



**Groundwater Sample Results,
Level 4 Laboratory Report, Electronic Data
Deliverable, Data Validation Report, Sample Location
Report, SDG 20-1375**

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 20-1375

Package DP-20-1245

Submitted to:

CH2M

5701 Cleveland Street

Virginia Beach, VA 23462 USA

Submitted by:

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

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**CTO-4532: NRL Chesapeake Bay Detachment
(NRL-CBD) Site 10
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PFAS by DoD QSM 5.3 Table B-15
AQ, GW
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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: 2020.11.20 10:32:19 -05'00'

QC Chemist Approval:  Digitally signed by Carla Devine
Date: 2020.11.25 16:17:08 -05'00'

Project Manager Approval:  Digitally signed by Jonathan Thorn
Date: 2020.11.25 16:38:56 -05'00'



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 20-1375


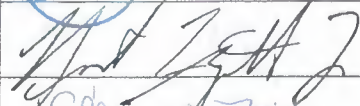






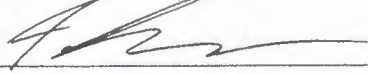





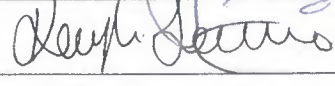
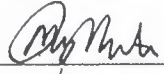
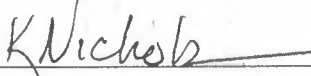
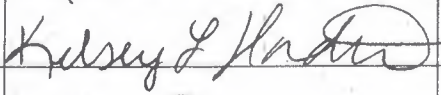
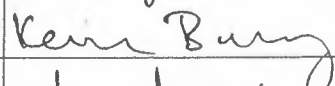

Package DP-20-1245

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.	52
4	<i>Sample Preparation Records</i> Sample Preparation Records, Dilution Worksheets, Standard Preparation Records, Certificates Of Analysis, GPC Check Report.	195
5	<i>Analytical Calibrations</i> Analytical Sequence, Analytical Method, Tune Report, Initial Calibration, Pesticide Degradation Report, RF Summary, Calibration Verifications, Independent Calibration Verification Check.	213
6	<i>Analytical Data</i> Raw Data Quantification Reports.	312
7	<i>Chromatograms</i> Sample And Standard Chromatograms.	349
8	<i>Unused Data</i>	446



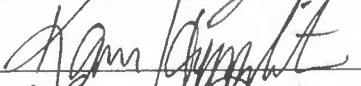

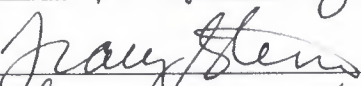
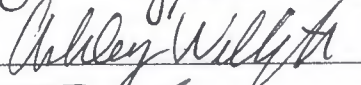


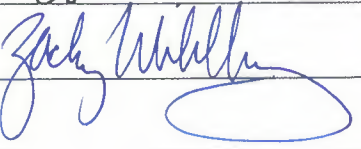
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Master Signature Page

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

Master Signature Page

Name (Printed)	Signature	Initials	Date
Ulimieo Brown		UB	01/30/20
Ryan Kelly		RK	01/30/20
KAREN HYPPOLITE		K.H.	01/31/20
Gail DeRuzzo		GD	01/31/2020
Tracy Stenner		JWS	1/31/2020
Ashley Wellington		AW	1/31/2020
Daniel Cooney		DAC	1/31/2020
Peter Demers		PD	1/31/2020
Zachary Willenberg		ZM	2/3/2020

Sample Summary

Client: CH2M
 SDG: 20-1375
 Project/Site: NRL Chesapeake Bay Detachment (NRL-CBD) Site 10
 CTO: 4532

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Receipt Date
DB124PB-FS	Procedural Blank	WATER	11/4/2020	11/4/2020
DB125LCS-FS	Laboratory Control Sample	WATER	11/4/2020	11/4/2020
G2203-FS	CBD-AOA-MW06-1020	GW	10/27/2020	10/29/2020
G2204-FS	CBD-AOA-EB01-102720-GW	AQ	10/27/2020	10/29/2020
G2205-FS	CBD-AOA-MW12-1020	GW	10/28/2020	10/29/2020
G2206-FS	CBD-AOA-MW11-1020	GW	10/28/2020	10/29/2020
G2207-FS	CBD-AOA-MW11P-1020	GW	10/28/2020	10/29/2020
G2208-FS	CBD-AOA-FB01-102820	AQ	10/28/2020	10/29/2020
G2209-FS	CBD-AOA-EB01-102820-GW	AQ	10/28/2020	10/29/2020
G2210-FS	CBD-AOA-MW14-1020	GW	10/28/2020	10/29/2020
G2211-FS	CBD-AOA-MW13-1020	GW	10/28/2020	10/29/2020
G2212-FS	CBD-AOA-IW01-102820	AQ	10/28/2020	10/29/2020

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	AQ	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



WORK/QUALITY ASSURANCE PROJECT PLAN

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

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



WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 2: Test Codes

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

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

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



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.



It can be done

ShpNo SHP-201029-03

Battelle Project No: 100142218

Sample Receipt Form

Approved: [] Authorized []

Project Number: 708207CH Client: Jacobs
Received by: Schumitz, Matt Date/Time Received: Thursday, October 29, 2020 10:00 AM
No. of Shipping Containers: 1

SHIPMENT

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

Cooler(s)/Box(es)

Table with 9 columns: Cntr, Type, Tracking No., Seal, Seal, Container, Therm, Temp C, Smps. Row 1: 1 of 1, Cooler, 7718 9536 2077, Custody Seals, Intact, Intact, Therm_1, 1.5, 11

Samples

Sample Labels: [x] Sample labels agree with COC forms [] Discrepancies (see Sample Custody Corrective Action Form)
Container Seals: [] Tape [] Custody Seals [] Other Seals (See sample Log) [x] Seals intact for each shipping container [] Seals broken (See sample log for impacted samples)
Condition of Samples: [x] Sample containers intact [] Sample containers broken/leaking (See Custody Corrective Action Form)

Temperature upon receipt (°C): 1.5 Temperature Blank used [x] Yes [] No
(Note: If temperature upon receipt differs from required conditions, see sample log comment field)

Samples Acidified: [] Yes [] No [x] Unknown

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

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

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

Samples Containers:
Samples returned in PC-grade jars: [] Yes [] No [x] Unknown /Lot No.: Unknown

Storage Location: Custody: Refrigerator - R0119 (NA) BDO IDs Assigned: G2203 - G2213

Samples logged in by: Schumitz, Matt Date/Time: 10/29/2020 10:00 AM

Approved By: Approved On:

Authorized By: Authorized On:



It can be done

ShpNo SHP-201029-03

Battelle Project No: 100142218

Sample Receipt Form Details

Approved: Authorized

Project Number: 708207CH Client: Jacobs

Received by: Schumitz, Matt Date/Time Received: Thursday, October 29, 2020 10:00 AM

No. of Shipping Containers: 1

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
G2203	CBD-AOA-MW06-1020	10/27/20 10:00	10/29/20 10:52	2	GW	1.5	NA	NA	NA	R0119 (NA)			
G2204	CBD-AOA-EB01-102720-GW	10/27/20 10:10	10/29/20 10:52	2	AQ	1.5	NA	NA	NA	R0119 (NA)			
G2205	CBD-AOA-MW12-1020	10/28/20 13:45	10/29/20 10:52	2	GW	1.5	NA	NA	NA	R0119 (NA)			
G2206	CBD-AOA-MW11-1020	10/28/20 15:30	10/29/20 10:53	2	GW	1.5	NA	NA	NA	R0119 (NA)			
G2207	CBD-AOA-MW11P-1020	10/28/20 15:35	10/29/20 10:53	2	GW	1.5	NA	NA	NA	R0119 (NA)			
G2208	CBD-AOA-FB01-102820	10/28/20 15:55	10/29/20 10:53	2	AQ	1.5	NA	NA	NA	R0119 (NA)			
G2209	CBD-AOA-EB01-102820-GW	10/28/20 16:40	10/29/20 10:53	2	AQ	1.5	NA	NA	NA	R0119 (NA)			
G2210	CBD-AOA-MW14-1020	10/28/20 16:35	10/29/20 10:54	2	GW	1.5	NA	NA	NA	R0119 (NA)			
G2211	CBD-AOA-MW13-1020	10/28/20 17:10	10/29/20 10:54	2	GW	1.5	NA	NA	NA	R0119 (NA)			
G2212	CBD-AOA-IW01-102820	10/28/20 17:30	10/29/20 10:54	2	AQ	1.5	NA	NA	NA	R0119 (NA)			
G2213	CBD-AOA-IS01-102820	10/28/20 17:35	10/29/20 10:55	1	SO	1.5	NA	NA	NA	R0119 (NA)			

Total Samples: 11



Chain-of-Custody

Client Contact Information Mike Zamboni Michael.Zamboni@jacobs.com CH2M/JACOBS		Project Manager: Caitlin Dronfield Email: caitlin.dronfield@jacobs.com		Sampling Site: Site 10 (FTA)		Site Information: NRL-CBD	
Project Name: Site 10 SI Project No.: 708207CH		Normal <input checked="" type="checkbox"/> Priority <input type="checkbox"/> RUSH <input type="checkbox"/>		Turnaround Time (TAT) Requested:		COC #	
Sample Identification		Time Zone: ET		Preservative: none		Analysis: PFAS	
Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.			
CBD-AAA-MW06-1020	10/27/20 1000	Grab GW	GW	2	X	62203	
CBD-AAA-EB01-102720-GW	10/27/20 1010	" " AQ	AQ	2	X	04	Equipment Blank - monsoon pump
CBD-AAA-MW12-1020	10/28/20 1345	" " GW	GW	2	X	05	
CBD-AAA-MW11-1020	1530	" " GW	GW	2	X	06	
CBD-AAA-MW11P-1020	1535	" " GW	GW	2	X	07	Duplicate
CBD-AAA-FB01-102820	1555	" " AQ	AQ	2	X	08	Field Blank
CBD-AAA-EB01-102820-GW	1640	" " AQ	AQ	2	X	09	Equipment blank - water via pump
CBD-AAA-MW14-1020	1635	" " GW	GW	2	X	10	
CBD-AAA-MW13-1020	1710	" " GW	GW	2	X	11	
CBD-AAA-IW01-102820	10/28/20 1730	Comp AQ	AQ	2	X	12	IDW sample - water
CBD-AAA-IS01-10280	10/28/20 1735	Comp SO	SO	2	X	62213	IDW sample - soil
Receipt Temperature: (°C)		Samples Intact: Yes - No		Samples on Ice: Yes - No		Receipt Comments:	
Relinquished by (Print/Sign): Caitlin Dronfield		Company: CH2M/JACOBS		Date/Time: 10/28/20 1900		Received by (Print/Sign): [Signature]	
Relinquished by (Print/Sign):		Company:		Date/Time:		Received by (Print/Sign):	
Relinquished by (Print/Sign):		Company:		Date/Time:		Received by (Print/Sign):	
Comments:							

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

SHIP DATE: 26OCT20
ACTWGT: 50.00 LB
CAD: 103931050/INET4280
DIMS: 16x24x18 IN
BILL THIRD PARTY

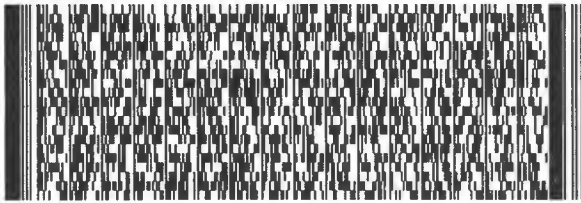
TO **ATTN: SAMPLE RECEIVING**
BATTELLE
141 LONGWATER DRIVE
SUITE 202
NORWELL MA 02061

(781) 681-5565
INV:
PO:

REF: 706207CH.FLFS

DEPT:

56B,2/A27E/B766



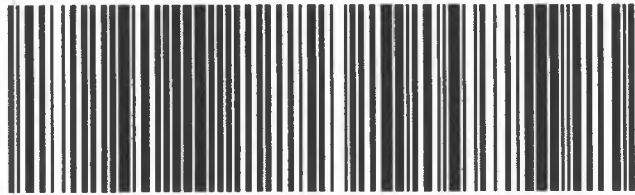
TRK#
0201

7718 9536 2077

TUE - 27 OCT 10:30A
PRIORITY OVERNIGHT

EM XPUA

02061
MA-US BOS



*Thermal
1.50*

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Data Tables



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

Client ID CBD-AOA-MW06-1020

Battelle ID G2203-FS
 Sample Type SA
 Collection Date 10/27/2020
 Extraction Date 11/04/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS
 % Moisture NA
 Matrix GW
 Sample Size 0.260
 Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	Extract ID	DF	Analysis Date	DL	LOD	LOQ
PFHxA	307-24-4	1.46 J	G2203-FS(0)	1.000	11/19/2020	0.507	1.44	4.81
PFHpA	375-85-9	1.54 J	G2203-FS(0)	1.000	11/19/2020	0.253	0.962	4.81
PFOA	335-67-1	55.0	G2203-FS(0)	1.000	11/19/2020	0.491	1.44	4.81
PFNA	375-95-1	0.426 J	G2203-FS(0)	1.000	11/19/2020	0.297	0.962	4.81
PFDA	335-76-2	0.481 U	G2203-FS(0)	1.000	11/19/2020	0.137	0.481	4.81
PFUnA	2058-94-8	0.481 U	G2203-FS(0)	1.000	11/19/2020	0.211	0.481	4.81
PFDoA	307-55-1	0.481 U	G2203-FS(0)	1.000	11/19/2020	0.185	0.481	4.81
PFTTrDA	72629-94-8	0.481 U	G2203-FS(0)	1.000	11/19/2020	0.148	0.481	4.81
PFTeDA	376-06-7	1.92 U	G2203-FS(0)	1.000	11/19/2020	0.705	1.92	4.81
NMeFOSAA	2355-31-9	0.962 U	G2203-FS(0)	1.000	11/19/2020	0.337	0.962	4.81
NEtFOSAA	2991-50-6	0.962 U	G2203-FS(0)	1.000	11/19/2020	0.481	0.962	4.81
PFBS	375-73-5	1.04 J	G2203-FS(0)	1.000	11/19/2020	0.138	0.481	4.81
PFHxS	355-46-4	15.1	G2203-FS(0)	1.000	11/19/2020	0.108	0.385	4.81
PFOS	1763-23-1	5.96	G2203-FS(0)	1.000	11/19/2020	0.420	0.962	4.81
HFPO-DA	13252-13-6	0.481 U	G2203-FS(0)	1.000	11/19/2020	0.238	0.481	4.81
Adona	919005-14-4	0.962 U	G2203-FS(0)	1.000	11/19/2020	0.255	0.962	4.81
9CI-PF3ONS	756426-58-1	0.481 U	G2203-FS(0)	1.000	11/19/2020	0.258	0.481	4.81
11CI-PF3OUdS	763051-92-9	0.962 U	G2203-FS(0)	1.000	11/19/2020	0.222	0.962	4.81



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

Client ID CBD-AOA-MW06-1020

Battelle ID G2203-FS
 Sample Type SA
 Collection Date 10/27/2020
 Extraction Date 11/04/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS

<i>Surrogate Recoveries (%)</i>	Recovery	Extract ID	Analysis Date
13C5-PFHxA	51	G2203-FS(0)	11/19/2020
13C4-PFHpA	67	G2203-FS(0)	11/19/2020
13C8-PFOA	70	G2203-FS(0)	11/19/2020
13C9-PFNA	73	G2203-FS(0)	11/19/2020
13C6-PFDA	77	G2203-FS(0)	11/19/2020
13C7-PFUnA	67	G2203-FS(0)	11/19/2020
13C2-PFDoA	60	G2203-FS(0)	11/19/2020
13C2-PFTeDA	23 N	G2203-FS(0)	11/19/2020
d3-MeFOSAA	72	G2203-FS(0)	11/19/2020
d5-EtFOSAA	89	G2203-FS(0)	11/19/2020
13C3-PFBS	86	G2203-FS(0)	11/19/2020
13C3-PFHxS	92	G2203-FS(0)	11/19/2020
13C8-PFOS	83	G2203-FS(0)	11/19/2020
13C3-HFPO-DA	77	G2203-FS(0)	11/19/2020



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

Client ID CBD-AOA-EB01-102720-GW

Battelle ID G2204-FS
 Sample Type SA
 Collection Date 10/27/2020
 Extraction Date 11/04/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS
 % Moisture NA
 Matrix AQ
 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	G2204-FS(0)	1.000	11/19/2020	0.527	1.50	5.00
PFHpA	375-85-9	1.00 U	G2204-FS(0)	1.000	11/19/2020	0.263	1.00	5.00
PFOA	335-67-1	1.50 U	G2204-FS(0)	1.000	11/19/2020	0.511	1.50	5.00
PFNA	375-95-1	1.00 U	G2204-FS(0)	1.000	11/19/2020	0.309	1.00	5.00
PFDA	335-76-2	0.500 U	G2204-FS(0)	1.000	11/19/2020	0.142	0.500	5.00
PFUnA	2058-94-8	0.500 U	G2204-FS(0)	1.000	11/19/2020	0.219	0.500	5.00
PFDaA	307-55-1	0.500 U	G2204-FS(0)	1.000	11/19/2020	0.192	0.500	5.00
PFTrDA	72629-94-8	0.500 U	G2204-FS(0)	1.000	11/19/2020	0.154	0.500	5.00
PFTeDA	376-06-7	2.00 U	G2204-FS(0)	1.000	11/19/2020	0.733	2.00	5.00
NMeFOSAA	2355-31-9	1.00 U	G2204-FS(0)	1.000	11/19/2020	0.350	1.00	5.00
NEtFOSAA	2991-50-6	1.00 U	G2204-FS(0)	1.000	11/19/2020	0.500	1.00	5.00
PFBS	375-73-5	0.500 U	G2204-FS(0)	1.000	11/19/2020	0.144	0.500	5.00
PFHxS	355-46-4	0.400 U	G2204-FS(0)	1.000	11/19/2020	0.112	0.400	5.00
PFOS	1763-23-1	1.00 U	G2204-FS(0)	1.000	11/19/2020	0.437	1.00	5.00
HFPO-DA	13252-13-6	0.500 U	G2204-FS(0)	1.000	11/19/2020	0.248	0.500	5.00
Adona	919005-14-4	1.00 U	G2204-FS(0)	1.000	11/19/2020	0.265	1.00	5.00
9CI-PF3ONS	756426-58-1	0.500 U	G2204-FS(0)	1.000	11/19/2020	0.268	0.500	5.00
11CI-PF3OUdS	763051-92-9	1.00 U	G2204-FS(0)	1.000	11/19/2020	0.231	1.00	5.00



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

Client ID CBD-AOA-EB01-102720-GW

 Battelle ID G2204-FS
 Sample Type SA
 Collection Date 10/27/2020
 Extraction Date 11/04/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS

<i>Surrogate Recoveries (%)</i>	Recovery	Extract ID	Analysis Date
13C5-PFHxA	71	G2204-FS(0)	11/19/2020
13C4-PFHpA	80	G2204-FS(0)	11/19/2020
13C8-PFOA	72	G2204-FS(0)	11/19/2020
13C9-PFNA	93	G2204-FS(0)	11/19/2020
13C6-PFDA	91	G2204-FS(0)	11/19/2020
13C7-PFUnA	92	G2204-FS(0)	11/19/2020
13C2-PFDoA	92	G2204-FS(0)	11/19/2020
13C2-PFTeDA	75	G2204-FS(0)	11/19/2020
d3-MeFOSAA	87	G2204-FS(0)	11/19/2020
d5-EtFOSAA	104	G2204-FS(0)	11/19/2020
13C3-PFBS	113	G2204-FS(0)	11/19/2020
13C3-PFHxS	96	G2204-FS(0)	11/19/2020
13C8-PFOS	90	G2204-FS(0)	11/19/2020
13C3-HFPO-DA	83	G2204-FS(0)	11/19/2020



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

Client ID CBD-AOA-MW12-1020

Battelle ID G2205-FS
 Sample Type SA
 Collection Date 10/28/2020
 Extraction Date 11/04/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS
 % Moisture NA
 Matrix GW
 Sample Size 0.275

Analyte	CAS No.	Result (ng/L)	Extract ID	DF	Analysis Date	DL	LOD	LOQ
PFHxA	307-24-4	1.36 U	G2205-FS(0)	1.000	11/19/2020	0.479	1.36	4.55
PFHpA	375-85-9	0.909 U	G2205-FS(0)	1.000	11/19/2020	0.239	0.909	4.55
PFOA	335-67-1	0.681 J	G2205-FS(0)	1.000	11/19/2020	0.465	1.36	4.55
PFNA	375-95-1	0.909 U	G2205-FS(0)	1.000	11/19/2020	0.281	0.909	4.55
PFDA	335-76-2	0.455 U	G2205-FS(0)	1.000	11/19/2020	0.129	0.455	4.55
PFUnA	2058-94-8	0.455 U	G2205-FS(0)	1.000	11/19/2020	0.199	0.455	4.55
PFDoA	307-55-1	0.455 U	G2205-FS(0)	1.000	11/19/2020	0.175	0.455	4.55
PFTrDA	72629-94-8	0.455 U	G2205-FS(0)	1.000	11/19/2020	0.140	0.455	4.55
PFTeDA	376-06-7	1.82 U	G2205-FS(0)	1.000	11/19/2020	0.666	1.82	4.55
NMeFOSAA	2355-31-9	0.909 U	G2205-FS(0)	1.000	11/19/2020	0.318	0.909	4.55
NEtFOSAA	2991-50-6	0.909 U	G2205-FS(0)	1.000	11/19/2020	0.455	0.909	4.55
PFBS	375-73-5	0.455 U	G2205-FS(0)	1.000	11/19/2020	0.131	0.455	4.55
PFHxS	355-46-4	0.152 J	G2205-FS(0)	1.000	11/19/2020	0.102	0.364	4.55
PFOS	1763-23-1	0.909 U	G2205-FS(0)	1.000	11/19/2020	0.397	0.909	4.55
HFPO-DA	13252-13-6	0.455 U	G2205-FS(0)	1.000	11/19/2020	0.225	0.455	4.55
Adona	919005-14-4	0.909 U	G2205-FS(0)	1.000	11/19/2020	0.241	0.909	4.55
9CI-PF3ONS	756426-58-1	0.455 U	G2205-FS(0)	1.000	11/19/2020	0.244	0.455	4.55
11CI-PF3OUdS	763051-92-9	0.909 U	G2205-FS(0)	1.000	11/19/2020	0.210	0.909	4.55



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

Client ID CBD-AOA-MW12-1020

Battelle ID G2205-FS
Sample Type SA
Collection Date 10/28/2020
Extraction Date 11/04/2020
Analytical Instrument Sciex 6500+ (AE) LC/MS/MS

<i>Surrogate Recoveries (%)</i>	Recovery	Extract ID	Analysis Date
13C5-PFHxA	42 N	G2205-FS(0)	11/19/2020
13C4-PFHpA	44 N	G2205-FS(0)	11/19/2020
13C8-PFOA	58	G2205-FS(0)	11/19/2020
13C9-PFNA	73	G2205-FS(0)	11/19/2020
13C6-PFDA	78	G2205-FS(0)	11/19/2020
13C7-PFUnA	84	G2205-FS(0)	11/19/2020
13C2-PFDoA	84	G2205-FS(0)	11/19/2020
13C2-PFTeDA	89	G2205-FS(0)	11/19/2020
d3-MeFOSAA	94	G2205-FS(0)	11/19/2020
d5-EtFOSAA	141	G2205-FS(0)	11/19/2020
13C3-PFBS	76	G2205-FS(0)	11/19/2020
13C3-PFHxS	80	G2205-FS(0)	11/19/2020
13C8-PFOS	91	G2205-FS(0)	11/19/2020
13C3-HFPO-DA	89	G2205-FS(0)	11/19/2020



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

Client ID CBD-AOA-MW11-1020

Battelle ID G2206-FS

Sample Type SA

Collection Date 10/28/2020

Extraction Date 11/04/2020

Analytical Instrument Sciex 6500+ (AE) LC/MS/MS

% Moisture NA

Matrix GW

Sample Size 0.270

Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	Extract ID	DF	Analysis Date	DL	LOD	LOQ
PFHxA	307-24-4	1.39 U	G2206-FS(0)	1.000	11/19/2020	0.488	1.39	4.63
PFHpA	375-85-9	0.926 U	G2206-FS(0)	1.000	11/19/2020	0.244	0.926	4.63
PFOA	335-67-1	0.681 J	G2206-FS(0)	1.000	11/19/2020	0.473	1.39	4.63
PFNA	375-95-1	0.926 U	G2206-FS(0)	1.000	11/19/2020	0.286	0.926	4.63
PFDA	335-76-2	0.463 U	G2206-FS(0)	1.000	11/19/2020	0.131	0.463	4.63
PFUnA	2058-94-8	0.463 U	G2206-FS(0)	1.000	11/19/2020	0.203	0.463	4.63
PFDoA	307-55-1	0.463 U	G2206-FS(0)	1.000	11/19/2020	0.178	0.463	4.63
PFTrDA	72629-94-8	0.463 U	G2206-FS(0)	1.000	11/19/2020	0.143	0.463	4.63
PFTeDA	376-06-7	1.85 U	G2206-FS(0)	1.000	11/19/2020	0.679	1.85	4.63
NMeFOSAA	2355-31-9	0.926 U	G2206-FS(0)	1.000	11/19/2020	0.324	0.926	4.63
NEtFOSAA	2991-50-6	0.926 U	G2206-FS(0)	1.000	11/19/2020	0.463	0.926	4.63
PFBS	375-73-5	0.463 U	G2206-FS(0)	1.000	11/19/2020	0.133	0.463	4.63
PFHxS	355-46-4	0.370 U	G2206-FS(0)	1.000	11/19/2020	0.104	0.370	4.63
PFOS	1763-23-1	0.926 U	G2206-FS(0)	1.000	11/19/2020	0.405	0.926	4.63
HFPO-DA	13252-13-6	0.463 U	G2206-FS(0)	1.000	11/19/2020	0.230	0.463	4.63
Adona	919005-14-4	0.926 U	G2206-FS(0)	1.000	11/19/2020	0.245	0.926	4.63
9Cl-PF3ONS	756426-58-1	0.463 U	G2206-FS(0)	1.000	11/19/2020	0.248	0.463	4.63
11Cl-PF3OUdS	763051-92-9	0.926 U	G2206-FS(0)	1.000	11/19/2020	0.214	0.926	4.63



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

Client ID CBD-AOA-MW11-1020
 Battelle ID G2206-FS
 Sample Type SA
 Collection Date 10/28/2020
 Extraction Date 11/04/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS

<i>Surrogate Recoveries (%)</i>	Recovery	Extract ID	Analysis Date
13C5-PFHxA	27 N	G2206-FS(0)	11/19/2020
13C4-PFHpA	20 N	G2206-FS(0)	11/19/2020
13C8-PFOA	55	G2206-FS(0)	11/19/2020
13C9-PFNA	81	G2206-FS(0)	11/19/2020
13C6-PFDA	69	G2206-FS(0)	11/19/2020
13C7-PFUnA	97	G2206-FS(0)	11/19/2020
13C2-PFDoA	85	G2206-FS(0)	11/19/2020
13C2-PFTeDA	92	G2206-FS(0)	11/19/2020
d3-MeFOSAA	96	G2206-FS(0)	11/19/2020
d5-EtFOSAA	148	G2206-FS(0)	11/19/2020
13C3-PFBS	61	G2206-FS(0)	11/19/2020
13C3-PFHxS	63	G2206-FS(0)	11/19/2020
13C8-PFOS	85	G2206-FS(0)	11/19/2020
13C3-HFPO-DA	39 N	G2206-FS(0)	11/19/2020



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

Client ID CBD-AOA-MW11P-1020

Battelle ID G2207-FS

Sample Type SA

Collection Date 10/28/2020

Extraction Date 11/04/2020

Analytical Instrument Sciex 6500+ (AE) LC/MS/MS

% Moisture NA

Matrix GW

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	G2207-FS(0)	1.000	11/19/2020	0.517	1.47	4.90
PFHpA	375-85-9	0.980 U	G2207-FS(0)	1.000	11/19/2020	0.258	0.980	4.90
PFOA	335-67-1	0.765 J	G2207-FS(0)	1.000	11/19/2020	0.501	1.47	4.90
PFNA	375-95-1	0.980 U	G2207-FS(0)	1.000	11/19/2020	0.303	0.980	4.90
PFDA	335-76-2	0.490 U	G2207-FS(0)	1.000	11/19/2020	0.139	0.490	4.90
PFUnA	2058-94-8	0.490 U	G2207-FS(0)	1.000	11/19/2020	0.215	0.490	4.90
PFDoA	307-55-1	0.490 U	G2207-FS(0)	1.000	11/19/2020	0.188	0.490	4.90
PFTTrDA	72629-94-8	0.490 U	G2207-FS(0)	1.000	11/19/2020	0.151	0.490	4.90
PFTeDA	376-06-7	1.96 U	G2207-FS(0)	1.000	11/19/2020	0.719	1.96	4.90
NMeFOSAA	2355-31-9	0.980 U	G2207-FS(0)	1.000	11/19/2020	0.343	0.980	4.90
NEtFOSAA	2991-50-6	0.980 U	G2207-FS(0)	1.000	11/19/2020	0.490	0.980	4.90
PFBS	375-73-5	0.490 U	G2207-FS(0)	1.000	11/19/2020	0.141	0.490	4.90
PFHxS	355-46-4	0.392 U	G2207-FS(0)	1.000	11/19/2020	0.110	0.392	4.90
PFOS	1763-23-1	0.980 U	G2207-FS(0)	1.000	11/19/2020	0.428	0.980	4.90
HFPO-DA	13252-13-6	0.490 U	G2207-FS(0)	1.000	11/19/2020	0.243	0.490	4.90
Adona	919005-14-4	0.980 U	G2207-FS(0)	1.000	11/19/2020	0.260	0.980	4.90
9CI-PF3ONS	756426-58-1	0.490 U	G2207-FS(0)	1.000	11/19/2020	0.263	0.490	4.90
11CI-PF3OUdS	763051-92-9	0.980 U	G2207-FS(0)	1.000	11/19/2020	0.226	0.980	4.90



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

Client ID CBD-AOA-MW11P-1020

Battelle ID G2207-FS
 Sample Type SA
 Collection Date 10/28/2020
 Extraction Date 11/04/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS

Surrogate Recoveries (%)	Recovery	Extract ID	Analysis Date
13C5-PFHxA	27 N	G2207-FS(0)	11/19/2020
13C4-PFHpA	23 N	G2207-FS(0)	11/19/2020
13C8-PFOA	62	G2207-FS(0)	11/19/2020
13C9-PFNA	94	G2207-FS(0)	11/19/2020
13C6-PFDA	70	G2207-FS(0)	11/19/2020
13C7-PFUnA	91	G2207-FS(0)	11/19/2020
13C2-PFDoA	81	G2207-FS(0)	11/19/2020
13C2-PFTeDA	92	G2207-FS(0)	11/19/2020
d3-MeFOSAA	97	G2207-FS(0)	11/19/2020
d5-EtFOSAA	161 N	G2207-FS(0)	11/19/2020
13C3-PFBS	55	G2207-FS(0)	11/19/2020
13C3-PFHxS	61	G2207-FS(0)	11/19/2020
13C8-PFOS	78	G2207-FS(0)	11/19/2020
13C3-HFPO-DA	40 N	G2207-FS(0)	11/19/2020



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

Client ID CBD-AOA-FB01-102820

Battelle ID G2208-FS

Sample Type SA

Collection Date 10/28/2020

Extraction Date 11/04/2020

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	G2208-FS(0)	1.000	11/19/2020	0.517	1.47	4.90
PFHpA	375-85-9	0.980 U	G2208-FS(0)	1.000	11/19/2020	0.258	0.980	4.90
PFOA	335-67-1	1.47 U	G2208-FS(0)	1.000	11/19/2020	0.501	1.47	4.90
PFNA	375-95-1	0.980 U	G2208-FS(0)	1.000	11/19/2020	0.303	0.980	4.90
PFDA	335-76-2	0.490 U	G2208-FS(0)	1.000	11/19/2020	0.139	0.490	4.90
PFUnA	2058-94-8	0.490 U	G2208-FS(0)	1.000	11/19/2020	0.215	0.490	4.90
PFDoA	307-55-1	0.490 U	G2208-FS(0)	1.000	11/19/2020	0.188	0.490	4.90
PFTTrDA	72629-94-8	0.490 U	G2208-FS(0)	1.000	11/19/2020	0.151	0.490	4.90
PFTeDA	376-06-7	1.96 U	G2208-FS(0)	1.000	11/19/2020	0.719	1.96	4.90
NMeFOSAA	2355-31-9	0.980 U	G2208-FS(0)	1.000	11/19/2020	0.343	0.980	4.90
NEtFOSAA	2991-50-6	0.980 U	G2208-FS(0)	1.000	11/19/2020	0.490	0.980	4.90
PFBS	375-73-5	0.490 U	G2208-FS(0)	1.000	11/19/2020	0.141	0.490	4.90
PFHxS	355-46-4	0.392 U	G2208-FS(0)	1.000	11/19/2020	0.110	0.392	4.90
PFOS	1763-23-1	0.980 U	G2208-FS(0)	1.000	11/19/2020	0.428	0.980	4.90
HFPO-DA	13252-13-6	0.490 U	G2208-FS(0)	1.000	11/19/2020	0.243	0.490	4.90
Adona	919005-14-4	0.980 U	G2208-FS(0)	1.000	11/19/2020	0.260	0.980	4.90
9CI-PF3ONS	756426-58-1	0.490 U	G2208-FS(0)	1.000	11/19/2020	0.263	0.490	4.90
11CI-PF3OUdS	763051-92-9	0.980 U	G2208-FS(0)	1.000	11/19/2020	0.226	0.980	4.90



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

Client ID CBD-AOA-FB01-102820

Battelle ID G2208-FS
 Sample Type SA
 Collection Date 10/28/2020
 Extraction Date 11/04/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS

Surrogate Recoveries (%)	Recovery	Extract ID	Analysis Date
13C5-PFHxA	88	G2208-FS(0)	11/19/2020
13C4-PFHpA	81	G2208-FS(0)	11/19/2020
13C8-PFOA	81	G2208-FS(0)	11/19/2020
13C9-PFNA	107	G2208-FS(0)	11/19/2020
13C6-PFDA	87	G2208-FS(0)	11/19/2020
13C7-PFUnA	98	G2208-FS(0)	11/19/2020
13C2-PFDoA	95	G2208-FS(0)	11/19/2020
13C2-PFTeDA	89	G2208-FS(0)	11/19/2020
d3-MeFOSAA	94	G2208-FS(0)	11/19/2020
d5-EtFOSAA	131	G2208-FS(0)	11/19/2020
13C3-PFBS	106	G2208-FS(0)	11/19/2020
13C3-PFHxS	96	G2208-FS(0)	11/19/2020
13C8-PFOS	93	G2208-FS(0)	11/19/2020
13C3-HFPO-DA	59	G2208-FS(0)	11/19/2020



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

Client ID CBD-AOA-EB01-102820-GW

Battelle ID G2209-FS

Sample Type SA

Collection Date 10/28/2020

Extraction Date 11/04/2020

Analytical Instrument Sciex 6500+ (AE) LC/MS/MS

% Moisture NA

Matrix AQ

Sample Size 0.280

Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	Extract ID	DF	Analysis Date	DL	LOD	LOQ
PFHxA	307-24-4	0.682 J	G2209-FS(0)	1.000	11/18/2020	0.471	1.34	4.46
PFHpA	375-85-9	0.893 U	G2209-FS(0)	1.000	11/18/2020	0.235	0.893	4.46
PFOA	335-67-1	1.34 U	G2209-FS(0)	1.000	11/18/2020	0.456	1.34	4.46
PFNA	375-95-1	0.893 U	G2209-FS(0)	1.000	11/18/2020	0.276	0.893	4.46
PFDA	335-76-2	0.446 U	G2209-FS(0)	1.000	11/18/2020	0.127	0.446	4.46
PFUnA	2058-94-8	0.446 U	G2209-FS(0)	1.000	11/18/2020	0.196	0.446	4.46
PFDaA	307-55-1	0.446 U	G2209-FS(0)	1.000	11/18/2020	0.171	0.446	4.46
PFTrDA	72629-94-8	0.291 J	G2209-FS(0)	1.000	11/18/2020	0.138	0.446	4.46
PFTeDA	376-06-7	1.79 U	G2209-FS(0)	1.000	11/18/2020	0.654	1.79	4.46
NMeFOSAA	2355-31-9	0.893 U	G2209-FS(0)	1.000	11/18/2020	0.313	0.893	4.46
NEtFOSAA	2991-50-6	0.893 U	G2209-FS(0)	1.000	11/18/2020	0.446	0.893	4.46
PFBS	375-73-5	0.446 U	G2209-FS(0)	1.000	11/18/2020	0.129	0.446	4.46
PFHxS	355-46-4	0.357 U	G2209-FS(0)	1.000	11/18/2020	0.100	0.357	4.46
PFOS	1763-23-1	1.20 J	G2209-FS(0)	1.000	11/18/2020	0.390	0.893	4.46
HFPO-DA	13252-13-6	0.446 U	G2209-FS(0)	1.000	11/18/2020	0.221	0.446	4.46
Adona	919005-14-4	0.893 U	G2209-FS(0)	1.000	11/18/2020	0.237	0.893	4.46
9Cl-PF3ONS	756426-58-1	0.446 U	G2209-FS(0)	1.000	11/18/2020	0.239	0.446	4.46
11Cl-PF3OUdS	763051-92-9	0.893 U	G2209-FS(0)	1.000	11/18/2020	0.206	0.893	4.46



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

Client ID CBD-AOA-EB01-102820-GW

Battelle ID G2209-FS
Sample Type SA
Collection Date 10/28/2020
Extraction Date 11/04/2020
Analytical Instrument Sciex 6500+ (AE) LC/MS/MS

Surrogate Recoveries (%)	Recovery	Extract ID	Analysis Date
13C5-PFHxA	55	G2209-FS(0)	11/18/2020
13C4-PFHpA	63	G2209-FS(0)	11/18/2020
13C8-PFOA	61	G2209-FS(0)	11/18/2020
13C9-PFNA	70	G2209-FS(0)	11/18/2020
13C6-PFDA	72	G2209-FS(0)	11/18/2020
13C7-PFUnA	30 N	G2209-FS(0)	11/18/2020
13C2-PFDoA	33 N	G2209-FS(0)	11/18/2020
13C2-PFTeDA	30 N	G2209-FS(0)	11/18/2020
d3-MeFOSAA	11 N	G2209-FS(0)	11/18/2020
d5-EtFOSAA	27 N	G2209-FS(0)	11/18/2020
13C3-PFBS	88	G2209-FS(0)	11/18/2020
13C3-PFHxS	83	G2209-FS(0)	11/18/2020
13C8-PFOS	84	G2209-FS(0)	11/18/2020
13C3-HFPO-DA	91	G2209-FS(0)	11/18/2020



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

Client ID CBD-AOA-MW14-1020

Battelle ID G2210-FS

Sample Type SA

Collection Date 10/28/2020

Extraction Date 11/04/2020

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	4.36 J	G2210-FS(0)	1.000	11/19/2020	0.527	1.50	5.00
PFHpA	375-85-9	1.97 J	G2210-FS(0)	1.000	11/19/2020	0.263	1.00	5.00
PFOA	335-67-1	5.99	G2210-FS(0)	1.000	11/19/2020	0.511	1.50	5.00
PFNA	375-95-1	1.32 J	G2210-FS(0)	1.000	11/19/2020	0.309	1.00	5.00
PFDA	335-76-2	0.500 U	G2210-FS(0)	1.000	11/19/2020	0.142	0.500	5.00
PFUnA	2058-94-8	0.500 U	G2210-FS(0)	1.000	11/19/2020	0.219	0.500	5.00
PFDoA	307-55-1	0.500 U	G2210-FS(0)	1.000	11/19/2020	0.192	0.500	5.00
PFTTrDA	72629-94-8	0.500 U	G2210-FS(0)	1.000	11/19/2020	0.154	0.500	5.00
PFTeDA	376-06-7	2.00 U	G2210-FS(0)	1.000	11/19/2020	0.733	2.00	5.00
NMeFOSAA	2355-31-9	1.00 U	G2210-FS(0)	1.000	11/19/2020	0.350	1.00	5.00
NEtFOSAA	2991-50-6	1.00 U	G2210-FS(0)	1.000	11/19/2020	0.500	1.00	5.00
PFBS	375-73-5	0.751 J	G2210-FS(0)	1.000	11/19/2020	0.144	0.500	5.00
PFHxS	355-46-4	9.20	G2210-FS(0)	1.000	11/19/2020	0.112	0.400	5.00
PFOS	1763-23-1	4.25 J	G2210-FS(0)	1.000	11/19/2020	0.437	1.00	5.00
HFPO-DA	13252-13-6	0.500 U	G2210-FS(0)	1.000	11/19/2020	0.248	0.500	5.00
Adona	919005-14-4	1.00 U	G2210-FS(0)	1.000	11/19/2020	0.265	1.00	5.00
9CI-PF3ONS	756426-58-1	0.500 U	G2210-FS(0)	1.000	11/19/2020	0.268	0.500	5.00
11CI-PF3OUdS	763051-92-9	1.00 U	G2210-FS(0)	1.000	11/19/2020	0.231	1.00	5.00



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

Client ID CBD-AOA-MW14-1020

 Battelle ID G2210-FS
 Sample Type SA
 Collection Date 10/28/2020
 Extraction Date 11/04/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS

<i>Surrogate Recoveries (%)</i>	Recovery	Extract ID	Analysis Date
13C5-PFHxA	40 N	G2210-FS(0)	11/19/2020
13C4-PFHpA	51	G2210-FS(0)	11/19/2020
13C8-PFOA	55	G2210-FS(0)	11/19/2020
13C9-PFNA	81	G2210-FS(0)	11/19/2020
13C6-PFDA	73	G2210-FS(0)	11/19/2020
13C7-PFUnA	80	G2210-FS(0)	11/19/2020
13C2-PFDoA	78	G2210-FS(0)	11/19/2020
13C2-PFTeDA	83	G2210-FS(0)	11/19/2020
d3-MeFOSAA	80	G2210-FS(0)	11/19/2020
d5-EtFOSAA	114	G2210-FS(0)	11/19/2020
13C3-PFBS	75	G2210-FS(0)	11/19/2020
13C3-PFHxS	79	G2210-FS(0)	11/19/2020
13C8-PFOS	97	G2210-FS(0)	11/19/2020
13C3-HFPO-DA	84	G2210-FS(0)	11/19/2020



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

Client ID CBD-AOA-MW13-1020

Battelle ID G2211-FS
 Sample Type SA
 Collection Date 10/28/2020
 Extraction Date 11/04/2020
 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	16.6	G2211-FS(0)	1.000	11/19/2020	0.527	1.50	5.00
PFHpA	375-85-9	7.02	G2211-FS(0)	1.000	11/19/2020	0.263	1.00	5.00
PFOA	335-67-1	10.0	G2211-FS(0)	1.000	11/19/2020	0.511	1.50	5.00
PFNA	375-95-1	3.09 J	G2211-FS(0)	1.000	11/19/2020	0.309	1.00	5.00
PFDA	335-76-2	0.898 J	G2211-FS(0)	1.000	11/19/2020	0.142	0.500	5.00
PFUnA	2058-94-8	1.09 J	G2211-FS(0)	1.000	11/19/2020	0.219	0.500	5.00
PFDoA	307-55-1	0.500 U	G2211-FS(0)	1.000	11/19/2020	0.192	0.500	5.00
PFTTrDA	72629-94-8	0.500 U	G2211-FS(0)	1.000	11/19/2020	0.154	0.500	5.00
PFTeDA	376-06-7	2.00 U	G2211-FS(0)	1.000	11/19/2020	0.733	2.00	5.00
NMeFOSAA	2355-31-9	1.00 U	G2211-FS(0)	1.000	11/19/2020	0.350	1.00	5.00
NEtFOSAA	2991-50-6	1.00 U	G2211-FS(0)	1.000	11/19/2020	0.500	1.00	5.00
PFBS	375-73-5	0.500 U	G2211-FS(0)	1.000	11/19/2020	0.144	0.500	5.00
PFHxS	355-46-4	42.9	G2211-FS(0)	1.000	11/19/2020	0.112	0.400	5.00
PFOS	1763-23-1	17.9	G2211-FS(0)	1.000	11/19/2020	0.437	1.00	5.00
HFPO-DA	13252-13-6	0.500 U	G2211-FS(0)	1.000	11/19/2020	0.248	0.500	5.00
Adona	919005-14-4	1.00 U	G2211-FS(0)	1.000	11/19/2020	0.265	1.00	5.00
9Cl-PF3ONS	756426-58-1	0.500 U	G2211-FS(0)	1.000	11/19/2020	0.268	0.500	5.00
11Cl-PF3OUdS	763051-92-9	1.00 U	G2211-FS(0)	1.000	11/19/2020	0.231	1.00	5.00



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

Client ID CBD-AOA-MW13-1020

Battelle ID G2211-FS
Sample Type SA
Collection Date 10/28/2020
Extraction Date 11/04/2020
Analytical Instrument Sciex 6500+ (AE) LC/MS/MS

Surrogate Recoveries (%)	Recovery	Extract ID	Analysis Date
13C5-PFHxA	51	G2211-FS(0)	11/19/2020
13C4-PFHpA	62	G2211-FS(0)	11/19/2020
13C8-PFOA	66	G2211-FS(0)	11/19/2020
13C9-PFNA	85	G2211-FS(0)	11/19/2020
13C6-PFDA	78	G2211-FS(0)	11/19/2020
13C7-PFUnA	82	G2211-FS(0)	11/19/2020
13C2-PFDoA	76	G2211-FS(0)	11/19/2020
13C2-PFTeDA	74	G2211-FS(0)	11/19/2020
d3-MeFOSAA	91	G2211-FS(0)	11/19/2020
d5-EtFOSAA	123	G2211-FS(0)	11/19/2020
13C3-PFBS	80	G2211-FS(0)	11/19/2020
13C3-PFHxS	81	G2211-FS(0)	11/19/2020
13C8-PFOS	88	G2211-FS(0)	11/19/2020
13C3-HFPO-DA	97	G2211-FS(0)	11/19/2020



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

Client ID CBD-AOA-IW01-102820

Battelle ID G2212-FS
 Sample Type SA
 Collection Date 10/28/2020
 Extraction Date 11/04/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS
 % Moisture NA
 Matrix AQ
 Sample Size 0.280
 Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	Extract ID	DF	Analysis Date	DL	LOD	LOQ
PFHxA	307-24-4	787 D	G2212-FS-D(5)	25.000	11/19/2020	11.8	33.5	112
PFHpA	375-85-9	492	G2212-FS(0)	1.000	11/19/2020	0.235	0.893	4.46
PFOA	335-67-1	933 D	G2212-FS-D(5)	25.000	11/19/2020	11.4	33.5	112
PFNA	375-95-1	3110 D	G2212-FS-D(7)	125.000	11/19/2020	34.5	112	558
PFDA	335-76-2	119	G2212-FS(0)	1.000	11/19/2020	0.127	0.446	4.46
PFUnA	2058-94-8	213	G2212-FS(0)	1.000	11/19/2020	0.196	0.446	4.46
PFDoA	307-55-1	3.99 J	G2212-FS(0)	1.000	11/19/2020	0.171	0.446	4.46
PFTTrDA	72629-94-8	15.2	G2212-FS(0)	1.000	11/19/2020	0.138	0.446	4.46
PFTeDA	376-06-7	1.79 U	G2212-FS(0)	1.000	11/19/2020	0.654	1.79	4.46
NMeFOSAA	2355-31-9	0.893 U	G2212-FS(0)	1.000	11/19/2020	0.313	0.893	4.46
NEtFOSAA	2991-50-6	0.893 U	G2212-FS(0)	1.000	11/19/2020	0.446	0.893	4.46
PFBS	375-73-5	86.6	G2212-FS(0)	1.000	11/19/2020	0.129	0.446	4.46
PFHxS	355-46-4	2270 D	G2212-FS-D(7)	125.000	11/19/2020	12.5	44.6	558
PFOS	1763-23-1	15600 D	G2212-FS-D(9)	312.500	11/19/2020	122	279	1400
HFPO-DA	13252-13-6	0.446 U	G2212-FS(0)	1.000	11/19/2020	0.221	0.446	4.46
Adona	919005-14-4	0.893 U	G2212-FS(0)	1.000	11/19/2020	0.237	0.893	4.46
9CI-PF3ONS	756426-58-1	0.446 U	G2212-FS(0)	1.000	11/19/2020	0.239	0.446	4.46
11CI-PF3OUdS	763051-92-9	0.893 U	G2212-FS(0)	1.000	11/19/2020	0.206	0.893	4.46



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

Client ID CBD-AOA-IW01-102820

Battelle ID G2212-FS
 Sample Type SA
 Collection Date 10/28/2020
 Extraction Date 11/04/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS

<i>Surrogate Recoveries (%)</i>	Recovery	Extract ID	Analysis Date
13C5-PFHxA	76 D	G2212-FS-D(5)	11/19/2020
13C4-PFHpA	76 D	G2212-FS-D(5)	11/19/2020
13C8-PFOA	80 D	G2212-FS-D(5)	11/19/2020
13C9-PFNA	95 D	G2212-FS-D(9)	11/19/2020
13C6-PFDA	69	G2212-FS(0)	11/19/2020
13C7-PFUnA	65	G2212-FS(0)	11/19/2020
13C2-PFDoA	78	G2212-FS(0)	11/19/2020
13C2-PFTeDA	116	G2212-FS(0)	11/19/2020
d3-MeFOSAA	106 D	G2212-FS-D(9)	11/19/2020
d5-EtFOSAA	109 D	G2212-FS-D(9)	11/19/2020
13C3-PFBS	94 D	G2212-FS-D(9)	11/19/2020
13C3-PFHxS	105 D	G2212-FS-D(9)	11/19/2020
13C8-PFOS	97 D	G2212-FS-D(9)	11/19/2020
13C3-HFPO-DA	63 D	G2212-FS-D(5)	11/19/2020



It can be done

Project Client: CH2M

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

Project No.: 100142218

Client ID LE58 IB

Battelle ID LE58 IB_11/17/2020

Sample Type IB

Collection Date NA

Extraction Date NA

Analysis Date 11/17/2020

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	1.00 U	0.350	1.00	5.00
NEtFOSAA	2991-50-6	1.00 U	0.500	1.00	5.00
PFBS	375-73-5	0.500 U	0.144	0.500	5.00
PFHxS	355-46-4	0.400 U	0.112	0.400	5.00
PFOS	1763-23-1	1.00 U	0.437	1.00	5.00
HFPO-DA	13252-13-6	0.500 U	0.248	0.500	5.00
Adona	919005-14-4	1.00 U	0.265	1.00	5.00
9Cl-PF3ONS	756426-58-1	0.500 U	0.268	0.500	5.00
11Cl-PF3OUdS	763051-92-9	1.00 U	0.231	1.00	5.00

Analyzed by: Schumitz, Denise

Printed: 11/25/2020

Isotope Dilution

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It can be done

Project Client: CH2M

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

Project No.: 100142218

Client ID	LE58 IB
Battelle ID	LE58 IB_11/17/2020
Sample Type	IB
Collection Date	NA
Extraction Date	NA
Analysis Date	11/17/2020
Analytical Instrument	Sciex 6500+ (AE) LC/MS/MS
% Moisture	NA
Matrix	Water
Sample Size	0.250
Size Unit-Basis	L

Surrogate Recoveries (%)

13C5-PFHxA	119
13C4-PFHpA	109
13C8-PFOA	113
13C9-PFNA	111
13C6-PFDA	101
13C7-PFUnA	103
13C2-PFDoA	97
13C2-PFTeDA	99
d3-MeFOSAA	102
d5-EtFOSAA	105
13C3-PFBS	103
13C3-PFHxS	113
13C8-PFOS	105
13C3-HFPO-DA	109



It can be done

Project Client: CH2M

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

Project No.: 100142218

Client ID LE58 IB

Battelle ID LE58 IB_11/18/2020

Sample Type IB

Collection Date NA

Extraction Date NA

Analysis Date 11/18/2020

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	1.00 U	0.350	1.00	5.00
NEtFOSAA	2991-50-6	1.00 U	0.500	1.00	5.00
PFBS	375-73-5	0.500 U	0.144	0.500	5.00
PFHxS	355-46-4	0.400 U	0.112	0.400	5.00
PFOS	1763-23-1	1.00 U	0.437	1.00	5.00
HFPO-DA	13252-13-6	0.500 U	0.248	0.500	5.00
Adona	919005-14-4	1.00 U	0.265	1.00	5.00
9Cl-PF3ONS	756426-58-1	0.500 U	0.268	0.500	5.00
11Cl-PF3OUdS	763051-92-9	0.366 J	0.231	1.00	5.00

Analyzed by: Schumitz, Denise

Printed: 11/25/2020

Isotope Dilution

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It can be done

Project Client: CH2M

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

Project No.: 100142218

Client ID	LE58 IB
Battelle ID	LE58 IB_11/18/2020
Sample Type	IB
Collection Date	NA
Extraction Date	NA
Analysis Date	11/18/2020
Analytical Instrument	Sciex 6500+ (AE) LC/MS/MS
% Moisture	NA
Matrix	Water
Sample Size	0.250
Size Unit-Basis	L

Surrogate Recoveries (%)

13C5-PFHxA	116
13C4-PFHpA	114
13C8-PFOA	107
13C9-PFNA	91
13C6-PFDA	101
13C7-PFUnA	99
13C2-PFDoA	101
13C2-PFTeDA	96
d3-MeFOSAA	102
d5-EtFOSAA	104
13C3-PFBS	93
13C3-PFHxS	102
13C8-PFOS	99
13C3-HFPO-DA	98



It can be done

Project Client: CH2M

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

Project No.: 100142218

Client ID LE58 IB

Battelle ID LE58 IB_11/19/2020

Sample Type IB

Collection Date NA

Extraction Date NA

Analysis Date 11/19/2020

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	1.00 U	0.350	1.00	5.00
NEtFOSAA	2991-50-6	1.00 U	0.500	1.00	5.00
PFBS	375-73-5	0.500 U	0.144	0.500	5.00
PFHxS	355-46-4	0.400 U	0.112	0.400	5.00
PFOS	1763-23-1	1.00 U	0.437	1.00	5.00
HFPO-DA	13252-13-6	0.500 U	0.248	0.500	5.00
Adona	919005-14-4	1.00 U	0.265	1.00	5.00
9Cl-PF3ONS	756426-58-1	0.500 U	0.268	0.500	5.00
11Cl-PF3OUdS	763051-92-9	1.00 U	0.231	1.00	5.00

Analyzed by: Schumitz, Denise

Printed: 11/25/2020

Isotope Dilution

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It can be done

Project Client: CH2M

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

Project No.: 100142218

Client ID	LE58 IB
Battelle ID	LE58 IB_11/19/2020
Sample Type	IB
Collection Date	NA
Extraction Date	NA
Analysis Date	11/19/2020
Analytical Instrument	Sciex 6500+ (AE) LC/MS/MS
% Moisture	NA
Matrix	Water
Sample Size	0.250
Size Unit-Basis	L

Surrogate Recoveries (%)

13C5-PFHxA	106
13C4-PFHpA	96
13C8-PFOA	100
13C9-PFNA	102
13C6-PFDA	100
13C7-PFUnA	99
13C2-PFDoA	102
13C2-PFTeDA	95
d3-MeFOSAA	100
d5-EtFOSAA	101
13C3-PFBS	92
13C3-PFHxS	96
13C8-PFOS	106
13C3-HFPO-DA	79



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

Client ID Procedural Blank

Battelle ID DB124PB-FS
 Sample Type PB
 Collection Date 11/04/2020
 Extraction Date 11/04/2020
 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)	Extract ID	DF	Analysis Date	DL	LOD	LOQ
PFHxA	307-24-4	1.02 J	DB124PB-FS(0)	1.000	11/18/2020	0.527	1.50	5.00
PFHpA	375-85-9	1.00 U	DB124PB-FS(0)	1.000	11/18/2020	0.263	1.00	5.00
PFOA	335-67-1	1.50 U	DB124PB-FS(0)	1.000	11/18/2020	0.511	1.50	5.00
PFNA	375-95-1	1.00 U	DB124PB-FS(0)	1.000	11/18/2020	0.309	1.00	5.00
PFDA	335-76-2	0.500 U	DB124PB-FS(0)	1.000	11/18/2020	0.142	0.500	5.00
PFUnA	2058-94-8	0.500 U	DB124PB-FS(0)	1.000	11/18/2020	0.219	0.500	5.00
PFDoA	307-55-1	0.500 U	DB124PB-FS(0)	1.000	11/18/2020	0.192	0.500	5.00
PFTTrDA	72629-94-8	0.500 U	DB124PB-FS(0)	1.000	11/18/2020	0.154	0.500	5.00
PFTeDA	376-06-7	2.00 U	DB124PB-FS(0)	1.000	11/18/2020	0.733	2.00	5.00
NMeFOSAA	2355-31-9	1.00 U	DB124PB-FS(0)	1.000	11/18/2020	0.350	1.00	5.00
NEtFOSAA	2991-50-6	1.00 U	DB124PB-FS(0)	1.000	11/18/2020	0.500	1.00	5.00
PFBS	375-73-5	0.500 U	DB124PB-FS(0)	1.000	11/18/2020	0.144	0.500	5.00
PFHxS	355-46-4	0.400 U	DB124PB-FS(0)	1.000	11/18/2020	0.112	0.400	5.00
PFOS	1763-23-1	1.00 U	DB124PB-FS(0)	1.000	11/18/2020	0.437	1.00	5.00
HFPO-DA	13252-13-6	0.500 U	DB124PB-FS(0)	1.000	11/18/2020	0.248	0.500	5.00
Adona	919005-14-4	1.00 U	DB124PB-FS(0)	1.000	11/18/2020	0.265	1.00	5.00
9Cl-PF3ONS	756426-58-1	0.500 U	DB124PB-FS(0)	1.000	11/18/2020	0.268	0.500	5.00
11Cl-PF3OUdS	763051-92-9	1.00 U	DB124PB-FS(0)	1.000	11/18/2020	0.231	1.00	5.00



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

Client ID: Procedural Blank
 Battelle ID: DB124PB-FS
 Sample Type: PB
 Collection Date: 11/04/2020
 Extraction Date: 11/04/2020
 Analytical Instrument: Sciex 6500+ (AE) LC/MS/MS

Surrogate Recoveries (%)	Recovery	Extract ID	Analysis Date
13C5-PFHxA	76	DB124PB-FS(0)	11/18/2020
13C4-PFHpA	76	DB124PB-FS(0)	11/18/2020
13C8-PFOA	76	DB124PB-FS(0)	11/18/2020
13C9-PFNA	77	DB124PB-FS(0)	11/18/2020
13C6-PFDA	73	DB124PB-FS(0)	11/18/2020
13C7-PFUnA	71	DB124PB-FS(0)	11/18/2020
13C2-PFDoA	68	DB124PB-FS(0)	11/18/2020
13C2-PFTeDA	56	DB124PB-FS(0)	11/18/2020
d3-MeFOSAA	62	DB124PB-FS(0)	11/18/2020
d5-EtFOSAA	80	DB124PB-FS(0)	11/18/2020
13C3-PFBS	87	DB124PB-FS(0)	11/18/2020
13C3-PFHxS	81	DB124PB-FS(0)	11/18/2020
13C8-PFOS	77	DB124PB-FS(0)	11/18/2020
13C3-HFPO-DA	67	DB124PB-FS(0)	11/18/2020



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 DB125LCS-FS
 Sample Type LCS
 Collection Date 11/04/2020
 Extraction Date 11/04/2020
 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)	Extract ID	DF	Analysis Date	Target	Recovery	Qual	Control Limits	
									Lower	Upper
PFHxA	307-24-4	32.9	DB125LCS-FS(0)	1.000	11/18/2020	40.4	81		72	129
PFHpA	375-85-9	32.7	DB125LCS-FS(0)	1.000	11/18/2020	40.0	82		72	130
PFOA	335-67-1	29.5	DB125LCS-FS(0)	1.000	11/18/2020	40.0	74		71	133
PFNA	375-95-1	34.4	DB125LCS-FS(0)	1.000	11/18/2020	40.0	86		69	130
PFDA	335-76-2	34.9	DB125LCS-FS(0)	1.000	11/18/2020	40.0	87		71	129
PFUnA	2058-94-8	32.0	DB125LCS-FS(0)	1.000	11/18/2020	40.0	80		69	133
PFDoA	307-55-1	31.6	DB125LCS-FS(0)	1.000	11/18/2020	40.0	79		72	134
PFTrDA	72629-94-8	36.3	DB125LCS-FS(0)	1.000	11/18/2020	40.0	91		65	144
PFTeDA	376-06-7	33.9	DB125LCS-FS(0)	1.000	11/18/2020	40.0	85		71	132
NMeFOSAA	2355-31-9	34.9	DB125LCS-FS(0)	1.000	11/18/2020	40.0	87		65	136
NEtFOSAA	2991-50-6	36.7	DB125LCS-FS(0)	1.000	11/18/2020	40.0	92		61	135
PFBS	375-73-5	33.7	DB125LCS-FS(0)	1.000	11/18/2020	40.0	84		72	130
PFHxS	355-46-4	36.7	DB125LCS-FS(0)	1.000	11/18/2020	40.4	91		68	131
PFOS	1763-23-1	31.0	DB125LCS-FS(0)	1.000	11/18/2020	40.4	77		65	140
HFPO-DA	13252-13-6	33.2	DB125LCS-FS(0)	1.000	11/18/2020	40.0	83		74	148
Adona	919005-14-4	33.0	DB125LCS-FS(0)	1.000	11/18/2020	40.0	83		61	143
9CI-PF3ONS	756426-58-1	31.3	DB125LCS-FS(0)	1.000	11/18/2020	40.0	78		52	158
11CI-PF3OUdS	763051-92-9	27.0	DB125LCS-FS(0)	1.000	11/18/2020	40.0	68		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	DB125LCS-FS
Sample Type	LCS
Collection Date	11/04/2020
Extraction Date	11/04/2020
Analytical Instrument	Sciex 6500+ (AE) LC/MS/MS

<i>Surrogate Recoveries (%)</i>	Recovery	Extract ID	Analysis Date
13C5-PFHxA	72	DB125LCS-FS(0)	11/18/2020
13C4-PFHpA	68	DB125LCS-FS(0)	11/18/2020
13C8-PFOA	74	DB125LCS-FS(0)	11/18/2020
13C9-PFNA	75	DB125LCS-FS(0)	11/18/2020
13C6-PFDA	79	DB125LCS-FS(0)	11/18/2020
13C7-PFUnA	77	DB125LCS-FS(0)	11/18/2020
13C2-PFDoA	83	DB125LCS-FS(0)	11/18/2020
13C2-PFTeDA	74	DB125LCS-FS(0)	11/18/2020
d3-MeFOSAA	80	DB125LCS-FS(0)	11/18/2020
d5-EtFOSAA	68	DB125LCS-FS(0)	11/18/2020
13C3-PFBS	90	DB125LCS-FS(0)	11/18/2020
13C3-PFHxS	81	DB125LCS-FS(0)	11/18/2020
13C8-PFOS	87	DB125LCS-FS(0)	11/18/2020
13C3-HFPO-DA	74	DB125LCS-FS(0)	11/18/2020



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 20-1375

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-20-1245
Analytical SOP:	5-369
Method Reference:	PFAS to QSM 5.3 Table B-15

Sample Custody		
Collection Date	Receipt Date	Temp (°C)
10/27 – 28/2020	10/29/2020	1.5

Corrective Actions	None.
Sample Storage	The samples were stored refrigerated until extraction.
Related samples	Samples G2203-FS (CBD-AOA-MW06-1020), G2205-FS (CBD-AOA-MW12-1020), G2206-FS (CBD-AOA-MW11-1020), G2207-FS (CBD-AOA-MW11P-1020), G2209-FS (CBD-AOA-EB01-102820-GW), and G2210-FS (CBD-AOA-MW14-1020) re-extracted in SDG 20-1519 to verify select 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 DB124PB-FS (Procedural Blank), DB125LCS-FS (Laboratory Control Sample), G2203-FS (CBD-AOA-MW06-1020), and G2212-FS (CBD-AOA-MW13-1020) 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>Samples G2211-FS (CBD-AOA-MW13-1020) and G2212-FS (CBD-AOA-IW01-102820) clogged the top filter of the SPE. A new SPE cartridge was conditioned and the remaining sample was moved to the new column. Both SPE were dried and eluted per the SOP. The extracts were combined after cleanup, prior to further processing.</p>

**QA/QC Summary
Batch 20-1375**

Analysis	PFAS were measured by liquid chromatography tandem mass spectrometry (LC-MS/MS) in the multiple reaction monitoring (MRM). An initial calibration consisting of representative target analytes, labelled analogs, and internal standards was analyzed prior to analysis to demonstrate the linear range of analysis. Calibration verification was performed at the beginning and end of 10 injections and at the end of each sequence. Target PFAS were quantified using the isotope dilution method. Samples are reported in ng/L concentrations to three (3) significant figures.
Analysis Comments	<p>Samples analyzed on Sciex 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>

Holding Times	Extraction Date(s)	Analysis Date(s)
	11/4/2020	11/17 – 19/2020

Procedural Blank (PB)	A PB was prepared with this analytical batch to ensure the sample extraction and analysis methods are free of contamination.
$\leq \frac{1}{2}$ 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 20-1375

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>Sixteen (16) exceedances noted.</p> <p>Six 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>13C7-PFUaA</th> <th>13C2-PFDoA</th> <th>13C2-PFTeDA</th> <th>d3-MeFOSAA</th> <th>d5-EtFOSAA</th> <th>13C3-HFPO-DA</th> </tr> </thead> <tbody> <tr> <td>G2203-FS (CBD-AOA-MW06-1020)</td> <td></td> <td></td> <td></td> <td></td> <td>↓</td> <td></td> <td></td> <td></td> </tr> <tr> <td>G2205-FS (CBD-AOA-MW12-1020)</td> <td>↓</td> <td>↓</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>G2206-FS (CBD-AOA-MW11-1020)</td> <td>↓</td> <td>↓</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>↓</td> </tr> <tr> <td>G2207-FS (CBD-AOA-MW11P-1020)</td> <td>↓</td> <td>↓</td> <td></td> <td></td> <td></td> <td></td> <td>P</td> <td>↓</td> </tr> <tr> <td>G2209-FS (CBD-AOA-EB01-102820-GW)</td> <td></td> <td></td> <td>↓</td> <td>↓</td> <td>↓</td> <td>↓</td> <td>↓</td> <td></td> </tr> <tr> <td>G2210-FS (CBD-AOA-MW14-1020)</td> <td>↓</td> <td></td> <td></td> <td></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 analysis not reported is included in the unused data section of the full data package.</p>		13C5-PFHxA	13C4-PFHpA	13C7-PFUaA	13C2-PFDoA	13C2-PFTeDA	d3-MeFOSAA	d5-EtFOSAA	13C3-HFPO-DA	G2203-FS (CBD-AOA-MW06-1020)					↓				G2205-FS (CBD-AOA-MW12-1020)	↓	↓							G2206-FS (CBD-AOA-MW11-1020)	↓	↓						↓	G2207-FS (CBD-AOA-MW11P-1020)	↓	↓					P	↓	G2209-FS (CBD-AOA-EB01-102820-GW)			↓	↓	↓	↓	↓		G2210-FS (CBD-AOA-MW14-1020)	↓							
	13C5-PFHxA	13C4-PFHpA	13C7-PFUaA	13C2-PFDoA	13C2-PFTeDA	d3-MeFOSAA	d5-EtFOSAA	13C3-HFPO-DA																																																								
G2203-FS (CBD-AOA-MW06-1020)					↓																																																											
G2205-FS (CBD-AOA-MW12-1020)	↓	↓																																																														
G2206-FS (CBD-AOA-MW11-1020)	↓	↓						↓																																																								
G2207-FS (CBD-AOA-MW11P-1020)	↓	↓					P	↓																																																								
G2209-FS (CBD-AOA-EB01-102820-GW)			↓	↓	↓	↓	↓																																																									
G2210-FS (CBD-AOA-MW14-1020)	↓																																																															
Internal Standard Analytes	Labelled analog compounds were added prior to analysis.																																																															
+/- 50% of the area of the L3 calibration point.	<p>One (1) exceedance noted.</p> <p>There is one confirmed exceedance for 13C2-PFDA in the undiluted extract G2212-FS (CBD-AOA-IW01-102820), the quant report for the confirmation analysis is included in the unused data section of the full data package.</p> <p>There are two instances of 13C2-PFOA and/or 13C4-PFOS in undiluted or low-level diluted extracts outside of criteria. In all cases the associated results were reported from higher level dilutions that pass IS area criteria and there was no impact on the reported data.</p> <p>There are three sample extracts reanalyzed due to exceedances, the reanalysis passed and were reported, the quant reports for the initial analysis are included in the unused data section of the full data package.</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>																																																															

QA/QC Summary
Batch 20-1375

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	No exceedances noted.
	No comments.
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	No exceedances noted.
	No comments.
Instrument Blank (IB)	Immediately following the highest standard analyzed and daily prior to sample analysis.
$\leq \frac{1}{2}$ 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: 20-1375
 Data Set: DP-20-1245
 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)	16	There are sixteen extracted internal standards that do not meet passing criteria and was confirmed from a prior run or from analysis from a fresh aliquot. DMS 11/20/2020
Instrument Calibration	0	None
Instrument Blank	0	None
Independent Calibration Check	0	None
Continuing Calibration Verification	0	None



It can be done

BATTELLE - NORWELL OPERATIONS MISCELLANEOUS DOCUMENTATION FORM

Project Title: CTO-4532: NRL Chesapeake Bay Detac **Data Set Number:** DP-20-1245
Project Number: 100142218 **Prep Batch Number:** 20-1375
Entered By: Denise Schumitz **Entered On:** 11/20/2020
Test Code (Matrix Type): Master_369B(L)

Samples that were manually integrated are noted on the quant reports with the comment (TRUE).
DMS 11/20/2020

ADONA, 9CI-PF3ONS and 11CI-PF3OUdS are being quantified off 13C8-PFOA instead of 13C3-HFPO-DA.
DMS 11/20/2020

13C9-PFNA is quantified from 13C4-PFOS and not 13C2-PFOA.
DMS 11/20/2020

Task Leader Approval:

SupervisorApproval:

PM Approval:

Digitally signed by Jonathan Thorn
Date: 2020.11.23 10:31:33 -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: G2212-FS-D(9)
 Client Sample ID: CBD-AOA-IW01-102820
 Sample Size: 0.28
 Units: L
 Dilution Factor: 312.500
 PIV (L): 0.001
 Target Analyte: PFOS
 MRM Transition: 499.0 / 80.0
 Data file: AE_11172020_5-369.wiff
 Result table: 20-1375
 Area: 14,885,668.24
 IS Name: 13C8-PFOS
 IS Area: 315,800.39
 IS Amount (ng/L): 1195
 y-intercept: 0.02689
 slope: 4.03886

$$\text{Concentration} = \frac{[(14885668.24/315800.39) - 0.02689]}{4.03886} * 1195 * 0.001 * 312.5 / 0.28$$

$$\text{ng/L} = 15,556.39$$

*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: 20-1375
 Data Set: DP-20-1245

		DB124PB-FS (Procedural Blank)	DB125LCS-FS (Laboratory Control Sample)	G2203-FS (CBD-AOA-MW06-1020)	G2204-FS (CBD-AOA-EB01-102720-GW)	G2205-FS (CBD-AOA-MW12-1020)	G2206-FS (CBD-AOA-MW11-1020)	G2207-FS (CBD-AOA-MW11P-1020)	G2208-FS (CBD-AOA-FB01-102820)	G2209-FS (CBD-AOA-EB01-102820-GW)	G2210-FS (CBD-AOA-MW14-1020)	G2211-FS (CBD-AOA-MW13-1020)	G2212-FS (CBD-AOA-IW01-102820)
PFHxA	307-24-4	L	L	L	-	-	-	-	-	L	L	L	L
PFHpA	375-85-9	-	L	L	-	-	-	-	-	-	L	L	L
PFOA	335-67-1	-	L	L	-	L	L	L	-	-	L	L	L
PFNA	375-95-1	-	L	L	-	-	-	-	-	-	L	L	L
PFDA	335-76-2	-	L	-	-	-	-	-	-	-	-	L	L
PFUnA	2058-94-8	-	L	-	-	-	-	-	-	-	-	L	L
PFDoA	307-55-1	-	L	-	-	-	-	-	-	-	-	-	L
PFTrDA	72629-94-8	-	L	-	-	-	-	-	-	L	-	-	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
PFHxS	355-46-4	-	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
HFPO-DA	13252-13-6	-	L	-	-	-	-	-	-	-	-	-	-
Adona	919005-14-4	-	L	-	-	-	-	-	-	-	-	-	-
9Cl-PF3ONS	756426-58-1	-	L	-	-	-	-	-	-	-	-	-	-
11Cl-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
LE54	L3	11/17/20 20:25	-	853,676.36	1,223,007.83	256,795.79
		Lower	-	426,838.18	611,503.92	128,397.90
		Upper	-	1,280,514.54	1,834,511.75	385,193.69

Sample Name	Sample ID	Analysis Date	13C3-PFBA	Qual	User	13C2-PFOA	Qual	User	13C2-PFDA	Qual	User	13C4-PFOS	Qual	User
LE52	L1	11/17/20 20:04	-			817,919.75			1,281,768.27			259,430.52		
LE53	L2	11/17/20 20:14	-			821,458.12			1,241,000.05			263,835.28		
LE54	L3	11/17/20 20:25	-			853,676.36			1,223,007.83			256,795.79		
LE55	L4	11/17/20 20:35	-			805,997.69			1,179,570.54			244,959.00		
LE56	L5	11/17/20 20:46	-			798,470.90			1,036,127.31			232,492.36		
LE57	L6	11/17/20 20:56	-			715,529.21			969,514.10			227,239.73		
LE58 IB	Instrument Blank	11/17/20 21:06	-			745,155.12			1,156,951.01			226,762.03		
LE59 ICC	ICC	11/17/20 21:17	-			783,309.06			1,121,497.90			230,569.29		
LE54 CCV	CCV	11/18/20 18:54	-			887,479.34			1,350,710.40			280,595.55		
LE58 IB	Instrument Blank	11/18/20 19:15	-			794,310.18			1,237,187.67			279,485.48		
LE55 CCV	CCV	11/18/20 21:10	-			865,516.67			1,386,781.69			292,083.38		
DB124PB-FS(0)	Procedural Blank	11/18/20 21:31	-			1,209,127.36			1,739,935.48			352,772.50		
DB125LCS-FS(0)	Laboratory Control Sample	11/18/20 21:41	-			1,268,695.20			1,542,943.41			373,950.61		
G2203-FS(0)	CBD- AOA-MW06-1020	11/18/20 21:52	-			1,117,183.29			1,571,754.98			319,704.57		1
G2204-FS(0)	CBD- AOA-EB01-102720-GW	11/18/20 22:02	-			1,627,725.49	N		1,912,913.69	N		395,868.30	N	1
G2205-FS(0)	CBD- AOA-MW12-1020	11/18/20 22:13	-			937,351.70			1,444,913.00			280,428.33		1
G2206-FS(0)	CBD- AOA-MW11-1020	11/18/20 22:23	-			786,636.81			1,424,041.92			243,527.76		1
G2207-FS(0)	CBD- AOA-MW11P-1020	11/18/20 22:34	-			809,753.49			1,286,036.45			221,423.59		1
G2208-FS(0)	CBD- AOA-FB01-102820	11/18/20 22:44	-			1,597,494.54	N		2,212,252.18	N		405,529.47	N	1
LE54 CCV	CCV	11/18/20 23:05	-			1,074,372.98			1,405,114.40			336,946.50		
G2209-FS(0)	CBD- AOA-EB01-102820-GW	11/18/20 23:15	-			984,463.79			1,021,867.04			285,511.77		
G2210-FS(0)	CBD- AOA-MW14-1020	11/18/20 23:26	-			890,163.48			1,638,687.18			294,133.07		1
G2211-FS(0)	CBD- AOA-MW13-1020	11/18/20 23:36	-			1,156,369.92			1,759,652.11			352,247.14		1
G2212-FS(0)	CBD- AOA-IW01-102820	11/18/20 23:47	-			305,698.69	N		241,722.75	N		21,354.69	N	1
LE55 CCV	CCV	11/19/20 0:08	-			997,125.62			1,435,636.09			329,185.46		
LE55 CCV	CCV	11/19/20 16:18	-			1,058,178.29			1,406,172.05			260,982.87		
LE58 IB	Instrument Blank	11/19/20 16:39	-			940,852.94			1,359,823.34			275,685.30		
G2203-FS(0)	CBD- AOA-MW06-1020	11/19/20 19:17	-			886,857.26			1,159,753.22			225,233.29		
G2204-FS(0)	CBD- AOA-EB01-102720-GW	11/19/20 19:27	-			1,237,488.49			1,519,984.60			305,256.86		
G2205-FS(0)	CBD- AOA-MW12-1020	11/19/20 19:38	-			790,041.64			1,258,019.57			220,273.25		
G2206-FS(0)	CBD- AOA-MW11-1020	11/19/20 19:48	-			735,233.46			1,284,259.45			197,277.12		
G2207-FS(0)	CBD- AOA-MW11P-1020	11/19/20 19:59	-			781,044.29			1,325,188.35			199,363.09		
G2208-FS(0)	CBD- AOA-FB01-102820	11/19/20 20:09	-			1,236,272.24			1,698,351.02			334,135.25		
G2209-FS(0)	CBD- AOA-EB01-102820-GW	11/19/20 20:20	-			996,226.51			976,471.25			258,638.93		3
LE55 CCV	CCV	11/19/20 20:41	-			1,125,873.74			1,426,792.64			293,053.91		
G2210-FS(0)	CBD- AOA-MW14-1020	11/19/20 20:51	-			821,345.91			1,342,119.81			239,090.52		
G2211-FS(0)	CBD- AOA-MW13-1020	11/19/20 21:02	-			882,841.28			1,484,042.57			269,905.25		
G2212-FS(0)	CBD- AOA-IW01-102820	11/19/20 21:12	-			399,012.31	N	2	311,211.83	N	4	33,169.49	N	2
G2212-FS-D(5)	CBD- AOA-IW01-102820	11/19/20 21:33	-			1,064,966.83			1,207,549.98			170,612.43		
G2212-FS-D(7)	CBD- AOA-IW01-102820	11/19/20 21:43	-			1,125,171.48			1,405,728.15			268,708.35		
G2212-FS-D(9)	CBD- AOA-IW01-102820	11/19/20 21:54	-			1,171,748.14			1,471,168.81			309,310.16		
LE54 CCV	CCV	11/19/20 22:15	-			1,045,589.73			1,413,094.73			292,729.44		

1. Sample did not meet all passing criteria. A fresh aliquot was taken, run and is being reported. DMS 11/20/2020
2. IS area outside of criteria, likely due to contribution from the native, extracted internal standards and natives reported from higher dilution. DMS 11/20/2020
3. Sample run for confirmation only and not being reported. DMS 11/20/2020
4. IS area outside of criteria and confirmed from previous run. DMS 11/20/2020

Sample Name	LE56	Injection Vial	16
Sample ID	L5	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:46:05 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Asymmetry Factor	Passing Range
PFBS_1	298.9 / 80.0	1.36	1.21	0.8 – 1.5
PFHxA_1	313.0 / 269.0	1.62	1.20	0.8 – 1.5

Sample Name	LE57	Injection Vial	17
Sample ID	L6	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:56:32 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
PFBS 1	298.9 / 80.0	1.37	58	>10
PFBS 2	298.9 / 99.0	1.37	50	>10
PFHxA 1	313.0 / 269.0	1.62	59	>10
PFHxA 2	313.0 / 119.0	1.62	39	>10
PFHpA 1	363.0 / 319.0	1.96	49	>10
PFHpA 2	363.0 / 169.0	1.96	36	>10
PFHxS 1	399.0 / 80.0	1.97	47	>10
PFHxS 2	399.0 / 99.0	1.97	48	>10
PFOA 1	413.0 / 369.0	2.32	49	>10
PFOA 2	413.0 / 169.0	2.32	23	>10
PFNA 1	463.0 / 419.0	2.69	43	>10
PFNA 2	463.0 / 219.0	2.69	53	>10
PFOS 1	499.0 / 80.0	2.68	49	>10
PFOS 2	499.0 / 99.0	2.68	59	>10
PFDA 1	513.0 / 469.0	3.03	51	>10
PFDA 2	513.0 / 219.0	3.03	51	>10
PFUnA 1	563.0 / 519.0	3.35	64	>10
PFUnA 2	563.0 / 269.0	3.35	53	>10
PFDoA 1	613.0 / 569.0	3.64	61	>10
PFDoA 2	613.0 / 319.0	3.63	66	>10
PFTTrDA 1	663.0 / 619.0	3.88	90	>10
PFTTrDA 2	663.0 / 169.0	3.88	75	>10
PFTeDA 1	713.0 / 669.0	4.11	88	>10
PFTeDA 2	713.0 / 169.0	4.11	79	>10
NMeFOSAA 1	570.0 / 419.0	3.17	58	>10
NMeFOSAA 2	570.0 / 512.0	3.17	69	>10
NEtFOSAA 1	584.0 / 419.0	3.34	70	>10
NEtFOSAA 2	584.0 / 483.0	3.34	65	>10
HFPO-DA 1	285.0 / 169.0	1.72	52	>10
HFPO-DA 2	285.0 / 118.8	1.72	36	>10
ADONA 1	377.0 / 251.0	2.00	50	>10
ADONA 2	377.0 / 85.0	2.00	54	>10
9Cl-PF3ONS 1	531.0 / 351.0	2.88	55	>10
9Cl-PF3ONS 2	531.0 / 83.0	2.88	48	>10
11Cl-pf3OUdS 1	631.0 / 451.0	3.49	68	>10
11Cl-pf3OUdS 2	631.0 / 83.0	3.49	35	>10

Sample Name	LE57	Injection Vial	17
Sample ID	L6	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:56:32 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
13C2-PFDoA	615.0 / 570.0	3.63	52	>10
d3-MeFOSAA	573.0 / 419.0	3.17	35	>10
d5-EtFOSAA	589.0 / 419.0	3.33	46	>10
13C5-PFHxA	318.0 / 273.0	1.61	34	>10
13C4-PFHpA	367.0 / 322.0	1.95	30	>10
13C8-PFOA	421.0 / 376.0	2.31	50	>10
13C9-PFNA	472.0 / 427.0	2.68	41	>10
13C6-PFDA	519.0 / 474.0	3.03	42	>10
13C7-PFUnA	570.0 / 525.0	3.35	47	>10
13C2-PFTeDA	715.0 / 670.0	4.11	57	>10
13C3-PFBS	302.0 / 99.0	1.35	41	>10
13C3-PFHxS	402.0 / 99.0	1.96	28	>10
13C8-PFOS	507.0 / 99.0	2.67	31	>10
13C3-HFPO-DA	287.0 / 169.0	1.71	11	>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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Triple Quad 6500+

LC/MS/MS Detector System

Appendix ZEFPM003-1S

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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Triple Quad 6500+

LC/MS/MS Detector System

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		$\geq 3.2 \text{ } ^e7$		0.6 to 0.8
Q1 616.464		$\geq 2.0 \text{ } ^e7$		0.6 to 0.8
Q1 906.673		$\geq 9.6 \text{ } ^e7$		0.6 to 0.8
Q1 1952.427		$\geq 2.4 \text{ } ^e6$		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		$\geq 3.2 \text{ } ^e7$		0.6 to 0.8
Q3 616.464		$\geq 2.0 \text{ } ^e7$		0.6 to 0.8
Q3 906.673		$\geq 9.6 \text{ } ^e7$		0.6 to 0.8
Q3 1952.427		$\geq 2.4 \text{ } ^e6$		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		$\geq 1.8 \text{ } ^e7$		0.6 to 0.8
Q1 1863.306		$\geq 1.0 \text{ } ^e6$		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		$\geq 1.8 \text{ } ^e7$		0.6 to 0.8
Q3 1863.306		$\geq 1.0 \text{ } ^e6$		0.6 to 0.8

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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

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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)
LE52	PFAS - DoD Calibration L1	LD73	LB74	-	200721-07
LE52	PFAS - DoD Calibration L1	LD73	LB74	-	200721-08
LE52	PFAS - DoD Calibration L1	LD73	LB74	-	200721-09
LE52	PFAS - DoD Calibration L1	LD73	LB74	-	200721-10
LE52	PFAS - DoD Calibration L1	LD73	LB74	-	200721-11
LE52	PFAS - DoD Calibration L1	LD73	LB74	-	200721-12
LE52	PFAS - DoD Calibration L1	LD73	LB74	-	200721-13
LE52	PFAS - DoD Calibration L1	LD73	LB74	-	200721-14
LE52	PFAS - DoD Calibration L1	LD73	LB74	-	200721-15
LE52	PFAS - DoD Calibration L1	LD73	LB74	-	200721-16
LE52	PFAS - DoD Calibration L1	LD73	LB74	-	200721-17
LE52	PFAS - DoD Calibration L1	LD73	LB74	-	200721-18
LE52	PFAS - DoD Calibration L1	LD73	LB74	-	200721-19
LE52	PFAS - DoD Calibration L1	LD73	LB74	-	200721-20
LE52	PFAS - DoD Calibration L1	LE51	LE50	LC24	200811-01
LE52	PFAS - DoD Calibration L1	LE51	LE50	LC24	200811-02
LE52	PFAS - DoD Calibration L1	LE51	LE50	LC24	200811-03
LE52	PFAS - DoD Calibration L1	LE51	LE50	-	200914-01
LE53	PFAS - DoD Calibration L2	LB78	LB75	-	200721-21
LE53	PFAS - DoD Calibration L2	LB78	LB75	-	200721-22
LE53	PFAS - DoD Calibration L2	LB78	LB75	-	200721-23
LE53	PFAS - DoD Calibration L2	LB78	LB75	-	200721-24
LE53	PFAS - DoD Calibration L2	LD73	LB74	-	200721-01
LE53	PFAS - DoD Calibration L2	LD73	LB74	-	200721-02
LE53	PFAS - DoD Calibration L2	LD73	LB74	-	200721-03
LE53	PFAS - DoD Calibration L2	LD73	LB74	-	200721-04
LE53	PFAS - DoD Calibration L2	LD73	LB74	-	200721-05
LE53	PFAS - DoD Calibration L2	LD73	LB74	-	200721-06
LE53	PFAS - DoD Calibration L2	LD73	LB74	-	200721-07
LE53	PFAS - DoD Calibration L2	LD73	LB74	-	200721-08
LE53	PFAS - DoD Calibration L2	LD73	LB74	-	200721-09
LE53	PFAS - DoD Calibration L2	LD73	LB74	-	200721-10
LE53	PFAS - DoD Calibration L2	LD73	LB74	-	200721-11
LE53	PFAS - DoD Calibration L2	LD73	LB74	-	200721-12
LE53	PFAS - DoD Calibration L2	LD73	LB74	-	200721-13
LE53	PFAS - DoD Calibration L2	LD73	LB74	-	200721-14
LE53	PFAS - DoD Calibration L2	LD73	LB74	-	200721-15
LE53	PFAS - DoD Calibration L2	LD73	LB74	-	200721-16
LE53	PFAS - DoD Calibration L2	LD73	LB74	-	200721-17
LE53	PFAS - DoD Calibration L2	LD73	LB74	-	200721-18
LE53	PFAS - DoD Calibration L2	LD73	LB74	-	200721-19
LE53	PFAS - DoD Calibration L2	LD73	LB74	-	200721-20
LE53	PFAS - DoD Calibration L2	LE51	LE50	LC24	200811-01
LE53	PFAS - DoD Calibration L2	LE51	LE50	LC24	200811-02
LE53	PFAS - DoD Calibration L2	LE51	LE50	LC24	200811-03
LE53	PFAS - DoD Calibration L2	LE51	LE50	-	200914-01
LE54	PFAS - DoD Calibration L3	LB78	LB75	-	200721-21
LE54	PFAS - DoD Calibration L3	LB78	LB75	-	200721-22
LE54	PFAS - DoD Calibration L3	LB78	LB75	-	200721-23
LE54	PFAS - DoD Calibration L3	LB78	LB75	-	200721-24
LE54	PFAS - DoD Calibration L3	LD73	LB74	-	200721-01
LE54	PFAS - DoD Calibration L3	LD73	LB74	-	200721-02
LE54	PFAS - DoD Calibration L3	LD73	LB74	-	200721-03
LE54	PFAS - DoD Calibration L3	LD73	LB74	-	200721-04
LE54	PFAS - DoD Calibration L3	LD73	LB74	-	200721-05
LE54	PFAS - DoD Calibration L3	LD73	LB74	-	200721-06
LE54	PFAS - DoD Calibration L3	LD73	LB74	-	200721-07
LE54	PFAS - DoD Calibration L3	LD73	LB74	-	200721-08

Battelle Standard ID	Description	Intermediate Solutions			Battelle Reagent ID (purchased solutions)
LE54	PFAS - DoD Calibration L3	LD73	LB74	-	200721-09
LE54	PFAS - DoD Calibration L3	LD73	LB74	-	200721-10
LE54	PFAS - DoD Calibration L3	LD73	LB74	-	200721-11
LE54	PFAS - DoD Calibration L3	LD73	LB74	-	200721-12
LE54	PFAS - DoD Calibration L3	LD73	LB74	-	200721-13
LE54	PFAS - DoD Calibration L3	LD73	LB74	-	200721-14
LE54	PFAS - DoD Calibration L3	LD73	LB74	-	200721-15
LE54	PFAS - DoD Calibration L3	LD73	LB74	-	200721-16
LE54	PFAS - DoD Calibration L3	LD73	LB74	-	200721-17
LE54	PFAS - DoD Calibration L3	LD73	LB74	-	200721-18
LE54	PFAS - DoD Calibration L3	LD73	LB74	-	200721-19
LE54	PFAS - DoD Calibration L3	LD73	LB74	-	200721-20
LE54	PFAS - DoD Calibration L3	LE50	LC24	-	200811-01
LE54	PFAS - DoD Calibration L3	LE50	LC24	-	200811-02
LE54	PFAS - DoD Calibration L3	LE50	LC24	-	200811-03
LE54	PFAS - DoD Calibration L3	LE50	-	-	200914-01
LE55	PFAS - DoD Calibration L4	LB78	LB75	-	200721-21
LE55	PFAS - DoD Calibration L4	LB78	LB75	-	200721-22
LE55	PFAS - DoD Calibration L4	LB78	LB75	-	200721-23
LE55	PFAS - DoD Calibration L4	LB78	LB75	-	200721-24
LE55	PFAS - DoD Calibration L4	LD73	LB74	-	200721-01
LE55	PFAS - DoD Calibration L4	LD73	LB74	-	200721-02
LE55	PFAS - DoD Calibration L4	LD73	LB74	-	200721-03
LE55	PFAS - DoD Calibration L4	LD73	LB74	-	200721-04
LE55	PFAS - DoD Calibration L4	LD73	LB74	-	200721-05
LE55	PFAS - DoD Calibration L4	LD73	LB74	-	200721-06
LE55	PFAS - DoD Calibration L4	LD73	LB74	-	200721-07
LE55	PFAS - DoD Calibration L4	LD73	LB74	-	200721-08
LE55	PFAS - DoD Calibration L4	LD73	LB74	-	200721-09
LE55	PFAS - DoD Calibration L4	LD73	LB74	-	200721-10
LE55	PFAS - DoD Calibration L4	LD73	LB74	-	200721-11
LE55	PFAS - DoD Calibration L4	LD73	LB74	-	200721-12
LE55	PFAS - DoD Calibration L4	LD73	LB74	-	200721-13
LE55	PFAS - DoD Calibration L4	LD73	LB74	-	200721-14
LE55	PFAS - DoD Calibration L4	LD73	LB74	-	200721-15
LE55	PFAS - DoD Calibration L4	LD73	LB74	-	200721-16
LE55	PFAS - DoD Calibration L4	LD73	LB74	-	200721-17
LE55	PFAS - DoD Calibration L4	LD73	LB74	-	200721-18
LE55	PFAS - DoD Calibration L4	LD73	LB74	-	200721-19
LE55	PFAS - DoD Calibration L4	LD73	LB74	-	200721-20
LE55	PFAS - DoD Calibration L4	LE50	LC24	-	200811-01
LE55	PFAS - DoD Calibration L4	LE50	LC24	-	200811-02
LE55	PFAS - DoD Calibration L4	LE50	LC24	-	200811-03
LE55	PFAS - DoD Calibration L4	LE50	-	-	200914-01
LE56	PFAS - DoD Calibration L5	LB78	LB75	-	200721-21
LE56	PFAS - DoD Calibration L5	LB78	LB75	-	200721-22
LE56	PFAS - DoD Calibration L5	LB78	LB75	-	200721-23
LE56	PFAS - DoD Calibration L5	LB78	LB75	-	200721-24
LE56	PFAS - DoD Calibration L5	LD73	LB74	-	200721-01
LE56	PFAS - DoD Calibration L5	LD73	LB74	-	200721-02
LE56	PFAS - DoD Calibration L5	LD73	LB74	-	200721-03
LE56	PFAS - DoD Calibration L5	LD73	LB74	-	200721-04
LE56	PFAS - DoD Calibration L5	LD73	LB74	-	200721-05
LE56	PFAS - DoD Calibration L5	LD73	LB74	-	200721-06
LE56	PFAS - DoD Calibration L5	LD73	LB74	-	200721-07
LE56	PFAS - DoD Calibration L5	LD73	LB74	-	200721-08
LE56	PFAS - DoD Calibration L5	LD73	LB74	-	200721-09
LE56	PFAS - DoD Calibration L5	LD73	LB74	-	200721-10

