



**Groundwater Sample Results,
Level 4 Laboratory Report, Electronic Data
Deliverable, Data Validation Report, Sample Location
Report, SDG 20-1305**

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

AQ, GW

Batch 20-1305

Package DP-20-1185

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

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**CTO-4532: NRL Chesapeake Bay Detachment
(NRL-CBD) Site 10
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Submitted to:
CH2M
5701 Cleveland Street
Virginia Beach, VA 23462 USA

NELAP Accreditation Number: E87856 (Florida Department of Health)

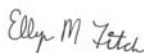
Submitted by:
Battelle Norwell Operations
141 Longwater Drive Suite 202
Norwell, MA 02061

Analyst Approval:



Digitally signed by Denise Schumitz
Date: 2020.11.06 16:21:36 -05'00'

QC Chemist Approval:



Digitally signed by Ellyn M. Fitch
Date: 2020.11.12 20:47:53 -05'00'

Project Manager Approval:



Digitally signed by Jonathan Thorn
Date: 2020.11.13 07:35:14 -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

AQ, GW

Batch 20-1305


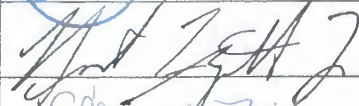






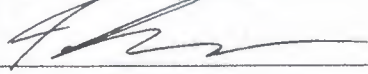





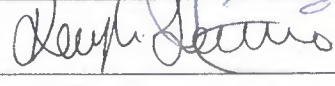
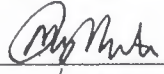
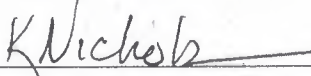

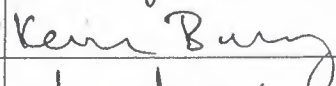

Package DP-20-1185

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.	20
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.	167
5	<i>Analytical Calibrations</i> Analytical Sequence, Analytical Method, Tune Report, Initial Calibration, Pesticide Degradation Report, RF Summary, Calibration Verifications, Independent Calibration Verification Check.	183
6	<i>Analytical Data</i> Raw Data Quantification Reports.	273
7	<i>Chromatograms</i> Sample And Standard Chromatograms.	308
8	<i>Unused Data</i>	396

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Master Signature Page

Name (Printed)	Signature	Initials	Date
Jonathan Thom		JRT	1/9/2020
Robert Lizette, 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: 20-1305
Project/Site: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10
CTO: 4532

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Receipt Date
DA908PB-FS	Procedural Blank	WATER	10/21/2020	10/21/2020
DA909LCS-FS	Laboratory Control Sample	WATER	10/21/2020	10/21/2020
G1696-FS	CBD-HVG-GW10-1020	GW	10/14/2020	10/16/2020
G1697-FS	CBD-HVG-GW09-1020	GW	10/14/2020	10/16/2020
G1698-FS	CBD-EB01-101420-GW	AQ	10/14/2020	10/16/2020
G1699-FS	CBD-AOA-MW10-1020	GW	10/15/2020	10/16/2020
G1700-FS	CBD-BKG-MW03-1020	GW	10/15/2020	10/16/2020
G1701-FS	CBD-SO4-MW01-1020	GW	10/15/2020	10/16/2020
G1702-FS	CBD-SO4-MW01P-1020	GW	10/15/2020	10/16/2020

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	PFTrDA	T		13C2-PFTrDA	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



It can be done

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



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.	N	Review with Project Manager; re-analyze or justify reporting results in the project records.
	Organics Results in the Target is less than 5 times the Original	n	
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.	N	Review with Project Manager; re-analyze or justify reporting results in the project records.
	Organics Results in the Target is less than 5 times the Original	n	
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).	N	Review with Project Manager; re-analyze or justify reporting results in the project records.
	Organics Results in the Target is less than 5 times the MDL	n	
Analytical Duplicate Precision	Organics results less than 30% Relative Percent Difference (RPD). Analyte concentration must be > 5x MDL.	N	Review with Project Manager; re-analyze or justify reporting results in the project records.
	Organics Results in the Original is less than 5 times the MDL	n	



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.

BATTELLEShpNo **SHP-201016-02**

It can be done

Battelle Project No: **100142218****Sample Receipt Form**Approved: Authorized:

Project Number:

Client: Jacobs

Received by: Schumitz, Matt

Date/Time Received: Friday, October 16, 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 1467 1937	Custody Seals	Intact	Intact	Therm_2	1.3	7

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): 1.3 Temperature Blank used Yes No*(Note: If temperature upon receipt differs from required conditions, see sample log comment field)*Samples Acidified: Yes No UnknownInitial 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:

Samples returned in PC-grade jars: Yes No Unknown /Lot No.: Unknown

Storage Location:

Custody: Refrigerator - R0119 (NA)

BDO IDs Assigned: G1696 - G1702

Samples logged in by:

Schumitz, Matt

Date/Time: 10/16/2020 11:00 AM

Approved By:

Approved On:

Authorized By:

Authorized On:



It can be done

ShpNo SHP-201016-02Battelle Project No: 100142218

Sample Receipt Form Details

Approved: Authorized: Project Number: _____ Client: JacobsReceived by: Schumitz, Matt Date/Time Received: Friday, October 16, 2020 11:00 AMNo. of Shipping Containers: 1

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
G1696	CBD-HVG-GW10-1020	10/14/20 15:15	10/16/20 11:20	2	GW	1.3	NA	NA	Yes	R0119 (NA)			
G1697	CBD-HVG-GW09-1020	10/14/20 15:30	10/16/20 11:20	2	GW	1.3	NA	NA	Yes	R0119 (NA)			
G1698	CBD-EB01-101420-GW	10/14/20 15:40	10/16/20 11:21	2	AQ	1.3	NA	NA	Yes	R0119 (NA)			
G1699	CBD-AOA-MW10-1020	10/15/20 10:25	10/16/20 11:21	2	GW	1.3	NA	NA	Yes	R0119 (NA)			
G1700	CBD-BKG-MW03-1020	10/15/20 14:00	10/16/20 11:22	2	GW	1.3	NA	NA	Yes	R0119 (NA)			
G1701	CBD-SO4-MW01-1020	10/15/20 15:25	10/16/20 11:22	2	GW	1.3	NA	NA	Yes	R0119 (NA)			
G1702	CBD-SO4-MW01P-1020	10/15/20 15:30	10/16/20 11:23	2	GW	1.3	NA	NA	Yes	R0119 (NA)			

Total Samples: 7

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

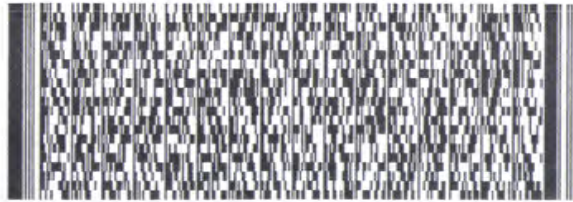
SHIP DATE: 15OCT20
ACTWGT: 50.00 LB
CAD: 103931050/INET4280
DIMS: 16x24x18 IN
BILL THIRD PARTY

TO **ATTN: SAMPLE RECEIVING
BATTELLE
141 LONGWATER DRIVE
SUITE 202
NORWELL MA 02061**

(781) 681-5565
INV
PO

REF 708207CH FIFS
DEPT

56BL2/A27E/B766



FRI - 16 OCT 10:30A
PRIORITY OVERNIGHT

TRK# 7718 1467 1937
0201

EM XPUA

02061
MA-US BOS



*Therm 2
1.3°*

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.

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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-BKG-MW03-1020

Battelle ID G1700-FS
 Sample Type SA
 Collection Date 10/15/2020
 Extraction Date 10/21/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS
 % Moisture NA
 Matrix GW
 Sample Size 0.265
 Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	Extract ID	DF	Analysis Date	DL	LOD	LOQ
PFHxA	307-24-4	1.34 J	G1700-FS(0)	1.000	11/5/2020	0.497	1.42	4.72
PFHpA	375-85-9	1.06 J	G1700-FS(0)	1.000	11/5/2020	0.248	0.943	4.72
PFOA	335-67-1	2.89 J	G1700-FS(0)	1.000	11/5/2020	0.482	1.42	4.72
PFNA	375-95-1	1.26 J	G1700-FS(0)	1.000	11/5/2020	0.292	0.943	4.72
PFDA	335-76-2	0.472 U	G1700-FS(0)	1.000	11/5/2020	0.134	0.472	4.72
PFUnA	2058-94-8	0.472 U	G1700-FS(0)	1.000	11/5/2020	0.207	0.472	4.72
PFDoA	307-55-1	0.472 U	G1700-FS(0)	1.000	11/5/2020	0.181	0.472	4.72
PFTTrDA	72629-94-8	0.472 U	G1700-FS(0)	1.000	11/5/2020	0.145	0.472	4.72
PFTeDA	376-06-7	1.89 U	G1700-FS(0)	1.000	11/5/2020	0.692	1.89	4.72
NMeFOSAA	2355-31-9	0.943 U	G1700-FS(0)	1.000	11/5/2020	0.330	0.943	4.72
NEtFOSAA	2991-50-6	0.943 U	G1700-FS(0)	1.000	11/5/2020	0.472	0.943	4.72
PFBS	375-73-5	1.11 J	G1700-FS(0)	1.000	11/5/2020	0.136	0.472	4.72
PFHxS	355-46-4	9.72	G1700-FS(0)	1.000	11/5/2020	0.106	0.377	4.72
PFOS	1763-23-1	10.6	G1700-FS(0)	1.000	11/5/2020	0.412	0.943	4.72
HFPO-DA	13252-13-6	0.472 U	G1700-FS(0)	1.000	11/5/2020	0.234	0.472	4.72
Adona	919005-14-4	0.943 U	G1700-FS(0)	1.000	11/5/2020	0.250	0.943	4.72
9CI-PF3ONS	756426-58-1	0.472 U	G1700-FS(0)	1.000	11/5/2020	0.253	0.472	4.72
11CI-PF3OUdS	763051-92-9	0.943 U	G1700-FS(0)	1.000	11/5/2020	0.218	0.943	4.72



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 6500+ (AE) 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	0.392 J	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: Schumitz, Denise

Printed: 11/13/2020

Isotope Dilution

L20-1305_Master_369B.xlsm



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 6500+ (AE) LC/MS/MS
% Moisture	NA
Matrix	Water
Sample Size	0.250
Size Unit-Basis	L

Surrogate Recoveries (%)

13C5-PFHxA	103
13C4-PFHpA	106
13C8-PFOA	104
13C9-PFNA	111
13C6-PFDA	100
13C7-PFUnA	102
13C2-PFDoA	101
13C2-PFTeDA	98
d3-MeFOSAA	107
d5-EtFOSAA	105
13C3-PFBS	99
13C3-PFHxS	108
13C8-PFOS	100
13C3-HFPO-DA	87



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_11/06/2020

Sample Type IB

Collection Date NA

Extraction Date NA

Analysis Date 11/06/2020

Analytical Instrument Sciex 6500+ (AE) 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	0.391 J	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: Schumitz, Denise

Printed: 11/13/2020

Isotope Dilution

L20-1305_Master_369B.xlsm



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_11/06/2020
Sample Type	IB
Collection Date	NA
Extraction Date	NA
Analysis Date	11/06/2020
Analytical Instrument	Sciex 6500+ (AE) LC/MS/MS
% Moisture	NA
Matrix	Water
Sample Size	0.250
Size Unit-Basis	L

Surrogate Recoveries (%)

13C5-PFHxA	105
13C4-PFHpA	99
13C8-PFOA	109
13C9-PFNA	101
13C6-PFDA	105
13C7-PFUnA	100
13C2-PFDoA	92
13C2-PFTeDA	97
d3-MeFOSAA	104
d5-EtFOSAA	105
13C3-PFBS	90
13C3-PFHxS	99
13C8-PFOS	94
13C3-HFPO-DA	87



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

Client ID Procedural Blank

Battelle ID DA908PB-FS
 Sample Type PB
 Collection Date 10/21/2020
 Extraction Date 10/21/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS
 % Moisture NA
 Matrix WATER
 Sample Size 0.245
 Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	Extract ID	DF	Analysis Date	DL	LOD	LOQ
PFHxA	307-24-4	1.53 U	DA908PB-FS(0)	1.000	11/5/2020	0.538	1.53	5.10
PFHpA	375-85-9	1.02 U	DA908PB-FS(0)	1.000	11/5/2020	0.268	1.02	5.10
PFOA	335-67-1	1.53 U	DA908PB-FS(0)	1.000	11/5/2020	0.521	1.53	5.10
PFNA	375-95-1	1.02 U	DA908PB-FS(0)	1.000	11/5/2020	0.315	1.02	5.10
PFDA	335-76-2	0.510 U	DA908PB-FS(0)	1.000	11/5/2020	0.145	0.510	5.10
PFUnA	2058-94-8	0.510 U	DA908PB-FS(0)	1.000	11/5/2020	0.223	0.510	5.10
PFDoA	307-55-1	0.510 U	DA908PB-FS(0)	1.000	11/5/2020	0.196	0.510	5.10
PFTTrDA	72629-94-8	0.510 U	DA908PB-FS(0)	1.000	11/5/2020	0.157	0.510	5.10
PFTeDA	376-06-7	2.04 U	DA908PB-FS(0)	1.000	11/5/2020	0.748	2.04	5.10
NMeFOSAA	2355-31-9	1.02 U	DA908PB-FS(0)	1.000	11/5/2020	0.357	1.02	5.10
NEtFOSAA	2991-50-6	1.02 U	DA908PB-FS(0)	1.000	11/5/2020	0.510	1.02	5.10
PFBS	375-73-5	0.510 U	DA908PB-FS(0)	1.000	11/5/2020	0.147	0.510	5.10
PFHxS	355-46-4	0.408 U	DA908PB-FS(0)	1.000	11/5/2020	0.114	0.408	5.10
PFOS	1763-23-1	1.02 U	DA908PB-FS(0)	1.000	11/5/2020	0.446	1.02	5.10
HFPO-DA	13252-13-6	0.510 U	DA908PB-FS(0)	1.000	11/5/2020	0.253	0.510	5.10
Adona	919005-14-4	1.02 U	DA908PB-FS(0)	1.000	11/5/2020	0.270	1.02	5.10
9Cl-PF3ONS	756426-58-1	0.510 U	DA908PB-FS(0)	1.000	11/5/2020	0.273	0.510	5.10
11Cl-PF3OUdS	763051-92-9	1.02 U	DA908PB-FS(0)	1.000	11/5/2020	0.236	1.02	5.10



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 DA909LCS-FS
 Sample Type LCS
 Collection Date 10/21/2020
 Extraction Date 10/21/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS
 % Moisture NA
 Matrix WATER
 Sample Size 0.245
 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	43.9	DA909LCS-FS(0)	1.000	11/5/2020	41.2	107		72	129
PFHpA	375-85-9	34.1	DA909LCS-FS(0)	1.000	11/5/2020	40.8	84		72	130
PFOA	335-67-1	36.9	DA909LCS-FS(0)	1.000	11/5/2020	40.8	90		71	133
PFNA	375-95-1	32.7	DA909LCS-FS(0)	1.000	11/5/2020	40.8	80		69	130
PFDA	335-76-2	40.0	DA909LCS-FS(0)	1.000	11/5/2020	40.8	98		71	129
PFUnA	2058-94-8	40.9	DA909LCS-FS(0)	1.000	11/5/2020	40.8	100		69	133
PFDoA	307-55-1	38.4	DA909LCS-FS(0)	1.000	11/5/2020	40.8	94		72	134
PFTTrDA	72629-94-8	39.7	DA909LCS-FS(0)	1.000	11/5/2020	40.8	97		65	144
PFTeDA	376-06-7	41.9	DA909LCS-FS(0)	1.000	11/5/2020	40.8	103		71	132
NMeFOSAA	2355-31-9	40.8	DA909LCS-FS(0)	1.000	11/5/2020	40.8	100		65	136
NEtFOSAA	2991-50-6	41.3	DA909LCS-FS(0)	1.000	11/5/2020	40.8	101		61	135
PFBS	375-73-5	40.6	DA909LCS-FS(0)	1.000	11/5/2020	40.8	100		72	130
PFHxS	355-46-4	47.9	DA909LCS-FS(0)	1.000	11/5/2020	41.2	116		68	131
PFOS	1763-23-1	42.9	DA909LCS-FS(0)	1.000	11/5/2020	41.2	104		65	140
HFPO-DA	13252-13-6	39.5	DA909LCS-FS(0)	1.000	11/5/2020	40.8	97		74	148
Adona	919005-14-4	38.2	DA909LCS-FS(0)	1.000	11/5/2020	40.8	94		61	143
9CI-PF3ONS	756426-58-1	36.1	DA909LCS-FS(0)	1.000	11/5/2020	40.8	88		52	158
11CI-PF3OUdS	763051-92-9	32.8	DA909LCS-FS(0)	1.000	11/5/2020	40.8	80		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	DA909LCS-FS
Sample Type	LCS
Collection Date	10/21/2020
Extraction Date	10/21/2020
Analytical Instrument	Sciex 6500+ (AE) LC/MS/MS

<i>Surrogate Recoveries (%)</i>	Recovery	Extract ID	Analysis Date
13C5-PFHxA	70	DA909LCS-FS(0)	11/5/2020
13C4-PFHpA	72	DA909LCS-FS(0)	11/5/2020
13C8-PFOA	75	DA909LCS-FS(0)	11/5/2020
13C9-PFNA	75	DA909LCS-FS(0)	11/5/2020
13C6-PFDA	79	DA909LCS-FS(0)	11/5/2020
13C7-PFUnA	68	DA909LCS-FS(0)	11/5/2020
13C2-PFDoA	73	DA909LCS-FS(0)	11/5/2020
13C2-PFTeDA	72	DA909LCS-FS(0)	11/5/2020
d3-MeFOSAA	76	DA909LCS-FS(0)	11/5/2020
d5-EtFOSAA	65	DA909LCS-FS(0)	11/5/2020
13C3-PFBS	81	DA909LCS-FS(0)	11/5/2020
13C3-PFHxS	73	DA909LCS-FS(0)	11/5/2020
13C8-PFOS	70	DA909LCS-FS(0)	11/5/2020
13C3-HFPO-DA	78	DA909LCS-FS(0)	11/5/2020



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 20-1305

Project:	CTO-4532: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10
Client Project Manager:	Michael Zamboni
Parameters:	PFAS
Laboratory:	Battelle, Norwell, MA
Matrix:	AQ, GW
Data Set:	DP-20-1185
Analytical SOP:	5-369
Method Reference:	PFAS to QSM 5.3 Table B-15

Sample Custody		
Collection Date	Receipt Date	Temp (°C)
10/14 – 15/2020	10/16/2020	1.3

Corrective Actions	None.
Sample Storage	The samples were stored refrigerated until extraction.
Related samples	Samples G1696-FS (CBD-HVG-GW10-1020) and G1697-FS (CBD-HVG-GW09-1020) re-extracted in SDG 20-1441 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 G1697-FS (CBD-HVG-GW09-1020), G1699-FS (CBD-AOA-MW10-1020), G1701-FS (CBD-SO4-MW01-1020), and G1702-FS (CBD-SO4-MW01P-1020) contained particulates.</p> <p>Samples DA908PB-FS (Procedural Blank), DA909LCS-FS (Laboratory Control Sample), and G1696-FS (CBD-HVG-GW10-1020) 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> <p>Sample G1701-FS (CBD-SO4-MW01-1020) clogged the top filter of the SPE cartridge during extraction. the filter was popped and left inside the cartridge for the remainder of the extraction and elution procedure.</p>
Analysis	PFAS were measured by liquid chromatography tandem mass spectrometry (LC-MS/MS) in the multiple reaction monitoring (MRM). An initial calibration

**QA/QC Summary
Batch 20-1305**

	<p>consisting of representative target analytes, labelled analogs, and internal standards was analyzed prior to analysis to demonstrate the linear range of 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.</p>
Analysis Comments	<p>Samples analyzed on Sciex 6500+ (AE) LC-MS/MS.</p> <p>MeFOSAA, EtFOSAA, PFHxS, and PFOS in the LCS, and field samples when detected, were found and reported as a combination of the linear and branched isomers.</p> <p>Adona, 9CI-PF3ONS, and 11CI-PF3OUdS are quantified using 13C8-PFOA.</p> <p>13C9-PFNA is quantified using 13C4-PFOS.</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> <p>Samples G1701-FS (CBD-SO4-MW01-1020) and G1702-FS (CBD-SO4-MW01P-1020) are field replicates, that confirmed the extracted internal standard recoveries. These two samples were not re-extracted.</p>

Holding Times	Extraction Date(s)	Analysis Date(s)
	10/21/2020	11/5 – 6/2020

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	Project specific MS/MSD not included in this SDG.
	No comments.

QA/QC Summary Batch 20-1305

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>¹³C5-PFHxA</th> <th>¹³C4-PFHpA</th> <th>¹³C2-PFTeDA</th> <th>¹³C3-PFBS</th> </tr> </thead> <tbody> <tr> <td>G1696-FS (CBD-HVG-GW10-1020)</td> <td>↓</td> <td>↓</td> <td>P</td> <td>↓</td> </tr> <tr> <td>G1697-FS (CBD-HVG-GW09-1020)</td> <td>↓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>G1701-FS (CBD-SO4-MW01-1020)</td> <td></td> <td>↓</td> <td></td> <td></td> </tr> <tr> <td>G1702-FS (CBD-SO4-MW01P-1020)</td> <td></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 C5-PFHxA	¹³ C4-PFHpA	¹³ C2-PFTeDA	¹³ C3-PFBS	G1696-FS (CBD-HVG-GW10-1020)	↓	↓	P	↓	G1697-FS (CBD-HVG-GW09-1020)	↓				G1701-FS (CBD-SO4-MW01-1020)		↓			G1702-FS (CBD-SO4-MW01P-1020)		↓		
	¹³ C5-PFHxA	¹³ C4-PFHpA	¹³ C2-PFTeDA	¹³ C3-PFBS																						
G1696-FS (CBD-HVG-GW10-1020)	↓	↓	P	↓																						
G1697-FS (CBD-HVG-GW09-1020)	↓																									
G1701-FS (CBD-SO4-MW01-1020)		↓																								
G1702-FS (CBD-SO4-MW01P-1020)		↓																								
Internal Standard Analytes	Labelled analog compounds were added prior to analysis.																									
+/- 50% of the area of the L5 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"> • EtFOSAA in LD76 CCV (11/5/2020 17:05:11) <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 20-1305

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: 20-1305
 Data Set: DP-20-1185
 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	NA	None
Matrix Spike / Matrix Spike Duplicate Precision	NA	None
Extracted Internal Standard Analytes (Surrogates)	7	There are seven extracted internal standards that do not meet passing criteria. A fresh aliquot was taken, run and the results confirmed. DMS 11/6/2020
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-20-1185
Project Number:	100142218	Prep Batch Number:	20-1305
Entered By:	Denise Schumitz	Entered On:	11/06/2020
Test Code (Matrix Type):	Master_369B(L)		

Samples that were manually integrated are noted on the quant reports with the comment (TRUE).
DMS 11/6/2020

ADONA, 9CI-PF3ONS and 11CI-PF3OUdS are being quantified off 13C8-PFOA instead of 13C3-HFPO-DA.
DMS 11/6/2020

13C9-PFNA is being quantified off 13C4-PFOS instead of 13C2-PFOA.
DMS 11/6/2020

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.
DMS 11/6/2020

The following secondary transitions are outside of criteria:

•NEtFOSAA in LD76 CCV (11/5/2020 17:05:11)

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

Task Leader Approval:

Supervisor Approval:

PM Approval:



Digitally signed by Jonathan Thorn

Date: 2020.11.09 10:26:57 -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: G1699-FS-D(5)
 Client Sample ID: CBD-AOA-MW10-1020
 Sample Size: 0.25
 Units: L
 Dilution Factor: 12.500
 PIV (L): 0.001
 Target Analyte: PFHxS
 MRM Transition: 399.0 / 80.0
 Data file: AE_11052020_5-369.wiff
 Result table: 20-1305
 Area: 7,653,328.28
 IS Name: 13C3-PFHxS
 IS Area: 211,758.76
 IS Amount (ng/L): 1182.5
 y-intercept: 0.20551
 slope: 3.22958

$$\text{Concentration} = \frac{[(7653328.28/211758.76) - 0.20551]}{3.22958} * 1182.5 * 0.001 * 12.5 / 0.25$$

$$\text{ng/L} = 658$$

*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: 20-1305
 Data Set: DP-20-1185

		DA908PB-FS (Procedural Blank)	DA909LCS-FS (Laboratory Control Sample)	G1696-FS (CBD-HVG-GW10-1020)	G1697-FS (CBD-HVG-GW09-1020)	G1698-FS (CBD-EB01-101420-GW)	G1699-FS (CBD-AOA-MW10-1020)	G1700-FS (CBD-BKG-MW03-1020)	G1701-FS (CBD-SO4-MW01-1020)	G1702-FS (CBD-SO4-MW01P-1020)
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	L
PFNA	375-95-1	-	L	-	-	-	L	L	L	L
PFDA	335-76-2	-	L	-	-	-	L	-	-	-
PFUnA	2058-94-8	-	L	-	-	-	-	-	-	-
PFDoA	307-55-1	-	L	-	-	-	-	-	-	-
PFTTrDA	72629-94-8	-	L	-	-	-	-	-	-	-
PFTeDA	376-06-7	-	L	-	-	-	-	-	-	-
NMeFOSAA	2355-31-9	-	L/Br	-	-	-	-	-	-	-
NEtFOSAA	2991-50-6	-	L/Br	-	-	-	-	-	-	-
PFBS	375-73-5	-	L	L	L	-	L	L	L	L
PFHxS	355-46-4	-	L/Br	L/Br	L/Br	-	L/Br	L/Br	L/Br	L/Br
PFOS	1763-23-1	-	L/Br	L/Br	L/Br	-	L/Br	L/Br	L/Br	L/Br
HFPO-DA	13252-13-6	-	L	-	-	-	-	-	-	-
Adona	919005-14-4	-	L	-	-	-	-	-	-	-
9CI-PF3ONS	756426-58-1	-	L	-	-	-	-	-	-	-
11CI-PF3OUDS	763051-92-9	-	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 14:27	-		706,685.09		939,068.19		157,209.48
		Lower	-		353,342.55		469,534.10		78,604.74
		Upper	-		1,060,027.64		1,408,602.29		235,814.22

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 13:46	-			666,092.74			1,024,257.59			169,902.02		
LD75	L2	11/5/20 13:56	-			634,349.70			987,350.36			166,740.64		
LD76	L3	11/5/20 14:06	-			733,846.07			1,044,704.24			191,638.83		
LD77	L4	11/5/20 14:17	-			710,115.13			940,747.67			185,913.74		
LD78	L5	11/5/20 14:27	-			706,685.09			939,068.19			157,209.48		
LD79	L6	11/5/20 14:38	-			681,173.46			849,818.95			167,186.16		
LD80 IB	Instrument Blank	11/5/20 14:48	-			681,233.61			959,338.09			164,880.32		
LD81 ICC	ICC	11/5/20 14:59	-			702,017.09			947,982.79			174,564.26		
DA908PB-FS(0)	Procedural Blank	11/5/20 15:30	-			698,229.12			958,294.64			169,850.68		
DA909LCS-FS(0)	Laboratory Control Sample	11/5/20 15:41	-			796,442.65			1,067,344.02			198,287.38		
G1696-FS(0)	CBD-HVG-GW10-1020	11/5/20 15:51	-			245,499.27	N		334,106.64	N		56,861.10	N	1
G1697-FS(0)	CBD-HVG-GW09-1020	11/5/20 16:02	-			662,582.85			1,005,970.51			144,350.54		
G1698-FS(0)	CBD-EB01-101420-GW	11/5/20 16:12	-			802,190.37			1,019,481.08			182,856.31		
G1699-FS(0)	CBD-AOA-MW10-1020	11/5/20 16:23	-			682,573.00			1,005,530.19			156,990.42		
G1699-FS-D(3)	CBD-AOA-MW10-1020	11/5/20 16:33	-			825,712.02			962,742.20			181,048.83		
G1699-FS-D(5)	CBD-AOA-MW10-1020	11/5/20 16:44	-			791,594.49			1,044,050.70			175,231.63		
LD76 CCV	CCV	11/5/20 17:05	-			784,759.45			1,074,232.92			191,416.89		
G1700-FS(0)	CBD-BKG-MW03-1020	11/5/20 17:16	-			780,520.98			1,159,239.47			180,535.57		
G1701-FS(0)	CBD-SO4-MW01-1020	11/5/20 17:26	-			723,715.10			907,451.72			86,038.28		
G1701-FS-D(3)	CBD-SO4-MW01-1020	11/5/20 17:37	-			687,727.91			1,022,345.92			172,462.21		
G1701-FS-D(5)	CBD-SO4-MW01-1020	11/5/20 17:47	-			749,341.34			1,104,193.03			191,751.46		
G1702-FS(0)	CBD-SO4-MW01P-1020	11/5/20 17:58	-			635,405.59			956,795.49			86,808.24		
G1702-FS-D(3)	CBD-SO4-MW01P-1020	11/5/20 18:08	-			875,236.08			1,044,732.82			170,996.95		
G1702-FS-D(5)	CBD-SO4-MW01P-1020	11/5/20 18:18	-			766,563.13			1,007,013.51			177,873.49		
LD77 CCV	CCV	11/5/20 18:29	-			785,730.16			1,193,636.99			186,497.75		
LD76 CCV	CCV	11/6/20 13:12	-			816,459.62			1,166,667.12			229,167.57		
LD80 IB	Instrument Blank	11/6/20 13:33	-			741,393.25			1,120,719.13			194,868.48		
LD77 CCV	CCV	11/6/20 14:14	-			876,418.86			1,133,850.96			223,576.40		
G1696-FS(0)	CBD-HVG-GW10-1020	11/6/20 14:25	-			579,899.60			958,126.14			151,279.70		
G1697-FS(0)	CBD-HVG-GW09-1020	11/6/20 14:35	-			801,545.14			1,168,144.90			180,114.49		2
G1701-FS(0)	CBD-SO4-MW01-1020	11/6/20 14:46	-			777,968.92			1,059,887.88			98,495.81		2
G1702-FS(0)	CBD-SO4-MW01P-1020	11/6/20 14:56	-			761,195.49			1,154,727.65			92,564.58		2
LD76 CCV	CCV	11/6/20 15:17	-			905,881.65			1,207,305.62			222,562.09		

1. Sample did not inject correctly on the instrument. A fresh aliquot was taken, run and is being reported. DMS 11/6/2020

2. Samples run for confirmation only. DMS 11/6/2020

Sample Name	LD78	Injection Vial	6
Sample ID	L5	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:27:51 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Asymmetry Factor	Passing Range
PFBS_1	298.9 / 80.0	1.32	1.19	0.8 – 1.5
PFHxA_1	313.0 / 269.0	1.56	1.22	0.8 – 1.5

Sample Name	LD79	Injection Vial	7
Sample ID	L6	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:38:18 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
PFBS 1	298.9 / 80.0	1.32	60	>10
PFBS 2	298.9 / 99.0	1.32	53	>10
PFHxA 1	313.0 / 269.0	1.57	45	>10
PFHxA 2	313.0 / 119.0	1.57	31	>10
PFHpA 1	363.0 / 319.0	1.90	38	>10
PFHpA 2	363.0 / 169.0	1.89	33	>10
PFHxS 1	399.0 / 80.0	1.90	54	>10
PFHxS 2	399.0 / 99.0	1.90	44	>10
PFOA 1	413.0 / 369.0	2.26	54	>10
PFOA 2	413.0 / 169.0	2.26	28	>10
PFNA 1	463.0 / 419.0	2.63	46	>10
PFNA 2	463.0 / 219.0	2.63	45	>10
PFOS 1	499.0 / 80.0	2.62	50	>10
PFOS 2	499.0 / 99.0	2.62	43	>10
PFDA 1	513.0 / 469.0	2.98	43	>10
PFDA 2	513.0 / 219.0	2.98	46	>10
PFUnA 1	563.0 / 519.0	3.30	66	>10
PFUnA 2	563.0 / 269.0	3.30	48	>10
PFDoA 1	613.0 / 569.0	3.59	92	>10
PFDoA 2	613.0 / 319.0	3.59	70	>10
PFTTrDA 1	663.0 / 619.0	3.85	112	>10
PFTTrDA 2	663.0 / 169.0	3.85	61	>10
PFTeDA 1	713.0 / 669.0	4.08	96	>10
PFTeDA 2	713.0 / 169.0	4.08	81	>10
NMeFOSAA 1	570.0 / 419.0	3.13	71	>10
NMeFOSAA 2	570.0 / 512.0	3.12	65	>10
NEtFOSAA 1	584.0 / 419.0	3.29	70	>10
NEtFOSAA 2	584.0 / 483.0	3.29	55	>10
HFPO-DA 1	285.0 / 169.0	1.66	53	>10
HFPO-DA 2	285.0 / 118.8	1.65	35	>10
ADONA 1	377.0 / 251.0	1.93	39	>10
ADONA 2	377.0 / 85.0	1.93	38	>10
9Cl-PF3ONS 1	531.0 / 351.0	2.83	58	>10
9Cl-PF3ONS 2	531.0 / 83.0	2.83	25	>10
11Cl-pf3OUdS 1	631.0 / 451.0	3.46	50	>10
11Cl-pf3OUdS 2	631.0 / 83.0	3.46	24	>10

Sample Name	LD79	Injection Vial	7
Sample ID	L6	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:38:18 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
13C2-PFDoA	615.0 / 570.0	3.59	38	>10
d3-MeFOSAA	573.0 / 419.0	3.12	37	>10
d5-EtFOSAA	589.0 / 419.0	3.29	35	>10
13C5-PFHxA	318.0 / 273.0	1.56	41	>10
13C4-PFHpA	367.0 / 322.0	1.89	32	>10
13C8-PFOA	421.0 / 376.0	2.25	34	>10
13C9-PFNA	472.0 / 427.0	2.62	44	>10
13C6-PFDA	519.0 / 474.0	2.97	34	>10
13C7-PFUnA	570.0 / 525.0	3.30	36	>10
13C2-PFTeDA	715.0 / 670.0	4.07	86	>10
13C3-PFBS	302.0 / 99.0	1.31	41	>10
13C3-PFHxS	402.0 / 99.0	1.90	33	>10
13C8-PFOS	507.0 / 99.0	2.61	36	>10
13C3-HFPO-DA	287.0 / 169.0	1.65	40	>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



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Triple Quad 6500+

LC/MS/MS Detector System
Appendix ZEFPM003-1S

Triple Quad 6500+ 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:** _____



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PRE-PM PPG PERFORMANCE EVALUATION:

- Consult the customer concerning the system overall performance.
- Check Logbook for services performed recently if available.
- Check Vacuum Pressure.

CAD Settings	Vacuum Reading (10 ⁻⁵ Torr)	Acceptance Criteria
<input type="checkbox"/> CAD 0		0.4 to 1.1 x 10 ⁻⁵ Torr
<input type="checkbox"/> CAD 12		2.4 to 4.1 x 10 ⁻⁵ Torr

- Check for Front end contamination symptoms. Run Q1 POS PPG using PPG 2e-7M for 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-7M for 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

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Appendix ZEFPM003-1S

PPG Performance Test

(Make printouts showing all the peaks, intensities, peak widths, and mass shift values.)

Positive Mode: Masses for the peaks of interest are: 59.050, 175.133, 500.380, 616.464, 906.673, 1254.925, 1545.134, 1952.427.

High Mass Test

Perform High Mass Q1 POS using POS PPG 2e-7M (500:1). Scan Rate 10 Da/s. Record 10 MCA.

Mass	Q1 Intensity		Q1 Width Value	Width Specs
	Value	Specs		
Q1 500.380		Read Only		Read Only
Q1 616.464		Read Only		Read Only
Q1 906.673		Read Only		Read Only
Q1 1952.427		Read Only		Read Only

Perform High Mass Q3 POS using POS PPG 2e-7M (500:1). Scan Rate 10 Da/s. Record 10 MCA.

Mass	Q3 Intensity		Q3 Width Value	Width Specs
	Value	Specs		
Q3 500.380		Read Only		Read Only
Q3 616.464		Read Only		Read Only
Q3 906.673		Read Only		Read Only
Q3 1952.427		Read Only		Read Only

Low Mass Test

Perform Low Mass Q1 POS using POS PPG 2e-7M (500:1). Scan Rate 10 Da/s. Record 10 MCA.

Mass	Q1 Intensity		Q1 Width Value	Width Specs
	Value	Specs		
Q1 175.133		Read Only		Read Only
Q1 500.380		Read Only		Read Only
Q1 616.464		Read Only		Read Only
Q1 906.673		Read Only		Read Only

Perform Low Mass Q3 POS using POS PPG 2e-7M (500:1). Scan Rate 10 Da/s. Record 10 MCA.

Mass	Q3 Intensity		Q3 Width Value	Width Specs
	Value	Specs		
Q3 175.133		Read Only		Read Only
Q3 500.380		Read Only		Read Only
Q3 616.464		Read Only		Read Only
Q3 906.673		Read Only		Read Only

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Appendix ZEFPM003-1S

Preventive Maintenance Procedure

- Check cooling fans in mass spec if working. Replace them soon, if defective.
- Clean bench cooling fans if applicable. Replace them soon, if defective.
- Record AC input voltage while MS is OFF: _____ (200 to 240 Vac).
Notify customer if input voltage is out of range.
- After venting, clean Interface region:
 - Curtain Plate
 - Orifice Plate atmosphere side
 - Orifice Plate vacuum side
 - Ion Drive QJet and IQ0.
- Check Q0 for signs of arcing and clean with cleaning solvent.
- Replace Roughing Pump Oil.
- Clean oil exhaust Filter.

Replace if necessary. N/A
- Adjust Multiplier Voltage if necessary.
- Clean or replace Air Filters.
- Clean the turbo pump filter screen if applicable.
- Check Orifice resistances.

Replace it soon if out of resistance specifications. N/A
- Replace Electrode if necessary in Ion Drive Turbo V source.
- Check Turbo heaters resistances and their physical conditions in Ion Drive Turbo V source.

Replace the defective heaters if necessary. N/A
- Check the APCI heater resistance. Verify Temperature reaches setpoint

Replace the heater if necessary. N/A
- Turn on the mass spec and rough pumps for pumping down.
- Verify Temperature reaches setpoint in both TIS and APCI modes if applicable.

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Appendix ZEFPM003-1S

POST- PM PPG PERFORMANCE TESTS:

- Set-up PPG standard for infusion.
- Check spray and adjust sprayer's position of the Ion Drive Turbo V source.
- Check Vacuum Pressure:

CAD Settings	Vacuum Reading (10^{-5} Torr)	Acceptance Criteria
<input type="checkbox"/> CAD 0		0.4 to 1.1×10^{-5} Torr
<input type="checkbox"/> CAD 12		2.4 to 4.1×10^{-5} Torr

- Check for Front end contamination symptoms. Run Q1 POS PPG using PPG 2e-7M for 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-7M for 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

PPG Performance Test

(Mass calibrate to less than 0.1 amu. Make printouts showing all the peaks, intensities, peak widths, and mass shift values.)

Positive Mode: Masses for the peaks of interest are: 59.050, 175.133, 500.380, 616.464, 906.673, 1254.925, 1545.134, 1952.427.

Negative Mode: Masses for the peaks of interest are: 44.998, 411.259, 585.385, 933.636, 1223.845, 1572.097, 1863.306, 1979.389.

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Appendix ZEFPM003-1S

High Mass Test

Perform High Mass Q1 POS using POS PPG 2e-7M (500:1). Scan Rate 10 Da/s. Record 10 MCA.

Mass	Q1 Intensity		Q1 Width Value	Width Specs
	Value	Specs		
Q1 500.380		$\geq 3.2 \text{ }^{\text{e}}7$		0.6 to 0.8
Q1 616.464		$\geq 2.0 \text{ }^{\text{e}}7$		0.6 to 0.8
Q1 906.673		$\geq 9.6 \text{ }^{\text{e}}7$		0.6 to 0.8
Q1 1952.427		$\geq 2.4 \text{ }^{\text{e}}6$		0.6 to 0.8

Perform High Mass Q3 POS using POS PPG 2e-7M (500:1). Scan Rate 10 Da/s. Record 10 MCA.

Mass	Q3 Intensity		Q3 Width Value	Width Specs
	Value	Specs		
Q3 500.380		$\geq 3.2 \text{ }^{\text{e}}7$		0.6 to 0.8
Q3 616.464		$\geq 2.0 \text{ }^{\text{e}}7$		0.6 to 0.8
Q3 906.673		$\geq 9.6 \text{ }^{\text{e}}7$		0.6 to 0.8
Q3 1952.427		$\geq 2.4 \text{ }^{\text{e}}6$		0.6 to 0.8

Perform MSMS POS in Product Ion scan with 907 parent and record daughter 175.1 using POS PPG 2e-7M (500:1). Scan Rate 10 Da/s. Record 10 MCA.

Mass	MSMS Intensity		MSMS Width Value	Width Specs
	Value	Spec		
MS/MS 175.1		Read Only		Read Only

Perform Q1 NEG using NEG PPG 3 x 10-5 M (10:1). Scan Rate 10 Da/s. Record 10 MCA.

Mass	Q1 Intensity		Q1 Width Value	Width Specs
	Value	Specs		
Q1 933.636		$\geq 1.8 \text{ }^{\text{e}}7$		0.6 to 0.8
Q1 1863.306		$\geq 1.0 \text{ }^{\text{e}}6$		0.6 to 0.8

Perform Q3 NEG using NEG PPG 3 x 10-5 M (10:1). Scan Rate 10 Da/s. Record 10 MCA.

Mass	Q3 Intensity		Q3 Width Value	Width Specs
	Value	Specs		
Q3 933.636		$\geq 1.8 \text{ }^{\text{e}}7$		0.6 to 0.8
Q3 1863.306		$\geq 1.0 \text{ }^{\text{e}}6$		0.6 to 0.8

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LC/MS/MS Detector System

Appendix ZEFPM003-1S

Low Mass Test

Perform Low Mass Q1 POS using POS PPG 2e-7M (500:1). Scan Rate 10 Da/s. Record 10 MCA.

Mass	Q1 Intensity		Q1 Width Value	Width Specs
	Value	Specs		
Q1 175.133		$\geq 8.0 \text{ }^{\text{e}6}$		0.6 to 0.8
Q1 500.380		$\geq 3.68 \text{ }^{\text{e}7}$		0.6 to 0.8
Q1 616.464		$\geq 2.4 \text{ }^{\text{e}7}$		0.6 to 0.8
Q1 906.673		$\geq 1.0 \text{ }^{\text{e}8}$		0.6 to 0.8

Perform Low Mass Q3 POS using POS PPG 2e-7M (500:1). Scan Rate 10 Da/s. Record 10 MCA.

Mass	Q3 Intensity		Q3 Width Value	Width Specs
	Value	Specs		
Q3 175.133		$\geq 8.0 \text{ }^{\text{e}6}$		0.6 to 0.8
Q3 500.380		$\geq 3.68 \text{ }^{\text{e}7}$		0.6 to 0.8
Q3 616.464		$\geq 2.4 \text{ }^{\text{e}7}$		0.6 to 0.8
Q3 906.673		$\geq 1.0 \text{ }^{\text{e}8}$		0.6 to 0.8

Perform Q1 NEG using NEG PPG 3 x 10-5 M (10:1). Scan Rate 10 Da/s. Record 10 MCA.

Mass	Q1 Intensity		Q1 Width Value	Width Specs
	Value	Spec		
Q1 933.636		$\geq 1.8 \text{ }^{\text{e}7}$		0.6 to 0.8

Perform Q3 NEG using NEG PPG 3 x 10-5 M (10:1). Scan Rate 10 Da/s. Record 10 MCA.

Mass	Q3 Intensity		Q3 Width Value	Width Specs
	Value	Spec		
Q3 933.636		$\geq 1.8 \text{ }^{\text{e}7}$		0.6 to 0.8

Perform MSMS NEG in Product Ion scan with 933.6 parent and record daughter 45.0 using NEG PPG 3 x 10-5 M (10:1) at the scan rate of 10 Da/s for 10 MCA.

Mass	MSMS Intensity		MSMS Width Value	Width Specs
	Value	Spec		
MS/MS 45.0		Read Only		Read Only

**Zef Scientific Inc.**

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Triple Quad 6500+

LC/MS/MS Detector System
Appendix ZEFPM003-1S

REVIEW:

- Attach all printouts to this checklist.
- If any parameter setting access modes were changed during the PM, ensure that 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
- Fill and replaced PM Label.

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

04 OCT 2016: Appendix ZEFPM003-1S: New SOP Appendix.

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
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
LD56	PFAS - DoD Internal Standard Spiking Solution	LB75	-	-	200721-21
LD56	PFAS - DoD Internal Standard Spiking Solution	LB75	-	-	200721-22
LD56	PFAS - DoD Internal Standard Spiking Solution	LB75	-	-	200721-23
LD56	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
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

Battelle Standard ID	Description	Intermediate Solutions			Battelle Reagent ID (purchased solutions)
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
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

Battelle Standard ID	Description	Intermediate Solutions			Battelle Reagent ID (purchased solutions)
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
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

Battelle Standard ID	Description	Intermediate Solutions			Battelle Reagent ID (purchased solutions)
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
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-butanedioic Acid	.01000
Perfluoro-n-decanedioic Acid	.01000
Perfluoro-n-dodecanedioic acid	.01000
Perfluoro-n-heptanedioic Acid	.01000
Perfluoro-n-hexanedioic acid	.01010
Perfluoro-n-octanedioic Acid	.01000
Perfluorononanedioic Acid	.01000
Perfluoro-n-pentanedioic acid	.01010
Perfluoro-n-tetradecanedioic acid	.01000
Perfluoro-n-tridecanedioic acid	.01000
Perfluoro-n-undecanedioic acid	.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: **LD56**

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: 10/8/2020 Expiration Date: 7/21/2021

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

Comment:

Approved By: Schumitz, Denise Date: 10/9/2020 12:46:00 PM



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-butanedisulfonate	.00250
Perfluoro-n-decanedisulfonate	.00250
Perfluoro-n-dodecanedisulfonate	.00250
Perfluoro-n-heptanedisulfonate	.00250
Perfluoro-n-hexanedisulfonate	.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

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"/>			

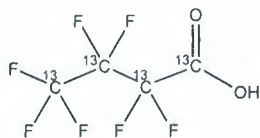
Total Analytes: 1

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

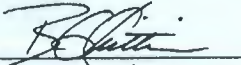
DOCUMENTATION/ DATA ATTACHED:

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)

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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: _____

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: _____



WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M5PFHxA **LOT NUMBER:** M5PFHxA0320
COMPOUND: Perfluoro-n-[1,2,3,4,6-¹³C₅]hexanoic acid

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA: ¹³C₅¹²C₁HF₁₁O₂ **MOLECULAR WEIGHT:** 319.02
CONCENTRATION: 50.0 ± 2.5 µg/ml **SOLVENT(S):** Methanol
Water (<1%)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99% ¹³C
(1,2,3,4,6-¹³C₅)
LAST TESTED: (mm/dd/yyyy) 04/03/2020
EXPIRY DATE: (mm/dd/yyyy) 04/03/2025
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

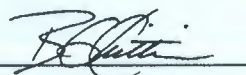
DOCUMENTATION/ DATA ATTACHED:

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:  **Date:** 04/15/2020
B.G. Chittim, General Manager (mm/dd/yyyy)

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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:

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: _____

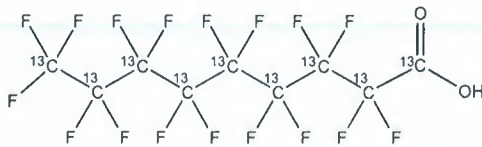


WELLINGTON LABORATORIES

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

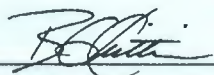
DOCUMENTATION/ DATA ATTACHED:

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

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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: _____

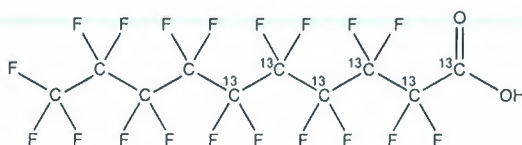
260721-07



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)

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

BDO Id:

200721-08

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: Authorized:

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: _____

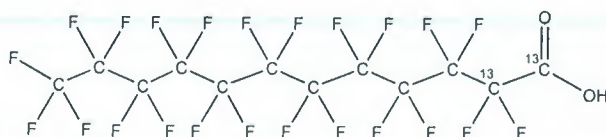
200721-09



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)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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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)

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

BDO Id: 200721-11

Reagent Receipt Report

Approved:

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 Val:	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

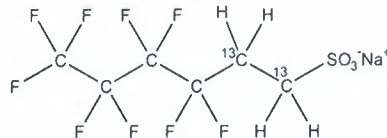


WELLINGTON LABORATORIES

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)

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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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: _____

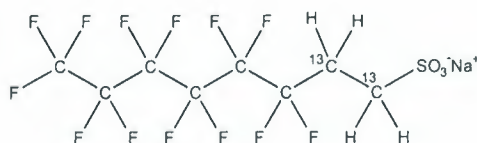


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LABORATORIES

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

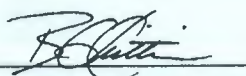
DOCUMENTATION/ DATA ATTACHED:

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

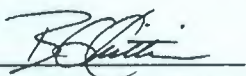
DOCUMENTATION/ DATA ATTACHED:

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)

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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:	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: _____



WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M3PFHxS **LOT NUMBER:** M3PFHxS1019
COMPOUND: Sodium perfluoro-1-[1,2,3-¹³C₃]hexanesulfonate
STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA: ¹³C₃¹²C₃F₁₃SO₃Na **MOLECULAR WEIGHT:** 425.07
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
47.3 ± 2.4 µg/ml (M3PFHxS anion)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99% ¹³C
LAST TESTED: (mm/dd/yyyy) 10/15/2019 (1,2,3-¹³C₃)
EXPIRY DATE: (mm/dd/yyyy) 10/15/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

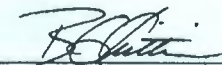
DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 0.1% perfluoro-1-[1,2-¹³C₂]pentanesulfonate, ~ 0.1% perfluoro-1-octanesulfonate, and ~ 0.05% of perfluoro-1-hexanesulfonate.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By:  **Date:** 10/16/2019
B.G. Chittim, General Manager (mm/dd/yyyy)

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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: _____

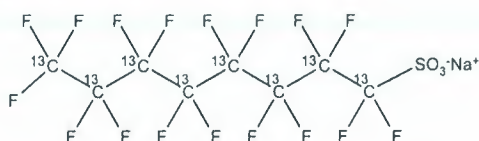
200721-16



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:

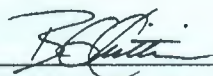
Figure 1: LC/MS Data (TIC and Mass Spectrum)
 Figure 2: LC/MS/MS Data (Selected MRM Transitions)

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

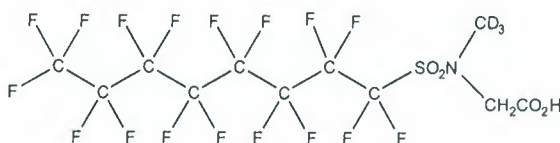


WELLINGTON LABORATORIES

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)

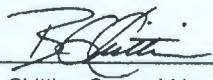
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

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: _____

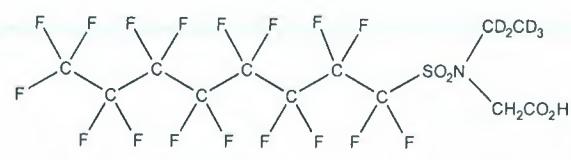


WELLINGTON LABORATORIES

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%
LAST TESTED: (mm/dd/yyyy) 05/20/2020
EXPIRY DATE: (mm/dd/yyyy) 05/20/2025
RECOMMENDED STORAGE: Refrigerate ampoule

ISOTOPIC PURITY: ≥98% ²H₅

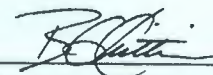
DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By:  **Date:** 05/22/2020
B.G. Chittim, General Manager (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: _____

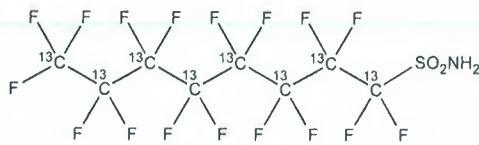
200721-19



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:

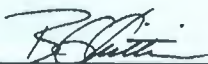
Figure 1: LC/MS Data (TIC and Mass Spectrum)
 Figure 2: LC/MS/MS Data (Selected MRM Transitions)

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)

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:

200721-20

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	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: _____

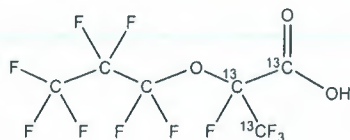


WELLINGTON LABORATORIES

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:	$^{13}\text{C}_3^{12}\text{C}_3\text{HF}_{11}\text{O}_3$	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:

B.G. Chittim, General Manager

Date: 05/22/2020

(mm/dd/yyyy)

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

BDO Id:

200721-21

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:	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:

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: _____

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: _____

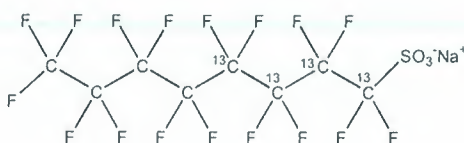


WELLINGTON LABORATORIES

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: ¹³C₄¹²C₄F₁₇SO₃Na **MOLECULAR WEIGHT:** 526.08
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol
47.9 ± 2.4 µg/ml (MPFOS acid)
47.8 ± 2.4 µg/ml (MPFOS anion)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99% ¹³C
LAST TESTED: (mm/dd/yyyy) 04/15/2020 (1,2,3,4-¹³C₄)
EXPIRY DATE: (mm/dd/yyyy) 04/15/2025
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

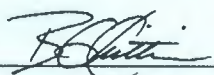
DOCUMENTATION/ DATA ATTACHED:

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.

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

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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	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

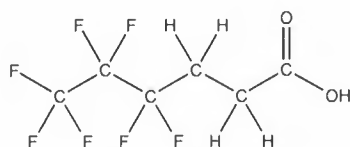
CERTIFICATE OF ANALYSIS DOCUMENTATION

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.

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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:

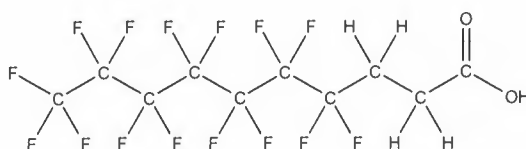
Approved by: _____ **Approved on:** _____
Authorized by: _____ **Authorized on:** _____



WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: FHpPA **LOT NUMBER:** FHpPA0320
COMPOUND: 3-Perfluoroheptyl propanoic acid
STRUCTURE: **CAS #:** 812-70-4



MOLECULAR FORMULA: C₁₀H₅F₁₅O₂ **MOLECULAR WEIGHT:** 442.12
CONCENTRATION: 50.0 ± 2.5 µg/ml **SOLVENT(S):** Methanol
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 03/31/2020
EXPIRY DATE: (mm/dd/yyyy) 03/31/2023
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.

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Certified By: 
 B.G. Chittim, General Manager **Date:** 04/01/2020
 (mm/dd/yyyy)

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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	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

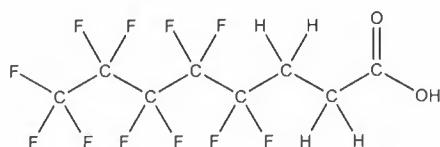
CERTIFICATE OF ANALYSIS DOCUMENTATION

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-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:** _____



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	072820	DATE
Reviewed By: Pedro L. Santos	072820	DATE

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-Chloroicosasulfuro-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 Result," 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-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:** _____



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-butyanoic 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. Perfluorohexanoic acid (linear)	99197	081920	0.02	1.00	0.004	50.1	1.00	0.01	375-85-9	N/A	N/A
5. Perfluoroheptanoic 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-tetrafluoropropanoic 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 Evaluating 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
20-1305	
CTO-4532: PFAS in Water	
AQ, GW	
SOP Numbers (see workplan for modifications)	
ExtractionSOP No.	5-370

This Batch Contains The Following Samples:	
DA908PB-FS	G1700-FS
DA909LCS-FS	G1701-FS
G1696-FS	G1702-FS
G1697-FS	
G1698-FS	
G1699-FS	

Laboratory Preparation Records
COMPLETE AND VALIDATED

Prep Task Leader: Allison Wamness

Approved By:	Date	Initials
Denise Schumitz	11/05/2020	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

20-1305**CTO-4532: PFAS in Water****AQ, GW**

Sample ID	Description
DA908PB-FS	Procedural Blank
DA909LCS-FS	Laboratory Control Sample
G1696-FS	CBD-HVG-GW10-1020
G1697-FS	CBD-HVG-GW09-1020
G1698-FS	CBD-EB01-101420-GW
G1699-FS	CBD-AOA-MW10-1020
G1700-FS	CBD-BKG-MW03-1020
G1701-FS	CBD-SO4-MW01-1020
G1702-FS	CBD-SO4-MW01P-1020

Samples Assigned By:

Matt Schumitz

Date : October 16, 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

20-1305

CTO-4532: PFAS in Water

AQ, GW

Requested On/By: 10/21/2020 AW	Purpose: Sample Preparation
Relinquished On/By: 10/21/2020 MDS	Last Activity: Transfer
Accepted On/By: 10/21/2020 KH Stored In Facility: Sample Preparation Stored Until: Stored Comment: NA	Returned On/To: Returned To Facility: Returned Comment: NA

No.	BDO-ID:	Ctrs	*	Condition:	Custody Comment:	
1	G1696	1	C	Consumed	NA	
2	G1697	1	C	Consumed	NA	
3	G1698	1	C	Consumed	NA	
4	G1699	1	C	Consumed	NA	
5	G1700	1	C	Consumed	NA	
6	G1701	1	C	Consumed	NA	
7	G1702	1	C	Consumed	NA	
Total Samples		7		* "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

20-1305

CTO-4532: PFAS in Water

AQ, GW

Sample ID	Description	Volume (mL)	Bottles	*	Date Initials
DA908PB-FS	Procedural Blank	245.0	NA	--	10/21/20 KH
DA909LCS-FS	Laboratory Control Sample	245.0	NA	--	10/22/20 KH
G1696-FS	CBD-HVG-GW10-1020	250.0	1	C	10/22/20 KH
G1697-FS	CBD-HVG-GW09-1020	265.0	1	C	10/22/20 KH
G1698-FS	CBD-EB01-101420-GW	255.0	1	C	10/22/20 KH
G1699-FS	CBD-AOA-MW10-1020	250.0	1	C	10/22/20 KH
G1700-FS	CBD-BKG-MW03-1020	265.0	1	C	10/22/20 KH
G1701-FS	CBD-SO4-MW01-1020	250.0	1	C	10/22/20 KH
G1702-FS	CBD-SO4-MW01P-1020	265.0	1	C	10/22/20 KH

Comments:

Samples Assigned By:

Matt Schumitz

Date : October 16, 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

20-1305

CTO-4532: PFAS in Water

AQ, GW

Sample ID	Standard ID	Type	Vial No.	Vol Added (uL)	Date Spiked/ Spiked By	Witn'd By	Comment
DA908PB-FS	LD44	SIS	5	125	10/21/20 KH	DMS	NA
DA909LCS-FS	LD43	LCS/MS	1	100	10/21/20 KH	DMS	NA
DA909LCS-FS	LD44	SIS	5	125	10/21/20 KH	DMS	NA
G1696-FS	LD44	SIS	5	125	10/21/20 KH	DMS	NA
G1697-FS	LD44	SIS	5	125	10/21/20 KH	DMS	NA
G1698-FS	LD44	SIS	5	125	10/21/20 KH	DMS	NA
G1699-FS	LD44	SIS	5	125	10/21/20 KH	DMS	NA
G1700-FS	LD44	SIS	5	125	10/21/20 KH	DMS	NA
G1701-FS	LD44	SIS	5	125	10/21/20 KH	DMS	NA
G1702-FS	LD44	SIS	5	125	10/21/20 KH	DMS	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

20-1305**CTO-4532: PFAS in Water****AQ, GW**

Sample ID	1st Extraction	2nd Extraction	3rd Extraction	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comment
DA908PB-FS	10/21/20 KH	NA	NA	NEVAP_3	NA	NA	NA	NA
DA909LCS-FS	10/21/20 KH	NA	NA	NEVAP_3	NA	NA	NA	NA
G1696-FS	10/21/20 KH	NA	NA	NEVAP_3	NA	NA	NA	NA
G1697-FS	10/21/20 KH	NA	NA	NEVAP_3	NA	NA	NA	NA
G1698-FS	10/21/20 KH	NA	NA	NEVAP_3	NA	NA	NA	NA
G1699-FS	10/21/20 KH	NA	NA	NEVAP_3	NA	NA	NA	NA
G1700-FS	10/21/20 KH	NA	NA	NEVAP_3	NA	NA	NA	NA
G1701-FS	10/21/20 KH	NA	NA	NEVAP_3	NA	NA	NA	NA
G1702-FS	10/21/20 KH	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% NH3 in Methanol (w/v)	RP-201021-1	10/21/20	A0409799	Per 100 mL, 4.25 mL ammonia solution brought to 100 mL with methanol	
0.5% NH3 in Methanol (w/v)	RP-201021-1	10/21/20	201527	Per 100 mL, 4.25 mL ammonia solution brought to 100 mL with methanol	
Pre-packed SPE Column	RP-201021-9	10/21/20	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

20-1305

CTO-4532: PFAS in Water

AQ, GW

Extract Id	Date	Init.	Comments
DA908PB-FS(0)	10/21/20	KH	NA
DA909LCS-FS(0)	10/21/20	KH	NA
G1696-FS(0)	10/21/20	KH	NA
G1697-FS(0)	10/21/20	KH	NA
G1698-FS(0)	10/21/20	KH	NA
G1699-FS(0)	10/21/20	KH	NA
G1700-FS(0)	10/21/20	KH	NA
G1701-FS(0)	10/21/20	KH	NA
G1702-FS(0)	10/21/20	KH	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

20-1305

CTO-4532: PFAS in Water

AQ, 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

20-1305**CTO-4532: PFAS in Water****AQ, 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
DA908PB-FS(0)	875	125	LD56	125	8	1000	1.000	11/04/20 KB	RPK
DA909LCS-FS(0)	875	125	LD56	125	8	1000	1.000	11/04/20 KB	RPK
G1696-FS(0)	875	125	LD56	125	8	1000	1.000	11/04/20 KB	RPK
G1697-FS(0)	875	125	LD56	125	8	1000	1.000	11/04/20 KB	RPK
G1698-FS(0)	875	125	LD56	125	8	1000	1.000	11/04/20 KB	RPK
G1699-FS(0)	875	125	LD56	125	8	1000	1.000	11/04/20 KB	RPK
G1699-FS-D(3)	900	100	LD56	125	8	1000	5.000	11/04/20 KB	RPK
G1699-FS-D(5)	925	75	LD56	125	8	1000	12.500	11/04/20 KB	RPK
G1700-FS(0)	875	125	LD56	125	8	1000	1.000	11/04/20 KB	RPK
G1701-FS(0)	875	125	LD56	125	8	1000	1.000	11/04/20 KB	RPK
G1701-FS-D(3)	885	115	LD56	125	8	1000	12.500	11/04/20 KB	RPK
G1701-FS-D(5)	925	75	LD56	125	8	1000	31.250	11/04/20 KB	RPK
G1702-FS(0)	875	125	LD56	125	8	1000	1.000	11/04/20 KB	RPK
G1702-FS-D(3)	885	115	LD56	125	8	1000	12.500	11/04/20 KB	RPK
G1702-FS-D(5)	925	75	LD56	125	8	1000	31.250	11/04/20 KB	RPK

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
LD44	Pipette	B814657482
LD56	Pipette	B814657482

* - 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

20-1305

CTO-4532: PFAS in Water

AQ, GW

Extract Id	DF	Std. ID	Type	Vial No.	Vol. Added (uL)	Conc (ug/mL)	Added (ng)	Date Spiked/ Spiked By	Witn'd By
G1699-FS-D(3)	5	LD44	SIS	8	100	0	0	11/04/20 KB	RPK
G1699-FS-D(5)	12.5	LD44	SIS	8	75	0	0	11/04/20 KB	RPK
G1701-FS-D(3)	12.5	LD44	SIS	8	115	0	0	11/04/20 KB	RPK
G1701-FS-D(5)	31.25	LD44	SIS	8	75	0	0	11/04/20 KB	RPK
G1702-FS-D(3)	12.5	LD44	SIS	8	115	0	0	11/04/20 KB	RPK
G1702-FS-D(5)	31.25	LD44	SIS	8	75	0	0	11/04/20 KB	RPK

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
LD44	Pipette	B814657482
LD56	Pipette	B814657482



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

20-1305**CTO-4532: PFAS in Water****AQ, GW**

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
DA908PB-FS	0	--	10/21/2020	NA		NA	NA	1.000	1.000	10/21/20 KH
DA909LCS-FS	0	--	10/21/2020	NA		NA	NA	1.000	1.000	10/21/20 KH
G1696-FS	0	--	10/21/2020	NA		NA	NA	1.000	1.000	10/21/20 KH
G1697-FS	0	--	10/21/2020	NA		NA	NA	1.000	1.000	10/21/20 KH
G1698-FS	0	--	10/21/2020	NA		NA	NA	1.000	1.000	10/21/20 KH
G1699-FS	0	C	10/21/2020	NA		NA	NA	1.000	1.000	10/21/20 KH
G1699-FS	2	--	11/4/2020 2:18:00 PM	G1699-FS	0	1000	800	1.250	1.250	11/04/20 KB
G1699-FS-D	3	C	11/4/2020 2:18:00 PM	G1699-FS	0	1000	200	5.000	5.000	11/04/20 KB
G1699-FS-D	4	--	11/4/2020 2:19:00 PM	G1699-FS-D	3	1000	600	1.667	8.333	11/04/20 KB
G1699-FS-D	5	--	11/4/2020 2:19:00 PM	G1699-FS-D	3	1000	400	2.500	12.500	11/04/20 KB
G1700-FS	0	--	10/21/2020	NA		NA	NA	1.000	1.000	10/21/20 KH
G1701-FS	0	C	10/21/2020	NA		NA	NA	1.000	1.000	10/21/20 KH
G1701-FS	2	--	11/4/2020 2:16:00 PM	G1701-FS	0	1000	920	1.087	1.087	11/04/20 KB
G1701-FS-D	3	C	11/4/2020 2:16:00 PM	G1701-FS	0	1000	80	12.500	12.500	11/04/20 KB

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

20-1305**CTO-4532: PFAS in Water****AQ, GW**

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
G1701-FS-D	4	--	11/4/2020 2:19:00 PM	G1701-FS-D	3	1000	600	1.667	20.833	11/04/20 KB
G1701-FS-D	5	--	11/4/2020 2:19:00 PM	G1701-FS-D	3	1000	400	2.500	31.250	11/04/20 KB
G1702-FS	0	C	10/21/2020	NA		NA	NA	1.000	1.000	10/21/20 KH
G1702-FS	2	--	11/4/2020 2:16:00 PM	G1702-FS	0	1000	920	1.087	1.087	11/04/20 KB
G1702-FS-D	3	C	11/4/2020 2:16:00 PM	G1702-FS	0	1000	80	12.500	12.500	11/04/20 KB
G1702-FS-D	4	--	11/4/2020 2:19:00 PM	G1702-FS-D	3	1000	600	1.667	20.833	11/04/20 KB
G1702-FS-D	5	--	11/4/2020 2:19:00 PM	G1702-FS-D	3	1000	400	2.500	31.250	11/04/20 KB

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

20-1305

CTO-4532: PFAS in Water

AQ, GW

Purpose: LC-MS/MS TRANSFER	Last Activity: Prep->Inst
Relinquished On/By: Nov 4 2020 6:23PM KB	Received On/By: Nov 4 2020 6:23PM 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	DA908PB-FS(0)	1000	1	Intact	NA
2	DA909LCS-FS(0)	1000	1	Intact	NA
3	G1696-FS(0)	1000	1	Intact	NA
4	G1697-FS(0)	1000	1	Intact	NA
5	G1698-FS(0)	1000	1	Intact	NA
6	G1699-FS(0)	1000	1	Intact	NA
7	G1699-FS-D(3)	1000	5	Intact	NA
8	G1699-FS-D(5)	1000	12.5	Intact	NA
9	G1700-FS(0)	1000	1	Intact	NA
10	G1701-FS(0)	1000	1	Intact	NA
11	G1701-FS-D(3)	1000	12.5	Intact	NA
12	G1701-FS-D(5)	1000	31.25	Intact	NA
13	G1702-FS(0)	1000	1	Intact	NA
14	G1702-FS-D(3)	1000	12.5	Intact	NA
15	G1702-FS-D(5)	1000	31.25	Intact	NA

Total Extracts: 15



BATTELLE - NORWELL OPERATIONS SAMPLE SPECIFIC COMMENTS

Project Title(s)

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

Project No.(s)

100142218

20-1305

CTO-4532: PFAS in Water

AQ, GW

Sample ID:	Comment:	Date/Initials:
DA908PB-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.	10/21/20 KH
DA908PB-FS	Extraction began at 2:17 PM, manifold 6, ended at 3:34 PM.	10/21/20 KH
DA909LCS-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.	10/21/20 KH
DA909LCS-FS	Extraction began at 2:17 PM, manifold 6, ended at 3:35 PM.	10/21/20 KH
G1696-FS	Sample contained approximately 1% particulate matter. 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.	10/21/20 KH
G1696-FS	Extraction began at 2:17 PM, manifold 6, ended at 3:20 PM.	10/21/20 KH
G1697-FS	Extraction began at 2:17 PM, manifold 6, ended at 3:33 PM.	10/21/20 KH
G1697-FS	Sample contained particulates.	10/21/20 KH
G1698-FS	Extraction began at 2:17 PM, manifold 6, ended at 3:33 PM.	10/21/20 KH
G1699-FS	Extraction began at 2:17 PM, manifold 6, ended at 3:14 PM.	10/21/20 KH
G1699-FS	Sample contained particulates.	10/21/20 KH
G1700-FS	Extraction began at 2:17 PM, manifold 6, ended at 3:46 PM.	10/21/20 KH
G1701-FS	Extraction began at 2:17 PM, manifold 6, ended at 4:56 PM.	10/21/20 KH
G1701-FS	Sample contained particulates.	10/21/20 KH
G1701-FS	Sample clogged the top filter of the SPE cartridge during extraction, the filter was popped and left inside the SPE cartridge for the remainder of the extraction and elution process.	10/21/20 KH
G1702-FS	Extraction began at 2:17 PM, manifold 6, ended at 5:08 PM.	10/21/20 KH
G1702-FS	Sample contained particulates.	10/21/20 KH



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

20-1305

CTO-4532: PFAS in Water

AQ, 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 4:38:46 PM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
2	LD74	L1	11/5/2020 1:46:02 PM	5-369.dam	AE 11052020 5-369.wiff
3	LD75	L2	11/5/2020 1:56:29 PM	5-369.dam	AE 11052020 5-369.wiff
4	LD76	L3	11/5/2020 2:06:57 PM	5-369.dam	AE 11052020 5-369.wiff
5	LD77	L4	11/5/2020 2:17:24 PM	5-369.dam	AE 11052020 5-369.wiff
6	LD78	L5	11/5/2020 2:27:51 PM	5-369.dam	AE 11052020 5-369.wiff
7	LD79	L6	11/5/2020 2:38:18 PM	5-369.dam	AE 11052020 5-369.wiff
8	LD80 IB	Instrument Blank	11/5/2020 2:48:46 PM	5-369.dam	AE 11052020 5-369.wiff
9	LD81 ICC	ICC	11/5/2020 2:59:12 PM	5-369.dam	AE 11052020 5-369.wiff
10	LE25 Branch	Branch Standard	11/5/2020 3:09:41 PM	5-369.dam	AE 11052020 5-369.wiff
11	MeOH		11/5/2020 3:20:09 PM	5-369.dam	AE 11052020 5-369.wiff
12	DA908PB-FS(0)	Procedural Blank	11/5/2020 3:30:37 PM	5-369.dam	AE 11052020 5-369.wiff
13	DA909LCS-FS(0)	Laboratory Control Sample	11/5/2020 3:41:28 PM	5-369.dam	AE 11052020 5-369.wiff
14	G1696-FS(0)	CBD-HVG-GW10-1020	11/5/2020 3:51:55 PM	5-369.dam	AE 11052020 5-369.wiff
15	G1697-FS(0)	CBD-HVG-GW09-1020	11/5/2020 4:02:22 PM	5-369.dam	AE 11052020 5-369.wiff
16	G1698-FS(0)	CBD-EB01-101420-GW	11/5/2020 4:12:50 PM	5-369.dam	AE 11052020 5-369.wiff
17	G1699-FS(0)	CBD-AOA-MW10-1020	11/5/2020 4:23:19 PM	5-369.dam	AE 11052020 5-369.wiff
18	G1699-FS-D(3)	CBD-AOA-MW10-1020	11/5/2020 4:33:47 PM	5-369.dam	AE 11052020 5-369.wiff
19	G1699-FS-D(5)	CBD-AOA-MW10-1020	11/5/2020 4:44:14 PM	5-369.dam	AE 11052020 5-369.wiff
20	MeOH		11/5/2020 4:54:43 PM	5-369.dam	AE 11052020 5-369.wiff
21	LD76 CCV	CCV	11/5/2020 5:05:11 PM	5-369.dam	AE 11052020 5-369.wiff
22	G1700-FS(0)	CBD-BKG-MW03-1020	11/5/2020 5:16:07 PM	5-369.dam	AE 11052020 5-369.wiff
23	G1701-FS(0)	CBD-SO4-MW01-1020	11/5/2020 5:26:35 PM	5-369.dam	AE 11052020 5-369.wiff
24	G1701-FS-D(3)	CBD-SO4-MW01-1020	11/5/2020 5:37:03 PM	5-369.dam	AE 11052020 5-369.wiff
25	G1701-FS-D(5)	CBD-SO4-MW01-1020	11/5/2020 5:47:31 PM	5-369.dam	AE 11052020 5-369.wiff
26	G1702-FS(0)	CBD-SO4-MW01P-1020	11/5/2020 5:58:00 PM	5-369.dam	AE 11052020 5-369.wiff
27	G1702-FS-D(3)	CBD-SO4-MW01P-1020	11/5/2020 6:08:28 PM	5-369.dam	AE 11052020 5-369.wiff
28	G1702-FS-D(5)	CBD-SO4-MW01P-1020	11/5/2020 6:18:56 PM	5-369.dam	AE 11052020 5-369.wiff
29	LD77 CCV	CCV	11/5/2020 6:29:24 PM	5-369.dam	AE 11052020 5-369.wiff

1. Sample did not inject correctly on the instrument. A fresh aliquot was taken, run and is being reported. DMS 11/6/2020



Sequence Report

Created with Analyst Reporter
Printed: 06/11/2020 4:41:21 PM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
2	LD76 CCV	CCV	11/6/2020 1:12:05 PM	5-369.dam	AE_11062020_5-369.wiff
3	LD79	L6	11/6/2020 1:22:32 PM	5-369.dam	AE_11062020_5-369.wiff
4	LD80 IB	Instrument Blank	11/6/2020 1:33:00 PM	5-369.dam	AE_11062020_5-369.wiff
5	MeOH		11/6/2020 1:43:28 PM	5-369.dam	AE_11062020_5-369.wiff
6	G1812-FS(0)		11/6/2020 1:53:55 PM	5-369.dam	AE_11062020_5-369.wiff
7	MeOH		11/6/2020 2:04:22 PM	5-369.dam	AE_11062020_5-369.wiff
8	LD77 CCV	CCV	11/6/2020 2:14:49 PM	5-369.dam	AE_11062020_5-369.wiff
9	G1696-FS(0)	CBD-HVG-GW10-1020	11/6/2020 2:25:16 PM	5-369.dam	AE_11062020_5-369.wiff
10	G1697-FS(0)	CBD-HVG-GW09-1020	11/6/2020 2:35:43 PM	5-369.dam	AE_11062020_5-369.wiff
11	G1701-FS(0)	CBD-SO4-MW01-1020	11/6/2020 2:46:10 PM	5-369.dam	AE_11062020_5-369.wiff
12	G1702-FS(0)	CBD-SO4-MW01P-1020	11/6/2020 2:56:37 PM	5-369.dam	AE_11062020_5-369.wiff
13	MeOH		11/6/2020 3:07:05 PM	5-369.dam	AE_11062020_5-369.wiff
15	LD76 CCV	CCV	11/6/2020 3:17:33 PM	5-369.dam	AE_11062020_5-369.wiff

1

2



1. Sample from another batch, not reported with this one. DMS 11/6/2020
2. Samples run for confirmation only. DMS 11/6/2020



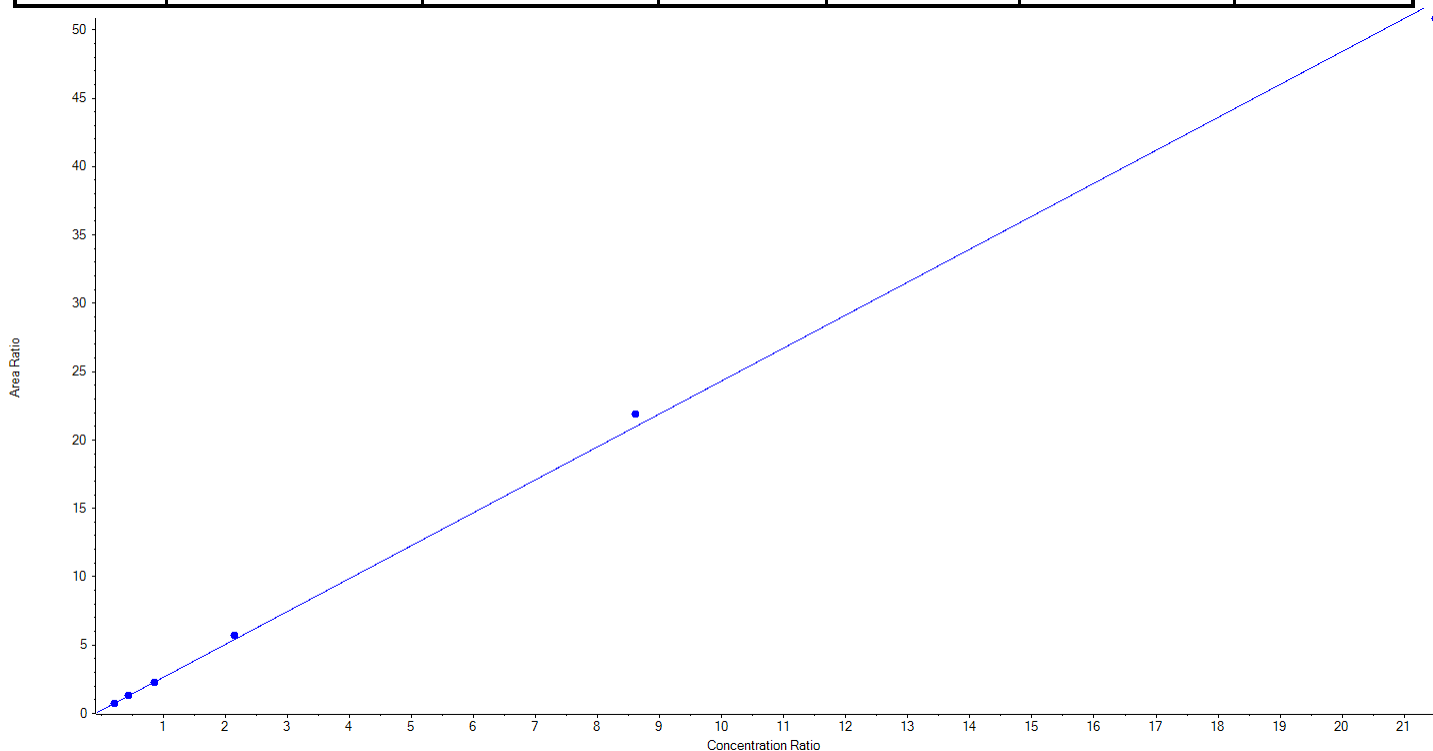
Calibration Summary Report

Created with Analyst Reporter
Printed: 06/11/2020 4:31:57 PM

Analyte Name	PFBS_1	Data File	AE_11052020_5-369.wiff
MRM Transition	298.9 / 80.0	Result Table	20-1305
Internal Standard	13C3-PFBS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 2.40860x + 0.23835$ ($r = 0.99928$) (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	224.32	89.7
3	LD75	L2	True	500.00	524.64	104.9
4	LD76	L3	True	1000.00	967.62	96.8
5	LD77	L4	True	2500.00	2657.99	106.3
6	LD78	L5	True	10000.00	10460.31	104.6
7	LD79	L6	True	25000.00	24415.12	97.7





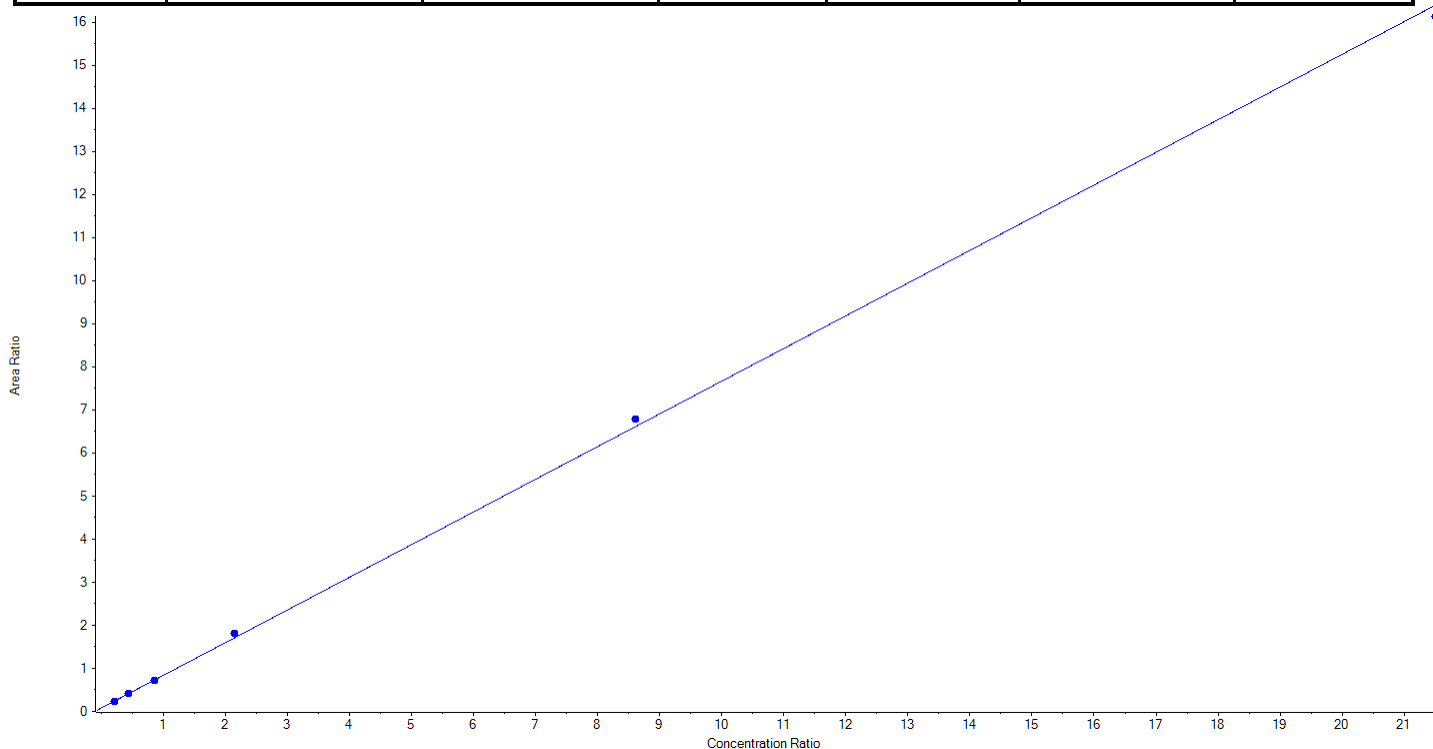
Calibration Summary Report

Created with Analyst Reporter
Printed: 06/11/2020 4:31:57 PM

Analyte Name	PFBS_2	Data File	AE_11052020_5-369.wiff
MRM Transition	298.9 / 99.0	Result Table	20-1305
Internal Standard	13C3-PFBS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.75852 x + 0.08279$ ($r = 0.99958$) (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	219.02	87.6
3	LD75	L2	True	500.00	532.03	106.4
4	LD76	L3	True	1000.00	986.84	98.7
5	LD77	L4	True	2500.00	2658.51	106.3
6	LD78	L5	True	10000.00	10257.86	102.6
7	LD79	L6	True	25000.00	24595.73	98.4





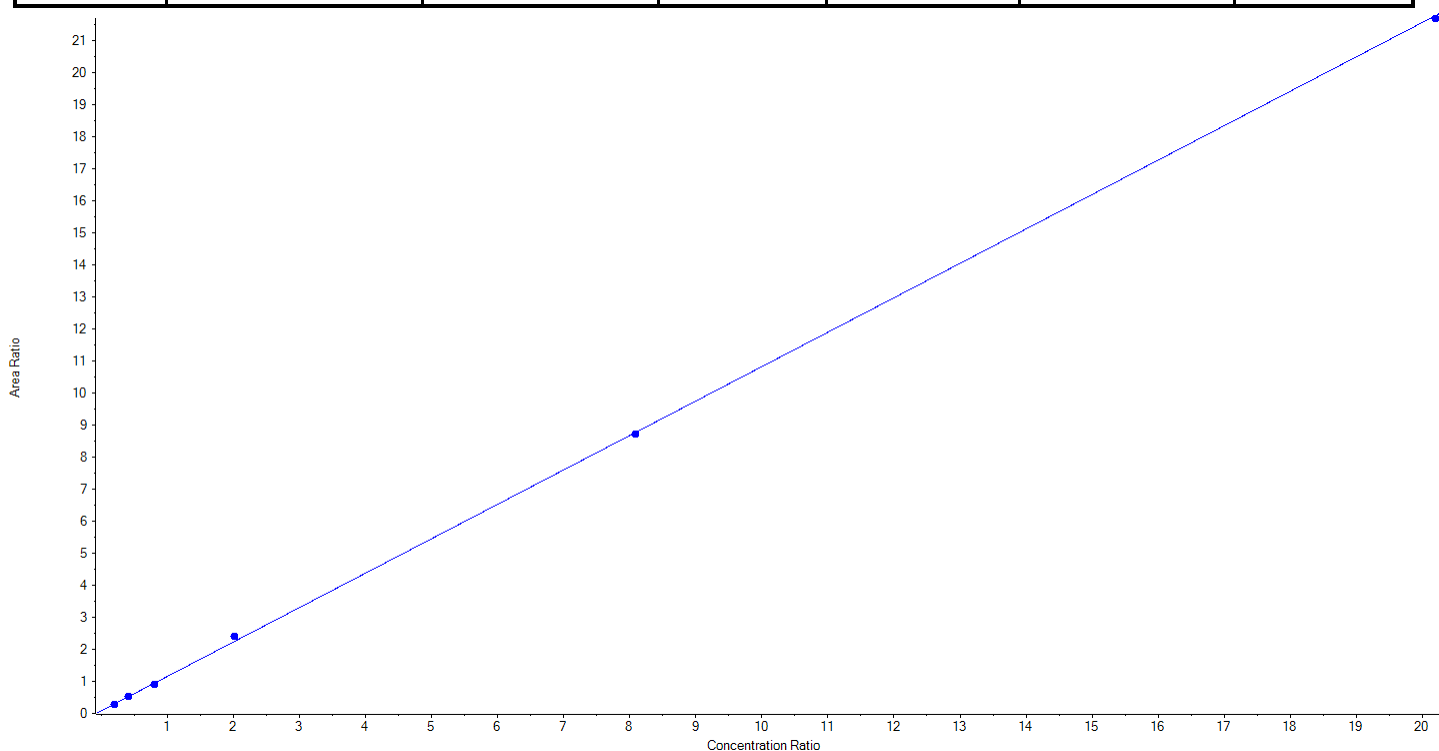
Calibration Summary Report

Created with Analyst Reporter
Printed: 06/11/2020 4:31:57 PM

Analyte Name	PFHxA_1	Data File	AE_11052020_5-369.wiff
MRM Transition	313.0 / 269.0	Result Table	20-1305
Internal Standard	13C5-PFHxA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.07473x + 0.08521$ ($r = 0.99973$) (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	252.50	233.71	92.6
3	LD75	L2	True	505.00	533.78	105.7
4	LD76	L3	True	1010.00	963.52	95.4
5	LD77	L4	True	2525.00	2705.09	107.1
6	LD78	L5	True	10100.00	10063.50	99.6
7	LD79	L6	True	25250.00	25142.90	99.6





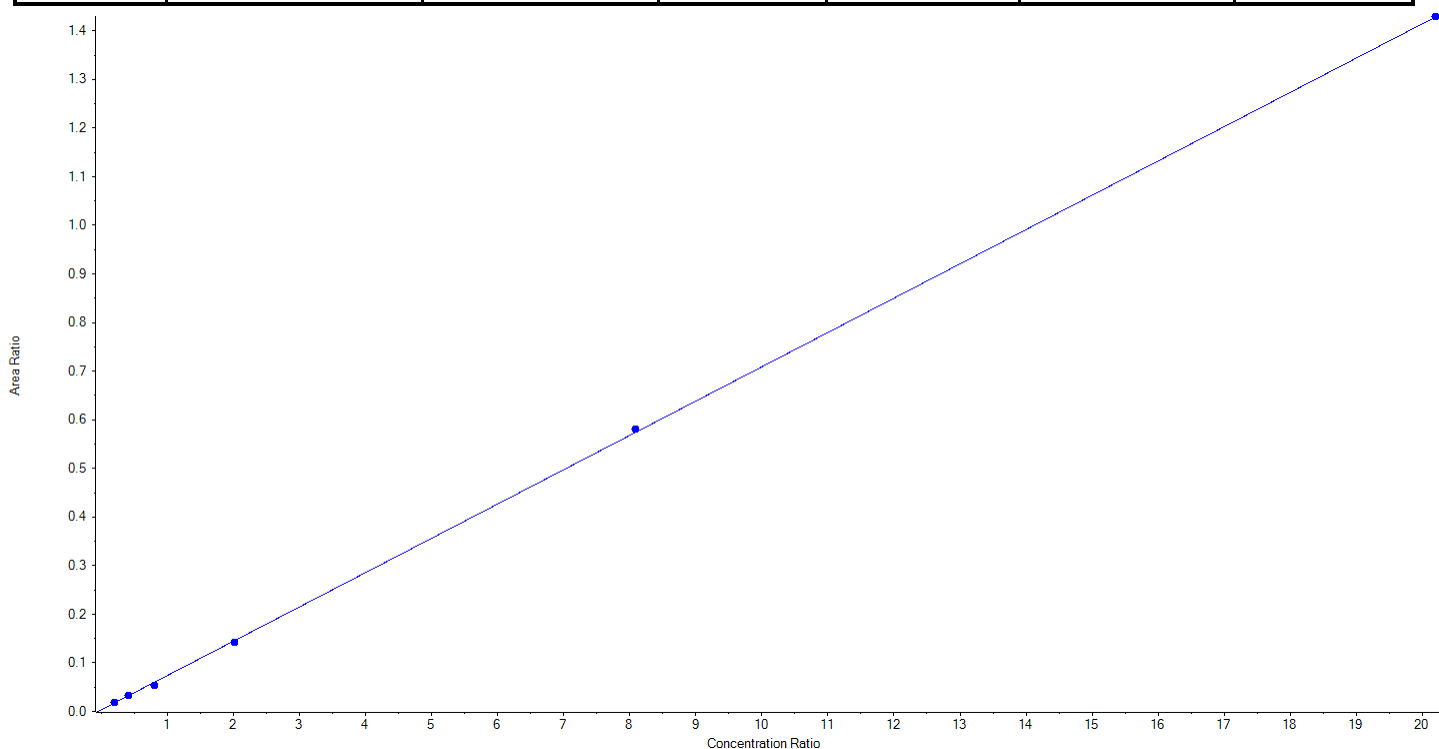
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Analyte Name	PFHxA_2	Data File	AE_11052020_5-369.wiff
MRM Transition	313.0 / 119.0	Result Table	20-1305
Internal Standard	13C5-PFHxA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.07054 x + 0.00362$ ($r = 0.99970$) (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	252.50	273.11	108.2
3	LD75	L2	True	505.00	531.46	105.2
4	LD76	L3	True	1010.00	887.72	87.9
5	LD77	L4	True	2525.00	2459.46	97.4
6	LD78	L5	True	10100.00	10225.09	101.2
7	LD79	L6	True	25250.00	25265.67	100.1





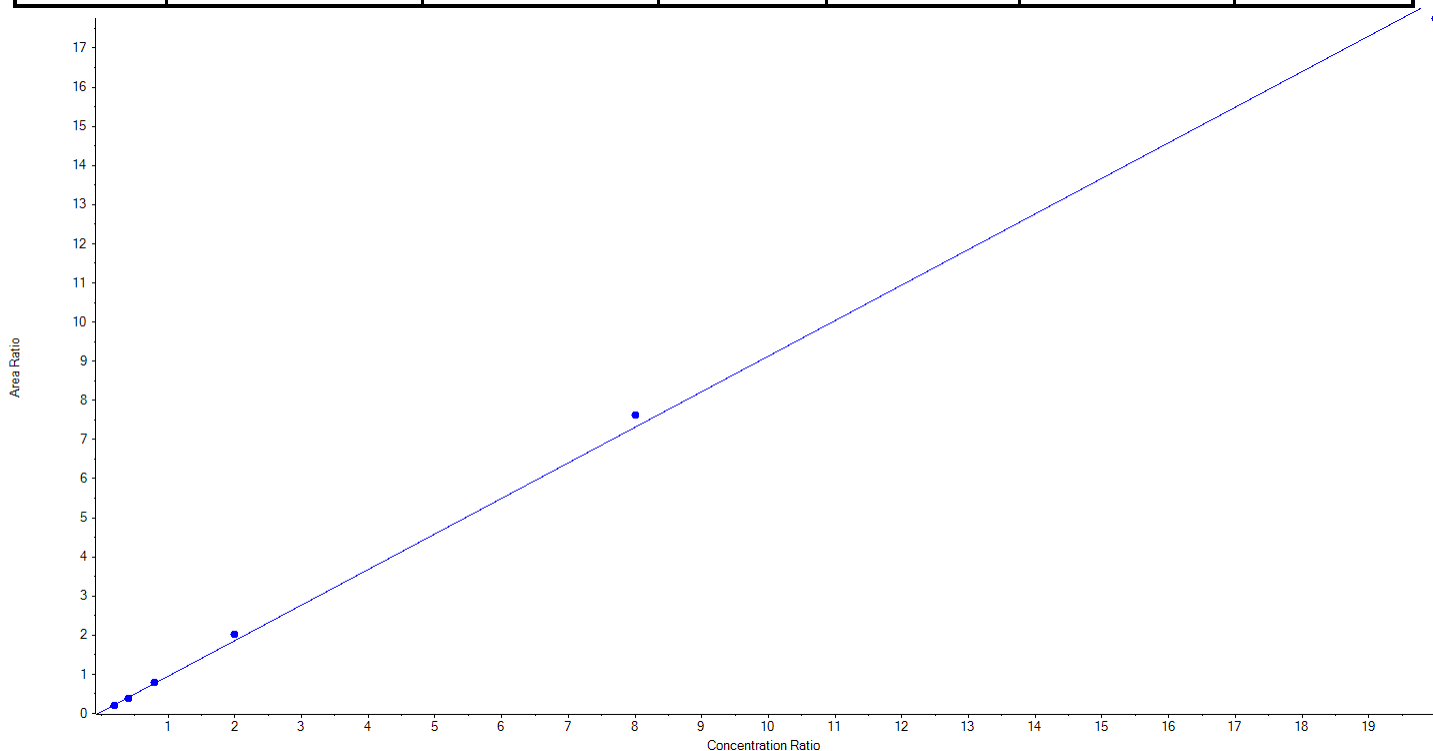
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Analyte Name	PFHpA_1	Data File	AE_11052020_5-369.wiff
MRM Transition	363.0 / 319.0	Result Table	20-1305
Internal Standard	13C4-PFHpA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.90848x + 0.04443$ ($r = 0.99913$) (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	236.85	94.7
3	LD75	L2	True	500.00	457.99	91.6
4	LD76	L3	True	1000.00	1028.84	102.9
5	LD77	L4	True	2500.00	2723.53	108.9
6	LD78	L5	True	10000.00	10437.37	104.4
7	LD79	L6	True	25000.00	24365.41	97.5





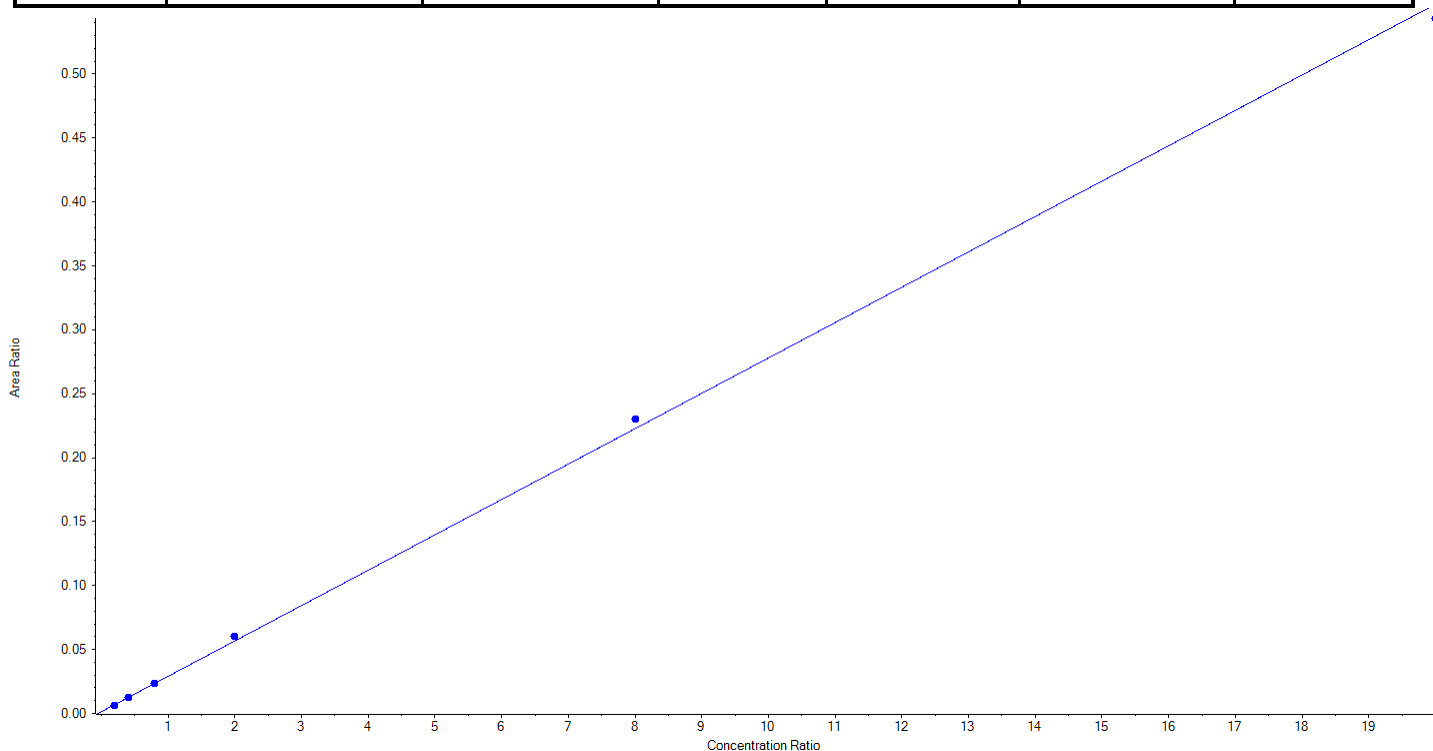
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Analyte Name	PFHpA_2	Data File	AE_11052020_5-369.wiff
MRM Transition	363.0 / 169.0	Result Table	20-1305
Internal Standard	13C4-PFHpA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.02765x + 0.00146$ ($r = 0.99949$) (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	225.58	90.2
3	LD75	L2	True	500.00	504.36	100.9
4	LD76	L3	True	1000.00	1011.10	101.1
5	LD77	L4	True	2500.00	2655.85	106.2
6	LD78	L5	True	10000.00	10356.54	103.6
7	LD79	L6	True	25000.00	24496.57	98.0





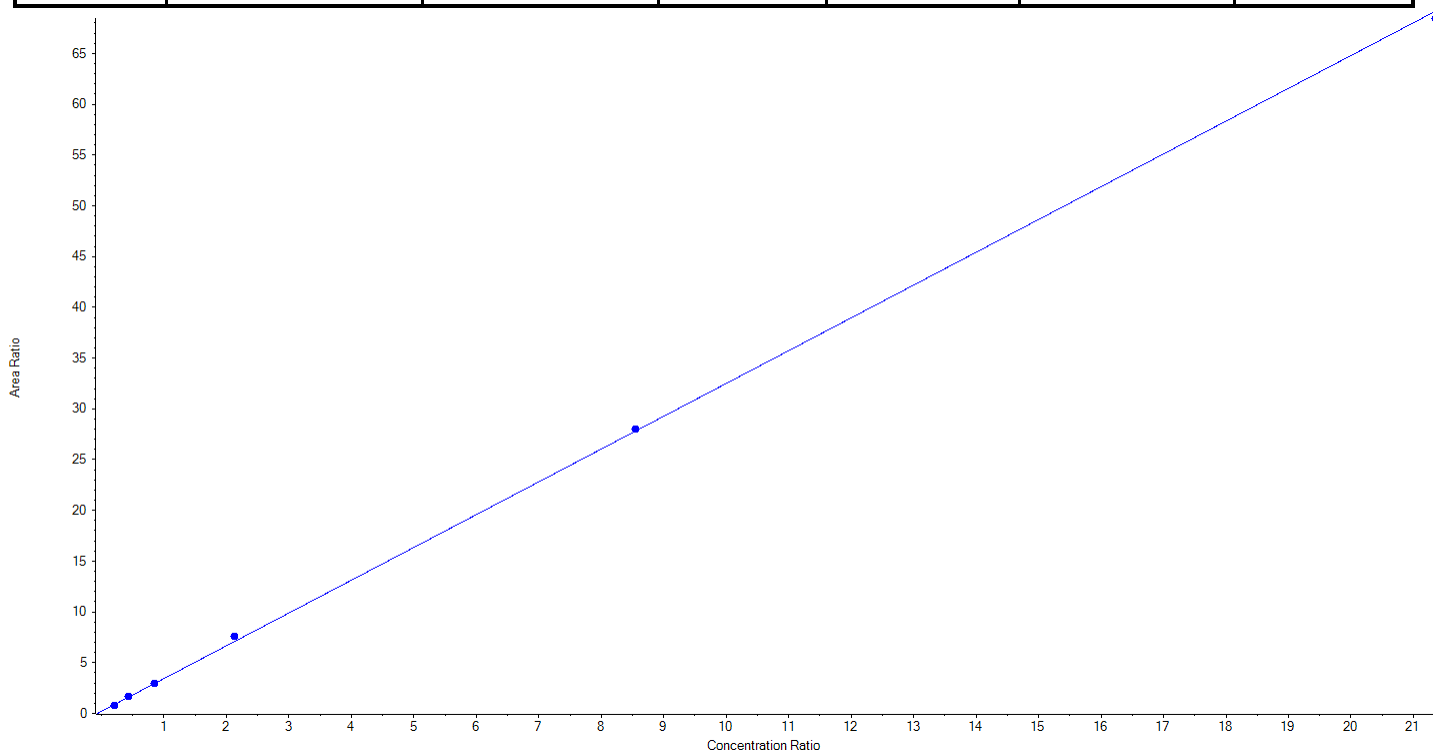
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Analyte Name	PFHxS_1	Data File	AE_11052020_5-369.wiff
MRM Transition	399.0 / 80.0	Result Table	20-1305
Internal Standard	13C3-PFHxS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 3.22958x + 0.20551$ ($r = 0.99972$) (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	252.50	221.39	87.7
3	LD75	L2	True	505.00	530.50	105.1
4	LD76	L3	True	1010.00	1018.01	100.8
5	LD77	L4	True	2525.00	2690.88	106.6
6	LD78	L5	True	10100.00	10197.19	101.0
7	LD79	L6	True	25250.00	24984.54	99.0





