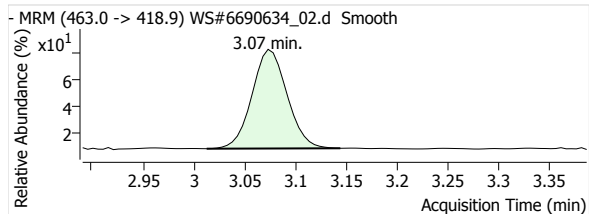


Quantitative Analysis Report

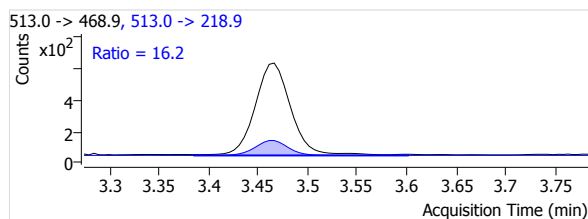
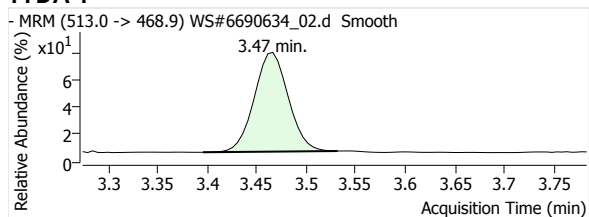
PFOA 1



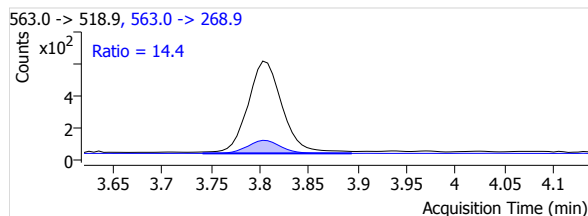
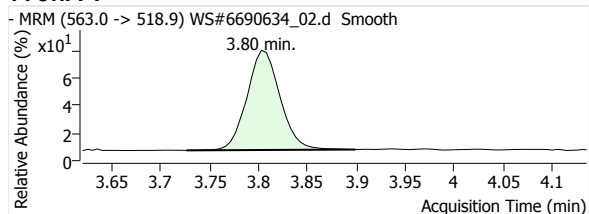
PFNA 1



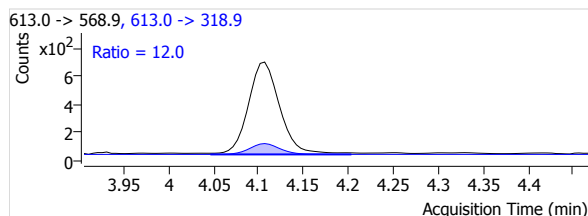
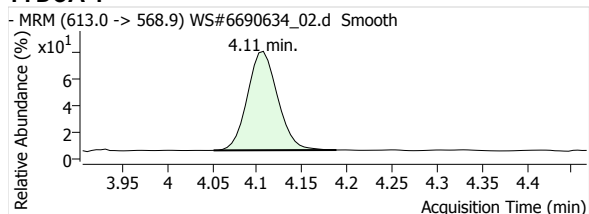
PFDA 1



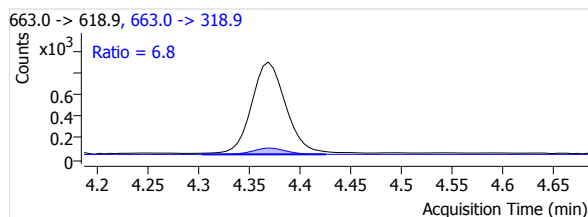
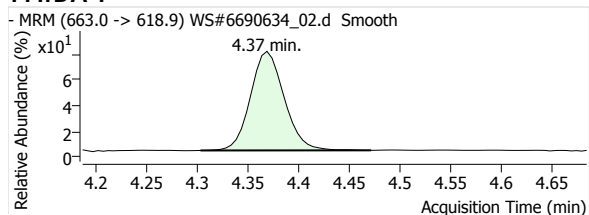
PFUnA 1



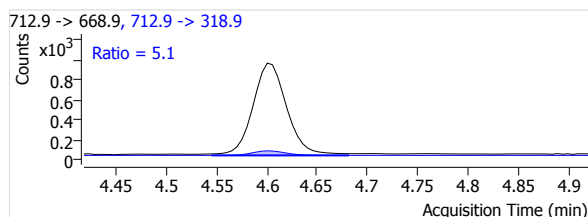
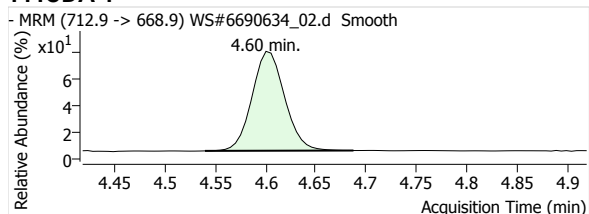
PFDaA 1



PFTrDA 1

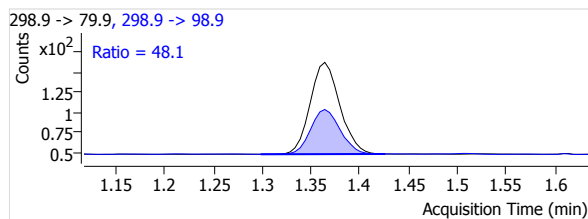
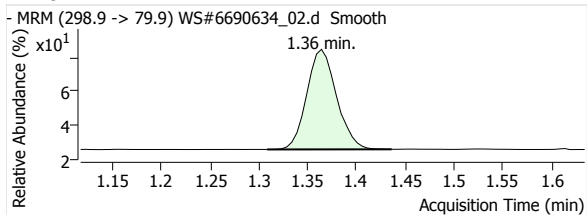


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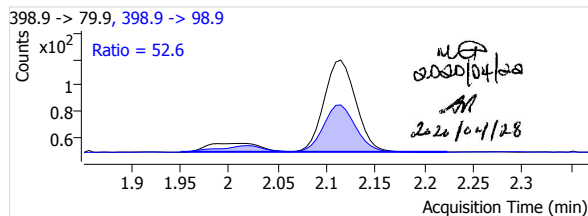
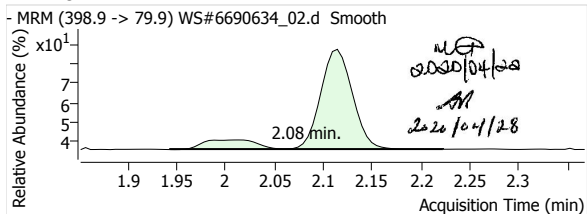


Quantitative Analysis Report

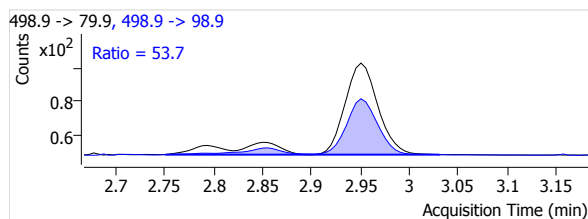
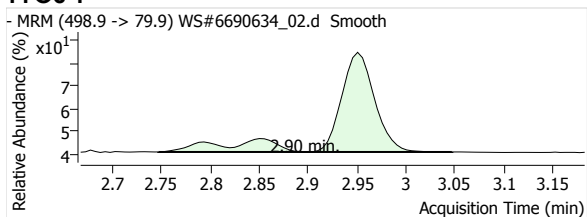
PFBS 1



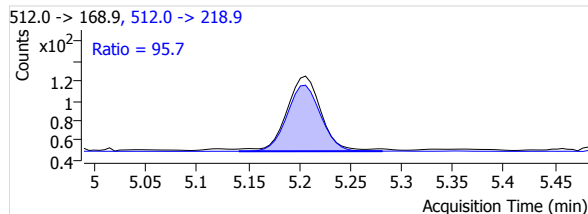
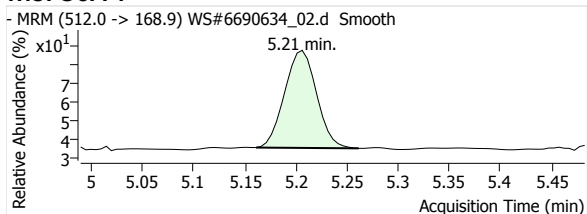
PFHxS 1



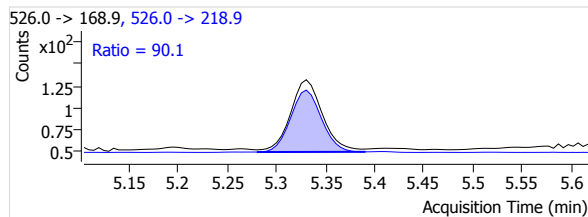
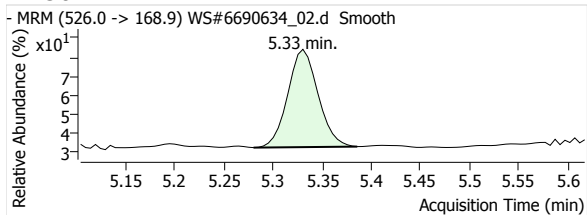
PFOS 1



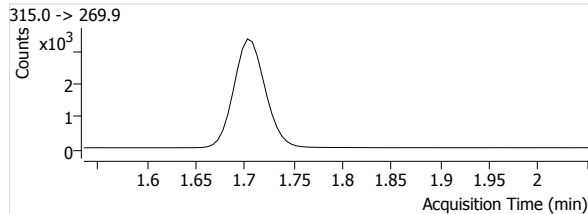
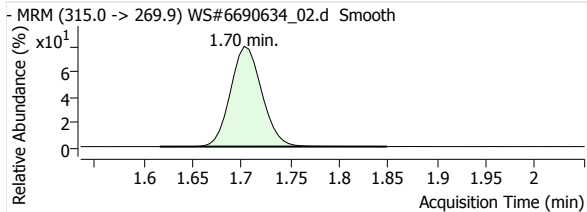
MeFOSA 1



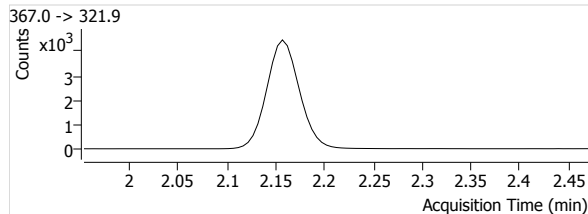
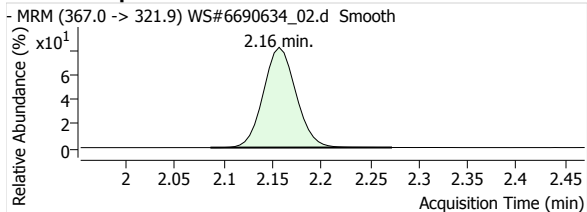
eFOSA 1



13C2-PFHxA

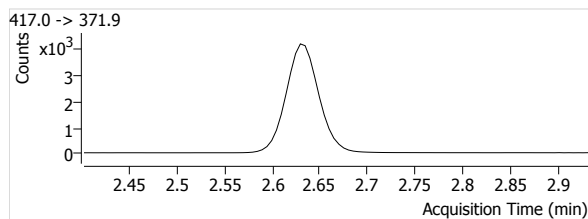
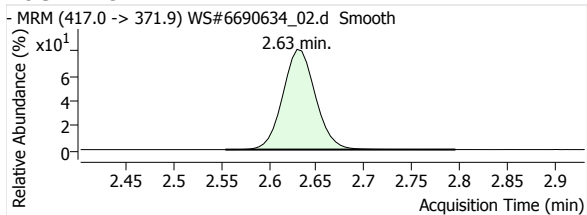


13C4-PFHpA

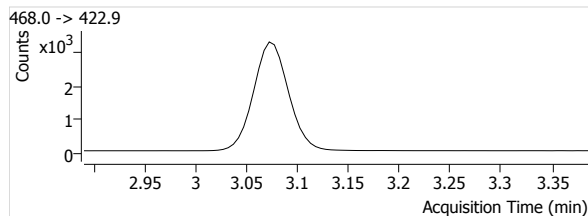
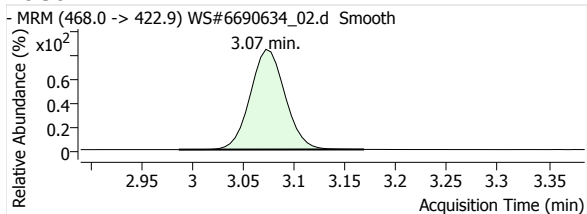


Quantitative Analysis Report

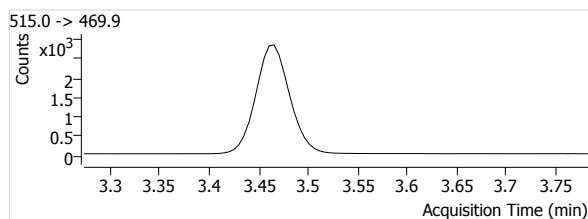
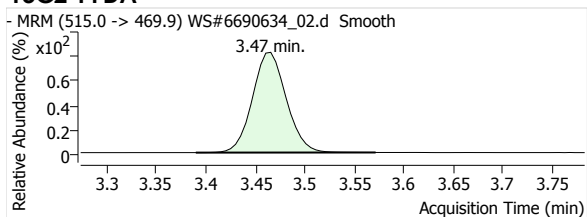
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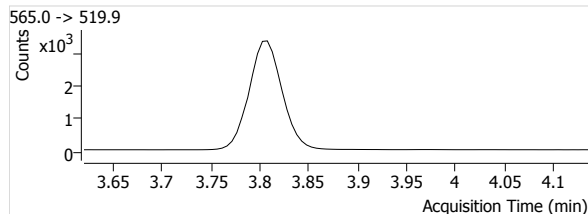
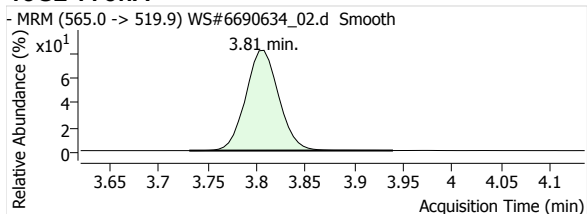
13C5-PFNA



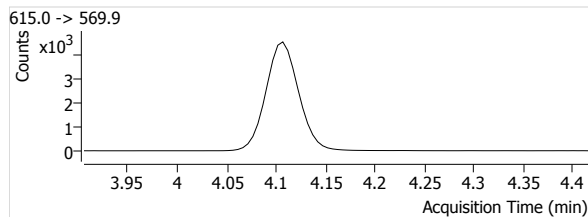
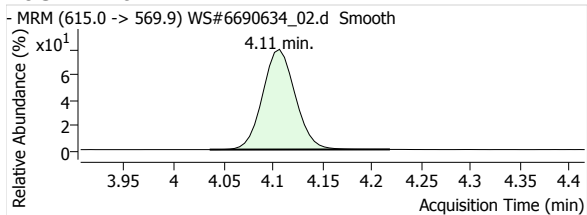
13C2-PFDA



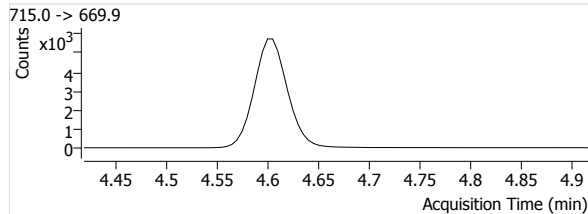
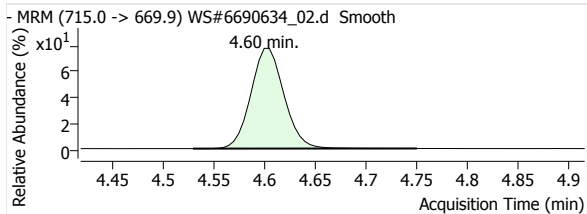
13C2-PFUnA



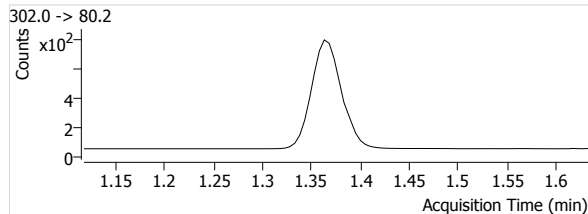
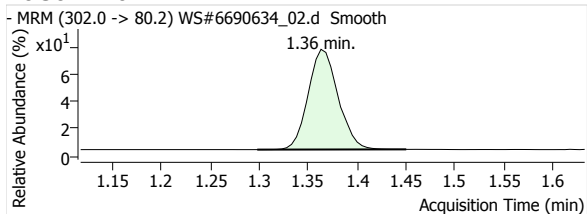
13C2-PFDoA



13C2-PFTeDA

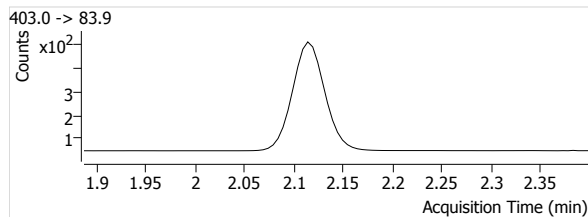
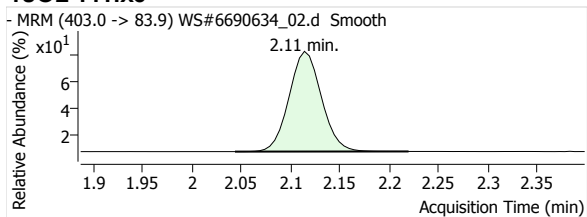


13C3-PFBS

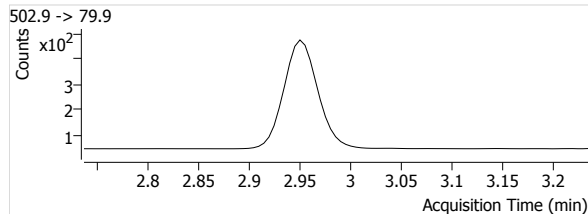
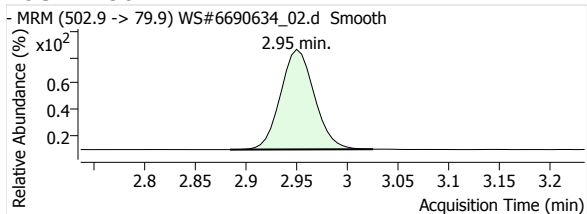


Quantitative Analysis Report

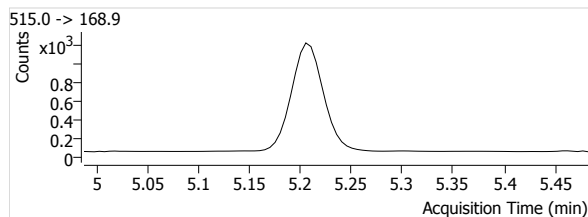
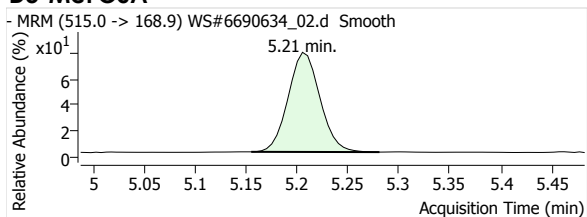
18O2-PFHxs



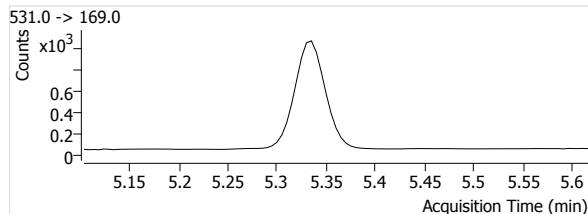
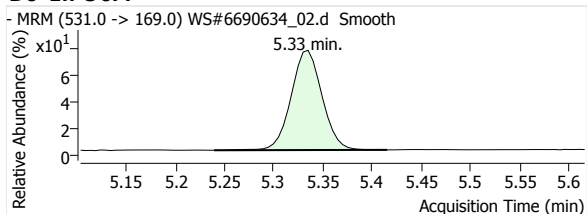
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

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bin

Sample Name
Type
Acq. Method File
Acq. Date-Time
Comment
User Defined

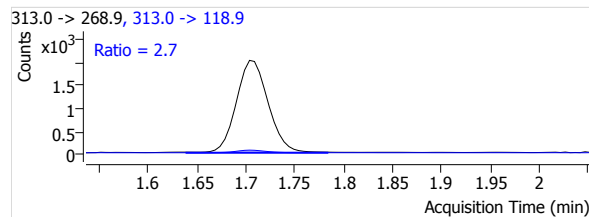
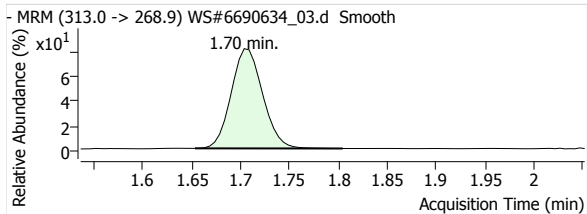
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Calibration
PFAS.m
2020/04/21 10:14:24 PM
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Data File
Instrument
Position
Dil.

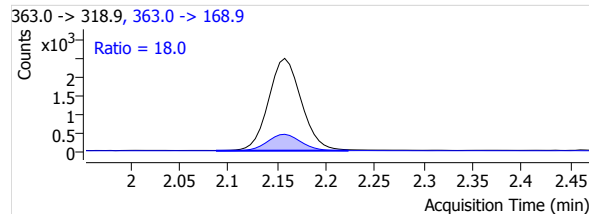
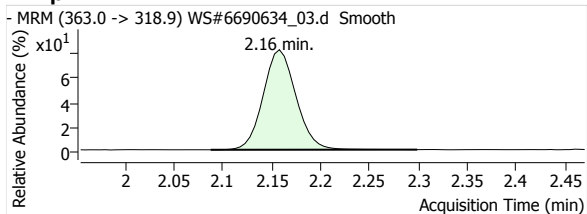
WS#6690634_03.d
LCMS04
P1-A3
1.0

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PFHxA 1	µg/L	3.000	3.3003	110.0	4435	1.70	3367	0.6217	120	1.70	832	2.7
PFHpA 1	µg/L	3.000	3.3591	112.0	5693	2.16	8843	0.5906	1027	2.16	8203	18.0
PFOA 1	µg/L	3.000	3.3918	113.1	5533	2.64	5540	0.5960	1306	2.63	46911	23.6
PFNA 1	µg/L	3.000	3.3790	112.6	4544	3.07	6022	0.6122	928	3.07	36620	20.4
PFDA 1	µg/L	3.000	3.3119	110.4	4653	3.47	10644	0.7192	781	3.46	9851	16.8
PFUnA 1	µg/L	3.000	3.3678	112.3	4457	3.80	38557	0.5883	657	3.80	37821	14.7
PFDoA 1	µg/L	3.000	3.3297	111.0	5105	4.11	2576	0.5257	626	4.11	1403	12.3
PFTrDA 1	µg/L	3.000	3.4691	115.6	6605	4.37	15732	0.5460	517	4.37	2480	7.8
PFTeDA 1	µg/L	3.000	3.3895	113.0	7007	4.61	16010	0.5792	365	4.61	4481	5.2
PFBS 1	µg/L	3.000	3.3659	112.2	808	1.36	5889	0.5467	374	1.36	5644	46.3
PFHxS 1	µg/L	3.000	3.2946	109.8	623	2.08	2817	0.6135	337	2.09	6801	54.1
PFOS 1	µg/L	3.000	3.4148	113.8	524	2.90	2178	0.5679	293	2.89	7167	55.9
MeFOSA 1	µg/L	3.000	3.2868	109.6	555	5.21	73	0.2358	501	5.21	249	90.3
EtFOSA 1	µg/L	3.000	3.2206	107.4	554	5.33	46	0.2744	530	5.33	295	95.7
13C2-PFHxA	µg/L	100.000	101.5661	101.6	7134	1.70	782		--	--	--	--
13C4-PFHpA	µg/L	100.000	99.7413	99.7	9640	2.16	2048		--	--	--	--
13C4-PFOA	µg/L	100.000	96.3570	96.4	9284	2.63	3322		--	--	--	--
13C5-PFNA	µg/L	100.000	98.1359	98.1	7423	3.08	1201		--	--	--	--
13C2-PFDA	µg/L	100.000	98.9751	99.0	6470	3.47	959		--	--	--	--
13C2-PFUnA	µg/L	100.000	97.3654	97.4	7576	3.81	816		--	--	--	--
13C2-PFDoA	µg/L	100.000	96.0059	96.0	9711	4.11	1356		--	--	--	--
13C2-PFTeDA	µg/L	100.000	96.4753	96.5	12098	4.60	2231		--	--	--	--
13C3-PFBS	µg/L	100.000	95.7874	95.8	1478	1.36	498		--	--	--	--
18O2-PFHxS	µg/L	100.000	99.9016	99.9	1015	2.11	747		--	--	--	--
13C4-PFOS	µg/L	100.000	95.7425	95.7	922	2.95	398		--	--	--	--
D3-MeFOSA	µg/L	100.000	96.8326	96.8	2354	5.21	116		--	--	--	--
D5-EtFOSA	µg/L	100.000	96.4644	96.5	2019	5.33	166		--	--	--	--

PFHxA 1

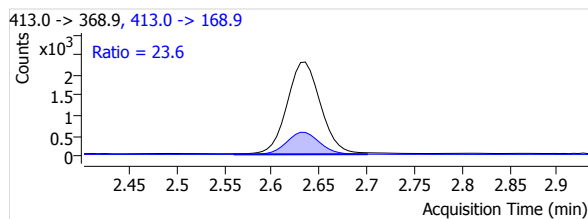
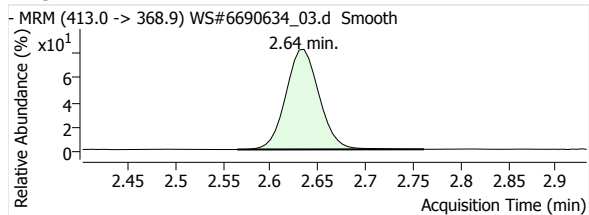


PFHpA 1

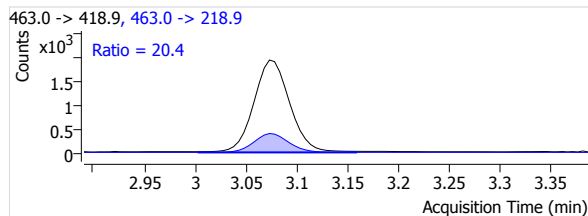
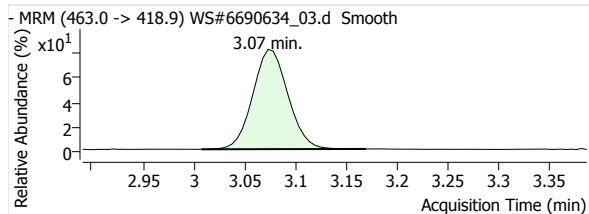


Quantitative Analysis Report

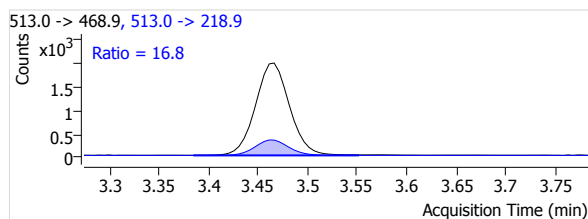
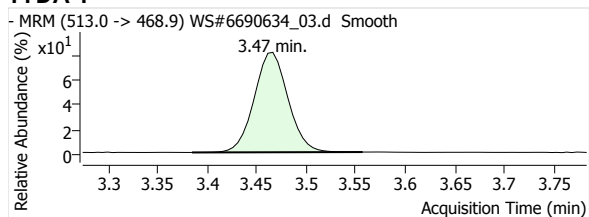
PFOA 1



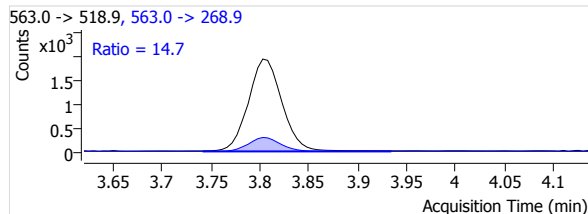
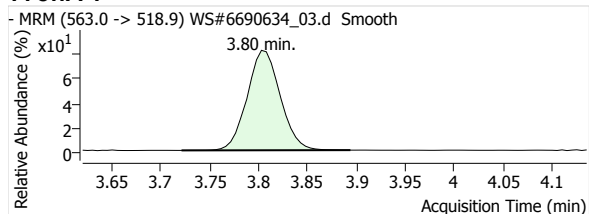
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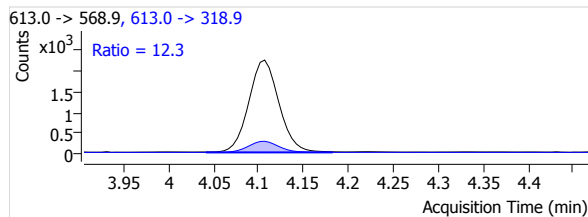
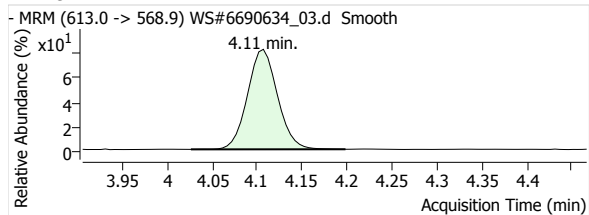
PFDA 1



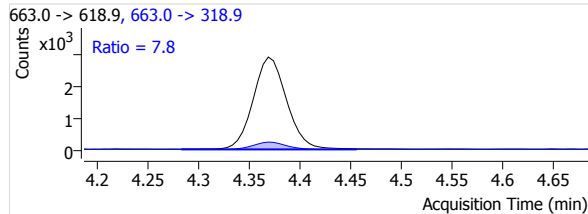
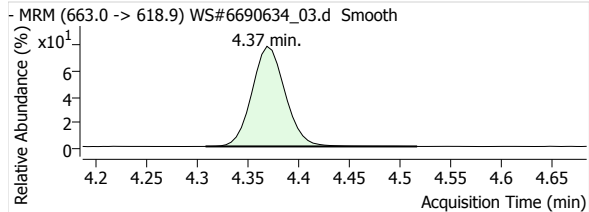
PFUnA 1



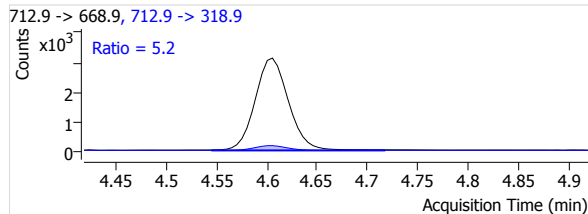
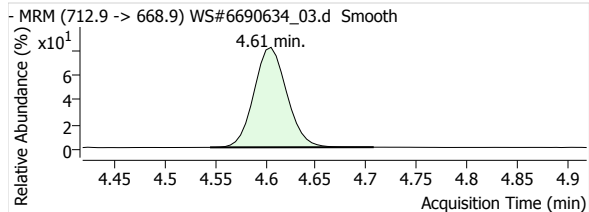
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PFTrDA 1

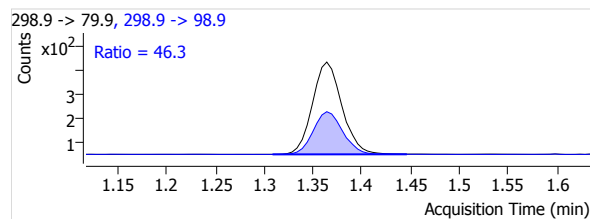
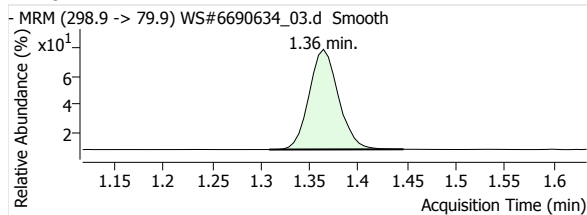


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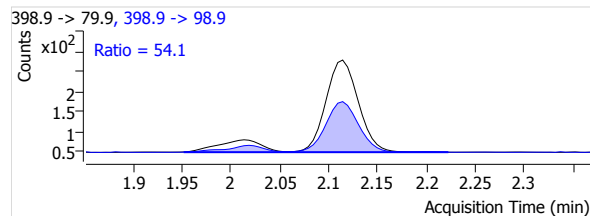
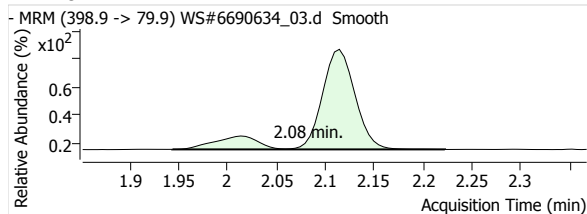


Quantitative Analysis Report

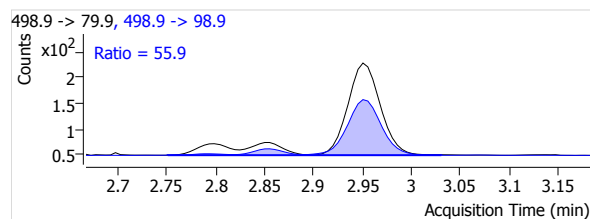
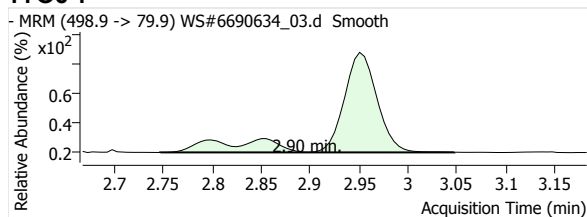
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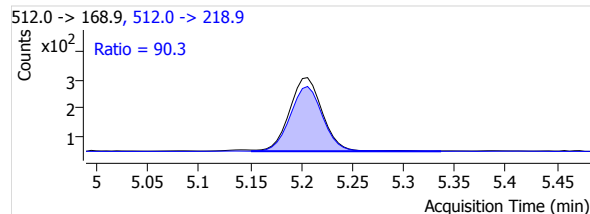
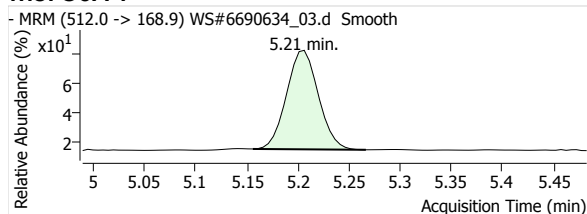
PFHxS 1



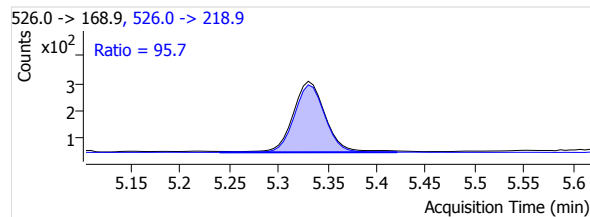
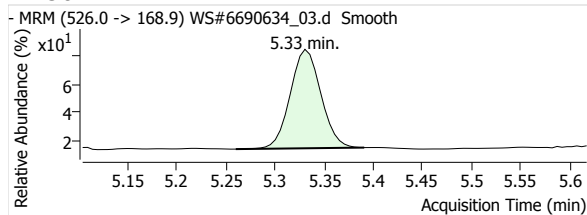
PFOS 1



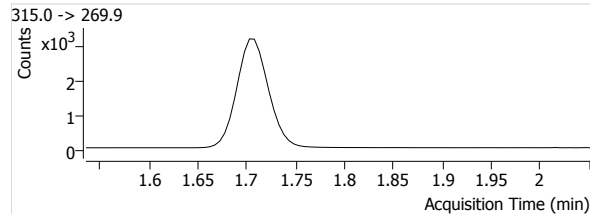
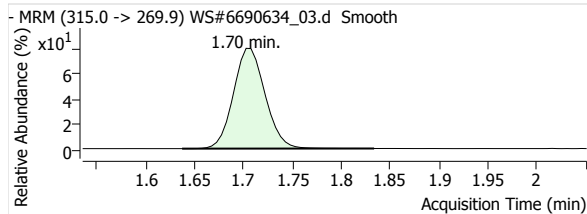
MeFOSA 1



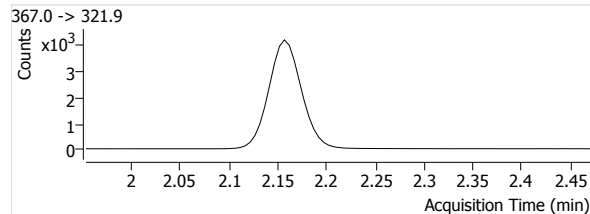
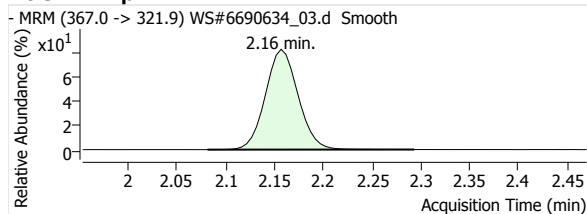
eFOSA 1



13C2-PFHxA

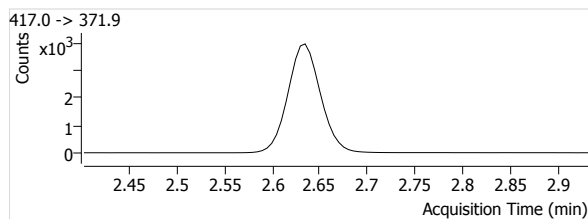
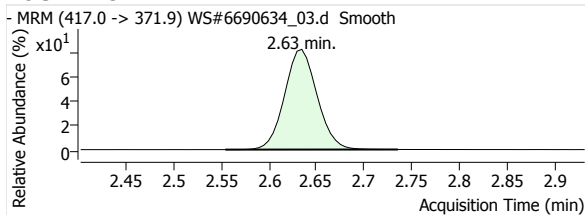


13C4-PFHpA

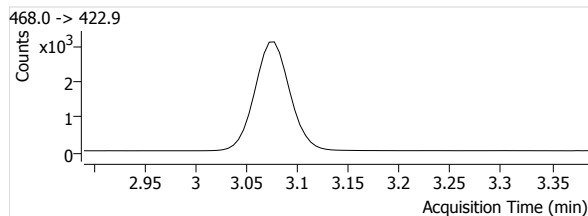
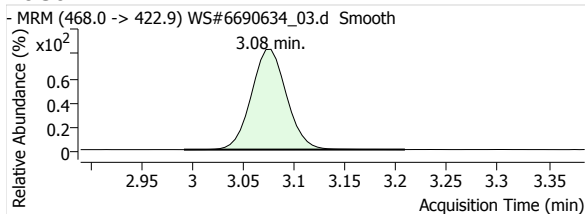


Quantitative Analysis Report

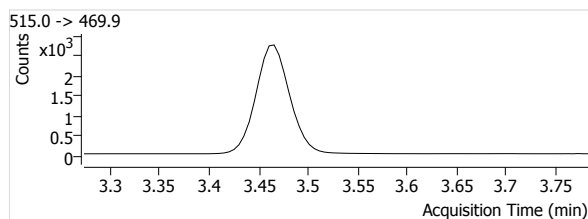
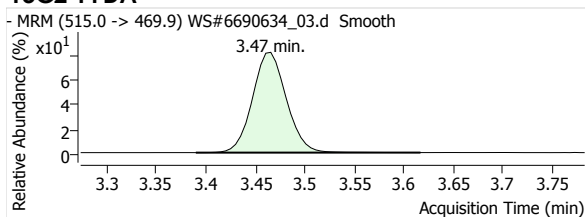
13C4-PFOA



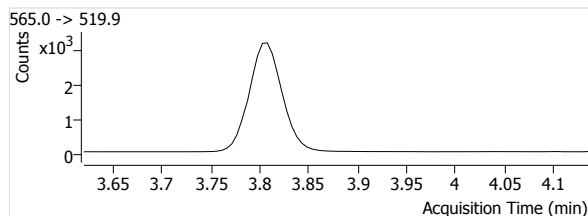
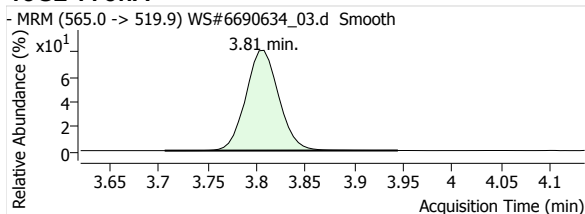
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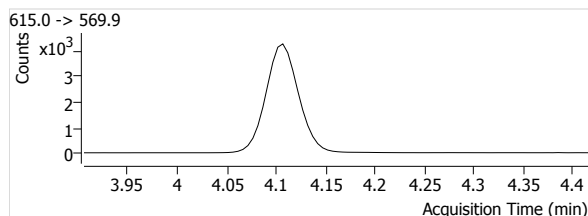
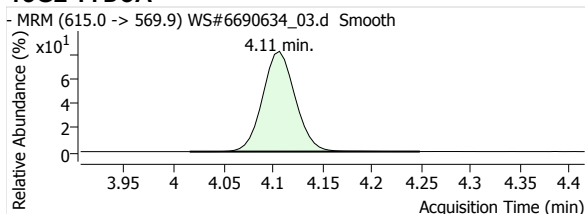
13C2-PFDA



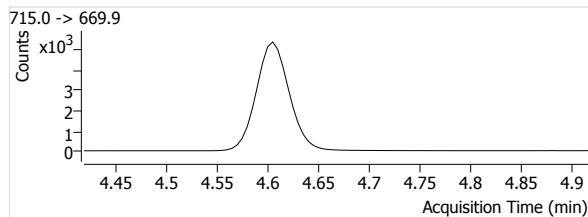
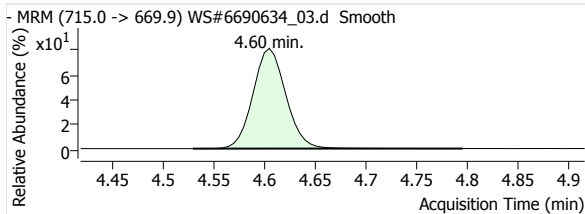
13C2-PFUnA



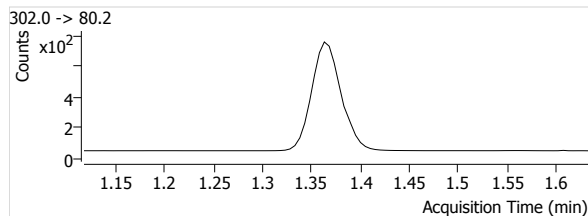
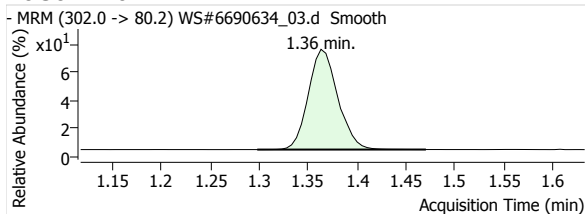
13C2-PFDoA



13C2-PFTeDA

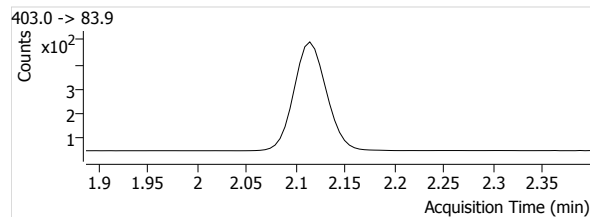
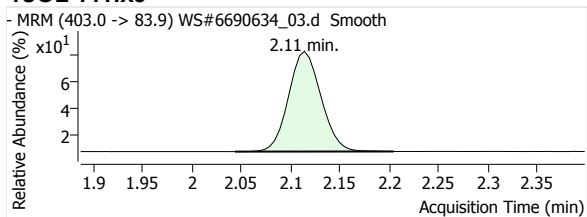


13C3-PFBS

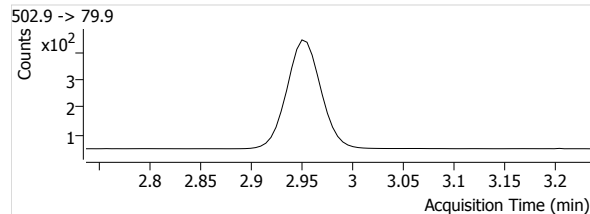
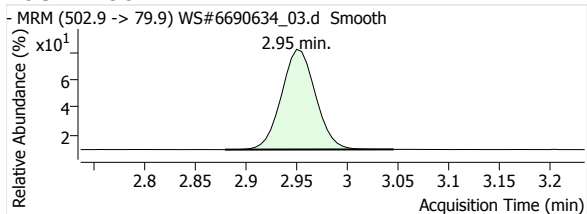


Quantitative Analysis Report

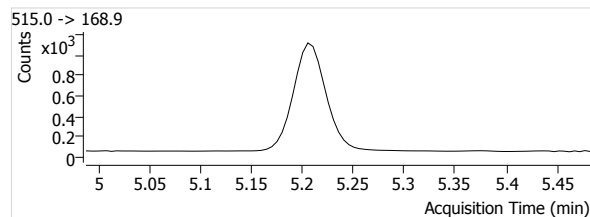
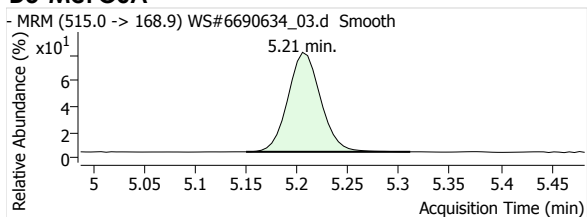
18O2-PFHxS



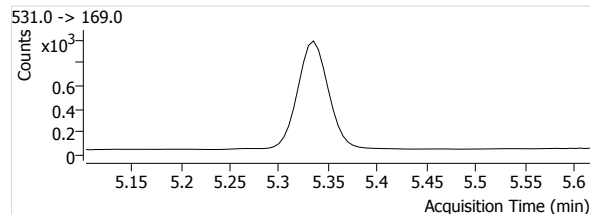
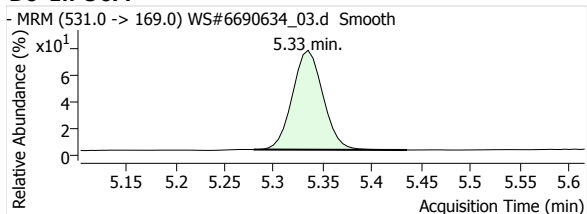
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

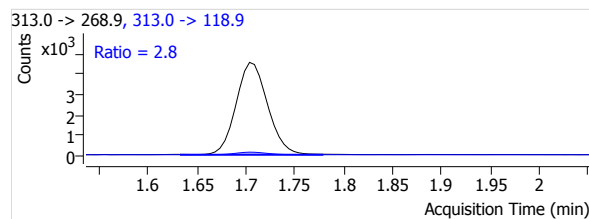
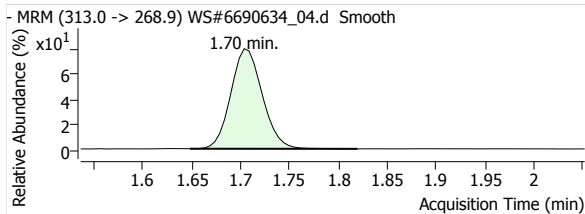
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bin

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Acq. Method File PFAS.m
Acq. Date-Time 2020/04/21 10:21:20 PM
Comment -
User Defined

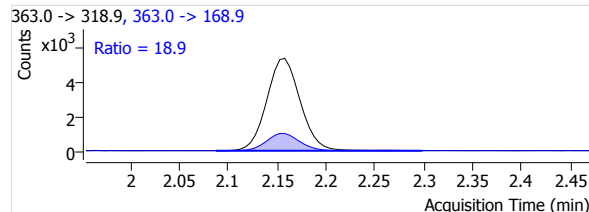
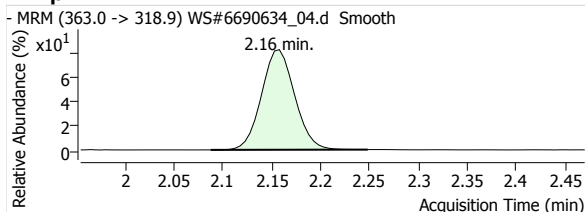
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Instrument LCMS04
Position P1-A4
Dil. 1.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	8.000	7.8795	98.5	10090	1.70	8837	1.4347	287	1.70	1314	2.8
PFHpA 1	µg/L	8.000	7.7904	97.4	12714	2.16	5753	1.3219	2408	2.15	4716	18.9
PFOA 1	µg/L	8.000	7.7083	96.4	12346	2.63	5824	1.3142	3012	2.63	17759	24.4
PFNA 1	µg/L	8.000	7.7885	97.4	10189	3.07	9984	1.3553	2116	3.07	55393	20.8
PFDA 1	µg/L	8.000	7.7711	97.1	10491	3.46	10940	1.6192	1693	3.46	124924	16.1
PFUnA 1	µg/L	8.000	7.7169	96.5	9892	3.80	15303	1.2914	1437	3.80	14391	14.5
PFDoA 1	µg/L	8.000	7.6457	95.6	11453	4.10	9484	1.1692	1371	4.10	26306	12.0
PFTeDA 1	µg/L	8.000	7.8609	98.3	14499	4.37	23174	1.1783	1092	4.37	10273	7.5
PFTeDA 1	µg/L	8.000	7.7945	97.4	15780	4.61	86576	1.2824	780	4.61	54744	4.9
PFBS 1	µg/L	8.000	7.8343	97.9	1862	1.36	16687	1.2210	846	1.36	6319	45.4
PFHxS 1	µg/L	8.000	7.9090	98.9	1476	2.08	38460	1.4097	768	2.09	15739	52.0
PFOS 1	µg/L	8.000	7.9692	99.6	1180	2.90	37902	1.2656	642	2.89	10119	54.5
MeFOSA 1	µg/L	8.000	7.6355	95.4	1295	5.20	100	0.5338	1169	5.21	404	90.3
EtFOSA 1	µg/L	8.000	7.5845	94.8	1303	5.33	88	0.6301	1184	5.33	813	90.9
13C2-PFHxA	µg/L	100.000	100.1281	100.1	7033	1.70	1103		--	--	--	--
13C4-PFHpA	µg/L	100.000	99.5137	99.5	9618	2.16	1434		--	--	--	--
13C4-PFOA	µg/L	100.000	97.4987	97.5	9394	2.63	2339		--	--	--	--
13C5-PFNA	µg/L	100.000	99.3919	99.4	7518	3.07	1062		--	--	--	--
13C2-PFDA	µg/L	100.000	99.1127	99.1	6479	3.46	1387		--	--	--	--
13C2-PFUnA	µg/L	100.000	98.4449	98.4	7660	3.80	829		--	--	--	--
13C2-PFDoA	µg/L	100.000	96.8463	96.8	9796	4.10	1817		--	--	--	--
13C2-PFTeDA	µg/L	100.000	98.1260	98.1	12305	4.60	2886		--	--	--	--
13C3-PFBS	µg/L	100.000	98.8334	98.8	1525	1.37	634		--	--	--	--
18O2-PFHxS	µg/L	100.000	103.0512	103.1	1047	2.11	955		--	--	--	--
13C4-PFOS	µg/L	100.000	96.7809	96.8	932	2.95	629		--	--	--	--
D3-MeFOSA	µg/L	100.000	99.7943	99.8	2426	5.21	120		--	--	--	--
D5-EtFOSA	µg/L	100.000	98.8055	98.8	2068	5.33	110		--	--	--	--

PFHxA 1

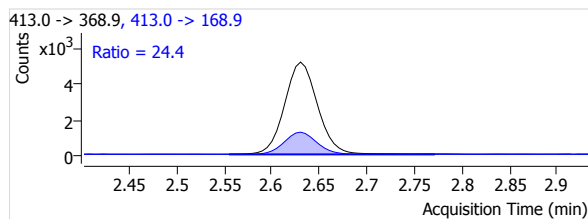
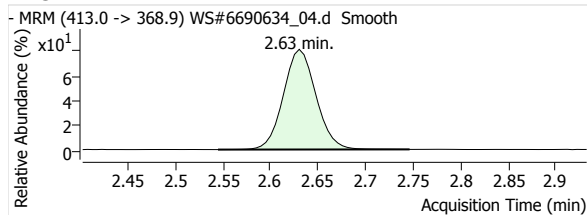


PFHpA 1

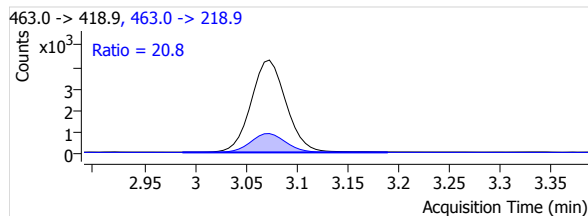
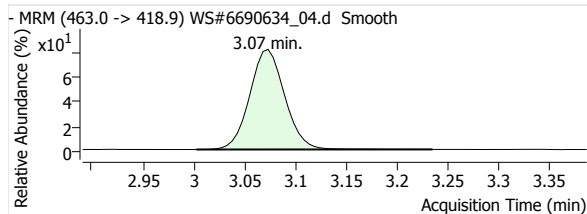


Quantitative Analysis Report

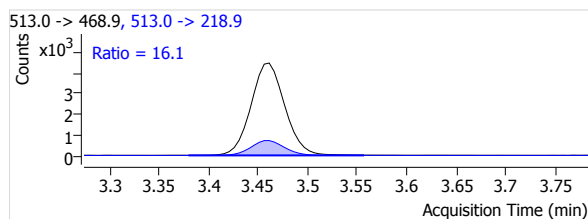
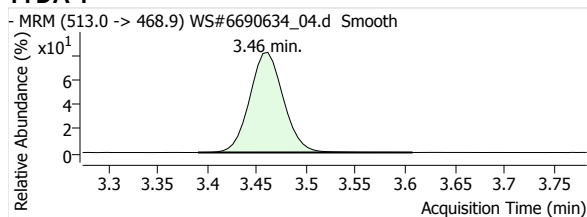
PFOA 1



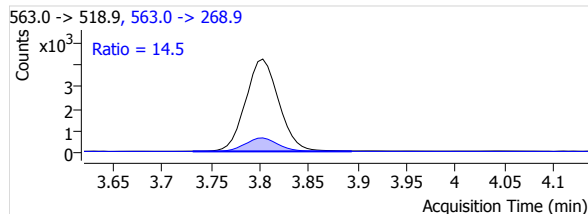
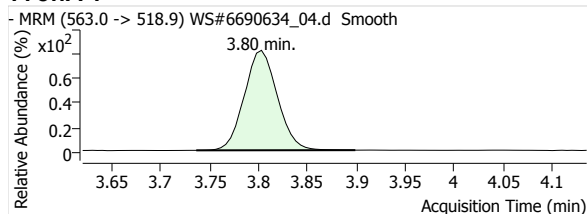
PFNA 1



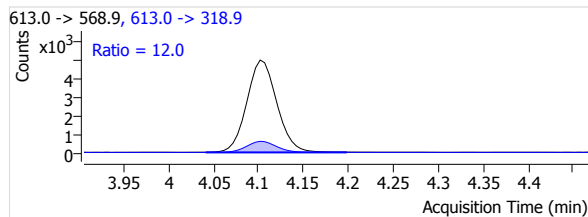
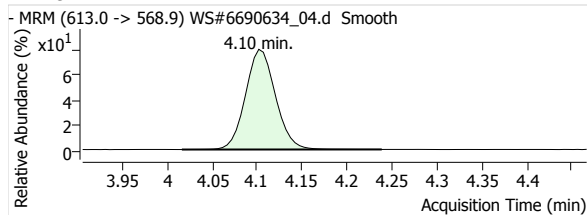
PFDA 1



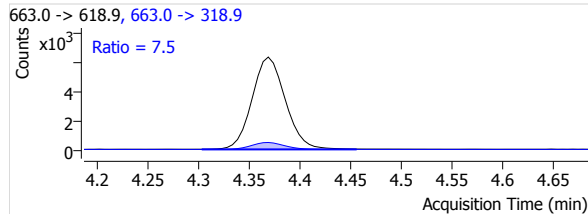
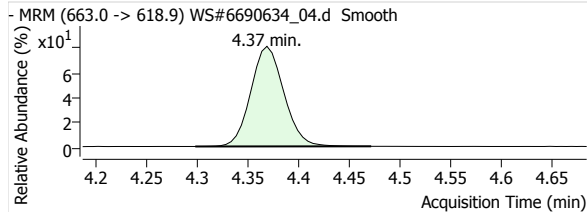
PFUnA 1



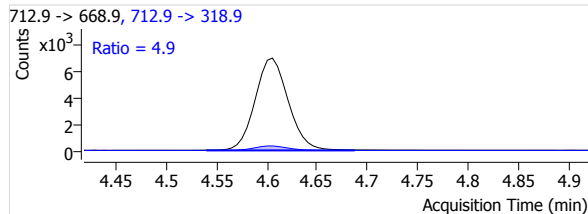
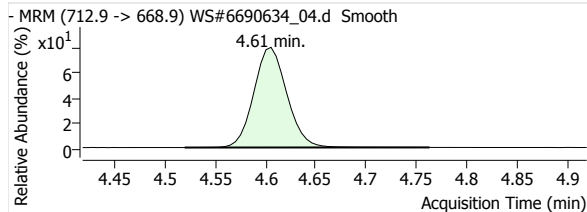
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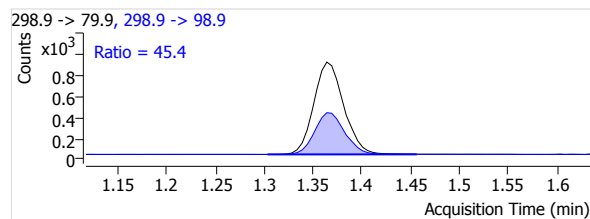
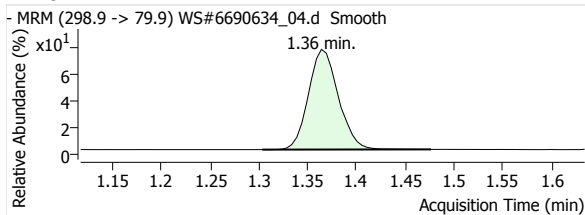


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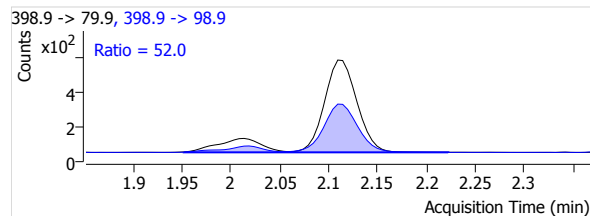
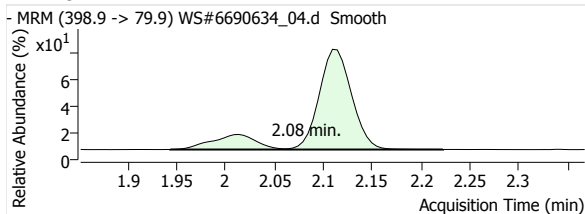


Quantitative Analysis Report

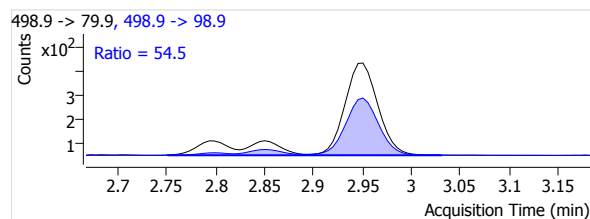
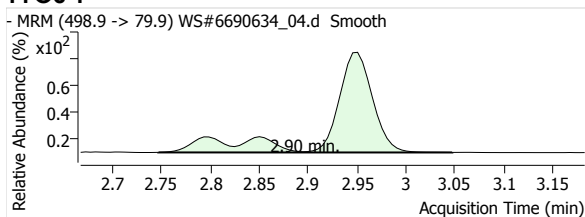
PFBS 1



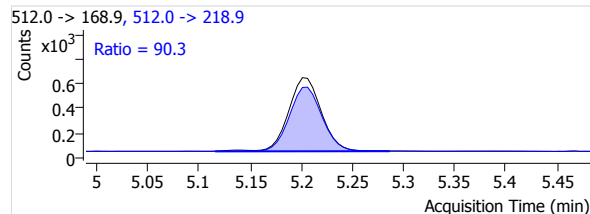
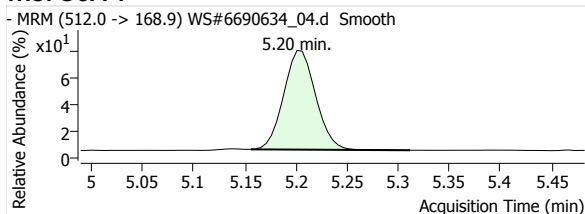
PFHxS 1



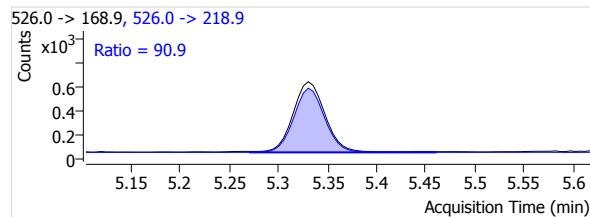
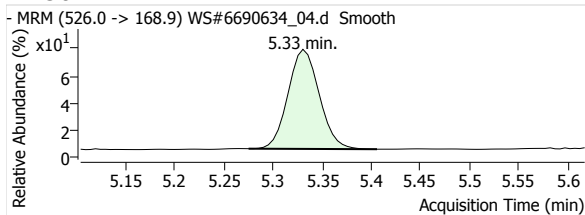
PFOS 1



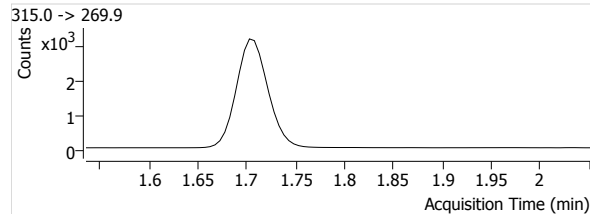
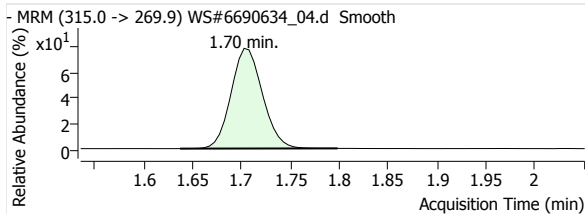
MeFOSA 1



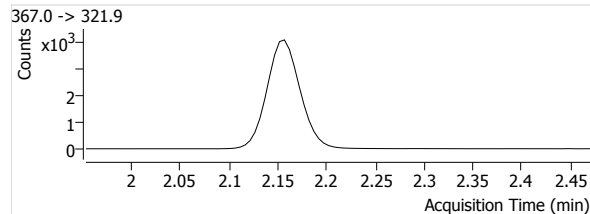
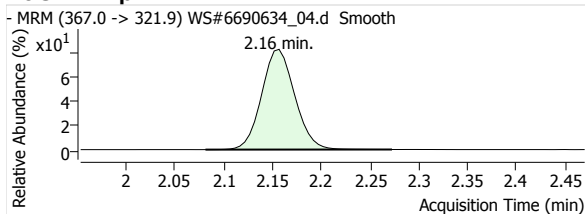
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13C2-PFHxA

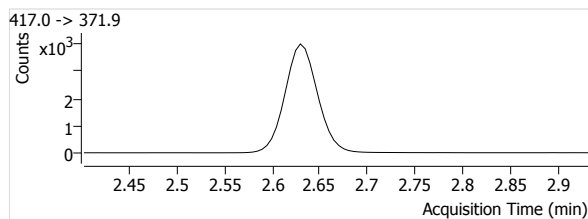
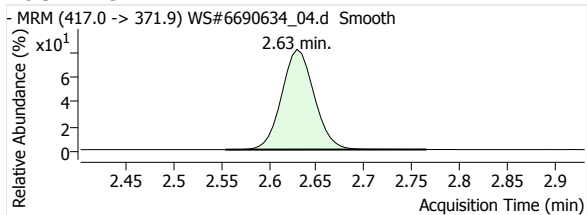


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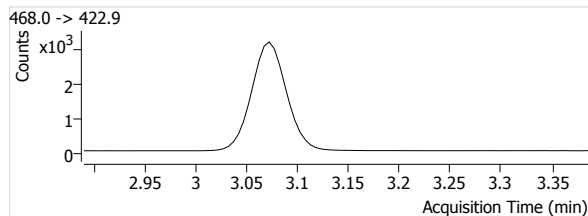
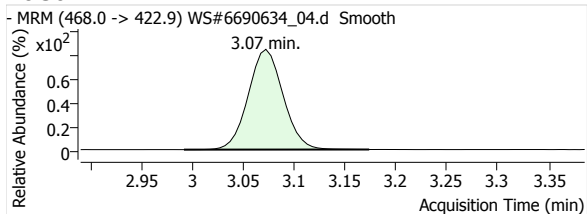


Quantitative Analysis Report

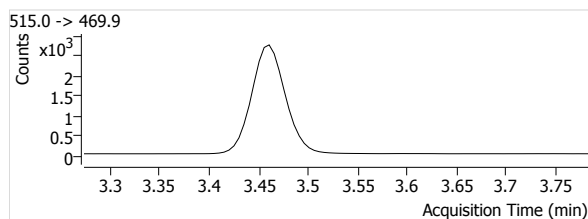
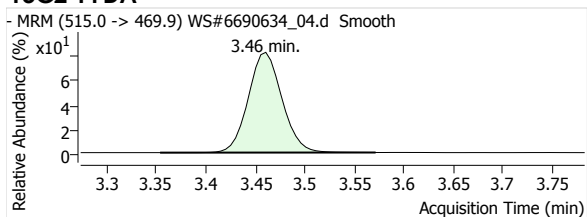
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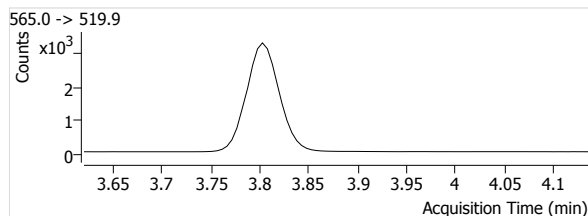
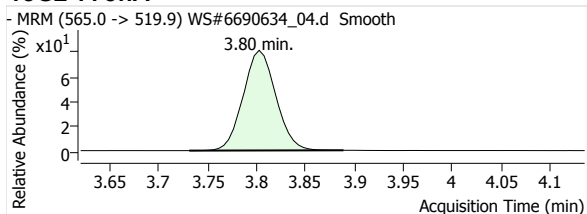
13C5-PFNA



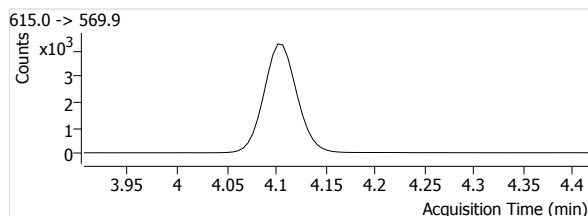
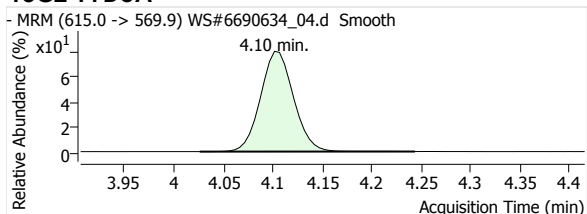
13C2-PFDA



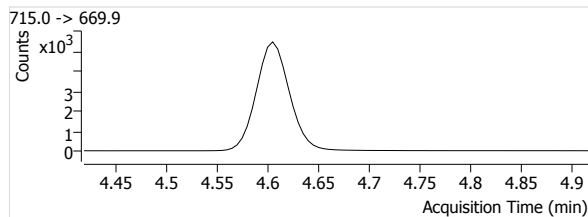
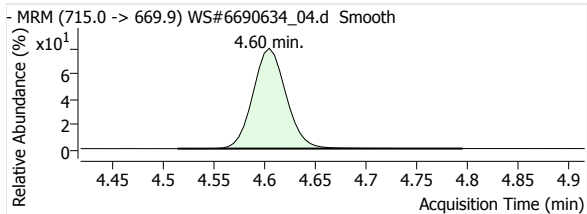
13C2-PFUnA



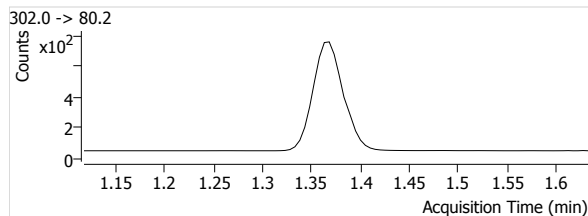
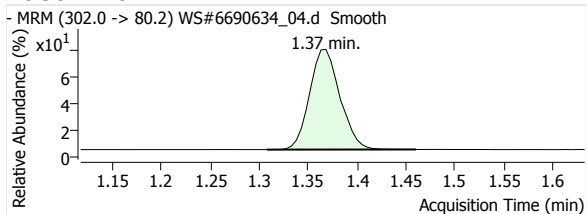
13C2-PFDoA



13C2-PFTeDA

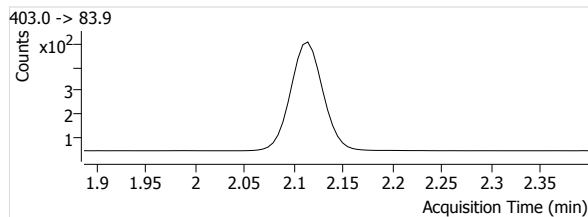
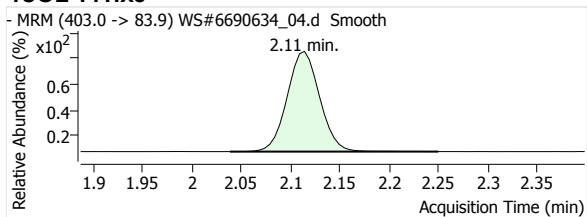


13C3-PFBS

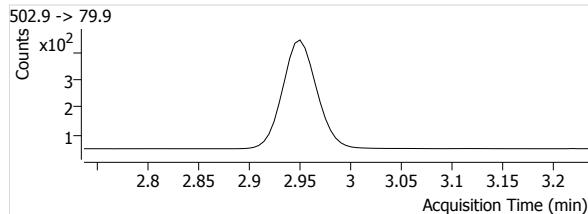
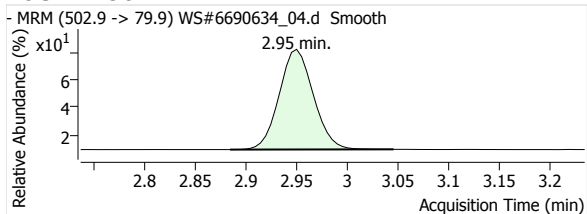


Quantitative Analysis Report

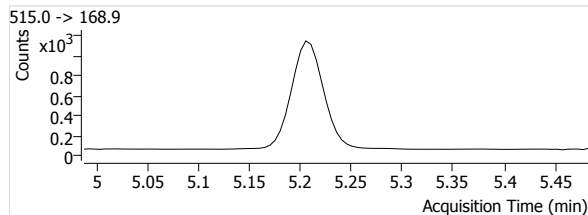
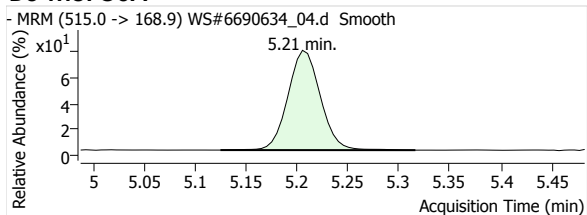
18O2-PFHxs



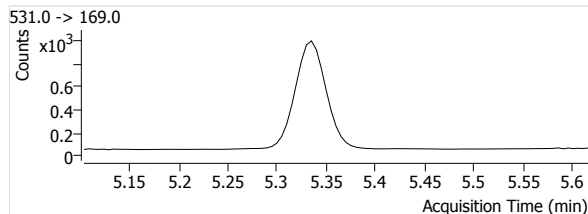
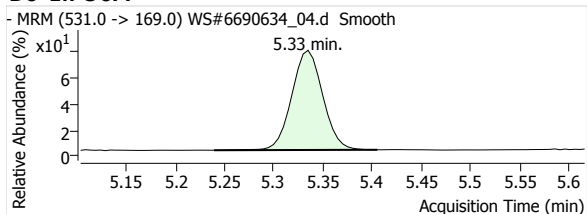
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

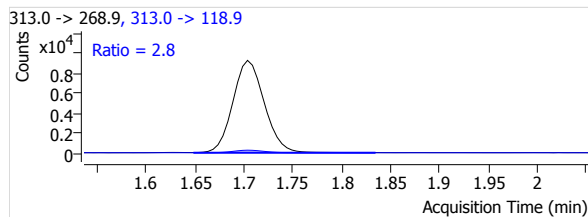
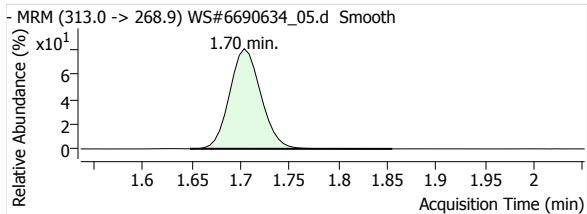
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Sample Name STD 4
Type Calibration
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/21 10:28:16 PM
Comment -
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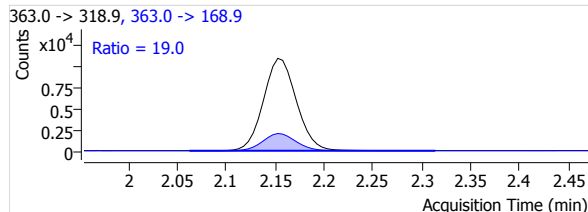
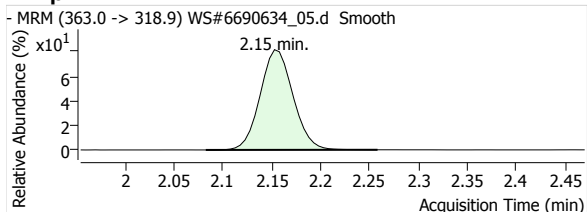
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Instrument LCMS04
Position P1-A5
Dil. 1.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	16.000	16.2937	101.8	20570	1.70	12087	2.9285	569	1.70	1784	2.8
PFHpA 1	µg/L	16.000	15.9497	99.7	25791	2.15	27261	2.6685	4891	2.15	12875	19.0
PFOA 1	µg/L	16.000	15.9584	99.7	25890	2.63	76832	2.6871	6207	2.63	9304	24.0
PFNA 1	µg/L	16.000	16.0251	100.2	20751	3.07	31275	2.7434	4361	3.07	28315	21.0
PFDA 1	µg/L	16.000	16.1761	101.1	21675	3.46	43274	3.3157	3425	3.46	18248	15.8
PFUnA 1	µg/L	16.000	16.0337	100.2	20510	3.80	64175	2.6359	2983	3.80	36508	14.5
PFDoA 1	µg/L	16.000	15.6735	98.0	23932	4.10	13985	2.3660	2767	4.10	5362	11.6
PFTeDA 1	µg/L	16.000	15.9006	99.4	29292	4.37	36922	2.3359	2274	4.37	18983	7.8
PFTeDA 1	µg/L	16.000	16.0580	100.4	32624	4.60	26653	2.6016	1615	4.60	14889	5.0
PFBS 1	µg/L	16.000	16.1102	100.7	3811	1.36	11662	2.4699	1750	1.36	3547	45.9
PFHxS 1	µg/L	16.000	16.2342	101.5	2892	2.08	33447	2.8462	1579	2.09	14509	54.6
PFOS 1	µg/L	16.000	15.8244	98.9	2378	2.90	3931	2.4691	1351	2.89	5379	56.8
MeFOSA 1	µg/L	16.000	15.9805	99.9	2688	5.20	134	1.1057	2495	5.21	678	92.8
EtFOSA 1	µg/L	16.000	16.2500	101.6	2797	5.33	369	1.3364	2480	5.33	720	88.7
13C2-PFHxA	µg/L	100.000	100.0000	100.0	7024	1.70	851		--	--	--	--
13C4-PFHpA	µg/L	100.000	100.0000	100.0	9665	2.15	2346		--	--	--	--
13C4-PFOA	µg/L	100.000	100.0000	100.0	9635	2.63	906		--	--	--	--
13C5-PFNA	µg/L	100.000	100.0000	100.0	7564	3.07	747		--	--	--	--
13C2-PFDA	µg/L	100.000	100.0000	100.0	6537	3.46	945		--	--	--	--
13C2-PFUnA	µg/L	100.000	100.0000	100.0	7781	3.80	870		--	--	--	--
13C2-PFDoA	µg/L	100.000	100.0000	100.0	10115	4.11	1233		--	--	--	--
13C2-PFTeDA	µg/L	100.000	100.0000	100.0	12540	4.60	2553		--	--	--	--
13C3-PFBS	µg/L	100.000	100.0000	100.0	1543	1.36	1530		--	--	--	--
18O2-PFHxS	µg/L	100.000	100.0000	100.0	1016	2.11	830		--	--	--	--
13C4-PFOS	µg/L	100.000	100.0000	100.0	963	2.95	305		--	--	--	--
D3-MeFOSA	µg/L	100.000	100.0000	100.0	2431	5.21	160		--	--	--	--
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PFHxA 1

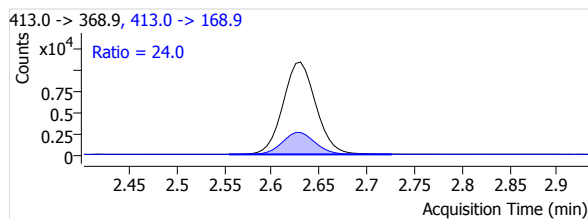
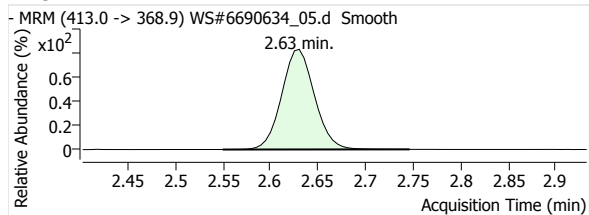


PFHpA 1

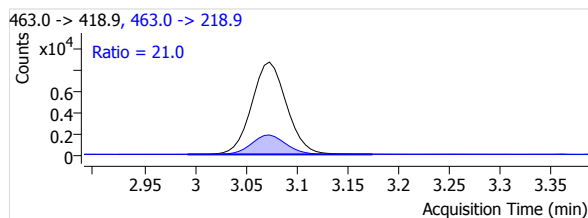
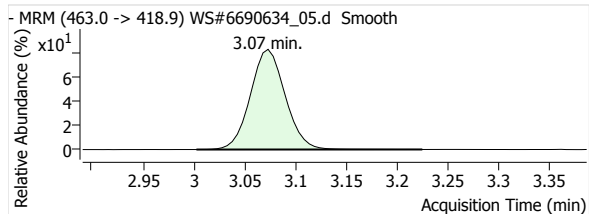


Quantitative Analysis Report

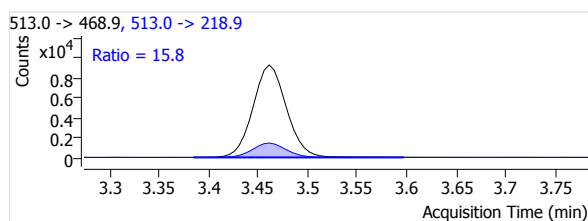
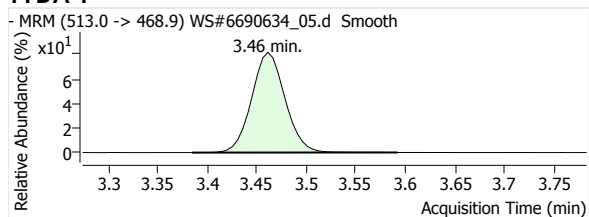
PFOA 1



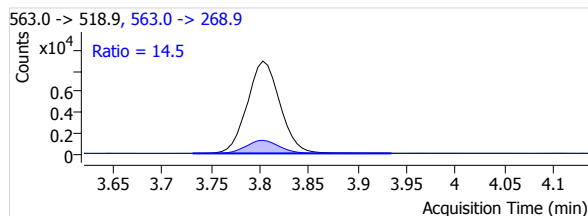
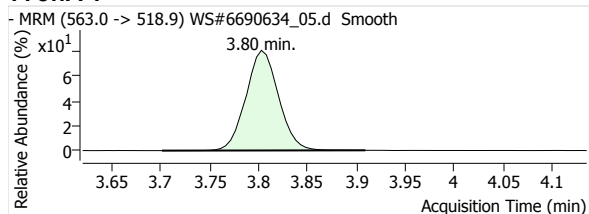
PFNA 1



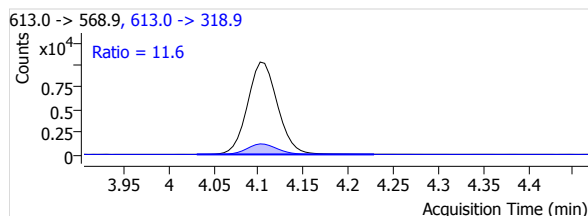
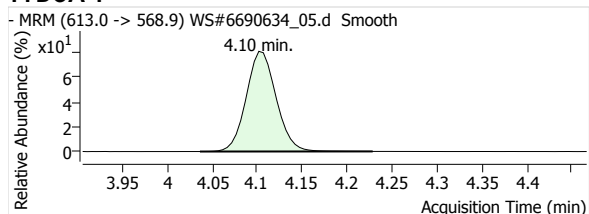
PFDA 1



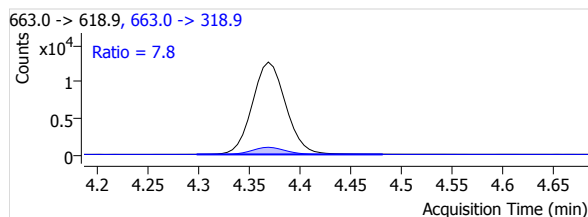
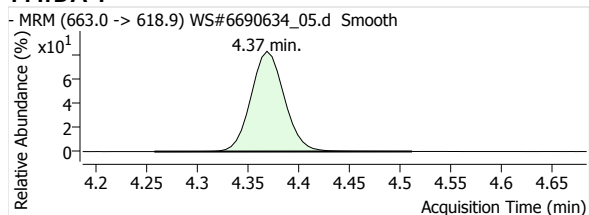
PFUnA 1



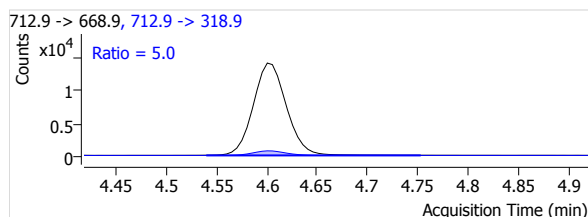
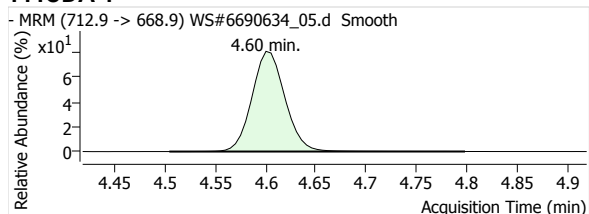
PFDaA 1



PFTrDA 1

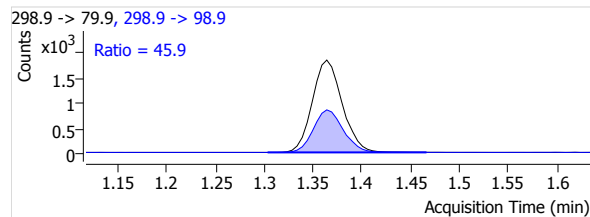
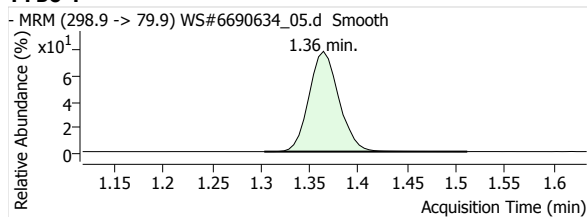


PFTeDA 1

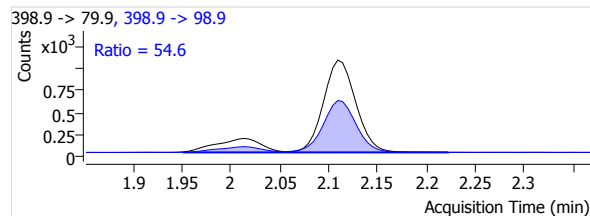
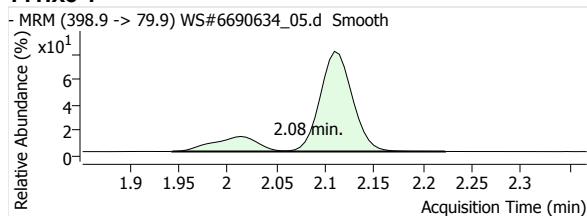


Quantitative Analysis Report

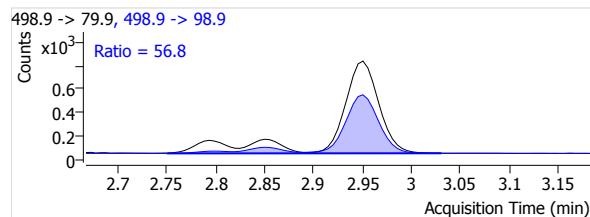
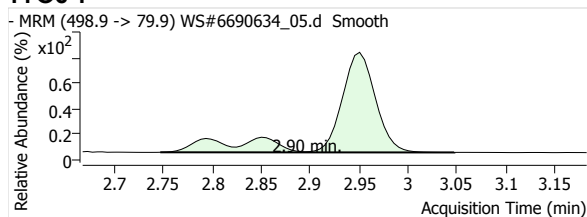
PFBS 1



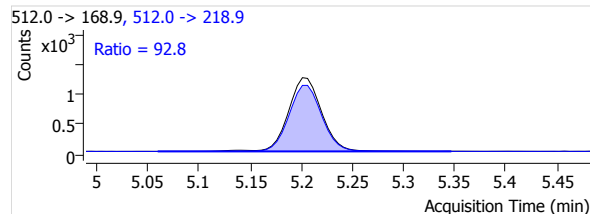
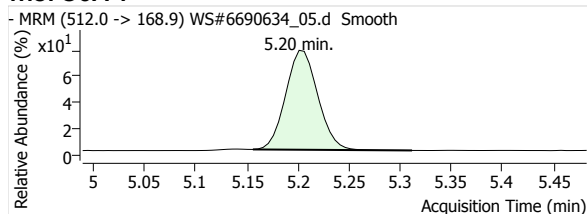
PFHxS 1



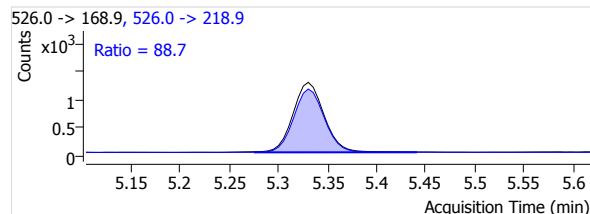
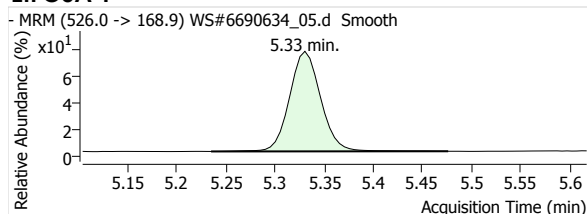
PFOS 1



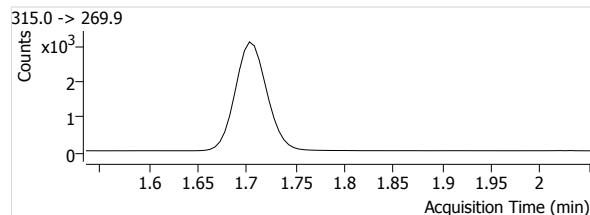
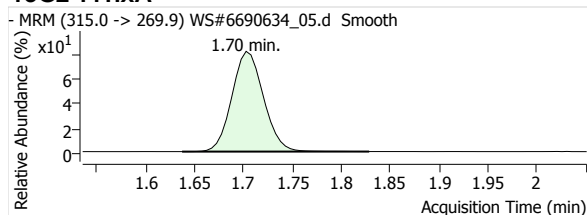
MeFOSA 1



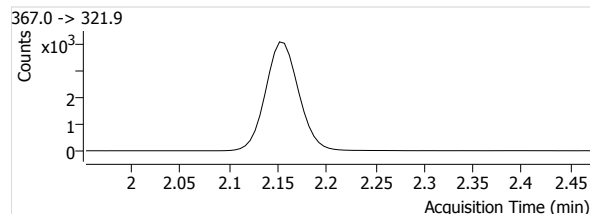
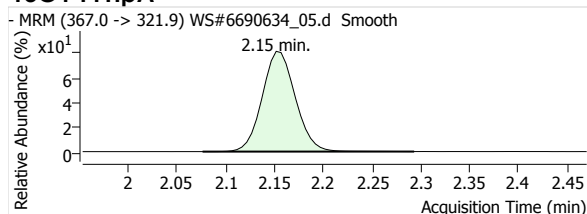
eFOSA 1



13C2-PFHxA

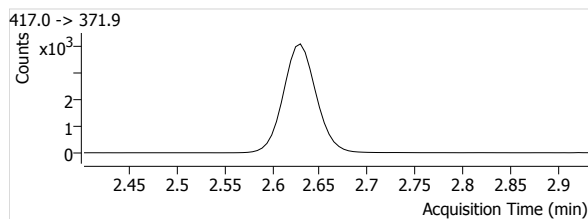
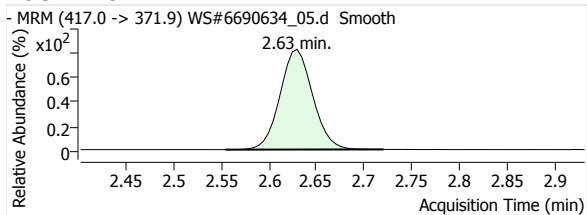


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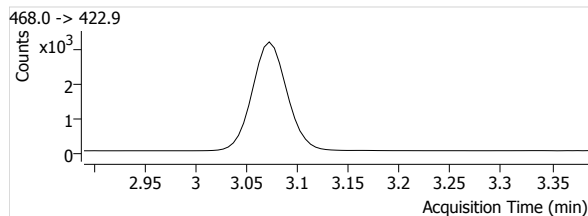
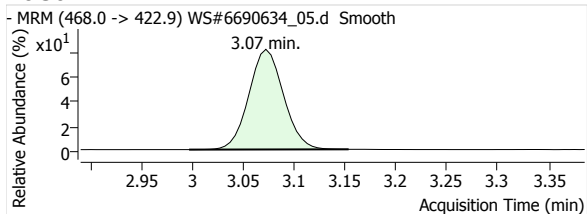


Quantitative Analysis Report

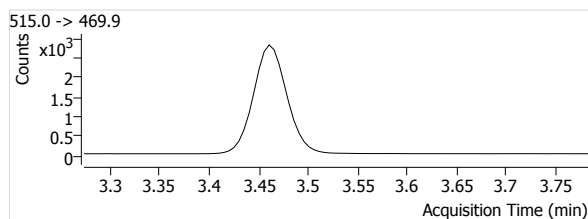
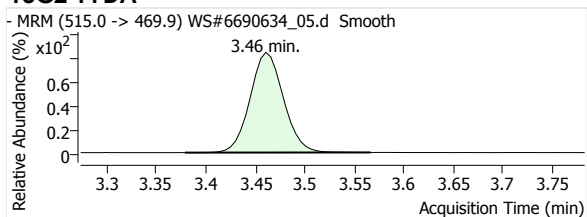
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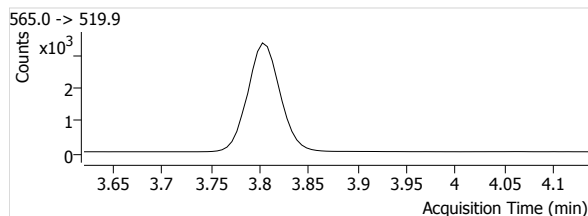
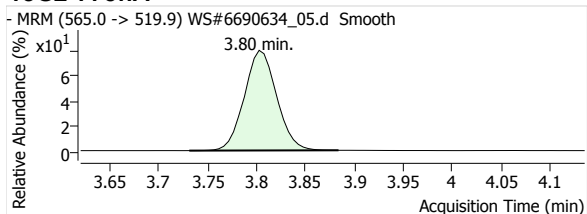
13C5-PFNA



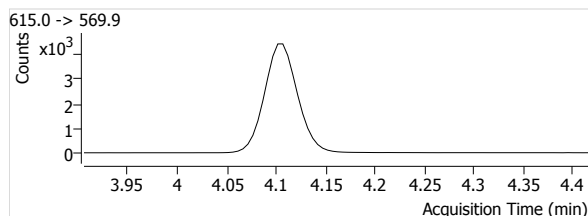
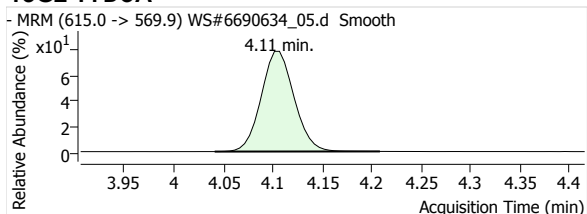
13C2-PFDA



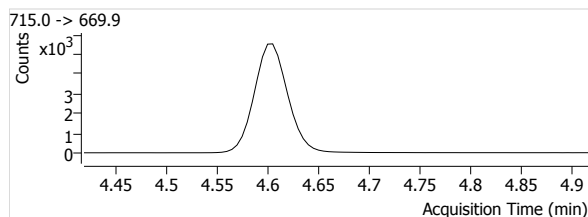
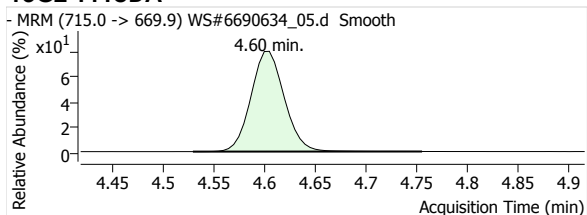
13C2-PFUnA