Battelle Standard ID	Description	Intermediate Solutions			Battelle Reagent ID (purchased solutions)
LE56	PFAS - DoD Calibration L5	LD73	LB74	-	200721-11
LE56	PFAS - DoD Calibration L5	LD73	LB74	-	200721-12
LE56	PFAS - DoD Calibration L5	LD73	LB74	-	200721-13
LE56	PFAS - DoD Calibration L5	LD73	LB74	-	200721-14
LE56	PFAS - DoD Calibration L5	LD73	LB74	-	200721-15
LE56	PFAS - DoD Calibration L5	LD73	LB74	-	200721-16
LE56	PFAS - DoD Calibration L5	LD73	LB74	-	200721-17
LE56	PFAS - DoD Calibration L5	LD73	LB74	-	200721-18
LE56	PFAS - DoD Calibration L5	LD73	LB74	-	200721-19
LE56	PFAS - DoD Calibration L5	LD73	LB74	-	200721-20
LE56	PFAS - DoD Calibration L5	LE50	LC24	-	200811-01
LE56	PFAS - DoD Calibration L5	LE50	LC24	-	200811-02
LE56	PFAS - DoD Calibration L5	LE50	LC24	-	200811-03
LE56	PFAS - DoD Calibration L5	LE50	-	-	200914-01
LE57	PFAS - DoD Calibration L6	LB78	LB75	-	200721-21
LE57	PFAS - DoD Calibration L6	LB78	LB75	-	200721-22
LE57	PFAS - DoD Calibration L6	LB78	LB75	-	200721-23
LE57	PFAS - DoD Calibration L6	LB78	LB75	-	200721-24
LE57	PFAS - DoD Calibration L6	LD73	LB74	-	200721-01
LE57	PFAS - DoD Calibration L6	LD73	LB74	-	200721-02
LE57	PFAS - DoD Calibration L6	LD73	LB74	-	200721-03
LE57	PFAS - DoD Calibration L6	LD73	LB74	-	200721-04
LE57	PFAS - DoD Calibration L6	LD73	LB74	-	200721-05
LE57	PFAS - DoD Calibration L6	LD73	LB74	-	200721-06
LE57	PFAS - DoD Calibration L6	LD73	LB74	-	200721-07
LE57	PFAS - DoD Calibration L6	LD73	LB74	-	200721-08
LE57	PFAS - DoD Calibration L6	LD73	LB74	-	200721-09
LE57	PFAS - DoD Calibration L6	LD73	LB74	-	200721-10
LE57	PFAS - DoD Calibration L6	LD73	LB74	-	200721-11
LE57	PFAS - DoD Calibration L6	LD73	LB74	-	200721-12
LE57	PFAS - DoD Calibration L6	LD73	LB74	-	200721-13
LE57	PFAS - DoD Calibration L6	LD73	LB74	-	200721-14
LE57	PFAS - DoD Calibration L6	LD73	LB74	-	200721-15
LE57	PFAS - DoD Calibration L6	LD73	LB74	-	200721-16
LE57	PFAS - DoD Calibration L6	LD73	LB74	-	200721-17
LE57	PFAS - DoD Calibration L6	LD73	LB74	-	200721-18
LE57	PFAS - DoD Calibration L6	LD73	LB74	-	200721-19
LE57	PFAS - DoD Calibration L6	LD73	LB74	-	200721-20
LE57	PFAS - DoD Calibration L6	LE50	LC24	-	200811-01
LE57	PFAS - DoD Calibration L6	LE50	LC24	-	200811-02
LE57	PFAS - DoD Calibration L6	LE50	LC24	-	200811-03
LE57	PFAS - DoD Calibration L6	LE50	-	-	200914-01
LE59	PFAS - DoD ICC	LB78	LB75	-	200721-21
LE59	PFAS - DoD ICC	LB78	LB75	-	200721-22
LE59	PFAS - DoD ICC	LB78	LB75	-	200721-23
LE59	PFAS - DoD ICC	LB78	LB75	-	200721-24
LE59	PFAS - DoD ICC	LD73	LB74	-	200721-01
LE59	PFAS - DoD ICC	LD73	LB74	-	200721-02
LE59	PFAS - DoD ICC	LD73	LB74	-	200721-03
LE59	PFAS - DoD ICC	LD73	LB74	-	200721-04
LE59	PFAS - DoD ICC	LD73	LB74	-	200721-05
LE59	PFAS - DoD ICC	LD73	LB74	-	200721-06
LE59	PFAS - DoD ICC	LD73	LB74	-	200721-07
LE59	PFAS - DoD ICC	LD73	LB74	-	200721-08
LE59	PFAS - DoD ICC	LD73	LB74	-	200721-09
LE59	PFAS - DoD ICC	LD73	LB74	-	200721-10
LE59	PFAS - DoD ICC	LD73	LB74	-	200721-11
LE59	PFAS - DoD ICC	LD73	LB74	-	200721-12

Battelle Standard ID	Description	Intermediate Solutions			Battelle Reagent ID (purchased solutions)
LE59	PFAS - DoD ICC	LD73	LB74	-	200721-13
LE59	PFAS - DoD ICC	LD73	LB74	-	200721-14
LE59	PFAS - DoD ICC	LD73	LB74	-	200721-15
LE59	PFAS - DoD ICC	LD73	LB74	-	200721-16
LE59	PFAS - DoD ICC	LD73	LB74	-	200721-17
LE59	PFAS - DoD ICC	LD73	LB74	-	200721-18
LE59	PFAS - DoD ICC	LD73	LB74	-	200721-19
LE59	PFAS - DoD ICC	LD73	LB74	-	200721-20
LE59	PFAS - DoD ICC	LE49	LC24	-	200811-01
LE59	PFAS - DoD ICC	LE49	LC24	-	200811-02
LE59	PFAS - DoD ICC	LE49	LC24	-	200811-03
LE59	PFAS - DoD ICC	LE49	-	-	200909-01
LE59	PFAS - DoD ICC	LE49	-	-	201006-07



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: LD44

Description: PFAS - DoD Low Level Labelled Extracted Internal Standard

Stock Id: LB74

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

Final Concentrations:

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

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

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

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

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



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD44

Description: PFAS - DoD Low Level Labelled Extracted Internal Standard

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

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB74	Pipette	B820865811

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

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

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

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



It can be done

Standard Solution Concentrations Approved:

Standard Laboratory ID Number: LD73

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

Stock Id: LB74	Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
	13C2-4:2FTS	5000	0.93	---	---	1	50	0.09340
	13C2-6:2FTS	5000	0.95	---	---	1	50	0.09500
	13C2-8:2FTS	5000	0.96	---	---	1	50	0.09580
	13C2-PFDoA	5000	1.00	---	---	1	50	0.10000
	13C2-PFTeDA	5000	1.00	---	---	1	50	0.10000
	13C3-HFPO-DA	5000	1.00	---	---	1	50	0.10000
	13C3-PFBS	5000	0.93	---	---	1	50	0.09300
	13C3-PFHxS	5000	0.95	---	---	1	50	0.09460
	13C4-PFBA	5000	1.00	---	---	1	50	0.10000
	13C4-PFHpA	5000	1.00	---	---	1	50	0.10000
	13C5-PFHxA	5000	1.00	---	---	1	50	0.10000
	13C5-PFPeA	5000	1.00	---	---	1	50	0.10000
	13C6-PFDA	5000	1.00	---	---	1	50	0.10000
	13C7-PFUnA	5000	1.00	---	---	1	50	0.10000
	13C8-FOSA	5000	1.00	---	---	1	50	0.10000
	13C8-PFOA	5000	0.98	---	---	1	50	0.09780
	13C8-PFOS	5000	0.96	---	---	1	50	0.09560
	13C9-PFNA	5000	1.00	---	---	1	50	0.10000
	d3-MeFOSAA	5000	1.00	---	---	1	50	0.10000
	d5-EtFOSAA	5000	1.00	---	---	1	50	0.10000

Final Concentrations:

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

Solution Prepared By: Bailey, Kevin	Date Prepared: 10/22/2020	Expiration Date: 7/21/2021
Solution Volume : 40 mL X 5 Vials Refrigerator/Freezer No: VOC Laboratory: Refrigerator - R0121		

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

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



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LD73

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

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

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB74	Pipette	B820865811

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

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

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

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



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE23

Description: PFAS - DoD Second Source LCS/MS Solution

Stock Id: 201006-07

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:** 10/29/2020 **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-201029-1)

Approved By: Schumitz, Denise **Date:** 10/29/2020 1:33:00 PM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE23

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:
201006-07	Pipette	B820865811
LC24	Pipette	B820865811

Solution Prepared By: Bailey, Kevin **Date Prepared:** 10/29/2020 **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-201029-1)

Approved By: Schumitz, Denise **Date:** 10/29/2020 1:33:00 PM



It can be done

Standard Solution Concentrations

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

Description: PFAS - DoD Low Level Labelled Extracted Internal Standard

Stock Id: **LB74**

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

Final Concentrations:

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

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

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

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

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



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE39

Description: PFAS - DoD Low Level Labelled Extracted Internal Standard

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

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB74	Pipette	B820865811

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

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

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

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



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE40

Description: PFAS - DoD Internal Standard Spiking Solution

Stock Id: LB75

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

Final Concentrations:

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

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB75	Pipette	B820865811

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

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

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

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



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE49

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	0	1.00	1	100.000	1	10	0.00000
1H,1H,2H,2H-Perfluorodecane sulfonate	0	1.01	1	100.000	1	10	0.00000
1H,1H,2H,2H-Perfluorohexane sulfonate	0	1.00	1	100.000	1	10	0.00000
1H,1H,2H,2H-Perfluorooctane sulfonate	0	1.00	1	100.000	1	10	0.00000
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic aci	0	1.00	1	100.000	1	10	0.00000
Adona	0	1.00	1	100.000	1	10	0.00000
Hexafluoropropylene oxide dimer acid	0	1.00	1	100.000	1	10	0.00000
N-ethylperfluoro-octanesulfonamidoacetic acid	0	1.00	1	100.000	1	10	0.00000
N-methylperfluoro-1-octanesulfonamidoacetic acid	0	1.00	1	100.000	1	10	0.00000
Perfluoro-1-butanefluoride	0	1.00	1	100.000	1	10	0.00000
Perfluoro-1-decanesulfonate	0	1.01	1	100.000	1	10	0.00000
Perfluoro-1-heptanesulfonate	0	1.00	1	100.000	1	10	0.00000
Perfluoro-1-hexanesulfonate	0	1.01	1	100.000	1	10	0.00000
Perfluoro-1-nonanesulfonate	0	1.01	1	100.000	1	10	0.00000
Perfluoro-1-octanesulfonamide	0	1.00	1	100.000	1	10	0.00000
Perfluoro-1-octanesulfonate	0	1.01	1	100.000	1	10	0.00000
perfluoro-1-pentanesulfonate	0	1.00	1	100.000	1	10	0.00000
Perfluoro-n-butanoic Acid	0	1.00	1	100.000	1	10	0.00000
Perfluoro-n-decanoic Acid	0	1.00	1	100.000	1	10	0.00000
Perfluoro-n-dodecanoic acid	0	1.00	1	100.000	1	10	0.00000
Perfluoro-n-heptanoic Acid	0	1.00	1	100.000	1	10	0.00000
Perfluoro-n-hexanoic acid	0	1.01	1	100.000	1	10	0.00000
Perfluoro-n-octanoic Acid	0	1.00	1	100.000	1	10	0.00000
Perfluorononanoic Acid	0	1.00	1	100.000	1	10	0.00000
Perfluoro-n-pentanoic acid	0	1.01	1	100.000	1	10	0.00000
Perfluoro-n-tetradecanoic acid	0	1.00	1	100.000	1	10	0.00000
Perfluoro-n-tridecanoic acid	0	1.00	1	100.000	1	10	0.00000
Perfluoro-n-undecanoic acid	0	1.00	1	100.000	1	10	0.00000

Stock Id: 201006-07

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	1000	1.00	1	100.000	1	10	0.10000
1H,1H,2H,2H-Perfluorodecane sulfonate	1000	1.01	1	100.000	1	10	0.10100
1H,1H,2H,2H-Perfluorohexane sulfonate	1000	1.00	1	100.000	1	10	0.10000
1H,1H,2H,2H-Perfluorooctane sulfonate	1000	1.00	1	100.000	1	10	0.10000

Solution Prepared By: Bailey, Kevin **Date Prepared:** 11/10/2020 **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-201110-)

Approved By: Schumitz, Denise **Date:** 11/11/2020 1:05:00 PM



It can be done

Standard Solution Concentrations

Approved: Standard Laboratory ID Number: **LE49**

Description: PFAS - DoD Second Source LCS/MS Solution

9-chlorohexadecafluoro-3-oxanonane-1-sulfonic aci	1000	1.00	1	100.000	1	10	0.10000
Adona	1000	1.00	1	100.000	1	10	0.10000
Hexafluoropropylene oxide dimer acid	1000	1.00	1	100.000	1	10	0.10000
N-ethylperfluoro-octanesulfonamidoacetic acid	1000	1.00	1	100.000	1	10	0.10000
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	1.00	1	100.000	1	10	0.10000
Perfluoro-1-butanefluoride	1000	1.00	1	100.000	1	10	0.10000
Perfluoro-1-decanesulfonate	1000	1.01	1	100.000	1	10	0.10100
Perfluoro-1-heptanesulfonate	1000	1.00	1	100.000	1	10	0.10000
Perfluoro-1-hexanesulfonate	1000	1.01	1	100.000	1	10	0.10100
Perfluoro-1-nonanesulfonate	1000	1.01	1	100.000	1	10	0.10100
Perfluoro-1-octanesulfonamide	1000	1.00	1	100.000	1	10	0.10000
Perfluoro-1-octanesulfonate	1000	1.01	1	100.000	1	10	0.10100
perfluoro-1-pentanesulfonate	1000	1.00	1	100.000	1	10	0.10000
Perfluoro-n-butanoic Acid	1000	1.00	1	100.000	1	10	0.10000
Perfluoro-n-decanoic Acid	1000	1.00	1	100.000	1	10	0.10000
Perfluoro-n-dodecanoic acid	1000	1.00	1	100.000	1	10	0.10000
Perfluoro-n-heptanoic Acid	1000	1.00	1	100.000	1	10	0.10000
Perfluoro-n-hexanoic acid	1000	1.01	1	100.000	1	10	0.10100
Perfluoro-n-octanoic Acid	1000	1.00	1	100.000	1	10	0.10000
Perfluorononanoic Acid	1000	1.00	1	100.000	1	10	0.10000
Perfluoro-n-pentanoic acid	1000	1.01	1	100.000	1	10	0.10100
Perfluoro-n-tetradecanoic acid	1000	1.00	1	100.000	1	10	0.10000
Perfluoro-n-tridecanoic acid	1000	1.00	1	100.000	1	10	0.10000
Perfluoro-n-undecanoic acid	1000	1.00	1	100.000	1	10	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	200	5.00	---	---	1	10	0.10000
3-Perfluoropentyl propanoic acid	200	5.00	---	---	1	10	0.10000
3-perfluoropropyl propanoic Acid	200	5.00	---	---	1	10	0.10000

Final Concentrations:

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

Solution Prepared By: Bailey, Kevin Date Prepared: 11/10/2020 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-201110-)

Approved By: Schumitz, Denise Date: 11/11/2020 1:05:00 PM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE49

Description: PFAS - DoD Second Source LCS/MS Solution

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-butanefluoride	.10000
Perfluoro-1-decanesulfonate	.10100
Perfluoro-1-heptanesulfonate	.10000
Perfluoro-1-hexanesulfonate	.10100
Perfluoro-1-nonanesulfonate	.10100
Perfluoro-1-octanesulfonamide	.10000
Perfluoro-1-octanesulfonate	.10100
perfluoro-1-pentanesulfonate	.10000
Perfluoro-n-butanofluoride	.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
201006-07	Pipette	B820865811
LC24	Pipette	B814657482

Solution Prepared By: Bailey, Kevin **Date Prepared:** 11/10/2020 **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-201110-)

Approved By: Schumitz, Denise **Date:** 11/11/2020 1:05:00 PM



It can be done

Standard Solution Concentrations

Approved: Standard Laboratory ID Number: **LE50**

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: 11/12/2020	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-201112-3)

Approved By: Schumitz, Denise Date: 11/13/2020 1:15:00 PM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE50

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	B820865811
LC24	Pipette	B820865811

Solution Prepared By: Bailey, Kevin **Date Prepared:** 11/12/2020 **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-201112-3)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:15:00 PM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE51

Description: PFAS - DoD Low ICAL Stock

Stock Id: LE50

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
11-chloroeicosafluoro-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-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	.01000
1H,1H,2H,2H-Perfluorodecane sulfonate	.01010

Solution Prepared By: Bailey, Kevin **Date Prepared:** 11/12/2020 **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-201112-3)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:15:00 PM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE51

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-octanesulfonate	.01010
perfluoro-1-pentanesulfonate	.01000
Perfluoro-n-butanedioic Acid	.01000
Perfluoro-n-decanoic Acid	.01000
Perfluoro-n-dodecanoic acid	.01000
Perfluoro-n-heptanoic Acid	.01000
Perfluoro-n-hexanoic acid	.01010
Perfluoro-n-octanoic Acid	.01000
Perfluorononanoic Acid	.01000
Perfluoro-n-pentanoic acid	.01010
Perfluoro-n-tetradecanoic acid	.01000
Perfluoro-n-tridecanoic acid	.01000
Perfluoro-n-undecanoic acid	.01000

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LE50	Pipette	B820865811

Solution Prepared By: Bailey, Kevin **Date Prepared:** 11/12/2020 **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-201112-3)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:15:00 PM



It can be done

Standard Solution Concentrations

Approved: Standard Laboratory ID Number: **LE52**

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: 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

Stock Id: LE51

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	0.01	---	---	1	10	0.00025
1H,1H,2H,2H-Perfluorodecane sulfonate	250	0.01	---	---	1	10	0.00025
1H,1H,2H,2H-Perfluorohexane sulfonate	250	0.01	---	---	1	10	0.00025
1H,1H,2H,2H-Perfluorooctane sulfonate	250	0.01	---	---	1	10	0.00025
3-Perfluoroheptyl propanoic acid	250	0.01	---	---	1	10	0.00025

Solution Prepared By: Bailey, Kevin Date Prepared: 11/12/2020 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-201112-19)

Approved By: Schumitz, Denise Date: 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations Approved:

Standard Laboratory ID Number: LE52

Description: PFAS - DoD Calibration L1

3-Perfluoropentyl propanoic acid	250	0.01	---	---	1	10	0.00025
3-perfluoropropyl propanoic Acid	250	0.01	---	---	1	10	0.00025
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic aci	250	0.01	---	---	1	10	0.00025
Adona	250	0.01	---	---	1	10	0.00025
Hexafluoropropylene oxide dimer acid	250	0.01	---	---	1	10	0.00025
N-ethylperfluoro-octanesulfonamidoacetic acid	250	0.01	---	---	1	10	0.00025
N-methylperfluoro-1-octanesulfonamidoacetic acid	250	0.01	---	---	1	10	0.00025
Perfluoro-1-butanefulfonate	250	0.01	---	---	1	10	0.00025
Perfluoro-1-decanesulfonate	250	0.01	---	---	1	10	0.00025
Perfluoro-1-heptanesulfonate	250	0.01	---	---	1	10	0.00025
Perfluoro-1-hexanesulfonate	250	0.01	---	---	1	10	0.00025
Perfluoro-1-nonanesulfonate	250	0.01	---	---	1	10	0.00025
Perfluoro-1-octanesulfonamide	250	0.01	---	---	1	10	0.00025
Perfluoro-1-octanesulfonate	250	0.01	---	---	1	10	0.00025
perfluoro-1-pentanesulfonate	250	0.01	---	---	1	10	0.00025
Perfluoro-n-butanoic Acid	250	0.01	---	---	1	10	0.00025
Perfluoro-n-decanoic Acid	250	0.01	---	---	1	10	0.00025
Perfluoro-n-dodecanoic acid	250	0.01	---	---	1	10	0.00025
Perfluoro-n-heptanoic Acid	250	0.01	---	---	1	10	0.00025
Perfluoro-n-hexanoic acid	250	0.01	---	---	1	10	0.00025
Perfluoro-n-octanoic Acid	250	0.01	---	---	1	10	0.00025
Perfluorononanoic Acid	250	0.01	---	---	1	10	0.00025
Perfluoro-n-pentanoic acid	250	0.01	---	---	1	10	0.00025
Perfluoro-n-tetradecanoic acid	250	0.01	---	---	1	10	0.00025
Perfluoro-n-tridecanoic acid	250	0.01	---	---	1	10	0.00025
Perfluoro-n-undecanoic acid	250	0.01	---	---	1	10	0.00025

Final Concentrations:

Analyte:	Conc (ug/mL):
11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	.00025
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: 11/12/2020	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-201112-19)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE52

Description: PFAS - DoD Calibration L1

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	.00025
1H,1H,2H,2H-Perfluorohexane sulfonate	.00025
1H,1H,2H,2H-Perfluorooctane sulfonate	.00025
3-Perfluoroheptyl propanoic acid	.00025
3-Perfluoropentyl propanoic acid	.00025
3-perfluoropropyl propanoic Acid	.00025
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	.00025
Adona	.00025
d3-MeFOSAA	.00125
d5-EtFOSAA	.00125
Hexafluoropropylene oxide dimer acid	.00025
N-ethylperfluoro-octanesulfonamidoacetic acid	.00025
N-methylperfluoro-1-octanesulfonamidoacetic acid	.00025
Perfluoro-1-butanedisulfonate	.00025
Perfluoro-1-decanedisulfonate	.00025
Perfluoro-1-heptanedisulfonate	.00025
Perfluoro-1-hexanedisulfonate	.00025
Perfluoro-1-nonanedisulfonate	.00025
Perfluoro-1-octanesulfonamide	.00025
Perfluoro-1-octanesulfonate	.00025
perfluoro-1-pentanesulfonate	.00025
Perfluoro-n-butanoic Acid	.00025
Perfluoro-n-decanoic Acid	.00025
Perfluoro-n-dodecanoic acid	.00025
Perfluoro-n-heptanoic Acid	.00025
Perfluoro-n-hexanoic acid	.00025

Solution Prepared By: Bailey, Kevin **Date Prepared:** 11/12/2020 **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-201112-19)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE52

Description: PFAS - DoD Calibration L1

Perfluoro-n-octanoic Acid	.00025
Perfluorononanoic Acid	.00025
Perfluoro-n-pentanoic acid	.00025
Perfluoro-n-tetradecanoic acid	.00025
Perfluoro-n-tridecanoic acid	.00025
Perfluoro-n-undecanoic acid	.00025

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB78	Pipette	B814657482
LD73	Pipette	B814657482
LE51	Pipette	B814657482

Solution Prepared By: Bailey, Kevin **Date Prepared:** 11/12/2020 **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-201112-19)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations

Approved: Standard Laboratory ID Number: **LE53**

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: 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

Stock Id: LE51

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	0.01	---	---	1	10	0.00050
1H,1H,2H,2H-Perfluorodecane sulfonate	500	0.01	---	---	1	10	0.00051
1H,1H,2H,2H-Perfluorohexane sulfonate	500	0.01	---	---	1	10	0.00050
1H,1H,2H,2H-Perfluorooctane sulfonate	500	0.01	---	---	1	10	0.00050
3-Perfluoroheptyl propanoic acid	500	0.01	---	---	1	10	0.00050

Solution Prepared By: Bailey, Kevin Date Prepared: 11/12/2020 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-201112-19)

Approved By: Schumitz, Denise Date: 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: **LE53**

Description: PFAS - DoD Calibration L2

3-Perfluoropentyl propanoic acid	500	0.01	---	---	1	10	0.00050
3-perfluoropropyl propanoic Acid	500	0.01	---	---	1	10	0.00050
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic aci	500	0.01	---	---	1	10	0.00050
Adona	500	0.01	---	---	1	10	0.00050
Hexafluoropropylene oxide dimer acid	500	0.01	---	---	1	10	0.00050
N-ethylperfluoro-octanesulfonamidoacetic acid	500	0.01	---	---	1	10	0.00050
N-methylperfluoro-1-octanesulfonamidoacetic acid	500	0.01	---	---	1	10	0.00050
Perfluoro-1-butanefulfonate	500	0.01	---	---	1	10	0.00050
Perfluoro-1-decanesulfonate	500	0.01	---	---	1	10	0.00051
Perfluoro-1-heptanesulfonate	500	0.01	---	---	1	10	0.00050
Perfluoro-1-hexanesulfonate	500	0.01	---	---	1	10	0.00051
Perfluoro-1-nonanesulfonate	500	0.01	---	---	1	10	0.00051
Perfluoro-1-octanesulfonamide	500	0.01	---	---	1	10	0.00050
Perfluoro-1-octanesulfonate	500	0.01	---	---	1	10	0.00051
perfluoro-1-pentanesulfonate	500	0.01	---	---	1	10	0.00050
Perfluoro-n-butanoic Acid	500	0.01	---	---	1	10	0.00050
Perfluoro-n-decanoic Acid	500	0.01	---	---	1	10	0.00050
Perfluoro-n-dodecanoic acid	500	0.01	---	---	1	10	0.00050
Perfluoro-n-heptanoic Acid	500	0.01	---	---	1	10	0.00050
Perfluoro-n-hexanoic acid	500	0.01	---	---	1	10	0.00051
Perfluoro-n-octanoic Acid	500	0.01	---	---	1	10	0.00050
Perfluorononanoic Acid	500	0.01	---	---	1	10	0.00050
Perfluoro-n-pentanoic acid	500	0.01	---	---	1	10	0.00051
Perfluoro-n-tetradecanoic acid	500	0.01	---	---	1	10	0.00050
Perfluoro-n-tridecanoic acid	500	0.01	---	---	1	10	0.00050
Perfluoro-n-undecanoic acid	500	0.01	---	---	1	10	0.00050

Final Concentrations:

Analyte:	Conc (ug/mL):
11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	.00050
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: 11/12/2020	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-201112-19)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE53

Description: PFAS - DoD Calibration L2

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	.00051
1H,1H,2H,2H-Perfluorohexane sulfonate	.00050
1H,1H,2H,2H-Perfluorooctane sulfonate	.00050
3-Perfluoroheptyl propanoic acid	.00050
3-Perfluoropentyl propanoic acid	.00050
3-perfluoropropyl propanoic Acid	.00050
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	.00050
Adona	.00050
d3-MeFOSAA	.00125
d5-EtFOSAA	.00125
Hexafluoropropylene oxide dimer acid	.00050
N-ethylperfluoro-octanesulfonamidoacetic acid	.00050
N-methylperfluoro-1-octanesulfonamidoacetic acid	.00050
Perfluoro-1-butanedisulfonate	.00050
Perfluoro-1-decanedisulfonate	.00051
Perfluoro-1-heptanedisulfonate	.00050
Perfluoro-1-hexanedisulfonate	.00051
Perfluoro-1-nonanedisulfonate	.00051
Perfluoro-1-octanesulfonamide	.00050
Perfluoro-1-octanedisulfonate	.00051
perfluoro-1-pentanedisulfonate	.00050
Perfluoro-n-butanedisulfonate	.00050
Perfluoro-n-decanedisulfonate	.00050
Perfluoro-n-dodecanedisulfonate	.00050
Perfluoro-n-heptanedisulfonate	.00050
Perfluoro-n-hexanedisulfonate	.00051

Solution Prepared By: Bailey, Kevin **Date Prepared:** 11/12/2020 **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-201112-19)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations Approved:

Standard Laboratory ID Number: LE53

Description: PFAS - DoD Calibration L2

Perfluoro-n-octanoic Acid	.00050
Perfluorononanoic Acid	.00050
Perfluoro-n-pentanoic acid	.00051
Perfluoro-n-tetradecanoic acid	.00050
Perfluoro-n-tridecanoic acid	.00050
Perfluoro-n-undecanoic acid	.00050

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB78	Pipette	B814657482
LD73	Pipette	B814657482
LE51	Pipette	B820865811

Solution Prepared By: Bailey, Kevin	Date Prepared: 11/12/2020	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-201112-19)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations

Approved: Standard Laboratory ID Number: **LE54**

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: 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-PFUnA	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

Stock Id: LE50

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	400	0.10	---	---	1	40	0.00100
1H,1H,2H,2H-Perfluorodecane sulfonate	400	0.10	---	---	1	40	0.00101
1H,1H,2H,2H-Perfluorohexane sulfonate	400	0.10	---	---	1	40	0.00100
1H,1H,2H,2H-Perfluorooctane sulfonate	400	0.10	---	---	1	40	0.00100
3-Perfluoroheptyl propanoic acid	400	0.10	---	---	1	40	0.00100

Solution Prepared By: Bailey, Kevin Date Prepared: 11/12/2020 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-201112-19)

Approved By: Schumitz, Denise Date: 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations Approved:

Standard Laboratory ID Number: LE54

Description: PFAS - DoD Calibration L3

3-Perfluoropentyl propanoic acid	400	0.10	---	---	1	40	0.00100
3-perfluoropropyl propanoic Acid	400	0.10	---	---	1	40	0.00100
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic aci	400	0.10	---	---	1	40	0.00100
Adona	400	0.10	---	---	1	40	0.00100
Hexafluoropropylene oxide dimer acid	400	0.10	---	---	1	40	0.00100
N-ethylperfluoro-octanesulfonamidoacetic acid	400	0.10	---	---	1	40	0.00100
N-methylperfluoro-1-octanesulfonamidoacetic acid	400	0.10	---	---	1	40	0.00100
Perfluoro-1-butanefulfonate	400	0.10	---	---	1	40	0.00100
Perfluoro-1-decanesulfonate	400	0.10	---	---	1	40	0.00101
Perfluoro-1-heptanesulfonate	400	0.10	---	---	1	40	0.00100
Perfluoro-1-hexanesulfonate	400	0.10	---	---	1	40	0.00101
Perfluoro-1-nonanesulfonate	400	0.10	---	---	1	40	0.00101
Perfluoro-1-octanesulfonamide	400	0.10	---	---	1	40	0.00100
Perfluoro-1-octanesulfonate	400	0.10	---	---	1	40	0.00101
perfluoro-1-pentanesulfonate	400	0.10	---	---	1	40	0.00100
Perfluoro-n-butanoic Acid	400	0.10	---	---	1	40	0.00100
Perfluoro-n-decanoic Acid	400	0.10	---	---	1	40	0.00100
Perfluoro-n-dodecanoic acid	400	0.10	---	---	1	40	0.00100
Perfluoro-n-heptanoic Acid	400	0.10	---	---	1	40	0.00100
Perfluoro-n-hexanoic acid	400	0.10	---	---	1	40	0.00101
Perfluoro-n-octanoic Acid	400	0.10	---	---	1	40	0.00100
Perfluorononanoic Acid	400	0.10	---	---	1	40	0.00100
Perfluoro-n-pentanoic acid	400	0.10	---	---	1	40	0.00101
Perfluoro-n-tetradecanoic acid	400	0.10	---	---	1	40	0.00100
Perfluoro-n-tridecanoic acid	400	0.10	---	---	1	40	0.00100
Perfluoro-n-undecanoic acid	400	0.10	---	---	1	40	0.00100

Final Concentrations:

Analyte:	Conc (ug/mL):
11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	.00100
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: 11/12/2020	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-201112-19)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE54

Description: PFAS - DoD Calibration L3

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	.00101
1H,1H,2H,2H-Perfluorohexane sulfonate	.00100
1H,1H,2H,2H-Perfluorooctane sulfonate	.00100
3-Perfluoroheptyl propanoic acid	.00100
3-Perfluoropentyl propanoic acid	.00100
3-perfluoropropyl propanoic Acid	.00100
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	.00100
Adona	.00100
d3-MeFOSAA	.00125
d5-EtFOSAA	.00125
Hexafluoropropylene oxide dimer acid	.00100
N-ethylperfluoro-octanesulfonamidoacetic acid	.00100
N-methylperfluoro-1-octanesulfonamidoacetic acid	.00100
Perfluoro-1-butanefulfonate	.00100
Perfluoro-1-decanesulfonate	.00101
Perfluoro-1-heptanesulfonate	.00100
Perfluoro-1-hexanesulfonate	.00101
Perfluoro-1-nonanesulfonate	.00101
Perfluoro-1-octanesulfonamide	.00100
Perfluoro-1-octanesulfonate	.00101
perfluoro-1-pentanesulfonate	.00100
Perfluoro-n-butanoic Acid	.00100
Perfluoro-n-decanoic Acid	.00100
Perfluoro-n-dodecanoic acid	.00100
Perfluoro-n-heptanoic Acid	.00100
Perfluoro-n-hexanoic acid	.00101

Solution Prepared By: Bailey, Kevin **Date Prepared:** 11/12/2020 **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-201112-19)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE54

Description: PFAS - DoD Calibration L3

Perfluoro-n-octanoic Acid	.00100
Perfluorononanoic Acid	.00100
Perfluoro-n-pentanoic acid	.00101
Perfluoro-n-tetradecanoic acid	.00100
Perfluoro-n-tridecanoic acid	.00100
Perfluoro-n-undecanoic acid	.00100

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB78	Pipette	B820865811
LD73	Pipette	B820865811
LE50	Pipette	B820865811

Solution Prepared By: Bailey, Kevin **Date Prepared:** 11/12/2020 **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-201112-19)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations

Approved: Standard Laboratory ID Number: **LE55**

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: 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-PFUnA	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

Stock Id: LE50

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	1000	0.10	---	---	1	40	0.00250
1H,1H,2H,2H-Perfluorodecane sulfonate	1000	0.10	---	---	1	40	0.00253
1H,1H,2H,2H-Perfluorohexane sulfonate	1000	0.10	---	---	1	40	0.00250
1H,1H,2H,2H-Perfluorooctane sulfonate	1000	0.10	---	---	1	40	0.00250
3-Perfluoroheptyl propanoic acid	1000	0.10	---	---	1	40	0.00250

Solution Prepared By: Bailey, Kevin Date Prepared: 11/12/2020 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-201112-19)

Approved By: Schumitz, Denise Date: 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE55

Description: PFAS - DoD Calibration L4

3-Perfluoropentyl propanoic acid	1000	0.10	---	---	1	40	0.00250
3-perfluoropropyl propanoic Acid	1000	0.10	---	---	1	40	0.00250
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic aci	1000	0.10	---	---	1	40	0.00250
Adona	1000	0.10	---	---	1	40	0.00250
Hexafluoropropylene oxide dimer acid	1000	0.10	---	---	1	40	0.00250
N-ethylperfluoro-octanesulfonamidoacetic acid	1000	0.10	---	---	1	40	0.00250
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	0.10	---	---	1	40	0.00250
Perfluoro-1-butanefluoride	1000	0.10	---	---	1	40	0.00250
Perfluoro-1-decanesulfonate	1000	0.10	---	---	1	40	0.00253
Perfluoro-1-heptanesulfonate	1000	0.10	---	---	1	40	0.00250
Perfluoro-1-hexanesulfonate	1000	0.10	---	---	1	40	0.00253
Perfluoro-1-nonanesulfonate	1000	0.10	---	---	1	40	0.00253
Perfluoro-1-octanesulfonamide	1000	0.10	---	---	1	40	0.00250
Perfluoro-1-octanesulfonate	1000	0.10	---	---	1	40	0.00253
perfluoro-1-pentanesulfonate	1000	0.10	---	---	1	40	0.00250
Perfluoro-n-butanoic Acid	1000	0.10	---	---	1	40	0.00250
Perfluoro-n-decanoic Acid	1000	0.10	---	---	1	40	0.00250
Perfluoro-n-dodecanoic acid	1000	0.10	---	---	1	40	0.00250
Perfluoro-n-heptanoic Acid	1000	0.10	---	---	1	40	0.00250
Perfluoro-n-hexanoic acid	1000	0.10	---	---	1	40	0.00253
Perfluoro-n-octanoic Acid	1000	0.10	---	---	1	40	0.00250
Perfluorononanoic Acid	1000	0.10	---	---	1	40	0.00250
Perfluoro-n-pentanoic acid	1000	0.10	---	---	1	40	0.00253
Perfluoro-n-tetradecanoic acid	1000	0.10	---	---	1	40	0.00250
Perfluoro-n-tridecanoic acid	1000	0.10	---	---	1	40	0.00250
Perfluoro-n-undecanoic acid	1000	0.10	---	---	1	40	0.00250

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: 11/12/2020 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-201112-19)

Approved By: Schumitz, Denise Date: 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations Approved:

Standard Laboratory ID Number: LE55

Description: PFAS - DoD Calibration L4

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: 11/12/2020	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-201112-19)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE55

Description: PFAS - DoD Calibration L4

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	B820865811
LD73	Pipette	B820865811
LE50	Pipette	B820865811

Solution Prepared By: Bailey, Kevin **Date Prepared:** 11/12/2020 **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-201112-19)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations

Approved: Standard Laboratory ID Number: **LE56**

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: 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

Stock Id: LE50

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	1000	0.10	---	---	1	10	0.01000
1H,1H,2H,2H-Perfluorodecane sulfonate	1000	0.10	---	---	1	10	0.01010
1H,1H,2H,2H-Perfluorohexane sulfonate	1000	0.10	---	---	1	10	0.01000
1H,1H,2H,2H-Perfluorooctane sulfonate	1000	0.10	---	---	1	10	0.01000
3-Perfluoroheptyl propanoic acid	1000	0.10	---	---	1	10	0.01000

Solution Prepared By: Bailey, Kevin Date Prepared: 11/12/2020 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-201112-19)

Approved By: Schumitz, Denise Date: 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: **LE56**

Description: PFAS - DoD Calibration L5

3-Perfluoropentyl propanoic acid	1000	0.10	---	---	1	10	0.01000
3-perfluoropropyl propanoic Acid	1000	0.10	---	---	1	10	0.01000
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic aci	1000	0.10	---	---	1	10	0.01000
Adona	1000	0.10	---	---	1	10	0.01000
Hexafluoropropylene oxide dimer acid	1000	0.10	---	---	1	10	0.01000
N-ethylperfluoro-octanesulfonamidoacetic acid	1000	0.10	---	---	1	10	0.01000
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	0.10	---	---	1	10	0.01000
Perfluoro-1-butanefulfonate	1000	0.10	---	---	1	10	0.01000
Perfluoro-1-decanesulfonate	1000	0.10	---	---	1	10	0.01010
Perfluoro-1-heptanesulfonate	1000	0.10	---	---	1	10	0.01000
Perfluoro-1-hexanesulfonate	1000	0.10	---	---	1	10	0.01010
Perfluoro-1-nonanesulfonate	1000	0.10	---	---	1	10	0.01010
Perfluoro-1-octanesulfonamide	1000	0.10	---	---	1	10	0.01000
Perfluoro-1-octanesulfonate	1000	0.10	---	---	1	10	0.01010
perfluoro-1-pentanesulfonate	1000	0.10	---	---	1	10	0.01000
Perfluoro-n-butanoic Acid	1000	0.10	---	---	1	10	0.01000
Perfluoro-n-decanoic Acid	1000	0.10	---	---	1	10	0.01000
Perfluoro-n-dodecanoic acid	1000	0.10	---	---	1	10	0.01000
Perfluoro-n-heptanoic Acid	1000	0.10	---	---	1	10	0.01000
Perfluoro-n-hexanoic acid	1000	0.10	---	---	1	10	0.01010
Perfluoro-n-octanoic Acid	1000	0.10	---	---	1	10	0.01000
Perfluorononanoic Acid	1000	0.10	---	---	1	10	0.01000
Perfluoro-n-pentanoic acid	1000	0.10	---	---	1	10	0.01010
Perfluoro-n-tetradecanoic acid	1000	0.10	---	---	1	10	0.01000
Perfluoro-n-tridecanoic acid	1000	0.10	---	---	1	10	0.01000
Perfluoro-n-undecanoic acid	1000	0.10	---	---	1	10	0.01000

Final Concentrations:

Analyte:	Conc (ug/mL):
11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	.01000
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: 11/12/2020	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-201112-19)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations Approved:

Standard Laboratory ID Number: LE56

Description: PFAS - DoD Calibration L5

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	.01010
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
d3-MeFOSAA	.00125
d5-EtFOSAA	.00125
Hexafluoropropylene oxide dimer acid	.01000
N-ethylperfluoro-octanesulfonamidoacetic acid	.01000
N-methylperfluoro-1-octanesulfonamidoacetic acid	.01000
Perfluoro-1-butanedisulfonate	.01000
Perfluoro-1-decanedisulfonate	.01010
Perfluoro-1-heptanedisulfonate	.01000
Perfluoro-1-hexanedisulfonate	.01010
Perfluoro-1-nonanedisulfonate	.01010
Perfluoro-1-octanesulfonamide	.01000
Perfluoro-1-octanedisulfonate	.01010
perfluoro-1-pentanedisulfonate	.01000
Perfluoro-n-butanedisulfonate	.01000
Perfluoro-n-decanedisulfonate	.01000
Perfluoro-n-dodecanedisulfonate	.01000
Perfluoro-n-heptanedisulfonate	.01000
Perfluoro-n-hexanedisulfonate	.01010

Solution Prepared By: Bailey, Kevin	Date Prepared: 11/12/2020	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-201112-19)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations Approved:

Standard Laboratory ID Number: LE56

Description: PFAS - DoD Calibration L5

Perfluoro-n-octanoic Acid	.01000
Perfluorononanoic Acid	.01000
Perfluoro-n-pentanoic acid	.01010
Perfluoro-n-tetradecanoic acid	.01000
Perfluoro-n-tridecanoic acid	.01000
Perfluoro-n-undecanoic acid	.01000

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB78	Pipette	B814657482
LD73	Pipette	B814657482
LE50	Pipette	B820865811

Solution Prepared By: Bailey, Kevin	Date Prepared: 11/12/2020	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-201112-19)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations

Approved: Standard Laboratory ID Number: **LE57**

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: 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

Stock Id: LE50

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	2500	0.10	---	---	1	10	0.02500
1H,1H,2H,2H-Perfluorodecane sulfonate	2500	0.10	---	---	1	10	0.02525
1H,1H,2H,2H-Perfluorohexane sulfonate	2500	0.10	---	---	1	10	0.02500
1H,1H,2H,2H-Perfluorooctane sulfonate	2500	0.10	---	---	1	10	0.02500
3-Perfluoroheptyl propanoic acid	2500	0.10	---	---	1	10	0.02500

Solution Prepared By: Bailey, Kevin Date Prepared: 11/12/2020 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-201112-19)

Approved By: Schumitz, Denise Date: 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations Approved:

Standard Laboratory ID Number: LE57

Description: PFAS - DoD Calibration L6

3-Perfluoropentyl propanoic acid	2500	0.10	---	---	1	10	0.02500
3-perfluoropropyl propanoic Acid	2500	0.10	---	---	1	10	0.02500
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic aci	2500	0.10	---	---	1	10	0.02500
Adona	2500	0.10	---	---	1	10	0.02500
Hexafluoropropylene oxide dimer acid	2500	0.10	---	---	1	10	0.02500
N-ethylperfluoro-octanesulfonamidoacetic acid	2500	0.10	---	---	1	10	0.02500
N-methylperfluoro-1-octanesulfonamidoacetic acid	2500	0.10	---	---	1	10	0.02500
Perfluoro-1-butanefulfonate	2500	0.10	---	---	1	10	0.02500
Perfluoro-1-decanesulfonate	2500	0.10	---	---	1	10	0.02525
Perfluoro-1-heptanesulfonate	2500	0.10	---	---	1	10	0.02500
Perfluoro-1-hexanesulfonate	2500	0.10	---	---	1	10	0.02525
Perfluoro-1-nonanesulfonate	2500	0.10	---	---	1	10	0.02525
Perfluoro-1-octanesulfonamide	2500	0.10	---	---	1	10	0.02500
Perfluoro-1-octanesulfonate	2500	0.10	---	---	1	10	0.02525
perfluoro-1-pentanesulfonate	2500	0.10	---	---	1	10	0.02500
Perfluoro-n-butanoic Acid	2500	0.10	---	---	1	10	0.02500
Perfluoro-n-decanoic Acid	2500	0.10	---	---	1	10	0.02500
Perfluoro-n-dodecanoic acid	2500	0.10	---	---	1	10	0.02500
Perfluoro-n-heptanoic Acid	2500	0.10	---	---	1	10	0.02500
Perfluoro-n-hexanoic acid	2500	0.10	---	---	1	10	0.02525
Perfluoro-n-octanoic Acid	2500	0.10	---	---	1	10	0.02500
Perfluorononanoic Acid	2500	0.10	---	---	1	10	0.02500
Perfluoro-n-pentanoic acid	2500	0.10	---	---	1	10	0.02525
Perfluoro-n-tetradecanoic acid	2500	0.10	---	---	1	10	0.02500
Perfluoro-n-tridecanoic acid	2500	0.10	---	---	1	10	0.02500
Perfluoro-n-undecanoic acid	2500	0.10	---	---	1	10	0.02500

Final Concentrations:

Analyte:	Conc (ug/mL):
11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	.02500
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: 11/12/2020	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-201112-19)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations Approved:

Standard Laboratory ID Number: LE57

Description: PFAS - DoD Calibration L6

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	.02525
1H,1H,2H,2H-Perfluorohexane sulfonate	.02500
1H,1H,2H,2H-Perfluorooctane sulfonate	.02500
3-Perfluoroheptyl propanoic acid	.02500
3-Perfluoropentyl propanoic acid	.02500
3-perfluoropropyl propanoic Acid	.02500
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	.02500
Adona	.02500
d3-MeFOSAA	.00125
d5-EtFOSAA	.00125
Hexafluoropropylene oxide dimer acid	.02500
N-ethylperfluoro-octanesulfonamidoacetic acid	.02500
N-methylperfluoro-1-octanesulfonamidoacetic acid	.02500
Perfluoro-1-butanefulfonate	.02500
Perfluoro-1-decanesulfonate	.02525
Perfluoro-1-heptanesulfonate	.02500
Perfluoro-1-hexanesulfonate	.02525
Perfluoro-1-nonanesulfonate	.02525
Perfluoro-1-octanesulfonamide	.02500
Perfluoro-1-octanesulfonate	.02525
perfluoro-1-pentanesulfonate	.02500
Perfluoro-n-butanoic Acid	.02500
Perfluoro-n-decanoic Acid	.02500
Perfluoro-n-dodecanoic acid	.02500
Perfluoro-n-heptanoic Acid	.02500
Perfluoro-n-hexanoic acid	.02525

Solution Prepared By: Bailey, Kevin	Date Prepared: 11/12/2020	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-201112-19)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE57

Description: PFAS - DoD Calibration L6

Perfluoro-n-octanoic Acid	.02500
Perfluorononanoic Acid	.02500
Perfluoro-n-pentanoic acid	.02525
Perfluoro-n-tetradecanoic acid	.02500
Perfluoro-n-tridecanoic acid	.02500
Perfluoro-n-undecanoic acid	.02500

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
LB78	Pipette	B814657482
LD73	Pipette	B814657482
LE50	Pipette	B814657482

Solution Prepared By: Bailey, Kevin **Date Prepared:** 11/12/2020 **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-201112-19)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations

Approved: Standard Laboratory ID Number: **LE59**

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: 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

Stock Id: LE49

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

Solution Prepared By: Bailey, Kevin Date Prepared: 11/12/2020 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-201112-19)

Approved By: Schumitz, Denise Date: 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations

Approved: Standard Laboratory ID Number: **LE59**

Description: PFAS - DoD ICC

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-butanefulfonate	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
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

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: 11/12/2020 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-201112-19)

Approved By: Schumitz, Denise Date: 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE59

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-butanefulfonate	.00250
Perfluoro-1-decanesulfonate	.00253
Perfluoro-1-heptanesulfonate	.00250
Perfluoro-1-hexanesulfonate	.00253
Perfluoro-1-nonanesulfonate	.00253
Perfluoro-1-octanesulfonamide	.00250
Perfluoro-1-octanesulfonate	.00253
perfluoro-1-pentanesulfonate	.00250
Perfluoro-n-butanoic Acid	.00250
Perfluoro-n-decanoic Acid	.00250
Perfluoro-n-dodecanoic acid	.00250
Perfluoro-n-heptanoic Acid	.00250
Perfluoro-n-hexanoic acid	.00253

Solution Prepared By: Bailey, Kevin Date Prepared: 11/12/2020 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-201112-19)

Approved By: Schumitz, Denise Date: 11/13/2020 1:16:00 PM



It can be done

Standard Solution Concentrations

Approved:

Standard Laboratory ID Number: LE59

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
LD73	Pipette	B814657482
LE49	Pipette	B814657482

Solution Prepared By: Bailey, Kevin **Date Prepared:** 11/12/2020 **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-201112-19)

Approved By: Schumitz, Denise **Date:** 11/13/2020 1:16:00 PM



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:	Lower Limit:	Upper Limit:
13C4-PFBA	BDO-2105	50.0000	98.00	--	--	<input type="checkbox"/>		

Total Analytes: 1

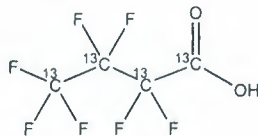
Notes:

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: _____

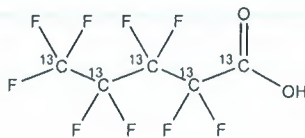


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M5PFPeA **LOT NUMBER:** M5PFPeA0120
COMPOUND: Perfluoro-n-[¹³C₅]pentanoic acid

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA: ¹³C₅HF₉O₂ **MOLECULAR WEIGHT:** 269.01
CONCENTRATION: 50.0 ± 2.5 µg/ml **SOLVENT(S):** Methanol
Water (<1%)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99% ¹³C
(¹³C₅)
LAST TESTED: (mm/dd/yyyy) 01/22/2020
EXPIRY DATE: (mm/dd/yyyy) 01/22/2025
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

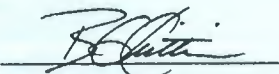
DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.25% of perfluoro-n-pentanoic acid.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

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It can be done

BDO Id:

200721-03

Reagent Receipt Report

Approved: Authorized:

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

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

Notes:

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



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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

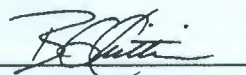
DOCUMENTATION/ DATA ATTACHED:

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: _____



WELLINGTON LABORATORIES

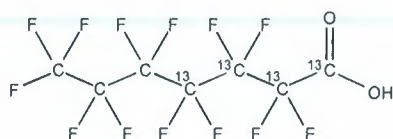
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M4PFHpA
COMPOUND: Perfluoro-n-[1,2,3,4-¹³C₄]heptanoic acid

LOT NUMBER: M4PFHpA0120

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA: ¹³C₄¹²C₃HF₁₃O₂
CONCENTRATION: 50.0 ± 2.5 µg/ml

MOLECULAR WEIGHT: 368.03
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/08/2020
EXPIRY DATE: (mm/dd/yyyy) 01/08/2025

ISOTOPIC PURITY: ≥99%¹³C
(1,2,3,4-¹³C₄)

RECOMMENDED STORAGE: Store ampoule in a cool, dark place

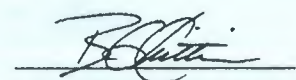
DOCUMENTATION/ DATA ATTACHED:

- 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 ~ 0.03% of perfluoro-n-heptanoic acid.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

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It can be done

BDO Id:

200721-05

Reagent Receipt Report

Approved: Number (max)

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

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

Notes:

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

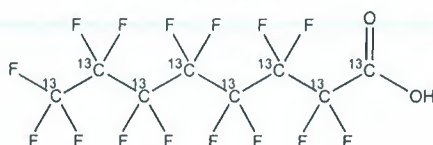


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 LABORATORIES

CERTIFICATE OF ANALYSIS
 DOCUMENTATION

PRODUCT CODE: M8PFOA **LOT NUMBER:** M8PFOA0220
COMPOUND: Perfluoro-n-[¹³C₈]octanoic acid

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA: ¹³C₈HF₁₅O₂ **MOLECULAR WEIGHT:** 422.01
CONCENTRATION: 48.9 ± 2.4 µg/ml **SOLVENT(S):** Methanol
 Water (<1%)
CHEMICAL PURITY: 97.8% (M8PFOA) **ISOTOPIC PURITY:** ≥99% ¹³C
 2.2% (MPFOA [M+4]) (¹³C₈)
LAST TESTED: (mm/dd/yyyy) 01/23/2020
EXPIRY DATE: (mm/dd/yyyy) 01/23/2025
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

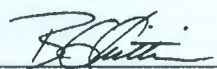
DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains < 0.1% of native perfluoro-n-octanoic acid (PFOA) and ~ 2.2% of [M+4] perfluoro-n-octanoic acid.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

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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: _____

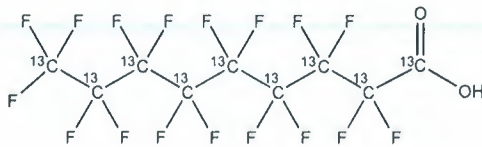


WELLINGTON LABORATORIES

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)

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

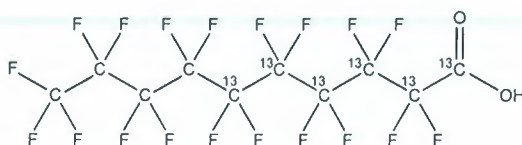
26072-07



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: _____

200721-08



WELLINGTON LABORATORIES

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: _____

B.G. Chittim, General Manager

Date: 09/12/2019

(mm/dd/yyyy)

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It can be doneBDO Id: 200721-09

Reagent Receipt Report

Approved: Available:

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

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

Notes:

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

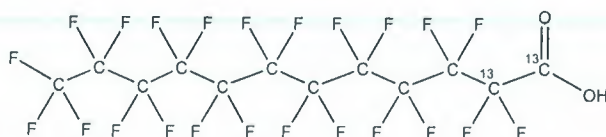
200721-09



WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

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



MOLECULAR FORMULA: ¹³C₂¹²C₁₀HF₂₃O₂ **MOLECULAR WEIGHT:** 616.08
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
 Water (<1%)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99% ¹³C
 (1,2-¹³C₂)
LAST TESTED: (mm/dd/yyyy) 11/22/2019
EXPIRY DATE: (mm/dd/yyyy) 11/22/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

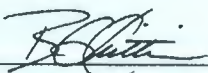
Figure 1: LC/MS Data (TIC and Mass Spectrum)
 Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____


 B.G. Chittim, General Manager

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

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It can be done

BDO Id:

200721-10

Reagent Receipt Report

Approved: Authorized:

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

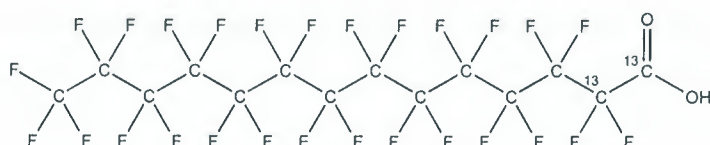
Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Lower Limit:	Upper Limit:
13C2-PFTeDA	BDO-2224	50.0000	98.00	--	--	<input type="checkbox"/>		
Total Analytes:	1							

Notes:

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

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

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



MOLECULAR FORMULA: ¹³C₂¹²C₁₂HF₂₇O₂ **MOLECULAR WEIGHT:** 716.10
CONCENTRATION: 50 ± 2.5 µg/ml **SOLVENT(S):** Methanol
Water (<1%)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99% ¹³C
(1,2-¹³C₂)
LAST TESTED: (mm/dd/yyyy) 11/14/2019
EXPIRY DATE: (mm/dd/yyyy) 11/14/2024
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains < 0.1% of perfluoro-n-tetradecanoic acid.

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Certified By:

B.G. Chittim, General Manager

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

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It can be done

BDO Id: 200721-11

Reagent Receipt Report

Approved: Authorized:

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

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert 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

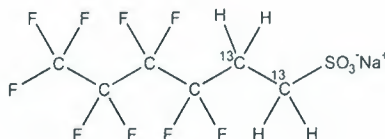


WELLINGTON LABORATORIES

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).

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

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It can be done

BDO Id:

200721-12

Reagent Receipt Report

Approved:

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

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

Total Analytes: 1

Notes:

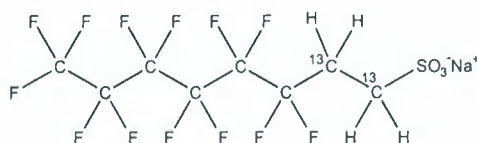
Approved by: _____ Approved on: _____
Authorized by: _____ Authorized on: _____



WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

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



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

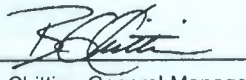
DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

- See page 2 for further details.
- The native 6:2FTS contains 4.22% of ³⁴S (due to natural isotopic abundance) therefore both native 6:2FTS and M2-6:2FTS will produce signals in the m/z 429 to m/z 409 channel during SRM analysis. We recommend using the m/z 429 to m/z 81 transition to monitor for M2-6:2FTS during quantitative analysis as it will be free of any native contribution (see Figure 2).

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Certified By: 
 B.G. Chittim, General Manager **Date:** 06/02/2020
 (mm/dd/yyyy)

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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).

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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:	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: _____

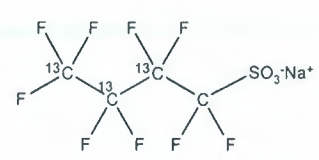


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M3PFBS **LOT NUMBER:** M3PFBS1019
COMPOUND: Sodium perfluoro-1-[2,3,4-¹³C₃]butanesulfonate

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	¹³ C ₃ ¹² CF ₉ SO ₃ Na	MOLECULAR WEIGHT:	325.06
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 46.6 ± 2.3 µg/ml (M3PFBS acid) 46.5 ± 2.3 µg/ml (M3PFBS anion)	SOLVENT(S):	Methanol
CHEMICAL PURITY:	>98%	ISOTOPIC PURITY:	≥99% ¹³ C (2,3,4- ¹³ C ₃)
LAST TESTED: (mm/dd/yyyy)	03/17/2020		
EXPIRY DATE: (mm/dd/yyyy)	03/17/2025		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

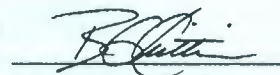
DOCUMENTATION/ DATA ATTACHED:

- 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 < 0.1% of perfluoro-1-butanesulfonate.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

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It can be done

BDO Id:

200721-15

Reagent Receipt Report

Approved:

Authorized:

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

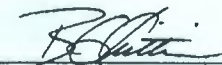
DOCUMENTATION/ DATA ATTACHED:

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: _____

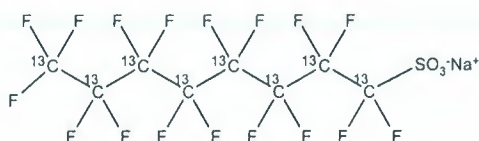
200721-16



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)

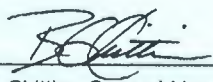
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

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)

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 519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

It can be done

BDO Id:

200721-18

Reagent Receipt Report

Approved: Authorized:

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

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

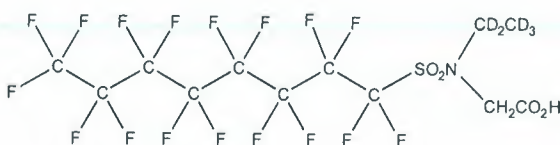
Notes:

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

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

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

STRUCTURE: **CAS #:** Not available



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

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

CHEMICAL PURITY: >98%

ISOTOPIC PURITY: ≥98% ²H₅

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

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

RECOMMENDED STORAGE: Refrigerate ampoule

DOCUMENTATION/ DATA ATTACHED:

Figure 1: LC/MS Data (TIC and Mass Spectrum)

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

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By:

B.G. Chittim, General Manager

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

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It can be done

BDO Id:

200721-19

Reagent Receipt Report

Approved: Authorized:

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

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Lower Limit:	Upper Limit:
13C8-FOSA	BDO-2225	50.0000	98.00	--	--	<input type="checkbox"/>		
Total Analytes:	1							

Notes:

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

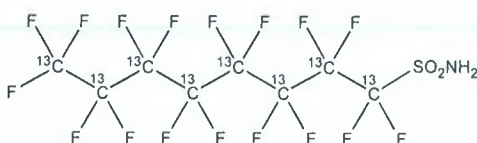
200721-19



WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

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



MOLECULAR FORMULA: ¹³C₈H₂F₁₇NO₂S **MOLECULAR WEIGHT:** 507.09
CONCENTRATION: 50.0 ± 2.5 µg/ml **SOLVENT(S):** Isopropanol
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99% ¹³C
LAST TESTED: (mm/dd/yyyy) 02/28/2020 (¹³C₈)
EXPIRY DATE: (mm/dd/yyyy) 02/28/2025
RECOMMENDED STORAGE: Refrigerate ampoule

DOCUMENTATION/ DATA ATTACHED:

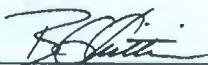
Figure 1: LC/MS Data (TIC and Mass Spectrum)
 Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 1.2% of perfluoro-1-[¹³C₈]octanesulfonamide and ~ 0.03% of perfluoro-1-[¹³C₇]heptanesulfonamide.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By:


 B.G. Chittim, General Manager

Date: 03/03/2020
 (mm/dd/yyyy)

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It can be done

BDO Id:

200721-20

Reagent Receipt Report

Approved: Sub:

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

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

Notes:

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

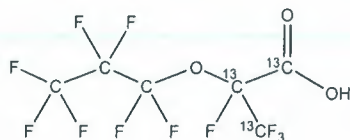


WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

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

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA:	¹³ C ₃ ¹² C ₃ HF ₁₁ O ₃	MOLECULAR WEIGHT:	333.03
CONCENTRATION:	50.0 ± 2.5 µg/ml	SOLVENT(S):	Methanol
CHEMICAL PURITY:	>98%	ISOTOPIC PURITY:	≥99% ¹³ C
LAST TESTED: (mm/dd/yyyy)	05/13/2020		(¹³ C ₃)
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.

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Certified By:

B.G. Chittim, General Manager

Date: 05/22/2020

(mm/dd/yyyy)

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It can be done

BDO Id: _____

200721-21

Reagent Receipt Report

Approved: Authorized:

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

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Lower Limit:	Upper Limit:
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Total Analytes:	1							

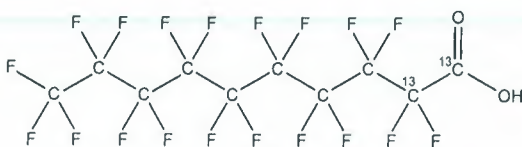
Notes:

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

200721-21

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

PRODUCT CODE: MPFDA **LOT NUMBER:** MPFDA0320
COMPOUND: Perfluoro-n-[1,2-¹³C₂]decanoic acid
STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA: ¹³C₂¹²C₈HF₁₉O₂ **MOLECULAR WEIGHT:** 516.07
CONCENTRATION: 50.0 ± 2.5 µg/ml **SOLVENT(S):** Methanol
Water (<1%)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99% ¹³C
LAST TESTED: (mm/dd/yyyy) 03/24/2020 (1,2-¹³C₂)
EXPIRY DATE: (mm/dd/yyyy) 03/24/2025
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

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

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Certified By: 
B.G. Chittim, General Manager

Date: 04/06/2020
(mm/dd/yyyy)

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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: _____

200721-22

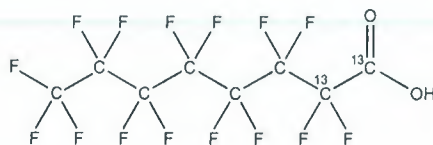


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CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: M2PFOA **LOT NUMBER:** M2PFOA0120
COMPOUND: Perfluoro-n-[1,2-¹³C₂]octanoic acid

STRUCTURE: **CAS #:** Not available



MOLECULAR FORMULA: ¹³C₂¹²C₆HF₁₅O₂ **MOLECULAR WEIGHT:** 416.05
CONCENTRATION: 50.0 ± 2.5 µg/ml **SOLVENT(S):** Methanol
 Water (<1%)
CHEMICAL PURITY: >98% **ISOTOPIC PURITY:** ≥99%¹³C
LAST TESTED: (mm/dd/yyyy) 01/08/2020 (1,2-¹³C₂)
EXPIRY DATE: (mm/dd/yyyy) 01/08/2025
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains < 0.1% of perfluoro-n-[¹³C₁]heptanoic acid (¹³C₁-PFHpA).

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Certified By: 
 B.G. Chittim, General Manager

Date: 01/15/2020
 (mm/dd/yyyy)

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It can be done

BDO Id:

200721-23

Reagent Receipt Report

Approved:

Authorized:

Name: M3PFBA

Received: 7/21/2020

Vendor: Wellington Laboratories

Custodian: Schultz, Stephanie

Catalogue No: M3PFBA

Expires: 2/24/2025

Type: Solution

Consumed:

Lot No: M3PFBA0120

Stored In: VOC Laboratory - R0123

Quantity: 1 ea mL % Moisture:

Description: M3PFBA

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

Total Analytes: 1

Notes:

Approved by: _____

Approved on: _____

Authorized by: _____

Authorized on: _____

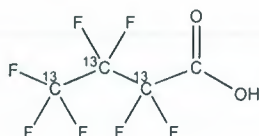


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CERTIFICATE OF ANALYSIS DOCUMENTATION

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

STRUCTURE: **CAS #:** Not available



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

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.
- Contains ~ 0.2% of perfluoro-n-[¹³C₃]propanoic acid and also contains ~ 1.0% of perfluoro-n-[1,2,3,4-¹³C₄]butanoic acid due to the naturally occurring isotopic abundance of ¹³C in the unlabelled carbon atom.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
 B.G. Chittim, General Manager

Date: 03/27/2020
 (mm/dd/yyyy)

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It can be done

BDO Id: 200721-24

Reagent Receipt Report

Approved: Authorized:

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

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

Notes:

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

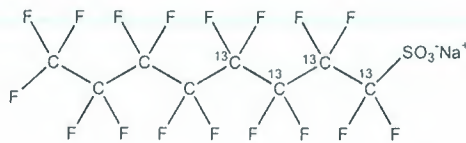


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CERTIFICATE OF ANALYSIS
DOCUMENTATION

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

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



MOLECULAR FORMULA:	¹³ C ₄ ¹² C ₄ F ₁₇ SO ₃ Na	MOLECULAR WEIGHT:	526.08
CONCENTRATION:	50.0 ± 2.5 µg/ml (Na salt) 47.9 ± 2.4 µg/ml (MPFOS acid) 47.8 ± 2.4 µg/ml (MPFOS anion)	SOLVENT(S):	Methanol
CHEMICAL PURITY:	>98%	ISOTOPIC PURITY:	≥99% ¹³ C (1,2,3,4- ¹³ C ₄)
LAST TESTED: (mm/dd/yyyy)	04/15/2020		
EXPIRY DATE: (mm/dd/yyyy)	04/15/2025		
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place		

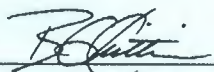
DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 0.3% Sodium perfluoro-1-[1,2,3-¹³C₃]heptanesulfonate.

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

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BATTELLE

It can be done

BDO Id: 200811-01

Reagent Receipt Report

Approved: Authorized

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

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	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:** _____



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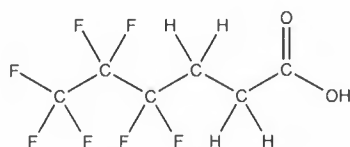
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: FPrPA
COMPOUND: 3-Perfluoropropyl propanoic acid

LOT NUMBER: FPrPA1219

STRUCTURE:

CAS #: 356-02-5



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

MOLECULAR WEIGHT: 242.09
SOLVENT(S): Methanol

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains <1% of the unsaturated 3:3 telomer acid ($C_6H_3F_7O_2$) as an impurity determined by ^{19}F NMR.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: 
B.G. Chittim, General Manager

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

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BATTELLE

It can be done

BDO Id: 200811-02

Reagent Receipt Report

Approved: Authorized

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

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

Total Analytes: 1

Notes:

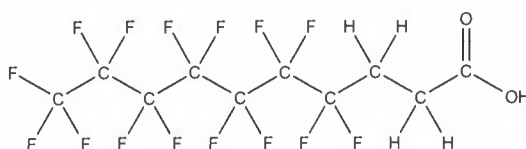
Approved by: _____ **Approved on:** _____
Authorized by: _____ **Authorized on:** _____



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:  **Date:** 04/01/2020
 B.G. Chittim, General Manager (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

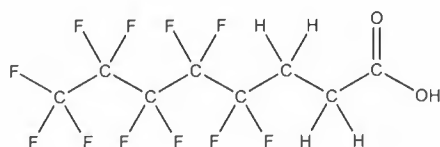
CERTIFICATE OF ANALYSIS DOCUMENTATION

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. Rantes	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. Perfluorononanolic acid	99200	110419	0.02	1.00	0.004	50.1	1.00	0.01	375-95-1	N/A	N/A
7. Perfluorodecanolic 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. Perfluoroundecanolic acid	99205	110419	0.02	1.00	0.004	50.1	1.00	0.01	2058-94-8	N/A	N/A
9. Tricosafuorododecanolic acid	99196	010820	0.02	1.00	0.004	50.1	1.00	0.01	307-55-1	N/A	N/A
10. Perfluorotridecanolic acid	99204	110419	0.02	1.00	0.004	50.1	1.00	0.01	72829-94-8	N/A	N/A
11. Perfluorotetradecanolic 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-Chloroicosafuoro-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-butyric acid (linear)	99542	110419	0.02	1.00	0.004	50.2	1.00	0.01	375-22-4	N/A	N/A
2. Perfluoro-n-pentanoic acid	99543	110419	0.02	1.00	0.004	50.7	1.01	0.02	2706-90-3	N/A	N/A
3. Perfluorohexanoic acid	99199	010820	0.02	1.00	0.004	50.3	1.01	0.01	307-24-4	N/A	N/A
4. Perfluorooctanoic acid (linear)*	99202	021820	0.02	1.00	0.004	50.3	1.01	0.01	335-67-1	N/A	or-rel 180mg/kg
5. Perfluorooctanoic acid (branched)*	99202	021820	0.02	1.00	0.004	50.3	1.01	0.01	335-67-1	N/A	or-rel 180mg/kg
6. Perfluorononanoic acid	99200	110419	0.02	1.00	0.004	50.1	1.00	0.01	375-95-1	N/A	N/A
7. Perfluorodecanoic acid	99195	110419	0.02	1.00	0.004	50.1	1.00	0.01	335-76-2	N/A	or-rel 57mg/kg
8. Perfluoroundecanoic acid	99205	110419	0.02	1.00	0.004	50.1	1.00	0.01	2058-94-8	N/A	N/A
9. Tricosfluorododecanoic acid	99196	010820	0.02	1.00	0.004	50.1	1.00	0.01	307-55-1	N/A	N/A
10. Perfluortridecanoic acid	99204	110419	0.02	1.00	0.004	50.1	1.00	0.01	72529-94-8	N/A	N/A
11. Perfluortetradecanoic acid	99203	120319	0.02	1.00	0.004	50.1	1.00	0.01	376-06-7	N/A	N/A
12. Perfluoro-1-octanesulfonamide	3677	FOSA04201	0.02	1.00	0.004	50.0	1.00	0.05	754-91-6	N/A	N/A
13. N-Methylperfluoro-1-octanesulfonamidoacetic acid (linear)*	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	LPFH6S0120	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	LPFNS1119	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	LPFDS1119	0.021	1.05	0.004	48.2	1.01	0.05	2806-15-7	N/A	N/A
22. 1H,1H,2H,2H-Perfluorohexane sulfonic acid	3955	42FTS0720	0.0214	1.07	0.004	46.7	1.00	0.05	27619-93-8	N/A	N/A
23. 1H,1H,2H,2H-Perfluorooctane sulfonic acid	3661	62FTS0420	0.021	1.05	0.004	47.4	1.00	0.05	27819-94-9	N/A	N/A
24. 1H,1H,2H,2H-Perfluorodecane sulfonic acid	3662	82FTS0520	0.021	1.05	0.004	47.9	1.01	0.05	27619-96-1	N/A	N/A
25. 2-(Heptafluoropropoxy)-2,3,3,3-tetrafluoropropionic acid	99966	061820	0.020	1.00	0.004	50.1	1.00	0.01	13252-13-6	N/A	N/A
26. 11-Chlorooctadecafluoro-3-oxaundecane-1-sulfonic acid	4165	11ClPF30udS0320	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	9ClPF30NS0420	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 Kuyatt, C.E., "Guidelines for Expressing and Reporting the Uncertainty of NIST Measurement Results," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).



It can be done

BDO Id: 201006-07

Reagent Receipt Report

Approved: Authorized

Name: PFOA DOD Received: 10/6/2020
 Vendor: ABSOLUTE STANDARDS Custodian: Bailey, Kevin
 Catalogue No: 64029 Expires: 7/28/2025
 Type: Solution Consumed: _____
 Lot No: 072820 Stored In: LC Laboratory - F0111
 Quantity: 5 ea ml % Moisture: _____
 Description: PFOA DOD

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

Total Analytes: 28

Notes:

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



201006-07

CERTIFIED WEIGHT REPORT

Part Number: 64029
Lot Number: 072820
Description: PFOA - DOD
28 components
Expiration Date: 072825
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 1.0
NIST Test ID#: 23060

Solvent(s): Methanol (1 mM KOH)
2-Propanol

Lot# 042920 (98%)
23214 (2%)

5E-05 Balance Uncertainty
0.007 Flask Uncertainty

Formulated By: Benson Chan	072820	DATE
Reviewed By: Pedro L. Rentas	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-pentanoic acid	99543	110419	0.02	1.00	0.004	50.7	1.01	0.02	2708-90-3	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. Perfluoroheptanoic 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	335-87-1	N/A	lpr-rat 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	335-78-2	N/A	ort-rat 57mg/kg
8. Perfluoroundecanoic acid	99205	110419	0.02	1.00	0.004	50.1	1.00	0.01	2058-94-6	N/A	N/A
9. Tricosulfurododecanoic acid	99198	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	378-08-7	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)*	4182	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)*	4183	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)*	99196	091219	0.02	1.00	0.004	50.6	1.01	0.01	355-48-4	N/A	N/A
18. Perfluoro-1-heptanesulfonic acid	3672	LPFHPS0120	0.021	1.05	0.004	47.8	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	LPFN51119	0.021	1.05	0.004	48.0	1.01	0.05	98789-57-2	N/A	N/A
21. Perfluoro-1-decanesulfonic 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	48.7	1.00	0.05	27819-93-8	N/A	N/A
23. 1H,1H,2H,2H-Perfluorooctane sulfonic acid	3681	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	3682	82FTS0520	0.021	1.05	0.004	47.9	1.01	0.05	27819-98-1	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	4185	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	4184	9CIPF3ONS0420	0.021	1.07	0.004	46.6	1.00	0.05	73608-19-6	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	335-87-1	N/A	lpr-rat 189mg/kg
Perfluorooctanoic acid (branched isomer)*	99202	021820	0.02	1.00	0.004	6.0	0.12	0.002	335-87-1	N/A	lpr-rat 189mg/kg
Perfluorohexanesulfonic acid (linear)*	99198	091219	0.02	1.00	0.004	50.0	1.00	0.01	355-48-4	N/A	N/A
Perfluorohexanesulfonic acid (branched isomer)*	99198	091219	0.02	1.00	0.004	0.6	0.01	0.0002	355-48-4	N/A	N/A
Heptadecafluorooctanesulfonic acid (linear)*	99201	021820	0.02	1.00	0.004	38.2	0.78	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
Heptadecafluorooclanesulfonic 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)*	4182	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)*	4182	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)*	4152	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)*	4182	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)*	4183	brNEIFOSAA0819	0.02	1.00	0.004	38.2	0.72	0.04	2991-50-6	N/A	N/A
N-Ethylperfluoro-1-octanesulfonamidoacetic acid (branched)*	4183	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)*	4183	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)*	4183	brNEIFOSAA0819	0.02	1.00	0.004	0.8	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. 1.2.2) 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 caps 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).



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
20-1375	
CTO-4532: PFAS in Water	
AQ, GW	
SOP Numbers (see workplan for modifications)	
ExtractionSOP No.	5-370

This Batch Contains The Following Samples:	
DB124PB-FS	G2207-FS
DB125LCS-FS	G2208-FS
G2203-FS	G2209-FS
G2204-FS	G2210-FS
G2205-FS	G2211-FS
G2206-FS	G2212-FS

Laboratory Preparation Records
COMPLETE AND VALIDATED

Prep Task Leader: Allison Wamness

Approved By:	Date	Initials
Denise Schumitz	11/24/2020	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

20-1375**CTO-4532: PFAS in Water****AQ, GW**

Sample ID	Description
DB124PB-FS	Procedural Blank
DB125LCS-FS	Laboratory Control Sample
G2203-FS	CBD-AOA-MW06-1020
G2204-FS	CBD-AOA-EB01-102720-GW
G2205-FS	CBD-AOA-MW12-1020
G2206-FS	CBD-AOA-MW11-1020
G2207-FS	CBD-AOA-MW11P-1020
G2208-FS	CBD-AOA-FB01-102820
G2209-FS	CBD-AOA-EB01-102820-GW
G2210-FS	CBD-AOA-MW14-1020
G2211-FS	CBD-AOA-MW13-1020
G2212-FS	CBD-AOA-IW01-102820

Samples Assigned By:

Matt Schumitz

Date : October 29, 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

20-1375**CTO-4532: PFAS in Water****AQ, GW**

Requested On/By: 11/04/2020 AW	Purpose: Sample Preparation
Relinquished On/By: 11/04/2020 MDS	Last Activity: Transfer
Accepted On/By: 11/04/2020 AW 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	G2203	1	C	Consumed	NA	
2	G2204	1	C	Consumed	NA	
3	G2205	1	C	Consumed	NA	
4	G2206	1	C	Consumed	NA	
5	G2207	1	C	Consumed	NA	
6	G2208	1	C	Consumed	NA	
7	G2209	1	C	Consumed	NA	
8	G2210	1	C	Consumed	NA	
9	G2211	1	C	Consumed	NA	
10	G2212	1	C	Consumed	NA	
Total Samples		10		* "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

20-1375

CTO-4532: PFAS in Water

AQ, GW

Sample ID	Description	Volume (mL)	Bottles	*	Date Initials
DB124PB-FS	Procedural Blank	250.0	NA	--	11/04/20 KH
DB125LCS-FS	Laboratory Control Sample	250.0	NA	--	11/04/20 KH
G2203-FS	CBD-AOA-MW06-1020	260.0	1	C	11/05/20 BTM
G2204-FS	CBD-AOA-EB01-102720-GW	250.0	1	C	11/05/20 AW
G2205-FS	CBD-AOA-MW12-1020	275.0	1	C	11/05/20 KH
G2206-FS	CBD-AOA-MW11-1020	270.0	1	C	11/05/20 KH
G2207-FS	CBD-AOA-MW11P-1020	255.0	1	C	11/05/20 KH
G2208-FS	CBD-AOA-FB01-102820	255.0	1	C	11/05/20 AW
G2209-FS	CBD-AOA-EB01-102820-GW	280.0	1	C	11/05/20 AW
G2210-FS	CBD-AOA-MW14-1020	250.0	1	C	11/05/20 KH
G2211-FS	CBD-AOA-MW13-1020	250.0	1	C	11/05/20 BTM
G2212-FS	CBD-AOA-IW01-102820	280.0	1	C	11/05/20 BTM

Comments:

Sample ID:	Comments:
G2205-FS	40 ul HCl was added to achieve a pH between 6 and 8. KH
G2206-FS	170ul HCl was added to achieve a pH between 6 and 8. KH
G2207-FS	170ul HCl was added to achieve a pH between 6 and 8. KH
G2210-FS	160ul HCl was added to achieve a pH between 6 and 8. KH

Samples Assigned By:

Matt Schumitz

Date : October 29, 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

20-1375**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
DB124PB-FS	LD44	SIS	8	125	11/04/20 AW	BTM	NA
DB125LCS-FS	LD44	SIS	8	125	11/04/20 AW	BTM	NA
DB125LCS-FS	LE23	LCS/MS	1	100	11/04/20 AW	BTM	NA
G2203-FS	LD44	SIS	8	125	11/04/20 AW	BTM	NA
G2204-FS	LD44	SIS	8	125	11/04/20 AW	BTM	NA
G2205-FS	LD44	SIS	8	125	11/04/20 AW	BTM	NA
G2206-FS	LD44	SIS	8	125	11/04/20 AW	BTM	NA
G2207-FS	LD44	SIS	8	125	11/04/20 AW	BTM	NA
G2208-FS	LD44	SIS	8	125	11/04/20 AW	BTM	NA
G2209-FS	LD44	SIS	8	125	11/04/20 AW	BTM	NA
G2210-FS	LD44	SIS	8	125	11/04/20 AW	BTM	NA
G2211-FS	LD44	SIS	8	125	11/04/20 AW	BTM	NA
G2212-FS	LD44	SIS	8	125	11/04/20 AW	BTM	NA

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
LD44	Pipette	B814657482
LE23	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

20-1375**CTO-4532: PFAS in Water****AQ, GW**

Sample ID	1st Extraction	2nd Extraction	3rd Extraction	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comment
DB124PB-FS	11/04/20 BTM	NA	NA	NEVAP_4	NA	NA	NA	NA
DB125LCS-FS	11/04/20 BTM	NA	NA	NEVAP_4	NA	NA	NA	NA
G2203-FS	11/04/20 BTM	NA	NA	NEVAP_4	NA	NA	NA	NA
G2204-FS	11/04/20 BTM	NA	NA	NEVAP_4	NA	NA	NA	NA
G2205-FS	11/04/20 BTM	NA	NA	NEVAP_4	NA	NA	NA	NA
G2206-FS	11/04/20 BTM	NA	NA	NEVAP_4	NA	NA	NA	NA
G2207-FS	11/04/20 BTM	NA	NA	NEVAP_4	NA	NA	NA	NA
G2208-FS	11/04/20 BTM	NA	NA	NEVAP_4	NA	NA	NA	NA
G2209-FS	11/04/20 BTM	NA	NA	NEVAP_4	NA	NA	NA	NA
G2210-FS	11/04/20 BTM	NA	NA	NEVAP_4	NA	NA	NA	NA
G2211-FS	11/04/20 BTM	NA	NA	NEVAP_4	NA	NA	NA	NA
G2212-FS	11/04/20 BTM	NA	NA	NEVAP_4	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	
Pre-packed SPE Column	RP-201104-10	11/04/20	S308-0116/S20-004413	Pre-packed SPE Column	
0.5% NH ₃ in Methanol (w/v)	RP-201104-5	11/04/20	A0409799	Per 100 mL, 4.25 mL ammonia solution brought to 100 mL with methanol	
0.5% NH ₃ in Methanol (w/v)	RP-201104-5	11/04/20	202167	Per 100 mL, 4.25 mL ammonia solution brought to 100 mL with methanol	

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

20-1375

CTO-4532: PFAS in Water

AQ, GW

Extract Id	Date	Init.	Comments
DB124PB-FS(0)	11/04/20	BTM	NA
DB125LCS-FS(0)	11/04/20	BTM	NA
G2203-FS(0)	11/04/20	BTM	NA
G2204-FS(0)	11/04/20	BTM	NA
G2205-FS(0)	11/04/20	BTM	NA
G2206-FS(0)	11/04/20	BTM	NA
G2207-FS(0)	11/04/20	BTM	NA
G2208-FS(0)	11/04/20	BTM	NA
G2209-FS(0)	11/04/20	BTM	NA
G2210-FS(0)	11/04/20	BTM	NA
G2211-FS(0)	11/04/20	BTM	NA
G2212-FS(0)	11/04/20	BTM	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

20-1375

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

20-1375

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
DB124PB-FS(0)	875	125	LE40	125	4	1000	1.000	11/18/20 KB	RPK
DB125LCS-FS(0)	875	125	LE40	125	4	1000	1.000	11/18/20 KB	RPK
G2203-FS(0)	875	125	LE40	125	4	1000	1.000	11/18/20 KB	RPK
G2204-FS(0)	875	125	LE40	125	4	1000	1.000	11/18/20 KB	RPK
G2205-FS(0)	875	125	LE40	125	4	1000	1.000	11/18/20 KB	RPK
G2206-FS(0)	875	125	LE40	125	4	1000	1.000	11/18/20 KB	RPK
G2207-FS(0)	875	125	LE40	125	4	1000	1.000	11/18/20 KB	RPK
G2208-FS(0)	875	125	LE40	125	4	1000	1.000	11/18/20 KB	RPK
G2209-FS(0)	875	125	LE40	125	4	1000	1.000	11/18/20 KB	RPK
G2210-FS(0)	875	125	LE40	125	4	1000	1.000	11/18/20 KB	RPK
G2211-FS(0)	875	125	LE40	125	4	1000	1.000	11/18/20 KB	RPK
G2212-FS(0)	875	125	LE40	125	4	1000	1.000	11/18/20 KB	RPK
G2212-FS-D(3)	900	100	LE40	125	5	1000	5.000	11/19/20 KB	BTM
G2212-FS-D(5)	900	100	LE40	125	5	1000	25.000	11/19/20 KB	BTM
G2212-FS-D(7)	900	100	LE40	125	5	1000	125.000	11/19/20 KB	BTM
G2212-FS-D(9)	925	75	LE40	125	5	1000	312.500	11/19/20 KB	BTM

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

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



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

20-1375

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
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Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
LE39	Pipette	B814657482
LE40	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

20-1375**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
G2212-FS-D(3)	5	LE39	SIS	6	100	0	0	11/19/20 KB	BTM
G2212-FS-D(5)	25	LE39	SIS	6	100	0	0	11/19/20 KB	BTM
G2212-FS-D(7)	125	LE39	SIS	6	100	0	0	11/19/20 KB	BTM
G2212-FS-D(9)	312.5	LE39	SIS	5	75	0	0	11/19/20 KB	BTM

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
LE39	Pipette	B814657482
LE40	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

20-1375**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	#					
DB124PB-FS	0	--	11/4/2020 12:48:00 PM	NA		NA	NA	1.000	1.000	11/04/20 AW
DB125LCS-FS	0	--	11/4/2020 12:48:00 PM	NA		NA	NA	1.000	1.000	11/04/20 AW
G2203-FS	0	--	11/4/2020 12:48:00 PM	NA		NA	NA	1.000	1.000	11/04/20 BTM
G2204-FS	0	--	11/4/2020 12:48:00 PM	NA		NA	NA	1.000	1.000	11/04/20 AW
G2205-FS	0	--	11/4/2020 12:48:00 PM	NA		NA	NA	1.000	1.000	11/04/20 BTM
G2206-FS	0	--	11/4/2020 12:48:00 PM	NA		NA	NA	1.000	1.000	11/04/20 BTM
G2207-FS	0	--	11/4/2020 12:48:00 PM	NA		NA	NA	1.000	1.000	11/04/20 BTM
G2208-FS	0	--	11/4/2020 12:48:00 PM	NA		NA	NA	1.000	1.000	11/04/20 AW
G2209-FS	0	--	11/4/2020 12:48:00 PM	NA		NA	NA	1.000	1.000	11/04/20 AW
G2210-FS	0	--	11/4/2020 12:48:00 PM	NA		NA	NA	1.000	1.000	11/04/20 BTM
G2211-FS	0	--	11/4/2020 12:48:00 PM	NA		NA	NA	1.000	1.000	11/04/20 BTM
G2212-FS	0	C	11/4/2020 12:48:00 PM	NA		NA	NA	1.000	1.000	11/04/20 BTM
G2212-FS	2	--	11/19/2020 2:49:00 PM	G2212-FS	0	1000	800	1.250	1.250	11/19/20 KB
G2212-FS-D	3	C	11/19/2020 2:49:00 PM	G2212-FS	0	1000	200	5.000	5.000	11/19/20 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

20-1375**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	#					
G2212-FS-D	4	--	11/19/2020 2:53:00 PM	G2212-FS-D	3	1000	800	1.250	6.250	11/19/20 KB
G2212-FS-D	5	C	11/19/2020 2:53:00 PM	G2212-FS-D	3	1000	200	5.000	25.000	11/19/20 KB
G2212-FS-D	6	--	11/19/2020 2:54:00 PM	G2212-FS-D	5	1000	800	1.250	31.250	11/19/20 KB
G2212-FS-D	7	C	11/19/2020 2:54:00 PM	G2212-FS-D	5	1000	200	5.000	125.000	11/19/20 KB
G2212-FS-D	8	--	11/19/2020 2:57:00 PM	G2212-FS-D	7	1000	600	1.667	208.333	11/19/20 KB
G2212-FS-D	9	--	11/19/2020 2:57:00 PM	G2212-FS-D	7	1000	400	2.500	312.500	11/19/20 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

20-1375

CTO-4532: PFAS in Water

AQ, GW

Purpose:	LC-MS/MS TRANSFER	Last Activity:	Prep->Inst
Relinquished On/By:	Nov 18 2020 7:06PM KB	Received On/By:	Nov 18 2020 7:06PM 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	DB124PB-FS(0)	1000	1	Intact	NA
2	DB125LCS-FS(0)	1000	1	Intact	NA
3	G2203-FS(0)	1000	1	Intact	NA
4	G2204-FS(0)	1000	1	Intact	NA
5	G2205-FS(0)	1000	1	Intact	NA
6	G2206-FS(0)	1000	1	Intact	NA
7	G2207-FS(0)	1000	1	Intact	NA
8	G2208-FS(0)	1000	1	Intact	NA
9	G2209-FS(0)	1000	1	Intact	NA
10	G2210-FS(0)	1000	1	Intact	NA
11	G2211-FS(0)	1000	1	Intact	NA
12	G2212-FS(0)	1000	1	Intact	NA

Total Extracts: 12



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

20-1375

CTO-4532: PFAS in Water

AQ, GW

Purpose: LC-MS/MS TRANSFER		Last Activity: Prep->Inst			
Relinquished On/By: Nov 19 2020 3:40PM KB		Received On/By: Nov 19 2020 3:40PM 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	G2212-FS-D(3)	1000	5	Intact	NA
2	G2212-FS-D(5)	1000	25	Intact	NA
3	G2212-FS-D(7)	1000	125	Intact	NA
4	G2212-FS-D(9)	1000	312.5	Intact	NA
Total Extracts:		4			



It can be done

BATTELLE - NORWELL OPERATIONS SAMPLE SPECIFIC COMMENTS

Project Title(s)

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

Project No.(s)

100142218

20-1375**CTO-4532: PFAS in Water****AQ, GW**

Sample ID:	Comment:	Date/Initials:
DB124PB-FS	Extraction started at 12:48 PM, manifold 5, ended at 2:15 PM	11/04/20 AW
DB124PB-FS	Sample was fortified per project plan, poured in to a centrifuge bottle and centrifuged at 3500 rpm for 5 minutes. Sample bottle was rinsed with milli-q water. Sample was then poured back into original container and centrifuge bottle was kept.	11/04/20 AW
DB125LCS-FS	Extraction started at 12:48 PM, manifold 5, ended at 2:14 PM	11/04/20 AW
DB125LCS-FS	Sample was fortified per project plan, poured in to a centrifuge bottle and centrifuged at 3500 rpm for 5 minutes. Sample bottle was rinsed with milli-q water. Sample was then poured back into original container and centrifuge bottle was kept.	11/04/20 AW
G2203-FS	Sample was fortified per project plan, poured in to a centrifuge bottle and centrifuged at 3500 rpm for 5 minutes. Sample bottle was rinsed with milli-q water. Sample was then poured back into original container and centrifuge bottle was kept.	11/04/20 AW
G2203-FS	Extraction began at 12:48PM, manifold 4, ended at 2:31PM.	11/04/20 BTM
G2204-FS	Extraction started at 12:48 PM, manifold 4, ended at 2:23 PM	11/04/20 AW
G2205-FS	Extraction began at 12:48PM, manifold 4, ended at 2:30PM.	11/04/20 BTM
G2206-FS	Extraction began at 12:48PM, manifold 4, ended at 2:30PM.	11/04/20 BTM
G2207-FS	Extraction began at 12:48PM, manifold 4, ended at 2:21PM.	11/04/20 BTM
G2208-FS	Extraction started at 12:48 PM, manifold 5, ended at 2:18 PM	11/04/20 AW
G2209-FS	Extraction started at 12:48 PM, manifold 5, ended at 2:39 PM	11/04/20 AW
G2210-FS	Extraction began at 12:48PM, manifold 4, ended at 2:00PM.	11/04/20 BTM
G2211-FS	Extraction began at 12:48PM, manifold 4, ended at 3:39PM.	11/04/20 BTM
G2211-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.	11/04/20 BTM
G2212-FS	Sample was fortified per project plan, poured in to a centrifuge bottle and centrifuged at 3500 rpm for 5 minutes. Sample bottle was rinsed with milli-q water. Sample was then poured back into original container and centrifuge bottle was kept.	11/04/20 AW
G2212-FS	Extraction began at 12:48PM, manifold 4, ended at 4:03PM.	11/04/20 BTM
G2212-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.	11/04/20 BTM



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

20-1375

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: 20/11/2020 11:20:11 AM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
12	LE52	L1	11/17/2020 8:04:16 PM	5-369.dam	AE_11172020_5-369.wiff
13	LE53	L2	11/17/2020 8:14:43 PM	5-369.dam	AE_11172020_5-369.wiff
14	LE54	L3	11/17/2020 8:25:10 PM	5-369.dam	AE_11172020_5-369.wiff
15	LE55	L4	11/17/2020 8:35:38 PM	5-369.dam	AE_11172020_5-369.wiff
16	LE56	L5	11/17/2020 8:46:05 PM	5-369.dam	AE_11172020_5-369.wiff
17	LE57	L6	11/17/2020 8:56:32 PM	5-369.dam	AE_11172020_5-369.wiff
18	LE58 IB	Instrument Blank	11/17/2020 9:06:58 PM	5-369.dam	AE_11172020_5-369.wiff
19	LE59 ICC	ICC	11/17/2020 9:17:26 PM	5-369.dam	AE_11172020_5-369.wiff
20	LE25 Branch	Branch Standard	11/17/2020 9:27:55 PM	5-369.dam	AE_11172020_5-369.wiff



