



**Groundwater Sample Results,
Level 4 Laboratory Report, Electronic Data
Deliverable, Data Validation Report, Sample Location
Report, SDG 20-1310**

NRL

Chesapeake Bay Detachment, MD

October 2021

**CTO-4532: NRL Chesapeake Bay Detachment
(NRL-CBD) Site 10
Project No 100142218
PFAS by DoD QSM 5.3 Table B-15**

GW

Batch 20-1310

Package DP-20-1190

Submitted to:

CH2M

5701 Cleveland Street

Virginia Beach, VA 23462 USA

Submitted by:

Battelle Norwell Operations
141 Longwater Drive Suite 202
Norwell, MA 02061

BATTELLE

It can be done


**CTO-4532: NRL Chesapeake Bay Detachment
(NRL-CBD) Site 10
Project No 100142218
PFAS by DoD QSM 5.3 Table B-15
GW
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Submitted to:
CH2M
5701 Cleveland Street
Virginia Beach, VA 23462 USA

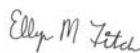
NELAP Accreditation Number: E87856 (Florida Department of Health)

Submitted by:
Battelle Norwell Operations
141 Longwater Drive Suite 202
Norwell, MA 02061

Analyst Approval:


Digitally signed
by Lauren Griffith
Date: 2020.11.09
15:25:51 -05'00'

QC Chemist Approval:



Digitally signed by Ellyn M. Fitch
Date: 2020.11.16 10:54:42 -05'00'

Project Manager Approval:



Digitally signed by Jonathan Thorn
Date: 2020.11.16 11:07:18 -05'00'

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CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10

Project No 100142218

PFAS by DoD QSM 5.3 Table B-15

GW

Batch 20-1310


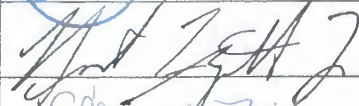






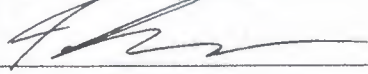






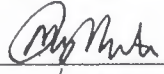
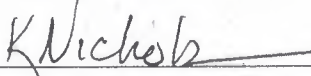

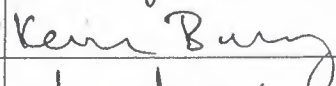

Package DP-20-1190

1	<i>Work Plan</i> Laboratory Work Plan, Addendums To Work Plan, Memos From Project Manager, Special Instructions, Chain-of-Custody Reports.	1
2	<i>Tables</i> Analytical Data Tables, Qualifier Definitions.	22
3	<i>Miscellaneous Documentation</i> Case Narrative, Miscellaneous Documentation Form, Quality Control Summary, Example Calculations, Internal Standard Recovery Report, Retention Time Window Report.	44
4	<i>Sample Preparation Records</i> Sample Preparation Records, Dilution Worksheets, Standard Preparation Records, Certificates Of Analysis, GPC Check Report.	169
5	<i>Analytical Calibrations</i> Analytical Sequence, Analytical Method, Tune Report, Initial Calibration, Pesticide Degradation Report, RF Summary, Calibration Verifications, Independent Calibration Verification Check.	185
6	<i>Analytical Data</i> Raw Data Quantification Reports.	277
7	<i>Chromatograms</i> Sample And Standard Chromatograms.	306
8	<i>Unused Data</i>	385

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Master Signature Page

Name (Printed)	Signature	Initials	Date
Jonathan Thom		JRT	1/9/2020
Robert Lizotte, Jr.		BL	1.9.2020
Elynn M. Fitch		EF	1/9/2020
Carla Devine		CRD	1/9/2020
Dennis Schumitz		DS	1/9/2020
Lauren Griffith		LMG	1.9.2020
Carrie P. McLarthy		CPM	1/9/2020
Rich Restucci		RR	1/9/2020
Sam Guimaraes		SAG	1/9/2020
Jordan Tower		JT	1/9/2020
Christie Usher		CU	1/9/2020
Kevin McInerney		KM	1/14/2020
Matt Schumitz		MDS	1/14/2020
Weidong Li		W.L	1/14/2020
Kayla Lamarre		KAL	1/14/2020
MUNAZ MUNTASIR		MM	01/14/2020
Kristen Nichols		KN	01/14/2020
Kelsey Harnden		KH	01/30/2020
Kevin Bailey		KB	1/30/2020
Stephanie Schultz		SAS	1/30/2020

Sample Summary

Client: CH2M
SDG: 20-1310
Project/Site: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10
CTO: 4532

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Receipt Date
DA918PB-FS	Procedural Blank	WATER	10/22/2020	10/22/2020
DA919LCS-FS	Laboratory Control Sample	WATER	10/22/2020	10/22/2020
G1707-FS	CBD-AOA-MW15-1020	GW	10/16/2020	10/17/2020
G1708-FS	CBD-AOA-MW16-1020	GW	10/16/2020	10/17/2020
G1708MS-FS	CBD-AOA-MW16-1020	GW	10/16/2020	10/17/2020
G1708MSD-FS	CBD-AOA-MW16-1020	GW	10/16/2020	10/17/2020
G1709-FS	CBD-FB04-101620	AQ	10/16/2020	10/17/2020

Work Plan



WORK/QUALITY ASSURANCE PROJECT PLAN

1.0 GENERAL PROJECT INFORMATION

Project Title: CTO-4532: PFAS in Water
Project Number: 100142218
Client: CH2M
 2411 Dulles Corner Park
 Suite 500
 Herdon, VA 20171
 USA

Client Contact Information: Michael Zamboni
 Project Chemist
 (703) 376-5301(V)
 NA
 Michael.Zamboni@jacobs.com

Effective Date of QAPP: 10/1/2020
Version Number: 100142218(L)-02
Project Manager: Thorn, Jonathan
Laboratory Task Manager: Thorn, Jonathan
Deliverable Due Date: 10/29/2020

2.0 SCOPE OF WORK

Overview: Analysis of non-potable water for PFAS.
Matrix: Water

2.1 TECHNICAL APPROACH

2.1.1 Sample Receipt, Storage, and Handling

The list of samples for this project plan are presented in Attachment 1.

Storage Directions: Store samples refrigerated prior to extraction.
Sub_Sampling: None
Procedures: NA
Contact: NA
Comment: None.
Archiving: Store excess samples for six months after delivery of final data.
Disposal: Dispose of samples in the appropriate waste stream.



WORK/QUALITY ASSURANCE PROJECT PLAN

2.1.2 Sample Preparation

IDW samples should be batched separately from field samples.

Samples Expected:	Samples Per Batch:	Batches Expected:
51	20	3

Batch quality control samples are defined in Table 1.

Target samples are presented in Attachment 1.

Table 1: Quality Control Samples

Type:	Description:	Count:	Rgt:	Reference:	Comment:
PB	Laboratory control reagent blank.	1 per batch	--	NA	
LCS	Laboratory Control Sample	1 per batch	No	NA	
MS	Spiked field sample for determining method accuracy in the presence of matrix.	1 per batch	--	NA	MS/MSD identified on COC with suffix "-MS" and "-SD".
MSD	Spiked field sample for determining method accuracy and precision in the presence of matrix.	1 per batch	--	NA	

2.1.3 Extraction/Preparation

2.1.3.1 Extraction

SOP No.-Rev:	5-370-11
SOP Title:	<i>Extraction of Poly and Perfluoroalkyl Substances from Environmental Matrices</i>
Sample Size:	250 ml
SIS and LCS/MS Compounds:	Defined in Table 2.
Deviations:	None
Comments:	None

Table 2: SIS and LCS/MS Spiking Level

Standard Type	Standard Contents	Spike Amount (ng)	Volume (uL)	Comment
PFAS - DoD Low Level Labelled Extracted Internal Standard (SIS)	LC22 SIS	~ 1.13 - 1.25 ng	125 uL	NA



WORK/QUALITY ASSURANCE PROJECT PLAN

Standard Type	Standard Contents	Spike Amount (ng)	Volume (uL)	Comment
PFAS - DoD Second Source LCS/MS solution	LD11 LCS/MS	~ 7.5 ng	75 uL	Vary spikes 25 (LCS only), 50, 75, 100, 125 µL

2.1.3.2 Cleanup

None.

RIS spiking levels are presented in Table 3.

Extract PIV (uL): 1000

Table 3: RIS Spiking Level

Standard Type	Standard Contents	Spike Amount (ng)	Volume (uL)	Comment
PFAS - DoD Internal Standard Spiking Solution	LD33 RIS	~ 1.25 ng	125 uL	NA

2.1.4 Instrumental Analysis

The list of analytes along with data quality criteria are presented in Attachment 2.

- 1) SOP_No-Rev: **5-369-08**
- SOP_Title: *Analysis of Perfluoroalkyl Substances in Environmental Samples by Liquid Chromatography and Tandem Mass Spectrometry (LC-MS/MS)*
- Deviations: None.
- Comments: None.

2.2. DELIVERABLES

Deliverables Due: 10/29/2020

LIMS Reports: No

Histograms: No

Excel Tables: No

EICs: No

Chromatograms: No

EDDs: No



WORK/QUALITY ASSURANCE PROJECT PLAN

Comments:

- 28-day TAT for most samples
- Samples marked rush will be 7-day TAT
- LIV validation data packages
- CH2M EDD file

3.0 QUALITY

The Method Quality Objectives are defined in Attachment 3.

4.0 ORGANIZATION AND COMMUNICATION

4.1 ORGANIZATION

The project team is defined in Table 4. Supervisors may make substitutions with Project Manager concurrence.

Table 4: Project Team and Roles

Staff Member	Role	Comment
Jonathan R. Thorn	Project Manager	NA
Ryan P. Kelly	Sample Preparation	NA
Stephanie A. Schultz	LC-MS/MS Analysis	NA
Matt D. Schumitz	Sample Custody	NA
Carla R. Devine	Quality Control Officer	NA
Zachary J. Willenberg	Quality Assurance Officer	NA

4.2 COMMUNICATION

A kick-off meeting will be held to discuss project scope and goals.

5.0 SCHEDULE

The project schedule is presented in Table 5.

Table 5. Schedule of Laboratory Activities

Activity:	Start Date:	End Date:	TAT (days):	Comment:
Sample Receipt	10/01/2020	10/01/2020	0	NA
Sample Preparation	10/01/2020	10/12/2020	11	NA
Instrument Analysis	10/12/2020	10/23/2020	11	NA
Quality Control Review	10/23/2020	10/27/2020	4	NA



WORK/QUALITY ASSURANCE PROJECT PLAN

Activity:	Start Date:	End Date:	TAT (days):	Comment:
Quality Assurance Review	10/27/2020	10/29/2020	2	NA

6.0 BUDGET

The labor budget for the analytical task is presented in Table 6.

Table 6. Labor Budget (Laboratory Analytical Task)

Labor Activity:	Hours/ Batch:	Batches:	Total Hours:	Comment:
Sample Receipt	4	3	12	NA
Sample Preparation	9	3	27	NA
Instrument Analysis	10	3	30	NA
Quality Control Review	3	3	9	NA
Quality Assurance Review	1	3	3	NA

7.0 STAFF DEVELOPMENT

None anticipated.



WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 1: Target Samples

Shipment: SHP-201005-02
Status: Pending
Description: Site 10 SI
Range: G1071-G1072
Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
1	G1071	CBD-AOA-EB01-100220-SO	10/02/2020 2:10 pm	AQ	R0119	(NA)		
2	G1072	CBD-AOA-FB01-100220	10/02/2020 2:00 pm	AQ	R0119	(NA)		

Shipment: SHP-201012-02
Status: Pending
Description: Site 10
Range: G1524-G1525
Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
1	G1524	CBD-AOA-FB02-100920	10/09/2020 1:00 pm	AQ	R0119	(NA)		
2	G1525	CBD-AOA-EB02-100920-SO	10/09/2020 1:10 pm	AQ	R0119	(NA)		

Shipment: SHP-201014-03
Status: Pending
Description: Site 10 SI
Range: G1644-G1668
Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
1	G1644	CBD-AOA-SW07-1020	10/13/2020 10:00 am	SW	R0119	(NA)		
2	G1645	CBD-AOA-SW05-1020	10/13/2020 10:20 am	SW	R0119	(NA)		
3	G1646	CBD-AOA-SW03-1020	10/13/2020 10:35 am	SW	R0119	(NA)		
4	G1647	CBD-AOA-SW04-1020	10/13/2020 10:40 am	SW	R0119	(NA)		
5	G1651	CBD-AOA-SW02-1020	10/13/2020 11:30 am	SW	R0119	(NA)		
6	G1652	CBD-AOA-SW02P-1020	10/13/2020 11:35 am	SW	R0119	(NA)		
7	G1654	CBD-AOA-SW01-1020	10/13/2020 12:00 pm	SW	R0119	(NA)		
8	G1655	CBD-AOA-FB03-101320	10/13/2020 12:20 pm	AQ	R0119	(NA)		
9	G1656	CBD-AOA-EB01-101320-SW	10/13/2020 12:25 pm	AQ	R0119	(NA)		
10	G1657	CBD-AOA-EB01-101320-SD	10/13/2020 12:30 pm	AQ	R0119	(NA)		
11	G1658	CBD-AOA-SW08-1020	10/13/2020 1:00 pm	SW	R0119	(NA)		
12	G1661	CBD-AOA-SW06-1020	10/13/2020 1:25 pm	SW	R0119	(NA)		
13	G1663	CBD-AOA-SW11-1020	10/13/2020 2:00 pm	SW	R0119	(NA)		
14	G1664	CBD-AOA-SW11P-1020	10/13/2020 2:05 pm	SW	R0119	(NA)		
15	G1665	CBD-AOA-SW10-1020	10/13/2020 2:10 pm	SW	R0119	(NA)		
16	G1666	CBD-AOA-SW10-1020-MS	10/13/2020 2:10 pm	SW	R0119	(NA)		



WORK/QUALITY ASSURANCE PROJECT PLAN

Shipment: SHP-201014-03
Status: Pending
Description: Site 10 SI
Range: G1644-G1668
Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
17	G1667	CBD-AOA-SW10-1020-SD	10/13/2020 2:10 pm	SW	R0119 (NA)			
18	G1668	CBD-AOA-SW09-1020	10/13/2020 2:25 pm	SW	R0119 (NA)			

Shipment: SHP-201016-02
Status: Pending
Description: Site 10 SI
Range: G1696-G1702
Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
1	G1696	CBD-HVG-GW10-1020	10/14/2020 3:15 pm	GW	R0119 (NA)			
2	G1697	CBD-HVG-GW09-1020	10/14/2020 3:30 pm	GW	R0119 (NA)			
3	G1698	CBD-EB01-101420-GW	10/14/2020 3:40 pm	AQ	R0119 (NA)			
4	G1699	CBD-AOA-MW10-1020	10/15/2020 10:25 am	GW	R0119 (NA)			
5	G1700	CBD-BKG-MW03-1020	10/15/2020 2:00 pm	GW	R0119 (NA)			
6	G1701	CBD-SO4-MW01-1020	10/15/2020 3:25 pm	GW	R0119 (NA)			
7	G1702	CBD-SO4-MW01P-1020	10/15/2020 3:30 pm	GW	R0119 (NA)			

Shipment: SHP-201019-01
Status: Pending
Description: Site 10 SI
Range: G1707-G1709
Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
1	G1707	CBD-AOA-MW15-1020	10/16/2020 10:40 am	GW	R0119 (NA)			
2	G1708	CBD-AOA-MW16-1020	10/16/2020 12:05 pm	GW	R0119 (NA)			MS/MSD
3	G1709	CBD-FB04-101620	10/16/2020 12:10 pm	GW	R0119 (NA)			

Shipment: SHP-201020-04
Status: Pending
Description: Site 10 SI
Range: G1765-G1775
Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
1	G1765	CBD-AOA-MW04-1020	10/19/2020 10:20 am	GW	R0119 (NA)			
2	G1766	CBD-AOA-MW01-1020	10/19/2020 10:35 am	GW	R0119 (NA)			
3	G1767	CBD-AOA-MW01P-1020	10/19/2020 10:40 am	GW	R0119 (NA)			
4	G1768	CBD-AOA-MW03-1020	10/19/2020 11:35 am	GW	R0119 (NA)			



WORK/QUALITY ASSURANCE PROJECT PLAN

Shipment: SHP-201020-04
Status: Pending
Description: Site 10 SI
Range: G1765-G1775
Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
5	G1769	CBD-AOA-MW08-1020	10/19/2020 12:55 pm	GW	R0119 (NA)			
6	G1770	CBD-AOA-MW08-1020-MS	10/19/2020 12:55 pm	GW	R0119 (NA)			
7	G1771	CBD-AOA-MW08-1020-SD	10/19/2020 12:55 pm	GW	R0119 (NA)			
8	G1772	CBD-AOA-MW02-1020	10/19/2020 1:10 pm	GW	R0119 (NA)			
9	G1773	CBD-AOA-MW18-1020	10/19/2020 2:35 pm	GW	R0119 (NA)			
10	G1774	CBD-AOA-EB01-101920-GW	10/19/2020 4:00 pm	AQ	R0119 (NA)			
11	G1775	CBD-SO3-MW01-1020	10/19/2020 3:20 pm	GW	R0119 (NA)			

Shipment: SHP-201022-01
Status: Pending
Description: Site 10 SI
Range: G1794-G1801
Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
1	G1794	CBD-AOA-MW07-1020	10/20/2020 3:50 pm	GW	R0118 (NA)			
2	G1795	CBD-AOA-MW17-1020	10/20/2020 3:45 pm	GW	R0118 (NA)			
3	G1796	CBD-AOA-MW19-1020	10/20/2020 1:45 pm	GW	R0118 (NA)			
4	G1797	CBD-AOA-FB05-102020	10/20/2020 12:40 pm	AQ	R0118 (NA)			Field Blank - GW this week
5	G1798	CBD-AOA-EB01-102020-GW	10/20/2020 4:20 pm	AQ	R0118 (NA)			Equipment Blank - monsoon pump
6	G1799	CBD-BKG-MW01-1020	10/20/2020 2:20 pm	GW	R0118 (NA)			
7	G1800	CBD-BKG-MW02-1020	10/20/2020 3:25 pm	GW	R0118 (NA)			
8	G1801	CBD-SO3-MW02-1020	10/20/2020 12:00 pm	GW	R0118 (NA)			

Shipment: SHP-201022-02
Status: Pending
Description: Site 10 SI
Range: G1802-G1804
Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
1	G1802	CBD-AOA-MW09-1020	10/21/2020 9:35 am	GW	R0119 (NA)			
2	G1803	CBD-AOA-MW05-1020	10/21/2020 10:25 am	GW	R0119 (NA)			
3	G1804	CBD-AOA-EB01-102120-GW	10/21/2020 10:35 am	AQ	R0119 (NA)			Equipment Blank - monsoon



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Shipment: SHP-201029-03
Status: Pending
Description: Site 10 SI
Range: G2203-G2212
Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
1	G2203	CBD-AOA-MW06-1020	10/27/2020 10:00 am	GW	R0119	(NA)		
2	G2204	CBD-AOA-EB01-102720-GW	10/27/2020 10:10 am	AQ	R0119	(NA)		
3	G2205	CBD-AOA-MW12-1020	10/28/2020 1:45 pm	GW	R0119	(NA)		
4	G2206	CBD-AOA-MW11-1020	10/28/2020 3:30 pm	GW	R0119	(NA)		
5	G2207	CBD-AOA-MW11P-1020	10/28/2020 3:35 pm	GW	R0119	(NA)		
6	G2208	CBD-AOA-FB01-102820	10/28/2020 3:55 pm	AQ	R0119	(NA)		
7	G2209	CBD-AOA-EB01-102820-GW	10/28/2020 4:40 pm	AQ	R0119	(NA)		
8	G2210	CBD-AOA-MW14-1020	10/28/2020 4:35 pm	GW	R0119	(NA)		
9	G2211	CBD-AOA-MW13-1020	10/28/2020 5:10 pm	GW	R0119	(NA)		
10	G2212	CBD-AOA-IW01-102820	10/28/2020 5:30 pm	AQ	R0119	(NA)		



WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 2: Test Codes

Project Test Code Name:	Master_369B
SOP Reference:	5-369 - Analysis of Perfluoroalkyl Substances in Environmental Samples by Liquid Chromatography and Tandem Mass Spectrometry (LC-MS/MS)
Description:	PFAS by DoD QSM 5.3 Table B-15
Matrix:	L - Liquid Samples, like water or sea water, prepared and analyzed under the same class of detection limits.
Detection Limit Study:	5-369
Instrument:	LC-MS/MS
MQO Criteria	Universal_LC
Standard Report:	Standard Result Report

Method Specific Reporting		Holding Times (days)	Data Flags
Result Units:	ng/L	Unit Conversion: (none)	Sample: 14 DL_Flag: U
Weight Basis:	LIQUID	Result Format: Fixed Digits	Frozen: 14 RL_Flag: J
Standard Basis:	SIS	# of Figures/Digits: 2	Extract: 28 PB_Flag: B
Oil Weight Basis:	No	Oil Weight Source: Oil Weight	DIL_Flag: D
U-Value Substitution:	U-Flag=MD	Histograms: No	HT_Flag: T
ECD_Reporting:	No		

No:	Analyte:	Report Name:	Type	RIS	SIS	Hidden:	Graph:
1	Perfluoro-n-hexanoic acid	PFHxA	T		13C5-PFHxA	No	No
2	Perfluoro-n-heptanoic Acid	PFHpA	T		13C4-PFHpA	No	No
3	Perfluoro-n-octanoic Acid	PFOA	T		13C8-PFOA	No	No
4	Perfluorononanoic Acid	PFNA	T		13C9-PFNA	No	No
5	Perfluoro-n-decanoic Acid	PFDA	T		13C6-PFDA	No	No
6	Perfluoro-n-undecanoic acid	PFUnA	T		13C7-PFUnA	No	No
7	Perfluoro-n-dodecanoic acid	PFDoA	T		13C2-PFDoA	No	No
8	Perfluoro-n-tridecanoic acid	PFTTrDA	T		13C2-PFTeDA	No	No
9	Perfluoro-n-tetradecanoic acid	PFTeDA	T		13C2-PFTeDA	No	No
10	N-methylperfluoro-1-octanesulfonamidoacetic acid	NMeFOSAA	T		d3-MeFOSAA	No	No
11	N-ethylperfluoro-octanesulfonamidoacetic acid	NEtFOSAA	T		d5-EtFOSAA	No	No
12	Perfluoro-1-butanefulfonate	PFBS	T		13C3-PFBS	No	No
13	Perfluoro-1-hexanesulfonate	PFHxS	T		13C3-PFHxS	No	No
14	Perfluoro-1-octanesulfonate	PFOS	T		13C8-PFOS	No	No
15	Hexafluoropropylene oxide dimer acid	HFPO-DA	T		13C3-HFPO-DA	No	No
16	Adona	Adona	T		13C3-HFPO-DA	No	No
17	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	T		13C3-HFPO-DA	No	No



WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 2: Test Codes

Project Test Code Name: Master_369B

No:	Analyte:	Report Name:	Type	RIS	SIS	Hidden:	Graph:
18	9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS	T		13C3-HFPO-DA	No	No
1	13C5-PFHxA	13C5-PFHxA	SIS	13C2-PFOA		No	No
2	13C4-PFHpA	13C4-PFHpA	SIS	13C2-PFOA		No	No
3	13C8-PFOA	13C8-PFOA	SIS	13C2-PFOA		No	No
4	13C9-PFNA	13C9-PFNA	SIS	13C2-PFOA		No	No
5	13C6-PFDA	13C6-PFDA	SIS	13C2-PFDA		No	No
6	13C7-PFUnA	13C7-PFUnA	SIS	13C2-PFDA		No	No
7	13C2-PFDoA	13C2-PFDoA	SIS	13C2-PFDA		No	No
8	13C2-PFTeDA	13C2-PFTeDA	SIS	13C2-PFDA		No	No
9	d3-MeFOSAA	d3-MeFOSAA	SIS	13C4-PFOS		No	No
10	d5-EtFOSAA	d5-EtFOSAA	SIS	13C4-PFOS		No	No
11	13C3-PFBS	13C3-PFBS	SIS	13C4-PFOS		No	No
12	13C3-PFHxS	13C3-PFHxS	SIS	13C4-PFOS		No	No
13	13C8-PFOS	13C8-PFOS	SIS	13C4-PFOS		No	No
14	13C3-HFPO-DA	13C3-HFPO-DA	SIS	13C2-PFOA		No	No
Total Analytes:		32					

Subtract Peaks:

None

Sum Peaks:

None



It can be done

WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 2: Test Codes

Project Test Code Name: Master_369B

ICAL Acceptance Criteria:

Curve Fit:	Limit Mean(%):	Mean Qual:	Limit Ind.:	Ind. Qual:	Min Points:	Points Qual:	Comments:
Linear	NA	NA	0.99	N	5	N	y = Bx + C
Quadratic	NA	NA	0.99	N	6	N	y = Ax^2 + Bx + C

Continuing Calibration Verification Criteria:

CCV Name: 5-369

Frequency Hrs:	Mean PD(%):	Individual PD(%):	RIS/SIS RT Window (min):	Area Limit Low(%):	Area Limit High(%):	Comment:
12 (N)	30 (N)	30 (N)	0.04 (N)	-50	100 (N)	NA

Independent Calibration Verification:

ICC Name: 5-369

Mean PD Limit(%):	Ind. PD Limit(%):	RIS/SIS Window Limit (Secs):	Area Limit High(%):	Area Limit Low(%):	Comment:
30 (N)	30 (N)	0.04 (N)	-50	100 (N)	NA

Mass Discrimination Criteria:

None

Degradation Check Criteria:

None



WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 3: Method Quality Objectives

MQO Application: <i>Universal_LC</i>			
MQO:	Acceptance Criteria:	Qual:	Corrective Action:
Procedural Blank	Samples must be greater than five times the blank concentration (>5xPB).	B	Review with Project Manager; re-analyze or justify results in project records.
PB Measurement Quality Objective	Organic results in the Procedural Blank are less than 1/2 times the LOQ (<1/2xLOQ)	N	Review with Project Manager; re-analyze or justify results in project records.
Laboratory Control Sample	Recovery values 70-130%.	N	Review with project manager; re-analyze or justify reporting the results in project records.
Matrix Spike / Matrix Spike Duplicate Recovery	Organics 70-130%. Analyte concentration in MS/MSD must be greater than five times reported background concentration. Organics Results in the Target is less than 5 times the Original	N n	Review with Project Manager; re-analyze or justify reporting results in the project records.
Matrix Spike/Spike Duplicate Precision	Organics results less than 30% Relative Percent Difference (RPD). Analyte concentration in MS/MSD must be greater than five times reported background concentration. Organics Results in the Target is less than 5 times the Original	N n	Review with Project Manager; re-analyze or justify reporting results in the project records.
Standard Reference Material Accuracy	Organics Percent Difference less than 30% from a range of certified values on average. Analyte concentration must be greater than five times the Method Detection Limit (>5xMDL). Organics Results in the Target is less than 5 times the MDL	N n	Review with Project Manager; re-analyze or justify reporting results in the project records.
Analytical Duplicate Precision	Organics results less than 30% Relative Percent Difference (RPD). Analyte concentration must be > 5x MDL. Organics Results in the Original is less than 5 times the MDL	N n	Review with Project Manager; re-analyze or justify reporting results in the project records.



WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 3: Method Quality Objectives

MQO Application:	<i>Universal_LC</i>		
MQO:	Acceptance Criteria:	Qual:	Corrective Action:
Analytical Triplicate Precision	Organics results less than 30% Relative Standard Deviation (RSD). Analyte concentration must be > 5x MDL. Organics Results in the Original is less than 5 times the MDL	N n	Review with Project Manager; re-analyze or justify reporting results in the project records.
Surrogate Compound Recovery	Recovery results between 50% and 150%.	N	Review with Project Manager; re-analyze or justify reporting results in the project records.
Control Oil	RPD < 30% for at least 90% of analytes	N	Results examined by project manager, task leader, or subcontractor lab manager. Reextraction, reanalysis, or justification documented.
Instrument Calibration	5-369-8: R-squared greater than or equal to 0.990		Results examined by project manager, task leader, or subcontractor lab manager. Reextraction, reanalysis, or justification documented.
Independent Calibration Check Solution	5-369-8: Individual PD less than or equal to 30%. Mean Percent Difference less than or equal to 30%.	N	Review with Project Manager; re-analyze or justify in project records.
Continuing Calibration Verification	5-369-8: Individual PD less than or equal to 30%. Mean Percent Difference less than or equal to 30%.	N	Review with Project Manager; re-analyze or justify in project records.

Sample Receipt Form

Approved: Authorized

Project Number: _____ Client: Jacobs
Received by: Schumitz, Matt Date/Time Received: Saturday, October 17, 2020 11:00 AM
No. of Shipping Containers: 1

SHIPMENT

Method of Delivery: Commercial Carrier Tracking Number: Fed Ex
COC Forms: Shipped with samples No Forms

Cooler(s)/Box(es)

Cntr	Type	Tracking No.	Seal	Seal	Container	Therm.	Temp C	Smps
1 of 1	Cooler	7718 1464 1419	Custody Seals	Intact	Intact	Therm_1	1.1	3

Samples

Sample Labels: Sample labels agree with COC forms
 Discrepancies (see Sample Custody Corrective Action Form)

Container Seals: Tape Custody Seals Other Seals (See sample Log)
 Seals intact for each shipping container
 Seals broken (See sample log for impacted samples)

Condition of Samples: Sample containers intact
 Sample containers broken/leaking (See Custody Corrective Action Form)

Temperature upon receipt (°C): 1.1 Temperature Blank used Yes No
(Note: If temperature upon receipt differs from required conditions, see sample log comment field)

Samples Acidified: Yes No Unknown

Initial pH 5-9?: Yes No NA
If no, individual sample adjustments on the Auxiliary Sample Receipt Form

Total Residual Chlorine Present?: Yes No NA
If yes, individual sample adjustments on the Auxiliary Sample Receipt Form

Head Space <1% in samples for water VOC analysis: Yes No NA
Individual sample deviations noted on sample log

Samples Containers: Yes No Unknown /Lot No.: Unknown

Storage Location: Custody: Refrigerator - R0119 (NA) BDO IDs Assigned: G1707 - G1709

Samples logged in by: Schumitz, Matt Date/Time: 10/17/2020 11:00 AM

Approved By: _____ Approved On: _____

Authorized By: _____ Authorized On: _____

Report Corrective Actions

Corrective Action No: 1 of 1

Authorized Approved:

COC Client: Jacobs
COC Project: Site 10 SI
COC Date: 10/19/2020 9:23:00 AM

	Description of Problem:	Explanation:
Client Id	Extra samples not listed on the C-O-C	Sample CBD-AOA-MW16-1020 lists 2 under number of containers but there were 6 in the cooler. The other 4 bottles were listed as MS and MSD's

Documentation of project manager notification

Sample Custodian: Schumitz, Matt Date: 10/19/2020 9:27:00 A

Laboratory Manager: Thorn, Jonathan Date: 11/10/2020 9:02:00 A

Project Manager: Thorn, Jonathan Date: 11/10/2020 9:02:00 A

Documentation of client notification (should be completed by project manager within 24 hrs):

On 19-Oct-20 I contacted Zamboni, Michael at CH2M

Results of communication with client (Describe any corrective action directed by the client):

See attached email

Date this form was received back to the custodian: _____

Reference Number: _____

From: [Zamboni, Michael/WDC](#)
To: [Thorn, Jonathan R](#); [Dronfield, Caitlin/WDC](#); [Schumitz, Denise M](#)
Cc: [Lampshire, Laura/WDC](#); [Schumitz, Matthew](#); [Zamboni, Michael/WDC](#)
Subject: RE: CTO-4532 sample receipt 10/19/2020
Date: Monday, October 19, 2020 4:04:13 PM

Message received from outside the Battelle network. Carefully examine it before you open any links or attachments.

Thanks, Jon. That MS/MSD was in the project instructions and it sounds like we collected it. I think we just forgot to mark the CoC, no problem.

Thanks,
 Mike Z.

From: Thorn, Jonathan R <thorn@battelle.org>
Sent: Monday, October 19, 2020 1:06 PM
To: Zamboni, Michael/WDC <Michael.Zamboni@jacobs.com>; Dronfield, Caitlin/WDC <Caitlin.Dronfield@jacobs.com>; Schumitz, Denise M <SchumitzD@battelle.org>
Cc: Lampshire, Laura/WDC <Laura.Lampshire@jacobs.com>; Schumitz, Matthew <SCHUMITZM@battelle.org>
Subject: [EXTERNAL] CTO-4532 sample receipt 10/19/2020

Hi Mike,
 The attached custody records are for the samples received Saturday, in good condition.

One minor corrective action, sample CBD-AOA-MW16-1020 is listed as having two containers, however, six were received, with four bottles marked as MS and MSDs. We are processing these as the MS/MSD, no need to respond unless you do not want these as the MS/MSD.

The table below includes SDG and delivery information.

SDG	Due Date
20-1310	11/16/2020 (28-day TAT)

Best Regards,
 Jon

Jonathan Thorn

Laboratory Director
 Analytical Chemistry Services
 Office: 781.681.5565 | Mobile: 781.710.9664 | Fax: 614.458.6917
thorn@battelle.org

Battelle

141 Longwater Drive
 Suite 202
 Norwell, MA 02061
<http://www.battelle.org>



It can be done

ShpNo SHP-201019-01

Battelle Project No: 100142218

Sample Receipt Form Details

Approved: Authorized

Project Number: _____ Client: Jacobs

Received by: Schumitz, Matt Date/Time Received: Saturday, October 17, 2020 11:00 AM

No. of Shipping Containers: 1

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
G1707	CBD-AOA-MW15-1020	10/16/20 10:40	10/19/20 9:25	2	GW	1.1	NA	NA	NA	R0119 (NA)			
G1708	CBD-AOA-MW16-1020	10/16/20 12:05	10/19/20 9:25	6	GW	1.1	NA	NA	NA	R0119 (NA)			MS/MSD
G1709	CBD-FB04-101620	10/16/20 12:10	10/19/20 9:25	2	AQ	1.1	NA	NA	NA	R0119 (NA)			

Total Samples: 3

ORIGIN ID:BCBA (703) 376-5000
CAITLIN DRONFIELD
CAITLIN DRONFIELD
2411 DULLES CORNER PARK
SUITE 500
HERNDON, VA 20171
UNITED STATES US

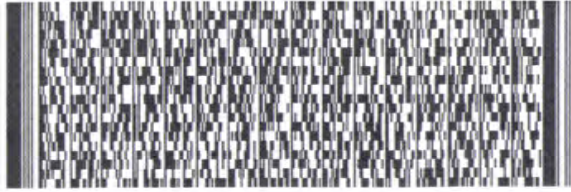
SHIP DATE: 16OCT20
ACTWGT: 50.00 LB
CAD: 103931050/NET4280
DIMS: 16x24x18 IN
BILL THIRD PARTY

TO **MATT SCHUMITZ**
BATTELLE
29 NICKERSON ST.

PLYMOUTH MA 02360

(781) 681-5565 REF. 706207/CH/FIFS
INV DEPT.
PO

56BLJ2/A27E1B766



REL#
3785346

SATURDAY 12:00P
PRIORITY OVERNIGHT

TRK#
0201 7718 1464 1419

X0 UWAA

02360
MA-US BOS



Therm!
1.10

After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

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Data Tables



Project Client: CH2M
 Project Name: CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10
 Project No.: 100142218

Client ID CBD-AOA-MW15-1020

Battelle ID G1707-FS
 Sample Type SA
 Collection Date 10/16/2020
 Extraction Date 10/22/2020
 Analytical Instrument Sciex 5500 (AC) LC/MS/MS
 % Moisture NA
 Matrix GW
 Sample Size 0.260
 Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	Extract ID	DF	Analysis Date	DL	LOD	LOQ
PFHxA	307-24-4	149 D	G1707-FS-D(5)	12.500	11/6/2020	6.33	18.0	60.1
PFHpA	375-85-9	86.7 D	G1707-FS-D(3)	5.000	11/6/2020	1.26	4.81	24.0
PFOA	335-67-1	431 D	G1707-FS-D(5)	12.500	11/6/2020	6.14	18.0	60.1
PFNA	375-95-1	46.3	G1707-FS(0)	1.000	11/6/2020	0.297	0.962	4.81
PFDA	335-76-2	0.481 U	G1707-FS(0)	1.000	11/6/2020	0.137	0.481	4.81
PFUnA	2058-94-8	0.481 U	G1707-FS(0)	1.000	11/6/2020	0.211	0.481	4.81
PFDoA	307-55-1	0.481 U	G1707-FS(0)	1.000	11/6/2020	0.185	0.481	4.81
PFTTrDA	72629-94-8	0.481 U	G1707-FS(0)	1.000	11/6/2020	0.148	0.481	4.81
PFTeDA	376-06-7	1.92 U	G1707-FS(0)	1.000	11/6/2020	0.705	1.92	4.81
NMeFOSAA	2355-31-9	0.962 U	G1707-FS(0)	1.000	11/6/2020	0.337	0.962	4.81
NEtFOSAA	2991-50-6	0.962 U	G1707-FS(0)	1.000	11/6/2020	0.481	0.962	4.81
PFBS	375-73-5	30.2	G1707-FS(0)	1.000	11/6/2020	0.138	0.481	4.81
PFHxS	355-46-4	901 D	G1707-FS-D(5)	12.500	11/6/2020	1.35	4.81	60.1
PFOS	1763-23-1	34.5	G1707-FS(0)	1.000	11/6/2020	0.420	0.962	4.81
HFPO-DA	13252-13-6	0.481 U	G1707-FS(0)	1.000	11/6/2020	0.238	0.481	4.81
Adona	919005-14-4	0.962 U	G1707-FS(0)	1.000	11/6/2020	0.255	0.962	4.81
9Cl-PF3ONS	756426-58-1	0.481 U	G1707-FS(0)	1.000	11/6/2020	0.258	0.481	4.81
11Cl-PF3OUdS	763051-92-9	0.962 U	G1707-FS(0)	1.000	11/6/2020	0.222	0.962	4.81



It can be done

Project Client: CH2M

Project Name: CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10

Project No.: 100142218

Client ID LD80 IB

Battelle ID LD80 IB_11/05/2020

Sample Type IB

Collection Date NA

Extraction Date NA

Analysis Date 11/05/2020

Analytical Instrument Sciex 5500 (AC) LC/MS/MS

% Moisture NA

Matrix Water

Sample Size 0.250

Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	DL	LOD	LOQ
PFHxA	307-24-4	1.50 U	0.527	1.50	5.00
PFHpA	375-85-9	1.00 U	0.263	1.00	5.00
PFOA	335-67-1	1.50 U	0.511	1.50	5.00
PFNA	375-95-1	1.00 U	0.309	1.00	5.00
PFDA	335-76-2	0.500 U	0.142	0.500	5.00
PFUnA	2058-94-8	0.500 U	0.219	0.500	5.00
PFDoA	307-55-1	0.500 U	0.192	0.500	5.00
PFTTrDA	72629-94-8	0.500 U	0.154	0.500	5.00
PFTeDA	376-06-7	2.00 U	0.733	2.00	5.00
NMeFOSAA	2355-31-9	1.00 U	0.350	1.00	5.00
NEtFOSAA	2991-50-6	1.00 U	0.500	1.00	5.00
PFBS	375-73-5	0.500 U	0.144	0.500	5.00
PFHxS	355-46-4	0.400 U	0.112	0.400	5.00
PFOS	1763-23-1	1.00 U	0.437	1.00	5.00
HFPO-DA	13252-13-6	0.500 U	0.248	0.500	5.00
Adona	919005-14-4	1.00 U	0.265	1.00	5.00
9Cl-PF3ONS	756426-58-1	0.500 U	0.268	0.500	5.00
11Cl-PF3OUdS	763051-92-9	1.00 U	0.231	1.00	5.00

Analyzed by: Griffith, Lauren

Printed: 11/16/2020

Isotope Dilution

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It can be done

Project Client: CH2M

Project Name: CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10

Project No.: 100142218

Client ID	LD80 IB
Battelle ID	LD80 IB_11/05/2020
Sample Type	IB
Collection Date	NA
Extraction Date	NA
Analysis Date	11/05/2020
Analytical Instrument	Sciex 5500 (AC) LC/MS/MS
% Moisture	NA
Matrix	Water
Sample Size	0.250
Size Unit-Basis	L

Surrogate Recoveries (%)

13C5-PFHxA	96
13C4-PFHpA	102
13C8-PFOA	97
13C9-PFNA	94
13C6-PFDA	95
13C7-PFUnA	99
13C2-PFDoA	93
13C2-PFTeDA	90
d3-MeFOSAA	105
d5-EtFOSAA	112
13C3-PFBS	103
13C3-PFHxS	97
13C8-PFOS	100
13C3-HFPO-DA	91



It can be done

Project Client: CH2M

Project Name: CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10

Project No.: 100142218

Client ID LD80 IB

Battelle ID LD80 IBA_11/05/2020

Sample Type IB

Collection Date NA

Extraction Date NA

Analysis Date 11/05/2020

Analytical Instrument Sciex 5500 (AC) LC/MS/MS

% Moisture NA

Matrix Water

Sample Size 0.250

Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	DL	LOD	LOQ
PFHxA	307-24-4	1.50 U	0.527	1.50	5.00
PFHpA	375-85-9	1.00 U	0.263	1.00	5.00
PFOA	335-67-1	1.50 U	0.511	1.50	5.00
PFNA	375-95-1	1.00 U	0.309	1.00	5.00
PFDA	335-76-2	0.500 U	0.142	0.500	5.00
PFUnA	2058-94-8	0.500 U	0.219	0.500	5.00
PFDoA	307-55-1	0.500 U	0.192	0.500	5.00
PFTTrDA	72629-94-8	0.500 U	0.154	0.500	5.00
PFTeDA	376-06-7	2.00 U	0.733	2.00	5.00
NMeFOSAA	2355-31-9	1.00 U	0.350	1.00	5.00
NEtFOSAA	2991-50-6	1.00 U	0.500	1.00	5.00
PFBS	375-73-5	0.500 U	0.144	0.500	5.00
PFHxS	355-46-4	0.400 U	0.112	0.400	5.00
PFOS	1763-23-1	1.00 U	0.437	1.00	5.00
HFPO-DA	13252-13-6	0.500 U	0.248	0.500	5.00
Adona	919005-14-4	1.00 U	0.265	1.00	5.00
9Cl-PF3ONS	756426-58-1	0.500 U	0.268	0.500	5.00
11Cl-PF3OUdS	763051-92-9	1.00 U	0.231	1.00	5.00

Analyzed by: Griffith, Lauren

Printed: 11/16/2020

Isotope Dilution

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It can be done

Project Client: CH2M

Project Name: CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10

Project No.: 100142218

Client ID	LD80 IB
Battelle ID	LD80 IBA_11/05/2020
Sample Type	IB
Collection Date	NA
Extraction Date	NA
Analysis Date	11/05/2020
Analytical Instrument	Sciex 5500 (AC) LC/MS/MS
% Moisture	NA
Matrix	Water
Sample Size	0.250
Size Unit-Basis	L

Surrogate Recoveries (%)

13C5-PFHxA	107
13C4-PFHpA	103
13C8-PFOA	103
13C9-PFNA	102
13C6-PFDA	98
13C7-PFUnA	92
13C2-PFDoA	96
13C2-PFTeDA	84
d3-MeFOSAA	81
d5-EtFOSAA	82
13C3-PFBS	101
13C3-PFHxS	98
13C8-PFOS	98
13C3-HFPO-DA	108



It can be done

Project Client: CH2M

Project Name: CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10

Project No.: 100142218

Client ID LD80 IB

Battelle ID LD80 IB_11/09/2020

Sample Type IB

Collection Date NA

Extraction Date NA

Analysis Date 11/09/2020

Analytical Instrument Sciex 5500 (AC) LC/MS/MS

% Moisture NA

Matrix Water

Sample Size 0.250

Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	DL	LOD	LOQ
PFHxA	307-24-4	1.50 U	0.527	1.50	5.00
PFHpA	375-85-9	1.00 U	0.263	1.00	5.00
PFOA	335-67-1	1.50 U	0.511	1.50	5.00
PFNA	375-95-1	1.00 U	0.309	1.00	5.00
PFDA	335-76-2	0.500 U	0.142	0.500	5.00
PFUnA	2058-94-8	0.500 U	0.219	0.500	5.00
PFDoA	307-55-1	0.500 U	0.192	0.500	5.00
PFTTrDA	72629-94-8	0.500 U	0.154	0.500	5.00
PFTeDA	376-06-7	2.00 U	0.733	2.00	5.00
NMeFOSAA	2355-31-9	1.00 U	0.350	1.00	5.00
NEtFOSAA	2991-50-6	1.00 U	0.500	1.00	5.00
PFBS	375-73-5	0.500 U	0.144	0.500	5.00
PFHxS	355-46-4	0.400 U	0.112	0.400	5.00
PFOS	1763-23-1	1.00 U	0.437	1.00	5.00
HFPO-DA	13252-13-6	0.500 U	0.248	0.500	5.00
Adona	919005-14-4	1.00 U	0.265	1.00	5.00
9Cl-PF3ONS	756426-58-1	0.500 U	0.268	0.500	5.00
11Cl-PF3OUdS	763051-92-9	1.00 U	0.231	1.00	5.00

Analyzed by: Griffith, Lauren

Printed: 11/16/2020

Isotope Dilution

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It can be done

Project Client: CH2M

Project Name: CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10

Project No.: 100142218

Client ID	LD80 IB
Battelle ID	LD80 IB_11/09/2020
Sample Type	IB
Collection Date	NA
Extraction Date	NA
Analysis Date	11/09/2020
Analytical Instrument	Sciex 5500 (AC) LC/MS/MS
% Moisture	NA
Matrix	Water
Sample Size	0.250
Size Unit-Basis	L

Surrogate Recoveries (%)

13C5-PFHxA	106
13C4-PFHpA	108
13C8-PFOA	108
13C9-PFNA	103
13C6-PFDA	105
13C7-PFUnA	101
13C2-PFDoA	107
13C2-PFTeDA	86
d3-MeFOSAA	81
d5-EtFOSAA	83
13C3-PFBS	102
13C3-PFHxS	97
13C8-PFOS	107
13C3-HFPO-DA	101



Project Client: CH2M
 Project Name: CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10
 Project No.: 100142218

Client ID Procedural Blank

Battelle ID DA918PB-FS
 Sample Type PB
 Collection Date 10/22/2020
 Extraction Date 10/22/2020
 Analytical Instrument Sciex 5500 (AC) LC/MS/MS
 % Moisture NA
 Matrix WATER
 Sample Size 0.250
 Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	Extract ID	DF	Analysis Date	DL	LOD	LOQ
PFHxA	307-24-4	1.50 U	DA918PB-FS(0)	1.000	11/6/2020	0.527	1.50	5.00
PFHpA	375-85-9	1.00 U	DA918PB-FS(0)	1.000	11/6/2020	0.263	1.00	5.00
PFOA	335-67-1	1.50 U	DA918PB-FS(0)	1.000	11/6/2020	0.511	1.50	5.00
PFNA	375-95-1	1.00 U	DA918PB-FS(0)	1.000	11/6/2020	0.309	1.00	5.00
PFDA	335-76-2	0.500 U	DA918PB-FS(0)	1.000	11/6/2020	0.142	0.500	5.00
PFUnA	2058-94-8	0.500 U	DA918PB-FS(0)	1.000	11/6/2020	0.219	0.500	5.00
PFDoA	307-55-1	0.500 U	DA918PB-FS(0)	1.000	11/6/2020	0.192	0.500	5.00
PFTTrDA	72629-94-8	0.500 U	DA918PB-FS(0)	1.000	11/6/2020	0.154	0.500	5.00
PFTeDA	376-06-7	2.00 U	DA918PB-FS(0)	1.000	11/6/2020	0.733	2.00	5.00
NMeFOSAA	2355-31-9	1.00 U	DA918PB-FS(0)	1.000	11/6/2020	0.350	1.00	5.00
NEtFOSAA	2991-50-6	1.00 U	DA918PB-FS(0)	1.000	11/6/2020	0.500	1.00	5.00
PFBS	375-73-5	0.500 U	DA918PB-FS(0)	1.000	11/6/2020	0.144	0.500	5.00
PFHxS	355-46-4	0.400 U	DA918PB-FS(0)	1.000	11/6/2020	0.112	0.400	5.00
PFOS	1763-23-1	1.00 U	DA918PB-FS(0)	1.000	11/6/2020	0.437	1.00	5.00
HFPO-DA	13252-13-6	0.500 U	DA918PB-FS(0)	1.000	11/6/2020	0.248	0.500	5.00
Adona	919005-14-4	1.00 U	DA918PB-FS(0)	1.000	11/6/2020	0.265	1.00	5.00
9Cl-PF3ONS	756426-58-1	0.500 U	DA918PB-FS(0)	1.000	11/6/2020	0.268	0.500	5.00
11Cl-PF3OUdS	763051-92-9	1.00 U	DA918PB-FS(0)	1.000	11/6/2020	0.231	1.00	5.00



Project Client: CH2M
 Project Name: CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10
 Project No.: 100142218

Client ID Laboratory Control Sample

Battelle ID DA919LCS-FS
 Sample Type LCS
 Collection Date 10/22/2020
 Extraction Date 10/22/2020
 Analytical Instrument Sciex 5500 (AC) LC/MS/MS
 % Moisture NA
 Matrix WATER
 Sample Size 0.255
 Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	Extract ID	DF	Analysis Date	Target	Recovery	Qual	Control Limits	
									Lower	Upper
PFHxA	307-24-4	35.3	DA919LCS-FS(0)	1.000	11/6/2020	39.6	89		72	129
PFHpA	375-85-9	33.7	DA919LCS-FS(0)	1.000	11/6/2020	39.2	86		72	130
PFOA	335-67-1	35.8	DA919LCS-FS(0)	1.000	11/6/2020	39.2	91		71	133
PFNA	375-95-1	34.2	DA919LCS-FS(0)	1.000	11/6/2020	39.2	87		69	130
PFDA	335-76-2	33.5	DA919LCS-FS(0)	1.000	11/6/2020	39.2	85		71	129
PFUnA	2058-94-8	35.1	DA919LCS-FS(0)	1.000	11/6/2020	39.2	90		69	133
PFDoA	307-55-1	33.6	DA919LCS-FS(0)	1.000	11/6/2020	39.2	86		72	134
PFTTrDA	72629-94-8	39.8	DA919LCS-FS(0)	1.000	11/6/2020	39.2	102		65	144
PFTeDA	376-06-7	36.6	DA919LCS-FS(0)	1.000	11/6/2020	39.2	93		71	132
NMeFOSAA	2355-31-9	39.4	DA919LCS-FS(0)	1.000	11/6/2020	39.2	101		65	136
NEtFOSAA	2991-50-6	36.6	DA919LCS-FS(0)	1.000	11/6/2020	39.2	93		61	135
PFBS	375-73-5	37.8	DA919LCS-FS(0)	1.000	11/6/2020	39.2	96		72	130
PFHxS	355-46-4	43.1	DA919LCS-FS(0)	1.000	11/6/2020	39.6	109		68	131
PFOS	1763-23-1	35.8	DA919LCS-FS(0)	1.000	11/6/2020	39.6	90		65	140
HFPO-DA	13252-13-6	36.1	DA919LCS-FS(0)	1.000	11/6/2020	39.2	92		74	148
Adona	919005-14-4	37.8	DA919LCS-FS(0)	1.000	11/6/2020	39.2	96		61	143
9CI-PF3ONS	756426-58-1	36.0	DA919LCS-FS(0)	1.000	11/6/2020	39.2	92		52	158
11CI-PF3OUdS	763051-92-9	32.2	DA919LCS-FS(0)	1.000	11/6/2020	39.2	82		59	147



Project Client: CH2M
 Project Name: CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10
 Project No.: 100142218

Client ID	Laboratory Control Sample
Battelle ID	DA919LCS-FS
Sample Type	LCS
Collection Date	10/22/2020
Extraction Date	10/22/2020
Analytical Instrument	Sciex 5500 (AC) LC/MS/MS

<i>Surrogate Recoveries (%)</i>	Recovery	Extract ID	Analysis Date
13C5-PFHxA	97	DA919LCS-FS(0)	11/6/2020
13C4-PFHpA	104	DA919LCS-FS(0)	11/6/2020
13C8-PFOA	97	DA919LCS-FS(0)	11/6/2020
13C9-PFNA	103	DA919LCS-FS(0)	11/6/2020
13C6-PFDA	101	DA919LCS-FS(0)	11/6/2020
13C7-PFUnA	88	DA919LCS-FS(0)	11/6/2020
13C2-PFDoA	102	DA919LCS-FS(0)	11/6/2020
13C2-PFTeDA	80	DA919LCS-FS(0)	11/6/2020
d3-MeFOSAA	74	DA919LCS-FS(0)	11/6/2020
d5-EtFOSAA	71	DA919LCS-FS(0)	11/6/2020
13C3-PFBS	105	DA919LCS-FS(0)	11/6/2020
13C3-PFHxS	101	DA919LCS-FS(0)	11/6/2020
13C8-PFOS	98	DA919LCS-FS(0)	11/6/2020
13C3-HFPO-DA	101	DA919LCS-FS(0)	11/6/2020



Project Client: CH2M

Project Name: CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10
Project No.: 100142218**MS/MSD Background
Sample**

Client ID	CBD-AOA-MW16-1020	CBD-AOA-MW16-1020
Battelle ID	G1708MS-FS	G1708-FS
Sample Type	MS	SA
Collection Date	10/16/2020	10/16/2020
Extraction Date	10/22/2020	10/22/2020
Analytical Instrument	Sciex 5500 (AC) LC/MS/MS	Sciex 5500 (AC) LC/MS/MS

<i>Surrogate Recoveries (%)</i>	Recovery	Extract ID	Analysis Date
13C5-PFHxA	82	G1708MS-FS(0)	11/6/2020
13C4-PFHpA	82	G1708MS-FS(0)	11/6/2020
13C8-PFOA	87	G1708MS-FS(0)	11/6/2020
13C9-PFNA	87	G1708MS-FS(0)	11/6/2020
13C6-PFDA	86	G1708MS-FS(0)	11/6/2020
13C7-PFUnA	78	G1708MS-FS(0)	11/6/2020
13C2-PFDoA	78	G1708MS-FS(0)	11/6/2020
13C2-PFTeDA	30 N	G1708MS-FS(0)	11/6/2020
d3-MeFOSAA	91 D	G1708MS-FS-D(3)	11/9/2020
d5-EtFOSAA	84 D	G1708MS-FS-D(3)	11/9/2020
13C3-PFBS	115 D	G1708MS-FS-D(3)	11/9/2020
13C3-PFHxS	111 D	G1708MS-FS-D(3)	11/9/2020
13C8-PFOS	111 D	G1708MS-FS-D(3)	11/9/2020
13C3-HFPO-DA	83	G1708MS-FS(0)	11/6/2020



Project Client: CH2M

Project Name: CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10
Project No.: 100142218**MS/MSD Background
Sample**

Client ID	CBD-AOA-MW16-1020	CBD-AOA-MW16-1020
Battelle ID	G1708MSD-FS	G1708-FS
Sample Type	MSD	SA
Collection Date	10/16/2020	10/16/2020
Extraction Date	10/22/2020	10/22/2020
Analytical Instrument	Sciex 5500 (AC) LC/MS/MS	Sciex 5500 (AC) LC/MS/MS

<i>Surrogate Recoveries (%)</i>	Recovery	Extract ID	Analysis Date
13C5-PFHxA	88	G1708MSD-FS(0)	11/6/2020
13C4-PFHpA	90	G1708MSD-FS(0)	11/6/2020
13C8-PFOA	92	G1708MSD-FS(0)	11/6/2020
13C9-PFNA	93	G1708MSD-FS(0)	11/6/2020
13C6-PFDA	92	G1708MSD-FS(0)	11/6/2020
13C7-PFUnA	83	G1708MSD-FS(0)	11/6/2020
13C2-PFDoA	72	G1708MSD-FS(0)	11/6/2020
13C2-PFTeDA	16 N	G1708MSD-FS(0)	11/6/2020
d3-MeFOSAA	72 D	G1708MSD-FS-D(3)	11/9/2020
d5-EtFOSAA	76 D	G1708MSD-FS-D(3)	11/9/2020
13C3-PFBS	108 D	G1708MSD-FS-D(3)	11/9/2020
13C3-PFHxS	97 D	G1708MSD-FS-D(3)	11/9/2020
13C8-PFOS	88 D	G1708MSD-FS-D(3)	11/9/2020
13C3-HFPO-DA	88	G1708MSD-FS(0)	11/6/2020



Glossary of Data Qualifiers

Flag: Application:

B	Analyte found in the sample at a concentration <10x the level found in the procedural blank
D	Dilution Run. Initial run outside the initial calibration range of the instrument
E	Estimate, result is greater than the highest concentration level in the calibration
J	Analyte detected below the Limit of Quantitation (LOQ)
MI	Significant Matrix Interference - value could not be determined.
N	Quality Control (QC) value is outside the accuracy or precision Data Quality Objective (DQO)
NA	Not Applicable
T	Holding Time (HT) exceeded
U	Analyte not detected or detected below the Detection Limit (DL) value, Limit of Detection (LOD) reported
Q	Ion ratio outside of criteria (50% difference from calibration expected ratio)

Miscellaneous Documentation

**QA/QC Summary
Batch 20-1310**

Project:	CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10
Client Project Manager:	Michael Zamboni
Parameters:	PFAS
Laboratory:	Battelle, Norwell, MA
Matrix:	GW, AQ
Data Set:	DP-20-1190
Analytical SOP:	5-369
Method Reference:	PFAS to QSM 5.3 Table B-15

Sample Custody		
Collection Date	Receipt Date	Temp (°C)
10/16/2020	10/17/2020	1.1

Corrective Actions	One sample listed as having two samples, however, six were received. Verified with client that the sample was the background for the MS/MSD sample during login.
Sample Storage	The samples were stored refrigerated until extraction.
Related samples	Samples G1707-FS (CBD-AOA-MW15-1020) and G1708-FS (CBD-AOA-MW16-1020) re-extracted in SDG 20-1455 to verify extracted internal standard recoveries.

METHOD SUMMARIES	
Sample Preparation	Water samples were fortified with surrogates in the original sample container from the field. The water was extracted using a weak-anion exchange (WAX) solid phase extraction (SPE) cartridge. Target analytes are eluted from the WAX SPE using methanol followed by 0.5% NH ₃ in methanol. Extracts were further refined using Envi-carb to remove co-extracted interferences. Extracts were concentrated to approximately 500 µL under nitrogen with a water bath set between 50 °C and 60 °C, reconstituted with methanol/water and fortified with internal standard. Extracts were transferred for LC-MS/MS analysis in 80:20 methanol/water (V/V).
Prep comments	<p>pH of all samples prior to SPE extraction was verified between 6 and 8.</p> <p>Samples G1708-FS (CBD-AOA-MW16-1020), G1708MS-FS (CBD-AOA-MW16-1020), and G1708MSD-FS (CBD-AOA-MW16-1020) contained particulates.</p> <p>Samples DA918PB-FS (Procedural Blank), DA919LCS-FS (Laboratory Control Sample), and G1707-FS (CBD-AOA-MW15-1020) were fortified with extracted internal standards, shaken, and transferred to a new HDPE bottle. The samples were centrifuged at 3,500 RPM for five minutes. The supernatant was then decanted back into the original sample container prior to extraction. This procedure was performed due to the level of particulate matter present in the field samples centrifuged.</p>
Analysis	PFAS were measured by liquid chromatography tandem mass spectrometry (LC-MS/MS) in the multiple reaction monitoring (MRM). An initial calibration consisting of representative target analytes, labelled analogs, and internal standards was analyzed prior to analysis to demonstrate the linear range of

**QA/QC Summary
Batch 20-1310**

	analysis. Calibration verification was performed at the beginning and end of 10 injections and at the end of each sequence. Target PFAS were quantified using the isotope dilution method. Samples are reported in ng/L concentrations to three (3) significant figures.
Analysis Comments	<p>Samples analyzed on Sciex 5500 (AC) LC-MS/MS.</p> <p>MeFOSAA, EtFOSAA, PFHxS, and PFOS in the LCS, MS, MSD, and field samples when detected, were found and reported as a combination of the linear and branched isomers.</p> <p>9CI-PF3ONS and 11CI-PF3OUdS are quantified using 13C8-PFOA.</p> <p>Due to the potential contribution of high concentration of native compounds to labelled analogs, in cases where the native PFOA and PFOS are reported from a dilution, the extracted internal standards reported from 13C2-PFOA and 13C4-PFOS are reported from the same dilution level. In all other cases, the extracted internal standard is reported from the same dilution level as the native compound.</p>

Holding Times	Extraction Date(s)	Analysis Date(s)
	10/22/2020	11/5, 6, and 9/2020

Procedural Blank (PB)	A PB was prepared with this analytical batch to ensure the sample extraction and analysis methods are free of contamination.
≤ ½ the LOQ	No exceedances noted.
Samples >10x PB	No comments.

Laboratory Control Spike (LCS)	A LCS was prepared with this analytical batch. The percent recoveries of target analytes were calculated to measure accuracy.
Laboratory derived control limits for recovery	No exceedances noted.
	No comments.

Matrix Spike and Matrix Spike Duplicate (MS/MSD)	A MS/MSD was prepared with this analytical batch. The percent recoveries of target analytes were calculated to measure accuracy.
Laboratory derived control limits for recovery and <30% RPD	<p>Six (6) recovery and two (2) precision exceedances noted.</p> <p>PFHxS and PFOS recoveries are impacted by the concentrations in the background sample are above the concentration fortified into the MS/MSD samples.</p> <p>PFTTrDA in both the MS and MSD are recovered high due to the low recovery of the extracted internal standard 13C2-PFTTeDA used to quantify PFTTrDA, which does not have a direct labeled analog. Any detections of PFTTrDA in samples (none above the LOD outside of the LCS, MS, and MSD) should be considered biased high. Samples were reanalyzed, confirming the original results. The quant reports for data not reported is included in the unused data section of the full data package.</p>

QA/QC Summary Batch 20-1310

Extracted Internal Standard Analytes	Labelled analog compounds were added prior to extraction. The recoveries are calculated to measure extraction efficiency.																				
50-150% of true value	<p>Seven (7) exceedances noted.</p> <p>Four samples had suppressed or enhanced recoveries for select extracted internal standards. The table below indicates if the extracted internal standard was within +/- 50% of the area of the L5 calibration point ("P") or if the area showed suppression ("↓") or enhancement ("↑") for these extracted internal standards.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>¹³C2-PFDoA</th> <th>¹³C2-PFTeDA</th> <th>d5-EtFOSAA</th> </tr> </thead> <tbody> <tr> <td>G1708MS-FS (CBD-AOA-MW16-1020)</td> <td></td> <td>↓</td> <td></td> </tr> <tr> <td>G1708MSD-FS (CBD-AOA-MW16-1020)</td> <td></td> <td>↓</td> <td></td> </tr> <tr> <td>G1707-FS (CBD-AOA-MW15-1020)</td> <td>↓</td> <td>↓</td> <td>↓</td> </tr> <tr> <td>G1708-FS (CBD-AOA-MW16-1020)</td> <td>↓</td> <td>↓</td> <td></td> </tr> </tbody> </table> <p>The remaining extracted internal standards in each impacted sample, fortified from the same solution, pass all criteria, suggesting that the suppression is matrix related to these analytes only. The sample extracts were re-analyzed for confirmation. The quant report for the confirmation analysis is included in the unused data section of the full data package.</p>		¹³ C2-PFDoA	¹³ C2-PFTeDA	d5-EtFOSAA	G1708MS-FS (CBD-AOA-MW16-1020)		↓		G1708MSD-FS (CBD-AOA-MW16-1020)		↓		G1707-FS (CBD-AOA-MW15-1020)	↓	↓	↓	G1708-FS (CBD-AOA-MW16-1020)	↓	↓	
	¹³ C2-PFDoA	¹³ C2-PFTeDA	d5-EtFOSAA																		
G1708MS-FS (CBD-AOA-MW16-1020)		↓																			
G1708MSD-FS (CBD-AOA-MW16-1020)		↓																			
G1707-FS (CBD-AOA-MW15-1020)	↓	↓	↓																		
G1708-FS (CBD-AOA-MW16-1020)	↓	↓																			
Internal Standard Analytes	Labelled analog compounds were added prior to analysis.																				
+/- 50% of the area of the L4 calibration point.	<p>No exceedances noted.</p> <p>No comments.</p>																				
Initial Calibration (ICAL)	The LC-MS/MS was calibrated with multi-level calibration curve for all compounds using linear or quadratic curve fitting.																				
+/- 30% of true value, R ² ≥0.99	<p>No exceedances noted.</p> <p>No comments.</p>																				
Independent Calibration Check (ICC)	The independent check was run after each initial calibration to verify the calibration. This standard is from a different source than the ICAL.																				
+/- 30% of true value	<p>No exceedances noted.</p> <p>No comments.</p>																				
Continuing Calibration Verification (CCV)	Continuing calibration standards were run at the beginning and end of 10 injections and at the end of the sequence to ensure that initial calibration is still valid.																				
+/- 30% of true value	<p>No exceedances noted.</p> <p>The following secondary transitions are outside of criteria:</p> <ul style="list-style-type: none"> • HFPO-DA in LD76 CCV (11/9/2020 11:30:20) <p>The secondary transition is monitored solely for peak identification, not quantification. There is no impact on the reported data.</p>																				

QA/QC Summary
Batch 20-1310

Instrument Blank (IB)	Immediately following the highest standard analyzed and daily prior to sample analysis.
≤ ½ the LOQ	No exceedances noted.
	No comments.



Project Client: CH2M
 Project Name: CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10
 Project Number: 100142218
 Preparation Batch: 20-1310
 Data Set: DP-20-1190
 Test Code: Master_369B

QC Parameter:	Exceed:	Justification:
Procedural Blank	0	None
PB Measurement Quality Objective	0	None
Laboratory Control Sample	0	None
Matrix Spike / Matrix Spike Duplicate Recovery	6	Exceedances for PFTrDA were confirmed by analysis of a fresh aliquot of the sample. Remaining exceedances were for analytes which were present in the parent sample above the amount spiked into the MS and MSD. LMG 11/09/2020
Matrix Spike / Matrix Spike Duplicate Precision	2	Exceedances were for analytes which were present in the parent sample above the amount spiked into the MS and MSD. LMG 11/09/2020
Extracted Internal Standard Analytes (Surrogates)	7	Exceedances were confirmed by analysis of a fresh aliquot of the samples. G1707 and G1708 will be re-extracted in SDG-20-1455. LMG 11/09/2020
Instrument Calibration	0	None
Instrument Blank	0	None
Independent Calibration Check	0	None
Continuing Calibration Verification	0	None

BATTELLE

It can be done

BATTELLE - NORWELL OPERATIONS MISCELLANEOUS DOCUMENTATION FORM

Project Title:	CTO-4532: NRL Chesapeake Bay Detac	Data Set Number:	DP-20-1190
Project Number:	100142218	Prep Batch Number:	20-1310
Entered By:	Lauren Griffith	Entered On:	11/09/2020
Test Code (Matrix Type):	Master_369B(L)		

Samples that were manually integrated are noted on the quant reports with the comment (TRUE).
LMG 11/09/2020

9CI-PF3ONS and 11CI-PF3OUdS are being quantified off 13C8-PFOA instead of 13C3-HFPO-DA.
LMG 11/09/2020

The following secondary transitions are outside of criteria:
HFPO-DA in LD76 CCV (11/9/2020 11:30:20)

The secondary transition is monitored solely for peak identification, not quantification. There is no impact on the reported data.
LMG 11/09/2020

Due to the potential contribution of high concentration of native compounds to labelled analogs, in cases where the native PFOA and PFOS are reported from a dilution, the extracted internal standards reported from 13C2-PFOA and 13C4-PFOS are reported from the same dilution level. In all other cases, the extracted internal standard is reported from the same dilution level as the native compound.
LMG 11/09/2020

Task Leader Approval:

Supervisor Approval:

PM Approval:



Digitally signed by Jonathan Thorn
Date: 2020.11.10 14:29:58 -05'00'

Example Calculation for PFAS

Calculation of final concentration from area:

$$\text{Concentration} = \left[\frac{PA - b}{m} \right] * C_{IS} * PIV * DF / S$$

Where:

PA = Area of target / area of internal standard

b = y intercept from calibration curve

CIS = concentration of internal standard (ng/L)

m = slope of calibration

DF = dilution factor

S = Sample Size

PIV = Pre-injection volume (L)

Sample ID: G1708-FS(0)
 Client Sample ID: CBD-AOA-MW16-1020
 Sample Size: 0.26
 Units: L
 Dilution Factor: 1.000
 PIV (L): 0.001
 Target Analyte: PFHxS
 MRM Transition: 399.0 / 80.0
 Data file: AC_11042020_5-369.wiff
 Result table: 20-1310
 Area: 9,892,930.51
 IS Name: 13C3-PFHxS
 IS Area: 101,862.77
 IS Amount (ng/L): 1182.5
 y-intercept: 0.21837
 slope: 3.72027

$$\text{Concentration} = \frac{[(9892930.51/101862.77) - 0.21837]}{3.72027} * 1182.5 * 0.001 * 1 / 0.26$$

$$\text{ng/L} = 118.46$$

*Final concentration may vary based on rounding.



Project Client: CH2M
 Project Name: CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10
 Project No.: 100142218
 Preparation Batch: 20-1310
 Data Set: DP-20-1190

		DA918PB-FS (Procedural Blank)	DA919LCS-FS (Laboratory Control Sample)	G1708MS-FS (CBD-AOA-MW16-1020)	G1708MSD-FS (CBD-AOA-MW16-1020)	G1707-FS (CBD-AOA-MW15-1020)	G1708-FS (CBD-AOA-MW16-1020)	G1709-FS (CBD-FB04-101620)
PFHxA	307-24-4	-	L	L	L	L	L	-
PFHpA	375-85-9	-	L	L	L	L	L	-
PFOA	335-67-1	-	L	L	L	L	L	-
PFNA	375-95-1	-	L	L	L	L	L	-
PFDA	335-76-2	-	L	L	L	-	-	-
PFUnA	2058-94-8	-	L	L	L	-	-	-
PFDoA	307-55-1	-	L	L	L	-	-	-
PFTrDA	72629-94-8	-	L	L	L	-	-	L
PFTeDA	376-06-7	-	L	L	L	-	-	-
NMeFOSAA	2355-31-9	-	L/Br	L/Br	L/Br	-	-	-
NEtFOSAA	2991-50-6	-	L/Br	L/Br	L/Br	-	-	-
PFBS	375-73-5	-	L	L	L	L	L	-
PFHxS	355-46-4	-	L/Br	L/Br	L/Br	L/Br	L/Br	-
PFOS	1763-23-1	-	L/Br	L/Br	L/Br	L/Br	L/Br	-
HFPO-DA	13252-13-6	-	L	L	L	-	-	-
Adona	919005-14-4	-	L	L	L	-	-	-
9CI-PF3ONS	756426-58-1	-	L	L	L	-	-	-
11CI-PF3OUdS	763051-92-9	-	L	L	L	-	-	-

"L" :Linear

"Br" : branched

"L/Br" : Linear/Branched

"-": Not detected

Project Client: CH2M
 Project Name: CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10
 Project No.: 100142218



Passing criteria = 50% to 150% of internal standard area (compared to mid-point of calibration)

Sample Name	Sample ID	Analysis Date	13C3-PFBA	13C2-PFOA	13C2-PFDA	13C4-PFOS
LD78	L5	11/5/20 2:03	-	854,356.52	857,884.82	151,106.52
		Lower	-	427,178.26	428,942.41	75,553.26
		Upper	-	1,281,534.78	1,286,827.23	226,659.78

Sample Name	Sample ID	Analysis Date	13C3-PFBA	Qual	User	13C2-PFOA	Qual	User	13C2-PFDA	Qual	User	13C4-PFOS	Qual	User
LD74	L1	11/5/20 1:19	-			792,424.23			866,235.38			132,849.06		
LD75	L2	11/5/20 1:30	-			792,685.49			785,350.35			142,146.86		
LD76	L3	11/5/20 1:41	-			791,986.52			856,153.71			144,587.80		
LD77	L4	11/5/20 1:52	-			839,430.52			839,301.63			148,017.04		
LD78	L5	11/5/20 2:03	-			854,356.52			857,884.82			151,106.52		
LD79	L6	11/5/20 2:14	-			826,060.90			728,252.36			146,470.25		
LD80 IB	IB	11/5/20 2:25	-			855,027.80			874,854.42			142,444.06		
LD81 ICC	ICC	11/5/20 2:36	-			839,341.96			823,217.02			139,356.67		
LD76 CCV	CCV	11/5/20 23:03	-			759,342.39			829,759.52			138,802.61		
LD80 IBA	IB	11/5/20 23:25	-			656,269.33			675,680.36			120,529.72		
LD77 CCV	CCV	11/6/20 19:08	-			743,324.54			730,286.70			140,018.85		
DA918PB-FS(0)	Procedural Blank	11/6/20 19:29	-			732,961.66			704,434.26			134,053.67		
DA919LCS-FS(0)	Laboratory Control Sample	11/6/20 19:40	-			749,202.62			684,151.71			124,488.41		
G1707-FS(0)	CBD-AOA-MW15-1020	11/6/20 19:51	-			621,983.78			506,914.22			106,447.32		
G1707-FS-D(3)	CBD-AOA-MW15-1020	11/6/20 20:02	-			758,537.38			665,524.68			133,755.92		
G1707-FS-D(5)	CBD-AOA-MW15-1020	11/6/20 20:13	-			761,723.27			681,900.25			134,001.21		
G1708-FS(0)	CBD-AOA-MW16-1020	11/6/20 20:24	-			676,418.16			535,406.47			101,810.78		
G1708MS-FS(0)	CBD-AOA-MW16-1020	11/6/20 20:35	-			751,783.16			648,647.32			110,314.16		
G1708MSD-FS(0)	CBD-AOA-MW16-1020	11/6/20 20:46	-			603,250.83			493,348.02			99,791.11		
G1709-FS(0)	CBD-FB04-101620	11/6/20 20:56	-			790,943.36			827,643.62			140,666.83		
LD76 CCV	CCV	11/6/20 21:07	-			764,577.28			738,337.18			127,486.33		
LD76 CCV	CCV	11/9/20 11:30	-			789,867.71			764,001.00			144,373.81		
LD80 IB	IB	11/9/20 11:52	-			718,597.01			705,354.72			132,067.01		
G1707-FS(0)	CBD-AOA-MW15-1020	11/9/20 12:24	-			536,162.48			463,993.61			94,222.42		1
G1708-FS(0)	CBD-AOA-MW16-1020	11/9/20 12:35	-			654,404.48			536,500.71			97,527.17		1
G1708MS-FS(0)	CBD-AOA-MW16-1020	11/9/20 12:46	-			765,622.04			594,212.56			135,140.04		1
G1708MSD-FS(0)	CBD-AOA-MW16-1020	11/9/20 12:57	-			602,930.09			486,288.89			89,714.16		1
G1708MS-FS-D(3)	CBD-AOA-MW16-1020	11/9/20 13:08	-			819,784.54			713,992.44			139,013.59		
G1708MSD-FS-D(3)	CBD-AOA-MW16-1020	11/9/20 13:18	-			774,857.45			698,952.33			148,929.15		
LD77 CCV	CCV	11/9/20 13:29	-			713,697.22			704,548.34			144,940.44		

1 Sample was reanalyzed for confirmation only and was not reported. Data is included in the Unused Data section. LMG 11/09/2020

Sample Name	LD78	Injection Vial	6
Sample ID	L5	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:03:27 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Asymmetry Factor	Passing Range
PFBS_1	298.9 / 80.0	1.56	1.41	0.8 – 1.5
PFHxA_1	313.0 / 269.0	1.88	1.28	0.8 – 1.5

Sample Name	LD79	Injection Vial	7
Sample ID	L6	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:14:18 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
PFBS_1	298.9 / 80.0	1.57	69	>10
PFBS_2	298.9 / 99.0	1.57	66	>10
PFHxA_1	313.0 / 269.0	1.89	76	>10
PFHxA_2	313.0 / 119.0	1.89	58	>10
PFHpA_1	363.0 / 319.0	2.29	63	>10
PFHpA_2	363.0 / 169.0	2.29	31	>10
PFHxS_1	399.0 / 80.0	2.30	58	>10
PFHxS_2	399.0 / 99.0	2.30	62	>10
PFOA_1	413.0 / 369.0	2.68	48	>10
PFOA_2	413.0 / 169.0	2.68	47	>10
PFNA_1	463.0 / 419.0	3.05	66	>10
PFNA_2	463.0 / 219.0	3.05	47	>10
PFOS_1	499.0 / 80.0	3.05	53	>10
PFOS_2	499.0 / 99.0	3.05	70	>10
PFDA_1	513.0 / 469.0	3.39	59	>10
PFDA_2	513.0 / 219.0	3.39	35	>10
PFUnA_1	563.0 / 519.0	3.69	68	>10
PFUnA_2	563.0 / 269.0	3.69	51	>10
PFDoA_1	613.0 / 569.0	3.96	82	>10
PFDoA_2	613.0 / 319.0	3.96	52	>10
PFTrDA_1	663.0 / 619.0	4.20	86	>10
PFTrDA_2	663.0 / 169.0	4.20	60	>10
PFTeDA_1	713.0 / 669.0	4.41	101	>10
PFTeDA_2	713.0 / 169.0	4.40	71	>10
NMeFOSAA_1	570.0 / 419.0	3.54	100	>10
NMeFOSAA_2	570.0 / 512.0	3.54	83	>10
NEtFOSAA_1	584.0 / 419.0	3.69	102	>10
NEtFOSAA_2	584.0 / 483.0	3.69	73	>10
HFPO-DA_1	285.0 / 169.0	1.99	66	>10
HFPO-DA_2	285.0 / 118.8	1.99	43	>10
ADONA_1	377.0 / 251.0	2.31	74	>10
ADONA_2	377.0 / 85.0	2.31	38	>10
9Cl-PF3ONS_1	531.0 / 351.0	3.23	71	>10
9Cl-PF3ONS_2	531.0 / 83.0	3.23	37	>10
11Cl-pf3OUdS_1	631.0 / 451.0	3.81	51	>10
11Cl-pf3OUdS_2	631.0 / 83.0	3.81	33	>10

Sample Name	LD79	Injection Vial	7
Sample ID	L6	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:14:18 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
13C2-PFDoA	615.0 / 570.0	3.95	46	>10
d3-MeFOSAA	573.0 / 419.0	3.53	33	>10
d5-EtFOSAA	589.0 / 419.0	3.68	40	>10
13C5-PFHxA	318.0 / 273.0	1.88	43	>10
13C4-PFHpA	367.0 / 322.0	2.27	33	>10
13C8-PFOA	421.0 / 376.0	2.66	54	>10
13C9-PFNA	472.0 / 427.0	3.03	41	>10
13C6-PFDA	519.0 / 474.0	3.37	41	>10
13C7-PFUnA	570.0 / 525.0	3.68	59	>10
13C2-PFTeDA	715.0 / 670.0	4.40	47	>10
13C3-PFBS	302.0 / 99.0	1.56	25	>10
13C3-PFHxS	402.0 / 99.0	2.29	45	>10
13C8-PFOS	507.0 / 99.0	3.03	38	>10
13C3-HFPO-DA	287.0 / 169.0	1.99	38	>10



Precision and Bias at the LOQ for PFAS in non-potable Water

Analyte	CAS No.	Average (ng/L)	ST DEV	2 Sigma	n ¹
PFBA	375-22-4	11.00	0.9226	1.85	14
PFPeA	2706-90-3	9.81	0.7228	1.45	11
PFHxA	307-24-4	9.88	1.1365	2.27	43
PFHpA	375-85-9	9.76	0.9225	1.85	43
PFOA	335-67-1	9.93	1.3923	2.78	44
PFNA	375-95-1	9.71	1.1236	2.25	43
PFDA	335-76-2	9.51	0.9842	1.97	43
PFUnA	2058-94-8	9.55	0.9267	1.85	43
PFDoA	307-55-1	10.22	0.9055	1.81	43
PFTTrDA	72629-94-8	9.93	1.2752	2.55	43
PFTeDA	376-06-7	10.39	0.9707	1.94	43
NMeFOSAA	2355-31-9	10.02	1.5564	3.11	43
NEtFOSAA	2991-50-6	9.55	1.4218	2.84	43
PFOSA	754-91-6	10.06	0.8394	1.68	11
PFBS	375-73-5	9.63	1.1816	2.36	43
PFPeS	2706-91-4	9.88	0.9203	1.84	5
PFHxS	355-46-4	9.90	1.1346	2.27	43
PFHpS	375-92-8	10.13	1.0851	2.17	11
PFOS	1763-23-1	9.78	1.2383	2.48	44
PFNS	68259-12-1	9.45	1.0923	2.18	5
PFDS	335-77-3	9.55	1.3140	2.63	11
4:2FTS	757124-72-4	10.38	1.7353	3.47	6
6:2FTS	27619-97-2	10.08	1.1871	2.37	12
8:2FTS	39108-34-4	9.59	1.4345	2.87	12
HFPO-DA	13252-13-6	10.92	1.4420	2.88	25
Adona	919005-14-4	10.38	1.4862	2.97	25
11Cl-PF3OUdS	763051-92-9	9.80	1.5701	3.14	25
9Cl-PF3ONS	756426-58-1	9.52	1.0952	2.19	25

¹ Minimum of 20 samples required per QAM for determination of uncertainty, results including less than 20 data points are estimated.

BATTELLE DETECTION LIMITS FOR PFAS IN NON-POTABLE WATER

QSM 5.1.1 compliant with Table B-15 requirements

Analyte	CAS No.	MDL (ng/L)	LOD (ng/L)	LOQ (ng/L)
PFBA	375-22-4	0.45	1.0	5.0
PFPeA	2706-90-3	0.26	1.0	5.0
PFHxA	307-24-4	0.53	1.5	5.0
PFHpA	375-85-9	0.26	1.0	5.0
PFOA	335-67-1	0.51	1.5	5.0
PFNA	375-95-1	0.31	1.0	5.0
PFDA	335-76-2	0.14	0.5	5.0
PFUnA	2058-94-8	0.22	0.5	5.0
PFDoA	307-55-1	0.19	0.5	5.0
PFTrDA	72629-94-8	0.15	0.5	5.0
PFTeDA	376-06-7	0.73	2.0	5.0
NMeFOSAA	2355-31-9	0.35	1.0	5.0
NEtFOSAA	2991-50-6	0.50	1.0	5.0
PFOSA	754-91-6	0.46	1.0	5.0
PFBS	375-73-5	0.14	0.5	5.0
PFPeS	2706-91-4	0.26	1.0	5.0
PFHxS	355-46-4	0.11	0.4	5.0
PFHpS	375-92-8	0.85	2.0	5.0
PFOS	1763-23-1	0.44	1.0	5.0
PFNS	68259-12-1	0.36	1.0	5.0
PFDS	335-77-3	0.27	1.0	5.0
4:2FTS	747124-72-4	0.50	1.0	5.0
6:2FTS	27619-97-2	0.53	1.5	5.0
8:2FTS	39108-34-4	0.60	2.0	5.0
3:3 FTCA	356-02-5	1.32	3.0	5.0
5:3 FTCA	914637-49-3	1.59	3.0	5.0
7:3 FTCA	812-70-4	1.40	3.0	5.0
HFPO-DA	13252-13-6	0.25	0.5	5.0
Adona	919005-14-4	0.27	1.0	5.0
11CI-PF3OUdS	763051-92-9	0.23	0.5	5.0
9CI-PF3ONS	756426-58-1	0.27	1.0	5.0

Analytes on ELAP QSM 5.1.1 Scope of accreditation

MDL calculated based on 40 CFR 136 (2017)

Analytical Transitions for PFAS in non-potable water, solid, and tissue

Analyte	CAS No.	Type	Primary Transition	Secondary Transition
PFBA	375-22-4	Target	213.0 / 169.0	NA
PFPeA	2706-90-3	Target	263.0 / 219.0	NA
PFHxA	307-24-4	Target	313.0 / 269.0	313.0 / 119.0
PFHpA	375-85-9	Target	363.0 / 319.0	363.0 / 169.0
PFOA	335-67-1	Target	413.0 / 369.0	413.0 / 169.0
PFNA	375-95-1	Target	463.0 / 419.0	463.0 / 219.0
PFDA	335-76-2	Target	513.0 / 469.0	513.0 / 219.0
PFUnA	2058-94-8	Target	563.0 / 519.0	563.0 / 269.0
PFDoA	307-55-1	Target	613.0 / 569.0	613.0 / 319.0
PFTTrDA	72629-94-8	Target	663.0 / 619.0	663.0 / 169.0
PFTeDA	376-06-7	Target	713.0 / 669.0	713.0 / 169.0
NMeFOSAA	2355-31-9	Target	570.0 / 419.0	570.0 / 512.0
NEtFOSAA	2991-50-6	Target	584.0 / 419.0	584.0 / 483.0
PFOSA	754-91-6	Target	498.0 / 78.0	498.0 / 83.0
PFBS	375-73-5	Target	299.0 / 80.0	299.0 / 99.0
PFPeS	BDO-2114	Target	349.0 / 99.0	249.0 / 80.0
PFHxS	355-46-4	Target	399.0 / 80.0	399.0 / 99.0
PFHpS	375-99-6	Target	449.0 / 80.0	449.0 / 99.0
PFOS	1763-23-1	Target	499.0 / 80.0	499.0 / 99.0
PFNS	98789-57-2	Target	549.0 / 99.0	549.0 / 80.0
PFDS	2806-15-7	Target	599.0 / 80.0	599.0 / 99.0
4:2FTS	BDO-2205	Target	327.0 / 307.0	327.0 / 80.0
6:2FTS	27619-97-2	Target	427.0 / 407.0	427.0 / 81.0
8:2FTS	39108-34-4	Target	527.0 / 507.0	527.0 / 487.0
3:3 FTCA	356-02-5	Target	241.0 / 177.0	NA
5:3 FTCA	914637-49-3	Target	341.0 / 237.0	NA
7:3 FTCA	812-70-4	Target	441.0 / 337.0	NA
HFPO-DA	13252-13-6	Target	285.0 / 169.0	285.0 / 118.8
Adona	919005-14-4	Target	377.0 / 251.0	377.0 / 85.0
9CI-PF3ONS	756426-58-1	Target	531.0 / 351.0	531.0 / 83.0
11CI-PF3OUdS	763051-92-9	Target	631.0 / 451.0	631.0 / 83.0

Analyte	CAS No.	Type	Primary Transition	Secondary Transition
13C4-PFBA	NA	SIS ¹	217.0 / 172.0	NA
13C5-PFPeA	NA	SIS ¹	268.0 / 223.0	NA
13C5-PFHxA	NA	SIS ¹	318.0 / 273.0	NA
13C4-PFHpA	NA	SIS ¹	367.0 / 322.0	NA
13C8-PFOA	NA	SIS ¹	421.0 / 376.0	NA
13C9-PFNA	NA	SIS ¹	472.0 / 427.0	NA
13C6-PFDA	NA	SIS ¹	519.0 / 474.0	NA
13C7-PFUnA	NA	SIS ¹	570.0 / 525.0	NA
13C2-PFDoA	NA	SIS ¹	615.0 / 570.0	NA
13C2-PFTeDA	NA	SIS ¹	715.0 / 670.0	NA
d3-MeFOSAA	NA	SIS ¹	573.0 / 419.0	NA
d5-EtFOSAA	NA	SIS ¹	589.0 / 419.0	NA
13C8-FOSA	NA	SIS ¹	506.0 / 78.0	NA
13C3-PFBS	NA	SIS ¹	302.0 / 99.0	NA
13C3-PFHxS	NA	SIS ¹	402.0 / 99.0	NA
13C8-PFOS	NA	SIS ¹	507.0 / 99.0	NA
13C2-4:2FTS	NA	SIS ¹	329.0 / 81.0	NA
13C2-6:2FTS	NA	SIS ¹	429.0 / 81.0	NA
13C2-8:2FTS	NA	SIS ¹	529.0 / 81.0	NA
¹³ C ₃ -HFPO-DA	NA	SIS	287.0 / 169.0	NA
13C3-PFBA	NA	IS ²	216.0 / 172.0	NA
13C2-PFOA	NA	IS ²	415.0 / 370.0	NA
13C2-PFDA	NA	IS ²	515.0 / 470.0	NA
13C4-PFOS	NA	IS ²	503.0 / 99.0	NA

¹ – extracted internal standard (surrogate)

² – injection internal standard



Non-Potable Water Calibration to Sample Equivalents

ICAL (ng/L)	PIV (mL)	DF ¹	Sample Size (L)	Sample Equivalent (ng/L) ²
125	1	1	0.250	0.5
250	1	1	0.250	1.0
500	1	1	0.250	2.0
1,000	1	1	0.250	4.0
2,500	1	1	0.250	10.0
10,000	1	1	0.250	40.0
25,000	1	1	0.250	100.0

¹ - base level dilution as part of the extraction procedure

² - calculated equivalent of a sample based on the ICAL concentration



Zef Scientific Inc.

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Canada H9P 1J8

Phone: 1.866.854.7988

QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

QTRAP 5500 Preventive Maintenance Checklist

Preventive Maintenance Date:	
Request ID:	
Company Name:	
Instrument ID:	
Instrument Model:	
Instrument Serial Number:	

PASS **FAIL**

Any failure will lead to an automatic Service Call being open to investigate fault.

Preventive Maintenance is performed twice every year unless specified in the Service Contract. It is designed to help maintain optimum system performance and to help diagnose any system deficiencies.

Engineer is required the assigned Request ID for this PM otherwise making this job invalid.

Comments: _____

Performed By: _____ **Date:** _____

Approved By : _____ **Date:** _____

**Zef Scientific Inc.**

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

PRE PM PPG PERFORMANCE EVALUATION:

- Consult Customer concerning the unit overall performance.
 Check Logbook for Services recently performed.
 Check Vacuum Pressure:

CAD Settings	Vacuum Reading (x 10 ⁻⁵ Torr)	Acceptance Criteria
<input type="checkbox"/> CAD 0		0.4 to 1.1 x10 ⁻⁵ Torr
<input type="checkbox"/> CAD Low		Read Only
<input type="checkbox"/> CAD Medium		Read Only
<input type="checkbox"/> CAD High		Read Only
<input type="checkbox"/> CAD 12		2.4 to 4.5 x10 ⁻⁵ Torr

- Check for Front end contamination symptoms. Run Q1 POS PPG using PPG 2e-7for a few minutes and check for any TIC signal degradation or huge sensitivity drop where the sensitivity result can't pass specification
 No degradation or Sensitivity drop
- Check for Q3 contamination symptoms. Run Q3 POS PPG using PPG 2e-7for a few minutes and check for any TIC signal degradation or huge sensitivity drop where the sensitivity result can't pass specification
 No degradation or Sensitivity drop

Pre PM PPG Test: Perform each of the following tests. Optimize ion source position only. The specifications listed for these Pre PM tests are guidelines only, not required to be met.

- Perform Q1 POS using POS PPG 2e-7M. Scan Rate 10 Da/s. Record 10 mca.

Mass	Q1 Intensity		Q1 Width Value	Width Specs
	Value	Spec		
Q1 175.133		Read Only		Read Only
Q1 500.380		Read Only		Read Only
Q1 906.673		Read Only		Read Only

- Perform Q3 POS using POS PPG 2e-7M. Scan Rate 10 Da/s. Record 10 mca.

Mass	Q3 Intensity		Q3 Width Value	Width Specs
	Value	Spec		
Q3 175.133		Read Only		Read Only
Q3 500.380		Read Only		Read Only
Q3 906.673		Read Only		Read Only

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QTRAP 5500**LC/MS/MS Detector System**

Appendix ZEFPM003-2L

Perform MSMS POS in Product Ion scan with 609.3 parent and record daughter 195.1 using Reserpine 0.167 pmol/ul at the scan rate of 10 Da/s for 10 MCA. Calculate transmission efficiency comparing Q1POS 609 intensity. Transmission Efficiency: : _____ (Read Only)

Mass	MSMS Intensity		MSMS Width Value	Width Specs
	Value	Spec		
Q1 609.3		Read Only		Read Only
MS/MS 195.1		Read Only		Read Only

Perform Q1 NEG using NEG PPG 3e-5M. Scan Rate 10 Da/s. Record 10 mca.

Mass	Q1 Intensity		Q1 Width Value	Width Specs
	Value	Spec		
Q1 933.636		Read Only		Read Only

Perform Q3 NEG using NEG PPG 3e-5M. Scan Rate 10 Da/s. Record 10 mca.

Mass	Q3 Intensity		Q3 Width Value	Width Specs
	Value	Spec		
Q3 933.636		Read Only		Read Only

Perform Product Ion scan using NEG PPG 3e-5M. Record 10 mca.

Mass	Scan Rate	MCA	MSMS Intensity		MSMS Width Value	Width Specs
			Value	Spec		
MSMS 45	10	10		Read Only		Read Only

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

PREVENTIVE MAINTENANCE CHECKLIST:

- Check Cooling Fans for Turbo Pumps while MS is ON.
- Check QJet and QPS tuning voltage for reference.
- Record AC input Voltage while MS is OFF: _____ (200-240VAC).
If Out-of-Range, notify customer.

- Clean Interface
 - Curtain Plate
 - Orifice Plate
 - QJet
 - Q0 Rods.

- Replace Roughing Pump Oil.
- Inspect Oil Exhaust Filter, if Applicable. N/A
- Clean and inspect built-in divert valve if used. N/A
- Check Multiplier Voltage, optimize if necessary.
- Replace four Air Filters at the bottom of the mass spectrometer.

- Pump down overnight if possible. N/A

- Perform Maintenance on Turbo V source.

- Replace Electrode, if necessary. N/A
- Check Turbo heaters resistances.
- Check if Temperature is reached at 500C with TIS Probe installed.
- Check if Temperature is reached at 500C with APCI Probe installed. N/A

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QTRAP 5500**LC/MS/MS Detector System**

Appendix ZEFPM003-2L

POST PM PPG PERFORMANCE TESTS:

- Set-up Sample for Infusion.
 Check spray and adjust sprayer's position of the TIS source.
 Check Vacuum Pressure:

CAD Settings	Vacuum Reading (x 10 ⁻⁵ Torr)	Acceptance Criteria
<input type="checkbox"/> CAD 0		0.4 to 1.1 x10 ⁻⁵ Torr
<input type="checkbox"/> CAD Low		Read Only
<input type="checkbox"/> CAD Medium		Read Only
<input type="checkbox"/> CAD High		Read Only
<input type="checkbox"/> CAD 12		2.4 to 4.5 x10 ⁻⁵ Torr

- Perform Q1 POS using POS PPG 2e-7M. Mass calibrate to less than 0.1 amu.

Mass	Q1 Intensity		Q1 Width Value	Width Specs
	Value	Spec		
Scan Rate 10 Da/s Record 10 mca				
Q1 175.133		≥1.2 ⁶		0.6 to 0.8
Q1 500.380		≥9.0 ⁶		0.6 to 0.8
Q1 906.673		≥1.4 ⁷		0.6 to 0.8
Scan Rate 1000 Da/s Record 50 mca				
Q1 906.673		≥6.8 ⁷		0.6 to 0.8

- Perform Q3 POS using POS PPG 2e-7M. Mass calibrate to less than 0.1 amu.

Mass	Q3 Intensity		Q3 Width Value	Width Specs
	Value	Spec		
Scan Rate 10 Da/s Record 10 mca				
Q3 175.133		≥1.2 ⁶		0.6 to 0.8
Q3 500.380		≥9.0 ⁶		0.6 to 0.8
Q3 906.673		≥1.4 ⁷		0.6 to 0.8
Scan Rate 1000 Da/s Record 50 mca				
Q3 906.673		≥6.8 ⁷		0.6 to 0.8

- Perform "Product of 609.3" POS and record product ion 195.1 using Reserpine 0.167pmol/uL. Record 10 mca. Calculate Transmission efficiency comparing Q1POS 609 intensity.

Transmission Efficiency: _____ (≥ 10.0%)

Mass	MSMS Intensity		Width Value	Width Specs
	Value	Spec		
Q1 609.3		N/A		Read Only
MS/MS 195.1		N/A		Read Only

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

Perform Q1 NEG using NEG PPG 3e-5M. Mass calibrate to less than 0.1 amu.

Mass	Scan Rate	Mca	Q1 Intensity		Q1 Width Value	Width Specs
			Value	Spec		
Q1 933.636	10	10		$\geq 1.0^{e7}$		0.6 to 0.8
Q1 933.636	1000	50		$\geq 4.0^{e7}$		0.6 to 0.8

Perform Q3 NEG using NEG PPG 3e-5M. Mass calibrate to less than 0.1 amu.

Mass	Scan Rate	Mca	Q3 Intensity		Q3 Width Value	Width Specs
			Value	Spec		
Q3 933.636	10	10		$\geq 8.0^{e6}$		0.6 to 0.8
Q3 933.636	1000	50		$\geq 4.0^{e7}$		0.6 to 0.8

Perform Product Ion scan using NEG PPG 3e-5M.

Mass	Scan Rate	Mca	MSMS Intensity		MSMS Width Value	Width Specs
			Value	Spec		
MSMS 45	10	10		Read Only		Read Only

Perform ER POS 118.087 and 922.01 using ESI Tuning Mix 1:100 in ES Tuning Dilution Solvent. Apply suggested Scan Rate and Record number of MCA. Mass calibrate to less than 0.1 amu.

Mass	Fill Time (ms)	ER Intensity		ER Width Value	Width Specs
		Value	Spec		
ScanRate : 1000 Da/s ; 50 Mca					
ER 118.087	0.05		$\geq 7.2^{e6}$		<0.35
ER 922.010	0.05		$\geq 2.8^{e6}$		<0.35
ScanRate : 10000 Da/s ; 50 Mca					
ER 118.087	0.05		$\geq 2.4^{e7}$		<0.65
ER 922.010	0.05		$\geq 6.8^{e7}$		<0.65

Perform ER NEG 431.982 and 601.978 using ESI Tuning Mix 1:100 in ES Tuning Dilution Solvent. Apply suggested Scan Rate and Record number of MCA. Mass calibrate to less than 0.1 amu.

Mass	Fill Time (ms)	ER Intensity		ER Width Value	Width Specs
		Value	Spec		
ScanRate : 1000 Da/s ; 50 Mca					
ER 431.982	0.05		$\geq 4.4^{e7}$		<0.35
ER 601.978	0.05		$\geq 5.6^{e7}$		<0.35
ScanRate : 10000 Da/s ; 50 Mca					
ER 431.982	0.05		$\geq 1.2^{e8}$		<0.65
ER 601.978	0.05		$\geq 1.6^{e8}$		<0.65

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QTRAP 5500**LC/MS/MS Detector System**

Appendix ZEFPM003-2L

- Perform EPI POS 397.2 using Reserpine 0.167pmol/uL. Record 20 mca.

Mass	Scan Rate (Da/s)	Q0 Trapping OFF		Q0 Trapping ON	
		Intensity	Spec	Intensity	Spec
EPI 397.2	10000		$\geq 2.0 \times 10^6$		$\geq 6.4 \times 10^6$

- Perform MS3 POS full scan Fragmentation ON & OFF using Reserpine 0.167pmol/uL. Record 20 mca.

Mass	Scan Rate (Da/s)	Fragamentation OFF		Fragmentation ON	
		Intensity	Spec	Intensity	Spec
MS3 397.2	1000		Contains only 397.2	N/A	N/A
<input type="checkbox"/> 236 OR <input type="checkbox"/> 365	1000		Fragment Intensity		$\geq 1.6 \times 10^6$

REVIEW:

- Attach all spectrums printouts to this procedure.
- If any parameter setting access modes were changed during the PM, ensure they are returned to their normal access mode and that their offsets are adjusted to match optimized values from the post-PM acquisition files.
- Empty tuning cache folder, if necessary. N/A
- Update Service Work Order status
- Fill and replace PM Label.

END OF PREVENTIVE MAINTENANCE CHECKLIST**Document history:**

06 OCT 2016: Appendix ZEFPM003-2L: Removed requirements to fit Manufacturer's testing criteria.

Battelle Standard ID	Description	Intermediate Solutions			Battelle Reagent ID (purchased solutions)
LD44	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-01
LD44	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-02
LD44	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-03
LD44	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-04
LD44	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-05
LD44	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-06
LD44	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-07
LD44	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-08
LD44	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-09
LD44	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-10
LD44	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-11
LD44	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-12
LD44	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-13
LD44	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-14
LD44	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-15
LD44	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-16
LD44	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-17
LD44	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-18
LD44	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-19
LD44	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-20
LE39	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-01
LE39	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-02
LE39	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-03
LE39	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-04
LE39	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-05
LE39	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-06
LE39	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-07
LE39	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-08
LE39	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-09
LE39	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-10
LE39	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-11
LE39	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-12
LE39	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-13
LE39	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-14
LE39	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-15
LE39	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-16
LE39	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-17
LE39	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-18
LE39	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-19
LE39	PFAS - DoD Low Level Labelled Extracted Internal Standard	LB74	-	-	200721-20
LD43	PFAS - DoD Second Source LCS/MS Solution	-	-	-	200909-01
LD43	PFAS - DoD Second Source LCS/MS Solution	LC24	-	-	200811-01
LD43	PFAS - DoD Second Source LCS/MS Solution	LC24	-	-	200811-02
LD43	PFAS - DoD Second Source LCS/MS Solution	LC24	-	-	200811-03
LE40	PFAS - DoD Internal Standard Spiking Solution	LB75	-	-	200721-21
LE40	PFAS - DoD Internal Standard Spiking Solution	LB75	-	-	200721-22
LE40	PFAS - DoD Internal Standard Spiking Solution	LB75	-	-	200721-23
LE40	PFAS - DoD Internal Standard Spiking Solution	LB75	-	-	200721-24
LD74	PFAS - DoD Calibration L1	LB78	LB75	-	200721-21
LD74	PFAS - DoD Calibration L1	LB78	LB75	-	200721-22
LD74	PFAS - DoD Calibration L1	LB78	LB75	-	200721-23
LD74	PFAS - DoD Calibration L1	LB78	LB75	-	200721-24
LD74	PFAS - DoD Calibration L1	LC85	LC84	LC24	200811-01
LD74	PFAS - DoD Calibration L1	LC85	LC84	LC24	200811-02
LD74	PFAS - DoD Calibration L1	LC85	LC84	LC24	200811-03
LD74	PFAS - DoD Calibration L1	LC85	LC84	-	200914-01
LD74	PFAS - DoD Calibration L1	LD73	LB74	-	200721-01
LD74	PFAS - DoD Calibration L1	LD73	LB74	-	200721-02

Battelle Standard ID	Description	Intermediate Solutions			Battelle Reagent ID (purchased solutions)
LD74	PFAS - DoD Calibration L1	LD73	LB74	-	200721-03
LD74	PFAS - DoD Calibration L1	LD73	LB74	-	200721-04
LD74	PFAS - DoD Calibration L1	LD73	LB74	-	200721-05
LD74	PFAS - DoD Calibration L1	LD73	LB74	-	200721-06
LD74	PFAS - DoD Calibration L1	LD73	LB74	-	200721-07
LD74	PFAS - DoD Calibration L1	LD73	LB74	-	200721-08
LD74	PFAS - DoD Calibration L1	LD73	LB74	-	200721-09
LD74	PFAS - DoD Calibration L1	LD73	LB74	-	200721-10
LD74	PFAS - DoD Calibration L1	LD73	LB74	-	200721-11
LD74	PFAS - DoD Calibration L1	LD73	LB74	-	200721-12
LD74	PFAS - DoD Calibration L1	LD73	LB74	-	200721-13
LD74	PFAS - DoD Calibration L1	LD73	LB74	-	200721-14
LD74	PFAS - DoD Calibration L1	LD73	LB74	-	200721-15
LD74	PFAS - DoD Calibration L1	LD73	LB74	-	200721-16
LD74	PFAS - DoD Calibration L1	LD73	LB74	-	200721-17
LD74	PFAS - DoD Calibration L1	LD73	LB74	-	200721-18
LD74	PFAS - DoD Calibration L1	LD73	LB74	-	200721-19
LD74	PFAS - DoD Calibration L1	LD73	LB74	-	200721-20
LD75	PFAS - DoD Calibration L2	LB78	LB75	-	200721-21
LD75	PFAS - DoD Calibration L2	LB78	LB75	-	200721-22
LD75	PFAS - DoD Calibration L2	LB78	LB75	-	200721-23
LD75	PFAS - DoD Calibration L2	LB78	LB75	-	200721-24
LD75	PFAS - DoD Calibration L2	LC85	LC84	LC24	200811-01
LD75	PFAS - DoD Calibration L2	LC85	LC84	LC24	200811-02
LD75	PFAS - DoD Calibration L2	LC85	LC84	LC24	200811-03
LD75	PFAS - DoD Calibration L2	LC85	LC84	-	200914-01
LD75	PFAS - DoD Calibration L2	LD73	LB74	-	200721-01
LD75	PFAS - DoD Calibration L2	LD73	LB74	-	200721-02
LD75	PFAS - DoD Calibration L2	LD73	LB74	-	200721-03
LD75	PFAS - DoD Calibration L2	LD73	LB74	-	200721-04
LD75	PFAS - DoD Calibration L2	LD73	LB74	-	200721-05
LD75	PFAS - DoD Calibration L2	LD73	LB74	-	200721-06
LD75	PFAS - DoD Calibration L2	LD73	LB74	-	200721-07
LD75	PFAS - DoD Calibration L2	LD73	LB74	-	200721-08
LD75	PFAS - DoD Calibration L2	LD73	LB74	-	200721-09
LD75	PFAS - DoD Calibration L2	LD73	LB74	-	200721-10
LD75	PFAS - DoD Calibration L2	LD73	LB74	-	200721-11
LD75	PFAS - DoD Calibration L2	LD73	LB74	-	200721-12
LD75	PFAS - DoD Calibration L2	LD73	LB74	-	200721-13
LD75	PFAS - DoD Calibration L2	LD73	LB74	-	200721-14
LD75	PFAS - DoD Calibration L2	LD73	LB74	-	200721-15
LD75	PFAS - DoD Calibration L2	LD73	LB74	-	200721-16
LD75	PFAS - DoD Calibration L2	LD73	LB74	-	200721-17
LD75	PFAS - DoD Calibration L2	LD73	LB74	-	200721-18
LD75	PFAS - DoD Calibration L2	LD73	LB74	-	200721-19
LD75	PFAS - DoD Calibration L2	LD73	LB74	-	200721-20
LD76	PFAS - DoD Calibration L3	LB78	LB75	-	200721-21
LD76	PFAS - DoD Calibration L3	LB78	LB75	-	200721-22
LD76	PFAS - DoD Calibration L3	LB78	LB75	-	200721-23
LD76	PFAS - DoD Calibration L3	LB78	LB75	-	200721-24
LD76	PFAS - DoD Calibration L3	LC84	LC24	-	200811-01
LD76	PFAS - DoD Calibration L3	LC84	LC24	-	200811-02
LD76	PFAS - DoD Calibration L3	LC84	LC24	-	200811-03
LD76	PFAS - DoD Calibration L3	LC84	-	-	200914-01
LD76	PFAS - DoD Calibration L3	LD73	LB74	-	200721-01
LD76	PFAS - DoD Calibration L3	LD73	LB74	-	200721-02
LD76	PFAS - DoD Calibration L3	LD73	LB74	-	200721-03
LD76	PFAS - DoD Calibration L3	LD73	LB74	-	200721-04

Battelle Standard ID	Description	Intermediate Solutions			Battelle Reagent ID (purchased solutions)
LD76	PFAS - DoD Calibration L3	LD73	LB74	-	200721-05
LD76	PFAS - DoD Calibration L3	LD73	LB74	-	200721-06
LD76	PFAS - DoD Calibration L3	LD73	LB74	-	200721-07
LD76	PFAS - DoD Calibration L3	LD73	LB74	-	200721-08
LD76	PFAS - DoD Calibration L3	LD73	LB74	-	200721-09
LD76	PFAS - DoD Calibration L3	LD73	LB74	-	200721-10
LD76	PFAS - DoD Calibration L3	LD73	LB74	-	200721-11
LD76	PFAS - DoD Calibration L3	LD73	LB74	-	200721-12
LD76	PFAS - DoD Calibration L3	LD73	LB74	-	200721-13
LD76	PFAS - DoD Calibration L3	LD73	LB74	-	200721-14
LD76	PFAS - DoD Calibration L3	LD73	LB74	-	200721-15
LD76	PFAS - DoD Calibration L3	LD73	LB74	-	200721-16
LD76	PFAS - DoD Calibration L3	LD73	LB74	-	200721-17
LD76	PFAS - DoD Calibration L3	LD73	LB74	-	200721-18
LD76	PFAS - DoD Calibration L3	LD73	LB74	-	200721-19
LD76	PFAS - DoD Calibration L3	LD73	LB74	-	200721-20
LD77	PFAS - DoD Calibration L4	LB78	LB75	-	200721-21
LD77	PFAS - DoD Calibration L4	LB78	LB75	-	200721-22
LD77	PFAS - DoD Calibration L4	LB78	LB75	-	200721-23
LD77	PFAS - DoD Calibration L4	LB78	LB75	-	200721-24
LD77	PFAS - DoD Calibration L4	LC84	LC24	-	200811-01
LD77	PFAS - DoD Calibration L4	LC84	LC24	-	200811-02
LD77	PFAS - DoD Calibration L4	LC84	LC24	-	200811-03
LD77	PFAS - DoD Calibration L4	LC84	-	-	200914-01
LD77	PFAS - DoD Calibration L4	LD73	LB74	-	200721-01
LD77	PFAS - DoD Calibration L4	LD73	LB74	-	200721-02
LD77	PFAS - DoD Calibration L4	LD73	LB74	-	200721-03
LD77	PFAS - DoD Calibration L4	LD73	LB74	-	200721-04
LD77	PFAS - DoD Calibration L4	LD73	LB74	-	200721-05
LD77	PFAS - DoD Calibration L4	LD73	LB74	-	200721-06
LD77	PFAS - DoD Calibration L4	LD73	LB74	-	200721-07
LD77	PFAS - DoD Calibration L4	LD73	LB74	-	200721-08
LD77	PFAS - DoD Calibration L4	LD73	LB74	-	200721-09
LD77	PFAS - DoD Calibration L4	LD73	LB74	-	200721-10
LD77	PFAS - DoD Calibration L4	LD73	LB74	-	200721-11
LD77	PFAS - DoD Calibration L4	LD73	LB74	-	200721-12
LD77	PFAS - DoD Calibration L4	LD73	LB74	-	200721-13
LD77	PFAS - DoD Calibration L4	LD73	LB74	-	200721-14
LD77	PFAS - DoD Calibration L4	LD73	LB74	-	200721-15
LD77	PFAS - DoD Calibration L4	LD73	LB74	-	200721-16
LD77	PFAS - DoD Calibration L4	LD73	LB74	-	200721-17
LD77	PFAS - DoD Calibration L4	LD73	LB74	-	200721-18
LD77	PFAS - DoD Calibration L4	LD73	LB74	-	200721-19
LD77	PFAS - DoD Calibration L4	LD73	LB74	-	200721-20
LD78	PFAS - DoD Calibration L5	LB78	LB75	-	200721-21
LD78	PFAS - DoD Calibration L5	LB78	LB75	-	200721-22
LD78	PFAS - DoD Calibration L5	LB78	LB75	-	200721-23
LD78	PFAS - DoD Calibration L5	LB78	LB75	-	200721-24
LD78	PFAS - DoD Calibration L5	LC84	LC24	-	200811-01
LD78	PFAS - DoD Calibration L5	LC84	LC24	-	200811-02
LD78	PFAS - DoD Calibration L5	LC84	LC24	-	200811-03
LD78	PFAS - DoD Calibration L5	LC84	-	-	200914-01
LD78	PFAS - DoD Calibration L5	LD73	LB74	-	200721-01
LD78	PFAS - DoD Calibration L5	LD73	LB74	-	200721-02
LD78	PFAS - DoD Calibration L5	LD73	LB74	-	200721-03
LD78	PFAS - DoD Calibration L5	LD73	LB74	-	200721-04
LD78	PFAS - DoD Calibration L5	LD73	LB74	-	200721-05
LD78	PFAS - DoD Calibration L5	LD73	LB74	-	200721-06

Battelle Standard ID	Description	Intermediate Solutions			Battelle Reagent ID (purchased solutions)
LD78	PFAS - DoD Calibration L5	LD73	LB74	-	200721-07
LD78	PFAS - DoD Calibration L5	LD73	LB74	-	200721-08
LD78	PFAS - DoD Calibration L5	LD73	LB74	-	200721-09
LD78	PFAS - DoD Calibration L5	LD73	LB74	-	200721-10
LD78	PFAS - DoD Calibration L5	LD73	LB74	-	200721-11
LD78	PFAS - DoD Calibration L5	LD73	LB74	-	200721-12
LD78	PFAS - DoD Calibration L5	LD73	LB74	-	200721-13
LD78	PFAS - DoD Calibration L5	LD73	LB74	-	200721-14
LD78	PFAS - DoD Calibration L5	LD73	LB74	-	200721-15
LD78	PFAS - DoD Calibration L5	LD73	LB74	-	200721-16
LD78	PFAS - DoD Calibration L5	LD73	LB74	-	200721-17
LD78	PFAS - DoD Calibration L5	LD73	LB74	-	200721-18
LD78	PFAS - DoD Calibration L5	LD73	LB74	-	200721-19
LD78	PFAS - DoD Calibration L5	LD73	LB74	-	200721-20
LD79	PFAS - DoD Calibration L6	LB78	LB75	-	200721-21
LD79	PFAS - DoD Calibration L6	LB78	LB75	-	200721-22
LD79	PFAS - DoD Calibration L6	LB78	LB75	-	200721-23
LD79	PFAS - DoD Calibration L6	LB78	LB75	-	200721-24
LD79	PFAS - DoD Calibration L6	LC84	LC24	-	200811-01
LD79	PFAS - DoD Calibration L6	LC84	LC24	-	200811-02
LD79	PFAS - DoD Calibration L6	LC84	LC24	-	200811-03
LD79	PFAS - DoD Calibration L6	LC84	-	-	200914-01
LD79	PFAS - DoD Calibration L6	LD73	LB74	-	200721-01
LD79	PFAS - DoD Calibration L6	LD73	LB74	-	200721-02
LD79	PFAS - DoD Calibration L6	LD73	LB74	-	200721-03
LD79	PFAS - DoD Calibration L6	LD73	LB74	-	200721-04
LD79	PFAS - DoD Calibration L6	LD73	LB74	-	200721-05
LD79	PFAS - DoD Calibration L6	LD73	LB74	-	200721-06
LD79	PFAS - DoD Calibration L6	LD73	LB74	-	200721-07
LD79	PFAS - DoD Calibration L6	LD73	LB74	-	200721-08
LD79	PFAS - DoD Calibration L6	LD73	LB74	-	200721-09
LD79	PFAS - DoD Calibration L6	LD73	LB74	-	200721-10
LD79	PFAS - DoD Calibration L6	LD73	LB74	-	200721-11
LD79	PFAS - DoD Calibration L6	LD73	LB74	-	200721-12
LD79	PFAS - DoD Calibration L6	LD73	LB74	-	200721-13
LD79	PFAS - DoD Calibration L6	LD73	LB74	-	200721-14
LD79	PFAS - DoD Calibration L6	LD73	LB74	-	200721-15
LD79	PFAS - DoD Calibration L6	LD73	LB74	-	200721-16
LD79	PFAS - DoD Calibration L6	LD73	LB74	-	200721-17
LD79	PFAS - DoD Calibration L6	LD73	LB74	-	200721-18
LD79	PFAS - DoD Calibration L6	LD73	LB74	-	200721-19
LD79	PFAS - DoD Calibration L6	LD73	LB74	-	200721-20
LD81	PFAS - DoD ICC	LB78	LB75	-	200721-21
LD81	PFAS - DoD ICC	LB78	LB75	-	200721-22
LD81	PFAS - DoD ICC	LB78	LB75	-	200721-23
LD81	PFAS - DoD ICC	LB78	LB75	-	200721-24
LD81	PFAS - DoD ICC	LD43	LC24	-	200811-01
LD81	PFAS - DoD ICC	LD43	LC24	-	200811-02
LD81	PFAS - DoD ICC	LD43	LC24	-	200811-03
LD81	PFAS - DoD ICC	LD43	-	-	200909-01
LD81	PFAS - DoD ICC	LD73	LB74	-	200721-01
LD81	PFAS - DoD ICC	LD73	LB74	-	200721-02
LD81	PFAS - DoD ICC	LD73	LB74	-	200721-03
LD81	PFAS - DoD ICC	LD73	LB74	-	200721-04
LD81	PFAS - DoD ICC	LD73	LB74	-	200721-05
LD81	PFAS - DoD ICC	LD73	LB74	-	200721-06
LD81	PFAS - DoD ICC	LD73	LB74	-	200721-07
LD81	PFAS - DoD ICC	LD73	LB74	-	200721-08

Battelle Standard ID	Description	Intermediate Solutions			Battelle Reagent ID (purchased solutions)
LD81	PFAS - DoD ICC	LD73	LB74	-	200721-09
LD81	PFAS - DoD ICC	LD73	LB74	-	200721-10
LD81	PFAS - DoD ICC	LD73	LB74	-	200721-11
LD81	PFAS - DoD ICC	LD73	LB74	-	200721-12
LD81	PFAS - DoD ICC	LD73	LB74	-	200721-13
LD81	PFAS - DoD ICC	LD73	LB74	-	200721-14
LD81	PFAS - DoD ICC	LD73	LB74	-	200721-15
LD81	PFAS - DoD ICC	LD73	LB74	-	200721-16
LD81	PFAS - DoD ICC	LD73	LB74	-	200721-17
LD81	PFAS - DoD ICC	LD73	LB74	-	200721-18
LD81	PFAS - DoD ICC	LD73	LB74	-	200721-19
LD81	PFAS - DoD ICC	LD73	LB74	-	200721-20



It can be done

Standard Solution Concentrations

Approved: Standard Laboratory ID Number: **LB74**

Description: PFAS - DoD SIS Stock

Stock Id: 200721-01	Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
	13C4-PFBA	1000	50.00	1	98.000	1	50	1.00000
Stock Id: 200721-02	Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
	13C5-PFPeA	1000	50.00	1	98.000	1	50	1.00000
Stock Id: 200721-03	Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
	13C5-PFHxA	1000	50.00	1	98.000	1	50	1.00000
Stock Id: 200721-04	Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
	13C4-PFHpA	1000	50.00	1	98.000	1	50	1.00000
Stock Id: 200721-05	Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
	13C8-PFOA	1000	48.90	1	97.800	1	50	0.97800
Stock Id: 200721-06	Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
	13C9-PFNA	1000	50.00	1	98.000	1	50	1.00000
Stock Id: 200721-07	Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
	13C6-PFDA	1000	50.00	1	98.000	1	50	1.00000
Stock Id: 200721-08	Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
	13C7-PFUnA	1000	50.00	1	98.000	1	50	1.00000
Stock Id: 200721-09	Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
	13C2-PFDoA	1000	50.00	1	98.000	1	50	1.00000

Solution Prepared By: Schultz, Stephanie Date Prepared: 7/21/2020 Expiration Date: 7/21/2021

Solution Volume : 40 mL X 5 Vials Refrigerator/Freezer No: VOC Laboratory: Refrigerator - R0121

Comment: 96/4 methanol/milli-q water (RP-200722-1)

Approved By: Schumitz, Denise Date: 7/23/2020 11:25:00 AM



It can be done

Standard Solution Concentrations

Approved: Standard Laboratory ID Number: **LB74**

Description: PFAS - DoD SIS Stock

Stock Id: 200721-10	Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
	13C2-PFTeDA	1000	50.00	1	98.000	1	50	1.00000
Stock Id: 200721-11	Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
	13C2-4:2FTS	1000	46.70	1	98.000	1	50	0.93400
Stock Id: 200721-12	Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
	13C2-6:2FTS	1000	47.50	1	98.000	1	50	0.95000
Stock Id: 200721-13	Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
	13C2-8:2FTS	1000	47.90	1	98.000	1	50	0.95800
Stock Id: 200721-14	Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
	13C3-PFBS	1000	46.50	1	98.000	1	50	0.93000
Stock Id: 200721-15	Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
	13C3-PFHxS	1000	47.30	1	98.000	1	50	0.94600
Stock Id: 200721-16	Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
	13C8-PFOS	1000	47.80	1	98.000	1	50	0.95600
Stock Id: 200721-17	Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
	d3-MeFOSAA	1000	50.00	1	98.000	1	50	1.00000
Stock Id: 200721-18	Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
	d5-EtFOSAA	1000	50.00	1	98.000	1	50	1.00000

Solution Prepared By: Schultz, Stephanie Date Prepared: 7/21/2020 Expiration Date: 7/21/2021

Solution Volume : 40 mL X 5 Vials Refrigerator/Freezer No: VOC Laboratory: Refrigerator - R0121

Comment: 96/4 methanol/milli-q water (RP-200722-1)

Approved By: Schumitz, Denise Date: 7/23/2020 11:25:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LB74

Description: PFAS - DoD SIS Stock

Stock Id: 200721-19

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C8-FOSA	1000	50.00	1	98.000	1	50	1.00000

Stock Id: 200721-20

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C3-HFPO-DA	1000	50.00	1	98.000	1	50	1.00000

Final Concentrations:

Analyte:	Conc (ug/mL):
13C2-4:2FTS	.93400
13C2-6:2FTS	.95000
13C2-8:2FTS	.95800
13C2-PFDoA	1.00000
13C2-PFTeDA	1.00000
13C3-HFPO-DA	1.00000
13C3-PFBS	.93000
13C3-PFHxS	.94600
13C4-PFBA	1.00000
13C4-PFHpA	1.00000
13C5-PFHxA	1.00000
13C5-PFPeA	1.00000
13C6-PFDA	1.00000
13C7-PFUnA	1.00000
13C8-FOSA	1.00000
13C8-PFOA	.97800
13C8-PFOS	.95600
13C9-PFNA	1.00000
d3-MeFOSAA	1.00000
d5-EtFOSAA	1.00000

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
200721-01	Pipette	B820865811
200721-02	Pipette	B820865811
200721-03	Pipette	B820865811
200721-04	Pipette	B820865811

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 7/21/2020 **Expiration Date:** 7/21/2021

Solution Volume : 40 mL X 5 Vials **Refrigerator/Freezer No:** VOC Laboratory: Refrigerator - R0121

Comment: 96/4 methanol/milli-q water (RP-200722-1)

Approved By: Schumitz, Denise **Date:** 7/23/2020 11:25:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LB74

Description: PFAS - DoD SIS Stock

200721-05	Pipette	B820865811
200721-06	Pipette	B820865811
200721-07	Pipette	B820865811
200721-08	Pipette	B820865811
200721-09	Pipette	B820865811
200721-10	Pipette	B820865811
200721-11	Pipette	B820865811
200721-12	Pipette	B820865811
200721-13	Pipette	B820865811
200721-14	Pipette	B820865811
200721-15	Pipette	B820865811
200721-16	Pipette	B820865811
200721-17	Pipette	B820865811
200721-18	Pipette	B820865811
200721-19	Pipette	B820865811
200721-20	Pipette	B820865811

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 7/21/2020 **Expiration Date:** 7/21/2021

Solution Volume : 40 mL X 5 Vials **Refrigerator/Freezer No:** VOC Laboratory: Refrigerator - R0121

Comment: 96/4 methanol/milli-q water (RP-200722-1)

Approved By: Schumitz, Denise **Date:** 7/23/2020 11:25:00 AM



It can be done

Standard Solution Concentrations

Approved: Standard Laboratory ID Number: **LB75**

Description: PFAS - DoD RIS Stock

Stock Id: 200721-21							
Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	1000	50.00	1	98.000	1	50	1.00000
Stock Id: 200721-22							
Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFOA	1000	50.00	1	98.000	1	50	1.00000
Stock Id: 200721-23							
Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C3-PFBA	1000	50.00	1	98.000	1	50	1.00000
Stock Id: 200721-24							
Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C4-PFOS	1000	47.80	1	98.000	1	50	0.95600