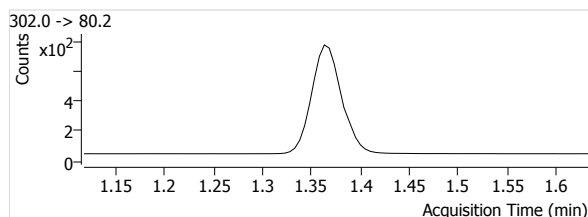
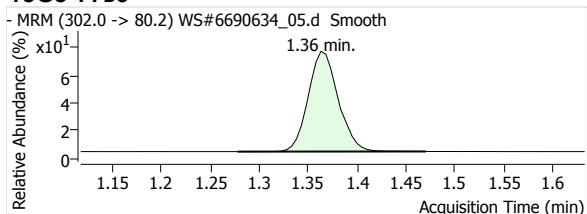
13C2-PFDoA



13C2-PFTeDA

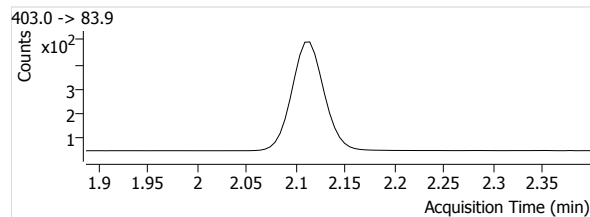
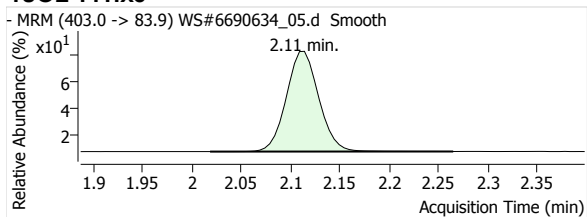


13C3-PFBS

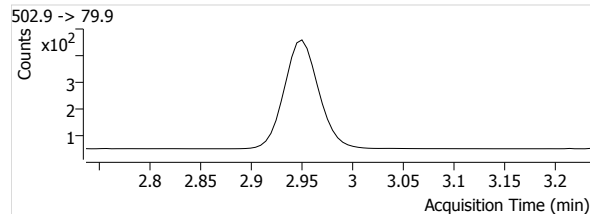
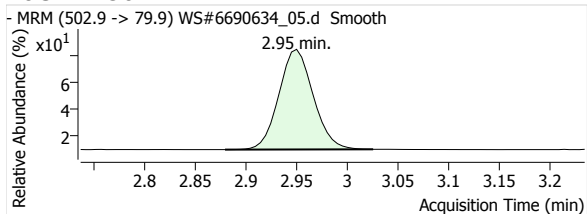


Quantitative Analysis Report

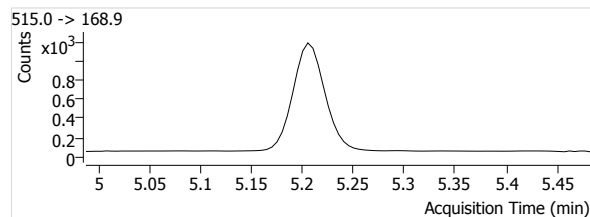
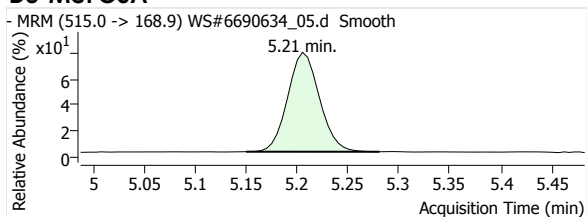
18O2-PFHxs



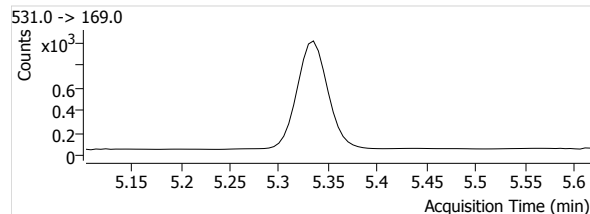
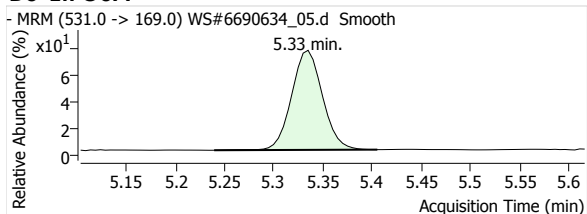
13C4-PFOS



D3-MeFOSA



D5-EtFOSA

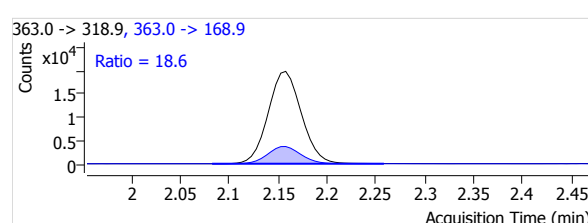
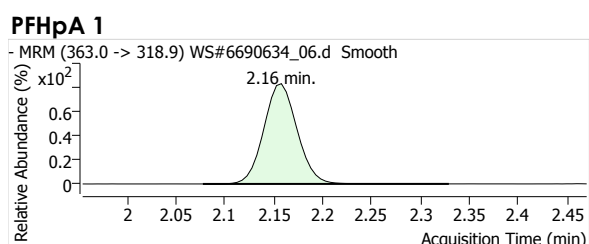
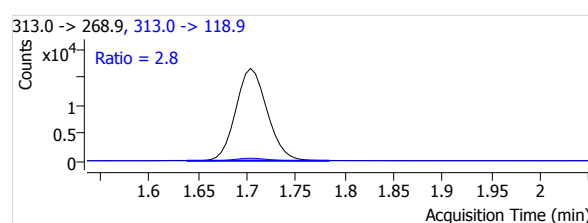
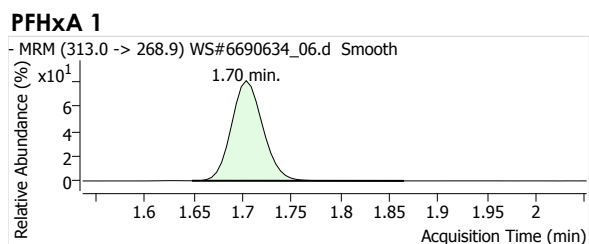


Quantitative Analysis Report

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bin

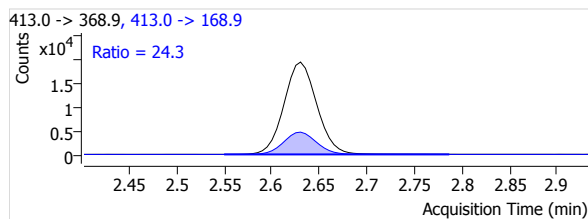
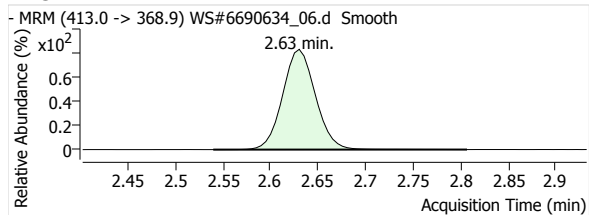
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Acq. Method File	PFAS.m	Position	P1-A6
Acq. Date-Time	2020/04/21 10:35:12 PM	Dil.	1.0
Comment	-		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	30.000	29.8769	99.6	37151	1.70	129926	5.3401	1027	1.70	7667	2.8
PFHpA 1	µg/L	30.000	29.6604	98.9	47217	2.16	240353	4.9313	8767	2.16	18578	18.6
PFOA 1	µg/L	30.000	29.7857	99.3	46383	2.63	45966	4.9880	11284	2.63	13476	24.3
PFNA 1	µg/L	30.000	29.2064	97.4	37420	3.07	14723	4.9648	7868	3.07	18135	21.0
PFDA 1	µg/L	30.000	29.0388	96.8	39043	3.46	140077	5.9120	6271	3.46	45000	16.1
PFUnA 1	µg/L	30.000	29.7997	99.3	38006	3.81	44544	4.8613	5399	3.80	9120	14.2
PFDoA 1	µg/L	30.000	29.5541	98.5	43192	4.11	39812	4.4354	4968	4.11	35279	11.5
PFTeDA 1	µg/L	30.000	29.5896	98.6	53849	4.37	127080	4.3069	4030	4.37	17208	7.5
PFTeDA 1	µg/L	30.000	29.4700	98.2	59298	4.61	44598	4.7427	2918	4.61	25640	4.9
PFBS 1	µg/L	30.000	29.1541	97.2	6866	1.36	72010	4.4383	3172	1.36	16212	46.2
PFHxS 1	µg/L	30.000	28.9794	96.6	5257	2.08	21504	5.0453	2908	2.09	19720	55.3
PFOS 1	µg/L	30.000	30.0512	100.2	4393	2.90	22869	4.6487	2459	2.89	19323	56.0
MeFOSA 1	µg/L	30.000	29.7224	99.1	4914	5.21	158	2.0475	4498	5.21	480	91.5
EtFOSA 1	µg/L	30.000	29.2107	97.4	5063	5.33	368	2.3927	4554	5.33	738	89.9
13C2-PFHxA	µg/L	100.000	99.0461	99.0	6957	1.70	1675		--	--	--	--
13C4-PFHpA	µg/L	100.000	99.0688	99.1	9575	2.16	1586		--	--	--	--
13C4-PFOA	µg/L	100.000	96.5127	96.5	9299	2.63	1380		--	--	--	--
13C5-PFNA	µg/L	100.000	99.6430	99.6	7537	3.07	1070		--	--	--	--
13C2-PFDA	µg/L	100.000	101.0249	101.0	6604	3.47	1794		--	--	--	--
13C2-PFUnA	µg/L	100.000	100.4755	100.5	7818	3.81	1100		--	--	--	--
13C2-PFDoA	µg/L	100.000	96.2729	96.3	9738	4.11	882		--	--	--	--
13C2-PFTeDA	µg/L	100.000	99.7049	99.7	12503	4.60	1698		--	--	--	--
13C3-PFBS	µg/L	100.000	100.2592	100.3	1547	1.36	1118		--	--	--	--
18O2-PFHxS	µg/L	100.000	102.5591	102.6	1042	2.11	287		--	--	--	--
13C4-PFOS	µg/L	100.000	98.1308	98.1	945	2.95	653		--	--	--	--
D3-MeFOSA	µg/L	100.000	98.7248	98.7	2400	5.21	116		--	--	--	--
D5-EtFOSA	µg/L	100.000	101.0989	101.1	2116	5.33	131		--	--	--	--

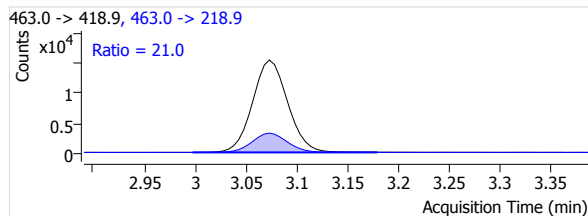
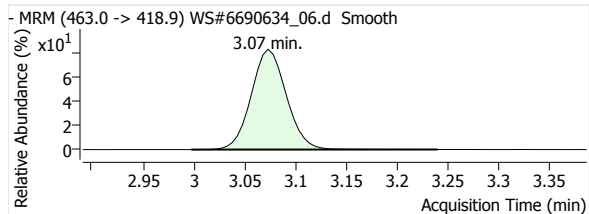


Quantitative Analysis Report

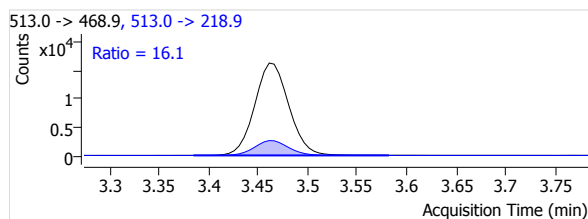
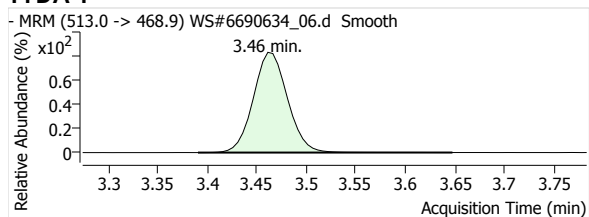
PFOA 1



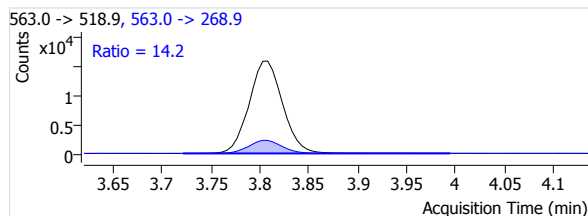
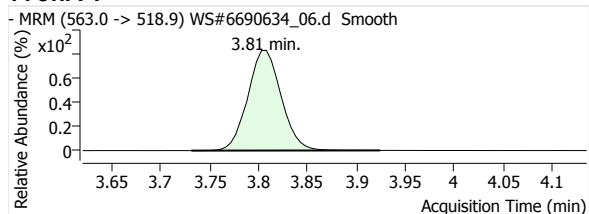
PFNA 1



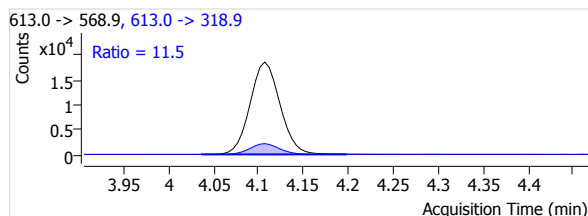
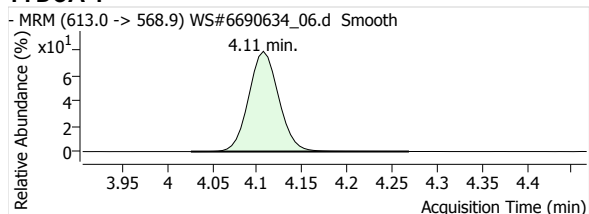
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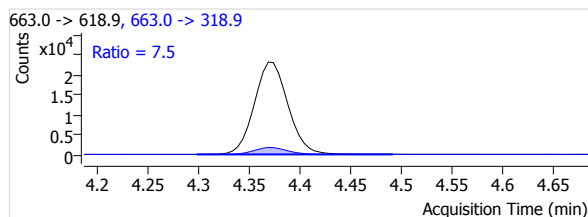
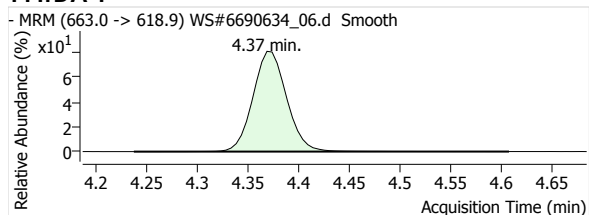
PFUnA 1



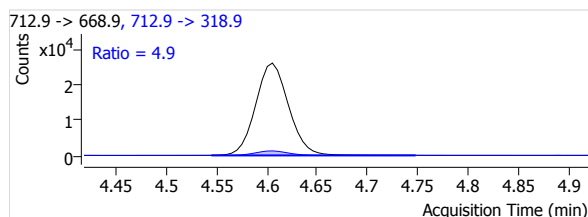
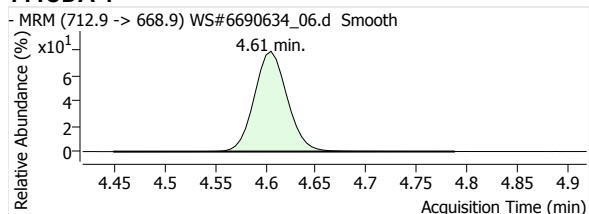
PFDaA 1



PFTrDA 1

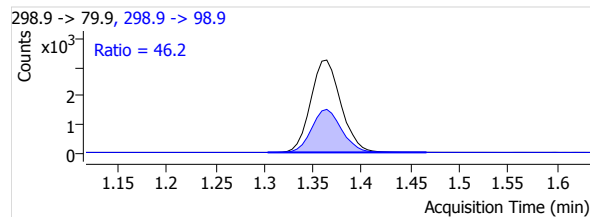
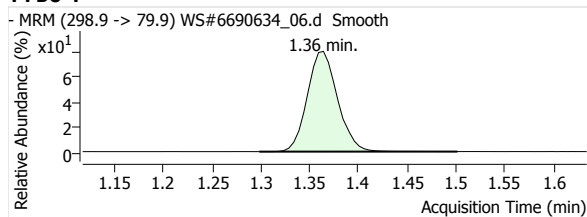


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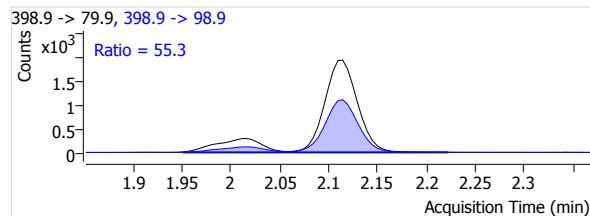
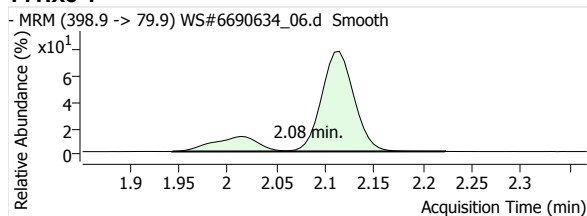


Quantitative Analysis Report

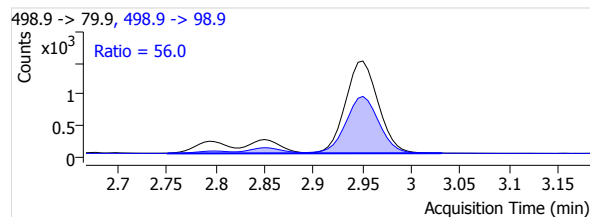
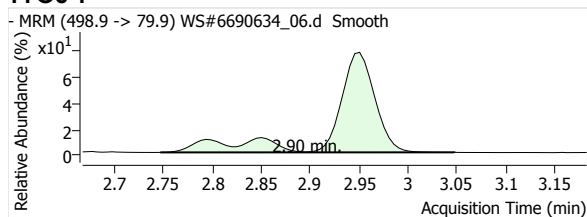
PFBS 1



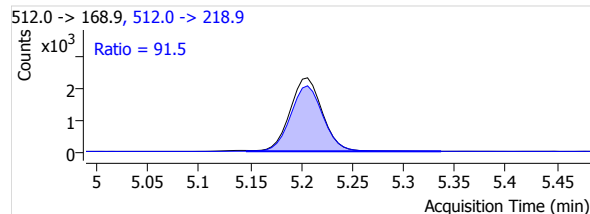
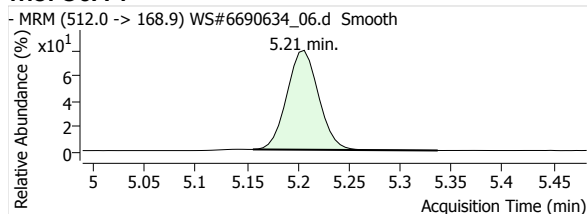
PFHxS 1



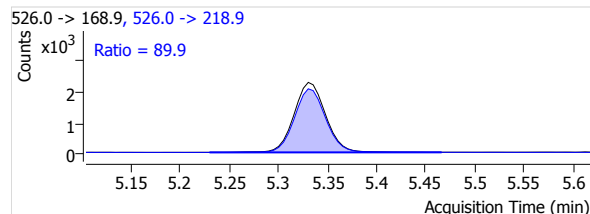
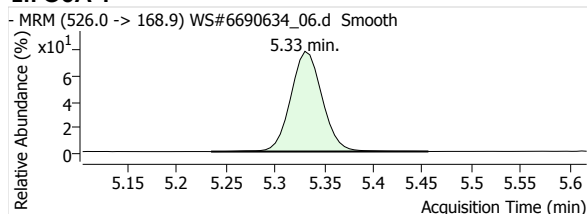
PFOS 1



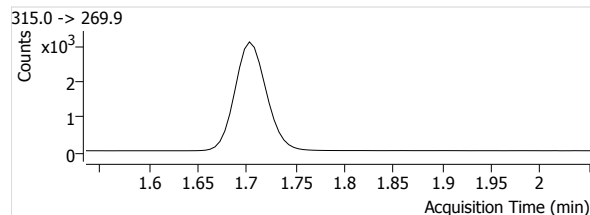
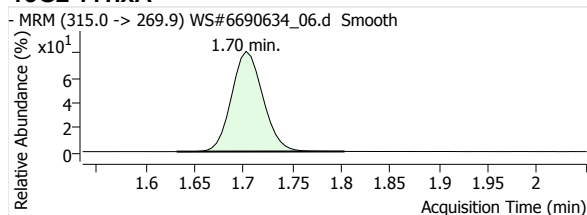
MeFOSA 1



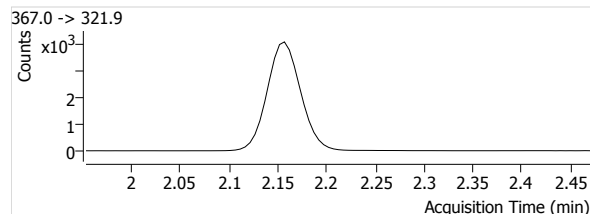
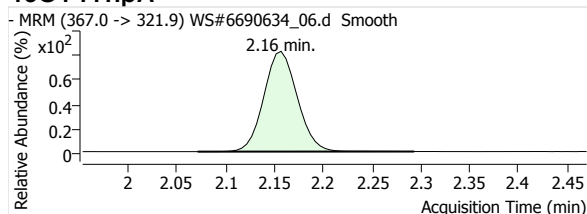
eFOSA 1



13C2-PFHxA

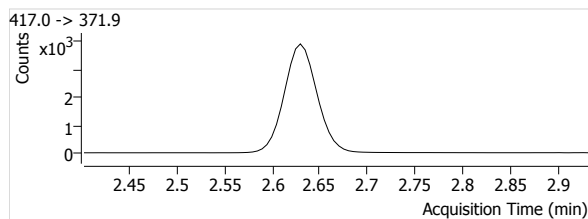
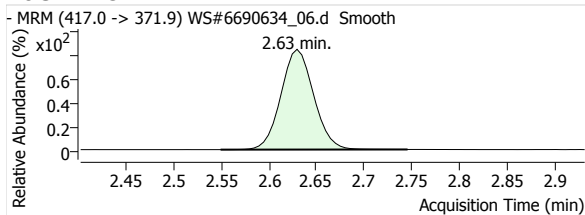


13C4-PFHpA

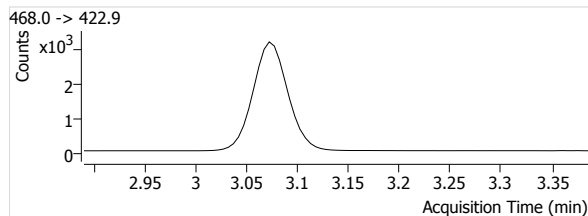
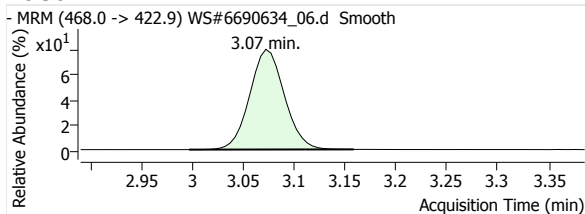


Quantitative Analysis Report

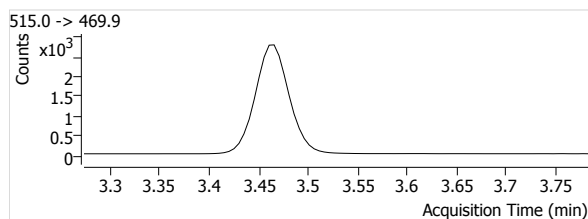
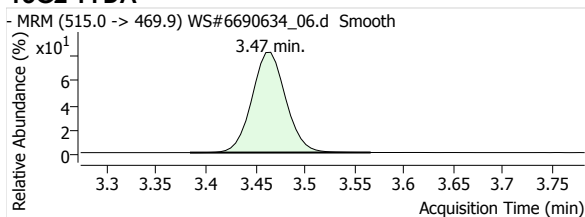
13C4-PFOA



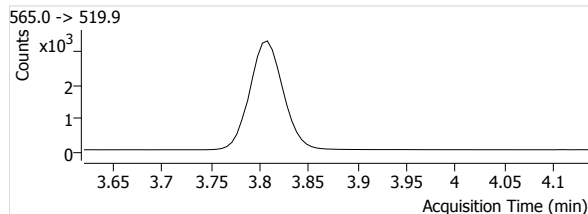
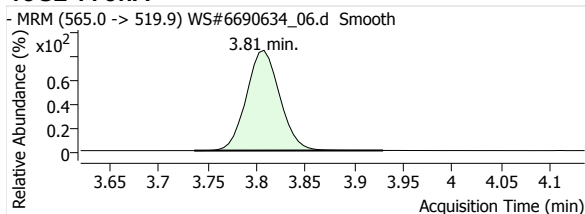
13C5-PFNA



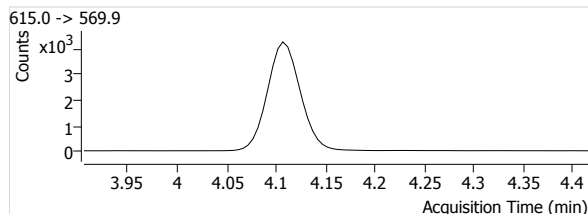
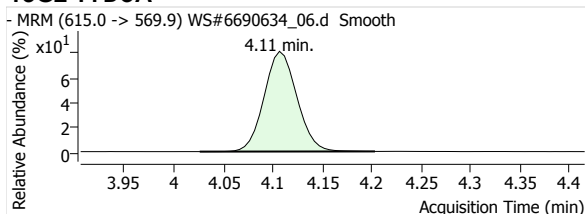
13C2-PFDA



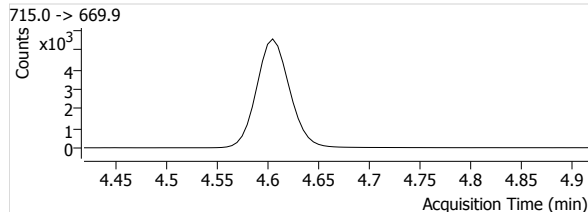
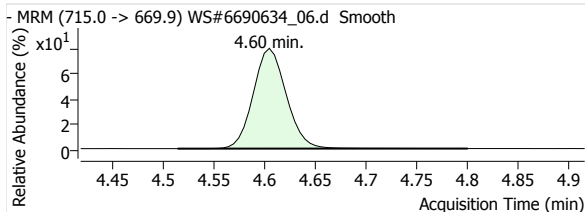
13C2-PFUnA



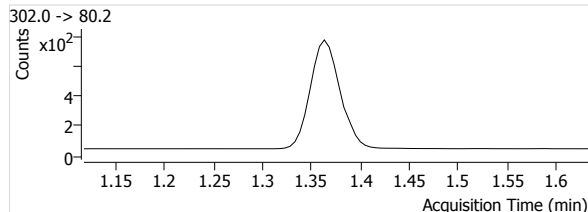
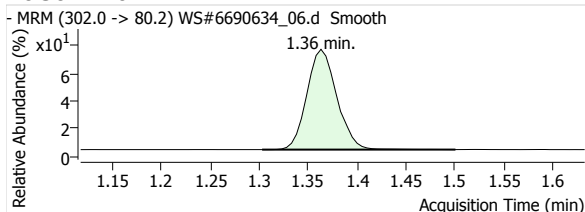
13C2-PFDoA



13C2-PFTeDA

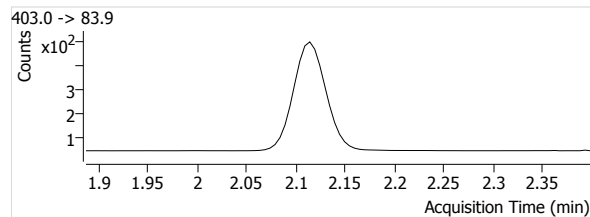
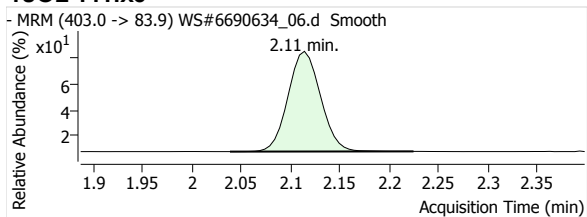


13C3-PFBS

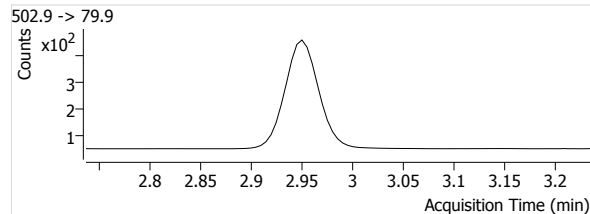
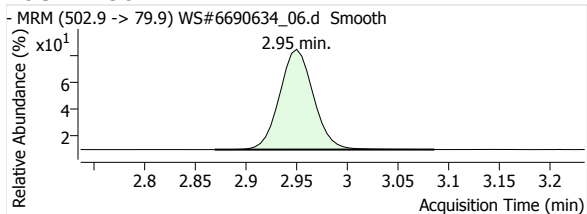


Quantitative Analysis Report

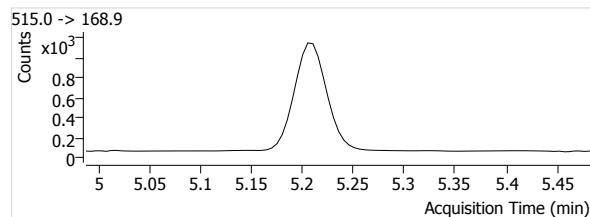
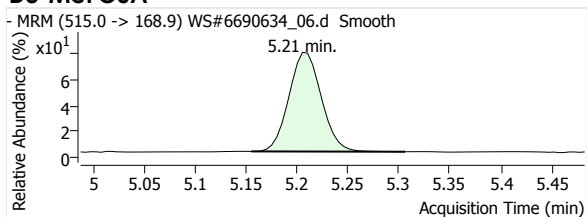
18O2-PFHxs



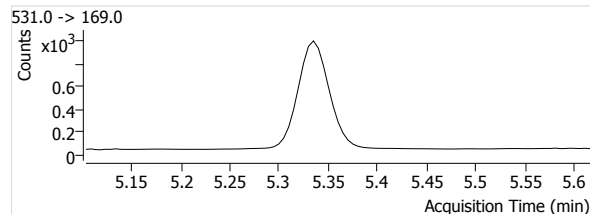
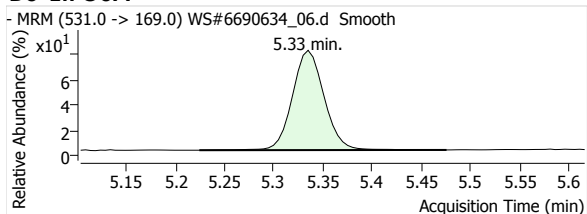
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

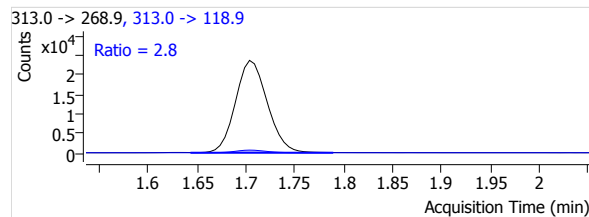
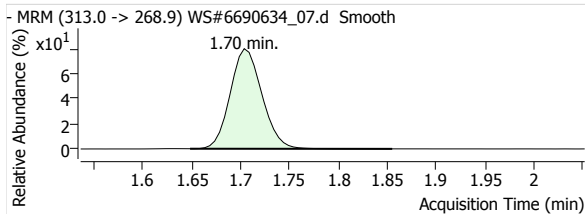
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Sample Name STD 6
Type Calibration
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/21 10:42:08 PM
Comment -
User Defined

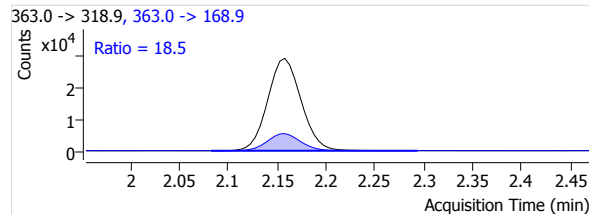
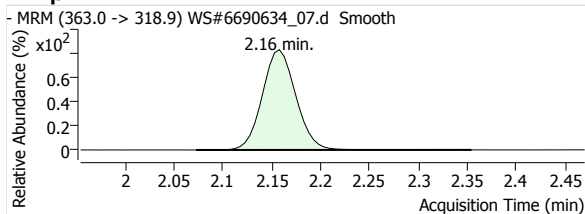
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Instrument LCMS04
Position P1-A7
Dil. 1.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	41.700	41.4266	99.3	53523	1.70	29248	7.3906	1508	1.70	7714	2.8
PFHpA 1	µg/L	41.700	42.0123	100.7	69503	2.16	45777	6.9698	12864	2.16	34324	18.5
PFOA 1	µg/L	41.700	41.9304	100.6	69584	2.63	37339	7.0089	16733	2.63	36423	24.0
PFNA 1	µg/L	41.700	42.3768	101.6	55780	3.07	43755	7.1844	11536	3.07	11453	20.7
PFDA 1	µg/L	41.700	42.4623	101.8	58471	3.47	16685	8.6215	9212	3.47	45287	15.8
PFUnA 1	µg/L	41.700	41.8536	100.4	56414	3.80	439558	6.8100	7974	3.80	23023	14.1
PFDoA 1	µg/L	41.700	42.5390	102.0	65516	4.11	24858	6.3713	7400	4.11	12596	11.3
PFTrDA 1	µg/L	41.700	41.9844	100.7	79598	4.37	118561	6.0915	5866	4.37	13385	7.4
PFTeDA 1	µg/L	41.700	42.0701	100.9	88257	4.61	477835	6.7542	4359	4.61	56810	4.9
PFBS 1	µg/L	41.700	42.3141	101.5	10253	1.36	19826	6.4242	4731	1.36	6584	46.1
PFHxS 1	µg/L	41.700	42.3517	101.6	7992	2.08	79805	7.3527	4317	2.09	50386	54.0
PFOS 1	µg/L	41.700	41.5411	99.6	6467	2.90	15028	6.4090	3610	2.89	8513	55.8
MeFOSA 1	µg/L	41.700	42.1160	101.0	7416	5.21	186	2.8969	6690	5.21	1595	90.2
EtFOSA 1	µg/L	41.700	42.4584	101.8	7570	5.33	514	3.4725	6754	5.33	1305	89.2
13C2-PFHxA	µg/L	100.000	103.1036	103.1	7242	1.70	962		--	--	--	--
13C4-PFHpA	µg/L	100.000	103.1764	103.2	9972	2.16	1106		--	--	--	--
13C4-PFOA	µg/L	100.000	103.0410	103.0	9928	2.63	1967		--	--	--	--
13C5-PFNA	µg/L	100.000	102.6441	102.6	7764	3.07	1036		--	--	--	--
13C2-PFDA	µg/L	100.000	103.7479	103.7	6782	3.47	1320		--	--	--	--
13C2-PFUnA	µg/L	100.000	106.4645	106.5	8284	3.81	1357		--	--	--	--
13C2-PFDoA	µg/L	100.000	101.6609	101.7	10283	4.11	1075		--	--	--	--
13C2-PFTeDA	µg/L	100.000	104.2026	104.2	13067	4.60	2389		--	--	--	--
13C3-PFBS	µg/L	100.000	103.4349	103.4	1596	1.36	955		--	--	--	--
18O2-PFHxS	µg/L	100.000	106.9882	107.0	1087	2.11	610		--	--	--	--
13C4-PFOS	µg/L	100.000	104.7767	104.8	1009	2.95	594		--	--	--	--
D3-MeFOSA	µg/L	100.000	105.3065	105.3	2560	5.21	118		--	--	--	--
D5-EtFOSA	µg/L	100.000	104.1567	104.2	2180	5.33	123		--	--	--	--

PFHxA 1

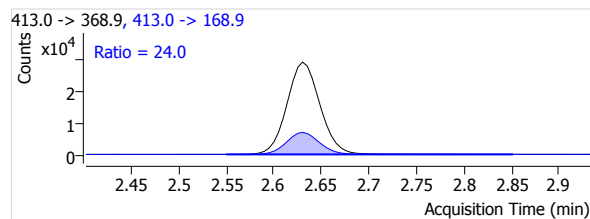
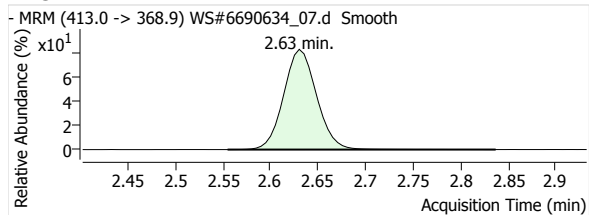


PFHpA 1

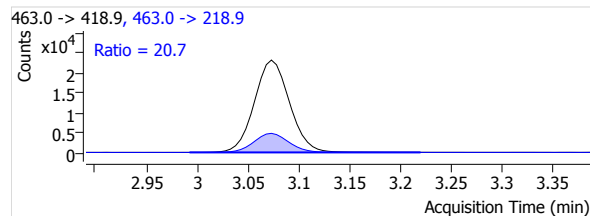
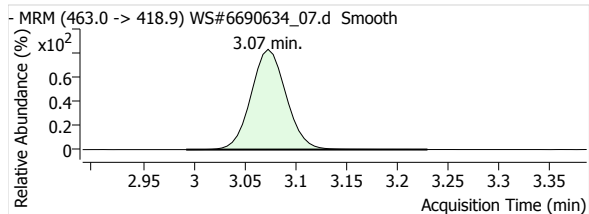


Quantitative Analysis Report

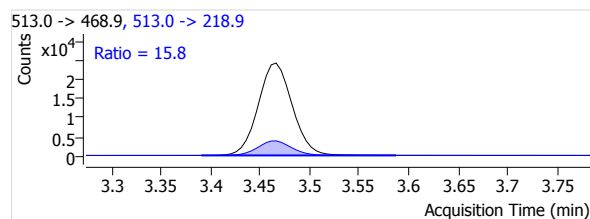
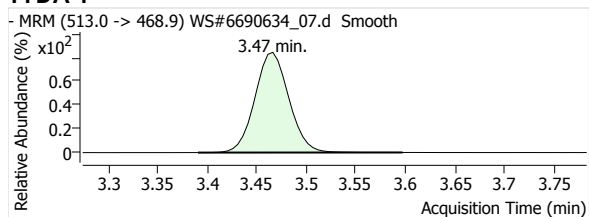
PFOA 1



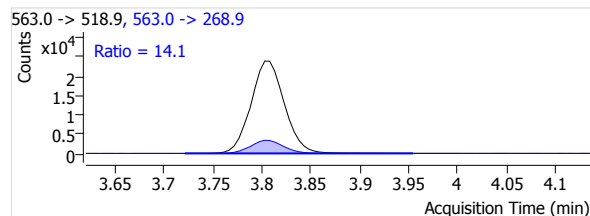
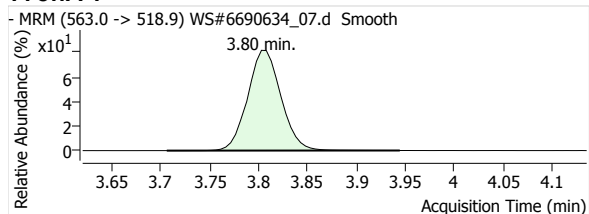
PFNA 1



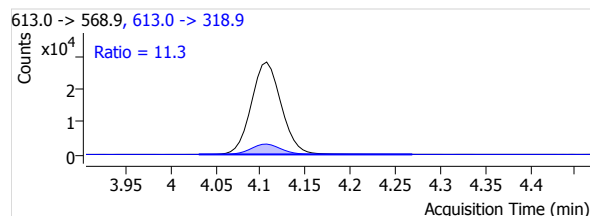
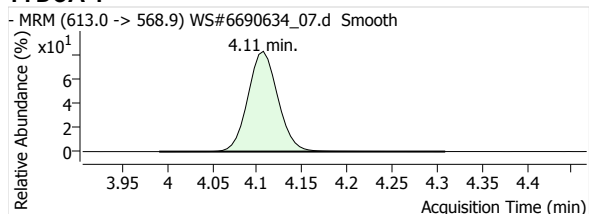
PFDA 1



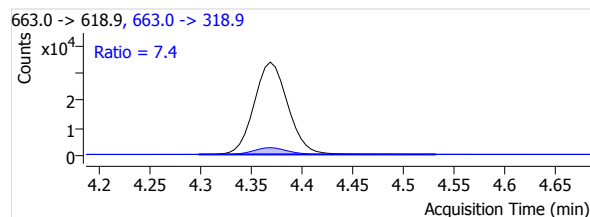
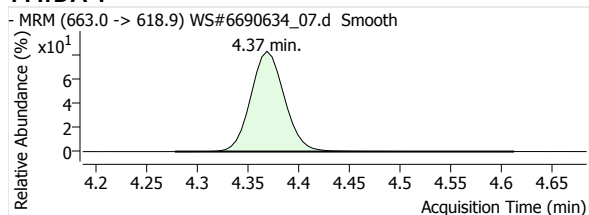
PFUnA 1



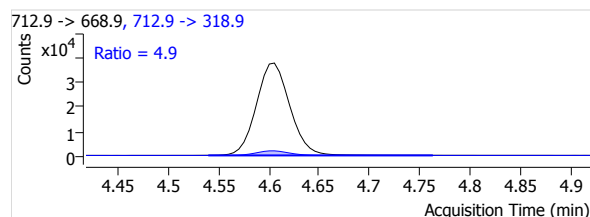
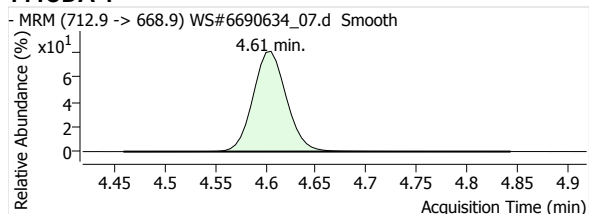
PFDaA 1



PFTrDA 1

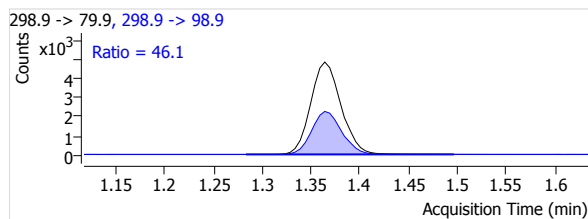
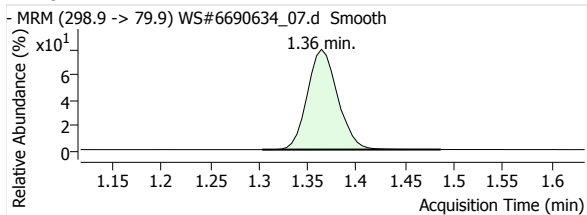


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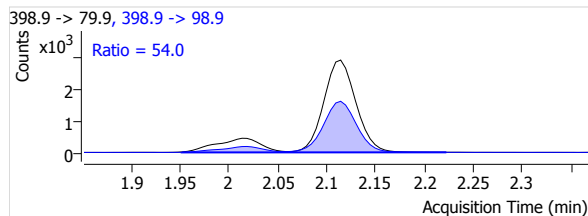
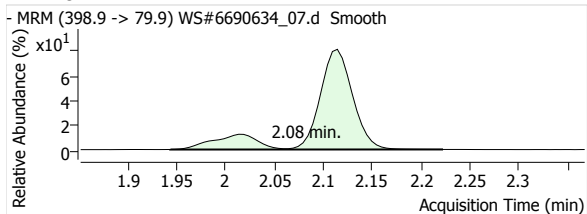


Quantitative Analysis Report

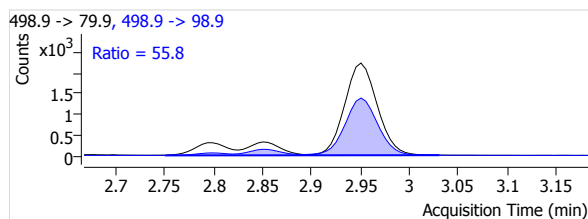
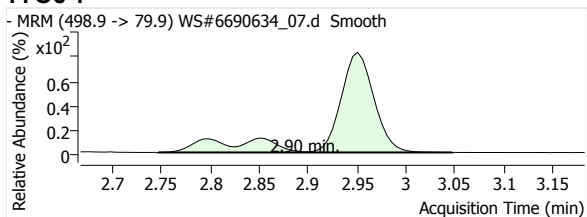
PFBS 1



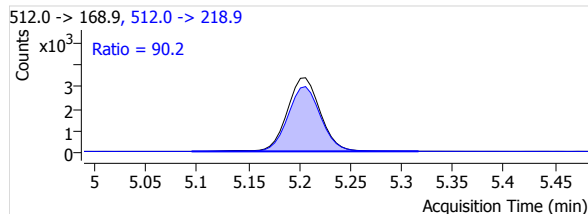
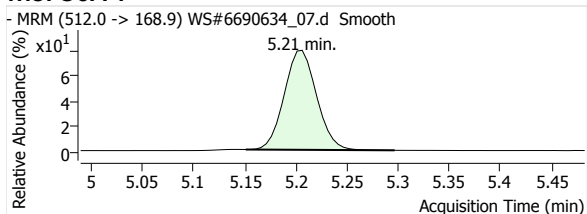
PFHxS 1



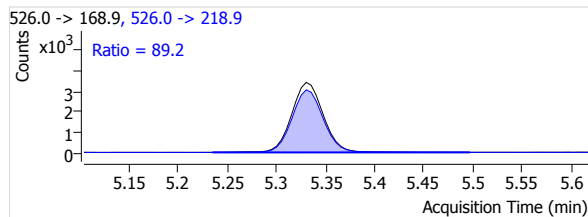
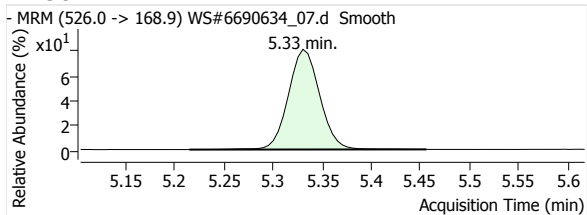
PFOS 1



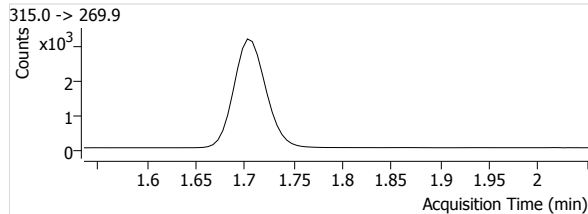
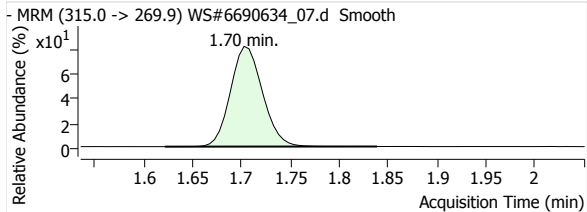
MeFOSA 1



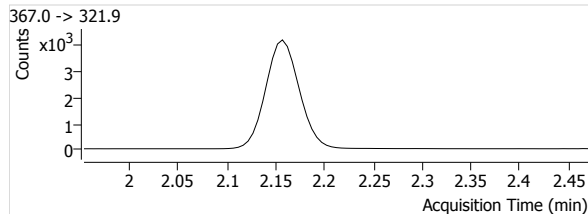
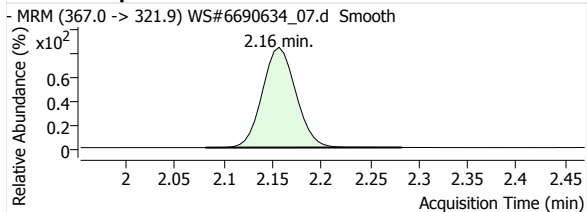
eFOSA 1



13C2-PFHxA

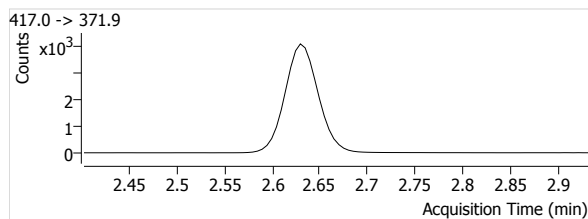
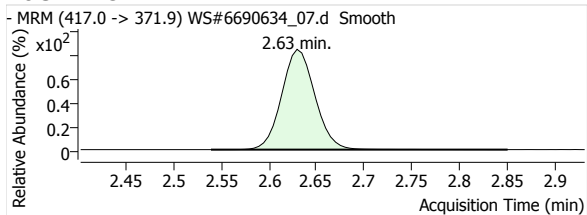


13C4-PFHpA

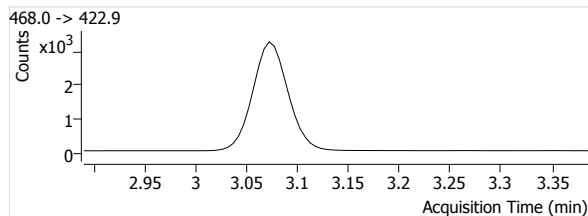
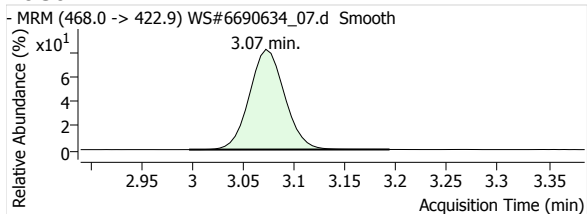


Quantitative Analysis Report

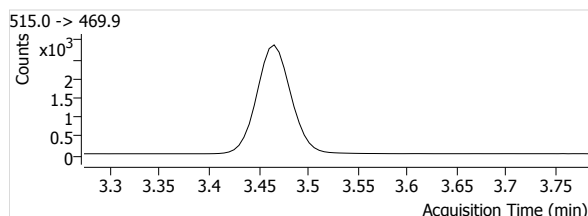
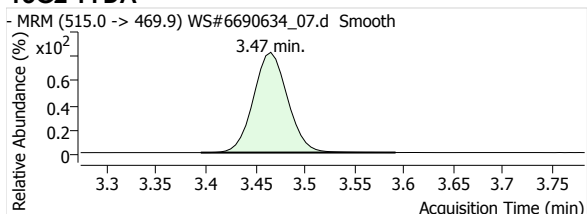
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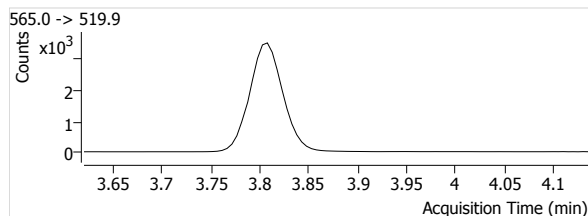
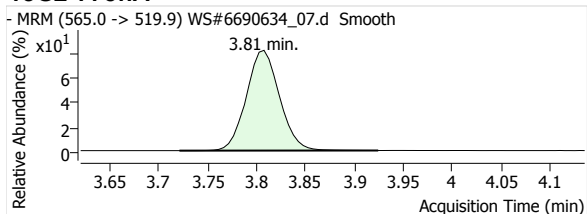
13C5-PFNA



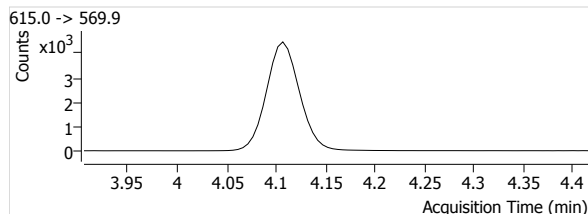
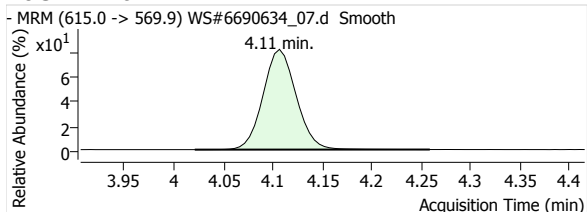
13C2-PFDA



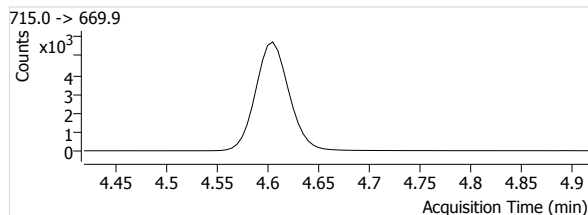
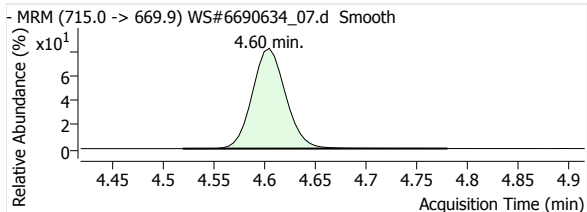
13C2-PFUnA



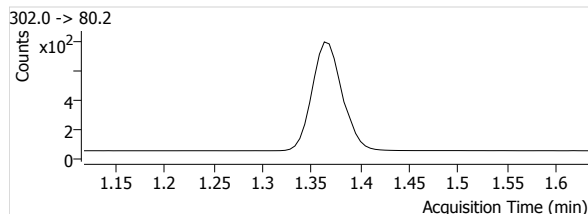
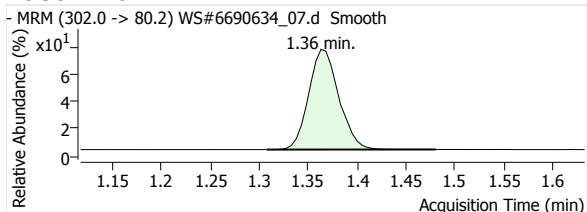
13C2-PFDoA



13C2-PFTeDA

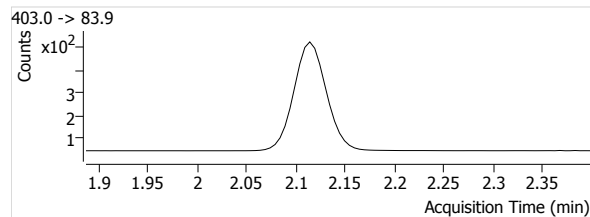
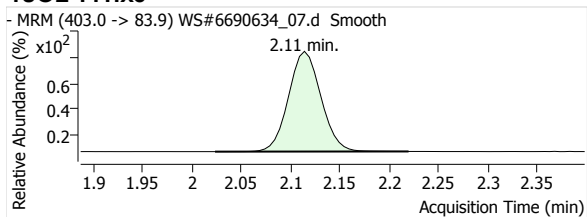


13C3-PFBS

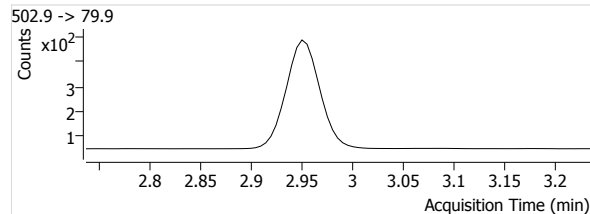
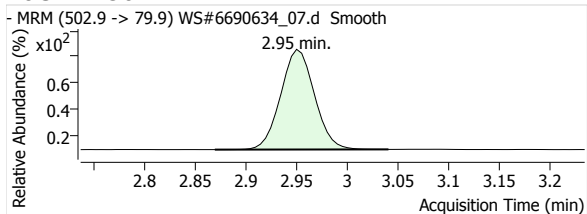


Quantitative Analysis Report

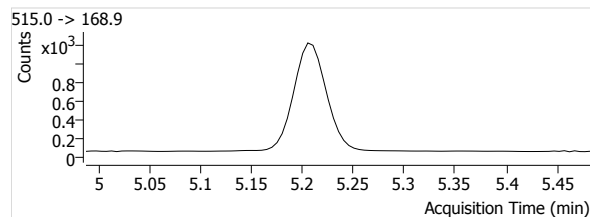
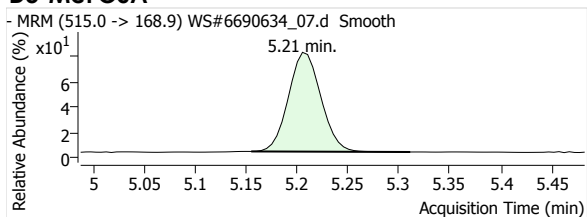
18O2-PFHxs



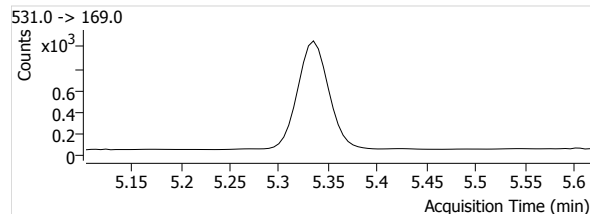
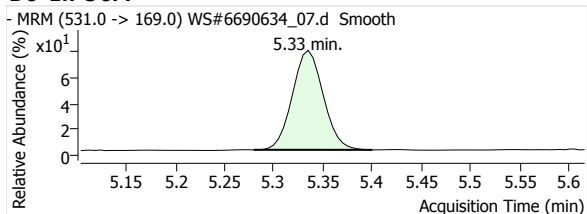
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



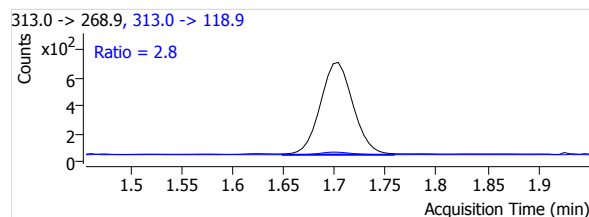
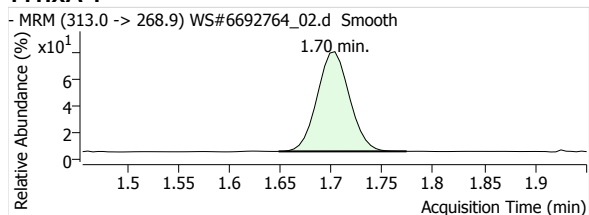
Quantitative Analysis Report

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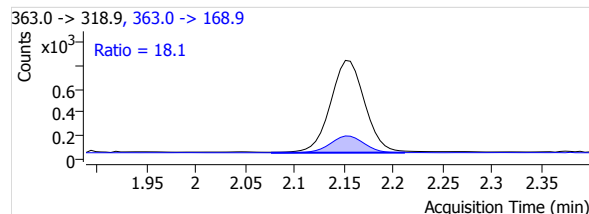
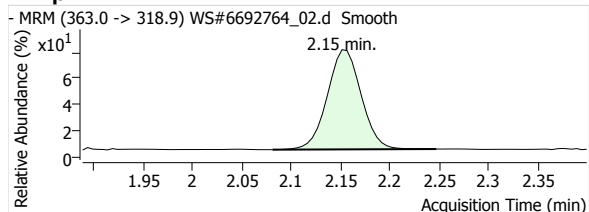
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Acq. Date-Time	2020/04/23 2:01:44 AM	Dil.	1.0
Comment	-		
User Defined	MI PFHxS, PFOS		

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PFHxA 1	µg/L	0.830	0.7596	91.5	1457	1.70	3223	0.1820	41	1.70	253	2.8
PFHpA 1	µg/L	0.830	0.7916	95.4	1894	2.15	107	0.1704	343	2.15	459	18.1
PFOA 1	µg/L	0.830	0.7742	93.3	1820	2.63	1947	0.1693	443	2.63	1050	24.3
PFNA 1	µg/L	0.830	0.7599	91.6	1454	3.07	2272	0.1711	307	3.07	1900	21.1
PFDA 1	µg/L	0.830	0.7802	94.0	1536	3.46	446	0.2120	253	3.46	1917	16.5
PFUnA 1	µg/L	0.830	0.7812	94.1	1477	3.80	2390	0.1673	203	3.80	208	13.7
PFDoA 1	µg/L	0.830	0.7756	93.4	1649	4.10	82	0.1564	195	4.10	90	11.8
PFTeDA 1	µg/L	0.830	0.7865	94.8	2122	4.37	1756	0.1505	174	4.37	1876	8.2
PFTeDA 1	µg/L	0.830	0.7791	93.9	2240	4.60	3702	0.1588	119	4.60	6195	5.3
PFBS 1	µg/L	0.830	0.7908	95.3	270	1.36	4591	0.1593	115	1.36	461	42.6
PFHxS 1	µg/L	0.830	0.8211	98.9	201	2.11	634	0.1749	102	2.11	1209	50.8
PFOS 1	µg/L	0.830	0.7677	92.5	167	2.95	22	0.1616	91	2.95	84	54.6
MeFOSA 1	µg/L	0.830	0.7924	95.5	176	5.20	27	0.0678	153	5.21	164	86.9
EtFOSA 1	µg/L	0.830	0.7119	85.8	169	5.33	16	0.0739	168	5.33	118	99.4
13C2-PFHxA	µg/L	100.000	99.6638	99.7	8005	1.70	1581		--	--	--	--
13C4-PFHpA	µg/L	100.000	99.7040	99.7	11117	2.15	1612		--	--	--	--
13C4-PFOA	µg/L	100.000	99.5094	99.5	10751	2.63	1476		--	--	--	--
13C5-PFNA	µg/L	100.000	98.8026	98.8	8499	3.07	1047		--	--	--	--
13C2-PFDA	µg/L	100.000	97.2092	97.2	7245	3.46	1680		--	--	--	--
13C2-PFUnA	µg/L	100.000	100.5927	100.6	8826	3.80	1064		--	--	--	--
13C2-PFDoA	µg/L	100.000	98.8838	98.9	10542	4.10	1079		--	--	--	--
13C2-PFTeDA	µg/L	100.000	100.9809	101.0	14104	4.60	3674		--	--	--	--
13C3-PFBS	µg/L	100.000	99.0649	99.1	1695	1.36	742		--	--	--	--
18O2-PFHxS	µg/L	100.000	100.4378	100.4	1147	2.11	576		--	--	--	--
13C4-PFOS	µg/L	100.000	97.5425	97.5	1032	2.95	475		--	--	--	--
D3-MeFOSA	µg/L	100.000	98.1460	98.1	2594	5.21	147		--	--	--	--
D5-EtFOSA	µg/L	100.000	101.4184	101.4	2288	5.34	205		--	--	--	--

PFHxA 1

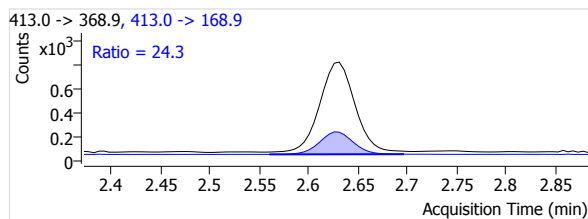
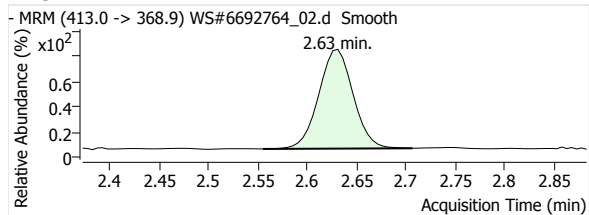


PFHpA 1

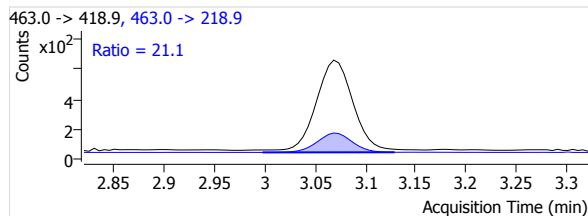
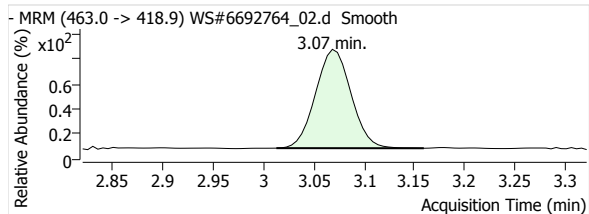


Quantitative Analysis Report

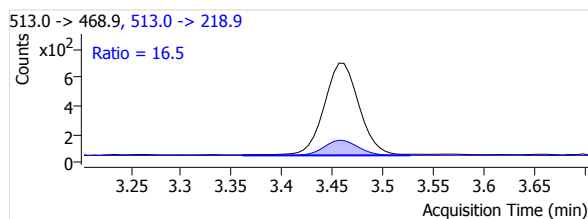
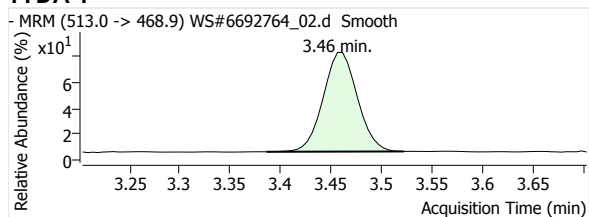
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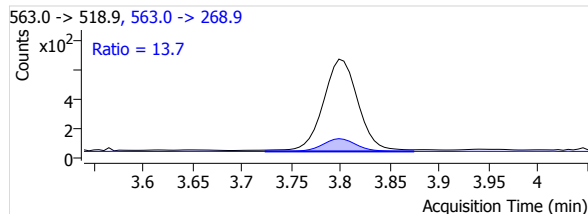
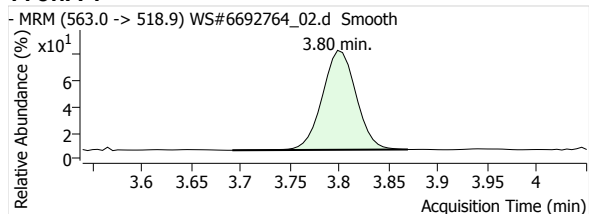
PFNA 1



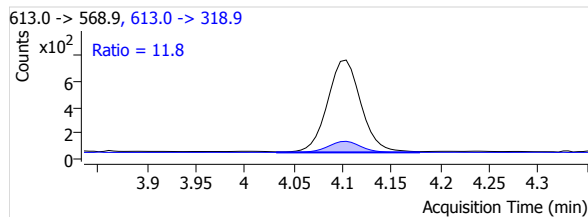
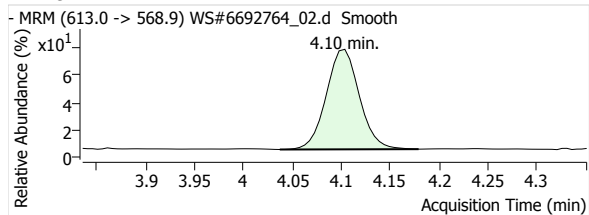
PFDA 1



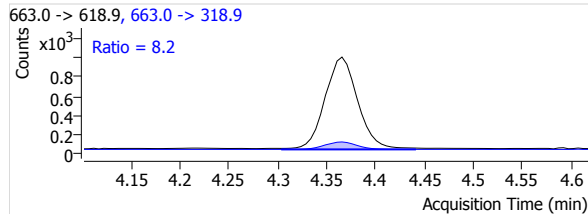
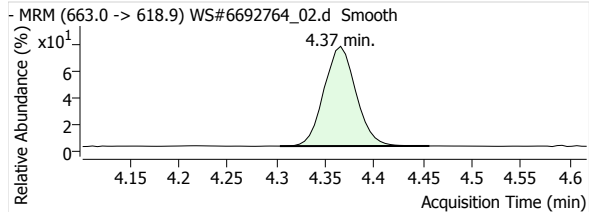
PFUnA 1



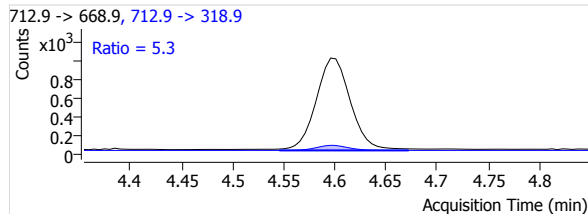
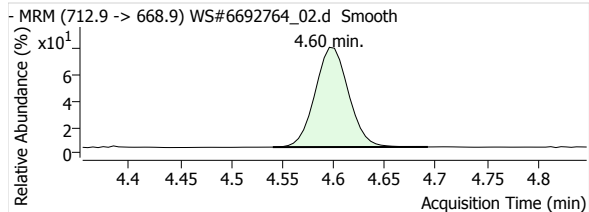
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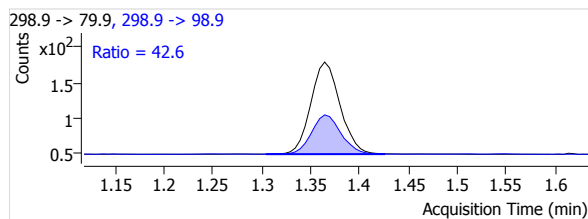
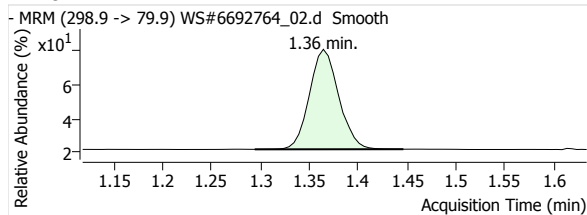


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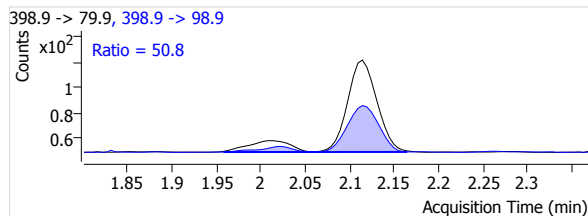
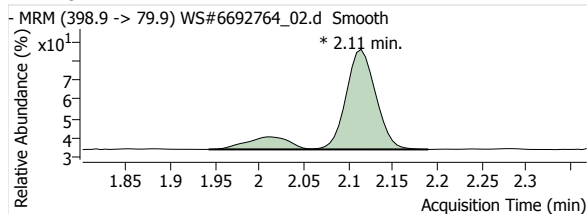


Quantitative Analysis Report

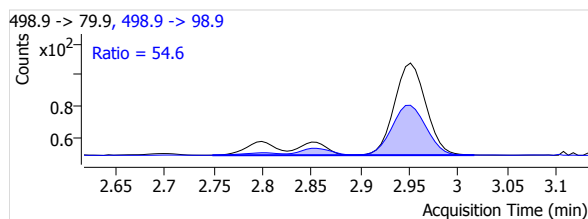
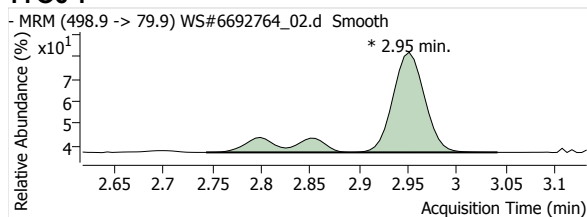
PFBS 1



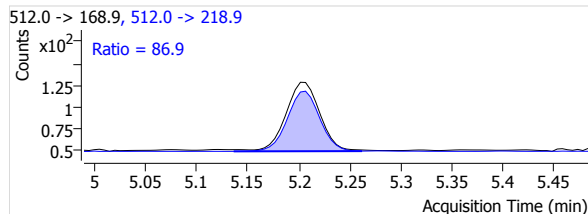
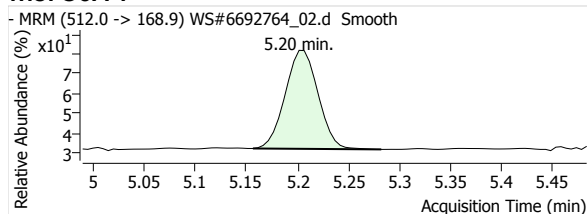
PFHxS 1



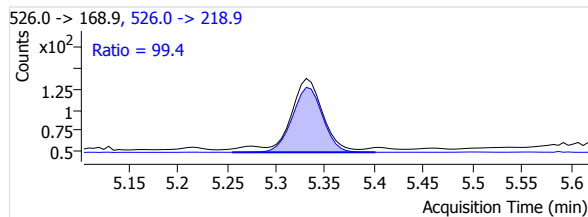
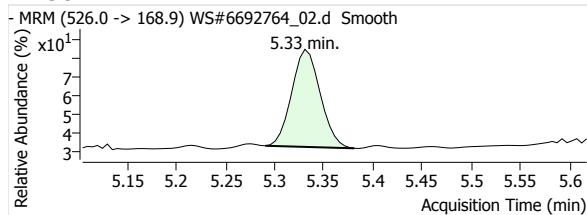
PFOS 1



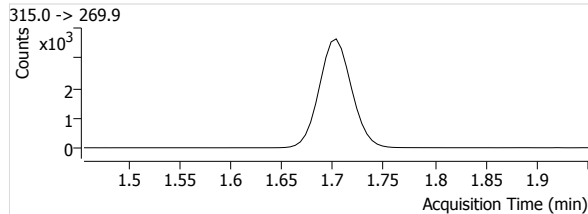
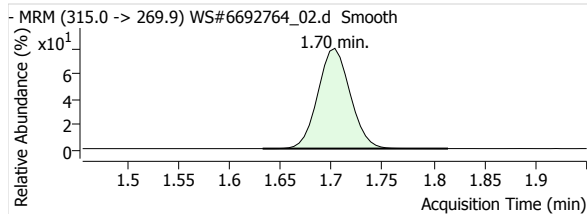
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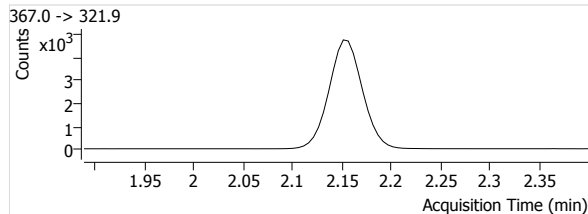
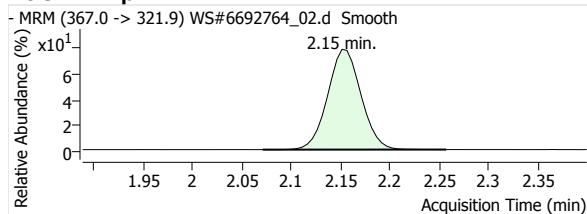
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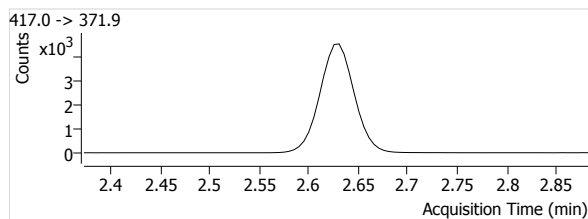
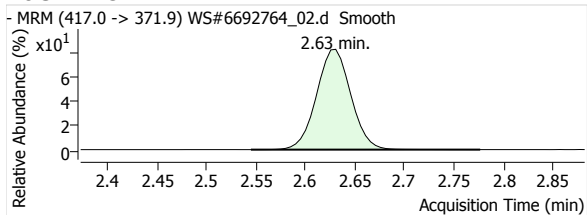


13C4-PFHpA

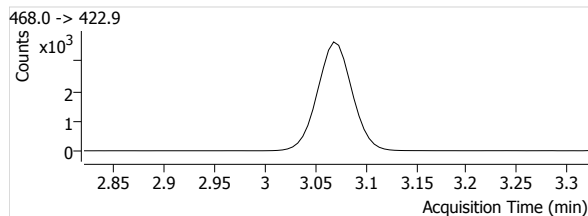
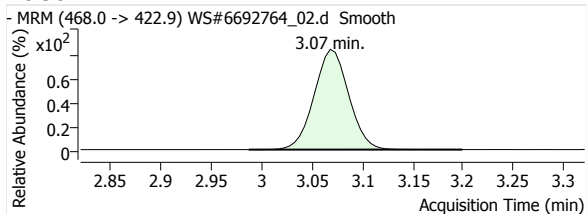


Quantitative Analysis Report

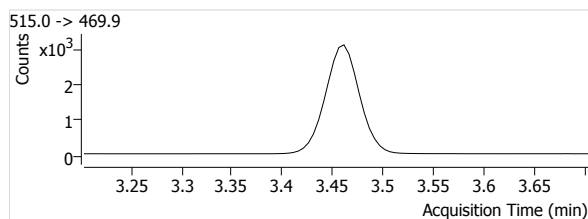
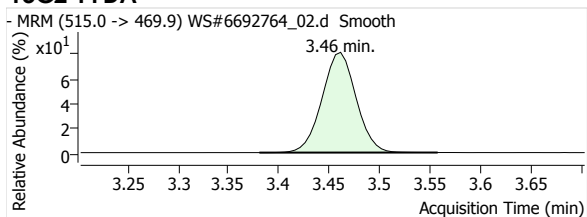
13C4-PFOA



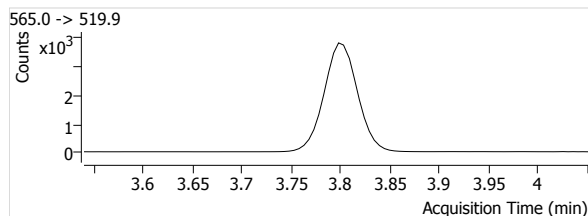
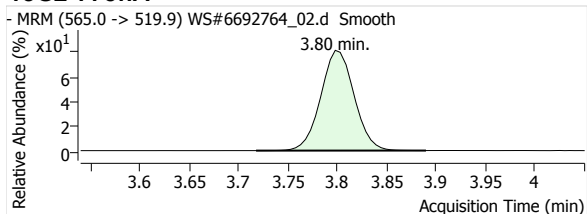
13C5-PFNA



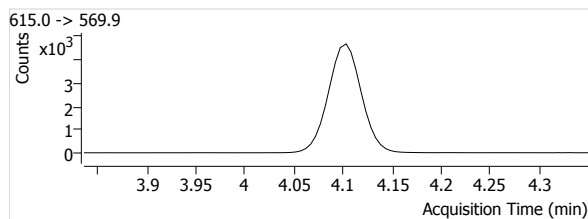
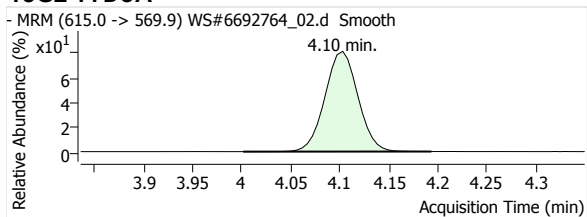
13C2-PFDA



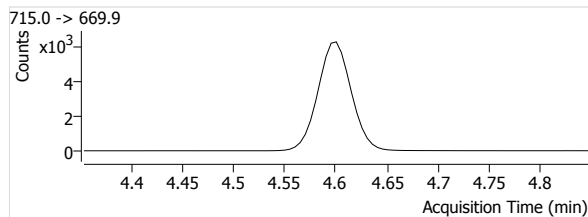
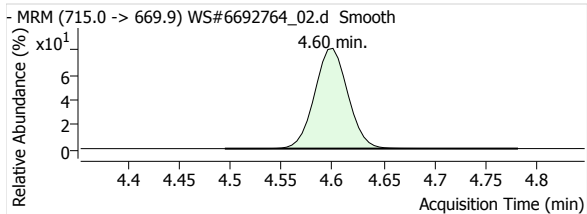
13C2-PFUnA



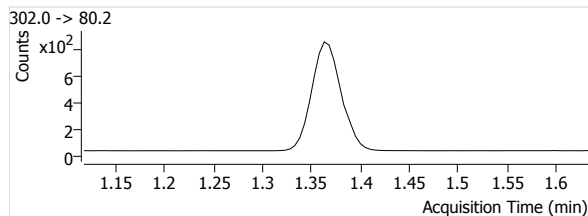
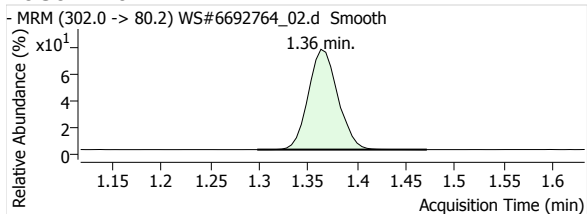
13C2-PFDoA



13C2-PFTeDA

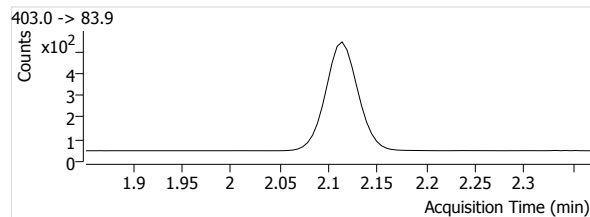
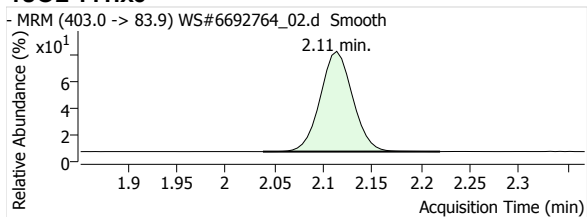


13C3-PFBS

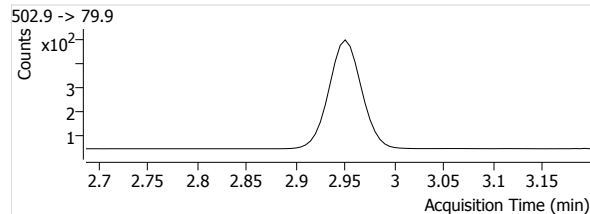
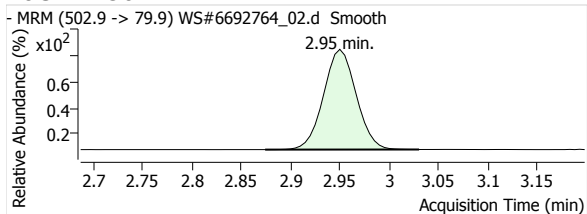


Quantitative Analysis Report

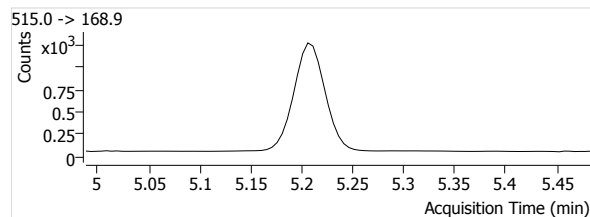
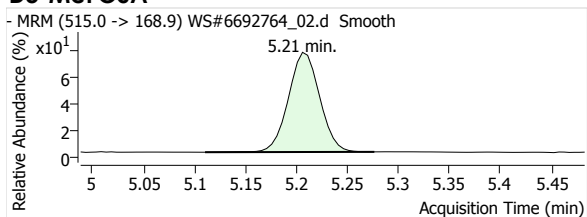
18O2-PFHxs



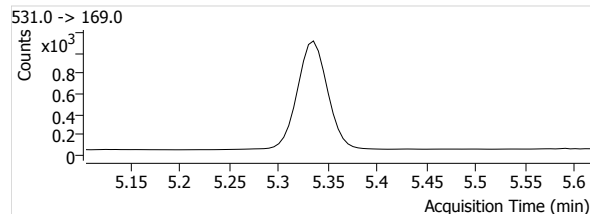
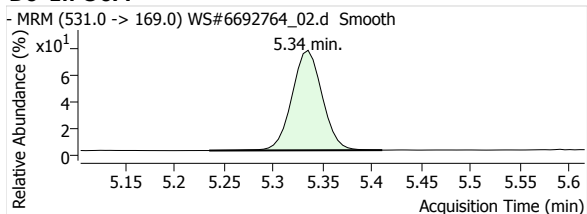
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

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Sample Name
Type
Acq. Method File
Acq. Date-Time
Comment
User Defined

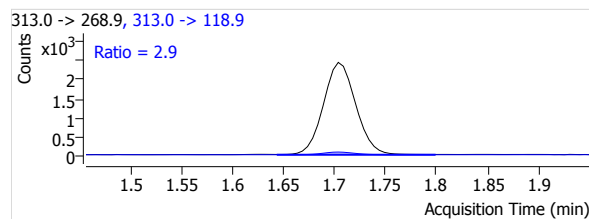
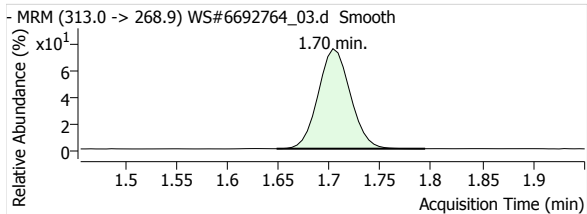
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PFAS.m
2020/04/23 2:08:40 AM
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Data File
Instrument
Position
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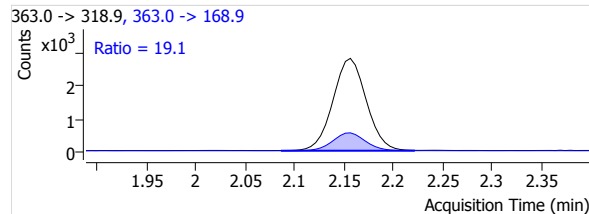
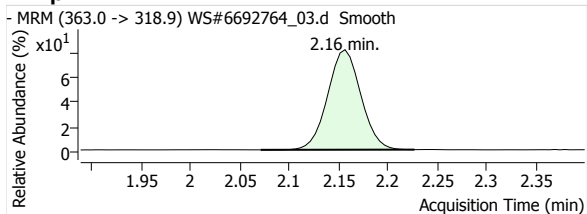
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LCMS04
P1-A3
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Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	3.000	3.3533	111.8	5263	1.70	6621	0.6606	154	1.70	495	2.9
PFHpA 1	µg/L	3.000	3.2585	108.6	6469	2.16	5746	0.5947	1234	2.16	736	19.1
PFOA 1	µg/L	3.000	3.3555	111.8	6519	2.63	4855	0.6199	1589	2.63	2766	24.4
PFNA 1	µg/L	3.000	3.4147	113.8	5309	3.07	9687	0.6432	1092	3.07	15254	20.6
PFDA 1	µg/L	3.000	3.3189	110.6	5473	3.46	6446	0.7483	874	3.46	943	16.0
PFUnA 1	µg/L	3.000	3.3049	110.2	5106	3.80	1868	0.5909	729	3.80	475	14.3
PFDoA 1	µg/L	3.000	3.3395	111.3	5729	4.10	274	0.5528	663	4.10	236	11.6
PFTrDA 1	µg/L	3.000	3.2918	109.7	7379	4.37	7905	0.5317	555	4.37	3728	7.5
PFTeDA 1	µg/L	3.000	3.3038	110.1	8011	4.60	7455	0.5772	407	4.60	14486	5.1
PFBS 1	µg/L	3.000	3.2438	108.1	910	1.36	12322	0.5426	426	1.36	2013	46.8
PFHxS 1	µg/L	3.000	3.1974	106.6	684	2.08	3781	0.6086	386	2.09	2084	56.4
PFOS 1	µg/L	3.000	3.3525	111.8	602	2.90	6109	0.5775	329	2.89	3473	54.6
MeFOSA 1	µg/L	3.000	3.2094	107.0	620	5.21	75	0.2406	560	5.21	336	90.3
EtFOSA 1	µg/L	3.000	3.5742	119.1	702	5.33	58	0.3110	583	5.33	385	83.0
13C2-PFHxA	µg/L	100.000	99.1907	99.2	7967	1.70	1629		--	--	--	--
13C4-PFHpA	µg/L	100.000	97.5516	97.6	10877	2.16	1323		--	--	--	--
13C4-PFOA	µg/L	100.000	97.3436	97.3	10517	2.63	1689		--	--	--	--
13C5-PFNA	µg/L	100.000	95.9544	96.0	8254	3.07	1376		--	--	--	--
13C2-PFDA	µg/L	100.000	98.1350	98.1	7314	3.46	1330		--	--	--	--
13C2-PFUnA	µg/L	100.000	98.4842	98.5	8641	3.80	991		--	--	--	--
13C2-PFDoA	µg/L	100.000	97.2141	97.2	10364	4.10	1346		--	--	--	--
13C2-PFTeDA	µg/L	100.000	99.3628	99.4	13878	4.60	2814		--	--	--	--
13C3-PFBS	µg/L	100.000	98.0129	98.0	1677	1.36	1087		--	--	--	--
18O2-PFHxS	µg/L	100.000	98.4238	98.4	1124	2.11	502		--	--	--	--
13C4-PFOS	µg/L	100.000	98.5822	98.6	1043	2.95	370		--	--	--	--
D3-MeFOSA	µg/L	100.000	97.5028	97.5	2577	5.21	150		--	--	--	--
D5-EtFOSA	µg/L	100.000	100.0443	100.0	2257	5.34	128		--	--	--	--

PFHxA 1

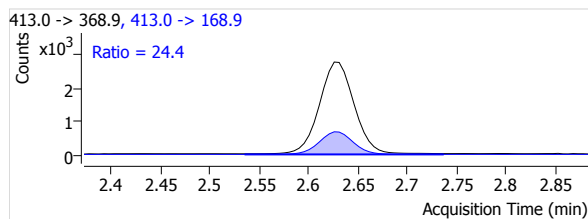
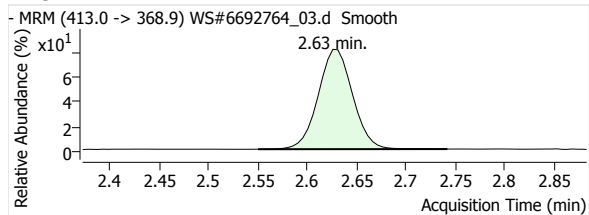


PFHpA 1

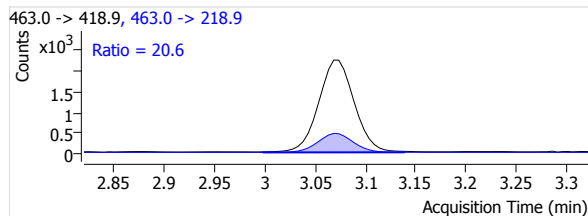
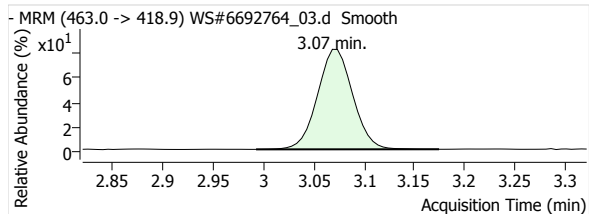


Quantitative Analysis Report

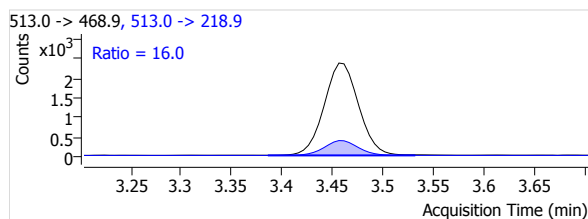
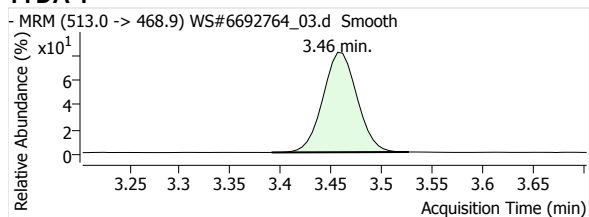
PFOA 1



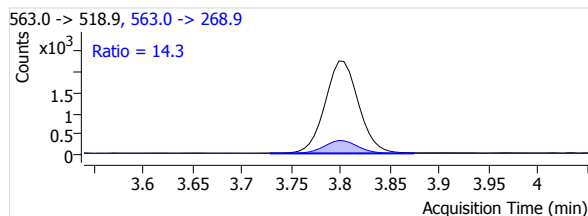
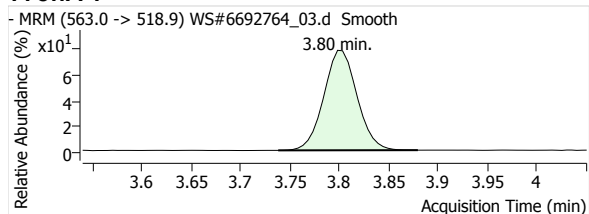
PFNA 1



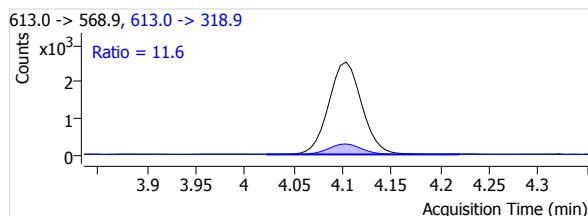
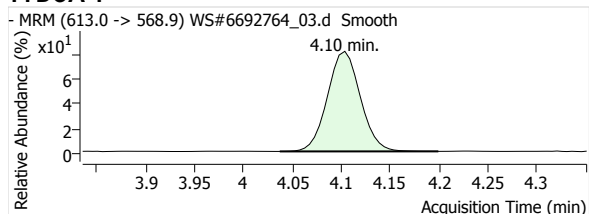
PFDA 1



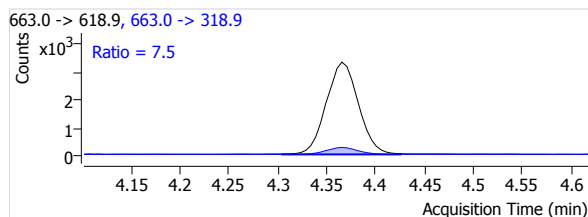
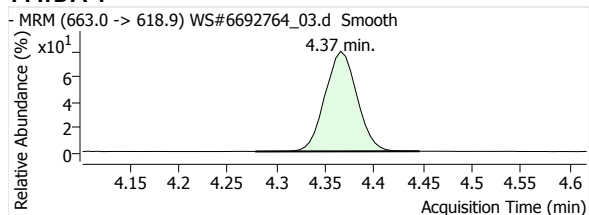
PFUnA 1



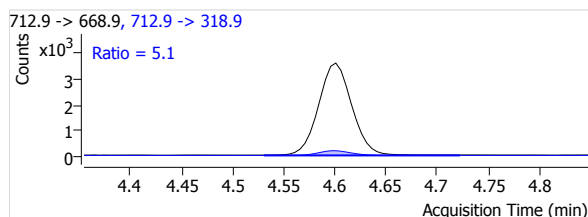
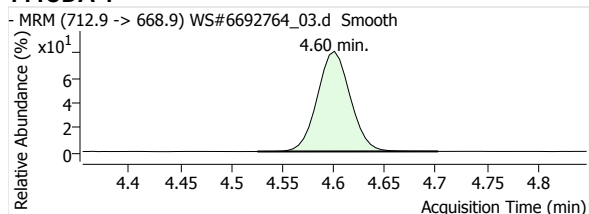
PFDaA 1



PFTrDA 1

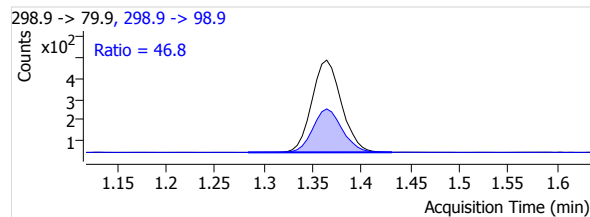
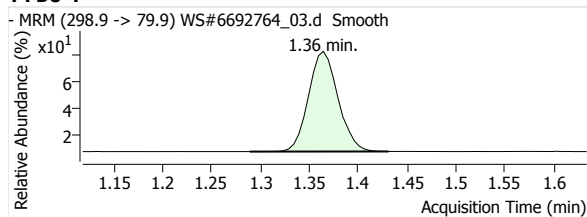