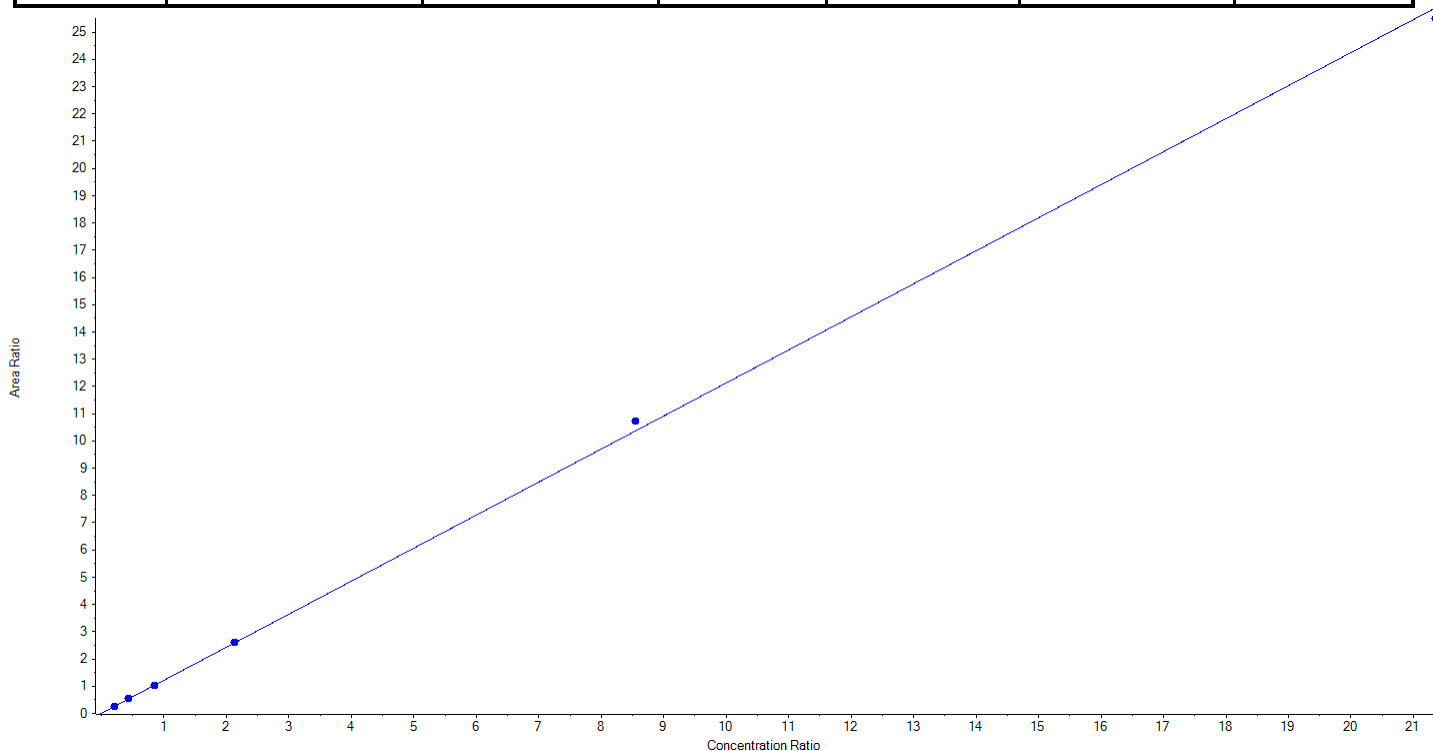
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Analyte Name	PFHxS_2	Data File	AE_11052020_5-369.wiff
MRM Transition	399.0 / 99.0	Result Table	20-1305
Internal Standard	13C3-PFHxS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.21209x + 0.00785$ ($r = 0.99964$) (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	252.50	229.31	90.8
3	LD75	L2	True	505.00	546.03	108.1
4	LD76	L3	True	1010.00	999.24	98.9
5	LD77	L4	True	2525.00	2522.73	99.9
6	LD78	L5	True	10100.00	10476.15	103.7
7	LD79	L6	True	25250.00	24869.04	98.5





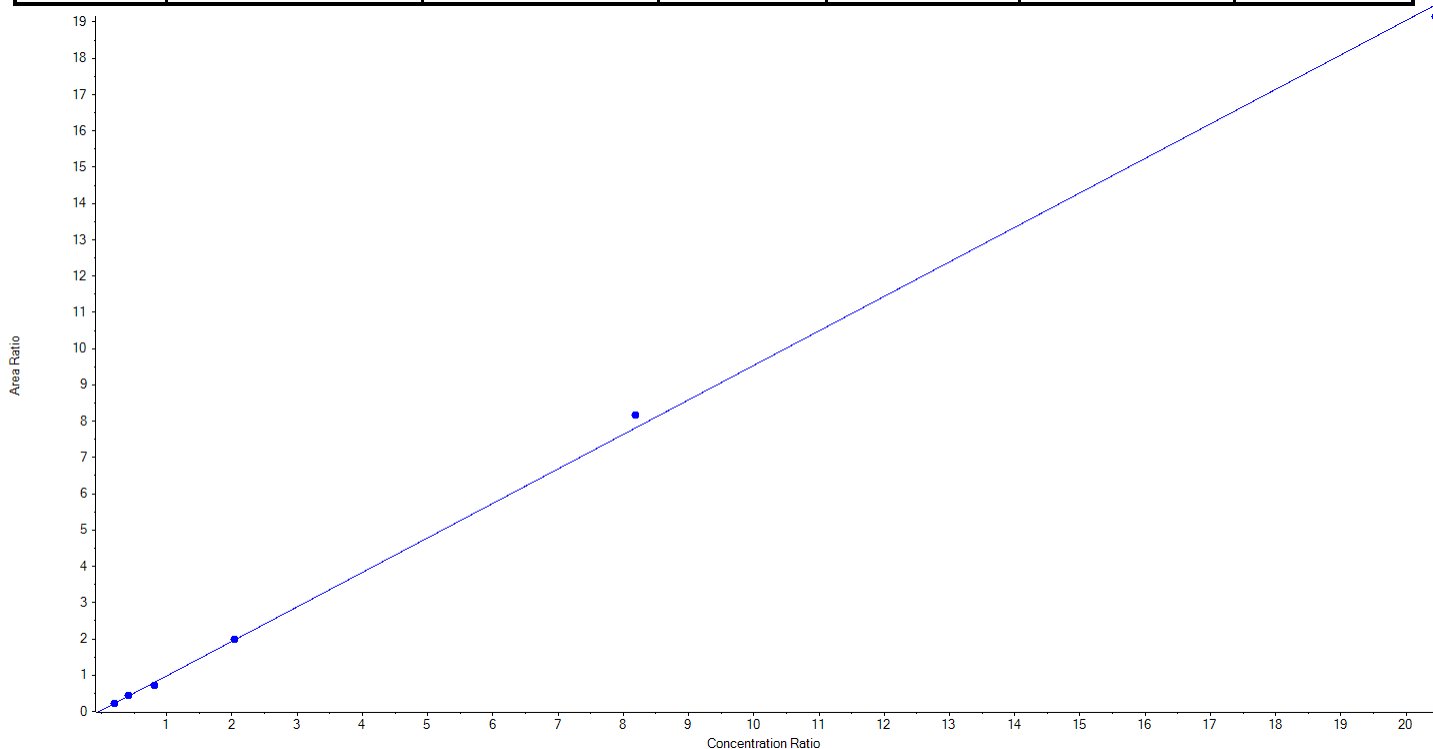
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Analyte Name	PFOA_1	Data File	AE_11052020_5-369.wiff
MRM Transition	413.0 / 369.0	Result Table	20-1305
Internal Standard	13C8-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.95076x + 0.03018$ ($r = 0.99935$) (weighting: $1/x$) $r^2:0.9987$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	246.16	98.5
3	LD75	L2	True	500.00	544.76	109.0
4	LD76	L3	True	1000.00	894.52	89.5
5	LD77	L4	True	2500.00	2500.23	100.0
6	LD78	L5	True	10000.00	10477.64	104.8
7	LD79	L6	True	25000.00	24586.69	98.4





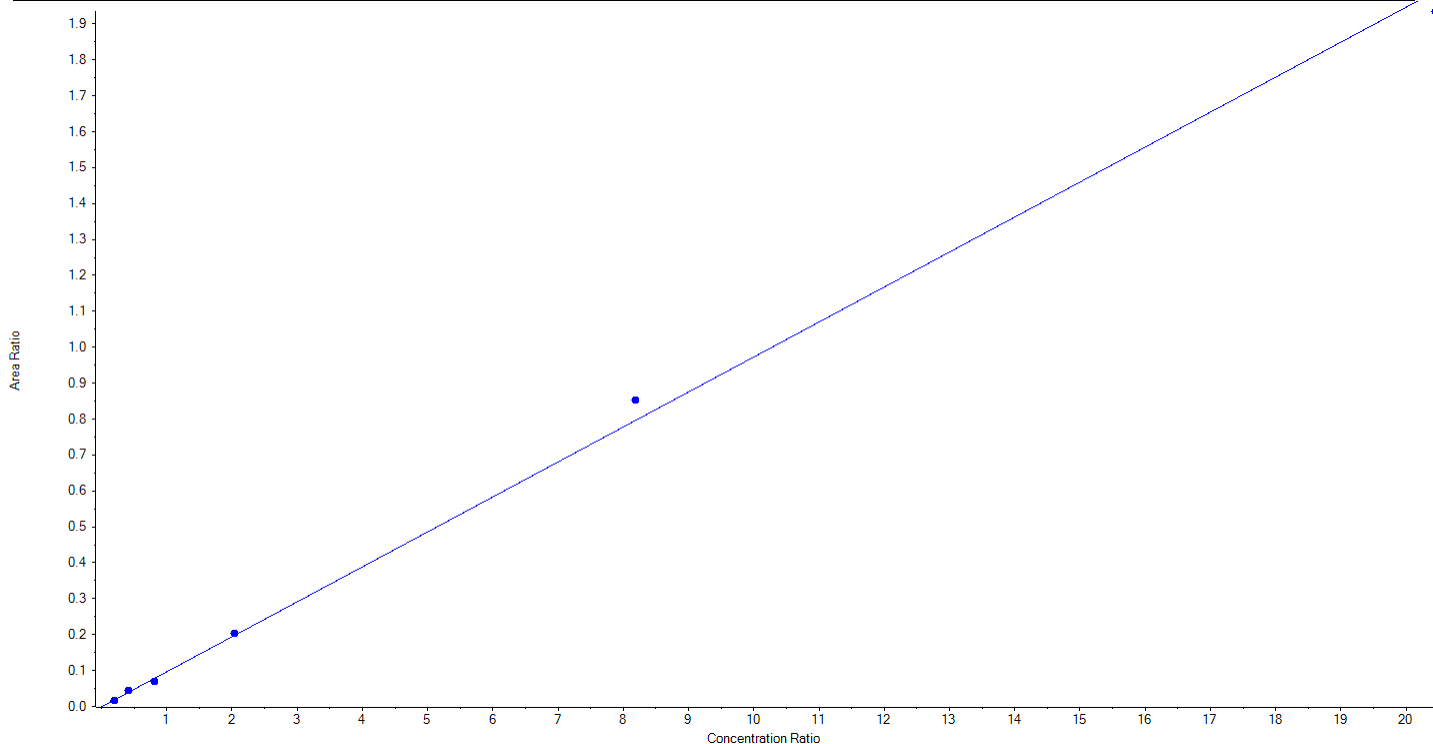
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Analyte Name	PFOA_2	Data File	AE_11052020_5-369.wiff
MRM Transition	413.0 / 169.0	Result Table	20-1305
Internal Standard	13C8-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.09737x + -8.35170e-4$ ($r = 0.99860$) (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	231.68	92.7
3	LD75	L2	True	500.00	563.38	112.7
4	LD76	L3	True	1000.00	880.97	88.1
5	LD77	L4	True	2500.00	2553.39	102.1
6	LD78	L5	True	10000.00	10722.57	107.2
7	LD79	L6	True	25000.00	24298.01	97.2





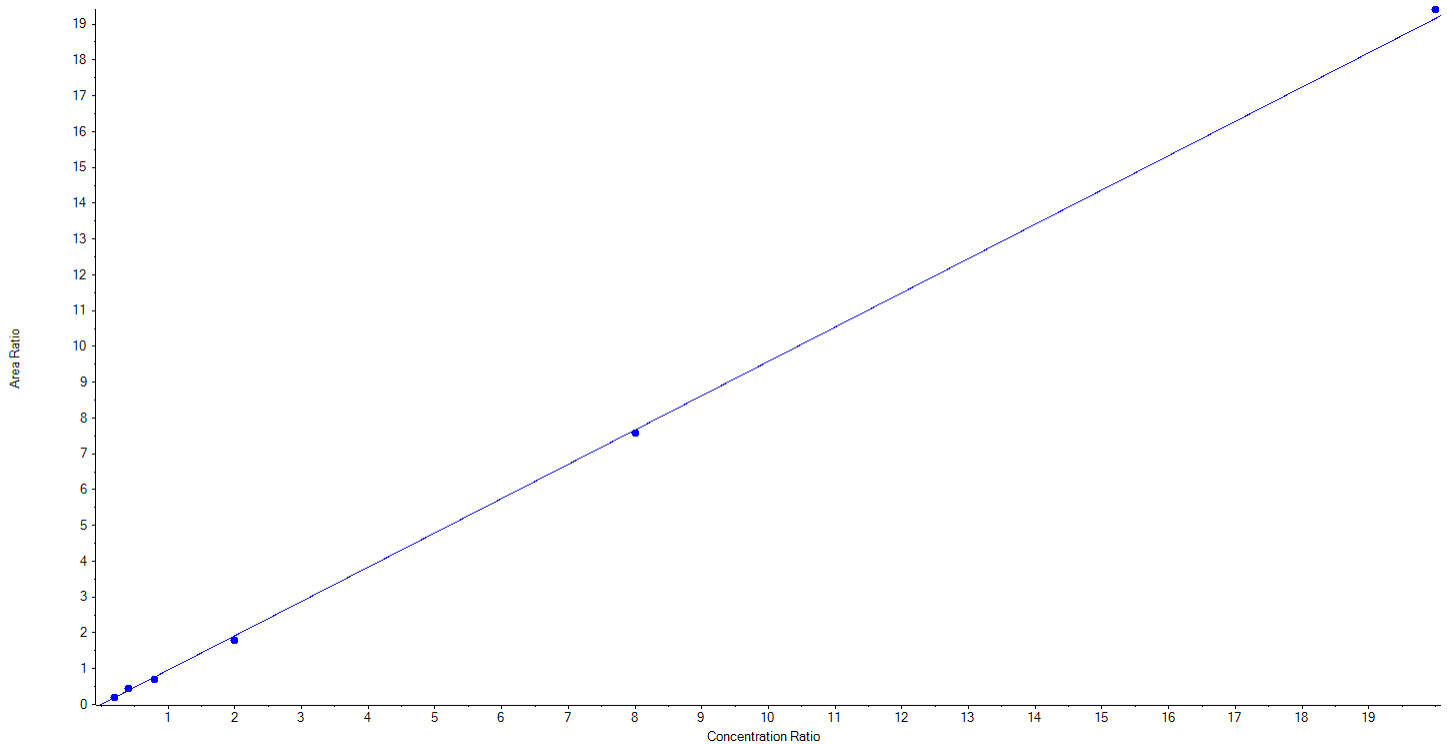
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Analyte Name	PFNA_1	Data File	AE_11052020_5-369.wiff
MRM Transition	463.0 / 419.0	Result Table	20-1305
Internal Standard	13C9-PFNA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.95760x + 0.00623$ ($r = 0.99943$) (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	250.00	264.96	106.0
3	LD75	L2	True	500.00	561.12	112.2
4	LD76	L3	True	1000.00	887.17	88.7
5	LD77	L4	True	2500.00	2322.40	92.9
6	LD78	L5	True	10000.00	9887.37	98.9
7	LD79	L6	True	25000.00	25326.99	101.3





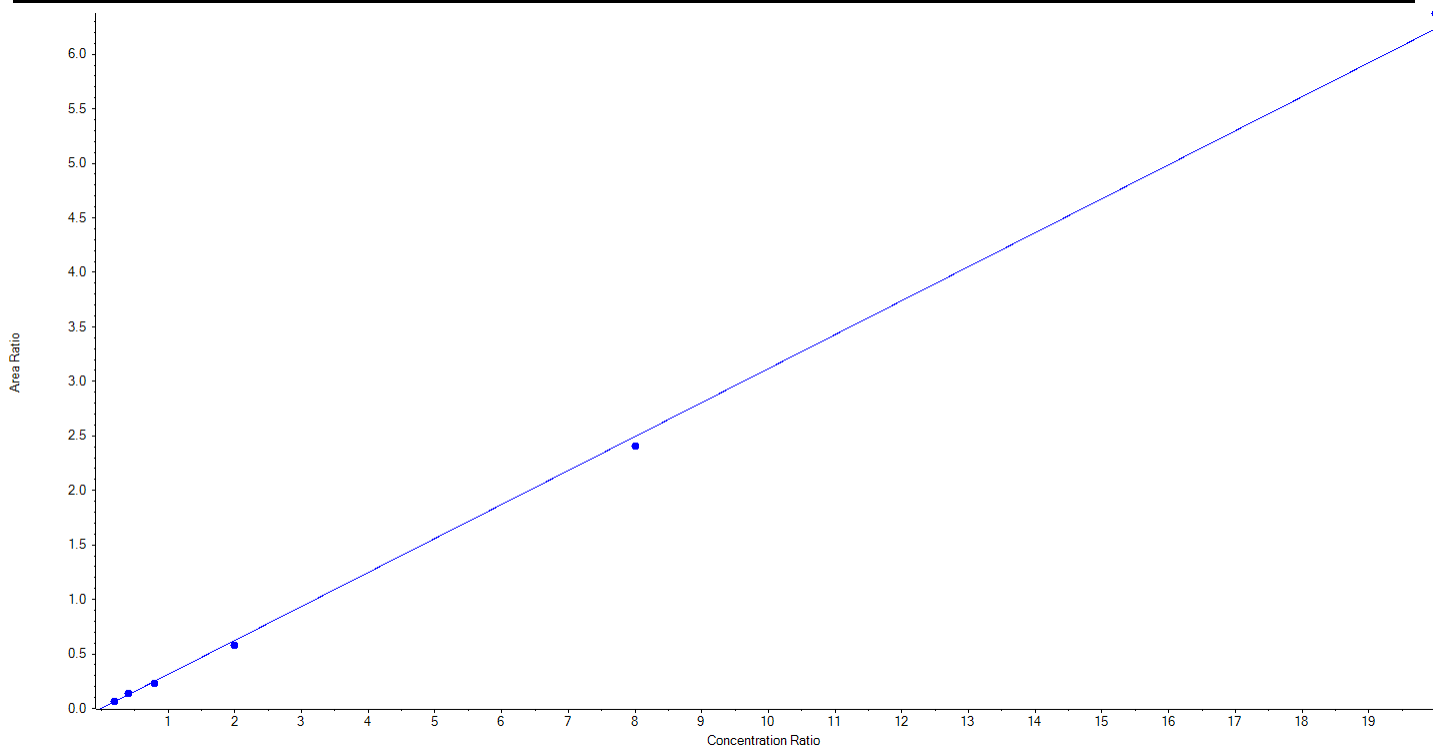
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Analyte Name	PFNA_2	Data File	AE_11052020_5-369.wiff
MRM Transition	463.0 / 219.0	Result Table	20-1305
Internal Standard	13C9-PFNA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.31163x + 0.00112$ ($r = 0.99924$) (weighting: $1/x$) $r^2: 0.9985$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	268.61	107.5
3	LD75	L2	True	500.00	550.24	110.1
4	LD76	L3	True	1000.00	907.21	90.7
5	LD77	L4	True	2500.00	2330.61	93.2
6	LD78	L5	True	10000.00	9631.41	96.3
7	LD79	L6	True	25000.00	25561.92	102.3





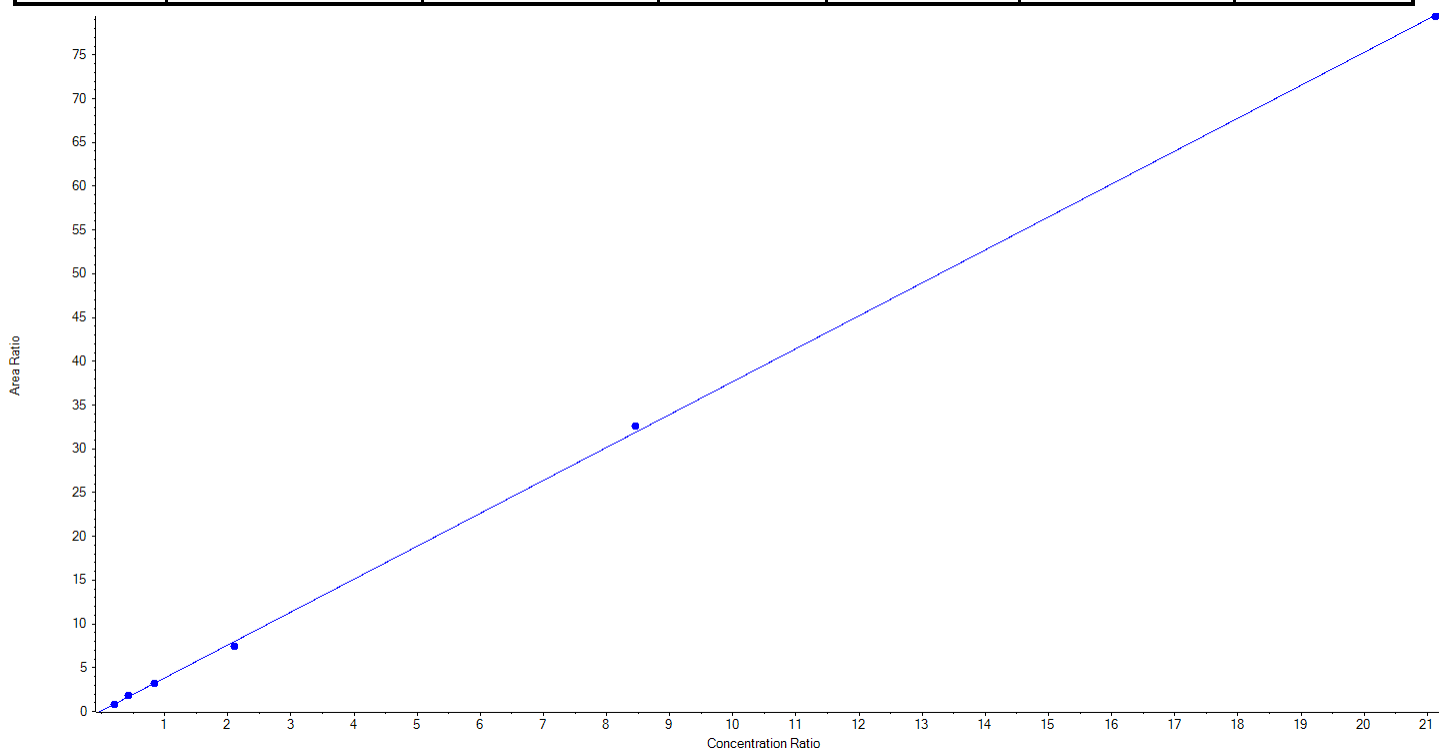
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Analyte Name	PFOS_1	Data File	AE_11052020_5-369.wiff
MRM Transition	499.0 / 80.0	Result Table	20-1305
Internal Standard	13C8-PFOS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 3.76103 x + 0.06746$ ($r = 0.99958$) (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	252.50	242.46	96.0
3	LD75	L2	True	505.00	567.77	112.4
4	LD76	L3	True	1010.00	983.67	97.4
5	LD77	L4	True	2525.00	2327.07	92.2
6	LD78	L5	True	10100.00	10321.41	102.2
7	LD79	L6	True	25250.00	25200.13	99.8





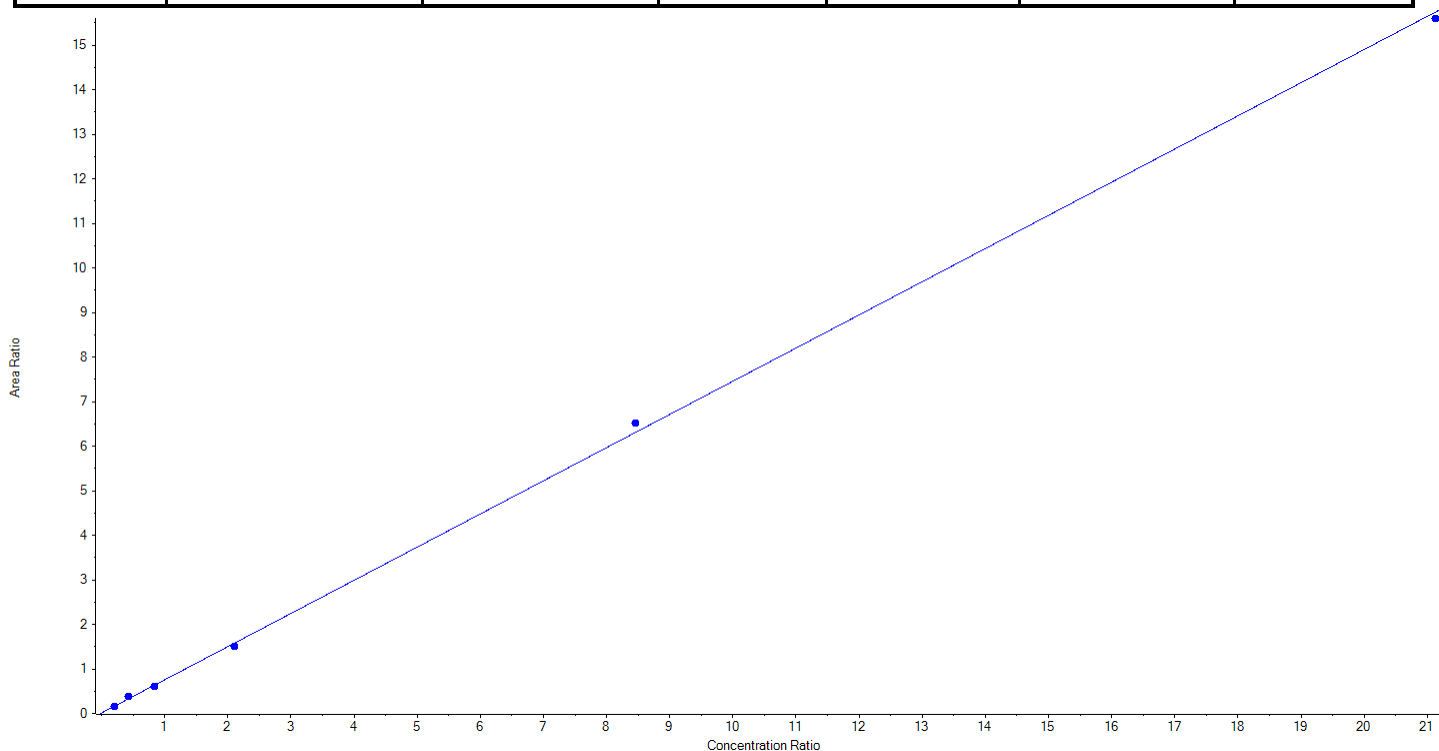
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Analyte Name	PFOS_2	Data File	AE_11052020_5-369.wiff
MRM Transition	499.0 / 99.0	Result Table	20-1305
Internal Standard	13C8-PFOS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.74470x + 0.01062$ ($r = 0.99946$) (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	230.42	91.3
3	LD75	L2	True	505.00	585.81	116.0
4	LD76	L3	True	1010.00	961.29	95.2
5	LD77	L4	True	2525.00	2399.60	95.0
6	LD78	L5	True	10100.00	10449.07	103.5
7	LD79	L6	True	25250.00	25016.30	99.1





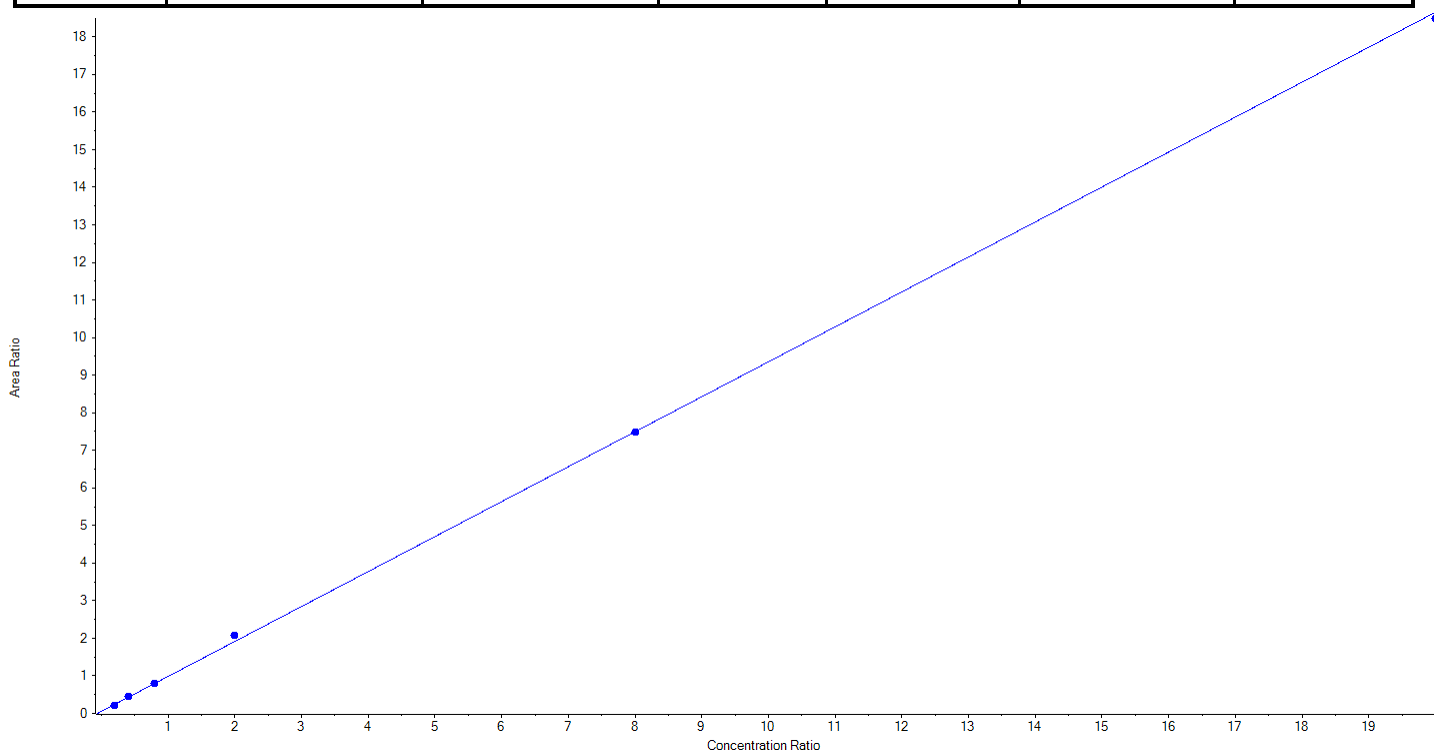
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Analyte Name	PFDA_1	Data File	AE_11052020_5-369.wiff
MRM Transition	513.0 / 469.0	Result Table	20-1305
Internal Standard	13C6-PFDA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.92991x + 0.05666$ (r = 0.99958) (weighting: 1 / x) r²:0.9992

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	216.20	86.5
3	LD75	L2	True	500.00	525.74	105.2
4	LD76	L3	True	1000.00	1000.74	100.1
5	LD77	L4	True	2500.00	2729.15	109.2
6	LD78	L5	True	10000.00	10003.38	100.0
7	LD79	L6	True	25000.00	24774.79	99.1





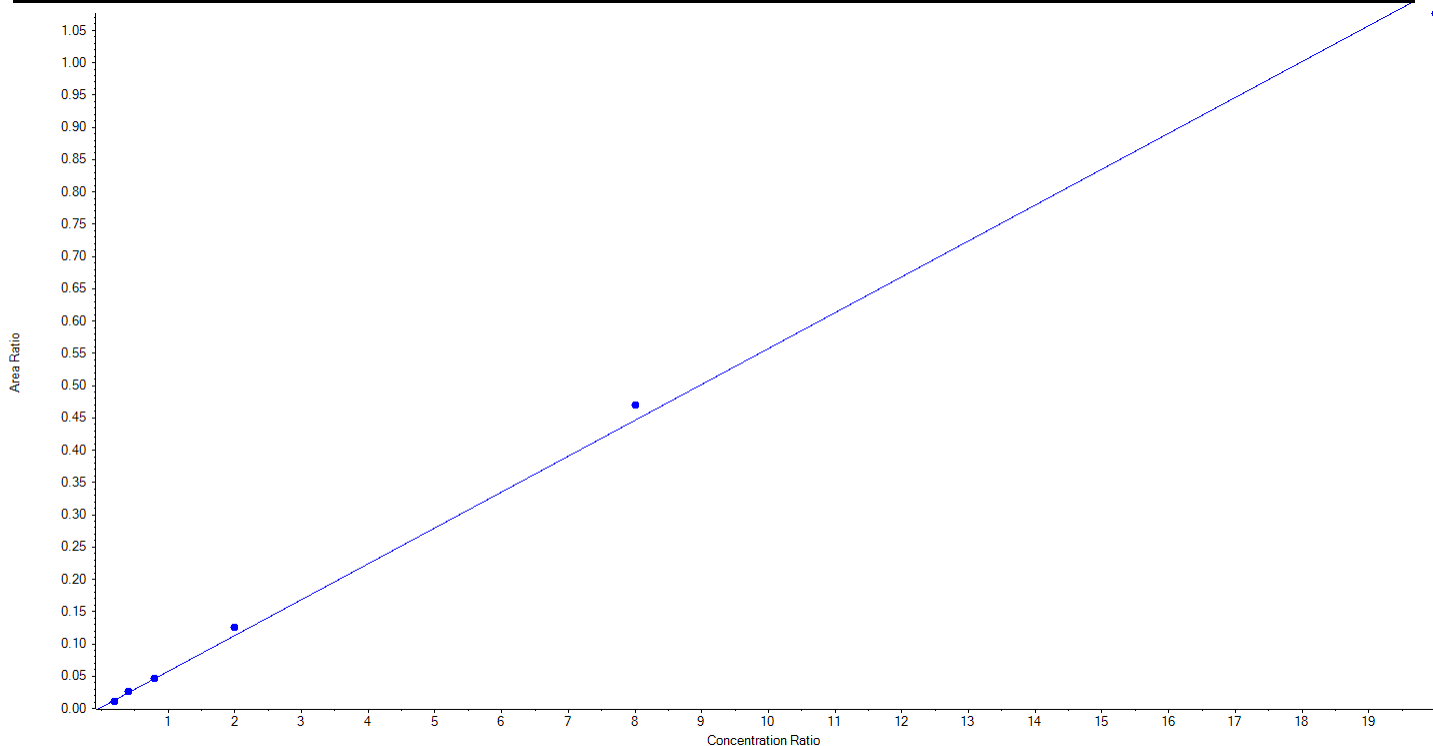
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Analyte Name	PFDA_2	Data File	AE_11052020_5-369.wiff
MRM Transition	513.0 / 219.0	Result Table	20-1305
Internal Standard	13C6-PFDA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.05555x + 0.00194$ ($r = 0.99845$) (weighting: $1/x$) $r^2: 0.9969$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	191.45	76.6
3	LD75	L2	True	500.00	544.21	108.8
4	LD76	L3	True	1000.00	1010.68	101.1
5	LD77	L4	True	2500.00	2783.88	111.4
6	LD78	L5	True	10000.00	10545.70	105.5
7	LD79	L6	True	25000.00	24174.07	96.7





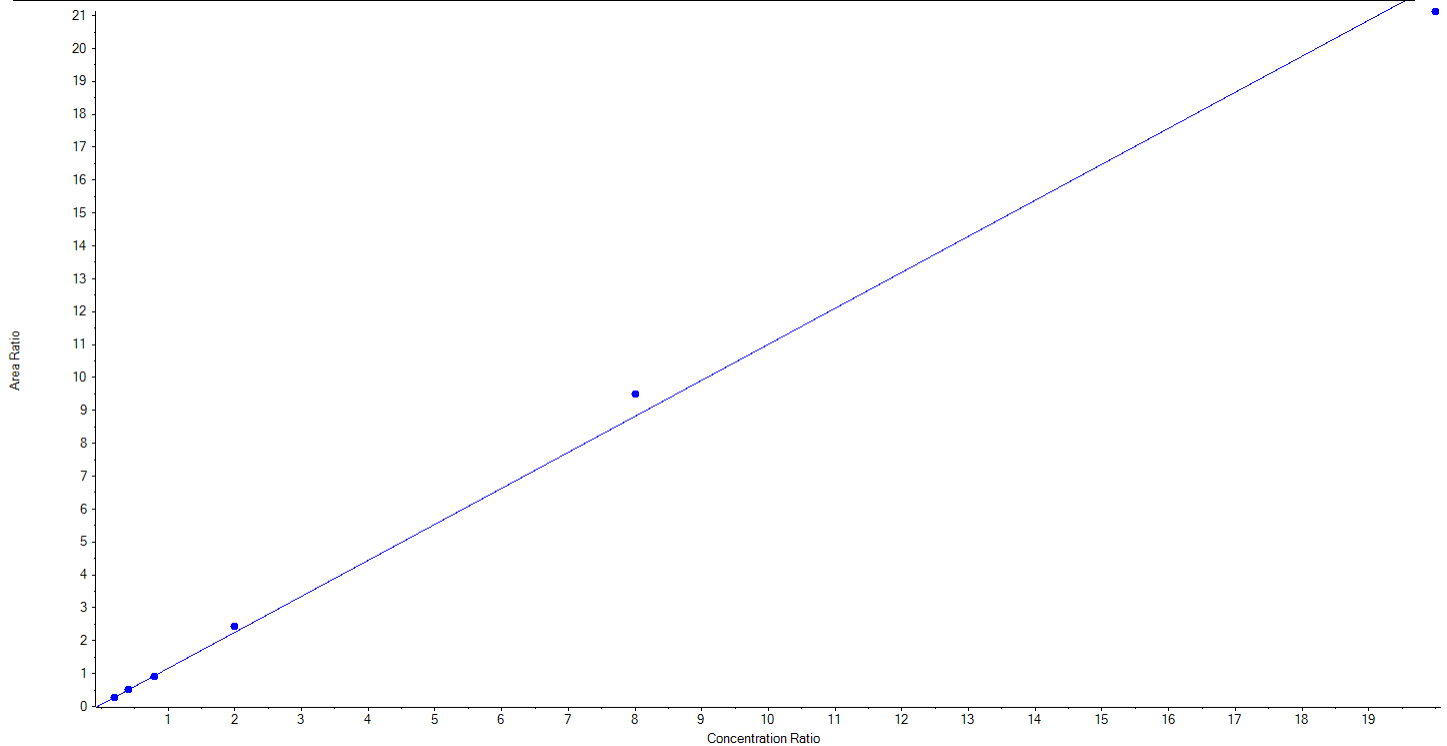
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Analyte Name	PFUnA_1	Data File	AE_11052020_5-369.wiff
MRM Transition	563.0 / 519.0	Result Table	20-1305
Internal Standard	13C7-PFUnA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.09446x + 0.06515$ ($r = 0.99825$) (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	224.08	89.6
3	LD75	L2	True	500.00	506.99	101.4
4	LD76	L3	True	1000.00	962.73	96.3
5	LD77	L4	True	2500.00	2714.86	108.6
6	LD78	L5	True	10000.00	10789.13	107.9
7	LD79	L6	True	25000.00	24052.20	96.2





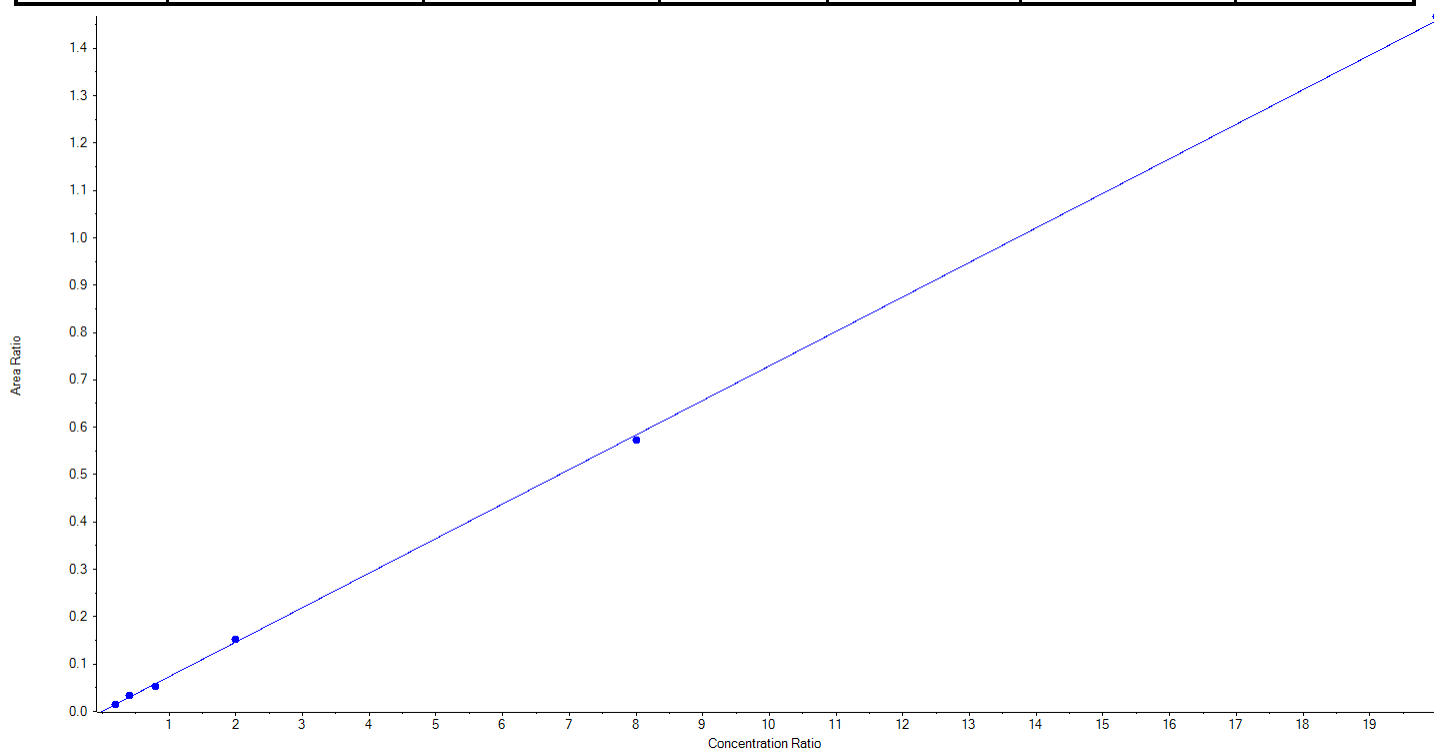
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Analyte Name	PFUnA_2	Data File	AE_11052020_5-369.wiff
MRM Transition	563.0 / 269.0	Result Table	20-1305
Internal Standard	13C7-PFUnA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.07287x + 7.29618e-4$ ($r = 0.99961$) (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	238.19	95.3
3	LD75	L2	True	500.00	561.29	112.3
4	LD76	L3	True	1000.00	898.64	89.9
5	LD77	L4	True	2500.00	2599.58	104.0
6	LD78	L5	True	10000.00	9801.54	98.0
7	LD79	L6	True	25000.00	25150.76	100.6





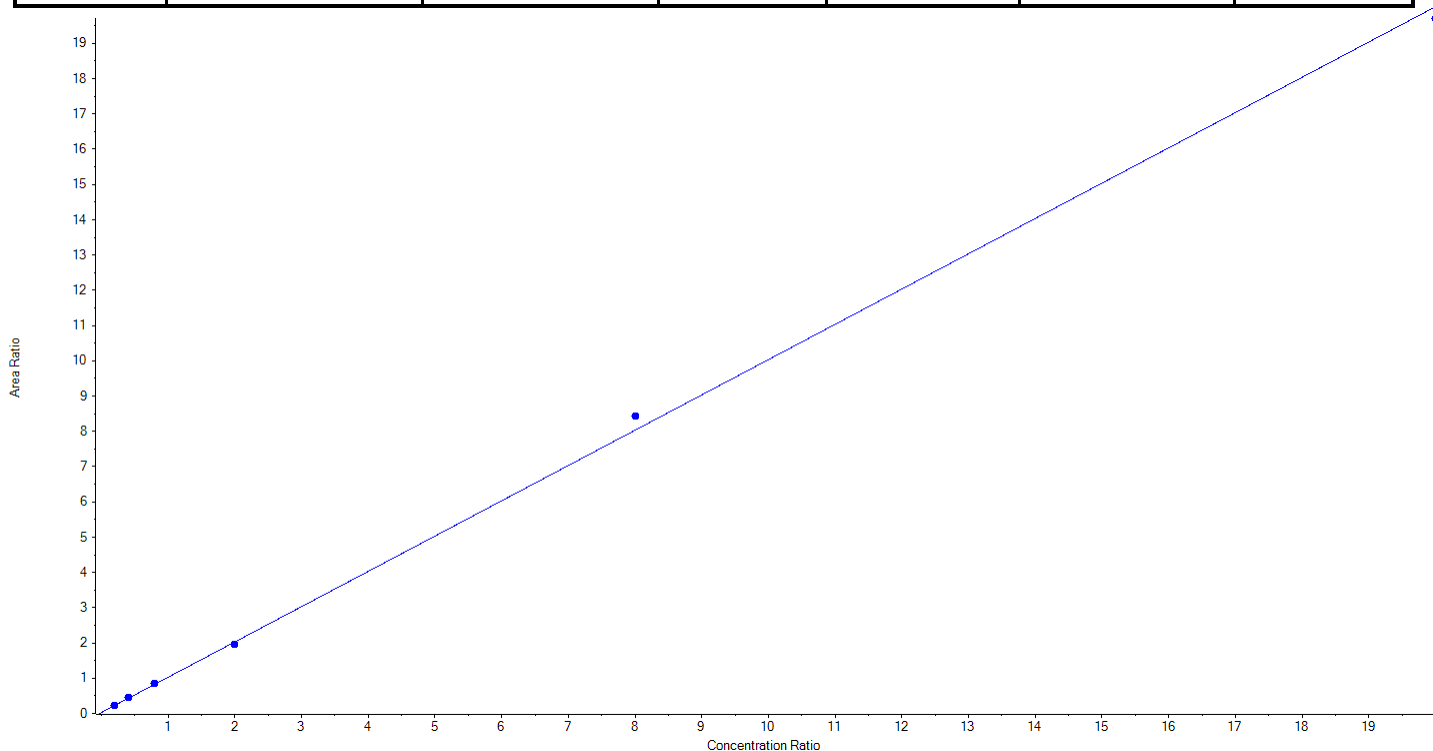
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Analyte Name	PFDoA_1	Data File	AE_11052020_5-369.wiff
MRM Transition	613.0 / 569.0	Result Table	20-1305
Internal Standard	13C2-PFDoA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.00056x + 0.02845$ ($r = 0.99946$) (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	250.00	235.30	94.1
3	LD75	L2	True	500.00	525.22	105.0
4	LD76	L3	True	1000.00	1015.93	101.6
5	LD77	L4	True	2500.00	2399.91	96.0
6	LD78	L5	True	10000.00	10491.86	104.9
7	LD79	L6	True	25000.00	24581.77	98.3





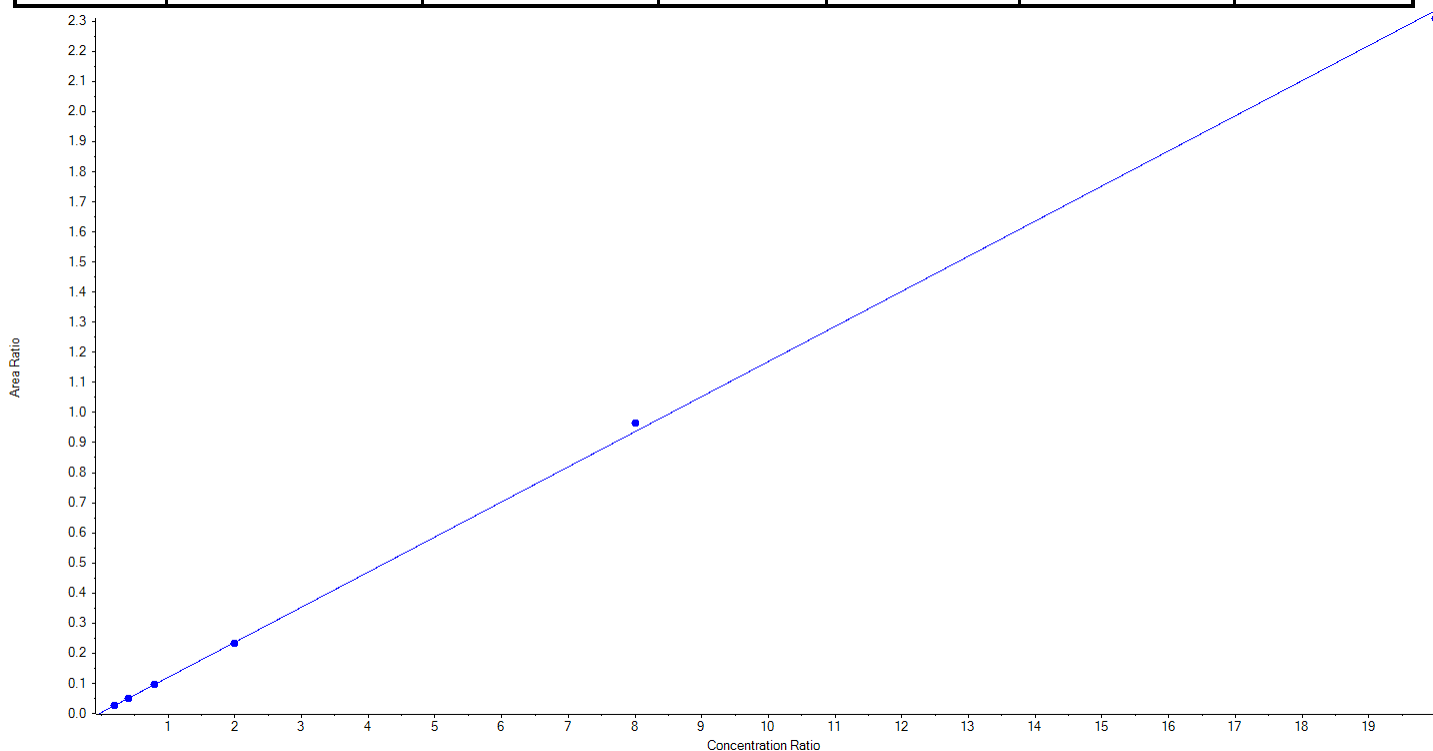
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Analyte Name	PFDoA_2	Data File	AE_11052020_5-369.wiff
MRM Transition	613.0 / 319.0	Result Table	20-1305
Internal Standard	13C2-PFDoA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.11660x + 0.00336$ ($r = 0.99978$) (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	241.28	96.5
3	LD75	L2	True	500.00	512.50	102.5
4	LD76	L3	True	1000.00	1007.48	100.8
5	LD77	L4	True	2500.00	2454.56	98.2
6	LD78	L5	True	10000.00	10320.48	103.2
7	LD79	L6	True	25000.00	24713.70	98.9





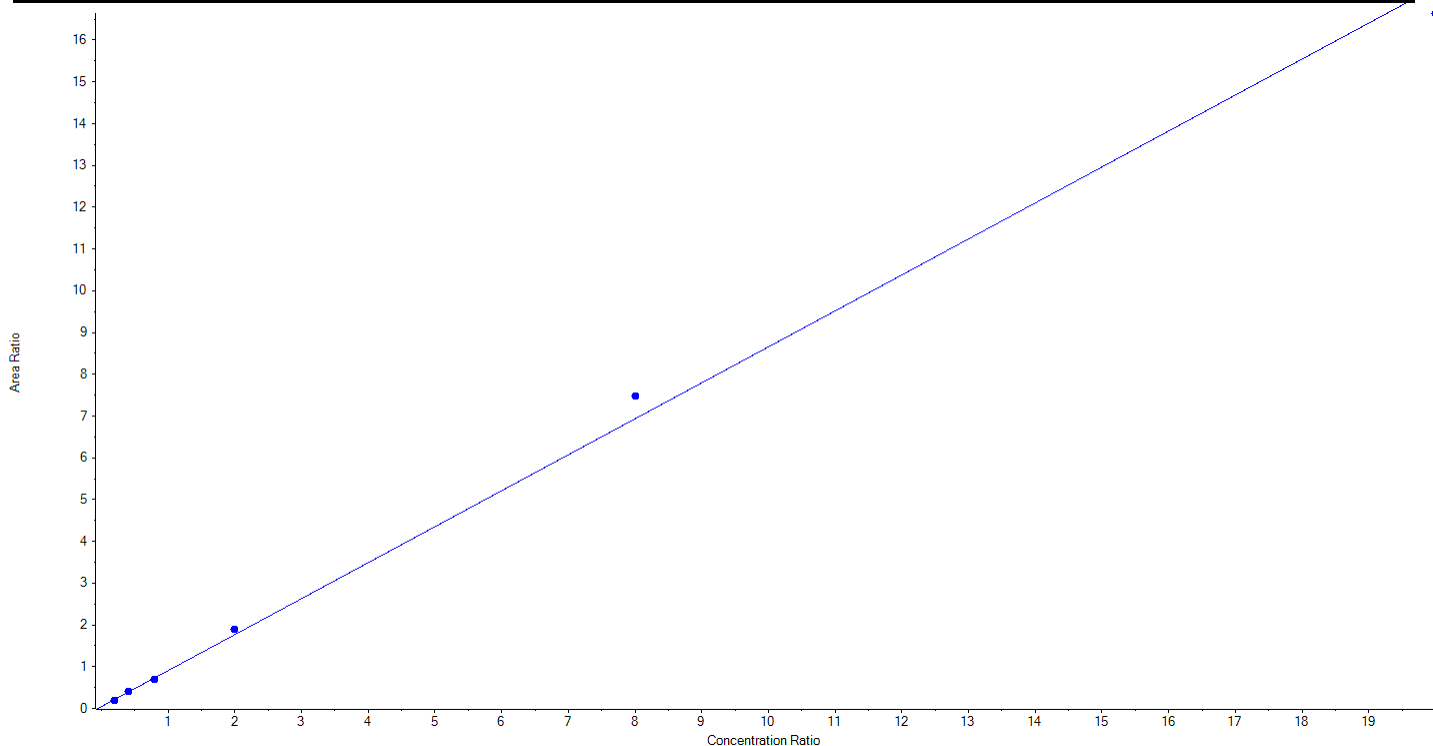
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Analyte Name	PFTrDA_1	Data File	AE_11052020_5-369.wiff
MRM Transition	663.0 / 619.0	Result Table	20-1305
Internal Standard	13C2-PFTeDA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.86102x + 0.04644$ ($r = 0.99834$) (weighting: $1/x$) $r^2:0.9967$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	221.44	88.6
3	LD75	L2	True	500.00	518.34	103.7
4	LD76	L3	True	1000.00	957.79	95.8
5	LD77	L4	True	2500.00	2698.21	107.9
6	LD78	L5	True	10000.00	10772.18	107.7
7	LD79	L6	True	25000.00	24082.04	96.3





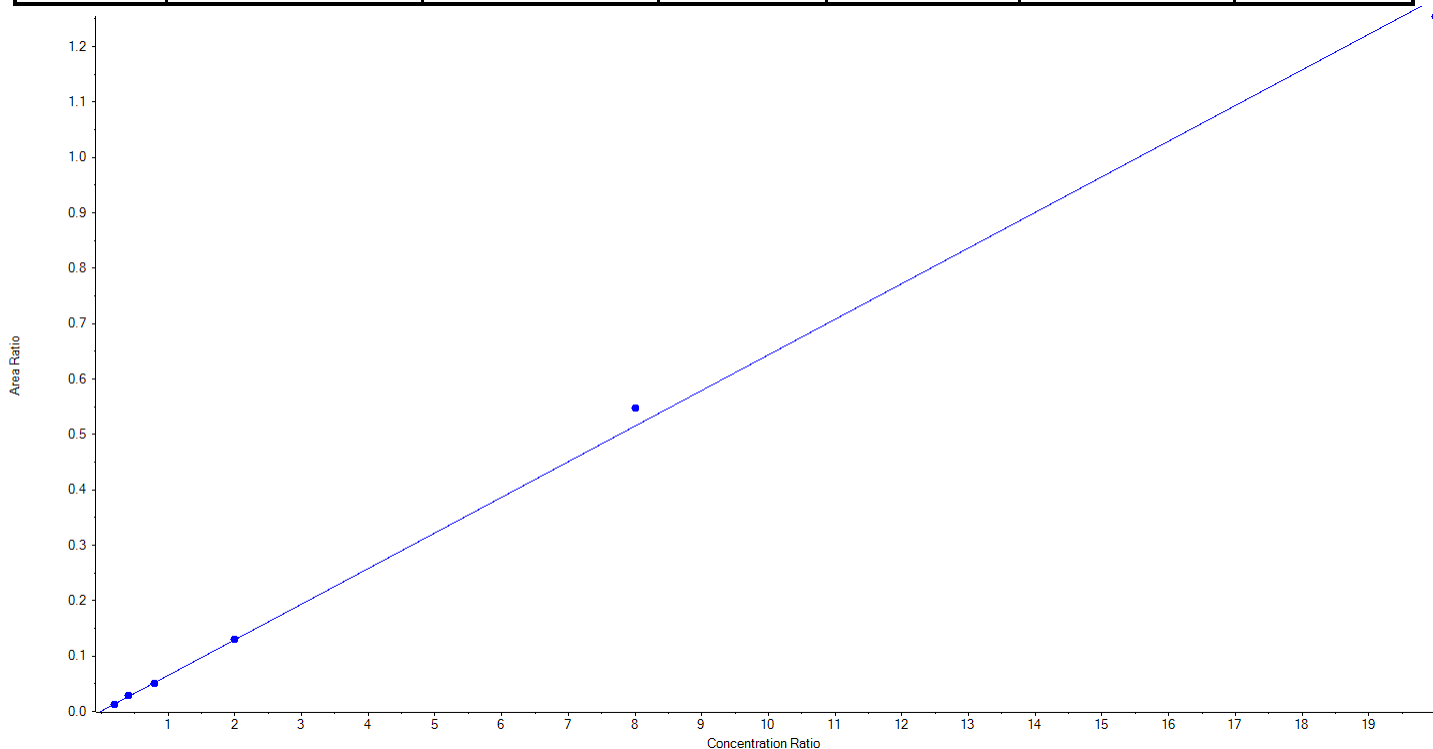
Calibration Summary Report

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Analyte Name	PFTrDA_2	Data File	AE_11052020_5-369.wiff
MRM Transition	663.0 / 169.0	Result Table	20-1305
Internal Standard	13C2-PFTeDA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.06429x + 8.38046e-4$ ($r = 0.99904$) (weighting: $1/x$) $r^2:0.9981$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	223.98	89.6
3	LD75	L2	True	500.00	551.95	110.4
4	LD76	L3	True	1000.00	959.40	95.9
5	LD77	L4	True	2500.00	2505.62	100.2
6	LD78	L5	True	10000.00	10636.48	106.4
7	LD79	L6	True	25000.00	24372.58	97.5





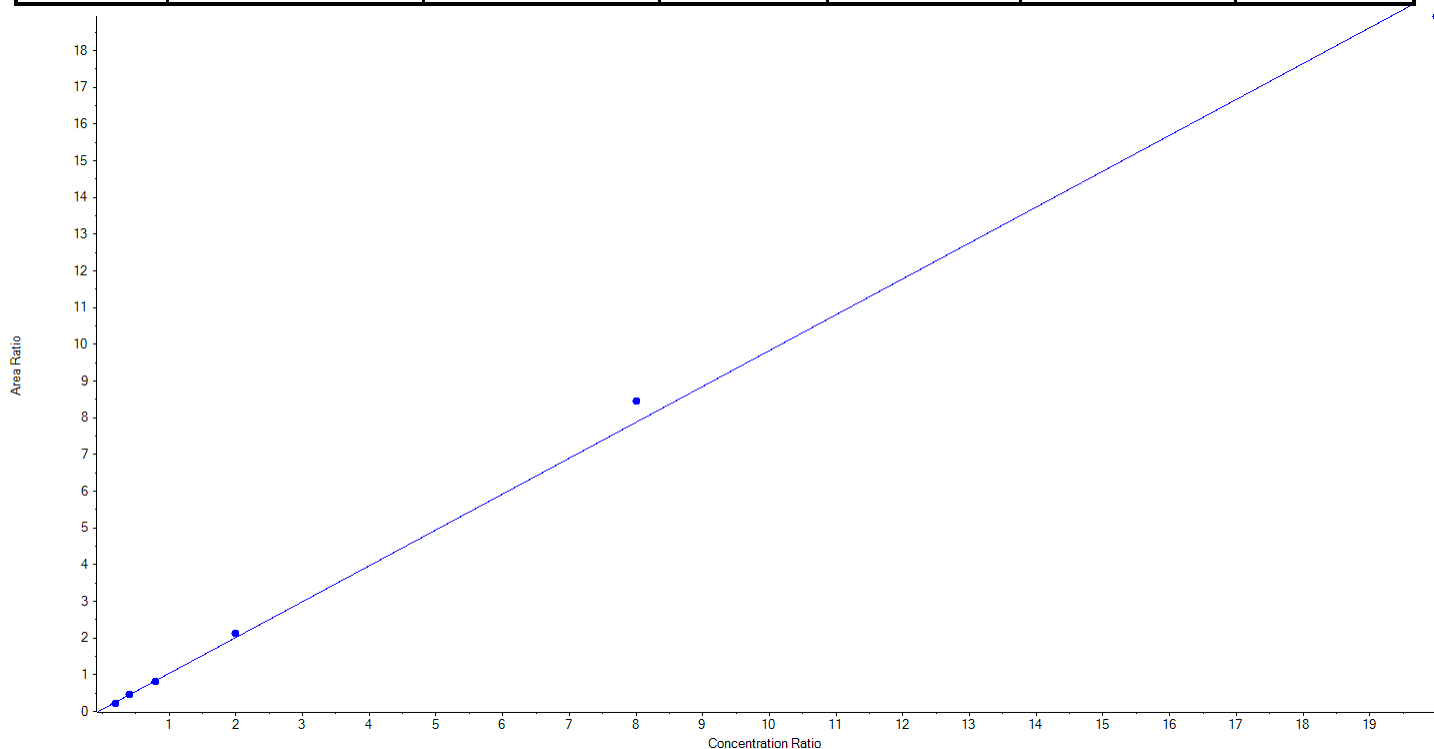
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Analyte Name	PFTeDA_1	Data File	AE_11052020_5-369.wiff
MRM Transition	713.0 / 669.0	Result Table	20-1305
Internal Standard	13C2-PFTeDA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.97723x + 0.06064$ ($r = 0.99854$) (weighting: $1/x$) $r^2: 0.9971$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	217.82	87.1
3	LD75	L2	True	500.00	529.90	106.0
4	LD76	L3	True	1000.00	974.57	97.5
5	LD77	L4	True	2500.00	2632.92	105.3
6	LD78	L5	True	10000.00	10756.37	107.6
7	LD79	L6	True	25000.00	24138.42	96.6





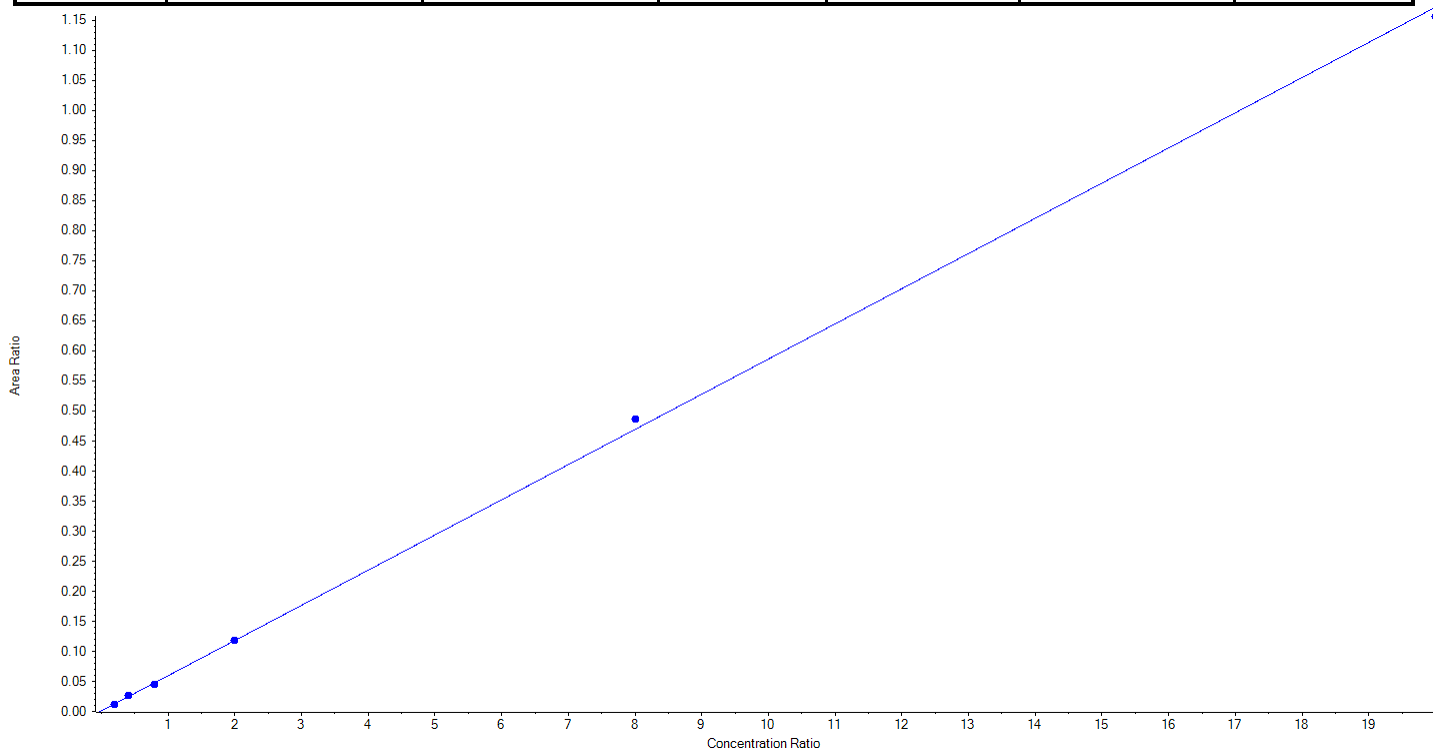
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Analyte Name	PFTeDA_2	Data File	AE_11052020_5-369.wiff
MRM Transition	713.0 / 169.0	Result Table	20-1305
Internal Standard	13C2-PFTeDA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.05853x + 0.00105$ ($r = 0.99960$) (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	235.67	94.3
3	LD75	L2	True	500.00	549.74	110.0
4	LD76	L3	True	1000.00	932.26	93.2
5	LD77	L4	True	2500.00	2508.14	100.3
6	LD78	L5	True	10000.00	10355.63	103.6
7	LD79	L6	True	25000.00	24668.55	98.7





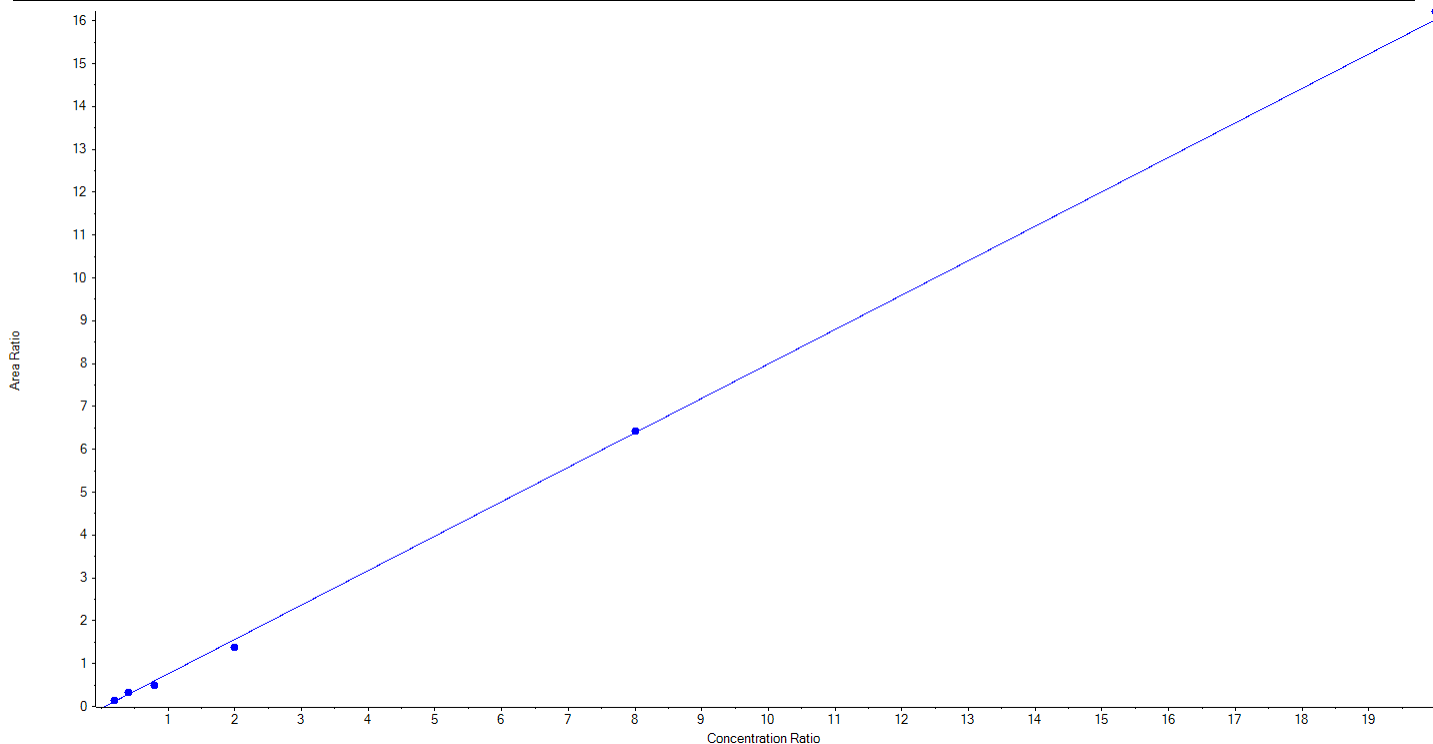
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Analyte Name	NMeFOSAA_1	Data File	AE_11052020_5-369.wiff
MRM Transition	570.0 / 419.0	Result Table	20-1305
Internal Standard	d3-MeFOSAA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.80340x + -0.04162$ ($r = 0.99885$) (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	288.42	115.4
3	LD75	L2	True	500.00	556.83	111.4
4	LD76	L3	True	1000.00	830.19	83.0
5	LD77	L4	True	2500.00	2208.50	88.3
6	LD78	L5	True	10000.00	10073.48	100.7
7	LD79	L6	True	25000.00	25292.58	101.2





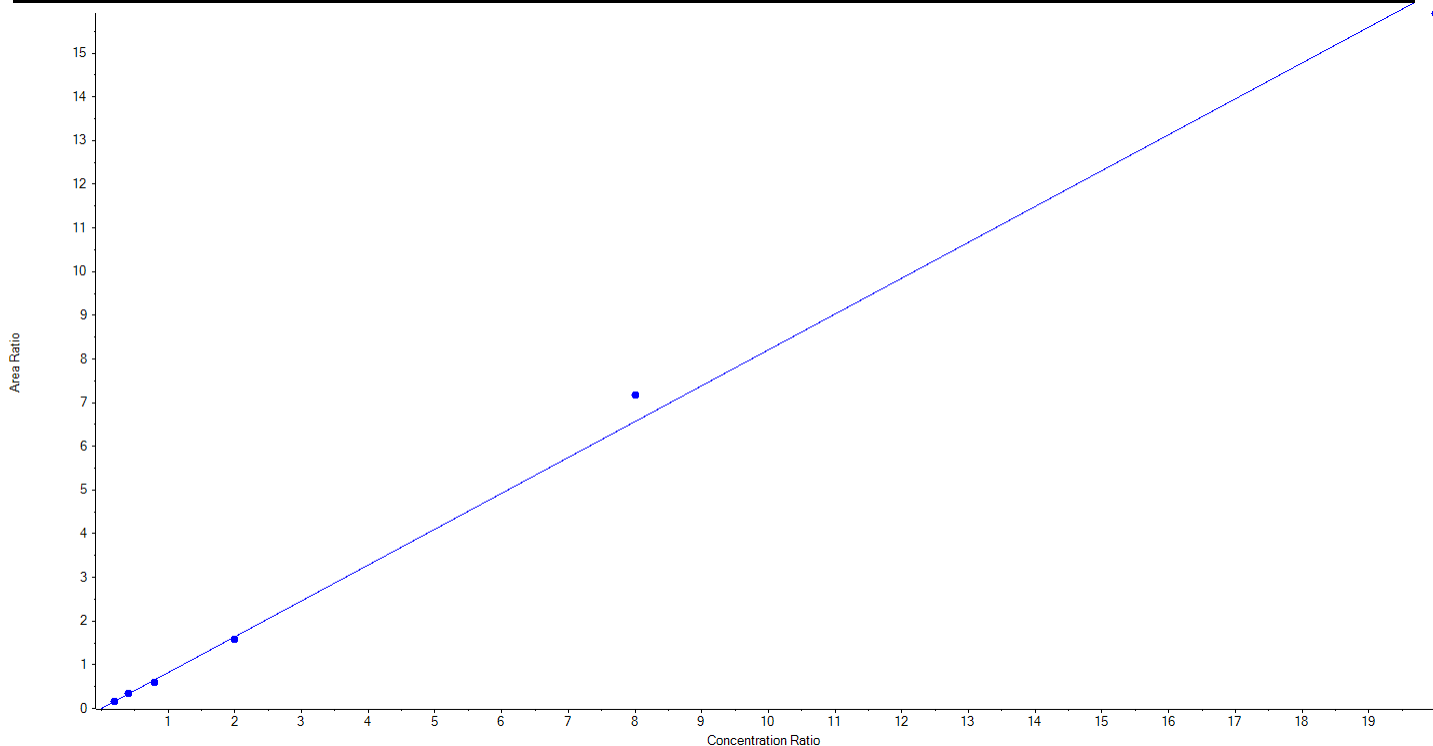
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Analyte Name	NMeFOSAA_2	Data File	AE_11052020_5-369.wiff
MRM Transition	570.0 / 512.0	Result Table	20-1305
Internal Standard	d3-MeFOSAA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.82089x + -8.88930e-5$ ($r = 0.99824$) (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	245.61	98.2
3	LD75	L2	True	500.00	538.73	107.8
4	LD76	L3	True	1000.00	914.83	91.5
5	LD77	L4	True	2500.00	2411.80	96.5
6	LD78	L5	True	10000.00	10916.42	109.2
7	LD79	L6	True	25000.00	24222.60	96.9





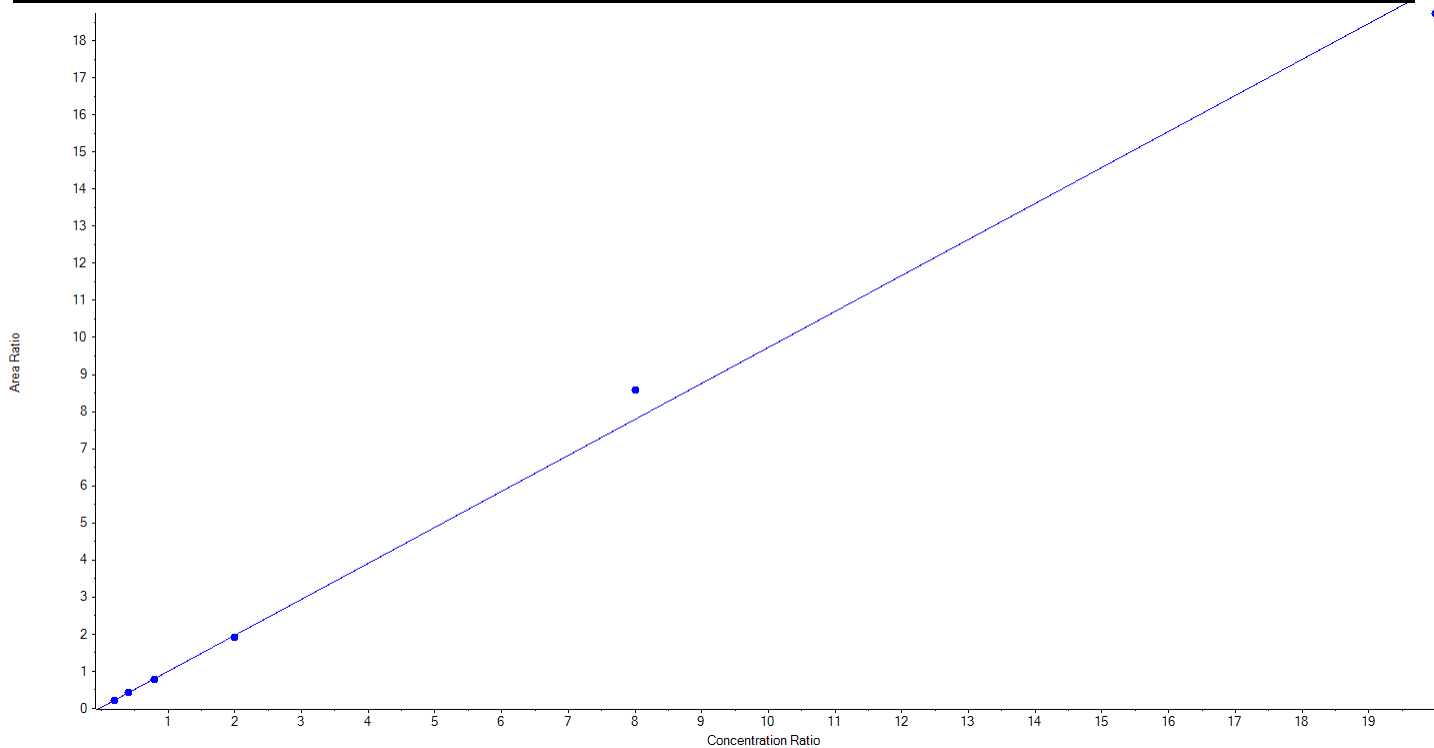
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Analyte Name	NEtFOSAA_1	Data File	AE_11052020_5-369.wiff
MRM Transition	584.0 / 419.0	Result Table	20-1305
Internal Standard	d5-EtFOSAA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.97001x + 0.03276$ ($r = 0.99802$) (weighting: $1/x$) $r^2:0.9960$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	244.19	97.7
3	LD75	L2	True	500.00	512.72	102.5
4	LD76	L3	True	1000.00	959.11	95.9
5	LD77	L4	True	2500.00	2436.80	97.5
6	LD78	L5	True	10000.00	11001.77	110.0
7	LD79	L6	True	25000.00	24095.42	96.4





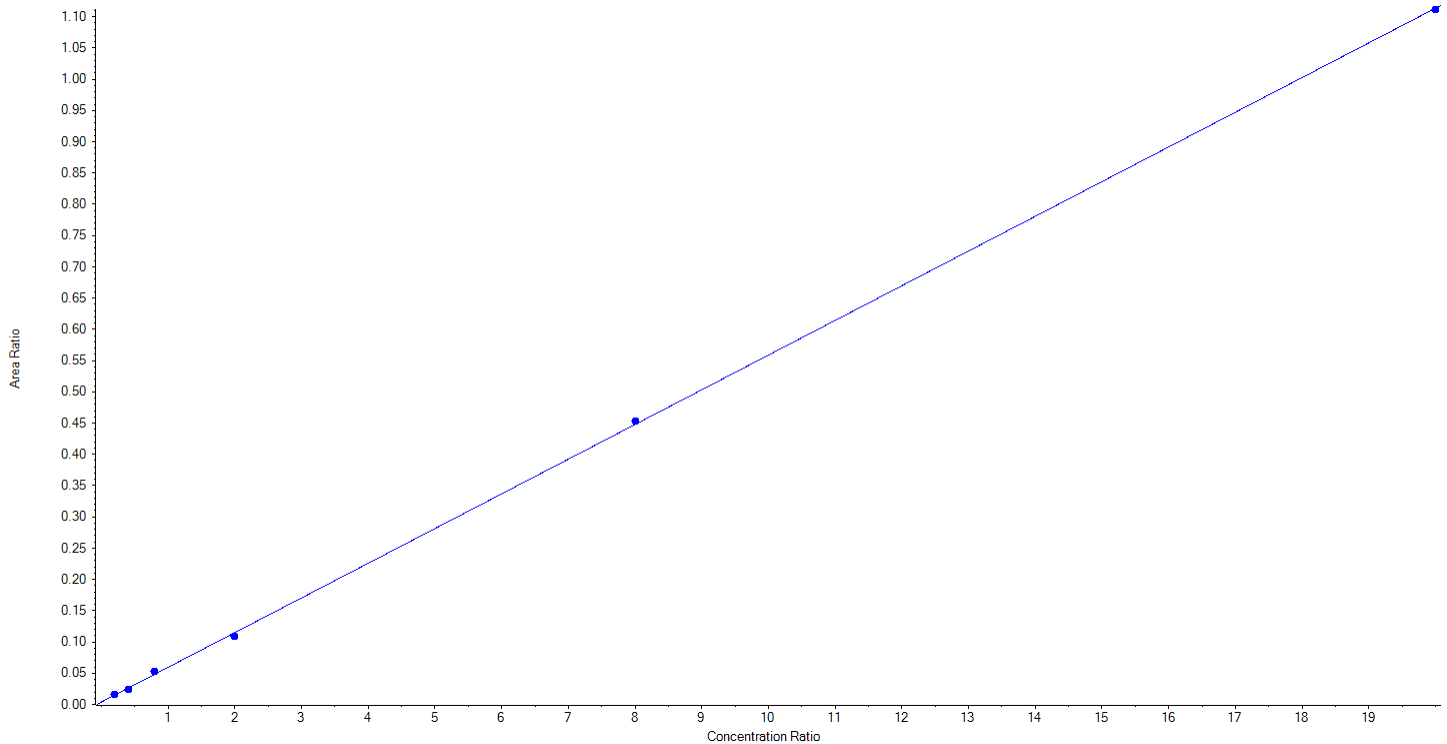
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Analyte Name	NEtFOSAA_2	Data File	AE_11052020_5-369.wiff
MRM Transition	584.0 / 483.0	Result Table	20-1305
Internal Standard	d5-EtFOSAA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.05547 x + 0.00403$ ($r = 0.99964$) (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	259.07	103.6
3	LD75	L2	True	500.00	448.84	89.8
4	LD76	L3	True	1000.00	1107.49	110.8
5	LD77	L4	True	2500.00	2373.93	95.0
6	LD78	L5	True	10000.00	10108.88	101.1
7	LD79	L6	True	25000.00	24951.78	99.8





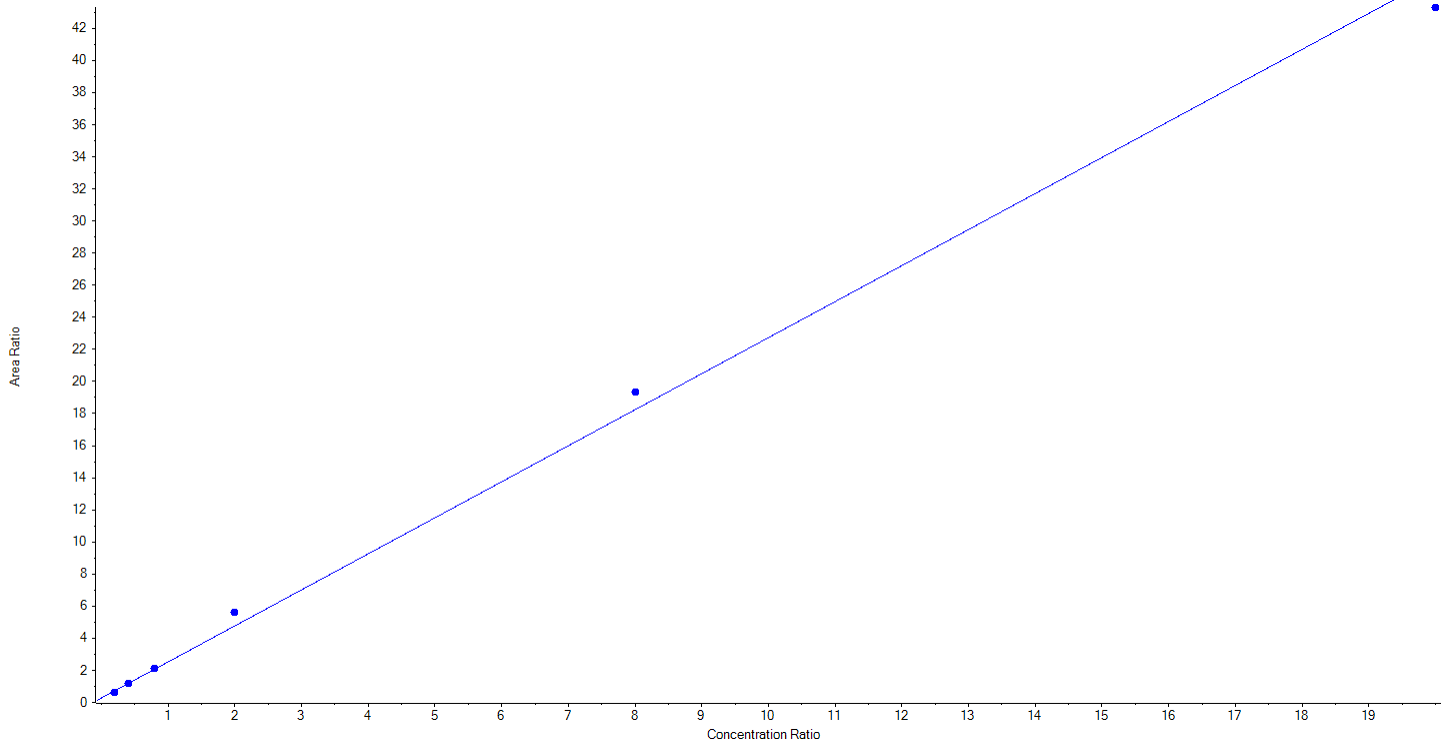
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Analyte Name	HFPO-DA_1	Data File	AE_11052020_5-369.wiff
MRM Transition	285.0 / 169.0	Result Table	20-1305
Internal Standard	13C3-HFPO-DA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 2.24442x + 0.28371$ ($r = 0.99737$) (weighting: $1/x$) $r^2:0.9947$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	185.70	74.3
3	LD75	L2	True	500.00	508.38	101.7
4	LD76	L3	True	1000.00	1039.45	103.9
5	LD77	L4	True	2500.00	2955.07	118.2
6	LD78	L5	True	10000.00	10608.89	106.1
7	LD79	L6	True	25000.00	23952.52	95.8





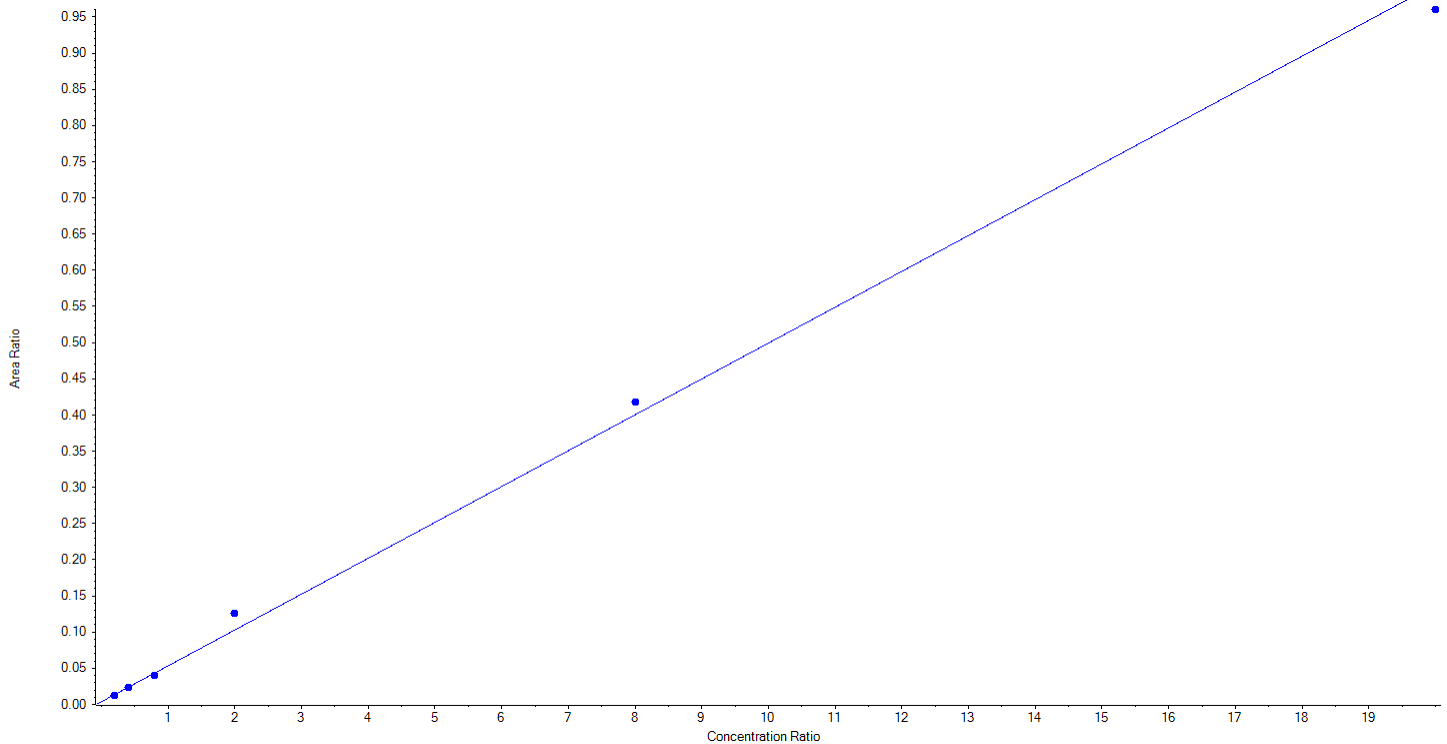
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Analyte Name	HFPO-DA_2	Data File	AE_11052020_5-369.wiff
MRM Transition	285.0 / 118.8	Result Table	20-1305
Internal Standard	13C3-HFPO-DA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.04955x + 0.00388$ ($r = 0.99718$) (weighting: $1/x$) $r^2: 0.9944$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	225.26	90.1
3	LD75	L2	True	500.00	480.45	96.1
4	LD76	L3	True	1000.00	899.36	89.9
5	LD77	L4	True	2500.00	3072.59	122.9
6	LD78	L5	True	10000.00	10446.29	104.5
7	LD79	L6	True	25000.00	24126.06	96.5





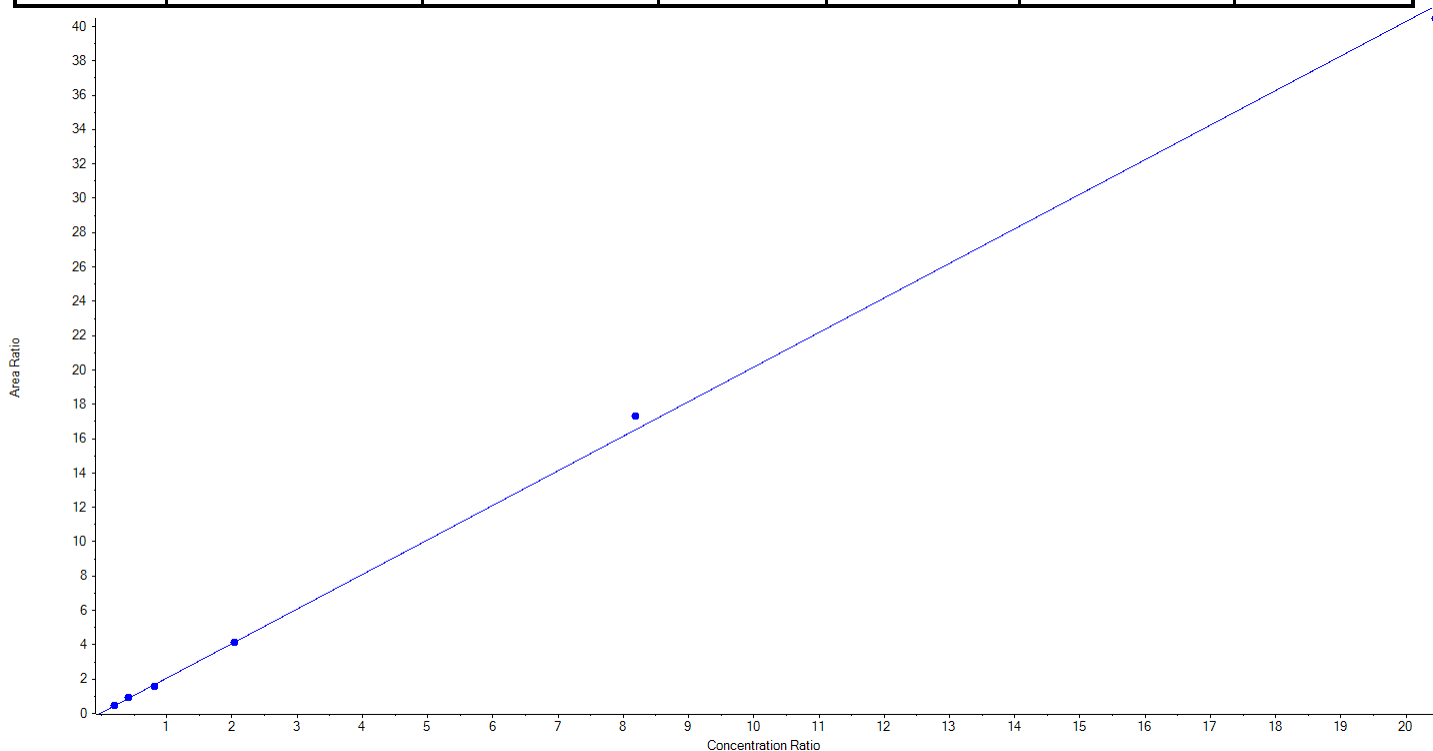
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Analyte Name	ADONA_1	Data File	AE_11052020_5-369.wiff
MRM Transition	377.0 / 251.0	Result Table	20-1305
Internal Standard	13C8-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 2.01265x + 0.04366$ ($r = 0.99938$) (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	242.30	96.9
3	LD75	L2	True	500.00	539.47	107.9
4	LD76	L3	True	1000.00	922.70	92.3
5	LD77	L4	True	2500.00	2492.38	99.7
6	LD78	L5	True	10000.00	10501.12	105.0
7	LD79	L6	True	25000.00	24552.03	98.2





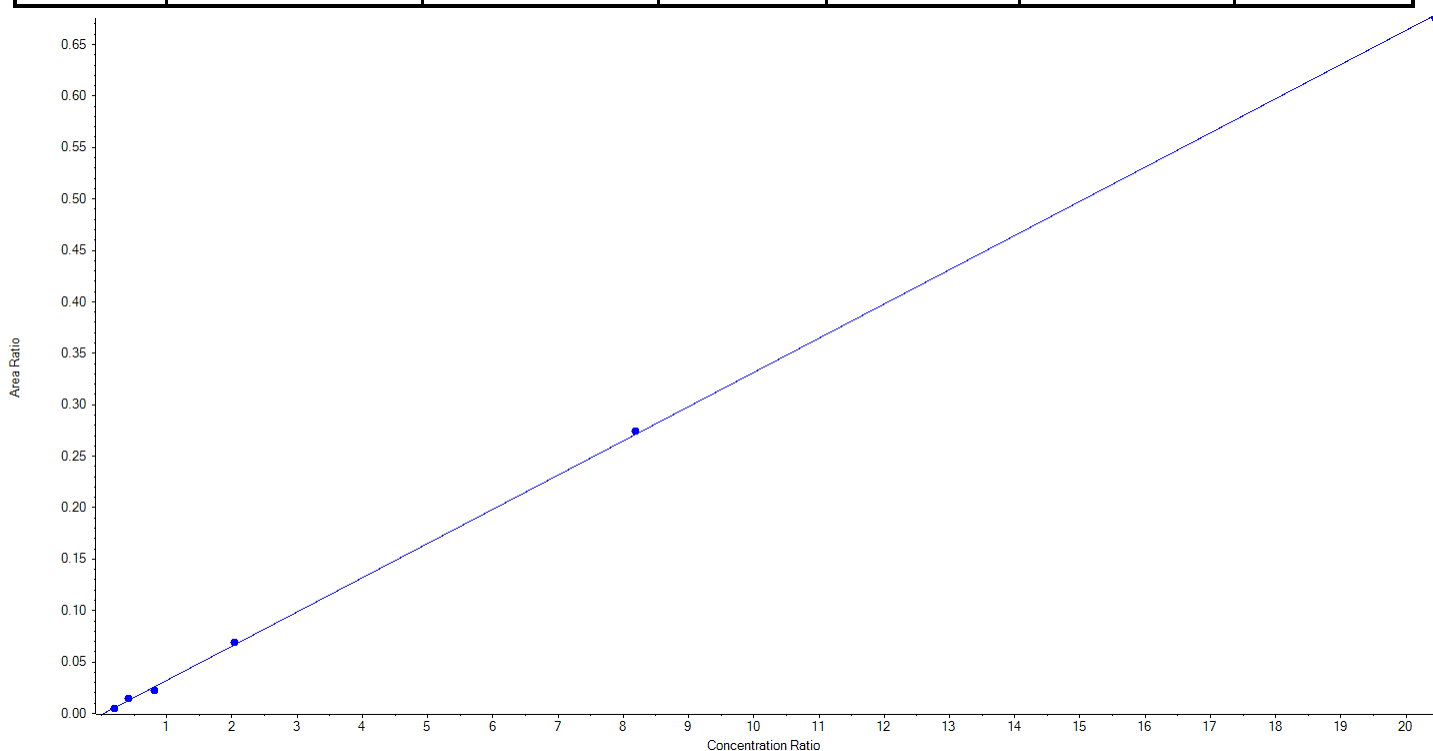
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Analyte Name	ADONA_2	Data File	AE_11052020_5-369.wiff
MRM Transition	377.0 / 85.0	Result Table	20-1305
Internal Standard	13C8-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.03325x + -0.00105$ ($r = 0.99940$) (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	230.73	92.3
3	LD75	L2	True	500.00	589.48	117.9
4	LD76	L3	True	1000.00	860.48	86.1
5	LD77	L4	True	2500.00	2576.23	103.1
6	LD78	L5	True	10000.00	10123.72	101.2
7	LD79	L6	True	25000.00	24869.36	99.5





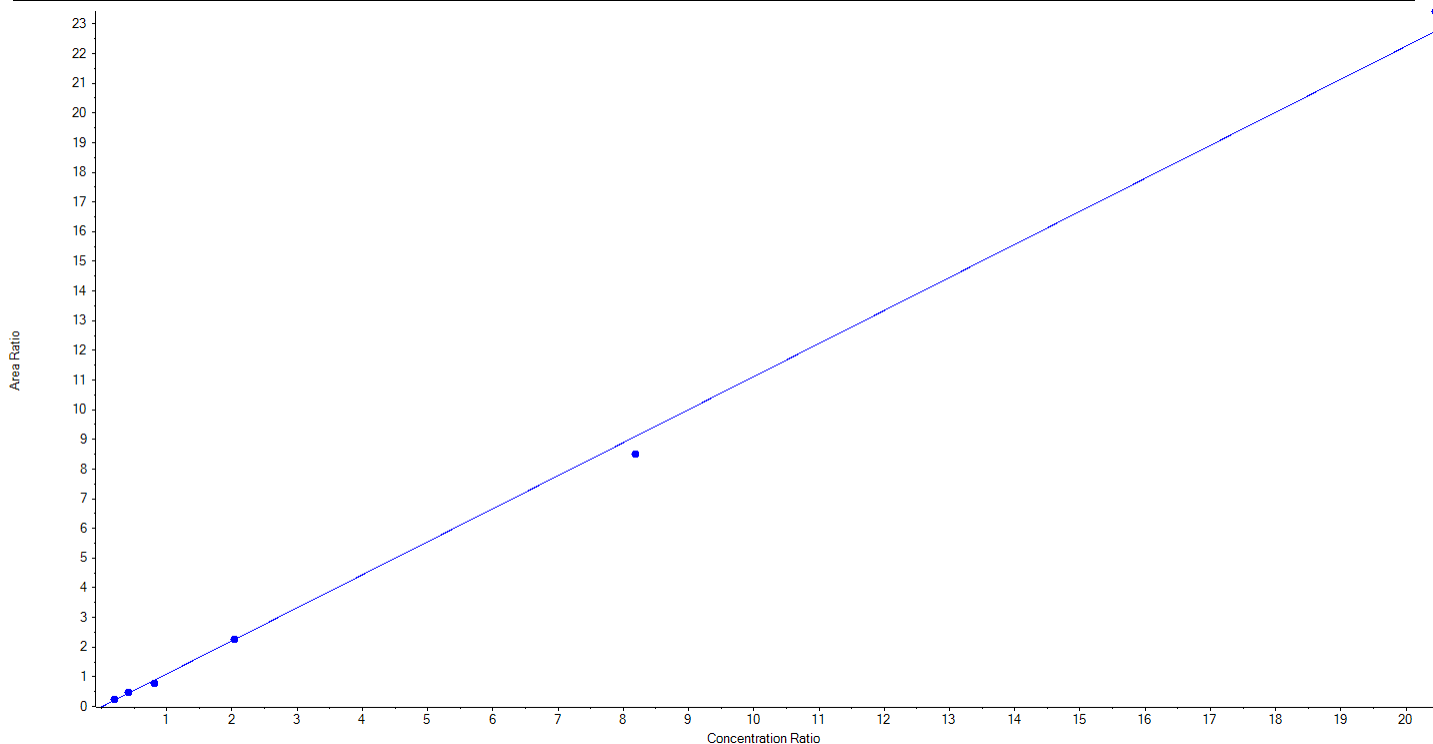
Calibration Summary Report

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Analyte Name	9CI-PF3ONS_1	Data File	AE_11052020_5-369.wiff
MRM Transition	531.0 / 351.0	Result Table	20-1305
Internal Standard	13C8-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.11331x + -0.01581$ ($r = 0.99865$) (weighting: $1/x$) $r^2: 0.9973$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	271.37	108.6
3	LD75	L2	True	500.00	546.95	109.4
4	LD76	L3	True	1000.00	854.16	85.4
5	LD77	L4	True	2500.00	2508.75	100.4
6	LD78	L5	True	10000.00	9336.87	93.4
7	LD79	L6	True	25000.00	25731.91	102.9





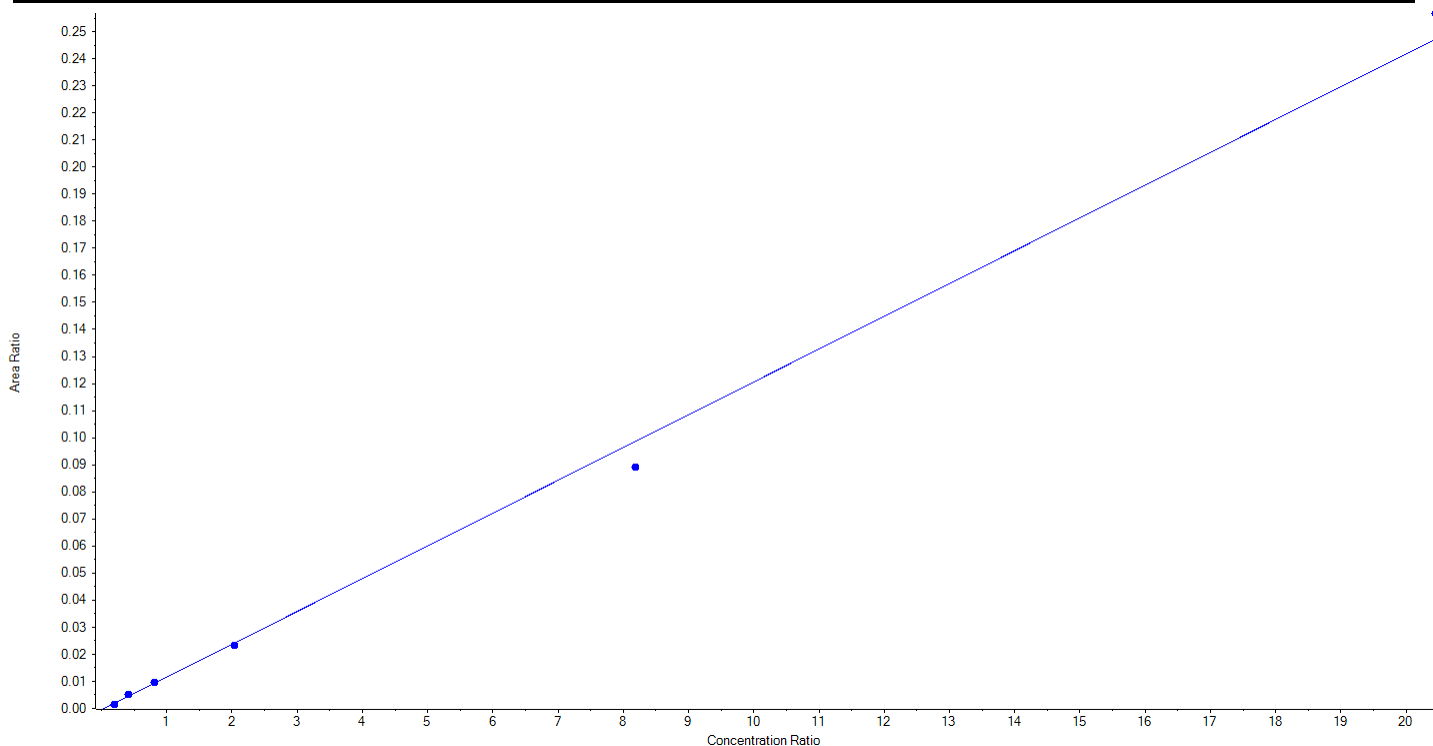
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Analyte Name	9CI-PF3ONS_2	Data File	AE_11052020_5-369.wiff
MRM Transition	531.0 / 83.0	Result Table	20-1305
Internal Standard	13C8-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.01211x + -5.14929e-4$ ($r = 0.99777$) (weighting: $1/x$) $r^2: 0.9955$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	218.59	87.4
3	LD75	L2	True	500.00	592.19	118.4
4	LD76	L3	True	1000.00	1039.02	103.9
5	LD77	L4	True	2500.00	2398.39	95.9
6	LD78	L5	True	10000.00	9046.78	90.5
7	LD79	L6	True	25000.00	25955.03	103.8