Final Concentrations:

Analyte:	Conc (ug/mL):
13C2-PFDA	1.00000
13C2-PFOA	1.00000
13C3-PFBA	1.00000
13C4-PFOS	.95600

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
200721-21	Pipette	B820865811
200721-22	Pipette	B820865811
200721-23	Pipette	B820865811
200721-24	Pipette	B820865811

Solution Prepared By: Schultz, Stephanie Date Prepared: 7/21/2020 Expiration Date: 7/21/2021

Solution Volume : 40 mL X 5 Vials Refrigerator/Freezer No: VOC Laboratory: Refrigerator - R0123

Comment: 96/4 methanol/milli-q water (RP-200722-1)

Approved By: Schumitz, Denise Date: 7/23/2020 11:25:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LB78

Description: PFAS - DoD Internal Standard Stock Solution

Stock Id: LB75

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	5000	1.00	---	---	1	50	0.10000
13C2-PFOA	5000	1.00	---	---	1	50	0.10000
13C3-PFBA	5000	1.00	---	---	1	50	0.10000
13C4-PFOS	5000	0.96	---	---	1	50	0.09560

Final Concentrations:

Analyte:	Conc (ug/mL):
13C2-PFDA	.10000
13C2-PFOA	.10000
13C3-PFBA	.10000
13C4-PFOS	.09560

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB75	Pipette	B906204506

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 7/21/2020 **Expiration Date:** 7/21/2021

Solution Volume : 40 mL X 5 Vials **Refrigerator/Freezer No:** VOC Laboratory: Refrigerator - R0121

Comment: 96/4 methanol/milli-q water (RP-200722-1)

Approved By: Schumitz, Denise **Date:** 7/23/2020 11:25:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LC24

Description: PFAS - FTCA Stock

Stock Id: 200811-01							
Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
3-perfluoropropyl propanoic Acid	1000	50.00	1	98.000	1	10	5.00000
Stock Id: 200811-02							
Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
3-Perfluoroheptyl propanoic acid	1000	50.00	1	98.000	1	10	5.00000
Stock Id: 200811-03							
Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
3-Perfluoropentyl propanoic acid	1000	50.00	1	98.000	1	10	5.00000

Final Concentrations:

Analyte:	Conc (ug/mL):
3-Perfluoroheptyl propanoic acid	5.00000
3-Perfluoropentyl propanoic acid	5.00000
3-perfluoropropyl propanoic Acid	5.00000

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
200811-01	Pipette	B909301606
200811-02	Pipette	B909301606
200811-03	Pipette	B909301606

Solution Prepared By: Bailey, Kevin Date Prepared: 8/11/2020 Expiration Date: 8/11/2021

Solution Volume : 40 mL X 1 Vials Refrigerator/Freezer No: LC Laboratory: Freezer - F0111

Comment:

Approved By: Schumitz, Denise Date: 8/12/2020 8:20:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LC84

Description: PFAS - DoD High ICAL Stock

Stock Id: 200914-01

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
11-chloroeicosafuoro-3-oxaundecane-1-sulfonic aci	2000	1.00	1	100.000	1	20	0.10000
1H,1H,2H,2H-Perfluorodecane sulfonate	2000	1.01	1	100.000	1	20	0.10100
1H,1H,2H,2H-Perfluorohexane sulfonate	2000	1.00	1	100.000	1	20	0.10000
1H,1H,2H,2H-Perfluorooctane sulfonate	2000	1.00	1	100.000	1	20	0.10000
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic aci	2000	1.00	1	100.000	1	20	0.10000
Adona	2000	1.00	1	100.000	1	20	0.10000
Hexafluoropropylene oxide dimer acid	2000	1.00	1	100.000	1	20	0.10000
N-ethylperfluoro-octanesulfonamidoacetic acid	2000	1.00	1	100.000	1	20	0.10000
N-methylperfluoro-1-octanesulfonamidoacetic acid	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-1-butanefluoride	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-1-decanesulfonate	2000	1.01	1	100.000	1	20	0.10100
Perfluoro-1-heptanesulfonate	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-1-hexanesulfonate	2000	1.01	1	100.000	1	20	0.10100
Perfluoro-1-nonanesulfonate	2000	1.01	1	100.000	1	20	0.10100
Perfluoro-1-octanesulfonamide	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-1-octanesulfonate	2000	1.01	1	100.000	1	20	0.10100
perfluoro-1-pentanesulfonate	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-n-butanoic Acid	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-n-decanoic Acid	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-n-dodecanoic acid	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-n-heptanoic Acid	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-n-hexanoic acid	2000	1.01	1	100.000	1	20	0.10100
Perfluoro-n-octanoic Acid	2000	1.00	1	100.000	1	20	0.10000
Perfluorononanoic Acid	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-n-pentanoic acid	2000	1.01	1	100.000	1	20	0.10100
Perfluoro-n-tetradecanoic acid	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-n-tridecanoic acid	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-n-undecanoic acid	2000	1.00	1	100.000	1	20	0.10000

Stock Id: LC24

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
3-Perfluoroheptyl propanoic acid	400	5.00	---	---	1	20	0.10000
3-Perfluoropentyl propanoic acid	400	5.00	---	---	1	20	0.10000
3-perfluoropropyl propanoic Acid	400	5.00	---	---	1	20	0.10000

Final Concentrations:

Solution Prepared By: Bailey, Kevin	Date Prepared: 9/15/2020	Expiration Date: 8/11/2021
Solution Volume : 40 mL X 1 Vials Refrigerator/Freezer No: VOC Laboratory: Refrigerator - R0121		

Comment: 96/4 methanol/milli-q (RP-200915-3)

Approved By: Schumitz, Denise **Date:** 9/16/2020 8:25:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LC84

Description: PFAS - DoD High ICAL Stock

Analyte:	Conc (ug/mL):
11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	.10000
1H,1H,2H,2H-Perfluorodecane sulfonate	.10100
1H,1H,2H,2H-Perfluorohexane sulfonate	.10000
1H,1H,2H,2H-Perfluorooctane sulfonate	.10000
3-Perfluoroheptyl propanoic acid	.10000
3-Perfluoropentyl propanoic acid	.10000
3-perfluoropropyl propanoic Acid	.10000
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	.10000
Adona	.10000
Hexafluoropropylene oxide dimer acid	.10000
N-ethylperfluoro-octanesulfonamidoacetic acid	.10000
N-methylperfluoro-1-octanesulfonamidoacetic acid	.10000
Perfluoro-1-butanedisulfonate	.10000
Perfluoro-1-decanedisulfonate	.10100
Perfluoro-1-heptanedisulfonate	.10000
Perfluoro-1-hexanedisulfonate	.10100
Perfluoro-1-nonanedisulfonate	.10100
Perfluoro-1-octanesulfonamide	.10000
Perfluoro-1-octanesulfonate	.10100
perfluoro-1-pentanesulfonate	.10000
Perfluoro-n-butanoic Acid	.10000
Perfluoro-n-decanoic Acid	.10000
Perfluoro-n-dodecanoic acid	.10000
Perfluoro-n-heptanoic Acid	.10000
Perfluoro-n-hexanoic acid	.10100
Perfluoro-n-octanoic Acid	.10000
Perfluorononanoic Acid	.10000
Perfluoro-n-pentanoic acid	.10100
Perfluoro-n-tetradecanoic acid	.10000
Perfluoro-n-tridecanoic acid	.10000
Perfluoro-n-undecanoic acid	.10000

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
200914-01	Pipette	B1100330B
LC24	Pipette	B1100330B

Solution Prepared By: Bailey, Kevin **Date Prepared:** 9/15/2020 **Expiration Date:** 8/11/2021

Solution Volume : 40 mL X 1 Vials **Refrigerator/Freezer No:** VOC Laboratory: Refrigerator - R0121

Comment: 96/4 methanol/milli-q (RP-200915-3)

Approved By: Schumitz, Denise **Date:** 9/16/2020 8:25:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LC85

Description: PFAS - DoD Low ICAL Stock

Stock Id: LC84

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
11-chloroeicosafuoro-3-oxaundecane-1-sulfonic aci	500	0.10	---	---	1	5	0.01000
1H,1H,2H,2H-Perfluorodecane sulfonate	500	0.10	---	---	1	5	0.01010
1H,1H,2H,2H-Perfluorohexane sulfonate	500	0.10	---	---	1	5	0.01000
1H,1H,2H,2H-Perfluorooctane sulfonate	500	0.10	---	---	1	5	0.01000
3-Perfluoroheptyl propanoic acid	500	0.10	---	---	1	5	0.01000
3-Perfluoropentyl propanoic acid	500	0.10	---	---	1	5	0.01000
3-perfluoropropyl propanoic Acid	500	0.10	---	---	1	5	0.01000
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic aci	500	0.10	---	---	1	5	0.01000
Adona	500	0.10	---	---	1	5	0.01000
Hexafluoropropylene oxide dimer acid	500	0.10	---	---	1	5	0.01000
N-ethylperfluoro-octanesulfonamidoacetic acid	500	0.10	---	---	1	5	0.01000
N-methylperfluoro-1-octanesulfonamidoacetic acid	500	0.10	---	---	1	5	0.01000
Perfluoro-1-butanefluoride	500	0.10	---	---	1	5	0.01000
Perfluoro-1-decanesulfonate	500	0.10	---	---	1	5	0.01010
Perfluoro-1-heptanesulfonate	500	0.10	---	---	1	5	0.01000
Perfluoro-1-hexanesulfonate	500	0.10	---	---	1	5	0.01010
Perfluoro-1-nonanesulfonate	500	0.10	---	---	1	5	0.01010
Perfluoro-1-octanesulfonamide	500	0.10	---	---	1	5	0.01000
Perfluoro-1-octanesulfonate	500	0.10	---	---	1	5	0.01010
perfluoro-1-pentanesulfonate	500	0.10	---	---	1	5	0.01000
Perfluoro-n-butanoic Acid	500	0.10	---	---	1	5	0.01000
Perfluoro-n-decanoic Acid	500	0.10	---	---	1	5	0.01000
Perfluoro-n-dodecanoic acid	500	0.10	---	---	1	5	0.01000
Perfluoro-n-heptanoic Acid	500	0.10	---	---	1	5	0.01000
Perfluoro-n-hexanoic acid	500	0.10	---	---	1	5	0.01010
Perfluoro-n-octanoic Acid	500	0.10	---	---	1	5	0.01000
Perfluorononanoic Acid	500	0.10	---	---	1	5	0.01000
Perfluoro-n-pentanoic acid	500	0.10	---	---	1	5	0.01010
Perfluoro-n-tetradecanoic acid	500	0.10	---	---	1	5	0.01000
Perfluoro-n-tridecanoic acid	500	0.10	---	---	1	5	0.01000
Perfluoro-n-undecanoic acid	500	0.10	---	---	1	5	0.01000

Final Concentrations:

Analyte:	Conc (ug/mL):
11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	.01000
1H,1H,2H,2H-Perfluorodecane sulfonate	.01010

Solution Prepared By: Bailey, Kevin	Date Prepared: 9/15/2020	Expiration Date: 8/11/2021
Solution Volume : 40 mL X 1 Vials Refrigerator/Freezer No: VOC Laboratory: Refrigerator - R0121		

Comment: 96/4 methanol/milli-q (RP-200915-3)

Approved By: Schumitz, Denise **Date:** 9/16/2020 8:25:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LC85

Description: PFAS - DoD Low ICAL Stock

1H,1H,2H,2H-Perfluorohexane sulfonate	.01000
1H,1H,2H,2H-Perfluorooctane sulfonate	.01000
3-Perfluoroheptyl propanoic acid	.01000
3-Perfluoropentyl propanoic acid	.01000
3-perfluoropropyl propanoic Acid	.01000
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	.01000
Adona	.01000
Hexafluoropropylene oxide dimer acid	.01000
N-ethylperfluoro-octanesulfonamidoacetic acid	.01000
N-methylperfluoro-1-octanesulfonamidoacetic acid	.01000
Perfluoro-1-butanedisulfonate	.01000
Perfluoro-1-decanedisulfonate	.01010
Perfluoro-1-heptanedisulfonate	.01000
Perfluoro-1-hexanedisulfonate	.01010
Perfluoro-1-nonanedisulfonate	.01010
Perfluoro-1-octanesulfonamide	.01000
Perfluoro-1-octanedisulfonate	.01010
perfluoro-1-pentanedisulfonate	.01000
Perfluoro-n-butanedisulfonate	.01000
Perfluoro-n-decanedisulfonate	.01000
Perfluoro-n-dodecanedisulfonate	.01000
Perfluoro-n-heptanedisulfonate	.01000
Perfluoro-n-hexanedisulfonate	.01010
Perfluoro-n-octanedisulfonate	.01000
Perfluorononanedisulfonate	.01000
Perfluoro-n-pentanedisulfonate	.01010
Perfluoro-n-tetradecanedisulfonate	.01000
Perfluoro-n-tridecanedisulfonate	.01000
Perfluoro-n-undecanedisulfonate	.01000

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LC84	Pipette	B1100330B

Solution Prepared By: Bailey, Kevin **Date Prepared:** 9/15/2020 **Expiration Date:** 8/11/2021

Solution Volume : 40 mL X 1 Vials **Refrigerator/Freezer No:** VOC Laboratory: Refrigerator - R0121

Comment: 96/4 methanol/milli-q (RP-200915-3)

Approved By: Schumitz, Denise **Date:** 9/16/2020 8:25:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD43

Description: PFAS - DoD Second Source LCS/MS Solution

Stock Id: 200909-01

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
11-chloroeicosafuoro-3-oxaundecane-1-sulfonic aci	2000	1.00	1	100.000	1	20	0.10000
1H,1H,2H,2H-Perfluorodecane sulfonate	2000	1.01	1	100.000	1	20	0.10100
1H,1H,2H,2H-Perfluorohexane sulfonate	2000	1.00	1	100.000	1	20	0.10000
1H,1H,2H,2H-Perfluorooctane sulfonate	2000	1.00	1	100.000	1	20	0.10000
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic aci	2000	1.00	1	100.000	1	20	0.10000
Adona	2000	1.00	1	100.000	1	20	0.10000
Hexafluoropropylene oxide dimer acid	2000	1.00	1	100.000	1	20	0.10000
N-ethylperfluoro-octanesulfonamidoacetic acid	2000	1.00	1	100.000	1	20	0.10000
N-methylperfluoro-1-octanesulfonamidoacetic acid	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-1-butanefluoride	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-1-decanesulfonate	2000	1.01	1	100.000	1	20	0.10100
Perfluoro-1-heptanesulfonate	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-1-hexanesulfonate	2000	1.01	1	100.000	1	20	0.10100
Perfluoro-1-nonanesulfonate	2000	1.01	1	100.000	1	20	0.10100
Perfluoro-1-octanesulfonamide	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-1-octanesulfonate	2000	1.01	1	100.000	1	20	0.10100
perfluoro-1-pentanesulfonate	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-n-butanoic Acid	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-n-decanoic Acid	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-n-dodecanoic acid	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-n-heptanoic Acid	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-n-hexanoic acid	2000	1.01	1	100.000	1	20	0.10100
Perfluoro-n-octanoic Acid	2000	1.00	1	100.000	1	20	0.10000
Perfluorononanoic Acid	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-n-pentanoic acid	2000	1.01	1	100.000	1	20	0.10100
Perfluoro-n-tetradecanoic acid	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-n-tridecanoic acid	2000	1.00	1	100.000	1	20	0.10000
Perfluoro-n-undecanoic acid	2000	1.00	1	100.000	1	20	0.10000

Stock Id: LC24

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
3-Perfluoroheptyl propanoic acid	400	5.00	---	---	1	20	0.10000
3-Perfluoropentyl propanoic acid	400	5.00	---	---	1	20	0.10000
3-perfluoropropyl propanoic Acid	400	5.00	---	---	1	20	0.10000

Final Concentrations:

Solution Prepared By: Bailey, Kevin	Date Prepared: 10/6/2020	Expiration Date: 8/11/2021
Solution Volume : 40 mL X 1 Vials Refrigerator/Freezer No: VOC Laboratory: Refrigerator - R0121		

Comment: 80/20 methanol/milli-q (RP-201006-1)

Approved By: Schumitz, Denise **Date:** 10/8/2020 10:54:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD43

Description: PFAS - DoD Second Source LCS/MS Solution

Analyte:	Conc (ug/mL):
11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	.10000
1H,1H,2H,2H-Perfluorodecane sulfonate	.10100
1H,1H,2H,2H-Perfluorohexane sulfonate	.10000
1H,1H,2H,2H-Perfluorooctane sulfonate	.10000
3-Perfluoroheptyl propanoic acid	.10000
3-Perfluoropentyl propanoic acid	.10000
3-perfluoropropyl propanoic Acid	.10000
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	.10000
Adona	.10000
Hexafluoropropylene oxide dimer acid	.10000
N-ethylperfluoro-octanesulfonamidoacetic acid	.10000
N-methylperfluoro-1-octanesulfonamidoacetic acid	.10000
Perfluoro-1-butanedisulfonate	.10000
Perfluoro-1-decanedisulfonate	.10100
Perfluoro-1-heptanedisulfonate	.10000
Perfluoro-1-hexanedisulfonate	.10100
Perfluoro-1-nonanedisulfonate	.10100
Perfluoro-1-octanesulfonamide	.10000
Perfluoro-1-octanesulfonate	.10100
perfluoro-1-pentanesulfonate	.10000
Perfluoro-n-butanoic Acid	.10000
Perfluoro-n-decanoic Acid	.10000
Perfluoro-n-dodecanoic acid	.10000
Perfluoro-n-heptanoic Acid	.10000
Perfluoro-n-hexanoic acid	.10100
Perfluoro-n-octanoic Acid	.10000
Perfluorononanoic Acid	.10000
Perfluoro-n-pentanoic acid	.10100
Perfluoro-n-tetradecanoic acid	.10000
Perfluoro-n-tridecanoic acid	.10000
Perfluoro-n-undecanoic acid	.10000

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
200909-01	Pipette	B820865811
LC24	Pipette	B820865811

Solution Prepared By: Bailey, Kevin **Date Prepared:** 10/6/2020 **Expiration Date:** 8/11/2021

Solution Volume : 40 mL X 1 Vials **Refrigerator/Freezer No:** VOC Laboratory: Refrigerator - R0121

Comment: 80/20 methanol/milli-q (RP-201006-1)

Approved By: Schumitz, Denise **Date:** 10/8/2020 10:54:00 AM



It can be done

Standard Solution Concentrations

Approved: Standard Laboratory ID Number: **LD44**

Description: PFAS - DoD Low Level Labelled Extracted Internal Standard

Stock Id: **LB74**

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	2000	0.93	---	---	1	200	0.00934
13C2-6:2FTS	2000	0.95	---	---	1	200	0.00950
13C2-8:2FTS	2000	0.96	---	---	1	200	0.00958
13C2-PFDoA	2000	1.00	---	---	1	200	0.01000
13C2-PFTeDA	2000	1.00	---	---	1	200	0.01000
13C3-HFPO-DA	2000	1.00	---	---	1	200	0.01000
13C3-PFBS	2000	0.93	---	---	1	200	0.00930
13C3-PFHxS	2000	0.95	---	---	1	200	0.00946
13C4-PFBA	2000	1.00	---	---	1	200	0.01000
13C4-PFHpA	2000	1.00	---	---	1	200	0.01000
13C5-PFHxA	2000	1.00	---	---	1	200	0.01000
13C5-PFPeA	2000	1.00	---	---	1	200	0.01000
13C6-PFDA	2000	1.00	---	---	1	200	0.01000
13C7-PFUnA	2000	1.00	---	---	1	200	0.01000
13C8-FOSA	2000	1.00	---	---	1	200	0.01000
13C8-PFOA	2000	0.98	---	---	1	200	0.00978
13C8-PFOS	2000	0.96	---	---	1	200	0.00956
13C9-PFNA	2000	1.00	---	---	1	200	0.01000
d3-MeFOSAA	2000	1.00	---	---	1	200	0.01000
d5-EtFOSAA	2000	1.00	---	---	1	200	0.01000

Final Concentrations:

Analyte:	Conc (ug/mL):
13C2-4:2FTS	.00934
13C2-6:2FTS	.00950
13C2-8:2FTS	.00958
13C2-PFDoA	.01000
13C2-PFTeDA	.01000
13C3-HFPO-DA	.01000
13C3-PFBS	.00930
13C3-PFHxS	.00946
13C4-PFBA	.01000
13C4-PFHpA	.01000
13C5-PFHxA	.01000
13C5-PFPeA	.01000
13C6-PFDA	.01000

Solution Prepared By: Bailey, Kevin Date Prepared: 10/6/2020 Expiration Date: 7/21/2021

Solution Volume : 40 mL X 8 Vials Refrigerator/Freezer No: VOC Laboratory: Refrigerator - R0121

Comment: 96/4 methanol/milli-q water (RP-201006-13)

Approved By: Schumitz, Denise Date: 10/7/2020 8:51:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD44

Description: PFAS - DoD Low Level Labelled Extracted Internal Standard

13C7-PFUnA	.01000
13C8-FOSA	.01000
13C8-PFOA	.00978
13C8-PFOS	.00956
13C9-PFNA	.01000
d3-MeFOSAA	.01000
d5-EtFOSAA	.01000

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB74	Pipette	B820865811

Solution Prepared By: Bailey, Kevin **Date Prepared:** 10/6/2020 **Expiration Date:** 7/21/2021

Solution Volume : 40 mL X 8 Vials **Refrigerator/Freezer No:** VOC Laboratory: Refrigerator - R0121

Comment: 96/4 methanol/milli-q water (RP-201006-13)

Approved By: Schumitz, Denise **Date:** 10/7/2020 8:51:00 AM



It can be done

Standard Solution Concentrations

Approved: Standard Laboratory ID Number: **LD73**

Description: PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)

Stock Id: **LB74**

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	5000	0.93	---	---	1	50	0.09340
13C2-6:2FTS	5000	0.95	---	---	1	50	0.09500
13C2-8:2FTS	5000	0.96	---	---	1	50	0.09580
13C2-PFDoA	5000	1.00	---	---	1	50	0.10000
13C2-PFTeDA	5000	1.00	---	---	1	50	0.10000
13C3-HFPO-DA	5000	1.00	---	---	1	50	0.10000
13C3-PFBS	5000	0.93	---	---	1	50	0.09300
13C3-PFHxS	5000	0.95	---	---	1	50	0.09460
13C4-PFBA	5000	1.00	---	---	1	50	0.10000
13C4-PFHpA	5000	1.00	---	---	1	50	0.10000
13C5-PFHxA	5000	1.00	---	---	1	50	0.10000
13C5-PFPeA	5000	1.00	---	---	1	50	0.10000
13C6-PFDA	5000	1.00	---	---	1	50	0.10000
13C7-PFUnA	5000	1.00	---	---	1	50	0.10000
13C8-FOSA	5000	1.00	---	---	1	50	0.10000
13C8-PFOA	5000	0.98	---	---	1	50	0.09780
13C8-PFOS	5000	0.96	---	---	1	50	0.09560
13C9-PFNA	5000	1.00	---	---	1	50	0.10000
d3-MeFOSAA	5000	1.00	---	---	1	50	0.10000
d5-EtFOSAA	5000	1.00	---	---	1	50	0.10000

Final Concentrations:

Analyte:	Conc (ug/mL):
13C2-4:2FTS	.09340
13C2-6:2FTS	.09500
13C2-8:2FTS	.09580
13C2-PFDoA	.10000
13C2-PFTeDA	.10000
13C3-HFPO-DA	.10000
13C3-PFBS	.09300
13C3-PFHxS	.09460
13C4-PFBA	.10000
13C4-PFHpA	.10000
13C5-PFHxA	.10000
13C5-PFPeA	.10000
13C6-PFDA	.10000

Solution Prepared By: Bailey, Kevin Date Prepared: 10/22/2020 Expiration Date: 7/21/2021

Solution Volume : 40 mL X 5 Vials Refrigerator/Freezer No: VOC Laboratory: Refrigerator - R0121

Comment: 96/4 methanol/milli-q (RP-201022-2)

Approved By: Schumitz, Denise Date: 10/23/2020 9:27:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD73

Description: PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)

13C7-PFUnA	.10000
13C8-FOSA	.10000
13C8-PFOA	.09780
13C8-PFOS	.09560
13C9-PFNA	.10000
d3-MeFOSAA	.10000
d5-EtFOSAA	.10000

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB74	Pipette	B820865811

Solution Prepared By: Bailey, Kevin **Date Prepared:** 10/22/2020 **Expiration Date:** 7/21/2021

Solution Volume : 40 mL X 5 Vials **Refrigerator/Freezer No:** VOC Laboratory: Refrigerator - R0121

Comment: 96/4 methanol/milli-q (RP-201022-2)

Approved By: Schumitz, Denise **Date:** 10/23/2020 9:27:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD74

Description: PFAS - DoD Calibration L1

Stock Id: LB78

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	125	0.10	---	---	1	10	0.00125
13C2-PFOA	125	0.10	---	---	1	10	0.00125
13C3-PFBA	125	0.10	---	---	1	10	0.00125
13C4-PFOS	125	0.10	---	---	1	10	0.00119

Stock Id: LC85

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
3-Perfluoroheptyl propanoic acid	250	0.01	---	---	1	10	0.00025
3-Perfluoropentyl propanoic acid	250	0.01	---	---	1	10	0.00025
3-perfluoropropyl propanoic Acid	250	0.01	---	---	1	10	0.00025

Stock Id: LD73

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	125	0.09	---	---	1	10	0.00117
13C2-6:2FTS	125	0.10	---	---	1	10	0.00119
13C2-8:2FTS	125	0.10	---	---	1	10	0.00120
13C2-PFDoA	125	0.10	---	---	1	10	0.00125
13C2-PFTeDA	125	0.10	---	---	1	10	0.00125
13C3-HFPO-DA	125	0.10	---	---	1	10	0.00125
13C3-PFBS	125	0.09	---	---	1	10	0.00116
13C3-PFHxS	125	0.09	---	---	1	10	0.00118
13C4-PFBA	125	0.10	---	---	1	10	0.00125
13C4-PFHpA	125	0.10	---	---	1	10	0.00125
13C5-PFHxA	125	0.10	---	---	1	10	0.00125
13C5-PFPeA	125	0.10	---	---	1	10	0.00125
13C6-PFDA	125	0.10	---	---	1	10	0.00125
13C7-PFU _n A	125	0.10	---	---	1	10	0.00125
13C8-FOSA	125	0.10	---	---	1	10	0.00125
13C8-PFOA	125	0.10	---	---	1	10	0.00122
13C8-PFOS	125	0.10	---	---	1	10	0.00119
13C9-PFNA	125	0.10	---	---	1	10	0.00125
d3-MeFOSAA	125	0.10	---	---	1	10	0.00125
d5-EtFOSAA	125	0.10	---	---	1	10	0.00125

Final Concentrations:

Solution Prepared By: Bailey, Kevin	Date Prepared: 10/22/2020	Expiration Date: 7/21/2021
Solution Volume : 40 mL X 1 Vials Refrigerator/Freezer No: VOC Laboratory: Refrigerator - R0121		

Comment: 80/20 methanol/milli-q (RP-201022-7)

Approved By: Schumitz, Denise **Date:** 10/23/2020 9:27:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD74

Description: PFAS - DoD Calibration L1

Analyte:	Conc (ug/mL):
13C2-4:2FTS	.00117
13C2-6:2FTS	.00119
13C2-8:2FTS	.00120
13C2-PFDA	.00125
13C2-PFDoA	.00125
13C2-PFOA	.00125
13C2-PFTeDA	.00125
13C3-HFPO-DA	.00125
13C3-PFBA	.00125
13C3-PFBS	.00116
13C3-PFHxS	.00118
13C4-PFBA	.00125
13C4-PFHpA	.00125
13C4-PFOS	.00119
13C5-PFHxA	.00125
13C5-PFPeA	.00125
13C6-PFDA	.00125
13C7-PFUnA	.00125
13C8-FOSA	.00125
13C8-PFOA	.00122
13C8-PFOS	.00119
13C9-PFNA	.00125
3-Perfluoroheptyl propanoic acid	.00025
3-Perfluoropentyl propanoic acid	.00025
3-perfluoropropyl propanoic Acid	.00025
d3-MeFOSAA	.00125
d5-EtFOSAA	.00125

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB78	Pipette	B814657482
LC85	Pipette	B814657482
LD73	Pipette	B814657482

Solution Prepared By: Bailey, Kevin **Date Prepared:** 10/22/2020 **Expiration Date:** 7/21/2021

Solution Volume : 40 mL X 1 Vials **Refrigerator/Freezer No:** VOC Laboratory: Refrigerator - R0121

Comment: 80/20 methanol/milli-q (RP-201022-7)

Approved By: Schumitz, Denise **Date:** 10/23/2020 9:27:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD75

Description: PFAS - DoD Calibration L2

Stock Id: LB78

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	125	0.10	---	---	1	10	0.00125
13C2-PFOA	125	0.10	---	---	1	10	0.00125
13C3-PFBA	125	0.10	---	---	1	10	0.00125
13C4-PFOS	125	0.10	---	---	1	10	0.00119

Stock Id: LC85

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
3-Perfluoroheptyl propanoic acid	500	0.01	---	---	1	10	0.00050
3-Perfluoropentyl propanoic acid	500	0.01	---	---	1	10	0.00050
3-perfluoropropyl propanoic Acid	500	0.01	---	---	1	10	0.00050

Stock Id: LD73

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	125	0.09	---	---	1	10	0.00117
13C2-6:2FTS	125	0.10	---	---	1	10	0.00119
13C2-8:2FTS	125	0.10	---	---	1	10	0.00120
13C2-PFDoA	125	0.10	---	---	1	10	0.00125
13C2-PFTeDA	125	0.10	---	---	1	10	0.00125
13C3-HFPO-DA	125	0.10	---	---	1	10	0.00125
13C3-PFBS	125	0.09	---	---	1	10	0.00116
13C3-PFHxS	125	0.09	---	---	1	10	0.00118
13C4-PFBA	125	0.10	---	---	1	10	0.00125
13C4-PFHpA	125	0.10	---	---	1	10	0.00125
13C5-PFHxA	125	0.10	---	---	1	10	0.00125
13C5-PFPeA	125	0.10	---	---	1	10	0.00125
13C6-PFDA	125	0.10	---	---	1	10	0.00125
13C7-PFU _n A	125	0.10	---	---	1	10	0.00125
13C8-FOSA	125	0.10	---	---	1	10	0.00125
13C8-PFOA	125	0.10	---	---	1	10	0.00122
13C8-PFOS	125	0.10	---	---	1	10	0.00119
13C9-PFNA	125	0.10	---	---	1	10	0.00125
d3-MeFOSAA	125	0.10	---	---	1	10	0.00125
d5-EtFOSAA	125	0.10	---	---	1	10	0.00125

Final Concentrations:

Solution Prepared By: Bailey, Kevin	Date Prepared: 10/22/2020	Expiration Date: 7/21/2021
Solution Volume : 40 mL X 1 Vials Refrigerator/Freezer No: VOC Laboratory: Refrigerator - R0121		

Comment: 80/20 methanol/milli-q (RP-201022-7)

Approved By: Schumitz, Denise **Date:** 10/23/2020 9:27:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD75

Description: PFAS - DoD Calibration L2

Analyte:	Conc (ug/mL):
13C2-4:2FTS	.00117
13C2-6:2FTS	.00119
13C2-8:2FTS	.00120
13C2-PFDA	.00125
13C2-PFDoA	.00125
13C2-PFOA	.00125
13C2-PFTeDA	.00125
13C3-HFPO-DA	.00125
13C3-PFBA	.00125
13C3-PFBS	.00116
13C3-PFHxS	.00118
13C4-PFBA	.00125
13C4-PFHpA	.00125
13C4-PFOS	.00119
13C5-PFHxA	.00125
13C5-PFPeA	.00125
13C6-PFDA	.00125
13C7-PFUnA	.00125
13C8-FOSA	.00125
13C8-PFOA	.00122
13C8-PFOS	.00119
13C9-PFNA	.00125
3-Perfluoroheptyl propanoic acid	.00050
3-Perfluoropentyl propanoic acid	.00050
3-perfluoropropyl propanoic Acid	.00050
d3-MeFOSAA	.00125
d5-EtFOSAA	.00125

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB78	Pipette	B814657482
LC85	Pipette	B820865811
LD73	Pipette	B814657482

Solution Prepared By: Bailey, Kevin **Date Prepared:** 10/22/2020 **Expiration Date:** 7/21/2021

Solution Volume : 40 mL X 1 Vials **Refrigerator/Freezer No:** VOC Laboratory: Refrigerator - R0121

Comment: 80/20 methanol/milli-q (RP-201022-7)

Approved By: Schumitz, Denise **Date:** 10/23/2020 9:27:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD76

Description: PFAS - DoD Calibration L3

Stock Id: LB78

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	500	0.10	---	---	1	40	0.00125
13C2-PFOA	500	0.10	---	---	1	40	0.00125
13C3-PFBA	500	0.10	---	---	1	40	0.00125
13C4-PFOS	500	0.10	---	---	1	40	0.00119

Stock Id: LC84

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
3-Perfluoroheptyl propanoic acid	400	0.10	---	---	1	40	0.00100
3-Perfluoropentyl propanoic acid	400	0.10	---	---	1	40	0.00100
3-perfluoropropyl propanoic Acid	400	0.10	---	---	1	40	0.00100

Stock Id: LD73

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	500	0.09	---	---	1	40	0.00117
13C2-6:2FTS	500	0.10	---	---	1	40	0.00119
13C2-8:2FTS	500	0.10	---	---	1	40	0.00120
13C2-PFDoA	500	0.10	---	---	1	40	0.00125
13C2-PFTeDA	500	0.10	---	---	1	40	0.00125
13C3-HFPO-DA	500	0.10	---	---	1	40	0.00125
13C3-PFBS	500	0.09	---	---	1	40	0.00116
13C3-PFHxS	500	0.09	---	---	1	40	0.00118
13C4-PFBA	500	0.10	---	---	1	40	0.00125
13C4-PFHpA	500	0.10	---	---	1	40	0.00125
13C5-PFHxA	500	0.10	---	---	1	40	0.00125
13C5-PFPeA	500	0.10	---	---	1	40	0.00125
13C6-PFDA	500	0.10	---	---	1	40	0.00125
13C7-PFU _n A	500	0.10	---	---	1	40	0.00125
13C8-FOSA	500	0.10	---	---	1	40	0.00125
13C8-PFOA	500	0.10	---	---	1	40	0.00122
13C8-PFOS	500	0.10	---	---	1	40	0.00119
13C9-PFNA	500	0.10	---	---	1	40	0.00125
d3-MeFOSAA	500	0.10	---	---	1	40	0.00125
d5-EtFOSAA	500	0.10	---	---	1	40	0.00125

Final Concentrations:

Solution Prepared By: Bailey, Kevin	Date Prepared: 10/22/2020	Expiration Date: 7/21/2021
Solution Volume : 40 mL X 1 Vials Refrigerator/Freezer No: VOC Laboratory: Refrigerator - R0121		

Comment: 80/20 methanol/milli-q (RP-201022-7)

Approved By: Schumitz, Denise Date: 10/23/2020 9:27:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD76

Description: PFAS - DoD Calibration L3

Analyte:	Conc (ug/mL):
13C2-4:2FTS	.00117
13C2-6:2FTS	.00119
13C2-8:2FTS	.00120
13C2-PFDA	.00125
13C2-PFDoA	.00125
13C2-PFOA	.00125
13C2-PFTeDA	.00125
13C3-HFPO-DA	.00125
13C3-PFBA	.00125
13C3-PFBS	.00116
13C3-PFHxS	.00118
13C4-PFBA	.00125
13C4-PFHpA	.00125
13C4-PFOS	.00119
13C5-PFHxA	.00125
13C5-PFPeA	.00125
13C6-PFDA	.00125
13C7-PFUnA	.00125
13C8-FOSA	.00125
13C8-PFOA	.00122
13C8-PFOS	.00119
13C9-PFNA	.00125
3-Perfluoroheptyl propanoic acid	.00100
3-Perfluoropentyl propanoic acid	.00100
3-perfluoropropyl propanoic Acid	.00100
d3-MeFOSAA	.00125
d5-EtFOSAA	.00125

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB78	Pipette	B820865811
LC84	Pipette	B820865811
LD73	Pipette	B820865811

Solution Prepared By: Bailey, Kevin **Date Prepared:** 10/22/2020 **Expiration Date:** 7/21/2021

Solution Volume : 40 mL X 1 Vials **Refrigerator/Freezer No:** VOC Laboratory: Refrigerator - R0121

Comment: 80/20 methanol/milli-q (RP-201022-7)

Approved By: Schumitz, Denise **Date:** 10/23/2020 9:27:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD77

Description: PFAS - DoD Calibration L4

Stock Id: LB78

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	500	0.10	---	---	1	40	0.00125
13C2-PFOA	500	0.10	---	---	1	40	0.00125
13C3-PFBA	500	0.10	---	---	1	40	0.00125
13C4-PFOS	500	0.10	---	---	1	40	0.00119

Stock Id: LC84

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
3-Perfluoroheptyl propanoic acid	1000	0.10	---	---	1	40	0.00250
3-Perfluoropentyl propanoic acid	1000	0.10	---	---	1	40	0.00250
3-perfluoropropyl propanoic Acid	1000	0.10	---	---	1	40	0.00250

Stock Id: LD73

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	500	0.09	---	---	1	40	0.00117
13C2-6:2FTS	500	0.10	---	---	1	40	0.00119
13C2-8:2FTS	500	0.10	---	---	1	40	0.00120
13C2-PFDoA	500	0.10	---	---	1	40	0.00125
13C2-PFTeDA	500	0.10	---	---	1	40	0.00125
13C3-HFPO-DA	500	0.10	---	---	1	40	0.00125
13C3-PFBS	500	0.09	---	---	1	40	0.00116
13C3-PFHxS	500	0.09	---	---	1	40	0.00118
13C4-PFBA	500	0.10	---	---	1	40	0.00125
13C4-PFHpA	500	0.10	---	---	1	40	0.00125
13C5-PFHxA	500	0.10	---	---	1	40	0.00125
13C5-PFPeA	500	0.10	---	---	1	40	0.00125
13C6-PFDA	500	0.10	---	---	1	40	0.00125
13C7-PFU _n A	500	0.10	---	---	1	40	0.00125
13C8-FOSA	500	0.10	---	---	1	40	0.00125
13C8-PFOA	500	0.10	---	---	1	40	0.00122
13C8-PFOS	500	0.10	---	---	1	40	0.00119
13C9-PFNA	500	0.10	---	---	1	40	0.00125
d3-MeFOSAA	500	0.10	---	---	1	40	0.00125
d5-EtFOSAA	500	0.10	---	---	1	40	0.00125

Final Concentrations:

Solution Prepared By: Bailey, Kevin	Date Prepared: 10/22/2020	Expiration Date: 7/21/2021
Solution Volume : 40 mL X 1 Vials Refrigerator/Freezer No: VOC Laboratory: Refrigerator - R0121		

Comment: 80/20 methanol/milli-q (RP-201022-7)

Approved By: Schumitz, Denise Date: 10/23/2020 9:27:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD77

Description: PFAS - DoD Calibration L4

Analyte:	Conc (ug/mL):
13C2-4:2FTS	.00117
13C2-6:2FTS	.00119
13C2-8:2FTS	.00120
13C2-PFDA	.00125
13C2-PFDoA	.00125
13C2-PFOA	.00125
13C2-PFTeDA	.00125
13C3-HFPO-DA	.00125
13C3-PFBA	.00125
13C3-PFBS	.00116
13C3-PFHxS	.00118
13C4-PFBA	.00125
13C4-PFHpA	.00125
13C4-PFOS	.00119
13C5-PFHxA	.00125
13C5-PFPeA	.00125
13C6-PFDA	.00125
13C7-PFUnA	.00125
13C8-FOSA	.00125
13C8-PFOA	.00122
13C8-PFOS	.00119
13C9-PFNA	.00125
3-Perfluoroheptyl propanoic acid	.00250
3-Perfluoropentyl propanoic acid	.00250
3-perfluoropropyl propanoic Acid	.00250
d3-MeFOSAA	.00125
d5-EtFOSAA	.00125

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB78	Pipette	B820865811
LC84	Pipette	B820865811
LD73	Pipette	B820865811

Solution Prepared By: Bailey, Kevin **Date Prepared:** 10/22/2020 **Expiration Date:** 7/21/2021

Solution Volume : 40 mL X 1 Vials **Refrigerator/Freezer No:** VOC Laboratory: Refrigerator - R0121

Comment: 80/20 methanol/milli-q (RP-201022-7)

Approved By: Schumitz, Denise **Date:** 10/23/2020 9:27:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD78

Description: PFAS - DoD Calibration L5

Stock Id: LB78

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	125	0.10	---	---	1	10	0.00125
13C2-PFOA	125	0.10	---	---	1	10	0.00125
13C3-PFBA	125	0.10	---	---	1	10	0.00125
13C4-PFOS	125	0.10	---	---	1	10	0.00119

Stock Id: LC84

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
3-Perfluoroheptyl propanoic acid	1000	0.10	---	---	1	10	0.01000
3-Perfluoropentyl propanoic acid	1000	0.10	---	---	1	10	0.01000
3-perfluoropropyl propanoic Acid	1000	0.10	---	---	1	10	0.01000

Stock Id: LD73

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	125	0.09	---	---	1	10	0.00117
13C2-6:2FTS	125	0.10	---	---	1	10	0.00119
13C2-8:2FTS	125	0.10	---	---	1	10	0.00120
13C2-PFDoA	125	0.10	---	---	1	10	0.00125
13C2-PFTeDA	125	0.10	---	---	1	10	0.00125
13C3-HFPO-DA	125	0.10	---	---	1	10	0.00125
13C3-PFBS	125	0.09	---	---	1	10	0.00116
13C3-PFHxS	125	0.09	---	---	1	10	0.00118
13C4-PFBA	125	0.10	---	---	1	10	0.00125
13C4-PFHpA	125	0.10	---	---	1	10	0.00125
13C5-PFHxA	125	0.10	---	---	1	10	0.00125
13C5-PFPeA	125	0.10	---	---	1	10	0.00125
13C6-PFDA	125	0.10	---	---	1	10	0.00125
13C7-PFU _n A	125	0.10	---	---	1	10	0.00125
13C8-FOSA	125	0.10	---	---	1	10	0.00125
13C8-PFOA	125	0.10	---	---	1	10	0.00122
13C8-PFOS	125	0.10	---	---	1	10	0.00119
13C9-PFNA	125	0.10	---	---	1	10	0.00125
d3-MeFOSAA	125	0.10	---	---	1	10	0.00125
d5-EtFOSAA	125	0.10	---	---	1	10	0.00125

Final Concentrations:

Solution Prepared By: Bailey, Kevin	Date Prepared: 10/22/2020	Expiration Date: 7/21/2021
Solution Volume : 40 mL X 1 Vials Refrigerator/Freezer No: VOC Laboratory: Refrigerator - R0121		

Comment: 80/20 methanol/milli-q (RP-201022-7)

Approved By: Schumitz, Denise Date: 10/23/2020 9:27:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD78

Description: PFAS - DoD Calibration L5

Analyte:	Conc (ug/mL):
13C2-4:2FTS	.00117
13C2-6:2FTS	.00119
13C2-8:2FTS	.00120
13C2-PFDA	.00125
13C2-PFDoA	.00125
13C2-PFOA	.00125
13C2-PFTeDA	.00125
13C3-HFPO-DA	.00125
13C3-PFBA	.00125
13C3-PFBS	.00116
13C3-PFHxS	.00118
13C4-PFBA	.00125
13C4-PFHpA	.00125
13C4-PFOS	.00119
13C5-PFHxA	.00125
13C5-PFPeA	.00125
13C6-PFDA	.00125
13C7-PFUnA	.00125
13C8-FOSA	.00125
13C8-PFOA	.00122
13C8-PFOS	.00119
13C9-PFNA	.00125
3-Perfluoroheptyl propanoic acid	.01000
3-Perfluoropentyl propanoic acid	.01000
3-perfluoropropyl propanoic Acid	.01000
d3-MeFOSAA	.00125
d5-EtFOSAA	.00125

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB78	Pipette	B814657482
LC84	Pipette	B820865811
LD73	Pipette	B814657482

Solution Prepared By: Bailey, Kevin **Date Prepared:** 10/22/2020 **Expiration Date:** 7/21/2021

Solution Volume : 40 mL X 1 Vials **Refrigerator/Freezer No:** VOC Laboratory: Refrigerator - R0121

Comment: 80/20 methanol/milli-q (RP-201022-7)

Approved By: Schumitz, Denise **Date:** 10/23/2020 9:27:00 AM



It can be done

Standard Solution Concentrations

Approved: Standard Laboratory ID Number: **LD79**

Description: PFAS - DoD Calibration L6

Stock Id: LB78

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	125	0.10	---	---	1	10	0.00125
13C2-PFOA	125	0.10	---	---	1	10	0.00125
13C3-PFBA	125	0.10	---	---	1	10	0.00125
13C4-PFOS	125	0.10	---	---	1	10	0.00119

Stock Id: LC84

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
3-Perfluoroheptyl propanoic acid	2500	0.10	---	---	1	10	0.02500
3-Perfluoropentyl propanoic acid	2500	0.10	---	---	1	10	0.02500
3-perfluoropropyl propanoic Acid	2500	0.10	---	---	1	10	0.02500

Stock Id: LD73

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	125	0.09	---	---	1	10	0.00117
13C2-6:2FTS	125	0.10	---	---	1	10	0.00119
13C2-8:2FTS	125	0.10	---	---	1	10	0.00120
13C2-PFDoA	125	0.10	---	---	1	10	0.00125
13C2-PFTeDA	125	0.10	---	---	1	10	0.00125
13C3-HFPO-DA	125	0.10	---	---	1	10	0.00125
13C3-PFBS	125	0.09	---	---	1	10	0.00116
13C3-PFHxS	125	0.09	---	---	1	10	0.00118
13C4-PFBA	125	0.10	---	---	1	10	0.00125
13C4-PFHpA	125	0.10	---	---	1	10	0.00125
13C5-PFHxA	125	0.10	---	---	1	10	0.00125
13C5-PFPeA	125	0.10	---	---	1	10	0.00125
13C6-PFDA	125	0.10	---	---	1	10	0.00125
13C7-PFU _n A	125	0.10	---	---	1	10	0.00125
13C8-FOSA	125	0.10	---	---	1	10	0.00125
13C8-PFOA	125	0.10	---	---	1	10	0.00122
13C8-PFOS	125	0.10	---	---	1	10	0.00119
13C9-PFNA	125	0.10	---	---	1	10	0.00125
d3-MeFOSAA	125	0.10	---	---	1	10	0.00125
d5-EtFOSAA	125	0.10	---	---	1	10	0.00125

Final Concentrations:

Solution Prepared By: Bailey, Kevin	Date Prepared: 10/22/2020	Expiration Date: 7/21/2021
Solution Volume : 40 mL X 1 Vials Refrigerator/Freezer No: VOC Laboratory: Refrigerator - R0121		

Comment: 80/20 methanol/milli-q (RP-201022-7)

Approved By: Schumitz, Denise **Date:** 10/23/2020 9:27:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD79

Description: PFAS - DoD Calibration L6

Analyte:	Conc (ug/mL):
13C2-4:2FTS	.00117
13C2-6:2FTS	.00119
13C2-8:2FTS	.00120
13C2-PFDA	.00125
13C2-PFDoA	.00125
13C2-PFOA	.00125
13C2-PFTeDA	.00125
13C3-HFPO-DA	.00125
13C3-PFBA	.00125
13C3-PFBS	.00116
13C3-PFHxS	.00118
13C4-PFBA	.00125
13C4-PFHpA	.00125
13C4-PFOS	.00119
13C5-PFHxA	.00125
13C5-PFPeA	.00125
13C6-PFDA	.00125
13C7-PFUnA	.00125
13C8-FOSA	.00125
13C8-PFOA	.00122
13C8-PFOS	.00119
13C9-PFNA	.00125
3-Perfluoroheptyl propanoic acid	.02500
3-Perfluoropentyl propanoic acid	.02500
3-perfluoropropyl propanoic Acid	.02500
d3-MeFOSAA	.00125
d5-EtFOSAA	.00125

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB78	Pipette	B814657482
LC84	Pipette	B820865811
LD73	Pipette	B814657482

Solution Prepared By: Bailey, Kevin **Date Prepared:** 10/22/2020 **Expiration Date:** 7/21/2021

Solution Volume : 40 mL X 1 Vials **Refrigerator/Freezer No:** VOC Laboratory: Refrigerator - R0121

Comment: 80/20 methanol/milli-q (RP-201022-7)

Approved By: Schumitz, Denise **Date:** 10/23/2020 9:27:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD81

Description: PFAS - DoD ICC

Stock Id: LB78

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	125	0.10	---	---	1	10	0.00125
13C2-PFOA	125	0.10	---	---	1	10	0.00125
13C3-PFBA	125	0.10	---	---	1	10	0.00125
13C4-PFOS	125	0.10	---	---	1	10	0.00119

Stock Id: LD43

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
11-chloroeicosafuoro-3-oxaundecane-1-sulfonic aci	250	0.10	---	---	1	10	0.00250
1H,1H,2H,2H-Perfluorodecane sulfonate	250	0.10	---	---	1	10	0.00253
1H,1H,2H,2H-Perfluorohexane sulfonate	250	0.10	---	---	1	10	0.00250
1H,1H,2H,2H-Perfluorooctane sulfonate	250	0.10	---	---	1	10	0.00250
3-Perfluoroheptyl propanoic acid	250	0.10	---	---	1	10	0.00250
3-Perfluoropentyl propanoic acid	250	0.10	---	---	1	10	0.00250
3-perfluoropropyl propanoic Acid	250	0.10	---	---	1	10	0.00250
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic aci	250	0.10	---	---	1	10	0.00250
Adona	250	0.10	---	---	1	10	0.00250
Hexafluoropropylene oxide dimer acid	250	0.10	---	---	1	10	0.00250
N-ethylperfluoro-octanesulfonamidoacetic acid	250	0.10	---	---	1	10	0.00250
N-methylperfluoro-1-octanesulfonamidoacetic acid	250	0.10	---	---	1	10	0.00250
Perfluoro-1-butanefluoride	250	0.10	---	---	1	10	0.00250
Perfluoro-1-decanesulfonate	250	0.10	---	---	1	10	0.00253
Perfluoro-1-heptanesulfonate	250	0.10	---	---	1	10	0.00250
Perfluoro-1-hexanesulfonate	250	0.10	---	---	1	10	0.00253
Perfluoro-1-nonanesulfonate	250	0.10	---	---	1	10	0.00253
Perfluoro-1-octanesulfonamide	250	0.10	---	---	1	10	0.00250
Perfluoro-1-octanesulfonate	250	0.10	---	---	1	10	0.00253
perfluoro-1-pentanesulfonate	250	0.10	---	---	1	10	0.00250
Perfluoro-n-butanoic Acid	250	0.10	---	---	1	10	0.00250
Perfluoro-n-decanoic Acid	250	0.10	---	---	1	10	0.00250
Perfluoro-n-dodecanoic acid	250	0.10	---	---	1	10	0.00250
Perfluoro-n-heptanoic Acid	250	0.10	---	---	1	10	0.00250
Perfluoro-n-hexanoic acid	250	0.10	---	---	1	10	0.00253
Perfluoro-n-octanoic Acid	250	0.10	---	---	1	10	0.00250
Perfluorononanoic Acid	250	0.10	---	---	1	10	0.00250
Perfluoro-n-pentanoic acid	250	0.10	---	---	1	10	0.00253

Solution Prepared By: Bailey, Kevin Date Prepared: 10/22/2020 Expiration Date: 7/21/2021

Solution Volume : 40 mL X 1 Vials Refrigerator/Freezer No: VOC Laboratory: Refrigerator - R0121

Comment: 80/20 methanol/milli-q (RP-201022-7)

Approved By: Schumitz, Denise Date: 10/23/2020 9:27:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD81

Description: PFAS - DoD ICC

Perfluoro-n-tetradecanoic acid	250	0.10	---	---	1	10	0.00250
Perfluoro-n-tridecanoic acid	250	0.10	---	---	1	10	0.00250
Perfluoro-n-undecanoic acid	250	0.10	---	---	1	10	0.00250

Stock Id: LD73

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	125	0.09	---	---	1	10	0.00117
13C2-6:2FTS	125	0.10	---	---	1	10	0.00119
13C2-8:2FTS	125	0.10	---	---	1	10	0.00120
13C2-PFDoA	125	0.10	---	---	1	10	0.00125
13C2-PFTeDA	125	0.10	---	---	1	10	0.00125
13C3-HFPO-DA	125	0.10	---	---	1	10	0.00125
13C3-PFBS	125	0.09	---	---	1	10	0.00116
13C3-PFHxS	125	0.09	---	---	1	10	0.00118
13C4-PFBA	125	0.10	---	---	1	10	0.00125
13C4-PFHpA	125	0.10	---	---	1	10	0.00125
13C5-PFHxA	125	0.10	---	---	1	10	0.00125
13C5-PFPeA	125	0.10	---	---	1	10	0.00125
13C6-PFDA	125	0.10	---	---	1	10	0.00125
13C7-PFUnA	125	0.10	---	---	1	10	0.00125
13C8-FOSA	125	0.10	---	---	1	10	0.00125
13C8-PFOA	125	0.10	---	---	1	10	0.00122
13C8-PFOS	125	0.10	---	---	1	10	0.00119
13C9-PFNA	125	0.10	---	---	1	10	0.00125
d3-MeFOSAA	125	0.10	---	---	1	10	0.00125
d5-EtFOSAA	125	0.10	---	---	1	10	0.00125

Final Concentrations:

Analyte:	Conc (ug/mL):
11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	.00250
13C2-4:2FTS	.00117
13C2-6:2FTS	.00119
13C2-8:2FTS	.00120
13C2-PFDA	.00125
13C2-PFDoA	.00125
13C2-PFOA	.00125
13C2-PFTeDA	.00125
13C3-HFPO-DA	.00125
13C3-PFBA	.00125

Solution Prepared By: Bailey, Kevin Date Prepared: 10/22/2020 Expiration Date: 7/21/2021

Solution Volume : 40 mL X 1 Vials Refrigerator/Freezer No: VOC Laboratory: Refrigerator - R0121

Comment: 80/20 methanol/milli-q (RP-201022-7)

Approved By: Schumitz, Denise Date: 10/23/2020 9:27:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD81

Description: PFAS - DoD ICC

13C3-PFBS	.00116
13C3-PFHxS	.00118
13C4-PFBA	.00125
13C4-PFHpA	.00125
13C4-PFOS	.00119
13C5-PFHxA	.00125
13C5-PFPeA	.00125
13C6-PFDA	.00125
13C7-PFUnA	.00125
13C8-FOSA	.00125
13C8-PFOA	.00122
13C8-PFOS	.00119
13C9-PFNA	.00125
1H,1H,2H,2H-Perfluorodecane sulfonate	.00253
1H,1H,2H,2H-Perfluorohexane sulfonate	.00250
1H,1H,2H,2H-Perfluorooctane sulfonate	.00250
3-Perfluoroheptyl propanoic acid	.00250
3-Perfluoropentyl propanoic acid	.00250
3-perfluoropropyl propanoic Acid	.00250
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	.00250
Adona	.00250
d3-MeFOSAA	.00125
d5-EtFOSAA	.00125
Hexafluoropropylene oxide dimer acid	.00250
N-ethylperfluoro-octanesulfonamidoacetic acid	.00250
N-methylperfluoro-1-octanesulfonamidoacetic acid	.00250
Perfluoro-1-butanedisulfonate	.00250
Perfluoro-1-decanedisulfonate	.00253
Perfluoro-1-heptanedisulfonate	.00250
Perfluoro-1-hexanedisulfonate	.00253
Perfluoro-1-nonanedisulfonate	.00253
Perfluoro-1-octanesulfonamide	.00250
Perfluoro-1-octanedisulfonate	.00253
perfluoro-1-pentanedisulfonate	.00250
Perfluoro-n-butanedic acid	.00250
Perfluoro-n-decanedic acid	.00250
Perfluoro-n-dodecanedic acid	.00250
Perfluoro-n-heptanedic acid	.00250
Perfluoro-n-hexanedic acid	.00253

Solution Prepared By: Bailey, Kevin Date Prepared: 10/22/2020 Expiration Date: 7/21/2021

Solution Volume : 40 mL X 1 Vials Refrigerator/Freezer No: VOC Laboratory: Refrigerator - R0121

Comment: 80/20 methanol/milli-q (RP-201022-7)

Approved By: Schumitz, Denise Date: 10/23/2020 9:27:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD81

Description: PFAS - DoD ICC

Perfluoro-n-octanoic Acid	.00250
Perfluorononanoic Acid	.00250
Perfluoro-n-pentanoic acid	.00253
Perfluoro-n-tetradecanoic acid	.00250
Perfluoro-n-tridecanoic acid	.00250
Perfluoro-n-undecanoic acid	.00250

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB78	Pipette	B814657482
LD43	Pipette	B814657482
LD73	Pipette	B814657482

Solution Prepared By: Bailey, Kevin **Date Prepared:** 10/22/2020 **Expiration Date:** 7/21/2021

Solution Volume : 40 mL X 1 Vials **Refrigerator/Freezer No:** VOC Laboratory: Refrigerator - R0121

Comment: 80/20 methanol/milli-q (RP-201022-7)

Approved By: Schumitz, Denise **Date:** 10/23/2020 9:27:00 AM



It can be done

Standard Solution Concentrations

Approved: Standard Laboratory ID Number: **LE39**

Description: PFAS - DoD Low Level Labelled Extracted Internal Standard

Stock Id: **LB74**

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	2000	0.93	---	---	1	200	0.00934
13C2-6:2FTS	2000	0.95	---	---	1	200	0.00950
13C2-8:2FTS	2000	0.96	---	---	1	200	0.00958
13C2-PFDoA	2000	1.00	---	---	1	200	0.01000
13C2-PFTeDA	2000	1.00	---	---	1	200	0.01000
13C3-HFPO-DA	2000	1.00	---	---	1	200	0.01000
13C3-PFBS	2000	0.93	---	---	1	200	0.00930
13C3-PFHxS	2000	0.95	---	---	1	200	0.00946
13C4-PFBA	2000	1.00	---	---	1	200	0.01000
13C4-PFHpA	2000	1.00	---	---	1	200	0.01000
13C5-PFHxA	2000	1.00	---	---	1	200	0.01000
13C5-PFPeA	2000	1.00	---	---	1	200	0.01000
13C6-PFDA	2000	1.00	---	---	1	200	0.01000
13C7-PFUnA	2000	1.00	---	---	1	200	0.01000
13C8-FOSA	2000	1.00	---	---	1	200	0.01000
13C8-PFOA	2000	0.98	---	---	1	200	0.00978
13C8-PFOS	2000	0.96	---	---	1	200	0.00956
13C9-PFNA	2000	1.00	---	---	1	200	0.01000
d3-MeFOSAA	2000	1.00	---	---	1	200	0.01000
d5-EtFOSAA	2000	1.00	---	---	1	200	0.01000

Final Concentrations:

Analyte:	Conc (ug/mL):
13C2-4:2FTS	.00934
13C2-6:2FTS	.00950
13C2-8:2FTS	.00958
13C2-PFDoA	.01000
13C2-PFTeDA	.01000
13C3-HFPO-DA	.01000
13C3-PFBS	.00930
13C3-PFHxS	.00946
13C4-PFBA	.01000
13C4-PFHpA	.01000
13C5-PFHxA	.01000
13C5-PFPeA	.01000
13C6-PFDA	.01000

Solution Prepared By: Bailey, Kevin Date Prepared: 11/4/2020 Expiration Date: 7/21/2021

Solution Volume : 40 mL X 8 Vials Refrigerator/Freezer No: VOC Laboratory: Refrigerator - R0121

Comment: 96/4 methanol/milli-q water (RP-201104-11)

Approved By: Schumitz, Denise Date: 11/5/2020 10:09:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE39

Description: PFAS - DoD Low Level Labelled Extracted Internal Standard

13C7-PFUnA	.01000
13C8-FOSA	.01000
13C8-PFOA	.00978
13C8-PFOS	.00956
13C9-PFNA	.01000
d3-MeFOSAA	.01000
d5-EtFOSAA	.01000

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB74	Pipette	B820865811

Solution Prepared By: Bailey, Kevin **Date Prepared:** 11/4/2020 **Expiration Date:** 7/21/2021

Solution Volume : 40 mL X 8 Vials **Refrigerator/Freezer No:** VOC Laboratory: Refrigerator - R0121

Comment: 96/4 methanol/milli-q water (RP-201104-11)

Approved By: Schumitz, Denise **Date:** 11/5/2020 10:09:00 AM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE40

Description: PFAS - DoD Internal Standard Spiking Solution

Stock Id: LB75

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	2000	1.00	---	---	1	200	0.01000
13C2-PFOA	2000	1.00	---	---	1	200	0.01000
13C3-PFBA	2000	1.00	---	---	1	200	0.01000
13C4-PFOS	2000	0.96	---	---	1	200	0.00956

Final Concentrations:

Analyte:	Conc (ug/mL):
13C2-PFDA	.01000
13C2-PFOA	.01000
13C3-PFBA	.01000
13C4-PFOS	.00956

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB75	Pipette	B820865811

Solution Prepared By: Bailey, Kevin **Date Prepared:** 11/4/2020 **Expiration Date:** 7/21/2021

Solution Volume : 40 mL X 8 Vials **Refrigerator/Freezer No:** VOC Laboratory: Refrigerator - R0121

Comment: 96/4 methanol/milli-q (RP-201104-12)

Approved By: Schumitz, Denise **Date:** 11/5/2020 10:54:00 AM



It can be done

BDO Id: 200721-01

Reagent Receipt Report

Approved:

Name: MPFBA Received: 7/21/2020
 Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
 Catalogue No: MPFBA Expires: 5/13/2025
 Type: Solution Consumed: _____
 Lot No: MPFBA0420 Stored In: VOC Laboratory - R0123
 Quantity: 1 ea mL % Moisture: _____
 Description: MPFBA

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Cert Val:	Lower Limit:	Upper Limit:
13C4-PFBA	BDO-2105	50.0000	98.00	--	--	<input type="checkbox"/>			

Total Analytes: 1

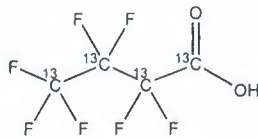
Notes:

Approved by: _____ Approved on: _____
 Authorized by: _____ Authorized on: _____

**WELLINGTON**
LABORATORIES**CERTIFICATE OF ANALYSIS**
DOCUMENTATION

PRODUCT CODE: MPFBA **LOT NUMBER:** MPFBA0420
COMPOUND: Perfluoro-n-[1,2,3,4-¹³C₄]butanoic acid

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA: ¹³C₄HF₇O₂ **MOLECULAR WEIGHT:** 218.01
CONCENTRATION: 50.0 ± 2.5 µg/ml **SOLVENT(S):** Methanol
Water (<1%)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99%¹³C
(1,2,3,4-¹³C₄)
LAST TESTED: (mm/dd/yyyy) 05/13/2020
EXPIRY DATE: (mm/dd/yyyy) 05/13/2025
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:** 05/20/2020
(mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com



It can be done

BDO Id:

200721-02

Reagent Receipt Report

Approved:

Authorized:

Name: M5PFPeA

Received: 7/21/2020

Vendor: Wellington Laboratories

Custodian: Schultz, Stephanie

Catalogue No: M5PFPeA

Expires: 1/22/2025

Type: Solution

Consumed:

Lot No: M5PFPeA0120

Stored In: VOC Laboratory - R0123

Quantity: 1 ea mL % Moisture:

Description: M5PFPeA

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Lower Limit:	Upper Limit:
13C5-PFPeA	BDO-2216	50.0000	98.00	--	--	<input type="checkbox"/>		

Total Analytes: 1

Notes:

Approved by: _____

Approved on: _____

Authorized by: _____

Authorized on: _____

It can be done

BDO Id:

200721-03

Reagent Receipt Report

Approved: Authorized:

Name: M5PFHxA Received: 7/21/2020
Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
Catalogue No: M5PFHxA Expires: 4/3/2025
Type: Solution Consumed: _____
Lot No: M5PFHxA0320 Stored In: VOC Laboratory - R0123
Quantity: 1 ea mL % Moisture: _____
Description: M5PFHxA

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Lower Limit:	Upper Limit:
13C5-PFHxA	BDO-2217	50.0000	98.00	--	--	<input type="checkbox"/>		
Total Analytes:	1							

Notes:

Approved by: _____ Approved on: _____
Authorized by: _____ Authorized on: _____

It can be done

BDO Id:

200721-04

Reagent Receipt Report

Approved:

AM 07/21/20

Name: M4PFHpA Received: 7/21/2020
Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
Catalogue No: M4PFHpA Expires: 1/8/2025
Type: Solution Consumed: _____
Lot No: M4PFHpA0120 Stored In: VOC Laboratory - R0123
Quantity: 1 ea mL % Moisture: _____
Description: M4PFHpA

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Cert Val:	Lower Limit:	Upper Limit:
13C4-PFHpA	BDO-2218	50.0000	98.00	--	--	<input type="checkbox"/>			
Total Analytes:	1								

Notes:

Approved by: _____ Approved on: _____
Authorized by: _____ Authorized on: _____

It can be done

BDO Id:

200721-05

Reagent Receipt Report

Approved: Number (max)

Name: M8PFOA Received: 7/21/2020
Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
Catalogue No: M8PFOA Expires: 1/23/2025
Type: Solution Consumed: _____
Lot No: M8PFOA0220 Stored In: VOC Laboratory - R0123
Quantity: 1 ea mL % Moisture: _____
Description: M8PFOA

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Lower Limit:	Upper Limit:
13C8-PFOA	BDO-2219	48.9000	97.80	--	--	<input type="checkbox"/>		
Total Analytes:	1							

Notes:

Approved by: _____ Approved on: _____
Authorized by: _____ Authorized on: _____

It can be done

BDO Id:

200721-06

Reagent Receipt Report

Approved: Authorized:

Name: M9PFNA Received: 7/21/2020
Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
Catalogue No: M9PFNA Expires: 9/8/2023
Type: Solution Consumed: _____
Lot No: M9PFNA0918 Stored In: VOC Laboratory - R0123
Quantity: 1 ea mL % Moisture: _____
Description: M9PFNA

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Lower Limit:	Upper Limit:
13C9-PFNA	BDO-2221	50.0000	98.00	--	--	<input type="checkbox"/>		
Total Analytes:	1							

Notes:

Approved by: _____ Approved on: _____
Authorized by: _____ Authorized on: _____

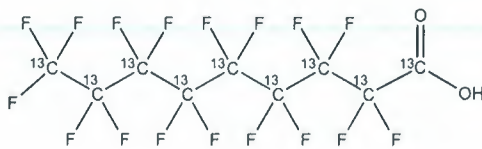


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M9PFNA **LOT NUMBER:** M9PFNA0918
COMPOUND: Perfluoro-n-[¹³C₉]nonanoic acid

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA: ¹³C₉HF₁₇O₂ **MOLECULAR WEIGHT:** 473.01
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
Water (<1%)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99% ¹³C
LAST TESTED: (mm/dd/yyyy) 09/08/2018 (¹³C₉)
EXPIRY DATE: (mm/dd/yyyy) 09/08/2023
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 ~ 1.0% of ¹³C₅¹²C₄HF₁₇O₂ (MPFNA).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager **Date:** 09/19/2018
(mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

It can be done

BDO Id:

200721-07

Reagent Receipt Report

Approved: Authorized:

Name: M6PFDA Received: 7/21/2020
Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
Catalogue No: M6PFDA Expires: 7/25/2024
Type: Solution Consumed:
Lot No: M6PFDA0719 Stored In: VOC Laboratory - R0123
Quantity: 1 ea mL % Moisture:
Description: M6PFDA

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Lower Limit:	Upper Limit:
13C6-PFDA	BDO-2222	50.0000	98.00	--	--	<input type="checkbox"/>		
Total Analytes:	1							

Notes:

Approved by: _____ Approved on: _____
Authorized by: _____ Authorized on: _____

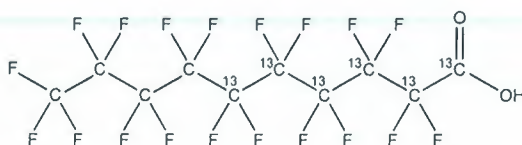
26074-07



WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M6PFDA **LOT NUMBER:** M6PFDA0719
COMPOUND: Perfluoro-n-[1,2,3,4,5,6-¹³C₆]decanoic acid
STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA: ¹³C₆¹²C₄HF₁₉O₂ **MOLECULAR WEIGHT:** 520.04
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
 Water (<1%)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99% ¹³C
 (1,2,3,4,5,6-¹³C₆)
LAST TESTED: (mm/dd/yyyy) 07/25/2019
EXPIRY DATE: (mm/dd/yyyy) 07/25/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

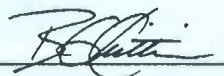
Figure 1: LC/MS Data (TIC and Mass Spectrum)
 Figure 2: LC/MS/MS Data (Selected MRM Transitions)

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: 07/26/2019

(mm/dd/yyyy)

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It can be done

BDO Id:

200721-08

Acquisition Receipt Report

Approved: Authorized:

Name: M7PFUdA Received: 7/21/2020
Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
Catalogue No: M7PFUdA Expires: 7/22/2024
Type: Solution Consumed: _____
Lot No: M7PFUdA0719 Stored In: VOC Laboratory - R0123
Quantity: 1 ea mL % Moisture: _____
Description: M7PFUdA

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Lower Limit:	Upper Limit:
13C7-PFUnA	BDO-2223	50.0000	98.00	--	--	<input type="checkbox"/>		
Total Analytes:	1							

Notes:

Approved by: _____ Approved on: _____
Authorized by: _____ Authorized on: _____



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CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: M7PFUdA **LOT NUMBER:** M7PFUdA0719
COMPOUND: Perfluoro-n-[1,2,3,4,5,6,7-¹³C₇]undecanoic acid
STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA: ¹³C₇¹²C₄HF₂₁O₂ **MOLECULAR WEIGHT:** 571.04
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
 Water (<1%)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99% ¹³C
 (1,2,3,4,5,6,7-¹³C₇)
LAST TESTED: (mm/dd/yyyy) 07/22/2019
EXPIRY DATE: (mm/dd/yyyy) 07/22/2024
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:  **Date:** 09/12/2019
 B.G. Chittim, General Manager (mm/dd/yyyy)

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It can be doneBDO Id: 200721-09

Reagent Receipt Report

Approved: Available:

Name: MPFDoA Received: 7/21/2020
Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
Catalogue No: MPFDoA Expires: 11/22/2024
Type: Solution Consumed: _____
Lot No: MPFDoA1119 Stored In: VOC Laboratory - R0123
Quantity: 1 ea mL % Moisture: _____
Description: MPFDoA

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Lower Limit:	Upper Limit:
13C2-PFDoA	BDO-2112	50.0000	98.00	--	--	<input type="checkbox"/>		
Total Analytes:	1							

Notes:

Approved by: _____ Approved on: _____
Authorized by: _____ Authorized on: _____

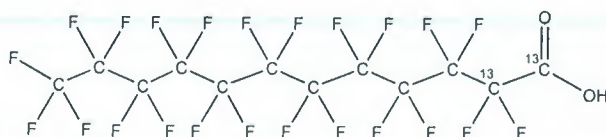
200721-09



WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: MPFDoA **LOT NUMBER:** MPFDoA1119
COMPOUND: Perfluoro-n-[1,2-¹³C₂]dodecanoic acid
STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA: ¹³C₂¹²C₁₀HF₂₃O₂ **MOLECULAR WEIGHT:** 616.08
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) 11/22/2019
EXPIRY DATE: (mm/dd/yyyy) 11/22/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

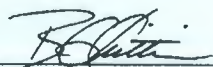
Figure 1: LC/MS Data (TIC and Mass Spectrum)
 Figure 2: LC/MS/MS Data (Selected MRM Transitions)

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: 11/27/2019
 (mm/dd/yyyy)

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It can be done

BDO Id:

200721-10

Reagent Receipt Report

Approved: Authorized:

Name: M2PFTeDA Received: 7/21/2020
Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
Catalogue No: M2PFTeDA Expires: 11/14/2024
Type: Solution Consumed: _____
Lot No: M2PFTeDA1119 Stored In: VOC Laboratory - R0123
Quantity: 1 ea mL % Moisture: _____
Description: M2PFTeDA

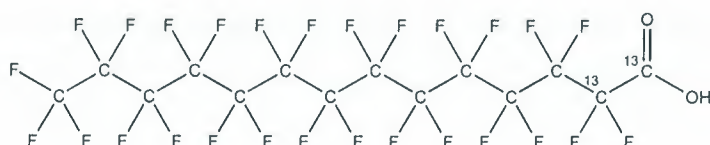
Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Lower Limit:	Upper Limit:
13C2-PFTeDA	BDO-2224	50.0000	98.00	--	--	<input type="checkbox"/>		
Total Analytes:	1							

Notes:

Approved by: _____ Approved on: _____
Authorized by: _____ Authorized on: _____

**WELLINGTON**
LABORATORIES**CERTIFICATE OF ANALYSIS**
DOCUMENTATION

PRODUCT CODE: M2PFTeDA **LOT NUMBER:** M2PFTeDA1119
COMPOUND: Perfluoro-n-[1,2-¹³C₂]tetradecanoic acid
STRUCTURE: **CAS #:** Not available



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.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By:

B.G. Chittim, General Manager

Date: 11/26/2019
(mm/dd/yyyy)

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It can be done

BDO Id: 200721-11

Reagent Receipt Report

Approved: Authorized:

Name: M2-4:2FTS Received: 7/21/2020
 Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
 Catalogue No: M2-4:2FTS Expires: 4/16/2025
 Type: Solution Consumed:
 Lot No: M242FTS0420 Stored In: VOC Laboratory - R0123
 Quantity: 1 ea mL % Moisture:
 Description: M2-4:2FTS

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:
13C2-4:2FTS	BDO-2229	46.7000	98.00	--	--	<input type="checkbox"/>			

Total Analytes: 1

Notes:

Approved by: _____ Approved on: _____
 Authorized by: _____ Authorized on: _____

200721-11

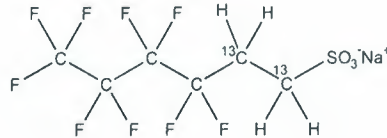


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M2-4:2FTS **LOT NUMBER:** M242FTS0420
COMPOUND: Sodium 1H,1H,2H,2H-perfluoro-[1,2-¹³C₂]hexane sulfonate

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA: ¹³C₂¹²C₄H₄F₉SO₃Na **MOLECULAR WEIGHT:** 352.12
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
 46.9 ± 2.3 µg/ml (M2-4:2FTS acid)
 46.7 ± 2.3 µg/ml (M2-4:2FTS anion)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99% ¹³C
LAST TESTED: (mm/dd/yyyy) 04/16/2020 (1,2-¹³C₂)
EXPIRY DATE: (mm/dd/yyyy) 04/16/2025
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 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:** 04/20/2020
 (mm/dd/yyyy)

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It can be done

BDO Id:

200721-12

Reagent Receipt Report

Approved:

Name: M2-6:2FTS Received: 7/21/2020
Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
Catalogue No: M2-6:2FTS Expires: 5/20/2025
Type: Solution Consumed: _____
Lot No: M262FTS0520 Stored In: VOC Laboratory - R0123
Quantity: 1 ea mL % Moisture: _____
Description: M2-6:2FTS

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Lower Limit:	Upper Limit:
13C2-6:2FTS	BDO-2230	47.5000	98.00	--	--	<input type="checkbox"/>		

Total Analytes: 1

Notes:

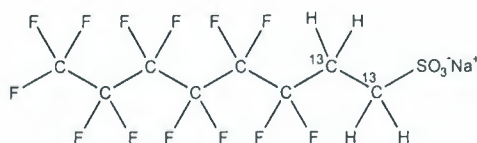
Approved by: _____ Approved on: _____
Authorized by: _____ Authorized on: _____



WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M2-6:2FTS **LOT NUMBER:** M262FTS0520
COMPOUND: Sodium 1H,1H,2H,2H-perfluoro-[1,2-¹³C₂]octane sulfonate
STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA: ¹³C₂¹²C₆H₄F₁₃SO₃Na **MOLECULAR WEIGHT:** 452.13
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
 47.6 ± 2.4 µg/ml (M2-6:2FTS acid)
 47.5 ± 2.4 µg/ml (M2-6:2FTS anion)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99% ¹³C
LAST TESTED: (mm/dd/yyyy) 05/20/2020 (1,2-¹³C₂)
EXPIRY DATE: (mm/dd/yyyy) 05/20/2025
RECOMMENDED STORAGE: Refrigerate ampoule

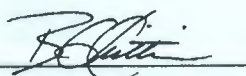
DOCUMENTATION/ DATA ATTACHED:

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:** 06/02/2020
 (mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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It can be done

BDO Id: 200721-13

Reagent Receipt Report

Approved: Authorized:

Name: M2-8:2FTS Received: 7/21/2020
 Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
 Catalogue No: M2-8:2FTS Expires: 3/18/2025
 Type: Solution Consumed:
 Lot No: M282FTS0320 Stored In: VOC Laboratory - R0123
 Quantity: 1 ea mL % Moisture:
 Description: M2-8:2FTS

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Lower Limit:	Upper Limit:
13C2-8:2FTS	BDO-2220	47.9000	98.00	--	--	<input type="checkbox"/>		

Total Analytes: 1

Notes:

Approved by: _____ Approved on: _____
 Authorized by: _____ Authorized on: _____

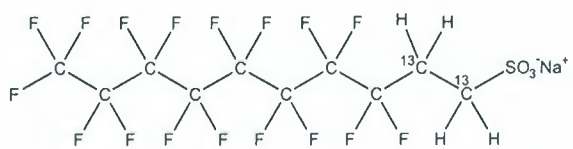


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M2-8:2FTS **LOT NUMBER:** M282FTS0320
COMPOUND: Sodium 1H,1H,2H,2H-perfluoro-[1,2-¹³C₂]decane sulfonate

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA: ¹³C₂¹²C₈H₄F₁₇SO₃Na **MOLECULAR WEIGHT:** 552.15
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
48.0 ± 2.4 µg/ml (M2-8:2FTS acid)
47.9 ± 2.4 µg/ml (M2-8:2FTS anion)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99% ¹³C
LAST TESTED: (mm/dd/yyyy) 03/18/2020 (1,2-¹³C₂)
EXPIRY DATE: (mm/dd/yyyy) 03/18/2025
RECOMMENDED STORAGE: Refrigerate ampoule

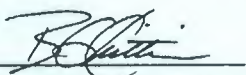
DOCUMENTATION/ DATA ATTACHED:

- 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).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager **Date:** 03/18/2020
(mm/dd/yyyy)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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It can be done

BDO Id:

200721-14

Reagent Receipt Report

Approved:

Date: _____

Name: M3PFBSReceived: 7/21/2020Vendor: Wellington LaboratoriesCustodian: Schultz, StephanieCatalogue No: M3PFBSExpires: 3/17/2025Type: Solution

Consumed: _____

Lot No: M3PFBS1019Stored In: VOC Laboratory - R0123Quantity: 1 ea mL % Moisture: _____Description: M3PFBS

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Lower Limit:	Upper Limit:
13C3-PFBS	BDO-2226	46.5000	98.00	--	--	<input type="checkbox"/>		

Total Analytes: 1

Notes:

Approved by: _____ Approved on: _____

Authorized by: _____ Authorized on: _____

It can be done

BDO Id:

200721-15

Reagent Receipt Report

Approved: Authorized on:

Name: M3PFHxS Received: 7/21/2020
Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
Catalogue No: M3PFHxS Expires: 10/15/2024
Type: Solution Consumed: _____
Lot No: M3PFHxS1019 Stored In: VOC Laboratory - R0123
Quantity: 1 ea mL % Moisture: _____
Description: M3PFHxS

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Lower Limit:	Upper Limit:
13C3-PFHxS	BDO-2227	47.3000	98.00	--	--	<input type="checkbox"/>		
Total Analytes:	1							

Notes:

Approved by: _____ Approved on: _____
Authorized by: _____ Authorized on: _____

It can be done

BDO Id:

200721-16

Reagent Receipt Report

Approved: Authorized:

Name: M8PFOS Received: 7/21/2020
Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
Catalogue No: M8PFOS Expires: 2/21/2025
Type: Solution Consumed: _____
Lot No: M8PFOS0120 Stored In: VOC Laboratory - R0123
Quantity: 1 ea mL % Moisture: _____
Description: M8PFOS

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Lower Limit:	Upper Limit:
13C8-PFOS	BDO-2228	47.8000	98.00	--	--	<input type="checkbox"/>		
Total Analytes:	1							

Notes:

Approved by: _____ Approved on: _____
Authorized by: _____ Authorized on: _____

200721-16



WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M8PFOS **LOT NUMBER:** M8PFOS0120
COMPOUND: Sodium perfluoro-1-[¹³C₈]octanesulfonate
STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA: ¹³C₈F₁₇SO₃Na **MOLECULAR WEIGHT:** 530.05
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
 47.9 ± 2.4 µg/ml (M8PFOS acid)
 47.8 ± 2.4 µg/ml (M8PFOS anion)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** >99% ¹³C
LAST TESTED: (mm/dd/yyyy) 02/21/2020 (¹³C₈)
EXPIRY DATE: (mm/dd/yyyy) 02/21/2025
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 ~ 0.2% of sodium perfluoro-1-[¹³C₇]heptanesulfonate (¹³C₇-PFHpS) and ~ 1.0% of sodium perfluoro-1-[¹³C₈]octanesulfonate (MPFOS).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
 B.G. Chittim, General Manager

Date: 02/21/2020
 (mm/dd/yyyy)

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It can be done

BDO Id: 200721-17

Reagent Receipt Report Approved: Authorized:

Name: d3-N-MeFOSAA Received: 7/21/2020
 Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
 Catalogue No: d3-N-MeFOSAA Expires: 12/2/2024
 Type: Solution Consumed: _____
 Lot No: d3NMeFOSAA1119 Stored In: VOC Laboratory - R0123
 Quantity: 1 ea mL % Moisture: _____
 Description: d3-N-MeFOSAA

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Cert Val:	Lower Limit:	Upper Limit:
d3-MeFOSAA	BDO-1838	50.0000	98.00	--	--	<input type="checkbox"/>			
Total Analytes:		1							

Notes:

Approved by: _____ Approved on: _____
 Authorized by: _____ Authorized on: _____

200721-17



WELLINGTON LABORATORIES

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



MOLECULAR FORMULA: C₁₁D₃H₃F₁₇NO₄S
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 574.23
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)

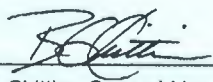
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

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)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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It can be done

BDO Id:

200721-18

Reagent Receipt Report

Approved: Authorized:

Name: d5-N-EtFOSAA Received: 7/21/2020
Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
Catalogue No: d5-N-EtFOSAA Expires: 5/20/2025
Type: Solution Consumed: _____
Lot No: d5NEtFOSAA0520 Stored In: VOC Laboratory - R0123
Quantity: 1 ea mL % Moisture: _____
Description: d5-N-EtFOSAA

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Cert Val:	Lower Limit:	Upper Limit:
d5-EtFOSAA	BDO-1839	50.0000	98.00	--	--	<input type="checkbox"/>			
Total Analytes:	1								

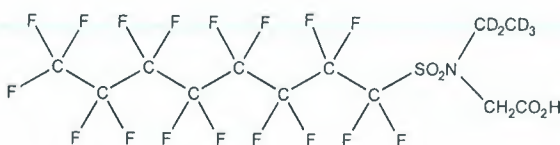
Notes:

Approved by: _____ Approved on: _____
Authorized by: _____ Authorized on: _____

**WELLINGTON**
LABORATORIES**CERTIFICATE OF ANALYSIS**
DOCUMENTATION

PRODUCT CODE: d5-N-EtFOSAA **LOT NUMBER:** d5NEtFOSAA0520
COMPOUND: N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA: C₁₂D₅H₃F₁₇NO₄S
CONCENTRATION: 50.0 ± 2.5 µg/ml

MOLECULAR WEIGHT: 590.26
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%

ISOTOPIC PURITY: ≥98% ²H₅

LAST TESTED: (mm/dd/yyyy) 05/20/2020

EXPIRY DATE: (mm/dd/yyyy) 05/20/2025

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.

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Certified By:

B.G. Chittim, General Manager

Date: 05/22/2020
(mm/dd/yyyy)

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It can be done

BDO Id:

200721-19

Reagent Receipt Report

Approved: Authorized:

Name: M8FOSA-I Received: 7/21/2020
Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
Catalogue No: M8FOSA-I Expires: 2/28/2025
Type: Solution Consumed:
Lot No: M8FOSA0220I Stored In: VOC Laboratory - R0123
Quantity: 1 ea mL % Moisture:
Description: M8FOSA-I

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Lower Limit:	Upper Limit:
13C8-FOSA	BDO-2225	50.0000	98.00	--	--	<input type="checkbox"/>		

Total Analytes: 1

Notes:

Approved by: _____ Approved on: _____
Authorized by: _____ Authorized on: _____

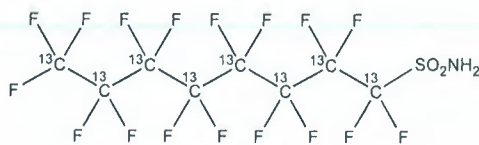
200721-19



WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M8FOSA-I **LOT NUMBER:** M8FOSA0220I
COMPOUND: Perfluoro-1-[¹³C₈]octanesulfonamide
STRUCTURE: **CAS #:** 1365803-60-6



MOLECULAR FORMULA: ¹³C₈H₂F₁₇NO₂S **MOLECULAR WEIGHT:** 507.09
CONCENTRATION: 50.0 ± 2.5 µg/ml **SOLVENT(S):** Isopropanol
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99% ¹³C
LAST TESTED: (mm/dd/yyyy) 02/28/2020 (¹³C₈)
EXPIRY DATE: (mm/dd/yyyy) 02/28/2025
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 ~ 1.2% of perfluoro-1-[¹³C₈]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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It can be done

BDO Id:

200721-20

Reagent Receipt Report

Approved: Sub:

Name: M3HFPO-DA Received: 7/21/2020
Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
Catalogue No: M3HFPO-DA Expires: 5/13/2023
Type: Solution Consumed:
Lot No: M3HFPODA0520 Stored In: VOC Laboratory - R0123
Quantity: 1 ea mL % Moisture:
Description: M3HFPO-DA

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Lower Limit:	Upper Limit:
13C3-HFPO-DA	BDO-2276	50.0000	98.00	--	--	<input type="checkbox"/>		
Total Analytes:	1							

Notes:

Approved by: _____ Approved on: _____
Authorized by: _____ Authorized on: _____

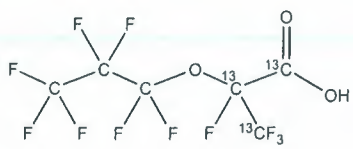


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M3HFPO-DA **LOT NUMBER:** M3HFPODA0520
COMPOUND: 2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-¹³C₃-propanoic acid

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	¹³ C ₃ ¹² C ₃ HF ₁₁ O ₃	MOLECULAR WEIGHT:	333.03
CONCENTRATION:	50.0 ± 2.5 µg/ml	SOLVENT(S):	Methanol
CHEMICAL PURITY:	>98%	ISOTOPIC PURITY:	≥99% ¹³ C (¹³ C ₃)
LAST TESTED: (mm/dd/yyyy)	05/13/2020		
EXPIRY DATE: (mm/dd/yyyy)	05/13/2023		
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:  **Date:** 05/22/2020
(mm/dd/yyyy)
 B.G. Chittim, General Manager

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It can be done

BDO Id:

200721-21

Reagent Receipt Report

Approved: Authorized:

Name: MPFDA Received: 7/21/2020
Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
Catalogue No: MPFDA Expires: 3/24/2025
Type: Solution Consumed: _____
Lot No: MPFDA0320 Stored In: VOC Laboratory - R0123
Quantity: 1 ea mL % Moisture: _____
Description: MPFDA

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Lower Limit:	Upper Limit:
13C2-PFDA	BDO-2110	50.0000	98.00	--	--	<input type="checkbox"/>		
Total Analytes:	1							

Notes:

Approved by: _____ Approved on: _____
Authorized by: _____ Authorized on: _____

It can be done

BDO Id:

200721-22

Reagent Receipt Report

Approved: Authorized:

Name: M2PFOA Received: 7/21/2020
Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
Catalogue No: M2PFOA Expires: 1/8/2025
Type: Solution Consumed: _____
Lot No: M2PFOA0120 Stored In: VOC Laboratory - R0123
Quantity: 1 ea mL % Moisture: _____
Description: M2PFOA

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Cert Val:	Lower Limit:	Upper Limit:
13C2-PFOA	BDO-2107	50.0000	98.00	--	--	<input type="checkbox"/>			
Total Analytes:	1								

Notes:

Approved by: _____ Approved on: _____
Authorized by: _____ Authorized on: _____



It can be done

BDO Id:

200721-23

Reagent Receipt Report

Approved:

Authorized:

Name: M3PFBA

Received: 7/21/2020

Vendor: Wellington Laboratories

Custodian: Schultz, Stephanie

Catalogue No: M3PFBA

Expires: 2/24/2025

Type: Solution

Consumed:

Lot No: M3PFBA0120

Stored In: VOC Laboratory - R0123

Quantity: 1 ea mL % Moisture:

Description: M3PFBA

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Cert Val:	Lower Limit:	Upper Limit:
13C3-PFBA	BDO-2231	50.0000	98.00	--	--	<input type="checkbox"/>			

Total Analytes: 1

Notes:

Approved by: _____

Approved on: _____

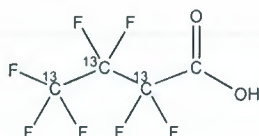
Authorized by: _____

Authorized on: _____

**WELLINGTON**
LABORATORIES**CERTIFICATE OF ANALYSIS**
DOCUMENTATION

PRODUCT CODE: M3PFBA **LOT NUMBER:** M3PFBA0120
COMPOUND: Perfluoro-n-[2,3,4-¹³C₃]butanoic acid

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA: ¹³C₃¹²CHF₇O₂ **MOLECULAR WEIGHT:** 217.02
CONCENTRATION: 50.0 ± 2.5 µg/ml **SOLVENT(S):** Methanol
 Water (<1%)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99%¹³C
 (2,3,4-¹³C₃)
LAST TESTED: (mm/dd/yyyy) 02/24/2020
EXPIRY DATE: (mm/dd/yyyy) 02/24/2025
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

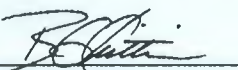
DOCUMENTATION/ DATA ATTACHED:

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 ~ 0.2% of perfluoro-n-[¹³C₃]propanoic acid and also contains ~ 1.0% of perfluoro-n-[1,2,3,4-¹³C₄]butanoic acid due to the naturally occurring isotopic abundance of ¹³C in the unlabelled carbon atom.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
 B.G. Chittim, General Manager **Date:** 03/27/2020
 (mm/dd/yyyy)

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It can be done

BDO Id: 200721-24

Reagent Receipt Report

Approved: Authorized:

Name: MPFOS Received: 7/21/2020
Vendor: Wellington Laboratories Custodian: Schultz, Stephanie
Catalogue No: MPFOS Expires: 4/15/2025
Type: Solution Consumed:
Lot No: MPFOS0420 Stored In: VOC Laboratory - R0123
Quantity: 1 ea mL % Moisture:
Description: MPFOS

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Cert Val:	Lower Limit:	Upper Limit:
13C4-PFOS	BDO-2121	47.8000	98.00	--	--	<input type="checkbox"/>			
Total Analytes:	1								

Notes:

Approved by: _____ Approved on: _____
Authorized by: _____ Authorized on: _____



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LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PRODUCT CODE: MPFOS **LOT NUMBER:** MPFOS0420
COMPOUND: Sodium perfluoro-1-[1,2,3,4-¹³C₄]octanesulfonate

STRUCTURE: **CAS #:** 960315-53-1



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) 47.9 ± 2.4 µg/ml (MPFOS acid) 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)	04/15/2020		
EXPIRY DATE: (mm/dd/yyyy)	04/15/2025		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

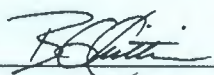
DOCUMENTATION/ DATA ATTACHED:

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:** 04/20/2020
 B.G. Chittim, General Manager (mm/dd/yyyy)

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BATTELLE

It can be done

BDO Id: 200811-01

Reagent Receipt Report

Approved: Authorized

Name: 3-Perfluoropropyl propanoic acid **Received:** 8/11/2020
Vendor: Wellington Laboratories **Custodian:** Bailey, Kevin
Catalogue No: FPrPA **Expires:** 1/7/2023
Type: Solution **Consumed:** _____
Lot No: FPrPA1219 **Stored In:** VOC Laboratory - R0123
Quantity: 1 ea ml **% Moisture:** _____
Description: FPrPA

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Cert Val:	Lower Limit:	Upper Limit:
3-perfluoropropyl propanoic Acid	356-02-5	50.0000	98.00	--	--	<input type="checkbox"/>	50	47.5	52.5

Total Analytes: 1

Notes:

Approved by: _____ **Approved on:** _____
Authorized by: _____ **Authorized on:** _____



WELLINGTON LABORATORIES

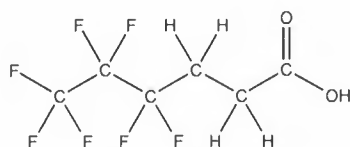
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: FPrPA
COMPOUND: 3-Perfluoropropyl propanoic acid

LOT NUMBER: FPrPA1219

STRUCTURE:

CAS #: 356-02-5



MOLECULAR FORMULA: $C_6H_5F_7O_2$
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/07/2020
EXPIRY DATE: (mm/dd/yyyy) 01/07/2023
RECOMMENDED STORAGE: Refrigerate ampoule

MOLECULAR WEIGHT: 242.09
SOLVENT(S): Methanol

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% of the unsaturated 3:3 telomer acid ($C_6H_3F_7O_2$) as an impurity determined by ^{19}F NMR.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager

Date: 01/08/2020
(mm/dd/yyyy)

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BATTELLE

It can be done

BDO Id: 200811-02

Reagent Receipt Report

Approved: Authorized

Name: 3-Perfluoroheptyl propanoic acid **Received:** 8/11/2020
Vendor: Wellington Laboratories **Custodian:** Bailey, Kevin
Catalogue No: FHpPA **Expires:** 3/31/2023
Type: Solution **Consumed:** _____
Lot No: FHpPA0320 **Stored In:** VOC Laboratory - R0123
Quantity: 1 ea ml **% Moisture:** _____
Description: FHpPA

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:
3-Perfluoroheptyl propanoic acid	812-70-4	50.0000	98.00	--	--	<input type="checkbox"/>	50	47.5	52.5

Total Analytes: 1

Notes:

Approved by: _____ **Approved on:** _____
Authorized by: _____ **Authorized on:** _____

BATTELLE

It can be done

BDO Id: 200811-03

Reagent Receipt Report

Approved: Authorized

Name: 3-Perfluoropentyl propanoic acid **Received:** 8/11/2020
Vendor: Wellington Laboratories **Custodian:** Bailey, Kevin
Catalogue No: FPePA **Expires:** 10/2/2022
Type: Solution **Consumed:** _____
Lot No: FPePA0919 **Stored In:** VOC Laboratory - R0123
Quantity: 1 ea ml **% Moisture:** _____
Description: FPePA

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Cert Val:	Lower Limit:	Upper Limit:
3-Perfluoropentyl propanoic acid	914637-49-3	50.0000	98.00	--	--	<input type="checkbox"/>	50	47.5	52.5

Total Analytes: 1

Notes:

Approved by: _____ **Approved on:** _____
Authorized by: _____ **Authorized on:** _____



WELLINGTON LABORATORIES

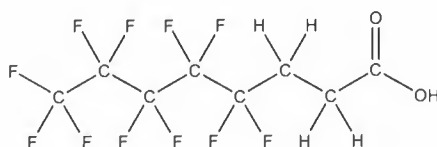
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: FPePA
COMPOUND: 3-Perfluoropentyl propanoic acid

LOT NUMBER: FPePA0919

STRUCTURE:

CAS #: 914637-49-3



MOLECULAR FORMULA: $C_8H_5F_{11}O_2$
CONCENTRATION: $50 \pm 2.5 \mu\text{g/ml}$
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 10/02/2019
EXPIRY DATE: (mm/dd/yyyy) 10/02/2022
RECOMMENDED STORAGE: Refrigerate ampoule

MOLECULAR WEIGHT: 342.11
SOLVENT(S): Methanol

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% of the unsaturated 5:3 telomer acid ($C_8H_3F_{11}O_2$) as an impurity determined by ^{19}F NMR.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager

Date: 10/04/2019
(mm/dd/yyyy)

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It can be done

BDO Id: 200909-01

Reagent Receipt Report

Approved: Authorized

Name: PFOA DOD **Received:** 9/9/2020
Vendor: ABSOLUTE STANDARDS **Custodian:** Bailey, Kevin
Catalogue No: 64029 **Expires:** 7/28/2025
Type: Solution **Consumed:** _____
Lot No: 072820 **Stored In:** LC Laboratory - F0111
Quantity: 5 ea ml **% Moisture:** _____
Description: PFOA DOD

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:
11-chloroeicosafuoro-3-oxaundecan	763051-92-9	1.0000	100.00	--	--	<input type="checkbox"/>			
1H,1H,2H,2H-Perfluorodecane sulfon	39108-34-4	1.0100	100.00	--	--	<input type="checkbox"/>			
1H,1H,2H,2H-Perfluorohexane sulfon	757124-72-4	1.0000	100.00	--	--	<input type="checkbox"/>			
1H,1H,2H,2H-Perfluorooctane sulfon	27619-97-2	1.0000	100.00	--	--	<input type="checkbox"/>			
9-chlorohexadecafluoro-3-oxanonane	756426-58-1	1.0000	100.00	--	--	<input type="checkbox"/>			
Adona	919005-14-4	1.0000	100.00	--	--	<input type="checkbox"/>			
Hexafluoropropylene oxide dimer aci	13252-13-6	1.0000	100.00	--	--	<input type="checkbox"/>			
N-ethylperfluoro-octanesulfonamidoa	2991-50-6	1.0000	100.00	--	--	<input type="checkbox"/>			
N-methylperfluoro-1-octanesulfonami	2355-31-9	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-1-butanefluoride	375-73-5	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-1-decanesulfonate	335-77-3	1.0100	100.00	--	--	<input type="checkbox"/>			
Perfluoro-1-heptanesulfonate	375-92-8	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-1-hexanesulfonate	355-46-4	1.0100	100.00	--	--	<input type="checkbox"/>			
Perfluoro-1-nonanesulfonate	68259-12-1	1.0100	100.00	--	--	<input type="checkbox"/>			
Perfluoro-1-octanesulfonamide	754-91-6	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-1-octanesulfonate	1763-23-1	1.0100	100.00	--	--	<input type="checkbox"/>			
perfluoro-1-pentanesulfonate	2706-91-4	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-butanoic Acid	375-22-4	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-decanoic Acid	335-76-2	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-dodecanoic acid	307-55-1	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-heptanoic Acid	375-85-9	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-hexanoic acid	307-24-4	1.0100	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-octanoic Acid	335-67-1	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluorononanoic Acid	375-95-1	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-pentanoic acid	2706-90-3	1.0100	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-tetradecanoic acid	376-06-7	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-tridecanoic acid	72629-94-8	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-undecanoic acid	2058-94-8	1.0000	100.00	--	--	<input type="checkbox"/>			

Total Analytes: 28

Notes:

Approved by: _____ **Approved on:** _____
Authorized by: _____ **Authorized on:** _____



200909-01

CERTIFIED WEIGHT REPORT

Part Number: 64029
Lot Number: 072820
Description: PFOA - DOD
26 components
Solvent(s): Methanol (1 mM KOH) Lot# 042920 (98%)
2-Propanol 23214 (2%)
Expiration Date: 072825
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 1.0
NIST Test ID#: 23050
5E-05 Balance Uncertainty
0.007 Flask Uncertainty

Formulated By:	Benson Chan	DATE	072820
Reviewed By:	Pedro L. Rantes	DATE	072820

Volume(s) shown below were combined and diluted to (mL): 50.0
Note: All assigned values are anion concentrations.

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-) µg/mL	SDS Information (Solvent Safety Info. On Attached pg.)		
									CAS#	OSHA PEL (TWA)	LD50
1. Perfluoro-n-butanolic acid (linear)	99542	110419	0.02	1.00	0.004	50.2	1.00	0.01	375-22-4	N/A	N/A
2. Perfluoro-n-pentanolic acid	99543	110419	0.02	1.00	0.004	50.7	1.01	0.02	2706-90-3	N/A	N/A
3. Perfluorohexanolic acid	99199	010820	0.02	1.00	0.004	50.3	1.01	0.01	307-24-4	N/A	N/A
4. Perfluoroheptanolic acid	99197	071219	0.02	1.00	0.004	50.1	1.00	0.01	375-85-9	N/A	N/A
5. Perfluorooctanoic acid (branched)*	99202	021820	0.02	1.00	0.004	50.3	1.01	0.01	335-67-1	N/A	ipr-rel 189mg/kg
6. Perfluorononanoic acid	99200	110419	0.02	1.00	0.004	50.1	1.00	0.01	375-95-1	N/A	N/A
7. Perfluorodecanoic acid	99195	110419	0.02	1.00	0.004	50.1	1.00	0.01	335-76-2	N/A	ori-rel 57mg/kg
8. Perfluoroundecanoic acid	99205	110419	0.02	1.00	0.004	50.1	1.00	0.01	2058-94-8	N/A	N/A
9. Tricosulfurododecanoic acid	99196	010820	0.02	1.00	0.004	50.1	1.00	0.01	307-55-1	N/A	N/A
10. Perfluorotridecanoic acid	99204	110419	0.02	1.00	0.004	50.1	1.00	0.01	72829-94-8	N/A	N/A
11. Perfluorotetradecanoic acid	99203	120319	0.02	1.00	0.004	50.1	1.00	0.01	376-06-7	N/A	N/A
12. Perfluoro-1-octanesulfonamide	3677	FOSA04201	0.02	1.00	0.004	50.0	1.00	0.05	754-91-8	N/A	N/A
13. N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*	4162	brNMeFOSAA0119	0.02	1.00	0.004	50.0	1.00	0.05	00-00-0	N/A	N/A
14. N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*	4163	brNEIFOSAA0819	0.02	1.00	0.004	50.0	1.00	0.05	00-00-0	N/A	N/A
15. Perfluorobutanesulfonic acid	99194	021820	0.02	1.00	0.004	50.2	1.00	0.01	375-73-5	N/A	N/A
16. Perfluoro-1-pentanesulfonic acid	99544	011420	0.02	0.98	0.004	51.3	1.00	0.02	830402-22-1	N/A	N/A
17. Perfluorohexanesulfonic acid (branched)*	99198	091219	0.02	1.00	0.004	50.6	1.01	0.01	355-46-4	N/A	N/A
18. Perfluoro-1-heptanesulfonic acid	3672	LPFHpS0120	0.021	1.05	0.004	47.6	1.00	0.05	375-92-8	N/A	N/A
19. Heptadecafluorooctanesulfonic acid (branched)*	99201	021820	0.02	1.00	0.004	50.2	1.00	0.01	1763-23-1	N/A	N/A
20. Perfluoro-1-nonanesulfonic acid	3957	LPFNS1119	0.021	1.05	0.004	46.0	1.01	0.05	98789-57-2	N/A	N/A
21. Perfluoro-1-decane sulfonic acid	3671	LPFDS0419	0.021	1.05	0.004	48.2	1.01	0.05	2808-15-7	N/A	N/A
22. 1H,1H,2H,2H-Perfluorohexane sulfonic acid	3955	42FTS1019	0.0214	1.07	0.004	46.7	1.00	0.05	27819-93-8	N/A	N/A
23. 1H,1H,2H,2H-Perfluorooctane sulfonic acid	3661	82FTS0919	0.021	1.05	0.004	47.4	1.00	0.05	27819-94-9	N/A	N/A
24. 1H,1H,2H,2H-Perfluorodecane sulfonic acid	3662	82FTS0520	0.021	1.05	0.004	47.9	1.01	0.05	27819-96-1	N/A	N/A
25. 2-(Heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid	99668	071219	0.020	1.00	0.004	50.1	1.00	0.01	13252-13-6	N/A	N/A
26. 11-Chloroicosanulfuro-3-oxaundecane-1-sulfonic acid	4165	11CIPF3OUdS0320	0.021	1.06	0.004	47.1	1.00	0.05	83329-89-9	N/A	N/A
27. 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	4164	9CIPF3ONS0420	0.021	1.07	0.004	46.6	1.00	0.05	73606-19-6	N/A	N/A
28. Dodecafluoro-3H-4,8-dioxanonanoic acid (ADONA)	4103	NaDONA1119	0.021	1.06	0.004	47.1	1.00	0.05	958445-44-8	N/A	N/A
Perfluorooctanoic acid (linear)*	99202	021820	0.02	1.00	0.004	44.2	0.88	0.012	335-67-1	N/A	ipr-rel 189mg/kg
Perfluorooctanoic acid (branched isomer)*	99202	021820	0.02	1.00	0.004	6.0	0.12	0.002	335-67-1	N/A	ipr-rel 189mg/kg
Perfluorohexanesulfonic acid (linear)*	99198	091219	0.02	1.00	0.004	50.0	1.00	0.01	355-46-4	N/A	N/A
Perfluorohexanesulfonic acid (branched isomer)*	99198	091219	0.02	1.00	0.004	0.6	0.01	0.0002	355-46-4	N/A	N/A
Heptadecafluorooctanesulfonic acid (linear)*	99201	021820	0.02	1.00	0.004	38.2	0.76	0.01	1763-23-1	N/A	N/A
Heptadecafluorooctanesulfonic acid (branched isomer)*	99201	021820	0.02	1.00	0.004	7.5	0.15	0.002	1763-23-1	N/A	N/A
Heptadecafluorooctanesulfonic acid (branched isomer)*	99201	021820	0.02	1.00	0.004	4.0	0.08	0.001	1763-23-1	N/A	N/A
Heptadecafluorooctanesulfonic acid (branched isomer)*	99201	021820	0.02	1.00	0.004	0.5	0.010	0.0001	1763-23-1	N/A	N/A
N-Methylperfluoro-1-octanesulfonamidoacetic acid (linear)*	4162	brNMeFOSAA0119	0.02	1.00	0.004	34.2	0.68	0.03	2355-31-9	N/A	N/A
N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*	4162	brNMeFOSAA0119	0.02	1.00	0.004	10.5	0.21	0.011	00-00-0	N/A	N/A
N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*	4162	brNMeFOSAA0119	0.02	1.00	0.004	5.1	0.10	0.005	00-00-0	N/A	N/A
N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*	4162	brNMeFOSAA0119	0.02	1.00	0.004	0.3	0.005	0.00026	00-00-0	N/A	N/A
N-Ethylperfluoro-1-octanesulfonamidoacetic acid (linear)*	4163	brNEIFOSAA0819	0.02	1.00	0.004	36.2	0.72	0.04	2991-50-6	N/A	N/A
N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*	4163	brNEIFOSAA0819	0.02	1.00	0.004	8.7	0.17	0.009	00-00-0	N/A	N/A
N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*	4163	brNEIFOSAA0819	0.02	1.00	0.004	4.5	0.09	0.005	00-00-0	N/A	N/A
N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*	4163	brNEIFOSAA0819	0.02	1.00	0.004	0.6	0.012	0.0006	00-00-0	N/A	N/A

*Concentrations for branched and linear isomers are based on LCMS chromatographic analysis only.

A qualitative standard (Sect. 3.19) is available for PFOA that contains the linear and branched isomers (Wellington Labs, Cat. No. T-PFOA, or equivalent). This qualitative PFOA standard must be purchased and used to identify the retention times of the branched PFOA isomers, but the linear only PFOA standard must be used for quantitation (Sect. 12.2) until a quantitative PFOA standard containing the branched and linear isomers becomes commercially available.1

• The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
 • Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
 • Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
 • All Standards, after opening ampule, should be stored with cap tight and under appropriate laboratory conditions.
 • Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).



It can be done

BDO Id: 200914-01

Reagent Receipt Report

Approved: Authorized

Name: PFOA DOD **Received:** 9/14/2020
Vendor: ABSOLUTE STANDARDS **Custodian:** Schumitz, Matt
Catalogue No: 64029 **Expires:** 8/26/2025
Type: Solution **Consumed:** _____
Lot No: 082620 **Stored In:** LC Laboratory - F0111
Quantity: 5 ea ML **% Moisture:** _____
Description: PFOA DOD

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:
11-chloroeicosafuoro-3-oxaundecan	763051-92-9	1.0000	100.00	--	--	<input type="checkbox"/>			
1H,1H,2H,2H-Perfluorodecane sulfon	39108-34-4	1.0100	100.00	--	--	<input type="checkbox"/>			
1H,1H,2H,2H-Perfluorohexane sulfon	757124-72-4	1.0000	100.00	--	--	<input type="checkbox"/>			
1H,1H,2H,2H-Perfluorooctane sulfon	27619-97-2	1.0000	100.00	--	--	<input type="checkbox"/>			
9-chlorohexadecafluoro-3-oxanonane	756426-58-1	1.0000	100.00	--	--	<input type="checkbox"/>			
Adona	919005-14-4	1.0000	100.00	--	--	<input type="checkbox"/>			
Hexafluoropropylene oxide dimer aci	13252-13-6	1.0000	100.00	--	--	<input type="checkbox"/>			
N-ethylperfluoro-octanesulfonamidoa	2991-50-6	1.0000	100.00	--	--	<input type="checkbox"/>			
N-methylperfluoro-1-octanesulfonami	2355-31-9	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-1-butanefluoride	375-73-5	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-1-decanesulfonate	335-77-3	1.0100	100.00	--	--	<input type="checkbox"/>			
Perfluoro-1-heptanesulfonate	375-92-8	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-1-hexanesulfonate	355-46-4	1.0100	100.00	--	--	<input type="checkbox"/>			
Perfluoro-1-nonanesulfonate	68259-12-1	1.0100	100.00	--	--	<input type="checkbox"/>			
Perfluoro-1-octanesulfonamide	754-91-6	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-1-octanesulfonate	1763-23-1	1.0100	100.00	--	--	<input type="checkbox"/>			
perfluoro-1-pentanesulfonate	2706-91-4	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-butyric Acid	375-22-4	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-decanoic Acid	335-76-2	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-dodecanoic acid	307-55-1	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-heptanoic Acid	375-85-9	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-hexanoic acid	307-24-4	1.0100	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-octanoic Acid	335-67-1	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluorononanoic Acid	375-95-1	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-pentanoic acid	2706-90-3	1.0100	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-tetradecanoic acid	376-06-7	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-tridecanoic acid	72629-94-8	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-undecanoic acid	2058-94-8	1.0000	100.00	--	--	<input type="checkbox"/>			

Total Analytes: 28

Notes:

Approved by: _____ **Approved on:** _____
Authorized by: _____ **Authorized on:** _____



CERTIFIED WEIGHT REPORT

Part Number: 64029
Lot Number: 082620
Description: PFOA - DOD
28 components
Expiration Date: 082625
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 1.0
NIST Test ID#: 23060

Solvent(s):
Methanol (1 mM KOH) 042920 (98%)
2-Propanol 23214 (2%)

Lot#
5E-05 Balance Uncertainty
0.007 Flask Uncertainty

Formulated By: Benson Cran		082620
		DATE
Reviewed By: Pedro L. Rentas		082620
		DATE

Volume(s) shown below were combined and diluted to (mL):

Note: All assigned values are anion concentrations.

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-) µg/mL	SDS Information (Solvent Safety Info. On Attached pg.)		
									CAS#	OSHA PEL (TWA)	LD50
1. Perfluoro-n-butyric acid (linear)	99542	110419	0.02	1.00	0.004	50.2	1.00	0.01	375-22-4	N/A	N/A
2. Perfluoro-n-pentanoic acid	99543	110419	0.02	1.00	0.004	50.7	1.01	0.02	2706-90-3	N/A	N/A
3. Perfluorohexanoic acid	99199	010820	0.02	1.00	0.004	50.3	1.01	0.01	307-24-4	N/A	N/A
4. Perfluorooctanoic acid (linear)*	99202	021820	0.02	1.00	0.004	50.3	1.01	0.01	375-85-9	N/A	N/A
5. Perfluorooctanoic acid (branched)*	99202	021820	0.02	1.00	0.004	50.3	1.01	0.01	335-67-1	N/A	or-rel 180mg/kg
6. Perfluorononanoic acid	99200	110419	0.02	1.00	0.004	50.1	1.00	0.01	375-95-1	N/A	N/A
7. Perfluorodecanoic acid	99195	110419	0.02	1.00	0.004	50.1	1.00	0.01	335-76-2	N/A	or-rel 57mg/kg
8. Perfluoroundecanoic acid	99205	110419	0.02	1.00	0.004	50.1	1.00	0.01	2058-94-8	N/A	N/A
9. Tricosfluorododecanoic acid	99196	010820	0.02	1.00	0.004	50.1	1.00	0.01	307-55-1	N/A	N/A
10. Perfluortridecanoic acid	99204	110419	0.02	1.00	0.004	50.1	1.00	0.01	72529-94-8	N/A	N/A
11. Perfluortetradecanoic acid	99203	120319	0.02	1.00	0.004	50.1	1.00	0.01	376-06-7	N/A	N/A
12. Perfluoro-1-octanesulfonamide	3677	FOSA04201	0.02	1.00	0.004	50.0	1.00	0.05	754-91-6	N/A	N/A
13. N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*	4162	brMeFOSAA1119	0.02	1.00	0.004	50.0	1.00	0.05	00-00-0	N/A	N/A
14. N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*	4163	brNEFOSAA0819	0.02	1.00	0.004	50.0	1.00	0.05	00-00-0	N/A	N/A
15. Perfluorobutanesulfonic acid	99194	021820	0.02	1.00	0.004	50.2	1.00	0.01	375-73-5	N/A	N/A
16. Perfluoro-1-pentanesulfonic acid	99544	011420	0.02	0.98	0.004	51.3	1.00	0.02	630402-22-1	N/A	N/A
17. Perfluorohexanesulfonic acid (branched)*	99198	081920	0.02	1.00	0.004	50.2	1.00	0.01	355-46-4	N/A	N/A
18. Perfluoro-1-heptanesulfonic acid	3672	LPFHs0120	0.021	1.05	0.004	47.6	1.00	0.05	375-92-8	N/A	N/A
19. Heptadecafluorooctanesulfonic acid (branched)*	99201	021820	0.02	1.00	0.004	50.2	1.00	0.01	1783-23-1	N/A	N/A
20. Perfluoro-1-nonanesulfonic acid	3957	LFFNS1119	0.021	1.05	0.004	48.0	1.01	0.05	98789-57-2	N/A	N/A
21. Perfluoro-1-decane sulfonic acid	3671	LFFDS1119	0.021	1.05	0.004	48.2	1.01	0.05	2806-15-7	N/A	N/A
22. 1H,1H,2H,2H-Perfluorohexane sulfonic acid	3955	42FTS0720	0.0214	1.07	0.004	46.7	1.00	0.05	27619-93-8	N/A	N/A
23. 1H,1H,2H,2H-Perfluorooctane sulfonic acid	3661	62FTS0420	0.021	1.05	0.004	47.4	1.00	0.05	27819-94-9	N/A	N/A
24. 1H,1H,2H,2H-Perfluorodecane sulfonic acid	3662	82FTS0520	0.021	1.05	0.004	47.9	1.01	0.05	27619-96-1	N/A	N/A
25. 2-(heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid	99966	061820	0.020	1.00	0.004	50.1	1.00	0.01	13252-13-6	N/A	N/A
26. 11-Chlorooctadecafluoro-3-oxaundecane-1-sulfonic acid	4165	11ClPF3OudS0320	0.021	1.06	0.004	47.1	1.00	0.05	83329-89-9	N/A	N/A
27. 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	4164	9ClPF3ONS0420	0.021	1.07	0.004	46.6	1.00	0.05	72606-19-6	N/A	N/A
28. Dodecafluoro-3H-4,8-dioxanonanoic acid (ADONA)	4103	NaDONA1119	0.021	1.06	0.004	47.1	1.00	0.05	958445-44-8	N/A	N/A

Perfluorooctanoic acid (linear)*	99202	021820	0.02	1.00	0.004	44.2	0.88	0.012	335-67-1	N/A	or-rel 180mg/kg
Perfluorooctanoic acid (branched isomer)*	99202	021820	0.02	1.00	0.004	6.0	0.12	0.002	335-67-1	N/A	or-rel 180mg/kg
Perfluorohexanesulfonic acid (linear)*	99198	081920	0.02	1.00	0.004	49.6	0.99	0.01	355-46-4	N/A	N/A
Perfluorohexanesulfonic acid (branched isomer)*	99198	081920	0.02	1.00	0.004	0.6	0.01	0.0002	355-46-4	N/A	N/A
Heptadecafluorooctanesulfonic acid (linear)*	99201	021820	0.02	1.00	0.004	38.2	0.76	0.01	1783-23-1	N/A	N/A
Heptadecafluorooctanesulfonic acid (branched isomer)*	99201	021820	0.02	1.00	0.004	7.5	0.15	0.002	1783-23-1	N/A	N/A
Heptadecafluorooctanesulfonic acid (branched isomer)*	99201	021820	0.02	1.00	0.004	4.0	0.08	0.001	1783-23-1	N/A	N/A
Heptadecafluorooctanesulfonic acid (branched isomer)*	99201	021820	0.02	1.00	0.004	0.5	0.010	0.0001	1783-23-1	N/A	N/A
N-Methylperfluoro-1-octanesulfonamidoacetic acid (linear)*	4162	brMeFOSAA0119	0.02	1.00	0.004	34.2	0.68	0.03	2355-31-9	N/A	N/A
N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*	4162	brMeFOSAA0119	0.02	1.00	0.004	10.5	0.21	0.011	00-00-0	N/A	N/A
N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*	4162	brMeFOSAA0119	0.02	1.00	0.004	5.1	0.10	0.005	00-00-0	N/A	N/A
N-Methylperfluoro-1-octanesulfonamidoacetic acid (branched)*	4162	brMeFOSAA0119	0.02	1.00	0.004	0.3	0.005	0.00026	00-00-0	N/A	N/A
N-Ethylperfluoro-1-octanesulfonamidoacetic acid (linear)*	4163	brNEFOSAA0819	0.02	1.00	0.004	36.2	0.72	0.04	2991-50-6	N/A	N/A
N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*	4163	brNEFOSAA0819	0.02	1.00	0.004	6.7	0.17	0.009	00-00-0	N/A	N/A
N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*	4163	brNEFOSAA0819	0.02	1.00	0.004	4.5	0.09	0.005	00-00-0	N/A	N/A
N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*	4163	brNEFOSAA0819	0.02	1.00	0.004	0.6	0.012	0.0006	00-00-0	N/A	N/A

*Concentrations for branched and linear isomers are based on LCMS chromatographic analysis only.

A qualitative standard (Sect. 3.19) is available for PFOA that contains the linear and branched isomers (Wellington Labs, Cat. No. T-PFOA, or equivalent). This qualitative PFOA standard must be purchased and used to identify the retention times of the branched PFOA isomers, but the linear only PFOA standard must be used for quantitation (Sect. 12.2) until a quantitative PFOA standard containing the branched and linear isomers becomes commercially available. 1

The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
Standards are certified to ± 0.25% of the stated value, unless otherwise stated.
All standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
Uncertainty Reference: Taylor, B.N. and Kaye, C.E., "Guidelines for Establishing and Expressing the Uncertainty of NIST Measurement Results," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).



ACCREDITATIONS

Accrediting Authority	Laboratory ID
U.S. Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP)	91667
State of Florida Department of Health	E87856
State of New York Department of Health	12105
State of Washington Department of Ecology	C1050
State of California	3045
Commonwealth of Massachusetts	E87856
State of Maine	MA00056
State of Vermont	VT 87856
State of New Hampshire	2137
Commonwealth of Pennsylvania Department of Environmental Protection	68-05687
State of Alaska Department of Environmental Conservation	19-005
State of Rhode Island	E87856

Current certificates and lists of accredited parameters are available upon request.