PFTeDA 1

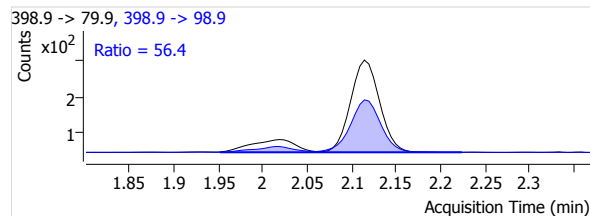
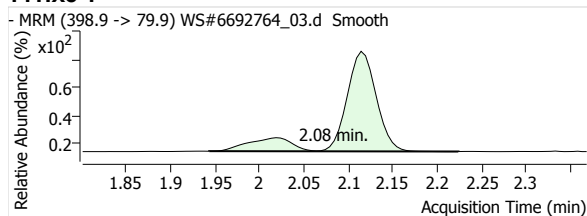


Quantitative Analysis Report

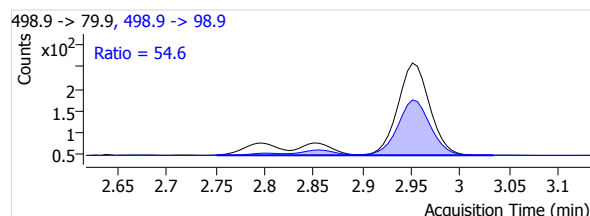
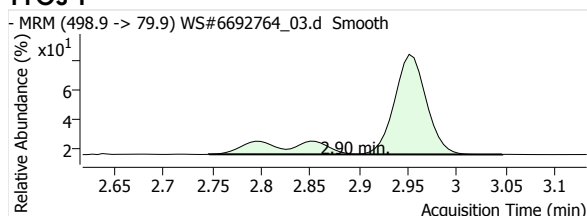
PFBS 1



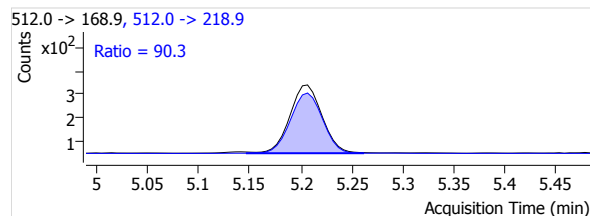
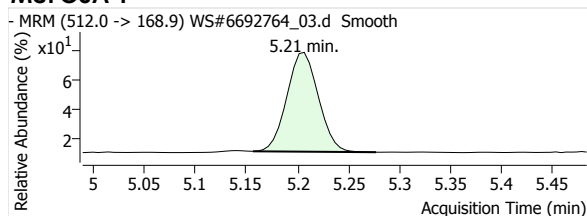
PFHxS 1



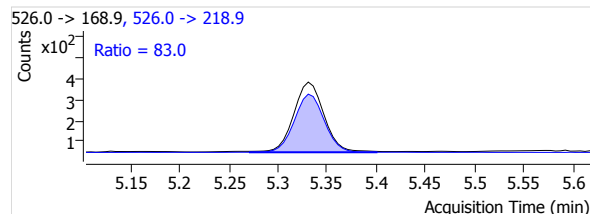
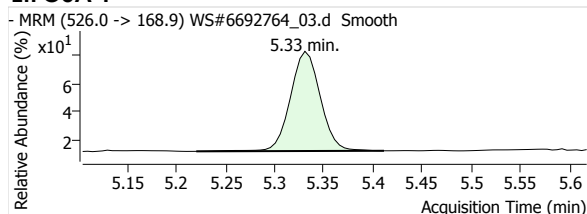
PFOS 1



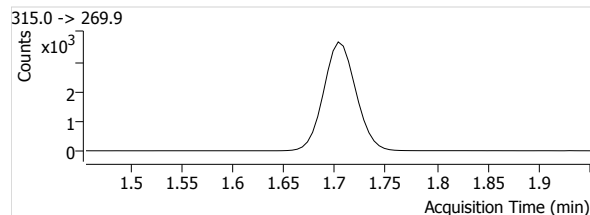
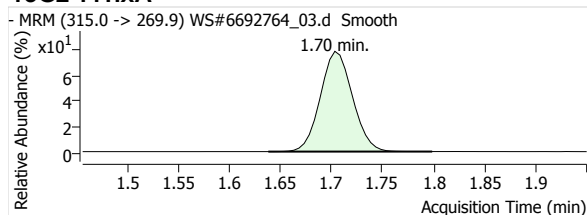
MeFOSA 1



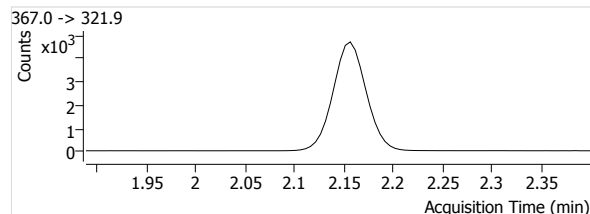
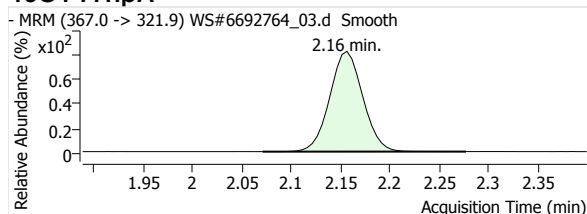
eFOSA 1



13C2-PFHxA

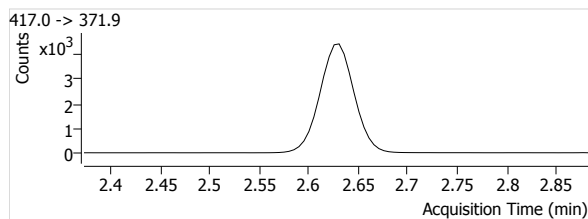
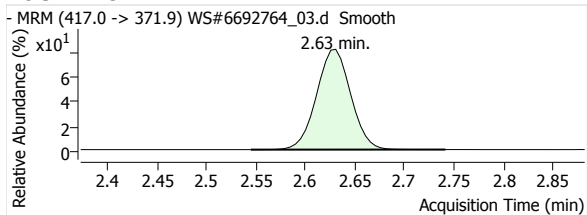


13C4-PFHpA

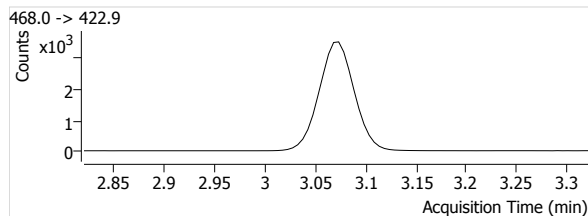
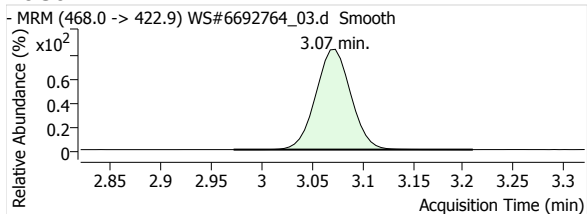


Quantitative Analysis Report

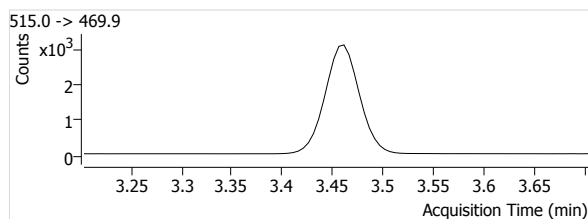
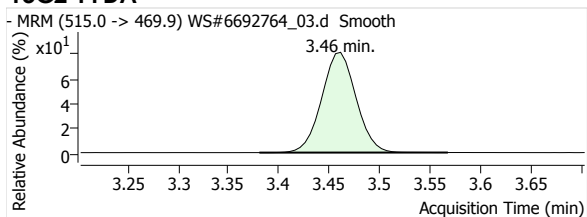
13C4-PFOA



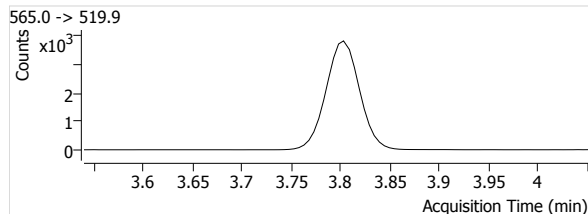
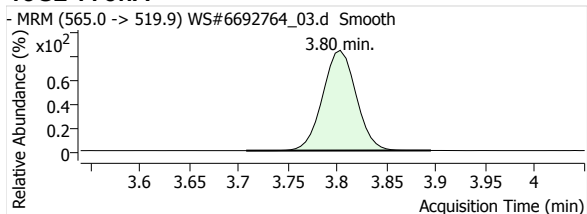
13C5-PFNA



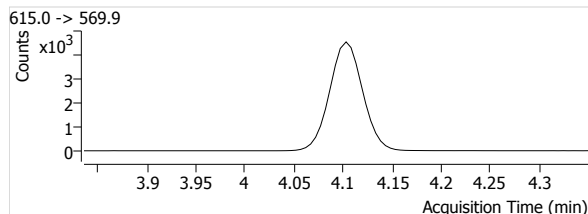
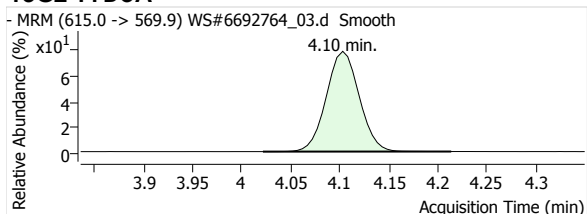
13C2-PFDA



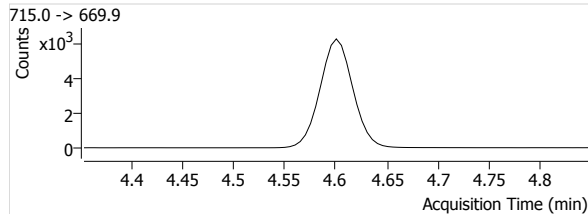
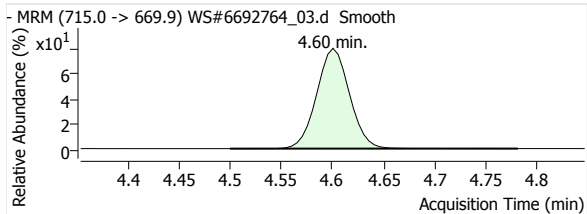
13C2-PFUnA



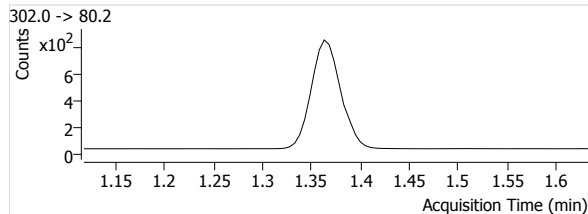
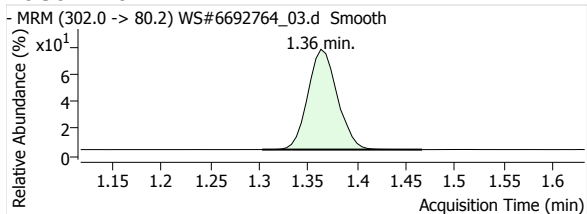
13C2-PFDoA



13C2-PFTeDA

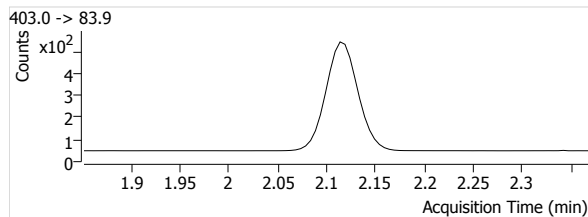
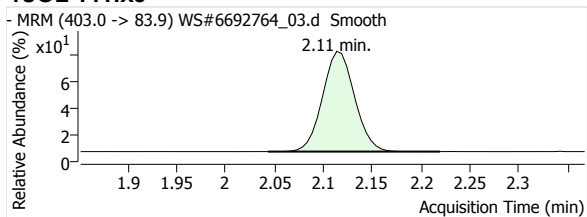


13C3-PFBS

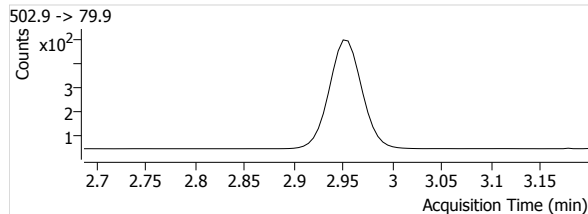
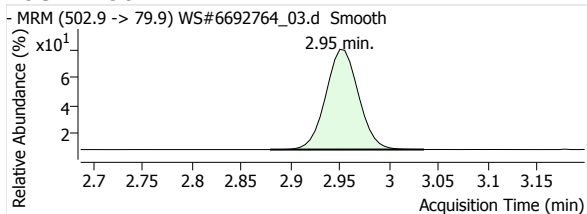


Quantitative Analysis Report

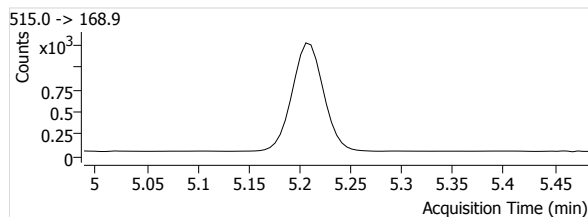
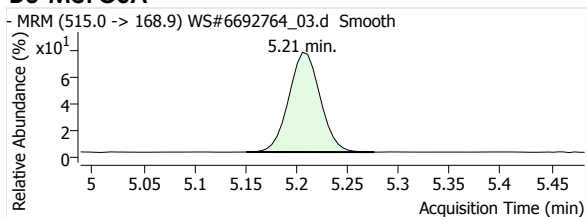
18O2-PFHxs



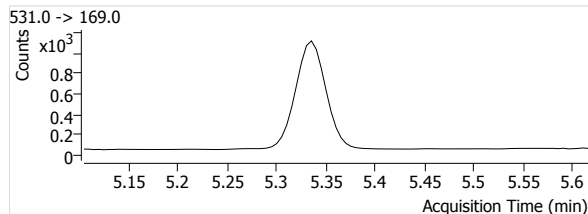
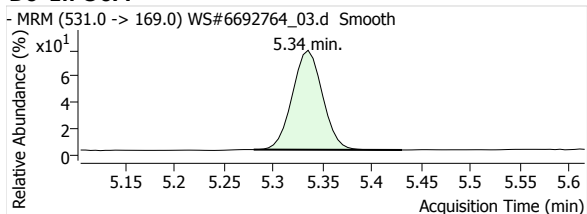
13C4-PFOS



D3-MeFOSA



D5-EtFOSA

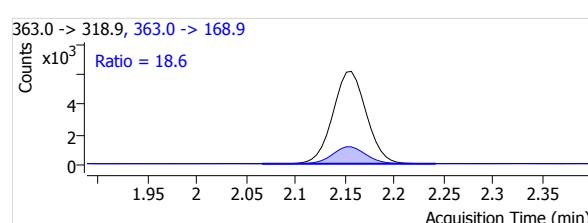
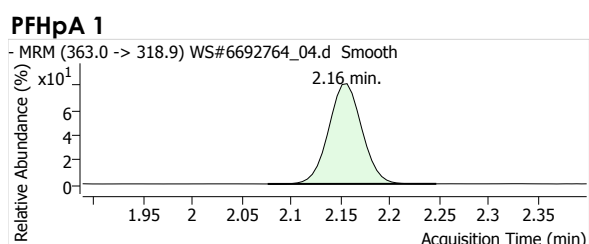
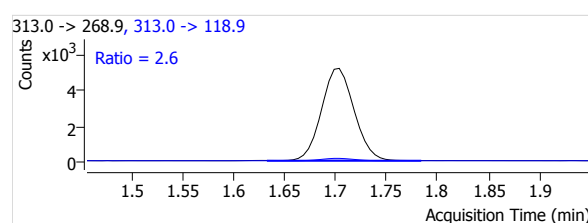
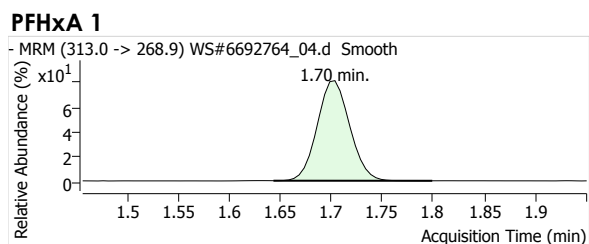


Quantitative Analysis Report

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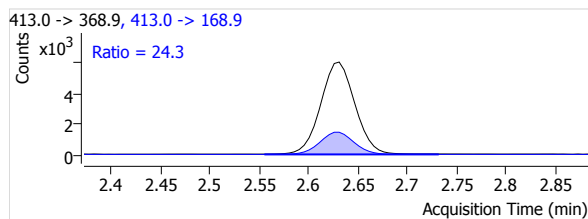
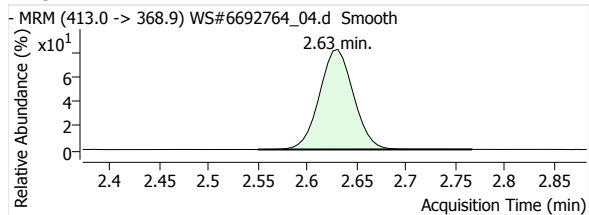
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Type	Calibration	Instrument	LCMS04
Acq. Method File	PFAS.m	Position	P1-A4
Acq. Date-Time	2020/04/23 2:15:35 AM	Dil.	1.0
Comment	-		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	8.000	8.1278	101.6	11599	1.70	70305	1.5416	307	1.70	1138	2.6
PFHpA 1	µg/L	8.000	8.1427	101.8	14586	2.16	882	1.4349	2708	2.15	619	18.6
PFOA 1	µg/L	8.000	8.0392	100.5	14295	2.63	9481	1.4374	3471	2.63	1334	24.3
PFNA 1	µg/L	8.000	8.0733	100.9	11575	3.07	11887	1.4717	2385	3.07	6315	20.6
PFDA 1	µg/L	8.000	8.0392	100.5	11860	3.46	4845	1.7454	1873	3.46	7854	15.8
PFUnA 1	µg/L	8.000	8.0474	100.6	11350	3.80	1681	1.3869	1678	3.80	13072	14.8
PFDoA 1	µg/L	8.000	7.9811	99.8	12579	4.10	1282	1.2703	1515	4.10	857	12.0
PFTeDA 1	µg/L	8.000	8.0859	101.1	16326	4.37	7666	1.2613	1162	4.37	4095	7.1
PFTeDA 1	µg/L	8.000	8.0830	101.0	17724	4.60	68540	1.3693	864	4.60	7113	4.9
PFBS 1	µg/L	8.000	8.0241	100.3	2039	1.36	15050	1.2897	935	1.36	29057	45.9
PFHxS 1	µg/L	8.000	7.9352	99.2	1531	2.08	4877	1.4731	866	2.09	6231	56.6
PFOS 1	µg/L	8.000	8.1539	101.9	1298	2.90	621	1.3502	720	2.89	3173	55.5
MeFOSA 1	µg/L	8.000	8.1604	102.0	1451	5.21	134	0.5944	1279	5.21	702	88.1
EtFOSA 1	µg/L	8.000	8.0949	101.2	1448	5.34	131	0.6856	1296	5.34	1568	89.5
13C2-PFHxA	µg/L	100.000	93.6753	93.7	7524	1.70	2423		--	--	--	--
13C4-PFHpA	µg/L	100.000	91.1659	91.2	10165	2.16	1000		--	--	--	--
13C4-PFOA	µg/L	100.000	92.0492	92.0	9945	2.63	2620		--	--	--	--
13C5-PFNA	µg/L	100.000	91.4322	91.4	7865	3.07	833		--	--	--	--
13C2-PFDA	µg/L	100.000	91.1713	91.2	6795	3.46	1583		--	--	--	--
13C2-PFUnA	µg/L	100.000	93.2756	93.3	8184	3.80	1176		--	--	--	--
13C2-PFDoA	µg/L	100.000	92.8806	92.9	9902	4.10	1274		--	--	--	--
13C2-PFTeDA	µg/L	100.000	92.6756	92.7	12944	4.60	1605		--	--	--	--
13C3-PFBS	µg/L	100.000	92.4021	92.4	1581	1.36	431		--	--	--	--
18O2-PFHxS	µg/L	100.000	90.9807	91.0	1039	2.11	569		--	--	--	--
13C4-PFOS	µg/L	100.000	90.8318	90.8	961	2.95	347		--	--	--	--
D3-MeFOSA	µg/L	100.000	92.3572	92.4	2441	5.21	120		--	--	--	--
D5-EtFOSA	µg/L	100.000	93.6170	93.6	2112	5.34	133		--	--	--	--

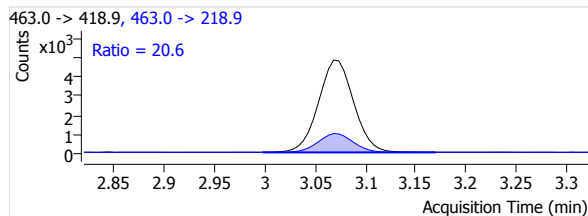
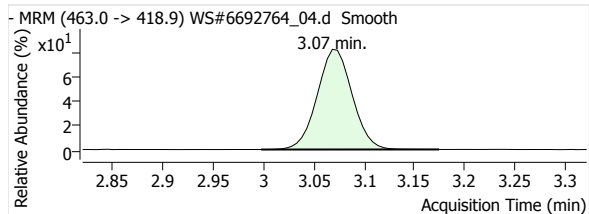


Quantitative Analysis Report

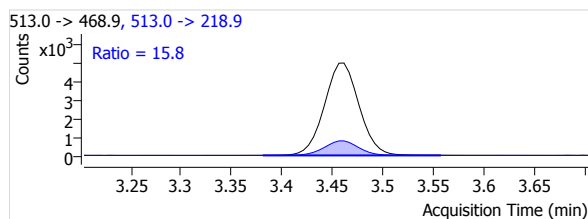
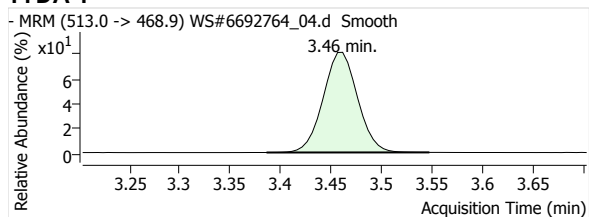
PFOA 1



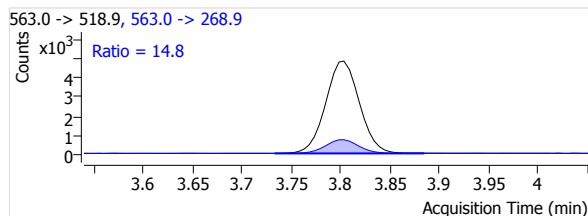
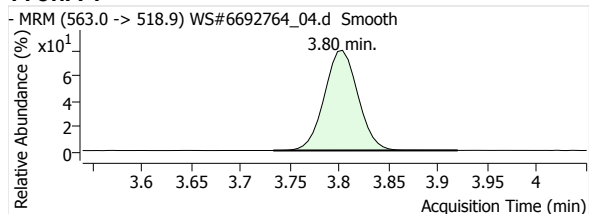
PFNA 1



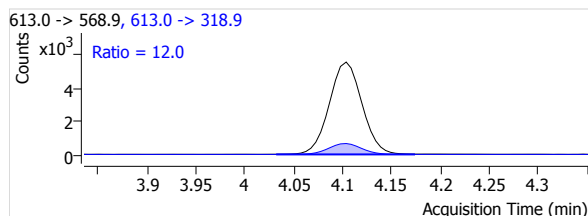
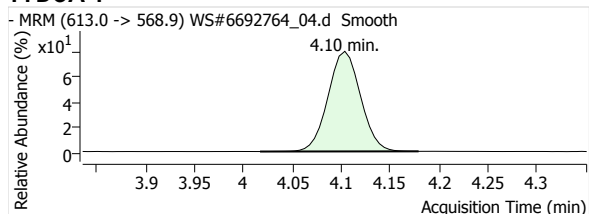
PFDA 1



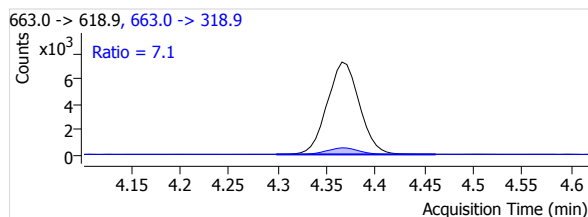
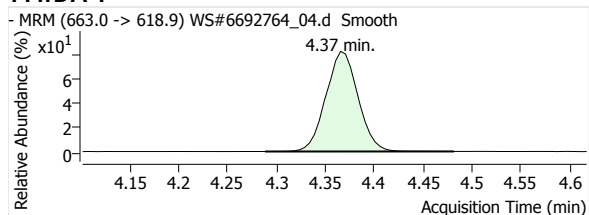
PFUnA 1



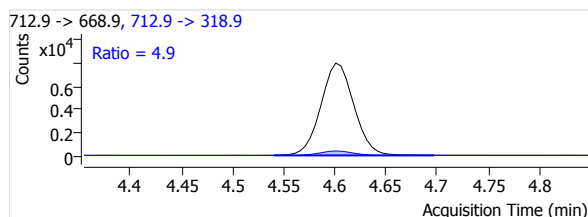
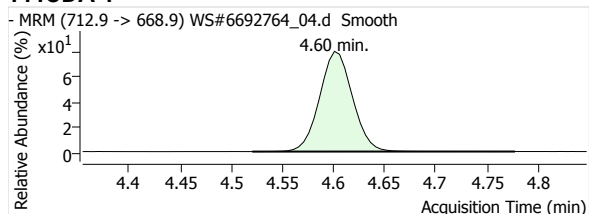
PFDaA 1



PFTrDA 1

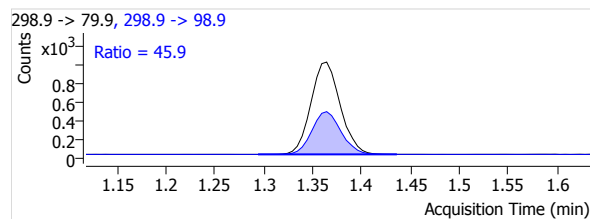
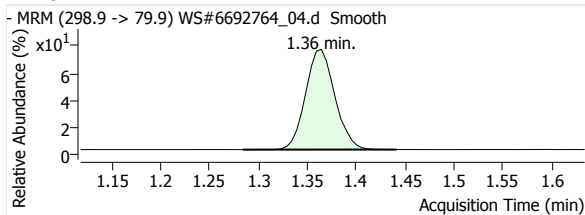


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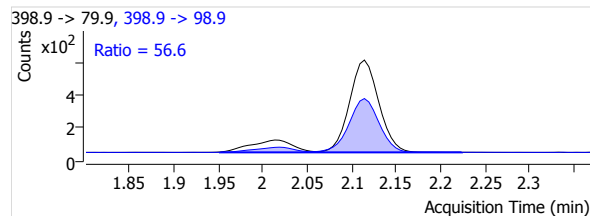
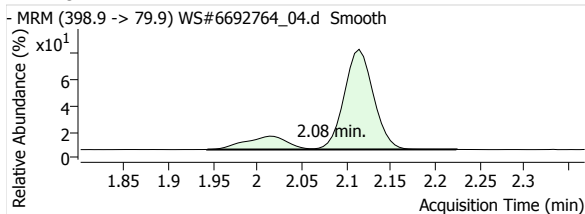


Quantitative Analysis Report

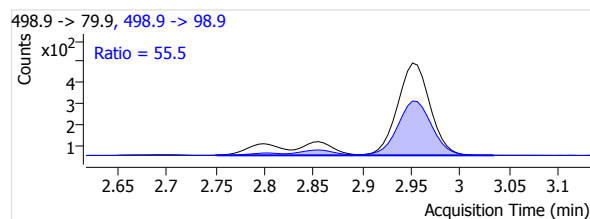
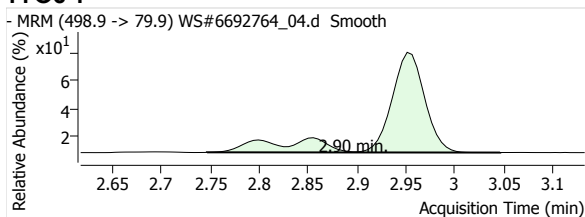
PFBS 1



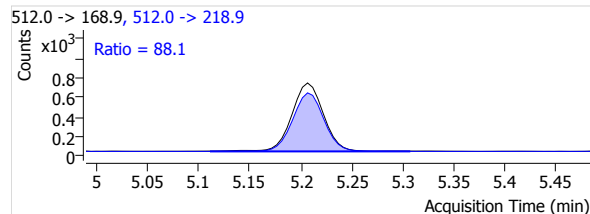
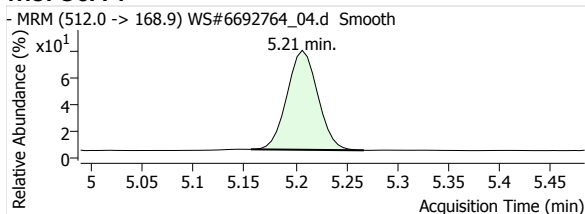
PFHxS 1



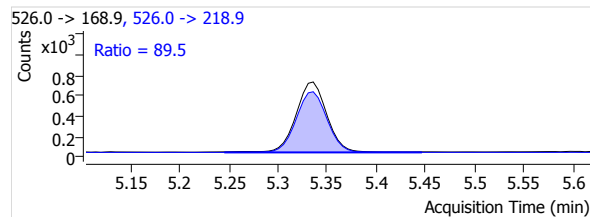
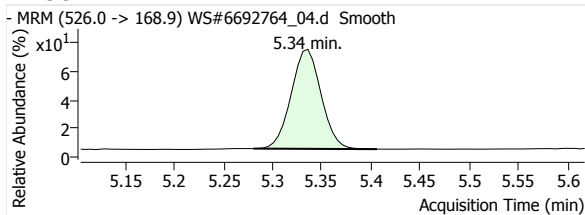
PFOS 1



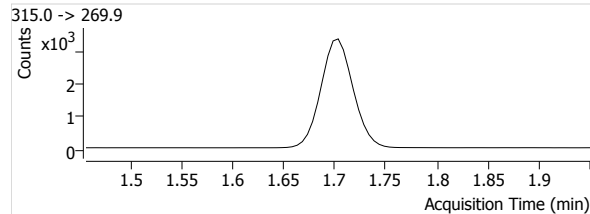
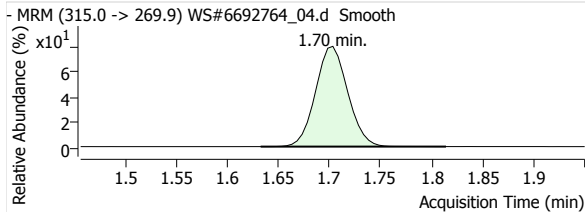
MeFOSA 1



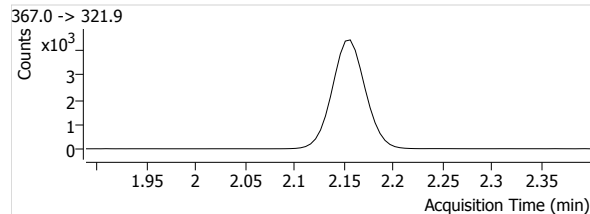
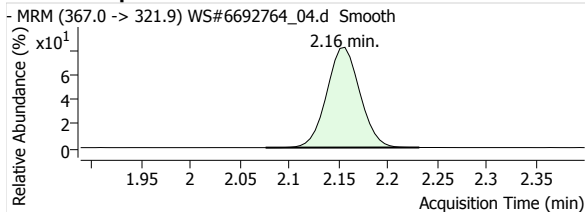
eFOSA 1



13C2-PFHxA

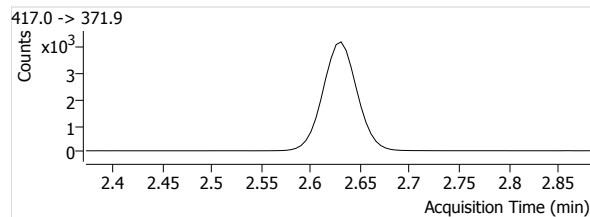
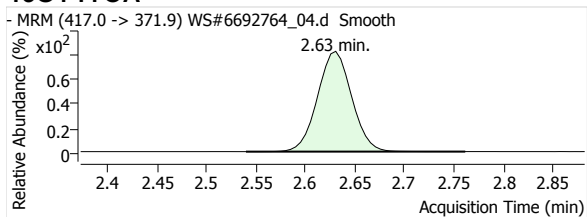


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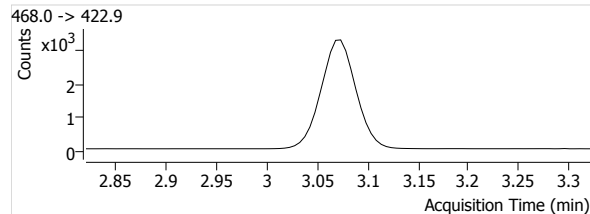
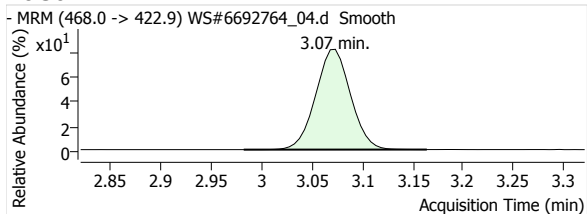


Quantitative Analysis Report

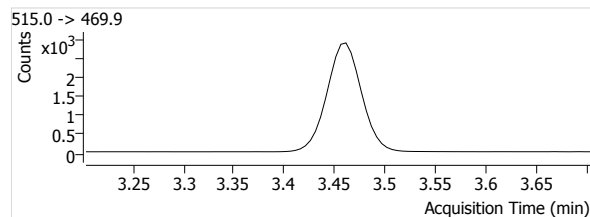
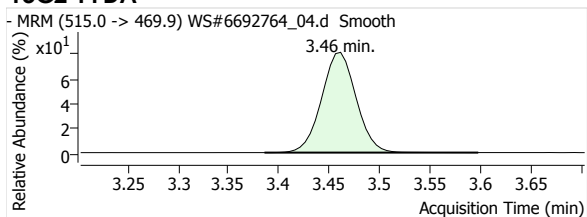
13C4-PFOA



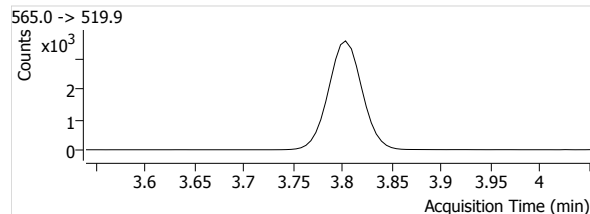
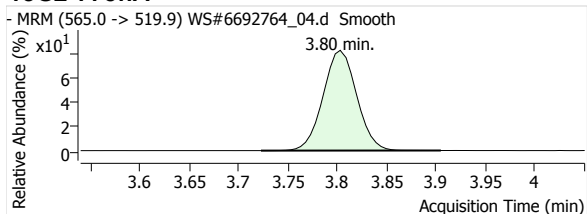
13C5-PFNA



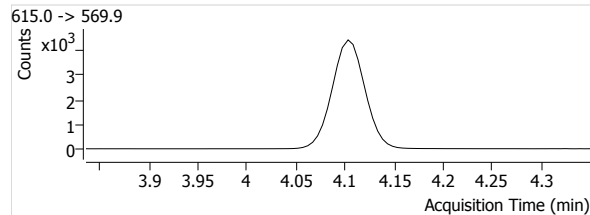
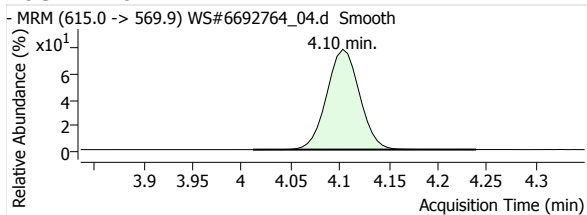
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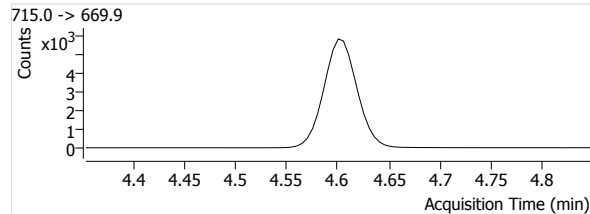
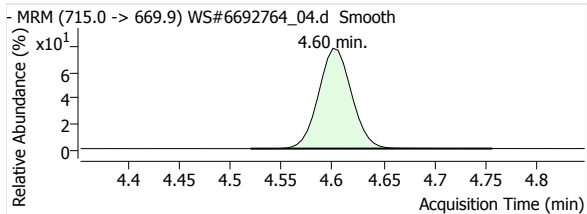
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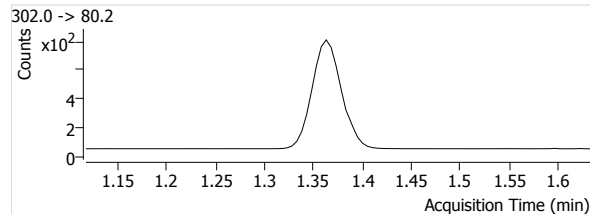
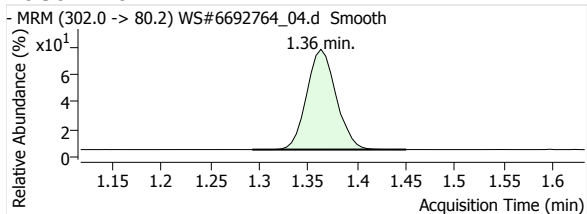
13C2-PFDoA



13C2-PFTeDA

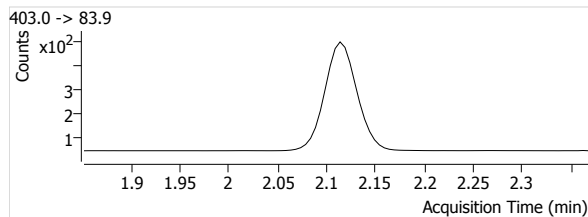
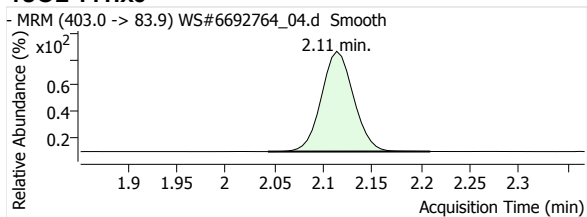


13C3-PFBS

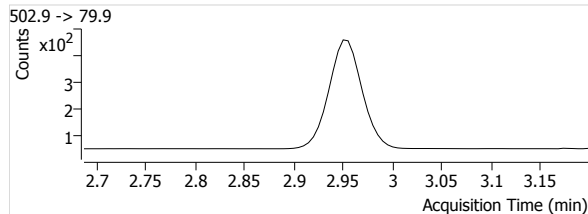
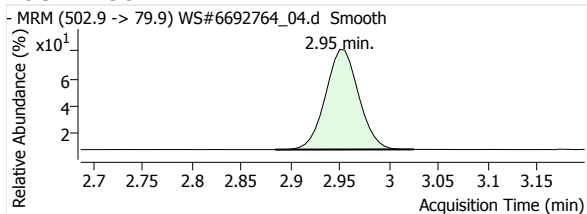


Quantitative Analysis Report

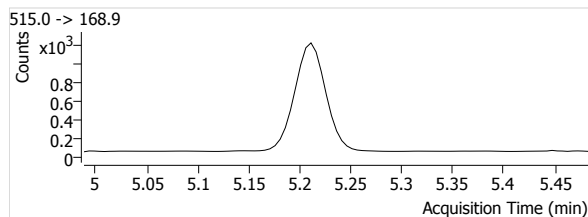
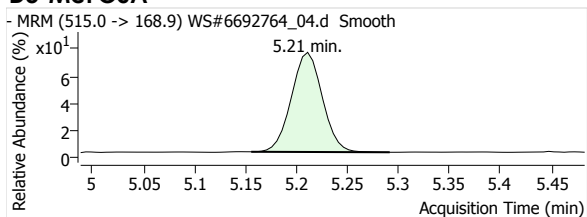
18O2-PFHxs



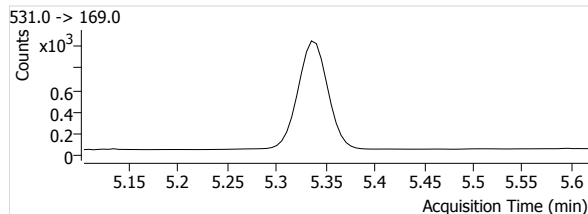
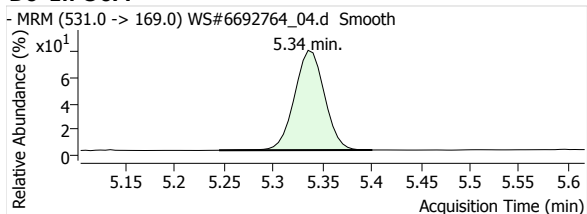
13C4-PFOS



D3-MeFOSA



D5-EtFOSA

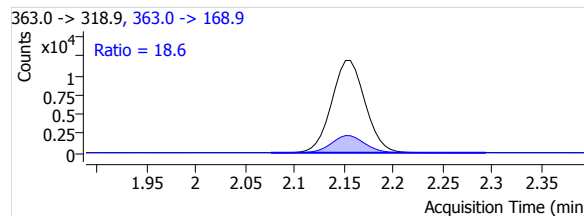
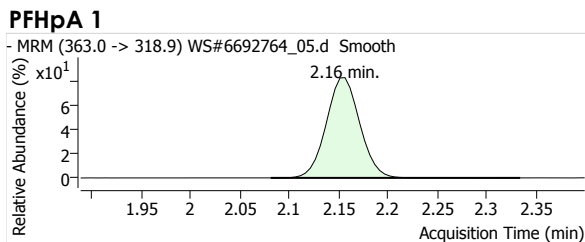
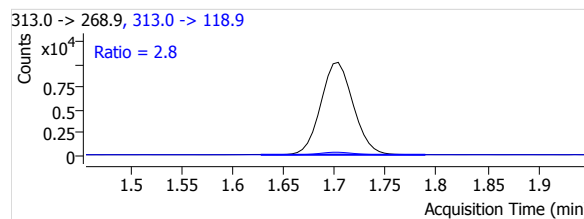
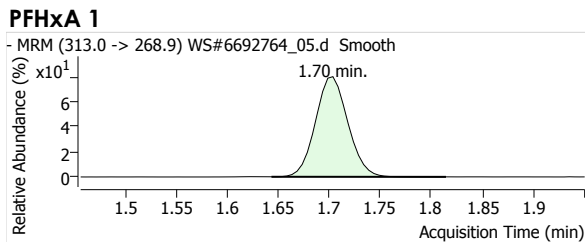


Quantitative Analysis Report

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bin

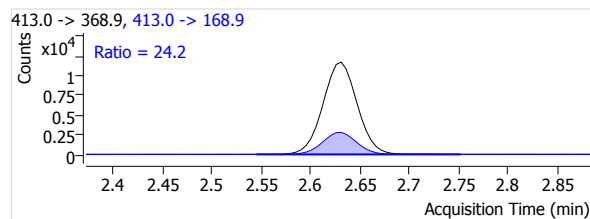
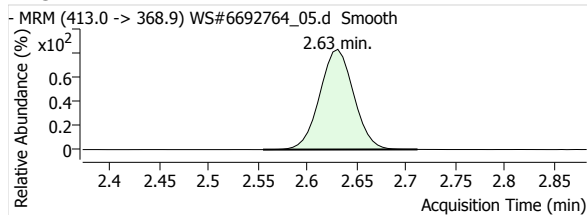
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Acq. Method File	PFAS.m	Position	P1-A5
Acq. Date-Time	2020/04/23 2:22:31 AM	Dil.	1.0
Comment	-		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	16.000	14.9175	93.2	22445	1.70	9561	2.7944	638	1.70	3770	2.8
PFHpA 1	µg/L	16.000	14.6229	91.4	28429	2.16	3274	2.5497	5281	2.15	1111	18.6
PFOA 1	µg/L	16.000	14.5573	91.0	27822	2.63	15403	2.5752	6726	2.63	29862	24.2
PFNA 1	µg/L	16.000	14.5352	90.8	22545	3.07	17327	2.6209	4775	3.07	14325	21.2
PFDA 1	µg/L	16.000	14.7241	92.0	23533	3.46	5638	3.1575	3737	3.46	2808	15.9
PFUnA 1	µg/L	16.000	14.7275	92.0	22005	3.80	5103	2.5080	3175	3.80	3247	14.4
PFDoA 1	µg/L	16.000	14.8294	92.7	24830	4.10	1207	2.3290	2870	4.10	346	11.6
PFTeDA 1	µg/L	16.000	14.6372	91.5	31541	4.37	103821	2.2583	2308	4.37	62600	7.3
PFTeDA 1	µg/L	16.000	14.7746	92.3	34614	4.60	90462	2.4783	1677	4.60	8567	4.8
PFBS 1	µg/L	16.000	15.0301	93.9	4080	1.36	10989	2.3846	1838	1.36	14233	45.0
PFHxS 1	µg/L	16.000	14.7914	92.4	3111	2.08	13806	2.7243	1666	2.09	8563	53.5
PFOS 1	µg/L	16.000	14.6873	91.8	2541	2.90	1114	2.4015	1420	2.89	2672	55.9
MeFOSA 1	µg/L	16.000	14.9153	93.2	2847	5.21	173	1.0772	2524	5.21	539	88.7
EtFOSA 1	µg/L	16.000	14.6925	91.8	2780	5.33	202	1.2323	2594	5.33	1104	93.3
13C2-PFHxA	µg/L	100.000	100.0000	100.0	8032	1.70	1727		--	--	--	--
13C4-PFHpA	µg/L	100.000	100.0000	100.0	11150	2.16	850		--	--	--	--
13C4-PFOA	µg/L	100.000	100.0000	100.0	10804	2.63	1947		--	--	--	--
13C5-PFNA	µg/L	100.000	100.0000	100.0	8602	3.07	1138		--	--	--	--
13C2-PFDA	µg/L	100.000	100.0000	100.0	7453	3.46	2179		--	--	--	--
13C2-PFUnA	µg/L	100.000	100.0000	100.0	8774	3.80	1185		--	--	--	--
13C2-PFDoA	µg/L	100.000	100.0000	100.0	10661	4.10	2074		--	--	--	--
13C2-PFTeDA	µg/L	100.000	100.0000	100.0	13967	4.60	2071		--	--	--	--
13C3-PFBS	µg/L	100.000	100.0000	100.0	1711	1.36	876		--	--	--	--
18O2-PFHxS	µg/L	100.000	100.0000	100.0	1142	2.11	783		--	--	--	--
13C4-PFOS	µg/L	100.000	100.0000	100.0	1058	2.95	1067		--	--	--	--
D3-MeFOSA	µg/L	100.000	100.0000	100.0	2643	5.21	144		--	--	--	--
D5-EtFOSA	µg/L	100.000	100.0000	100.0	2256	5.34	151		--	--	--	--

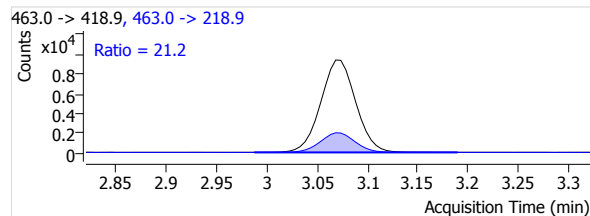
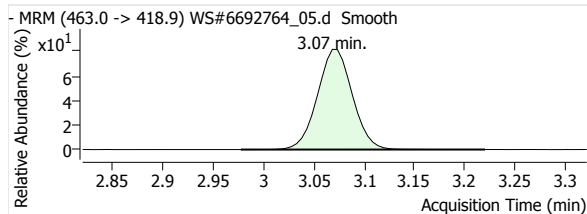


Quantitative Analysis Report

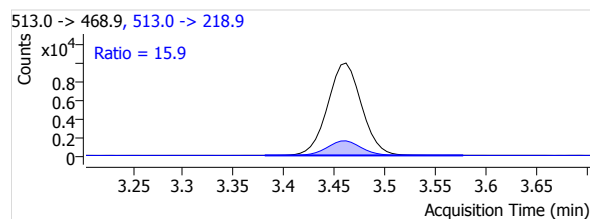
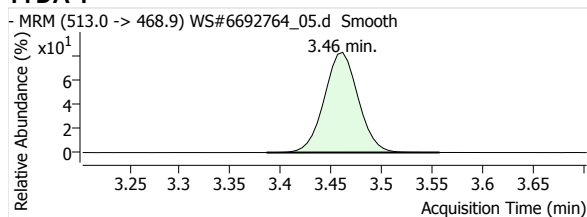
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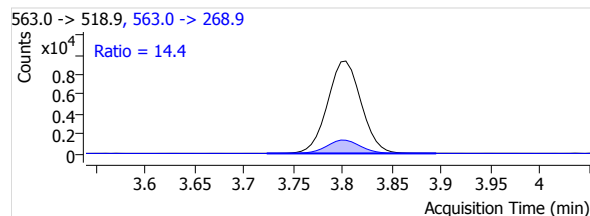
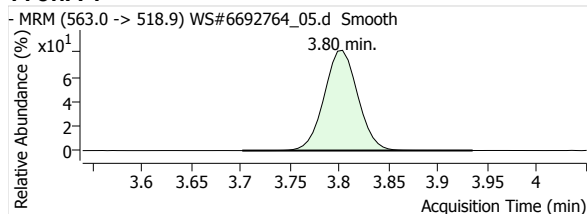
PFNA 1



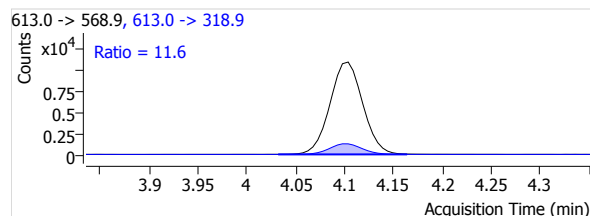
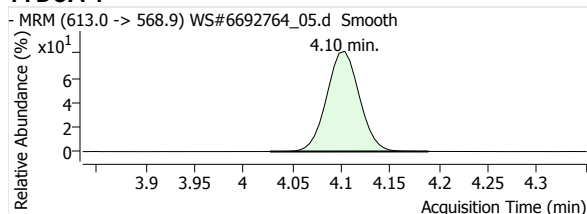
PFDA 1



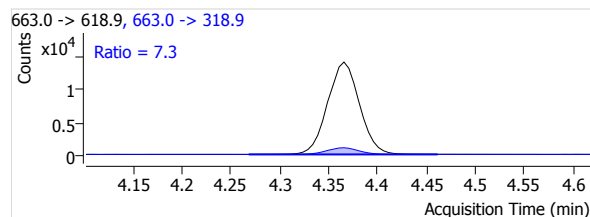
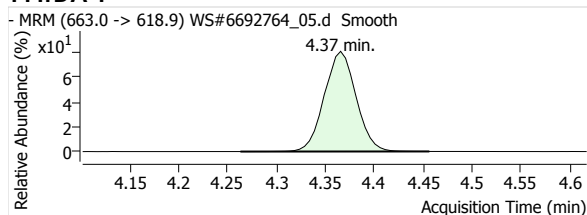
PFUnA 1



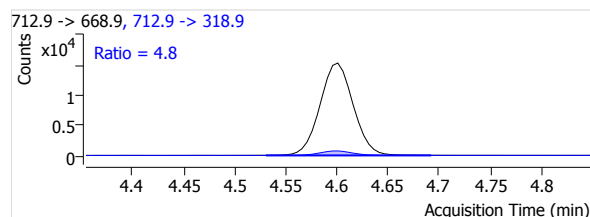
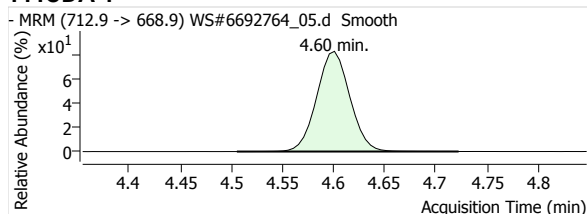
PFDaA 1



PFTrDA 1

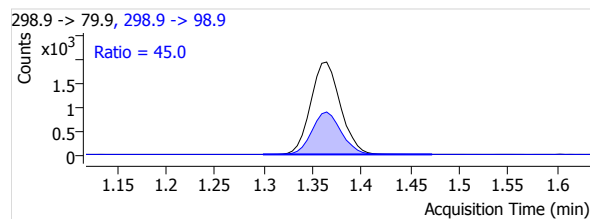
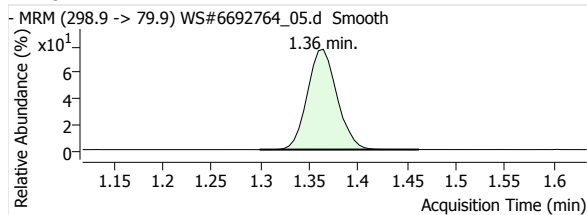


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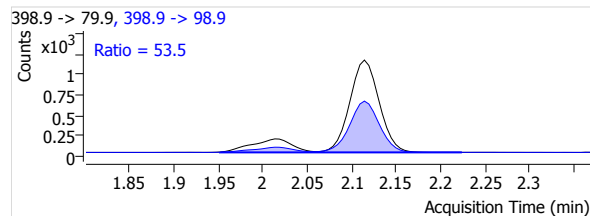
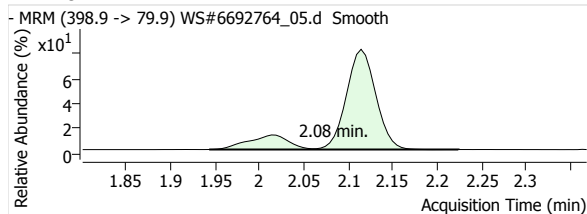


Quantitative Analysis Report

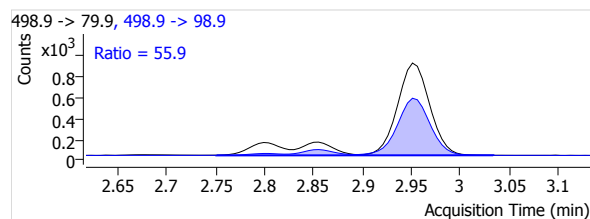
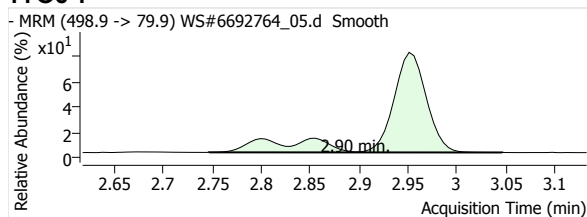
PFBS 1



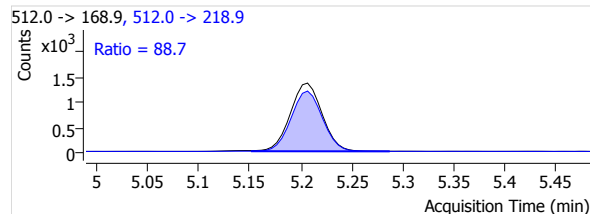
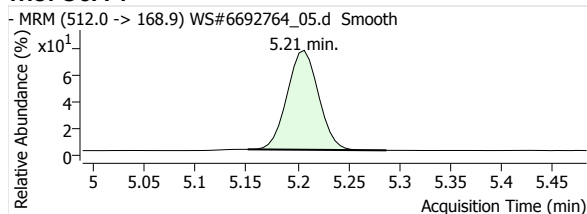
PFHxS 1



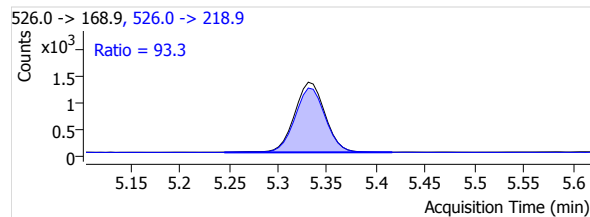
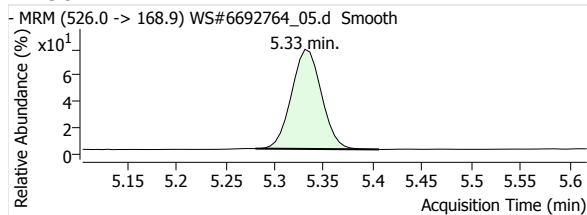
PFOS 1



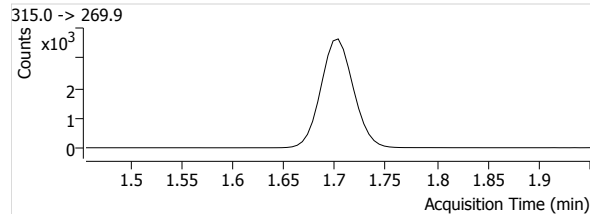
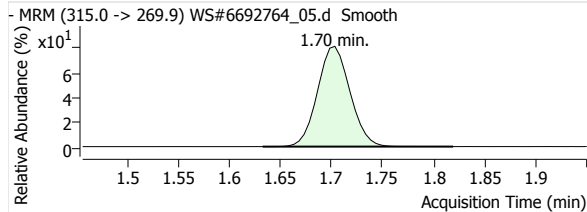
MeFOSA 1



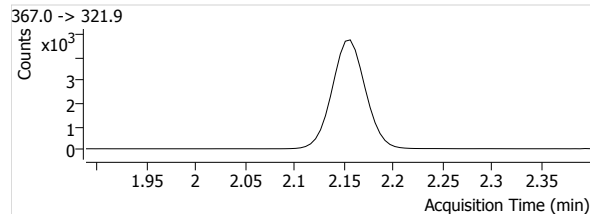
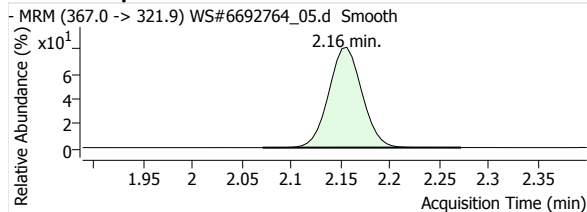
eFOSA 1



13C2-PFHxA

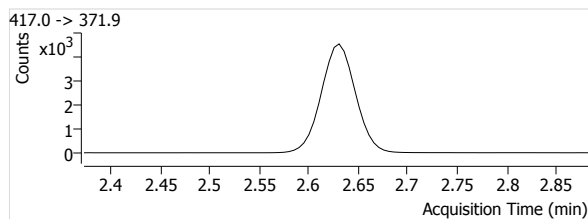
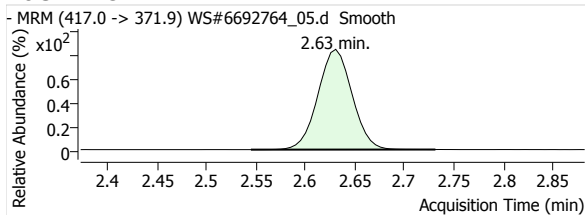


13C4-PFHpA

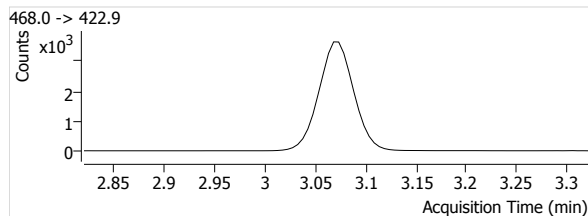
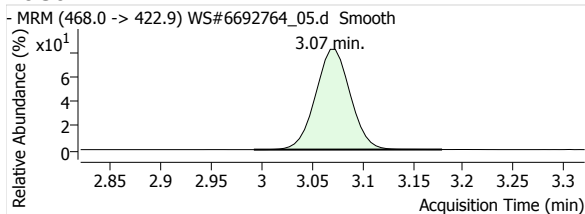


Quantitative Analysis Report

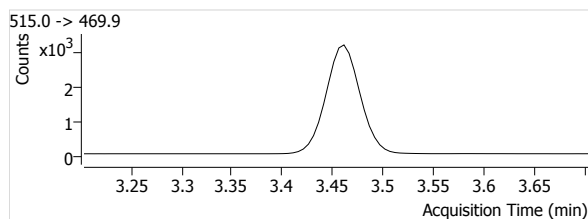
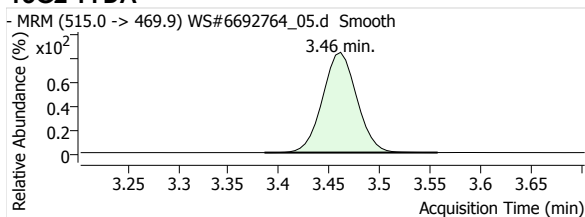
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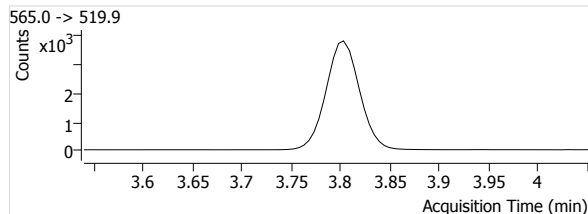
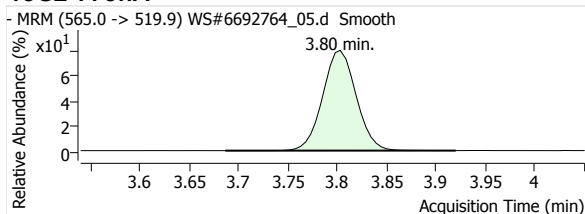
13C5-PFNA



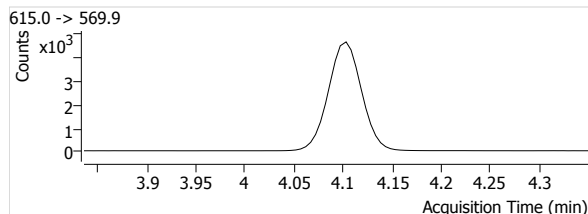
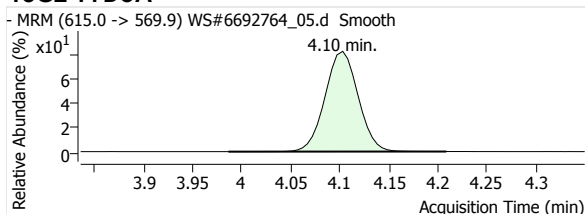
13C2-PFDA



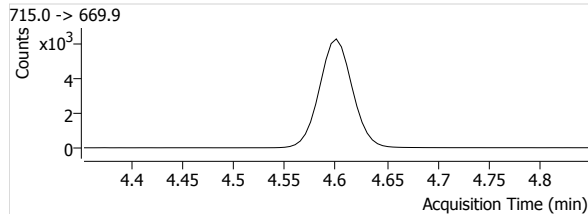
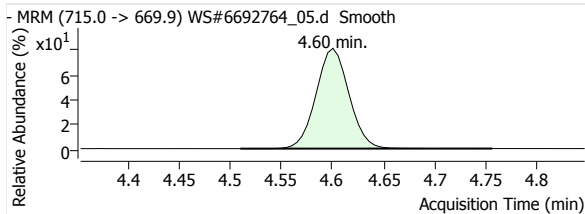
13C2-PFUnA



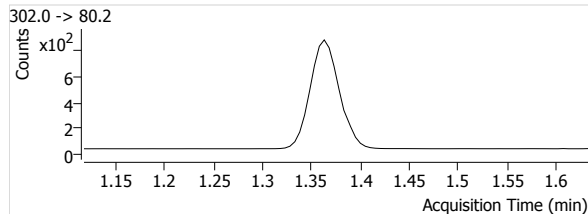
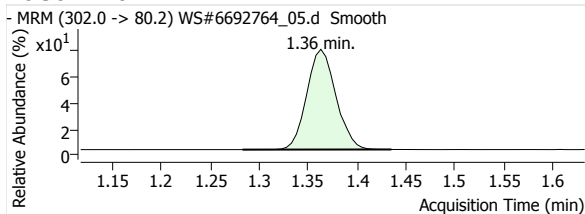
13C2-PFDoA



13C2-PFTeDA

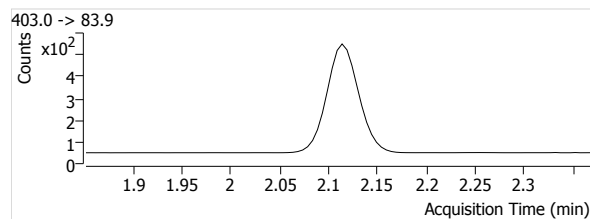
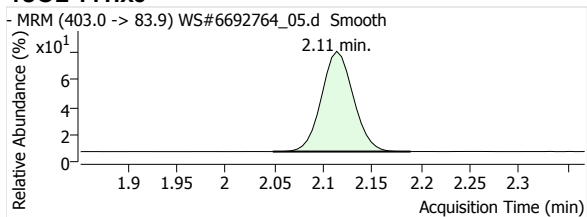


13C3-PFBS

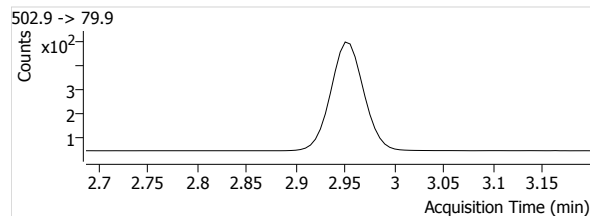
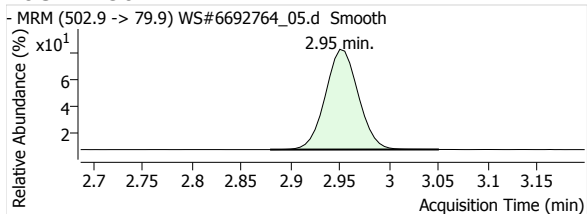


Quantitative Analysis Report

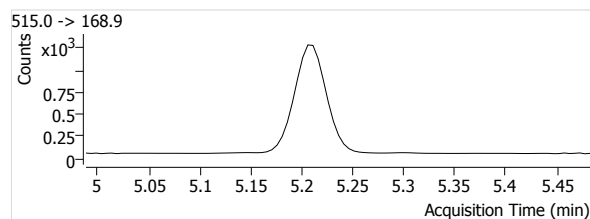
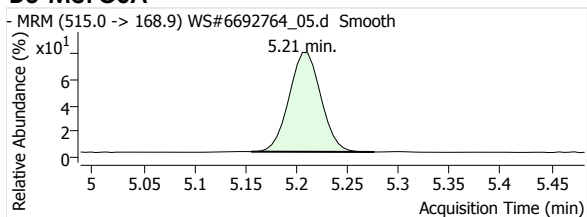
18O2-PFHxs



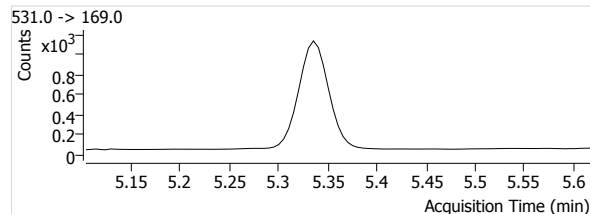
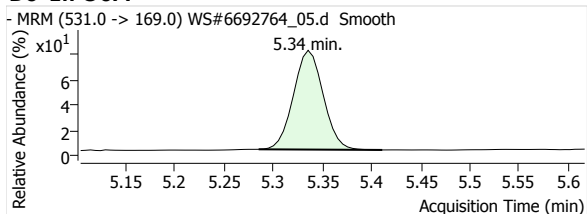
13C4-PFOS



D3-MeFOXA



D5-EtFOXA



Quantitative Analysis Report

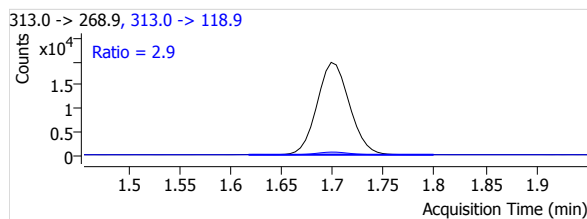
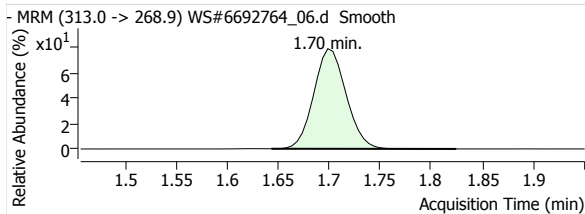
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Sample Name STD 5
Type Calibration
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/23 2:29:26 AM
Comment -
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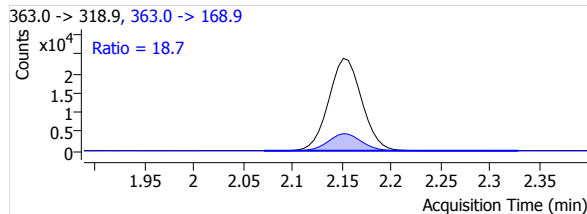
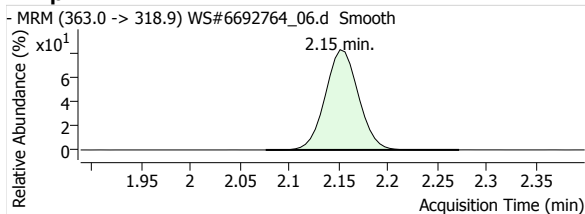
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Instrument LCMS04
Position P1-A6
Dil. 1.0

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PFHxA 1	µg/L	30.000	30.2787	100.9	43658	1.70	51513	5.6289	1279	1.70	7854	2.9
PFHpA 1	µg/L	30.000	30.4251	101.4	55741	2.15	4552	5.2680	10439	2.15	6465	18.7
PFOA 1	µg/L	30.000	30.8054	102.7	55482	2.63	8863	5.4113	13438	2.63	17848	24.2
PFNA 1	µg/L	30.000	30.3737	101.2	44366	3.07	25892	5.4377	9235	3.07	67183	20.8
PFDA 1	µg/L	30.000	30.5708	101.9	46901	3.46	8943	6.5050	7419	3.46	4917	15.8
PFUnA 1	µg/L	30.000	30.8124	102.7	44691	3.80	7461	5.2075	6238	3.80	79991	14.0
PFDoA 1	µg/L	30.000	30.6641	102.2	49418	4.10	49491	4.7770	5637	4.10	4051	11.4
PFTeDA 1	µg/L	30.000	30.5276	101.8	63165	4.37	59368	4.6765	4560	4.37	33653	7.2
PFTeDA 1	µg/L	30.000	30.5293	101.8	68741	4.60	192561	5.0893	3357	4.60	95572	4.9
PFBS 1	µg/L	30.000	30.6198	102.1	7993	1.36	18969	4.8209	3732	1.36	32026	46.7
PFHxS 1	µg/L	30.000	30.2765	100.9	6155	2.08	83474	5.5501	3356	2.09	17002	54.5
PFOS 1	µg/L	30.000	29.9449	99.8	5056	2.90	5173	4.8566	2836	2.89	895	56.1
MeFOSA 1	µg/L	30.000	30.5606	101.9	5732	5.21	151	2.1953	5072	5.21	620	88.5
EtFOSA 1	µg/L	30.000	30.2788	100.9	5744	5.33	410	2.5237	5251	5.33	1231	91.4
13C2-PFHxA	µg/L	100.000	96.5637	96.6	7756	1.70	1310		--	--	--	--
13C4-PFHpA	µg/L	100.000	94.8969	94.9	10581	2.15	1825		--	--	--	--
13C4-PFOA	µg/L	100.000	94.9000	94.9	10253	2.63	2201		--	--	--	--
13C5-PFNA	µg/L	100.000	94.8500	94.9	8159	3.07	1651		--	--	--	--
13C2-PFDA	µg/L	100.000	96.7396	96.7	7210	3.46	1345		--	--	--	--
13C2-PFUnA	µg/L	100.000	97.8117	97.8	8582	3.80	1657		--	--	--	--
13C2-PFDoA	µg/L	100.000	97.0359	97.0	10345	4.10	1376		--	--	--	--
13C2-PFTeDA	µg/L	100.000	96.7065	96.7	13507	4.60	3391		--	--	--	--
13C3-PFBS	µg/L	100.000	96.9024	96.9	1658	1.36	510		--	--	--	--
18O2-PFHxS	µg/L	100.000	97.1103	97.1	1109	2.11	474		--	--	--	--
13C4-PFOS	µg/L	100.000	98.3932	98.4	1041	2.95	433		--	--	--	--
D3-MeFOSA	µg/L	100.000	98.7893	98.8	2611	5.21	107		--	--	--	--
D5-EtFOSA	µg/L	100.000	100.8865	100.9	2276	5.34	83		--	--	--	--

PFHxA 1

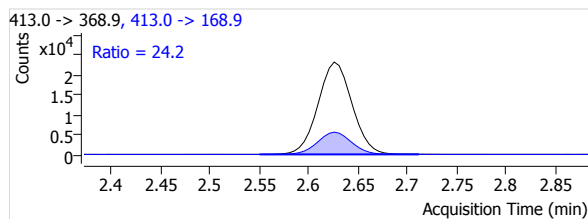
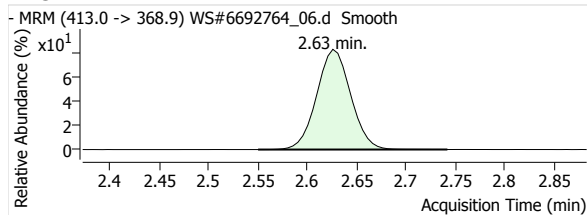


PFHpA 1

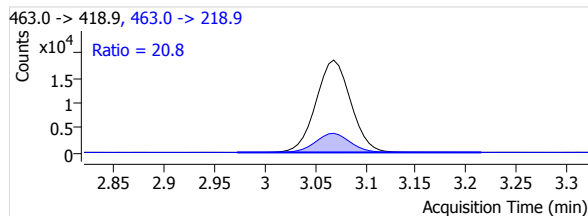
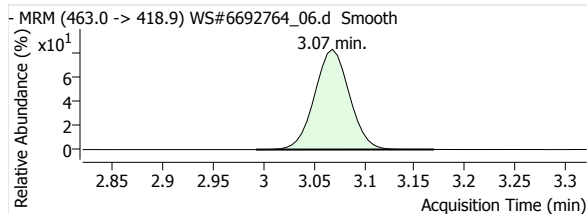


Quantitative Analysis Report

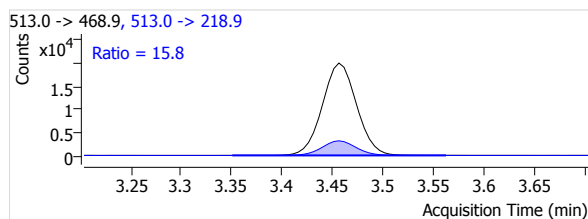
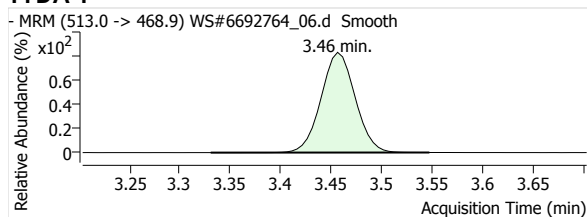
PFOA 1



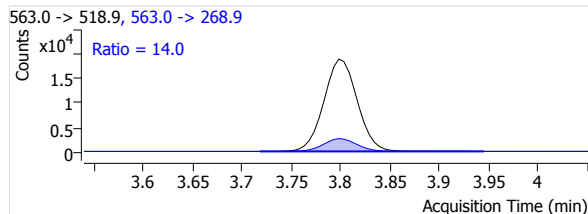
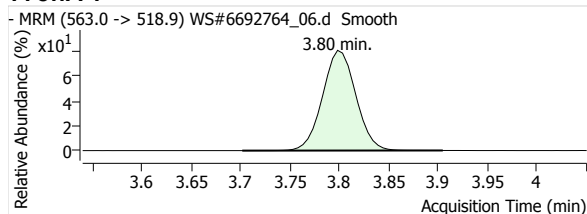
PFNA 1



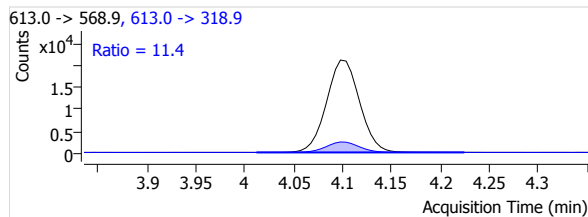
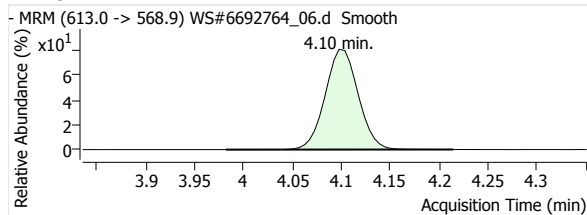
PFDA 1



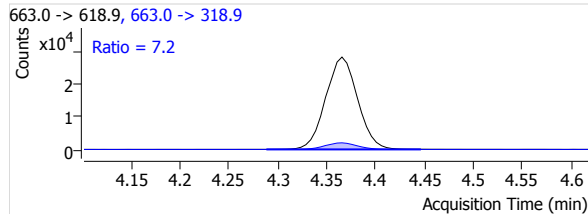
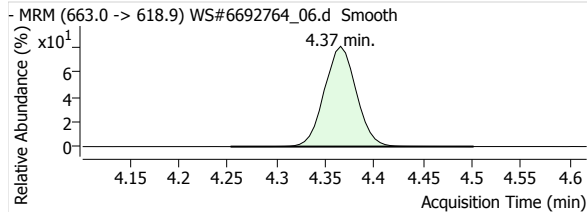
PFUnA 1



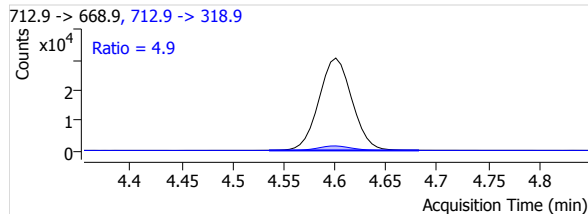
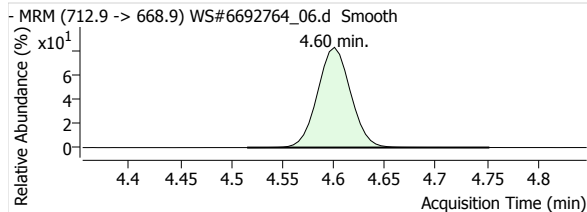
PFDaA 1



PFTrDA 1

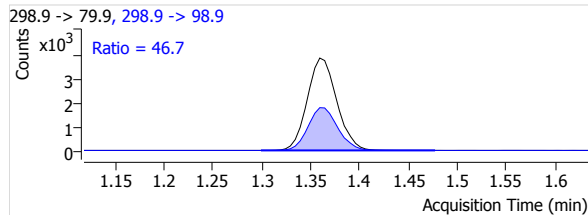
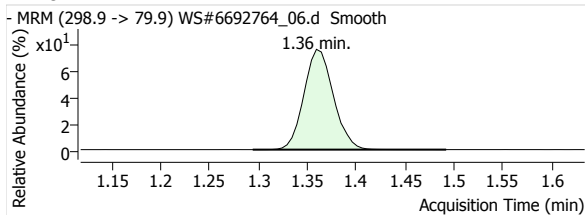


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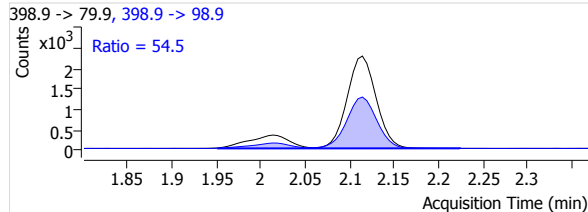
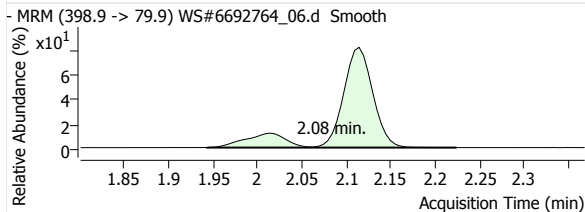


Quantitative Analysis Report

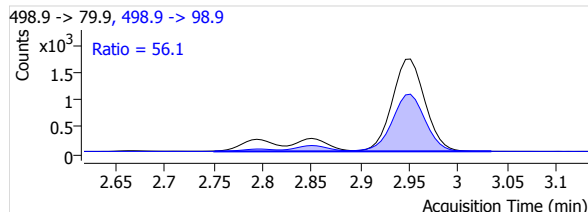
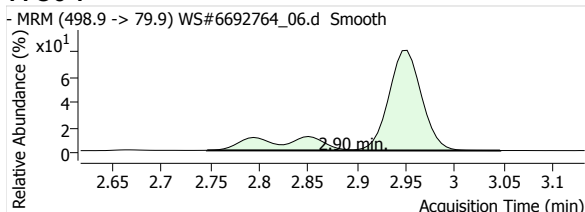
PFBS 1



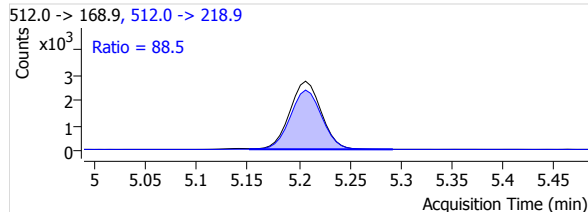
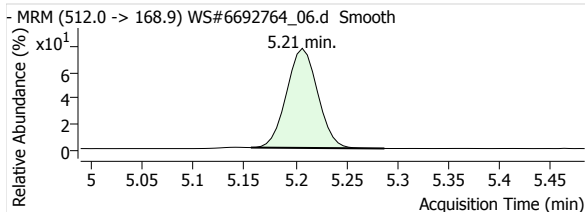
PFHxS 1



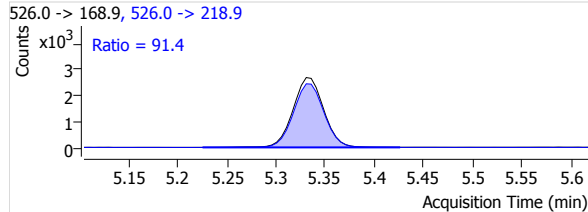
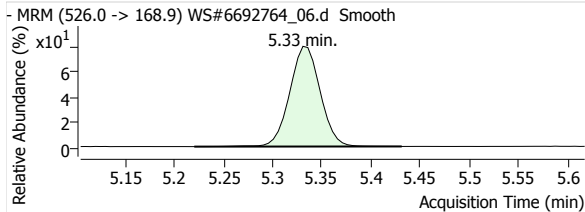
PFOS 1



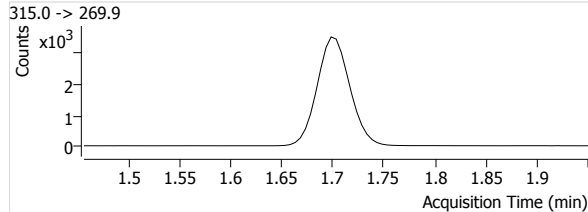
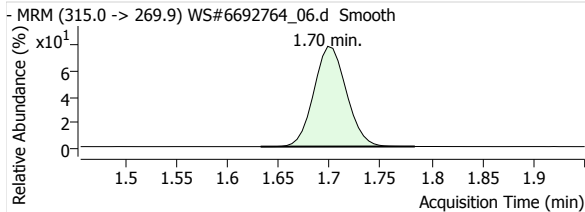
MeFOSA 1



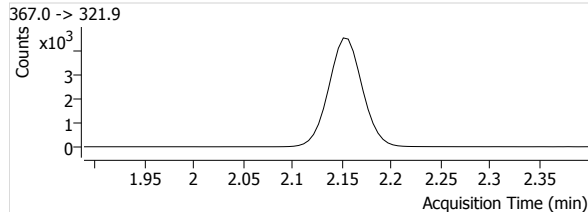
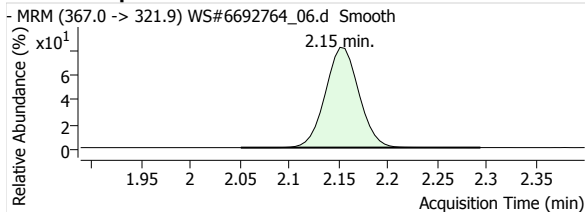
eFOSA 1



13C2-PFHxA

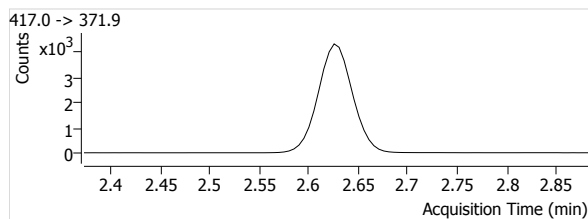
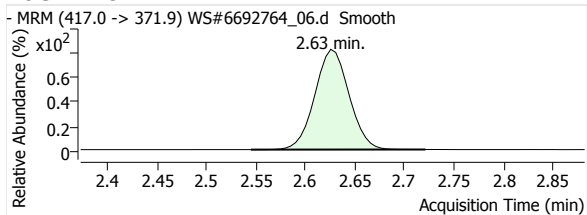


13C4-PFHpA

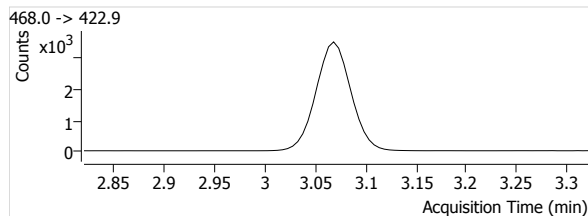
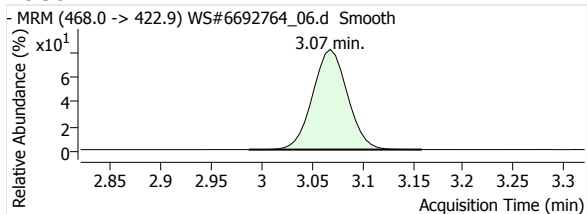


Quantitative Analysis Report

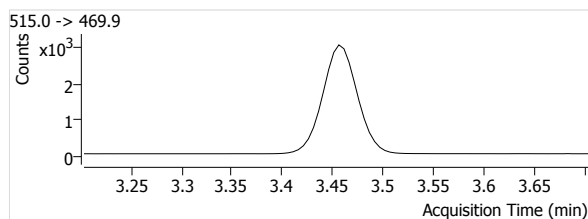
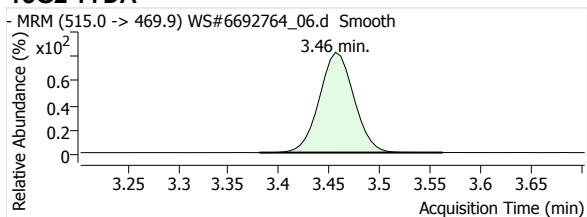
13C4-PFOA



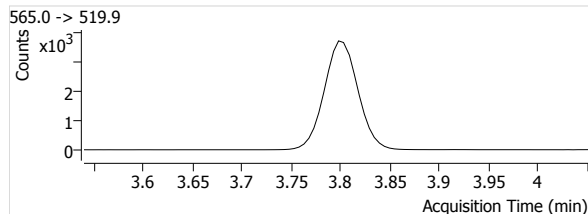
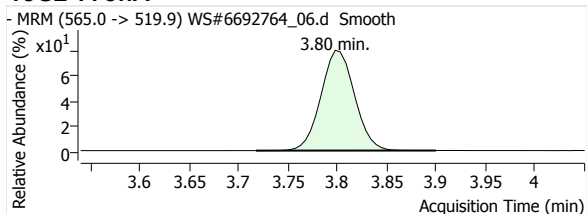
13C5-PFNA



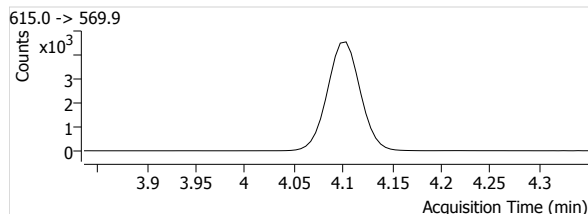
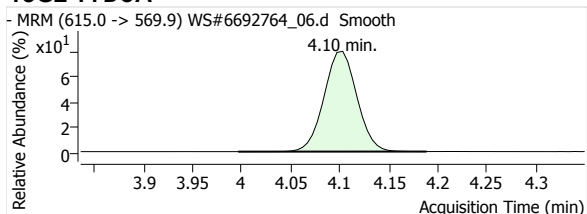
13C2-PFDA



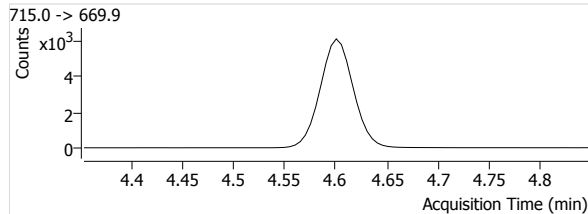
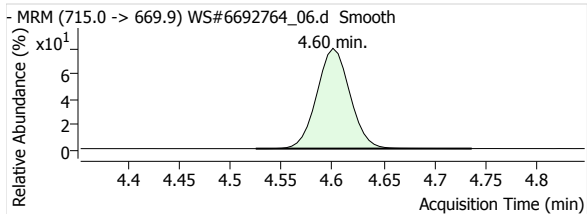
13C2-PFUnA



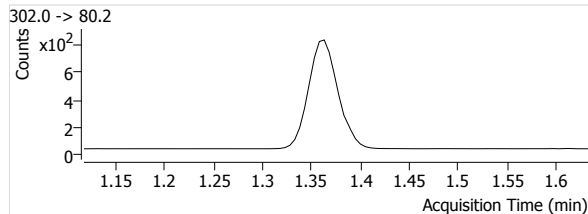
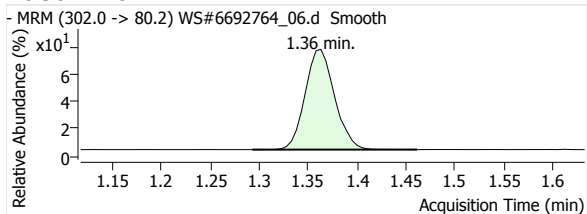
13C2-PFDoA



13C2-PFTeDA

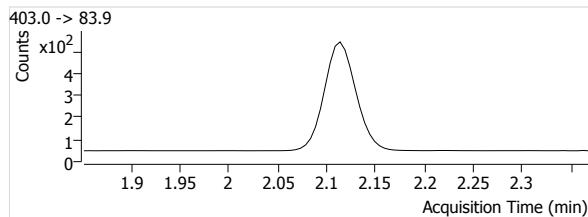
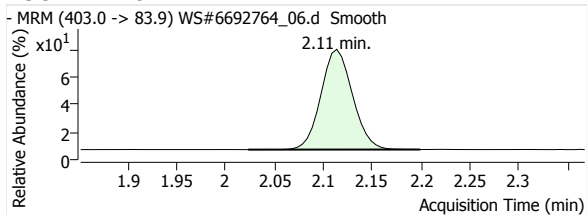


13C3-PFBS

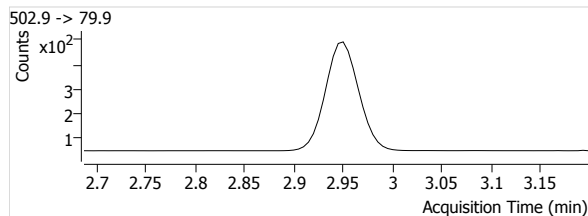
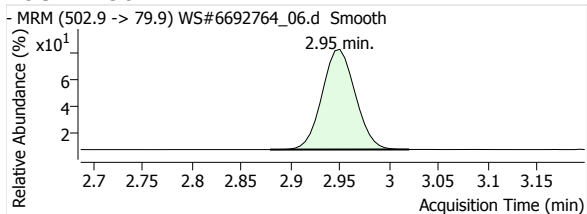


Quantitative Analysis Report

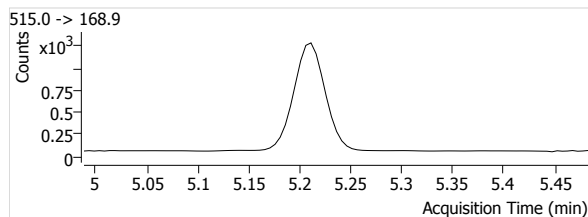
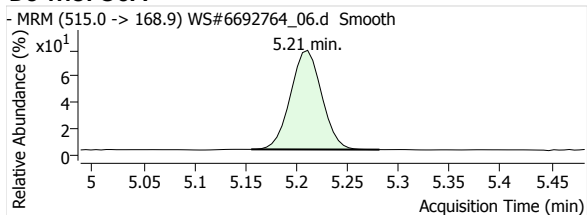
18O2-PFHxS



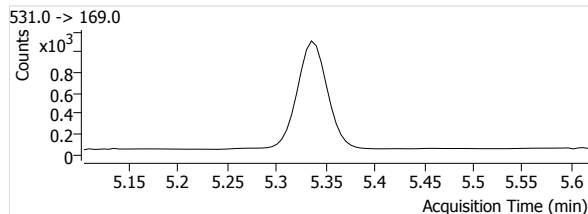
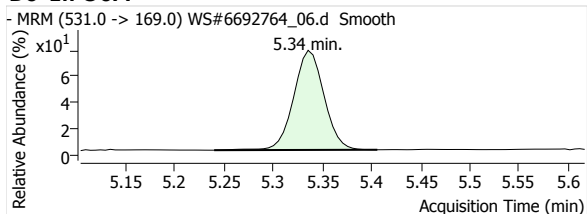
13C4-PFOS



D3-MeFOXA



D5-EtFOXA



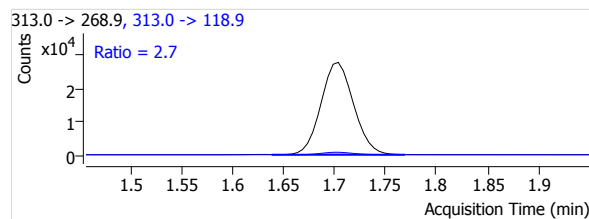
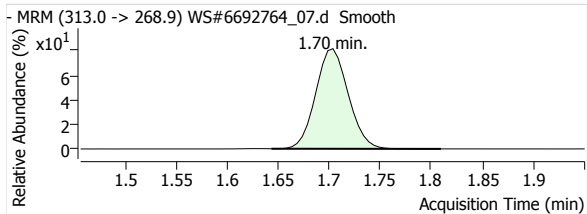
Quantitative Analysis Report