Sequence Report

Created with Analyst Reporter
Printed: 20/11/2020 11:22:46 AM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
2	LE54 CCV	CCV	11/18/2020 6:54:22 PM	5-369.dam	AE_11182020_5-369.wiff
3	LE57	L6	11/18/2020 7:04:51 PM	5-369.dam	AE_11182020_5-369.wiff
4	LE58 IB	Instrument Blank	11/18/2020 7:15:18 PM	5-369.dam	AE_11182020_5-369.wiff
5	MeOH		11/18/2020 7:25:45 PM	5-369.dam	AE_11182020_5-369.wiff
6	DB350PB-FS(0)		11/18/2020 7:36:12 PM	5-369.dam	AE_11182020_5-369.wiff
7	DB351LCS-FS(0)		11/18/2020 7:46:38 PM	5-369.dam	AE_11182020_5-369.wiff
8	G2953-FS(0)		11/18/2020 7:57:05 PM	5-369.dam	AE_11182020_5-369.wiff
9	G2954-FS(0)		11/18/2020 8:07:32 PM	5-369.dam	AE_11182020_5-369.wiff
10	G2957-FS(0)		11/18/2020 8:17:59 PM	5-369.dam	AE_11182020_5-369.wiff
11	G2958-FS(0)		11/18/2020 8:28:26 PM	5-369.dam	AE_11182020_5-369.wiff
12	G2961-FS(0)		11/18/2020 8:38:53 PM	5-369.dam	AE_11182020_5-369.wiff
13	G2962-FS(0)		11/18/2020 8:49:20 PM	5-369.dam	AE_11182020_5-369.wiff
14	MeOH		11/18/2020 8:59:48 PM	5-369.dam	AE_11182020_5-369.wiff
15	LE55 CCV	CCV	11/18/2020 9:10:16 PM	5-369.dam	AE_11182020_5-369.wiff
16	MeOH		11/18/2020 9:20:44 PM	5-369.dam	AE_11182020_5-369.wiff
17	DB124PB-FS(0)	Procedural Blank	11/18/2020 9:31:12 PM	5-369.dam	AE_11182020_5-369.wiff
18	DB125LCS-FS(0)	Laboratory Control Sample	11/18/2020 9:41:40 PM	5-369.dam	AE_11182020_5-369.wiff
19	G2203-FS(0)	CBD-AOA-MW06-1020	11/18/2020 9:52:09 PM	5-369.dam	AE_11182020_5-369.wiff
20	G2204-FS(0)	CBD-AOA-EB01-102720-GW	11/18/2020 10:02:37 PM	5-369.dam	AE_11182020_5-369.wiff
21	G2205-FS(0)	CBD-AOA-MW12-1020	11/18/2020 10:13:05 PM	5-369.dam	AE_11182020_5-369.wiff
22	G2206-FS(0)	CBD-AOA-MW11-1020	11/18/2020 10:23:33 PM	5-369.dam	AE_11182020_5-369.wiff
23	G2207-FS(0)	CBD-AOA-MW11P-1020	11/18/2020 10:34:01 PM	5-369.dam	AE_11182020_5-369.wiff
24	G2208-FS(0)	CBD-AOA-FB01-102820	11/18/2020 10:44:29 PM	5-369.dam	AE_11182020_5-369.wiff
25	MeOH		11/18/2020 10:54:57 PM	5-369.dam	AE_11182020_5-369.wiff
26	LE54 CCV	CCV	11/18/2020 11:05:25 PM	5-369.dam	AE_11182020_5-369.wiff
27	G2209-FS(0)	CBD-AOA-EB01-102820-GW	11/18/2020 11:15:54 PM	5-369.dam	AE_11182020_5-369.wiff
28	G2210-FS(0)	CBD-AOA-MW14-1020	11/18/2020 11:26:21 PM	5-369.dam	AE_11182020_5-369.wiff
29	G2211-FS(0)	CBD-AOA-MW13-1020	11/18/2020 11:36:49 PM	5-369.dam	AE_11182020_5-369.wiff
30	G2212-FS(0)	CBD-AOA-IW01-102820	11/18/2020 11:47:17 PM	5-369.dam	AE_11182020_5-369.wiff
31	MeOH		11/18/2020 11:57:46 PM	5-369.dam	AE_11182020_5-369.wiff
32	LE55 CCV	CCV	11/19/2020 12:08:13 AM	5-369.dam	AE_11182020_5-369.wiff

1. Samples from another batch, not reported with this one. DMS 11/20/2020
2. Samples did not meet passing criteria, a fresh aliquot was taken, run and is being reported. DMS 11/20/2020



Sequence Report

Created with Analyst Reporter
Printed: 20/11/2020 11:27:58 AM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
1	LE55 CCV	CCV	11/19/2020 4:18:03 PM	5-369.dam	AE_11192020_5-369.wiff
2	LE57	L6	11/19/2020 4:28:32 PM	5-369.dam	AE_11192020_5-369.wiff
3	LE58 IB	Instrument Blank	11/19/2020 4:39:00 PM	5-369.dam	AE_11192020_5-369.wiff
4	MeOH		11/19/2020 4:49:27 PM	5-369.dam	AE_11192020_5-369.wiff
1	MeOH		11/19/2020 6:56:24 PM	5-369.dam	AE_11192020_5-369.wiff
2	DB124PB-FS(0)	Procedural Blank	11/19/2020 7:06:53 PM	5-369.dam	AE_11192020_5-369.wiff
3	G2203-FS(0)	CBD-AOA-MW06-1020	11/19/2020 7:17:24 PM	5-369.dam	AE_11192020_5-369.wiff
4	G2204-FS(0)	CBD-AOA-EB01-102720-GW	11/19/2020 7:27:53 PM	5-369.dam	AE_11192020_5-369.wiff
5	G2205-FS(0)	CBD-AOA-MW12-1020	11/19/2020 7:38:20 PM	5-369.dam	AE_11192020_5-369.wiff
6	G2206-FS(0)	CBD-AOA-MW11-1020	11/19/2020 7:48:47 PM	5-369.dam	AE_11192020_5-369.wiff
7	G2207-FS(0)	CBD-AOA-MW11P-1020	11/19/2020 7:59:14 PM	5-369.dam	AE_11192020_5-369.wiff
8	G2208-FS(0)	CBD-AOA-FB01-102820	11/19/2020 8:09:41 PM	5-369.dam	AE_11192020_5-369.wiff
9	G2209-FS(0)	CBD-AOA-EB01-102820-GW	11/19/2020 8:20:11 PM	5-369.dam	AE_11192020_5-369.wiff
10	MeOH		11/19/2020 8:30:37 PM	5-369.dam	AE_11192020_5-369.wiff
11	LE55 CCV	CCV	11/19/2020 8:41:06 PM	5-369.dam	AE_11192020_5-369.wiff
12	G2210-FS(0)	CBD-AOA-MW14-1020	11/19/2020 8:51:35 PM	5-369.dam	AE_11192020_5-369.wiff
13	G2211-FS(0)	CBD-AOA-MW13-1020	11/19/2020 9:02:03 PM	5-369.dam	AE_11192020_5-369.wiff
14	G2212-FS(0)	CBD-AOA-IW01-102820	11/19/2020 9:12:30 PM	5-369.dam	AE_11192020_5-369.wiff
15	G2212-FS-D(3)	CBD-AOA-IW01-102820	11/19/2020 9:22:58 PM	5-369.dam	AE_11192020_5-369.wiff
16	G2212-FS-D(5)	CBD-AOA-IW01-102820	11/19/2020 9:33:26 PM	5-369.dam	AE_11192020_5-369.wiff
17	G2212-FS-D(7)	CBD-AOA-IW01-102820	11/19/2020 9:43:54 PM	5-369.dam	AE_11192020_5-369.wiff
18	G2212-FS-D(9)	CBD-AOA-IW01-102820	11/19/2020 9:54:22 PM	5-369.dam	AE_11192020_5-369.wiff
19	MeOH		11/19/2020 10:04:50 PM	5-369.dam	AE_11192020_5-369.wiff
20	LE54 CCV	CCV	11/19/2020 10:15:19 PM	5-369.dam	AE_11192020_5-369.wiff

1

1

2

1. Sample run for confirmation only. DMS 11/20/2020
2. Dilution made and run but not needed. DMS 11/20/2020



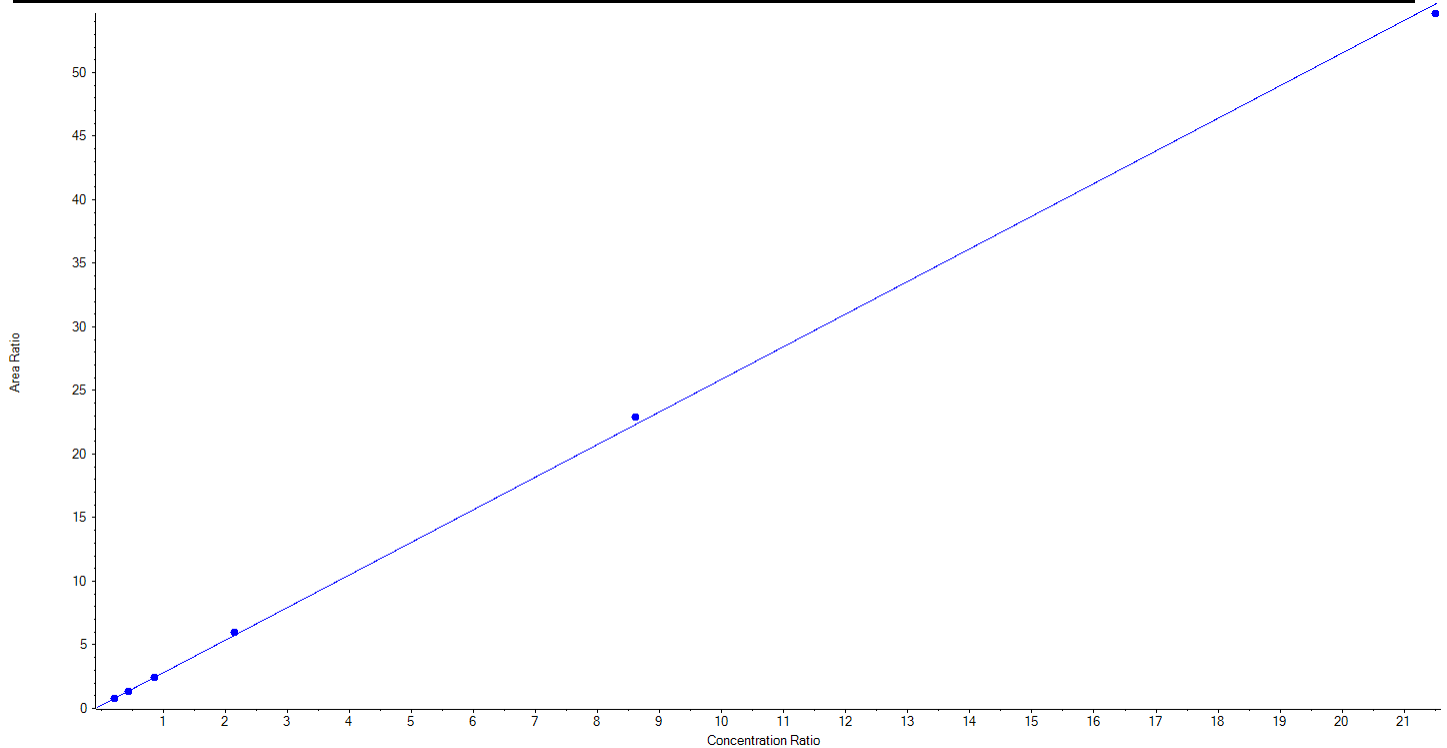
Calibration Summary Report

Created with Analyst Reporter
Printed: 20/11/2020 4:51:43 PM

Analyte Name	PFBS_1	Data File	AE_11172020_5-369.wiff
MRM Transition	298.9 / 80.0	Result Table	20-1375
Internal Standard	13C3-PFBS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 2.56405x + 0.25050$ ($r = 0.99977$) (weighting: $1/x$) $r^2:0.9995$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	234.87	94.0
13	LE53	L2	True	500.00	506.07	101.2
14	LE54	L3	True	1000.00	998.98	99.9
15	LE55	L4	True	2500.00	2593.18	103.7
16	LE56	L5	True	10000.00	10257.31	102.6
17	LE57	L6	True	25000.00	24659.59	98.6





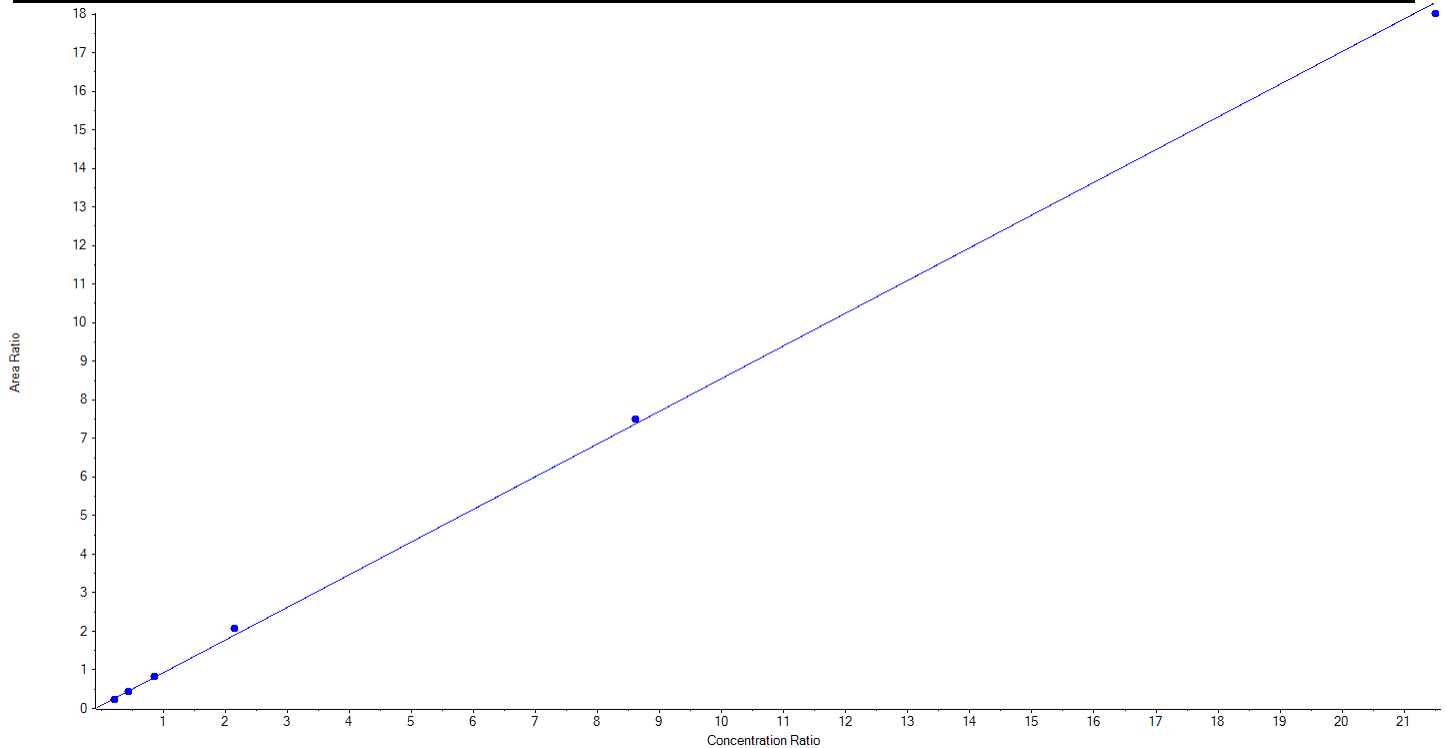
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Analyte Name	PFBS_2	Data File	AE_11172020_5-369.wiff
MRM Transition	298.9 / 99.0	Result Table	20-1375
Internal Standard	13C3-PFBS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.84725x + 0.08260$ ($r = 0.99951$) (weighting: $1/x$) $r^2: 0.9990$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	219.57	87.8
13	LE53	L2	True	500.00	507.68	101.5
14	LE54	L3	True	1000.00	1014.51	101.5
15	LE55	L4	True	2500.00	2724.14	109.0
16	LE56	L5	True	10000.00	10180.51	101.8
17	LE57	L6	True	25000.00	24603.60	98.4





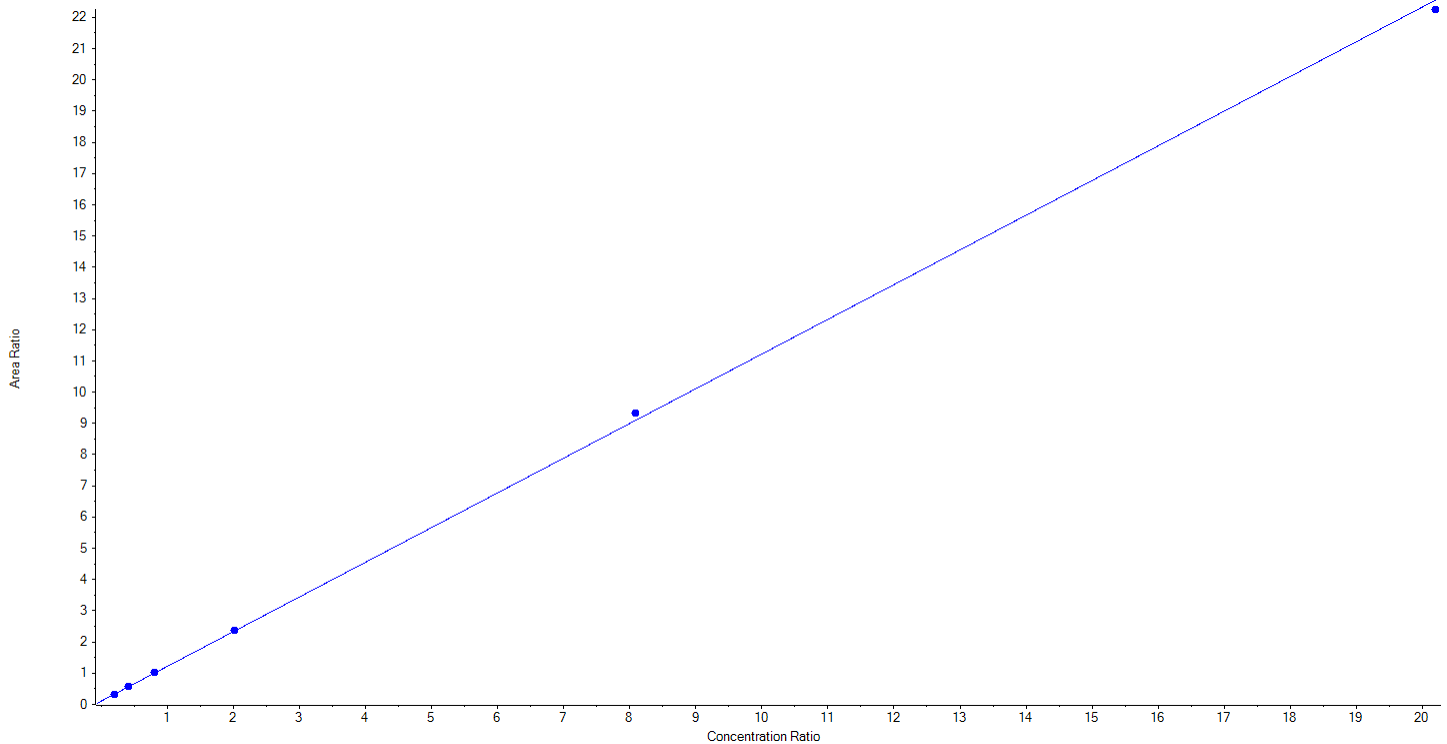
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Analyte Name	PFHxA_1	Data File	AE_11172020_5-369.wiff
MRM Transition	313.0 / 269.0	Result Table	20-1375
Internal Standard	13C5-PFHxA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.11075x + 0.11241$ ($r = 0.99977$) (weighting: $1/x$) $r^2:0.9995$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	252.50	233.27	92.4
13	LE53	L2	True	505.00	512.90	101.6
14	LE54	L3	True	1010.00	1045.73	103.5
15	LE55	L4	True	2525.00	2550.13	101.0
16	LE56	L5	True	10100.00	10388.54	102.9
17	LE57	L6	True	25250.00	24911.93	98.7





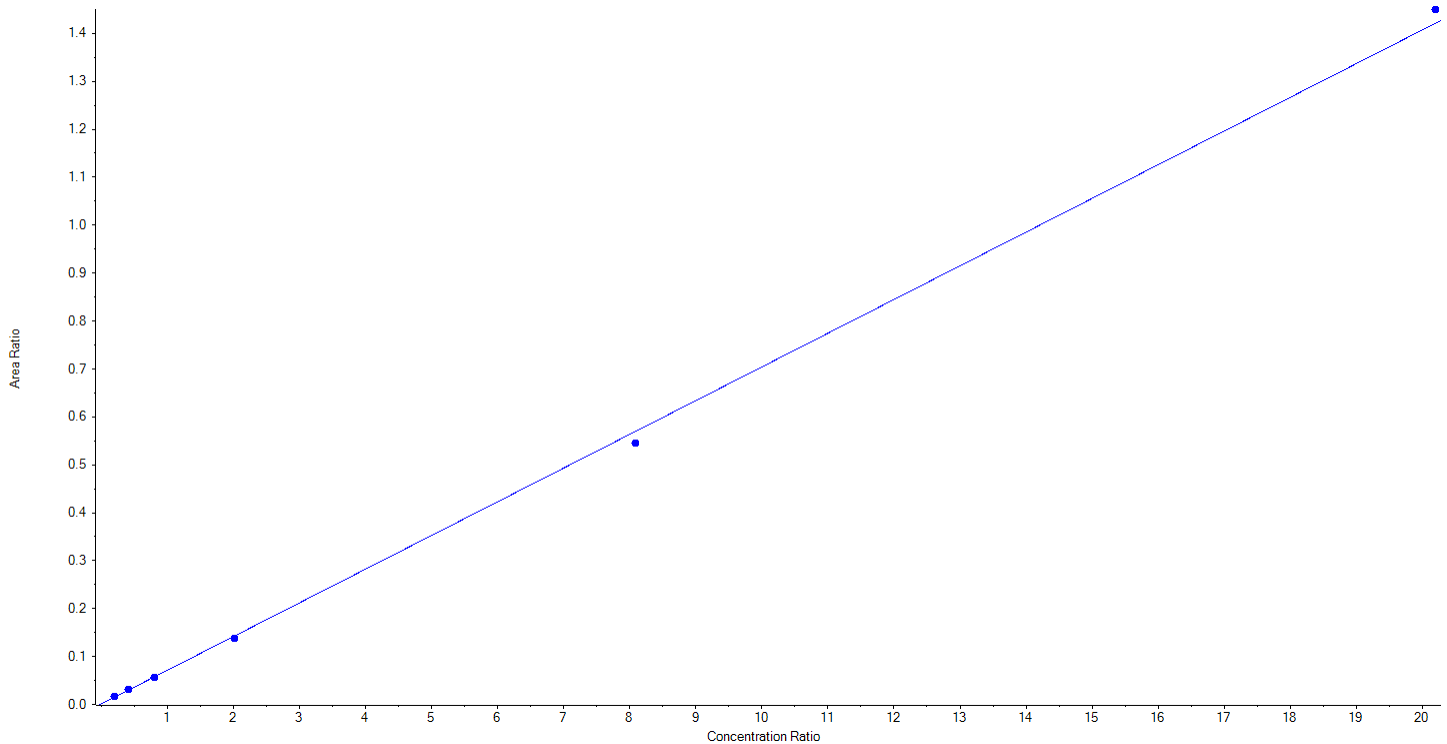
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Analyte Name	PFHxA_2	Data File	AE_11172020_5-369.wiff
MRM Transition	313.0 / 119.0	Result Table	20-1375
Internal Standard	13C5-PFHxA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.07029x + 0.00124$ ($r = 0.99953$) (weighting: $1/x$) $r^2:0.9991$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	252.50	263.60	104.4
13	LE53	L2	True	505.00	525.40	104.0
14	LE54	L3	True	1010.00	981.20	97.2
15	LE55	L4	True	2525.00	2439.33	96.6
16	LE56	L5	True	10100.00	9675.48	95.8
17	LE57	L6	True	25250.00	25757.48	102.0





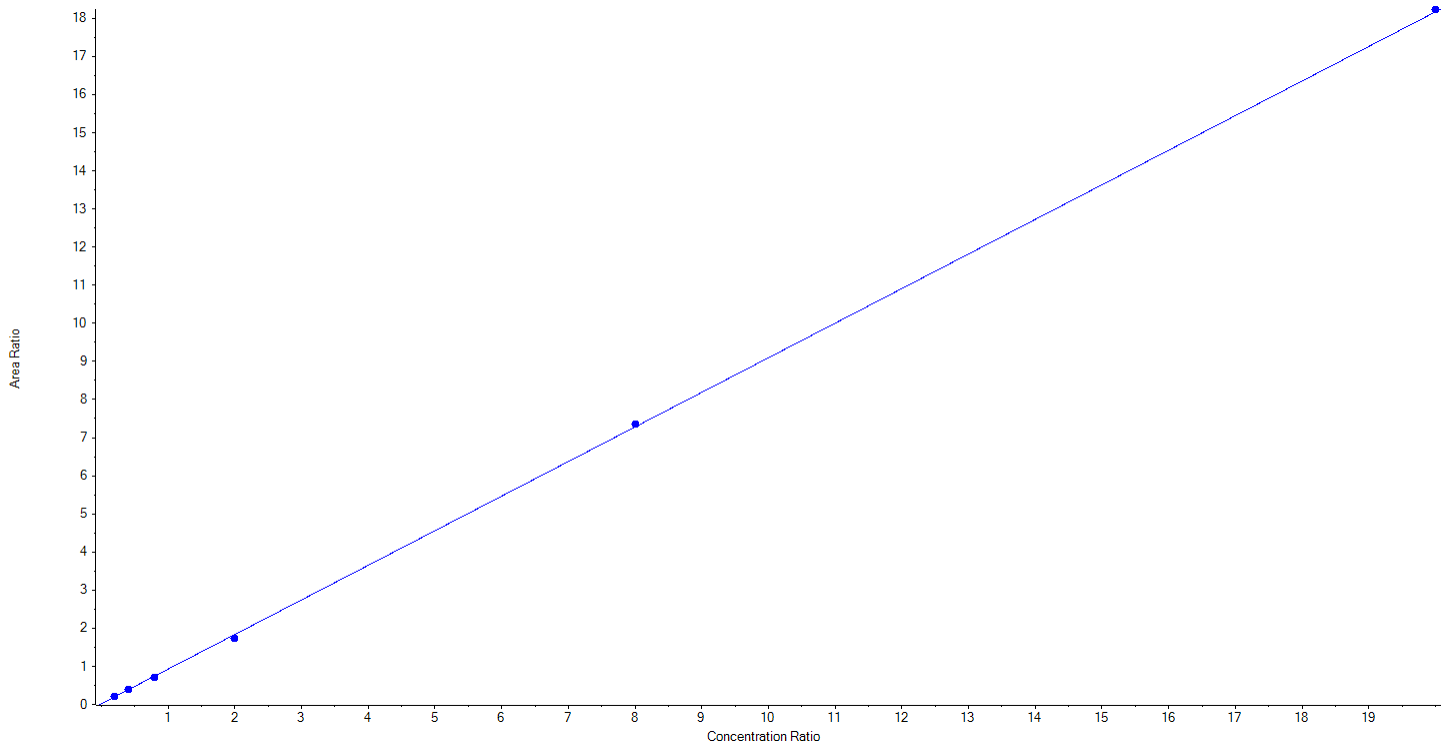
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Analyte Name	PFHpA_1	Data File	AE_11172020_5-369.wiff
MRM Transition	363.0 / 319.0	Result Table	20-1375
Internal Standard	13C4-PFHpA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.90735x + 0.02179$ ($r = 0.99979$) (weighting: $1/x$) $r^2: 0.9996$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	272.42	109.0
13	LE53	L2	True	500.00	503.16	100.6
14	LE54	L3	True	1000.00	952.10	95.2
15	LE55	L4	True	2500.00	2348.93	94.0
16	LE56	L5	True	10000.00	10089.98	100.9
17	LE57	L6	True	25000.00	25083.41	100.3





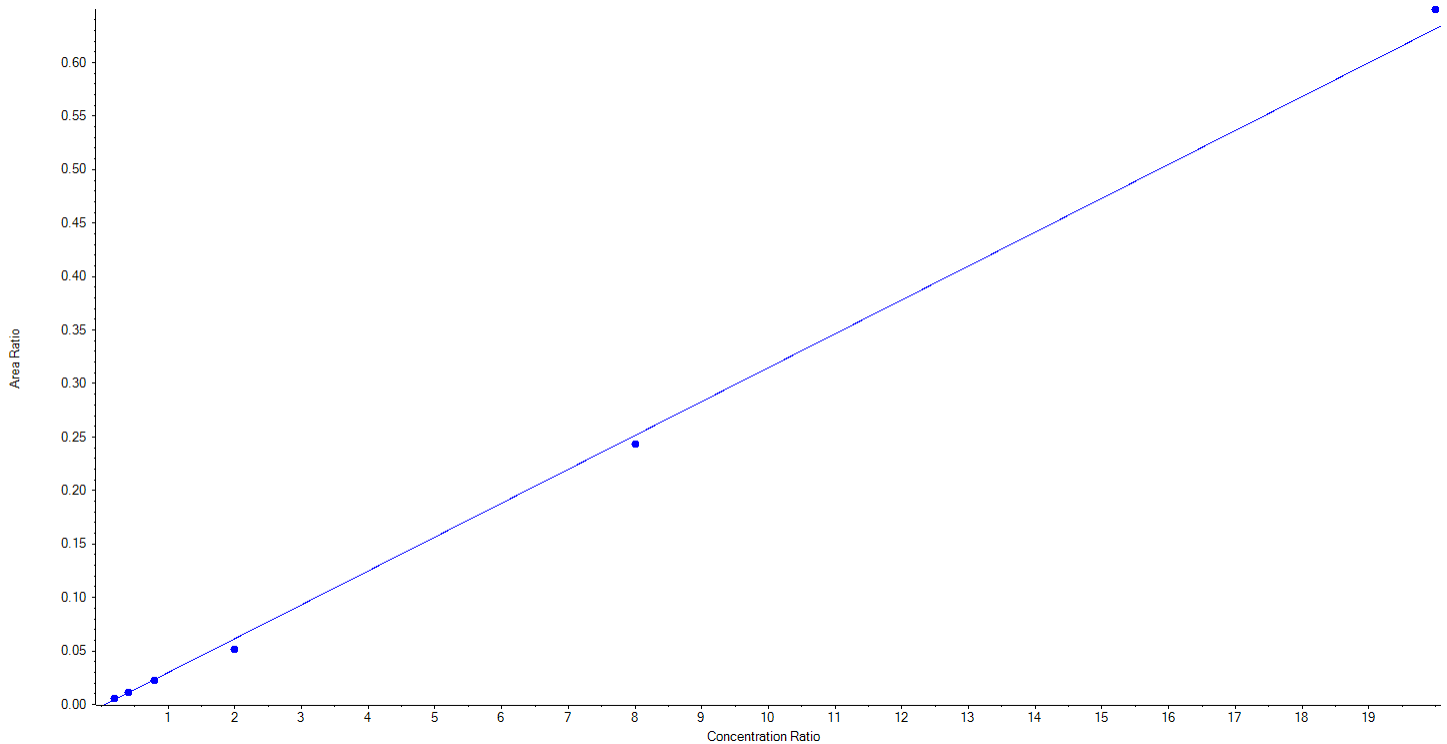
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Analyte Name	PFHpA_2	Data File	AE_11172020_5-369.wiff
MRM Transition	363.0 / 169.0	Result Table	20-1375
Internal Standard	13C4-PFHpA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.03167 x + -0.00183$ ($r = 0.99842$) (weighting: $1 / x$) $r^2: 0.9968$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	293.52	117.4
13	LE53	L2	True	500.00	525.18	105.0
14	LE54	L3	True	1000.00	942.10	94.2
15	LE55	L4	True	2500.00	2090.82	83.6
16	LE56	L5	True	10000.00	9686.36	96.9
17	LE57	L6	True	25000.00	25712.02	102.9





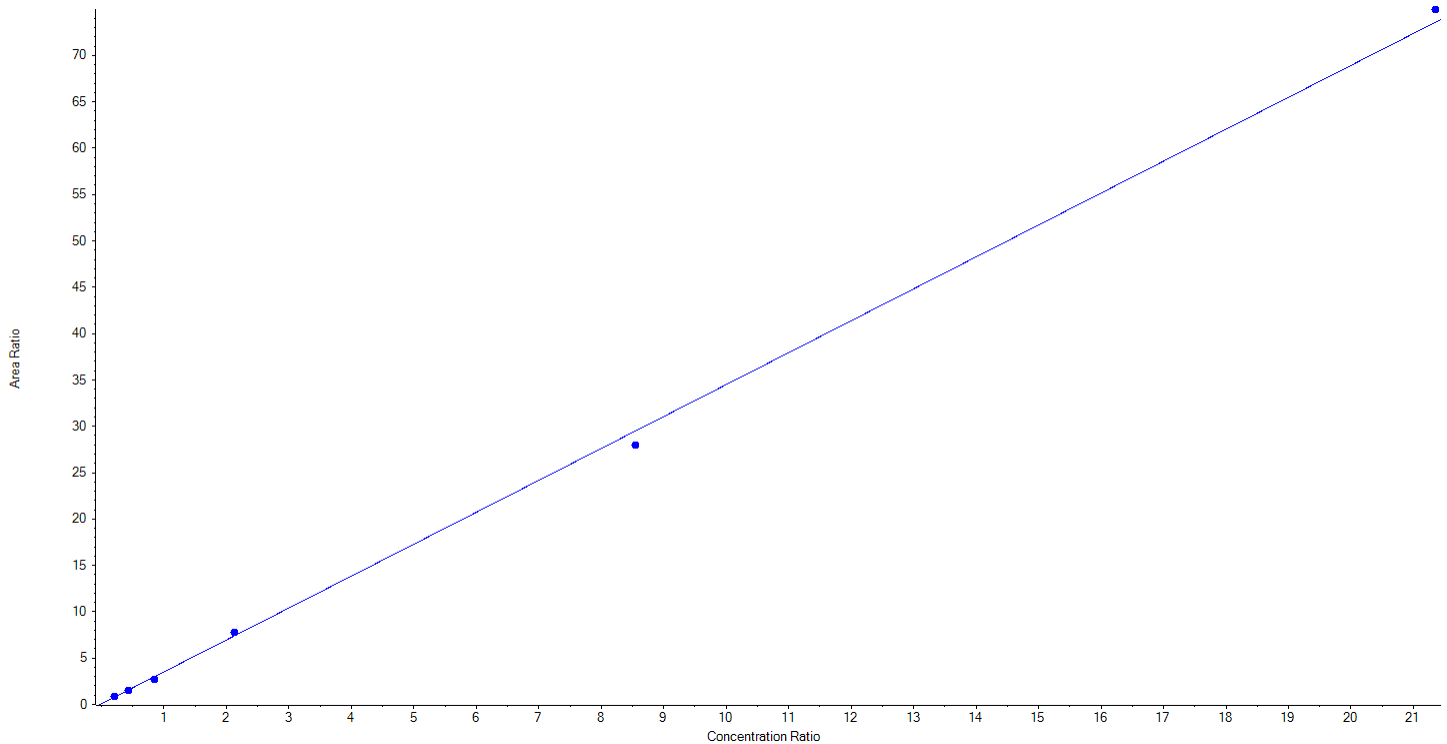
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Analyte Name	PFHxS_1	Data File	AE_11172020_5-369.wiff
MRM Transition	399.0 / 80.0	Result Table	20-1375
Internal Standard	13C3-PFHxS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 3.44230x + 0.07757$ ($r = 0.99922$) (weighting: $1/x$) $r^2: 0.9984$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	252.50	276.09	109.3
13	LE53	L2	True	505.00	502.23	99.5
14	LE54	L3	True	1010.00	902.40	89.4
15	LE55	L4	True	2525.00	2652.60	105.1
16	LE56	L5	True	10100.00	9589.19	94.9
17	LE57	L6	True	25250.00	25719.98	101.9





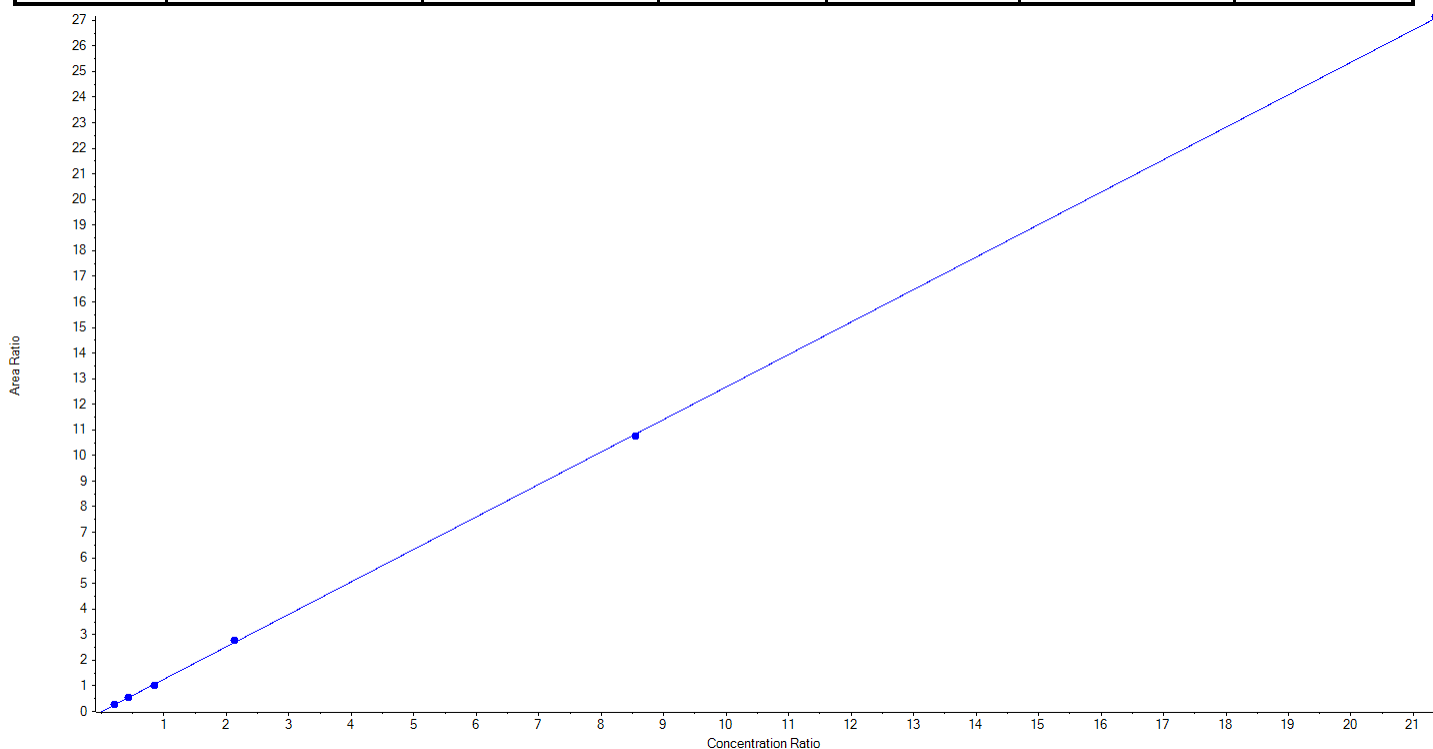
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Analyte Name	PFHxS_2	Data File	AE_11172020_5-369.wiff
MRM Transition	399.0 / 99.0	Result Table	20-1375
Internal Standard	13C3-PFHxS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.26840 x + -0.00843$ ($r = 0.99988$) (weighting: $1 / x$) $r^2:0.9998$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	252.50	260.18	103.0
13	LE53	L2	True	505.00	514.53	101.9
14	LE54	L3	True	1010.00	938.44	92.9
15	LE55	L4	True	2525.00	2592.65	102.7
16	LE56	L5	True	10100.00	10020.88	99.2
17	LE57	L6	True	25250.00	25315.82	100.3





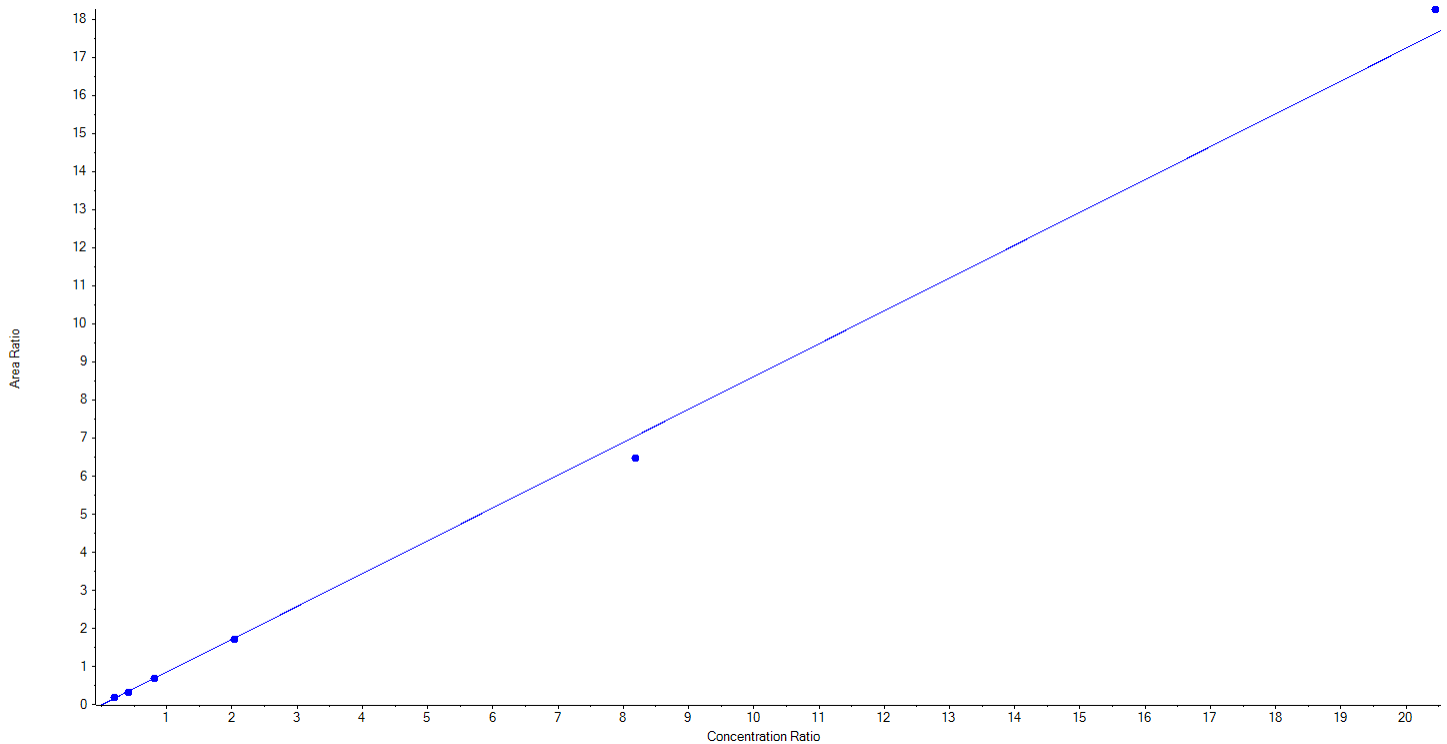
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Analyte Name	PFOA_1	Data File	AE_11172020_5-369.wiff
MRM Transition	413.0 / 369.0	Result Table	20-1375
Internal Standard	13C8-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.86262x + -0.01299$ ($r = 0.99847$) (weighting: $1/x$) $r^2: 0.9969$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	284.11	113.6
13	LE53	L2	True	500.00	479.53	95.9
14	LE54	L3	True	1000.00	975.56	97.6
15	LE55	L4	True	2500.00	2437.03	97.5
16	LE56	L5	True	10000.00	9186.10	91.9
17	LE57	L6	True	25000.00	25887.67	103.6





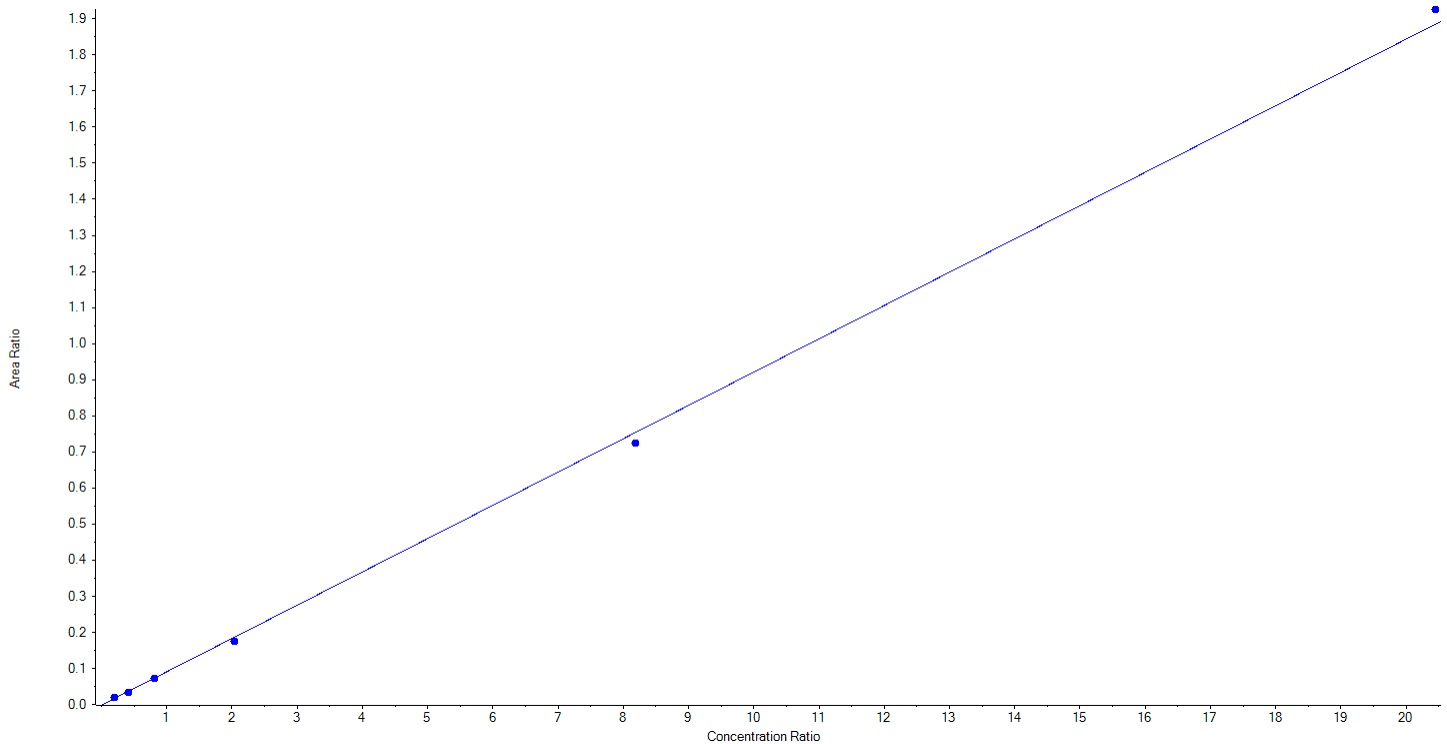
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Analyte Name	PFOA_2	Data File	AE_11172020_5-369.wiff
MRM Transition	413.0 / 169.0	Result Table	20-1375
Internal Standard	13C8-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.09227 x + -0.00166$ ($r = 0.99940$) (weighting: $1 / x$) $r^2: 0.9988$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	282.30	112.9
13	LE53	L2	True	500.00	480.15	96.0
14	LE54	L3	True	1000.00	991.74	99.2
15	LE55	L4	True	2500.00	2338.01	93.5
16	LE56	L5	True	10000.00	9620.47	96.2
17	LE57	L6	True	25000.00	25537.33	102.2





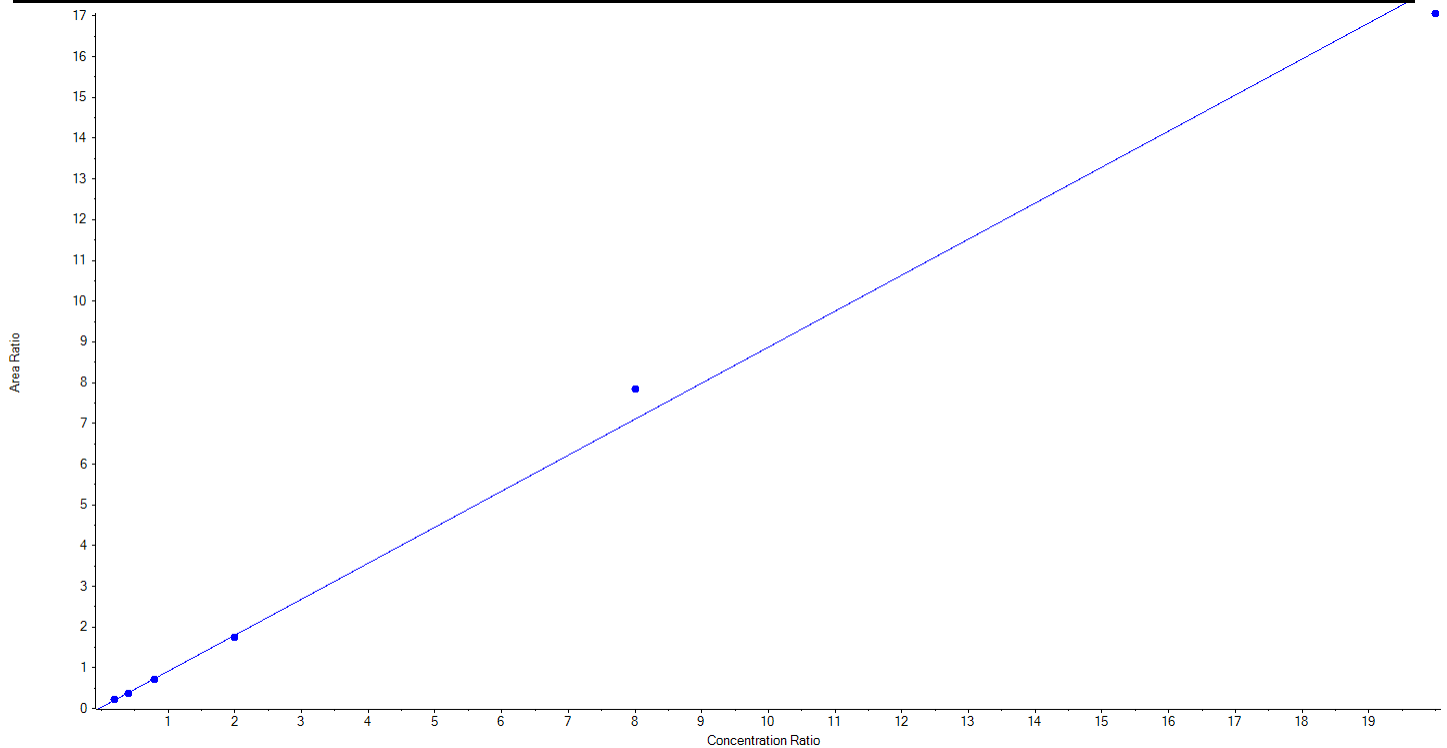
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Analyte Name	PFNA_1	Data File	AE_11172020_5-369.wiff
MRM Transition	463.0 / 419.0	Result Table	20-1375
Internal Standard	13C9-PFNA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.88406 x + 0.02988$ ($r = 0.99790$) (weighting: $1/x$) $r^2:0.9958$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	262.56	105.0
13	LE53	L2	True	500.00	465.69	93.1
14	LE54	L3	True	1000.00	978.08	97.8
15	LE55	L4	True	2500.00	2435.53	97.4
16	LE56	L5	True	10000.00	11029.41	110.3
17	LE57	L6	True	25000.00	24078.74	96.3





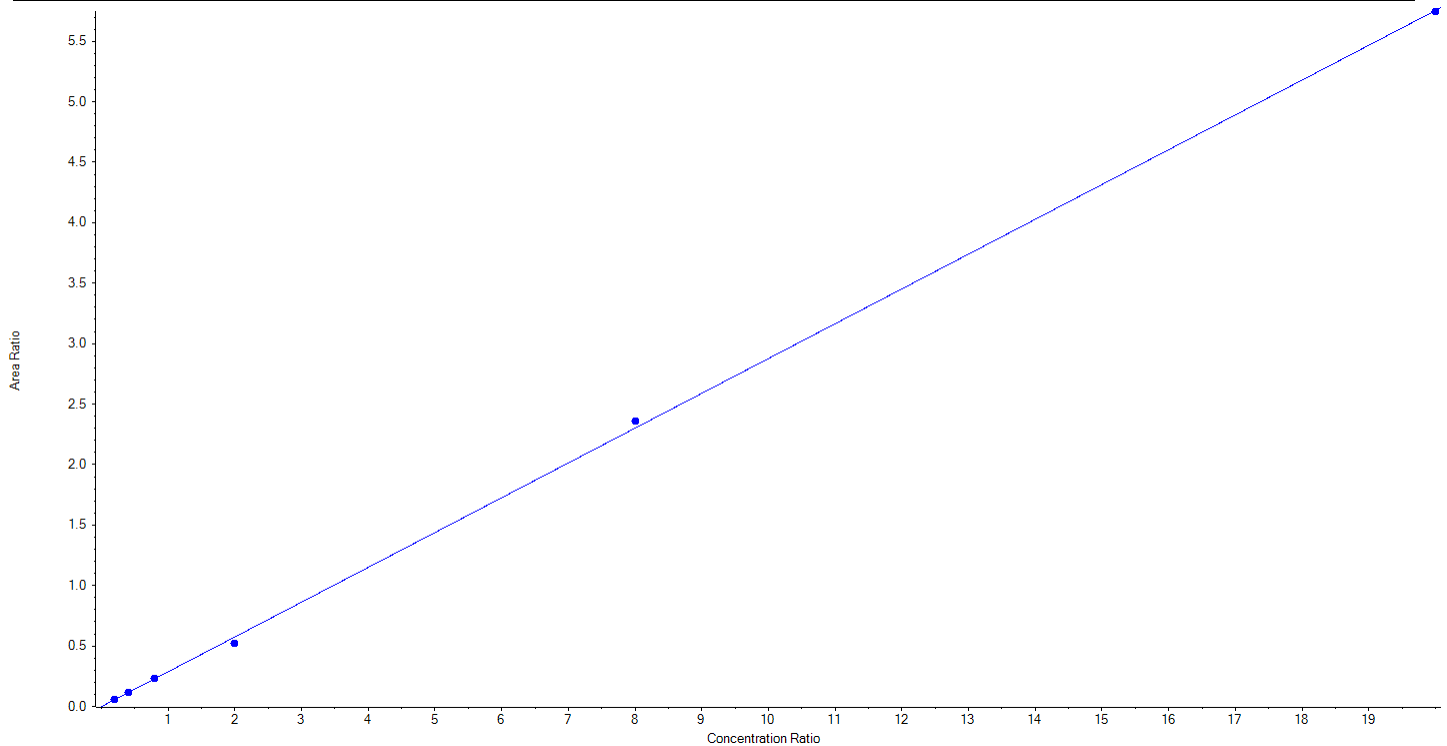
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Analyte Name	PFNA_2	Data File	AE_11172020_5-369.wiff
MRM Transition	463.0 / 219.0	Result Table	20-1375
Internal Standard	13C9-PFNA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.28775x + -6.64436e-4$ ($r = 0.99958$) (weighting: $1/x$) $r^2: 0.9992$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	259.15	103.7
13	LE53	L2	True	500.00	517.02	103.4
14	LE54	L3	True	1000.00	999.43	99.9
15	LE55	L4	True	2500.00	2267.28	90.7
16	LE56	L5	True	10000.00	10245.32	102.5
17	LE57	L6	True	25000.00	24961.80	99.9





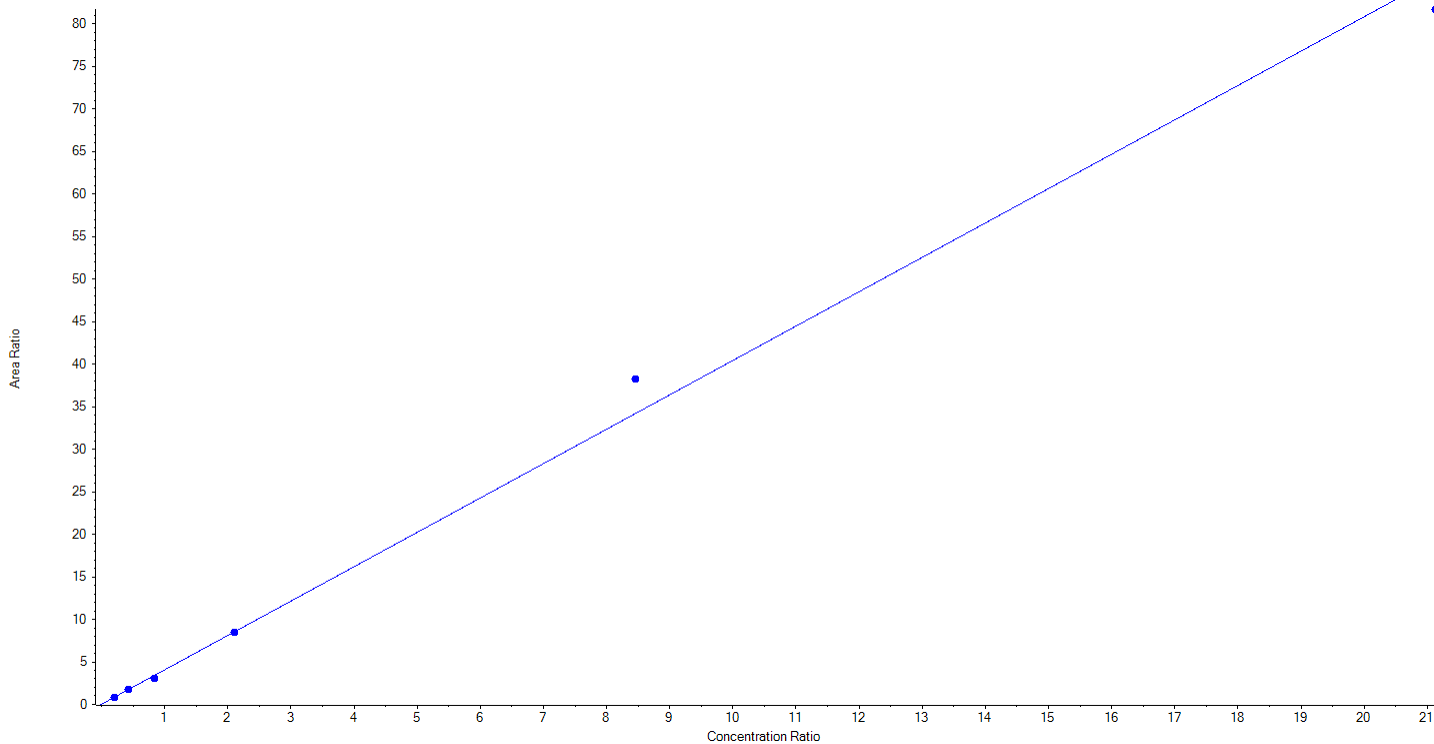
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Analyte Name	PFOS_1	Data File	AE_11172020_5-369.wiff
MRM Transition	499.0 / 80.0	Result Table	20-1375
Internal Standard	13C8-PFOS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 4.03886 x + 0.02689$ (r = 0.99715) (weighting: 1 / x) $r^2:0.9943$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	252.50	250.53	99.2
13	LE53	L2	True	505.00	522.98	103.6
14	LE54	L3	True	1010.00	910.33	90.1
15	LE55	L4	True	2525.00	2515.80	99.6
16	LE56	L5	True	10100.00	11292.33	111.8
17	LE57	L6	True	25250.00	24150.53	95.7





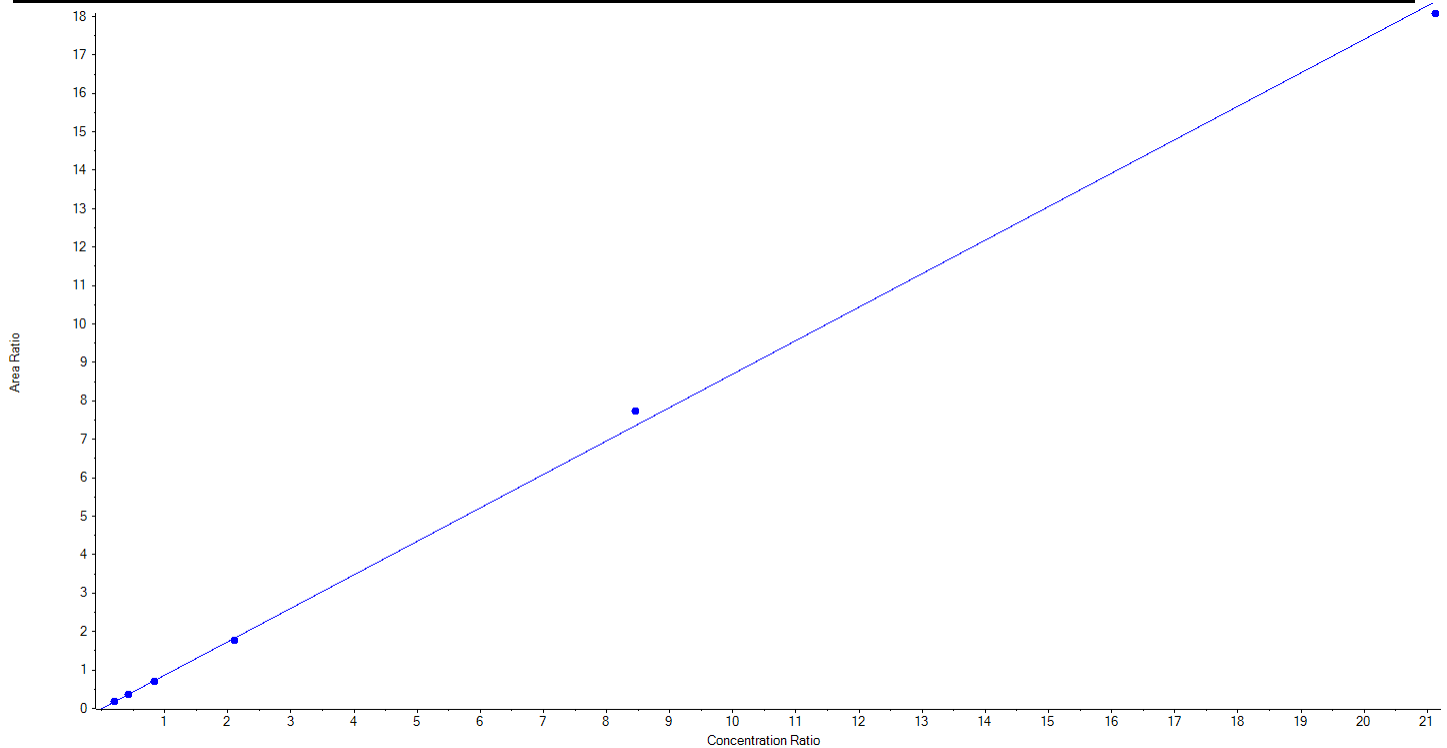
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Analyte Name	PFOS_2	Data File	AE_11172020_5-369.wiff
MRM Transition	499.0 / 99.0	Result Table	20-1375
Internal Standard	13C8-PFOS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.87056x + -0.00608$ ($r = 0.99942$) (weighting: $1/x$) $r^2: 0.9988$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	252.50	261.34	103.5
13	LE53	L2	True	505.00	506.40	100.3
14	LE54	L3	True	1010.00	963.79	95.4
15	LE55	L4	True	2525.00	2454.04	97.2
16	LE56	L5	True	10100.00	10635.68	105.3
17	LE57	L6	True	25250.00	24821.24	98.3





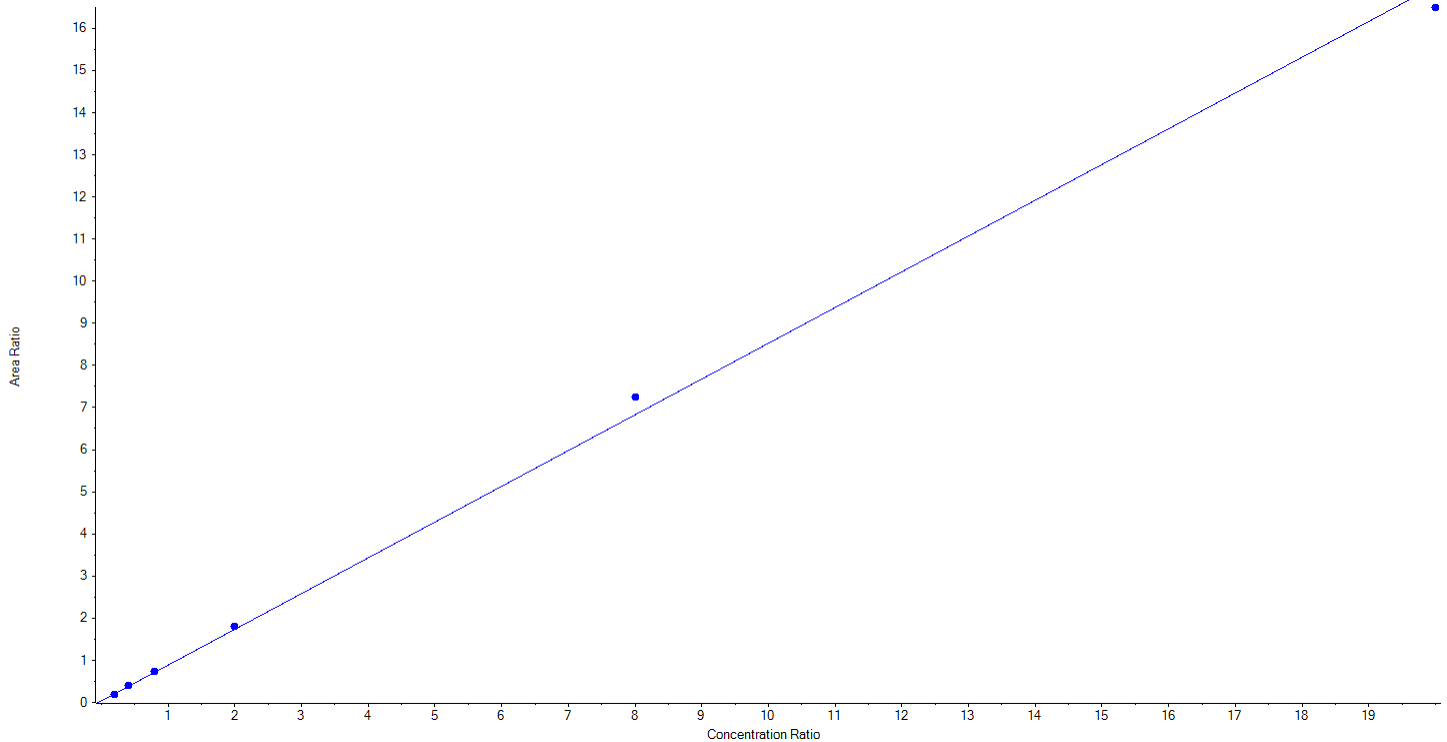
Calibration Summary Report

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Analyte Name	PFDA_1	Data File	AE_11172020_5-369.wiff
MRM Transition	513.0 / 469.0	Result Table	20-1375
Internal Standard	13C6-PFDA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.84862x + 0.03931$ ($r = 0.99889$) (weighting: $1/x$) $r^2:0.9978$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	209.28	83.7
13	LE53	L2	True	500.00	522.37	104.5
14	LE54	L3	True	1000.00	1038.81	103.9
15	LE55	L4	True	2500.00	2618.61	104.7
16	LE56	L5	True	10000.00	10624.04	106.2
17	LE57	L6	True	25000.00	24236.89	97.0





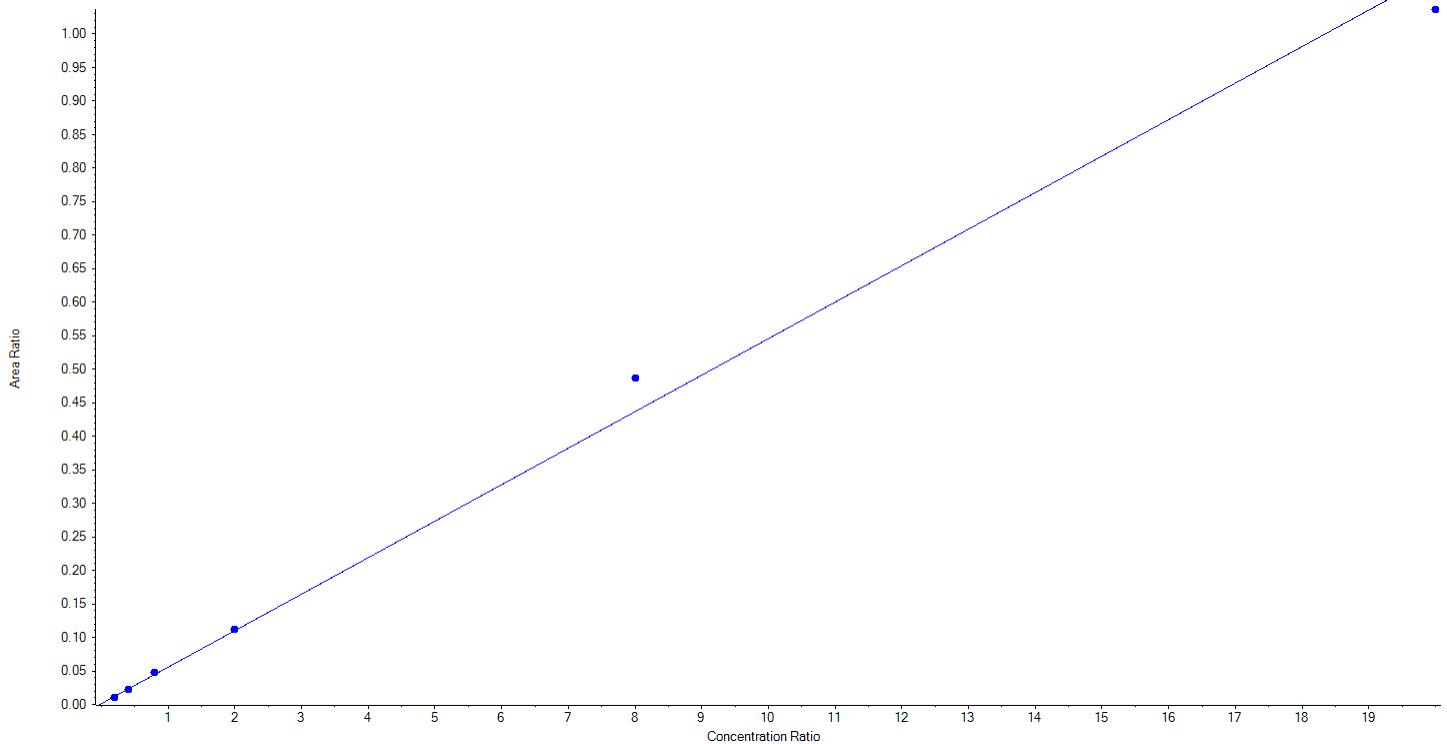
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Analyte Name	PFDA_2	Data File	AE_11172020_5-369.wiff
MRM Transition	513.0 / 219.0	Result Table	20-1375
Internal Standard	13C6-PFDA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.05444 x + 0.00124$ ($r = 0.99705$) (weighting: $1 / x$) $r^2: 0.9941$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	218.07	87.2
13	LE53	L2	True	500.00	482.03	96.4
14	LE54	L3	True	1000.00	1076.29	107.6
15	LE55	L4	True	2500.00	2553.99	102.2
16	LE56	L5	True	10000.00	11149.87	111.5
17	LE57	L6	True	25000.00	23769.75	95.1





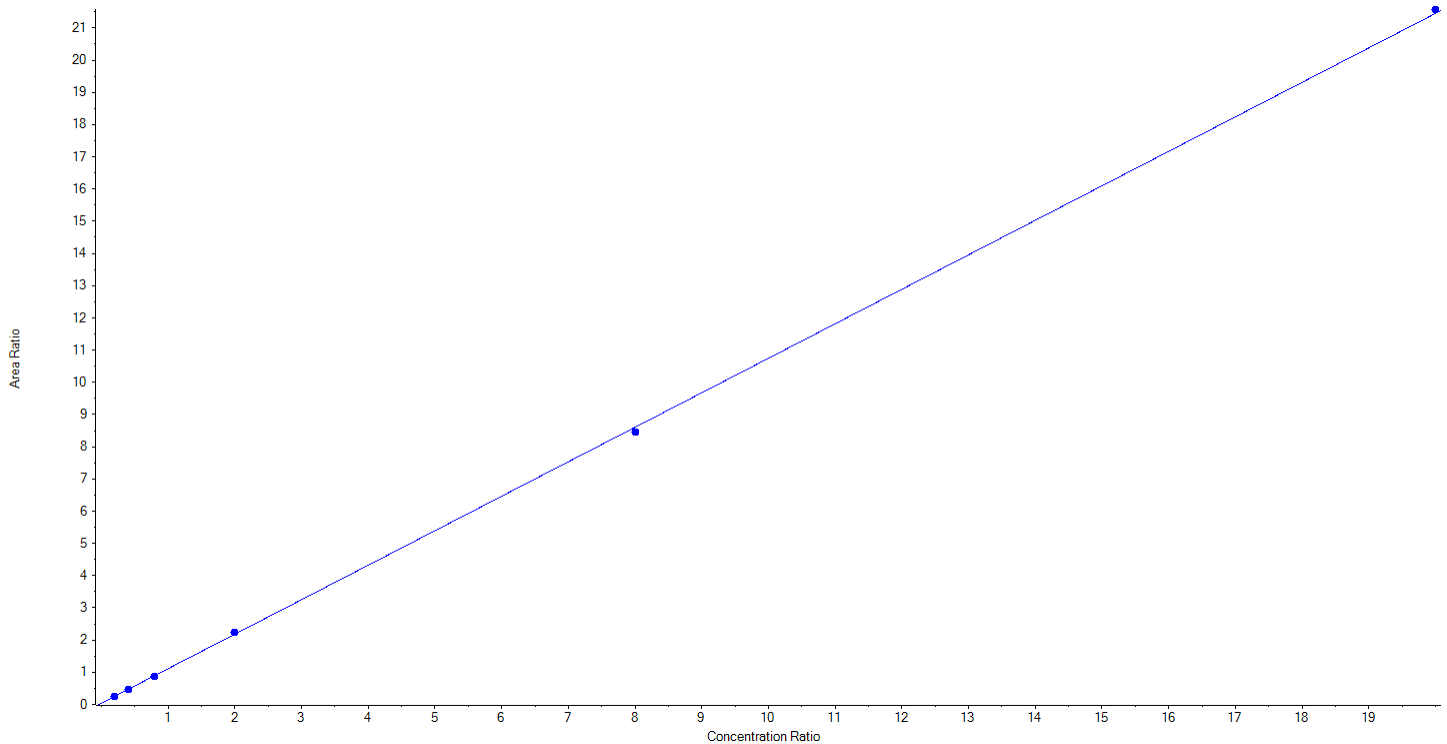
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Analyte Name	PFUnA_1	Data File	AE_11172020_5-369.wiff
MRM Transition	563.0 / 519.0	Result Table	20-1375
Internal Standard	13C7-PFUnA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.07041 x + 0.04215$ ($r = 0.99990$) (weighting: $1/x$) $r^2:0.9998$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	252.00	100.8
13	LE53	L2	True	500.00	512.61	102.5
14	LE54	L3	True	1000.00	955.75	95.6
15	LE55	L4	True	2500.00	2554.95	102.2
16	LE56	L5	True	10000.00	9834.22	98.3
17	LE57	L6	True	25000.00	25140.47	100.6





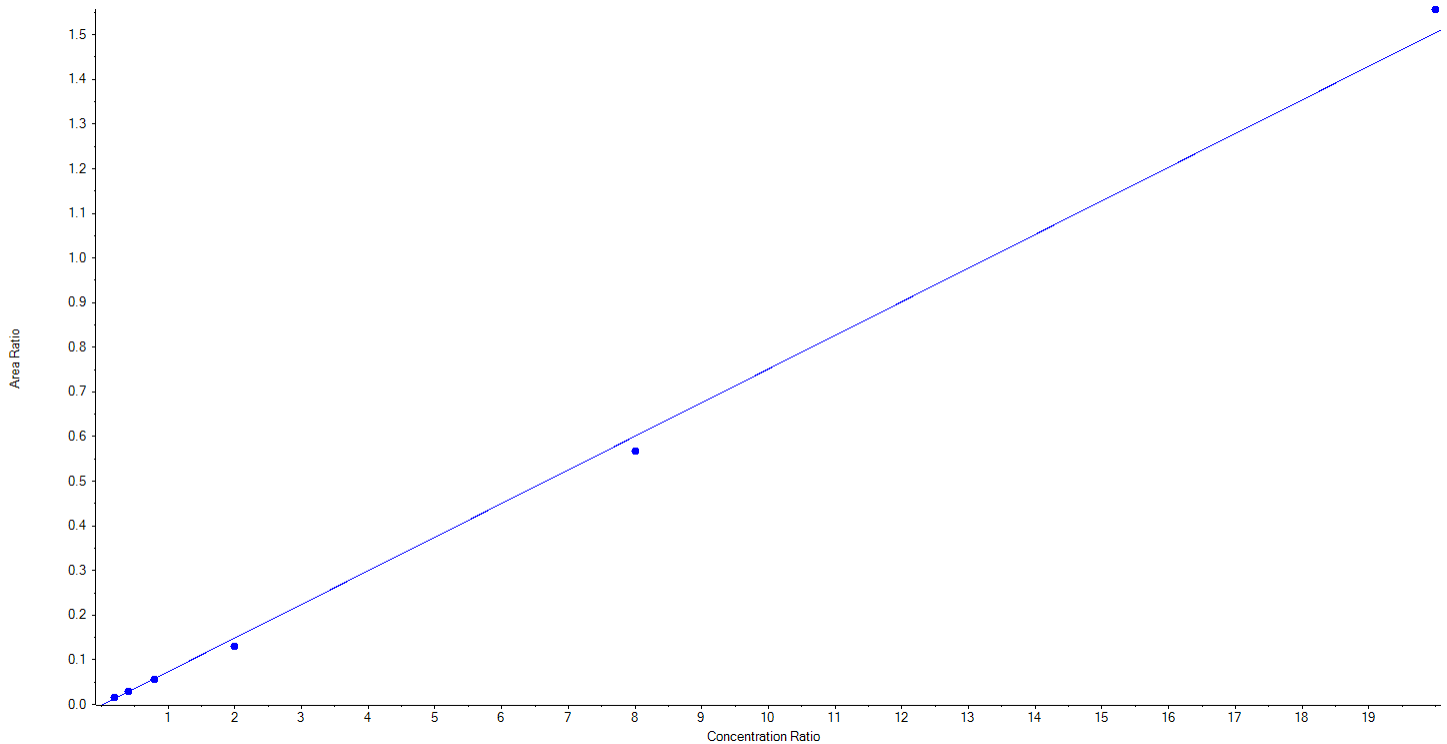
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Analyte Name	PFUnA_2	Data File	AE_11172020_5-369.wiff
MRM Transition	563.0 / 269.0	Result Table	20-1375
Internal Standard	13C7-PFUnA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.07532 x + -0.00182$ ($r = 0.99839$) (weighting: 1 / x) $r^2:0.9968$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	295.35	118.1
13	LE53	L2	True	500.00	508.69	101.7
14	LE54	L3	True	1000.00	949.76	95.0
15	LE55	L4	True	2500.00	2178.01	87.1
16	LE56	L5	True	10000.00	9458.88	94.6
17	LE57	L6	True	25000.00	25859.31	103.4





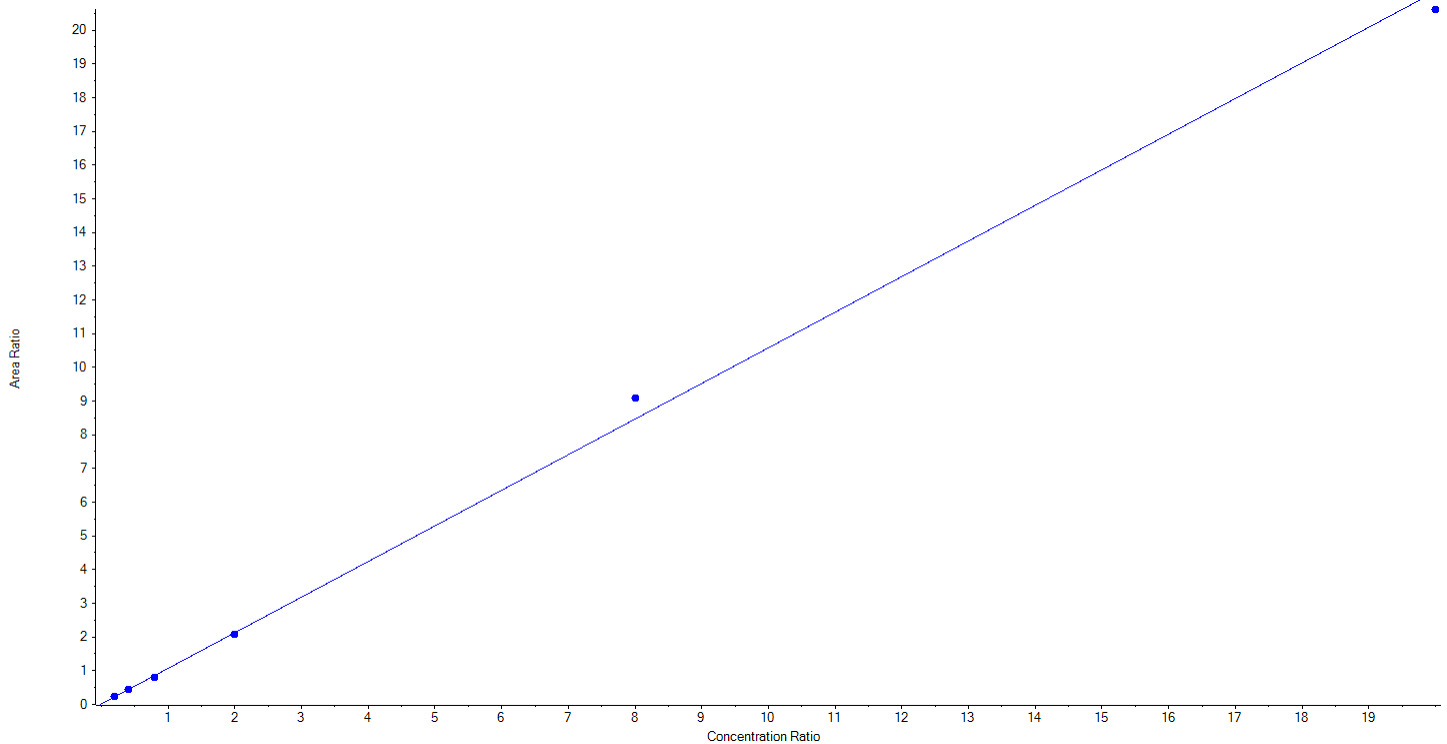
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Analyte Name	PFDoA_1	Data File	AE_11172020_5-369.wiff
MRM Transition	613.0 / 569.0	Result Table	20-1375
Internal Standard	13C2-PFDoA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.05625x + 0.01667$ ($r = 0.99892$) (weighting: $1/x$) $r^2: 0.9978$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	256.14	102.5
13	LE53	L2	True	500.00	506.74	101.4
14	LE54	L3	True	1000.00	934.08	93.4
15	LE55	L4	True	2500.00	2449.88	98.0
16	LE56	L5	True	10000.00	10730.36	107.3
17	LE57	L6	True	25000.00	24372.81	97.5





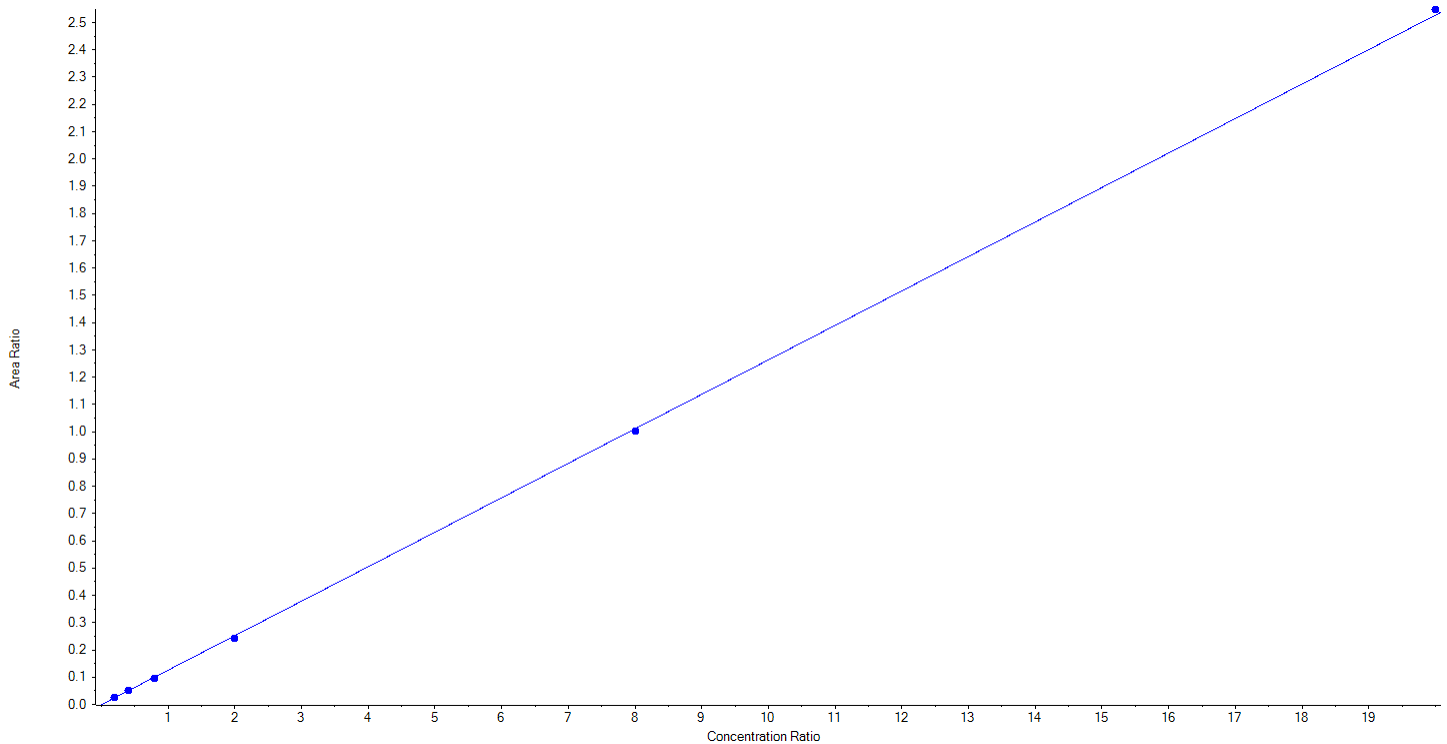
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Analyte Name	PFDoA_2	Data File	AE_11172020_5-369.wiff
MRM Transition	613.0 / 319.0	Result Table	20-1375
Internal Standard	13C2-PFDoA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.12639x + -4.38314e-4$ ($r = 0.99983$) (weighting: $1/x$) $r^2: 0.9997$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	268.76	107.5
13	LE53	L2	True	500.00	512.36	102.5
14	LE54	L3	True	1000.00	942.54	94.3
15	LE55	L4	True	2500.00	2390.65	95.6
16	LE56	L5	True	10000.00	9933.83	99.3
17	LE57	L6	True	25000.00	25201.87	100.8





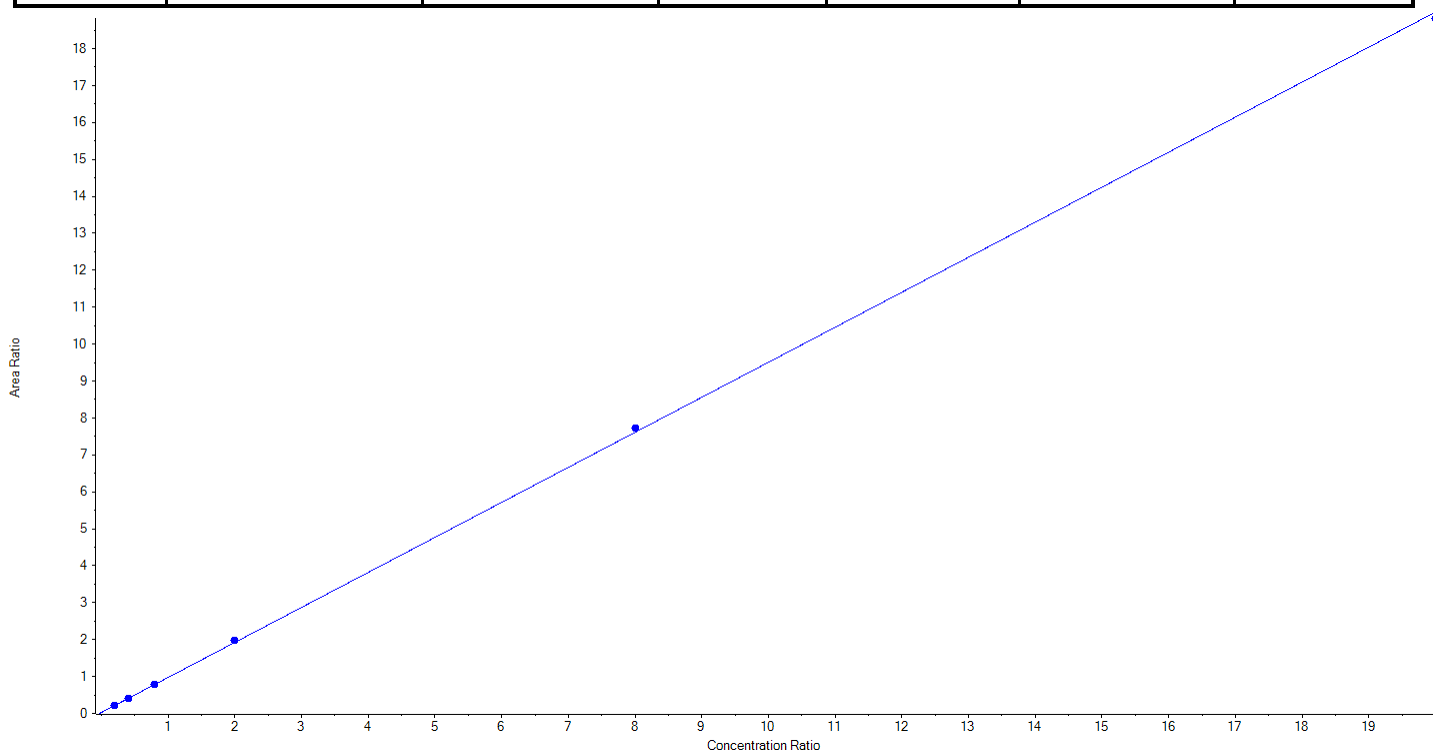
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Analyte Name	PFTrDA_1	Data File	AE_11172020_5-369.wiff
MRM Transition	663.0 / 619.0	Result Table	20-1375
Internal Standard	13C2-PFTeDA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.94805x + 0.02773$ ($r = 0.99988$) (weighting: $1/x$) $r^2:0.9998$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	245.17	98.1
13	LE53	L2	True	500.00	483.38	96.7
14	LE54	L3	True	1000.00	1010.48	101.1
15	LE55	L4	True	2500.00	2590.64	103.6
16	LE56	L5	True	10000.00	10150.21	101.5
17	LE57	L6	True	25000.00	24770.12	99.1