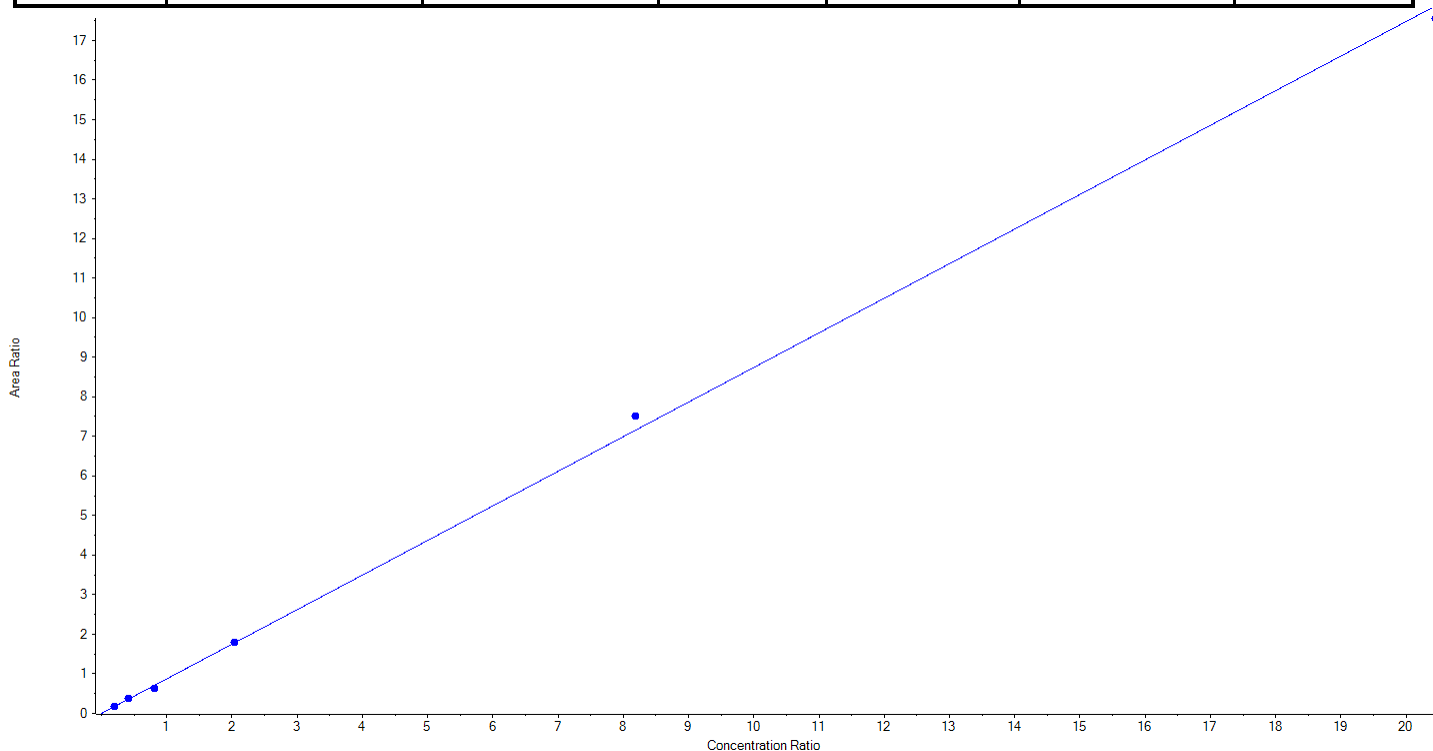
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Analyte Name	11Cl-pf3OUdS_1	Data File	AE_11052020_5-369.wiff
MRM Transition	631.0 / 451.0	Result Table	20-1305
Internal Standard	13C8-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.87400x + 6.90818e-5$ ($r = 0.99928$) (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	255.78	102.3
3	LD75	L2	True	500.00	527.09	105.4
4	LD76	L3	True	1000.00	883.09	88.3
5	LD77	L4	True	2500.00	2514.74	100.6
6	LD78	L5	True	10000.00	10515.78	105.2
7	LD79	L6	True	25000.00	24553.52	98.2





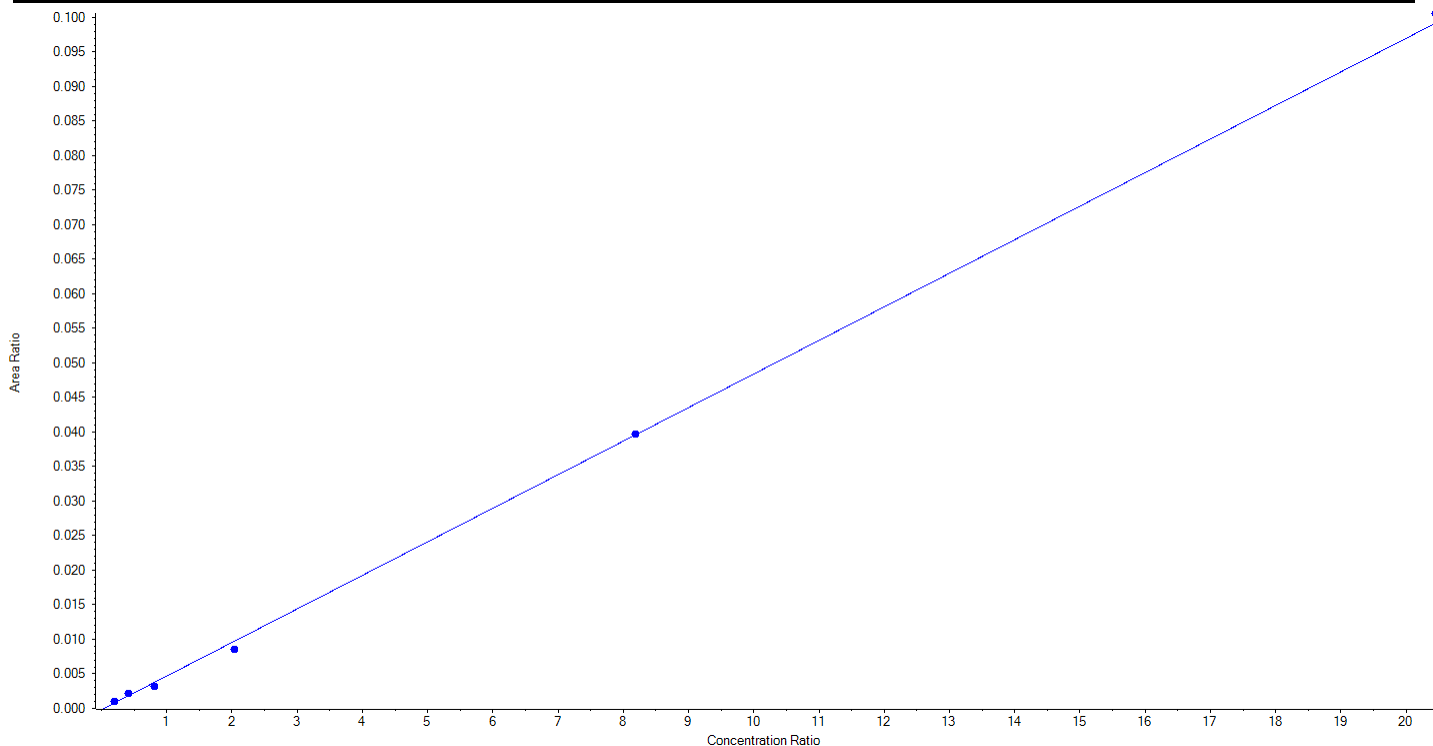
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Analyte Name	11Cl-pf3OUdS_2	Data File	AE_11052020_5-369.wiff
MRM Transition	631.0 / 83.0	Result Table	20-1305
Internal Standard	13C8-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.00486x + -1.67077e-4$ ($r = 0.99872$) (weighting: $1/x$) $r^2:0.9974$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	LD74	L1	True	250.00	280.73	112.3
3	LD75	L2	True	500.00	577.52	115.5
4	LD76	L3	True	1000.00	831.24	83.1
5	LD77	L4	True	2500.00	2186.39	87.5
6	LD78	L5	True	10000.00	10021.51	100.2
7	LD79	L6	True	25000.00	25352.61	101.4





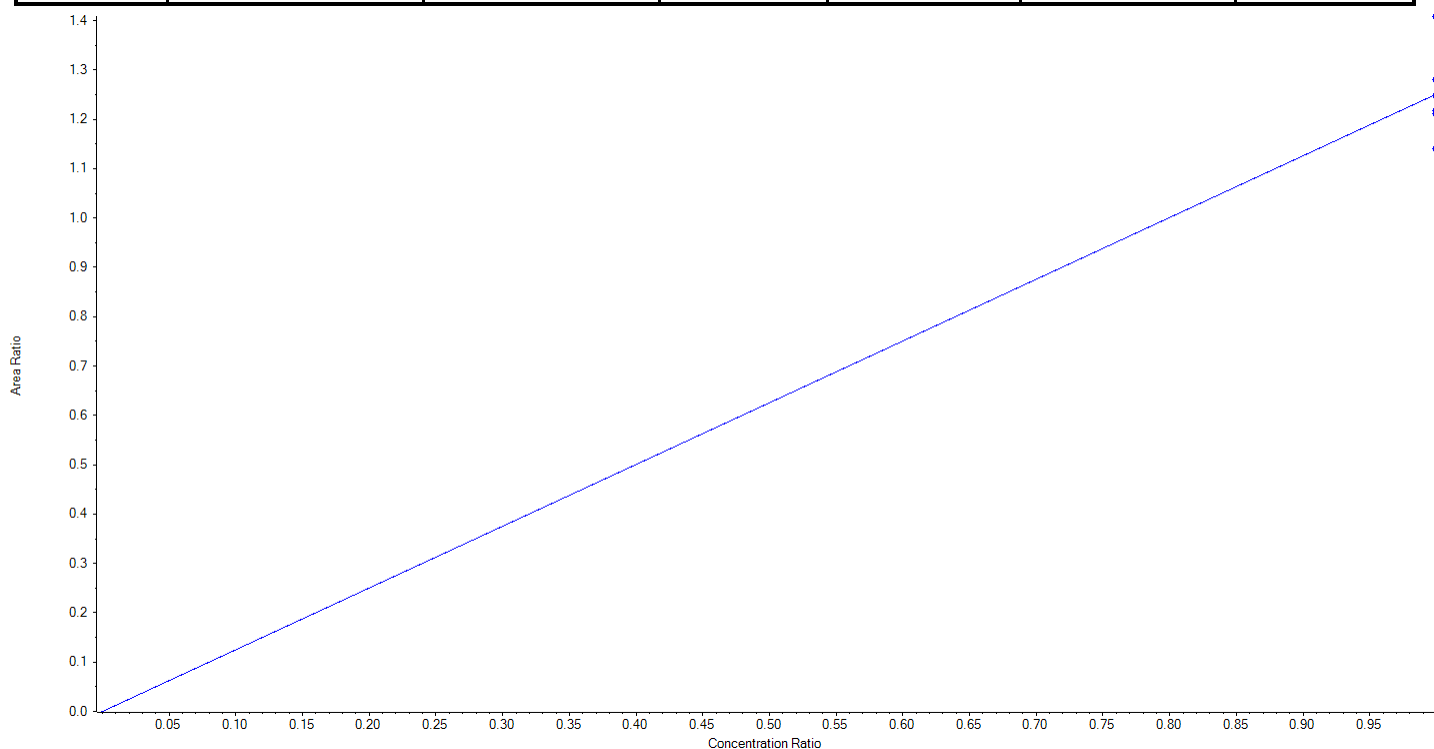
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Analyte Name	13C2-PFDoA	Data File	AE_11052020_5-369.wiff
MRM Transition	615.0 / 570.0	Result Table	20-1305_SIS
Internal Standard	13C2-PFDA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.25119 x$ (std. dev. = 0.08996) (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	1247.57	99.8
3	LD75	L2	True	1250.00	1210.57	96.9
4	LD76	L3	True	1250.00	1139.02	91.1
5	LD77	L4	True	1250.00	1406.81	112.5
6	LD78	L5	True	1250.00	1217.06	97.4
7	LD79	L6	True	1250.00	1278.98	102.3





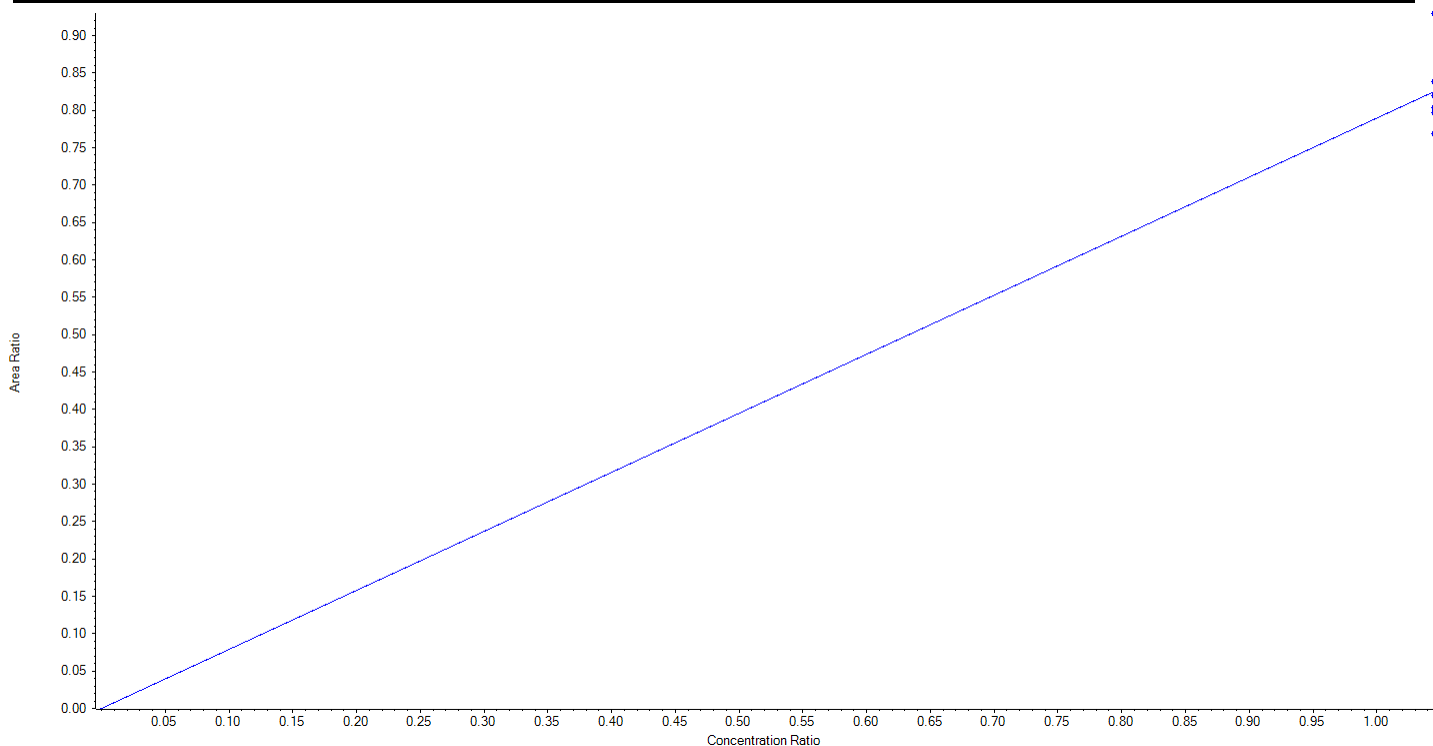
Calibration Summary Report

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Analyte Name	d3-MeFOSAA	Data File	AE_11052020_5-369.wiff
MRM Transition	573.0 / 419.0	Result Table	20-1305_SIS
Internal Standard	13C4-PFOS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.78961 x$ (std. dev. = 0.05339) (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	1406.65	112.5
3	LD75	L2	True	1250.00	1268.99	101.5
4	LD76	L3	True	1250.00	1240.11	99.2
5	LD77	L4	True	1250.00	1205.07	96.4
6	LD78	L5	True	1250.00	1216.14	97.3
7	LD79	L6	True	1250.00	1163.04	93.0





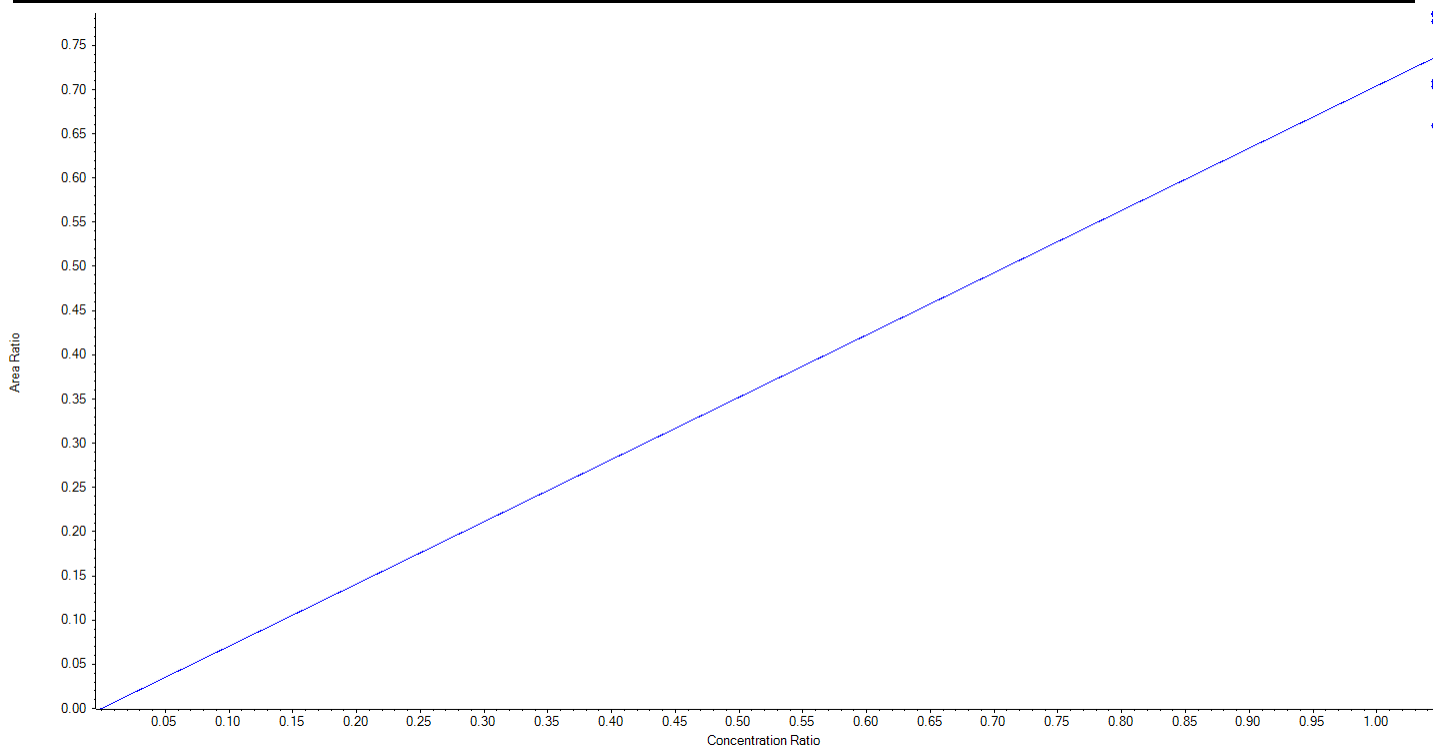
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Analyte Name	d5-EtFOSAA	Data File	AE_11052020_5-369.wiff
MRM Transition	589.0 / 419.0	Result Table	20-1305_SIS
Internal Standard	13C4-PFOS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.70414 x$ (std. dev. = 0.05123) (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	1333.86	106.7
3	LD75	L2	True	1250.00	1319.14	105.5
4	LD76	L3	True	1250.00	1192.70	95.4
5	LD77	L4	True	1250.00	1332.56	106.6
6	LD78	L5	True	1250.00	1203.03	96.2
7	LD79	L6	True	1250.00	1118.71	89.5





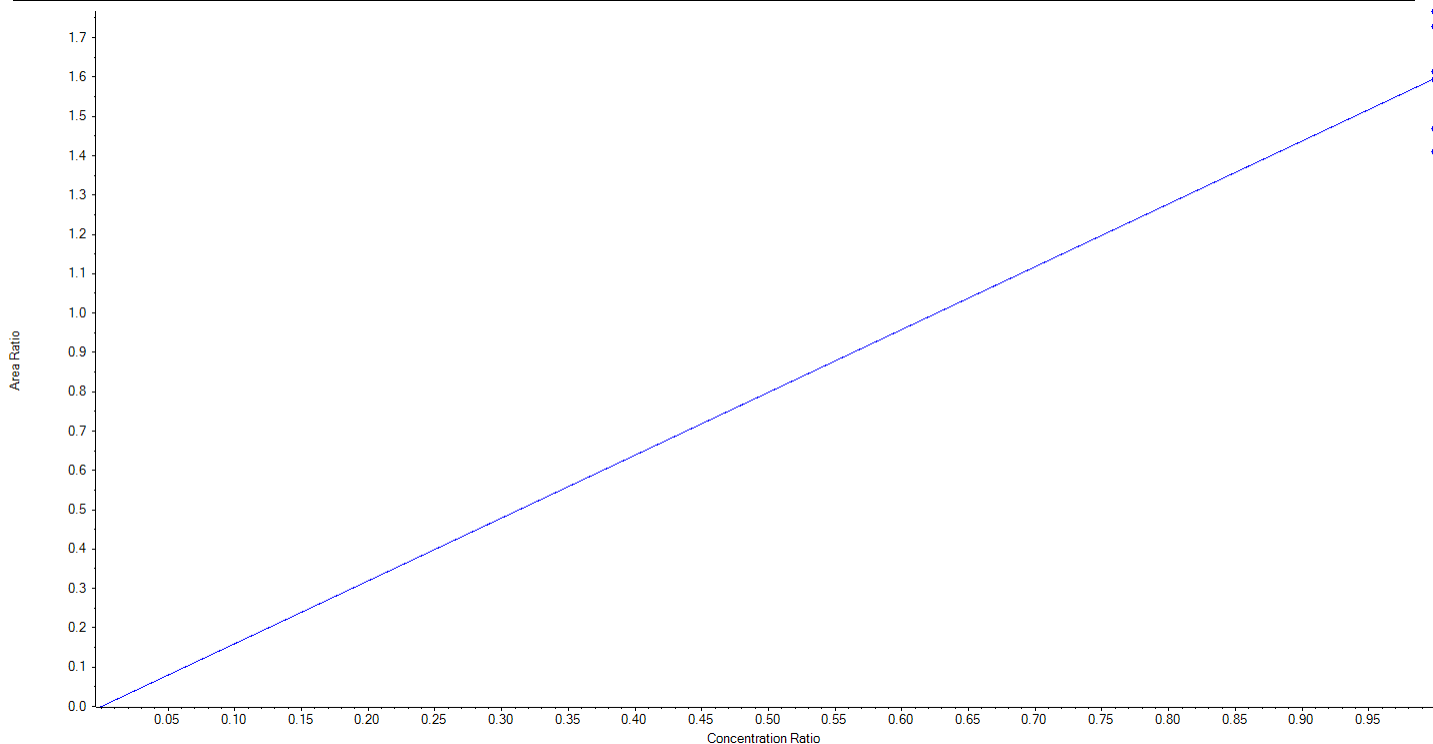
Calibration Summary Report

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Printed: 06/11/2020 4:24:14 PM

Analyte Name	13C5-PFHxA	Data File	AE_11052020_5-369.wiff
MRM Transition	318.0 / 273.0	Result Table	20-1305_SIS
Internal Standard	13C2-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.59709 x$ (std. dev. = 0.14004) (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	1353.60	108.3
3	LD75	L2	True	1250.00	1382.56	110.6
4	LD76	L3	True	1250.00	1263.16	101.1
5	LD77	L4	True	1250.00	1247.80	99.8
6	LD78	L5	True	1250.00	1149.31	91.9
7	LD79	L6	True	1250.00	1103.57	88.3





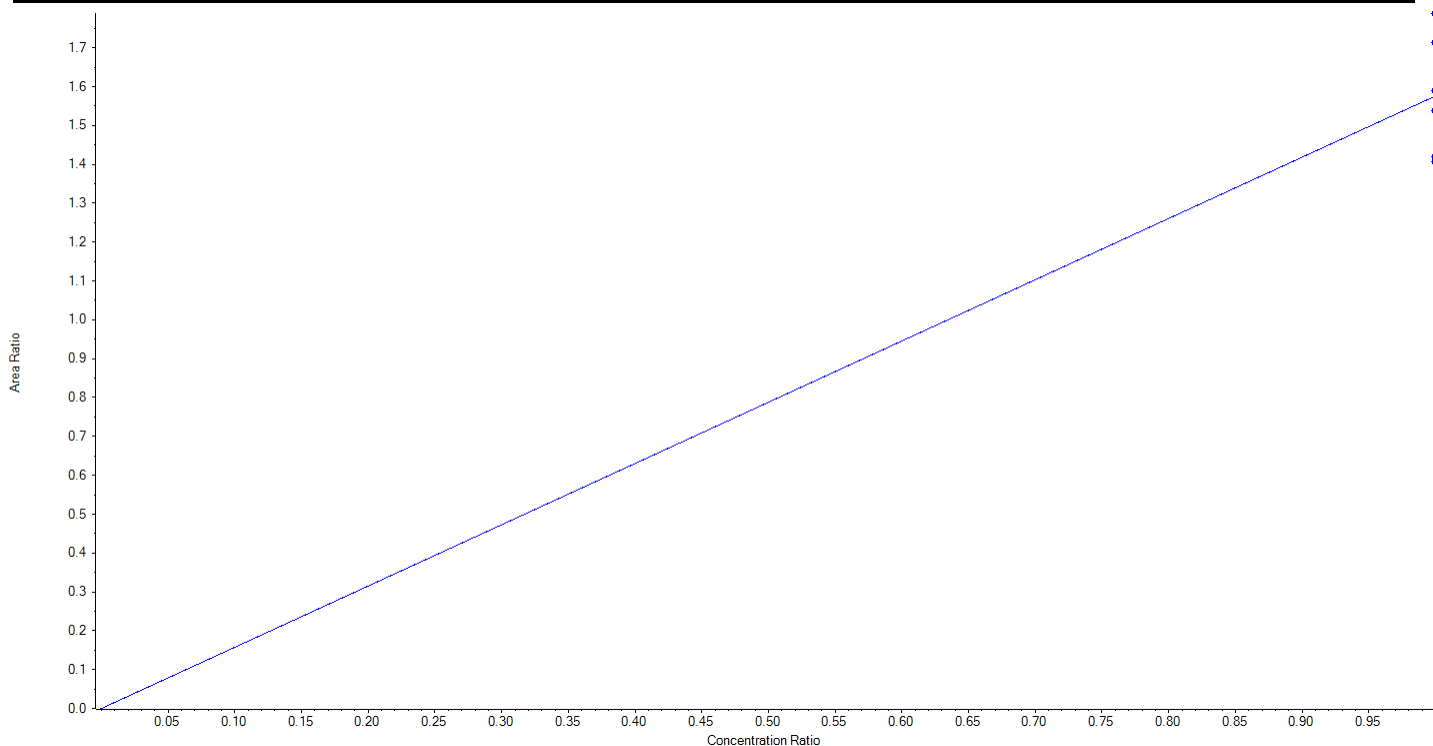
Calibration Summary Report

Created with Analyst Reporter
Printed: 06/11/2020 4:24:14 PM

Analyte Name	13C4-PFHpA	Data File	AE_11052020_5-369.wiff
MRM Transition	367.0 / 322.0	Result Table	20-1305_SIS
Internal Standard	13C2-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.57594 x$ (std. dev. = 0.15373) (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	1358.86	108.7
3	LD75	L2	True	1250.00	1418.27	113.5
4	LD76	L3	True	1250.00	1219.49	97.6
5	LD77	L4	True	1250.00	1260.61	100.9
6	LD78	L5	True	1250.00	1116.40	89.3
7	LD79	L6	True	1250.00	1126.38	90.1





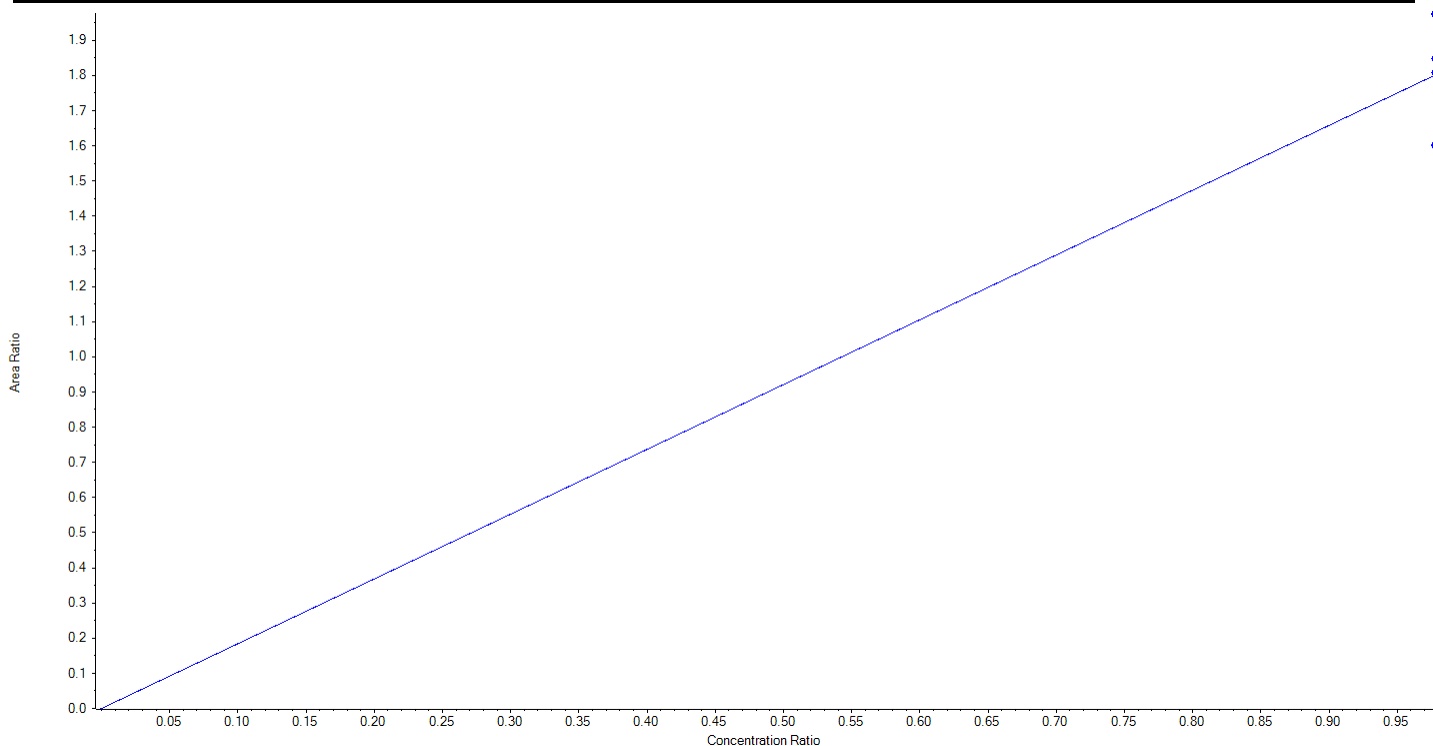
Calibration Summary Report

Created with Analyst Reporter
Printed: 06/11/2020 4:24:14 PM

Analyte Name	13C8-PFOA	Data File	AE_11052020_5-369.wiff
MRM Transition	421.0 / 376.0	Result Table	20-1305_SIS
Internal Standard	13C2-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.84224 x$ (std. dev. = 0.17154) (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	1340.88	109.7
3	LD75	L2	True	1222.50	1338.11	109.5
4	LD76	L3	True	1222.50	1253.15	102.5
5	LD77	L4	True	1222.50	1227.81	100.4
6	LD78	L5	True	1222.50	1088.60	89.1
7	LD79	L6	True	1222.50	1086.44	88.9





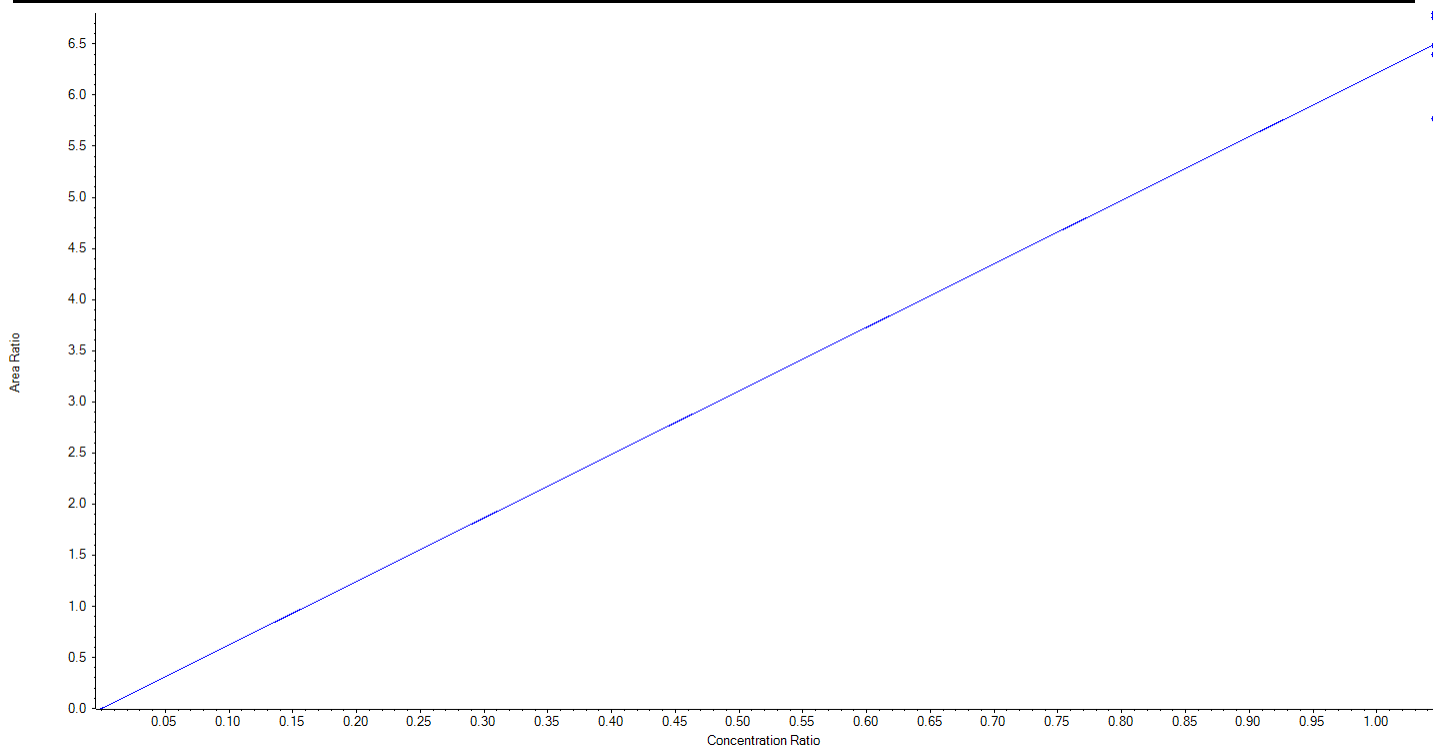
Calibration Summary Report

Created with Analyst Reporter
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Analyte Name	13C9-PFNA	Data File	AE_11052020_5-369.wiff
MRM Transition	472.0 / 427.0	Result Table	20-1305_SIS
Internal Standard	13C4-PFOS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 6.21387 x$ (std. dev. = 0.38045) (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	1306.47	104.5
3	LD75	L2	True	1250.00	1307.23	104.6
4	LD76	L3	True	1250.00	1230.78	98.5
5	LD77	L4	True	1250.00	1299.80	104.0
6	LD78	L5	True	1250.00	1247.02	99.8
7	LD79	L6	True	1250.00	1108.70	88.7





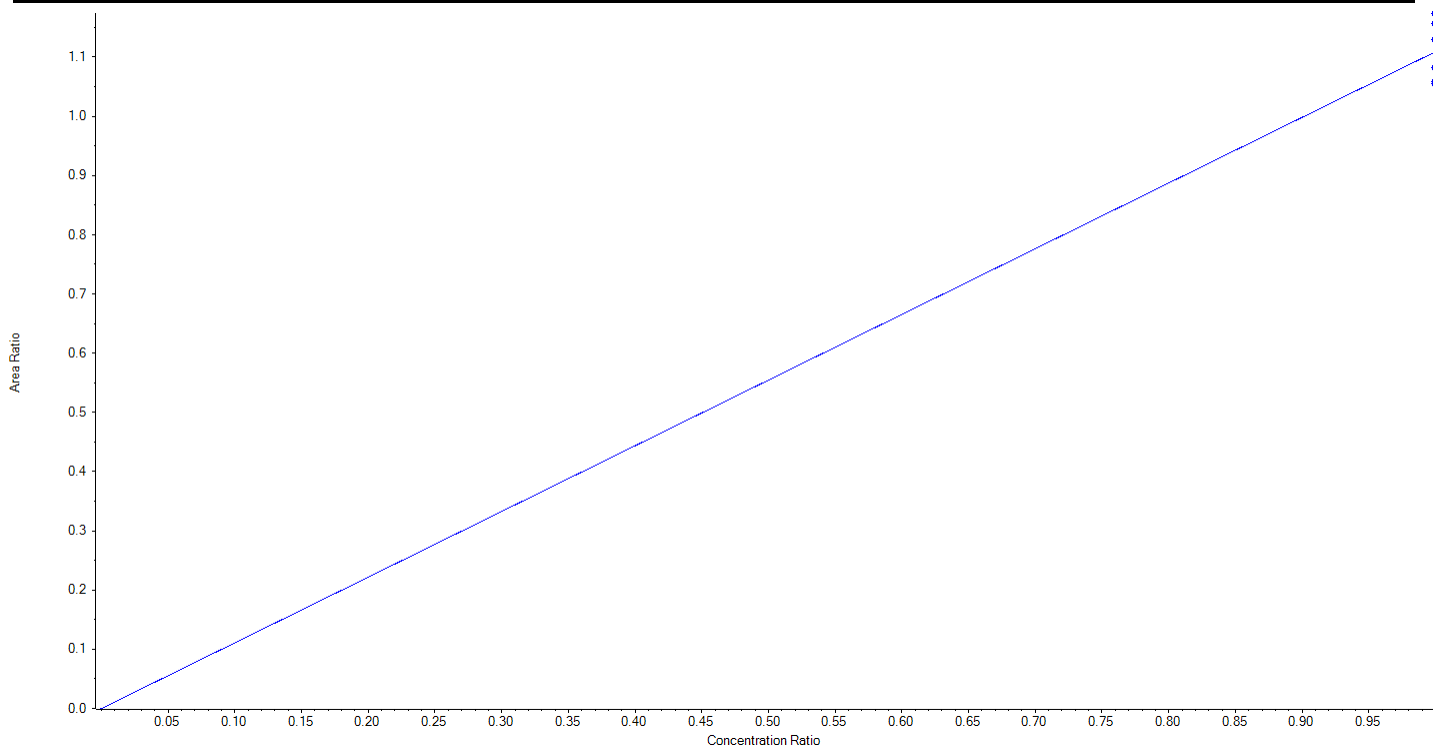
Calibration Summary Report

Created with Analyst Reporter
Printed: 06/11/2020 4:24:14 PM

Analyte Name	13C6-PFDA	Data File	AE_11052020_5-369.wiff
MRM Transition	519.0 / 474.0	Result Table	20-1305_SIS
Internal Standard	13C2-PFDA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.10912 x$ (std. dev. = 0.05120) (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	1303.61	104.3
3	LD75	L2	True	1250.00	1219.04	97.5
4	LD76	L3	True	1250.00	1188.51	95.1
5	LD77	L4	True	1250.00	1322.61	105.8
6	LD78	L5	True	1250.00	1193.18	95.5
7	LD79	L6	True	1250.00	1273.05	101.8





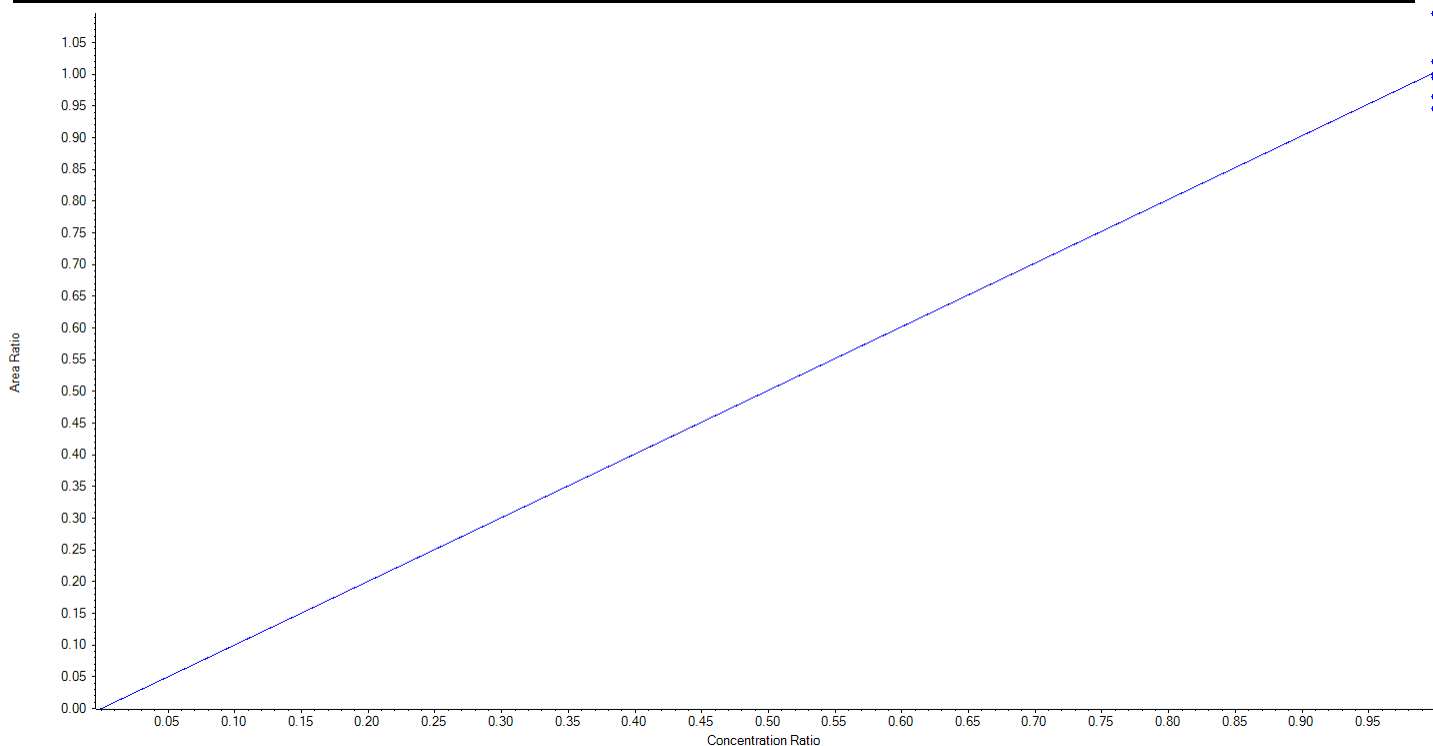
Calibration Summary Report

Created with Analyst Reporter
Printed: 06/11/2020 4:24:14 PM

Analyte Name	13C7-PFUnA	Data File	AE_11052020_5-369.wiff
MRM Transition	570.0 / 525.0	Result Table	20-1305_SIS
Internal Standard	13C2-PFDA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.00350 x$ (std. dev. = 0.05231) (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	1271.09	101.7
3	LD75	L2	True	1250.00	1239.36	99.2
4	LD76	L3	True	1250.00	1244.24	99.5
5	LD77	L4	True	1250.00	1364.99	109.2
6	LD78	L5	True	1250.00	1178.97	94.3
7	LD79	L6	True	1250.00	1201.35	96.1





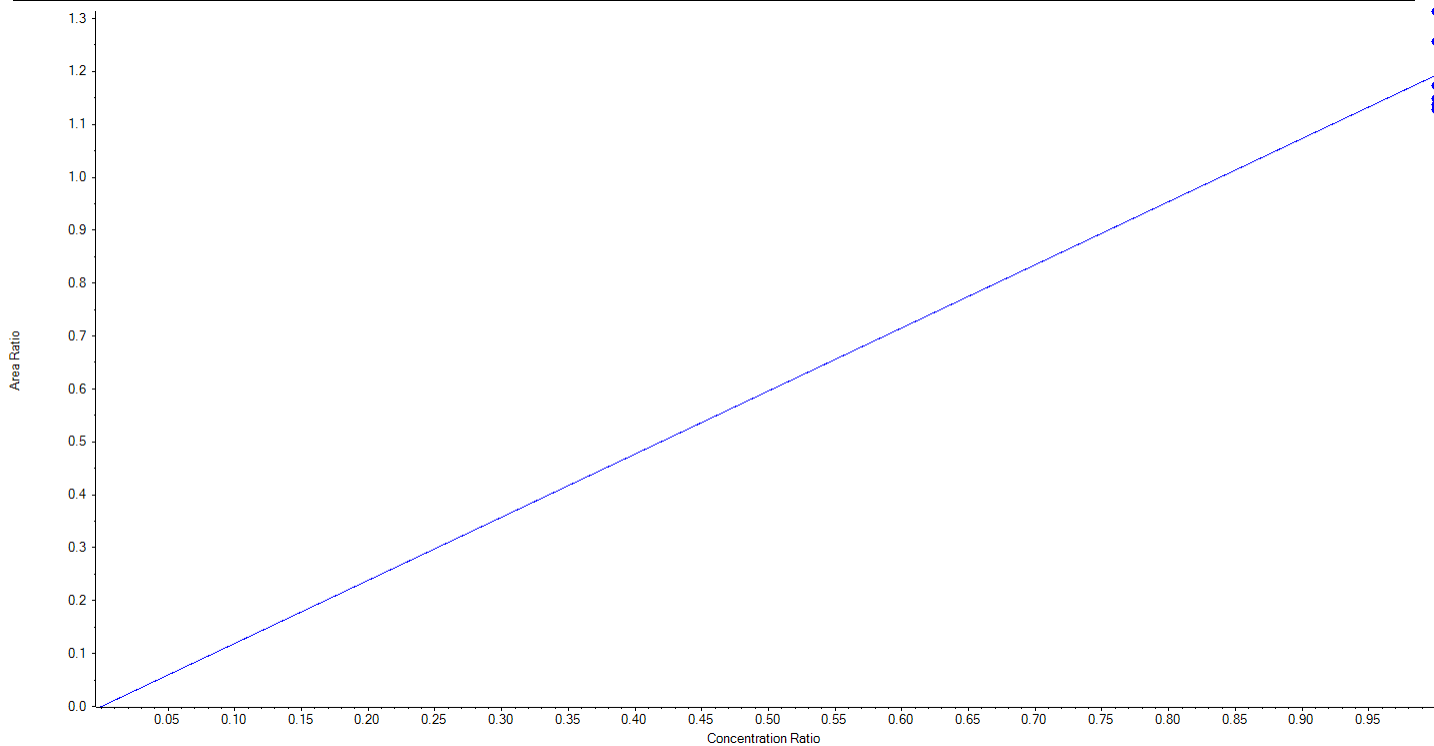
Calibration Summary Report

Created with Analyst Reporter
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Analyte Name	13C2-PFTeDA	Data File	AE_11052020_5-369.wiff
MRM Transition	715.0 / 670.0	Result Table	20-1305_SIS
Internal Standard	13C2-PFDA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.19252 x$ (std. dev. = 0.07525) (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	1229.34	98.4
3	LD75	L2	True	1250.00	1204.08	96.3
4	LD76	L3	True	1250.00	1191.88	95.4
5	LD77	L4	True	1250.00	1376.54	110.1
6	LD78	L5	True	1250.00	1181.32	94.5
7	LD79	L6	True	1250.00	1316.83	105.4





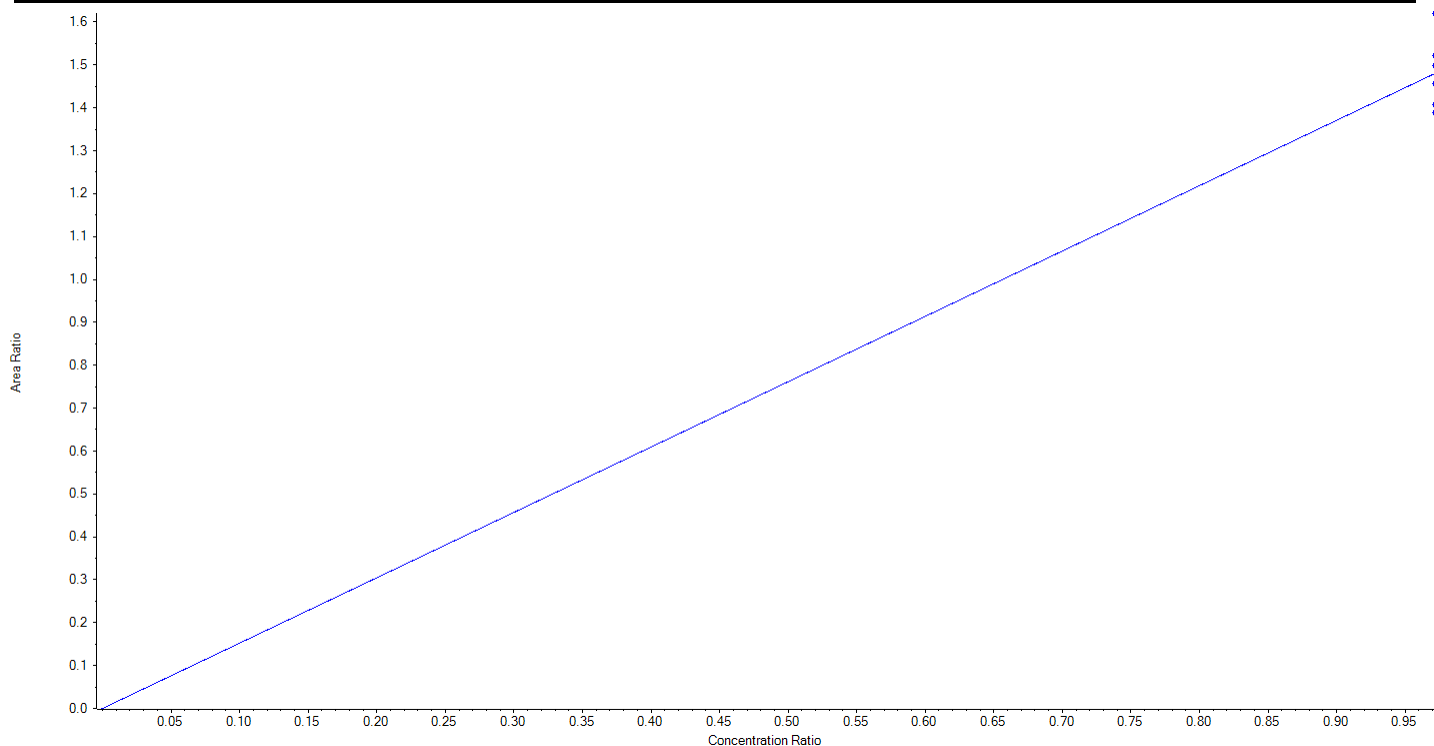
Calibration Summary Report

Created with Analyst Reporter
Printed: 06/11/2020 4:24:14 PM

Analyte Name	13C3-PFBS	Data File	AE_11052020_5-369.wiff
MRM Transition	302.0 / 99.0	Result Table	20-1305_SIS
Internal Standard	13C4-PFOS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.52307 x$ (std. dev. = 0.08692) (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	1141.71	98.2
3	LD75	L2	True	1162.50	1175.38	101.1
4	LD76	L3	True	1162.50	1088.77	93.7
5	LD77	L4	True	1162.50	1105.03	95.1
6	LD78	L5	True	1162.50	1270.75	109.3
7	LD79	L6	True	1162.50	1193.37	102.7





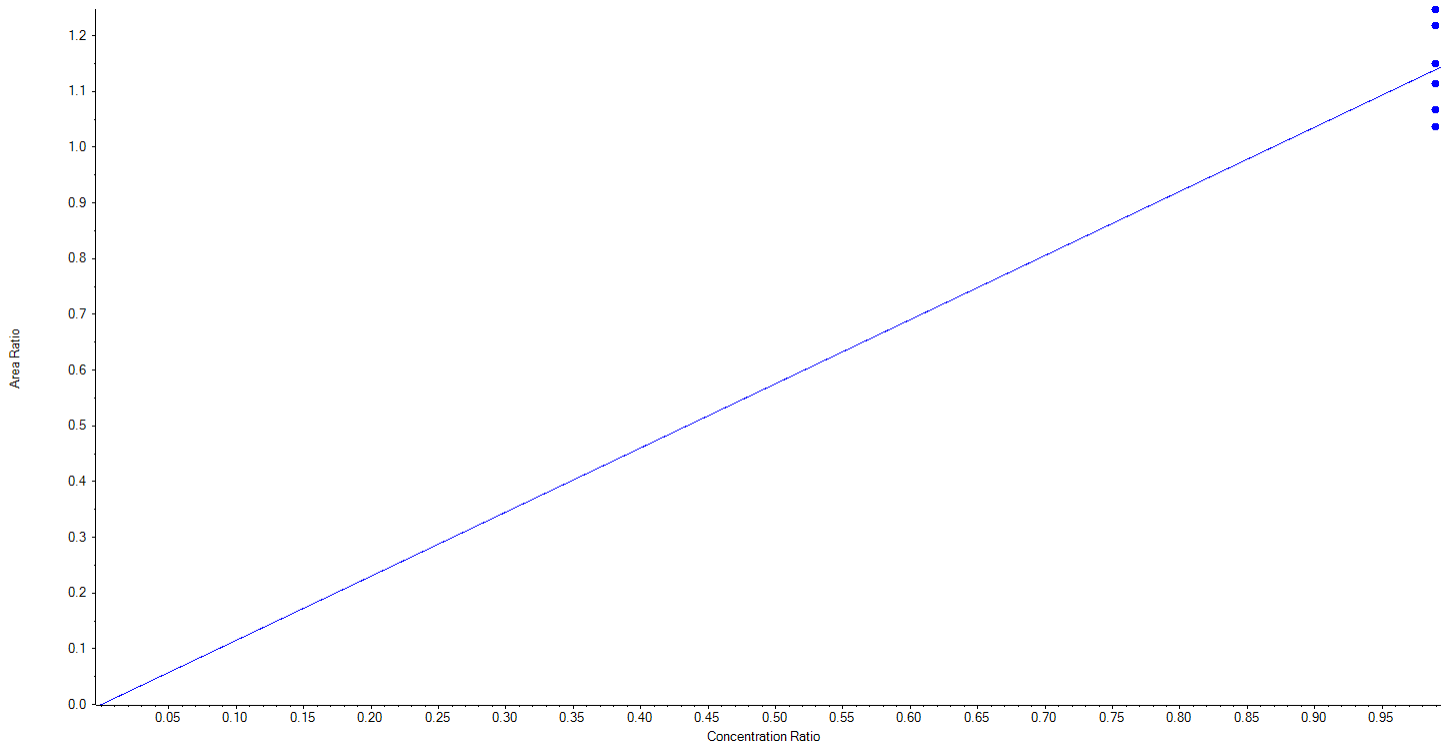
Calibration Summary Report

Created with Analyst Reporter
Printed: 06/11/2020 4:24:14 PM

Analyte Name	13C3-PFHxS	Data File	AE_11052020_5-369.wiff
MRM Transition	402.0 / 99.0	Result Table	20-1305_SIS
Internal Standard	13C4-PFOS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.15097 x$ (std. dev. = 0.08352) (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	1264.34	106.9
3	LD75	L2	True	1182.50	1294.60	109.5
4	LD76	L3	True	1182.50	1077.06	91.1
5	LD77	L4	True	1182.50	1156.87	97.8
6	LD78	L5	True	1182.50	1194.64	101.0
7	LD79	L6	True	1182.50	1107.49	93.7





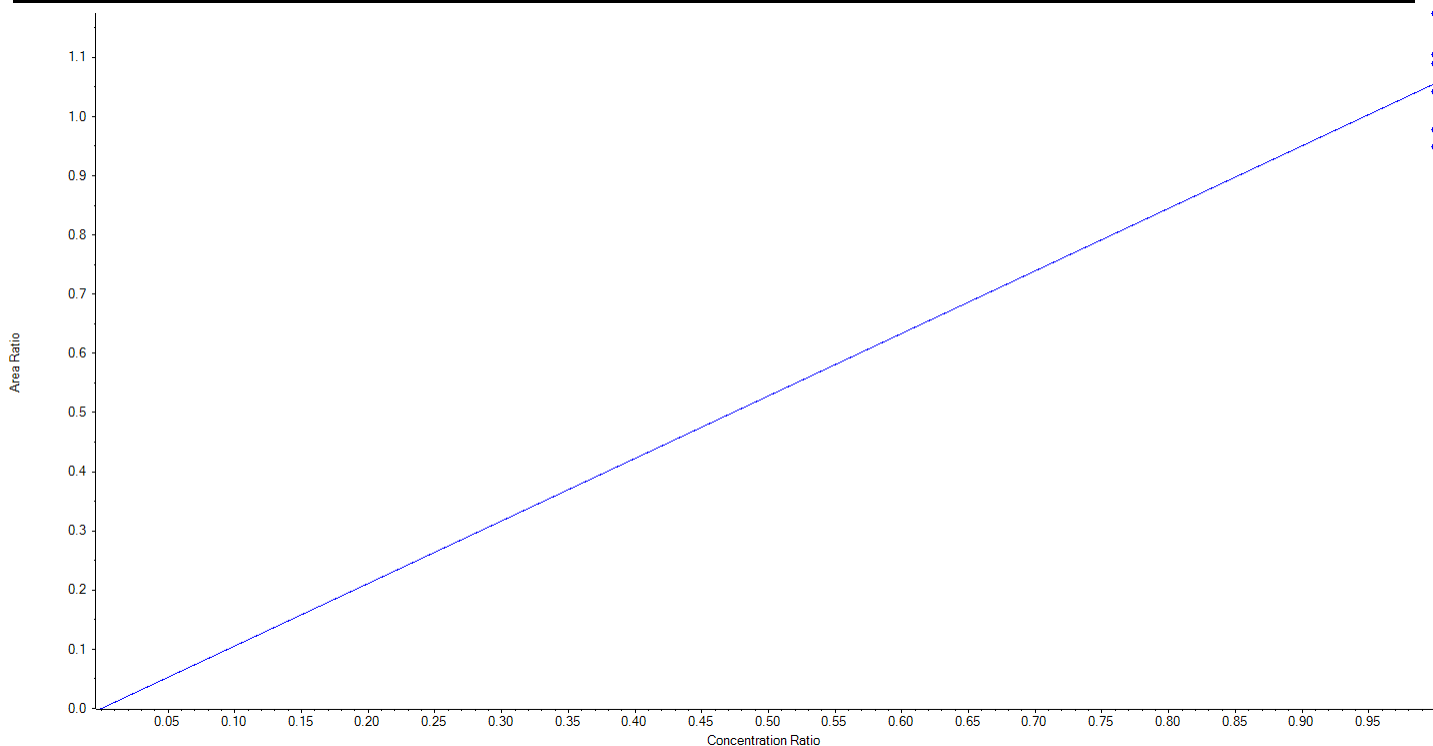
Calibration Summary Report

Created with Analyst Reporter
Printed: 06/11/2020 4:24:14 PM

Analyte Name	13C8-PFOS	Data File	AE_11052020_5-369.wiff
MRM Transition	507.0 / 99.0	Result Table	20-1305_SIS
Internal Standard	13C4-PFOS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.05622 x$ (std. dev. = 0.08385) (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	1328.33	111.2
3	LD75	L2	True	1195.00	1250.43	104.6
4	LD76	L3	True	1195.00	1074.57	89.9
5	LD77	L4	True	1195.00	1178.99	98.7
6	LD78	L5	True	1195.00	1232.16	103.1
7	LD79	L6	True	1195.00	1105.51	92.5





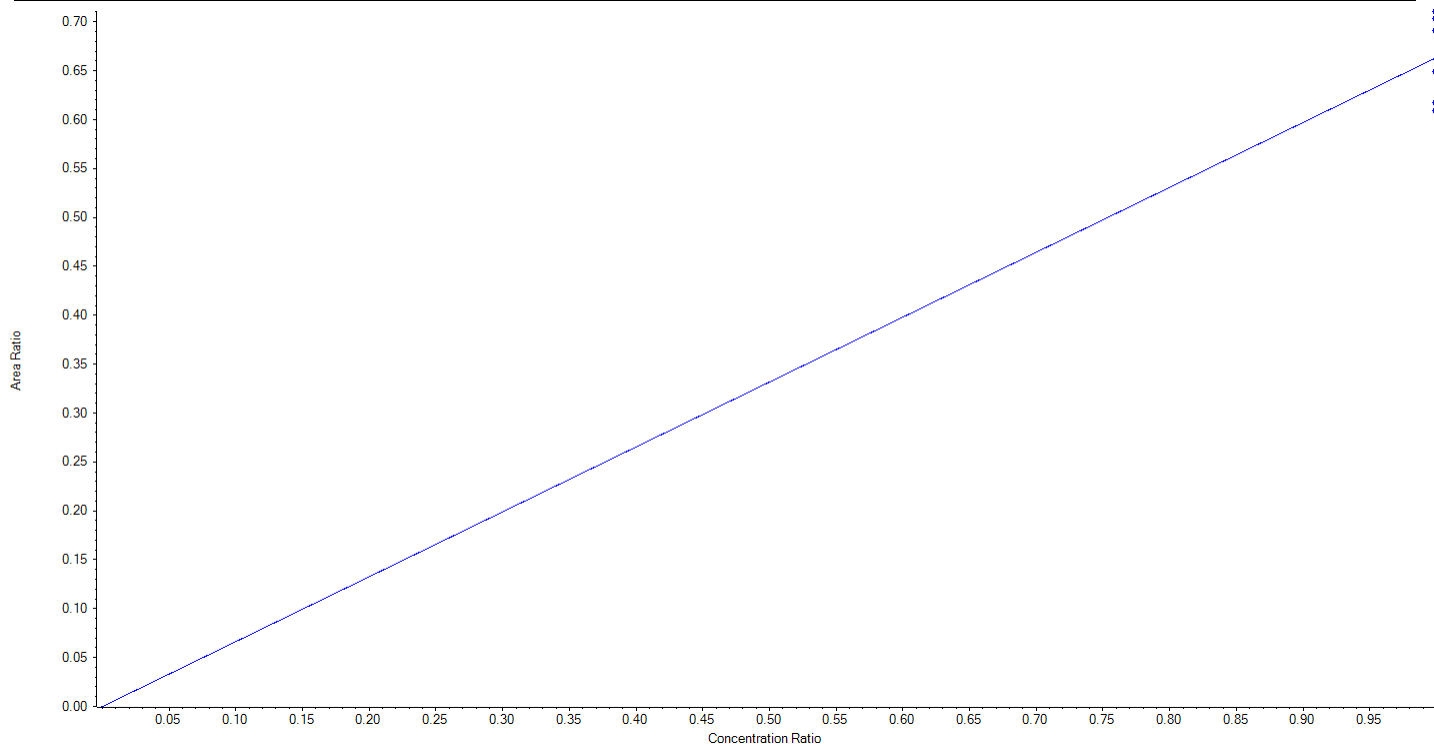
Calibration Summary Report

Created with Analyst Reporter
Printed: 06/11/2020 4:24:14 PM

Analyte Name	13C3-HFPO-DA	Data File	AE_11052020_5-369.wiff
MRM Transition	287.0 / 169.0	Result Table	20-1305_SIS
Internal Standard	13C2-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.66340 x$ (std. dev. = 0.04433) (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	1325.51	106.0
3	LD75	L2	True	1250.00	1301.12	104.1
4	LD76	L3	True	1250.00	1147.10	91.8
5	LD77	L4	True	1250.00	1163.93	93.1
6	LD78	L5	True	1250.00	1223.61	97.9
7	LD79	L6	True	1250.00	1338.73	107.1



Sample Name	LD74	Injection Vial	2
Sample ID	L1	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.32	173833.48	224.32	5369.5	False	13C3-PFBS	247231.79	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.32	55799.48	219.02	1323.8	False	13C3-PFBS	247231.79	1162.50	PFBS	0.321	0.319	✓
PFHxA_1	313.0 / 269.0	1.56	329627.32	233.71	712.4	False	13C5-PFHxA	1151975.28	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.56	21925.79	273.11	461.7	False	13C5-PFHxA	1151975.28	1250.00	PFHxA	0.067	0.063	✓
PFHpA_1	363.0 / 319.0	1.89	247137.86	236.85	360.6	False	13C4-PFHpA	1141140.23	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.89	7359.75	225.58	11879.1	False	13C4-PFHpA	1141140.23	1250.00	PFHpA	0.030	0.031	✓
PFHxS_1	399.0 / 80.0	1.90	167618.96	221.39	617.1	False	13C3-PFHxS	206899.68	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.90	50253.89	229.31	453.9	False	13C3-PFHxS	206899.68	1182.50	PFHxS	0.300	0.348	✓
PFOA_1	413.0 / 369.0	2.26	291727.94	246.16	409.0	False	13C8-PFOA	1316317.49	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.26	23190.11	231.68	233.9	False	13C8-PFOA	1316317.49	1222.50	PFOA	0.079	0.097	✓
PFNA_1	463.0 / 419.0	2.63	241471.41	264.96	337.8	False	13C9-PFNA	1154225.15	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.63	78587.85	268.61	1410.4	False	13C9-PFNA	1154225.15	1250.00	PFNA	0.325	0.324	✓
PFOS_1	499.0 / 80.0	2.62	165674.08	242.46	322.5	False	13C8-PFOS	199476.43	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.62	30762.25	230.42	604.9	False	13C8-PFOS	199476.43	1195.00	PFOS	0.186	0.197	✓
PFDA_1	513.0 / 469.0	2.98	257681.38	216.20	388.5	False	13C6-PFDA	1184745.73	1250.00	PFDA			
PFDA_2	513.0 / 219.0	2.97	12383.03	191.45	456.9	False	13C6-PFDA	1184745.73	1250.00	PFDA	0.048	0.058	✓
PFUnA_1	563.0 / 519.0	3.30	273159.89	224.08	544.1	False	13C7-PFUnA	1045187.19	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.30	15276.02	238.19	445.7	False	13C7-PFUnA	1045187.19	1250.00	PFUnA	0.056	0.062	✓
PFDoA_1	613.0 / 569.0	3.60	277292.86	235.30	552.6	False	13C2-PFDoA	1279052.97	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.60	33085.25	241.28	725.2	False	13C2-PFDoA	1279052.97	1250.00	PFDoA	0.119	0.117	✓
PFTTrDA_1	663.0 / 619.0	3.85	239017.93	221.44	917.6	False	13C2-PFTeDA	1201264.55	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	3.85	14844.47	223.98	680.2	False	13C2-PFTeDA	1201264.55	1250.00	PFTTrDA	0.062	0.070	✓
PFTeDA_1	713.0 / 669.0	4.08	277403.75	217.82	1405.4	False	13C2-PFTeDA	1201264.55	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.08	14517.48	235.67	851.1	False	13C2-PFTeDA	1201264.55	1250.00	PFTeDA	0.052	0.056	✓
NMeFOSAA_1	570.0 / 419.0	3.12	22764.79	288.42	2534.6	False	d3-MeFOSAA	158352.95	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.12	25527.28	245.61	13686.9	False	d3-MeFOSAA	158352.95	1250.00	NMeFOSAA	1.121	1.118	✓
NEIFOSAA_1	584.0 / 419.0	3.29	29702.34	244.19	912.5	False	d5-EiFOSAA	133644.32	1250.00	NEIFOSAA			
NEIFOSAA_2	584.0 / 483.0	3.28	2075.60	259.07	383.9	True	d5-EiFOSAA	133644.32	1250.00	NEIFOSAA	0.070	0.060	✓
HFPO-DA_1	285.0 / 169.0	1.65	289172.66	185.70	1973.9	False	13C3-HFPO-DA	468575.06	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.65	6002.08	225.26	624.9	False	13C3-HFPO-DA	468575.06	1250.00	HFPO-DA	0.021	0.021	✓
ADONA_1	377.0 / 251.0	1.93	582570.65	242.30	6229.2	False	13C8-PFOA	1316317.49	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.93	6875.98	230.73	83851.3	False	13C8-PFOA	1316317.49	1222.50	ADONA	0.012	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	2.83	304495.88	271.37	873.2	False	13C8-PFOA	1316317.49	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.82	2173.42	218.59	2203.1	False	13C8-PFOA	1316317.49	1222.50	9CI-PF3ONS	0.007	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.46	240797.09	255.78	1138.6	False	13C8-PFOA	1316317.49	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.47	1248.42	280.73	84.6	False	13C8-PFOA	1316317.49	1222.50	11Cl-PF3OUdS	0.005	0.005	✓

Sample Name	LD75	Injection Vial	3
Sample ID	L2	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:56:29 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.32	331058.04	524.64	6084.1	False	13C3-PFBS	249786.91	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.32	107391.64	532.03	1660.7	False	13C3-PFBS	249786.91	1162.50	PFBS	0.324	0.319	✓
PFHxA_1	313.0 / 269.0	1.57	609734.38	533.78	834.1	False	13C5-PFHxA	1120552.06	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.57	37664.31	531.46	675.9	False	13C5-PFHxA	1120552.06	1250.00	PFHxA	0.062	0.063	✓
PFHpA_1	363.0 / 319.0	1.90	427955.48	457.99	578.2	False	13C4-PFHpA	1134271.92	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.90	14309.71	504.36	3060122.4	False	13C4-PFHpA	1134271.92	1250.00	PFHpA	0.033	0.031	✓
PFHxS_1	399.0 / 80.0	1.91	343957.30	530.50	1155.5	False	13C3-PFHxS	207908.86	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.91	117997.51	546.03	840.6	False	13C3-PFHxS	207908.86	1182.50	PFHxS	0.343	0.348	✓
PFOA_1	413.0 / 369.0	2.26	567774.23	544.76	419.7	False	13C8-PFOA	1251001.72	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.25	55088.79	563.38	447.3	False	13C8-PFOA	1251001.72	1222.50	PFOA	0.097	0.097	✓
PFNA_1	463.0 / 419.0	2.63	494270.61	561.12	513.2	False	13C9-PFNA	1133414.85	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.63	156747.84	550.24	1275.0	False	13C9-PFNA	1133414.85	1250.00	PFNA	0.317	0.324	✓
PFOS_1	499.0 / 80.0	2.62	341738.34	567.77	559.4	False	13C8-PFOS	184284.38	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.62	69233.29	585.81	478.1	False	13C8-PFOS	184284.38	1195.00	PFOS	0.203	0.197	✓
PFDA_1	513.0 / 469.0	2.98	478207.60	525.74	518.6	False	13C6-PFDA	1067961.53	1250.00	PFDA			
PFDA_2	513.0 / 219.0	2.98	27904.14	544.21	1159100.1	False	13C6-PFDA	1067961.53	1250.00	PFDA	0.058	0.058	✓
PFUnA_1	563.0 / 519.0	3.30	500083.89	506.99	702.3	False	13C7-PFUnA	982373.57	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.30	32862.07	561.29	813.0	False	13C7-PFUnA	982373.57	1250.00	PFUnA	0.066	0.062	✓
PFDoA_1	613.0 / 569.0	3.60	537015.59	525.22	802.5	False	13C2-PFDoA	1196394.39	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.59	61214.65	512.50	984.4	False	13C2-PFDoA	1196394.39	1250.00	PFDoA	0.114	0.117	✓
PFTeDA_1	663.0 / 619.0	3.85	457621.04	518.34	1293.8	False	13C2-PFTeDA	1134184.94	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	3.85	33146.55	551.95	1030.7	False	13C2-PFTeDA	1134184.94	1250.00	PFTeDA	0.072	0.070	✓
PFTeDA_1	713.0 / 669.0	4.08	538628.33	529.90	2577.8	False	13C2-PFTeDA	1134184.94	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.08	30386.85	549.74	1518.3	False	13C2-PFTeDA	1134184.94	1250.00	PFTeDA	0.056	0.056	✓
NMeFOSAA_1	570.0 / 419.0	3.12	44439.03	556.83	20816.2	False	d3-MeFOSAA	140509.23	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.13	49698.55	538.73	3496.2	False	d3-MeFOSAA	140509.23	1250.00	NMeFOSAA	1.118	1.118	✓
NEiFOSAA_1	584.0 / 419.0	3.29	55764.70	512.72	3529.9	False	d5-EtFOSAA	129495.18	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.29	3101.71	448.84	39176.0	False	d5-EtFOSAA	129495.18	1250.00	NEiFOSAA	0.056	0.060	✓
HFPO-DA_1	285.0 / 169.0	1.65	524116.14	508.38	2317.6	True	13C3-HFPO-DA	438035.90	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.65	10041.85	480.45	381.8	False	13C3-HFPO-DA	438035.90	1250.00	HFPO-DA	0.019	0.021	✓
ADONA_1	377.0 / 251.0	1.93	1165693.94	539.47	3597.7	False	13C8-PFOA	1251001.72	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.93	18739.37	589.48	44395.3	False	13C8-PFOA	1251001.72	1222.50	ADONA	0.016	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	2.83	603339.55	546.95	1199.3	False	13C8-PFOA	1251001.72	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.82	6696.94	592.19	728.0	False	13C8-PFOA	1251001.72	1222.50	9CI-PF3ONS	0.011	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.46	471504.99	527.09	1439.3	False	13C8-PFOA	1251001.72	1222.50	11Cl-pf3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.45	2661.82	577.52	393.6	False	13C8-PFOA	1251001.72	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	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:06:57 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.32	596536.28	967.62	13413.9	False	13C3-PFBS	265933.64	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.32	193252.63	986.84	2081.3	False	13C3-PFBS	265933.64	1162.50	PFBS	0.324	0.319	✓
PFHxA_1	313.0 / 269.0	1.56	1082060.84	963.52	1268.6	False	13C5-PFHxA	1184357.50	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.56	63620.26	887.72	1529.3	False	13C5-PFHxA	1184357.50	1250.00	PFHxA	0.059	0.063	✓
PFHpA_1	363.0 / 319.0	1.89	893792.80	1028.84	677.5	False	13C4-PFHpA	1128267.94	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.89	26880.38	1011.10	1120.1	False	13C4-PFHpA	1128267.94	1250.00	PFHpA	0.030	0.031	✓
PFHxS_1	399.0 / 80.0	1.90	593587.29	1018.01	1646.8	False	13C3-PFHxS	198801.08	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.90	205180.52	999.24	1719.7	False	13C3-PFHxS	198801.08	1182.50	PFHxS	0.346	0.348	✓
PFOA_1	413.0 / 369.0	2.26	983793.70	894.52	610.5	False	13C8-PFOA	1355335.48	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.25	93966.38	880.97	675.6	False	13C8-PFOA	1355335.48	1222.50	PFOA	0.096	0.097	✓
PFNA_1	463.0 / 419.0	2.62	841207.39	887.17	708.8	False	13C9-PFNA	1226477.54	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.62	278764.64	907.21	84248.6	False	13C9-PFNA	1226477.54	1250.00	PFNA	0.331	0.324	✓
PFOS_1	499.0 / 80.0	2.62	575777.65	983.67	609.7	False	13C8-PFOS	182014.52	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.62	110969.72	961.29	704.5	False	13C8-PFOS	182014.52	1195.00	PFOS	0.193	0.197	✓
PFDA_1	513.0 / 469.0	2.97	882621.78	1000.74	601.9	False	13C6-PFDA	1101699.32	1250.00	PFDA			
PFDA_2	513.0 / 219.0	2.97	51623.11	1010.68	1311.3	False	13C6-PFDA	1101699.32	1250.00	PFDA	0.058	0.058	✓
PFUnA_1	563.0 / 519.0	3.29	947613.98	962.73	753.3	False	13C7-PFUnA	1043527.50	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.29	55430.71	898.64	1088.2	False	13C7-PFUnA	1043527.50	1250.00	PFUnA	0.058	0.062	✓
PFDoA_1	613.0 / 569.0	3.58	1002472.21	1015.93	1220.1	False	13C2-PFDoA	1191078.06	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.58	115936.80	1007.48	1289.8	False	13C2-PFDoA	1191078.06	1250.00	PFDoA	0.116	0.117	✓
PFTTrDA_1	663.0 / 619.0	3.83	838880.36	957.79	1666.3	False	13C2-PFTTeDA	1187911.85	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	3.83	59610.05	959.40	1576.5	False	13C2-PFTTeDA	1187911.85	1250.00	PFTTrDA	0.071	0.070	✓
PFTTeDA_1	713.0 / 669.0	4.06	977102.88	974.57	2470.2	False	13C2-PFTTeDA	1187911.85	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	4.06	53104.47	932.26	1642.6	False	13C2-PFTTeDA	1187911.85	1250.00	PFTTeDA	0.054	0.056	✓
NMeFOSAA_1	570.0 / 419.0	3.11	77724.54	830.19	6232272.5	False	d3-MeFOSAA	157988.70	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.11	94902.54	914.83	39296.5	False	d3-MeFOSAA	157988.70	1250.00	NMeFOSAA	1.221	1.118	✓
NEIFOSAA_1	584.0 / 419.0	3.28	105811.15	959.11	1301.4	False	d5-EtFOSAA	136172.85	1250.00	NEIFOSAA			
NEIFOSAA_2	584.0 / 483.0	3.28	7242.07	1107.49	4061.8	True	d5-EtFOSAA	136172.85	1250.00	NEIFOSAA	0.068	0.060	✓
HFPO-DA_1	285.0 / 169.0	1.65	960553.36	1039.45	3115.1	False	13C3-HFPO-DA	446753.27	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.65	17660.28	899.36	10252.1	False	13C3-HFPO-DA	446753.27	1250.00	HFPO-DA	0.018	0.021	✓
ADONA_1	377.0 / 251.0	1.93	2118039.39	922.70	7266.2	False	13C8-PFOA	1355335.48	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.93	30290.72	860.48	4732.9	False	13C8-PFOA	1355335.48	1222.50	ADONA	0.014	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	2.82	1032848.15	854.16	1826.8	False	13C8-PFOA	1355335.48	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.83	13256.44	1039.02	425.6	False	13C8-PFOA	1355335.48	1222.50	9CI-PF3ONS	0.013	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.45	855774.73	883.09	2105.6	False	13C8-PFOA	1355335.48	1222.50	11Cl-pf3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.44	4250.23	831.24	217.5	False	13C8-PFOA	1355335.48	1222.50	11Cl-pf3OUdS	0.005	0.005	✓

Sample Name	LD77	Injection Vial	5
Sample ID	L4	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:17:24 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.32	1504397.12	2657.99	12172.7	False	13C3-PFBS	261840.25	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.32	475879.54	2658.51	3362.7	False	13C3-PFBS	261840.25	1162.50	PFBS	0.316	0.319	✓
PFHxA_1	313.0 / 269.0	1.56	2729523.25	2705.09	1609.2	False	13C5-PFHxA	1132114.85	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.56	161228.86	2459.46	1776.1	False	13C5-PFHxA	1132114.85	1250.00	PFHxA	0.059	0.063	✓
PFHpA_1	363.0 / 319.0	1.90	2284119.21	2723.53	1118.9	False	13C4-PFHpA	1128597.37	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.90	67947.48	2655.85	8415804.6	False	13C4-PFHpA	1128597.37	1250.00	PFHpA	0.030	0.031	✓
PFHxS_1	399.0 / 80.0	1.91	1564987.95	2690.88	2113.2	False	13C3-PFHxS	207154.68	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.91	537298.96	2522.73	1384.2	False	13C3-PFHxS	207154.68	1182.50	PFHxS	0.343	0.348	✓
PFOA_1	413.0 / 369.0	2.26	2537391.36	2500.23	974.8	False	13C8-PFOA	1284982.99	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.26	260250.09	2553.39	1412.1	False	13C8-PFOA	1284982.99	1222.50	PFOA	0.103	0.097	✓
PFNA_1	463.0 / 419.0	2.62	2243431.02	2322.40	927.6	False	13C9-PFNA	1256553.53	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.62	731494.31	2330.61	2444.9	False	13C9-PFNA	1256553.53	1250.00	PFNA	0.326	0.324	✓
PFOS_1	499.0 / 80.0	2.62	1431977.83	2327.07	1062.1	False	13C8-PFOS	193734.38	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.62	291763.43	2399.60	1327.9	False	13C8-PFOS	193734.38	1195.00	PFOS	0.204	0.197	✓
PFDA_1	513.0 / 469.0	2.97	2304023.37	2729.15	1013.1	False	13C6-PFDA	1104013.14	1250.00	PFDA			
PFDA_2	513.0 / 219.0	2.97	138727.53	2783.88	1982.2	False	13C6-PFDA	1104013.14	1250.00	PFDA	0.060	0.058	✓
PFUnA_1	563.0 / 519.0	3.28	2517621.36	2714.86	1261.8	False	13C7-PFUnA	1030886.94	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.28	156983.35	2599.58	2972.5	False	13C7-PFUnA	1030886.94	1250.00	PFUnA	0.062	0.062	✓
PFDoA_1	613.0 / 569.0	3.56	2582474.18	2399.91	1630.7	False	13C2-PFDoA	1324713.38	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.56	307757.36	2454.56	2317.1	False	13C2-PFDoA	1324713.38	1250.00	PFDoA	0.119	0.117	✓
PFTeDA_1	663.0 / 619.0	3.80	2353520.91	2698.21	2742.5	False	13C2-PFTeDA	1235436.27	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	3.80	160240.62	2505.62	1777.2	False	13C2-PFTeDA	1235436.27	1250.00	PFTeDA	0.068	0.070	✓
PFTeDA_1	713.0 / 669.0	4.01	2617895.65	2632.92	3019.3	False	13C2-PFTeDA	1235436.27	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.01	146395.23	2508.14	2524.8	False	13C2-PFTeDA	1235436.27	1250.00	PFTeDA	0.056	0.056	✓
NMeFOSAA_1	570.0 / 419.0	3.11	205460.65	2208.50	6270.1	False	d3-MeFOSAA	149118.64	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.10	236169.43	2411.80	2592.9	False	d3-MeFOSAA	149118.64	1250.00	NMeFOSAA	1.149	1.118	✓
NEiFOSAA_1	584.0 / 419.0	3.27	279859.09	2436.80	1727.8	False	d5-EtFOSAA	145476.55	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.26	15913.12	2373.93	2250.8	False	d5-EtFOSAA	145476.55	1250.00	NEiFOSAA	0.057	0.060	✓
HFPO-DA_1	285.0 / 169.0	1.65	2451892.61	2955.07	1950.6	True	13C3-HFPO-DA	438649.39	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.65	55127.81	3072.59	906.6	False	13C3-HFPO-DA	438649.39	1250.00	HFPO-DA	0.022	0.021	✓
ADONA_1	377.0 / 251.0	1.93	5328768.59	2492.38	13362.5	False	13C8-PFOA	1284982.99	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.93	88674.66	2576.23	529164.5	False	13C8-PFOA	1284982.99	1222.50	ADONA	0.017	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	2.82	2915453.50	2508.75	2153.0	False	13C8-PFOA	1284982.99	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.82	29877.46	2398.39	9516.9	False	13C8-PFOA	1284982.99	1222.50	9CI-PF3ONS	0.010	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.42	2310307.30	2514.74	2423.5	False	13C8-PFOA	1284982.99	1222.50	11Cl-pf3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.43	10949.05	2186.39	714.3	True	13C8-PFOA	1284982.99	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	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:27:51 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.32	5579004.37	10460.31	34918.5	False	13C3-PFBS	254618.82	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.32	1725281.21	10257.86	6427.0	False	13C3-PFBS	254618.82	1162.50	PFBS	0.309	0.319	✓
PFHxA_1	313.0 / 269.0	1.56	9067220.74	10063.50	3102.8	False	13C5-PFHxA	1037720.67	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.56	602548.81	10225.09	2495.3	False	13C5-PFHxA	1037720.67	1250.00	PFHxA	0.066	0.063	✓
PFHpA_1	363.0 / 319.0	1.90	7589480.88	10437.37	1798.2	False	13C4-PFHpA	994667.05	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.89	229309.12	10356.54	2489.1	False	13C4-PFHpA	994667.05	1250.00	PFHpA	0.030	0.031	✓
PFHxS_1	399.0 / 80.0	1.91	5074956.33	10197.19	4230.1	False	13C3-PFHxS	180889.80	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.91	1943870.22	10476.15	3081.7	False	13C3-PFHxS	180889.80	1182.50	PFHxS	0.383	0.348	✓
PFOA_1	413.0 / 369.0	2.26	9273041.86	10477.64	1649.8	False	13C8-PFOA	1133788.90	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.26	967317.67	10722.57	2303.5	False	13C8-PFOA	1133788.90	1222.50	PFOA	0.104	0.097	✓
PFNA_1	463.0 / 419.0	2.63	7727838.04	9887.37	1356.6	False	13C9-PFNA	1019399.44	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.63	2448834.96	9631.41	3815.1	False	13C9-PFNA	1019399.44	1250.00	PFNA	0.317	0.324	✓
PFOS_1	499.0 / 80.0	2.62	5573273.10	10321.41	2016.1	False	13C8-PFOS	171210.96	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.62	1116678.49	10449.07	2676.0	False	13C8-PFOS	171210.96	1195.00	PFOS	0.200	0.197	✓
PFDA_1	513.0 / 469.0	2.98	7454876.13	10003.38	1658.7	False	13C6-PFDA	994189.12	1250.00	PFDA			
PFDA_2	513.0 / 219.0	2.98	467851.62	10545.70	2157.2	False	13C6-PFDA	994189.12	1250.00	PFDA	0.063	0.058	✓
PFUnA_1	563.0 / 519.0	3.30	8454080.61	10789.13	2444.2	False	13C7-PFUnA	888804.18	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.30	508519.32	9801.54	2854.4	False	13C7-PFUnA	888804.18	1250.00	PFUnA	0.060	0.062	✓
PFDoA_1	613.0 / 569.0	3.59	9640046.57	10491.86	2478.1	False	13C2-PFDoA	1143993.33	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.59	1105147.54	10320.48	3207.9	False	13C2-PFDoA	1143993.33	1250.00	PFDoA	0.115	0.117	✓
PFTeDA_1	663.0 / 619.0	3.85	7902048.22	10772.18	3202.5	False	13C2-PFTeDA	1058335.19	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	3.85	579839.80	10636.48	2991.5	False	13C2-PFTeDA	1058335.19	1250.00	PFTeDA	0.073	0.070	✓
PFTeDA_1	713.0 / 669.0	4.08	8963874.16	10756.37	3794.3	False	13C2-PFTeDA	1058335.19	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.08	514315.70	10355.63	3862.3	False	13C2-PFTeDA	1058335.19	1250.00	PFTeDA	0.057	0.056	✓
NMeFOSAA_1	570.0 / 419.0	3.12	810707.78	10073.48	9938.1	False	d3-MeFOSAA	126026.40	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.12	903464.13	10916.42	3067.3	False	d3-MeFOSAA	126026.40	1250.00	NMeFOSAA	1.114	1.118	✓
NEiFOSAA_1	584.0 / 419.0	3.29	951303.55	11001.77	2013.0	False	d5-EiFOSAA	111000.95	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.29	50245.28	10108.88	16879.7	False	d5-EiFOSAA	111000.95	1250.00	NEiFOSAA	0.053	0.060	✓
HFPO-DA_1	285.0 / 169.0	1.65	8871914.08	10608.89	10870.1	False	13C3-HFPO-DA	458915.13	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.65	191811.46	10446.29	83948.0	False	13C3-HFPO-DA	458915.13	1250.00	HFPO-DA	0.022	0.021	✓
ADONA_1	377.0 / 251.0	1.93	19650904.79	10501.12	19514.4	False	13C8-PFOA	1133788.90	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.93	310951.76	10123.72	5400.0	False	13C8-PFOA	1133788.90	1222.50	ADONA	0.016	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	2.83	9622598.61	9336.87	3809.6	False	13C8-PFOA	1133788.90	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.83	101056.63	9046.78	6696.2	False	13C8-PFOA	1133788.90	1222.50	9CI-PF3ONS	0.011	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.46	8523932.42	10515.78	4773.6	False	13C8-PFOA	1133788.90	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.45	44959.68	10021.51	1161.9	True	13C8-PFOA	1133788.90	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	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:38:18 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.32	12924033.99	24415.12	46462.9	False	13C3-PFBS	254288.17	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.32	4101985.78	24595.73	12078.4	False	13C3-PFBS	254288.17	1162.50	PFBS	0.317	0.319	✓
PFHxA_1	313.0 / 269.0	1.57	20844417.49	25142.90	4540.6	False	13C5-PFHxA	960455.06	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.57	1372895.07	25265.67	4375.3	False	13C5-PFHxA	960455.06	1250.00	PFHxA	0.066	0.063	✓
PFHpA_1	363.0 / 319.0	1.90	17172771.61	24365.41	2714.1	False	13C4-PFHpA	967323.51	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.89	525551.84	24496.57	3323.9	False	13C4-PFHpA	967323.51	1250.00	PFHpA	0.031	0.031	✓
PFHxS_1	399.0 / 80.0	1.90	12205619.37	24984.54	4825.8	False	13C3-PFHxS	178335.45	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.90	4547415.67	24869.04	4751.3	False	13C3-PFHxS	178335.45	1182.50	PFHxS	0.373	0.348	✓
PFOA_1	413.0 / 369.0	2.26	20888560.74	24586.69	2338.3	False	13C8-PFOA	1090692.65	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.26	2109835.89	24298.01	2468.2	False	13C8-PFOA	1090692.65	1222.50	PFOA	0.101	0.097	✓
PFNA_1	463.0 / 419.0	2.63	18707194.94	25326.99	2342.5	False	13C9-PFNA	963850.33	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.63	6143303.20	25561.92	8016.8	False	13C9-PFNA	963850.33	1250.00	PFNA	0.328	0.324	✓
PFOS_1	499.0 / 80.0	2.62	12967648.68	25200.13	2664.7	False	13C8-PFOS	163361.81	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.62	2548475.17	25016.30	2920.6	False	13C8-PFOS	163361.81	1195.00	PFOS	0.197	0.197	✓
PFDA_1	513.0 / 469.0	2.98	17746588.54	24774.79	2134.0	False	13C6-PFDA	959933.49	1250.00	PFDA			
PFDA_2	513.0 / 219.0	2.98	1033098.85	24174.07	3433.5	False	13C6-PFDA	959933.49	1250.00	PFDA	0.058	0.058	✓
PFUnA_1	563.0 / 519.0	3.30	17313662.10	24052.20	2804.7	False	13C7-PFUnA	819602.97	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.30	1202330.02	25150.76	3077.5	False	13C7-PFUnA	819602.97	1250.00	PFUnA	0.069	0.062	✓
PFDoA_1	613.0 / 569.0	3.59	21437695.63	24581.77	3043.3	False	13C2-PFDoA	1087935.65	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.59	2511638.63	24713.70	3178.5	False	13C2-PFDoA	1087935.65	1250.00	PFDoA	0.117	0.117	✓
PFTeDA_1	663.0 / 619.0	3.85	17759205.26	24082.04	3678.1	False	13C2-PFTeDA	1067611.26	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	3.85	1339143.21	24372.58	3393.7	False	13C2-PFTeDA	1067611.26	1250.00	PFTeDA	0.075	0.070	✓
PFTeDA_1	713.0 / 669.0	4.08	20211636.76	24138.42	3719.8	False	13C2-PFTeDA	1067611.26	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.08	1234361.44	24668.55	3609.6	False	13C2-PFTeDA	1067611.26	1250.00	PFTeDA	0.061	0.056	✓
NMeFOSAA_1	570.0 / 419.0	3.13	2081488.92	25292.58	3142.1	False	d3-MeFOSAA	128372.04	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.12	2042034.97	24222.60	2429.8	False	d3-MeFOSAA	128372.04	1250.00	NMeFOSAA	0.981	1.118	✓
NEiFOSAA_1	584.0 / 419.0	3.29	2063249.23	24095.42	1872.7	False	d5-EiFOSAA	110151.49	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.29	122419.11	24951.78	7597.5	False	d5-EiFOSAA	110151.49	1250.00	NEiFOSAA	0.059	0.060	✓
HFPO-DA_1	285.0 / 169.0	1.66	20951454.53	23952.52	14856.5	False	13C3-HFPO-DA	483963.95	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.65	464715.87	24126.06	167247.6	False	13C3-HFPO-DA	483963.95	1250.00	HFPO-DA	0.022	0.021	✓
ADONA_1	377.0 / 251.0	1.93	44134480.33	24552.03	18416.9	False	13C8-PFOA	1090692.65	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.93	736500.72	24869.36	6964.7	False	13C8-PFOA	1090692.65	1222.50	ADONA	0.017	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	2.83	25541620.63	25731.91	7622.6	False	13C8-PFOA	1090692.65	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.83	279958.67	25955.03	3619.5	False	13C8-PFOA	1090692.65	1222.50	9CI-PF3ONS	0.011	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.46	19146093.14	24553.52	6726.1	False	13C8-PFOA	1090692.65	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.46	109695.28	25352.61	1833.6	True	13C8-PFOA	1090692.65	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	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.59	1279052.97	1247.57	3868.5	False	13C2-PFDA	1024257.59	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.12	157916.70	1406.65	1230.0	False	13C4-PFOS	169902.02	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.29	133535.87	1333.86	993.6	False	13C4-PFOS	169902.02	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.55	1151975.28	1353.60	5140.7	False	13C2-PFOA	666092.74	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.88	1141140.23	1358.86	11415.3	False	13C2-PFOA	666092.74	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.25	1316317.49	1340.88	1426.3	False	13C2-PFOA	666092.74	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.62	1154225.15	1306.47	12066.9	False	13C4-PFOS	169902.02	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.97	1184745.73	1303.61	4196.1	False	13C2-PFDA	1024257.59	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.30	1045187.19	1271.09	3458.8	False	13C2-PFDA	1024257.59	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.08	1201264.55	1229.34	4329.7	False	13C2-PFDA	1024257.59	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.30	247231.79	1141.71	6761.1	False	13C4-PFOS	169902.02	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.89	206899.68	1264.34	35829.1	False	13C4-PFOS	169902.02	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.62	199476.43	1328.33	1440.9	False	13C4-PFOS	169902.02	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.65	468575.06	1325.51	3901.9	False	13C2-PFOA	666092.74	1250.00		N/A	N/A	✓

Sample Name	LD75	Injection Vial	3
Sample ID	L2	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:56:29 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.59	1196394.39	1210.57	3847.4	False	13C2-PFDA	987350.36	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.12	139811.46	1268.99	951.7	False	13C4-PFOS	166740.64	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.29	129604.73	1319.14	953.3	False	13C4-PFOS	166740.64	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.56	1120552.06	1382.56	6383.2	False	13C2-PFOA	634349.70	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.89	1134271.92	1418.27	40664621.0	False	13C2-PFOA	634349.70	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.25	1251001.72	1338.11	6098.2	False	13C2-PFOA	634349.70	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.62	1133414.85	1307.23	971.4	False	13C4-PFOS	166740.64	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.97	1067961.53	1219.04	3287.7	False	13C2-PFDA	987350.36	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.30	982373.57	1239.36	3031.5	False	13C2-PFDA	987350.36	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.08	1134184.94	1204.08	3773.7	False	13C2-PFDA	987350.36	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.31	249786.91	1175.38	5621.5	False	13C4-PFOS	166740.64	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.90	207908.86	1294.60	6911.6	False	13C4-PFOS	166740.64	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.62	184284.38	1250.43	1314.5	False	13C4-PFOS	166740.64	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.65	438035.90	1301.12	174687.1	False	13C2-PFOA	634349.70	1250.00		N/A	N/A	✓

Sample Name	LD76	Injection Vial	4
Sample ID	L3	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:06:57 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.58	1191078.06	1139.02	4257.6	False	13C2-PFDA	1044704.24	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.11	157032.27	1240.11	995.8	False	13C4-PFOS	191638.83	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.28	134679.98	1192.70	1126.5	False	13C4-PFOS	191638.83	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.55	1184357.50	1263.16	5268.6	False	13C2-PFOA	733846.07	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.89	1128267.94	1219.49	524939.0	False	13C2-PFOA	733846.07	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.25	1355335.48	1253.15	8930.3	False	13C2-PFOA	733846.07	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.62	1226477.54	1230.78	3415.4	False	13C4-PFOS	191638.83	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.97	1101699.32	1188.51	3980.6	False	13C2-PFDA	1044704.24	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.29	1043527.50	1244.24	3732.3	False	13C2-PFDA	1044704.24	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.06	1187911.85	1191.88	5019.6	False	13C2-PFDA	1044704.24	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.31	265933.64	1088.77	6395.8	False	13C4-PFOS	191638.83	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.90	198801.08	1077.06	65937.4	False	13C4-PFOS	191638.83	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.61	182014.52	1074.57	1313.2	False	13C4-PFOS	191638.83	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.65	446753.27	1147.10	3757.0	False	13C2-PFOA	733846.07	1250.00		N/A	N/A	✓

Sample Name	LD77	Injection Vial	5
Sample ID	L4	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:17:24 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305 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	3.56	1324713.38	1406.81	4152.1	False	13C2-PFDA	940747.67	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.10	148036.85	1205.07	991.6	False	13C4-PFOS	185913.74	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.26	145978.36	1332.56	1224.4	False	13C4-PFOS	185913.74	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.56	1132114.85	1247.80	7631.9	False	13C2-PFOA	710115.13	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.89	1128597.37	1260.61	1511.2	False	13C2-PFOA	710115.13	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.25	1284982.99	1227.81	1594277.1	False	13C2-PFOA	710115.13	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.61	1256553.53	1299.80	15093.2	False	13C4-PFOS	185913.74	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.96	1104013.14	1322.61	242044.9	False	13C2-PFDA	940747.67	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.27	1030886.94	1364.99	4098.1	False	13C2-PFDA	940747.67	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.01	1235436.27	1376.54	3167.1	False	13C2-PFDA	940747.67	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.31	261840.25	1105.03	8089.0	False	13C4-PFOS	185913.74	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.90	207154.68	1156.87	8381.4	False	13C4-PFOS	185913.74	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.61	193734.38	1178.99	961.6	False	13C4-PFOS	185913.74	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.65	438649.39	1163.93	4647.1	False	13C2-PFOA	710115.13	1250.00		N/A	N/A	✓

Sample Name	LD78	Injection Vial	6
Sample ID	L5	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:27:51 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.59	1143993.33	1217.06	4781.9	False	13C2-PFDA	939068.19	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.12	126330.32	1216.14	935.8	False	13C4-PFOS	157209.48	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.29	111440.30	1203.03	930.9	False	13C4-PFOS	157209.48	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.55	1037720.67	1149.31	7117.0	False	13C2-PFOA	706685.09	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.89	994667.05	1116.40	12223.4	False	13C2-PFOA	706685.09	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.25	1133788.90	1088.60	69783.1	False	13C2-PFOA	706685.09	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.62	1019399.44	1247.02	3561.7	False	13C4-PFOS	157209.48	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.97	994189.12	1193.18	1001.0	False	13C2-PFDA	939068.19	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.30	888804.18	1178.97	4201.4	False	13C2-PFDA	939068.19	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.07	1058335.19	1181.32	3644.1	False	13C2-PFDA	939068.19	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.31	254618.82	1270.75	5227.6	False	13C4-PFOS	157209.48	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.90	180889.80	1194.64	6421.0	False	13C4-PFOS	157209.48	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.62	171210.96	1232.16	2115.2	False	13C4-PFOS	157209.48	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.65	458915.13	1223.61	3872.9	False	13C2-PFOA	706685.09	1250.00		N/A	N/A	✓

Sample Name	LD79	Injection Vial	7
Sample ID	L6	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:38:18 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305 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	3.59	1087935.65	1278.98	3840.4	False	13C2-PFDA	849818.95	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.12	128481.14	1163.04	1150.1	False	13C4-PFOS	167186.16	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.29	110206.48	1118.71	996.3	False	13C4-PFOS	167186.16	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.56	960455.06	1103.57	6994.5	False	13C2-PFOA	681173.46	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.89	967323.51	1126.38	110595.0	False	13C2-PFOA	681173.46	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.25	1090692.65	1086.44	1258711.3	False	13C2-PFOA	681173.46	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.62	963850.33	1108.70	3242.5	False	13C4-PFOS	167186.16	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.97	959933.49	1273.05	2456.5	False	13C2-PFDA	849818.95	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.30	819602.97	1201.35	3901.2	False	13C2-PFDA	849818.95	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.07	1067611.26	1316.83	4275.3	False	13C2-PFDA	849818.95	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.31	254288.17	1193.37	4899.2	False	13C4-PFOS	167186.16	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.90	178335.45	1107.49	6488.3	False	13C4-PFOS	167186.16	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.61	163361.81	1105.51	1668.2	False	13C4-PFOS	167186.16	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.65	483963.95	1338.73	31271.9	False	13C2-PFOA	681173.46	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	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:59:12 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.32	2781.43	2500.00	111.26
PFBS_2	298.9 / 99.0	1.32	2803.90	2500.00	112.16
PFHxA_1	313.0 / 269.0	1.56	2764.25	2525.00	109.48
PFHxA_2	313.0 / 119.0	1.56	2546.64	2525.00	100.86
PFHpA_1	363.0 / 319.0	1.89	2564.52	2500.00	102.58
PFHpA_2	363.0 / 169.0	1.89	2904.20	2500.00	116.17
PFHxS_1	399.0 / 80.0	1.90	2776.22	2525.00	109.95
PFHxS_2	399.0 / 99.0	1.90	2668.51	2525.00	105.68
PFOA_1	413.0 / 369.0	2.25	2480.21	2500.00	99.21
PFOA_2	413.0 / 169.0	2.25	2431.26	2500.00	97.25
PFNA_1	463.0 / 419.0	2.62	2626.47	2500.00	105.06
PFNA_2	463.0 / 219.0	2.62	2681.43	2500.00	107.26
PFOS_1	499.0 / 80.0	2.62	2420.82	2525.00	95.87
PFOS_2	499.0 / 99.0	2.62	2381.24	2525.00	94.31
PFDA_1	513.0 / 469.0	2.98	2955.00	2500.00	118.20
PFDA_2	513.0 / 219.0	2.97	2667.78	2500.00	106.71
PFUnA_1	563.0 / 519.0	3.30	2571.27	2500.00	102.85
PFUnA_2	563.0 / 269.0	3.30	2393.18	2500.00	95.73
PFDoA_1	613.0 / 569.0	3.59	2710.30	2500.00	108.41
PFDoA_2	613.0 / 319.0	3.59	2675.07	2500.00	107.00
PFTrDA_1	663.0 / 619.0	3.84	2733.53	2500.00	109.34
PFTrDA_2	663.0 / 169.0	3.84	2759.97	2500.00	110.40
PFTeDA_1	713.0 / 669.0	4.07	2626.53	2500.00	105.06
PFTeDA_2	713.0 / 169.0	4.07	2530.14	2500.00	101.21
NMeFOSAA_1	570.0 / 419.0	3.12	2486.45	2500.00	99.46
NMeFOSAA_2	570.0 / 512.0	3.12	2759.53	2500.00	110.38
NEtFOSAA_1	584.0 / 419.0	3.29	2437.67	2500.00	97.51
NEtFOSAA_2	584.0 / 483.0	3.28	2547.86	2500.00	101.91
HFPO-DA_1	285.0 / 169.0	1.65	3209.33	2500.00	128.37
HFPO-DA_2	285.0 / 118.8	1.65	2773.91	2500.00	110.96
ADONA_1	377.0 / 251.0	1.92	2586.73	2500.00	103.47
ADONA_2	377.0 / 85.0	1.92	2370.45	2500.00	94.82
9Cl-PF3ONS_1	531.0 / 351.0	2.83	2494.88	2500.00	99.80
9Cl-PF3ONS_2	531.0 / 83.0	2.83	2461.15	2500.00	98.45
11Cl-pf3OUdS_1	631.0 / 451.0	3.45	2375.52	2500.00	95.02
11Cl-pf3OUdS_2	631.0 / 83.0	3.45	2655.24	2500.00	106.21