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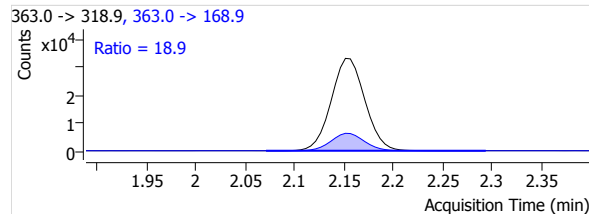
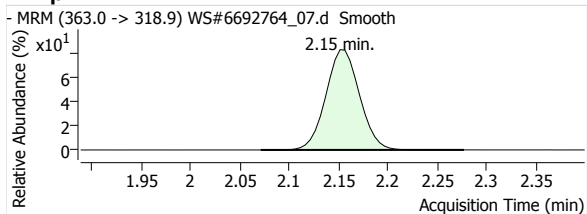
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Acq. Date-Time	2020/04/23 2:36:24 AM	Dil.	1.0
Comment	-		
User Defined			

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	41.700	42.0932	100.9	62261	1.70	101951	7.8090	1695	1.70	6793	2.7
PFHpA 1	µg/L	41.700	42.2892	101.4	78900	2.15	4524	7.3089	14917	2.15	1108	18.9
PFOA 1	µg/L	41.700	41.9985	100.7	79889	2.63	45628	7.3651	19396	2.63	4185	24.3
PFNA 1	µg/L	41.700	42.3732	101.6	64261	3.07	27956	7.5717	13461	3.07	21477	20.9
PFDA 1	µg/L	41.700	42.0969	101.0	67683	3.46	15413	8.9398	10658	3.46	4635	15.7
PFUnA 1	µg/L	41.700	41.8567	100.4	63889	3.80	16136	7.0611	8941	3.80	3364	14.0
PFDoA 1	µg/L	41.700	41.9402	100.6	70679	4.10	2440	6.5202	8014	4.10	12840	11.3
PFTeDA 1	µg/L	41.700	42.2010	101.2	90883	4.37	86484	6.4529	6517	4.37	38327	7.2
PFTeDA 1	µg/L	41.700	42.0602	100.9	98592	4.60	103513	7.0003	4840	4.60	89919	4.9
PFBS 1	µg/L	41.700	41.8214	100.3	11408	1.36	46826	6.5714	5307	1.36	17071	46.5
PFHxS 1	µg/L	41.700	42.5084	101.9	8911	2.08	35114	7.7822	4841	2.09	16250	54.3
PFOS 1	µg/L	41.700	42.6236	102.2	7387	2.90	1995	6.8968	4110	2.89	1445	55.6
MeFOSA 1	µg/L	41.700	41.8919	100.5	8165	5.21	185	3.0052	7462	5.21	1269	91.4
EtFOSA 1	µg/L	41.700	42.1777	101.1	8367	5.33	571	3.5096	7494	5.33	1790	89.6
13C2-PFHxA	µg/L	100.000	99.2654	99.3	7973	1.70	1589		--	--	--	--
13C4-PFHpA	µg/L	100.000	96.8161	96.8	10795	2.16	2414		--	--	--	--
13C4-PFOA	µg/L	100.000	100.3980	100.4	10847	2.63	1800		--	--	--	--
13C5-PFNA	µg/L	100.000	98.6631	98.7	8487	3.07	1556		--	--	--	--
13C2-PFDA	µg/L	100.000	101.5833	101.6	7571	3.46	2291		--	--	--	--
13C2-PFUnA	µg/L	100.000	103.1229	103.1	9048	3.80	1310		--	--	--	--
13C2-PFDoA	µg/L	100.000	101.6790	101.7	10840	4.10	1913		--	--	--	--
13C2-PFTeDA	µg/L	100.000	100.8377	100.8	14084	4.60	2259		--	--	--	--
13C3-PFBS	µg/L	100.000	101.4611	101.5	1736	1.36	626		--	--	--	--
18O2-PFHxS	µg/L	100.000	100.2627	100.3	1145	2.11	580		--	--	--	--
13C4-PFOS	µg/L	100.000	101.2287	101.2	1071	2.95	1322		--	--	--	--
D3-MeFOSA	µg/L	100.000	102.7998	102.8	2717	5.21	156		--	--	--	--
D5-EtFOSA	µg/L	100.000	105.6738	105.7	2384	5.34	163		--	--	--	--

PFHxA 1

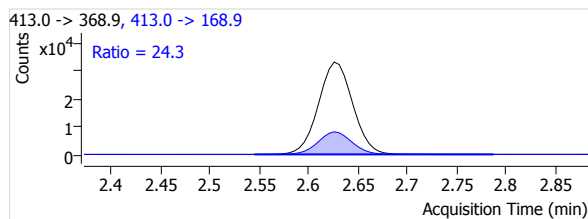
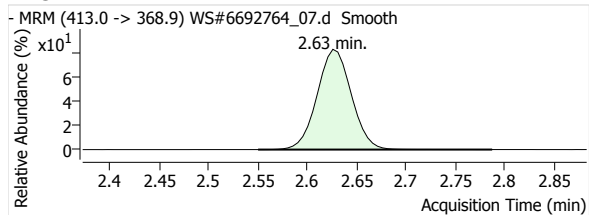


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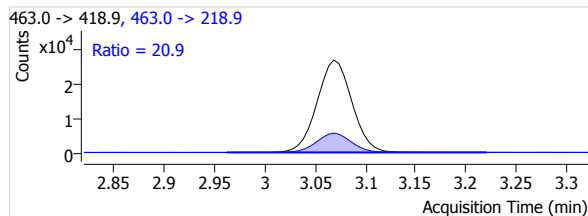
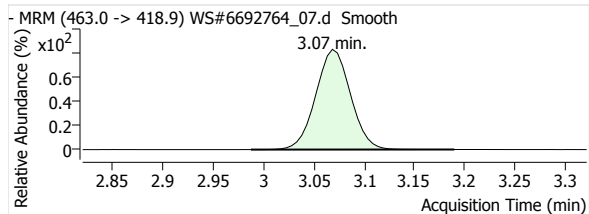


Quantitative Analysis Report

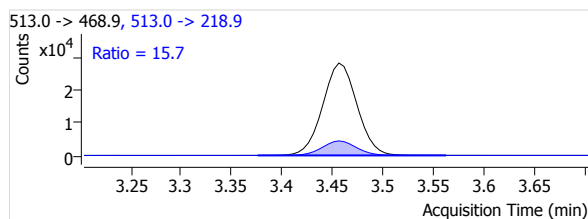
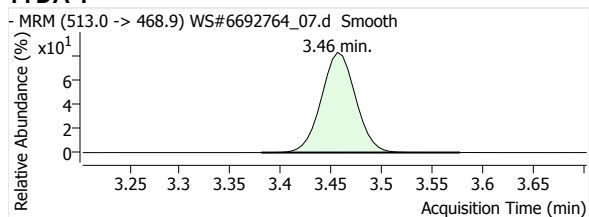
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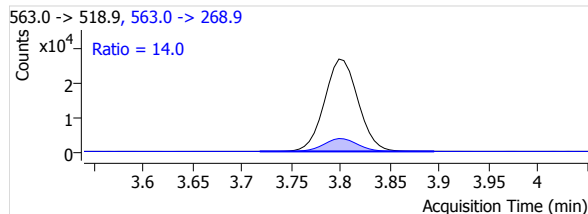
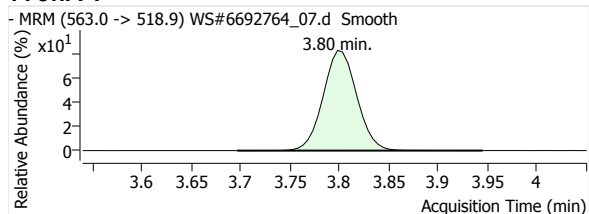
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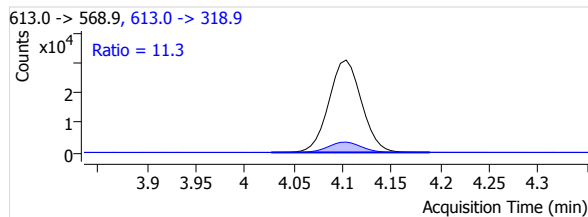
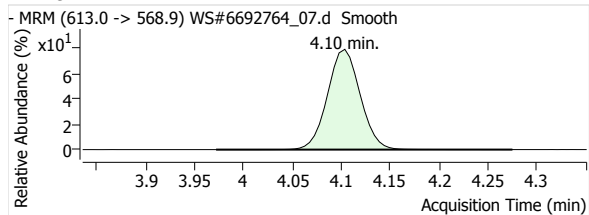
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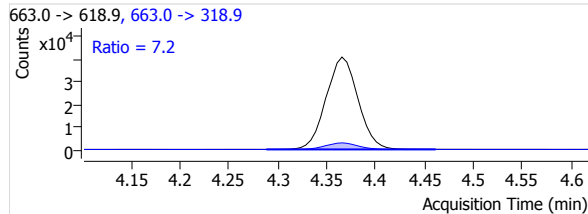
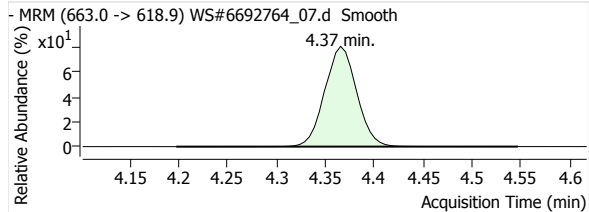
PFUnA 1



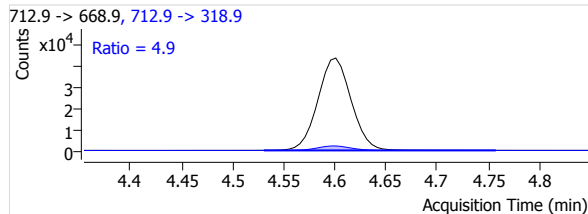
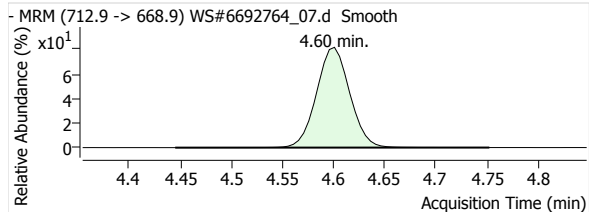
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PFTrDA 1

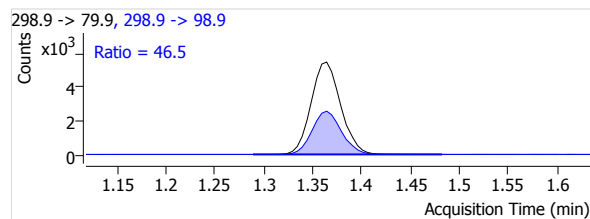
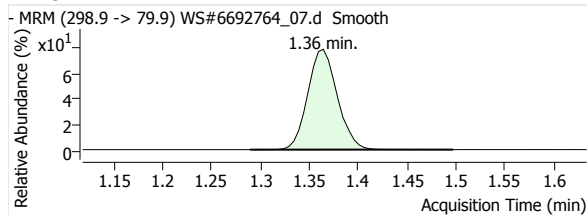


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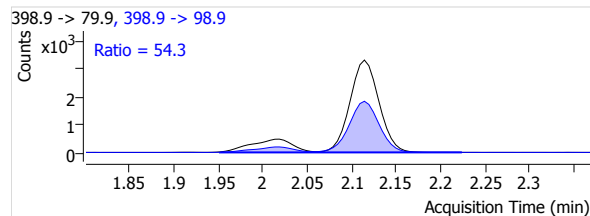
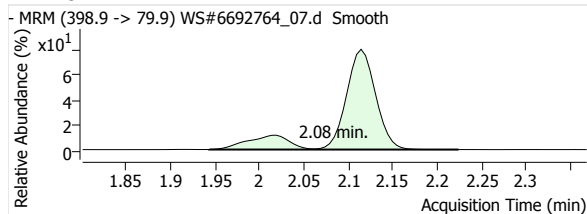


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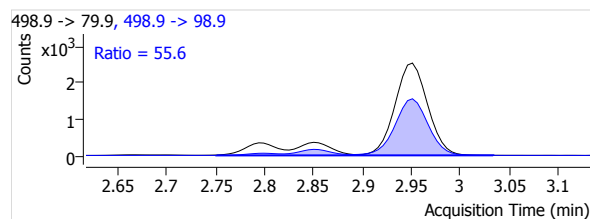
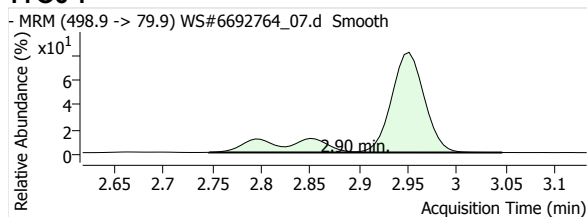
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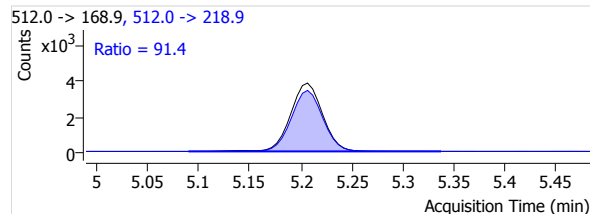
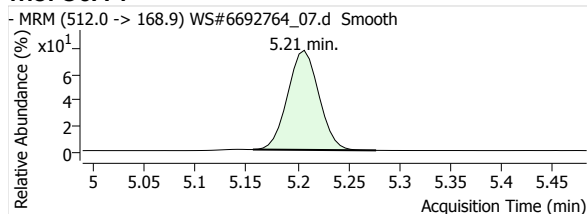
PFHxS 1



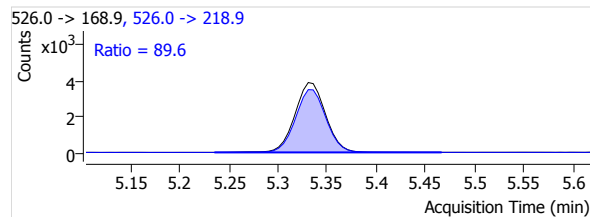
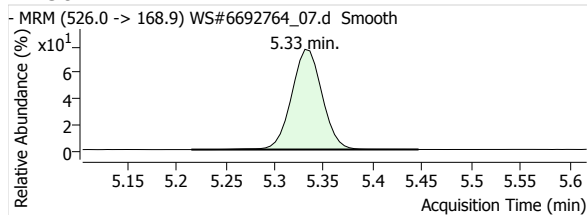
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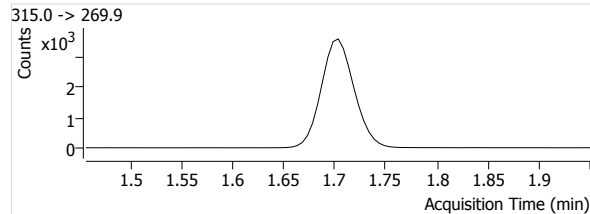
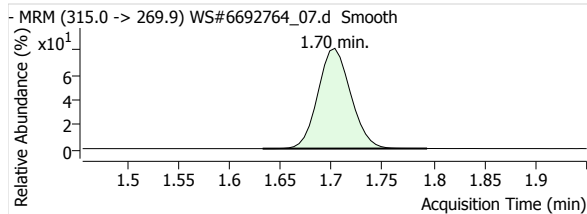
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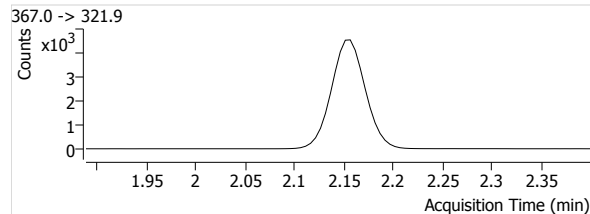
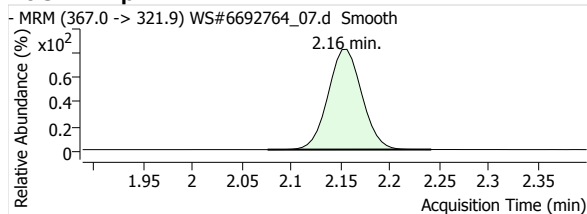
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13C2-PFHxA

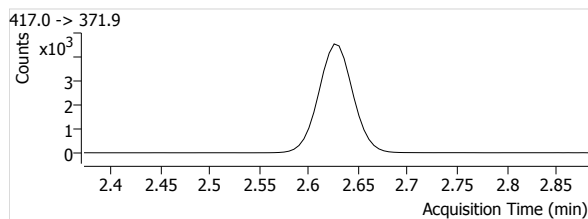
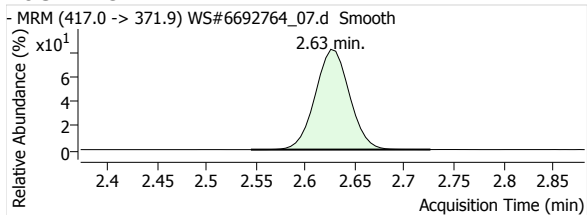


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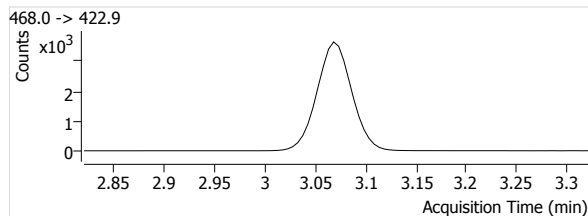
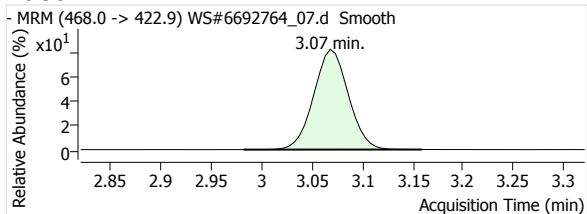


Quantitative Analysis Report

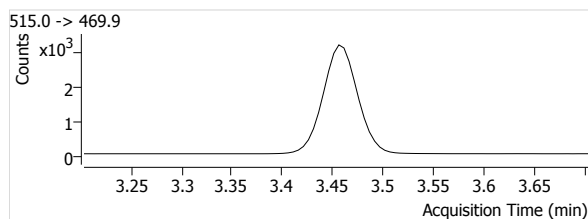
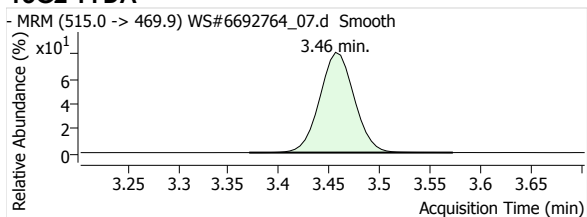
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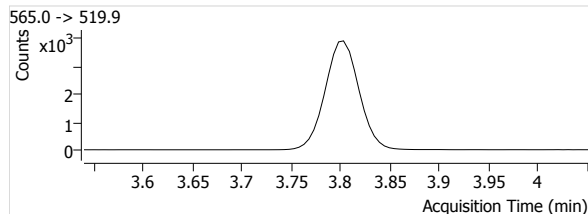
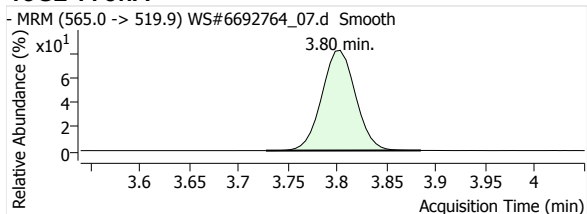
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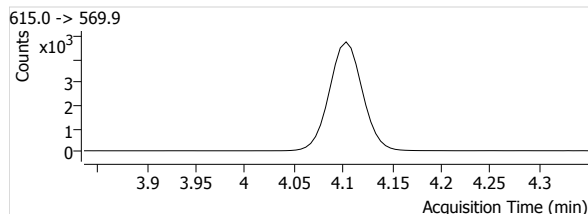
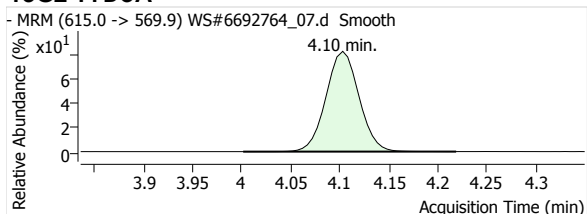
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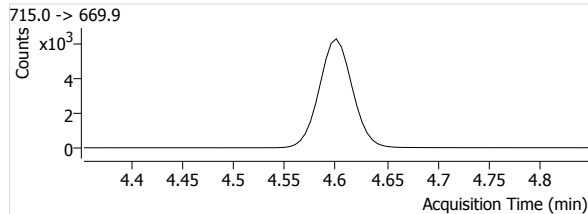
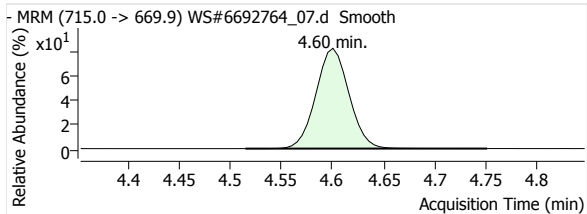
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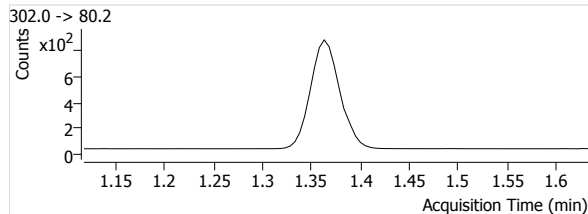
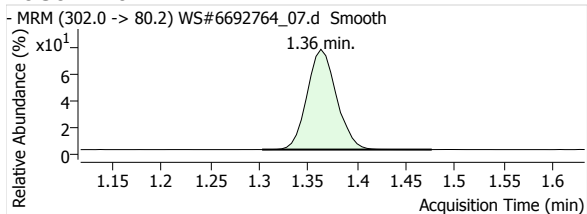
13C2-PFDoA



13C2-PFTeDA

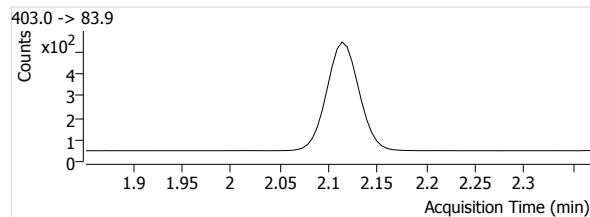
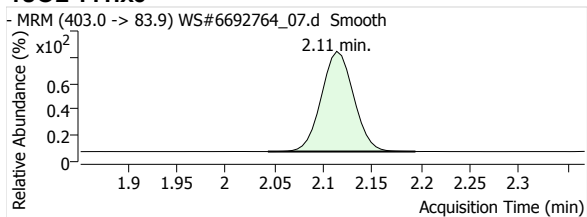


13C3-PFBS

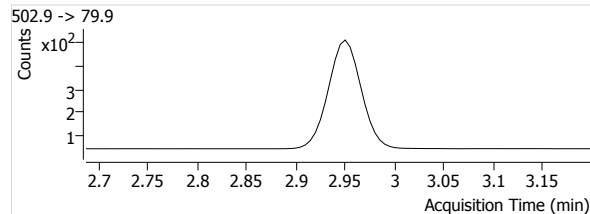
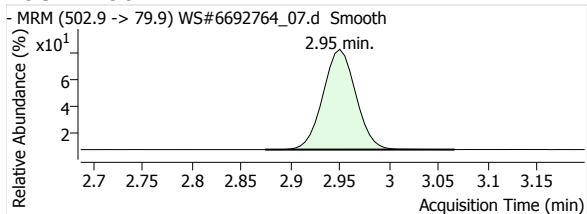


Quantitative Analysis Report

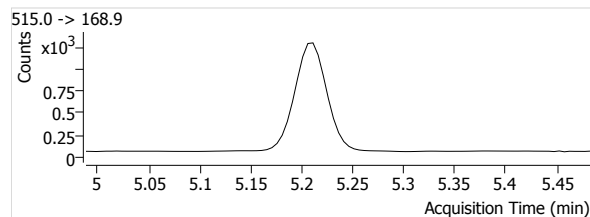
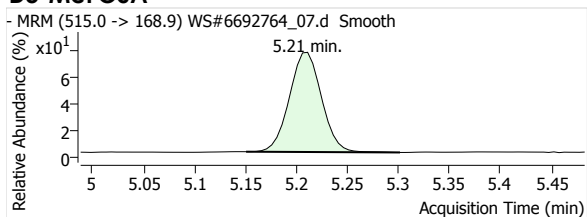
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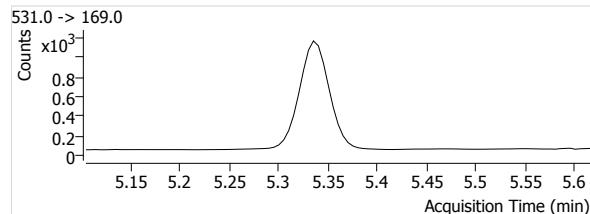
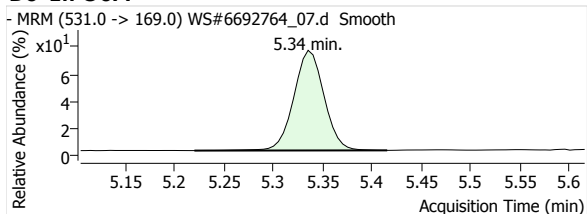
13C4-PFOS



D3-MeFOXA



D5-EtFOXA



Quantitative Analysis Report

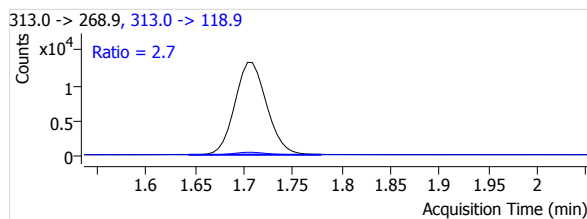
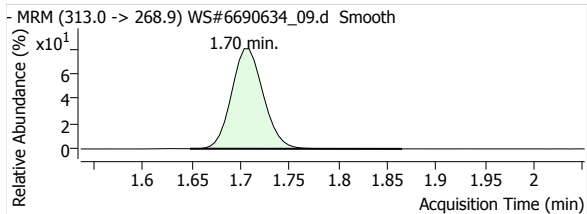
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 Acq. Date-Time 2020/04/21 10:56:02 PM
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 User Defined

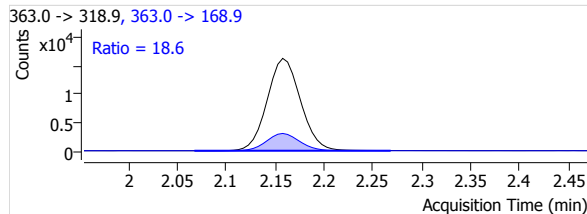
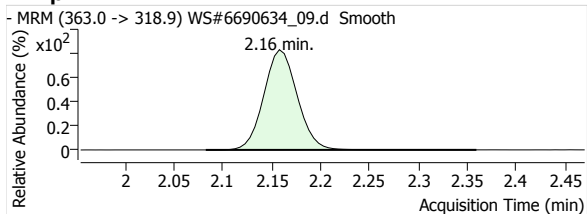
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 Dil. 1.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	20.000	22.8388	114.2	30041	1.70	28272	4.0906	825	1.70	4078	2.7
PFHpA 1	µg/L	20.000	23.5481	117.7	39088	2.16	15460	3.9225	7259	2.16	14907	18.6
PFOA 1	µg/L	20.000	22.3183	111.6	36435	2.63	40793	3.7454	8897	2.63	27219	24.4
PFNA 1	µg/L	20.000	23.3928	117.0	30976	3.07	125782	3.9851	6455	3.07	12022	20.8
PFDA 1	µg/L	20.000	23.2555	116.3	31908	3.46	20169	4.7447	5202	3.46	68380	16.3
PFUnA 1	µg/L	20.000	23.5989	118.0	30825	3.80	39946	3.8589	4418	3.80	98531	14.3
PFDoA 1	µg/L	20.000	22.9332	114.7	35597	4.10	37001	3.4483	4164	4.10	4753	11.7
PFTeDA 1	µg/L	20.000	22.5280	112.6	42061	4.37	172076	3.2901	3236	4.37	26735	7.7
PFTeDA 1	µg/L	20.000	22.0522	110.3	45492	4.61	32061	3.5585	2186	4.60	273789	4.8
PFBS 1	µg/L	20.000	22.8081	114.0	5569	1.36	11295	3.4806	2573	1.36	4561	46.2
PFHxS 1	µg/L	20.000	22.6724	113.4	4246	2.08	84673	3.9571	2299	2.09	43220	54.1
PFOS 1	µg/L	20.000	23.7080	118.5	3581	2.90	12983	3.6769	2016	2.89	7524	56.3
MeFOSA 1	µg/L	20.000	23.0825	115.4	3919	5.21	146	1.5924	3611	5.21	617	92.1
EtFOSA 1	µg/L	20.000	23.3533	116.8	4139	5.33	167	1.9153	3804	5.34	2040	91.9
13C2-PFHxA	µg/L	100.000	104.5558	104.6	7344	1.71	1407		--	--	--	--
13C4-PFHpA	µg/L	100.000	103.1040	103.1	9965	2.16	1214		--	--	--	--
13C4-PFOA	µg/L	100.000	100.9652	101.0	9728	2.63	1382		--	--	--	--
13C5-PFNA	µg/L	100.000	102.7631	102.8	7773	3.07	944		--	--	--	--
13C2-PFDA	µg/L	100.000	102.8759	102.9	6725	3.46	1534		--	--	--	--
13C2-PFUnA	µg/L	100.000	102.6603	102.7	7988	3.80	956		--	--	--	--
13C2-PFDoA	µg/L	100.000	102.0564	102.1	10323	4.10	2098		--	--	--	--
13C2-PFTeDA	µg/L	100.000	101.9458	101.9	12784	4.60	1896		--	--	--	--
13C3-PFBS	µg/L	100.000	103.6941	103.7	1600	1.37	679		--	--	--	--
18O2-PFHxS	µg/L	100.000	105.6102	105.6	1073	2.11	828		--	--	--	--
13C4-PFOS	µg/L	100.000	101.1423	101.1	974	2.95	460		--	--	--	--
D3-MeFOSA	µg/L	100.000	101.2341	101.2	2461	5.21	118		--	--	--	--
D5-EtFOSA	µg/L	100.000	103.2489	103.2	2161	5.33	132		--	--	--	--

PFHxA 1

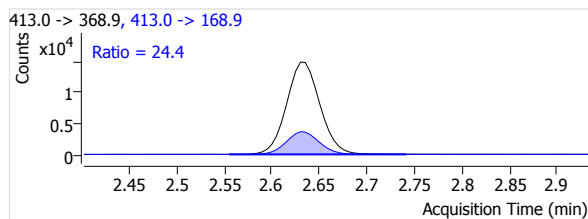
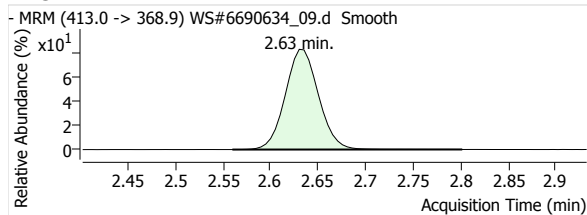


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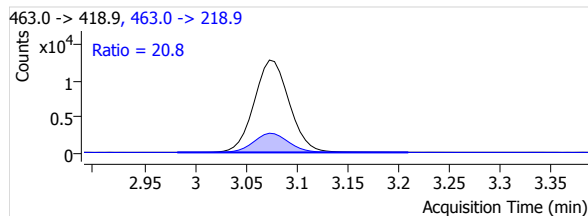
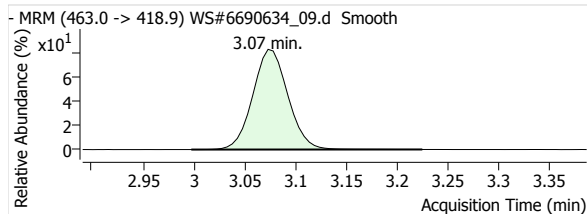


Quantitative Analysis Report

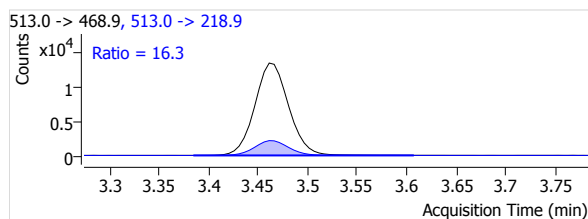
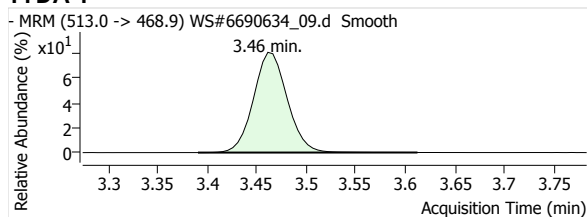
PFOA 1



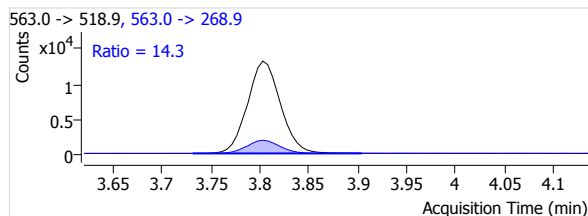
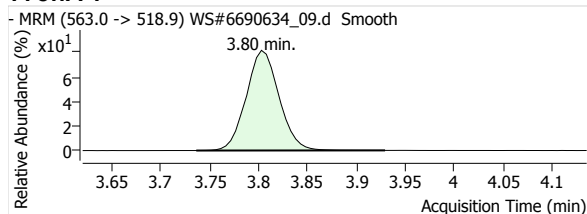
PFNA 1



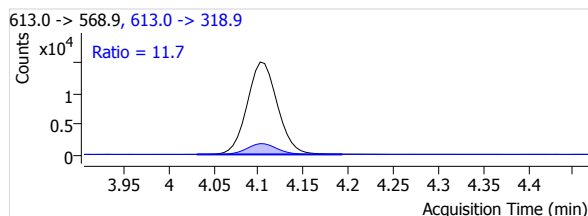
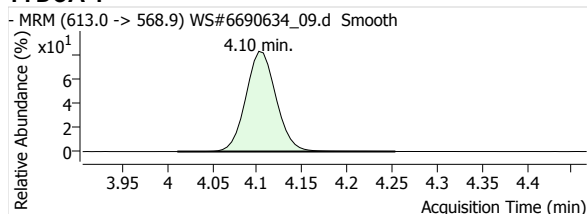
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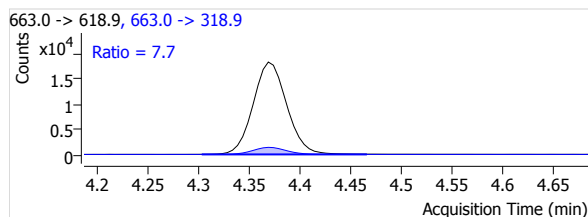
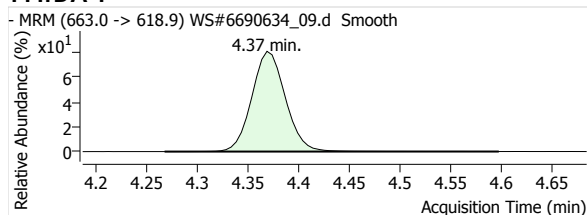
PFUnA 1



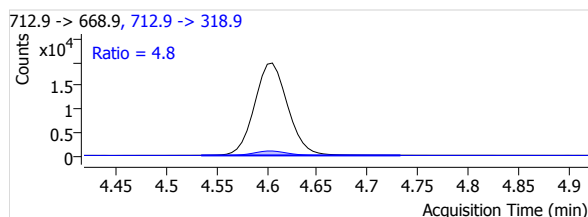
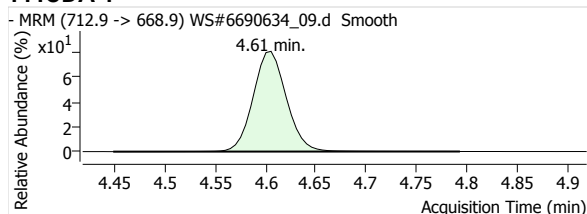
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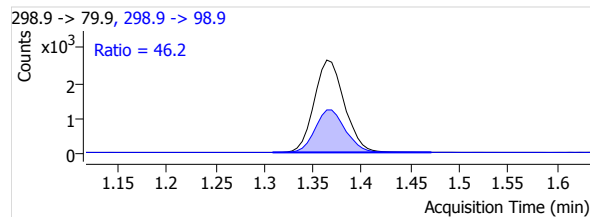
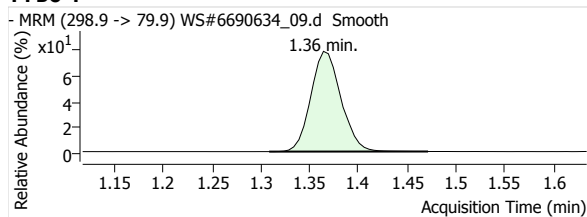


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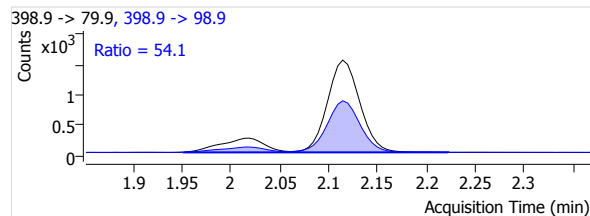
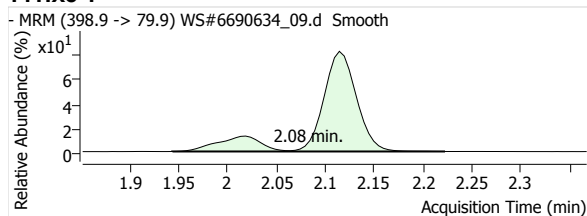


Quantitative Analysis Report

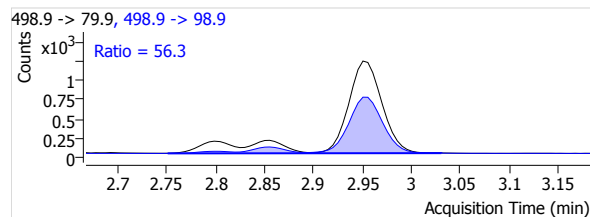
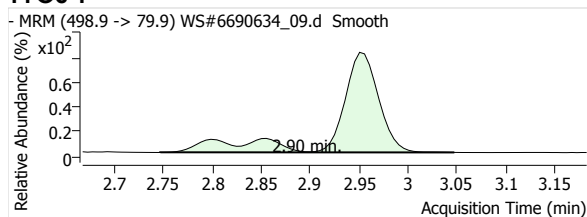
PFBS 1



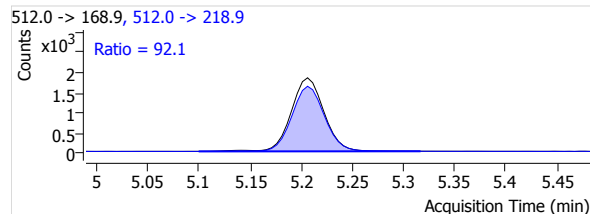
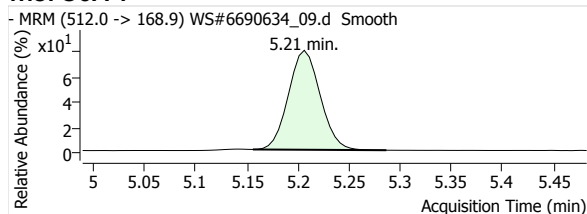
PFHxS 1



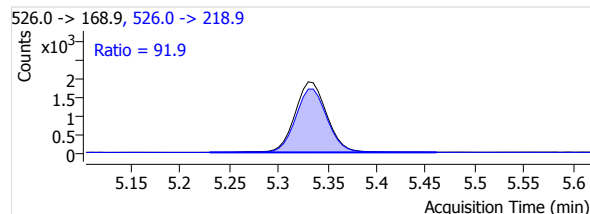
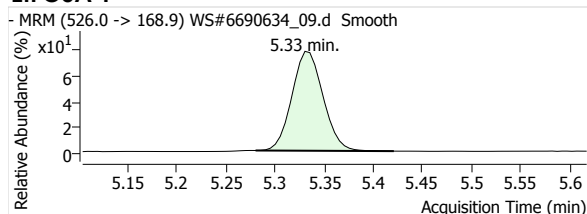
PFOS 1



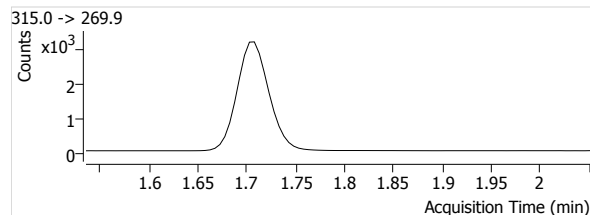
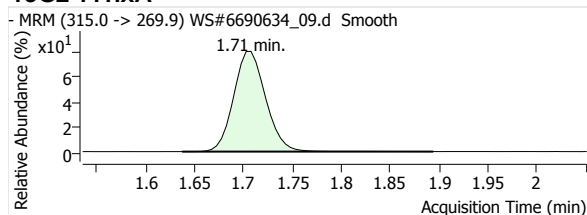
MeFOSA 1



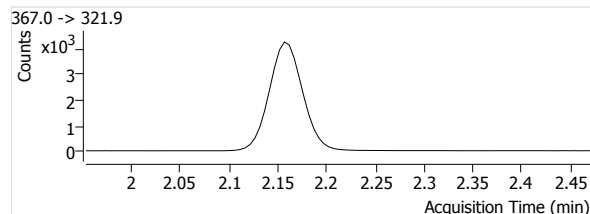
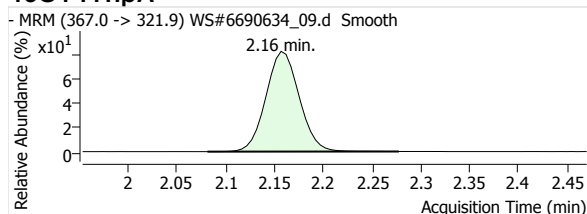
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13C2-PFHxA

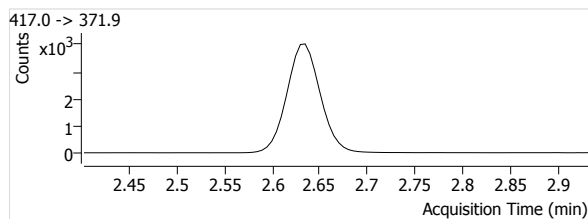
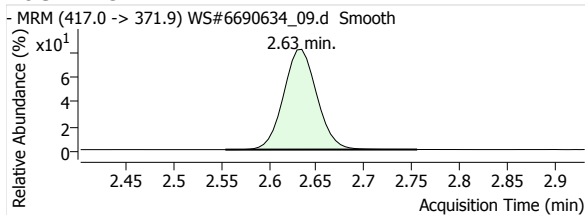


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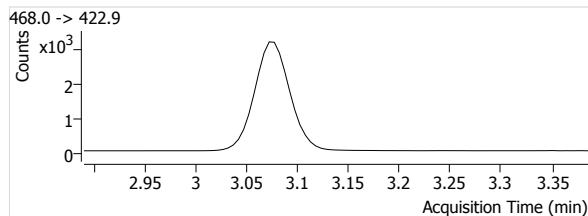
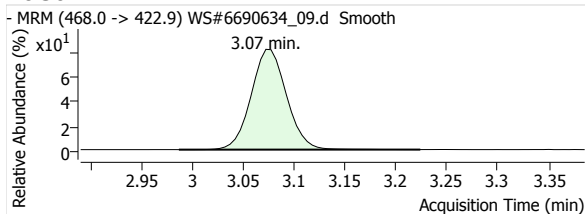


Quantitative Analysis Report

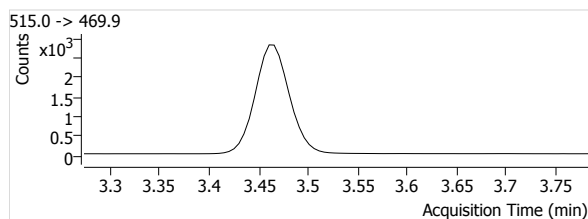
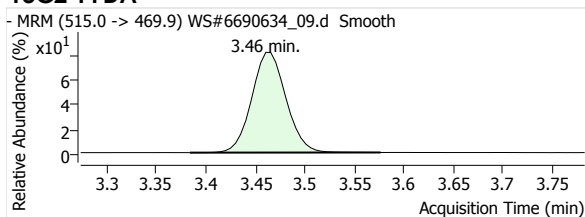
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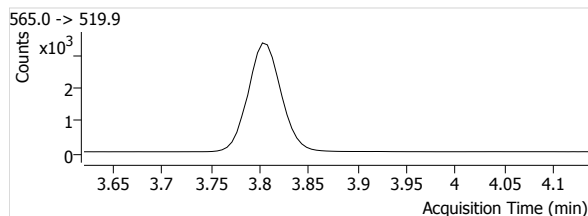
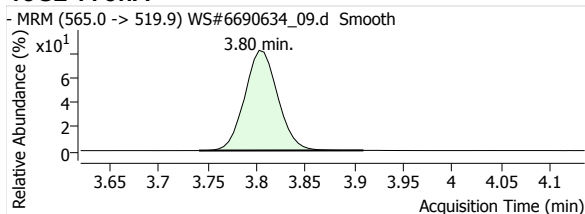
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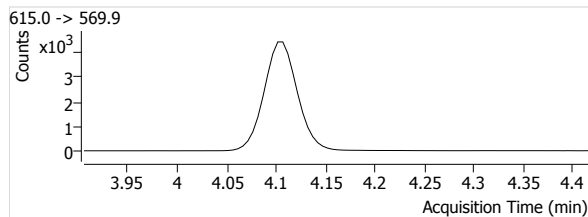
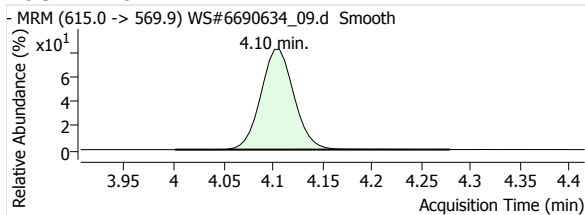
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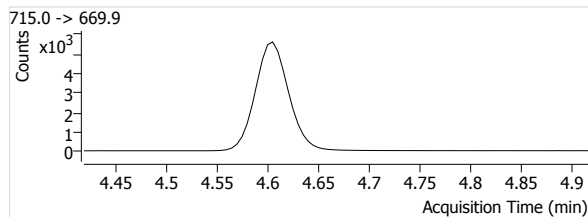
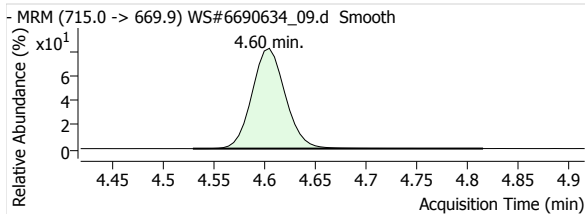
13C2-PFUnA



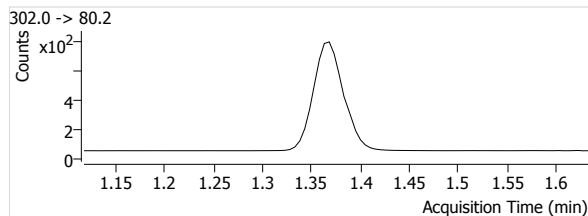
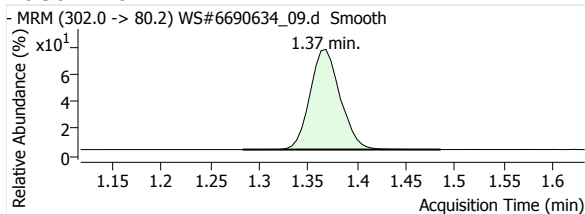
13C2-PFDoA



13C2-PFTeDA

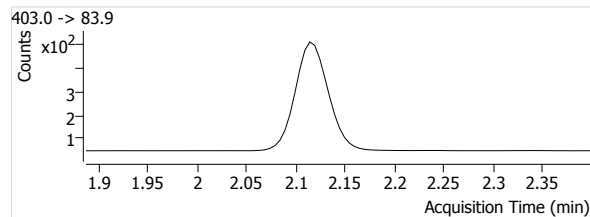
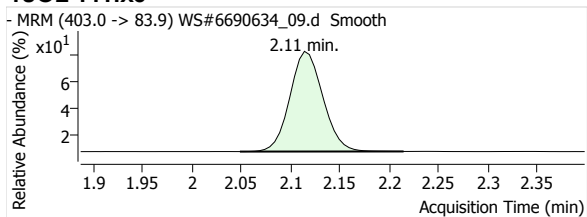


13C3-PFBS

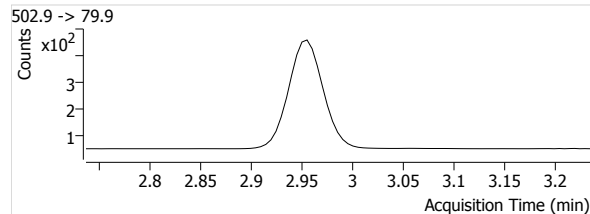
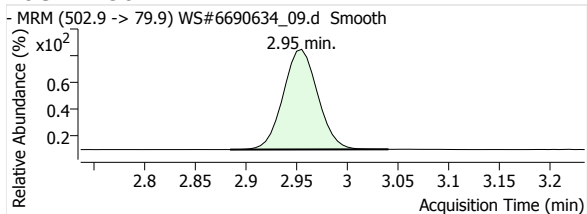


Quantitative Analysis Report

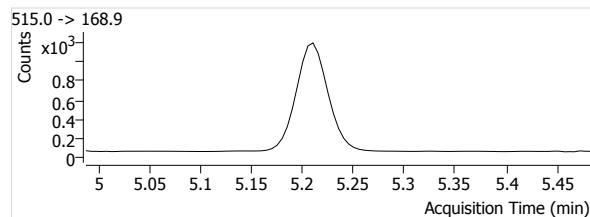
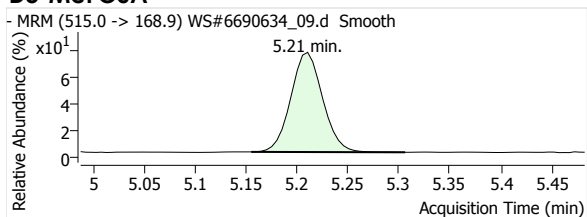
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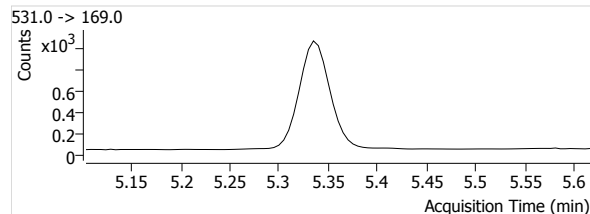
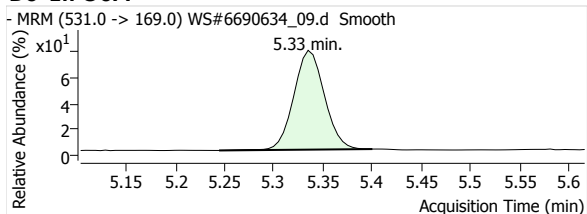
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

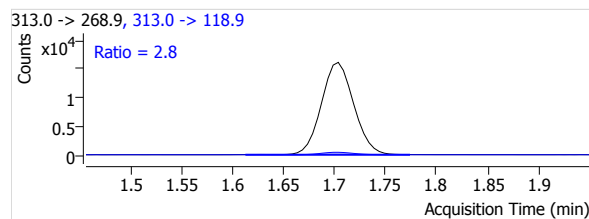
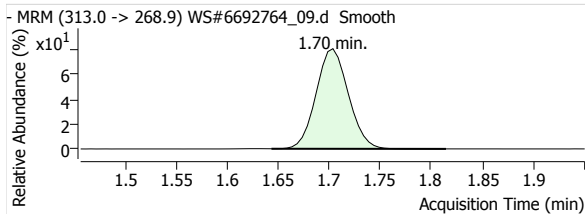
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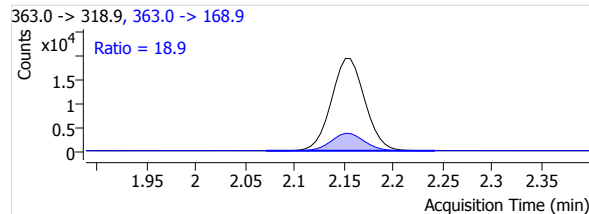
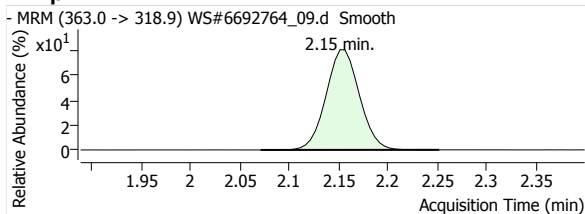
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 Position P1-A9
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Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	20.000	23.5842	117.9	35492	1.70	40571	4.3937	985	1.70	6091	2.8
PFHpA 1	µg/L	20.000	23.8650	119.3	45506	2.15	2822	4.1395	8581	2.15	1026	18.9
PFOA 1	µg/L	20.000	22.3167	111.6	43186	2.63	21459	3.9296	10550	2.63	11141	24.4
PFNA 1	µg/L	20.000	23.8444	119.2	36085	3.07	15617	4.2765	7636	3.07	50906	21.2
PFDA 1	µg/L	20.000	23.5284	117.6	38172	3.46	22491	5.0174	5940	3.46	3493	15.6
PFUnA 1	µg/L	20.000	24.1730	120.9	36176	3.80	2617	4.0932	5224	3.80	3652	14.4
PFDoA 1	µg/L	20.000	24.1819	120.9	40648	4.10	1307	3.7749	4720	4.10	1326	11.6
PFTeDA 1	µg/L	20.000	22.8820	114.4	49652	4.37	87489	3.5129	3629	4.37	47972	7.3
PFTeDA 1	µg/L	20.000	22.0368	110.2	52039	4.60	151615	3.6818	2538	4.60	35057	4.9
PFBS 1	µg/L	20.000	23.9311	119.7	6528	1.36	39553	3.7756	2966	1.36	9449	45.4
PFHxS 1	µg/L	20.000	22.7674	113.8	4865	2.08	14035	4.1798	2690	2.09	19751	55.3
PFOS 1	µg/L	20.000	23.3510	116.8	4122	2.90	1163	3.7956	2327	2.89	3846	56.5
MeFOSA 1	µg/L	20.000	23.0306	115.2	4481	5.20	174	1.6572	4021	5.21	579	89.7
EtFOSA 1	µg/L	20.000	24.7575	123.8	4866	5.33	465	2.0662	4388	5.33	1326	90.2
13C2-PFHxA	µg/L	100.000	100.5727	100.6	8078	1.70	1379		--	--	--	--
13C4-PFHpA	µg/L	100.000	98.5919	98.6	10993	2.16	2342		--	--	--	--
13C4-PFOA	µg/L	100.000	101.7216	101.7	10990	2.63	2130		--	--	--	--
13C5-PFNA	µg/L	100.000	98.0935	98.1	8438	3.07	1483		--	--	--	--
13C2-PFDA	µg/L	100.000	102.0797	102.1	7608	3.46	1509		--	--	--	--
13C2-PFUnA	µg/L	100.000	100.7294	100.7	8838	3.80	1389		--	--	--	--
13C2-PFDoA	µg/L	100.000	101.0037	101.0	10768	4.10	1527		--	--	--	--
13C2-PFTeDA	µg/L	100.000	101.1957	101.2	14134	4.60	4250		--	--	--	--
13C3-PFBS	µg/L	100.000	101.0520	101.1	1729	1.36	1892		--	--	--	--
18O2-PFHxS	µg/L	100.000	101.9264	101.9	1164	2.11	811		--	--	--	--
13C4-PFOS	µg/L	100.000	102.6465	102.6	1086	2.95	534		--	--	--	--
D3-MeFOSA	µg/L	100.000	102.3080	102.3	2704	5.21	152		--	--	--	--
D5-EtFOSA	µg/L	100.000	104.3883	104.4	2355	5.34	116		--	--	--	--

PFHxA 1

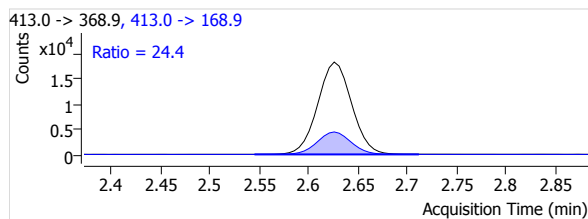
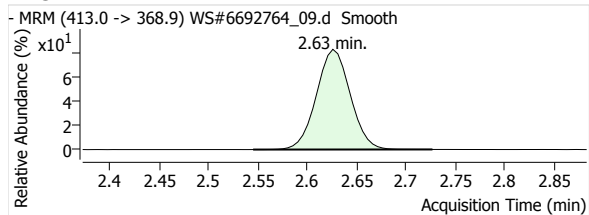


PFHpA 1

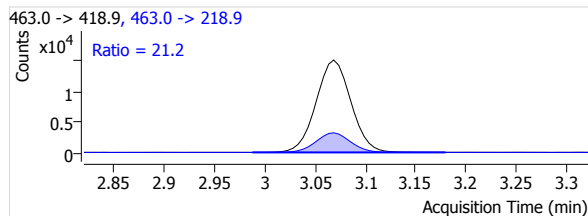
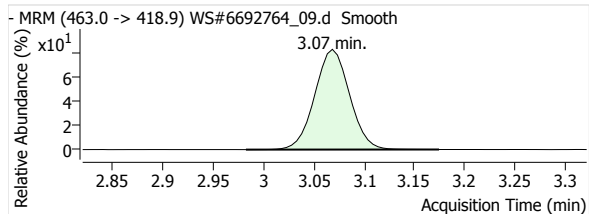


Quantitative Analysis Report

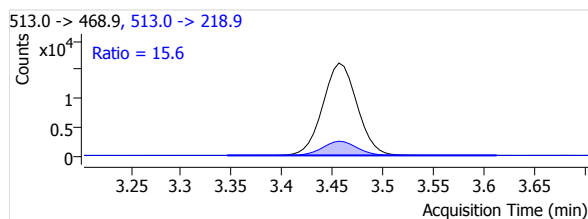
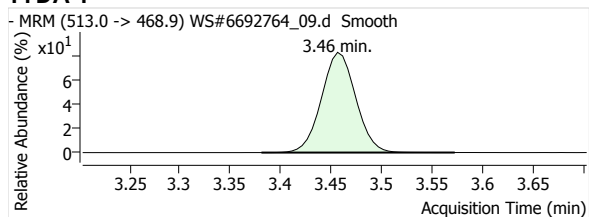
PFOA 1



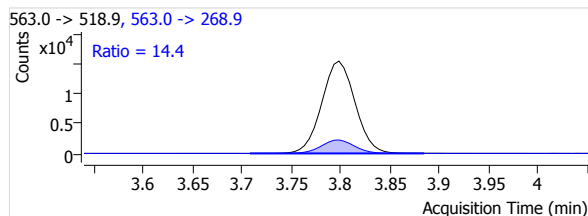
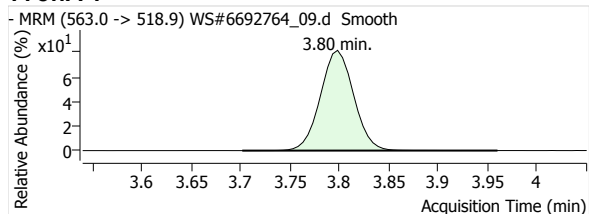
PFNA 1



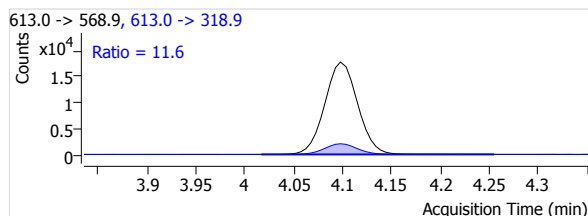
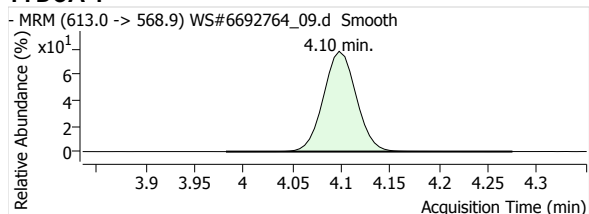
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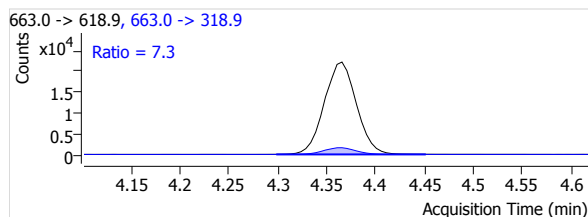
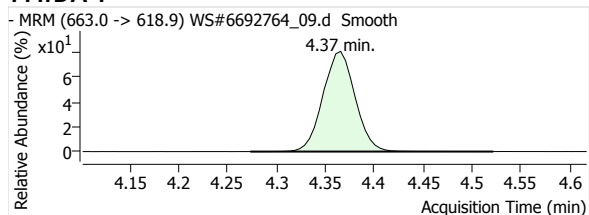
PFUnA 1



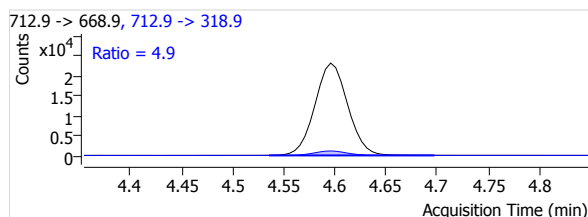
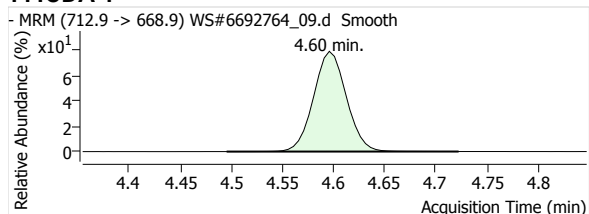
PFDaA 1



PFTrDA 1

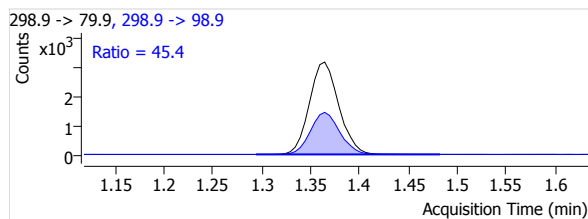
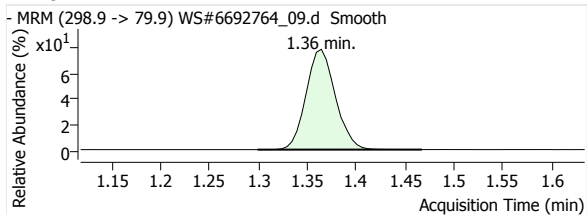


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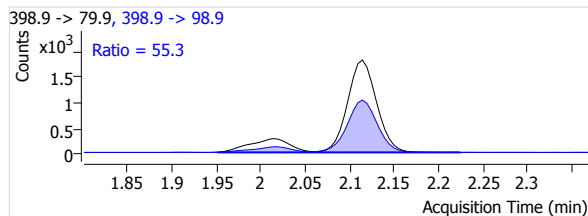
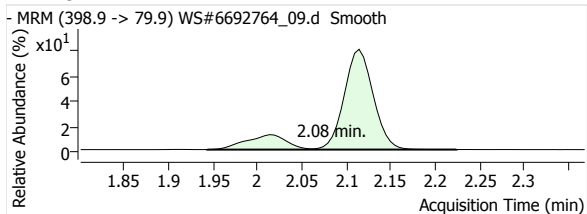


Quantitative Analysis Report

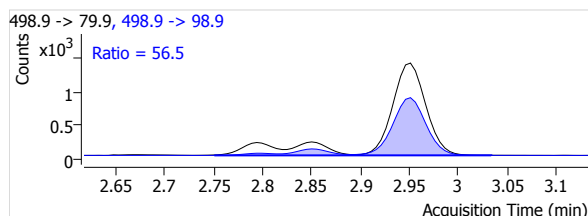
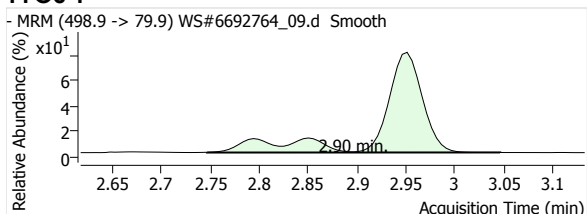
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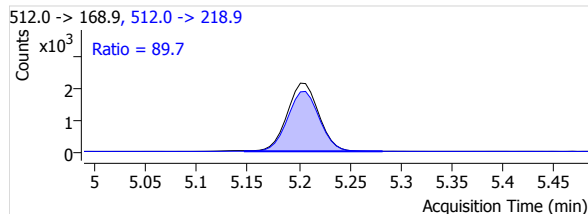
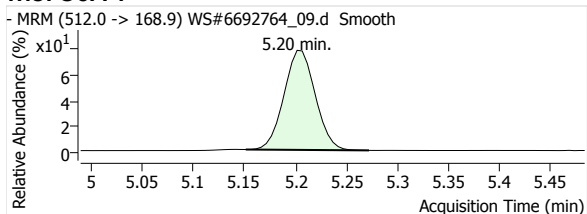
PFHxS 1



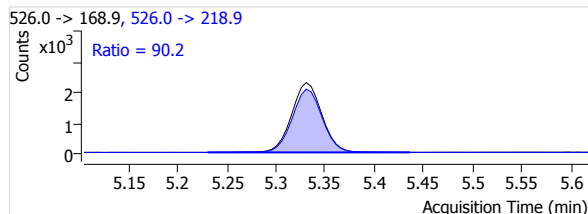
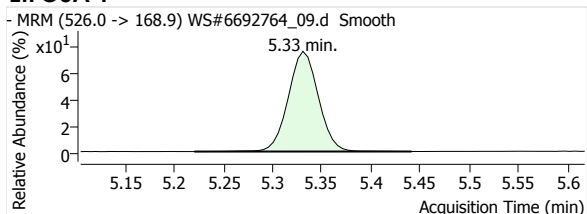
PFOS 1



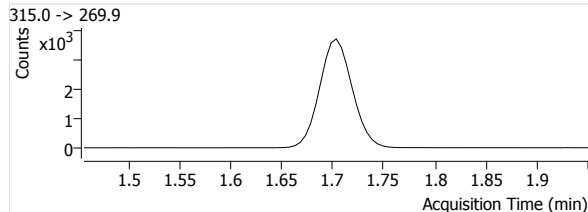
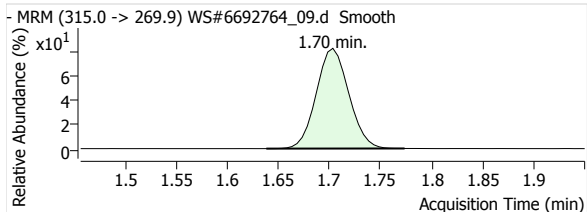
MeFOSA 1



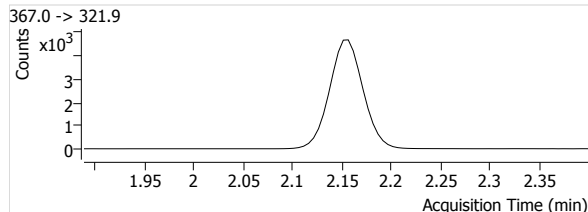
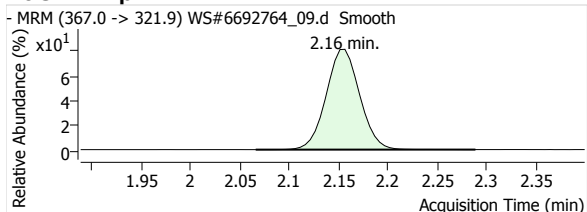
eFOSA 1



13C2-PFHxA

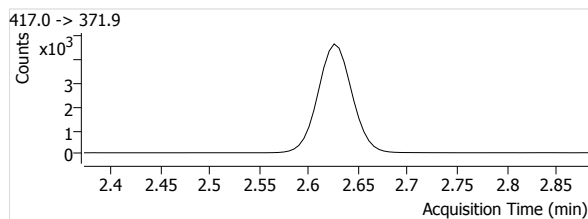
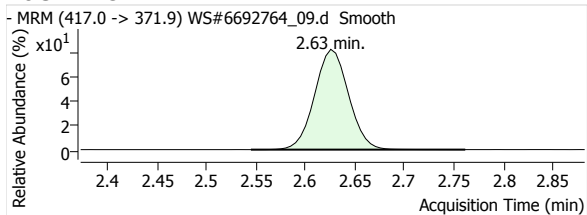


13C4-PFHpA

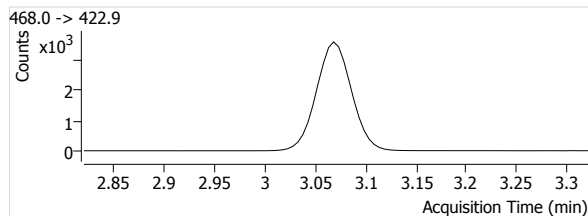
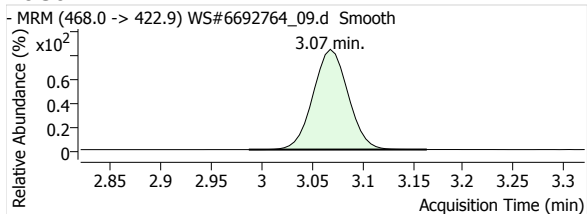


Quantitative Analysis Report

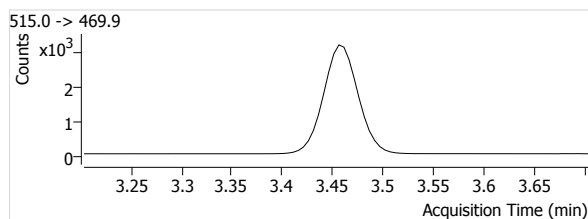
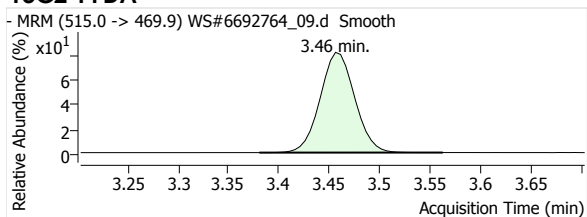
13C4-PFOA



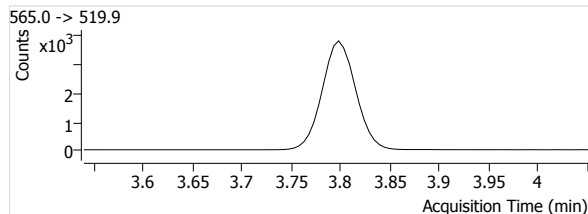
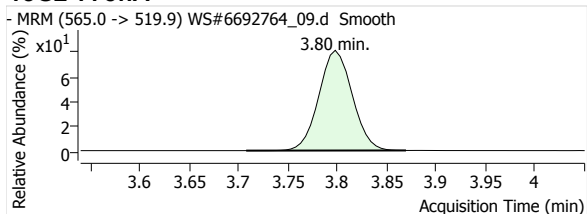
13C5-PFNA



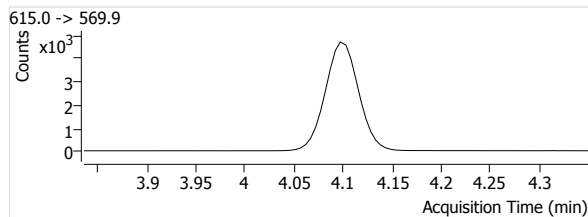
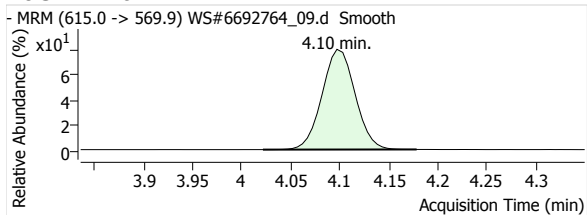
13C2-PFDA



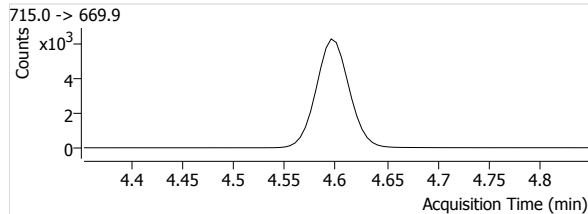
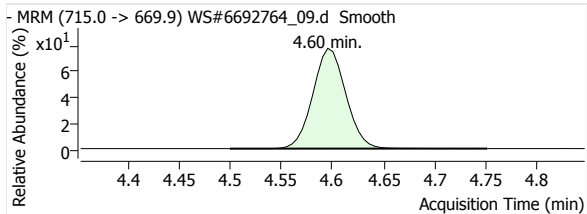
13C2-PFUnA



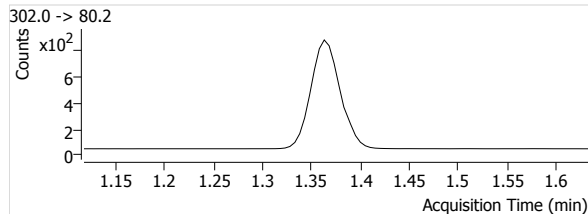
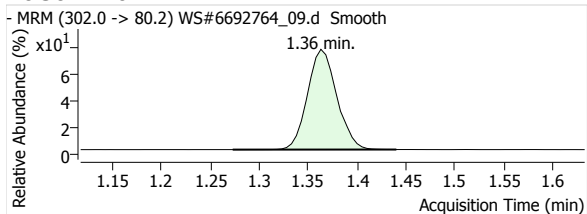
13C2-PFDoA



13C2-PFTeDA

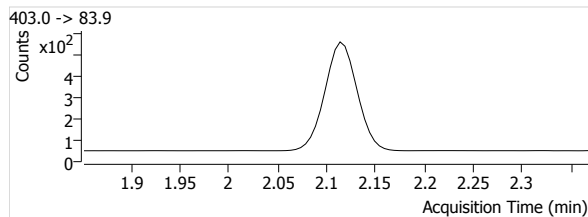
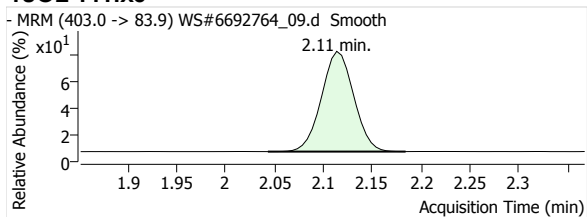


13C3-PFBS

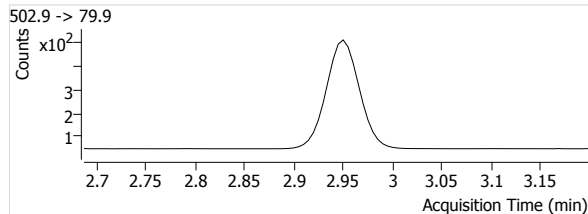
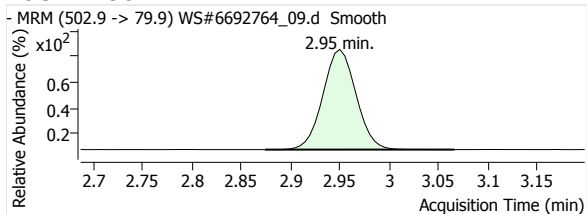


Quantitative Analysis Report

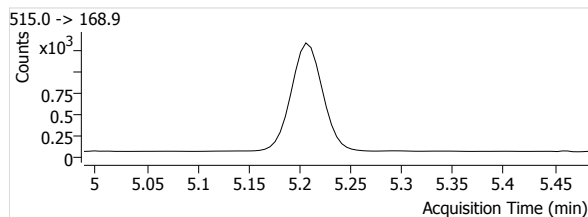
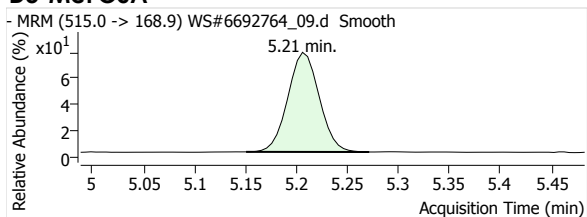
18O2-PFHxs



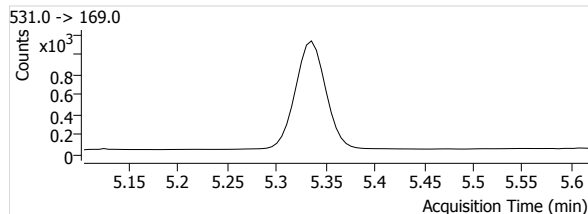
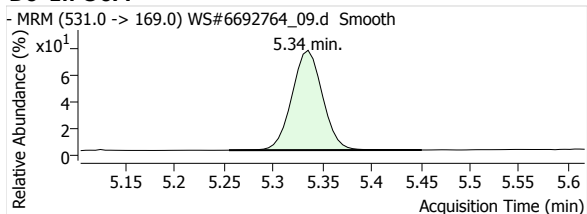
13C4-PFOS



D3-MeFOFA



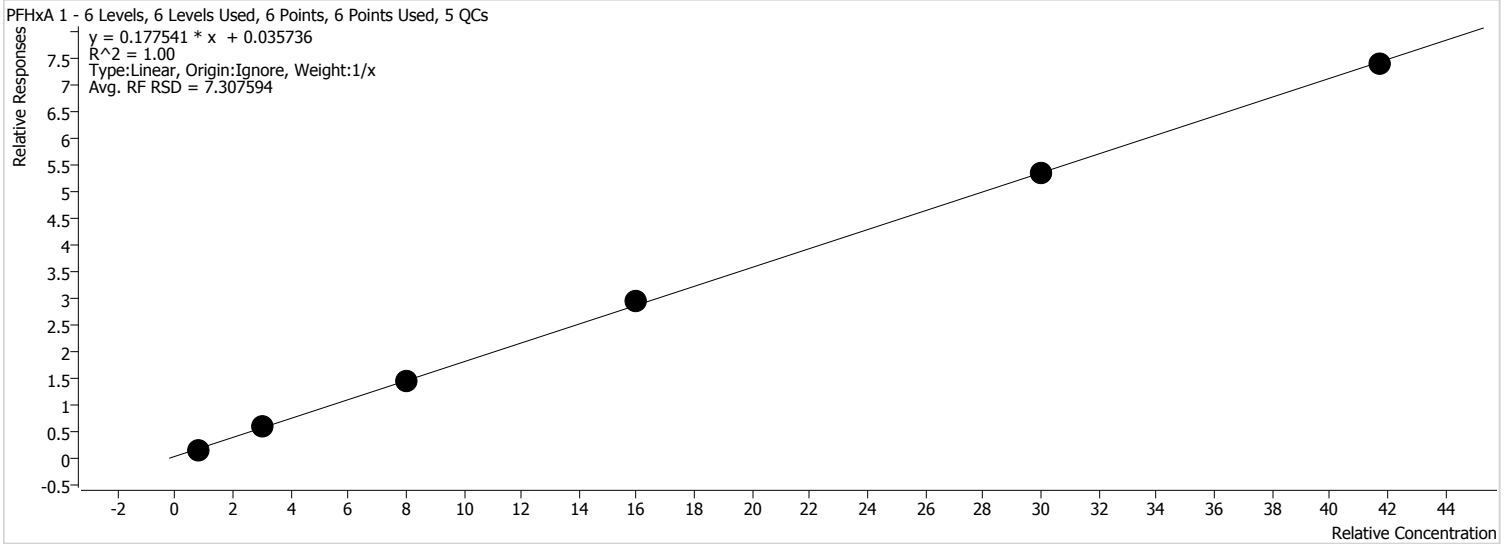
D5-EtFOFA



By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: PFHxA 1
Internal Standard: 13C2-PFHxA IS

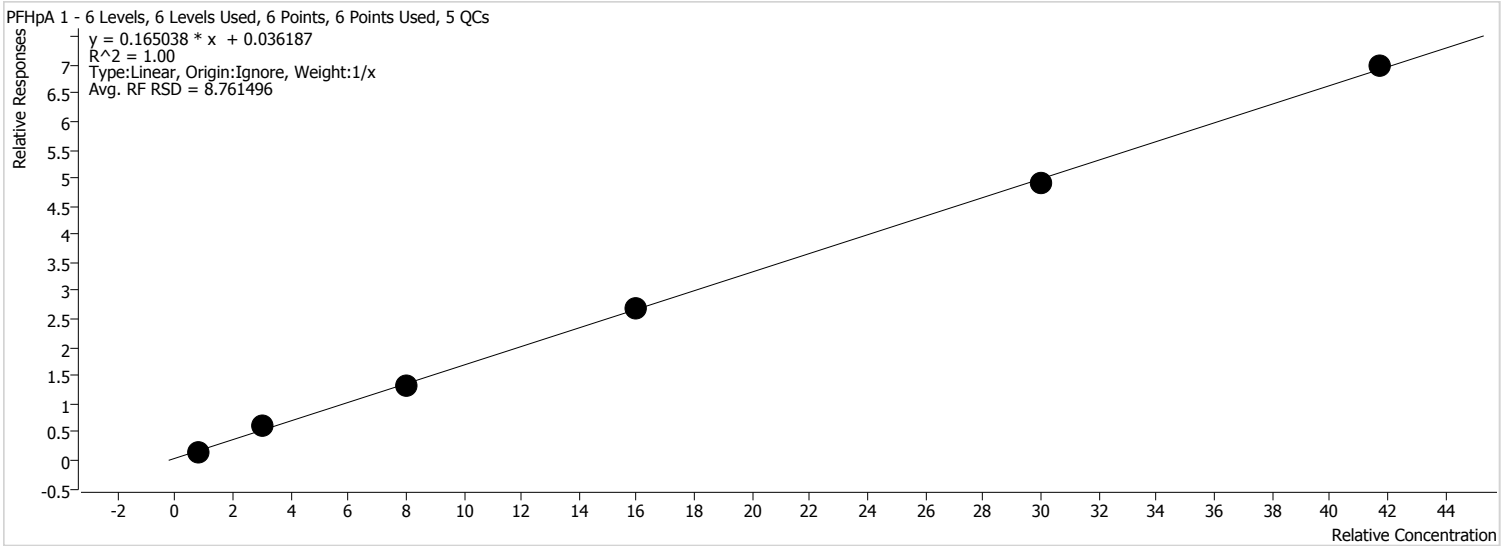


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/21 10:07:29 PM	0.83	0.75	1267	0.2041	3865	90.7
STD 2	STD 2	x	2020/04/21 10:14:24 PM	3.00	3.30	4435	0.2072	3367	110.0
STD 3	STD 3	x	2020/04/21 10:21:20 PM	8.00	7.88	10090	0.1793	8837	98.5
STD 4	STD 4	x	2020/04/21 10:28:16 PM	16.00	16.29	20570	0.1830	12087	101.8
STD 5	STD 5	x	2020/04/21 10:35:12 PM	30.00	29.88	37151	0.1780	129926	99.6
STD 6	STD 6	x	2020/04/21 10:42:08 PM	41.70	41.43	53523	0.1772	29248	99.3

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: PFHpA 1
Internal Standard: 13C4-PFHpA IS

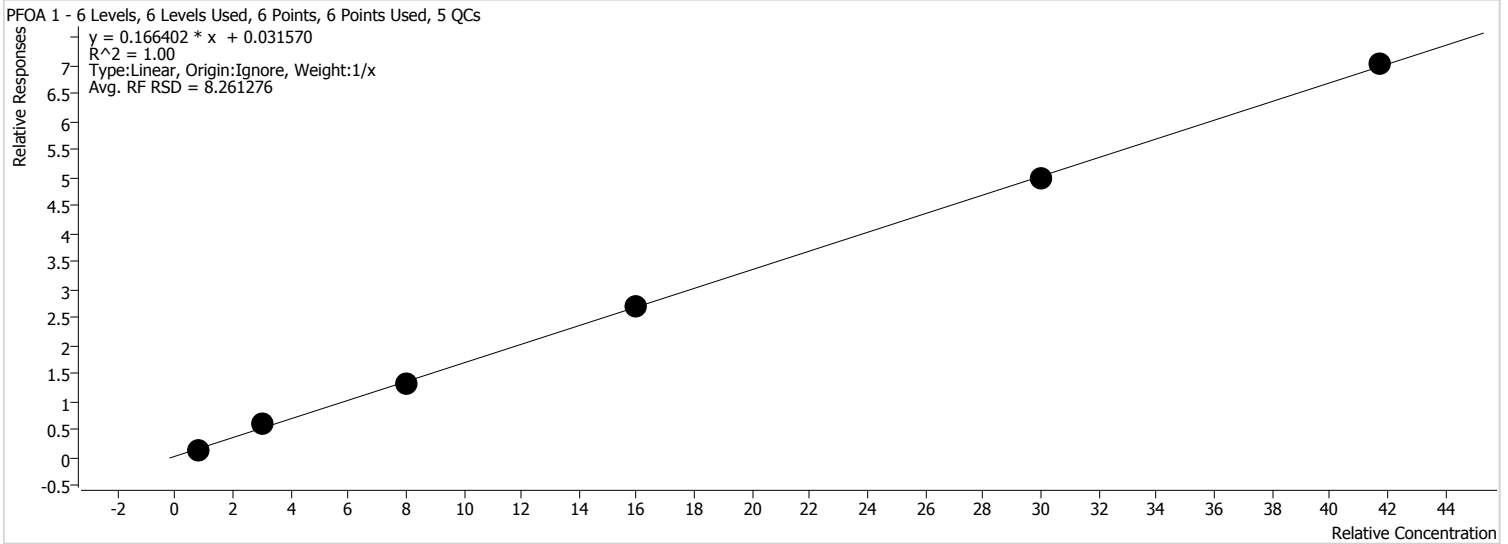


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/21 10:07:29 PM	0.83	0.76	1654	0.1944	13597	91.3
STD 2	STD 2	x	2020/04/21 10:14:24 PM	3.00	3.36	5693	0.1969	8843	112.0
STD 3	STD 3	x	2020/04/21 10:21:20 PM	8.00	7.79	12714	0.1652	5753	97.4
STD 4	STD 4	x	2020/04/21 10:28:16 PM	16.00	15.95	25791	0.1668	27261	99.7
STD 5	STD 5	x	2020/04/21 10:35:12 PM	30.00	29.66	47217	0.1644	240353	98.9
STD 6	STD 6	x	2020/04/21 10:42:08 PM	41.70	42.01	69503	0.1671	45777	100.7

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: PFOA 1
Internal Standard: 13C4-PFOA IS

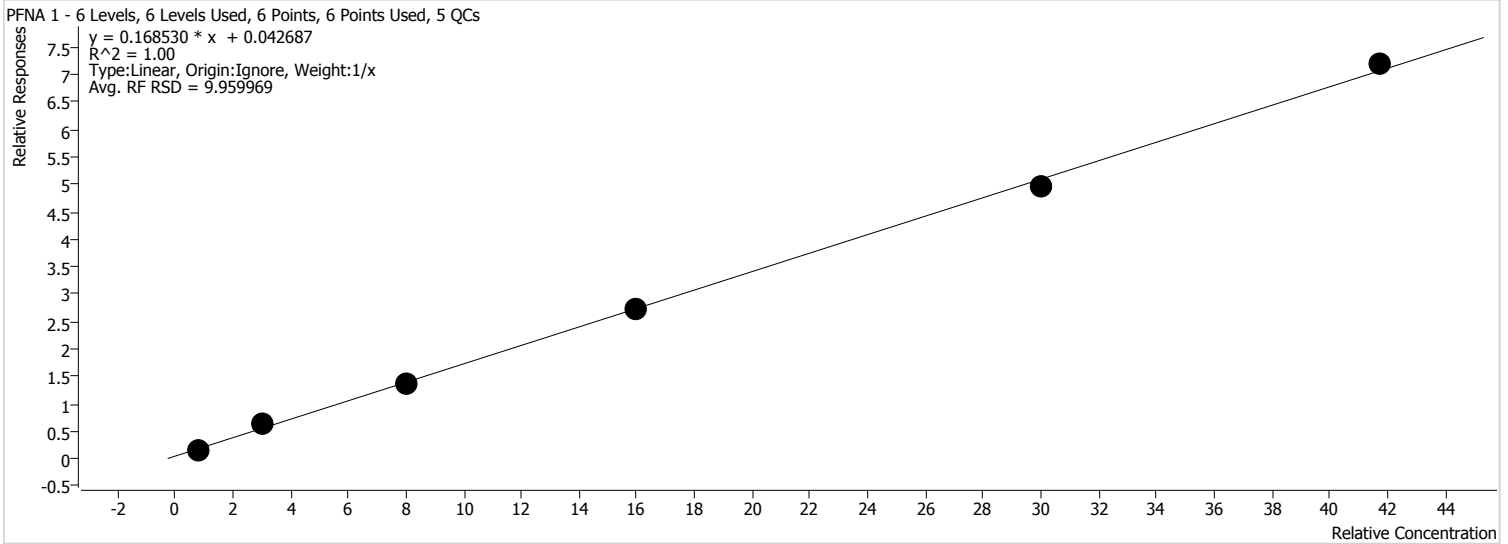


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/21 10:07:29 PM	0.83	0.76	1575	0.1895	1896	91.0
STD 2	STD 2	x	2020/04/21 10:14:24 PM	3.00	3.39	5533	0.1987	5540	113.1
STD 3	STD 3	x	2020/04/21 10:21:20 PM	8.00	7.71	12346	0.1643	5824	96.4
STD 4	STD 4	x	2020/04/21 10:28:16 PM	16.00	15.96	25890	0.1679	76832	99.7
STD 5	STD 5	x	2020/04/21 10:35:12 PM	30.00	29.79	46383	0.1663	45966	99.3
STD 6	STD 6	x	2020/04/21 10:42:08 PM	41.70	41.93	69584	0.1681	37339	100.6

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: PFNA 1
Internal Standard: 13C5-PFNA IS

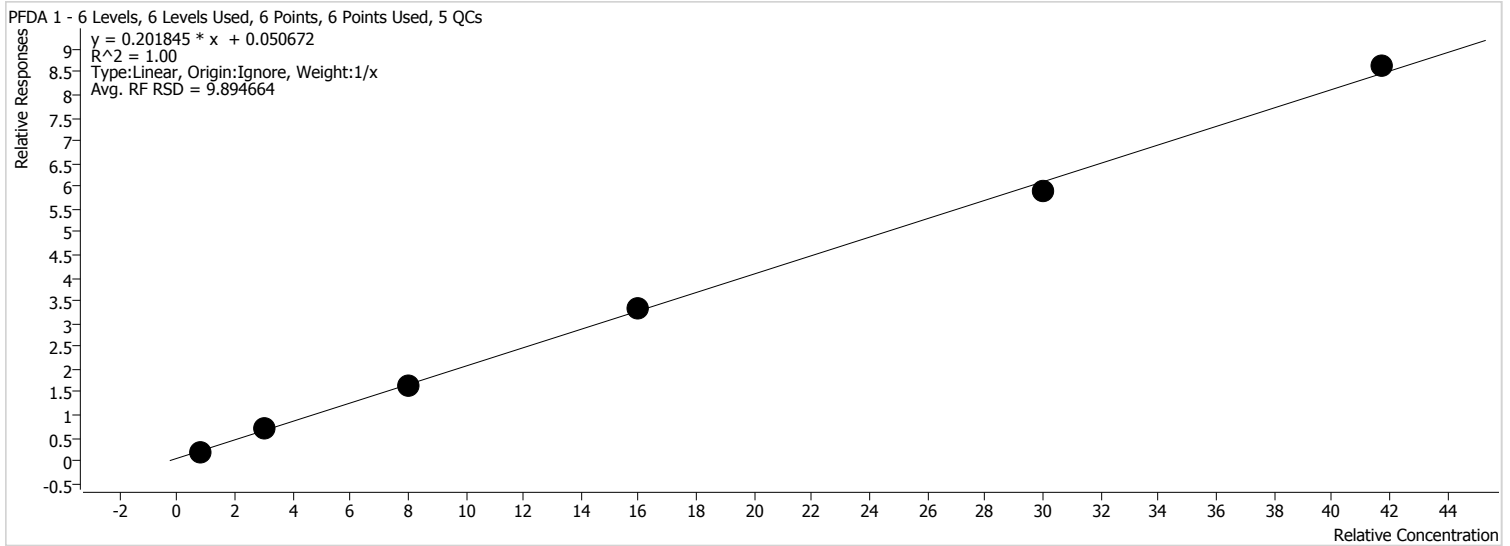


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/21 10:07:29 PM	0.83	0.75	1335	0.2046	932	90.9
STD 2	STD 2	x	2020/04/21 10:14:24 PM	3.00	3.38	4544	0.2041	6022	112.6
STD 3	STD 3	x	2020/04/21 10:21:20 PM	8.00	7.79	10189	0.1694	9984	97.4
STD 4	STD 4	x	2020/04/21 10:28:16 PM	16.00	16.03	20751	0.1715	31275	100.2
STD 5	STD 5	x	2020/04/21 10:35:12 PM	30.00	29.21	37420	0.1655	14723	97.4
STD 6	STD 6	x	2020/04/21 10:42:08 PM	41.70	42.38	55780	0.1723	43755	101.6

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: PFDA 1
Internal Standard: 13C2-PFDA IS