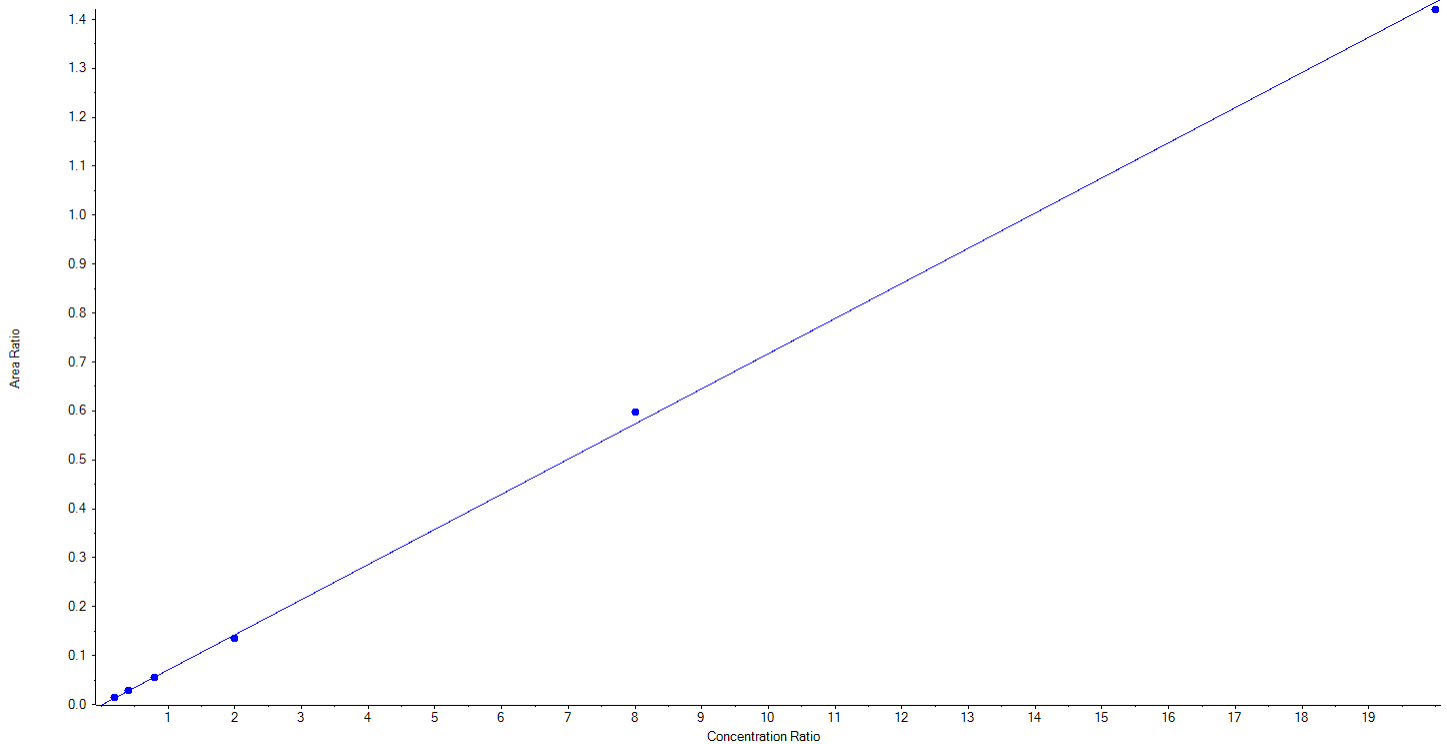
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Analyte Name	PFTrDA_2	Data File	AE_11172020_5-369.wiff
MRM Transition	663.0 / 169.0	Result Table	20-1375
Internal Standard	13C2-PFTeDA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.07182x + -0.00115$ ($r = 0.99961$) (weighting: $1/x$) $r^2: 0.9992$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	258.13	103.3
13	LE53	L2	True	500.00	508.31	101.7
14	LE54	L3	True	1000.00	973.42	97.3
15	LE55	L4	True	2500.00	2369.01	94.8
16	LE56	L5	True	10000.00	10403.25	104.0
17	LE57	L6	True	25000.00	24737.87	99.0





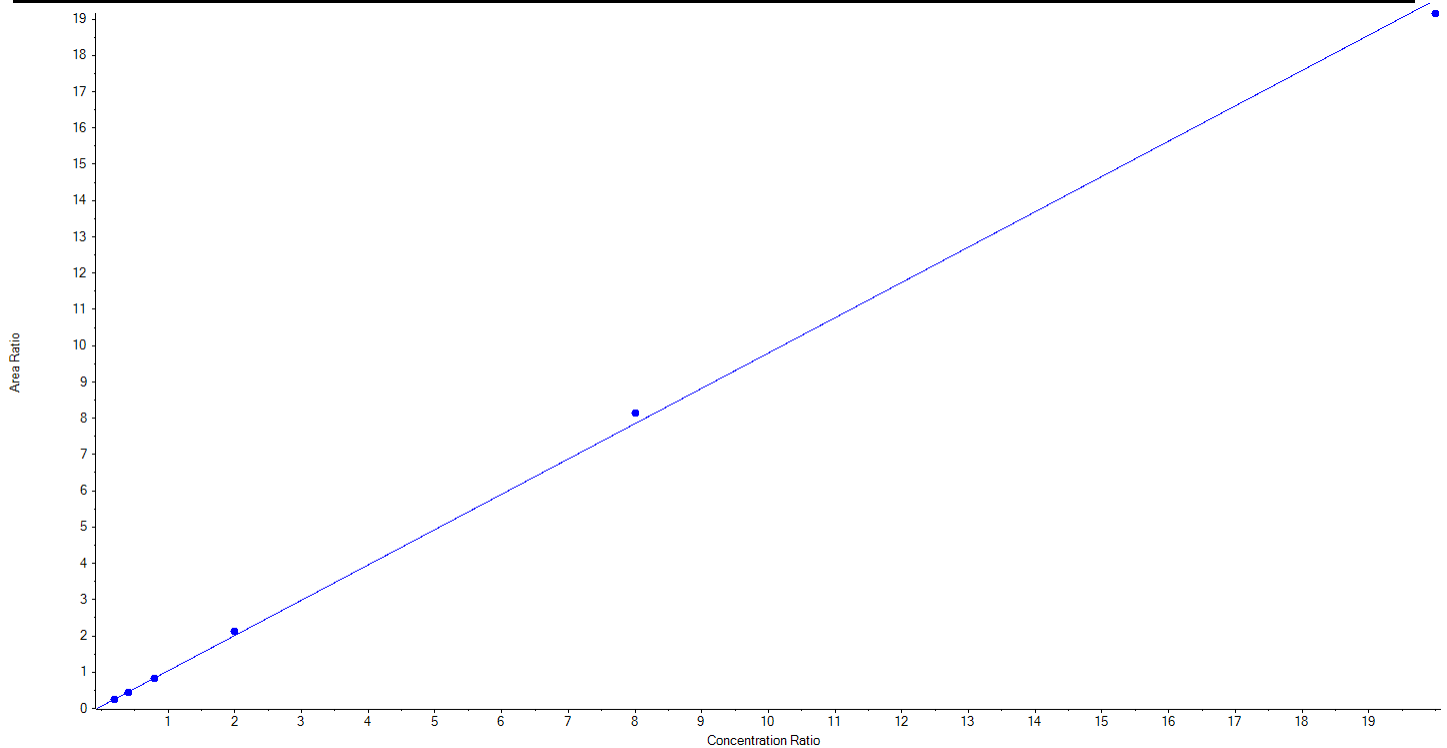
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Analyte Name	PFTeDA_1	Data File	AE_11172020_5-369.wiff
MRM Transition	713.0 / 669.0	Result Table	20-1375
Internal Standard	13C2-PFTeDA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.97329x + 0.06451$ ($r = 0.99952$) (weighting: $1/x$) $r^2: 0.9990$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	235.56	94.2
13	LE53	L2	True	500.00	497.25	99.5
14	LE54	L3	True	1000.00	985.66	98.6
15	LE55	L4	True	2500.00	2651.15	106.1
16	LE56	L5	True	10000.00	10365.11	103.7
17	LE57	L6	True	25000.00	24515.26	98.1





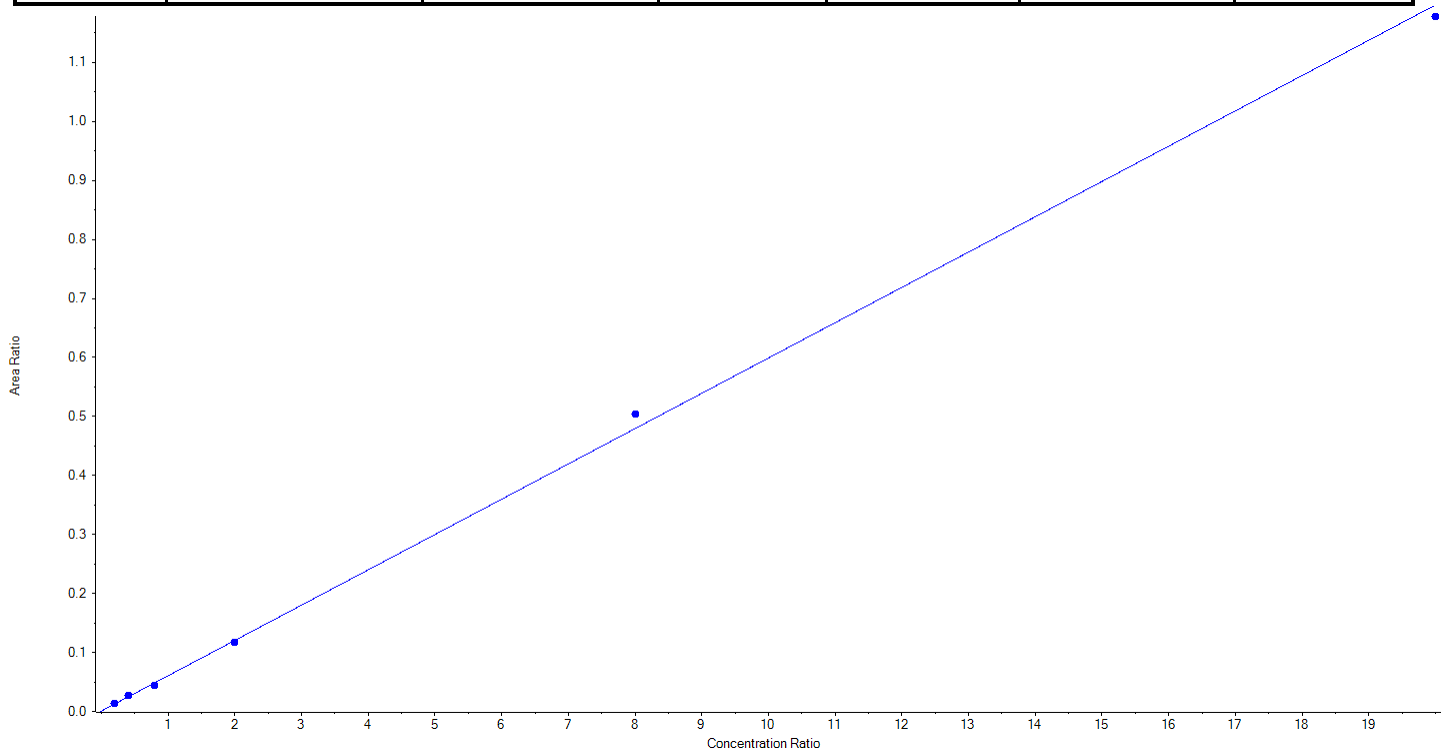
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Analyte Name	PFTeDA_2	Data File	AE_11172020_5-369.wiff
MRM Transition	713.0 / 169.0	Result Table	20-1375
Internal Standard	13C2-PFTeDA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.05983x + 7.90440e-4$ ($r = 0.99927$) (weighting: $1/x$) $r^2:0.9985$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	250.55	100.2
13	LE53	L2	True	500.00	543.10	108.6
14	LE54	L3	True	1000.00	900.72	90.1
15	LE55	L4	True	2500.00	2435.69	97.4
16	LE56	L5	True	10000.00	10530.07	105.3
17	LE57	L6	True	25000.00	24589.87	98.4





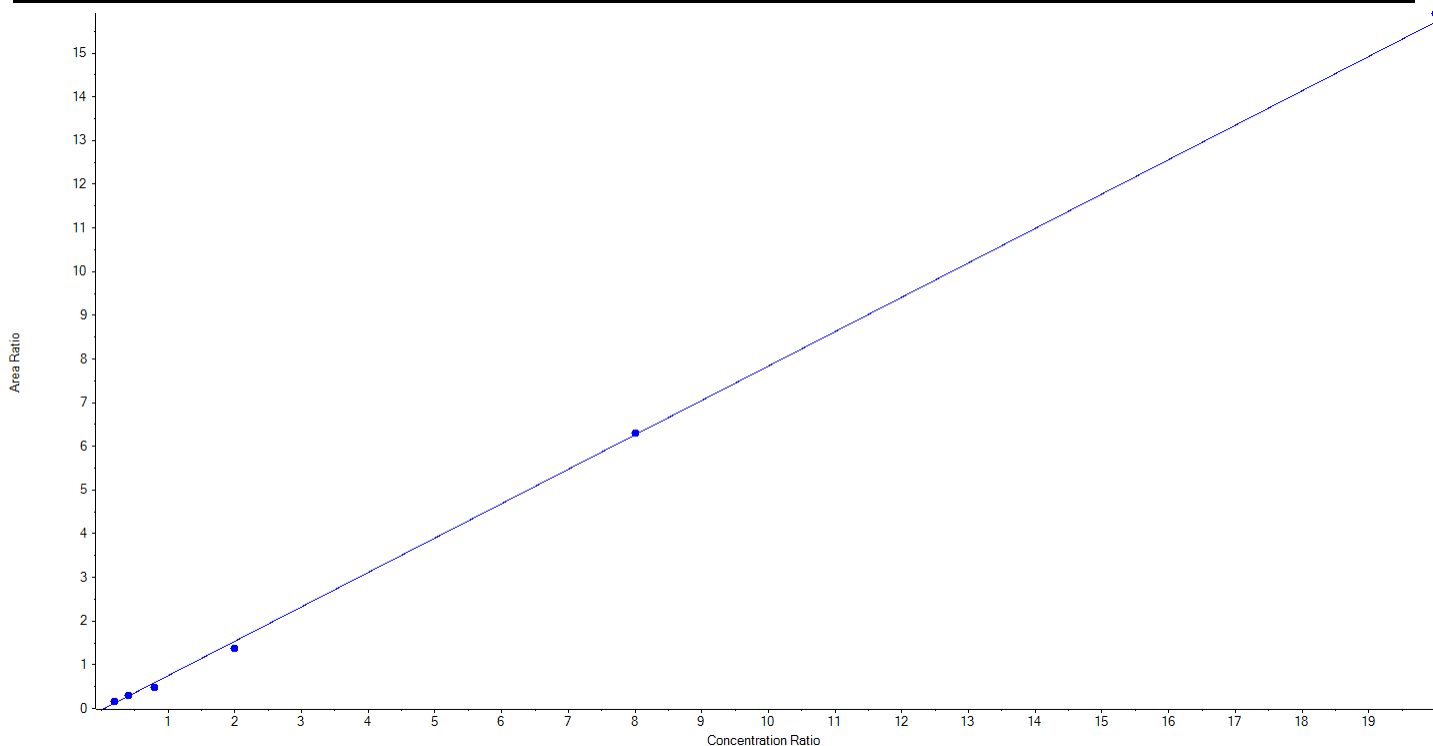
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Analyte Name	NMeFOSAA_1	Data File	AE_11172020_5-369.wiff
MRM Transition	570.0 / 419.0	Result Table	20-1375
Internal Standard	d3-MeFOSAA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.78734 x + -0.03481$ ($r = 0.99876$) (weighting: 1 / x) $r^2:0.9975$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	306.06	122.4
13	LE53	L2	True	500.00	529.36	105.9
14	LE54	L3	True	1000.00	805.40	80.5
15	LE55	L4	True	2500.00	2230.68	89.2
16	LE56	L5	True	10000.00	10069.94	100.7
17	LE57	L6	True	25000.00	25308.55	101.2





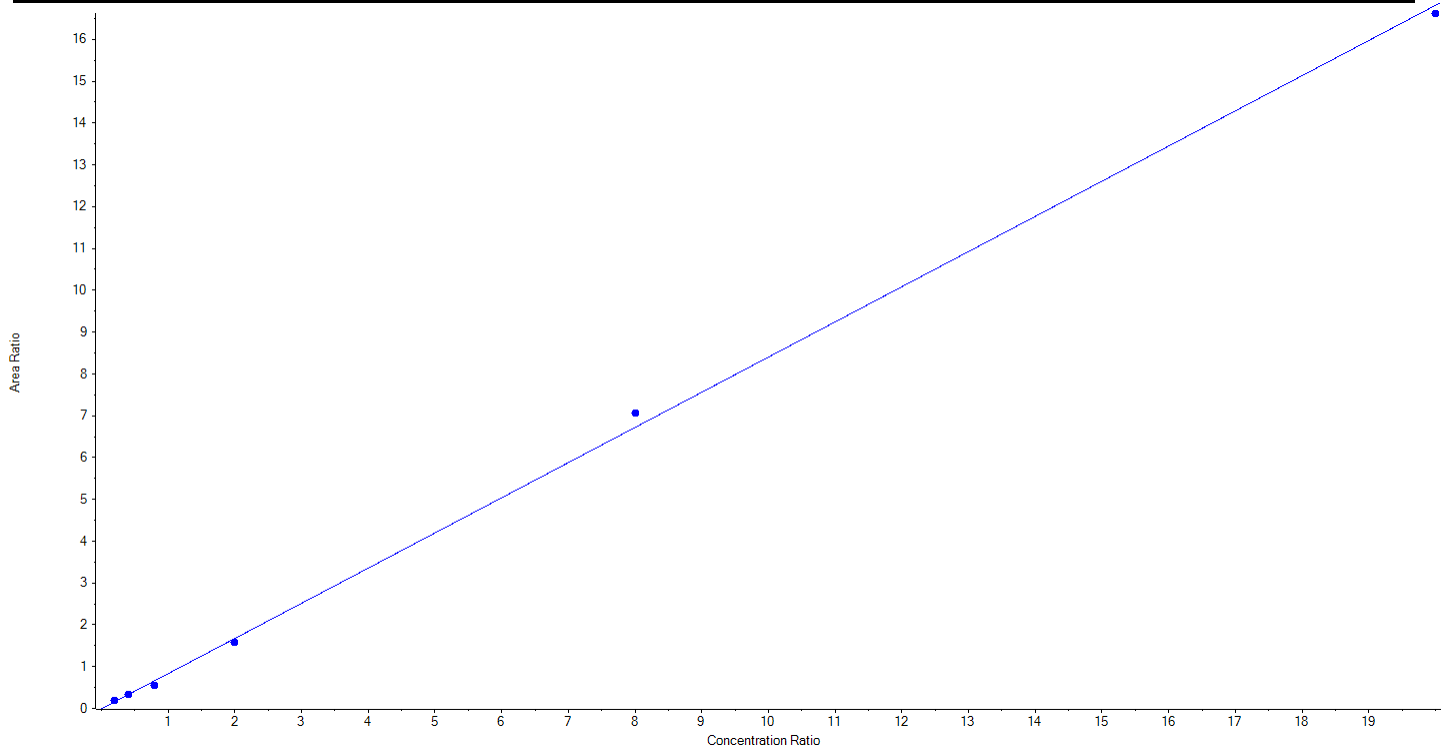
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Analyte Name	NMeFOSAA_2	Data File	AE_11172020_5-369.wiff
MRM Transition	570.0 / 512.0	Result Table	20-1375
Internal Standard	d3-MeFOSAA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.84112x + -0.00793$ ($r = 0.99905$) (weighting: $1/x$) $r^2: 0.9981$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	280.17	112.1
13	LE53	L2	True	500.00	522.61	104.5
14	LE54	L3	True	1000.00	844.12	84.4
15	LE55	L4	True	2500.00	2373.79	95.0
16	LE56	L5	True	10000.00	10521.38	105.2
17	LE57	L6	True	25000.00	24707.92	98.8





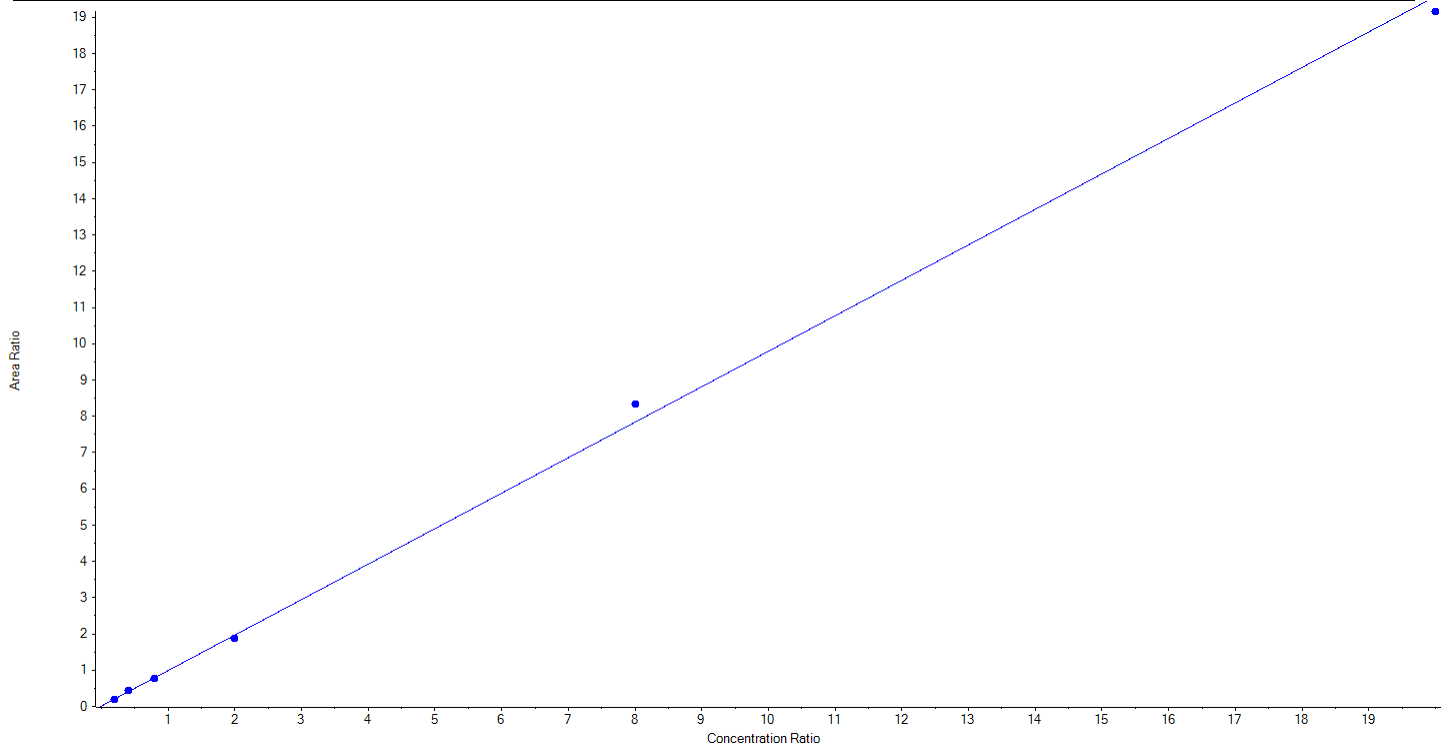
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Analyte Name	NEtFOSAA_1	Data File	AE_11172020_5-369.wiff
MRM Transition	584.0 / 419.0	Result Table	20-1375
Internal Standard	d5-EtFOSAA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.97806 x + 0.01360$ ($r = 0.99911$) (weighting: $1/x$) $r^2: 0.9982$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	239.74	95.9
13	LE53	L2	True	500.00	535.38	107.1
14	LE54	L3	True	1000.00	971.78	97.2
15	LE55	L4	True	2500.00	2387.75	95.5
16	LE56	L5	True	10000.00	10646.19	106.5
17	LE57	L6	True	25000.00	24469.16	97.9





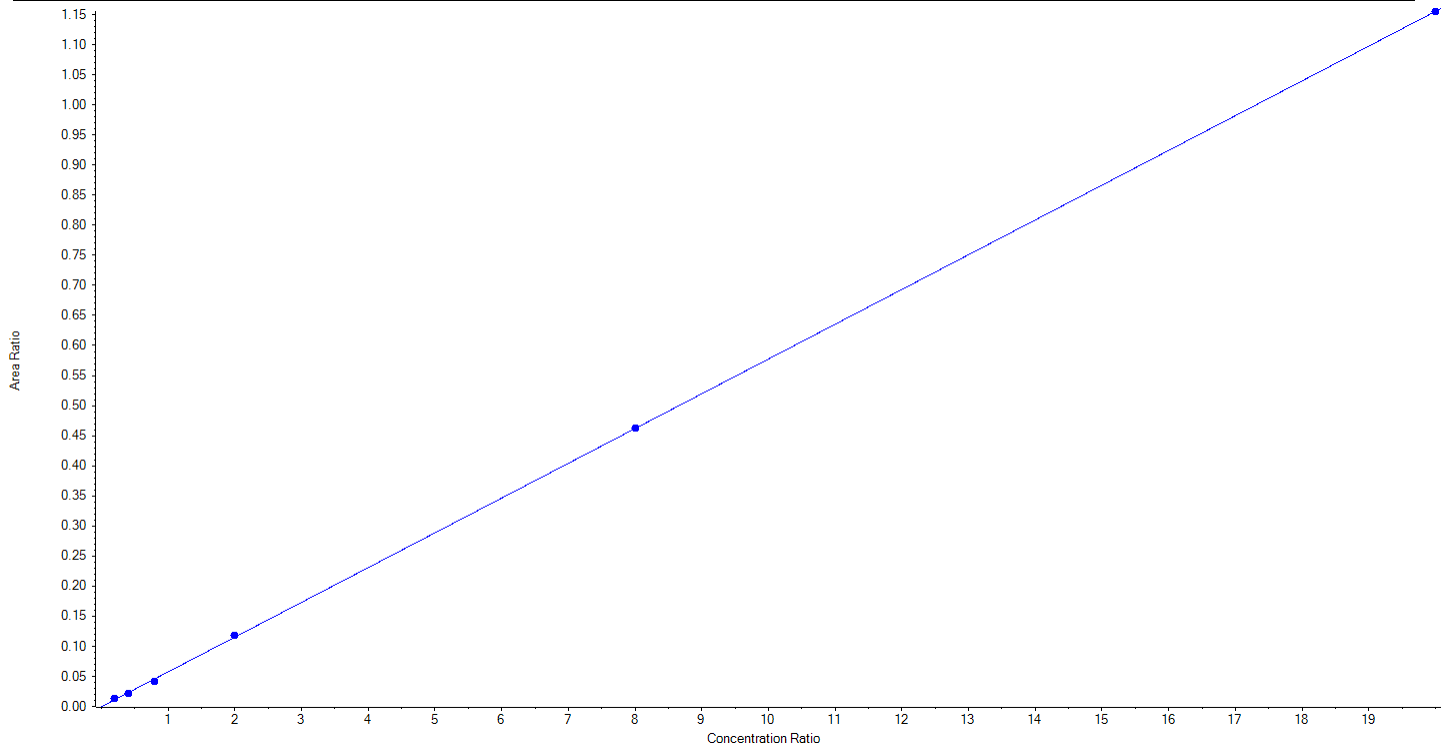
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Analyte Name	NEtFOSAA_2	Data File	AE_11172020_5-369.wiff
MRM Transition	584.0 / 483.0	Result Table	20-1375
Internal Standard	d5-EtFOSAA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.05778x + -2.84388e-4$ ($r = 0.99977$) (weighting: $1/x$) $r^2: 0.9995$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	281.21	112.5
13	LE53	L2	True	500.00	467.57	93.5
14	LE54	L3	True	1000.00	910.95	91.1
15	LE55	L4	True	2500.00	2565.56	102.6
16	LE56	L5	True	10000.00	10031.10	100.3
17	LE57	L6	True	25000.00	24993.61	100.0





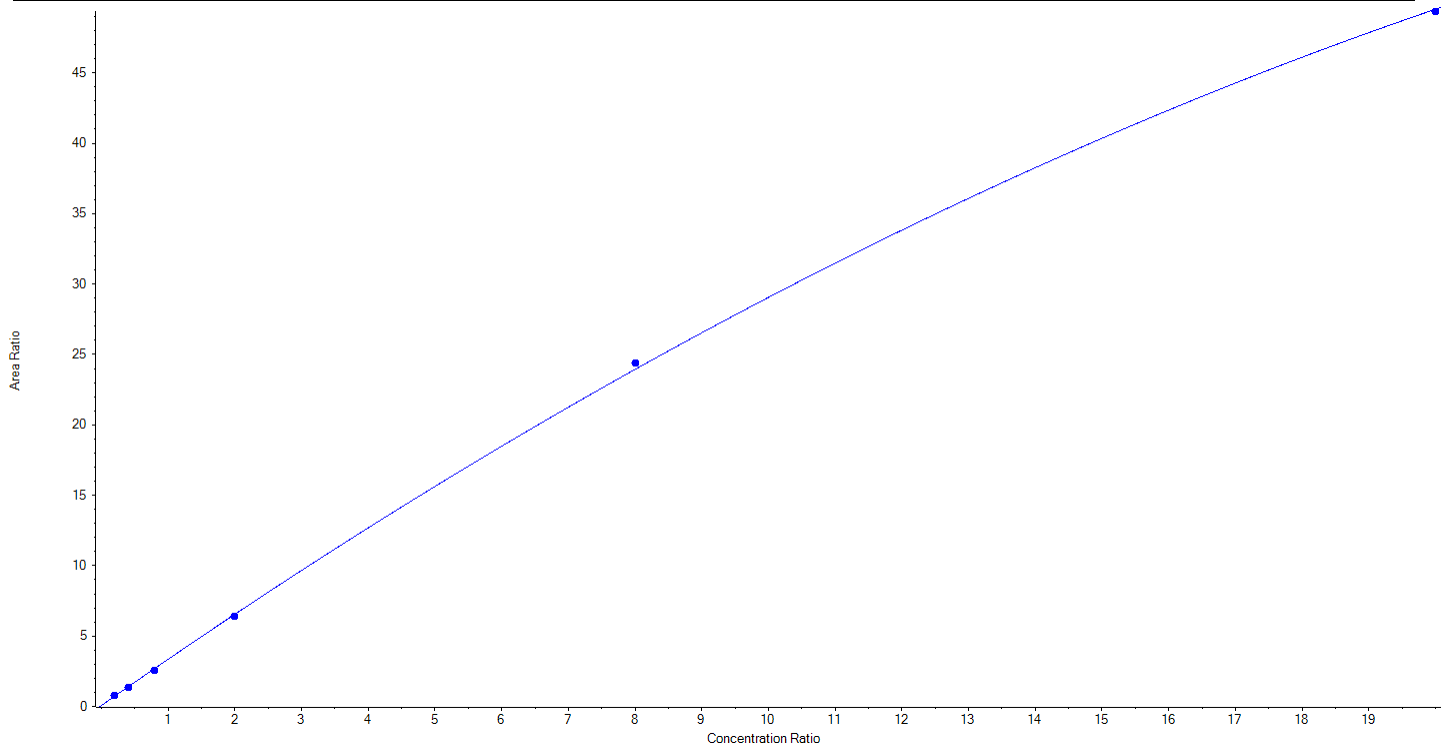
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Analyte Name	HFPO-DA_1	Data File	AE_11172020_5-369.wiff
MRM Transition	285.0 / 169.0	Result Table	20-1375
Internal Standard	13C3-HFPO-DA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = -0.04257 x^2 + 3.32380 x + 0.07412$ ($r = 0.99974$) (weighting: $1 / x$) $r^2: 0.9995$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	272.51	109.0
13	LE53	L2	True	500.00	493.93	98.8
14	LE54	L3	True	1000.00	932.11	93.2
15	LE55	L4	True	2500.00	2430.67	97.2
16	LE56	L5	True	10000.00	10224.62	102.3
17	LE57	L6	True	25000.00	24873.02	99.5





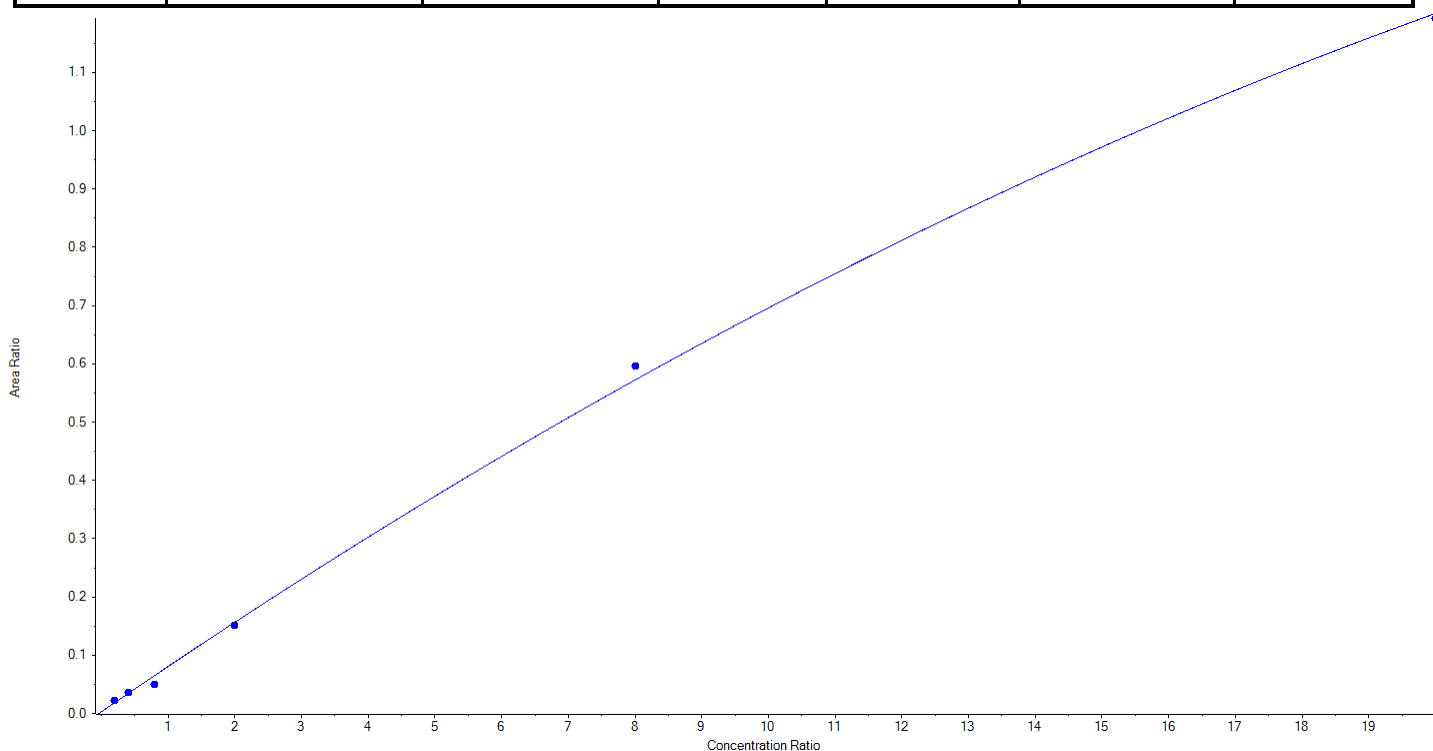
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Analyte Name	HFPO-DA_2	Data File	AE_11172020_5-369.wiff
MRM Transition	285.0 / 118.8	Result Table	20-1375
Internal Standard	13C3-HFPO-DA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = -9.37346e-4 x^2 + 0.07866 x + 0.00303$ ($r = 0.99807$) (weighting: $1/x$) $r^2:0.9961$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	294.24	117.7
13	LE53	L2	True	500.00	534.01	106.8
14	LE54	L3	True	1000.00	753.17	75.3
15	LE55	L4	True	2500.00	2410.85	96.4
16	LE56	L5	True	10000.00	10482.36	104.8
17	LE57	L6	True	25000.00	24737.22	99.0





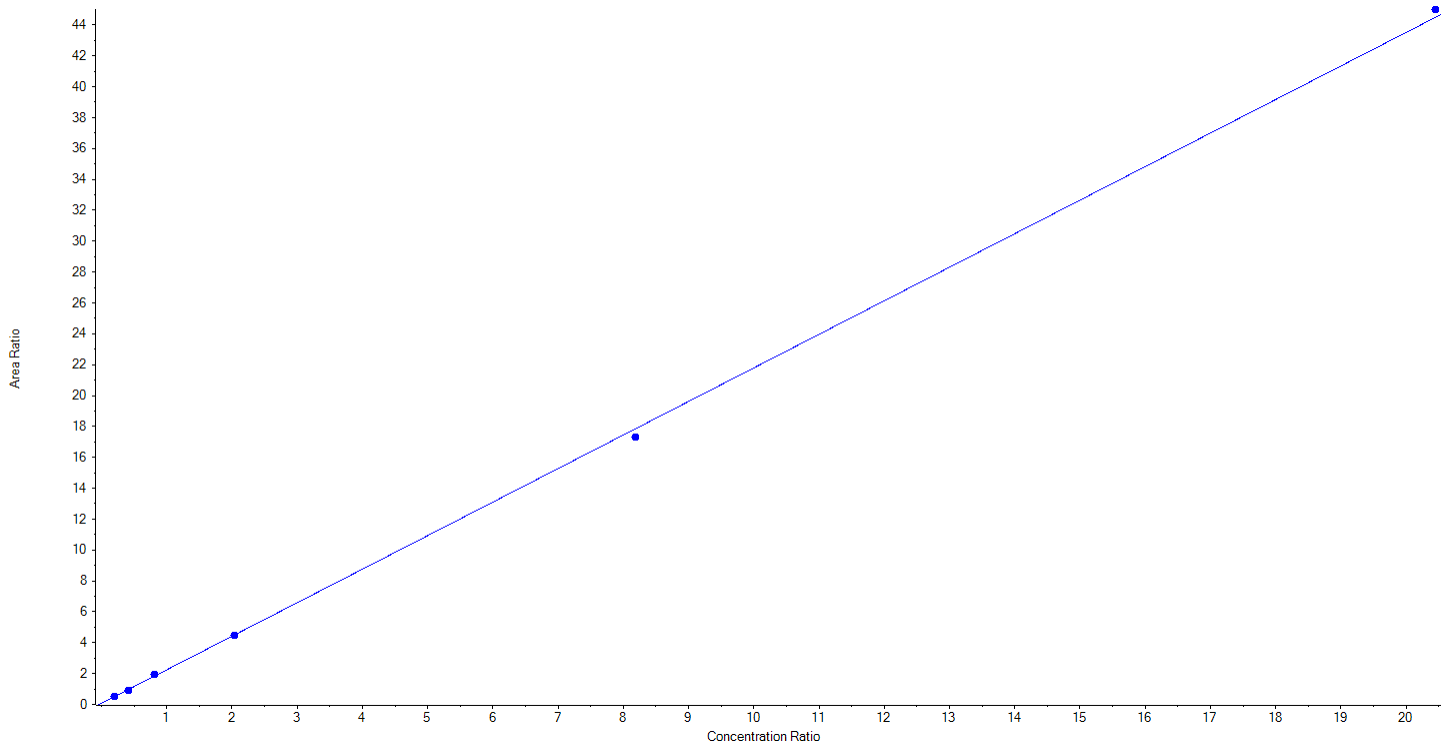
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Analyte Name	ADONA_1	Data File	AE_11172020_5-369.wiff
MRM Transition	377.0 / 251.0	Result Table	20-1375
Internal Standard	13C8-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 2.17206 x + 0.07201$ ($r = 0.99978$) (weighting: $1 / x$) $r^2: 0.9996$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	250.47	100.2
13	LE53	L2	True	500.00	487.63	97.5
14	LE54	L3	True	1000.00	1051.41	105.1
15	LE55	L4	True	2500.00	2474.71	99.0
16	LE56	L5	True	10000.00	9701.88	97.0
17	LE57	L6	True	25000.00	25283.89	101.1





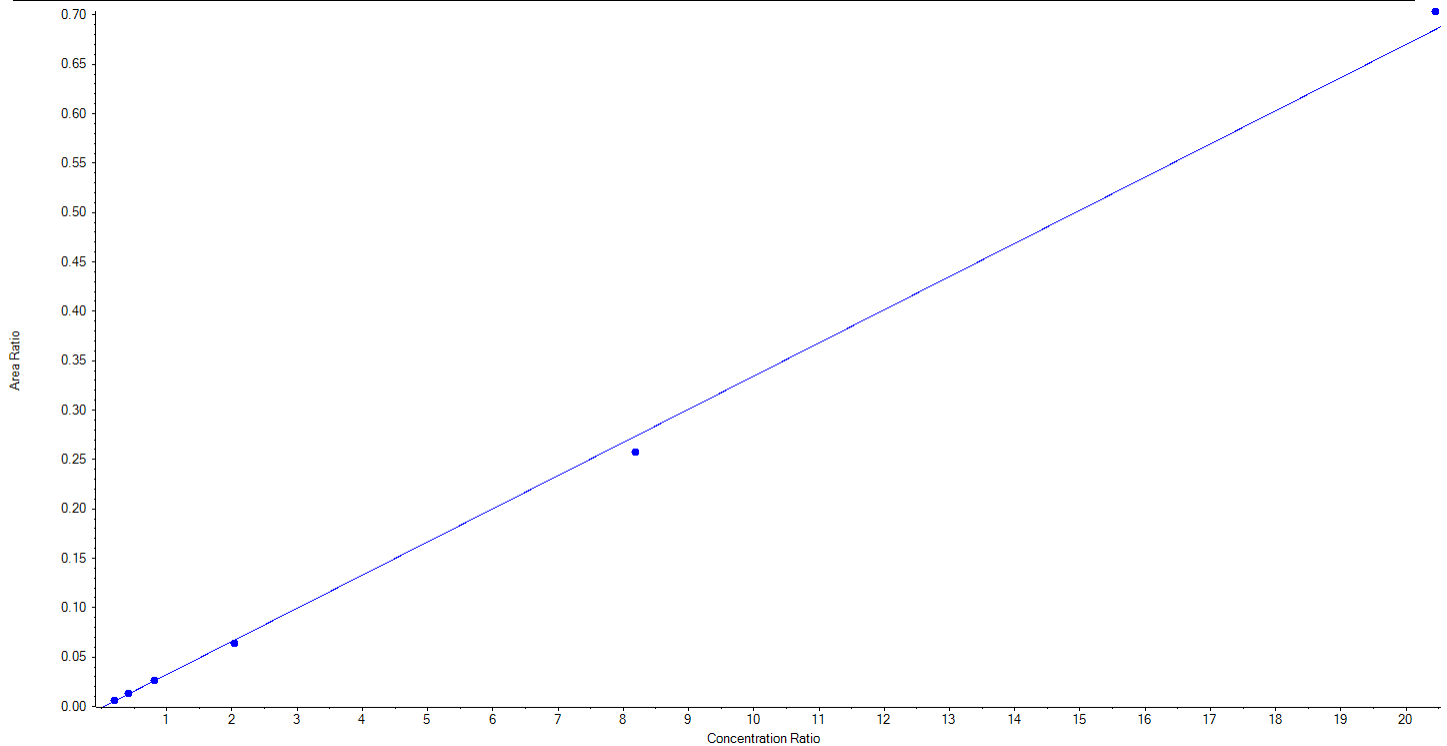
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Analyte Name	ADONA_2	Data File	AE_11172020_5-369.wiff
MRM Transition	377.0 / 85.0	Result Table	20-1375
Internal Standard	13C8-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.03357 x + -0.00129$ ($r = 0.99914$) (weighting: $1 / x$) $r^2: 0.9983$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	253.67	101.5
13	LE53	L2	True	500.00	531.94	106.4
14	LE54	L3	True	1000.00	1003.39	100.3
15	LE55	L4	True	2500.00	2372.31	94.9
16	LE56	L5	True	10000.00	9426.26	94.3
17	LE57	L6	True	25000.00	25662.43	102.7





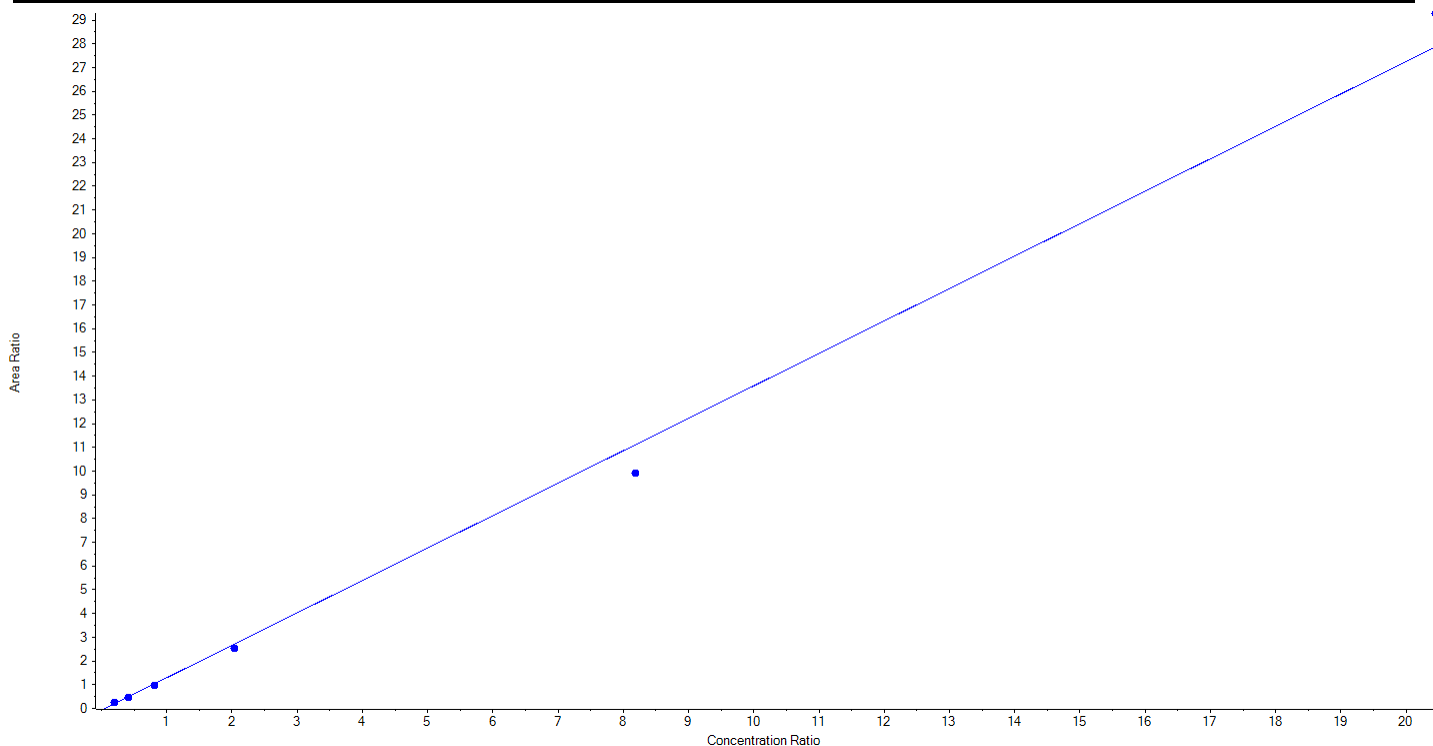
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Analyte Name	9CI-PF3ONS_1	Data File	AE_11172020_5-369.wiff
MRM Transition	531.0 / 351.0	Result Table	20-1375
Internal Standard	13C8-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.36650x + -0.07230$ ($r = 0.99707$) (weighting: $1/x$) $r^2:0.9941$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	301.49	120.6
13	LE53	L2	True	500.00	496.67	99.3
14	LE54	L3	True	1000.00	923.09	92.3
15	LE55	L4	True	2500.00	2333.58	93.3
16	LE56	L5	True	10000.00	8939.24	89.4
17	LE57	L6	True	25000.00	26255.92	105.0





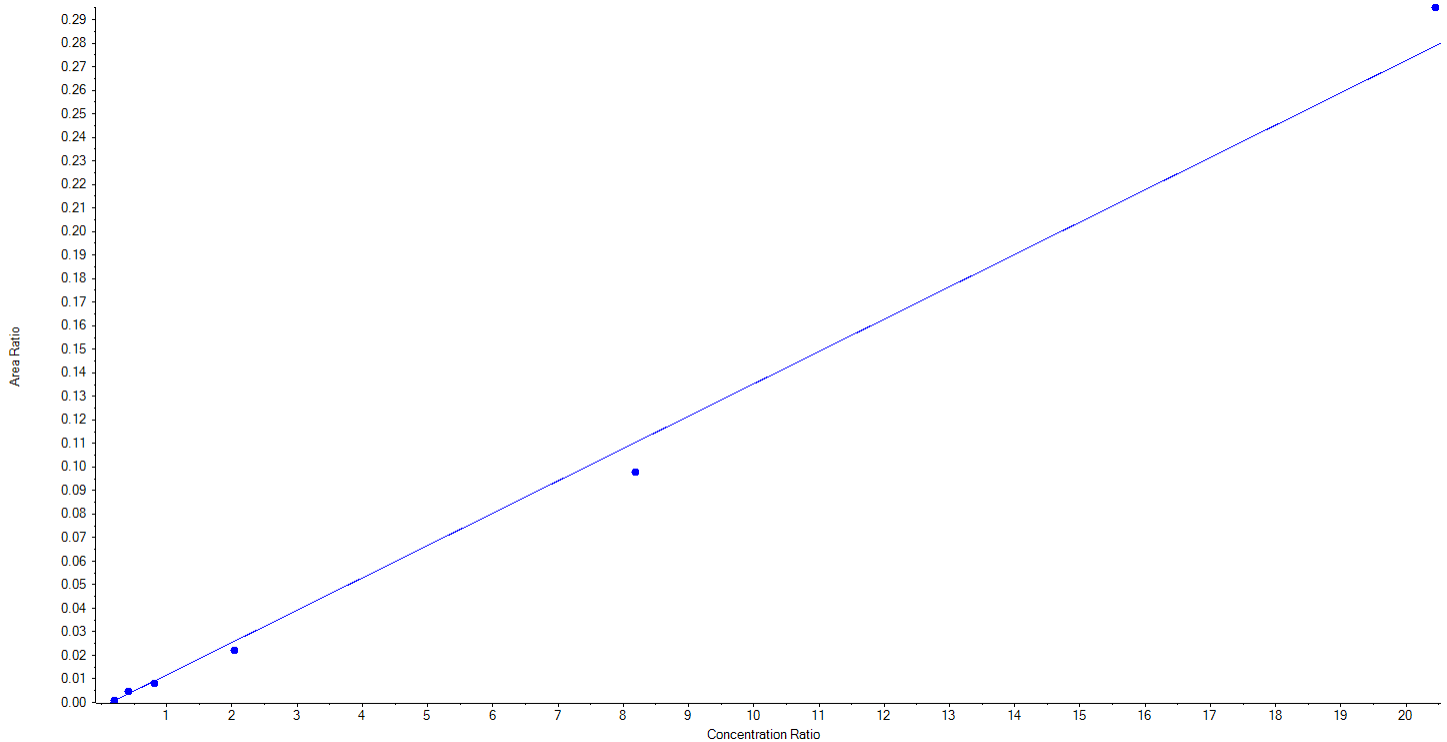
Calibration Summary Report

Created with Analyst Reporter
Printed: 20/11/2020 4:51:43 PM

Analyte Name	9CI-PF3ONS_2	Data File	AE_11172020_5-369.wiff
MRM Transition	531.0 / 83.0	Result Table	20-1375
Internal Standard	13C8-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.01373 x + -0.00202$ ($r = 0.99578$) (weighting: 1 / x) $r^2:0.9916$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	272.61	109.0
13	LE53	L2	True	500.00	603.42	120.7
14	LE54	L3	True	1000.00	898.52	89.9
15	LE55	L4	True	2500.00	2145.15	85.8
16	LE56	L5	True	10000.00	8881.88	88.8
17	LE57	L6	True	25000.00	26448.42	105.8





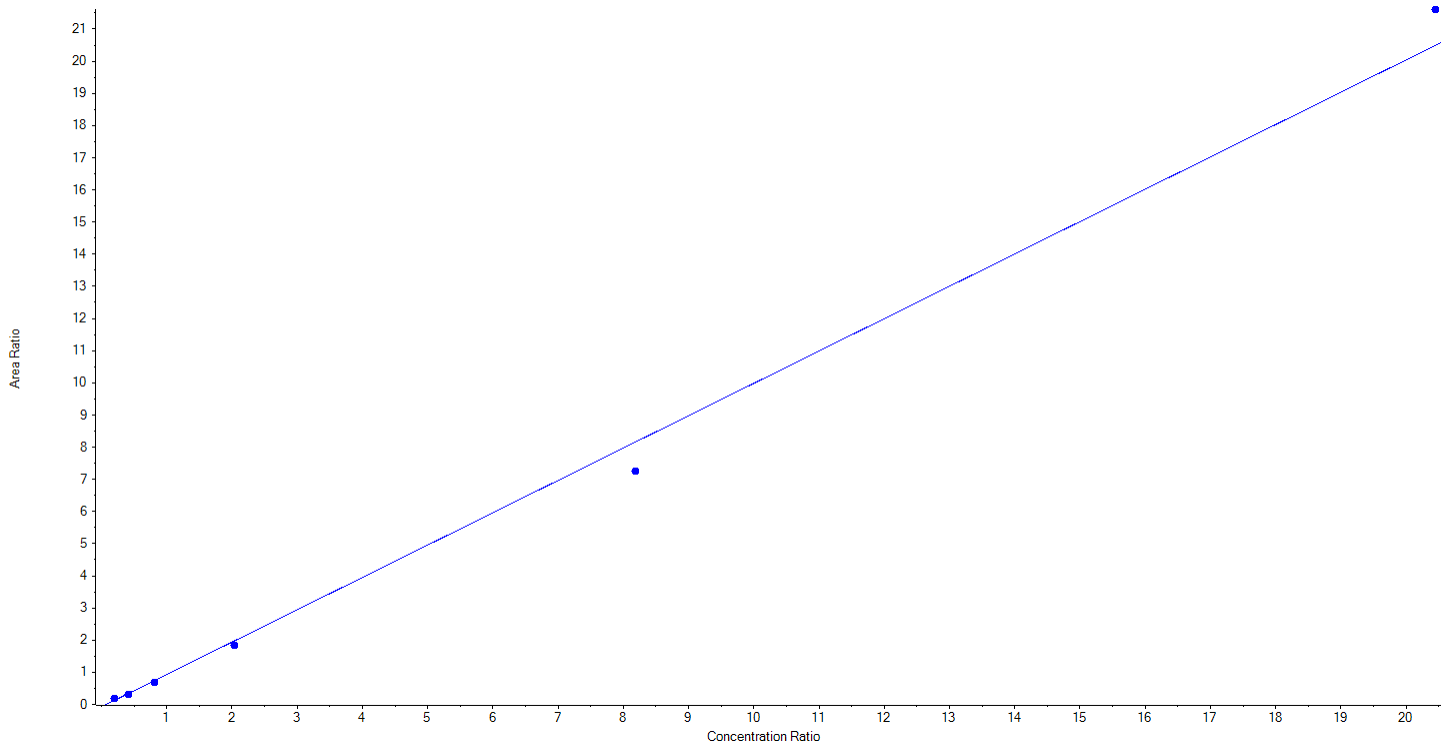
Calibration Summary Report

Created with Analyst Reporter
Printed: 20/11/2020 4:51:43 PM

Analyte Name	11Cl-pf3OUdS_1	Data File	AE_11172020_5-369.wiff
MRM Transition	631.0 / 451.0	Result Table	20-1375
Internal Standard	13C8-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.00574 x + -0.07343$ ($r = 0.99656$) (weighting: $1 / x$) $r^2:0.9931$

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	315.31	126.1
13	LE53	L2	True	500.00	485.25	97.1
14	LE54	L3	True	1000.00	903.39	90.3
15	LE55	L4	True	2500.00	2304.44	92.2
16	LE56	L5	True	10000.00	8890.27	88.9
17	LE57	L6	True	25000.00	26351.34	105.4





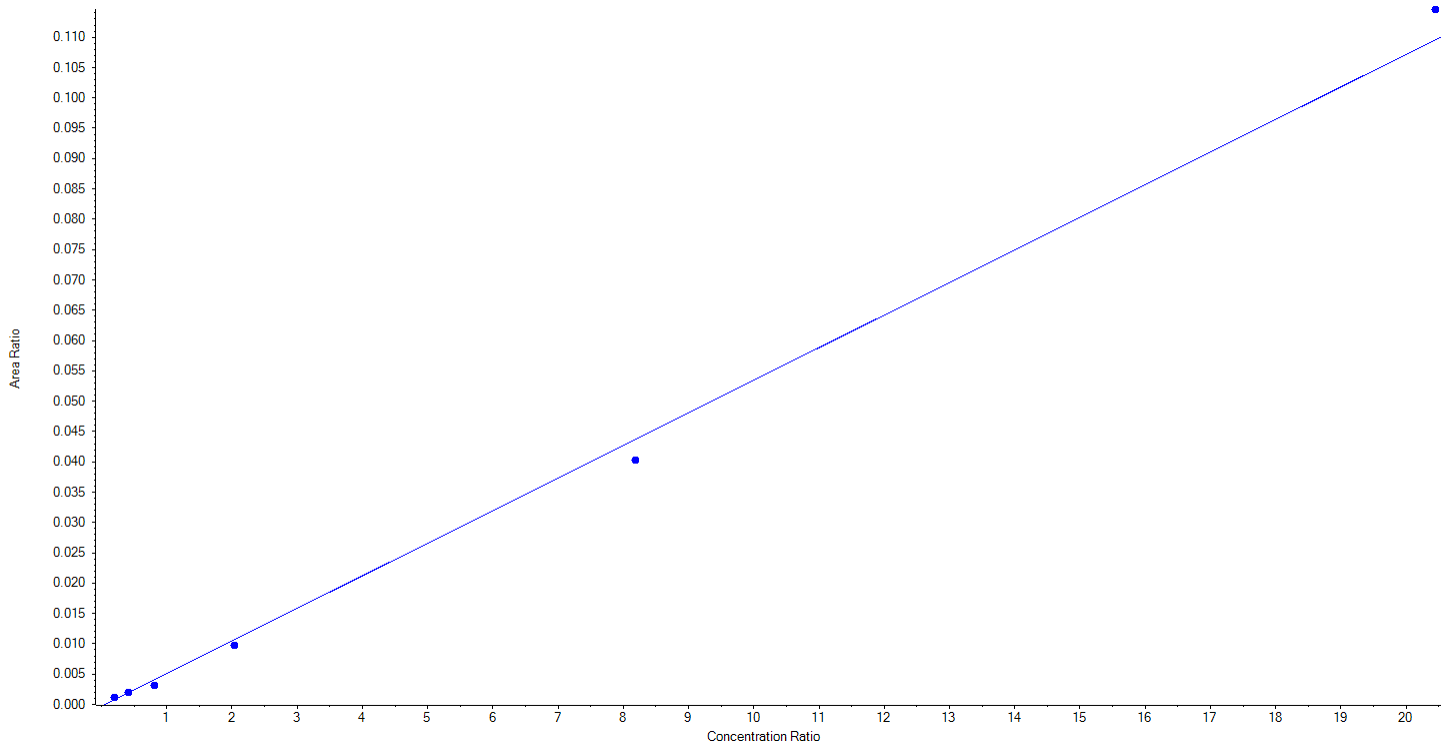
Calibration Summary Report

Created with Analyst Reporter
Printed: 20/11/2020 4:51:43 PM

Analyte Name	11Cl-pf3OUdS_2	Data File	AE_11172020_5-369.wiff
MRM Transition	631.0 / 83.0	Result Table	20-1375
Internal Standard	13C8-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.00537x + -2.81786e-4$ ($r = 0.99706$) (weighting: $1/x$) $r^2:0.9941$

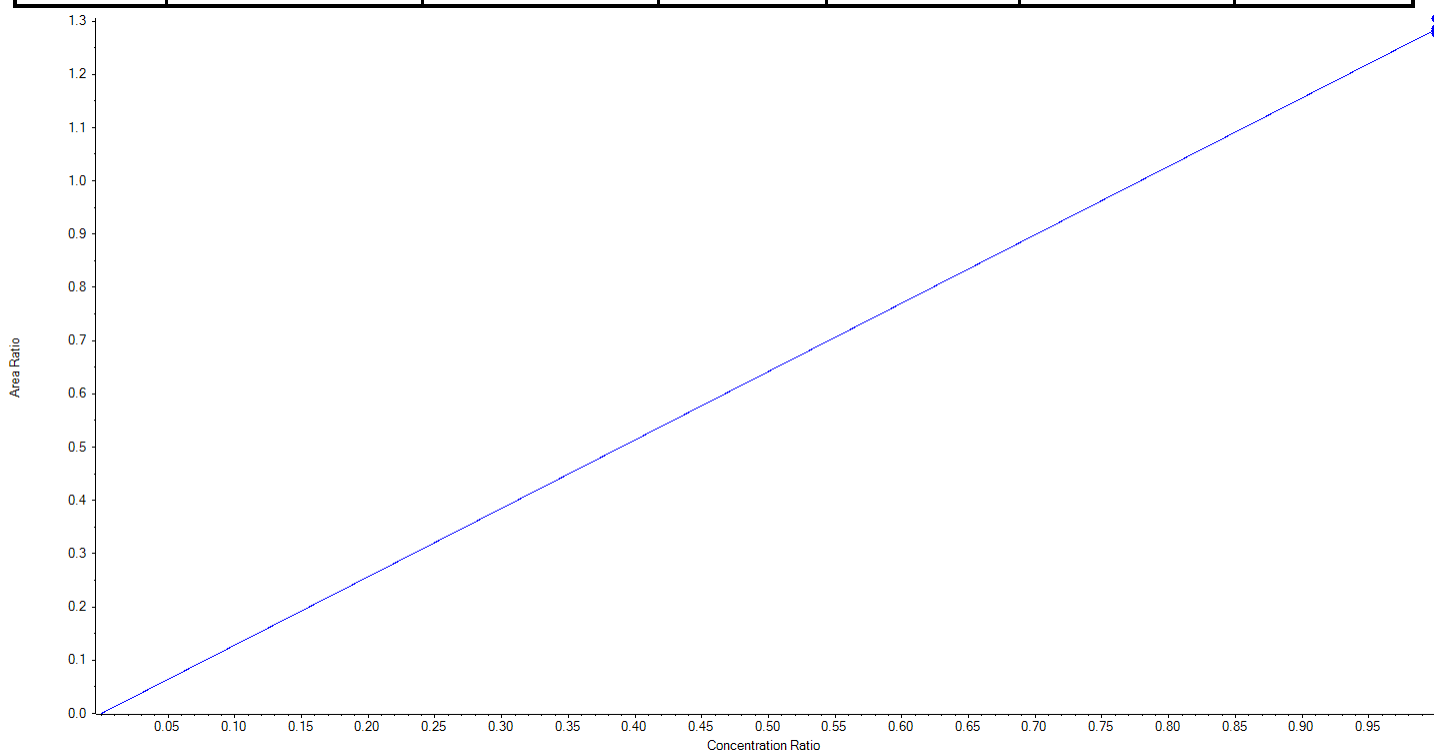
Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	250.00	324.13	129.7
13	LE53	L2	True	500.00	522.22	104.4
14	LE54	L3	True	1000.00	778.97	77.9
15	LE55	L4	True	2500.00	2284.54	91.4
16	LE56	L5	True	10000.00	9210.59	92.1
17	LE57	L6	True	25000.00	26129.55	104.5



Analyte Name	13C2-PFDoA	Data File	AE_11172020_5-369.wiff
MRM Transition	615.0 / 570.0	Result Table	20-1375_SIS
Internal Standard	13C2-PFDA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.28411 x$ (std. dev. = 0.01076) (weighting: None) r^2 :N/A

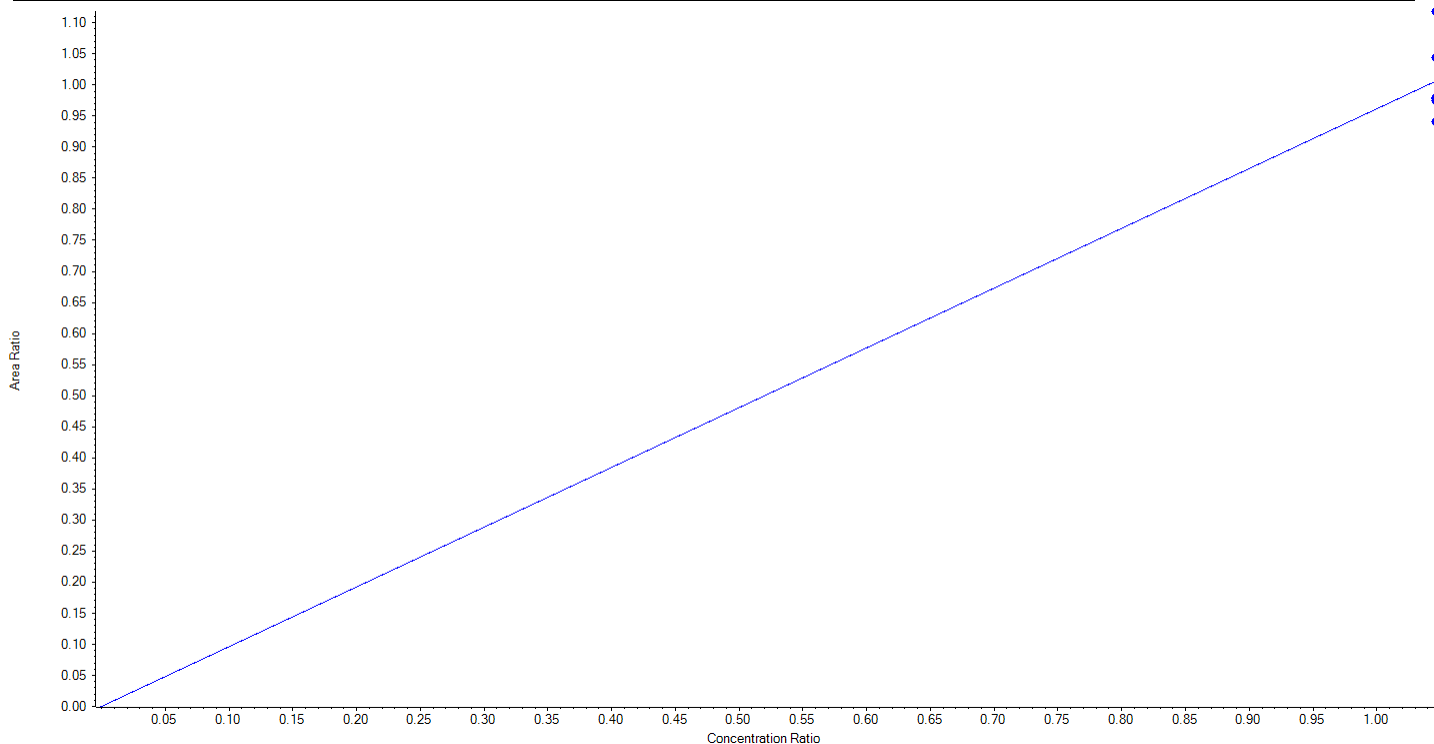
Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	1250.00	1242.07	99.4
13	LE53	L2	True	1250.00	1251.97	100.2
14	LE54	L3	True	1250.00	1242.46	99.4
15	LE55	L4	True	1250.00	1246.08	99.7
16	LE56	L5	True	1250.00	1247.37	99.8
17	LE57	L6	True	1250.00	1270.06	101.6



Analyte Name	d3-MeFOSAA	Data File	AE_11172020_5-369.wiff
MRM Transition	573.0 / 419.0	Result Table	20-1375_SIS
Internal Standard	13C4-PFOS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.96163 x$ (std. dev. = 0.06167) (weighting: None) r^2 :N/A

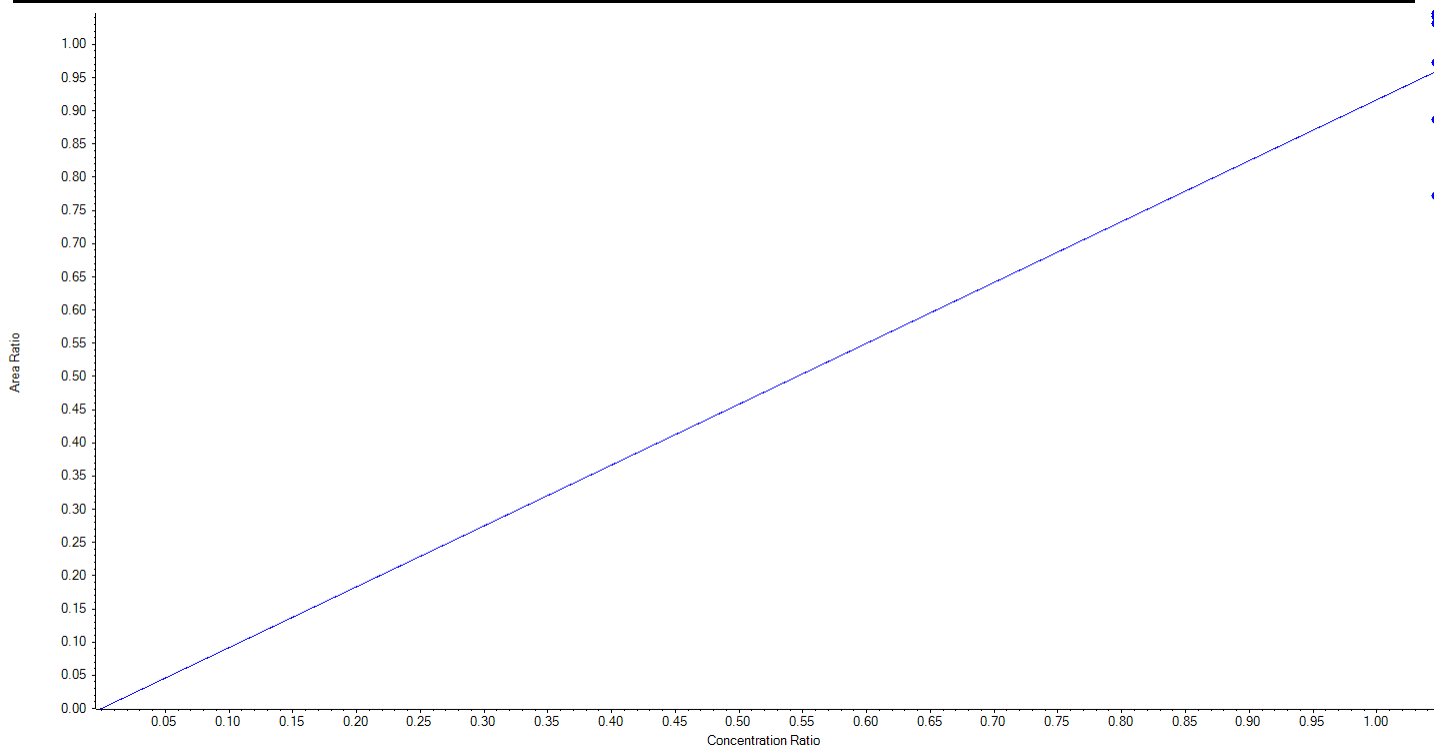
Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	1250.00	1298.09	103.9
13	LE53	L2	True	1250.00	1215.10	97.2
14	LE54	L3	True	1250.00	1389.46	111.2
15	LE55	L4	True	1250.00	1211.96	97.0
16	LE56	L5	True	1250.00	1216.60	97.3
17	LE57	L6	True	1250.00	1168.80	93.5



Analyte Name	d5-EtFOSAA	Data File	AE_11172020_5-369.wiff
MRM Transition	589.0 / 419.0	Result Table	20-1375_SIS
Internal Standard	13C4-PFOS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.91648 x$ (std. dev. = 0.10488) (weighting: None) r^2 :N/A

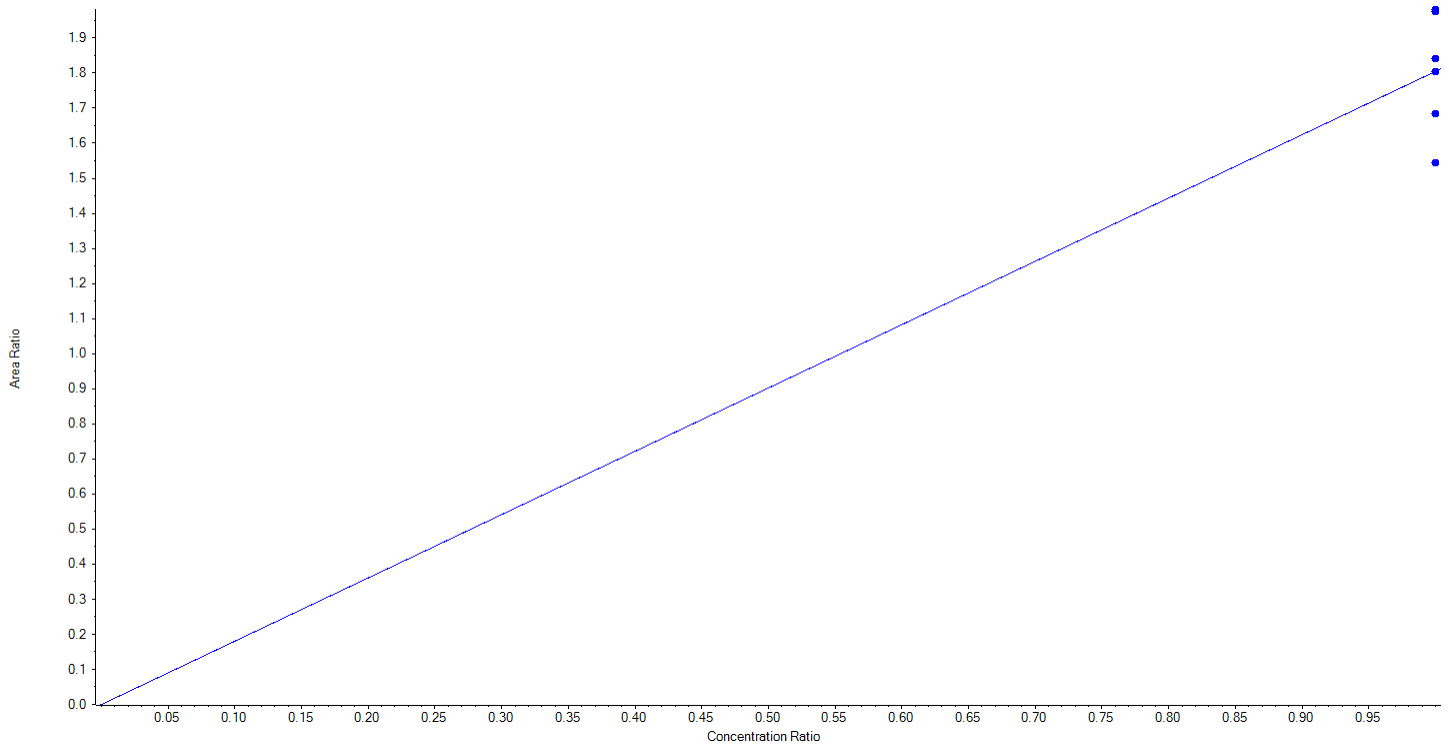
Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	1250.00	1345.32	107.6
13	LE53	L2	True	1250.00	1359.07	108.7
14	LE54	L3	True	1250.00	1364.41	109.2
15	LE55	L4	True	1250.00	1268.03	101.4
16	LE56	L5	True	1250.00	1156.39	92.5
17	LE57	L6	True	1250.00	1006.78	80.5



Analyte Name	13C5-PFHxA	Data File	AE_11172020_5-369.wiff
MRM Transition	318.0 / 273.0	Result Table	20-1375_SIS
Internal Standard	13C2-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.80462 x$ (std. dev. = 0.16979) (weighting: None) r^2 :N/A

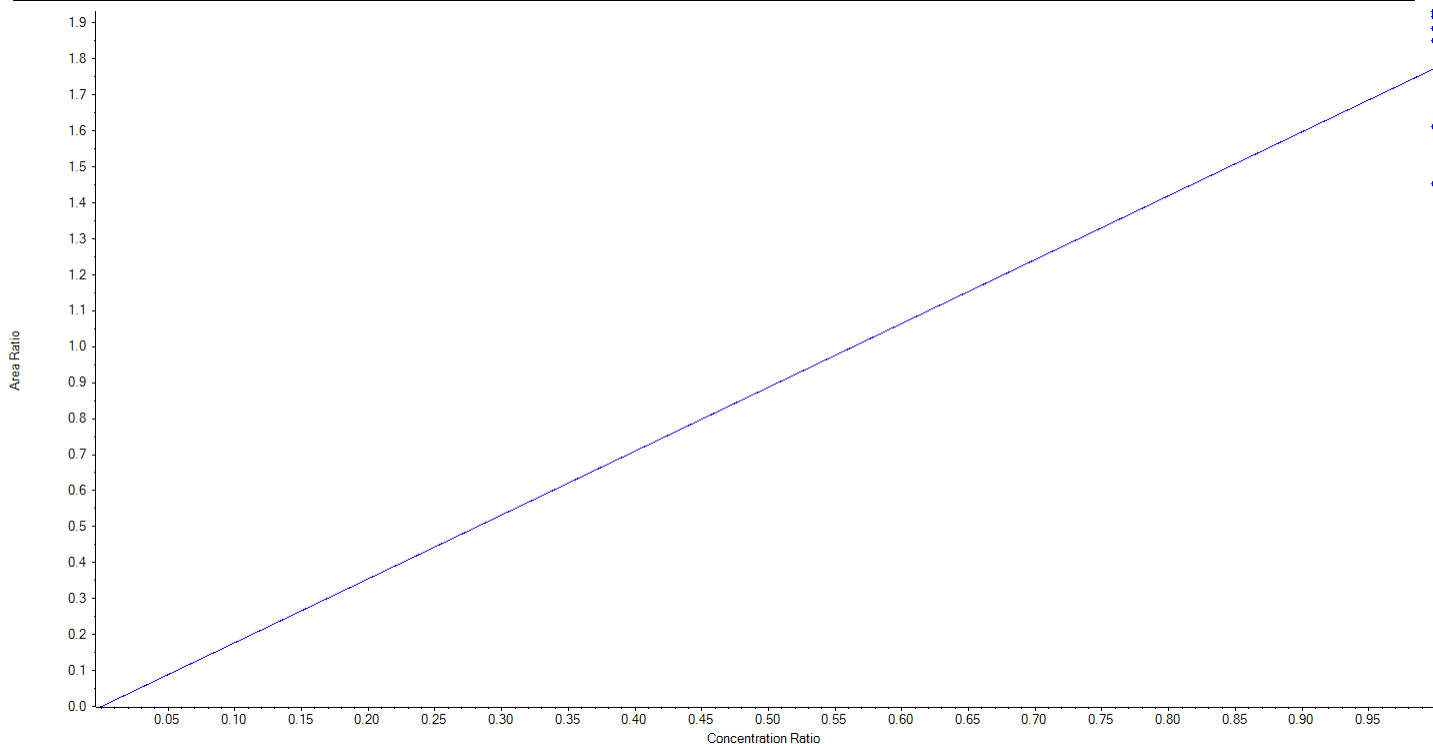
Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	1250.00	1372.19	109.8
13	LE53	L2	True	1250.00	1367.73	109.4
14	LE54	L3	True	1250.00	1248.73	99.9
15	LE55	L4	True	1250.00	1275.75	102.1
16	LE56	L5	True	1250.00	1166.52	93.3
17	LE57	L6	True	1250.00	1069.07	85.5



Analyte Name	13C4-PFHpA	Data File	AE_11172020_5-369.wiff
MRM Transition	367.0 / 322.0	Result Table	20-1375_SIS
Internal Standard	13C2-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.77480 x$ (std. dev. = 0.19637) (weighting: None) r^2 :N/A

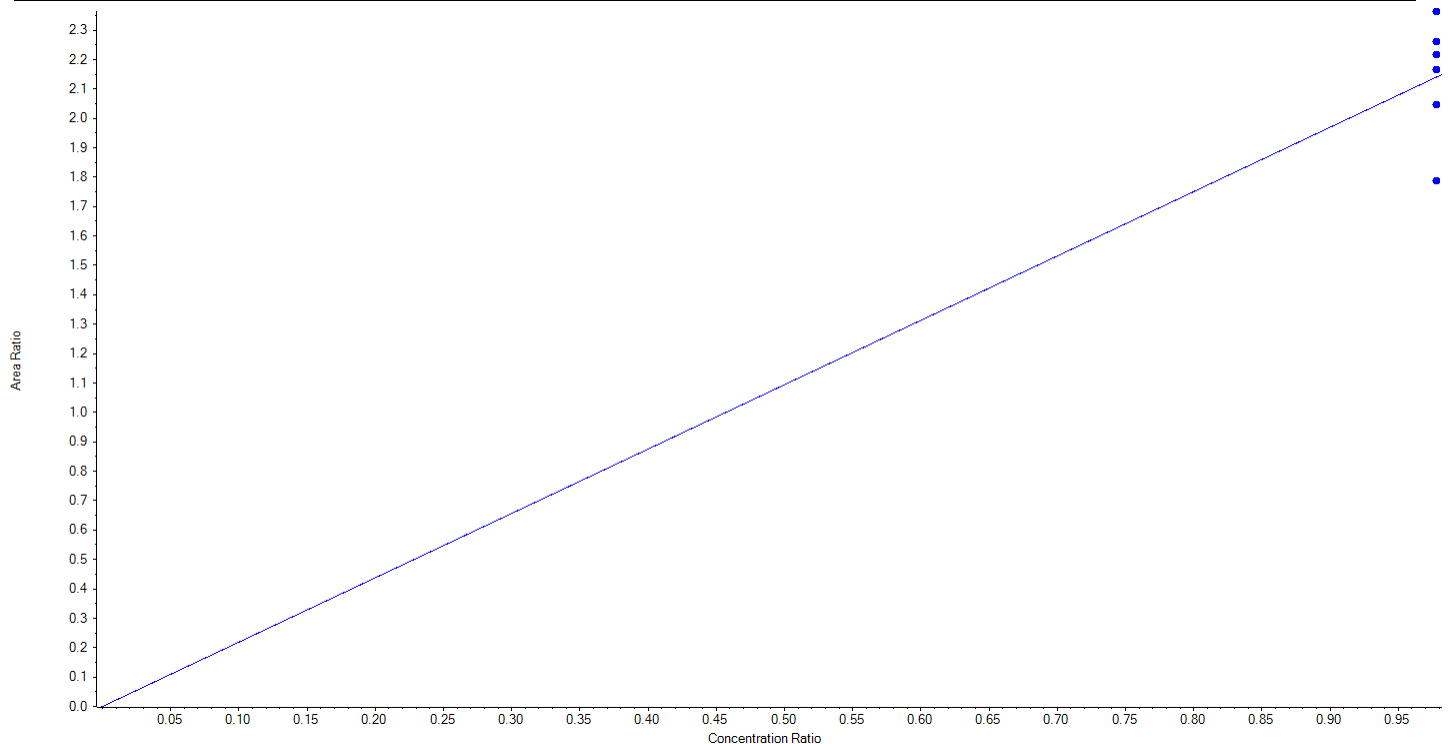
Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	1250.00	1327.21	106.2
13	LE53	L2	True	1250.00	1360.59	108.9
14	LE54	L3	True	1250.00	1303.44	104.3
15	LE55	L4	True	1250.00	1350.52	108.0
16	LE56	L5	True	1250.00	1134.28	90.7
17	LE57	L6	True	1250.00	1023.95	81.9



Analyte Name	13C8-PFOA	Data File	AE_11172020_5-369.wiff
MRM Transition	421.0 / 376.0	Result Table	20-1375_SIS
Internal Standard	13C2-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 2.18825 x$ (std. dev. = 0.20705) (weighting: None) r^2 :N/A

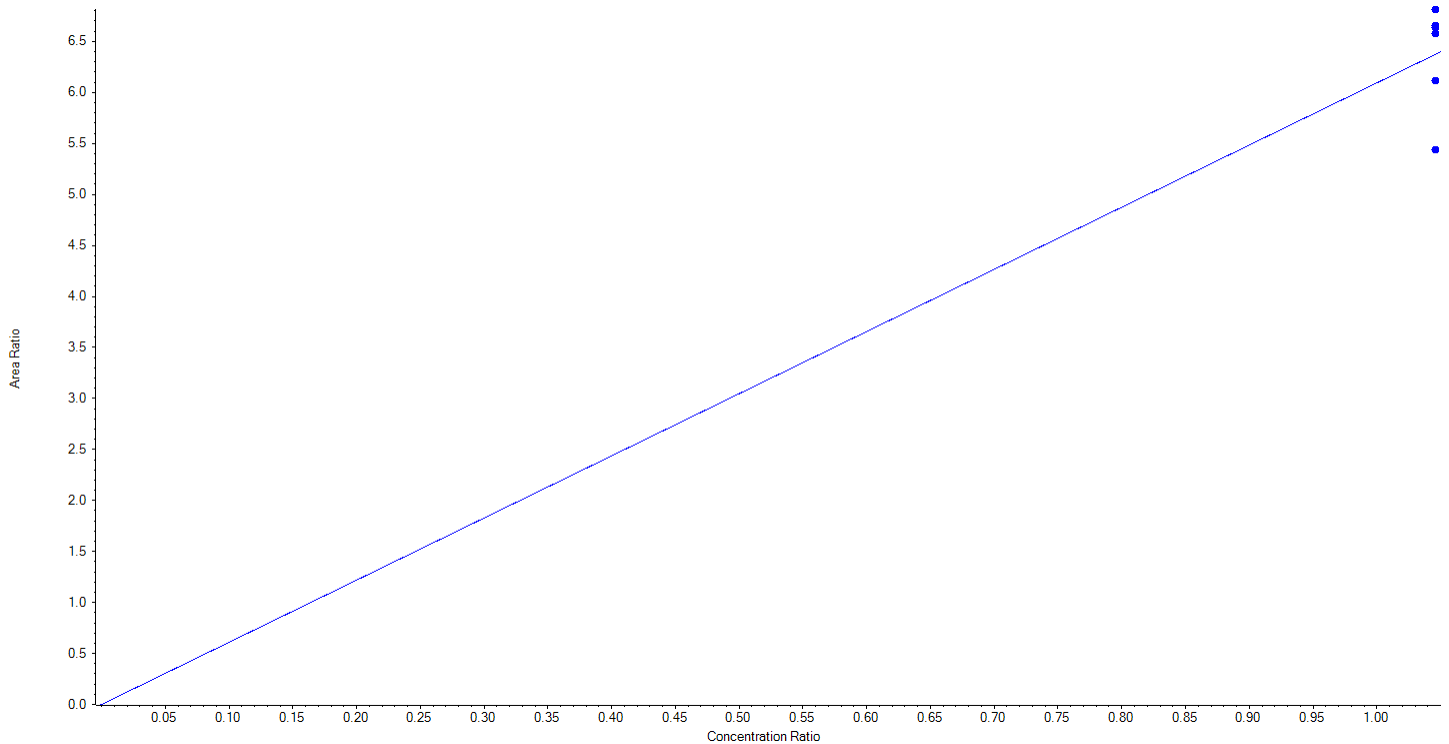
Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	1222.50	1291.92	105.7
13	LE53	L2	True	1222.50	1349.86	110.4
14	LE54	L3	True	1222.50	1236.84	101.2
15	LE55	L4	True	1222.50	1267.15	103.7
16	LE56	L5	True	1222.50	1168.60	95.6
17	LE57	L6	True	1222.50	1020.62	83.5



Analyte Name	13C9-PFNA	Data File	AE_11172020_5-369.wiff
MRM Transition	472.0 / 427.0	Result Table	20-1375_SIS
Internal Standard	13C4-PFOS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 6.09352 x$ (std. dev. = 0.49244) (weighting: None) r^2 :N/A

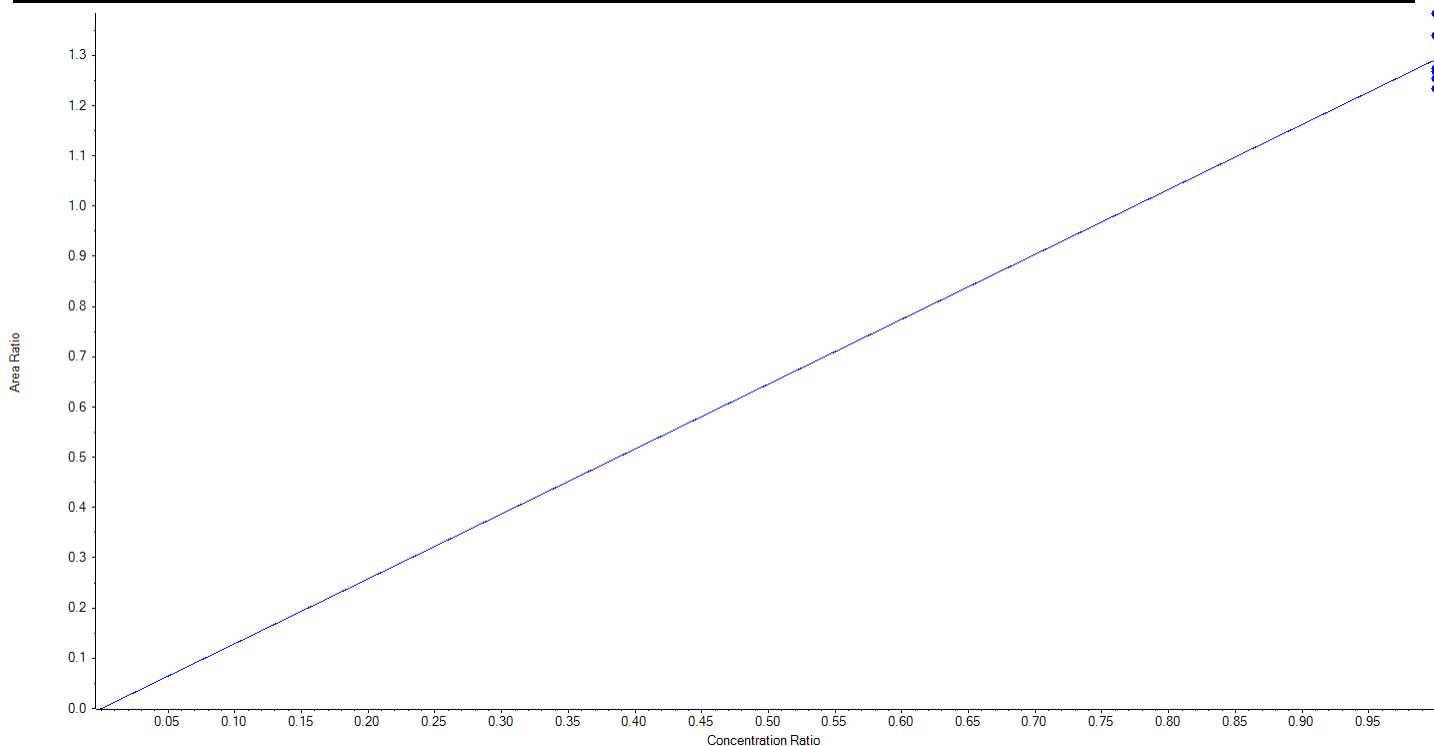
Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	1250.00	1290.79	103.3
13	LE53	L2	True	1250.00	1305.98	104.5
14	LE54	L3	True	1250.00	1336.05	106.9
15	LE55	L4	True	1250.00	1300.82	104.1
16	LE56	L5	True	1250.00	1200.05	96.0
17	LE57	L6	True	1250.00	1066.31	85.3



Analyte Name	13C6-PFDA	Data File	AE_11172020_5-369.wiff
MRM Transition	519.0 / 474.0	Result Table	20-1375_SIS
Internal Standard	13C2-PFDA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.29155 x$ (std. dev. = 0.05739) (weighting: None) r^2 :N/A

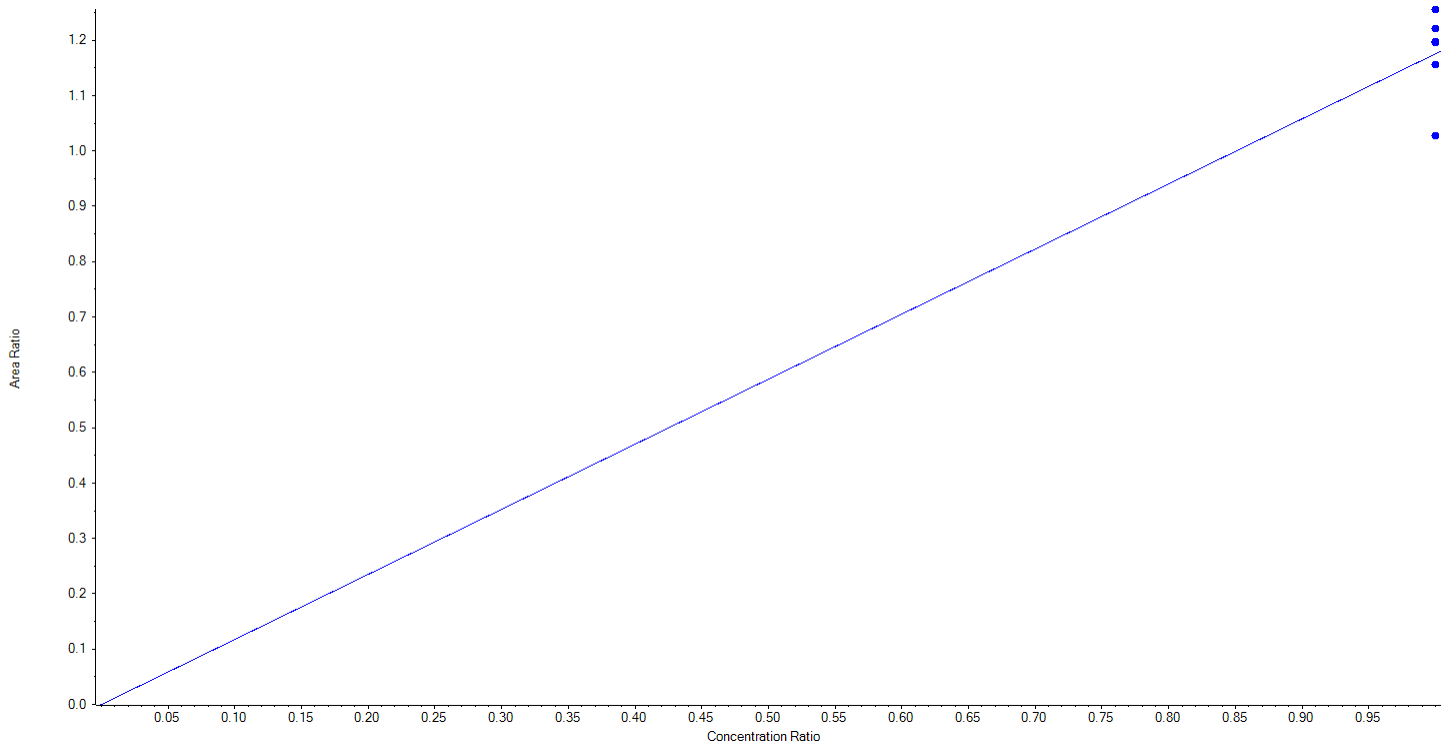
Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	1250.00	1338.86	107.1
13	LE53	L2	True	1250.00	1295.73	103.7
14	LE54	L3	True	1250.00	1232.07	98.6
15	LE55	L4	True	1250.00	1212.50	97.0
16	LE56	L5	True	1250.00	1227.40	98.2
17	LE57	L6	True	1250.00	1193.43	95.5