Sample Name	LD76 CCV	Injection Vial	21
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:05:11 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS 1	298.9 / 80.0	1.32	980.89	1000.00	98.09
PFBS 2	298.9 / 99.0	1.32	1047.47	1000.00	104.75
PFHxA 1	313.0 / 269.0	1.56	1160.40	1010.00	114.89
PFHxA 2	313.0 / 119.0	1.56	1106.26	1010.00	109.53
PFHpA 1	363.0 / 319.0	1.89	983.66	1000.00	98.37
PFHpA 2	363.0 / 169.0	1.90	1009.03	1000.00	100.90
PFHxS 1	399.0 / 80.0	1.90	1054.25	1010.00	104.38
PFHxS 2	399.0 / 99.0	1.90	989.85	1010.00	98.00
PFOA 1	413.0 / 369.0	2.25	916.43	1000.00	91.64
PFOA 2	413.0 / 169.0	2.25	925.93	1000.00	92.59
PFNA 1	463.0 / 419.0	2.62	861.44	1000.00	86.14
PFNA 2	463.0 / 219.0	2.62	928.77	1000.00	92.88
PFOS 1	499.0 / 80.0	2.62	972.87	1010.00	96.32
PFOS 2	499.0 / 99.0	2.62	994.47	1010.00	98.46
PFDA 1	513.0 / 469.0	2.98	1018.74	1000.00	101.87
PFDA 2	513.0 / 219.0	2.98	956.50	1000.00	95.65
PFUnA 1	563.0 / 519.0	3.30	915.90	1000.00	91.59
PFUnA 2	563.0 / 269.0	3.29	959.42	1000.00	95.94
PFDoA 1	613.0 / 569.0	3.59	950.84	1000.00	95.08
PFDoA 2	613.0 / 319.0	3.58	906.24	1000.00	90.62
PFTTrDA 1	663.0 / 619.0	3.84	980.40	1000.00	98.04
PFTTrDA 2	663.0 / 169.0	3.84	987.94	1000.00	98.79
PFTeDA 1	713.0 / 669.0	4.07	954.82	1000.00	95.48
PFTeDA 2	713.0 / 169.0	4.07	921.02	1000.00	92.10
NMeFOSAA 1	570.0 / 419.0	3.12	953.34	1000.00	95.33
NMeFOSAA 2	570.0 / 512.0	3.12	833.82	1000.00	83.38
NEtFOSAA 1	584.0 / 419.0	3.29	971.46	1000.00	97.15
NEtFOSAA 2	584.0 / 483.0	3.29	532.41	1000.00	53.24
HFPO-DA 1	285.0 / 169.0	1.65	1061.11	1000.00	106.11
HFPO-DA 2	285.0 / 118.8	1.65	1190.03	1000.00	119.00
ADONA 1	377.0 / 251.0	1.92	894.97	1000.00	89.50
ADONA 2	377.0 / 85.0	1.92	807.70	1000.00	80.77
9Cl-PF3ONS 1	531.0 / 351.0	2.82	912.61	1000.00	91.26
9Cl-PF3ONS 2	531.0 / 83.0	2.82	909.09	1000.00	90.91
11Cl-pf3OUdS 1	631.0 / 451.0	3.45	912.67	1000.00	91.27
11Cl-pf3OUdS 2	631.0 / 83.0	3.45	943.36	1000.00	94.34

Sample Name	LD77 CCV	Injection Vial	29
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 6:29:24 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS 1	298.9 / 80.0	1.32	2760.68	2500.00	110.43
PFBS 2	298.9 / 99.0	1.32	2740.08	2500.00	109.60
PFHxA 1	313.0 / 269.0	1.56	2711.33	2525.00	107.38
PFHxA 2	313.0 / 119.0	1.56	2501.82	2525.00	99.08
PFHpA 1	363.0 / 319.0	1.89	2640.66	2500.00	105.63
PFHpA 2	363.0 / 169.0	1.89	2650.00	2500.00	106.00
PFHxS 1	399.0 / 80.0	1.90	2648.01	2525.00	104.87
PFHxS 2	399.0 / 99.0	1.90	2431.29	2525.00	96.29
PFOA 1	413.0 / 369.0	2.25	2496.97	2500.00	99.88
PFOA 2	413.0 / 169.0	2.25	2355.89	2500.00	94.24
PFNA 1	463.0 / 419.0	2.61	2424.15	2500.00	96.97
PFNA 2	463.0 / 219.0	2.62	2425.61	2500.00	97.02
PFOS 1	499.0 / 80.0	2.61	2642.08	2525.00	104.64
PFOS 2	499.0 / 99.0	2.61	2804.53	2525.00	111.07
PFDA 1	513.0 / 469.0	2.96	2636.77	2500.00	105.47
PFDA 2	513.0 / 219.0	2.96	2505.41	2500.00	100.22
PFUnA 1	563.0 / 519.0	3.28	2588.76	2500.00	103.55
PFUnA 2	563.0 / 269.0	3.28	2288.36	2500.00	91.53
PFDoA 1	613.0 / 569.0	3.57	2550.30	2500.00	102.01
PFDoA 2	613.0 / 319.0	3.57	2522.66	2500.00	100.91
PFTTrDA 1	663.0 / 619.0	3.83	2726.88	2500.00	109.08
PFTTrDA 2	663.0 / 169.0	3.83	2776.56	2500.00	111.06
PFTeDA 1	713.0 / 669.0	4.06	2686.17	2500.00	107.45
PFTeDA 2	713.0 / 169.0	4.06	2567.10	2500.00	102.68
NMeFOSAA 1	570.0 / 419.0	3.11	2373.80	2500.00	94.95
NMeFOSAA 2	570.0 / 512.0	3.11	2438.82	2500.00	97.55
NEtFOSAA 1	584.0 / 419.0	3.27	2343.49	2500.00	93.74
NEtFOSAA 2	584.0 / 483.0	3.27	2035.83	2500.00	81.43
HFPO-DA 1	285.0 / 169.0	1.65	3231.19	2500.00	129.25
HFPO-DA 2	285.0 / 118.8	1.65	3040.72	2500.00	121.63
ADONA 1	377.0 / 251.0	1.92	2563.11	2500.00	102.52
ADONA 2	377.0 / 85.0	1.92	2479.15	2500.00	99.17
9Cl-PF3ONS 1	531.0 / 351.0	2.81	2556.56	2500.00	102.26
9Cl-PF3ONS 2	531.0 / 83.0	2.82	2571.24	2500.00	102.85
11Cl-pf3OUdS 1	631.0 / 451.0	3.44	2462.54	2500.00	98.50
11Cl-pf3OUdS 2	631.0 / 83.0	3.44	2387.19	2500.00	95.49

Sample Name	LD76 CCV	Injection Vial	2
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 1:12:05 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS 1	298.9 / 80.0	1.33	959.66	1000.00	95.97
PFBS 2	298.9 / 99.0	1.33	1022.60	1000.00	102.26
PFHxA 1	313.0 / 269.0	1.57	997.99	1010.00	98.81
PFHxA 2	313.0 / 119.0	1.57	946.76	1010.00	93.74
PFHpA 1	363.0 / 319.0	1.90	1024.84	1000.00	102.48
PFHpA 2	363.0 / 169.0	1.90	998.65	1000.00	99.86
PFHxS 1	399.0 / 80.0	1.91	890.57	1010.00	88.18
PFHxS 2	399.0 / 99.0	1.91	914.50	1010.00	90.54
PFOA 1	413.0 / 369.0	2.26	978.20	1000.00	97.82
PFOA 2	413.0 / 169.0	2.26	913.23	1000.00	91.32
PFNA 1	463.0 / 419.0	2.63	999.19	1000.00	99.92
PFNA 2	463.0 / 219.0	2.63	983.64	1000.00	98.36
PFOS 1	499.0 / 80.0	2.62	928.90	1010.00	91.97
PFOS 2	499.0 / 99.0	2.62	1058.40	1010.00	104.79
PFDA 1	513.0 / 469.0	2.98	939.76	1000.00	93.98
PFDA 2	513.0 / 219.0	2.98	1021.70	1000.00	102.17
PFUnA 1	563.0 / 519.0	3.31	921.97	1000.00	92.20
PFUnA 2	563.0 / 269.0	3.31	955.84	1000.00	95.58
PFDoA 1	613.0 / 569.0	3.60	970.04	1000.00	97.00
PFDoA 2	613.0 / 319.0	3.60	987.27	1000.00	98.73
PFTTrDA 1	663.0 / 619.0	3.86	981.11	1000.00	98.11
PFTTrDA 2	663.0 / 169.0	3.85	984.49	1000.00	98.45
PFTeDA 1	713.0 / 669.0	4.09	982.59	1000.00	98.26
PFTeDA 2	713.0 / 169.0	4.09	1031.84	1000.00	103.18
NMeFOSAA 1	570.0 / 419.0	3.13	874.67	1000.00	87.47
NMeFOSAA 2	570.0 / 512.0	3.13	924.90	1000.00	92.49
NEtFOSAA 1	584.0 / 419.0	3.29	987.57	1000.00	98.76
NEtFOSAA 2	584.0 / 483.0	3.29	748.32	1000.00	74.83
HFPO-DA 1	285.0 / 169.0	1.66	1152.27	1000.00	115.23
HFPO-DA 2	285.0 / 118.8	1.66	873.42	1000.00	87.34
ADONA 1	377.0 / 251.0	1.93	998.66	1000.00	99.87
ADONA 2	377.0 / 85.0	1.93	1099.07	1000.00	109.91
9Cl-PF3ONS 1	531.0 / 351.0	2.83	933.80	1000.00	93.38
9Cl-PF3ONS 2	531.0 / 83.0	2.82	1081.71	1000.00	108.17
11Cl-pf3OUdS 1	631.0 / 451.0	3.46	924.44	1000.00	92.44
11Cl-pf3OUdS 2	631.0 / 83.0	3.46	1165.22	1000.00	116.52

Sample Name	LD77 CCV	Injection Vial	8
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 2:14:49 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS 1	298.9 / 80.0	1.32	2505.24	2500.00	100.21
PFBS 2	298.9 / 99.0	1.32	2589.19	2500.00	103.57
PFHxA 1	313.0 / 269.0	1.55	2707.39	2525.00	107.22
PFHxA 2	313.0 / 119.0	1.55	2633.11	2525.00	104.28
PFHpA 1	363.0 / 319.0	1.87	2608.92	2500.00	104.36
PFHpA 2	363.0 / 169.0	1.87	2611.83	2500.00	104.47
PFHxS 1	399.0 / 80.0	1.88	2630.31	2525.00	104.17
PFHxS 2	399.0 / 99.0	1.88	2522.23	2525.00	99.89
PFOA 1	413.0 / 369.0	2.22	2272.77	2500.00	90.91
PFOA 2	413.0 / 169.0	2.22	2461.19	2500.00	98.45
PFNA 1	463.0 / 419.0	2.59	2225.21	2500.00	89.01
PFNA 2	463.0 / 219.0	2.58	2494.39	2500.00	99.78
PFOS 1	499.0 / 80.0	2.57	2359.48	2525.00	93.44
PFOS 2	499.0 / 99.0	2.57	2515.52	2525.00	99.62
PFDA 1	513.0 / 469.0	2.93	2624.90	2500.00	105.00
PFDA 2	513.0 / 219.0	2.93	2571.23	2500.00	102.85
PFUnA 1	563.0 / 519.0	3.25	2500.66	2500.00	100.03
PFUnA 2	563.0 / 269.0	3.25	2403.41	2500.00	96.14
PFDoA 1	613.0 / 569.0	3.54	2386.65	2500.00	95.47
PFDoA 2	613.0 / 319.0	3.54	2602.38	2500.00	104.10
PFTTrDA 1	663.0 / 619.0	3.80	2610.84	2500.00	104.43
PFTTrDA 2	663.0 / 169.0	3.80	2569.00	2500.00	102.76
PFTeDA 1	713.0 / 669.0	4.04	2608.68	2500.00	104.35
PFTeDA 2	713.0 / 169.0	4.04	2642.95	2500.00	105.72
NMeFOSAA 1	570.0 / 419.0	3.07	2315.39	2500.00	92.62
NMeFOSAA 2	570.0 / 512.0	3.07	2477.15	2500.00	99.09
NEtFOSAA 1	584.0 / 419.0	3.24	2282.87	2500.00	91.31
NEtFOSAA 2	584.0 / 483.0	3.24	2393.81	2500.00	95.75
HFPO-DA 1	285.0 / 169.0	1.64	2986.98	2500.00	119.48
HFPO-DA 2	285.0 / 118.8	1.64	2922.50	2500.00	116.90
ADONA 1	377.0 / 251.0	1.90	2316.87	2500.00	92.67
ADONA 2	377.0 / 85.0	1.90	2667.64	2500.00	106.71
9Cl-PF3ONS 1	531.0 / 351.0	2.78	2531.01	2500.00	101.24
9Cl-PF3ONS 2	531.0 / 83.0	2.78	2161.06	2500.00	86.44
11Cl-pf3OUdS 1	631.0 / 451.0	3.41	2343.57	2500.00	93.74
11Cl-pf3OUdS 2	631.0 / 83.0	3.41	2428.94	2500.00	97.16

Sample Name	LD76 CCV	Injection Vial	15
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 3:17:33 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS 1	298.9 / 80.0	1.32	986.77	1000.00	98.68
PFBS 2	298.9 / 99.0	1.32	963.66	1000.00	96.37
PFHxA 1	313.0 / 269.0	1.56	966.32	1010.00	95.68
PFHxA 2	313.0 / 119.0	1.55	928.02	1010.00	91.88
PFHpA 1	363.0 / 319.0	1.88	1024.10	1000.00	102.41
PFHpA 2	363.0 / 169.0	1.87	953.91	1000.00	95.39
PFHxS 1	399.0 / 80.0	1.88	982.94	1010.00	97.32
PFHxS 2	399.0 / 99.0	1.88	1003.05	1010.00	99.31
PFOA 1	413.0 / 369.0	2.23	843.07	1000.00	84.31
PFOA 2	413.0 / 169.0	2.23	888.40	1000.00	88.84
PFNA 1	463.0 / 419.0	2.59	903.88	1000.00	90.39
PFNA 2	463.0 / 219.0	2.59	917.81	1000.00	91.78
PFOS 1	499.0 / 80.0	2.59	934.13	1010.00	92.49
PFOS 2	499.0 / 99.0	2.59	1004.18	1010.00	99.42
PFDA 1	513.0 / 469.0	2.94	979.19	1000.00	97.92
PFDA 2	513.0 / 219.0	2.94	1027.28	1000.00	102.73
PFUnA 1	563.0 / 519.0	3.26	947.95	1000.00	94.79
PFUnA 2	563.0 / 269.0	3.26	979.29	1000.00	97.93
PFDoA 1	613.0 / 569.0	3.54	977.03	1000.00	97.70
PFDoA 2	613.0 / 319.0	3.54	939.00	1000.00	93.90
PFTrDA 1	663.0 / 619.0	3.79	961.55	1000.00	96.16
PFTrDA 2	663.0 / 169.0	3.79	986.50	1000.00	98.65
PFTeDA 1	713.0 / 669.0	4.01	984.63	1000.00	98.46
PFTeDA 2	713.0 / 169.0	4.01	1007.07	1000.00	100.71
NMeFOSAA 1	570.0 / 419.0	3.08	889.94	1000.00	88.99
NMeFOSAA 2	570.0 / 512.0	3.08	905.82	1000.00	90.58
NEtFOSAA 1	584.0 / 419.0	3.24	918.04	1000.00	91.80
NEtFOSAA 2	584.0 / 483.0	3.25	1082.29	1000.00	108.23
HFPO-DA 1	285.0 / 169.0	1.64	1281.82	1000.00	128.18
HFPO-DA 2	285.0 / 118.8	1.64	1197.01	1000.00	119.70
ADONA 1	377.0 / 251.0	1.91	896.90	1000.00	89.69
ADONA 2	377.0 / 85.0	1.91	899.84	1000.00	89.98
9Cl-PF3ONS 1	531.0 / 351.0	2.79	881.26	1000.00	88.13
9Cl-PF3ONS 2	531.0 / 83.0	2.78	913.95	1000.00	91.40
11Cl-pf3OUdS 1	631.0 / 451.0	3.41	859.68	1000.00	85.97
11Cl-pf3OUdS 2	631.0 / 83.0	3.41	704.13	1000.00	70.41

Sample Name	LD81 ICC	Injection Vial	9
Sample ID	ICC	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:59:12 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.59	1249.27	1250.00	99.94
d3-MeFOSAA	573.0 / 419.0	3.12	1204.62	1250.00	96.37
d5-EtFOSAA	589.0 / 419.0	3.28	1213.65	1250.00	97.09
13C5-PFHxA	318.0 / 273.0	1.55	1216.82	1250.00	97.35
13C4-PFHpA	367.0 / 322.0	1.88	1243.39	1250.00	99.47
13C8-PFOA	421.0 / 376.0	2.24	1243.89	1222.50	101.75
13C9-PFNA	472.0 / 427.0	2.62	1245.03	1250.00	99.60
13C6-PFDA	519.0 / 474.0	2.97	1240.70	1250.00	99.26
13C7-PFUnA	570.0 / 525.0	3.29	1284.77	1250.00	102.78
13C2-PFTeDA	715.0 / 670.0	4.07	1265.11	1250.00	101.21
13C3-PFBS	302.0 / 99.0	1.31	1141.38	1162.50	98.18
13C3-PFHxS	402.0 / 99.0	1.89	1294.75	1182.50	109.49
13C8-PFOS	507.0 / 99.0	2.61	1274.03	1195.00	106.61
13C3-HFPO-DA	287.0 / 169.0	1.65	1166.06	1250.00	93.28

Sample Name	LD76 CCV	Injection Vial	21
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:05:11 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.59	1240.26	1250.00	99.22
d3-MeFOSAA	573.0 / 419.0	3.12	1294.11	1250.00	103.53
d5-EtFOSAA	589.0 / 419.0	3.28	1278.51	1250.00	102.28
13C5-PFHxA	318.0 / 273.0	1.55	1103.68	1250.00	88.29
13C4-PFHpA	367.0 / 322.0	1.88	1153.90	1250.00	92.31
13C8-PFOA	421.0 / 376.0	2.24	1224.55	1222.50	100.17
13C9-PFNA	472.0 / 427.0	2.61	1302.03	1250.00	104.16
13C6-PFDA	519.0 / 474.0	2.97	1151.35	1250.00	92.11
13C7-PFUnA	570.0 / 525.0	3.29	1288.71	1250.00	103.10
13C2-PFTeDA	715.0 / 670.0	4.07	1187.81	1250.00	95.03
13C3-PFBS	302.0 / 99.0	1.31	1070.71	1162.50	92.10
13C3-PFHxS	402.0 / 99.0	1.89	1143.85	1182.50	96.73
13C8-PFOS	507.0 / 99.0	2.61	1117.00	1195.00	93.47
13C3-HFPO-DA	287.0 / 169.0	1.65	1120.15	1250.00	89.61

Sample Name	LD77 CCV	Injection Vial	29
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 6:29:24 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.57	1147.59	1250.00	91.81
d3-MeFOSAA	573.0 / 419.0	3.11	1239.35	1250.00	99.15
d5-EtFOSAA	589.0 / 419.0	3.27	1387.53	1250.00	111.00
13C5-PFHxA	318.0 / 273.0	1.55	1194.18	1250.00	95.53
13C4-PFHpA	367.0 / 322.0	1.88	1167.50	1250.00	93.40
13C8-PFOA	421.0 / 376.0	2.24	1169.12	1222.50	95.63
13C9-PFNA	472.0 / 427.0	2.61	1362.81	1250.00	109.02
13C6-PFDA	519.0 / 474.0	2.96	1145.60	1250.00	91.65
13C7-PFUnA	570.0 / 525.0	3.28	1127.30	1250.00	90.18
13C2-PFTeDA	715.0 / 670.0	4.05	1065.43	1250.00	85.23
13C3-PFBS	302.0 / 99.0	1.30	1159.51	1162.50	99.74
13C3-PFHxS	402.0 / 99.0	1.89	1239.62	1182.50	104.83
13C8-PFOS	507.0 / 99.0	2.61	1165.19	1195.00	97.51
13C3-HFPO-DA	287.0 / 169.0	1.65	1100.38	1250.00	88.03

Sample Name	LD76 CCV	Injection Vial	2
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 1:12:05 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.60	1215.03	1250.00	97.20
d3-MeFOSAA	573.0 / 419.0	3.12	1263.06	1250.00	101.04
d5-EtFOSAA	589.0 / 419.0	3.29	1293.72	1250.00	103.50
13C5-PFHxA	318.0 / 273.0	1.56	1239.12	1250.00	99.13
13C4-PFHpA	367.0 / 322.0	1.89	1199.34	1250.00	95.95
13C8-PFOA	421.0 / 376.0	2.25	1188.37	1222.50	97.21
13C9-PFNA	472.0 / 427.0	2.63	1128.71	1250.00	90.30
13C6-PFDA	519.0 / 474.0	2.98	1261.79	1250.00	100.94
13C7-PFUnA	570.0 / 525.0	3.30	1229.93	1250.00	98.39
13C2-PFTeDA	715.0 / 670.0	4.08	1218.59	1250.00	97.49
13C3-PFBS	302.0 / 99.0	1.31	1054.29	1162.50	90.69
13C3-PFHxS	402.0 / 99.0	1.90	1187.64	1182.50	100.44
13C8-PFOS	507.0 / 99.0	2.62	1114.12	1195.00	93.23
13C3-HFPO-DA	287.0 / 169.0	1.66	1069.51	1250.00	85.56

Sample Name	LD77 CCV	Injection Vial	8
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 2:14:49 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.54	1258.03	1250.00	100.64
d3-MeFOSAA	573.0 / 419.0	3.07	1094.49	1250.00	87.56
d5-EtFOSAA	589.0 / 419.0	3.24	1238.23	1250.00	99.06
13C5-PFHxA	318.0 / 273.0	1.54	1119.52	1250.00	89.56
13C4-PFHpA	367.0 / 322.0	1.86	1107.86	1250.00	88.63
13C8-PFOA	421.0 / 376.0	2.21	1146.52	1222.50	93.78
13C9-PFNA	472.0 / 427.0	2.58	1139.73	1250.00	91.18
13C6-PFDA	519.0 / 474.0	2.92	1279.48	1250.00	102.36
13C7-PFUnA	570.0 / 525.0	3.25	1331.70	1250.00	106.54
13C2-PFTeDA	715.0 / 670.0	4.04	1215.37	1250.00	97.23
13C3-PFBS	302.0 / 99.0	1.30	1084.70	1162.50	93.31
13C3-PFHxS	402.0 / 99.0	1.87	1057.66	1182.50	89.44
13C8-PFOS	507.0 / 99.0	2.57	1051.55	1195.00	88.00
13C3-HFPO-DA	287.0 / 169.0	1.63	1047.44	1250.00	83.79

Sample Name	LD76 CCV	Injection Vial	15
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 3:17:33 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.54	1275.88	1250.00	102.07
d3-MeFOSAA	573.0 / 419.0	3.08	1250.04	1250.00	100.00
d5-EtFOSAA	589.0 / 419.0	3.24	1314.66	1250.00	105.17
13C5-PFHxA	318.0 / 273.0	1.55	1212.24	1250.00	96.98
13C4-PFHpA	367.0 / 322.0	1.87	1159.47	1250.00	92.76
13C8-PFOA	421.0 / 376.0	2.22	1239.89	1222.50	101.42
13C9-PFNA	472.0 / 427.0	2.58	1238.65	1250.00	99.09
13C6-PFDA	519.0 / 474.0	2.93	1327.29	1250.00	106.18
13C7-PFUnA	570.0 / 525.0	3.25	1315.73	1250.00	105.26
13C2-PFTeDA	715.0 / 670.0	4.01	1243.42	1250.00	99.47
13C3-PFBS	302.0 / 99.0	1.30	1110.76	1162.50	95.55
13C3-PFHxS	402.0 / 99.0	1.88	1123.82	1182.50	95.04
13C8-PFOS	507.0 / 99.0	2.58	1100.47	1195.00	92.09
13C3-HFPO-DA	287.0 / 169.0	1.64	941.53	1250.00	75.32

Sample Name	LD81 ICC	Injection Vial	9
Sample ID	ICC	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:59:12 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.32	1523981.12	2781.43	14757.6	False	13C3-PFBS	253944.54	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.32	485619.29	2803.90	3832.9	False	13C3-PFBS	253944.54	1162.50	PFBS	0.319	0.319	✓
PFHxA_1	313.0 / 269.0	1.56	2686931.85	2764.25	2068.7	False	13C5-PFHxA	1091422.65	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.56	160803.36	2546.64	1390.9	False	13C5-PFHxA	1091422.65	1250.00	PFHxA	0.060	0.063	✓
PFHpA_1	363.0 / 319.0	1.89	2100047.98	2564.52	960.7	False	13C4-PFHpA	1100488.63	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.89	72300.44	2904.20	7719.8	False	13C4-PFHpA	1100488.63	1250.00	PFHpA	0.034	0.031	✓
PFHxS_1	399.0 / 80.0	1.90	1695318.64	2776.22	2600.7	False	13C3-PFHxS	217690.01	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.90	597153.40	2668.51	2211.5	False	13C3-PFHxS	217690.01	1182.50	PFHxS	0.352	0.348	✓
PFOA_1	413.0 / 369.0	2.25	2521272.54	2480.21	1031.6	False	13C8-PFOA	1286963.42	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.25	248132.25	2431.26	1221.0	False	13C8-PFOA	1286963.42	1222.50	PFOA	0.098	0.097	✓
PFNA_1	463.0 / 419.0	2.62	2280980.29	2626.47	1051.6	False	13C9-PFNA	1130135.07	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.62	756741.58	2681.43	2573.8	False	13C9-PFNA	1130135.07	1250.00	PFNA	0.332	0.324	✓
PFOS_1	499.0 / 80.0	2.62	1510947.57	2420.82	1021.3	False	13C8-PFOS	196571.48	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.62	293787.05	2381.24	1171.4	False	13C8-PFOS	196571.48	1195.00	PFOS	0.194	0.197	✓
PFDA_1	513.0 / 469.0	2.98	2353289.02	2955.00	940.3	False	13C6-PFDA	1043601.38	1250.00	PFDA			
PFDA_2	513.0 / 219.0	2.97	125751.72	2667.78	2104.1	False	13C6-PFDA	1043601.38	1250.00	PFDA	0.053	0.058	✓
PFUnA_1	563.0 / 519.0	3.30	2264952.11	2571.27	1237.1	False	13C7-PFUnA	977759.72	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.30	137127.75	2393.18	15278.0	False	13C7-PFUnA	977759.72	1250.00	PFUnA	0.061	0.062	✓
PFDoA_1	613.0 / 569.0	3.59	2605434.88	2710.30	1856.1	False	13C2-PFDoA	1185415.16	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.59	299777.49	2675.07	2302.7	False	13C2-PFDoA	1185415.16	1250.00	PFDoA	0.115	0.117	✓
PFTTrDA_1	663.0 / 619.0	3.84	2207473.24	2733.53	2387.9	False	13C2-PFTTeDA	1144160.82	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	3.84	163369.31	2759.97	2053.8	False	13C2-PFTTeDA	1144160.82	1250.00	PFTTrDA	0.074	0.070	✓
PFTTeDA_1	713.0 / 669.0	4.07	2418767.52	2626.53	4293.2	False	13C2-PFTTeDA	1144160.82	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	4.07	136758.24	2530.14	3729.6	False	13C2-PFTTeDA	1144160.82	1250.00	PFTTeDA	0.057	0.056	✓
NMeFOSAA_1	570.0 / 419.0	3.12	217998.95	2486.45	9131.7	False	d3-MeFOSAA	140058.67	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.12	253804.29	2759.53	3005.4	False	d3-MeFOSAA	140058.67	1250.00	NMeFOSAA	1.164	1.118	✓
NEiFOSAA_1	584.0 / 419.0	3.29	239868.32	2437.67	2533.0	False	d5-EiFOSAA	124644.83	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.28	14596.51	2547.86	11161.3	True	d5-EiFOSAA	124644.83	1250.00	NEiFOSAA	0.061	0.060	✓
HFPO-DA_1	285.0 / 169.0	1.65	2626699.78	3209.33	4341.7	False	13C3-HFPO-DA	434439.97	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.65	49455.24	2773.91	1653.9	False	13C3-HFPO-DA	434439.97	1250.00	HFPO-DA	0.019	0.021	✓
ADONA_1	377.0 / 251.0	1.92	5536901.58	2586.73	13650.3	False	13C8-PFOA	1286963.42	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.92	81609.27	2370.45	7566.9	False	13C8-PFOA	1286963.42	1222.50	ADONA	0.015	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	2.83	2903692.06	2494.88	2620.0	False	13C8-PFOA	1286963.42	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.83	30723.87	2461.15	1421.7	False	13C8-PFOA	1286963.42	1222.50	9CI-PF3ONS	0.011	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.45	2185776.40	2375.52	2336.0	False	13C8-PFOA	1286963.42	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.45	13363.54	2655.24	1432.8	False	13C8-PFOA	1286963.42	1222.50	11Cl-PF3OUdS	0.006	0.005	✓

Sample Name	LD76 CCV	Injection Vial	21
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:05:11 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.32	593146.32	980.89	11312.6	False	13C3-PFBS	261219.54	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.32	200160.74	1047.47	2103.0	False	13C3-PFBS	261219.54	1162.50	PFBS	0.337	0.319	✓
PFHxA_1	313.0 / 269.0	1.56	1198357.54	1160.40	1312.6	False	13C5-PFHxA	1106617.07	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.56	73091.89	1106.26	1125.2	False	13C5-PFHxA	1106617.07	1250.00	PFHxA	0.061	0.063	✓
PFHpA_1	363.0 / 319.0	1.89	866903.74	983.66	738.5	False	13C4-PFHpA	1141655.84	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.90	27147.14	1009.03	9289.3	False	13C4-PFHpA	1141655.84	1250.00	PFHpA	0.031	0.031	✓
PFHxS_1	399.0 / 80.0	1.90	650543.04	1054.25	1722.7	False	13C3-PFHxS	210885.09	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.90	215622.51	989.85	1339.5	False	13C3-PFHxS	210885.09	1182.50	PFHxS	0.331	0.348	✓
PFOA_1	413.0 / 369.0	2.25	1052167.13	916.43	658.4	False	13C8-PFOA	1416283.95	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.25	103262.92	925.93	1509.2	False	13C8-PFOA	1416283.95	1222.50	PFOA	0.098	0.097	✓
PFNA_1	463.0 / 419.0	2.62	863330.31	861.44	723.4	False	13C9-PFNA	1295968.73	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.62	301524.43	928.77	2038.8	False	13C9-PFNA	1295968.73	1250.00	PFNA	0.349	0.324	✓
PFOS_1	499.0 / 80.0	2.62	591394.72	972.87	707.7	False	13C8-PFOS	188981.21	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.62	119124.98	994.47	682.3	False	13C8-PFOS	188981.21	1195.00	PFOS	0.201	0.197	✓
PFDA_1	513.0 / 469.0	2.98	893879.83	1018.74	592.0	False	13C6-PFDA	1097417.53	1250.00	PFDA			
PFDA_2	513.0 / 219.0	2.98	48780.12	956.50	2322.4	False	13C6-PFDA	1097417.53	1250.00	PFDA	0.055	0.058	✓
PFUnA_1	563.0 / 519.0	3.30	963654.63	915.90	812.9	False	13C7-PFUnA	1111377.65	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.29	62972.76	959.42	1784.2	False	13C7-PFUnA	1111377.65	1250.00	PFUnA	0.065	0.062	✓
PFDoA_1	613.0 / 569.0	3.59	1052946.14	950.84	1226.7	False	13C2-PFDoA	1333601.42	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.58	117215.38	906.24	1570.3	False	13C2-PFDoA	1333601.42	1250.00	PFDoA	0.111	0.117	✓
PFTrDA_1	663.0 / 619.0	3.84	878606.75	980.40	1594.4	False	13C2-PFTeDA	1217317.87	1250.00	PFTrDA			
PFTrDA_2	663.0 / 169.0	3.84	62872.62	987.94	1445.4	False	13C2-PFTeDA	1217317.87	1250.00	PFTrDA	0.072	0.070	✓
PFTeDA_1	713.0 / 669.0	4.07	982494.77	954.82	3363.7	False	13C2-PFTeDA	1217317.87	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.07	53778.31	921.02	1989.9	False	13C2-PFTeDA	1217317.87	1250.00	PFTeDA	0.055	0.056	✓
NMeFOSAA_1	570.0 / 419.0	3.12	93903.74	953.34	661.7	False	d3-MeFOSAA	164422.25	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.12	90019.89	833.82	3846.3	False	d3-MeFOSAA	164422.25	1250.00	NMeFOSAA	0.959	1.118	✓
NEiFOSAA_1	584.0 / 419.0	3.29	113558.42	971.46	1562.2	False	d5-EtFOSAA	144362.87	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.29	3993.23	532.41	21657.1	True	d5-EtFOSAA	144362.87	1250.00	NEiFOSAA	0.035	0.060	✓
HFPO-DA_1	285.0 / 169.0	1.65	1021209.27	1061.11	4153.4	False	13C3-HFPO-DA	466523.53	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.65	23817.14	1190.03	30107.7	False	13C3-HFPO-DA	466523.53	1250.00	HFPO-DA	0.023	0.021	✓
ADONA_1	377.0 / 251.0	1.92	2148618.48	894.97	5139.0	False	13C8-PFOA	1416283.95	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.92	29620.19	807.70	4125013.0	False	13C8-PFOA	1416283.95	1222.50	ADONA	0.014	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	2.82	1154681.37	912.61	1303.1	False	13C8-PFOA	1416283.95	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.82	12029.20	909.09	3224.0	False	13C8-PFOA	1416283.95	1222.50	9CI-PF3ONS	0.010	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.45	924214.32	912.67	1766.4	False	13C8-PFOA	1416283.95	1222.50	11Cl-pf3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.45	5072.35	943.36	12363.1	False	13C8-PFOA	1416283.95	1222.50	11Cl-pf3OUdS	0.005	0.005	✓

Sample Name	LD77 CCV	Injection Vial	29
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 6:29:24 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.32	1642161.09	2760.68	13168.6	False	13C3-PFBS	275612.02	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.32	515577.43	2740.08	3807.1	False	13C3-PFBS	275612.02	1162.50	PFBS	0.314	0.319	✓
PFHxA_1	313.0 / 269.0	1.56	2896839.65	2711.33	2007.8	False	13C5-PFHxA	1198845.07	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.56	173598.07	2501.82	1648.1	False	13C5-PFHxA	1198845.07	1250.00	PFHxA	0.060	0.063	✓
PFHpA_1	363.0 / 319.0	1.89	2271019.30	2640.66	1198.7	False	13C4-PFHpA	1156542.64	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.89	69480.11	2650.00	20772.1	False	13C4-PFHpA	1156542.64	1250.00	PFHpA	0.031	0.031	✓
PFHxS_1	399.0 / 80.0	1.90	1656119.94	2648.01	2150.9	False	13C3-PFHxS	222668.71	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.90	556665.75	2431.29	1997.0	False	13C3-PFHxS	222668.71	1182.50	PFHxS	0.336	0.348	✓
PFOA_1	413.0 / 369.0	2.25	2669956.03	2496.97	979.4	False	13C8-PFOA	1353850.10	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.25	252901.37	2355.89	1616.2	False	13C8-PFOA	1353850.10	1222.50	PFOA	0.095	0.097	✓
PFNA_1	463.0 / 419.0	2.61	2462587.50	2424.15	995.4	False	13C9-PFNA	1321604.67	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.62	800664.96	2425.61	3411.3	False	13C9-PFNA	1321604.67	1250.00	PFNA	0.325	0.324	✓
PFOS_1	499.0 / 80.0	2.61	1610095.16	2642.08	1197.7	False	13C8-PFOS	192068.92	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.61	337721.84	2804.53	2880.3	False	13C8-PFOS	192068.92	1195.00	PFOS	0.210	0.197	✓
PFDA_1	513.0 / 469.0	2.96	2448742.88	2636.77	1032.8	False	13C6-PFDA	1213314.10	1250.00	PFDA			
PFDA_2	513.0 / 219.0	2.96	137447.15	2505.41	2200.5	False	13C6-PFDA	1213314.10	1250.00	PFDA	0.056	0.058	✓
PFUnA_1	563.0 / 519.0	3.28	2518891.29	2588.76	1347.5	False	13C7-PFUnA	1080242.22	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.28	144899.73	2288.36	3083.6	False	13C7-PFUnA	1080242.22	1250.00	PFUnA	0.058	0.062	✓
PFDoA_1	613.0 / 569.0	3.57	2837981.36	2550.30	1901.4	False	13C2-PFDoA	1371113.44	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.57	327245.94	2522.66	2336.9	False	13C2-PFDoA	1371113.44	1250.00	PFDoA	0.115	0.117	✓
PFTeDA_1	663.0 / 619.0	3.83	2335232.76	2726.88	2303.2	False	13C2-PFTeDA	1213260.34	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	3.83	174270.84	2776.56	1951.1	False	13C2-PFTeDA	1213260.34	1250.00	PFTeDA	0.075	0.070	✓
PFTeDA_1	713.0 / 669.0	4.06	2621415.96	2686.17	4416.8	False	13C2-PFTeDA	1213260.34	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.06	147117.11	2567.10	3081.5	False	13C2-PFTeDA	1213260.34	1250.00	PFTeDA	0.056	0.056	✓
NMeFOSAA_1	570.0 / 419.0	3.11	229311.31	2373.80	58554.8	False	d3-MeFOSAA	154514.43	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.11	247456.56	2438.82	3453.7	False	d3-MeFOSAA	154514.43	1250.00	NMeFOSAA	1.079	1.118	✓
NEiFOSAA_1	584.0 / 419.0	3.27	282776.20	2343.49	2273.6	False	d5-EiFOSAA	152742.18	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.27	14416.04	2035.83	4634.2	False	d5-EiFOSAA	152742.18	1250.00	NEiFOSAA	0.051	0.060	✓
HFPO-DA_1	285.0 / 169.0	1.65	2792353.47	3231.19	4112.4	False	13C3-HFPO-DA	458858.28	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.65	57088.01	3040.72	842.1	False	13C3-HFPO-DA	458858.28	1250.00	HFPO-DA	0.020	0.021	✓
ADONA_1	377.0 / 251.0	1.92	5772008.75	2563.11	15595.5	False	13C8-PFOA	1353850.10	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.92	89852.78	2479.15	142274.3	False	13C8-PFOA	1353850.10	1222.50	ADONA	0.016	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	2.81	3130650.09	2556.56	2252.9	False	13C8-PFOA	1353850.10	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.82	33797.64	2571.24	3062.7	False	13C8-PFOA	1353850.10	1222.50	9CI-PF3ONS	0.011	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.44	2383600.74	2462.54	2957.2	False	13C8-PFOA	1353850.10	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.44	12616.04	2387.19	1355.6	False	13C8-PFOA	1353850.10	1222.50	11Cl-PF3OUdS	0.005	0.005	✓

Sample Name	LD76 CCV	Injection Vial	2
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 1:12:05 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.33	685684.79	959.66	13273.1	False	13C3-PFBS	307940.44	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.33	230963.80	1022.60	2413.4	False	13C3-PFBS	307940.44	1162.50	PFBS	0.337	0.319	✓
PFHxA_1	313.0 / 269.0	1.57	1219265.49	997.99	1115.1	False	13C5-PFHxA	1292610.69	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.57	73741.69	946.76	1025.5	False	13C5-PFHxA	1292610.69	1250.00	PFHxA	0.060	0.063	✓
PFHpA_1	363.0 / 319.0	1.90	974395.13	1024.84	621.6	False	13C4-PFHpA	1234548.06	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.90	29072.43	998.65	721.3	False	13C4-PFHpA	1234548.06	1250.00	PFHpA	0.030	0.031	✓
PFHxS_1	399.0 / 80.0	1.91	691472.29	890.57	1242.8	False	13C3-PFHxS	262142.06	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.91	247783.67	914.50	1084.6	False	13C3-PFHxS	262142.06	1182.50	PFHxS	0.358	0.348	✓
PFOA_1	413.0 / 369.0	2.26	1131010.47	978.20	644.3	False	13C8-PFOA	1429953.03	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.26	102813.63	913.23	720.3	False	13C8-PFOA	1429953.03	1222.50	PFOA	0.091	0.097	✓
PFNA_1	463.0 / 419.0	2.63	1037941.49	999.19	690.5	False	13C9-PFNA	1345026.63	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.63	331337.52	983.64	3012.7	False	13C9-PFNA	1345026.63	1250.00	PFNA	0.319	0.324	✓
PFOS_1	499.0 / 80.0	2.62	674973.57	928.90	741.2	False	13C8-PFOS	225669.69	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.62	151242.53	1058.40	5452.8	False	13C8-PFOS	225669.69	1195.00	PFOS	0.224	0.197	✓
PFDA_1	513.0 / 469.0	2.98	987182.95	939.76	646.7	False	13C6-PFDA	1306181.07	1250.00	PFDA			
PFDA_2	513.0 / 219.0	2.98	61844.47	1021.70	12900.9	False	13C6-PFDA	1306181.07	1250.00	PFDA	0.063	0.058	✓
PFUnA_1	563.0 / 519.0	3.31	1004962.41	921.97	903.2	False	13C7-PFUnA	1151951.46	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.31	65031.51	955.84	1441.5	False	13C7-PFUnA	1151951.46	1250.00	PFUnA	0.065	0.062	✓
PFDoA_1	613.0 / 569.0	3.60	1142088.53	970.04	1249.8	False	13C2-PFDoA	1418889.04	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.60	135436.47	987.27	1652.9	False	13C2-PFDoA	1418889.04	1250.00	PFDoA	0.119	0.117	✓
PFTTrDA_1	663.0 / 619.0	3.86	979594.78	981.11	2175.2	False	13C2-PFTTeDA	1356323.60	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	3.85	69811.45	984.49	1592.7	False	13C2-PFTTeDA	1356323.60	1250.00	PFTTrDA	0.071	0.070	✓
PFTTeDA_1	713.0 / 669.0	4.09	1124135.67	982.59	3183.9	False	13C2-PFTTeDA	1356323.60	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	4.09	66957.53	1031.84	2369.3	False	13C2-PFTTeDA	1356323.60	1250.00	PFTTeDA	0.060	0.056	✓
NMeFOSAA_1	570.0 / 419.0	3.13	100054.28	874.67	613.1	False	d3-MeFOSAA	192208.53	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.13	116728.73	924.90	305864.8	False	d3-MeFOSAA	192208.53	1250.00	NMeFOSAA	1.167	1.118	✓
NEiFOSAA_1	584.0 / 419.0	3.29	139472.08	987.57	1483.2	False	d5-EiFOSAA	174531.42	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.29	6500.06	748.32	5311.7	False	d5-EiFOSAA	174531.42	1250.00	NEiFOSAA	0.047	0.060	✓
HFPO-DA_1	285.0 / 169.0	1.66	1090281.63	1152.27	3375.7	False	13C3-HFPO-DA	463425.48	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.66	17842.85	873.42	72334.7	False	13C3-HFPO-DA	463425.48	1250.00	HFPO-DA	0.016	0.021	✓
ADONA_1	377.0 / 251.0	1.93	2413474.23	998.66	5261.8	False	13C8-PFOA	1429953.03	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.93	41236.44	1099.07	37919.4	False	13C8-PFOA	1429953.03	1222.50	ADONA	0.017	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	2.83	1193417.06	933.80	1502.0	False	13C8-PFOA	1429953.03	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.82	14591.17	1081.71	495.7	False	13C8-PFOA	1429953.03	1222.50	9CI-PF3ONS	0.012	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.46	945163.42	924.44	1667.7	False	13C8-PFOA	1429953.03	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.46	6381.92	1165.22	3951.6	False	13C8-PFOA	1429953.03	1222.50	11Cl-PF3OUdS	0.007	0.005	✓

Sample Name	LD77 CCV	Injection Vial	8
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 2:14:49 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.32	1678055.18	2505.24	15814.6	False	13C3-PFBS	309091.03	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.32	547773.78	2589.19	3701.5	False	13C3-PFBS	309091.03	1162.50	PFBS	0.326	0.319	✓
PFHxA_1	313.0 / 269.0	1.55	3024916.92	2707.39	1457.2	False	13C5-PFHxA	1253604.27	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.55	190815.34	2633.11	1555.8	False	13C5-PFHxA	1253604.27	1250.00	PFHxA	0.063	0.063	✓
PFHpA_1	363.0 / 319.0	1.87	2375489.07	2608.92	940.2	False	13C4-PFHpA	1224127.22	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.87	72506.82	2611.83	1687.2	False	13C4-PFHpA	1224127.22	1250.00	PFHpA	0.031	0.031	✓
PFHxS_1	399.0 / 80.0	1.88	1682950.93	2630.31	1978.3	False	13C3-PFHxS	227755.99	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.88	590614.87	2522.23	1643.0	False	13C3-PFHxS	227755.99	1182.50	PFHxS	0.351	0.348	✓
PFOA_1	413.0 / 369.0	2.22	2662320.75	2272.77	852.1	False	13C8-PFOA	1480916.36	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.22	289057.80	2461.19	1183.3	False	13C8-PFOA	1480916.36	1222.50	PFOA	0.109	0.097	✓
PFNA_1	463.0 / 419.0	2.59	2266995.78	2225.21	889.4	False	13C9-PFNA	1325013.45	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.58	825449.42	2494.39	11030.3	False	13C9-PFNA	1325013.45	1250.00	PFNA	0.364	0.324	✓
PFOS_1	499.0 / 80.0	2.57	1557126.82	2359.48	1152.1	False	13C8-PFOS	207798.28	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.57	327954.74	2515.52	2257.2	False	13C8-PFOS	207798.28	1195.00	PFOS	0.211	0.197	✓
PFDA_1	513.0 / 469.0	2.93	2586557.49	2624.90	1378.6	False	13C6-PFDA	1287231.19	1250.00	PFDA			
PFDA_2	513.0 / 219.0	2.93	149585.45	2571.23	1756.5	False	13C6-PFDA	1287231.19	1250.00	PFDA	0.058	0.058	✓
PFUnA_1	563.0 / 519.0	3.25	2733065.03	2500.66	1489.3	False	13C7-PFUnA	1212191.74	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.25	170729.05	2403.41	2445.6	False	13C7-PFUnA	1212191.74	1250.00	PFUnA	0.062	0.062	✓
PFDoA_1	613.0 / 569.0	3.54	2768235.25	2386.65	1801.8	False	13C2-PFDoA	1427777.75	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.54	351387.85	2602.38	2755.9	False	13C2-PFDoA	1427777.75	1250.00	PFDoA	0.127	0.117	✓
PFTeDA_1	663.0 / 619.0	3.80	2425373.43	2610.84	2344.8	False	13C2-PFTeDA	1314686.33	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	3.80	174805.15	2569.00	2060.7	False	13C2-PFTeDA	1314686.33	1250.00	PFTeDA	0.072	0.070	✓
PFTeDA_1	713.0 / 669.0	4.04	2760921.51	2608.68	2982.9	False	13C2-PFTeDA	1314686.33	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.04	164085.46	2642.95	2671.9	False	13C2-PFTeDA	1314686.33	1250.00	PFTeDA	0.059	0.056	✓
NMeFOSAA_1	570.0 / 419.0	3.07	233794.74	2315.39	10641.3	False	d3-MeFOSAA	161623.96	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.07	262910.49	2477.15	1842.0	False	d3-MeFOSAA	161623.96	1250.00	NMeFOSAA	1.125	1.118	✓
NEiFOSAA_1	584.0 / 419.0	3.24	294363.04	2282.87	1814.9	False	d5-EtFOSAA	163146.45	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.24	17989.88	2393.81	3683.8	False	d5-EtFOSAA	163146.45	1250.00	NEiFOSAA	0.061	0.060	✓
HFPO-DA_1	285.0 / 169.0	1.64	2751148.35	2986.98	7262.3	False	13C3-HFPO-DA	487193.28	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.64	58330.19	2922.50	5136066.6	False	13C3-HFPO-DA	487193.28	1250.00	HFPO-DA	0.021	0.021	✓
ADONA_1	377.0 / 251.0	1.90	5713399.86	2316.87	7448.5	False	13C8-PFOA	1480916.36	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.90	105876.99	2667.64	19043.7	False	13C8-PFOA	1480916.36	1222.50	ADONA	0.019	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	2.78	3390018.86	2531.01	2306.2	False	13C8-PFOA	1480916.36	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.78	30950.52	2161.06	9434.3	False	13C8-PFOA	1480916.36	1222.50	9CI-PF3ONS	0.009	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.41	2481350.14	2343.57	2311.3	False	13C8-PFOA	1480916.36	1222.50	11Cl-pf3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.41	14045.83	2428.94	660.2	False	13C8-PFOA	1480916.36	1222.50	11Cl-pf3OUdS	0.006	0.005	✓

Sample Name	LD76 CCV	Injection Vial	15
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 3:17:33 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.32	719291.23	986.77	8400.2	False	13C3-PFBS	315082.87	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.32	224202.58	963.66	2056.5	False	13C3-PFBS	315082.87	1162.50	PFBS	0.312	0.319	✓
PFHxA_1	313.0 / 269.0	1.56	1285252.21	966.32	1054.6	False	13C5-PFHxA	1403066.70	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.55	78559.10	928.02	964.2	False	13C5-PFHxA	1403066.70	1250.00	PFHxA	0.061	0.063	✓
PFHpA_1	363.0 / 319.0	1.88	1044454.01	1024.10	729.3	False	13C4-PFHpA	1324221.04	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.87	29873.75	953.91	9669.5	False	13C4-PFHpA	1324221.04	1250.00	PFHpA	0.029	0.031	✓
PFHxS_1	399.0 / 80.0	1.88	696228.88	982.94	1123.6	False	13C3-PFHxS	240904.38	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.88	249576.40	1003.05	1347.1	False	13C3-PFHxS	240904.38	1182.50	PFHxS	0.358	0.348	✓
PFOA_1	413.0 / 369.0	2.23	1126794.69	843.07	639.0	False	13C8-PFOA	1642903.65	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.23	114875.63	888.40	776.7	False	13C8-PFOA	1642903.65	1222.50	PFOA	0.102	0.097	✓
PFNA_1	463.0 / 419.0	2.59	1001542.44	903.88	604.0	False	13C9-PFNA	1433490.54	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.59	329605.79	917.81	2828.4	False	13C9-PFNA	1433490.54	1250.00	PFNA	0.329	0.324	✓
PFOS_1	499.0 / 80.0	2.59	651054.19	934.13	596.7	False	13C8-PFOS	216479.22	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.59	137768.40	1004.18	982.5	False	13C8-PFOS	216479.22	1195.00	PFOS	0.212	0.197	✓
PFDA_1	513.0 / 469.0	2.94	1116304.13	979.19	627.3	False	13C6-PFDA	1421838.64	1250.00	PFDA			
PFDA_2	513.0 / 219.0	2.94	67672.99	1027.28	2002.6	False	13C6-PFDA	1421838.64	1250.00	PFDA	0.061	0.058	✓
PFUnA_1	563.0 / 519.0	3.26	1141519.96	947.95	920.8	False	13C7-PFUnA	1275238.33	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.26	73734.63	979.29	2452.5	False	13C7-PFUnA	1275238.33	1250.00	PFUnA	0.065	0.062	✓
PFDoA_1	613.0 / 569.0	3.54	1249687.98	977.03	1095.6	False	13C2-PFDoA	1541853.64	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.54	140231.53	939.00	1582.5	False	13C2-PFDoA	1541853.64	1250.00	PFDoA	0.112	0.117	✓
PFTTrDA_1	663.0 / 619.0	3.79	1015075.27	961.55	1666.5	False	13C2-PFTeDA	1432157.68	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	3.79	73862.96	986.50	1168.7	False	13C2-PFTeDA	1432157.68	1250.00	PFTTrDA	0.073	0.070	✓
PFTeDA_1	713.0 / 669.0	4.01	1189271.09	984.63	2512.4	False	13C2-PFTeDA	1432157.68	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.01	69039.74	1007.07	1899.7	False	13C2-PFTeDA	1432157.68	1250.00	PFTeDA	0.058	0.056	✓
NMeFOSAA_1	570.0 / 419.0	3.08	98561.99	889.94	36045.0	False	d3-MeFOSAA	185836.18	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.08	110529.99	905.82	6373.5	False	d3-MeFOSAA	185836.18	1250.00	NMeFOSAA	1.121	1.118	✓
NEiFOSAA_1	584.0 / 419.0	3.24	128637.16	918.04	2585.0	False	d5-EiFOSAA	172628.30	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.25	8987.79	1082.29	1412.6	False	d5-EiFOSAA	172628.30	1250.00	NEiFOSAA	0.070	0.060	✓
HFPO-DA_1	285.0 / 169.0	1.64	1170243.08	1281.82	3502.9	False	13C3-HFPO-DA	452657.87	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.64	23234.53	1197.01	2832.1	False	13C3-HFPO-DA	452657.87	1250.00	HFPO-DA	0.020	0.021	✓
ADONA_1	377.0 / 251.0	1.91	2497646.58	896.90	6547.2	False	13C8-PFOA	1642903.65	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.91	38476.38	899.84	7030.9	False	13C8-PFOA	1642903.65	1222.50	ADONA	0.015	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	2.79	1292540.81	881.26	1678.5	False	13C8-PFOA	1642903.65	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.78	14033.07	913.95	485.7	False	13C8-PFOA	1642903.65	1222.50	9CI-PF3ONS	0.011	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.41	1009855.61	859.68	1839.1	False	13C8-PFOA	1642903.65	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.41	4322.25	704.13	8497.4	False	13C8-PFOA	1642903.65	1222.50	11Cl-PF3OUdS	0.004	0.005	✓

Sample Name	LD81 ICC	Injection Vial	9
Sample ID	ICC	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:59:12 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305 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	3.59	1185415.16	1249.27	5458.4	False	13C2-PFDA	947982.79	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.12	138947.60	1204.62	950.7	False	13C4-PFOS	174564.26	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.28	124835.04	1213.65	1027.7	False	13C4-PFOS	174564.26	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.55	1091422.65	1216.82	22478.0	False	13C2-PFOA	702017.09	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.88	1100488.63	1243.39	36202720.4	False	13C2-PFOA	702017.09	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.24	1286963.42	1243.89	7788.1	False	13C2-PFOA	702017.09	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.62	1130135.07	1245.03	3624.2	False	13C4-PFOS	174564.26	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.97	1043601.38	1240.70	10749.7	False	13C2-PFDA	947982.79	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.29	977759.72	1284.77	3895.2	False	13C2-PFDA	947982.79	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.07	1144160.82	1265.11	4230.8	False	13C2-PFDA	947982.79	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.31	253944.54	1141.38	5263.9	False	13C4-PFOS	174564.26	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.89	217690.01	1294.75	13206345.5	False	13C4-PFOS	174564.26	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.61	196571.48	1274.03	1316.7	False	13C4-PFOS	174564.26	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.65	434439.97	1166.06	3598.1	False	13C2-PFOA	702017.09	1250.00		N/A	N/A	✓

Sample Name	LD76 CCV	Injection Vial	21
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:05:11 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.59	1333601.42	1240.26	4938.9	False	13C2-PFDA	1074232.92	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.12	163679.80	1294.11	1227.5	False	13C4-PFOS	191416.89	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.28	144203.02	1278.51	1189.7	False	13C4-PFOS	191416.89	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.55	1106617.07	1103.68	9631.4	False	13C2-PFOA	784759.45	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.88	1141655.84	1153.90	564612.4	False	13C2-PFOA	784759.45	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.24	1416283.95	1224.55	19651.2	False	13C2-PFOA	784759.45	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.61	1295968.73	1302.03	3766.9	False	13C4-PFOS	191416.89	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.97	1097417.53	1151.35	4592.1	False	13C2-PFDA	1074232.92	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.29	1111377.65	1288.71	3328.6	False	13C2-PFDA	1074232.92	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.07	1217317.87	1187.81	4223.1	False	13C2-PFDA	1074232.92	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.31	261219.54	1070.71	5430.6	False	13C4-PFOS	191416.89	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.89	210885.09	1143.85	10805.4	False	13C4-PFOS	191416.89	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.61	188981.21	1117.00	976.9	False	13C4-PFOS	191416.89	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.65	466523.53	1120.15	3708.9	False	13C2-PFOA	784759.45	1250.00		N/A	N/A	✓

Sample Name	LD77 CCV	Injection Vial	29
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 6:29:24 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.57	1371113.44	1147.59	4037.3	False	13C2-PFDA	1193636.99	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.11	152725.91	1239.35	897.0	False	13C4-PFOS	186497.75	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.27	152477.00	1387.53	953.1	False	13C4-PFOS	186497.75	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.55	1198845.07	1194.18	98616.4	False	13C2-PFOA	785730.16	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.88	1156542.64	1167.50	10124.5	False	13C2-PFOA	785730.16	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.24	1353850.10	1169.12	19037.1	False	13C2-PFOA	785730.16	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.61	1321604.67	1362.81	4612.9	False	13C4-PFOS	186497.75	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.96	1213314.10	1145.60	5778.9	False	13C2-PFDA	1193636.99	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.28	1080242.22	1127.30	3448.3	False	13C2-PFDA	1193636.99	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.05	1213260.34	1065.43	3672.2	False	13C2-PFDA	1193636.99	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.30	275612.02	1159.51	6355.7	False	13C4-PFOS	186497.75	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.89	222668.71	1239.62	1876372.6	False	13C4-PFOS	186497.75	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.61	192068.92	1165.19	3209.5	False	13C4-PFOS	186497.75	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.65	458858.28	1100.38	5587.6	False	13C2-PFOA	785730.16	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	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 1:12:05 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305 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	3.60	1418889.04	1215.03	3161.6	False	13C2-PFDA	1166667.12	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.12	191258.35	1263.06	1239.0	False	13C4-PFOS	229167.57	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.29	174695.18	1293.72	1183.3	False	13C4-PFOS	229167.57	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.56	1292610.69	1239.12	8916.4	False	13C2-PFOA	816459.62	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.89	1234548.06	1199.34	1383856.3	False	13C2-PFOA	816459.62	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.25	1429953.03	1188.37	5755.9	False	13C2-PFOA	816459.62	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.63	1345026.63	1128.71	7749.7	False	13C4-PFOS	229167.57	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.98	1306181.07	1261.79	2963.2	False	13C2-PFDA	1166667.12	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.30	1151951.46	1229.93	3835.7	False	13C2-PFDA	1166667.12	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.08	1356323.60	1218.59	3690.1	False	13C2-PFDA	1166667.12	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.31	307940.44	1054.29	6009.4	False	13C4-PFOS	229167.57	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.90	262142.06	1187.64	9361.3	False	13C4-PFOS	229167.57	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.62	225669.69	1114.12	1208.3	False	13C4-PFOS	229167.57	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.66	463425.48	1069.51	16987.8	False	13C2-PFOA	816459.62	1250.00		N/A	N/A	✓

Sample Name	LD77 CCV	Injection Vial	8
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 2:14:49 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305 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	3.54	1427777.75	1258.03	4706.7	False	13C2-PFDA	1133850.96	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.07	161690.28	1094.49	1303.4	False	13C4-PFOS	223576.40	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.24	163123.47	1238.23	1034.6	False	13C4-PFOS	223576.40	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.54	1253604.27	1119.52	7784.2	False	13C2-PFOA	876418.86	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.86	1224127.22	1107.86	28296.3	False	13C2-PFOA	876418.86	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.21	1480916.36	1146.52	552059.1	False	13C2-PFOA	876418.86	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.58	1325013.45	1139.73	3595.7	False	13C4-PFOS	223576.40	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.92	1287231.19	1279.48	3474.7	False	13C2-PFDA	1133850.96	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.25	1212191.74	1331.70	3584.2	False	13C2-PFDA	1133850.96	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.04	1314686.33	1215.37	5078.5	False	13C2-PFDA	1133850.96	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.30	309091.03	1084.70	30054816.1	False	13C4-PFOS	223576.40	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.87	227755.99	1057.66	34788.9	False	13C4-PFOS	223576.40	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.57	207798.28	1051.55	1231.6	False	13C4-PFOS	223576.40	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.63	487193.28	1047.44	5196.7	False	13C2-PFOA	876418.86	1250.00		N/A	N/A	✓

Sample Name	LD76 CCV	Injection Vial	15
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 3:17:33 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305 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	3.54	1541853.64	1275.88	3088.4	False	13C2-PFDA	1207305.62	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.08	183830.73	1250.04	1130.6	False	13C4-PFOS	222562.09	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.24	172406.18	1314.66	1233.3	False	13C4-PFOS	222562.09	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.55	1403066.70	1212.24	5341.1	False	13C2-PFOA	905881.65	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.87	1324221.04	1159.47	2799.4	False	13C2-PFOA	905881.65	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.22	1655361.93	1239.89	1007.3	False	13C2-PFOA	905881.65	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.58	1433490.54	1238.65	3456.3	False	13C4-PFOS	222562.09	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.93	1421838.64	1327.29	8319.3	False	13C2-PFDA	1207305.62	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.25	1275238.33	1315.73	3596.6	False	13C2-PFDA	1207305.62	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.01	1432157.68	1243.42	3509.5	False	13C2-PFDA	1207305.62	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.30	315082.87	1110.76	55053.6	False	13C4-PFOS	222562.09	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.88	240904.38	1123.82	31311147.8	False	13C4-PFOS	222562.09	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.58	216479.22	1100.47	1495.6	False	13C4-PFOS	222562.09	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.64	452657.87	941.53	7457.3	False	13C2-PFOA	905881.65	1250.00		N/A	N/A	✓

Raw Analytical Data

Sample Name	LD80 IB	Injection Vial	8
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:48:46 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	241329.20	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	241329.20	1162.50	PFBS	N/A	0.319	✓
PFHxA_1	313.0 / 269.0	1.61	42545.18	< 0	155.2	True	13C5-PFHxA	1115893.79	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	1115893.79	1250.00	PFHxA	N/A	0.063	
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1143051.39	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1143051.39	1250.00	PFHpA	N/A	0.031	✓
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	201877.07	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	201877.07	1182.50	PFHxS	N/A	0.348	✓
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1280550.40	1222.50	PFOA			
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1280550.40	1222.50	PFOA	N/A	0.097	✓
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1188221.78	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1188221.78	1250.00	PFNA	N/A	0.324	✓
PFOS_1	499.0 / 80.0	2.60	8457.13	< 0	26.1	True	13C8-PFOS	174603.19	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.62	1835.33	< 0	43.5	True	13C8-PFOS	174603.19	1195.00	PFOS	0.217	0.197	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1060795.68	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1060795.68	1250.00	PFDA	N/A	0.058	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	983100.30	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	983100.30	1250.00	PFUnA	N/A	0.062	✓
PFDoA_1	613.0 / 569.0	3.60	12139.45	< 0	66.8	False	13C2-PFDoA	1209794.83	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.60	1535.12	< 0	75.8	False	13C2-PFDoA	1209794.83	1250.00	PFDoA	0.126	0.117	✓
PFTTrDA_1	663.0 / 619.0	3.85	9371.18	< 0	128.5	True	13C2-PFTTeDA	1122189.49	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	3.85	908.14	< 0	66.5	True	13C2-PFTTeDA	1122189.49	1250.00	PFTTrDA	0.097	0.070	✓
PFTTeDA_1	713.0 / 669.0	4.08	26138.12	< 0	322.7	False	13C2-PFTTeDA	1122189.49	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	4.08	819.65	< 0	68.4	False	13C2-PFTTeDA	1122189.49	1250.00	PFTTeDA	0.031	0.056	✓
NMeFOSAA_1	570.0 / 419.0	3.12	3148.48	98.02	533.0	True	d3-MeFOSAA	147239.13	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.13	6629.76	68.70	732.6	True	d3-MeFOSAA	147239.13	1250.00	NMeFOSAA	2.106	1.118	
NEtFOSAA_1	584.0 / 419.0	3.29	5768.58	16.40	465.6	False	d5-EtFOSAA	126832.81	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	126832.81	1250.00	NEtFOSAA	N/A	0.060	
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	394199.73	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	394199.73	1250.00	HFPO-DA	N/A	0.021	✓
ADONA_1	377.0 / 251.0	1.92	5093.97	< 0	124.0	False	13C8-PFOA	1280550.40	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1280550.40	1222.50	ADONA	N/A	0.015	
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1280550.40	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1280550.40	1222.50	9CI-PF3ONS	N/A	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.45	3032.57	3.22	49.2	False	13C8-PFOA	1280550.40	1222.50	11Cl-pf3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1280550.40	1222.50	11Cl-pf3OUdS	N/A	0.005	

Sample Name	DA908PB-FS(0)	Injection Vial	12
Sample ID	Procedural Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 3:30:37 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	205496.27	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	205496.27	1162.50	PFBS	N/A	0.319	✓
PFHxA_1	313.0 / 269.0	1.60	46304.36	< 0	134.5	True	13C5-PFHxA	779833.02	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	779833.02	1250.00	PFHxA	N/A	0.063	
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	801607.77	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	801607.77	1250.00	PFHpA	N/A	0.031	✓
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	137717.95	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	137717.95	1182.50	PFHxS	N/A	0.348	✓
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	886039.76	1222.50	PFOA			
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	886039.76	1222.50	PFOA	N/A	0.097	✓
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	777779.01	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	777779.01	1250.00	PFNA	N/A	0.324	✓
PFOS_1	499.0 / 80.0	2.59	6637.60	< 0	22.7	True	13C8-PFOS	121029.85	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.61	1349.14	0.84	42.0	True	13C8-PFOS	121029.85	1195.00	PFOS	0.203	0.197	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	868556.50	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	868556.50	1250.00	PFDA	N/A	0.058	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	664414.30	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	664414.30	1250.00	PFUnA	N/A	0.062	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	844866.77	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	844866.77	1250.00	PFDoA	N/A	0.117	✓
PFTeDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	783347.85	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	783347.85	1250.00	PFTeDA	N/A	0.070	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	783347.85	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	783347.85	1250.00	PFTeDA	N/A	0.056	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	95336.41	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	95336.41	1250.00	NMeFOSAA	N/A	1.118	✓
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	86501.56	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	86501.56	1250.00	NEtFOSAA	N/A	0.060	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	321537.34	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	321537.34	1250.00	HFPO-DA	N/A	0.021	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	886039.76	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	886039.76	1222.50	ADONA	N/A	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	886039.76	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	886039.76	1222.50	9CI-PF3ONS	N/A	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	886039.76	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	886039.76	1222.50	11Cl-PF3OUdS	N/A	0.005	✓

Sample Name	DA909LCS-FS(0)	Injection Vial	13
Sample ID	Laboratory Control Sample	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 3:41:28 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.32	4954509.64	9958.10	17030.1	False	13C3-PFBS	237391.13	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.32	1626307.20	10372.52	4637.6	False	13C3-PFBS	237391.13	1162.50	PFBS	0.328	0.319	✓
PFHxA_1	313.0 / 269.0	1.57	8317133.94	10745.56	3132.6	False	13C5-PFHxA	892008.30	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.57	514101.20	10148.80	2242.8	False	13C5-PFHxA	892008.30	1250.00	PFHxA	0.062	0.063	✓
PFHpA_1	363.0 / 319.0	1.90	5518856.18	8354.26	1482.4	False	13C4-PFHpA	902335.32	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.90	165306.10	8216.30	1961.1	False	13C4-PFHpA	902335.32	1250.00	PFHpA	0.030	0.031	✓
PFHxS_1	399.0 / 80.0	1.90	5301758.68	11723.52	2536.5	True	13C3-PFHxS	164527.55	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.90	1857293.28	11005.39	3048.2	False	13C3-PFHxS	164527.55	1182.50	PFHxS	0.350	0.348	✓
PFOA_1	413.0 / 369.0	2.26	7585741.73	9029.14	1461.0	False	13C8-PFOA	1075642.98	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.26	770116.04	8999.77	2000.3	False	13C8-PFOA	1075642.98	1222.50	PFOA	0.102	0.097	✓
PFNA_1	463.0 / 419.0	2.63	5973902.16	8003.86	1292.6	False	13C9-PFNA	973288.94	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.63	2480272.40	10217.48	4701.0	False	13C9-PFNA	973288.94	1250.00	PFNA	0.415	0.324	✓
PFOS_1	499.0 / 80.0	2.62	4856436.60	10514.72	1747.4	False	13C8-PFOS	146452.57	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.62	979937.69	10720.14	2963.3	False	13C8-PFOS	146452.57	1195.00	PFOS	0.202	0.197	✓
PFDA_1	513.0 / 469.0	2.98	6899218.49	9792.55	1658.5	False	13C6-PFDA	939741.53	1250.00	PFDA			
PFDA_2	513.0 / 219.0	2.98	393119.66	9369.74	2192.1	False	13C6-PFDA	939741.53	1250.00	PFDA	0.057	0.058	✓
PFUnA_1	563.0 / 519.0	3.30	6414663.68	10031.82	2177.6	False	13C7-PFUnA	724929.33	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.30	400079.29	9454.16	2167.0	False	13C7-PFUnA	724929.33	1250.00	PFUnA	0.062	0.062	✓
PFDoA_1	613.0 / 569.0	3.59	7353569.26	9409.04	2692.2	False	13C2-PFDoA	972704.92	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.59	931525.70	10230.66	2826.7	False	13C2-PFDoA	972704.92	1250.00	PFDoA	0.127	0.117	✓
PFTTrDA_1	663.0 / 619.0	3.85	6169148.64	9717.30	3002.9	False	13C2-PFTTeDA	915322.27	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	3.85	444606.68	9428.22	2331.2	False	13C2-PFTTeDA	915322.27	1250.00	PFTTrDA	0.072	0.070	✓
PFTTeDA_1	713.0 / 669.0	4.08	7401586.86	10265.87	5258.3	False	13C2-PFTTeDA	915322.27	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	4.08	435896.86	10147.53	4639.7	False	13C2-PFTTeDA	915322.27	1250.00	PFTTeDA	0.059	0.056	✓
NMeFOSAA_1	570.0 / 419.0	3.12	798858.11	9992.83	3068.1	False	d3-MeFOSAA	125193.13	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.12	886765.92	10785.98	4487.9	False	d3-MeFOSAA	125193.13	1250.00	NMeFOSAA	1.110	1.118	✓
NEiFOSAA_1	584.0 / 419.0	3.29	748608.51	10115.26	2215.3	False	d5-EiFOSAA	94973.46	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.29	42187.57	9918.42	1068.6	True	d5-EiFOSAA	94973.46	1250.00	NEiFOSAA	0.056	0.060	✓
HFPO-DA_1	285.0 / 169.0	1.66	7245710.52	9673.37	7918.8	False	13C3-HFPO-DA	410461.44	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.66	157183.62	9562.74	1785.7	False	13C3-HFPO-DA	410461.44	1250.00	HFPO-DA	0.022	0.021	✓
ADONA_1	377.0 / 251.0	1.93	16611152.29	9353.68	16013.1	False	13C8-PFOA	1075642.98	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.93	260983.08	8960.66	218655.4	False	13C8-PFOA	1075642.98	1222.50	ADONA	0.016	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	2.83	8639144.91	8836.69	4076.7	False	13C8-PFOA	1075642.98	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.83	89665.89	8464.34	49733.2	False	13C8-PFOA	1075642.98	1222.50	9CI-PF3ONS	0.010	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.46	6187654.97	8046.19	3462.1	False	13C8-PFOA	1075642.98	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.45	31373.61	7382.33	1597.2	False	13C8-PFOA	1075642.98	1222.50	11Cl-PF3OUdS	0.005	0.005	✓

Sample Name	G1697-FS(0)	Injection Vial	15
Sample ID	CBD-HVG-GW09-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 4:02:22 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.31	198297.43	716.76	190.1	False	13C3-PFBS	115060.24	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.31	36674.45	361.62	372.3	False	13C3-PFBS	115060.24	1162.50	PFBS	0.185	0.319	✓
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	False	13C5-PFHxA	420912.76	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	420912.76	1250.00	PFHxA	N/A	0.063	✓
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	False	13C4-PFHpA	585290.22	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	585290.22	1250.00	PFHpA	N/A	0.031	✓
PFHxS_1	399.0 / 80.0	1.90	1298045.04	3444.43	392.2	False	13C3-PFHxS	135033.75	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.90	455824.81	3285.57	633.4	False	13C3-PFHxS	135033.75	1182.50	PFHxS	0.351	0.348	✓
PFOA_1	413.0 / 369.0	2.25	33130.56	12.83	28.7	False	13C8-PFOA	824952.05	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.24	3402.85	62.28	35.3	True	13C8-PFOA	824952.05	1222.50	PFOA	0.103	0.097	✓
PFNA_1	463.0 / 419.0	2.62	7791.28	5.75	17.2	True	13C9-PFNA	732974.14	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.61	2640.02	9.95	21.4	True	13C9-PFNA	732974.14	1250.00	PFNA	0.339	0.324	✓
PFOS_1	499.0 / 80.0	2.54	357771.13	840.78	259.9	False	13C8-PFOS	131841.02	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.61	57853.39	687.11	267.8	False	13C8-PFOS	131841.02	1195.00	PFOS	0.162	0.197	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	786469.60	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	786469.60	1250.00	PFDA	N/A	0.058	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	691975.79	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	691975.79	1250.00	PFUnA	N/A	0.062	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	883738.50	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	883738.50	1250.00	PFDoA	N/A	0.117	✓
PFTeDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	775923.27	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	775923.27	1250.00	PFTeDA	N/A	0.070	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	775923.27	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	775923.27	1250.00	PFTeDA	N/A	0.056	✓
NMeFOSAA_1	570.0 / 419.0	3.12	1316.35	81.11	15640.1	False	d3-MeFOSAA	125222.12	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.11	1642.48	20.11	185.8	True	d3-MeFOSAA	125222.12	1250.00	NMeFOSAA	1.248	1.118	✓
NEiFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	104346.83	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	104346.83	1250.00	NEiFOSAA	N/A	0.060	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	261656.36	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	261656.36	1250.00	HFPO-DA	N/A	0.021	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	824952.05	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	824952.05	1222.50	ADONA	N/A	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	824952.05	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	824952.05	1222.50	9CI-PF3ONS	N/A	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	824952.05	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	824952.05	1222.50	11Cl-PF3OUdS	N/A	0.005	✓

Sample Name	G1698-FS(0)	Injection Vial	16
Sample ID	CBD-EB01-101420-GW	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 4:12:50 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.43	12286.29	< 0	119.0	True	13C3-PFBS	255938.93	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	255938.93	1162.50	PFBS	N/A	0.319	
PFHxA_1	313.0 / 269.0	1.58	59049.98	< 0	75.6	True	13C5-PFHxA	915863.89	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.61	3275.13	< 0	55.2	False	13C5-PFHxA	915863.89	1250.00	PFHxA	0.055	0.063	✓
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	915618.45	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	915618.45	1250.00	PFHpA	N/A	0.031	✓
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	174370.82	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	174370.82	1182.50	PFHxS	N/A	0.348	✓
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1103771.19	1222.50	PFOA			
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1103771.19	1222.50	PFOA	N/A	0.097	✓
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	935942.71	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	935942.71	1250.00	PFNA	N/A	0.324	✓
PFOS_1	499.0 / 80.0	2.62	10321.99	1.77	34.7	False	13C8-PFOS	141320.43	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.61	2834.39	15.14	67.9	True	13C8-PFOS	141320.43	1195.00	PFOS	0.275	0.197	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1012771.64	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1012771.64	1250.00	PFDA	N/A	0.058	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	780723.94	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	780723.94	1250.00	PFUnA	N/A	0.062	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	979568.93	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	979568.93	1250.00	PFDoA	N/A	0.117	✓
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	908082.93	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	908082.93	1250.00	PFTTrDA	N/A	0.070	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	908082.93	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	908082.93	1250.00	PFTeDA	N/A	0.056	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	127696.25	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	127696.25	1250.00	NMeFOSAA	N/A	1.118	✓
NEiFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	109796.42	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	109796.42	1250.00	NEiFOSAA	N/A	0.060	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	381960.29	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	381960.29	1250.00	HFPO-DA	N/A	0.021	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1103771.19	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1103771.19	1222.50	ADONA	N/A	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1103771.19	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1103771.19	1222.50	9CI-PF3ONS	N/A	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1103771.19	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1103771.19	1222.50	11Cl-PF3OUdS	N/A	0.005	✓

Sample Name	G1699-FS(0)	Injection Vial	17
Sample ID	CBD-AOA-MW10-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 4:23:19 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.32	2116896.74	8314.55	1311.7	False	13C3-PFBS	121205.36	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.32	651402.18	8109.83	1397.2	False	13C3-PFBS	121205.36	1162.50	PFBS	0.308	0.319	✓
PFHxA_1	313.0 / 269.0	1.56	18402754.81	60331.90	917.6	False	13C5-PFHxA	354188.28	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.56	1031159.30	51525.60	1061.4	False	13C5-PFHxA	354188.28	1250.00	PFHxA	0.056	0.063	✓
PFHpA_1	363.0 / 319.0	1.89	8996472.51	35377.82	591.4	False	13C4-PFHpA	349288.76	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.88	324857.19	41981.27	1090.5	False	13C4-PFHpA	349288.76	1250.00	PFHpA	0.036	0.031	✓
PFHxS_1	399.0 / 80.0	1.90	55792977.67	196221.14	2087.6	False	13C3-PFHxS	104069.26	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.90	19001515.42	178120.05	3366.3	False	13C3-PFHxS	104069.26	1182.50	PFHxS	0.341	0.348	✓
PFOA_1	413.0 / 369.0	2.25	42197191.87	81934.76	1019.4	False	13C8-PFOA	661894.44	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.25	4182681.14	79352.44	2535.0	False	13C8-PFOA	661894.44	1222.50	PFOA	0.099	0.097	✓
PFNA_1	463.0 / 419.0	2.62	10099158.00	22163.48	1203.2	False	13C9-PFNA	594582.04	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.62	3767688.55	25413.47	1650.2	False	13C9-PFNA	594582.04	1250.00	PFNA	0.373	0.324	✓
PFOS_1	499.0 / 80.0	2.59	38970195.77	120912.40	1586.5	False	13C8-PFOS	102387.30	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.61	7766551.13	121705.53	2638.5	False	13C8-PFOS	102387.30	1195.00	PFOS	0.199	0.197	✓
PFDA_1	513.0 / 469.0	2.97	397845.72	619.94	342.9	False	13C6-PFDA	768255.31	1250.00	PFDA			
PFDA_2	513.0 / 219.0	2.96	21669.16	590.96	228.7	True	13C6-PFDA	768255.31	1250.00	PFDA	0.054	0.058	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	714457.65	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	714457.65	1250.00	PFUnA	N/A	0.062	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	902509.96	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	902509.96	1250.00	PFDoA	N/A	0.117	✓
PFTeDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	842165.47	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	842165.47	1250.00	PFTeDA	N/A	0.070	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	842165.47	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	842165.47	1250.00	PFTeDA	N/A	0.056	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	106738.16	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	106738.16	1250.00	NMeFOSAA	N/A	1.118	✓
NEiFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	99162.06	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	99162.06	1250.00	NEiFOSAA	N/A	0.060	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	293168.83	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	293168.83	1250.00	HFPO-DA	N/A	0.021	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	661894.44	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	661894.44	1222.50	ADONA	N/A	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	661894.44	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	661894.44	1222.50	9CI-PF3ONS	N/A	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	661894.44	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	661894.44	1222.50	11Cl-PF3OUdS	N/A	0.005	✓

Sample Name	G1699-FS-D(3)	Injection Vial	18
Sample ID	CBD-AOA-MW10-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 4:33:47 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	241533.10	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	241533.10	1162.50	PFBS	N/A	0.319	✓
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	914662.44	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	914662.44	1250.00	PFHxA	N/A	0.063	✓
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	912935.98	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	912935.98	1250.00	PFHpA	N/A	0.031	✓
PFHxS_1	399.0 / 80.0	1.90	17558575.93	35123.80	1837.2	False	13C3-PFHxS	182647.43	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.90	6258223.99	33419.79	2868.9	False	13C3-PFHxS	182647.43	1182.50	PFHxS	0.356	0.348	✓
PFOA_1	413.0 / 369.0	2.25	11476615.90	12380.81	845.2	False	13C8-PFOA	1188186.45	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.25	1176541.00	12443.01	2281.5	False	13C8-PFOA	1188186.45	1222.50	PFOA	0.103	0.097	✓
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1105644.36	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1105644.36	1250.00	PFNA	N/A	0.324	✓
PFOS_1	499.0 / 80.0	2.61	9750085.75	16255.03	1615.1	False	13C8-PFOS	190331.09	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.62	1959263.99	16501.52	2168.6	False	13C8-PFOS	190331.09	1195.00	PFOS	0.201	0.197	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1030277.74	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1030277.74	1250.00	PFDA	N/A	0.058	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	957421.82	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	957421.82	1250.00	PFUnA	N/A	0.062	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1193397.10	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1193397.10	1250.00	PFDoA	N/A	0.117	✓
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1097222.59	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1097222.59	1250.00	PFTTrDA	N/A	0.070	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1097222.59	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1097222.59	1250.00	PFTeDA	N/A	0.056	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	141549.48	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	141549.48	1250.00	NMeFOSAA	N/A	1.118	✓
NEiFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	129548.92	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	129548.92	1250.00	NEiFOSAA	N/A	0.060	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	408318.18	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	408318.18	1250.00	HFPO-DA	N/A	0.021	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1188186.45	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1188186.45	1222.50	ADONA	N/A	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1188186.45	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1188186.45	1222.50	9CI-PF3ONS	N/A	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1188186.45	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1188186.45	1222.50	11Cl-PF3OUdS	N/A	0.005	✓

Sample Name	G1699-FS-D(5)	Injection Vial	19
Sample ID	CBD-AOA-MW10-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 4:44:14 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	260953.27	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	260953.27	1162.50	PFBS	N/A	0.319	✓
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	1093031.48	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	1093031.48	1250.00	PFHxA	N/A	0.063	✓
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1090559.82	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1090559.82	1250.00	PFHpA	N/A	0.031	✓
PFHxS_1	399.0 / 80.0	1.89	7653328.28	13157.93	2347.5	False	13C3-PFHxS	211758.76	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.89	2601971.30	11979.80	2363.4	False	13C3-PFHxS	211758.76	1182.50	PFHxS	0.340	0.348	✓
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1336530.84	1222.50	PFOA			
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1336530.84	1222.50	PFOA	N/A	0.097	✓
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1160245.10	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1160245.10	1250.00	PFNA	N/A	0.324	✓
PFOS_1	499.0 / 80.0	N/A	N/A	N/A	N/A	True	13C8-PFOS	182849.43	1195.00	PFOS			
PFOS_2	499.0 / 99.0	N/A	N/A	N/A	N/A	True	13C8-PFOS	182849.43	1195.00	PFOS	N/A	0.197	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1204503.31	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1204503.31	1250.00	PFDA	N/A	0.058	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1018119.67	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1018119.67	1250.00	PFUnA	N/A	0.062	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1281965.35	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1281965.35	1250.00	PFDoA	N/A	0.117	✓
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1160232.56	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1160232.56	1250.00	PFTTrDA	N/A	0.070	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1160232.56	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1160232.56	1250.00	PFTeDA	N/A	0.056	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	130634.31	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	130634.31	1250.00	NMeFOSAA	N/A	1.118	✓
NEiFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	137996.41	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	137996.41	1250.00	NEiFOSAA	N/A	0.060	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	436961.96	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	436961.96	1250.00	HFPO-DA	N/A	0.021	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1336530.84	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1336530.84	1222.50	ADONA	N/A	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1336530.84	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1336530.84	1222.50	9CI-PF3ONS	N/A	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1336530.84	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1336530.84	1222.50	11Cl-PF3OUdS	N/A	0.005	✓

Sample Name	G1700-FS(0)	Injection Vial	22
Sample ID	CBD-BKG-MW03-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:16:07 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.31	162958.12	293.39	214.8	True	13C3-PFBS	192568.13	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.32	29822.04	110.46	276.2	False	13C3-PFBS	192568.13	1162.50	PFBS	0.183	0.319	✓
PFHxA_1	313.0 / 269.0	1.56	281129.08	355.58	156.3	False	13C5-PFHxA	719138.84	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.56	13854.88	277.24	89.5	False	13C5-PFHxA	719138.84	1250.00	PFHxA	0.049	0.063	✓
PFHpA_1	363.0 / 319.0	1.89	204189.27	281.71	126.4	False	13C4-PFHpA	819451.56	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.88	5175.88	219.56	113.1	False	13C4-PFHpA	819451.56	1250.00	PFHpA	0.025	0.031	✓
PFHxS_1	399.0 / 80.0	1.89	1315292.63	2574.70	490.8	False	13C3-PFHxS	181735.56	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.89	459808.41	2460.67	727.8	False	13C3-PFHxS	181735.56	1182.50	PFHxS	0.350	0.348	✓
PFOA_1	413.0 / 369.0	2.24	707445.96	764.84	216.3	False	13C8-PFOA	1131897.06	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.24	71240.88	800.73	325.1	True	13C8-PFOA	1131897.06	1222.50	PFOA	0.101	0.097	✓
PFNA_1	463.0 / 419.0	2.61	259104.77	333.11	299.9	False	13C9-PFNA	991158.56	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.61	101729.80	407.20	574.0	False	13C9-PFNA	991158.56	1250.00	PFNA	0.393	0.324	✓
PFOS_1	499.0 / 80.0	2.53	1316698.80	2809.50	411.5	False	13C8-PFOS	147780.82	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.60	219342.74	2364.69	708.6	False	13C8-PFOS	147780.82	1195.00	PFOS	0.167	0.197	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	953685.98	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	False	13C6-PFDA	953685.98	1250.00	PFDA	N/A	0.058	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	789766.05	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	789766.05	1250.00	PFUnA	N/A	0.062	✓
PFDoA_1	613.0 / 569.0	3.55	12996.48	< 0	60.4	False	13C2-PFDoA	1064742.60	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.55	695.24	< 0	39.9	False	13C2-PFDoA	1064742.60	1250.00	PFDoA	0.053	0.117	✓
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	799308.44	1250.00	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	799308.44	1250.00	PFTrDA	N/A	0.070	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	799308.44	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	799308.44	1250.00	PFTeDA	N/A	0.056	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	126780.92	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	126780.92	1250.00	NMeFOSAA	N/A	1.118	✓
NEiFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	108646.64	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	108646.64	1250.00	NEiFOSAA	N/A	0.060	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	380176.30	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	380176.30	1250.00	HFPO-DA	N/A	0.021	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1131897.06	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1131897.06	1222.50	ADONA	N/A	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1131897.06	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1131897.06	1222.50	9CI-PF3ONS	N/A	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.42	5324.45	6.48	137.4	False	13C8-PFOA	1131897.06	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1131897.06	1222.50	11Cl-PF3OUdS	N/A	0.005	

Sample Name	G1701-FS(0)	Injection Vial	23
Sample ID	CBD-SO4-MW01-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:26:35 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.32	11898852.45	41896.01	4475.0	False	13C3-PFBS	136700.48	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.32	4097336.00	45809.62	3292.9	False	13C3-PFBS	136700.48	1162.50	PFBS	0.344	0.319	✓
PFHxA_1	313.0 / 269.0	1.56	37625966.06	96558.45	2108.4	False	13C5-PFHxA	452754.74	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.56	2191185.27	85696.48	1830.0	False	13C5-PFHxA	452754.74	1250.00	PFHxA	0.058	0.063	✓
PFHpA_1	363.0 / 319.0	1.88	4351879.43	12778.89	530.3	False	13C4-PFHpA	466341.69	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.87	167410.75	16163.65	1000.2	False	13C4-PFHpA	466341.69	1250.00	PFHpA	0.038	0.031	✓
PFHxS_1	399.0 / 80.0	1.90	65989780.09	225133.83	2885.9	False	13C3-PFHxS	107286.73	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.90	22934587.48	208542.55	2375.4	False	13C3-PFHxS	107286.73	1182.50	PFHxS	0.348	0.348	✓
PFOA_1	413.0 / 369.0	2.23	2213419.43	3022.08	425.7	False	13C8-PFOA	929812.76	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.25	113448.13	1542.42	243.1	True	13C8-PFOA	929812.76	1222.50	PFOA	0.051	0.097	✓
PFNA_1	463.0 / 419.0	2.62	286553.75	878.67	277.2	False	13C9-PFNA	421799.63	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.62	91980.73	870.22	503.3	False	13C9-PFNA	421799.63	1250.00	PFNA	0.321	0.324	✓
PFOS_1	499.0 / 80.0	2.57	160021890.45	622464.35	3349.1	False	13C8-PFOS	81679.17	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.61	30036759.09	590090.01	5825.3	False	13C8-PFOS	81679.17	1195.00	PFOS	0.188	0.197	✓
PFDA_1	513.0 / 469.0	2.98	7960.53	< 0	18.6	False	13C6-PFDA	902089.93	1250.00	PFDA			
PFDA_2	513.0 / 219.0	2.97	405.11	< 0	26.3	False	13C6-PFDA	902089.93	1250.00	PFDA	0.051	0.058	✓
PFUnA_1	563.0 / 519.0	3.29	11327.62	< 0	50.2	False	13C7-PFUnA	755530.29	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.31	598.62	1.08	153.1	False	13C7-PFUnA	755530.29	1250.00	PFUnA	0.053	0.062	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1001198.51	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1001198.51	1250.00	PFDoA	N/A	0.117	✓
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	818369.17	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	818369.17	1250.00	PFTTrDA	N/A	0.070	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	818369.17	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	818369.17	1250.00	PFTeDA	N/A	0.056	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	106522.21	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	106522.21	1250.00	NMeFOSAA	N/A	1.118	✓
NEiFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	107292.87	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	107292.87	1250.00	NEiFOSAA	N/A	0.060	✓
HFPO-DA_1	285.0 / 169.0	1.65	22352.51	< 0	181.1	False	13C3-HFPO-DA	330368.46	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.66	413.74	< 0	57.3	False	13C3-HFPO-DA	330368.46	1250.00	HFPO-DA	0.019	0.021	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	929812.76	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	929812.76	1222.50	ADONA	N/A	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	929812.76	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	929812.76	1222.50	9CI-PF3ONS	N/A	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.43	583.21	0.78	22.9	False	13C8-PFOA	929812.76	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	929812.76	1222.50	11Cl-PF3OUdS	N/A	0.005	

Sample Name	G1701-FS-D(3)	Injection Vial	24
Sample ID	CBD-SO4-MW01-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:37:03 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	278460.71	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	278460.71	1162.50	PFBS	N/A	0.319	✓
PFHxA_1	313.0 / 269.0	1.56	5841215.04	5813.94	1751.6	False	13C5-PFHxA	1148956.19	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.56	340030.86	5180.13	1503.5	False	13C5-PFHxA	1148956.19	1250.00	PFHxA	0.058	0.063	✓
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1158229.13	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1158229.13	1250.00	PFHpA	N/A	0.031	✓
PFHxS_1	399.0 / 80.0	1.90	9131605.56	14726.35	2390.6	False	13C3-PFHxS	225888.31	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.89	3022109.40	13044.50	2416.6	False	13C3-PFHxS	225888.31	1182.50	PFHxS	0.331	0.348	✓
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1466658.98	1222.50	PFOA			
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1466658.98	1222.50	PFOA	N/A	0.097	✓
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1111327.32	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1111327.32	1250.00	PFNA	N/A	0.324	✓
PFOS_1	499.0 / 80.0	2.60	22083729.87	34521.07	2622.2	False	13C8-PFOS	203132.72	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.61	4354220.09	34379.87	3106.1	False	13C8-PFOS	203132.72	1195.00	PFOS	0.197	0.197	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1144964.17	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1144964.17	1250.00	PFDA	N/A	0.058	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1056851.60	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1056851.60	1250.00	PFUnA	N/A	0.062	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1381618.27	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1381618.27	1250.00	PFDoA	N/A	0.117	✓
PFTeDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1032952.64	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1032952.64	1250.00	PFTeDA	N/A	0.070	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1032952.64	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1032952.64	1250.00	PFTeDA	N/A	0.056	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	144846.22	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	144846.22	1250.00	NMeFOSAA	N/A	1.118	✓
NEiFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	143600.76	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	143600.76	1250.00	NEiFOSAA	N/A	0.060	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	503412.00	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	503412.00	1250.00	HFPO-DA	N/A	0.021	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1466658.98	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1466658.98	1222.50	ADONA	N/A	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1466658.98	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1466658.98	1222.50	9CI-PF3ONS	N/A	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1466658.98	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1466658.98	1222.50	11Cl-PF3OUdS	N/A	0.005	✓

Sample Name	G1701-FS-D(5)	Injection Vial	25
Sample ID	CBD-SO4-MW01-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:47:31 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	292535.56	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	292535.56	1162.50	PFBS	N/A	0.319	✓
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	1277325.93	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	1277325.93	1250.00	PFHxA	N/A	0.063	✓
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1189525.70	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1189525.70	1250.00	PFHpA	N/A	0.031	✓
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	244450.41	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	244450.41	1182.50	PFHxS	N/A	0.348	✓
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1480099.22	1222.50	PFOA			
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1480099.22	1222.50	PFOA	N/A	0.097	✓
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1284084.90	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1284084.90	1250.00	PFNA	N/A	0.324	✓
PFOS_1	499.0 / 80.0	2.61	9337841.66	14799.17	1825.4	False	13C8-PFOS	200189.82	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.61	1845801.54	14778.54	2382.0	False	13C8-PFOS	200189.82	1195.00	PFOS	0.198	0.197	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1261815.59	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1261815.59	1250.00	PFDA	N/A	0.058	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1171954.05	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1171954.05	1250.00	PFUnA	N/A	0.062	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1412098.06	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1412098.06	1250.00	PFDoA	N/A	0.117	✓
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1246479.35	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1246479.35	1250.00	PFTTrDA	N/A	0.070	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1246479.35	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1246479.35	1250.00	PFTeDA	N/A	0.056	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	148918.97	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	148918.97	1250.00	NMeFOSAA	N/A	1.118	✓
NEiFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	159558.43	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	159558.43	1250.00	NEiFOSAA	N/A	0.060	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	481165.06	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	481165.06	1250.00	HFPO-DA	N/A	0.021	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1480099.22	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1480099.22	1222.50	ADONA	N/A	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1480099.22	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1480099.22	1222.50	9CI-PF3ONS	N/A	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1480099.22	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1480099.22	1222.50	11Cl-PF3OUdS	N/A	0.005	✓

Sample Name	G1702-FS(0)	Injection Vial	26
Sample ID	CBD-SO4-MW01P-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:58:00 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.31	13102214.76	48279.44	4023.6	False	13C3-PFBS	130670.45	1162.50	PFBS			
PFBS 2	298.9 / 99.0	1.31	4408998.25	51584.83	3330.4	False	13C3-PFBS	130670.45	1162.50	PFBS	0.337	0.319	✓
PFHxA 1	313.0 / 269.0	1.55	39102868.87	113354.95	1740.4	False	13C5-PFHxA	400866.51	1250.00	PFHxA			
PFHxA 2	313.0 / 119.0	1.56	2191823.04	96825.55	1752.4	False	13C5-PFHxA	400866.51	1250.00	PFHxA	0.056	0.063	✓
PFHpA 1	363.0 / 319.0	1.87	4242578.98	14239.31	487.5	False	13C4-PFHpA	408200.57	1250.00	PFHpA			
PFHpA 2	363.0 / 169.0	1.86	175177.56	19335.48	1281.7	False	13C4-PFHpA	408200.57	1250.00	PFHpA	0.041	0.031	✓
PFHxS 1	399.0 / 80.0	1.89	74220193.53	274359.85	2564.1	False	13C3-PFHxS	99023.36	1182.50	PFHxS			
PFHxS 2	399.0 / 99.0	1.89	24670521.53	243048.36	2773.3	False	13C3-PFHxS	99023.36	1182.50	PFHxS	0.332	0.348	✓
PFOA 1	413.0 / 369.0	2.21	2374118.78	3420.45	406.9	False	13C8-PFOA	882465.24	1222.50	PFOA			
PFOA 2	413.0 / 169.0	2.22	149557.95	2138.37	371.8	True	13C8-PFOA	882465.24	1222.50	PFOA	0.063	0.097	✓
PFNA 1	463.0 / 419.0	2.59	331691.61	1111.21	307.9	False	13C9-PFNA	386807.66	1250.00	PFNA			
PFNA 2	463.0 / 219.0	2.60	89100.68	919.48	365.8	False	13C9-PFNA	386807.66	1250.00	PFNA	0.269	0.324	✓
PFOS 1	499.0 / 80.0	2.54	165654702.89	724808.96	3712.3	False	13C8-PFOS	72615.40	1195.00	PFOS			
PFOS 2	499.0 / 99.0	2.59	31074284.47	686674.12	5237.0	False	13C8-PFOS	72615.40	1195.00	PFOS	0.188	0.197	✓
PFDA 1	513.0 / 469.0	2.91	11272.47	< 0	22.9	False	13C6-PFDA	817054.32	1250.00	PFDA			
PFDA 2	513.0 / 219.0	2.93	812.38	< 0	24.3	False	13C6-PFDA	817054.32	1250.00	PFDA	0.072	0.058	✓
PFUnA 1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	741384.66	1250.00	PFUnA			
PFUnA 2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	741384.66	1250.00	PFUnA	N/A	0.062	✓
PFDoA 1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	916273.37	1250.00	PFDoA			
PFDoA 2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	916273.37	1250.00	PFDoA	N/A	0.117	✓
PFTeDA 1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	734819.64	1250.00	PFTeDA			
PFTeDA 2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	734819.64	1250.00	PFTeDA	N/A	0.070	✓
PFTeDA 1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	734819.64	1250.00	PFTeDA			
PFTeDA 2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	734819.64	1250.00	PFTeDA	N/A	0.056	✓
NMeFOSAA 1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	94654.17	1250.00	NMeFOSAA			
NMeFOSAA 2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	94654.17	1250.00	NMeFOSAA	N/A	1.118	✓
NEiFOSAA 1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	111640.34	1250.00	NEiFOSAA			
NEiFOSAA 2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	111640.34	1250.00	NEiFOSAA	N/A	0.060	✓
HFPO-DA 1	285.0 / 169.0	1.64	23151.54	< 0	198.8	False	13C3-HFPO-DA	328314.65	1250.00	HFPO-DA			
HFPO-DA 2	285.0 / 118.8	1.62	490.90	< 0	124.3	False	13C3-HFPO-DA	328314.65	1250.00	HFPO-DA	0.021	0.021	✓
ADONA 1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	882465.24	1222.50	ADONA			
ADONA 2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	882465.24	1222.50	ADONA	N/A	0.015	✓
9CI-PF3ONS 1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	882465.24	1222.50	9CI-PF3ONS			
9CI-PF3ONS 2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	882465.24	1222.50	9CI-PF3ONS	N/A	0.010	✓
11Cl-pf3OUdS 1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	882465.24	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS 2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	882465.24	1222.50	11Cl-PF3OUdS	N/A	0.005	✓

Sample Name	G1702-FS-D(3)	Injection Vial	27
Sample ID	CBD-SO4-MW01P-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 6:08:28 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.31	2035972.54	3263.16	5310.6	False	13C3-PFBS	290880.62	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.31	656090.32	3329.93	3090.0	False	13C3-PFBS	290880.62	1162.50	PFBS	0.322	0.319	✓
PFHxA_1	313.0 / 269.0	1.55	6186303.20	6133.36	1501.7	False	13C5-PFHxA	1154469.53	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.55	377915.23	5736.58	1383.6	False	13C5-PFHxA	1154469.53	1250.00	PFHxA	0.061	0.063	✓
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1166149.84	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1166149.84	1250.00	PFHpA	N/A	0.031	✓
PFHxS_1	399.0 / 80.0	1.87	10780397.52	18709.76	2689.9	False	13C3-PFHxS	210125.48	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.87	3448624.54	16003.88	2511.3	False	13C3-PFHxS	210125.48	1182.50	PFHxS	0.320	0.348	✓
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1446032.69	1222.50	PFOA			
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1446032.69	1222.50	PFOA	N/A	0.097	✓
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1107434.26	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1107434.26	1250.00	PFNA	N/A	0.324	✓
PFOS_1	499.0 / 80.0	2.56	23870622.44	41254.59	3017.6	False	13C8-PFOS	183749.96	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.57	4736544.58	41347.04	3265.4	False	13C8-PFOS	183749.96	1195.00	PFOS	0.198	0.197	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1219663.25	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1219663.25	1250.00	PFDA	N/A	0.058	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1108262.83	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1108262.83	1250.00	PFUnA	N/A	0.062	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1369707.06	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1369707.06	1250.00	PFDoA	N/A	0.117	✓
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1225433.57	1250.00	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1225433.57	1250.00	PFTrDA	N/A	0.070	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1225433.57	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1225433.57	1250.00	PFTeDA	N/A	0.056	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	166340.77	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	166340.77	1250.00	NMeFOSAA	N/A	1.118	✓
NEiFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	155293.34	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	155293.34	1250.00	NEiFOSAA	N/A	0.060	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	463052.13	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	463052.13	1250.00	HFPO-DA	N/A	0.021	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1446032.69	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1446032.69	1222.50	ADONA	N/A	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1446032.69	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1446032.69	1222.50	9CI-PF3ONS	N/A	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1446032.69	1222.50	11Cl-pf3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1446032.69	1222.50	11Cl-pf3OUdS	N/A	0.005	✓

Sample Name	G1702-FS-D(5)	Injection Vial	28
Sample ID	CBD-SO4-MW01P-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 6:18:56 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	267690.30	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	267690.30	1162.50	PFBS	N/A	0.319	✓
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	1170848.43	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	1170848.43	1250.00	PFHxA	N/A	0.063	✓
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1114578.01	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1114578.01	1250.00	PFHpA	N/A	0.031	✓
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	224992.08	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	224992.08	1182.50	PFHxS	N/A	0.348	✓
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1443165.14	1222.50	PFOA			
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1443165.14	1222.50	PFOA	N/A	0.097	✓
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1245831.83	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1245831.83	1250.00	PFNA	N/A	0.324	✓
PFOS_1	499.0 / 80.0	2.56	9690559.82	16135.39	2032.1	False	13C8-PFOS	190569.80	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.58	1996924.23	16797.94	3413.1	False	13C8-PFOS	190569.80	1195.00	PFOS	0.206	0.197	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1123892.53	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1123892.53	1250.00	PFDA	N/A	0.058	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1104718.65	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1104718.65	1250.00	PFUnA	N/A	0.062	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1367627.57	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1367627.57	1250.00	PFDoA	N/A	0.117	✓
PFTeDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1183603.80	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1183603.80	1250.00	PFTeDA	N/A	0.070	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1183603.80	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1183603.80	1250.00	PFTeDA	N/A	0.056	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	158422.14	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	158422.14	1250.00	NMeFOSAA	N/A	1.118	✓
NEiFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	134079.38	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	134079.38	1250.00	NEiFOSAA	N/A	0.060	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	488009.69	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	488009.69	1250.00	HFPO-DA	N/A	0.021	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1443165.14	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1443165.14	1222.50	ADONA	N/A	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1443165.14	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1443165.14	1222.50	9CI-PF3ONS	N/A	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1443165.14	1222.50	11Cl-pf3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1443165.14	1222.50	11Cl-pf3OUdS	N/A	0.005	✓