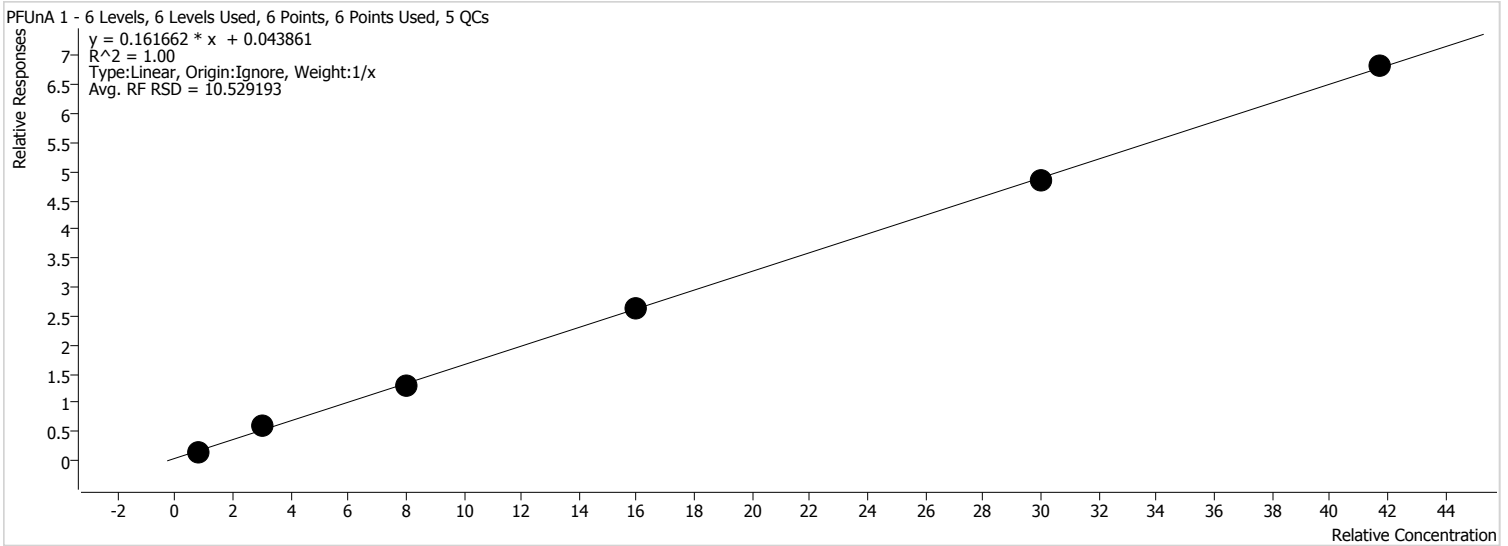


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/21 10:07:29 PM	0.83	0.77	1378	0.2482	2744	92.7
STD 2	STD 2	x	2020/04/21 10:14:24 PM	3.00	3.31	4653	0.2397	10644	110.4
STD 3	STD 3	x	2020/04/21 10:21:20 PM	8.00	7.77	10491	0.2024	10940	97.1
STD 4	STD 4	x	2020/04/21 10:28:16 PM	16.00	16.18	21675	0.2072	43274	101.1
STD 5	STD 5	x	2020/04/21 10:35:12 PM	30.00	29.04	39043	0.1971	140077	96.8
STD 6	STD 6	x	2020/04/21 10:42:08 PM	41.70	42.46	58471	0.2068	16685	101.8

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: PFUnA 1
Internal Standard: 13C2-PFUnA IS

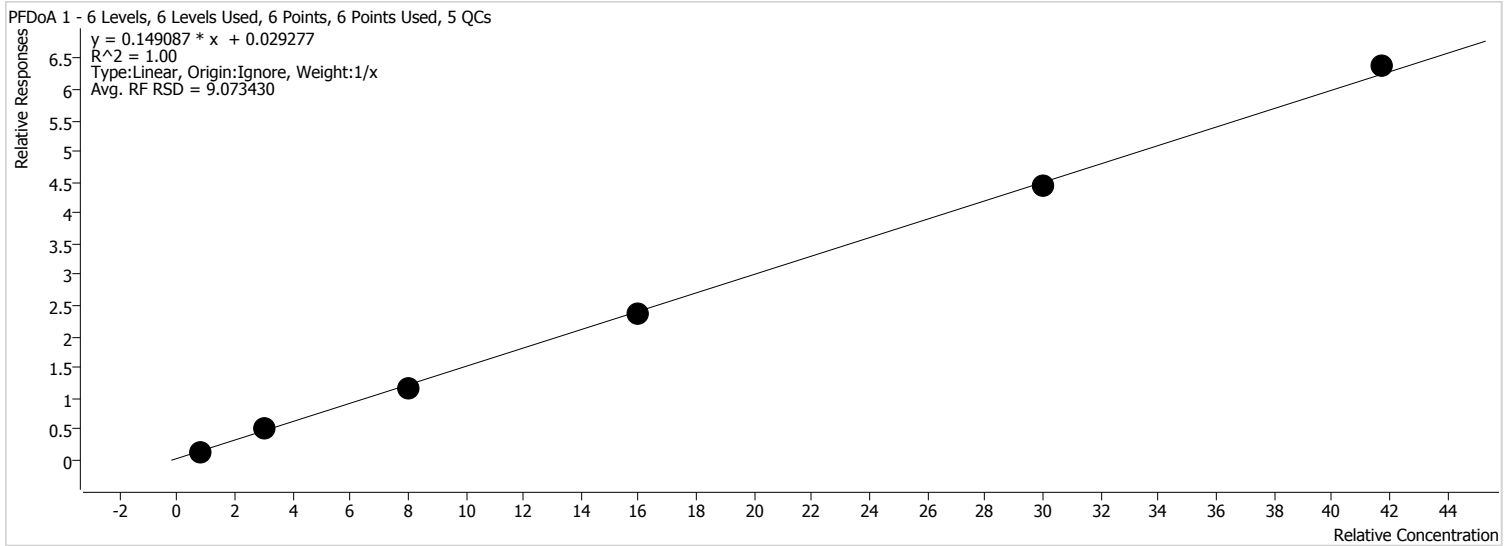


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/21 10:07:29 PM	0.83	0.76	1336	0.2006	4028	91.4
STD 2	STD 2	x	2020/04/21 10:14:24 PM	3.00	3.37	4457	0.1961	38557	112.3
STD 3	STD 3	x	2020/04/21 10:21:20 PM	8.00	7.72	9892	0.1614	15303	96.5
STD 4	STD 4	x	2020/04/21 10:28:16 PM	16.00	16.03	20510	0.1647	64175	100.2
STD 5	STD 5	x	2020/04/21 10:35:12 PM	30.00	29.80	38006	0.1620	44544	99.3
STD 6	STD 6	x	2020/04/21 10:42:08 PM	41.70	41.85	56414	0.1633	439558	100.4

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: PFDa 1
Internal Standard: 13C2-PFDa IS

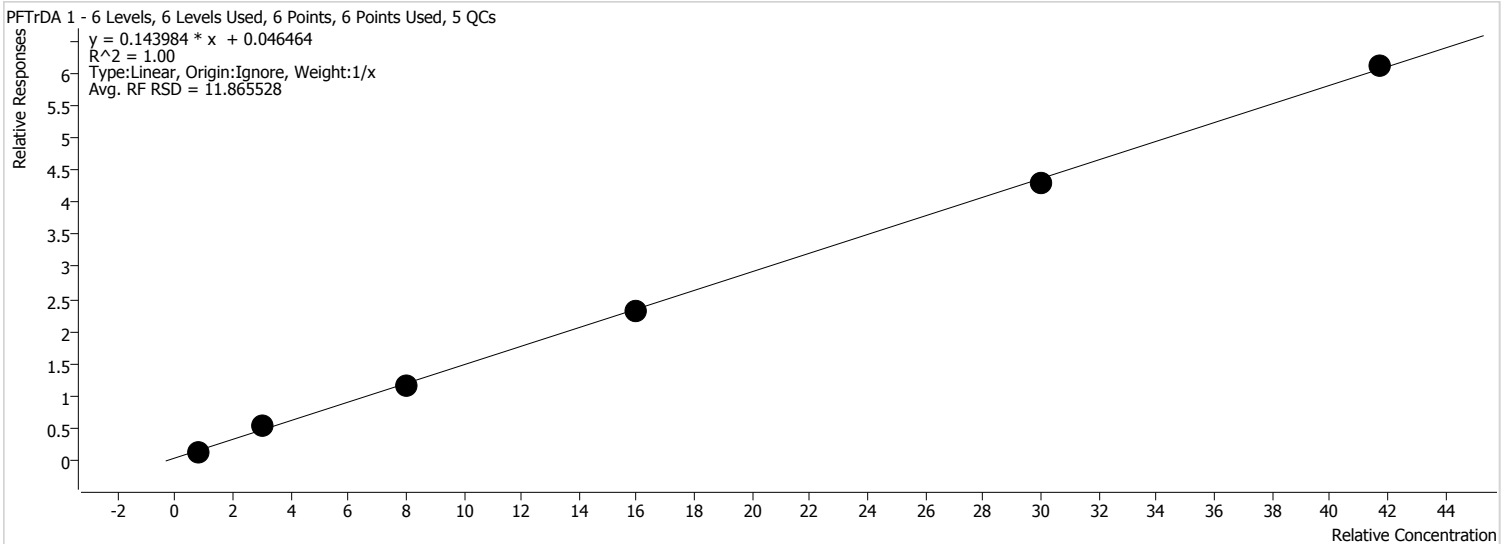


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/21 10:07:29 PM	0.83	0.79	1509	0.1768	622	95.0
STD 2	STD 2	x	2020/04/21 10:14:24 PM	3.00	3.33	5105	0.1752	2576	111.0
STD 3	STD 3	x	2020/04/21 10:21:20 PM	8.00	7.65	11453	0.1461	9484	95.6
STD 4	STD 4	x	2020/04/21 10:28:16 PM	16.00	15.67	23932	0.1479	13985	98.0
STD 5	STD 5	x	2020/04/21 10:35:12 PM	30.00	29.55	43192	0.1478	39812	98.5
STD 6	STD 6	x	2020/04/21 10:42:08 PM	41.70	42.54	65516	0.1528	24858	102.0

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: PFTrDA 1
Internal Standard: 13C2-PFTeDA IS

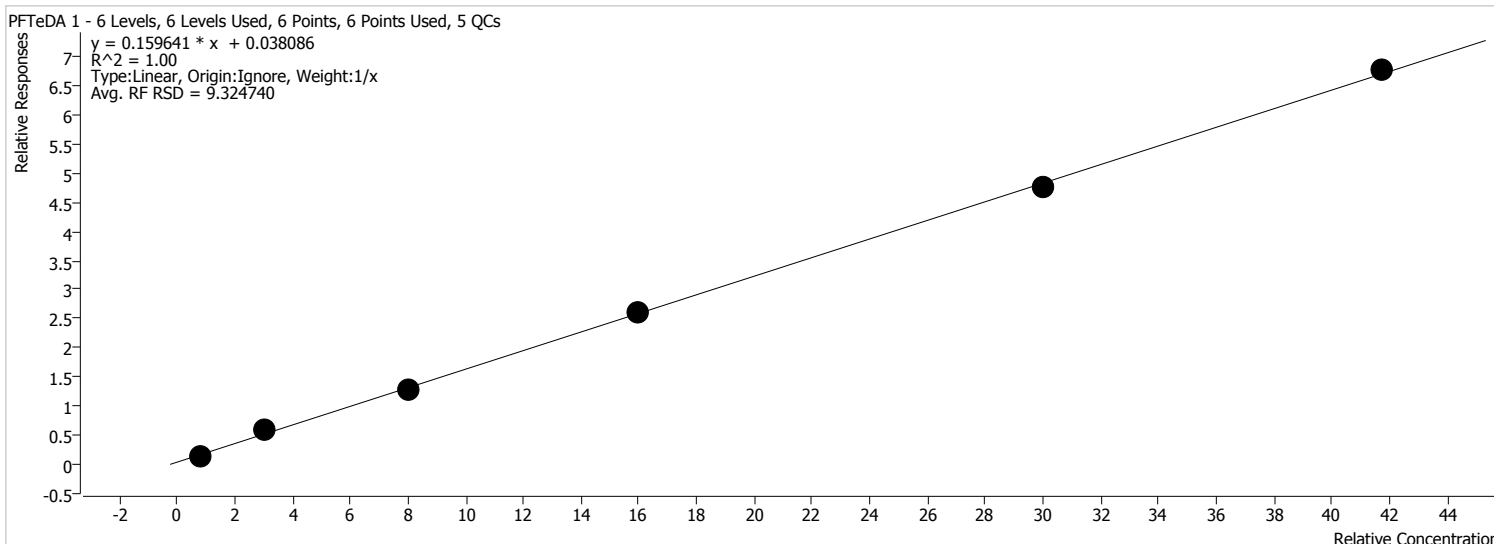


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/21 10:07:29 PM	0.83	0.73	1959	0.1818	6727	87.4
STD 2	STD 2	x	2020/04/21 10:14:24 PM	3.00	3.47	6605	0.1820	15732	115.6
STD 3	STD 3	x	2020/04/21 10:21:20 PM	8.00	7.86	14499	0.1473	23174	98.3
STD 4	STD 4	x	2020/04/21 10:28:16 PM	16.00	15.90	29292	0.1460	36922	99.4
STD 5	STD 5	x	2020/04/21 10:35:12 PM	30.00	29.59	53849	0.1436	127080	98.6
STD 6	STD 6	x	2020/04/21 10:42:08 PM	41.70	41.98	79598	0.1461	118561	100.7

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: PFTeDA 1
Internal Standard: 13C2-PFTeDA IS

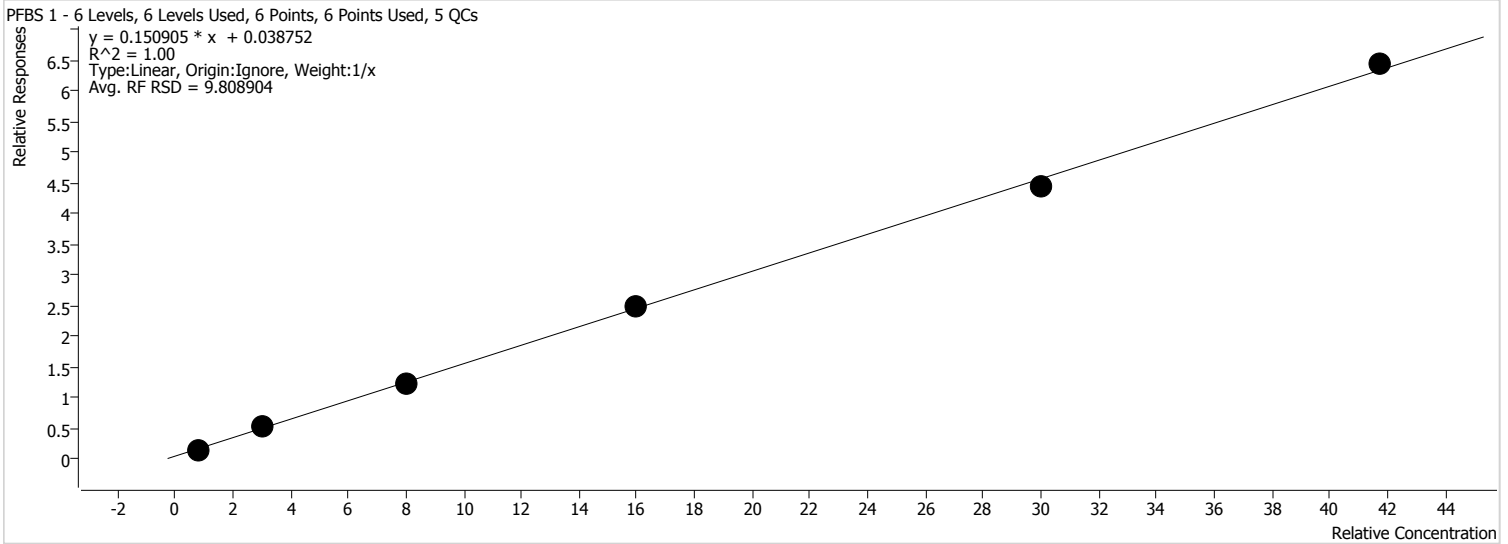


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/21 10:07:29 PM	0.83	0.75	2044	0.1897	2554	90.1
STD 2	STD 2	x	2020/04/21 10:14:24 PM	3.00	3.39	7007	0.1931	16010	113.0
STD 3	STD 3	x	2020/04/21 10:21:20 PM	8.00	7.79	15780	0.1603	86576	97.4
STD 4	STD 4	x	2020/04/21 10:28:16 PM	16.00	16.06	32624	0.1626	26653	100.4
STD 5	STD 5	x	2020/04/21 10:35:12 PM	30.00	29.47	59298	0.1581	44598	98.2
STD 6	STD 6	x	2020/04/21 10:42:08 PM	41.70	42.07	88257	0.1620	477835	100.9

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: PFBS 1
Internal Standard: 13C3-PFBS IS

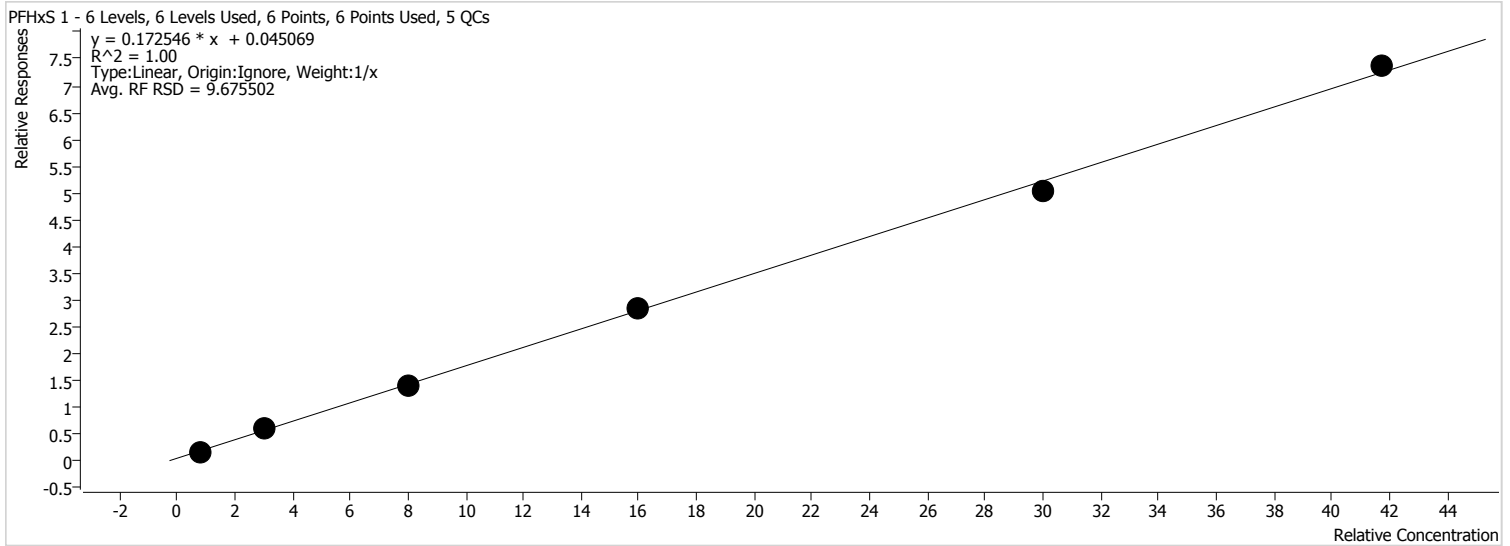


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/21 10:07:29 PM	0.83	0.75	241	0.1833	3575	90.5
STD 2	STD 2	x	2020/04/21 10:14:24 PM	3.00	3.37	808	0.1822	5889	112.2
STD 3	STD 3	x	2020/04/21 10:21:20 PM	8.00	7.83	1862	0.1526	16687	97.9
STD 4	STD 4	x	2020/04/21 10:28:16 PM	16.00	16.11	3811	0.1544	11662	100.7
STD 5	STD 5	x	2020/04/21 10:35:12 PM	30.00	29.15	6866	0.1479	72010	97.2
STD 6	STD 6	x	2020/04/21 10:42:08 PM	41.70	42.31	10253	0.1541	19826	101.5

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: PFHxS 1
Internal Standard: 18O2-PFHxS IS

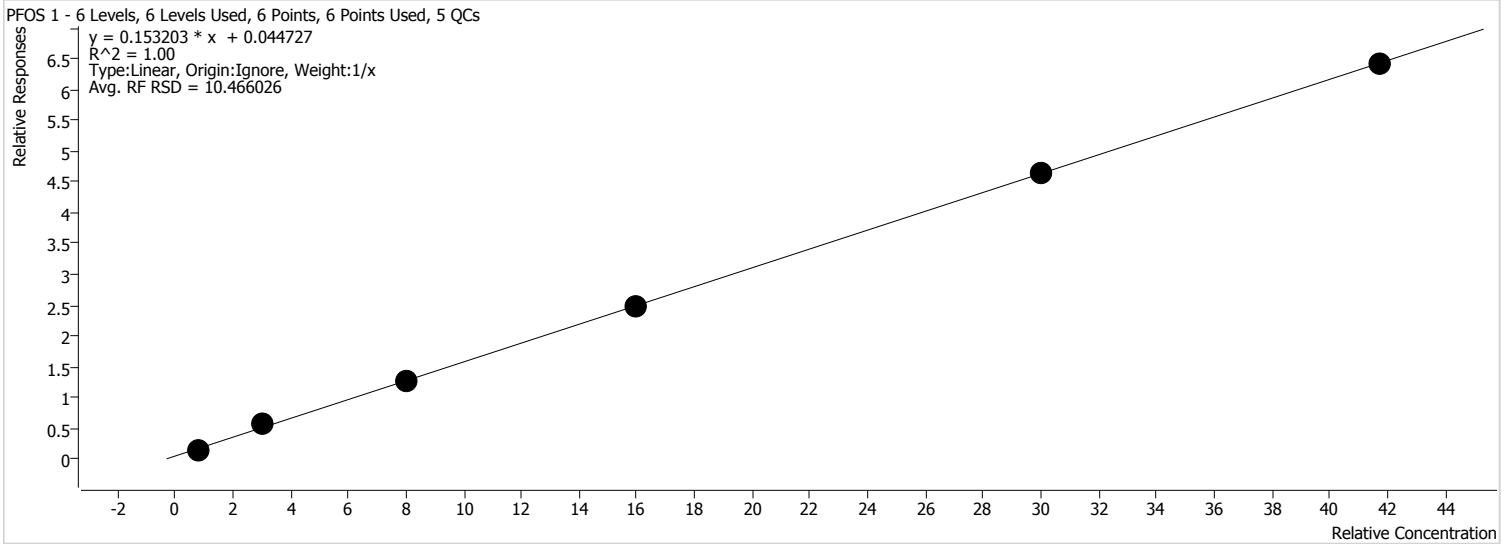


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/21 10:07:29 PM	0.83	0.76	186	0.2125	2709	91.7
STD 2	STD 2	x	2020/04/21 10:14:24 PM	3.00	3.29	623	0.2045	2817	109.8
STD 3	STD 3	x	2020/04/21 10:21:20 PM	8.00	7.91	1476	0.1762	38460	98.9
STD 4	STD 4	x	2020/04/21 10:28:16 PM	16.00	16.23	2892	0.1779	33447	101.5
STD 5	STD 5	x	2020/04/21 10:35:12 PM	30.00	28.98	5257	0.1682	21504	96.6
STD 6	STD 6	x	2020/04/21 10:42:08 PM	41.70	42.35	7992	0.1763	79805	101.6

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: PFOS 1
Internal Standard: 13C4-PFOS IS

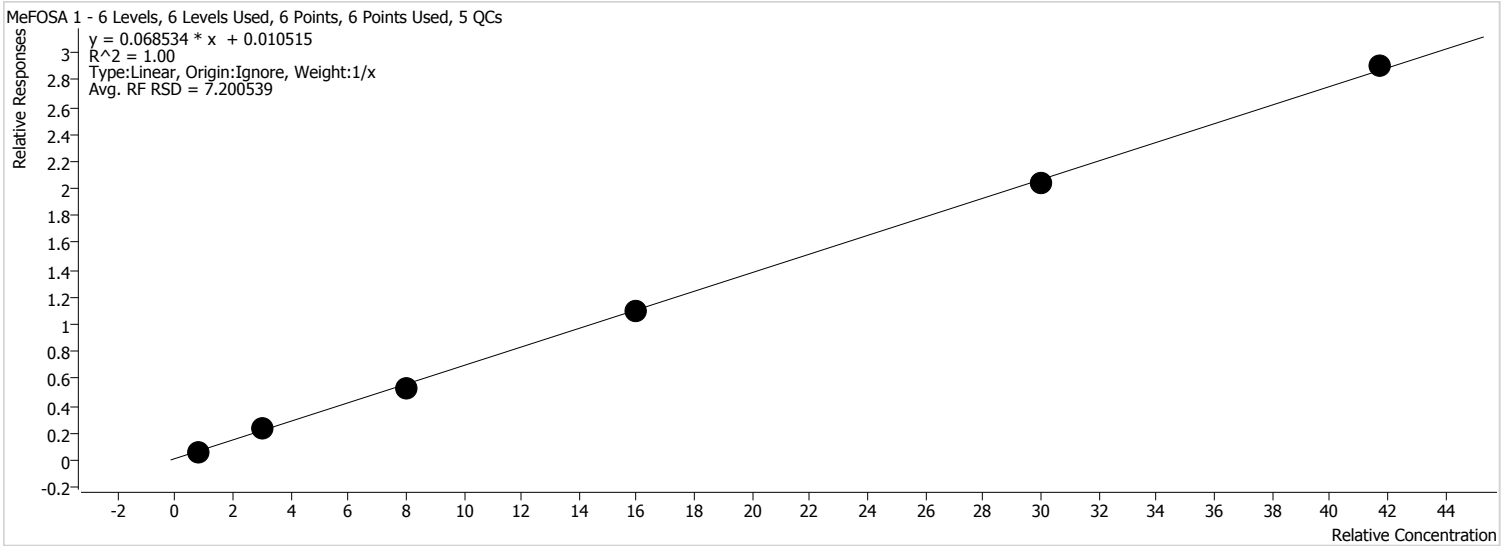


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/21 10:07:29 PM	0.83	0.73	153	0.1885	9405	87.9
STD 2	STD 2	x	2020/04/21 10:14:24 PM	3.00	3.41	524	0.1893	2178	113.8
STD 3	STD 3	x	2020/04/21 10:21:20 PM	8.00	7.97	1180	0.1582	37902	99.6
STD 4	STD 4	x	2020/04/21 10:28:16 PM	16.00	15.82	2378	0.1543	3931	98.9
STD 5	STD 5	x	2020/04/21 10:35:12 PM	30.00	30.05	4393	0.1550	22869	100.2
STD 6	STD 6	x	2020/04/21 10:42:08 PM	41.70	41.54	6467	0.1537	15028	99.6

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: MeFOSA 1
Internal Standard: D3-MeFOSA IS

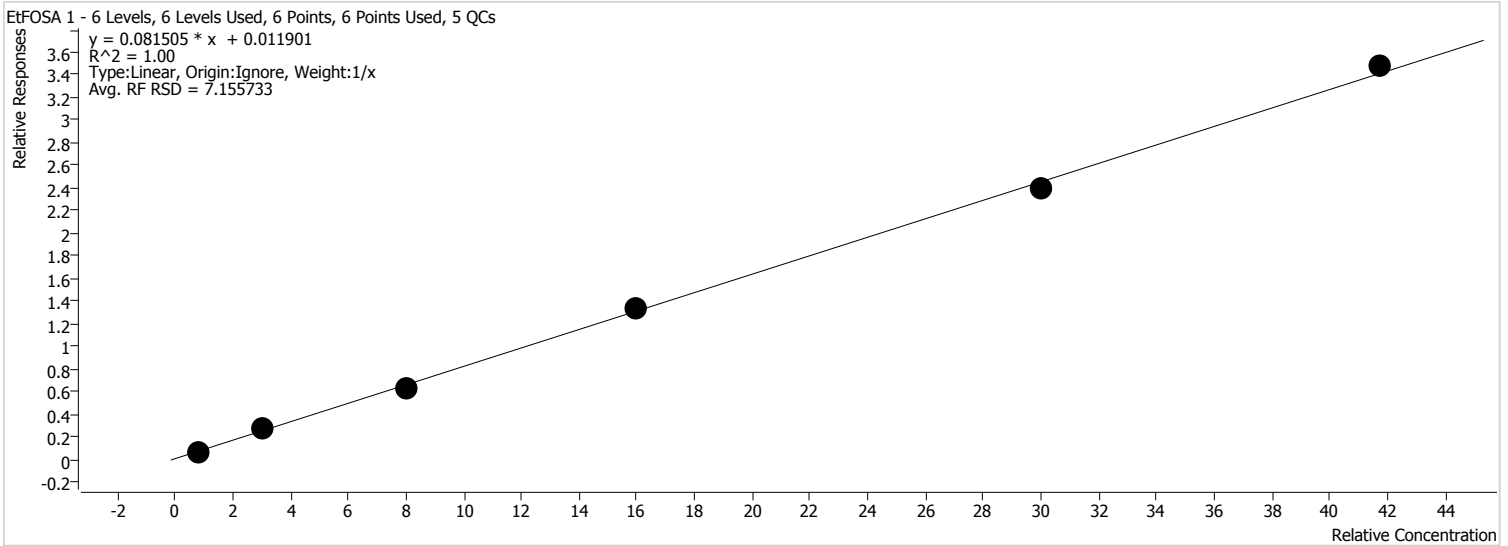


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/21 10:07:29 PM	0.83	0.79	161	0.0778	21	95.0
STD 2	STD 2	x	2020/04/21 10:14:24 PM	3.00	3.29	555	0.0786	73	109.6
STD 3	STD 3	x	2020/04/21 10:21:20 PM	8.00	7.64	1295	0.0667	100	95.4
STD 4	STD 4	x	2020/04/21 10:28:16 PM	16.00	15.98	2688	0.0691	134	99.9
STD 5	STD 5	x	2020/04/21 10:35:12 PM	30.00	29.72	4914	0.0683	158	99.1
STD 6	STD 6	x	2020/04/21 10:42:08 PM	41.70	42.12	7416	0.0695	186	101.0

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: EtFOSA 1
Internal Standard: D5-EtFOSA IS

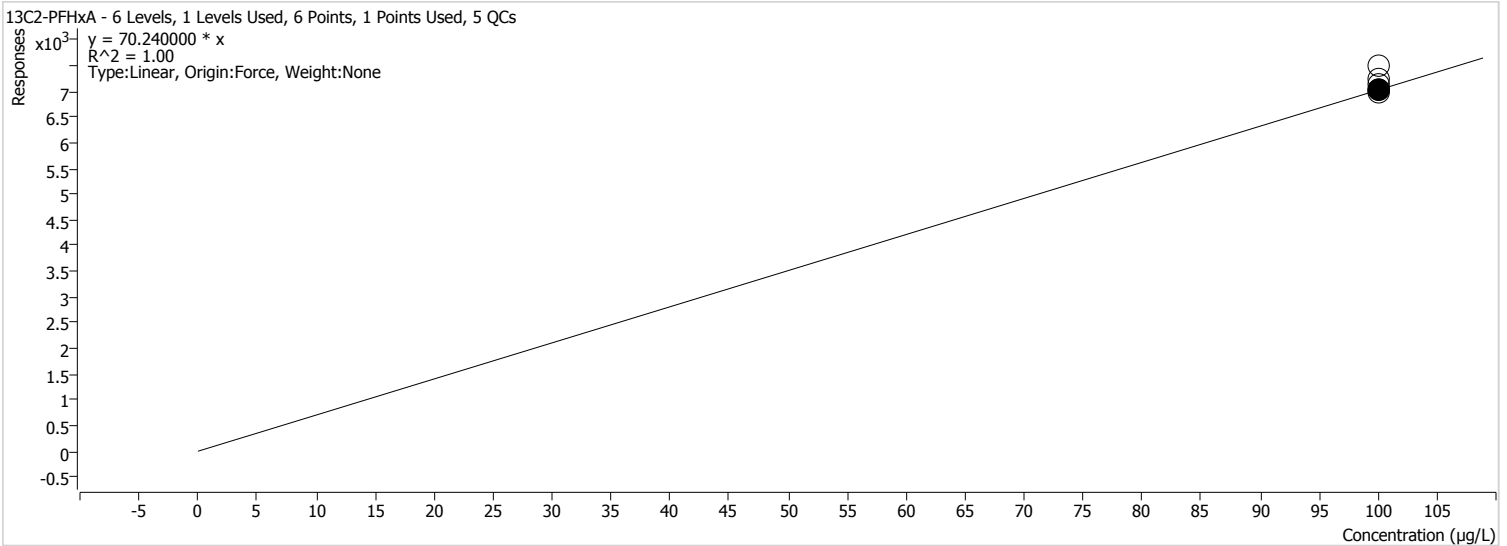


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/21 10:07:29 PM	0.83	0.81	172	0.0935	15	97.1
STD 2	STD 2	x	2020/04/21 10:14:24 PM	3.00	3.22	554	0.0915	46	107.4
STD 3	STD 3	x	2020/04/21 10:21:20 PM	8.00	7.58	1303	0.0788	88	94.8
STD 4	STD 4	x	2020/04/21 10:28:16 PM	16.00	16.25	2797	0.0835	369	101.6
STD 5	STD 5	x	2020/04/21 10:35:12 PM	30.00	29.21	5063	0.0798	368	97.4
STD 6	STD 6	x	2020/04/21 10:42:08 PM	41.70	42.46	7570	0.0833	514	101.8

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: 13C2-PFHxA
Internal Standard:

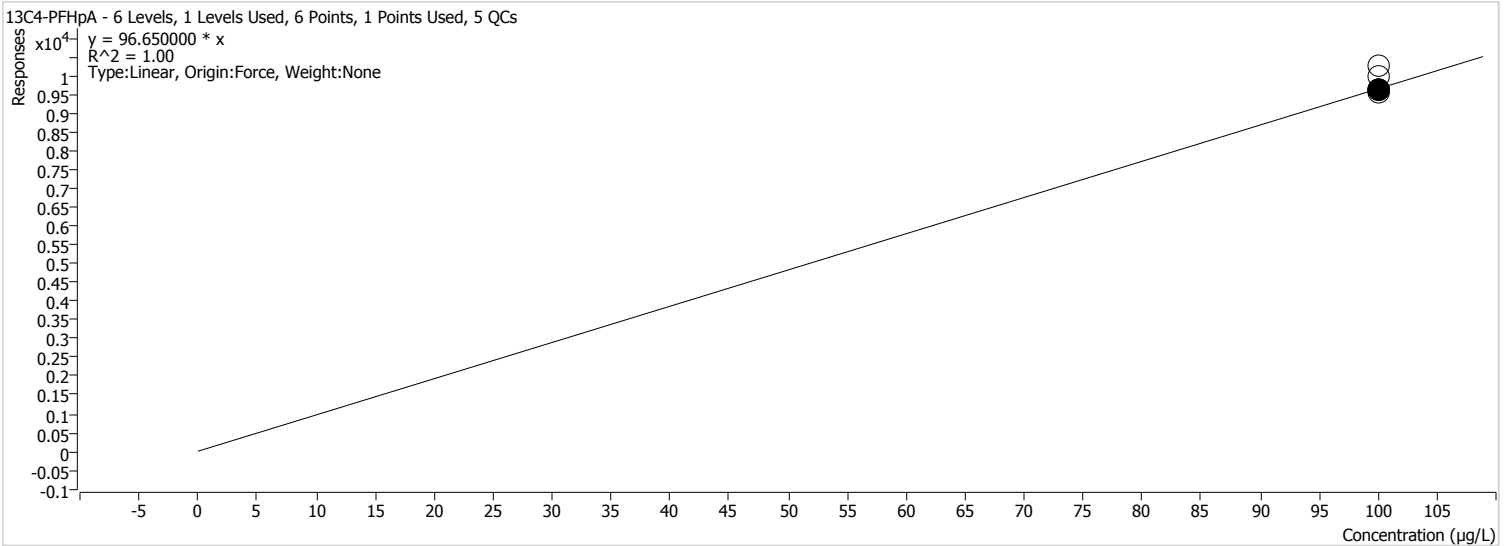


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/21 10:07:29 PM	100.00	106.46	7478	74.7800	1775	106.5
STD 2	STD 2		2020/04/21 10:14:24 PM	100.00	101.57	7134	71.3400	782	101.6
STD 3	STD 3		2020/04/21 10:21:20 PM	100.00	100.13	7033	70.3300	1103	100.1
STD 4	STD 4	x	2020/04/21 10:28:16 PM	100.00	100.00	7024	70.2400	851	100.0
STD 5	STD 5		2020/04/21 10:35:12 PM	100.00	99.05	6957	69.5700	1675	99.0
STD 6	STD 6		2020/04/21 10:42:08 PM	100.00	103.10	7242	72.4200	962	103.1

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: 13C4-PFHpA
Internal Standard:

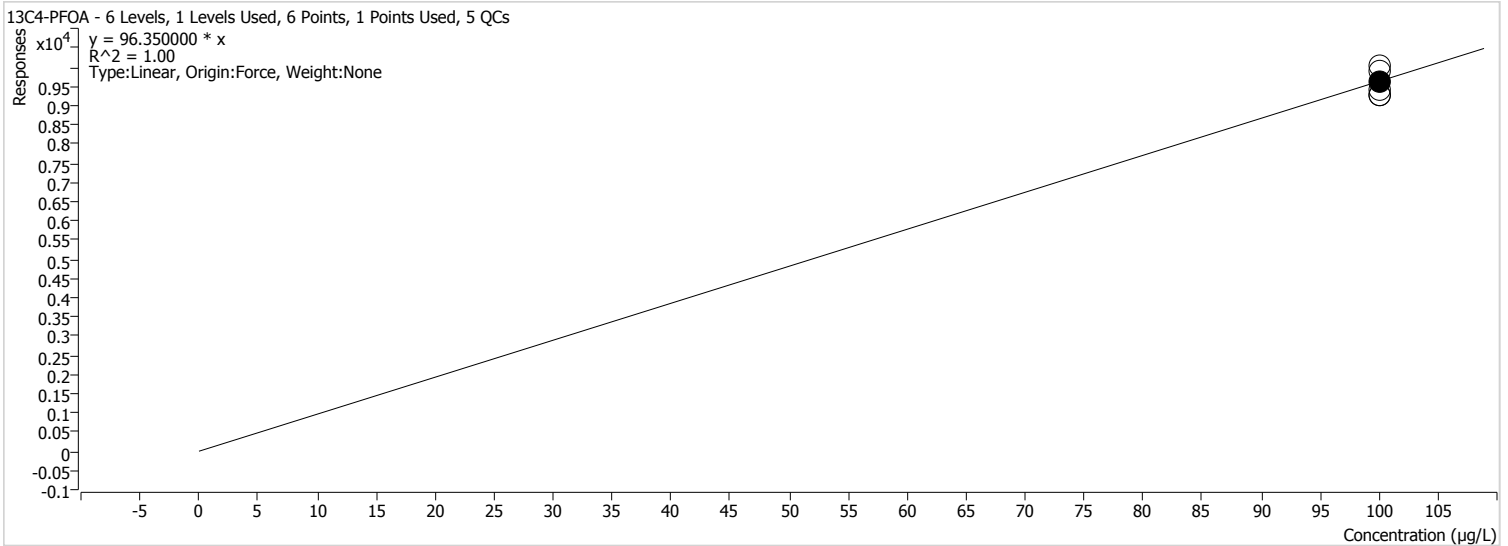


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/21 10:07:29 PM	100.00	106.08	10253	102.5300	1756	106.1
STD 2	STD 2		2020/04/21 10:14:24 PM	100.00	99.74	9640	96.4000	2048	99.7
STD 3	STD 3		2020/04/21 10:21:20 PM	100.00	99.51	9618	96.1800	1434	99.5
STD 4	STD 4	x	2020/04/21 10:28:16 PM	100.00	100.00	9665	96.6500	2346	100.0
STD 5	STD 5		2020/04/21 10:35:12 PM	100.00	99.07	9575	95.7500	1586	99.1
STD 6	STD 6		2020/04/21 10:42:08 PM	100.00	103.18	9972	99.7200	1106	103.2

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: 13C4-PFOA
Internal Standard:

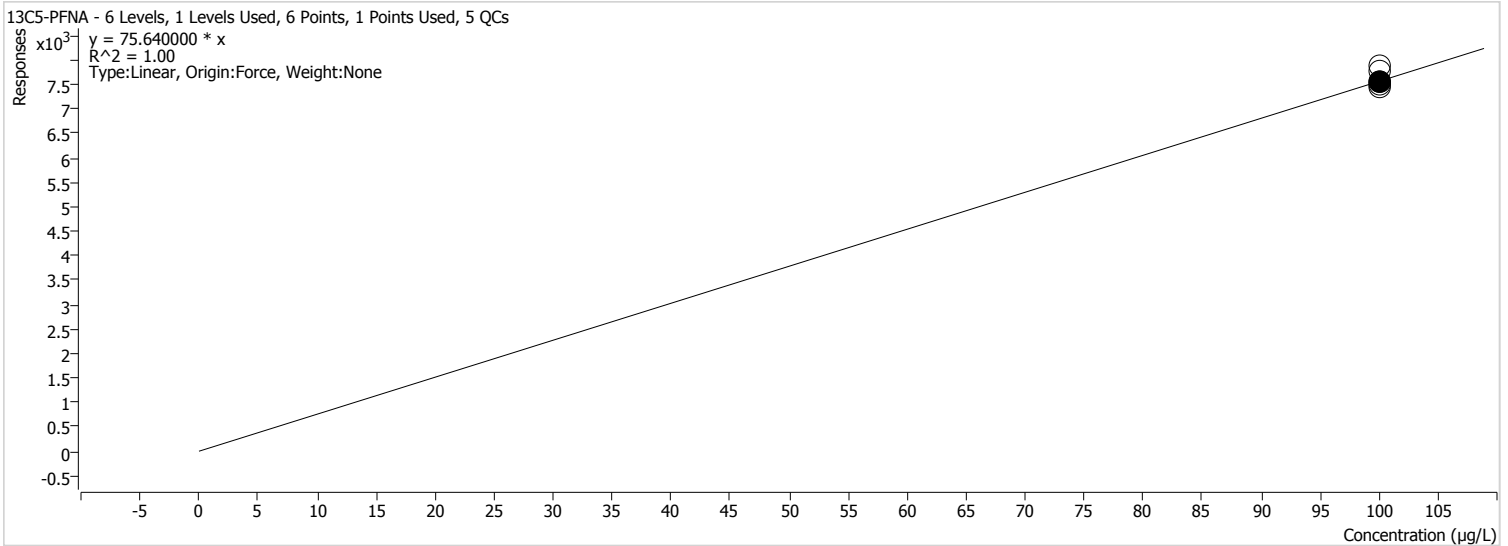


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/21 10:07:29 PM	100.00	103.94	10015	100.1500	1394	103.9
STD 2	STD 2		2020/04/21 10:14:24 PM	100.00	96.36	9284	92.8400	3322	96.4
STD 3	STD 3		2020/04/21 10:21:20 PM	100.00	97.50	9394	93.9400	2339	97.5
STD 4	STD 4	x	2020/04/21 10:28:16 PM	100.00	100.00	9635	96.3500	906	100.0
STD 5	STD 5		2020/04/21 10:35:12 PM	100.00	96.51	9299	92.9900	1380	96.5
STD 6	STD 6		2020/04/21 10:42:08 PM	100.00	103.04	9928	99.2800	1967	103.0

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: 13C5-PFNA
Internal Standard:

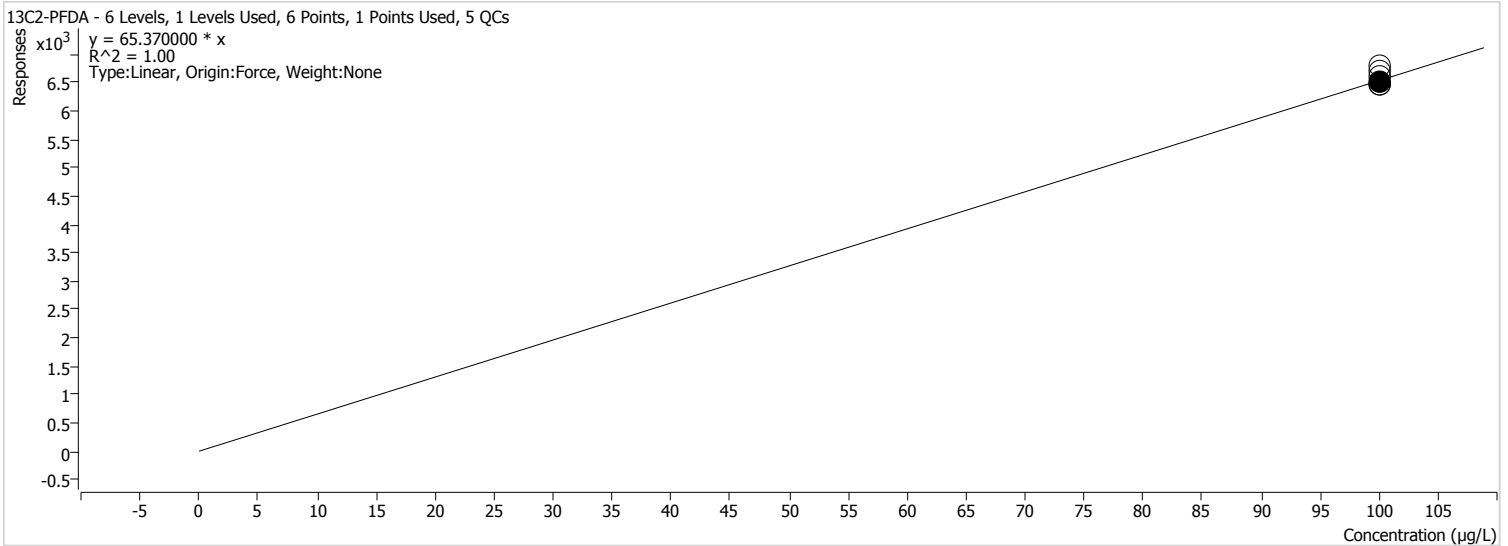


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/21 10:07:29 PM	100.00	103.94	7862	78.6200	1578	103.9
STD 2	STD 2		2020/04/21 10:14:24 PM	100.00	98.14	7423	74.2300	1201	98.1
STD 3	STD 3		2020/04/21 10:21:20 PM	100.00	99.39	7518	75.1800	1062	99.4
STD 4	STD 4	x	2020/04/21 10:28:16 PM	100.00	100.00	7564	75.6400	747	100.0
STD 5	STD 5		2020/04/21 10:35:12 PM	100.00	99.64	7537	75.3700	1070	99.6
STD 6	STD 6		2020/04/21 10:42:08 PM	100.00	102.64	7764	77.6400	1036	102.6

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: 13C2-PFDA
Internal Standard:

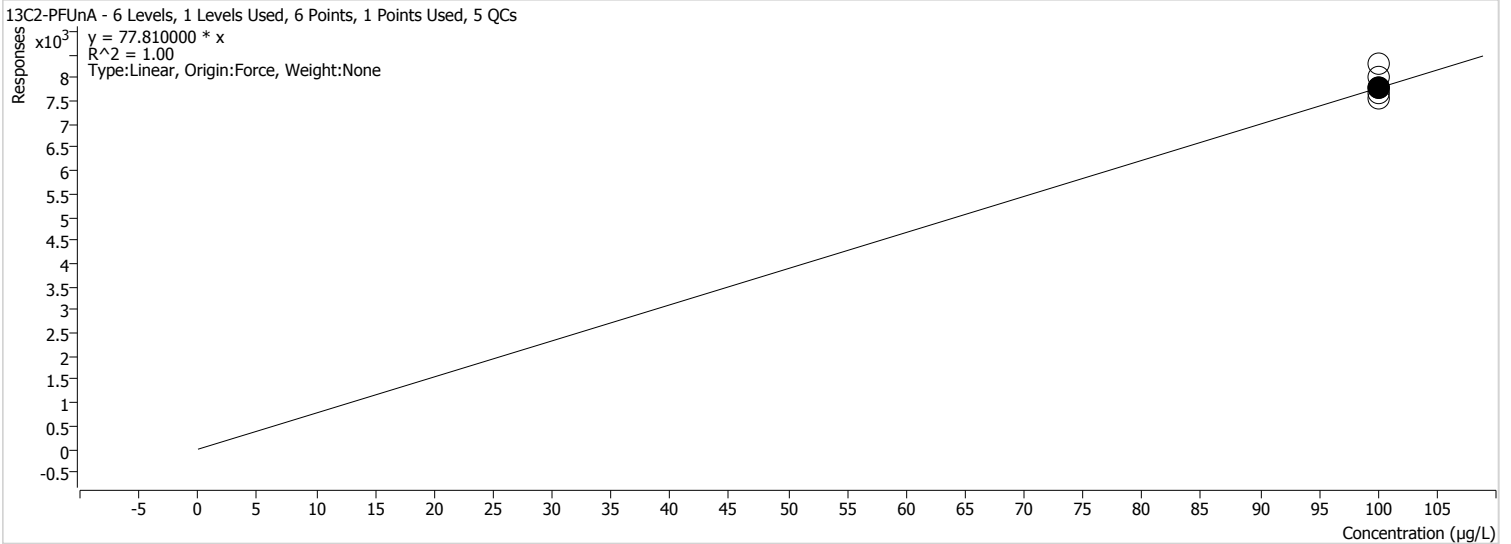


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/21 10:07:29 PM	100.00	102.31	6688	66.8800	954	102.3
STD 2	STD 2		2020/04/21 10:14:24 PM	100.00	98.98	6470	64.7000	959	99.0
STD 3	STD 3		2020/04/21 10:21:20 PM	100.00	99.11	6479	64.7900	1387	99.1
STD 4	STD 4	x	2020/04/21 10:28:16 PM	100.00	100.00	6537	65.3700	945	100.0
STD 5	STD 5		2020/04/21 10:35:12 PM	100.00	101.02	6604	66.0400	1794	101.0
STD 6	STD 6		2020/04/21 10:42:08 PM	100.00	103.75	6782	67.8200	1320	103.7

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: 13C2-PFUnA
Internal Standard:

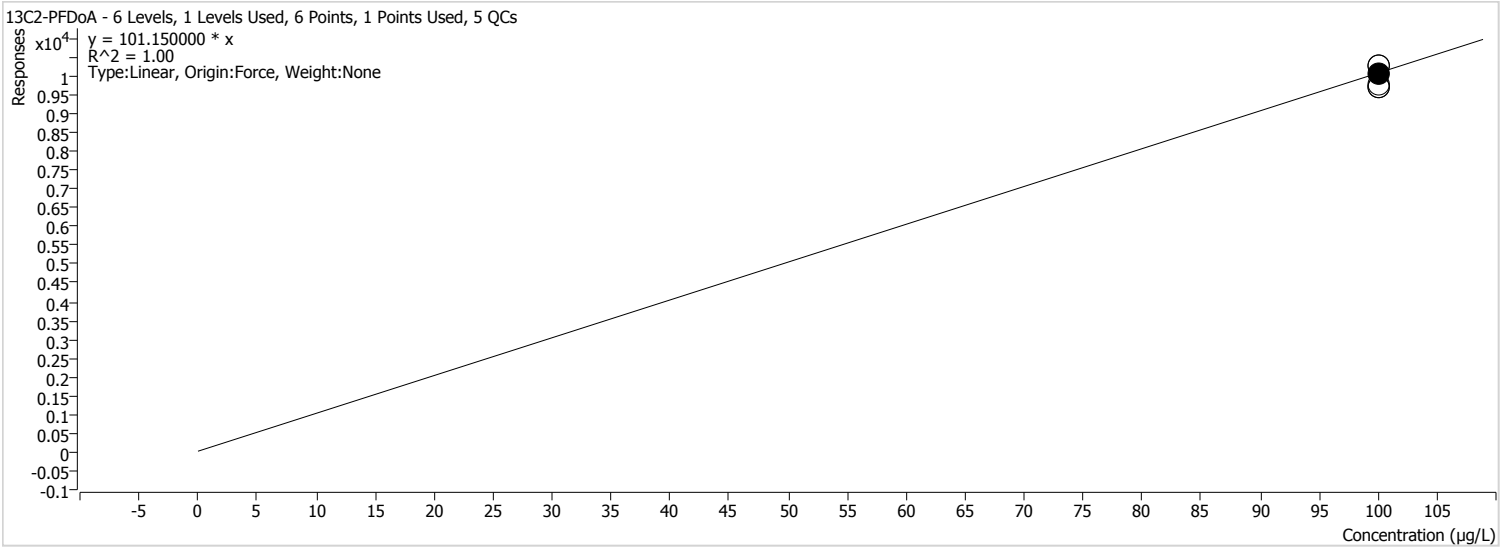


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/21 10:07:29 PM	100.00	103.15	8026	80.2600	1329	103.1
STD 2	STD 2		2020/04/21 10:14:24 PM	100.00	97.37	7576	75.7600	816	97.4
STD 3	STD 3		2020/04/21 10:21:20 PM	100.00	98.44	7660	76.6000	829	98.4
STD 4	STD 4	x	2020/04/21 10:28:16 PM	100.00	100.00	7781	77.8100	870	100.0
STD 5	STD 5		2020/04/21 10:35:12 PM	100.00	100.48	7818	78.1800	1100	100.5
STD 6	STD 6		2020/04/21 10:42:08 PM	100.00	106.46	8284	82.8400	1357	106.5

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: 13C2-PFDoA
Internal Standard:

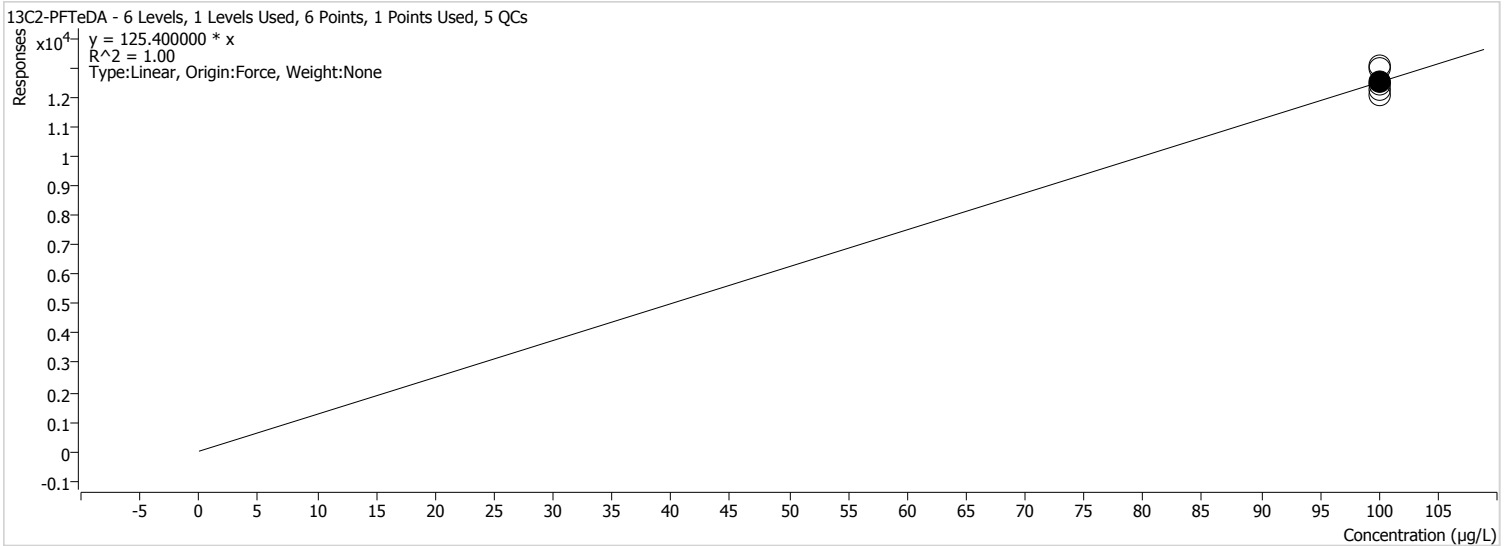


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/21 10:07:29 PM	100.00	101.64	10281	102.8100	1139	101.6
STD 2	STD 2		2020/04/21 10:14:24 PM	100.00	96.01	9711	97.1100	1356	96.0
STD 3	STD 3		2020/04/21 10:21:20 PM	100.00	96.85	9796	97.9600	1817	96.8
STD 4	STD 4	x	2020/04/21 10:28:16 PM	100.00	100.00	10115	101.1500	1233	100.0
STD 5	STD 5		2020/04/21 10:35:12 PM	100.00	96.27	9738	97.3800	882	96.3
STD 6	STD 6		2020/04/21 10:42:08 PM	100.00	101.66	10283	102.8300	1075	101.7

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: 13C2-PFTeDA
Internal Standard:

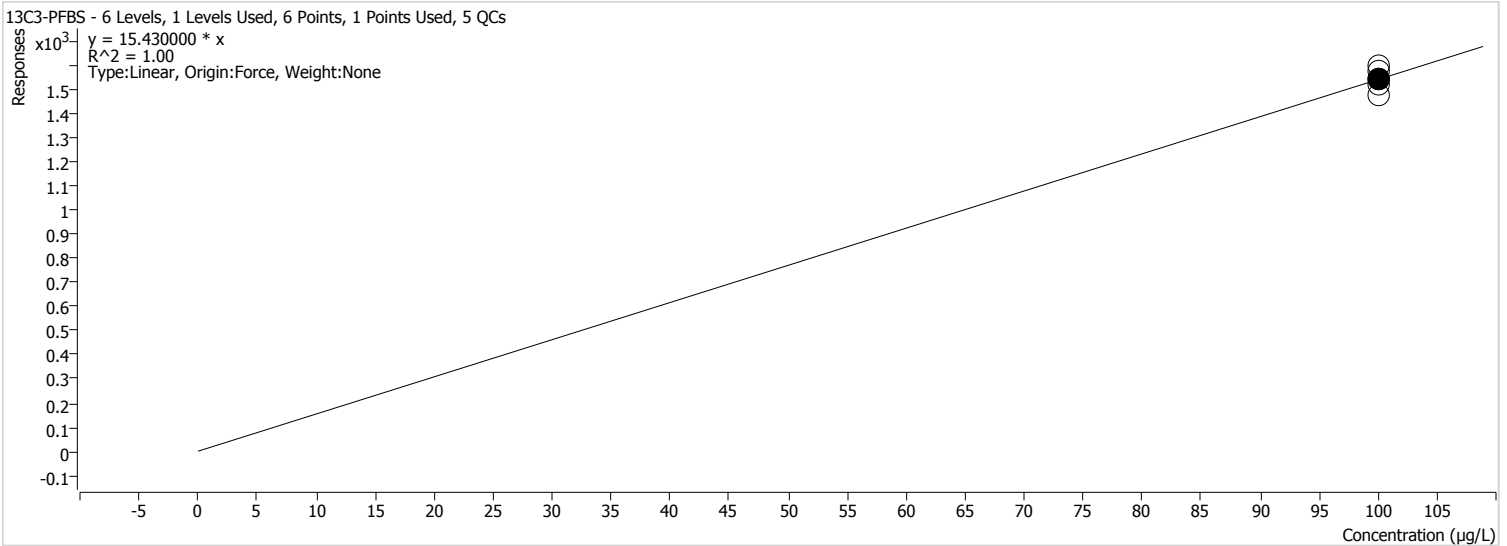


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/21 10:07:29 PM	100.00	103.51	12980	129.8000	1818	103.5
STD 2	STD 2		2020/04/21 10:14:24 PM	100.00	96.48	12098	120.9800	2231	96.5
STD 3	STD 3		2020/04/21 10:21:20 PM	100.00	98.13	12305	123.0500	2886	98.1
STD 4	STD 4	x	2020/04/21 10:28:16 PM	100.00	100.00	12540	125.4000	2553	100.0
STD 5	STD 5		2020/04/21 10:35:12 PM	100.00	99.70	12503	125.0300	1698	99.7
STD 6	STD 6		2020/04/21 10:42:08 PM	100.00	104.20	13067	130.6700	2389	104.2

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: 13C3-PFBS
Internal Standard:

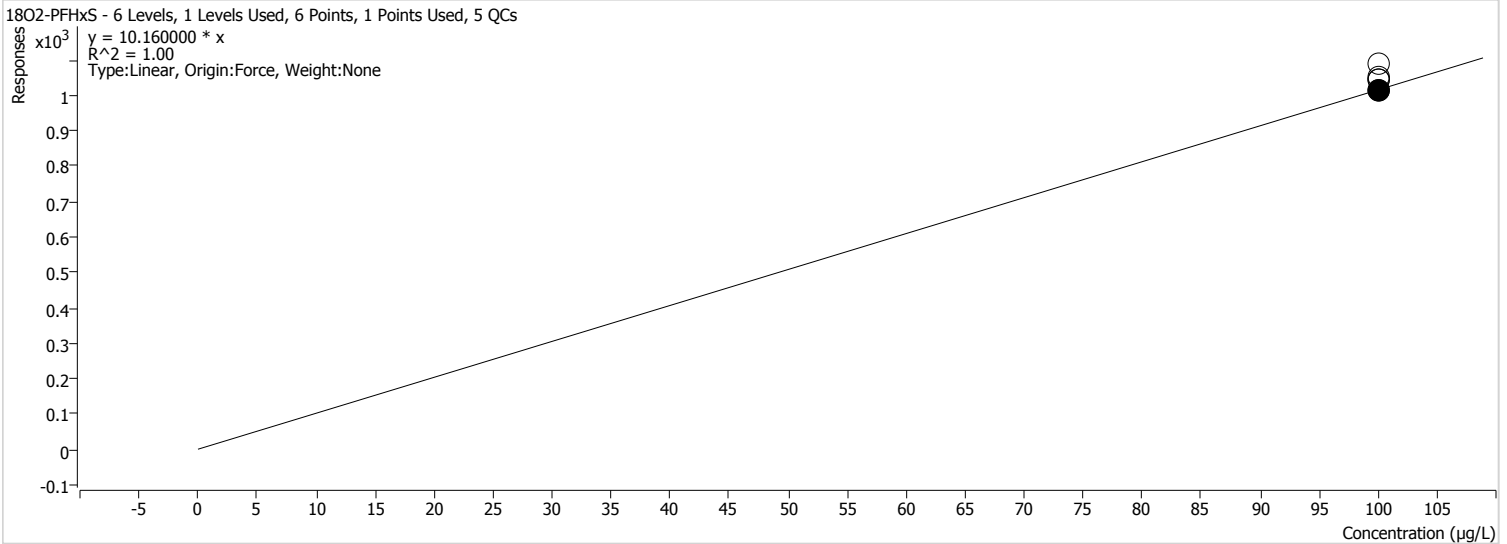


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/21 10:07:29 PM	100.00	102.66	1584	15.8400	535	102.7
STD 2	STD 2		2020/04/21 10:14:24 PM	100.00	95.79	1478	14.7800	498	95.8
STD 3	STD 3		2020/04/21 10:21:20 PM	100.00	98.83	1525	15.2500	634	98.8
STD 4	STD 4	x	2020/04/21 10:28:16 PM	100.00	100.00	1543	15.4300	1530	100.0
STD 5	STD 5		2020/04/21 10:35:12 PM	100.00	100.26	1547	15.4700	1118	100.3
STD 6	STD 6		2020/04/21 10:42:08 PM	100.00	103.43	1596	15.9600	955	103.4

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: 18O2-PFHxS
Internal Standard:

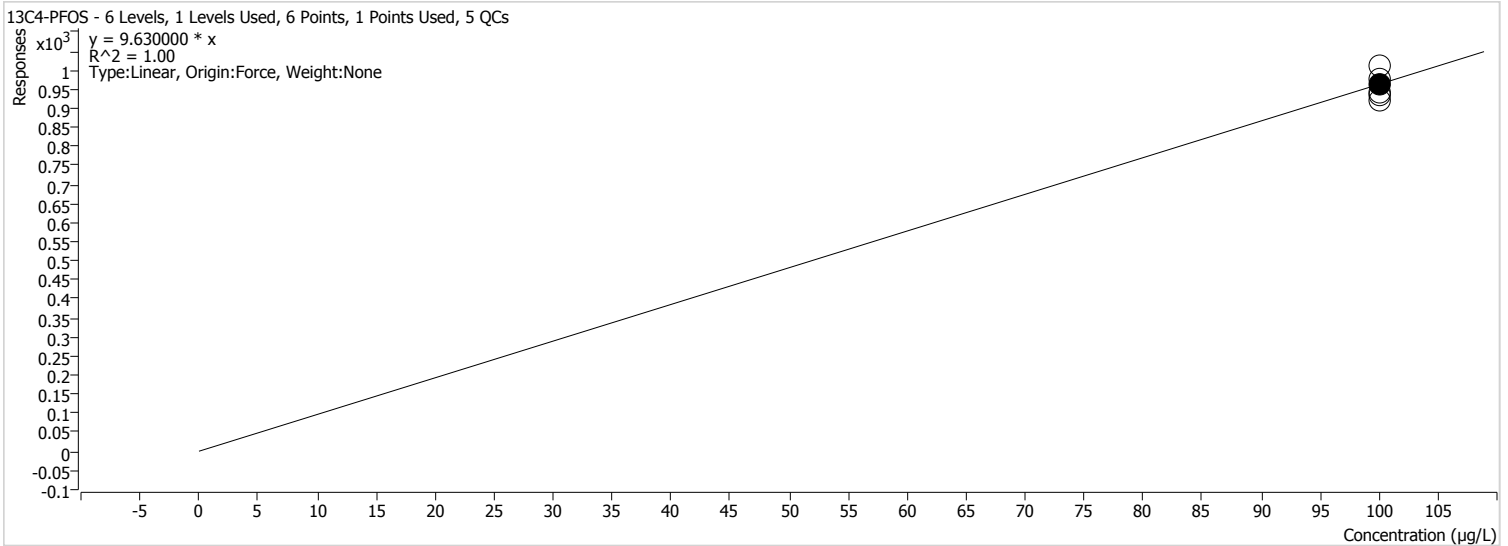


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/21 10:07:29 PM	100.00	103.94	1056	10.5600	537	103.9
STD 2	STD 2		2020/04/21 10:14:24 PM	100.00	99.90	1015	10.1500	747	99.9
STD 3	STD 3		2020/04/21 10:21:20 PM	100.00	103.05	1047	10.4700	955	103.1
STD 4	STD 4	x	2020/04/21 10:28:16 PM	100.00	100.00	1016	10.1600	830	100.0
STD 5	STD 5		2020/04/21 10:35:12 PM	100.00	102.56	1042	10.4200	287	102.6
STD 6	STD 6		2020/04/21 10:42:08 PM	100.00	106.99	1087	10.8700	610	107.0

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: 13C4-PFOS
Internal Standard:

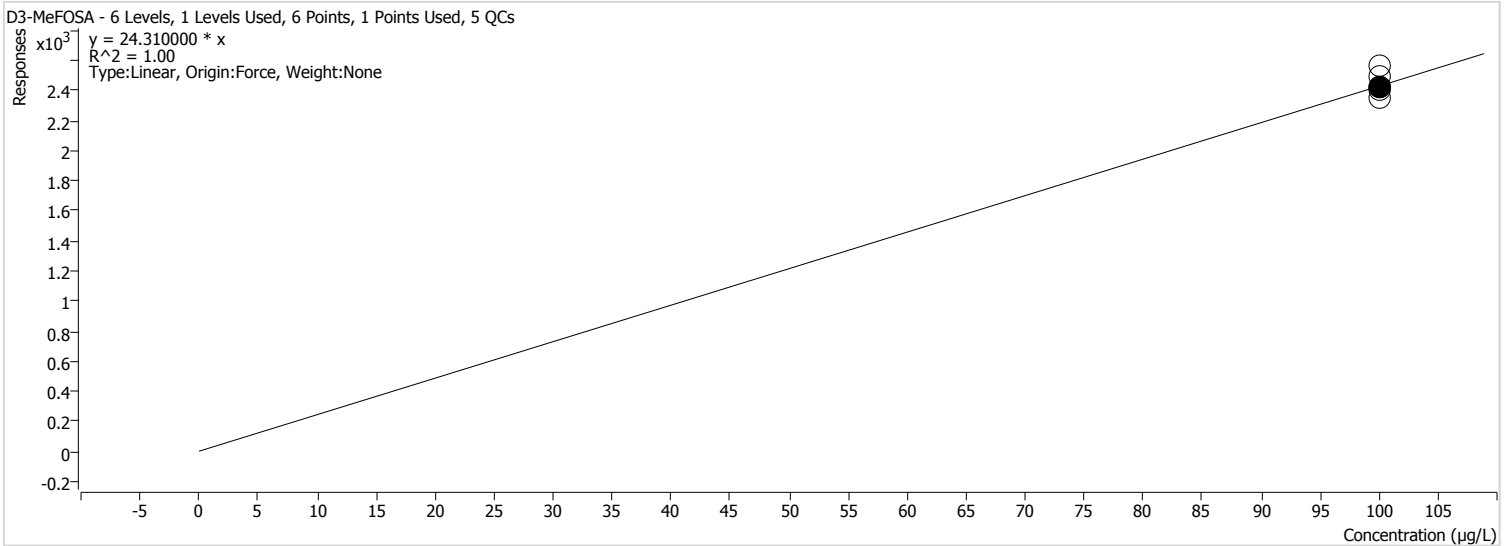


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/21 10:07:29 PM	100.00	101.45	977	9.7700	514	101.5
STD 2	STD 2		2020/04/21 10:14:24 PM	100.00	95.74	922	9.2200	398	95.7
STD 3	STD 3		2020/04/21 10:21:20 PM	100.00	96.78	932	9.3200	629	96.8
STD 4	STD 4	x	2020/04/21 10:28:16 PM	100.00	100.00	963	9.6300	305	100.0
STD 5	STD 5		2020/04/21 10:35:12 PM	100.00	98.13	945	9.4500	653	98.1
STD 6	STD 6		2020/04/21 10:42:08 PM	100.00	104.78	1009	10.0900	594	104.8

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: D3-MeFOSA
Internal Standard:

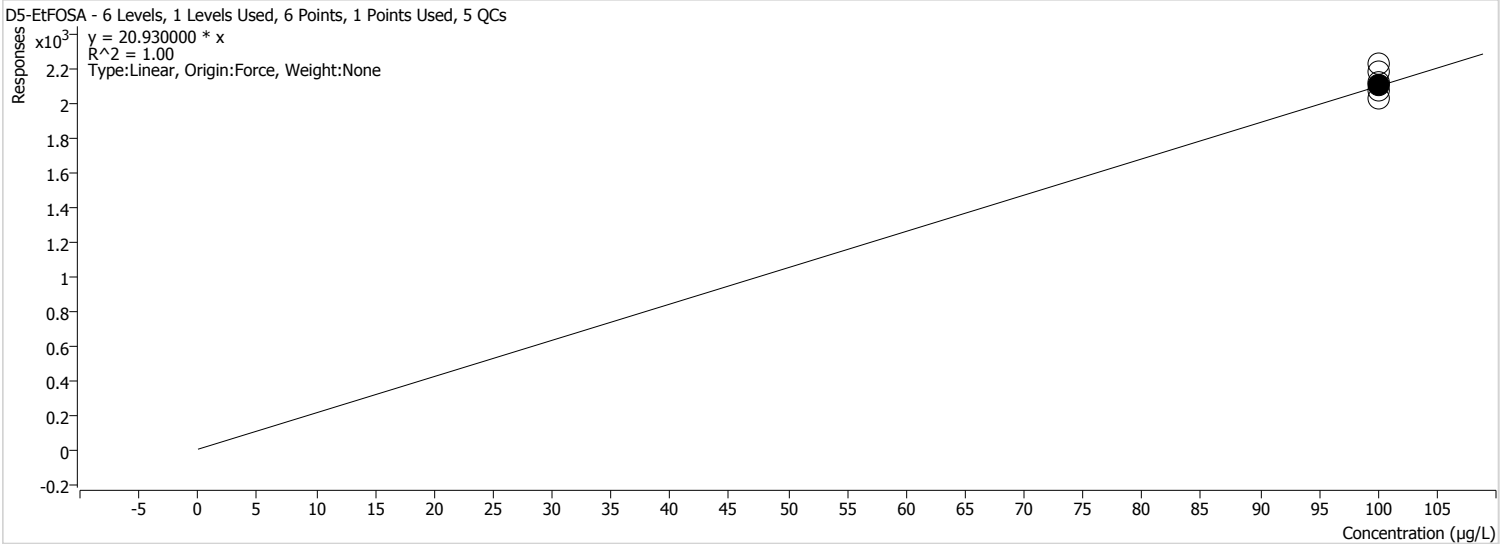


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/21 10:07:29 PM	100.00	102.55	2493	24.9300	141	102.6
STD 2	STD 2		2020/04/21 10:14:24 PM	100.00	96.83	2354	23.5400	116	96.8
STD 3	STD 3		2020/04/21 10:21:20 PM	100.00	99.79	2426	24.2600	120	99.8
STD 4	STD 4	x	2020/04/21 10:28:16 PM	100.00	100.00	2431	24.3100	160	100.0
STD 5	STD 5		2020/04/21 10:35:12 PM	100.00	98.72	2400	24.0000	116	98.7
STD 6	STD 6		2020/04/21 10:42:08 PM	100.00	105.31	2560	25.6000	118	105.3

By Compound Report



Batch Path T:\LCMS04\PFC\20200421\WS#6690634\QuantResults\PFC_Water_Low_DOD_20200421_WS#6690634_MI.batch.bin
Last Calib Update 2020/04/22 1:30:46 PM
Instrument: LCMS04
Analyte: D5-EtFOSA
Internal Standard:

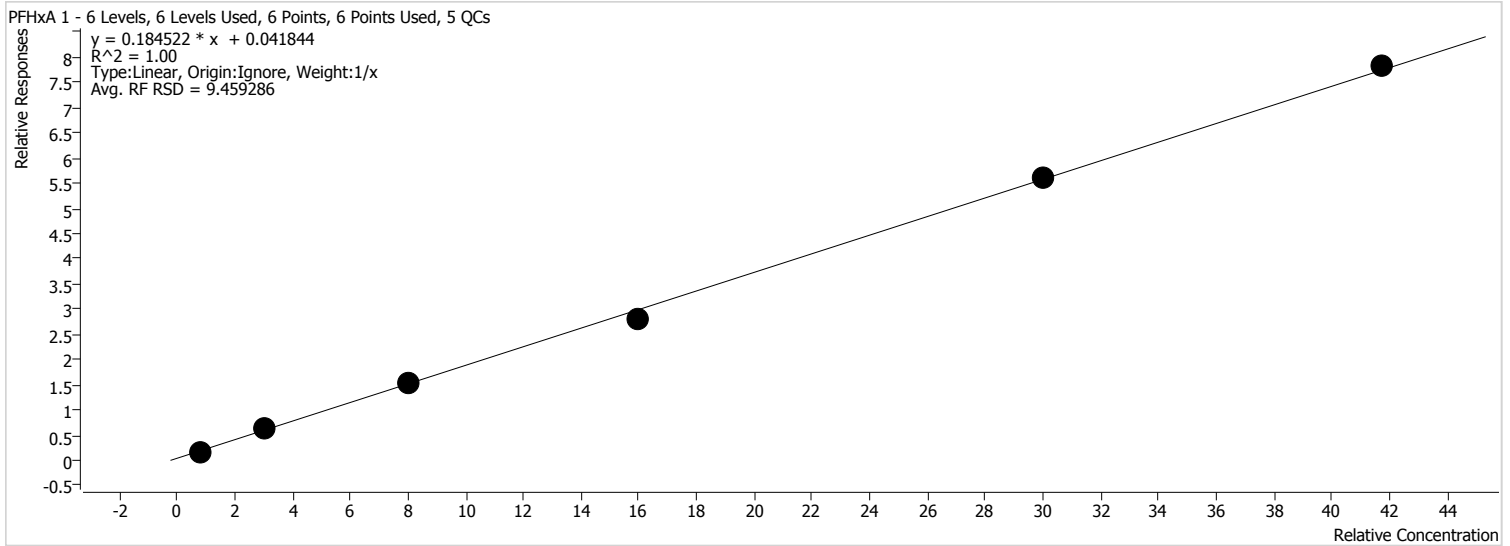


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/21 10:07:29 PM	100.00	105.92	2217	22.1700	183	105.9
STD 2	STD 2		2020/04/21 10:14:24 PM	100.00	96.46	2019	20.1900	166	96.5
STD 3	STD 3		2020/04/21 10:21:20 PM	100.00	98.81	2068	20.6800	110	98.8
STD 4	STD 4	x	2020/04/21 10:28:16 PM	100.00	100.00	2093	20.9300	101	100.0
STD 5	STD 5		2020/04/21 10:35:12 PM	100.00	101.10	2116	21.1600	131	101.1
STD 6	STD 6		2020/04/21 10:42:08 PM	100.00	104.16	2180	21.8000	123	104.2

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: PFHxA 1
Internal Standard: 13C2-PFHxA IS

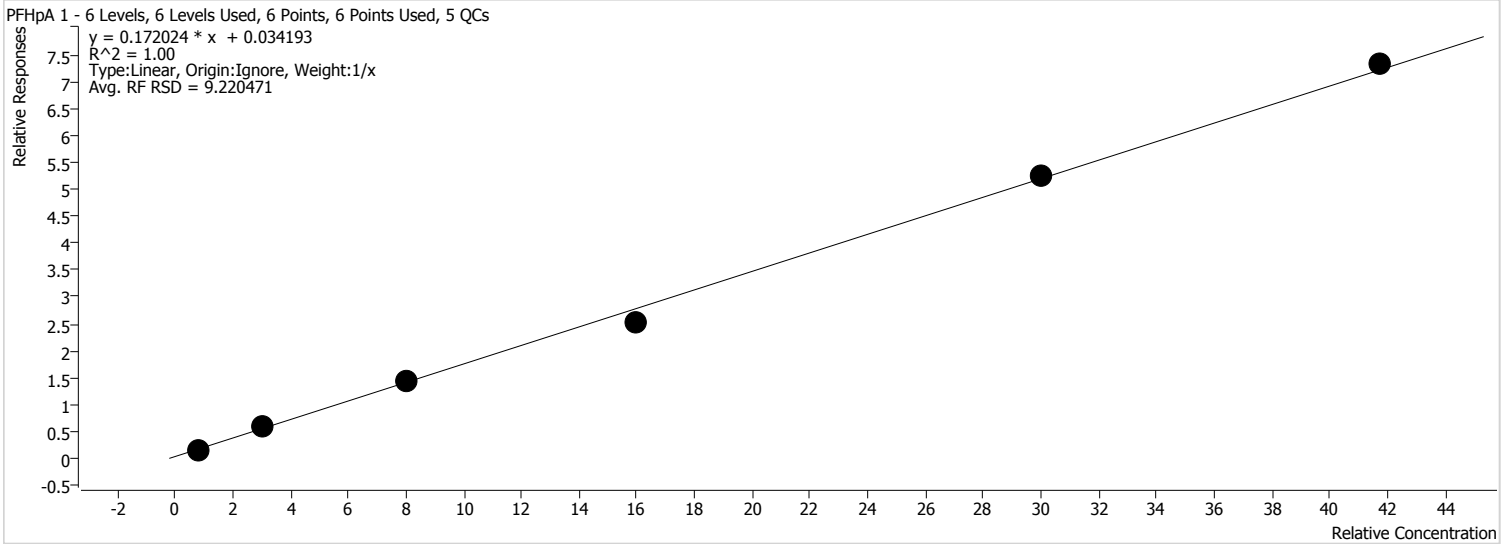


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/23 2:01:44 AM	0.83	0.76	1457	0.2193	3223	91.5
STD 2	STD 2	x	2020/04/23 2:08:40 AM	3.00	3.35	5263	0.2202	6621	111.8
STD 3	STD 3	x	2020/04/23 2:15:35 AM	8.00	8.13	11599	0.1927	70305	101.6
STD 4	STD 4	x	2020/04/23 2:22:31 AM	16.00	14.92	22445	0.1747	9561	93.2
STD 5	STD 5	x	2020/04/23 2:29:26 AM	30.00	30.28	43658	0.1876	51513	100.9
STD 6	STD 6	x	2020/04/23 2:36:24 AM	41.70	42.09	62261	0.1873	101951	100.9

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: PFHpA 1
Internal Standard: 13C4-PFHpA IS

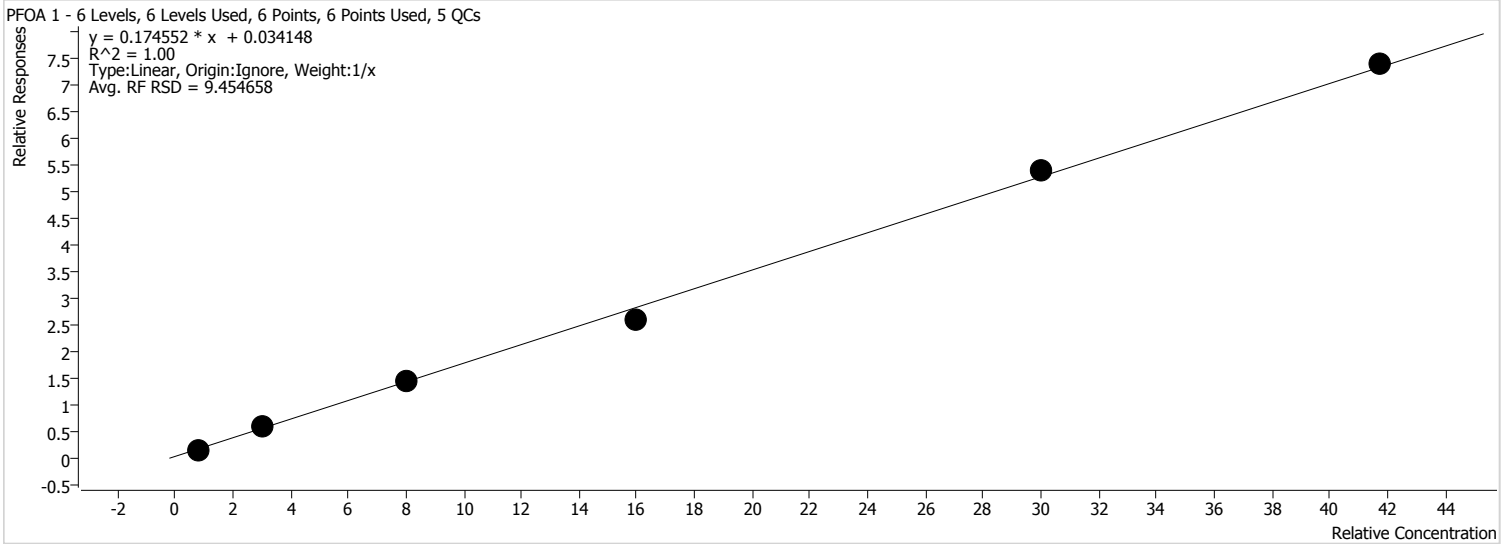


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/23 2:01:44 AM	0.83	0.79	1894	0.2053	107	95.4
STD 2	STD 2	x	2020/04/23 2:08:40 AM	3.00	3.26	6469	0.1982	5746	108.6
STD 3	STD 3	x	2020/04/23 2:15:35 AM	8.00	8.14	14586	0.1794	882	101.8
STD 4	STD 4	x	2020/04/23 2:22:31 AM	16.00	14.62	28429	0.1594	3274	91.4
STD 5	STD 5	x	2020/04/23 2:29:26 AM	30.00	30.43	55741	0.1756	4552	101.4
STD 6	STD 6	x	2020/04/23 2:36:24 AM	41.70	42.29	78900	0.1753	4524	101.4

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: PFOA 1
Internal Standard: 13C4-PFOA IS

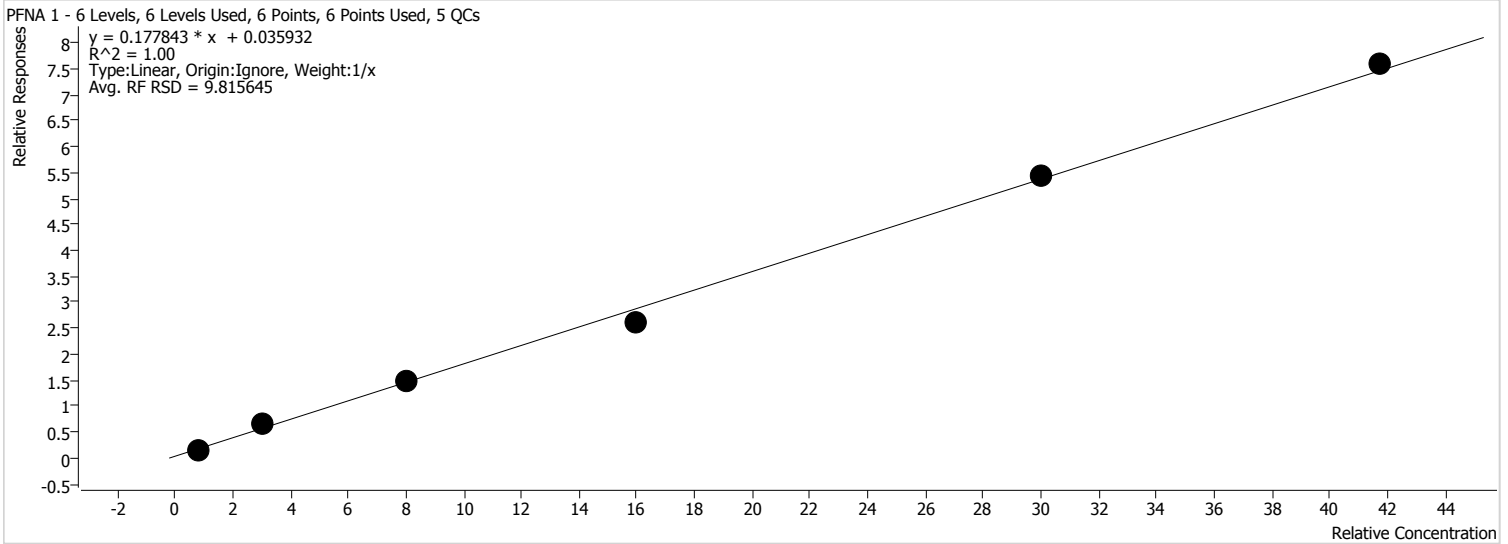


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/23 2:01:44 AM	0.83	0.77	1820	0.2040	1947	93.3
STD 2	STD 2	x	2020/04/23 2:08:40 AM	3.00	3.36	6519	0.2066	4855	111.8
STD 3	STD 3	x	2020/04/23 2:15:35 AM	8.00	8.04	14295	0.1797	9481	100.5
STD 4	STD 4	x	2020/04/23 2:22:31 AM	16.00	14.56	27822	0.1609	15403	91.0
STD 5	STD 5	x	2020/04/23 2:29:26 AM	30.00	30.81	55482	0.1804	8863	102.7
STD 6	STD 6	x	2020/04/23 2:36:24 AM	41.70	42.00	79889	0.1766	45628	100.7

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: PFNA 1
Internal Standard: 13C5-PFNA IS

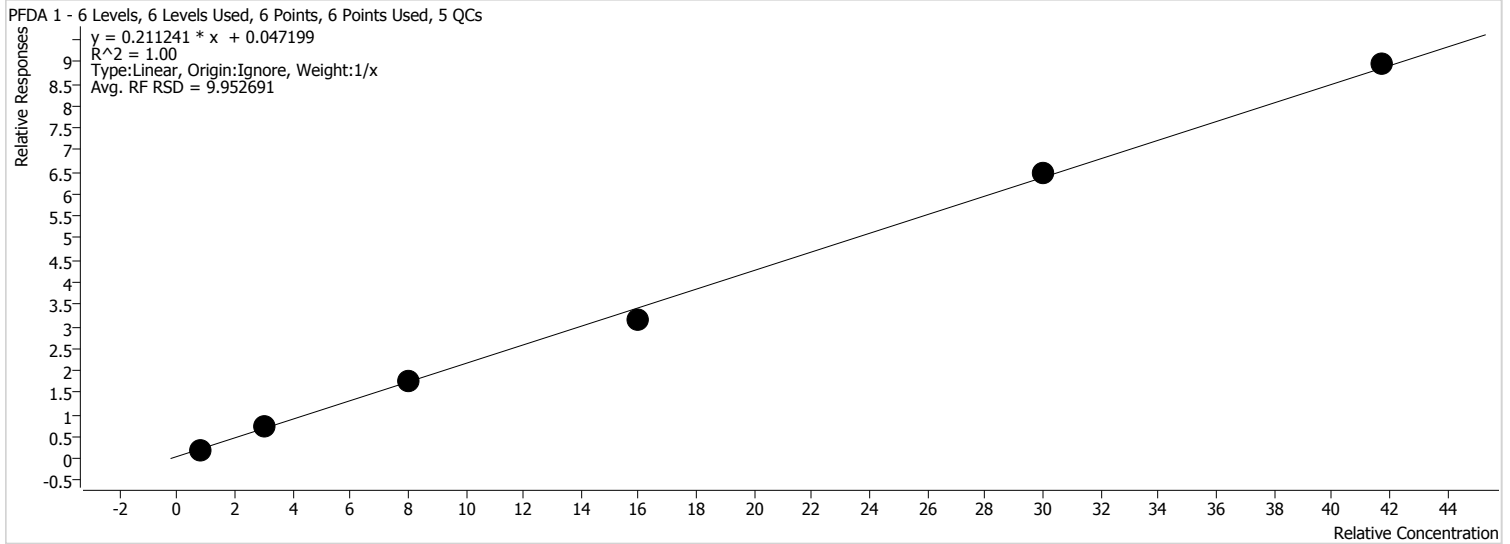


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/23 2:01:44 AM	0.83	0.76	1454	0.2061	2272	91.6
STD 2	STD 2	x	2020/04/23 2:08:40 AM	3.00	3.41	5309	0.2144	9687	113.8
STD 3	STD 3	x	2020/04/23 2:15:35 AM	8.00	8.07	11575	0.1840	11887	100.9
STD 4	STD 4	x	2020/04/23 2:22:31 AM	16.00	14.54	22545	0.1638	17327	90.8
STD 5	STD 5	x	2020/04/23 2:29:26 AM	30.00	30.37	44366	0.1813	25892	101.2
STD 6	STD 6	x	2020/04/23 2:36:24 AM	41.70	42.37	64261	0.1816	27956	101.6

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: PFDA 1
Internal Standard: 13C2-PFDA IS

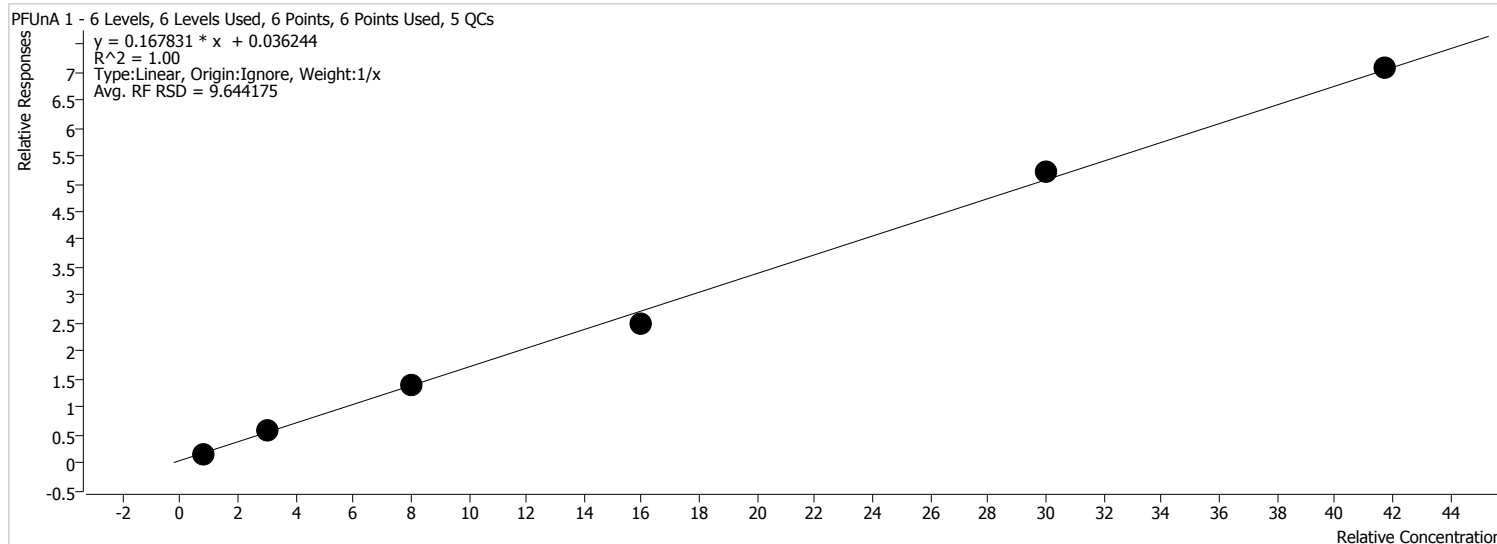


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/23 2:01:44 AM	0.83	0.78	1536	0.2554	446	94.0
STD 2	STD 2	x	2020/04/23 2:08:40 AM	3.00	3.32	5473	0.2494	6446	110.6
STD 3	STD 3	x	2020/04/23 2:15:35 AM	8.00	8.04	11860	0.2182	4845	100.5
STD 4	STD 4	x	2020/04/23 2:22:31 AM	16.00	14.72	23533	0.1973	5638	92.0
STD 5	STD 5	x	2020/04/23 2:29:26 AM	30.00	30.57	46901	0.2168	8943	101.9
STD 6	STD 6	x	2020/04/23 2:36:24 AM	41.70	42.10	67683	0.2144	15413	101.0

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: PFUnA 1
Internal Standard: 13C2-PFUnA IS

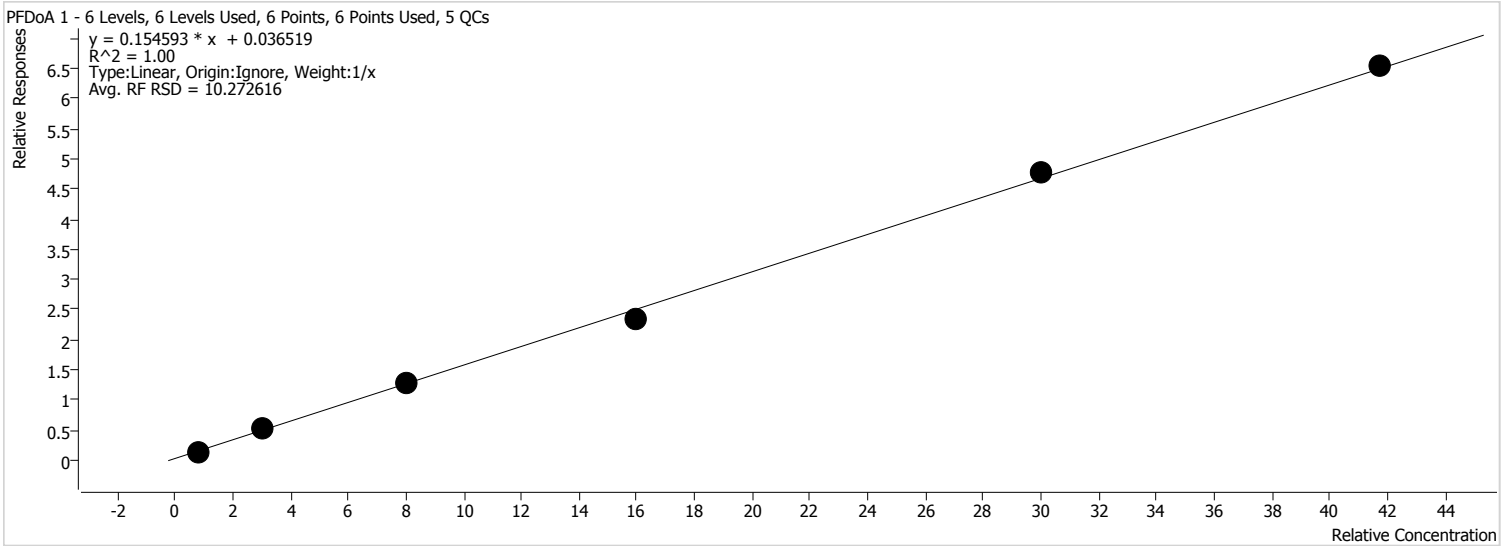


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/23 2:01:44 AM	0.83	0.78	1477	0.2016	2390	94.1
STD 2	STD 2	x	2020/04/23 2:08:40 AM	3.00	3.30	5106	0.1970	1868	110.2
STD 3	STD 3	x	2020/04/23 2:15:35 AM	8.00	8.05	11350	0.1734	1681	100.6
STD 4	STD 4	x	2020/04/23 2:22:31 AM	16.00	14.73	22005	0.1567	5103	92.0
STD 5	STD 5	x	2020/04/23 2:29:26 AM	30.00	30.81	44691	0.1736	7461	102.7
STD 6	STD 6	x	2020/04/23 2:36:24 AM	41.70	41.86	63889	0.1693	16136	100.4