Analyte Name	13C7-PFUnA	Data File	AE_11172020_5-369.wiff
MRM Transition	570.0 / 525.0	Result Table	20-1375_SIS
Internal Standard	13C2-PFDA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.17546 x$ (std. dev. = 0.07951) (weighting: None) r^2 :N/A

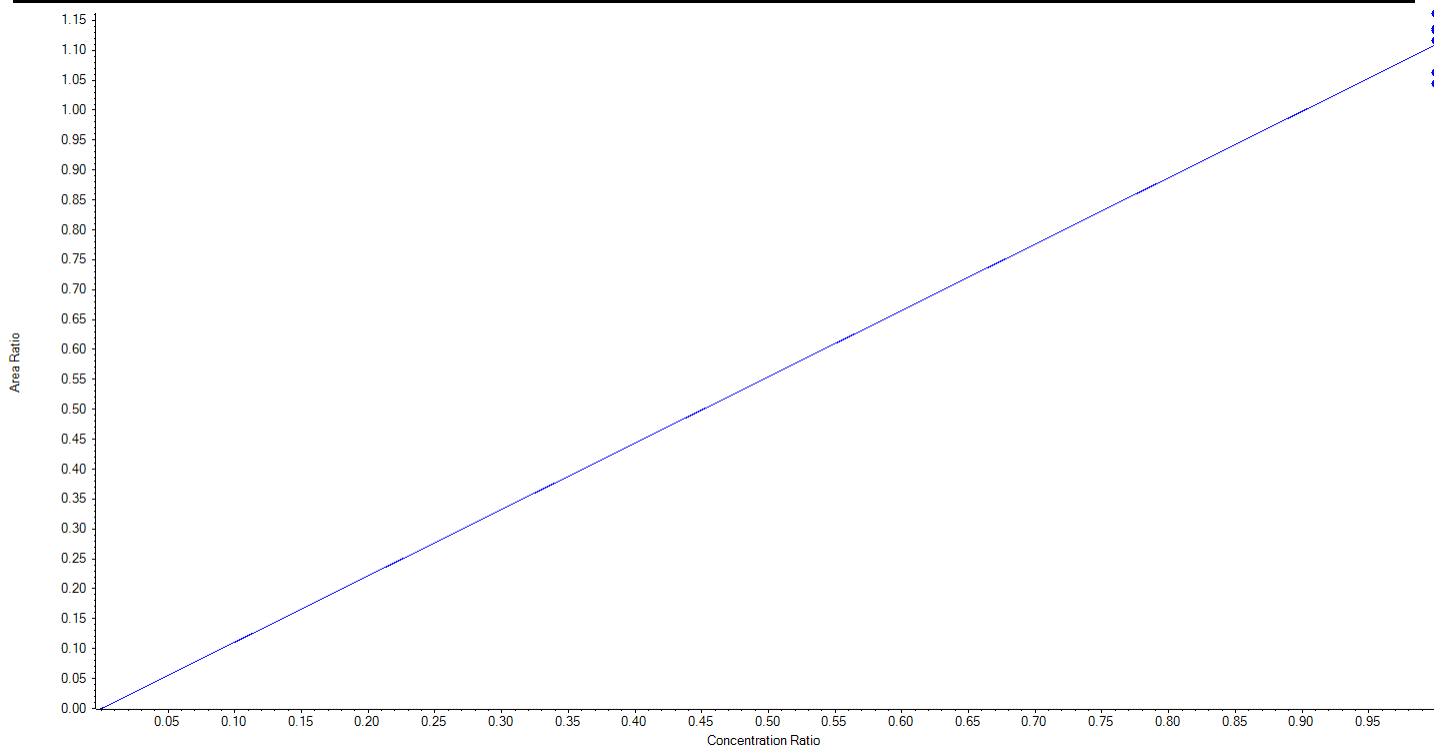
Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	1250.00	1228.62	98.3
13	LE53	L2	True	1250.00	1299.30	103.9
14	LE54	L3	True	1250.00	1273.11	101.9
15	LE55	L4	True	1250.00	1270.95	101.7
16	LE56	L5	True	1250.00	1335.03	106.8
17	LE57	L6	True	1250.00	1092.99	87.4



Analyte Name	13C2-PFTeDA	Data File	AE_11172020_5-369.wiff
MRM Transition	715.0 / 670.0	Result Table	20-1375_SIS
Internal Standard	13C2-PFDA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.10890 x$ (std. dev. = 0.04597) (weighting: None) r^2 :N/A

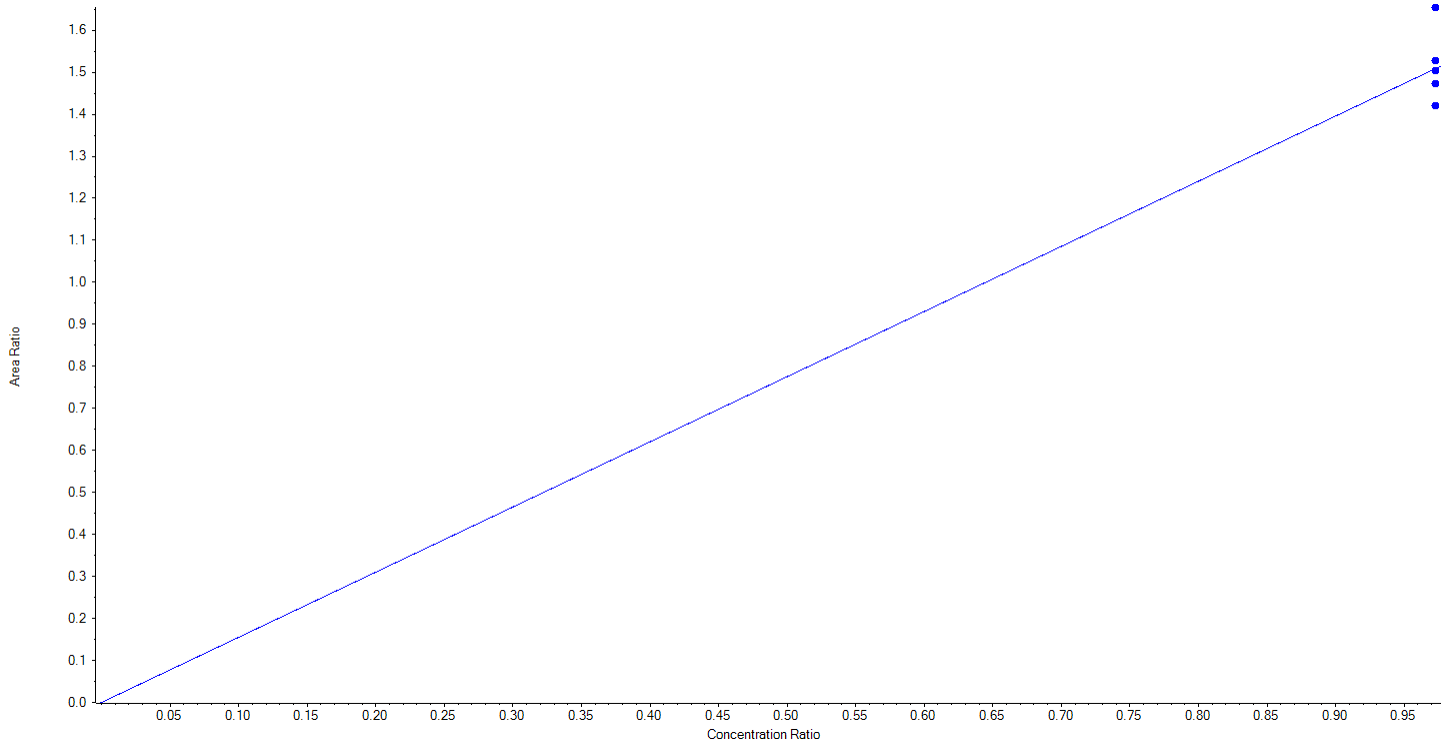
Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	1250.00	1176.41	94.1
13	LE53	L2	True	1250.00	1259.04	100.7
14	LE54	L3	True	1250.00	1197.60	95.8
15	LE55	L4	True	1250.00	1280.17	102.4
16	LE56	L5	True	1250.00	1277.48	102.2
17	LE57	L6	True	1250.00	1309.29	104.7



Analyte Name	13C3-PFBS	Data File	AE_11172020_5-369.wiff
MRM Transition	302.0 / 99.0	Result Table	20-1375_SIS
Internal Standard	13C4-PFOS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.55078 x$ (std. dev. = 0.08182) (weighting: None) r^2 :N/A

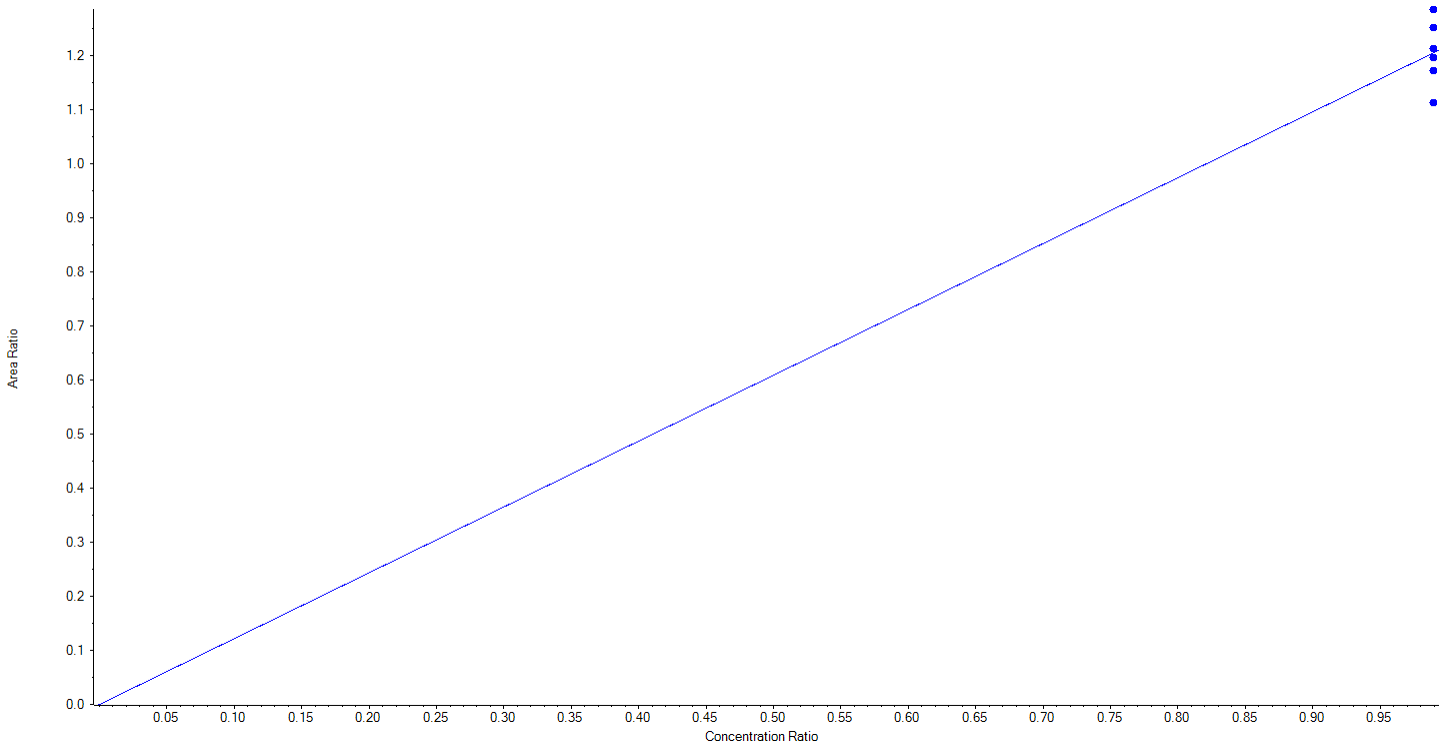
Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	1162.50	1134.79	97.6
13	LE53	L2	True	1162.50	1095.13	94.2
14	LE54	L3	True	1162.50	1158.92	99.7
15	LE55	L4	True	1162.50	1176.58	101.2
16	LE56	L5	True	1162.50	1274.49	109.6
17	LE57	L6	True	1162.50	1135.09	97.6



Analyte Name	13C3-PFHxS	Data File	AE_11172020_5-369.wiff
MRM Transition	402.0 / 99.0	Result Table	20-1375_SIS
Internal Standard	13C4-PFOS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.21769 x$ (std. dev. = 0.06146) (weighting: None) r^2 :N/A

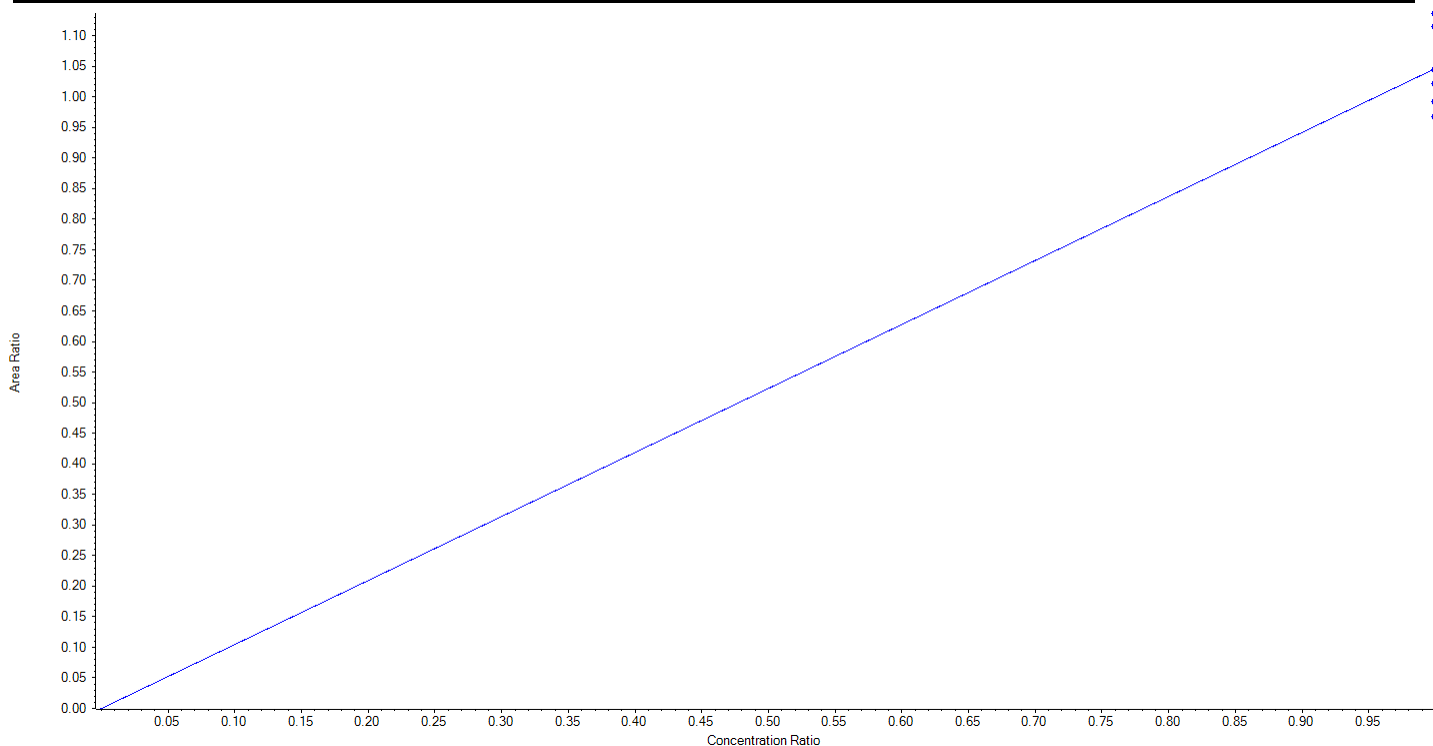
Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	1182.50	1150.33	97.3
13	LE53	L2	True	1182.50	1173.27	99.2
14	LE54	L3	True	1182.50	1261.12	106.7
15	LE55	L4	True	1182.50	1189.71	100.6
16	LE56	L5	True	1182.50	1229.09	103.9
17	LE57	L6	True	1182.50	1091.48	92.3



Analyte Name	13C8-PFOS	Data File	AE_11172020_5-369.wiff
MRM Transition	507.0 / 99.0	Result Table	20-1375_SIS
Internal Standard	13C4-PFOS	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 1.04642 x$ (std. dev. = 0.06714) (weighting: None) r^2 :N/A

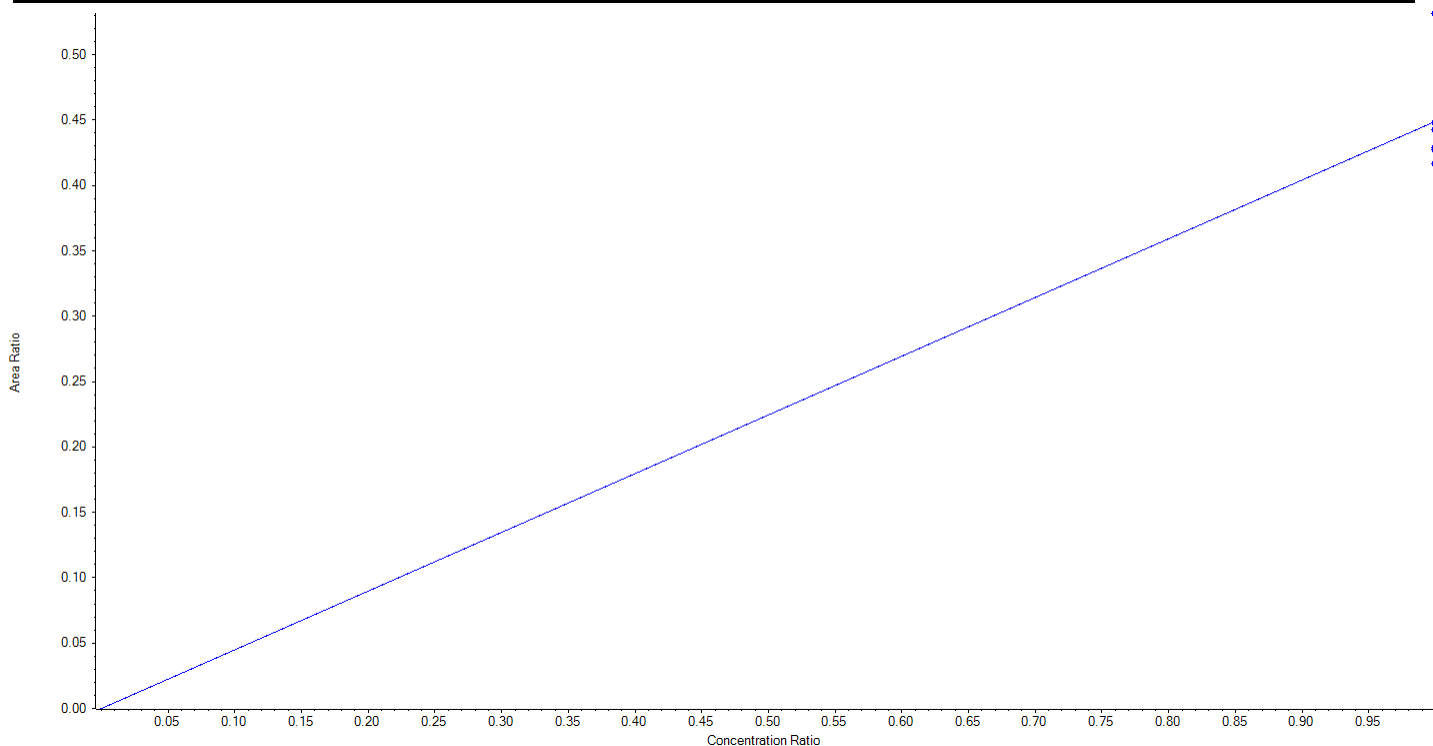
Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	1195.00	1273.78	106.6
13	LE53	L2	True	1195.00	1167.43	97.7
14	LE54	L3	True	1195.00	1297.51	108.6
15	LE55	L4	True	1195.00	1193.03	99.8
16	LE56	L5	True	1195.00	1133.23	94.8
17	LE57	L6	True	1195.00	1105.02	92.5



Analyte Name	13C3-HFPO-DA	Data File	AE_11172020_5-369.wiff
MRM Transition	287.0 / 169.0	Result Table	20-1375_SIS
Internal Standard	13C2-PFOA	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Acquisition Method	5-369.dam

Regression Equation: $y = 0.44903 x$ (std. dev. = 0.04193) (weighting: None) r^2 :N/A

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
12	LE52	L1	True	1250.00	1188.86	95.1
13	LE53	L2	True	1250.00	1159.15	92.7
14	LE54	L3	True	1250.00	1232.30	98.6
15	LE55	L4	True	1250.00	1246.11	99.7
16	LE56	L5	True	1250.00	1194.09	95.5
17	LE57	L6	True	1250.00	1479.49	118.4



Sample Name	LE52	Injection Vial	12
Sample ID	L1	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	1.36	293623.45	234.87	1895.1	False	13C3-PFBS	382050.12	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.36	92696.26	219.57	1391.7	False	13C3-PFBS	382050.12	1162.50	PFBS	0.316	0.331	✓
PFHxA_1	313.0 / 269.0	1.62	518008.51	233.27	450.1	False	13C5-PFHxA	1620322.19	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.62	26029.84	263.60	279.6	False	13C5-PFHxA	1620322.19	1250.00	PFHxA	0.050	0.057	✓
PFHpA_1	363.0 / 319.0	1.96	338367.86	272.42	611.1	False	13C4-PFHpA	1541305.52	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.96	8637.15	293.52	1626.9	False	13C4-PFHpA	1541305.52	1250.00	PFHpA	0.026	0.031	✓
PFHxS_1	399.0 / 80.0	1.96	267996.38	276.09	1261.1	False	13C3-PFHxS	304096.45	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.96	82305.46	260.18	846.4	False	13C3-PFHxS	304096.45	1182.50	PFHxS	0.307	0.355	✓
PFOA_1	413.0 / 369.0	2.33	346813.50	284.11	274.0	False	13C8-PFOA	1849839.81	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.33	36346.85	282.30	185.7	False	13C8-PFOA	1849839.81	1222.50	PFOA	0.105	0.107	✓
PFNA_1	463.0 / 419.0	2.71	368099.28	262.56	348.4	False	13C9-PFNA	1707559.68	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.71	100735.12	259.15	395.2	False	13C9-PFNA	1707559.68	1250.00	PFNA	0.274	0.309	✓
PFOS_1	499.0 / 80.0	2.70	252807.29	250.53	406.2	False	13C8-PFOS	289370.75	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.70	53334.48	261.34	890.0	False	13C8-PFOS	289370.75	1195.00	PFOS	0.211	0.212	✓
PFDA_1	513.0 / 469.0	3.07	321633.32	209.28	576.3	False	13C6-PFDA	1773161.55	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.07	19041.90	218.07	4792.8	False	13C6-PFDA	1773161.55	1250.00	PFDA	0.059	0.062	✓
PFUnA_1	563.0 / 519.0	3.40	381988.98	252.00	723.6	False	13C7-PFUnA	1480899.95	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.40	23657.56	295.35	1121.3	False	13C7-PFUnA	1480899.95	1250.00	PFUnA	0.062	0.064	✓
PFDoA_1	613.0 / 569.0	3.69	381248.13	256.14	628.9	False	13C2-PFDoA	1635492.12	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.69	43726.18	268.76	1303.3	False	13C2-PFDoA	1635492.12	1250.00	PFDoA	0.115	0.116	✓
PFTTrDA_1	663.0 / 619.0	3.96	285831.11	245.17	872.8	False	13C2-PFTTeDA	1337684.42	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	3.95	18305.84	258.13	659.6	False	13C2-PFTTeDA	1337684.42	1250.00	PFTTrDA	0.064	0.071	✓
PFTTeDA_1	713.0 / 669.0	4.20	331650.13	235.56	1005.2	False	13C2-PFTTeDA	1337684.42	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	4.20	17099.06	250.55	1074.1	False	13C2-PFTTeDA	1337684.42	1250.00	PFTTeDA	0.052	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.21	42607.72	306.06	22452.8	False	d3-MeFOSAA	269710.37	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.22	48708.03	280.17	958.3	False	d3-MeFOSAA	269710.37	1250.00	NMeFOSAA	1.143	1.134	✓
NEiFOSAA_1	584.0 / 419.0	3.39	53889.85	239.74	1500.4	False	d5-EiFOSAA	267863.10	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.39	3405.75	281.21	31198.0	False	d5-EiFOSAA	267863.10	1250.00	NEiFOSAA	0.063	0.058	✓
HFPO-DA_1	285.0 / 169.0	1.71	294272.89	272.51	1591.2	False	13C3-HFPO-DA	369359.54	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.71	7938.21	294.24	40277.7	False	13C3-HFPO-DA	369359.54	1250.00	HFPO-DA	0.027	0.024	✓
ADONA_1	377.0 / 251.0	1.99	956425.88	250.47	4277.4	False	13C8-PFOA	1849839.81	1222.50	ADONA			
ADONA_2	377.0 / 85.0	2.00	10508.03	253.67	7708.4	False	13C8-PFOA	1849839.81	1222.50	ADONA	0.011	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	2.91	489655.67	301.49	918.9	True	13C8-PFOA	1849839.81	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.90	1935.13	272.61	356.7	False	13C8-PFOA	1849839.81	1222.50	9CI-PF3ONS	0.004	0.008	
11Cl-pf3OUdS_1	631.0 / 451.0	3.55	344021.27	315.31	1179.3	False	13C8-PFOA	1849839.81	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.55	2114.00	324.13	511.4	True	13C8-PFOA	1849839.81	1222.50	11Cl-PF3OUdS	0.006	0.006	✓

Sample Name	LE53	Injection Vial	13
Sample ID	L2	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:14:43 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	1.37	512455.13	506.07	2950.4	False	13C3-PFBS	374956.97	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.37	169706.78	507.68	1614.1	False	13C3-PFBS	374956.97	1162.50	PFBS	0.331	0.331	✓
PFHxA_1	313.0 / 269.0	1.62	921597.58	512.90	547.9	False	13C5-PFHxA	1622044.43	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.62	49936.77	525.40	416.8	False	13C5-PFHxA	1622044.43	1250.00	PFHxA	0.054	0.057	✓
PFHpA_1	363.0 / 319.0	1.97	614174.20	503.16	808.0	False	13C4-PFHpA	1586900.59	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.96	18206.53	525.18	1181.2	False	13C4-PFHpA	1586900.59	1250.00	PFHpA	0.030	0.031	✓
PFHxS_1	399.0 / 80.0	1.98	485631.17	502.23	1403.3	False	13C3-PFHxS	315428.81	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.97	171429.68	514.53	1076.1	False	13C3-PFHxS	315428.81	1182.50	PFHxS	0.353	0.355	✓
PFOA_1	413.0 / 369.0	2.34	631607.24	479.53	400.2	False	13C8-PFOA	1941160.29	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.34	67127.63	480.15	262.1	False	13C8-PFOA	1941160.29	1222.50	PFOA	0.106	0.107	✓
PFNA_1	463.0 / 419.0	2.71	631162.95	465.69	458.5	False	13C9-PFNA	1756989.19	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.71	207949.16	517.02	512.1	False	13C9-PFNA	1756989.19	1250.00	PFNA	0.329	0.309	✓
PFOS_1	499.0 / 80.0	2.70	483994.43	522.98	716.8	False	13C8-PFOS	269713.56	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.70	97863.14	506.40	818.9	False	13C8-PFOS	269713.56	1195.00	PFOS	0.202	0.212	✓
PFDA_1	513.0 / 469.0	3.06	654517.90	522.37	682.9	False	13C6-PFDA	1661460.58	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.06	36944.01	482.03	1265.9	False	13C6-PFDA	1661460.58	1250.00	PFDA	0.056	0.062	✓
PFUnA_1	563.0 / 519.0	3.39	729494.98	512.61	876.6	False	13C7-PFUnA	1516290.66	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.38	43715.63	508.69	1120.3	False	13C7-PFUnA	1516290.66	1250.00	PFUnA	0.060	0.064	✓
PFDoA_1	613.0 / 569.0	3.68	710048.70	506.74	912.6	False	13C2-PFDoA	1596094.37	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.68	81985.29	512.36	2323.6	False	13C2-PFDoA	1596094.37	1250.00	PFDoA	0.115	0.116	✓
PFTTrDA_1	663.0 / 619.0	3.94	546597.93	483.38	1379.2	False	13C2-PFTTeDA	1386106.54	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	3.93	38893.99	508.31	1060.1	False	13C2-PFTTeDA	1386106.54	1250.00	PFTTrDA	0.071	0.071	✓
PFTTeDA_1	713.0 / 669.0	4.17	626083.10	497.25	1696.1	False	13C2-PFTTeDA	1386106.54	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	4.17	37126.93	543.10	1717.5	False	13C2-PFTTeDA	1386106.54	1250.00	PFTTeDA	0.059	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.21	76634.90	529.36	316617.8	False	d3-MeFOSAA	256625.21	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.21	88208.69	522.61	1592.7	False	d3-MeFOSAA	256625.21	1250.00	NMeFOSAA	1.151	1.134	✓
NEiFOSAA_1	584.0 / 419.0	3.38	119189.93	535.38	2510.5	False	d5-EiFOSAA	275580.69	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.37	58777.91	467.57	274.0	False	d5-EiFOSAA	275580.69	1250.00	NEiFOSAA	0.049	0.058	✓
HFPO-DA_1	285.0 / 169.0	1.72	506283.37	493.93	2809.5	False	13C3-HFPO-DA	366644.44	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.72	13367.96	534.01	10232107.8	False	13C3-HFPO-DA	366644.44	1250.00	HFPO-DA	0.026	0.024	✓
ADONA_1	377.0 / 251.0	2.00	1821595.95	487.63	5562.4	False	13C8-PFOA	1941160.29	1222.50	ADONA			
ADONA_2	377.0 / 85.0	2.00	25860.57	531.94	3751509.9	False	13C8-PFOA	1941160.29	1222.50	ADONA	0.014	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	2.91	937334.10	496.67	1448.6	False	13C8-PFOA	1941160.29	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.91	9245.19	603.42	302.5	False	13C8-PFOA	1941160.29	1222.50	9CI-PF3ONS	0.010	0.008	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.54	632385.98	485.25	1469.6	False	13C8-PFOA	1941160.29	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.54	3908.36	522.22	1677.3	False	13C8-PFOA	1941160.29	1222.50	11Cl-PF3OUdS	0.006	0.006	✓

Sample Name	LE54	Injection Vial	14
Sample ID	L3	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:25:10 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	1.35	947715.68	998.98	3818.9	False	13C3-PFBS	386209.02	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.35	317461.08	1014.51	2645.0	False	13C3-PFBS	386209.02	1162.50	PFBS	0.335	0.331	✓
PFHxA_1	313.0 / 269.0	1.60	1603093.33	1045.73	726.4	False	13C5-PFHxA	1539000.20	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.60	86826.01	981.20	506.4	False	13C5-PFHxA	1539000.20	1250.00	PFHxA	0.054	0.057	✓
PFHpA_1	363.0 / 319.0	1.93	1126302.39	952.10	1027.7	False	13C4-PFHpA	1579878.25	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.93	34814.14	942.10	1828.2	False	13C4-PFHpA	1579878.25	1250.00	PFHpA	0.031	0.031	✓
PFHxS_1	399.0 / 80.0	1.94	892483.33	902.40	2027.5	False	13C3-PFHxS	329998.71	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.94	329400.32	938.44	3016.7	False	13C3-PFHxS	329998.71	1182.50	PFHxS	0.369	0.355	✓
PFOA_1	413.0 / 369.0	2.30	1248375.07	975.56	530.6	False	13C8-PFOA	1848387.81	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.29	135289.19	991.74	577.1	False	13C8-PFOA	1848387.81	1222.50	PFOA	0.108	0.107	✓
PFNA_1	463.0 / 419.0	2.67	1262458.03	978.08	627.3	False	13C9-PFNA	1749486.58	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.67	401343.75	999.43	846.3	False	13C9-PFNA	1749486.58	1250.00	PFNA	0.318	0.309	✓
PFOS_1	499.0 / 80.0	2.66	905539.16	910.33	777.1	False	13C8-PFOS	291768.46	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.66	203084.63	963.79	4591.9	False	13C8-PFOS	291768.46	1195.00	PFOS	0.224	0.212	✓
PFDA_1	513.0 / 469.0	3.02	1159207.13	1038.81	863.8	False	13C6-PFDA	1556917.99	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.02	74917.29	1076.29	45685.1	False	13C6-PFDA	1556917.99	1250.00	PFDA	0.065	0.062	✓
PFUnA_1	563.0 / 519.0	3.34	1260043.81	955.75	1016.4	False	13C7-PFUnA	1464175.52	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.34	81128.89	949.76	2750.7	False	13C7-PFUnA	1464175.52	1250.00	PFUnA	0.064	0.064	✓
PFDoA_1	613.0 / 569.0	3.63	1258121.79	934.08	1035.7	False	13C2-PFDoA	1561002.02	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.63	148079.35	942.54	2626.2	False	13C2-PFDoA	1561002.02	1250.00	PFDoA	0.118	0.116	✓
PFTTrDA_1	663.0 / 619.0	3.89	1031830.94	1010.48	2077.0	False	13C2-PFTTeDA	1299346.66	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	3.89	71183.60	973.42	1510.2	False	13C2-PFTTeDA	1299346.66	1250.00	PFTTrDA	0.069	0.071	✓
PFTeDA_1	713.0 / 669.0	4.13	1081033.99	985.66	2289.8	False	13C2-PFTeDA	1299346.66	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.13	57043.95	900.72	1690.6	False	13C2-PFTeDA	1299346.66	1250.00	PFTeDA	0.053	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.16	134657.08	805.40	9256.5	False	d3-MeFOSAA	284991.62	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.16	159616.16	844.12	2320.0	False	d3-MeFOSAA	284991.62	1250.00	NMeFOSAA	1.185	1.134	✓
NEiFOSAA_1	584.0 / 419.0	3.33	208329.94	971.78	3315.6	False	d5-EiFOSAA	269174.17	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.33	11258.13	910.95	6217.7	False	d5-EiFOSAA	269174.17	1250.00	NEiFOSAA	0.054	0.058	✓
HFPO-DA_1	285.0 / 169.0	1.69	1008557.70	932.11	3573.1	False	13C3-HFPO-DA	398801.05	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.69	19972.57	753.17	5389.7	False	13C3-HFPO-DA	398801.05	1250.00	HFPO-DA	0.020	0.024	✓
ADONA_1	377.0 / 251.0	1.97	3586033.86	1051.41	8579.1	False	13C8-PFOA	1848387.81	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.96	48554.71	1003.39	24698231.6	False	13C8-PFOA	1848387.81	1222.50	ADONA	0.014	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	2.86	1773572.69	923.09	1973.2	False	13C8-PFOA	1848387.81	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.86	14931.36	898.52	911.1	False	13C8-PFOA	1848387.81	1222.50	9CI-PF3ONS	0.008	0.008	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.49	1238003.74	903.39	2015.0	False	13C8-PFOA	1848387.81	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.50	5807.29	778.97	37960.4	False	13C8-PFOA	1848387.81	1222.50	11Cl-PF3OUdS	0.005	0.006	✓

Sample Name	LE55	Injection Vial	15
Sample ID	L4	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:35:38 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	1.36	2232944.13	2593.18	6737.5	False	13C3-PFBS	374021.31	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.36	773476.98	2724.14	5289.1	False	13C3-PFBS	374021.31	1162.50	PFBS	0.346	0.331	✓
PFHxA_1	313.0 / 269.0	1.62	3530777.13	2550.13	1274.9	False	13C5-PFHxA	1484481.29	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.62	205470.22	2439.33	1171.0	False	13C5-PFHxA	1484481.29	1250.00	PFHxA	0.058	0.057	✓
PFHpA_1	363.0 / 319.0	1.96	2668855.40	2348.93	1635.0	False	13C4-PFHpA	1545516.63	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.96	79037.35	2090.82	2926.0	False	13C4-PFHpA	1545516.63	1250.00	PFHpA	0.030	0.031	✓
PFHxS_1	399.0 / 80.0	1.96	2316132.81	2652.60	3486.6	False	13C3-PFHxS	296963.04	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.96	823349.67	2592.65	2482.7	False	13C3-PFHxS	296963.04	1182.50	PFHxS	0.355	0.355	✓
PFOA_1	413.0 / 369.0	2.32	3051316.14	2437.03	703.1	False	13C8-PFOA	1787924.12	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.32	312533.04	2338.01	879.2	False	13C8-PFOA	1787924.12	1222.50	PFOA	0.102	0.107	✓
PFNA_1	463.0 / 419.0	2.70	2847359.77	2435.53	855.3	False	13C9-PFNA	1624843.97	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.70	846983.35	2267.28	1037.3	False	13C9-PFNA	1624843.97	1250.00	PFNA	0.297	0.309	✓
PFOS_1	499.0 / 80.0	2.69	2182848.23	2515.80	1344.2	False	13C8-PFOS	255908.36	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.69	455950.64	2454.04	2556.3	False	13C8-PFOS	255908.36	1195.00	PFOS	0.209	0.212	✓
PFDA_1	513.0 / 469.0	3.06	2685230.55	2618.61	1013.1	False	13C6-PFDA	1477779.27	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.06	166221.90	2553.99	9699.0	False	13C6-PFDA	1477779.27	1250.00	PFDA	0.062	0.062	✓
PFUnA_1	563.0 / 519.0	3.38	3143836.83	2554.95	1830.9	False	13C7-PFUnA	1409785.03	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.38	182456.58	2178.01	2272.0	False	13C7-PFUnA	1409785.03	1250.00	PFUnA	0.058	0.064	✓
PFDoA_1	613.0 / 569.0	3.67	3150985.25	2449.88	1527.3	False	13C2-PFDoA	1509947.79	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.67	364320.75	2390.65	2287.6	False	13C2-PFDoA	1509947.79	1250.00	PFDoA	0.116	0.116	✓
PFTeDA_1	663.0 / 619.0	3.93	2669258.69	2590.64	2031.6	False	13C2-PFTeDA	1339599.91	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	3.93	180808.63	2369.01	2262.0	False	13C2-PFTeDA	1339599.91	1250.00	PFTeDA	0.068	0.071	✓
PFTeDA_1	713.0 / 669.0	4.17	2851730.93	2651.15	3507.8	False	13C2-PFTeDA	1339599.91	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.17	157229.46	2435.69	3135.3	False	13C2-PFTeDA	1339599.91	1250.00	PFTeDA	0.055	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.20	325274.07	2230.68	92140.6	False	d3-MeFOSAA	237386.32	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.20	377296.89	2373.79	1766.0	False	d3-MeFOSAA	237386.32	1250.00	NMeFOSAA	1.160	1.134	✓
NEiFOSAA_1	584.0 / 419.0	3.37	449506.07	2387.75	1685.6	False	d5-EiFOSAA	238859.22	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.37	28259.32	2565.56	2131.7	False	d5-EiFOSAA	238859.22	1250.00	NEiFOSAA	0.063	0.058	✓
HFPO-DA_1	285.0 / 169.0	1.71	2417460.60	2430.67	3954.3	False	13C3-HFPO-DA	379126.85	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.71	57341.61	2410.85	21005.4	False	13C3-HFPO-DA	379126.85	1250.00	HFPO-DA	0.024	0.024	✓
ADONA_1	377.0 / 251.0	1.99	7990071.22	2474.71	9669.9	False	13C8-PFOA	1787924.12	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.99	114178.61	2372.31	1252.0	False	13C8-PFOA	1787924.12	1222.50	ADONA	0.014	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	2.90	4534455.28	2333.58	2566.4	False	13C8-PFOA	1787924.12	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.90	39483.92	2145.15	28449.6	False	13C8-PFOA	1787924.12	1222.50	9CI-PF3ONS	0.009	0.008	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.53	3258334.00	2304.44	2613.6	False	13C8-PFOA	1787924.12	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.53	17448.17	2284.54	3254.4	False	13C8-PFOA	1787924.12	1222.50	11Cl-PF3OUdS	0.005	0.006	✓

Sample Name	LE56	Injection Vial	16
Sample ID	L5	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:46:05 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	1.36	8795836.90	10257.31	11204.0	False	13C3-PFBS	384527.95	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.36	2884861.75	10180.51	7208.4	False	13C3-PFBS	384527.95	1162.50	PFBS	0.328	0.331	✓
PFHxA_1	313.0 / 269.0	1.62	12564564.84	10388.54	2082.9	False	13C5-PFHxA	1344711.30	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.62	733301.44	9675.48	1892.5	False	13C5-PFHxA	1344711.30	1250.00	PFHxA	0.058	0.057	✓
PFHpA_1	363.0 / 319.0	1.96	9446402.12	10089.98	2734.6	False	13C4-PFHpA	1285936.13	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.96	313226.44	9686.36	4927.9	False	13C4-PFHpA	1285936.13	1250.00	PFHpA	0.033	0.031	✓
PFHxS_1	399.0 / 80.0	1.97	8150747.51	9589.19	6048.7	False	13C3-PFHxS	291180.59	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.97	3127405.95	10020.88	4630.0	False	13C3-PFHxS	291180.59	1182.50	PFHxS	0.384	0.355	✓
PFOA_1	413.0 / 369.0	2.33	10566769.72	9186.10	1479.6	False	13C8-PFOA	1633472.62	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.33	1183358.47	9620.47	1052.4	False	13C8-PFOA	1633472.62	1222.50	PFOA	0.112	0.107	✓
PFNA_1	463.0 / 419.0	2.71	11140137.41	11029.41	2045.0	False	13C9-PFNA	1422685.52	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.71	3354465.34	10245.32	2155.5	False	13C9-PFNA	1422685.52	1250.00	PFNA	0.301	0.309	✓
PFOS_1	499.0 / 80.0	2.70	8811403.00	11292.33	2265.9	False	13C8-PFOS	230708.95	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.70	1786153.90	10635.68	5956.7	False	13C8-PFOS	230708.95	1195.00	PFOS	0.203	0.212	✓
PFDA_1	513.0 / 469.0	3.07	9529188.56	10624.04	2682.5	False	13C6-PFDA	1314024.75	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.07	639769.53	11149.87	8672.8	False	13C6-PFDA	1314024.75	1250.00	PFDA	0.067	0.062	✓
PFUnA_1	563.0 / 519.0	3.39	11009041.53	9834.22	2655.2	False	13C7-PFUnA	1300776.71	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.39	739045.05	9458.88	4195.7	False	13C7-PFUnA	1300776.71	1250.00	PFUnA	0.067	0.064	✓
PFDoA_1	613.0 / 569.0	3.69	12060650.76	10730.36	2520.8	False	13C2-PFDoA	1327707.43	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.69	1332981.72	9933.83	3002.0	False	13C2-PFDoA	1327707.43	1250.00	PFDoA	0.111	0.116	✓
PFTeDA_1	663.0 / 619.0	3.95	9072155.66	10150.21	2608.1	False	13C2-PFTeDA	1174225.22	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	3.95	700548.11	10403.25	2757.6	False	13C2-PFTeDA	1174225.22	1250.00	PFTeDA	0.077	0.071	✓
PFTeDA_1	713.0 / 669.0	4.19	9552502.91	10365.11	3614.9	False	13C2-PFTeDA	1174225.22	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.18	592742.48	10530.07	3721.8	False	13C2-PFTeDA	1174225.22	1250.00	PFTeDA	0.062	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.21	1426301.80	10069.94	829.5	False	d3-MeFOSAA	226111.90	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.21	1599026.71	10521.38	3765.4	False	d3-MeFOSAA	226111.90	1250.00	NMeFOSAA	1.121	1.134	✓
NEiFOSAA_1	584.0 / 419.0	3.38	1726951.36	10646.19	2458.4	False	d5-EiFOSAA	206977.47	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.38	95914.71	10031.10	2246.4	False	d5-EiFOSAA	206977.47	1250.00	NEiFOSAA	0.056	0.058	✓
HFPO-DA_1	285.0 / 169.0	1.71	8951065.38	10224.62	9678.9	False	13C3-HFPO-DA	366648.14	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.71	218787.57	10482.36	100982.5	False	13C3-HFPO-DA	366648.14	1250.00	HFPO-DA	0.024	0.024	✓
ADONA_1	377.0 / 251.0	2.00	28274884.33	9701.88	27809.6	False	13C8-PFOA	1633472.62	1222.50	ADONA			
ADONA_2	377.0 / 85.0	2.00	420736.44	9426.26	91926.4	False	13C8-PFOA	1633472.62	1222.50	ADONA	0.015	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	2.91	16203945.75	8939.24	5196.8	False	13C8-PFOA	1633472.62	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.91	159703.87	8881.88	3951.6	False	13C8-PFOA	1633472.62	1222.50	9CI-PF3ONS	0.010	0.008	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.55	11827175.65	8890.27	5172.0	False	13C8-PFOA	1633472.62	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.54	65664.49	9210.59	2180.7	False	13C8-PFOA	1633472.62	1222.50	11Cl-PF3OUdS	0.006	0.006	✓

Sample Name	LE57	Injection Vial	17
Sample ID	L6	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:56:32 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	1.37	18289910.26	24659.59	20502.8	False	13C3-PFBS	334731.64	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.37	6029911.94	24603.60	11827.3	False	13C3-PFBS	334731.64	1162.50	PFBS	0.330	0.331	✓
PFHxA_1	313.0 / 269.0	1.62	24571130.40	24911.93	2571.7	False	13C5-PFHxA	1104360.14	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.62	1600947.71	25757.48	2403.4	False	13C5-PFHxA	1104360.14	1250.00	PFHxA	0.065	0.057	✓
PFHpA_1	363.0 / 319.0	1.96	18963534.27	25083.41	4149.0	False	13C4-PFHpA	1040270.98	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.96	675761.21	25712.02	15947.1	False	13C4-PFHpA	1040270.98	1250.00	PFHpA	0.036	0.031	✓
PFHxS_1	399.0 / 80.0	1.97	18942544.45	25719.98	9674.3	False	13C3-PFHxS	252737.63	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.97	6860940.22	25315.82	9082.0	False	13C3-PFHxS	252737.63	1182.50	PFHxS	0.362	0.355	✓
PFOA_1	413.0 / 369.0	2.32	23336431.86	25887.67	1914.9	False	13C8-PFOA	1278438.28	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.32	2461969.18	25537.33	2011.2	False	13C8-PFOA	1278438.28	1222.50	PFOA	0.105	0.107	✓
PFNA_1	463.0 / 419.0	2.69	21078098.27	24078.74	2314.2	False	13C9-PFNA	1235569.40	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.69	7099111.71	24961.80	3013.8	False	13C9-PFNA	1235569.40	1250.00	PFNA	0.337	0.309	✓
PFOS_1	499.0 / 80.0	2.68	17953689.28	24150.53	2929.4	False	13C8-PFOS	219883.62	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.68	3974659.96	24821.24	3622.9	False	13C8-PFOS	219883.62	1195.00	PFOS	0.221	0.212	✓
PFDA_1	513.0 / 469.0	3.03	19718331.95	24236.89	2536.0	False	13C6-PFDA	1195514.44	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.03	1239200.88	23769.75	4208.2	False	13C6-PFDA	1195514.44	1250.00	PFDA	0.063	0.062	✓
PFUnA_1	563.0 / 519.0	3.35	21494762.05	25140.47	2855.6	False	13C7-PFUnA	996485.39	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.35	1550953.63	25859.31	3368.9	False	13C7-PFUnA	996485.39	1250.00	PFUnA	0.072	0.064	✓
PFDoA_1	613.0 / 569.0	3.64	26072616.96	24372.81	2958.5	False	13C2-PFDoA	1264943.76	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.63	3222728.40	25201.87	3358.9	False	13C2-PFDoA	1264943.76	1250.00	PFDoA	0.124	0.116	✓
PFTeDA_1	663.0 / 619.0	3.88	21186824.08	24770.12	3812.1	False	13C2-PFTeDA	1126093.81	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	3.88	1599328.95	24737.87	3699.7	False	13C2-PFTeDA	1126093.81	1250.00	PFTeDA	0.075	0.071	✓
PFTeDA_1	713.0 / 669.0	4.11	21568025.70	24515.26	3529.7	False	13C2-PFTeDA	1126093.81	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.11	1326249.08	24589.87	4506.9	False	13C2-PFTeDA	1126093.81	1250.00	PFTeDA	0.061	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.17	3370546.39	25308.55	5340.0	False	d3-MeFOSAA	211900.29	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.17	3521333.05	24707.92	4753.4	False	d3-MeFOSAA	211900.29	1250.00	NMeFOSAA	1.045	1.134	✓
NEiFOSAA_1	584.0 / 419.0	3.34	3367102.24	24469.16	2211.1	False	d5-EiFOSAA	175741.56	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.34	202990.93	24993.61	2606.1	False	d5-EiFOSAA	175741.56	1250.00	NEiFOSAA	0.060	0.058	✓
HFPO-DA_1	285.0 / 169.0	1.72	19795412.66	24873.02	12071.2	False	13C3-HFPO-DA	401080.30	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.72	478305.79	24737.22	37014.6	False	13C3-HFPO-DA	401080.30	1250.00	HFPO-DA	0.024	0.024	✓
ADONA_1	377.0 / 251.0	2.00	57523067.28	25283.89	30958.0	False	13C8-PFOA	1278438.28	1222.50	ADONA			
ADONA_2	377.0 / 85.0	2.00	899301.93	25662.43	22243398.7	False	13C8-PFOA	1278438.28	1222.50	ADONA	0.016	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	2.88	37428104.42	26255.92	9384.7	False	13C8-PFOA	1278438.28	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.87	377300.55	26448.42	480.4	True	13C8-PFOA	1278438.28	1222.50	9CI-PF3ONS	0.010	0.008	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.49	27621403.40	26351.34	7233.5	False	13C8-PFOA	1278438.28	1222.50	11Cl-pf3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.49	146456.76	26129.55	3445.8	False	13C8-PFOA	1278438.28	1222.50	11Cl-pf3OUdS	0.005	0.006	✓

Sample Name	LE52	Injection Vial	12
Sample ID	L1	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.69	1635492.12	1242.07	9751.4	False	13C2-PFDA	1281768.27	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.21	270997.88	1298.09	1581.9	False	13C4-PFOS	259430.52	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.38	267670.90	1345.32	3060.5	False	13C4-PFOS	259430.52	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.61	1620322.19	1372.19	8162.4	False	13C2-PFOA	817919.75	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.95	1541305.52	1327.21	11979.5	False	13C2-PFOA	817919.75	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.32	1849839.81	1291.92	14108.6	False	13C2-PFOA	817919.75	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.71	1707559.68	1290.79	10894.5	False	13C4-PFOS	259430.52	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.07	1773161.55	1338.86	7991.1	False	13C2-PFDA	1281768.27	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.39	1480899.95	1228.62	6261.3	False	13C2-PFDA	1281768.27	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.19	1337684.42	1176.41	4048.8	False	13C2-PFDA	1281768.27	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.35	382050.12	1134.79	14220.1	False	13C4-PFOS	259430.52	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.96	304096.45	1150.33	5524.1	False	13C4-PFOS	259430.52	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.70	289370.75	1273.78	1495.6	False	13C4-PFOS	259430.52	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.70	349304.37	1188.86	729.6	True	13C2-PFOA	817919.75	1250.00		N/A	N/A	✓

Sample Name	LE53	Injection Vial	13
Sample ID	L2	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:14:43 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.68	1596094.37	1251.97	7118.2	False	13C2-PFDA	1241000.05	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.20	257980.31	1215.10	1983.3	False	13C4-PFOS	263835.28	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.37	274999.28	1359.07	1607.1	False	13C4-PFOS	263835.28	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.62	1622044.43	1367.73	8325.5	False	13C2-PFOA	821458.12	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.96	1586900.59	1360.59	7504.3	False	13C2-PFOA	821458.12	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.33	1941160.29	1349.86	6528553.3	False	13C2-PFOA	821458.12	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.70	1756989.19	1305.98	124316.6	False	13C4-PFOS	263835.28	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.06	1661460.58	1295.73	10892.6	False	13C2-PFDA	1241000.05	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.38	1516290.66	1299.30	4857.2	False	13C2-PFDA	1241000.05	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.17	1386106.54	1259.04	4257.1	False	13C2-PFDA	1241000.05	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.35	374956.97	1095.13	7345.4	False	13C4-PFOS	263835.28	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.97	315428.81	1173.27	1268.0	False	13C4-PFOS	263835.28	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.70	269713.56	1167.43	2166.4	False	13C4-PFOS	263835.28	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.71	342048.88	1159.15	569.3	True	13C2-PFOA	821458.12	1250.00		N/A	N/A	✓

Sample Name	LE54	Injection Vial	14
Sample ID	L3	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:25:10 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.63	1561002.02	1242.46	9959.5	False	13C2-PFDA	1223007.83	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.16	287126.02	1389.46	1522.9	False	13C4-PFOS	256795.79	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.33	268712.16	1364.41	1352.6	False	13C4-PFOS	256795.79	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.59	1539000.20	1248.73	6871.1	False	13C2-PFOA	853676.36	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.92	1579878.25	1303.44	158621.0	False	13C2-PFOA	853676.36	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.29	1848387.81	1236.84	90028.3	False	13C2-PFOA	853676.36	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.66	1749486.58	1336.05	4235.5	False	13C4-PFOS	256795.79	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.01	1556917.99	1232.07	4118.4	False	13C2-PFDA	1223007.83	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.34	1464175.52	1273.11	6116.0	False	13C2-PFDA	1223007.83	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.13	1299346.66	1197.60	3430.7	False	13C2-PFDA	1223007.83	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.34	386209.02	1158.92	7468.3	False	13C4-PFOS	256795.79	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.93	329998.71	1261.12	33751.9	False	13C4-PFOS	256795.79	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.65	291768.46	1297.51	1569.9	False	13C4-PFOS	256795.79	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.68	377897.87	1232.30	551.3	True	13C2-PFOA	853676.36	1250.00		N/A	N/A	✓

Sample Name	LE55	Injection Vial	15
Sample ID	L4	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:35:38 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.67	1509947.79	1246.08	5623.9	False	13C2-PFDA	1179570.54	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.19	238902.35	1211.96	1651.7	False	13C4-PFOS	244959.00	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.36	238220.75	1268.03	2229.3	False	13C4-PFOS	244959.00	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.61	1484481.29	1275.75	10539.0	False	13C2-PFOA	805997.69	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.95	1545516.63	1350.52	5407.5	False	13C2-PFOA	805997.69	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.32	1787924.12	1267.15	9245.8	False	13C2-PFOA	805997.69	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.69	1624843.97	1300.82	26702.3	False	13C4-PFOS	244959.00	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.05	1477779.27	1212.50	5407.8	False	13C2-PFDA	1179570.54	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.38	1409785.03	1270.95	5426.1	False	13C2-PFDA	1179570.54	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.17	1339599.91	1280.17	5446.3	False	13C2-PFDA	1179570.54	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.35	374021.31	1176.58	7132.4	False	13C4-PFOS	244959.00	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.96	296963.04	1189.71	1569.6	False	13C4-PFOS	244959.00	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.69	255908.36	1193.03	1930.5	False	13C4-PFOS	244959.00	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.70	360788.22	1246.11	436.1	True	13C2-PFOA	805997.69	1250.00		N/A	N/A	✓

Sample Name	LE56	Injection Vial	16
Sample ID	L5	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:46:05 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.69	1327707.43	1247.37	7290.7	False	13C2-PFDA	1036127.31	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.21	227612.18	1216.60	2142.8	False	13C4-PFOS	232492.36	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.38	206190.94	1156.39	1352.3	False	13C4-PFOS	232492.36	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.61	1344711.30	1166.52	10553.2	False	13C2-PFOA	798470.90	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.95	1285936.13	1134.28	15286.6	False	13C2-PFOA	798470.90	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.32	1633472.62	1168.60	9918.7	False	13C2-PFOA	798470.90	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.71	1422685.52	1200.05	151277.4	False	13C4-PFOS	232492.36	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.06	1314024.75	1227.40	794.5	False	13C2-PFDA	1036127.31	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.39	1300776.71	1335.03	3544.9	False	13C2-PFDA	1036127.31	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.18	1174225.22	1277.48	3930.1	False	13C2-PFDA	1036127.31	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.35	384527.95	1274.49	14966.8	False	13C4-PFOS	232492.36	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.96	291180.59	1229.09	3426.5	False	13C4-PFOS	232492.36	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.70	230708.95	1133.23	1359.3	False	13C4-PFOS	232492.36	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.71	342499.96	1194.09	804.7	True	13C2-PFOA	798470.90	1250.00		N/A	N/A	✓

Sample Name	LE57	Injection Vial	17
Sample ID	L6	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:56:32 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.63	1264943.76	1270.06	3675.4	False	13C2-PFDA	969514.10	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.17	213728.88	1168.80	1292.8	False	13C4-PFOS	227239.73	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.33	175458.43	1006.78	1555.3	False	13C4-PFOS	227239.73	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.61	1104360.14	1069.07	6947.7	False	13C2-PFOA	715529.21	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.95	1040270.98	1023.95	27142.5	False	13C2-PFOA	715529.21	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.31	1278438.28	1020.62	12004.2	False	13C2-PFOA	715529.21	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.68	1235569.40	1066.31	18937.4	False	13C4-PFOS	227239.73	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.03	1195514.44	1193.43	6759.7	False	13C2-PFDA	969514.10	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.35	996485.39	1092.99	4880.2	False	13C2-PFDA	969514.10	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.11	1126093.81	1309.29	3765.1	False	13C2-PFDA	969514.10	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.35	334731.64	1135.09	8479.9	False	13C4-PFOS	227239.73	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.96	252737.63	1091.48	7563.0	False	13C4-PFOS	227239.73	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.67	219883.62	1105.02	1246.7	False	13C4-PFOS	227239.73	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.71	380280.85	1479.49	497.9	True	13C2-PFOA	715529.21	1250.00		N/A	N/A	✓

Sample Name	LE59 ICC	Injection Vial	19
Sample ID	ICC	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 9:17:26 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS 1	298.9 / 80.0	1.36	2706.08	2500.00	108.24
PFBS 2	298.9 / 99.0	1.36	2759.85	2500.00	110.39
PFHxA 1	313.0 / 269.0	1.62	2396.22	2525.00	94.90
PFHxA 2	313.0 / 119.0	1.61	2294.43	2525.00	90.87
PFHpA 1	363.0 / 319.0	1.96	2289.93	2500.00	91.60
PFHpA 2	363.0 / 169.0	1.96	2187.65	2500.00	87.51
PFHxS 1	399.0 / 80.0	1.96	2333.60	2525.00	92.42
PFHxS 2	399.0 / 99.0	1.96	2345.94	2525.00	92.91
PFOA 1	413.0 / 369.0	2.32	2337.83	2500.00	93.51
PFOA 2	413.0 / 169.0	2.32	2321.65	2500.00	92.87
PFNA 1	463.0 / 419.0	2.70	2362.09	2500.00	94.48
PFNA 2	463.0 / 219.0	2.70	2381.73	2500.00	95.27
PFOS 1	499.0 / 80.0	2.69	2283.74	2525.00	90.44
PFOS 2	499.0 / 99.0	2.69	2235.01	2525.00	88.52
PFDA 1	513.0 / 469.0	3.05	2663.98	2500.00	106.56
PFDA 2	513.0 / 219.0	3.06	2448.76	2500.00	97.95
PFUnA 1	563.0 / 519.0	3.38	2365.37	2500.00	94.61
PFUnA 2	563.0 / 269.0	3.38	2176.38	2500.00	87.06
PFDoA 1	613.0 / 569.0	3.67	2549.96	2500.00	102.00
PFDoA 2	613.0 / 319.0	3.67	2371.26	2500.00	94.85
PFTrDA 1	663.0 / 619.0	3.93	2584.07	2500.00	103.36
PFTrDA 2	663.0 / 169.0	3.93	2428.69	2500.00	97.15
PFTeDA 1	713.0 / 669.0	4.17	2605.00	2500.00	104.20
PFTeDA 2	713.0 / 169.0	4.17	2447.68	2500.00	97.91
NMeFOSAA 1	570.0 / 419.0	3.20	2294.41	2500.00	91.78
NMeFOSAA 2	570.0 / 512.0	3.20	2429.65	2500.00	97.19
NEtFOSAA 1	584.0 / 419.0	3.37	2353.83	2500.00	94.15
NEtFOSAA 2	584.0 / 483.0	3.37	2265.52	2500.00	90.62
HFPO-DA 1	285.0 / 169.0	1.71	2561.44	2500.00	102.46
HFPO-DA 2	285.0 / 118.8	1.71	2103.69	2500.00	84.15
ADONA 1	377.0 / 251.0	1.99	2448.54	2500.00	97.94
ADONA 2	377.0 / 85.0	1.99	2438.65	2500.00	97.55
9Cl-PF3ONS 1	531.0 / 351.0	2.90	2248.89	2500.00	89.96
9Cl-PF3ONS 2	531.0 / 83.0	2.90	2473.28	2500.00	98.93
11Cl-pf3OUdS 1	631.0 / 451.0	3.53	2212.59	2500.00	88.50
11Cl-pf3OUdS 2	631.0 / 83.0	3.53	1932.97	2500.00	77.32

Sample Name	LE54 CCV	Injection Vial	2
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 6:54:22 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS 1	298.9 / 80.0	1.36	1005.26	1000.00	100.53
PFBS 2	298.9 / 99.0	1.36	977.44	1000.00	97.74
PFHxA 1	313.0 / 269.0	1.61	916.72	1010.00	90.76
PFHxA 2	313.0 / 119.0	1.61	952.55	1010.00	94.31
PFHpA 1	363.0 / 319.0	1.95	910.98	1000.00	91.10
PFHpA 2	363.0 / 169.0	1.95	958.17	1000.00	95.82
PFHxS 1	399.0 / 80.0	1.96	1007.56	1010.00	99.76
PFHxS 2	399.0 / 99.0	1.96	991.81	1010.00	98.20
PFOA 1	413.0 / 369.0	2.32	1046.87	1000.00	104.69
PFOA 2	413.0 / 169.0	2.32	990.56	1000.00	99.06
PFNA 1	463.0 / 419.0	2.69	1049.92	1000.00	104.99
PFNA 2	463.0 / 219.0	2.69	978.08	1000.00	97.81
PFOS 1	499.0 / 80.0	2.68	979.92	1010.00	97.02
PFOS 2	499.0 / 99.0	2.68	901.93	1010.00	89.30
PFDA 1	513.0 / 469.0	3.04	968.87	1000.00	96.89
PFDA 2	513.0 / 219.0	3.04	845.04	1000.00	84.50
PFUnA 1	563.0 / 519.0	3.37	953.69	1000.00	95.37
PFUnA 2	563.0 / 269.0	3.37	859.46	1000.00	85.95
PFDoA 1	613.0 / 569.0	3.66	903.39	1000.00	90.34
PFDoA 2	613.0 / 319.0	3.66	962.10	1000.00	96.21
PFTrDA 1	663.0 / 619.0	3.92	957.80	1000.00	95.78
PFTrDA 2	663.0 / 169.0	3.92	988.49	1000.00	98.85
PFTeDA 1	713.0 / 669.0	4.15	917.68	1000.00	91.77
PFTeDA 2	713.0 / 169.0	4.15	917.35	1000.00	91.74
NMeFOSAA 1	570.0 / 419.0	3.19	949.48	1000.00	94.95
NMeFOSAA 2	570.0 / 512.0	3.19	1006.12	1000.00	100.61
NEtFOSAA 1	584.0 / 419.0	3.36	912.07	1000.00	91.21
NEtFOSAA 2	584.0 / 483.0	3.35	1005.63	1000.00	100.56
HFPO-DA 1	285.0 / 169.0	1.70	1012.93	1000.00	101.29
HFPO-DA 2	285.0 / 118.8	1.70	1035.64	1000.00	103.56
ADONA 1	377.0 / 251.0	1.98	1050.62	1000.00	105.06
ADONA 2	377.0 / 85.0	1.98	999.98	1000.00	100.00
9Cl-PF3ONS 1	531.0 / 351.0	2.89	1037.59	1000.00	103.76
9Cl-PF3ONS 2	531.0 / 83.0	2.89	1047.15	1000.00	104.71
11Cl-pf3OUdS 1	631.0 / 451.0	3.52	1000.97	1000.00	100.10
11Cl-pf3OUdS 2	631.0 / 83.0	3.52	799.25	1000.00	79.93

Sample Name	LE55 CCV	Injection Vial	15
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 9:10:16 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS 1	298.9 / 80.0	1.35	2624.73	2500.00	104.99
PFBS 2	298.9 / 99.0	1.35	2596.69	2500.00	103.87
PFHxA 1	313.0 / 269.0	1.60	2460.78	2525.00	97.46
PFHxA 2	313.0 / 119.0	1.60	2510.23	2525.00	99.42
PFHpA 1	363.0 / 319.0	1.93	2298.89	2500.00	91.96
PFHpA 2	363.0 / 169.0	1.93	2199.66	2500.00	87.99
PFHxS 1	399.0 / 80.0	1.94	2418.83	2525.00	95.80
PFHxS 2	399.0 / 99.0	1.94	2532.25	2525.00	100.29
PFOA 1	413.0 / 369.0	2.29	2326.16	2500.00	93.05
PFOA 2	413.0 / 169.0	2.29	2381.07	2500.00	95.24
PFNA 1	463.0 / 419.0	2.65	2569.09	2500.00	102.76
PFNA 2	463.0 / 219.0	2.65	2441.55	2500.00	97.66
PFOS 1	499.0 / 80.0	2.65	2378.97	2525.00	94.22
PFOS 2	499.0 / 99.0	2.65	2165.08	2525.00	85.75
PFDA 1	513.0 / 469.0	3.01	2600.42	2500.00	104.02
PFDA 2	513.0 / 219.0	3.01	2494.74	2500.00	99.79
PFUnA 1	563.0 / 519.0	3.33	2324.57	2500.00	92.98
PFUnA 2	563.0 / 269.0	3.33	2138.38	2500.00	85.54
PFDoA 1	613.0 / 569.0	3.62	2567.29	2500.00	102.69
PFDoA 2	613.0 / 319.0	3.62	2449.95	2500.00	98.00
PFTrDA 1	663.0 / 619.0	3.88	2771.90	2500.00	110.88
PFTrDA 2	663.0 / 169.0	3.88	2552.16	2500.00	102.09
PFTeDA 1	713.0 / 669.0	4.12	2682.88	2500.00	107.32
PFTeDA 2	713.0 / 169.0	4.12	2313.42	2500.00	92.54
NMeFOSAA 1	570.0 / 419.0	3.15	2261.35	2500.00	90.45
NMeFOSAA 2	570.0 / 512.0	3.15	2319.97	2500.00	92.80
NEtFOSAA 1	584.0 / 419.0	3.32	2487.87	2500.00	99.51
NEtFOSAA 2	584.0 / 483.0	3.32	2313.95	2500.00	92.56
HFPO-DA 1	285.0 / 169.0	1.69	2655.54	2500.00	106.22
HFPO-DA 2	285.0 / 118.8	1.69	2610.31	2500.00	104.41
ADONA 1	377.0 / 251.0	1.96	2563.95	2500.00	102.56
ADONA 2	377.0 / 85.0	1.96	2520.25	2500.00	100.81
9Cl-PF3ONS 1	531.0 / 351.0	2.85	2278.17	2500.00	91.13
9Cl-PF3ONS 2	531.0 / 83.0	2.85	2534.38	2500.00	101.38
11Cl-pf3OUdS 1	631.0 / 451.0	3.48	2314.14	2500.00	92.57
11Cl-pf3OUdS 2	631.0 / 83.0	3.48	2229.90	2500.00	89.20

Sample Name	LE54 CCV	Injection Vial	26
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 11:05:25 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS 1	298.9 / 80.0	1.35	1025.07	1000.00	102.51
PFBS 2	298.9 / 99.0	1.35	914.76	1000.00	91.48
PFHxA 1	313.0 / 269.0	1.60	1007.74	1010.00	99.78
PFHxA 2	313.0 / 119.0	1.60	959.53	1010.00	95.00
PFHpA 1	363.0 / 319.0	1.94	863.30	1000.00	86.33
PFHpA 2	363.0 / 169.0	1.94	962.06	1000.00	96.21
PFHxS 1	399.0 / 80.0	1.94	941.68	1010.00	93.24
PFHxS 2	399.0 / 99.0	1.94	939.31	1010.00	93.00
PFOA 1	413.0 / 369.0	2.30	952.88	1000.00	95.29
PFOA 2	413.0 / 169.0	2.30	892.64	1000.00	89.26
PFNA 1	463.0 / 419.0	2.67	1104.43	1000.00	110.44
PFNA 2	463.0 / 219.0	2.67	1008.08	1000.00	100.81
PFOS 1	499.0 / 80.0	2.66	927.72	1010.00	91.85
PFOS 2	499.0 / 99.0	2.66	952.43	1010.00	94.30
PFDA 1	513.0 / 469.0	3.02	1022.13	1000.00	102.21
PFDA 2	513.0 / 219.0	3.02	960.12	1000.00	96.01
PFUnA 1	563.0 / 519.0	3.34	1001.76	1000.00	100.18
PFUnA 2	563.0 / 269.0	3.34	852.09	1000.00	85.21
PFDoA 1	613.0 / 569.0	3.63	981.66	1000.00	98.17
PFDoA 2	613.0 / 319.0	3.63	909.54	1000.00	90.95
PFTrDA 1	663.0 / 619.0	3.89	1056.49	1000.00	105.65
PFTrDA 2	663.0 / 169.0	3.89	1046.13	1000.00	104.61
PFTeDA 1	713.0 / 669.0	4.13	929.98	1000.00	93.00
PFTeDA 2	713.0 / 169.0	4.12	884.18	1000.00	88.42
NMeFOSAA 1	570.0 / 419.0	3.16	858.08	1000.00	85.81
NMeFOSAA 2	570.0 / 512.0	3.16	928.43	1000.00	92.84
NEtFOSAA 1	584.0 / 419.0	3.33	1038.31	1000.00	103.83
NEtFOSAA 2	584.0 / 483.0	3.33	950.37	1000.00	95.04
HFPO-DA 1	285.0 / 169.0	1.70	1109.13	1000.00	110.91
HFPO-DA 2	285.0 / 118.8	1.70	1020.70	1000.00	102.07
ADONA 1	377.0 / 251.0	1.97	1003.05	1000.00	100.30
ADONA 2	377.0 / 85.0	1.97	965.56	1000.00	96.56
9Cl-PF3ONS 1	531.0 / 351.0	2.87	867.36	1000.00	86.74
9Cl-PF3ONS 2	531.0 / 83.0	2.86	985.15	1000.00	98.51
11Cl-pf3OUdS 1	631.0 / 451.0	3.49	895.65	1000.00	89.56
11Cl-pf3OUdS 2	631.0 / 83.0	3.49	961.57	1000.00	96.16

Sample Name	LE55 CCV	Injection Vial	32
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 12:08:13 AM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS 1	298.9 / 80.0	1.36	2592.51	2500.00	103.70
PFBS 2	298.9 / 99.0	1.35	2656.51	2500.00	106.26
PFHxA 1	313.0 / 269.0	1.61	2306.30	2525.00	91.34
PFHxA 2	313.0 / 119.0	1.61	2232.56	2525.00	88.42
PFHpA 1	363.0 / 319.0	1.94	2478.74	2500.00	99.15
PFHpA 2	363.0 / 169.0	1.94	2314.57	2500.00	92.58
PFHxS 1	399.0 / 80.0	1.95	2579.79	2525.00	102.17
PFHxS 2	399.0 / 99.0	1.95	2493.28	2525.00	98.74
PFOA 1	413.0 / 369.0	2.30	2313.63	2500.00	92.55
PFOA 2	413.0 / 169.0	2.30	2480.05	2500.00	99.20
PFNA 1	463.0 / 419.0	2.67	2625.43	2500.00	105.02
PFNA 2	463.0 / 219.0	2.67	2537.00	2500.00	101.48
PFOS 1	499.0 / 80.0	2.67	2334.34	2525.00	92.45
PFOS 2	499.0 / 99.0	2.67	2291.34	2525.00	90.75
PFDA 1	513.0 / 469.0	3.03	2645.12	2500.00	105.80
PFDA 2	513.0 / 219.0	3.03	2601.73	2500.00	104.07
PFUnA 1	563.0 / 519.0	3.35	2728.82	2500.00	109.15
PFUnA 2	563.0 / 269.0	3.35	2614.99	2500.00	104.60
PFDoA 1	613.0 / 569.0	3.64	2519.58	2500.00	100.78
PFDoA 2	613.0 / 319.0	3.64	2399.62	2500.00	95.98
PFTrDA 1	663.0 / 619.0	3.90	2563.45	2500.00	102.54
PFTrDA 2	663.0 / 169.0	3.90	2526.55	2500.00	101.06
PFTeDA 1	713.0 / 669.0	4.14	2562.50	2500.00	102.50
PFTeDA 2	713.0 / 169.0	4.13	2240.84	2500.00	89.63
NMeFOSAA 1	570.0 / 419.0	3.17	2365.73	2500.00	94.63
NMeFOSAA 2	570.0 / 512.0	3.17	2470.09	2500.00	98.80
NEtFOSAA 1	584.0 / 419.0	3.34	2334.39	2500.00	93.38
NEtFOSAA 2	584.0 / 483.0	3.34	2256.83	2500.00	90.27
HFPO-DA 1	285.0 / 169.0	1.70	3005.08	2500.00	120.20
HFPO-DA 2	285.0 / 118.8	1.70	3214.61	2500.00	128.58
ADONA 1	377.0 / 251.0	1.98	2542.04	2500.00	101.68
ADONA 2	377.0 / 85.0	1.98	2448.18	2500.00	97.93
9Cl-PF3ONS 1	531.0 / 351.0	2.87	2188.05	2500.00	87.52
9Cl-PF3ONS 2	531.0 / 83.0	2.87	2638.50	2500.00	105.54
11Cl-pf3OUdS 1	631.0 / 451.0	3.50	2240.25	2500.00	89.61
11Cl-pf3OUdS 2	631.0 / 83.0	3.50	2027.18	2500.00	81.09

Sample Name	LE55 CCV	Injection Vial	1
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 4:18:03 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS 1	298.9 / 80.0	1.36	2754.06	2500.00	110.16
PFBS 2	298.9 / 99.0	1.36	2667.44	2500.00	106.70
PFHxA 1	313.0 / 269.0	1.61	2354.69	2525.00	93.26
PFHxA 2	313.0 / 119.0	1.61	2327.01	2525.00	92.16
PFHpA 1	363.0 / 319.0	1.95	2476.48	2500.00	99.06
PFHpA 2	363.0 / 169.0	1.95	2124.50	2500.00	84.98
PFHxS 1	399.0 / 80.0	1.96	2640.03	2525.00	104.56
PFHxS 2	399.0 / 99.0	1.96	2611.63	2525.00	103.43
PFOA 1	413.0 / 369.0	2.32	2307.70	2500.00	92.31
PFOA 2	413.0 / 169.0	2.32	2484.26	2500.00	99.37
PFNA 1	463.0 / 419.0	2.69	2551.16	2500.00	102.05
PFNA 2	463.0 / 219.0	2.69	2597.30	2500.00	103.89
PFOS 1	499.0 / 80.0	2.69	2257.28	2525.00	89.40
PFOS 2	499.0 / 99.0	2.69	2389.74	2525.00	94.64
PFDA 1	513.0 / 469.0	3.05	2507.22	2500.00	100.29
PFDA 2	513.0 / 219.0	3.05	2344.16	2500.00	93.77
PFUnA 1	563.0 / 519.0	3.37	2778.65	2500.00	111.15
PFUnA 2	563.0 / 269.0	3.37	2513.47	2500.00	100.54
PFDoA 1	613.0 / 569.0	3.67	2458.36	2500.00	98.33
PFDoA 2	613.0 / 319.0	3.67	2370.29	2500.00	94.81
PFTrDA 1	663.0 / 619.0	3.93	2642.09	2500.00	105.68
PFTrDA 2	663.0 / 169.0	3.93	2651.63	2500.00	106.07
PFTeDA 1	713.0 / 669.0	4.17	2594.52	2500.00	103.78
PFTeDA 2	713.0 / 169.0	4.17	2482.31	2500.00	99.29
NMeFOSAA 1	570.0 / 419.0	3.19	2399.55	2500.00	95.98
NMeFOSAA 2	570.0 / 512.0	3.19	2314.94	2500.00	92.60
NEtFOSAA 1	584.0 / 419.0	3.36	2356.15	2500.00	94.25
NEtFOSAA 2	584.0 / 483.0	3.36	2420.99	2500.00	96.84
HFPO-DA 1	285.0 / 169.0	1.70	2871.80	2500.00	114.87
HFPO-DA 2	285.0 / 118.8	1.70	2643.74	2500.00	105.75
ADONA 1	377.0 / 251.0	1.99	2399.87	2500.00	95.99
ADONA 2	377.0 / 85.0	1.99	2227.61	2500.00	89.10
9Cl-PF3ONS 1	531.0 / 351.0	2.89	2185.47	2500.00	87.42
9Cl-PF3ONS 2	531.0 / 83.0	2.89	2637.69	2500.00	105.51
11Cl-pf3OUdS 1	631.0 / 451.0	3.53	2085.37	2500.00	83.41
11Cl-pf3OUdS 2	631.0 / 83.0	3.53	1862.52	2500.00	74.50

Sample Name	LE55 CCV	Injection Vial	11
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 8:41:06 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS 1	298.9 / 80.0	1.35	2787.22	2500.00	111.49
PFBS 2	298.9 / 99.0	1.35	2703.81	2500.00	108.15
PFHxA 1	313.0 / 269.0	1.60	2358.75	2525.00	93.42
PFHxA 2	313.0 / 119.0	1.60	2385.71	2525.00	94.48
PFHpA 1	363.0 / 319.0	1.94	2394.25	2500.00	95.77
PFHpA 2	363.0 / 169.0	1.94	2269.54	2500.00	90.78
PFHxS 1	399.0 / 80.0	1.95	2282.81	2525.00	90.41
PFHxS 2	399.0 / 99.0	1.95	2377.33	2525.00	94.15
PFOA 1	413.0 / 369.0	2.31	2407.27	2500.00	96.29
PFOA 2	413.0 / 169.0	2.31	2503.14	2500.00	100.13
PFNA 1	463.0 / 419.0	2.68	2472.96	2500.00	98.92
PFNA 2	463.0 / 219.0	2.68	2370.92	2500.00	94.84
PFOS 1	499.0 / 80.0	2.67	2470.73	2525.00	97.85
PFOS 2	499.0 / 99.0	2.67	2335.10	2525.00	92.48
PFDA 1	513.0 / 469.0	3.04	2272.05	2500.00	90.88
PFDA 2	513.0 / 219.0	3.04	2405.24	2500.00	96.21
PFUnA 1	563.0 / 519.0	3.36	2537.80	2500.00	101.51
PFUnA 2	563.0 / 269.0	3.36	2450.79	2500.00	98.03
PFDoA 1	613.0 / 569.0	3.66	2351.45	2500.00	94.06
PFDoA 2	613.0 / 319.0	3.65	2454.14	2500.00	98.17
PFTrDA 1	663.0 / 619.0	3.91	2446.85	2500.00	97.87
PFTrDA 2	663.0 / 169.0	3.91	2463.88	2500.00	98.56
PFTeDA 1	713.0 / 669.0	4.15	2422.67	2500.00	96.91
PFTeDA 2	713.0 / 169.0	4.15	2457.77	2500.00	98.31
NMeFOSAA 1	570.0 / 419.0	3.18	2324.40	2500.00	92.98
NMeFOSAA 2	570.0 / 512.0	3.18	2312.90	2500.00	92.52
NEtFOSAA 1	584.0 / 419.0	3.35	2527.96	2500.00	101.12
NEtFOSAA 2	584.0 / 483.0	3.35	2133.77	2500.00	85.35
HFPO-DA 1	285.0 / 169.0	1.69	2974.31	2500.00	118.97
HFPO-DA 2	285.0 / 118.8	1.69	2757.83	2500.00	110.31
ADONA 1	377.0 / 251.0	1.98	2629.64	2500.00	105.19
ADONA 2	377.0 / 85.0	1.97	2527.38	2500.00	101.10
9Cl-PF3ONS 1	531.0 / 351.0	2.88	2417.53	2500.00	96.70
9Cl-PF3ONS 2	531.0 / 83.0	2.88	2302.17	2500.00	92.09
11Cl-pf3OUdS 1	631.0 / 451.0	3.51	2356.77	2500.00	94.27
11Cl-pf3OUdS 2	631.0 / 83.0	3.51	2374.79	2500.00	94.99

Sample Name	LE54 CCV	Injection Vial	20
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 10:15:19 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS 1	298.9 / 80.0	1.36	1076.81	1000.00	107.68
PFBS 2	298.9 / 99.0	1.36	1028.02	1000.00	102.80
PFHxA 1	313.0 / 269.0	1.61	901.50	1010.00	89.26
PFHxA 2	313.0 / 119.0	1.61	867.38	1010.00	85.88
PFHpA 1	363.0 / 319.0	1.94	996.30	1000.00	99.63
PFHpA 2	363.0 / 169.0	1.94	880.62	1000.00	88.06
PFHxS 1	399.0 / 80.0	1.95	873.65	1010.00	86.50
PFHxS 2	399.0 / 99.0	1.95	896.69	1010.00	88.78
PFOA 1	413.0 / 369.0	2.30	947.90	1000.00	94.79
PFOA 2	413.0 / 169.0	2.30	910.94	1000.00	91.09
PFNA 1	463.0 / 419.0	2.67	1030.75	1000.00	103.08
PFNA 2	463.0 / 219.0	2.67	1064.07	1000.00	106.41
PFOS 1	499.0 / 80.0	2.67	982.36	1010.00	97.26
PFOS 2	499.0 / 99.0	2.67	1051.83	1010.00	104.14
PFDA 1	513.0 / 469.0	3.02	1080.25	1000.00	108.02
PFDA 2	513.0 / 219.0	3.03	1016.64	1000.00	101.66
PFUnA 1	563.0 / 519.0	3.35	1044.58	1000.00	104.46
PFUnA 2	563.0 / 269.0	3.35	998.26	1000.00	99.83
PFDoA 1	613.0 / 569.0	3.64	1039.38	1000.00	103.94
PFDoA 2	613.0 / 319.0	3.64	1069.41	1000.00	106.94
PFTrDA 1	663.0 / 619.0	3.89	1023.72	1000.00	102.37
PFTrDA 2	663.0 / 169.0	3.89	1054.52	1000.00	105.45
PFTeDA 1	713.0 / 669.0	4.13	978.65	1000.00	97.87
PFTeDA 2	713.0 / 169.0	4.13	960.32	1000.00	96.03
NMeFOSAA 1	570.0 / 419.0	3.17	952.90	1000.00	95.29
NMeFOSAA 2	570.0 / 512.0	3.17	976.89	1000.00	97.69
NEtFOSAA 1	584.0 / 419.0	3.34	970.47	1000.00	97.05
NEtFOSAA 2	584.0 / 483.0	3.34	760.93	1000.00	76.09
HFPO-DA 1	285.0 / 169.0	1.70	1208.53	1000.00	120.85
HFPO-DA 2	285.0 / 118.8	1.70	1080.65	1000.00	108.07
ADONA 1	377.0 / 251.0	1.97	1046.50	1000.00	104.65
ADONA 2	377.0 / 85.0	1.97	1028.31	1000.00	102.83
9Cl-PF3ONS 1	531.0 / 351.0	2.87	851.99	1000.00	85.20
9Cl-PF3ONS 2	531.0 / 83.0	2.87	966.72	1000.00	96.67
11Cl-pf3OUdS 1	631.0 / 451.0	3.50	904.66	1000.00	90.47
11Cl-pf3OUdS 2	631.0 / 83.0	3.50	795.70	1000.00	79.57

Sample Name	LE59 ICC	Injection Vial	19
Sample ID	ICC	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 9:17:26 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.67	1157.87	1250.00	92.63
d3-MeFOSAA	573.0 / 419.0	3.20	1224.34	1250.00	97.95
d5-EtFOSAA	589.0 / 419.0	3.36	1206.65	1250.00	96.53
13C5-PFHxA	318.0 / 273.0	1.60	1281.80	1250.00	102.54
13C4-PFHpA	367.0 / 322.0	1.94	1259.23	1250.00	100.74
13C8-PFOA	421.0 / 376.0	2.32	1189.59	1222.50	97.31
13C9-PFNA	472.0 / 427.0	2.70	1285.19	1250.00	102.82
13C6-PFDA	519.0 / 474.0	3.05	1162.15	1250.00	92.97
13C7-PFUnA	570.0 / 525.0	3.38	1247.17	1250.00	99.77
13C2-PFTeDA	715.0 / 670.0	4.17	1214.88	1250.00	97.19
13C3-PFBS	302.0 / 99.0	1.35	1153.18	1162.50	99.20
13C3-PFHxS	402.0 / 99.0	1.96	1324.49	1182.50	112.01
13C8-PFOS	507.0 / 99.0	2.69	1221.14	1195.00	102.19
13C3-HFPO-DA	287.0 / 169.0	1.71	1181.14	1250.00	94.49

Sample Name	LE54 CCV	Injection Vial	2
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 6:54:22 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.66	1201.06	1250.00	96.08
d3-MeFOSAA	573.0 / 419.0	3.18	1228.14	1250.00	98.25
d5-EtFOSAA	589.0 / 419.0	3.35	1453.88	1250.00	116.31
13C5-PFHxA	318.0 / 273.0	1.60	1318.03	1250.00	105.44
13C4-PFHpA	367.0 / 322.0	1.94	1361.70	1250.00	108.94
13C8-PFOA	421.0 / 376.0	2.31	1186.14	1222.50	97.03
13C9-PFNA	472.0 / 427.0	2.68	1253.41	1250.00	100.27
13C6-PFDA	519.0 / 474.0	3.03	1235.23	1250.00	98.82
13C7-PFUnA	570.0 / 525.0	3.36	1260.07	1250.00	100.81
13C2-PFTeDA	715.0 / 670.0	4.15	1167.91	1250.00	93.43
13C3-PFBS	302.0 / 99.0	1.35	1204.78	1162.50	103.64
13C3-PFHxS	402.0 / 99.0	1.95	1204.65	1182.50	101.87
13C8-PFOS	507.0 / 99.0	2.68	1246.20	1195.00	104.28
13C3-HFPO-DA	287.0 / 169.0	1.70	1156.54	1250.00	92.52

Sample Name	LE55 CCV	Injection Vial	15
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 9:10:16 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.62	1152.90	1250.00	92.23
d3-MeFOSAA	573.0 / 419.0	3.15	1272.62	1250.00	101.81
d5-EtFOSAA	589.0 / 419.0	3.31	1250.33	1250.00	100.03
13C5-PFHxA	318.0 / 273.0	1.59	1348.12	1250.00	107.85
13C4-PFHpA	367.0 / 322.0	1.92	1388.63	1250.00	111.09
13C8-PFOA	421.0 / 376.0	2.28	1330.82	1222.50	108.86
13C9-PFNA	472.0 / 427.0	2.65	1256.10	1250.00	100.49
13C6-PFDA	519.0 / 474.0	3.00	1232.47	1250.00	98.60
13C7-PFUnA	570.0 / 525.0	3.33	1248.86	1250.00	99.91
13C2-PFTeDA	715.0 / 670.0	4.11	1119.72	1250.00	89.58
13C3-PFBS	302.0 / 99.0	1.34	1183.72	1162.50	101.83
13C3-PFHxS	402.0 / 99.0	1.93	1233.51	1182.50	104.31
13C8-PFOS	507.0 / 99.0	2.64	1328.87	1195.00	111.20
13C3-HFPO-DA	287.0 / 169.0	1.68	1208.69	1250.00	96.70

Sample Name	LE54 CCV	Injection Vial	26
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 11:05:25 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.63	1363.98	1250.00	109.12
d3-MeFOSAA	573.0 / 419.0	3.16	1375.70	1250.00	110.06
d5-EtFOSAA	589.0 / 419.0	3.33	1232.58	1250.00	98.61
13C5-PFHxA	318.0 / 273.0	1.59	1195.54	1250.00	95.64
13C4-PFHpA	367.0 / 322.0	1.93	1261.26	1250.00	100.90
13C8-PFOA	421.0 / 376.0	2.29	1243.24	1222.50	101.70
13C9-PFNA	472.0 / 427.0	2.66	1181.72	1250.00	94.54
13C6-PFDA	519.0 / 474.0	3.02	1343.06	1250.00	107.45
13C7-PFUnA	570.0 / 525.0	3.34	1362.73	1250.00	109.02
13C2-PFTeDA	715.0 / 670.0	4.12	1212.84	1250.00	97.03
13C3-PFBS	302.0 / 99.0	1.34	1122.86	1162.50	96.59
13C3-PFHxS	402.0 / 99.0	1.94	1140.15	1182.50	96.42
13C8-PFOS	507.0 / 99.0	2.66	1166.35	1195.00	97.60
13C3-HFPO-DA	287.0 / 169.0	1.69	885.75	1250.00	70.86

Sample Name	LE55 CCV	Injection Vial	32
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 12:08:13 AM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.64	1292.56	1250.00	103.40
d3-MeFOSAA	573.0 / 419.0	3.17	1226.99	1250.00	98.16
d5-EtFOSAA	589.0 / 419.0	3.33	1289.12	1250.00	103.13
13C5-PFHxA	318.0 / 273.0	1.60	1352.35	1250.00	108.19
13C4-PFHpA	367.0 / 322.0	1.93	1315.84	1250.00	105.27
13C8-PFOA	421.0 / 376.0	2.29	1301.49	1222.50	106.46
13C9-PFNA	472.0 / 427.0	2.67	1176.73	1250.00	94.14
13C6-PFDA	519.0 / 474.0	3.02	1264.05	1250.00	101.12
13C7-PFUnA	570.0 / 525.0	3.35	1245.82	1250.00	99.67
13C2-PFTeDA	715.0 / 670.0	4.13	1231.97	1250.00	98.56
13C3-PFBS	302.0 / 99.0	1.34	1117.37	1162.50	96.12
13C3-PFHxS	402.0 / 99.0	1.94	1135.99	1182.50	96.07
13C8-PFOS	507.0 / 99.0	2.66	1184.49	1195.00	99.12
13C3-HFPO-DA	287.0 / 169.0	1.70	951.44	1250.00	76.12

Sample Name	LE55 CCV	Injection Vial	1
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 4:18:03 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.67	1213.79	1250.00	97.10
d3-MeFOSAA	573.0 / 419.0	3.19	1227.50	1250.00	98.20
d5-EtFOSAA	589.0 / 419.0	3.36	1356.34	1250.00	108.51
13C5-PFHxA	318.0 / 273.0	1.60	1115.52	1250.00	89.24
13C4-PFHpA	367.0 / 322.0	1.94	1079.87	1250.00	86.39
13C8-PFOA	421.0 / 376.0	2.31	1069.37	1222.50	87.47
13C9-PFNA	472.0 / 427.0	2.69	1357.51	1250.00	108.60
13C6-PFDA	519.0 / 474.0	3.04	1208.44	1250.00	96.68
13C7-PFUnA	570.0 / 525.0	3.37	1122.74	1250.00	89.82
13C2-PFTeDA	715.0 / 670.0	4.17	1189.13	1250.00	95.13
13C3-PFBS	302.0 / 99.0	1.35	1178.27	1162.50	101.36
13C3-PFHxS	402.0 / 99.0	1.95	1215.97	1182.50	102.83
13C8-PFOS	507.0 / 99.0	2.68	1290.85	1195.00	108.02
13C3-HFPO-DA	287.0 / 169.0	1.70	952.90	1250.00	76.23

Sample Name	LE55 CCV	Injection Vial	11
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 8:41:06 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.65	1293.76	1250.00	103.50
d3-MeFOSAA	573.0 / 419.0	3.18	1323.65	1250.00	105.89
d5-EtFOSAA	589.0 / 419.0	3.35	1329.65	1250.00	106.37
13C5-PFHxA	318.0 / 273.0	1.59	1138.95	1250.00	91.12
13C4-PFHpA	367.0 / 322.0	1.93	1132.30	1250.00	90.58
13C8-PFOA	421.0 / 376.0	2.30	1042.89	1222.50	85.31
13C9-PFNA	472.0 / 427.0	2.67	1398.62	1250.00	111.89
13C6-PFDA	519.0 / 474.0	3.03	1323.31	1250.00	105.87
13C7-PFUnA	570.0 / 525.0	3.36	1317.83	1250.00	105.43
13C2-PFTeDA	715.0 / 670.0	4.15	1313.93	1250.00	105.11
13C3-PFBS	302.0 / 99.0	1.34	1168.97	1162.50	100.56
13C3-PFHxS	402.0 / 99.0	1.94	1271.11	1182.50	107.49
13C8-PFOS	507.0 / 99.0	2.67	1159.53	1195.00	97.03
13C3-HFPO-DA	287.0 / 169.0	1.70	882.07	1250.00	70.57