Sample Preparation



It can be done

**BATTELLE - NORWELL OPERATIONS
SAMPLE PREPARATION RECORDS**

<u>Project Title(s)</u>	<u>Project No.(s)</u>
CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10	100142218
20-1310	
CTO-4532: PFAS in Water	
GW	
SOP Numbers (see workplan for modifications)	
ExtractionSOP No.	5-370

This Batch Contains The Following Samples:	
DA918PB-FS	G1709-FS
DA919LCS-FS	
G1707-FS	
G1708-FS	
G1708MS-FS	
G1708MSD-FS	

Laboratory Preparation Records
COMPLETE AND VALIDATED

Prep Task Leader: Allison Wamness

Approved By:	Date	Initials
Denise Schumitz	11/08/2020	DMS



It can be done

BATTELLE - NORWELL OPERATIONS SAMPLE IDENTIFICATION PAGE

Project Title(s)CTO-4532: NRL Chesapeake Bay Detachment (NRL-
CBD) Site 10**Project No.(s)**

100142218

20-1310**CTO-4532: PFAS in Water****GW**

Sample ID	Description
DA918PB-FS	Procedural Blank
DA919LCS-FS	Laboratory Control Sample
G1707-FS	CBD-AOA-MW15-1020
G1708-FS	CBD-AOA-MW16-1020
G1708MS-FS	Matrix Spike of CBD-AOA-MW16-1020
G1708MSD-FS	Matrix Spike Duplicate of CBD-AOA-MW16-1020
G1709-FS	CBD-FB04-101620

Samples Assigned By:

Matt Schumitz

Date : October 19, 2020

Comments:



It can be done

BATTELLE - NORWELL OPERATIONS SAMPLE CUSTODY LOG

Project Title(s)

CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10

Project No.(s)

100142218

20-1310**CTO-4532: PFAS in Water****GW**

Requested On/By:	10/22/2020 AW	Purpose:	Sample Preparation	
Relinquished On/By:	10/22/2020 MDS	Last Activity:	Transfer	
Accepted On/By:	10/22/2020 AW	Returned On/To:		
Stored In Facility:	Sample Preparation	Returned To Facility:		
Stored Until		Returned Comment:	NA	
Stored Comment:	NA			

No.	BDO-ID:	Ctrs	*	Condition:	Custody Comment:
1	G1707	1	C	Consumed	NA
2	G1708	1	C	Consumed	NA
3	G1709	1	C	Consumed	NA
Total Samples		3		* "C" = Consumed Container	



It can be done

**BATTELLE - NORWELL OPERATIONS
LIQUID SAMPLE ID FORM**

Project Title(s)

CTO-4532: NRL Chesapeake Bay Detachment (NRL-
CBD) Site 10

Project No.(s)

100142218

20-1310

**CTO-4532: PFAS in Water
GW**

Sample ID	Description	Volume (mL)	Bottles	*	Date Initials
DA918PB-FS	Procedural Blank	250.0	NA	--	10/22/20 AW
DA919LCS-FS	Laboratory Control Sample	255.0	NA	--	10/22/20 BTM
G1707-FS	CBD-AOA-MW15-1020	260.0	1	C	10/22/20 BTM
G1708-FS	CBD-AOA-MW16-1020	260.0	1	C	10/22/20 BTM
G1708MS-FS	Matrix Spike	265.0	2	C	10/22/20 BTM
G1708MSD-FS	Matrix Spike Duplicate	265.0	3	C	10/22/20 BTM
G1709-FS	CBD-FB04-101620	255.0	1	C	10/22/20 AW

Comments:

Samples Assigned By:

Matt Schumitz

Date : October 19, 2020

* - "C" = Sample is Consumed



It can be done

BATTELLE - NORWELL OPERATIONS SURROGATE SPIKE FORM

Project Title(s)

CTO-4532: NRL Chesapeake Bay Detachment (NRL-
CBD) Site 10

Project No.(s)

100142218

20-1310

CTO-4532: PFAS in Water

GW

Sample ID	Standard ID	Type	Vial No.	Vol Added (uL)	Date Spiked/ Spiked By	Witn'd By	Comment
DA918PB-FS	LD44	SIS	5	125	10/22/20 AW	KH	NA
DA919LCS-FS	LD43	LCS/MS	1	100	10/22/20 AW	KH	NA
DA919LCS-FS	LD44	SIS	5	125	10/22/20 AW	KH	NA
G1707-FS	LD44	SIS	5	125	10/22/20 AW	KH	NA
G1708-FS	LD44	SIS	5	125	10/22/20 AW	KH	NA
G1708MS-FS	LD43	LCS/MS	1	125	10/22/20 AW	KH	NA
G1708MS-FS	LD44	SIS	5	125	10/22/20 AW	KH	NA
G1708MSD-FS	LD43	LCS/MS	1	125	10/22/20 AW	KH	NA
G1708MSD-FS	LD44	SIS	5	125	10/22/20 AW	KH	NA
G1709-FS	LD44	SIS	5	125	10/22/20 AW	KH	NA

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
LD43	Pipette	B814657482
LD44	Pipette	B814657482



It can be done

BATTELLE - NORWELL OPERATIONS SAMPLE EXTRACTION FORM

Project Title(s)CTO-4532: NRL Chesapeake Bay Detachment (NRL-
CBD) Site 10**Project No.(s)**

100142218

20-1310

**CTO-4532: PFAS in Water
GW**

Sample ID	1st Extraction	2nd Extraction	3rd Extraction	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comment
DA918PB-FS	10/22/20 AW	NA	NA	NEVAP_3	NA	NA	NA	NA
DA919LCS-FS	10/22/20 AW	NA	NA	NEVAP_3	NA	NA	NA	NA
G1707-FS	10/22/20 AW	NA	NA	NEVAP_3	NA	NA	NA	NA
G1708-FS	10/22/20 AW	NA	NA	NEVAP_3	NA	NA	NA	NA
G1708MS-FS	10/22/20 AW	NA	NA	NEVAP_3	NA	NA	NA	NA
G1708MSD-FS	10/22/20 AW	NA	NA	NEVAP_3	NA	NA	NA	NA
G1709-FS	10/22/20 AW	NA	NA	NEVAP_3	NA	NA	NA	NA

Solvents/Reagent Preparations:

Name	ID	Expires	Lot No	Procedure	Comments
pH Indicator Strips 0-14	200923-01	09/23/25	10D0401	NA	
0.5% NH ₃ in Methanol (w/v)	RP-201022-1	10/22/20	A0409799	Per 100 mL, 4.25 mL ammonia solution brought to 100 mL with methanol	
0.5% NH ₃ in Methanol (w/v)	RP-201022-1	10/22/20	202167	Per 100 mL, 4.25 mL ammonia solution brought to 100 mL with methanol	
Pre-packed SPE Column	RP-201022-3	10/22/20	S308-0116/S20-004415	Pre-packed SPE Column	

Solvents/Reagents:

Name	Lot No	Comments
Methanol HPLC (201009-01)	202167	



It can be done

**BATTELLE - NORWELL OPERATIONS
EXTRACT CLEANUP FORM**

Project Title(s)

CTO-4532: NRL Chesapeake Bay Detachment (NRL-
CBD) Site 10

Project No.(s)

100142218

20-1310

CTO-4532: PFAS in Water

GW

Extract Id	Date	Init.	Comments
DA918PB-FS(0)	10/22/20	AW	NA
DA919LCS-FS(0)	10/22/20	AW	NA
G1707-FS(0)	10/22/20	AW	NA
G1708-FS(0)	10/22/20	AW	NA
G1708MS-FS(0)	10/22/20	AW	NA
G1708MSD-FS(0)	10/22/20	AW	NA
G1709-FS(0)	10/22/20	AW	NA

Cleanup:

Envi-Carb

Reagents:

Reagent Prep	Name	Expires	Lot No	Procedure
191209-01	Supelclean ENVI- Carb SPE Bulk Packing	12/09/24	122395	NA



It can be done

**BATTELLE - NORWELL OPERATIONS
EXTRACT CLEANUP FORM**

Project Title(s)

CTO-4532: NRL Chesapeake Bay Detachment (NRL-
CBD) Site 10

Project No.(s)

100142218

20-1310

**CTO-4532: PFAS in Water
GW**

Extract Id	Date	Init.	Comments
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It can be done

BATTELLE - NORWELL OPERATIONS INTERNAL STANDARD SPIKING FORM

Project Title(s)

CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10

Project No.(s)

100142218

20-1310**CTO-4532: PFAS in Water****GW****(N/A Fraction)**

Extract Id	Extr. Vol. (uL)	Added (uL)	Std. Id	Accm. (uL)	Vial No.	Pre Inj. Vol. (uL)^	Final Dilution *	Date Spiked/ Spiked By	Witn'd By
DA918PB-FS(0)	875	125	LE40	125	1	1000	1.000	11/06/20 BTM	RPK
DA919LCS-FS(0)	875	125	LE40	125	1	1000	1.000	11/06/20 BTM	RPK
G1707-FS(0)	875	125	LE40	125	1	1000	1.000	11/06/20 BTM	RPK
G1707-FS-D(3)	900	100	LE40	125	1	1000	5.000	11/06/20 BTM	RPK
G1707-FS-D(5)	925	75	LE40	125	1	1000	12.500	11/06/20 BTM	RPK
G1708-FS(0)	875	125	LE40	125	1	1000	1.000	11/06/20 BTM	RPK
G1708MS-FS(0)	875	125	LE40	125	1	1000	1.000	11/06/20 BTM	RPK
G1708MS-FS-D(3)	900	100	LE40	125	1	1000	5.000	11/09/20 LMG	RPK
G1708MSD-FS(0)	875	125	LE40	125	1	1000	1.000	11/06/20 BTM	RPK
G1708MSD-FS-D(3)	900	100	LE40	125	1	1000	5.000	11/09/20 LMG	RPK
G1709-FS(0)	875	125	LE40	125	1	1000	1.000	11/06/20 BTM	RPK

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
LE39	Pipette	B814657482
LE39	Pipette	B814659662
LE40	Pipette	B814657482
LE40	Pipette	B814659662

* - Final Dilution is any HPLC, dilutions, or other manipulation

^ - Pre Injection Volume (PIV) includes any RIS spikes.



It can be done

BATTELLE - NORWELL OPERATIONS EXTRACT SPIKE FORM

Project Title(s)

CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10

Project No.(s)

100142218

20-1310

CTO-4532: PFAS in Water

GW

Extract Id	DF	Std. ID	Type	Vial No.	Vol. Added (uL)	Conc (ug/mL)	Added (ng)	Date Spiked/ Spiked By	Witn'd By
G1707-FS-D(3)	5	LE39	SIS	2	100	0	0	11/06/20 BTM	RPK
G1707-FS-D(5)	12.5	LE39	SIS	2	75	0	0	11/06/20 BTM	RPK
G1708MS-FS-D(3)	5	LE39	SIS	1	100	0	0	11/09/20 LMG	RPK
G1708MSD-FS-D(3)	5	LE39	SIS	1	100	0	0	11/09/20 LMG	RPK

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
LE39	Pipette	B814657482
LE39	Pipette	B814659662
LE40	Pipette	B814657482
LE40	Pipette	B814659662



It can be done

BATTELLE - NORWELL OPERATIONS PREPARATION EXTRACT SPLIT FORM

Project Title(s)

CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10

Project No.(s)

100142218

20-1310**CTO-4532: PFAS in Water****GW**

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
DA918PB-FS	0	--	10/22/2020 10:27:00 AM	NA		NA	NA	1.000	1.000	10/22/20 AW
DA919LCS-FS	0	--	10/22/2020 10:27:00 AM	NA		NA	NA	1.000	1.000	10/22/20 AW
G1707-FS	0	C	10/22/2020 10:27:00 AM	NA		NA	NA	1.000	1.000	10/22/20 AW
G1707-FS	2	--	11/6/2020 3:12:00 PM	G1707-FS	0	1000	800	1.250	1.250	11/06/20 BTM
G1707-FS-D	3	C	11/6/2020 3:12:00 PM	G1707-FS	0	1000	200	5.000	5.000	11/06/20 BTM
G1707-FS-D	4	--	11/6/2020 3:15:00 PM	G1707-FS-D	3	1000	600	1.667	8.333	11/06/20 BTM
G1707-FS-D	5	--	11/6/2020 3:15:00 PM	G1707-FS-D	3	1000	400	2.500	12.500	11/06/20 BTM
G1708-FS	0	--	10/22/2020 10:27:00 AM	NA		NA	NA	1.000	1.000	10/22/20 AW
G1708MS-FS	0	C	10/22/2020 10:27:00 AM	NA		NA	NA	1.000	1.000	10/22/20 AW
G1708MS-FS	2	--	11/9/2020 10:11:00 AM	G1708MS-FS	0	1000	800	1.250	1.250	11/09/20 LMG
G1708MS-FS-D	3	--	11/9/2020 10:11:00 AM	G1708MS-FS	0	1000	200	5.000	5.000	11/09/20 LMG
G1708MSD-FS	0	C	10/22/2020 10:27:00 AM	NA		NA	NA	1.000	1.000	10/22/20 AW
G1708MSD-FS	2	--	11/9/2020 10:11:00 AM	G1708MSD-FS	0	1000	800	1.250	1.250	11/09/20 LMG
G1708MSD-FS-D	3	--	11/9/2020 10:11:00 AM	G1708MSD-FS	0	1000	200	5.000	5.000	11/09/20 LMG

Total Oil = [Sample Volume (uL) / Aliquot Volume (uL)] * [Aliquot Weight (mg)]

Dilution Factor = [Sample Volume (uL) / Aliquot Volume (uL)] * Prior Dilution Factor

* - "C" = Extract is Consumed



It can be done

BATTELLE - NORWELL OPERATIONS PREPARATION EXTRACT SPLIT FORM

Project Title(s)

CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10

Project No.(s)

100142218

20-1310**CTO-4532: PFAS in Water****GW**

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
G1709-FS	0	--	10/22/2020 10:27:00 AM	NA		NA	NA	1.000	1.000	10/22/20 AW

Total Oil = [Sample Volume (uL) / Aliquot Volume (uL)] * [Aliquot Weight (mg)]

Dilution Factor = [Sample Volume (uL) / Aliquot Volume (uL)] * Prior Dilution Factor

* - "C" = Extract is Consumed



It can be done

**BATTELLE - NORWELL OPERATIONS
EXTRACT - INSTRUMENT FACILITY CUSTODY PAGE**

Project Title(s)

CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10

Project No.(s)

100142218

20-1310

**CTO-4532: PFAS in Water
GW**

Purpose:	LC-MS/MS TRANSFER	Last Activity:	Prep->Inst
Relinquished On/By:	Nov 6 2020 4:02PM LMG	Received On/By:	Nov 6 2020 4:02PM DMS
Relinquished From:	Sample Preparation: NA	Received Location:	LC Laboratory: NA
Relinquish Comment:	NA	Received Comment:	NA

No.	BDO-ID:	PIV:	DF:	Condition:	Custody Comment:
1	DA918PB-FS(0)	1000	1	Intact	NA
2	DA919LCS-FS(0)	1000	1	Intact	NA
3	G1707-FS(0)	1000	1	Intact	NA
4	G1707-FS-D(3)	1000	5	Intact	NA
5	G1707-FS-D(5)	1000	12.5	Intact	NA
6	G1708-FS(0)	1000	1	Intact	NA
7	G1708MS-FS(0)	1000	1	Intact	NA
8	G1708MSD-FS(0)	1000	1	Intact	NA
9	G1709-FS(0)	1000	1	Intact	NA

Total Extracts: 9

Purpose:	LC-MS/MS TRANSFER	Last Activity:	Prep->Inst
Relinquished On/By:	Nov 9 2020 11:27AM LMG	Received On/By:	Nov 9 2020 11:27AM LMG
Relinquished From:	Sample Preparation: NA	Received Location:	LC Laboratory: NA
Relinquish Comment:	NA	Received Comment:	NA

No.	BDO-ID:	PIV:	DF:	Condition:	Custody Comment:
1	G1708MS-FS-D(3)	1000	5	Intact	NA
2	G1708MSD-FS-D(3)	1000	5	Intact	NA

Total Extracts: 2



It can be done

BATTELLE - NORWELL OPERATIONS SAMPLE SPECIFIC COMMENTS

Project Title(s)

CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10

Project No.(s)

100142218

20-1310**CTO-4532: PFAS in Water****GW**

Sample ID:	Comment:	Date/Initials:
DA918PB-FS	Sample was fortified per project plan, poured into a centrifuge bottle, centrifuged at 3500 rpm for 5 minutes. Sample was then poured back into original container for extraction.	10/22/20 AW
DA918PB-FS	Extraction started at 10:27 AM, manifold 2, ended at 11:22 AM	10/22/20 AW
DA919LCS-FS	Sample was fortified per project plan, poured into a centrifuge bottle, centrifuged at 3500 rpm for 5 minutes. Sample was then poured back into original container for extraction.	10/22/20 AW
DA919LCS-FS	Extraction started at 10:27 AM, manifold 2, ended at 11:25 AM	10/22/20 AW
G1707-FS	Sample was fortified per project plan, poured into a centrifuge bottle, centrifuged at 3500 rpm for 5 minutes. Sample was then poured back into original container for extraction.	10/22/20 AW
G1707-FS	Extraction started at 10:27 AM, manifold 5, ended at 11:47 AM	10/22/20 AW
G1708-FS	Extraction started at 10:27 AM, manifold 5, ended at 11:49 AM	10/22/20 AW
G1708-FS	Sample contained particulates	10/22/20 AW
G1708MS-FS	Extraction started at 10:27 AM, manifold 5, ended at 11:55 AM	10/22/20 AW
G1708MS-FS	Sample contained particulates	10/22/20 AW
G1708MSD-FS	Extraction started at 10:27 AM, manifold 5, ended at 11:49 AM	10/22/20 AW
G1708MSD-FS	Sample contained particulates	10/22/20 AW
G1709-FS	Extraction started at 10:27 AM, manifold 2, ended at 11:26 AM	10/22/20 AW



It can be done

**BATTELLE - NORWELL OPERATIONS
MISCELLANEOUS DOCUMENTATION FORM**

Project Title(s)

CTO-4532: NRL Chesapeake Bay Detachment (NRL-
CBD) Site 10

Project No.(s)

100142218

20-1310

**CTO-4532: PFAS in Water
GW**

Entered By:

On:

Task Leader Approval:

On:

SupervisorApproval:

On:

PM Approval:

On:

Analytical Calibrations



Sequence Report

Created with Analyst Reporter
Printed: 06/11/2020 1:47:43 PM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
1	MEOH		11/5/2020 1:09:07 AM	5-0369.dam	AC_11042020_5-369.wiff
2	LD74	L1	11/5/2020 1:19:58 AM	5-0369.dam	AC_11042020_5-369.wiff
3	LD75	L2	11/5/2020 1:30:51 AM	5-0369.dam	AC_11042020_5-369.wiff
4	LD76	L3	11/5/2020 1:41:42 AM	5-0369.dam	AC_11042020_5-369.wiff
5	LD77	L4	11/5/2020 1:52:35 AM	5-0369.dam	AC_11042020_5-369.wiff
6	LD78	L5	11/5/2020 2:03:27 AM	5-0369.dam	AC_11042020_5-369.wiff
7	LD79	L6	11/5/2020 2:14:18 AM	5-0369.dam	AC_11042020_5-369.wiff
8	LD80 IB	IB	11/5/2020 2:25:10 AM	5-0369.dam	AC_11042020_5-369.wiff
9	LD81 ICC	ICC	11/5/2020 2:36:01 AM	5-0369.dam	AC_11042020_5-369.wiff
10	LE25 BRANCHED	Branched Standard	11/5/2020 2:46:52 AM	5-0369.dam	AC_11042020_5-369.wiff



Sequence Report

Created with Analyst Reporter
Printed: 09/11/2020 3:03:17 PM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
1	MEOH		11/5/2020 10:52:52 PM	5-0369.dam	AC_11052020_5-369.wiff
2	LD76 CCV	CCV	11/5/2020 11:03:44 PM	5-0369.dam	AC_11052020_5-369.wiff
3	LD79	L6	11/5/2020 11:14:36 PM	5-0369.dam	AC_11052020_5-369.wiff
4	LD80 IBA	IB	11/5/2020 11:25:29 PM	5-0369.dam	AC_11052020_5-369.wiff
5	MEOH		11/5/2020 11:36:19 PM	5-0369.dam	AC_11052020_5-369.wiff
6	DA953PB-FS(0)		11/5/2020 11:47:11 PM	5-0369.dam	AC_11052020_5-369.wiff
7	DA954LCS-FS(0)		11/5/2020 11:58:04 PM	5-0369.dam	AC_11052020_5-369.wiff
8	G1792-FS(0)		11/6/2020 12:08:55 AM	5-0369.dam	AC_11052020_5-369.wiff
9	G1788-FS D(9)		11/6/2020 12:19:46 AM	5-0369.dam	AC_11052020_5-369.wiff
10	G1788-FS D(7)		11/6/2020 12:30:38 AM	5-0369.dam	AC_11052020_5-369.wiff
11	G1788-FS D(5)		11/6/2020 12:41:29 AM	5-0369.dam	AC_11052020_5-369.wiff
12	G1788-FS D(3)		11/6/2020 12:52:21 AM	5-0369.dam	AC_11052020_5-369.wiff
13	MEOH		11/6/2020 1:03:13 AM	5-0369.dam	AC_11052020_5-369.wiff
14	LD77 CCV		11/6/2020 1:14:04 AM	5-0369.dam	AC_11052020_5-369.wiff
15	G1789-FS D(9)		11/6/2020 1:24:55 AM	5-0369.dam	AC_11052020_5-369.wiff
16	G1789-FS D(7)		11/6/2020 1:35:47 AM	5-0369.dam	AC_11052020_5-369.wiff
17	G1789-FS D(5)		11/6/2020 1:46:39 AM	5-0369.dam	AC_11052020_5-369.wiff
18	G1789-FS D(3)		11/6/2020 1:57:31 AM	5-0369.dam	AC_11052020_5-369.wiff
19	G1790-FS D(9)		11/6/2020 2:08:23 AM	5-0369.dam	AC_11052020_5-369.wiff
20	G1790-FS D(7)		11/6/2020 2:19:15 AM	5-0369.dam	AC_11052020_5-369.wiff
21	G1790-FS D(5)		11/6/2020 2:30:06 AM	5-0369.dam	AC_11052020_5-369.wiff
22	G1790-FS D(3)		11/6/2020 2:40:58 AM	5-0369.dam	AC_11052020_5-369.wiff
23	MEOH		11/6/2020 2:51:50 AM	5-0369.dam	AC_11052020_5-369.wiff
24	LD76 CCV		11/6/2020 3:02:42 AM	5-0369.dam	AC_11052020_5-369.wiff
25	G1791-FS D(9)		11/6/2020 3:13:34 AM	5-0369.dam	AC_11052020_5-369.wiff
26	G1791-FS D(7)		11/6/2020 3:24:26 AM	5-0369.dam	AC_11052020_5-369.wiff
27	G1793-FS D(9)		11/6/2020 3:35:18 AM	5-0369.dam	AC_11052020_5-369.wiff
28	G1793-FS D(7)		11/6/2020 3:46:11 AM	5-0369.dam	AC_11052020_5-369.wiff
29	G1793-FS D(5)		11/6/2020 3:57:02 AM	5-0369.dam	AC_11052020_5-369.wiff
30	G1793-FS D(3)		11/6/2020 4:07:54 AM	5-0369.dam	AC_11052020_5-369.wiff
31	G1791-FS D(5)		11/6/2020 4:18:46 AM	5-0369.dam	AC_11052020_5-369.wiff
32	G1791-FS D(3)		11/6/2020 4:29:38 AM	5-0369.dam	AC_11052020_5-369.wiff
33	MEOH		11/6/2020 4:40:30 AM	5-0369.dam	AC_11052020_5-369.wiff
34	LD77 CCV		11/6/2020 4:51:21 AM	5-0369.dam	AC_11052020_5-369.wiff
35	G1788-FS(0)		11/6/2020 5:02:13 AM	5-0369.dam	AC_11052020_5-369.wiff
36	G1789-FS(0)		11/6/2020 5:13:06 AM	5-0369.dam	AC_11052020_5-369.wiff
37	G1790-FS(0)		11/6/2020 5:23:58 AM	5-0369.dam	AC_11052020_5-369.wiff
38	G1791-FS(0)		11/6/2020 5:34:49 AM	5-0369.dam	AC_11052020_5-369.wiff
39	G1793-FS(0)		11/6/2020 5:45:42 AM	5-0369.dam	AC_11052020_5-369.wiff



Sequence Report

Created with Analyst Reporter
Printed: 09/11/2020 3:03:17 PM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
40	MEOH		11/6/2020 5:56:34 AM	5-0369.dam	AC_11052020_5-369.wiff
41	MEOH		11/6/2020 6:07:26 AM	5-0369.dam	AC_11052020_5-369.wiff
42	MEOH		11/6/2020 6:18:18 AM	5-0369.dam	AC_11052020_5-369.wiff
43	LD77 CCV		11/6/2020 6:29:11 AM	5-0369.dam	AC_11052020_5-369.wiff
44	MEOH		11/6/2020 9:55:20 AM	5-0369.dam	AC_11052020_5-369.wiff
45	LD77 CCV		11/6/2020 10:06:13 AM	5-0369.dam	AC_11052020_5-369.wiff
46	G1791-FS(0)		11/6/2020 10:17:05 AM	5-0369.dam	AC_11052020_5-369.wiff
47	G1793-FS(0)		11/6/2020 10:27:59 AM	5-0369.dam	AC_11052020_5-369.wiff
48	MEOH		11/6/2020 10:38:51 AM	5-0369.dam	AC_11052020_5-369.wiff
49	MEOH		11/6/2020 10:49:45 AM	5-0369.dam	AC_11052020_5-369.wiff
50	MEOH		11/6/2020 11:00:38 AM	5-0369.dam	AC_11052020_5-369.wiff
51	LD78 CCV		11/6/2020 11:11:32 AM	5-0369.dam	AC_11052020_5-369.wiff
1	MEOH		11/6/2020 5:19:04 PM	5-0369.dam	AC_11052020_5-369.wiff
2	LD76 CCV		11/6/2020 5:29:58 PM	5-0369.dam	AC_11052020_5-369.wiff
3	MEOH		11/6/2020 5:40:52 PM	5-0369.dam	AC_11052020_5-369.wiff
4	DA914PB-FS(3)		11/6/2020 5:51:46 PM	5-0369.dam	AC_11052020_5-369.wiff
5	DA916PB-FS(0)		11/6/2020 6:02:39 PM	5-0369.dam	AC_11052020_5-369.wiff
6	DA915LCS-FS(3)		11/6/2020 6:13:33 PM	5-0369.dam	AC_11052020_5-369.wiff
7	DA917LCS-FS(0)		11/6/2020 6:24:26 PM	5-0369.dam	AC_11052020_5-369.wiff
8	G1710-FS(3)		11/6/2020 6:35:20 PM	5-0369.dam	AC_11052020_5-369.wiff
9	G1711-FS(0)		11/6/2020 6:46:14 PM	5-0369.dam	AC_11052020_5-369.wiff
10	MEOH		11/6/2020 6:57:07 PM	5-0369.dam	AC_11052020_5-369.wiff
11	LD77 CCV	CCV	11/6/2020 7:08:01 PM	5-0369.dam	AC_11052020_5-369.wiff
12	MEOH		11/6/2020 7:18:55 PM	5-0369.dam	AC_11052020_5-369.wiff
13	DA918PB-FS(0)	Procedural Blank	11/6/2020 7:29:50 PM	5-0369.dam	AC_11052020_5-369.wiff
14	DA919LCS-FS(0)	Laboratory Control Sample	11/6/2020 7:40:42 PM	5-0369.dam	AC_11052020_5-369.wiff
15	G1707-FS(0)	CBD-AOA-MW15-1020	11/6/2020 7:51:36 PM	5-0369.dam	AC_11052020_5-369.wiff
16	G1707-FS-D(3)	CBD-AOA-MW15-1020	11/6/2020 8:02:29 PM	5-0369.dam	AC_11052020_5-369.wiff
17	G1707-FS-D(5)	CBD-AOA-MW15-1020	11/6/2020 8:13:23 PM	5-0369.dam	AC_11052020_5-369.wiff
18	G1708-FS(0)	CBD-AOA-MW16-1020	11/6/2020 8:24:17 PM	5-0369.dam	AC_11052020_5-369.wiff
19	G1708MS-FS(0)	CBD-AOA-MW16-1020	11/6/2020 8:35:11 PM	5-0369.dam	AC_11052020_5-369.wiff
20	G1708MSD-FS(0)	CBD-AOA-MW16-1020	11/6/2020 8:46:05 PM	5-0369.dam	AC_11052020_5-369.wiff
21	G1709-FS(0)	CBD-FB04-101620	11/6/2020 8:56:59 PM	5-0369.dam	AC_11052020_5-369.wiff
22	LD76 CCV	CCV	11/6/2020 9:07:53 PM	5-0369.dam	AC_11052020_5-369.wiff

1 Samples do not apply to this batch. LMG 11/09/2020



Sequence Report

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Printed: 09/11/2020 3:06:15 PM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
1	MEOH		11/9/2020 11:08:36 AM	5-0369.dam	AC_11092020_5-369.wiff
2	MEOH		11/9/2020 11:19:28 AM	5-0369.dam	AC_11092020_5-369.wiff
3	LD76 CCV	CCV	11/9/2020 11:30:20 AM	5-0369.dam	AC_11092020_5-369.wiff
4	LD79	L6	11/9/2020 11:41:10 AM	5-0369.dam	AC_11092020_5-369.wiff
5	LD80 IB	IB	11/9/2020 11:52:02 AM	5-0369.dam	AC_11092020_5-369.wiff
6	MEOH		11/9/2020 12:02:54 PM	5-0369.dam	AC_11092020_5-369.wiff
7	G1711 FS(0)		11/9/2020 12:13:45 PM	5-0369.dam	AC_11092020_5-369.wiff
8	G1707 FS(0)	CBD AOA MW15 1020	11/9/2020 12:24:36 PM	5-0369.dam	AC_11092020_5-369.wiff
9	G1708 FS(0)	CBD AOA MW16 1020	11/9/2020 12:35:27 PM	5-0369.dam	AC_11092020_5-369.wiff
10	G1708MS FS(0)	CBD AOA MW16 1020	11/9/2020 12:46:18 PM	5-0369.dam	AC_11092020_5-369.wiff
11	G1708MSD FS(0)	CBD AOA MW16 1020	11/9/2020 12:57:12 PM	5-0369.dam	AC_11092020_5-369.wiff
12	G1708MS-FS-D(3)	CBD-AOA-MW16-1020	11/9/2020 1:08:03 PM	5-0369.dam	AC_11092020_5-369.wiff
13	G1708MSD-FS-D(3)	CBD-AOA-MW16-1020	11/9/2020 1:18:55 PM	5-0369.dam	AC_11092020_5-369.wiff
14	LD77 CCV	CCV	11/9/2020 1:29:46 PM	5-0369.dam	AC_11092020_5-369.wiff

1 Sample does not apply to this batch. LMG 11/09/2020

2 Sample was reanalyzed for confirmation only and was not reported. LMG 11/09/2020



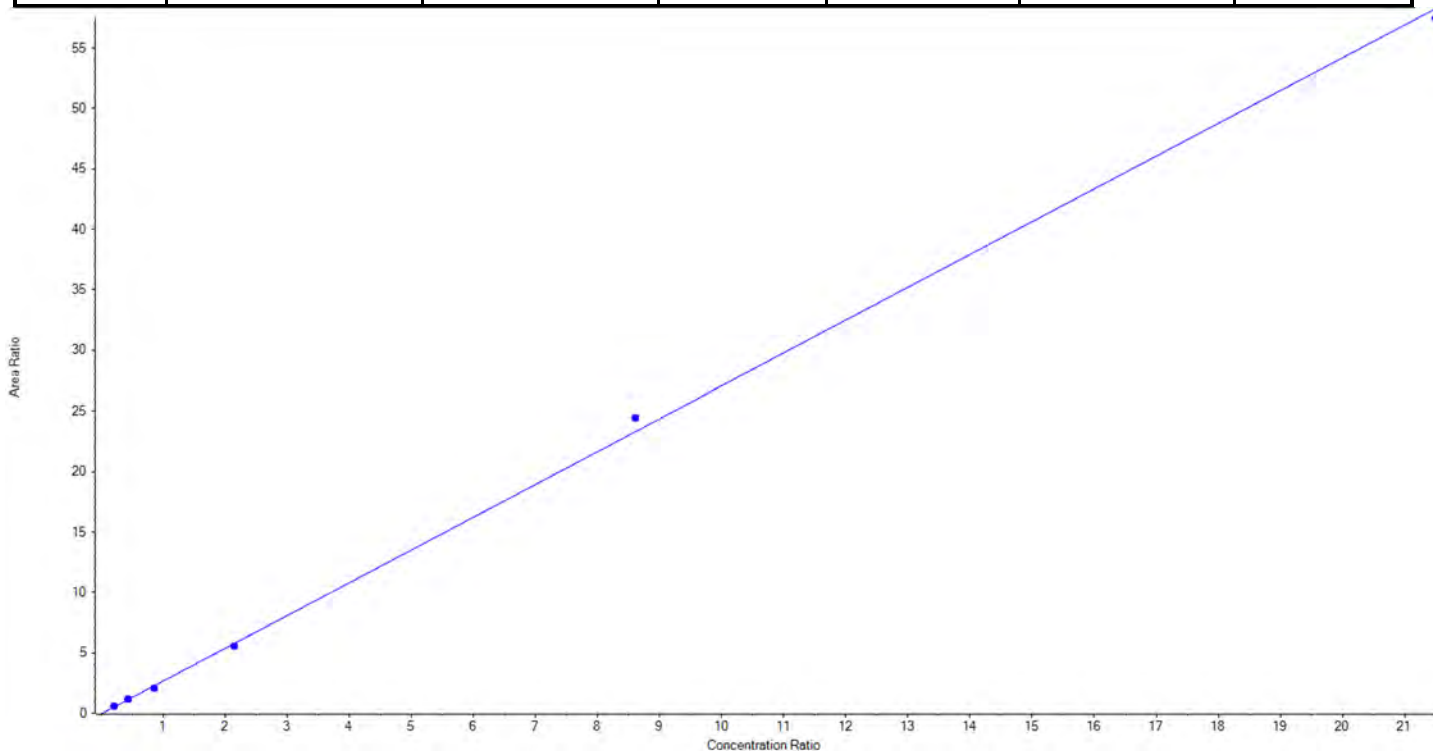
Calibration Summary Report

Created with Analyst Reporter
Printed: 09/11/2020 3:15:03 PM

Analyte Name	PFBS_1	Data File	AC_11042020_5-369.wiff
MRM Transition	298.9 / 80.0	Result Table	20-1310
Internal Standard	13C3-PFBS	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 2.71254 x + -0.05174$ ($r = 0.99942$) (weighting: $1 / x$) $r^2: 0.9988$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	256.60	102.6
3	LD75	L2	True	500.00	528.23	105.7
4	LD76	L3	True	1000.00	923.96	92.4
5	LD77	L4	True	2500.00	2395.54	95.8
6	LD78	L5	True	10000.00	10485.69	104.9
7	LD79	L6	True	25000.00	24659.97	98.6





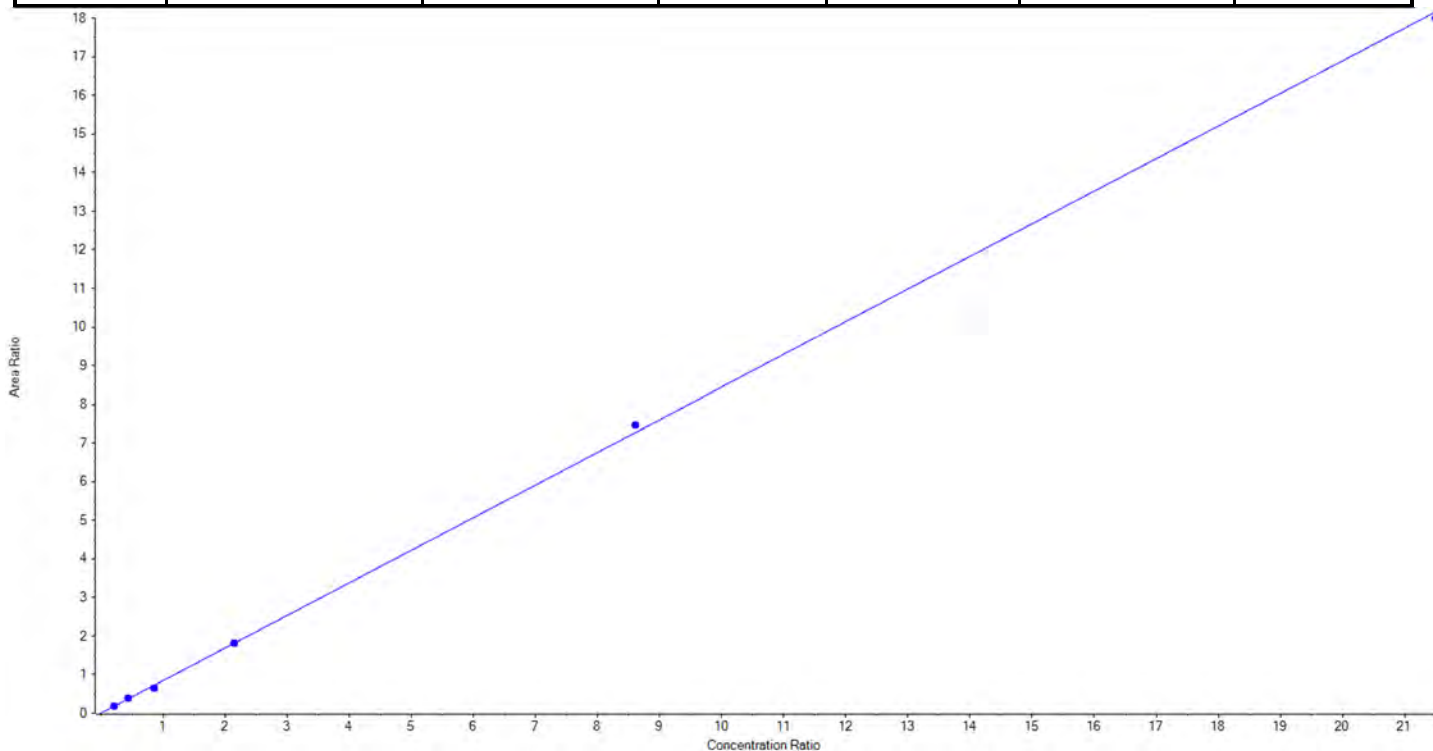
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Analyte Name	PFBS_2	Data File	AC_11042020_5-369.wiff
MRM Transition	298.9 / 99.0	Result Table	20-1310
Internal Standard	13C3-PFBS	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.84461x + 0.00234$ ($r = 0.99962$) (weighting: $1/x$) $r^2: 0.9992$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	248.58	99.4
3	LD75	L2	True	500.00	547.96	109.6
4	LD76	L3	True	1000.00	894.62	89.5
5	LD77	L4	True	2500.00	2486.30	99.5
6	LD78	L5	True	10000.00	10295.36	103.0
7	LD79	L6	True	25000.00	24777.18	99.1





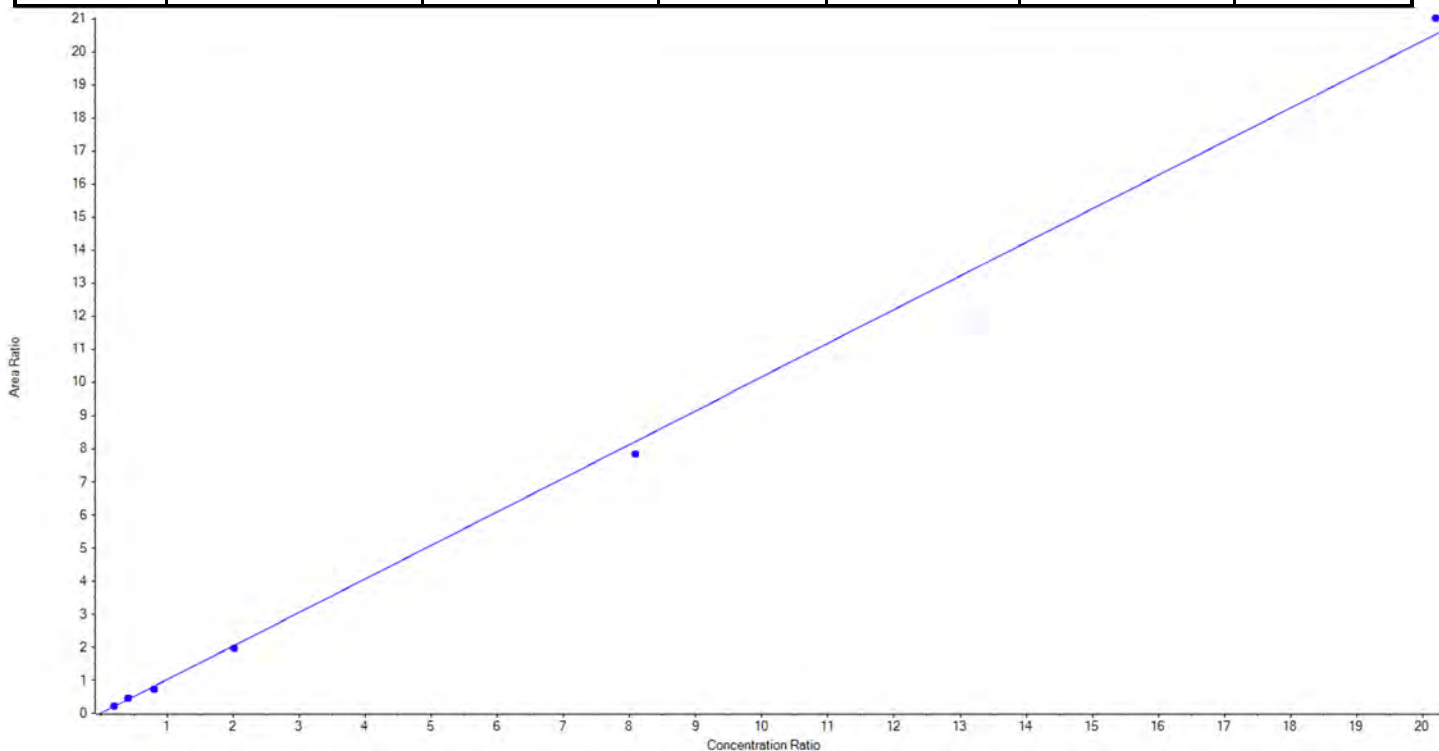
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Analyte Name	PFHxA_1	Data File	AC_11042020_5-369.wiff
MRM Transition	313.0 / 269.0	Result Table	20-1310
Internal Standard	13C5-PFHxA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 1.01632x + 0.00157$ ($r = 0.99918$) (weighting: $1/x$) $r^2: 0.9984$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	252.50	266.19	105.4
3	LD75	L2	True	505.00	562.31	111.4
4	LD76	L3	True	1010.00	908.85	90.0
5	LD77	L4	True	2525.00	2407.66	95.4
6	LD78	L5	True	10100.00	9646.91	95.5
7	LD79	L6	True	25250.00	25850.58	102.4





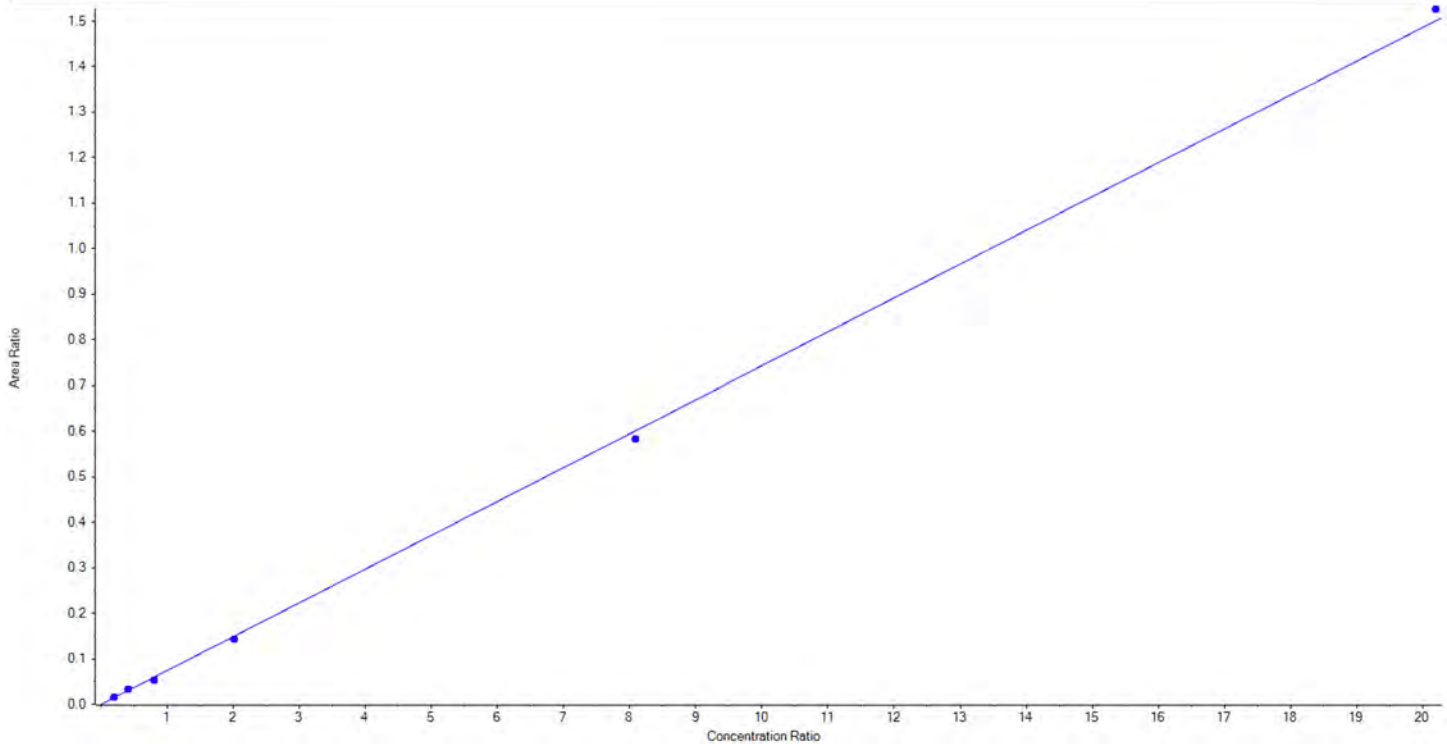
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Analyte Name	PFHxA_2	Data File	AC_11042020_5-369.wiff
MRM Transition	313.0 / 119.0	Result Table	20-1310
Internal Standard	13C5-PFHxA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.07430 x + -2.04547e-4$ (r = 0.99945) (weighting: 1 / x) r²:0.9989

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	252.50	267.64	106.0
3	LD75	L2	True	505.00	556.60	110.2
4	LD76	L3	True	1010.00	897.05	88.8
5	LD77	L4	True	2525.00	2426.39	96.1
6	LD78	L5	True	10100.00	9814.16	97.2
7	LD79	L6	True	25250.00	25680.66	101.7





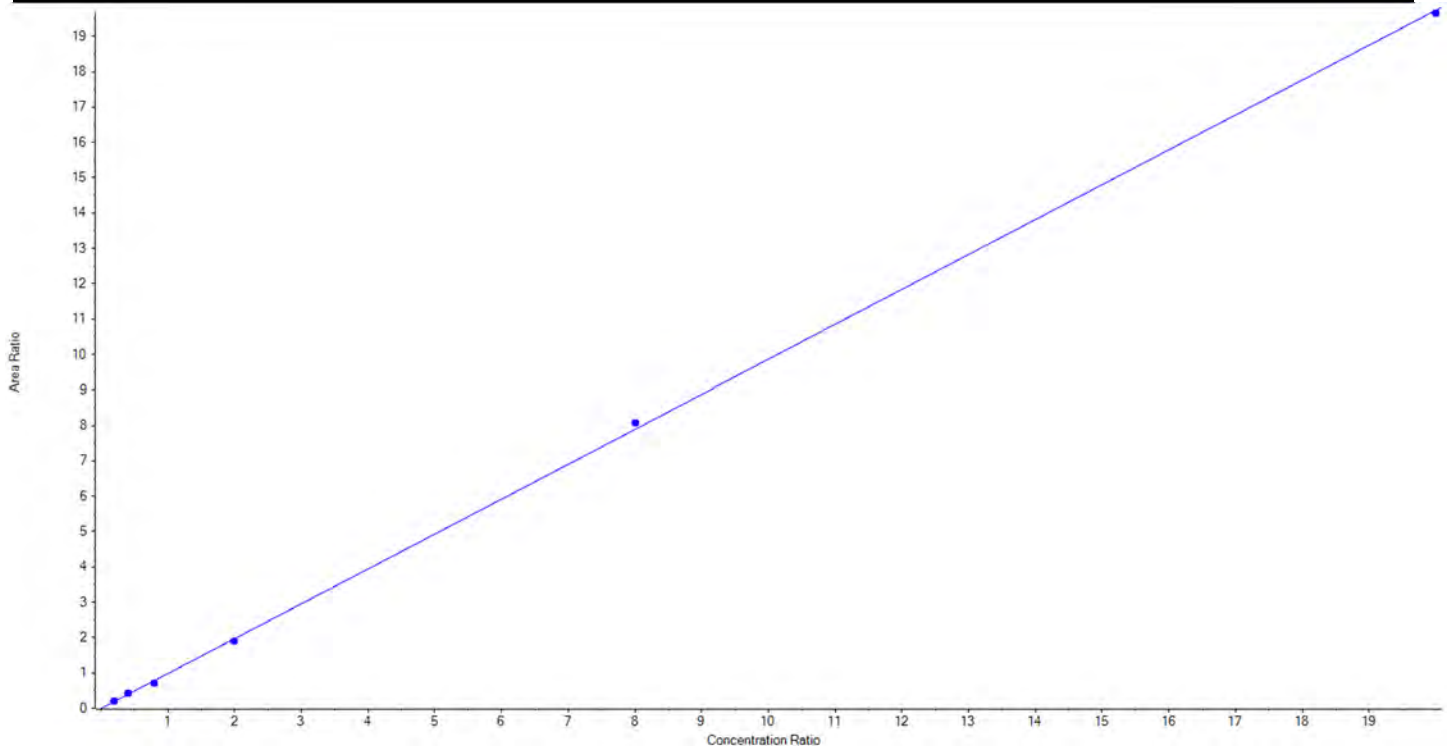
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Analyte Name	PFHpA_1	Data File	AC_11042020_5-369.wiff
MRM Transition	363.0 / 319.0	Result Table	20-1310
Internal Standard	13C4-PFHpA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.98722 x + -0.00689$ ($r = 0.99971$) (weighting: $1 / x$) $r^2: 0.9994$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	250.87	100.4
3	LD75	L2	True	500.00	547.94	109.6
4	LD76	L3	True	1000.00	920.44	92.0
5	LD77	L4	True	2500.00	2403.64	96.2
6	LD78	L5	True	10000.00	10227.41	102.3
7	LD79	L6	True	25000.00	24899.70	99.6





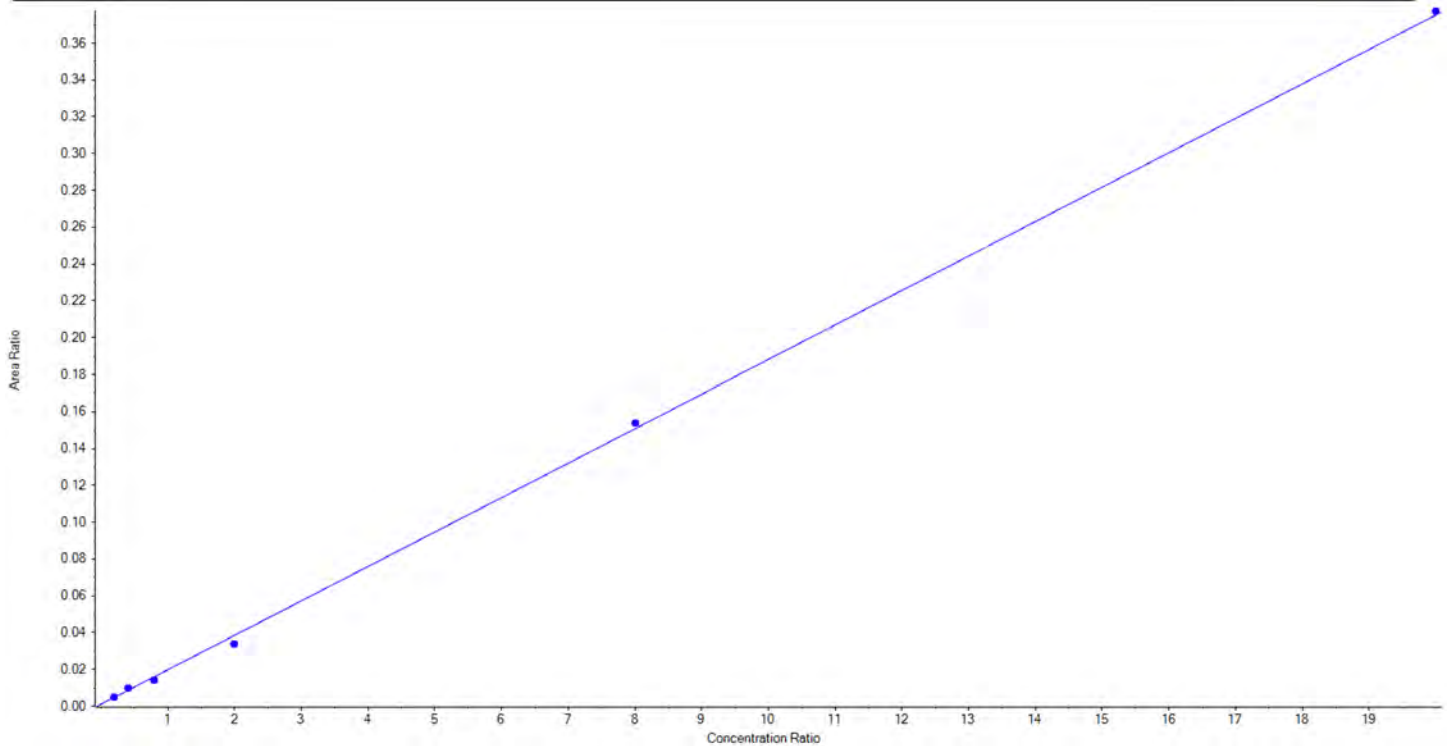
Calibration Summary Report

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Analyte Name	PFHpA_2	Data File	AC_11042020_5-369.wiff
MRM Transition	363.0 / 169.0	Result Table	20-1310
Internal Standard	13C4-PFHpA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.01871 x + 0.00110$ ($r = 0.99884$) (weighting: $1/x$) $r^2: 0.9977$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	261.70	104.7
3	LD75	L2	True	500.00	587.95	117.6
4	LD76	L3	True	1000.00	885.94	88.6
5	LD77	L4	True	2500.00	2161.83	86.5
6	LD78	L5	True	10000.00	10208.97	102.1
7	LD79	L6	True	25000.00	25143.61	100.6





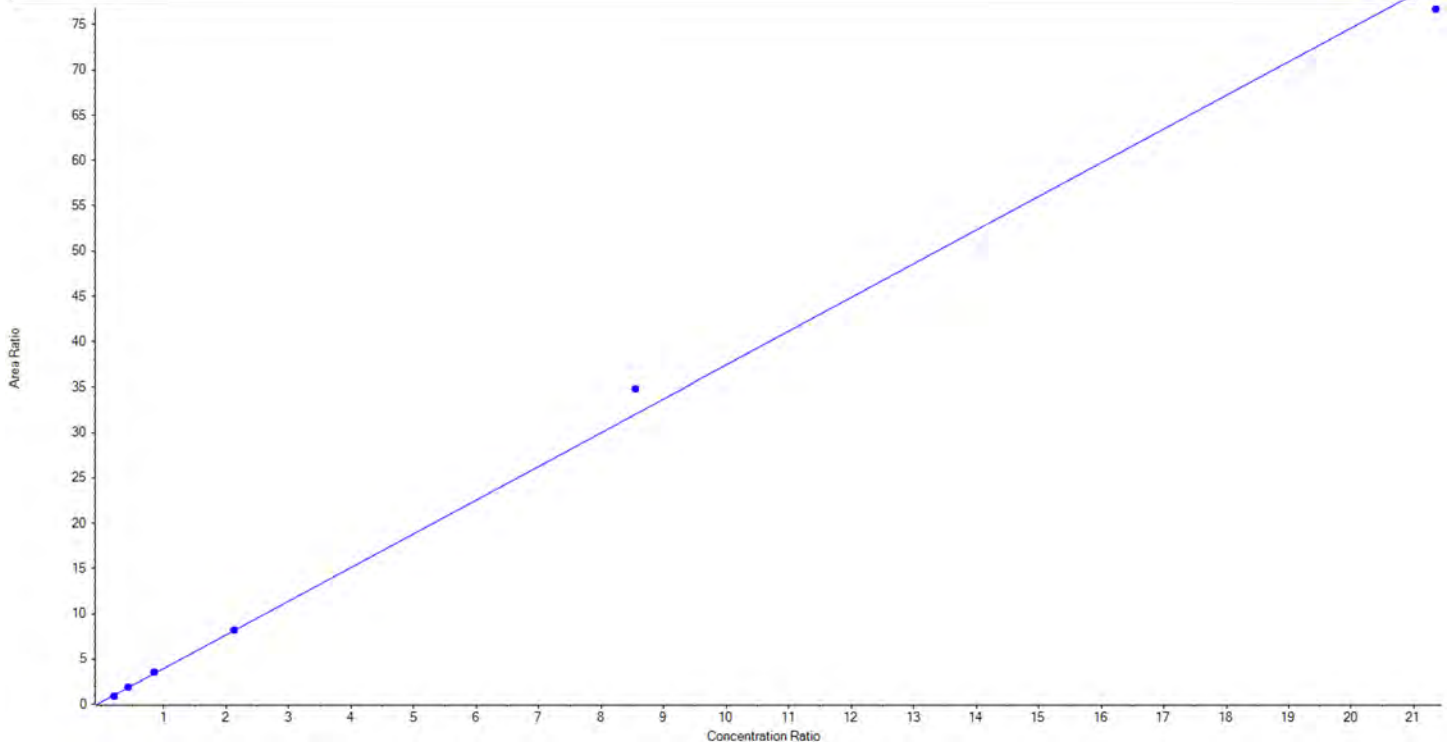
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Analyte Name	PFHxS_1	Data File	AC_11042020_5-369.wiff
MRM Transition	399.0 / 80.0	Result Table	20-1310
Internal Standard	13C3-PFHxS	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 3.72027x + 0.21837$ ($r = 0.99822$) (weighting: $1/x$) $r^2: 0.9964$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	252.50	215.87	85.5
3	LD75	L2	True	505.00	535.52	106.0
4	LD76	L3	True	1010.00	1040.51	103.0
5	LD77	L4	True	2525.00	2529.20	100.2
6	LD78	L5	True	10100.00	11007.16	109.0
7	LD79	L6	True	25250.00	24314.23	96.3





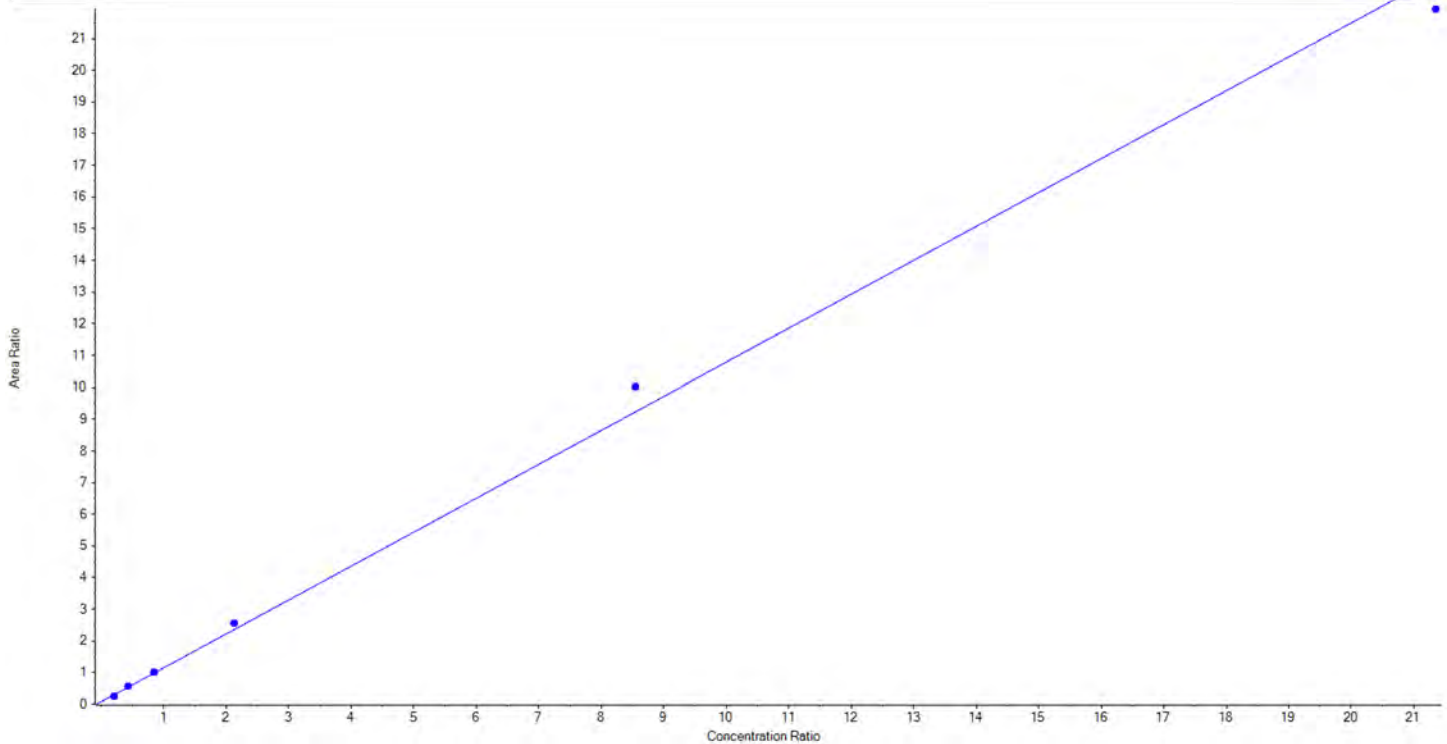
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Analyte Name	PFHxS_2	Data File	AC_11042020_5-369.wiff
MRM Transition	399.0 / 99.0	Result Table	20-1310
Internal Standard	13C3-PFHxS	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 1.07105x + 0.07633$ ($r = 0.99769$) (weighting: $1/x$) $r^2: 0.9954$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	252.50	200.63	79.5
3	LD75	L2	True	505.00	528.77	104.7
4	LD76	L3	True	1010.00	1032.06	102.2
5	LD77	L4	True	2525.00	2759.11	109.3
6	LD78	L5	True	10100.00	10989.14	108.8
7	LD79	L6	True	25250.00	24132.79	95.6





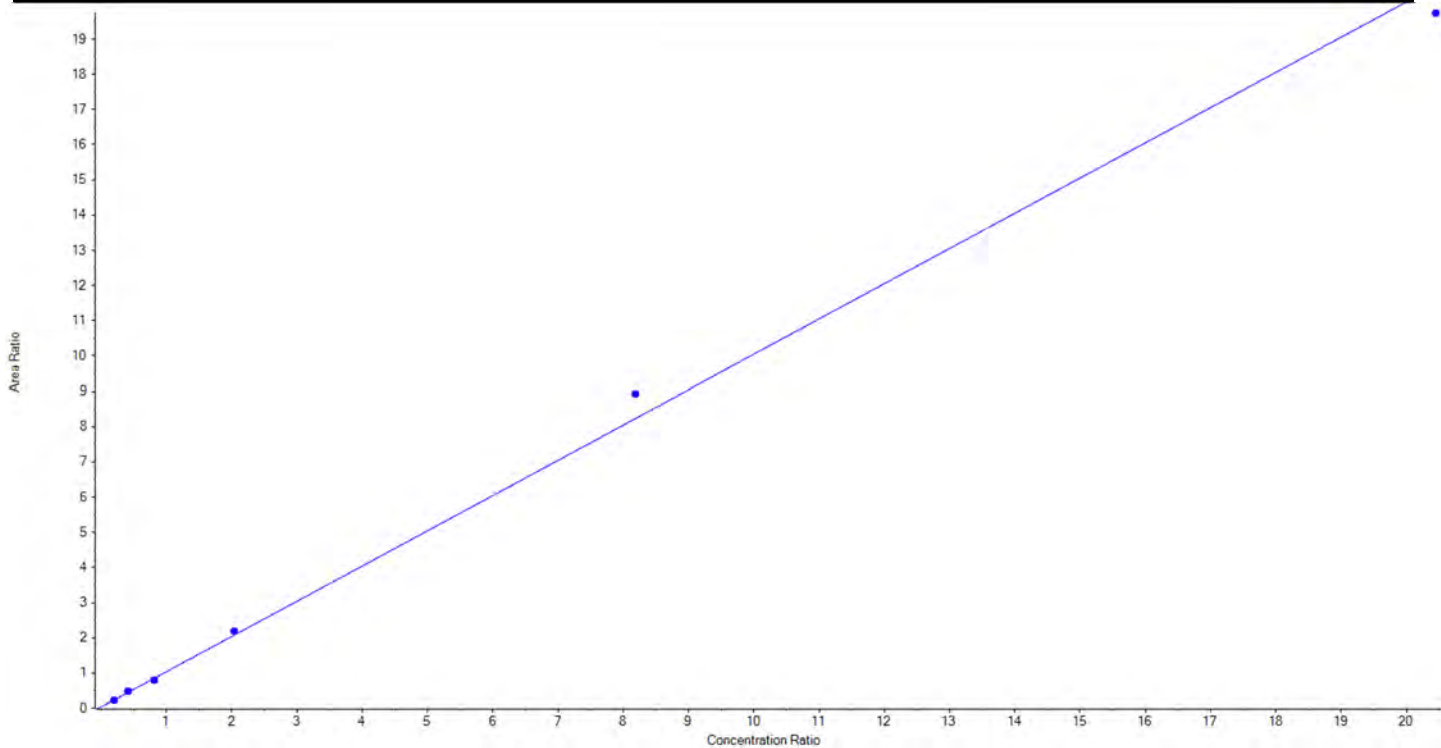
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Analyte Name	PFOA_1	Data File	AC_11042020_5-369.wiff
MRM Transition	413.0 / 369.0	Result Table	20-1310
Internal Standard	13C8-PFOA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 1.00092x + 0.03592$ ($r = 0.99818$) (weighting: $1/x$) $r^2:0.9964$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	218.58	87.4
3	LD75	L2	True	500.00	541.21	108.2
4	LD76	L3	True	1000.00	941.21	94.1
5	LD77	L4	True	2500.00	2636.24	105.5
6	LD78	L5	True	10000.00	10850.49	108.5
7	LD79	L6	True	25000.00	24062.27	96.3





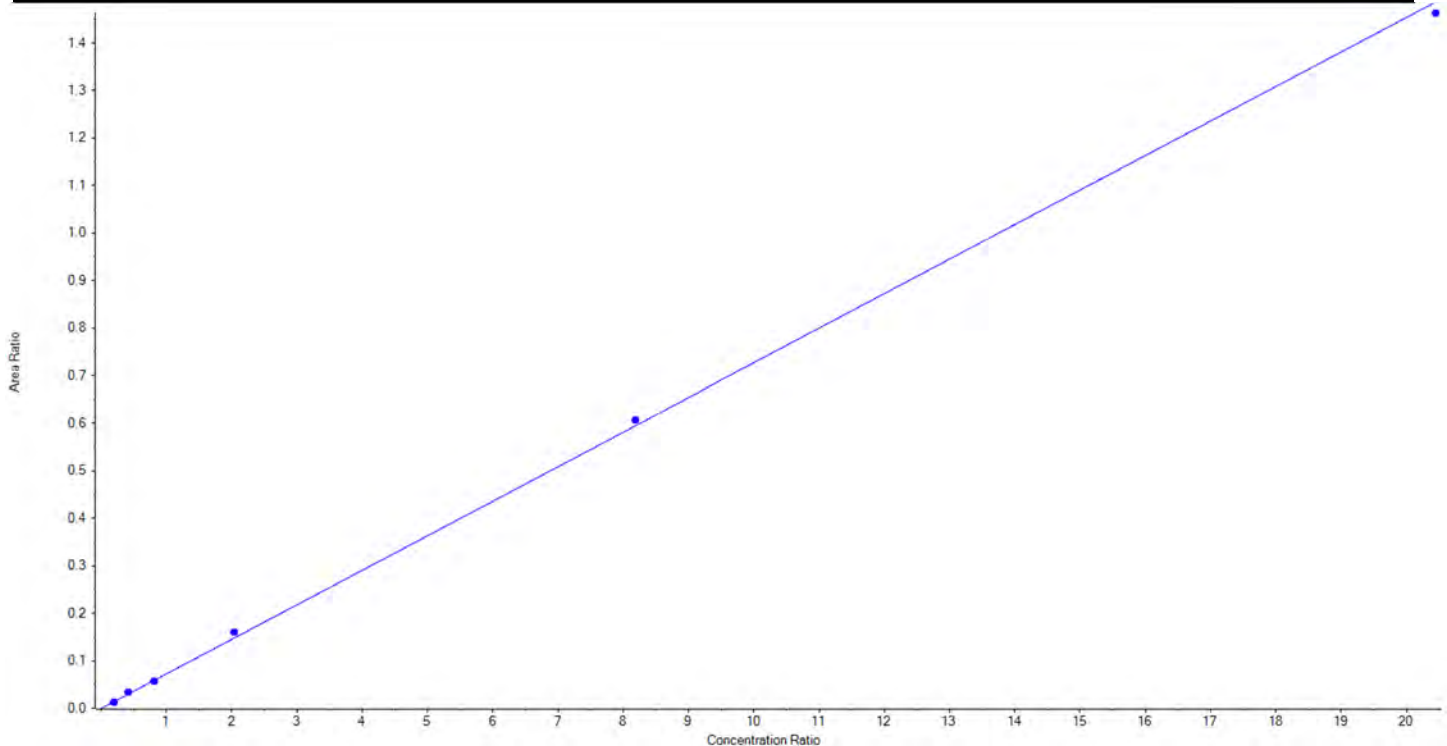
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Analyte Name	PFOA_2	Data File	AC_11042020_5-369.wiff
MRM Transition	413.0 / 169.0	Result Table	20-1310
Internal Standard	13C8-PFOA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.07272 x + -4.36901e-4$ ($r = 0.99938$) (weighting: $1 / x$) $r^2:0.9988$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	208.93	83.6
3	LD75	L2	True	500.00	563.28	112.7
4	LD76	L3	True	1000.00	954.41	95.4
5	LD77	L4	True	2500.00	2690.76	107.6
6	LD78	L5	True	10000.00	10228.51	102.3
7	LD79	L6	True	25000.00	24604.11	98.4





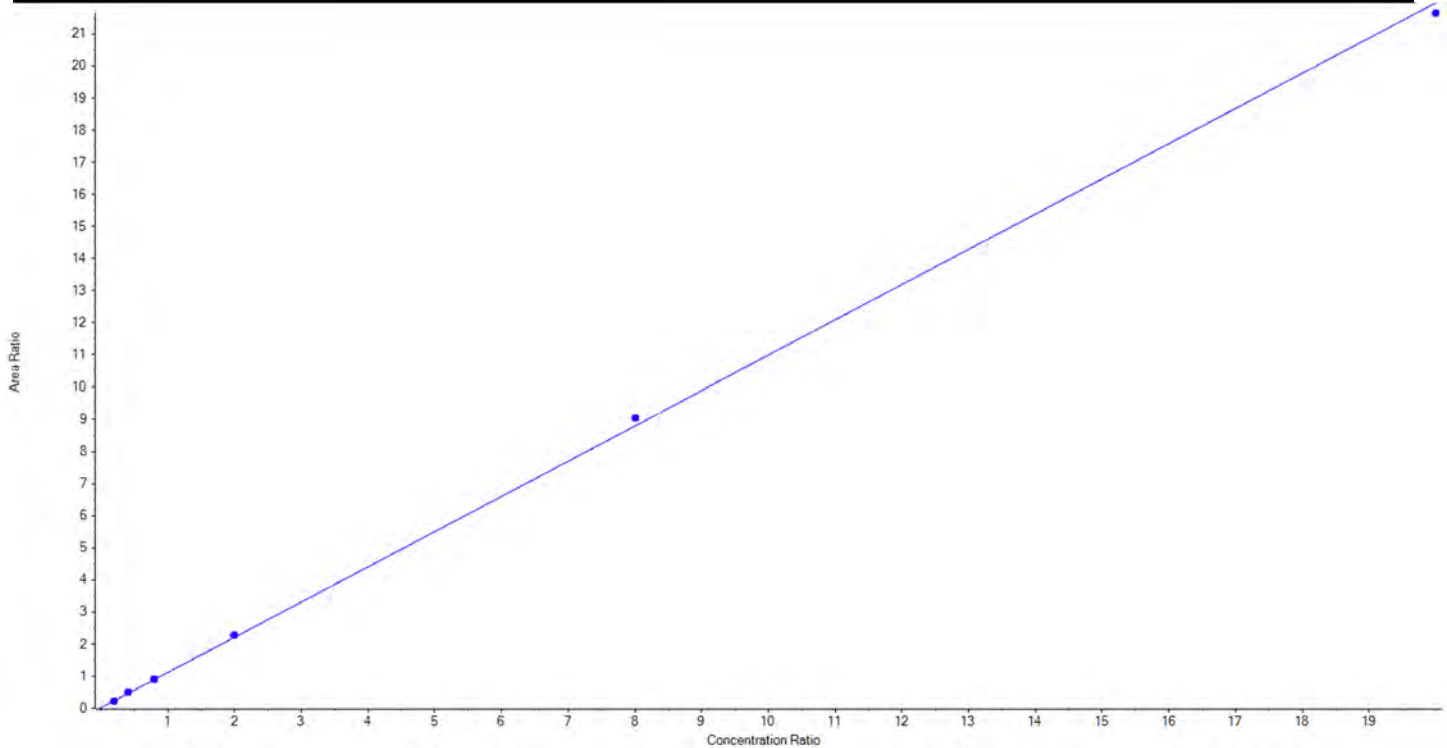
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Analyte Name	PFNA_1	Data File	AC_11042020_5-369.wiff
MRM Transition	463.0 / 419.0	Result Table	20-1310
Internal Standard	13C9-PFNA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 1.09763x + 0.01645$ ($r = 0.99967$) (weighting: $1/x$) $r^2: 0.9993$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	220.28	88.1
3	LD75	L2	True	500.00	541.03	108.2
4	LD76	L3	True	1000.00	994.01	99.4
5	LD77	L4	True	2500.00	2571.40	102.9
6	LD78	L5	True	10000.00	10288.70	102.9
7	LD79	L6	True	25000.00	24634.59	98.5





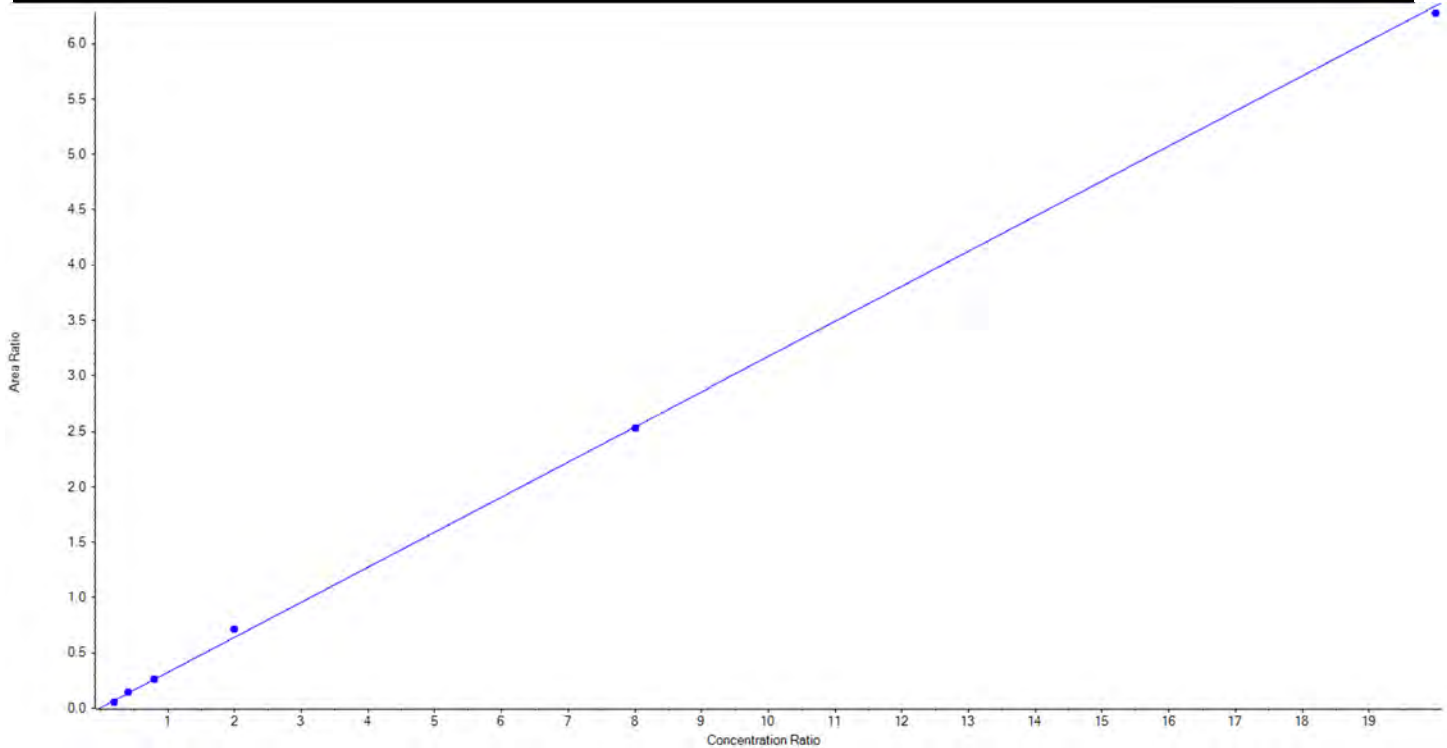
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Analyte Name	PFNA_2	Data File	AC_11042020_5-369.wiff
MRM Transition	463.0 / 219.0	Result Table	20-1310
Internal Standard	13C9-PFNA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.31676 x + 0.00758$ ($r = 0.99931$) (weighting: $1/x$) $r^2:0.9986$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	198.22	79.3
3	LD75	L2	True	500.00	544.84	109.0
4	LD76	L3	True	1000.00	1021.26	102.1
5	LD77	L4	True	2500.00	2773.64	111.0
6	LD78	L5	True	10000.00	9971.05	99.7
7	LD79	L6	True	25000.00	24741.00	99.0





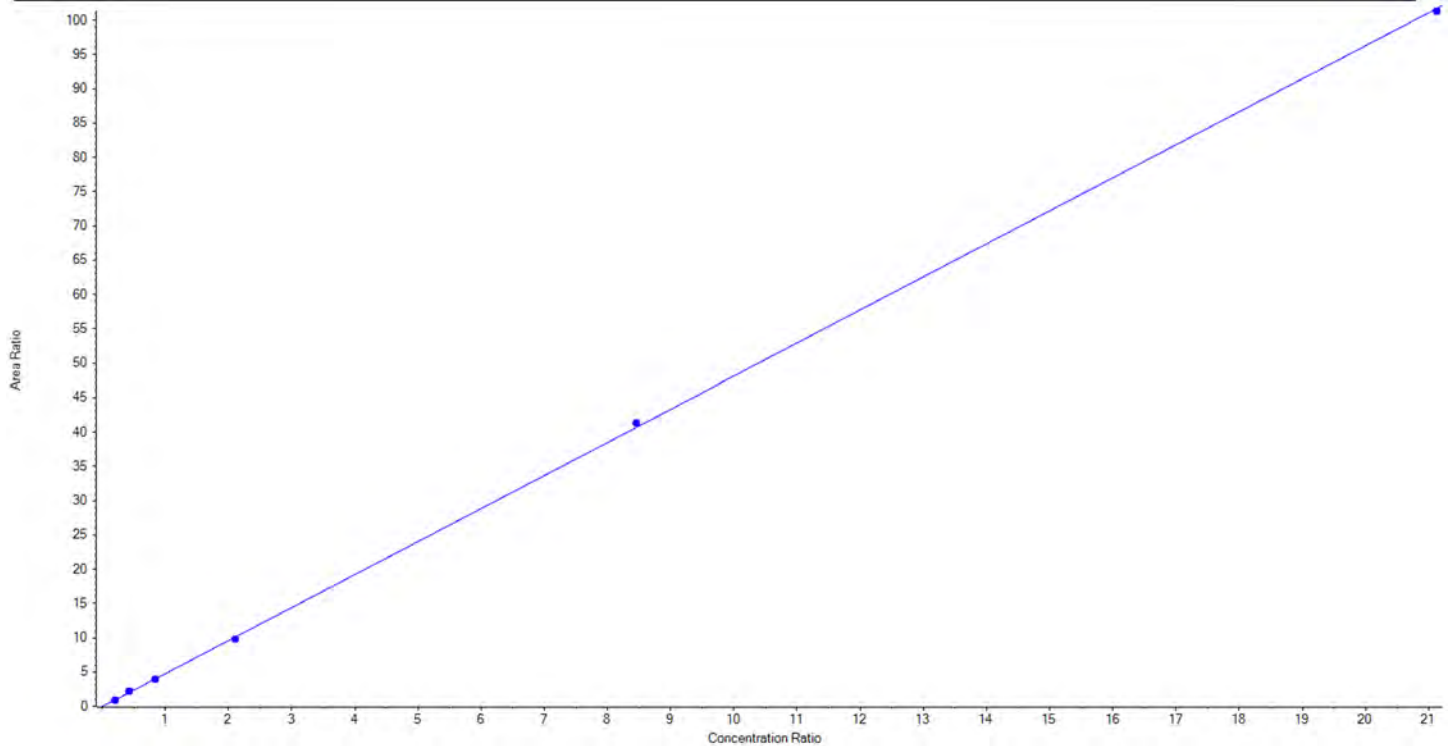
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Analyte Name	PFOS_1	Data File	AC_11042020_5-369.wiff
MRM Transition	499.0 / 80.0	Result Table	20-1310
Internal Standard	13C8-PFOS	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 4.81648x + -0.06971$ ($r = 0.99987$) (weighting: 1 / x) $r^2: 0.9997$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	252.50	244.49	96.8
3	LD75	L2	True	505.00	542.98	107.5
4	LD76	L3	True	1010.00	983.65	97.4
5	LD77	L4	True	2525.00	2448.57	97.0
6	LD78	L5	True	10100.00	10268.04	101.7
7	LD79	L6	True	25250.00	25154.77	99.6





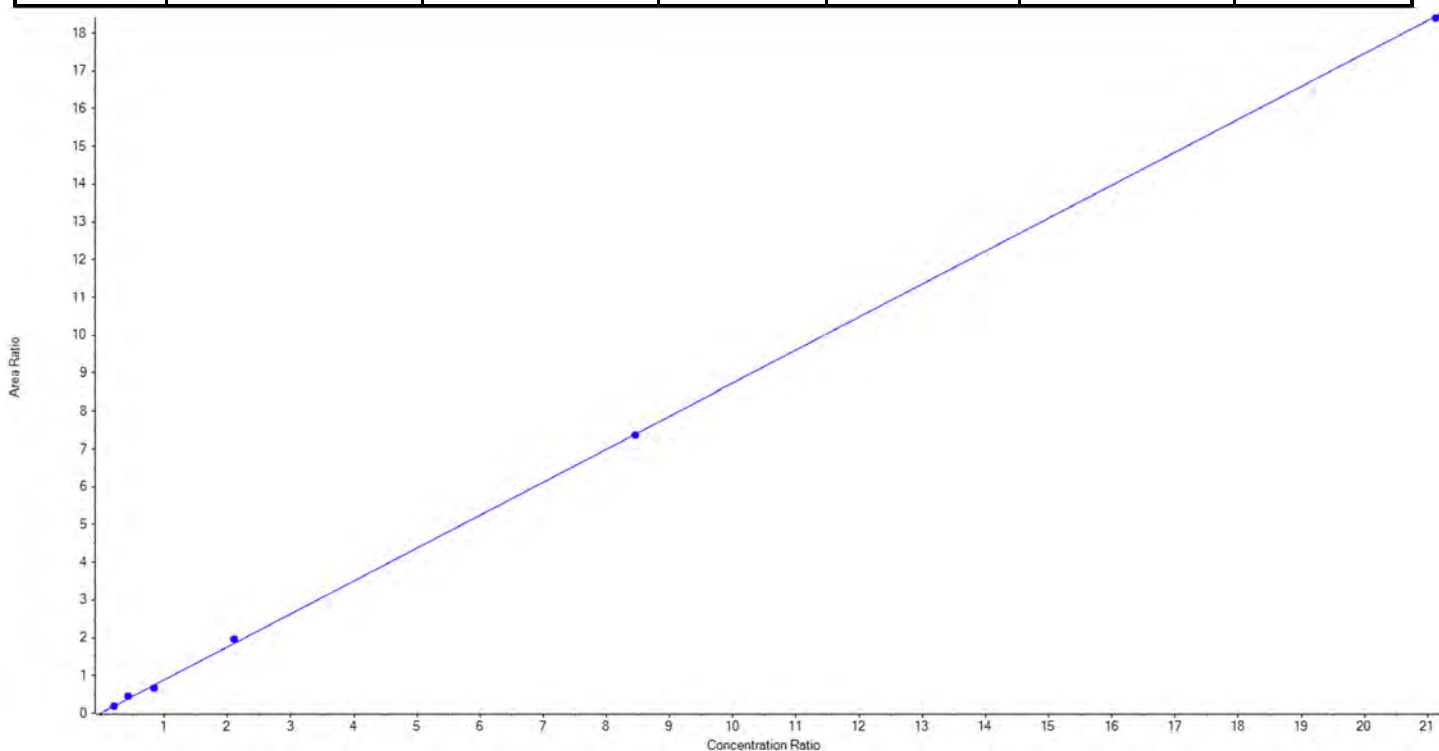
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Analyte Name	PFOS_2	Data File	AC_11042020_5-369.wiff
MRM Transition	499.0 / 99.0	Result Table	20-1310
Internal Standard	13C8-PFOS	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.87234x + 0.01141$ ($r = 0.99944$) (weighting: $1/x$) $r^2: 0.9989$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	252.50	224.28	88.8
3	LD75	L2	True	505.00	591.86	117.2
4	LD76	L3	True	1010.00	896.43	88.8
5	LD77	L4	True	2525.00	2669.59	105.7
6	LD78	L5	True	10100.00	10074.69	99.8
7	LD79	L6	True	25250.00	25185.66	99.8





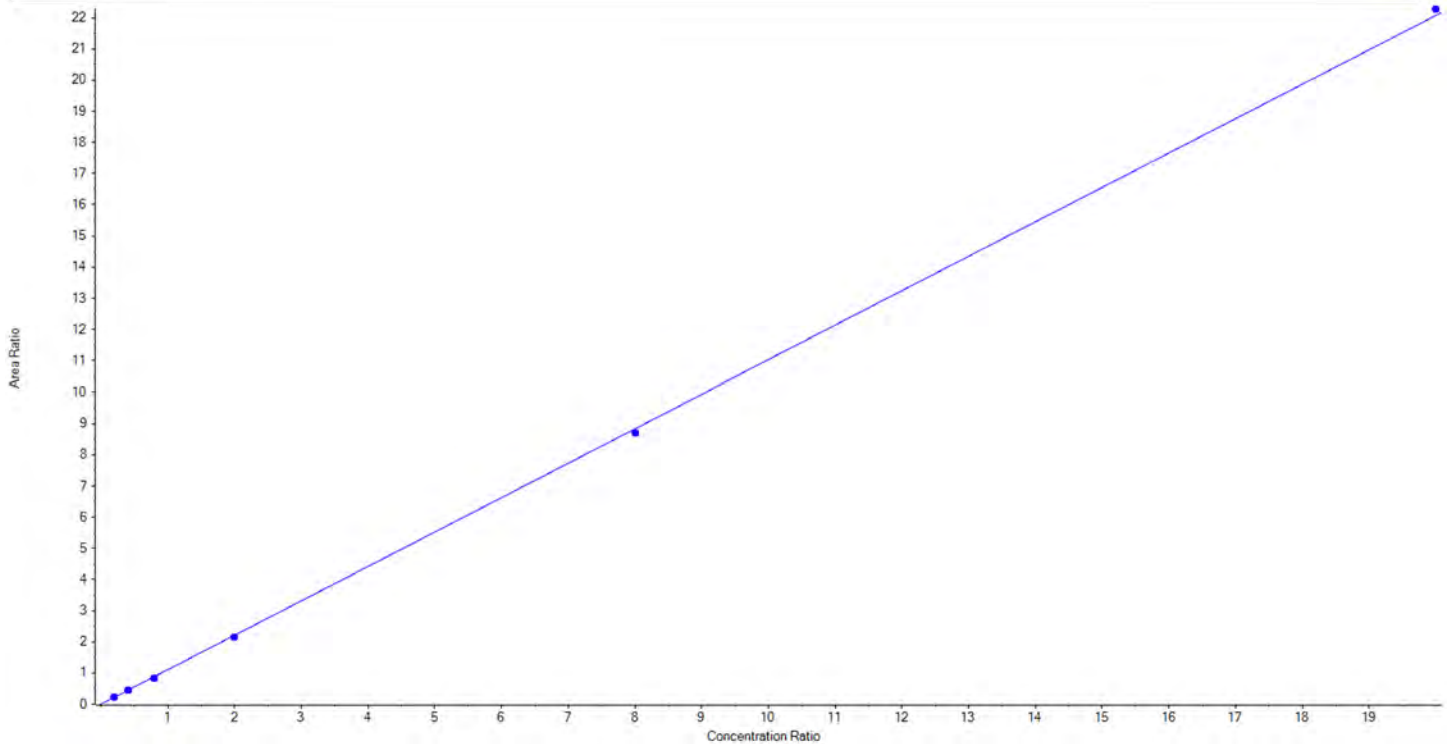
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Analyte Name	PFDA_1	Data File	AC_11042020_5-369.wiff
MRM Transition	513.0 / 469.0	Result Table	20-1310
Internal Standard	13C6-PFDA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 1.10331x + 0.00482$ ($r = 0.99984$) (weighting: $1/x$) $r^2: 0.9997$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	265.43	106.2
3	LD75	L2	True	500.00	514.92	103.0
4	LD76	L3	True	1000.00	935.96	93.6
5	LD77	L4	True	2500.00	2443.09	97.7
6	LD78	L5	True	10000.00	9860.38	98.6
7	LD79	L6	True	25000.00	25230.23	100.9





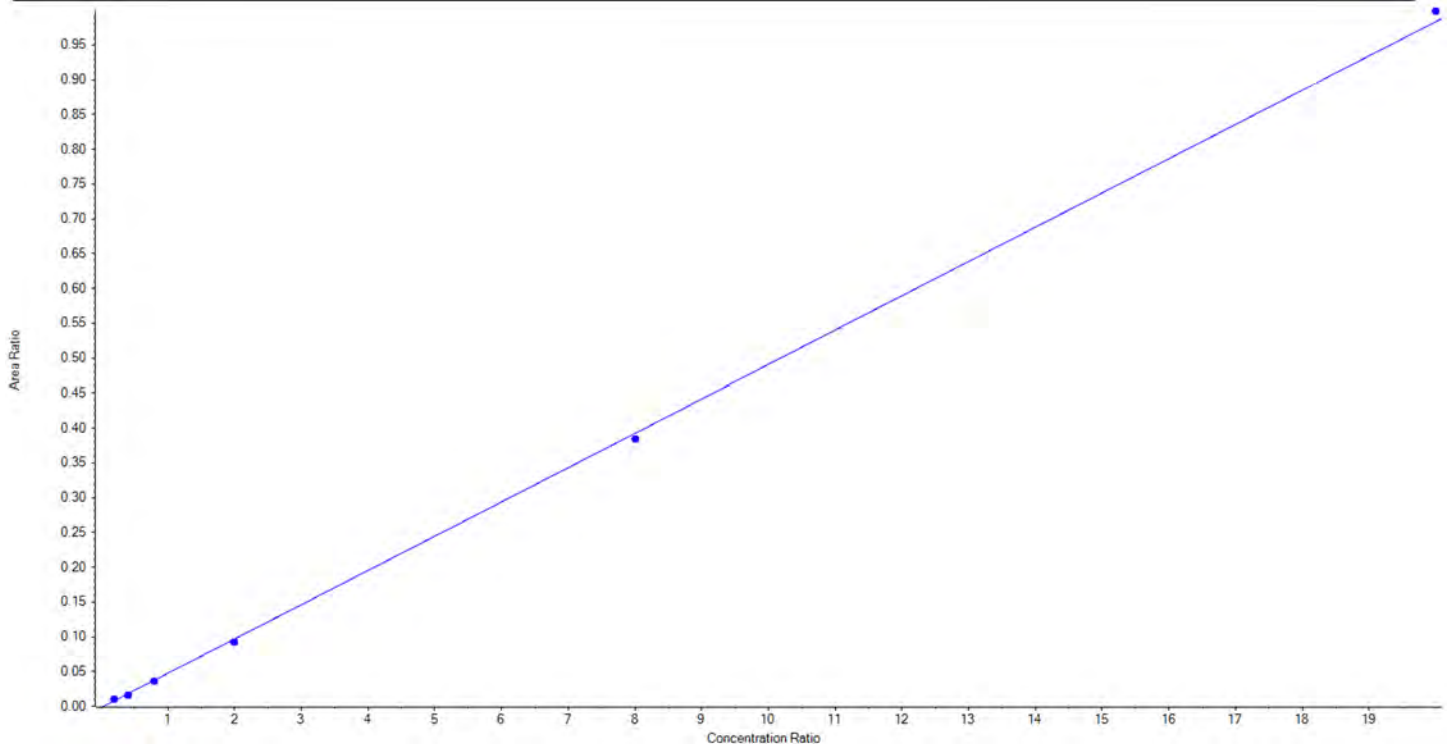
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Analyte Name	PFDA_2	Data File	AC_11042020_5-369.wiff
MRM Transition	513.0 / 219.0	Result Table	20-1310
Internal Standard	13C6-PFDA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.04927 x + -0.00188$ ($r = 0.99940$) (weighting: $1 / x$) $r^2:0.9988$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	309.02	123.6
3	LD75	L2	True	500.00	431.47	86.3
4	LD76	L3	True	1000.00	954.66	95.5
5	LD77	L4	True	2500.00	2379.50	95.2
6	LD78	L5	True	10000.00	9791.78	97.9
7	LD79	L6	True	25000.00	25383.57	101.5





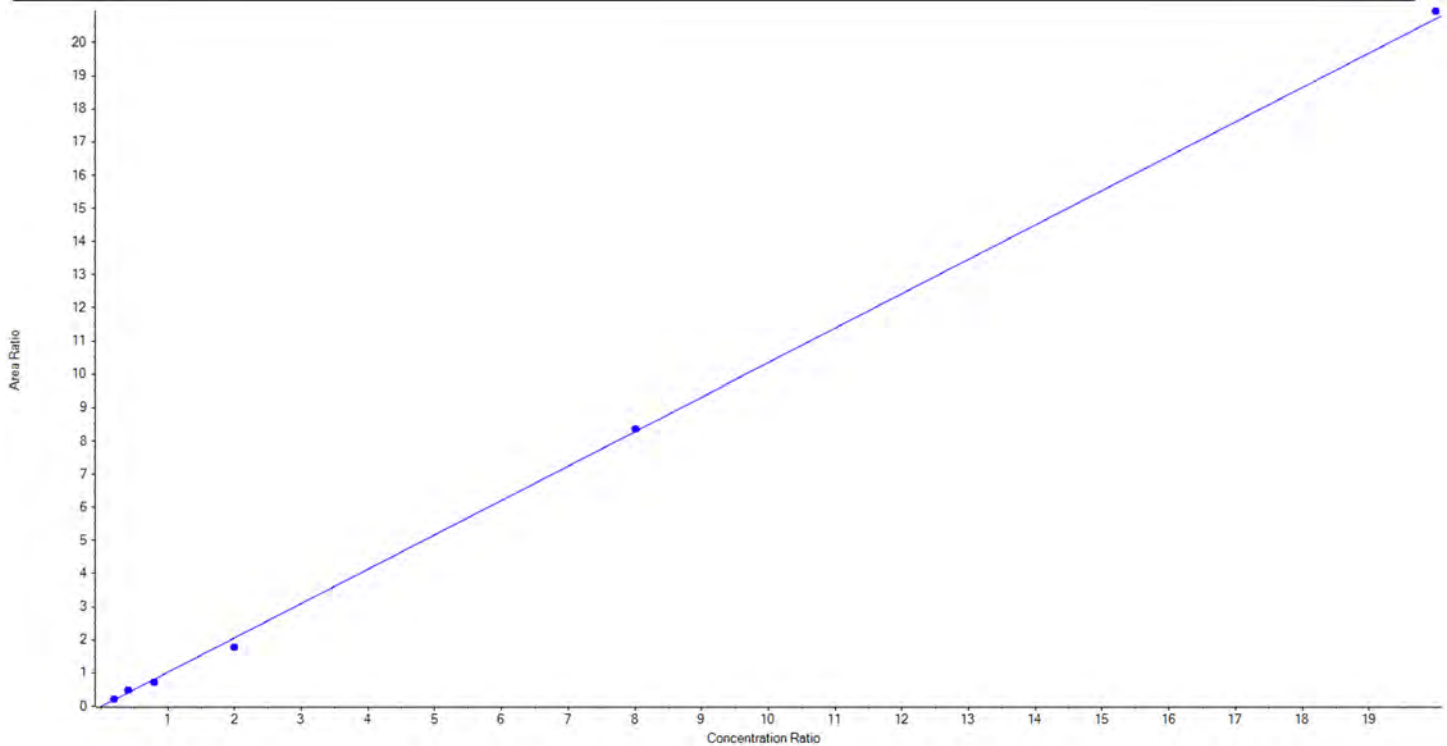
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Analyte Name	PFUnA_1	Data File	AC_11042020_5-369.wiff
MRM Transition	563.0 / 519.0	Result Table	20-1310
Internal Standard	13C7-PFUnA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 1.03647 x + -0.01255$ ($r = 0.99881$) (weighting: $1 / x$) $r^2: 0.9976$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	268.19	107.3
3	LD75	L2	True	500.00	585.06	117.0
4	LD76	L3	True	1000.00	874.09	87.4
5	LD77	L4	True	2500.00	2158.41	86.3
6	LD78	L5	True	10000.00	10085.03	100.9
7	LD79	L6	True	25000.00	25279.22	101.1





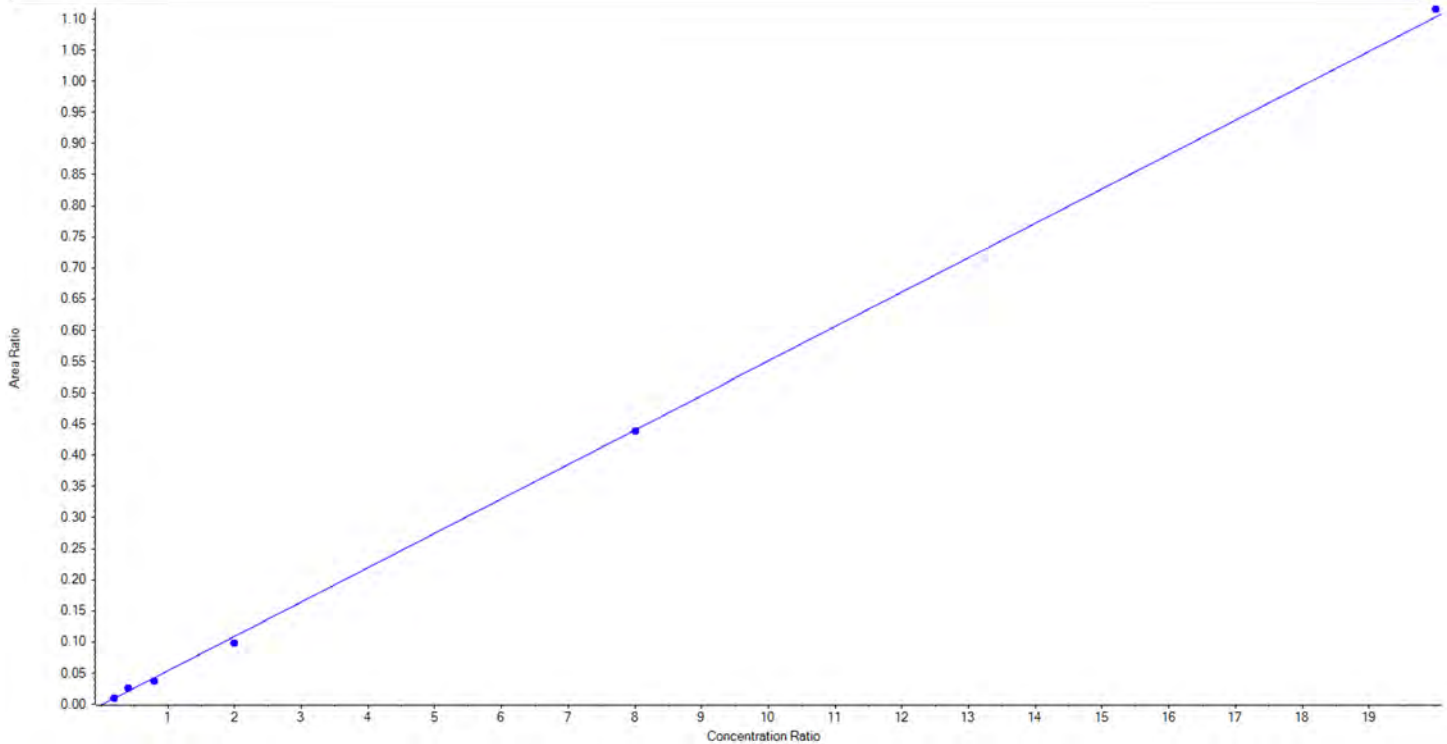
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Analyte Name	PFUnA_2	Data File	AC_11042020_5-369.wiff
MRM Transition	563.0 / 269.0	Result Table	20-1310
Internal Standard	13C7-PFUnA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.05524 x + -0.00149$ ($r = 0.99895$) (weighting: $1 / x$) $r^2: 0.9979$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	252.33	100.9
3	LD75	L2	True	500.00	611.44	122.3
4	LD76	L3	True	1000.00	852.59	85.3
5	LD77	L4	True	2500.00	2263.74	90.6
6	LD78	L5	True	10000.00	9982.15	99.8
7	LD79	L6	True	25000.00	25287.76	101.2





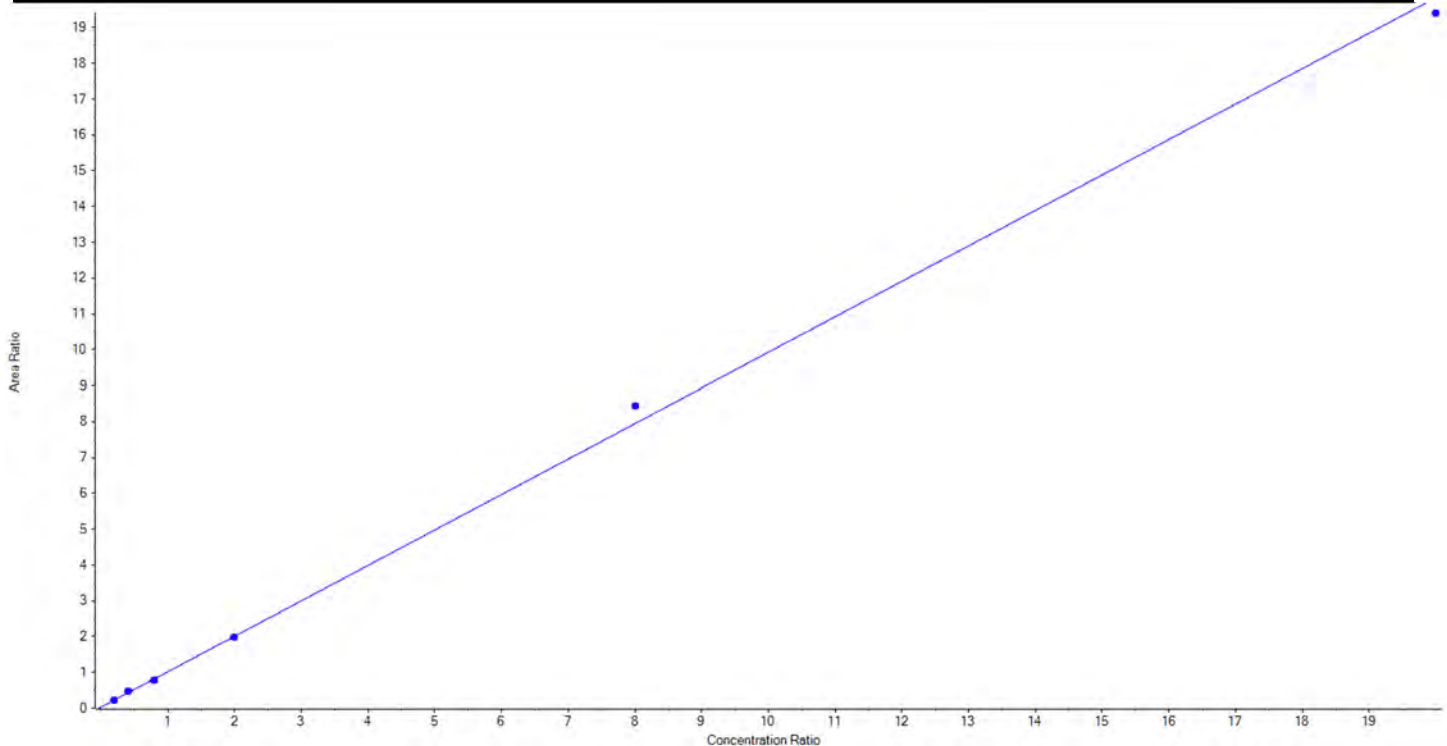
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Analyte Name	PFD _o A_1	Data File	AC_11042020_5-369.wiff
MRM Transition	613.0 / 569.0	Result Table	20-1310
Internal Standard	13C2-PFD _o A	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.99010x + 0.02904$ ($r = 0.99913$) (weighting: $1/x$) $r^2: 0.9983$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	235.28	94.1
3	LD75	L2	True	500.00	550.47	110.1
4	LD76	L3	True	1000.00	936.16	93.6
5	LD77	L4	True	2500.00	2454.90	98.2
6	LD78	L5	True	10000.00	10614.70	106.2
7	LD79	L6	True	25000.00	24458.48	97.8





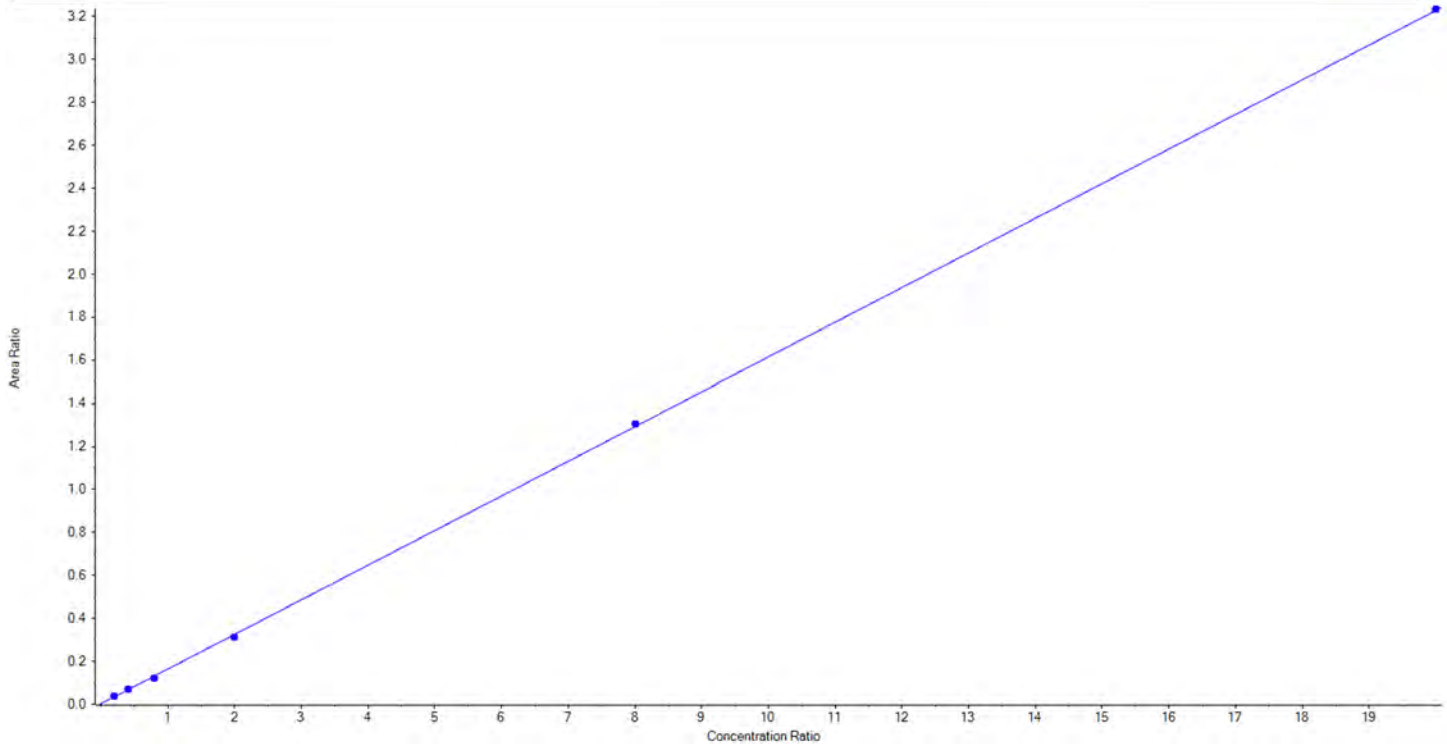
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Analyte Name	PFDoA_2	Data File	AC_11042020_5-369.wiff
MRM Transition	613.0 / 319.0	Result Table	20-1310
Internal Standard	13C2-PFDoA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.16129x + 0.00243$ ($r = 0.99974$) (weighting: $1/x$) $r^2: 0.9995$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	262.89	105.2
3	LD75	L2	True	500.00	535.79	107.2
4	LD76	L3	True	1000.00	910.63	91.1
5	LD77	L4	True	2500.00	2383.91	95.4
6	LD78	L5	True	10000.00	10106.41	101.1
7	LD79	L6	True	25000.00	25050.37	100.2





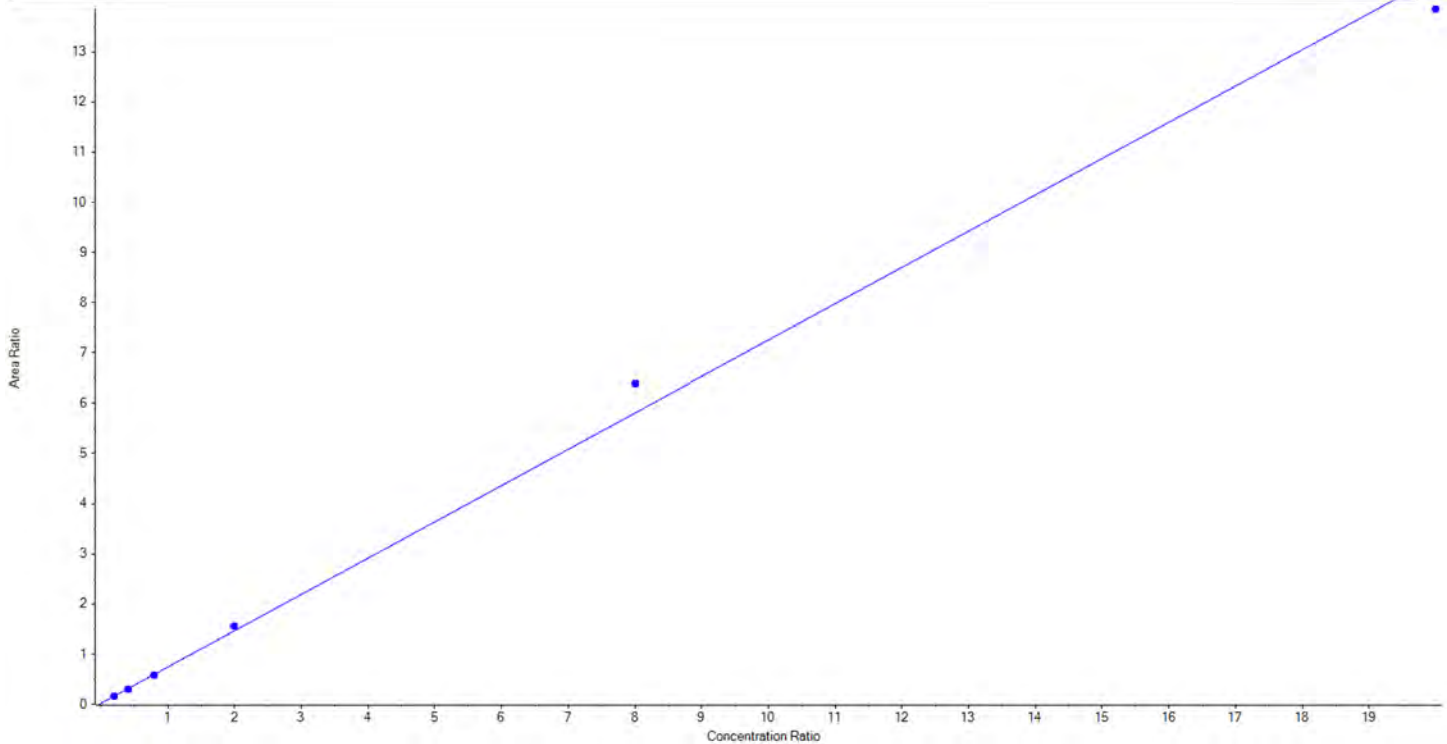
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Analyte Name	PFTrDA_1	Data File	AC_11042020_5-369.wiff
MRM Transition	663.0 / 619.0	Result Table	20-1310
Internal Standard	13C2-PFTeDA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.72333 x + 0.01948$ ($r = 0.99768$) (weighting: $1/x$) $r^2:0.9954$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	230.15	92.1
3	LD75	L2	True	500.00	498.83	99.8
4	LD76	L3	True	1000.00	968.38	96.8
5	LD77	L4	True	2500.00	2640.66	105.6
6	LD78	L5	True	10000.00	11010.32	110.1
7	LD79	L6	True	25000.00	23901.66	95.6





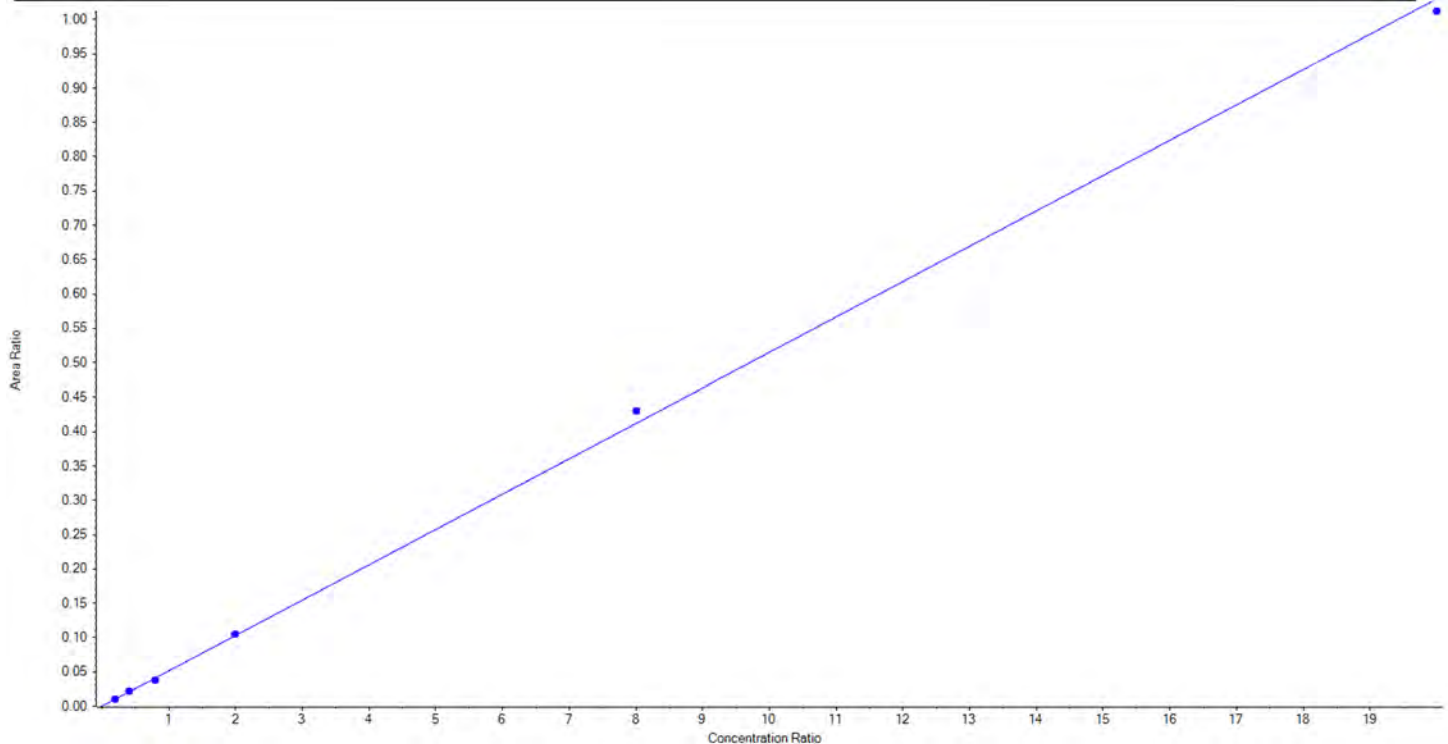
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Analyte Name	PFTrDA_2	Data File	AC_11042020_5-369.wiff
MRM Transition	663.0 / 169.0	Result Table	20-1310
Internal Standard	13C2-PFTeDA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.05150 x + 6.48519e-5$ ($r = 0.99952$) (weighting: $1/x$) $r^2:0.9990$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	243.10	97.2
3	LD75	L2	True	500.00	524.04	104.8
4	LD76	L3	True	1000.00	929.73	93.0
5	LD77	L4	True	2500.00	2561.60	102.5
6	LD78	L5	True	10000.00	10424.48	104.2
7	LD79	L6	True	25000.00	24567.04	98.3





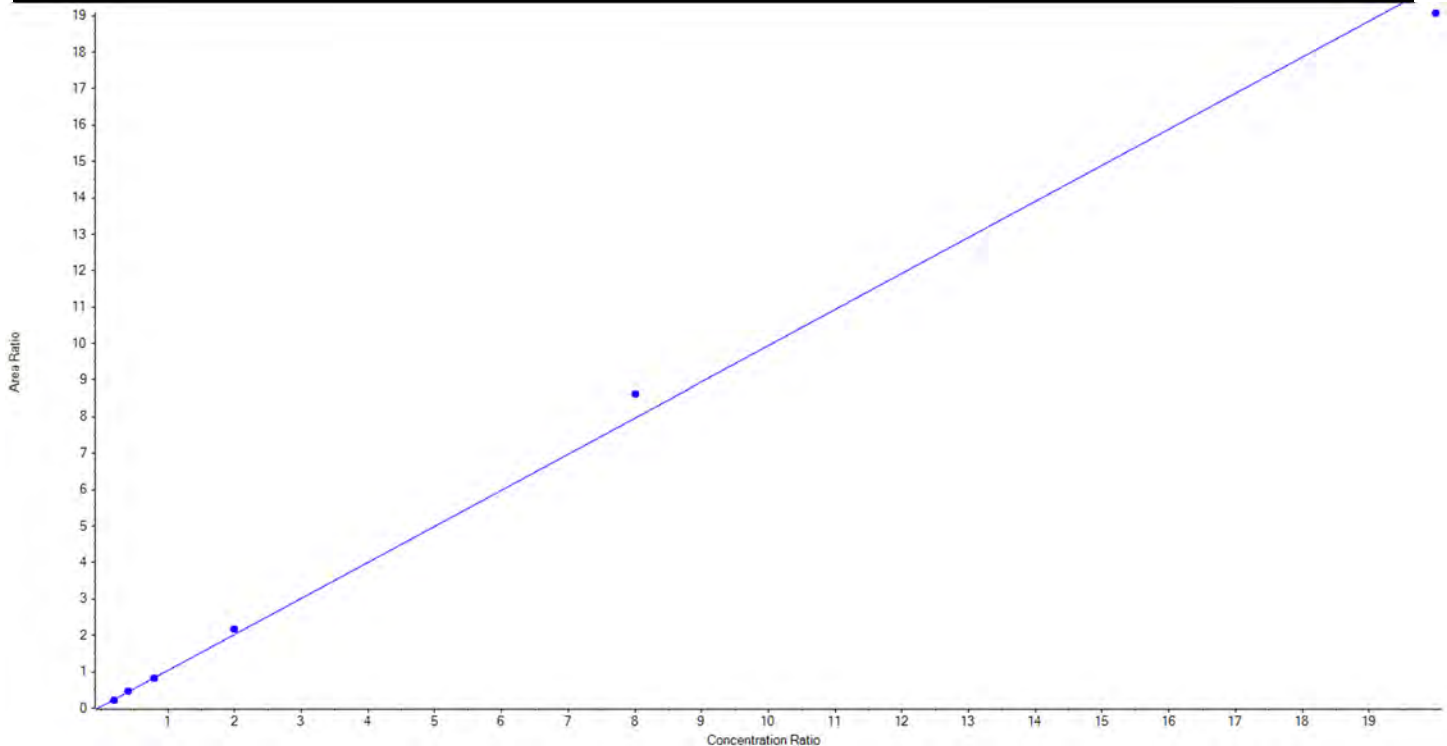
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Analyte Name	PFTeDA_1	Data File	AC_11042020_5-369.wiff
MRM Transition	713.0 / 669.0	Result Table	20-1310
Internal Standard	13C2-PFTeDA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.98971 x + 0.04572$ ($r = 0.99817$) (weighting: $1/x$) $r^2: 0.9963$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	217.87	87.2
3	LD75	L2	True	500.00	523.43	104.7
4	LD76	L3	True	1000.00	969.13	96.9
5	LD77	L4	True	2500.00	2667.61	106.7
6	LD78	L5	True	10000.00	10843.32	108.4
7	LD79	L6	True	25000.00	24028.64	96.1





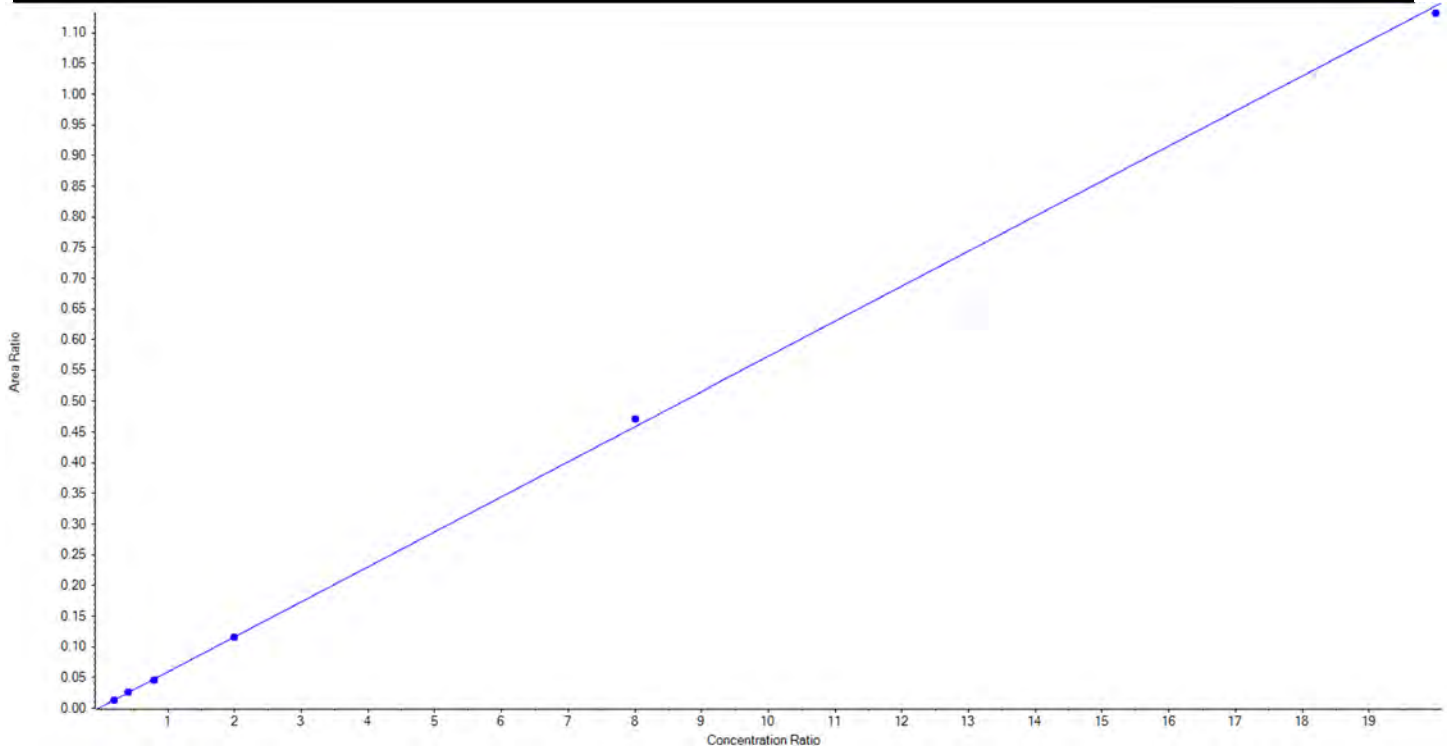
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Analyte Name	PFTeDA_2	Data File	AC_11042020_5-369.wiff
MRM Transition	713.0 / 169.0	Result Table	20-1310
Internal Standard	13C2-PFTeDA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.05708x + 0.00213$ ($r = 0.99981$) (weighting: $1/x$) $r^2: 0.9996$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	252.31	100.9
3	LD75	L2	True	500.00	507.15	101.4
4	LD76	L3	True	1000.00	958.00	95.8
5	LD77	L4	True	2500.00	2499.65	100.0
6	LD78	L5	True	10000.00	10288.15	102.9
7	LD79	L6	True	25000.00	24744.74	99.0