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: PFDa 1
Internal Standard: 13C2-PFDa IS

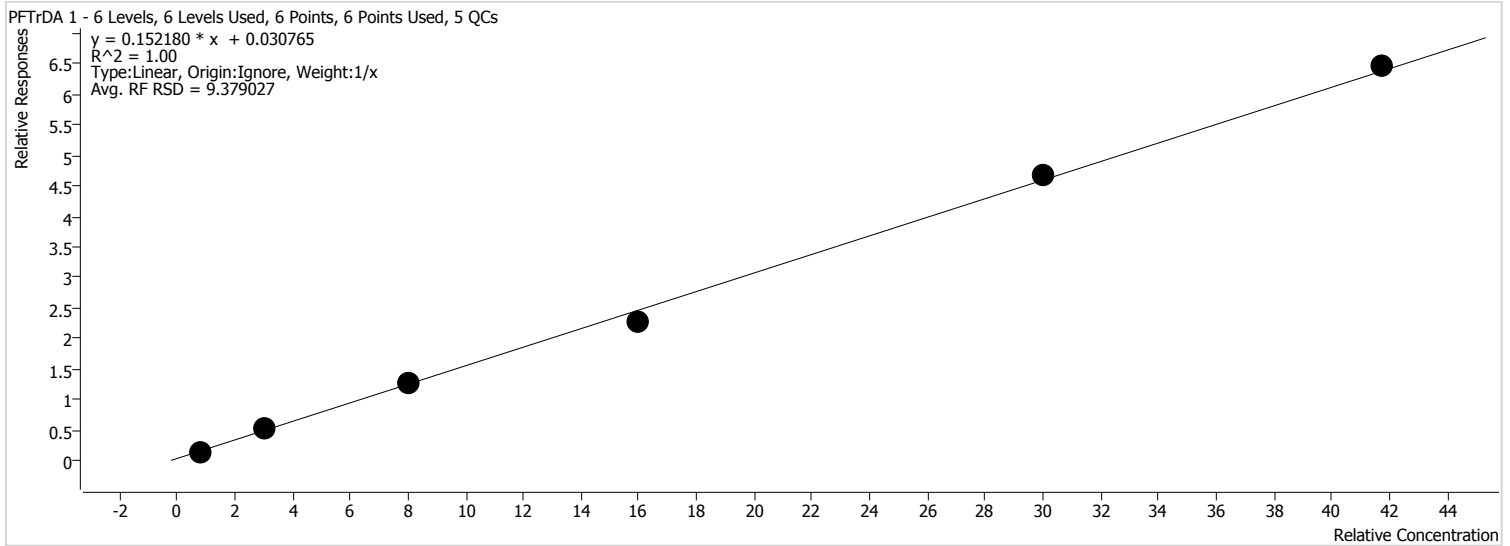


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/23 2:01:44 AM	0.83	0.78	1649	0.1885	82	93.4
STD 2	STD 2	x	2020/04/23 2:08:40 AM	3.00	3.34	5729	0.1843	274	111.3
STD 3	STD 3	x	2020/04/23 2:15:35 AM	8.00	7.98	12579	0.1588	1282	99.8
STD 4	STD 4	x	2020/04/23 2:22:31 AM	16.00	14.83	24830	0.1456	1207	92.7
STD 5	STD 5	x	2020/04/23 2:29:26 AM	30.00	30.66	49418	0.1592	49491	102.2
STD 6	STD 6	x	2020/04/23 2:36:24 AM	41.70	41.94	70679	0.1564	2440	100.6

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: PFTrDA 1
Internal Standard: 13C2-PFTeDA IS

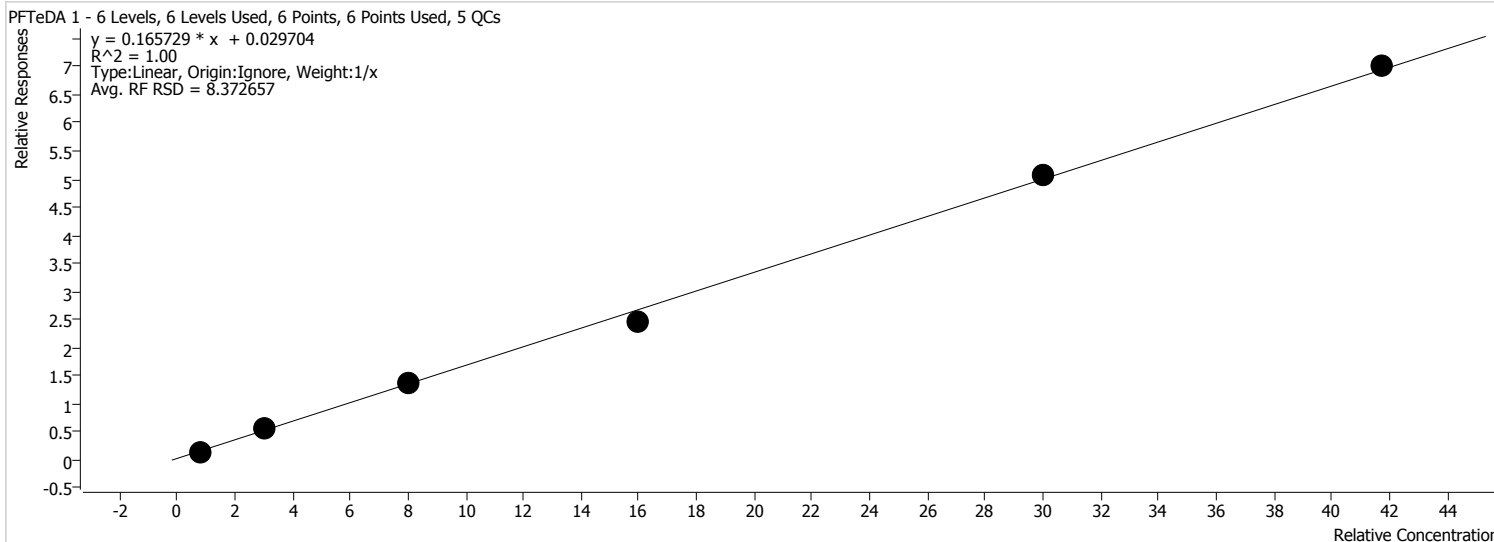


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/23 2:01:44 AM	0.83	0.79	2122	0.1813	1756	94.8
STD 2	STD 2	x	2020/04/23 2:08:40 AM	3.00	3.29	7379	0.1772	7905	109.7
STD 3	STD 3	x	2020/04/23 2:15:35 AM	8.00	8.09	16326	0.1577	7666	101.1
STD 4	STD 4	x	2020/04/23 2:22:31 AM	16.00	14.64	31541	0.1411	103821	91.5
STD 5	STD 5	x	2020/04/23 2:29:26 AM	30.00	30.53	63165	0.1559	59368	101.8
STD 6	STD 6	x	2020/04/23 2:36:24 AM	41.70	42.20	90883	0.1547	86484	101.2

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: PFTeDA 1
Internal Standard: 13C2-PFTeDA IS

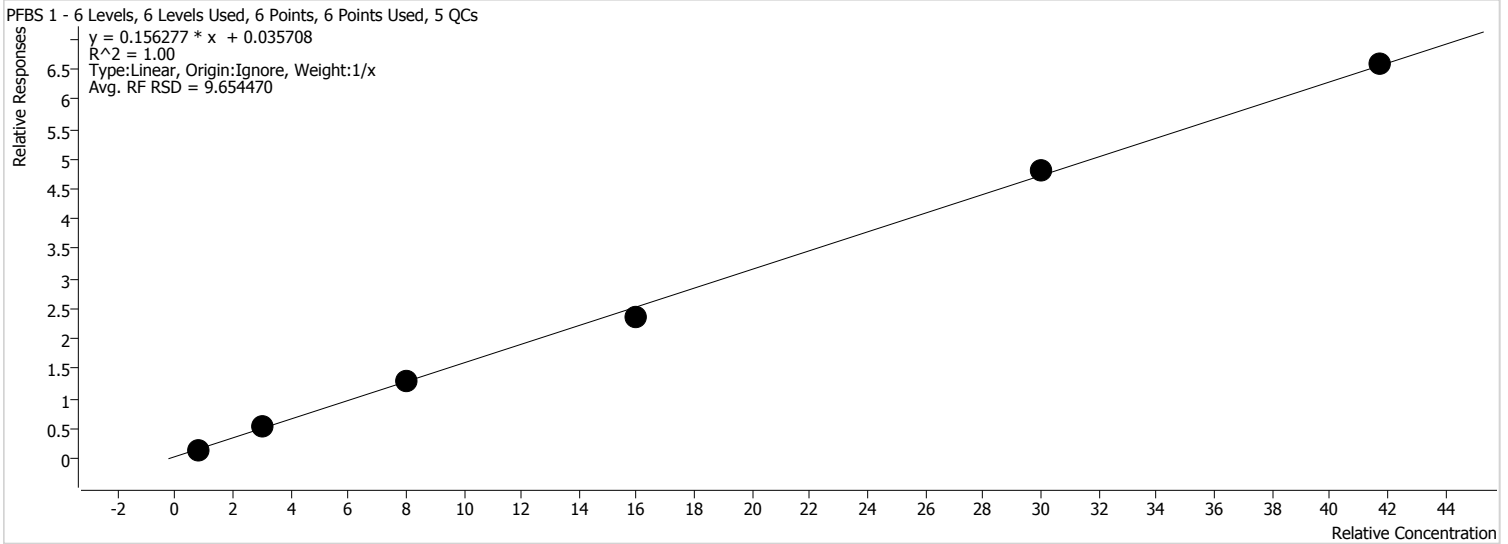


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/23 2:01:44 AM	0.83	0.78	2240	0.1913	3702	93.9
STD 2	STD 2	x	2020/04/23 2:08:40 AM	3.00	3.30	8011	0.1924	7455	110.1
STD 3	STD 3	x	2020/04/23 2:15:35 AM	8.00	8.08	17724	0.1712	68540	101.0
STD 4	STD 4	x	2020/04/23 2:22:31 AM	16.00	14.77	34614	0.1549	90462	92.3
STD 5	STD 5	x	2020/04/23 2:29:26 AM	30.00	30.53	68741	0.1696	192561	101.8
STD 6	STD 6	x	2020/04/23 2:36:24 AM	41.70	42.06	98592	0.1679	103513	100.9

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: PFBS 1
Internal Standard: 13C3-PFBS IS

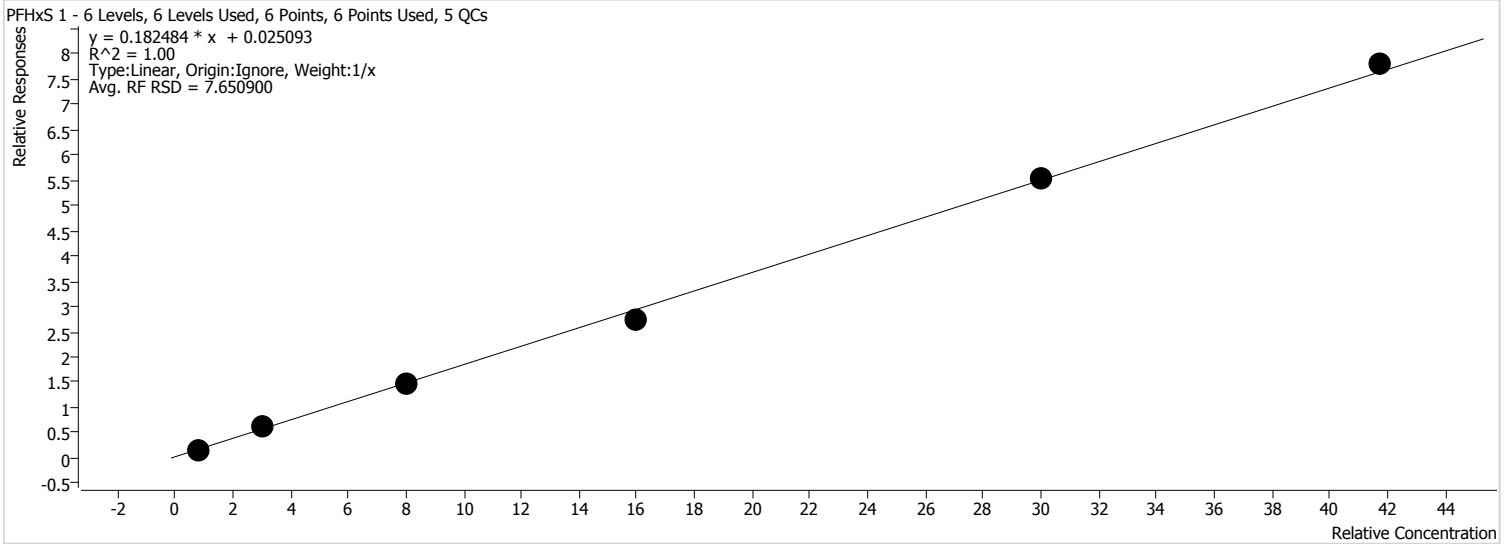


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/23 2:01:44 AM	0.83	0.79	270	0.1919	4591	95.3
STD 2	STD 2	x	2020/04/23 2:08:40 AM	3.00	3.24	910	0.1809	12322	108.1
STD 3	STD 3	x	2020/04/23 2:15:35 AM	8.00	8.02	2039	0.1612	15050	100.3
STD 4	STD 4	x	2020/04/23 2:22:31 AM	16.00	15.03	4080	0.1490	10989	93.9
STD 5	STD 5	x	2020/04/23 2:29:26 AM	30.00	30.62	7993	0.1607	18969	102.1
STD 6	STD 6	x	2020/04/23 2:36:24 AM	41.70	41.82	11408	0.1576	46826	100.3

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: PFHxS 1
Internal Standard: 18O2-PFHxS IS

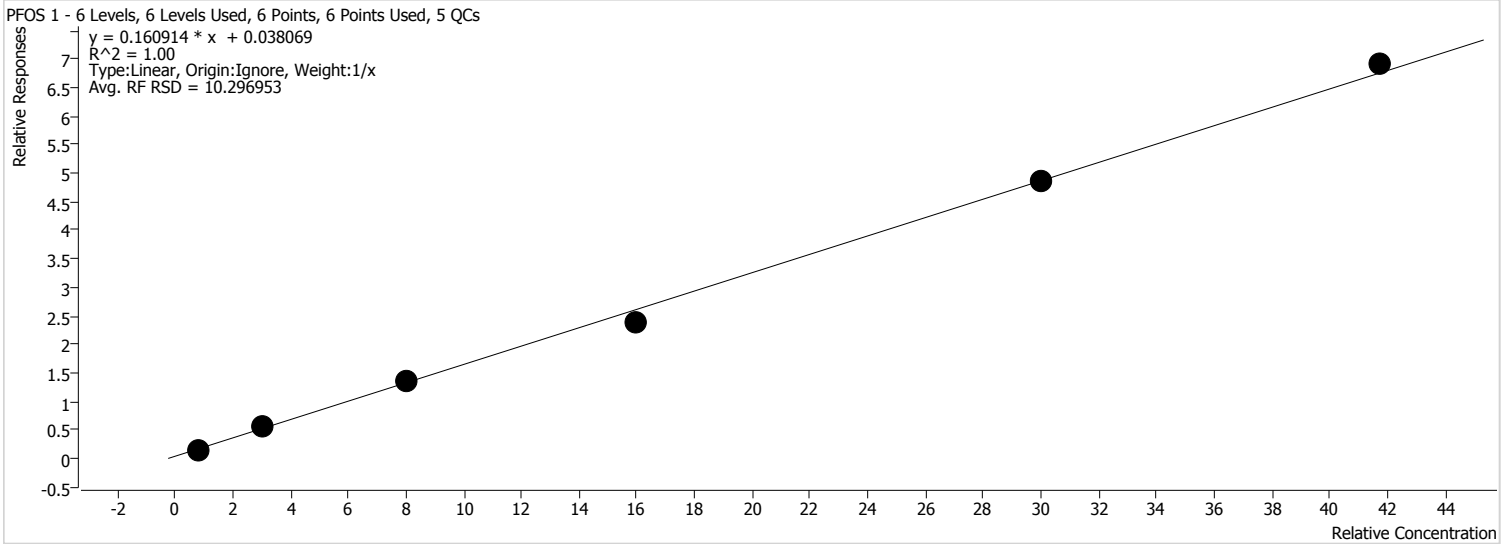


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/23 2:01:44 AM	0.83	0.82	201	0.2108	634	98.9
STD 2	STD 2	x	2020/04/23 2:08:40 AM	3.00	3.20	684	0.2029	3781	106.6
STD 3	STD 3	x	2020/04/23 2:15:35 AM	8.00	7.94	1531	0.1841	4877	99.2
STD 4	STD 4	x	2020/04/23 2:22:31 AM	16.00	14.79	3111	0.1703	13806	92.4
STD 5	STD 5	x	2020/04/23 2:29:26 AM	30.00	30.28	6155	0.1850	83474	100.9
STD 6	STD 6	x	2020/04/23 2:36:24 AM	41.70	42.51	8911	0.1866	35114	101.9

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: PFOS 1
Internal Standard: 13C4-PFOS IS

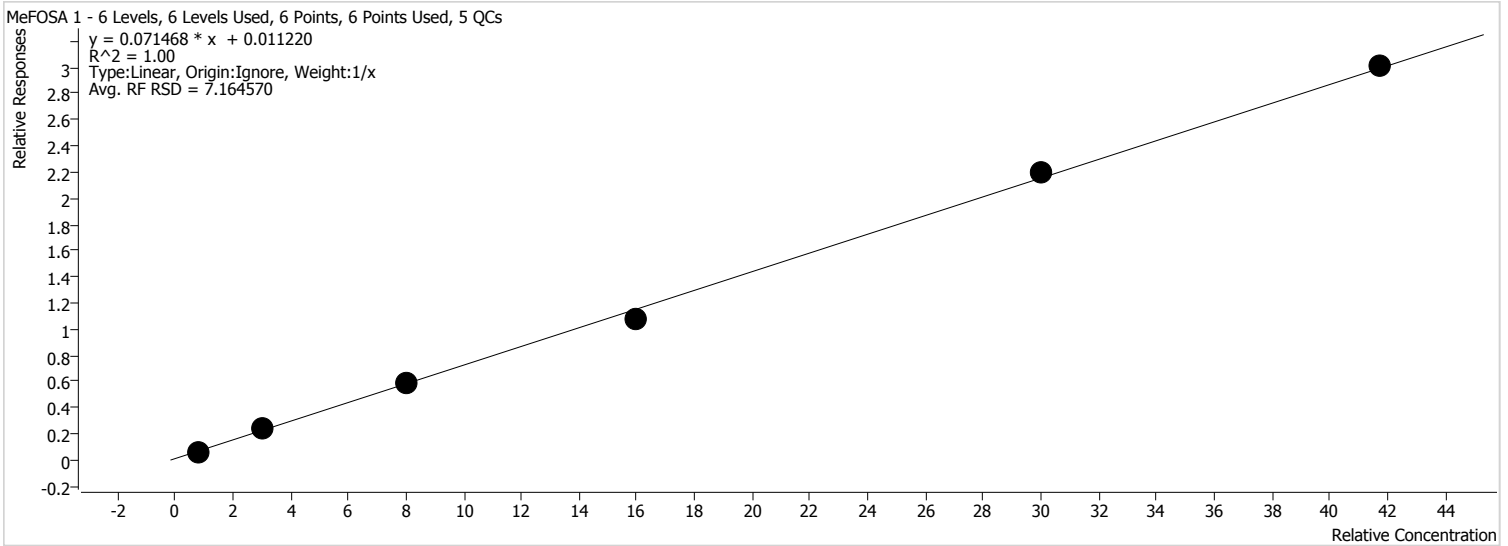


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/23 2:01:44 AM	0.83	0.77	167	0.1947	22	92.5
STD 2	STD 2	x	2020/04/23 2:08:40 AM	3.00	3.35	602	0.1925	6109	111.8
STD 3	STD 3	x	2020/04/23 2:15:35 AM	8.00	8.15	1298	0.1688	621	101.9
STD 4	STD 4	x	2020/04/23 2:22:31 AM	16.00	14.69	2541	0.1501	1114	91.8
STD 5	STD 5	x	2020/04/23 2:29:26 AM	30.00	29.94	5056	0.1619	5173	99.8
STD 6	STD 6	x	2020/04/23 2:36:24 AM	41.70	42.62	7387	0.1654	1995	102.2

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: MeFOSA 1
Internal Standard: D3-MeFOSA IS

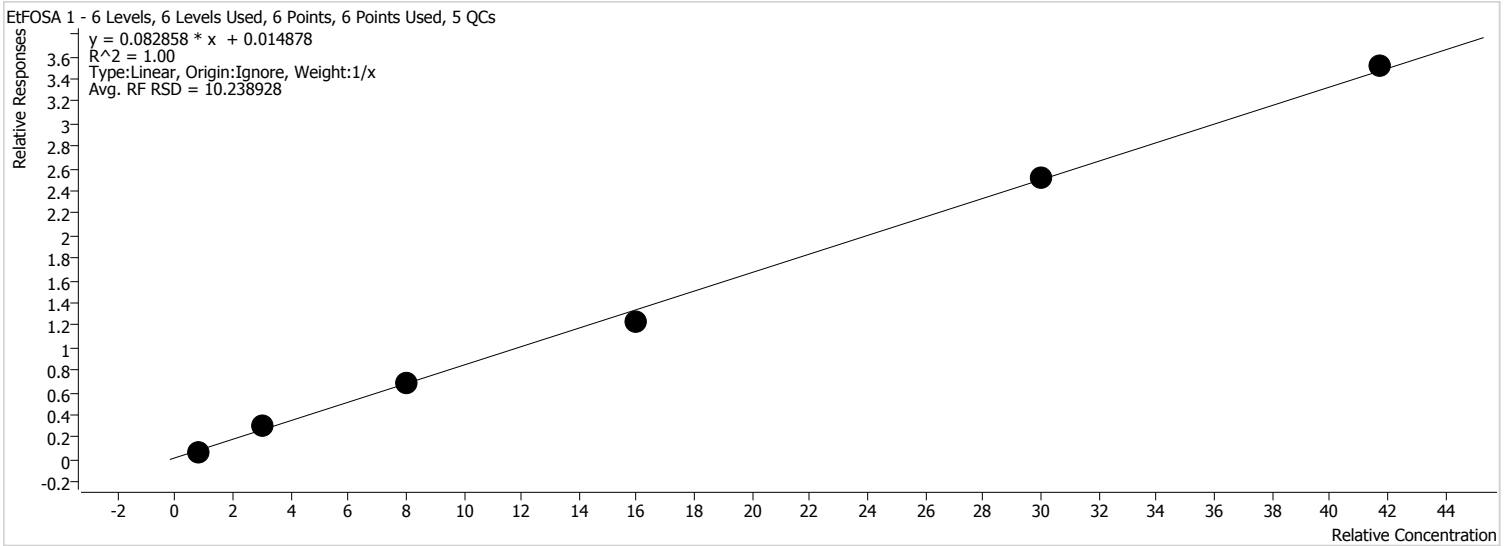


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/23 2:01:44 AM	0.83	0.79	176	0.0817	27	95.5
STD 2	STD 2	x	2020/04/23 2:08:40 AM	3.00	3.21	620	0.0802	75	107.0
STD 3	STD 3	x	2020/04/23 2:15:35 AM	8.00	8.16	1451	0.0743	134	102.0
STD 4	STD 4	x	2020/04/23 2:22:31 AM	16.00	14.92	2847	0.0673	173	93.2
STD 5	STD 5	x	2020/04/23 2:29:26 AM	30.00	30.56	5732	0.0732	151	101.9
STD 6	STD 6	x	2020/04/23 2:36:24 AM	41.70	41.89	8165	0.0721	185	100.5

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: EtFOSA 1
Internal Standard: D5-EtFOSA IS

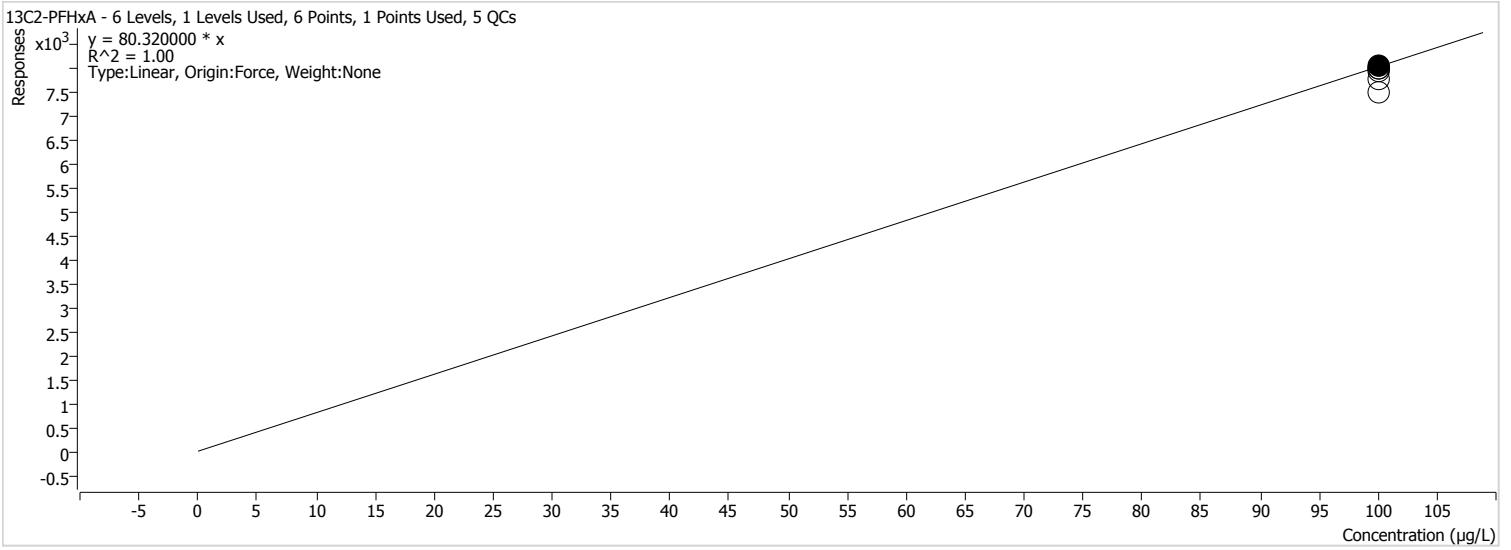


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1	x	2020/04/23 2:01:44 AM	0.83	0.71	169	0.0890	16	85.8
STD 2	STD 2	x	2020/04/23 2:08:40 AM	3.00	3.57	702	0.1037	58	119.1
STD 3	STD 3	x	2020/04/23 2:15:35 AM	8.00	8.09	1448	0.0857	131	101.2
STD 4	STD 4	x	2020/04/23 2:22:31 AM	16.00	14.69	2780	0.0770	202	91.8
STD 5	STD 5	x	2020/04/23 2:29:26 AM	30.00	30.28	5744	0.0841	410	100.9
STD 6	STD 6	x	2020/04/23 2:36:24 AM	41.70	42.18	8367	0.0842	571	101.1

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: 13C2-PFHxA
Internal Standard:

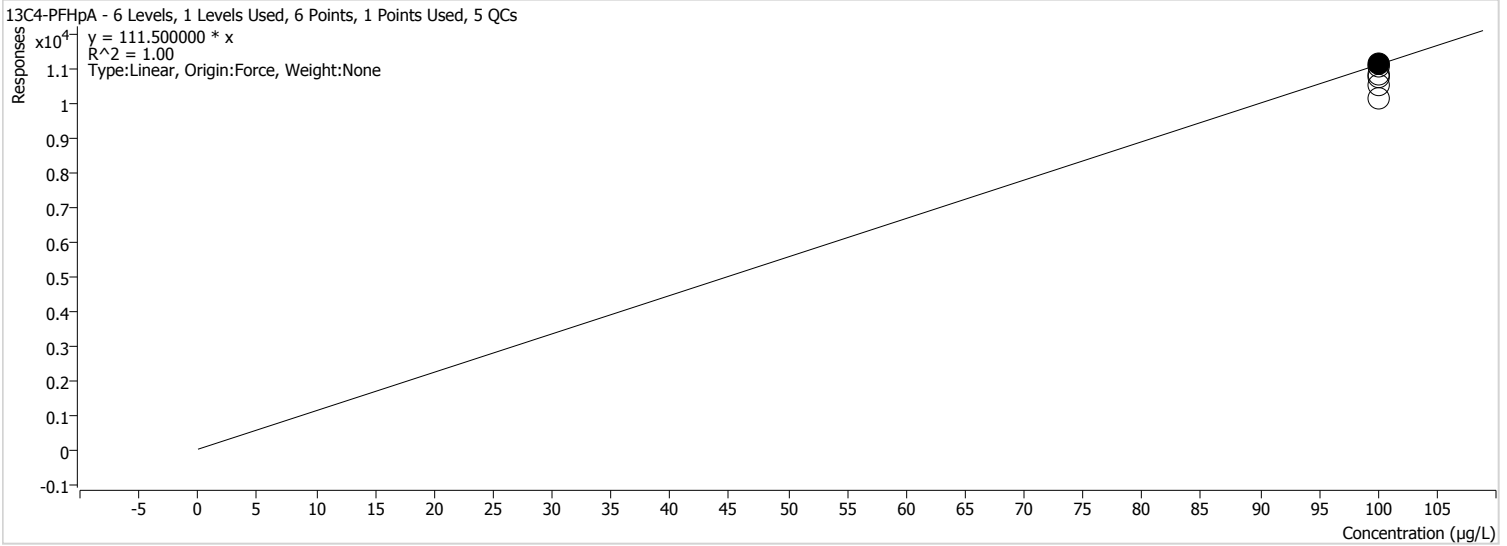


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/23 2:01:44 AM	100.00	99.66	8005	80.0500	1581	99.7
STD 2	STD 2		2020/04/23 2:08:40 AM	100.00	99.19	7967	79.6700	1629	99.2
STD 3	STD 3		2020/04/23 2:15:35 AM	100.00	93.68	7524	75.2400	2423	93.7
STD 4	STD 4	x	2020/04/23 2:22:31 AM	100.00	100.00	8032	80.3200	1727	100.0
STD 5	STD 5		2020/04/23 2:29:26 AM	100.00	96.56	7756	77.5600	1310	96.6
STD 6	STD 6		2020/04/23 2:36:24 AM	100.00	99.27	7973	79.7300	1589	99.3

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: 13C4-PFHpA
Internal Standard:

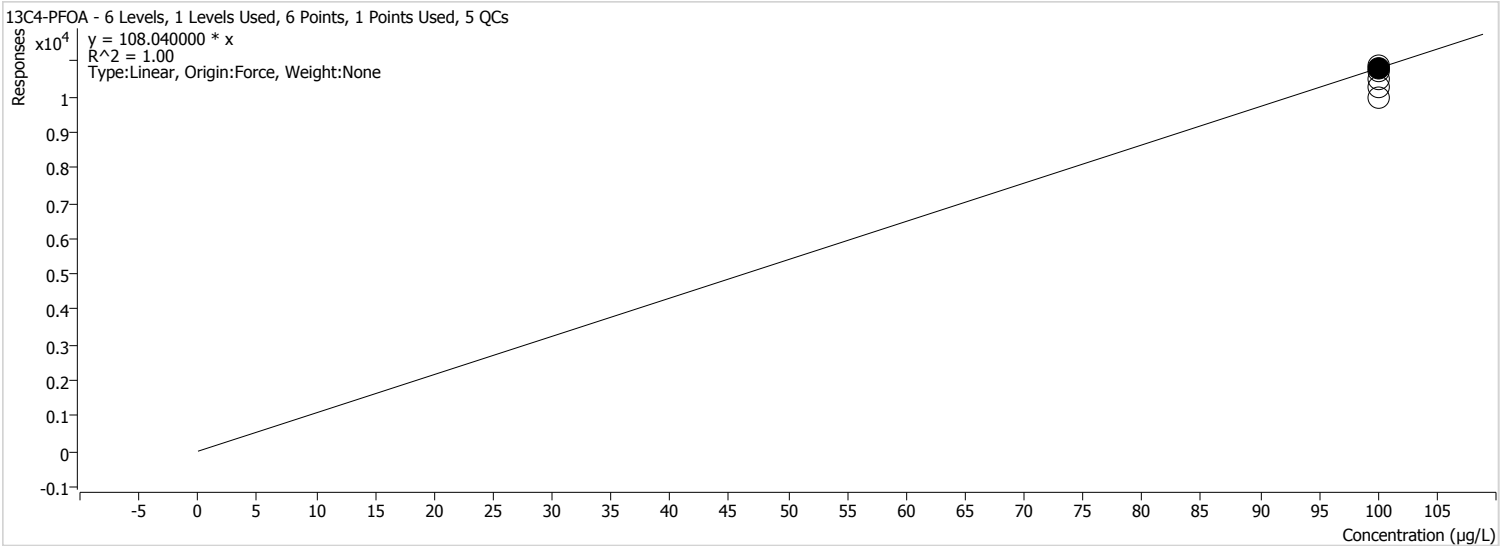


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/23 2:01:44 AM	100.00	99.70	11117	111.1700	1612	99.7
STD 2	STD 2		2020/04/23 2:08:40 AM	100.00	97.55	10877	108.7700	1323	97.6
STD 3	STD 3		2020/04/23 2:15:35 AM	100.00	91.17	10165	101.6500	1000	91.2
STD 4	STD 4	x	2020/04/23 2:22:31 AM	100.00	100.00	11150	111.5000	850	100.0
STD 5	STD 5		2020/04/23 2:29:26 AM	100.00	94.90	10581	105.8100	1825	94.9
STD 6	STD 6		2020/04/23 2:36:24 AM	100.00	96.82	10795	107.9500	2414	96.8

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: 13C4-PFOA
Internal Standard:

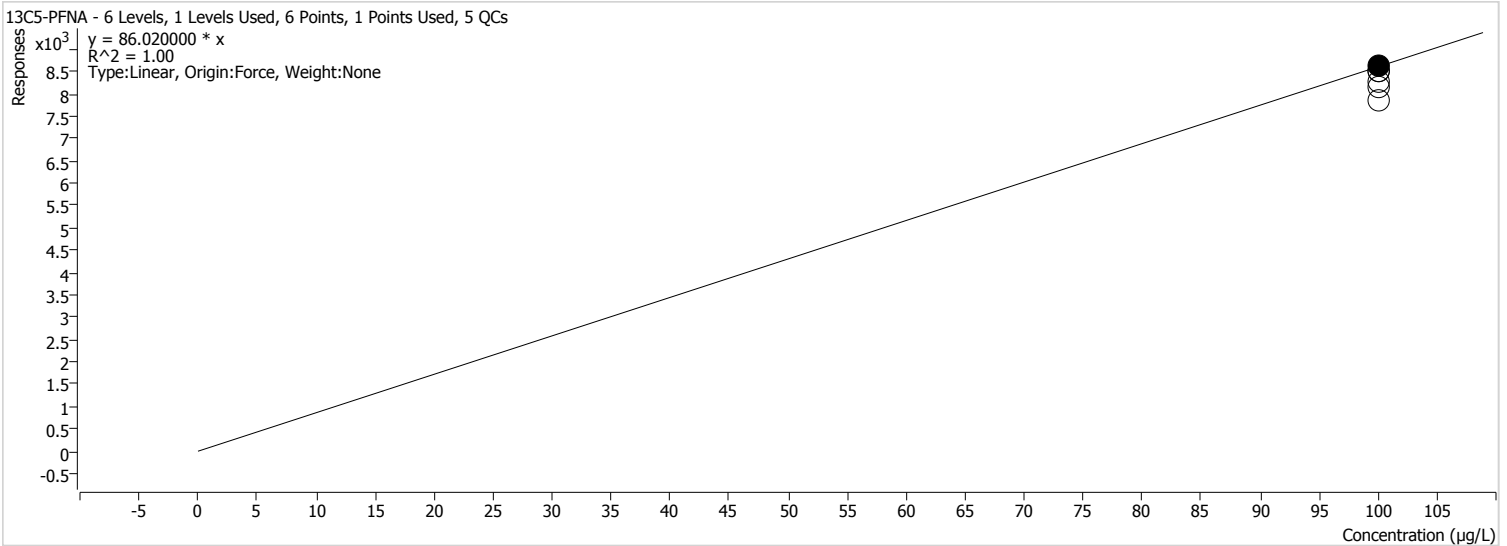


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/23 2:01:44 AM	100.00	99.51	10751	107.5100	1476	99.5
STD 2	STD 2		2020/04/23 2:08:40 AM	100.00	97.34	10517	105.1700	1689	97.3
STD 3	STD 3		2020/04/23 2:15:35 AM	100.00	92.05	9945	99.4500	2620	92.0
STD 4	STD 4	x	2020/04/23 2:22:31 AM	100.00	100.00	10804	108.0400	1947	100.0
STD 5	STD 5		2020/04/23 2:29:26 AM	100.00	94.90	10253	102.5300	2201	94.9
STD 6	STD 6		2020/04/23 2:36:24 AM	100.00	100.40	10847	108.4700	1800	100.4

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: 13C5-PFNA
Internal Standard:

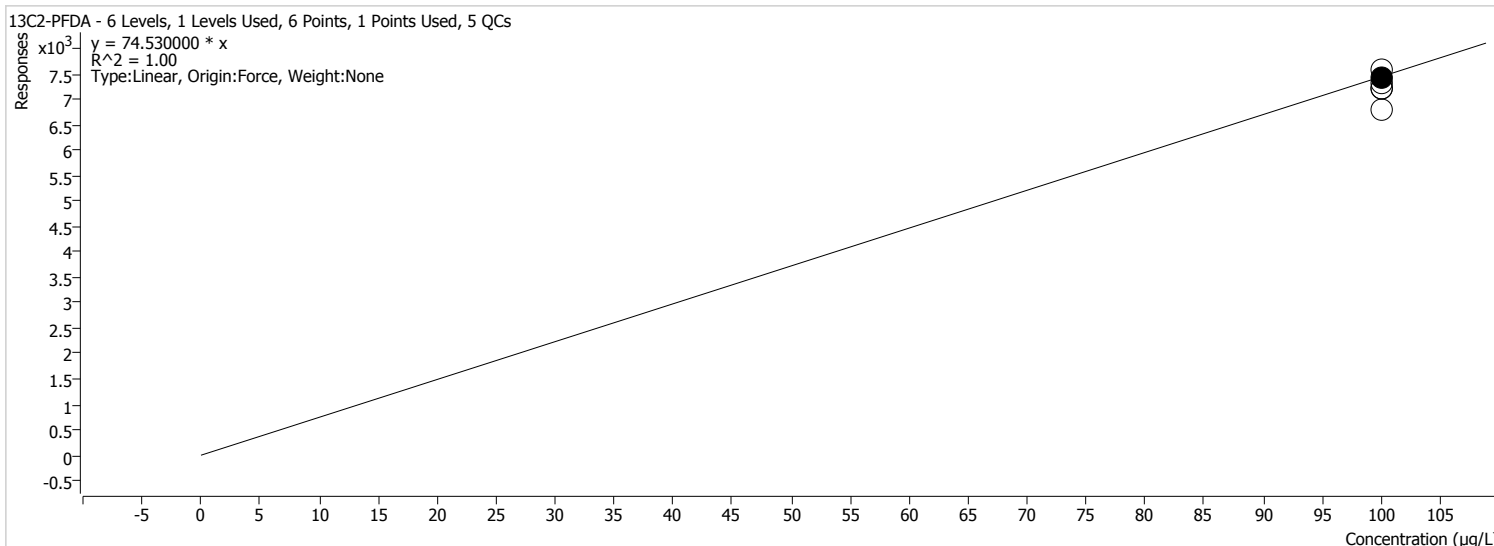


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/23 2:01:44 AM	100.00	98.80	8499	84.9900	1047	98.8
STD 2	STD 2		2020/04/23 2:08:40 AM	100.00	95.95	8254	82.5400	1376	96.0
STD 3	STD 3		2020/04/23 2:15:35 AM	100.00	91.43	7865	78.6500	833	91.4
STD 4	STD 4	x	2020/04/23 2:22:31 AM	100.00	100.00	8602	86.0200	1138	100.0
STD 5	STD 5		2020/04/23 2:29:26 AM	100.00	94.85	8159	81.5900	1651	94.9
STD 6	STD 6		2020/04/23 2:36:24 AM	100.00	98.66	8487	84.8700	1556	98.7

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: 13C2-PFDA
Internal Standard:

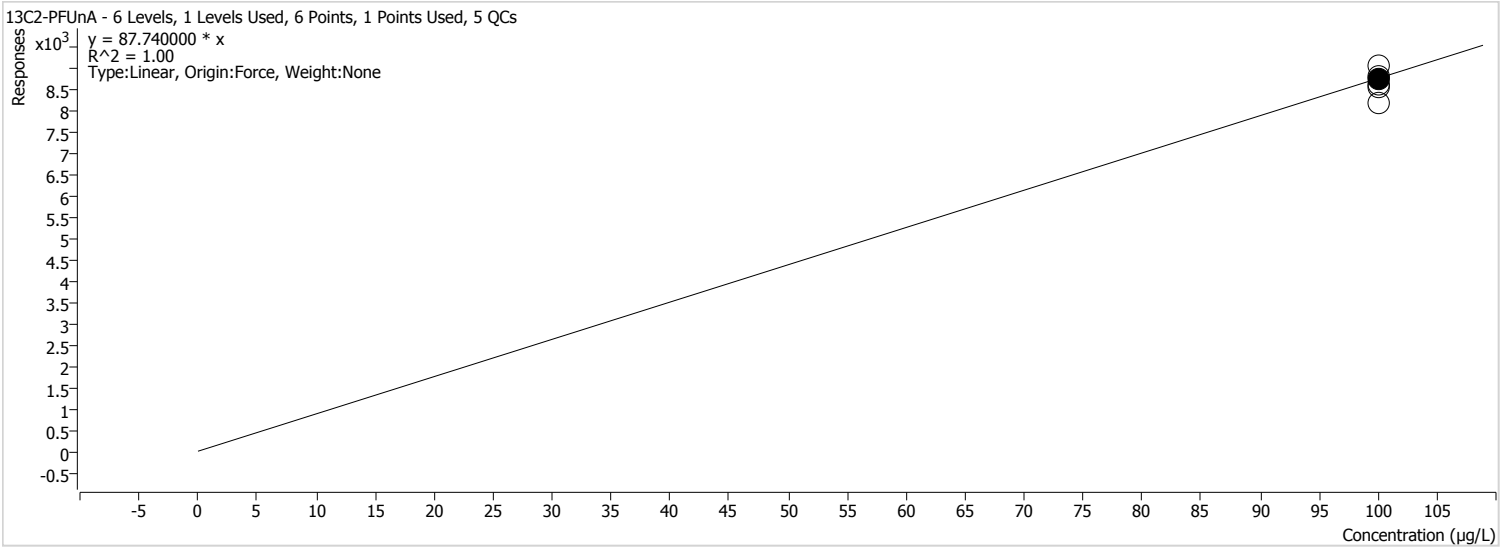


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/23 2:01:44 AM	100.00	97.21	7245	72.4500	1680	97.2
STD 2	STD 2		2020/04/23 2:08:40 AM	100.00	98.13	7314	73.1400	1330	98.1
STD 3	STD 3		2020/04/23 2:15:35 AM	100.00	91.17	6795	67.9500	1583	91.2
STD 4	STD 4	x	2020/04/23 2:22:31 AM	100.00	100.00	7453	74.5300	2179	100.0
STD 5	STD 5		2020/04/23 2:29:26 AM	100.00	96.74	7210	72.1000	1345	96.7
STD 6	STD 6		2020/04/23 2:36:24 AM	100.00	101.58	7571	75.7100	2291	101.6

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: 13C2-PFUnA
Internal Standard:

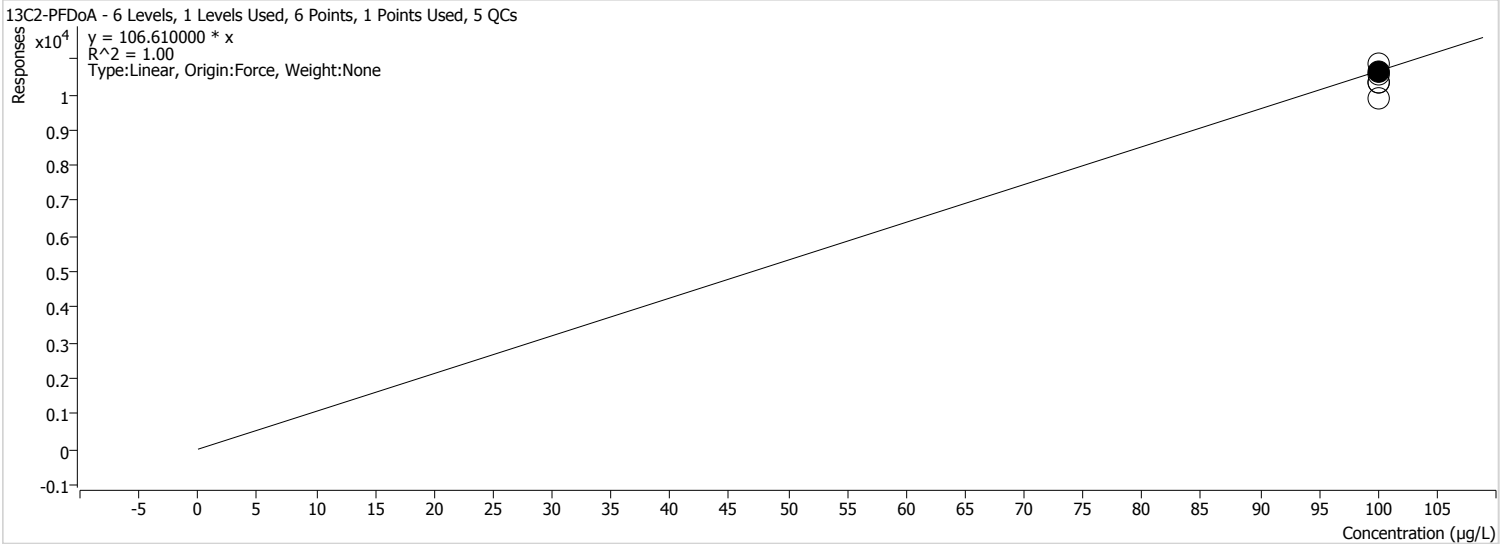


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/23 2:01:44 AM	100.00	100.59	8826	88.2600	1064	100.6
STD 2	STD 2		2020/04/23 2:08:40 AM	100.00	98.48	8641	86.4100	991	98.5
STD 3	STD 3		2020/04/23 2:15:35 AM	100.00	93.28	8184	81.8400	1176	93.3
STD 4	STD 4	x	2020/04/23 2:22:31 AM	100.00	100.00	8774	87.7400	1185	100.0
STD 5	STD 5		2020/04/23 2:29:26 AM	100.00	97.81	8582	85.8200	1657	97.8
STD 6	STD 6		2020/04/23 2:36:24 AM	100.00	103.12	9048	90.4800	1310	103.1

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: 13C2-PFDoA
Internal Standard:

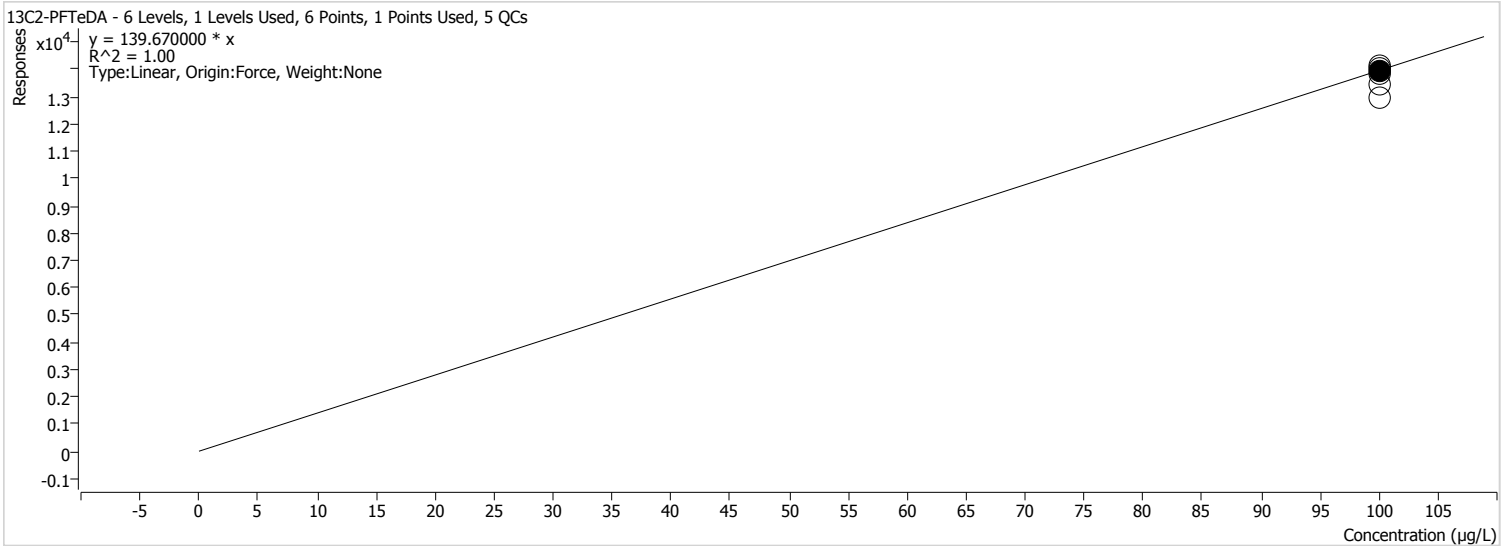


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/23 2:01:44 AM	100.00	98.88	10542	105.4200	1079	98.9
STD 2	STD 2		2020/04/23 2:08:40 AM	100.00	97.21	10364	103.6400	1346	97.2
STD 3	STD 3		2020/04/23 2:15:35 AM	100.00	92.88	9902	99.0200	1274	92.9
STD 4	STD 4	x	2020/04/23 2:22:31 AM	100.00	100.00	10661	106.6100	2074	100.0
STD 5	STD 5		2020/04/23 2:29:26 AM	100.00	97.04	10345	103.4500	1376	97.0
STD 6	STD 6		2020/04/23 2:36:24 AM	100.00	101.68	10840	108.4000	1913	101.7

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: 13C2-PFTeDA
Internal Standard:

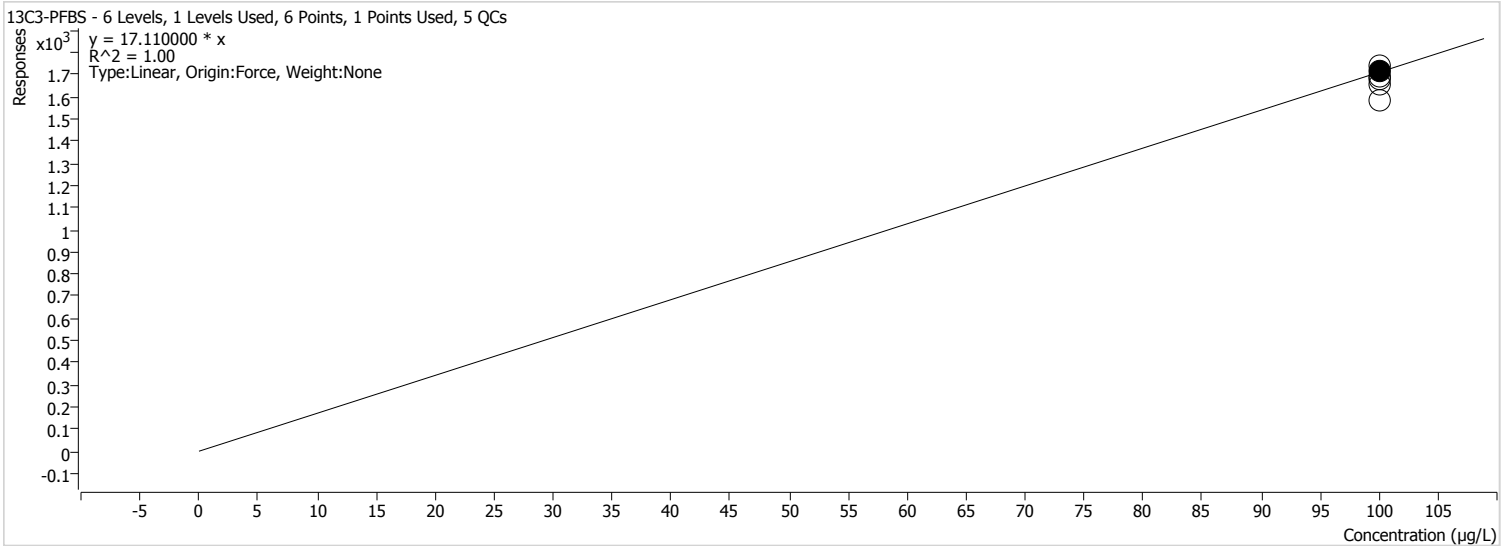


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/23 2:01:44 AM	100.00	100.98	14104	141.0400	3674	101.0
STD 2	STD 2		2020/04/23 2:08:40 AM	100.00	99.36	13878	138.7800	2814	99.4
STD 3	STD 3		2020/04/23 2:15:35 AM	100.00	92.68	12944	129.4400	1605	92.7
STD 4	STD 4	x	2020/04/23 2:22:31 AM	100.00	100.00	13967	139.6700	2071	100.0
STD 5	STD 5		2020/04/23 2:29:26 AM	100.00	96.71	13507	135.0700	3391	96.7
STD 6	STD 6		2020/04/23 2:36:24 AM	100.00	100.84	14084	140.8400	2259	100.8

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
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Instrument: LCMS04
Analyte: 13C3-PFBS
Internal Standard:

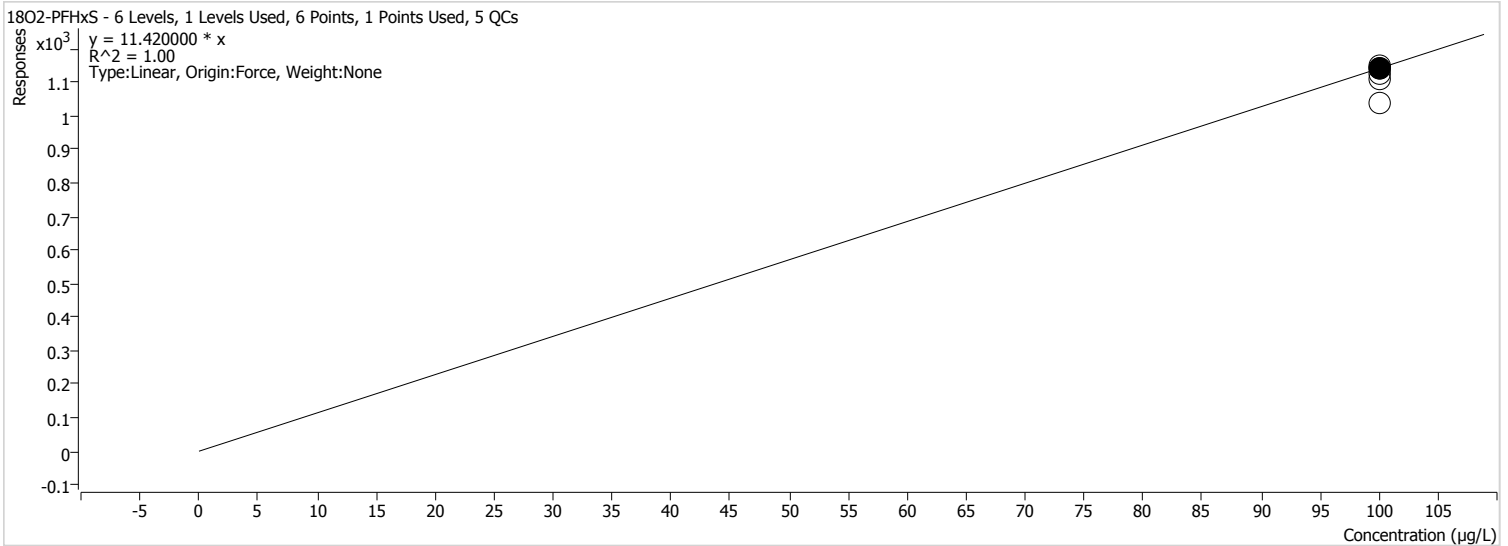


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/23 2:01:44 AM	100.00	99.06	1695	16.9500	742	99.1
STD 2	STD 2		2020/04/23 2:08:40 AM	100.00	98.01	1677	16.7700	1087	98.0
STD 3	STD 3		2020/04/23 2:15:35 AM	100.00	92.40	1581	15.8100	431	92.4
STD 4	STD 4	x	2020/04/23 2:22:31 AM	100.00	100.00	1711	17.1100	876	100.0
STD 5	STD 5		2020/04/23 2:29:26 AM	100.00	96.90	1658	16.5800	510	96.9
STD 6	STD 6		2020/04/23 2:36:24 AM	100.00	101.46	1736	17.3600	626	101.5

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
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Analyte: 18O2-PFHxS
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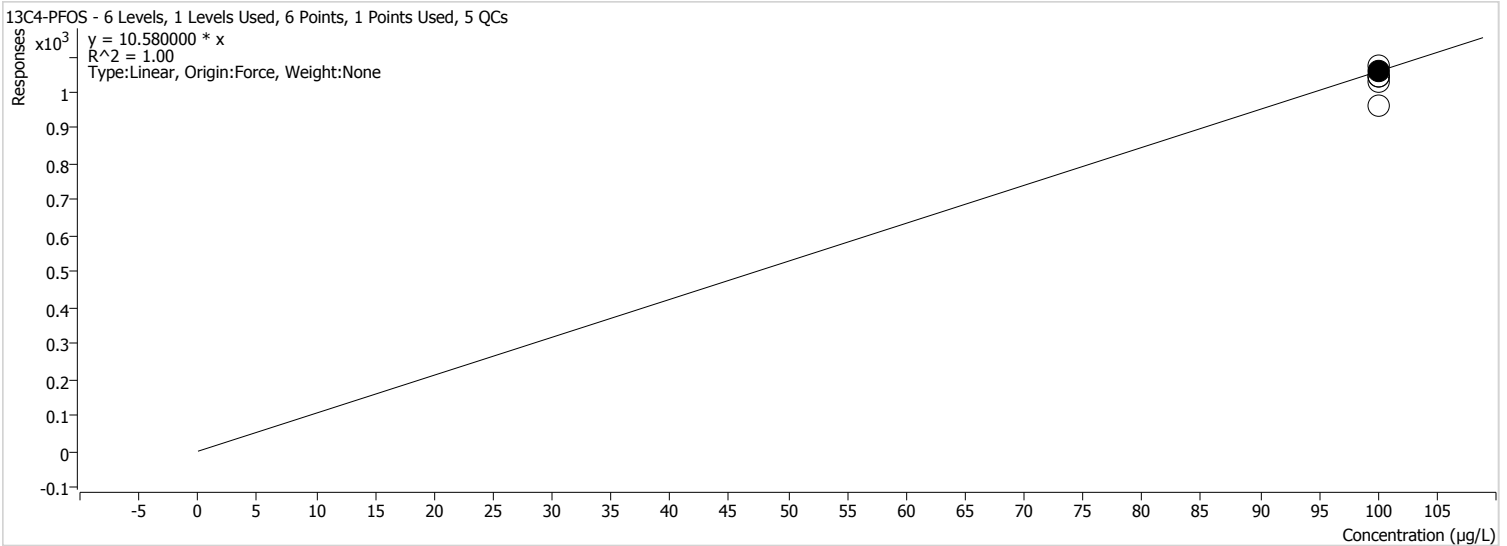


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/23 2:01:44 AM	100.00	100.44	1147	11.4700	576	100.4
STD 2	STD 2		2020/04/23 2:08:40 AM	100.00	98.42	1124	11.2400	502	98.4
STD 3	STD 3		2020/04/23 2:15:35 AM	100.00	90.98	1039	10.3900	569	91.0
STD 4	STD 4	x	2020/04/23 2:22:31 AM	100.00	100.00	1142	11.4200	783	100.0
STD 5	STD 5		2020/04/23 2:29:26 AM	100.00	97.11	1109	11.0900	474	97.1
STD 6	STD 6		2020/04/23 2:36:24 AM	100.00	100.26	1145	11.4500	580	100.3

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
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Analyte: 13C4-PFOS
Internal Standard:

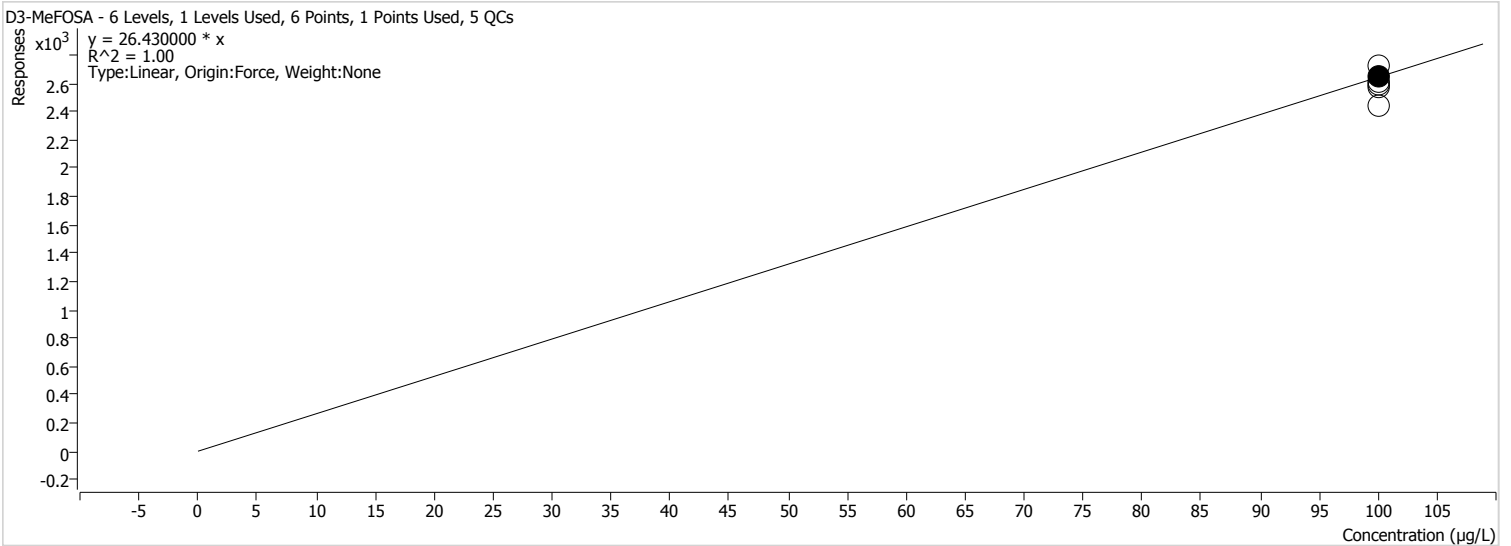


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/23 2:01:44 AM	100.00	97.54	1032	10.3200	475	97.5
STD 2	STD 2		2020/04/23 2:08:40 AM	100.00	98.58	1043	10.4300	370	98.6
STD 3	STD 3		2020/04/23 2:15:35 AM	100.00	90.83	961	9.6100	347	90.8
STD 4	STD 4	x	2020/04/23 2:22:31 AM	100.00	100.00	1058	10.5800	1067	100.0
STD 5	STD 5		2020/04/23 2:29:26 AM	100.00	98.39	1041	10.4100	433	98.4
STD 6	STD 6		2020/04/23 2:36:24 AM	100.00	101.23	1071	10.7100	1322	101.2

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
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Analyte: D3-MeFOSA
Internal Standard:

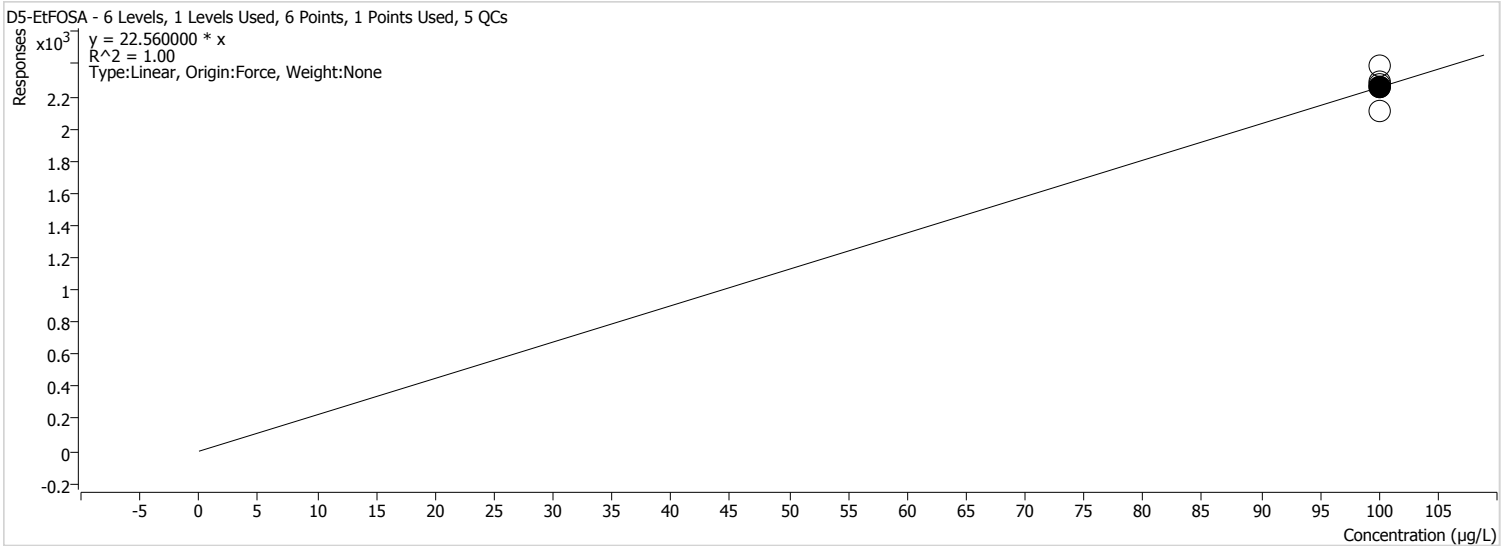


Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/23 2:01:44 AM	100.00	98.15	2594	25.9400	147	98.1
STD 2	STD 2		2020/04/23 2:08:40 AM	100.00	97.50	2577	25.7700	150	97.5
STD 3	STD 3		2020/04/23 2:15:35 AM	100.00	92.36	2441	24.4100	120	92.4
STD 4	STD 4	x	2020/04/23 2:22:31 AM	100.00	100.00	2643	26.4300	144	100.0
STD 5	STD 5		2020/04/23 2:29:26 AM	100.00	98.79	2611	26.1100	107	98.8
STD 6	STD 6		2020/04/23 2:36:24 AM	100.00	102.80	2717	27.1700	156	102.8

By Compound Report



Batch Path T:\LCMS04\PFC\20200422\WS#6692764\QuantResults\PFC_Water_Low_DOD_20200422_WS#6692764_MI.batch.bin
Last Calib Update 2020/04/29 6:11:10 AM
Instrument: LCMS04
Analyte: D5-EtFOSA
Internal Standard:



Sample	Level	Enabled	Acquisition Time	Exp. Conc.	Concentration	Response	RF	S/N	Accuracy
STD 1	STD 1		2020/04/23 2:01:44 AM	100.00	101.42	2288	22.8800	205	101.4
STD 2	STD 2		2020/04/23 2:08:40 AM	100.00	100.04	2257	22.5700	128	100.0
STD 3	STD 3		2020/04/23 2:15:35 AM	100.00	93.62	2112	21.1200	133	93.6
STD 4	STD 4	x	2020/04/23 2:22:31 AM	100.00	100.00	2256	22.5600	151	100.0
STD 5	STD 5		2020/04/23 2:29:26 AM	100.00	100.89	2276	22.7600	83	100.9
STD 6	STD 6		2020/04/23 2:36:24 AM	100.00	105.67	2384	23.8400	163	105.7



**BUREAU
VERITAS**

6. Continuing Calibration

**Bureau Veritas Canada (2019)
Inc.
6740 Campobello Rd.
Mississauga, Ontario, Canada
L5N 2L8
1-800-668-0639
www.bvlabs.com**

Quantitative Analysis Report

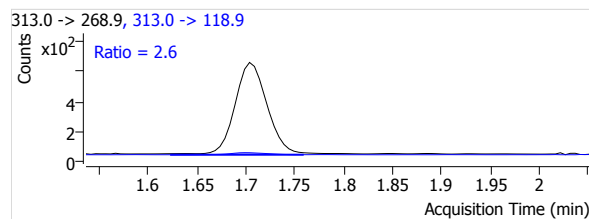
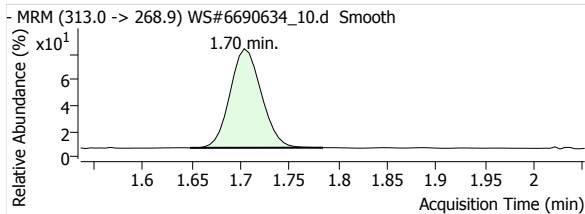
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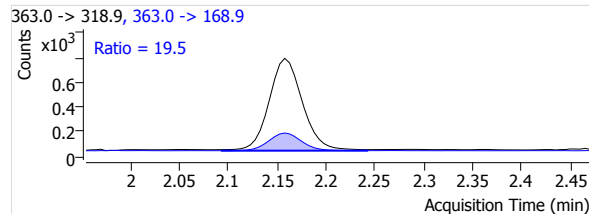
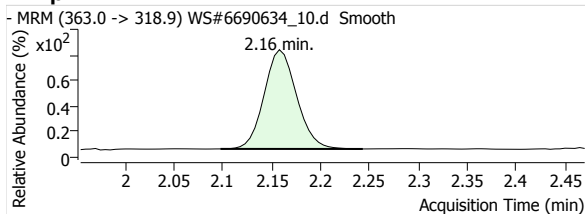
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Position P1-A2
Dil. 1.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	0.830	0.7861	94.7	1351	1.70	1316	0.1753	35	1.70	252	2.6
PFHpA 1	µg/L	0.830	0.7623	91.8	1698	2.16	6651	0.1620	331	2.16	1342	19.5
PFOA 1	µg/L	0.830	0.7982	96.2	1664	2.63	3203	0.1644	400	2.64	1560	24.0
PFNA 1	µg/L	0.830	0.7301	88.0	1359	3.07	2494	0.1657	286	3.07	1939	21.0
PFDA 1	µg/L	0.830	0.7980	96.1	1429	3.47	1841	0.2117	229	3.46	3392	16.0
PFUnA 1	µg/L	0.830	0.7564	91.1	1383	3.81	1080	0.1661	202	3.80	15493	14.6
PFDoA 1	µg/L	0.830	0.8052	97.0	1565	4.11	1484	0.1493	192	4.11	3171	12.3
PFTeDA 1	µg/L	0.830	0.7064	85.1	1947	4.37	1285	0.1482	140	4.37	3021	7.2
PFTeDA 1	µg/L	0.830	0.7773	93.7	2131	4.61	7872	0.1622	118	4.61	6046	5.5
PFBS 1	µg/L	0.830	0.7552	91.0	250	1.36	4754	0.1527	111	1.36	636	44.4
PFHxS 1	µg/L	0.830	0.7415	89.3	188	2.11	27549	0.1730	96	2.11	7700	51.1
PFOS 1	µg/L	0.830	0.7373	88.8	158	2.90	10719	0.1577	84	2.89	3391	53.1
MeFOSA 1	µg/L	0.830	0.8537	102.9	170	5.21	40	0.0690	151	5.21	163	88.8
EtFOSA 1	µg/L	0.830	0.7616	91.8	166	5.33	15	0.0740	163	5.33	137	98.2
13C2-PFHxA	µg/L	100.000	109.7238	109.7	7707	1.70	1626		--	--	--	--
13C4-PFHpA	µg/L	100.000	108.4532	108.5	10482	2.16	1623		--	--	--	--
13C4-PFOA	µg/L	100.000	105.0545	105.1	10122	2.63	2098		--	--	--	--
13C5-PFNA	µg/L	100.000	108.4082	108.4	8200	3.07	1122		--	--	--	--
13C2-PFDA	µg/L	100.000	103.2431	103.2	6749	3.47	1142		--	--	--	--
13C2-PFUnA	µg/L	100.000	106.9785	107.0	8324	3.81	773		--	--	--	--
13C2-PFDoA	µg/L	100.000	103.6184	103.6	10481	4.11	1171		--	--	--	--
13C2-PFTeDA	µg/L	100.000	104.7847	104.8	13140	4.60	2630		--	--	--	--
13C3-PFBS	µg/L	100.000	106.0920	106.1	1637	1.37	1173		--	--	--	--
18O2-PFHxS	µg/L	100.000	107.1850	107.2	1089	2.11	1065		--	--	--	--
13C4-PFOS	µg/L	100.000	104.0498	104.0	1002	2.95	374		--	--	--	--
D3-MeFOSA	µg/L	100.000	101.3163	101.3	2463	5.21	186		--	--	--	--
D5-EtFOSA	µg/L	100.000	107.2145	107.2	2244	5.33	174		--	--	--	--

PFHxA 1

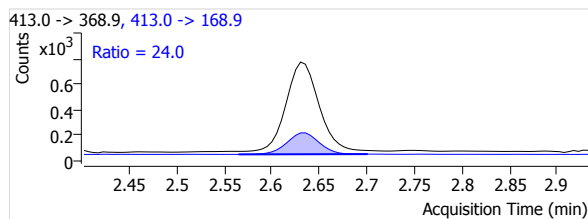
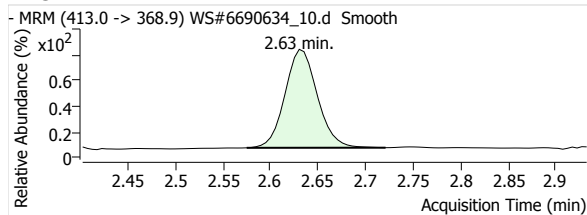


PFHpA 1

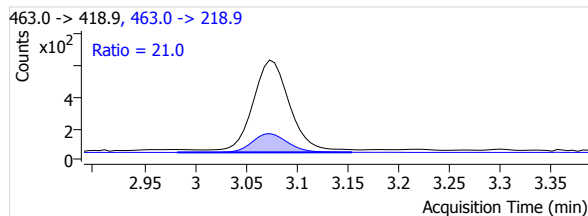
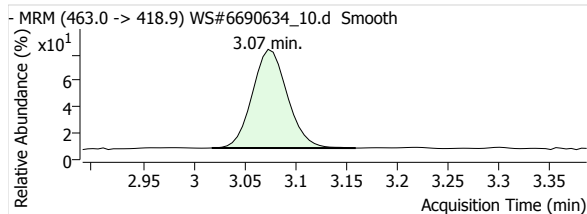


Quantitative Analysis Report

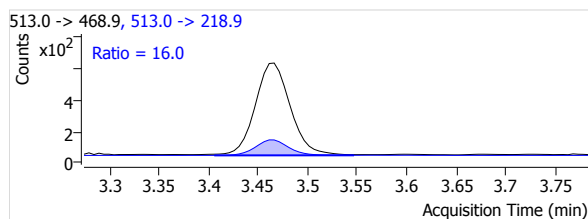
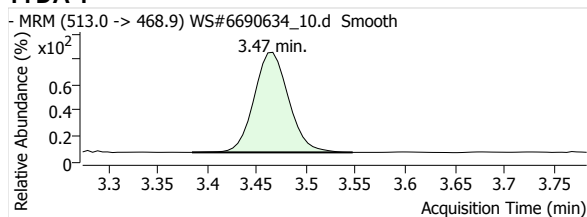
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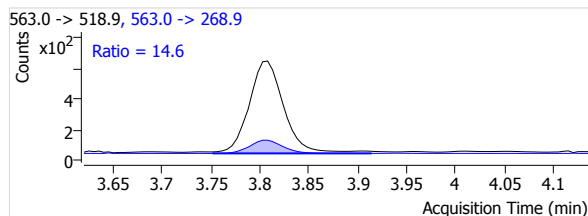
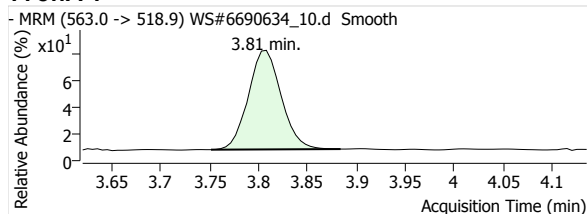
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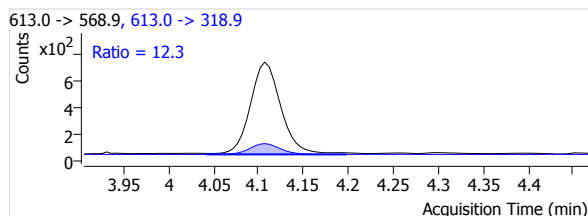
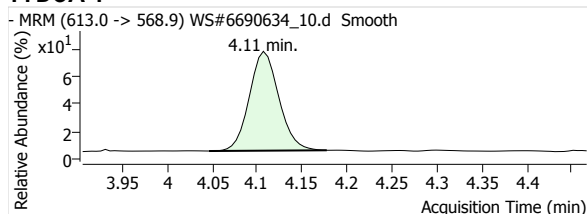
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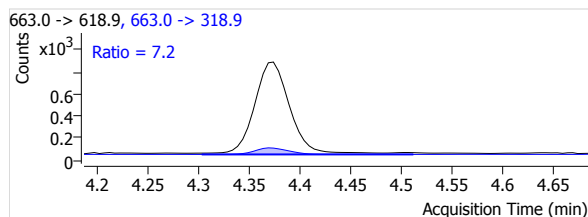
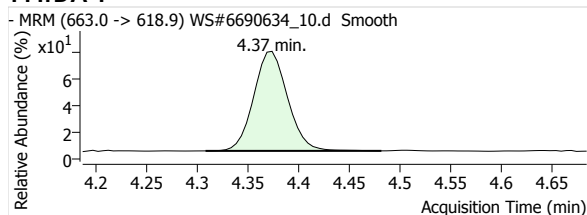
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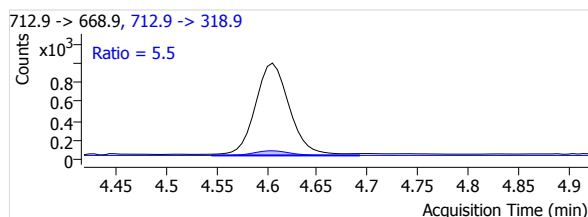
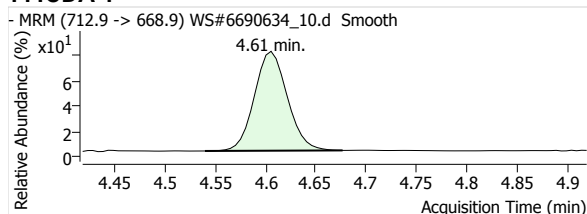
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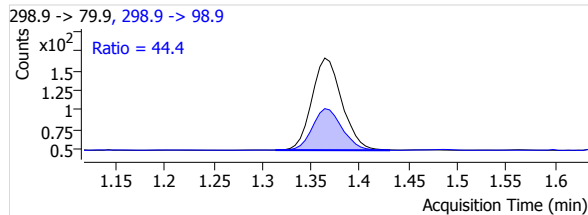
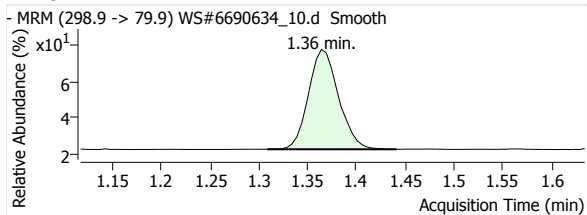


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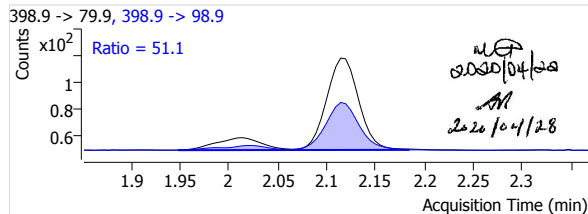
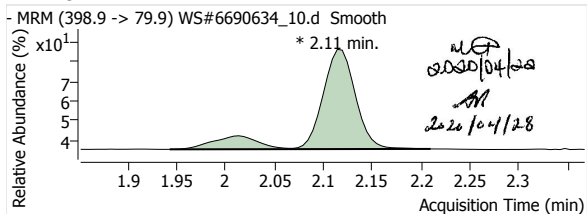


Quantitative Analysis Report

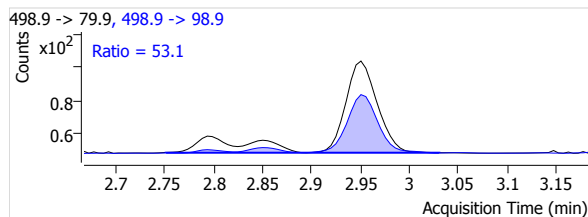
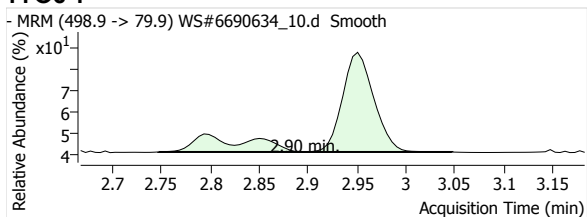
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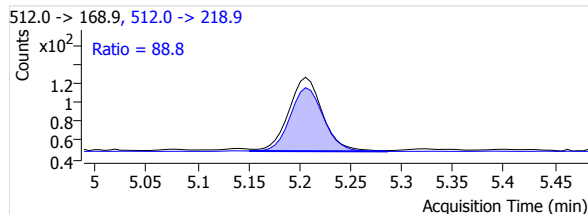
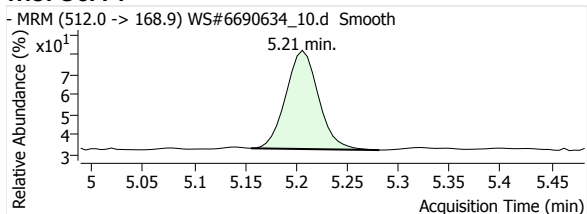
PFHxS 1



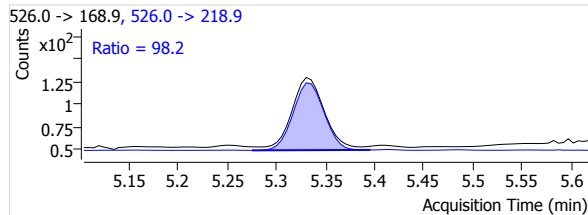
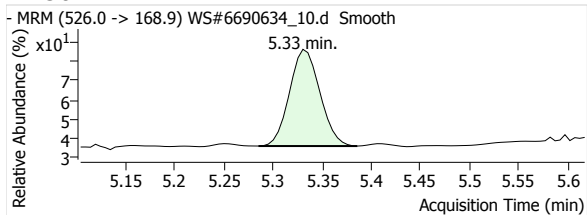
PFOS 1



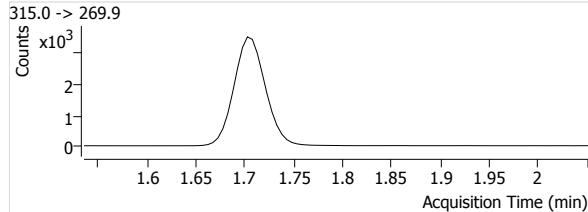
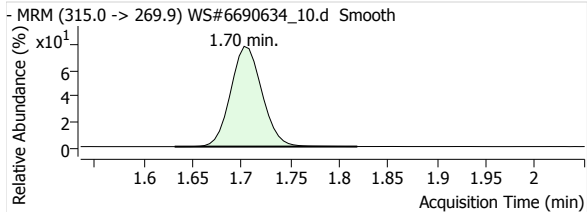
MeFOSA 1



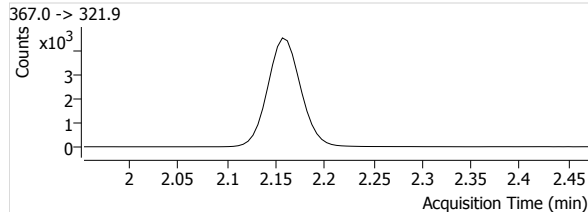
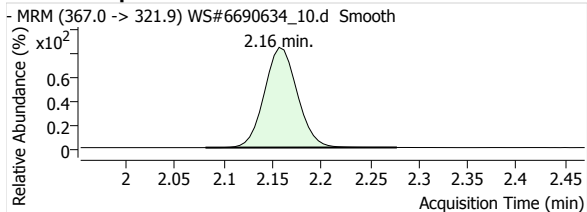
eFOSA 1



13C2-PFHxA

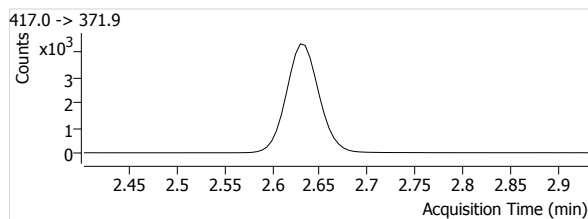
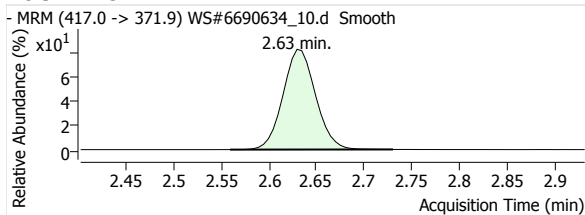


13C4-PFHpA

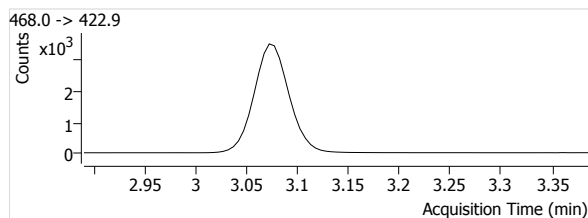
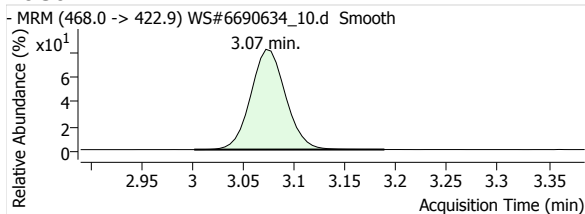


Quantitative Analysis Report

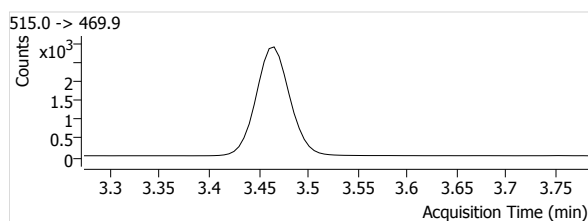
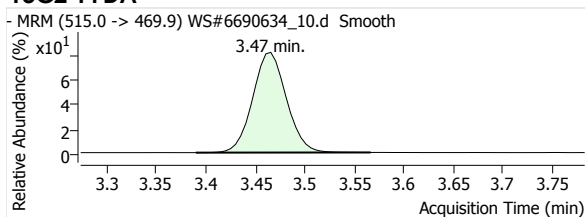
13C4-PFOA



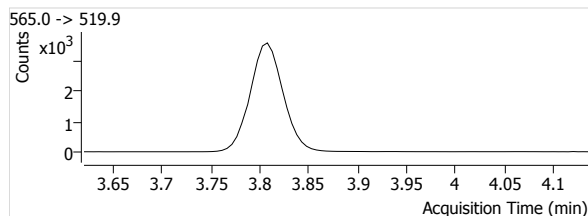
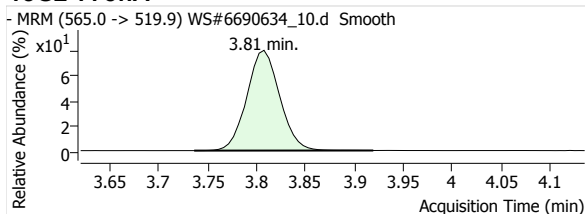
13C5-PFNA



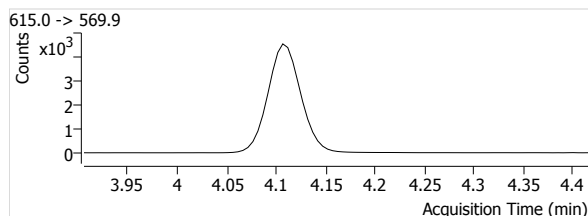
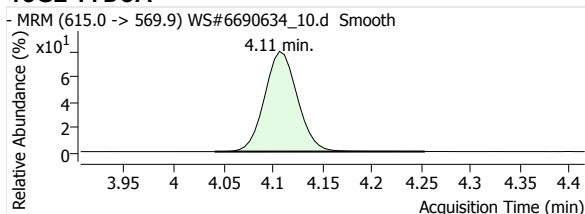
13C2-PFDA



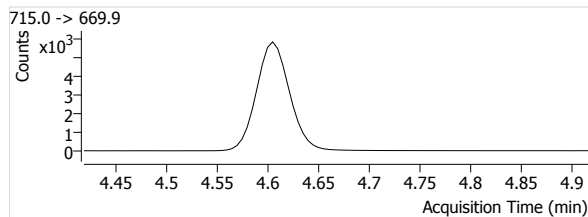
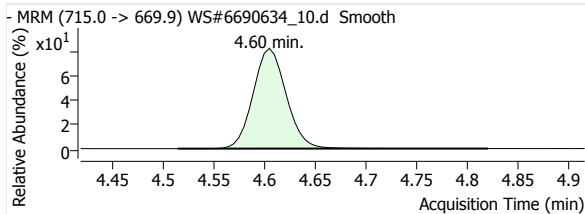
13C2-PFUnA



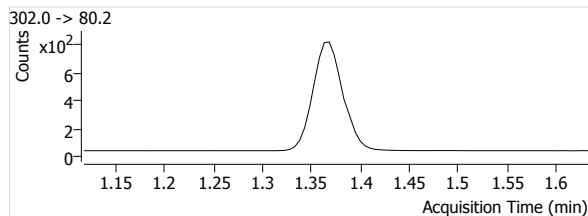
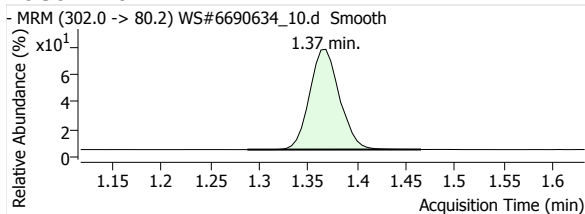
13C2-PFDoA



13C2-PFTeDA

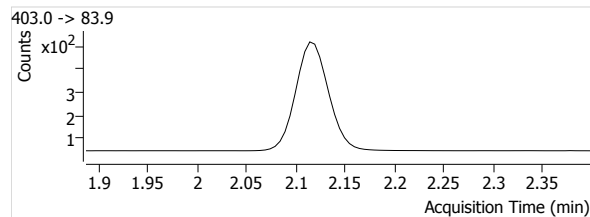
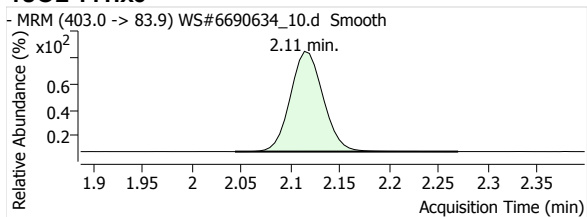


13C3-PFBS

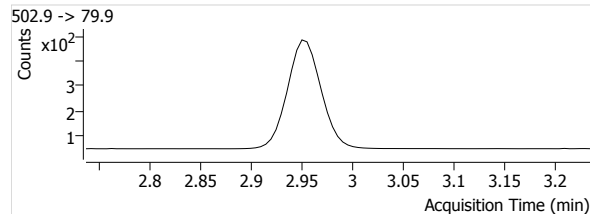
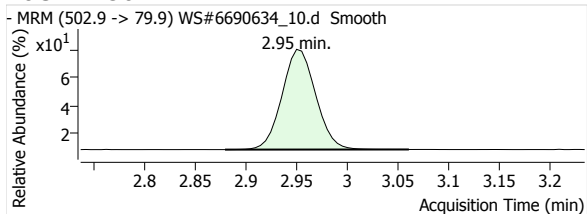


Quantitative Analysis Report

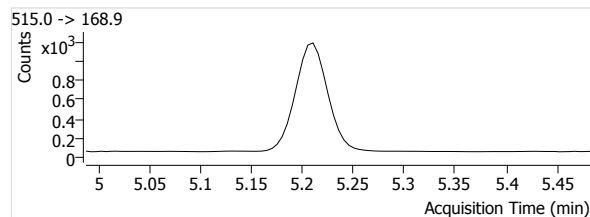
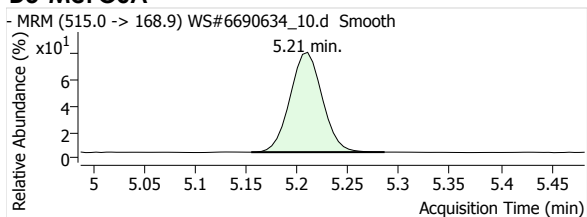
18O2-PFHxs