Sample Name	LE54 CCV	Injection Vial	20
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 10:15:19 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.64	1244.52	1250.00	99.56
d3-MeFOSAA	573.0 / 419.0	3.17	1399.34	1250.00	111.95
d5-EtFOSAA	589.0 / 419.0	3.33	1398.97	1250.00	111.92
13C5-PFHxA	318.0 / 273.0	1.60	1282.37	1250.00	102.59
13C4-PFHpA	367.0 / 322.0	1.93	1206.19	1250.00	96.50
13C8-PFOA	421.0 / 376.0	2.29	1201.66	1222.50	98.30
13C9-PFNA	472.0 / 427.0	2.67	1294.10	1250.00	103.53
13C6-PFDA	519.0 / 474.0	3.02	1257.74	1250.00	100.62
13C7-PFUnA	570.0 / 525.0	3.34	1333.60	1250.00	106.69
13C2-PFTeDA	715.0 / 670.0	4.12	1257.66	1250.00	100.61
13C3-PFBS	302.0 / 99.0	1.35	1154.49	1162.50	99.31
13C3-PFHxS	402.0 / 99.0	1.94	1294.03	1182.50	109.43
13C8-PFOS	507.0 / 99.0	2.66	1157.48	1195.00	96.86
13C3-HFPO-DA	287.0 / 169.0	1.70	931.81	1250.00	74.54

Sample Name	LE59 ICC	Injection Vial	19
Sample ID	ICC	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 9:17:26 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	1.36	2145904.45	2706.08	7621.3	False	13C3-PFBS	345049.42	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.36	722543.27	2759.85	4259.5	False	13C3-PFBS	345049.42	1162.50	PFBS	0.337	0.331	✓
PFHxA_1	313.0 / 269.0	1.62	3249427.41	2396.22	1268.3	False	13C5-PFHxA	1449543.44	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.61	188823.64	2294.43	910.0	False	13C5-PFHxA	1449543.44	1250.00	PFHxA	0.058	0.057	✓
PFHpA_1	363.0 / 319.0	1.96	2358421.18	2289.93	1509.1	False	13C4-PFHpA	1400477.08	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.96	75055.57	2187.65	1756.0	False	13C4-PFHpA	1400477.08	1250.00	PFHpA	0.032	0.031	✓
PFHxS_1	399.0 / 80.0	1.96	2138080.65	2333.60	3358.4	False	13C3-PFHxS	311185.60	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.96	780435.20	2345.94	3008.4	False	13C3-PFHxS	311185.60	1182.50	PFHxS	0.365	0.355	✓
PFOA_1	413.0 / 369.0	2.32	2669732.43	2337.83	715.8	False	13C8-PFOA	1631238.69	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.32	283130.41	2321.65	961.1	False	13C8-PFOA	1631238.69	1222.50	PFOA	0.106	0.107	✓
PFNA_1	463.0 / 419.0	2.70	2569407.79	2362.09	905.2	False	13C9-PFNA	1511014.30	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.70	827457.72	2381.73	1066.1	False	13C9-PFNA	1511014.30	1250.00	PFNA	0.322	0.309	✓
PFOS_1	499.0 / 80.0	2.69	1909651.52	2283.74	1690.1	False	13C8-PFOS	246550.82	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.69	399937.40	2235.01	3808.1	False	13C8-PFOS	246550.82	1195.00	PFOS	0.209	0.212	✓
PFDA_1	513.0 / 469.0	3.05	2488488.06	2663.98	1184.6	False	13C6-PFDA	1346679.16	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.06	145303.43	2448.76	1037.9	False	13C6-PFDA	1346679.16	1250.00	PFDA	0.058	0.062	✓
PFUnA_1	563.0 / 519.0	3.38	2719604.37	2365.37	1616.4	False	13C7-PFUnA	1315296.86	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.38	170098.99	2176.38	2459.0	False	13C7-PFUnA	1315296.86	1250.00	PFUnA	0.063	0.064	✓
PFDoA_1	613.0 / 569.0	3.67	2896598.19	2549.96	1680.2	False	13C2-PFDoA	1333986.36	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.67	319249.21	2371.26	2585.4	False	13C2-PFDoA	1333986.36	1250.00	PFDoA	0.110	0.116	✓
PFTTrDA_1	663.0 / 619.0	3.93	2402403.00	2584.07	1922.1	False	13C2-PFTeDA	1208696.92	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	3.93	167285.40	2428.69	2166.6	False	13C2-PFTeDA	1208696.92	1250.00	PFTTrDA	0.070	0.071	✓
PFTeDA_1	713.0 / 669.0	4.17	2529623.42	2605.00	3026.9	False	13C2-PFTeDA	1208696.92	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.17	142559.29	2447.68	3044.1	False	13C2-PFTeDA	1208696.92	1250.00	PFTeDA	0.056	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.20	318369.55	2294.41	94643.3	False	d3-MeFOSAA	225734.25	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.20	367262.06	2429.65	12832.7	False	d3-MeFOSAA	225734.25	1250.00	NMeFOSAA	1.154	1.134	✓
NEiFOSAA_1	584.0 / 419.0	3.37	396416.59	2353.83	2508.6	False	d5-EiFOSAA	213662.56	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.37	22314.89	2265.52	9970.0	False	d5-EiFOSAA	213662.56	1250.00	NEiFOSAA	0.056	0.058	✓
HFPO-DA_1	285.0 / 169.0	1.71	2228858.43	2561.44	3483.2	False	13C3-HFPO-DA	332352.42	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.71	44119.79	2103.69	19800.5	False	13C3-HFPO-DA	332352.42	1250.00	HFPO-DA	0.020	0.024	✓
ADONA_1	377.0 / 251.0	1.99	7214027.35	2448.54	22541.7	False	13C8-PFOA	1631238.69	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.99	107144.25	2438.65	7338.6	False	13C8-PFOA	1631238.69	1222.50	ADONA	0.015	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	2.90	3982665.49	2248.89	2330.4	False	13C8-PFOA	1631238.69	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.90	43942.88	2473.28	1953.2	False	13C8-PFOA	1631238.69	1222.50	9CI-PF3ONS	0.011	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.53	2849523.23	2212.59	2354.2	False	13C8-PFOA	1631238.69	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.53	13398.53	1932.97	5047.3	False	13C8-PFOA	1631238.69	1222.50	11Cl-PF3OUdS	0.005	0.006	✓

Sample Name	LE54 CCV	Injection Vial	2
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 6:54:22 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	1.36	1082602.16	1005.26	4145.3	False	13C3-PFBS	438703.43	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.36	348757.57	977.44	2432.4	False	13C3-PFBS	438703.43	1162.50	PFBS	0.322	0.331	✓
PFHxA_1	313.0 / 269.0	1.61	1565462.42	916.72	791.2	False	13C5-PFHxA	1688726.75	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.61	92552.63	952.55	591.8	False	13C5-PFHxA	1688726.75	1250.00	PFHxA	0.059	0.057	✓
PFHpA_1	363.0 / 319.0	1.95	1172014.23	910.98	936.4	False	13C4-PFHpA	1715848.41	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.95	38508.81	958.17	1114.8	False	13C4-PFHpA	1715848.41	1250.00	PFHpA	0.033	0.031	✓
PFHxS_1	399.0 / 80.0	1.96	1036968.15	1007.56	1153.4	False	13C3-PFHxS	344438.18	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.96	363533.76	991.81	2023.9	False	13C3-PFHxS	344438.18	1182.50	PFHxS	0.351	0.355	✓
PFOA_1	413.0 / 369.0	2.32	1337330.96	1046.87	698.1	False	13C8-PFOA	1842816.29	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.32	134716.70	990.56	551.0	False	13C8-PFOA	1842816.29	1222.50	PFOA	0.101	0.107	✓
PFNA_1	463.0 / 419.0	2.69	1385256.08	1049.92	836.4	False	13C9-PFNA	1793391.58	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.69	402604.90	978.08	896.5	False	13C9-PFNA	1793391.58	1250.00	PFNA	0.291	0.309	✓
PFOS_1	499.0 / 80.0	2.68	1022348.94	979.92	706.3	False	13C8-PFOS	306200.94	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.68	199331.01	901.93	425041.4	False	13C8-PFOS	306200.94	1195.00	PFOS	0.195	0.212	✓
PFDA_1	513.0 / 469.0	3.04	1201683.26	968.87	920.8	False	13C6-PFDA	1723899.67	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.04	65589.05	845.04	1501.2	False	13C6-PFDA	1723899.67	1250.00	PFDA	0.055	0.062	✓
PFUnA_1	563.0 / 519.0	3.37	1374540.27	953.69	1148.6	False	13C7-PFUnA	1600501.88	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.37	79973.62	859.46	1181.2	False	13C7-PFUnA	1600501.88	1250.00	PFUnA	0.058	0.064	✓
PFDoA_1	613.0 / 569.0	3.66	1299982.63	903.39	1012.1	False	13C2-PFDoA	1666556.72	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.66	161389.67	962.10	1682.1	False	13C2-PFDoA	1666556.72	1250.00	PFDoA	0.124	0.116	✓
PFTTrDA_1	663.0 / 619.0	3.92	1055411.45	957.80	1627.8	False	13C2-PFTTeDA	1399439.82	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	3.92	77878.61	988.49	1746.7	False	13C2-PFTTeDA	1399439.82	1250.00	PFTTrDA	0.074	0.071	✓
PFTTeDA_1	713.0 / 669.0	4.15	1090233.83	917.68	2408.1	False	13C2-PFTTeDA	1399439.82	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	4.15	62552.01	917.35	2413.3	False	13C2-PFTTeDA	1399439.82	1250.00	PFTTeDA	0.057	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.19	155003.07	949.48	11580.3	False	d3-MeFOSAA	275196.60	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.19	184129.17	1006.12	1009.4	False	d3-MeFOSAA	275196.60	1250.00	NMeFOSAA	1.188	1.134	✓
NEiFOSAA_1	584.0 / 419.0	3.36	227849.36	912.07	2025.4	False	d5-EiFOSAA	313306.83	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.35	14475.10	1005.63	334.3	False	d5-EiFOSAA	313306.83	1250.00	NEiFOSAA	0.064	0.058	✓
HFPO-DA_1	285.0 / 169.0	1.70	1010106.43	1012.93	3204.1	False	13C3-HFPO-DA	368708.05	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.70	24907.44	1035.64	4277.0	False	13C3-HFPO-DA	368708.05	1250.00	HFPO-DA	0.025	0.024	✓
ADONA_1	377.0 / 251.0	1.98	3572642.81	1050.62	8076.8	False	13C8-PFOA	1842816.29	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.98	48236.08	999.98	856.9	False	13C8-PFOA	1842816.29	1222.50	ADONA	0.014	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	2.89	2004073.63	1037.59	2449.4	False	13C8-PFOA	1842816.29	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.89	18471.36	1047.15	9059.9	False	13C8-PFOA	1842816.29	1222.50	9CI-PF3ONS	0.009	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.52	1382210.67	1000.97	1719.5	False	13C8-PFOA	1842816.29	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.52	5954.09	799.25	6850.7	False	13C8-PFOA	1842816.29	1222.50	11Cl-PF3OUdS	0.004	0.006	✓

Sample Name	LE55 CCV	Injection Vial	15
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 9:10:16 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	1.35	2709902.15	2624.73	9193.0	False	13C3-PFBS	448681.91	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.35	886198.29	2596.69	5411.9	False	13C3-PFBS	448681.91	1162.50	PFBS	0.327	0.331	✓
PFHxA_1	313.0 / 269.0	1.60	3872842.46	2460.78	1555.8	False	13C5-PFHxA	1684529.46	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.60	239875.82	2510.23	1462.0	False	13C5-PFHxA	1684529.46	1250.00	PFHxA	0.062	0.057	✓
PFHpA_1	363.0 / 319.0	1.93	2884830.17	2298.89	1428.8	False	13C4-PFHpA	1706476.30	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.93	91974.54	2199.66	3770.8	False	13C4-PFHpA	1706476.30	1250.00	PFHpA	0.032	0.031	✓
PFHxS_1	399.0 / 80.0	1.94	2613546.90	2418.83	2343.2	False	13C3-PFHxS	367128.86	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.94	994106.25	2532.25	3321.2	False	13C3-PFHxS	367128.86	1182.50	PFHxS	0.380	0.355	✓
PFOA_1	413.0 / 369.0	2.29	3283508.81	2326.16	983.8	False	13C8-PFOA	2016414.52	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.29	359027.63	2381.07	1078.5	False	13C8-PFOA	2016414.52	1222.50	PFOA	0.109	0.107	✓
PFNA_1	463.0 / 419.0	2.65	3455106.20	2569.09	1224.8	False	13C9-PFNA	1870809.69	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.65	1050250.90	2441.55	1979.1	False	13C9-PFNA	1870809.69	1250.00	PFNA	0.304	0.309	✓
PFOS_1	499.0 / 80.0	2.65	2741953.40	2378.97	1294.9	False	13C8-PFOS	339883.21	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.65	534019.75	2165.08	2124.5	False	13C8-PFOS	339883.21	1195.00	PFOS	0.195	0.212	✓
PFDA_1	513.0 / 469.0	3.01	3187122.19	2600.42	1324.9	False	13C6-PFDA	1765990.62	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.01	194082.75	2494.74	2718.2	False	13C6-PFDA	1765990.62	1250.00	PFDA	0.061	0.062	✓
PFUnA_1	563.0 / 519.0	3.33	3310555.96	2324.57	1432.5	False	13C7-PFUnA	1628622.88	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.33	206889.43	2138.38	1560.4	False	13C7-PFUnA	1628622.88	1250.00	PFUnA	0.062	0.064	✓
PFDoA_1	613.0 / 569.0	3.62	3590440.00	2567.29	1577.7	False	13C2-PFDoA	1642448.69	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.62	406137.90	2449.95	2008.2	False	13C2-PFDoA	1642448.69	1250.00	PFDoA	0.113	0.116	✓
PFTTrDA_1	663.0 / 619.0	3.88	2934215.58	2771.90	2171.4	False	13C2-PFTeDA	1377531.74	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	3.88	200424.55	2552.16	2582.0	False	13C2-PFTeDA	1377531.74	1250.00	PFTTrDA	0.068	0.071	✓
PFTeDA_1	713.0 / 669.0	4.12	2966507.46	2682.88	3278.0	False	13C2-PFTeDA	1377531.74	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.12	153620.21	2313.42	2681.4	False	13C2-PFTeDA	1377531.74	1250.00	PFTeDA	0.052	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.15	402956.11	2261.35	2757.2	False	d3-MeFOSAA	289989.91	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.15	450400.26	2319.97	1711.8	False	d3-MeFOSAA	289989.91	1250.00	NMeFOSAA	1.118	1.134	✓
NEIFOSAA_1	584.0 / 419.0	3.32	549355.91	2487.87	1763.1	False	d5-EtFOSAA	280251.61	1250.00	NEIFOSAA			
NEIFOSAA_2	584.0 / 483.0	3.32	29896.82	2313.95	1571931.4	False	d5-EtFOSAA	280251.61	1250.00	NEIFOSAA	0.054	0.058	✓
HFPO-DA_1	285.0 / 169.0	1.69	2609227.05	2655.54	4199.4	False	13C3-HFPO-DA	375797.97	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.69	61329.10	2610.31	3669.8	False	13C3-HFPO-DA	375797.97	1250.00	HFPO-DA	0.024	0.024	✓
ADONA_1	377.0 / 251.0	1.96	9330876.86	2563.95	11096.5	False	13C8-PFOA	2016414.52	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.96	136962.27	2520.25	858.1	False	13C8-PFOA	2016414.52	1222.50	ADONA	0.015	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	2.85	4989058.35	2278.17	2336.1	False	13C8-PFOA	2016414.52	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.85	55780.10	2534.38	3011.9	False	13C8-PFOA	2016414.52	1222.50	9CI-PF3ONS	0.011	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.48	3690817.85	2314.14	2835.8	False	13C8-PFOA	2016414.52	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.48	19193.72	2229.90	1362.9	False	13C8-PFOA	2016414.52	1222.50	11Cl-PF3OUdS	0.005	0.006	✓

Sample Name	LE54 CCV	Injection Vial	26
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 11:05:25 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	1.35	1233073.04	1025.07	5505.7	False	13C3-PFBS	490985.49	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.35	367891.61	914.76	4513.0	False	13C3-PFBS	490985.49	1162.50	PFBS	0.298	0.331	✓
PFHxA_1	313.0 / 269.0	1.60	1868995.83	1007.74	736.5	False	13C5-PFHxA	1854364.53	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.60	102358.74	959.53	811.4	False	13C5-PFHxA	1854364.53	1250.00	PFHxA	0.055	0.057	✓
PFHpA_1	363.0 / 319.0	1.94	1247587.44	863.30	969.7	False	13C4-PFHpA	1923968.47	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.94	43369.37	962.06	2768.8	False	13C4-PFHpA	1923968.47	1250.00	PFHpA	0.035	0.031	✓
PFHxS_1	399.0 / 80.0	1.94	1103474.45	941.68	1089.0	False	13C3-PFHxS	391465.37	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.94	391121.93	939.31	1648.6	False	13C3-PFHxS	391465.37	1182.50	PFHxS	0.354	0.355	✓
PFOA_1	413.0 / 369.0	2.30	1541819.83	952.88	694.0	False	13C8-PFOA	2338288.56	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.30	153657.03	892.64	670.5	False	13C8-PFOA	2338288.56	1222.50	PFOA	0.100	0.107	✓
PFNA_1	463.0 / 419.0	2.67	1646585.65	1104.43	780.5	False	13C9-PFNA	2030365.91	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.67	469825.37	1008.08	1073.5	False	13C9-PFNA	2030365.91	1250.00	PFNA	0.285	0.309	✓
PFOS_1	499.0 / 80.0	2.66	1088292.19	927.72	607.0	False	13C8-PFOS	344135.99	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.66	236687.15	952.43	1022.3	False	13C8-PFOS	344135.99	1195.00	PFOS	0.217	0.212	✓
PFDA_1	513.0 / 469.0	3.02	1429717.17	1022.13	881.7	False	13C6-PFDA	1949894.94	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.02	83960.65	960.12	1298.8	False	13C6-PFDA	1949894.94	1250.00	PFDA	0.059	0.062	✓
PFUnA_1	563.0 / 519.0	3.34	1620525.37	1001.76	1544.1	False	13C7-PFUnA	1800618.86	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.34	89173.01	852.09	1393.0	False	13C7-PFUnA	1800618.86	1250.00	PFUnA	0.055	0.064	✓
PFDoA_1	613.0 / 569.0	3.63	1665990.37	981.66	1125.2	False	13C2-PFDoA	1968851.88	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.63	180199.03	909.54	2650.2	False	13C2-PFDoA	1968851.88	1250.00	PFDoA	0.108	0.116	✓
PFTTrDA_1	663.0 / 619.0	3.89	1253315.28	1056.49	1474.1	False	13C2-PFTeDA	1511820.33	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	3.89	89139.58	1046.13	1689.3	False	13C2-PFTeDA	1511820.33	1250.00	PFTTrDA	0.071	0.071	✓
PFTeDA_1	713.0 / 669.0	4.13	1192257.59	929.98	2243.6	False	13C2-PFTeDA	1511820.33	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.12	65175.09	884.18	2642.9	False	13C2-PFTeDA	1511820.33	1250.00	PFTeDA	0.055	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.16	186254.24	858.08	9763.1	False	d3-MeFOSAA	368327.52	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.16	227184.11	928.43	2335.3	False	d3-MeFOSAA	368327.52	1250.00	NMeFOSAA	1.220	1.134	✓
NEiFOSAA_1	584.0 / 419.0	3.33	263334.41	1038.31	1900.9	False	d5-EiFOSAA	318798.48	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.33	13914.60	950.37	550.0	False	d5-EiFOSAA	318798.48	1250.00	NEiFOSAA	0.053	0.058	✓
HFPO-DA_1	285.0 / 169.0	1.70	1022053.54	1109.13	3306.5	False	13C3-HFPO-DA	341844.42	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.70	22777.78	1020.70	598.5	False	13C3-HFPO-DA	341844.42	1250.00	HFPO-DA	0.022	0.024	✓
ADONA_1	377.0 / 251.0	1.97	4335556.48	1003.05	10253.3	False	13C8-PFOA	2338288.56	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.97	58995.01	965.56	2853.5	False	13C8-PFOA	2338288.56	1222.50	ADONA	0.014	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	2.87	2097979.41	867.36	1710.5	False	13C8-PFOA	2338288.56	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.86	21718.17	985.15	1052.6	False	13C8-PFOA	2338288.56	1222.50	9CI-PF3ONS	0.010	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.49	1551236.58	895.65	1945.6	False	13C8-PFOA	2338288.56	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.49	9223.11	961.57	647.5	False	13C8-PFOA	2338288.56	1222.50	11Cl-PF3OUdS	0.006	0.006	✓

Sample Name	LE55 CCV	Injection Vial	32
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 12:08:13 AM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	1.36	2849012.67	2592.51	6304.6	False	13C3-PFBS	477331.77	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.35	963598.22	2656.51	5804.1	False	13C3-PFBS	477331.77	1162.50	PFBS	0.338	0.331	✓
PFHxA_1	313.0 / 269.0	1.61	4208534.51	2306.30	1195.4	False	13C5-PFHxA	1946777.91	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.61	246822.26	2232.56	1080.9	False	13C5-PFHxA	1946777.91	1250.00	PFHxA	0.059	0.057	✓
PFHpA_1	363.0 / 319.0	1.94	3392464.38	2478.74	1444.0	False	13C4-PFHpA	1862903.51	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.94	105828.81	2314.57	47372.2	False	13C4-PFHpA	1862903.51	1250.00	PFHpA	0.031	0.031	✓
PFHxS_1	399.0 / 80.0	1.95	2891214.66	2579.79	1832.3	False	13C3-PFHxS	381052.13	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.95	1015878.25	2493.28	3471.5	False	13C3-PFHxS	381052.13	1182.50	PFHxS	0.351	0.355	✓
PFOA_1	413.0 / 369.0	2.30	3679370.62	2313.63	1011.8	False	13C8-PFOA	2271844.51	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.30	421479.13	2480.05	1221.6	False	13C8-PFOA	2271844.51	1222.50	PFOA	0.115	0.107	✓
PFNA_1	463.0 / 419.0	2.67	3726646.70	2625.43	1155.0	False	13C9-PFNA	1975223.60	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.67	1152268.58	2537.00	1688.0	False	13C9-PFNA	1975223.60	1250.00	PFNA	0.309	0.309	✓
PFOS_1	499.0 / 80.0	2.67	2703000.75	2334.34	1126.8	False	13C8-PFOS	341438.28	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.67	567867.61	2291.34	1688.1	False	13C8-PFOS	341438.28	1195.00	PFOS	0.210	0.212	✓
PFDA_1	513.0 / 469.0	3.03	3440834.23	2645.12	1293.2	False	13C6-PFDA	1875043.81	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.03	214805.59	2601.73	2756.6	False	13C6-PFDA	1875043.81	1250.00	PFDA	0.062	0.062	✓
PFUnA_1	563.0 / 519.0	3.35	4001079.26	2728.82	1657.2	False	13C7-PFUnA	1681902.75	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.35	261962.30	2614.99	2333.1	False	13C7-PFUnA	1681902.75	1250.00	PFUnA	0.065	0.064	✓
PFDoA_1	613.0 / 569.0	3.64	4090346.10	2519.58	1724.8	False	13C2-PFDoA	1906281.16	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.64	461677.15	2399.62	2474.6	False	13C2-PFDoA	1906281.16	1250.00	PFDoA	0.113	0.116	✓
PFTeDA_1	663.0 / 619.0	3.90	3094044.83	2563.45	2252.0	False	13C2-PFTeDA	1569024.70	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	3.90	225977.17	2526.55	2120.3	False	13C2-PFTeDA	1569024.70	1250.00	PFTeDA	0.073	0.071	✓
PFTeDA_1	713.0 / 669.0	4.14	3231822.28	2562.50	3558.3	False	13C2-PFTeDA	1569024.70	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.13	169524.07	2240.84	2928.1	False	13C2-PFTeDA	1569024.70	1250.00	PFTeDA	0.052	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.17	466963.06	2365.73	716.4	False	d3-MeFOSAA	320871.75	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.17	530777.71	2470.09	2020.8	False	d3-MeFOSAA	320871.75	1250.00	NMeFOSAA	1.137	1.134	✓
NEiFOSAA_1	584.0 / 419.0	3.34	599033.80	2334.39	2357.9	False	d5-EiFOSAA	325538.13	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.34	33868.45	2256.83	1269.5	True	d5-EiFOSAA	325538.13	1250.00	NEiFOSAA	0.057	0.058	✓
HFPO-DA_1	285.0 / 169.0	1.70	2664580.76	3005.08	4953.9	False	13C3-HFPO-DA	340796.15	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.70	67856.46	3214.61	1602261.7	True	13C3-HFPO-DA	340796.15	1250.00	HFPO-DA	0.025	0.024	✓
ADONA_1	377.0 / 251.0	1.98	10424435.99	2542.04	21367.6	False	13C8-PFOA	2271844.51	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.98	149815.68	2448.18	39069968.6	False	13C8-PFOA	2271844.51	1222.50	ADONA	0.014	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	2.87	5392203.97	2188.05	2696.5	False	13C8-PFOA	2271844.51	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.87	65651.75	2638.50	1232.6	False	13C8-PFOA	2271844.51	1222.50	9CI-PF3ONS	0.012	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.50	4020265.36	2240.25	3296.4	False	13C8-PFOA	2271844.51	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.50	19600.96	2027.18	542.4	False	13C8-PFOA	2271844.51	1222.50	11Cl-PF3OUdS	0.005	0.006	✓

Sample Name	LE55 CCV	Injection Vial	1
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 4:18:03 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	1.36	2524036.36	2754.06	10265.8	False	13C3-PFBS	399060.68	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.36	808767.47	2667.44	5328.5	False	13C3-PFBS	399060.68	1162.50	PFBS	0.320	0.331	✓
PFHxA_1	313.0 / 269.0	1.61	3757327.84	2354.69	1631.3	False	13C5-PFHxA	1704163.92	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.61	225112.90	2327.01	1758.0	False	13C5-PFHxA	1704163.92	1250.00	PFHxA	0.060	0.057	✓
PFHpA_1	363.0 / 319.0	1.95	2951897.48	2476.48	1817.0	False	13C4-PFHpA	1622433.13	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.95	84355.32	2124.50	1172.7	False	13C4-PFHpA	1622433.13	1250.00	PFHpA	0.029	0.031	✓
PFHxS_1	399.0 / 80.0	1.96	2510288.67	2640.03	2511.8	False	13C3-PFHxS	323373.69	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.96	903159.70	2611.63	2645.2	False	13C3-PFHxS	323373.69	1182.50	PFHxS	0.360	0.355	✓
PFOA_1	413.0 / 369.0	2.32	3199952.97	2307.70	1079.5	False	13C8-PFOA	1980948.02	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.32	368139.96	2484.26	1497.9	False	13C8-PFOA	1980948.02	1222.50	PFOA	0.115	0.107	✓
PFNA_1	463.0 / 419.0	2.69	3313543.63	2551.16	1297.4	False	13C9-PFNA	1806567.69	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.69	1078959.55	2597.30	2292.4	False	13C9-PFNA	1806567.69	1250.00	PFNA	0.326	0.309	✓
PFOS_1	499.0 / 80.0	2.69	2258570.05	2257.28	1285.3	False	13C8-PFOS	295004.35	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.69	511787.75	2389.74	1786.2	False	13C8-PFOS	295004.35	1195.00	PFOS	0.227	0.212	✓
PFDA_1	513.0 / 469.0	3.05	3057583.76	2507.22	1534.7	False	13C6-PFDA	1755770.85	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.05	181444.46	2344.16	2406.9	False	13C6-PFDA	1755770.85	1250.00	PFDA	0.059	0.062	✓
PFUnA_1	563.0 / 519.0	3.37	3595131.99	2778.65	2216.1	False	13C7-PFUnA	1484623.30	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.37	222153.15	2513.47	2760.1	False	13C7-PFUnA	1484623.30	1250.00	PFUnA	0.062	0.064	✓
PFDoA_1	613.0 / 569.0	3.67	3671558.91	2458.36	1627.7	False	13C2-PFDoA	1753381.35	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.67	419446.63	2370.29	2055.5	False	13C2-PFDoA	1753381.35	1250.00	PFDoA	0.114	0.116	✓
PFTTrDA_1	663.0 / 619.0	3.93	3013633.24	2642.09	2610.9	False	13C2-PFTeDA	1483380.19	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	3.93	224303.52	2651.63	2630.4	False	13C2-PFTeDA	1483380.19	1250.00	PFTTrDA	0.074	0.071	✓
PFTeDA_1	713.0 / 669.0	4.17	3092400.78	2594.52	4039.4	False	13C2-PFTeDA	1483380.19	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.17	177415.31	2482.31	3659.0	False	13C2-PFTeDA	1483380.19	1250.00	PFTeDA	0.057	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.19	378099.43	2399.55	528.0	False	d3-MeFOSAA	256060.78	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.19	396837.11	2314.94	2728.2	False	d3-MeFOSAA	256060.78	1250.00	NMeFOSAA	1.050	1.134	✓
NEiFOSAA_1	584.0 / 419.0	3.36	505357.25	2356.15	3665.5	False	d5-EiFOSAA	272112.95	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.36	30375.06	2420.99	65496.7	False	d5-EiFOSAA	272112.95	1250.00	NEiFOSAA	0.060	0.058	✓
HFPO-DA_1	285.0 / 169.0	1.70	2711425.76	2871.80	4030.6	False	13C3-HFPO-DA	362217.86	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.70	59836.52	2643.74	821.5	False	13C3-HFPO-DA	362217.86	1250.00	HFPO-DA	0.022	0.024	✓
ADONA_1	377.0 / 251.0	1.99	8589256.93	2399.87	1229.6	False	13C8-PFOA	1980948.02	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.99	118633.93	2227.61	813.4	False	13C8-PFOA	1980948.02	1222.50	ADONA	0.014	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	2.89	4696035.34	2185.47	2976.8	False	13C8-PFOA	1980948.02	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.89	57226.24	2637.69	7414.6	False	13C8-PFOA	1980948.02	1222.50	9CI-PF3ONS	0.012	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.53	3253083.40	2085.37	3317.2	False	13C8-PFOA	1980948.02	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.53	15657.60	1862.52	1015.3	False	13C8-PFOA	1980948.02	1222.50	11Cl-PF3OUdS	0.005	0.006	✓

Sample Name	LE55 CCV	Injection Vial	11
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 8:41:06 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	1.35	2844352.38	2787.22	10469.9	False	13C3-PFBS	444562.96	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.35	912769.71	2703.81	5190.9	False	13C3-PFBS	444562.96	1162.50	PFBS	0.321	0.331	✓
PFHxA_1	313.0 / 269.0	1.60	4088325.20	2358.75	1063.9	False	13C5-PFHxA	1851265.72	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.60	250655.33	2385.71	1256.7	False	13C5-PFHxA	1851265.72	1250.00	PFHxA	0.061	0.057	✓
PFHpA_1	363.0 / 319.0	1.94	3185214.01	2394.25	1352.7	False	13C4-PFHpA	1810049.41	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.94	100761.17	2269.54	1413.9	False	13C4-PFHpA	1810049.41	1250.00	PFHpA	0.032	0.031	✓
PFHxS_1	399.0 / 80.0	1.95	2551854.15	2282.81	1926.0	False	13C3-PFHxS	379575.60	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.95	964733.52	2377.33	2637.3	False	13C3-PFHxS	379575.60	1182.50	PFHxS	0.378	0.355	✓
PFOA_1	413.0 / 369.0	2.31	3464797.48	2407.27	981.4	False	13C8-PFOA	2055493.07	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.31	384922.55	2503.14	1238.8	False	13C8-PFOA	2055493.07	1222.50	PFOA	0.111	0.107	✓
PFNA_1	463.0 / 419.0	2.68	3717829.68	2472.96	1330.7	False	13C9-PFNA	2090008.32	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.68	1139321.40	2370.92	1468.4	False	13C9-PFNA	2090008.32	1250.00	PFNA	0.306	0.309	✓
PFOS_1	499.0 / 80.0	2.67	2492752.05	2470.73	1183.2	False	13C8-PFOS	297554.77	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.67	504368.43	2335.10	1804.2	False	13C8-PFOS	297554.77	1195.00	PFOS	0.202	0.212	✓
PFDA_1	513.0 / 469.0	3.04	3085848.22	2272.05	1233.2	False	13C6-PFDA	1950860.32	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.04	206794.87	2405.24	1642.7	False	13C6-PFDA	1950860.32	1250.00	PFDA	0.067	0.062	✓
PFUnA_1	563.0 / 519.0	3.36	3917038.18	2537.80	1891.5	False	13C7-PFUnA	1768150.12	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.36	257900.32	2450.79	1866.4	False	13C7-PFUnA	1768150.12	1250.00	PFUnA	0.066	0.064	✓
PFDoA_1	613.0 / 569.0	3.66	3799536.73	2351.45	1561.1	False	13C2-PFDoA	1896308.67	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.65	469715.33	2454.14	2399.5	False	13C2-PFDoA	1896308.67	1250.00	PFDoA	0.124	0.116	✓
PFTTrDA_1	663.0 / 619.0	3.91	3132485.80	2446.85	2274.7	False	13C2-PFTTeDA	1663097.73	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	3.91	233537.09	2463.88	2538.8	False	13C2-PFTTeDA	1663097.73	1250.00	PFTTrDA	0.075	0.071	✓
PFTeDA_1	713.0 / 669.0	4.15	3244515.14	2422.67	3270.7	False	13C2-PFTTeDA	1663097.73	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.15	196956.15	2457.77	2801.2	False	13C2-PFTTeDA	1663097.73	1250.00	PFTeDA	0.061	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.18	442821.40	2324.40	16016.7	False	d3-MeFOSAA	309824.38	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.18	479732.34	2312.90	1959.1	False	d3-MeFOSAA	309824.38	1250.00	NMeFOSAA	1.083	1.134	✓
NEiFOSAA_1	584.0 / 419.0	3.35	591319.40	2527.96	2683.7	False	d5-EiFOSAA	296907.81	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.35	29200.90	2133.77	17813.5	False	d5-EiFOSAA	296907.81	1250.00	NEiFOSAA	0.049	0.058	✓
HFPO-DA_1	285.0 / 169.0	1.69	2723529.97	2974.31	3903.4	False	13C3-HFPO-DA	351792.38	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.69	60509.84	2757.83	987421.7	False	13C3-HFPO-DA	351792.38	1250.00	HFPO-DA	0.022	0.024	✓
ADONA_1	377.0 / 251.0	1.98	9751650.95	2629.64	9514.0	False	13C8-PFOA	2055493.07	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.97	140019.28	2527.38	723.0	False	13C8-PFOA	2055493.07	1222.50	ADONA	0.014	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	2.88	5405931.66	2417.53	3621.5	False	13C8-PFOA	2055493.07	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.88	51199.95	2302.17	1138.9	False	13C8-PFOA	2055493.07	1222.50	9CI-PF3ONS	0.009	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.51	3834441.13	2356.77	2737.7	False	13C8-PFOA	2055493.07	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.51	20874.67	2374.79	861.8	False	13C8-PFOA	2055493.07	1222.50	11Cl-PF3OUdS	0.005	0.006	✓

Sample Name	LE54 CCV	Injection Vial	20
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 10:15:19 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	1.36	1151486.75	1076.81	6337.5	False	13C3-PFBS	438568.68	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.36	364819.60	1028.02	2886.4	False	13C3-PFBS	438568.68	1162.50	PFBS	0.317	0.331	✓
PFHxA_1	313.0 / 269.0	1.61	1768289.80	901.50	899.4	False	13C5-PFHxA	1935763.66	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.61	96820.79	867.38	820.9	False	13C5-PFHxA	1935763.66	1250.00	PFHxA	0.055	0.057	✓
PFHpA_1	363.0 / 319.0	1.94	1334030.84	996.30	975.6	False	13C4-PFHpA	1790669.97	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.94	36669.77	880.62	17983.7	False	13C4-PFHpA	1790669.97	1250.00	PFHpA	0.027	0.031	✓
PFHxS_1	399.0 / 80.0	1.95	1011619.41	873.65	1063.2	False	13C3-PFHxS	385994.68	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.95	368007.18	896.69	1310.9	False	13C3-PFHxS	385994.68	1182.50	PFHxS	0.364	0.355	✓
PFOA_1	413.0 / 369.0	2.30	1442592.18	947.90	644.9	False	13C8-PFOA	2199533.38	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.30	147576.54	910.94	766.8	False	13C8-PFOA	2199533.38	1222.50	PFOA	0.102	0.107	✓
PFNA_1	463.0 / 419.0	2.67	1465888.39	1030.75	857.5	False	13C9-PFNA	1931673.80	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.67	471884.36	1064.07	1266.4	False	13C9-PFNA	1931673.80	1250.00	PFNA	0.322	0.309	✓
PFOS_1	499.0 / 80.0	2.67	993085.08	982.36	816.9	False	13C8-PFOS	296701.07	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.67	225546.89	1051.83	1868.5	False	13C8-PFOS	296701.07	1195.00	PFOS	0.227	0.212	✓
PFDA_1	513.0 / 469.0	3.02	1418945.32	1080.25	862.0	False	13C6-PFDA	1836386.39	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.03	83594.50	1016.64	366.7	False	13C6-PFDA	1836386.39	1250.00	PFDA	0.059	0.062	✓
PFUnA_1	563.0 / 519.0	3.35	1659853.02	1044.58	1210.1	False	13C7-PFUnA	1772129.63	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.35	103370.76	998.26	2167.4	False	13C7-PFUnA	1772129.63	1250.00	PFUnA	0.062	0.064	✓
PFDoA_1	613.0 / 569.0	3.64	1616837.04	1039.38	1148.3	False	13C2-PFDoA	1806625.80	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.64	194555.59	1069.41	2145.8	False	13C2-PFDoA	1806625.80	1250.00	PFDoA	0.120	0.116	✓
PFTTrDA_1	663.0 / 619.0	3.89	1267828.21	1023.72	1521.2	False	13C2-PFTTeDA	1576592.85	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	3.89	93719.14	1054.52	1909.1	False	13C2-PFTTeDA	1576592.85	1250.00	PFTTrDA	0.074	0.071	✓
PFTTeDA_1	713.0 / 669.0	4.13	1303091.65	978.65	2196.8	False	13C2-PFTTeDA	1576592.85	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	4.13	73712.92	960.32	2275.9	False	13C2-PFTTeDA	1576592.85	1250.00	PFTTeDA	0.057	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.17	184597.16	952.90	698.4	False	d3-MeFOSAA	326489.41	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.17	212025.09	976.89	7274.5	False	d3-MeFOSAA	326489.41	1250.00	NMeFOSAA	1.149	1.134	✓
NEiFOSAA_1	584.0 / 419.0	3.34	242345.79	970.47	3254.8	False	d5-EiFOSAA	313539.93	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.34	10939.38	760.93	1708.0	False	d5-EiFOSAA	313539.93	1250.00	NEiFOSAA	0.045	0.058	✓
HFPO-DA_1	285.0 / 169.0	1.70	1136705.99	1208.53	3120.0	False	13C3-HFPO-DA	349987.18	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.70	24614.16	1080.65	17404.5	False	13C3-HFPO-DA	349987.18	1250.00	HFPO-DA	0.022	0.024	✓
ADONA_1	377.0 / 251.0	1.97	4248101.66	1046.50	13743.9	False	13C8-PFOA	2199533.38	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.97	59284.47	1028.31	1010.0	False	13C8-PFOA	2199533.38	1222.50	ADONA	0.014	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	2.87	1935677.77	851.99	1830.3	False	13C8-PFOA	2199533.38	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.87	19948.68	966.72	242374.3	False	13C8-PFOA	2199533.38	1222.50	9CI-PF3ONS	0.010	0.009	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.50	1475491.19	904.66	2015.5	False	13C8-PFOA	2199533.38	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.50	7072.30	795.70	561.7	False	13C8-PFOA	2199533.38	1222.50	11Cl-PF3OUdS	0.005	0.006	✓

Sample Name	LE59 ICC	Injection Vial	19
Sample ID	ICC	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 9:17:26 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.67	1333986.36	1157.87	3454.9	False	13C2-PFDA	1121497.90	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.20	227166.99	1224.34	1666.4	False	13C4-PFOS	230569.29	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.36	213372.44	1206.65	1534.7	False	13C4-PFOS	230569.29	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.60	1449543.44	1281.80	9182.8	False	13C2-PFOA	783309.06	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.94	1400477.08	1259.23	2092.4	False	13C2-PFOA	783309.06	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.32	1631238.69	1189.59	242665.2	False	13C2-PFOA	783309.06	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.70	1511014.30	1285.19	12647.3	False	13C4-PFOS	230569.29	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.05	1346679.16	1162.15	153883.5	False	13C2-PFDA	1121497.90	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.38	1315296.86	1247.17	4904.2	False	13C2-PFDA	1121497.90	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.17	1208696.92	1214.88	5243.0	False	13C2-PFDA	1121497.90	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.35	345049.42	1153.18	8639.9	False	13C4-PFOS	230569.29	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.96	311185.60	1324.49	1726.0	False	13C4-PFOS	230569.29	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.69	246550.82	1221.14	6524.5	False	13C4-PFOS	230569.29	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.71	332352.42	1181.14	3121.3	False	13C2-PFOA	783309.06	1250.00		N/A	N/A	✓

Sample Name	LE54 CCV	Injection Vial	2
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 6:54:22 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.66	1666556.72	1201.06	6782.4	False	13C2-PFDA	1350710.40	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.18	277311.61	1228.14	1219.0	False	13C4-PFOS	280595.55	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.35	312870.37	1453.88	1163.3	False	13C4-PFOS	280595.55	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.60	1688726.75	1318.03	7609.2	False	13C2-PFOA	887479.34	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.94	1715848.41	1361.70	16764.0	False	13C2-PFOA	887479.34	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.31	1842816.29	1186.14	7004.1	False	13C2-PFOA	887479.34	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.68	1793391.58	1253.41	6922.1	False	13C4-PFOS	280595.55	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.03	1723899.67	1235.23	14388.0	False	13C2-PFDA	1350710.40	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.36	1600501.88	1260.07	4143.7	False	13C2-PFDA	1350710.40	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.15	1399439.82	1167.91	3920.3	False	13C2-PFDA	1350710.40	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.35	438703.43	1204.78	6866.7	False	13C4-PFOS	280595.55	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.95	344438.18	1204.65	4478.7	False	13C4-PFOS	280595.55	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.68	306200.94	1246.20	1008.9	False	13C4-PFOS	280595.55	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.70	368708.05	1156.54	5358.2	False	13C2-PFOA	887479.34	1250.00		N/A	N/A	✓

Sample Name	LE55 CCV	Injection Vial	15
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 9:10:16 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	1642448.69	1152.90	4009.5	False	13C2-PFDA	1386781.69	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.15	299120.60	1272.62	1300.0	False	13C4-PFOS	292083.38	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.31	280083.55	1250.33	1285.2	False	13C4-PFOS	292083.38	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.59	1684529.46	1348.12	10596.4	False	13C2-PFOA	865516.67	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.92	1706476.30	1388.63	64150.3	False	13C2-PFOA	865516.67	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.28	2016414.52	1330.82	69248.9	False	13C2-PFOA	865516.67	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.65	1870809.69	1256.10	11354.5	False	13C4-PFOS	292083.38	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.00	1765990.62	1232.47	610.3	False	13C2-PFDA	1386781.69	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.33	1628622.88	1248.86	5139.8	False	13C2-PFDA	1386781.69	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.11	1377531.74	1119.72	4670.6	False	13C2-PFDA	1386781.69	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.34	448681.91	1183.72	11318.7	False	13C4-PFOS	292083.38	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.93	367128.86	1233.51	5796.8	False	13C4-PFOS	292083.38	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.64	339883.21	1328.87	1492.9	False	13C4-PFOS	292083.38	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.68	375797.97	1208.69	3982.0	False	13C2-PFOA	865516.67	1250.00		N/A	N/A	✓

Sample Name	LE54 CCV	Injection Vial	26
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 11:05:25 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.63	1968851.88	1363.98	7833.2	False	13C2-PFDA	1405114.40	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.16	373012.31	1375.70	1466.0	False	13C4-PFOS	336946.50	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.33	318515.76	1232.58	1523.8	False	13C4-PFOS	336946.50	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.59	1854364.53	1195.54	8947.0	False	13C2-PFOA	1074372.98	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.93	1923968.47	1261.26	5931.4	False	13C2-PFOA	1074372.98	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.29	2338288.56	1243.24	1581884.6	False	13C2-PFOA	1074372.98	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.66	2030365.91	1181.72	10756.6	False	13C4-PFOS	336946.50	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.02	1949894.94	1343.06	5012.2	False	13C2-PFDA	1405114.40	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.34	1800618.86	1362.73	10451.1	False	13C2-PFDA	1405114.40	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.12	1511820.33	1212.84	4467.3	False	13C2-PFDA	1405114.40	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.34	490985.49	1122.86	5968.2	False	13C4-PFOS	336946.50	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.94	391465.37	1140.15	3756.7	False	13C4-PFOS	336946.50	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.66	344135.99	1166.35	1416.8	False	13C4-PFOS	336946.50	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.69	341844.42	885.75	4233.2	False	13C2-PFOA	1074372.98	1250.00		N/A	N/A	✓

Sample Name	LE55 CCV	Injection Vial	32
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 12:08:13 AM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.64	1906281.16	1292.56	3701.4	False	13C2-PFDA	1435636.09	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.17	325029.41	1226.99	1554.6	False	13C4-PFOS	329185.46	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.33	325454.40	1289.12	1414.1	False	13C4-PFOS	329185.46	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.60	1946777.91	1352.35	8131.5	False	13C2-PFOA	997125.62	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.93	1862903.51	1315.84	18102.0	False	13C2-PFOA	997125.62	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.29	2271844.51	1301.49	40092.1	False	13C2-PFOA	997125.62	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.67	1975223.60	1176.73	4968.2	False	13C4-PFOS	329185.46	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.02	1875043.81	1264.05	8871.9	False	13C2-PFDA	1435636.09	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.35	1681902.75	1245.82	4885.1	False	13C2-PFDA	1435636.09	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.13	1569024.70	1231.97	5310.1	False	13C2-PFDA	1435636.09	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.34	477331.77	1117.37	10041.6	False	13C4-PFOS	329185.46	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.94	381052.13	1135.99	10260.7	False	13C4-PFOS	329185.46	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.66	341438.28	1184.49	1488.5	False	13C4-PFOS	329185.46	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.70	340796.15	951.44	5786.9	False	13C2-PFOA	997125.62	1250.00		N/A	N/A	✓

Sample Name	LE55 CCV	Injection Vial	1
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 4:18:03 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.67	1753381.35	1213.79	5270.6	False	13C2-PFDA	1406172.05	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.19	257794.00	1227.50	1076.0	False	13C4-PFOS	260982.87	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.36	271479.36	1356.34	1883.7	False	13C4-PFOS	260982.87	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.60	1704163.92	1115.52	6093.6	False	13C2-PFOA	1058178.29	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.94	1622433.13	1079.87	8085.0	False	13C2-PFOA	1058178.29	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.31	1980948.02	1069.37	26840.3	False	13C2-PFOA	1058178.29	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.69	1806567.69	1357.51	4895.9	False	13C4-PFOS	260982.87	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.04	1755770.85	1208.44	12390.0	False	13C2-PFDA	1406172.05	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.37	1484623.30	1122.74	5579.8	False	13C2-PFDA	1406172.05	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.17	1483380.19	1189.13	4057.7	False	13C2-PFDA	1406172.05	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.35	399060.68	1178.27	8948.4	False	13C4-PFOS	260982.87	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.95	323373.69	1215.97	2506.9	False	13C4-PFOS	260982.87	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.68	295004.35	1290.85	4331.1	False	13C4-PFOS	260982.87	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.70	362217.86	952.90	6509.6	False	13C2-PFOA	1058178.29	1250.00		N/A	N/A	✓

Sample Name	LE55 CCV	Injection Vial	11
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 8:41:06 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.65	1896308.67	1293.76	7030.0	False	13C2-PFDA	1426792.64	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.18	312147.17	1323.65	1216.5	False	13C4-PFOS	293053.91	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.35	298841.28	1329.65	1900.1	False	13C4-PFOS	293053.91	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.59	1851265.72	1138.95	7327.7	False	13C2-PFOA	1125873.74	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.93	1810049.41	1132.30	11031.7	False	13C2-PFOA	1125873.74	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.30	2055493.07	1042.89	12414.3	False	13C2-PFOA	1125873.74	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.67	2090008.32	1398.62	7912.0	False	13C4-PFOS	293053.91	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.03	1950860.32	1323.31	8329.0	False	13C2-PFDA	1426792.64	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.36	1768150.12	1317.83	6985.3	False	13C2-PFDA	1426792.64	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.15	1663097.73	1313.93	5070.5	False	13C2-PFDA	1426792.64	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.34	444562.96	1168.97	6738.4	False	13C4-PFOS	293053.91	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.94	379575.60	1271.11	43677.9	False	13C4-PFOS	293053.91	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.67	297554.77	1159.53	1497.6	False	13C4-PFOS	293053.91	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.70	356743.07	882.07	4198.1	True	13C2-PFOA	1125873.74	1250.00		N/A	N/A	✓

Sample Name	LE54 CCV	Injection Vial	20
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 10:15:19 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.64	1806625.80	1244.52	5560.5	False	13C2-PFDA	1413094.73	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.17	329632.97	1399.34	1928.6	False	13C4-PFOS	292729.44	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.33	314072.01	1398.97	1364.6	False	13C4-PFOS	292729.44	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.60	1935763.66	1282.37	8819.6	False	13C2-PFOA	1045589.73	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.93	1790669.97	1206.19	53661.3	False	13C2-PFOA	1045589.73	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.29	2199533.38	1201.66	12346.4	False	13C2-PFOA	1045589.73	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.67	1931673.80	1294.10	839.1	False	13C4-PFOS	292729.44	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.02	1836386.39	1257.74	693.9	False	13C2-PFDA	1413094.73	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.34	1772129.63	1333.60	6997.6	False	13C2-PFDA	1413094.73	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.12	1576592.85	1257.66	4672.1	False	13C2-PFDA	1413094.73	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.35	438568.68	1154.49	7929.0	False	13C4-PFOS	292729.44	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.94	385994.68	1294.03	6253.2	False	13C4-PFOS	292729.44	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.66	296701.07	1157.48	2119.4	False	13C4-PFOS	292729.44	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.70	349987.18	931.81	3798.9	False	13C2-PFOA	1045589.73	1250.00		N/A	N/A	✓

Raw Analytical Data

Sample Name	LE58 IB	Injection Vial	18
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 9:06:58 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	352368.53	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	352368.53	1162.50	PFBS	N/A	0.331	✓
PFHxA_1	313.0 / 269.0	1.63	67980.66	< 0	126.3	True	13C5-PFHxA	1601950.63	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.63	4374.30	26.48	55.1	False	13C5-PFHxA	1601950.63	1250.00	PFHxA	0.064	0.057	✓
PFHpA_1	363.0 / 319.0	1.97	19328.33	< 0	66.9	False	13C4-PFHpA	1438087.99	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1438087.99	1250.00	PFHpA	N/A	0.031	
PFHxS_1	399.0 / 80.0	1.94	3299.24	< 0	31.7	False	13C3-PFHxS	309410.86	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	309410.86	1182.50	PFHxS	N/A	0.355	
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1800471.65	1222.50	PFOA			
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1800471.65	1222.50	PFOA	N/A	0.107	✓
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1600129.86	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1600129.86	1250.00	PFNA	N/A	0.309	✓
PFOS_1	499.0 / 80.0	N/A	N/A	N/A	N/A	True	13C8-PFOS	248070.29	1195.00	PFOS			
PFOS_2	499.0 / 99.0	N/A	N/A	N/A	N/A	True	13C8-PFOS	248070.29	1195.00	PFOS	N/A	0.212	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1513956.81	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1513956.81	1250.00	PFDA	N/A	0.062	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1399512.71	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1399512.71	1250.00	PFUnA	N/A	0.064	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1447499.44	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1447499.44	1250.00	PFDoA	N/A	0.116	✓
PFTeDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1265202.61	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1265202.61	1250.00	PFTeDA	N/A	0.071	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1265202.61	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1265202.61	1250.00	PFTeDA	N/A	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.18	2038.52	69.26	102.9	False	d3-MeFOSAA	231216.30	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.19	3769.54	36.02	147.6	True	d3-MeFOSAA	231216.30	1250.00	NMeFOSAA	1.849	1.134	
NEtFOSAA_1	584.0 / 419.0	3.36	6391.27	18.28	717.3	True	d5-EtFOSAA	229080.80	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	229080.80	1250.00	NEtFOSAA	N/A	0.058	
HFPO-DA_1	285.0 / 169.0	1.69	4089.39	< 0	65.3	False	13C3-HFPO-DA	363268.39	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	363268.39	1250.00	HFPO-DA	N/A	0.024	
ADONA_1	377.0 / 251.0	1.97	9048.19	< 0	113.7	False	13C8-PFOA	1800471.65	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1800471.65	1222.50	ADONA	N/A	0.014	
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1800471.65	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1800471.65	1222.50	9CI-PF3ONS	N/A	0.008	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1800471.65	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1800471.65	1222.50	11Cl-PF3OUdS	N/A	0.006	✓

Sample Name	LE58 IB	Injection Vial	4
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 7:15:18 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	392890.21	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	392890.21	1162.50	PFBS	N/A	0.331	✓
PFHxA_1	313.0 / 269.0	1.62	63120.05	< 0	169.5	True	13C5-PFHxA	1662189.50	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.62	4454.12	25.58	64.6	False	13C5-PFHxA	1662189.50	1250.00	PFHxA	0.071	0.057	✓
PFHpA_1	363.0 / 319.0	1.96	23880.81	< 0	130.5	True	13C4-PFHpA	1610217.77	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1610217.77	1250.00	PFHpA	N/A	0.031	
PFHxS_1	399.0 / 80.0	1.97	4884.54	< 0	24.1	True	13C3-PFHxS	342377.48	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.95	2570.15	14.85	56.5	False	13C3-PFHxS	342377.48	1182.50	PFHxS	0.526	0.355	✓
PFOA_1	413.0 / 369.0	2.33	21975.35	35.55	52.9	False	13C8-PFOA	1817049.58	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.34	2177.93	37.85	23.0	False	13C8-PFOA	1817049.58	1222.50	PFOA	0.099	0.107	✓
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1616357.82	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1616357.82	1250.00	PFNA	N/A	0.309	✓
PFOS_1	499.0 / 80.0	2.74	12365.36	4.65	26.0	True	13C8-PFOS	290300.49	1195.00	PFOS			
PFOS_2	499.0 / 99.0	N/A	N/A	N/A	N/A	True	13C8-PFOS	290300.49	1195.00	PFOS	N/A	0.212	
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1607748.07	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1607748.07	1250.00	PFDA	N/A	0.062	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1434555.78	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1434555.78	1250.00	PFUnA	N/A	0.064	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1605368.93	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1605368.93	1250.00	PFDoA	N/A	0.116	✓
PFTeDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1316298.93	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1316298.93	1250.00	PFTeDA	N/A	0.071	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1316298.93	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1316298.93	1250.00	PFTeDA	N/A	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.19	4288.07	79.42	3721.4	True	d3-MeFOSAA	281791.76	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.19	5533.68	40.97	70.5	True	d3-MeFOSAA	281791.76	1250.00	NMeFOSAA	1.290	1.134	✓
NEtFOSAA_1	584.0 / 419.0	3.35	6031.97	10.04	6128.3	True	d5-EtFOSAA	281191.08	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	281191.08	1250.00	NEtFOSAA	N/A	0.058	
HFPO-DA_1	285.0 / 169.0	1.68	4179.37	< 0	91.7	False	13C3-HFPO-DA	348232.45	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	348232.45	1250.00	HFPO-DA	N/A	0.024	
ADONA_1	377.0 / 251.0	1.98	10546.08	< 0	235.5	False	13C8-PFOA	1817049.58	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.96	232.15	51.47	1475.2	False	13C8-PFOA	1817049.58	1222.50	ADONA	0.022	0.014	
9CI-PF3ONS_1	531.0 / 351.0	2.89	3931.27	66.62	36.4	True	13C8-PFOA	1817049.58	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1817049.58	1222.50	9CI-PF3ONS	N/A	0.008	
11Cl-pf3OUdS_1	631.0 / 451.0	3.52	3500.45	91.60	47.6	False	13C8-PFOA	1817049.58	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1817049.58	1222.50	11Cl-PF3OUdS	N/A	0.006	

Sample Name	DB124PB-FS(0)	Injection Vial	17
Sample ID	Procedural Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 9:31:12 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	464023.37	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	464023.37	1162.50	PFBS	N/A	0.331	✓
PFHxA_1	313.0 / 269.0	1.61	560606.55	256.12	426.8	True	13C5-PFHxA	1648855.90	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.61	33345.82	337.56	323.0	True	13C5-PFHxA	1648855.90	1250.00	PFHxA	0.059	0.057	✓
PFHpA_1	363.0 / 319.0	1.95	47015.67	9.64	114.3	False	13C4-PFHpA	1633276.47	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.94	1595.97	110.91	294.4	False	13C4-PFHpA	1633276.47	1250.00	PFHpA	0.034	0.031	✓
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	342239.16	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	342239.16	1182.50	PFHxS	N/A	0.355	✓
PFOA_1	413.0 / 369.0	2.31	40588.36	47.58	99.4	False	13C8-PFOA	1972150.31	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.32	3109.48	42.86	29.5	False	13C8-PFOA	1972150.31	1222.50	PFOA	0.077	0.107	✓
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1725837.96	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1725837.96	1250.00	PFNA	N/A	0.309	✓
PFOS_1	499.0 / 80.0	2.65	18908.65	11.80	30.4	True	13C8-PFOS	283099.58	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.65	2147.50	18.75	719.4	True	13C8-PFOS	283099.58	1195.00	PFOS	0.114	0.212	✓
PFDA_1	513.0 / 469.0	3.04	5068.21	< 0	22.1	True	13C6-PFDA	1642153.47	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1642153.47	1250.00	PFDA	N/A	0.062	
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1453381.15	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1453381.15	1250.00	PFUnA	N/A	0.064	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1512248.72	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1512248.72	1250.00	PFDoA	N/A	0.116	✓
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	1074931.24	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	1074931.24	1250.00	PFTTrDA	N/A	0.071	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1074931.24	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1074931.24	1250.00	PFTeDA	N/A	0.057	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	219625.61	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	219625.61	1250.00	NMeFOSAA	N/A	1.134	✓
NEiFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	269336.45	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	269336.45	1250.00	NEiFOSAA	N/A	0.058	✓
HFPO-DA_1	285.0 / 169.0	1.70	35136.43	8.39	541.1	False	13C3-HFPO-DA	364354.67	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.70	777.09	< 0	80501.9	False	13C3-HFPO-DA	364354.67	1250.00	HFPO-DA	0.022	0.024	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1972150.31	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1972150.31	1222.50	ADONA	N/A	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1972150.31	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1972150.31	1222.50	9CI-PF3ONS	N/A	0.008	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1972150.31	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1972150.31	1222.50	11Cl-PF3OUdS	N/A	0.006	✓

Sample Name	DB125LCS-FS(0)	Injection Vial	18
Sample ID	Laboratory Control Sample	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 9:41:40 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	1.36	9511868.72	8413.53	12304.1	False	13C3-PFBS	505744.24	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.36	3142253.46	8411.59	5904.4	False	13C3-PFBS	505744.24	1162.50	PFBS	0.330	0.331	✓
PFHxA_1	313.0 / 269.0	1.61	12321138.97	8228.51	1558.2	False	13C5-PFHxA	1659573.17	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.61	793364.04	8479.22	1520.7	False	13C5-PFHxA	1659573.17	1250.00	PFHxA	0.064	0.057	✓
PFHpA_1	363.0 / 319.0	1.94	9141460.79	8185.26	2034.6	False	13C4-PFHpA	1532945.51	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.94	295074.27	7669.84	2434.8	False	13C4-PFHpA	1532945.51	1250.00	PFHpA	0.032	0.031	✓
PFHxS_1	399.0 / 80.0	1.94	9802882.52	9166.24	3162.7	False	13C3-PFHxS	366314.10	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.95	3513601.73	8950.02	5954.7	False	13C3-PFHxS	366314.10	1182.50	PFHxS	0.358	0.355	✓
PFOA_1	413.0 / 369.0	2.30	10431662.05	7385.31	1727.4	False	13C8-PFOA	2006770.84	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.30	1212338.83	8026.30	1700.0	False	13C8-PFOA	2006770.84	1222.50	PFOA	0.116	0.107	✓
PFNA_1	463.0 / 419.0	2.67	10997734.47	8609.61	2112.2	False	13C9-PFNA	1797316.82	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.67	3581434.62	8658.96	3421.7	False	13C9-PFNA	1797316.82	1250.00	PFNA	0.326	0.309	✓
PFOS_1	499.0 / 80.0	2.66	8915961.92	7757.71	1167.8	False	13C8-PFOS	339702.01	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.66	1855289.33	7505.28	7476.3	False	13C8-PFOS	339702.01	1195.00	PFOS	0.208	0.212	✓
PFDA_1	513.0 / 469.0	3.02	9391688.14	8716.09	2245.5	False	13C6-PFDA	1576681.66	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.02	619270.10	8989.18	2128.0	False	13C6-PFDA	1576681.66	1250.00	PFDA	0.066	0.062	✓
PFUnA_1	563.0 / 519.0	3.35	9694077.64	8010.54	2088.9	False	13C7-PFUnA	1404577.89	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.35	650764.97	7719.05	1570.2	False	13C7-PFUnA	1404577.89	1250.00	PFUnA	0.067	0.064	✓
PFDoA_1	613.0 / 569.0	3.64	11047940.84	7903.73	2832.2	False	13C2-PFDoA	1650098.94	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.64	1371658.03	8225.65	4387.5	False	13C2-PFDoA	1650098.94	1250.00	PFDoA	0.124	0.116	✓
PFTeDA_1	663.0 / 619.0	3.89	8714205.76	9078.93	3141.9	False	13C2-PFTeDA	1260448.37	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	3.89	646172.46	8942.16	3401.2	False	13C2-PFTeDA	1260448.37	1250.00	PFTeDA	0.074	0.071	✓
PFTeDA_1	713.0 / 669.0	4.13	8401322.03	8477.44	4381.6	False	13C2-PFTeDA	1260448.37	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.12	521153.73	8621.98	3902.9	False	13C2-PFTeDA	1260448.37	1250.00	PFTeDA	0.062	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.17	1630080.34	8730.90	32927.1	False	d3-MeFOSAA	298302.43	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.17	1644206.33	8203.09	2633.3	False	d3-MeFOSAA	298302.43	1250.00	NMeFOSAA	1.009	1.134	✓
NEiFOSAA_1	584.0 / 419.0	3.34	1751866.03	9168.06	2434.1	False	d5-EiFOSAA	243751.01	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	3.34	102553.55	9107.89	2094.4	False	d5-EiFOSAA	243751.01	1250.00	NEiFOSAA	0.059	0.058	✓
HFPO-DA_1	285.0 / 169.0	1.70	8565633.62	8304.47	8225.8	False	13C3-HFPO-DA	422432.70	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	1.70	196117.19	7929.07	53036.3	False	13C3-HFPO-DA	422432.70	1250.00	HFPO-DA	0.023	0.024	✓
ADONA_1	377.0 / 251.0	1.97	29519588.86	8238.70	19634.8	False	13C8-PFOA	2006770.84	1222.50	ADONA			
ADONA_2	377.0 / 85.0	1.97	444513.90	8112.97	16764051.9	False	13C8-PFOA	2006770.84	1222.50	ADONA	0.015	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	2.87	17420502.21	7830.75	5508.7	False	13C8-PFOA	2006770.84	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	2.87	182502.14	8274.27	1286.8	False	13C8-PFOA	2006770.84	1222.50	9CI-PF3ONS	0.010	0.008	✓
11Cl-pf3OUdS_1	631.0 / 451.0	3.50	10977239.25	6738.29	5135.6	False	13C8-PFOA	2006770.84	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	3.50	59387.24	6797.46	1687.5	False	13C8-PFOA	2006770.84	1222.50	11Cl-PF3OUdS	0.005	0.006	✓

Sample Name	G2209-FS(0)	Injection Vial	27
Sample ID	CBD-AOA-EB01-102820-GW	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 11:15:54 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	378512.83	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	378512.83	1162.50	PFBS	N/A	0.331	✓
PFHxA_1	313.0 / 269.0	1.60	274211.80	190.89	93.6	True	13C5-PFHxA	972254.99	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.60	9387.11	149.62	15.7	True	13C5-PFHxA	972254.99	1250.00	PFHxA	0.034	0.057	✓
PFHpA_1	363.0 / 319.0	1.93	66082.65	53.06	86.7	False	13C4-PFHpA	1095766.04	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.91	2463.65	161.08	23.2	False	13C4-PFHpA	1095766.04	1250.00	PFHpA	0.037	0.031	✓
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	285127.14	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	285127.14	1182.50	PFHxS	N/A	0.355	✓
PFOA_1	413.0 / 369.0	2.30	55874.83	79.55	76.9	False	13C8-PFOA	1295254.89	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.29	7122.76	94.83	27.3	False	13C8-PFOA	1295254.89	1222.50	PFOA	0.127	0.107	✓
PFNA_1	463.0 / 419.0	2.66	36295.75	< 0	29.1	False	13C9-PFNA	1276061.98	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.65	8796.79	32.83	47.7	False	13C9-PFNA	1276061.98	1250.00	PFNA	0.242	0.309	✓
PFOS_1	499.0 / 80.0	2.65	292041.59	336.54	231.5	True	13C8-PFOS	250825.18	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.66	34210.67	195.56	136.0	False	13C8-PFOS	250825.18	1195.00	PFOS	0.117	0.212	✓
PFDA_1	513.0 / 469.0	2.99	21086.42	< 0	68.4	False	13C6-PFDA	949040.98	1250.00	PFDA			
PFDA_2	513.0 / 219.0	2.98	1226.26	1.18	24.2	True	13C6-PFDA	949040.98	1250.00	PFDA	0.058	0.062	✓
PFUnA_1	563.0 / 519.0	3.30	8211.94	< 0	73.4	False	13C7-PFUnA	366504.53	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	366504.53	1250.00	PFUnA	N/A	0.064	
PFDoA_1	613.0 / 569.0	3.59	4487.63	< 0	56.0	False	13C2-PFDoA	429821.52	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.60	480.16	15.38	38.2	False	13C2-PFDoA	429821.52	1250.00	PFDoA	0.107	0.116	✓
PFTTrDA_1	663.0 / 619.0	3.87	30602.44	81.55	353.5	False	13C2-PFTeDA	341641.93	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	3.88	2209.37	132.51	99.9	False	13C2-PFTeDA	341641.93	1250.00	PFTTrDA	0.072	0.071	✓
PFTeDA_1	713.0 / 669.0	4.12	5893.48	< 0	89.0	False	13C2-PFTeDA	341641.93	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	341641.93	1250.00	PFTeDA	N/A	0.057	
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	33233.05	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	33233.05	1250.00	NMeFOSAA	N/A	1.134	✓
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	73406.57	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	73406.57	1250.00	NEtFOSAA	N/A	0.058	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	401582.12	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	401582.12	1250.00	HFPO-DA	N/A	0.024	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1295254.89	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1295254.89	1222.50	ADONA	N/A	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1295254.89	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1295254.89	1222.50	9CI-PF3ONS	N/A	0.008	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1295254.89	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1295254.89	1222.50	11Cl-PF3OUdS	N/A	0.006	✓

Sample Name	LE58 IB	Injection Vial	3
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 4:39:00 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	382585.85	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	382585.85	1162.50	PFBS	N/A	0.331	✓
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	1797637.93	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	1797637.93	1250.00	PFHxA	N/A	0.057	✓
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1608181.88	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1608181.88	1250.00	PFHpA	N/A	0.031	✓
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	317365.12	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	317365.12	1182.50	PFHxS	N/A	0.355	✓
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2009094.54	1222.50	PFOA			
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2009094.54	1222.50	PFOA	N/A	0.107	✓
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1800999.35	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1800999.35	1250.00	PFNA	N/A	0.309	✓
PFOS_1	499.0 / 80.0	N/A	N/A	N/A	N/A	True	13C8-PFOS	304761.51	1195.00	PFOS			
PFOS_2	499.0 / 99.0	N/A	N/A	N/A	N/A	True	13C8-PFOS	304761.51	1195.00	PFOS	N/A	0.212	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1756532.74	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1756532.74	1250.00	PFDA	N/A	0.062	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1579594.57	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1579594.57	1250.00	PFUnA	N/A	0.064	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1779486.34	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1779486.34	1250.00	PFDoA	N/A	0.116	✓
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	1429642.33	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	1429642.33	1250.00	PFTTrDA	N/A	0.071	✓
PFTTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	1429642.33	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	1429642.33	1250.00	PFTTeDA	N/A	0.057	✓
NMeFOSAA_1	570.0 / 419.0	3.15	4623.71	81.82	3105.4	False	d3-MeFOSAA	276381.30	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	276381.30	1250.00	NMeFOSAA	N/A	1.134	
NEiFOSAA_1	584.0 / 419.0	3.33	5391.18	8.33	77.9	True	d5-EiFOSAA	267978.15	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	267978.15	1250.00	NEiFOSAA	N/A	0.058	
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	331994.73	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	331994.73	1250.00	HFPO-DA	N/A	0.024	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2009094.54	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2009094.54	1222.50	ADONA	N/A	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2009094.54	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2009094.54	1222.50	9CI-PF3ONS	N/A	0.008	✓
11CI-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2009094.54	1222.50	11CI-PF3OUdS			
11CI-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2009094.54	1222.50	11CI-PF3OUdS	N/A	0.006	✓

Sample Name	G2203-FS(0)	Injection Vial	3
Sample ID	CBD-AOA-MW06-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 7:17:24 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	1.37	246770.57	269.98	86.8	True	13C3-PFBS	291700.29	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.37	67615.62	204.71	328.4	False	13C3-PFBS	291700.29	1162.50	PFBS	0.274	0.331	✓
PFHxA_1	313.0 / 269.0	1.62	365211.67	379.44	111.2	False	13C5-PFHxA	812348.40	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.63	21160.34	441.15	73.1	False	13C5-PFHxA	812348.40	1250.00	PFHxA	0.058	0.057	✓
PFHpA_1	363.0 / 319.0	1.96	327880.09	399.74	110.5	False	13C4-PFHpA	1051046.88	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.94	17244.60	719.93	178.3	False	13C4-PFHpA	1051046.88	1250.00	PFHpA	0.053	0.031	
PFHxS_1	399.0 / 80.0	1.97	2877706.31	3932.26	358.4	False	13C3-PFHxS	249702.71	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.97	1010690.95	3781.31	856.8	False	13C3-PFHxS	249702.71	1182.50	PFHxS	0.351	0.355	✓
PFOA_1	413.0 / 369.0	2.32	1331182.29	14291.78	659.4	False	13C8-PFOA	1321659.10	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.31	1217333.48	12225.60	1462.9	False	13C8-PFOA	1321659.10	1222.50	PFOA	0.091	0.107	✓
PFNA_1	463.0 / 419.0	2.68	114011.94	110.63	135.5	False	13C9-PFNA	1054543.25	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.68	44950.31	188.05	169.9	False	13C9-PFNA	1054543.25	1250.00	PFNA	0.394	0.309	✓
PFOS_1	499.0 / 80.0	2.68	1029297.75	1549.95	283.1	False	13C8-PFOS	195482.55	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.67	159866.41	1130.92	554.3	False	13C8-PFOS	195482.55	1195.00	PFOS	0.155	0.212	✓
PFDA_1	513.0 / 469.0	3.02	10736.60	< 0	35.6	False	13C6-PFDA	1148350.61	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1148350.61	1250.00	PFDA	N/A	0.062	
PFUnA_1	563.0 / 519.0	3.33	27486.66	< 0	127.1	False	13C7-PFUnA	911013.92	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.33	2176.13	69.88	70.9	False	13C7-PFUnA	911013.92	1250.00	PFUnA	0.079	0.064	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	890276.17	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	890276.17	1250.00	PFDoA	N/A	0.116	✓
PFTeDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	293036.41	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	293036.41	1250.00	PFTeDA	N/A	0.071	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	293036.41	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	293036.41	1250.00	PFTeDA	N/A	0.057	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	161391.25	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	161391.25	1250.00	NMeFOSAA	N/A	1.134	✓
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	189420.41	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	189420.41	1250.00	NEtFOSAA	N/A	0.058	✓
HFPO-DA_1	285.0 / 169.0	1.73	2813.89	< 0	22.8	False	13C3-HFPO-DA	307071.20	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	307071.20	1250.00	HFPO-DA	N/A	0.024	
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1321659.10	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1321659.10	1222.50	ADONA	N/A	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1321659.10	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1321659.10	1222.50	9CI-PF3ONS	N/A	0.008	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1321659.10	1222.50	11Cl-pf3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1321659.10	1222.50	11Cl-pf3OUdS	N/A	0.006	✓

Sample Name	G2204-FS(0)	Injection Vial	4
Sample ID	CBD-AOA-EB01-102720-GW	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 7:27:53 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	1.38	11434.87	< 0	160.2	True	13C3-PFBS	521141.77	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	521141.77	1162.50	PFBS	N/A	0.331	
PFHxA_1	313.0 / 269.0	1.63	80816.41	< 0	61.2	True	13C5-PFHxA	1587787.81	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.63	5454.22	39.01	53.3	False	13C5-PFHxA	1587787.81	1250.00	PFHxA	0.067	0.057	✓
PFHpA_1	363.0 / 319.0	1.98	28914.12	< 0	60.1	False	13C4-PFHpA	1746251.47	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.95	1458.42	105.31	40.4	False	13C4-PFHpA	1746251.47	1250.00	PFHpA	0.050	0.031	
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	352239.46	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	352239.46	1182.50	PFHxS	N/A	0.355	✓
PFOA_1	413.0 / 369.0	2.33	23698.35	36.08	34.3	False	13C8-PFOA	1900489.41	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.33	2461.01	39.13	15.7	False	13C8-PFOA	1900489.41	1222.50	PFOA	0.104	0.107	✓
PFNA_1	463.0 / 419.0	2.69	4646.14	< 0	12.9	False	13C9-PFNA	1800270.83	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1800270.83	1250.00	PFNA	N/A	0.309	
PFOS_1	499.0 / 80.0	2.72	52670.57	46.34	54.8	False	13C8-PFOS	286991.61	1195.00	PFOS			
PFOS_2	499.0 / 99.0	N/A	N/A	N/A	N/A	True	13C8-PFOS	286991.61	1195.00	PFOS	N/A	0.212	
PFDA_1	513.0 / 469.0	3.08	8977.57	< 0	29.2	False	13C6-PFDA	1784215.61	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1784215.61	1250.00	PFDA	N/A	0.062	
PFUnA_1	563.0 / 519.0	3.37	12914.52	< 0	72.3	False	13C7-PFUnA	1645431.27	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1645431.27	1250.00	PFUnA	N/A	0.064	
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1787266.72	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1787266.72	1250.00	PFDoA	N/A	0.116	✓
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	1256483.31	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	1256483.31	1250.00	PFTTrDA	N/A	0.071	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	1256483.31	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	1256483.31	1250.00	PFTeDA	N/A	0.057	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	265203.04	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	265203.04	1250.00	NMeFOSAA	N/A	1.134	✓
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	302751.13	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	302751.13	1250.00	NEtFOSAA	N/A	0.058	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	462669.77	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	462669.77	1250.00	HFPO-DA	N/A	0.024	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1900489.41	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1900489.41	1222.50	ADONA	N/A	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1900489.41	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1900489.41	1222.50	9CI-PF3ONS	N/A	0.008	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1900489.41	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1900489.41	1222.50	11Cl-PF3OUdS	N/A	0.006	✓

Sample Name	G2205-FS(0)	Injection Vial	5
Sample ID	CBD-AOA-MW12-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 7:38:20 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	253378.33	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	253378.33	1162.50	PFBS	N/A	0.331	✓
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	605233.35	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	605233.35	1250.00	PFHxA	N/A	0.057	✓
PFHpA_1	363.0 / 319.0	1.96	24131.61	24.19	18.3	False	13C4-PFHpA	613266.95	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.96	1064.54	140.86	21.0	False	13C4-PFHpA	613266.95	1250.00	PFHpA	0.044	0.031	✓
PFHxS_1	399.0 / 80.0	1.96	42294.81	41.71	28.8	False	13C3-PFHxS	212546.60	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.96	15015.09	73.71	35.7	False	13C3-PFHxS	212546.60	1182.50	PFHxS	0.355	0.355	✓
PFOA_1	413.0 / 369.0	2.32	116015.37	187.35	63.1	False	13C8-PFOA	973234.85	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.32	11302.73	175.84	76.4	False	13C8-PFOA	973234.85	1222.50	PFOA	0.097	0.107	✓
PFNA_1	463.0 / 419.0	2.69	7832.26	< 0	20.0	True	13C9-PFNA	1032456.03	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1032456.03	1250.00	PFNA	N/A	0.309	
PFOS_1	499.0 / 80.0	2.68	45802.58	56.20	28.9	True	13C8-PFOS	211225.01	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.65	7445.30	56.72	34.9	False	13C8-PFOS	211225.01	1195.00	PFOS	0.163	0.212	✓
PFDA_1	513.0 / 469.0	3.04	11473.00	< 0	33.0	False	13C6-PFDA	1273139.60	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.04	511.98	< 0	31.3	False	13C6-PFDA	1273139.60	1250.00	PFDA	0.045	0.062	✓
PFUnA_1	563.0 / 519.0	3.37	7987.67	< 0	23.7	False	13C7-PFUnA	1239666.78	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1239666.78	1250.00	PFUnA	N/A	0.064	
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1357089.34	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1357089.34	1250.00	PFDoA	N/A	0.116	✓
PFTeDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1244003.67	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1244003.67	1250.00	PFTeDA	N/A	0.071	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1244003.67	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1244003.67	1250.00	PFTeDA	N/A	0.057	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	207298.67	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	207298.67	1250.00	NMeFOSAA	N/A	1.134	✓
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	298115.91	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	298115.91	1250.00	NEtFOSAA	N/A	0.058	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	316372.30	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	316372.30	1250.00	HFPO-DA	N/A	0.024	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	973234.85	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	973234.85	1222.50	ADONA	N/A	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	973234.85	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	973234.85	1222.50	9CI-PF3ONS	N/A	0.008	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	973234.85	1222.50	11Cl-pf3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	973234.85	1222.50	11Cl-pf3OUdS	N/A	0.006	✓

Sample Name	G2206-FS(0)	Injection Vial	6
Sample ID	CBD-AOA-MW11-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 7:48:47 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	182059.52	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	182059.52	1162.50	PFBS	N/A	0.331	✓
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	362869.00	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	362869.00	1250.00	PFHxA	N/A	0.057	✓
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	261928.32	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	261928.32	1250.00	PFHpA	N/A	0.031	✓
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	False	13C3-PFHxS	149443.22	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	149443.22	1182.50	PFHxS	N/A	0.355	✓
PFOA_1	413.0 / 369.0	2.30	100335.04	183.87	43.5	False	13C8-PFOA	859377.15	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.29	12332.25	212.10	48.4	True	13C8-PFOA	859377.15	1222.50	PFOA	0.123	0.107	✓
PFNA_1	463.0 / 419.0	2.68	19057.79	< 0	38.7	True	13C9-PFNA	1018870.96	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.68	4814.54	23.41	28.6	False	13C9-PFNA	1018870.96	1250.00	PFNA	0.253	0.309	✓
PFOS_1	499.0 / 80.0	2.67	34264.44	49.86	19.9	True	13C8-PFOS	175353.79	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.67	9619.66	83.64	30.9	False	13C8-PFOS	175353.79	1195.00	PFOS	0.281	0.212	✓
PFDA_1	513.0 / 469.0	3.03	23715.14	< 0	51.1	False	13C6-PFDA	1143072.84	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1143072.84	1250.00	PFDA	N/A	0.062	
PFUnA_1	563.0 / 519.0	3.35	10265.53	< 0	32.0	False	13C7-PFUnA	1459701.98	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1459701.98	1250.00	PFUnA	N/A	0.064	
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1404565.74	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1404565.74	1250.00	PFDoA	N/A	0.116	✓
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	1311979.09	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	1311979.09	1250.00	PFTTrDA	N/A	0.071	✓
PFTTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	1311979.09	1250.00	PFTTeDA			
PFTTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTTeDA	1311979.09	1250.00	PFTTeDA	N/A	0.057	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	188752.11	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	188752.11	1250.00	NMeFOSAA	N/A	1.134	✓
NEtFOSAA_1	584.0 / 419.0	3.34	10616.27	28.08	193.4	False	d5-EtFOSAA	298454.62	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	298454.62	1250.00	NEtFOSAA	N/A	0.058	
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	128775.53	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	128775.53	1250.00	HFPO-DA	N/A	0.024	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	859377.15	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	859377.15	1222.50	ADONA	N/A	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	859377.15	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	859377.15	1222.50	9CI-PF3ONS	N/A	0.008	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	859377.15	1222.50	11Cl-pf3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	859377.15	1222.50	11Cl-pf3OUdS	N/A	0.006	✓

Sample Name	G2207-FS(0)	Injection Vial	7
Sample ID	CBD-AOA-MW11P-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 7:59:14 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	165153.68	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	165153.68	1162.50	PFBS	N/A	0.331	✓
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	379592.23	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	379592.23	1250.00	PFHxA	N/A	0.057	✓
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	321010.08	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	321010.08	1250.00	PFHpA	N/A	0.031	✓
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	False	13C3-PFHxS	147090.39	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	147090.39	1182.50	PFHxS	N/A	0.355	✓
PFOA_1	413.0 / 369.0	2.31	128094.26	195.11	42.3	False	13C8-PFOA	1027350.04	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.30	16094.68	229.54	50.0	False	13C8-PFOA	1027350.04	1222.50	PFOA	0.126	0.107	✓
PFNA_1	463.0 / 419.0	2.68	23773.99	< 0	32.6	False	13C9-PFNA	1191024.87	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.69	7814.94	31.39	38.4	False	13C9-PFNA	1191024.87	1250.00	PFNA	0.329	0.309	✓
PFOS_1	499.0 / 80.0	2.68	48463.35	79.59	26.3	True	13C8-PFOS	163787.13	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.68	10538.60	96.66	49.5	True	13C8-PFOS	163787.13	1195.00	PFOS	0.217	0.212	✓
PFDA_1	513.0 / 469.0	3.04	11540.76	< 0	31.1	False	13C6-PFDA	1205942.72	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1205942.72	1250.00	PFDA	N/A	0.062	
PFUnA_1	563.0 / 519.0	3.37	11938.74	< 0	31.3	False	13C7-PFUnA	1422832.85	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1422832.85	1250.00	PFUnA	N/A	0.064	
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1378192.91	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1378192.91	1250.00	PFDoA	N/A	0.116	✓
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1356777.36	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1356777.36	1250.00	PFTTrDA	N/A	0.071	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1356777.36	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1356777.36	1250.00	PFTeDA	N/A	0.057	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	192795.62	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	192795.62	1250.00	NMeFOSAA	N/A	1.134	✓
NEtFOSAA_1	584.0 / 419.0	3.36	10032.32	24.21	691.0	False	d5-EtFOSAA	308334.71	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	308334.71	1250.00	NEtFOSAA	N/A	0.058	
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	139206.56	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	139206.56	1250.00	HFPO-DA	N/A	0.024	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1027350.04	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1027350.04	1222.50	ADONA	N/A	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1027350.04	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1027350.04	1222.50	9CI-PF3ONS	N/A	0.008	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1027350.04	1222.50	11Cl-pf3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1027350.04	1222.50	11Cl-pf3OUdS	N/A	0.006	✓

Sample Name	G2208-FS(0)	Injection Vial	8
Sample ID	CBD-AOA-FB01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 8:09:41 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	536241.55	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	536241.55	1162.50	PFBS	N/A	0.331	✓
PFHxA_1	313.0 / 269.0	1.62	258434.88	22.51	218.4	True	13C5-PFHxA	1951744.48	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.62	15703.55	121.01	118.8	False	13C5-PFHxA	1951744.48	1250.00	PFHxA	0.061	0.057	✓
PFHpA_1	363.0 / 319.0	1.96	23958.64	< 0	57.0	False	13C4-PFHpA	1781268.83	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.96	683.17	87.48	84.4	False	13C4-PFHpA	1781268.83	1250.00	PFHpA	0.029	0.031	✓
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	387115.81	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	387115.81	1182.50	PFHxS	N/A	0.355	✓
PFOA_1	413.0 / 369.0	2.32	27721.51	36.73	37.0	False	13C8-PFOA	2144514.60	1222.50	PFOA			
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2144514.60	1222.50	PFOA	N/A	0.107	
PFNA_1	463.0 / 419.0	2.69	8620.91	< 0	24.4	False	13C9-PFNA	2279799.84	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	2279799.84	1250.00	PFNA	N/A	0.309	
PFOS_1	499.0 / 80.0	2.68	16195.91	6.72	19.3	False	13C8-PFOS	326442.01	1195.00	PFOS			
PFOS_2	499.0 / 99.0	N/A	N/A	N/A	N/A	True	13C8-PFOS	326442.01	1195.00	PFOS	N/A	0.212	
PFDA_1	513.0 / 469.0	3.04	2224.43	< 0	11.8	False	13C6-PFDA	1897606.43	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1897606.43	1250.00	PFDA	N/A	0.062	
PFUnA_1	563.0 / 519.0	3.40	3453.10	< 0	18.3	False	13C7-PFUnA	1961468.85	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1961468.85	1250.00	PFUnA	N/A	0.064	
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	2067512.44	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	2067512.44	1250.00	PFDoA	N/A	0.116	✓
PFTeDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1674328.83	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1674328.83	1250.00	PFTeDA	N/A	0.071	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1674328.83	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1674328.83	1250.00	PFTeDA	N/A	0.057	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	314673.63	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	314673.63	1250.00	NMeFOSAA	N/A	1.134	✓
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	419494.48	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	419494.48	1250.00	NEtFOSAA	N/A	0.058	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	327314.83	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	327314.83	1250.00	HFPO-DA	N/A	0.024	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2144514.60	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2144514.60	1222.50	ADONA	N/A	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2144514.60	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2144514.60	1222.50	9CI-PF3ONS	N/A	0.008	✓
11CI-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2144514.60	1222.50	11CI-PF3OUdS			
11CI-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2144514.60	1222.50	11CI-PF3OUdS	N/A	0.006	✓

Sample Name	G2210-FS(0)	Injection Vial	12
Sample ID	CBD-AOA-MW14-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 8:51:35 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	1.35	178876.44	187.79	55.7	True	13C3-PFBS	269108.94	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.35	41503.63	98.28	122.9	False	13C3-PFBS	269108.94	1162.50	PFBS	0.232	0.331	✓
PFHxA_1	313.0 / 269.0	1.60	643563.88	1090.92	85.5	False	13C5-PFHxA	594899.07	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.60	34032.28	995.24	94.4	False	13C5-PFHxA	594899.07	1250.00	PFHxA	0.053	0.057	✓
PFHpA_1	363.0 / 319.0	1.92	280935.18	492.77	106.0	False	13C4-PFHpA	740314.97	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.93	10720.71	643.92	80.4	False	13C4-PFHpA	740314.97	1250.00	PFHpA	0.038	0.031	✓
PFHxS_1	399.0 / 80.0	1.93	1544647.16	2299.71	243.9	False	13C3-PFHxS	228089.65	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.93	471728.25	1935.96	542.4	False	13C3-PFHxS	228089.65	1182.50	PFHxS	0.305	0.355	✓
PFOA_1	413.0 / 369.0	2.29	1009861.32	1497.76	181.4	False	13C8-PFOA	967434.41	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.28	99687.56	1387.24	243.0	False	13C8-PFOA	967434.41	1222.50	PFOA	0.099	0.107	✓
PFNA_1	463.0 / 419.0	2.65	327164.52	330.52	234.3	False	13C9-PFNA	1240965.81	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.65	90984.81	321.38	279.7	False	13C9-PFNA	1240965.81	1250.00	PFNA	0.278	0.309	✓
PFOS_1	499.0 / 80.0	2.64	882293.21	1062.66	206.7	False	13C8-PFOS	243829.70	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.64	165465.28	939.86	370.4	False	13C8-PFOS	243829.70	1195.00	PFOS	0.188	0.212	✓
PFDA_1	513.0 / 469.0	3.00	20654.71	< 0	57.7	False	13C6-PFDA	1261228.58	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.01	1629.98	1.18	35.0	False	13C6-PFDA	1261228.58	1250.00	PFDA	0.079	0.062	✓
PFUnA_1	563.0 / 519.0	3.33	71259.39	16.71	166.3	False	13C7-PFUnA	1262216.23	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.32	6026.17	109.47	117.9	False	13C7-PFUnA	1262216.23	1250.00	PFUnA	0.085	0.064	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1351378.25	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1351378.25	1250.00	PFDoA	N/A	0.116	✓
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1233168.98	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1233168.98	1250.00	PFTTrDA	N/A	0.071	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1233168.98	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1233168.98	1250.00	PFTeDA	N/A	0.057	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	191499.29	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	191499.29	1250.00	NMeFOSAA	N/A	1.134	✓
NEIFOSAA_1	584.0 / 419.0	3.31	1517.84	< 0	103.4	True	d5-EiFOSAA	260631.80	1250.00	NEIFOSAA			
NEIFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	260631.80	1250.00	NEIFOSAA	N/A	0.058	
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	308418.83	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	308418.83	1250.00	HFPO-DA	N/A	0.024	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	967434.41	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	967434.41	1222.50	ADONA	N/A	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	967434.41	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	967434.41	1222.50	9CI-PF3ONS	N/A	0.008	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	967434.41	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	967434.41	1222.50	11Cl-PF3OUdS	N/A	0.006	✓

Sample Name	G2211-FS(0)	Injection Vial	13
Sample ID	CBD-AOA-MW13-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 9:02:03 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	323789.44	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	323789.44	1162.50	PFBS	N/A	0.331	✓
PFHxA_1	313.0 / 269.0	1.60	3072038.68	4156.36	565.8	False	13C5-PFHxA	807207.91	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.60	147033.24	3217.13	232.6	False	13C5-PFHxA	807207.91	1250.00	PFHxA	0.048	0.057	✓
PFHpA_1	363.0 / 319.0	1.93	1255371.47	1754.34	317.5	False	13C4-PFHpA	969222.78	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.93	42258.37	1793.24	406.3	False	13C4-PFHpA	969222.78	1250.00	PFHpA	0.034	0.031	✓
PFHxS_1	399.0 / 80.0	1.94	8257773.39	10717.41	714.4	False	13C3-PFHxS	264025.88	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.94	2727395.74	9638.27	1372.1	False	13C3-PFHxS	264025.88	1182.50	PFHxS	0.330	0.355	✓
PFOA_1	413.0 / 369.0	2.29	2176513.23	2505.61	346.2	False	13C8-PFOA	1240165.58	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.29	240570.22	2592.13	641.8	False	13C8-PFOA	1240165.58	1222.50	PFOA	0.111	0.107	✓
PFNA_1	463.0 / 419.0	2.66	846734.58	772.58	365.2	False	13C9-PFNA	1469324.19	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.66	280724.19	832.83	568.1	False	13C9-PFNA	1469324.19	1250.00	PFNA	0.332	0.309	✓
PFOS_1	499.0 / 80.0	2.65	3772695.80	4476.51	450.1	False	13C8-PFOS	248914.00	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.65	758657.83	4192.10	1301.9	False	13C8-PFOS	248914.00	1195.00	PFOS	0.201	0.212	✓
PFDA_1	513.0 / 469.0	3.01	286972.06	224.54	287.7	False	13C6-PFDA	1496593.12	1250.00	PFDA			
PFDA_2	513.0 / 219.0	3.01	22889.87	322.67	310.3	False	13C6-PFDA	1496593.12	1250.00	PFDA	0.080	0.062	✓
PFUnA_1	563.0 / 519.0	3.32	392117.30	271.40	508.2	False	13C7-PFUnA	1428187.94	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.34	17086.21	228.78	318.7	False	13C7-PFUnA	1428187.94	1250.00	PFUnA	0.044	0.064	✓
PFDoA_1	613.0 / 569.0	3.62	21307.39	< 0	94.1	False	13C2-PFDoA	1440896.70	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.63	1960.75	17.79	49.0	False	13C2-PFDoA	1440896.70	1250.00	PFDoA	0.092	0.116	✓
PFTTrDA_1	663.0 / 619.0	3.87	64727.03	33.69	464.0	False	13C2-PFTeDA	1214944.32	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	3.81	4730.10	87.72	96.2	True	13C2-PFTeDA	1214944.32	1250.00	PFTTrDA	0.073	0.071	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1214944.32	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1214944.32	1250.00	PFTeDA	N/A	0.057	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	244354.09	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	244354.09	1250.00	NMeFOSAA	N/A	1.134	✓
NEiFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	318839.67	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	318839.67	1250.00	NEiFOSAA	N/A	0.058	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	384978.75	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	384978.75	1250.00	HFPO-DA	N/A	0.024	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1240165.58	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1240165.58	1222.50	ADONA	N/A	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1240165.58	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1240165.58	1222.50	9CI-PF3ONS	N/A	0.008	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1240165.58	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1240165.58	1222.50	11Cl-PF3OUdS	N/A	0.006	✓