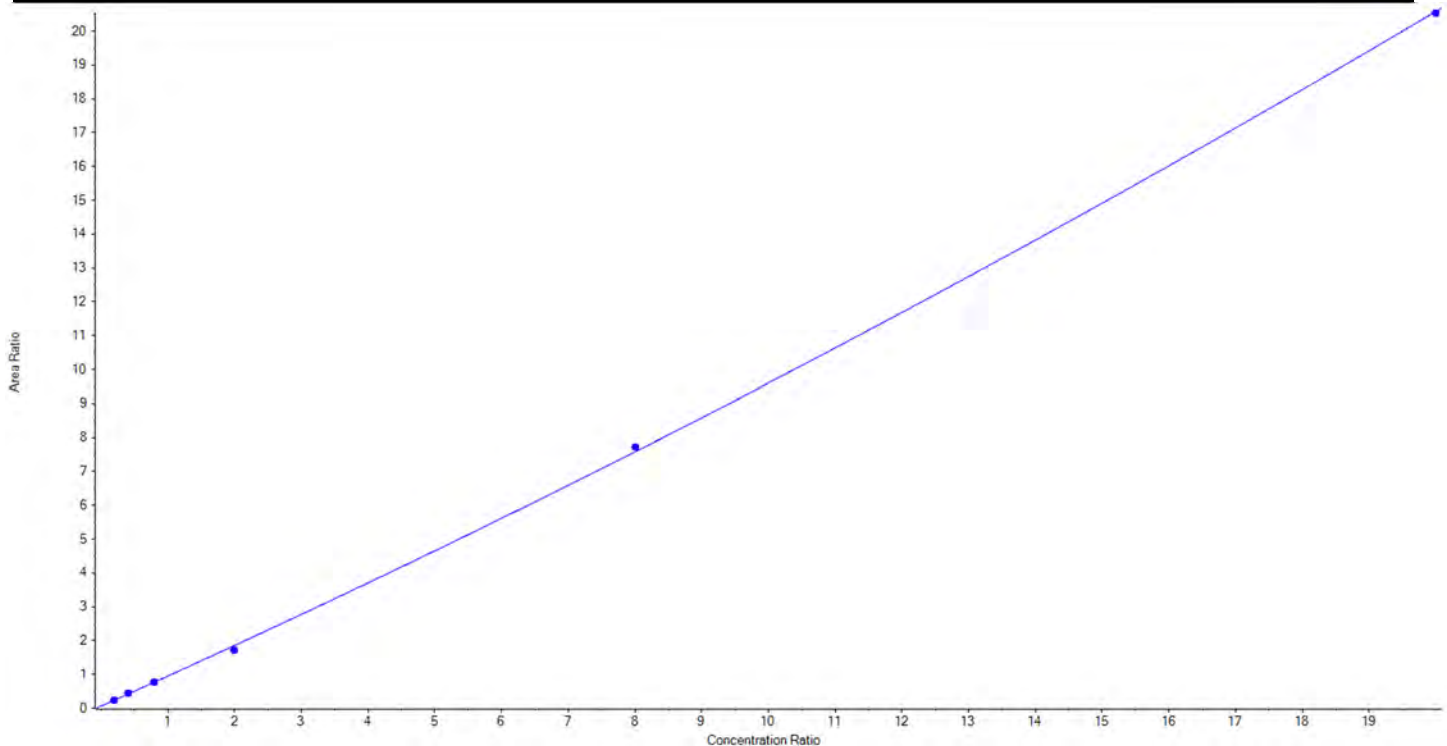
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Analyte Name	NMeFOSAA_1	Data File	AC_11042020_5-369.wiff
MRM Transition	570.0 / 419.0	Result Table	20-1310
Internal Standard	d3-MeFOSAA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.00719 x^2 + 0.88226 x + 0.06156$ ($r = 0.99977$) (weighting: $1 / x$) $r^2: 0.9995$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	244.05	97.6
3	LD75	L2	True	500.00	538.42	107.7
4	LD76	L3	True	1000.00	999.15	99.9
5	LD77	L4	True	2500.00	2326.82	93.1
6	LD78	L5	True	10000.00	10190.87	101.9
7	LD79	L6	True	25000.00	24947.79	99.8





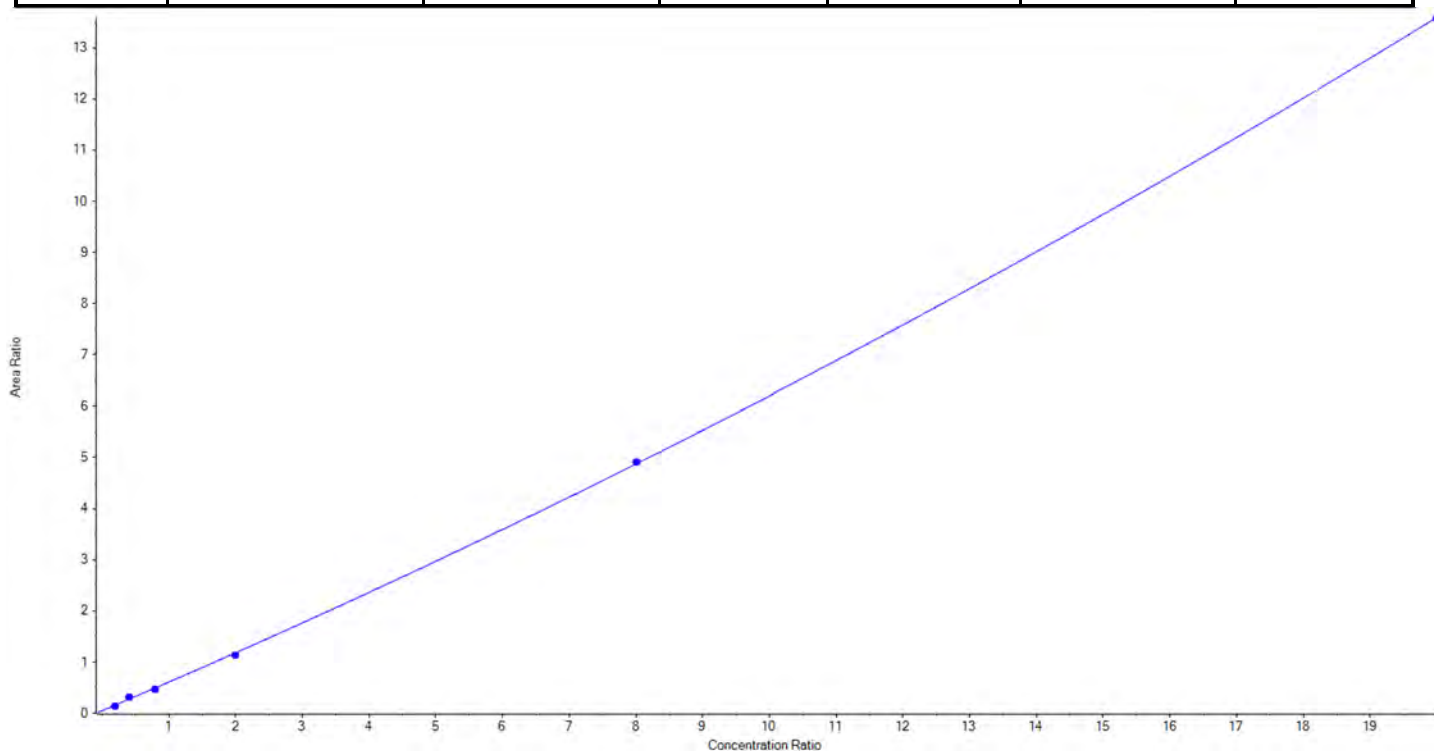
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Analyte Name	NMeFOSAA_2	Data File	AC_11042020_5-369.wiff
MRM Transition	570.0 / 512.0	Result Table	20-1310
Internal Standard	d3-MeFOSAA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.00618 x^2 + 0.55356 x + 0.04885$ ($r = 0.99970$) (weighting: $1 / x$) $r^2: 0.9994$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	218.35	87.3
3	LD75	L2	True	500.00	597.75	119.6
4	LD76	L3	True	1000.00	958.07	95.8
5	LD77	L4	True	2500.00	2414.03	96.6
6	LD78	L5	True	10000.00	10079.78	100.8
7	LD79	L6	True	25000.00	24980.22	99.9





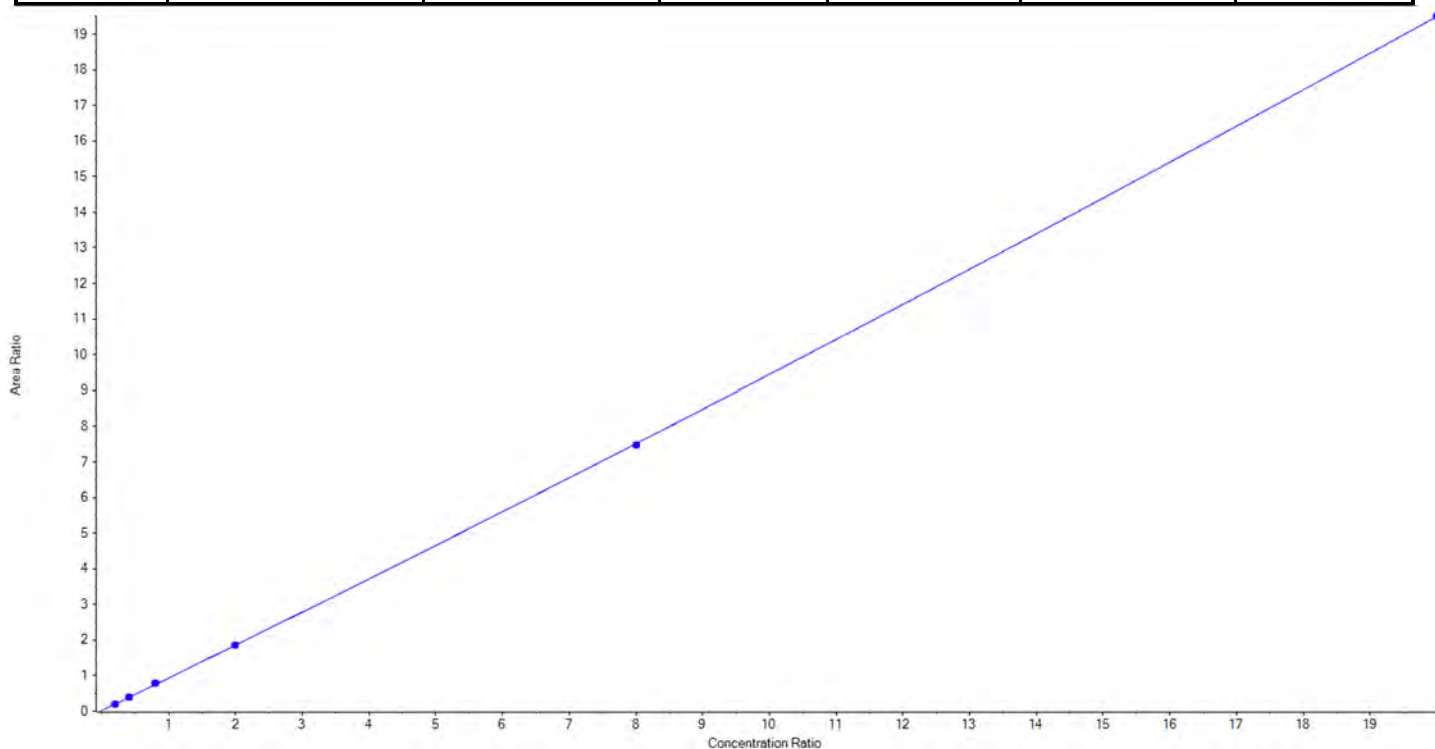
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Analyte Name	NEtFOSAA_1	Data File	AC_11042020_5-369.wiff
MRM Transition	584.0 / 419.0	Result Table	20-1310
Internal Standard	d5-EtFOSAA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.00310 x^2 + 0.91181 x + 0.02059$ ($r = 0.99997$) (weighting: $1 / x$) $r^2: 0.9999$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	237.80	95.1
3	LD75	L2	True	500.00	510.08	102.0
4	LD76	L3	True	1000.00	1036.07	103.6
5	LD77	L4	True	2500.00	2489.07	99.6
6	LD78	L5	True	10000.00	9964.18	99.6
7	LD79	L6	True	25000.00	25012.93	100.1





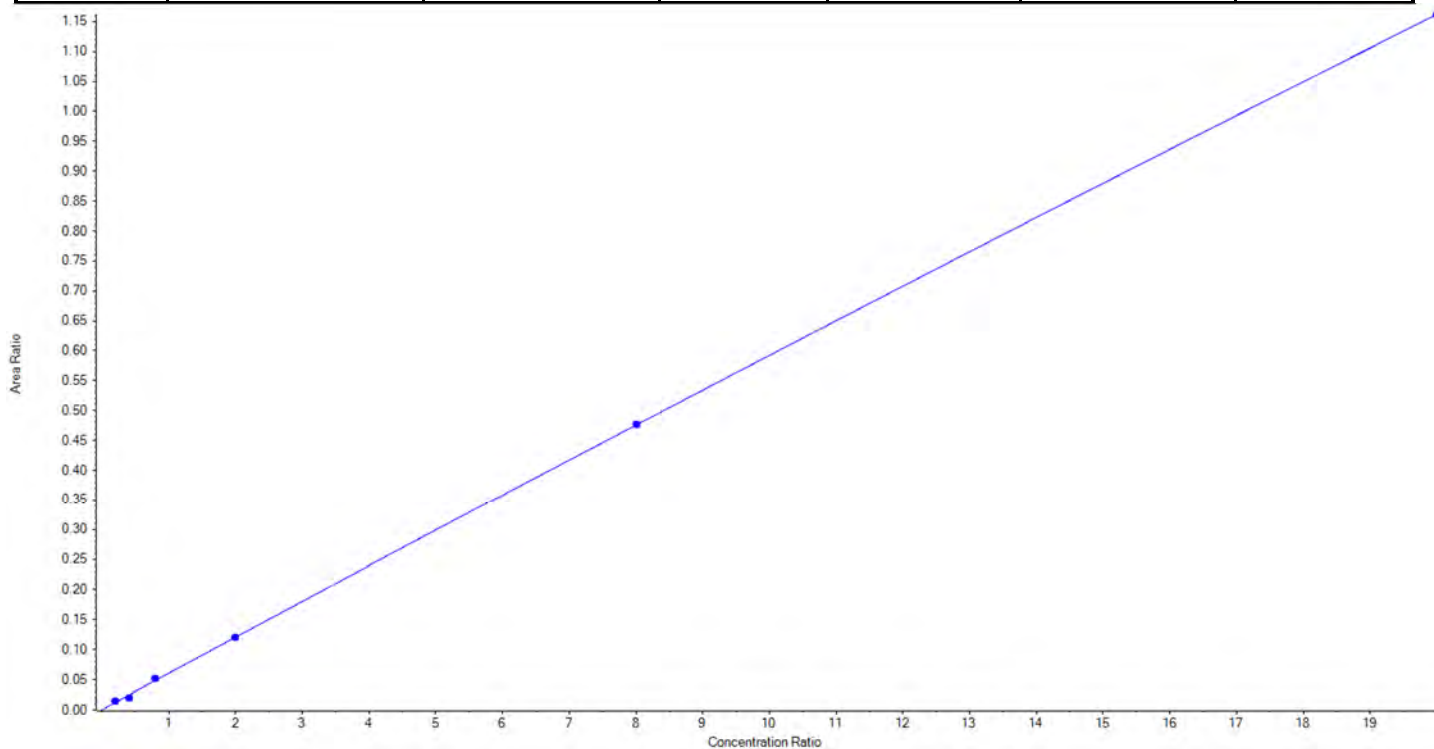
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Analyte Name	NEtFOSAA_2	Data File	AC_11042020_5-369.wiff
MRM Transition	584.0 / 483.0	Result Table	20-1310
Internal Standard	d5-EtFOSAA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = -1.10893e-4 x^2 + 0.06027 x + 6.12814e-4$ ($r = 0.99951$) (weighting: $1 / x$)
 $r^2: 0.9990$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	282.70	113.1
3	LD75	L2	True	500.00	397.76	79.6
4	LD76	L3	True	1000.00	1079.75	108.0
5	LD77	L4	True	2500.00	2482.44	99.3
6	LD78	L5	True	10000.00	10012.17	100.1
7	LD79	L6	True	25000.00	24995.20	100.0





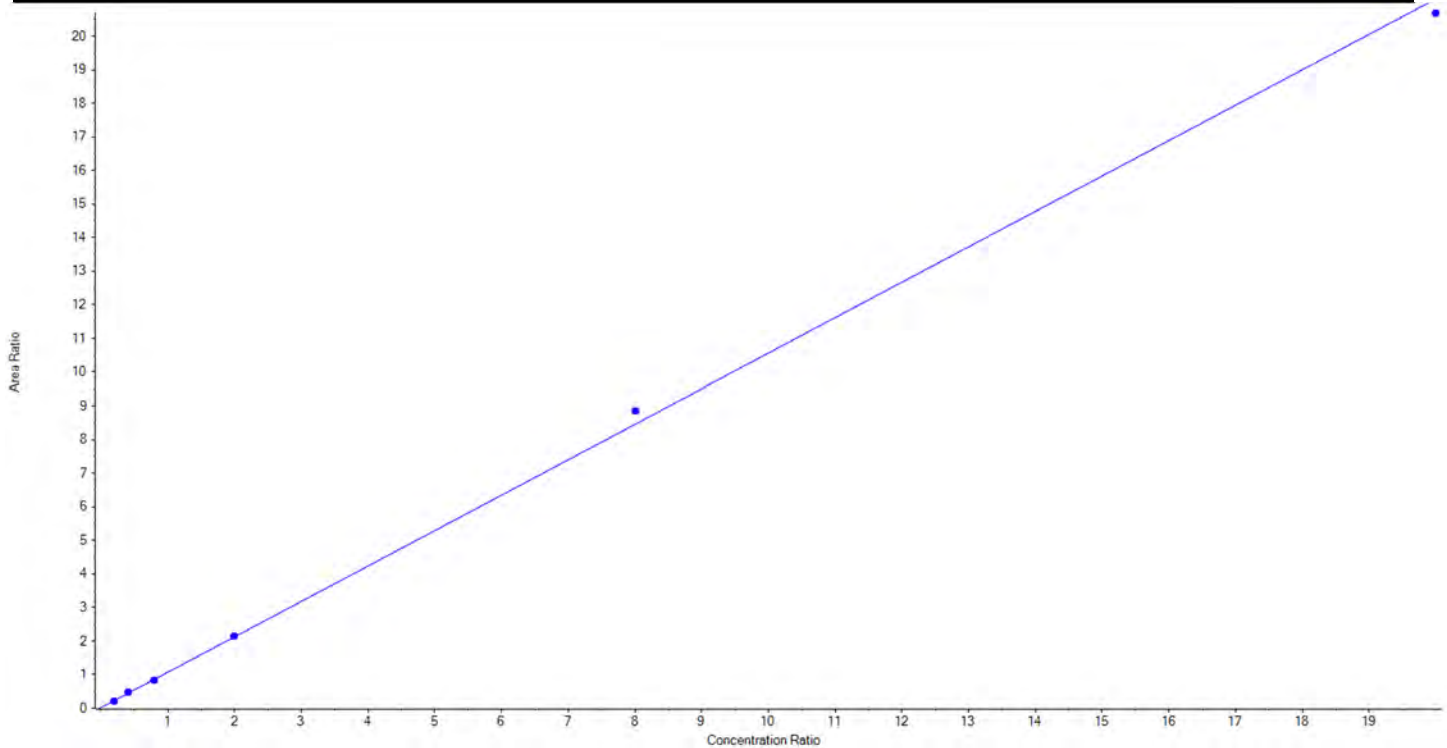
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Analyte Name	HFPO-DA_1	Data File	AC_11042020_5-369.wiff
MRM Transition	285.0 / 169.0	Result Table	20-1310
Internal Standard	13C3-HFPO-DA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 1.05438x + 0.01757$ ($r = 0.99940$) (weighting: $1/x$) $r^2: 0.9988$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	228.63	91.5
3	LD75	L2	True	500.00	542.62	108.5
4	LD76	L3	True	1000.00	958.69	95.9
5	LD77	L4	True	2500.00	2532.01	101.3
6	LD78	L5	True	10000.00	10487.05	104.9
7	LD79	L6	True	25000.00	24501.00	98.0





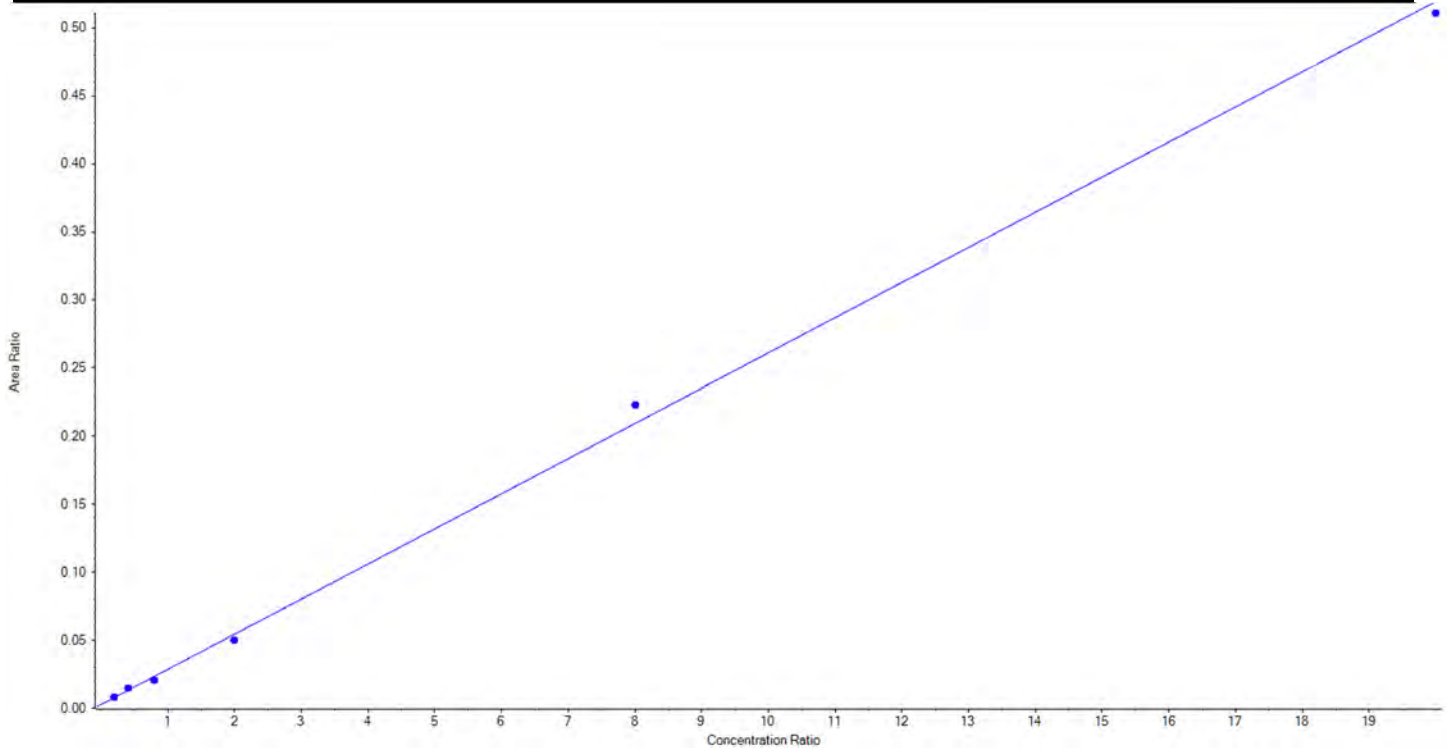
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Analyte Name	HFPO-DA_2	Data File	AC_11042020_5-369.wiff
MRM Transition	285.0 / 118.8	Result Table	20-1310
Internal Standard	13C3-HFPO-DA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.02583x + 0.00277$ ($r = 0.99858$) (weighting: $1/x$) $r^2: 0.9972$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	242.38	97.0
3	LD75	L2	True	500.00	593.52	118.7
4	LD76	L3	True	1000.00	873.79	87.4
5	LD77	L4	True	2500.00	2303.22	92.1
6	LD78	L5	True	10000.00	10647.94	106.5
7	LD79	L6	True	25000.00	24589.15	98.4





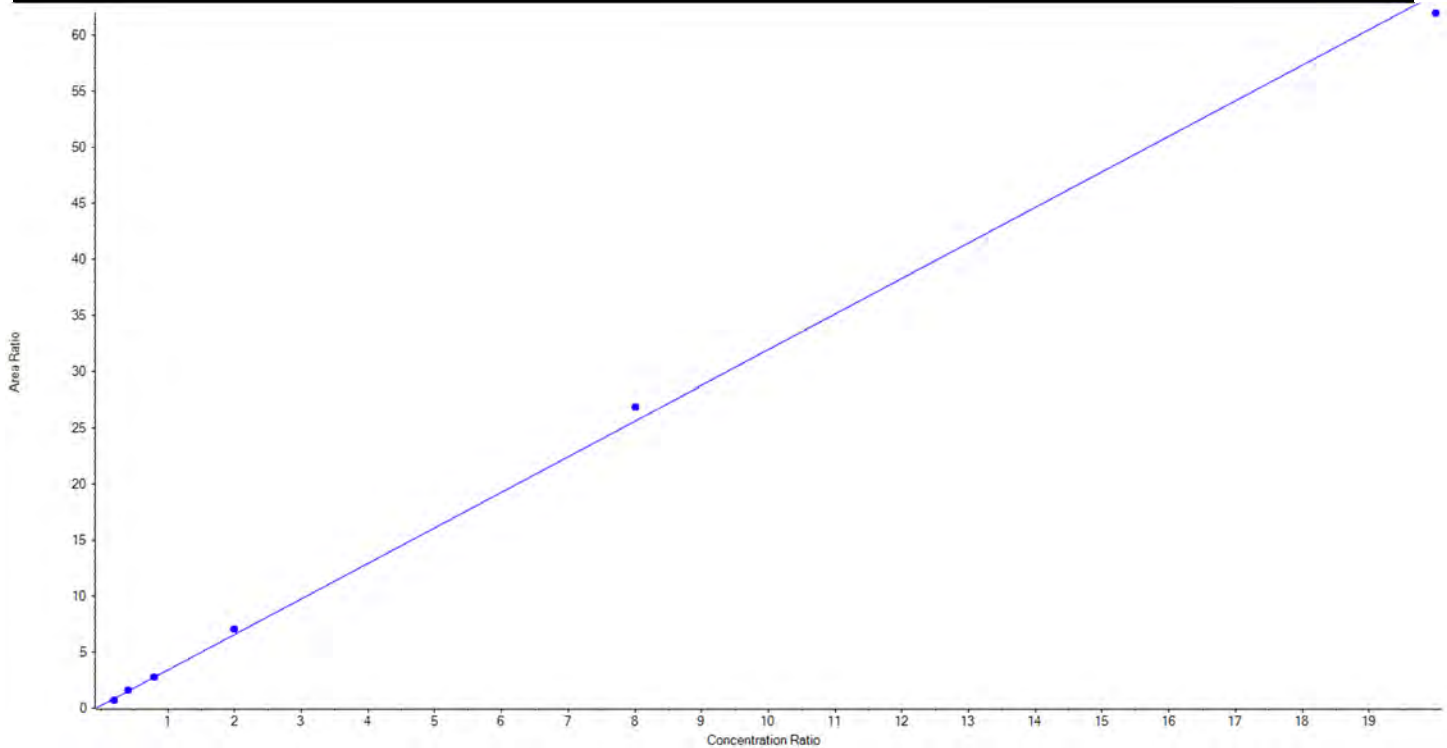
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Analyte Name	ADONA_1	Data File	AC_11042020_5-369.wiff
MRM Transition	377.0 / 251.0	Result Table	20-1310
Internal Standard	13C3-HFPO-DA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 3.17054x + 0.23740$ ($r = 0.99898$) (weighting: $1/x$) $r^2: 0.9980$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	198.96	79.6
3	LD75	L2	True	500.00	555.47	111.1
4	LD76	L3	True	1000.00	1000.53	100.1
5	LD77	L4	True	2500.00	2676.99	107.1
6	LD78	L5	True	10000.00	10486.33	104.9
7	LD79	L6	True	25000.00	24331.72	97.3





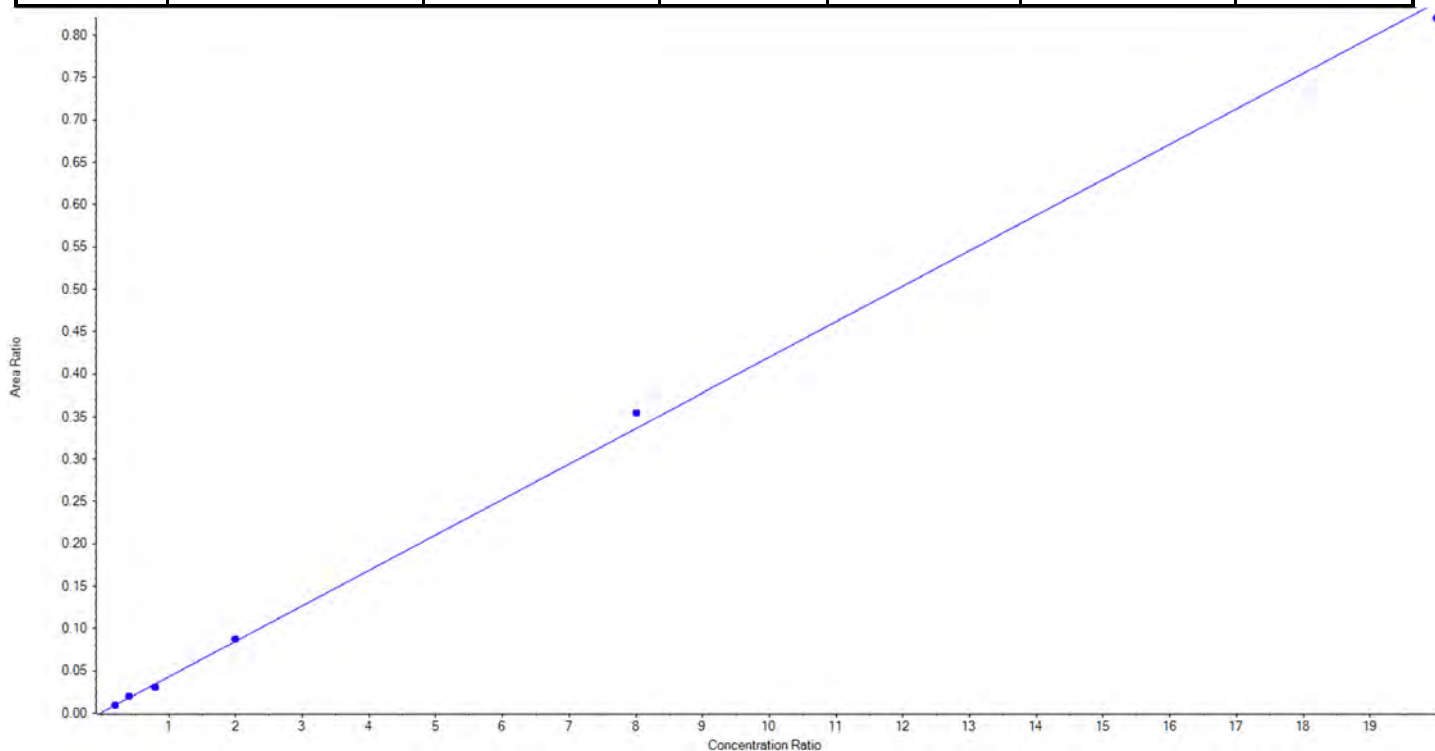
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Analyte Name	ADONA_2	Data File	AC_11042020_5-369.wiff
MRM Transition	377.0 / 85.0	Result Table	20-1310
Internal Standard	13C3-HFPO-DA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.04188x + 0.00120$ ($r = 0.99897$) (weighting: $1/x$) $r^2: 0.9979$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	231.50	92.6
3	LD75	L2	True	500.00	568.91	113.8
4	LD76	L3	True	1000.00	876.63	87.7
5	LD77	L4	True	2500.00	2563.82	102.6
6	LD78	L5	True	10000.00	10560.92	105.6
7	LD79	L6	True	25000.00	24448.22	97.8





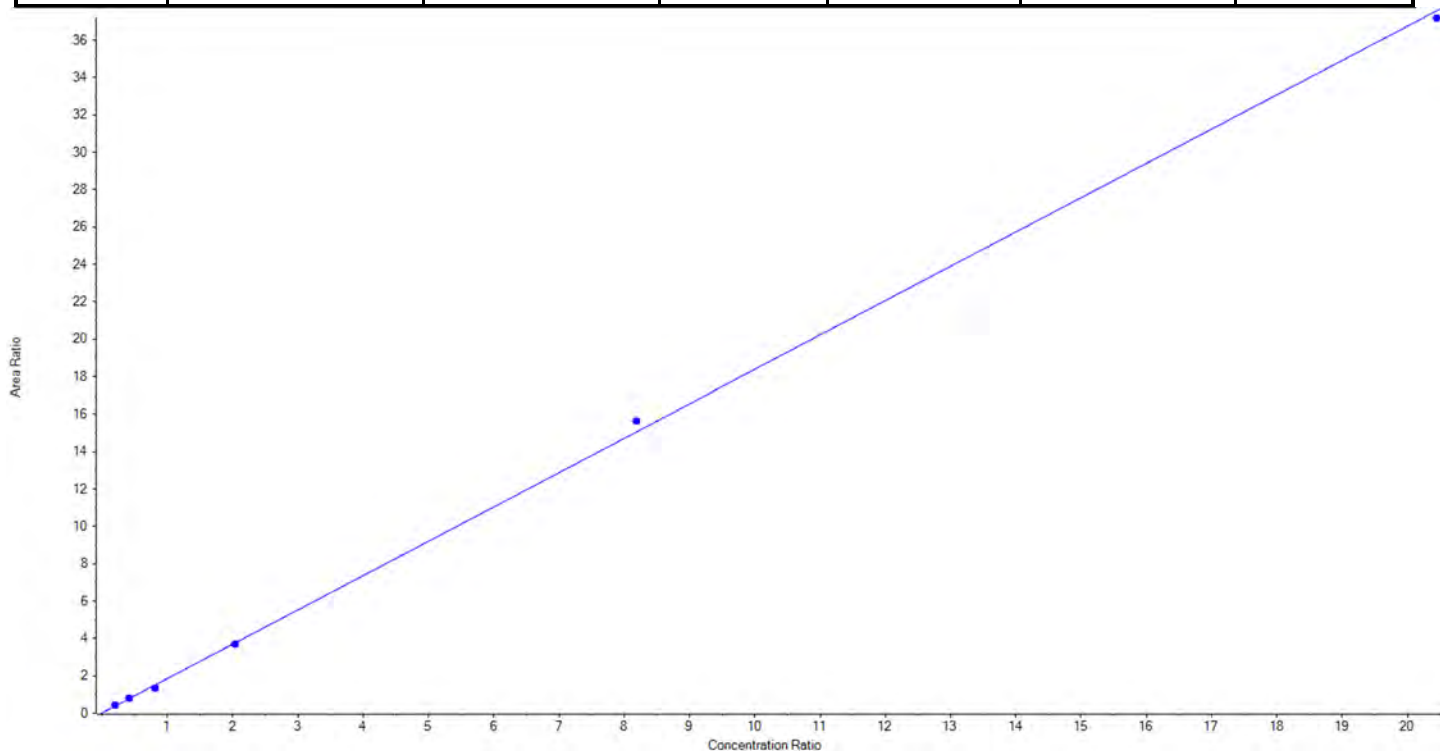
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Analyte Name	9CI-PF3ONS_1	Data File	AC_11042020_5-369.wiff
MRM Transition	531.0 / 351.0	Result Table	20-1310
Internal Standard	13C8-PFOA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 1.83648x + 0.02117$ ($r = 0.99939$) (weighting: $1/x$) $r^2: 0.9988$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	265.62	106.3
3	LD75	L2	True	500.00	532.39	106.5
4	LD76	L3	True	1000.00	867.34	86.7
5	LD77	L4	True	2500.00	2437.27	97.5
6	LD78	L5	True	10000.00	10409.86	104.1
7	LD79	L6	True	25000.00	24737.52	99.0





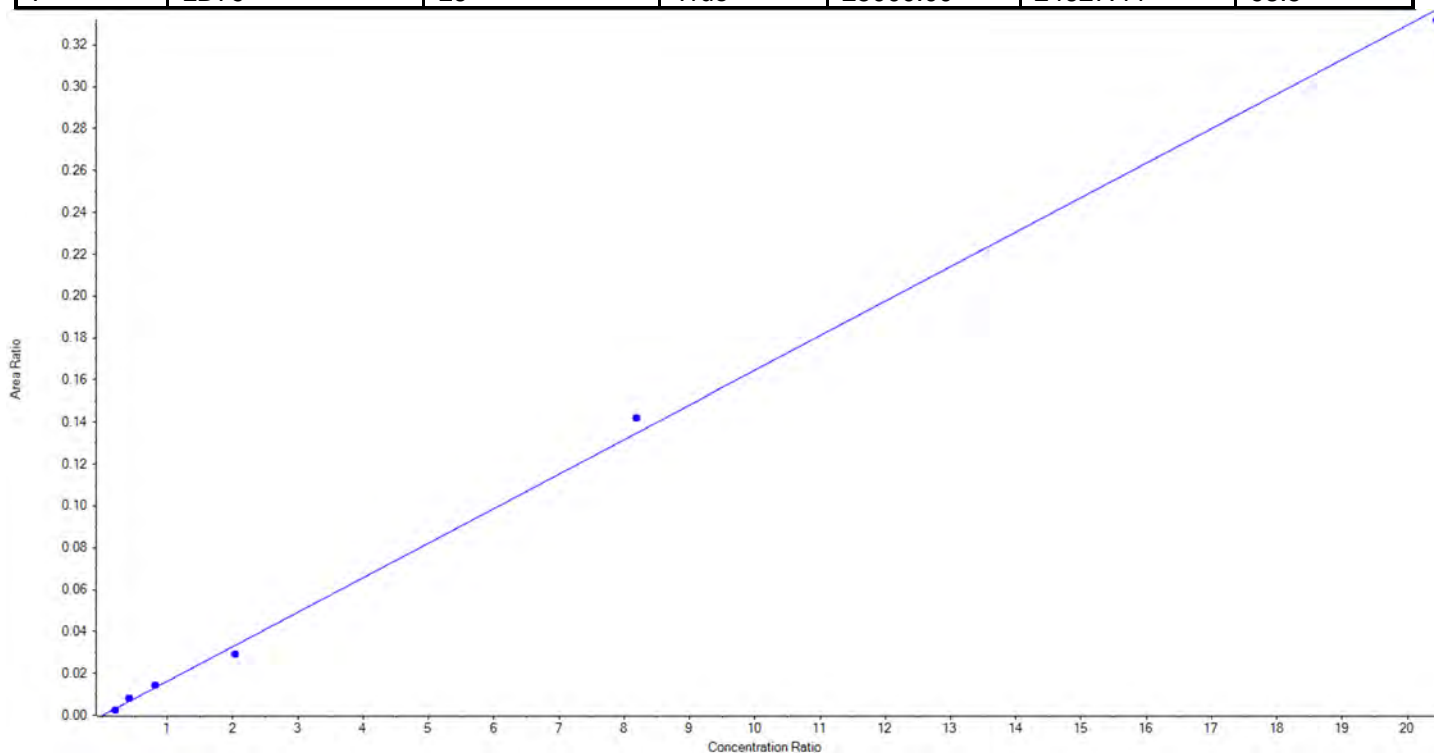
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Analyte Name	9CI-PF3ONS_2	Data File	AC_11042020_5-369.wiff
MRM Transition	531.0 / 83.0	Result Table	20-1310
Internal Standard	13C8-PFOA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.01649x + -2.58435e-4$ ($r = 0.99824$) (weighting: $1/x$) $r^2: 0.9965$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	192.13	76.9
3	LD75	L2	True	500.00	614.93	123.0
4	LD76	L3	True	1000.00	1088.08	108.8
5	LD77	L4	True	2500.00	2185.68	87.4
6	LD78	L5	True	10000.00	10541.74	105.4
7	LD79	L6	True	25000.00	24627.44	98.5





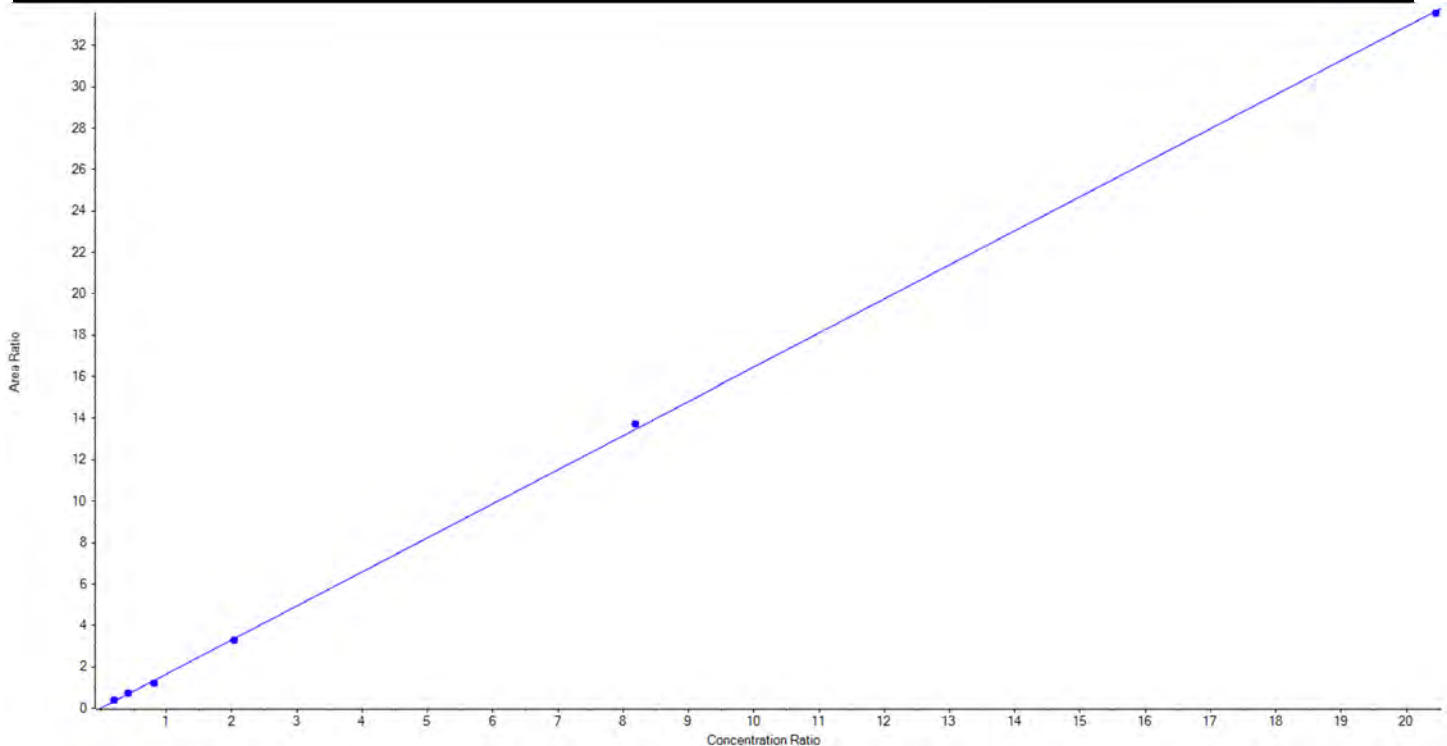
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Analyte Name	11Cl-pf3OUdS_1	Data File	AC_11042020_5-369.wiff
MRM Transition	631.0 / 451.0	Result Table	20-1310
Internal Standard	13C8-PFOA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 1.64545x + 0.00535$ ($r = 0.99967$) (weighting: $1/x$) $r^2:0.9993$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	265.93	106.4
3	LD75	L2	True	500.00	530.61	106.1
4	LD76	L3	True	1000.00	878.12	87.8
5	LD77	L4	True	2500.00	2450.76	98.0
6	LD78	L5	True	10000.00	10194.40	101.9
7	LD79	L6	True	25000.00	24930.18	99.7





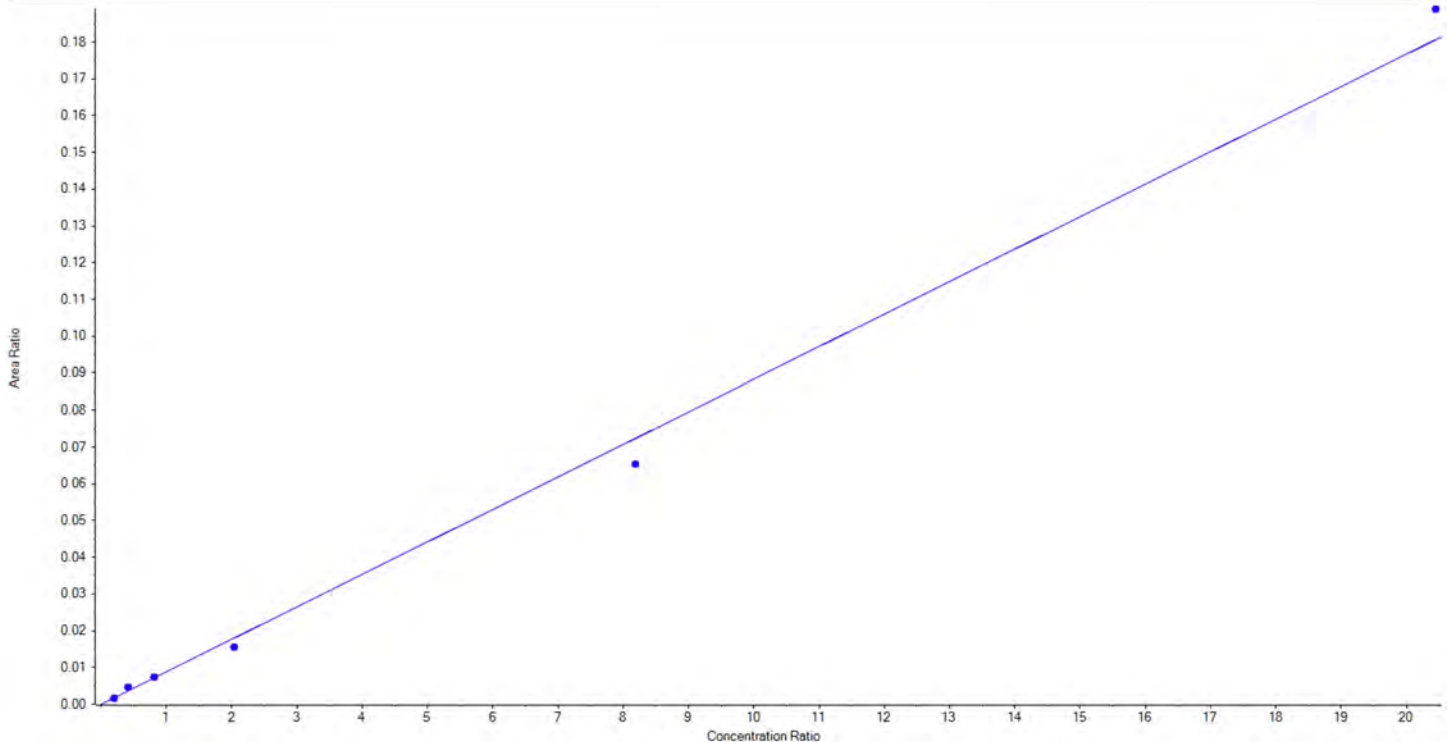
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Analyte Name	11Cl-pf3OUdS_2	Data File	AC_11042020_5-369.wiff
MRM Transition	631.0 / 83.0	Result Table	20-1310
Internal Standard	13C8-PFOA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.00883x + -2.63212e-5$ ($r = 0.99663$) (weighting: $1/x$) $r^2:0.9933$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	219.18	87.7
3	LD75	L2	True	500.00	647.22	129.4
4	LD76	L3	True	1000.00	1010.68	101.1
5	LD77	L4	True	2500.00	2166.07	86.6
6	LD78	L5	True	10000.00	9057.73	90.6
7	LD79	L6	True	25000.00	26149.13	104.6





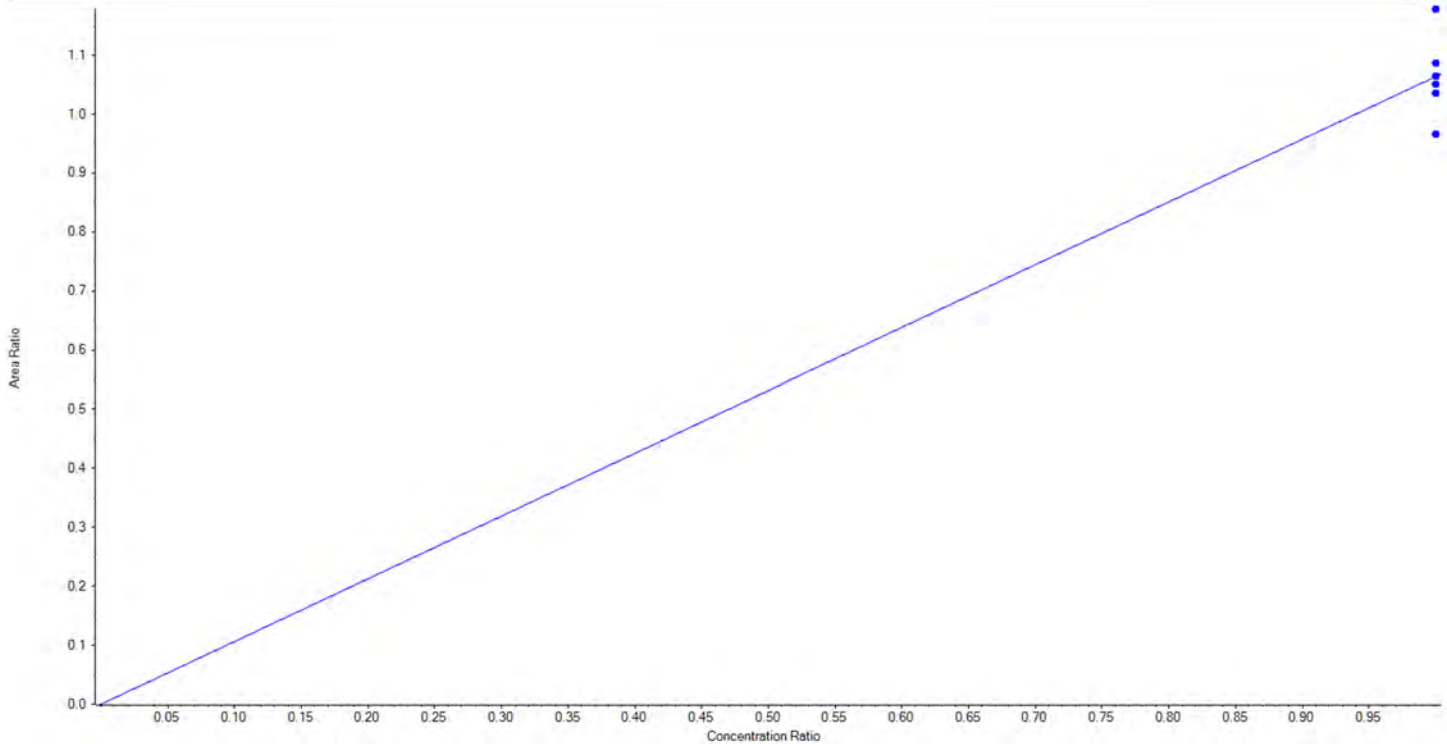
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Analyte Name	13C2-PFDoA	Data File	AC_11042020_5-369.wiff
MRM Transition	615.0 / 570.0	Result Table	20-1310_SIS
Internal Standard	13C2-PFDA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 1.06381 x$ (std. dev. = 0.06956) (weighting: None) r^2 :N/A

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	1250.00	1134.65	90.8
3	LD75	L2	True	1250.00	1277.40	102.2
4	LD76	L3	True	1250.00	1235.03	98.8
5	LD77	L4	True	1250.00	1251.17	100.1
6	LD78	L5	True	1250.00	1217.38	97.4
7	LD79	L6	True	1250.00	1384.37	110.8





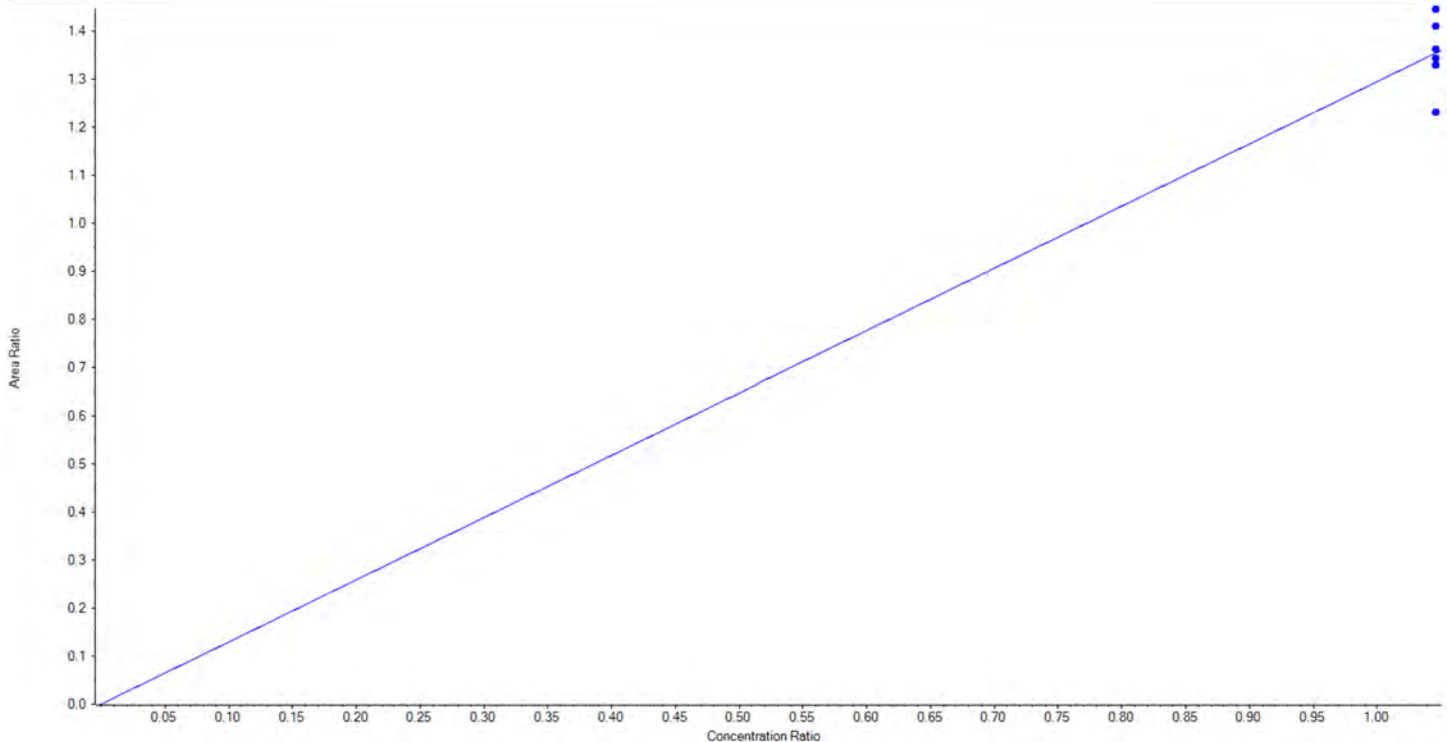
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Analyte Name	d3-MeFOSAA	Data File	AC_11042020_5-369.wiff
MRM Transition	573.0 / 419.0	Result Table	20-1310_SIS
Internal Standard	13C4-PFOS	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 1.29552 x$ (std. dev. = 0.07096) (weighting: None) r^2 :N/A

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	1250.00	1240.88	99.3
3	LD75	L2	True	1250.00	1226.87	98.2
4	LD76	L3	True	1250.00	1258.27	100.7
5	LD77	L4	True	1250.00	1302.75	104.2
6	LD78	L5	True	1250.00	1334.49	106.8
7	LD79	L6	True	1250.00	1136.74	90.9





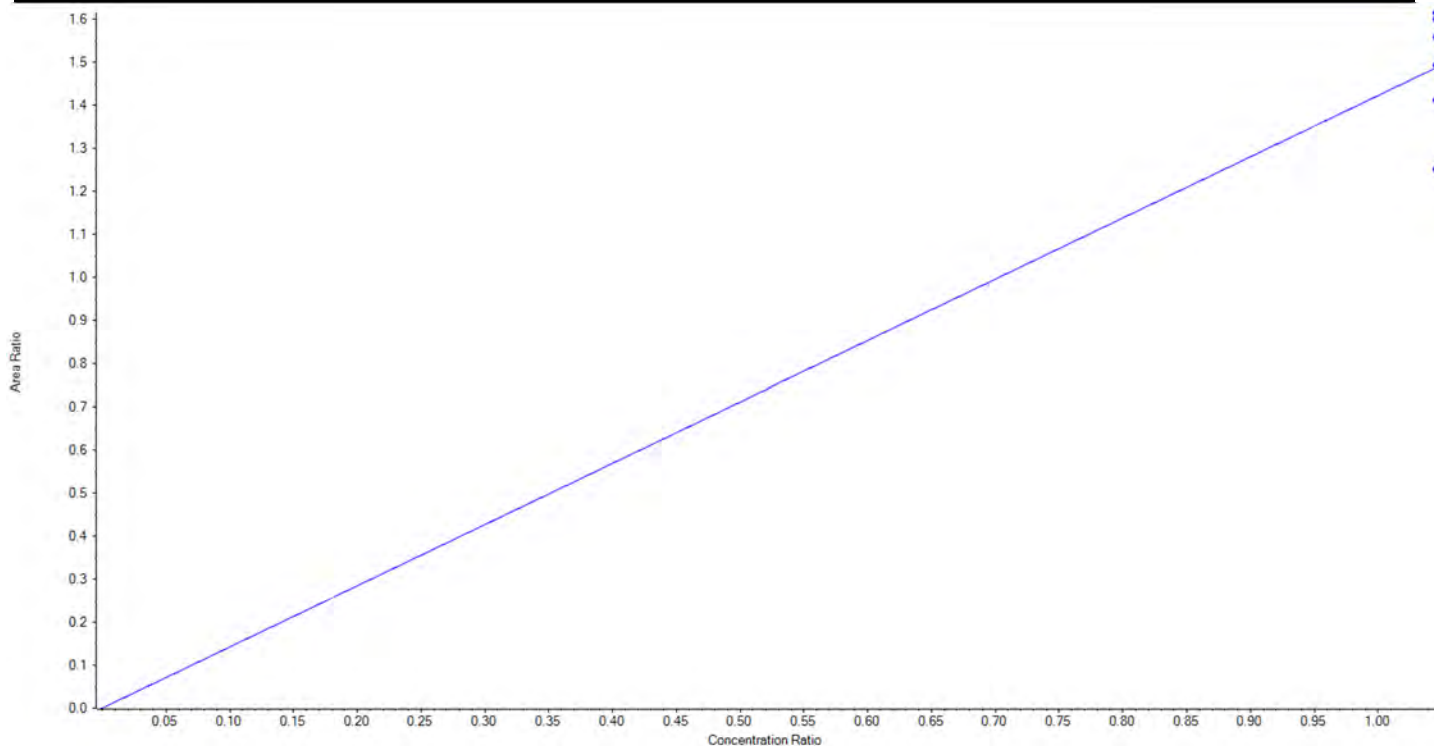
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Analyte Name	d5-EtFOSAA	Data File	AC_11042020_5-369.wiff
MRM Transition	589.0 / 419.0	Result Table	20-1310_SIS
Internal Standard	13C4-PFOS	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 1.42328 x$ (std. dev. = 0.13208) (weighting: None) r^2 : N/A

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	1250.00	1355.98	108.5
3	LD75	L2	True	1250.00	1345.19	107.6
4	LD76	L3	True	1250.00	1308.17	104.7
5	LD77	L4	True	1250.00	1185.48	94.8
6	LD78	L5	True	1250.00	1253.73	100.3
7	LD79	L6	True	1250.00	1051.44	84.1





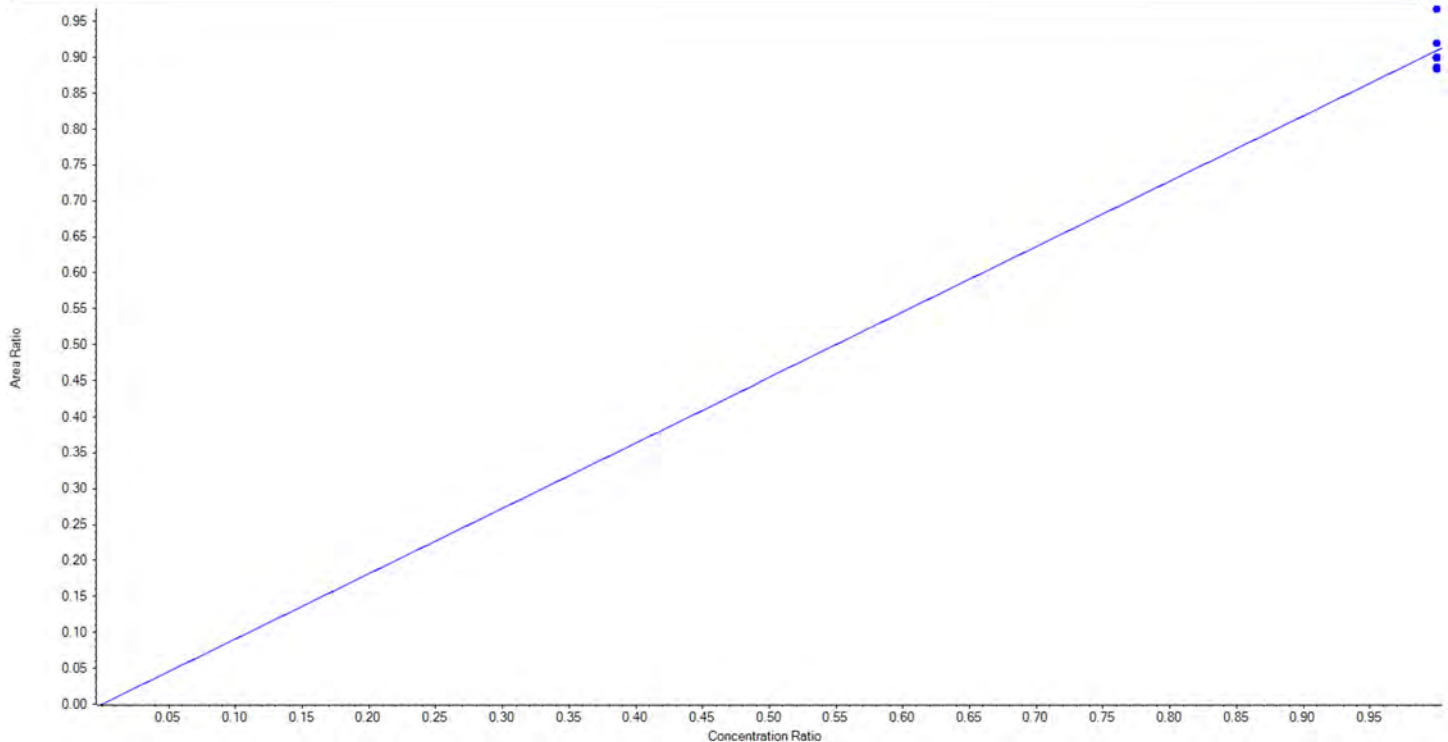
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Analyte Name	13C5-PFHxA	Data File	AC_11042020_5-369.wiff
MRM Transition	318.0 / 273.0	Result Table	20-1310_SIS
Internal Standard	13C2-PFOA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.90946 x$ (std. dev. = 0.03098) (weighting: None) r^2 :N/A

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	1250.00	1236.14	98.9
3	LD75	L2	True	1250.00	1263.80	101.1
4	LD76	L3	True	1250.00	1329.43	106.4
5	LD77	L4	True	1250.00	1236.94	99.0
6	LD78	L5	True	1250.00	1214.81	97.2
7	LD79	L6	True	1250.00	1218.89	97.5





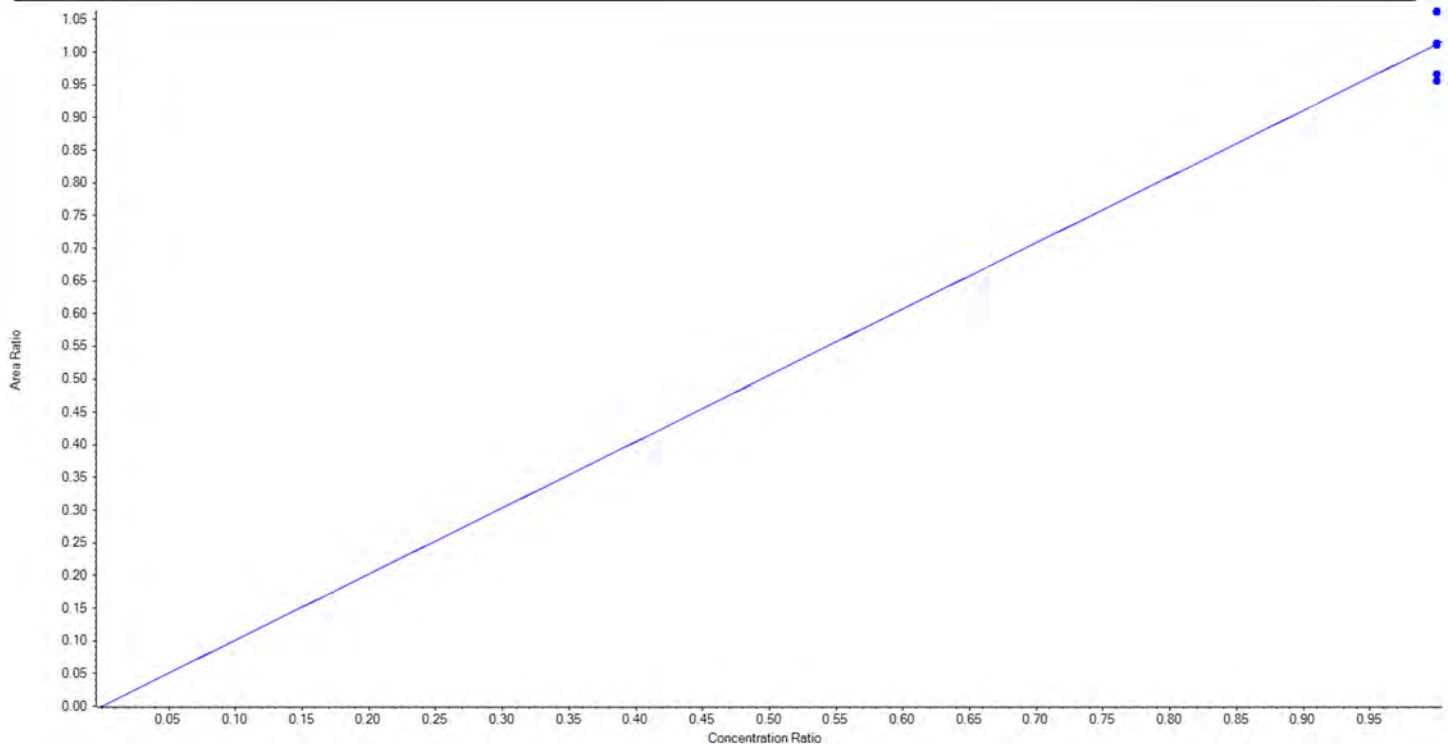
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Analyte Name	13C4-PFHpA	Data File	AC_11042020_5-369.wiff
MRM Transition	367.0 / 322.0	Result Table	20-1310_SIS
Internal Standard	13C2-PFOA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 1.01202 x$ (std. dev. = 0.04492) (weighting: None) r^2 :N/A

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	1250.00	1252.44	100.2
3	LD75	L2	True	1250.00	1312.79	105.0
4	LD76	L3	True	1250.00	1310.08	104.8
5	LD77	L4	True	1250.00	1249.13	99.9
6	LD78	L5	True	1250.00	1194.54	95.6
7	LD79	L6	True	1250.00	1181.02	94.5





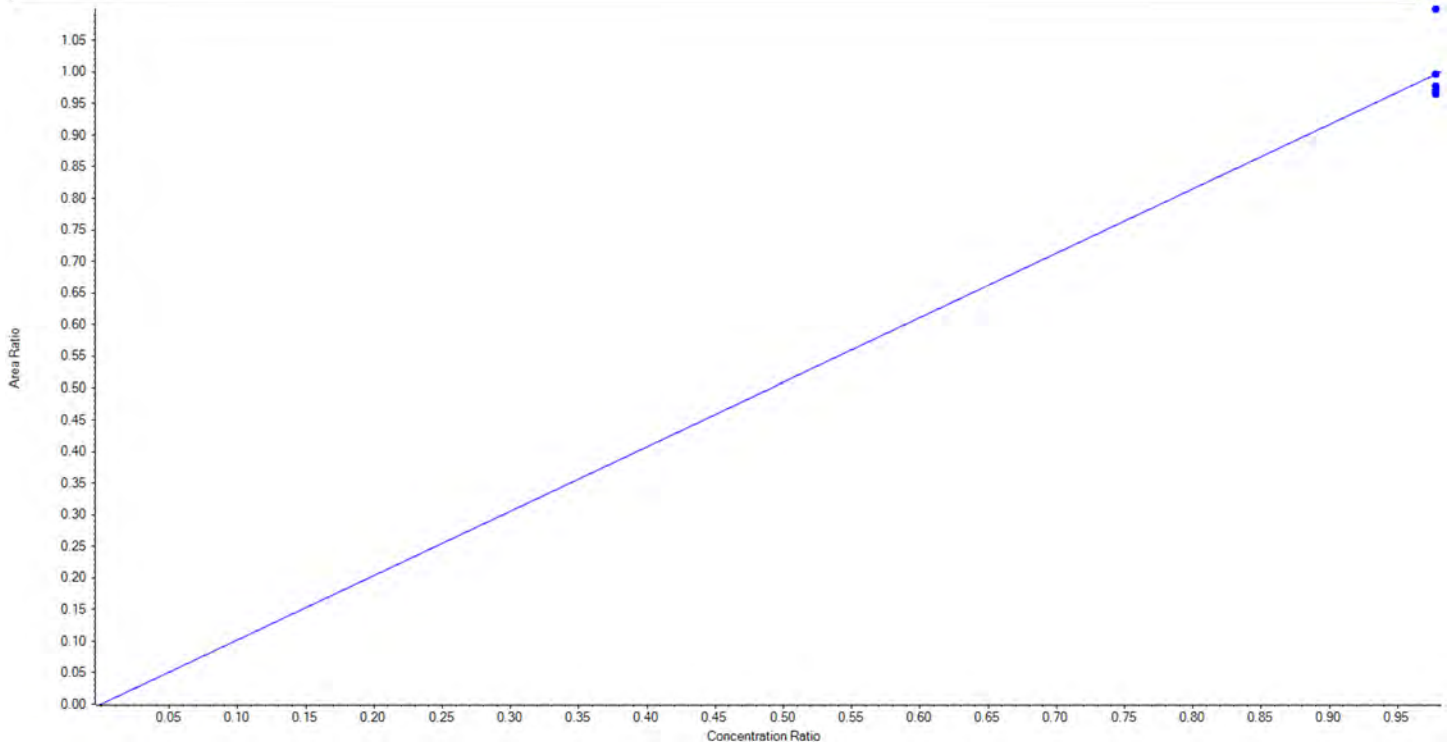
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Analyte Name	13C8-PFOA	Data File	AC_11042020_5-369.wiff
MRM Transition	421.0 / 376.0	Result Table	20-1310_SIS
Internal Standard	13C2-PFOA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 1.01863 x$ (std. dev. = 0.05303) (weighting: None) r^2 : N/A

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	1222.50	1199.63	98.1
3	LD75	L2	True	1222.50	1191.87	97.5
4	LD76	L3	True	1222.50	1349.21	110.4
5	LD77	L4	True	1222.50	1183.56	96.8
6	LD78	L5	True	1222.50	1187.62	97.2
7	LD79	L6	True	1222.50	1223.11	100.1





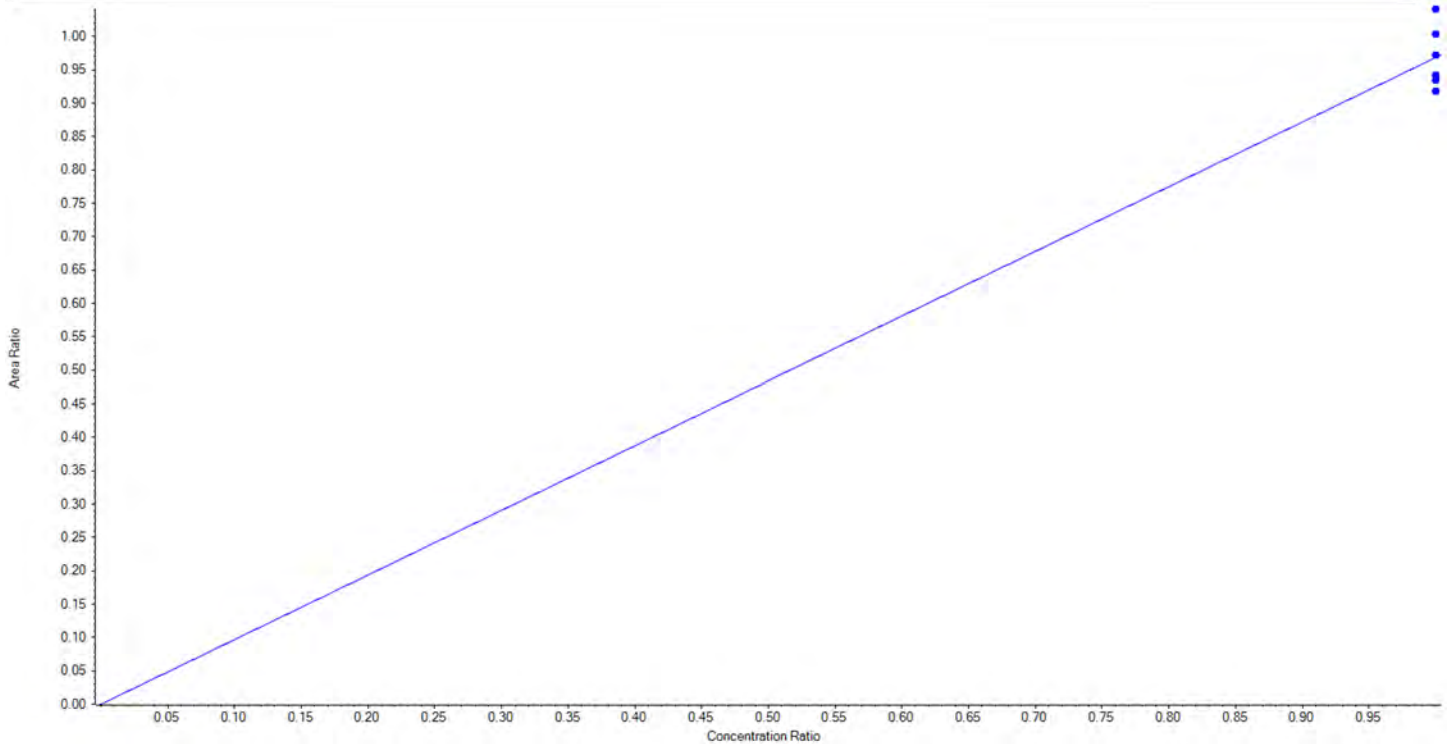
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Analyte Name	13C9-PFNA	Data File	AC_11042020_5-369.wiff
MRM Transition	472.0 / 427.0	Result Table	20-1310_SIS
Internal Standard	13C2-PFOA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.96837 x$ (std. dev. = 0.04664) (weighting: None) r^2 : N/A

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	1250.00	1343.59	107.5
3	LD75	L2	True	1250.00	1254.24	100.3
4	LD76	L3	True	1250.00	1295.21	103.6
5	LD77	L4	True	1250.00	1185.04	94.8
6	LD78	L5	True	1250.00	1215.28	97.2
7	LD79	L6	True	1250.00	1206.63	96.5





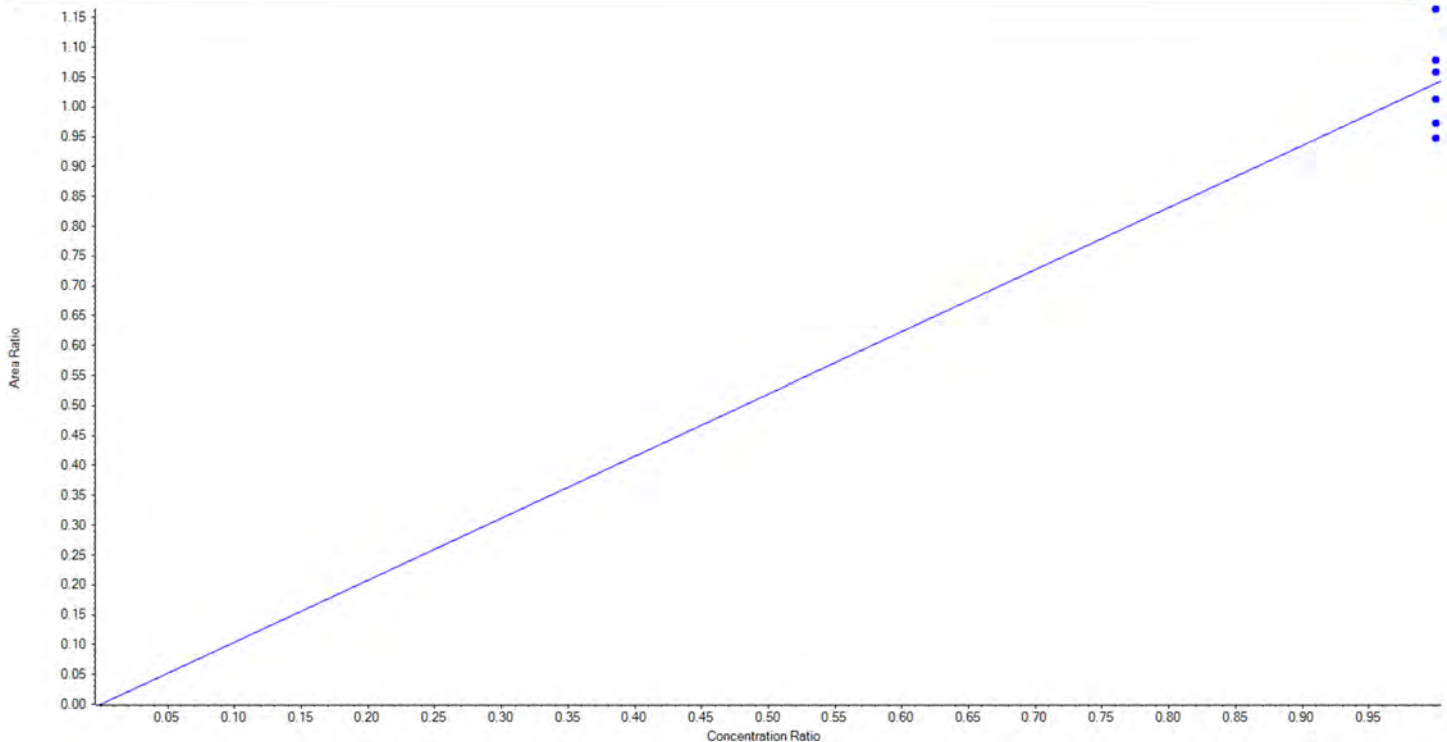
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Analyte Name	13C6-PFDA	Data File	AC_11042020_5-369.wiff
MRM Transition	519.0 / 474.0	Result Table	20-1310_SIS
Internal Standard	13C2-PFDA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 1.03915 x$ (std. dev. = 0.07860) (weighting: None) r^2 :N/A

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	1250.00	1139.58	91.2
3	LD75	L2	True	1250.00	1400.04	112.0
4	LD76	L3	True	1250.00	1296.59	103.7
5	LD77	L4	True	1250.00	1273.85	101.9
6	LD78	L5	True	1250.00	1170.55	93.6
7	LD79	L6	True	1250.00	1219.39	97.6





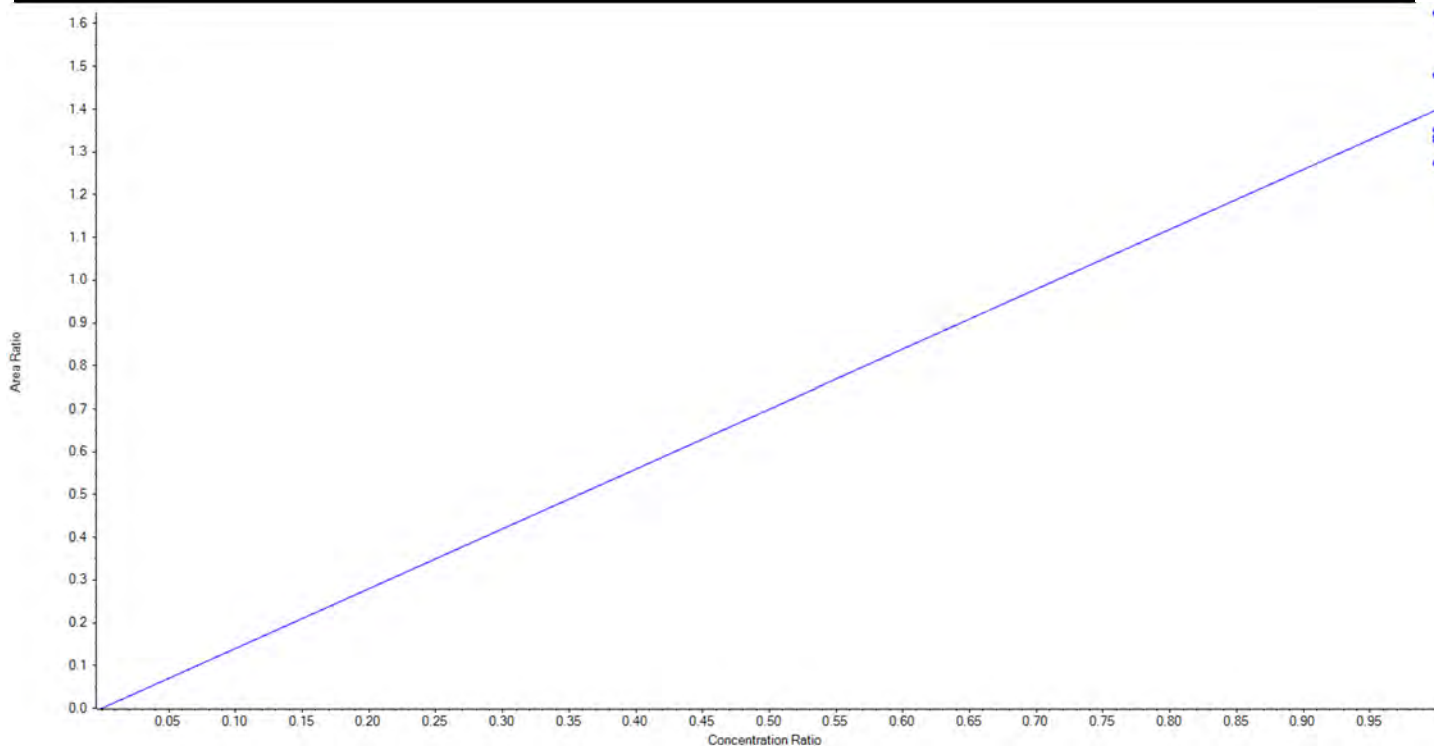
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Analyte Name	13C2-PFTeDA	Data File	AC_11042020_5-369.wiff
MRM Transition	715.0 / 670.0	Result Table	20-1310_SIS
Internal Standard	13C2-PFDA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 1.39839 x$ (std. dev. = 0.13010) (weighting: None) r^2 :N/A

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	1250.00	1187.42	95.0
3	LD75	L2	True	1250.00	1322.42	105.8
4	LD76	L3	True	1250.00	1191.97	95.4
5	LD77	L4	True	1250.00	1207.68	96.6
6	LD78	L5	True	1250.00	1138.40	91.1
7	LD79	L6	True	1250.00	1452.11	116.2





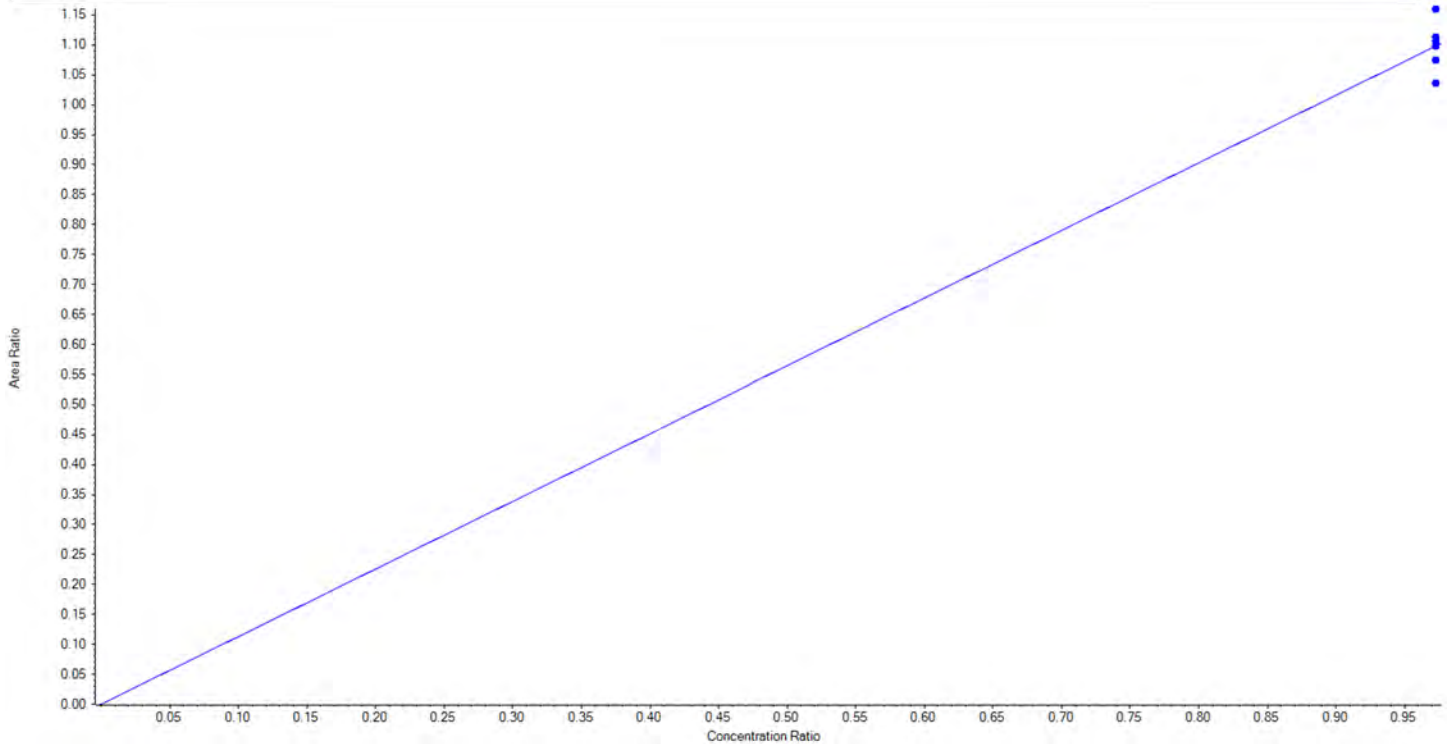
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Analyte Name	13C3-PFBS	Data File	AC_11042020_5-369.wiff
MRM Transition	302.0 / 99.0	Result Table	20-1310_SIS
Internal Standard	13C4-PFOS	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 1.12874 x$ (std. dev. = 0.04223) (weighting: None) r^2 :N/A

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	1162.50	1227.84	105.6
3	LD75	L2	True	1162.50	1178.52	101.4
4	LD76	L3	True	1162.50	1170.87	100.7
5	LD77	L4	True	1162.50	1136.94	97.8
6	LD78	L5	True	1162.50	1097.63	94.4
7	LD79	L6	True	1162.50	1163.20	100.1





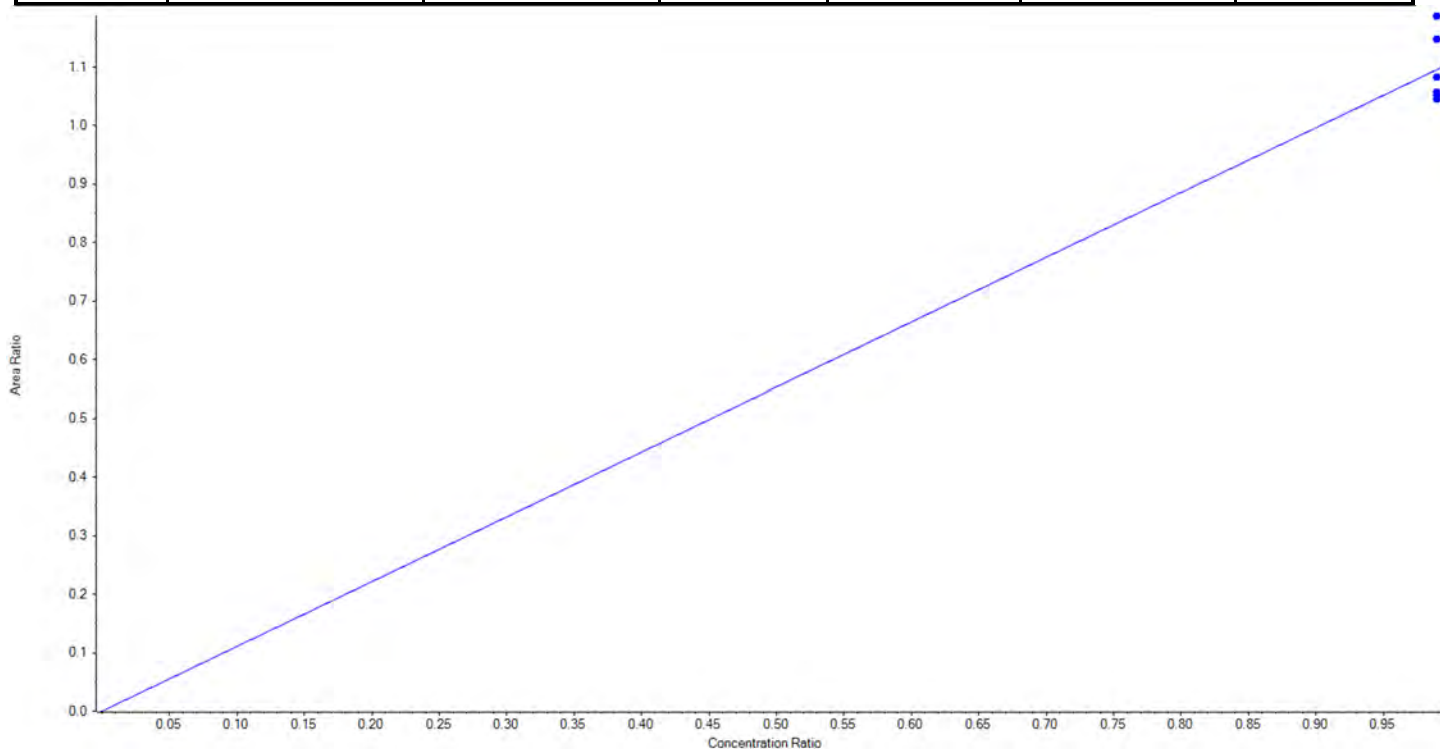
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Analyte Name	13C3-PFHxS	Data File	AC_11042020_5-369.wiff
MRM Transition	402.0 / 99.0	Result Table	20-1310_SIS
Internal Standard	13C4-PFOS	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 1.10710 x$ (std. dev. = 0.05933) (weighting: None) r^2 :N/A

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	1182.50	1239.70	104.8
3	LD75	L2	True	1182.50	1141.58	96.5
4	LD76	L3	True	1182.50	1127.77	95.4
5	LD77	L4	True	1182.50	1168.48	98.8
6	LD78	L5	True	1182.50	1136.06	96.1
7	LD79	L6	True	1182.50	1281.41	108.4





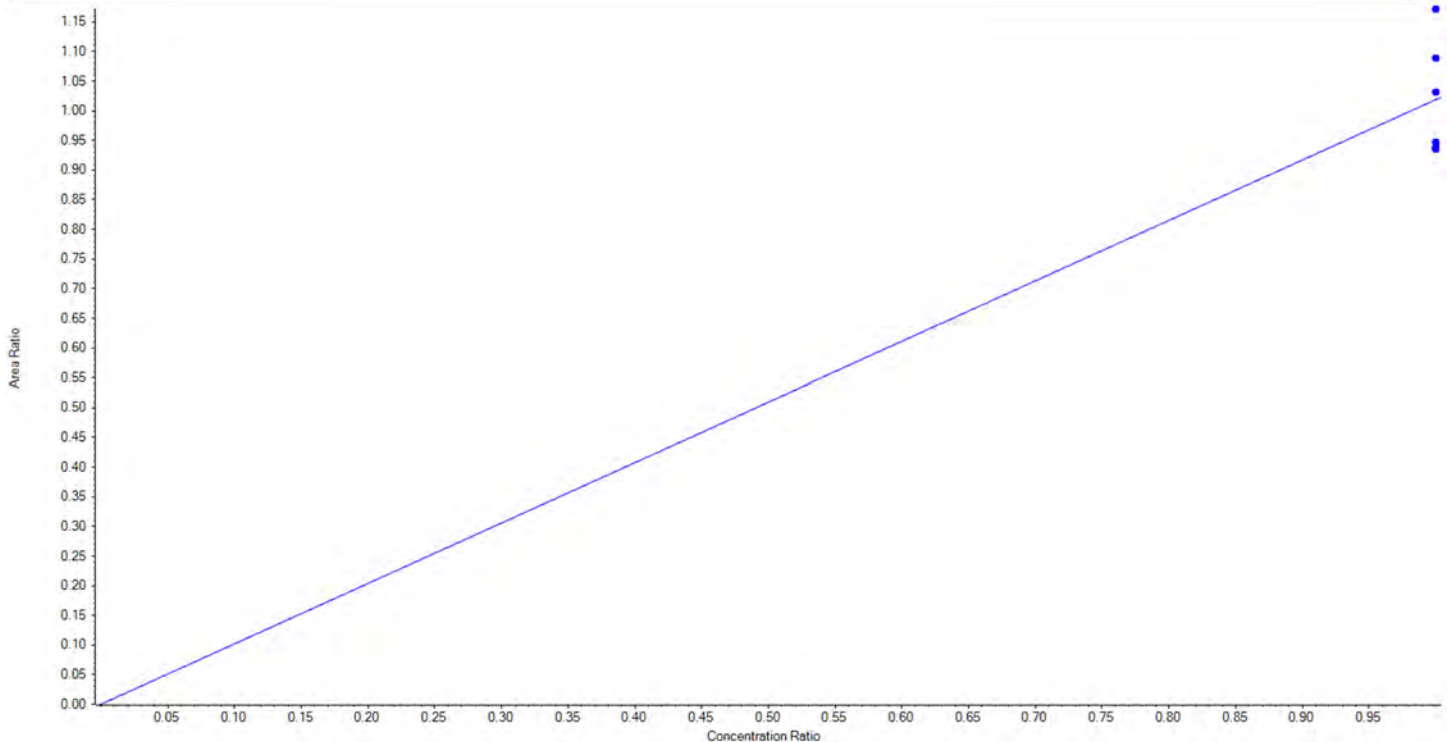
Calibration Summary Report

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Analyte Name	13C8-PFOS	Data File	AC_11042020_5-369.wiff
MRM Transition	507.0 / 99.0	Result Table	20-1310_SIS
Internal Standard	13C4-PFOS	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 1.01869 x$ (std. dev. = 0.09687) (weighting: None) r^2 :N/A

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	1195.00	1374.12	115.0
3	LD75	L2	True	1195.00	1210.23	101.3
4	LD76	L3	True	1195.00	1276.89	106.9
5	LD77	L4	True	1195.00	1101.71	92.2
6	LD78	L5	True	1195.00	1096.37	91.8
7	LD79	L6	True	1195.00	1110.68	92.9





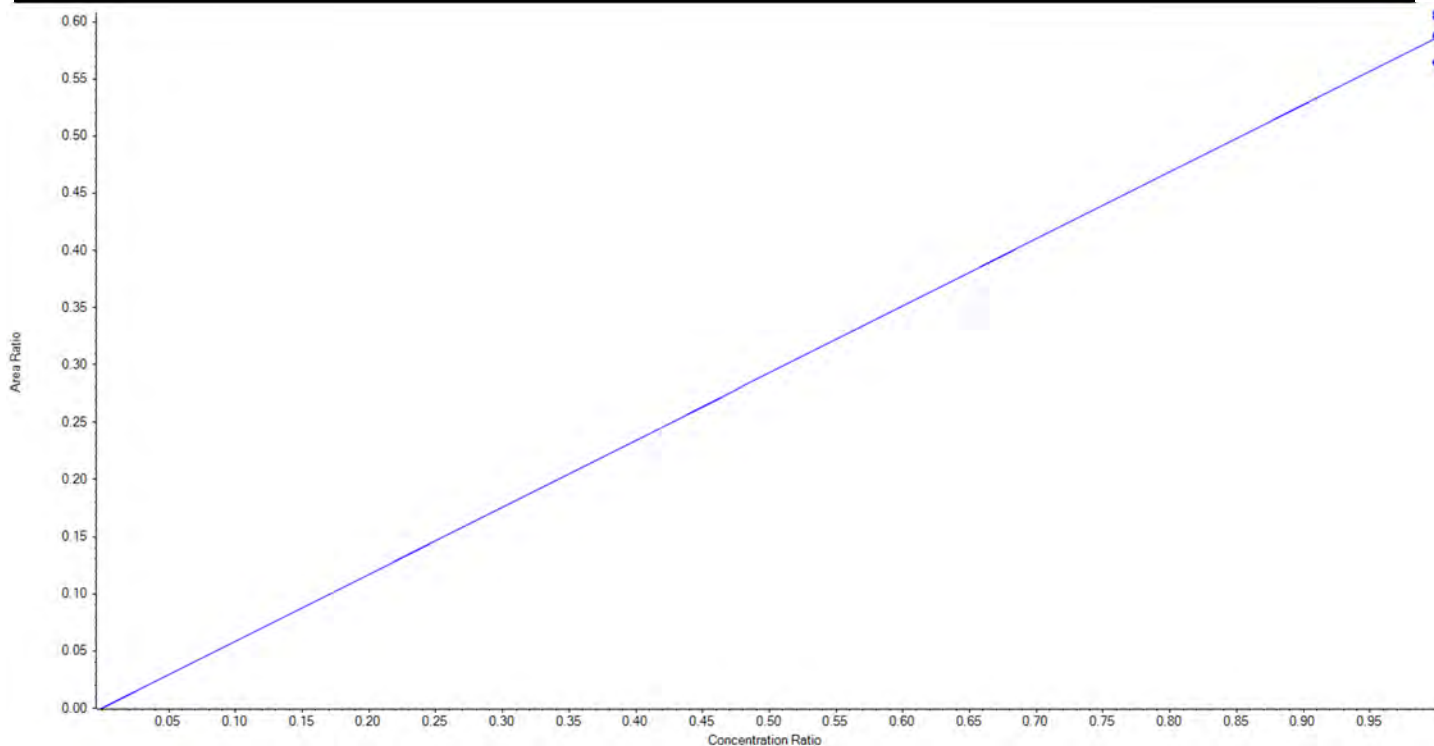
Calibration Summary Report

Created with Analyst Reporter
Printed: 09/11/2020 3:15:01 PM

Analyte Name	13C3-HFPO-DA	Data File	AC_11042020_5-369.wiff
MRM Transition	287.0 / 169.0	Result Table	20-1310_SIS
Internal Standard	13C2-PFOA	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Acquisition Method	5-0369.dam

Regression Equation: $y = 0.58581 x$ (std. dev. = 0.01862) (weighting: None) r^2 : N/A

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	1250.00	1251.60	100.1
3	LD75	L2	True	1250.00	1255.79	100.5
4	LD76	L3	True	1250.00	1288.52	103.1
5	LD77	L4	True	1250.00	1205.34	96.4
6	LD78	L5	True	1250.00	1202.58	96.2
7	LD79	L6	True	1250.00	1296.17	103.7



Sample Name	LD74	Injection Vial	2
Sample ID	L1	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.56	84277.66	256.60	2557.0	False	13C3-PFBS	154072.62	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.57	28186.60	248.58	993.4	False	13C3-PFBS	154072.62	1162.50	PFBS	0.334	0.322	✓
PFHxA_1	313.0 / 269.0	1.89	155366.59	266.19	403.0	False	13C5-PFHxA	712687.46	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.89	11191.38	267.64	191.2	False	13C5-PFHxA	712687.46	1250.00	PFHxA	0.072	0.073	✓
PFHpA_1	363.0 / 319.0	2.28	153669.91	250.87	319.6	False	13C4-PFHpA	803514.28	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.28	4029.99	261.70	94.8	False	13C4-PFHpA	803514.28	1250.00	PFHpA	0.026	0.021	✓
PFHxS_1	399.0 / 80.0	2.30	136940.60	215.87	780.0	False	13C3-PFHxS	152578.20	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	39373.34	200.63	454.1	False	13C3-PFHxS	152578.20	1182.50	PFHxS	0.288	0.293	✓
PFOA_1	413.0 / 369.0	2.67	166464.68	218.58	259.6	False	13C8-PFOA	774663.01	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.67	9289.22	208.93	82.7	False	13C8-PFOA	774663.01	1222.50	PFOA	0.056	0.068	✓
PFNA_1	463.0 / 419.0	3.04	173111.98	220.28	389.1	False	13C9-PFNA	824811.02	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.04	47680.03	198.22	627.1	False	13C9-PFNA	824811.02	1250.00	PFNA	0.275	0.292	✓
PFOS_1	499.0 / 80.0	3.04	142503.17	244.49	312.6	False	13C8-PFOS	155618.08	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.04	27253.83	224.28	1812.1	False	13C8-PFOS	155618.08	1195.00	PFOS	0.191	0.189	✓
PFDA_1	513.0 / 469.0	3.38	196216.41	265.43	587.2	False	13C6-PFDA	820634.01	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.38	8452.64	309.02	427.2	False	13C6-PFDA	820634.01	1250.00	PFDA	0.043	0.042	✓
PFUnA_1	563.0 / 519.0	3.68	192441.77	268.19	743.4	False	13C7-PFUnA	917147.21	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.69	8859.33	252.33	320.0	False	13C7-PFUnA	917147.21	1250.00	PFUnA	0.046	0.052	✓
PFDoA_1	613.0 / 569.0	3.95	180176.02	235.28	787.6	False	13C2-PFDoA	836467.43	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.95	30408.09	262.89	939.9	False	13C2-PFDoA	836467.43	1250.00	PFDoA	0.169	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.19	175664.68	230.15	1489.3	False	13C2-PFTTeDA	1150688.15	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.19	11598.73	243.10	375.6	False	13C2-PFTTeDA	1150688.15	1250.00	PFTTrDA	0.066	0.068	✓
PFTTeDA_1	713.0 / 669.0	4.40	251113.51	217.87	2108.0	False	13C2-PFTTeDA	1150688.15	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	4.40	15705.91	252.31	749.4	False	13C2-PFTTeDA	1150688.15	1250.00	PFTTeDA	0.063	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.53	42006.55	244.05	2765281.0	False	d3-MeFOSAA	179450.31	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.53	26151.87	218.35	672.7	False	d3-MeFOSAA	179450.31	1250.00	NMeFOSAA	0.623	0.651	✓
NEtFOSAA_1	584.0 / 419.0	3.68	41620.06	237.80	5238.3	False	d5-EtFOSAA	214359.76	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.68	3051.76	282.70	26067.5	True	d5-EtFOSAA	214359.76	1250.00	NEtFOSAA	0.073	0.063	✓
HFPO-DA_1	285.0 / 169.0	1.99	97805.07	228.63	1099.9	False	13C3-HFPO-DA	464801.05	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.99	3613.71	242.38	202.4	False	13C3-HFPO-DA	464801.05	1250.00	HFPO-DA	0.037	0.028	✓
ADONA_1	377.0 / 251.0	2.31	344899.36	198.96	1436.1	False	13C3-HFPO-DA	464801.05	1250.00	ADONA			
ADONA_2	377.0 / 85.0	2.31	4161.49	231.50	624.0	False	13C3-HFPO-DA	464801.05	1250.00	ADONA	0.012	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	3.22	325507.75	265.62	1631.4	False	13C8-PFOA	774663.01	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	3.21	1806.93	192.13	154.9	True	13C8-PFOA	774663.01	1222.50	9CI-PF3ONS	0.006	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.81	281422.53	265.93	2032.6	False	13C8-PFOA	774663.01	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.80	1206.67	219.18	195.1	False	13C8-PFOA	774663.01	1222.50	11Cl-PF3OUdS	0.004	0.005	✓

Sample Name	LD75	Injection Vial	3
Sample ID	L2	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:30:51 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.56	186846.98	528.23	3814.7	False	13C3-PFBS	158234.68	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.56	63366.15	547.96	3124.7	False	13C3-PFBS	158234.68	1162.50	PFBS	0.339	0.322	✓
PFHxA_1	313.0 / 269.0	1.89	334382.13	562.31	470.8	False	13C5-PFHxA	728876.74	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.88	23964.01	556.60	363.4	False	13C5-PFHxA	728876.74	1250.00	PFHxA	0.072	0.073	✓
PFHpA_1	363.0 / 319.0	2.28	358797.30	547.94	644.9	False	13C4-PFHpA	842513.34	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.28	8338.76	587.95	155.0	False	13C4-PFHpA	842513.34	1250.00	PFHpA	0.023	0.021	✓
PFHxS_1	399.0 / 80.0	2.30	286115.70	535.52	1152.1	False	13C3-PFHxS	150335.64	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	83477.13	528.77	1308.0	False	13C3-PFHxS	150335.64	1182.50	PFHxS	0.292	0.293	✓
PFOA_1	413.0 / 369.0	2.67	368814.69	541.21	477.9	False	13C8-PFOA	769908.12	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.67	25461.15	563.28	186.8	False	13C8-PFOA	769908.12	1222.50	PFOA	0.069	0.068	✓
PFNA_1	463.0 / 419.0	3.04	378588.80	541.03	762.1	False	13C9-PFNA	770211.93	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.04	112176.48	544.84	969.5	False	13C9-PFNA	770211.93	1250.00	PFNA	0.296	0.292	✓
PFOS_1	499.0 / 80.0	3.04	310718.13	542.98	392.8	False	13C8-PFOS	146649.84	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.03	65033.30	591.86	799.0	False	13C8-PFOS	146649.84	1195.00	PFOS	0.209	0.189	✓
PFDA_1	513.0 / 469.0	3.38	419843.33	514.92	911.2	False	13C6-PFDA	914053.16	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.38	13827.02	431.47	369.4	False	13C6-PFDA	914053.16	1250.00	PFDA	0.033	0.042	✓
PFUnA_1	563.0 / 519.0	3.68	445302.97	585.06	1011.0	False	13C7-PFUnA	942296.49	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.68	24057.78	611.44	613.3	False	13C7-PFUnA	942296.49	1250.00	PFUnA	0.054	0.052	✓
PFDoA_1	613.0 / 569.0	3.95	397059.54	550.47	1487.7	False	13C2-PFDoA	853776.91	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.95	61101.44	535.79	1692.1	False	13C2-PFDoA	853776.91	1250.00	PFDoA	0.154	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.19	358007.83	498.83	1565.8	False	13C2-PFTeDA	1161849.29	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.19	25158.18	524.04	523.4	False	13C2-PFTeDA	1161849.29	1250.00	PFTTrDA	0.070	0.068	✓
PFTeDA_1	713.0 / 669.0	4.40	534636.28	523.43	4383.4	False	13C2-PFTeDA	1161849.29	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.40	29379.08	507.15	1623.6	False	13C2-PFTeDA	1161849.29	1250.00	PFTeDA	0.055	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.53	83491.26	538.42	39544.2	False	d3-MeFOSAA	188502.77	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.53	59373.11	597.75	1495.4	False	d3-MeFOSAA	188502.77	1250.00	NMeFOSAA	0.711	0.651	✓
NEiFOSAA_1	584.0 / 419.0	3.68	89445.68	510.08	10482.0	False	d5-EiFOSAA	227493.22	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.68	4499.50	397.76	44488.3	False	d5-EiFOSAA	227493.22	1250.00	NEiFOSAA	0.050	0.063	✓
HFPO-DA_1	285.0 / 169.0	1.99	221720.25	542.62	2600.5	False	13C3-HFPO-DA	466511.33	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.99	7012.01	593.52	4948.3	False	13C3-HFPO-DA	466511.33	1250.00	HFPO-DA	0.032	0.028	✓
ADONA_1	377.0 / 251.0	2.31	768023.10	555.47	2937.2	False	13C3-HFPO-DA	466511.33	1250.00	ADONA			
ADONA_2	377.0 / 85.0	2.31	9450.37	568.91	1941.2	False	13C3-HFPO-DA	466511.33	1250.00	ADONA	0.012	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	3.22	632050.99	532.39	2175.4	False	13C8-PFOA	769908.12	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	3.22	6185.59	614.93	158.8	True	13C8-PFOA	769908.12	1222.50	9CI-PF3ONS	0.010	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.81	553979.21	530.61	2243.6	False	13C8-PFOA	769908.12	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.81	3580.93	647.22	209.6	True	13C8-PFOA	769908.12	1222.50	11Cl-PF3OUdS	0.006	0.005	✓

Sample Name	LD76	Injection Vial	4
Sample ID	L3	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:41:42 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.57	336476.38	923.96	5742.1	False	13C3-PFBS	159906.94	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.57	104310.68	894.62	2646.5	False	13C3-PFBS	159906.94	1162.50	PFBS	0.310	0.322	✓
PFHxA_1	313.0 / 269.0	1.89	567274.36	908.85	748.7	False	13C5-PFHxA	766050.08	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.89	40687.65	897.05	514.8	False	13C5-PFHxA	766050.08	1250.00	PFHxA	0.072	0.073	✓
PFHpA_1	363.0 / 319.0	2.29	604868.14	920.44	903.9	False	13C4-PFHpA	840030.46	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.28	12060.09	885.94	571.2	False	13C4-PFHpA	840030.46	1250.00	PFHpA	0.020	0.021	✓
PFHxS_1	399.0 / 80.0	2.30	527518.71	1040.51	1542.0	False	13C3-PFHxS	151068.22	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	152748.66	1032.06	1050.1	False	13C3-PFHxS	151068.22	1182.50	PFHxS	0.290	0.293	✓
PFOA_1	413.0 / 369.0	2.67	702308.81	941.21	839.1	False	13C8-PFOA	870774.73	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.67	49056.49	954.41	295.4	False	13C8-PFOA	870774.73	1222.50	PFOA	0.070	0.068	✓
PFNA_1	463.0 / 419.0	3.04	706699.79	994.01	960.6	False	13C9-PFNA	794668.92	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.04	211678.40	1021.26	1824.6	False	13C9-PFNA	794668.92	1250.00	PFNA	0.300	0.292	✓
PFOS_1	499.0 / 80.0	3.04	612996.75	983.65	648.6	False	13C8-PFOS	157383.66	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.04	104785.01	896.43	4290.8	False	13C8-PFOS	157383.66	1195.00	PFOS	0.171	0.189	✓
PFDA_1	513.0 / 469.0	3.38	766821.77	935.96	1223.5	False	13C6-PFDA	922835.46	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.38	32992.10	954.66	801.4	False	13C6-PFDA	922835.46	1250.00	PFDA	0.043	0.042	✓
PFUnA_1	563.0 / 519.0	3.68	704308.47	874.09	1300.8	False	13C7-PFUnA	988881.90	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.68	35786.32	852.59	872.9	False	13C7-PFUnA	988881.90	1250.00	PFUnA	0.051	0.052	✓
PFDoA_1	613.0 / 569.0	3.95	693409.64	936.16	2138.5	False	13C2-PFDoA	899877.26	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.95	107923.74	910.63	1777.3	False	13C2-PFDoA	899877.26	1250.00	PFDoA	0.156	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.19	661991.58	968.38	2822.2	False	13C2-PFTeDA	1141661.14	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.19	43801.30	929.73	940.9	False	13C2-PFTeDA	1141661.14	1250.00	PFTTrDA	0.066	0.068	✓
PFTeDA_1	713.0 / 669.0	4.40	928224.87	969.13	6689.1	False	13C2-PFTeDA	1141661.14	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.40	52373.13	958.00	2192.7	False	13C2-PFTeDA	1141661.14	1250.00	PFTeDA	0.056	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.53	153852.81	999.15	12132.1	False	d3-MeFOSAA	199455.72	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.53	95091.87	958.07	7359.0	False	d3-MeFOSAA	199455.72	1250.00	NMeFOSAA	0.618	0.651	✓
NEtFOSAA_1	584.0 / 419.0	3.68	175491.99	1036.07	4436.6	False	d5-EtFOSAA	225433.17	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.68	11855.01	1079.75	9613.7	False	d5-EtFOSAA	225433.17	1250.00	NEtFOSAA	0.068	0.063	✓
HFPO-DA_1	285.0 / 169.0	2.00	395143.40	958.69	3504.4	False	13C3-HFPO-DA	478248.64	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	2.00	9958.19	873.79	326.3	False	13C3-HFPO-DA	478248.64	1250.00	HFPO-DA	0.025	0.028	✓
ADONA_1	377.0 / 251.0	2.31	1327221.99	1000.53	2815.5	False	13C3-HFPO-DA	478248.64	1250.00	ADONA			
ADONA_2	377.0 / 85.0	2.31	14618.63	876.63	2521.0	False	13C3-HFPO-DA	478248.64	1250.00	ADONA	0.011	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	3.22	1153008.15	867.34	2868.3	False	13C8-PFOA	870774.73	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	3.22	12552.16	1088.08	335.9	False	13C8-PFOA	870774.73	1222.50	9CI-PF3ONS	0.011	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.81	1033855.43	878.12	3209.2	False	13C8-PFOA	870774.73	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.80	6337.33	1010.68	397.8	False	13C8-PFOA	870774.73	1222.50	11Cl-PF3OUdS	0.006	0.005	✓

Sample Name	LD77	Injection Vial	5
Sample ID	L4	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:52:35 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.56	880290.35	2395.54	8170.9	False	13C3-PFBS	158956.13	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.56	287510.75	2486.30	5137.9	False	13C3-PFBS	158956.13	1162.50	PFBS	0.327	0.322	✓
PFHxA_1	313.0 / 269.0	1.89	1480041.00	2407.66	1428.9	False	13C5-PFHxA	755455.16	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.89	108795.47	2426.39	1462.1	False	13C5-PFHxA	755455.16	1250.00	PFHxA	0.074	0.073	✓
PFHpA_1	363.0 / 319.0	2.28	1605713.87	2403.64	1420.3	False	13C4-PFHpA	848930.16	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.28	28396.23	2161.83	627.8	False	13C4-PFHpA	848930.16	1250.00	PFHpA	0.018	0.021	✓
PFHxS_1	399.0 / 80.0	2.30	1309983.82	2529.20	3023.5	False	13C3-PFHxS	160232.68	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	412664.03	2759.11	2441.7	False	13C3-PFHxS	160232.68	1182.50	PFHxS	0.315	0.293	✓
PFOA_1	413.0 / 369.0	2.67	1776578.99	2636.24	982.5	False	13C8-PFOA	809619.45	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.67	129235.64	2690.76	821.5	False	13C8-PFOA	809619.45	1222.50	PFOA	0.073	0.068	✓
PFNA_1	463.0 / 419.0	3.04	1752739.22	2571.40	1703.1	False	13C9-PFNA	770634.37	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.04	547488.29	2773.64	2236.3	False	13C9-PFNA	770634.37	1250.00	PFNA	0.312	0.292	✓
PFOS_1	499.0 / 80.0	3.04	1362229.21	2448.57	1062.9	False	13C8-PFOS	139012.53	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.04	272490.90	2669.59	11675.8	False	13C8-PFOS	139012.53	1195.00	PFOS	0.200	0.189	✓
PFDA_1	513.0 / 469.0	3.38	1920879.77	2443.09	1687.3	False	13C6-PFDA	888800.61	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.38	81695.09	2379.50	1645.6	False	13C6-PFDA	888800.61	1250.00	PFDA	0.043	0.042	✓
PFUnA_1	563.0 / 519.0	3.68	1691606.44	2158.41	1923.8	False	13C7-PFUnA	951864.86	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.68	93811.49	2263.74	1965.4	False	13C7-PFUnA	951864.86	1250.00	PFUnA	0.055	0.052	✓
PFDoA_1	613.0 / 569.0	3.95	1763722.28	2454.90	2534.9	False	13C2-PFDoA	893690.51	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.95	277073.11	2383.91	3358.1	False	13C2-PFDoA	893690.51	1250.00	PFDoA	0.157	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.19	1754814.08	2640.66	5180.4	False	13C2-PFTTeDA	1133938.23	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.19	119736.71	2561.60	1746.0	False	13C2-PFTTeDA	1133938.23	1250.00	PFTTrDA	0.068	0.068	✓
PFTTeDA_1	713.0 / 669.0	4.40	2446871.11	2667.61	7806.0	False	13C2-PFTTeDA	1133938.23	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	4.40	131847.08	2499.65	6316.7	False	13C2-PFTTeDA	1133938.23	1250.00	PFTTeDA	0.054	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.53	361660.01	2326.82	12714898.8	False	d3-MeFOSAA	209201.67	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.53	238687.79	2414.03	2877.6	False	d3-MeFOSAA	209201.67	1250.00	NMeFOSAA	0.660	0.651	✓
NEtFOSAA_1	584.0 / 419.0	3.68	384734.64	2489.07	4533.3	False	d5-EtFOSAA	208133.90	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.68	24947.08	2482.44	181118.4	False	d5-EtFOSAA	208133.90	1250.00	NEtFOSAA	0.065	0.063	✓
HFPO-DA_1	285.0 / 169.0	1.99	1021054.75	2532.01	4369.3	False	13C3-HFPO-DA	474173.93	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.99	23879.20	2303.22	18199.4	False	13C3-HFPO-DA	474173.93	1250.00	HFPO-DA	0.023	0.028	✓
ADONA_1	377.0 / 251.0	2.31	3332216.29	2676.99	4839.4	False	13C3-HFPO-DA	474173.93	1250.00	ADONA			
ADONA_2	377.0 / 85.0	2.31	41296.92	2563.82	5605.7	False	13C3-HFPO-DA	474173.93	1250.00	ADONA	0.012	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	3.22	2981439.69	2437.27	4317.3	False	13C8-PFOA	809619.45	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	3.22	23654.36	2185.68	700.4	False	13C8-PFOA	809619.45	1222.50	9CI-PF3ONS	0.008	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.81	2674997.32	2450.76	4443.4	False	13C8-PFOA	809619.45	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.81	12652.53	2166.07	776.2	False	13C8-PFOA	809619.45	1222.50	11Cl-PF3OUdS	0.005	0.005	✓

Sample Name	LD78	Injection Vial	6
Sample ID	L5	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:03:27 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.56	3824954.54	10485.69	20024.5	False	13C3-PFBS	156662.68	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.56	1172208.69	10295.36	12132.4	False	13C3-PFBS	156662.68	1162.50	PFBS	0.306	0.322	✓
PFHxA_1	313.0 / 269.0	1.88	5924061.17	9646.91	3001.9	False	13C5-PFHxA	755132.90	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.89	440333.23	9814.16	2043.9	False	13C5-PFHxA	755132.90	1250.00	PFHxA	0.074	0.073	✓
PFHpA_1	363.0 / 319.0	2.28	6668389.80	10227.41	3012.0	False	13C4-PFHpA	826267.22	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.28	127136.20	10208.97	1612.7	False	13C4-PFHpA	826267.22	1250.00	PFHpA	0.019	0.021	✓
PFHxS_1	399.0 / 80.0	2.30	5542214.41	11007.16	4304.9	False	13C3-PFHxS	159039.43	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	1595131.27	10989.14	3655.5	False	13C3-PFHxS	159039.43	1182.50	PFHxS	0.288	0.293	✓
PFOA_1	413.0 / 369.0	2.67	7375243.01	10850.49	1826.9	False	13C8-PFOA	826842.96	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.66	502731.86	10228.51	1710.0	False	13C8-PFOA	826842.96	1222.50	PFOA	0.068	0.068	✓
PFNA_1	463.0 / 419.0	3.04	7280196.91	10288.70	3329.6	False	13C9-PFNA	804351.43	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.04	2038482.96	9971.05	4664.4	False	13C9-PFNA	804351.43	1250.00	PFNA	0.280	0.292	✓
PFOS_1	499.0 / 80.0	3.03	5834893.75	10268.04	2058.8	False	13C8-PFOS	141226.45	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.03	1040254.95	10074.69	4751.1	False	13C8-PFOS	141226.45	1195.00	PFOS	0.178	0.189	✓
PFDA_1	513.0 / 469.0	3.38	7269583.35	9860.38	2622.8	False	13C6-PFDA	834812.46	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.38	320651.68	9791.78	2368.7	False	13C6-PFDA	834812.46	1250.00	PFDA	0.044	0.042	✓
PFUnA_1	563.0 / 519.0	3.68	7320032.23	10085.03	3665.6	False	13C7-PFUnA	876681.19	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.68	385456.41	9982.15	2896.4	False	13C7-PFUnA	876681.19	1250.00	PFUnA	0.053	0.052	✓
PFDoA_1	613.0 / 569.0	3.95	7498686.10	10614.70	4677.2	False	13C2-PFDoA	888810.97	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.95	1161218.91	10106.41	5248.2	False	13C2-PFDoA	888810.97	1250.00	PFDoA	0.155	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.19	6982256.93	11010.32	7930.8	False	13C2-PFTTeDA	1092554.53	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.19	469269.12	10424.48	3739.1	False	13C2-PFTTeDA	1092554.53	1250.00	PFTTrDA	0.067	0.068	✓
PFTTeDA_1	713.0 / 669.0	4.40	9429950.92	10843.32	19052.3	False	13C2-PFTTeDA	1092554.53	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	4.40	515613.52	10288.15	10074.9	False	13C2-PFTTeDA	1092554.53	1250.00	PFTTeDA	0.055	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.53	1701367.30	10190.87	4082.7	False	d3-MeFOSAA	220034.64	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.53	1081380.87	10079.78	3544.5	False	d3-MeFOSAA	220034.64	1250.00	NMeFOSAA	0.636	0.651	✓
NEtFOSAA_1	584.0 / 419.0	3.68	1676658.30	9964.18	4375.8	False	d5-EtFOSAA	223984.48	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.68	106664.21	10012.17	33662.5	False	d5-EtFOSAA	223984.48	1250.00	NEtFOSAA	0.064	0.063	✓
HFPO-DA_1	285.0 / 169.0	1.99	4267745.35	10487.05	11195.9	False	13C3-HFPO-DA	481500.24	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.99	107274.93	10647.94	2187197.4	False	13C3-HFPO-DA	481500.24	1250.00	HFPO-DA	0.025	0.028	✓
ADONA_1	377.0 / 251.0	2.31	12921184.94	10486.33	9714.3	False	13C3-HFPO-DA	481500.24	1250.00	ADONA			
ADONA_2	377.0 / 85.0	2.30	170941.13	10560.92	6540.5	False	13C3-HFPO-DA	481500.24	1250.00	ADONA	0.013	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	3.22	12947680.97	10409.86	6535.9	False	13C8-PFOA	826842.96	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	3.22	117331.15	10541.74	1981.1	False	13C8-PFOA	826842.96	1222.50	9CI-PF3ONS	0.009	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.81	11349862.08	10194.40	6602.0	False	13C8-PFOA	826842.96	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.81	54103.20	9057.73	2161.4	False	13C8-PFOA	826842.96	1222.50	11Cl-PF3OUdS	0.005	0.005	✓