Sample Name	LD80 IB	Injection Vial	4
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 1:33:00 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	259806.56	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	259806.56	1162.50	PFBS	N/A	0.319	✓
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	1239957.52	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	1239957.52	1250.00	PFHxA	N/A	0.063	✓
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1156654.42	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1156654.42	1250.00	PFHpA	N/A	0.031	✓
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	220455.98	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	220455.98	1182.50	PFHxS	N/A	0.348	✓
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1462592.09	1222.50	PFOA	N/A	0.097	✓
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1462592.09	1222.50	PFOA	N/A	0.097	✓
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1281748.37	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1281748.37	1250.00	PFNA	N/A	0.324	✓
PFOS_1	499.0 / 80.0	2.59	9816.18	< 0	24.9	False	13C8-PFOS	193299.41	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.57	2299.38	2.04	199.2	False	13C8-PFOS	193299.41	1195.00	PFOS	0.234	0.197	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1309539.92	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1309539.92	1250.00	PFDA	N/A	0.058	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1119648.95	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1119648.95	1250.00	PFUnA	N/A	0.062	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1292459.60	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1292459.60	1250.00	PFDoA	N/A	0.117	✓
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	1299221.86	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	1299221.86	1250.00	PFTTrDA	N/A	0.070	✓
PFTTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	1299221.86	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	1299221.86	1250.00	PFTTeDA	N/A	0.056	✓
NMeFOSAA_1	570.0 / 419.0	3.15	3571.34	97.83	1120.8	True	d3-MeFOSAA	167996.13	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.15	4369.94	39.75	60.2	False	d3-MeFOSAA	167996.13	1250.00	NMeFOSAA	1.224	1.118	✓
NEiFOSAA_1	584.0 / 419.0	3.32	7567.98	22.56	307.3	True	d5-EiFOSAA	150564.06	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	150564.06	1250.00	NEiFOSAA	N/A	0.060	
HFPO-DA_1	285.0 / 169.0	1.67	2289.38	< 0	30.9	False	13C3-HFPO-DA	427719.44	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	427719.44	1250.00	HFPO-DA	N/A	0.021	
ADONA_1	377.0 / 251.0	1.93	5824.22	< 0	131.0	False	13C8-PFOA	1462592.09	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1462592.09	1222.50	ADONA	N/A	0.015	
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1462592.09	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1462592.09	1222.50	9CI-PF3ONS	N/A	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.48	1648.04	1.48	37.5	False	13C8-PFOA	1462592.09	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1462592.09	1222.50	11Cl-PF3OUdS	N/A	0.005	

Sample Name	G1696-FS(0)	Injection Vial	9
Sample ID	CBD-HVG-GW10-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 2:25:16 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305
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	1.32	174068.09	705.16	164.6	True	13C3-PFBS	102429.76	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.32	51584.98	644.95	204.7	False	13C3-PFBS	102429.76	1162.50	PFBS	0.296	0.319	✓
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	308449.37	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	308449.37	1250.00	PFHxA	N/A	0.063	✓
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	447651.89	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	447651.89	1250.00	PFHpA	N/A	0.031	✓
PFHxS_1	399.0 / 80.0	1.91	3256289.11	10629.26	491.5	False	13C3-PFHxS	111381.16	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.91	1074084.10	9400.24	723.1	False	13C3-PFHxS	111381.16	1182.50	PFHxS	0.330	0.348	✓
PFOA_1	413.0 / 369.0	2.25	222268.82	368.71	100.3	False	13C8-PFOA	701314.24	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.26	21391.13	393.45	97.3	False	13C8-PFOA	701314.24	1222.50	PFOA	0.096	0.097	✓
PFNA_1	463.0 / 419.0	2.59	22515.91	32.61	31.5	False	13C9-PFNA	721474.20	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.60	7319.48	36.19	37.9	False	13C9-PFNA	721474.20	1250.00	PFNA	0.325	0.324	✓
PFOS_1	499.0 / 80.0	2.53	319371.30	818.23	134.4	False	13C8-PFOS	120851.36	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.60	47737.73	616.82	141.5	False	13C8-PFOS	120851.36	1195.00	PFOS	0.149	0.197	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	828206.54	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	828206.54	1250.00	PFDA	N/A	0.058	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	623066.86	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	623066.86	1250.00	PFUnA	N/A	0.062	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	677802.10	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	677802.10	1250.00	PFDoA	N/A	0.117	✓
PFTeDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	531914.65	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	531914.65	1250.00	PFTeDA	N/A	0.070	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	531914.65	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	531914.65	1250.00	PFTeDA	N/A	0.056	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	89066.34	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	89066.34	1250.00	NMeFOSAA	N/A	1.118	✓
NEiFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	76554.39	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	76554.39	1250.00	NEiFOSAA	N/A	0.060	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	224464.82	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	224464.82	1250.00	HFPO-DA	N/A	0.021	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	701314.24	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	701314.24	1222.50	ADONA	N/A	0.015	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	701314.24	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	701314.24	1222.50	9CI-PF3ONS	N/A	0.010	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	701314.24	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	701314.24	1222.50	11Cl-PF3OUdS	N/A	0.005	✓



Sample Name	LD80 IB	Injection Vial	8
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:48:46 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.59	1209794.83	1259.87	3848.9	False	13C2-PFDA	959338.09	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.12	146010.83	1340.21	942.8	False	13C4-PFOS	164880.32	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.29	126922.18	1306.41	1653.9	False	13C4-PFOS	164880.32	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.56	1115893.79	1282.06	6564.0	False	13C2-PFOA	681233.61	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.89	1143051.39	1330.88	9856.7	False	13C2-PFOA	681233.61	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.25	1280550.40	1275.45	9585.2	False	13C2-PFOA	681233.61	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.62	1188221.78	1385.91	7470.1	False	13C4-PFOS	164880.32	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.97	1060795.68	1246.21	5299.4	False	13C2-PFDA	959338.09	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.30	983100.30	1276.49	3885.3	False	13C2-PFDA	959338.09	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.08	1122189.49	1226.13	4266.5	False	13C2-PFDA	959338.09	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.31	241329.20	1148.39	7478.3	False	13C4-PFOS	164880.32	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.90	201877.07	1271.22	4246.8	False	13C4-PFOS	164880.32	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.62	174603.19	1198.11	1092.6	False	13C4-PFOS	164880.32	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.65	394199.73	1090.33	4255.3	False	13C2-PFOA	681233.61	1250.00		N/A	N/A	✓

Sample Name	DA908PB-FS(0)	Injection Vial	12
Sample ID	Procedural Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 3:30:37 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.58	844866.77	880.79	4412.1	False	13C2-PFDA	958294.64	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.11	94517.44	842.17	1371.3	False	13C4-PFOS	169850.68	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.28	86389.21	863.18	973.7	False	13C4-PFOS	169850.68	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.56	779833.02	874.15	5376.9	False	13C2-PFOA	698229.12	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.88	801607.77	910.61	59569.3	False	13C2-PFOA	698229.12	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.25	886039.76	861.03	7548.8	False	13C2-PFOA	698229.12	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.61	777779.01	880.63	2390.5	False	13C4-PFOS	169850.68	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.96	868556.50	1021.48	268779.6	False	13C2-PFDA	958294.64	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.29	664414.30	863.64	2818.7	False	13C2-PFDA	958294.64	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.07	783347.85	856.84	3879.4	False	13C2-PFDA	958294.64	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.31	205496.27	949.26	5043.5	False	13C4-PFOS	169850.68	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.89	137717.95	841.83	19494.3	False	13C4-PFOS	169850.68	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.61	121029.85	806.19	1057.1	False	13C4-PFOS	169850.68	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.65	321537.34	867.70	3215.7	False	13C2-PFOA	698229.12	1250.00		N/A	N/A	✓

Sample Name	DA909LCS-FS(0)	Injection Vial	13
Sample ID	Laboratory Control Sample	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 3:41:28 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305 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	3.59	972704.92	910.46	3550.9	False	13C2-PFDA	1067344.02	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.12	124581.96	950.86	1131.1	False	13C4-PFOS	198287.38	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.28	94981.36	812.93	738.3	False	13C4-PFOS	198287.38	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.56	892008.30	876.59	7219.4	False	13C2-PFOA	796442.65	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.89	902335.32	898.63	17621.0	False	13C2-PFOA	796442.65	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.25	1075642.98	916.38	18508255.2	False	13C2-PFOA	796442.65	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.62	973288.94	943.96	5056.1	False	13C4-PFOS	198287.38	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.97	939741.53	992.28	3635.6	False	13C2-PFDA	1067344.02	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.30	724929.33	846.03	2743.8	False	13C2-PFDA	1067344.02	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.08	915322.27	898.90	4268.8	False	13C2-PFDA	1067344.02	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.31	237391.13	939.33	5928.3	False	13C4-PFOS	198287.38	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.90	164527.55	861.48	1837.7	False	13C4-PFOS	198287.38	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.61	146452.57	835.63	841.1	False	13C4-PFOS	198287.38	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.65	410461.44	971.08	5413.3	False	13C2-PFOA	796442.65	1250.00		N/A	N/A	✓



Sample Name	G1697-FS(0)	Injection Vial	15
Sample ID	CBD-HVG-GW09-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 4:02:22 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.58	883738.50	877.66	3923.1	False	13C2-PFDA	1005970.51	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.11	124431.68	1304.57	1655.6	False	13C4-PFOS	144350.54	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.28	104221.36	1225.32	1111.3	False	13C4-PFOS	144350.54	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.55	420912.76	497.20	917.6	False	13C2-PFOA	662582.85	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.88	585290.22	700.65	1235.4	False	13C2-PFOA	662582.85	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.24	824952.05	844.80	2290.5	False	13C2-PFOA	662582.85	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.61	732974.14	976.51	1601.8	False	13C4-PFOS	144350.54	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.97	786469.60	881.11	3777.2	False	13C2-PFDA	1005970.51	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.29	691975.79	856.84	4908.7	False	13C2-PFDA	1005970.51	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.06	775923.27	808.49	4027.7	False	13C2-PFDA	1005970.51	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.30	115060.24	625.40	1818.0	False	13C4-PFOS	144350.54	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.89	135033.75	971.24	986.1	False	13C4-PFOS	144350.54	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.61	131841.02	1033.35	653.0	False	13C4-PFOS	144350.54	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.65	261656.36	744.10	1775.3	False	13C2-PFOA	662582.85	1250.00		N/A	N/A	✓



Sample Name	G1698-FS(0)	Injection Vial	16
Sample ID	CBD-EB01-101420-GW	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 4:12:50 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.58	979568.93	959.93	4161.8	False	13C2-PFDA	1019481.08	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.11	126413.55	1046.26	1178.6	False	13C4-PFOS	182856.31	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.28	109558.54	1016.83	935.1	False	13C4-PFOS	182856.31	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.55	915863.89	893.58	3705.3	False	13C2-PFOA	802190.37	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.88	915618.45	905.33	4491.6	False	13C2-PFOA	802190.37	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.24	1103771.19	933.61	4616.6	False	13C2-PFOA	802190.37	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.61	935942.71	984.34	3319.8	False	13C4-PFOS	182856.31	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.96	1012771.64	1119.60	5728.2	False	13C2-PFDA	1019481.08	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.29	780723.94	953.92	2841.1	False	13C2-PFDA	1019481.08	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.06	908082.93	933.66	5005.1	False	13C2-PFDA	1019481.08	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.30	255938.93	1098.18	5072.7	False	13C4-PFOS	182856.31	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.89	174370.82	990.07	2897.4	False	13C4-PFOS	182856.31	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.61	141320.43	874.40	869.4	False	13C4-PFOS	182856.31	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.65	381960.29	897.18	2501.5	False	13C2-PFOA	802190.37	1250.00		N/A	N/A	✓



Sample Name	G1699-FS(0)	Injection Vial	17
Sample ID	CBD-AOA-MW10-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 4:23:19 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.57	902509.96	896.69	4410.6	False	13C2-PFDA	1005530.19	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.11	106632.75	1027.95	981.3	False	13C4-PFOS	156990.42	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.27	98998.96	1070.21	909.0	False	13C4-PFOS	156990.42	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.55	354188.28	406.13	855.4	False	13C2-PFOA	682573.00	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.88	349288.76	405.89	1105.6	False	13C2-PFOA	682573.00	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.24	661894.44	657.96	2047.9	False	13C2-PFOA	682573.00	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.61	594582.04	728.36	1820.0	False	13C4-PFOS	156990.42	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.96	768255.31	861.08	3027.4	False	13C2-PFDA	1005530.19	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.28	714457.65	885.06	2273.1	False	13C2-PFDA	1005530.19	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.04	842165.47	877.90	4304.8	False	13C2-PFDA	1005530.19	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.31	121205.36	605.75	1677.0	False	13C4-PFOS	156990.42	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.89	104069.26	688.26	622.7	False	13C4-PFOS	156990.42	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.61	102387.30	737.88	448.1	False	13C4-PFOS	156990.42	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.64	293168.83	809.29	1731.5	False	13C2-PFOA	682573.00	1250.00		N/A	N/A	✓

Sample Name	G1699-FS-D(3)	Injection Vial	18
Sample ID	CBD-AOA-MW10-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 4:33:47 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.59	1193397.10	1238.40	5719.7	False	13C2-PFDA	962742.20	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.12	140667.23	1175.85	958.7	False	13C4-PFOS	181048.83	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.28	129836.71	1217.06	1054.3	False	13C4-PFOS	181048.83	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.55	914662.44	866.99	1926.9	False	13C2-PFOA	825712.02	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.88	912935.98	876.96	2247.9	False	13C2-PFOA	825712.02	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.25	1188186.45	976.38	2672.6	False	13C2-PFOA	825712.02	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.61	1105644.36	1174.43	3325.2	False	13C4-PFOS	181048.83	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.97	1030277.74	1206.08	4573.9	False	13C2-PFDA	962742.20	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.29	957421.82	1238.76	3176.0	False	13C2-PFDA	962742.20	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.07	1097222.59	1194.61	4167.2	False	13C2-PFDA	962742.20	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.30	241533.10	1046.72	4869.8	False	13C4-PFOS	181048.83	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.89	182647.43	1047.42	1592.3	False	13C4-PFOS	181048.83	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.61	190331.09	1189.40	988.4	False	13C4-PFOS	181048.83	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.65	408318.18	931.77	2254.9	False	13C2-PFOA	825712.02	1250.00		N/A	N/A	✓

Sample Name	G1699-FS-D(5)	Injection Vial	19
Sample ID	CBD-AOA-MW10-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 4:44:14 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.58	1281965.35	1226.71	3249.3	False	13C2-PFDA	1044050.70	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.11	129513.32	1118.56	1157.1	False	13C4-PFOS	175231.63	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.27	137366.32	1330.39	1065.8	False	13C4-PFOS	175231.63	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.54	1093031.48	1080.72	2578.4	False	13C2-PFOA	791594.49	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.87	1090559.82	1092.74	3320.7	False	13C2-PFOA	791594.49	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.23	1336530.84	1145.62	4251.8	False	13C2-PFOA	791594.49	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.60	1160245.10	1273.34	166999.6	False	13C4-PFOS	175231.63	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.95	1204503.31	1300.23	3869.1	False	13C2-PFDA	1044050.70	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.28	1018119.67	1214.70	4705.2	False	13C2-PFDA	1044050.70	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.06	1160232.56	1164.84	3548.3	False	13C2-PFDA	1044050.70	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.30	260953.27	1168.42	4486.0	False	13C4-PFOS	175231.63	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.88	211758.76	1254.68	1366.4	False	13C4-PFOS	175231.63	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.60	182849.43	1180.58	1336.8	False	13C4-PFOS	175231.63	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.64	436961.96	1040.11	3758.0	False	13C2-PFOA	791594.49	1250.00		N/A	N/A	✓

Sample Name	G1700-FS(0)	Injection Vial	22
Sample ID	CBD-BKG-MW03-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:16:07 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.56	1064742.60	917.61	4603.8	False	13C2-PFDA	1159239.47	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.09	124289.31	1041.90	1578.0	False	13C4-PFOS	180535.57	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.25	108274.77	1017.83	973.1	False	13C4-PFOS	180535.57	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.55	719138.84	721.12	1575.9	False	13C2-PFOA	780520.98	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.88	819451.56	832.74	2083.6	False	13C2-PFOA	780520.98	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.23	1131897.06	983.98	2349.8	False	13C2-PFOA	780520.98	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.60	991158.56	1055.81	2149.0	False	13C4-PFOS	180535.57	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.95	953685.98	927.18	3935.4	False	13C2-PFDA	1159239.47	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.27	789766.05	848.63	3191.6	False	13C2-PFDA	1159239.47	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.03	799308.44	722.74	4795.6	False	13C2-PFDA	1159239.47	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.31	192568.13	836.89	3017.6	False	13C4-PFOS	180535.57	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.89	181735.56	1045.15	1149.1	False	13C4-PFOS	180535.57	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.59	147780.82	926.12	738.9	False	13C4-PFOS	180535.57	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.64	380176.30	917.78	1746.8	False	13C2-PFOA	780520.98	1250.00		N/A	N/A	✓

Sample Name	G1701-FS(0)	Injection Vial	23
Sample ID	CBD-SO4-MW01-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:26:35 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.58	1001198.51	1102.26	3437.2	False	13C2-PFDA	907451.72	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.11	106205.61	1868.15	798.4	False	13C4-PFOS	86038.28	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.27	106918.84	2108.99	840.1	False	13C4-PFOS	86038.28	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.55	452754.74	489.64	1613.1	False	13C2-PFOA	723715.10	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.88	466341.69	511.10	1224.0	False	13C2-PFOA	723715.10	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.24	929812.76	871.75	1962.0	False	13C2-PFOA	723715.10	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.62	421799.63	942.80	5152.2	False	13C4-PFOS	86038.28	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.96	902089.93	1120.36	3288.2	False	13C2-PFDA	907451.72	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.29	755530.29	1037.10	3154.6	False	13C2-PFDA	907451.72	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.06	818369.17	945.30	4841.2	False	13C2-PFDA	907451.72	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.31	136700.48	1246.60	2666.6	False	13C4-PFOS	86038.28	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.89	107286.73	1294.66	641.9	False	13C4-PFOS	86038.28	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.61	81679.17	1074.07	480.5	False	13C4-PFOS	86038.28	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.65	330368.46	860.14	2348.3	False	13C2-PFOA	723715.10	1250.00		N/A	N/A	✓



PFAS Sample Quant Report

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Sample Name	G1701-FS-D(3)	Injection Vial	24
Sample ID	CBD-SO4-MW01-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:37:03 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.58	1381618.27	1350.13	3726.6	False	13C2-PFDA	1022345.92	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.11	145078.22	1273.10	1623.7	False	13C4-PFOS	172462.21	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.27	143348.97	1410.63	1250.6	False	13C4-PFOS	172462.21	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.55	1148956.19	1307.58	3211.0	False	13C2-PFOA	687727.91	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.88	1158229.13	1335.82	3717.7	False	13C2-PFOA	687727.91	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.24	1466658.98	1447.02	6970.3	False	13C2-PFOA	687727.91	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.61	1111327.32	1239.24	5021.7	False	13C4-PFOS	172462.21	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.96	1144964.17	1262.19	3683.4	False	13C2-PFDA	1022345.92	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.28	1056851.60	1287.68	3994.6	False	13C2-PFDA	1022345.92	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.06	1032952.64	1059.07	3892.6	False	13C2-PFDA	1022345.92	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.30	278460.71	1266.83	6560.8	False	13C4-PFOS	172462.21	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.89	225888.31	1359.89	1922.3	False	13C4-PFOS	172462.21	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.61	203132.72	1332.60	1264.0	False	13C4-PFOS	172462.21	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.64	503412.00	1379.25	2911.3	False	13C2-PFOA	687727.91	1250.00		N/A	N/A	✓



Sample Name	G1701-FS-D(5)	Injection Vial	25
Sample ID	CBD-SO4-MW01-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:47:31 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.57	1412098.06	1277.63	4888.8	False	13C2-PFDA	1104193.03	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.11	147914.92	1167.42	1081.0	False	13C4-PFOS	191751.46	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.27	159363.80	1410.46	1233.6	False	13C4-PFOS	191751.46	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.56	1277325.93	1334.15	7105.0	False	13C2-PFOA	749341.34	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.88	1189525.70	1259.11	7436.2	False	13C2-PFOA	749341.34	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.24	1480099.22	1340.21	5839.8	False	13C2-PFOA	749341.34	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.61	1284084.90	1287.84	7482.4	False	13C4-PFOS	191751.46	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.97	1261815.59	1287.90	14677.1	False	13C2-PFDA	1104193.03	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.28	1171954.05	1322.08	4310.6	False	13C2-PFDA	1104193.03	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.03	1246479.35	1183.27	3102.5	False	13C2-PFDA	1104193.03	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.31	292535.56	1196.98	5108.6	False	13C4-PFOS	191751.46	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.89	244450.41	1323.59	7711.9	False	13C4-PFOS	191751.46	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.61	200189.82	1181.18	1087.3	False	13C4-PFOS	191751.46	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.65	481165.06	1209.91	58587.8	False	13C2-PFOA	749341.34	1250.00		N/A	N/A	✓



PFAS Sample Quant Report

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Sample Name	G1702-FS(0)	Injection Vial	26
Sample ID	CBD-SO4-MW01P-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:58:00 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.55	916273.37	956.73	2938.1	False	13C2-PFDA	956795.49	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.09	93879.21	1636.68	1030.4	False	13C4-PFOS	86808.24	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.24	111553.88	2180.90	1413.6	False	13C4-PFOS	86808.24	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.55	400866.51	493.78	1758.0	False	13C2-PFOA	635405.59	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.87	408200.57	509.56	1935.4	False	13C2-PFOA	635405.59	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.22	882465.24	942.34	1877.5	False	13C2-PFOA	635405.59	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.59	386807.66	856.92	1902.2	False	13C4-PFOS	86808.24	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.94	817054.32	962.42	3188.7	False	13C2-PFDA	956795.49	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.26	741384.66	965.20	3281.2	False	13C2-PFDA	956795.49	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.03	734819.64	805.02	3678.1	False	13C2-PFDA	956795.49	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.31	130670.45	1181.04	1981.7	False	13C4-PFOS	86808.24	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.88	99023.36	1184.35	590.3	False	13C4-PFOS	86808.24	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.59	72615.40	946.41	434.3	False	13C4-PFOS	86808.24	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.64	328314.65	973.59	2453.7	False	13C2-PFOA	635405.59	1250.00		N/A	N/A	✓



Sample Name	G1702-FS-D(3)	Injection Vial	27
Sample ID	CBD-SO4-MW01P-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 6:08:28 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.52	1369707.06	1309.81	4121.6	False	13C2-PFDA	1044732.82	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.06	165540.11	1465.11	1641.6	False	13C4-PFOS	170996.95	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.23	154775.36	1536.12	1131.8	False	13C4-PFOS	170996.95	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.54	1154469.53	1032.38	6612.4	False	13C2-PFOA	875236.08	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.85	1166149.84	1056.81	3165.4	False	13C2-PFOA	875236.08	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.21	1446032.69	1121.03	3767.3	False	13C2-PFOA	875236.08	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.57	1107434.26	1245.48	16468.2	False	13C4-PFOS	170996.95	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.92	1219663.25	1315.73	4514.0	False	13C2-PFDA	1044732.82	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.24	1108262.83	1321.39	3047.8	False	13C2-PFDA	1044732.82	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	3.99	1225433.57	1229.50	4364.1	False	13C2-PFDA	1044732.82	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.30	290880.62	1334.67	5826.2	False	13C4-PFOS	170996.95	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.87	210125.48	1275.83	3888.0	False	13C4-PFOS	170996.95	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.57	183749.96	1215.77	861.2	False	13C4-PFOS	170996.95	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.63	463052.13	996.88	2525.2	False	13C2-PFOA	875236.08	1250.00		N/A	N/A	✓



Sample Name	G1702-FS-D(5)	Injection Vial	28
Sample ID	CBD-SO4-MW01P-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 6:18:56 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.53	1367627.57	1356.81	3743.5	False	13C2-PFDA	1007013.51	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.07	157097.17	1336.63	1781.1	False	13C4-PFOS	177873.49	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.23	134326.00	1281.62	936.7	False	13C4-PFOS	177873.49	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.54	1170848.43	1195.46	6805.8	False	13C2-PFOA	766563.13	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.86	1114578.01	1153.27	8025.8	False	13C2-PFOA	766563.13	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.22	1443165.14	1277.41	5090.6	False	13C2-PFOA	766563.13	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.58	1245831.83	1346.96	5446.9	False	13C4-PFOS	177873.49	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.93	1123892.53	1257.83	3975.1	False	13C2-PFDA	1007013.51	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.24	1104718.65	1366.50	3388.7	False	13C2-PFDA	1007013.51	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.01	1183603.80	1232.01	4014.4	False	13C2-PFDA	1007013.51	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.30	267690.30	1180.78	5431.7	False	13C4-PFOS	177873.49	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.87	224992.08	1313.28	2220.2	False	13C4-PFOS	177873.49	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.57	190569.80	1212.15	1165.7	False	13C4-PFOS	177873.49	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.64	488009.69	1199.55	4732.4	False	13C2-PFOA	766563.13	1250.00		N/A	N/A	✓

Sample Name	LD80 IB	Injection Vial	4
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 1:33:00 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.62	1292459.60	1152.14	4191.8	False	13C2-PFDA	1120719.13	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.15	168139.27	1305.82	942.7	False	13C4-PFOS	194868.48	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.31	150122.22	1307.42	959.4	False	13C4-PFOS	194868.48	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.57	1239957.52	1309.00	5427.6	False	13C2-PFOA	741393.25	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.90	1156654.42	1237.44	9805.2	False	13C2-PFOA	741393.25	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.27	1462592.09	1338.56	1486.5	False	13C2-PFOA	741393.25	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.64	1281748.37	1264.93	4248.1	False	13C4-PFOS	194868.48	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.00	1309539.92	1316.90	3779.2	False	13C2-PFDA	1120719.13	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.32	1119648.95	1244.45	4380.3	False	13C2-PFDA	1120719.13	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.11	1299221.86	1215.15	4636.5	False	13C2-PFDA	1120719.13	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.32	259806.56	1046.06	9526.9	False	13C4-PFOS	194868.48	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.91	220455.98	1174.58	5764.7	False	13C4-PFOS	194868.48	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.64	193299.41	1122.28	1176.8	False	13C4-PFOS	194868.48	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.67	427719.44	1087.05	4806.8	False	13C2-PFOA	741393.25	1250.00		N/A	N/A	✓

Sample Name	G1696-FS(0)	Injection Vial	9
Sample ID	CBD-HVG-GW10-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 2:25:16 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.59	677802.10	706.75	3956.7	False	13C2-PFDA	958126.14	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.12	88351.31	883.87	860.9	False	13C4-PFOS	151279.70	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.28	76665.71	860.07	716.6	False	13C4-PFOS	151279.70	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.56	308449.37	416.31	822.4	False	13C2-PFOA	579899.60	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.89	447651.89	612.29	1229.3	False	13C2-PFOA	579899.60	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.25	701314.24	820.58	1402.6	False	13C2-PFOA	579899.60	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.62	721474.20	917.16	1579.0	False	13C4-PFOS	151279.70	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.97	828206.54	974.20	3547.3	False	13C2-PFDA	958126.14	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.29	623066.86	810.04	3358.3	False	13C2-PFDA	958126.14	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.07	531914.65	581.92	3890.7	False	13C2-PFDA	958126.14	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.32	102429.76	531.24	1374.2	False	13C4-PFOS	151279.70	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.90	111381.16	764.42	549.6	False	13C4-PFOS	151279.70	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.61	120851.36	903.83	369.7	False	13C4-PFOS	151279.70	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.66	224464.82	729.35	1087.6	False	13C2-PFOA	579899.60	1250.00		N/A	N/A	✓

Chromatograms



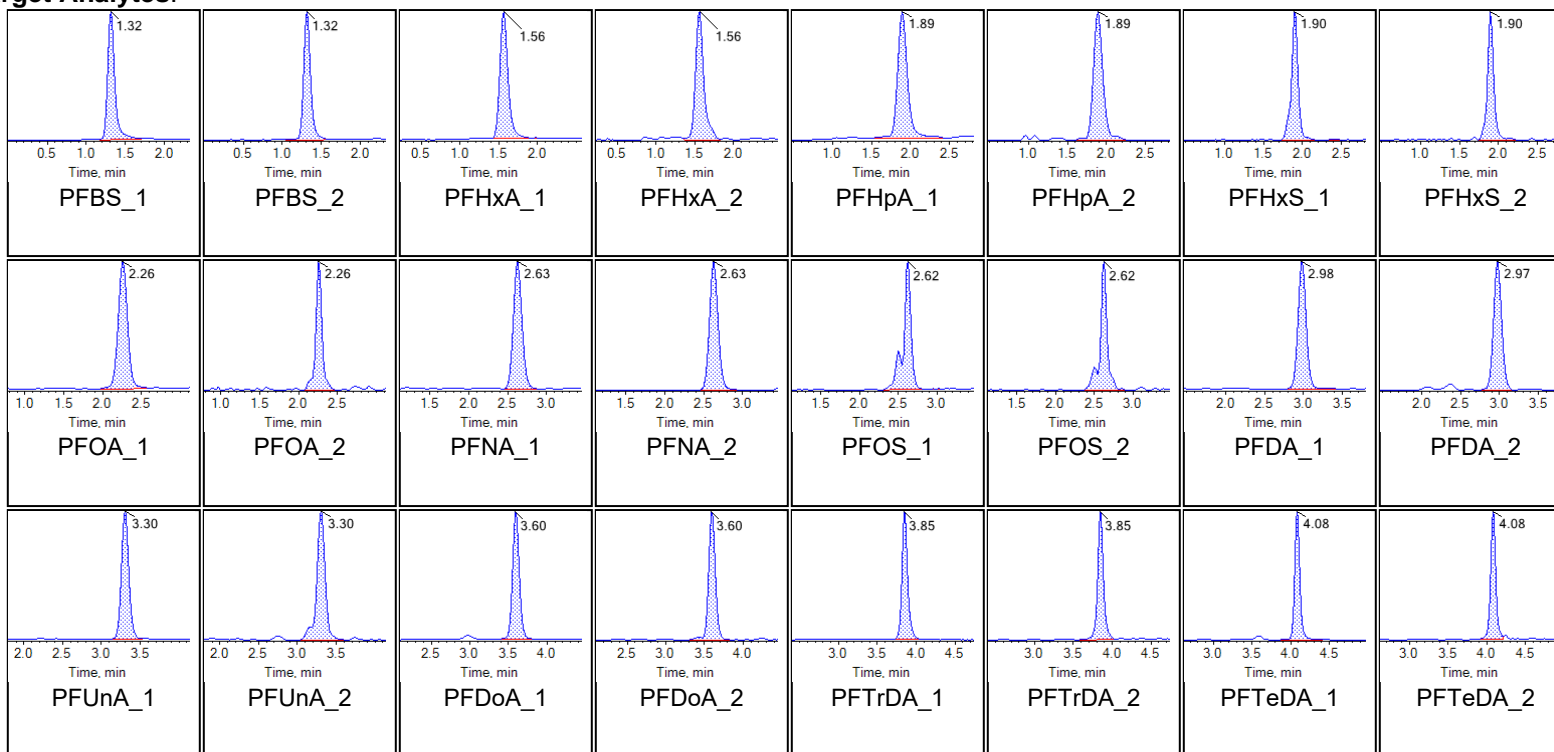
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	LD74	Injection Vial	2
Sample ID	L1	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

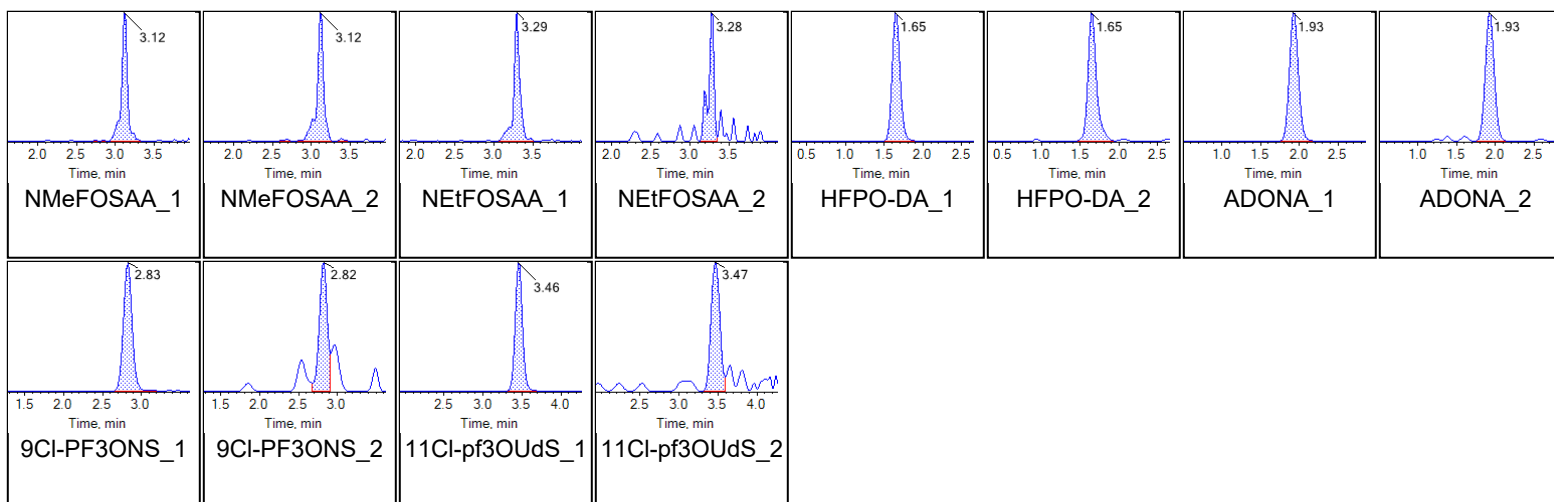
Chromatograms

Target Analytes:

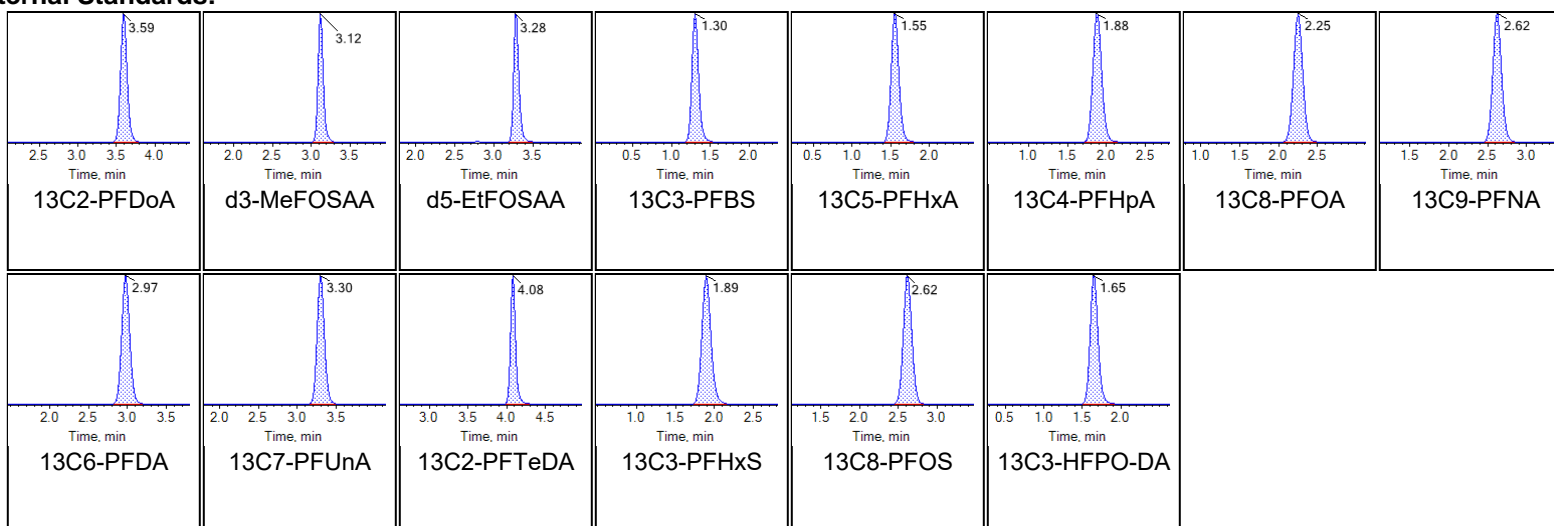




Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Internal Standards:





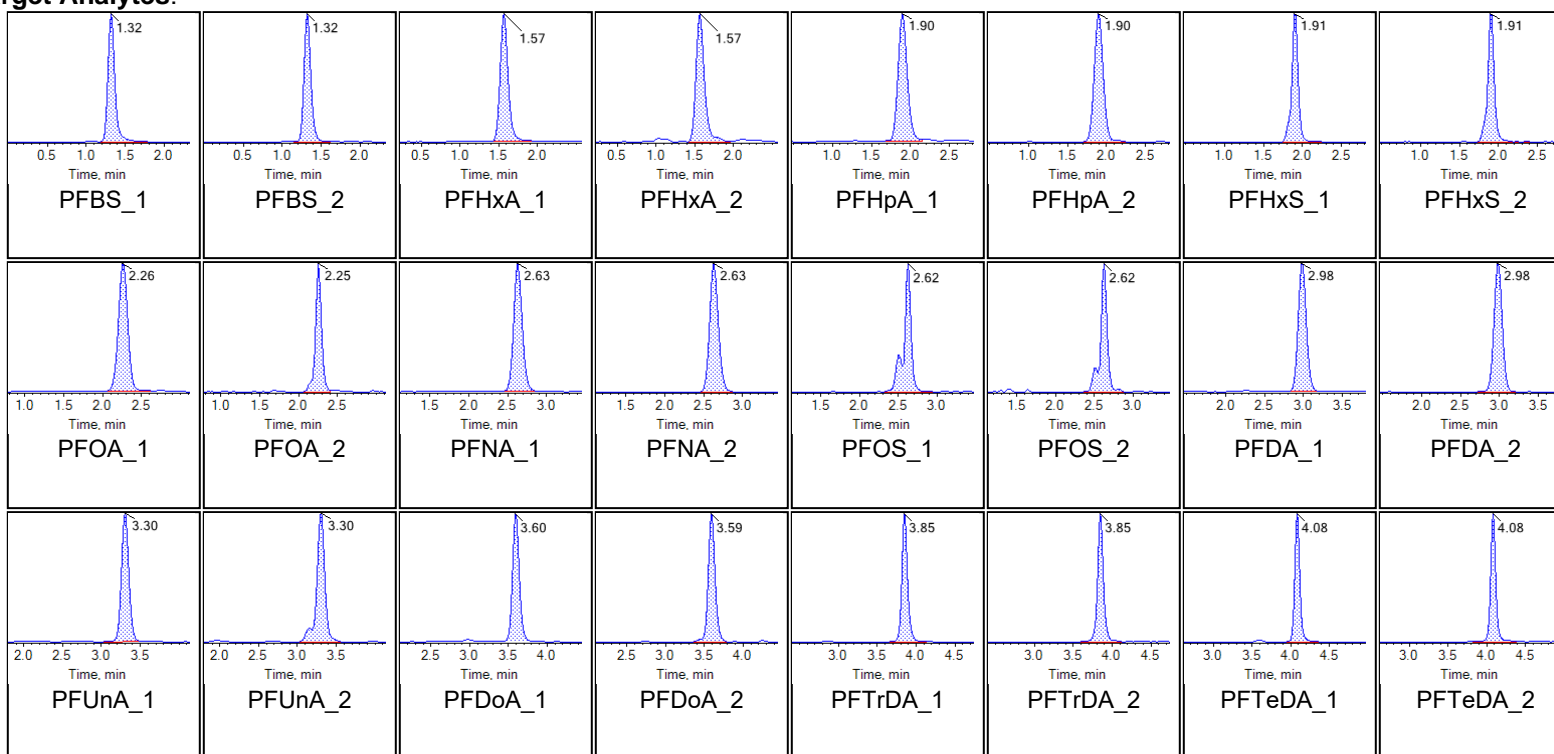
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	LD75	Injection Vial	3
Sample ID	L2	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:56:29 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

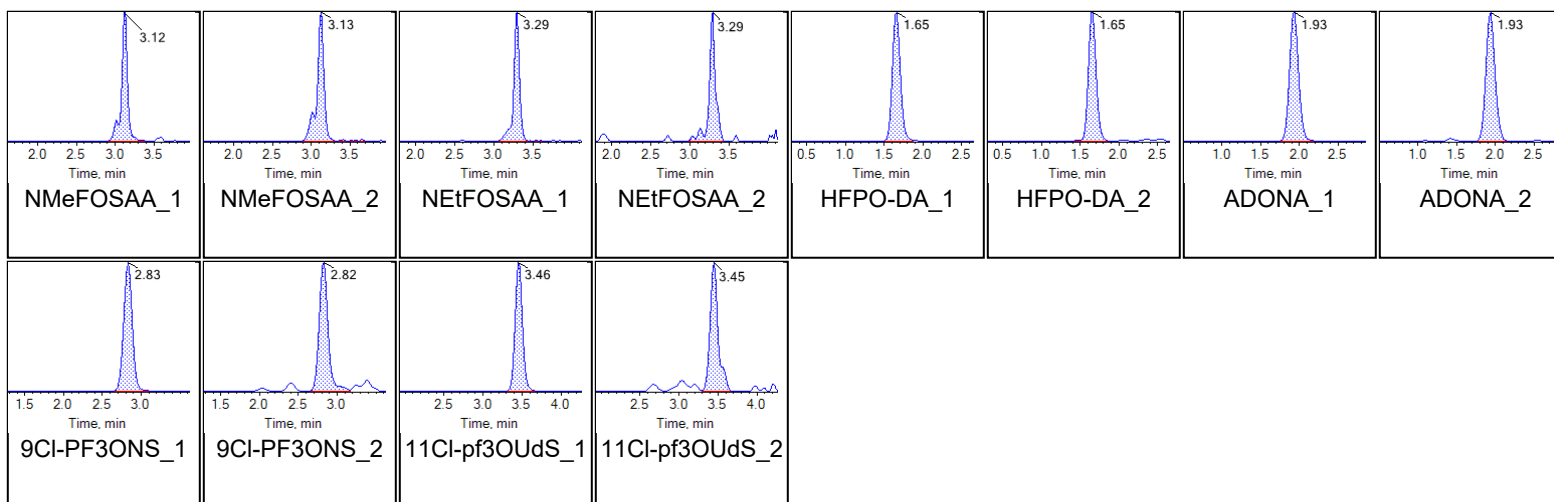
Chromatograms

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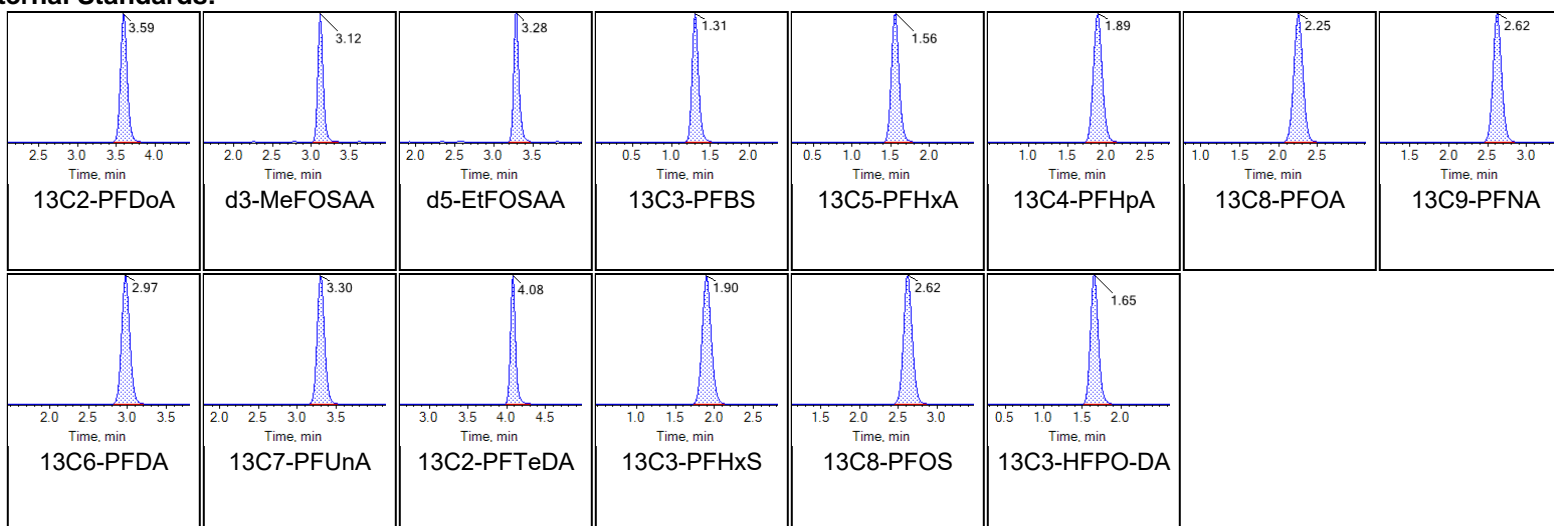




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Internal Standards:





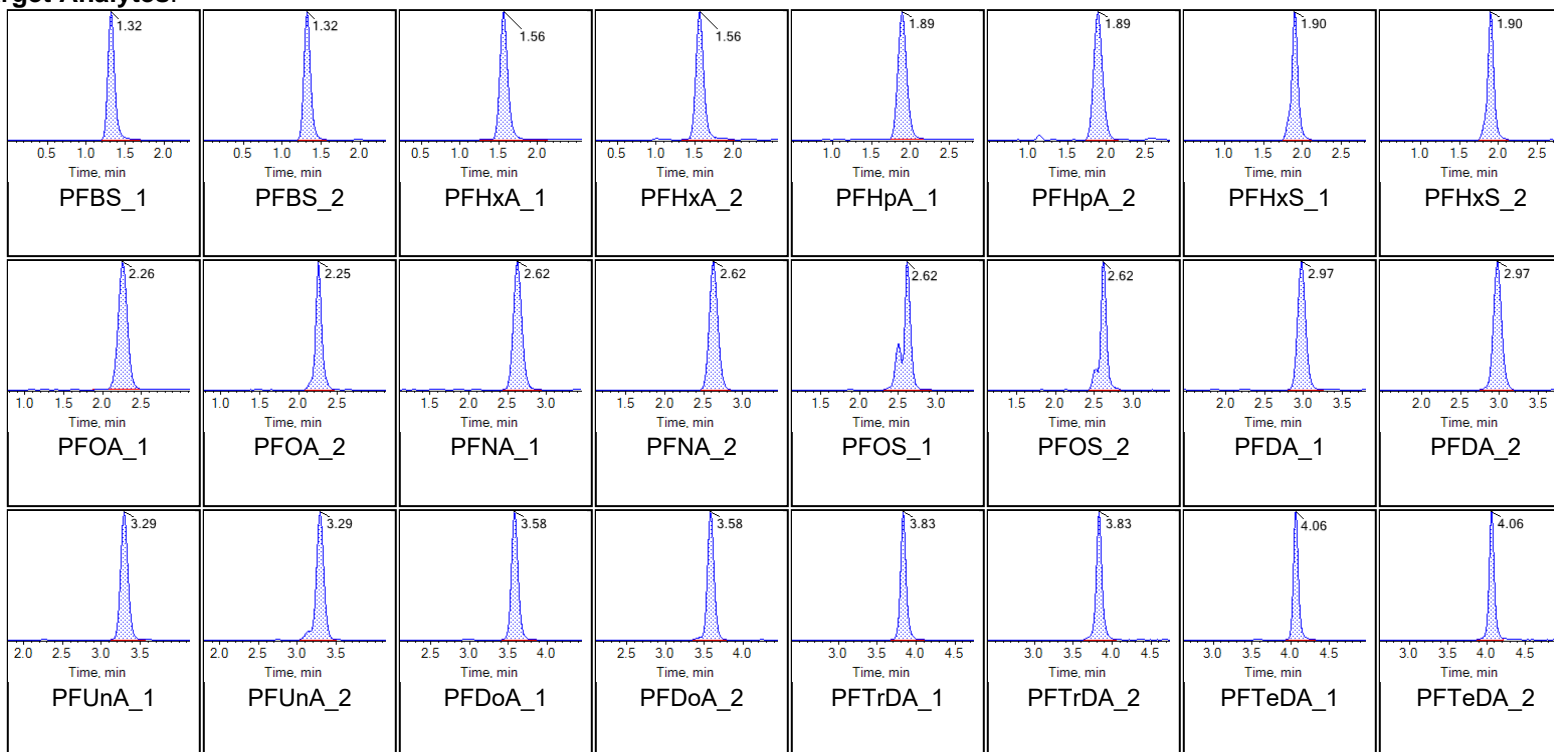
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	LD76	Injection Vial	4
Sample ID	L3	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:06:57 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

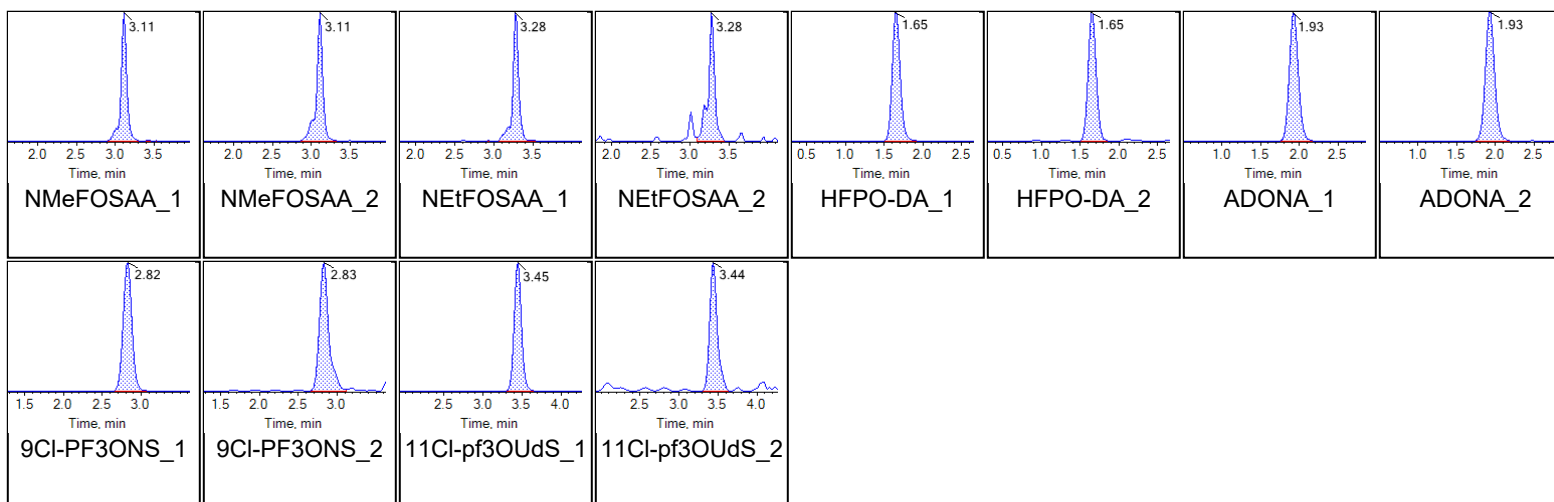
Chromatograms

Target Analytes:

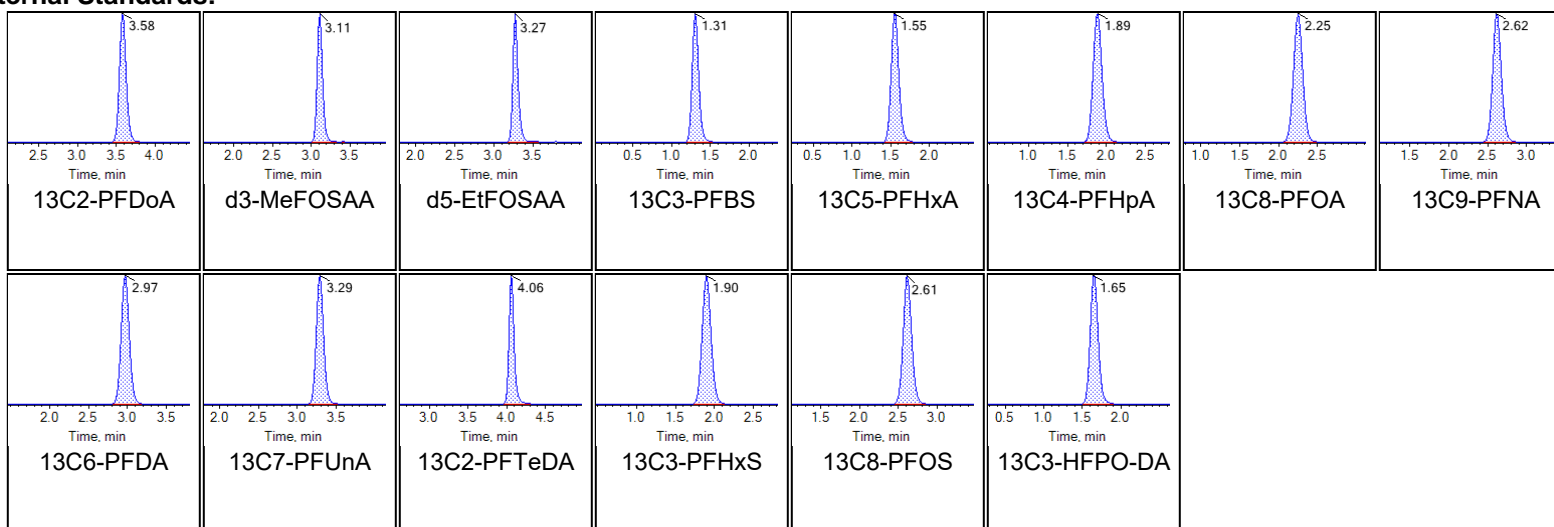




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Printed: 09/11/2020 11:46:05 AM

Internal Standards:





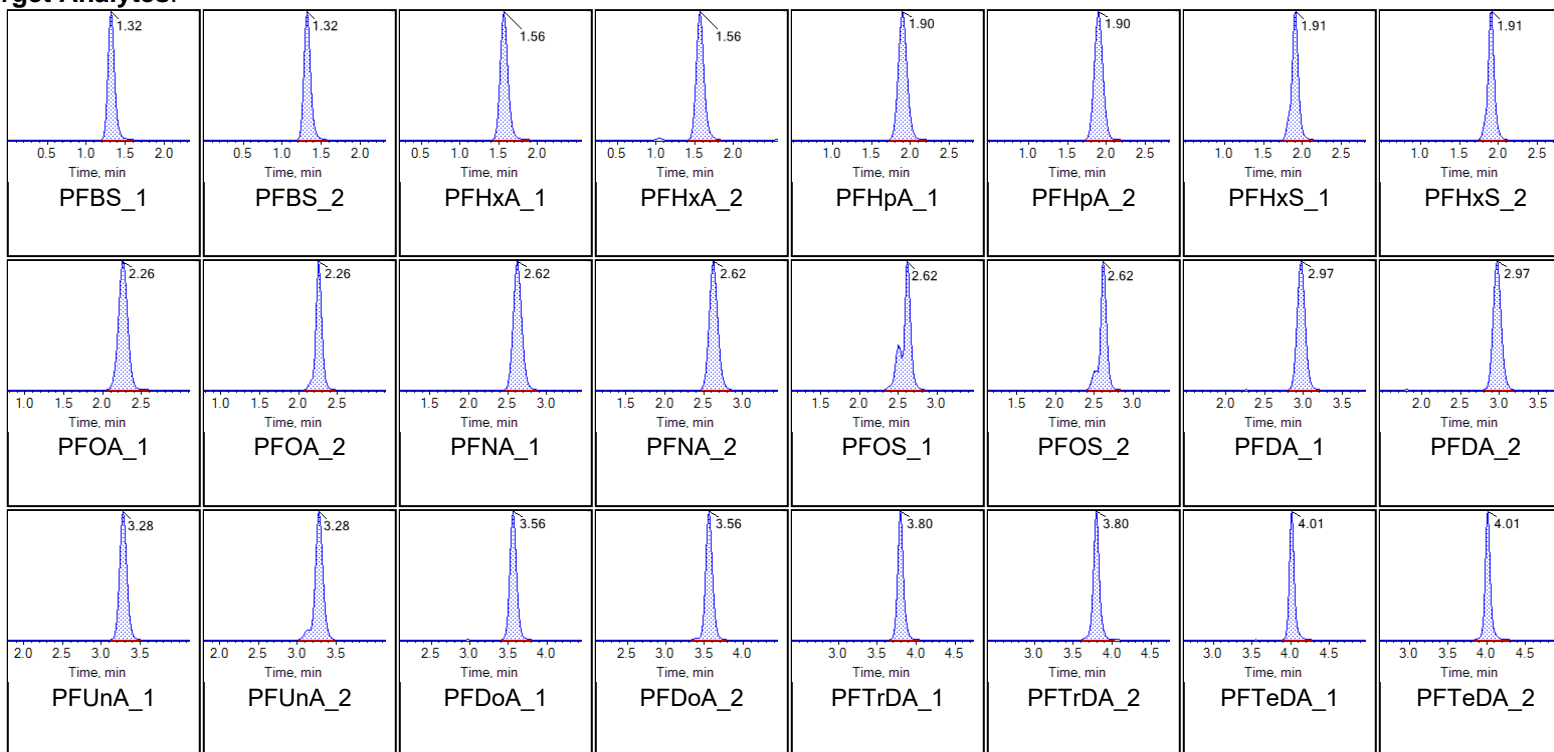
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	LD77	Injection Vial	5
Sample ID	L4	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:17:24 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

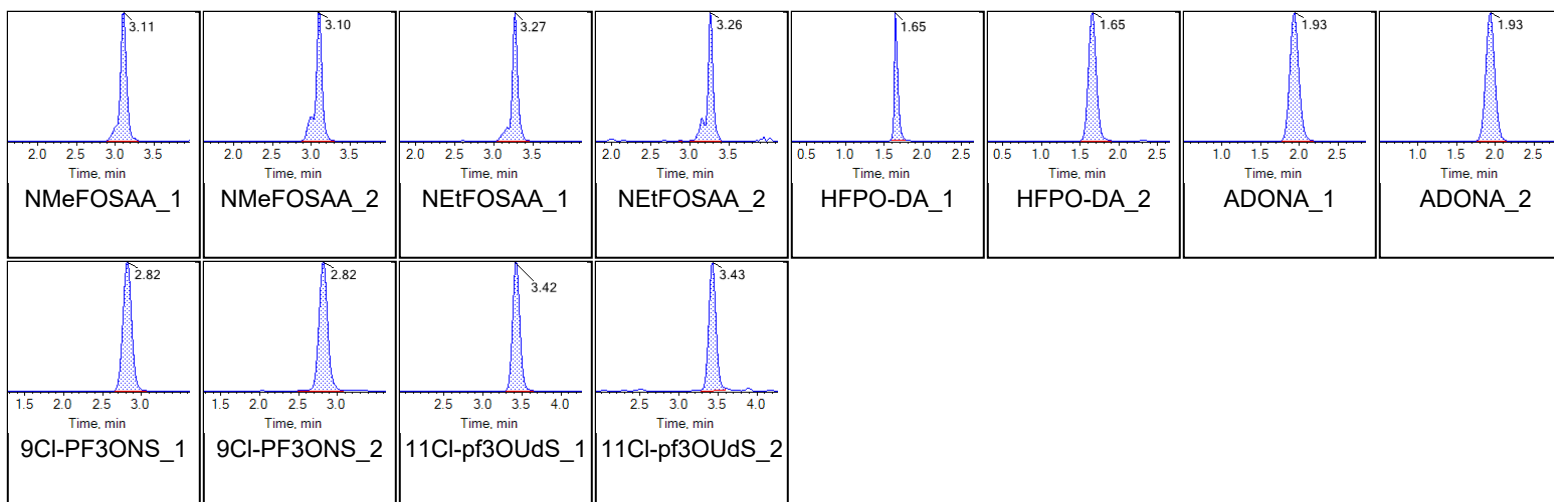
Chromatograms

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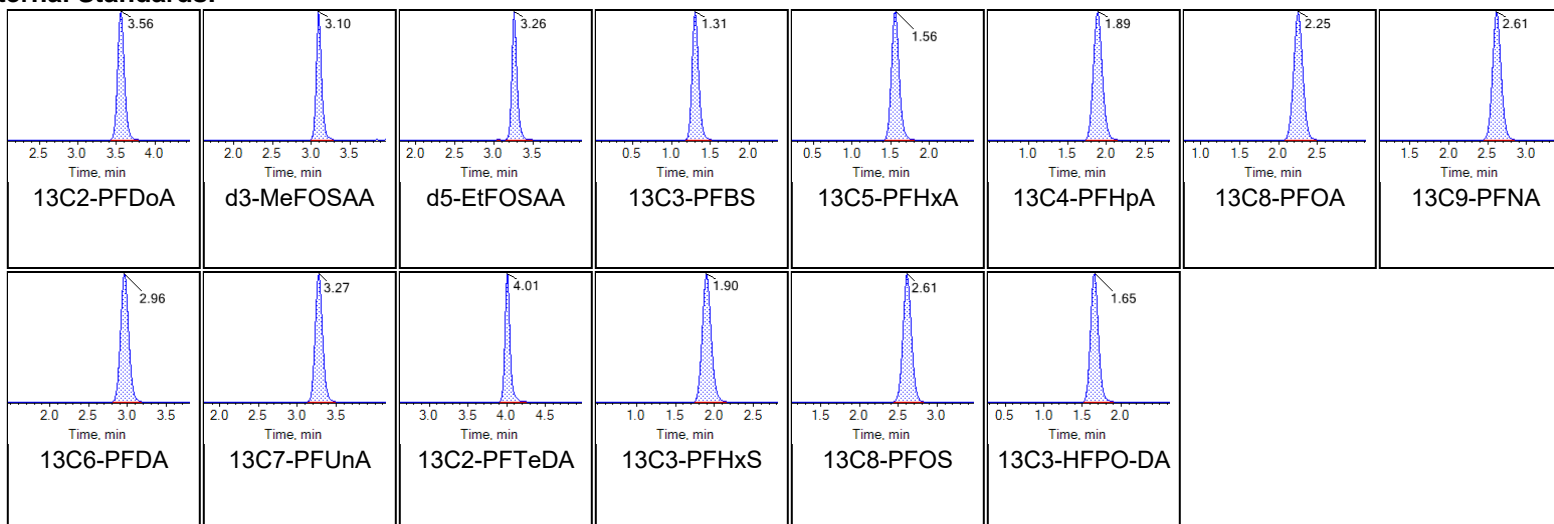




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Printed: 09/11/2020 11:46:05 AM

Internal Standards:





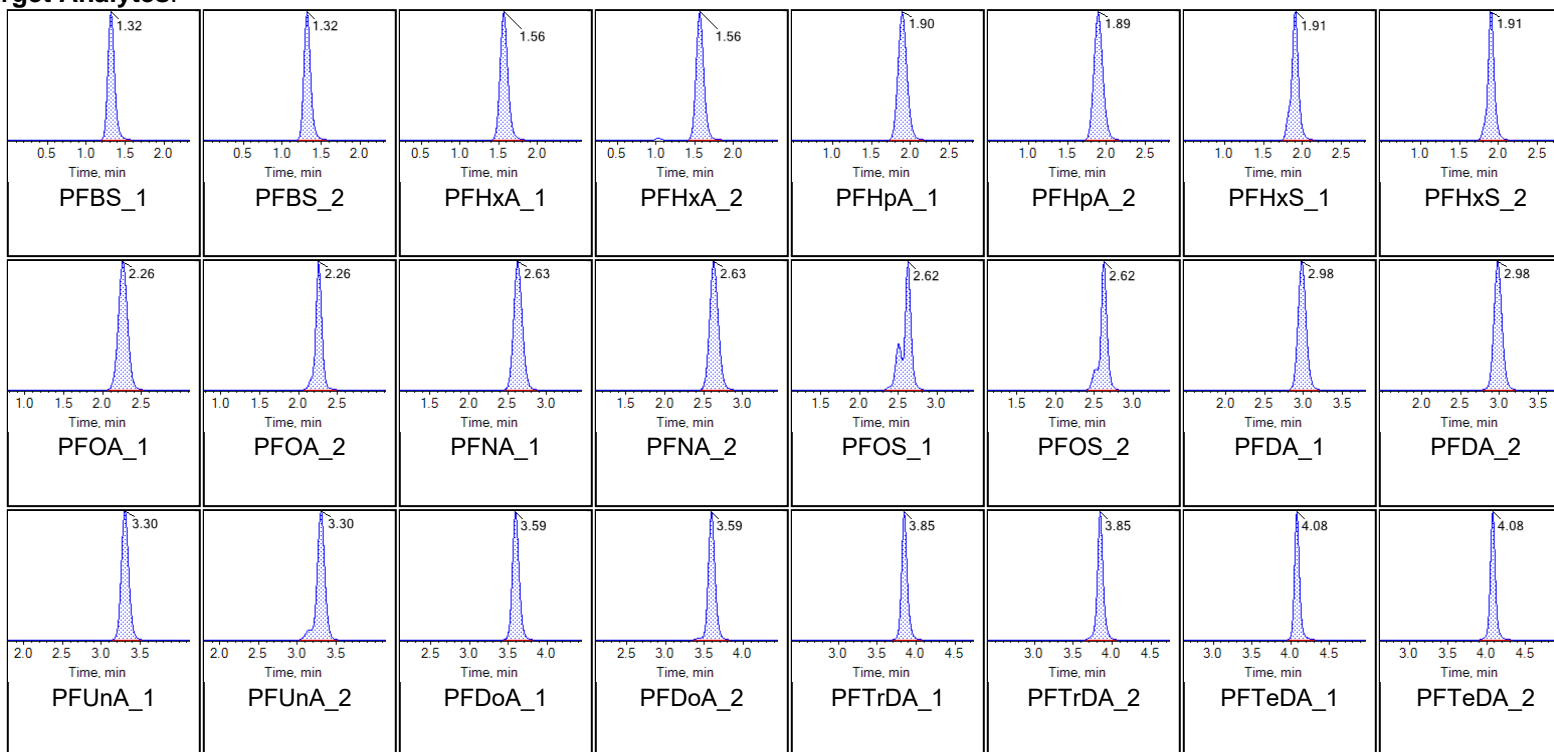
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	LD78	Injection Vial	6
Sample ID	L5	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:27:51 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

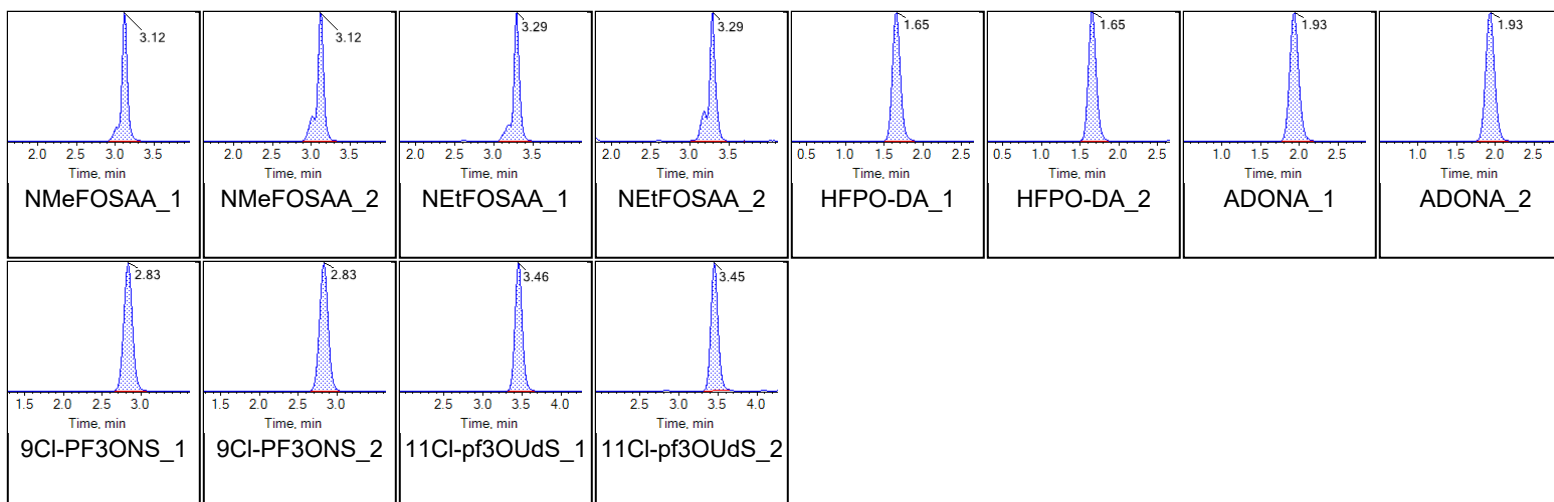
Chromatograms

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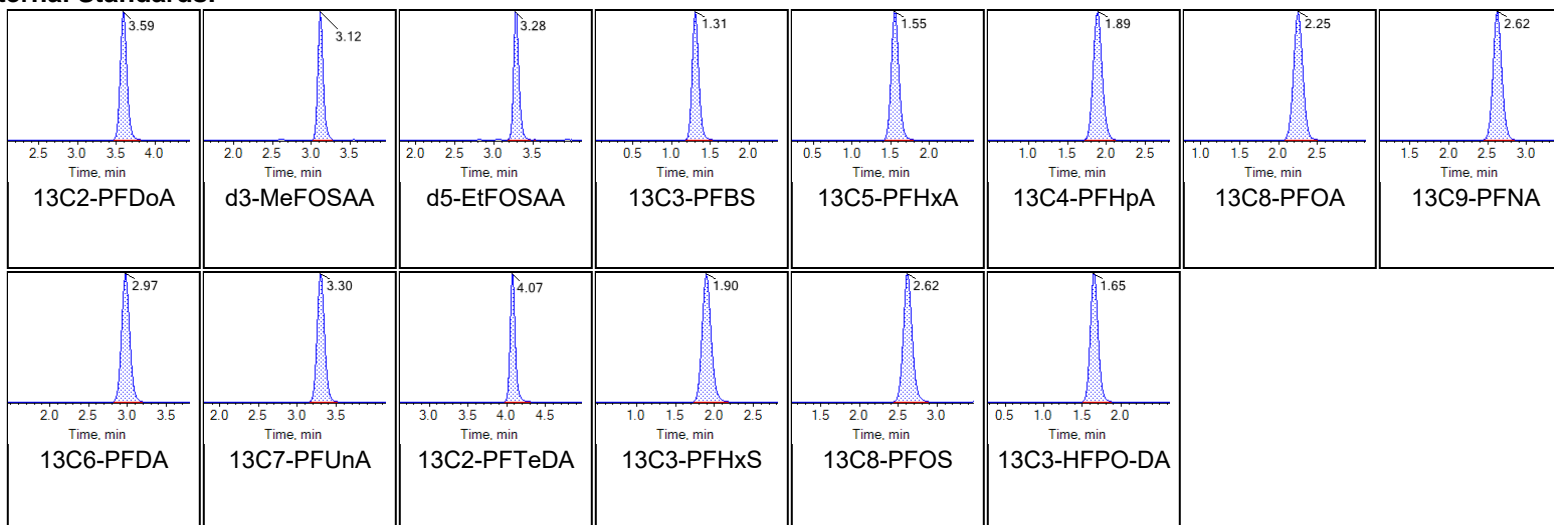




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Internal Standards:





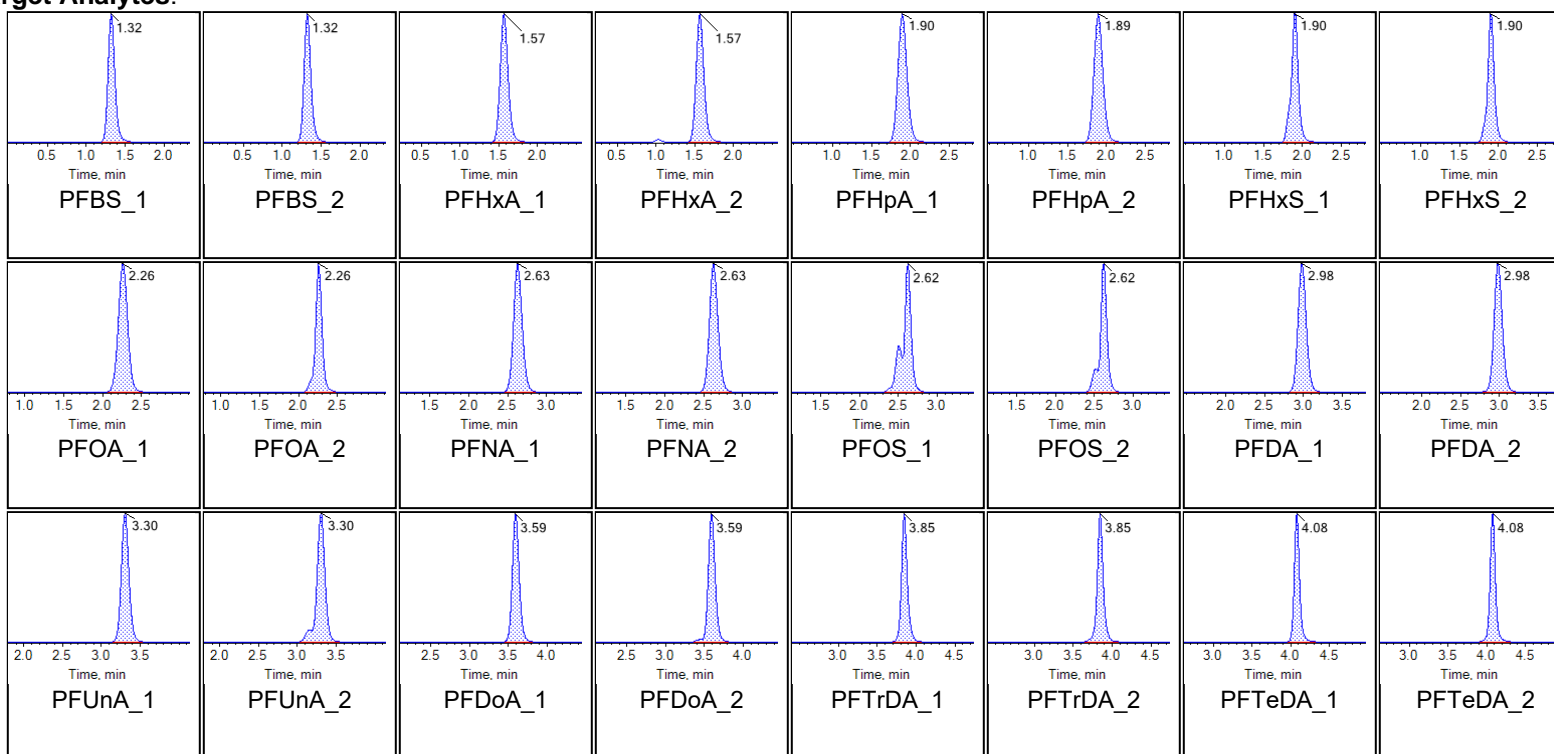
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	LD79	Injection Vial	7
Sample ID	L6	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:38:18 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

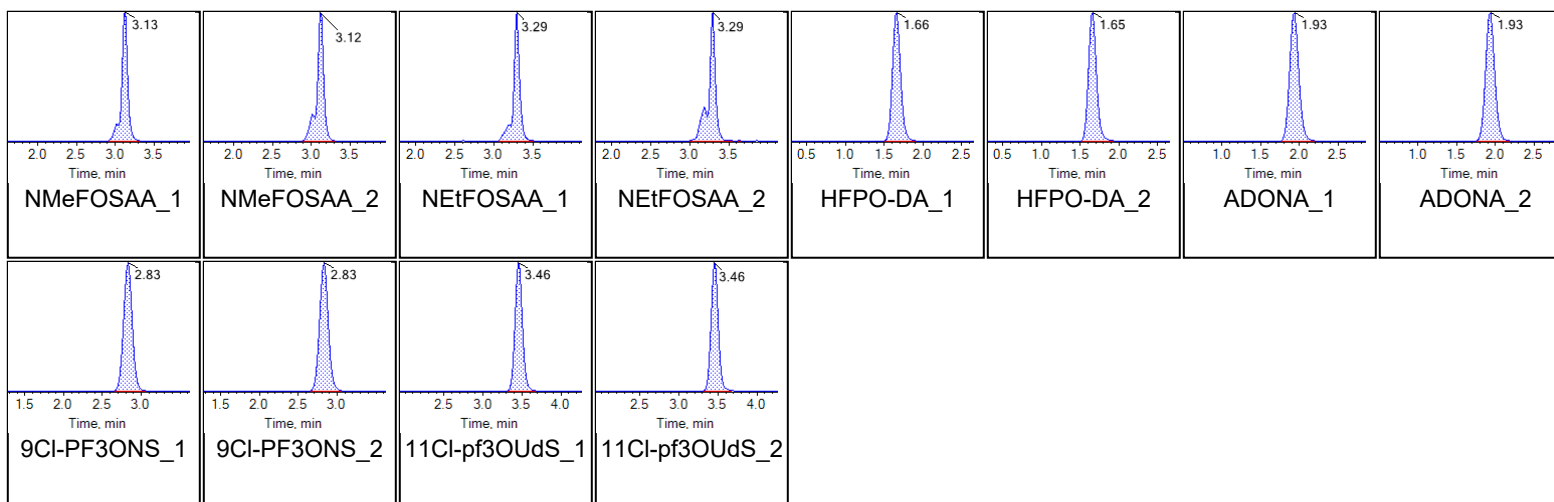
Chromatograms

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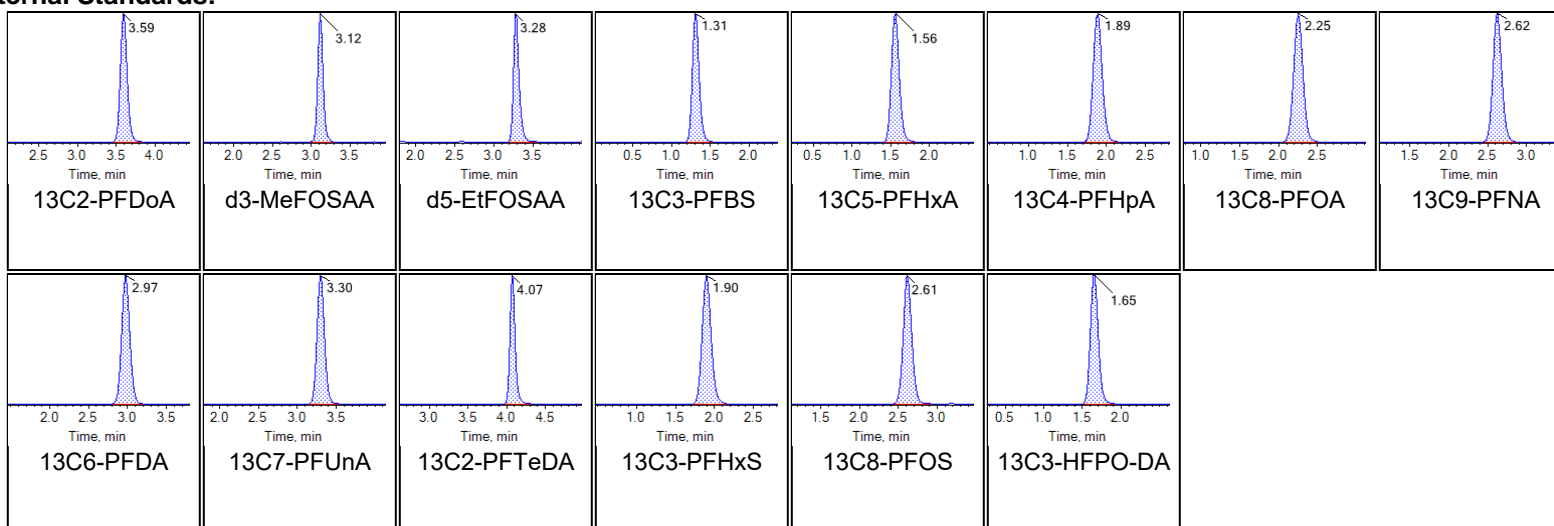




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Internal Standards:





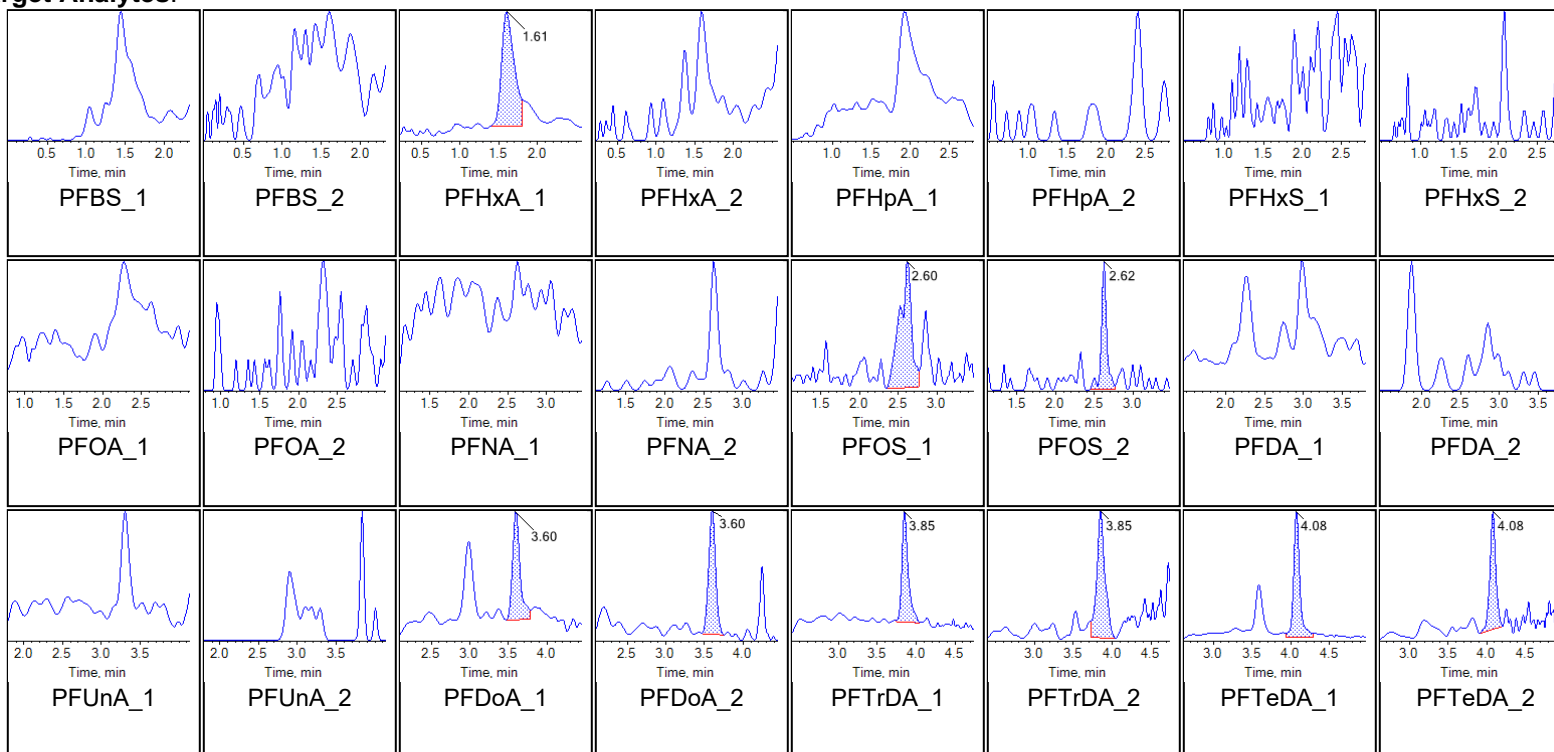
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	LD80 IB	Injection Vial	8
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:48:46 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

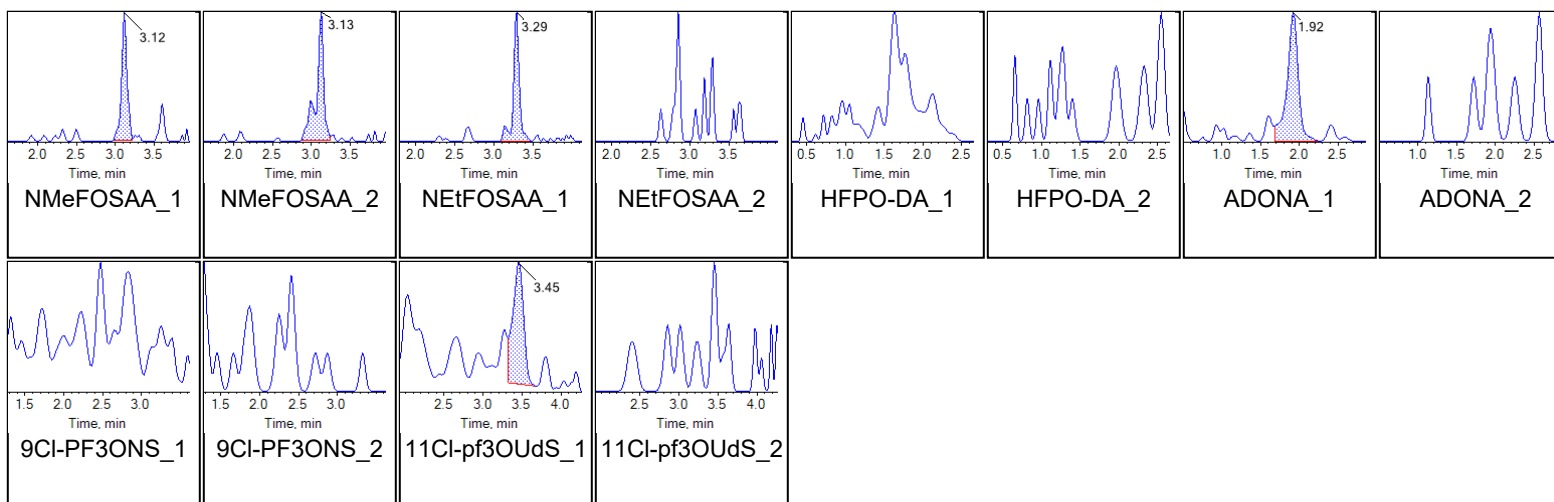
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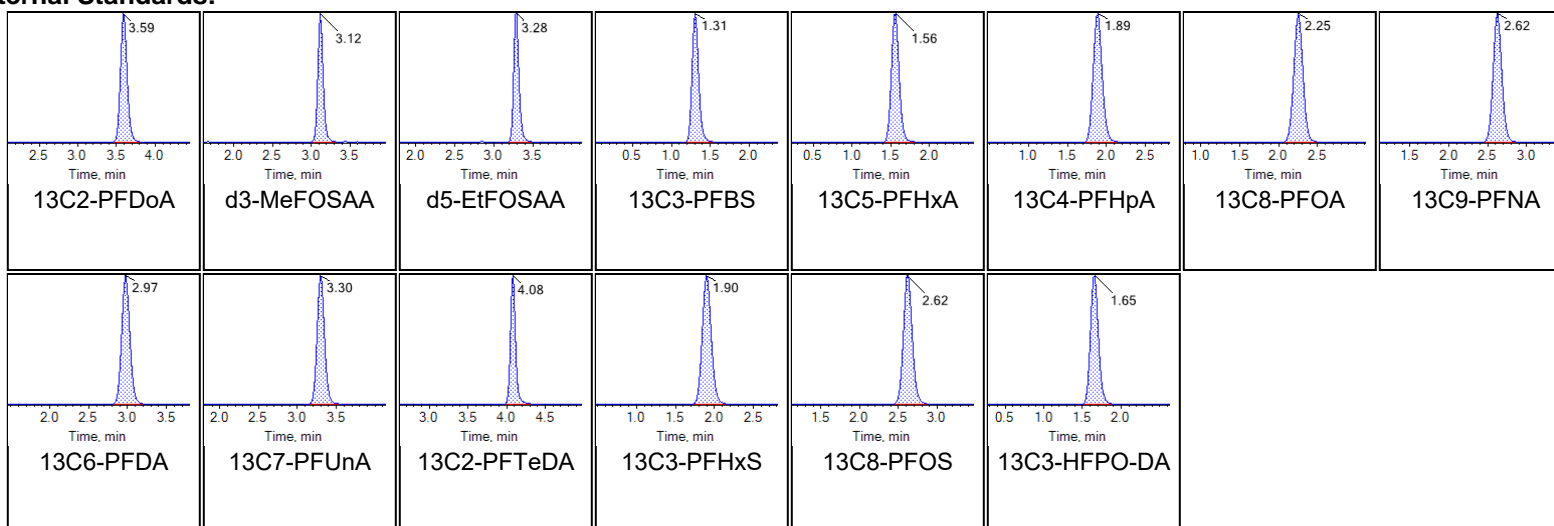




Chromatogram Report

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Internal Standards:





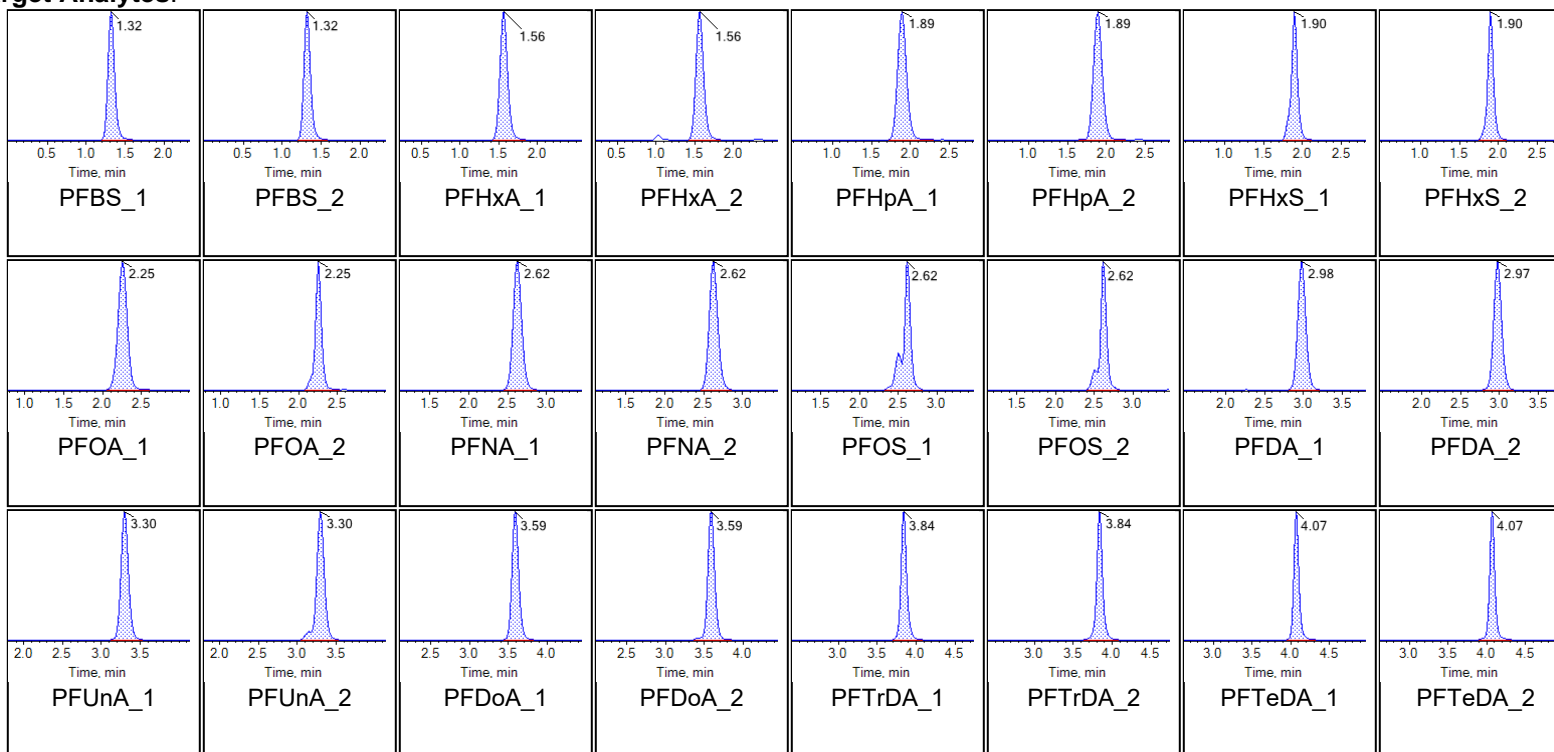
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	LD81 ICC	Injection Vial	9
Sample ID	ICC	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:59:12 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

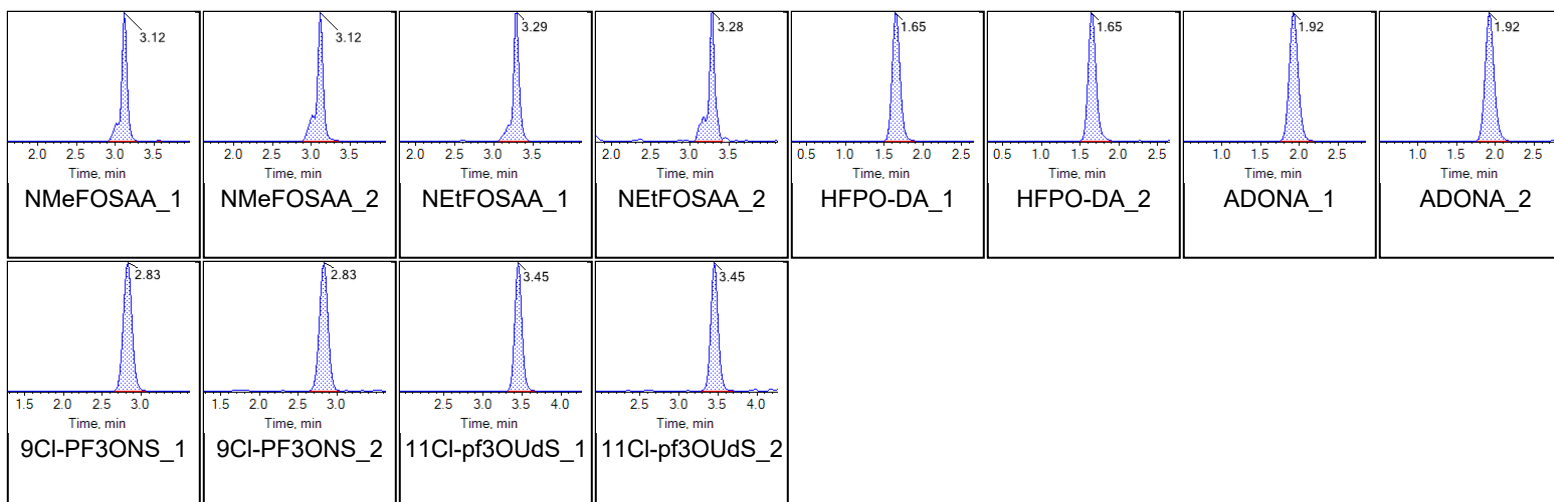
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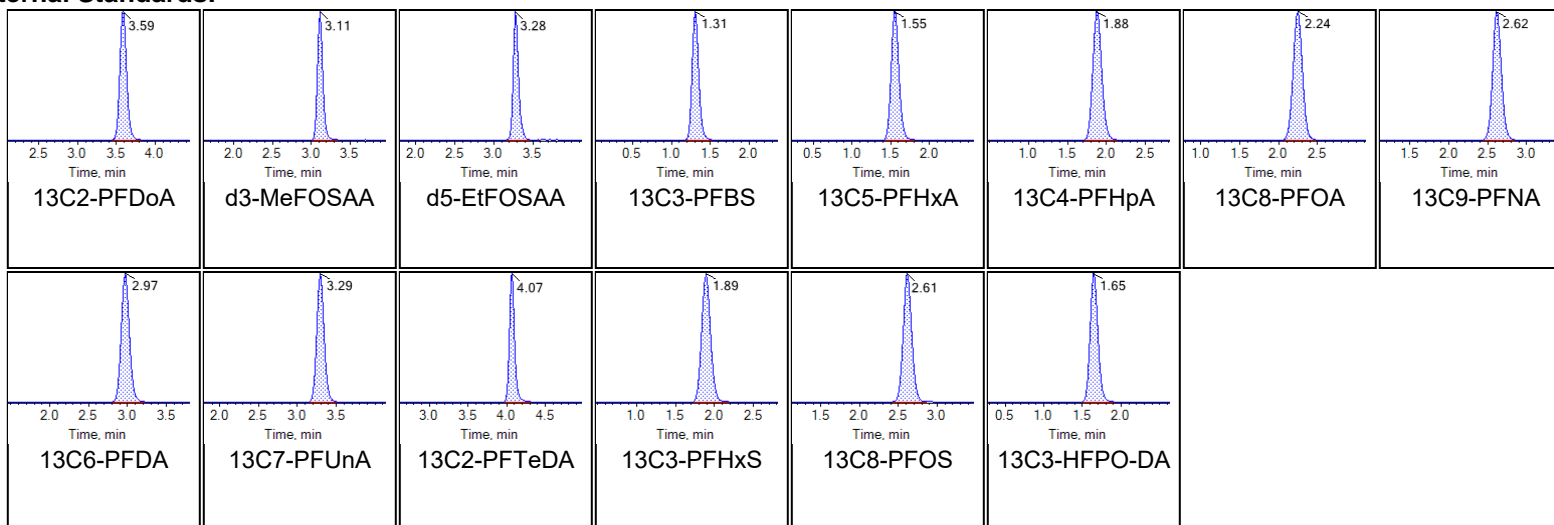




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Internal Standards:





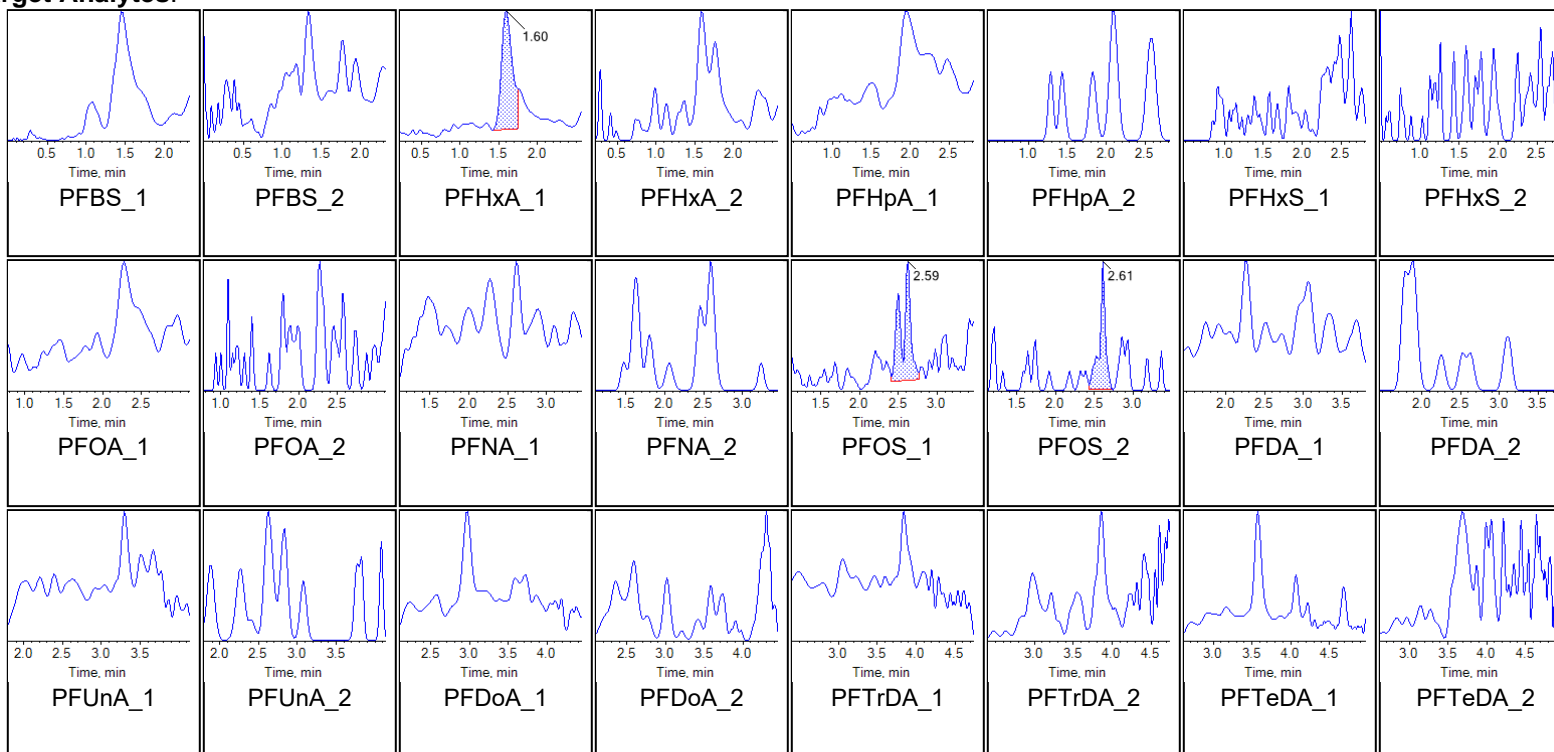
Chromatogram Report

Created with Analyst Reporter
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Sample Name	DA908PB-FS(0)	Injection Vial	12
Sample ID	Procedural Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 3:30:37 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

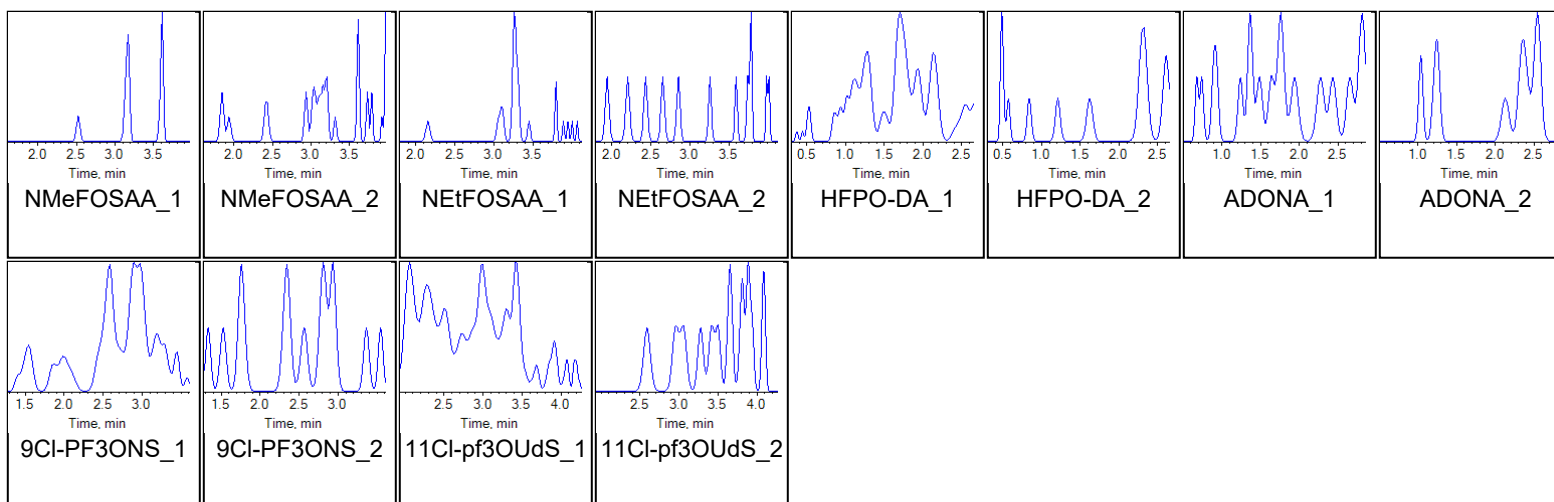
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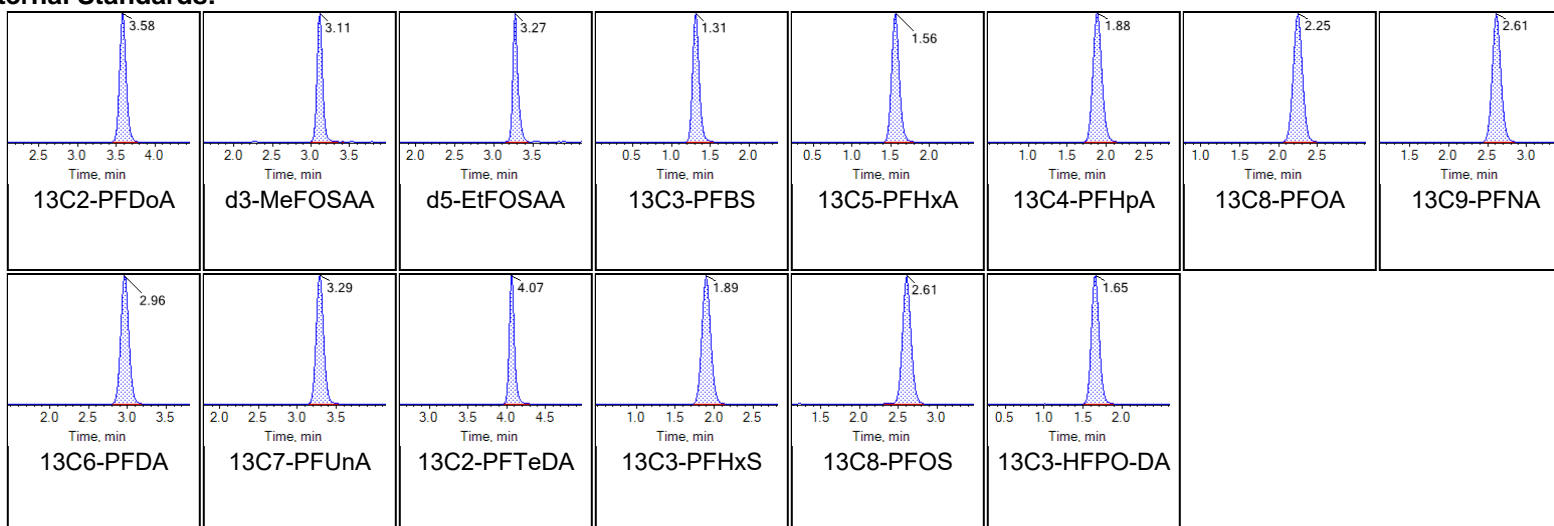