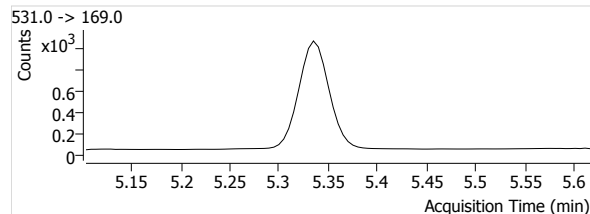
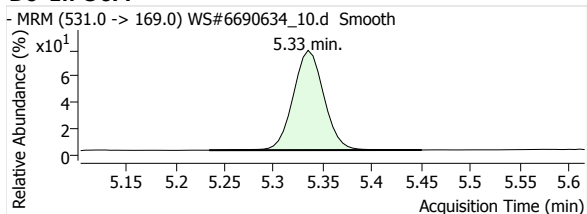
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



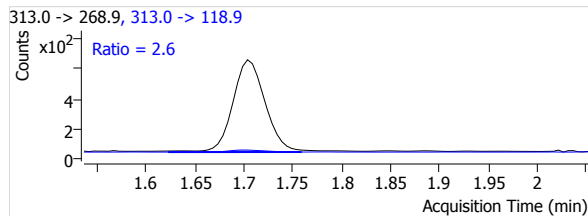
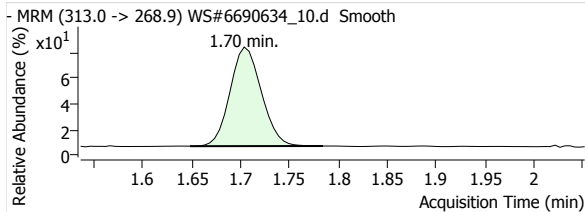
Quantitative Analysis Report

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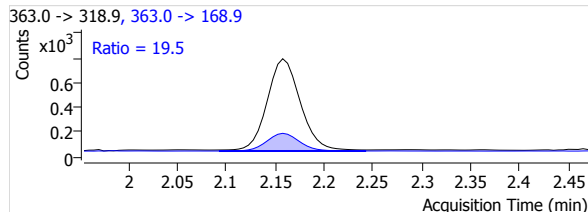
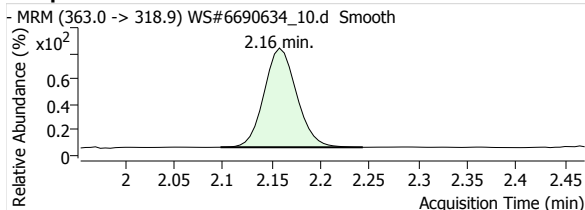
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Acq. Method File	PFAS.m	Position	P1-A2
Acq. Date-Time	2020/04/21 11:02:59 PM	Dil.	1.0
Comment	-		
User Defined	MI PFHxS		

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	0.830	0.7861	94.7	1351	1.70	1316	0.1753	35	1.70	252	2.6
PFHpA 1	µg/L	0.830	0.7623	91.8	1698	2.16	6651	0.1620	331	2.16	1342	19.5
PFOA 1	µg/L	0.830	0.7982	96.2	1664	2.63	3203	0.1644	400	2.64	1560	24.0
PFNA 1	µg/L	0.830	0.7301	88.0	1359	3.07	2494	0.1657	286	3.07	1939	21.0
PFDA 1	µg/L	0.830	0.7980	96.1	1429	3.47	1841	0.2117	229	3.46	3392	16.0
PFUnA 1	µg/L	0.830	0.7564	91.1	1383	3.81	1080	0.1661	202	3.80	15493	14.6
PFDaA 1	µg/L	0.830	0.8052	97.0	1565	4.11	1484	0.1493	192	4.11	3171	12.3
PFTrDA 1	µg/L	0.830	0.7064	85.1	1947	4.37	1285	0.1482	140	4.37	3021	7.2
PFTeDA 1	µg/L	0.830	0.7773	93.7	2131	4.61	7872	0.1622	118	4.61	6046	5.5
PFBS 1	µg/L	0.830	0.7552	91.0	250	1.36	4754	0.1527	111	1.36	636	44.4
PFHxS 1	µg/L	0.830	0.7621	91.8	187	2.08	27290	0.1716	93	2.09	7647	49.7
PFOS 1	µg/L	0.830	0.7373	88.8	158	2.90	10719	0.1577	84	2.89	3391	53.1
MeFOSA 1	µg/L	0.830	0.8537	102.9	170	5.21	40	0.0690	151	5.21	163	88.8
EtFOSA 1	µg/L	0.830	0.7616	91.8	166	5.33	15	0.0740	163	5.33	137	98.2
13C2-PFHxA	µg/L	100.000	109.7238	109.7	7707	1.70	1626		--	--	--	--
13C4-PFHpA	µg/L	100.000	108.4532	108.5	10482	2.16	1623		--	--	--	--
13C4-PFOA	µg/L	100.000	105.0545	105.1	10122	2.63	2098		--	--	--	--
13C5-PFNA	µg/L	100.000	108.4082	108.4	8200	3.07	1122		--	--	--	--
13C2-PFDA	µg/L	100.000	103.2431	103.2	6749	3.47	1142		--	--	--	--
13C2-PFUnA	µg/L	100.000	106.9785	107.0	8324	3.81	773		--	--	--	--
13C2-PFDaA	µg/L	100.000	103.6184	103.6	10481	4.11	1171		--	--	--	--
13C2-PFTeDA	µg/L	100.000	104.7847	104.8	13140	4.60	2630		--	--	--	--
13C3-PFBS	µg/L	100.000	106.0920	106.1	1637	1.37	1173		--	--	--	--
18O2-PFHxS	µg/L	100.000	107.1850	107.2	1089	2.11	1065		--	--	--	--
13C4-PFOS	µg/L	100.000	104.0498	104.0	1002	2.95	374		--	--	--	--
D3-MeFOSA	µg/L	100.000	101.3163	101.3	2463	5.21	186		--	--	--	--
D5-EtFOSA	µg/L	100.000	107.2145	107.2	2244	5.33	174		--	--	--	--

PFHxA 1

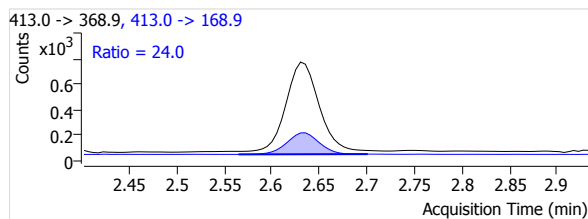
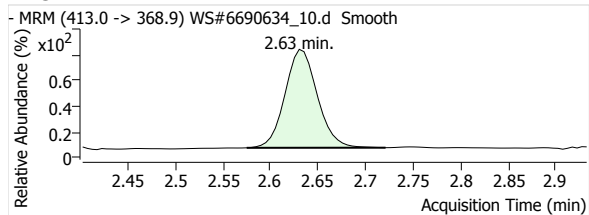


PFHpA 1

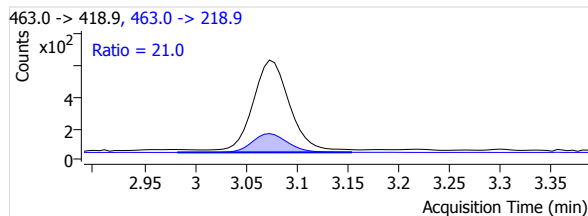
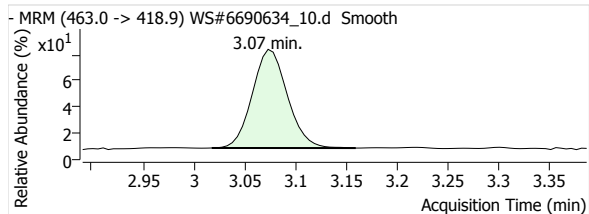


Quantitative Analysis Report

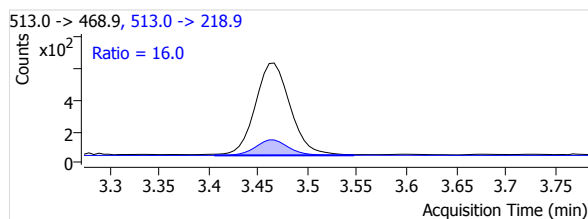
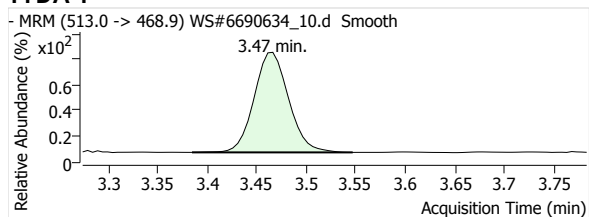
PFOA 1



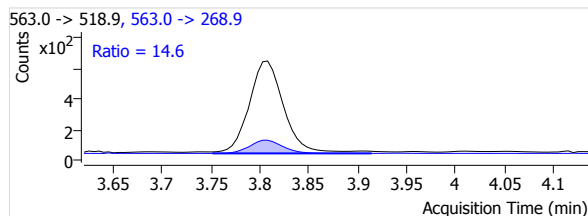
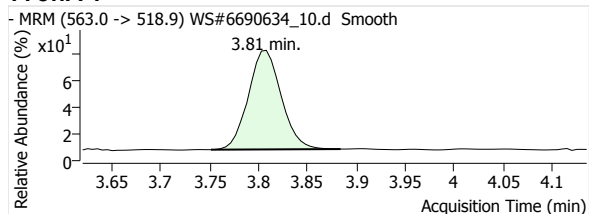
PFNA 1



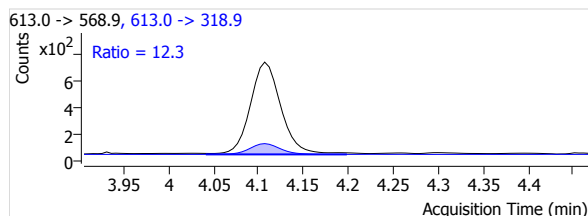
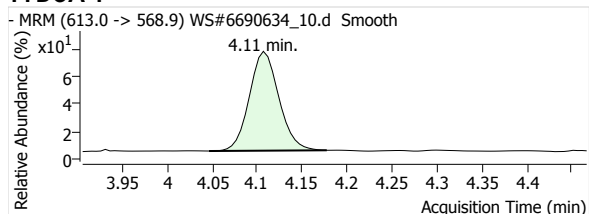
PFDA 1



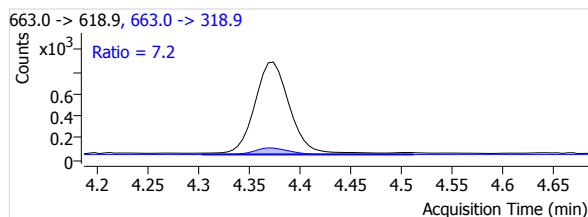
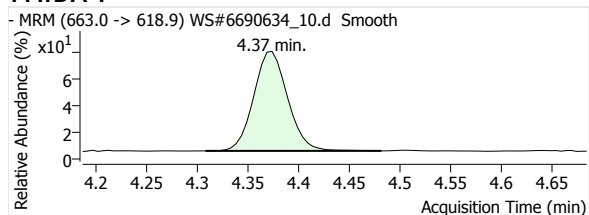
PFUnA 1



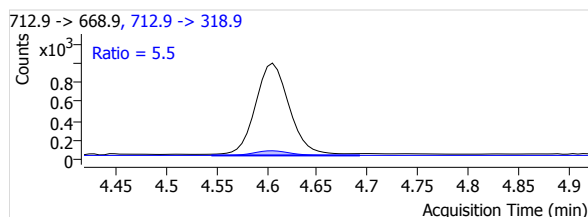
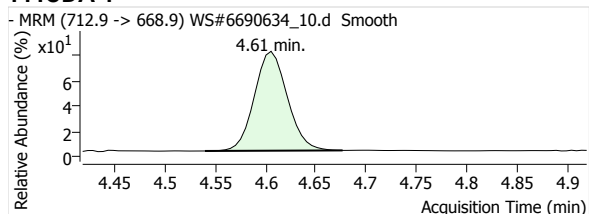
PFDaA 1



PFTrDA 1

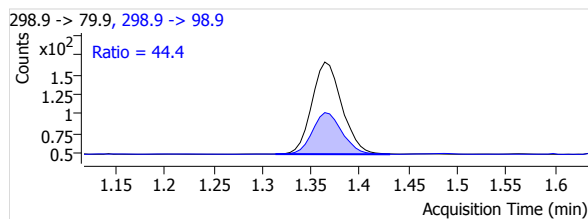
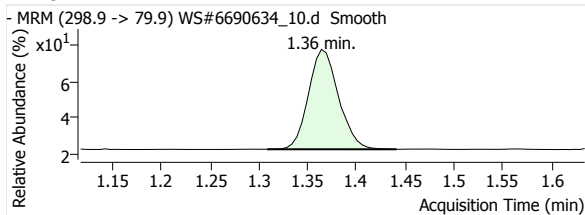


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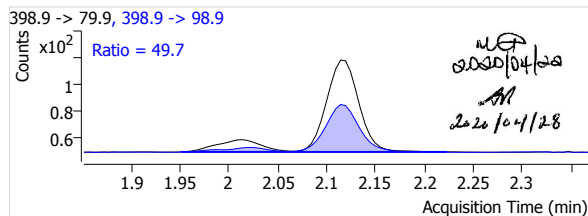
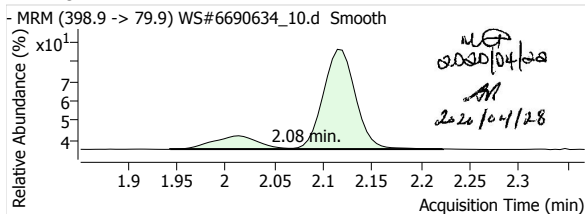


Quantitative Analysis Report

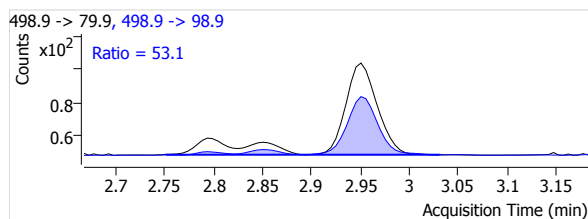
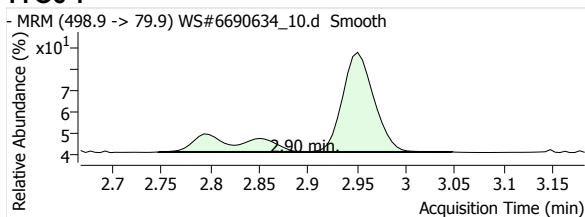
PFBS 1



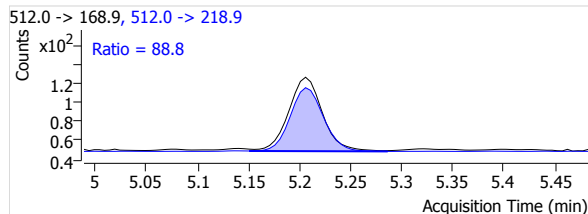
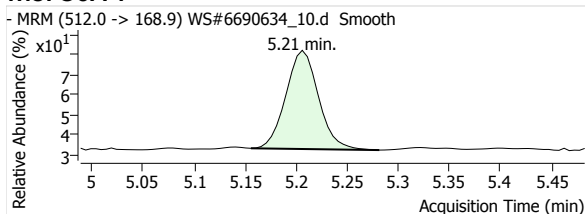
PFHxS 1



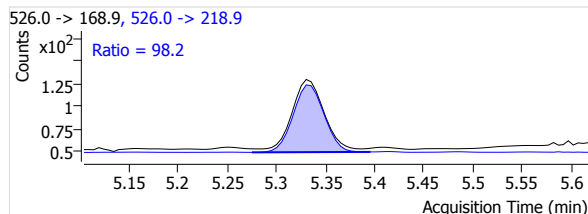
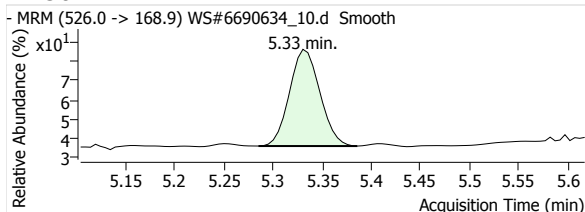
PFOS 1



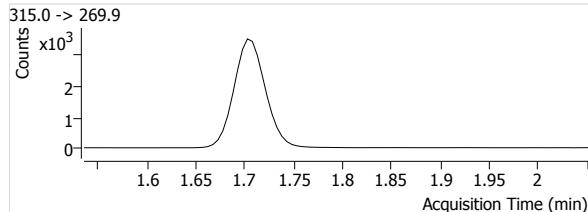
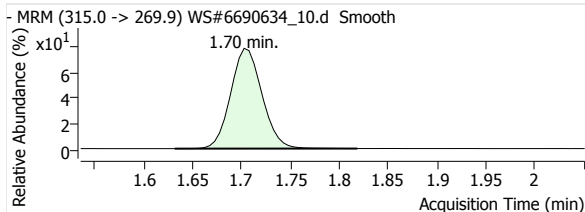
MeFOSA 1



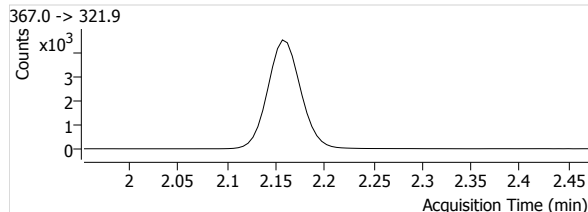
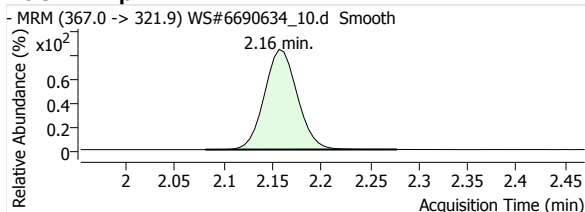
eFOSA 1



13C2-PFHxA

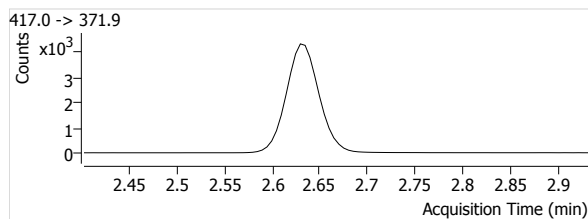
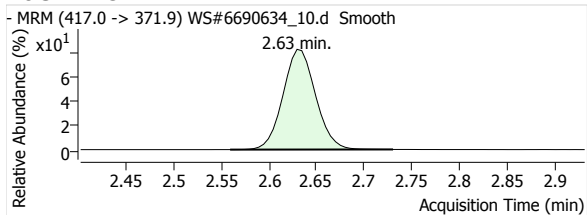


13C4-PFHpA

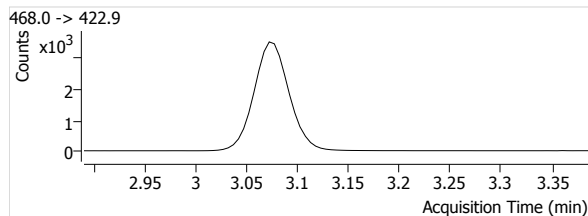
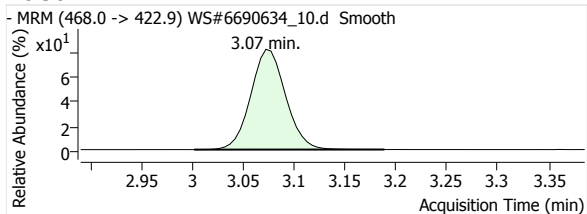


Quantitative Analysis Report

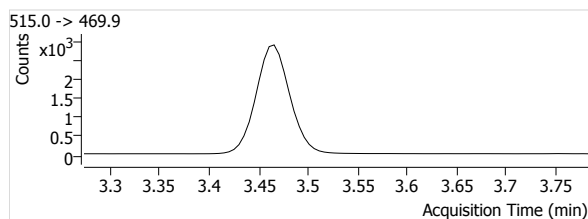
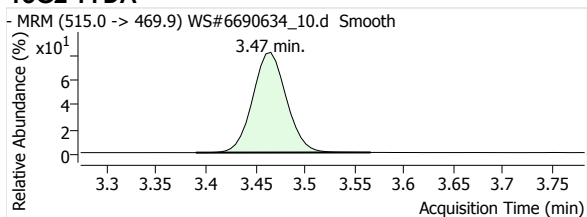
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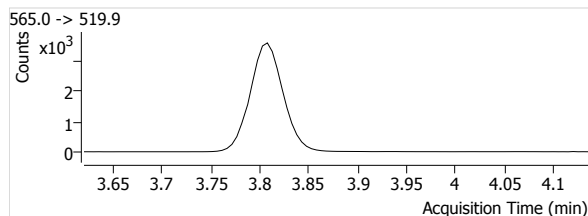
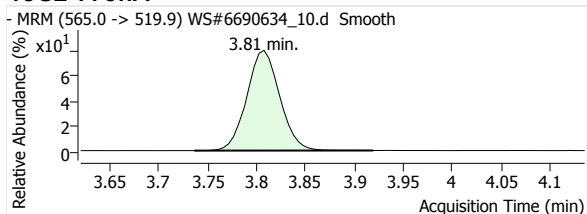
13C5-PFNA



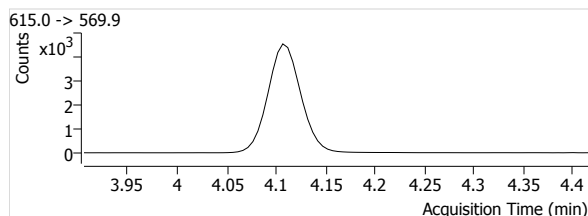
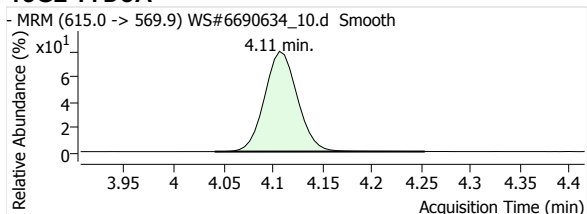
13C2-PFDA



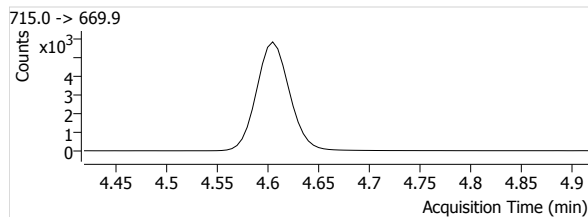
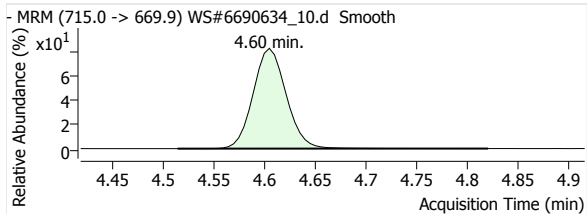
13C2-PFUnA



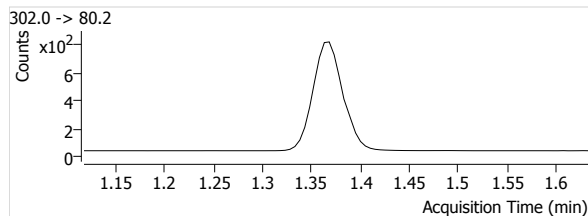
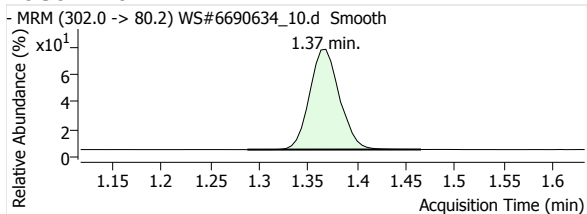
13C2-PFDoA



13C2-PFTeDA

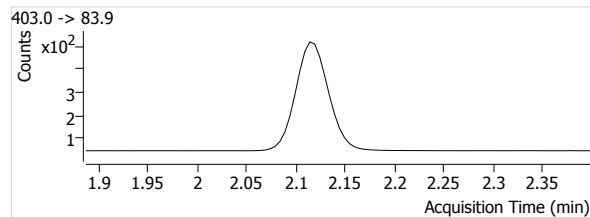
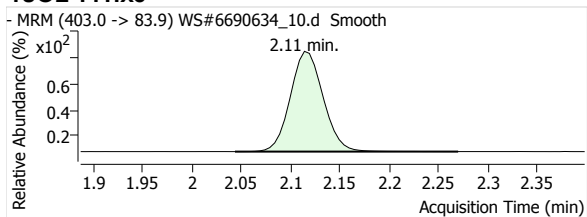


13C3-PFBS

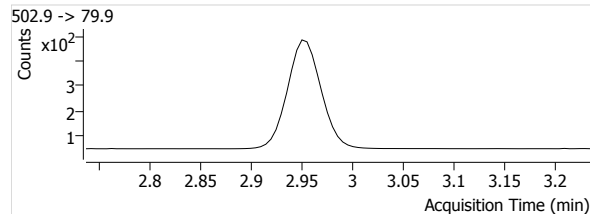
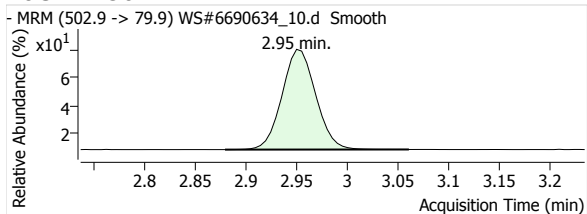


Quantitative Analysis Report

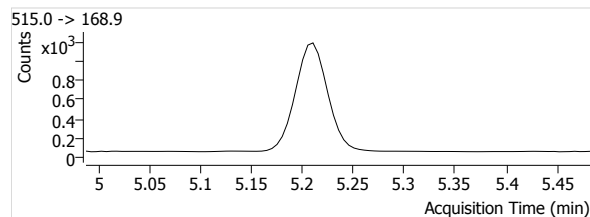
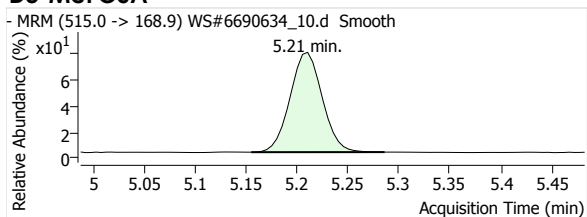
18O2-PFHxs



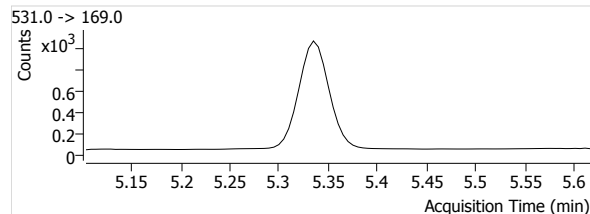
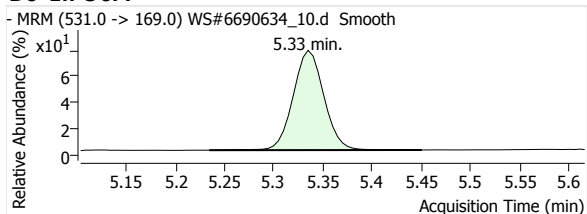
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



Quantitative Analysis Report

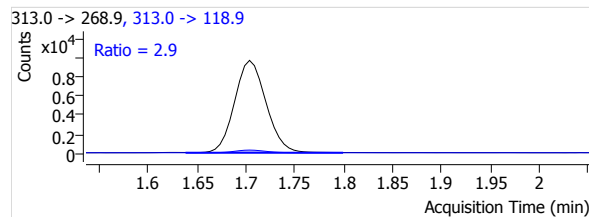
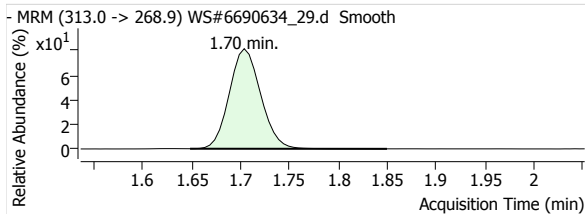
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bin

Sample Name CCV
 Type CC
 Acq. Method File PFAS.m
 Acq. Date-Time 2020/04/22 1:14:54 AM
 Comment -
 User Defined -

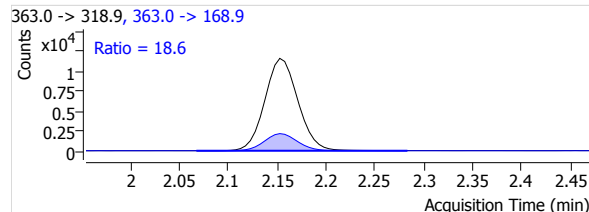
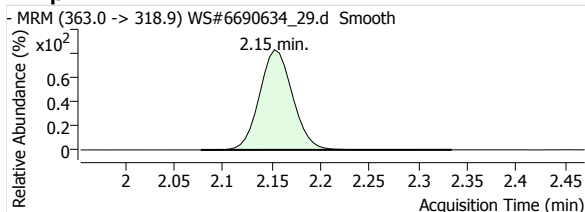
Data File WS#6690634_29.d
 Instrument LCMS04
 Position P1-A5
 Dil. 1.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	16.000	15.9988	100.0	21531	1.70	11784	2.8762	619	1.70	3399	2.9
PFHpA 1	µg/L	16.000	16.1236	100.8	27452	2.15	124565	2.6972	5105	2.15	7355	18.6
PFOA 1	µg/L	16.000	15.8688	99.2	26743	2.63	23314	2.6722	6522	2.63	93988	24.4
PFNA 1	µg/L	16.000	15.8024	98.8	21609	3.07	28608	2.7059	4508	3.07	5053	20.9
PFDA 1	µg/L	16.000	16.3791	102.4	22819	3.46	10880	3.3567	3628	3.46	35685	15.9
PFUnA 1	µg/L	16.000	16.0004	100.0	21828	3.80	107245	2.6305	3014	3.80	46096	13.8
PFDoA 1	µg/L	16.000	15.7783	98.6	24757	4.10	15022	2.3816	2805	4.10	31087	11.3
PFTeDA 1	µg/L	16.000	16.3225	102.0	31003	4.37	30345	2.3966	2334	4.37	12316	7.5
PFTeDA 1	µg/L	16.000	16.3044	101.9	34163	4.60	49626	2.6409	1681	4.60	40683	4.9
PFBS 1	µg/L	16.000	15.8371	99.0	3949	1.36	65729	2.4287	1813	1.36	19788	45.9
PFHxS 1	µg/L	16.000	16.1715	101.1	3079	2.08	25365	2.8354	1617	2.09	9298	52.5
PFOS 1	µg/L	16.000	15.8549	99.1	2484	2.90	18260	2.4738	1351	2.89	6004	54.4
MeFOSA 1	µg/L	16.000	16.0910	100.6	2781	5.20	165	1.1133	2518	5.20	331	90.5
EtFOSA 1	µg/L	16.000	15.2328	95.2	2814	5.33	162	1.2535	2572	5.33	628	91.4
13C2-PFHxA	µg/L	100.000	106.5774	106.6	7486	1.70	1339		--	--	--	--
13C4-PFHpA	µg/L	100.000	105.3078	105.3	10178	2.15	1472		--	--	--	--
13C4-PFOA	µg/L	100.000	103.8713	103.9	10008	2.62	2025		--	--	--	--
13C5-PFNA	µg/L	100.000	105.5791	105.6	7986	3.07	1223		--	--	--	--
13C2-PFDA	µg/L	100.000	103.9927	104.0	6798	3.46	1113		--	--	--	--
13C2-PFUnA	µg/L	100.000	106.6444	106.6	8298	3.80	1482		--	--	--	--
13C2-PFDoA	µg/L	100.000	102.7682	102.8	10395	4.11	1388		--	--	--	--
13C2-PFTeDA	µg/L	100.000	103.1579	103.2	12936	4.60	2760		--	--	--	--
13C3-PFBS	µg/L	100.000	105.3791	105.4	1626	1.36	2038		--	--	--	--
18O2-PFHxS	µg/L	100.000	106.8898	106.9	1086	2.11	611		--	--	--	--
13C4-PFOS	µg/L	100.000	104.2575	104.3	1004	2.95	406		--	--	--	--
D3-MeFOSA	µg/L	100.000	102.7561	102.8	2498	5.21	126		--	--	--	--
D5-EtFOSA	µg/L	100.000	107.2623	107.3	2245	5.33	169		--	--	--	--

PFHxA 1

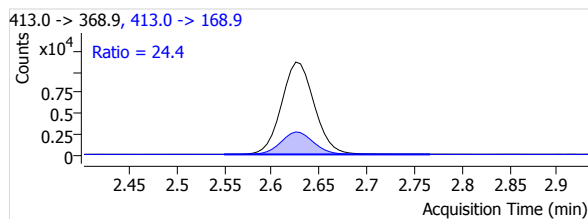
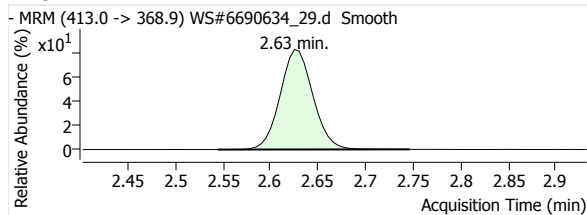


PFHpA 1

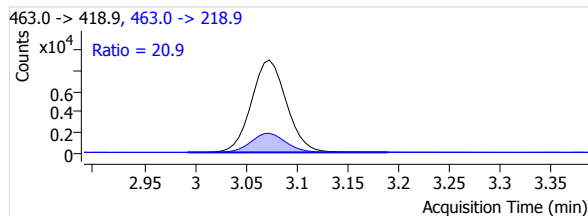
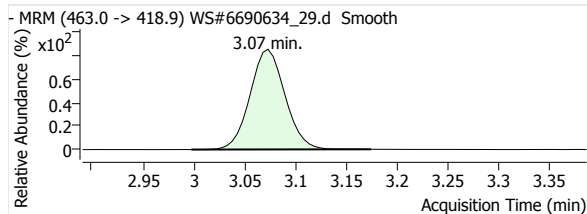


Quantitative Analysis Report

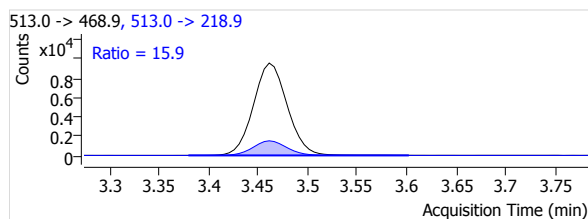
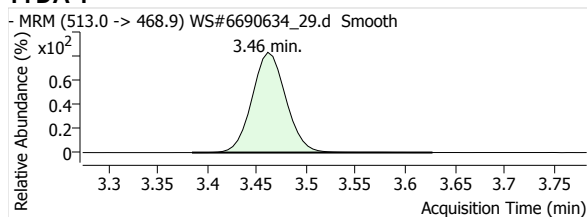
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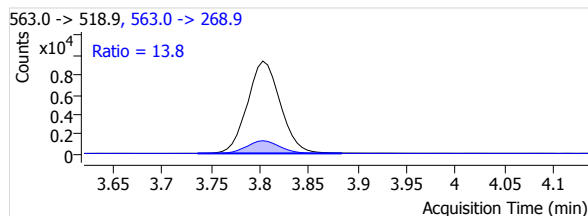
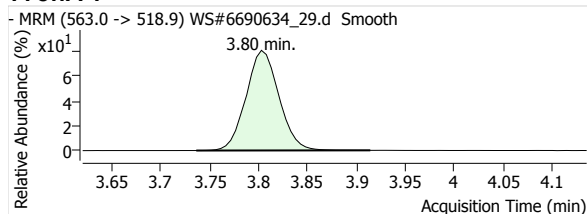
PFNA 1



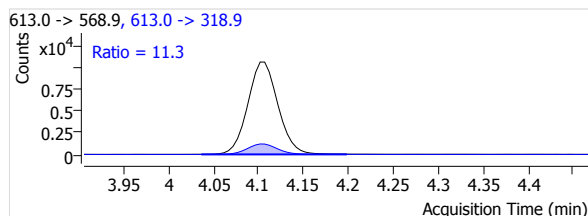
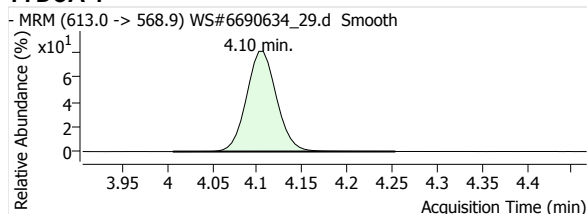
PFDA 1



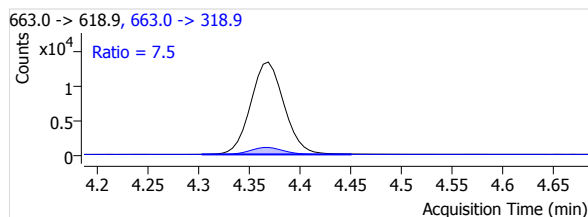
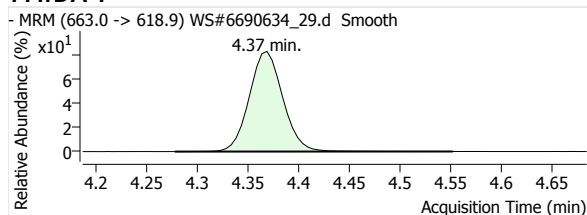
PFUnA 1



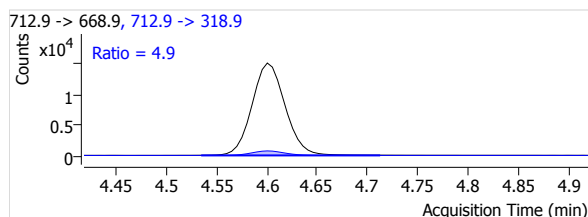
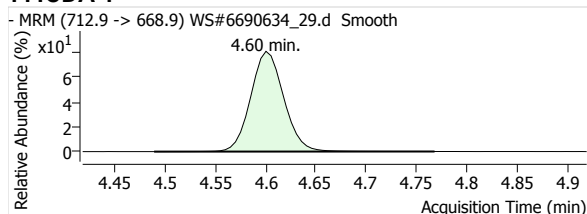
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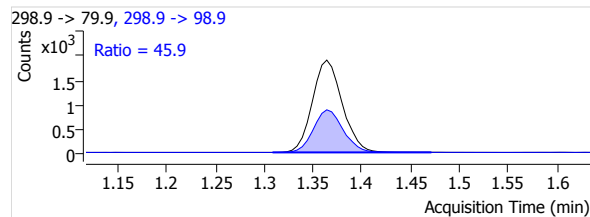
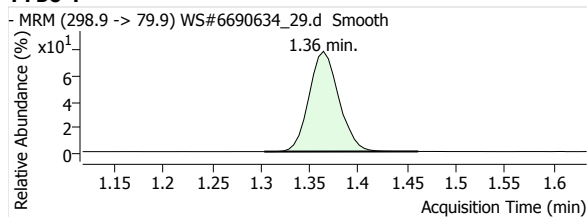


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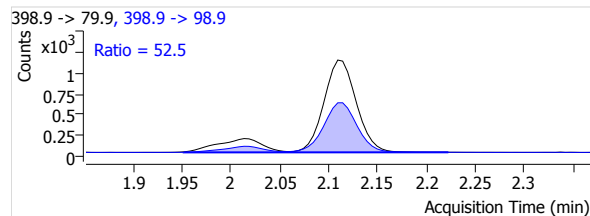
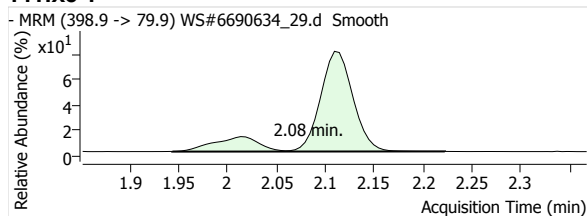


Quantitative Analysis Report

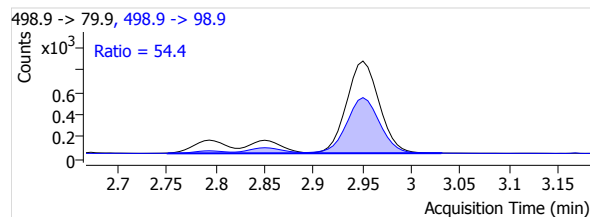
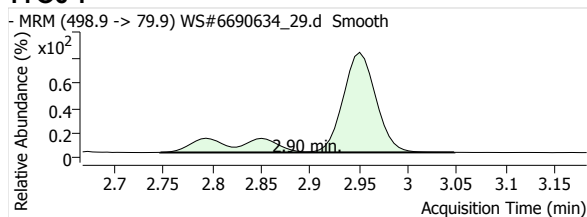
PFBS 1



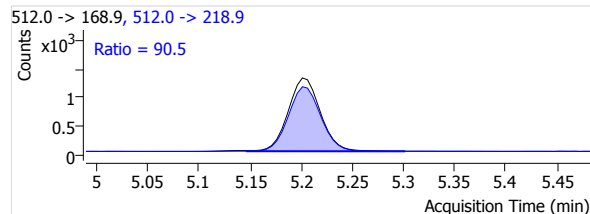
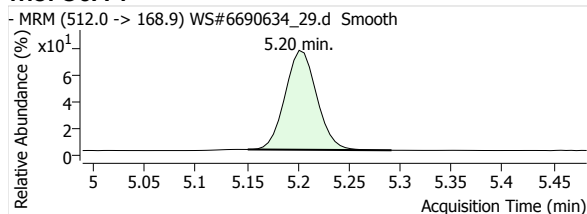
PFHxS 1



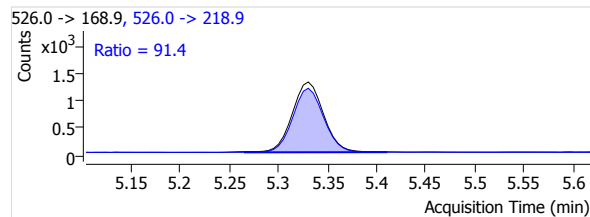
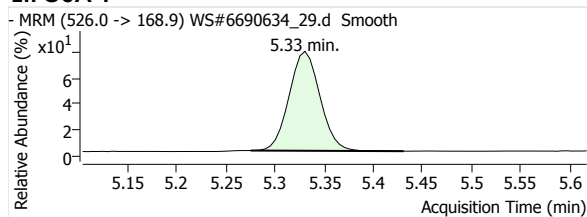
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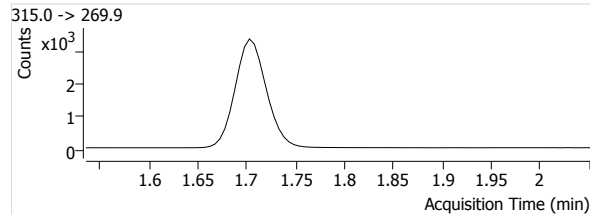
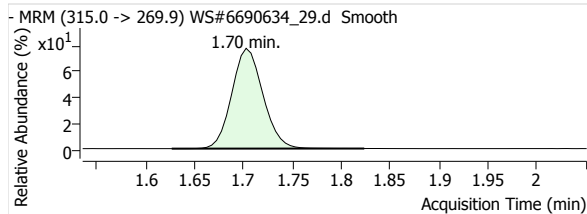
MeFOSA 1



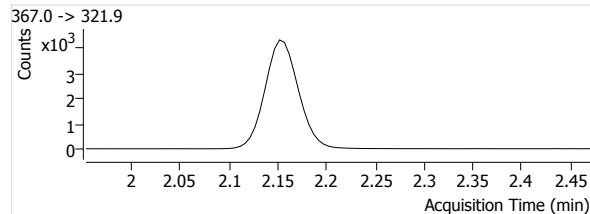
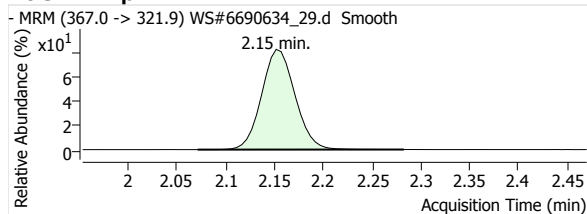
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13C2-PFHxA

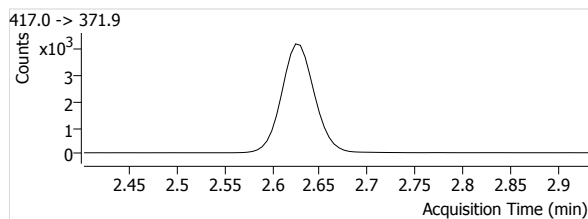
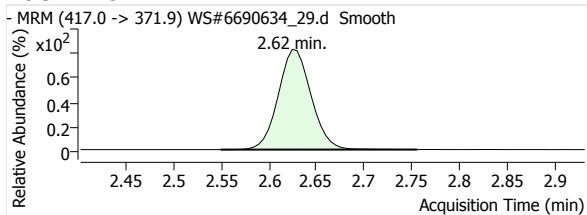


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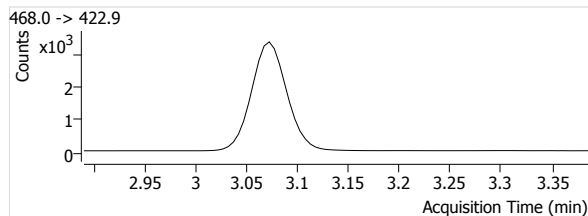
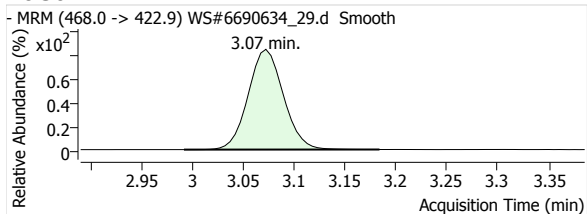


Quantitative Analysis Report

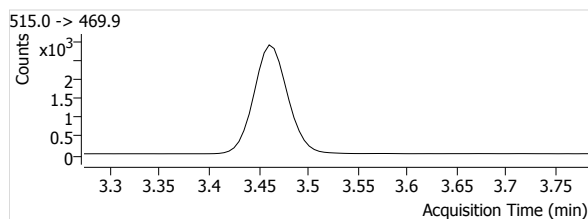
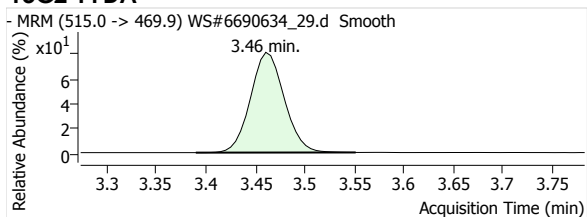
13C4-PFOA



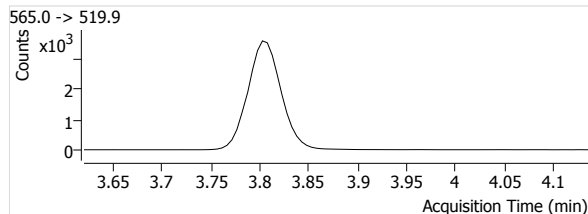
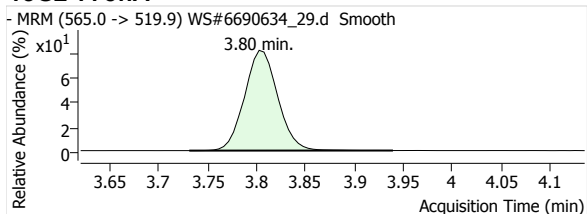
13C5-PFNA



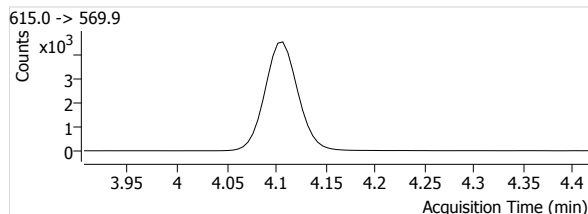
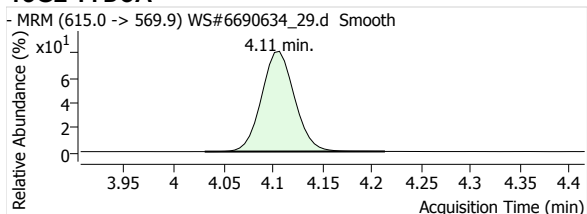
13C2-PFDA



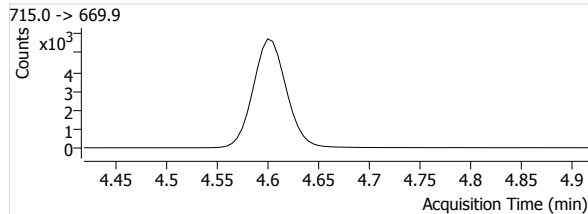
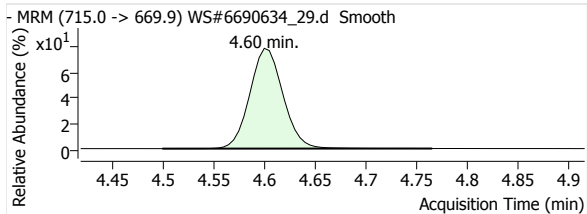
13C2-PFUnA



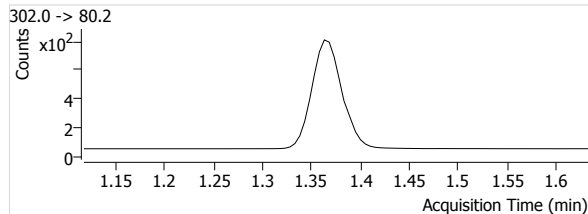
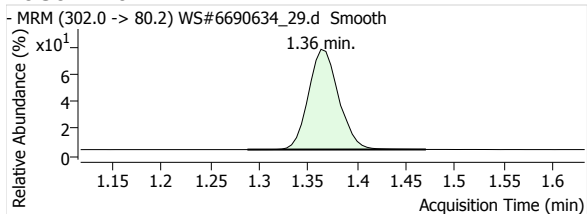
13C2-PFDoA



13C2-PFTeDA

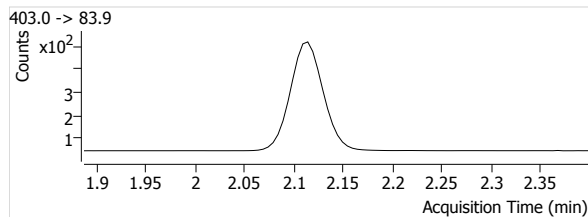
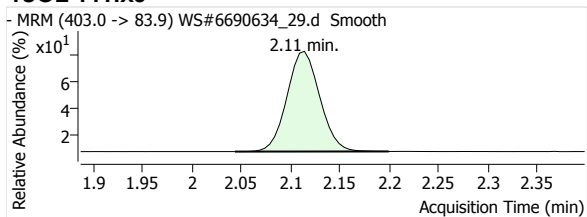


13C3-PFBS

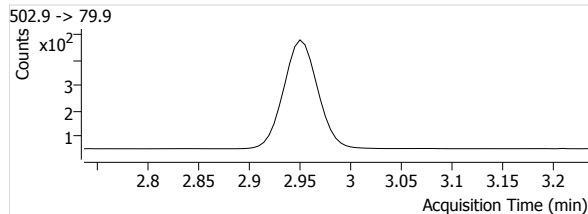
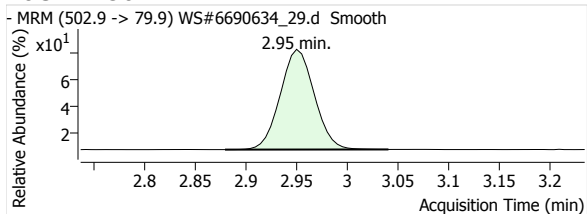


Quantitative Analysis Report

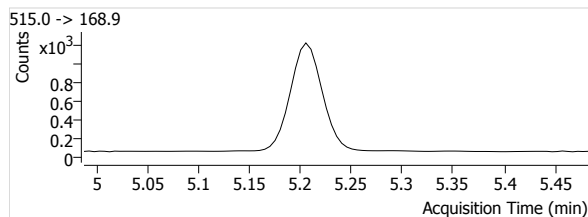
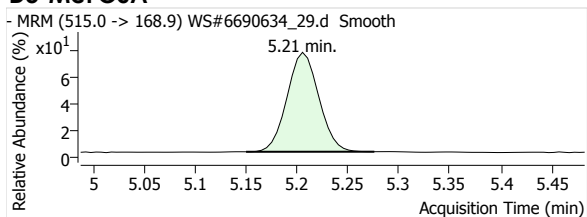
18O2-PFHxS



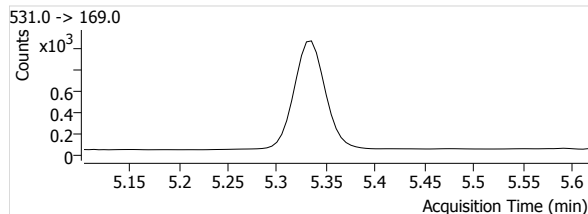
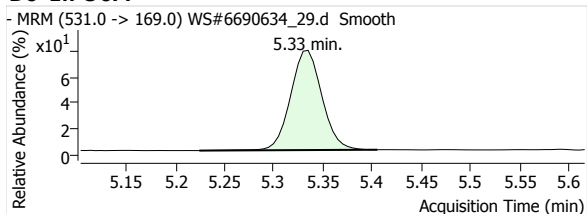
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



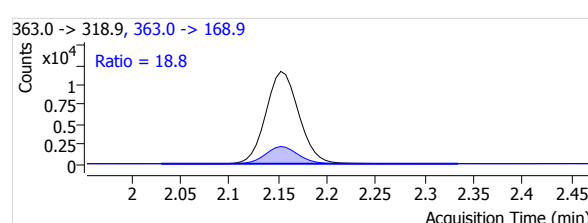
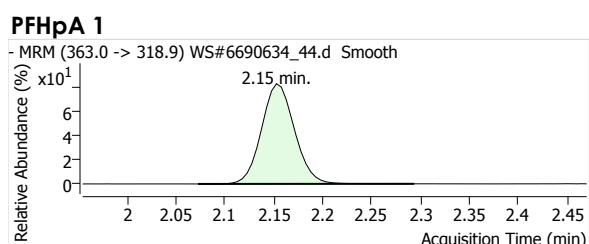
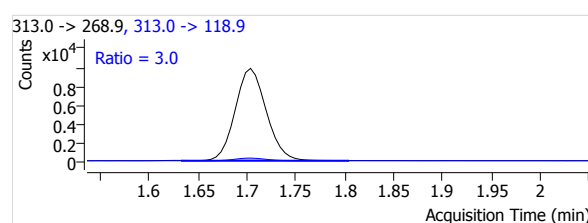
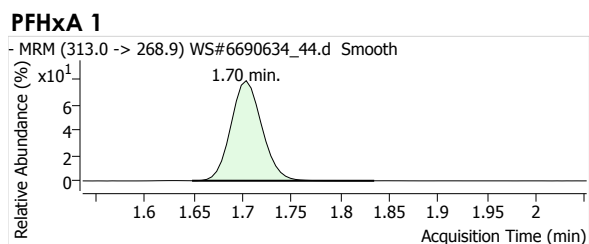
Quantitative Analysis Report

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bin

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 Acq. Method File PFAS.m
 Acq. Date-Time 2020/04/22 2:59:07 AM
 Comment -
 User Defined

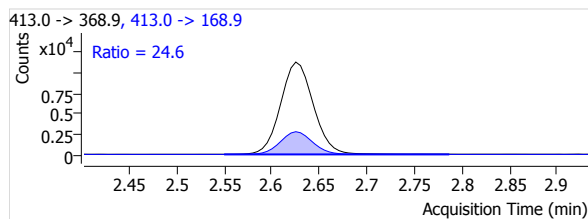
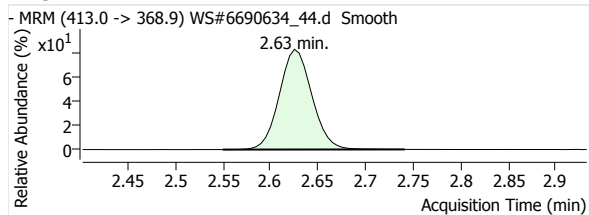
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 Instrument LCMS04
 Position P1-A5
 Dil. 1.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	16.000	16.0973	100.6	21607	1.70	47416	2.8937	640	1.70	3643	3.0
PFHpA 1	µg/L	16.000	15.9606	99.8	27440	2.15	85408	2.6703	5152	2.15	19073	18.8
PFOA 1	µg/L	16.000	15.9158	99.5	26816	2.63	12746	2.6800	6598	2.63	23181	24.6
PFNA 1	µg/L	16.000	15.6571	97.9	21636	3.07	12194	2.6814	4516	3.07	16832	20.9
PFDA 1	µg/L	16.000	16.2931	101.8	22751	3.46	59512	3.3394	3654	3.46	6812	16.1
PFUnA 1	µg/L	16.000	16.0083	100.1	21536	3.80	27644	2.6318	3086	3.80	47321	14.3
PFDoA 1	µg/L	16.000	16.0240	100.2	25278	4.10	11975	2.4183	2843	4.10	527573	11.2
PFTeDA 1	µg/L	16.000	16.0460	100.3	30891	4.36	19941	2.3568	2299	4.36	20157	7.4
PFTeDA 1	µg/L	16.000	16.0646	100.4	34113	4.60	30069	2.6027	1691	4.60	9591	5.0
PFBS 1	µg/L	16.000	16.1039	100.6	4012	1.36	12850	2.4689	1869	1.36	11950	46.6
PFHxS 1	µg/L	16.000	15.7641	98.5	3022	2.08	202667	2.7651	1628	2.09	33849	53.9
PFOS 1	µg/L	16.000	16.6299	103.9	2556	2.90	3311	2.5925	1388	2.89	3193	54.3
MeFOSA 1	µg/L	16.000	16.2410	101.5	2846	5.20	158	1.1236	2583	5.20	598	90.8
EtFOSA 1	µg/L	16.000	17.0873	106.8	2989	5.33	290	1.4046	2638	5.33	619	88.3
13C2-PFHxA	µg/L	100.000	106.3069	106.3	7467	1.70	1211		--	--	--	--
13C4-PFHpA	µg/L	100.000	106.3218	106.3	10276	2.15	1530		--	--	--	--
13C4-PFOA	µg/L	100.000	103.8505	103.9	10006	2.62	1823		--	--	--	--
13C5-PFNA	µg/L	100.000	106.6764	106.7	8069	3.07	1077		--	--	--	--
13C2-PFDA	µg/L	100.000	104.2221	104.2	6813	3.46	1006		--	--	--	--
13C2-PFUnA	µg/L	100.000	105.1664	105.2	8183	3.80	1162		--	--	--	--
13C2-PFDoA	µg/L	100.000	103.3416	103.3	10453	4.10	1127		--	--	--	--
13C2-PFTeDA	µg/L	100.000	104.5215	104.5	13107	4.60	2700		--	--	--	--
13C3-PFBS	µg/L	100.000	105.3143	105.3	1625	1.36	447		--	--	--	--
18O2-PFHxS	µg/L	100.000	107.5787	107.6	1093	2.11	923		--	--	--	--
13C4-PFOS	µg/L	100.000	102.3884	102.4	986	2.94	679		--	--	--	--
D3-MeFOSA	µg/L	100.000	104.1958	104.2	2533	5.21	98		--	--	--	--
D5-EtFOSA	µg/L	100.000	101.6722	101.7	2128	5.33	136		--	--	--	--

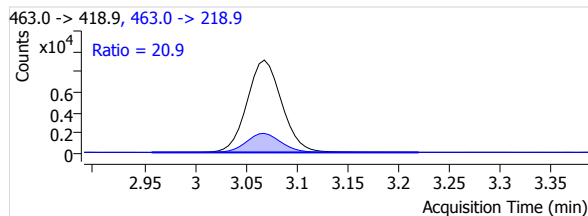
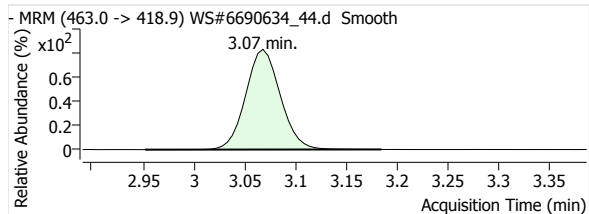


Quantitative Analysis Report

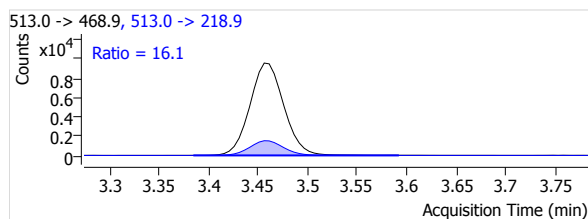
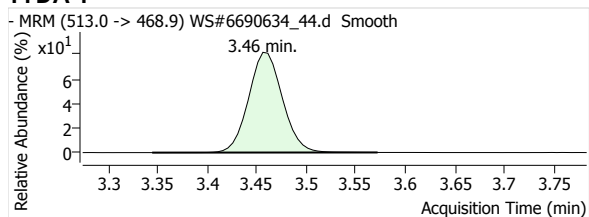
PFOA 1



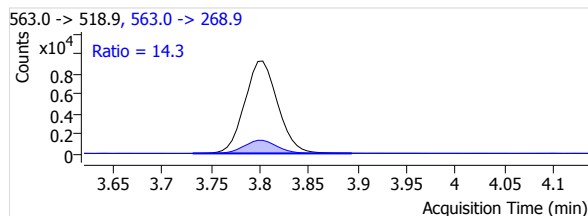
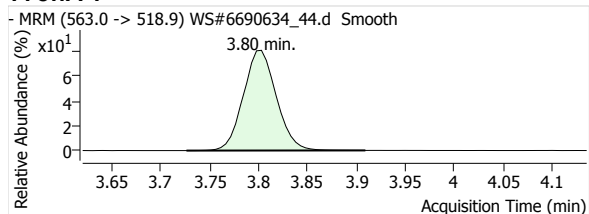
PFNA 1



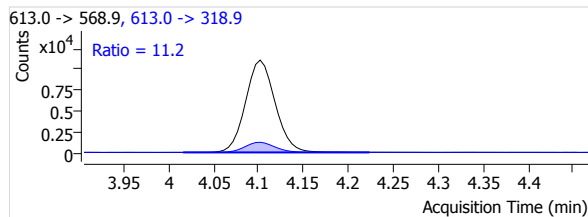
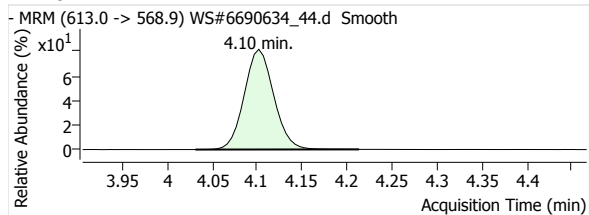
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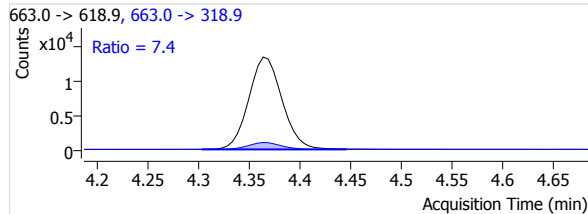
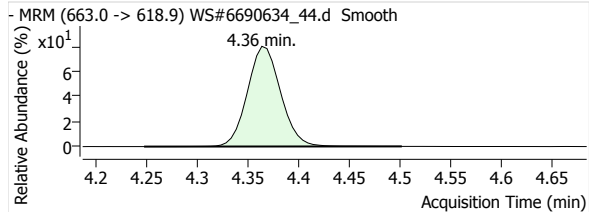
PFUnA 1



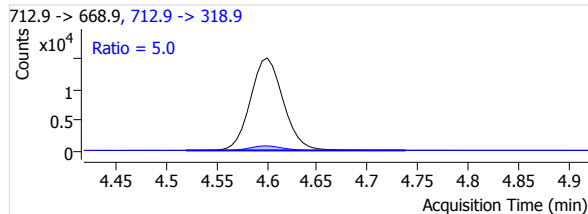
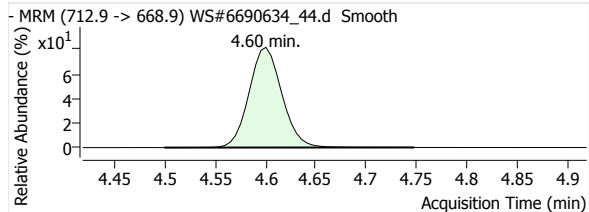
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PFTrDA 1

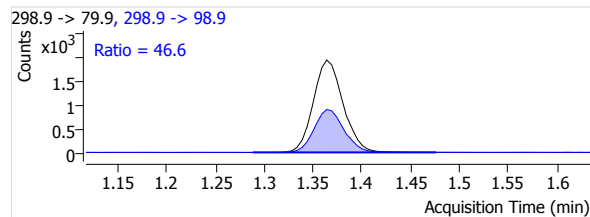
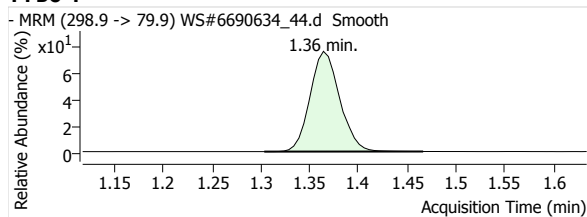


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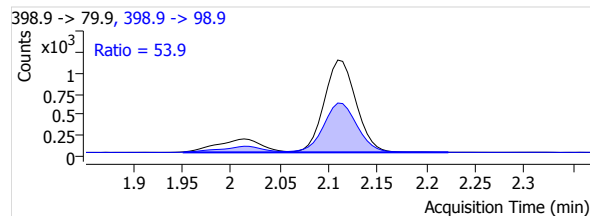
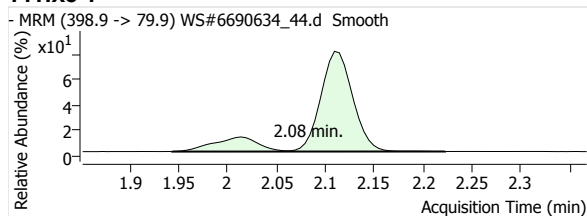


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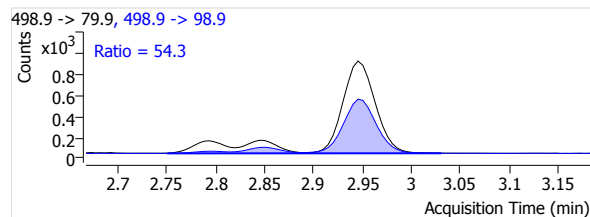
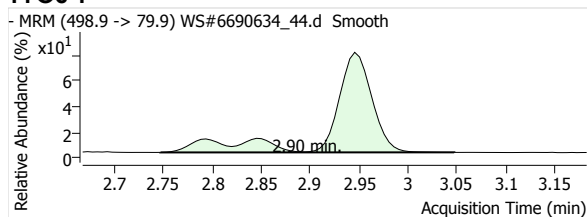
PFBS 1



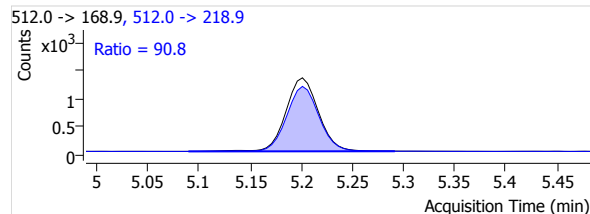
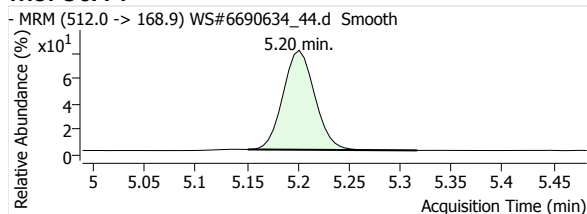
PFHxS 1



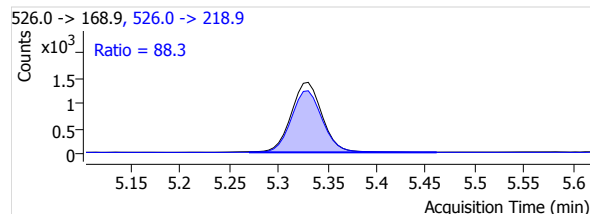
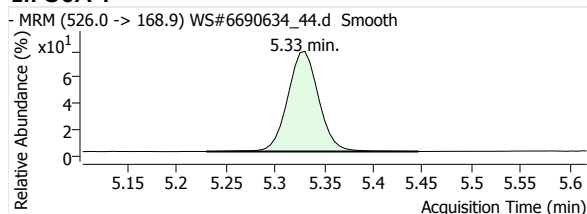
PFOS 1



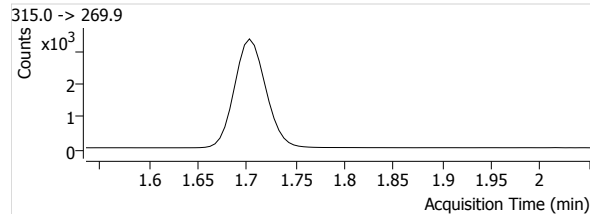
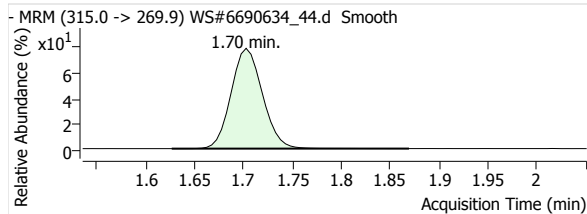
MeFOSA 1



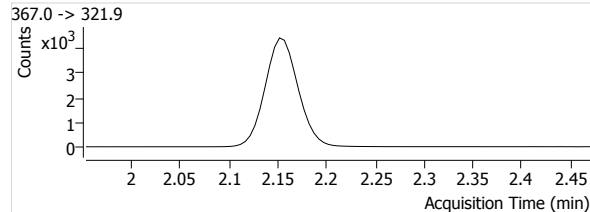
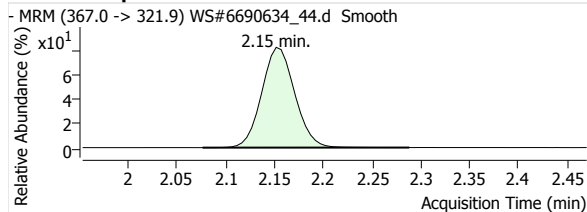
eFOSA 1



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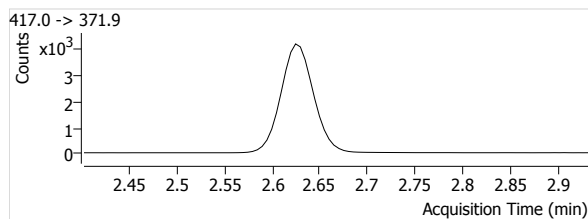
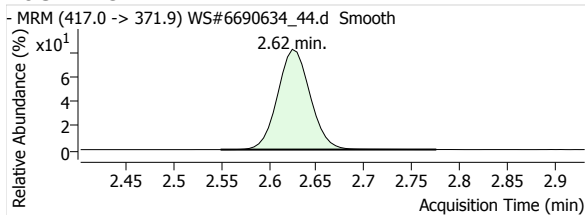


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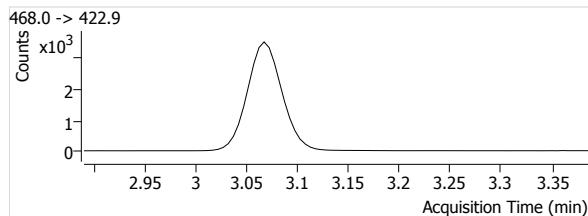
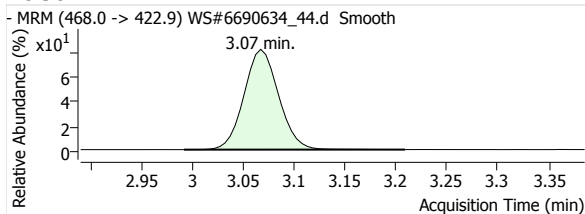


Quantitative Analysis Report

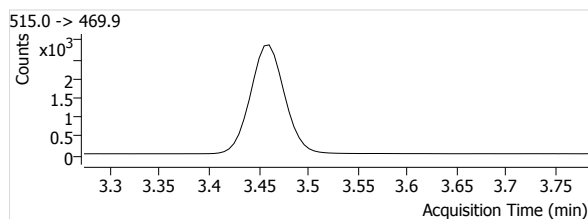
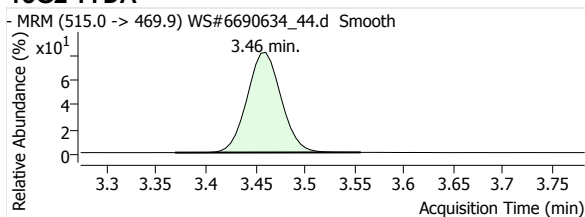
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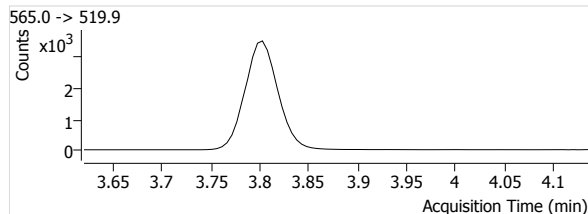
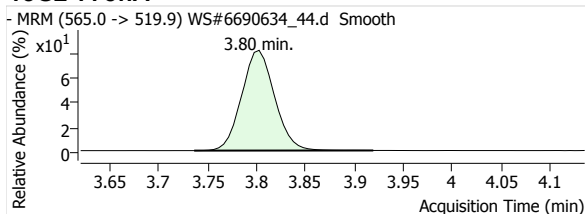
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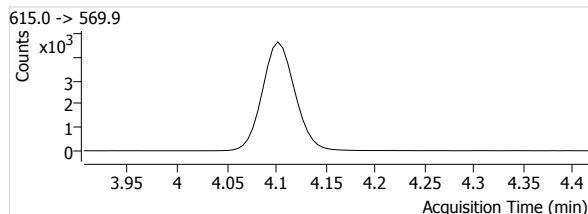
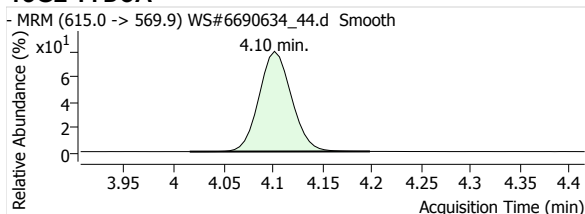
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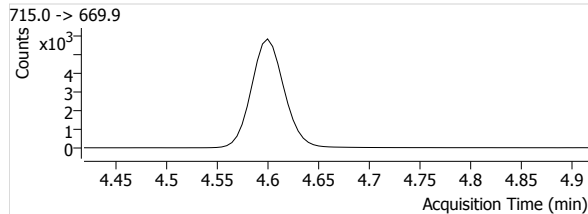
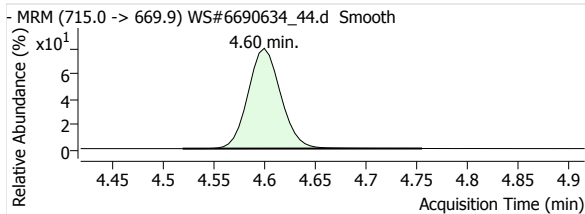
13C2-PFUnA



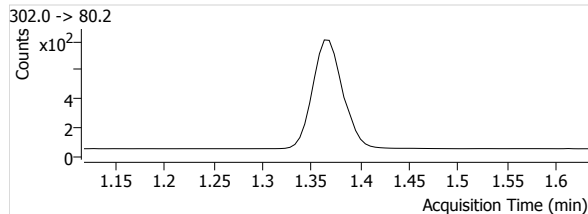
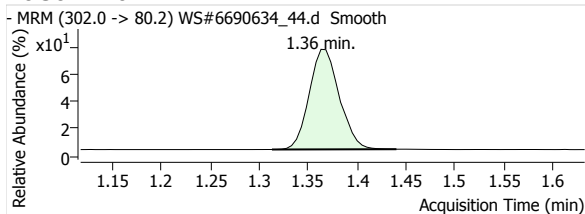
13C2-PFDoA



13C2-PFTeDA

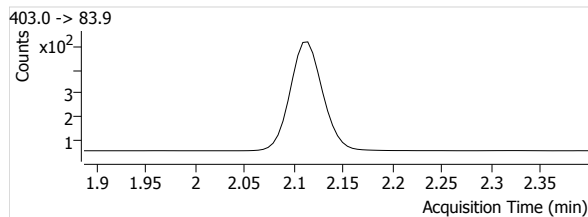
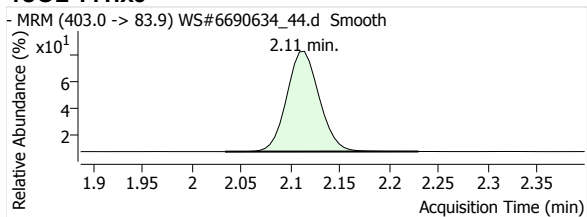


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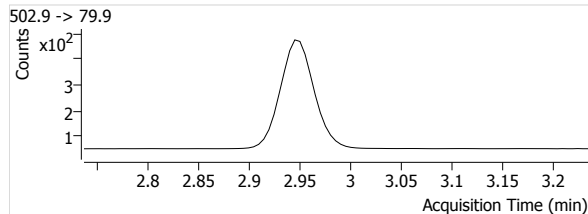
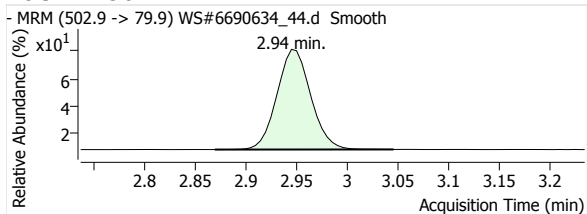


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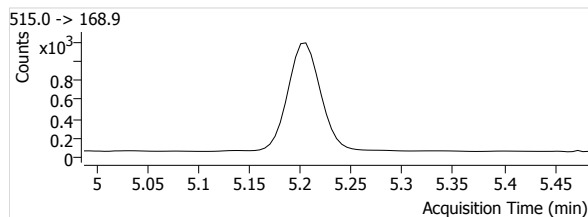
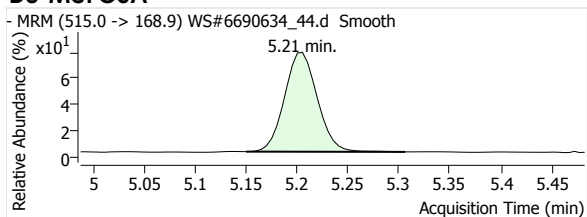
18O2-PFHxS



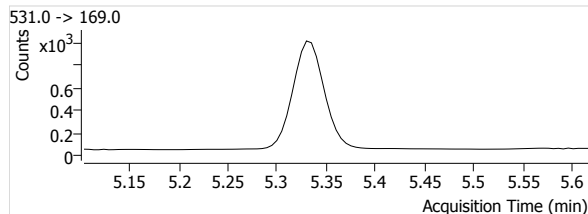
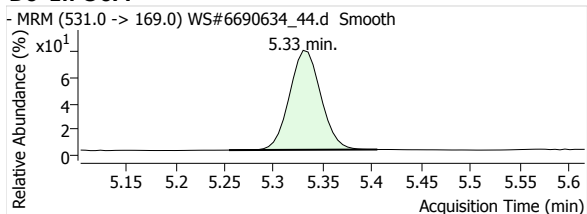
13C4-PFOS



D3-MeFOSA



D5-EtFOSA



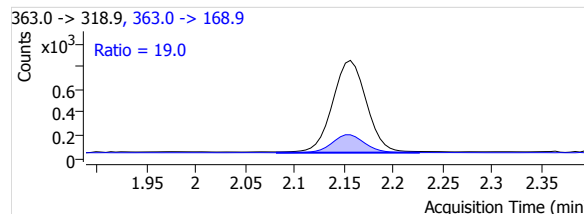
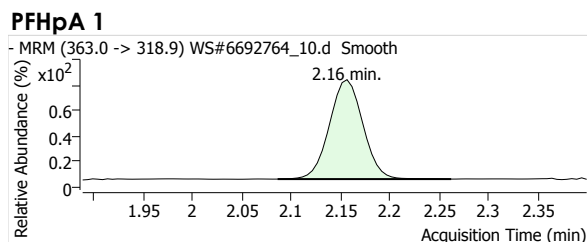
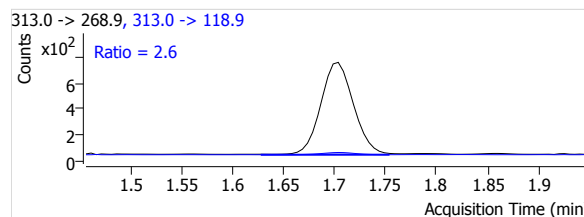
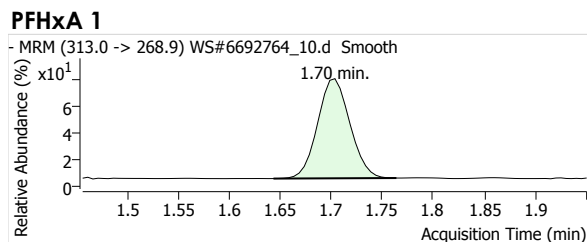
Quantitative Analysis Report

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Type QC
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/23 2:57:16 AM
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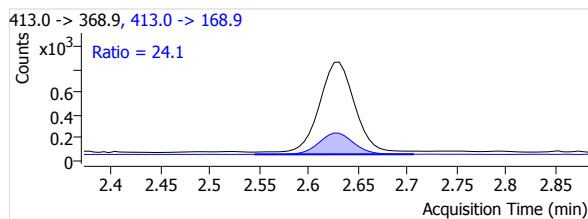
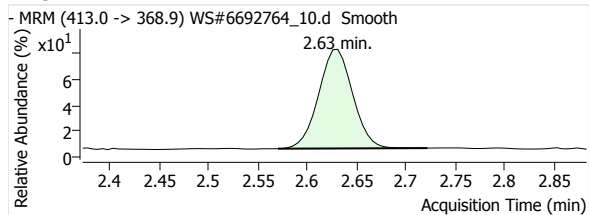
Data File WS#6692764_10.d
Instrument LCMS04
Position P1-A2
Dil. 1.0

Name	Units	Target Conc.	Final Conc.	Accuracy	Analyte Resp.	Analyte RT	Analyte S/N	Area Ratio	Conf. Resp.	Conf. RT	Conf. S/N	Ion Ratio
PFHxA 1	µg/L	0.830	0.7518	90.6	1552	1.70	1276	0.1806	40	1.70	360	2.6
PFHpA 1	µg/L	0.830	0.7539	90.8	1890	2.16	68	0.1639	360	2.15	69	19.0
PFOA 1	µg/L	0.830	0.7676	92.5	1893	2.63	357	0.1681	456	2.63	352	24.1
PFNA 1	µg/L	0.830	0.7504	90.4	1491	3.07	1313	0.1694	312	3.07	2124	20.9
PFDA 1	µg/L	0.830	0.7780	93.7	1641	3.46	252	0.2116	271	3.46	1621	16.5
PFUnA 1	µg/L	0.830	0.7868	94.8	1551	3.80	736	0.1683	227	3.80	1066	14.6
PFDoA 1	µg/L	0.830	0.8134	98.0	1784	4.10	130	0.1623	207	4.10	1894	11.6
PFTeDA 1	µg/L	0.830	0.7719	93.0	2130	4.37	4209	0.1482	154	4.37	977	7.2
PFTeDA 1	µg/L	0.830	0.8236	99.2	2388	4.60	4662	0.1662	122	4.60	1822	5.1
PFBS 1	µg/L	0.830	0.7587	91.4	278	1.36	4473	0.1543	119	1.36	3534	42.8
PFHxS 1	µg/L	0.830	0.7857	94.7	198	2.08	1094	0.1685	115	2.09	2513	58.2
PFOS 1	µg/L	0.830	0.7281	87.7	172	2.90	180	0.1552	103	2.89	30	59.7
MeFOSA 1	µg/L	0.830	0.7748	93.3	182	5.21	46	0.0666	147	5.21	138	80.8
EtFOSA 1	µg/L	0.830	0.8650	104.2	202	5.34	14	0.0865	170	5.34	89	84.2
13C2-PFHxA	µg/L	100.000	107.0095	107.0	8595	1.70	1305		--	--	--	--
13C4-PFHpA	µg/L	100.000	103.4350	103.4	11533	2.16	1212		--	--	--	--
13C4-PFOA	µg/L	100.000	104.2114	104.2	11259	2.63	2771		--	--	--	--
13C5-PFNA	µg/L	100.000	102.3250	102.3	8802	3.07	1043		--	--	--	--
13C2-PFDA	µg/L	100.000	104.0789	104.1	7757	3.46	862		--	--	--	--
13C2-PFUnA	µg/L	100.000	105.0376	105.0	9216	3.80	2710		--	--	--	--
13C2-PFDoA	µg/L	100.000	103.1235	103.1	10994	4.10	1760		--	--	--	--
13C2-PFTeDA	µg/L	100.000	102.8782	102.9	14369	4.60	3047		--	--	--	--
13C3-PFBS	µg/L	100.000	105.3185	105.3	1802	1.36	1239		--	--	--	--
18O2-PFHxS	µg/L	100.000	102.8021	102.8	1174	2.11	1259		--	--	--	--
13C4-PFOS	µg/L	100.000	104.7259	104.7	1108	2.95	422		--	--	--	--
D3-MeFOSA	µg/L	100.000	103.4052	103.4	2733	5.21	148		--	--	--	--
D5-EtFOSA	µg/L	100.000	103.4574	103.5	2334	5.34	187		--	--	--	--

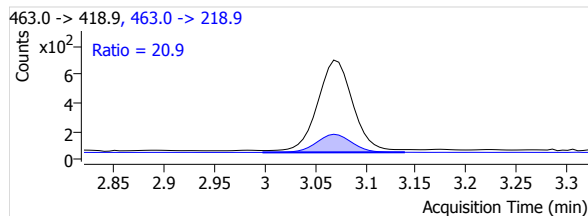
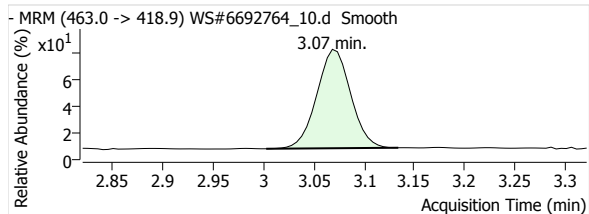


Quantitative Analysis Report

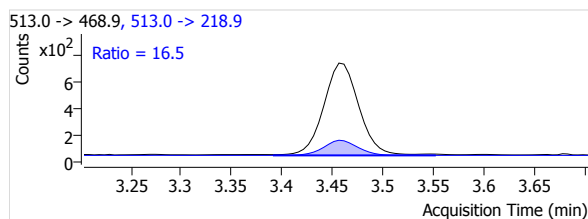
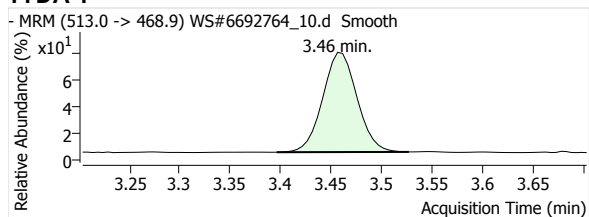
PFOA 1



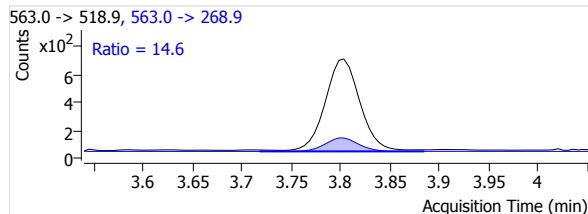
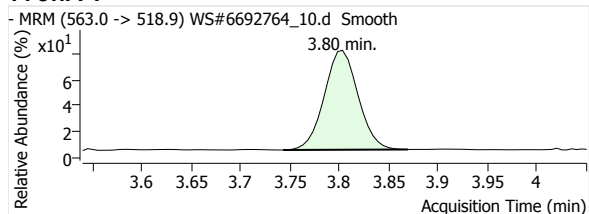
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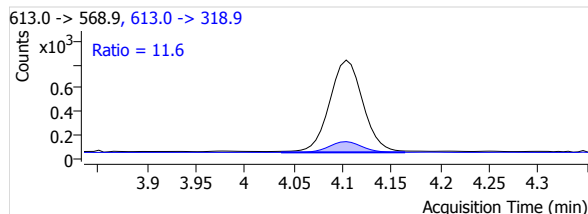
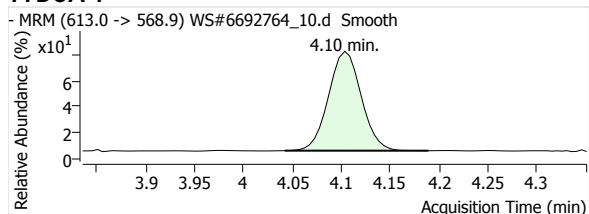
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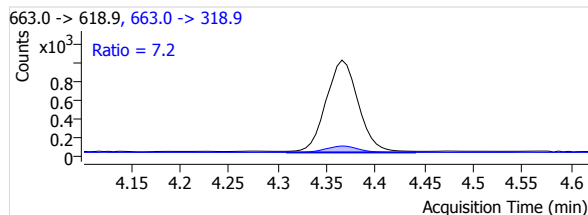
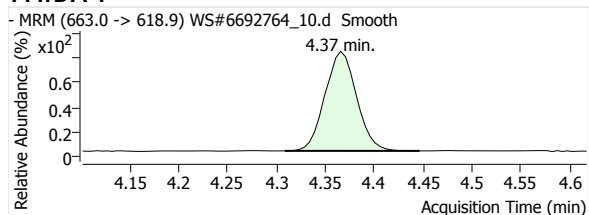
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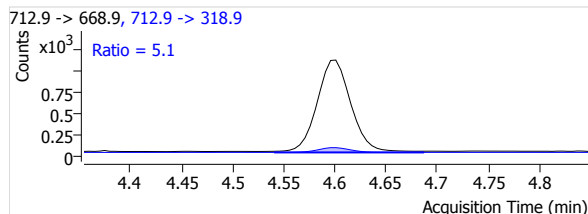
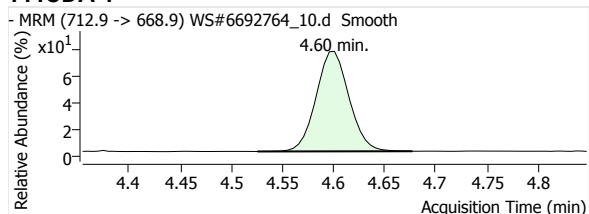
PFDaA 1



PFTrDA 1

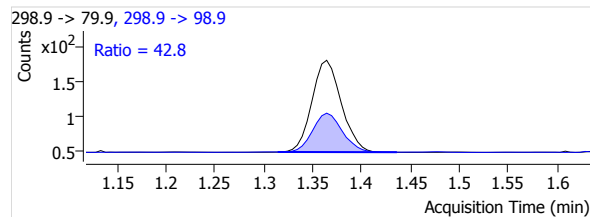
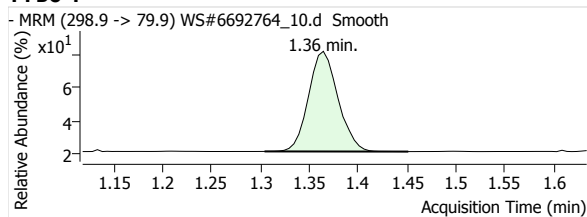


PFTeDA 1

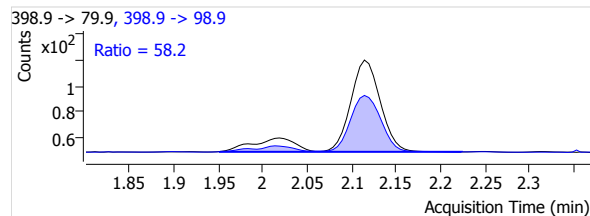
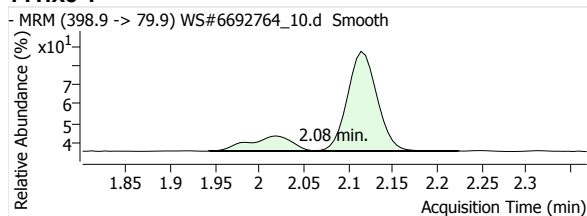


Quantitative Analysis Report

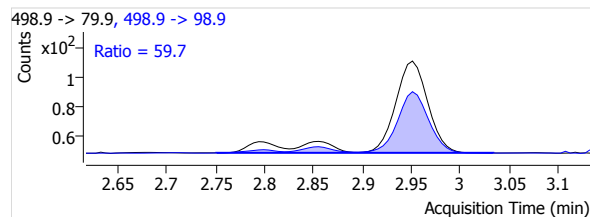
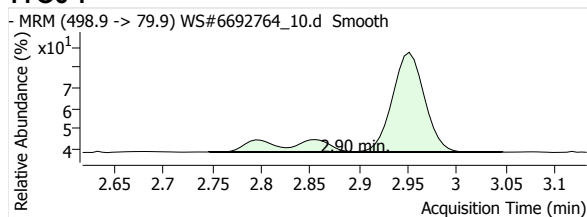
PFBS 1



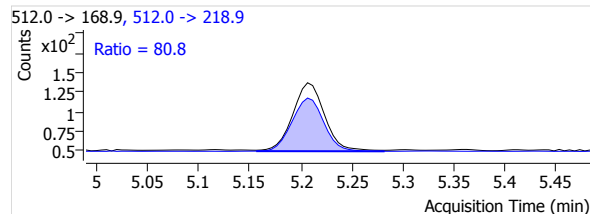
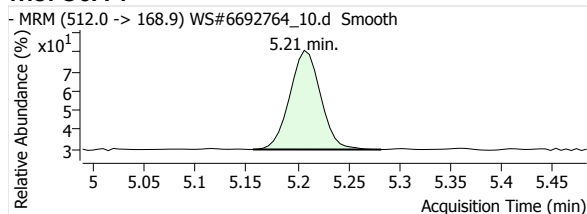
PFHxS 1