Sample Name	G2212-FS(0)	Injection Vial	14
Sample ID	CBD-AOA-IW01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 9:12:30 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	1.36	11270012.22	24242.59	223.2	True	13C3-PFBS	209788.68	1162.50	PFBS			
PFBS_2	298.9 / 99.0	1.36	3511148.82	22850.67	2252.2	False	13C3-PFBS	209788.68	1162.50	PFBS	0.312	0.331	✓
PFHxA_1	313.0 / 269.0	1.61	72024690.09	261624.87	1137.5	False	13C5-PFHxA	309659.97	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.61	3933781.46	225887.25	1080.0	False	13C5-PFHxA	309659.97	1250.00	PFHxA	0.055	0.057	✓
PFHpA_1	363.0 / 319.0	1.93	18540089.25	137855.28	630.9	False	13C4-PFHpA	185236.75	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	1.92	793878.20	169230.31	1031.9	True	13C4-PFHpA	185236.75	1250.00	PFHpA	0.043	0.031	✓
PFHxS_1	399.0 / 80.0	1.93	143782474.21	917255.50	2210.9	False	13C3-PFHxS	53846.19	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.94	46650134.16	807691.83	3781.1	False	13C3-PFHxS	53846.19	1182.50	PFHxS	0.324	0.355	✓
PFOA_1	413.0 / 369.0	2.28	77187803.43	319171.89	1161.6	False	13C8-PFOA	342750.71	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.28	8842440.36	341838.17	2283.4	False	13C8-PFOA	342750.71	1222.50	PFOA	0.115	0.107	✓
PFNA_1	463.0 / 419.0	2.63	67235283.77	887409.54	1666.4	False	13C9-PFNA	107123.10	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.63	21404134.70	867970.13	2090.3	False	13C9-PFNA	107123.10	1250.00	PFNA	0.318	0.309	✓
PFOS_1	499.0 / 80.0	2.57	551783267.42	7098953.94	3108.4	False	13C8-PFOS	22997.60	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.61	100251606.75	5983837.66	9027.4	False	13C8-PFOS	22997.60	1195.00	PFOS	0.182	0.212	✓
PFDA_1	513.0 / 469.0	2.93	6218967.82	33228.55	936.7	False	13C6-PFDA	275200.13	1250.00	PFDA			
PFDA_2	513.0 / 219.0	2.92	542324.18	45216.28	678.3	False	13C6-PFDA	275200.13	1250.00	PFDA	0.087	0.062	✓
PFUnA_1	563.0 / 519.0	3.23	12176629.49	59572.28	1899.1	False	13C7-PFUnA	238498.36	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	3.23	914263.16	63646.29	1257.4	False	13C7-PFUnA	238498.36	1250.00	PFUnA	0.075	0.064	✓
PFDoA_1	613.0 / 569.0	3.55	301514.32	1118.49	699.6	False	13C2-PFDoA	313489.87	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	3.55	36907.20	1168.71	644.7	False	13C2-PFDoA	313489.87	1250.00	PFDoA	0.122	0.116	✓
PFTeDA_1	663.0 / 619.0	3.82	1302804.97	4248.72	1774.2	False	13C2-PFTeDA	400846.39	1250.00	PFTeDA			
PFTeDA_2	663.0 / 169.0	3.81	117984.42	5142.62	1012.1	True	13C2-PFTeDA	400846.39	1250.00	PFTeDA	0.091	0.071	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	400846.39	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	400846.39	1250.00	PFTeDA	N/A	0.057	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	13761.64	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	13761.64	1250.00	NMeFOSAA	N/A	1.134	✓
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	34143.11	1250.00	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EtFOSAA	34143.11	1250.00	NEtFOSAA	N/A	0.058	✓
HFPO-DA_1	285.0 / 169.0	1.70	18929.22	< 0	87.8	False	13C3-HFPO-DA	277568.45	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	277568.45	1250.00	HFPO-DA	N/A	0.024	
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	342750.71	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	342750.71	1222.50	ADONA	N/A	0.014	✓
9Cl-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	342750.71	1222.50	9Cl-PF3ONS			
9Cl-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	342750.71	1222.50	9Cl-PF3ONS	N/A	0.008	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	342750.71	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	342750.71	1222.50	11Cl-PF3OUdS	N/A	0.006	✓

Sample Name	G2212-FS-D(5)	Injection Vial	16
Sample ID	CBD-AOA-IW01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 9:33:26 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	413997.05	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	413997.05	1162.50	PFBS	N/A	0.331	✓
PFHxA_1	313.0 / 269.0	1.61	11563238.16	8812.49	981.3	False	13C5-PFHxA	1455740.00	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	1.61	712407.75	8680.62	1021.5	False	13C5-PFHxA	1455740.00	1250.00	PFHxA	0.062	0.057	✓
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1437390.11	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1437390.11	1250.00	PFHpA	N/A	0.031	✓
PFHxS_1	399.0 / 80.0	1.94	26481817.44	26897.82	1861.0	False	13C3-PFHxS	337872.35	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.94	9180570.12	25339.33	3587.0	False	13C3-PFHxS	337872.35	1182.50	PFHxS	0.347	0.355	✓
PFOA_1	413.0 / 369.0	2.28	13404163.18	10454.48	932.3	False	13C8-PFOA	1820254.62	1222.50	PFOA			
PFOA_2	413.0 / 169.0	2.28	1666939.00	12155.48	1118.5	True	13C8-PFOA	1820254.62	1222.50	PFOA	0.124	0.107	✓
PFNA_1	463.0 / 419.0	2.65	21988921.74	34076.92	2278.2	False	13C9-PFNA	911247.31	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.65	7099828.15	33848.34	2283.5	False	13C9-PFNA	911247.31	1250.00	PFNA	0.323	0.309	✓
PFOS_1	499.0 / 80.0	2.62	122677514.32	203362.20	3710.5	False	13C8-PFOS	178478.77	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.63	24942752.07	191843.48	4692.6	False	13C8-PFOS	178478.77	1195.00	PFOS	0.203	0.212	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1428986.73	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1428986.73	1250.00	PFDA	N/A	0.062	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1303192.91	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1303192.91	1250.00	PFUnA	N/A	0.064	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1596026.52	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1596026.52	1250.00	PFDoA	N/A	0.116	✓
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1392555.64	1250.00	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1392555.64	1250.00	PFTTrDA	N/A	0.071	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1392555.64	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1392555.64	1250.00	PFTeDA	N/A	0.057	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	169623.69	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	169623.69	1250.00	NMeFOSAA	N/A	1.134	✓
NEiFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	284573.13	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	284573.13	1250.00	NEiFOSAA	N/A	0.058	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	302129.50	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	302129.50	1250.00	HFPO-DA	N/A	0.024	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1820254.62	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1820254.62	1222.50	ADONA	N/A	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1820254.62	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1820254.62	1222.50	9CI-PF3ONS	N/A	0.008	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1820254.62	1222.50	11Cl-pf3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1820254.62	1222.50	11Cl-pf3OUdS	N/A	0.006	✓

Sample Name	G2212-FS-D(7)	Injection Vial	17
Sample ID	CBD-AOA-IW01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 9:43:54 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	433416.35	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	433416.35	1162.50	PFBS	N/A	0.331	✓
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	1928979.70	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	1928979.70	1250.00	PFHxA	N/A	0.057	✓
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1849399.19	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1849399.19	1250.00	PFHpA	N/A	0.031	✓
PFHxS_1	399.0 / 80.0	1.95	5817376.34	5093.74	1430.5	False	13C3-PFHxS	390279.88	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	1.95	2054081.84	4914.51	2330.7	False	13C3-PFHxS	390279.88	1182.50	PFHxS	0.353	0.355	✓
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1980333.54	1222.50	PFOA			
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1980333.54	1222.50	PFOA	N/A	0.107	✓
PFNA_1	463.0 / 419.0	2.68	7663287.87	6958.95	1628.4	False	13C9-PFNA	1547653.36	1250.00	PFNA			
PFNA_2	463.0 / 219.0	2.68	2523587.96	7086.15	2107.8	False	13C9-PFNA	1547653.36	1250.00	PFNA	0.329	0.309	✓
PFOS_1	499.0 / 80.0	2.67	34520827.39	36251.94	2939.3	False	13C8-PFOS	281684.85	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.67	7540976.06	36756.40	4262.6	False	13C8-PFOS	281684.85	1195.00	PFOS	0.218	0.212	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1763918.77	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1763918.77	1250.00	PFDA	N/A	0.062	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1650737.13	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1650737.13	1250.00	PFUnA	N/A	0.064	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1944899.57	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1944899.57	1250.00	PFDoA	N/A	0.116	✓
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1649875.42	1250.00	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1649875.42	1250.00	PFTrDA	N/A	0.071	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1649875.42	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1649875.42	1250.00	PFTeDA	N/A	0.057	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	277779.65	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	277779.65	1250.00	NMeFOSAA	N/A	1.134	✓
NEiFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	327611.13	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	327611.13	1250.00	NEiFOSAA	N/A	0.058	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	344345.83	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	344345.83	1250.00	HFPO-DA	N/A	0.024	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1980333.54	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1980333.54	1222.50	ADONA	N/A	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1980333.54	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1980333.54	1222.50	9CI-PF3ONS	N/A	0.008	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1980333.54	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	1980333.54	1222.50	11Cl-PF3OUdS	N/A	0.006	✓

Sample Name	G2212-FS-D(9)	Injection Vial	18
Sample ID	CBD-AOA-IW01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 9:54:22 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375
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	436824.99	1162.50	PFBS			
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFBS	436824.99	1162.50	PFBS	N/A	0.331	✓
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	1904988.69	1250.00	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	True	13C5-PFHxA	1904988.69	1250.00	PFHxA	N/A	0.057	✓
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1777322.88	1250.00	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	True	13C4-PFHpA	1777322.88	1250.00	PFHpA	N/A	0.031	✓
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	392901.16	1182.50	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	True	13C3-PFHxS	392901.16	1182.50	PFHxS	N/A	0.355	✓
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2153740.47	1222.50	PFOA			
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2153740.47	1222.50	PFOA	N/A	0.107	✓
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1874113.09	1250.00	PFNA			
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	True	13C9-PFNA	1874113.09	1250.00	PFNA	N/A	0.309	✓
PFOS_1	499.0 / 80.0	2.64	14885668.24	13938.52	1976.7	False	13C8-PFOS	315800.39	1195.00	PFOS			
PFOS_2	499.0 / 99.0	2.64	3436389.63	14945.23	2966.8	False	13C8-PFOS	315800.39	1195.00	PFOS	0.231	0.212	✓
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1930561.92	1250.00	PFDA			
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	True	13C6-PFDA	1930561.92	1250.00	PFDA	N/A	0.062	✓
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1669352.79	1250.00	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	True	13C7-PFUnA	1669352.79	1250.00	PFUnA	N/A	0.064	✓
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1905845.08	1250.00	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	True	13C2-PFDoA	1905845.08	1250.00	PFDoA	N/A	0.116	✓
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1468736.23	1250.00	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1468736.23	1250.00	PFTrDA	N/A	0.071	✓
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1468736.23	1250.00	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	True	13C2-PFTeDA	1468736.23	1250.00	PFTeDA	N/A	0.057	✓
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	328442.71	1250.00	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	True	d3-MeFOSAA	328442.71	1250.00	NMeFOSAA	N/A	1.134	✓
NEiFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	324258.73	1250.00	NEiFOSAA			
NEiFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	True	d5-EiFOSAA	324258.73	1250.00	NEiFOSAA	N/A	0.058	✓
HFPO-DA_1	285.0 / 169.0	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	344195.30	1250.00	HFPO-DA			
HFPO-DA_2	285.0 / 118.8	N/A	N/A	N/A	N/A	True	13C3-HFPO-DA	344195.30	1250.00	HFPO-DA	N/A	0.024	✓
ADONA_1	377.0 / 251.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2153740.47	1222.50	ADONA			
ADONA_2	377.0 / 85.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2153740.47	1222.50	ADONA	N/A	0.014	✓
9CI-PF3ONS_1	531.0 / 351.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2153740.47	1222.50	9CI-PF3ONS			
9CI-PF3ONS_2	531.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2153740.47	1222.50	9CI-PF3ONS	N/A	0.008	✓
11Cl-pf3OUdS_1	631.0 / 451.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2153740.47	1222.50	11Cl-PF3OUdS			
11Cl-pf3OUdS_2	631.0 / 83.0	N/A	N/A	N/A	N/A	True	13C8-PFOA	2153740.47	1222.50	11Cl-PF3OUdS	N/A	0.006	✓



PFAS Sample Quant Report

Created with Analyst Reporter
Printed: 20/11/2020 10:34:16 AM

Sample Name	LE58 IB	Injection Vial	18
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 9:06:58 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.67	1447499.44	1217.90	7837.5	False	13C2-PFDA	1156951.01	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.19	232537.57	1274.33	1107.0	False	13C4-PFOS	226762.03	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.36	228794.01	1315.58	1531.5	False	13C4-PFOS	226762.03	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.60	1601950.63	1489.11	10141.2	False	13C2-PFOA	745155.12	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.94	1438087.99	1359.25	322655.0	False	13C2-PFOA	745155.12	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.31	1800471.65	1380.23	7354.4	False	13C2-PFOA	745155.12	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.69	1600129.86	1383.84	4111.5	False	13C4-PFOS	226762.03	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.04	1513956.81	1266.47	64127.7	False	13C2-PFDA	1156951.01	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.37	1399512.71	1286.36	4845.6	False	13C2-PFDA	1156951.01	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.17	1265202.61	1232.71	4413.7	False	13C2-PFDA	1156951.01	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.34	352368.53	1197.41	15369.3	False	13C4-PFOS	226762.03	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.95	309410.86	1339.05	5220.2	False	13C4-PFOS	226762.03	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.68	248070.29	1249.30	2412.1	False	13C4-PFOS	226762.03	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.70	363268.39	1357.12	19612.0	False	13C2-PFOA	745155.12	1250.00		N/A	N/A	✓

Sample Name	LE58 IB	Injection Vial	4
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 7:15:18 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.66	1605368.93	1263.12	8810.2	False	13C2-PFDA	1237187.67	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.18	285814.65	1270.82	1425.2	False	13C4-PFOS	279485.48	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.35	279186.80	1302.51	1532.6	False	13C4-PFOS	279485.48	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.60	1662189.50	1449.49	11362.2	False	13C2-PFOA	794310.18	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.93	1610217.77	1427.76	8037.4	False	13C2-PFOA	794310.18	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.30	1817049.58	1306.74	913.4	False	13C2-PFOA	794310.18	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.67	1616357.82	1134.17	6708.5	False	13C4-PFOS	279485.48	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.03	1607748.07	1257.71	4457.2	False	13C2-PFDA	1237187.67	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.36	1434555.78	1233.05	5114.9	False	13C2-PFDA	1237187.67	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.15	1316298.93	1199.32	3884.3	False	13C2-PFDA	1237187.67	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.34	392890.21	1083.25	5381.1	False	13C4-PFOS	279485.48	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.94	342377.48	1202.20	4411.7	False	13C4-PFOS	279485.48	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.67	290300.49	1186.18	1509.3	False	13C4-PFOS	279485.48	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.70	348232.45	1220.44	13201.0	False	13C2-PFOA	794310.18	1250.00		N/A	N/A	✓

Sample Name	DB124PB-FS(0)	Injection Vial	17
Sample ID	Procedural Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 9:31:12 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.65	1512248.72	846.05	8602.7	False	13C2-PFDA	1739935.48	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.18	221702.90	780.97	1513.2	False	13C4-PFOS	352772.50	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.34	269082.62	994.57	1875.1	False	13C4-PFOS	352772.50	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.60	1648855.90	944.57	8677.8	False	13C2-PFOA	1209127.36	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.93	1633276.47	951.37	6060.1	False	13C2-PFOA	1209127.36	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.30	1972150.31	931.71	7764.9	False	13C2-PFOA	1209127.36	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.67	1725837.96	959.41	829.1	False	13C4-PFOS	352772.50	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.03	1642153.47	913.44	5482.0	False	13C2-PFDA	1739935.48	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.35	1453381.15	888.27	10083.2	False	13C2-PFDA	1739935.48	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.14	1074931.24	696.41	4050.1	False	13C2-PFDA	1739935.48	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.35	464023.37	1013.59	4913.4	False	13C4-PFOS	352772.50	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.94	342239.16	952.06	2218.3	False	13C4-PFOS	352772.50	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.66	283099.58	916.44	1648.1	False	13C4-PFOS	352772.50	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.70	364354.67	838.86	5780.4	False	13C2-PFOA	1209127.36	1250.00		N/A	N/A	✓

Sample Name	DB125LCS-FS(0)	Injection Vial	18
Sample ID	Laboratory Control Sample	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 9:41:40 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.64	1650098.94	1041.04	5154.7	False	13C2-PFDA	1542943.41	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.17	300776.44	999.52	1716.0	False	13C4-PFOS	373950.61	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.33	243259.43	848.20	1273.9	False	13C4-PFOS	373950.61	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.60	1659573.17	906.07	5630.0	False	13C2-PFOA	1268695.20	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.93	1532945.51	851.00	5271.3	False	13C2-PFOA	1268695.20	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.29	2006770.84	903.55	13611.0	False	13C2-PFOA	1268695.20	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.67	1797316.82	942.56	4097.5	False	13C4-PFOS	373950.61	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.02	1576681.66	988.99	4634.9	False	13C2-PFDA	1542943.41	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.34	1404577.89	968.05	3097.4	False	13C2-PFDA	1542943.41	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.12	1260448.37	920.85	4503.6	False	13C2-PFDA	1542943.41	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.35	505744.24	1042.16	4158.5	False	13C4-PFOS	373950.61	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.94	366314.10	961.33	2201.6	False	13C4-PFOS	373950.61	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.66	339702.01	1037.40	1497.1	False	13C4-PFOS	373950.61	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.70	422432.70	926.91	4146.4	False	13C2-PFOA	1268695.20	1250.00		N/A	N/A	✓

Sample Name	G2209-FS(0)	Injection Vial	27
Sample ID	CBD-AOA-EB01-102820-GW	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 11:15:54 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	429821.52	409.45	2722.5	False	13C2-PFDA	1021867.04	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.12	32848.76	142.97	367.6	False	13C4-PFOS	285511.77	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.28	73826.74	337.16	569.0	False	13C4-PFOS	285511.77	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.59	972254.99	684.08	2422.9	False	13C2-PFOA	984463.79	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.92	1095766.04	783.93	2811.3	False	13C2-PFOA	984463.79	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.29	1295254.89	751.57	3149.3	False	13C2-PFOA	984463.79	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.65	1276061.98	876.49	3257.9	False	13C4-PFOS	285511.77	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.99	949040.98	898.85	3372.7	False	13C2-PFDA	1021867.04	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.29	366504.53	381.40	2445.3	False	13C2-PFDA	1021867.04	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.12	341641.93	376.87	2463.7	False	13C2-PFDA	1021867.04	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.34	378512.83	1021.58	2537.5	False	13C4-PFOS	285511.77	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.93	285127.14	980.04	1159.5	False	13C4-PFOS	285511.77	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.65	250825.18	1003.25	576.0	False	13C4-PFOS	285511.77	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.69	401582.12	1135.56	989.2	False	13C2-PFOA	984463.79	1250.00		N/A	N/A	✓

Sample Name	LE58 IB	Injection Vial	3
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 4:39:00 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	1779486.34	1273.85	7248.6	False	13C2-PFDA	1359823.34	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.15	278383.30	1254.84	1537.9	False	13C4-PFOS	275685.30	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.32	267506.52	1265.22	1184.6	False	13C4-PFOS	275685.30	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.60	1797637.93	1323.44	8270.3	False	13C2-PFOA	940852.94	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.93	1608181.88	1203.86	336665.1	False	13C2-PFOA	940852.94	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.29	2009094.54	1219.81	5370.1	False	13C2-PFOA	940852.94	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.66	1800999.35	1281.15	691.1	False	13C4-PFOS	275685.30	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.01	1756532.74	1250.18	3914.0	False	13C2-PFDA	1359823.34	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.33	1579594.57	1235.27	4677.7	False	13C2-PFDA	1359823.34	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.08	1429642.33	1185.12	4923.4	False	13C2-PFDA	1359823.34	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.35	382585.85	1069.38	75976.6	False	13C4-PFOS	275685.30	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.94	317365.12	1129.73	3959.2	False	13C4-PFOS	275685.30	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.65	304761.51	1262.43	2204.5	False	13C4-PFOS	275685.30	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.70	331994.73	982.30	7653.7	False	13C2-PFOA	940852.94	1250.00		N/A	N/A	✓



Sample Name	G2203-FS(0)	Injection Vial	3
Sample ID	CBD-AOA-MW06-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 7:17:24 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	890276.17	747.25	4622.7	False	13C2-PFDA	1159753.22	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.16	162778.86	898.10	1136.4	False	13C4-PFOS	225233.29	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.31	192126.59	1112.24	1362.1	False	13C4-PFOS	225233.29	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.62	812348.40	634.47	1556.6	False	13C2-PFOA	886857.26	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.96	1051046.88	834.70	1826.7	False	13C2-PFOA	886857.26	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.31	1321659.10	851.29	2265.7	False	13C2-PFOA	886857.26	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.67	1054543.25	918.19	1604.4	False	13C4-PFOS	225233.29	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.02	1148350.61	958.31	4262.6	False	13C2-PFDA	1159753.22	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.32	911013.92	835.33	4801.2	False	13C2-PFDA	1159753.22	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.01	293036.41	284.82	5462.9	False	13C2-PFDA	1159753.22	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.36	291700.29	997.98	2065.2	False	13C4-PFOS	225233.29	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.96	249702.71	1087.98	814.1	False	13C4-PFOS	225233.29	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.67	195482.55	991.14	589.6	False	13C4-PFOS	225233.29	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.72	307071.20	963.88	1472.2	False	13C2-PFOA	886857.26	1250.00		N/A	N/A	✓



PFAS Sample Quant Report

Created with Analyst Reporter
Printed: 20/11/2020 10:34:16 AM

Sample Name	G2204-FS(0)	Injection Vial	4
Sample ID	CBD-AOA-EB01-102720-GW	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 7:27:53 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.66	1787266.72	1144.61	5512.0	False	13C2-PFDA	1519984.60	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.19	266858.61	1086.36	1712.6	False	13C4-PFOS	305256.86	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.36	304672.51	1301.40	2168.0	False	13C4-PFOS	305256.86	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.61	1587787.81	888.74	4611.5	False	13C2-PFOA	1237488.49	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.95	1746251.47	993.86	8611.0	False	13C2-PFOA	1237488.49	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.32	1900489.41	877.28	30448.4	False	13C2-PFOA	1237488.49	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.69	1800270.83	1156.57	5311.6	False	13C4-PFOS	305256.86	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.05	1784215.61	1136.07	471512.1	False	13C2-PFDA	1519984.60	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.37	1645431.27	1151.17	4599.8	False	13C2-PFDA	1519984.60	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.15	1256483.31	931.82	5902.2	False	13C2-PFDA	1519984.60	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.35	521141.77	1315.55	3988.7	False	13C4-PFOS	305256.86	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.96	352239.46	1132.41	1530.7	False	13C4-PFOS	305256.86	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.69	286991.61	1073.66	780.6	False	13C4-PFOS	305256.86	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.71	462669.77	1040.80	1548.6	False	13C2-PFOA	1237488.49	1250.00		N/A	N/A	✓

Sample Name	G2205-FS(0)	Injection Vial	5
Sample ID	CBD-AOA-MW12-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 7:38:20 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.67	1357089.34	1050.09	4290.9	False	13C2-PFDA	1258019.57	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.19	208700.08	1177.39	1100.5	False	13C4-PFOS	220273.25	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.36	297897.08	1763.39	1617.1	False	13C4-PFOS	220273.25	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.61	605233.35	530.64	1084.6	False	13C2-PFOA	790041.64	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.94	613266.95	546.72	1212.1	False	13C2-PFOA	790041.64	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.31	973234.85	703.69	1568.2	False	13C2-PFOA	790041.64	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.69	1032456.03	919.20	2262.0	False	13C4-PFOS	220273.25	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.05	1273139.60	979.46	3444.9	False	13C2-PFDA	1258019.57	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.37	1239666.78	1047.90	3329.1	False	13C2-PFDA	1258019.57	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.16	1244003.67	1114.68	3907.4	False	13C2-PFDA	1258019.57	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.35	253378.33	886.39	2328.0	False	13C4-PFOS	220273.25	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.96	212546.60	946.94	860.4	False	13C4-PFOS	220273.25	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.69	211225.01	1095.08	614.2	False	13C4-PFOS	220273.25	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.71	316372.30	1114.77	1425.7	False	13C2-PFOA	790041.64	1250.00		N/A	N/A	✓

Sample Name	G2206-FS(0)	Injection Vial	6
Sample ID	CBD-AOA-MW11-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 7:48:47 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.64	1404565.74	1064.62	3837.2	False	13C2-PFDA	1284259.45	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.17	190479.69	1199.86	889.6	False	13C4-PFOS	197277.12	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.33	280686.73	1855.19	457.9	True	13C4-PFOS	197277.12	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.57	362869.00	341.86	1097.3	False	13C2-PFOA	735233.46	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.90	261928.32	250.91	891.5	False	13C2-PFOA	735233.46	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.28	859377.15	667.69	1002.1	False	13C2-PFOA	735233.46	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.67	1018870.96	1012.84	1543.5	False	13C4-PFOS	197277.12	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.02	1143072.84	861.43	2201.6	False	13C2-PFDA	1284259.45	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.35	1459701.98	1208.68	2606.7	False	13C2-PFDA	1284259.45	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.13	1311979.09	1151.57	4020.4	False	13C2-PFDA	1284259.45	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.28	182059.52	711.14	1178.8	False	13C4-PFOS	197277.12	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.90	149443.22	743.41	253.5	False	13C4-PFOS	197277.12	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.66	175353.79	1015.08	446.3	False	13C4-PFOS	197277.12	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.67	128775.53	487.58	896.9	False	13C2-PFOA	735233.46	1250.00		N/A	N/A	✓

Sample Name	G2207-FS(0)	Injection Vial	7
Sample ID	CBD-AOA-MW11P-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 7:59:14 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.66	1378192.91	1012.37	5364.7	False	13C2-PFDA	1325188.35	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.19	194302.98	1211.14	852.1	False	13C4-PFOS	199363.09	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.35	308056.53	2014.79	1184.0	False	13C4-PFOS	199363.09	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.57	379592.23	336.64	1094.9	False	13C2-PFOA	781044.29	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.90	321010.08	289.47	815.2	False	13C2-PFOA	781044.29	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.29	1027350.04	751.37	1087.0	False	13C2-PFOA	781044.29	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.68	1191024.87	1171.59	1462.4	False	13C4-PFOS	199363.09	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.04	1205942.72	880.74	1969.0	False	13C2-PFDA	1325188.35	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.37	1422832.85	1141.76	2534.5	False	13C2-PFDA	1325188.35	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.16	1356777.36	1154.11	3824.3	False	13C2-PFDA	1325188.35	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.28	165153.68	638.35	775.3	False	13C4-PFOS	199363.09	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.91	147090.39	724.05	223.7	False	13C4-PFOS	199363.09	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.67	163787.13	938.20	330.6	False	13C4-PFOS	199363.09	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.67	139206.56	496.16	1039.1	False	13C2-PFOA	781044.29	1250.00		N/A	N/A	✓

Sample Name	G2208-FS(0)	Injection Vial	8
Sample ID	CBD-AOA-FB01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 8:09:41 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.66	2067512.44	1185.02	7746.4	False	13C2-PFDA	1698351.02	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.19	316155.44	1175.81	1657.2	False	13C4-PFOS	334135.25	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.36	418862.19	1634.53	2254.1	False	13C4-PFOS	334135.25	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.60	1951744.48	1093.53	3151.3	False	13C2-PFOA	1236272.24	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.94	1781268.83	1014.79	5176.8	False	13C2-PFOA	1236272.24	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.31	2144514.60	990.90	6608.8	False	13C2-PFOA	1236272.24	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.69	2279799.84	1338.06	378849.2	False	13C4-PFOS	334135.25	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.04	1897606.43	1081.37	10210.0	False	13C2-PFDA	1698351.02	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.37	1961468.85	1228.16	5763.4	False	13C2-PFDA	1698351.02	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.15	1674328.83	1111.30	5009.9	False	13C2-PFDA	1698351.02	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.35	536241.55	1236.68	5059.7	False	13C4-PFOS	334135.25	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.95	387115.81	1136.97	2105.4	False	13C4-PFOS	334135.25	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.68	326442.01	1115.69	1510.3	False	13C4-PFOS	334135.25	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.70	327314.83	737.03	2407.2	False	13C2-PFOA	1236272.24	1250.00		N/A	N/A	✓

Sample Name	G2210-FS(0)	Injection Vial	12
Sample ID	CBD-AOA-MW14-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 8:51:35 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	1351378.25	980.15	5439.4	False	13C2-PFDA	1342119.81	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.15	193109.04	1003.69	1095.7	False	13C4-PFOS	239090.52	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.31	260526.10	1420.80	1680.7	False	13C4-PFOS	239090.52	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.59	594899.07	501.70	818.3	False	13C2-PFOA	821345.91	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.91	740314.97	634.82	1207.4	False	13C2-PFOA	821345.91	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.28	967434.41	672.84	1768.5	False	13C2-PFOA	821345.91	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.64	1240965.81	1017.88	2455.3	False	13C4-PFOS	239090.52	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.00	1261228.58	909.49	3408.0	False	13C2-PFDA	1342119.81	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.33	1262216.23	1000.10	5612.1	False	13C2-PFDA	1342119.81	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.11	1233168.98	1035.73	3280.5	False	13C2-PFDA	1342119.81	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.34	269108.94	867.33	1535.9	False	13C4-PFOS	239090.52	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.92	228089.65	936.21	685.3	False	13C4-PFOS	239090.52	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.64	243829.70	1164.62	468.1	False	13C4-PFOS	239090.52	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.69	308418.83	1045.32	928.4	False	13C2-PFOA	821345.91	1250.00		N/A	N/A	✓

Sample Name	G2211-FS(0)	Injection Vial	13
Sample ID	CBD-AOA-MW13-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 9:02:03 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	1440896.70	945.13	5841.8	False	13C2-PFDA	1484042.57	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.15	245926.35	1132.28	976.7	False	13C4-PFOS	269905.25	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.32	318600.56	1539.14	1901.5	False	13C4-PFOS	269905.25	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.59	807207.91	633.32	1698.9	False	13C2-PFOA	882841.28	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.92	969222.78	773.22	1817.1	False	13C2-PFOA	882841.28	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.29	1240165.58	802.44	1501.3	False	13C2-PFOA	882841.28	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.65	1469324.19	1067.59	2236.3	False	13C4-PFOS	269905.25	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.01	1496593.12	976.01	5291.2	False	13C2-PFDA	1484042.57	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.33	1428187.94	1023.39	3636.0	False	13C2-PFDA	1484042.57	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.10	1214944.32	922.84	4279.4	False	13C2-PFDA	1484042.57	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.34	323789.44	924.42	1932.7	False	13C4-PFOS	269905.25	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.93	264025.88	959.99	1022.2	False	13C4-PFOS	269905.25	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.65	248914.00	1053.17	629.9	False	13C4-PFOS	269905.25	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.69	384978.75	1213.92	1447.0	False	13C2-PFOA	882841.28	1250.00		N/A	N/A	✓

Sample Name	G2212-FS(0)	Injection Vial	14
Sample ID	CBD-AOA-IW01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 9:12:30 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	313489.87	980.56	1546.2	False	13C2-PFDA	311211.83	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.09	13364.83	500.71	152.7	False	13C4-PFOS	33169.49	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.22	34272.69	1347.27	447.8	False	13C4-PFOS	33169.49	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.60	309659.97	537.55	786.3	False	13C2-PFOA	399012.31	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.92	185236.75	326.97	628.7	False	13C2-PFOA	399012.31	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.28	342750.71	490.69	692.6	False	13C2-PFOA	399012.31	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.62	107123.10	633.35	402.4	False	13C4-PFOS	33169.49	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.92	275200.13	855.83	1209.0	False	13C2-PFDA	311211.83	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.23	238498.36	814.95	1250.0	False	13C2-PFDA	311211.83	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.03	400846.39	1451.90	3106.8	False	13C2-PFDA	311211.83	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.35	209788.68	4873.72	1647.1	False	13C4-PFOS	33169.49	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.94	53846.19	1593.12	284.1	False	13C4-PFOS	33169.49	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.61	22997.60	791.78	87.9	False	13C4-PFOS	33169.49	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.69	277568.45	1936.51	1021.0	False	13C2-PFOA	399012.31	1250.00		N/A	N/A	✓



PFAS Sample Quant Report

Created with Analyst Reporter
Printed: 20/11/2020 10:34:16 AM

Sample Name	G2212-FS-D(5)	Injection Vial	16
Sample ID	CBD-AOA-IW01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 9:33:26 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	1596026.52	1286.59	3455.9	False	13C2-PFDA	1207549.98	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.11	168094.12	1224.34	1265.4	False	13C4-PFOS	170612.43	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.28	284532.85	2174.53	1569.7	False	13C4-PFOS	170612.43	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.60	1455740.00	946.83	3006.4	False	13C2-PFOA	1064966.83	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.92	1437390.11	950.61	3155.6	False	13C2-PFOA	1064966.83	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.28	1820254.62	976.36	4284.9	False	13C2-PFOA	1064966.83	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.64	911247.31	1047.43	3050.7	False	13C4-PFOS	170612.43	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.98	1428986.73	1145.30	4552.3	False	13C2-PFDA	1207549.98	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.29	1303192.91	1147.64	3816.8	False	13C2-PFDA	1207549.98	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.04	1392555.64	1299.94	3663.9	False	13C2-PFDA	1207549.98	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.35	413997.05	1869.84	5674.3	False	13C4-PFOS	170612.43	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.93	337872.35	1943.45	2082.1	False	13C4-PFOS	170612.43	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.63	178478.77	1194.64	567.0	False	13C4-PFOS	170612.43	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.70	302129.50	789.76	2467.2	False	13C2-PFOA	1064966.83	1250.00		N/A	N/A	✓

Sample Name	G2212-FS-D(7)	Injection Vial	17
Sample ID	CBD-AOA-IW01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 9:43:54 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.65	1944899.57	1346.80	6323.6	False	13C2-PFDA	1405728.15	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.17	281027.03	1299.65	1533.5	False	13C4-PFOS	268708.35	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.34	327347.28	1588.44	1420.6	False	13C4-PFOS	268708.35	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.60	1928979.70	1187.50	5584.1	False	13C2-PFOA	1125171.48	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.93	1849399.19	1157.64	8552.5	False	13C2-PFOA	1125171.48	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.30	1980333.54	1005.39	5849.7	False	13C2-PFOA	1125171.48	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.67	1547653.36	1129.52	6654.7	False	13C4-PFOS	268708.35	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.02	1763918.77	1214.44	5440.1	False	13C2-PFDA	1405728.15	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.35	1650737.13	1248.75	3367.4	False	13C2-PFDA	1405728.15	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.14	1649875.42	1323.02	4763.7	False	13C2-PFDA	1405728.15	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.34	433416.35	1242.92	5691.7	False	13C4-PFOS	268708.35	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.94	390279.88	1425.36	2011.8	False	13C4-PFOS	268708.35	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.67	281684.85	1197.14	1739.6	False	13C4-PFOS	268708.35	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.70	344345.83	851.95	3715.7	False	13C2-PFOA	1125171.48	1250.00		N/A	N/A	✓



Sample Name	G2212-FS-D(9)	Injection Vial	18
Sample ID	CBD-AOA-IW01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 9:54:22 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	1905845.08	1261.05	4966.2	False	13C2-PFDA	1471168.81	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.13	328110.87	1318.22	1482.6	False	13C4-PFOS	309310.16	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.29	324041.76	1366.00	1159.6	False	13C4-PFOS	309310.16	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.59	1904988.69	1126.11	4186.6	False	13C2-PFOA	1171748.14	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.91	1777322.88	1068.30	5132.0	False	13C2-PFOA	1171748.14	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.27	2153740.47	1049.96	1107835.3	False	13C2-PFOA	1171748.14	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.64	1874113.09	1188.23	6104.8	False	13C4-PFOS	309310.16	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.99	1930561.92	1270.04	33063.2	False	13C2-PFDA	1471168.81	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.31	1669352.79	1206.66	5800.5	False	13C2-PFDA	1471168.81	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.07	1468736.23	1125.38	4854.2	False	13C2-PFDA	1471168.81	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.34	436824.99	1088.26	10378.4	False	13C4-PFOS	309310.16	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.92	392901.16	1246.58	2219.1	False	13C4-PFOS	309310.16	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.63	315800.39	1165.95	1267.9	False	13C4-PFOS	309310.16	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.68	344195.30	817.72	3311.8	False	13C2-PFOA	1171748.14	1250.00		N/A	N/A	✓

Chromatograms



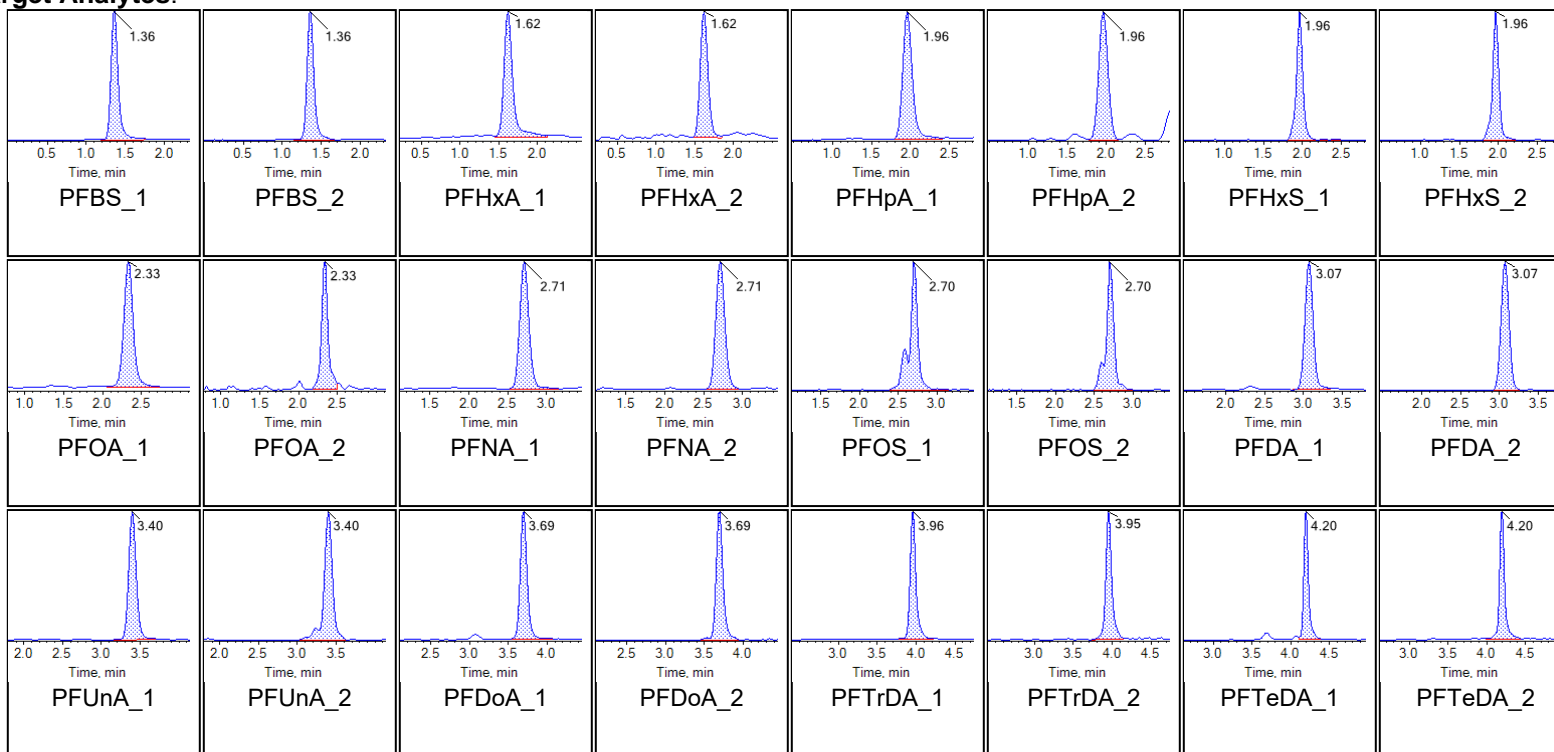
Chromatogram Report

Created with Analyst Reporter
Printed: 25/11/2020 3:13:18 PM

Sample Name	LE52	Injection Vial	12
Sample ID	L1	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

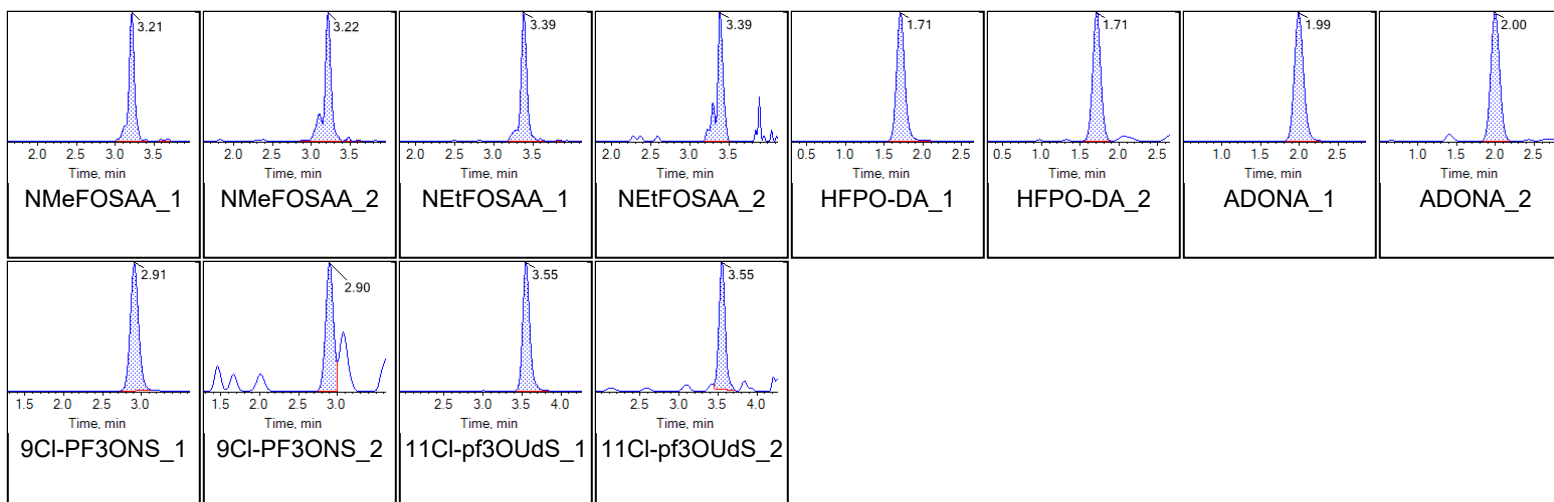
Chromatograms

Target Analytes:

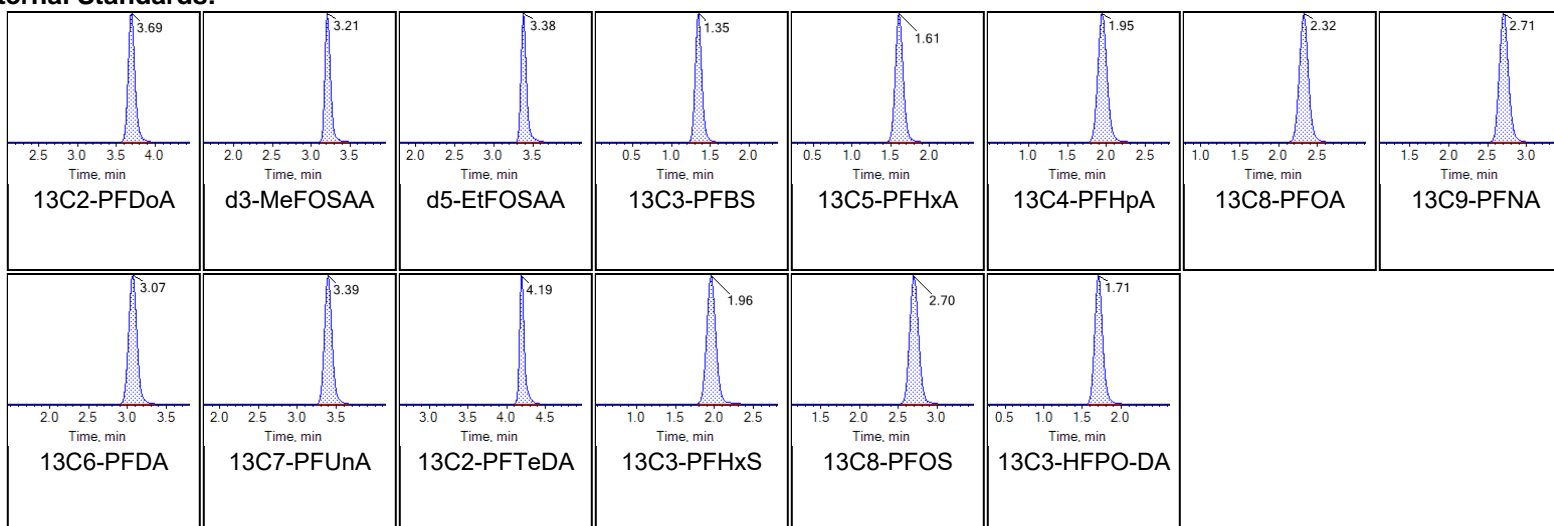




Chromatogram Report

Created with Analyst Reporter
Printed: 25/11/2020 3:13:18 PM

Internal Standards:





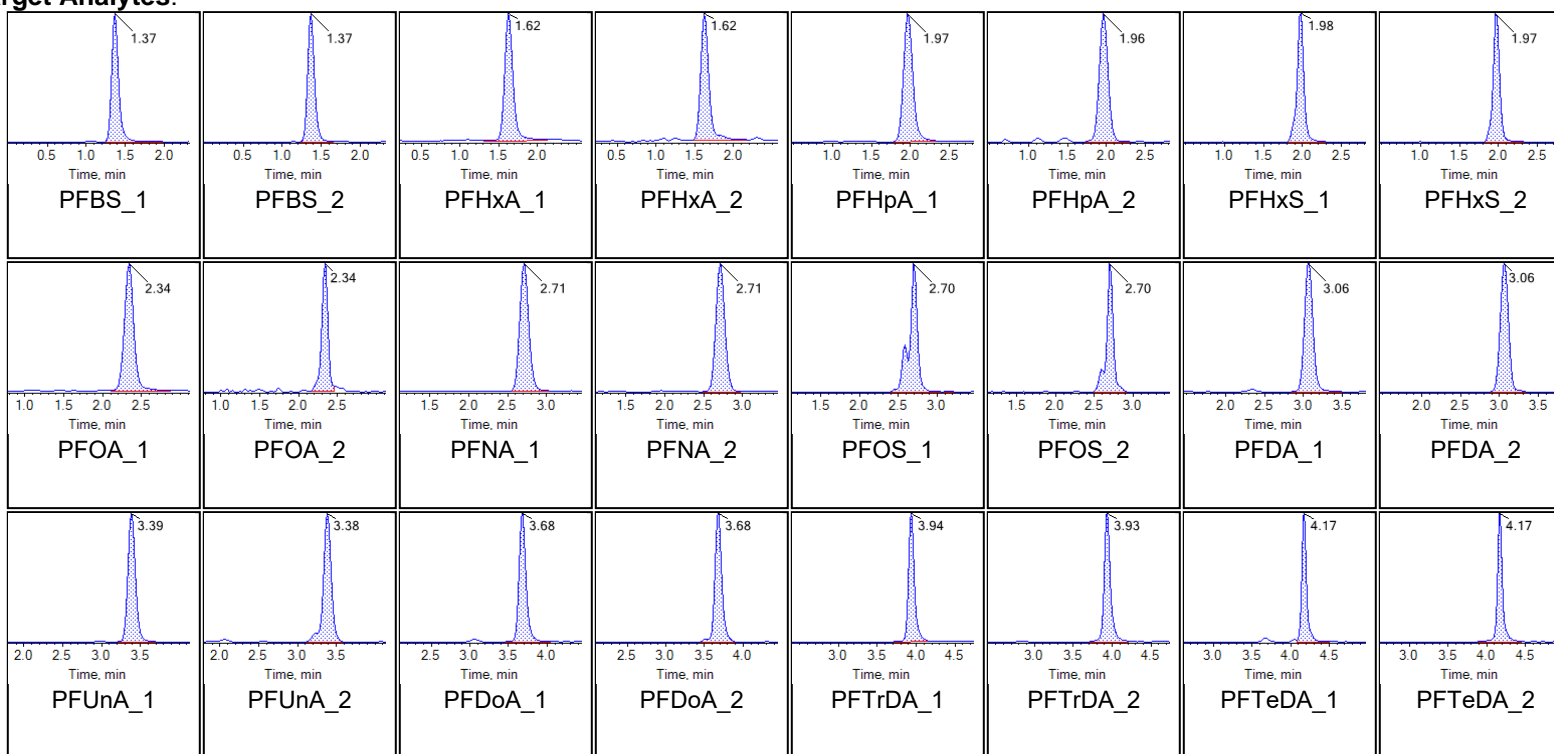
Chromatogram Report

Created with Analyst Reporter
Printed: 25/11/2020 3:13:18 PM

Sample Name	LE53	Injection Vial	13
Sample ID	L2	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:14:43 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

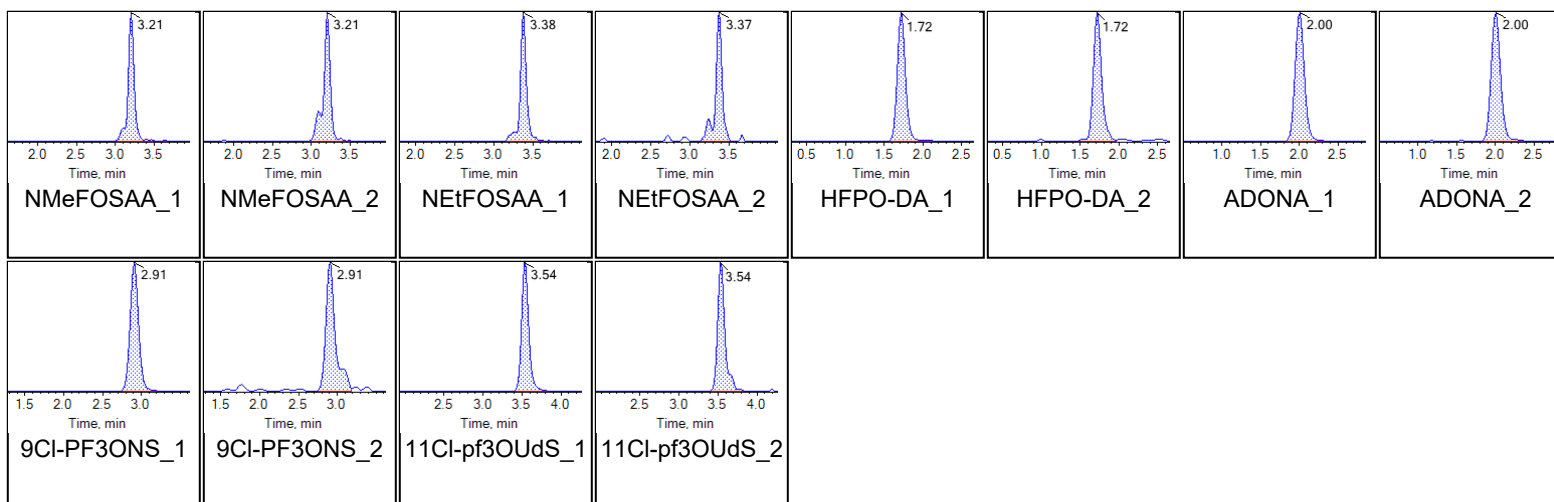
Chromatograms

Target Analytes:

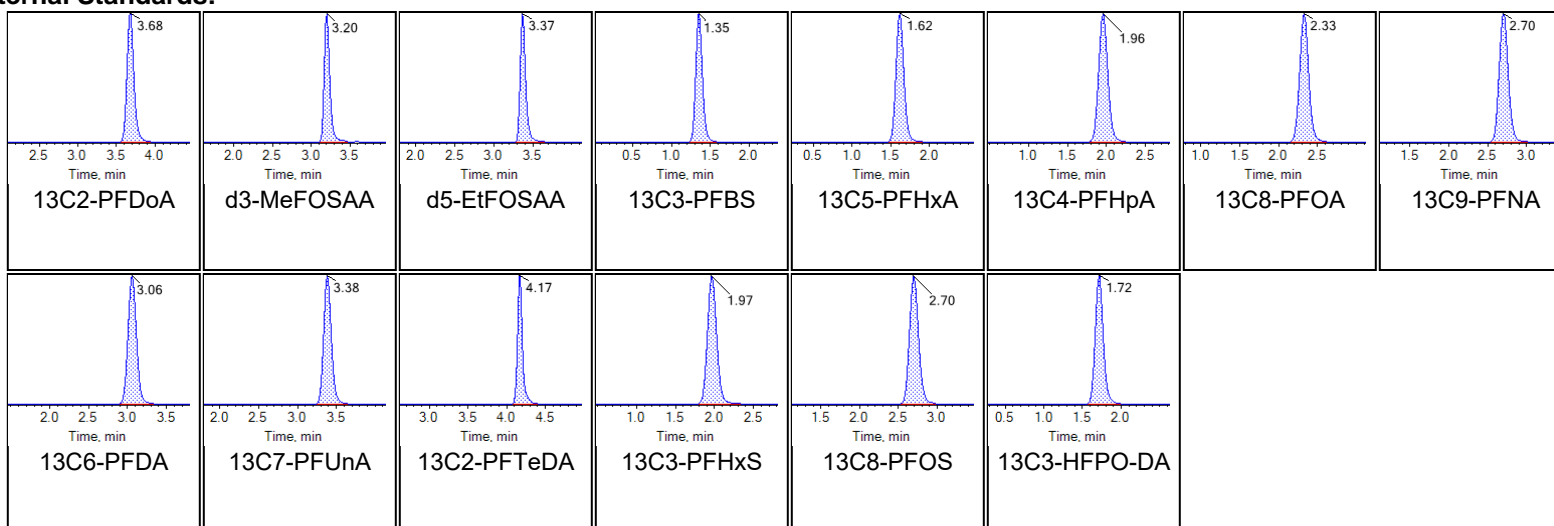




Chromatogram Report

Created with Analyst Reporter
Printed: 25/11/2020 3:13:18 PM

Internal Standards:





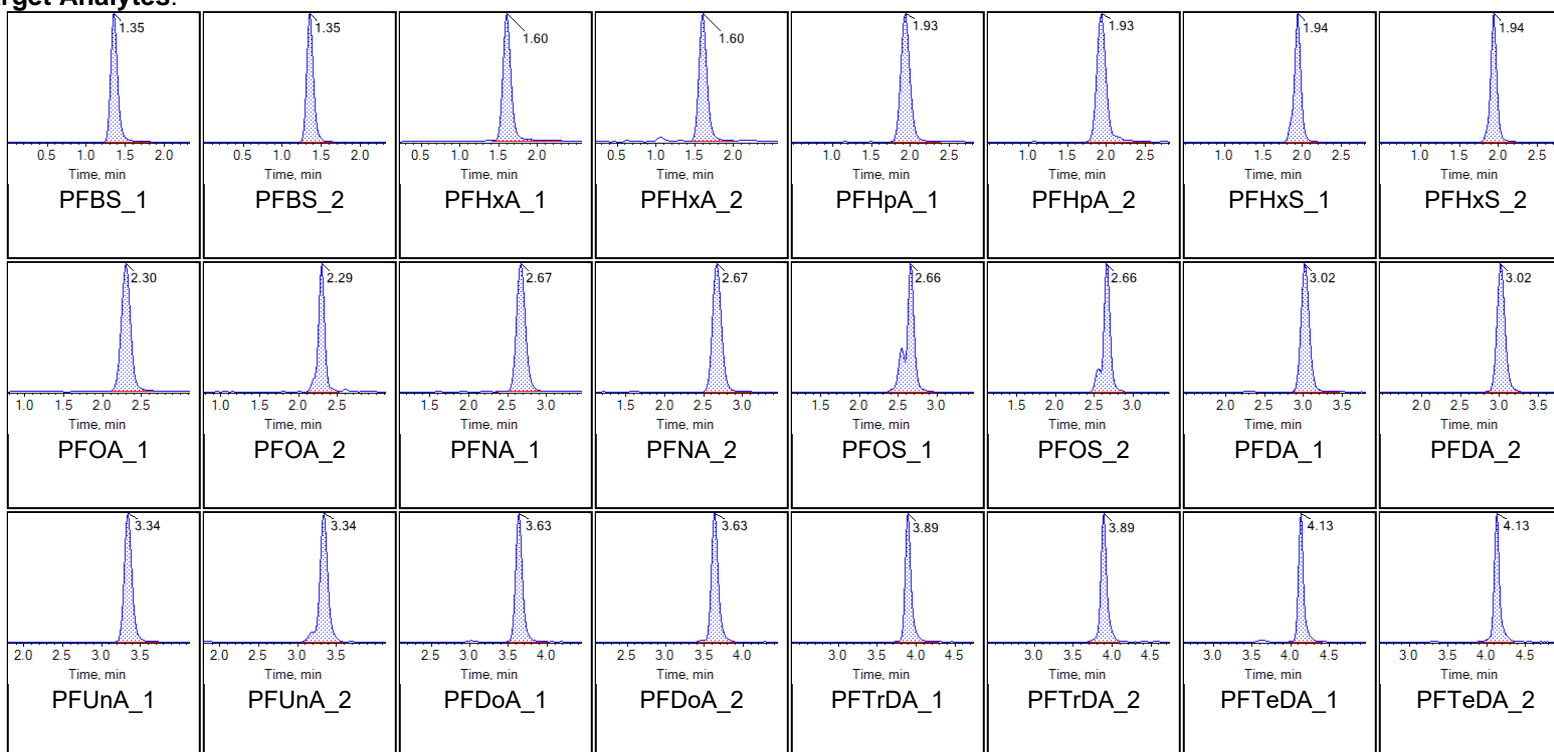
Chromatogram Report

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Printed: 25/11/2020 3:13:18 PM

Sample Name	LE54	Injection Vial	14
Sample ID	L3	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:25:10 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

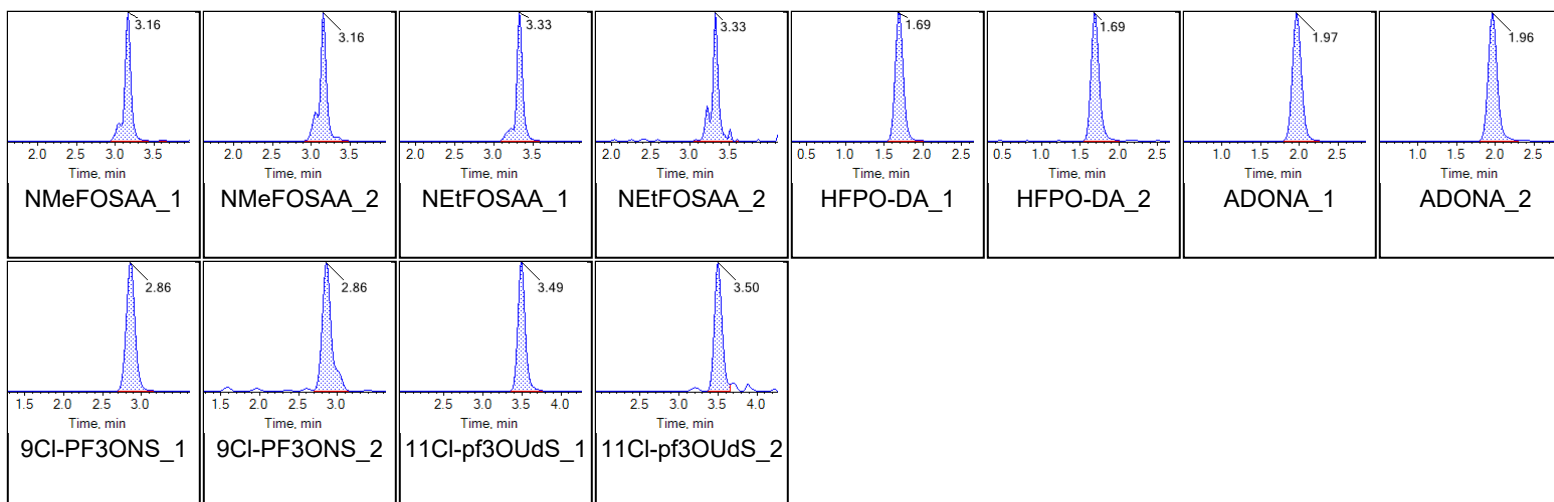
Chromatograms

Target Analytes:

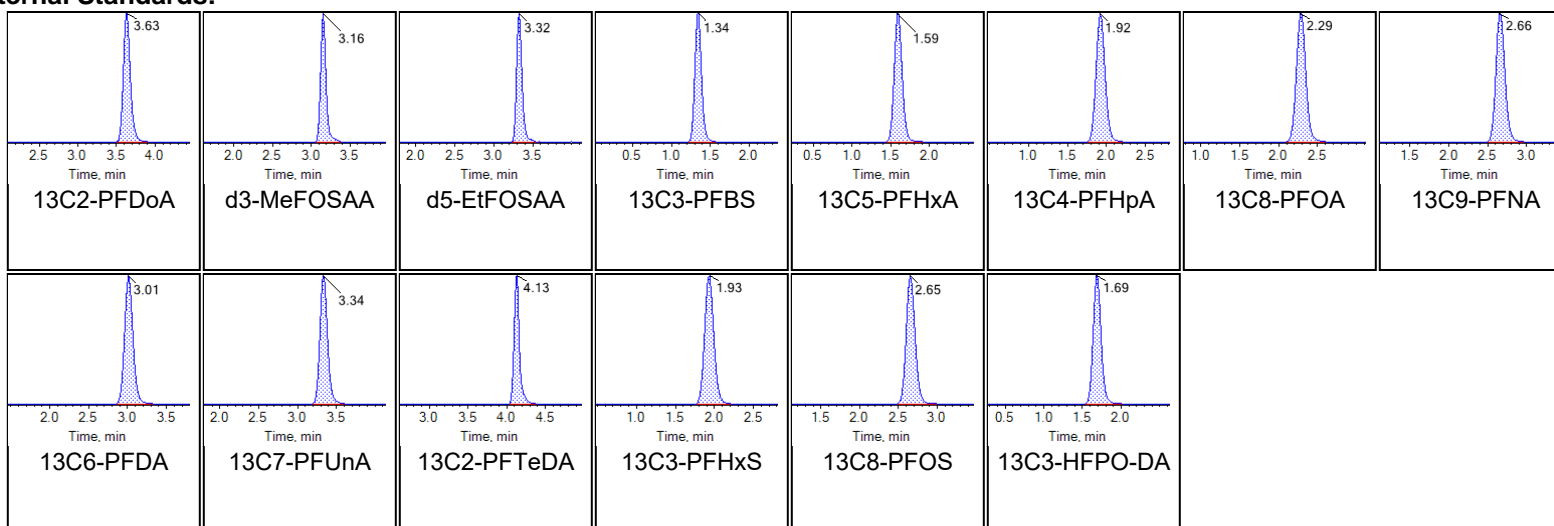




Chromatogram Report

Created with Analyst Reporter
Printed: 25/11/2020 3:13:18 PM

Internal Standards:





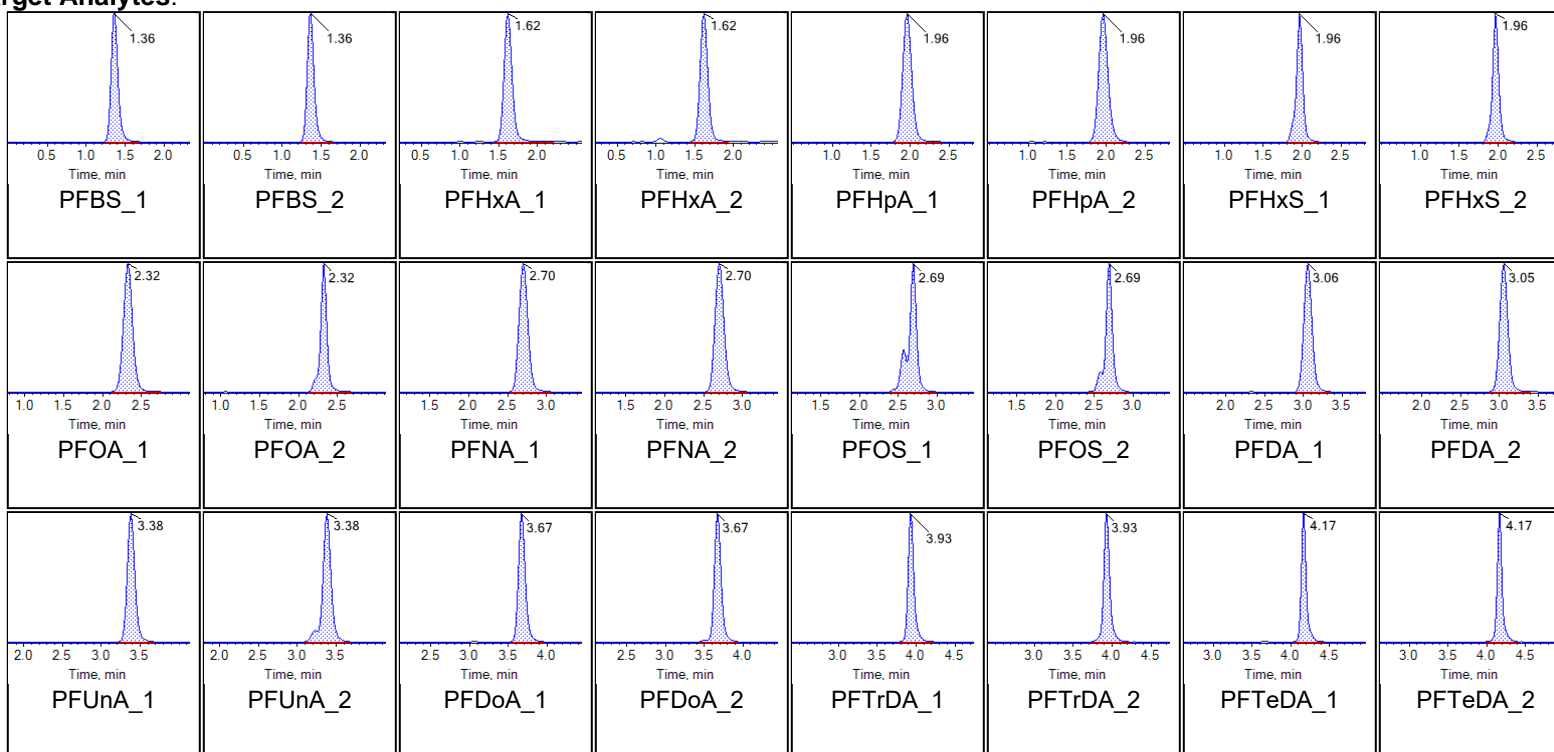
Chromatogram Report

Created with Analyst Reporter
Printed: 25/11/2020 3:13:18 PM

Sample Name	LE55	Injection Vial	15
Sample ID	L4	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:35:38 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

Chromatograms

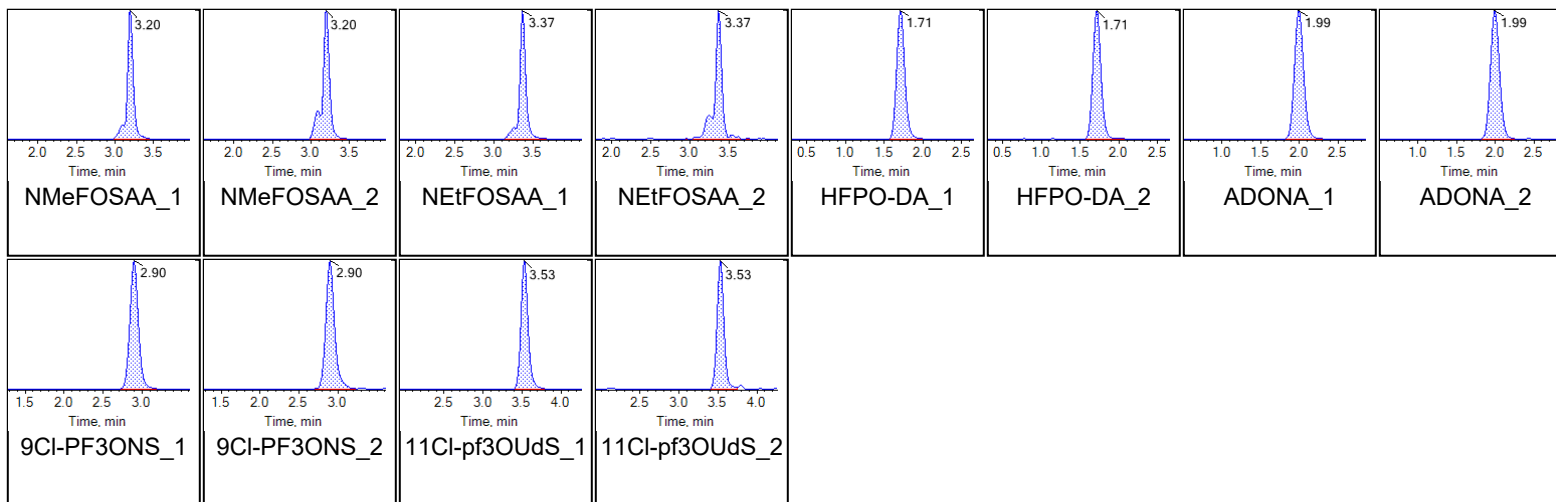
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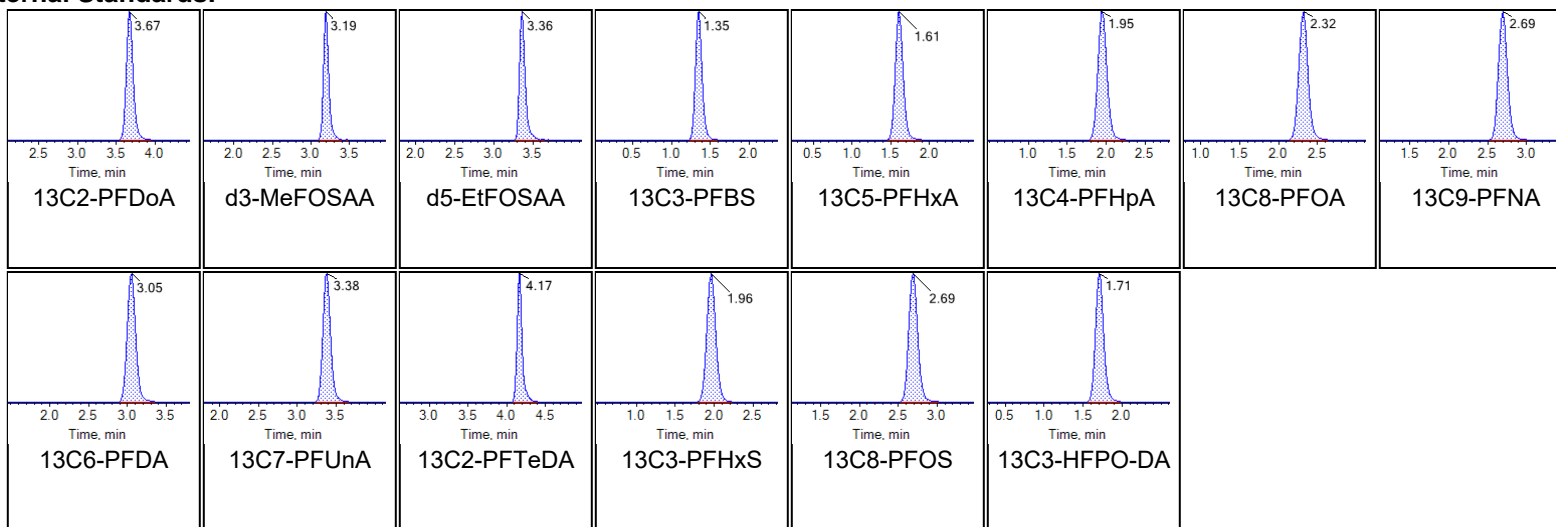


Chromatogram Report

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Internal Standards:





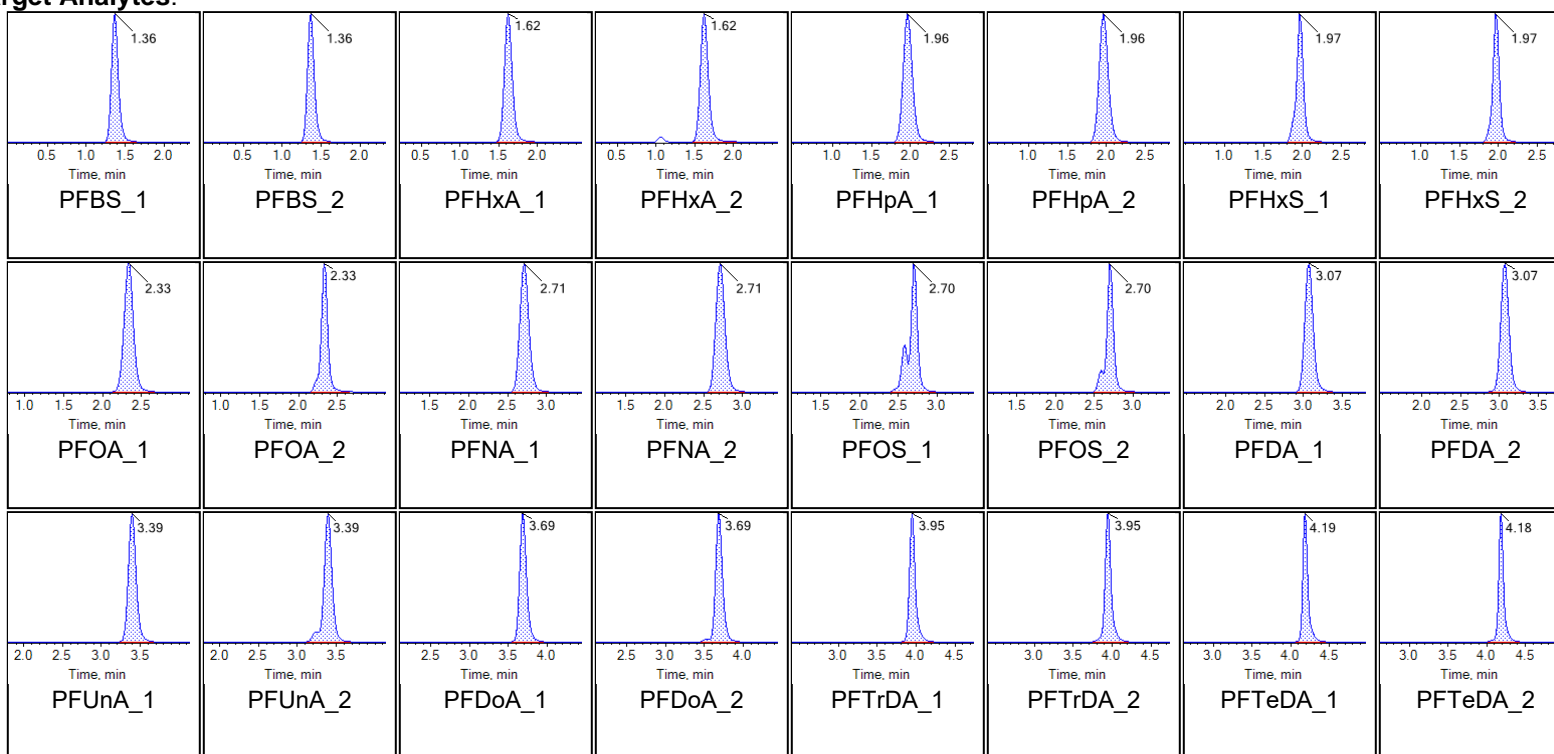
Chromatogram Report

Created with Analyst Reporter
Printed: 25/11/2020 3:13:18 PM

Sample Name	LE56	Injection Vial	16
Sample ID	L5	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:46:05 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

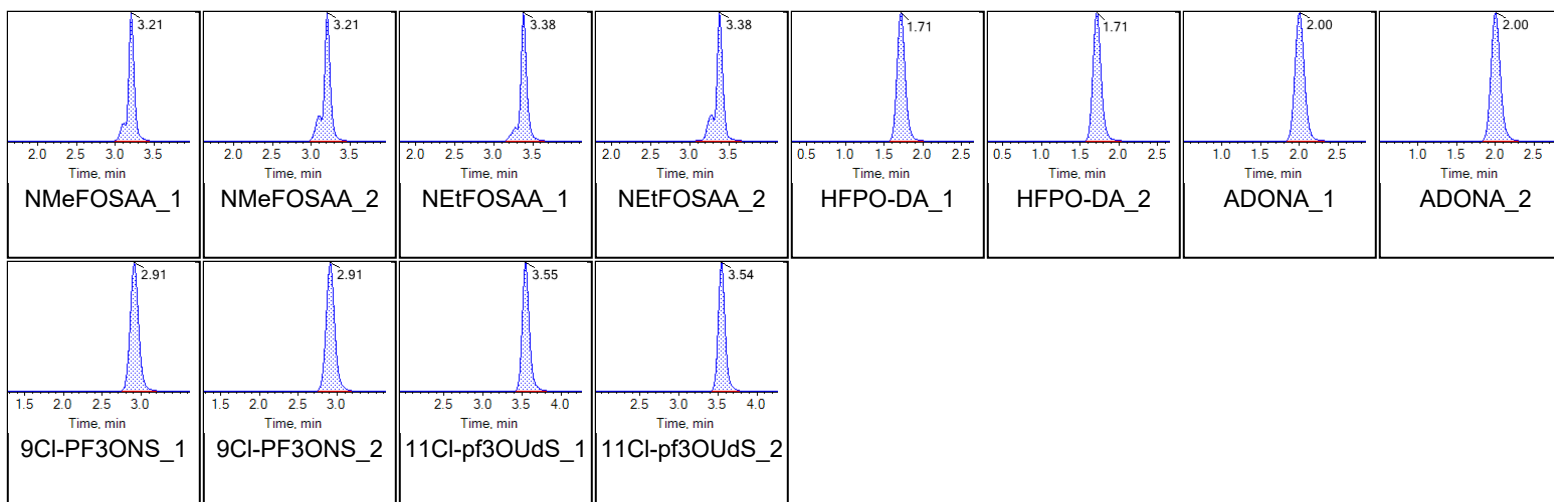
Chromatograms

Target Analytes:

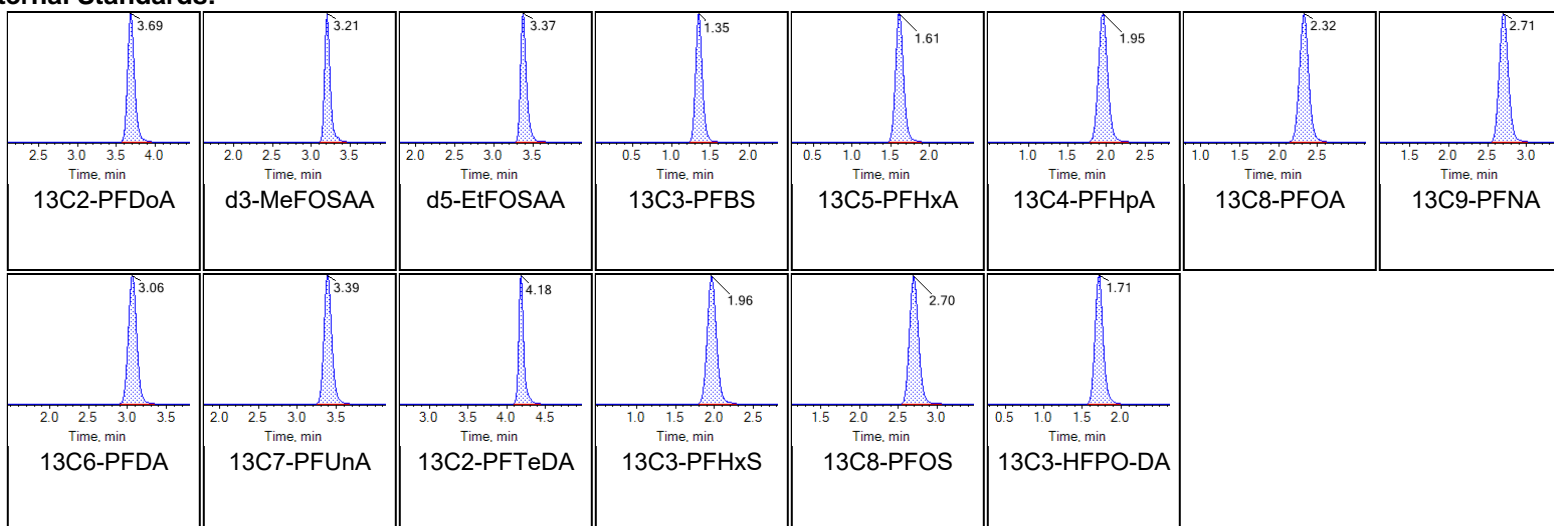




Chromatogram Report

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Internal Standards:





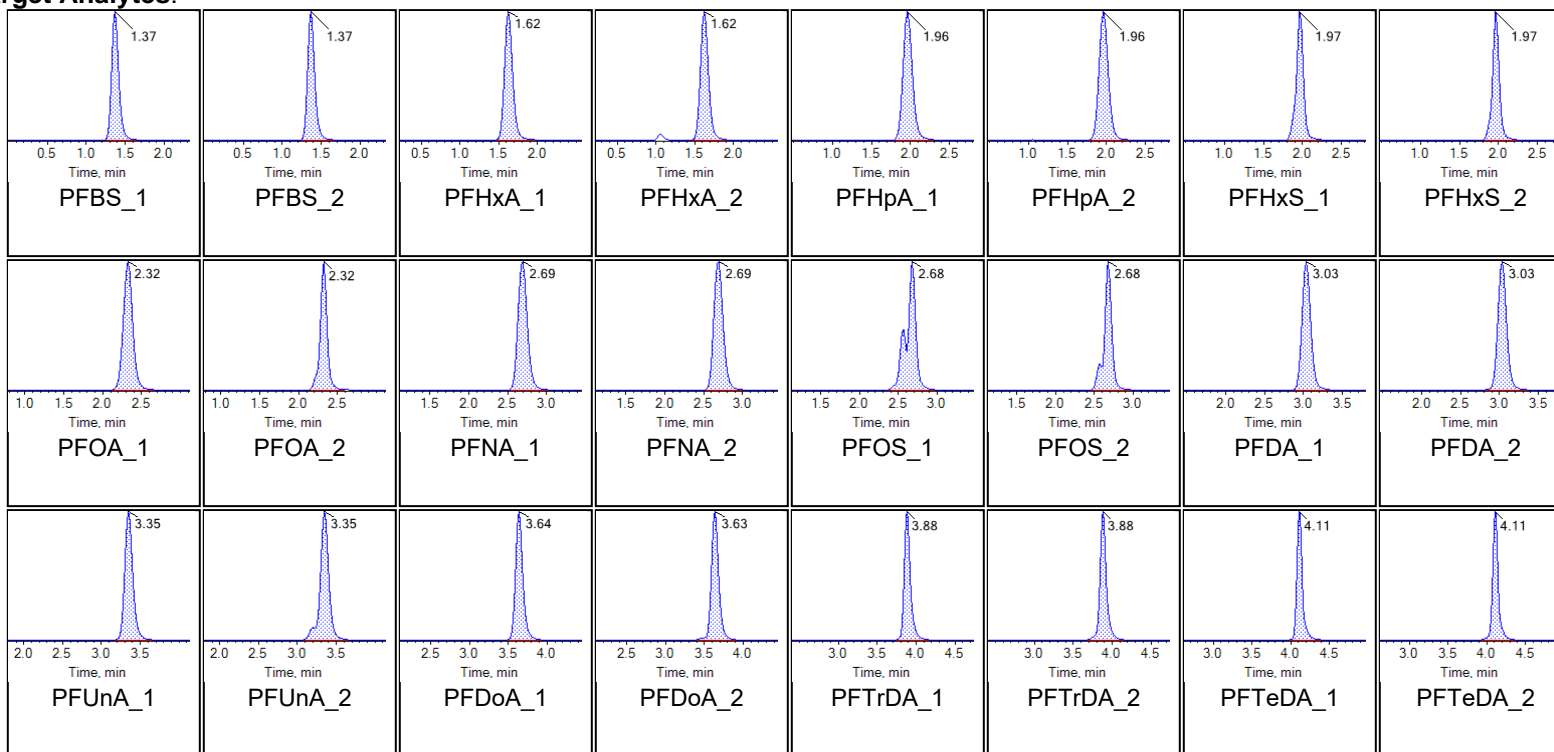
Chromatogram Report

Created with Analyst Reporter
Printed: 25/11/2020 3:13:18 PM

Sample Name	LE57	Injection Vial	17
Sample ID	L6	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:56:32 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

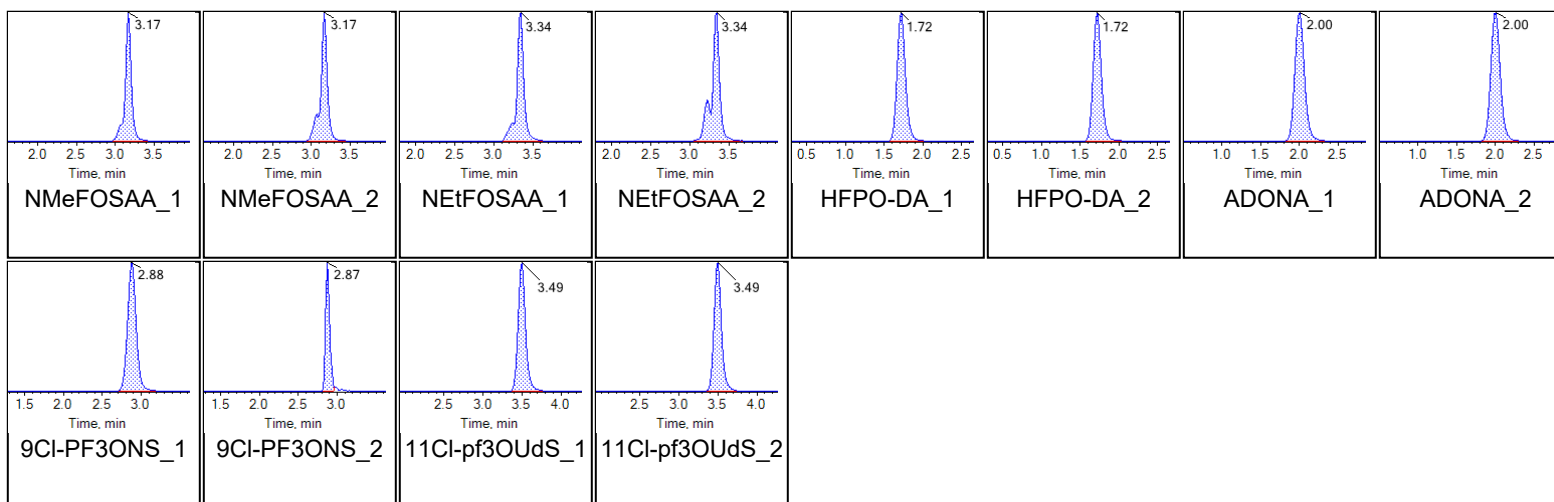
Chromatograms

Target Analytes:

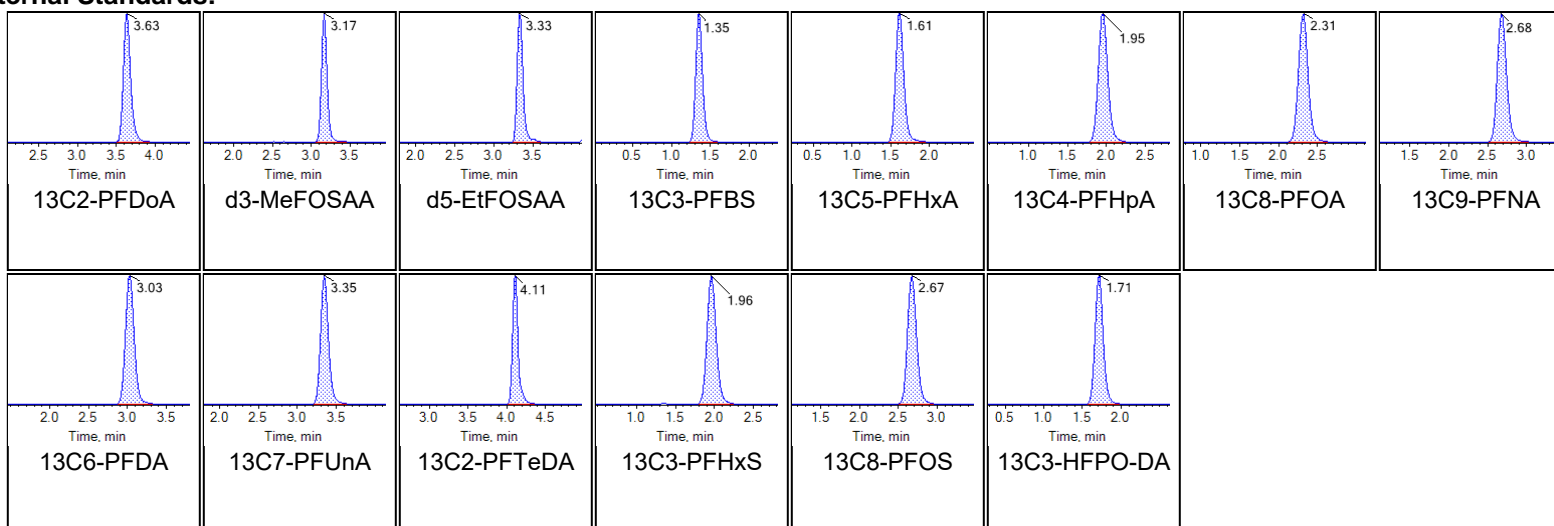




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Printed: 25/11/2020 3:13:18 PM

Internal Standards:





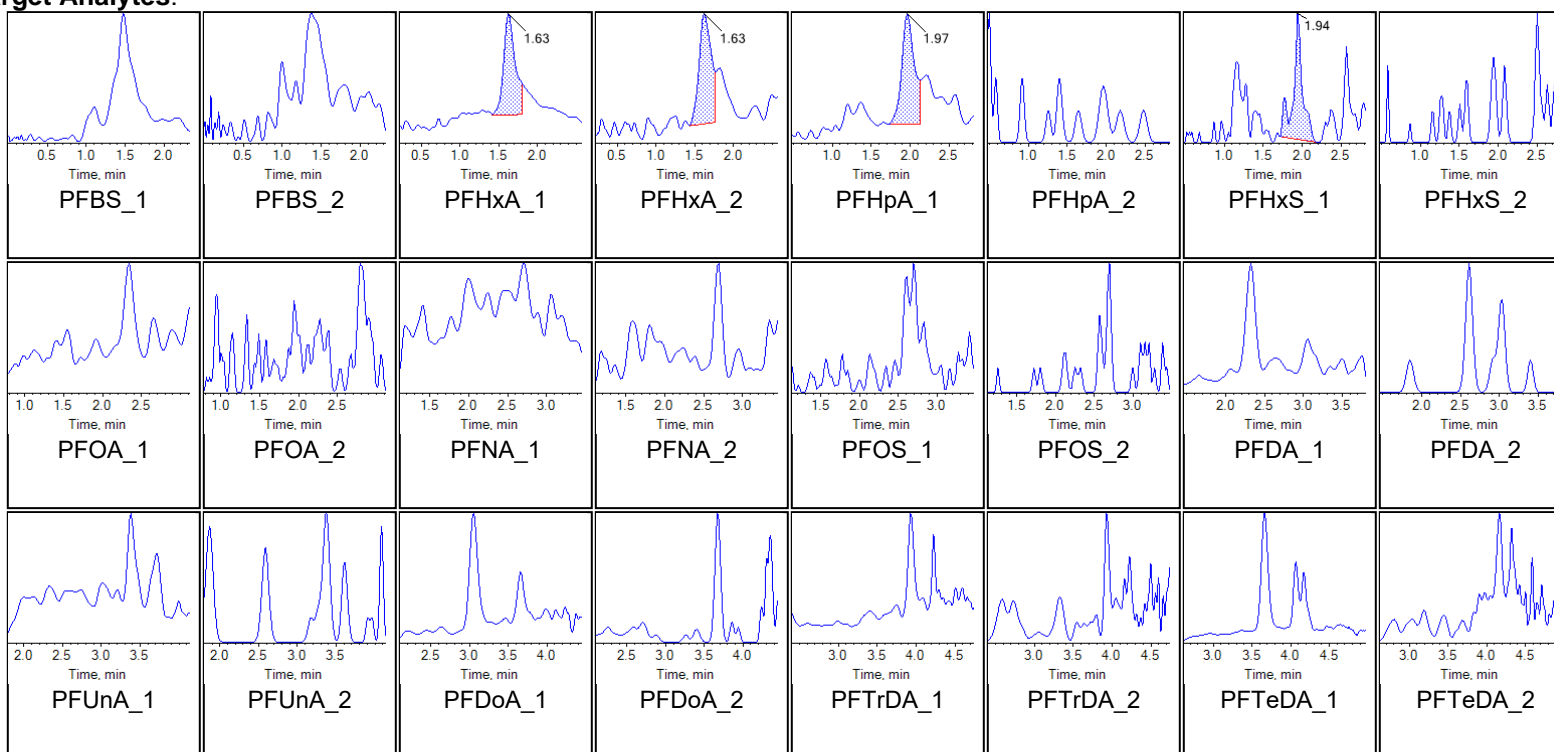
Chromatogram Report

Created with Analyst Reporter
Printed: 25/11/2020 3:13:18 PM

Sample Name	LE58 IB	Injection Vial	18
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 9:06:58 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