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Internal Standards:





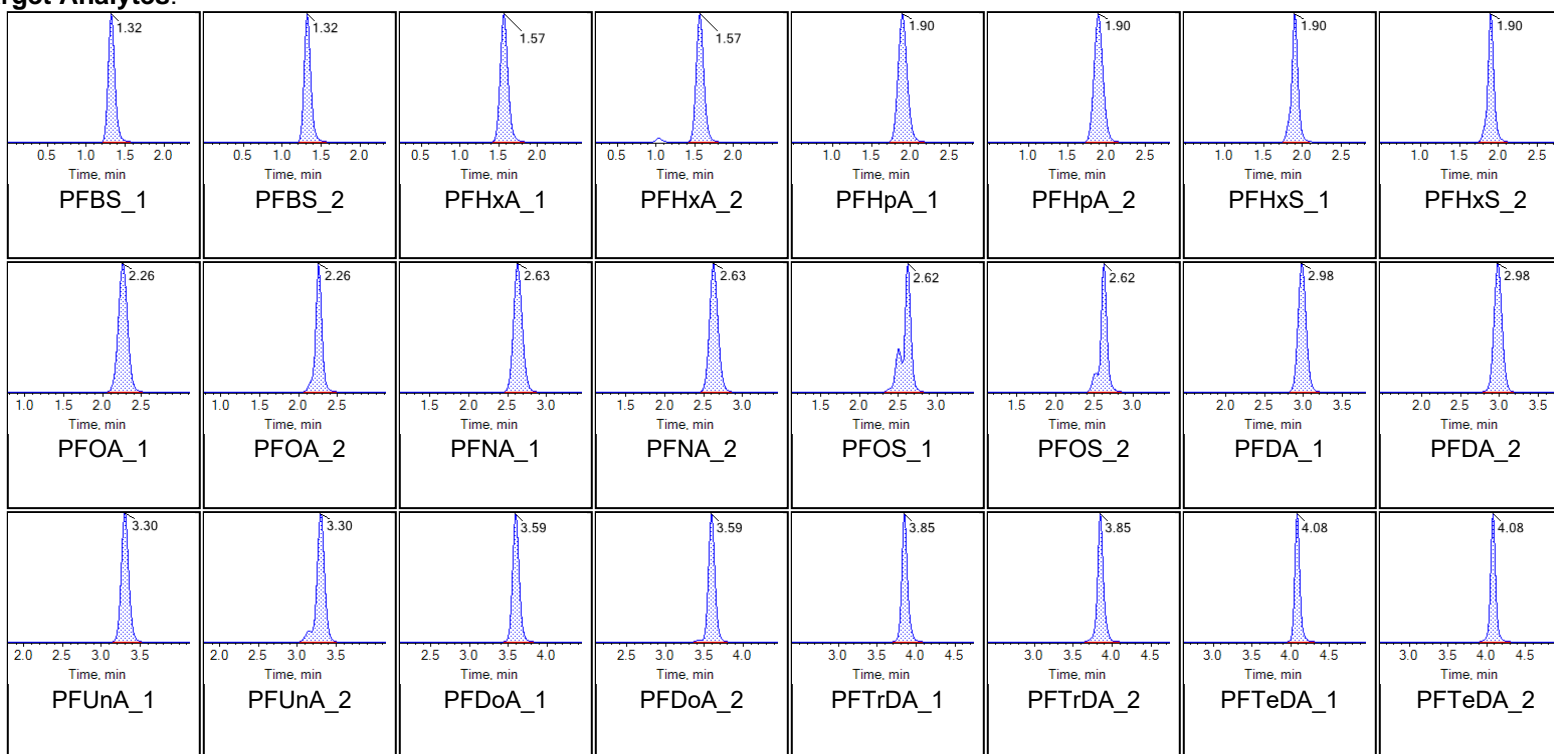
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Printed: 09/11/2020 11:46:05 AM

Sample Name	DA909LCS-FS(0)	Injection Vial	13
Sample ID	Laboratory Control Sample	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 3:41:28 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

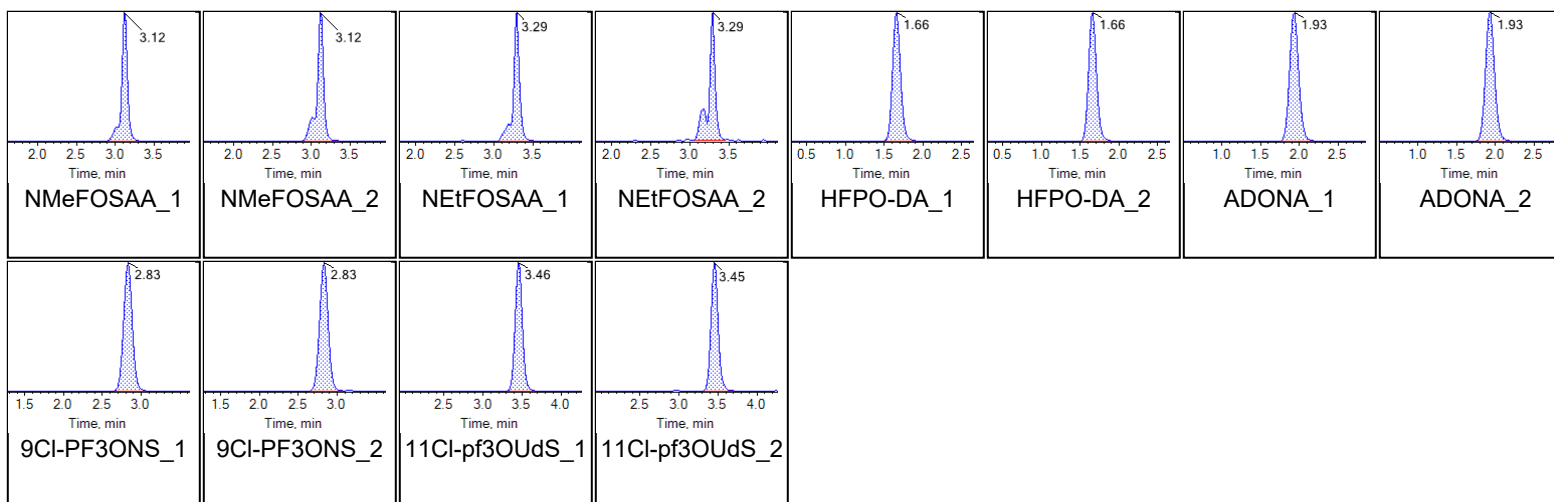
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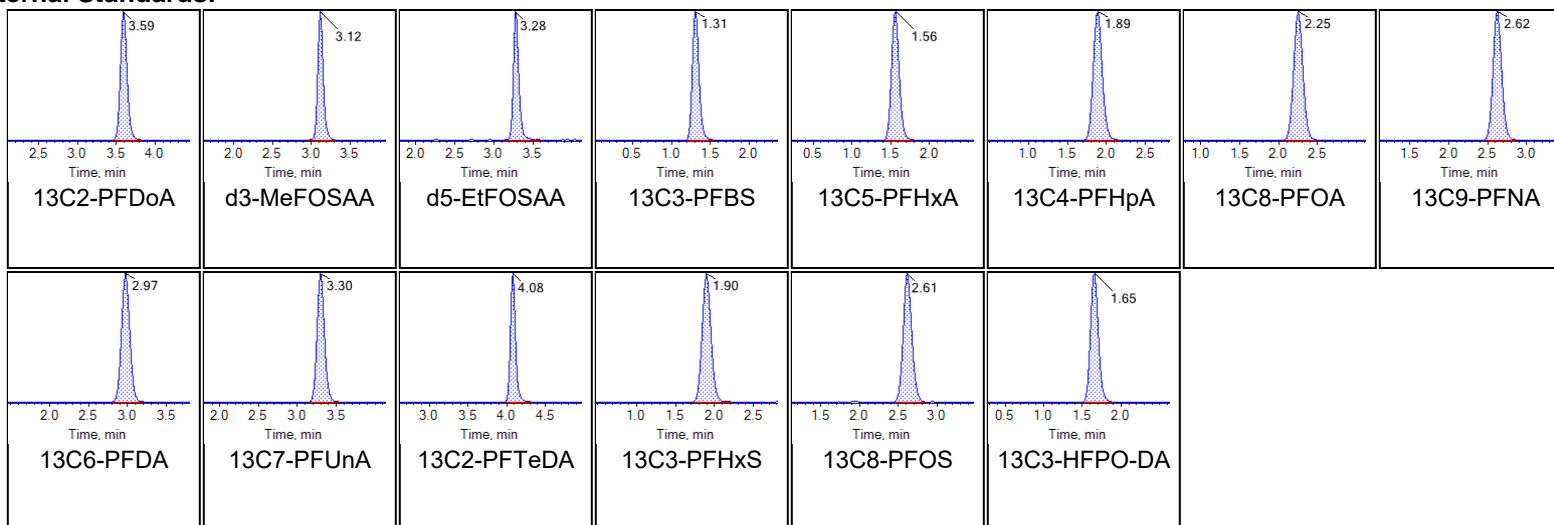




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Internal Standards:





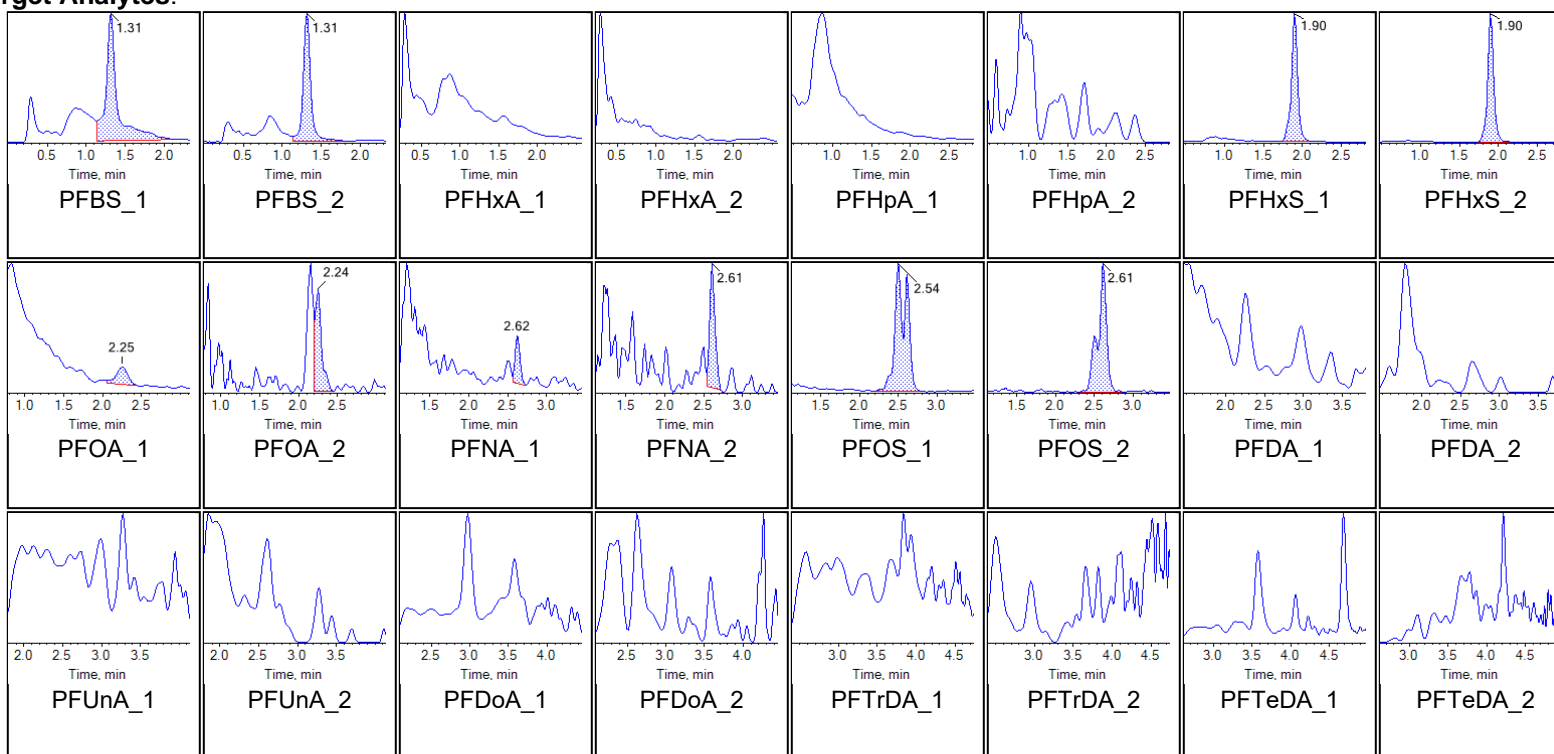
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	G1697-FS(0)	Injection Vial	15
Sample ID	CBD-HVG-GW09-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 4:02:22 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

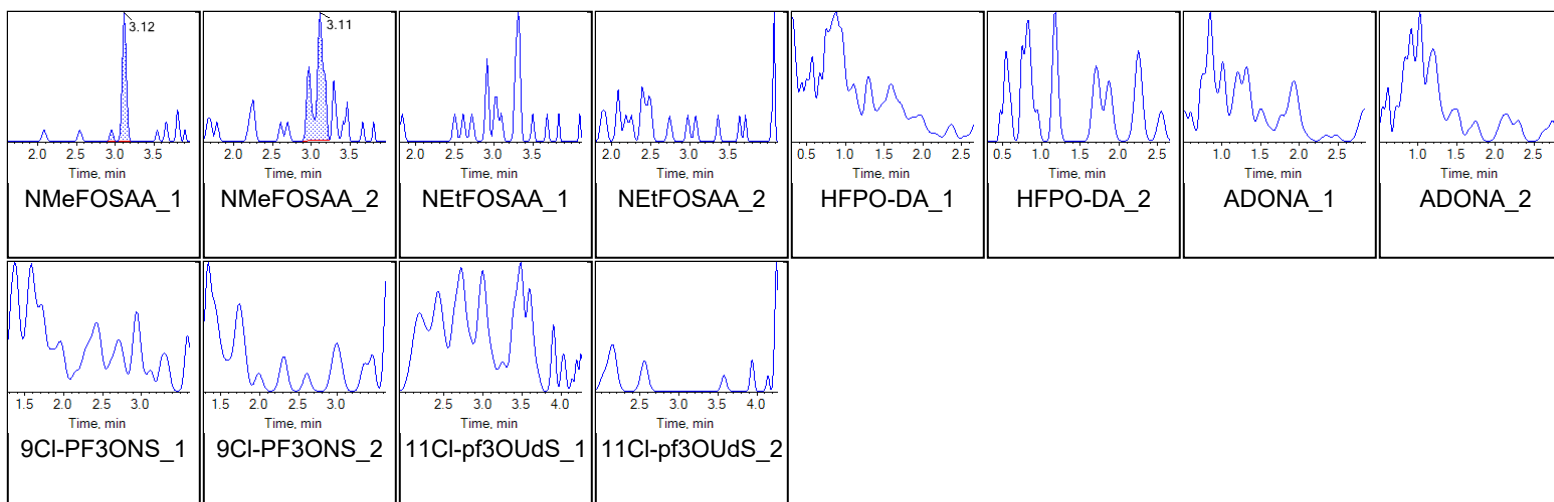
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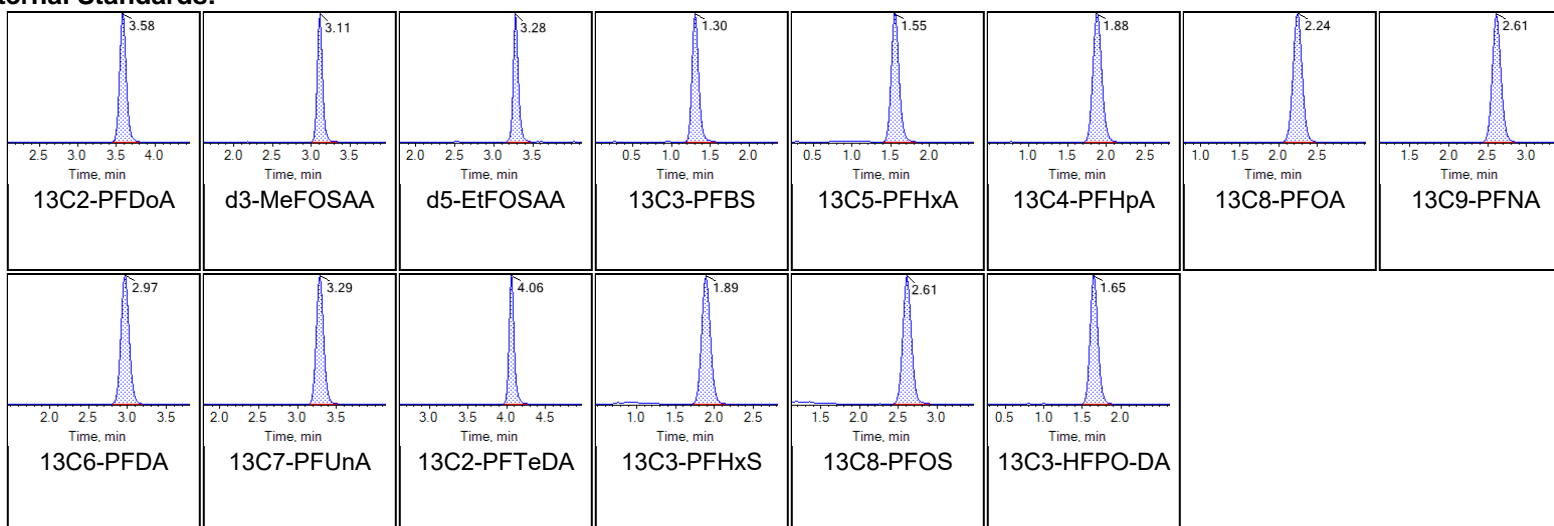




Chromatogram Report

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Internal Standards:





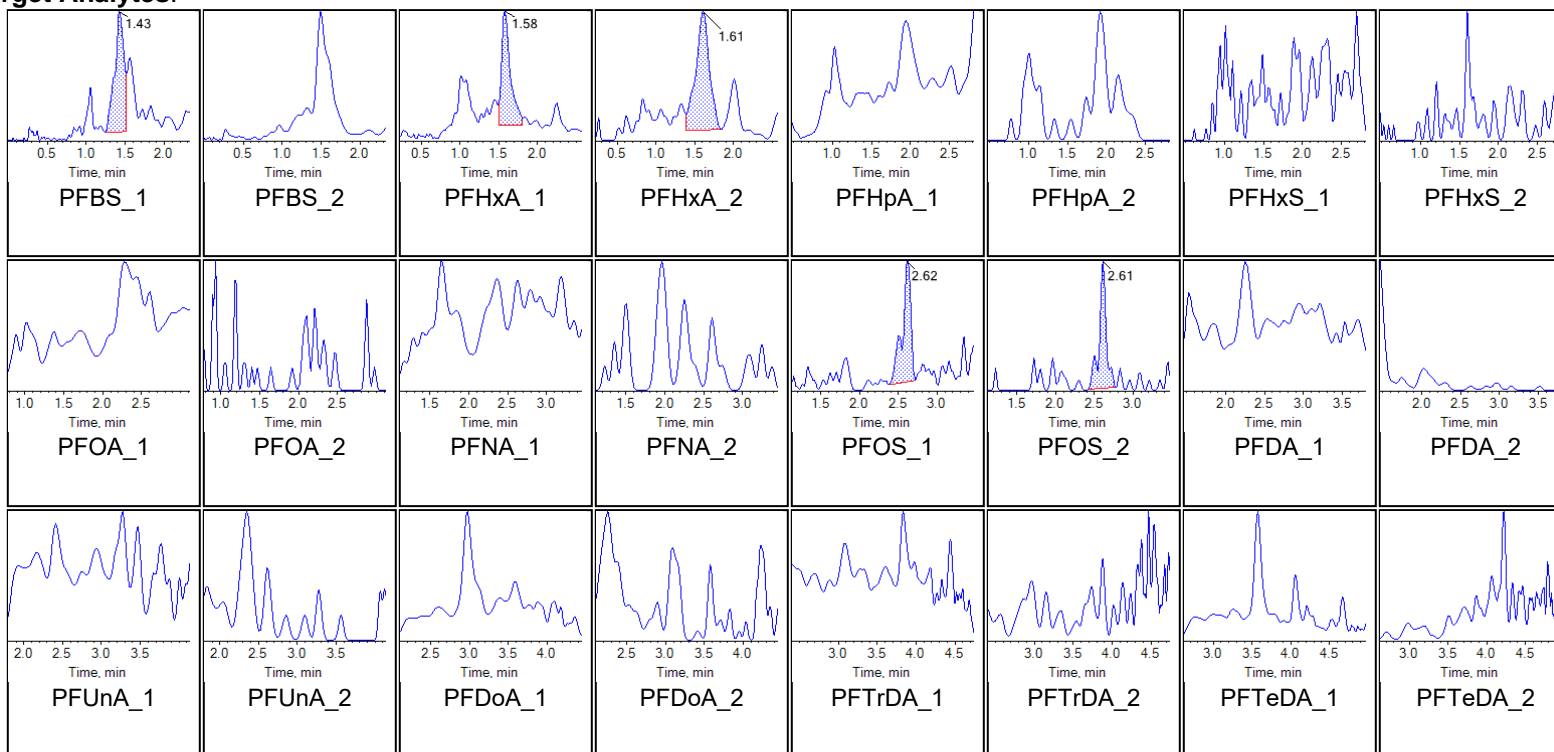
Chromatogram Report

Created with Analyst Reporter
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Sample Name	G1698-FS(0)	Injection Vial	16
Sample ID	CBD-EB01-101420-GW	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 4:12:50 PM	Data File	AE_11052020_5-369.wiff
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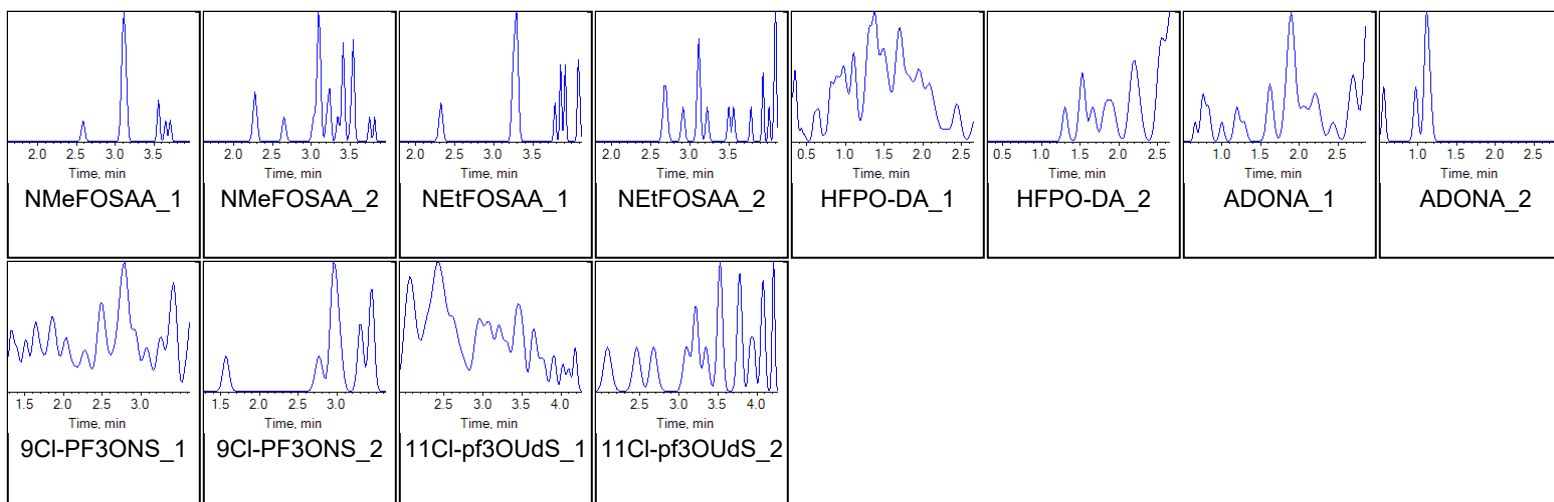
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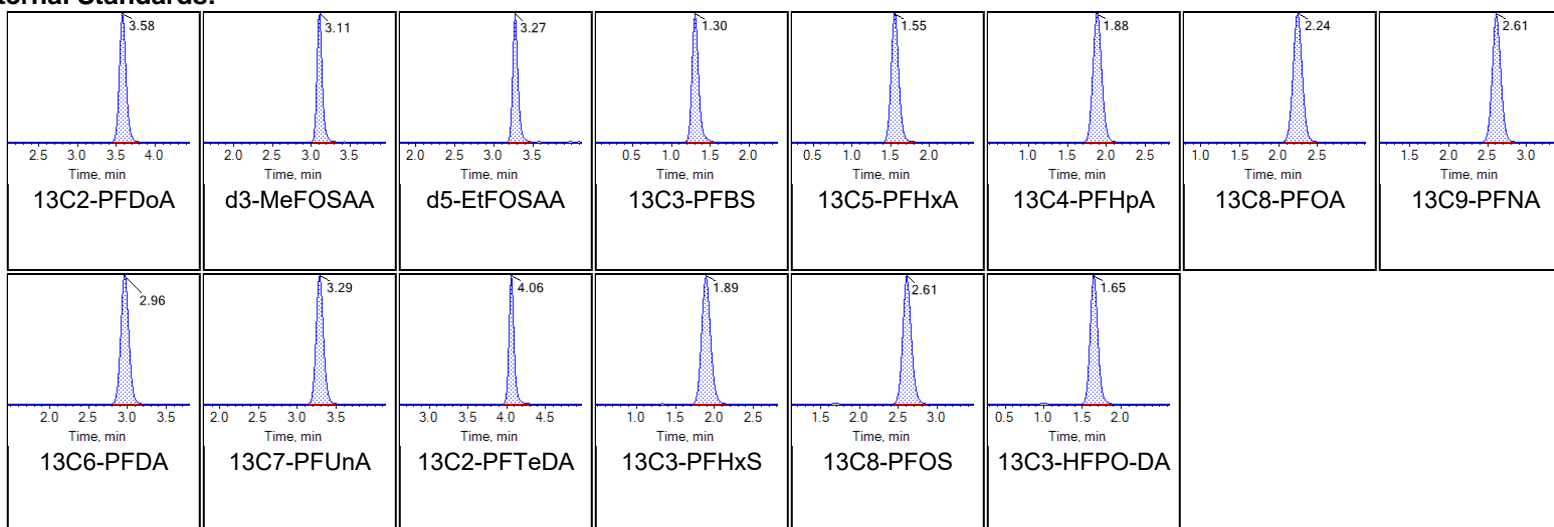




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Internal Standards:





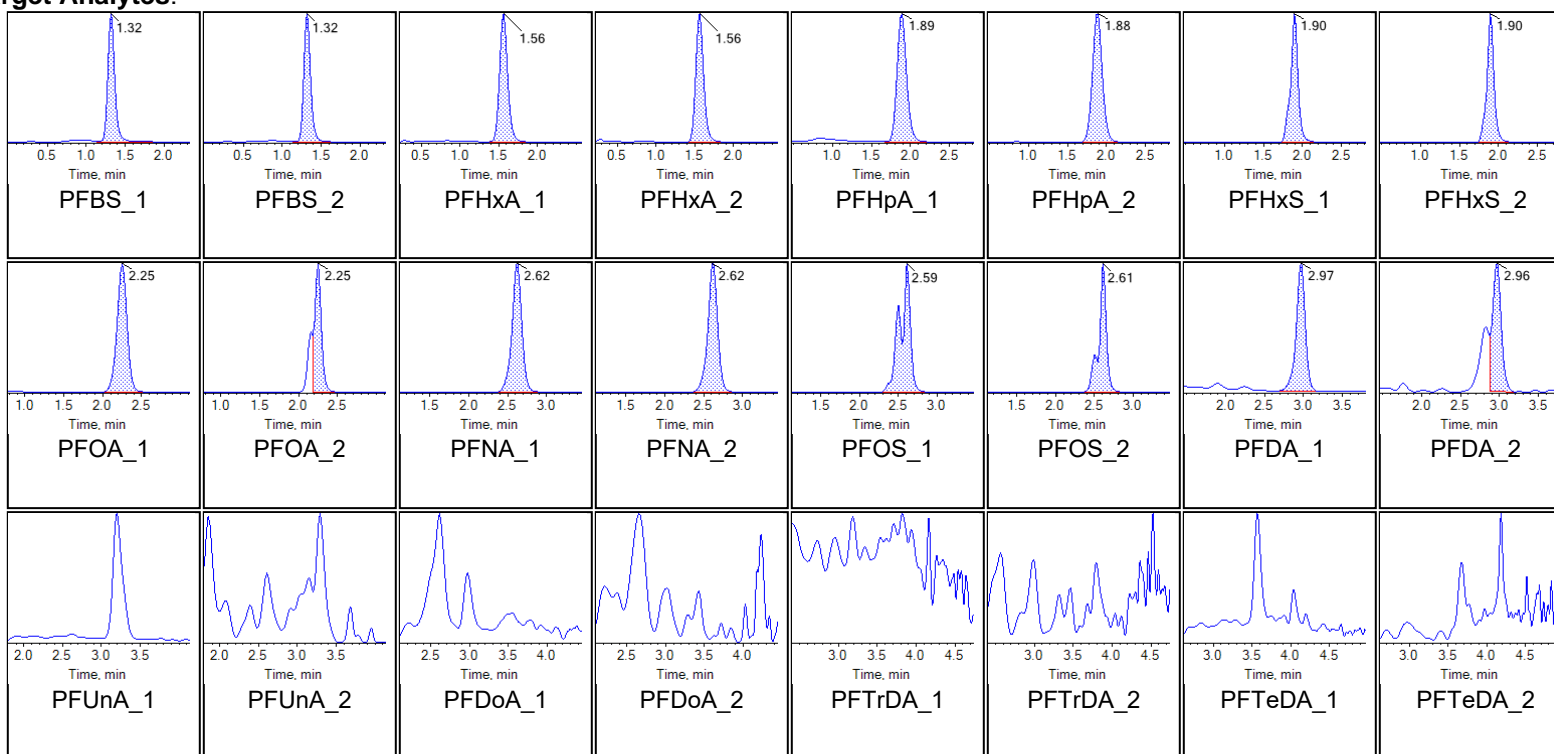
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Sample Name	G1699-FS(0)	Injection Vial	17
Sample ID	CBD-AOA-MW10-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
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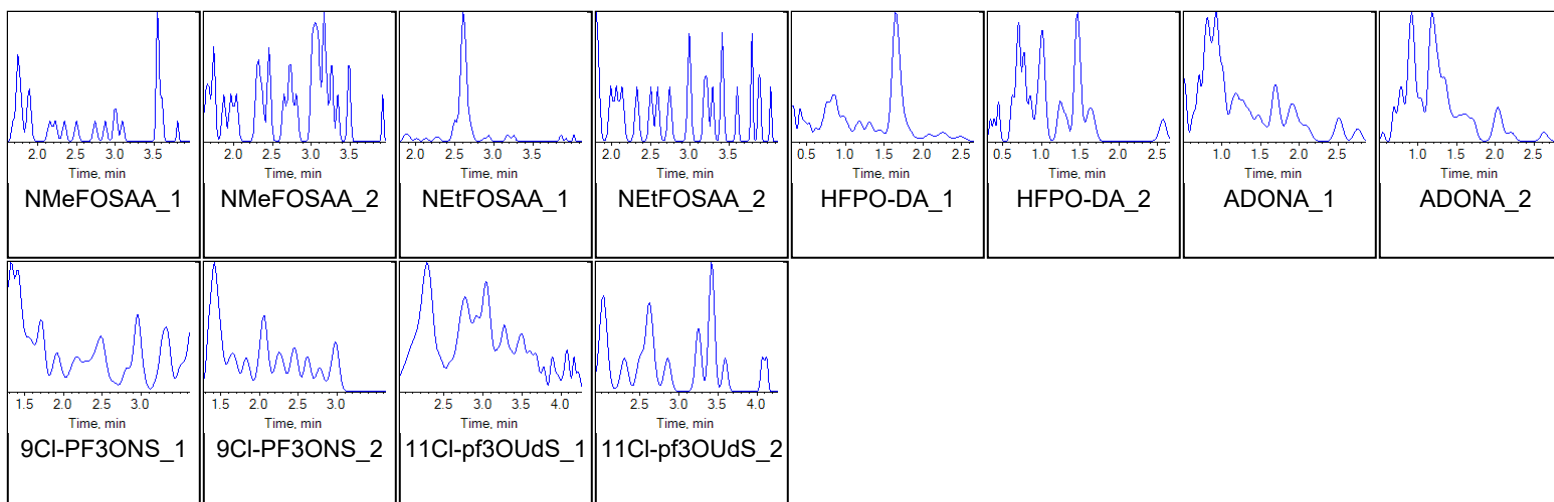
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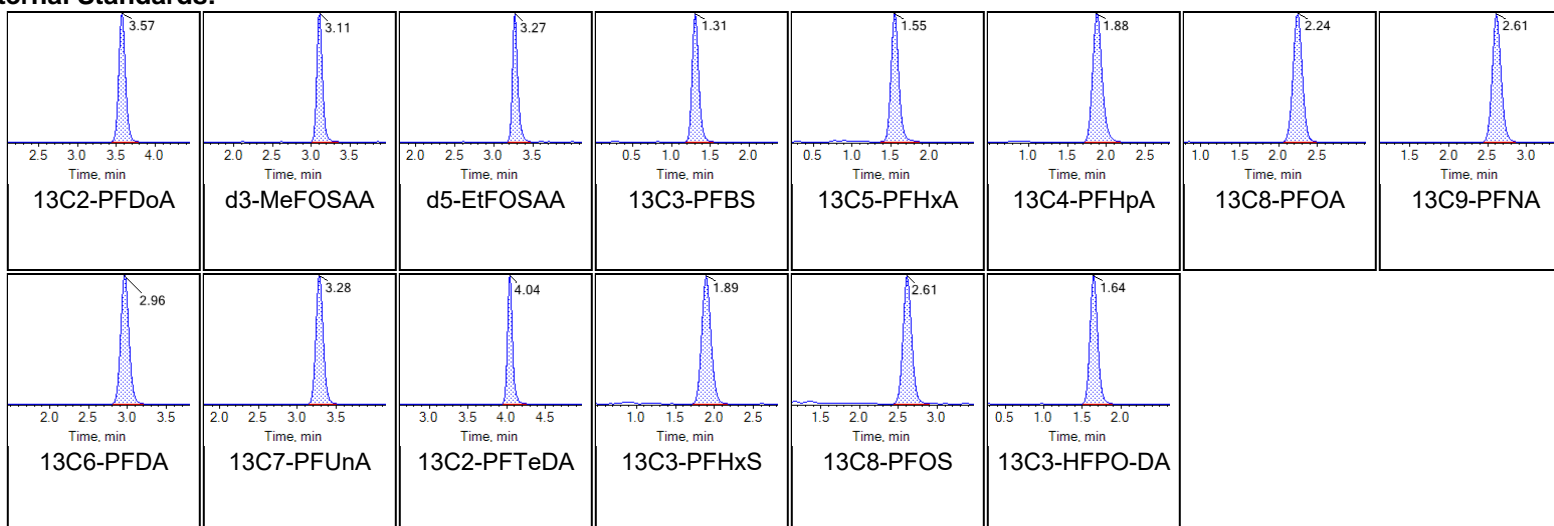




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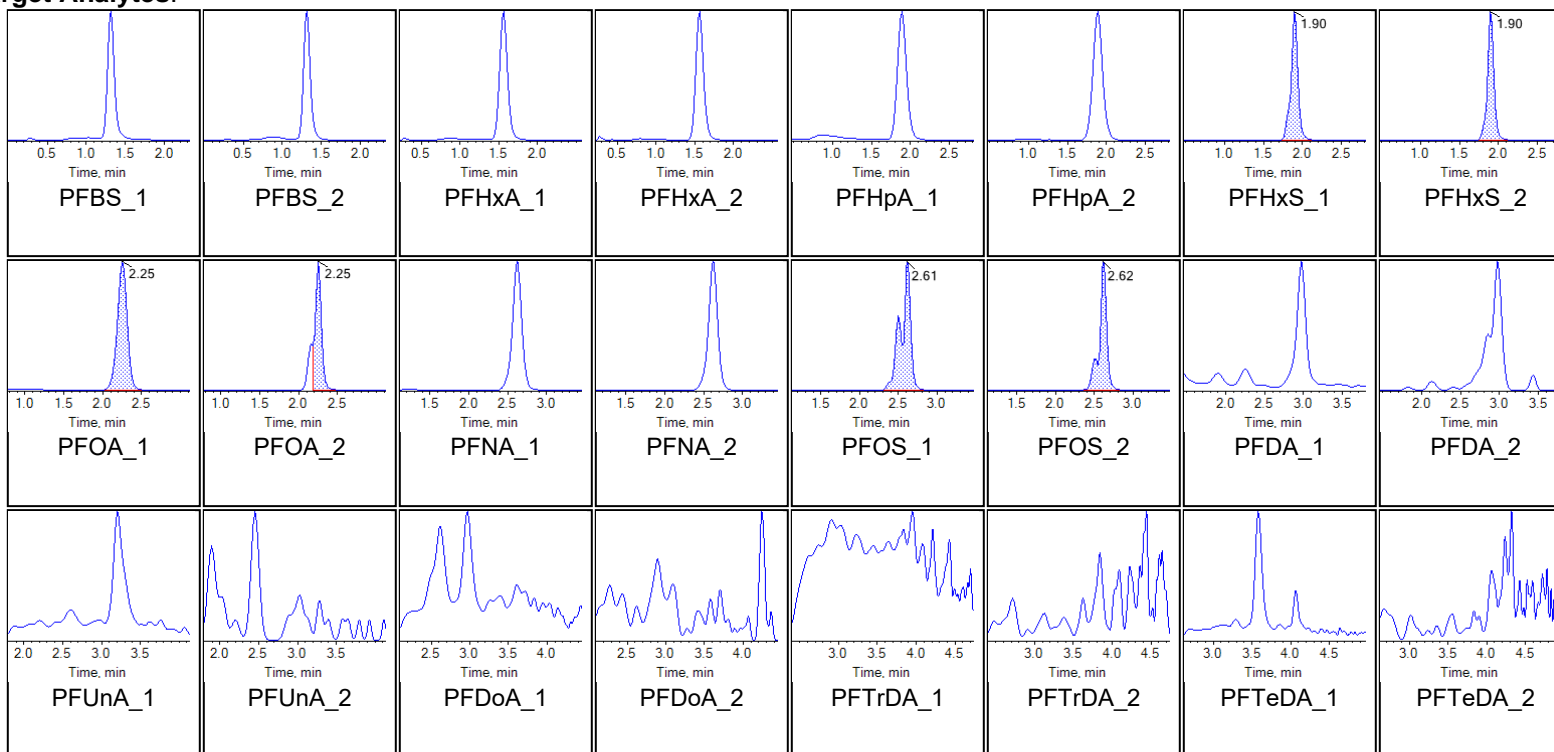
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Sample Name	G1699-FS-D(3)	Injection Vial	18
Sample ID	CBD-AOA-MW10-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
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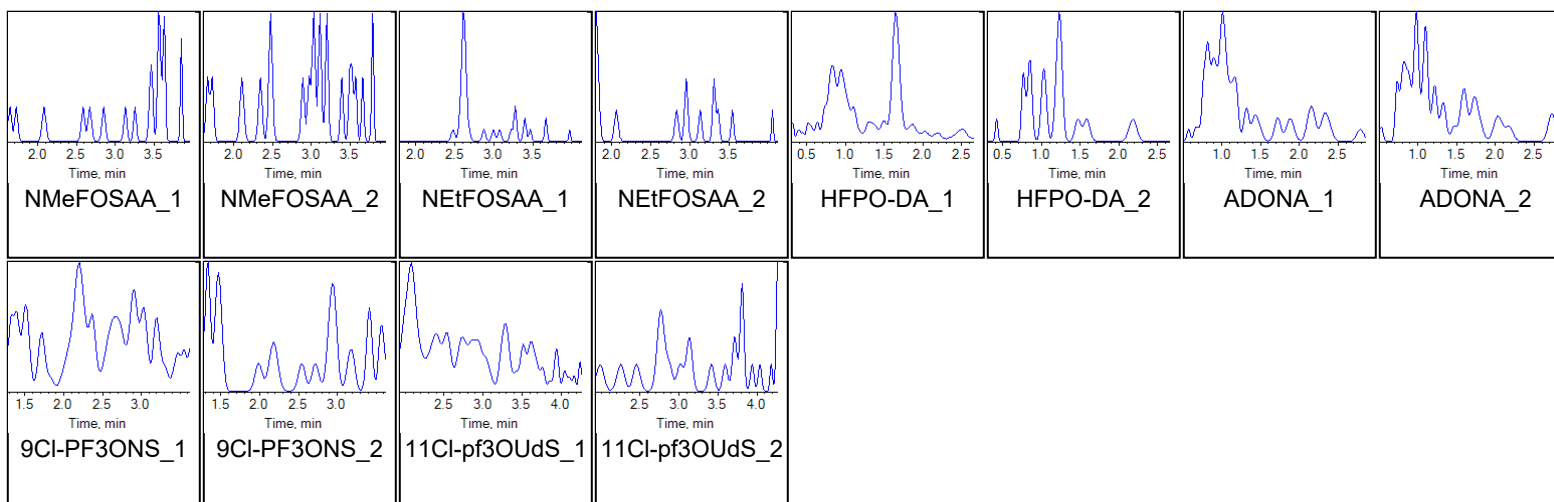
Chromatograms

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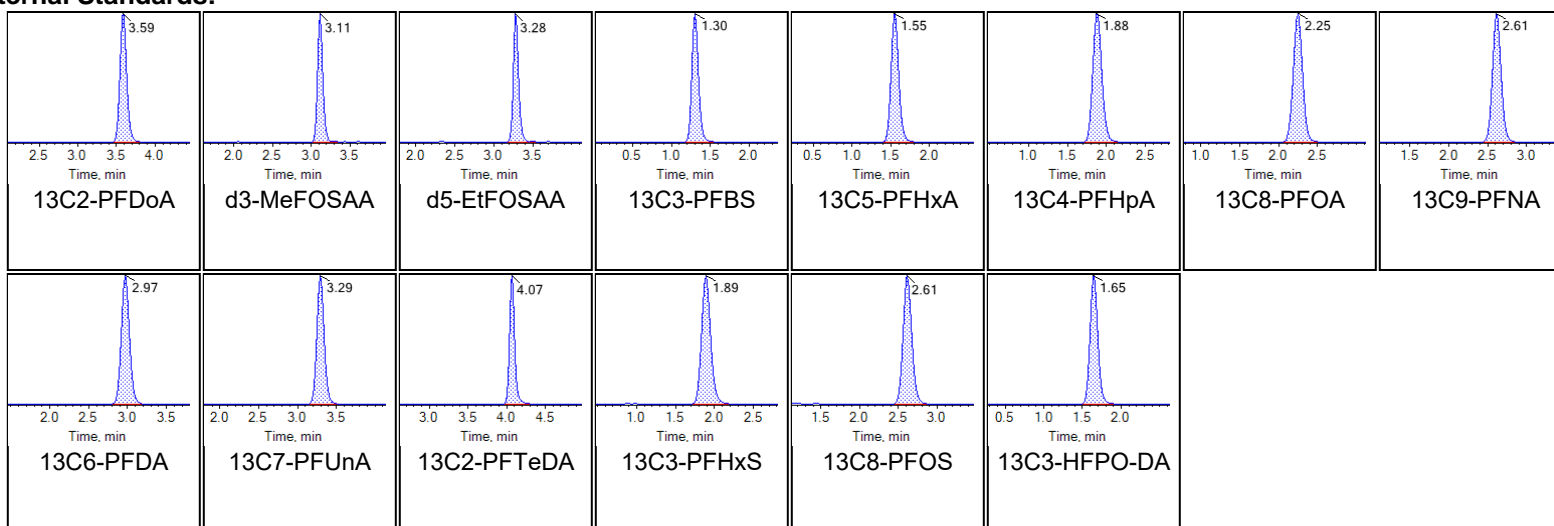




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Internal Standards:





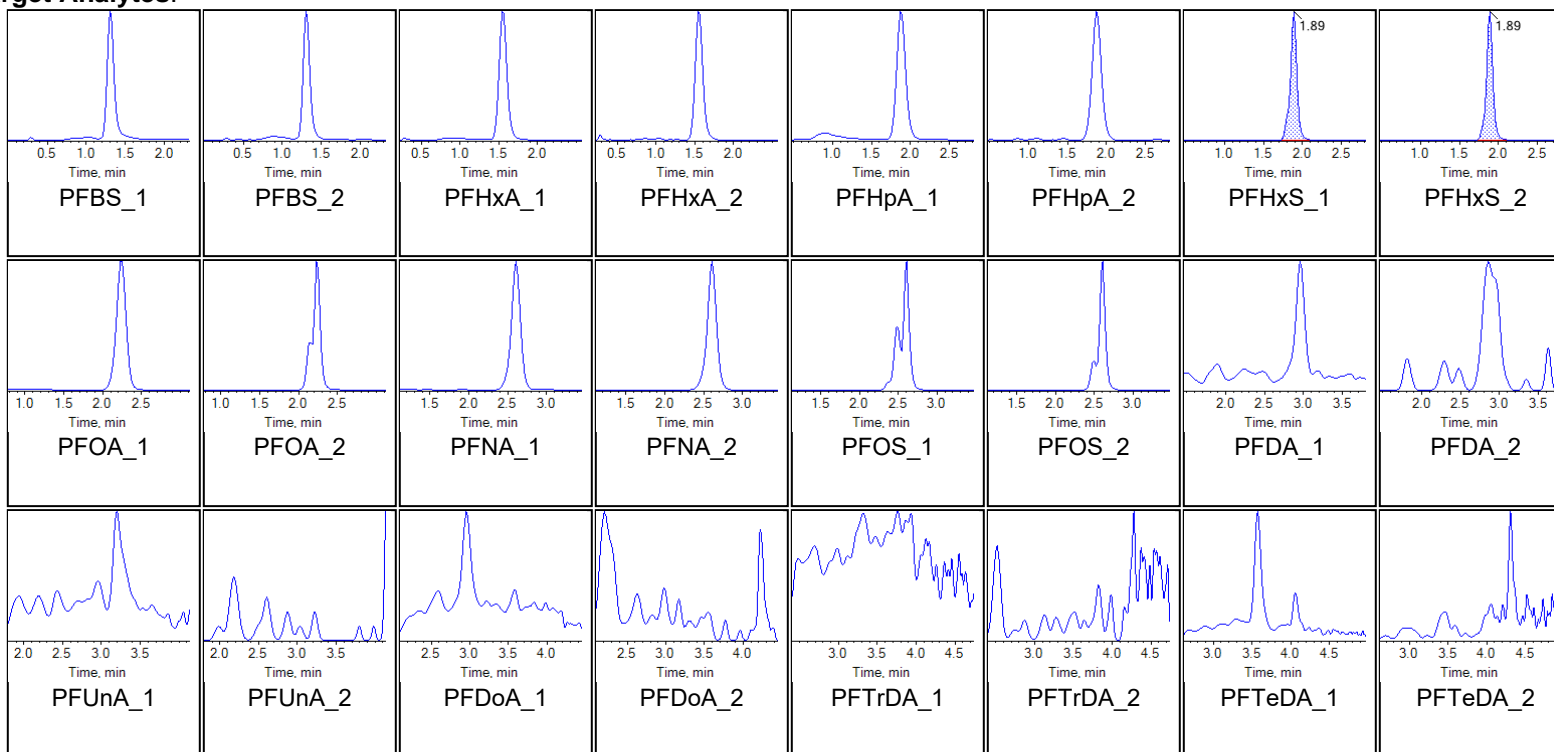
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	G1699-FS-D(5)	Injection Vial	19
Sample ID	CBD-AOA-MW10-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 4:44:14 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

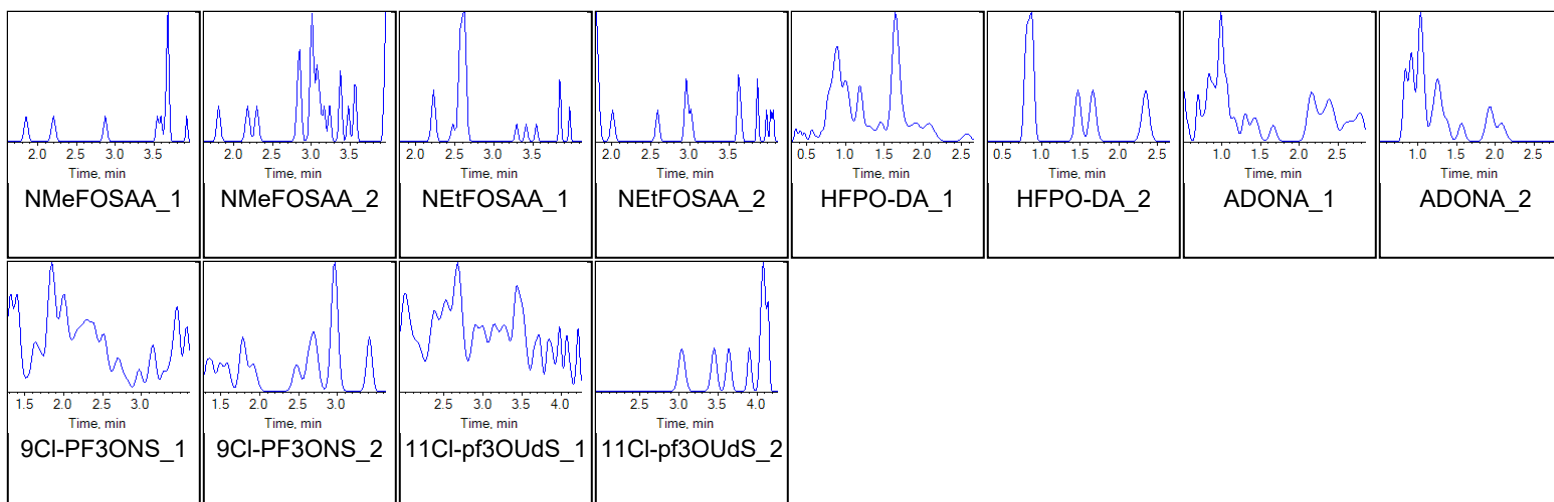
Chromatograms

Target Analytes:

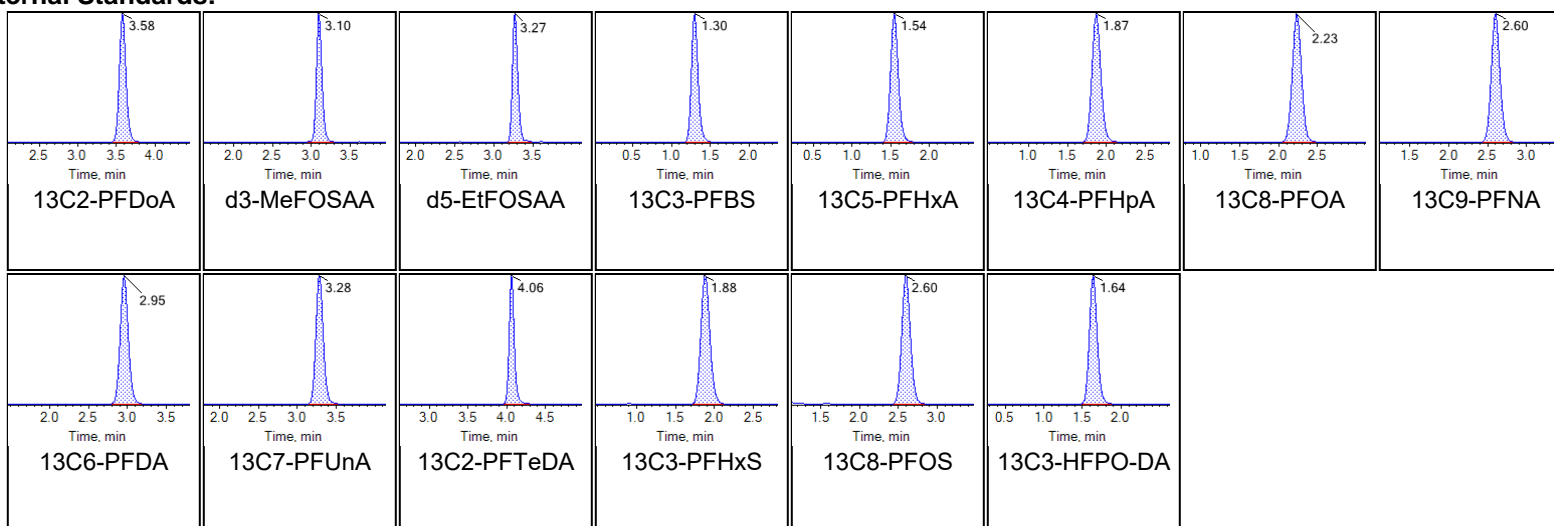




Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Internal Standards:





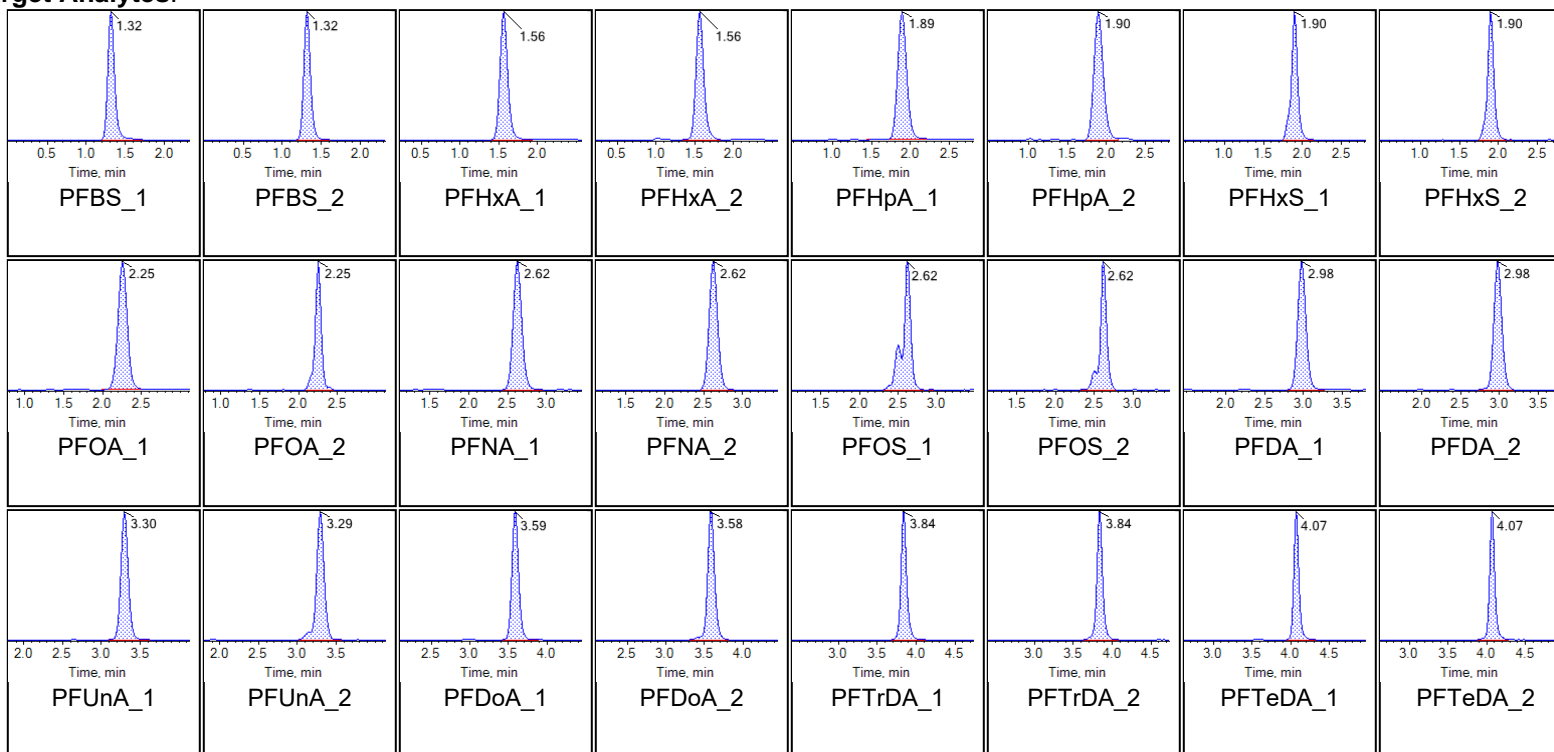
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	LD76 CCV	Injection Vial	21
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:05:11 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

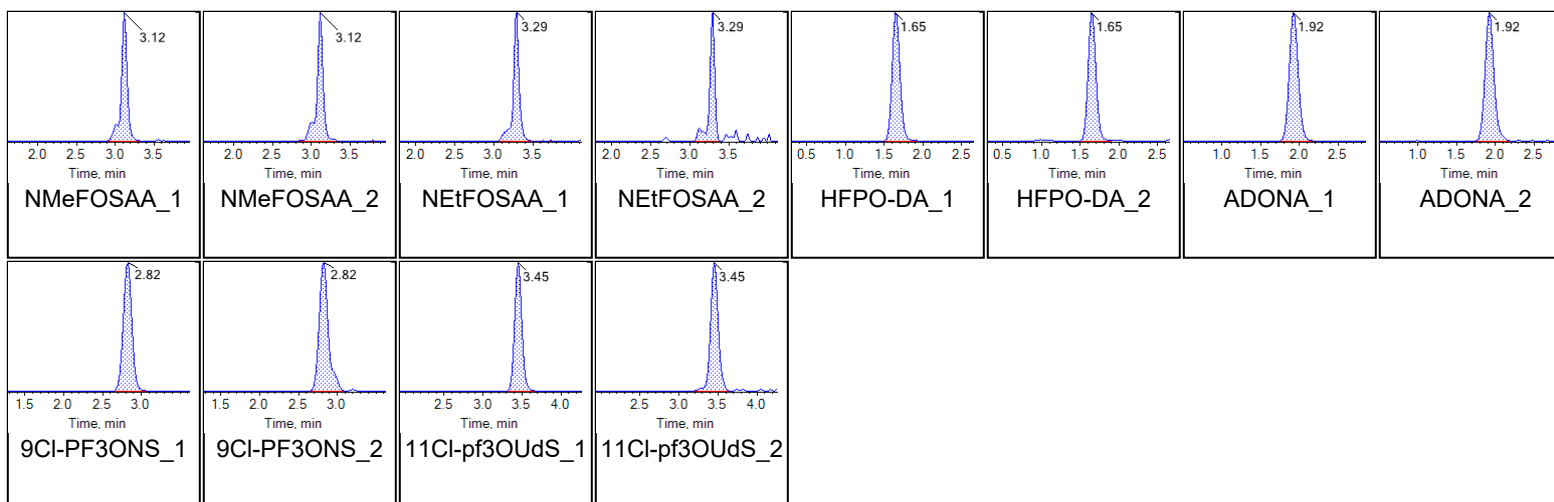
Chromatograms

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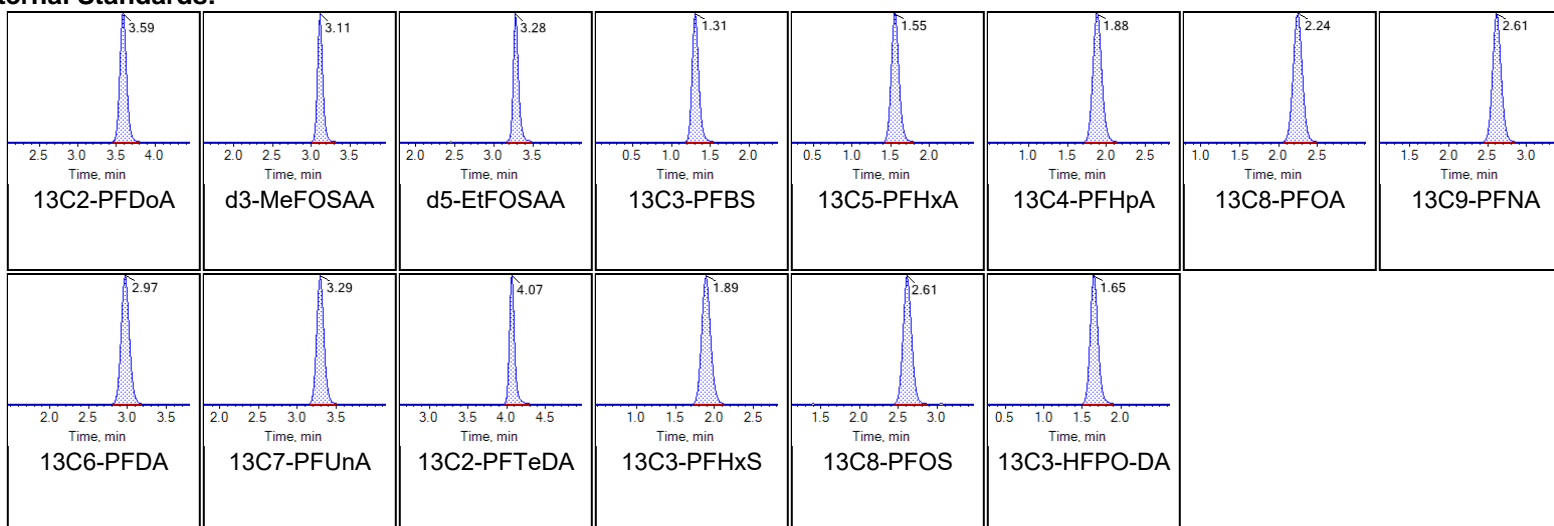




Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Internal Standards:





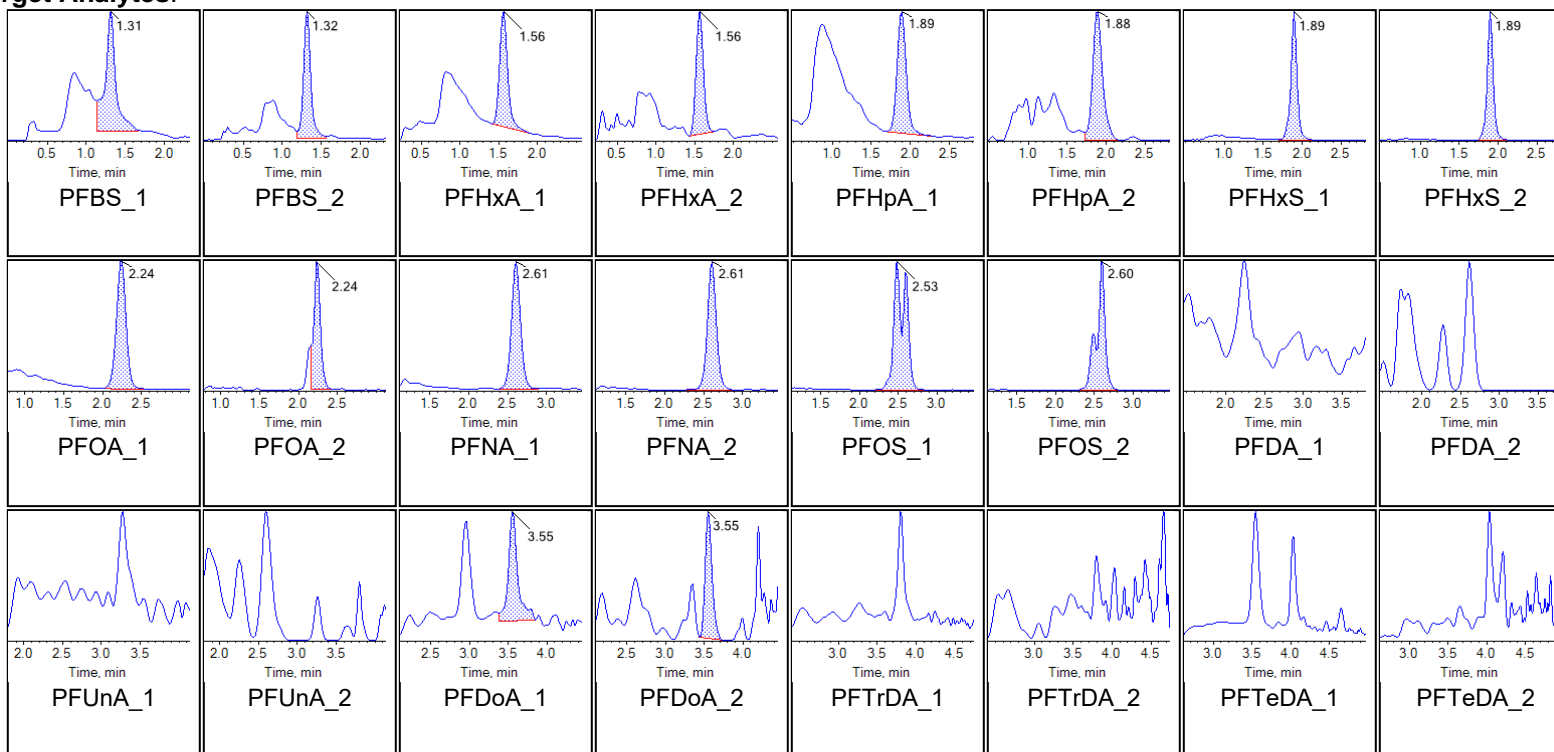
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	G1700-FS(0)	Injection Vial	22
Sample ID	CBD-BKG-MW03-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:16:07 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

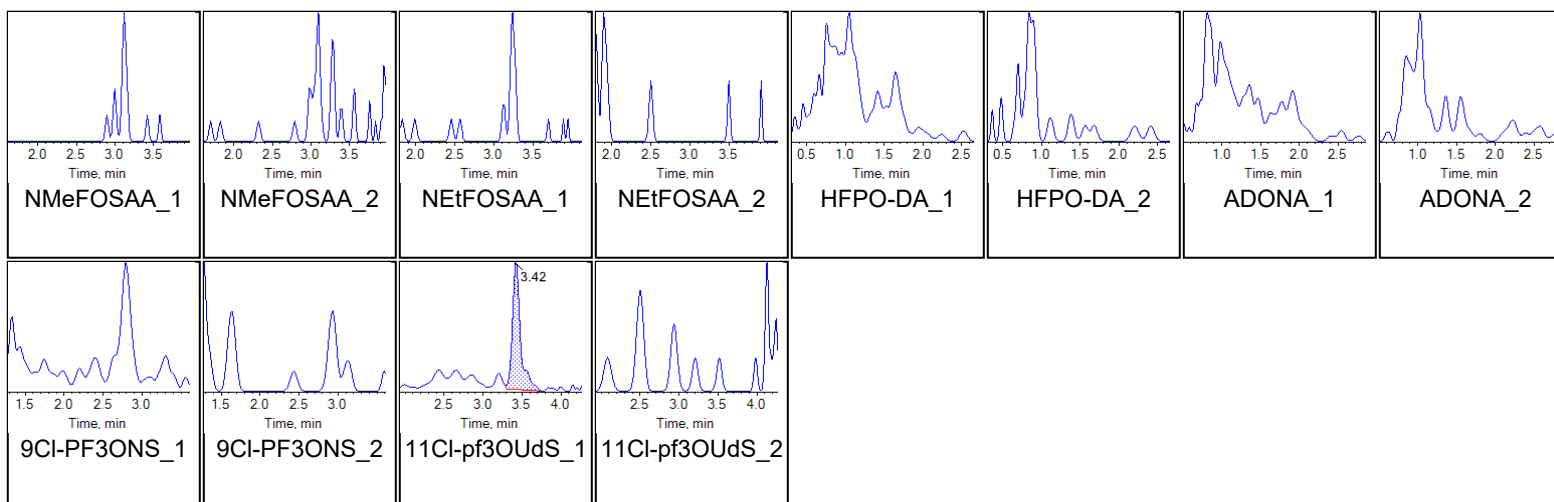
Chromatograms

Target Analytes:

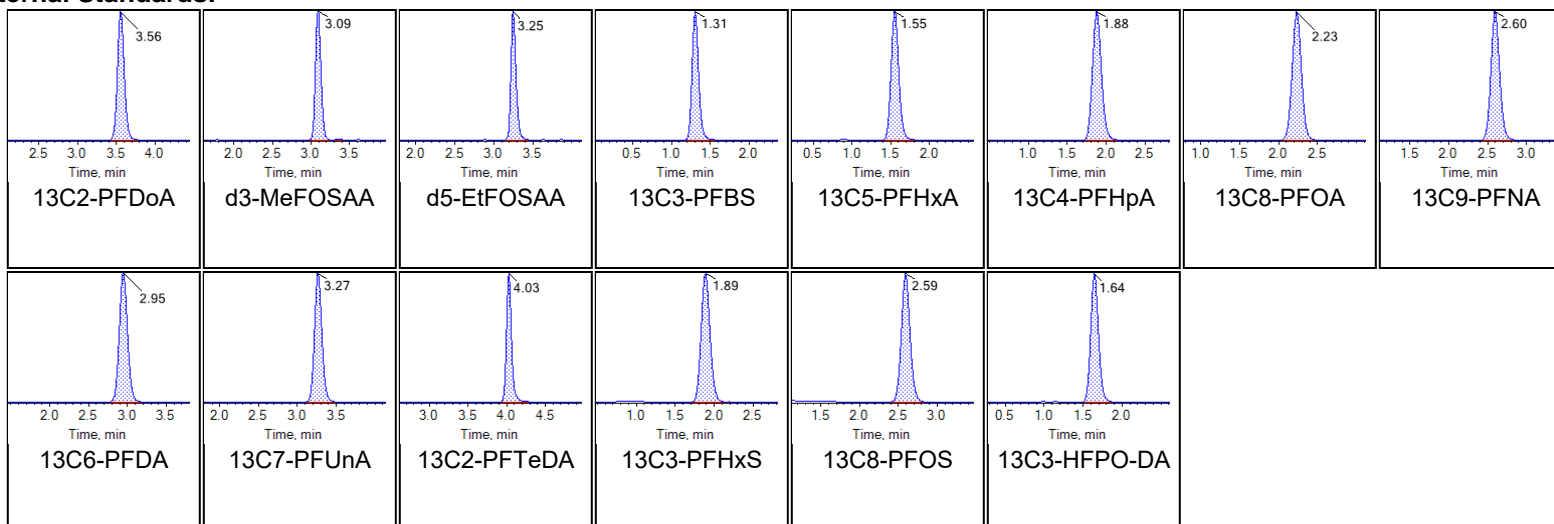




Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Internal Standards:





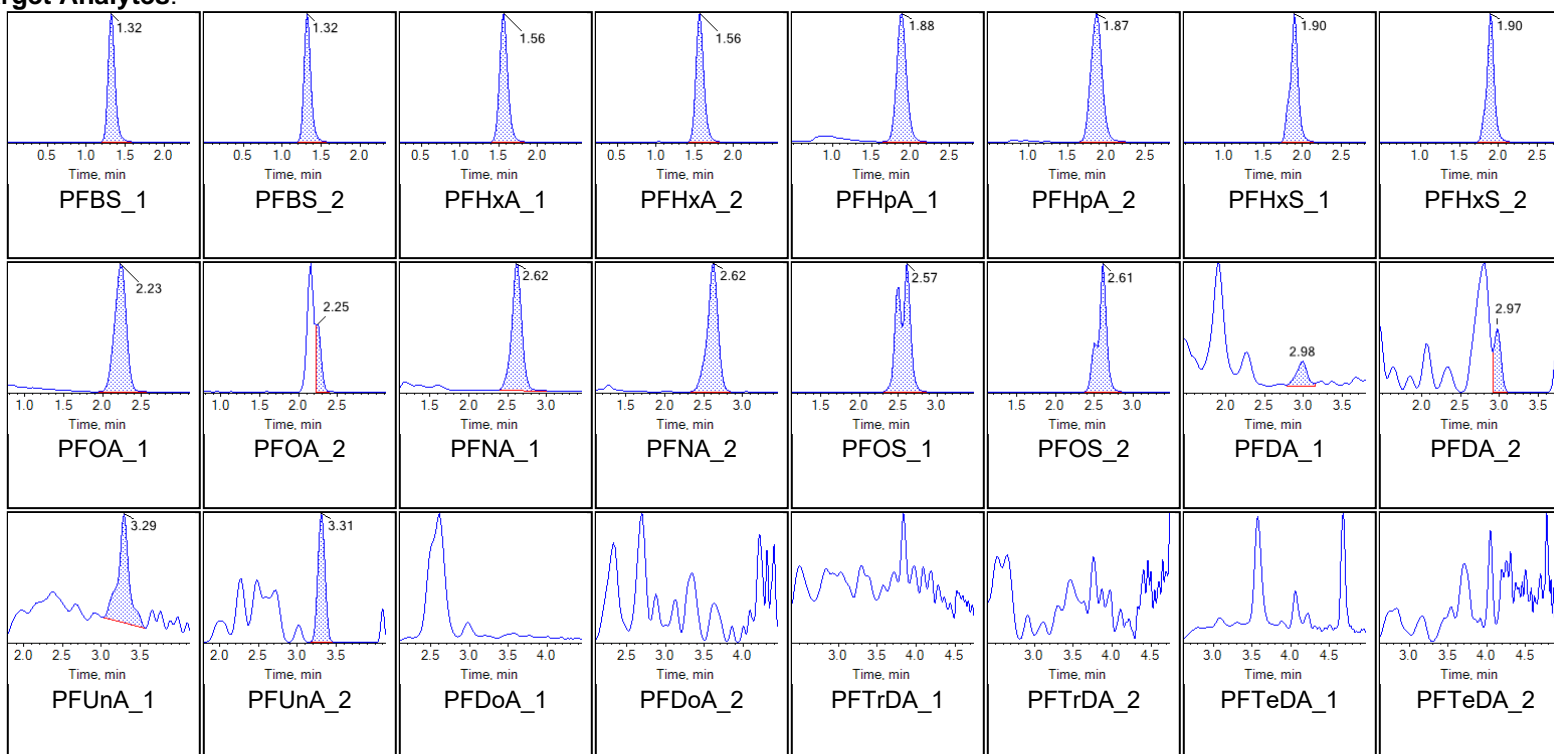
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	G1701-FS(0)	Injection Vial	23
Sample ID	CBD-SO4-MW01-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:26:35 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

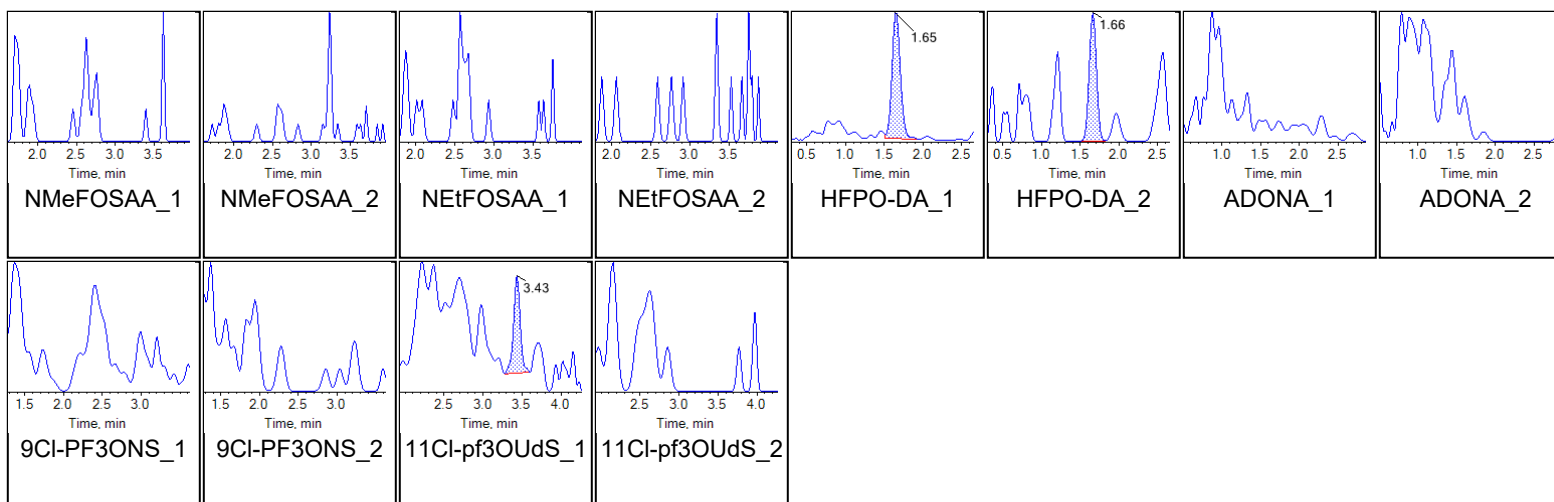
Chromatograms

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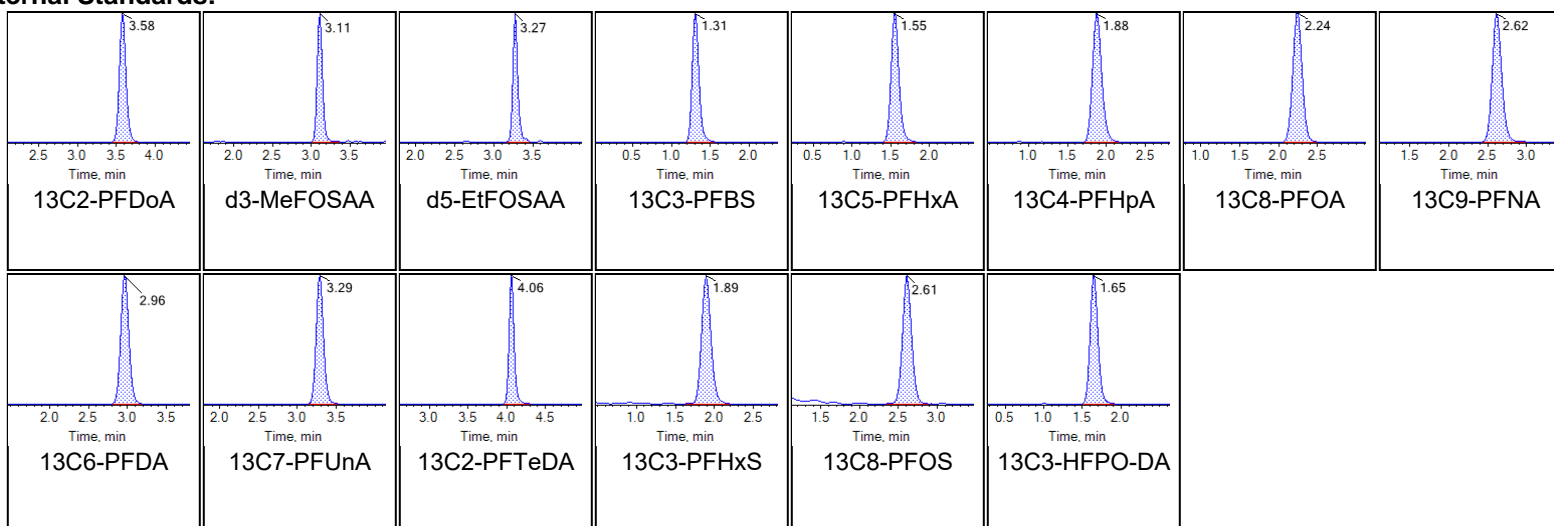




Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Internal Standards:





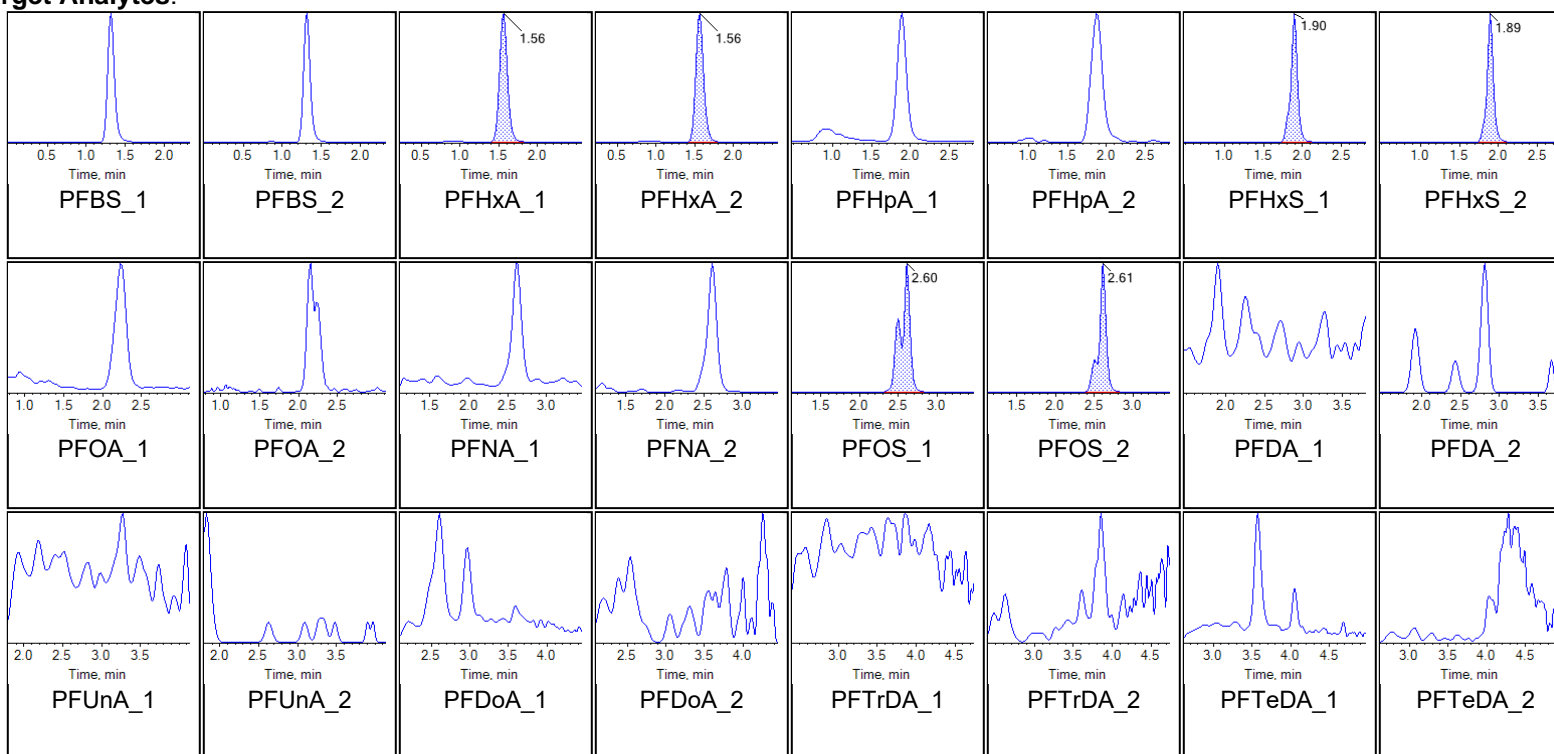
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	G1701-FS-D(3)	Injection Vial	24
Sample ID	CBD-SO4-MW01-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:37:03 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

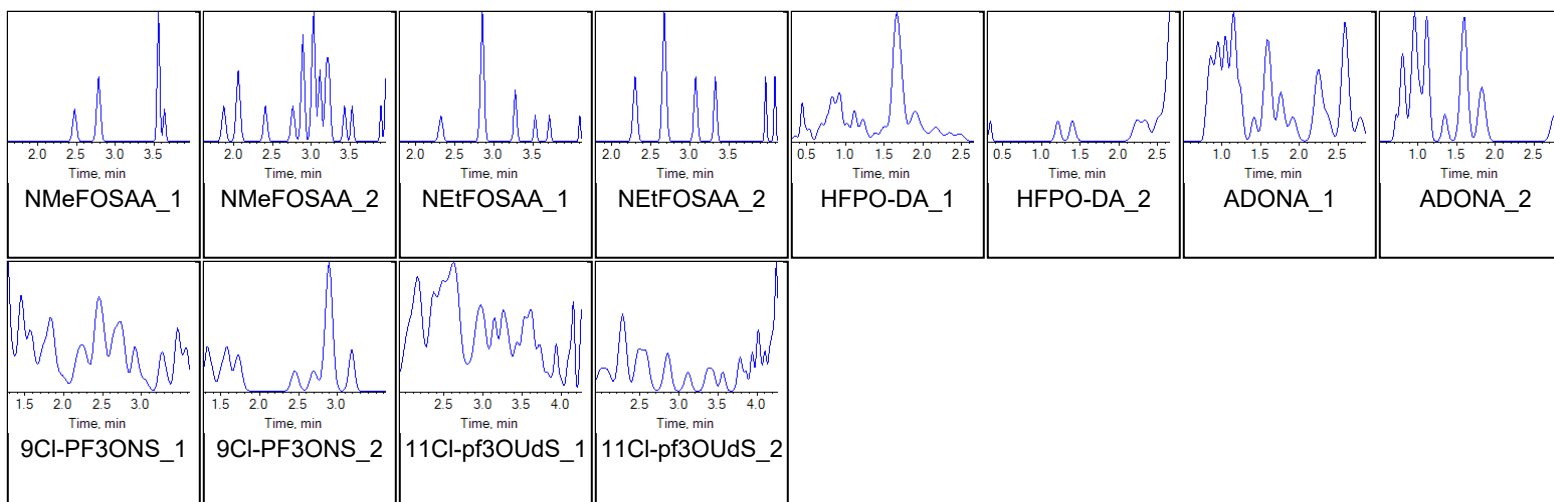
Chromatograms

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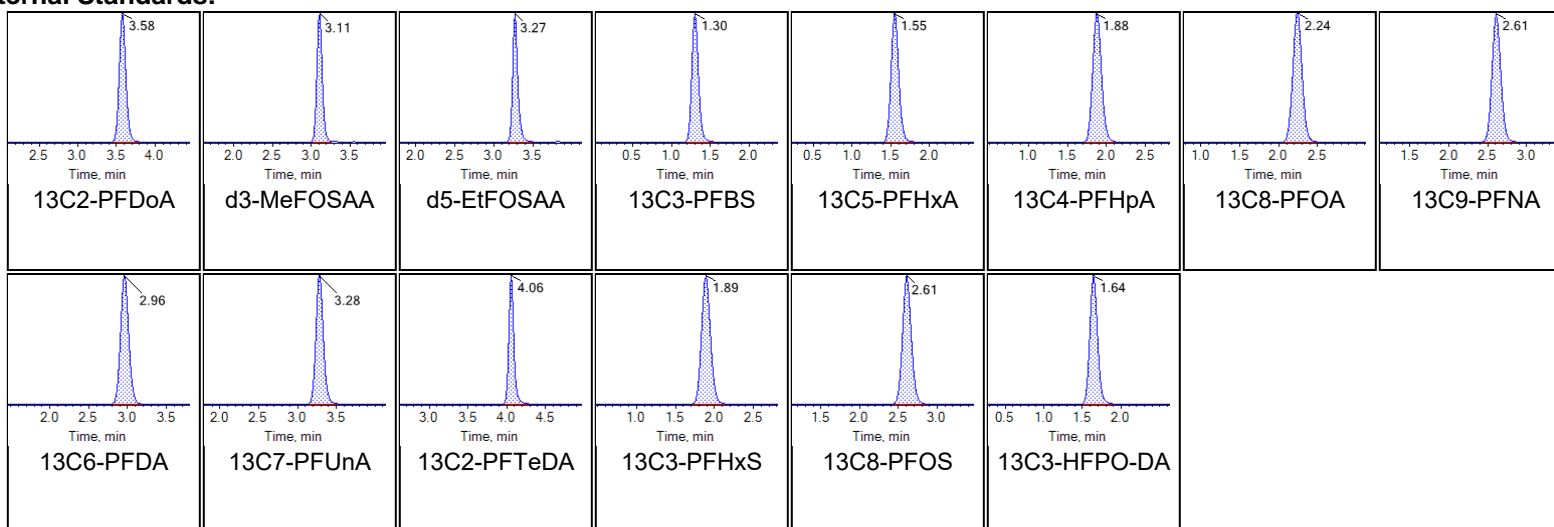




Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Internal Standards:





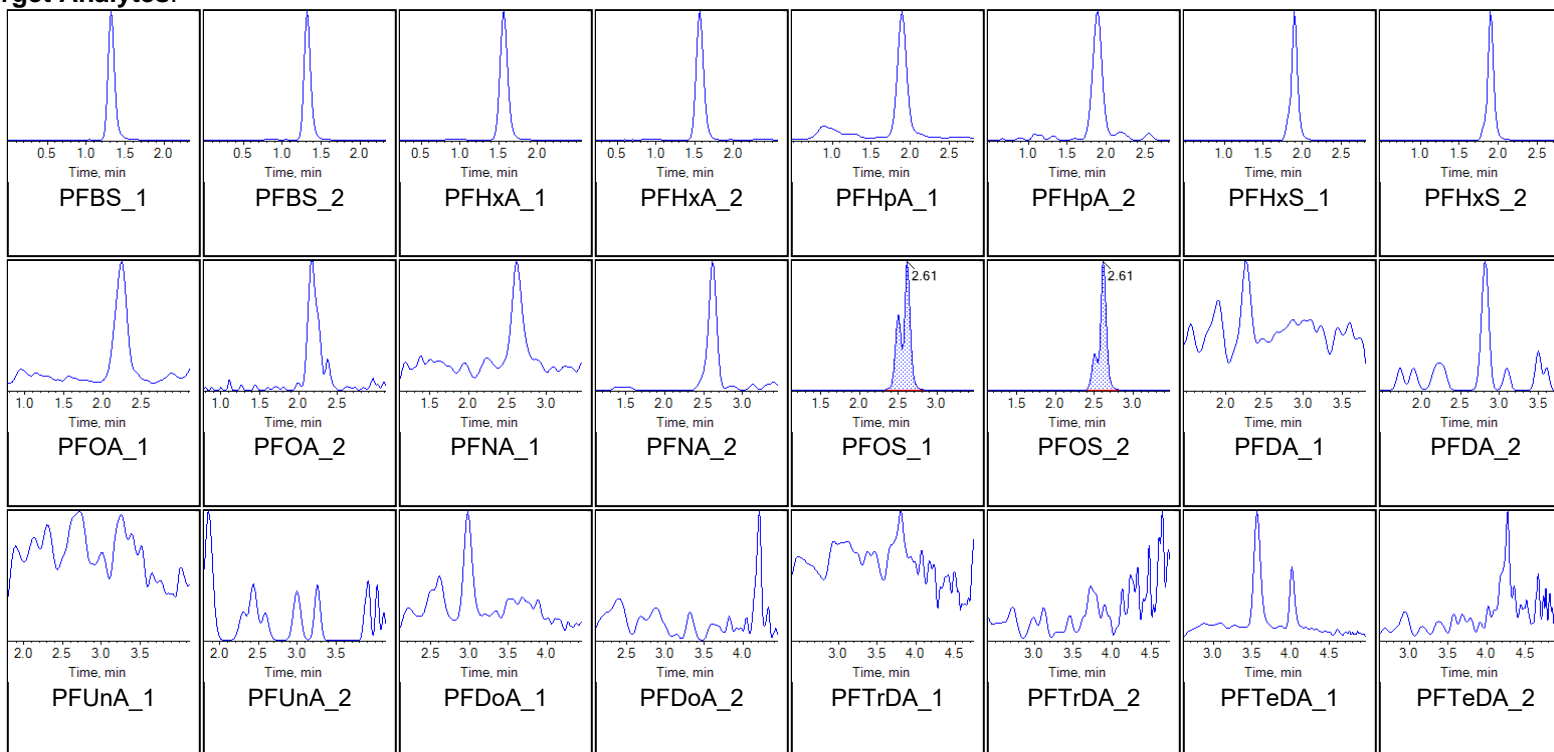
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	G1701-FS-D(5)	Injection Vial	25
Sample ID	CBD-SO4-MW01-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:47:31 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

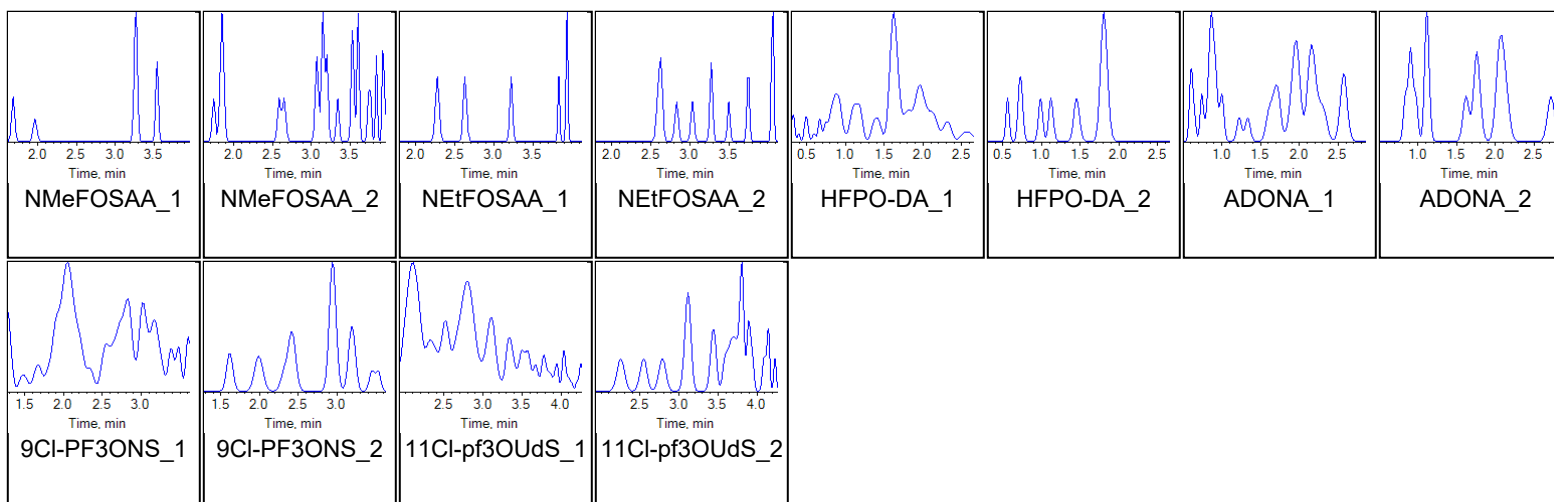
Chromatograms

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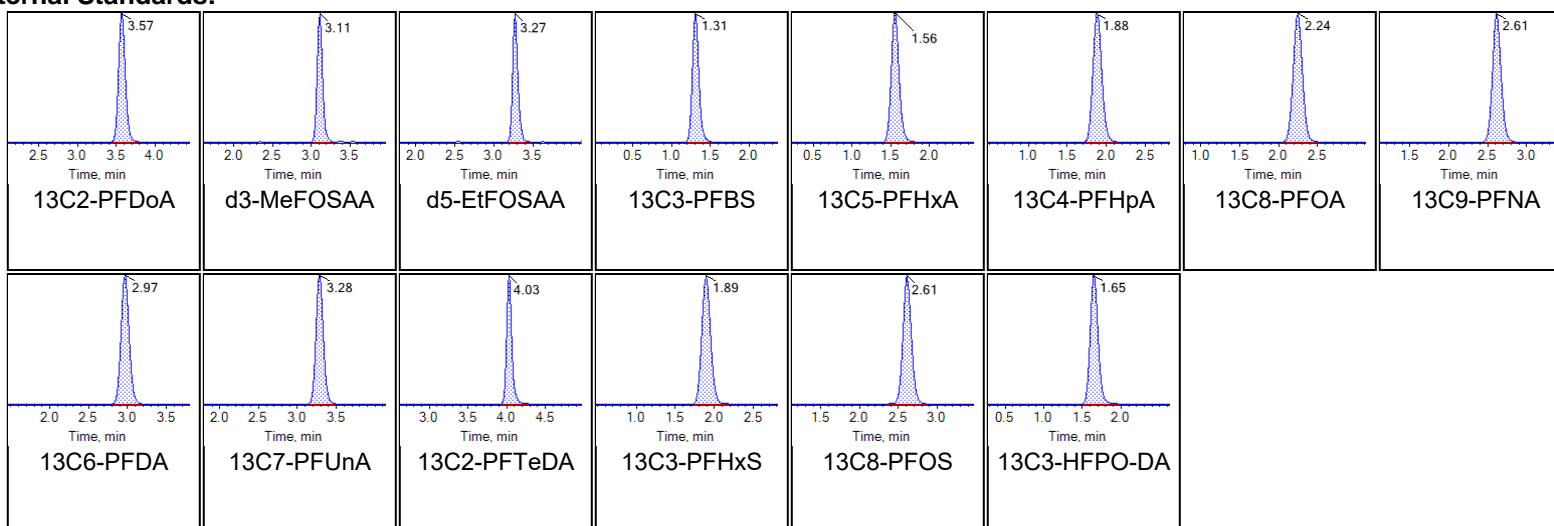




Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Internal Standards:





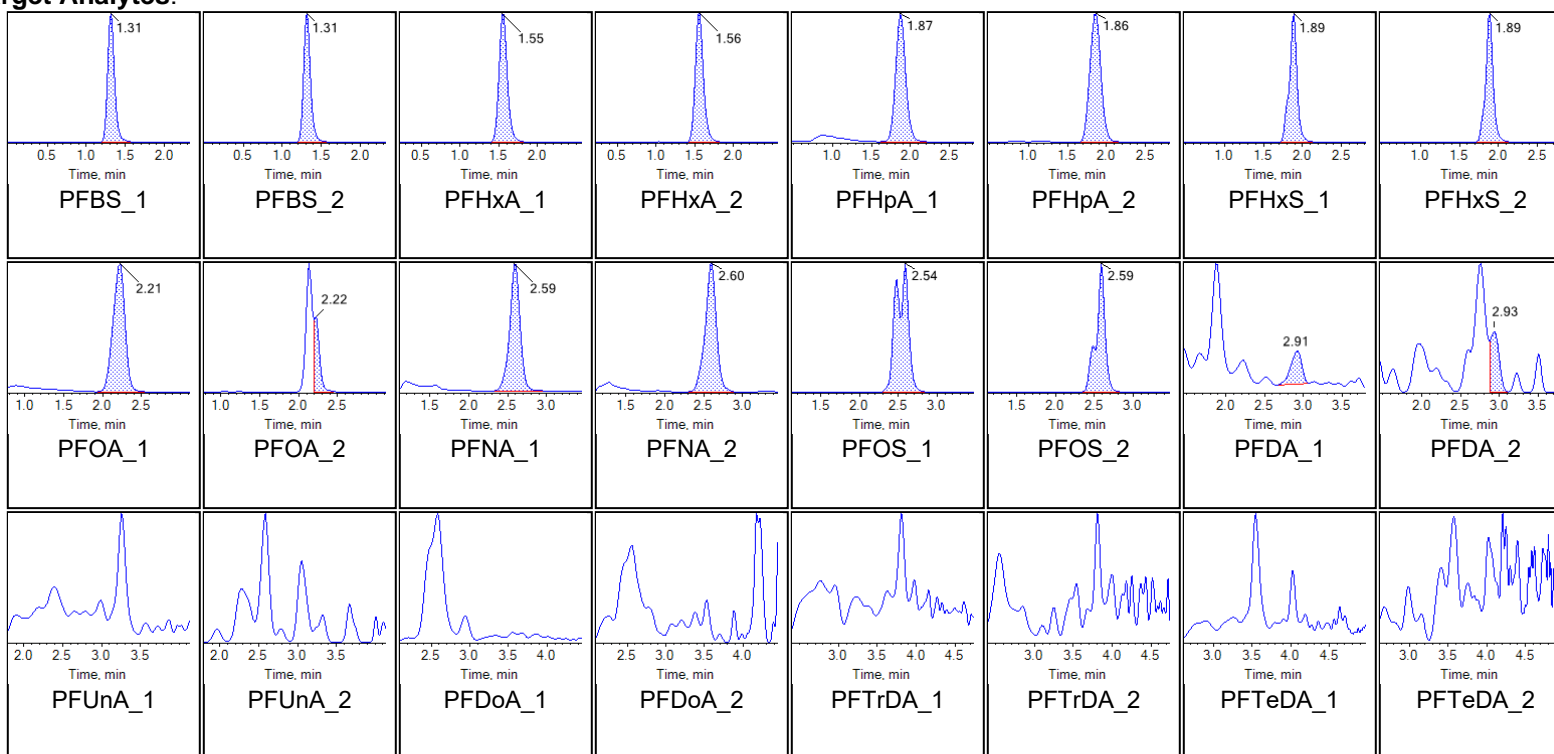
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	G1702-FS(0)	Injection Vial	26
Sample ID	CBD-SO4-MW01P-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:58:00 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

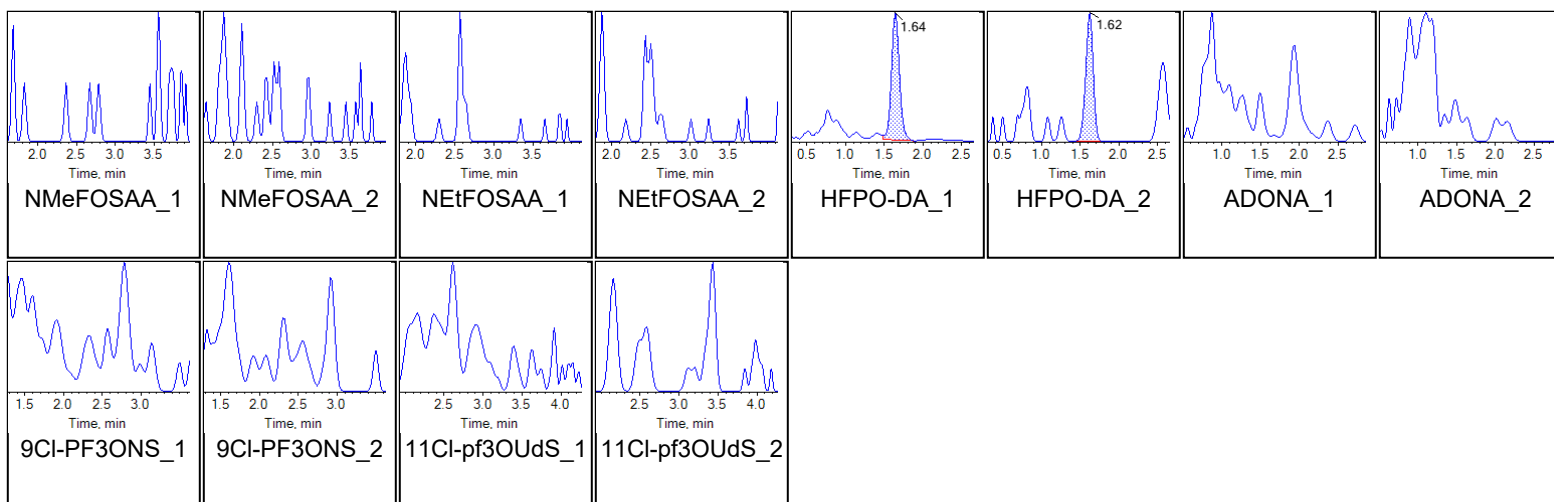
Chromatograms

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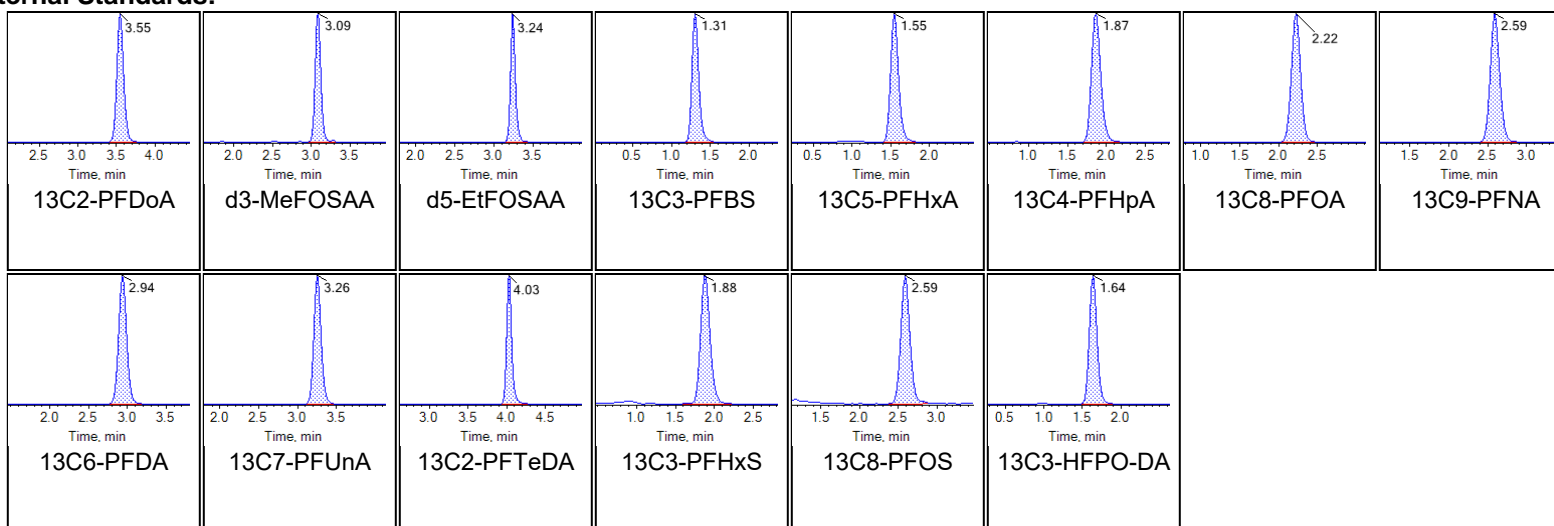