Sample Name	LD79	Injection Vial	7
Sample ID	L6	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:14:18 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.57	9251579.40	24659.97	41509.1	False	13C3-PFBS	160927.83	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.57	2897352.49	24777.18	20943.6	False	13C3-PFBS	160927.83	1162.50	PFBS	0.313	0.322	✓
PFHxA_1	313.0 / 269.0	1.89	15398396.87	25850.58	4980.7	False	13C5-PFHxA	732574.76	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.89	1118039.38	25680.66	4368.0	False	13C5-PFHxA	732574.76	1250.00	PFHxA	0.073	0.073	✓
PFHpA_1	363.0 / 319.0	2.29	15527338.25	24899.70	6373.0	False	13C4-PFHpA	789859.52	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.29	298055.67	25143.61	2921.2	False	13C4-PFHpA	789859.52	1250.00	PFHpA	0.019	0.021	✓
PFHxS_1	399.0 / 80.0	2.30	13339160.83	24314.23	7858.0	False	13C3-PFHxS	173882.82	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	3814066.03	24132.79	4957.2	False	13C3-PFHxS	173882.82	1182.50	PFHxS	0.286	0.293	✓
PFOA_1	413.0 / 369.0	2.68	16250389.97	24062.27	3715.6	False	13C8-PFOA	823350.61	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.68	1204691.34	24604.11	2053.2	False	13C8-PFOA	823350.61	1222.50	PFOA	0.074	0.068	✓
PFNA_1	463.0 / 419.0	3.05	16716262.39	24634.59	4151.8	False	13C9-PFNA	772177.25	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.05	4847064.07	24741.00	3527.6	False	13C9-PFNA	772177.25	1250.00	PFNA	0.290	0.292	✓
PFOS_1	499.0 / 80.0	3.05	14050742.21	25154.77	3123.7	False	13C8-PFOS	138680.69	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.05	2551277.16	25185.66	4309.3	False	13C8-PFOS	138680.69	1195.00	PFOS	0.182	0.189	✓
PFDA_1	513.0 / 469.0	3.39	16443583.63	25230.23	4092.4	False	13C6-PFDA	738235.17	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.39	737283.74	25383.57	4818.9	False	13C6-PFDA	738235.17	1250.00	PFDA	0.045	0.042	✓
PFUnA_1	563.0 / 519.0	3.69	16865963.15	25279.22	3692.7	False	13C7-PFUnA	805121.18	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.69	898611.90	25287.76	3520.9	False	13C7-PFUnA	805121.18	1250.00	PFUnA	0.053	0.052	✓
PFDoA_1	613.0 / 569.0	3.96	16647016.85	24458.48	6450.2	False	13C2-PFDoA	857996.83	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.96	2775398.08	25050.37	8575.4	False	13C2-PFDoA	857996.83	1250.00	PFDoA	0.167	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.20	16385704.53	23901.66	6260.2	False	13C2-PFTeDA	1183038.68	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.20	1197398.51	24567.04	4027.9	False	13C2-PFTeDA	1183038.68	1250.00	PFTTrDA	0.073	0.068	✓
PFTeDA_1	713.0 / 669.0	4.41	22561495.03	24028.64	27332.3	False	13C2-PFTeDA	1183038.68	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.40	1339307.41	24744.74	14440.6	False	13C2-PFTeDA	1183038.68	1250.00	PFTeDA	0.059	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.54	3736623.38	24947.79	3872.9	False	d3-MeFOSAA	181972.47	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.54	2471169.87	24980.22	3730.3	False	d3-MeFOSAA	181972.47	1250.00	NMeFOSAA	0.661	0.651	✓
NEiFOSAA_1	584.0 / 419.0	3.69	3575164.80	25012.93	4809.4	False	d5-EiFOSAA	183289.32	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.69	212864.85	24995.20	15440.3	False	d5-EiFOSAA	183289.32	1250.00	NEiFOSAA	0.060	0.063	✓
HFPO-DA_1	285.0 / 169.0	1.99	10379056.84	24501.00	15623.5	False	13C3-HFPO-DA	501785.66	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.99	256347.88	24589.15	5819.3	False	13C3-HFPO-DA	501785.66	1250.00	HFPO-DA	0.025	0.028	✓
ADONA_1	377.0 / 251.0	2.31	31087213.58	24331.72	14904.8	False	13C3-HFPO-DA	501785.66	1250.00	ADONA			
ADONA_2	377.0 / 85.0	2.31	411605.05	24448.22	9802.5	False	13C3-HFPO-DA	501785.66	1250.00	ADONA	0.013	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	3.23	30614346.52	24737.52	5401.5	False	13C8-PFOA	823350.61	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	3.23	273233.56	24627.44	2674.4	False	13C8-PFOA	823350.61	1222.50	9CI-PF3ONS	0.009	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.81	27632240.14	24930.18	8289.4	False	13C8-PFOA	823350.61	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.81	155573.96	26149.13	2608.4	False	13C8-PFOA	823350.61	1222.50	11Cl-PF3OUdS	0.006	0.005	✓

Sample Name	LD74	Injection Vial	2
Sample ID	L1	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.95	836467.43	1134.65	6213.8	False	13C2-PFDA	866235.38	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.53	178716.76	1240.88	2474.1	False	13C4-PFOS	132849.06	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.67	214552.55	1355.98	2060.4	False	13C4-PFOS	132849.06	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.88	712687.46	1236.14	4640.0	False	13C2-PFOA	792424.23	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.27	803514.28	1252.44	6594.4	False	13C2-PFOA	792424.23	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.66	774663.01	1199.63	4015.7	False	13C2-PFOA	792424.23	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.03	824811.02	1343.59	3602.1	False	13C2-PFOA	792424.23	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.37	820634.01	1139.58	5504.6	False	13C2-PFDA	866235.38	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.67	917147.21	1189.59	4057.9	False	13C2-PFDA	866235.38	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.39	1150688.15	1187.42	21075.5	False	13C2-PFDA	866235.38	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.56	154072.62	1227.84	5961.4	False	13C4-PFOS	132849.06	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.29	152578.20	1239.70	4753.4	False	13C4-PFOS	132849.06	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.02	155618.08	1374.12	1612.0	False	13C4-PFOS	132849.06	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.99	464801.05	1251.60	2702.1	False	13C2-PFOA	792424.23	1250.00		N/A	N/A	✓

Sample Name	LD75	Injection Vial	3
Sample ID	L2	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:30:51 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.95	853776.91	1277.40	5949.2	False	13C2-PFDA	785350.35	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.53	189065.89	1226.87	2200.5	False	13C4-PFOS	142146.86	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.68	227742.30	1345.19	2612.9	False	13C4-PFOS	142146.86	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.88	728876.74	1263.80	5571.5	False	13C2-PFOA	792685.49	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.27	842513.34	1312.79	10821.4	False	13C2-PFOA	792685.49	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.65	769908.12	1191.87	4737.5	False	13C2-PFOA	792685.49	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.03	770211.93	1254.24	5859.8	False	13C2-PFOA	792685.49	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.37	914053.16	1400.04	6045.3	False	13C2-PFDA	785350.35	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.67	942296.49	1348.09	4566.5	False	13C2-PFDA	785350.35	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.40	1161849.29	1322.42	15619.5	False	13C2-PFDA	785350.35	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.55	158234.68	1178.52	5244.6	False	13C4-PFOS	142146.86	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.29	150335.64	1141.58	7274.9	False	13C4-PFOS	142146.86	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.02	146649.84	1210.23	2844.5	False	13C4-PFOS	142146.86	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.99	466511.33	1255.79	3383.6	False	13C2-PFOA	792685.49	1250.00		N/A	N/A	✓

Sample Name	LD76	Injection Vial	4
Sample ID	L3	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:41:42 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.95	899877.26	1235.03	6011.2	False	13C2-PFDA	856153.71	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.52	197234.64	1258.27	2188.2	True	13C4-PFOS	144587.80	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.67	225277.16	1308.17	2265.8	False	13C4-PFOS	144587.80	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.88	766050.08	1329.43	6067.7	False	13C2-PFOA	791986.52	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.27	840030.46	1310.08	6014.5	False	13C2-PFOA	791986.52	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.66	870774.73	1349.21	6526.5	False	13C2-PFOA	791986.52	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.03	794668.92	1295.21	3539.3	False	13C2-PFOA	791986.52	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.37	922835.46	1296.59	6402.0	False	13C2-PFDA	856153.71	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.67	988881.90	1297.74	5267.8	False	13C2-PFDA	856153.71	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.39	1141661.14	1191.97	19454.3	False	13C2-PFDA	856153.71	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.56	159906.94	1170.87	296167.5	False	13C4-PFOS	144587.80	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.29	151068.22	1127.77	3882.7	False	13C4-PFOS	144587.80	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.02	157383.66	1276.89	1418.3	False	13C4-PFOS	144587.80	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.00	478248.64	1288.52	3958.9	False	13C2-PFOA	791986.52	1250.00		N/A	N/A	✓

Sample Name	LD77	Injection Vial	5
Sample ID	L4	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:52:35 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.94	893690.51	1251.17	5963.7	False	13C2-PFDA	839301.63	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.52	209049.03	1302.75	1765.8	False	13C4-PFOS	148017.04	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.67	208990.67	1185.48	1896.6	False	13C4-PFOS	148017.04	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.88	755455.16	1236.94	6424.6	False	13C2-PFOA	839430.52	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.27	848930.16	1249.13	5582.7	False	13C2-PFOA	839430.52	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.65	809619.45	1183.56	4838.4	False	13C2-PFOA	839430.52	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.03	770634.37	1185.04	3308.0	False	13C2-PFOA	839430.52	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.37	888800.61	1273.85	8555.8	False	13C2-PFDA	839301.63	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.67	951864.86	1274.24	3973.6	False	13C2-PFDA	839301.63	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.39	1133938.23	1207.68	17786.5	False	13C2-PFDA	839301.63	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.55	158956.13	1136.94	309711.7	False	13C4-PFOS	148017.04	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.29	160232.68	1168.48	2918.7	False	13C4-PFOS	148017.04	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.02	139012.53	1101.71	1399.7	False	13C4-PFOS	148017.04	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.99	474173.93	1205.34	2890.2	False	13C2-PFOA	839430.52	1250.00		N/A	N/A	✓

Sample Name	LD78	Injection Vial	6
Sample ID	L5	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:03:27 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.95	888810.97	1217.38	6029.8	False	13C2-PFDA	857884.82	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.52	218612.81	1334.49	2330.3	False	13C4-PFOS	151106.52	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.67	225636.50	1253.73	2684.2	False	13C4-PFOS	151106.52	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.88	755132.90	1214.81	5860.3	False	13C2-PFOA	854356.52	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.26	826267.22	1194.54	22711.1	False	13C2-PFOA	854356.52	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.65	826842.96	1187.62	4602.7	False	13C2-PFOA	854356.52	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.02	804351.43	1215.28	4708.9	False	13C2-PFOA	854356.52	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.37	834812.46	1170.55	5432.7	False	13C2-PFDA	857884.82	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.67	876681.19	1148.18	4098.6	False	13C2-PFDA	857884.82	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.39	1092554.53	1138.40	18352.7	False	13C2-PFDA	857884.82	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.55	156662.68	1097.63	3558.3	False	13C4-PFOS	151106.52	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.28	159039.43	1136.06	36248.7	False	13C4-PFOS	151106.52	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.02	141226.45	1096.37	1812.5	False	13C4-PFOS	151106.52	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.99	481500.24	1202.58	2901.2	False	13C2-PFOA	854356.52	1250.00		N/A	N/A	✓

Sample Name	LD79	Injection Vial	7
Sample ID	L6	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:14:18 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.95	857996.83	1384.37	6204.1	False	13C2-PFDA	728252.36	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.53	180503.59	1136.74	1327.0	False	13C4-PFOS	146470.25	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.68	183423.84	1051.44	1904.7	False	13C4-PFOS	146470.25	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.88	732574.76	1218.89	7375.7	False	13C2-PFOA	826060.90	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.27	789859.52	1181.02	6862.6	False	13C2-PFOA	826060.90	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.66	823350.61	1223.11	4145.8	False	13C2-PFOA	826060.90	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.03	772177.25	1206.63	4383.2	False	13C2-PFOA	826060.90	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.37	738235.17	1219.39	4140.8	False	13C2-PFDA	728252.36	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.68	805121.18	1242.15	5085.9	False	13C2-PFDA	728252.36	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.40	1183038.68	1452.11	13353.7	False	13C2-PFDA	728252.36	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.56	160927.83	1163.20	3889.4	False	13C4-PFOS	146470.25	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.29	173882.82	1281.41	12155.6	False	13C4-PFOS	146470.25	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.03	138680.69	1110.68	1724.7	False	13C4-PFOS	146470.25	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.99	501785.66	1296.17	3249.8	False	13C2-PFOA	826060.90	1250.00		N/A	N/A	✓

Sample Name	LD81 ICC	Injection Vial	9
Sample ID	ICC	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:36:01 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.57	2480.05	2500.00	99.20
PFBS_2	298.9 / 99.0	1.57	2613.47	2500.00	104.54
PFHxA_1	313.0 / 269.0	1.89	2535.91	2525.00	100.43
PFHxA_2	313.0 / 119.0	1.89	2437.99	2525.00	96.55
PFHpA_1	363.0 / 319.0	2.29	2368.26	2500.00	94.73
PFHpA_2	363.0 / 169.0	2.29	2414.58	2500.00	96.58
PFHxS_1	399.0 / 80.0	2.30	2909.08	2525.00	115.21
PFHxS_2	399.0 / 99.0	2.30	2843.63	2525.00	112.62
PFOA_1	413.0 / 369.0	2.68	2399.78	2500.00	95.99
PFOA_2	413.0 / 169.0	2.67	2411.15	2500.00	96.45
PFNA_1	463.0 / 419.0	3.05	2438.97	2500.00	97.56
PFNA_2	463.0 / 219.0	3.05	2331.13	2500.00	93.25
PFOS_1	499.0 / 80.0	3.04	2705.46	2525.00	107.15
PFOS_2	499.0 / 99.0	3.04	2733.63	2525.00	108.26
PFDA_1	513.0 / 469.0	3.39	2635.72	2500.00	105.43
PFDA_2	513.0 / 219.0	3.39	2289.40	2500.00	91.58
PFUnA_1	563.0 / 519.0	3.69	2323.92	2500.00	92.96
PFUnA_2	563.0 / 269.0	3.69	2298.76	2500.00	91.95
PFDoA_1	613.0 / 569.0	3.96	2533.15	2500.00	101.33
PFDoA_2	613.0 / 319.0	3.96	2445.58	2500.00	97.82
PFTrDA_1	663.0 / 619.0	4.20	2767.76	2500.00	110.71
PFTrDA_2	663.0 / 169.0	4.19	2799.60	2500.00	111.98
PFTeDA_1	713.0 / 669.0	4.40	2722.96	2500.00	108.92
PFTeDA_2	713.0 / 169.0	4.40	2648.29	2500.00	105.93
NMeFOSAA_1	570.0 / 419.0	3.54	2843.87	2500.00	113.75
NMeFOSAA_2	570.0 / 512.0	3.54	2893.05	2500.00	115.72
NEtFOSAA_1	584.0 / 419.0	3.69	2600.58	2500.00	104.02
NEtFOSAA_2	584.0 / 483.0	3.69	2545.10	2500.00	101.80
HFPO-DA_1	285.0 / 169.0	2.00	2618.73	2500.00	104.75
HFPO-DA_2	285.0 / 118.8	2.00	2779.90	2500.00	111.20
ADONA_1	377.0 / 251.0	2.31	2839.86	2500.00	113.59
ADONA_2	377.0 / 85.0	2.32	2767.65	2500.00	110.71
9Cl-PF3ONS_1	531.0 / 351.0	3.22	2544.57	2500.00	101.78
9Cl-PF3ONS_2	531.0 / 83.0	3.22	2148.98	2500.00	85.96
11Cl-pf3OUdS_1	631.0 / 451.0	3.81	2461.19	2500.00	98.45
11Cl-pf3OUdS_2	631.0 / 83.0	3.81	1918.99	2500.00	76.76

Sample Name	LD76 CCV	Injection Vial	2
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 11:03:44 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.56	899.47	1000.00	89.95
PFBS_2	298.9 / 99.0	1.56	922.44	1000.00	92.24
PFHxA_1	313.0 / 269.0	1.89	920.23	1010.00	91.11
PFHxA_2	313.0 / 119.0	1.89	919.74	1010.00	91.06
PFHpA_1	363.0 / 319.0	2.28	935.25	1000.00	93.52
PFHpA_2	363.0 / 169.0	2.28	1031.65	1000.00	103.16
PFHxS_1	399.0 / 80.0	2.30	916.45	1010.00	90.74
PFHxS_2	399.0 / 99.0	2.30	891.57	1010.00	88.27
PFOA_1	413.0 / 369.0	2.67	984.67	1000.00	98.47
PFOA_2	413.0 / 169.0	2.67	1126.37	1000.00	112.64
PFNA_1	463.0 / 419.0	3.04	1055.77	1000.00	105.58
PFNA_2	463.0 / 219.0	3.04	1106.92	1000.00	110.69
PFOS_1	499.0 / 80.0	3.04	918.18	1010.00	90.91
PFOS_2	499.0 / 99.0	3.04	925.22	1010.00	91.61
PFDA_1	513.0 / 469.0	3.38	941.13	1000.00	94.11
PFDA_2	513.0 / 219.0	3.38	837.46	1000.00	83.75
PFUnA_1	563.0 / 519.0	3.68	966.26	1000.00	96.63
PFUnA_2	563.0 / 269.0	3.68	904.04	1000.00	90.40
PFDoA_1	613.0 / 569.0	3.95	953.96	1000.00	95.40
PFDoA_2	613.0 / 319.0	3.95	935.97	1000.00	93.60
PFTrDA_1	663.0 / 619.0	4.19	942.06	1000.00	94.21
PFTrDA_2	663.0 / 169.0	4.19	890.27	1000.00	89.03
PFTeDA_1	713.0 / 669.0	4.40	952.50	1000.00	95.25
PFTeDA_2	713.0 / 169.0	4.40	950.08	1000.00	95.01
NMeFOSAA_1	570.0 / 419.0	3.53	1027.01	1000.00	102.70
NMeFOSAA_2	570.0 / 512.0	3.53	1043.27	1000.00	104.33
NEtFOSAA_1	584.0 / 419.0	3.68	868.14	1000.00	86.81
NEtFOSAA_2	584.0 / 483.0	3.68	818.38	1000.00	81.84
HFPO-DA_1	285.0 / 169.0	1.99	966.62	1000.00	96.66
HFPO-DA_2	285.0 / 118.8	1.99	892.92	1000.00	89.29
ADONA_1	377.0 / 251.0	2.31	942.27	1000.00	94.23
ADONA_2	377.0 / 85.0	2.30	883.44	1000.00	88.34
9Cl-PF3ONS_1	531.0 / 351.0	3.22	923.10	1000.00	92.31
9Cl-PF3ONS_2	531.0 / 83.0	3.23	1012.98	1000.00	101.30
11Cl-pf3OUdS_1	631.0 / 451.0	3.81	838.76	1000.00	83.88
11Cl-pf3OUdS_2	631.0 / 83.0	3.81	810.67	1000.00	81.07

Sample Name	LD77 CCV	Injection Vial	11
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 7:08:01 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.57	2241.78	2500.00	89.67
PFBS_2	298.9 / 99.0	1.57	2415.89	2500.00	96.64
PFHxA_1	313.0 / 269.0	1.90	2378.77	2525.00	94.21
PFHxA_2	313.0 / 119.0	1.90	2197.41	2525.00	87.03
PFHpA_1	363.0 / 319.0	2.30	2444.37	2500.00	97.77
PFHpA_2	363.0 / 169.0	2.30	1957.45	2500.00	78.30
PFHxS_1	399.0 / 80.0	2.32	2619.00	2525.00	103.72
PFHxS_2	399.0 / 99.0	2.32	2739.11	2525.00	108.48
PFOA_1	413.0 / 369.0	2.69	2650.93	2500.00	106.04
PFOA_2	413.0 / 169.0	2.69	2127.38	2500.00	85.10
PFNA_1	463.0 / 419.0	3.07	2624.49	2500.00	104.98
PFNA_2	463.0 / 219.0	3.07	2433.21	2500.00	97.33
PFOS_1	499.0 / 80.0	3.06	2522.91	2525.00	99.92
PFOS_2	499.0 / 99.0	3.06	2537.31	2525.00	100.49
PFDA_1	513.0 / 469.0	3.41	2557.06	2500.00	102.28
PFDA_2	513.0 / 219.0	3.41	2570.96	2500.00	102.84
PFUnA_1	563.0 / 519.0	3.71	2439.96	2500.00	97.60
PFUnA_2	563.0 / 269.0	3.71	2435.56	2500.00	97.42
PFDoA_1	613.0 / 569.0	3.98	2584.62	2500.00	103.38
PFDoA_2	613.0 / 319.0	3.98	2642.23	2500.00	105.69
PFTrDA_1	663.0 / 619.0	4.22	2902.11	2500.00	116.08
PFTrDA_2	663.0 / 169.0	4.22	2678.10	2500.00	107.12
PFTeDA_1	713.0 / 669.0	4.43	2674.09	2500.00	106.96
PFTeDA_2	713.0 / 169.0	4.43	2482.10	2500.00	99.28
NMeFOSAA_1	570.0 / 419.0	3.56	2465.61	2500.00	98.62
NMeFOSAA_2	570.0 / 512.0	3.56	2522.10	2500.00	100.88
NEtFOSAA_1	584.0 / 419.0	3.71	2765.19	2500.00	110.61
NEtFOSAA_2	584.0 / 483.0	3.71	2687.89	2500.00	107.52
HFPO-DA_1	285.0 / 169.0	2.01	2486.15	2500.00	99.45
HFPO-DA_2	285.0 / 118.8	2.01	2263.39	2500.00	90.54
ADONA_1	377.0 / 251.0	2.33	2679.36	2500.00	107.17
ADONA_2	377.0 / 85.0	2.33	2552.34	2500.00	102.09
9Cl-PF3ONS_1	531.0 / 351.0	3.25	2426.52	2500.00	97.06
9Cl-PF3ONS_2	531.0 / 83.0	3.25	2053.56	2500.00	82.14
11Cl-pf3OUdS_1	631.0 / 451.0	3.84	2380.71	2500.00	95.23
11Cl-pf3OUdS_2	631.0 / 83.0	3.84	2039.30	2500.00	81.57

Sample Name	LD76 CCV	Injection Vial	22
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 9:07:53 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.58	905.97	1000.00	90.60
PFBS_2	298.9 / 99.0	1.58	876.39	1000.00	87.64
PFHxA_1	313.0 / 269.0	1.90	950.87	1010.00	94.15
PFHxA_2	313.0 / 119.0	1.90	975.26	1010.00	96.56
PFHpA_1	363.0 / 319.0	2.30	979.70	1000.00	97.97
PFHpA_2	363.0 / 169.0	2.30	819.04	1000.00	81.90
PFHxS_1	399.0 / 80.0	2.32	902.96	1010.00	89.40
PFHxS_2	399.0 / 99.0	2.32	976.12	1010.00	96.65
PFOA_1	413.0 / 369.0	2.69	971.47	1000.00	97.15
PFOA_2	413.0 / 169.0	2.69	901.67	1000.00	90.17
PFNA_1	463.0 / 419.0	3.06	963.47	1000.00	96.35
PFNA_2	463.0 / 219.0	3.06	988.03	1000.00	98.80
PFOS_1	499.0 / 80.0	3.06	1050.84	1010.00	104.04
PFOS_2	499.0 / 99.0	3.06	934.93	1010.00	92.57
PFDA_1	513.0 / 469.0	3.40	882.00	1000.00	88.20
PFDA_2	513.0 / 219.0	3.40	1009.85	1000.00	100.98
PFUnA_1	563.0 / 519.0	3.70	1020.13	1000.00	102.01
PFUnA_2	563.0 / 269.0	3.70	1016.95	1000.00	101.69
PFDoA_1	613.0 / 569.0	3.97	918.65	1000.00	91.86
PFDoA_2	613.0 / 319.0	3.97	990.84	1000.00	99.08
PFTrDA_1	663.0 / 619.0	4.21	1109.26	1000.00	110.93
PFTrDA_2	663.0 / 169.0	4.21	1058.44	1000.00	105.84
PFTeDA_1	713.0 / 669.0	4.42	1037.20	1000.00	103.72
PFTeDA_2	713.0 / 169.0	4.42	932.16	1000.00	93.22
NMeFOSAA_1	570.0 / 419.0	3.56	1040.92	1000.00	104.09
NMeFOSAA_2	570.0 / 512.0	3.55	1025.38	1000.00	102.54
NEtFOSAA_1	584.0 / 419.0	3.71	1020.98	1000.00	102.10
NEtFOSAA_2	584.0 / 483.0	3.70	1108.54	1000.00	110.85
HFPO-DA_1	285.0 / 169.0	2.01	972.64	1000.00	97.26
HFPO-DA_2	285.0 / 118.8	2.00	1136.34	1000.00	113.63
ADONA_1	377.0 / 251.0	2.32	934.67	1000.00	93.47
ADONA_2	377.0 / 85.0	2.33	1080.33	1000.00	108.03
9Cl-PF3ONS_1	531.0 / 351.0	3.24	984.08	1000.00	98.41
9Cl-PF3ONS_2	531.0 / 83.0	3.24	862.19	1000.00	86.22
11Cl-pf3OUdS_1	631.0 / 451.0	3.83	925.66	1000.00	92.57
11Cl-pf3OUdS_2	631.0 / 83.0	3.83	1115.28	1000.00	111.53

Sample Name	LD76 CCV	Injection Vial	3
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 11:30:20 AM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.59	955.98	1000.00	95.60
PFBS_2	298.9 / 99.0	1.59	955.47	1000.00	95.55
PFHxA_1	313.0 / 269.0	1.92	984.96	1010.00	97.52
PFHxA_2	313.0 / 119.0	1.92	1011.79	1010.00	100.18
PFHpA_1	363.0 / 319.0	2.33	860.48	1000.00	86.05
PFHpA_2	363.0 / 169.0	2.32	1086.06	1000.00	108.61
PFHxS_1	399.0 / 80.0	2.35	1022.58	1010.00	101.25
PFHxS_2	399.0 / 99.0	2.35	910.89	1010.00	90.19
PFOA_1	413.0 / 369.0	2.73	904.39	1000.00	90.44
PFOA_2	413.0 / 169.0	2.72	707.28	1000.00	70.73
PFNA_1	463.0 / 419.0	3.10	933.08	1000.00	93.31
PFNA_2	463.0 / 219.0	3.10	1005.27	1000.00	100.53
PFOS_1	499.0 / 80.0	3.10	1017.04	1010.00	100.70
PFOS_2	499.0 / 99.0	3.10	912.64	1010.00	90.36
PFDA_1	513.0 / 469.0	3.45	964.00	1000.00	96.40
PFDA_2	513.0 / 219.0	3.45	1034.53	1000.00	103.45
PFUnA_1	563.0 / 519.0	3.76	897.76	1000.00	89.78
PFUnA_2	563.0 / 269.0	3.75	885.10	1000.00	88.51
PFDoA_1	613.0 / 569.0	4.03	944.52	1000.00	94.45
PFDoA_2	613.0 / 319.0	4.03	891.46	1000.00	89.15
PFTrDA_1	663.0 / 619.0	4.27	1117.53	1000.00	111.75
PFTrDA_2	663.0 / 169.0	4.27	1157.34	1000.00	115.73
PFTeDA_1	713.0 / 669.0	4.49	1023.65	1000.00	102.36
PFTeDA_2	713.0 / 169.0	4.48	987.73	1000.00	98.77
NMeFOSAA_1	570.0 / 419.0	3.60	1068.80	1000.00	106.88
NMeFOSAA_2	570.0 / 512.0	3.60	1077.35	1000.00	107.73
NEtFOSAA_1	584.0 / 419.0	3.76	909.00	1000.00	90.90
NEtFOSAA_2	584.0 / 483.0	3.76	1012.94	1000.00	101.29
HFPO-DA_1	285.0 / 169.0	2.04	973.34	1000.00	97.33
HFPO-DA_2	285.0 / 118.8	2.03	688.16	1000.00	68.82
ADONA_1	377.0 / 251.0	2.36	980.03	1000.00	98.00
ADONA_2	377.0 / 85.0	2.36	1146.05	1000.00	114.60
9Cl-PF3ONS_1	531.0 / 351.0	3.28	937.30	1000.00	93.73
9Cl-PF3ONS_2	531.0 / 83.0	3.28	1018.76	1000.00	101.88
11Cl-pf3OUdS_1	631.0 / 451.0	3.88	860.95	1000.00	86.09
11Cl-pf3OUdS_2	631.0 / 83.0	3.88	846.81	1000.00	84.68

Sample Name	LD77 CCV	Injection Vial	14
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 1:29:46 PM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.59	2274.42	2500.00	90.98
PFBS_2	298.9 / 99.0	1.58	2380.16	2500.00	95.21
PFHxA_1	313.0 / 269.0	1.92	2425.33	2525.00	96.05
PFHxA_2	313.0 / 119.0	1.92	2427.28	2525.00	96.13
PFHpA_1	363.0 / 319.0	2.32	2206.86	2500.00	88.27
PFHpA_2	363.0 / 169.0	2.32	2457.14	2500.00	98.29
PFHxS_1	399.0 / 80.0	2.34	2539.33	2525.00	100.57
PFHxS_2	399.0 / 99.0	2.34	2455.63	2525.00	97.25
PFOA_1	413.0 / 369.0	2.71	2811.40	2500.00	112.46
PFOA_2	413.0 / 169.0	2.71	2217.91	2500.00	88.72
PFNA_1	463.0 / 419.0	3.09	2521.16	2500.00	100.85
PFNA_2	463.0 / 219.0	3.09	2302.69	2500.00	92.11
PFOS_1	499.0 / 80.0	3.08	2191.96	2525.00	86.81
PFOS_2	499.0 / 99.0	3.08	2184.93	2525.00	86.53
PFDA_1	513.0 / 469.0	3.43	2468.41	2500.00	98.74
PFDA_2	513.0 / 219.0	3.43	2283.57	2500.00	91.34
PFUnA_1	563.0 / 519.0	3.73	2375.39	2500.00	95.02
PFUnA_2	563.0 / 269.0	3.73	2416.45	2500.00	96.66
PFDoA_1	613.0 / 569.0	4.00	2555.81	2500.00	102.23
PFDoA_2	613.0 / 319.0	4.00	2441.68	2500.00	97.67
PFTrDA_1	663.0 / 619.0	4.24	2722.80	2500.00	108.91
PFTrDA_2	663.0 / 169.0	4.24	2934.06	2500.00	117.36
PFTeDA_1	713.0 / 669.0	4.46	2673.92	2500.00	106.96
PFTeDA_2	713.0 / 169.0	4.45	2545.97	2500.00	101.84
NMeFOSAA_1	570.0 / 419.0	3.58	2880.49	2500.00	115.22
NMeFOSAA_2	570.0 / 512.0	3.58	2908.01	2500.00	116.32
NEtFOSAA_1	584.0 / 419.0	3.73	2534.76	2500.00	101.39
NEtFOSAA_2	584.0 / 483.0	3.73	2410.24	2500.00	96.41
HFPO-DA_1	285.0 / 169.0	2.02	2566.56	2500.00	102.66
HFPO-DA_2	285.0 / 118.8	2.03	2447.87	2500.00	97.91
ADONA_1	377.0 / 251.0	2.34	2801.71	2500.00	112.07
ADONA_2	377.0 / 85.0	2.34	2754.93	2500.00	110.20
9Cl-PF3ONS_1	531.0 / 351.0	3.27	2479.01	2500.00	99.16
9Cl-PF3ONS_2	531.0 / 83.0	3.26	3103.95	2500.00	124.16
11Cl-pf3OUdS_1	631.0 / 451.0	3.86	2370.33	2500.00	94.81
11Cl-pf3OUdS_2	631.0 / 83.0	3.86	2102.73	2500.00	84.11

Sample Name	LD81 ICC	Injection Vial	9
Sample ID	ICC	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:36:01 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.95	1241.04	1250.00	99.28
d3-MeFOSAA	573.0 / 419.0	3.53	1293.07	1250.00	103.45
d5-EtFOSAA	589.0 / 419.0	3.68	1350.75	1250.00	108.06
13C5-PFHxA	318.0 / 273.0	1.88	1172.63	1250.00	93.81
13C4-PFHpA	367.0 / 322.0	2.27	1238.55	1250.00	99.08
13C8-PFOA	421.0 / 376.0	2.66	1225.41	1222.50	100.24
13C9-PFNA	472.0 / 427.0	3.03	1296.10	1250.00	103.69
13C6-PFDA	519.0 / 474.0	3.37	1242.85	1250.00	99.43
13C7-PFUnA	570.0 / 525.0	3.68	1288.87	1250.00	103.11
13C2-PFTeDA	715.0 / 670.0	4.40	1170.40	1250.00	93.63
13C3-PFBS	302.0 / 99.0	1.56	1173.45	1162.50	100.94
13C3-PFHxS	402.0 / 99.0	2.29	1157.45	1182.50	97.88
13C8-PFOS	507.0 / 99.0	3.03	1057.74	1195.00	88.51
13C3-HFPO-DA	287.0 / 169.0	2.00	1202.71	1250.00	96.22

Sample Name	LD76 CCV	Injection Vial	2
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 11:03:44 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.95	1079.62	1250.00	86.37
d3-MeFOSAA	573.0 / 419.0	3.53	1240.91	1250.00	99.27
d5-EtFOSAA	589.0 / 419.0	3.68	1422.62	1250.00	113.81
13C5-PFHxA	318.0 / 273.0	1.88	1258.93	1250.00	100.71
13C4-PFHpA	367.0 / 322.0	2.27	1189.77	1250.00	95.18
13C8-PFOA	421.0 / 376.0	2.66	1196.65	1222.50	97.89
13C9-PFNA	472.0 / 427.0	3.03	1153.36	1250.00	92.27
13C6-PFDA	519.0 / 474.0	3.37	1231.19	1250.00	98.50
13C7-PFUnA	570.0 / 525.0	3.67	1101.81	1250.00	88.14
13C2-PFTeDA	715.0 / 670.0	4.39	1116.45	1250.00	89.32
13C3-PFBS	302.0 / 99.0	1.55	1113.61	1162.50	95.79
13C3-PFHxS	402.0 / 99.0	2.29	1100.48	1182.50	93.06
13C8-PFOS	507.0 / 99.0	3.03	1139.94	1195.00	95.39
13C3-HFPO-DA	287.0 / 169.0	1.99	1223.05	1250.00	97.84

Sample Name	LD77 CCV	Injection Vial	11
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 7:08:01 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.98	1246.65	1250.00	99.73
d3-MeFOSAA	573.0 / 419.0	3.55	1037.20	1250.00	82.98
d5-EtFOSAA	589.0 / 419.0	3.71	883.05	1250.00	70.64
13C5-PFHxA	318.0 / 273.0	1.89	1329.50	1250.00	106.36
13C4-PFHpA	367.0 / 322.0	2.29	1297.01	1250.00	103.76
13C8-PFOA	421.0 / 376.0	2.68	1256.43	1222.50	102.78
13C9-PFNA	472.0 / 427.0	3.05	1284.70	1250.00	102.78
13C6-PFDA	519.0 / 474.0	3.40	1209.92	1250.00	96.79
13C7-PFUnA	570.0 / 525.0	3.70	1197.43	1250.00	95.79
13C2-PFTeDA	715.0 / 670.0	4.43	1034.22	1250.00	82.74
13C3-PFBS	302.0 / 99.0	1.56	1141.77	1162.50	98.22
13C3-PFHxS	402.0 / 99.0	2.31	1124.41	1182.50	95.09
13C8-PFOS	507.0 / 99.0	3.05	1088.20	1195.00	91.06
13C3-HFPO-DA	287.0 / 169.0	2.01	1274.47	1250.00	101.96

Sample Name	LD76 CCV	Injection Vial	22
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 9:07:53 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.97	1234.97	1250.00	98.80
d3-MeFOSAA	573.0 / 419.0	3.55	1004.93	1250.00	80.39
d5-EtFOSAA	589.0 / 419.0	3.70	1019.65	1250.00	81.57
13C5-PFHxA	318.0 / 273.0	1.89	1245.10	1250.00	99.61
13C4-PFHpA	367.0 / 322.0	2.28	1243.91	1250.00	99.51
13C8-PFOA	421.0 / 376.0	2.67	1196.63	1222.50	97.88
13C9-PFNA	472.0 / 427.0	3.05	1227.57	1250.00	98.21
13C6-PFDA	519.0 / 474.0	3.39	1258.49	1250.00	100.68
13C7-PFUnA	570.0 / 525.0	3.69	1100.02	1250.00	88.00
13C2-PFTeDA	715.0 / 670.0	4.41	1035.79	1250.00	82.86
13C3-PFBS	302.0 / 99.0	1.56	1254.03	1162.50	107.87
13C3-PFHxS	402.0 / 99.0	2.30	1208.08	1182.50	102.16
13C8-PFOS	507.0 / 99.0	3.04	1104.09	1195.00	92.39
13C3-HFPO-DA	287.0 / 169.0	2.01	1233.06	1250.00	98.65

Sample Name	LD76 CCV	Injection Vial	3
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 11:30:20 AM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	4.02	1354.57	1250.00	108.37
d3-MeFOSAA	573.0 / 419.0	3.59	1013.81	1250.00	81.10
d5-EtFOSAA	589.0 / 419.0	3.75	995.61	1250.00	79.65
13C5-PFHxA	318.0 / 273.0	1.92	1201.15	1250.00	96.09
13C4-PFHpA	367.0 / 322.0	2.31	1248.00	1250.00	99.84
13C8-PFOA	421.0 / 376.0	2.71	1254.97	1222.50	102.66
13C9-PFNA	472.0 / 427.0	3.09	1227.72	1250.00	98.22
13C6-PFDA	519.0 / 474.0	3.44	1168.12	1250.00	93.45
13C7-PFUnA	570.0 / 525.0	3.74	1172.56	1250.00	93.81
13C2-PFTeDA	715.0 / 670.0	4.48	1006.09	1250.00	80.49
13C3-PFBS	302.0 / 99.0	1.58	1114.53	1162.50	95.87
13C3-PFHxS	402.0 / 99.0	2.33	1084.56	1182.50	91.72
13C8-PFOS	507.0 / 99.0	3.08	1059.32	1195.00	88.65
13C3-HFPO-DA	287.0 / 169.0	2.03	1168.35	1250.00	93.47

Sample Name	LD77 CCV	Injection Vial	14
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 1:29:46 PM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	4.00	1387.28	1250.00	110.98
d3-MeFOSAA	573.0 / 419.0	3.58	885.10	1250.00	70.81
d5-EtFOSAA	589.0 / 419.0	3.73	976.93	1250.00	78.15
13C5-PFHxA	318.0 / 273.0	1.91	1323.50	1250.00	105.88
13C4-PFHpA	367.0 / 322.0	2.31	1374.60	1250.00	109.97
13C8-PFOA	421.0 / 376.0	2.70	1286.52	1222.50	105.24
13C9-PFNA	472.0 / 427.0	3.07	1356.93	1250.00	108.55
13C6-PFDA	519.0 / 474.0	3.42	1266.38	1250.00	101.31
13C7-PFUnA	570.0 / 525.0	3.72	1261.48	1250.00	100.92
13C2-PFTeDA	715.0 / 670.0	4.45	1094.89	1250.00	87.59
13C3-PFBS	302.0 / 99.0	1.58	1136.91	1162.50	97.80
13C3-PFHxS	402.0 / 99.0	2.32	1126.92	1182.50	95.30
13C8-PFOS	507.0 / 99.0	3.07	1161.16	1195.00	97.17
13C3-HFPO-DA	287.0 / 169.0	2.02	1326.29	1250.00	106.10

Sample Name	LD81 ICC	Injection Vial	9
Sample ID	ICC	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:36:01 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.57	885855.40	2480.05	8913.3	False	13C3-PFBS	154461.15	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.57	293652.79	2613.47	6082.5	False	13C3-PFBS	154461.15	1162.50	PFBS	0.331	0.322	✓
PFHxA_1	313.0 / 269.0	1.89	1477608.08	2535.91	1392.7	False	13C5-PFHxA	716100.06	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.89	103621.58	2437.99	1072.3	False	13C5-PFHxA	716100.06	1250.00	PFHxA	0.070	0.073	✓
PFHpA_1	363.0 / 319.0	2.29	1568428.10	2368.26	1277.3	False	13C4-PFHpA	841651.55	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.29	31336.03	2414.58	2108.5	False	13C4-PFHpA	841651.55	1250.00	PFHpA	0.020	0.021	✓
PFHxS_1	399.0 / 80.0	2.30	1400294.11	2909.08	2442.8	False	13C3-PFHxS	149434.15	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	396293.16	2843.63	2031.2	False	13C3-PFHxS	149434.15	1182.50	PFHxS	0.283	0.293	✓
PFOA_1	413.0 / 369.0	2.68	1676941.75	2399.78	1257.7	False	13C8-PFOA	838158.90	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.67	119850.34	2411.15	810.1	False	13C8-PFOA	838158.90	1222.50	PFOA	0.071	0.068	✓
PFNA_1	463.0 / 419.0	3.05	1818798.15	2438.97	1690.5	False	13C9-PFNA	842765.82	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.05	504230.00	2331.13	2090.3	False	13C9-PFNA	842765.82	1250.00	PFNA	0.277	0.292	✓
PFOS_1	499.0 / 80.0	3.04	1361439.82	2705.46	1103.4	False	13C8-PFOS	125655.55	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.04	252182.74	2733.63	3042.4	False	13C8-PFOS	125655.55	1195.00	PFOS	0.185	0.189	✓
PFDA_1	513.0 / 469.0	3.39	1982847.88	2635.72	2038.6	False	13C6-PFDA	850557.14	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.39	75159.20	2289.40	1389.1	False	13C6-PFDA	850557.14	1250.00	PFDA	0.038	0.042	✓
PFUnA_1	563.0 / 519.0	3.69	1807822.12	2323.92	1697.5	False	13C7-PFUnA	944335.53	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.69	94531.28	2298.76	1311.4	False	13C7-PFUnA	944335.53	1250.00	PFUnA	0.052	0.052	✓
PFDoA_1	613.0 / 569.0	3.96	1769808.49	2533.15	3332.7	False	13C2-PFDoA	869469.34	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.96	276482.83	2445.58	3638.1	False	13C2-PFDoA	869469.34	1250.00	PFDoA	0.156	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.20	1747313.40	2767.76	3340.1	False	13C2-PFTeDA	1077867.85	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.19	124384.21	2799.60	1558.3	False	13C2-PFTeDA	1077867.85	1250.00	PFTTrDA	0.071	0.068	✓
PFTeDA_1	713.0 / 669.0	4.40	2373110.55	2722.96	9367.4	False	13C2-PFTeDA	1077867.85	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.40	132643.44	2648.29	4497.1	False	13C2-PFTeDA	1077867.85	1250.00	PFTeDA	0.056	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.54	412681.12	2843.87	16752.7	False	d3-MeFOSAA	195954.57	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.54	267112.47	2893.05	2186.4	False	d3-MeFOSAA	195954.57	1250.00	NMeFOSAA	0.647	0.651	✓
NEtFOSAA_1	584.0 / 419.0	3.69	432166.57	2600.58	3131.7	False	d5-EtFOSAA	223808.67	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.69	27496.99	2545.10	212421.5	False	d5-EtFOSAA	223808.67	1250.00	NEtFOSAA	0.064	0.063	✓
HFPO-DA_1	285.0 / 169.0	2.00	1053323.44	2618.73	5639.1	False	13C3-HFPO-DA	473088.63	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	2.00	28484.48	2779.90	508.5	False	13C3-HFPO-DA	473088.63	1250.00	HFPO-DA	0.027	0.028	✓
ADONA_1	377.0 / 251.0	2.31	3520018.39	2839.86	4391.1	False	13C3-HFPO-DA	473088.63	1250.00	ADONA			
ADONA_2	377.0 / 85.0	2.32	44433.13	2767.65	2272.3	False	13C3-HFPO-DA	473088.63	1250.00	ADONA	0.013	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	3.22	3221632.29	2544.57	3303.9	False	13C8-PFOA	838158.90	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	3.22	24073.35	2148.98	574.9	False	13C8-PFOA	838158.90	1222.50	9CI-PF3ONS	0.007	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.81	2781058.09	2461.19	5361.2	False	13C8-PFOA	838158.90	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.81	11601.90	1918.99	900.5	False	13C8-PFOA	838158.90	1222.50	11Cl-PF3OUdS	0.004	0.005	✓

Sample Name	LD76 CCV	Injection Vial	2
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 11:03:44 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.56	298873.34	899.47	5028.8	False	13C3-PFBS	146002.11	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.56	98191.17	922.44	2603.0	False	13C3-PFBS	146002.11	1162.50	PFBS	0.329	0.322	✓
PFHxA_1	313.0 / 269.0	1.89	521489.70	920.23	731.8	False	13C5-PFHxA	695530.03	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.89	37879.87	919.74	441.9	False	13C5-PFHxA	695530.03	1250.00	PFHxA	0.073	0.073	✓
PFHpA_1	363.0 / 319.0	2.28	535233.64	935.25	897.1	False	13C4-PFHpA	731442.10	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.28	12095.94	1031.65	253.3	False	13C4-PFHpA	731442.10	1250.00	PFHpA	0.023	0.021	✓
PFHxS_1	399.0 / 80.0	2.30	438918.68	916.45	1306.0	False	13C3-PFHxS	141513.34	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	125080.55	891.57	1097.8	False	13C3-PFHxS	141513.34	1182.50	PFHxS	0.285	0.293	✓
PFOA_1	413.0 / 369.0	2.67	623570.26	984.67	791.6	False	13C8-PFOA	740476.56	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.67	49290.39	1126.37	401.7	False	13C8-PFOA	740476.56	1222.50	PFOA	0.079	0.068	✓
PFNA_1	463.0 / 419.0	3.04	640156.61	1055.77	1126.0	False	13C9-PFNA	678470.10	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.04	195453.14	1106.92	1274.4	False	13C9-PFNA	678470.10	1250.00	PFNA	0.305	0.292	✓
PFOS_1	499.0 / 80.0	3.04	489766.41	918.18	570.9	False	13C8-PFOS	134882.64	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.04	92638.79	925.22	6231.5	False	13C8-PFOS	134882.64	1195.00	PFOS	0.189	0.189	✓
PFDA_1	513.0 / 469.0	3.38	709577.26	941.13	1250.5	False	13C6-PFDA	849273.16	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.38	26438.44	837.46	577.0	False	13C6-PFDA	849273.16	1250.00	PFDA	0.037	0.042	✓
PFUnA_1	563.0 / 519.0	3.68	641726.92	966.26	1322.3	False	13C7-PFUnA	813698.57	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.68	31297.08	904.04	1115.6	False	13C7-PFUnA	813698.57	1250.00	PFUnA	0.049	0.052	✓
PFDoA_1	613.0 / 569.0	3.95	598211.51	953.96	2082.8	False	13C2-PFDoA	762389.00	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.95	93928.09	935.97	2057.8	False	13C2-PFDoA	762389.00	1250.00	PFDoA	0.157	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.19	585144.34	942.06	2834.8	False	13C2-PFTeDA	1036356.52	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.19	38076.45	890.27	872.2	False	13C2-PFTeDA	1036356.52	1250.00	PFTTrDA	0.065	0.068	✓
PFTeDA_1	713.0 / 669.0	4.40	828961.65	952.50	5056.8	False	13C2-PFTeDA	1036356.52	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.40	47167.53	950.08	2588.7	False	13C2-PFTeDA	1036356.52	1250.00	PFTeDA	0.057	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.53	147751.98	1027.01	9000.4	False	d3-MeFOSAA	186724.51	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.53	96193.18	1043.27	4858.7	False	d3-MeFOSAA	186724.51	1250.00	NMeFOSAA	0.651	0.651	✓
NEiFOSAA_1	584.0 / 419.0	3.68	153528.71	868.14	10789.1	False	d5-EiFOSAA	234273.32	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.68	9375.97	818.38	1604.3	False	d5-EiFOSAA	234273.32	1250.00	NEiFOSAA	0.061	0.063	✓
HFPO-DA_1	285.0 / 169.0	1.99	362518.34	966.62	3071.6	False	13C3-HFPO-DA	435237.41	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.99	9234.63	892.92	818.0	False	13C3-HFPO-DA	435237.41	1250.00	HFPO-DA	0.025	0.028	✓
ADONA_1	377.0 / 251.0	2.31	1143543.87	942.27	3634.4	False	13C3-HFPO-DA	435237.41	1250.00	ADONA			
ADONA_2	377.0 / 85.0	2.30	13403.11	883.44	38495.6	False	13C3-HFPO-DA	435237.41	1250.00	ADONA	0.012	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	3.22	1042501.69	923.10	2622.8	False	13C8-PFOA	740476.56	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	3.23	9923.94	1012.98	246.6	False	13C8-PFOA	740476.56	1222.50	9CI-PF3ONS	0.010	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.81	839924.05	838.76	3065.2	False	13C8-PFOA	740476.56	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.81	4318.74	810.67	307.9	False	13C8-PFOA	740476.56	1222.50	11Cl-PF3OUdS	0.005	0.005	✓

Sample Name	LD77 CCV	Injection Vial	11
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 7:08:01 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.57	782078.50	2241.78	6202.8	False	13C3-PFBS	151004.87	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.57	265404.54	2415.89	6561.7	False	13C3-PFBS	151004.87	1162.50	PFBS	0.339	0.322	✓
PFHxA_1	313.0 / 269.0	1.90	1391776.45	2378.77	1064.7	False	13C5-PFHxA	719021.83	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.90	93762.71	2197.41	705.7	False	13C5-PFHxA	719021.83	1250.00	PFHxA	0.067	0.073	✓
PFHpA_1	363.0 / 319.0	2.30	1501484.18	2444.37	1202.1	False	13C4-PFHpA	780549.76	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.30	23721.68	1957.45	416.9	False	13C4-PFHpA	780549.76	1250.00	PFHpA	0.016	0.021	✓
PFHxS_1	399.0 / 80.0	2.32	1233671.21	2619.00	2774.7	False	13C3-PFHxS	145858.33	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	373001.68	2739.11	2470.8	False	13C3-PFHxS	145858.33	1182.50	PFHxS	0.302	0.293	✓
PFOA_1	413.0 / 369.0	2.69	1679202.04	2650.93	1263.4	False	13C8-PFOA	761070.67	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.69	95980.01	2127.38	629.7	False	13C8-PFOA	761070.67	1222.50	PFOA	0.057	0.068	✓
PFNA_1	463.0 / 419.0	3.07	1717080.58	2624.49	1803.4	False	13C9-PFNA	739791.04	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.07	461756.03	2433.21	3071.3	False	13C9-PFNA	739791.04	1250.00	PFNA	0.269	0.292	✓
PFOS_1	499.0 / 80.0	3.06	1311737.93	2522.91	1097.6	False	13C8-PFOS	129888.56	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.06	242063.83	2537.31	2819.8	False	13C8-PFOS	129888.56	1195.00	PFOS	0.185	0.189	✓
PFDA_1	513.0 / 469.0	3.41	1661397.83	2557.06	1860.4	False	13C6-PFDA	734545.22	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.41	73060.36	2570.96	1897.5	False	13C6-PFDA	734545.22	1250.00	PFDA	0.044	0.042	✓
PFUnA_1	563.0 / 519.0	3.71	1564854.74	2439.96	1648.7	False	13C7-PFUnA	778299.79	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.71	82616.08	2435.56	1881.8	False	13C7-PFUnA	778299.79	1250.00	PFUnA	0.053	0.052	✓
PFDoA_1	613.0 / 569.0	3.98	1608705.11	2584.62	3072.2	False	13C2-PFDoA	774804.17	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.98	266040.78	2642.23	2996.6	False	13C2-PFDoA	774804.17	1250.00	PFDoA	0.165	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.22	1435412.74	2902.11	4903.8	False	13C2-PFTTeDA	844941.65	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.22	93275.36	2678.10	1507.0	False	13C2-PFTTeDA	844941.65	1250.00	PFTTrDA	0.065	0.068	✓
PFTTeDA_1	713.0 / 669.0	4.43	1827591.93	2674.09	7988.7	False	13C2-PFTTeDA	844941.65	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	4.43	97567.36	2482.10	3611.8	False	13C2-PFTTeDA	844941.65	1250.00	PFTTeDA	0.053	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.56	290930.42	2465.61	17166.6	False	d3-MeFOSAA	158997.21	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.56	189352.41	2522.10	1807.3	False	d3-MeFOSAA	158997.21	1250.00	NMeFOSAA	0.651	0.651	✓
NEtFOSAA_1	584.0 / 419.0	3.71	301109.35	2765.19	4410.7	False	d5-EtFOSAA	146683.13	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.71	19023.43	2687.89	2265.9	False	d5-EtFOSAA	146683.13	1250.00	NEtFOSAA	0.063	0.063	✓
HFPO-DA_1	285.0 / 169.0	2.01	938838.09	2486.15	4139.6	False	13C3-HFPO-DA	443968.63	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	2.01	21992.65	2263.39	29266.6	False	13C3-HFPO-DA	443968.63	1250.00	HFPO-DA	0.023	0.028	✓
ADONA_1	377.0 / 251.0	2.33	3122617.23	2679.36	6495.7	False	13C3-HFPO-DA	443968.63	1250.00	ADONA			
ADONA_2	377.0 / 85.0	2.33	38495.55	2552.34	569.2	False	13C3-HFPO-DA	443968.63	1250.00	ADONA	0.012	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	3.25	2790359.69	2426.52	3883.2	False	13C8-PFOA	761070.67	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	3.25	20879.90	2053.56	1184.6	False	13C8-PFOA	761070.67	1222.50	9CI-PF3ONS	0.007	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.84	2442823.88	2380.71	4318.8	False	13C8-PFOA	761070.67	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.84	11196.58	2039.30	834.0	False	13C8-PFOA	761070.67	1222.50	11Cl-PF3OUdS	0.005	0.005	✓

Sample Name	LD76 CCV	Injection Vial	22
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 9:07:53 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.58	311410.73	905.97	5452.7	False	13C3-PFBS	151007.26	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.58	96505.32	876.39	2741.5	False	13C3-PFBS	151007.26	1162.50	PFBS	0.310	0.322	✓
PFHxA_1	313.0 / 269.0	1.90	536568.83	950.87	607.7	False	13C5-PFHxA	692630.31	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.90	40007.85	975.26	398.6	False	13C5-PFHxA	692630.31	1250.00	PFHxA	0.075	0.073	✓
PFHpA_1	363.0 / 319.0	2.30	590481.16	979.70	830.2	False	13C4-PFHpA	770002.09	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.30	10283.81	819.04	368.7	False	13C4-PFHpA	770002.09	1250.00	PFHpA	0.017	0.021	✓
PFHxS_1	399.0 / 80.0	2.32	436498.37	902.96	1254.1	False	13C3-PFHxS	142684.87	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	137042.36	976.12	1205.8	False	13C3-PFHxS	142684.87	1182.50	PFHxS	0.314	0.293	✓
PFOA_1	413.0 / 369.0	2.69	619803.90	971.47	608.5	False	13C8-PFOA	745570.78	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.69	39664.28	901.67	326.8	False	13C8-PFOA	745570.78	1222.50	PFOA	0.064	0.068	✓
PFNA_1	463.0 / 419.0	3.06	627114.09	963.47	1057.6	False	13C9-PFNA	727106.73	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.06	187559.29	988.03	1483.8	False	13C9-PFNA	727106.73	1250.00	PFNA	0.299	0.292	✓
PFOS_1	499.0 / 80.0	3.06	499848.02	1050.84	645.1	False	13C8-PFOS	119990.00	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.06	83261.02	934.93	2874.0	False	13C8-PFOS	119990.00	1195.00	PFOS	0.167	0.189	✓
PFDA_1	513.0 / 469.0	3.40	605076.50	882.00	1183.1	False	13C6-PFDA	772452.66	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.40	29296.05	1009.85	975.8	False	13C6-PFDA	772452.66	1250.00	PFDA	0.048	0.042	✓
PFUnA_1	563.0 / 519.0	3.70	602382.20	1020.13	1373.6	False	13C7-PFUnA	722870.53	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.70	31410.72	1016.95	954.6	False	13C7-PFUnA	722870.53	1250.00	PFUnA	0.052	0.052	✓
PFDoA_1	613.0 / 569.0	3.97	587190.59	918.65	2048.8	False	13C2-PFDoA	776003.44	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.97	101099.59	990.84	2071.2	False	13C2-PFDoA	776003.44	1250.00	PFDoA	0.172	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.21	565835.32	1109.26	2243.4	False	13C2-PFTTeDA	855550.55	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.21	37360.99	1058.44	707.9	False	13C2-PFTTeDA	855550.55	1250.00	PFTTrDA	0.066	0.068	✓
PFTTeDA_1	713.0 / 669.0	4.42	741718.77	1037.20	5938.2	False	13C2-PFTTeDA	855550.55	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	4.42	38238.22	932.16	2763.1	False	13C2-PFTTeDA	855550.55	1250.00	PFTTeDA	0.052	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.56	112009.19	1040.92	5887458.9	False	d3-MeFOSAA	139795.94	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.55	70889.43	1025.38	3938203.8	False	d3-MeFOSAA	139795.94	1250.00	NMeFOSAA	0.633	0.651	✓
NEiFOSAA_1	584.0 / 419.0	3.71	117796.48	1020.98	10479.0	False	d5-EiFOSAA	153500.37	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.70	8284.65	1108.54	82808.4	False	d5-EiFOSAA	153500.37	1250.00	NEiFOSAA	0.070	0.063	✓
HFPO-DA_1	285.0 / 169.0	2.01	370249.68	972.64	2708.7	False	13C3-HFPO-DA	441825.31	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	2.00	11596.77	1136.34	4270.0	False	13C3-HFPO-DA	441825.31	1250.00	HFPO-DA	0.031	0.028	✓
ADONA_1	377.0 / 251.0	2.32	1152338.07	934.67	3695.6	False	13C3-HFPO-DA	441825.31	1250.00	ADONA			
ADONA_2	377.0 / 85.0	2.33	16520.52	1080.33	2450.2	False	13C3-HFPO-DA	441825.31	1250.00	ADONA	0.014	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	3.24	1117976.57	984.08	2852.5	False	13C8-PFOA	745570.78	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	3.24	8476.09	862.19	1111.7	False	13C8-PFOA	745570.78	1222.50	9CI-PF3ONS	0.008	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.83	932912.26	925.66	2623.9	False	13C8-PFOA	745570.78	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.83	5989.72	1115.28	340.0	False	13C8-PFOA	745570.78	1222.50	11Cl-PF3OUdS	0.006	0.005	✓

Sample Name	LD76 CCV	Injection Vial	3
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 11:30:20 AM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.59	331165.68	955.98	4304.3	False	13C3-PFBS	151986.72	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.59	105863.02	955.47	2097.0	False	13C3-PFBS	151986.72	1162.50	PFBS	0.320	0.322	✓
PFHxA_1	313.0 / 269.0	1.92	553883.67	984.96	488.3	False	13C5-PFHxA	690281.31	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.92	41370.96	1011.79	451.4	False	13C5-PFHxA	690281.31	1250.00	PFHxA	0.075	0.073	✓
PFHpA_1	363.0 / 319.0	2.33	536871.99	860.48	629.4	False	13C4-PFHpA	798081.62	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.32	13847.84	1086.06	378.9	False	13C4-PFHpA	798081.62	1250.00	PFHpA	0.026	0.021	✓
PFHxS_1	399.0 / 80.0	2.35	498370.84	1022.58	1180.0	False	13C3-PFHxS	145064.68	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.35	130757.04	910.89	1375.3	False	13C3-PFHxS	145064.68	1182.50	PFHxS	0.262	0.293	✓
PFOA_1	413.0 / 369.0	2.73	627156.98	904.39	588.3	False	13C8-PFOA	807783.48	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.72	33632.86	707.28	300.6	False	13C8-PFOA	807783.48	1222.50	PFOA	0.054	0.068	✓
PFNA_1	463.0 / 419.0	3.10	627891.96	933.08	999.5	False	13C9-PFNA	751249.78	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.10	197068.35	1005.27	1656.5	False	13C9-PFNA	751249.78	1250.00	PFNA	0.314	0.292	✓
PFOS_1	499.0 / 80.0	3.10	525344.58	1017.04	646.8	False	13C8-PFOS	130374.54	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.10	88345.26	912.64	1579.8	False	13C8-PFOS	130374.54	1195.00	PFOS	0.168	0.189	✓
PFDA_1	513.0 / 469.0	3.45	634845.90	964.00	1067.3	False	13C6-PFDA	741909.69	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.45	28859.65	1034.53	866.6	False	13C6-PFDA	741909.69	1250.00	PFDA	0.045	0.042	✓
PFUnA_1	563.0 / 519.0	3.76	583526.01	897.76	1172.7	False	13C7-PFUnA	797323.62	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.75	29999.86	885.10	762.9	False	13C7-PFUnA	797323.62	1250.00	PFUnA	0.051	0.052	✓
PFDoA_1	613.0 / 569.0	4.03	684492.27	944.52	1875.8	False	13C2-PFDoA	880743.49	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	103451.14	891.46	1936.1	False	13C2-PFDoA	880743.49	1250.00	PFDoA	0.151	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.27	572831.03	1117.53	2183.7	False	13C2-PFTTeDA	859906.20	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.27	41054.69	1157.34	825.8	False	13C2-PFTTeDA	859906.20	1250.00	PFTTrDA	0.072	0.068	✓
PFTTeDA_1	713.0 / 669.0	4.49	736264.53	1023.65	4756.7	False	13C2-PFTTeDA	859906.20	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	4.48	40615.14	987.73	2078.1	False	13C2-PFTTeDA	859906.20	1250.00	PFTTeDA	0.055	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.60	129762.14	1068.80	527471.4	False	d3-MeFOSAA	158018.84	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.60	83835.12	1077.35	6879.9	False	d3-MeFOSAA	158018.84	1250.00	NMeFOSAA	0.646	0.651	✓
NEiFOSAA_1	584.0 / 419.0	3.76	117273.13	909.00	3472.8	False	d5-EiFOSAA	171128.99	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.76	8449.74	1012.94	1229227.5	False	d5-EiFOSAA	171128.99	1250.00	NEiFOSAA	0.072	0.063	✓
HFPO-DA_1	285.0 / 169.0	2.04	362678.57	973.34	2898.1	False	13C3-HFPO-DA	432486.63	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	2.03	7346.32	688.16	190.8	False	13C3-HFPO-DA	432486.63	1250.00	HFPO-DA	0.020	0.028	✓
ADONA_1	377.0 / 251.0	2.36	1177735.12	980.03	3534.2	False	13C3-HFPO-DA	432486.63	1250.00	ADONA			
ADONA_2	377.0 / 85.0	2.36	17123.53	1146.05	24813.2	False	13C3-HFPO-DA	432486.63	1250.00	ADONA	0.015	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	3.28	1154489.07	937.30	2447.7	False	13C8-PFOA	807783.48	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	3.28	10888.98	1018.76	249.0	False	13C8-PFOA	807783.48	1222.50	9CI-PF3ONS	0.009	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.88	940392.34	860.95	3578.2	False	13C8-PFOA	807783.48	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.88	4922.27	846.81	3727.0	False	13C8-PFOA	807783.48	1222.50	11Cl-PF3OUdS	0.005	0.005	✓

Sample Name	LD77 CCV	Injection Vial	14
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 1:29:46 PM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.59	817977.85	2274.42	7591.5	False	13C3-PFBS	155647.43	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.58	269524.05	2380.16	14112.0	False	13C3-PFBS	155647.43	1162.50	PFBS	0.330	0.322	✓
PFHxA_1	313.0 / 269.0	1.92	1356283.34	2425.33	883.3	False	13C5-PFHxA	687246.99	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.92	99008.75	2427.28	994.7	False	13C5-PFHxA	687246.99	1250.00	PFHxA	0.073	0.073	✓
PFHpA_1	363.0 / 319.0	2.32	1378889.23	2206.86	1179.3	False	13C4-PFHpA	794271.78	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.32	30077.87	2457.14	1262.3	False	13C4-PFHpA	794271.78	1250.00	PFHpA	0.022	0.021	✓
PFHxS_1	399.0 / 80.0	2.34	1241953.14	2539.33	2111.6	False	13C3-PFHxS	151321.60	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.34	348120.00	2455.63	2185.7	False	13C3-PFHxS	151321.60	1182.50	PFHxS	0.280	0.293	✓
PFOA_1	413.0 / 369.0	2.71	1749183.02	2811.40	1037.0	False	13C8-PFOA	748232.33	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.71	98390.23	2217.91	768.8	False	13C8-PFOA	748232.33	1222.50	PFOA	0.056	0.068	✓
PFNA_1	463.0 / 419.0	3.09	1673263.71	2521.16	1516.4	False	13C9-PFNA	750242.01	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.09	443465.63	2302.69	2375.0	False	13C9-PFNA	750242.01	1250.00	PFNA	0.265	0.292	✓
PFOS_1	499.0 / 80.0	3.08	1257505.12	2191.96	1159.0	False	13C8-PFOS	143468.58	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.08	230467.06	2184.93	2711.3	False	13C8-PFOS	143468.58	1195.00	PFOS	0.183	0.189	✓
PFDA_1	513.0 / 469.0	3.43	1619593.90	2468.41	2001.9	False	13C6-PFDA	741724.17	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.43	65371.83	2283.57	1207.4	False	13C6-PFDA	741724.17	1250.00	PFDA	0.040	0.042	✓
PFUnA_1	563.0 / 519.0	3.73	1548103.52	2375.39	1674.5	False	13C7-PFUnA	791032.09	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.73	83299.59	2416.45	1855.9	False	13C7-PFUnA	791032.09	1250.00	PFUnA	0.054	0.052	✓
PFDoA_1	613.0 / 569.0	4.00	1708095.44	2555.81	2880.0	False	13C2-PFDoA	831815.86	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	4.00	264091.07	2441.68	2944.8	False	13C2-PFDoA	831815.86	1250.00	PFDoA	0.155	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.24	1376507.22	2722.80	3667.5	False	13C2-PFTeDA	862975.09	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.24	104366.10	2934.06	2145.6	False	13C2-PFTeDA	862975.09	1250.00	PFTTrDA	0.076	0.068	✓
PFTeDA_1	713.0 / 669.0	4.46	1866482.74	2673.92	10823.0	False	13C2-PFTeDA	862975.09	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.45	102166.59	2545.97	4059.6	False	13C2-PFTeDA	862975.09	1250.00	PFTeDA	0.055	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.58	299217.62	2880.49	5333.8	False	d3-MeFOSAA	140292.16	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.58	192215.17	2908.01	2411.1	False	d3-MeFOSAA	140292.16	1250.00	NMeFOSAA	0.642	0.651	✓
NEtFOSAA_1	584.0 / 419.0	3.73	315622.22	2534.76	4256.4	False	d5-EtFOSAA	167680.55	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.73	19518.80	2410.24	783.0	False	d5-EtFOSAA	167680.55	1250.00	NEtFOSAA	0.062	0.063	✓
HFPO-DA_1	285.0 / 169.0	2.02	968159.02	2566.56	4871.4	False	13C3-HFPO-DA	443606.16	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	2.03	23665.77	2447.87	9068.3	False	13C3-HFPO-DA	443606.16	1250.00	HFPO-DA	0.024	0.028	✓
ADONA_1	377.0 / 251.0	2.34	3257730.88	2801.71	5729.0	False	13C3-HFPO-DA	443606.16	1250.00	ADONA			
ADONA_2	377.0 / 85.0	2.34	41475.05	2754.93	1301.0	False	13C3-HFPO-DA	443606.16	1250.00	ADONA	0.013	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	3.27	2802291.81	2479.01	4537.7	False	13C8-PFOA	748232.33	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	3.26	31126.49	3103.95	1649.1	False	13C8-PFOA	748232.33	1222.50	9CI-PF3ONS	0.011	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.86	2391168.91	2370.33	4163.9	False	13C8-PFOA	748232.33	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.86	11350.69	2102.73	665.7	False	13C8-PFOA	748232.33	1222.50	11Cl-PF3OUdS	0.005	0.005	✓

Sample Name	LD81 ICC	Injection Vial	9
Sample ID	ICC	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:36:01 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.95	869469.34	1241.04	7336.5	False	13C2-PFDA	823217.02	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.53	195355.40	1293.07	1994.5	False	13C4-PFOS	139356.67	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.68	224193.48	1350.75	2853.4	False	13C4-PFOS	139356.67	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.88	716100.06	1172.63	4737.3	False	13C2-PFOA	839341.96	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.27	841651.55	1238.55	5745.3	False	13C2-PFOA	839341.96	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.66	838158.90	1225.41	13042.5	False	13C2-PFOA	839341.96	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.03	842765.82	1296.10	3917.8	False	13C2-PFOA	839341.96	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.37	850557.14	1242.85	5717.8	False	13C2-PFDA	823217.02	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.68	944335.53	1288.87	5901.0	False	13C2-PFDA	823217.02	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.40	1077867.85	1170.40	15107.8	False	13C2-PFDA	823217.02	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.56	154461.15	1173.45	5082.0	False	13C4-PFOS	139356.67	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.29	149434.15	1157.45	8374.4	False	13C4-PFOS	139356.67	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.03	125655.55	1057.74	1664.6	False	13C4-PFOS	139356.67	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.00	473088.63	1202.71	3235.3	False	13C2-PFOA	839341.96	1250.00		N/A	N/A	✓

Sample Name	LD76 CCV	Injection Vial	2
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 11:03:44 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.95	762389.00	1079.62	6553.3	False	13C2-PFDA	829759.52	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.53	186730.23	1240.91	2205.0	False	13C4-PFOS	138802.61	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.68	235183.47	1422.62	2325.5	False	13C4-PFOS	138802.61	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.88	695530.03	1258.93	5015.4	False	13C2-PFOA	759342.39	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.27	731442.10	1189.77	5156.1	False	13C2-PFOA	759342.39	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.66	740476.56	1196.65	4591.5	False	13C2-PFOA	759342.39	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.03	678470.10	1153.36	3431.0	False	13C2-PFOA	759342.39	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.37	849273.16	1231.19	4351.7	False	13C2-PFDA	829759.52	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.67	813698.57	1101.81	6740.2	False	13C2-PFDA	829759.52	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.39	1036356.52	1116.45	22616.1	False	13C2-PFDA	829759.52	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.55	146002.11	1113.61	4432.2	False	13C4-PFOS	138802.61	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.29	141513.34	1100.48	3270.1	False	13C4-PFOS	138802.61	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.03	134882.64	1139.94	1469.5	False	13C4-PFOS	138802.61	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.99	435237.41	1223.05	2779.9	False	13C2-PFOA	759342.39	1250.00		N/A	N/A	✓

Sample Name	LD77 CCV	Injection Vial	11
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 7:08:01 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.98	774804.17	1246.65	7814.6	False	13C2-PFDA	730286.70	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.55	157444.25	1037.20	2389.8	False	13C4-PFOS	140018.85	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.71	147262.99	883.05	2068.8	False	13C4-PFOS	140018.85	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.89	719021.83	1329.50	4469.4	False	13C2-PFOA	743324.54	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.29	780549.76	1297.01	8378.2	False	13C2-PFOA	743324.54	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.68	761070.67	1256.43	5976.1	False	13C2-PFOA	743324.54	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.05	739791.04	1284.70	3453.4	False	13C2-PFOA	743324.54	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.40	734545.22	1209.92	4137.6	False	13C2-PFDA	730286.70	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.70	778299.79	1197.43	4289.6	False	13C2-PFDA	730286.70	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.43	844941.65	1034.22	13945.8	False	13C2-PFDA	730286.70	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.56	151004.87	1141.77	8337.5	False	13C4-PFOS	140018.85	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.31	145858.33	1124.41	7316.5	False	13C4-PFOS	140018.85	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.05	129888.56	1088.20	1404.8	False	13C4-PFOS	140018.85	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.01	443968.63	1274.47	3509.1	False	13C2-PFOA	743324.54	1250.00		N/A	N/A	✓

Sample Name	LD76 CCV	Injection Vial	22
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 9:07:53 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.97	776003.44	1234.97	6144.4	False	13C2-PFDA	738337.18	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.55	138892.31	1004.93	1706.6	False	13C4-PFOS	127486.33	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.70	154822.72	1019.65	1995.3	False	13C4-PFOS	127486.33	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.89	692630.31	1245.10	6110.5	False	13C2-PFOA	764577.28	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.28	770002.09	1243.91	5997.0	False	13C2-PFOA	764577.28	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.67	745570.78	1196.63	11301.6	False	13C2-PFOA	764577.28	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.05	727106.73	1227.57	6062.4	False	13C2-PFOA	764577.28	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.39	772452.66	1258.49	4999.4	False	13C2-PFDA	738337.18	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.69	722870.53	1100.02	4465.7	False	13C2-PFDA	738337.18	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.41	855550.55	1035.79	13117.0	False	13C2-PFDA	738337.18	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.56	151007.26	1254.03	5829.3	False	13C4-PFOS	127486.33	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.30	142684.87	1208.08	9656.8	False	13C4-PFOS	127486.33	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.04	119990.00	1104.09	1509.9	False	13C4-PFOS	127486.33	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.01	441825.31	1233.06	3084.2	False	13C2-PFOA	764577.28	1250.00		N/A	N/A	✓

Sample Name	LD76 CCV	Injection Vial	3
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 11:30:20 AM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	4.02	880743.49	1354.57	9577.2	False	13C2-PFDA	764001.00	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.59	158679.02	1013.81	1600.5	False	13C4-PFOS	144373.81	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.75	171197.98	995.61	2075.5	False	13C4-PFOS	144373.81	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.92	690281.31	1201.15	6645.0	False	13C2-PFOA	789867.71	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.31	798081.62	1248.00	9054.9	False	13C2-PFOA	789867.71	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.71	807783.48	1254.97	6543.6	False	13C2-PFOA	789867.71	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.09	751249.78	1227.72	9130.9	False	13C2-PFOA	789867.71	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.44	741909.69	1168.12	6214.5	False	13C2-PFDA	764001.00	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.74	797323.62	1172.56	6516.6	False	13C2-PFDA	764001.00	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.48	859906.20	1006.09	17749.0	False	13C2-PFDA	764001.00	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.58	151986.72	1114.53	10639.2	False	13C4-PFOS	144373.81	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.33	145064.68	1084.56	10382.8	False	13C4-PFOS	144373.81	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.08	130374.54	1059.32	1764.8	False	13C4-PFOS	144373.81	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.03	432486.63	1168.35	3117.2	False	13C2-PFOA	789867.71	1250.00		N/A	N/A	✓

Sample Name	LD77 CCV	Injection Vial	14
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 1:29:46 PM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	4.00	831815.86	1387.28	7641.3	False	13C2-PFDA	704548.34	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.58	139078.51	885.10	1731.0	False	13C4-PFOS	144940.44	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.73	168645.20	976.93	2171.9	False	13C4-PFOS	144940.44	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.91	687246.99	1323.50	7097.6	False	13C2-PFOA	713697.22	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.31	794271.78	1374.60	6599.5	False	13C2-PFOA	713697.22	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.70	748232.33	1286.52	8027.7	False	13C2-PFOA	713697.22	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.07	750242.01	1356.93	3303.2	False	13C2-PFOA	713697.22	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.42	741724.17	1266.38	4372.1	False	13C2-PFDA	704548.34	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.72	791032.09	1261.48	5343.7	False	13C2-PFDA	704548.34	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.45	862975.09	1094.89	17996.3	False	13C2-PFDA	704548.34	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.58	155647.43	1136.91	10796.2	False	13C4-PFOS	144940.44	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.32	151321.60	1126.92	16478.4	False	13C4-PFOS	144940.44	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.07	143468.58	1161.16	3333.7	False	13C4-PFOS	144940.44	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.02	443606.16	1326.29	3343.3	False	13C2-PFOA	713697.22	1250.00		N/A	N/A	✓

Raw Analytical Data

Sample Name	LD80 IB	Injection Vial	8
Sample ID	IB	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:25:10 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.57	639.76	23.87	30.0	False	13C3-PFBS	161131.21	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.58	349.07	< 0	38.3	False	13C3-PFBS	161131.21	1162.50	PFBS	0.546	0.322	
PFHxA_1	313.0 / 269.0	1.88	2717.56	2.53	10.4	False	13C5-PFHxA	748637.18	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.89	402.54	12.49	8.3	False	13C5-PFHxA	748637.18	1250.00	PFHxA	0.148	0.073	
PFHpA_1	363.0 / 319.0	2.29	2361.70	12.11	10.4	False	13C4-PFHpA	882705.22	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	882705.22	1250.00	PFHpA	N/A	0.021	
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	151460.37	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	151460.37	1182.50	PFHxS	N/A	0.293	✓
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	828027.91	1222.50	PFOA			
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	828027.91	1222.50	PFOA	N/A	0.068	✓
PFNA_1	463.0 / 419.0	3.05	3197.69	< 0	16.2	False	13C9-PFNA	780889.69	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.04	1033.40	< 0	13.6	False	13C9-PFNA	780889.69	1250.00	PFNA	0.323	0.292	✓
PFOS_1	499.0 / 80.0	N/A	N/A	N/A	N/A	True	13C8-PFOS	145408.23	1195.00	PFOS			
PFOS_2	499.0 / 99.0	N/A	N/A	N/A	N/A	True	13C8-PFOS	145408.23	1195.00	PFOS	N/A	0.189	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	860630.68	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	860630.68	1250.00	PFDA	N/A	0.042	✓
PFUnA_1	563.0 / 519.0	3.70	2925.69	18.79	22.0	False	13C7-PFUnA	964210.94	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	964210.94	1250.00	PFUnA	N/A	0.052	
PFDoA_1	613.0 / 569.0	3.96	5705.42	< 0	48.0	False	13C2-PFDoA	869714.76	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.95	727.42	< 0	25.6	False	13C2-PFDoA	869714.76	1250.00	PFDoA	0.127	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.20	5213.69	< 0	65.2	False	13C2-PFTTeDA	1104917.16	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.19	921.71	18.67	21.6	False	13C2-PFTTeDA	1104917.16	1250.00	PFTTrDA	0.177	0.068	
PFTTeDA_1	713.0 / 669.0	4.41	13788.67	< 0	169.6	False	13C2-PFTTeDA	1104917.16	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	4.40	1312.81	< 0	86.6	True	13C2-PFTTeDA	1104917.16	1250.00	PFTTeDA	0.095	0.057	
NMeFOSAA_1	570.0 / 419.0	3.53	3484.78	< 0	25424.2	False	d3-MeFOSAA	203725.21	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	203725.21	1250.00	NMeFOSAA	N/A	0.651	
NEtFOSAA_1	584.0 / 419.0	3.69	3094.38	< 0	497.4	False	d5-EtFOSAA	235799.73	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	235799.73	1250.00	NEtFOSAA	N/A	0.063	
HFPO-DA_1	285.0 / 169.0	2.00	1446.99	< 0	24.8	False	13C3-HFPO-DA	458181.54	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	458181.54	1250.00	HFPO-DA	N/A	0.028	
ADONA_1	377.0 / 251.0	2.31	5392.03	< 0	47.1	False	13C3-HFPO-DA	458181.54	1250.00	ADONA			
ADONA_2	377.0 / 85.0	2.31	437.16	< 0	40799.1	False	13C3-HFPO-DA	458181.54	1250.00	ADONA	0.081	0.012	
9CI-PF3ONS_1	531.0 / 351.0	3.21	3232.50	< 0	36.2	False	13C8-PFOA	828027.91	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	False	13C8-PFOA	828027.91	1222.50	9CI-PF3ONS	N/A	0.009	
11Cl-pf3OUdS_1	631.0 / 451.0	3.82	5676.62	1.12	89.4	False	13C8-PFOA	828027.91	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	828027.91	1222.50	11Cl-PF3OUdS	N/A	0.005	

Sample Name	LD80 IBA	Injection Vial	4
Sample ID	IB	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 11:25:29 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.54	1650.56	27.46	48.9	False	13C3-PFBS	133801.33	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.54	780.33	4.81	21.7	False	13C3-PFBS	133801.33	1162.50	PFBS	0.473	0.322	✓
PFHxA_1	313.0 / 269.0	1.86	4879.95	7.48	14.9	False	13C5-PFHxA	637177.23	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	637177.23	1250.00	PFHxA	N/A	0.073	
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	682079.25	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	682079.25	1250.00	PFHpA	N/A	0.021	✓
PFHxS_1	399.0 / 80.0	2.30	4127.67	< 0	21.5	False	13C3-PFHxS	128877.09	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.28	423.08	< 0	7.0	False	13C3-PFHxS	128877.09	1182.50	PFHxS	0.102	0.293	
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	675235.27	1222.50	PFOA			
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	675235.27	1222.50	PFOA	N/A	0.068	✓
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	650965.13	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	650965.13	1250.00	PFNA	N/A	0.292	✓
PFOS_1	499.0 / 80.0	3.03	6213.23	30.16	16.1	False	13C8-PFOS	119853.40	1195.00	PFOS			
PFOS_2	499.0 / 99.0	N/A	N/A	N/A	N/A	True	13C8-PFOS	119853.40	1195.00	PFOS	N/A	0.189	
PFDA_1	513.0 / 469.0	3.38	3218.35	< 0	18.6	False	13C6-PFDA	686646.82	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	686646.82	1250.00	PFDA	N/A	0.042	
PFUnA_1	563.0 / 519.0	3.69	2619.30	19.69	19.1	False	13C7-PFUnA	692661.59	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	692661.59	1250.00	PFUnA	N/A	0.052	
PFDoA_1	613.0 / 569.0	3.96	3766.14	< 0	35.1	False	13C2-PFDoA	687632.45	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	687632.45	1250.00	PFDoA	N/A	0.159	
PFTTrDA_1	663.0 / 619.0	4.19	3384.93	< 0	58.8	False	13C2-PFTTeDA	796928.65	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.17	121.80	2.14	5.4	False	13C2-PFTTeDA	796928.65	1250.00	PFTTrDA	0.036	0.068	✓
PFTTeDA_1	713.0 / 669.0	4.42	10968.34	< 0	214.6	False	13C2-PFTTeDA	796928.65	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	796928.65	1250.00	PFTTeDA	N/A	0.057	
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	133417.27	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	133417.27	1250.00	NMeFOSAA	N/A	0.651	✓
NEtFOSAA_1	584.0 / 419.0	3.68	2858.58	< 0	169.0	False	d5-EtFOSAA	146297.88	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	146297.88	1250.00	NEtFOSAA	N/A	0.063	
HFPO-DA_1	285.0 / 169.0	1.97	1950.96	< 0	33.3	False	13C3-HFPO-DA	416417.77	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	416417.77	1250.00	HFPO-DA	N/A	0.028	
ADONA_1	377.0 / 251.0	2.32	4509.56	< 0	42.5	False	13C3-HFPO-DA	416417.77	1250.00	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	416417.77	1250.00	ADONA	N/A	0.012	
9Cl-PF3ONS_1	531.0 / 351.0	3.23	3106.69	< 0	42.9	False	13C8-PFOA	675235.27	1222.50	9Cl-PF3ONS			
9Cl-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	675235.27	1222.50	9Cl-PF3ONS	N/A	0.009	
11Cl-pf3OUdS_1	631.0 / 451.0	3.81	6411.46	3.08	107.6	False	13C8-PFOA	675235.27	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	675235.27	1222.50	11Cl-PF3OUdS	N/A	0.005	

Sample Name	DA918PB-FS(0)	Injection Vial	13
Sample ID	Procedural Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 7:29:50 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.58	2465.13	28.81	69.0	False	13C3-PFBS	159230.15	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.57	1166.80	6.87	42.3	False	13C3-PFBS	159230.15	1162.50	PFBS	0.473	0.322	✓
PFHxA_1	313.0 / 269.0	1.90	8850.22	13.41	30.4	False	13C5-PFHxA	709330.68	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.91	931.36	25.53	15.9	True	13C5-PFHxA	709330.68	1250.00	PFHxA	0.105	0.073	✓
PFHpA_1	363.0 / 319.0	2.30	4452.40	15.73	12.2	False	13C4-PFHpA	804138.68	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	804138.68	1250.00	PFHpA	N/A	0.021	
PFHxS_1	399.0 / 80.0	2.29	2661.64	< 0	12.2	False	13C3-PFHxS	148016.76	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	148016.76	1182.50	PFHxS	N/A	0.293	
PFOA_1	413.0 / 369.0	2.68	6465.66	< 0	19.8	False	13C8-PFOA	766269.05	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.71	1550.96	41.37	11.7	False	13C8-PFOA	766269.05	1222.50	PFOA	0.240	0.068	
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	681879.41	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	681879.41	1250.00	PFNA	N/A	0.292	✓
PFOS_1	499.0 / 80.0	3.04	16016.28	47.72	21.4	False	13C8-PFOS	130617.02	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.05	4580.64	32.41	73.7	False	13C8-PFOS	130617.02	1195.00	PFOS	0.286	0.189	
PFDA_1	513.0 / 469.0	3.41	7231.92	6.04	24.6	False	13C6-PFDA	712296.56	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.43	99.27	51.25	5.1	False	13C6-PFDA	712296.56	1250.00	PFDA	0.014	0.042	
PFUnA_1	563.0 / 519.0	3.70	2849.84	19.86	14.0	False	13C7-PFUnA	727501.58	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.75	265.80	42.03	18.2	False	13C7-PFUnA	727501.58	1250.00	PFUnA	0.093	0.052	
PFDoA_1	613.0 / 569.0	3.98	2924.04	< 0	24.0	False	13C2-PFDoA	707941.90	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.99	346.14	< 0	12.1	False	13C2-PFDoA	707941.90	1250.00	PFDoA	0.118	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.21	1707.62	< 0	31.1	False	13C2-PFTTeDA	802168.41	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.14	627.12	17.40	12.2	False	13C2-PFTTeDA	802168.41	1250.00	PFTTrDA	0.367	0.068	
PFTeDA_1	713.0 / 669.0	4.43	13834.07	< 0	180.5	False	13C2-PFTeDA	802168.41	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	802168.41	1250.00	PFTeDA	N/A	0.057	
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	132411.95	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	132411.95	1250.00	NMeFOSAA	N/A	0.651	✓
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	156160.52	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	156160.52	1250.00	NEtFOSAA	N/A	0.063	✓
HFPO-DA_1	285.0 / 169.0	2.03	1797.80	< 0	27.8	False	13C3-HFPO-DA	416071.11	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	416071.11	1250.00	HFPO-DA	N/A	0.028	
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	416071.11	1250.00	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	416071.11	1250.00	ADONA	N/A	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	3.25	2725.13	< 0	30.8	False	13C8-PFOA	766269.05	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	766269.05	1222.50	9CI-PF3ONS	N/A	0.009	
11Cl-pf3OUdS_1	631.0 / 451.0	3.83	2399.45	< 0	49.9	False	13C8-PFOA	766269.05	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	766269.05	1222.50	11Cl-PF3OUdS	N/A	0.005	

Sample Name	DA919LCS-FS(0)	Injection Vial	14
Sample ID	Laboratory Control Sample	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 7:40:42 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.58	3234798.05	9635.62	27321.6	False	13C3-PFBS	144206.61	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.59	1003567.21	9575.32	14854.7	False	13C3-PFBS	144206.61	1162.50	PFBS	0.310	0.322	✓
PFHxA_1	313.0 / 269.0	1.91	4857744.73	9005.06	1789.6	False	13C5-PFHxA	663336.71	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.91	352221.66	8937.01	2009.5	False	13C5-PFHxA	663336.71	1250.00	PFHxA	0.073	0.073	✓
PFHpA_1	363.0 / 319.0	2.30	5363299.87	8586.53	2830.3	False	13C4-PFHpA	791681.70	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.30	97123.52	8124.78	1635.3	False	13C4-PFHpA	791681.70	1250.00	PFHpA	0.018	0.021	✓
PFHxS_1	399.0 / 80.0	2.32	4805631.00	10986.00	4513.7	False	13C3-PFHxS	138166.33	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	1402251.32	11120.77	3957.3	False	13C3-PFHxS	138166.33	1182.50	PFHxS	0.292	0.293	✓
PFOA_1	413.0 / 369.0	2.70	5426520.62	9126.40	2370.2	False	13C8-PFOA	722749.57	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.70	373130.55	8686.15	1392.8	False	13C8-PFOA	722749.57	1222.50	PFOA	0.069	0.068	✓
PFNA_1	463.0 / 419.0	3.07	5738280.09	8721.49	3161.7	False	13C9-PFNA	747674.33	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.07	1684553.32	8861.13	3833.4	False	13C9-PFNA	747674.33	1250.00	PFNA	0.294	0.292	✓
PFOS_1	499.0 / 80.0	3.07	4572694.23	9134.50	1287.5	False	13C8-PFOS	124436.77	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.06	810843.62	8910.63	2356.4	False	13C8-PFOS	124436.77	1195.00	PFOS	0.177	0.189	✓
PFDA_1	513.0 / 469.0	3.41	5436473.96	8544.62	3160.5	False	13C6-PFDA	720377.78	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.41	222995.60	7900.64	3151.8	False	13C6-PFDA	720377.78	1250.00	PFDA	0.041	0.042	✓
PFUnA_1	563.0 / 519.0	3.71	4950821.49	8942.95	2973.8	False	13C7-PFUnA	668783.77	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.71	249734.23	8482.88	2740.2	False	13C7-PFUnA	668783.77	1250.00	PFUnA	0.050	0.052	✓
PFDoA_1	613.0 / 569.0	3.98	5035504.97	8559.28	3940.9	False	13C2-PFDoA	739569.16	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.98	806586.06	8433.42	5542.2	False	13C2-PFDoA	739569.16	1250.00	PFDoA	0.160	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.22	4513964.05	10154.21	7640.0	False	13C2-PFTeDA	765680.10	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.22	297239.95	9421.68	2683.4	False	13C2-PFTeDA	765680.10	1250.00	PFTTrDA	0.066	0.068	✓
PFTeDA_1	713.0 / 669.0	4.43	5695994.58	9337.86	15940.2	False	13C2-PFTeDA	765680.10	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.43	314610.76	8951.38	7010.3	False	13C2-PFTeDA	765680.10	1250.00	PFTeDA	0.055	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.56	967956.27	10058.38	4232.1	False	d3-MeFOSAA	126921.60	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.56	643806.14	10381.20	2282.0	False	d3-MeFOSAA	126921.60	1250.00	NMeFOSAA	0.665	0.651	✓
NEtFOSAA_1	584.0 / 419.0	3.71	912551.56	9336.07	4436.6	False	d5-EtFOSAA	130301.08	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.71	56811.10	9153.86	432524.6	False	d5-EtFOSAA	130301.08	1250.00	NEtFOSAA	0.062	0.063	✓
HFPO-DA_1	285.0 / 169.0	2.01	3464702.99	9208.39	8784.4	False	13C3-HFPO-DA	445055.51	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	2.01	82564.80	8843.95	14914.5	False	13C3-HFPO-DA	445055.51	1250.00	HFPO-DA	0.024	0.028	✓
ADONA_1	377.0 / 251.0	2.33	10988770.69	9640.86	10199.0	False	13C3-HFPO-DA	445055.51	1250.00	ADONA			
ADONA_2	377.0 / 85.0	2.33	136545.67	9121.89	10734.7	False	13C3-HFPO-DA	445055.51	1250.00	ADONA	0.012	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	3.25	9985220.39	9182.63	5024.2	False	13C8-PFOA	722749.57	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	3.25	84750.30	8714.48	1913.7	False	13C8-PFOA	722749.57	1222.50	9CI-PF3ONS	0.008	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.84	7984916.24	8204.19	5930.2	False	13C8-PFOA	722749.57	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.83	35517.73	6803.53	3202.8	False	13C8-PFOA	722749.57	1222.50	11Cl-PF3OUdS	0.004	0.005	✓

Sample Name	G1707-FS(0)	Injection Vial	15
Sample ID	CBD-AOA-MW15-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 7:51:36 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.59	1921953.44	7841.97	2668.2	False	13C3-PFBS	105333.04	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.59	628318.93	8206.98	2552.6	False	13C3-PFBS	105333.04	1162.50	PFBS	0.327	0.322	✓
PFHxA_1	313.0 / 269.0	1.91	19627248.24	48227.09	1324.2	False	13C5-PFHxA	500530.12	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.91	1285703.63	43220.32	1675.4	False	13C5-PFHxA	500530.12	1250.00	PFHxA	0.066	0.073	✓
PFHpA_1	363.0 / 319.0	2.31	10091407.27	26078.01	1700.4	False	13C4-PFHpA	490136.74	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.30	206771.10	28118.14	1299.1	False	13C4-PFHpA	490136.74	1250.00	PFHpA	0.020	0.021	✓
PFHxS_1	399.0 / 80.0	2.33	73271822.13	246660.50	4755.8	False	13C3-PFHxS	94393.46	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.33	22646575.32	264796.56	4002.3	False	13C3-PFHxS	94393.46	1182.50	PFHxS	0.309	0.293	✓
PFOA_1	413.0 / 369.0	2.69	49017749.41	121799.16	2130.4	False	13C8-PFOA	491361.79	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.70	3147996.84	107708.40	2089.1	True	13C8-PFOA	491361.79	1222.50	PFOA	0.064	0.068	✓
PFNA_1	463.0 / 419.0	3.07	5204116.20	12048.30	1965.9	False	13C9-PFNA	491133.63	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.07	1460257.66	11703.12	2039.6	False	13C9-PFNA	491133.63	1250.00	PFNA	0.281	0.292	✓
PFOS_1	499.0 / 80.0	2.94	3380529.92	8972.71	812.3	False	13C8-PFOS	93656.40	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.95	336913.70	4912.28	1035.7	False	13C8-PFOS	93656.40	1195.00	PFOS	0.100	0.189	✓
PFDA_1	513.0 / 469.0	3.40	2784.58	1.52	12.8	False	13C6-PFDA	451687.41	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.41	375.53	68.81	8.9	False	13C6-PFDA	451687.41	1250.00	PFDA	0.135	0.042	
PFUnA_1	563.0 / 519.0	3.71	7816.00	39.47	34.3	False	13C7-PFUnA	387350.70	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.77	212.86	46.20	4.6	False	13C7-PFUnA	387350.70	1250.00	PFUnA	0.027	0.052	✓
PFDoA_1	613.0 / 569.0	3.98	1145.88	< 0	14.5	False	13C2-PFDoA	229961.72	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	4.00	280.34	< 0	10.5	False	13C2-PFDoA	229961.72	1250.00	PFDoA	0.245	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.23	2571.27	10.62	37.1	False	13C2-PFTeDA	100329.30	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	100329.30	1250.00	PFTTrDA	N/A	0.068	
PFTeDA_1	713.0 / 669.0	4.44	8999.60	55.54	166.8	False	13C2-PFTeDA	100329.30	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	100329.30	1250.00	PFTeDA	N/A	0.057	
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	72127.21	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	72127.21	1250.00	NMeFOSAA	N/A	0.651	✓
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	72961.32	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	72961.32	1250.00	NEtFOSAA	N/A	0.063	✓
HFPO-DA_1	285.0 / 169.0	2.02	8593.30	12.78	84.1	False	13C3-HFPO-DA	303105.74	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	2.02	482.81	< 0	17.9	True	13C3-HFPO-DA	303105.74	1250.00	HFPO-DA	0.056	0.028	
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	303105.74	1250.00	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	303105.74	1250.00	ADONA	N/A	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	491361.79	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	491361.79	1222.50	9CI-PF3ONS	N/A	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.83	1964.37	< 0	43.6	False	13C8-PFOA	491361.79	1222.50	11Cl-pf3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	491361.79	1222.50	11Cl-pf3OUdS	N/A	0.005	

Sample Name	G1707-FS-D(3)	Injection Vial	16
Sample ID	CBD-AOA-MW15-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 8:02:29 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	156580.07	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	156580.07	1162.50	PFBS	N/A	0.322	✓
PFHxA_1	313.0 / 269.0	1.90	4373481.06	8211.88	1227.3	False	13C5-PFHxA	654879.67	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.90	297052.14	7635.01	997.9	False	13C5-PFHxA	654879.67	1250.00	PFHxA	0.068	0.073	✓
PFHpA_1	363.0 / 319.0	2.30	2649293.97	4506.57	1083.1	False	13C4-PFHpA	745795.75	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.30	52605.51	4640.20	710.8	False	13C4-PFHpA	745795.75	1250.00	PFHpA	0.020	0.021	✓
PFHxS_1	399.0 / 80.0	2.32	19271118.62	43483.25	3285.6	False	13C3-PFHxS	140643.27	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	5603179.22	43900.81	4169.5	False	13C3-PFHxS	140643.27	1182.50	PFHxS	0.291	0.293	✓
PFOA_1	413.0 / 369.0	2.69	12906442.87	22312.07	1805.0	False	13C8-PFOA	705118.85	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.69	748172.09	17844.53	1440.9	True	13C8-PFOA	705118.85	1222.50	PFOA	0.058	0.068	✓
PFNA_1	463.0 / 419.0	3.06	1092039.74	1805.47	1131.4	False	13C9-PFNA	681738.65	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.07	338637.07	1930.28	1387.9	False	13C9-PFNA	681738.65	1250.00	PFNA	0.310	0.292	✓
PFOS_1	499.0 / 80.0	2.94	793413.66	1635.28	556.4	False	13C8-PFOS	121664.59	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.95	89678.41	994.10	735.0	False	13C8-PFOS	121664.59	1195.00	PFOS	0.113	0.189	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	691118.54	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	691118.54	1250.00	PFDA	N/A	0.042	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	714197.15	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	714197.15	1250.00	PFUnA	N/A	0.052	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	679656.18	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	679656.18	1250.00	PFDoA	N/A	0.159	✓
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	721115.62	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	721115.62	1250.00	PFTTrDA	N/A	0.068	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	721115.62	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	721115.62	1250.00	PFTeDA	N/A	0.057	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	150225.86	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	150225.86	1250.00	NMeFOSAA	N/A	0.651	✓
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	139421.40	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	139421.40	1250.00	NEtFOSAA	N/A	0.063	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	432626.27	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	432626.27	1250.00	HFPO-DA	N/A	0.028	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	432626.27	1250.00	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	432626.27	1250.00	ADONA	N/A	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	705118.85	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	705118.85	1222.50	9CI-PF3ONS	N/A	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	705118.85	1222.50	11Cl-pf3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	705118.85	1222.50	11Cl-pf3OUdS	N/A	0.005	✓

Sample Name	G1707-FS-D(5)	Injection Vial	17
Sample ID	CBD-AOA-MW15-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 8:13:23 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	151761.96	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	151761.96	1162.50	PFBS	N/A	0.322	✓
PFHxA_1	313.0 / 269.0	1.90	1730357.69	3103.31	938.6	False	13C5-PFHxA	685359.57	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.90	115403.13	2836.41	758.0	False	13C5-PFHxA	685359.57	1250.00	PFHxA	0.067	0.073	✓
PFHpA_1	363.0 / 319.0	2.30	1072333.73	1834.40	749.2	False	13C4-PFHpA	743706.04	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.29	22740.76	1969.92	447.2	False	13C4-PFHpA	743706.04	1250.00	PFHpA	0.021	0.021	✓
PFHxS_1	399.0 / 80.0	2.32	8004284.90	18748.42	3334.0	False	13C3-PFHxS	135200.93	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	2177135.11	17694.25	3162.0	False	13C3-PFHxS	135200.93	1182.50	PFHxS	0.272	0.293	✓
PFOA_1	413.0 / 369.0	2.69	5460480.63	8965.69	1404.9	False	13C8-PFOA	740245.78	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.69	306722.74	6972.92	790.6	True	13C8-PFOA	740245.78	1222.50	PFOA	0.056	0.068	✓
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	723380.58	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	723380.58	1250.00	PFNA	N/A	0.292	✓
PFOS_1	499.0 / 80.0	N/A	N/A	N/A	N/A	True	13C8-PFOS	131255.02	1195.00	PFOS			
PFOS_2	499.0 / 99.0	N/A	N/A	N/A	N/A	True	13C8-PFOS	131255.02	1195.00	PFOS	N/A	0.189	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	726292.55	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	726292.55	1250.00	PFDA	N/A	0.042	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	776986.04	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	776986.04	1250.00	PFUnA	N/A	0.052	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	743920.87	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	743920.87	1250.00	PFDoA	N/A	0.159	✓
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	811505.19	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	811505.19	1250.00	PFTTrDA	N/A	0.068	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	811505.19	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	811505.19	1250.00	PFTeDA	N/A	0.057	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	135764.37	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	135764.37	1250.00	NMeFOSAA	N/A	0.651	✓
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	139560.40	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	139560.40	1250.00	NEtFOSAA	N/A	0.063	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	427805.80	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	427805.80	1250.00	HFPO-DA	N/A	0.028	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	427805.80	1250.00	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	427805.80	1250.00	ADONA	N/A	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	740245.78	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	740245.78	1222.50	9CI-PF3ONS	N/A	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	740245.78	1222.50	11Cl-pf3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	740245.78	1222.50	11Cl-pf3OUdS	N/A	0.005	✓

Sample Name	G1708-FS(0)	Injection Vial	18
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 8:24:17 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.59	623317.08	2572.40	707.2	True	13C3-PFBS	104748.44	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.59	190294.14	2497.22	1334.5	False	13C3-PFBS	104748.44	1162.50	PFBS	0.305	0.322	✓
PFHxA_1	313.0 / 269.0	1.91	2893577.44	7173.16	530.3	False	13C5-PFHxA	496005.99	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.91	178873.86	6070.84	646.6	False	13C5-PFHxA	496005.99	1250.00	PFHxA	0.062	0.073	✓
PFHpA_1	363.0 / 319.0	2.31	1146643.92	2596.43	319.2	False	13C4-PFHpA	561057.63	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.30	25753.40	2993.96	377.3	False	13C4-PFHpA	561057.63	1250.00	PFHpA	0.022	0.021	✓
PFHxS_1	399.0 / 80.0	2.32	9892930.51	30800.56	1211.4	False	13C3-PFHxS	101862.77	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	2653942.37	28680.83	1885.3	False	13C3-PFHxS	101862.77	1182.50	PFHxS	0.268	0.293	✓
PFOA_1	413.0 / 369.0	2.69	2485230.68	5730.07	595.7	False	13C8-PFOA	525705.66	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.69	142995.93	4580.00	463.7	True	13C8-PFOA	525705.66	1222.50	PFOA	0.058	0.068	✓
PFNA_1	463.0 / 419.0	3.07	781518.51	1797.61	691.3	False	13C9-PFNA	489996.32	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.07	245377.73	1946.26	826.8	False	13C9-PFNA	489996.32	1250.00	PFNA	0.314	0.292	✓
PFOS_1	499.0 / 80.0	2.99	8486669.75	23930.51	1015.6	False	13C8-PFOS	88051.69	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.06	1269766.41	19738.92	2318.6	False	13C8-PFOS	88051.69	1195.00	PFOS	0.150	0.189	✓
PFDA_1	513.0 / 469.0	3.39	7045.71	14.00	23.1	False	13C6-PFDA	410065.45	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	410065.45	1250.00	PFDA	N/A	0.042	
PFUnA_1	563.0 / 519.0	3.71	4380.87	28.18	21.3	False	13C7-PFUnA	405074.51	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.72	594.75	66.98	16.4	False	13C7-PFUnA	405074.51	1250.00	PFUnA	0.136	0.052	
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	237827.09	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	237827.09	1250.00	PFDoA	N/A	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.21	1067.51	< 0	27.8	False	13C2-PFTeDA	85891.57	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	85891.57	1250.00	PFTTrDA	N/A	0.068	
PFTeDA_1	713.0 / 669.0	4.44	5365.84	21.15	73.4	False	13C2-PFTeDA	85891.57	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	85891.57	1250.00	PFTeDA	N/A	0.057	
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	71501.56	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	71501.56	1250.00	NMeFOSAA	N/A	0.651	✓
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	84835.60	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	84835.60	1250.00	NEtFOSAA	N/A	0.063	✓
HFPO-DA_1	285.0 / 169.0	2.02	6905.01	6.02	88.2	False	13C3-HFPO-DA	304833.89	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	2.01	234.12	< 0	12.1	False	13C3-HFPO-DA	304833.89	1250.00	HFPO-DA	0.034	0.028	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	304833.89	1250.00	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	304833.89	1250.00	ADONA	N/A	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	3.24	3420.07	< 0	43.4	False	13C8-PFOA	525705.66	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	525705.66	1222.50	9CI-PF3ONS	N/A	0.009	
11Cl-pf3OUdS_1	631.0 / 451.0	3.84	2623.30	< 0	48.2	False	13C8-PFOA	525705.66	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	525705.66	1222.50	11Cl-PF3OUdS	N/A	0.005	

Sample Name	G1708MS-FS(0)	Injection Vial	19
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 8:35:11 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.59	4705325.81	16772.91	2811.3	False	13C3-PFBS	120385.14	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.59	1350507.82	15437.32	3467.9	False	13C3-PFBS	120385.14	1162.50	PFBS	0.287	0.322	✓
PFHxA_1	313.0 / 269.0	1.91	9152698.90	19997.43	736.6	False	13C5-PFHxA	562875.36	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.91	607264.68	18154.78	1079.3	False	13C5-PFHxA	562875.36	1250.00	PFHxA	0.066	0.073	✓
PFHpA_1	363.0 / 319.0	2.31	7535257.64	15267.26	1266.7	False	13C4-PFHpA	625287.90	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.31	144231.85	15341.00	1213.7	False	13C4-PFHpA	625287.90	1250.00	PFHpA	0.019	0.021	✓
PFHxS_1	399.0 / 80.0	2.33	17711684.53	40247.85	1395.6	False	13C3-PFHxS	139635.41	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.33	4980075.50	39291.61	2501.9	False	13C3-PFHxS	139635.41	1182.50	PFHxS	0.281	0.293	✓
PFOA_1	413.0 / 369.0	2.70	9703172.00	18206.18	1088.9	False	13C8-PFOA	649379.08	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.70	589093.29	15257.45	887.9	True	13C8-PFOA	649379.08	1222.50	PFOA	0.061	0.068	✓
PFNA_1	463.0 / 419.0	3.07	7494958.03	13473.69	1933.2	False	13C9-PFNA	632604.59	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.07	2202008.17	13706.30	2879.5	False	13C9-PFNA	632604.59	1250.00	PFNA	0.294	0.292	✓
PFOS_1	499.0 / 80.0	3.02	16121026.40	37237.48	1348.2	False	13C8-PFOS	107461.42	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.07	2407191.85	30670.29	2471.1	False	13C8-PFOS	107461.42	1195.00	PFOS	0.149	0.189	✓
PFDA_1	513.0 / 469.0	3.41	6083486.30	11920.18	2438.7	False	13C6-PFDA	577941.91	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.41	257598.36	11354.90	2011.2	False	13C6-PFDA	577941.91	1250.00	PFDA	0.042	0.042	✓
PFUnA_1	563.0 / 519.0	3.71	5342261.76	11467.43	2875.7	False	13C7-PFUnA	562582.46	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.71	276876.62	11169.51	2172.6	False	13C7-PFUnA	562582.46	1250.00	PFUnA	0.052	0.052	✓
PFDoA_1	613.0 / 569.0	3.98	5299170.22	12335.71	4982.8	False	13C2-PFDoA	540734.40	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.98	818059.73	11705.87	4641.2	False	13C2-PFDoA	540734.40	1250.00	PFDoA	0.154	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.22	3744841.68	23931.93	6824.6	False	13C2-PFTeDA	270033.98	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.22	246055.65	22116.94	2500.3	False	13C2-PFTeDA	270033.98	1250.00	PFTTrDA	0.066	0.068	✓
PFTeDA_1	713.0 / 669.0	4.43	2799888.41	13037.84	9567.8	False	13C2-PFTeDA	270033.98	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.43	157353.86	12714.20	7539.4	False	13C2-PFTeDA	270033.98	1250.00	PFTeDA	0.056	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.56	1107426.79	11092.02	3977.1	False	d3-MeFOSAA	130954.58	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.56	723151.06	11232.30	2223.6	False	d3-MeFOSAA	130954.58	1250.00	NMeFOSAA	0.653	0.651	✓
NEtFOSAA_1	584.0 / 419.0	3.71	1007298.66	11359.31	4109.7	False	d5-EtFOSAA	117644.79	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.71	60333.53	10795.98	255804.8	False	d5-EtFOSAA	117644.79	1250.00	NEtFOSAA	0.060	0.063	✓
HFPO-DA_1	285.0 / 169.0	2.02	3708283.24	12041.68	5148.8	False	13C3-HFPO-DA	364458.87	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	2.02	101349.38	13323.57	2103.5	False	13C3-HFPO-DA	364458.87	1250.00	HFPO-DA	0.027	0.028	✓
ADONA_1	377.0 / 251.0	2.34	12768178.31	13718.42	5485.2	False	13C3-HFPO-DA	364458.87	1250.00	ADONA			
ADONA_2	377.0 / 85.0	2.34	155971.89	12737.97	1582.6	False	13C3-HFPO-DA	364458.87	1250.00	ADONA	0.012	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	3.25	11098910.20	11363.37	4144.8	False	13C8-PFOA	649379.08	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	3.25	107542.36	12299.58	1076.5	False	13C8-PFOA	649379.08	1222.50	9CI-PF3ONS	0.010	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.84	8286142.48	9476.22	6765.0	False	13C8-PFOA	649379.08	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.83	40972.36	8734.10	1126.1	False	13C8-PFOA	649379.08	1222.50	11Cl-PF3OUdS	0.005	0.005	✓

Sample Name	G1708MSD-FS(0)	Injection Vial	20
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 8:46:05 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.59	3995898.17	14857.71	2468.0	False	13C3-PFBS	115432.54	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.59	1147839.45	13683.24	3466.5	False	13C3-PFBS	115432.54	1162.50	PFBS	0.287	0.322	✓
PFHxA_1	313.0 / 269.0	1.91	7636808.15	19503.77	571.7	False	13C5-PFHxA	481536.76	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.91	504801.72	17640.83	830.2	False	13C5-PFHxA	481536.76	1250.00	PFHxA	0.066	0.073	✓
PFHpA_1	363.0 / 319.0	2.31	6309250.37	14501.82	1256.6	False	13C4-PFHpA	551202.74	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.31	120940.45	14589.02	1325.0	False	13C4-PFHpA	551202.74	1250.00	PFHpA	0.019	0.021	✓
PFHxS_1	399.0 / 80.0	2.32	14755569.99	40971.23	1517.4	False	13C3-PFHxS	114279.58	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	4175396.44	40254.16	2547.9	False	13C3-PFHxS	114279.58	1182.50	PFHxS	0.283	0.293	✓
PFOA_1	413.0 / 369.0	2.69	7756077.73	17018.35	891.2	False	13C8-PFOA	555207.53	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.69	594595.03	18010.68	1086.2	False	13C8-PFOA	555207.53	1222.50	PFOA	0.077	0.068	✓
PFNA_1	463.0 / 419.0	3.07	6363015.92	13367.01	1902.2	False	13C9-PFNA	541344.44	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.07	1701155.71	12370.92	2618.1	False	13C9-PFNA	541344.44	1250.00	PFNA	0.267	0.292	✓
PFOS_1	499.0 / 80.0	3.02	12589632.83	32739.35	1320.3	False	13C8-PFOS	95457.68	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.06	1522734.12	21836.53	1617.7	True	13C8-PFOS	95457.68	1195.00	PFOS	0.121	0.189	✓
PFDA_1	513.0 / 469.0	3.41	5143948.06	12388.08	2546.9	False	13C6-PFDA	470234.37	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.41	202523.54	10973.60	1871.3	False	13C6-PFDA	470234.37	1250.00	PFDA	0.039	0.042	✓
PFUnA_1	563.0 / 519.0	3.71	4353095.52	11512.71	2320.6	False	13C7-PFUnA	456610.34	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.71	213078.76	10592.54	1628.2	False	13C7-PFUnA	456610.34	1250.00	PFUnA	0.049	0.052	✓
PFDoA_1	613.0 / 569.0	3.98	3456645.61	11580.97	3952.3	False	13C2-PFDoA	375635.50	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.98	543924.62	11203.23	4702.1	False	13C2-PFDoA	375635.50	1250.00	PFDoA	0.157	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.22	1722885.06	26643.67	4722.3	False	13C2-PFTTeDA	111605.86	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.22	111014.27	24143.73	1352.4	False	13C2-PFTTeDA	111605.86	1250.00	PFTTrDA	0.064	0.068	✓
PFTTeDA_1	713.0 / 669.0	4.43	1109645.41	12499.66	5684.5	False	13C2-PFTTeDA	111605.86	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	4.43	61781.01	12075.75	2926.8	False	13C2-PFTTeDA	111605.86	1250.00	PFTTeDA	0.056	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.56	864511.78	12136.27	6568.8	False	d3-MeFOSAA	92906.03	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.56	597829.39	12927.28	2149.8	False	d3-MeFOSAA	92906.03	1250.00	NMeFOSAA	0.692	0.651	✓
NEtFOSAA_1	584.0 / 419.0	3.71	797945.22	10797.04	3931.3	False	d5-EtFOSAA	98179.88	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.71	51539.94	11055.50	29644.4	False	d5-EtFOSAA	98179.88	1250.00	NEtFOSAA	0.065	0.063	✓
HFPO-DA_1	285.0 / 169.0	2.02	3183572.95	12110.53	4608.5	False	13C3-HFPO-DA	311113.16	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	2.02	74307.75	11424.74	1626.0	False	13C3-HFPO-DA	311113.16	1250.00	HFPO-DA	0.023	0.028	✓
ADONA_1	377.0 / 251.0	2.33	10920130.45	13744.81	6404.3	False	13C3-HFPO-DA	311113.16	1250.00	ADONA			
ADONA_2	377.0 / 85.0	2.33	136191.49	13030.50	1699.2	False	13C3-HFPO-DA	311113.16	1250.00	ADONA	0.012	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	3.25	9187154.34	11001.02	4101.2	False	13C8-PFOA	555207.53	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	3.25	75610.07	10117.65	794.9	False	13C8-PFOA	555207.53	1222.50	9CI-PF3ONS	0.008	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.84	5665802.70	7577.77	6868.4	False	13C8-PFOA	555207.53	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.83	28160.49	7021.90	1085.7	False	13C8-PFOA	555207.53	1222.50	11Cl-PF3OUdS	0.005	0.005	✓

Sample Name	G1709-FS(0)	Injection Vial	21
Sample ID	CBD-FB04-101620	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 8:56:59 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.57	1958.67	27.88	78.9	False	13C3-PFBS	147056.97	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.58	560.12	2.02	19.9	False	13C3-PFBS	147056.97	1162.50	PFBS	0.286	0.322	✓
PFHxA_1	313.0 / 269.0	1.91	10704.28	16.53	23.3	False	13C5-PFHxA	713050.34	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.90	950.65	25.87	17.7	False	13C5-PFHxA	713050.34	1250.00	PFHxA	0.089	0.073	✓
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	805762.61	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	805762.61	1250.00	PFHpA	N/A	0.021	✓
PFHxS_1	399.0 / 80.0	2.31	6987.80	< 0	28.4	False	13C3-PFHxS	150417.25	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	3355.91	< 0	37.0	False	13C3-PFHxS	150417.25	1182.50	PFHxS	0.480	0.293	
PFOA_1	413.0 / 369.0	2.69	10933.96	< 0	23.0	False	13C8-PFOA	752134.33	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.65	913.74	27.77	8.9	False	13C8-PFOA	752134.33	1222.50	PFOA	0.084	0.068	✓
PFNA_1	463.0 / 419.0	3.07	8075.82	< 0	25.2	False	13C9-PFNA	744702.49	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.08	2663.02	< 0	34.1	False	13C9-PFNA	744702.49	1250.00	PFNA	0.330	0.292	✓
PFOS_1	499.0 / 80.0	3.06	35409.35	81.07	67.1	True	13C8-PFOS	137754.52	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.07	6208.28	46.11	435.2	False	13C8-PFOS	137754.52	1195.00	PFOS	0.175	0.189	✓
PFDA_1	513.0 / 469.0	3.41	7814.24	6.65	35.8	False	13C6-PFDA	730641.29	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	730641.29	1250.00	PFDA	N/A	0.042	
PFUnA_1	563.0 / 519.0	3.70	12207.50	34.39	54.8	False	13C7-PFUnA	764551.58	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	764551.58	1250.00	PFUnA	N/A	0.052	
PFDoA_1	613.0 / 569.0	3.98	24784.66	6.35	193.2	False	13C2-PFDoA	727394.76	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.98	6224.20	47.47	254.5	False	13C2-PFDoA	727394.76	1250.00	PFDoA	0.251	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.22	41628.89	45.53	672.7	False	13C2-PFTTeDA	908395.18	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.21	3569.76	93.82	84.4	False	13C2-PFTTeDA	908395.18	1250.00	PFTTrDA	0.086	0.068	✓
PFTTeDA_1	713.0 / 669.0	4.42	91585.57	69.59	1019.2	False	13C2-PFTTeDA	908395.18	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	4.42	4411.42	59.76	428.9	False	13C2-PFTTeDA	908395.18	1250.00	PFTTeDA	0.048	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.55	4987.26	< 0	708685.6	False	d3-MeFOSAA	143221.63	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.53	4593.46	< 0	268.2	False	d3-MeFOSAA	143221.63	1250.00	NMeFOSAA	0.921	0.651	✓
NEtFOSAA_1	584.0 / 419.0	3.71	5646.42	22.49	282.1	False	d5-EtFOSAA	152634.59	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	152634.59	1250.00	NEtFOSAA	N/A	0.063	
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	427194.85	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	427194.85	1250.00	HFPO-DA	N/A	0.028	✓
ADONA_1	377.0 / 251.0	2.33	4246.92	< 0	57.9	False	13C3-HFPO-DA	427194.85	1250.00	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	427194.85	1250.00	ADONA	N/A	0.012	
9CI-PF3ONS_1	531.0 / 351.0	3.25	12210.58	< 0	106.9	False	13C8-PFOA	752134.33	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	752134.33	1222.50	9CI-PF3ONS	N/A	0.009	
11Cl-pf3OUdS_1	631.0 / 451.0	3.83	27963.37	23.64	422.8	False	13C8-PFOA	752134.33	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	752134.33	1222.50	11Cl-PF3OUdS	N/A	0.005	

Sample Name	LD80 IB	Injection Vial	5
Sample ID	IB	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 11:52:02 AM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	148361.79	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	148361.79	1162.50	PFBS	N/A	0.322	✓
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	689535.69	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	689535.69	1250.00	PFHxA	N/A	0.073	✓
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	785085.35	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	785085.35	1250.00	PFHpA	N/A	0.021	✓
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	140535.40	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	140535.40	1182.50	PFHxS	N/A	0.293	✓
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	774230.15	1222.50	PFOA			
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	774230.15	1222.50	PFOA	N/A	0.068	✓
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	714065.42	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	714065.42	1250.00	PFNA	N/A	0.292	✓
PFOS_1	499.0 / 80.0	N/A	N/A	N/A	N/A	True	13C8-PFOS	143309.58	1195.00	PFOS			
PFOS_2	499.0 / 99.0	N/A	N/A	N/A	N/A	True	13C8-PFOS	143309.58	1195.00	PFOS	N/A	0.189	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	767779.30	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	767779.30	1250.00	PFDA	N/A	0.042	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	789950.70	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	789950.70	1250.00	PFUnA	N/A	0.052	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	801350.22	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	801350.22	1250.00	PFDoA	N/A	0.159	✓
PFTeDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	844851.21	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	844851.21	1250.00	PFTeDA	N/A	0.068	✓
PFTeDA_1	713.0 / 669.0	4.44	6590.15	< 0	102.2	False	13C2-PFTeDA	844851.21	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	844851.21	1250.00	PFTeDA	N/A	0.057	
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	145093.80	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	145093.80	1250.00	NMeFOSAA	N/A	0.651	✓
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	162973.22	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	162973.22	1250.00	NEtFOSAA	N/A	0.063	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	425645.21	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	425645.21	1250.00	HFPO-DA	N/A	0.028	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	425645.21	1250.00	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	425645.21	1250.00	ADONA	N/A	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	774230.15	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	774230.15	1222.50	9CI-PF3ONS	N/A	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	774230.15	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	774230.15	1222.50	11Cl-PF3OUdS	N/A	0.005	✓

Sample Name	G1708MS-FS-D(3)	Injection Vial	12
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 1:08:03 PM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	175704.56	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	175704.56	1162.50	PFBS	N/A	0.322	✓
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	789245.63	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	789245.63	1250.00	PFHxA	N/A	0.073	✓
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	825264.28	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	825264.28	1250.00	PFHpA	N/A	0.021	✓
PFHxS_1	399.0 / 80.0	2.34	3656422.22	6790.64	1252.4	False	13C3-PFHxS	169416.53	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.33	1072662.25	6906.05	2034.7	False	13C3-PFHxS	169416.53	1182.50	PFHxS	0.293	0.293	✓
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	781892.44	1222.50	PFOA			
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	781892.44	1222.50	PFOA	N/A	0.068	✓
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	852629.90	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	852629.90	1250.00	PFNA	N/A	0.292	✓
PFOS_1	499.0 / 80.0	3.04	3434974.47	5420.18	946.5	False	13C8-PFOS	157738.08	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.08	553423.25	4790.57	2136.9	False	13C8-PFOS	157738.08	1195.00	PFOS	0.161	0.189	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	806435.09	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	806435.09	1250.00	PFDA	N/A	0.042	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	826730.09	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	826730.09	1250.00	PFUnA	N/A	0.052	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	830531.45	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	830531.45	1250.00	PFDoA	N/A	0.159	✓
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	882906.86	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	882906.86	1250.00	PFTTrDA	N/A	0.068	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	882906.86	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	882906.86	1250.00	PFTeDA	N/A	0.057	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	172556.89	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	172556.89	1250.00	NMeFOSAA	N/A	0.651	✓
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	173979.23	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	173979.23	1250.00	NEtFOSAA	N/A	0.063	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	495290.81	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	495290.81	1250.00	HFPO-DA	N/A	0.028	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	495290.81	1250.00	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	495290.81	1250.00	ADONA	N/A	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	781892.44	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	781892.44	1222.50	9CI-PF3ONS	N/A	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	781892.44	1222.50	11Cl-pf3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	781892.44	1222.50	11Cl-pf3OUdS	N/A	0.005	✓

Sample Name	G1708MSD-FS-D(3)	Injection Vial	13
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 1:18:55 PM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	175907.25	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	175907.25	1162.50	PFBS	N/A	0.322	✓
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	736594.61	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	736594.61	1250.00	PFHxA	N/A	0.073	✓
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	821362.05	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	821362.05	1250.00	PFHpA	N/A	0.021	✓
PFHxS_1	399.0 / 80.0	2.33	2840784.54	5623.89	1217.2	False	13C3-PFHxS	158599.34	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.33	777940.84	5331.18	2406.8	False	13C3-PFHxS	158599.34	1182.50	PFHxS	0.274	0.293	✓
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	783051.49	1222.50	PFOA			
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	783051.49	1222.50	PFOA	N/A	0.068	✓
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	774608.84	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	774608.84	1250.00	PFNA	N/A	0.292	✓
PFOS_1	499.0 / 80.0	3.05	2493323.08	4664.82	803.4	False	13C8-PFOS	133105.13	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.08	417765.90	4283.89	2728.9	False	13C8-PFOS	133105.13	1195.00	PFOS	0.168	0.189	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	752083.94	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	752083.94	1250.00	PFDA	N/A	0.042	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	811792.82	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	811792.82	1250.00	PFUnA	N/A	0.052	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	843785.20	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	843785.20	1250.00	PFDoA	N/A	0.159	✓
PFTeDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	795475.62	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	795475.62	1250.00	PFTeDA	N/A	0.068	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	795475.62	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	795475.62	1250.00	PFTeDA	N/A	0.057	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	148166.58	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	148166.58	1250.00	NMeFOSAA	N/A	0.651	✓
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	167646.82	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	167646.82	1250.00	NEtFOSAA	N/A	0.063	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	469800.05	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	469800.05	1250.00	HFPO-DA	N/A	0.028	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	469800.05	1250.00	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	469800.05	1250.00	ADONA	N/A	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	783051.49	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	783051.49	1222.50	9CI-PF3ONS	N/A	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	783051.49	1222.50	11Cl-pf3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	783051.49	1222.50	11Cl-pf3OUdS	N/A	0.005	✓