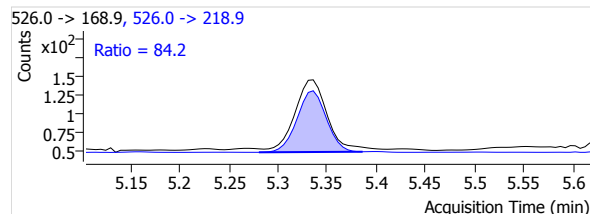
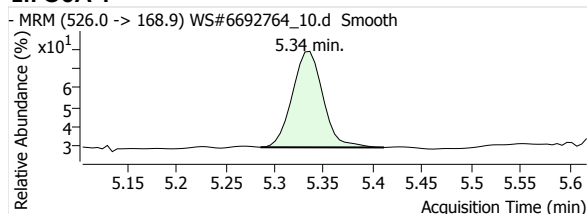
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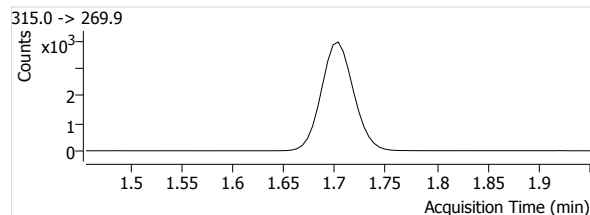
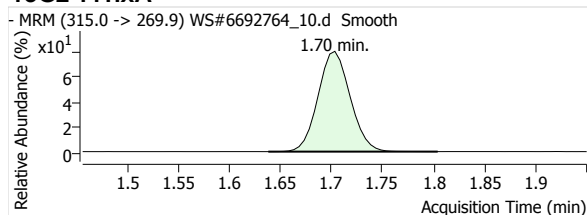
MeFOSA 1



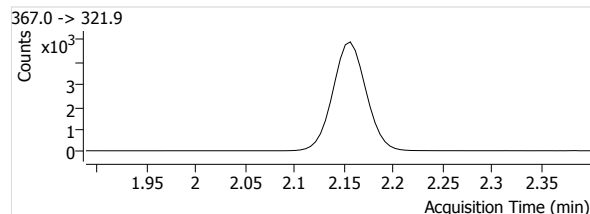
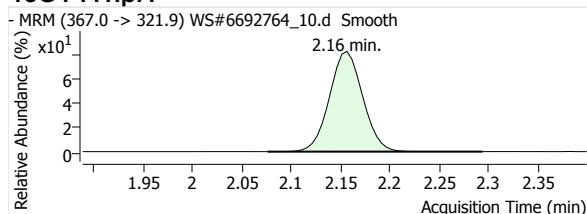
eFOSA 1



13C2-PFHxA

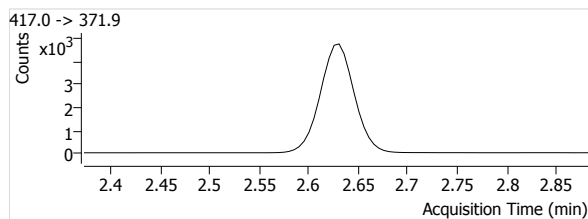
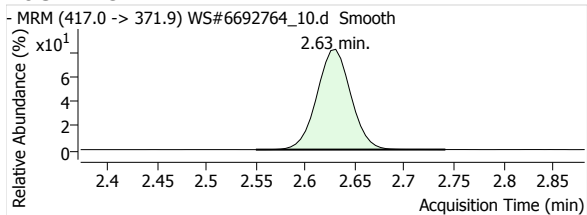


13C4-PFHpA

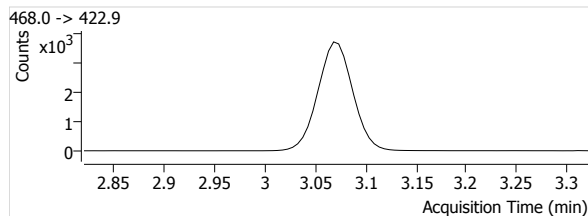
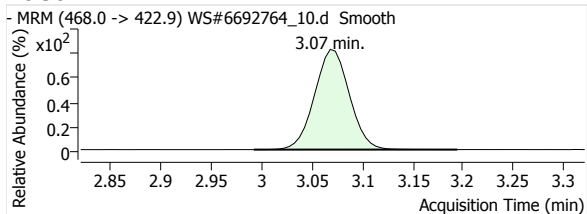


Quantitative Analysis Report

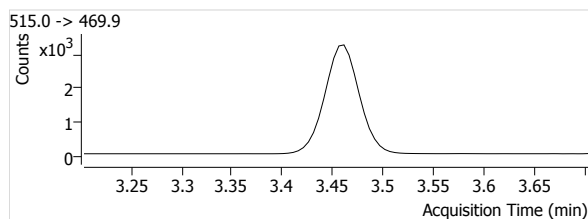
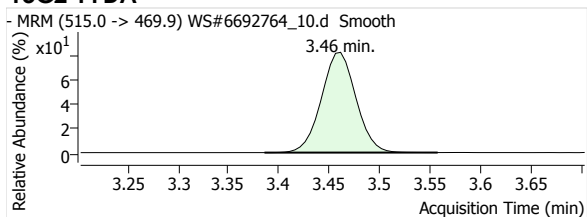
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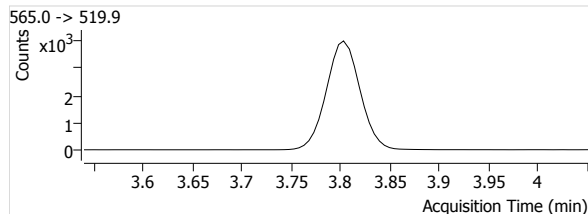
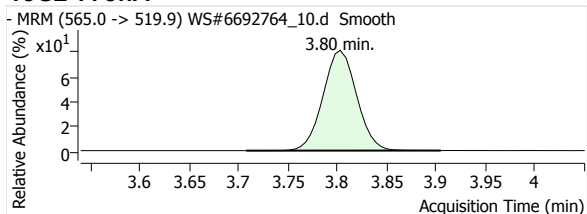
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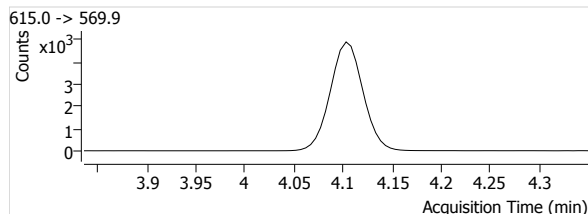
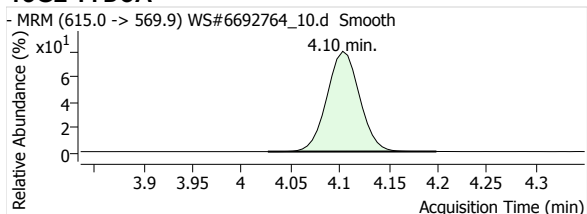
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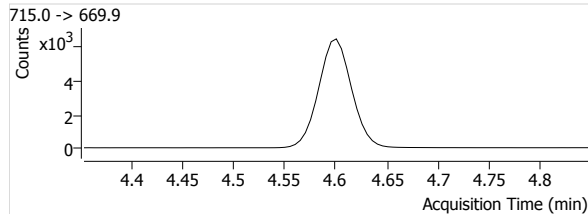
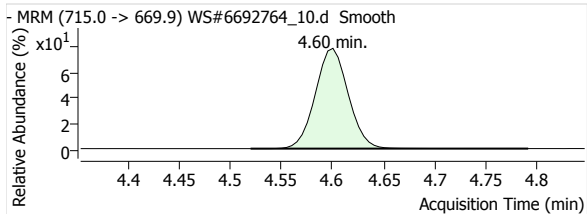
13C2-PFUnA



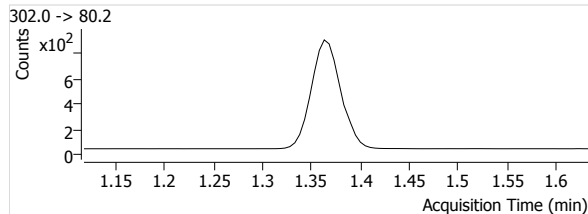
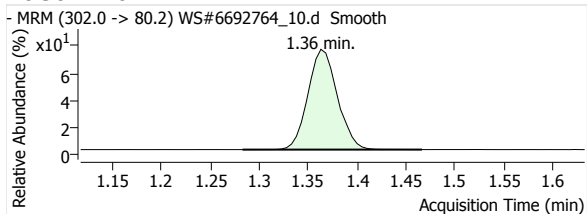
13C2-PFDoA



13C2-PFTeDA

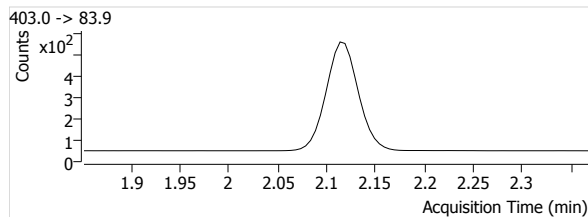
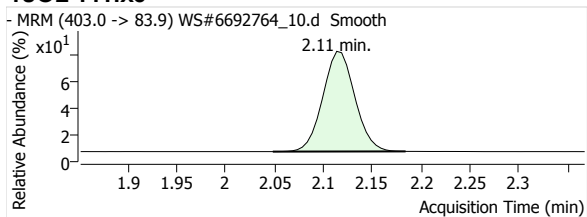


13C3-PFBS

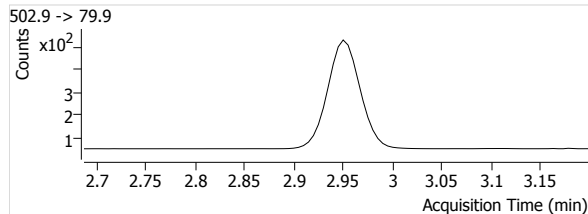
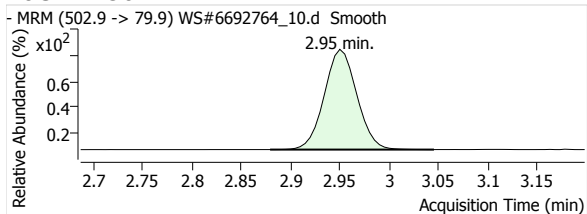


Quantitative Analysis Report

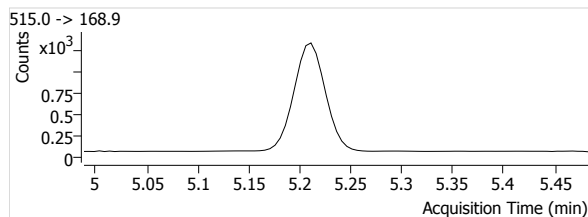
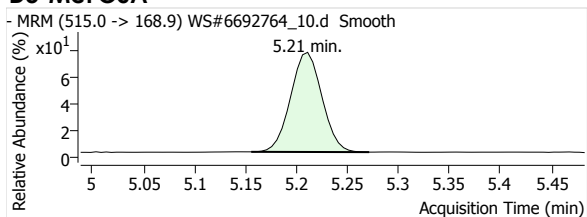
18O2-PFHxs



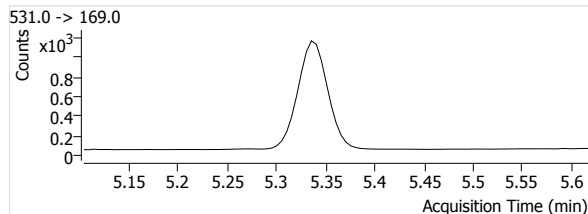
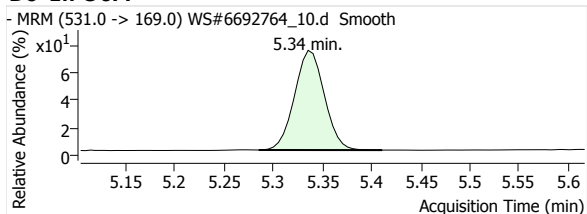
13C4-PFOS



D3-MeFOXA



D5-EtFOXA



Quantitative Analysis Report

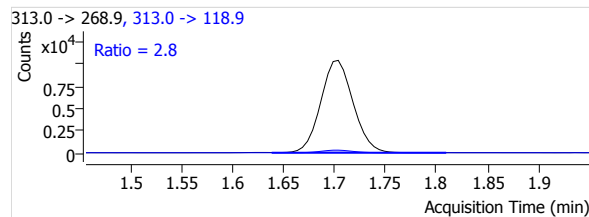
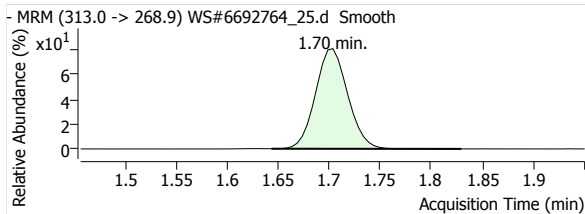
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Type CC
Acq. Method File PFAS.m
Acq. Date-Time 2020/04/23 4:41:21 AM
Comment -
User Defined

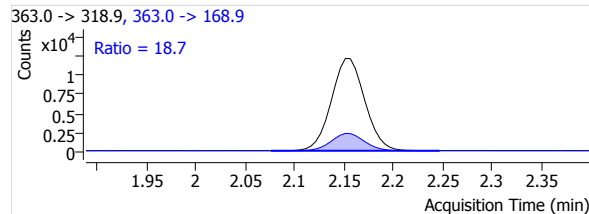
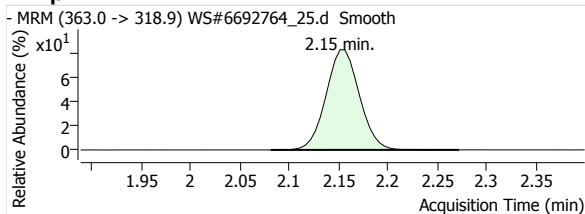
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Position P1-A5
Dil. 1.0

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PFHxA 1	µg/L	16.000	15.0067	93.8	22878	1.70	47960	2.8109	642	1.70	10358	2.8
PFHpA 1	µg/L	16.000	14.6708	91.7	28792	2.15	3830	2.5579	5381	2.15	1899	18.7
PFOA 1	µg/L	16.000	14.7053	91.9	28512	2.63	1644	2.6010	6798	2.63	2750	23.8
PFNA 1	µg/L	16.000	14.2780	89.2	22373	3.07	15862	2.5752	4752	3.07	19733	21.2
PFDA 1	µg/L	16.000	14.7580	92.2	23713	3.46	8891	3.1647	3802	3.46	2858	16.0
PFUnA 1	µg/L	16.000	15.0429	94.0	22846	3.80	24595	2.5609	3298	3.80	2449	14.4
PFDoA 1	µg/L	16.000	14.6843	91.8	25269	4.10	1054	2.3066	2914	4.10	1111	11.5
PFTrDA 1	µg/L	16.000	14.5632	91.0	32013	4.37	37213	2.2470	2305	4.37	21818	7.2
PFTeDA 1	µg/L	16.000	14.4557	90.3	34555	4.60	51473	2.4254	1708	4.60	25525	4.9
PFBS 1	µg/L	16.000	14.7896	92.4	4072	1.36	62915	2.3470	1875	1.36	23296	46.0
PFHxS 1	µg/L	16.000	14.8492	92.8	3142	2.08	24980	2.7348	1716	2.09	236791	54.6
PFOS 1	µg/L	16.000	14.7697	92.3	2644	2.90	1015	2.4147	1472	2.89	887	55.7
MeFOSA 1	µg/L	16.000	14.8452	92.8	2852	5.21	155	1.0722	2671	5.21	658	93.7
EtFOSA 1	µg/L	16.000	14.2848	89.3	2856	5.33	312	1.1985	2628	5.34	1390	92.0
13C2-PFHxA	µg/L	100.000	101.3322	101.3	8139	1.70	2541		--	--	--	--
13C4-PFHpA	µg/L	100.000	100.9507	101.0	11256	2.15	2160		--	--	--	--
13C4-PFOA	µg/L	100.000	101.4624	101.5	10962	2.63	3255		--	--	--	--
13C5-PFNA	µg/L	100.000	100.9998	101.0	8688	3.07	1551		--	--	--	--
13C2-PFDA	µg/L	100.000	100.5367	100.5	7493	3.46	2047		--	--	--	--
13C2-PFUnA	µg/L	100.000	101.6754	101.7	8921	3.80	1848		--	--	--	--
13C2-PFDoA	µg/L	100.000	102.7577	102.8	10955	4.10	2720		--	--	--	--
13C2-PFTeDA	µg/L	100.000	102.0047	102.0	14247	4.60	4769		--	--	--	--
13C3-PFBS	µg/L	100.000	101.4027	101.4	1735	1.36	795		--	--	--	--
18O2-PFHxS	µg/L	100.000	100.6130	100.6	1149	2.11	662		--	--	--	--
13C4-PFOS	µg/L	100.000	103.4972	103.5	1095	2.95	815		--	--	--	--
D3-MeFOSA	µg/L	100.000	100.6432	100.6	2660	5.21	135		--	--	--	--
D5-EtFOSA	µg/L	100.000	105.6294	105.6	2383	5.34	178		--	--	--	--

PFHxA 1

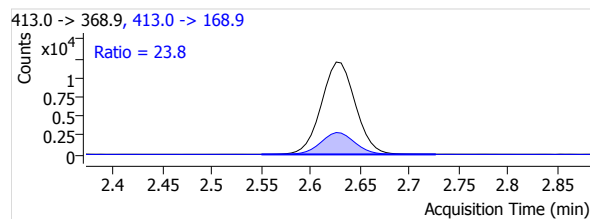
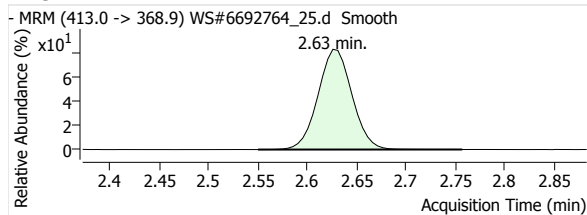


PFHpA 1

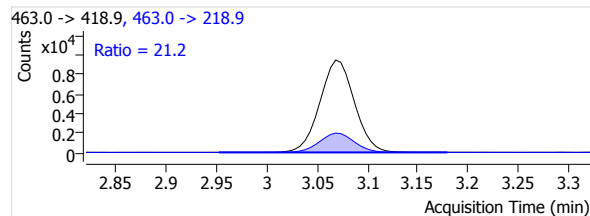
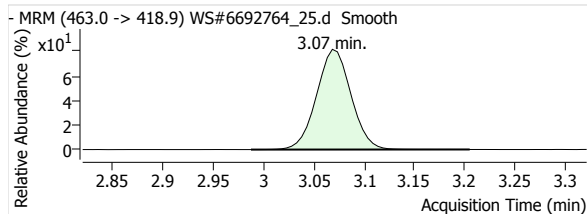


Quantitative Analysis Report

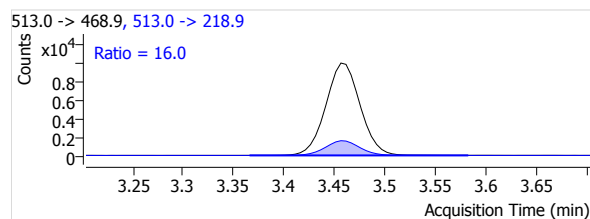
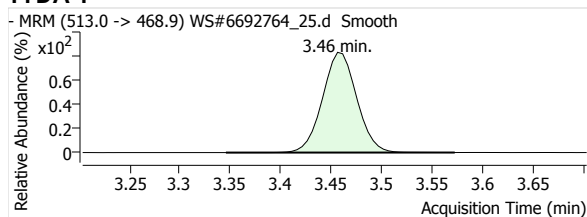
PFOA 1



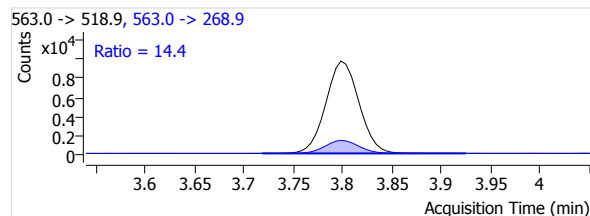
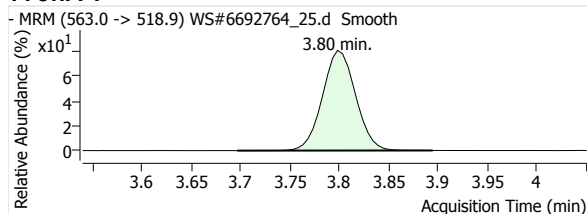
PFNA 1



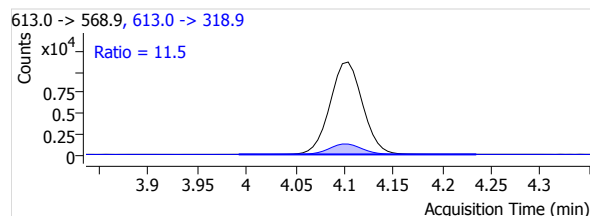
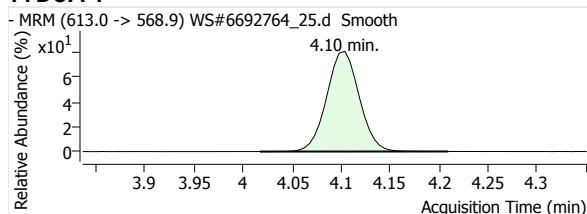
PFDA 1



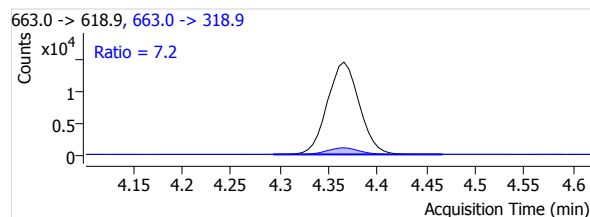
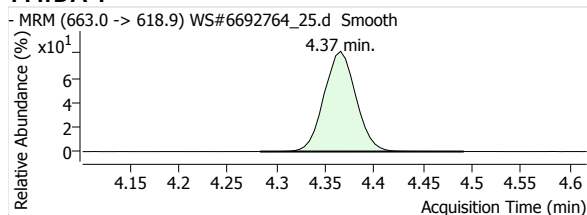
PFUnA 1



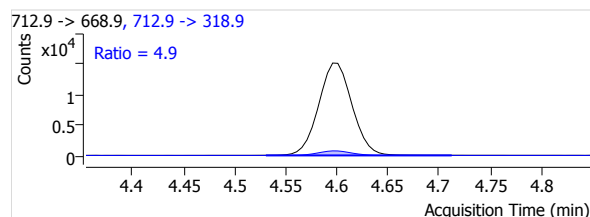
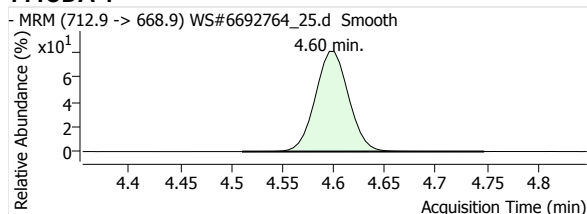
PFDaA 1



PFTrDA 1

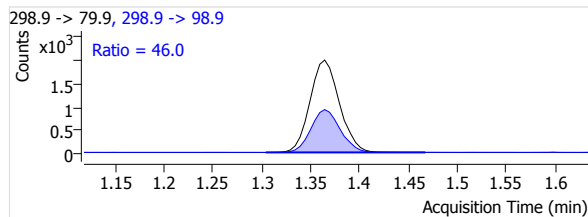
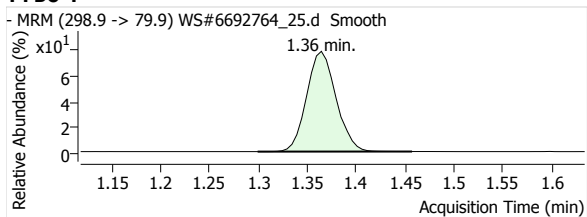


PFTeDA 1

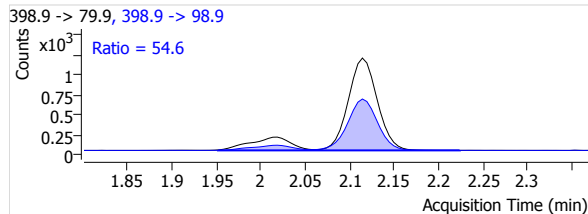
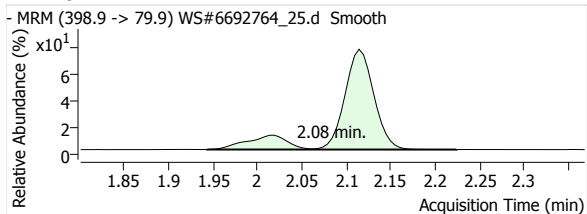


Quantitative Analysis Report

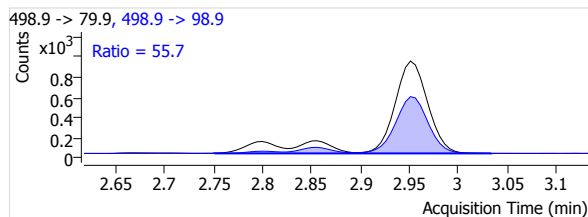
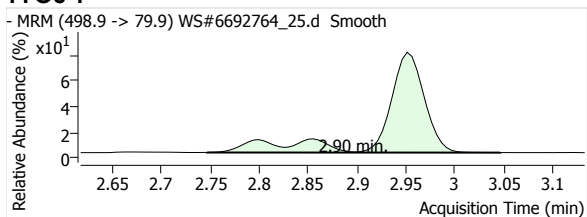
PFBS 1



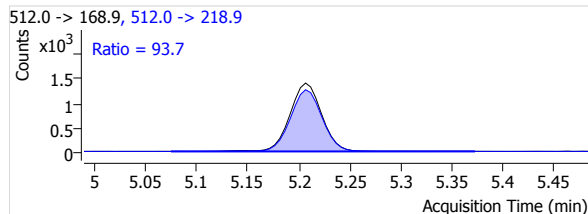
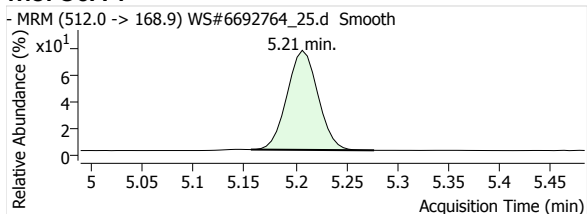
PFHxS 1



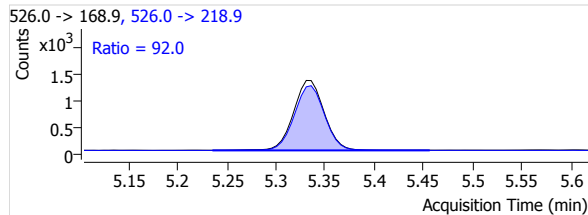
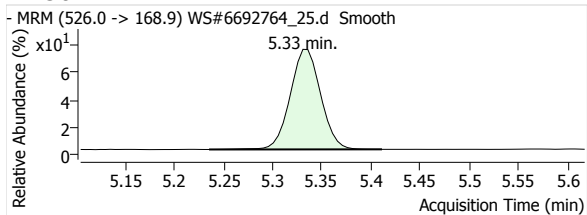
PFOS 1



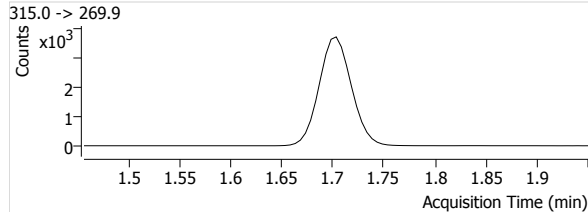
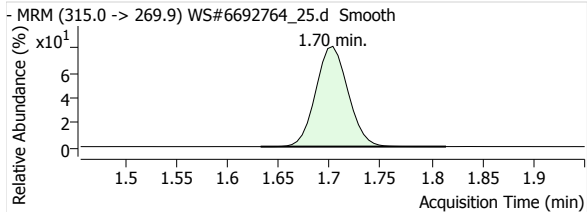
MeFOSA 1



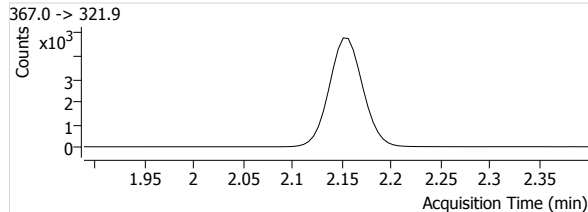
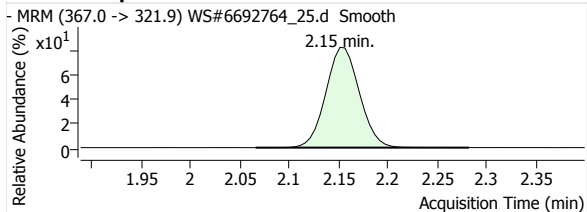
eFOSA 1



13C2-PFHxA

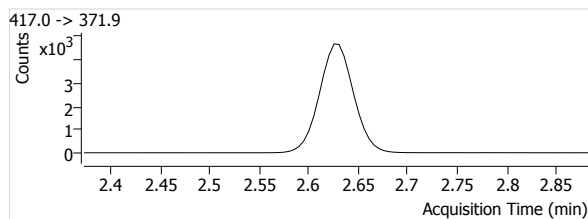
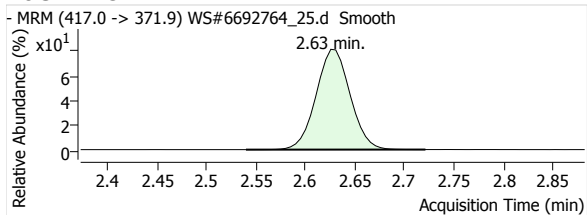


13C4-PFHpA

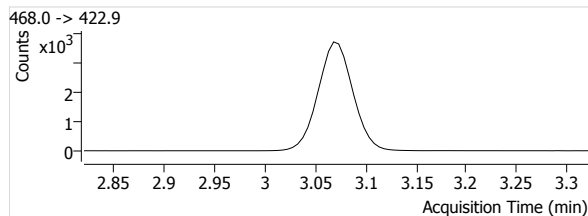
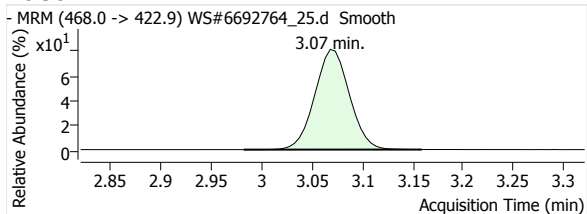


Quantitative Analysis Report

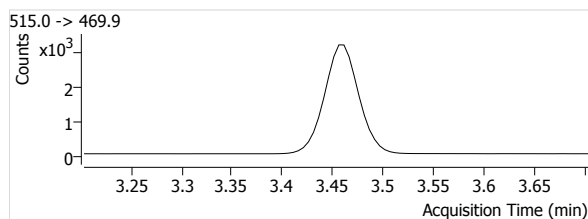
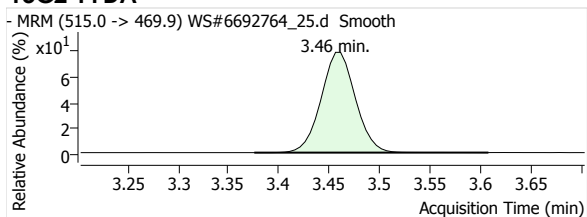
13C4-PFOA



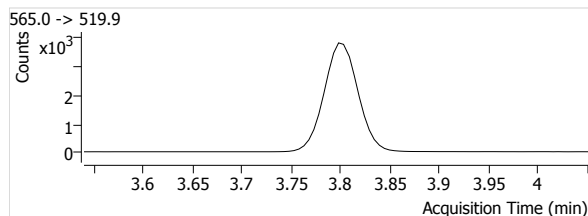
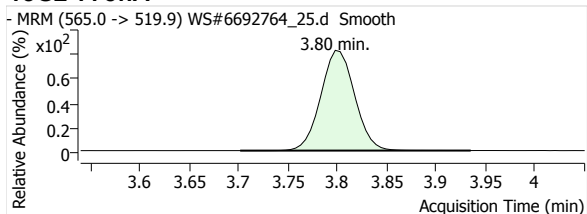
13C5-PFNA



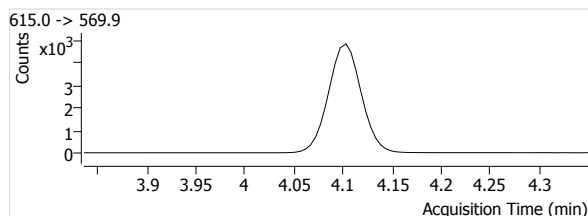
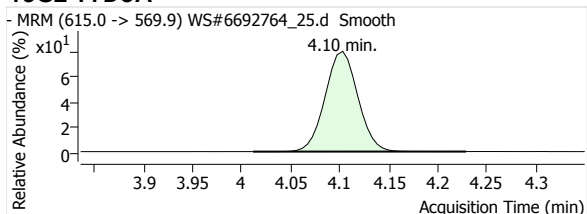
13C2-PFDA



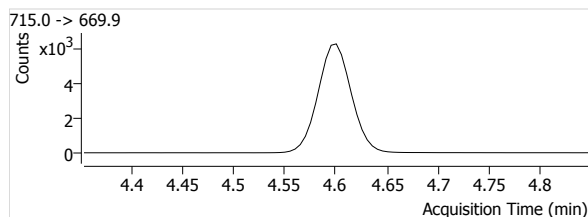
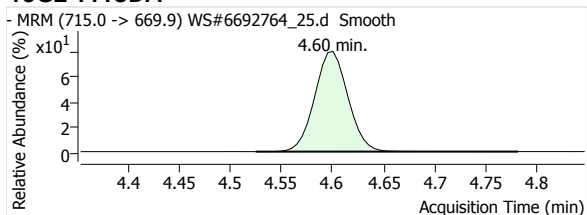
13C2-PFUnA



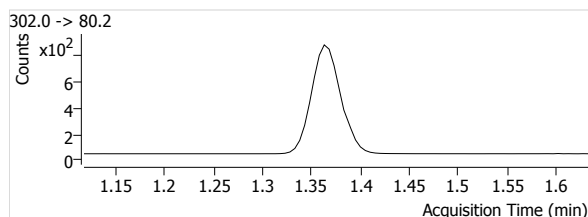
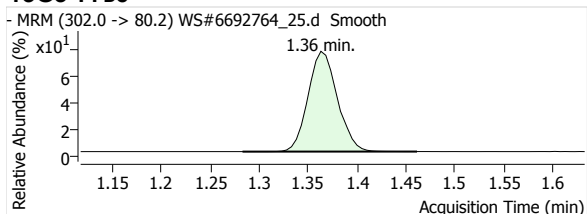
13C2-PFDoA



13C2-PFTeDA

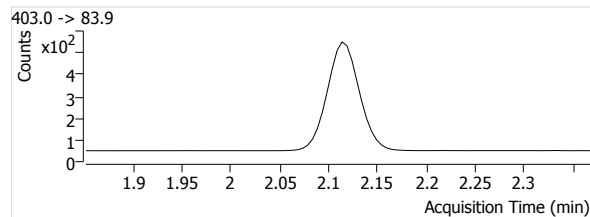
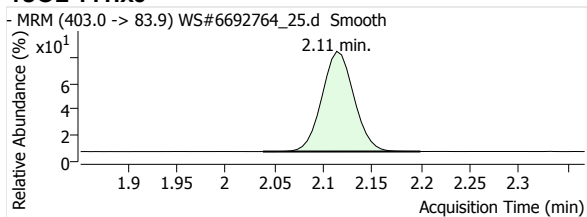


13C3-PFBS

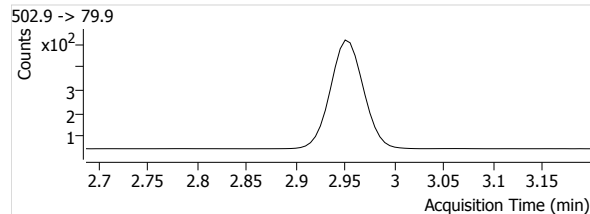
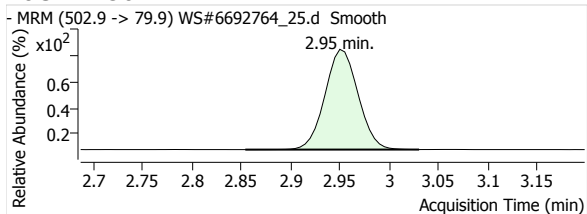


Quantitative Analysis Report

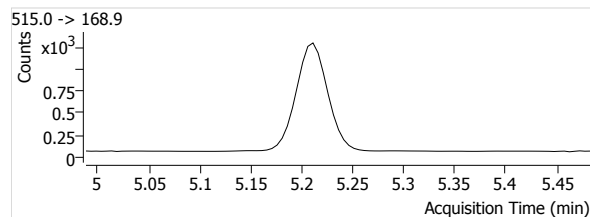
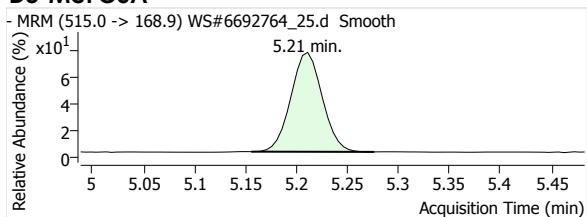
18O2-PFHxs



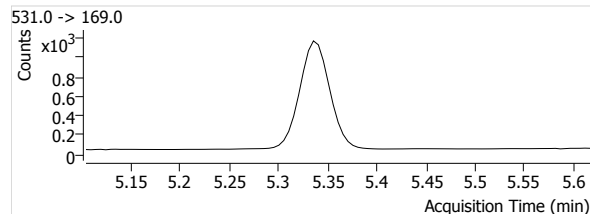
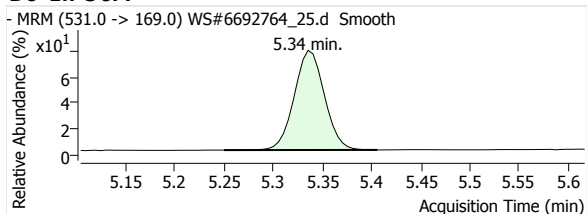
13C4-PFOS



D3-MeFOSA



D5-EtFOSA





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VERITAS

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

Analytics||NA||RAO|W||4||20200422|15:27:58|20200423|03:45:00|MLP496||C095296||1.00|1||1763-23-1|9.9|9.9|UG_L|||Y|PR|TRG||Due to high concentrations of the associated target analytes, a reduced sample volume was extracted and analyzed.
Detect|||0.052|||0.20||C095296|6692764|6692764|6692764|6692764||20200429|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW25-0420||Maxxam
Analytics||NA||RAO|W||4||20200422|15:27:58|20200423|03:45:00|MLP496||C095296||1.00|1||376-06-7|0.015|0.015|UG_L|U||N|PR|TRG|||0.0067|||0.020||C095296|6692764|6692764|6692764|6692764||20200429|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW25-0420||Maxxam
Analytics||NA||RAO|W||4||20200422|15:27:58|20200423|03:45:00|MLP496||C095296||1.00|1||72629-94-8|0.015|0.015|UG_L|U||N|PR|TRG|||0.0069|||0.020||C095296|6692764|6692764|6692764|6692764||20200429|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW25-0420||Maxxam
Analytics||NA||RAO|W||4||20200422|15:27:58|20200423|03:45:00|MLP496||C095296||1.00|1||2058-94-8|0.010|0.010|UG_L|U||N|PR|TRG|||0.0043|||0.020||C095296|6692764|6692764|6692764|6692764||20200429|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW26-0420||Maxxam
Analytics||NA||000|W||4||20200421|14:45:48|20200422|00:12:00|MLP497||C095296||1.00|1||4151-50-2|0.019||UG_L|U||N|PR|TRG|||0.0090|||0.040||C095296|6690634|6690634|6690634|6690634||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW26-0420||Maxxam
Analytics||NA||000|W||4||20200421|14:45:48|20200422|00:12:00|MLP497||C095296||1.00|1||31506-32-8|0.010||UG_L|U||N|PR|TRG|||0.0035|||0.040||C095296|6690634|6690634|6690634|6690634||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW26-0420||Maxxam
Analytics||NA||000|W||4||20200421|14:45:48|20200422|00:12:00|MLP497||C095296||1.00|1||375-73-5|0.020||UG_L|J||Y|PR|TRG|||0.0051|||0.020||C095296|6690634|6690634|6690634|6690634||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW26-0420||Maxxam
Analytics||NA||000|W||4||20200421|14:45:48|20200422|00:12:00|MLP497||C095296||1.00|1||335-76-2|0.010||UG_L|U||N|PR|TRG|||0.0041|||0.020||C095296|6690634|6690634|6690634|6690634||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW26-0420||Maxxam
Analytics||NA||000|W||4||20200421|14:45:48|20200422|00:12:00|MLP497||C095296||1.00|1||307-55-1|0.015||UG_L|U||N|PR|TRG|||0.0068|||0.020||C095296|6690634|6690634|6690634|6690634||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW26-0420||Maxxam
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Analytics||NA||000|W||4||20200421|14:45:48|20200422|00:12:00|MLP497||C095296||1.00|1||307-24-4|0.24||UG_L|||Y|PR|TRG|||0.0064|||0.020||C095296|6690634|6690634|6690634|6690634||20200428|Y
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N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW26-0420||Maxxam
Analytics||NA||000|W||4||20200421|14:45:48|20200422|00:12:00|MLP497||C095296||1.00|1||375-95-1|0.0073||UG_L|J||Y|PR|TRG|||0.0049|||0.020||C095296|6690634|6690634|6690634|6690634||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW26-0420||Maxxam
Analytics||NA||000|W||4||20200421|14:45:48|20200422|00:12:00|MLP497||C095296||1.00|1||335-67-1|0.31||UG_L|||Y|PR|TRG|||0.0074|||0.020||C095296|6690634|6690634|6690634|6690634||20200428|Y

N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW26-0420||Maxxam
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1|2.2||UG_L|||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was
extracted and analyzed. Detection limit
was|||0.052|||0.20|||C095296||6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW26-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:48|20200422|00:12:00|MLP497||C095296||1.00|1|||376-06-
7|0.015||UG_L|U|||N|PR|TRG|||0.0067|||0.020|||C095296||6690634|6690634|6690634|6690634|||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW26-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:48|20200422|00:12:00|MLP497||C095296||1.00|1|||72629-94-
8|0.015||UG_L|U|||N|PR|TRG|||0.0069|||0.020|||C095296||6690634|6690634|6690634|6690634|||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW26-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:48|20200422|00:12:00|MLP497||C095296||1.00|1|||2058-94-
8|0.010||UG_L|U|||N|PR|TRG|||0.0043|||0.020|||C095296||6690634|6690634|6690634|6690634|||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW30-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:48|20200422|00:26:00|MLP498||C095296||1.00|1|||4151-50-
2|0.019||UG_L|U|||N|PR|TRG|||0.0090|||0.040|||C095296||6690634|6690634|6690634|6690634|||
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8|0.010||UG_L|U|||N|PR|TRG|||0.0035|||0.040|||C095296||6690634|6690634|6690634|6690634|||
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5|0.015||UG_L|U|||N|PR|TRG|||0.0051|||0.020|||C095296||6690634|6690634|6690634|6690634|||
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Analytics|||NA||000|W||4|||20200421|14:45:48|20200422|00:26:00|MLP498||C095296||1.00|1|||335-76-
2|0.010||UG_L|U|||N|PR|TRG|||0.0041|||0.020|||C095296||6690634|6690634|6690634|6690634|||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW30-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:48|20200422|00:26:00|MLP498||C095296||1.00|1|||307-55-
1|0.015||UG_L|U|||N|PR|TRG|||0.0068|||0.020|||C095296||6690634|6690634|6690634|6690634|||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW30-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:48|20200422|00:26:00|MLP498||C095296||1.00|1|||375-85-
9|0.015||UG_L|U|||N|PR|TRG|||0.0071|||0.020|||C095296||6690634|6690634|6690634|6690634|||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW30-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:48|20200422|00:26:00|MLP498||C095296||1.00|1|||307-24-
4|0.0067||UG_L|J|||Y|PR|TRG|||0.0064|||0.020|||C095296||6690634|6690634|6690634|6690634|||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW30-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:48|20200422|00:26:00|MLP498||C095296||1.00|1|||355-46-
4|0.065||UG_L|||Y|PR|TRG|||0.0052|||0.020|||C095296||6690634|6690634|6690634|6690634|||20
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N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW30-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:48|20200422|00:26:00|MLP498||C095296||1.00|1|||375-95-
1|0.010||UG_L|U|||N|PR|TRG|||0.0049|||0.020|||C095296||6690634|6690634|6690634|6690634|||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW30-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:48|20200422|00:26:00|MLP498||C095296||1.00|1|||335-67-
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200428|Y

N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW30-0420||Maxxam
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00428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW30-0420||Maxxam
Analytics|||NA||RAO|W||4|||20200422|15:27:58|20200423|04:20:00|MLP498||C095296||1.00|1|||376-06-
7|0.015|0.015|UG_L|U|||N|PR|TRG|||0.0067|||0.020|||C095296||6692764|6692764|6692764|66927
64|||20200429|Y
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Analytics|||NA||RAO|W||4|||20200422|15:27:58|20200423|04:20:00|MLP498||C095296||1.00|1|||72629-
94-
8|0.015|0.015|UG_L|U|||N|PR|TRG|||0.0069|||0.020|||C095296||6692764|6692764|6692764|66927
64|||20200429|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW30-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:48|20200422|00:26:00|MLP498||C095296||1.00|1|||2058-94-
8|0.010||UG_L|U|||N|PR|TRG|||0.0043|||0.020|||C095296||6690634|6690634|6690634|6690634|||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW31-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:49|20200422|00:40:00|MLP499||C095296||1.00|1|||4151-50-
2|0.019||UG_L|U|||N|PR|TRG|||0.0090|||0.040|||C095296||6690634|6690634|6690634|6690634|||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW31-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:49|20200422|00:40:00|MLP499||C095296||1.00|1|||31506-32-
8|0.010||UG_L|U|||N|PR|TRG|||0.0035|||0.040|||C095296||6690634|6690634|6690634|6690634|||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW31-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:49|20200422|00:40:00|MLP499||C095296||1.00|1|||375-73-
5|0.020||UG_L|||Y|PR|TRG|||0.0051|||0.020|||C095296||6690634|6690634|6690634|6690634|||20
200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW31-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:49|20200422|00:40:00|MLP499||C095296||1.00|1|||335-76-
2|0.010||UG_L|U|||N|PR|TRG|||0.0041|||0.020|||C095296||6690634|6690634|6690634|6690634|||
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N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW31-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:49|20200422|00:40:00|MLP499||C095296||1.00|1|||307-55-
1|0.015||UG_L|U|||N|PR|TRG|||0.0068|||0.020|||C095296||6690634|6690634|6690634|6690634|||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW31-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:49|20200422|00:40:00|MLP499||C095296||1.00|1|||375-85-
9|0.33||UG_L|||Y|PR|TRG|||0.0071|||0.020|||C095296||6690634|6690634|6690634|6690634|||202
00428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW31-0420||Maxxam
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00428|Y
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Analytics|||NA||000|W||4|||20200421|14:45:49|20200422|00:40:00|MLP499||C095296||1.00|1|||355-46-
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Analytics|||NA||000|W||4|||20200421|14:45:49|20200422|00:40:00|MLP499||C095296||1.00|1|||1763-23-1|0.39||UG_L|||Y|PR|TRG|||0.0052|||0.020|||C095296||6690634|6690634|6690634|6690634|||20200428|Y

N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW31-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:49|20200422|00:40:00|MLP499||C095296||1.00|1|||376-06-7|0.015||UG_L|U|||N|PR|TRG|||0.0067|||0.020|||C095296||6690634|6690634|6690634|6690634|||20200428|Y

N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW31-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:49|20200422|00:40:00|MLP499||C095296||1.00|1|||72629-94-8|0.015||UG_L|U|||N|PR|TRG|||0.0069|||0.020|||C095296||6690634|6690634|6690634|6690634|||20200428|Y

N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW31-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:49|20200422|00:40:00|MLP499||C095296||1.00|1|||2058-94-8|0.010||UG_L|U|||N|PR|TRG|||0.0043|||0.020|||C095296||6690634|6690634|6690634|6690634|||20200428|Y

N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420||Maxxam
Analytics|||NA||DL1|W||4|||20200421|14:45:49|20200422|01:01:00|MLP500||C095296||5.00|1|||4151-50-2|0.095||UG_L|U|||N|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was|||0.045|||0.20|||C095296||6690634|6690634|6690634|6690634|||20200428|Y

N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420||Maxxam
Analytics|||NA||DL1|W||4|||20200421|14:45:49|20200422|01:01:00|MLP500||C095296||5.00|1|||31506-32-8|0.050||UG_L|U|||N|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was|||0.018|||0.20|||C095296||6690634|6690634|6690634|6690634|||20200428|Y

N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420||Maxxam
Analytics|||NA||DL1|W||4|||20200421|14:45:49|20200422|01:01:00|MLP500||C095296||5.00|1|||375-73-5|0.15||UG_L|||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was|||0.026|||0.10|||C095296||6690634|6690634|6690634|6690634|||20200428|Y

N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420||Maxxam
Analytics|||NA||DL1|W||4|||20200421|14:45:49|20200422|01:01:00|MLP500||C095296||5.00|1|||335-76-2|0.050||UG_L|U|||N|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was|||0.021|||0.10|||C095296||6690634|6690634|6690634|6690634|||20200428|Y

N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420||Maxxam
Analytics|||NA||DL1|W||4|||20200421|14:45:49|20200422|01:01:00|MLP500||C095296||5.00|1|||307-55-1|0.075||UG_L|U|||N|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was|||0.034|||0.10|||C095296||6690634|6690634|6690634|6690634|||20200428|Y

N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420||Maxxam
Analytics|||NA||DL1|W||4|||20200421|14:45:49|20200422|01:01:00|MLP500||C095296||5.00|1|||375-85-9|1.7||UG_L|||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was|||0.036|||0.10|||C095296||6690634|6690634|6690634|6690634|||20200428|Y

N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420||Maxxam
Analytics|||NA||DL1|W||4|||20200421|14:45:49|20200422|01:01:00|MLP500||C095296||5.00|1|||307-24-4|2.8||UG_L|||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was|||0.032|||0.10|||C095296||6690634|6690634|6690634|6690634|||20200428|Y

N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420||Maxxam
Analytics|||NA||DL1|W||4|||20200421|14:45:49|20200422|01:01:00|MLP500||C095296||5.00|1|||355-46-4|9.2||UG_L|||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was|||0.26|||1.0|||C095296||6690634|6690634|6690634|6690634|||20200428|Y

N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420||Maxxam

Analytics||NA||DL1|W||4||20200421|14:45:49|20200422|01:01:00|MLP500||C095296||5.00|1||375-95-1|0.11||UG_L||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was|||||0.025||||0.10||C095296||6690634|6690634|6690634|6690634||20200428|Y N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420||Maxxam

Analytics||NA||DL1|W||4||20200421|14:45:49|20200422|01:01:00|MLP500||C095296||5.00|1||335-67-1|2.0||UG_L||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was|||||0.037||||0.10||C095296||6690634|6690634|6690634|6690634||20200428|Y N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420||Maxxam

Analytics||NA||DL1|W||4||20200421|14:45:49|20200422|01:01:00|MLP500||C095296||5.00|1||1763-23-1|30||UG_L||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was|||||0.26||||1.0||C095296||6690634|6690634|6690634|6690634||20200428|Y N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420||Maxxam

Analytics||NA||DL1|W||4||20200421|14:45:49|20200422|01:01:00|MLP500||C095296||5.00|1||376-06-7|0.075||UG_L|U||N|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was|||||0.034||||0.10||C095296||6690634|6690634|6690634|6690634||20200428|Y N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420||Maxxam

Analytics||NA||DL1|W||4||20200421|14:45:49|20200422|01:01:00|MLP500||C095296||5.00|1||72629-94-8|0.075||UG_L|U||N|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was|||||0.035||||0.10||C095296||6690634|6690634|6690634|6690634||20200428|Y N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420||Maxxam

Analytics||NA||DL1|W||4||20200421|14:45:49|20200422|01:01:00|MLP500||C095296||5.00|1||2058-94-8|0.050||UG_L|U||N|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was|||||0.022||||0.10||C095296||6690634|6690634|6690634|6690634||20200428|Y N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420 DUP||Maxxam

Analytics||NA||DL1|W||4||20200421|14:45:49|20200422|01:28:00|MLP501||C095296||5.00|1||4151-50-2|0.095||UG_L|U||N|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was|||||0.045||||0.20||C095296||6690634|6690634|6690634|6690634||20200428|Y N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420 DUP||Maxxam

Analytics||NA||DL1|W||4||20200421|14:45:49|20200422|01:28:00|MLP501||C095296||5.00|1||31506-32-8|0.050||UG_L|U||N|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was|||||0.018||||0.20||C095296||6690634|6690634|6690634|6690634||20200428|Y N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420 DUP||Maxxam

Analytics||NA||DL1|W||4||20200421|14:45:49|20200422|01:28:00|MLP501||C095296||5.00|1||375-73-5|0.17||UG_L||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was|||||0.026||||0.10||C095296||6690634|6690634|6690634|6690634||20200428|Y N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420 DUP||Maxxam

Analytics||NA||DL1|W||4||20200421|14:45:49|20200422|01:28:00|MLP501||C095296||5.00|1||335-76-2|0.050||UG_L|U||N|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was|||||0.021||||0.10||C095296||6690634|6690634|6690634|6690634||20200428|Y N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420 DUP||Maxxam

Analytics||NA||DL1|W||4||20200421|14:45:49|20200422|01:28:00|MLP501||C095296||5.00|1||307-55-1|0.075||UG_L|U||N|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was extracted and analyzed. Detection limit was|||||0.034||||0.10||C095296||6690634|6690634|6690634|6690634||20200428|Y N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420 DUP||Maxxam

Analytics||NA||DL1|W||4||20200421|14:45:49|20200422|01:28:00|MLP501||C095296||5.00|1||375-85-9|1.8||UG_L||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was

extracted and analyzed. Detection limit
was|||||0.036||||0.10|||C095296|6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420 DUP||Maxxam
Analytics|||NA|DL1|W||4|||20200421|14:45:49|20200422|01:28:00|MLP501||C095296||5.00|1|||307-24-
4|3.0||UG_L|||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was
extracted and analyzed. Detection limit
was|||||0.032||||0.10|||C095296|6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420 DUP||Maxxam
Analytics|||NA|DL1|W||4|||20200421|14:45:49|20200422|01:28:00|MLP501||C095296||5.00|1|||355-46-
4|8.1||UG_L|||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was
extracted and analyzed. Detection limit
was|||||0.26||||1.0|||C095296|6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420 DUP||Maxxam
Analytics|||NA|DL1|W||4|||20200421|14:45:49|20200422|01:28:00|MLP501||C095296||5.00|1|||375-95-
1|0.12||UG_L|||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was
extracted and analyzed. Detection limit
was|||||0.025||||0.10|||C095296|6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420 DUP||Maxxam
Analytics|||NA|DL1|W||4|||20200421|14:45:49|20200422|01:28:00|MLP501||C095296||5.00|1|||335-67-
1|2.1||UG_L|||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was
extracted and analyzed. Detection limit
was|||||0.037||||0.10|||C095296|6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420 DUP||Maxxam
Analytics|||NA|DL1|W||4|||20200421|14:45:49|20200422|01:28:00|MLP501||C095296||5.00|1|||1763-23-
1|27||UG_L|||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was
extracted and analyzed. Detection limit
was|||||0.26||||1.0|||C095296|6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420 DUP||Maxxam
Analytics|||NA|DL1|W||4|||20200421|14:45:49|20200422|01:28:00|MLP501||C095296||5.00|1|||376-06-
7|0.075||UG_L|U||N|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume
was extracted and analyzed. Detection limit
was|||||0.034||||0.10|||C095296|6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420 DUP||Maxxam
Analytics|||NA|DL1|W||4|||20200421|14:45:49|20200422|01:28:00|MLP501||C095296||5.00|1|||72629-94-
8|0.075||UG_L|U||N|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume
was extracted and analyzed. Detection limit
was|||||0.035||||0.10|||C095296|6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW32-0420 DUP||Maxxam
Analytics|||NA|DL1|W||4|||20200421|14:45:49|20200422|01:28:00|MLP501||C095296||5.00|1|||2058-94-
8|0.050||UG_L|U||N|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume
was extracted and analyzed. Detection limit
was|||||0.022||||0.10|||C095296|6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW33-0420||Maxxam
Analytics|||NA|DL1|W||4|||20200421|14:45:49|20200422|01:49:00|MLP502||C095296||2.00|1|||4151-50-
2|0.038||UG_L|U||N|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume
was extracted and analyzed. Detection limit
was|||||0.018||||0.080|||C095296|6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW33-0420||Maxxam
Analytics|||NA|RAO|W||4|||20200422|15:27:58|20200423|04:27:00|MLP502||C095296||1.00|1|||31506-
32-
8|0.010|0.010|UG_L|U||N|PR|TRG|||||||0.0035||||0.040|||C095296|6692764|6692764|6692764|66927
64|||20200429|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW33-0420||Maxxam
Analytics|||NA|DL1|W||4|||20200421|14:45:49|20200422|01:49:00|MLP502||C095296||2.00|1|||375-73-
5|0.12||UG_L|||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was
extracted and analyzed. Detection limit
was|||||0.010||||0.040|||C095296|6690634|6690634|6690634|6690634|||20200428|Y

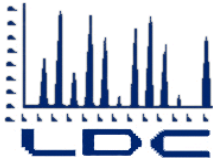
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW33-0420||Maxxam
Analytics|||NA||DL1|W||4|||20200421|14:45:49|20200422|01:49:00|MLP502||C095296||2.00|1|||335-76-
2|0.020||UG_L|U|||N|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume
was extracted and analyzed. Detection limit
was|||0.0082|||0.040||C095296||6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW33-0420||Maxxam
Analytics|||NA||DL1|W||4|||20200421|14:45:49|20200422|01:49:00|MLP502||C095296||2.00|1|||307-55-
1|0.030||UG_L|U|||N|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume
was extracted and analyzed. Detection limit
was|||0.014|||0.040||C095296||6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW33-0420||Maxxam
Analytics|||NA||DL1|W||4|||20200421|14:45:49|20200422|01:49:00|MLP502||C095296||2.00|1|||375-85-
9|0.87||UG_L|||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was
extracted and analyzed. Detection limit
was|||0.014|||0.040||C095296||6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW33-0420||Maxxam
Analytics|||NA||DL1|W||4|||20200421|14:45:49|20200422|01:49:00|MLP502||C095296||2.00|1|||307-24-
4|1.8||UG_L|||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was
extracted and analyzed. Detection limit
was|||0.013|||0.040||C095296||6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW33-0420||Maxxam
Analytics|||NA||DL1|W||4|||20200421|14:45:49|20200422|01:49:00|MLP502||C095296||2.00|1|||355-46-
4|2.9||UG_L|||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was
extracted and analyzed. Detection limit
was|||0.10|||0.40||C095296||6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW33-0420||Maxxam
Analytics|||NA||DL1|W||4|||20200421|14:45:49|20200422|01:49:00|MLP502||C095296||2.00|1|||375-95-
1|0.059||UG_L|||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was
extracted and analyzed. Detection limit
was|||0.0098|||0.040||C095296||6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW33-0420||Maxxam
Analytics|||NA||DL1|W||4|||20200421|14:45:49|20200422|01:49:00|MLP502||C095296||2.00|1|||335-67-
1|2.0||UG_L|||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was
extracted and analyzed. Detection limit
was|||0.015|||0.040||C095296||6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW33-0420||Maxxam
Analytics|||NA||DL1|W||4|||20200421|14:45:49|20200422|01:49:00|MLP502||C095296||2.00|1|||1763-23-
1|11||UG_L|||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was
extracted and analyzed. Detection limit
was|||0.10|||0.40||C095296||6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW33-0420||Maxxam
Analytics|||NA||DL1|W||4|||20200421|14:45:49|20200422|01:49:00|MLP502||C095296||2.00|1|||376-06-
7|0.030||UG_L|U|||N|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume
was extracted and analyzed. Detection limit
was|||0.013|||0.040||C095296||6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW33-0420||Maxxam
Analytics|||NA||DL1|W||4|||20200421|14:45:49|20200422|01:49:00|MLP502||C095296||2.00|1|||72629-94-
8|0.030||UG_L|U|||N|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume
was extracted and analyzed. Detection limit
was|||0.014|||0.040||C095296||6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW33-0420||Maxxam
Analytics|||NA||DL1|W||4|||20200421|14:45:49|20200422|01:49:00|MLP502||C095296||2.00|1|||2058-94-
8|0.020||UG_L|U|||N|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume
was extracted and analyzed. Detection limit
was|||0.0086|||0.040||C095296||6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW34-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:49|20200422|02:10:00|MLP503||C095296||1.00|1|||4151-50-

2|0.019||UG_L|U||N|PR|TRG|||||||0.0090|||0.040||C095296||6690634|6690634|6690634|6690634||
20200428|Y
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8|0.010||UG_L|U||N|PR|TRG|||||||0.0035|||0.040||C095296||6690634|6690634|6690634|6690634||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW34-0420||Maxxam
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5|0.014||UG_L|J||Y|PR|TRG|||||||0.0051|||0.020||C095296||6690634|6690634|6690634|6690634||2
0200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW34-0420||Maxxam
Analytics||NA||000|W||4||20200421|14:45:49|20200422|02:10:00|MLP503||C095296||1.00|1||335-76-
2|0.010||UG_L|U||N|PR|TRG|||||||0.0041|||0.020||C095296||6690634|6690634|6690634|6690634||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW34-0420||Maxxam
Analytics||NA||000|W||4||20200421|14:45:49|20200422|02:10:00|MLP503||C095296||1.00|1||307-55-
1|0.015||UG_L|U||N|PR|TRG|||||||0.0068|||0.020||C095296||6690634|6690634|6690634|6690634||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW34-0420||Maxxam
Analytics||NA||000|W||4||20200421|14:45:49|20200422|02:10:00|MLP503||C095296||1.00|1||375-85-
9|0.054||UG_L||Y|PR|TRG|||||||0.0071|||0.020||C095296||6690634|6690634|6690634|6690634||20
200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW34-0420||Maxxam
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4|0.15||UG_L||Y|PR|TRG|||||||0.0064|||0.020||C095296||6690634|6690634|6690634|6690634||202
00428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW34-0420||Maxxam
Analytics||NA||000|W||4||20200421|14:45:49|20200422|02:10:00|MLP503||C095296||1.00|1||355-46-
4|0.46||UG_L||Y|PR|TRG|||||||0.0052|||0.020||C095296||6690634|6690634|6690634|6690634||202
00428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW34-0420||Maxxam
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1|0.010||UG_L|U||N|PR|TRG|||||||0.0049|||0.020||C095296||6690634|6690634|6690634|6690634||
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Analytics||NA||000|W||4||20200421|14:45:49|20200422|02:10:00|MLP503||C095296||1.00|1||335-67-
1|0.10||UG_L||Y|PR|TRG|||||||0.0074|||0.020||C095296||6690634|6690634|6690634|6690634||202
00428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW34-0420||Maxxam
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1|1.8||UG_L||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was
extracted and analyzed. Detection limit
was|||||0.052|||0.20||C095296||6690634|6690634|6690634|6690634||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW34-0420||Maxxam
Analytics||NA||000|W||4||20200421|14:45:49|20200422|02:10:00|MLP503||C095296||1.00|1||376-06-
7|0.015||UG_L|U||N|PR|TRG|||||||0.0067|||0.020||C095296||6690634|6690634|6690634|6690634||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW34-0420||Maxxam
Analytics||NA||000|W||4||20200421|14:45:49|20200422|02:10:00|MLP503||C095296||1.00|1||72629-94-
8|0.015||UG_L|U||N|PR|TRG|||||||0.0069|||0.020||C095296||6690634|6690634|6690634|6690634||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW34-0420||Maxxam
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8|0.010||UG_L|U||N|PR|TRG|||||||0.0043|||0.020||C095296||6690634|6690634|6690634|6690634||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW35-0420||Maxxam
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2|0.019||UG_L|U||N|PR|TRG|||||||0.0090|||0.040|||C095296||6690634|6690634|6690634|6690634|||
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8|0.010||UG_L|U||N|PR|TRG|||||||0.0035|||0.040|||C095296||6690634|6690634|6690634|6690634|||
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5|0.026||UG_L|||Y|PR|TRG|||||||0.0051|||0.020|||C095296||6690634|6690634|6690634|6690634|||20
200428|Y
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2|0.010||UG_L|U||N|PR|TRG|||||||0.0041|||0.020|||C095296||6690634|6690634|6690634|6690634|||
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1|0.015||UG_L|U||N|PR|TRG|||||||0.0068|||0.020|||C095296||6690634|6690634|6690634|6690634|||
20200428|Y
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9|0.16||UG_L|||Y|PR|TRG|||||||0.0071|||0.020|||C095296||6690634|6690634|6690634|6690634|||202
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4|0.29||UG_L|||Y|PR|TRG|||||||0.0064|||0.020|||C095296||6690634|6690634|6690634|6690634|||202
00428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW35-0420||Maxxam
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4|1.2||UG_L|||Y|PR|TRG||Due to high concentration of the target analyte, a reduced sample volume was
extracted and analyzed. Detection limit
was|||||0.052||||0.20|||C095296||6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW35-0420||Maxxam
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1|0.026||UG_L|||Y|PR|TRG|||||||0.0049|||0.020|||C095296||6690634|6690634|6690634|6690634|||20
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00428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW35-0420||Maxxam
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extracted and analyzed. Detection limit
was|||||0.052||||0.20|||C095296||6690634|6690634|6690634|6690634|||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW35-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:49|20200422|02:31:00|MLP504||C095296||1.00|1|||376-06-
7|0.015||UG_L|U||N|PR|TRG|||||||0.0067|||0.020|||C095296||6690634|6690634|6690634|6690634|||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW35-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:49|20200422|02:31:00|MLP504||C095296||1.00|1|||72629-94-
8|0.015||UG_L|U||N|PR|TRG|||||||0.0069|||0.020|||C095296||6690634|6690634|6690634|6690634|||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW35-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:49|20200422|02:31:00|MLP504||C095296||1.00|1|||2058-94-
8|0.010||UG_L|U||N|PR|TRG|||||||0.0043|||0.020|||C095296||6690634|6690634|6690634|6690634|||
20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW36-0420||Maxxam

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N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW36-0420||Maxxam
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N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW36-0420||Maxxam
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N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW36-0420||Maxxam
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N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW36-0420||Maxxam
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N62473-16-C-2|0000|"QTR2 20|Site 00006|06-MW36-0420||Maxxam
Analytics||NA||000|W||4||20200421|14:45:50|20200422|02:45:00|MLP505||C095296||1.00|1||1763-23-1|0.77||UG_L||Y|PR|TRG|||||||0.0052|||0.020||C095296||6690634|6690634|6690634|6690634||20200428|Y
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N62473-16-C-2|0000|"QTR2 20|Site 00006|QCFB-0420||Maxxam
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2|0.019|0.019|UG_L|U||N|PR|TRG|||||||0.0090|||||0.040|||C095296||6692764|6692764|6692764|6692764|20200429|Y
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8|0.010|0.010|UG_L|U||N|PR|TRG|||||||0.0035|||||0.040|||C095296||6692764|6692764|6692764|6692764|20200429|Y
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N62473-16-C-2|0000|"QTR2 20|Site 00006|QCFB-0420||Maxxam
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Analytics|||NA||000|W||4|||20200421|14:45:50|20200422|02:52:00|MLP506||C095296||1.00|1|||375-95-1|0.010||UG_L|U||N|PR|TRG|||||||0.0049|||||0.020|||C095296||6690634|6690634|6690634|6690634||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|QCFB-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:50|20200422|02:52:00|MLP506||C095296||1.00|1|||335-67-1|0.015||UG_L|U||N|PR|TRG|||||||0.0074|||||0.020|||C095296||6690634|6690634|6690634|6690634||20200428|Y
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Analytics|||NA||000|W||4|||20200421|14:45:50|20200422|02:52:00|MLP506||C095296||1.00|1|||376-06-7|0.015||UG_L|U||N|PR|TRG|||||||0.0067|||||0.020|||C095296||6690634|6690634|6690634|6690634||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|QCFB-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:50|20200422|02:52:00|MLP506||C095296||1.00|1|||72629-94-8|0.015||UG_L|U||N|PR|TRG|||||||0.0069|||||0.020|||C095296||6690634|6690634|6690634|6690634||20200428|Y
N62473-16-C-2|0000|"QTR2 20|Site 00006|QCFB-0420||Maxxam
Analytics|||NA||000|W||4|||20200421|14:45:50|20200422|02:52:00|MLP506||C095296||1.00|1|||2058-94-8|0.010||UG_L|U||N|PR|TRG|||||||0.0043|||||0.020|||C095296||6690634|6690634|6690634|6690634||20200428|Y



LABORATORY DATA CONSULTANTS, INC.

2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

NOREAS, Inc.
16501 Scientific Way
Irvine, CA 92618
ATTN: Ms. Sevda Aleckson
Sevda.Aleckson@noreasinc.com

May 28, 2020

SUBJECT: Treasure Island, IR Site 6 Data Validation

Dear Ms. Aleckson,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on May 8, 2020. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #48034:

SDG

20D083/C095296
20D145

Fraction:

Dissolved Arsenic, Perfluoroalkyl & Polyfluoroalkyl
Substances

The data validation was performed under Level III & IV guidelines. The analyses were validated using the following documents, as applicable to each method:

- Final Sampling and Analysis Plan, Field Sampling Plan and Quality Assurance Project Plan, Basewide Groundwater and Soil Gas Monitoring at Installation Restoration Sites 6, 12, 21, and 24, Former Naval Station Treasure Island, San Francisco, California; April 2017
- U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 5.3; 2019
- USEPA National Functional Guidelines for Superfund Organic Methods Data Review; August 2014
- USEPA National Functional Guidelines for Inorganic Superfund Data Review; August 2014
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name: Treasure Island, IR Site 6

LDC Report Date: May 27, 2020

Parameters: Perfluoroalkyl & Polyfluoroalkyl Substances

Validation Level: Level IV

Laboratory: EMAX Laboratories, Inc./Bureau Veritas Canada, Inc.

Sample Delivery Group (SDG): 20D083/C095296

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
06-MW25-0420	20D083-01/MLP496	Water	04/08/20
06-MW26-0420	20D083-02/MLP497	Water	04/08/20
06-MW30-0420	20D083-03/MLP498	Water	04/08/20
06-MW31-0420	20D083-04/MLP499	Water	04/08/20
06-MW32-0420	20D083-05/MLP500	Water	04/08/20
06-MW32-0420 DUP	20D083-06/MLP501	Water	04/08/20
06-MW33-0420	20D083-07/MLP502	Water	04/08/20
06-MW34-0420	20D083-08/MLP503	Water	04/08/20
06-MW35-0420	20D083-09/MLP504	Water	04/08/20
06-MW36-0420	20D083-10/MLP505	Water	04/08/20
QCFB-0420	20D083-11/MLP506	Water	04/08/20
06-MW30-0420MS1	20D083-03/MLP498MS1	Water	04/08/20
06-MW30-0420MSD1	20D083-03/MLP498MSD1	Water	04/08/20
06-MW30-0420MS2	20D083-03/MLP498MS2	Water	04/08/20
06-MW30-0420MSD2	20D083-03/MLP498MSD2	Water	04/08/20

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Final Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan), Basewide Groundwater and Soil Gas Monitoring at Installation Restoration Sites 6, 12, 21, and 24, Former Naval Station Treasure Island, San Francisco, California (April 2017), the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.3 (2019), and a modified outline of the USEPA National Functional Guidelines (NFG) for Superfund Organic Methods Data Review (August 2014). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) by Environmental Protection Agency (EPA) Method 537 Modified and LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

All sample results were subjected to Level IV data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

- J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.
- U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).
- UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.
- R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.
- NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Codes

- 1 Holding Times Exceeded
- 2 Sample Preservation / Cooler Temperature Exceeded Acceptance Criteria
- 3 Sample Custody Potentially Compromised Sample Integrity
- 4 Missing/Incomplete Deliverables
- 5 Calibration Did Not Meet Method Criteria
- 6 Equipment/Field Blank Contamination
- 7 Laboratory Method or Calibration Blank Contamination
- 8 Matrix Spike % Recovery Exceeded Acceptance Criteria
- 9 Matrix Spike Duplicate (RPD or Duplicate Sample Analysis) Exceeded Acceptance Criteria
- 10A Laboratory Control Sample % Recovery Exceeded Acceptance Criteria
- 10B Laboratory Control Sample Duplicate (RPD) Exceeded Acceptance Criteria
- 11 ICP Interference Check Analysis Exceeded Method Criteria
- 12 RPD Between Two Columns (Pesticides/PCBs only)
- 13 Surrogate Recoveries Exceeded Acceptance Criteria
- 14 Field Duplicates RPD Exceeded Project Criteria
- 15 Peak Resolution did not meet method criteria
- 16 Serial Dilution Analysis Exceeded Method Criteria
- 17 Chemical Recoveries Exceeded Acceptance Criteria
- 18 Trip Blank Contamination
- 19 Internal Standards Did Not Meet Method Criteria
- 20 Calibration Range exceeded Method Criteria
- 21 Potential False Positives
- 22 Do not use, other result more technically sound (overall assessment)
- 23 Estimated Maximum Possible Concentration
- 24 Trace Detection Below the LOQ (RL) and Above the DL (MDL)
- 25 Other

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. LC/MS Instrument Performance Check

Instrument performance was checked and the requirements were met.

III. Initial Calibration and Initial Calibration Verification

Initial calibration was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990.

For each calibration standard, all compounds were within 70-130% of their true value.

The signal to noise (S/N) ratio was within validation criteria for all compounds.

Retention time windows were established as required by the method.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 30.0% for all compounds.

The percent differences (%D) of the instrument sensitivity check (ISC) were less than or equal to 30.0% for all compounds.

The signal to noise (S/N) ratio was within validation criteria for all compounds.

Retention times of all compounds in the calibration standards were within the established retention time windows.

All compound concentrations were at the limit of quantitation (LOQ) for the ISC standard.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Sample QCFB-0420 was identified as a field blank. No contaminants were found.

VII. Surrogates

Surrogates were added to all samples as required by the methods. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the methods. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

Samples 06-MW31-0420 and QCFB-0420 were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/L)		RPD (Limits)	Flag	A or P
	06-MW31-0420	QCFB-0420			
Perfluorohexanoic acid (PFHxA)	2.8	3.0	7 (≤30)	-	-
Perfluoroheptanoic acid (PFHpA)	1.7	1.8	6 (≤30)	-	-
Perfluorooctanoic acid (PFOA)	2.0	2.1	5 (≤30)	-	-
Perfluorononanoic acid (PFNA)	0.11	0.12	9 (≤30)	-	-
Perfluorobutane sulfonate (PFBS)	0.15	0.17	13 (≤30)	-	-
Perfluorohexane sulfonate (PFHxS)	9.2	8.1	13 (≤30)	-	-
Perfluorooctane sulfonate (PFOS)	30	27	11 (≤30)	-	-

XI. Labeled Compounds

All percent recoveries (%R) for labeled compounds used to quantitate target compounds were within QC limits with the following exceptions:

Sample	Labeled Compound	%R (Limits)	Affected Compound	Flag	A or P
06-MW30-0420	13C2-PFTeDA	46 (50-150)	Perfluorotridecanoic acid (PFTriDA) Perfluorotetradecanoic acid (PFTeDA)	UJ (all non-detects) UJ (all non-detects)	P

XII. Compound Quantitation

All compound quantitations met validation criteria.

XIII. Target Compound Identifications

All target compound identifications met validation criteria.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method, DoD QSM version 5.3 and project SAP. This review also included verification of analytes, methods, reporting limits, instrument performance and method QC acceptance limits, which were found to be compliant with the project documents. No results were rejected.

Due to labeled compound %R, data were qualified as estimated in one sample.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

**Treasure Island, IR Site 6
 Perfluoroalkyl & Polyfluoroalkyl Substances - Data Qualification Summary - SDG
 20D083/C095296**

Sample	Compound	Flag	A or P	Reason (Code)
06-MW30-0420	Perfluorotridecanoic acid (PFTriDA) Perfluorotetradecanoic acid (PFTeDA)	UJ (all non-detects) UJ (all non-detects)	P	Labeled compounds (%R) (19)

**Treasure Island, IR Site 6
 Perfluoroalkyl & Polyfluoroalkyl Substances - Laboratory Blank Data Qualification
 Summary - SDG 20D083/C095296**

No Sample Data Qualified in this SDG

**Treasure Island, IR Site 6
 Perfluoroalkyl & Polyfluoroalkyl Substances - Field Blank Data Qualification
 Summary - SDG 20D083/C095296**

No Sample Data Qualified in this SDG

LDC #: 48034A96

VALIDATION COMPLETENESS WORKSHEET

SDG #: 20D083/C095296

Level III/IV *Stage 4*

Laboratory: EMAX Laboratories, Inc./Bureau Veritas Canada, Inc.

Date: *7/24/20*

Page: *1* of *2*

Reviewer: *[Signature]*

2nd Reviewer: *[Signature]*

METHOD: LC/MS Perfluoroalkyl & Polyfluoroalkyl Substances (EPA Method 537M) / *DOB USM C.3 Table B-15*

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area	Comments
I.	Sample receipt/Technical holding times	A, A
II.	LC/MS Instrument performance check	A
III.	Initial calibration/ICV	A, A <i>n2 TV/ICV = 30</i>
IV.	Continuing calibration/ISC	A/A <i>D=30</i>
V.	Laboratory Blanks	A
V.I	Field blanks	ND <i>FB = 11</i>
VII.	Matrix spike/Matrix spike duplicates	A
VIII.	Laboratory control samples	A <i>LCs</i>
IX.	Field duplicates	SW <i>D = 5+6</i>
X.	Labeled Compounds	SW
XI.	Compound quantitation RL/LOQ/LODs	A
XII.	Target compound identification	A Not reviewed for Level III validation.
XIII.	System performance	A Not reviewed for Level III validation.
XIV.	Overall assessment of data	A

Note: A = Acceptable
 N = Not provided/applicable
 SW = See worksheet

ND = No compounds detected
 R = Rinsate
 FB = Field blank

D = Duplicate
 TB = Trip blank
 EB = Equipment blank

SB=Source blank
 OTHER:

** Indicates sample was underwent Level IV review

	Client ID	Sub	Lab ID	Matrix	Date
1 ²	06-MW25-0420	MLP496	20D083-01	Water	04/08/20
2	06-MW26-0420	497	20D083-02	Water	04/08/20
3	06-MW30-0420	498	20D083-03	Water	04/08/20
4	06-MW31-0420	499	20D083-04	Water	04/08/20
5	06-MW32-0420	500	20D083-05	Water	04/08/20
6	06-MW32-0420 DUP	501	20D083-06	Water	04/08/20
7	06-MW33-0420	502	20D083-07	Water	04/08/20
8	06-MW34-0420	503	20D083-08	Water	04/08/20
9	06-MW35-0420	504	20D083-09	Water	04/08/20
10	06-MW36-0420	505	20D083-10	Water	04/08/20
11 ^{1,2}	QCFB-0420	506	20D083-11	Water	04/08/20
12	06-MW30-0420MS1	498MS1	20D083-03MS1	Water	04/08/20
13	06-MW30-0420MSD1	D1	20D083-03MSD1	Water	04/08/20
14	06-MW30-0420MS2	2	20D083-03MS2	Water	04/08/20
15	06-MW30-0420MSD2	↓ ↓ D2	20D083-03MSD2	Water	04/08/20

LDC #: 48034A96

VALIDATION COMPLETENESS WORKSHEET

Date: 5/21/20

SDG #: 20D083/C095296

Level III/IV

Page: 2 of 2

Laboratory: EMAX Laboratories, Inc./Bureau Veritas Canada, Inc.

Reviewer: [Signature]

2nd Reviewer: [Signature]

METHOD: LC/MS Perfluoroalkyl & Polyfluoroalkyl Substances (EPA Method 537M)

16				
17				
18				

Notes:

1	6690634						
2	6692764						

Method: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	/			
Were cooler temperature criteria met?	/			
II. LC/MS Instrument performance check				
Were the instrument performance reviewed and found to be within the validation criteria?	/			
III. Initial calibration and Initial calibration verification				
Did the laboratory perform a 5-point calibration prior to sample analysis?	/			
Were all percent relative standard deviations (%RSD) \leq 20%?		/		
Was a curve fit used for evaluation? If yes, did the initial calibration meet the coefficient of determination (r^2) criteria of \geq 0.990?	/			
Were all analytes within 70-130% or percent differences (%D) \leq 30% of their true value for each calibration standard?	/			
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	/			
Were the retention time windows properly established?	/			
Was an initial calibration verification (ICV) standard analyzed after each initial calibration for each instrument?	/			
Were all ICV percent differences (%D) of the initial calibration verification \leq 30%?	/			
IV. Continuing calibration and Instrument sensitivity check				
Was a continuing calibration analyzed prior to sample analysis, after every 10 samples and at the end of the analytical sequence?	/			
Were all percent differences (%D) of the continuing calibration \leq 30%?	/			
Were all the retention times within the acceptance windows?	/			
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	/			
Were all percent differences (%D) of the Instrument Sensitivity Check \leq 30%?	/			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	/			
Was a laboratory blank analyzed for each matrix and concentration?	/			
Was there contamination in the laboratory blanks?		/		
VI. Field blanks				
Were field blanks identified in this SDG?	/			
Were target compounds detected in the field blanks?		/		

Validation Area	Yes	No	NA	Findings/Comments
VII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?	/			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	/			
VIII. Laboratory control samples				
Was an LCS analyzed per extraction batch for this SDG?	/			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	/			
IX. Field duplicates				
Were field duplicate pairs identified in this SDG?	/			
Were target compounds detected in the field duplicates?	/			
X. Labeled compounds				
Were labeled compound percent recoveries (%R) within the QC limits?		/		
Were retention times within 0.4 minutes of the associated calibration standard?	/			
XI. Compound quantitation				
Did the laboratory reporting limits (i.e. DL, LOD, LOQ) meet the QAPP?	/			
Did reported results include both branched and linear isomers?	/			
Were the correct ion transition, labeled compound and relative response factor (RRF) used to quantitate the compound?	/			
Were compound retention times within 0.1 minutes of the associated labeled compound for compounds with a labeled analog?	/			
Were compound quantitation and reporting limits adjusted to reflect all sample dilutions and dry weight factors applicable to Stage 4 validation?	/			
XII. Target compound identification				
Was the signal to noise (S/N) ratio for all compounds within the validation criteria?	/			
Were two transitions and the ion transition ratio per analyte monitored and documented with the exception of PFBA and PFPeA?	/			
Were ion ratios between 50-150%?	/			
XIII. System performance				
System performance was found to be acceptable.	/			
XIV. Overall assessment of Data				
Overall assessment of data was found to be acceptable.	/			

TARGET COMPOUND WORKSHEET

METHOD: PFAS

A. Perfluorohexanoic acid (PFHxA)			
B. Perfluoroheptanoic acid (PFHpA)			
C. Perfluorooctanoic acid (PFOA)			
D. Perfluorononanoic acid (PFNA)			
E. Perfluorodecanoic acid (PFDA)			
F. Perfluoroundecanoic acid (PFUnA)			
G. Perfluorododecanoic acid (PFDoA)			
H. Perfluorotridecanoic acid (PFTriDA)			
I. Perfluorotetradecanoic acid (PFTeDA)			
J. Perfluorobutanesulfonic acid (PFBS)			
K. Perfluorohexanesulfonic acid (PFHxS)			
L. Perfluoroheptanesulfonic acid (PFHpS)			
M. Perfluorooctanesulfonic acid (PFOS)			
N. Perfluorodecanesulfonic acid (PFDS)			
O. Perfluorooctane Sulfonamide (FOSA)			
P. Perfluorobutanoic acid (PFBA)			
Q. Perfluoropentanoic acid (PFPeA)			
R. 6:2 Fluorotelomer sulfonic acid (6:2 FTS)			
S. 8:2 Fluorotelomer sulfonic acid (8:2 FTS)			
T. N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)			
U. N-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)			
V. 1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)			

Field Duplicates**Method:** LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

Compound	Concentration (ug/L)		RPD (≤ 30) >10XLOQ	Qualification
	4	11		
A	2.8	3.0	7	
B	1.7	1.8	6	
C	2.0	2.1	5	
D	0.11	0.12	9	
J	0.15	0.17	13	
K	9.2	8.1	13	
M	30	27	11	

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Method: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

Calibration Date	Instrument	Analyte	Standard	(Y) Response ratio	(X) Concentration ratio
4/21/2020	LCMS04	PFOA	1	0.15726	0.830
			2	0.59597	3.000
			3	1.31424	8.000
			4	2.68708	16.000
			5	4.98796	30.000
			6	7.00886	41.700

Linear

	Calculated	Reported
Constant	0.028859	0.031570
X Coefficient(s)	0.16657	0.16640
Correlation Coefficient	0.999870	
Coefficient of Determination (r ²)	0.999740	1.000000

Calibration Date	Instrument	Analyte	Standard	(Y) Response ratio	(X) Concentration ratio
4/21/2020	LCMS04	PFOS	1	0.15660	0.830
			2	0.56833	3.000
			3	1.26609	8.000
			4	2.46937	16.000
			5	4.64868	30.000
			6	6.40932	41.700

Linear

	Calculated	Reported
Constant	0.058527	0.044727
X Coefficient(s)	0.15239	0.15320
Correlation Coefficient	0.999921	
Coefficient of Determination (r ²)	0.999843	1.000000

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Method: LC/MS/MS and Isotope Dilution Compliant with Table B-15 of DoD QSM 5.3

Calibration Date	Instrument	Analyte	Standard	(Y) Response ratio	(X) Concentration ratio
4/23/2020	LCMS04	PFOA	1	0.16929	0.830
			2	0.61985	3.000
			3	1.43741	8.000
			4	2.57516	16.000
			5	5.41129	30.000
			6	7.36508	41.700

Linear

	Calculated	Reported
Constant	0.001495	0.034148
X Coefficient(s)	0.176521	0.174552
Correlation Coefficient	0.998969	
Coefficient of Determination (r ²)	0.997939	1.000000

Calibration Date	Instrument	Analyte	Standard	(Y) Response ratio	(X) Concentration ratio
4/23/2020	LCMS04	PFOS	1	0.16182	0.830
			2	0.57718	3.000
			3	1.35068	8.000
			4	2.40170	16.000
			5	4.85687	30.000
			6	6.89729	41.700

Linear

	Calculated	Reported
Constant	0.001478	0.038069
X Coefficient(s)	0.163133	0.160914
Correlation Coefficient	0.999085	
Coefficient of Determination (r ²)	0.998171	1.000000

**Laboratory Data Consultants, Inc.
Data Validation Report**

Project/Site Name: Treasure Island, IR Site 6

LDC Report Date: May 20, 2020

Parameters: Dissolved Arsenic

Validation Level: Level III

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 20D145

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
06-MW33-0420	20D145-01	Water	04/23/20

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Final Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan), Basewide Groundwater and Soil Gas Monitoring at Installation Restoration Sites 6, 12, 21, and 24, Former Naval Station Treasure Island, San Francisco, California (April 2017), the U.S. Department of Defense (DoD) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.3 (2019), and a modified outline of the USEPA National Functional Guidelines (NFG) for Inorganic Superfund Data Review (August 2014). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Dissolved Arsenic by Environmental Protection Agency (EPA) SW 846 Method 6020A

All sample results were subjected to Level III data validation, which comprises an evaluation of quality control (QC) summary results. Samples appended with a double asterisk on the cover page were subjected to Level IV data validation, which is comprised of the QC summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

- J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.
- U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).
- UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.
- R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.
- NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Codes

- 1 Holding Times Exceeded
- 2 Sample Preservation / Cooler Temperature Exceeded Acceptance Criteria
- 3 Sample Custody Potentially Compromised Sample Integrity
- 4 Missing/Incomplete Deliverables
- 5 Calibration Did Not Meet Method Criteria
- 6 Equipment/Field Blank Contamination
- 7 Laboratory Method or Calibration Blank Contamination
- 8 Matrix Spike % Recovery Exceeded Acceptance Criteria
- 9 Matrix Spike Duplicate (RPD or Duplicate Sample Analysis) Exceeded Acceptance Criteria
- 10A Laboratory Control Sample % Recovery Exceeded Acceptance Criteria
- 10B Laboratory Control Sample Duplicate (RPD) Exceeded Acceptance Criteria
- 11 ICP Interference Check Analysis Exceeded Method Criteria
- 12 RPD Between Two Columns (Pesticides/PCBs only)
- 13 Surrogate Recoveries Exceeded Acceptance Criteria
- 14 Field Duplicates RPD Exceeded Project Criteria
- 15 Peak Resolution did not meet method criteria
- 16 Serial Dilution Analysis Exceeded Method Criteria
- 17 Chemical Recoveries Exceeded Acceptance Criteria
- 18 Trip Blank Contamination
- 19 Internal Standards Did Not Meet Method Criteria
- 20 Calibration Range exceeded Method Criteria
- 21 Potential False Positives
- 22 Do not use, other result more technically sound (overall assessment)
- 23 Estimated Maximum Possible Concentration
- 24 Trace Detection Below the LOQ (RL) and Above the DL (MDL)
- 25 Other

I. Sample Receipt and Technical Holding Times

All samples were received in good condition.

All technical holding time requirements were met.

II. ICPMS Tune

The mass calibration was within 0.1 AMU and the percent relative standard deviation (%RSD) was less than or equal to 5%.

III. Instrument Calibration

Initial and continuing calibrations were performed as required by the method.

The initial calibration verification (ICV) and continuing calibration verification (CCV) standards were within QC limits.

IV. ICP Interference Check Sample Analysis

The frequency of interference check sample (ICS) analysis was met. All criteria were within QC limits.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Duplicate Sample Analysis

The laboratory has indicated that there were no duplicate (DUP) analyses specified for the samples in this SDG, and therefore duplicate analyses were not performed for this SDG.

IX. Serial Dilution

Serial dilution was not performed for this SDG.

X. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

XI. Field Duplicates

No field duplicates were identified in this SDG.

XII. Internal Standards (ICP-MS)

All internal standard percent recoveries (%R) were within QC limits.

XIII. Sample Result Verification

Raw data were not reviewed for Level III validation.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the method, DoD QSM version 5.3 and project SAP. This review also included verification of analytes, methods, reporting limits, instrument performance and method QC acceptance limits, which were found to be compliant with the project documents. No results were rejected.

The quality control criteria reviewed were met and are considered acceptable.

**Treasure Island, IR Site 6
Dissolved Arsenic - Data Qualification Summary - SDG 20D145**

No Sample Data Qualified in this SDG

**Treasure Island, IR Site 6
Dissolved Arsenic - Laboratory Blank Data Qualification Summary - SDG 20D145**

No Sample Data Qualified in this SDG

**Treasure Island, IR Site 6
Dissolved Arsenic - Field Blank Data Qualification Summary - SDG 20D145**

No Sample Data Qualified in this SDG

LDC #: 48034B4a

VALIDATION COMPLETENESS WORKSHEET

Date: 5/14/2020

SDG #: 20D145

Level III

Page: (of 1)

Laboratory: EMAX Laboratories, Inc.

Reviewer: [Signature]

2nd Reviewer: [Signature]

METHOD: Dissolved Arsenic (EPA SW 846 Method 6020A)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	ICP/MS Tune	A	
III.	Instrument Calibration	A	
IV.	ICP Interference Check Sample (ICS) Analysis	A	
V.	Laboratory Blanks	A	
VI.	Field Blanks	N	
VII.	Matrix Spike/Matrix Spike Duplicates	N	
VIII.	Duplicate sample analysis	N	
IX.	Serial Dilution	N	
X.	Laboratory control samples	A	UCS/D
XI.	Field Duplicates	N	
XII.	Internal Standard (ICP-MS)	N	
XIII.	Sample Result Verification	N	
XIV.	Overall Assessment of Data	A	

Note: A = Acceptable
 N = Not provided/applicable
 SW = See worksheet

ND = No compounds detected
 R = Rinsate
 FB = Field blank

D = Duplicate
 TB = Trip blank
 EB = Equipment blank

SB=Source blank
 OTHER:

	Client ID	Lab ID	Matrix	Date
1	06-MW33-0420	20D145-01	Water	04/23/20
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				

Notes: _____

INSTALLATION_ID	SITE_NAME	LOCATION_NAME	LOCATION_TYPE_DESC	COORD_X	COORD_Y	SAMPLE_NAME	SAMPLE_MATRIX_DESC	SAMPLE_TYPE_DESC	COLLECT_DATE	ANALYTICAL_METHOD_GRP_DESC	SDG
NAVSTA TI	SITE 00006	06-MW25	Monitoring Well	6021164.38	2130489.47	06-MW25-0420	Groundwater	Normal (Regular)	8-Apr-20	Perfluoroalkyl Compounds	20D083
NAVSTA TI	SITE 00006	06-MW26	Monitoring Well	6021167.06	2130576.16	06-MW26-0420	Groundwater	Normal (Regular)	8-Apr-20	Perfluoroalkyl Compounds	20D083
NAVSTA TI	SITE 00006	06-MW30	Monitoring Well	6021164.04	2130315.21	06-MW30-0420	Groundwater	Normal (Regular)	8-Apr-20	Perfluoroalkyl Compounds	20D083
NAVSTA TI	SITE 00006	06-MW31	Monitoring Well	6021361.5	2130320.31	06-MW31-0420	Groundwater	Normal (Regular)	8-Apr-20	Perfluoroalkyl Compounds	20D083
NAVSTA TI	SITE 00006	06-MW32	Monitoring Well	6021359.03	2130646.04	06-MW32-0420	Groundwater	Normal (Regular)	8-Apr-20	Perfluoroalkyl Compounds	20D083
NAVSTA TI	SITE 00006	06-MW32	Monitoring Well	6021359.03	2130646.04	06-MW32-0420 DUP	Groundwater	Field duplicate	8-Apr-20	Perfluoroalkyl Compounds	20D083
NAVSTA TI	SITE 00006	06-MW33	Monitoring Well	6021251.13	2130701.09	06-MW33-0420	Groundwater	Normal (Regular)	8-Apr-20	Perfluoroalkyl Compounds	20D083
NAVSTA TI	SITE 00006	06-MW34	Monitoring Well	6021541.46	2130591.53	06-MW34-0420	Groundwater	Normal (Regular)	8-Apr-20	Perfluoroalkyl Compounds	20D083
NAVSTA TI	SITE 00006	06-MW35	Monitoring Well	6021429.59	2130616.91	06-MW35-0420	Groundwater	Normal (Regular)	8-Apr-20	Perfluoroalkyl Compounds	20D083
NAVSTA TI	SITE 00006	06-MW36	Monitoring Well	6021421.91	2130432.23	06-MW36-0420	Groundwater	Normal (Regular)	8-Apr-20	Perfluoroalkyl Compounds	20D083