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Internal Standards:





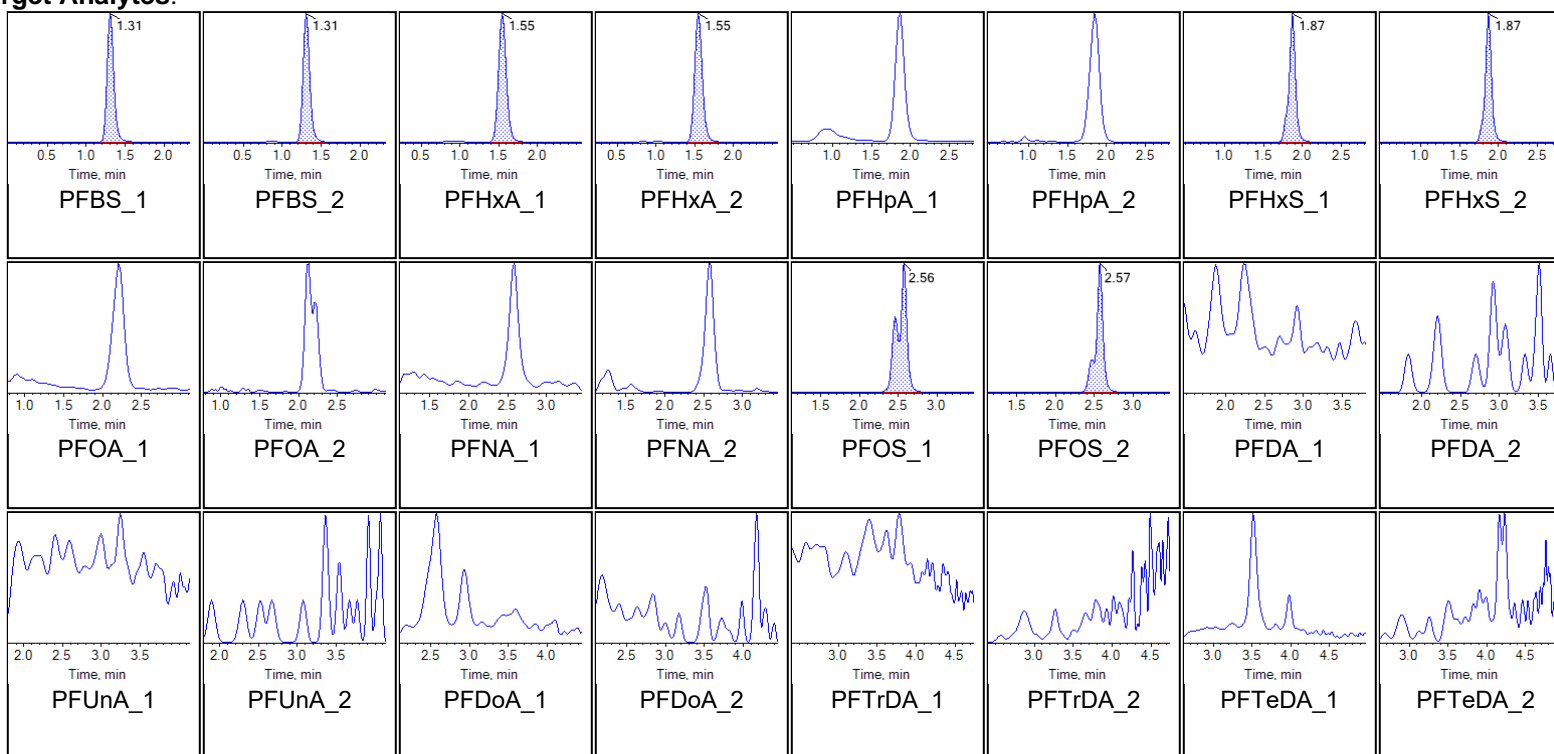
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	G1702-FS-D(3)	Injection Vial	27
Sample ID	CBD-SO4-MW01P-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 6:08:28 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

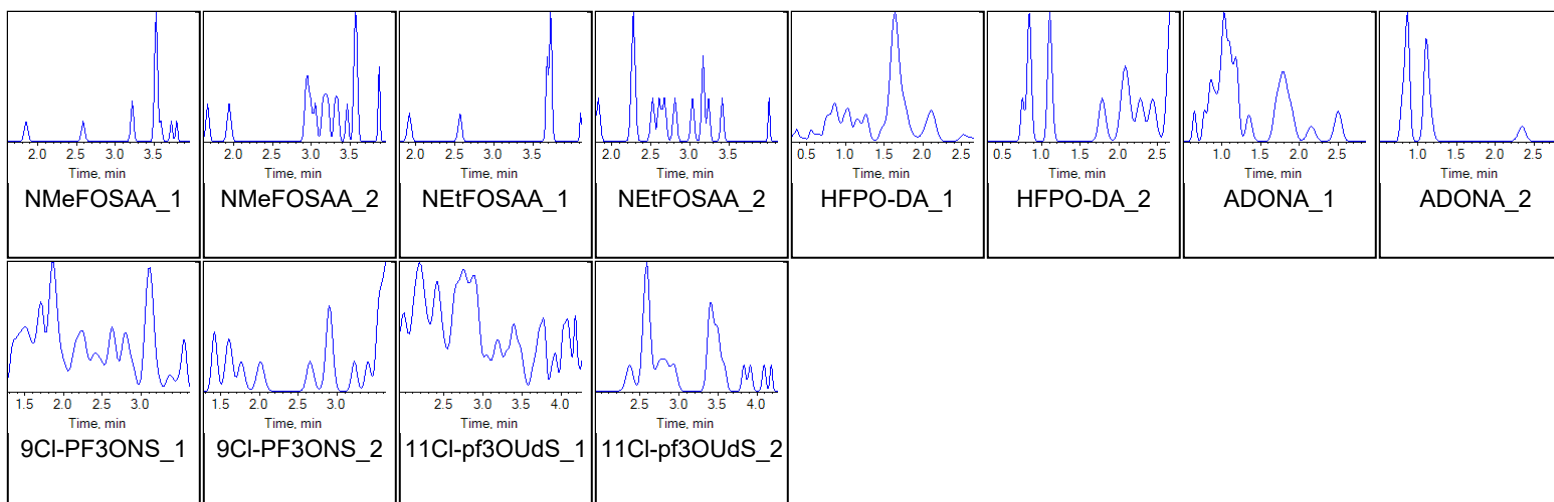
Chromatograms

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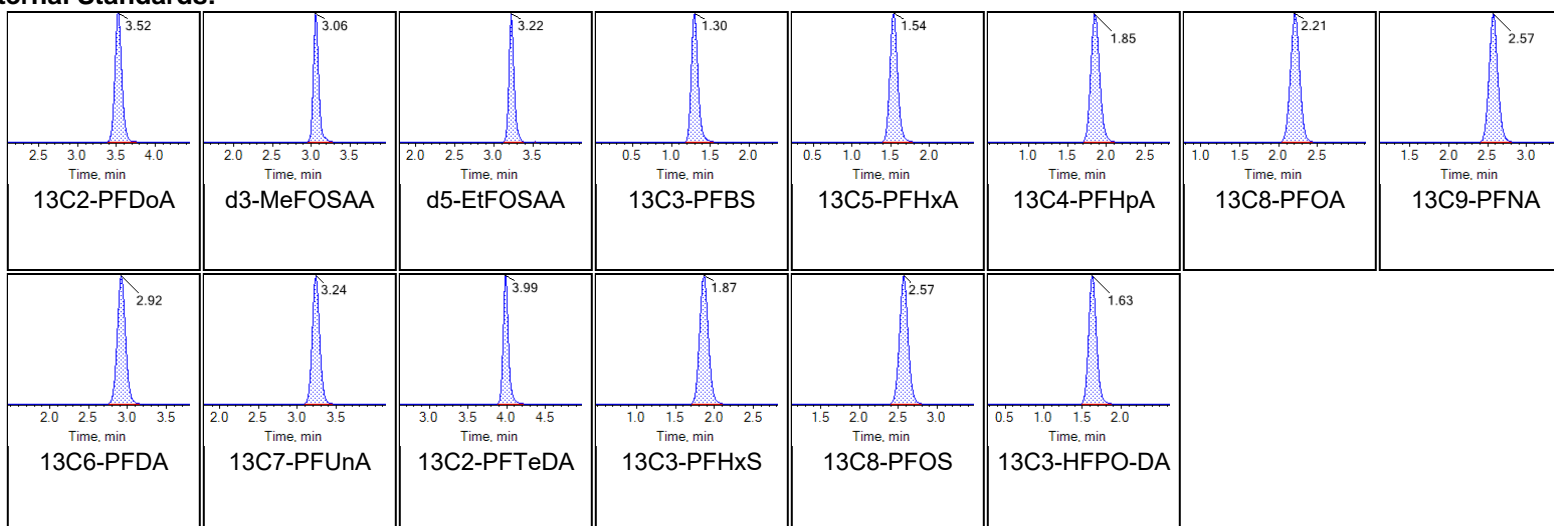




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Printed: 09/11/2020 11:46:05 AM

Internal Standards:





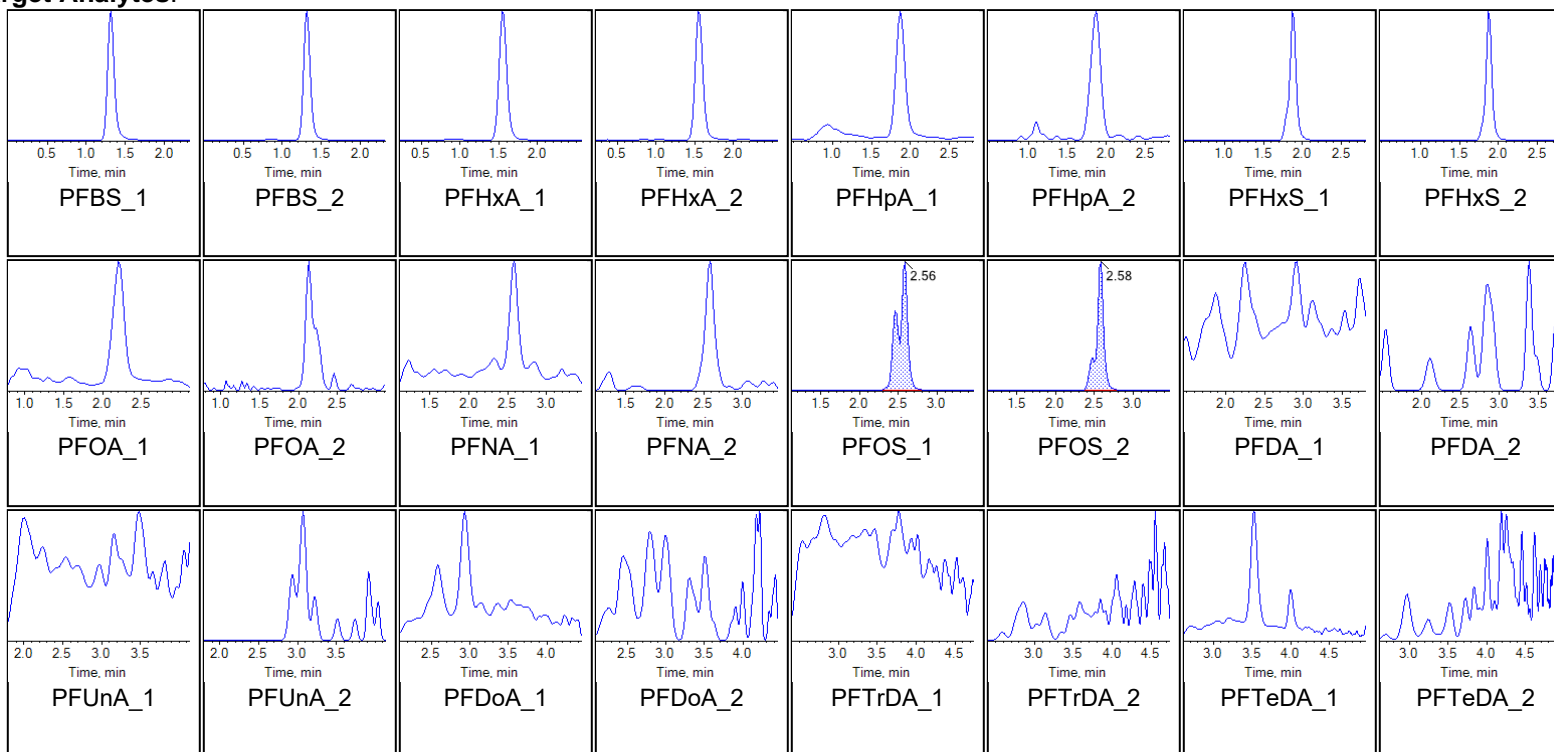
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	G1702-FS-D(5)	Injection Vial	28
Sample ID	CBD-SO4-MW01P-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 6:18:56 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

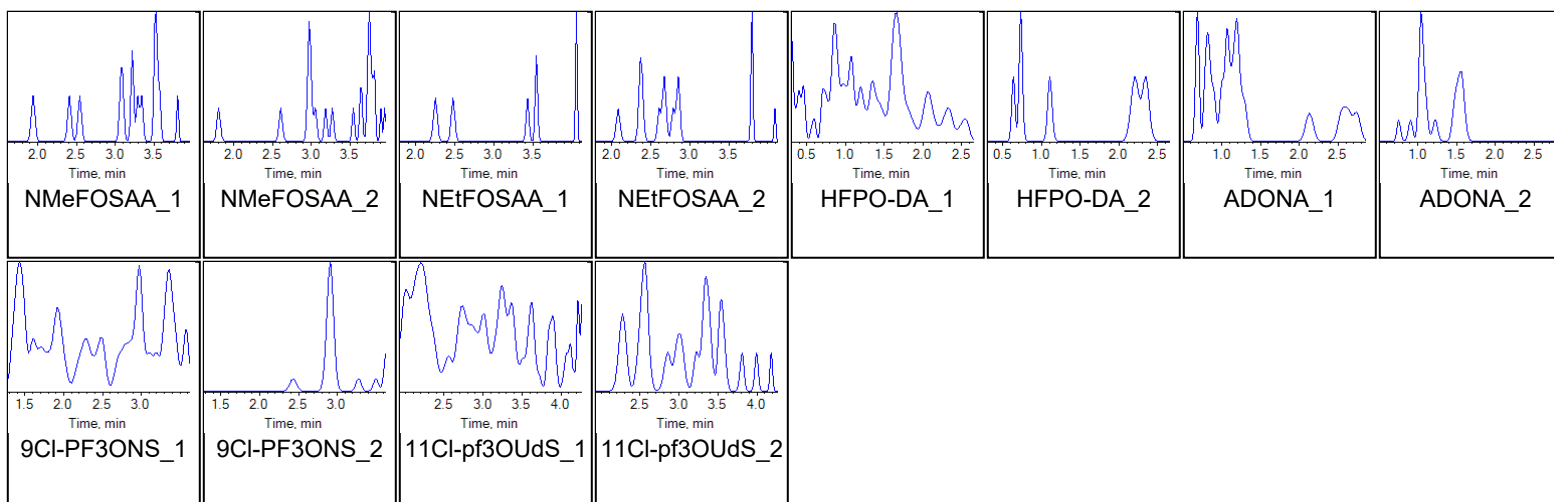
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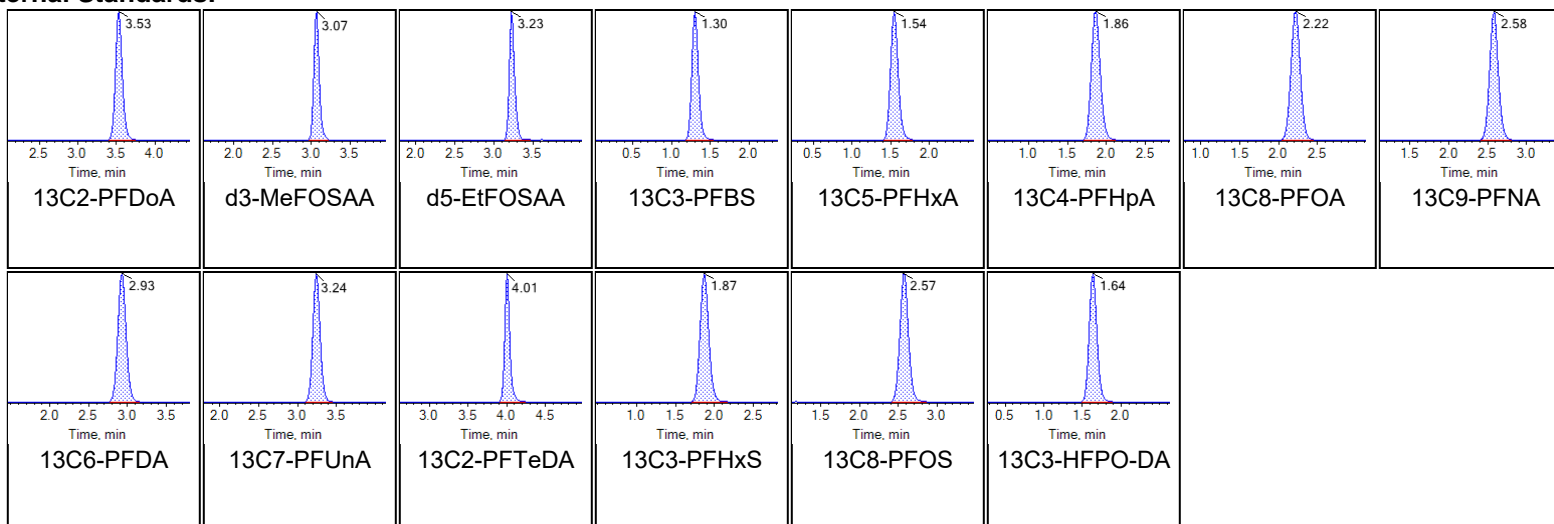




Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Internal Standards:





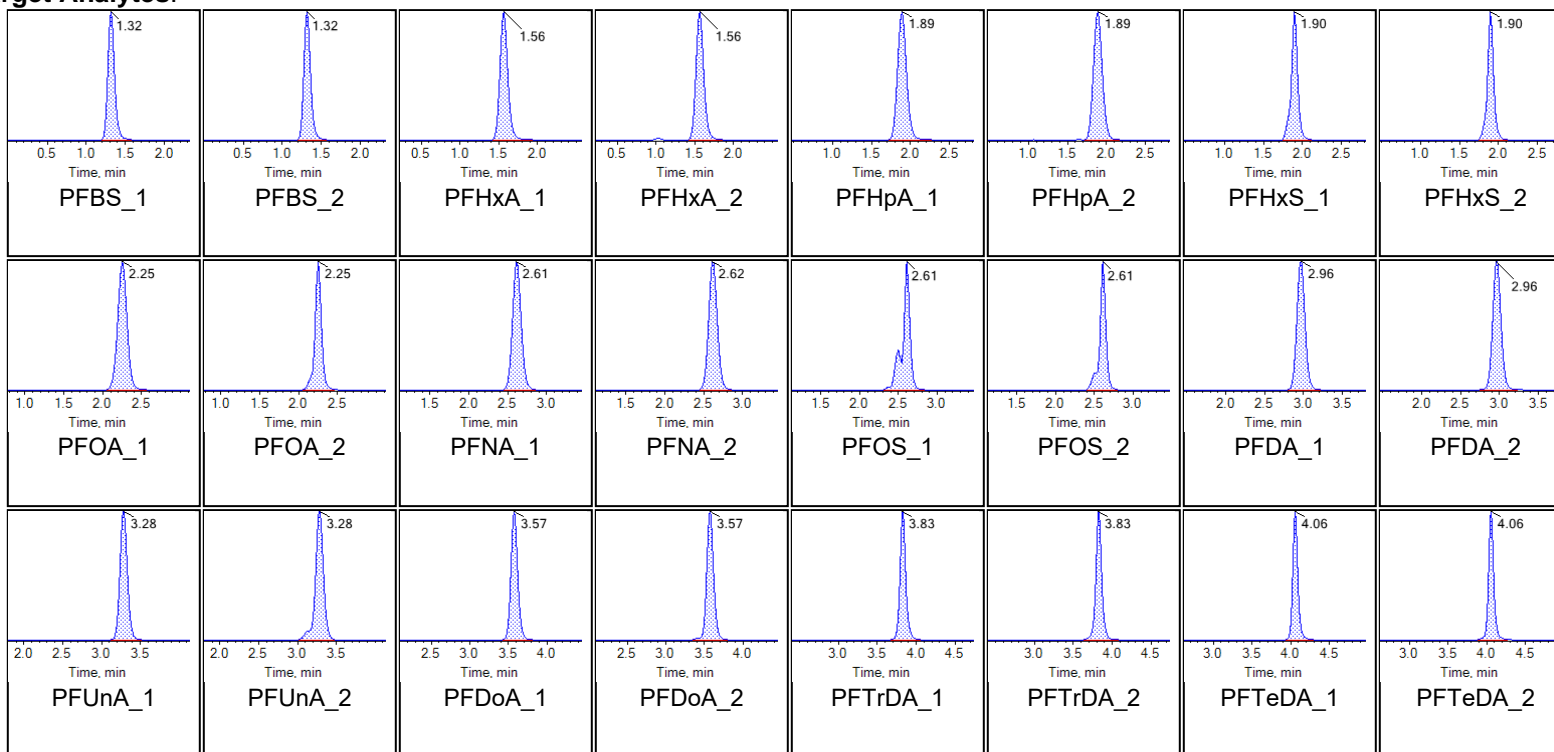
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	LD77 CCV	Injection Vial	29
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 6:29:24 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

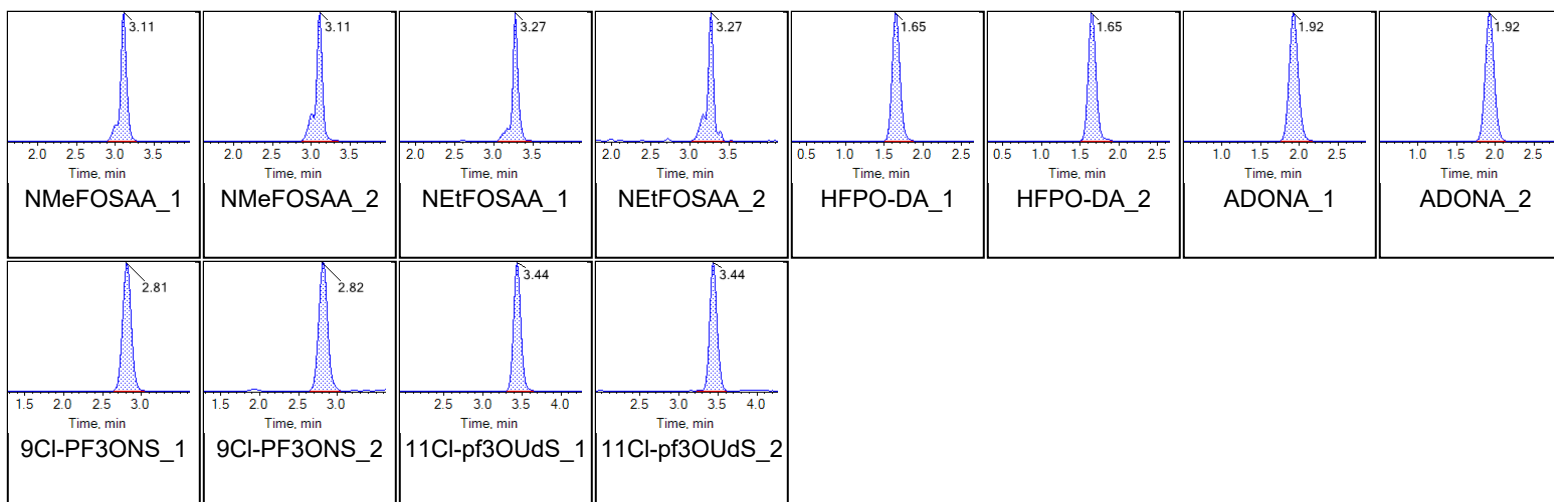
Chromatograms

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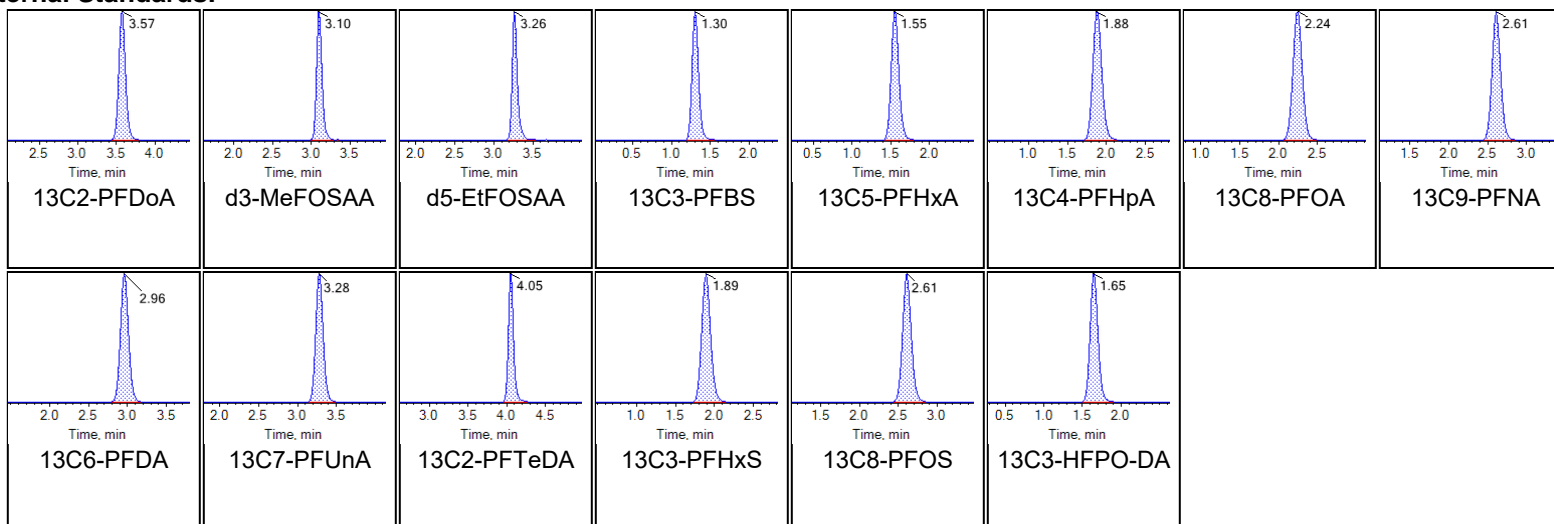




Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Internal Standards:





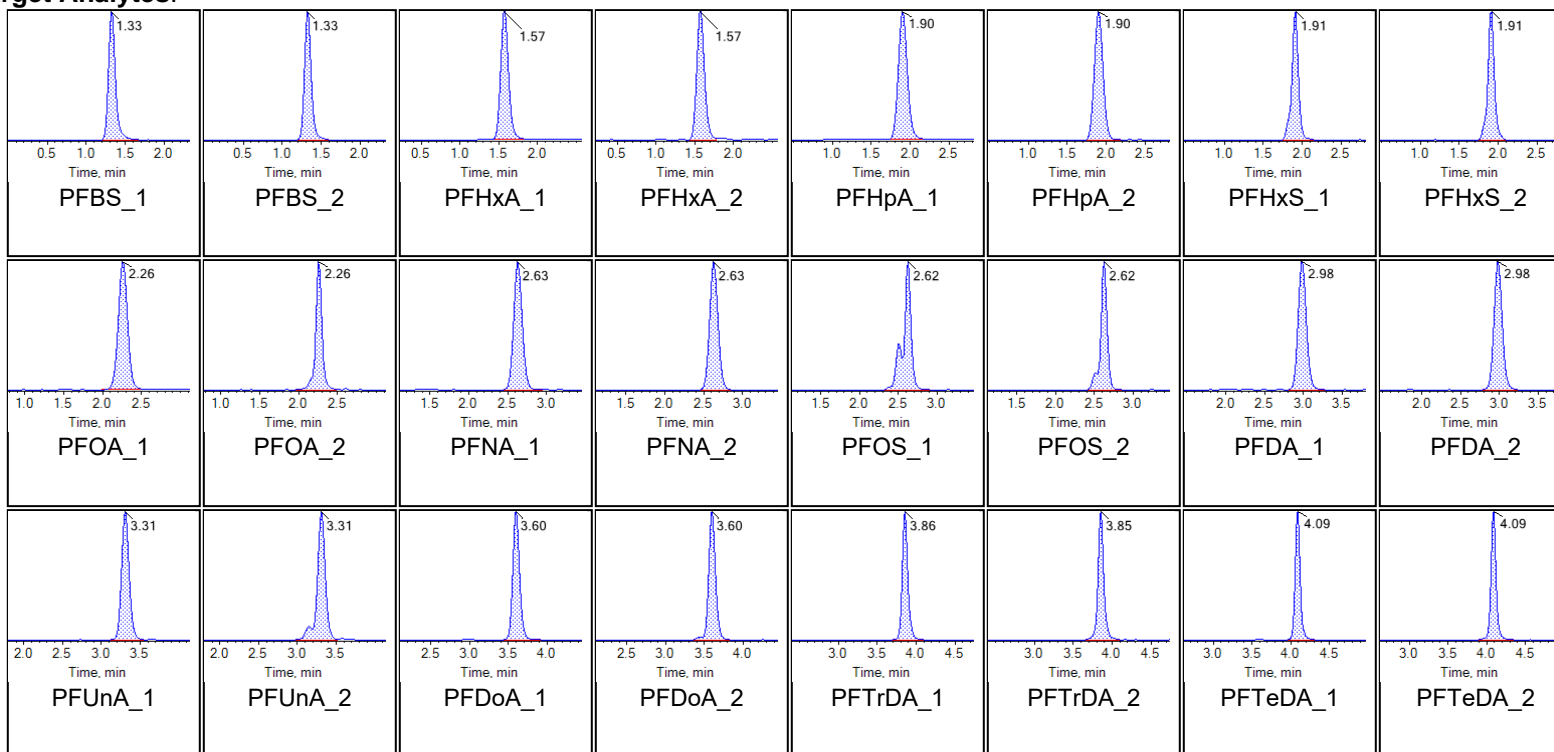
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	LD76 CCV	Injection Vial	2
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
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Acquisition Method	5-369.dam	Result Table	20-1305

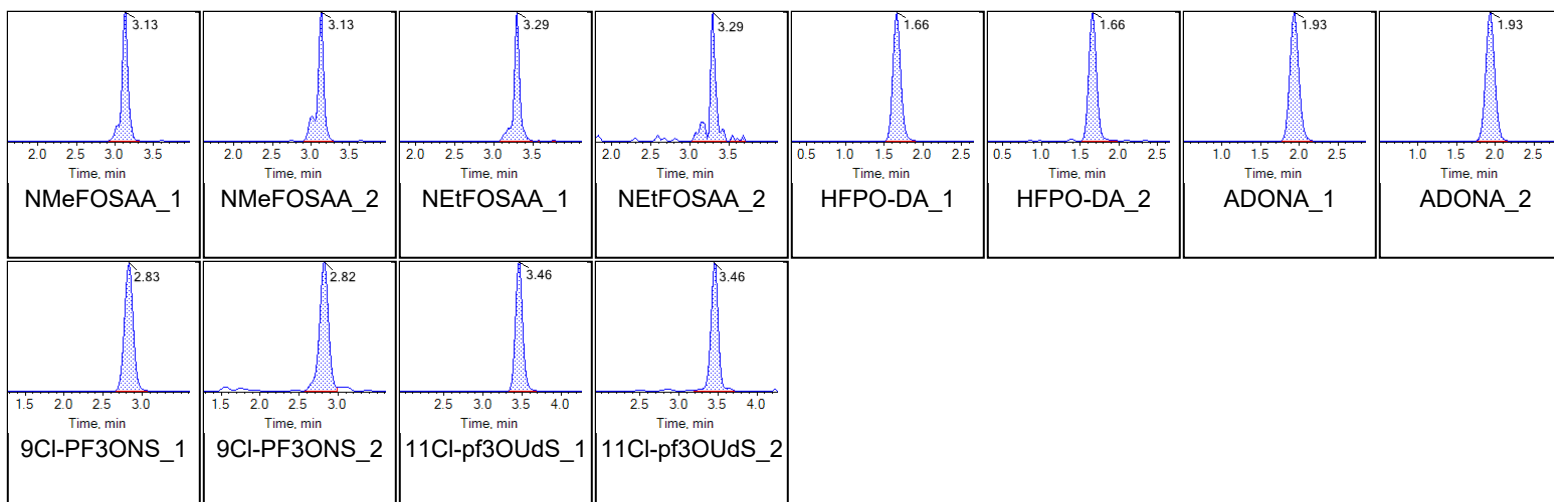
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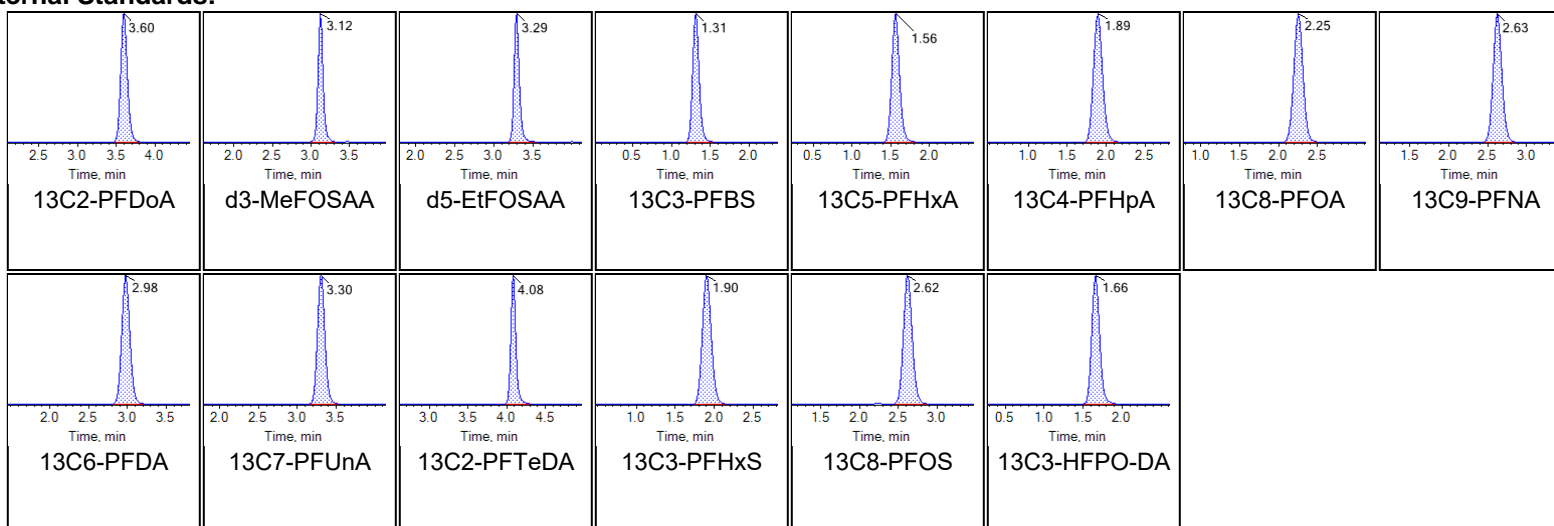




Chromatogram Report

Created with Analyst Reporter
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Internal Standards:





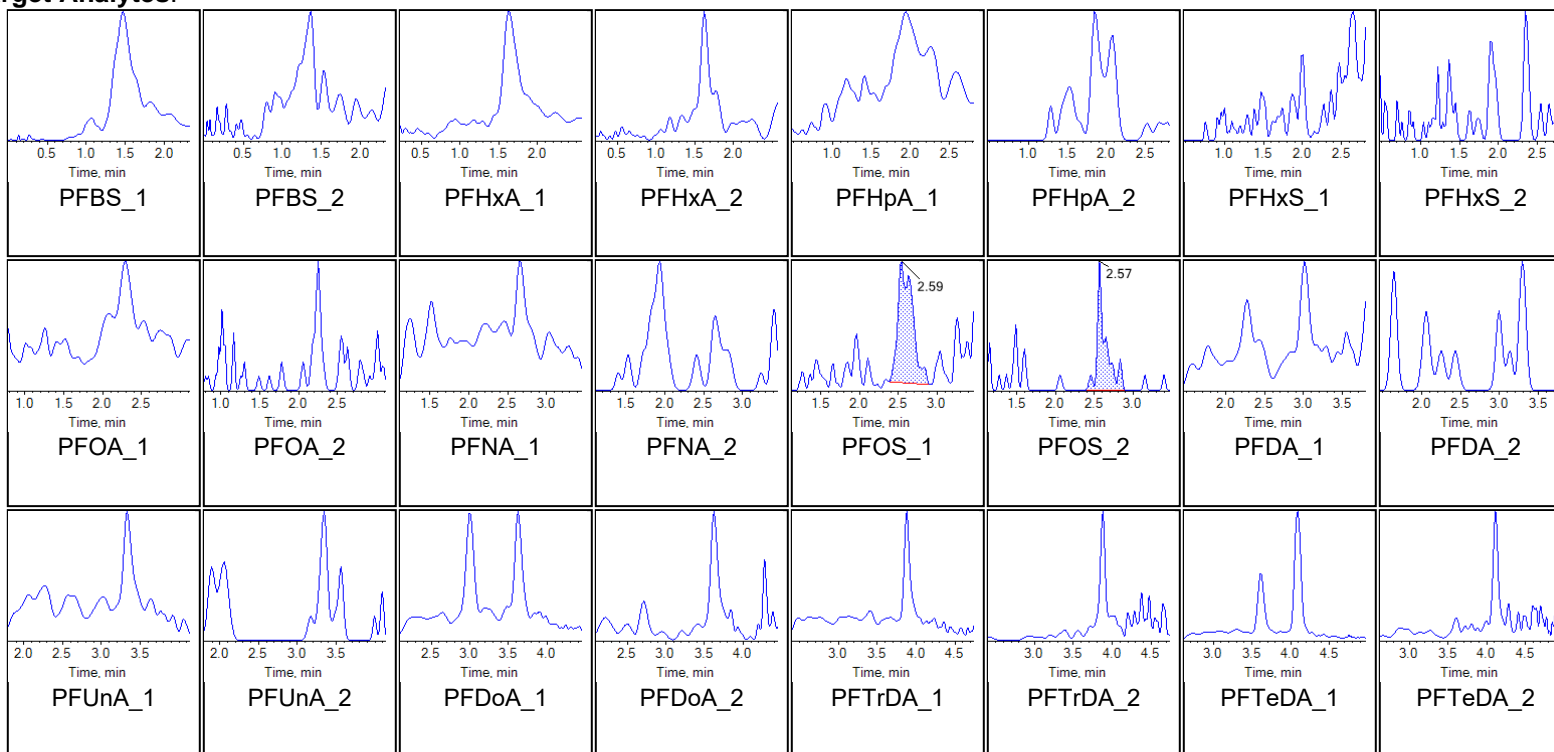
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	LD80 IB	Injection Vial	4
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 1:33:00 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

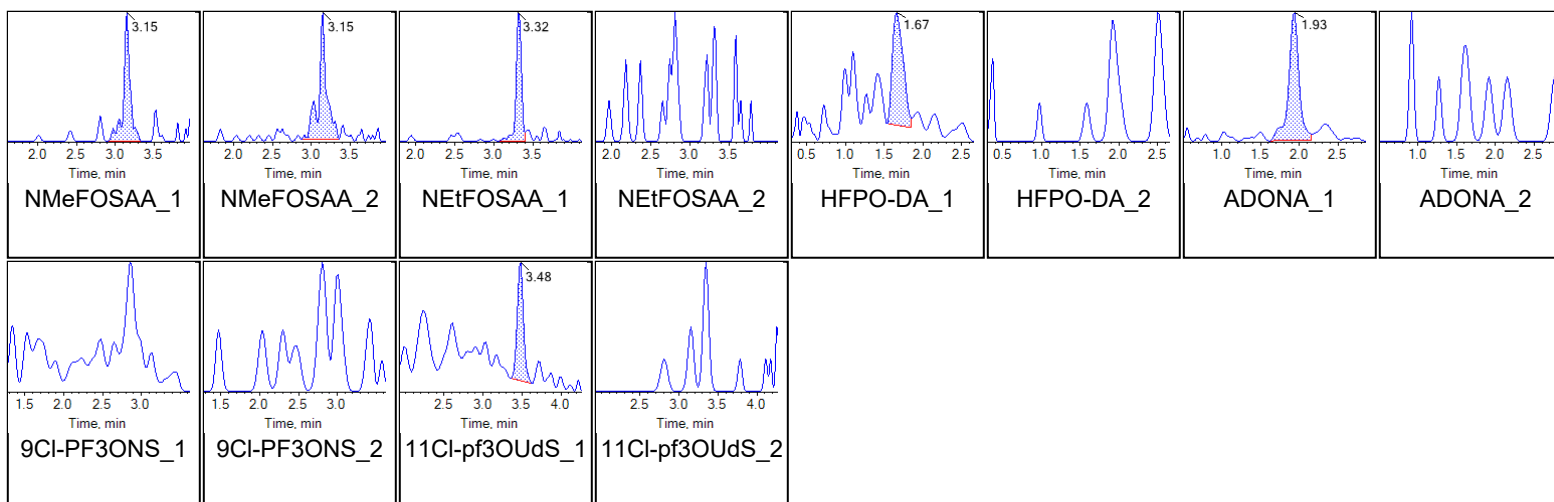
Chromatograms

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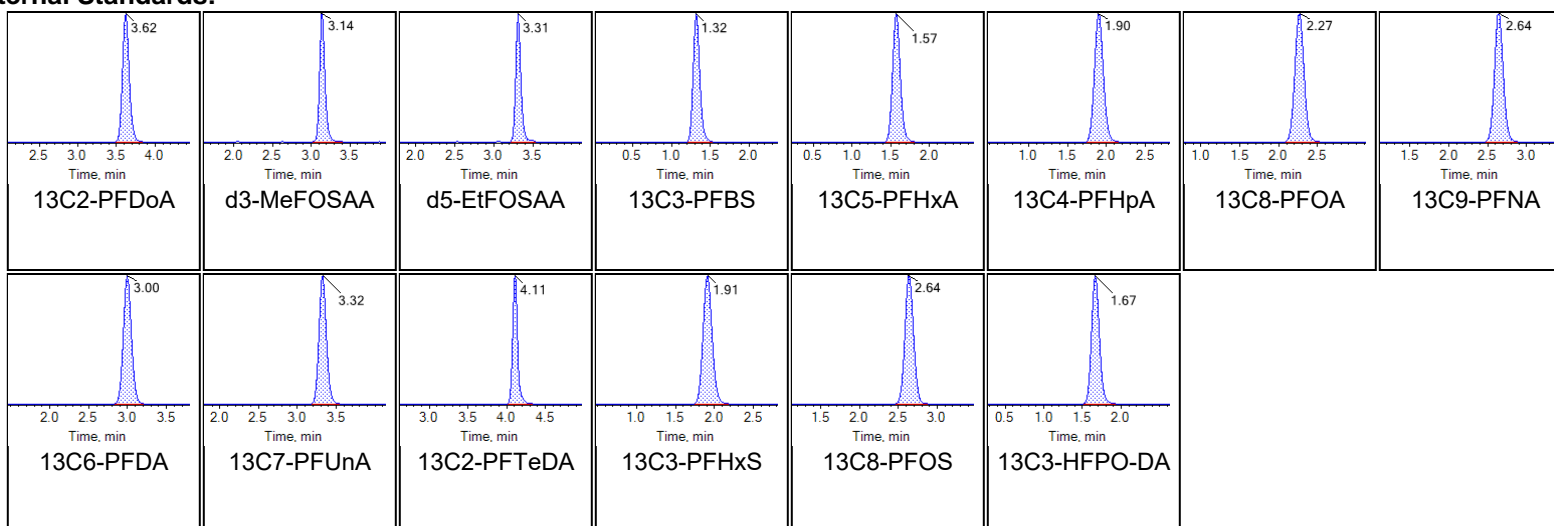




Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Internal Standards:





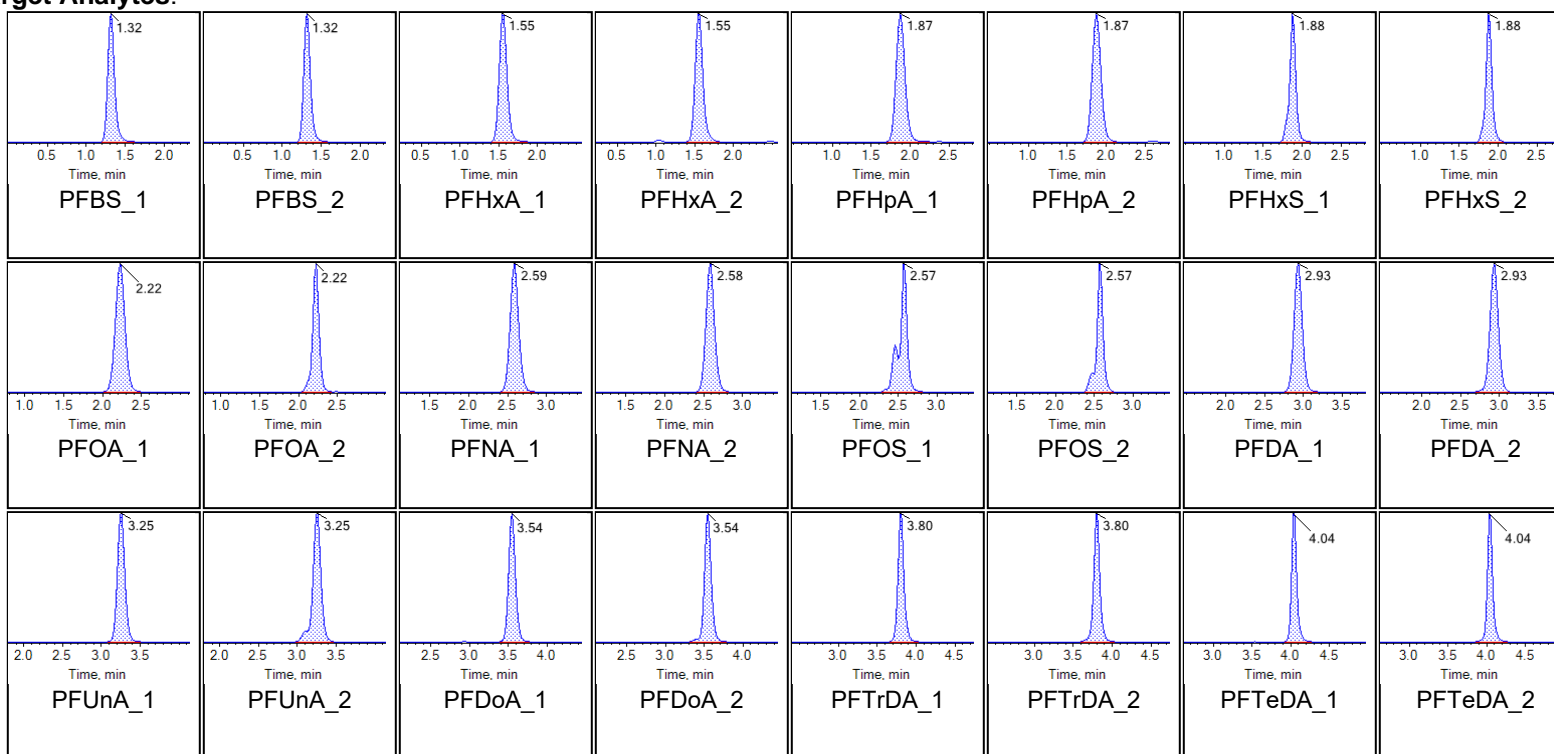
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	LD77 CCV	Injection Vial	8
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
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Acquisition Method	5-369.dam	Result Table	20-1305

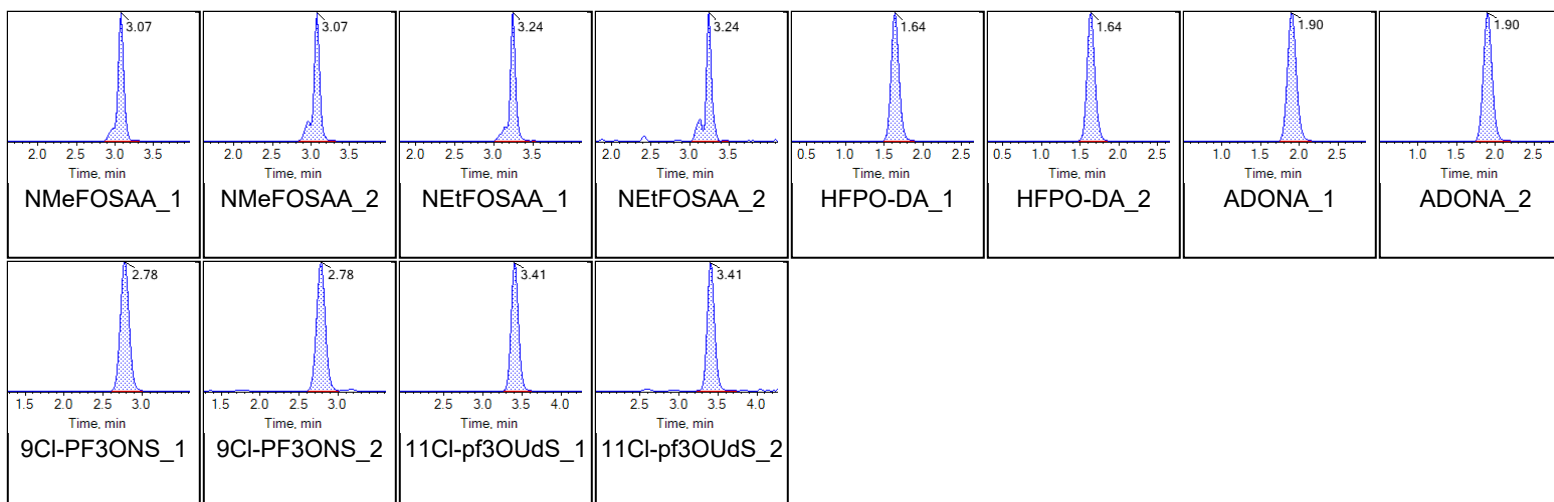
Chromatograms

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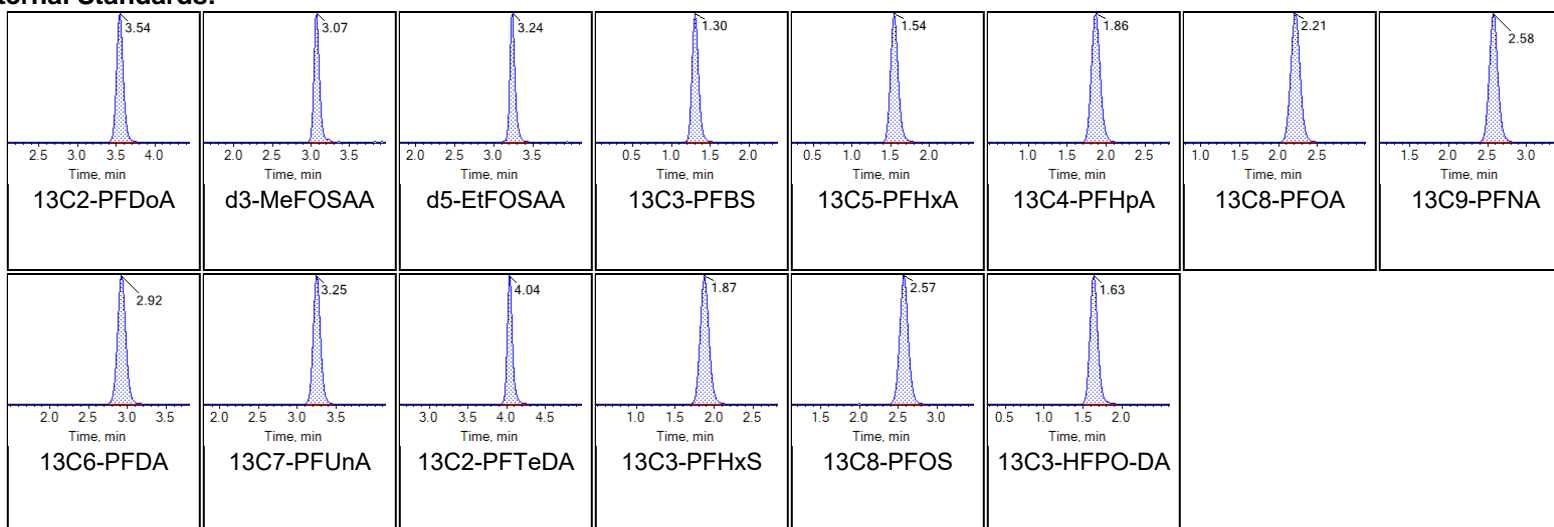




Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Internal Standards:





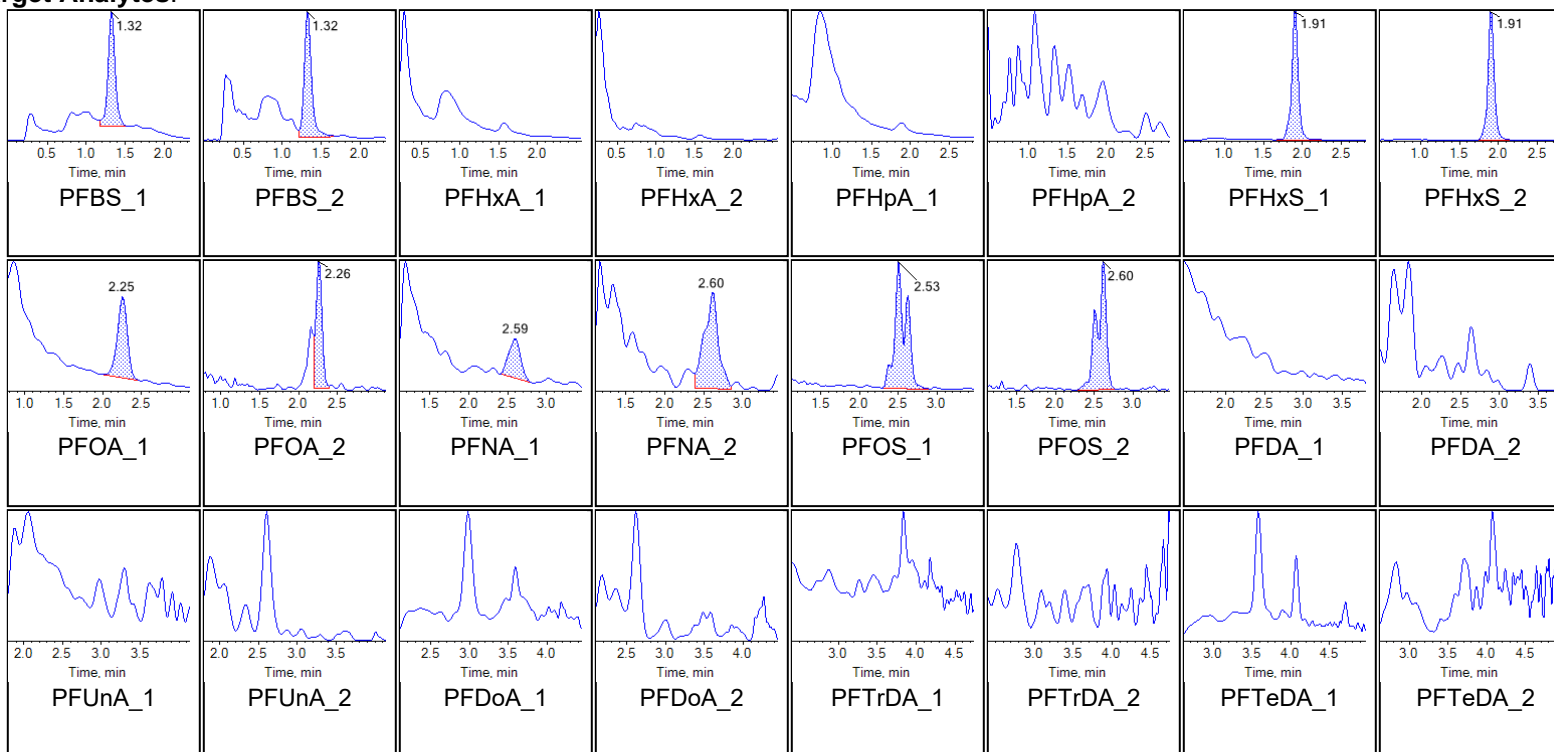
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	G1696-FS(0)	Injection Vial	9
Sample ID	CBD-HVG-GW10-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 2:25:16 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

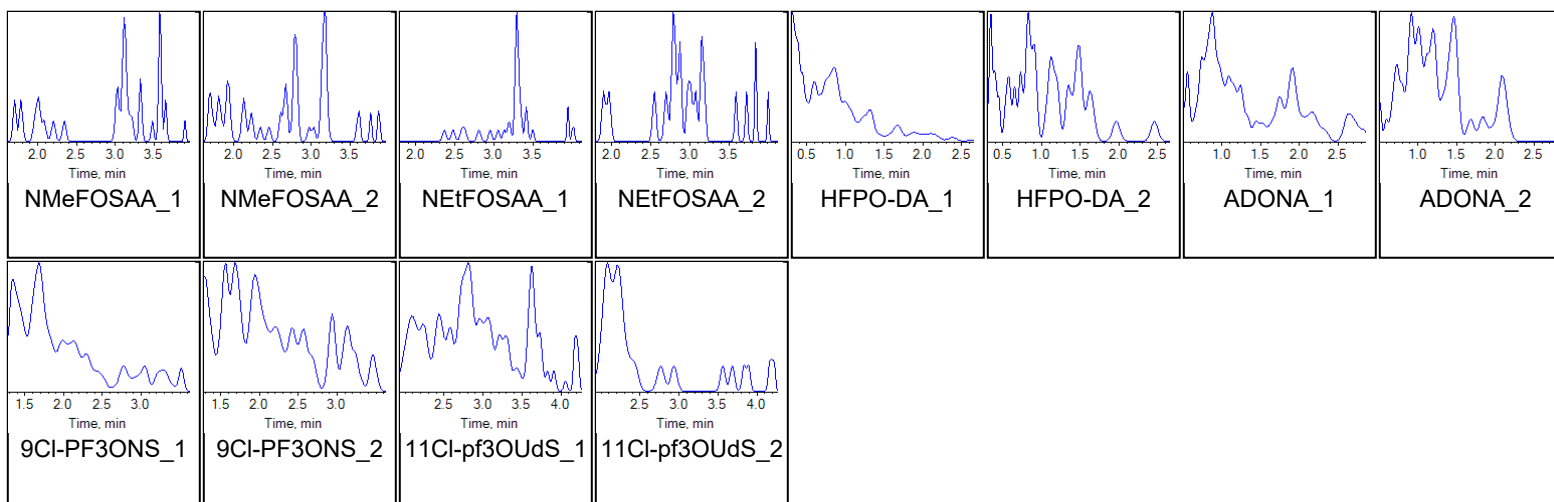
Chromatograms

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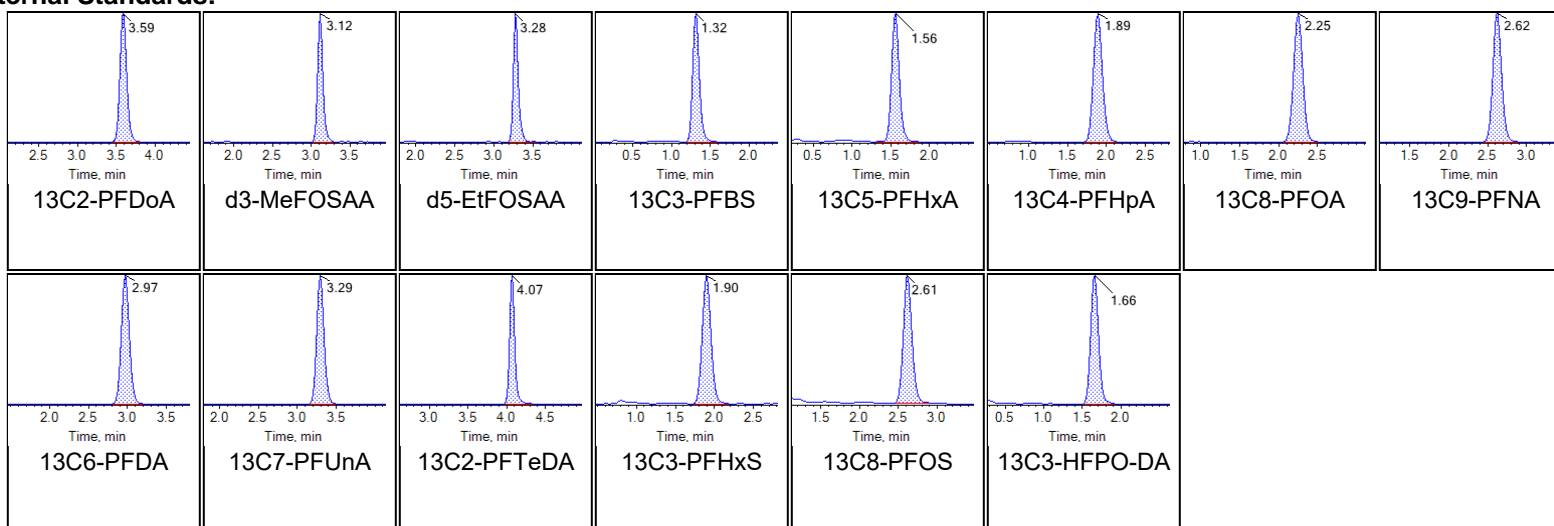




Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Internal Standards:





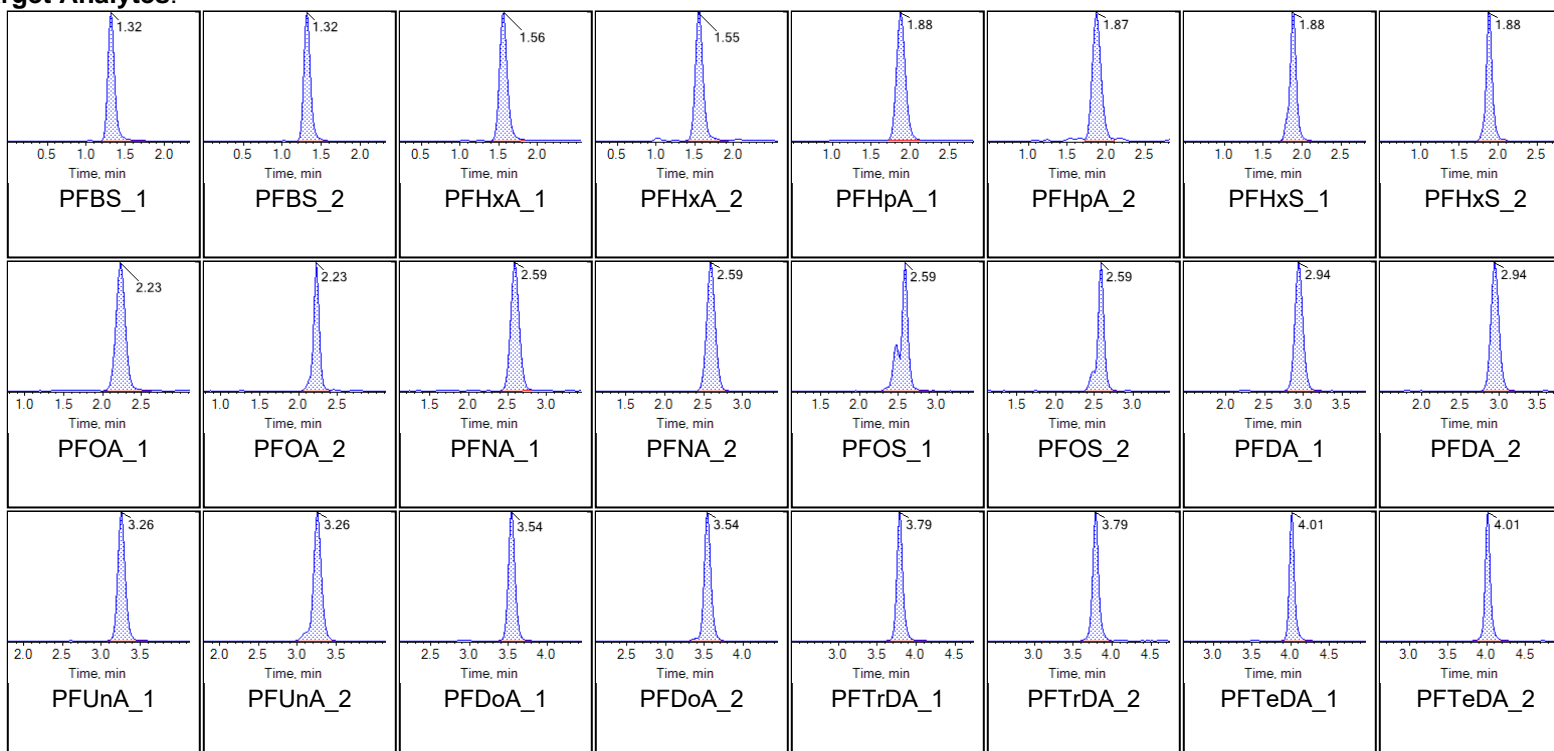
Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Sample Name	LD76 CCV	Injection Vial	15
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 3:17:33 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305

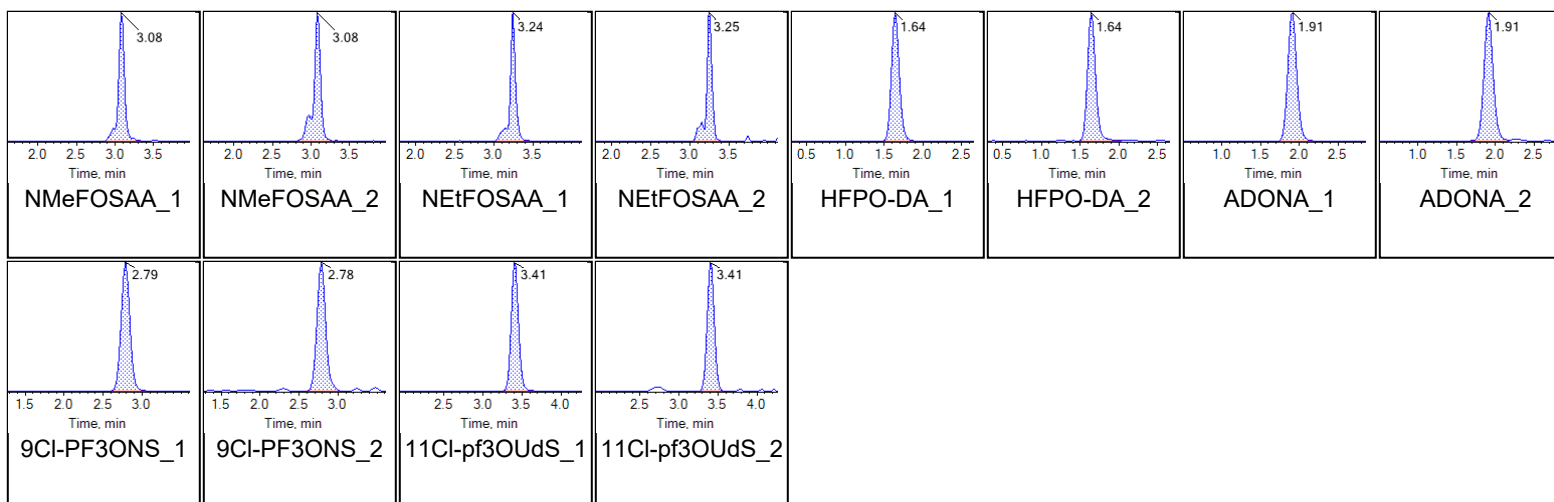
Chromatograms

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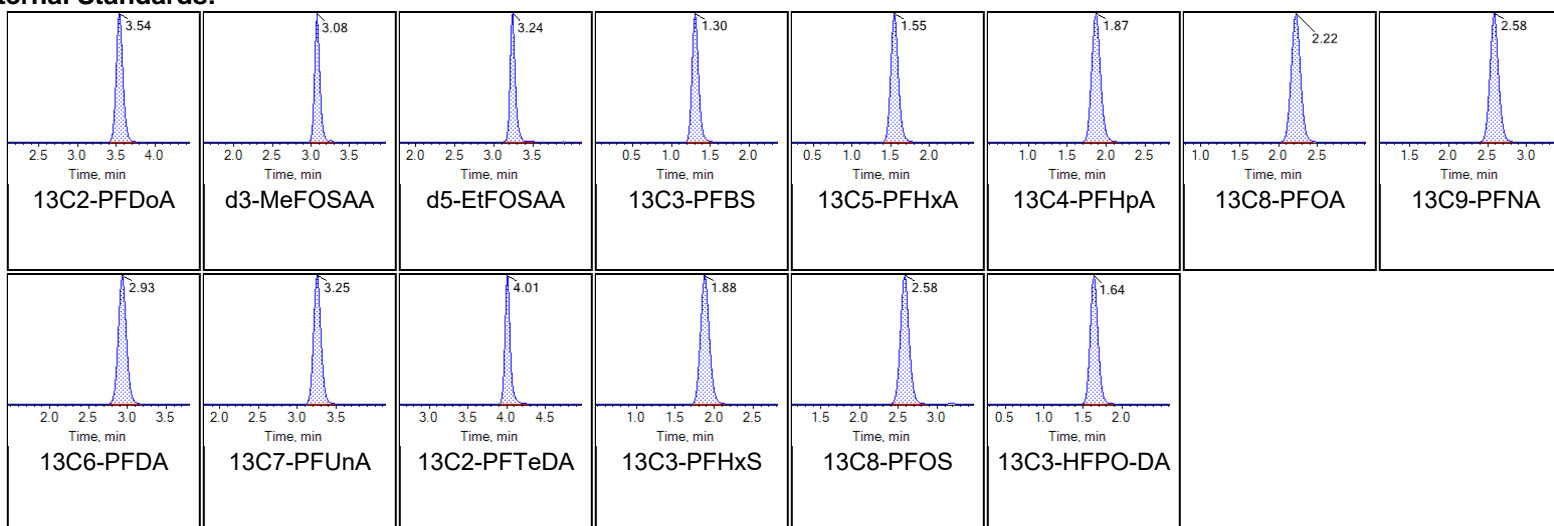




Chromatogram Report

Created with Analyst Reporter
Printed: 09/11/2020 11:46:05 AM

Internal Standards:





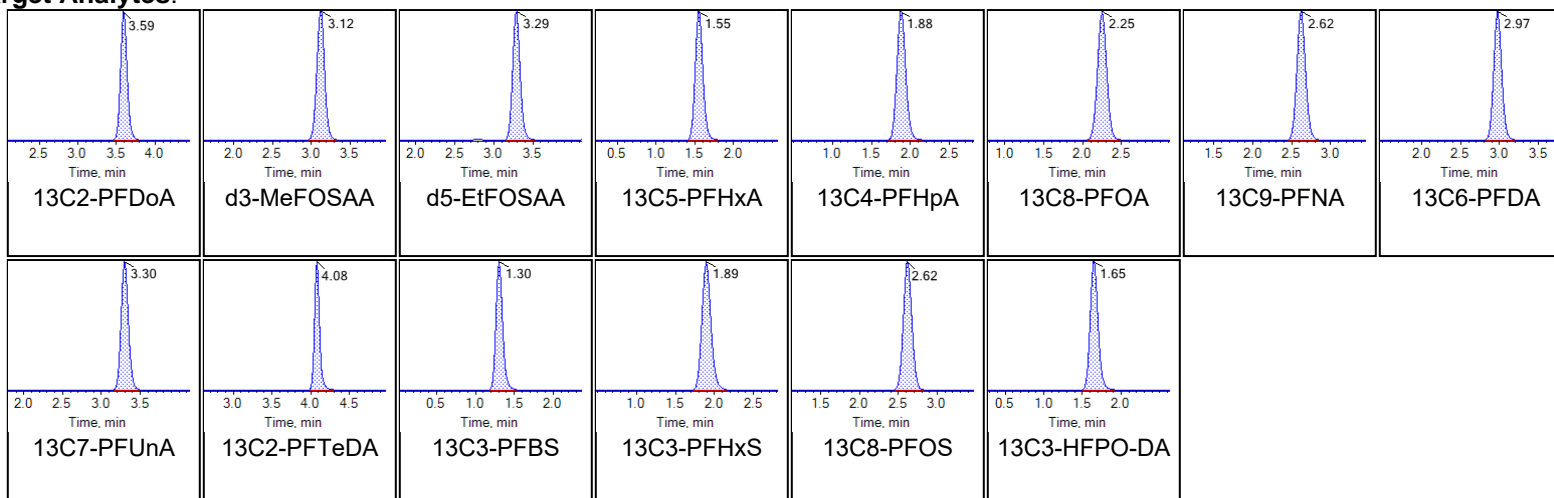
Chromatogram Report

Created with Analyst Reporter
Printed: 06/11/2020 4:25:26 PM

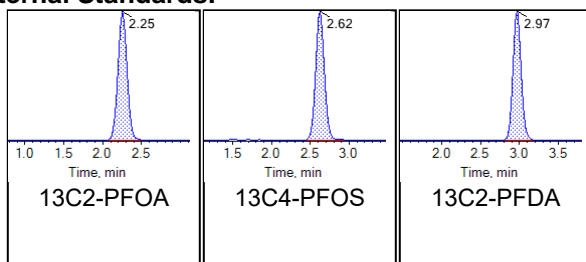
Sample Name	LD74	Injection Vial	2
Sample ID	L1	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:46:02 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



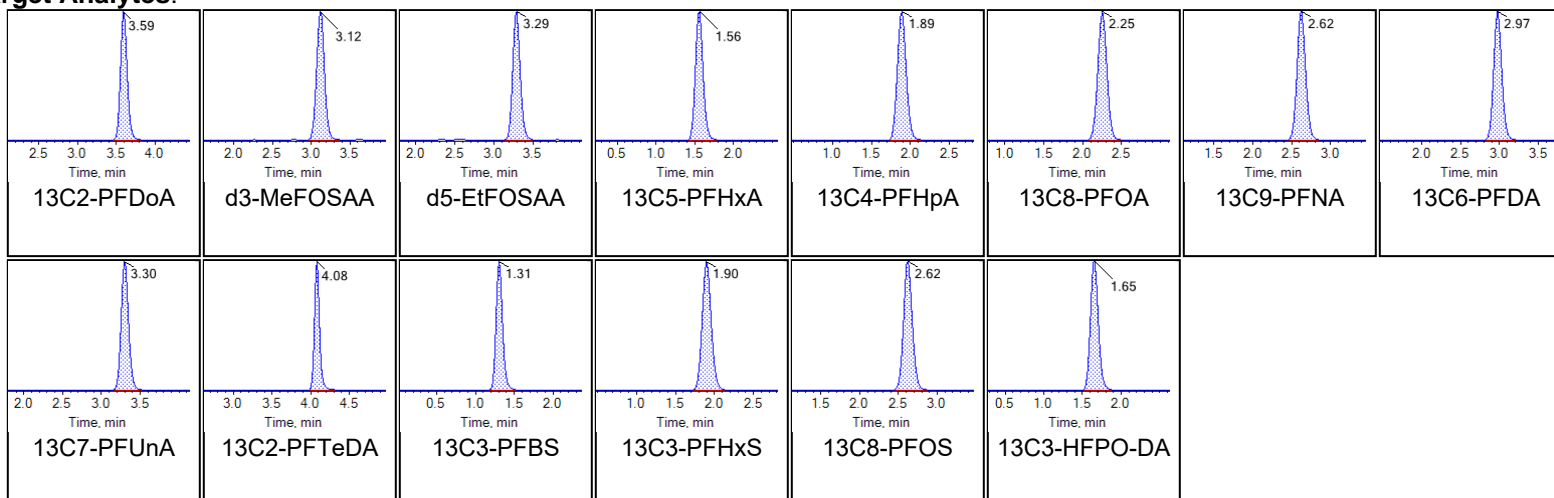
Internal Standards:



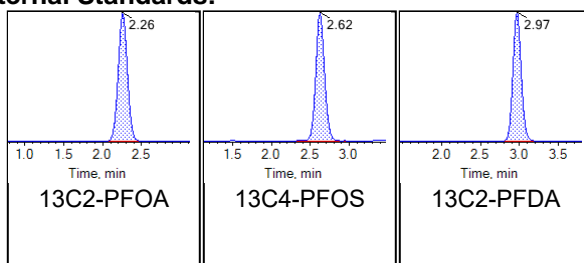
Sample Name	LD75	Injection Vial	3
Sample ID	L2	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 1:56:29 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



Internal Standards:





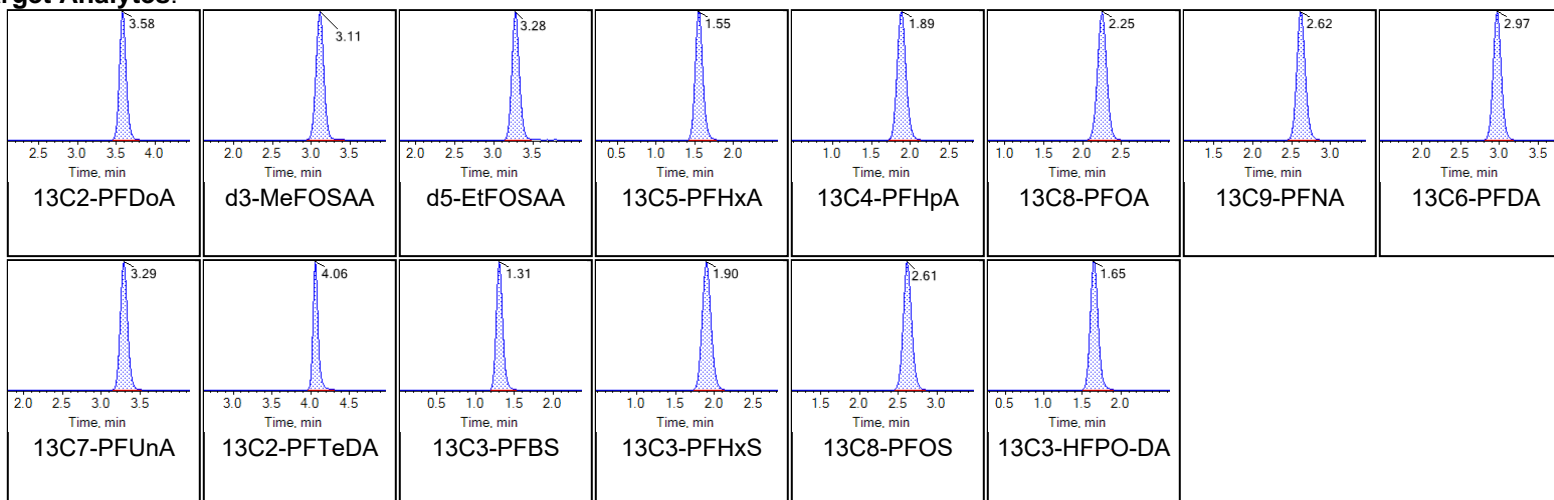
Chromatogram Report

Created with Analyst Reporter
Printed: 06/11/2020 4:25:26 PM

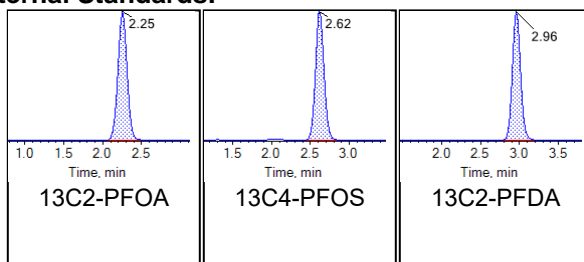
Sample Name	LD76	Injection Vial	4
Sample ID	L3	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:06:57 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



Internal Standards:





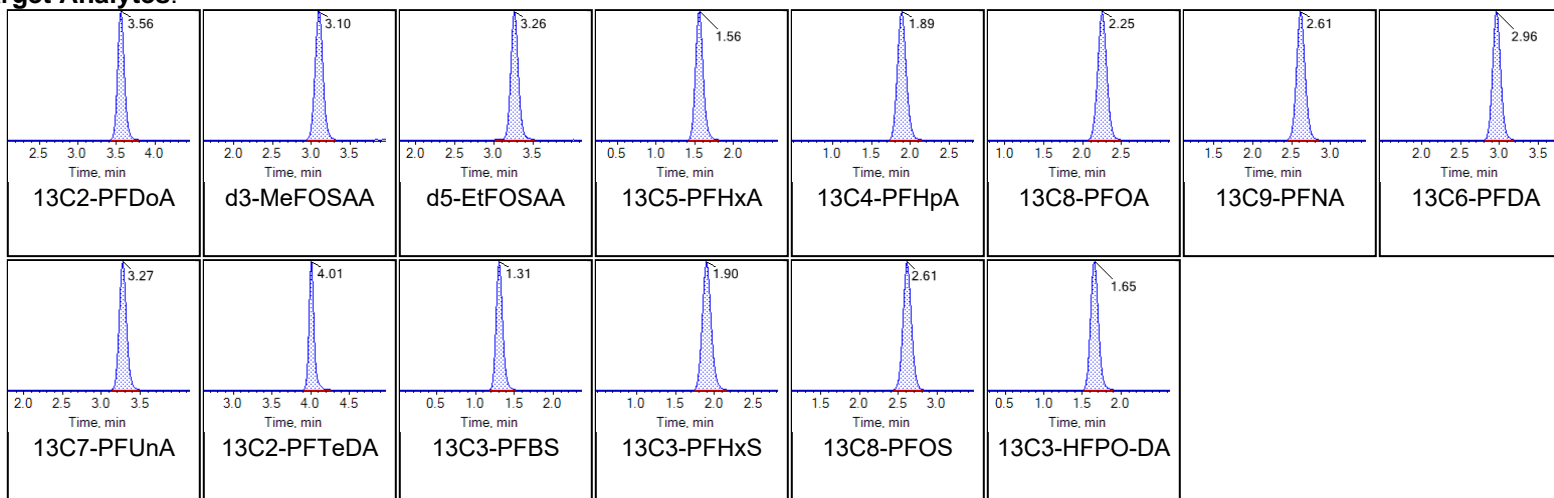
Chromatogram Report

Created with Analyst Reporter
Printed: 06/11/2020 4:25:26 PM

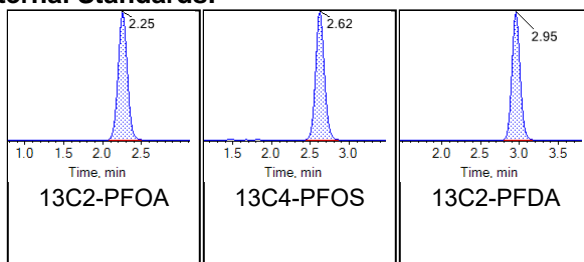
Sample Name	LD77	Injection Vial	5
Sample ID	L4	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:17:24 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



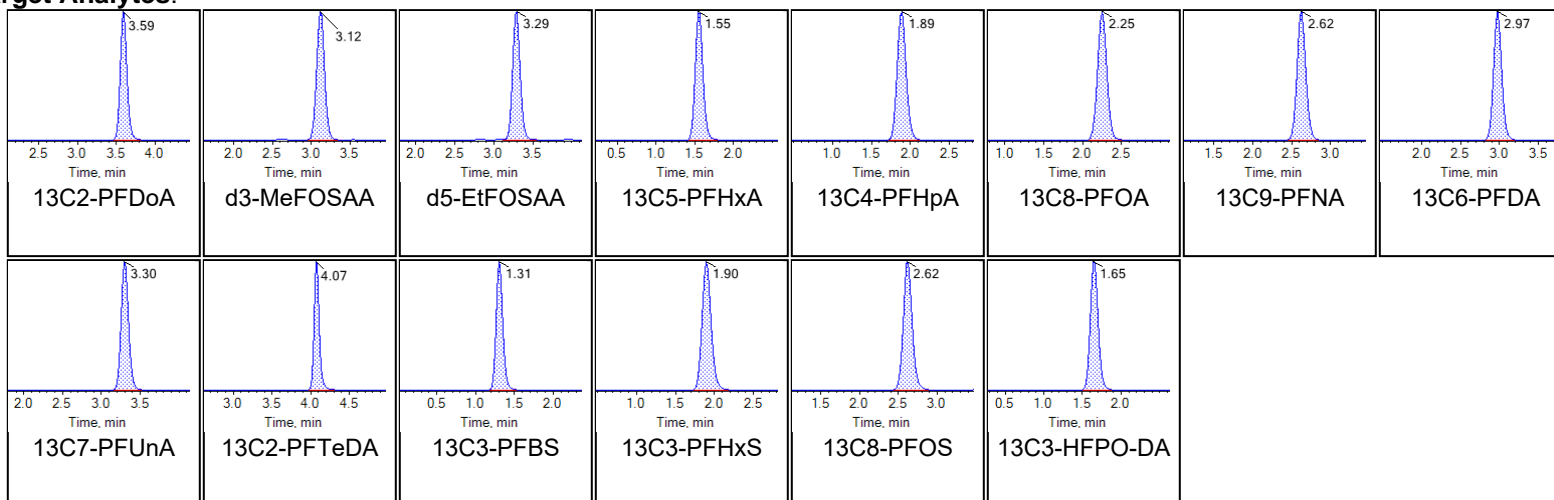
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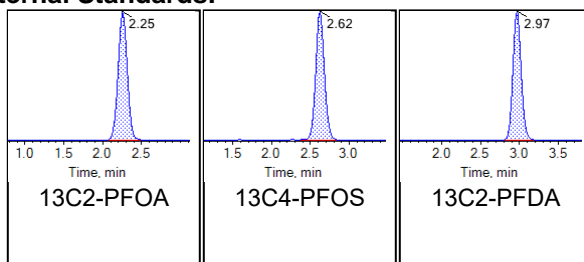
Sample Name	LD78	Injection Vial	6
Sample ID	L5	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:27:51 PM	Data File	AE_11052020_5-369.wiff
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Chromatograms

Target Analytes:



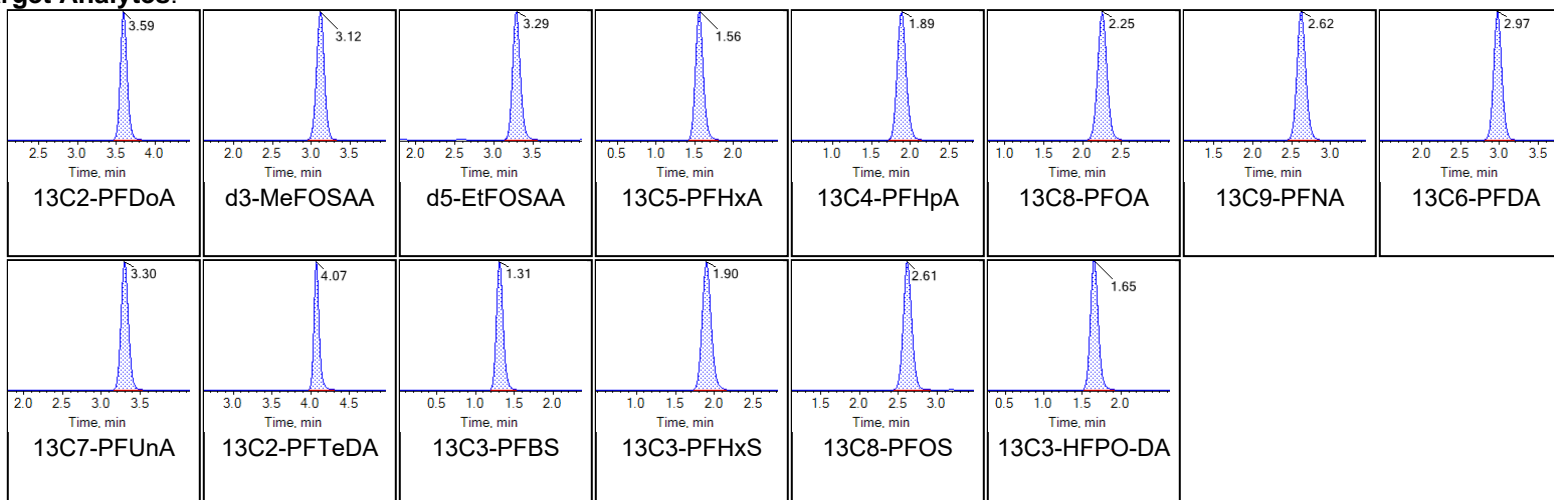
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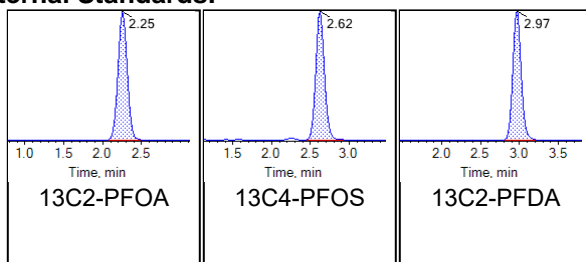
Sample Name	LD79	Injection Vial	7
Sample ID	L6	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:38:18 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

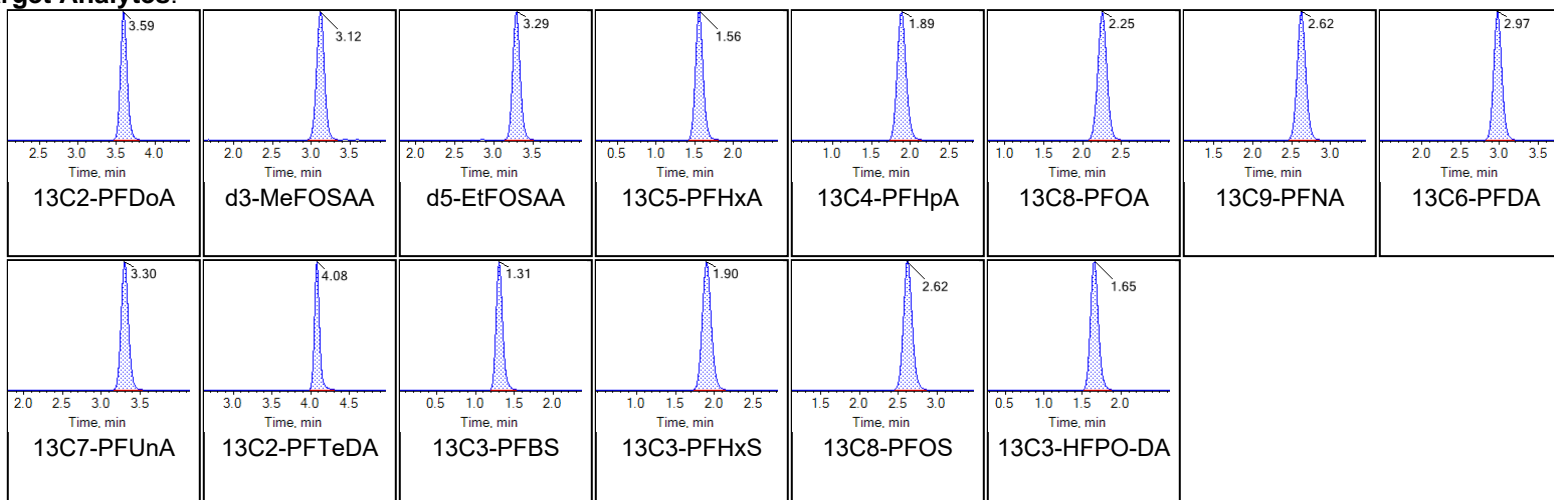
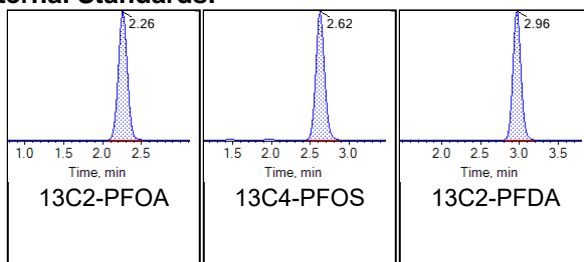
Target Analytes:



Internal Standards:



Sample Name	LD80 IB	Injection Vial	8
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:48:46 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms**Target Analytes:****Internal Standards:**



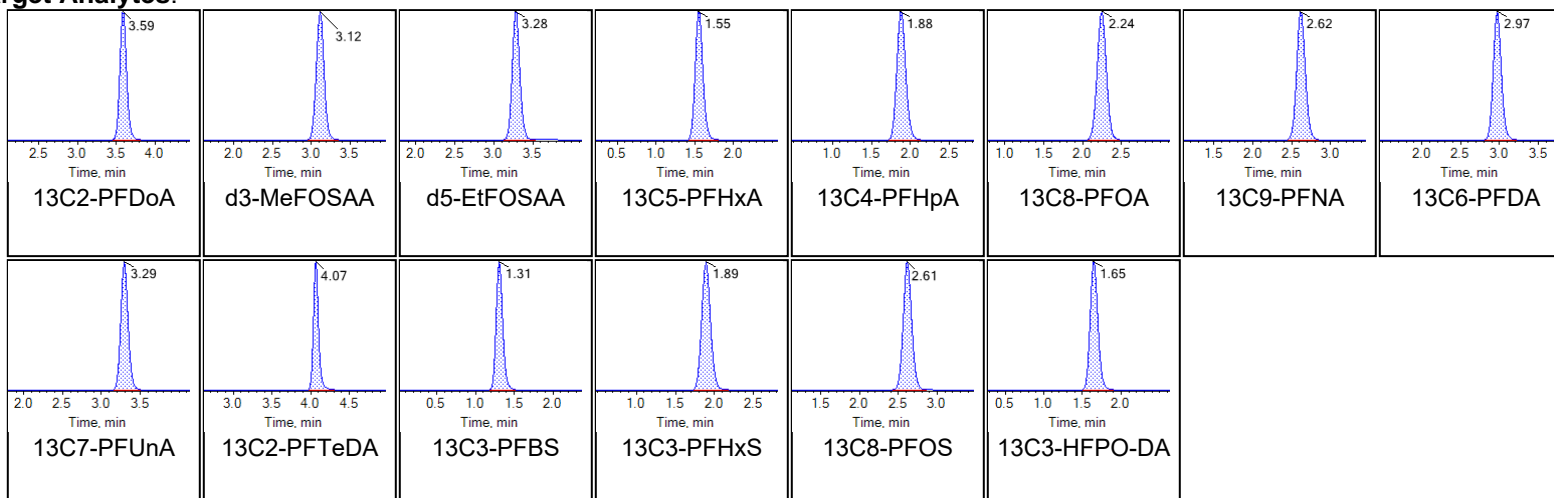
Chromatogram Report

Created with Analyst Reporter
Printed: 06/11/2020 4:25:26 PM

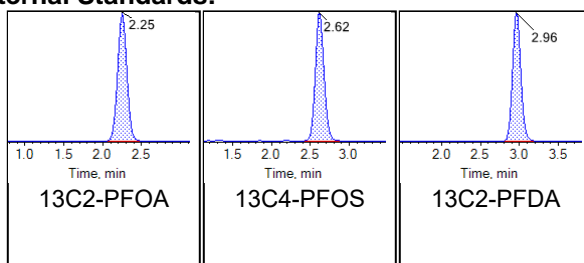
Sample Name	LD81 ICC	Injection Vial	9
Sample ID	ICC	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 2:59:12 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



Internal Standards:





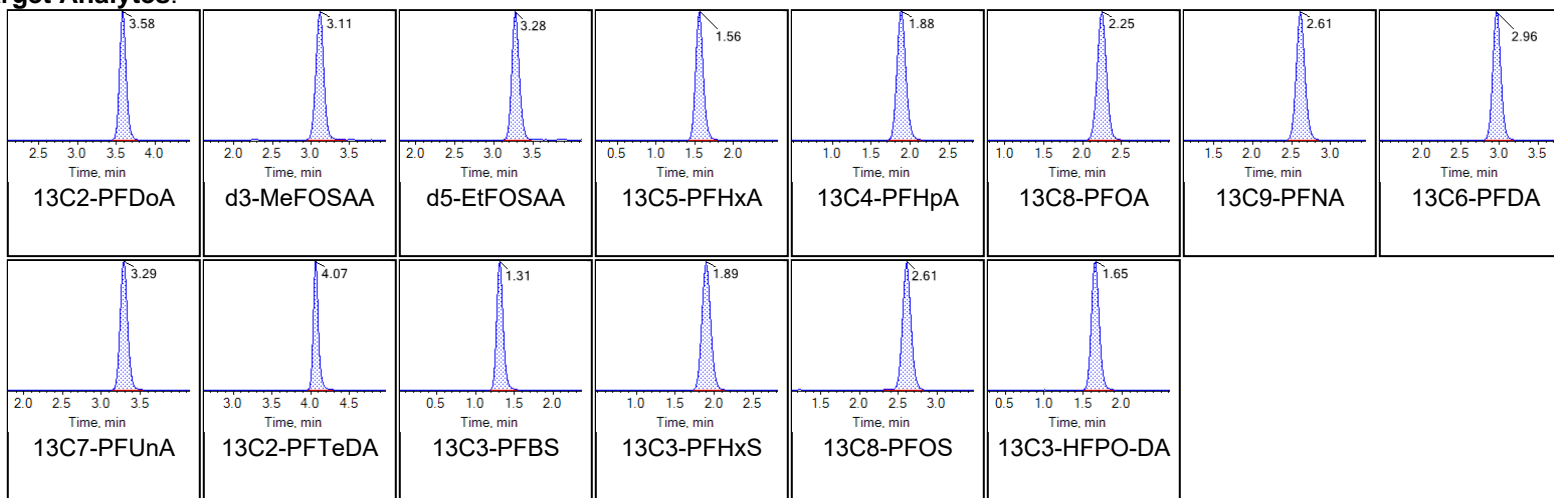
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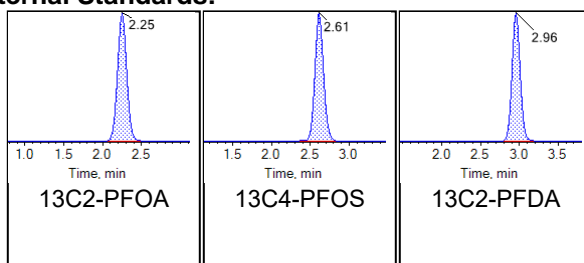
Sample Name	DA908PB-FS(0)	Injection Vial	12
Sample ID	Procedural Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 3:30:37 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



Internal Standards:





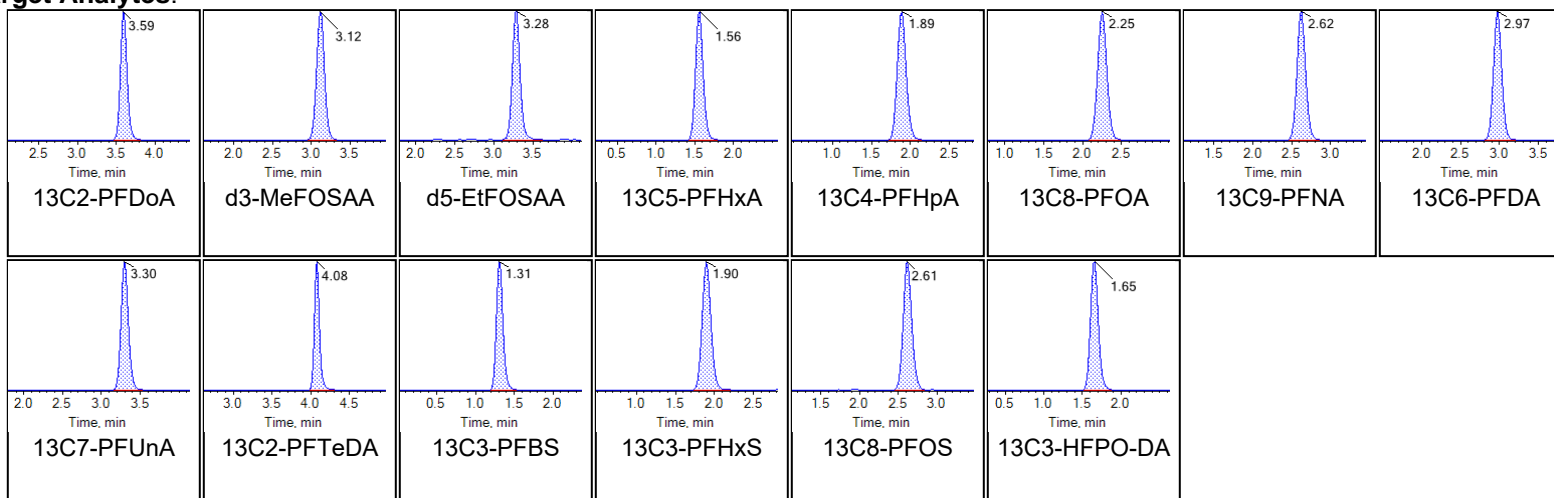
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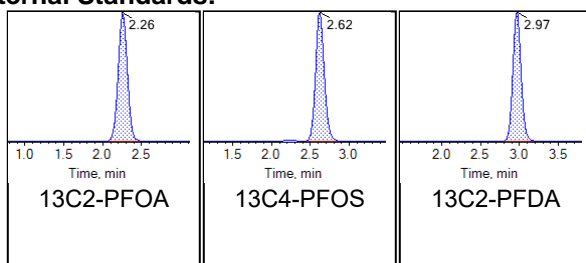
Sample Name	DA909LCS-FS(0)	Injection Vial	13
Sample ID	Laboratory Control Sample	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 3:41:28 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



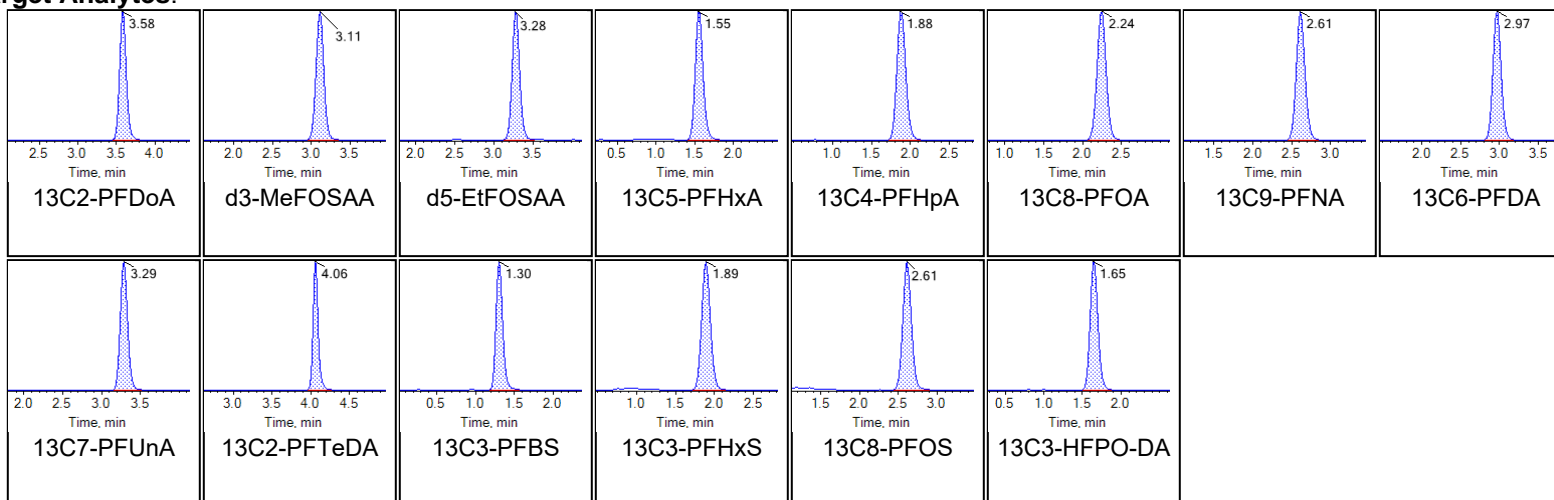
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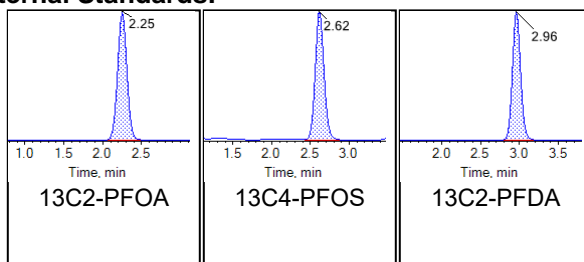
Sample Name	G1697-FS(0)	Injection Vial	15
Sample ID	CBD-HVG-GW09-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 4:02:22 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