Sample Name	LD80 IB	Injection Vial	8
Sample ID	IB	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:25:10 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.95	869714.76	1168.12	5886.3	False	13C2-PFDA	874854.42	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.53	201976.78	1307.92	2287.5	True	13C4-PFOS	142444.06	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.68	238055.78	1403.18	2288.3	False	13C4-PFOS	142444.06	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.88	748637.18	1203.42	7704.7	False	13C2-PFOA	855027.80	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.27	882705.22	1275.13	5707.2	False	13C2-PFOA	855027.80	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.66	828027.91	1188.39	4686.7	False	13C2-PFOA	855027.80	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.03	780889.69	1178.91	3924.0	False	13C2-PFOA	855027.80	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.37	860630.68	1183.35	4226.7	False	13C2-PFDA	874854.42	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.67	964210.94	1238.32	4688.2	False	13C2-PFDA	874854.42	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.40	1104917.16	1128.95	18186.9	False	13C2-PFDA	874854.42	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.56	161131.21	1197.59	5581905.5	False	13C4-PFOS	142444.06	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.29	151460.37	1147.72	8484.7	False	13C4-PFOS	142444.06	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.03	145408.23	1197.48	1583.4	False	13C4-PFOS	142444.06	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.99	458181.54	1143.44	3123.2	False	13C2-PFOA	855027.80	1250.00		N/A	N/A	✓

Sample Name	LD80 IBA	Injection Vial	4
Sample ID	IB	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 11:25:29 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.95	687632.45	1195.81	5200.9	False	13C2-PFDA	675680.36	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.53	133068.46	1018.37	1620.4	False	13C4-PFOS	120529.72	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.68	147207.71	1025.45	1973.7	False	13C4-PFOS	120529.72	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.88	637177.23	1334.45	4748.3	False	13C2-PFOA	656269.33	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.27	682079.25	1283.73	4791.2	False	13C2-PFOA	656269.33	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.66	675235.27	1262.60	5496.3	False	13C2-PFOA	656269.33	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.03	650965.13	1280.40	3278.0	False	13C2-PFOA	656269.33	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.37	686646.82	1222.43	5643.2	False	13C2-PFDA	675680.36	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.67	692661.59	1151.80	4387.4	False	13C2-PFDA	675680.36	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.40	796928.65	1054.29	15312.1	False	13C2-PFDA	675680.36	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.55	133801.33	1175.27	3998.2	False	13C4-PFOS	120529.72	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.29	128877.09	1154.15	11923.2	False	13C4-PFOS	120529.72	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.03	119853.40	1166.49	1126.1	False	13C4-PFOS	120529.72	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.99	416417.77	1353.95	2532.7	False	13C2-PFOA	656269.33	1250.00		N/A	N/A	✓



Sample Name	DA918PB-FS(0)	Injection Vial	13
Sample ID	Procedural Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 7:29:50 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.98	707941.90	1180.88	10992.2	False	13C2-PFDA	704434.26	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.56	130569.48	898.43	1924.4	False	13C4-PFOS	134053.67	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.71	157089.55	983.89	1990.8	False	13C4-PFOS	134053.67	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.90	709330.68	1330.12	4837.6	False	13C2-PFOA	732961.66	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.29	804138.68	1355.10	10952.4	False	13C2-PFOA	732961.66	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.68	766269.05	1282.90	6192.6	False	13C2-PFOA	732961.66	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.05	681879.41	1200.87	3270.4	False	13C2-PFOA	732961.66	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.40	712296.56	1216.33	4140.4	False	13C2-PFDA	704434.26	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.70	727501.58	1160.35	6666.8	False	13C2-PFDA	704434.26	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.42	802168.41	1017.90	18107.6	False	13C2-PFDA	704434.26	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.57	159230.15	1257.53	10272.3	False	13C4-PFOS	134053.67	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.31	148016.76	1191.83	5727.7	False	13C4-PFOS	134053.67	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.05	130617.02	1143.00	1744.8	False	13C4-PFOS	134053.67	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.01	416071.11	1211.27	2995.0	False	13C2-PFOA	732961.66	1250.00		N/A	N/A	✓

Sample Name	DA919LCS-FS(0)	Injection Vial	14
Sample ID	Laboratory Control Sample	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 7:40:42 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.98	739569.16	1270.20	10331.8	False	13C2-PFDA	684151.71	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.55	125332.88	928.67	1394.2	False	13C4-PFOS	124488.41	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.71	130636.93	881.08	1934.2	False	13C4-PFOS	124488.41	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.90	663336.71	1216.91	4667.2	False	13C2-PFOA	749202.62	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.29	791681.70	1305.18	5280.0	False	13C2-PFOA	749202.62	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.68	722749.57	1183.81	10200.8	False	13C2-PFOA	749202.62	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.05	747674.33	1288.20	4353.6	False	13C2-PFOA	749202.62	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.40	720377.78	1266.60	4298.3	False	13C2-PFDA	684151.71	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.70	668783.77	1098.32	7322.8	False	13C2-PFDA	684151.71	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.42	765680.10	1000.41	17540.0	False	13C2-PFDA	684151.71	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.57	144206.61	1226.39	5110.3	False	13C4-PFOS	124488.41	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.31	138166.33	1197.99	1935.1	False	13C4-PFOS	124488.41	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.05	124436.77	1172.58	1646.7	False	13C4-PFOS	124488.41	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.01	445055.51	1267.57	3373.5	False	13C2-PFOA	749202.62	1250.00		N/A	N/A	✓

Sample Name	G1707-FS(0)	Injection Vial	15
Sample ID	CBD-AOA-MW15-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 7:51:36 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.98	229961.72	533.05	5915.5	False	13C2-PFDA	506914.22	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.55	71829.34	622.43	1356.9	False	13C4-PFOS	106447.32	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.71	73809.97	582.18	1111.8	False	13C4-PFOS	106447.32	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.90	500530.12	1106.05	2257.2	False	13C2-PFOA	621983.78	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.29	490136.74	973.33	2683.9	False	13C2-PFOA	621983.78	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.69	491361.79	969.43	3018.3	False	13C2-PFOA	621983.78	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.06	491133.63	1019.28	2392.2	False	13C2-PFOA	621983.78	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.40	451687.41	1071.85	4433.6	False	13C2-PFDA	506914.22	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.70	387350.70	858.55	4449.7	False	13C2-PFDA	506914.22	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.42	100329.30	176.92	6525.6	False	13C2-PFDA	506914.22	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.58	105333.04	1047.62	1754.3	False	13C4-PFOS	106447.32	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.31	94393.46	957.17	1604.7	False	13C4-PFOS	106447.32	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.05	93656.40	1032.11	793.2	False	13C4-PFOS	106447.32	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.02	303105.74	1039.85	2533.4	False	13C2-PFOA	621983.78	1250.00		N/A	N/A	✓



Sample Name	G1707-FS-D(3)	Injection Vial	16
Sample ID	CBD-AOA-MW15-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 8:02:29 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.98	679656.18	1199.97	6685.8	False	13C2-PFDA	665524.68	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.56	149665.49	1032.12	2196.6	False	13C4-PFOS	133755.92	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.71	139747.70	877.22	1409.3	False	13C4-PFOS	133755.92	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.90	654879.67	1186.61	3141.2	False	13C2-PFOA	758537.38	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.29	745795.75	1214.40	3740.2	False	13C2-PFOA	758537.38	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.68	705118.85	1140.72	5719.3	False	13C2-PFOA	758537.38	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.05	681738.65	1160.14	3330.6	False	13C2-PFOA	758537.38	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.40	691118.54	1249.16	4175.0	False	13C2-PFDA	665524.68	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.70	714197.15	1205.73	5080.9	False	13C2-PFDA	665524.68	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.43	721115.62	968.55	14697.6	False	13C2-PFDA	665524.68	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.57	156580.07	1239.36	3568.1	False	13C4-PFOS	133755.92	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.31	140643.27	1134.98	2490.1	False	13C4-PFOS	133755.92	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.05	121664.59	1067.03	1219.8	False	13C4-PFOS	133755.92	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.01	432626.27	1217.00	2515.7	False	13C2-PFOA	758537.38	1250.00		N/A	N/A	✓



Sample Name	G1707-FS-D(5)	Injection Vial	17
Sample ID	CBD-AOA-MW15-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 8:13:23 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.98	743920.87	1281.90	7651.4	False	13C2-PFDA	681900.25	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.56	135295.64	931.32	1817.8	False	13C4-PFOS	134001.21	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.71	139865.54	876.36	1793.0	False	13C4-PFOS	134001.21	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.90	685359.57	1236.65	3378.6	False	13C2-PFOA	761723.27	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.29	743706.04	1205.94	5409.4	False	13C2-PFOA	761723.27	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.68	740245.78	1192.54	4707.9	False	13C2-PFOA	761723.27	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.06	723380.58	1225.86	3378.5	False	13C2-PFOA	761723.27	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.40	726292.55	1281.21	3245.7	False	13C2-PFDA	681900.25	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.70	776986.04	1280.23	6147.7	False	13C2-PFDA	681900.25	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.43	811505.19	1063.78	18218.2	False	13C2-PFDA	681900.25	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.57	151761.96	1199.02	3173.3	False	13C4-PFOS	134001.21	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.31	135200.93	1089.06	5622.1	False	13C4-PFOS	134001.21	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.05	131255.02	1149.03	2176.3	False	13C4-PFOS	134001.21	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.01	427805.80	1198.41	3228.6	False	13C2-PFOA	761723.27	1250.00		N/A	N/A	✓

Sample Name	G1708-FS(0)	Injection Vial	18
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 8:24:17 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.97	237827.09	521.94	6184.6	False	13C2-PFDA	535406.47	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.55	71908.19	651.49	1283.5	False	13C4-PFOS	101810.78	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.70	85197.57	702.61	1364.2	False	13C4-PFOS	101810.78	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.90	496005.99	1007.85	2025.3	False	13C2-PFOA	676418.16	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.29	561057.63	1024.50	1739.5	False	13C2-PFOA	676418.16	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.68	525705.66	953.72	2336.4	False	13C2-PFOA	676418.16	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.06	489996.32	935.08	2036.5	False	13C2-PFOA	676418.16	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.40	410065.45	921.30	3845.7	False	13C2-PFDA	535406.47	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.70	405074.51	850.05	4727.6	False	13C2-PFDA	535406.47	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.42	85891.57	143.40	7089.3	False	13C2-PFDA	535406.47	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.58	104748.44	1089.25	1519.0	False	13C4-PFOS	101810.78	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.31	101862.77	1079.95	1500.9	False	13C4-PFOS	101810.78	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.05	88051.69	1014.54	767.8	False	13C4-PFOS	101810.78	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.02	304833.89	961.62	2395.7	False	13C2-PFOA	676418.16	1250.00		N/A	N/A	✓

Sample Name	G1708MS-FS(0)	Injection Vial	19
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 8:35:11 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.97	540734.40	979.54	6888.6	False	13C2-PFDA	648647.32	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.56	129721.05	1084.68	1680.8	False	13C4-PFOS	110314.16	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.71	118786.44	904.10	1520.4	False	13C4-PFOS	110314.16	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.90	562875.36	1029.07	2032.8	False	13C2-PFOA	751783.16	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.30	625287.90	1027.32	1774.2	False	13C2-PFOA	751783.16	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.68	649379.08	1059.98	2238.9	False	13C2-PFOA	751783.16	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.06	632604.59	1086.20	2065.6	False	13C2-PFOA	751783.16	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.40	577941.91	1071.78	4376.5	False	13C2-PFDA	648647.32	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.70	562582.46	974.48	4376.3	False	13C2-PFDA	648647.32	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.42	270033.98	372.13	9585.2	False	13C2-PFDA	648647.32	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.58	120385.14	1155.35	1630.9	False	13C4-PFOS	110314.16	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.31	139635.41	1366.30	1052.3	False	13C4-PFOS	110314.16	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.05	107461.42	1142.73	739.7	False	13C4-PFOS	110314.16	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.02	364458.87	1034.46	2805.8	False	13C2-PFOA	751783.16	1250.00		N/A	N/A	✓

Sample Name	G1708MSD-FS(0)	Injection Vial	20
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 8:46:05 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.97	375635.50	894.66	7556.0	False	13C2-PFDA	493348.02	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.55	93801.86	867.05	1336.4	False	13C4-PFOS	99791.11	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.70	98130.27	825.64	1406.8	False	13C4-PFOS	99791.11	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.91	481536.76	1097.13	1932.5	False	13C2-PFOA	603250.83	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.29	551202.74	1128.58	2126.9	False	13C2-PFOA	603250.83	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.68	555207.53	1129.41	2701.0	False	13C2-PFOA	603250.83	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.05	541344.44	1158.37	2467.0	False	13C2-PFOA	603250.83	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.40	470234.37	1146.55	3909.7	False	13C2-PFDA	493348.02	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.70	456610.34	1039.89	4453.5	False	13C2-PFDA	493348.02	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.42	111605.86	202.22	6423.0	False	13C2-PFDA	493348.02	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.58	115432.54	1224.64	1565.4	False	13C4-PFOS	99791.11	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.31	114279.58	1236.11	1429.0	False	13C4-PFOS	99791.11	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.05	95457.68	1122.13	878.7	False	13C4-PFOS	99791.11	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.02	311113.16	1100.47	2569.2	False	13C2-PFOA	603250.83	1250.00		N/A	N/A	✓

Sample Name	G1709-FS(0)	Injection Vial	21
Sample ID	CBD-FB04-101620	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 8:56:59 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	3.97	727394.76	1032.70	5446.8	False	13C2-PFDA	827643.62	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.55	142993.62	937.67	1718.0	False	13C4-PFOS	140666.83	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.70	153539.39	916.45	1835.4	False	13C4-PFOS	140666.83	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.89	713050.34	1239.08	5910.8	False	13C2-PFOA	790943.36	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.29	805762.61	1258.29	9232.9	False	13C2-PFOA	790943.36	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.68	752134.33	1166.92	9360.9	False	13C2-PFOA	790943.36	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.05	744702.49	1215.37	7840.2	False	13C2-PFOA	790943.36	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.39	730641.29	1061.92	4211.3	False	13C2-PFDA	827643.62	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.70	764551.58	1037.91	4749.6	False	13C2-PFDA	827643.62	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.42	908395.18	981.10	17399.4	False	13C2-PFDA	827643.62	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.57	147056.97	1106.79	3748.7	False	13C4-PFOS	140666.83	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.30	150417.25	1154.22	4228.7	False	13C4-PFOS	140666.83	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.05	137754.52	1148.78	2535.1	False	13C4-PFOS	140666.83	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.01	427194.85	1152.49	3626.5	False	13C2-PFOA	790943.36	1250.00		N/A	N/A	✓

Sample Name	LD80 IB	Injection Vial	5
Sample ID	IB	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 11:52:02 AM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	4.01	801350.22	1334.94	6355.1	False	13C2-PFDA	705354.72	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.58	144517.15	1009.37	2113.9	False	13C4-PFOS	132067.01	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.74	162959.18	1036.01	2465.2	False	13C4-PFOS	132067.01	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.91	689535.69	1318.85	5160.1	False	13C2-PFOA	718597.01	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.31	785085.35	1349.43	6292.1	False	13C2-PFOA	718597.01	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.70	774230.15	1322.14	157736.8	False	13C2-PFOA	718597.01	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.08	714065.42	1282.70	4069.9	False	13C2-PFOA	718597.01	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.42	767779.30	1309.36	4255.2	False	13C2-PFDA	705354.72	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.73	789950.70	1258.31	5444.6	False	13C2-PFDA	705354.72	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.47	844851.21	1070.67	22847.6	False	13C2-PFDA	705354.72	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.58	148361.79	1189.33	8084.1	False	13C4-PFOS	132067.01	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.33	140535.40	1148.61	3890.7	False	13C4-PFOS	132067.01	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.07	143309.58	1272.93	1631.4	False	13C4-PFOS	132067.01	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.03	425645.21	1263.92	2446.2	False	13C2-PFOA	718597.01	1250.00		N/A	N/A	✓

Sample Name	G1708MS-FS-D(3)	Injection Vial	12
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 1:08:03 PM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	4.00	830531.45	1366.81	6203.8	False	13C2-PFDA	713992.44	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.57	171508.16	1138.02	2037.2	False	13C4-PFOS	139013.59	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.73	174234.91	1052.34	1683.7	False	13C4-PFOS	139013.59	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.91	789245.63	1323.24	3848.2	False	13C2-PFOA	819784.54	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.30	825264.28	1243.41	3356.3	False	13C2-PFOA	819784.54	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.70	781892.44	1170.41	4738.9	False	13C2-PFOA	819784.54	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.07	852629.90	1342.55	4137.0	False	13C2-PFOA	819784.54	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.41	806435.09	1358.65	4500.4	False	13C2-PFDA	713992.44	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.72	826730.09	1300.97	5054.1	False	13C2-PFDA	713992.44	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.45	882906.86	1105.36	15472.5	False	13C2-PFDA	713992.44	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.58	175704.56	1338.13	3303.3	False	13C4-PFOS	139013.59	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.32	169416.53	1315.47	3201.7	False	13C4-PFOS	139013.59	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.07	157738.08	1331.08	1728.0	False	13C4-PFOS	139013.59	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.03	495290.81	1289.19	2746.3	False	13C2-PFOA	819784.54	1250.00		N/A	N/A	✓

Sample Name	G1708MSD-FS-D(3)	Injection Vial	13
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 1:18:55 PM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	4.00	843785.20	1418.51	7172.4	False	13C2-PFDA	698952.33	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.57	146444.66	907.02	2144.0	False	13C4-PFOS	148929.15	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.73	169850.05	957.56	1977.0	False	13C4-PFOS	148929.15	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.91	736594.61	1306.57	3888.1	False	13C2-PFOA	774857.45	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.30	821362.05	1309.28	4045.7	False	13C2-PFOA	774857.45	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.70	783051.49	1240.11	4353.5	False	13C2-PFOA	774857.45	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.07	774608.84	1290.42	5829.8	False	13C2-PFOA	774857.45	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.42	752083.94	1294.34	4202.9	False	13C2-PFDA	698952.33	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.72	811792.82	1304.95	6643.9	False	13C2-PFDA	698952.33	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.45	795475.62	1017.33	14990.5	False	13C2-PFDA	698952.33	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.58	175907.25	1250.48	3047.2	False	13C4-PFOS	148929.15	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.32	158599.34	1149.48	1997.6	False	13C4-PFOS	148929.15	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.06	133105.13	1048.43	1672.4	False	13C4-PFOS	148929.15	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.02	469800.05	1293.74	2742.4	False	13C2-PFOA	774857.45	1250.00		N/A	N/A	✓

Chromatograms



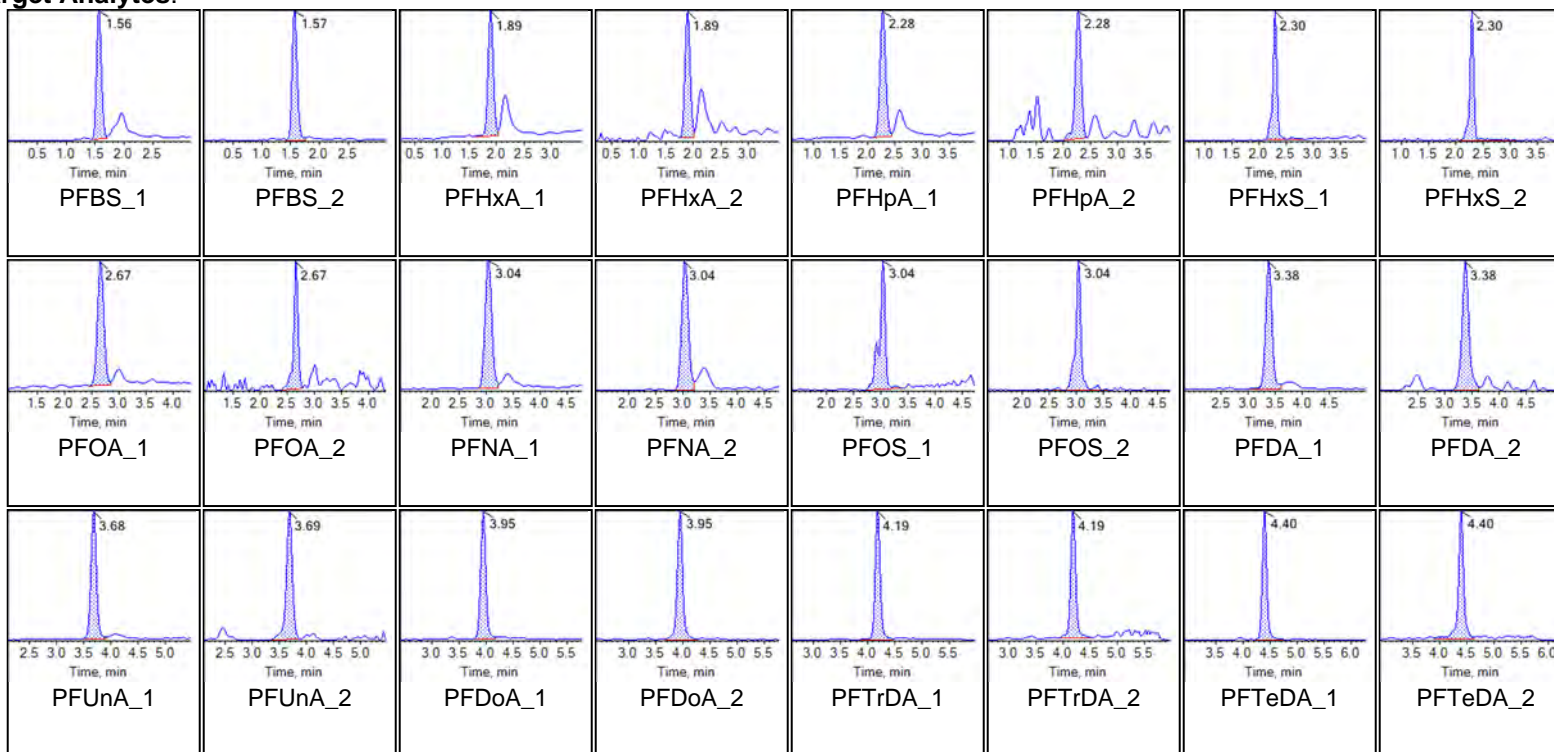
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	LD74	Injection Vial	2
Sample ID	L1	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310

Chromatograms

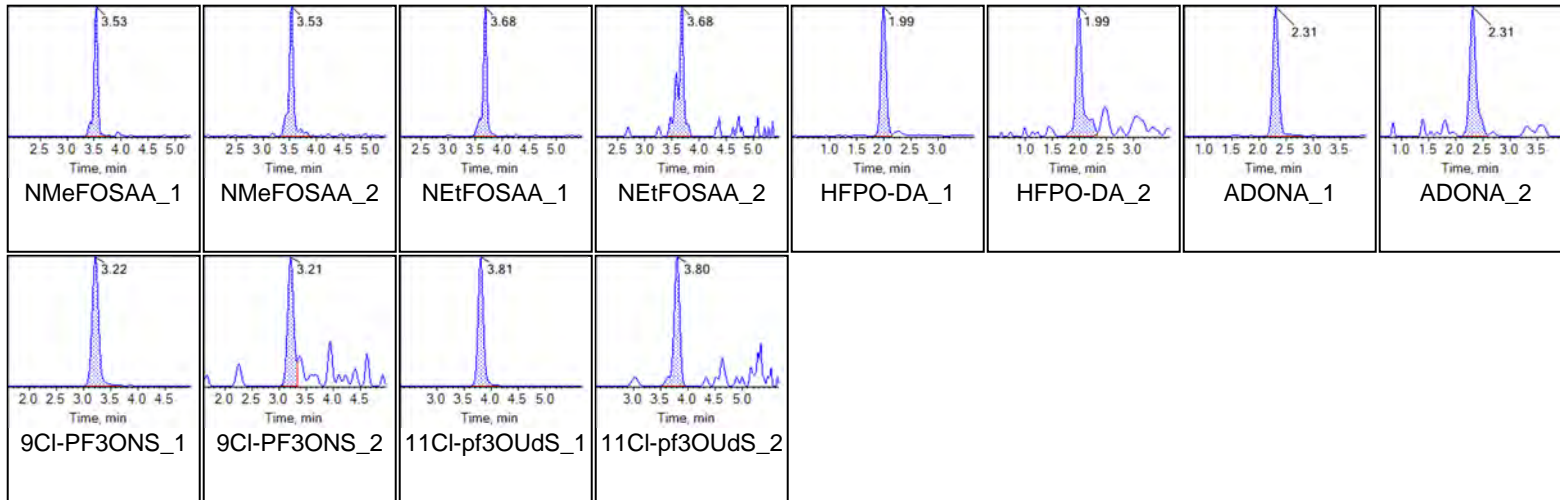
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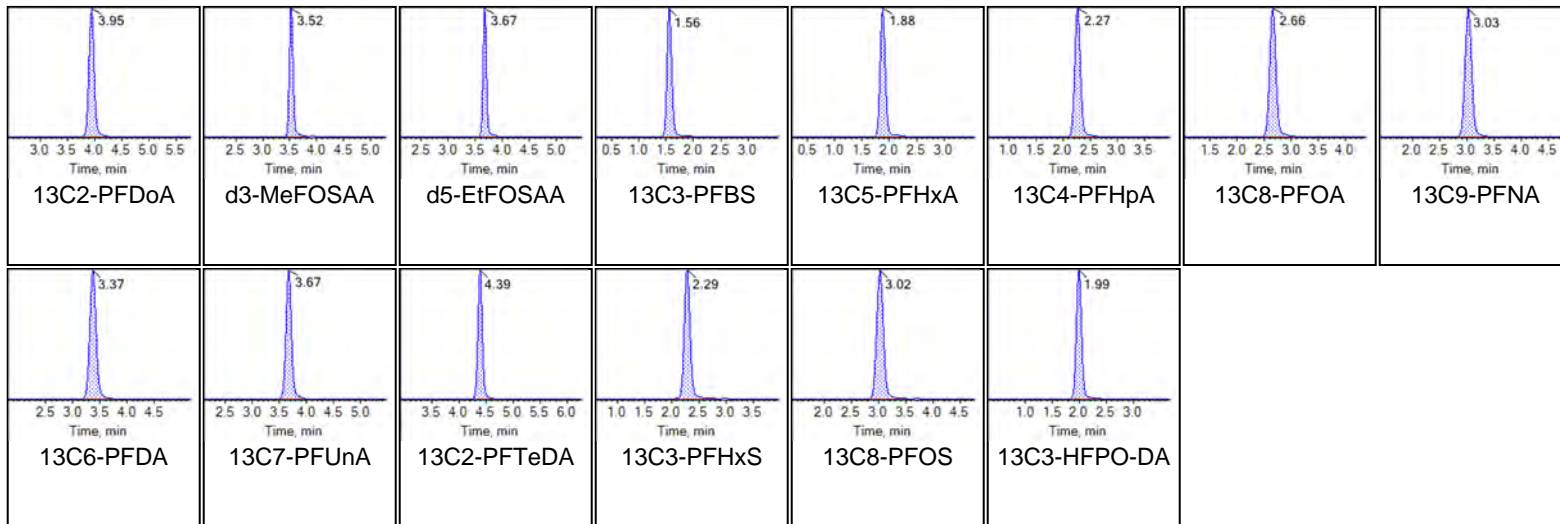


Chromatogram Report

Created with Analyst Reporter
 Printed: 09/11/2020 3:17:19 PM



Internal Standards:





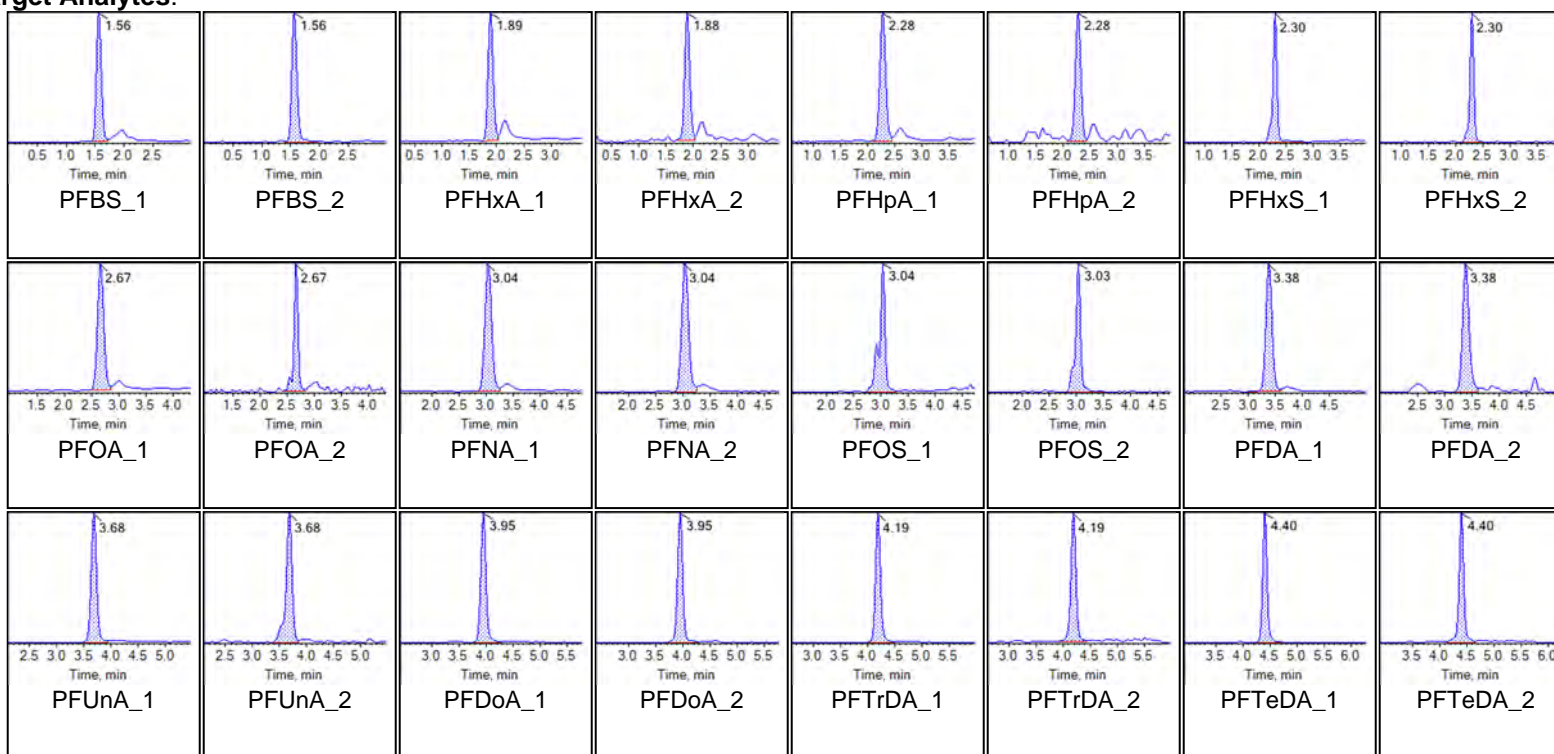
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	LD75	Injection Vial	3
Sample ID	L2	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:30:51 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310

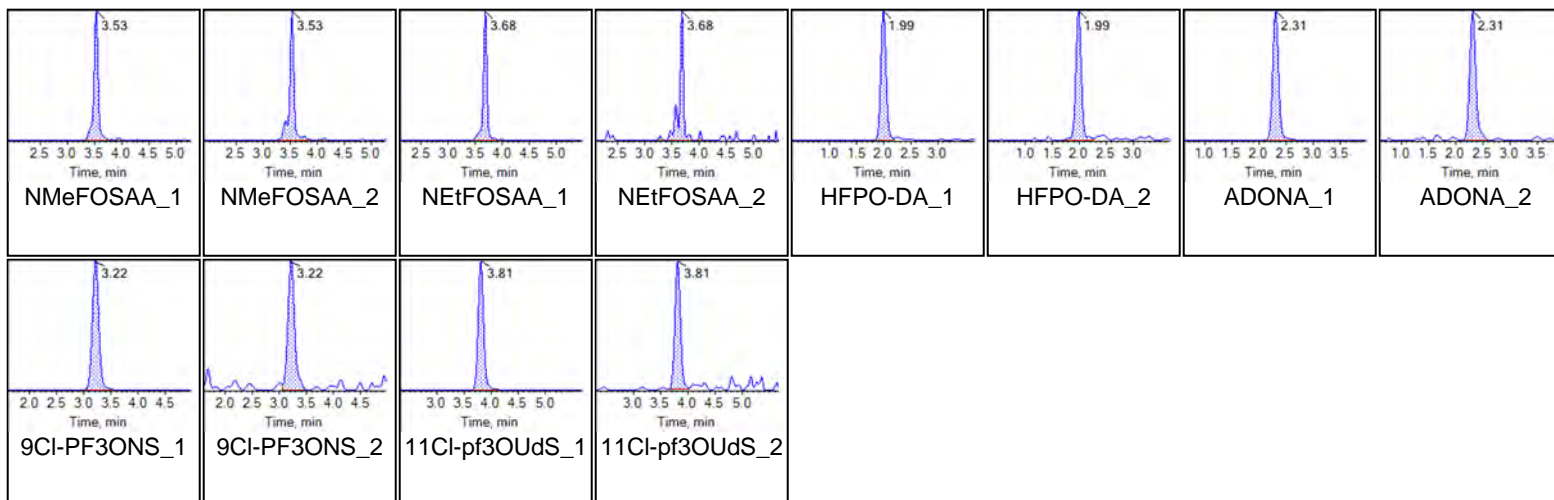
Chromatograms

Target Analytes:

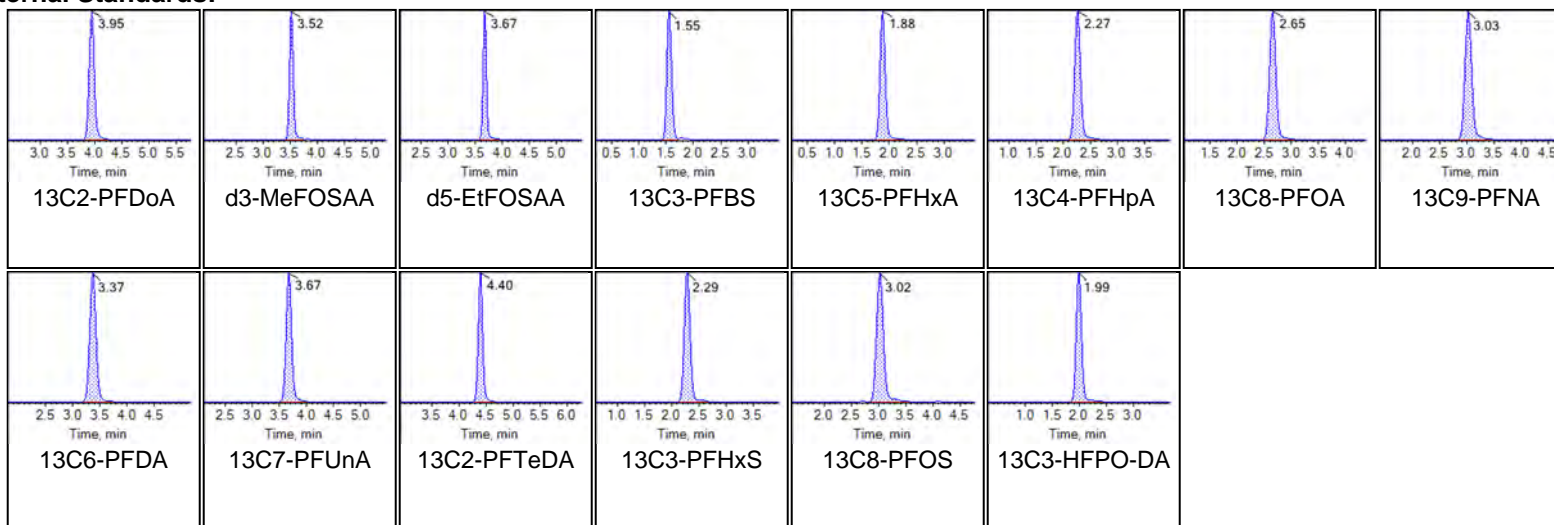




Chromatogram Report

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Internal Standards:





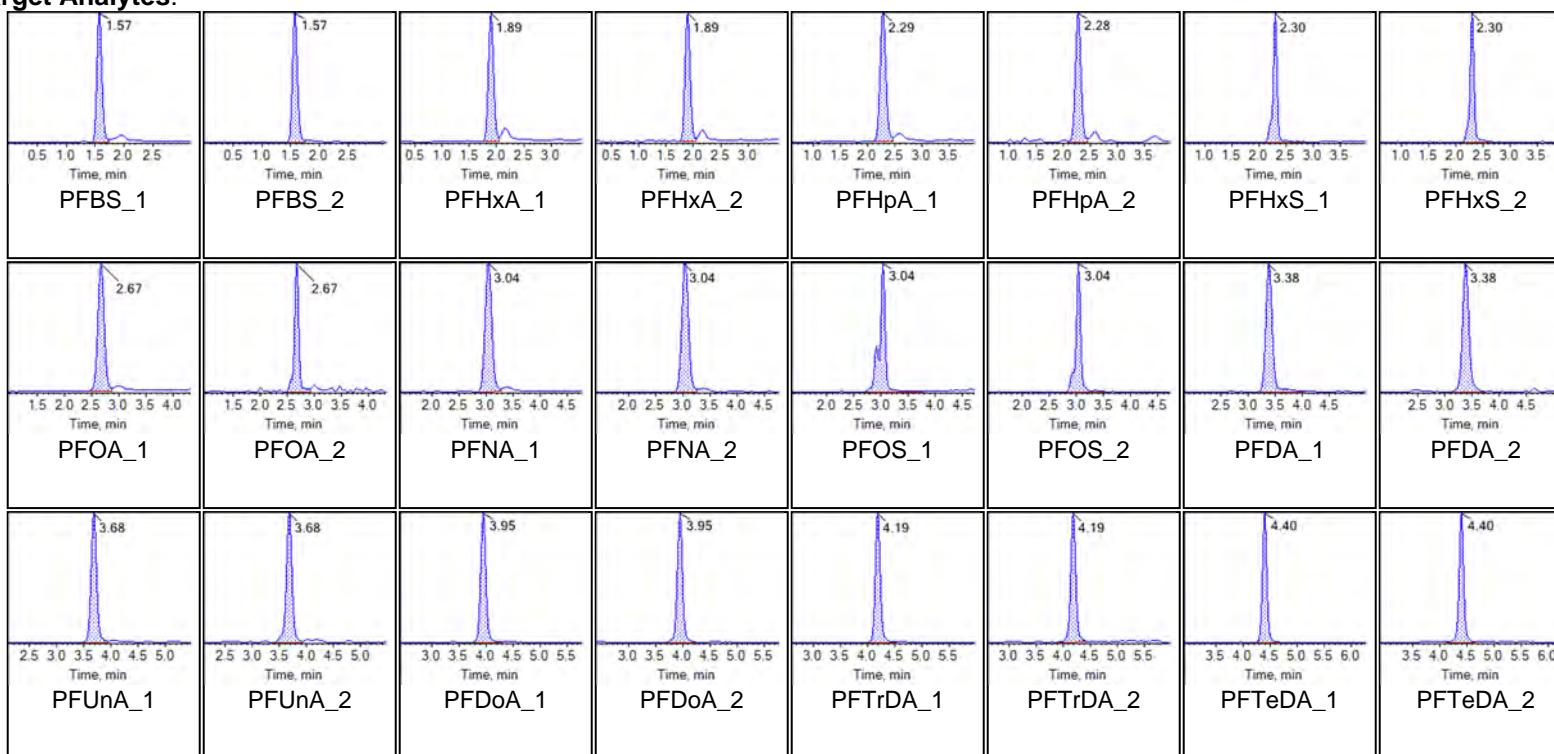
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	LD76	Injection Vial	4
Sample ID	L3	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
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Acquisition Method	5-0369.dam	Result Table	20-1310

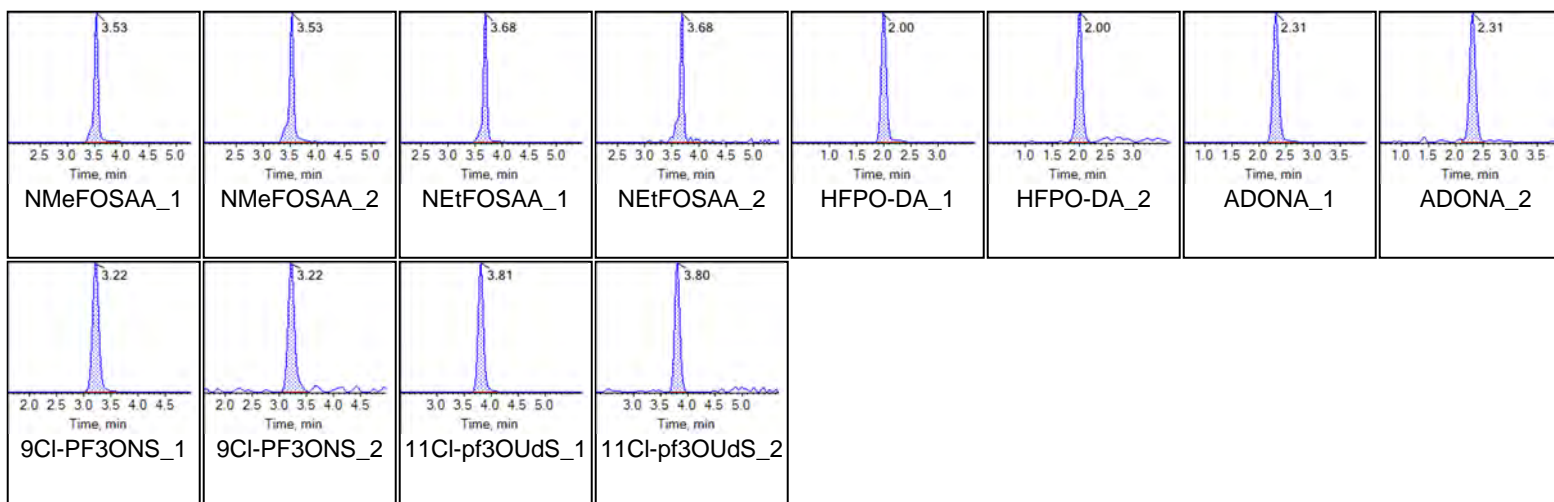
Chromatograms

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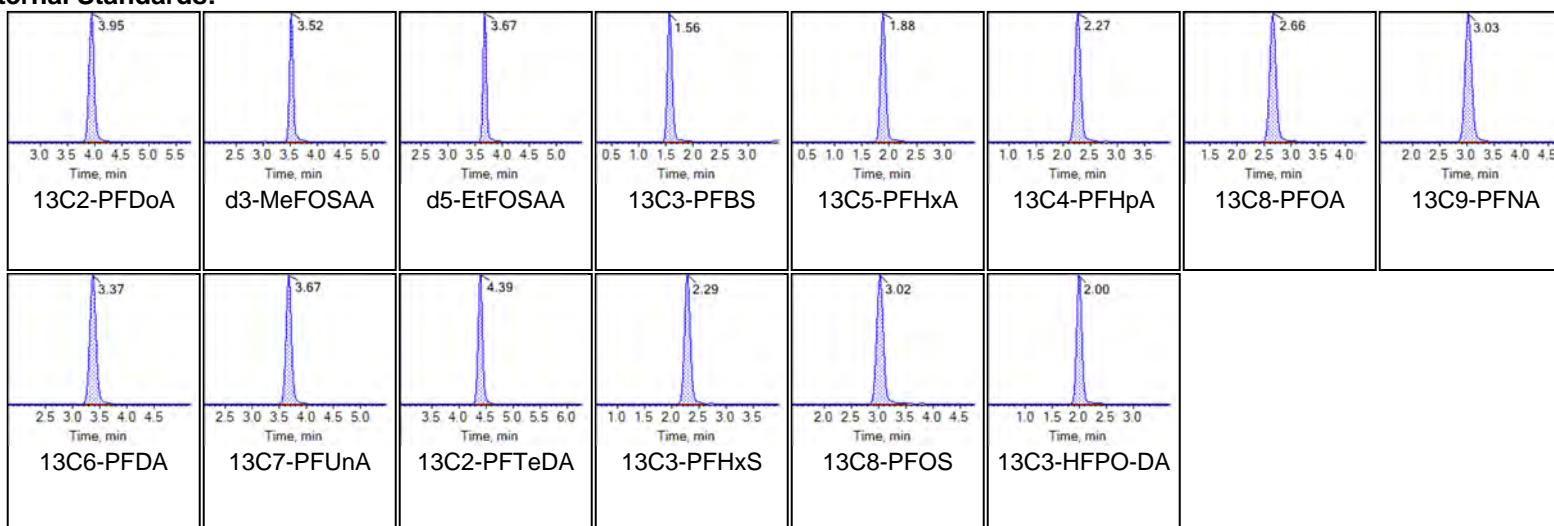




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Internal Standards:





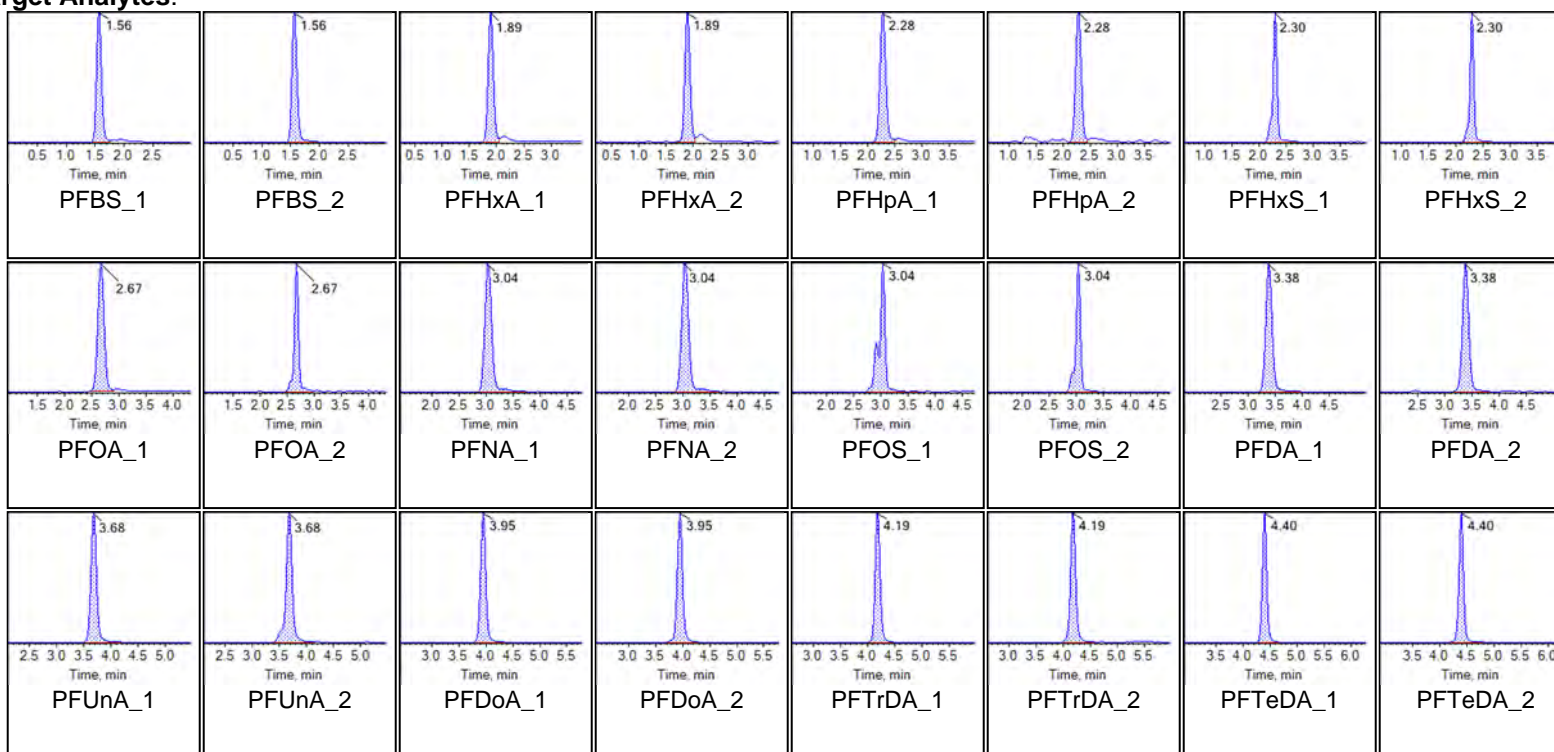
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	LD77	Injection Vial	5
Sample ID	L4	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:52:35 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310

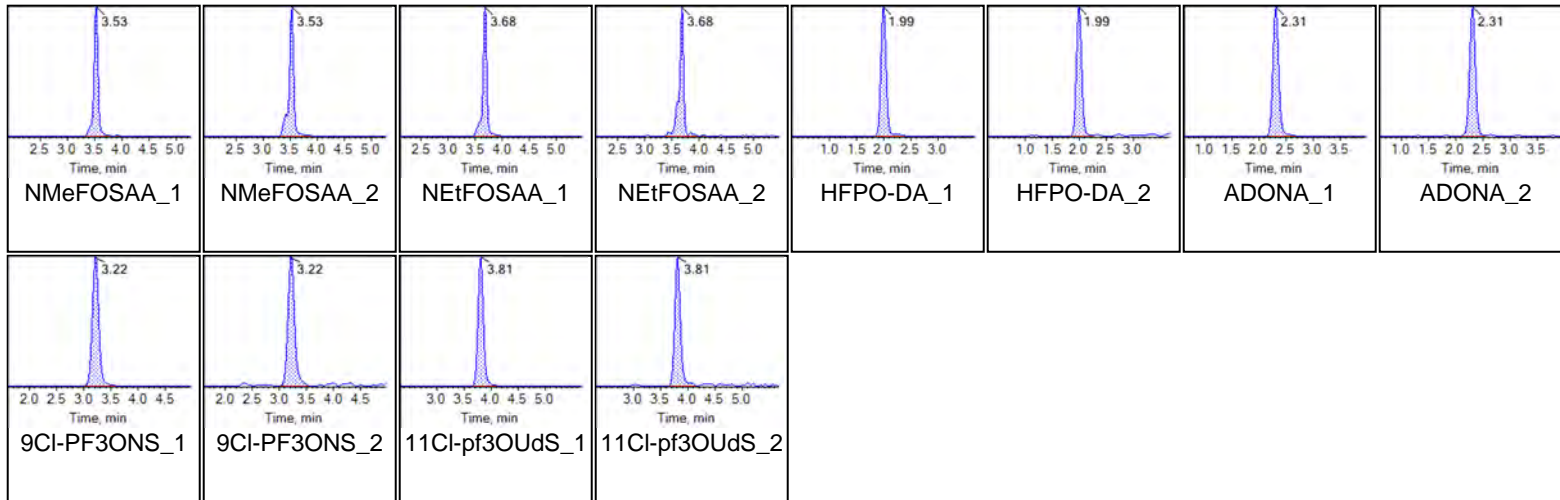
Chromatograms

Target Analytes:

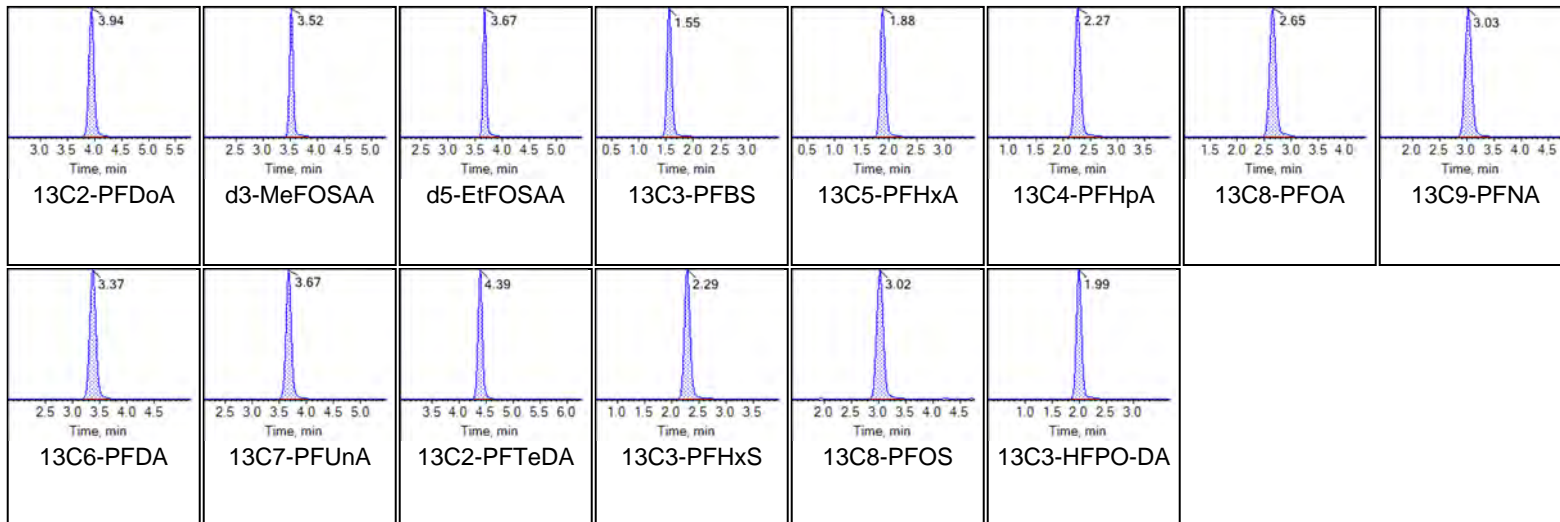




Chromatogram Report

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Internal Standards:





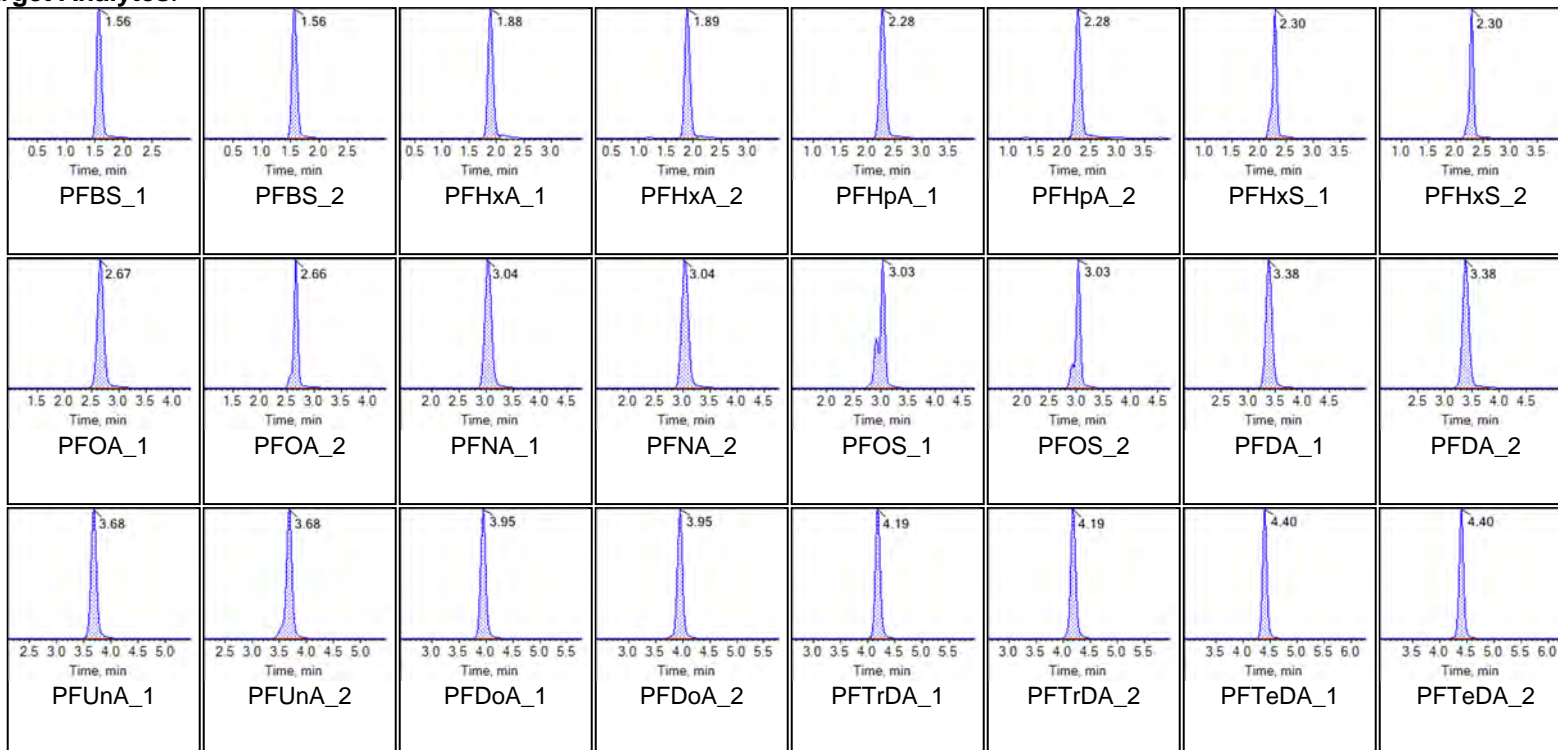
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	LD78	Injection Vial	6
Sample ID	L5	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:03:27 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310

Chromatograms

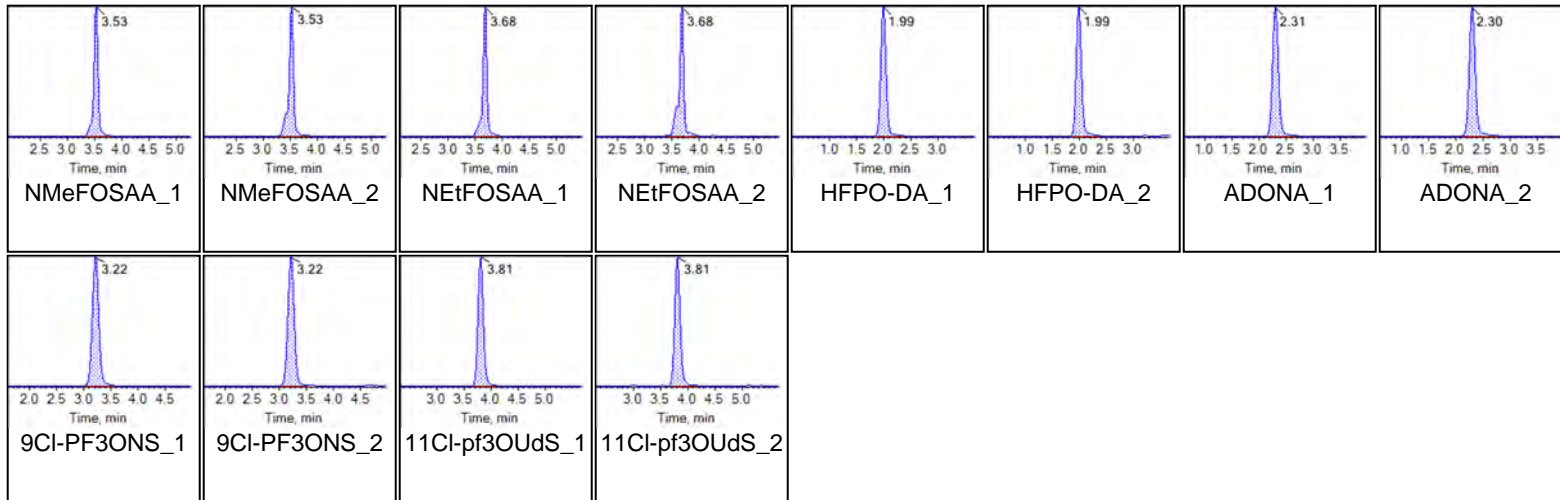
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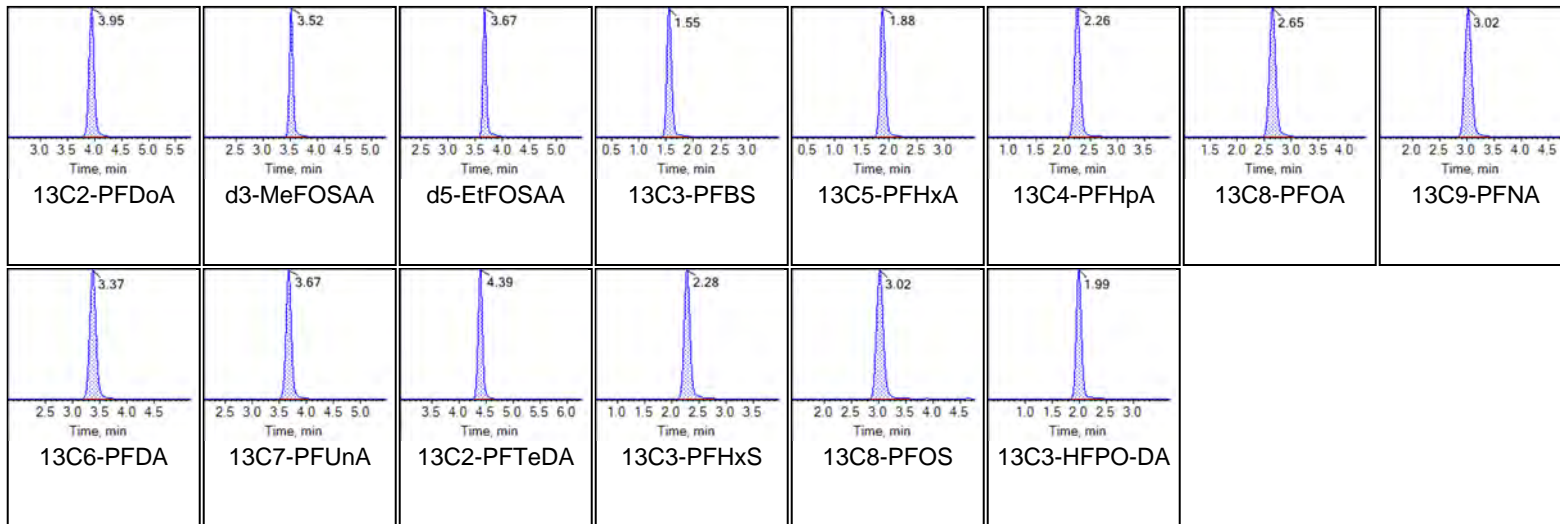


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Internal Standards:





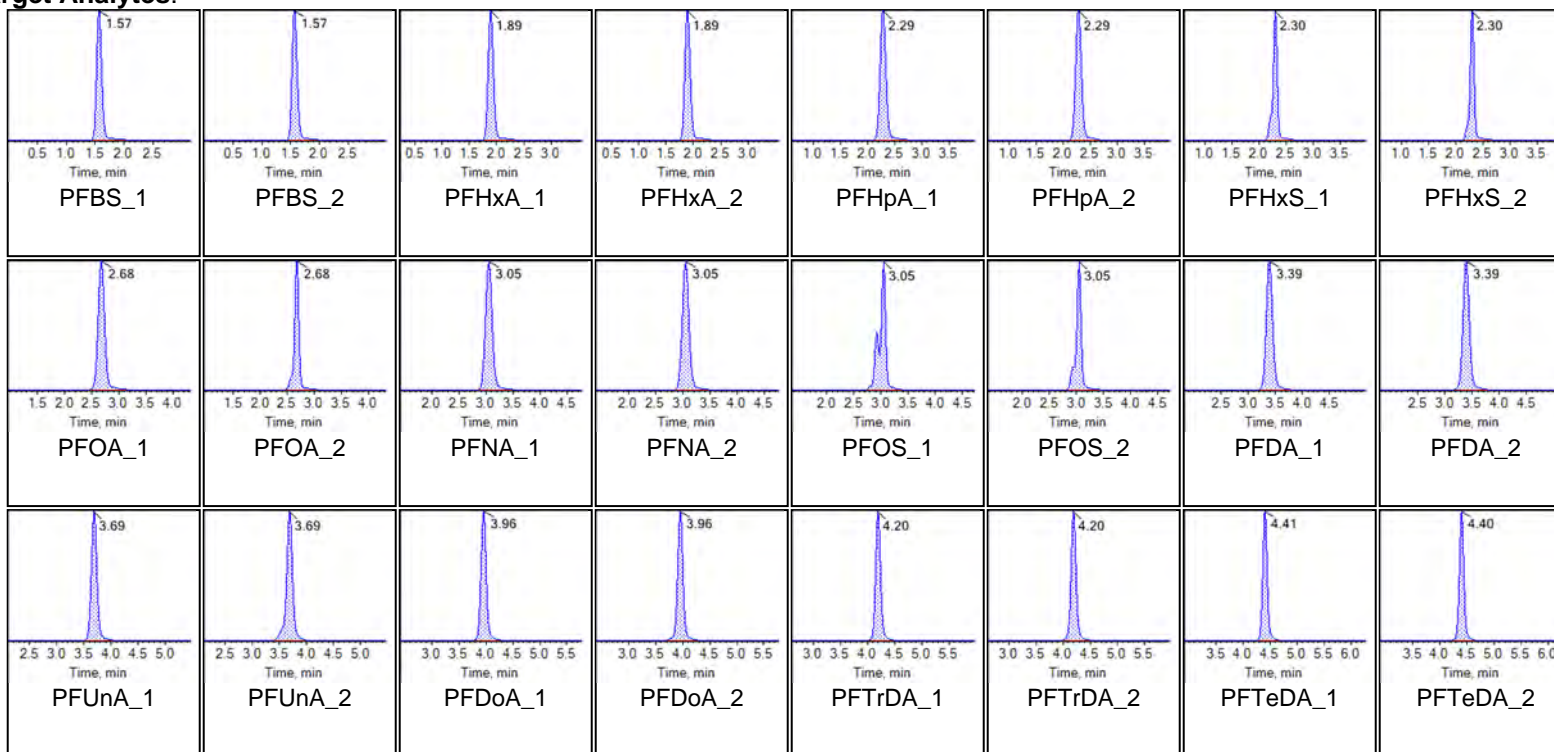
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	LD79	Injection Vial	7
Sample ID	L6	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:14:18 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310

Chromatograms

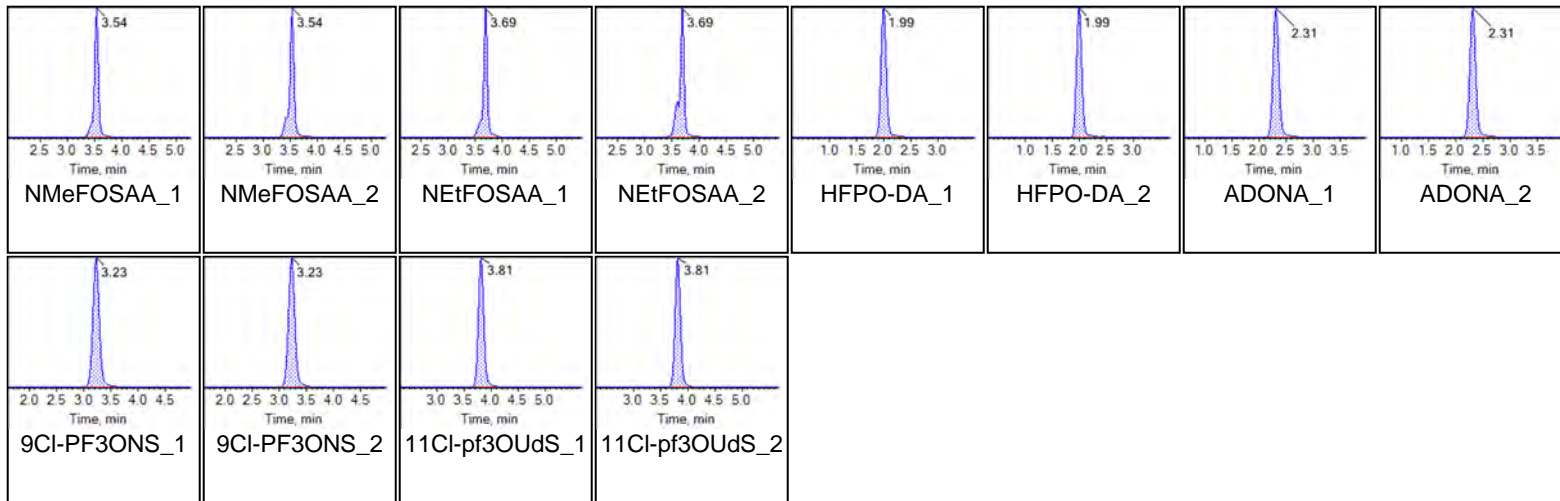
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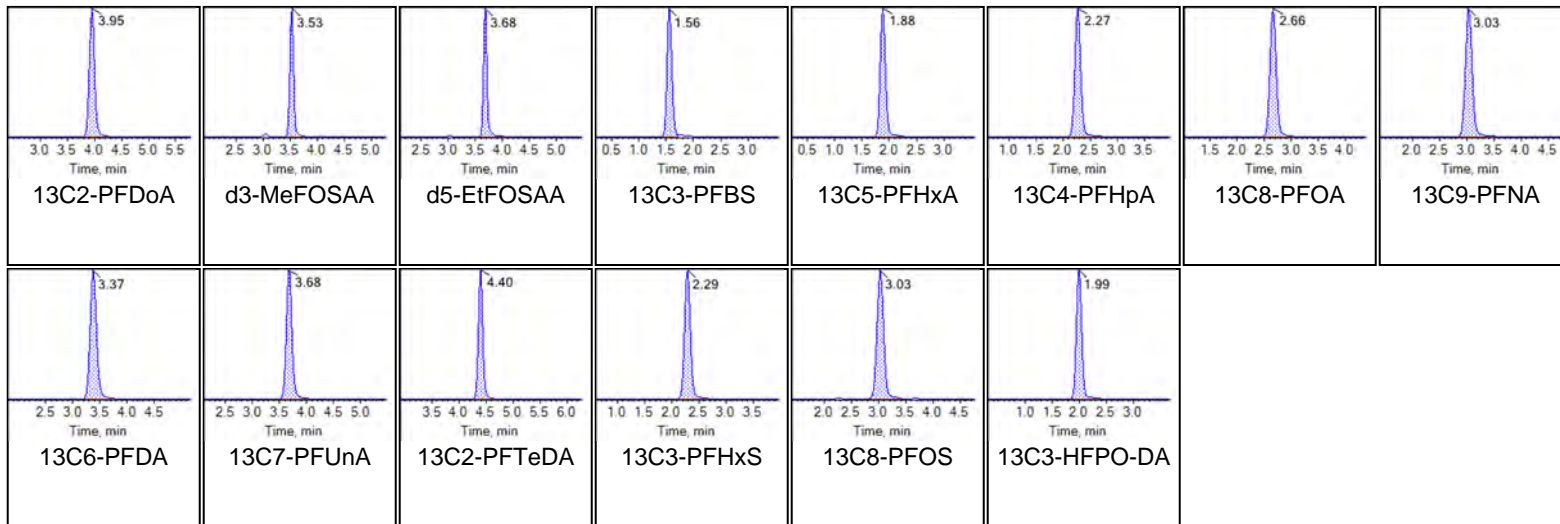


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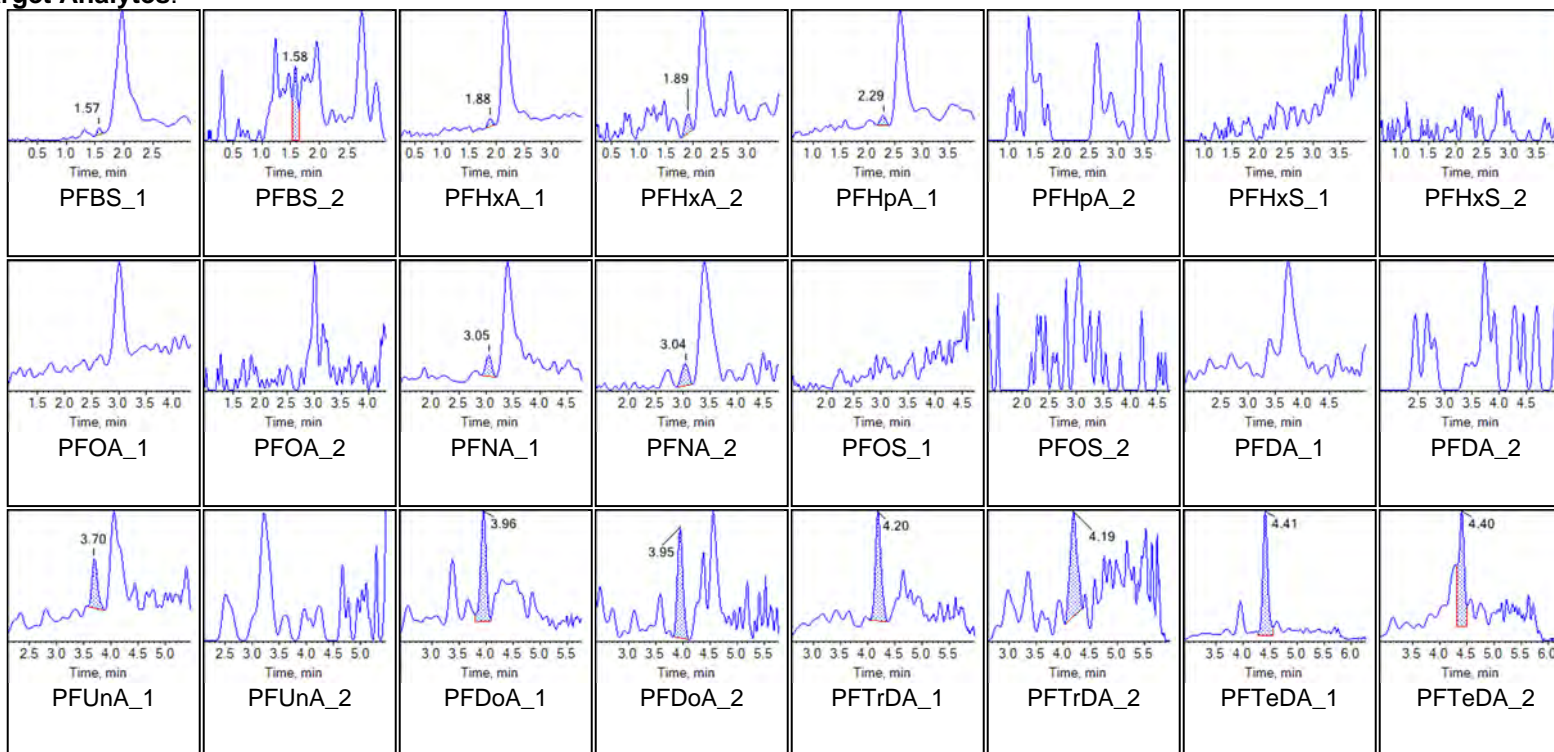
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	LD80 IB	Injection Vial	8
Sample ID	IB	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:25:10 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310

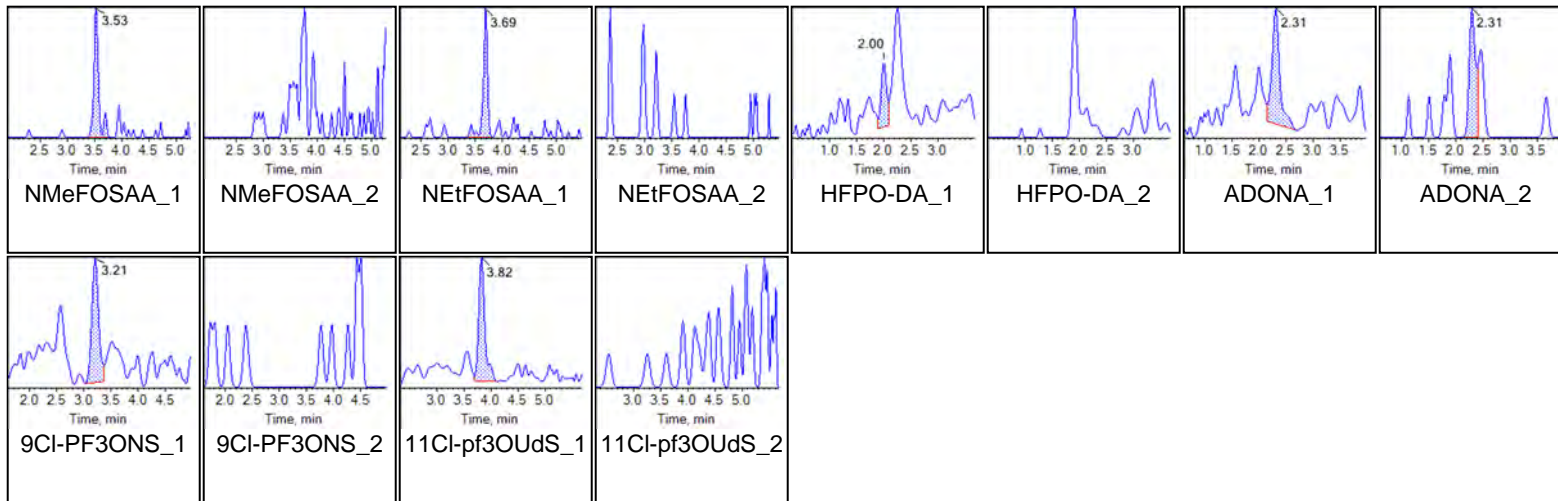
Chromatograms

Target Analytes:

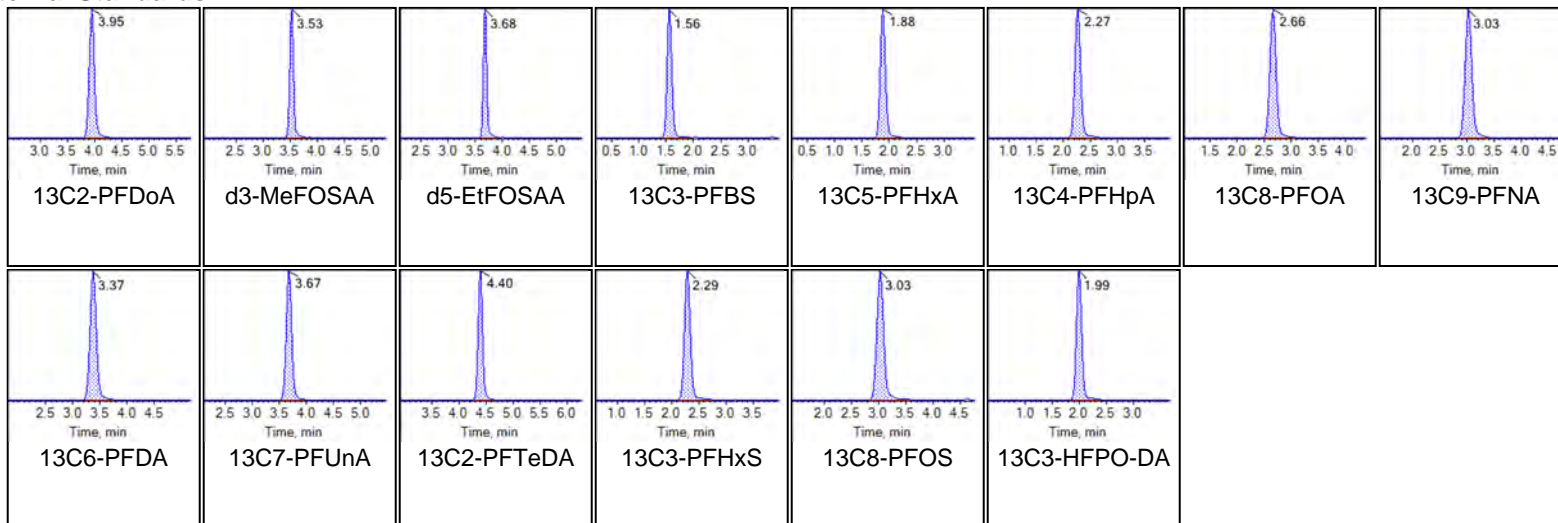




Chromatogram Report

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Internal Standards:





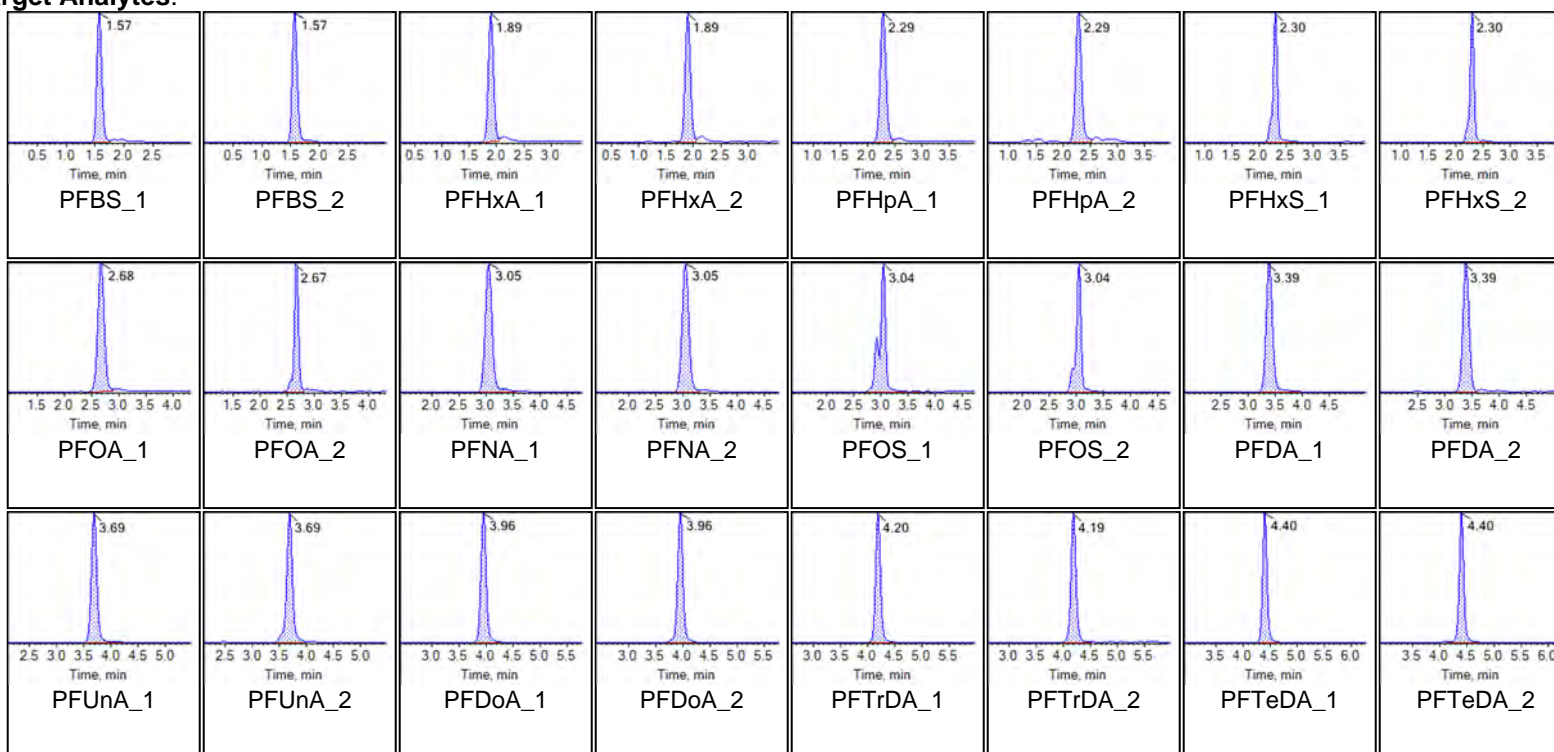
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	LD81 ICC	Injection Vial	9
Sample ID	ICC	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:36:01 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310

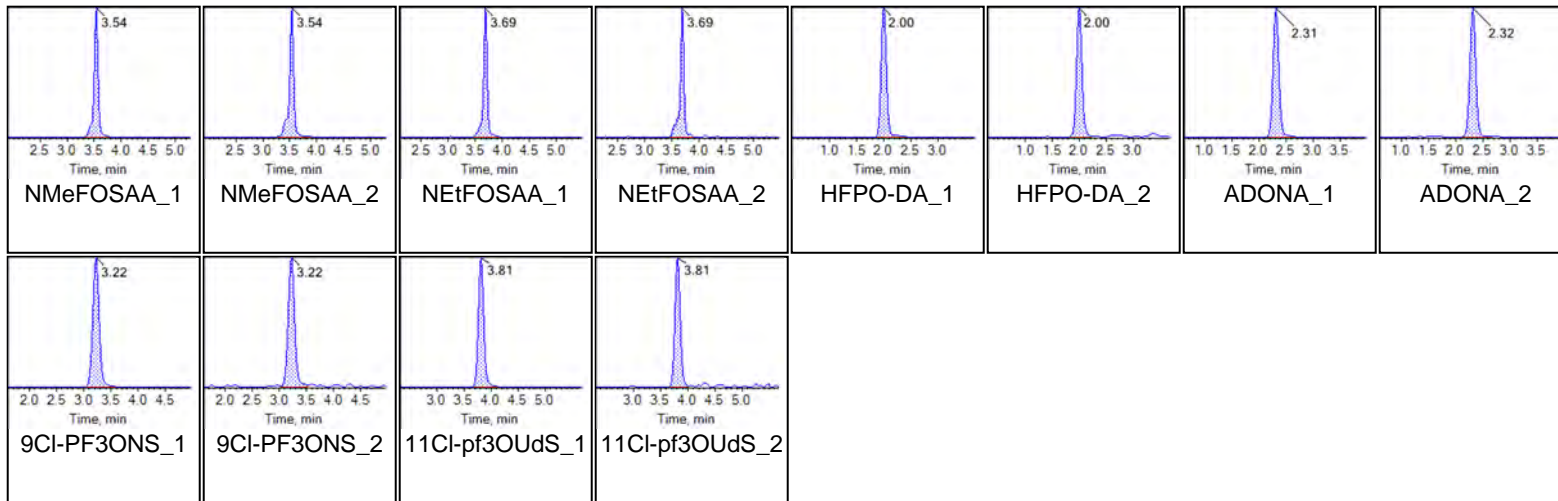
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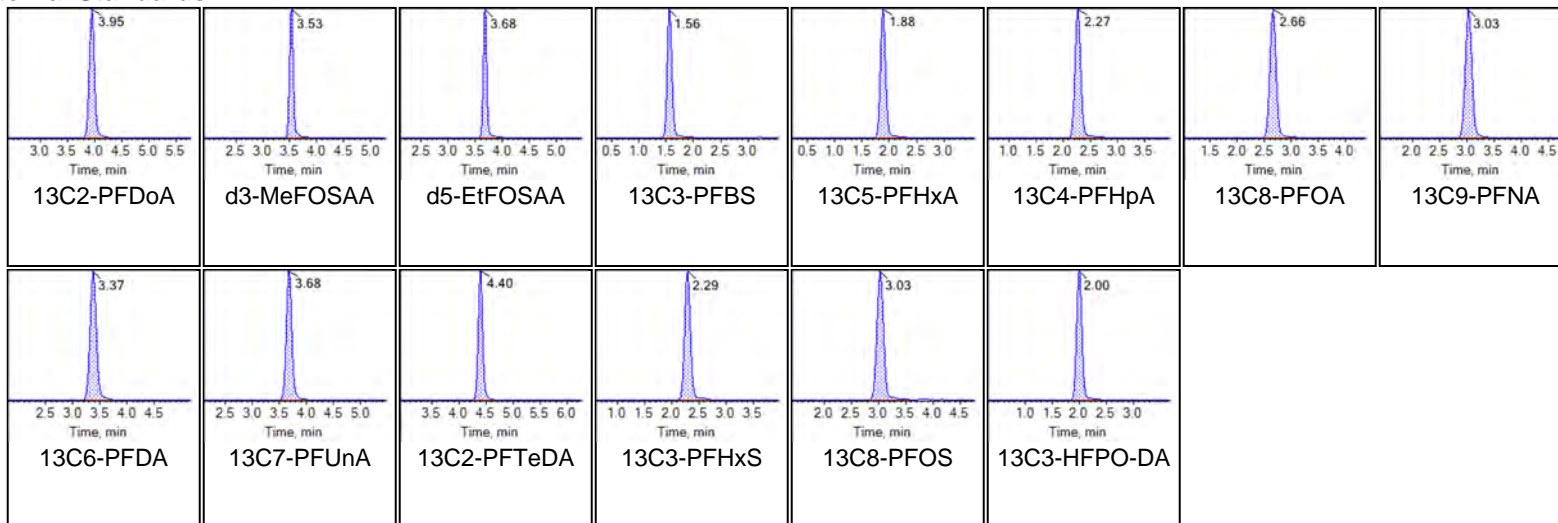




Chromatogram Report

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Internal Standards:





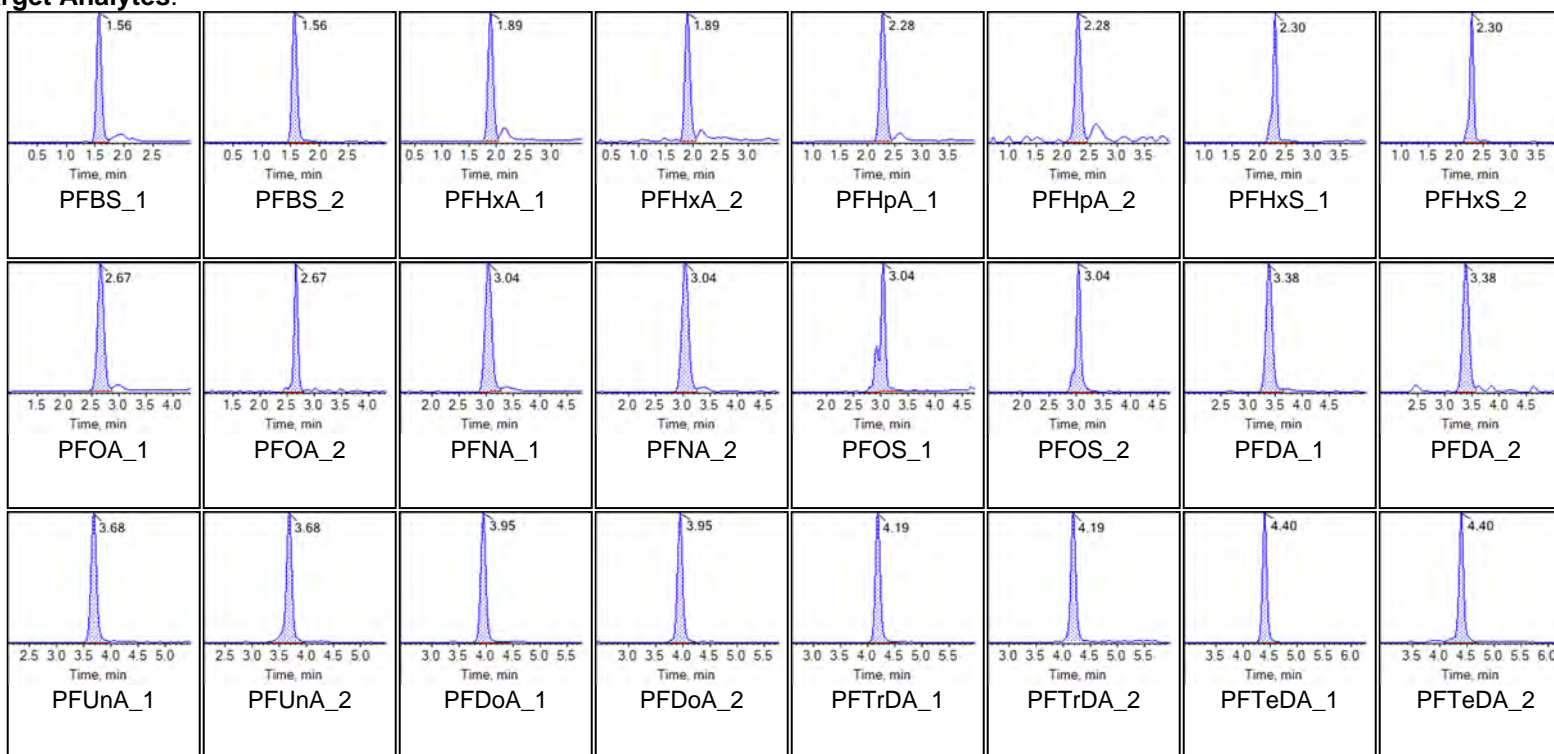
Chromatogram Report

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Sample Name	LD76 CCV	Injection Vial	2
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 11:03:44 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310

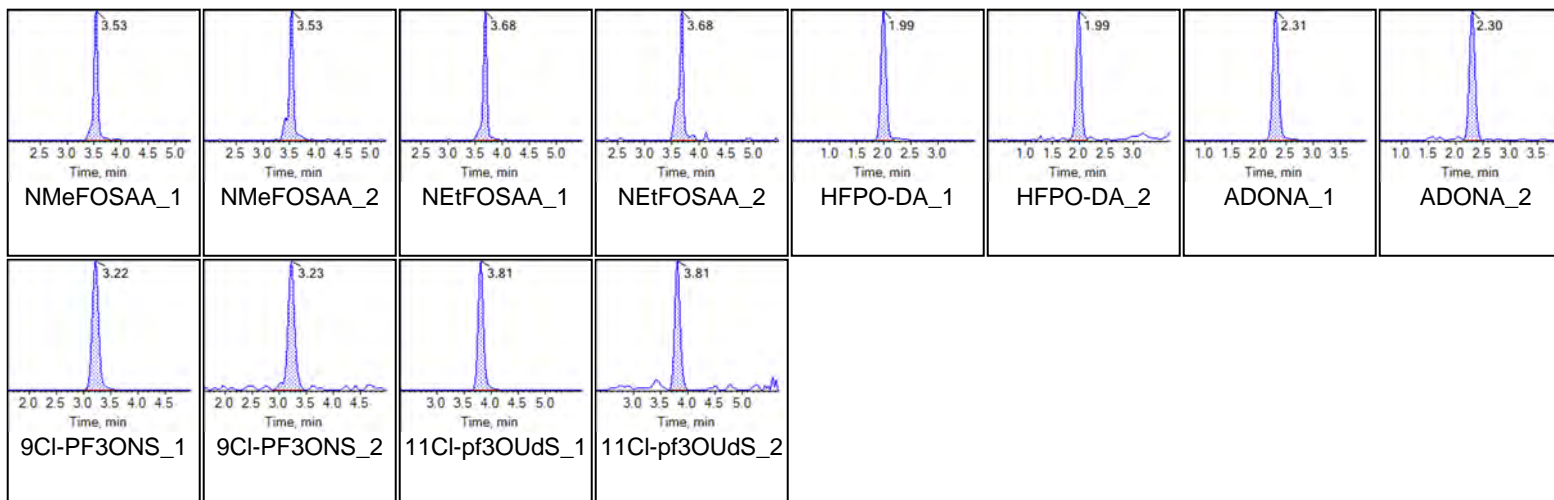
Chromatograms

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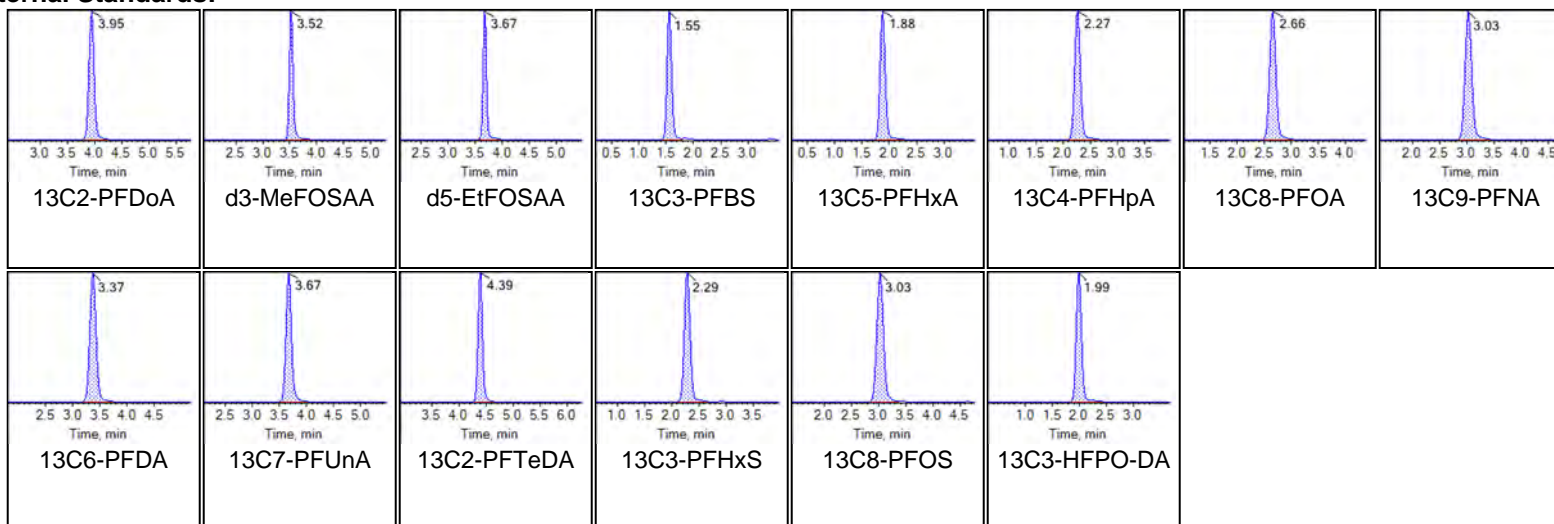




Chromatogram Report

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Internal Standards:





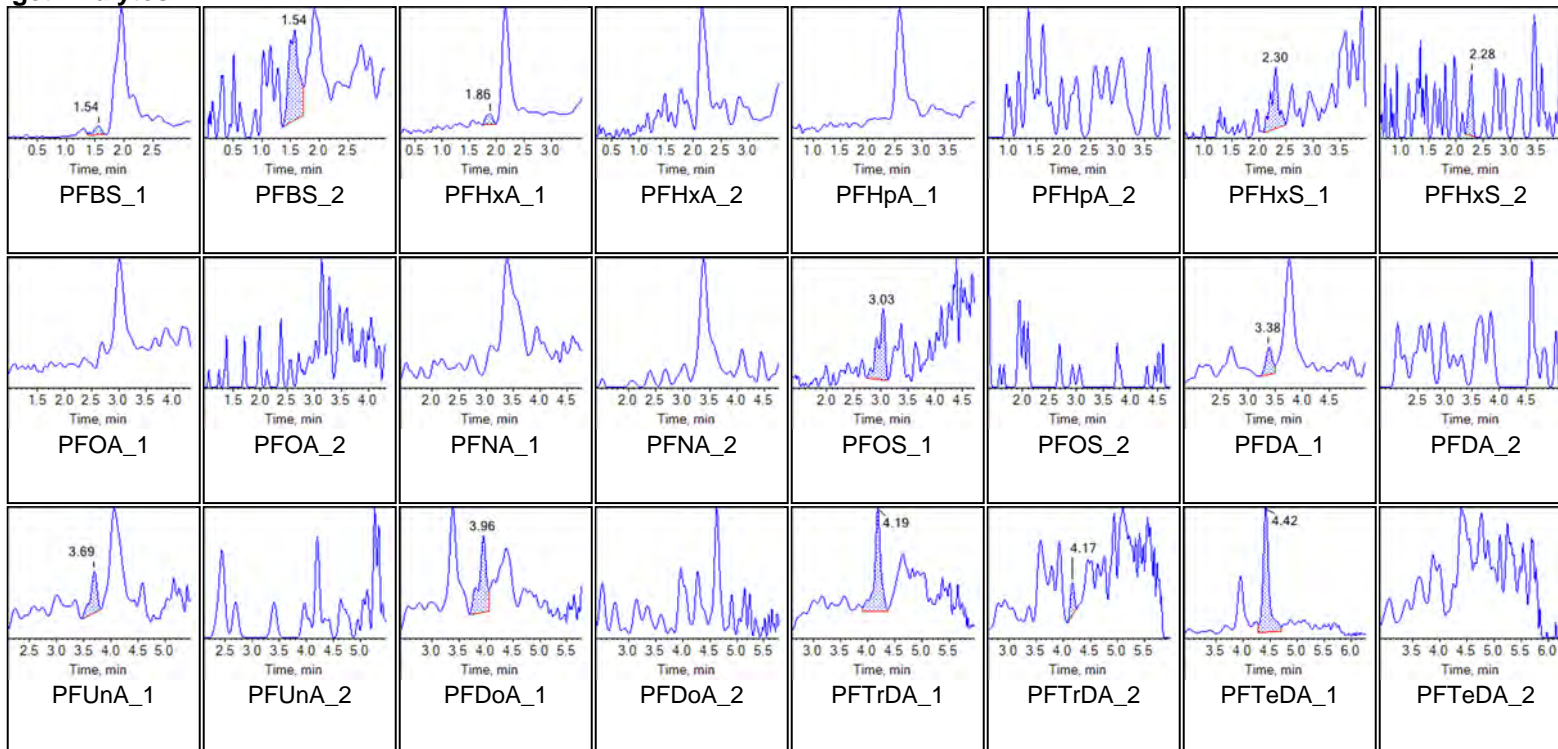
Chromatogram Report

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Printed: 09/11/2020 3:17:19 PM

Sample Name	LD80 IBA	Injection Vial	4
Sample ID	IB	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 11:25:29 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310

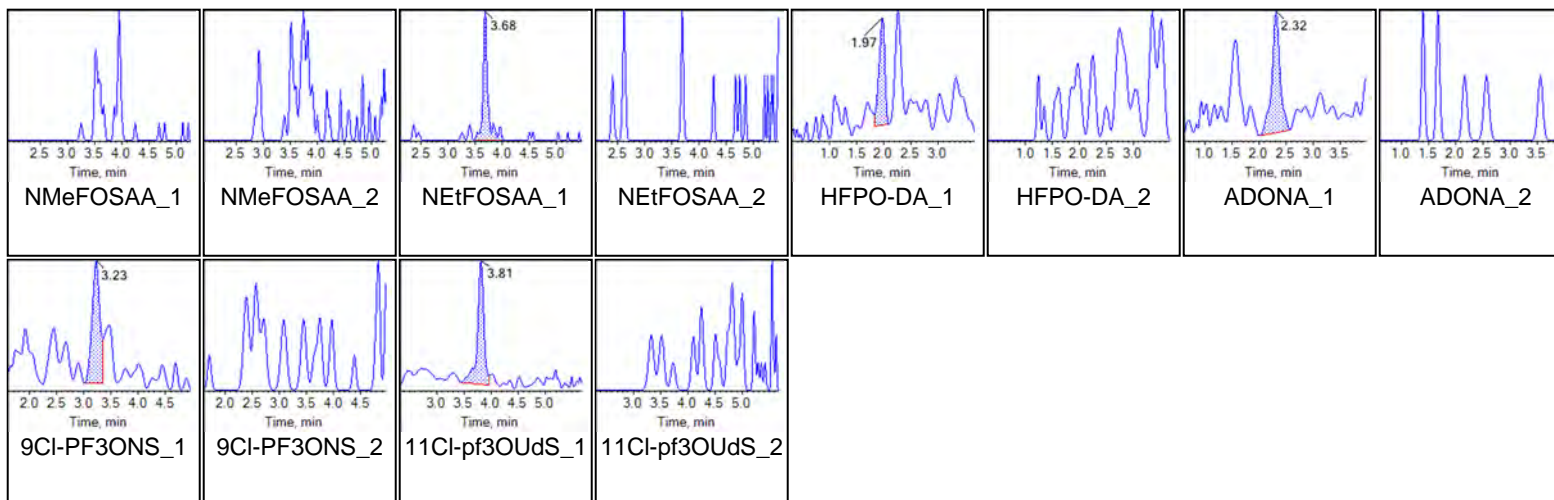
Chromatograms

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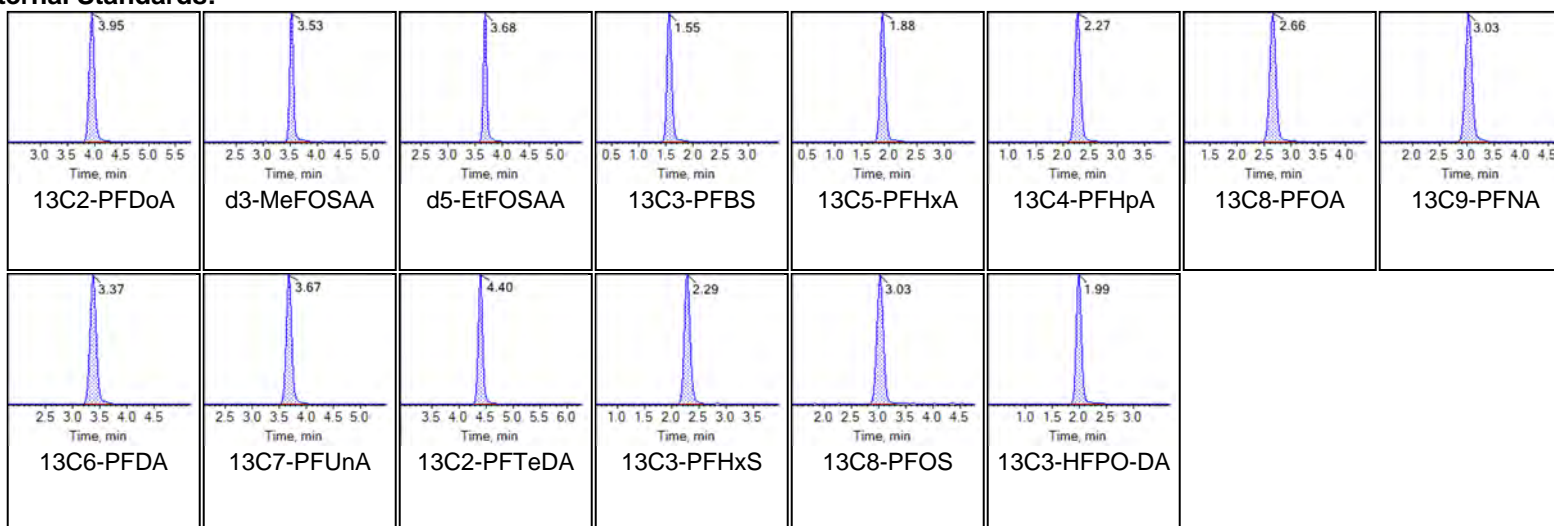




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Internal Standards:





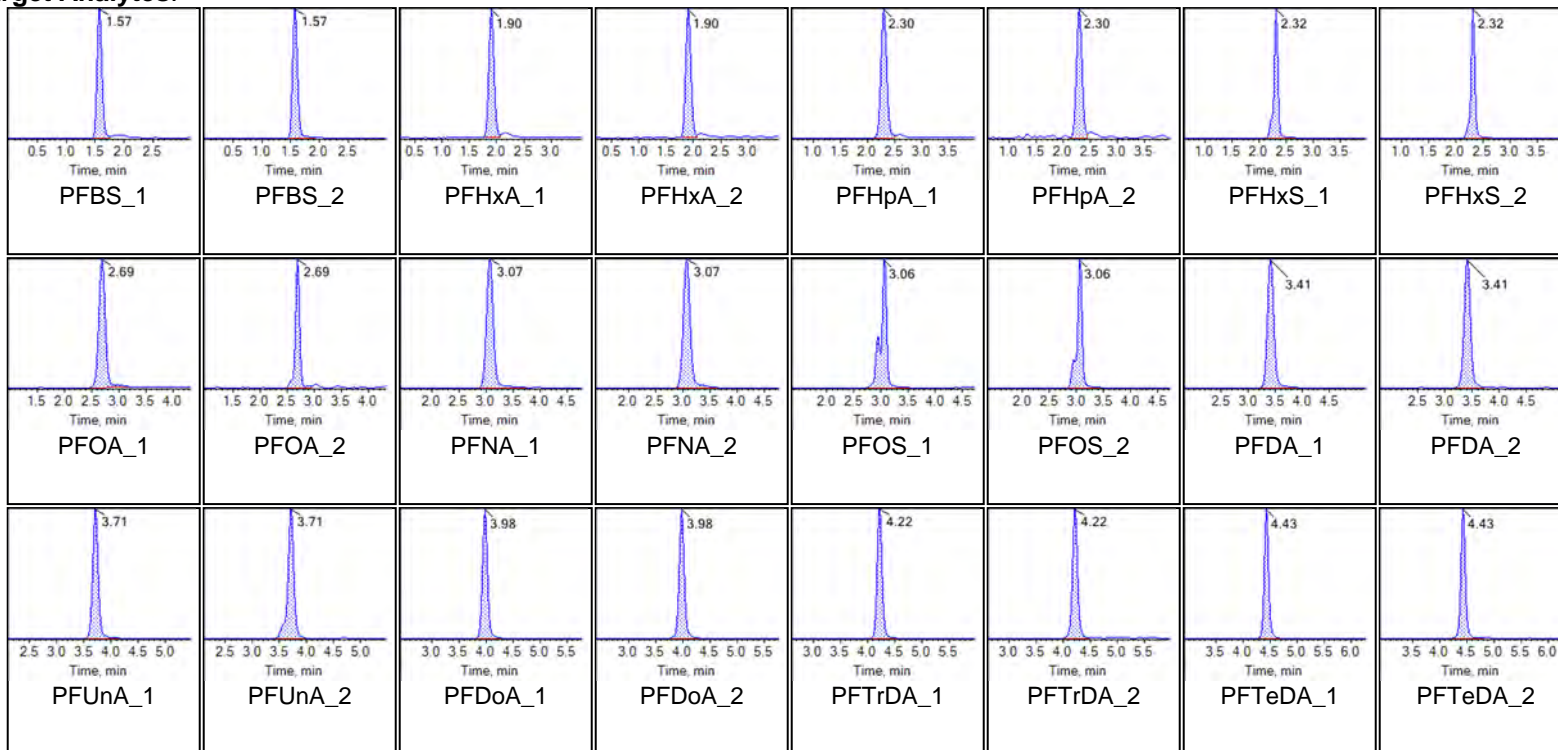
Chromatogram Report

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Sample Name	LD77 CCV	Injection Vial	11
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 7:08:01 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310

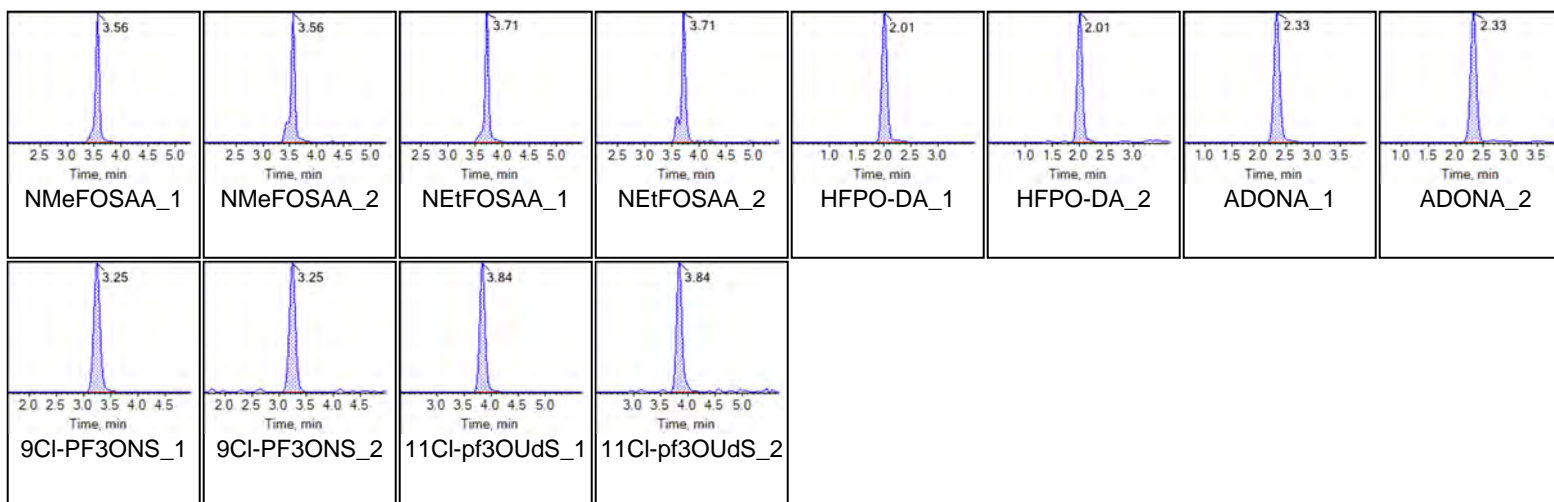
Chromatograms

Target Analytes:

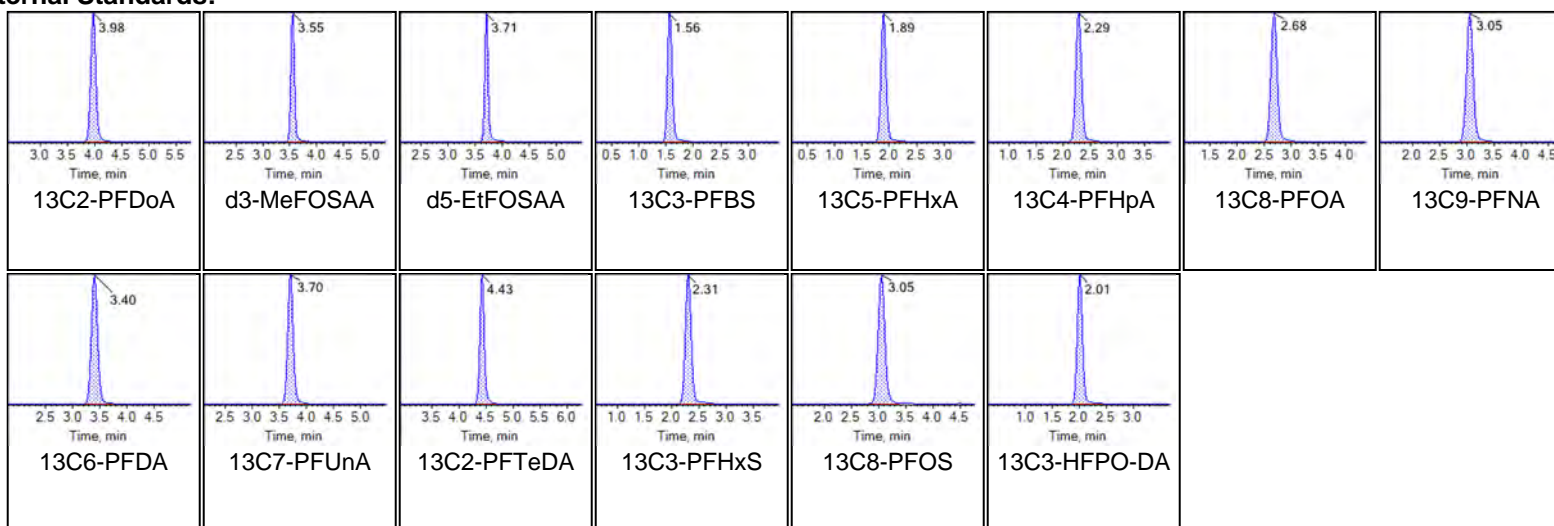




Chromatogram Report

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Internal Standards:





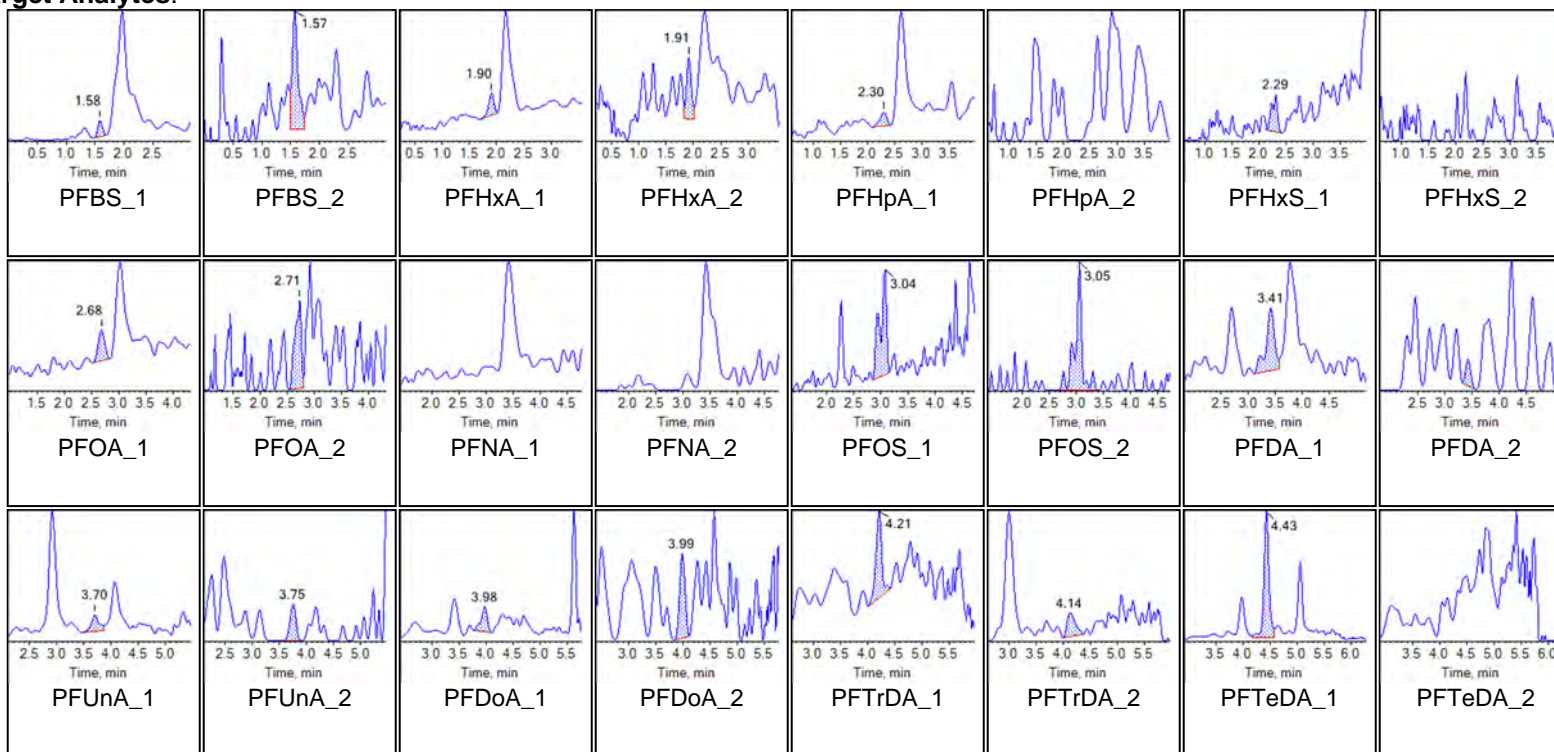
Chromatogram Report

Created with Analyst Reporter
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Sample Name	DA918PB-FS(0)	Injection Vial	13
Sample ID	Procedural Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 7:29:50 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310

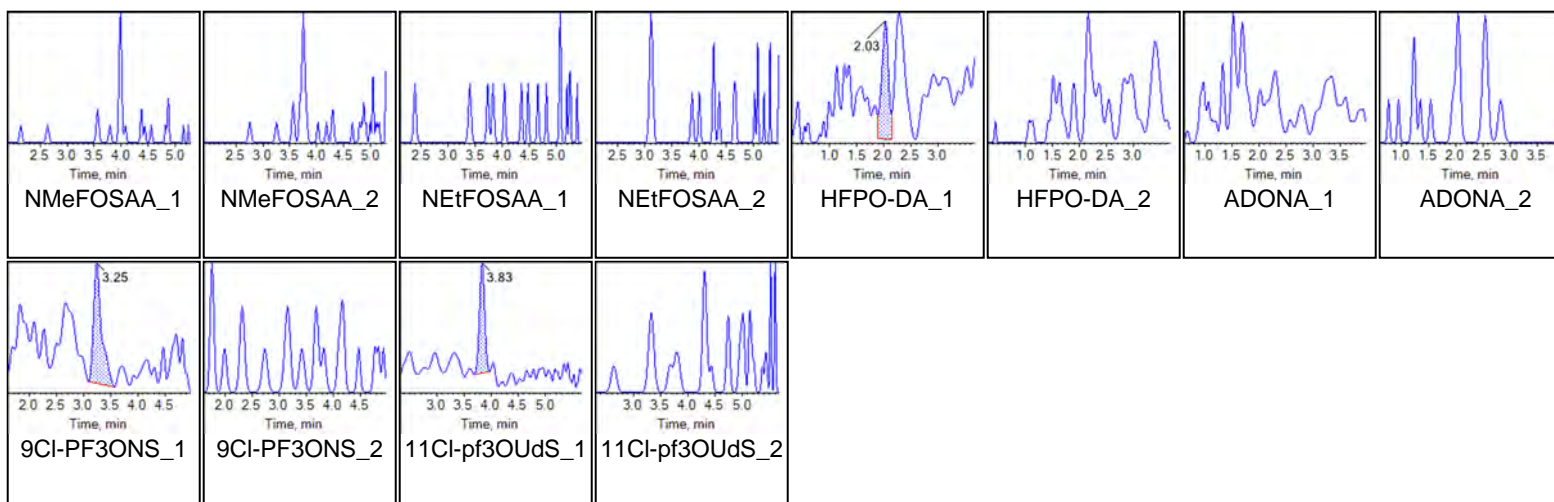
Chromatograms

Target Analytes:

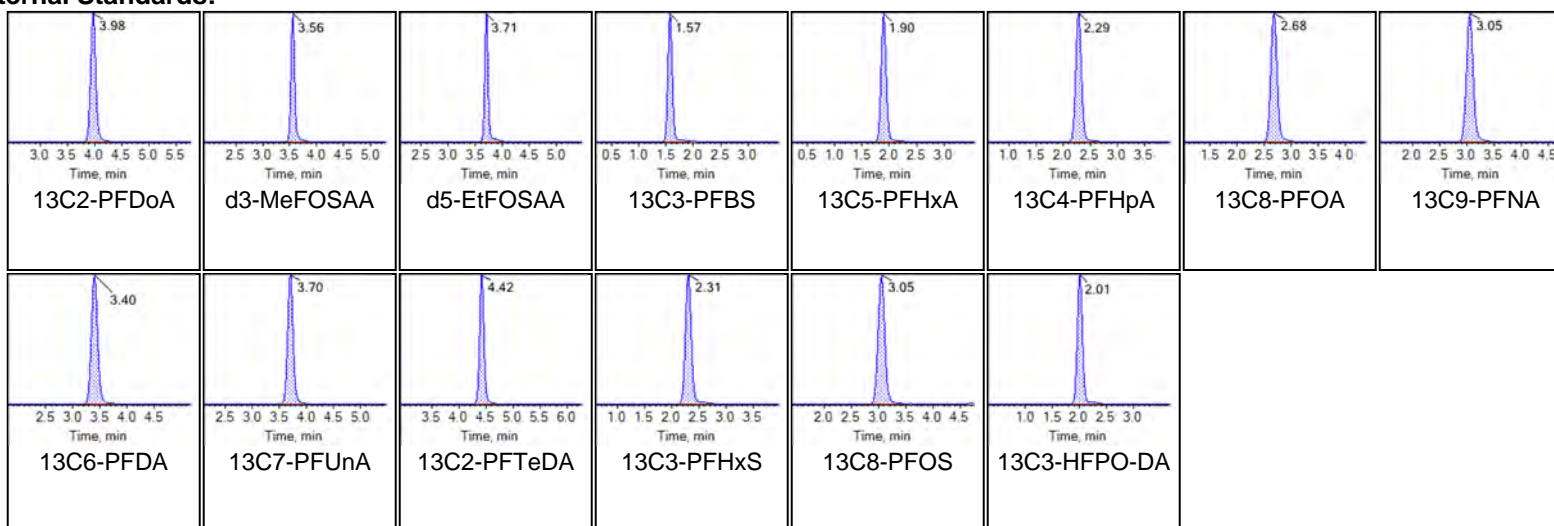




Chromatogram Report

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Internal Standards:





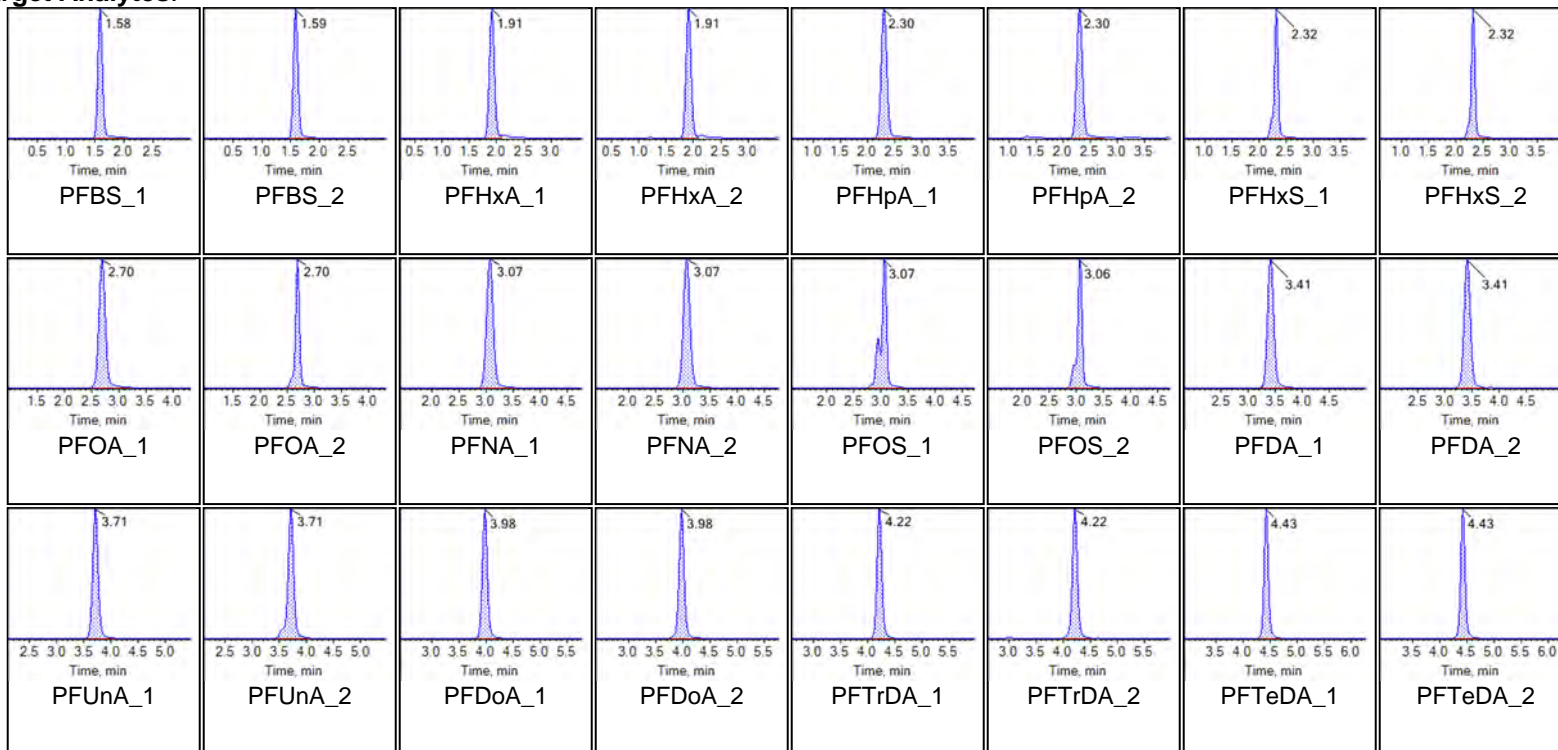
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	DA919LCS-FS(0)	Injection Vial	14
Sample ID	Laboratory Control Sample	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
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Acquisition Method	5-0369.dam	Result Table	20-1310

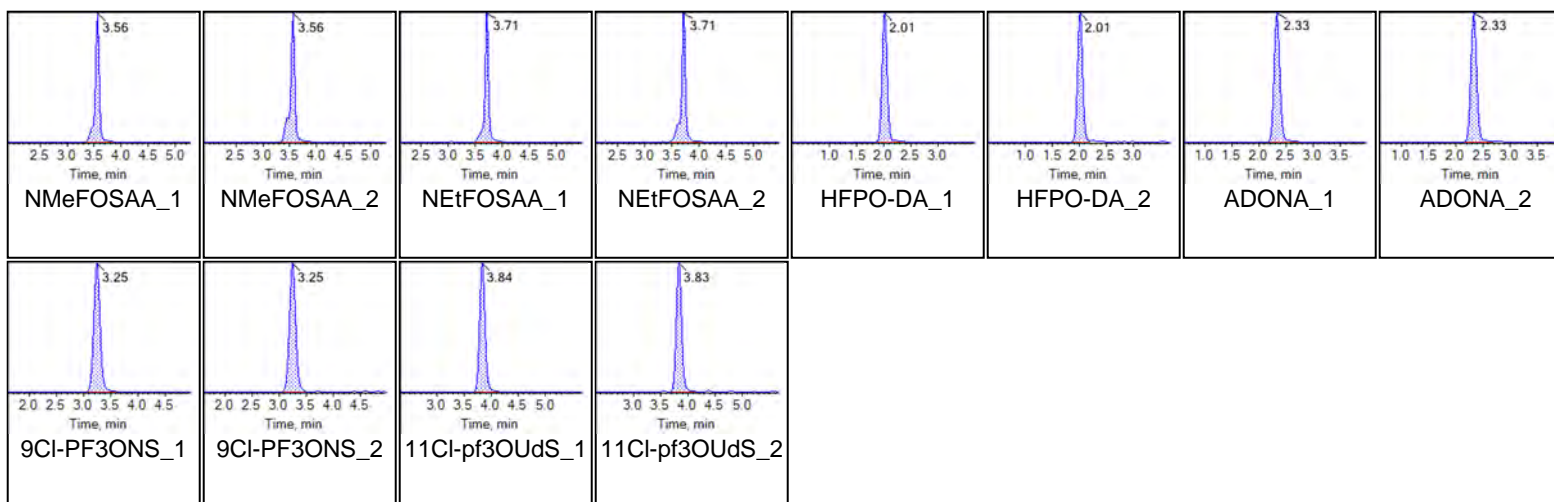
Chromatograms

Target Analytes:

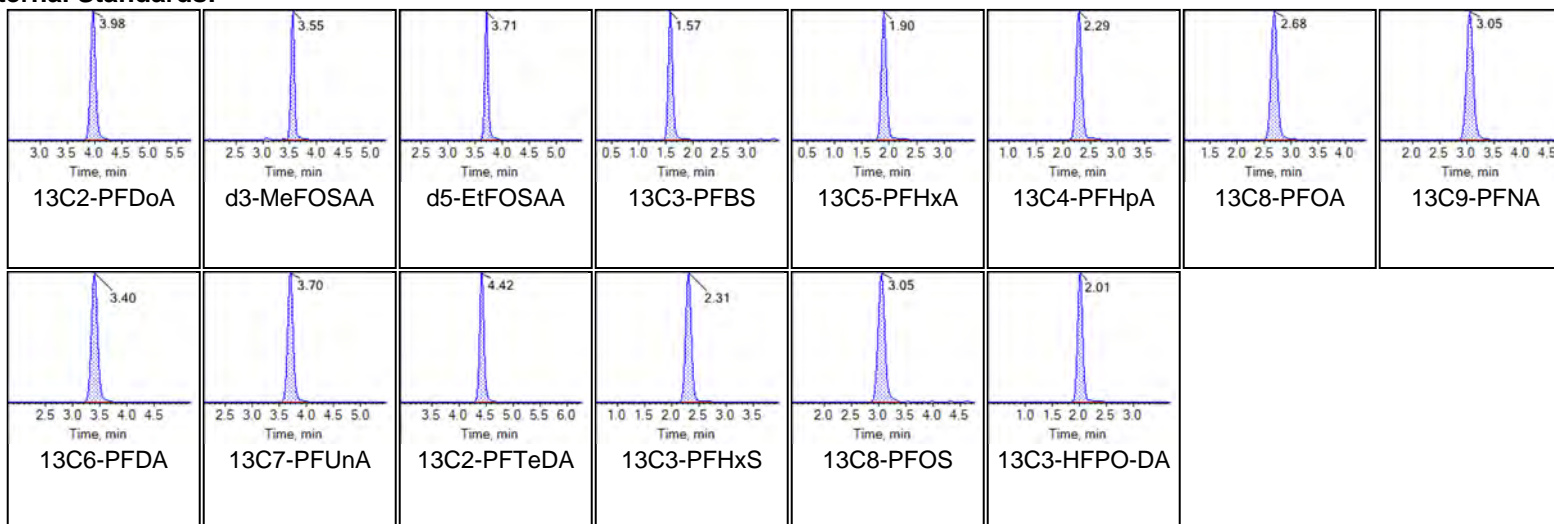




Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Internal Standards:





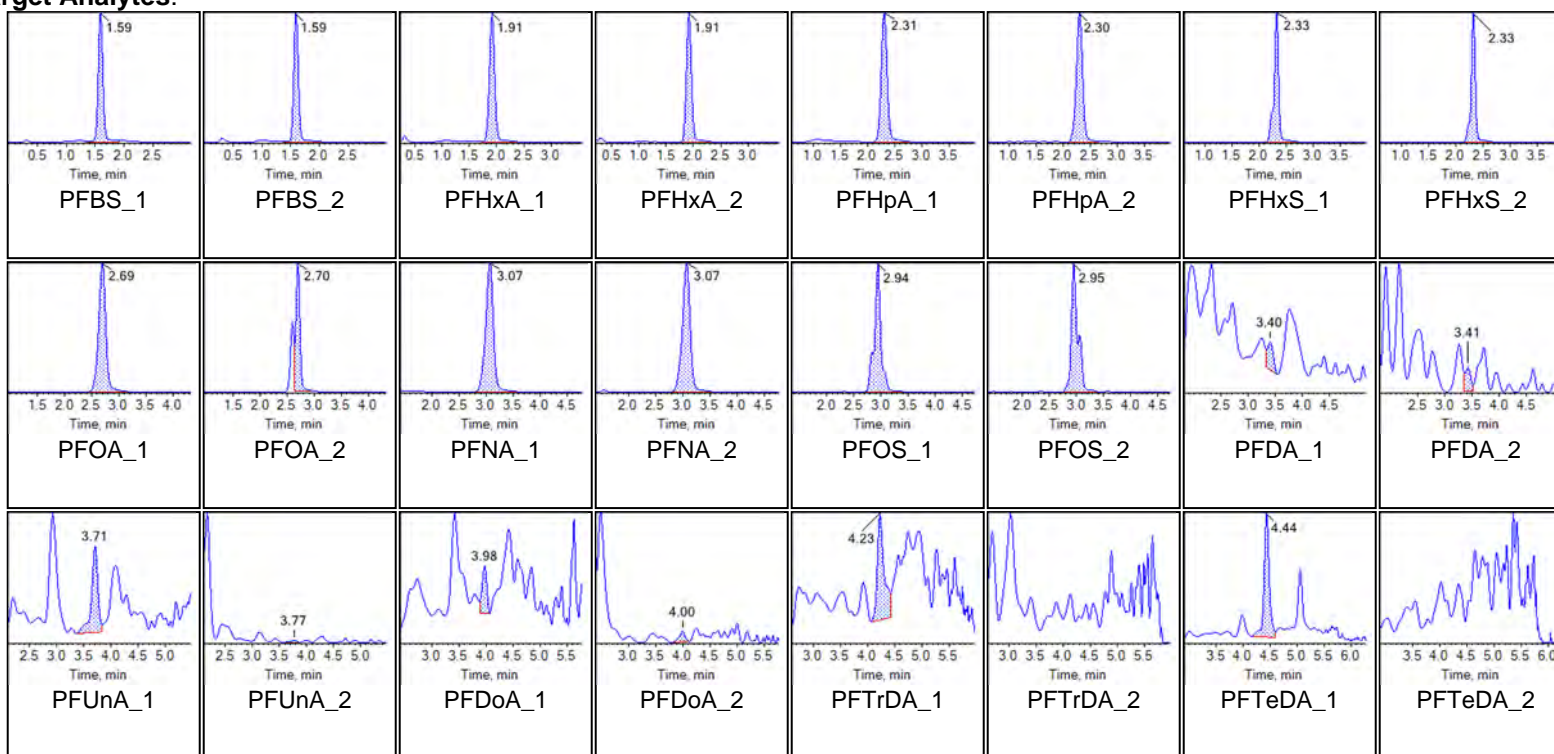
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	G1707-FS(0)	Injection Vial	15
Sample ID	CBD-AOA-MW15-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 7:51:36 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310

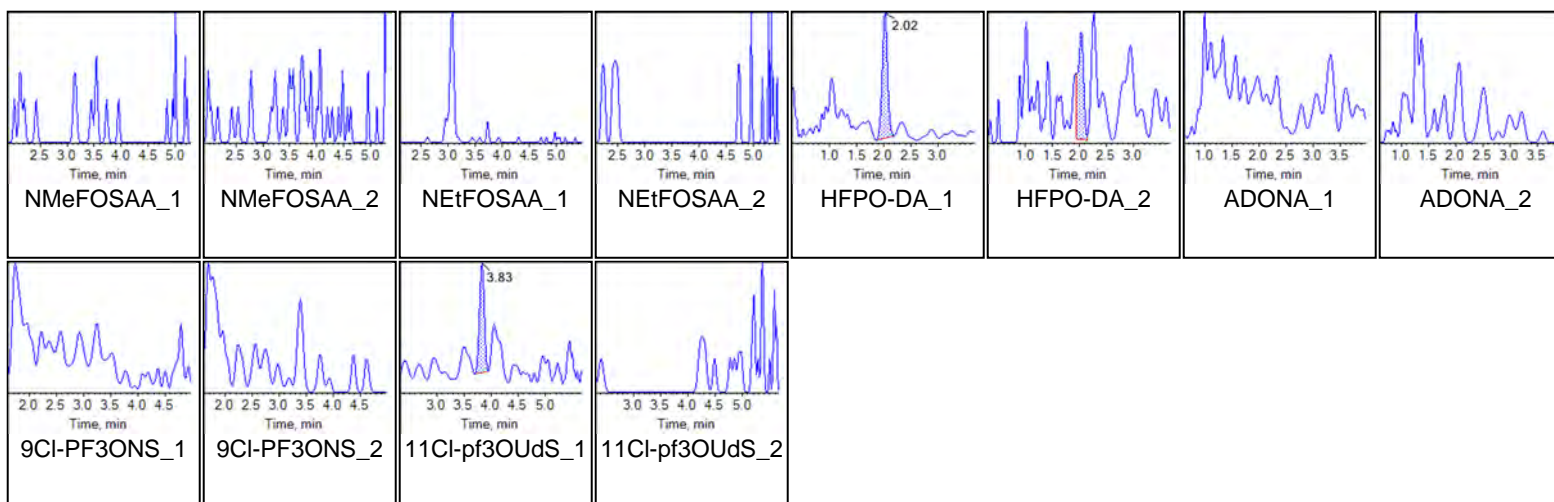
Chromatograms

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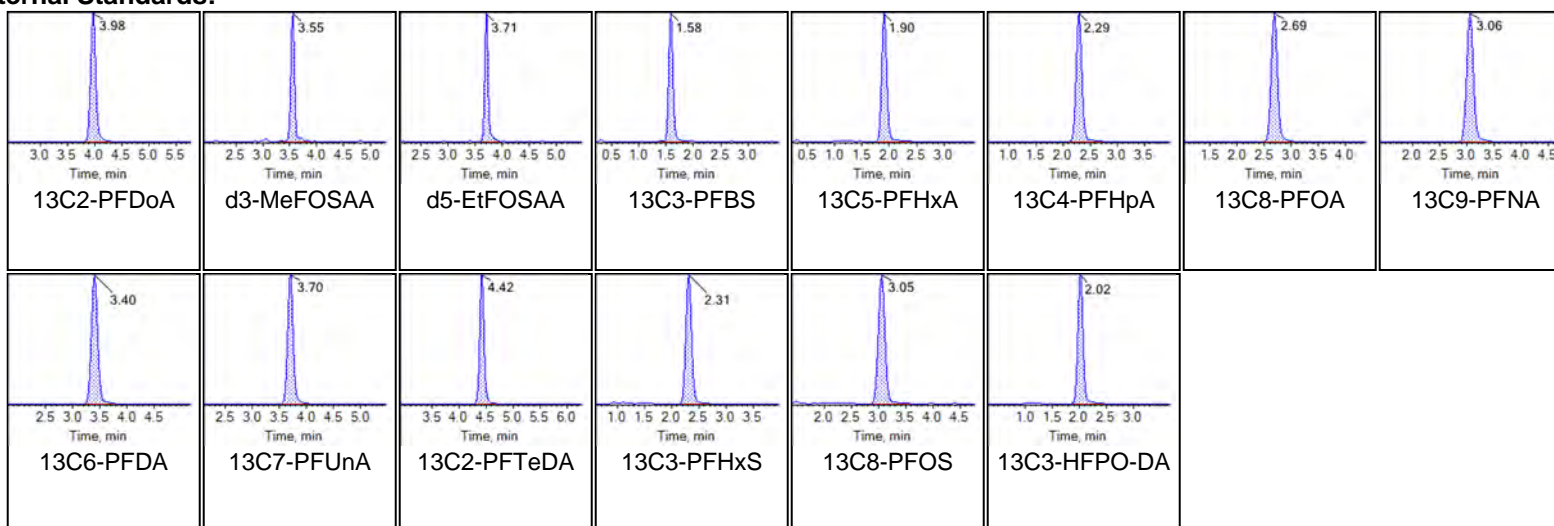




Chromatogram Report

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Printed: 09/11/2020 3:17:19 PM

Internal Standards:





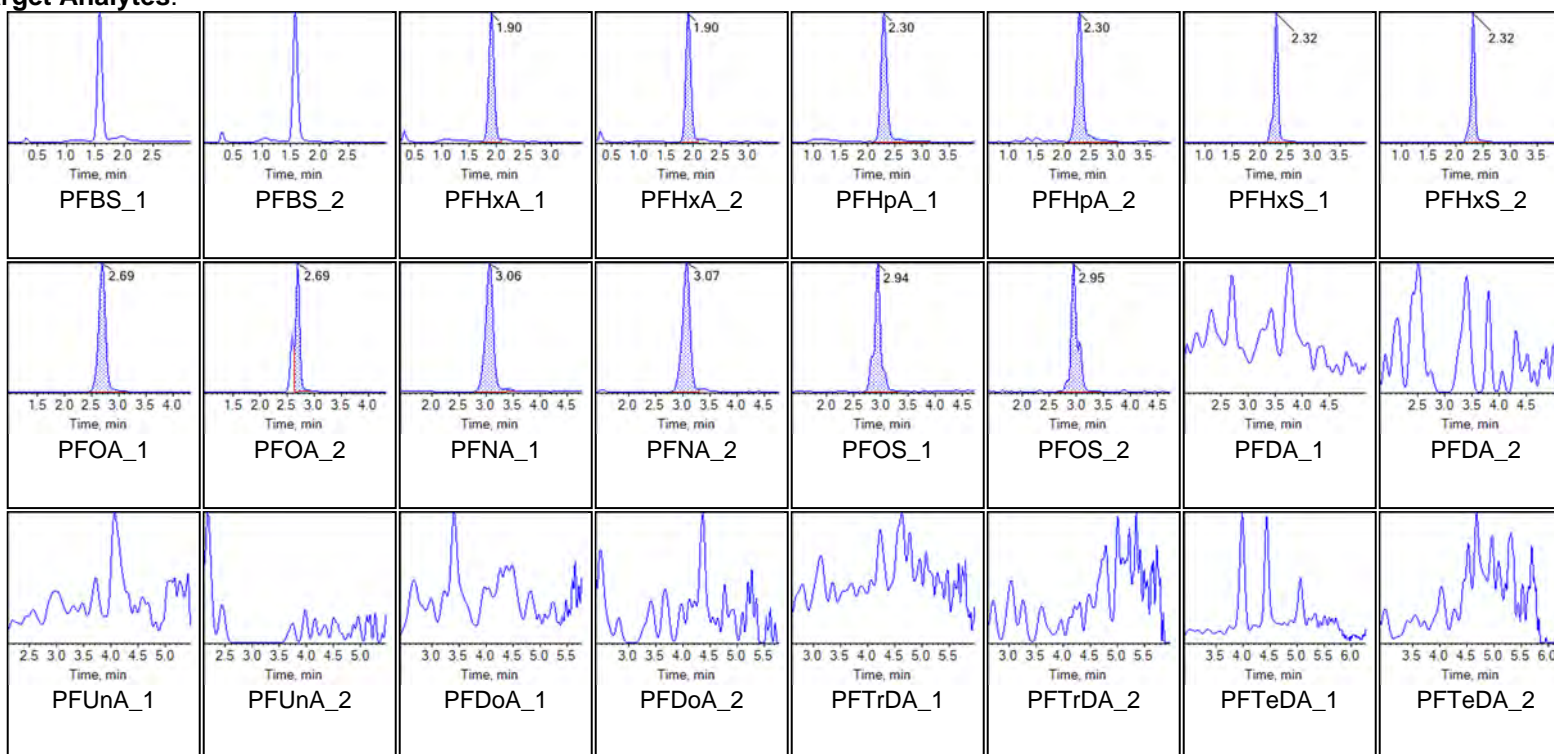
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	G1707-FS-D(3)	Injection Vial	16
Sample ID	CBD-AOA-MW15-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
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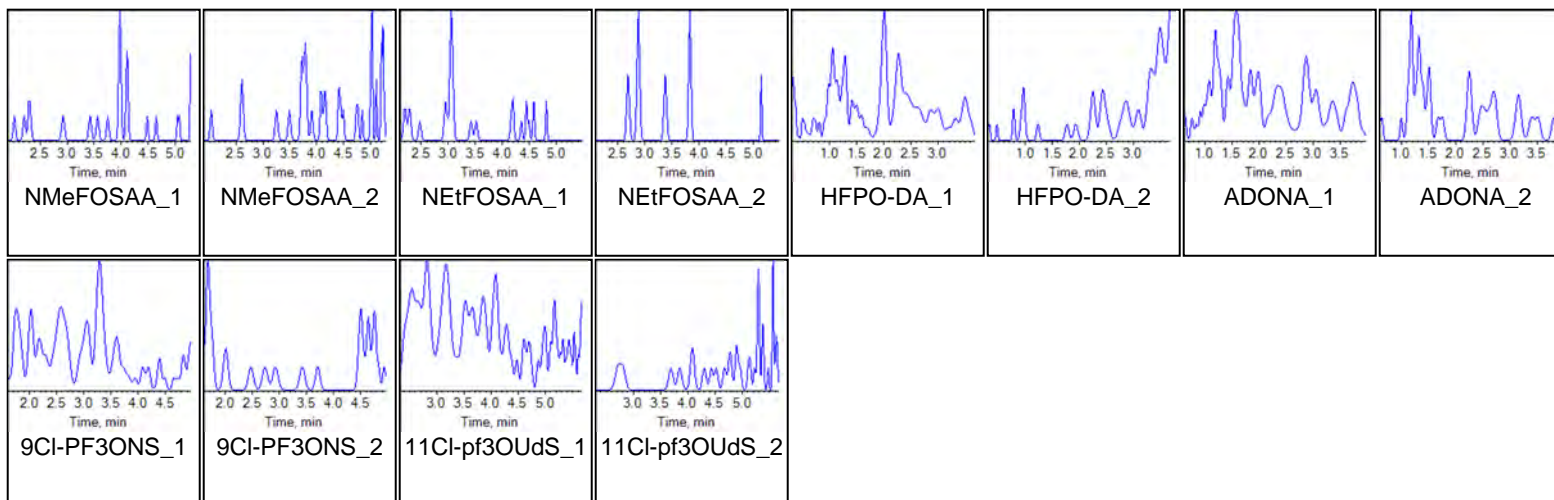
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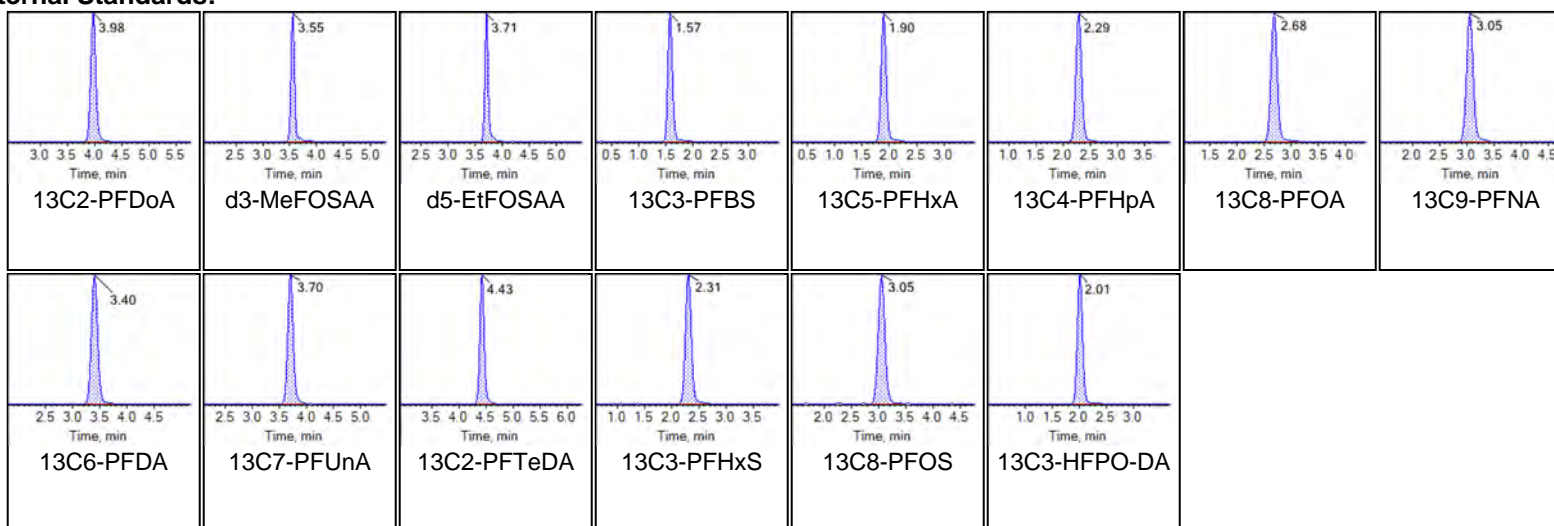




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Internal Standards:





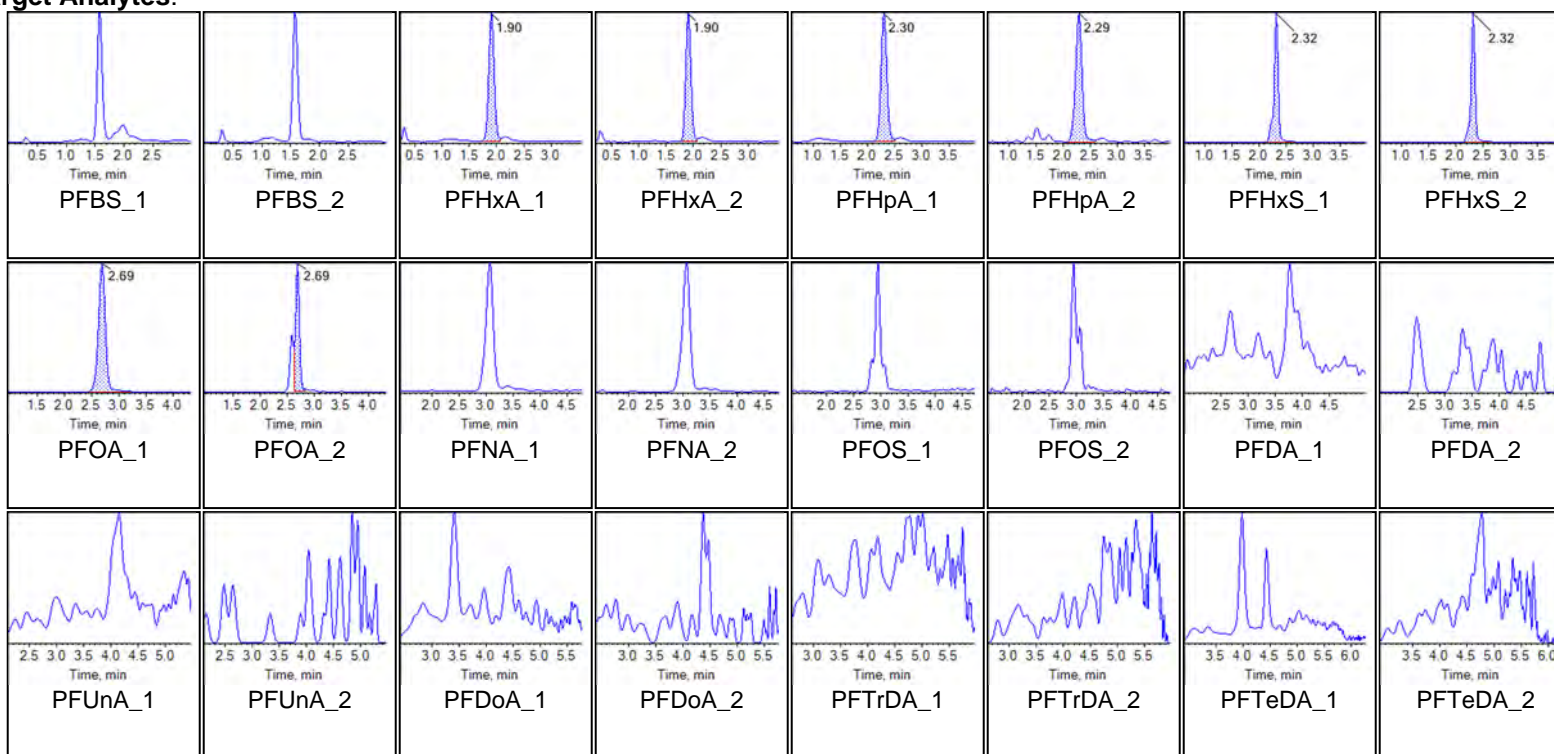
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	G1707-FS-D(5)	Injection Vial	17
Sample ID	CBD-AOA-MW15-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
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Acquisition Method	5-0369.dam	Result Table	20-1310

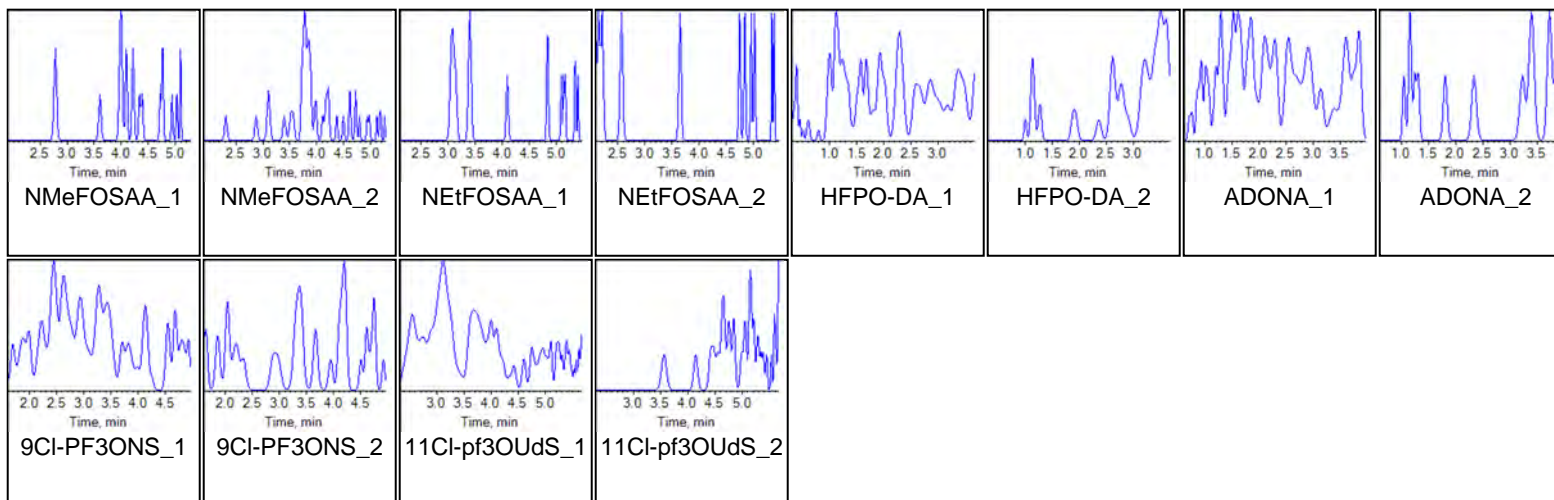
Chromatograms

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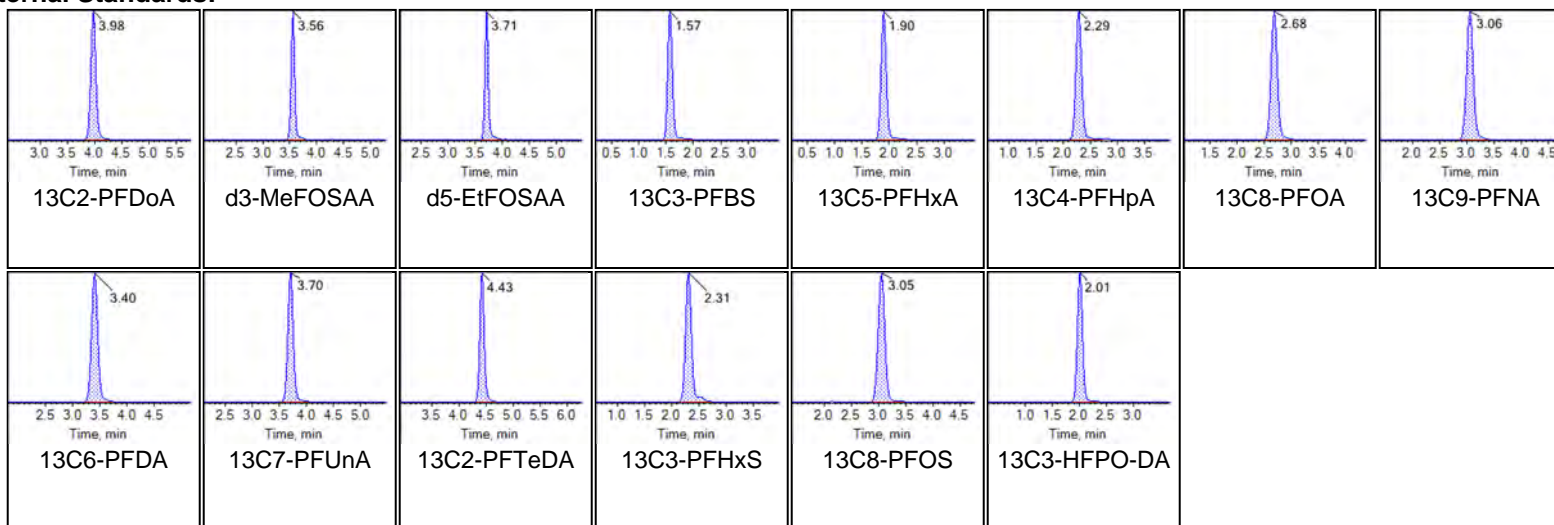




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Internal Standards:





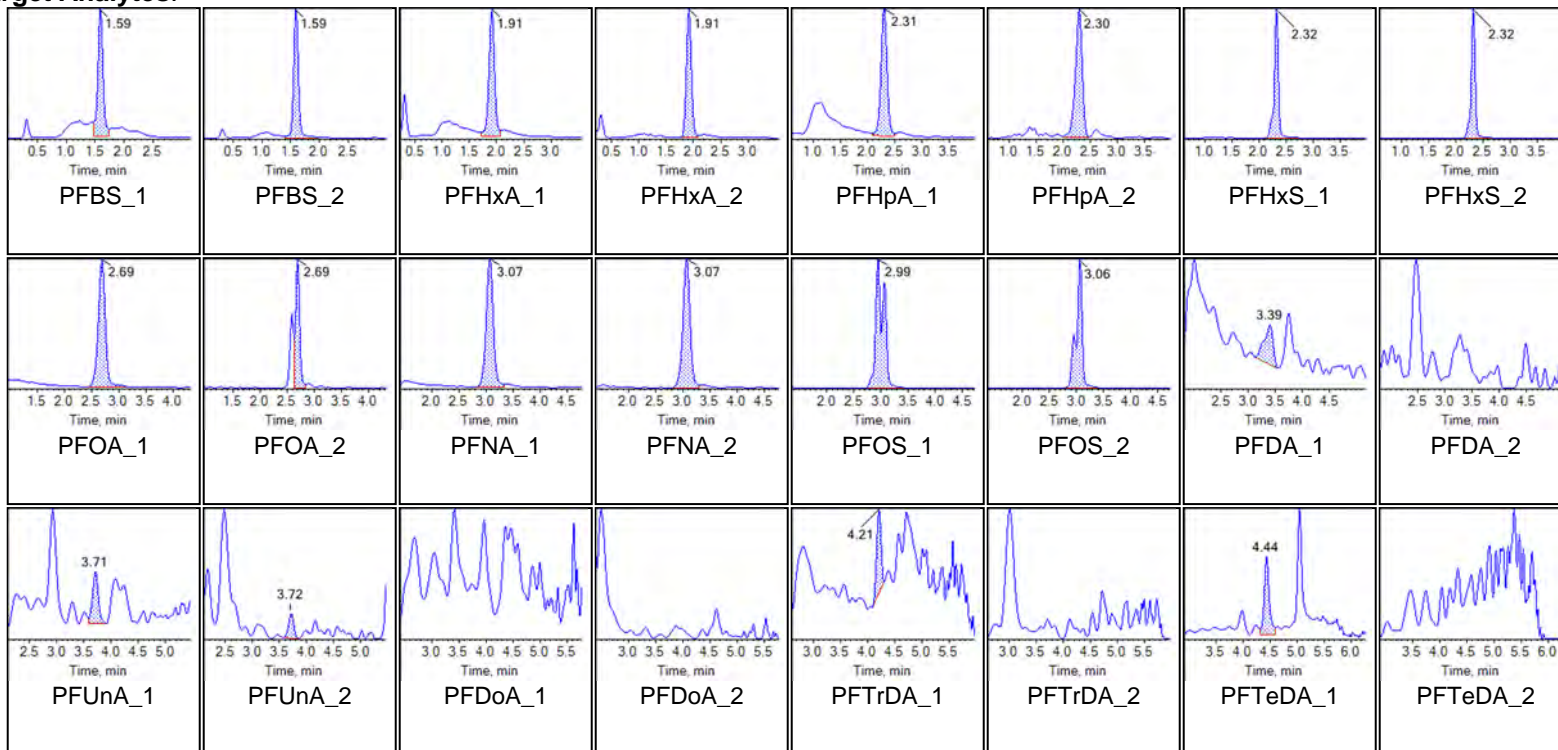
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	G1708-FS(0)	Injection Vial	18
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 8:24:17 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310

Chromatograms

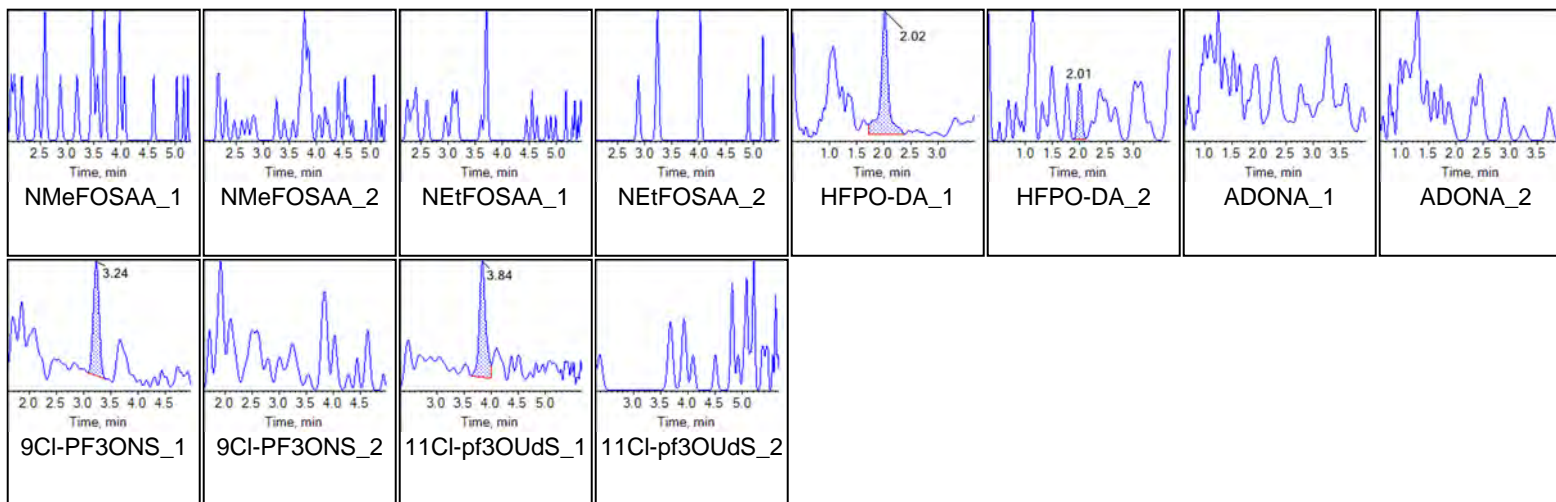
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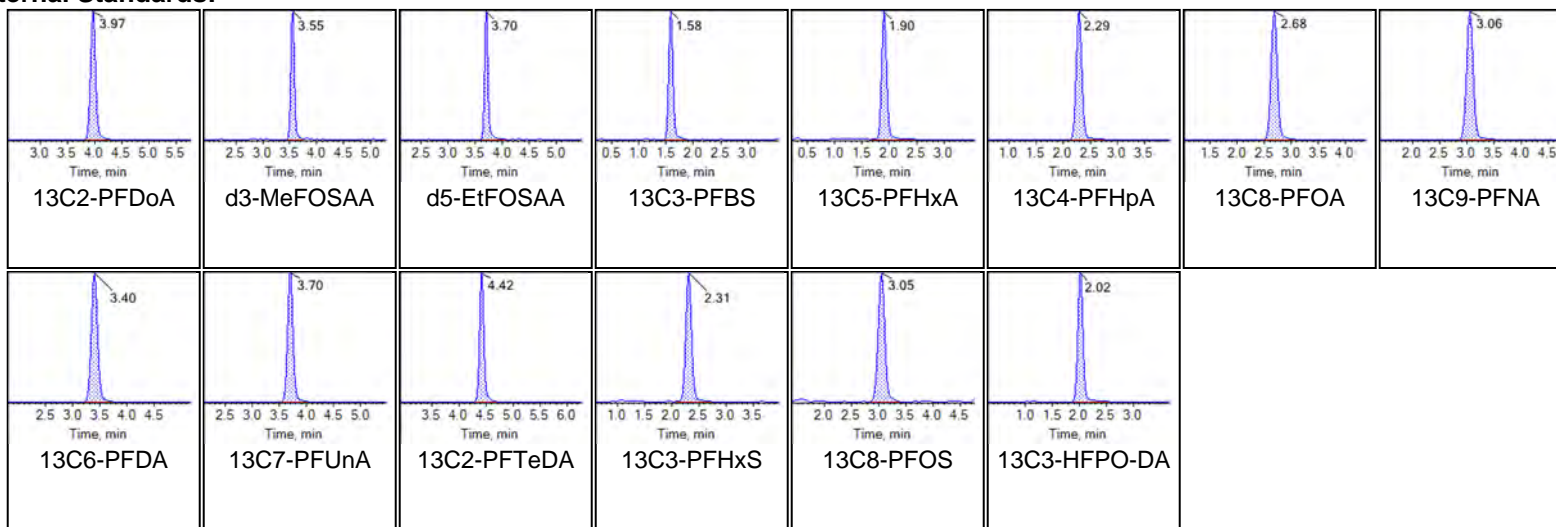


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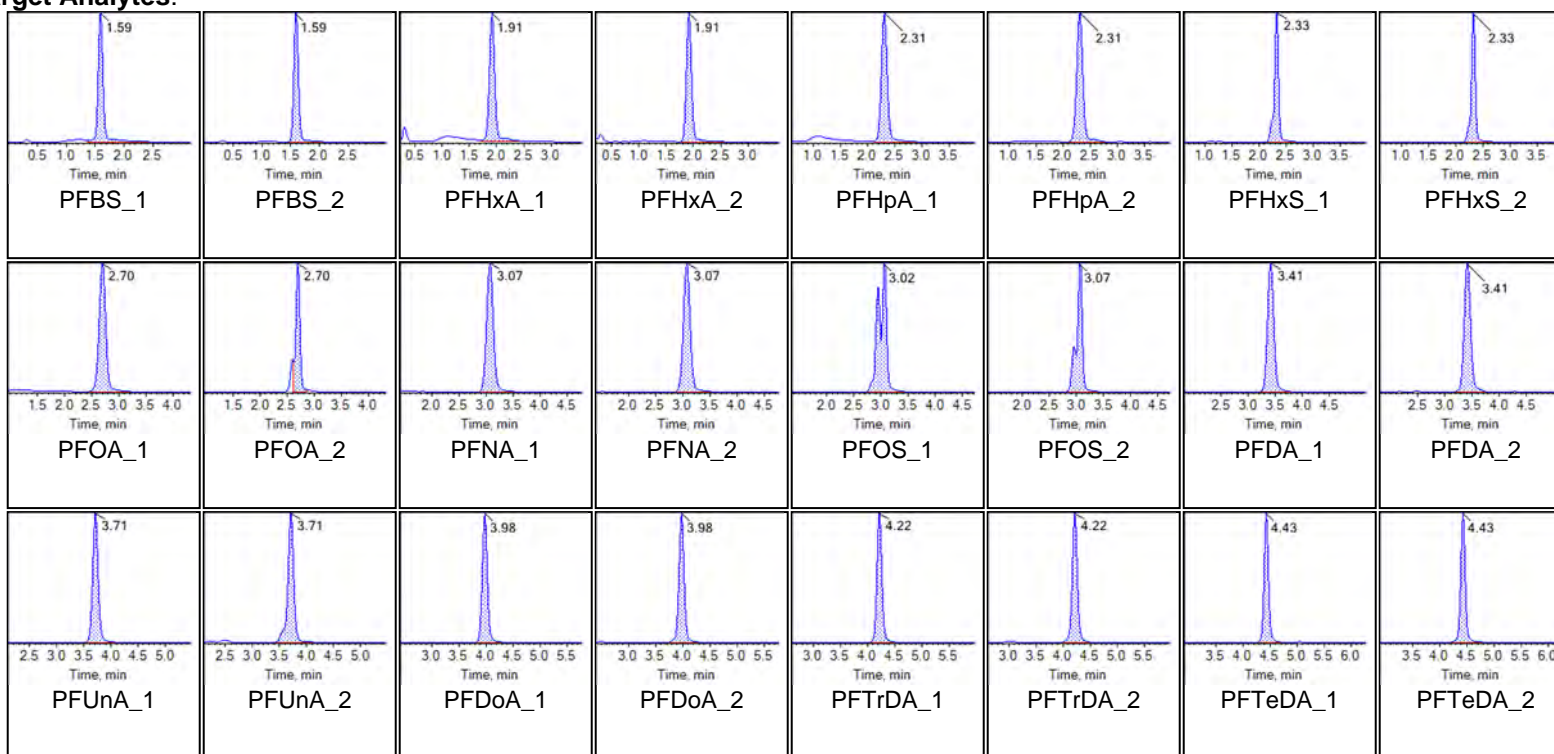
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	G1708MS-FS(0)	Injection Vial	19
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 8:35:11 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310

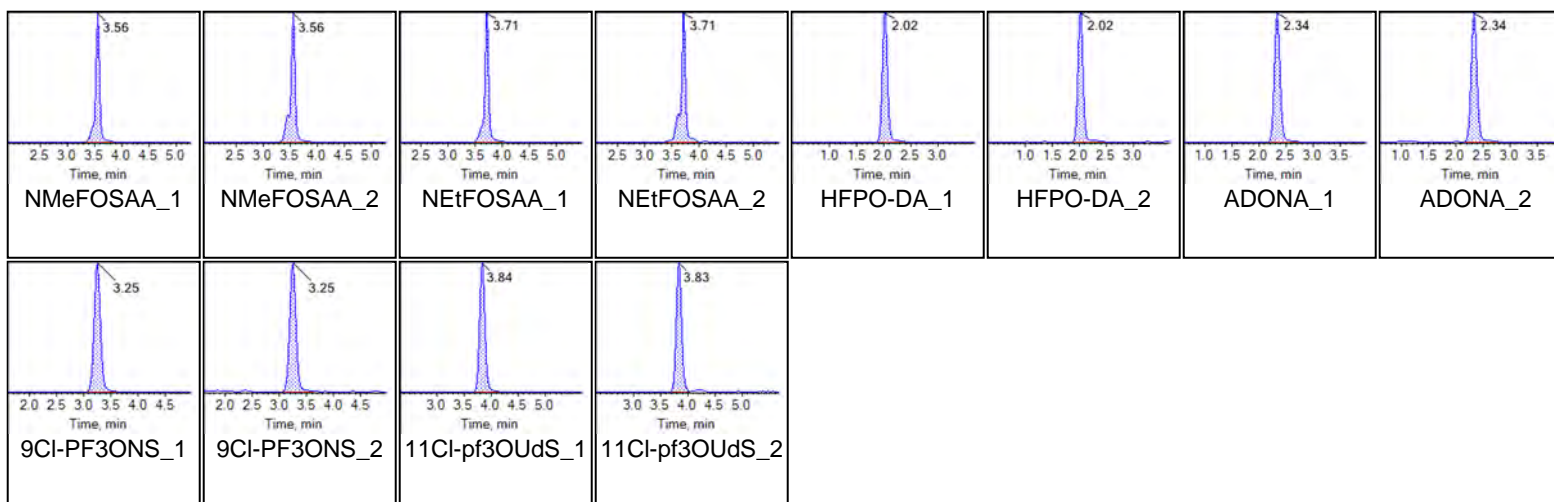
Chromatograms

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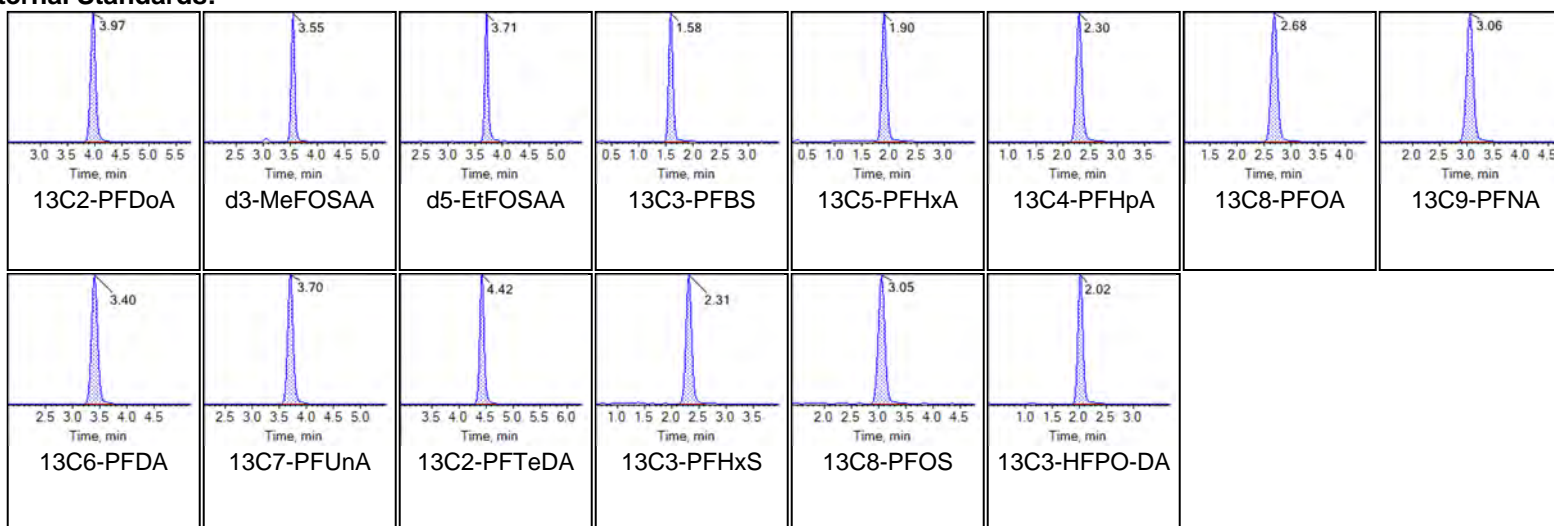




Chromatogram Report

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Internal Standards:





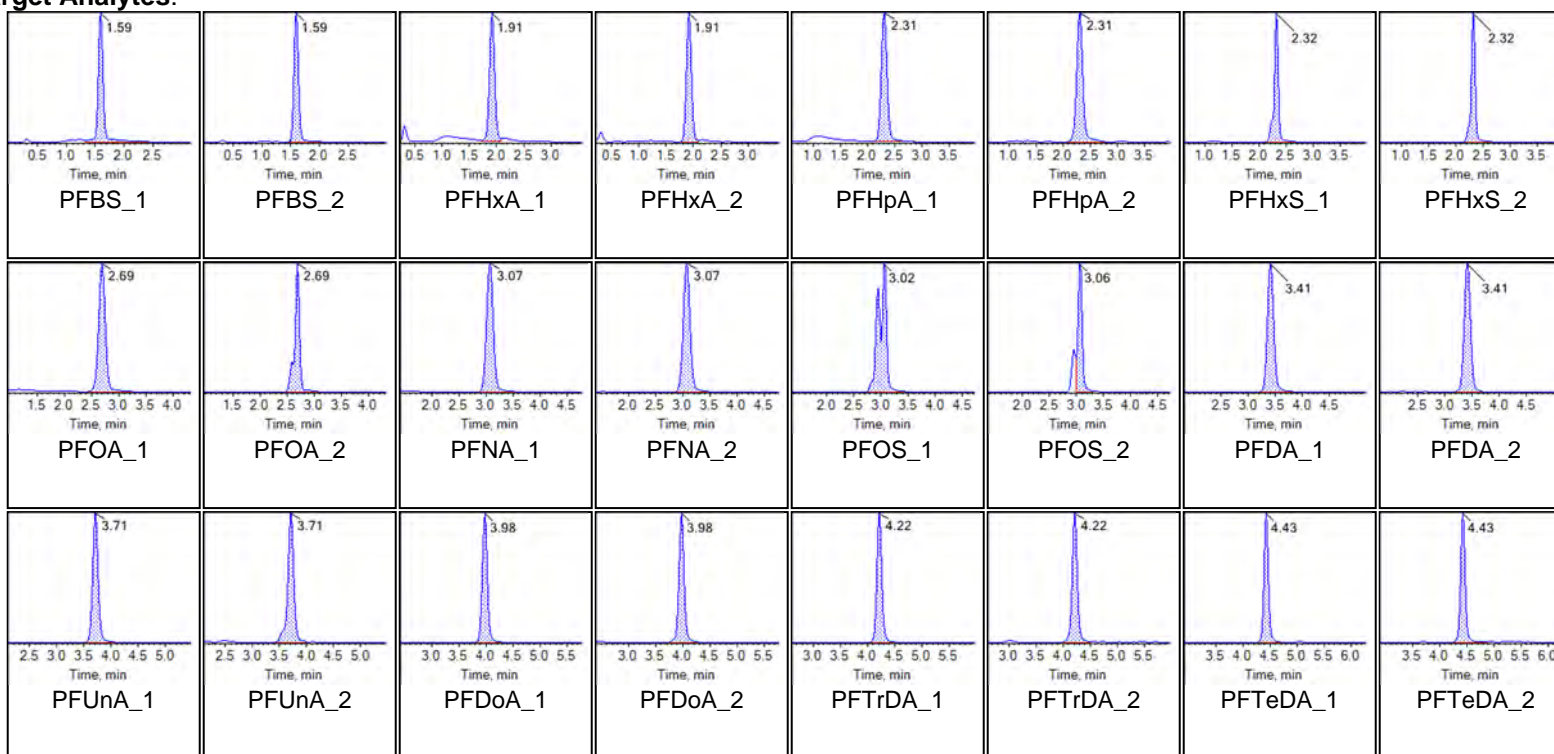
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	G1708MSD-FS(0)	Injection Vial	20
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
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Acquisition Method	5-0369.dam	Result Table	20-1310

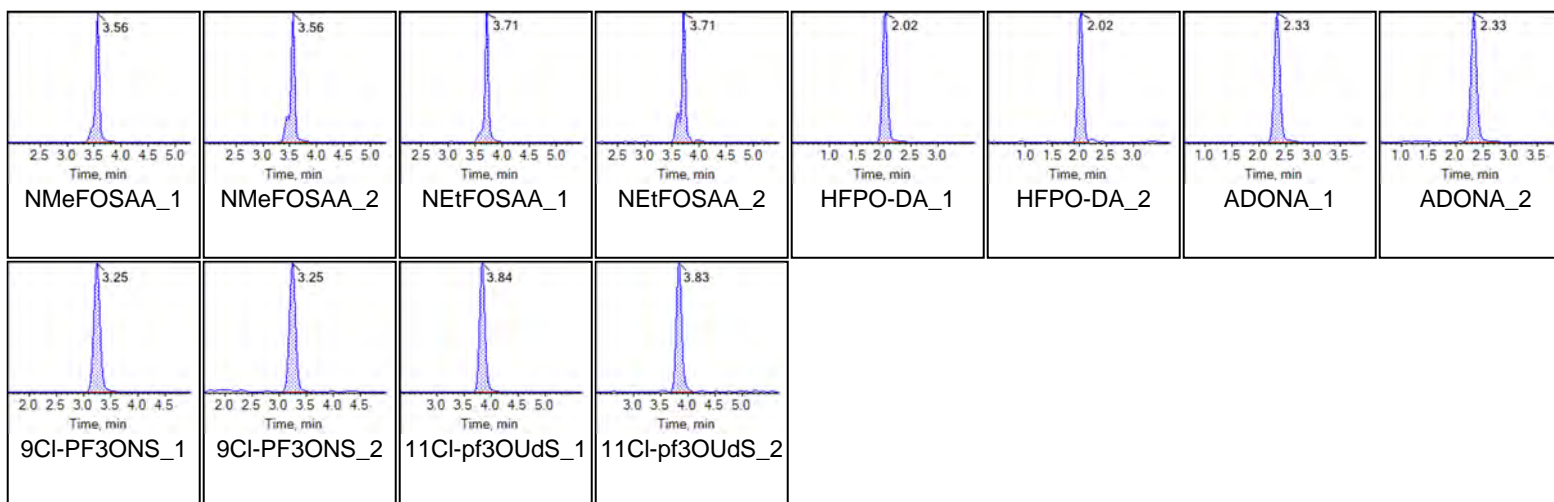
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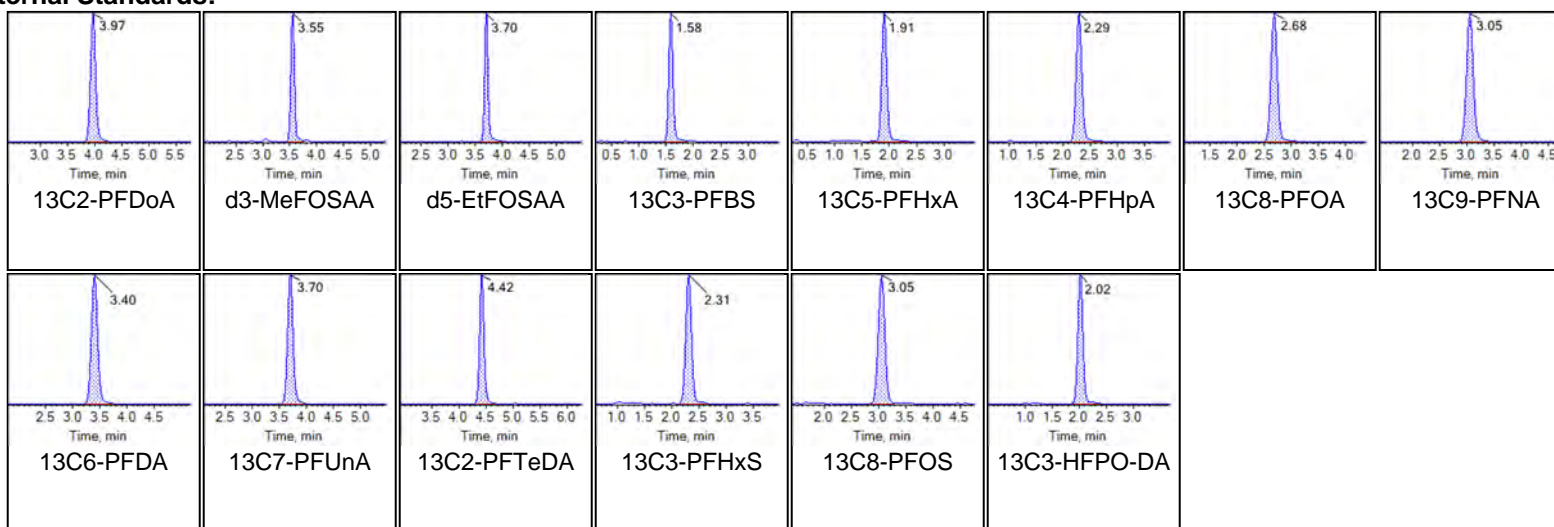




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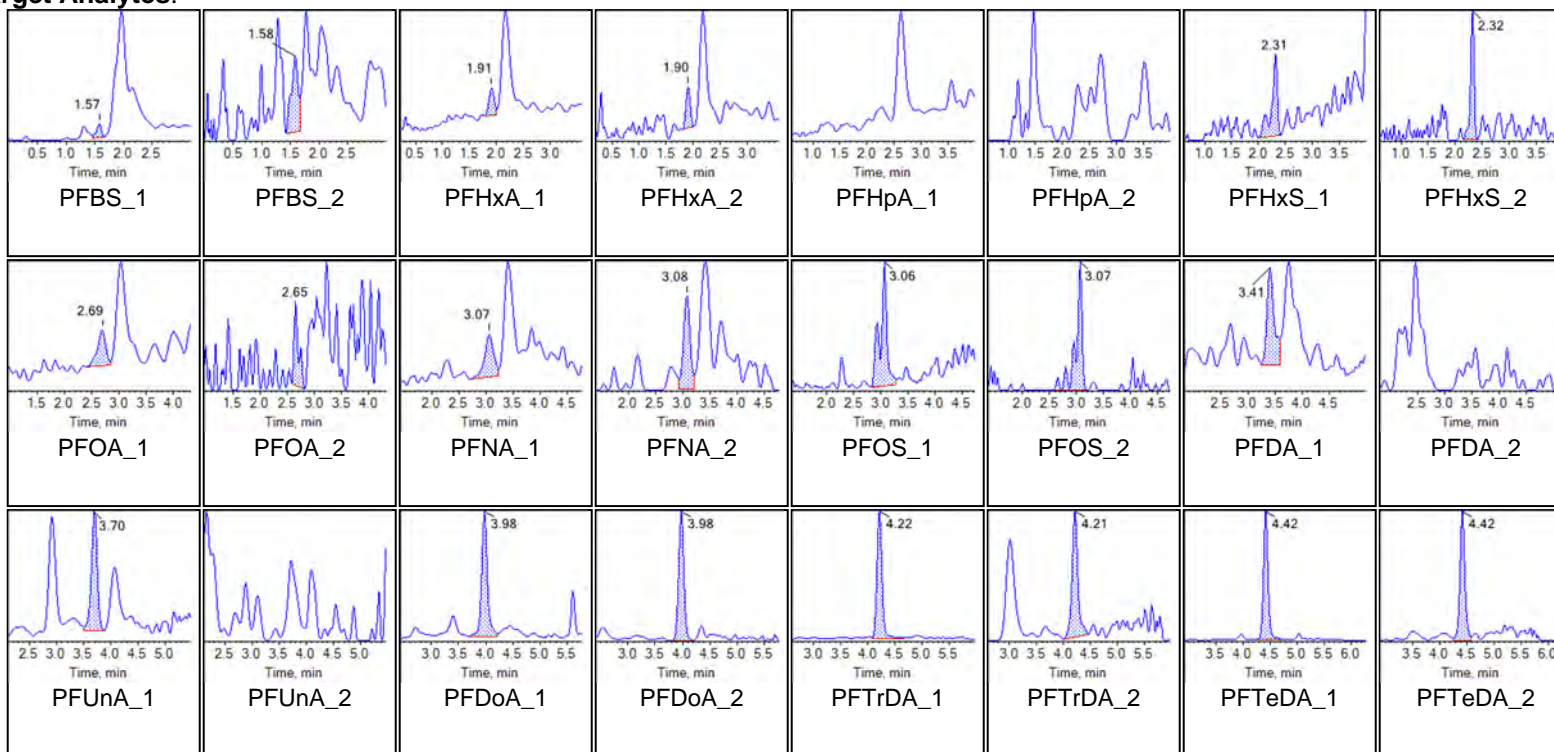
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	G1709-FS(0)	Injection Vial	21
Sample ID	CBD-FB04-101620	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
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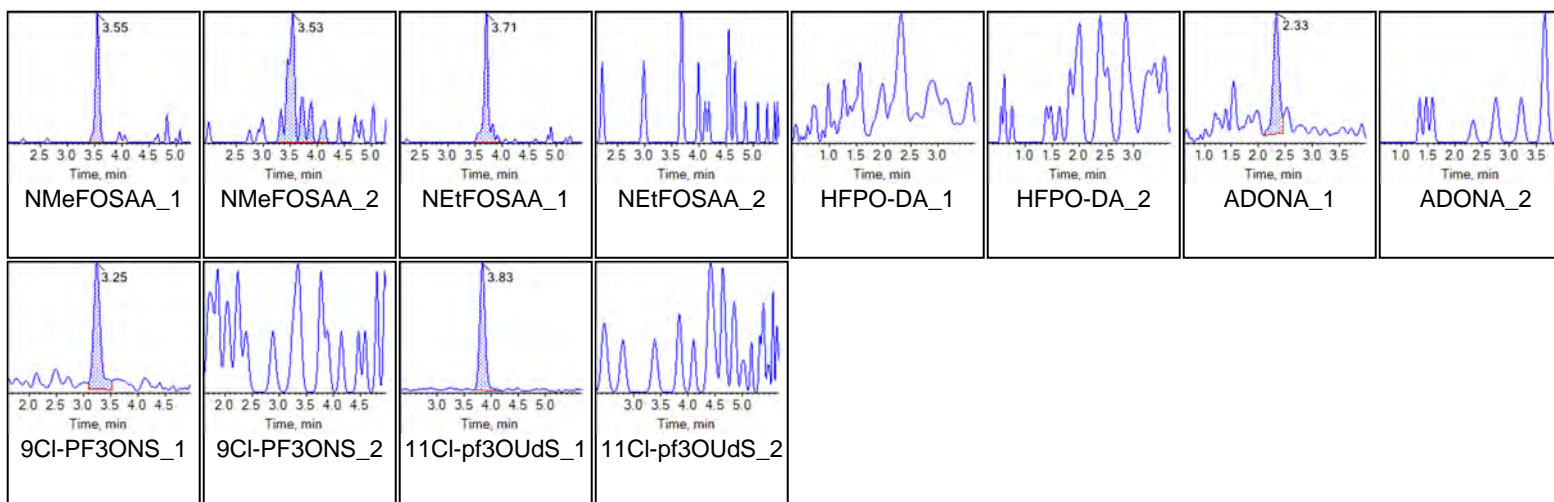
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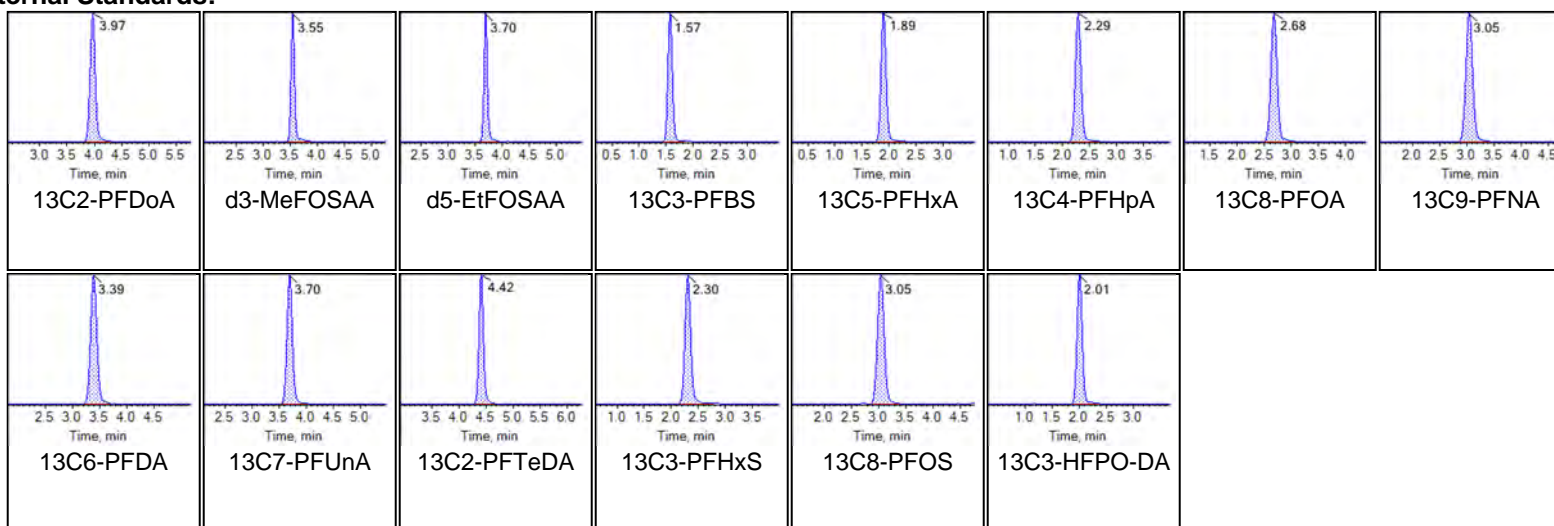




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Internal Standards:





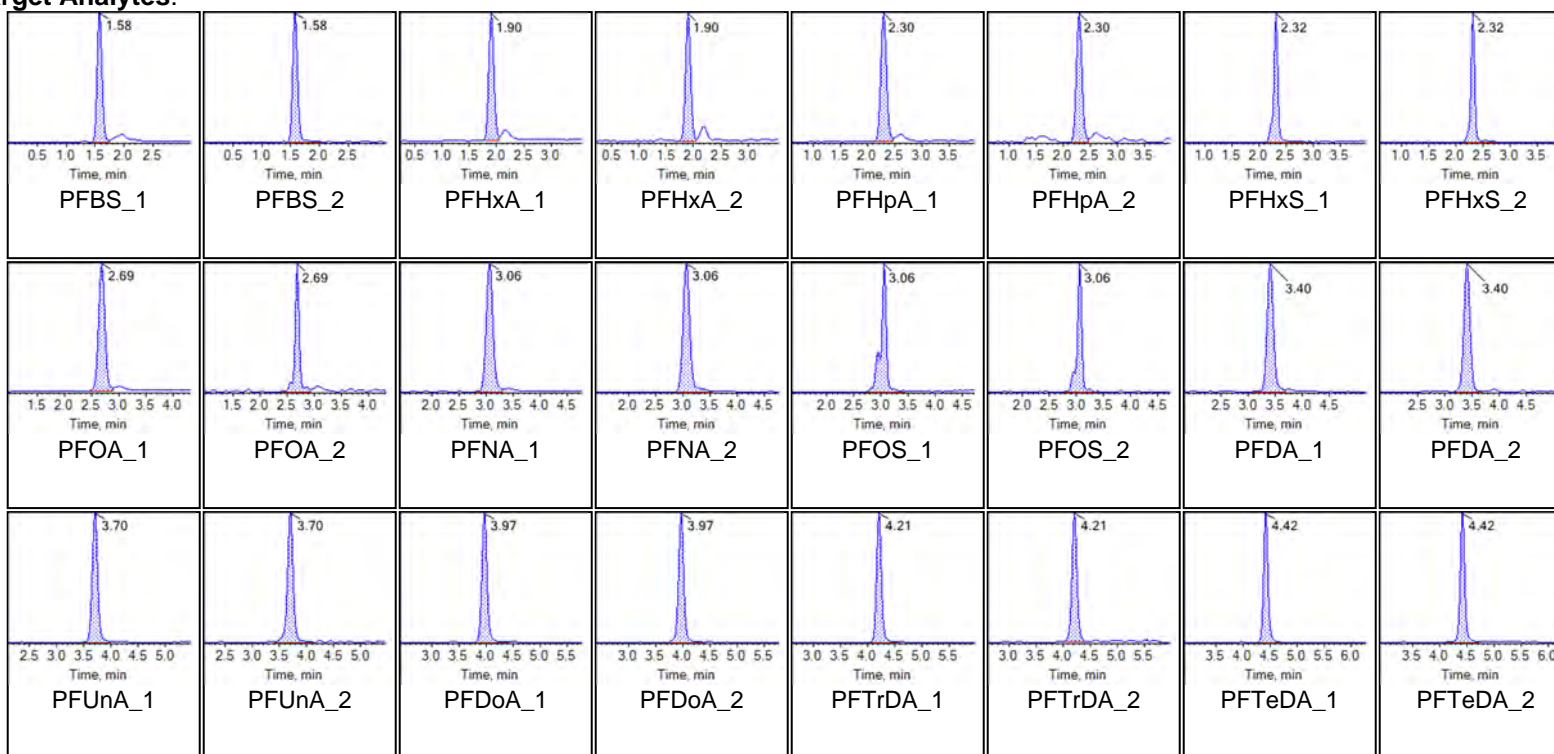
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	LD76 CCV	Injection Vial	22
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
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Acquisition Method	5-0369.dam	Result Table	20-1310

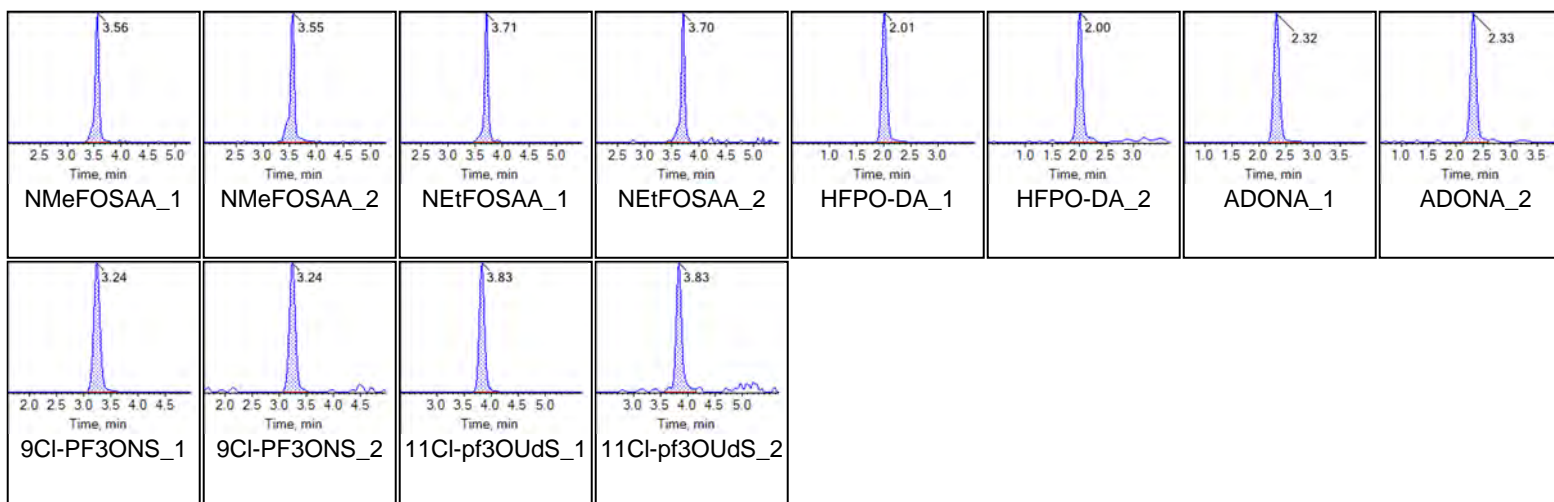
Chromatograms

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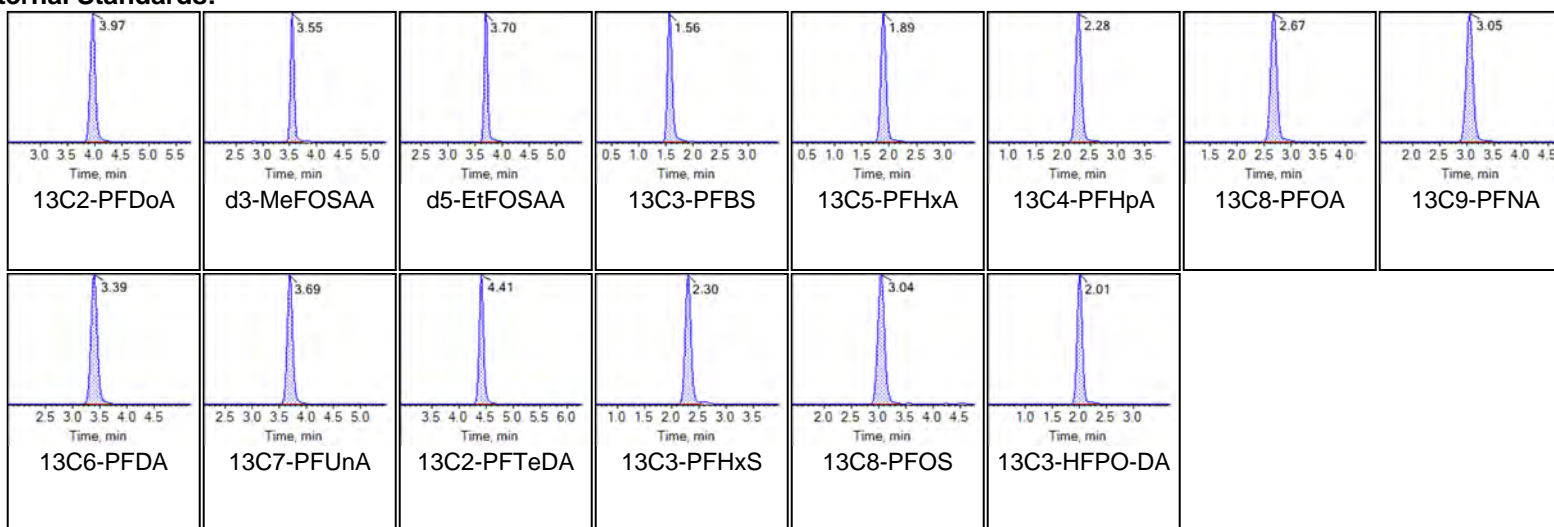




Chromatogram Report

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Internal Standards:





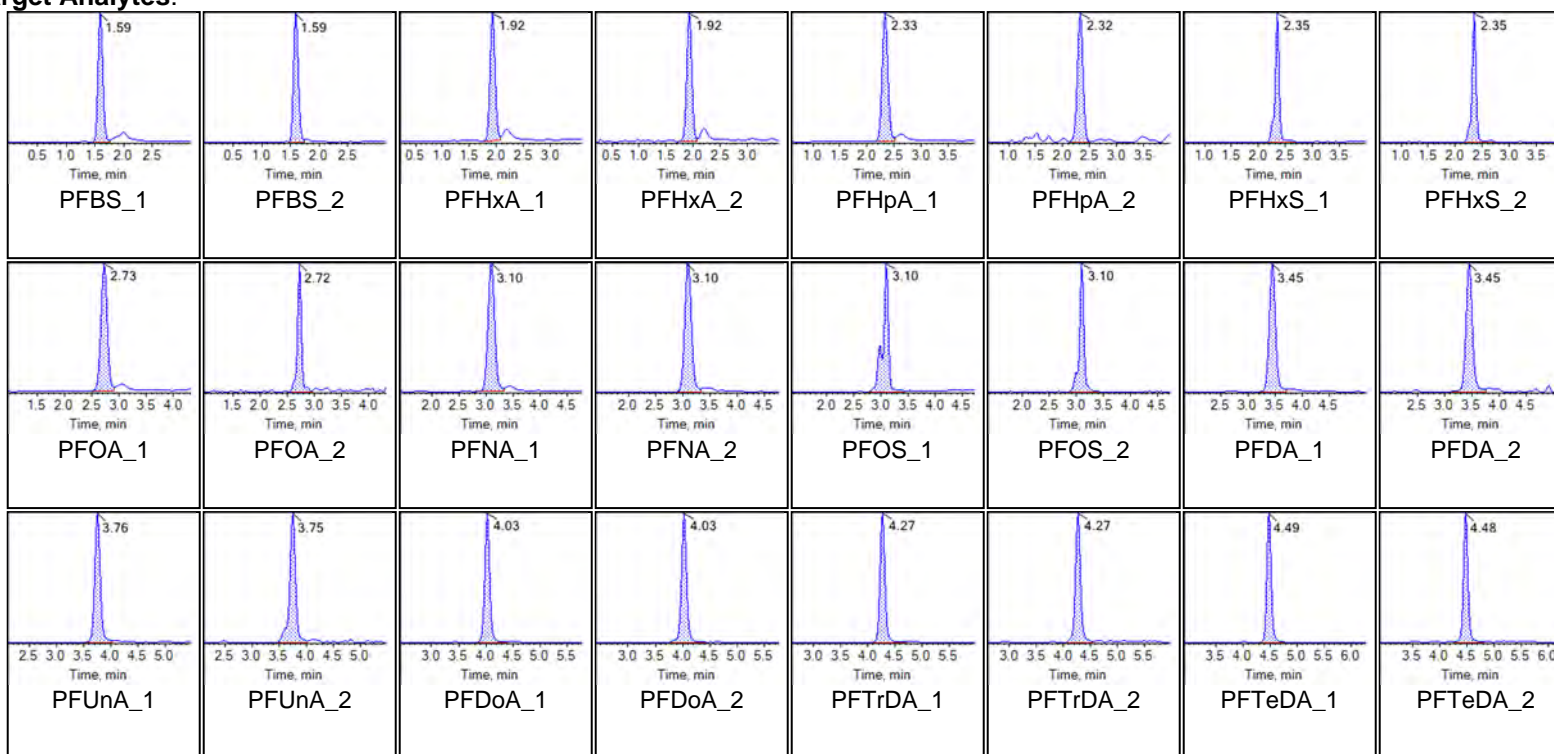
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	LD76 CCV	Injection Vial	3
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 11:30:20 AM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310

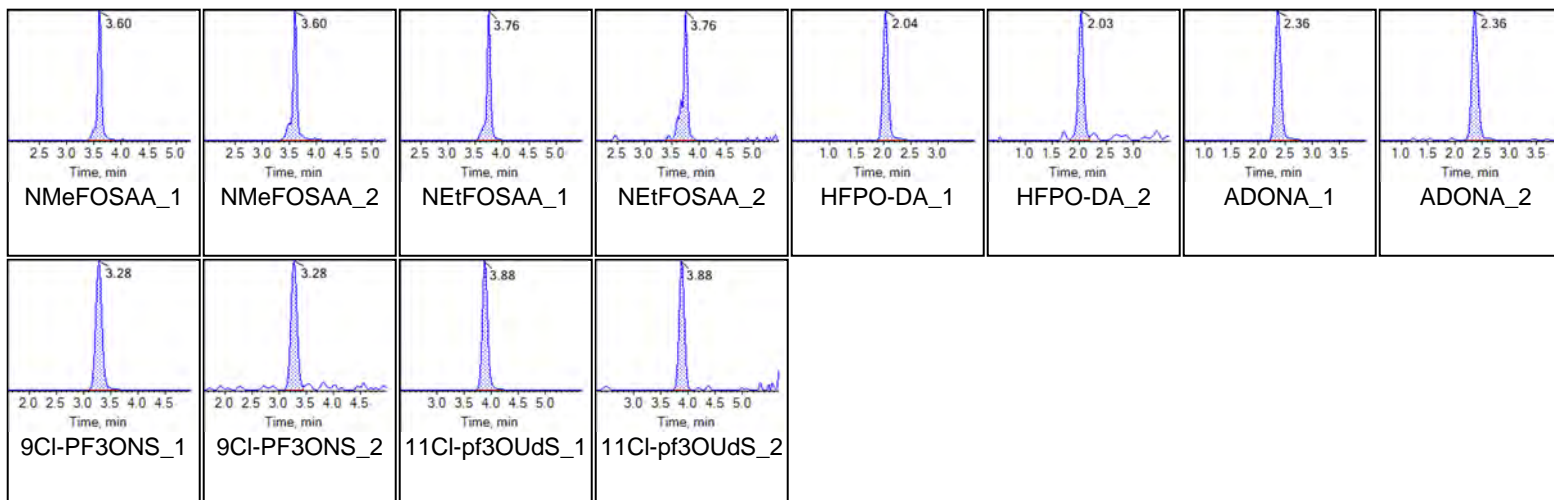
Chromatograms

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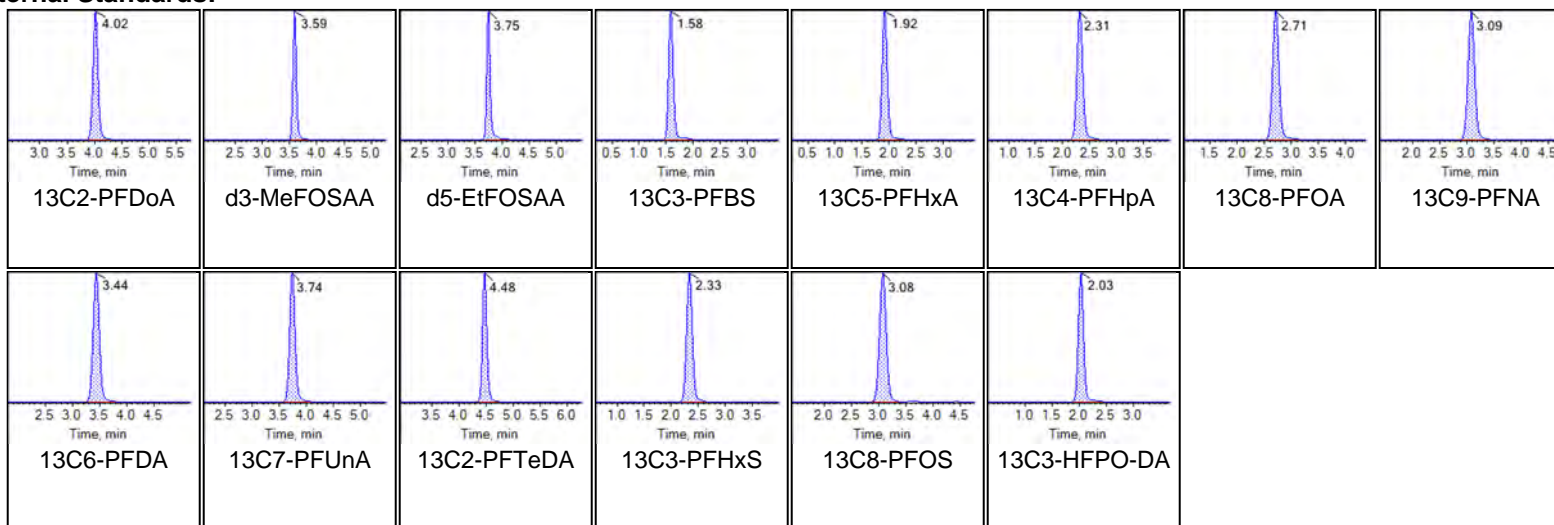




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Internal Standards:





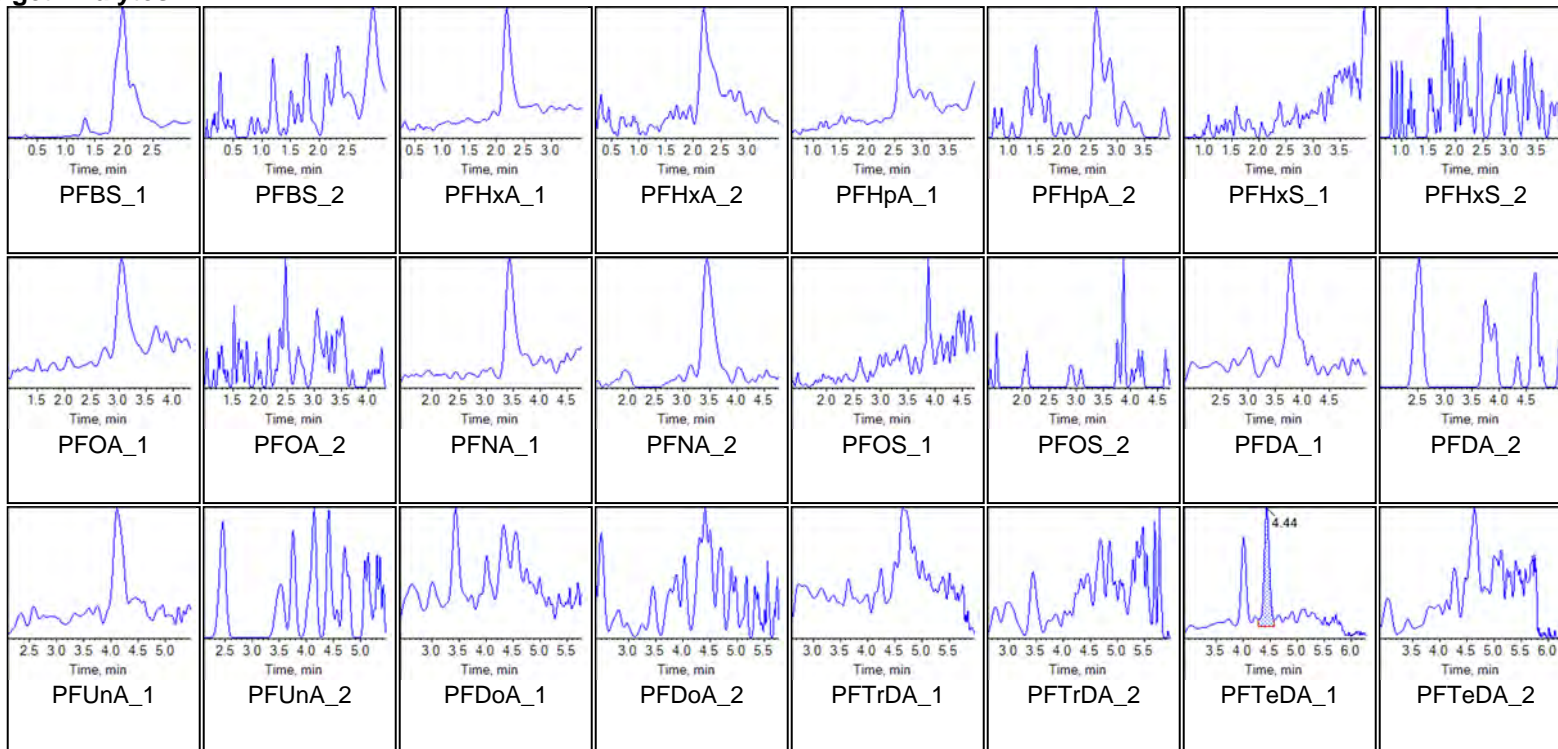
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	LD80 IB	Injection Vial	5
Sample ID	IB	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 11:52:02 AM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310

Chromatograms

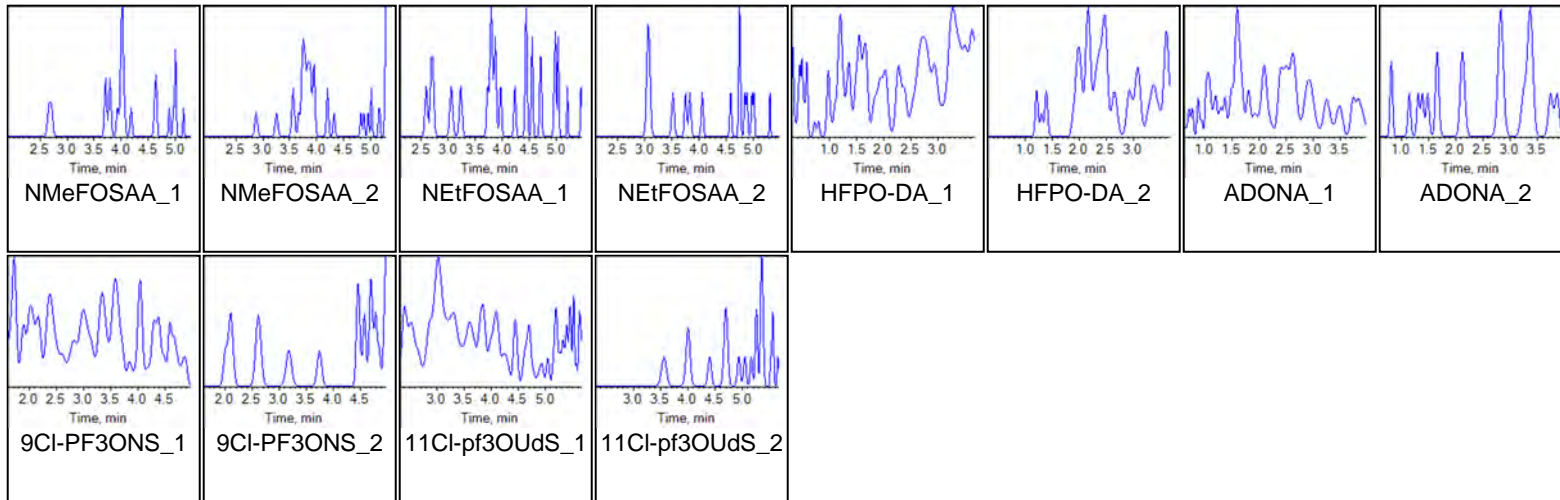
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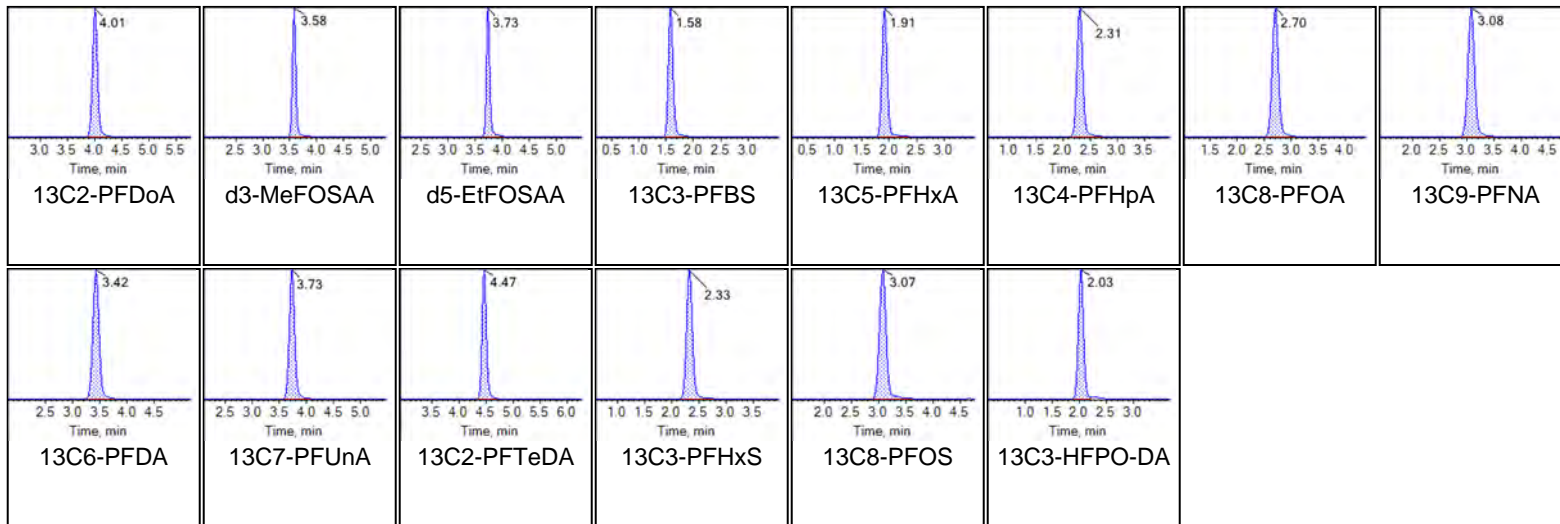


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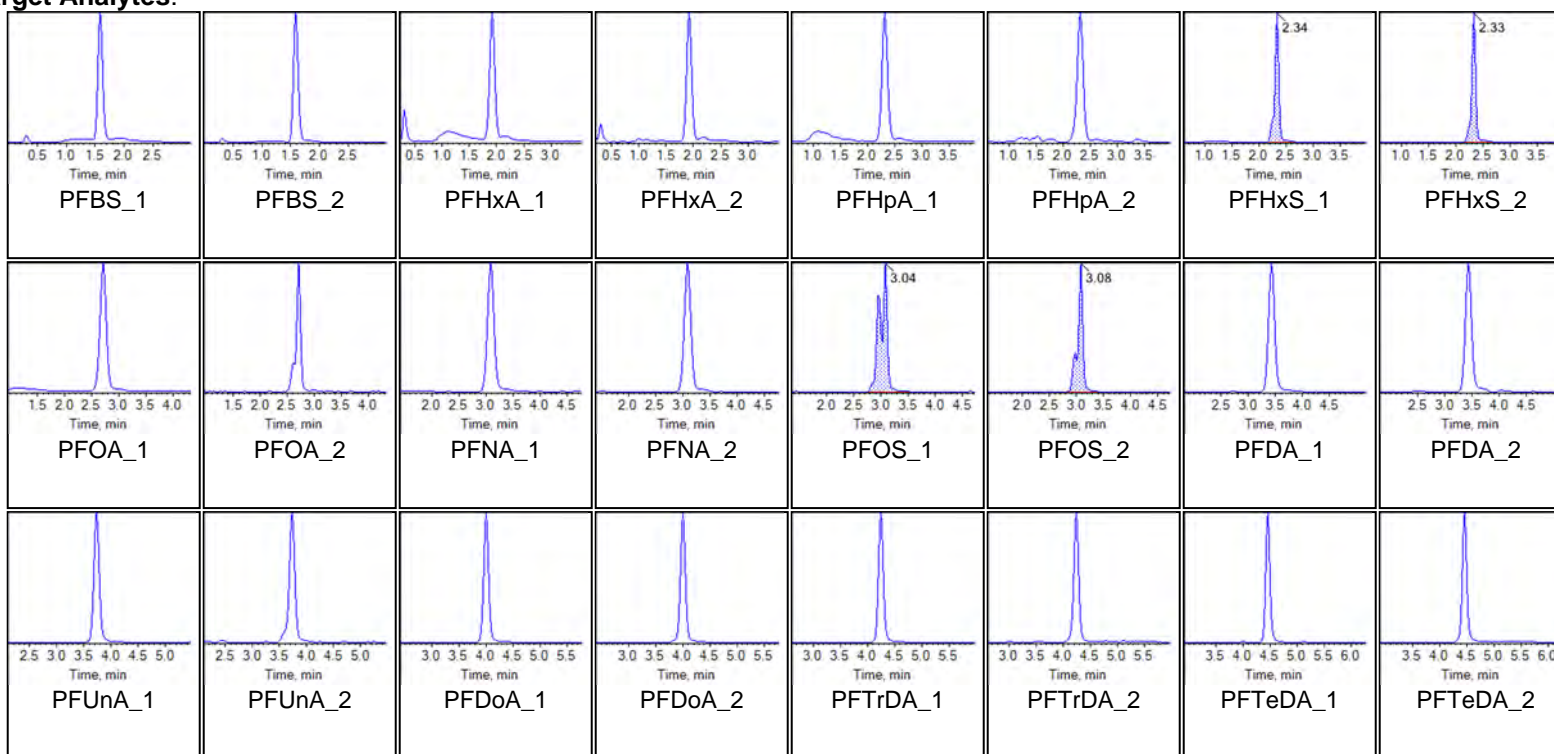
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	G1708MS-FS-D(3)	Injection Vial	12
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 1:08:03 PM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310

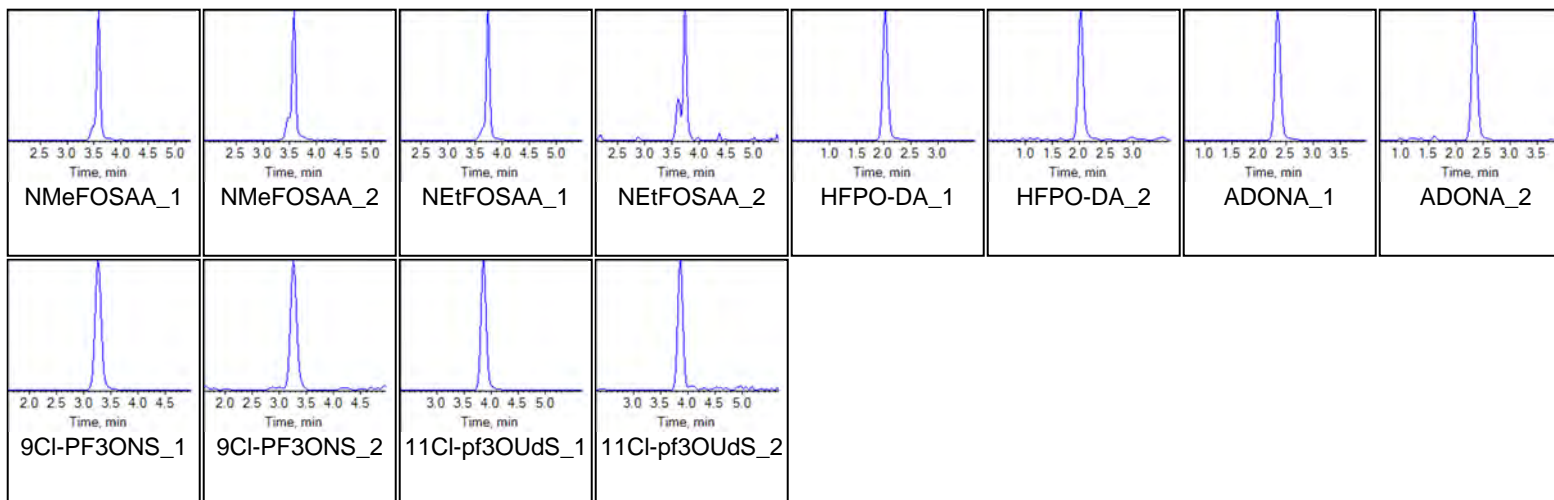
Chromatograms

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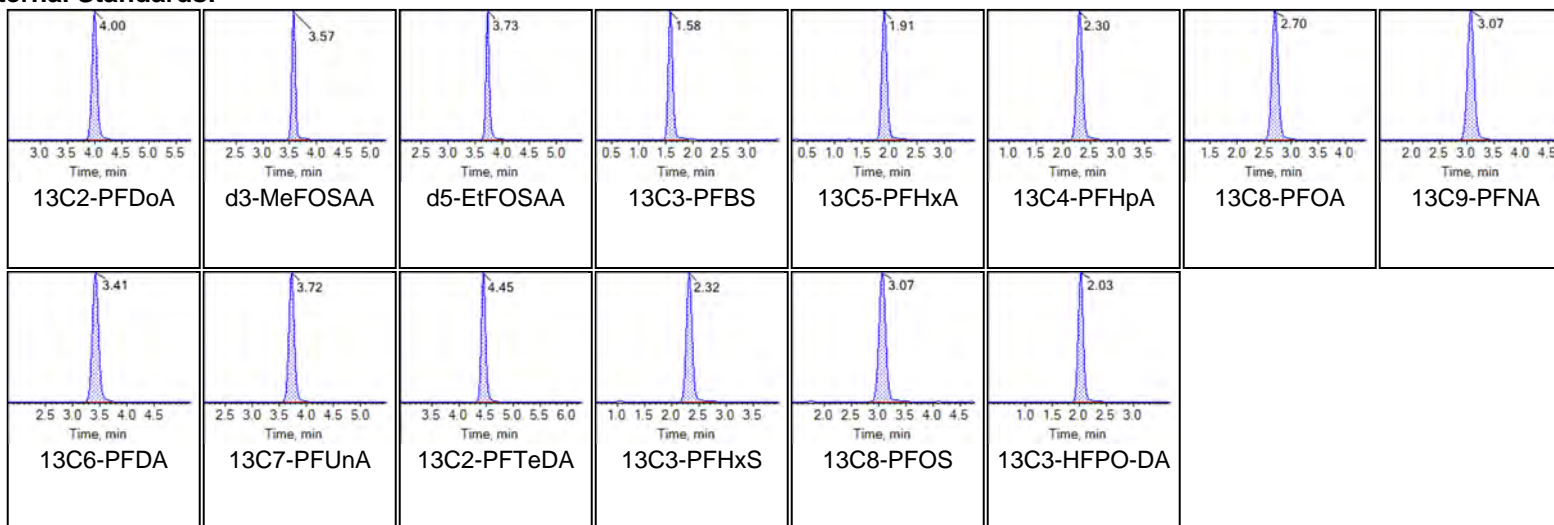




Chromatogram Report

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Internal Standards:





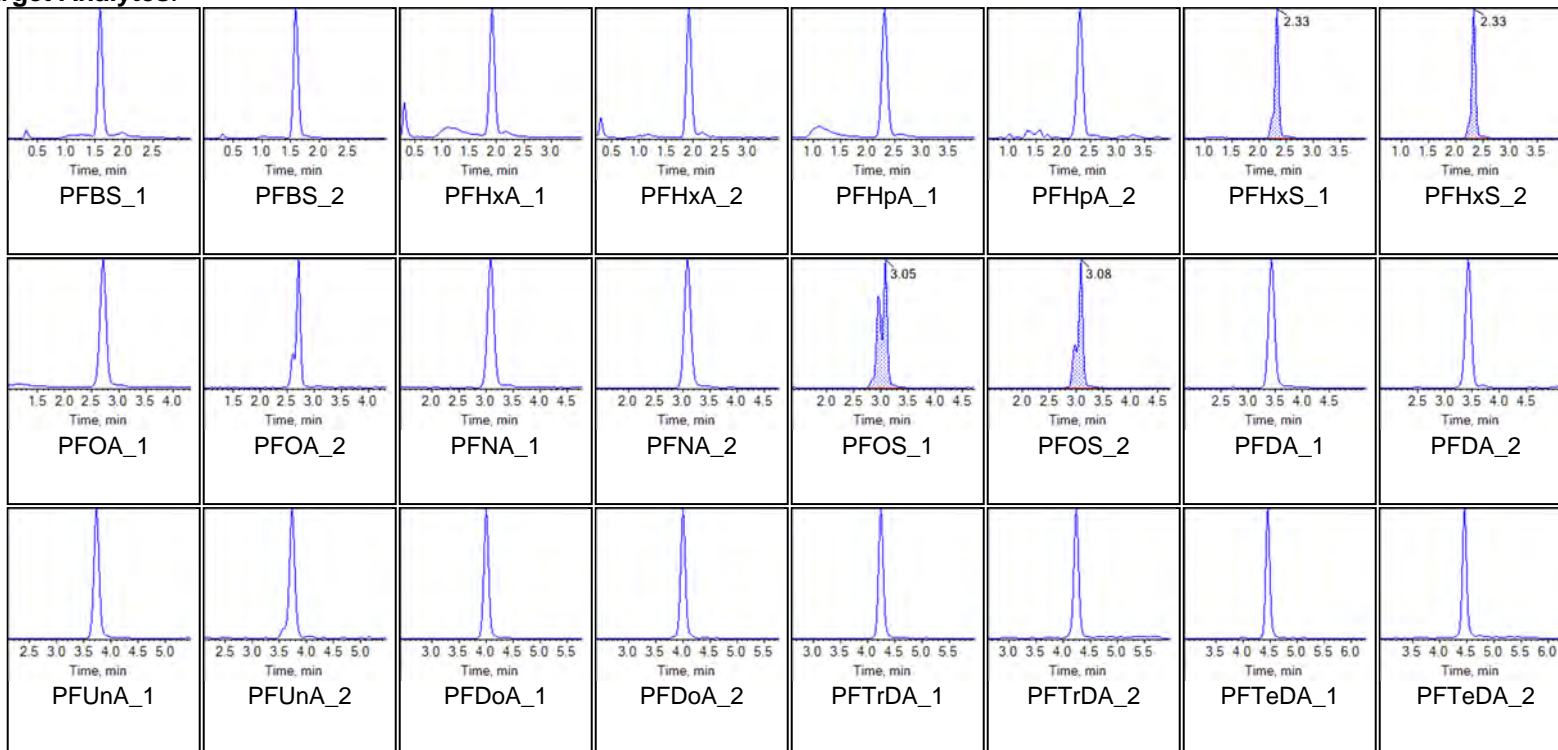
Chromatogram Report

Created with Analyst Reporter
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Sample Name	G1708MSD-FS-D(3)	Injection Vial	13
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
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Acquisition Method	5-0369.dam	Result Table	20-1310

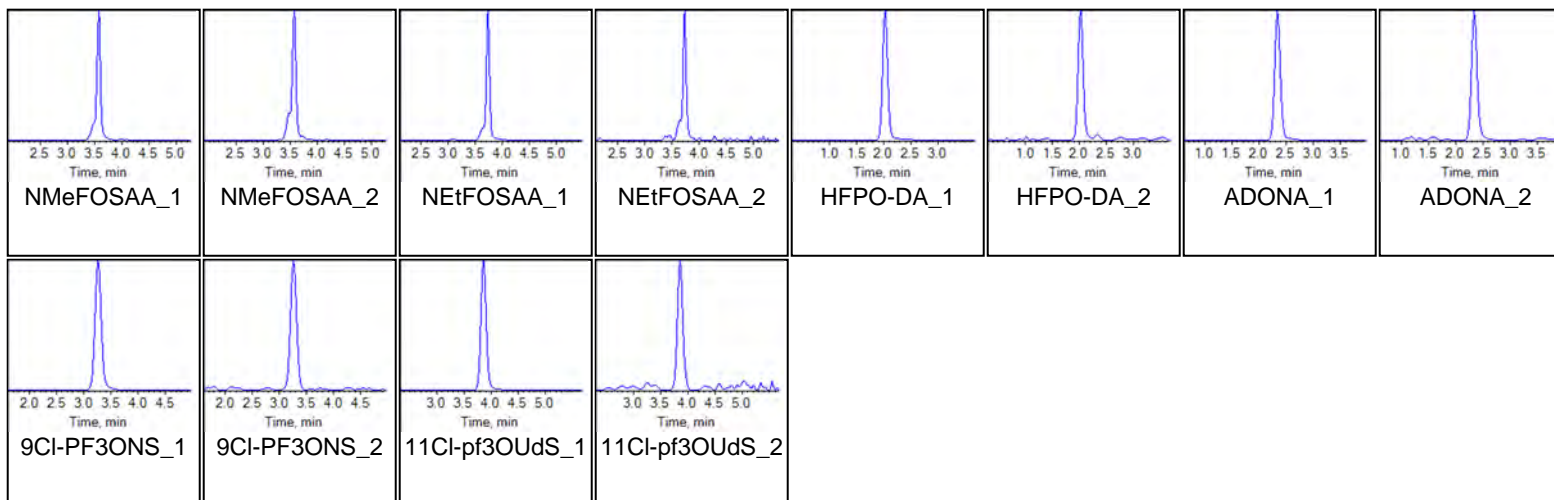
Chromatograms

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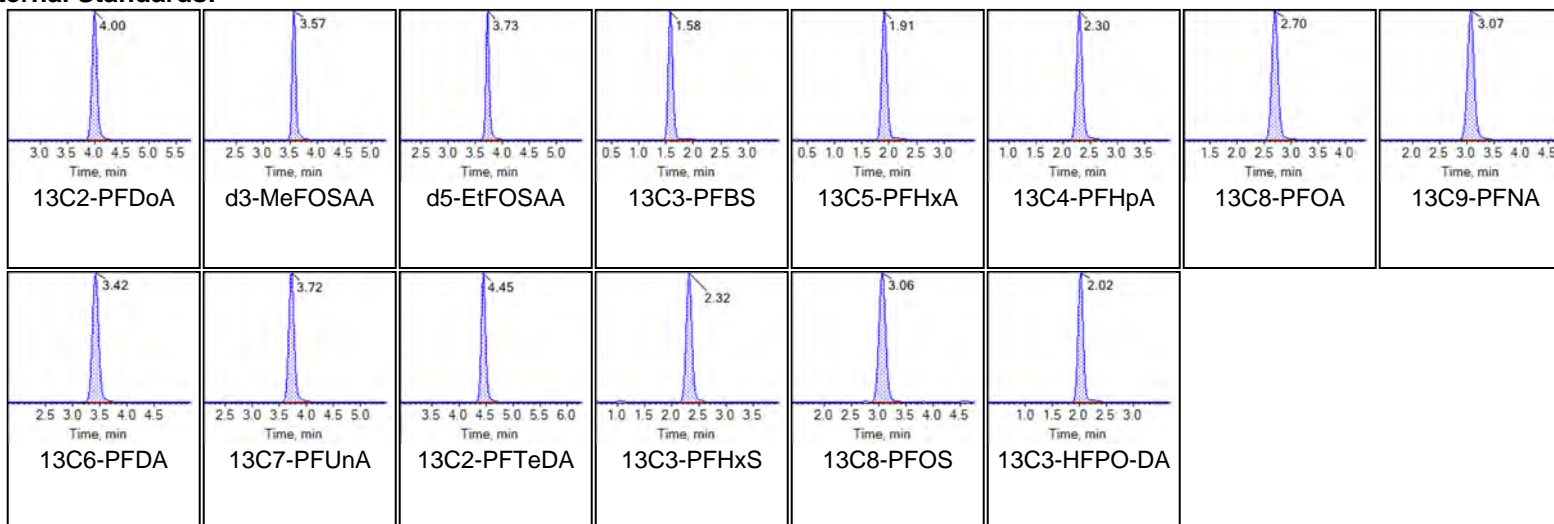




Chromatogram Report

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Internal Standards:





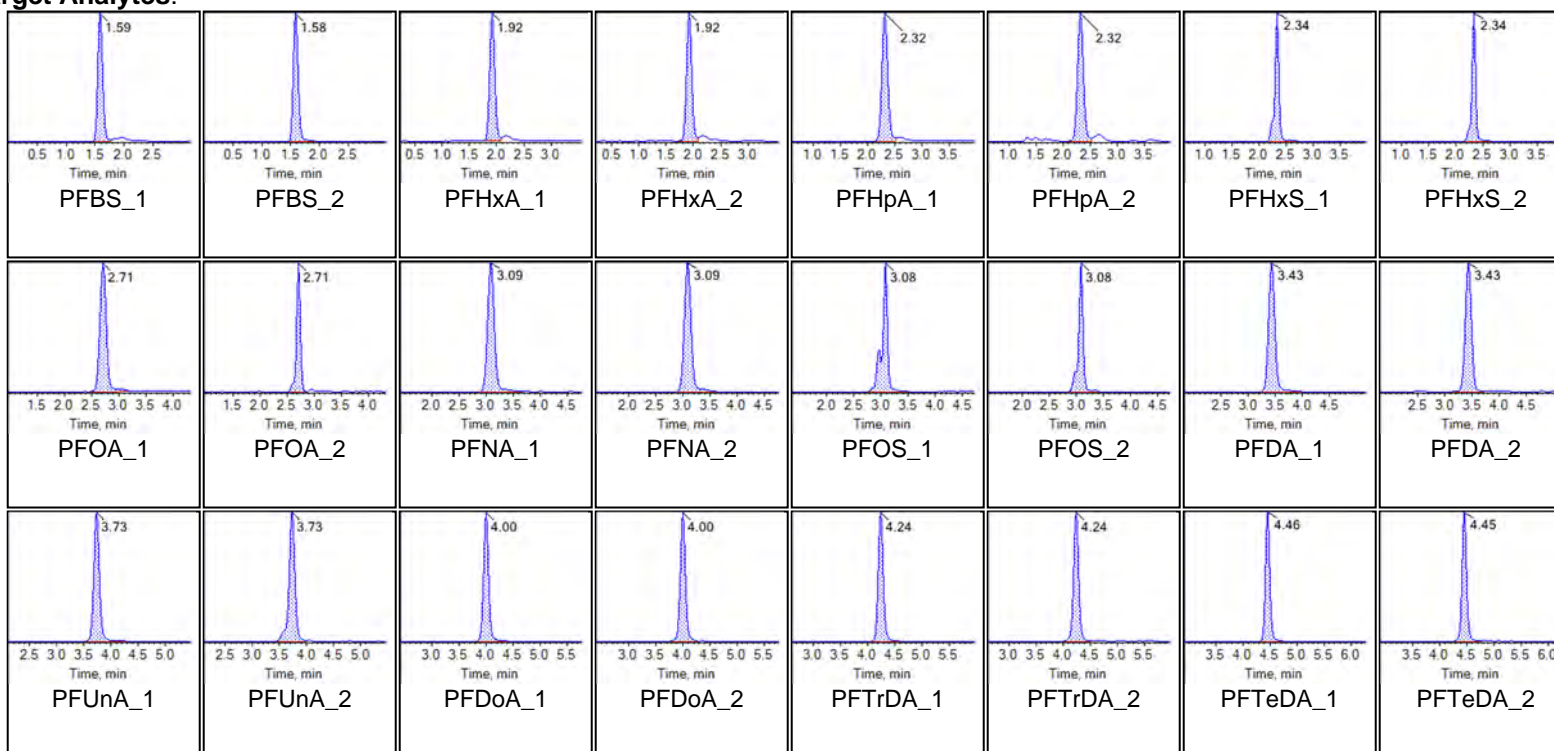
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:19 PM

Sample Name	LD77 CCV	Injection Vial	14
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
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Acquisition Method	5-0369.dam	Result Table	20-1310

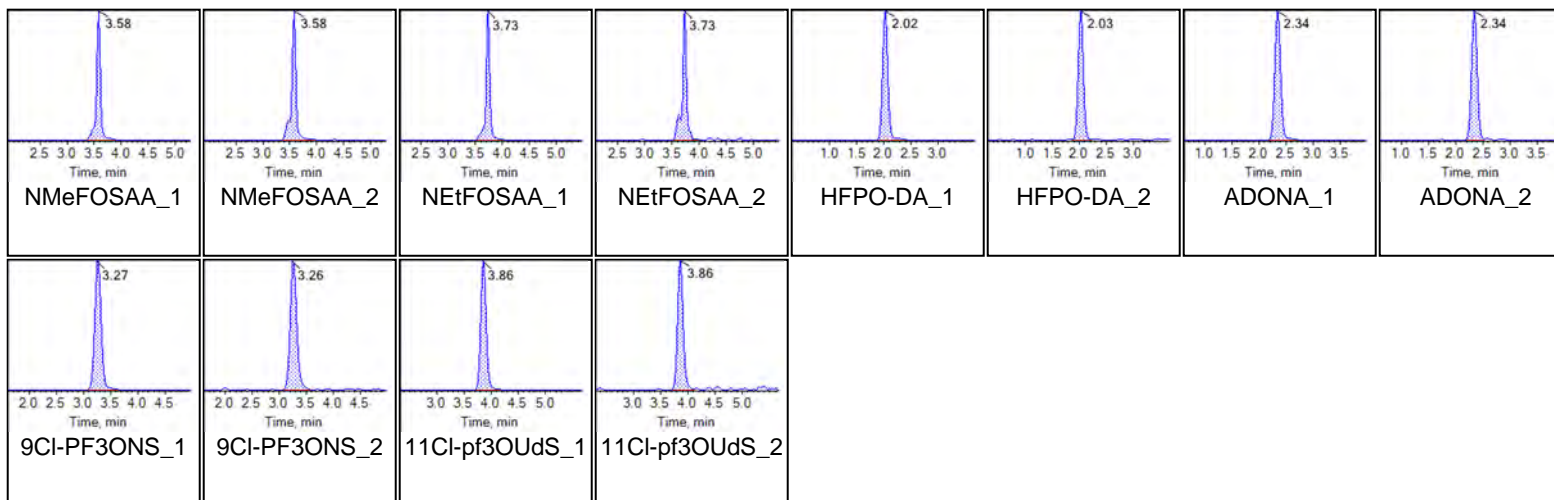
Chromatograms

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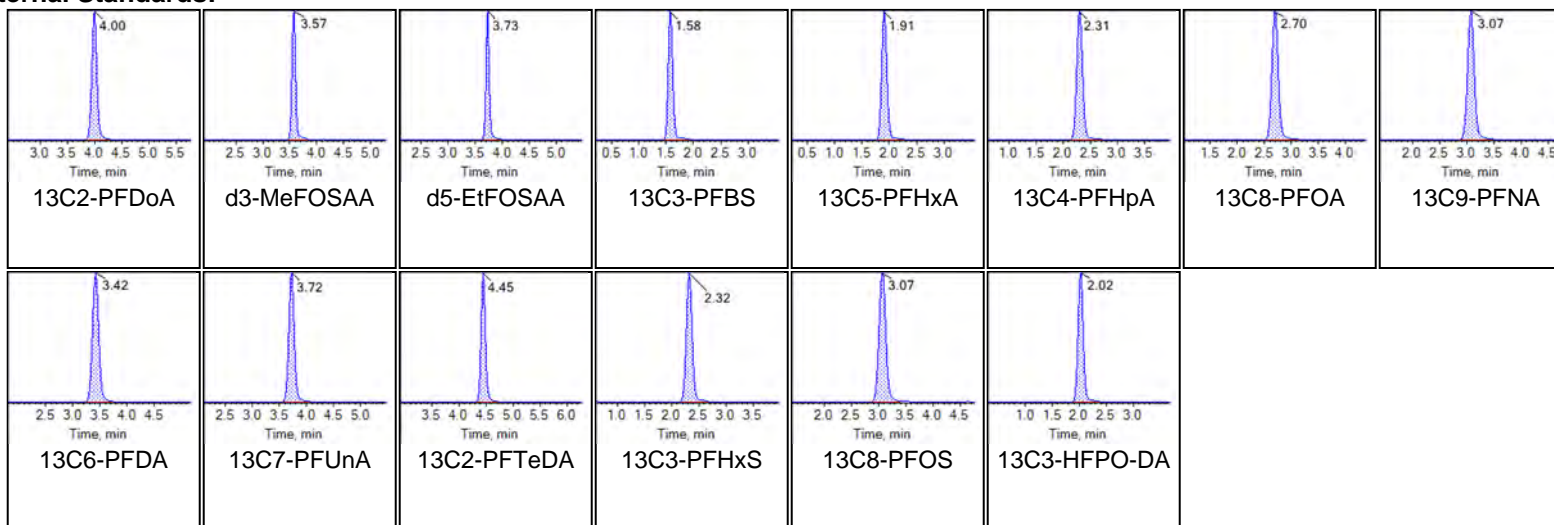




Chromatogram Report

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Printed: 09/11/2020 3:17:19 PM

Internal Standards:





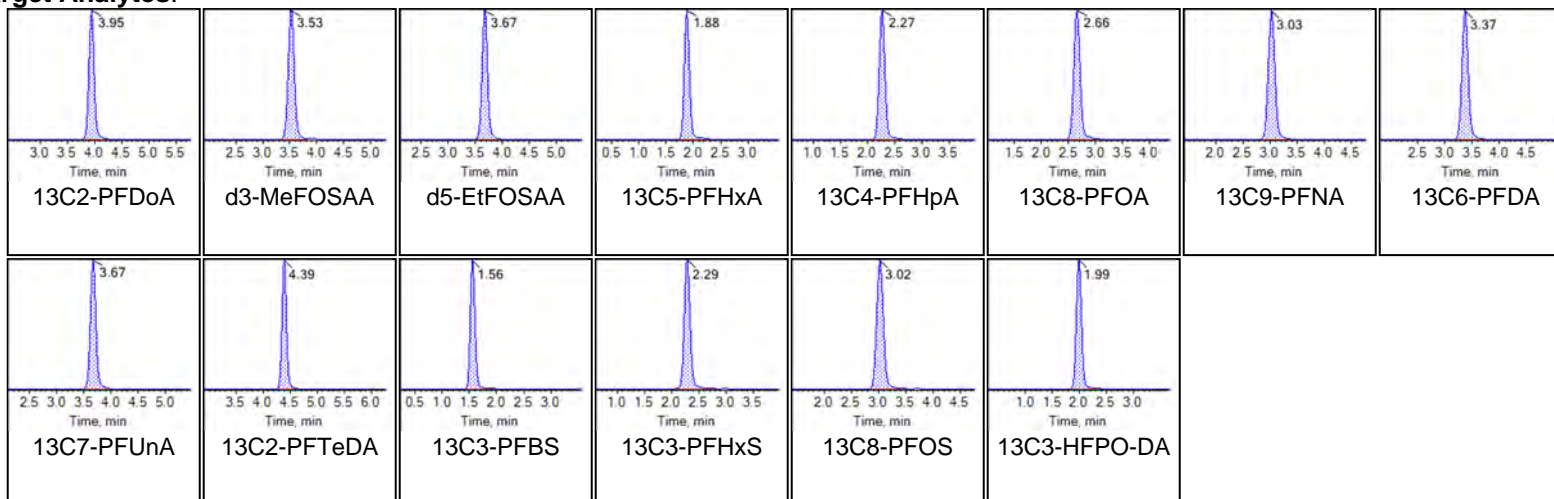
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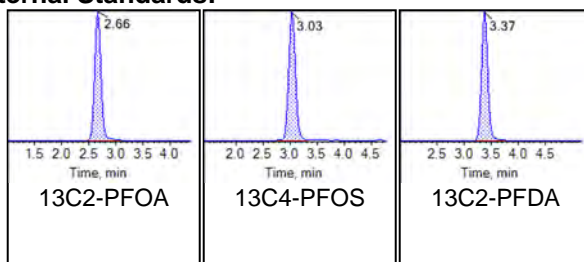
Sample Name	LD74	Injection Vial	2
Sample ID	L1	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:19:58 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



Internal Standards:





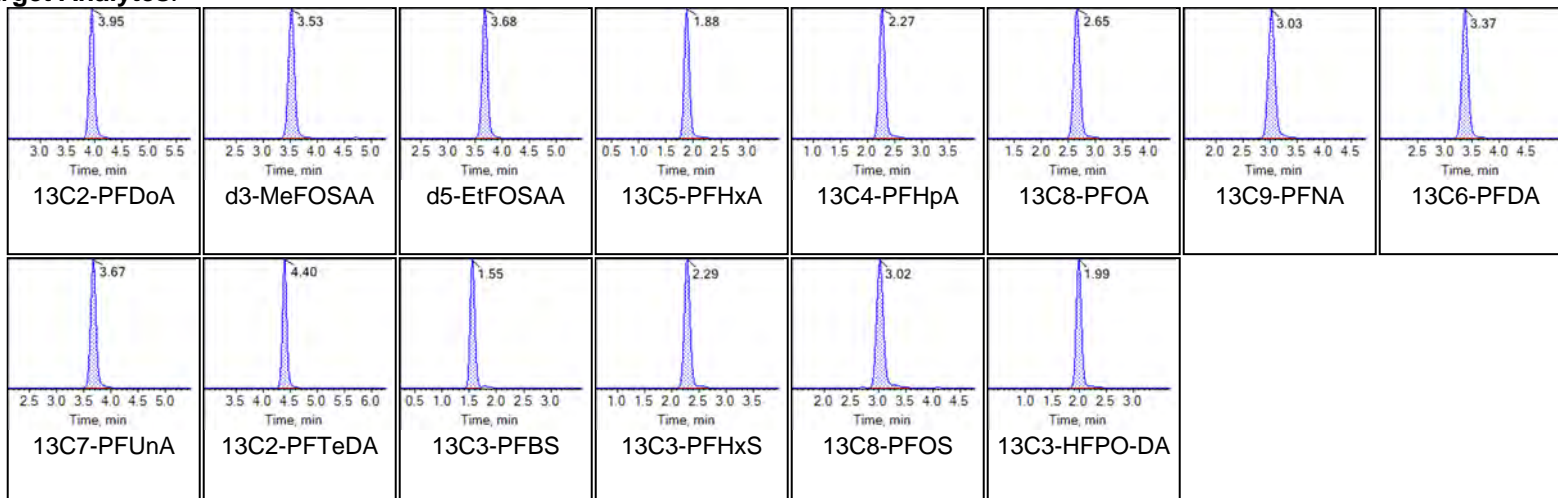
Chromatogram Report

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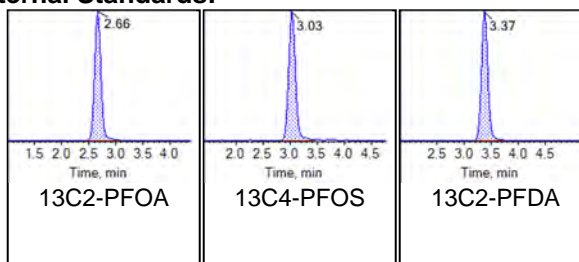
Sample Name	LD75	Injection Vial	3
Sample ID	L2	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:30:51 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



Internal Standards:





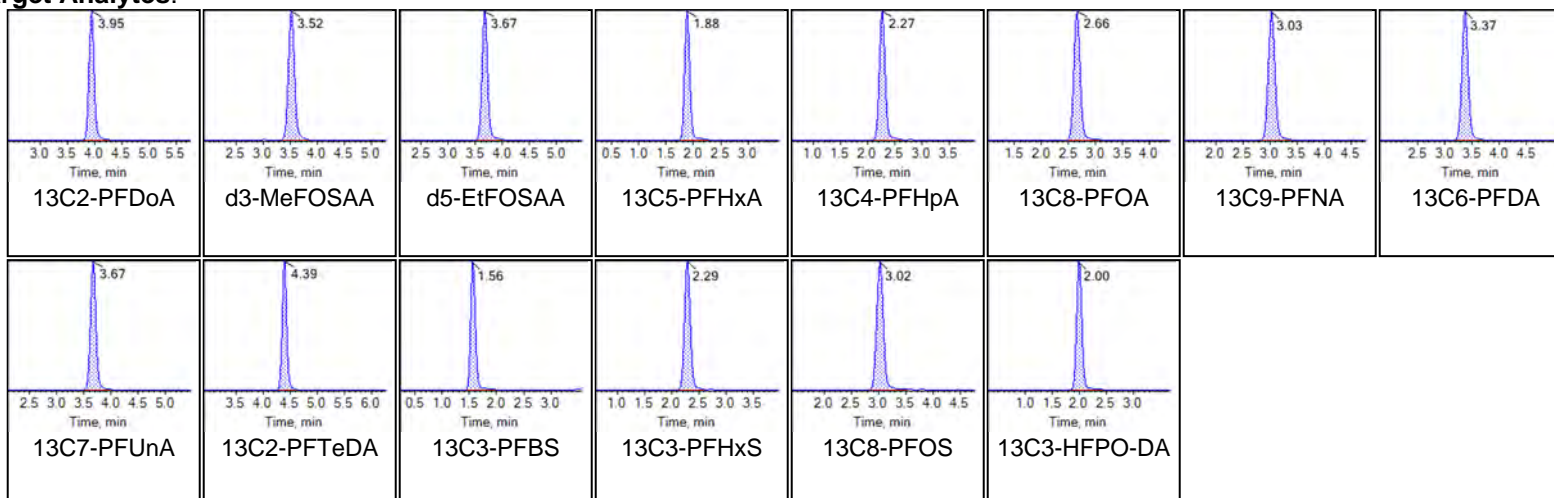
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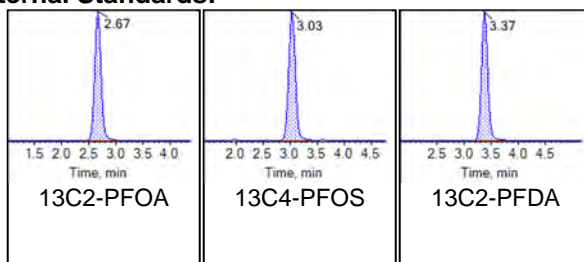
Sample Name	LD76	Injection Vial	4
Sample ID	L3	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:41:42 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



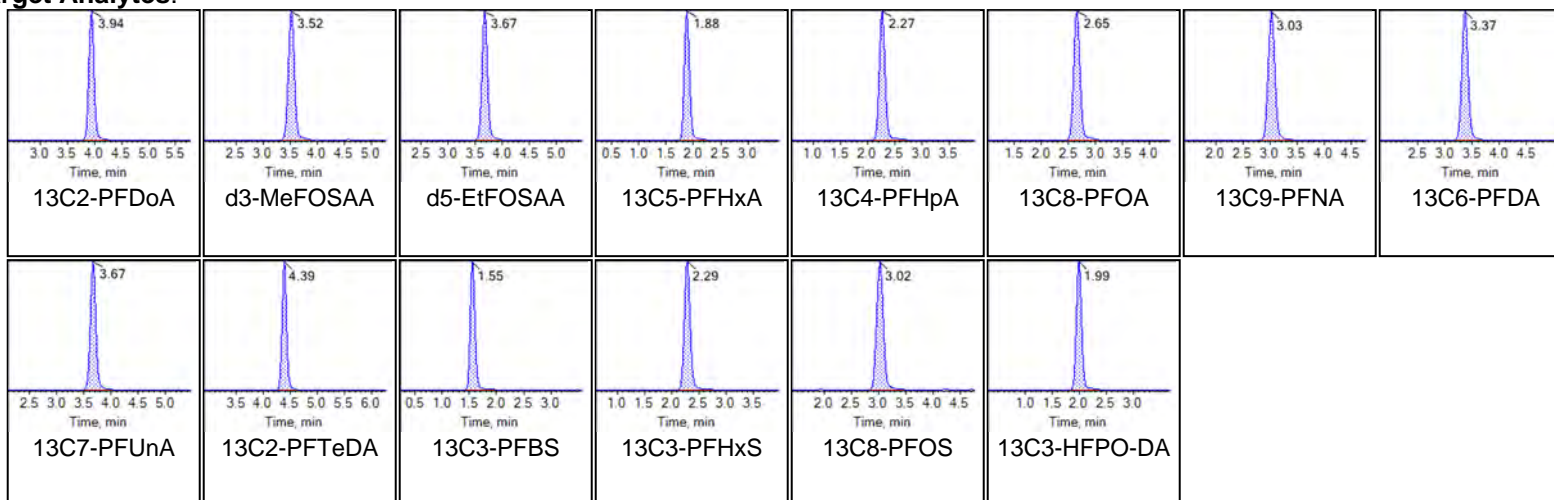
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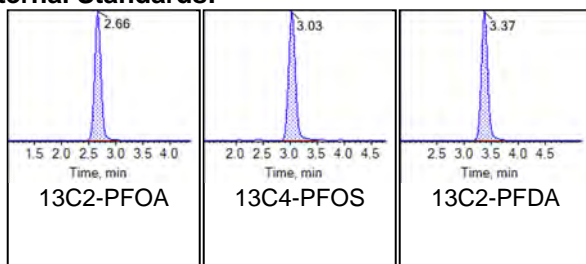
Sample Name	LD77	Injection Vial	5
Sample ID	L4	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 1:52:35 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



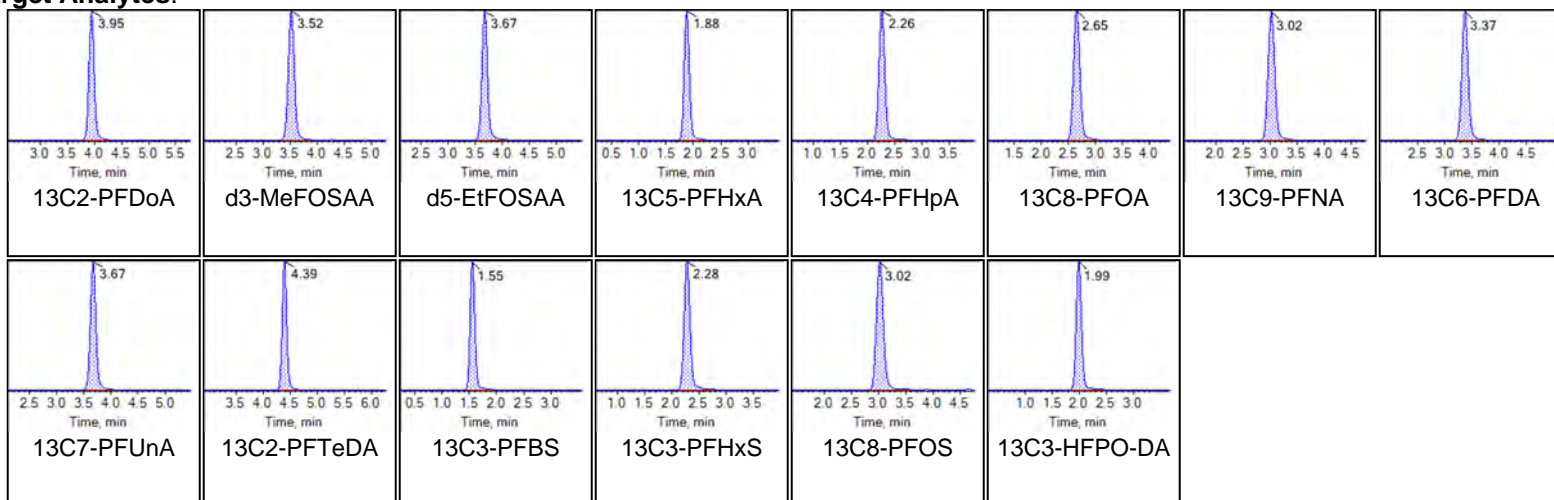
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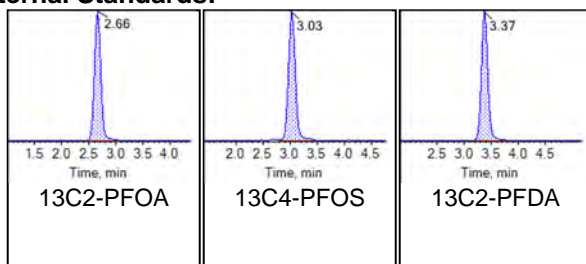
Sample Name	LD78	Injection Vial	6
Sample ID	L5	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:03:27 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



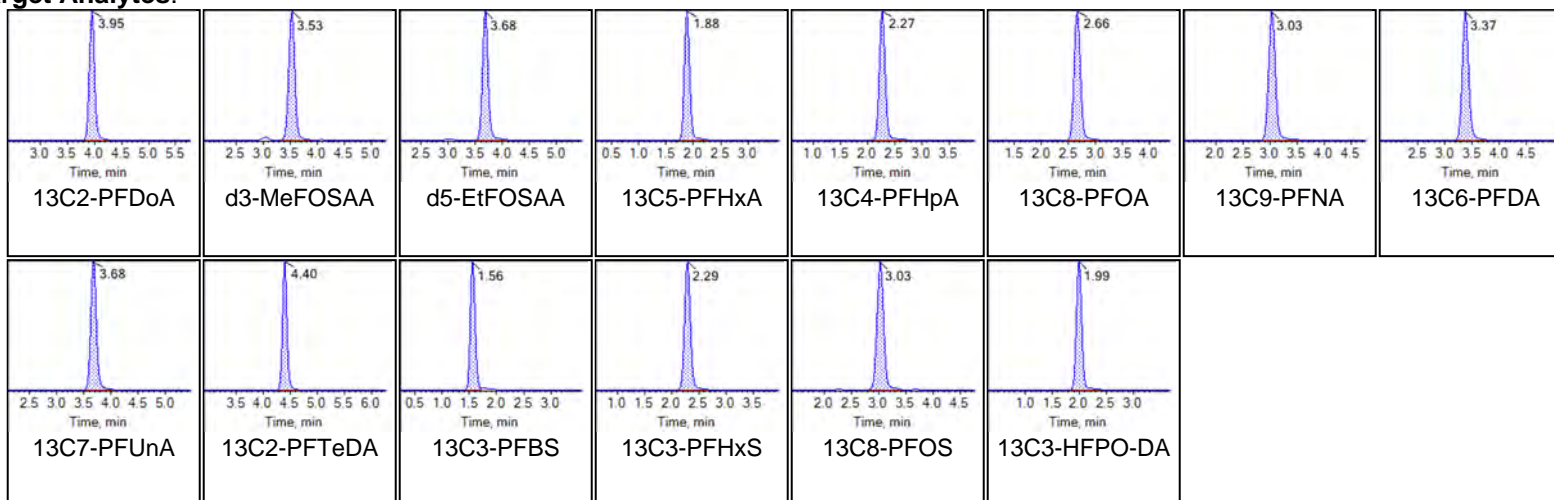
Internal Standards:



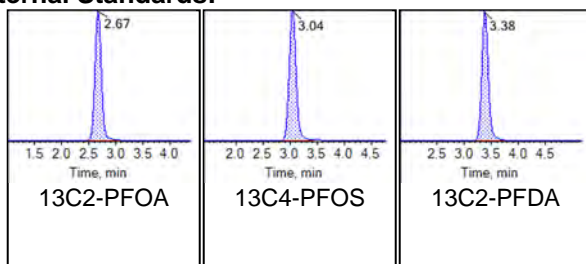
Sample Name	LD79	Injection Vial	7
Sample ID	L6	Injection Volume	10.00
Sample Type	Standard	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:14:18 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



Internal Standards:





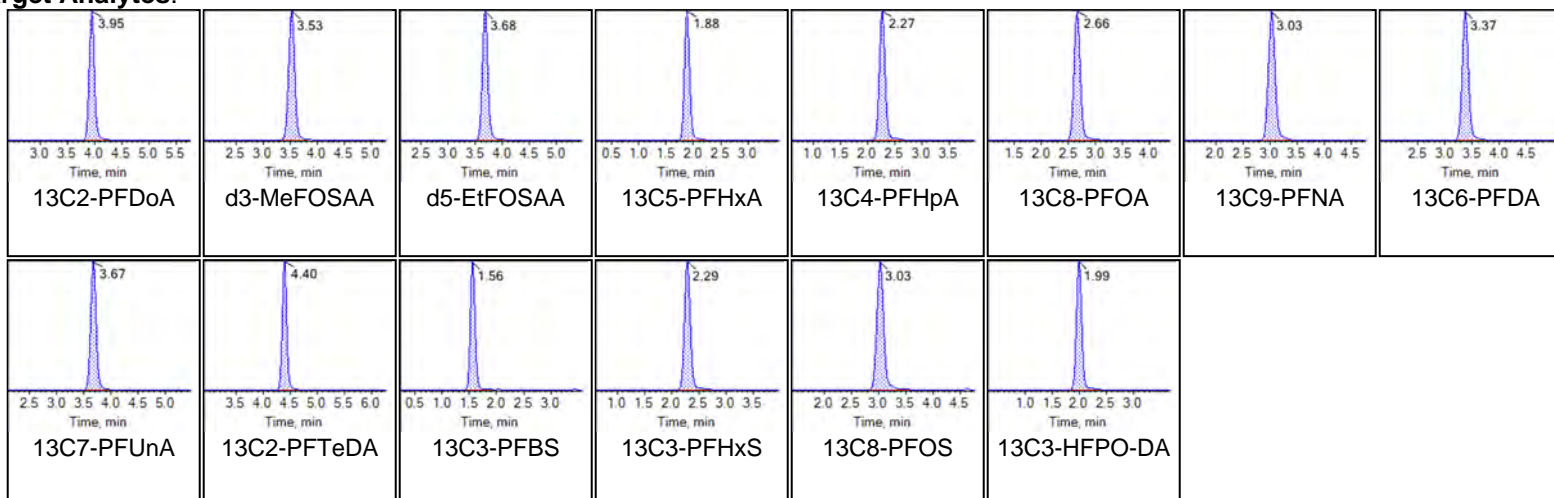
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:10 PM

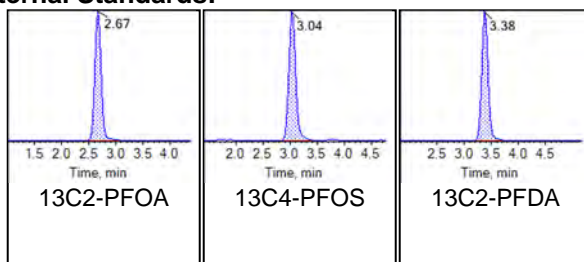
Sample Name	LD80 IB	Injection Vial	8
Sample ID	IB	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:25:10 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



Internal Standards:





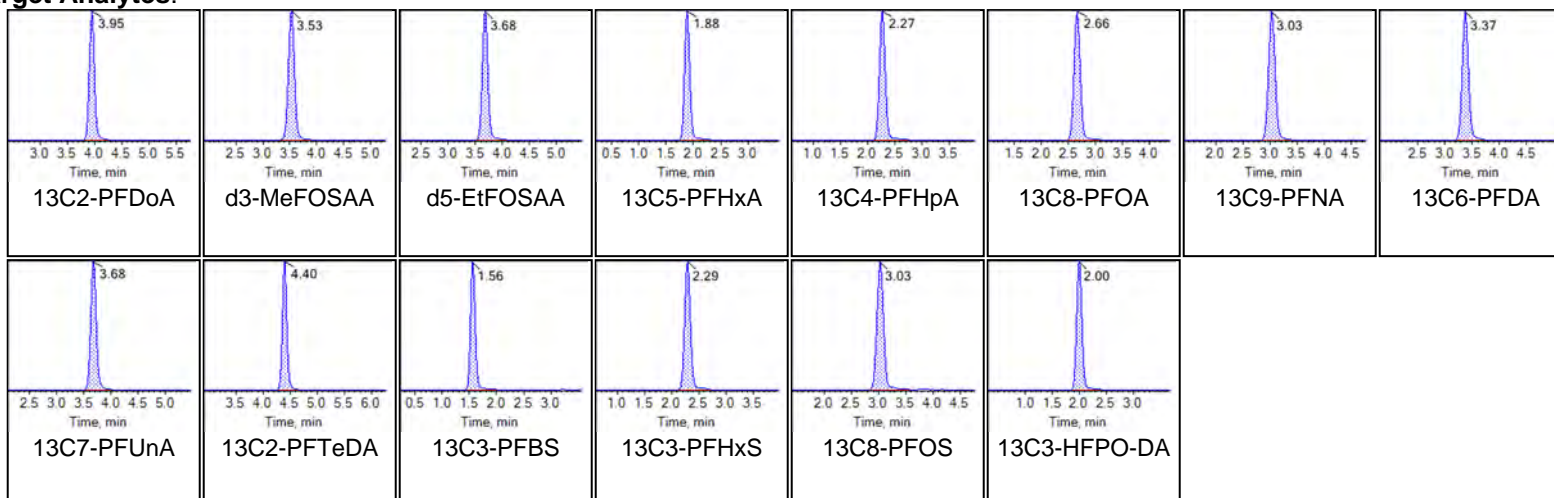
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:10 PM

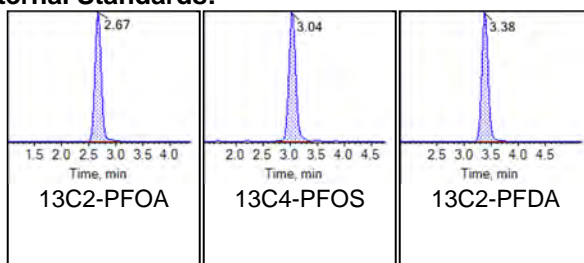
Sample Name	LD81 ICC	Injection Vial	9
Sample ID	ICC	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 2:36:01 AM	Data File	AC_11042020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



Internal Standards:





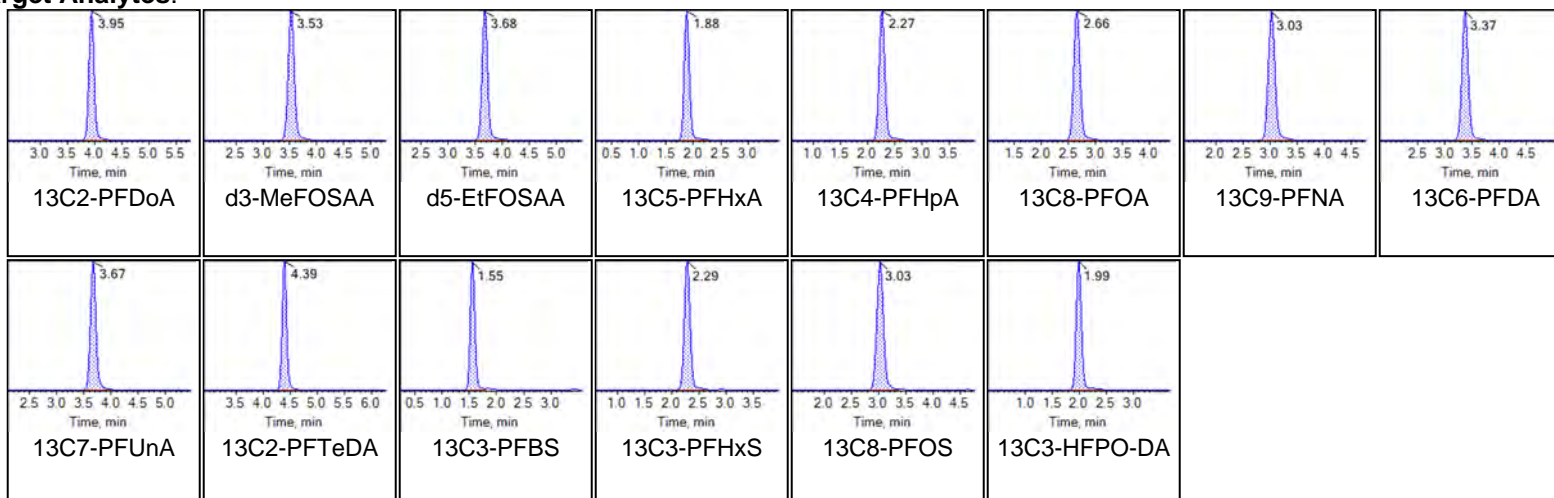
Chromatogram Report

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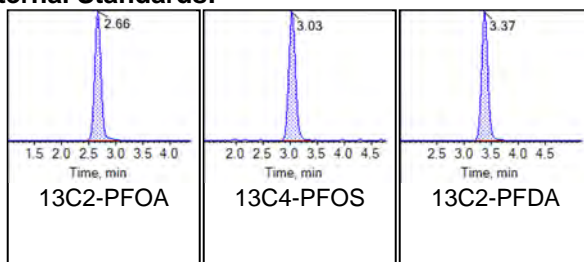
Sample Name	LD76 CCV	Injection Vial	2
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 11:03:44 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



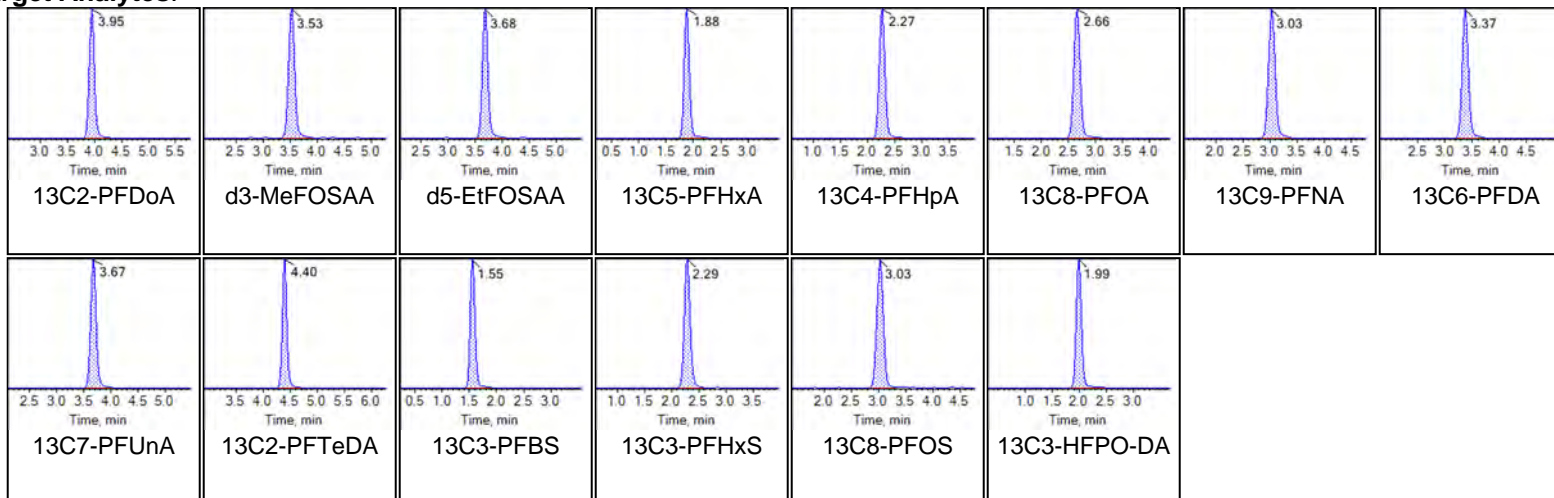
Internal Standards:



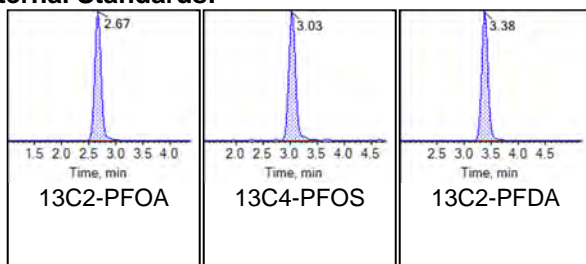
Sample Name	LD80 IBA	Injection Vial	4
Sample ID	IB	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/5/2020 11:25:29 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



Internal Standards:





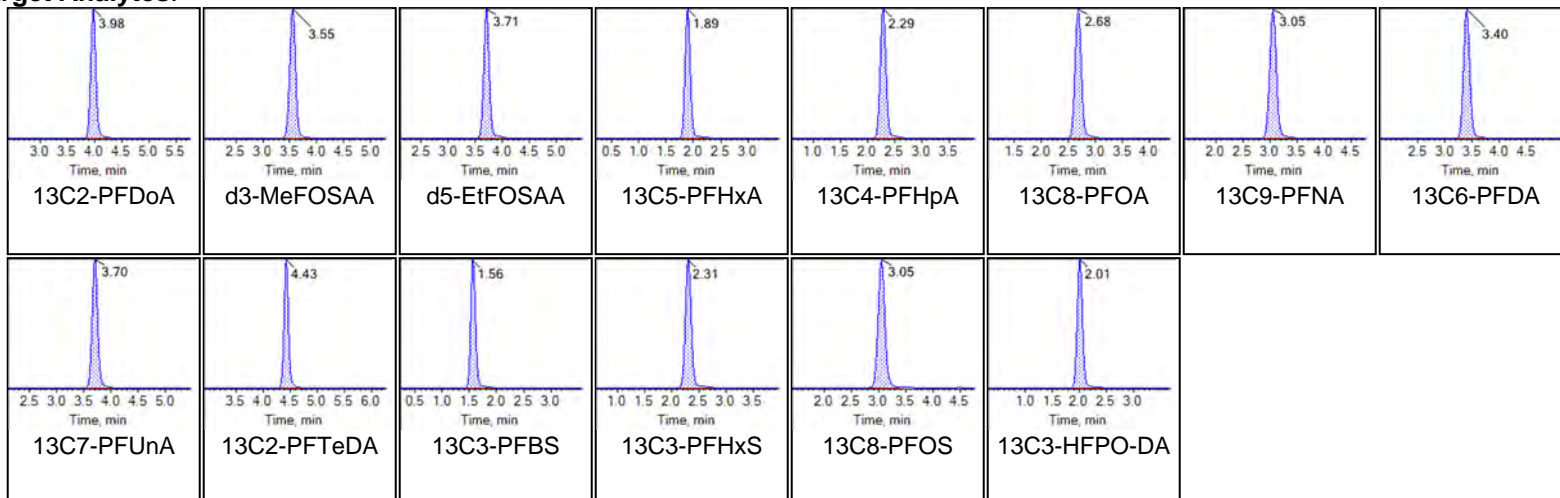
Chromatogram Report

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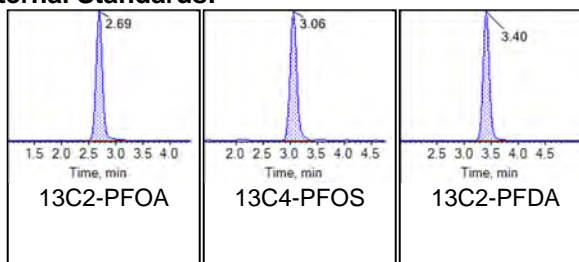
Sample Name	LD77 CCV	Injection Vial	11
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 7:08:01 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



Internal Standards:





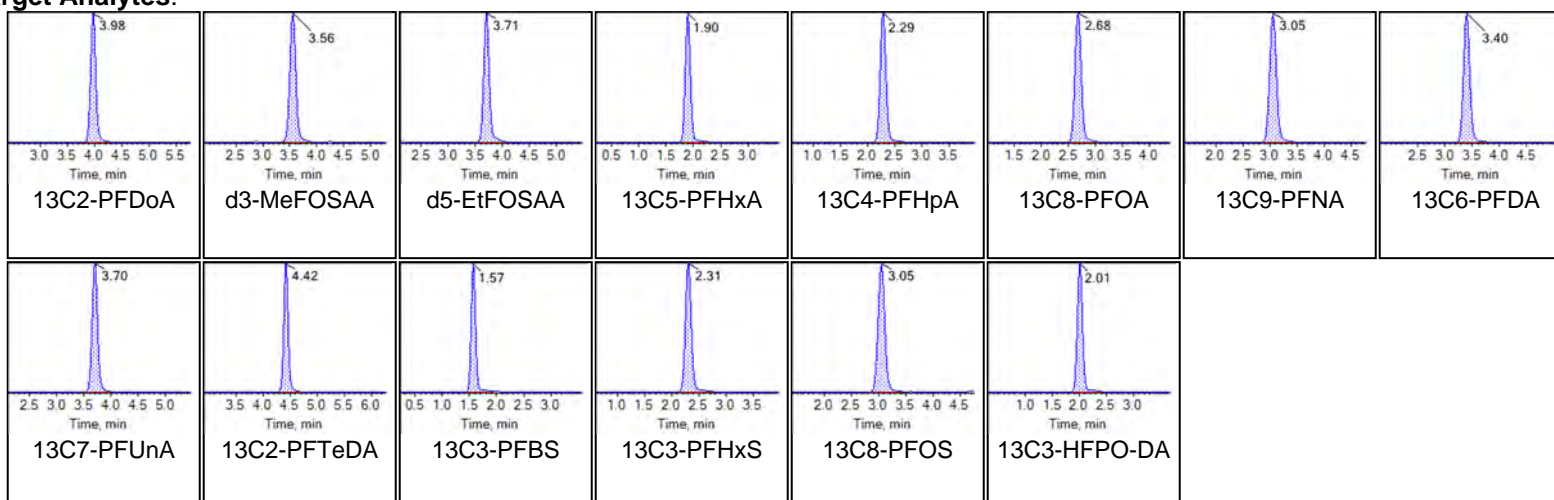
Chromatogram Report

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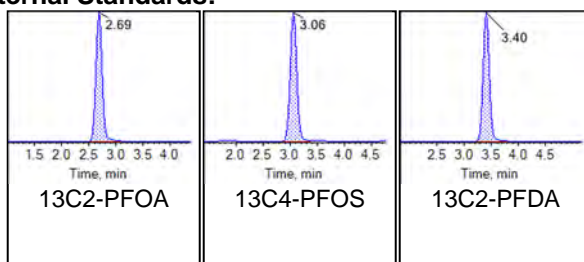
Sample Name	DA918PB-FS(0)	Injection Vial	13
Sample ID	Procedural Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 7:29:50 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



Internal Standards:





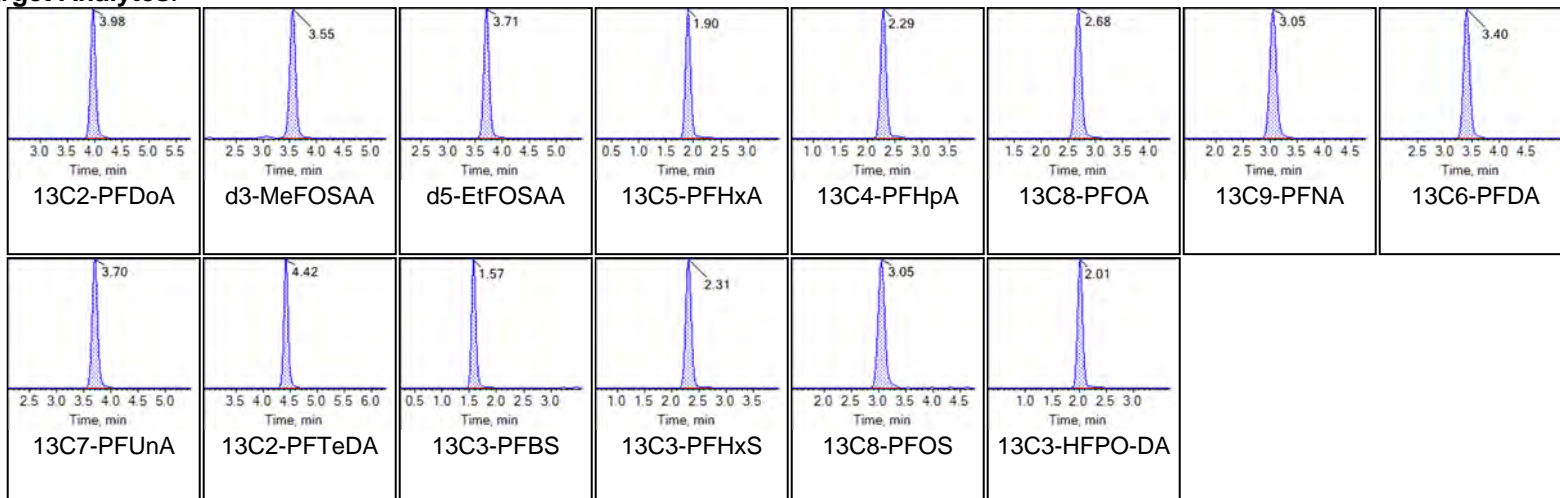
Chromatogram Report

Created with Analyst Reporter
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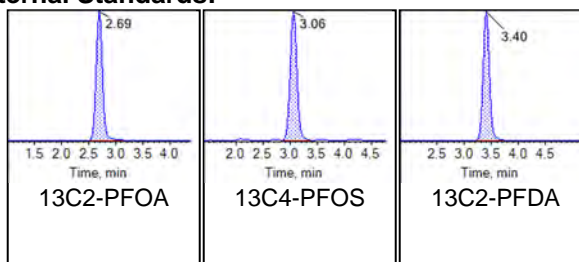
Sample Name	DA919LCS-FS(0)	Injection Vial	14
Sample ID	Laboratory Control Sample	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 7:40:42 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



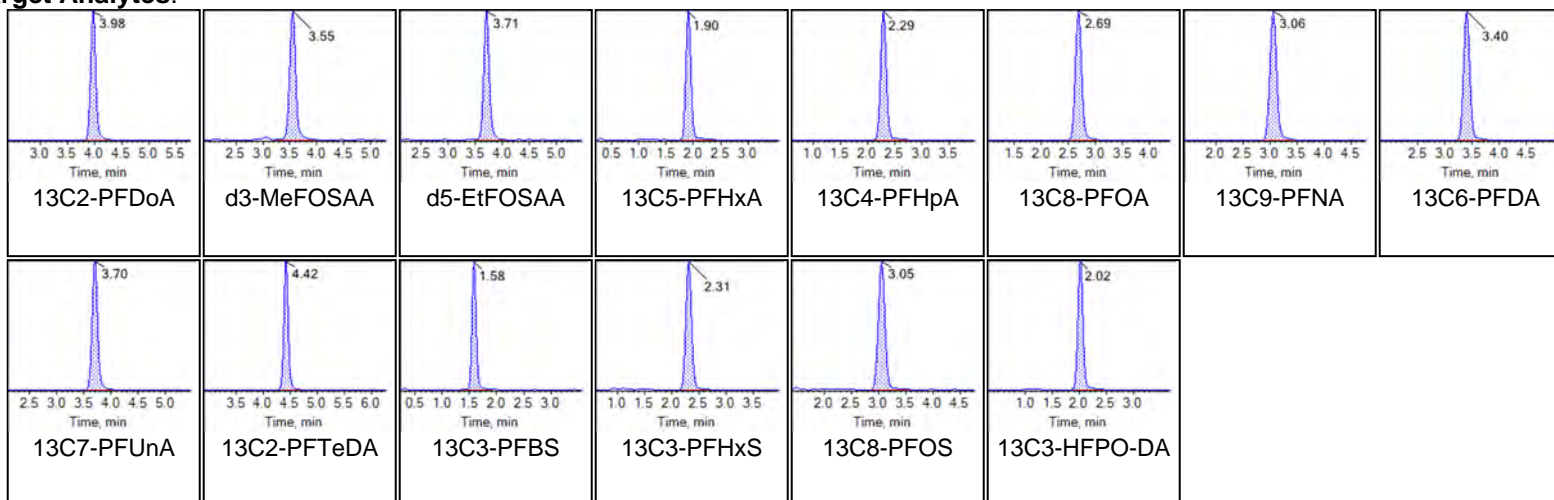
Internal Standards:



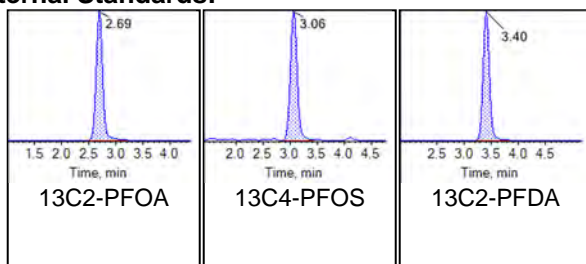
Sample Name	G1707-FS(0)	Injection Vial	15
Sample ID	CBD-AOA-MW15-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 7:51:36 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



Internal Standards:





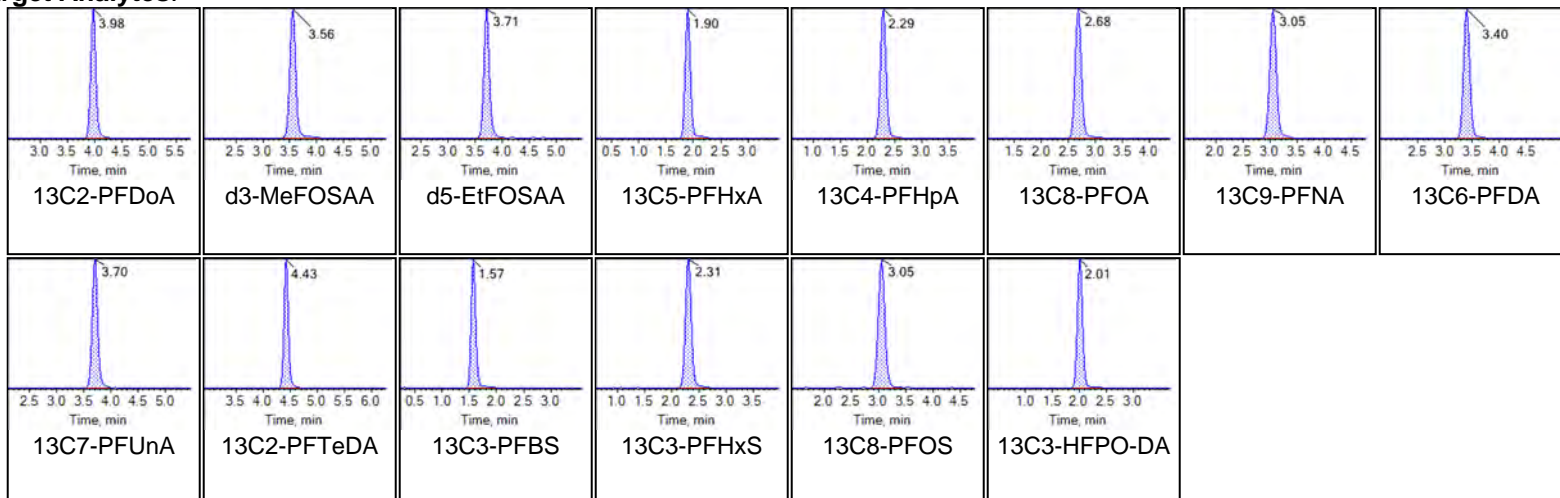
Chromatogram Report

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Printed: 09/11/2020 3:17:10 PM

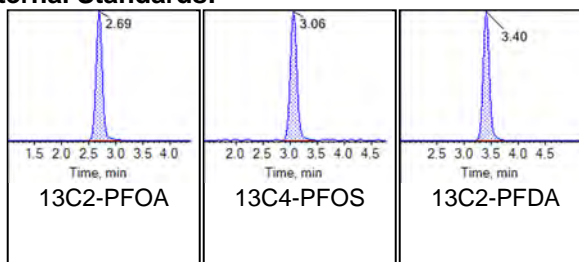
Sample Name	G1707-FS-D(3)	Injection Vial	16
Sample ID	CBD-AOA-MW15-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 8:02:29 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



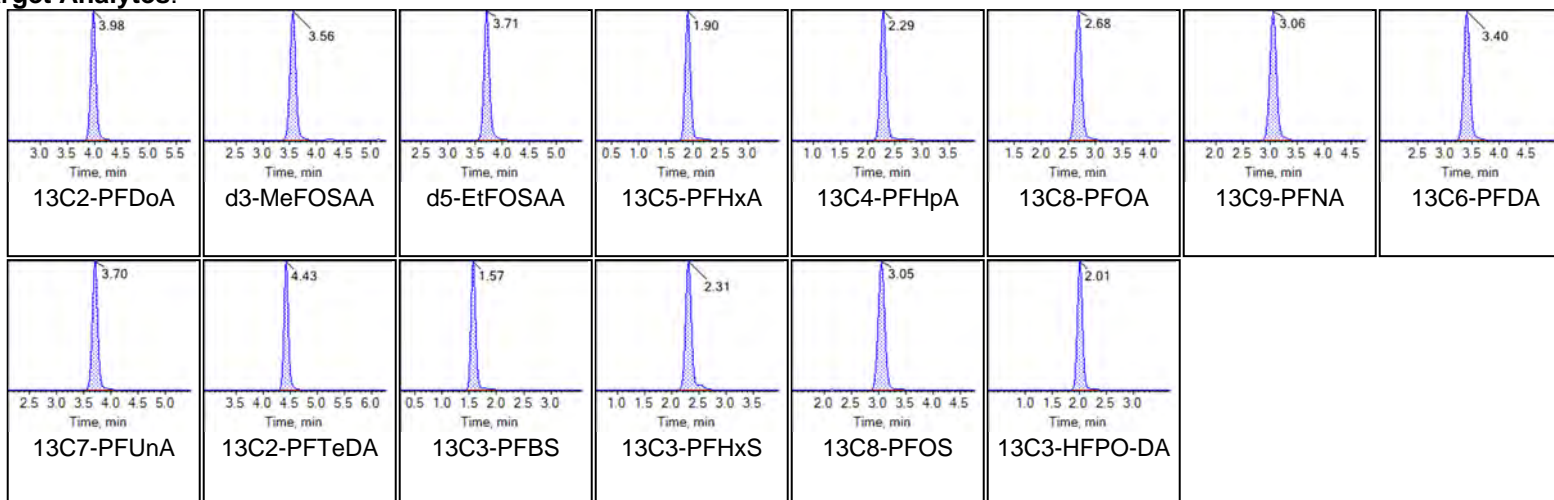
Internal Standards:



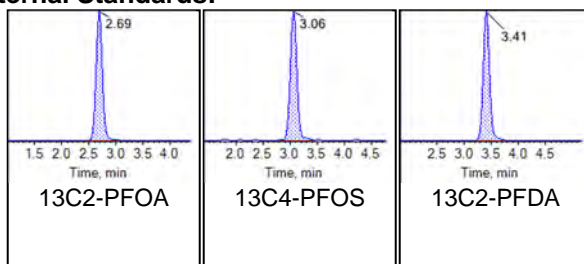
Sample Name	G1707-FS-D(5)	Injection Vial	17
Sample ID	CBD-AOA-MW15-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 8:13:23 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



Internal Standards:





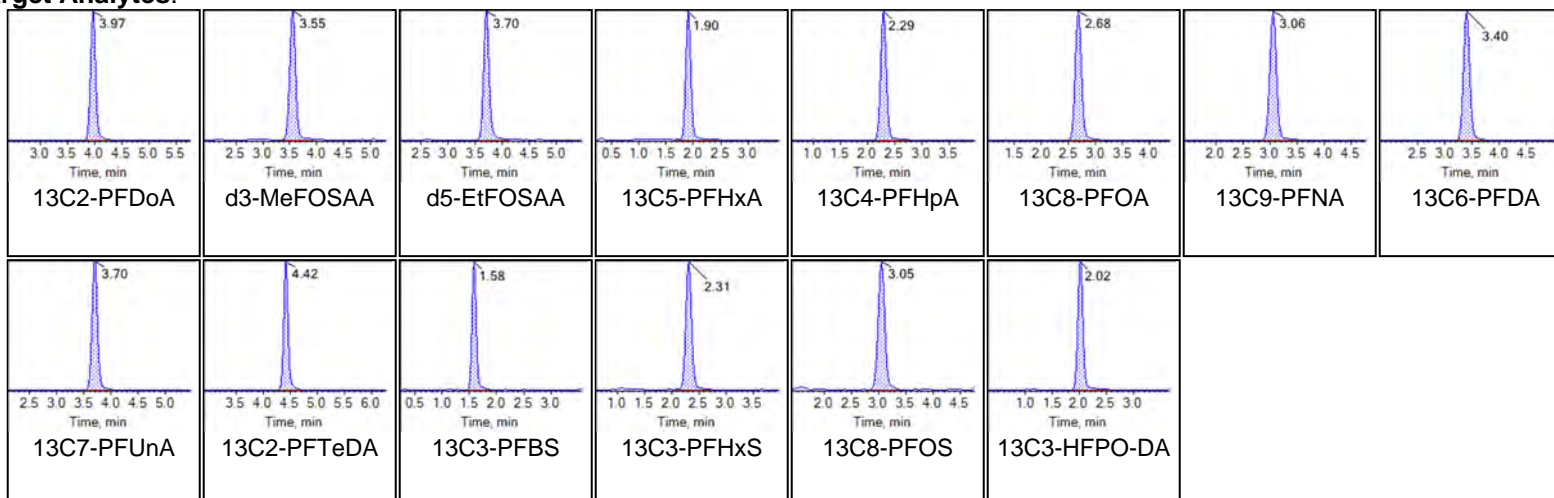
Chromatogram Report

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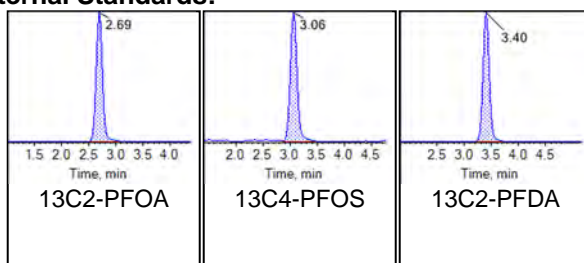
Sample Name	G1708-FS(0)	Injection Vial	18
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 8:24:17 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



Internal Standards:





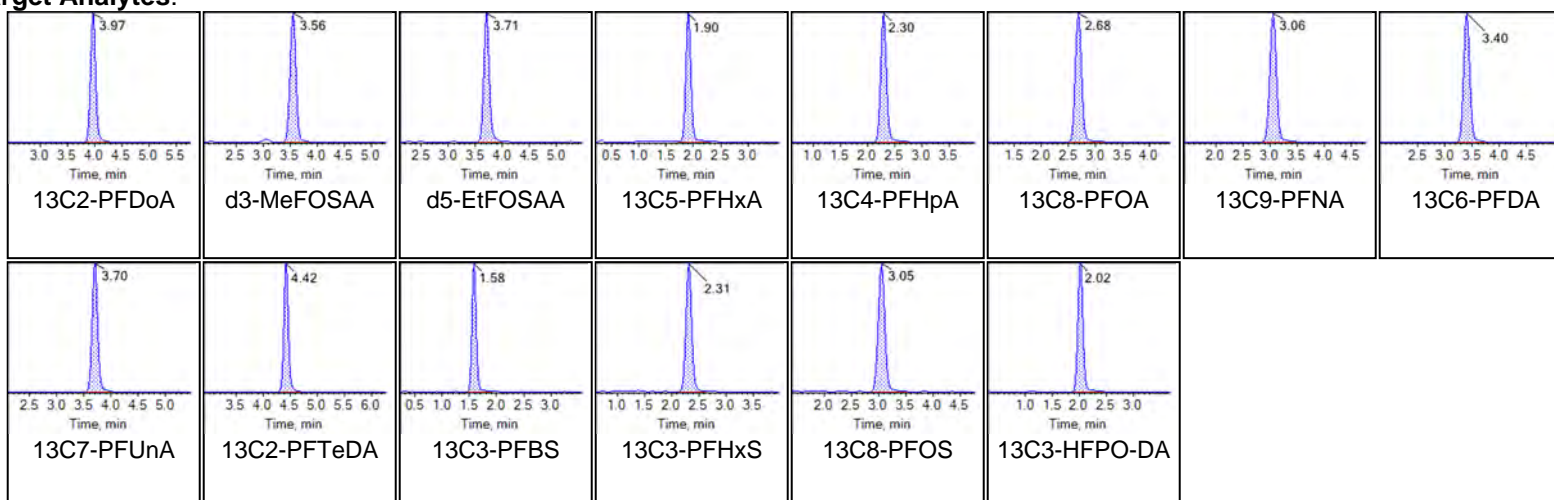
Chromatogram Report

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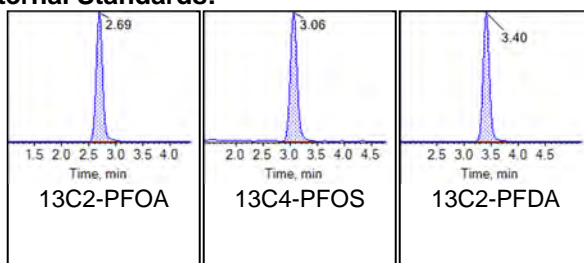
Sample Name	G1708MS-FS(0)	Injection Vial	19
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 8:35:11 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



Internal Standards:





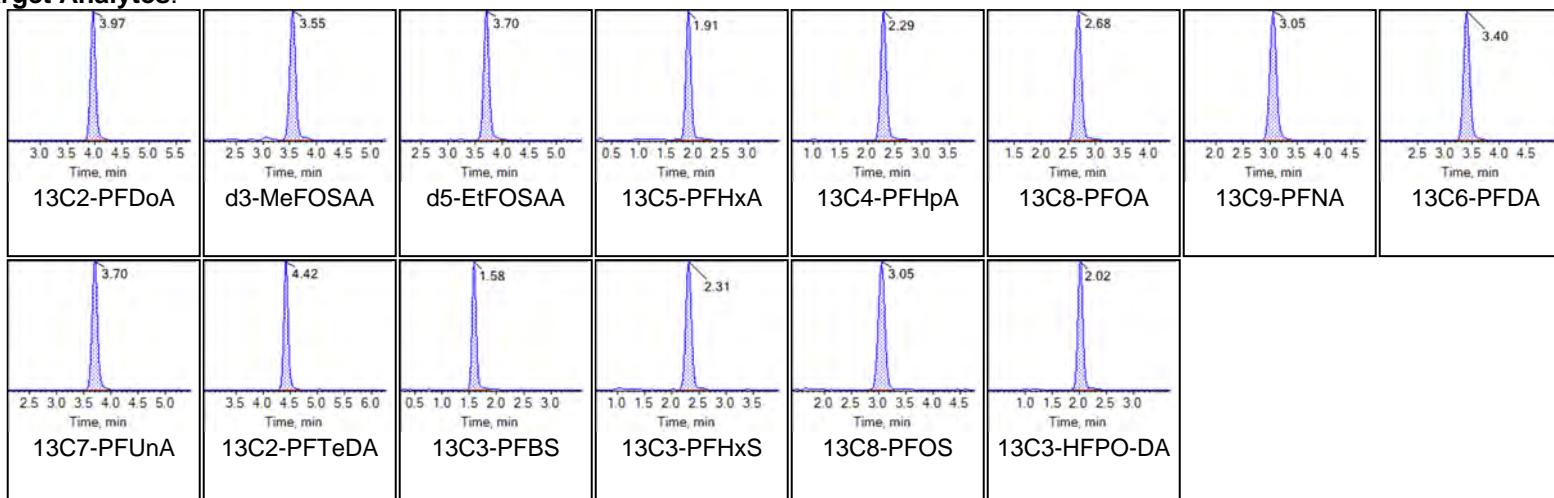
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:10 PM

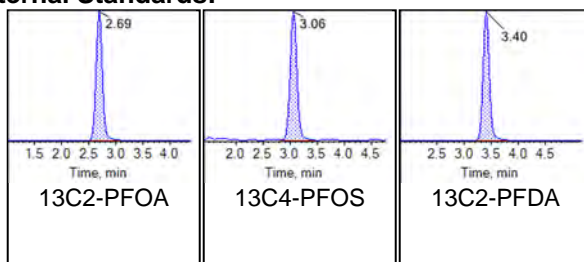
Sample Name	G1708MSD-FS(0)	Injection Vial	20
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 8:46:05 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



Internal Standards:





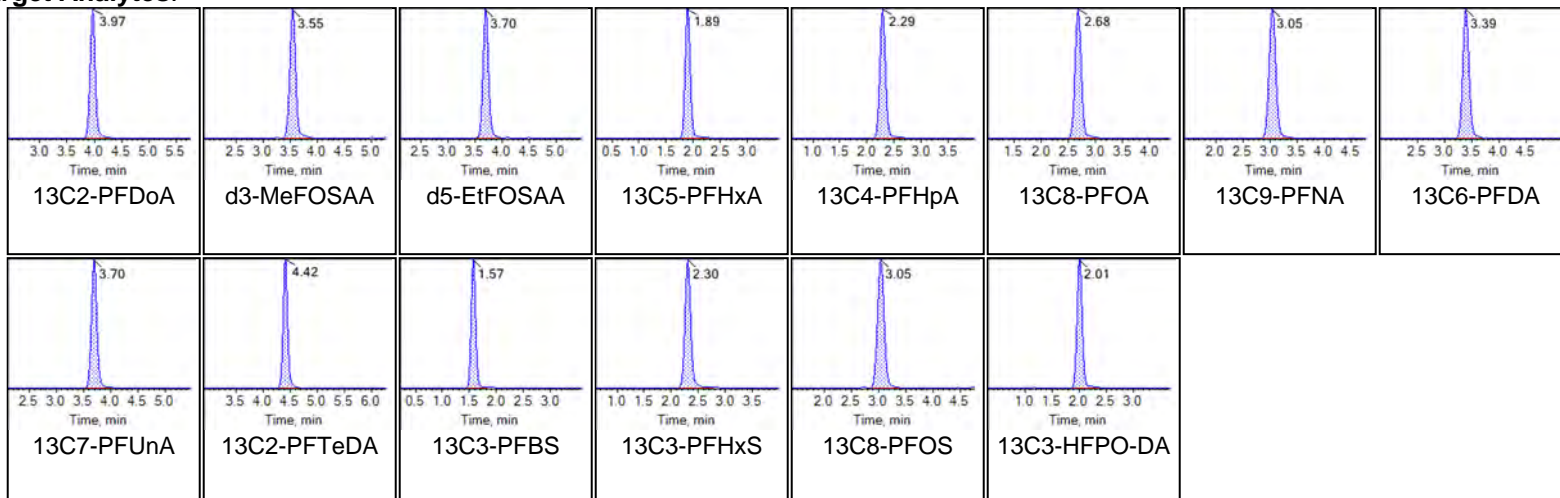
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:10 PM

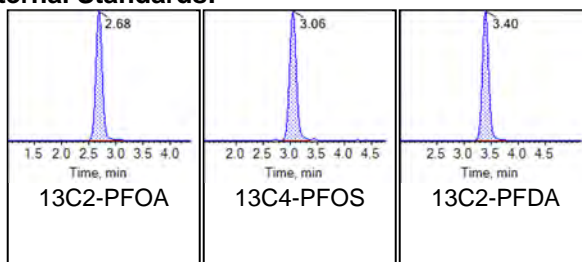
Sample Name	G1709-FS(0)	Injection Vial	21
Sample ID	CBD-FB04-101620	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 8:56:59 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



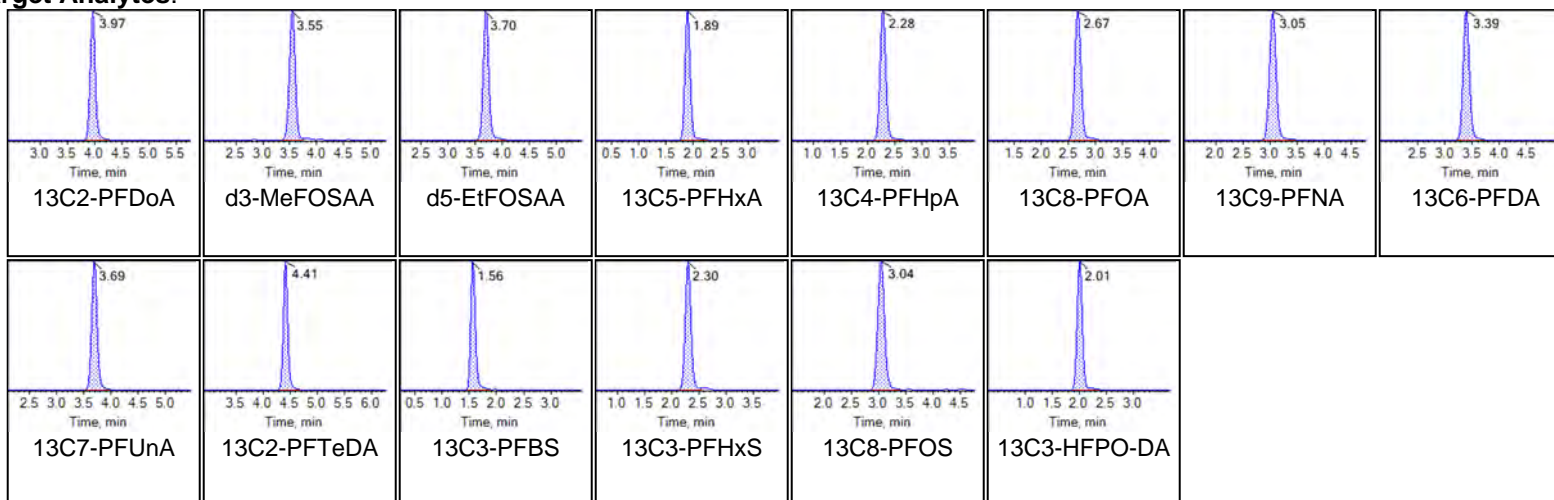
Internal Standards:



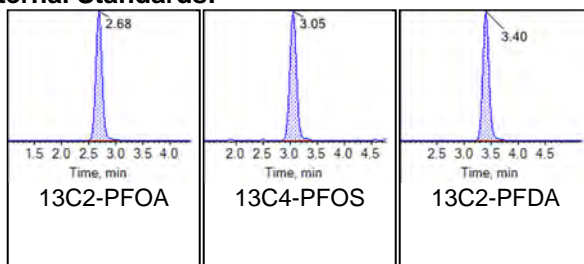
Sample Name	LD76 CCV	Injection Vial	22
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/6/2020 9:07:53 PM	Data File	AC_11052020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



Internal Standards:





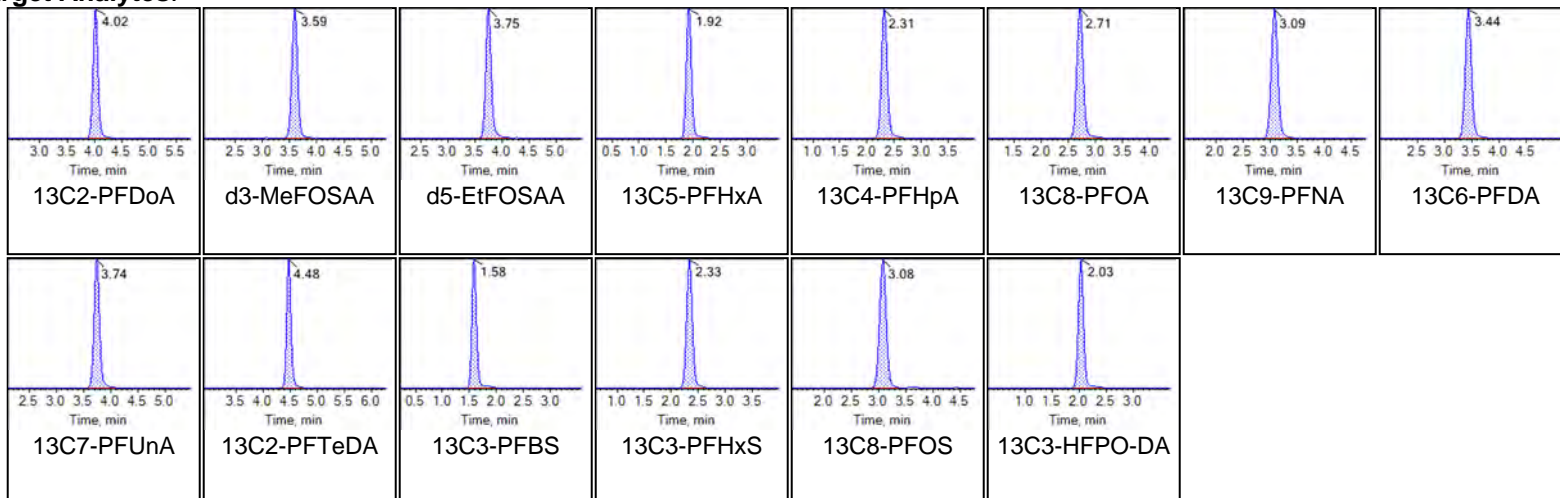
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:10 PM

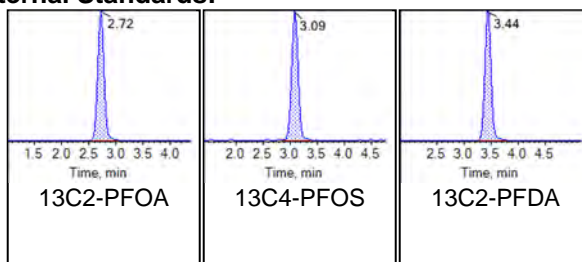
Sample Name	LD76 CCV	Injection Vial	3
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 11:30:20 AM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



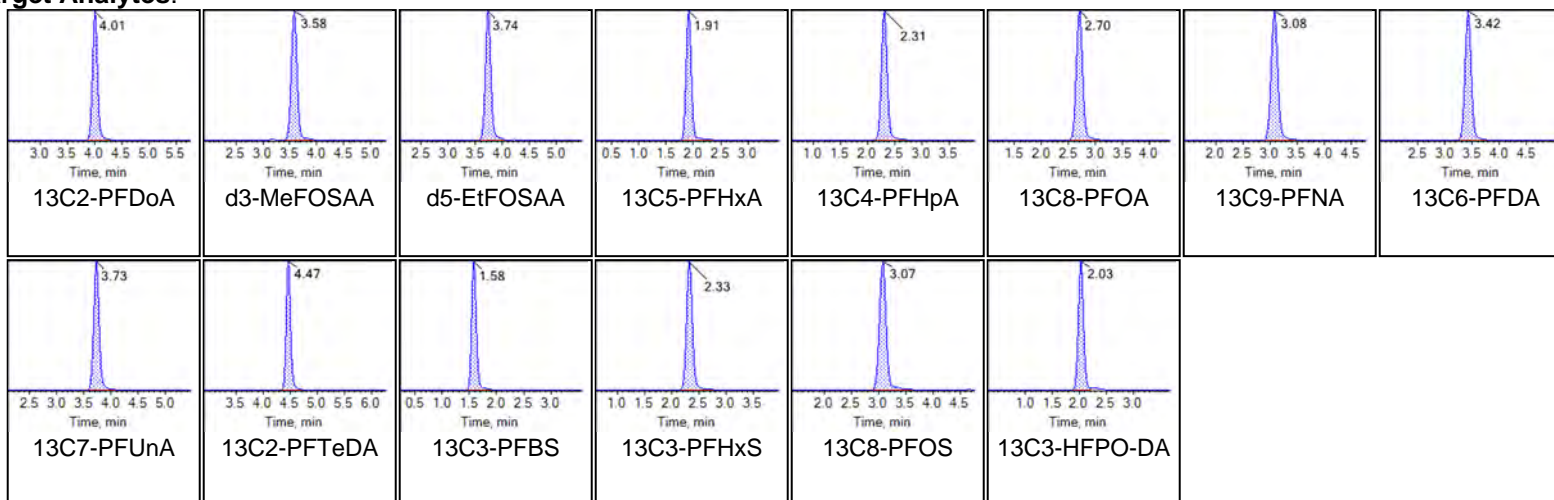
Internal Standards:



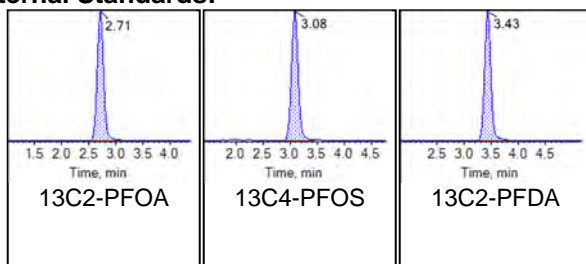
Sample Name	LD80 IB	Injection Vial	5
Sample ID	IB	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 11:52:02 AM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



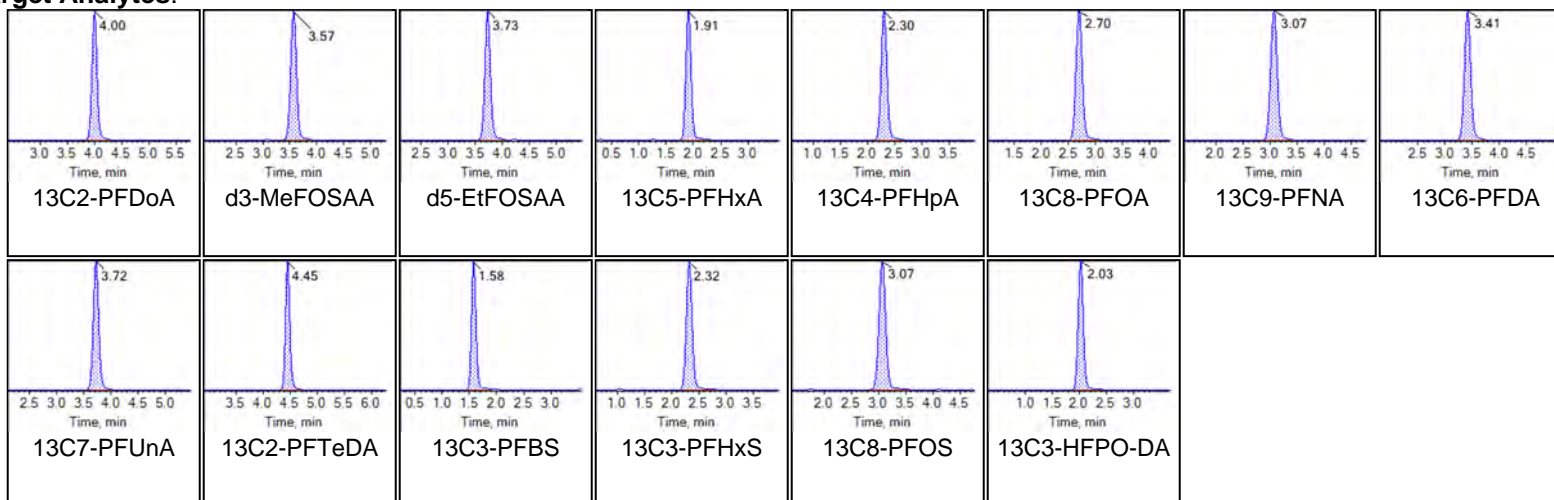
Internal Standards:



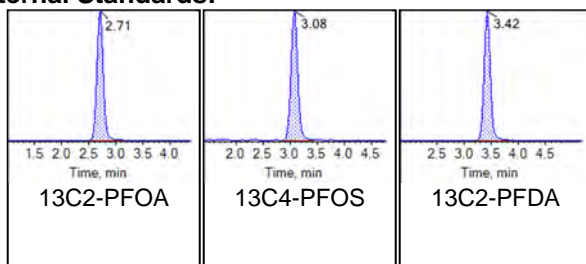
Sample Name	G1708MS-FS-D(3)	Injection Vial	12
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 1:08:03 PM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



Internal Standards:





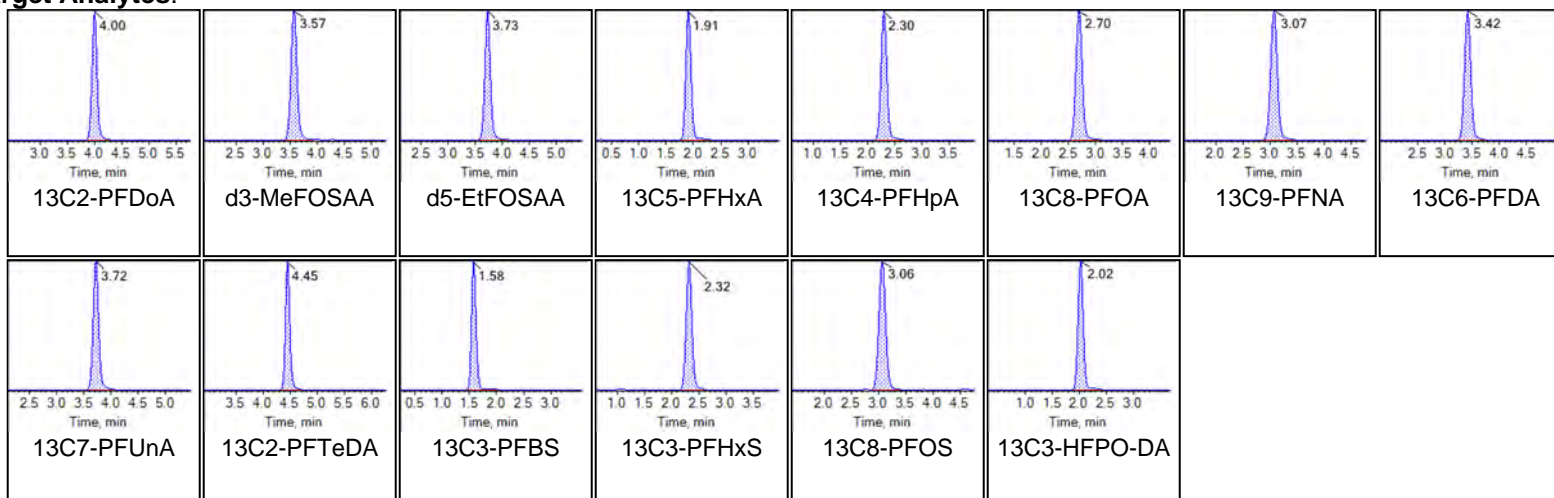
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:10 PM

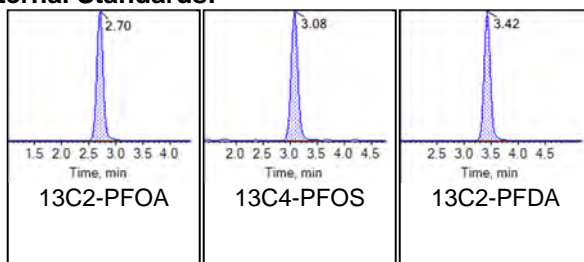
Sample Name	G1708MSD-FS-D(3)	Injection Vial	13
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 1:18:55 PM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



Internal Standards:





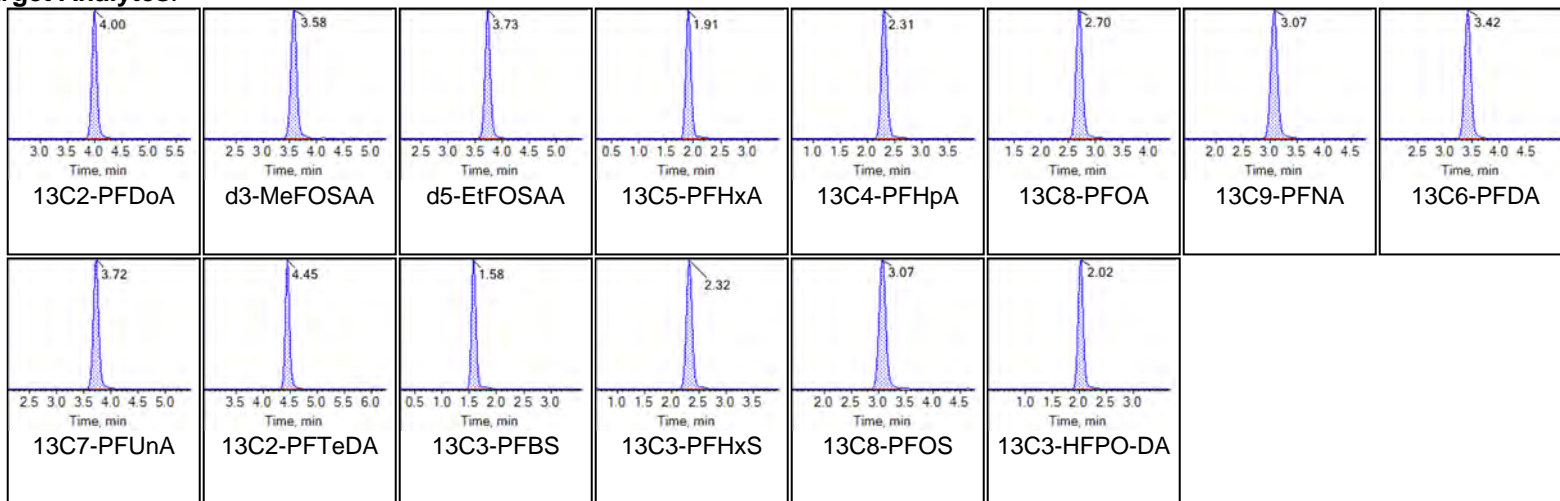
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 3:17:10 PM

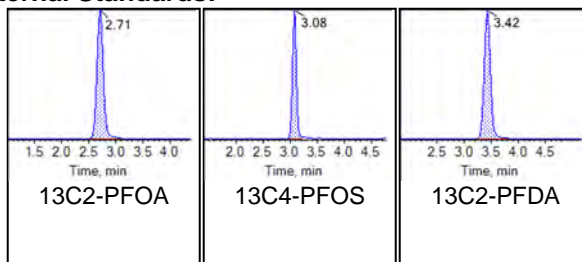
Sample Name	LD77 CCV	Injection Vial	14
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 1:29:46 PM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS

Chromatograms

Target Analytes:



Internal Standards:



Unused Data

Sample Name	G1708MS-FS(0)	Injection Vial	10
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 12:46:18 PM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.60	4890401.19	15959.89	3265.5	False	13C3-PFBS	131502.98	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.60	1347481.71	14100.23	3233.0	False	13C3-PFBS	131502.98	1162.50	PFBS	0.276	0.322	✓
PFHxA_1	313.0 / 269.0	1.93	9242977.64	20203.29	883.5	False	13C5-PFHxA	562635.94	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.93	605483.44	18109.24	1340.8	False	13C5-PFHxA	562635.94	1250.00	PFHxA	0.066	0.073	✓
PFHpA_1	363.0 / 319.0	2.32	6905209.43	13316.05	890.7	False	13C4-PFHpA	657023.43	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.32	140294.34	14195.96	1172.1	False	13C4-PFHpA	657023.43	1250.00	PFHpA	0.020	0.021	✓
PFHxS_1	399.0 / 80.0	2.34	18165262.07	45161.92	1177.4	False	13C3-PFHxS	127652.42	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.34	5060343.32	43682.13	2644.0	False	13C3-PFHxS	127652.42	1182.50	PFHxS	0.279	0.293	✓
PFOA_1	413.0 / 369.0	2.71	9469040.79	17719.80	807.7	False	13C8-PFOA	651061.23	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.71	730186.67	18861.15	1243.7	False	13C8-PFOA	651061.23	1222.50	PFOA	0.077	0.068	✓
PFNA_1	463.0 / 419.0	3.09	7085646.94	12896.65	1828.3	False	13C9-PFNA	624777.57	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.09	2165719.19	13649.17	2476.6	False	13C9-PFNA	624777.57	1250.00	PFNA	0.306	0.292	✓
PFOS_1	499.0 / 80.0	3.04	15586212.73	33136.72	1117.2	False	13C8-PFOS	116760.56	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.08	2566047.31	30090.13	3287.4	False	13C8-PFOS	116760.56	1195.00	PFOS	0.165	0.189	✓
PFDA_1	513.0 / 469.0	3.43	5968883.94	11381.35	2538.8	False	13C6-PFDA	593887.58	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.43	278079.32	11926.17	2135.7	False	13C6-PFDA	593887.58	1250.00	PFDA	0.047	0.042	✓
PFUnA_1	563.0 / 519.0	3.73	5328161.24	12595.59	2881.1	False	13C7-PFUnA	510781.11	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.73	273245.92	12138.02	2175.0	False	13C7-PFUnA	510781.11	1250.00	PFUnA	0.051	0.052	✓
PFDoA_1	613.0 / 569.0	4.01	4606579.17	11104.36	3994.1	False	13C2-PFDoA	522014.72	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	4.01	745828.58	11053.96	4166.4	False	13C2-PFDoA	522014.72	1250.00	PFDoA	0.162	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.25	3148512.42	23269.75	4167.8	False	13C2-PFTTeDA	233484.97	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.25	222435.68	23123.68	2144.1	False	13C2-PFTTeDA	233484.97	1250.00	PFTTrDA	0.071	0.068	✓
PFTTeDA_1	713.0 / 669.0	4.46	2277807.18	12263.67	9359.2	False	13C2-PFTTeDA	233484.97	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	4.46	134382.27	12557.21	4882.8	False	13C2-PFTTeDA	233484.97	1250.00	PFTTeDA	0.059	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.58	1045847.14	10880.14	5489.3	False	d3-MeFOSAA	126224.72	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.58	748815.05	11999.46	2759.7	False	d3-MeFOSAA	126224.72	1250.00	NMeFOSAA	0.716	0.651	✓
NEtFOSAA_1	584.0 / 419.0	3.74	989594.94	11873.28	3238.4	False	d5-EtFOSAA	110436.34	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.74	59368.55	11326.33	5884.1	False	d5-EtFOSAA	110436.34	1250.00	NEtFOSAA	0.060	0.063	✓
HFPO-DA_1	285.0 / 169.0	2.03	3723195.53	11996.24	4161.5	False	13C3-HFPO-DA	367308.04	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	2.03	93115.95	12134.41	1792.9	False	13C3-HFPO-DA	367308.04	1250.00	HFPO-DA	0.025	0.028	✓
ADONA_1	377.0 / 251.0	2.35	12393587.62	13209.21	9007.0	False	13C3-HFPO-DA	367308.04	1250.00	ADONA			
ADONA_2	377.0 / 85.0	2.35	160143.92	12977.91	1679.9	False	13C3-HFPO-DA	367308.04	1250.00	ADONA	0.013	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	3.27	11153170.29	11389.45	4850.4	False	13C8-PFOA	651061.23	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	3.27	99074.45	11303.39	1371.1	False	13C8-PFOA	651061.23	1222.50	9CI-PF3ONS	0.009	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.86	7552227.87	8614.22	6695.6	False	13C8-PFOA	651061.23	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.86	37756.96	8028.17	1922.3	False	13C8-PFOA	651061.23	1222.50	11Cl-PF3OUdS	0.005	0.005	✓

Sample Name	G1708MSD-FS(0)	Injection Vial	11
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 12:57:12 PM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.60	4119989.77	16262.78	2364.7	False	13C3-PFBS	108720.43	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.59	1161336.26	14699.07	2812.6	False	13C3-PFBS	108720.43	1162.50	PFBS	0.282	0.322	✓
PFHxA_1	313.0 / 269.0	1.92	7551330.55	18772.40	647.7	False	13C5-PFHxA	494695.74	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.92	483754.47	16455.85	766.3	False	13C5-PFHxA	494695.74	1250.00	PFHxA	0.064	0.073	✓
PFHpA_1	363.0 / 319.0	2.32	5896674.78	13210.23	644.9	False	13C4-PFHpA	565559.36	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	2.32	120095.95	14117.02	887.8	False	13C4-PFHpA	565559.36	1250.00	PFHpA	0.020	0.021	✓
PFHxS_1	399.0 / 80.0	2.34	14661357.45	41504.90	1252.5	False	13C3-PFHxS	112092.32	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	2.34	4048648.15	39792.87	2387.6	False	13C3-PFHxS	112092.32	1182.50	PFHxS	0.276	0.293	✓
PFOA_1	413.0 / 369.0	2.71	7653315.59	17168.94	853.6	False	13C8-PFOA	543058.24	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.71	591194.34	18308.18	1179.6	False	13C8-PFOA	543058.24	1222.50	PFOA	0.077	0.068	✓
PFNA_1	463.0 / 419.0	3.08	5569384.88	13257.62	1259.6	False	13C9-PFNA	477728.78	1250.00	PFNA			
PFNA_2	463.0 / 219.0	3.09	1724024.74	14211.15	1760.2	False	13C9-PFNA	477728.78	1250.00	PFNA	0.310	0.292	✓
PFOS_1	499.0 / 80.0	3.04	12436524.71	31645.70	1308.2	False	13C8-PFOS	97557.38	1195.00	PFOS			
PFOS_2	499.0 / 99.0	3.08	1924064.62	27001.59	2791.3	False	13C8-PFOS	97557.38	1195.00	PFOS	0.155	0.189	✓
PFDA_1	513.0 / 469.0	3.43	4355080.19	10852.36	1542.5	False	13C6-PFDA	454429.61	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.43	205888.08	11541.43	2200.3	False	13C6-PFDA	454429.61	1250.00	PFDA	0.047	0.042	✓
PFUnA_1	563.0 / 519.0	3.73	3735188.94	10692.37	2299.0	False	13C7-PFUnA	421898.11	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.73	201960.71	10865.01	1627.7	False	13C7-PFUnA	421898.11	1250.00	PFUnA	0.054	0.052	✓
PFDoA_1	613.0 / 569.0	4.00	3215041.38	11692.80	3543.7	False	13C2-PFDoA	346048.97	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	4.00	525829.38	11757.45	4425.6	False	13C2-PFDoA	346048.97	1250.00	PFDoA	0.164	0.159	✓
PFTTrDA_1	663.0 / 619.0	4.25	1751573.80	33389.10	4139.9	False	13C2-PFTTeDA	90564.74	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.24	125231.33	33564.06	1635.1	False	13C2-PFTTeDA	90564.74	1250.00	PFTTrDA	0.071	0.068	✓
PFTTeDA_1	713.0 / 669.0	4.46	860915.01	11948.40	4478.5	False	13C2-PFTTeDA	90564.74	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	4.46	50425.47	12146.37	2442.0	False	13C2-PFTTeDA	90564.74	1250.00	PFTTeDA	0.059	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.58	828762.45	13291.73	3659.1	False	d3-MeFOSAA	80807.82	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.58	529324.44	13139.08	2177.7	False	d3-MeFOSAA	80807.82	1250.00	NMeFOSAA	0.639	0.651	✓
NEtFOSAA_1	584.0 / 419.0	3.73	787440.24	13001.51	4201.2	False	d5-EtFOSAA	80029.71	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.73	48417.93	12776.11	5039.9	False	d5-EtFOSAA	80029.71	1250.00	NEtFOSAA	0.061	0.063	✓
HFPO-DA_1	285.0 / 169.0	2.03	3053747.31	11887.17	3917.0	False	13C3-HFPO-DA	304023.73	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	2.03	77508.87	12203.82	2307.0	False	13C3-HFPO-DA	304023.73	1250.00	HFPO-DA	0.025	0.028	✓
ADONA_1	377.0 / 251.0	2.35	10165033.64	13088.30	6210.5	False	13C3-HFPO-DA	304023.73	1250.00	ADONA			
ADONA_2	377.0 / 85.0	2.35	122101.36	11951.86	1433.7	False	13C3-HFPO-DA	304023.73	1250.00	ADONA	0.012	0.012	✓
9CI-PF3ONS_1	531.0 / 351.0	3.26	8435848.94	10326.51	4575.3	False	13C8-PFOA	543058.24	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	3.26	73888.20	10108.45	943.2	False	13C8-PFOA	543058.24	1222.50	9CI-PF3ONS	0.009	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.86	4886085.98	6680.66	6522.7	False	13C8-PFOA	543058.24	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	543058.24	1222.50	11Cl-PF3OUdS	N/A	0.005	

Sample Name	G1707-FS(0)	Injection Vial	8
Sample ID	CBD-AOA-MW15-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 12:24:36 PM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	4.00	188588.34	477.58	5347.1	False	13C2-PFDA	463993.61	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.58	62466.33	611.53	771.1	False	13C4-PFOS	94222.42	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.73	68831.68	613.36	1301.0	False	13C4-PFOS	94222.42	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.92	468816.33	1201.80	1597.1	False	13C2-PFOA	536162.48	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.31	476174.35	1096.96	2333.1	False	13C2-PFOA	536162.48	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.70	458373.45	1049.10	3455.6	False	13C2-PFOA	536162.48	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.08	460236.33	1108.04	2381.2	False	13C2-PFOA	536162.48	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.42	415516.07	1077.23	3708.9	False	13C2-PFDA	463993.61	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.73	335764.64	813.05	4206.8	False	13C2-PFDA	463993.61	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.46	41037.98	79.06	2679.2	False	13C2-PFDA	463993.61	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.59	105323.22	1183.43	1745.6	False	13C4-PFOS	94222.42	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.33	81767.45	936.71	974.7	False	13C4-PFOS	94222.42	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.07	78407.63	976.18	1011.9	False	13C4-PFOS	94222.42	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.03	283435.80	1128.01	1936.8	False	13C2-PFOA	536162.48	1250.00		N/A	N/A	✓

Sample Name	G1708-FS(0)	Injection Vial	9
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 12:35:27 PM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	4.00	271079.84	593.71	6516.0	False	13C2-PFDA	536500.71	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.58	77546.10	733.43	1424.7	False	13C4-PFOS	97527.17	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.73	82626.09	711.33	1132.7	False	13C4-PFOS	97527.17	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.92	495502.60	1040.70	1413.1	False	13C2-PFOA	654404.48	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.31	564495.80	1065.45	2695.0	False	13C2-PFOA	654404.48	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.70	526165.34	986.66	3750.0	False	13C2-PFOA	654404.48	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.07	474565.98	936.10	3129.5	False	13C2-PFOA	654404.48	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.42	419130.28	939.74	4454.2	False	13C2-PFDA	536500.71	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.72	371746.85	778.52	4089.9	False	13C2-PFDA	536500.71	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.46	51585.80	85.95	3479.2	False	13C2-PFDA	536500.71	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.59	107914.86	1171.46	1387.7	False	13C4-PFOS	97527.17	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.33	101458.21	1122.90	1091.8	False	13C4-PFOS	97527.17	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.07	88823.42	1068.38	864.9	False	13C4-PFOS	97527.17	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.03	298954.44	974.80	2301.6	False	13C2-PFOA	654404.48	1250.00		N/A	N/A	✓

Sample Name	G1708MS-FS(0)	Injection Vial	10
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 12:46:18 PM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	4.00	522014.72	1032.26	6808.5	False	13C2-PFDA	594212.56	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.58	125422.44	856.08	1364.6	False	13C4-PFOS	135140.04	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.73	110561.66	686.91	1357.5	False	13C4-PFOS	135140.04	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.92	562635.94	1010.04	1766.2	False	13C2-PFOA	765622.04	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.31	657023.43	1059.95	2782.9	False	13C2-PFOA	765622.04	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.70	651061.23	1043.52	3435.8	False	13C2-PFOA	765622.04	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.07	624777.57	1053.37	2494.1	False	13C2-PFOA	765622.04	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.42	593887.58	1202.25	2697.1	False	13C2-PFDA	594212.56	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.72	510781.11	965.80	4321.6	False	13C2-PFDA	594212.56	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.45	233484.97	351.24	10227.6	False	13C2-PFDA	594212.56	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.59	131502.98	1030.21	1800.2	False	13C4-PFOS	135140.04	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.33	127652.42	1019.59	1428.0	False	13C4-PFOS	135140.04	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.07	116760.56	1013.53	1084.4	False	13C4-PFOS	135140.04	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.03	367308.04	1023.70	2426.2	False	13C2-PFOA	765622.04	1250.00		N/A	N/A	✓

Sample Name	G1708MSD-FS(0)	Injection Vial	11
Sample ID	CBD-AOA-MW16-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	11/9/2020 12:57:12 PM	Data File	AC_11092020_5-369.wiff
Acquisition Method	5-0369.dam	Result Table	20-1310_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	S/N Ratio	Modified	IS	IS Area	IS Conc. (ng/L)	Ratio Group	Ion Ratio	Expected Ion Ratio	Ratio OK
13C2-PFDoA	615.0 / 570.0	4.00	346048.97	836.16	8002.6	False	13C2-PFDA	486288.89	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.57	81389.09	836.81	934.6	False	13C4-PFOS	89714.16	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.73	80253.77	751.07	1271.6	False	13C4-PFOS	89714.16	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.91	494695.74	1127.71	1759.7	False	13C2-PFOA	602930.09	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	2.31	565559.36	1158.59	2371.9	False	13C2-PFOA	602930.09	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.70	543058.24	1105.28	2844.1	False	13C2-PFOA	602930.09	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	3.07	477728.78	1022.79	2688.6	False	13C2-PFOA	602930.09	1250.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.41	454429.61	1124.10	4519.8	False	13C2-PFDA	486288.89	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.72	421898.11	974.78	4285.6	False	13C2-PFDA	486288.89	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.45	90564.74	166.47	5979.2	False	13C2-PFDA	486288.89	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.58	108720.43	1282.99	1385.0	False	13C4-PFOS	89714.16	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	2.32	112092.32	1348.64	1292.6	False	13C4-PFOS	89714.16	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	3.07	97557.38	1275.63	1089.0	False	13C4-PFOS	89714.16	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	2.03	304023.73	1075.96	1810.8	False	13C2-PFOA	602930.09	1250.00		N/A	N/A	✓

Leachate_Date	Leachate_Time	Extraction_Date	Extraction_Time	Analysis_Date	Analysis_Time	Lab_Sample_ID	Dilution	Run_Number	PERCENT_MOISTURE	PERCENT_LIPID	Chem_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_Qualifier	Final_Flag
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-244	1.5	1.5	NG L	U	U	U
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			Perfluoroheptanoic Acid (PFHpA)	375-85-9	1	1	NG L	U	U	U
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			Perfluorooctanoic Acid (PFOA)	335-67-1	1.5	1.5	NG L	U	U	U
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			Perfluorononanoic Acid (PFNA)	375-95-1	1	1	NG L	U	U	U
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2	0.5	0.5	NG L	U	U	U
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8	0.5	0.5	NG L	U	U	U
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1	0.5	0.5	NG L	U	U	U
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			Perfluorotridecanoic Acid (PFTeDA)	72629-94-8	0.5	0.5	NG L	U	U	U
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7	2	2	NG L	U	U	U
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	1	1	NG L	U	U	U
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	1	1	NG L	U	U	U
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.5	0.5	NG L	U	U	U
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.4	0.4	NG L	U	U	U
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	1	1	NG L	U	U	U
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	13252-13-6	0.5	0.5	NG L	U	U	U
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			4,8-dioxo-3H-perfluorononanoic acid (ADONA)	919005-14-4	1	1	NG L	U	U	U
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			11-chloroicosafuoro-3-oxadecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	1	1	NG L	U	U	U
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	0.5	0.5	NG L	U	U	U
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			13C5-PFHxA	BDO-2217	106	106			PCT_REC	
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			13C4-PFHpA	BDO-2218	108	108			PCT_REC	
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			13C8-PFOA	BDO-2219	105	105			PCT_REC	
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			13C9-PFNA	BDO-2221	96	96			PCT_REC	
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			13C6-PFDA	BDO-2222	97	97			PCT_REC	
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			13C7-PFUnA	BDO-2223	93	93			PCT_REC	
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			13C2-PFDoA	BDO-2112	94	94			PCT_REC	
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			13C2-PFTeDA	BDO-2224	81	81			PCT_REC	
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			d3-MeFOSAA	BDO-1838	72	72			PCT_REC	
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			d5-EtFOSAA	BDO-1839	79	79			PCT_REC	
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			13C3-PFBS	BDO-2226	108	108			PCT_REC	
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			13C3-PFHxS	BDO-2227	101	101			PCT_REC	
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			13C8-PFOS	BDO-2228	96	96			PCT_REC	
		20201022	10:27:00	20201106	19:29:50	DA918PB-FS	1	1			13C3-HFPO-DA	BDO-2276	97	97			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-244	89	89			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			Perfluoroheptanoic Acid (PFHpA)	375-85-9	86	86			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			Perfluorooctanoic Acid (PFOA)	335-67-1	91	91			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			Perfluorononanoic Acid (PFNA)	375-95-1	87	87			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2	85	85			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8	90	90			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1	86	86			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			Perfluorotridecanoic Acid (PFTeDA)	72629-94-8	102	102			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7	93	93			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	101	101			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	93	93			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	96	96			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	109	109			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	90	90			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	13252-13-6	92	92			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			4,8-dioxo-3H-perfluorononanoic acid (ADONA)	919005-14-4	96	96			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			11-chloroicosafuoro-3-oxadecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	92	92			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	82	82			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			13C5-PFHxA	BDO-2217	97	97			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			13C4-PFHpA	BDO-2218	104	104			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			13C8-PFOA	BDO-2219	97	97			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			13C9-PFNA	BDO-2221	103	103			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			13C6-PFDA	BDO-2222	101	101			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			13C7-PFUnA	BDO-2223	88	88			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			13C2-PFDoA	BDO-2112	102	102			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			13C2-PFTeDA	BDO-2224	80	80			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			d3-MeFOSAA	BDO-1838	74	74			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			d5-EtFOSAA	BDO-1839	71	71			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			13C3-PFBS	BDO-2226	105	105			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			13C3-PFHxS	BDO-2227	101	101			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			13C8-PFOS	BDO-2228	98	98			PCT_REC	
		20201022	10:27:00	20201106	19:40:42	DA919LCS-FS	1	1			13C3-HFPO-DA	BDO-2276	100	100			PCT_REC	
		20201022	10:27:00	20201106	20:13:23	G1707-FS	12.5	5			Perfluorohexanoic Acid (PFHxA)	307-244	149	149			NG L	D
		20201022	10:27:00	20201106	20:02:29	G1707-FS	5	5			Perfluoroheptanoic Acid (PFHpA)	375-85-9	86.7	86.7			NG L	D
		20201022	10:27:00	20201106	20:13:23	G1707-FS	12.5	5			Perfluorooctanoic Acid (PFOA)	335-67-1	431	431			NG L	D
		20201022	10:27:00	20201106	19:51:36	G1707-FS	1	1			Perfluorononanoic Acid (PFNA)	375-95-1	46.3	46.3			NG L	U
		20201022	10:27:00	20201106	19:51:36	G1707-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2	0.48	0.48			NG L	U
		20201022	10:27:00	20201106	19:51:36	G1707-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8	0.48	0.48			NG L	U
		20201022	10:27:00	20201106	19:51:36	G1707-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1	0.48	0.48			NG L	U
		20201022	10:27:00	20201106	19:51:36	G1707-FS	1	1			Perfluorotridecanoic Acid (PFTeDA)	72629-94-8	0.48	0.48			NG L	U
		20201022	10:27:00	20201106	19:51:36	G1707-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7	1.92	1.92			NG L	U
		20201022	10:27:00	20201106	19:51:36	G1707-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	0.96	0.96			NG L	U
		20201022	10:27:00	20201106	19:51:36	G1707-FS	1	1										

Leachate_Date	Leachate_Time	Extraction_Date	Extraction_Time	Analysis_Date	Analysis_Time	Lab_Sample_ID	Dilution	Run_Number	PERCENT_MOISTURE	PERCENT_LIPID	Chem_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_Qualifier	Final_Flag
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	22	22	NG L			
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1	6.91	6.91	NG L			
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2	0.48	0.48	NG L	U	U	U
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8	0.48	0.48	NG L	U	U	U
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1	0.48	0.48	NG L	U	U	U
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	0.48	0.48	NG L	U	U	U
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			Perfluorotetradecanoic Acid (PFTEdA)	376-06-7	1.92	1.92	NG L	U	U	U
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	0.96	0.96	NG L	U	U	U
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	0.96	0.96	NG L	U	U	U
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	9.89	9.89	NG L			
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	118	118	NG L			
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	92	92	NG L			
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	13252-13-6	0.48	0.48	NG L	U	U	U
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			4,8-dioxo-3H-perfluorononanoic acid (ADONA)	919005-14-0	0.96	0.96	NG L	U	U	U
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			11-chloroicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	0.96	0.96	NG L	U	U	U
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	0.48	0.48	NG L	U	U	U
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			13C5-PFHxA	BDO-2217	81	81	PCT REC			
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			13C4-PFHpA	BDO-2218	82	82	PCT REC			
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			13C8-PFOA	BDO-2219	78	78	PCT REC			
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			13C9-PFNA	BDO-2221	75	75	PCT REC			
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			13C6-PFDA	BDO-2222	74	74	PCT REC			
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			13C7-PFUnA	BDO-2223	68	68	PCT REC			
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			13C2-PFDoA	BDO-2112	42	42	PCT REC	N		
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			13C2-PFTEdA	BDO-2224	11	11	PCT REC	N		
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			d3-MeFOSAA	BDO-1838	52	52	PCT_REC			
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			d5-EtFOSAA	BDO-1839	56	56	PCT_REC			
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			13C3-PFBS	BDO-2226	94	94	PCT_REC			
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			13C3-PFHxS	BDO-2227	91	91	PCT_REC			
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			13C8-PFOS	BDO-2228	85	85	PCT_REC			
		20201022	10:27:00	20201106	20:24:17	G1708-FS	1	1			13C3-HFPO-DA	BDO-2276	77	77	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-24-4	97	97	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	95	95	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	89	89	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1	92	92	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2	99	99	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8	92	92	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1	93	93	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	214	214	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			Perfluorotetradecanoic Acid (PFTEdA)	376-06-7	100	100	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	97	97	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	86	86	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	98	98	PCT_REC			
		20201022	10:27:00	20201109	13:18:55	G1708MSD-FS	5	2			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0	0	PCT_REC			
		20201022	10:27:00	20201109	13:18:55	G1708MSD-FS	5	2			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0	0	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	13252-13-6	97	97	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			4,8-dioxo-3H-perfluorononanoic acid (ADONA)	919005-14-4	110	110	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			11-chloroicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	88	88	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	61	61	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			13C5-PFHxA	BDO-2217	88	88	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			13C4-PFHpA	BDO-2218	90	90	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			13C8-PFOA	BDO-2219	92	92	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			13C9-PFNA	BDO-2221	93	93	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			13C6-PFDA	BDO-2222	92	92	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			13C7-PFUnA	BDO-2223	83	83	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			13C2-PFDoA	BDO-2112	72	72	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			13C2-PFTEdA	BDO-2224	16	16	PCT_REC	N		
		20201022	10:27:00	20201109	13:18:55	G1708MSD-FS	5	2			d3-MeFOSAA	BDO-1838	72	72	PCT_REC			
		20201022	10:27:00	20201109	13:18:55	G1708MSD-FS	5	2			d5-EtFOSAA	BDO-1839	76	76	PCT_REC			
		20201022	10:27:00	20201109	13:18:55	G1708MSD-FS	5	2			13C3-PFBS	BDO-2226	108	108	PCT_REC			
		20201022	10:27:00	20201109	13:18:55	G1708MSD-FS	5	2			13C3-PFHxS	BDO-2227	97	97	PCT_REC			
		20201022	10:27:00	20201109	13:18:55	G1708MSD-FS	5	2			13C8-PFOS	BDO-2228	88	88	PCT_REC			
		20201022	10:27:00	20201106	20:46:05	G1708MSD-FS	1	1			13C3-HFPO-DA	BDO-2276	88	88	PCT_REC			
		20201022	10:27:00	20201106	20:35:11	G1708MS-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-24-4	101	101	PCT_REC			
		20201022	10:27:00	20201106	20:35:11	G1708MS-FS	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	101	101	PCT_REC			
		20201022	10:27:00	20201106	20:35:11	G1708MS-FS	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	99	99	PCT_REC			
		20201022	10:27:00	20201106	20:35:11	G1708MS-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1	93	93	PCT_REC			
		20201022	10:27:00	20201106	20:35:11	G1708MS-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2	95	95	PCT_REC			
		20201022	10:27:00	20201106	20:35:11	G1708MS-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8	92	92	PCT_REC			
		20201022	10:27:00	20201106	20:35:11	G1708MS-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1	99	99	PCT_REC			
		20201022	10:27:00	20201106	20:35:11	G1708MS-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	191	191	PCT_REC			
		20201022	10:27:00	20201106	20:35:11	G1708MS-FS	1	1			Perfluorotetradecanoic Acid (PFTEdA)	376-06-7	104	104	PCT_REC			
		20201022	10:27:00	20201106	20:35:11	G1708MS-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	89	89	PCT_REC			
		20201022	10:27:00	20201106	20:35:11	G1708MS-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	91	91	PCT_REC			
		20201022	10:27:00	20201106	20:35:11	G1708MS-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	113	113	PCT_REC			
		20201022	10:27:00	20201109	13:08:03	G1708MS-FS	5	2			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	21	21	PCT_REC			

Leachate_Date	Leachate_Time	Extraction_Date	Extraction_Time	Analysis_Date	Analysis_Time	Lab_Sample_ID	Dilution	Run_Number	PERCENT_MOISTURE	PERCENT_LIPID	Chem_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_Qualifier	Final_Flag
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2	0.49	0.49	NG L	U	U	U
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8	0.49	0.49	NG L	U	U	U
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1	0.49	0.49	NG L	U	U	U
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			Perfluorotridecanoic Acid (PFTriDA)	72629-94-8	0.17	0.17	NG L	J	J	J
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7	1.96	1.96	NG L	U	U	U
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	0.98	0.98	NG L	U	U	U
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	0.98	0.98	NG L	U	U	U
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.49	0.49	NG L	U	U	U
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.39	0.39	NG L	U	U	U
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.98	0.98	NG L	U	U	U
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			Perfluoro-2-methyl-3-oxahexanoic acid (HPPO-DA)	13252-13-6	0.49	0.49	NG L	U	U	U
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	0.98	0.98	NG L	U	U	U
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			11-chloroicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF30UdS)	763051-92-9	0.98	0.98	NG L	U	U	U
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	0.49	0.49	NG L	U	U	U
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			13C5-PFHA	BDO-2217	99			PCT_REC		
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			13C4-PFHpA	BDO-2218	101	101		PCT_REC		
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			13C8-PFOA	BDO-2219	96	96		PCT_REC		
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			13C9-PFNA	BDO-2221	97	97		PCT_REC		
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			13C6-PFDA	BDO-2222	85	85		PCT_REC		
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			13C7-PFUnA	BDO-2223	83	83		PCT_REC		
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			13C2-PFDoA	BDO-2212	83	83		PCT_REC		
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			13C2-PFTeDA	BDO-2224	79	79		PCT_REC		
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			d3-MeFOSAA	BDO-1838	75	75		PCT_REC		
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			d5-EtFOSAA	BDO-1839	73	73		PCT_REC		
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			13C3-PFBS	BDO-2226	95	95		PCT_REC		
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			13C3-PFHxS	BDO-2227	98	98		PCT_REC		
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			13C8-PFOS	BDO-2228	96	96		PCT_REC		
		20201022	10:27:00	20201106	20:56:59	G1709-FS	1	1			13C3-HFPO-DA	BDO-2276	92	92		PCT_REC		

**DATA VALIDATION SUMMARY REPORT
NAVAL RESEARCH LABORATORY, MARYLAND**

Client: CH2M HILL, Inc., Herndon, Virginia
SDG: 20-1310
Laboratory: Battelle Norwell Operations, Norwell, Massachusetts
Site: Naval Research Laboratory (NRL), Chesapeake Beach, Maryland
Date: January 10, 2021

PFAS			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	CBD-AOA-MW15-1020	G1707-FS	Water
2	CBD-AOA-MW16-1020	G1708-FS	Water
2MS	CBD-AOA-MW16-1020MS	G1708-FSMS	Water
2MSD	CBD-AOA-MW16-1020MSD	G1708-FSMSD	Water
3	CBD-FB04-101620	G1709-FS	Water

A Stage 2B/4 data validation was performed on the analytical data for two water samples and one aqueous field blank sample collected on October 16, 2020 by CH2M HILL at the Naval Research Laboratory Site 10 Fire Testing Area in Maryland. The samples were analyzed under the Analysis of Poly and Perfluoroalkyl Substances in Environmental Samples by Liquid Chromatography and Tandem Mass Spectrometry (LC-MS/MS).

Specific method references are as follows:

Analysis
PFAS

Method References
Battelle SOP 5-369-08

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Final Sampling and Analysis Plan Site 10 Fire Testing Area Site Inspection, Naval Research Laboratory, August 2020, and the DoD Final General Data Validation Guidelines, November 2019, including the following Module:

- The Department of Defense (DoD) Data Validation Guidelines Module 3, Data Validation Procedure for Per- and Polyfluoroalkyl Substances Analysis by Quality Systems Manual for Environmental Laboratories (QSM) Table B-15, May 2020;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Organics

- Date Completeness, Case Narrative & Custody Documentation

- Holding times
- Liquid Chromatography/Mass Spectrometry (LC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Surrogate Spike recoveries
- Laboratory Fortified Blank (LFB)
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Field Duplicate sample precision

A full (Stage 2B/4) data validation was performed with this review including a recalculation of 10% of the detected results in the samples.

Data Usability Assessment

There were no serious deficiencies of data.

The data are acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedances of QC criteria.

Per- and Polyfluoroalkyl Substances (PFAS)

Data Completeness, Case Narrative & Custody Documentation

- The case narrative and chain-of-custody documentation were included in the data package as required. All criteria were met.

Holding Times

- All samples were extracted within 14 days for water samples and analyzed within 28 days.

LC/MS Tuning

- All criteria were met.

Initial Calibration

- All relative standard deviation (%RSD) and/or correlation coefficients criteria were met.

Continuing Calibration

- All percent recovery (%R) criteria were met.

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- Field QC sample results are summarized below.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
CBD-FB04-101620	PFTTrDA	0.179	None	All Samples ND
CBD-EB01-101420-GW	None - ND	-	-	-

Surrogate Spike Recoveries

- Several samples exhibited surrogates outside of QC limits. See summary pages behind Form Is for specifics. All associated compounds were qualified estimated (J/UJ).

Laboratory Fortified Blank (LFB)

- The LFB samples exhibited acceptable percent recoveries (%R).

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable percent recoveries (%R) and RPD values except for the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier
2	PFTTrDA	191%/214%/OK	None - Samples ND
	PFHxS	21%/0%/200	J
	PFOS	21%/0%/200	J

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several compounds were analyzed at a dilution due to high concentrations of target compounds. The reporting limits were adjusted accordingly. No action was required.

Field Duplicate Sample Precision

- Field duplicate samples were not collected.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver
Nancy Weaver
Senior Chemist

Dated: 1/14/21

Qualifier	Definition
U	The analyte was not detected and was 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 was an estimated value with an unknown bias.
J+	The result was an estimated quantity, but the result may be biased high.
J-	The result was an estimated quantity, but the result may be biased low.
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a "tentative identification."
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value was the estimated concentration in the sample.
UJ	The analyte was not detected and was reported as less than the LOD or as defined by the customer. However, the associated numerical value is approximate.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.



Project Client: CH2M
 Project Name: CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10
 Project No.: 100142218

Client ID CBD-AOA-MW15-1020

Battelle ID G1707-FS
 Sample Type SA
 Collection Date 10/16/2020
 Extraction Date 10/22/2020
 Analytical Instrument Sciex 5500 (AC) LC/MS/MS
 % Moisture NA
 Matrix GW
 Sample Size 0.260
 Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	Extract ID	DF	Analysis Date	DL	LOD	LOQ
PFHxA	307-24-4	149	G1707-FS-D(5)	12.500	11/6/2020	6.33	18.0	60.1
PFHpA	375-85-9	86.7	G1707-FS-D(3)	5.000	11/6/2020	1.26	4.81	24.0
PFOA	335-67-1	431	G1707-FS-D(5)	12.500	11/6/2020	6.14	18.0	60.1
PFNA	375-95-1	46.3	G1707-FS(0)	1.000	11/6/2020	0.297	0.962	4.81
PFDA	335-76-2	0.481 U	G1707-FS(0)	1.000	11/6/2020	0.137	0.481	4.81
PFUnA	2058-94-8	0.481 U	G1707-FS(0)	1.000	11/6/2020	0.211	0.481	4.81
PFDoA	307-55-1	0.481 <i>UJ</i>	G1707-FS(0)	1.000	11/6/2020	0.185	0.481	4.81 <i>SSL</i>
PFTrDA	72629-94-8	0.481 U	G1707-FS(0)	1.000	11/6/2020	0.148	0.481	4.81
PFTeDA	376-06-7	1.92 <i>UJ</i>	G1707-FS(0)	1.000	11/6/2020	0.705	1.92	4.81 <i>SSL</i>
NMeFOSAA	2355-31-9	0.962 U	G1707-FS(0)	1.000	11/6/2020	0.337	0.962	4.81
NEtFOSAA	2991-50-6	0.962 <i>UJ</i>	G1707-FS(0)	1.000	11/6/2020	0.481	0.962	4.81 <i>SSL</i>
PFBS	375-73-5	30.2	G1707-FS(0)	1.000	11/6/2020	0.138	0.481	4.81
PFHxS	355-46-4	901	G1707-FS-D(5)	12.500	11/6/2020	1.35	4.81	60.1
PFOS	1763-23-1	34.5	G1707-FS(0)	1.000	11/6/2020	0.420	0.962	4.81
HFPO-DA	13252-13-6	0.481 U	G1707-FS(0)	1.000	11/6/2020	0.238	0.481	4.81
Adona	919005-14-4	0.962 U	G1707-FS(0)	1.000	11/6/2020	0.255	0.962	4.81
9Cl-PF3ONS	756426-58-1	0.481 U	G1707-FS(0)	1.000	11/6/2020	0.258	0.481	4.81
11Cl-PF3OUdS	763051-92-9	0.962 U	G1707-FS(0)	1.000	11/6/2020	0.222	0.962	4.81

MW110121

Analyzed by: Griffith, Lauren
 Printed: 11/16/2020



2

Project Client: CH2M
 Project Name: CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10
 Project No.: 100142218

Client ID CBD-AOA-MW16-1020

Battelle ID G1708-FS
 Sample Type SA
 Collection Date 10/16/2020
 Extraction Date 10/22/2020
 Analytical Instrument Sciex 5500 (AC) LC/MS/MS
 % Moisture NA
 Matrix GW
 Sample Size 0.260
 Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	Extract ID	DF	Analysis Date	DL	LOD	LOQ
PFHxA	307-24-4	27.6	G1708-FS(0)	1.000	11/6/2020	0.507	1.44	4.81
PFHpA	375-85-9	9.99	G1708-FS(0)	1.000	11/6/2020	0.253	0.962	4.81
PFOA	335-67-1	22.0	G1708-FS(0)	1.000	11/6/2020	0.491	1.44	4.81
PFNA	375-95-1	6.91	G1708-FS(0)	1.000	11/6/2020	0.297	0.962	4.81
PFDA	335-76-2	0.481 U	G1708-FS(0)	1.000	11/6/2020	0.137	0.481	4.81
PFUnA	2058-94-8	0.481 U	G1708-FS(0)	1.000	11/6/2020	0.211	0.481	4.81
PFDoA	307-55-1	0.481 U	G1708-FS(0)	1.000	11/6/2020	0.185	0.481	4.81
PFTDA	72629-94-8	0.481 U	G1708-FS(0)	1.000	11/6/2020	0.148	0.481	4.81
PFTeDA	376-06-7	1.92 U	G1708-FS(0)	1.000	11/6/2020	0.705	1.92	4.81
NMeFOSAA	2355-31-9	0.962 U	G1708-FS(0)	1.000	11/6/2020	0.337	0.962	4.81
NEtFOSAA	2991-50-6	0.962 U	G1708-FS(0)	1.000	11/6/2020	0.481	0.962	4.81
PFBS	375-73-5	9.89	G1708-FS(0)	1.000	11/6/2020	0.138	0.481	4.81
PFHxS	355-46-4	118 J	G1708-FS(0)	1.000	11/6/2020	0.108	0.385	4.81
PFOS	1763-23-1	92.0 J	G1708-FS(0)	1.000	11/6/2020	0.420	0.962	4.81
HFPO-DA	13252-13-6	0.481 U	G1708-FS(0)	1.000	11/6/2020	0.238	0.481	4.81
Adona	919005-14-4	0.962 U	G1708-FS(0)	1.000	11/6/2020	0.255	0.962	4.81
9CI-PF3ONS	756426-58-1	0.481 U	G1708-FS(0)	1.000	11/6/2020	0.258	0.481	4.81
11CI-PF3OUds	763051-92-9	0.962 U	G1708-FS(0)	1.000	11/6/2020	0.222	0.962	4.81

SSL

SSL

MSL

MSL

MW110121
 Analyzed by: Griffith, Lauren
 Printed: 11/16/2020



Project Client: CH2M
 Project Name: CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10
 Project No.: 100142218

Client ID CBD-AOA-MW16-1020

Battelle ID G1708-FS
 Sample Type SA
 Collection Date 10/16/2020
 Extraction Date 10/22/2020
 Analytical Instrument Sciex 5500 (AC) LC/MS/MS

<i>Surrogate Recoveries (%)</i>	<i>Recovery</i>	<i>Extract ID</i>	<i>Analysis Date</i>
13C5-PFHxA	81	G1708-FS(0)	11/6/2020
13C4-PFHpA	82	G1708-FS(0)	11/6/2020
13C8-PFOA	78	G1708-FS(0)	11/6/2020
13C9-PFNA	75	G1708-FS(0)	11/6/2020
13C6-PFDA	74	G1708-FS(0)	11/6/2020
13C7-PFUnA	68	G1708-FS(0)	11/6/2020
13C2-PFDoA	42	G1708-FS(0)	11/6/2020
13C2-PFTeDA	11	G1708-FS(0)	11/6/2020
d3-MeFOSAA	52	G1708-FS(0)	11/6/2020
d5-EtFOSAA	56	G1708-FS(0)	11/6/2020
13C3-PFBS	94	G1708-FS(0)	11/6/2020
13C3-PFHxS	91	G1708-FS(0)	11/6/2020
13C8-PFOS	85	G1708-FS(0)	11/6/2020
13C3-HFPD-DA	77	G1708-FS(0)	11/6/2020



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Project Client: CH2M
 Project Name: CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10
 Project No.: 100142218

Client ID CBD-F804-101620

Battelle ID G1709-FS
 Sample Type SA
 Collection Date 10/16/2020
 Extraction Date 10/22/2020
 Analytical Instrument Sciex 5500 (AC) LC/MS/MS
 % Moisture NA
 Matrix AQ
 Sample Size 0.255
 Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	Extract ID	DF	Analysis Date	DL	LOD	LOQ
PFHxA	307-24-4	1.47 U	G1709-FS(0)	1.000	11/6/2020	0.517	1.47	4.90
PFHpA	375-85-9	0.980 U	G1709-FS(0)	1.000	11/6/2020	0.258	0.980	4.90
PFOA	335-67-1	1.47 U	G1709-FS(0)	1.000	11/6/2020	0.501	1.47	4.90
PFNA	375-95-1	0.980 U	G1709-FS(0)	1.000	11/6/2020	0.303	0.980	4.90
PFDA	335-76-2	0.490 U	G1709-FS(0)	1.000	11/6/2020	0.139	0.490	4.90
PFUnA	2058-94-8	0.490 U	G1709-FS(0)	1.000	11/6/2020	0.215	0.490	4.90
PFDoA	307-55-1	0.490 U	G1709-FS(0)	1.000	11/6/2020	0.188	0.490	4.90
PFTrDA	72629-94-8	0.179 J	G1709-FS(0)	1.000	11/6/2020	0.151	0.490	4.90
PFTeDA	376-06-7	1.96 U	G1709-FS(0)	1.000	11/6/2020	0.719	1.96	4.90
NMeFOSAA	2355-31-9	0.980 U	G1709-FS(0)	1.000	11/6/2020	0.343	0.980	4.90
NEtFOSAA	2991-50-6	0.980 U	G1709-FS(0)	1.000	11/6/2020	0.490	0.980	4.90
PFBS	375-73-3	0.490 U	G1709-FS(0)	1.000	11/6/2020	0.141	0.490	4.90
PFHxS	355-46-4	0.392 U	G1709-FS(0)	1.000	11/6/2020	0.110	0.392	4.90
PFOS	1763-23-1	0.980 U	G1709-FS(0)	1.000	11/6/2020	0.428	0.980	4.90
HFPO-DA	13252-13-6	0.490 U	G1709-FS(0)	1.000	11/6/2020	0.243	0.490	4.90
Adona	919005-14-4	0.980 U	G1709-FS(0)	1.000	11/6/2020	0.260	0.980	4.90
9CI-PF3ONS	756426-58-1	0.490 U	G1709-FS(0)	1.000	11/6/2020	0.263	0.490	4.90
11CI-PF3OUds	763051-92-9	0.980 U	G1709-FS(0)	1.000	11/6/2020	0.226	0.980	4.90

NW 11/10/21

Analyzed by: Griffith, Lauren
 Printed: 11/16/2020

LOCATION_NAME	SITE_NAME	INSTALLATION_ID	LOCATION_TYPE	LOCATION_TYPE_DESCRIPTION	SDG	COORD_X	COORD_Y	ANALYTICAL_METHOD_GRP_DESC	SAMPLE_NAME	SAMPLE_MATRIX	SAMPLE_MATRIX_DESC	COLLECT_DATE
		CHESAPEAKE_BEACH_NRL			20-1310			Perfluoroalkyl Compounds	CBD-FB04-101620	WQ	Water for QC samples	16-Oct-20
CBD-AOA-MW15	SITE 00010	CHESAPEAKE_BEACH_NRL	WLM	Monitoring well	20-1310	1446145.1	360471.82	Perfluoroalkyl Compounds	CBD-AOA-MW15-1020	WG	Ground water	16-Oct-20
CBD-AOA-MW16	SITE 00010	CHESAPEAKE_BEACH_NRL	WLM	Monitoring well	20-1310	1446709.55	360086.2	Perfluoroalkyl Compounds	CBD-AOA-MW16-1020	WG	Ground water	16-Oct-20