Internal Standards:





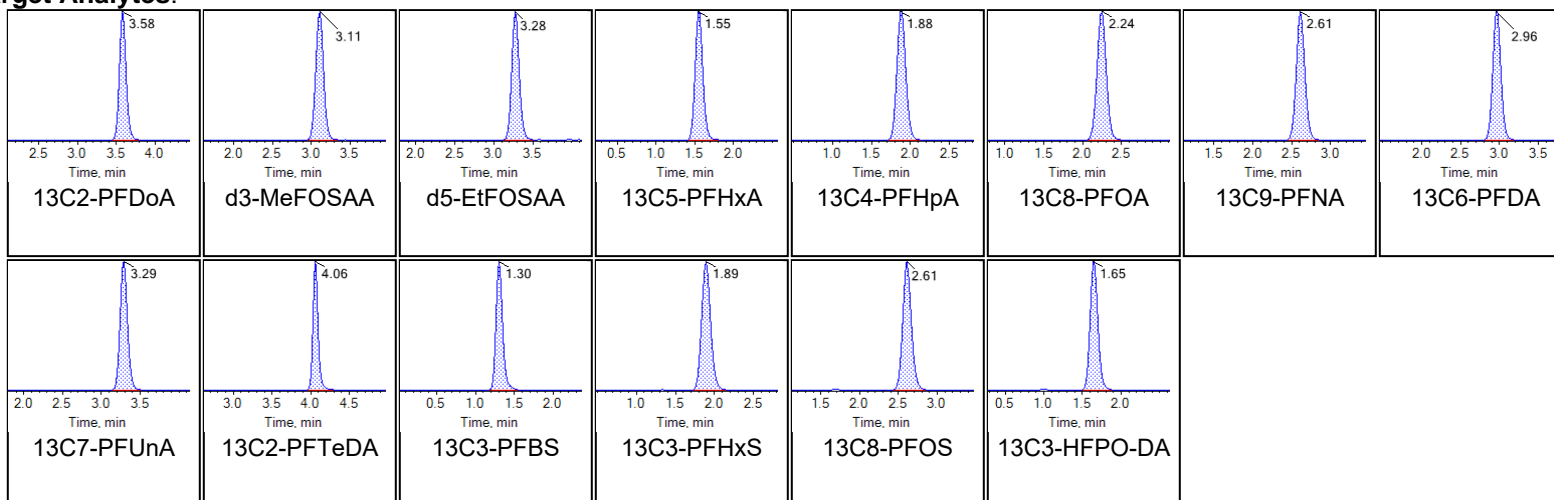
Chromatogram Report

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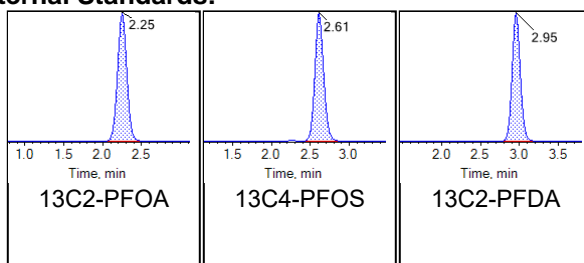
Sample Name	G1698-FS(0)	Injection Vial	16
Sample ID	CBD-EB01-101420-GW	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 4:12:50 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



Internal Standards:





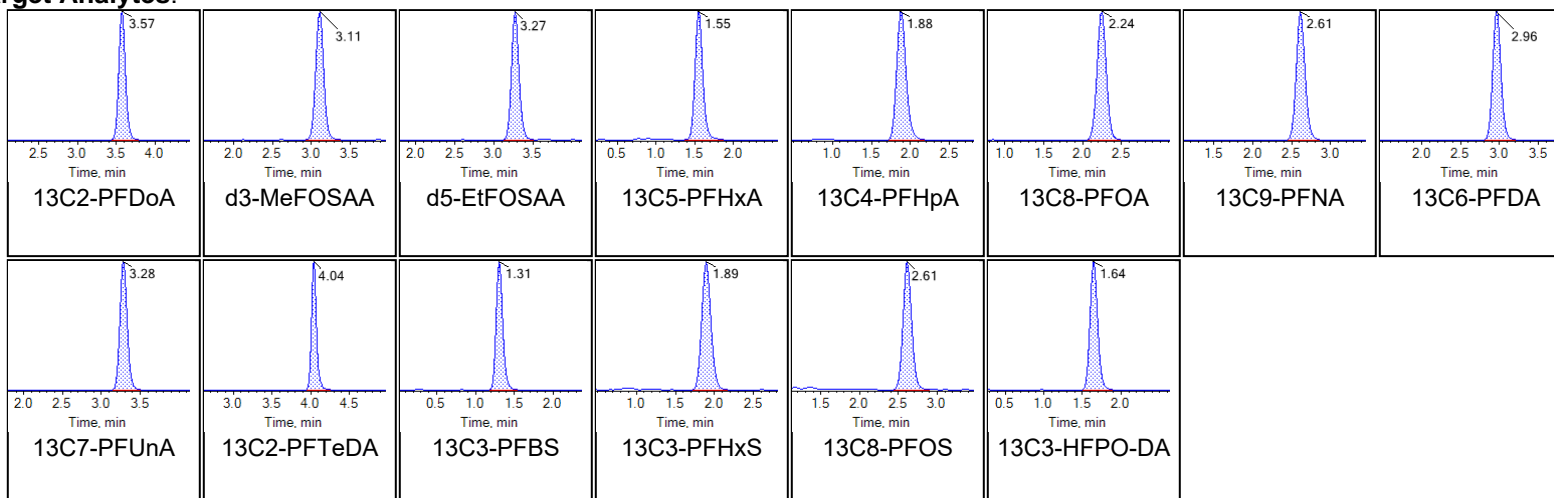
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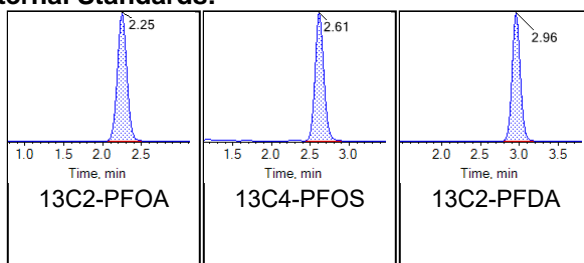
Sample Name	G1699-FS(0)	Injection Vial	17
Sample ID	CBD-AOA-MW10-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 4:23:19 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



Internal Standards:





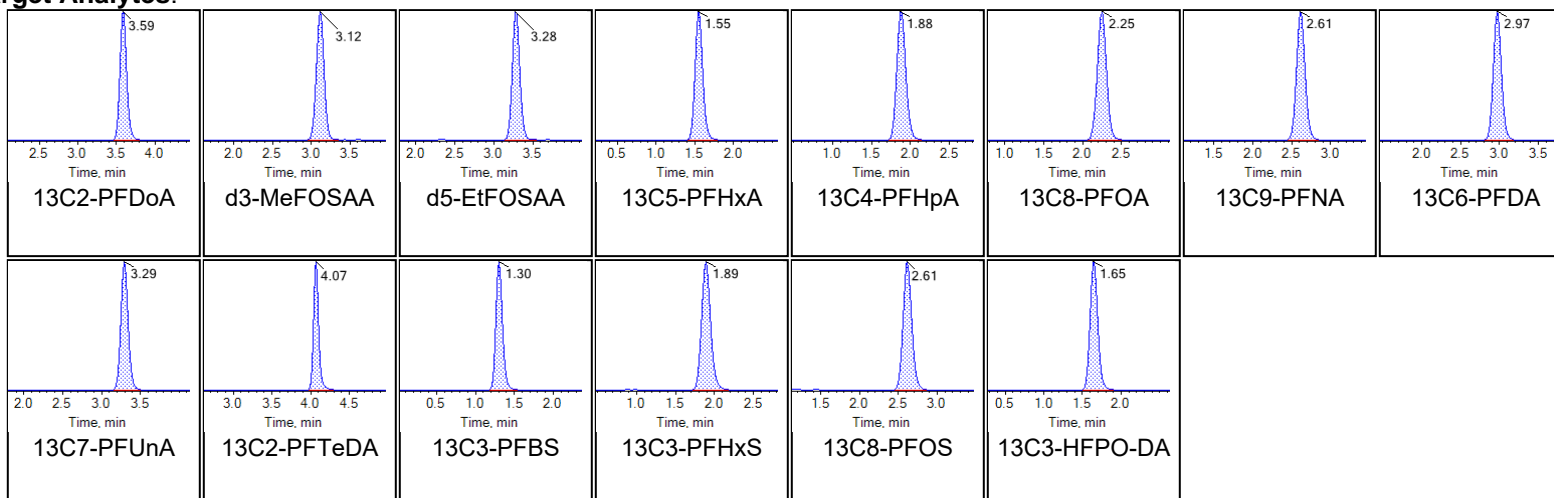
Chromatogram Report

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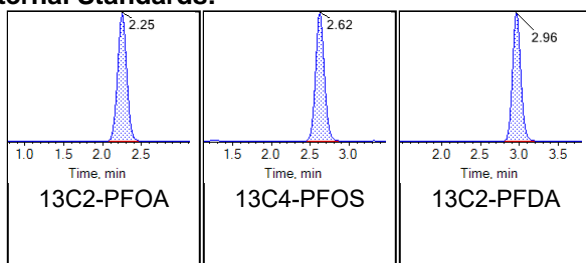
Sample Name	G1699-FS-D(3)	Injection Vial	18
Sample ID	CBD-AOA-MW10-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 4:33:47 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



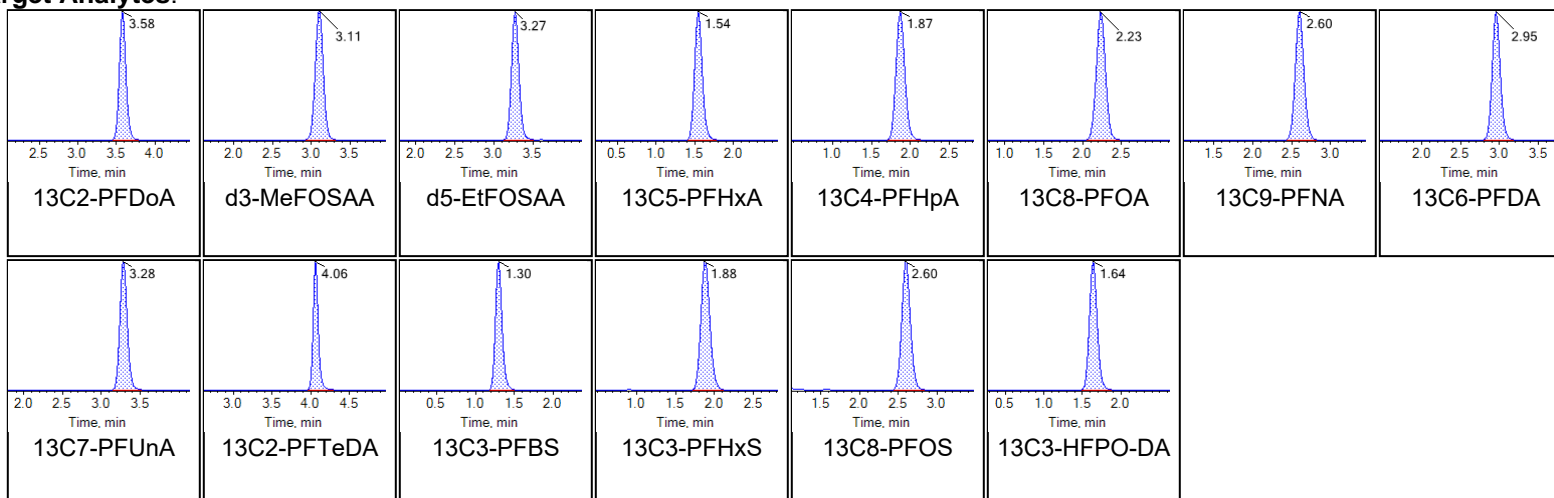
Internal Standards:



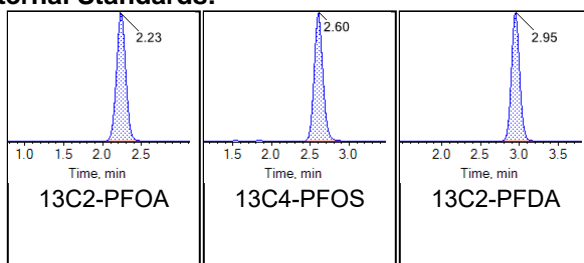
Sample Name	G1699-FS-D(5)	Injection Vial	19
Sample ID	CBD-AOA-MW10-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 4:44:14 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



Internal Standards:





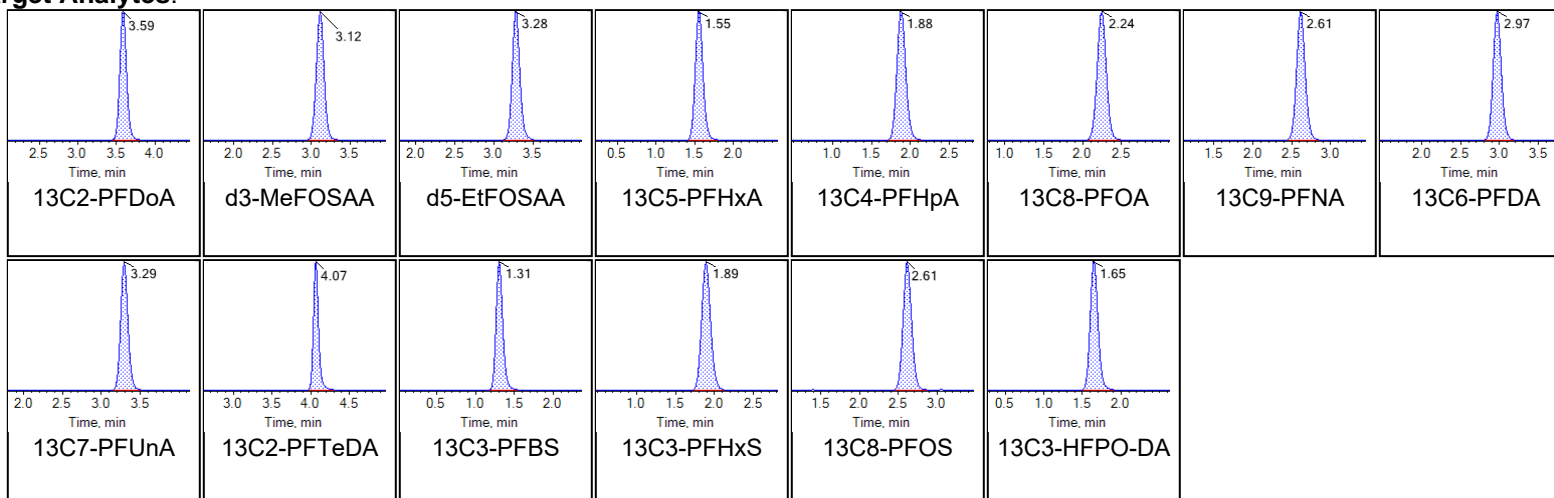
Chromatogram Report

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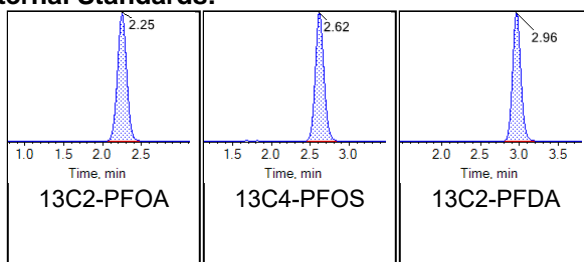
Sample Name	LD76 CCV	Injection Vial	21
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:05:11 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



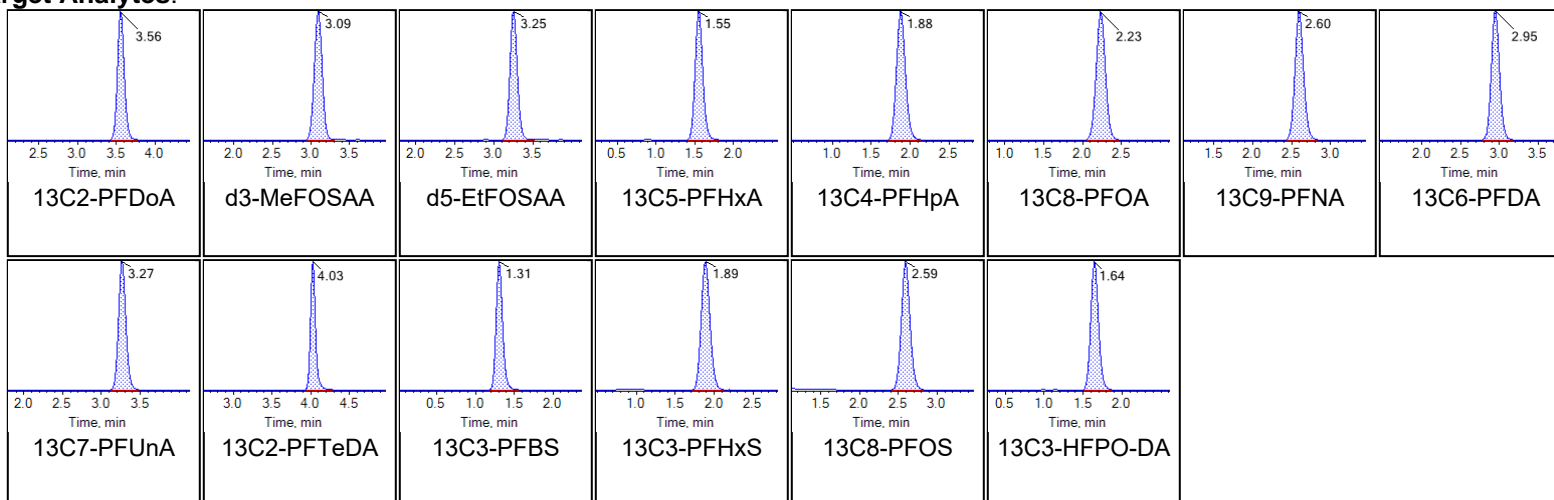
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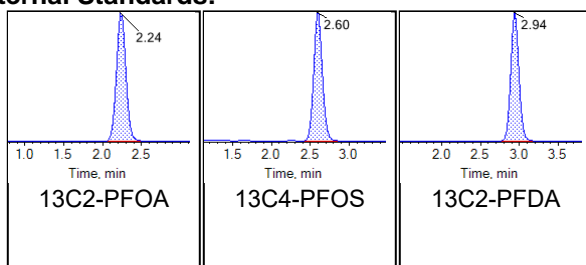
Sample Name	G1700-FS(0)	Injection Vial	22
Sample ID	CBD-BKG-MW03-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:16:07 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



Internal Standards:





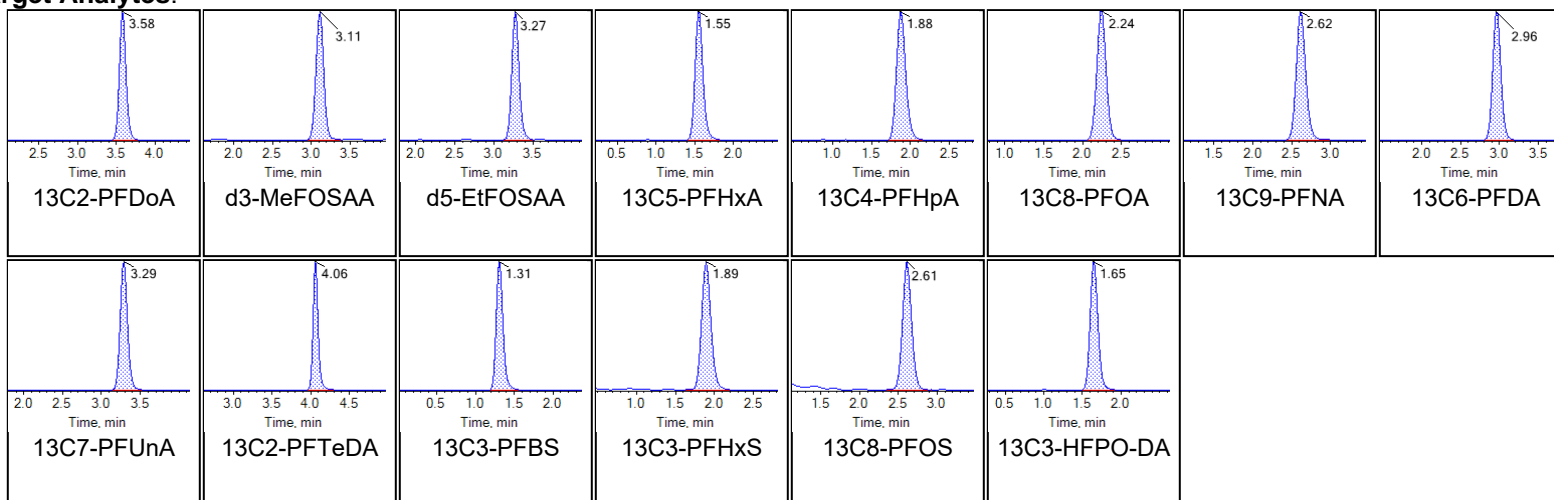
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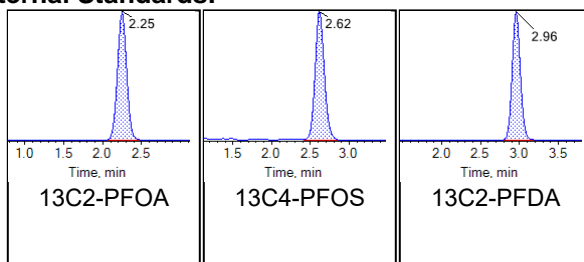
Sample Name	G1701-FS(0)	Injection Vial	23
Sample ID	CBD-SO4-MW01-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:26:35 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



Internal Standards:





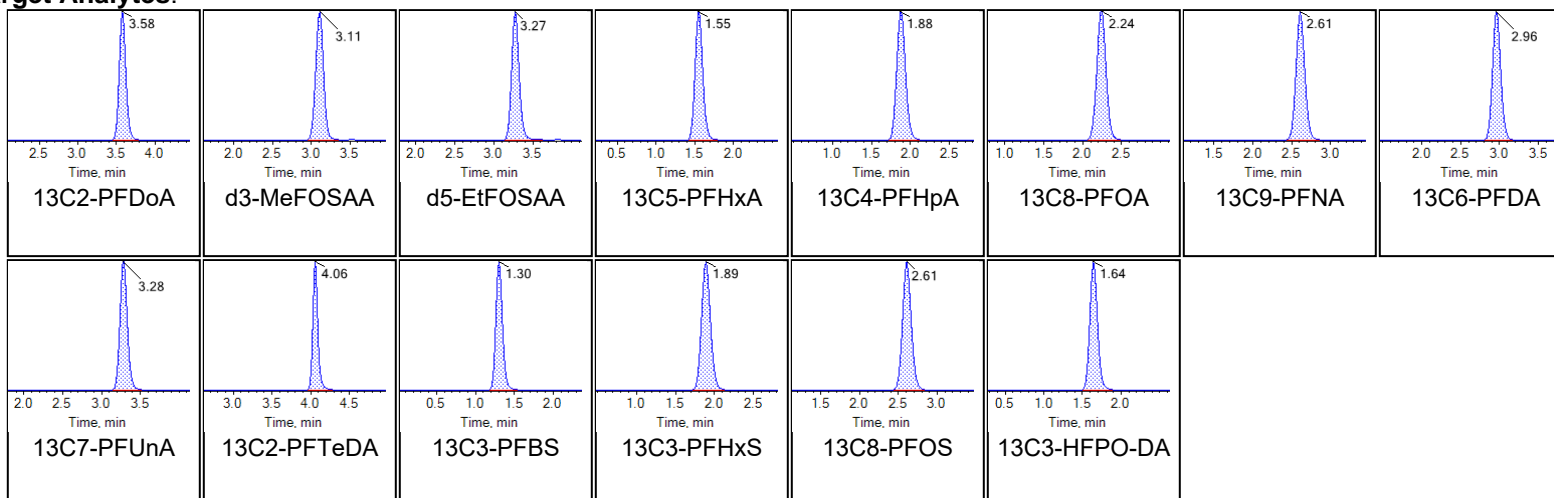
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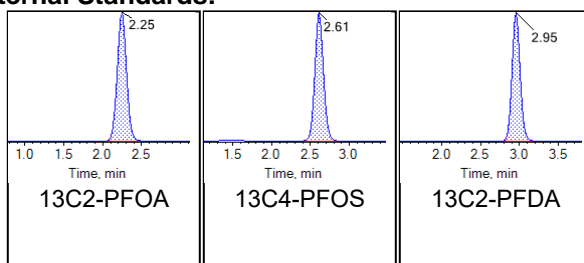
Sample Name	G1701-FS-D(3)	Injection Vial	24
Sample ID	CBD-SO4-MW01-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:37:03 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



Internal Standards:





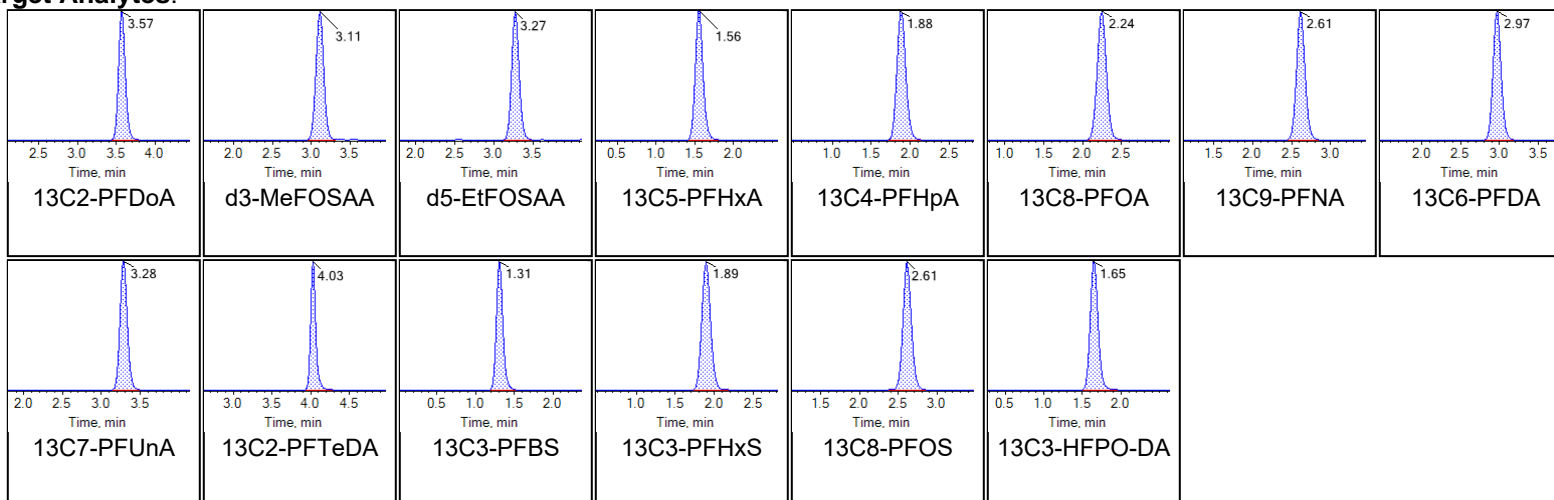
Chromatogram Report

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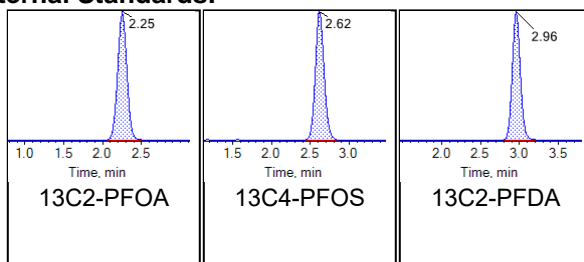
Sample Name	G1701-FS-D(5)	Injection Vial	25
Sample ID	CBD-SO4-MW01-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:47:31 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



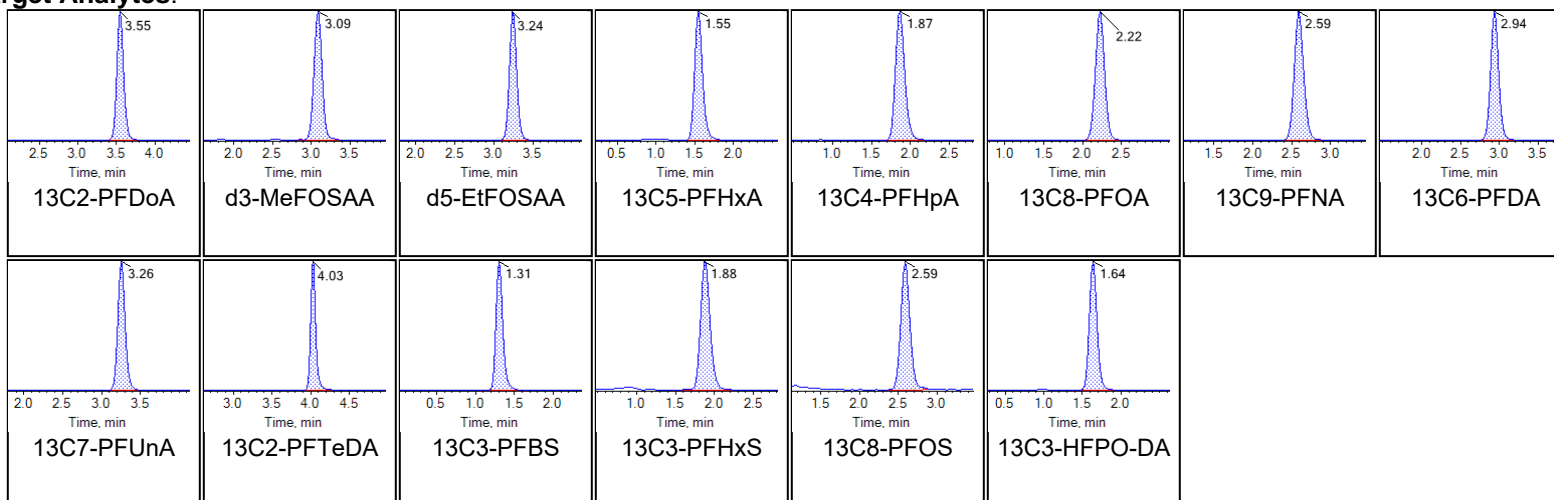
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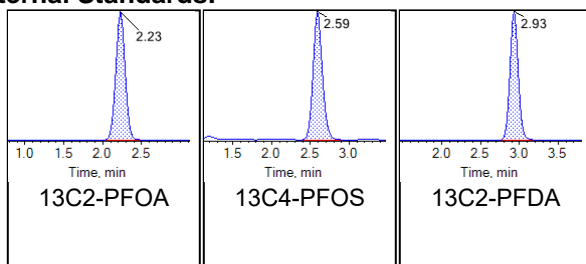
Sample Name	G1702-FS(0)	Injection Vial	26
Sample ID	CBD-SO4-MW01P-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 5:58:00 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



Internal Standards:





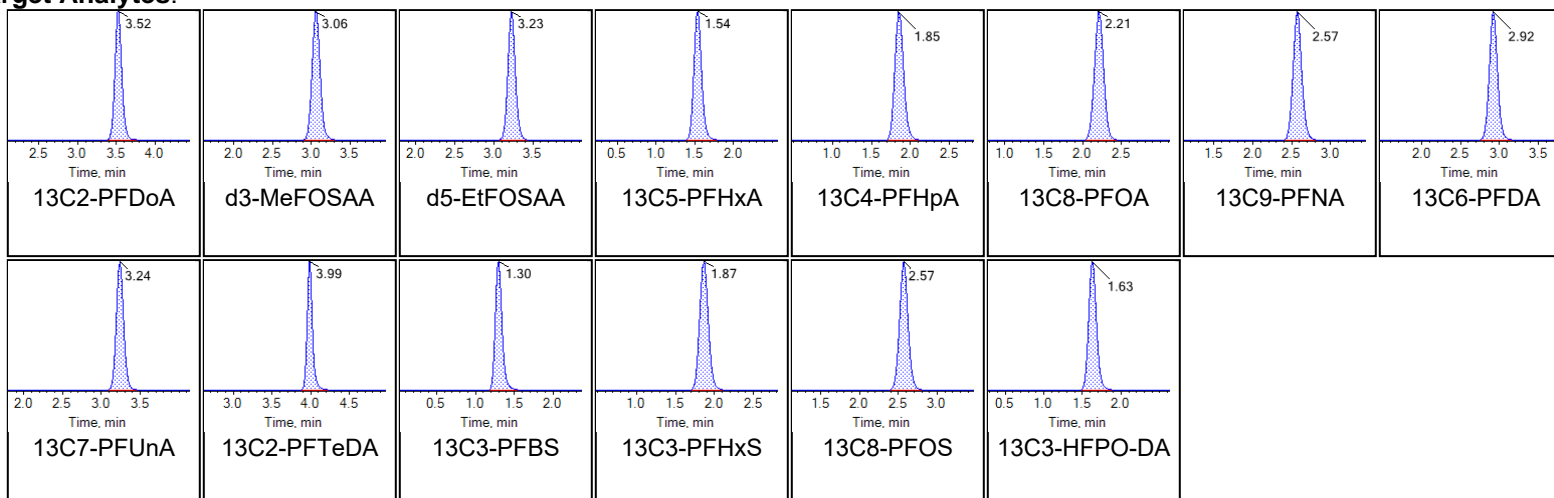
Chromatogram Report

Created with Analyst Reporter
Printed: 06/11/2020 4:25:26 PM

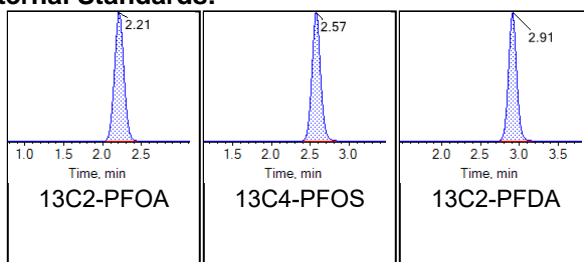
Sample Name	G1702-FS-D(3)	Injection Vial	27
Sample ID	CBD-SO4-MW01P-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 6:08:28 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



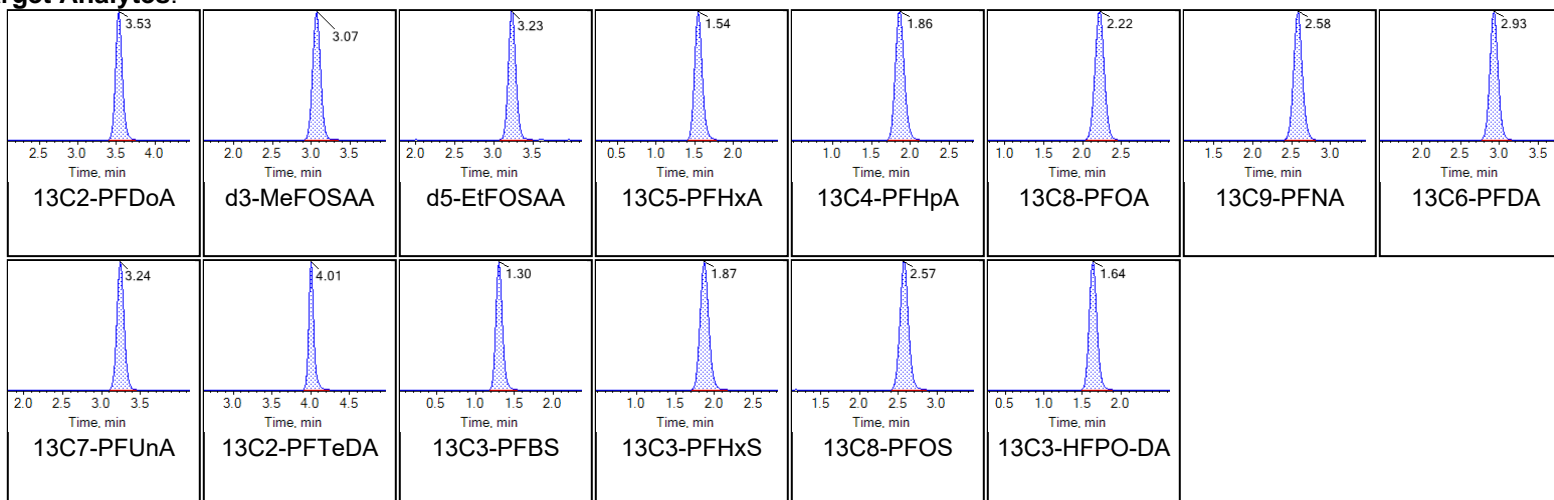
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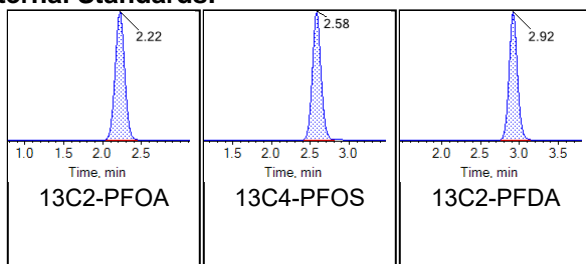
Sample Name	G1702-FS-D(5)	Injection Vial	28
Sample ID	CBD-SO4-MW01P-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 6:18:56 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



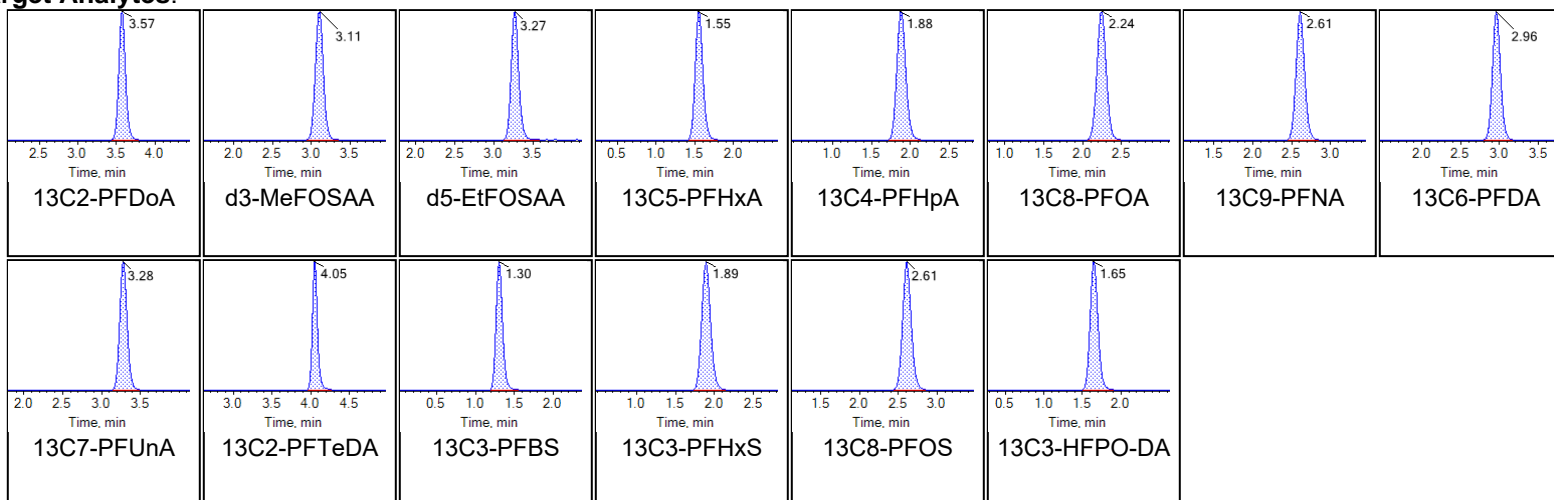
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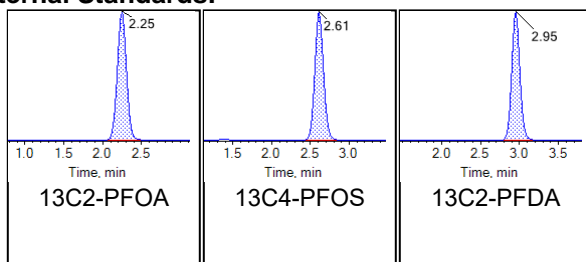
Sample Name	LD77 CCV	Injection Vial	29
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 6:29:24 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



Internal Standards:





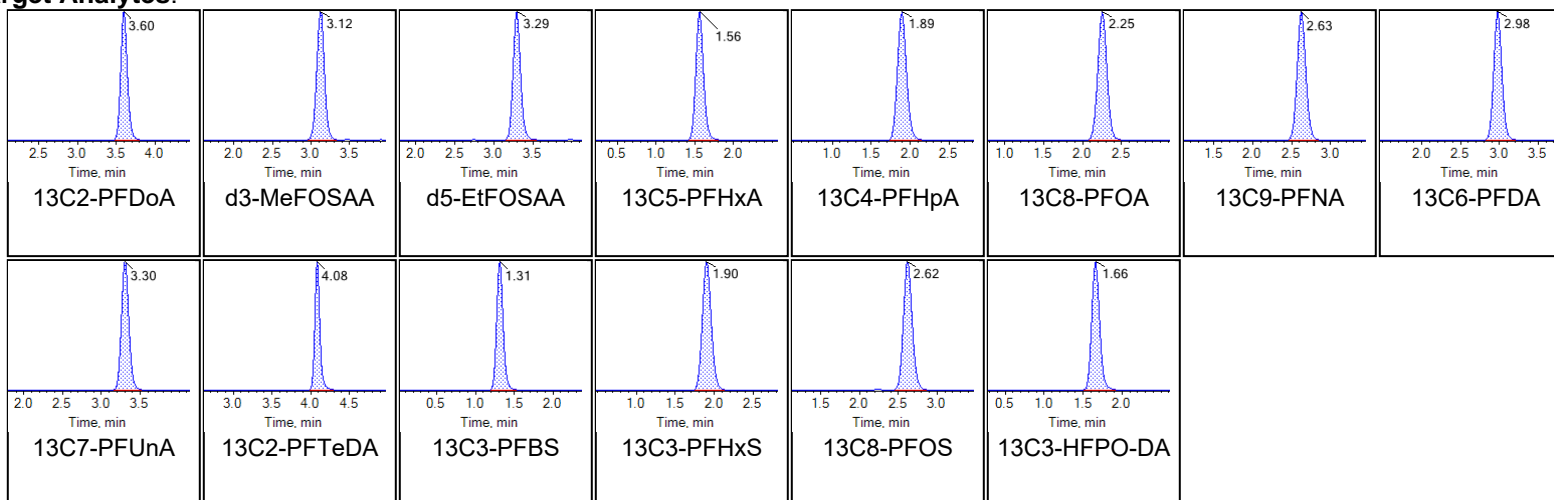
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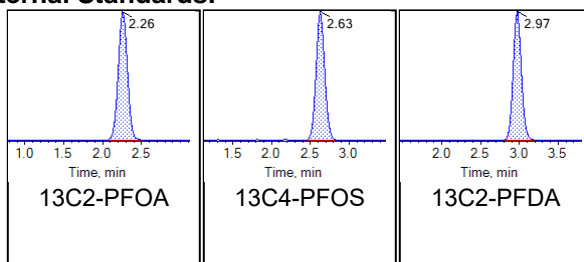
Sample Name	LD76 CCV	Injection Vial	2
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 1:12:05 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



Internal Standards:





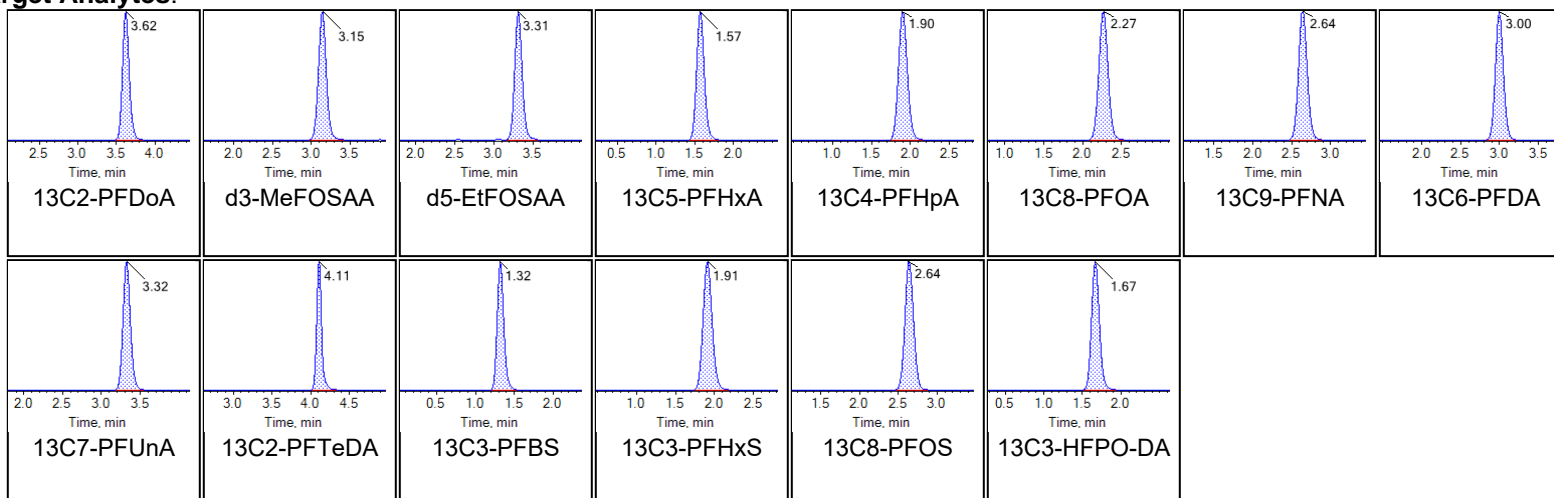
Chromatogram Report

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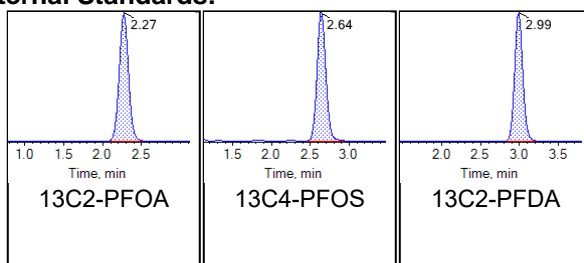
Sample Name	LD80 IB	Injection Vial	4
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 1:33:00 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_SIS

Chromatograms

Target Analytes:



Internal Standards:





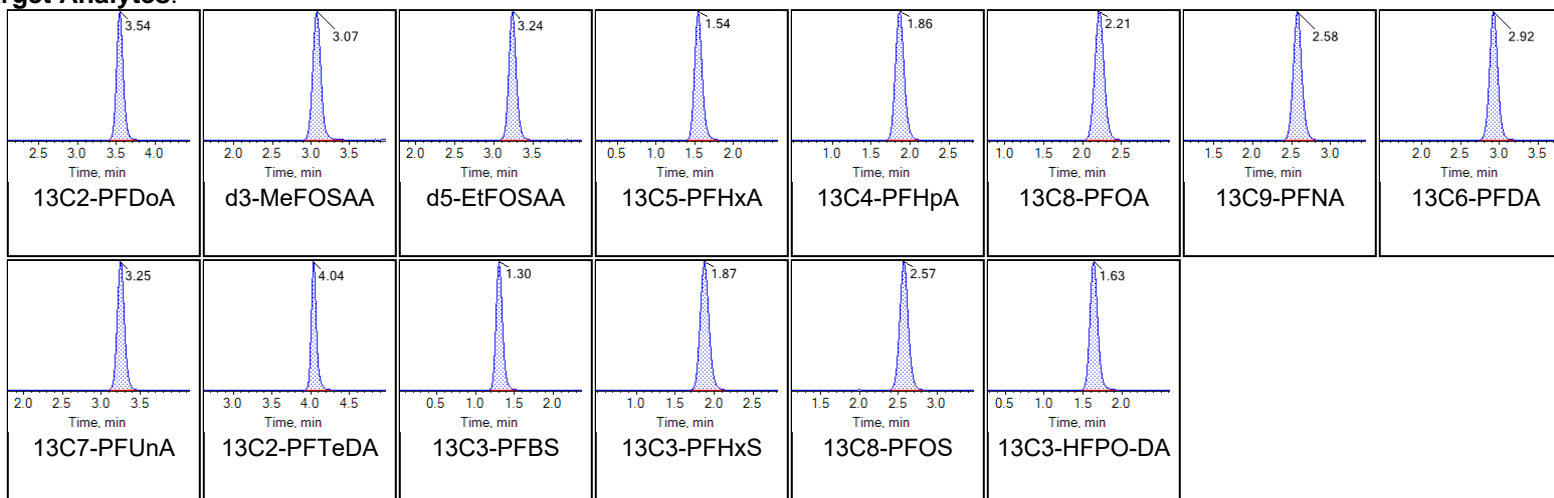
Chromatogram Report

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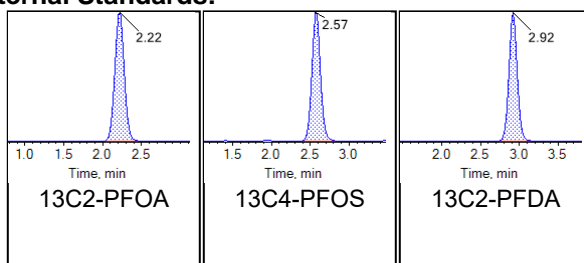
Sample Name	LD77 CCV	Injection Vial	8
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
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Chromatograms

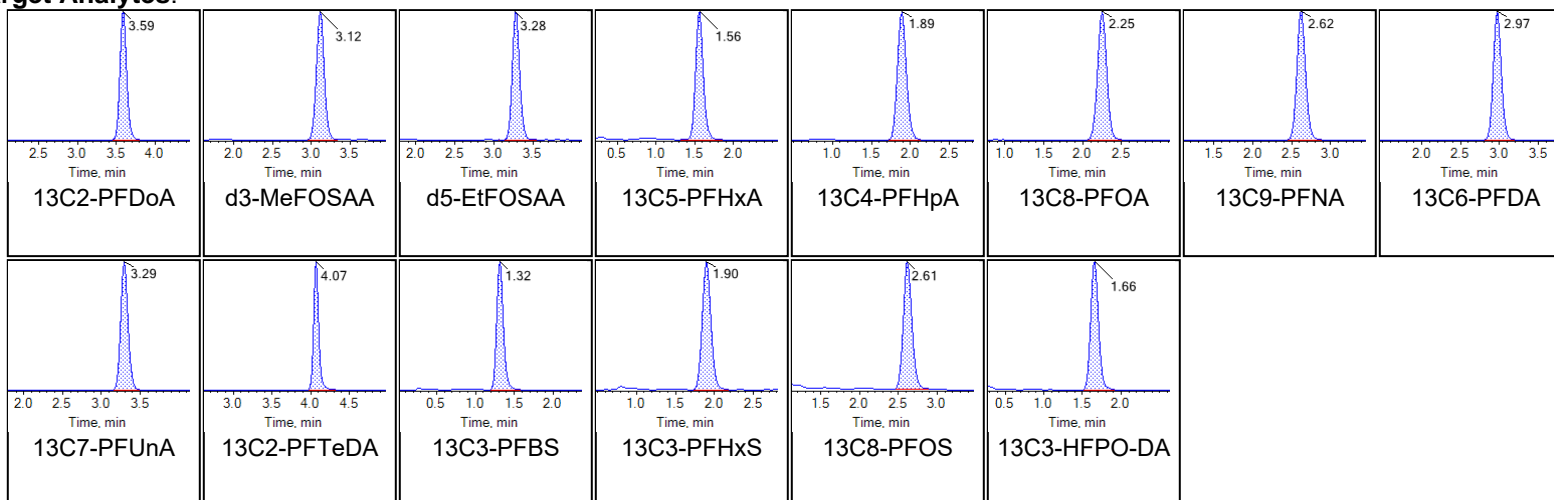
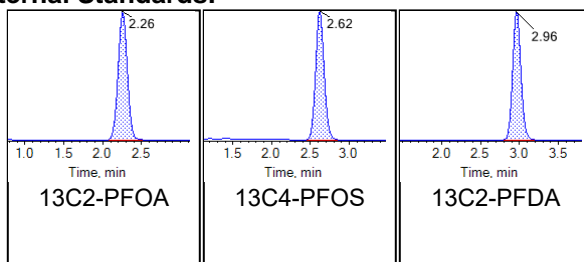
Target Analytes:



Internal Standards:



Sample Name	G1696-FS(0)	Injection Vial	9
Sample ID	CBD-HVG-GW10-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 2:25:16 PM	Data File	AE_11062020_5-369.wiff
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Chromatograms**Target Analytes:****Internal Standards:**



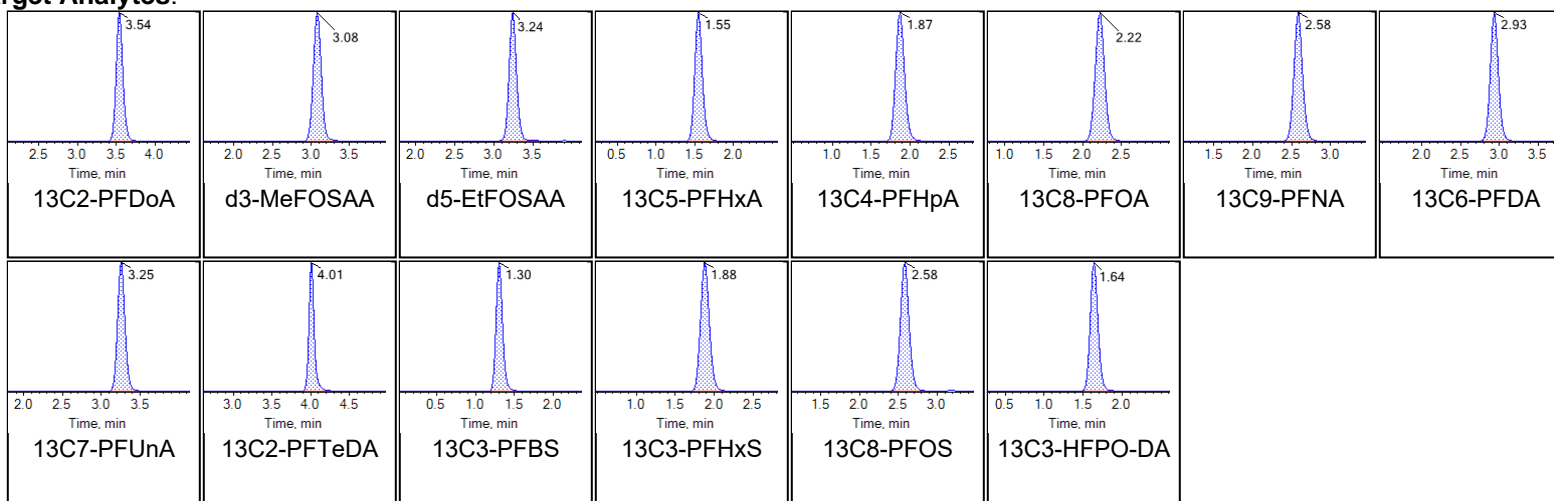
Chromatogram Report

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Printed: 06/11/2020 4:25:26 PM

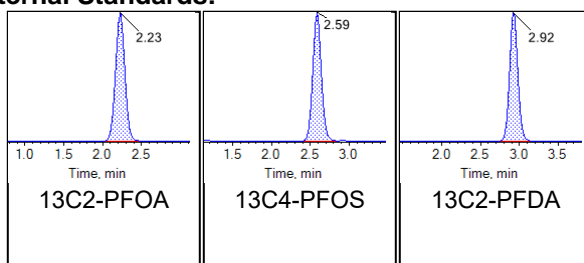
Sample Name	LD76 CCV	Injection Vial	15
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 3:17:33 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305 SIS

Chromatograms

Target Analytes:



Internal Standards:



Unused Data



Sample Name	G1697-FS(0)	Injection Vial	10
Sample ID	CBD-HVG-GW09-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 2:35:43 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.61	987456.74	844.51	4125.8	False	13C2-PFDA	1168144.90	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.14	135801.53	1141.07	1301.4	False	13C4-PFOS	180114.49	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.30	124476.04	1172.87	1069.0	False	13C4-PFOS	180114.49	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.57	484965.65	473.55	849.6	False	13C2-PFOA	801545.14	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.90	727741.61	720.14	1265.3	False	13C2-PFOA	801545.14	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.26	931178.54	788.26	1739.6	False	13C2-PFOA	801545.14	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.64	867753.52	926.52	2073.9	False	13C4-PFOS	180114.49	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.99	904216.72	872.38	6226.8	False	13C2-PFDA	1168144.90	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.31	762499.09	813.08	3686.9	False	13C2-PFDA	1168144.90	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.10	949639.11	852.13	3980.3	False	13C2-PFDA	1168144.90	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.32	139489.13	607.63	2673.7	False	13C4-PFOS	180114.49	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.91	145264.40	837.36	875.3	False	13C4-PFOS	180114.49	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.63	130233.30	818.06	490.6	False	13C4-PFOS	180114.49	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.66	257310.25	604.88	1690.8	False	13C2-PFOA	801545.14	1250.00		N/A	N/A	✓



Sample Name	G1701-FS(0)	Injection Vial	11
Sample ID	CBD-SO4-MW01-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 2:46:10 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.57	1063424.36	1002.38	3264.9	False	13C2-PFDA	1059887.88	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.10	118910.88	1827.09	1135.6	False	13C4-PFOS	98495.81	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.26	113178.88	1950.11	1207.6	False	13C4-PFOS	98495.81	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.56	515761.04	518.88	2155.7	False	13C2-PFOA	777968.92	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.88	483206.53	492.65	1487.6	False	13C2-PFOA	777968.92	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.23	1030866.13	899.09	2534.6	False	13C2-PFOA	777968.92	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.60	484918.37	946.80	1333.8	False	13C4-PFOS	98495.81	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.95	931011.48	989.98	2894.6	False	13C2-PFDA	1059887.88	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.27	760062.13	893.27	2608.9	False	13C2-PFDA	1059887.88	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.05	933218.07	922.92	3587.0	False	13C2-PFDA	1059887.88	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.31	138001.37	1099.29	2319.6	False	13C4-PFOS	98495.81	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.89	104317.39	1099.62	568.1	False	13C4-PFOS	98495.81	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.59	72069.31	827.84	346.0	False	13C4-PFOS	98495.81	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.65	328276.55	795.09	1814.8	False	13C2-PFOA	777968.92	1250.00		N/A	N/A	✓



PFAS Sample Quant Report

Created with Analyst Reporter
Printed: 06/11/2020 4:21:27 PM

Sample Name	G1702-FS(0)	Injection Vial	12
Sample ID	CBD-SO4-MW01P-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/6/2020 2:56:37 PM	Data File	AE_11062020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305_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	3.60	1120724.66	969.63	3603.0	False	13C2-PFDA	1154727.65	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.14	114208.51	1867.28	1099.6	False	13C4-PFOS	92564.58	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.29	121002.33	2218.50	895.3	False	13C4-PFOS	92564.58	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.57	486103.02	499.82	1812.7	False	13C2-PFOA	761195.49	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.89	504696.59	525.90	1631.3	False	13C2-PFOA	761195.49	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.26	1061135.80	945.88	3036.8	False	13C2-PFOA	761195.49	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.63	422035.26	876.82	1700.3	False	13C4-PFOS	92564.58	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.98	975158.25	951.76	2381.7	False	13C2-PFDA	1154727.65	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.30	883976.55	953.57	3485.2	False	13C2-PFDA	1154727.65	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.08	883134.06	801.66	3265.9	False	13C2-PFDA	1154727.65	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.32	160083.69	1356.91	2726.6	False	13C4-PFOS	92564.58	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.91	108876.44	1221.21	641.2	False	13C4-PFOS	92564.58	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.63	86293.84	1054.75	415.2	False	13C4-PFOS	92564.58	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.66	301612.28	746.60	1955.2	False	13C2-PFOA	761195.49	1250.00		N/A	N/A	✓

Sample Name	G1696-FS(0)	Injection Vial	14
Sample ID	CBD-HVG-GW10-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/5/2020 3:51:55 PM	Data File	AE_11052020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1305 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	3.54	212783.97	600.86	2927.9	False	13C2-PFDA	353796.76	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.07	29509.70	785.43	541.6	False	13C4-PFOS	56861.10	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.24	25164.61	751.08	561.5	False	13C4-PFOS	56861.10	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.54	156474.44	498.86	716.4	False	13C2-PFOA	245499.27	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.86	228407.46	737.95	864.7	False	13C2-PFOA	245499.27	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.21	311588.71	861.18	1086.0	False	13C2-PFOA	245499.27	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.58	284335.51	961.66	1162.1	False	13C4-PFOS	56861.10	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.93	278663.54	887.68	1795.2	False	13C2-PFDA	353796.76	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.25	223086.95	785.44	2120.7	False	13C2-PFDA	353796.76	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.04	146843.91	435.06	3049.3	False	13C2-PFDA	353796.76	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.30	48622.21	670.92	1090.6	False	13C4-PFOS	56861.10	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.87	46451.29	848.17	446.8	False	13C4-PFOS	56861.10	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.57	47020.86	935.60	369.0	False	13C4-PFOS	56861.10	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.63	115306.89	885.00	718.7	False	13C2-PFOA	245499.27	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
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-24-4	1.53	1.53	NG L	U	U	U
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			Perfluoroheptanoic Acid (PFHpA)	375-85-9	1.02	1.02	NG L	U	U	U
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			Perfluorooctanoic Acid (PFOA)	335-67-1	1.53	1.53	NG L	U	U	U
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			Perfluorononanoic Acid (PFNA)	375-95-1	1.02	1.02	NG L	U	U	U
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2	0.51	0.51	NG L	U	U	U
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8	0.51	0.51	NG L	U	U	U
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1	0.51	0.51	NG L	U	U	U
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			Perfluorotridecanoic Acid (PFTeDA)	72629-94-8	0.51	0.51	NG L	U	U	U
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7	2.04	2.04	NG L	U	U	U
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	1.02	1.02	NG L	U	U	U
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	1.02	1.02	NG L	U	U	U
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.51	0.51	NG L	U	U	U
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.4	0.4	NG L	U	U	U
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	1.02	1.02	NG L	U	U	U
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	13252-13-6	0.51	0.51	NG L	U	U	U
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			4,8-dioxo-3H-perfluorononanoic acid (ADONA)	919005-14-4	1.02	1.02	NG L	U	U	U
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			11-chloroicosafuoro-3-oxadecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	1.02	1.02	NG L	U	U	U
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	0.51	0.51	NG L	U	U	U
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			13C5-PFHxA	BDO-2217	70	70	PCT REC			
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			13C4-PFHpA	BDO-2218	73	73	PCT REC			
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			13C8-PFOA	BDO-2219	70	70	PCT REC			
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			13C9-PFNA	BDO-2221	70	70	PCT REC			
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			13C6-PFDA	BDO-2222	82	82	PCT REC			
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			13C7-PFUnA	BDO-2223	69	69	PCT REC			
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			13C2-PFDoA	BDO-2112	71	71	PCT_REC			
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			13C2-PFTeDA	BDO-2224	69	69	PCT REC			
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			d3-MeFOSAA	BDO-1838	67	67	PCT REC			
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			d5-EtFOSAA	BDO-1839	69	69	PCT REC			
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			13C3-PFBS	BDO-2226	82	82	PCT REC			
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			13C3-PFHxS	BDO-2227	71	71	PCT REC			
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			13C8-PFOS	BDO-2228	67	67	PCT_REC			
		20201021	14:17:00	20201105	15:30:37	DA908PB-FS	1	1			13C3-HFPO-DA	BDO-2276	69	69	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-24-4	107	107	PCT REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			Perfluoroheptanoic Acid (PFHpA)	375-85-9	84	84	PCT REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			Perfluorooctanoic Acid (PFOA)	335-67-1	90	90	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			Perfluorononanoic Acid (PFNA)	375-95-1	80	80	PCT REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2	98	98	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8	100	100	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1	94	94	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			Perfluorotridecanoic Acid (PFTeDA)	72629-94-8	97	97	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7	103	103	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	100	100	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	101	101	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	100	100	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	116	116	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	104	104	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	13252-13-6	97	97	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			4,8-dioxo-3H-perfluorononanoic acid (ADONA)	919005-14-4	94	94	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			11-chloroicosafuoro-3-oxadecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	88	88	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	80	80	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			13C5-PFHxA	BDO-2217	70	70	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			13C4-PFHpA	BDO-2218	72	72	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			13C8-PFOA	BDO-2219	75	75	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			13C9-PFNA	BDO-2221	75	75	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			13C6-PFDA	BDO-2222	79	79	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			13C7-PFUnA	BDO-2223	68	68	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			13C2-PFDoA	BDO-2112	73	73	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			13C2-PFTeDA	BDO-2224	72	72	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			d3-MeFOSAA	BDO-1838	76	76	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			d5-EtFOSAA	BDO-1839	65	65	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			13C3-PFBS	BDO-2226	81	81	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			13C3-PFHxS	BDO-2227	73	73	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			13C8-PFOS	BDO-2228	70	70	PCT_REC			
		20201021	14:17:00	20201105	15:41:28	DA909LCS-FS	1	1			13C3-HFPO-DA	BDO-2276	78	78	PCT_REC			
		20201021	14:17:00	20201106	14:25:16	G1696-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-24-4	1.5	1.5	NG L	U	UJ	UJ
		20201021	14:17:00	20201106	14:25:16	G1696-FS	1	1			Perfluoroheptanoic Acid (PFHpA)	375-85-9	1	1	NG L	U	UJ	UJ
		20201021	14:17:00	20201106	14:25:16	G1696-FS	1	1			Perfluorooctanoic Acid (PFOA)	335-67-1	1.47	1.47	NG L	J	J	J
		20201021	14:17:00	20201106	14:25:16	G1696-FS	1	1			Perfluorononanoic Acid (PFNA)	375-95-1	1	1	NG L	U	U	U
		20201021	14:17:00	20201106	14:25:16	G1696-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2	0.5	0.5	NG L	U	U	U
		20201021	14:17:00	20201106	14:25:16	G1696-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8	0.5	0.5	NG L	U	U	U
		20201021	14:17:00	20201106	14:25:16	G1696-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1	0.5	0.5	NG L	U	U	U
		20201021	14:17:00	20201106	14:25:16	G1696-FS	1	1			Perfluorotridecanoic Acid (PFTeDA)	72629-94-8	0.5	0.5	NG L	U	U	U
		20201021	14:17:00	20201106	14:25:16	G1696-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7	2	2	NG L	U	UJ	UJ
		20201021	14:17:00	20201106	14:25:16	G1696-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	1	1	NG L	U	U	U
		20201021	14:1															

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
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	1.42	1.42	NG L	U	U	U
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			Perfluorooctanoic acid (PFNA)	375-95-1	0.94	0.94	NG L	U	U	U
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			Perfluorodecanoic acid (PFDA)	335-76-2	0.47	0.47	NG L	U	U	U
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			Perfluoroundecanoic acid (PFUnA)	2058-94-8	0.47	0.47	NG L	U	U	U
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			Perfluorododecanoic acid (PFDoA)	307-55-1	0.47	0.47	NG L	U	U	U
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.47	0.47	NG L	U	U	U
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			Perfluorotetradecanoic acid (PFTeDA)	376-06-7	1.89	1.89	NG L	U	U	U
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	0.94	0.94	NG L	U	U	U
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	0.94	0.94	NG L	U	U	U
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	2.7	2.7	NG L	J	J	J
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	13	13	NG L	J	J	J
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	3.17	3.17	NG L	J	J	J
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	13252-13-6	0.47	0.47	NG L	U	U	U
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			4,8-dioxo-3H-perfluorooctanoic acid (ADONA)	919005-14-4	0.94	0.94	NG L	U	U	U
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			11-chloroicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	0.94	0.94	NG L	U	U	U
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	0.47	0.47	NG L	U	U	U
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			13C5-PFHxA	BDO-2217	40	40		PCT_REC		
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			13C4-PFHpA	BDO-2218	56	56		PCT_REC		
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			13C8-PFOA	BDO-2219	69	69		PCT_REC		
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			13C9-PFNA	BDO-2221	78	78		PCT_REC		
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			13C6-PFDA	BDO-2222	70	70		PCT_REC		
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			13C7-PFUnA	BDO-2223	68	68		PCT_REC		
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			13C2-PFDoA	BDO-2112	70	70		PCT_REC		
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			13C2-PFTeDA	BDO-2224	65	65		PCT_REC		
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			d3-MeFOSAA	BDO-1838	104	104		PCT_REC		
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			d5-EtFOSAA	BDO-1839	98	98		PCT_REC		
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			13C3-PFBS	BDO-2226	54	54		PCT_REC		
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			13C3-PFHxS	BDO-2227	82	82		PCT_REC		
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			13C8-PFOS	BDO-2228	86	86		PCT_REC		
		20201021	14:17:00	20201105	16:02:22	G1697-FS	1	1			13C3-HFPO-DA	BDO-2276	60	60		PCT_REC		
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-24-4	1.47	1.47	NG L	U	U	U
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	0.98	0.98	NG L	U	U	U
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	1.47	1.47	NG L	U	U	U
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1	0.98	0.98	NG L	U	U	U
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			Perfluorodecanoic acid (PFDA)	335-76-2	0.49	0.49	NG L	U	U	U
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			Perfluoroundecanoic acid (PFUnA)	2058-94-8	0.49	0.49	NG L	U	U	U
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			Perfluorododecanoic acid (PFDoA)	307-55-1	0.49	0.49	NG L	U	U	U
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.49	0.49	NG L	U	U	U
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			Perfluorotetradecanoic acid (PFTeDA)	376-06-7	1.96	1.96	NG L	U	U	U
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	0.98	0.98	NG L	U	U	U
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	0.98	0.98	NG L	U	U	U
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.49	0.49	NG L	U	U	U
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.39	0.39	NG L	U	U	U
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.98	0.98	NG L	U	U	U
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	13252-13-6	0.49	0.49	NG L	U	U	U
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			4,8-dioxo-3H-perfluorooctanoic acid (ADONA)	919005-14-4	0.98	0.98	NG L	U	U	U
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			11-chloroicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	0.98	0.98	NG L	U	U	U
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	0.49	0.49	NG L	U	U	U
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			13C5-PFHxA	BDO-2217	71	71		PCT_REC		
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			13C4-PFHpA	BDO-2218	72	72		PCT_REC		
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			13C8-PFOA	BDO-2219	76	76		PCT_REC		
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			13C9-PFNA	BDO-2221	79	79		PCT_REC		
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			13C6-PFDA	BDO-2222	90	90		PCT_REC		
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			13C7-PFUnA	BDO-2223	76	76		PCT_REC		
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			13C2-PFDoA	BDO-2112	77	77		PCT_REC		
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			13C2-PFTeDA	BDO-2224	75	75		PCT_REC		
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			d3-MeFOSAA	BDO-1838	84	84		PCT_REC		
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			d5-EtFOSAA	BDO-1839	81	81		PCT_REC		
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			13C3-PFBS	BDO-2226	95	95		PCT_REC		
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			13C3-PFHxS	BDO-2227	84	84		PCT_REC		
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			13C8-PFOS	BDO-2228	73	73		PCT_REC		
		20201021	14:17:00	20201105	16:12:50	G1698-FS	1	1			13C3-HFPO-DA	BDO-2276	72	72		PCT_REC		
		20201021	14:17:00	20201105	16:23:19	G1699-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-24-4	241	241	NG L	U	U	U
		20201021	14:17:00	20201105	16:23:19	G1699-FS	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	142	142	NG L	U	U	U
		20201021	14:17:00	20201105	16:33:47	G1699-FS	5	2			Perfluorooctanoic acid (PFOA)	335-67-1	248	248	NG L	D		
		20201021	14:17:00	20201105	16:23:19	G1699-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1	88.7	88.7	NG L	U	U	U
		20201021	14:17:00	20201105	16:23:19	G1699-FS	1	1			Perfluorodecanoic acid (PFDA)	335-76-2	2.48	2.48	NG L	J	J	J
		20201021	14:17:00	20201105	16:23:19	G1699-FS	1	1			Perfluoroundecanoic acid (PFUnA)	2058-94-8	0.5	0.5	NG L	U	U	U
		20201021	14:17:00	20201105	16:23:19	G1699-FS	1	1			Perfluorododecanoic acid (PFDoA)	307-55-1	0.5	0.5	NG L	U	U	U
		20201021	14:17:00	20201105	16:23:19	G1699-FS	1	1			Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.5	0.5	NG L	U	U	U
		20201021	14:17:00	20201105	16:23:19	G1699-FS	1	1			Perfluorotetradecanoic acid (PFTeDA)	376-06-7	2	2	NG L	U	U	U
		20201021	14:17:00	20201105	16:23:19	G1699-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	1	1	NG L	U	U	U
		20201021	14:17:00	20201105	16:23:19	G1699-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	1	1	NG L	U	U	U
		20201021	14:17:00	20201105	16:23:19	G1699-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	33.3					

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
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2	0.47	0.47	NG L	U	U	U
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8	0.47	0.47	NG L	U	U	U
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1	0.47	0.47	NG L	U	U	U
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	0.47	0.47	NG L	U	U	U
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7	1.89	1.89	NG L	U	U	U
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	0.94	0.94	NG L	U	U	U
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	0.94	0.94	NG L	U	U	U
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	1.11	1.11	NG L	J	J	J
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	9.72	9.72	NG L	J	J	J
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	10.6	10.6	NG L	J	J	J
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	13252-13-6	0.47	0.47	NG L	U	U	U
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			4,8-dioxo-3H-perfluorononanoic acid (ADONA)	919005-14-4	0.94	0.94	NG L	U	U	U
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			11-chloroicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	0.94	0.94	NG L	U	U	U
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	0.47	0.47	NG L	U	U	U
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			13C5-PFHxA	BDO-2217	58	58	PCT REC			
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			13C4-PFHpA	BDO-2218	67	67	PCT REC			
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			13C8-PFOA	BDO-2219	80	80	PCT REC			
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			13C9-PFNA	BDO-2221	84	84	PCT REC			
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			13C6-PFDA	BDO-2222	74	74	PCT REC			
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			13C7-PFUnA	BDO-2223	83	83	PCT REC			
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			13C2-PFDoA	BDO-2112	73	73	PCT REC			
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			13C2-PFTeDA	BDO-2224	58	58	PCT REC			
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			d3-MeFOSAA	BDO-1838	83	83	PCT REC			
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			d5-EtFOSAA	BDO-1839	81	81	PCT REC			
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			13C3-PFBS	BDO-2226	72	72	PCT REC			
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			13C3-PFHxS	BDO-2227	88	88	PCT REC			
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			13C8-PFOS	BDO-2228	77	77	PCT REC			
		20201021	14:17:00	20201105	17:16:07	G1700-FS	1	1			13C3-HFPO-DA	BDO-2276	73	73	PCT REC			
		20201021	14:17:00	20201105	17:37:03	G1701-FS	12.5	2			Perfluorohexanoic Acid (PFHxA)	307-24-4	291	291	NG L	D		
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	51.1	51.1	NG L		J	J
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	12.1	12.1	NG L			
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1	3.51	3.51	NG L	J	J	J
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2	0.5	0.5	NG L	U	U	U
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8	0.5	0.5	NG L	U	U	U
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1	0.5	0.5	NG L	U	U	U
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	0.5	0.5	NG L	U	U	U
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7	2	2	NG L	U	U	U
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	1	1	NG L	U	U	U
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	1	1	NG L	U	U	U
		20201021	14:17:00	20201105	17:37:03	G1701-FS	12.5	2			Perfluorobutanesulfonic acid (PFBS)	375-73-5	168	168	NG L	D		
		20201021	14:17:00	20201105	17:37:03	G1701-FS	12.5	2			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	726	726	NG L	D		
		20201021	14:17:00	20201105	17:47:31	G1701-FS	31.25	3			Perfluorooctane Sulfonate (PFOS)	1763-23-1	1850	1850	NG L	D		
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	13252-13-6	0.5	0.5	NG L	U	U	U
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			4,8-dioxo-3H-perfluorononanoic acid (ADONA)	919005-14-4	1	1	NG L	U	U	U
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			11-chloroicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	1	1	NG L	U	U	U
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	0.5	0.5	NG L	U	U	U
		20201021	14:17:00	20201105	17:37:03	G1701-FS	12.5	2			13C5-PFHxA	BDO-2217	105	105	PCT REC			
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			13C4-PFHpA	BDO-2218	41	41	PCT REC	N		
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			13C8-PFOA	BDO-2219	71	71	PCT REC			
		20201021	14:17:00	20201105	17:47:31	G1701-FS	31.25	3			13C9-PFNA	BDO-2221	103	103	PCT REC			
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			13C6-PFDA	BDO-2222	90	90	PCT REC			
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			13C7-PFUnA	BDO-2223	83	83	PCT REC			
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			13C2-PFDoA	BDO-2112	88	88	PCT REC			
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			13C2-PFTeDA	BDO-2224	76	76	PCT REC			
		20201021	14:17:00	20201105	17:47:31	G1701-FS	31.25	3			d3-MeFOSAA	BDO-1838	93	93	PCT REC			
		20201021	14:17:00	20201105	17:47:31	G1701-FS	31.25	3			d5-EtFOSAA	BDO-1839	113	113	PCT REC			
		20201021	14:17:00	20201105	17:47:31	G1701-FS	31.25	3			13C3-PFBS	BDO-2226	103	103	PCT REC			
		20201021	14:17:00	20201105	17:47:31	G1701-FS	31.25	3			13C3-PFHxS	BDO-2227	112	112	PCT REC			
		20201021	14:17:00	20201105	17:47:31	G1701-FS	31.25	3			13C8-PFOS	BDO-2228	99	99	PCT REC			
		20201021	14:17:00	20201105	17:26:35	G1701-FS	1	1			13C3-HFPO-DA	BDO-2276	69	69	PCT REC			
		20201021	14:17:00	20201105	18:08:28	G1702-FS	12.5	2			Perfluorohexanoic Acid (PFHxA)	307-24-4	289	289	NG L	D		
		20201021	14:17:00	20201105	17:58:00	G1702-FS	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	53.7	53.7	NG L	J	J	J
		20201021	14:17:00	20201105	17:58:00	G1702-FS	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	12.9	12.9	NG L			
		20201021	14:17:00	20201105	17:58:00	G1702-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1	4.19	4.19	NG L	J	J	J
		20201021	14:17:00	20201105	17:58:00	G1702-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2	0.47	0.47	NG L	U	U	U
		20201021	14:17:00	20201105	17:58:00	G1702-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8	0.47	0.47	NG L	U	U	U
		20201021	14:17:00	20201105	17:58:00	G1702-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1	0.47	0.47	NG L	U	U	U
		20201021	14:17:00	20201105	17:58:00	G1702-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	0.47	0.47	NG L	U	U	U
		20201021	14:17:00	20201105	17:58:00	G1702-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7	1.89	1.89	NG L	U	U	U
		20201021	14:17:00	20201105	17:58:00	G1702-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	0.94	0.94	NG L	U	U	U
		20201021	14:17:00	20201105	17:58:00	G1702-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	0.94	0.94	NG L	U	U	U
		20201021	14:17:00	20201105	18:08:28	G1702-FS	12.5	2			Perfluorobutanesulfonic acid (PFBS)	375-73-5	154	154	NG L	D		
		20201021	14:17:00	20201105	18:08:28	G1702-FS	12.5	2			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	883	883	NG L	D		
		20201021	14:17:00	20201105	18:18:56	G1702-FS	31.25	3			Perfluorooctane Sulfonate (PFOS)	1763-23-1	1900	1900				

**DATA VALIDATION SUMMARY REPORT
NAVAL RESEARCH LABORATORY, MARYLAND**

Client: CH2M HILL, Inc., Herndon, Virginia
 SDG: 20-1305
 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-HVG-GW10-1020	G1696-FS	Water
2	CBD-HVG-GW09-1020	G1697-FS	Water
3	CBD-EB01-101420-GW	G1698-FS	Water
4	CBD-AOA-MW10-1020	G1699-FS	Water
5	CBD-BKG-MW03-1020	G1700-FS	Water
6	CBD-SO4-MW01-1020	G1701-FS	Water
7	CBD-SO4-MW01P-1020	G1702-FS	Water

A Stage 2B/4 data validation was performed on the analytical data for six water samples and one aqueous equipment blank sample collected on October 14-15, 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 exhibited the following contamination.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
LD80 IB	NMeFOSAA	0.392	None	All Samples ND

Field QC Blank

- Field QC sample results are summarized below.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
CBD-EB01-101420-GW	None - ND	-	-	-
CBD-FB04-101620	PFTrDA	0.179	None	All Samples ND

Surrogate Spike Recoveries

- Several samples exhibited surrogate recoveries 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

- MS/MSD samples were not analyzed.

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.

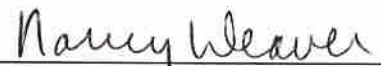
Field Duplicate Sample Precision

- Field duplicate results are summarized below. The precision was acceptable.

Compound	CBD-SO4-MW01-1020 ng/g	CBD-SO4-MW01P-1020 ng/g	RPD	Qualifier
PFHxA	291	289	1%	None
PFHpA	51.1	53.7	5%	
PFOA	12.1	12.9	6%	
PFNA	3.51	4.19	18%	
PFBS	168	154	9%	
PFHxS	736	883	18%	
PFOS	1850	1900	3%	

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed:


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	<p>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.</p> <p>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.</p>



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

Client ID: CBD-HVG-GW10-1020

Battelle ID: G1696-FS
 Sample Type: SA
 Collection Date: 10/14/2020
 Extraction Date: 10/21/2020
 Analytical Instrument: Sciex 6500+ (AE) LC/MS/MS
 % Moisture: NA
 Matrix: GW
 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 J	G1696-FS(0)	1.000	11/6/2020	0.527	1.50	5.00	SSL
PFHpA	375-85-9	1.00 U J	G1696-FS(0)	1.000	11/6/2020	0.263	1.00	5.00	SSL
PFOA	335-67-1	1.47 J	G1696-FS(0)	1.000	11/6/2020	0.511	1.50	5.00	
PFNA	375-95-1	1.00 U	G1696-FS(0)	1.000	11/6/2020	0.309	1.00	5.00	
PFDA	335-76-2	0.500 U	G1696-FS(0)	1.000	11/6/2020	0.142	0.500	5.00	
PFUnA	2058-94-8	0.500 U	G1696-FS(0)	1.000	11/6/2020	0.219	0.500	5.00	
PFDoA	307-55-1	0.500 U	G1696-FS(0)	1.000	11/6/2020	0.192	0.500	5.00	
PFTrDA	72629-94-8	0.500 U	G1696-FS(0)	1.000	11/6/2020	0.154	0.500	5.00	
PFTeDA	376-06-7	2.00 U J	G1696-FS(0)	1.000	11/6/2020	0.733	2.00	5.00	SSL
NMeFOSAA	2355-31-9	1.00 U	G1696-FS(0)	1.000	11/6/2020	0.350	1.00	5.00	
NEtFOSAA	2991-50-6	1.00 U	G1696-FS(0)	1.000	11/6/2020	0.500	1.00	5.00	
PFBS	375-73-5	2.82 U J	G1696-FS(0)	1.000	11/6/2020	0.144	0.500	5.00	SSL
PFHxS	355-46-4	42.5	G1696-FS(0)	1.000	11/6/2020	0.112	0.400	5.00	
PFOS	1763-23-1	3.27 J	G1696-FS(0)	1.000	11/6/2020	0.437	1.00	5.00	
HFPO-DA	13252-13-6	0.500 U	G1696-FS(0)	1.000	11/6/2020	0.248	0.500	5.00	
Adona	919005-14-4	1.00 U	G1696-FS(0)	1.000	11/6/2020	0.265	1.00	5.00	
9CI-PF3ONS	756426-58-1	0.500 U	G1696-FS(0)	1.000	11/6/2020	0.268	0.500	5.00	
11CI-PF3OUdS	763051-92-9	1.00 U	G1696-FS(0)	1.000	11/6/2020	0.231	1.00	5.00	

mwilolzi

Analyzed by: Schumitz, Denise
 Printed: 11/13/2020



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

2

Client ID CBD-HVG-GW09-1020

Battelle ID G1697-FS
 Sample Type SA
 Collection Date 10/14/2020
 Extraction Date 10/21/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS
 % Moisture NA
 Matrix GW
 Sample Size 0.265
 Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	Extract ID	DF	Analysis Date	DL	LOD	LOQ
PFHxA	307-24-4	1.42 <i>u J</i>	G1697-FS(0)	1.000	11/5/2020	0.497	1.42	4.72
PFHpA	375-85-9	0.943 U	G1697-FS(0)	1.000	11/5/2020	0.248	0.943	4.72
PFOA	335-67-1	1.42 U	G1697-FS(0)	1.000	11/5/2020	0.482	1.42	4.72
PFNA	375-95-1	0.943 U	G1697-FS(0)	1.000	11/5/2020	0.292	0.943	4.72
PFDA	335-76-2	0.472 U	G1697-FS(0)	1.000	11/5/2020	0.134	0.472	4.72
PFUnA	2058-94-8	0.472 U	G1697-FS(0)	1.000	11/5/2020	0.207	0.472	4.72
PFDoA	307-55-1	0.472 U	G1697-FS(0)	1.000	11/5/2020	0.181	0.472	4.72
PFTrDA	72629-94-8	0.472 U	G1697-FS(0)	1.000	11/5/2020	0.145	0.472	4.72
PFTeDA	376-06-7	1.89 U	G1697-FS(0)	1.000	11/5/2020	0.692	1.89	4.72
NMeFOSAA	2355-31-9	0.943 U	G1697-FS(0)	1.000	11/5/2020	0.330	0.943	4.72
NEtFOSAA	2991-50-6	0.943 U	G1697-FS(0)	1.000	11/5/2020	0.472	0.943	4.72
PFBS	375-73-5	2.70 J	G1697-FS(0)	1.000	11/5/2020	0.136	0.472	4.72
PFHxS	355-46-4	13.0	G1697-FS(0)	1.000	11/5/2020	0.106	0.377	4.72
PFOS	1763-23-1	3.17 J	G1697-FS(0)	1.000	11/5/2020	0.412	0.943	4.72
HFPO-DA	13252-13-6	0.472 U	G1697-FS(0)	1.000	11/5/2020	0.234	0.472	4.72
Adona	919005-14-4	0.943 U	G1697-FS(0)	1.000	11/5/2020	0.250	0.943	4.72
9CI-PF3ONS	756426-58-1	0.472 U	G1697-FS(0)	1.000	11/5/2020	0.253	0.472	4.72
11CI-PF3OUdS	763051-92-9	0.943 U	G1697-FS(0)	1.000	11/5/2020	0.218	0.943	4.72

SSL

mw 11/10/21

Analyzed by: Schumitz, Denise
 Printed: 11/13/2020



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

3

Client ID CBD-EB01-101420-GW

Battelle ID G1698-FS
 Sample Type SA
 Collection Date 10/14/2020
 Extraction Date 10/21/2020
 Analytical Instrument Sciex 6500+ (AE) 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	G1698-FS(0)	1.000	11/5/2020	0.517	1.47	4.90
PFHpA	373-85-9	0.980 U	G1698-FS(0)	1.000	11/5/2020	0.258	0.980	4.90
PFOA	335-67-1	1.47 U	G1698-FS(0)	1.000	11/5/2020	0.501	1.47	4.90
PFNA	375-95-1	0.980 U	G1698-FS(0)	1.000	11/5/2020	0.303	0.980	4.90
PFDA	335-76-2	0.490 U	G1698-FS(0)	1.000	11/5/2020	0.139	0.490	4.90
PFUnA	2058-94-8	0.490 U	G1698-FS(0)	1.000	11/5/2020	0.215	0.490	4.90
PFDoA	307-55-1	0.490 U	G1698-FS(0)	1.000	11/5/2020	0.188	0.490	4.90
PFTrDA	72629-94-8	0.490 U	G1698-FS(0)	1.000	11/5/2020	0.151	0.490	4.90
PFTeDA	376-06-7	1.96 U	G1698-FS(0)	1.000	11/5/2020	0.719	1.96	4.90
NMeFOSAA	2355-31-9	0.980 U	G1698-FS(0)	1.000	11/5/2020	0.343	0.980	4.90
NEtFOSAA	2991-50-6	0.980 U	G1698-FS(0)	1.000	11/5/2020	0.490	0.980	4.90
PFBS	375-73-5	0.490 U	G1698-FS(0)	1.000	11/5/2020	0.141	0.490	4.90
PFHxS	355-46-4	0.392 U	G1698-FS(0)	1.000	11/5/2020	0.110	0.392	4.90
PFOS	1763-23-1	0.980 U	G1698-FS(0)	1.000	11/5/2020	0.428	0.980	4.90
HFPO-DA	13252-13-6	0.490 U	G1698-FS(0)	1.000	11/5/2020	0.243	0.490	4.90
Adona	919005-14-4	0.980 U	G1698-FS(0)	1.000	11/5/2020	0.260	0.980	4.90
9CI-PF3ONS	756426-58-1	0.490 U	G1698-FS(0)	1.000	11/5/2020	0.263	0.490	4.90
11CI-PF3OUds	763051-92-9	0.980 U	G1698-FS(0)	1.000	11/5/2020	0.226	0.980	4.90

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

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Client ID CBD-AOA-MW10-1020

Battelle ID G1699-FS
 Sample Type SA
 Collection Date 10/15/2020
 Extraction Date 10/21/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS
 % Moisture NA
 Matrix GW
 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	241	G1699-FS(0)	1.000	11/5/2020	0.527	1.50	5.00
PFHpA	375-85-9	142	G1699-FS(0)	1.000	11/5/2020	0.263	1.00	5.00
PFOA	335-67-1	248	G1699-FS-D(3)	5.000	11/5/2020	2.56	7.50	25.0
PFNA	375-95-1	88.7	G1699-FS(0)	1.000	11/5/2020	0.309	1.00	5.00
PFDA	335-76-2	2.48 J	G1699-FS(0)	1.000	11/5/2020	0.142	0.500	5.00
PFUnA	2058-94-8	0.500 U	G1699-FS(0)	1.000	11/5/2020	0.219	0.500	5.00
PFDoA	307-55-1	0.500 U	G1699-FS(0)	1.000	11/5/2020	0.192	0.500	5.00
PFTrDA	72629-94-8	0.500 U	G1699-FS(0)	1.000	11/5/2020	0.154	0.500	5.00
PFTeDA	376-06-7	2.00 U	G1699-FS(0)	1.000	11/5/2020	0.733	2.00	5.00
NMeFOSAA	2355-91-9	1.00 U	G1699-FS(0)	1.000	11/5/2020	0.350	1.00	5.00
NEtFOSAA	2991-50-6	1.00 U	G1699-FS(0)	1.000	11/5/2020	0.500	1.00	5.00
PFBS	375-73-5	33.3	G1699-FS(0)	1.000	11/5/2020	0.144	0.500	5.00
PFHxS	355-46-4	658	G1699-FS-D(5)	12.500	11/5/2020	1.40	5.00	62.5
PFOS	1763-23-1	325	G1699-FS-D(3)	5.000	11/5/2020	2.19	5.00	25.0
HFPO-DA	13252-13-6	0.500 U	G1699-FS(0)	1.000	11/5/2020	0.248	0.500	5.00
Adona	919005-14-4	1.00 U	G1699-FS(0)	1.000	11/5/2020	0.265	1.00	5.00
9Cl-PF3ONS	756426-58-1	0.500 U	G1699-FS(0)	1.000	11/5/2020	0.268	0.500	5.00
11Cl-PF3OUdS	763051-92-9	1.00 U	G1699-FS(0)	1.000	11/5/2020	0.231	1.00	5.00

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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-BKG-MW03-1020

Battelle ID G1700-FS
 Sample Type SA
 Collection Date 10/15/2020
 Extraction Date 10/21/2020
 Analytical Instrument Sclex 6500+ (AE) LC/MS/MS
 % Moisture NA
 Matrix GW
 Sample Size 0.265
 Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	Extract ID	DF	Analysis Date	DL	LOD	LOQ
PFHxA	307-24-4	1.34 J	G1700-FS(0)	1.000	11/5/2020	0.497	1.42	4.72
PFHpA	375-85-9	1.06 J	G1700-FS(0)	1.000	11/5/2020	0.248	0.943	4.72
PFOA	335-67-1	2.89 J	G1700-FS(0)	1.000	11/5/2020	0.482	1.42	4.72
PFNA	375-95-1	1.26 J	G1700-FS(0)	1.000	11/5/2020	0.292	0.943	4.72
PFDA	335-76-2	0.472 U	G1700-FS(0)	1.000	11/5/2020	0.134	0.472	4.72
PFUnA	2058-94-8	0.472 U	G1700-FS(0)	1.000	11/5/2020	0.207	0.472	4.72
PFDoA	307-55-1	0.472 U	G1700-FS(0)	1.000	11/5/2020	0.181	0.472	4.72
PFTrDA	72629-94-8	0.472 U	G1700-FS(0)	1.000	11/5/2020	0.145	0.472	4.72
PFTeDA	376-06-7	1.89 U	G1700-FS(0)	1.000	11/5/2020	0.692	1.89	4.72
NMeFOSAA	2355-31-9	0.943 U	G1700-FS(0)	1.000	11/5/2020	0.330	0.943	4.72
NEtFOSAA	2991-50-6	0.943 U	G1700-FS(0)	1.000	11/5/2020	0.472	0.943	4.72
PFBS	375-73-5	1.11 J	G1700-FS(0)	1.000	11/5/2020	0.136	0.472	4.72
PFHxS	355-46-4	9.72	G1700-FS(0)	1.000	11/5/2020	0.106	0.377	4.72
PFOS	1763-23-1	10.6	G1700-FS(0)	1.000	11/5/2020	0.412	0.943	4.72
HFPO-DA	13252-13-6	0.472 U	G1700-FS(0)	1.000	11/5/2020	0.234	0.472	4.72
Adona	919005-14-4	0.943 U	G1700-FS(0)	1.000	11/5/2020	0.250	0.943	4.72
9CI-PF3ONS	756426-58-1	0.472 U	G1700-FS(0)	1.000	11/5/2020	0.253	0.472	4.72
11CI-PF3OUdS	763051-92-9	0.943 U	G1700-FS(0)	1.000	11/5/2020	0.218	0.943	4.72

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Analyzed by: Schumitz, Denise
 Printed: 11/13/2020



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

Client ID CBD-SO4-MW01-1020

Battelle ID G1701-FS
 Sample Type SA
 Collection Date 10/15/2020
 Extraction Date 10/21/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS
 % Moisture NA
 Matrix GW
 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	291 P	G1701-FS-D(3)	12.500	11/5/2020	6.59	18.8	62.5
PFHpA	375-85-9	51.1 J	G1701-FS(0)	1.000	11/5/2020	0.263	1.00	5.00
PFOA	335-67-1	12.1	G1701-FS(0)	1.000	11/5/2020	0.511	1.50	5.00
PFNA	375-95-1	3.51 J	G1701-FS(0)	1.000	11/5/2020	0.309	1.00	5.00
PFDA	335-76-2	0.500 U	G1701-FS(0)	1.000	11/5/2020	0.142	0.500	5.00
PFUnA	2058-44-8	0.500 U	G1701-FS(0)	1.000	11/5/2020	0.219	0.500	5.00
PFDoA	307-55-1	0.500 U	G1701-FS(0)	1.000	11/5/2020	0.192	0.500	5.00
PFTrDA	72629-94-8	0.500 U	G1701-FS(0)	1.000	11/5/2020	0.154	0.500	5.00
PFTeDA	376-06-7	2.00 U	G1701-FS(0)	1.000	11/5/2020	0.733	2.00	5.00
NMeFOSAA	2355-31-9	1.00 U	G1701-FS(0)	1.000	11/5/2020	0.330	1.00	5.00
NEtFOSAA	2991-50-6	1.00 U	G1701-FS(0)	1.000	11/5/2020	0.500	1.00	5.00
PFBS	375-73-5	168	G1701-FS(0)	1.000	11/5/2020	0.144	0.500	5.00
PFHxS	355-46-4	736 P	G1701-FS-D(3)	12.500	11/5/2020	1.40	5.00	62.5
PFOS	1763-23-1	1850 P	G1701-FS-D(5)	31.250	11/5/2020	13.7	31.3	156
HFPO-DA	13252-13-6	0.500 U	G1701-FS(0)	1.000	11/5/2020	0.248	0.500	5.00
Adona	919005-14-4	1.00 U	G1701-FS(0)	1.000	11/5/2020	0.265	1.00	5.00
9CI-PF3ONS	756426-58-1	0.500 U	G1701-FS(0)	1.000	11/5/2020	0.268	0.500	5.00
11CI-PF3OUds	763051-92-9	1.00 U	G1701-FS(0)	1.000	11/5/2020	0.231	1.00	5.00

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Analyzed by: Schumitz, Denise
 Printed: 11/13/2020



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

Client ID CBD-SO4-MW01-1020

Battelle ID G1701-FS
 Sample Type SA
 Collection Date 10/15/2020
 Extraction Date 10/21/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS

Surrogate Recoveries (%)	Recovery	Extract ID	Analysis Date
13C5-PFHxA	105	G1701-FS-D(3)	11/5/2020
13C4-PFHpA	41	G1701-FS(0)	11/5/2020
13C8-PFOA	71	G1701-FS(0)	11/5/2020
13C9-PFNA	103	G1701-FS-D(5)	11/5/2020
13C6-PFDA	90	G1701-FS(0)	11/5/2020
13C7-PFUnA	83	G1701-FS(0)	11/5/2020
13C2-PFDoA	88	G1701-FS(0)	11/5/2020
13C2-PFTeDA	76	G1701-FS(0)	11/5/2020
d3-MeFOSAA	93	G1701-FS-D(5)	11/5/2020
d5-EtFOSAA	113	G1701-FS-D(5)	11/5/2020
13C3-PFBS	103	G1701-FS-D(5)	11/5/2020
13C3-PFbS	112	G1701-FS-D(5)	11/5/2020
13C8-PFOS	99	G1701-FS-D(5)	11/5/2020
13C3-HFPO-DA	69	G1701-FS(0)	11/5/2020

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

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Client ID CBD-S04-MW01P-1020

Battelle ID G1702-FS
 Sample Type SA
 Collection Date 10/15/2020
 Extraction Date 10/21/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS
 % Moisture NA
 Matrix GW
 Sample Size 0.265
 Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	Extract ID	DF	Analysis Date	DL	LOD	LOQ
PFHxA	307-24-4	289 P	G1702-FS-D(3)	12.500	11/5/2020	6.21	17.7	59.0
PFHpA	375-85-9	53.7 J	G1702-FS(0)	1.000	11/5/2020	0.248	0.943	4.72
PFOA	335-67-1	12.9	G1702-FS(0)	1.000	11/5/2020	0.482	1.42	4.72
PFNA	375-95-1	4.19 J	G1702-FS(0)	1.000	11/5/2020	0.292	0.943	4.72
PFDA	335-76-2	0.472 U	G1702-FS(0)	1.000	11/5/2020	0.134	0.472	4.72
PFUnA	2058-94-8	0.472 U	G1702-FS(0)	1.000	11/5/2020	0.207	0.472	4.72
PFDoA	307-55-1	0.472 U	G1702-FS(0)	1.000	11/5/2020	0.181	0.472	4.72
PFTeDA	72629-94-8	0.472 U	G1702-FS(0)	1.000	11/5/2020	0.145	0.472	4.72
PFTeDA	376-06-7	1.89 U	G1702-FS(0)	1.000	11/5/2020	0.692	1.89	4.72
NMeFOSAA	2355-31-9	0.943 U	G1702-FS(0)	1.000	11/5/2020	0.330	0.943	4.72
NEtFOSAA	2991-50-6	0.943 U	G1702-FS(0)	1.000	11/5/2020	0.472	0.943	4.72
PFBS	375-73-5	154 P	G1702-FS-D(3)	12.500	11/5/2020	1.70	5.90	59.0
PFHxS	355-46-4	883 P	G1702-FS-D(3)	12.500	11/5/2020	1.32	4.72	59.0
PFOS	1763-23-1	1900 P	G1702-FS-D(5)	31.250	11/5/2020	12.9	29.5	147
HFPO-DA	13252-13-6	0.472 U	G1702-FS(0)	1.000	11/5/2020	0.234	0.472	4.72
Adona	919005-14-4	0.943 U	G1702-FS(0)	1.000	11/5/2020	0.250	0.943	4.72
9Cl-PF3ONS	756426-58-1	0.472 U	G1702-FS(0)	1.000	11/5/2020	0.253	0.472	4.72
11Cl-PF3OUds	763051-92-9	0.943 U	G1702-FS(0)	1.000	11/5/2020	0.218	0.943	4.72

SSL

11/13/20
 Analyzed by: Schumitz, Denise
 Printed: 11/13/2020



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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-SO4-MW01P-1020

Battelle ID G1702-FS
 Sample Type SA
 Collection Date 10/15/2020
 Extraction Date 10/21/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS

Surrogate Recoveries (%)	Recovery	Extract ID	Analysis Date
13C5-PFHxA	83	G1702-FS-D(3)	11/5/2020
13C4-PFHpA	41	G1702-FS(0)	11/5/2020
13C8-PFOA	77	G1702-FS(0)	11/5/2020
13C9-PFNA	108	G1702-FS-D(9)	11/5/2020
13C6-PFDA	77	G1702-FS(0)	11/5/2020
13C7-PFUaA	77	G1702-FS(0)	11/5/2020
13C2-PFDoA	76	G1702-FS(0)	11/5/2020
13C2-PFTeDA	64	G1702-FS(0)	11/5/2020
d3-MeFOSAA	107	G1702-FS-D(5)	11/5/2020
d5-EtFOSAA	103	G1702-FS-D(5)	11/5/2020
13C3-PFBS	102	G1702-FS-D(5)	11/5/2020
13C3-PFHxS	111	G1702-FS-D(5)	11/5/2020
13C8-PFOS	101	G1702-FS-D(5)	11/5/2020
13C3-HFPO-DA	78	G1702-FS(0)	11/5/2020

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			20-1305			Perfluoroalkyl Compounds	CBD-EB01-101420-GW	WQ	Water for QC samples	14-Oct-20
CBD-AOA-MW10	SITE 00010	CHESAPEAKE_BEACH_NRL	WLM	Monitoring well	20-1305	1446313.4	360527.11	Perfluoroalkyl Compounds	CBD-AOA-MW10-1020	WG	Ground water	15-Oct-20
	BACKGROU ND											
CBD-BKG-MW03		CHESAPEAKE_BEACH_NRL	WLM	Monitoring well	20-1305	1444966.83	360399.47	Perfluoroalkyl Compounds	CBD-BKG-MW03-1020	WG	Ground water	15-Oct-20
CBD-S04-MW01	SITE 00004	CHESAPEAKE_BEACH_NRL	WLM	Monitoring well	20-1305	1445080.26	361568.7	Perfluoroalkyl Compounds	CBD-S04-MW01-1020	WG	Ground water	15-Oct-20
CBD-S04-MW01	SITE 00004	CHESAPEAKE_BEACH_NRL	WLM	Monitoring well	20-1305	1445080.26	361568.7	Perfluoroalkyl Compounds	CBD-S04-MW01P-1020	WG	Ground water	15-Oct-20
HVGGW09	UXO 000001	CHESAPEAKE_BEACH_NRL	WLM	Monitoring well	20-1305	1444839.23	361115.465	Perfluoroalkyl Compounds	CBD-HVGGW09-1020	WG	Ground water	14-Oct-20
HVGGW10	UXO 000001	CHESAPEAKE_BEACH_NRL	WLM	Monitoring well	20-1305	1444933.43	361000.761	Perfluoroalkyl Compounds	CBD-HVGGW10-1020	WG	Ground water	14-Oct-20