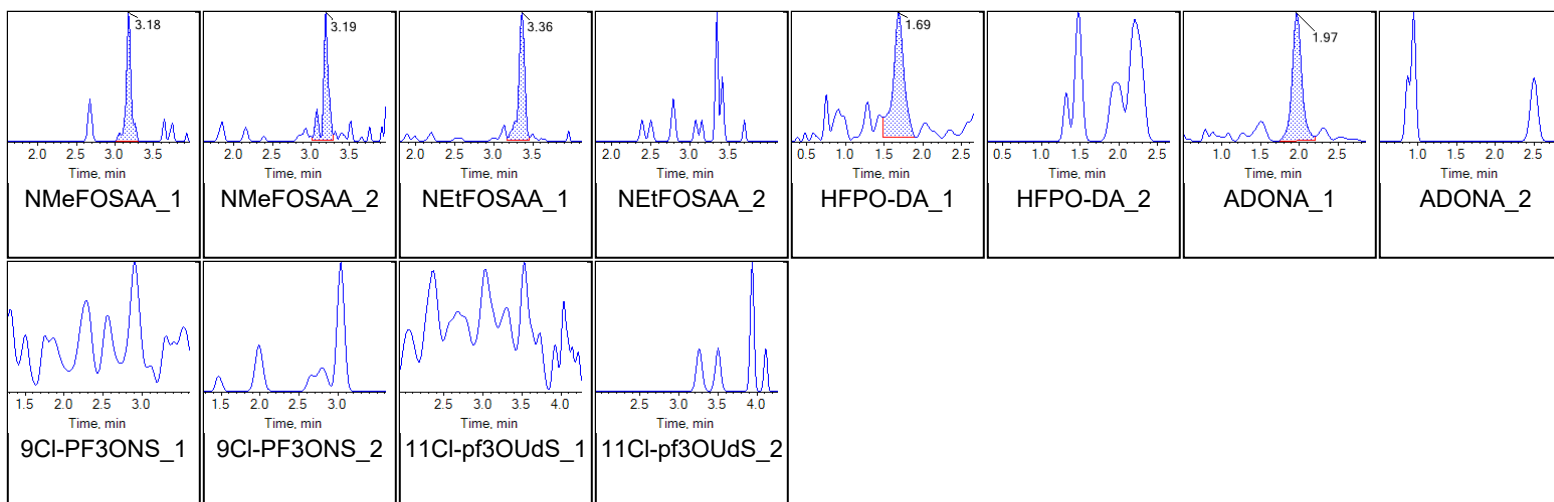
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Target Analytes:

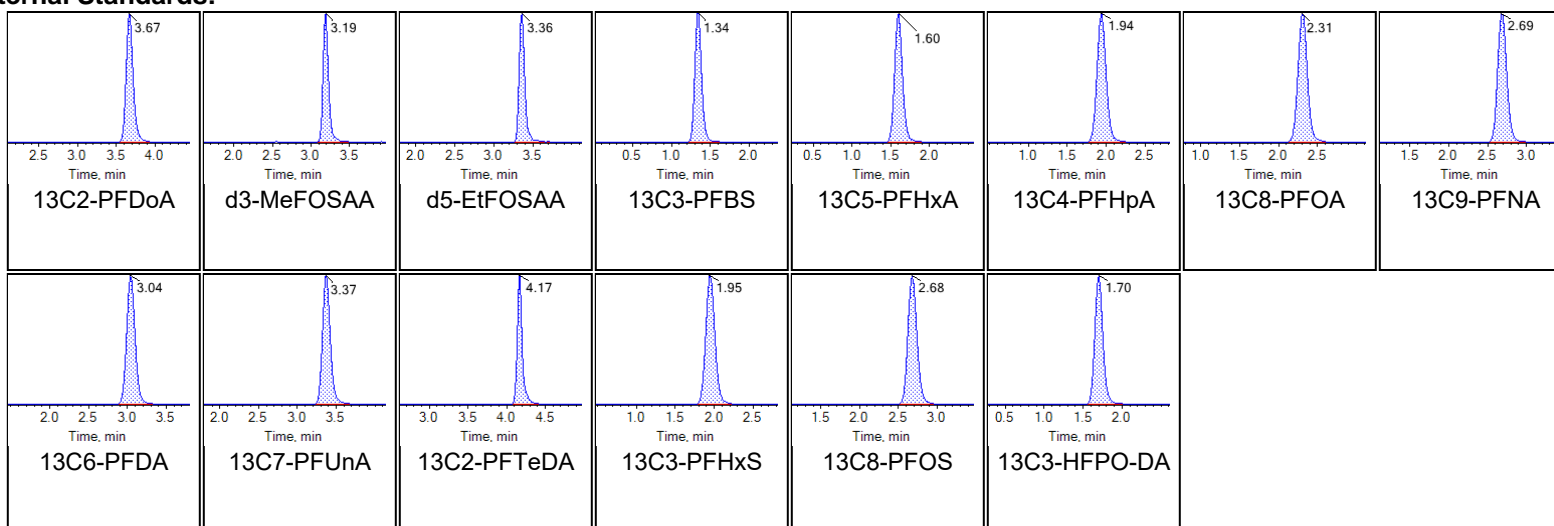




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Internal Standards:





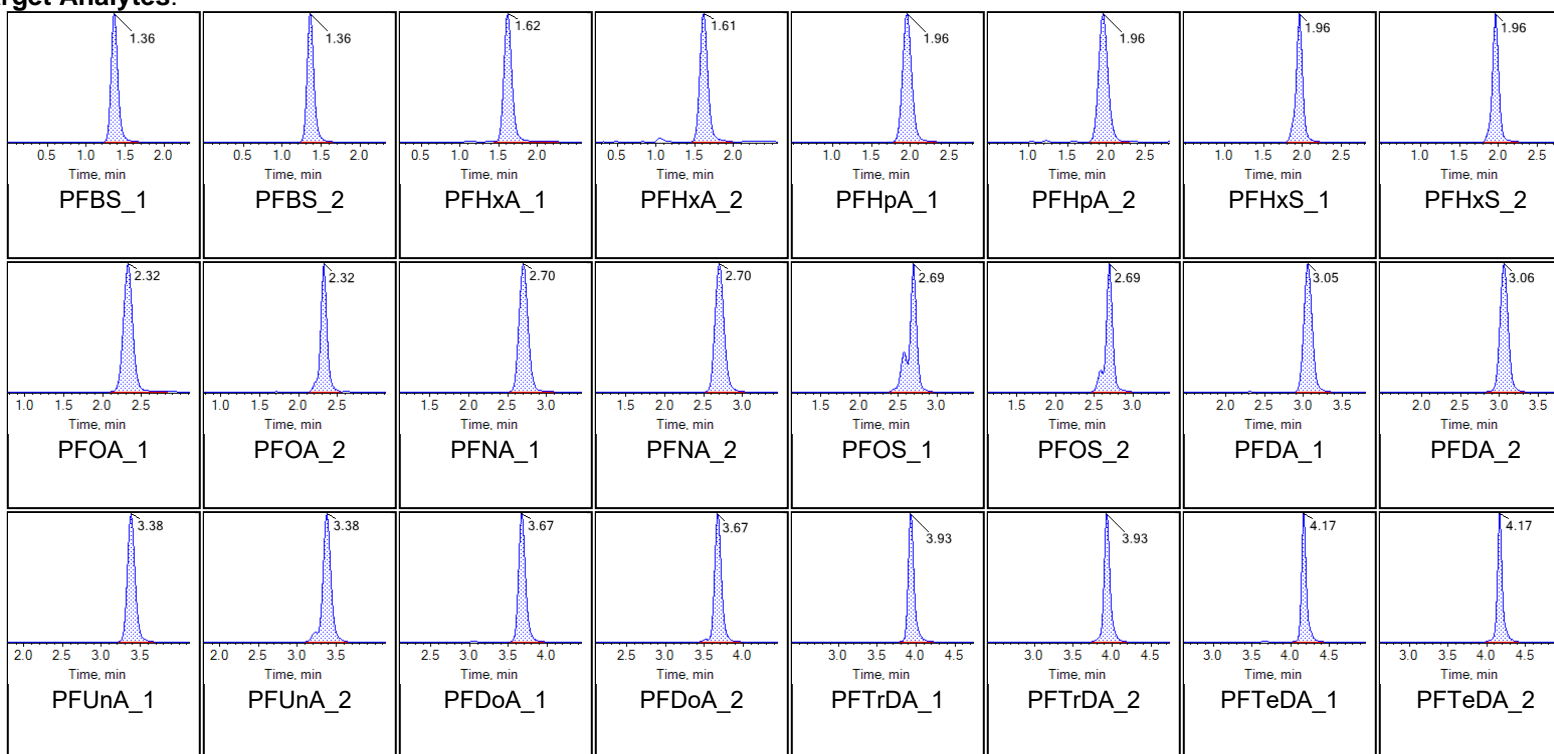
Chromatogram Report

Created with Analyst Reporter
Printed: 25/11/2020 3:13:18 PM

Sample Name	LE59 ICC	Injection Vial	19
Sample ID	ICC	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 9:17:26 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

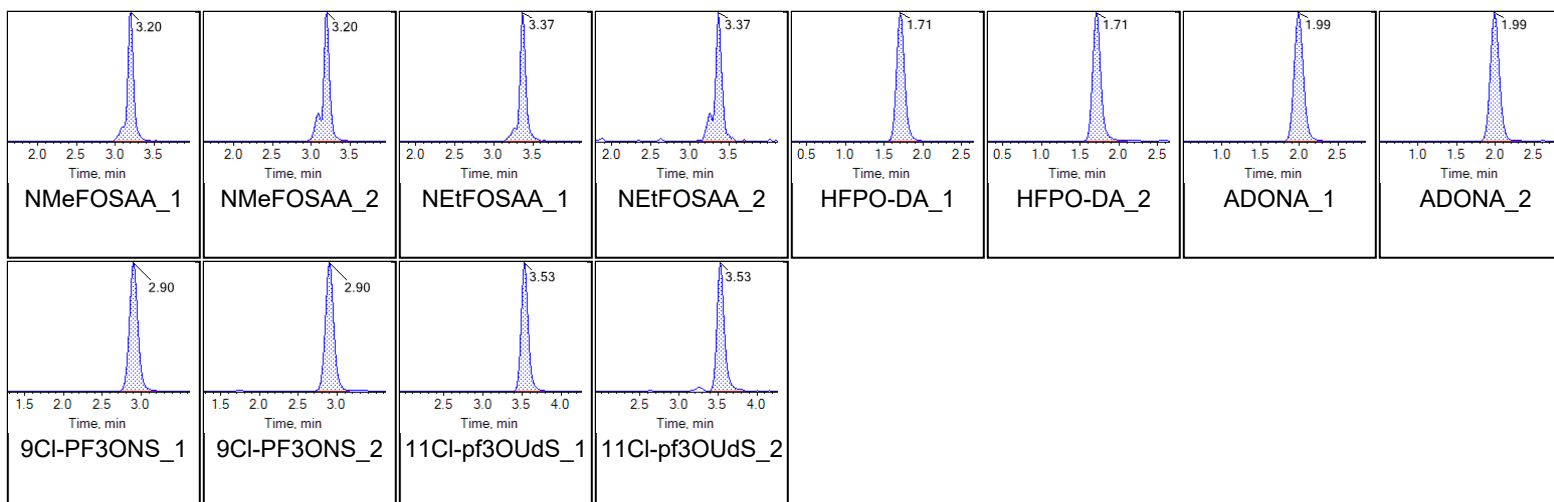
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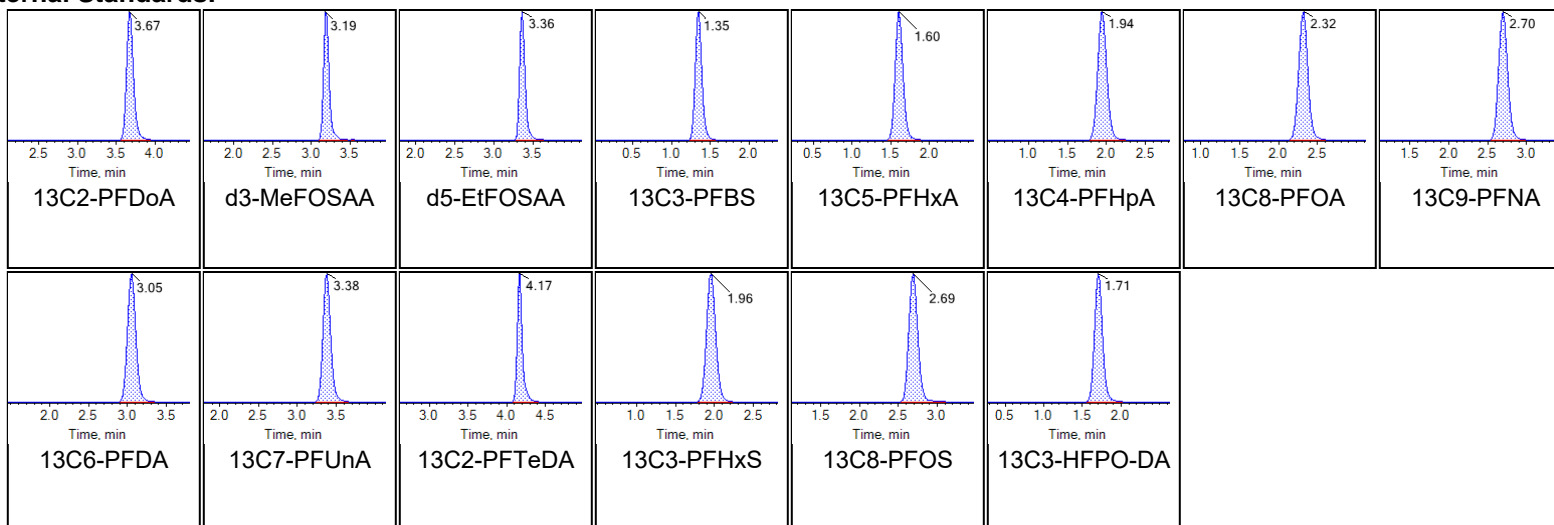




Chromatogram Report

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Printed: 25/11/2020 3:13:18 PM

Internal Standards:





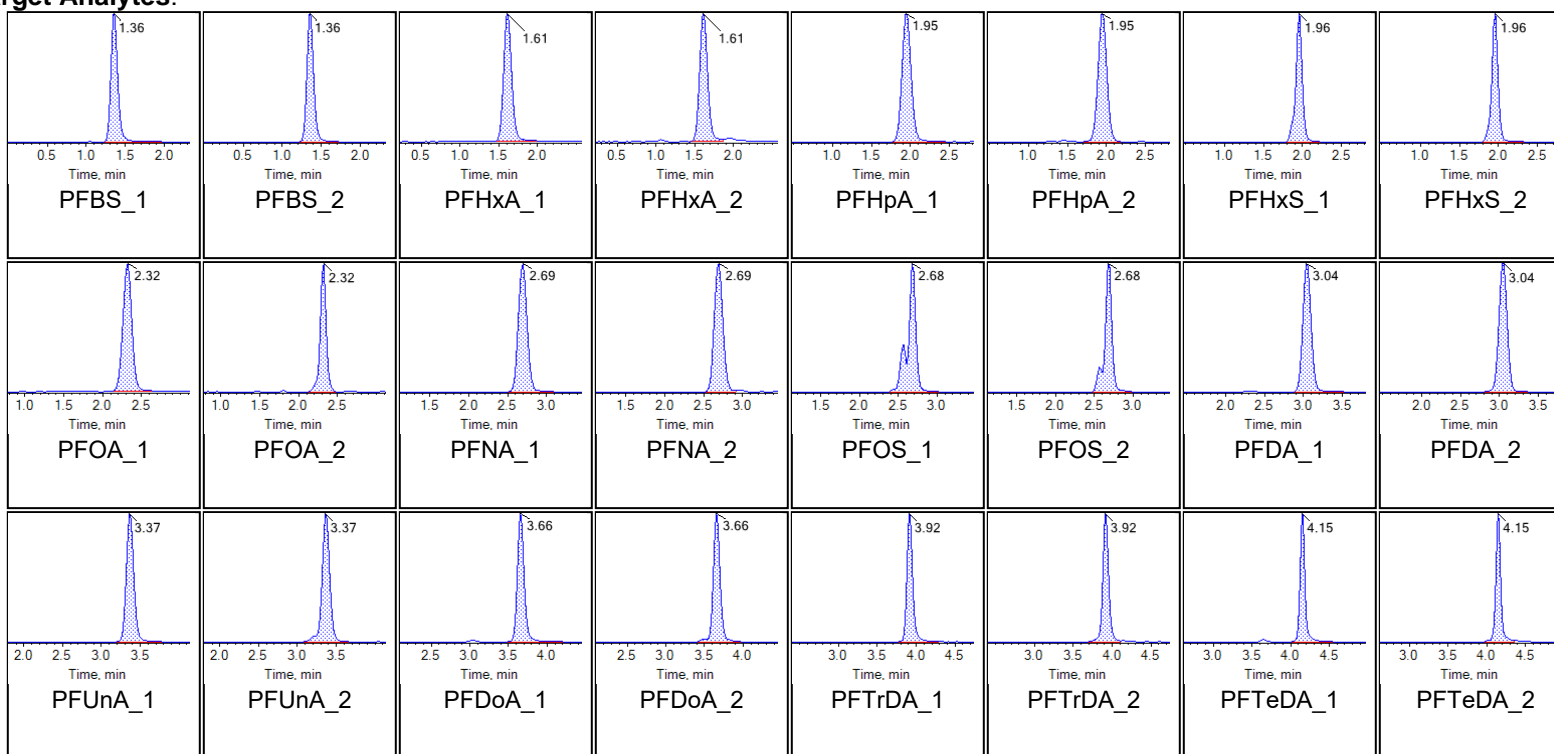
Chromatogram Report

Created with Analyst Reporter
Printed: 25/11/2020 3:13:18 PM

Sample Name	LE54 CCV	Injection Vial	2
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 6:54:22 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

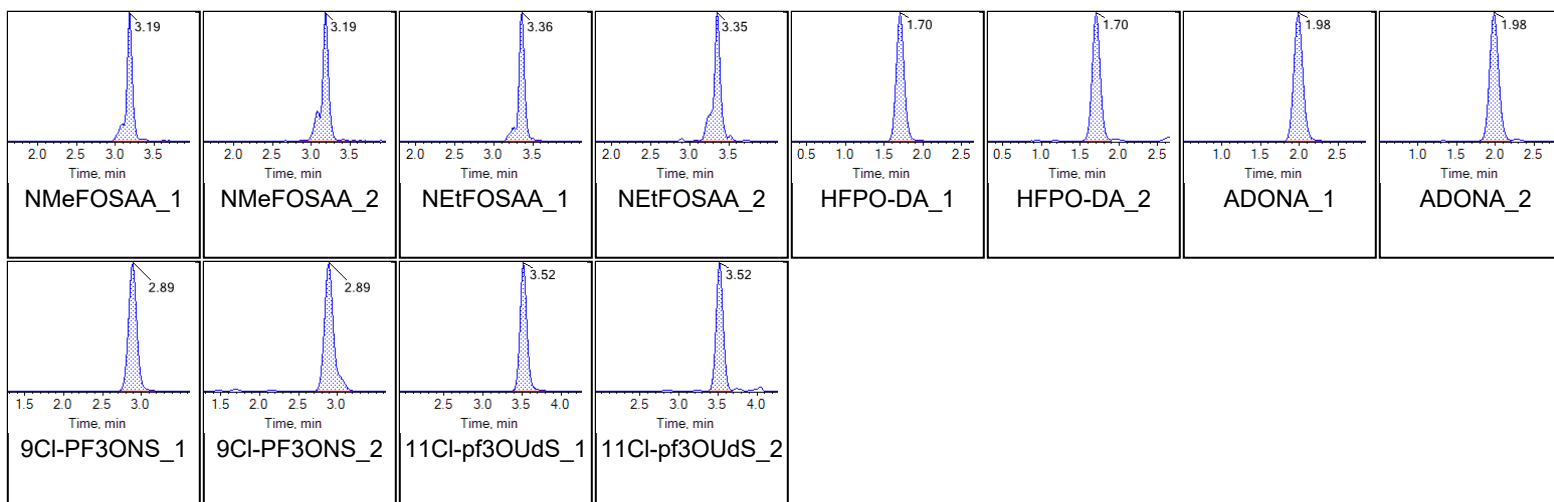
Chromatograms

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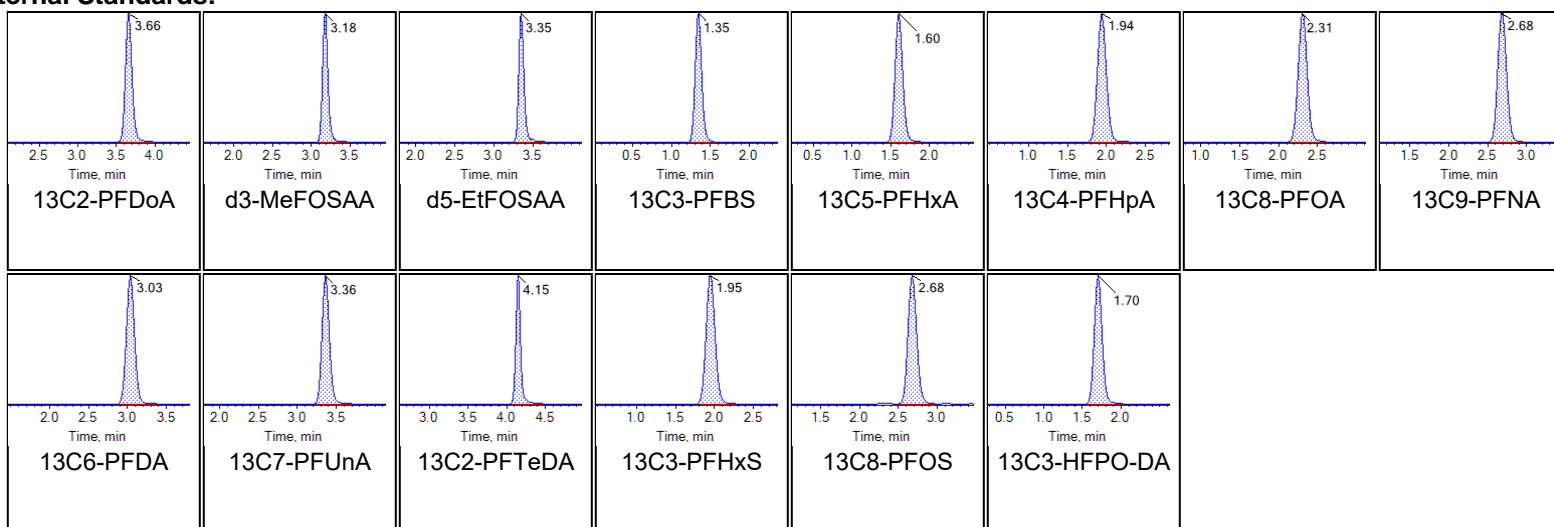




Chromatogram Report

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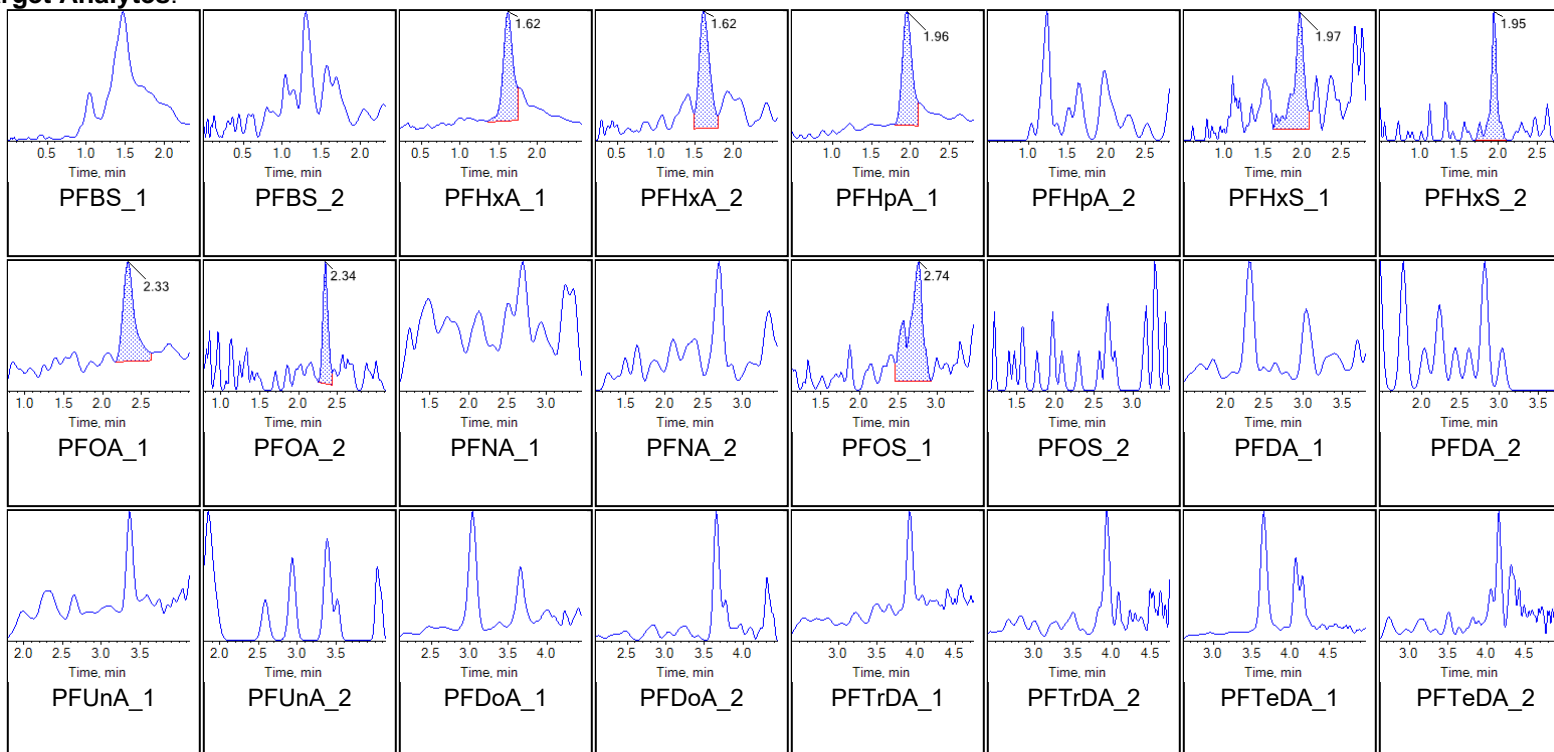
Internal Standards:



Sample Name	LE58 IB	Injection Vial	4
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 7:15:18 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

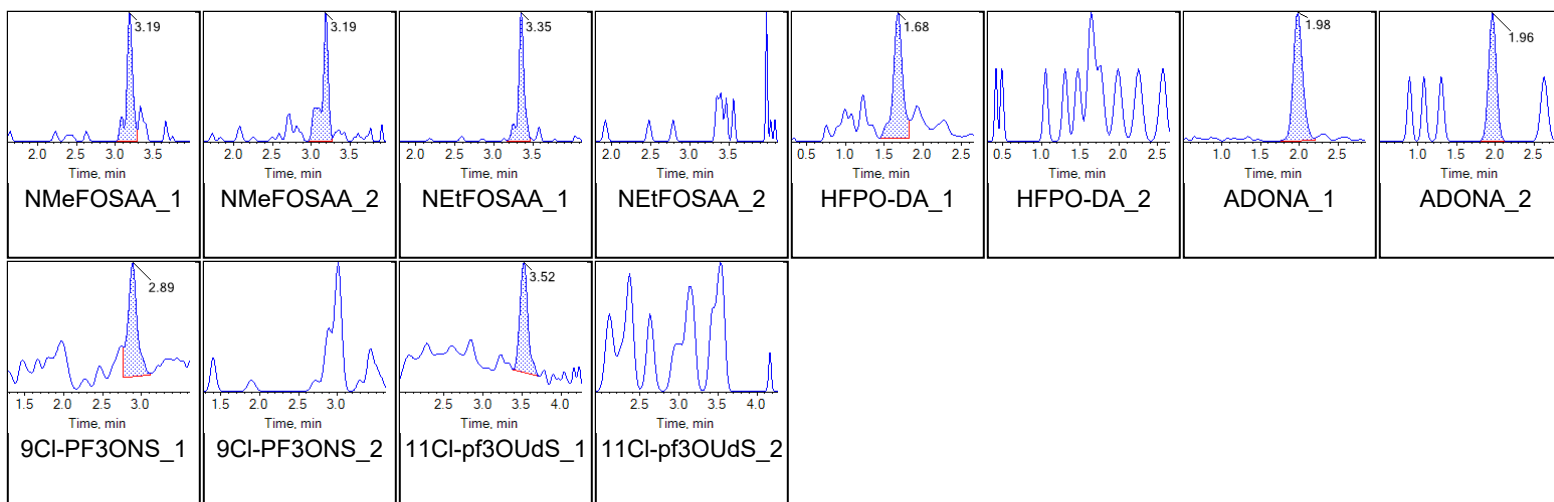
Chromatograms

Target Analytes:

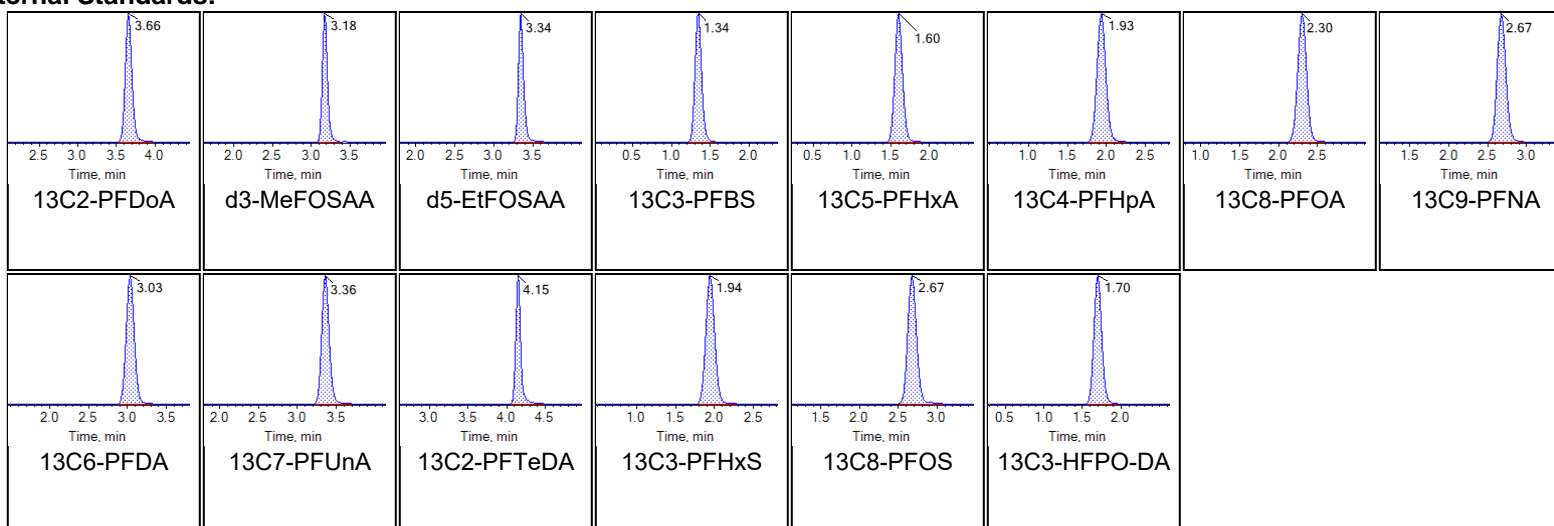




Chromatogram Report

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Internal Standards:





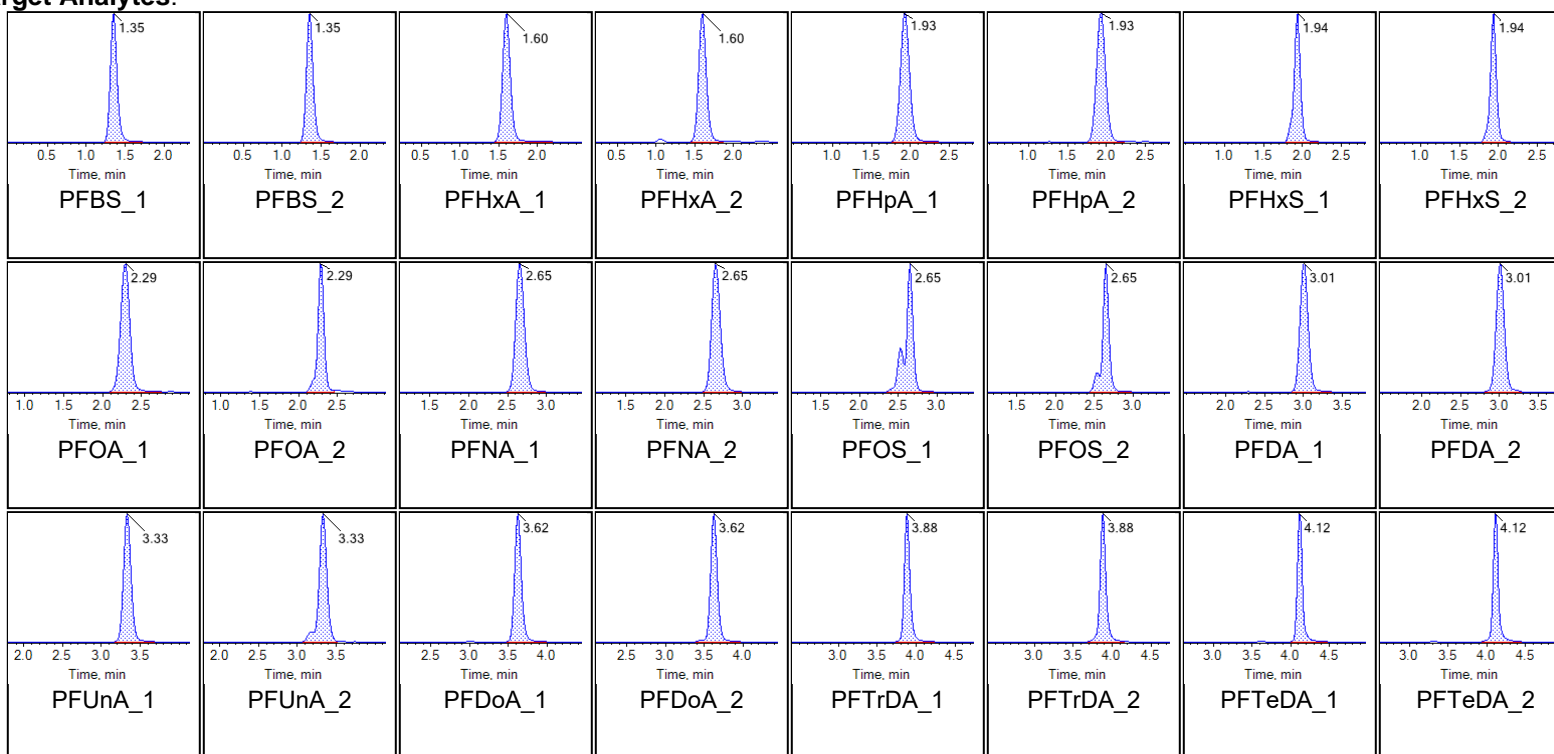
Chromatogram Report

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Sample Name	LE55 CCV	Injection Vial	15
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 9:10:16 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

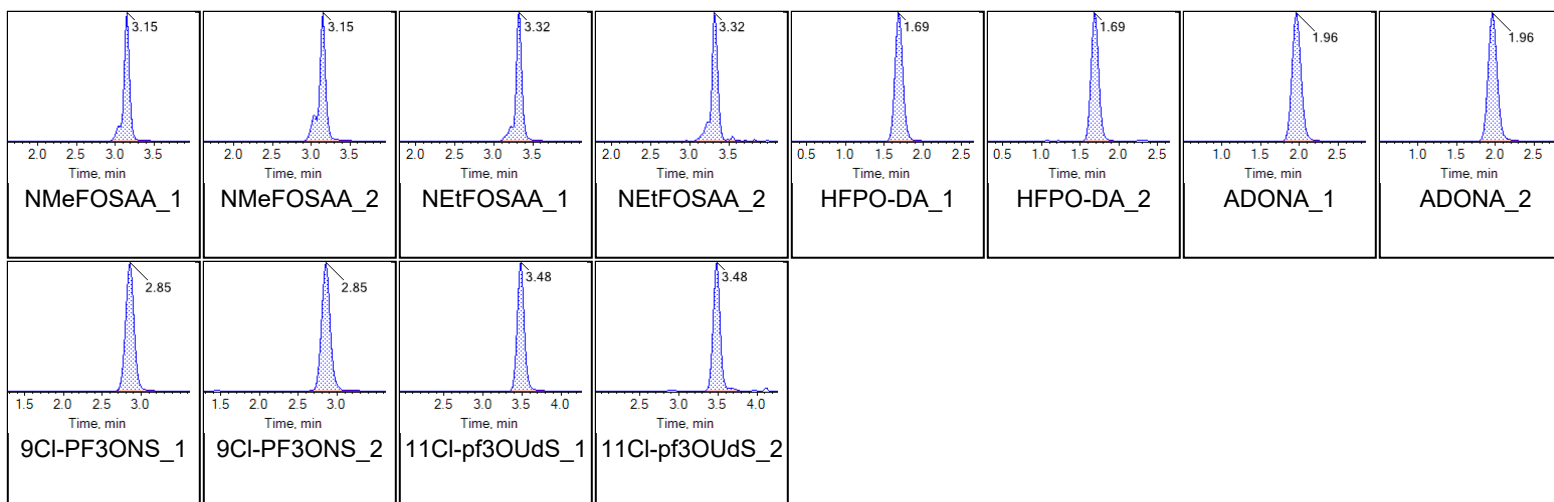
Chromatograms

Target Analytes:

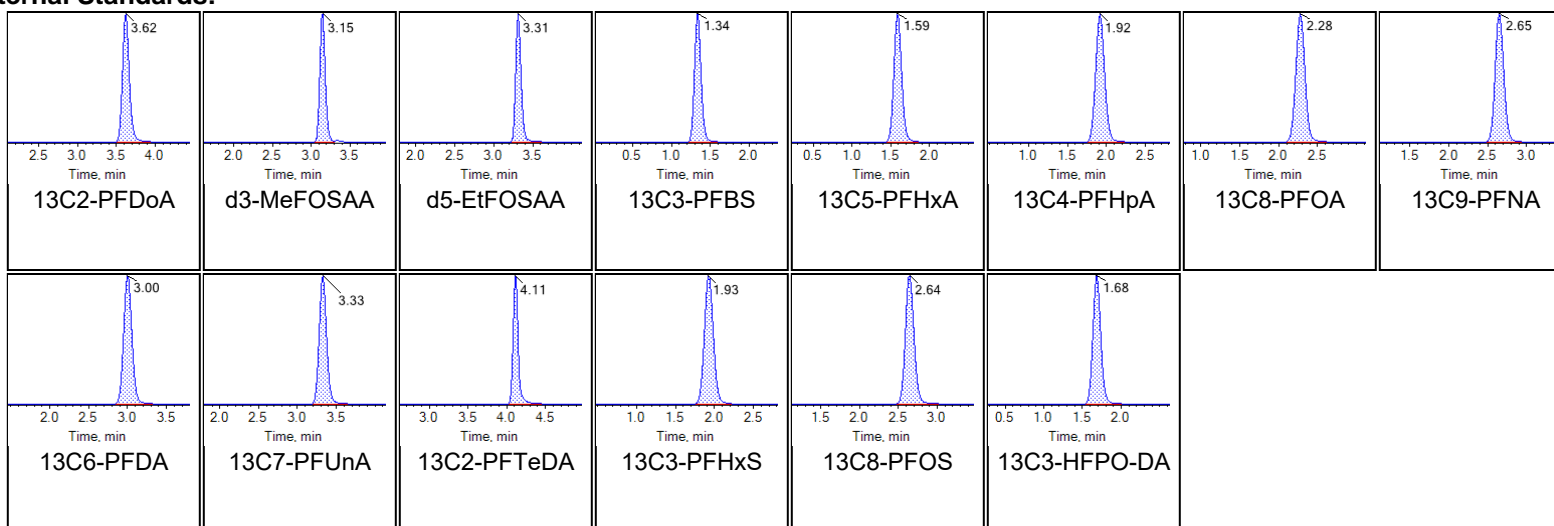




Chromatogram Report

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Printed: 25/11/2020 3:13:18 PM

Internal Standards:





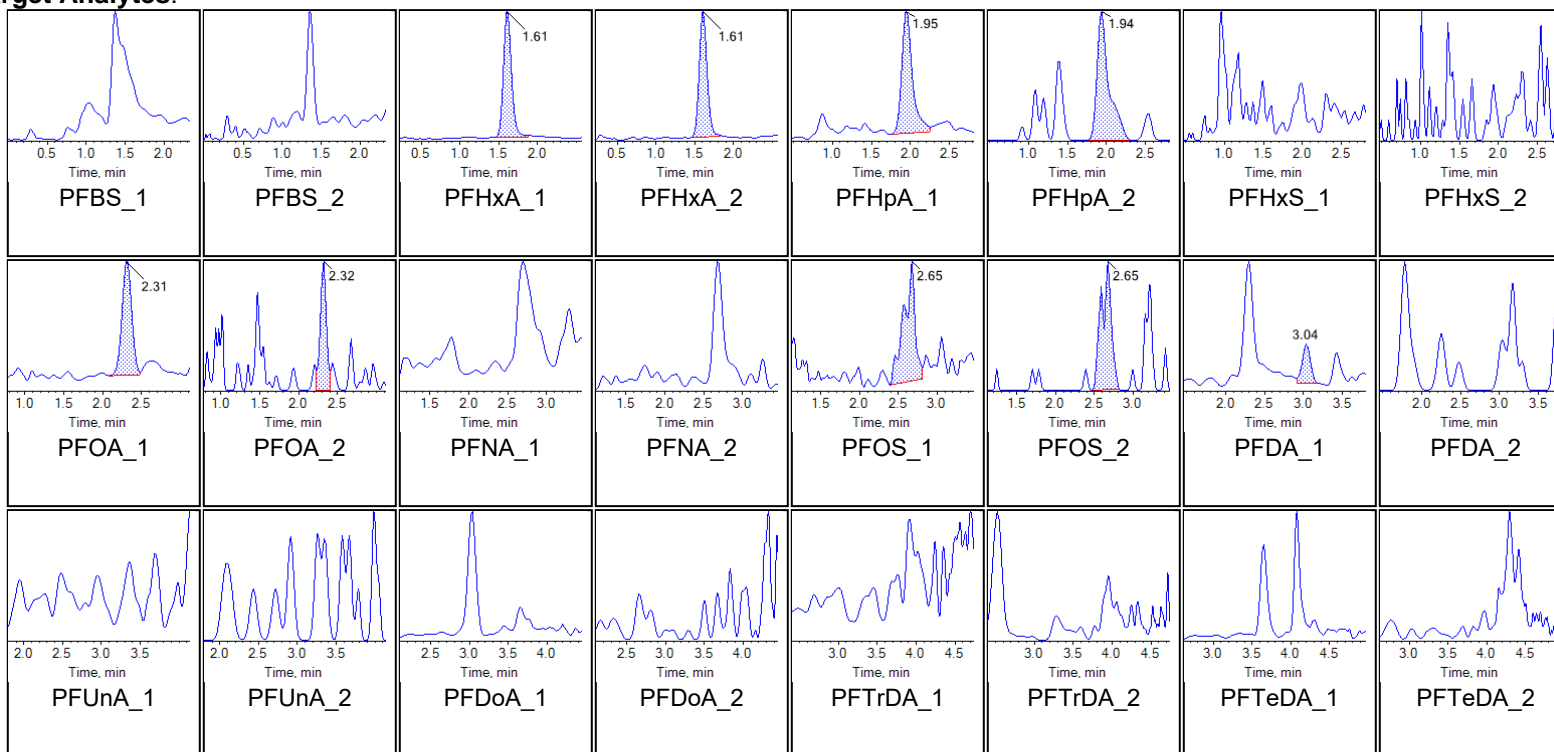
Chromatogram Report

Created with Analyst Reporter
Printed: 25/11/2020 3:13:18 PM

Sample Name	DB124PB-FS(0)	Injection Vial	17
Sample ID	Procedural Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 9:31:12 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

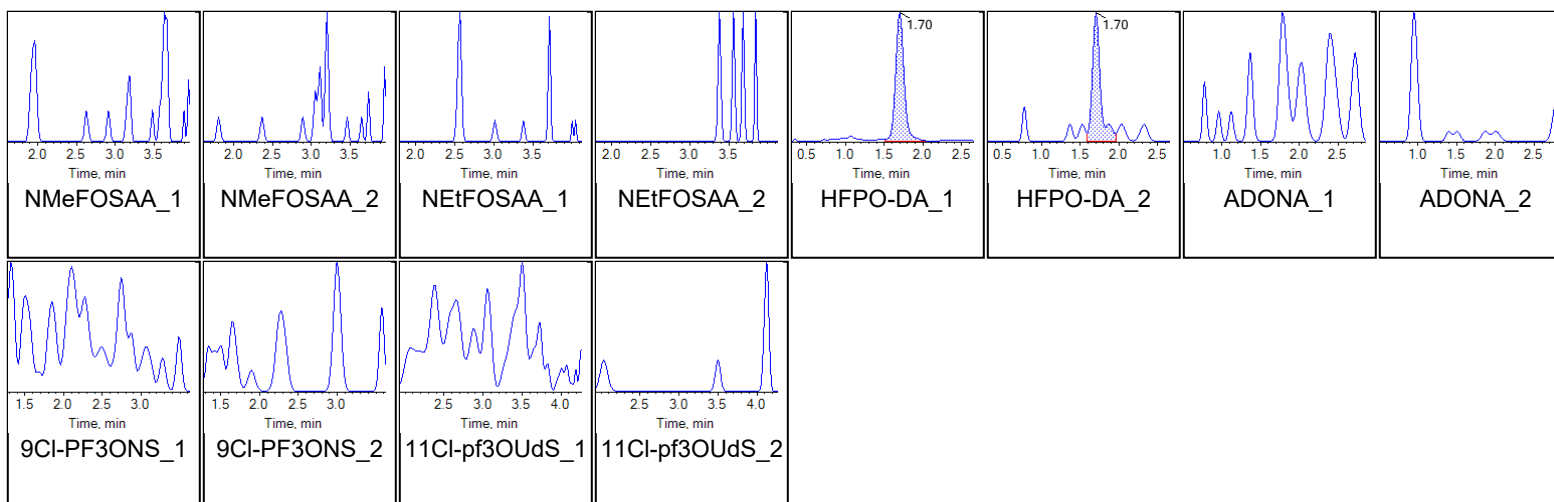
Chromatograms

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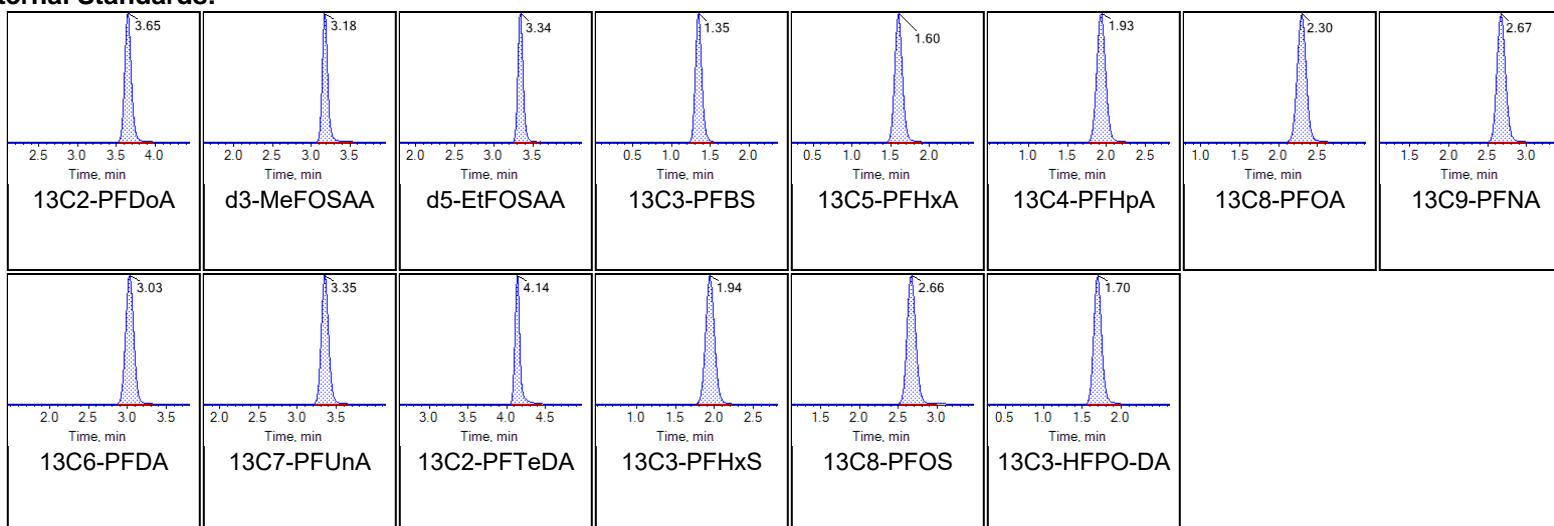




Chromatogram Report

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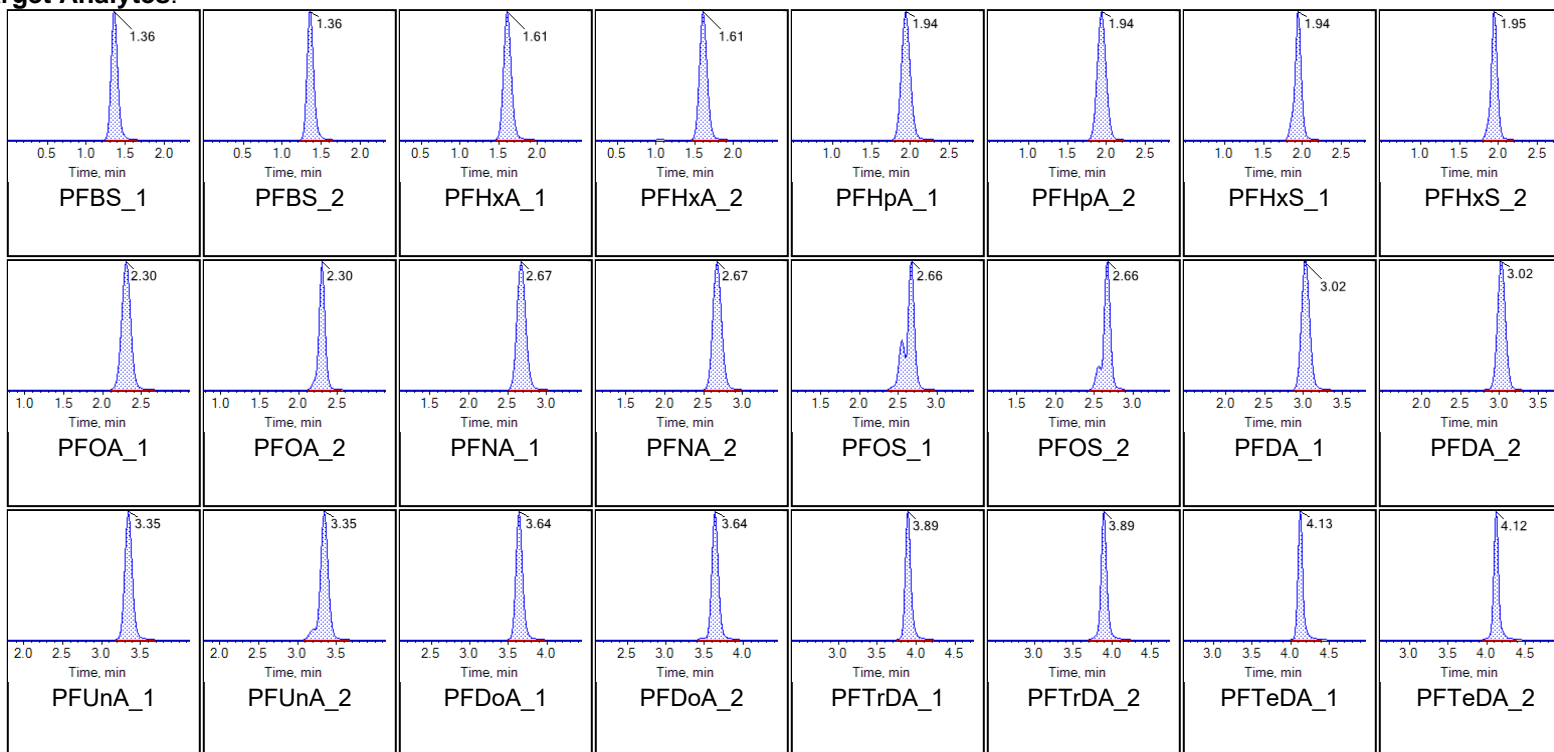
Internal Standards:



Sample Name	DB125LCS-FS(0)	Injection Vial	18
Sample ID	Laboratory Control Sample	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 9:41:40 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

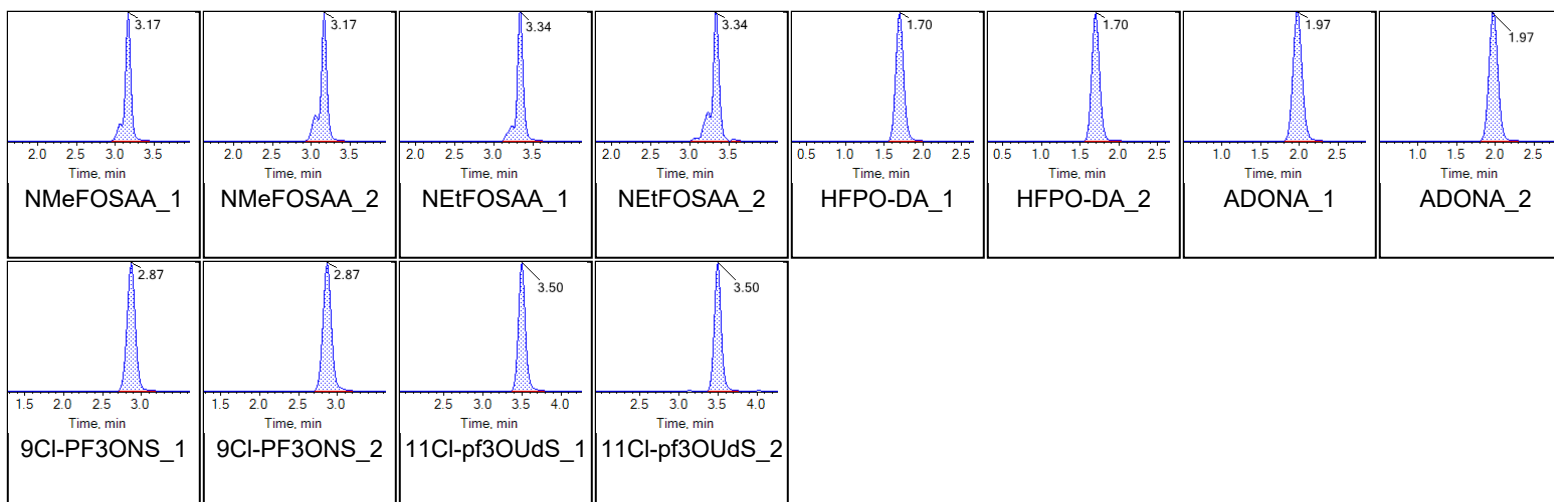
Chromatograms

Target Analytes:

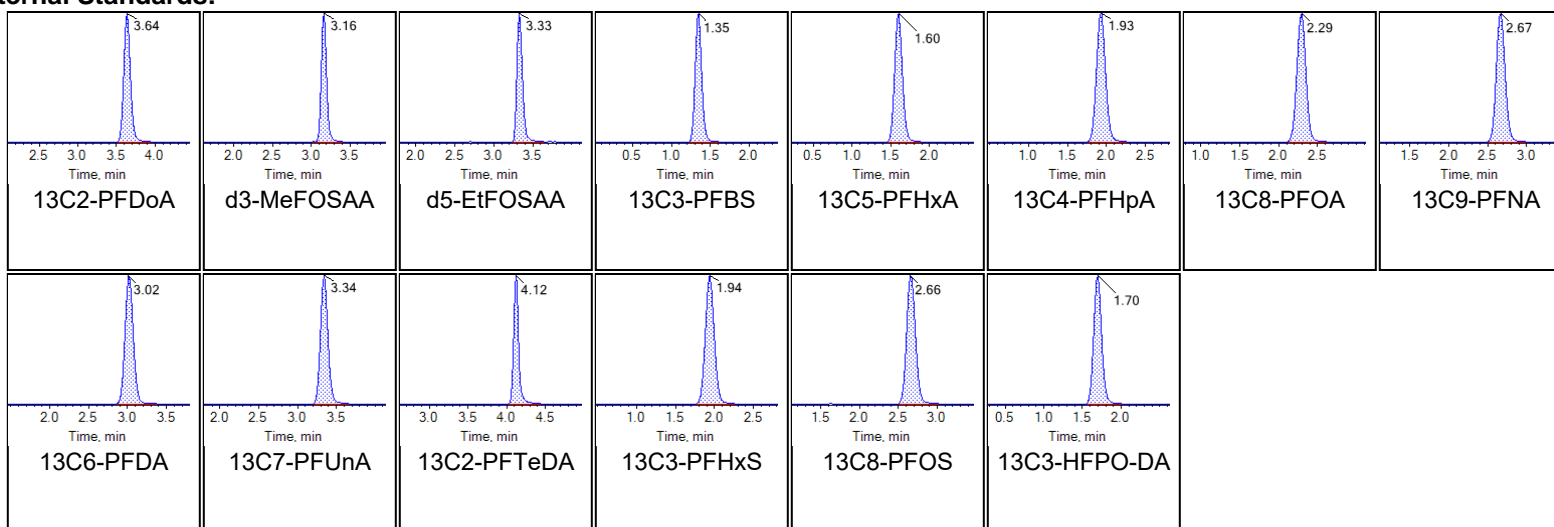




Chromatogram Report

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Printed: 25/11/2020 3:13:18 PM

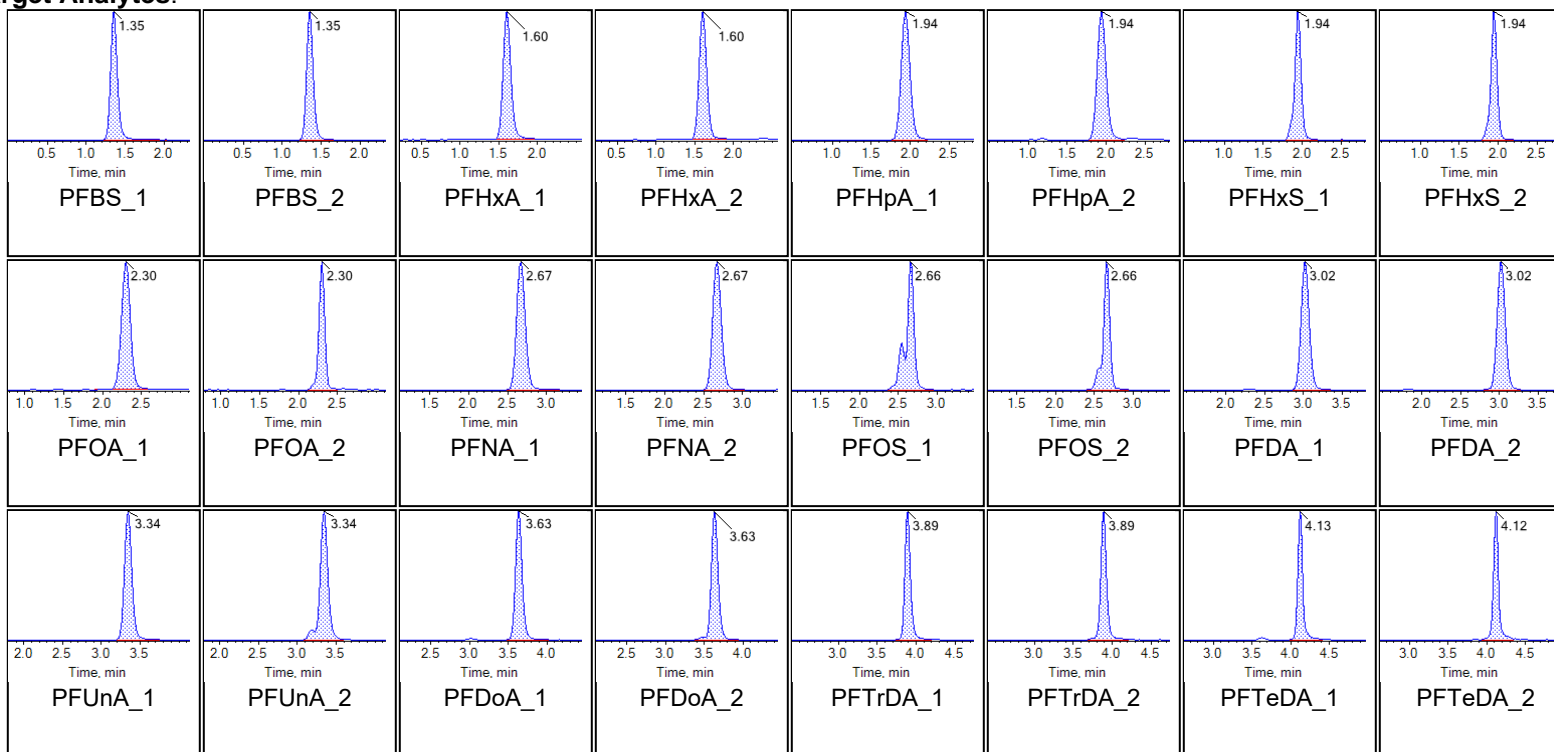
Internal Standards:



Sample Name	LE54 CCV	Injection Vial	26
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 11:05:25 PM	Data File	AE_11182020_5-369.wiff
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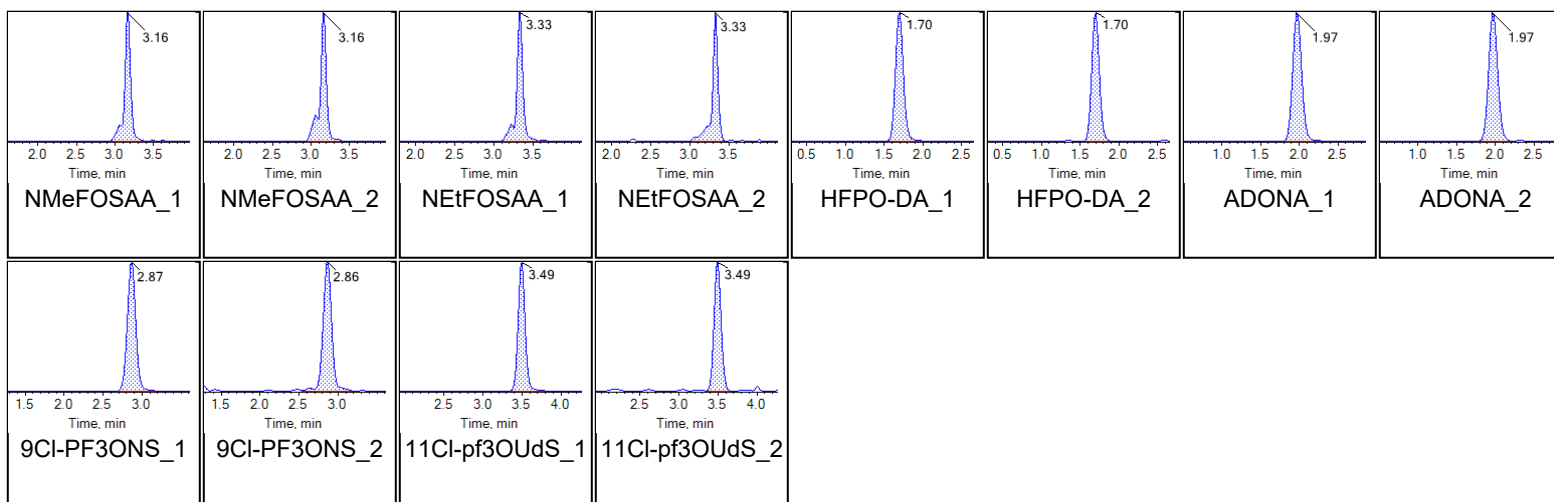
Chromatograms

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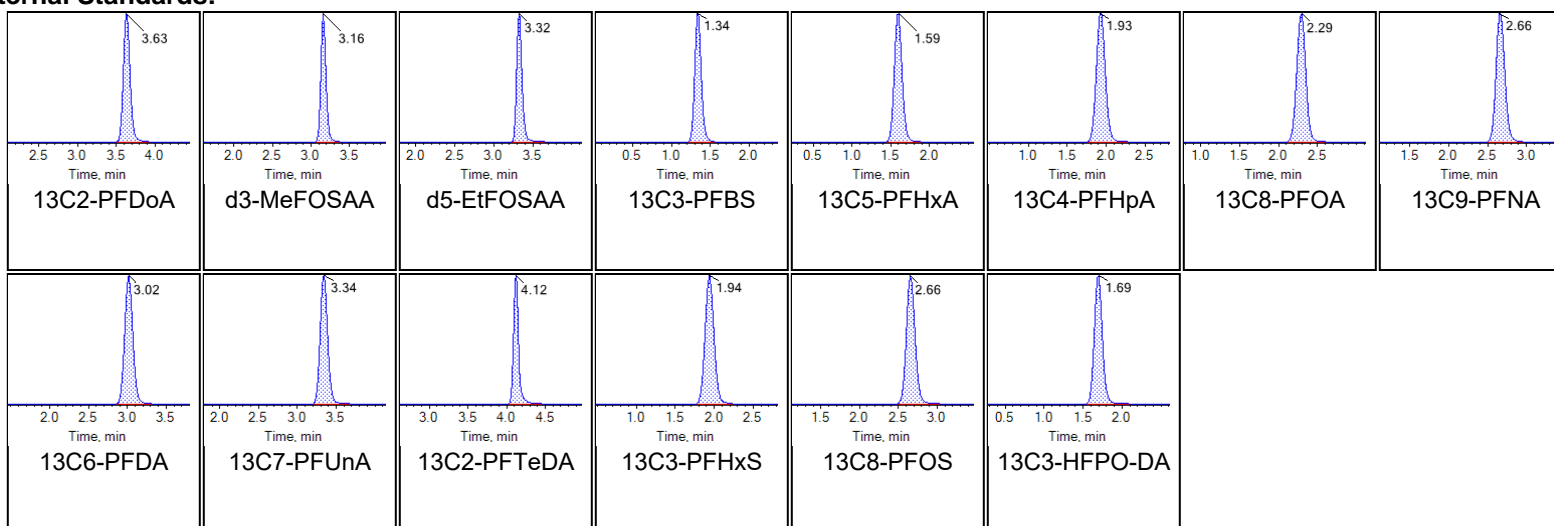




Chromatogram Report

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Printed: 25/11/2020 3:13:18 PM

Internal Standards:





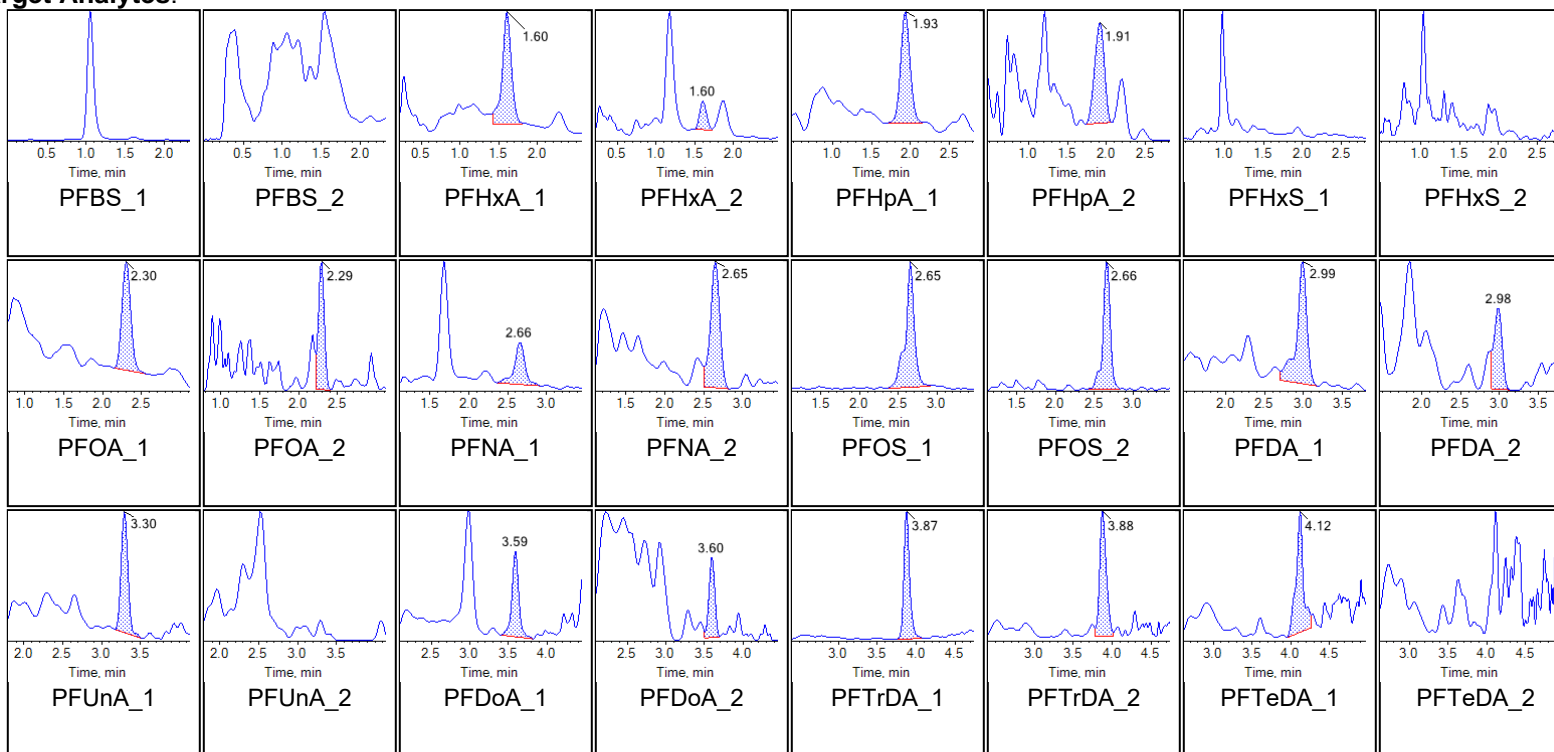
Chromatogram Report

Created with Analyst Reporter
Printed: 25/11/2020 3:13:18 PM

Sample Name	G2209-FS(0)	Injection Vial	27
Sample ID	CBD-AOA-EB01-102820-GW	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 11:15:54 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

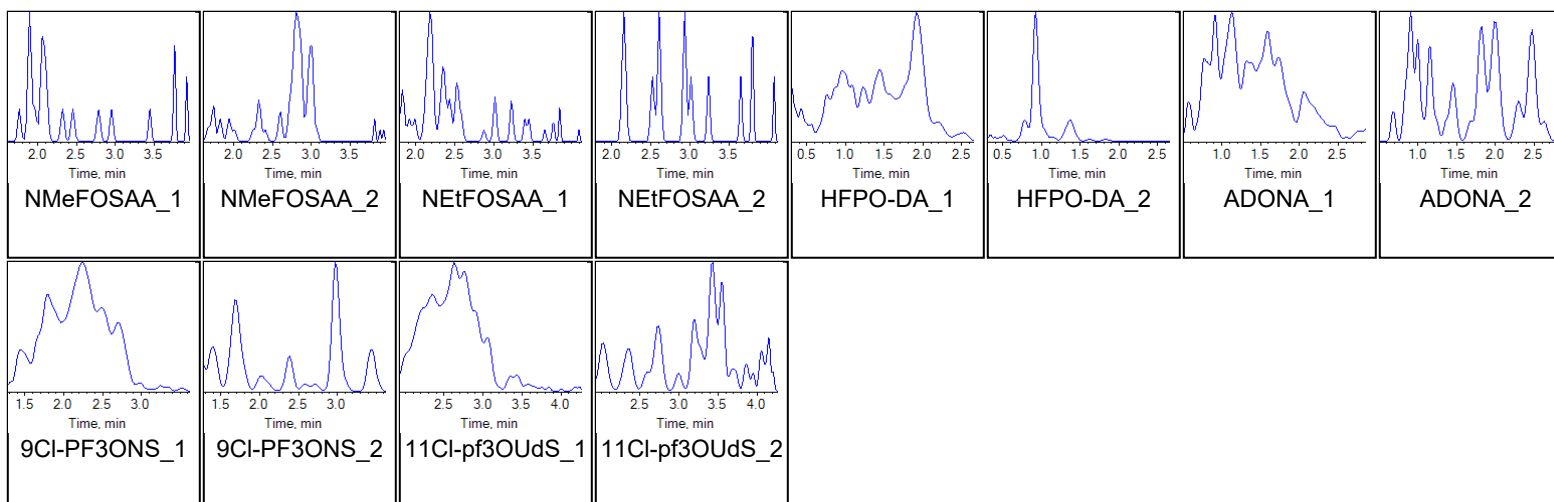
Chromatograms

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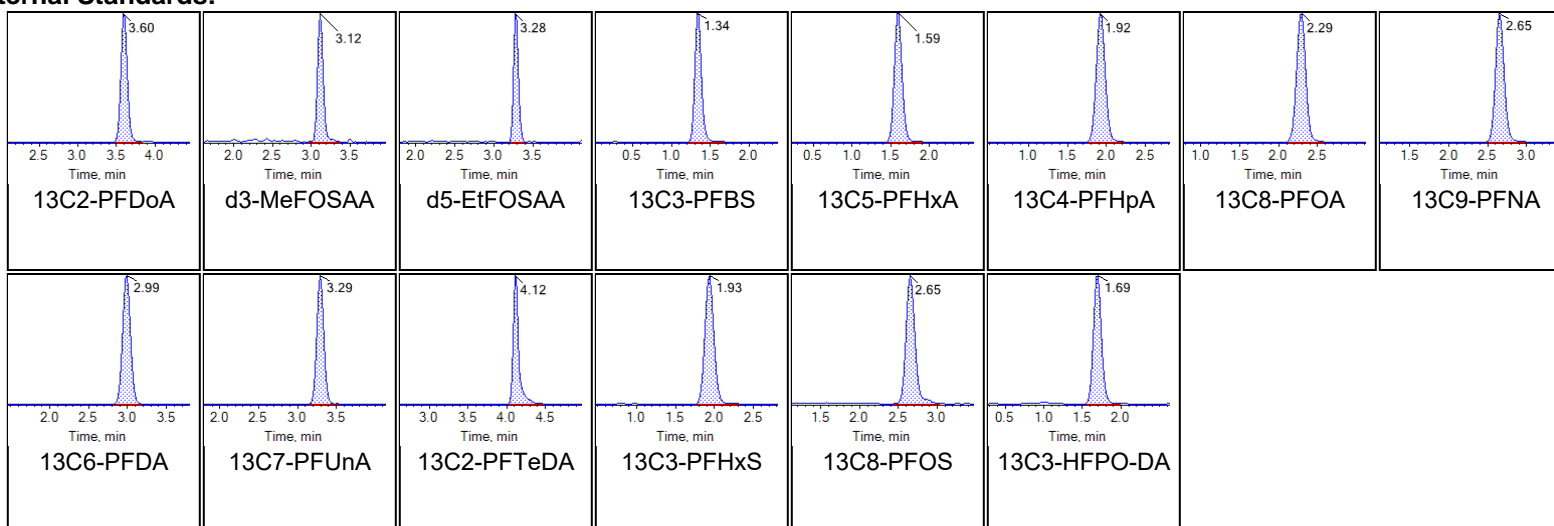




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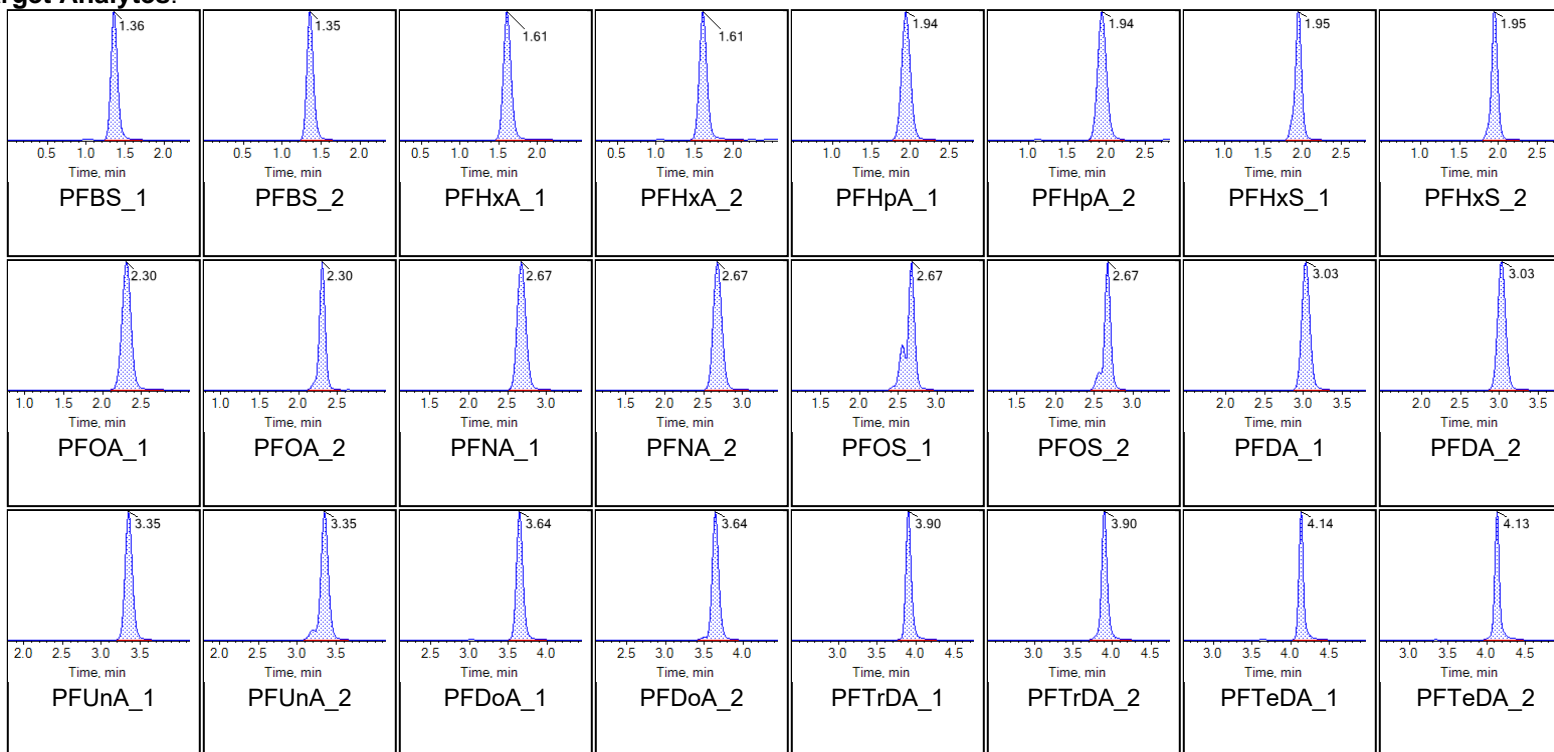
Internal Standards:



Sample Name	LE55 CCV	Injection Vial	32
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 12:08:13 AM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

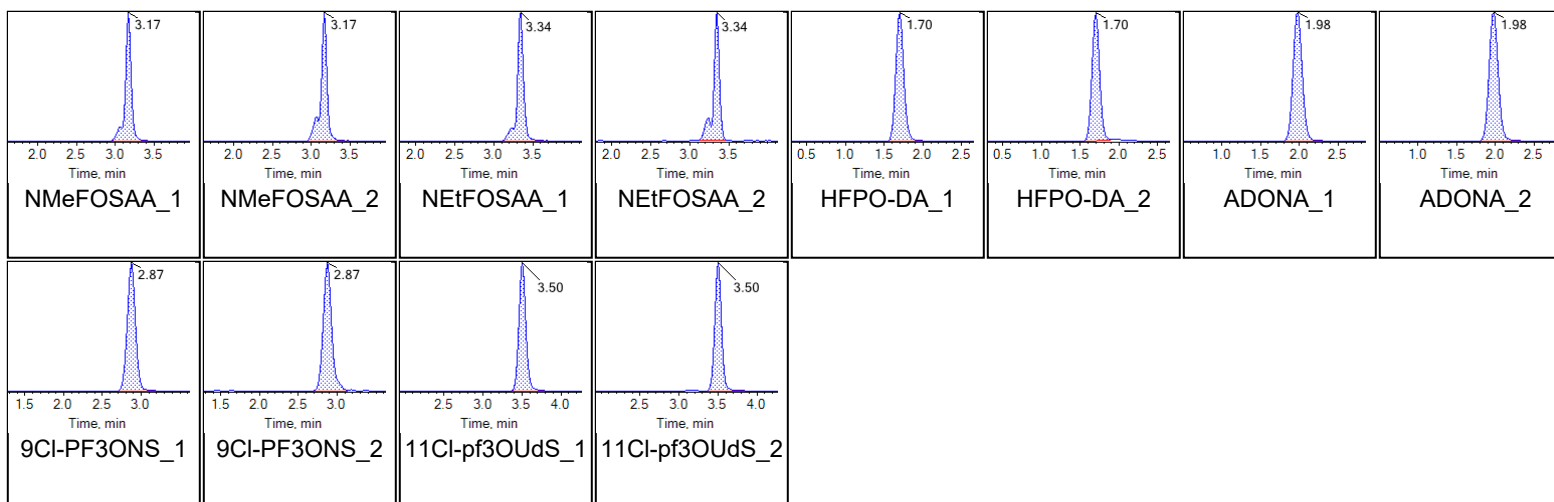
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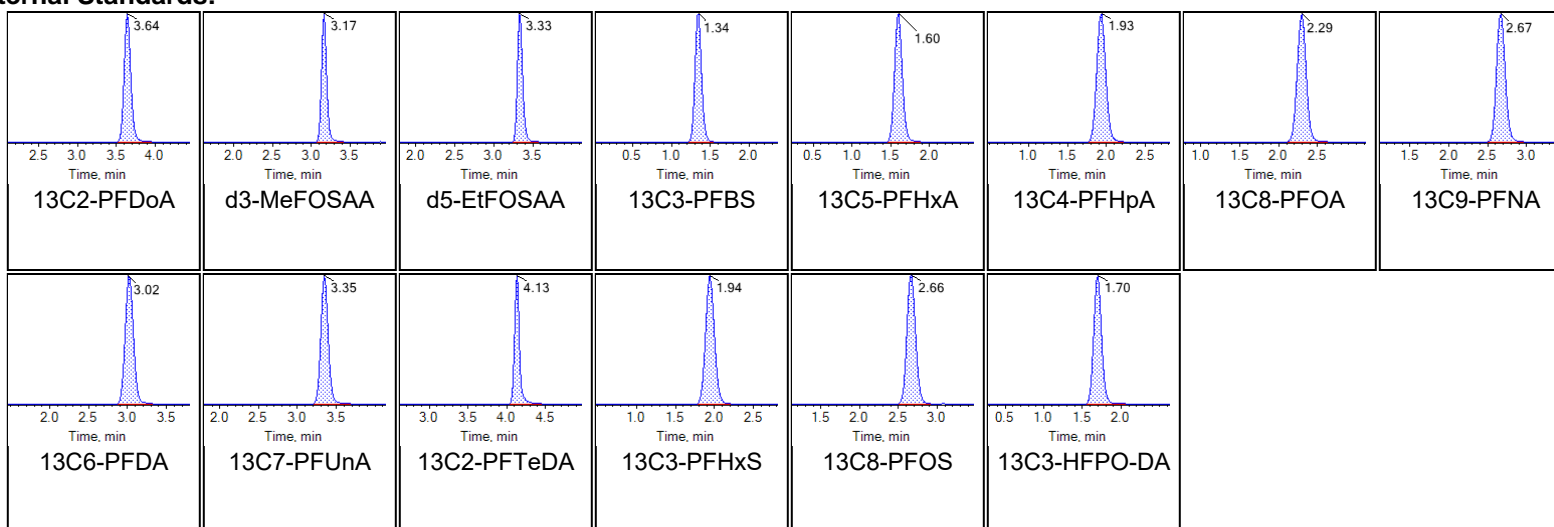




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Internal Standards:





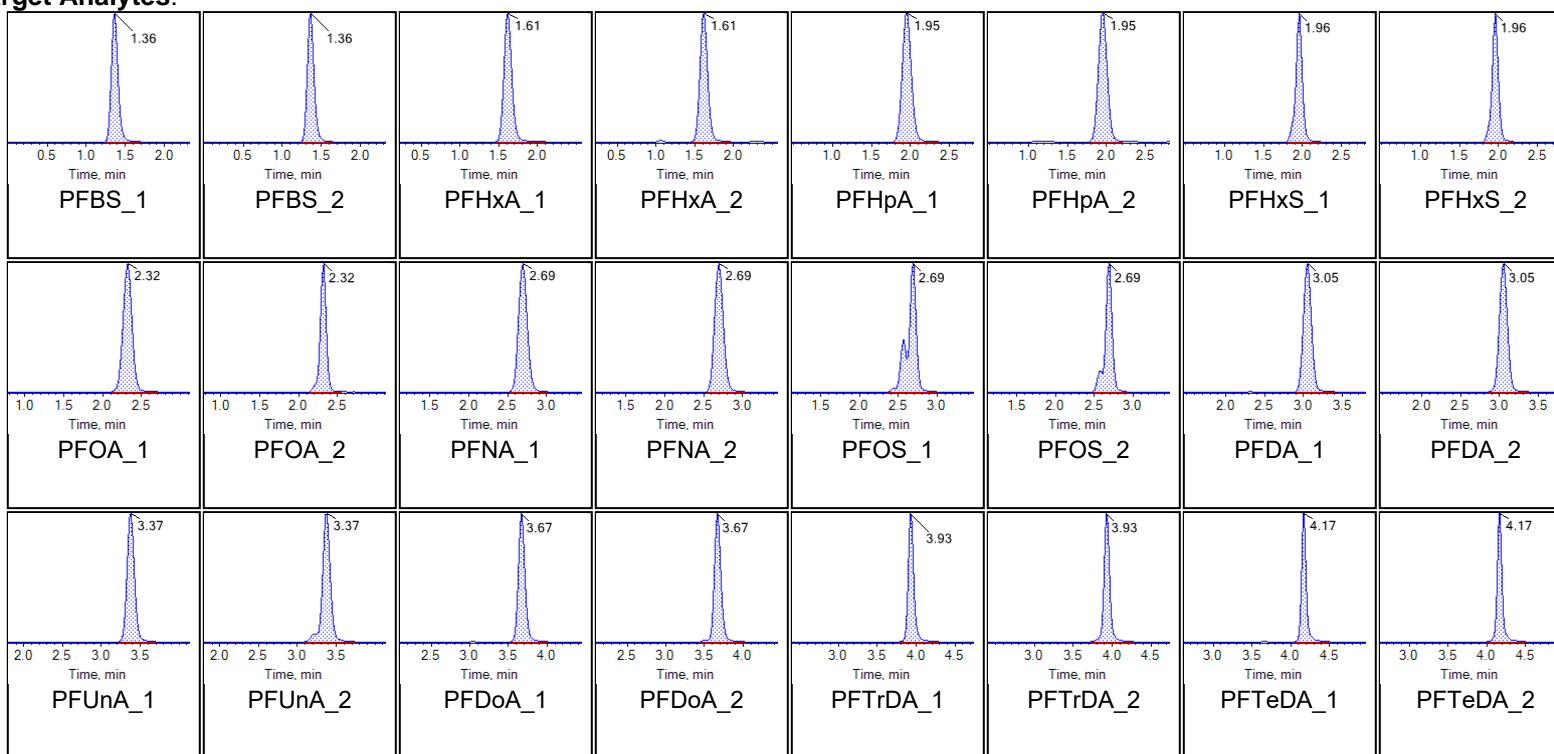
Chromatogram Report

Created with Analyst Reporter
Printed: 25/11/2020 3:13:18 PM

Sample Name	LE55 CCV	Injection Vial	1
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 4:18:03 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

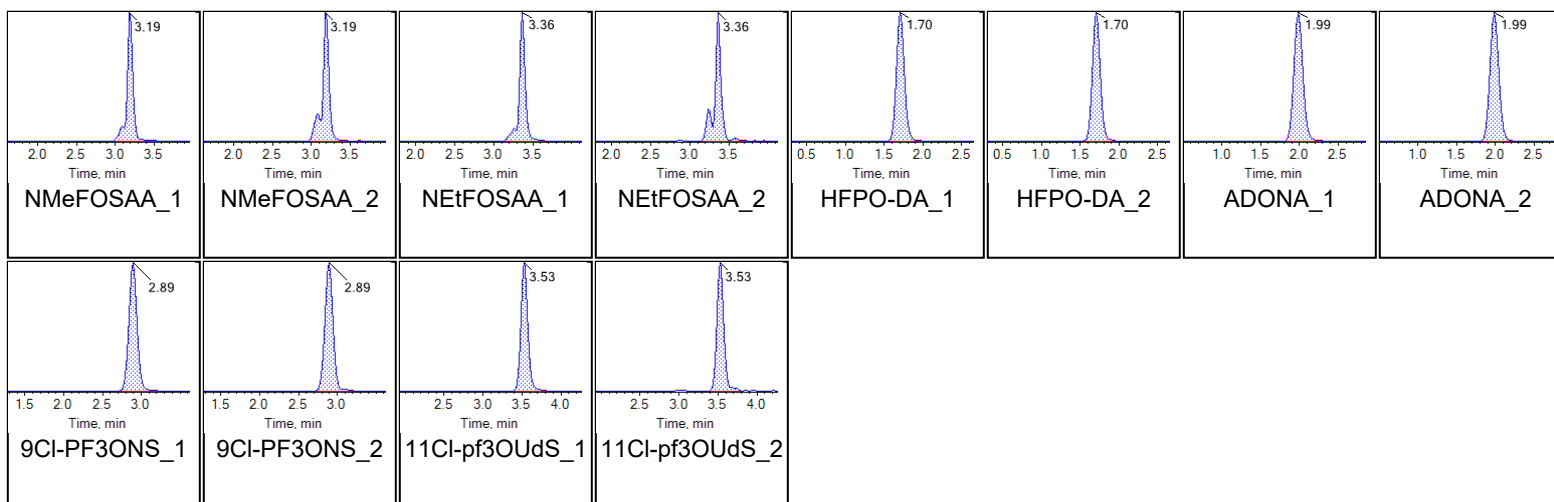
Chromatograms

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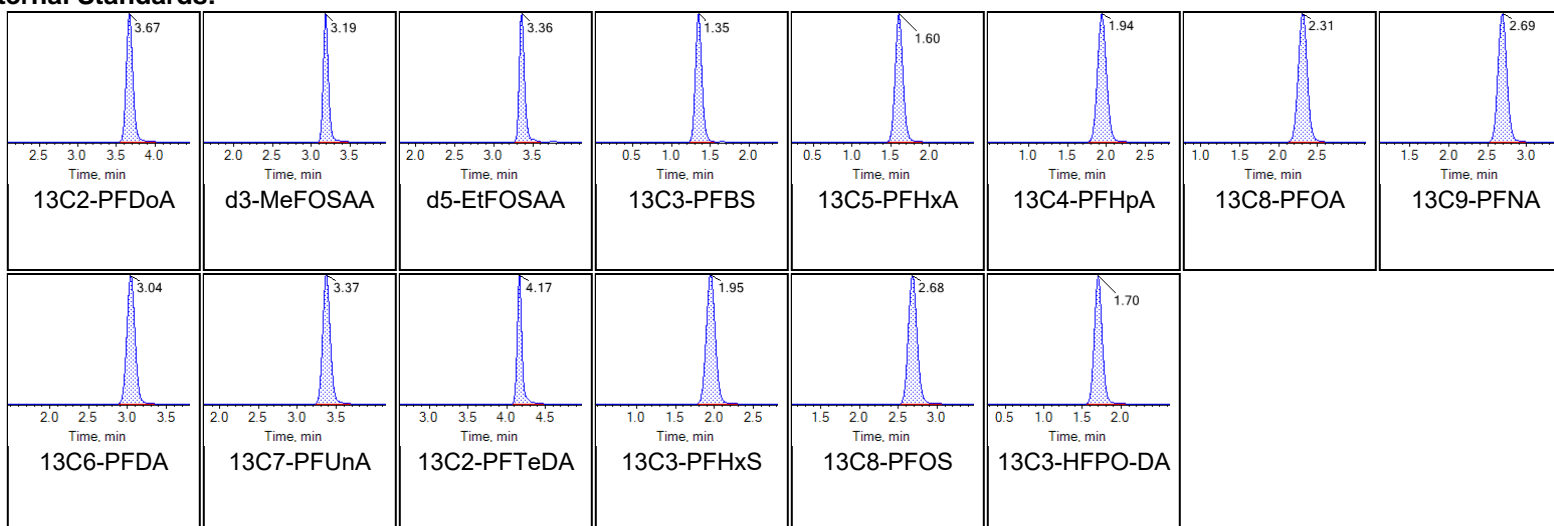




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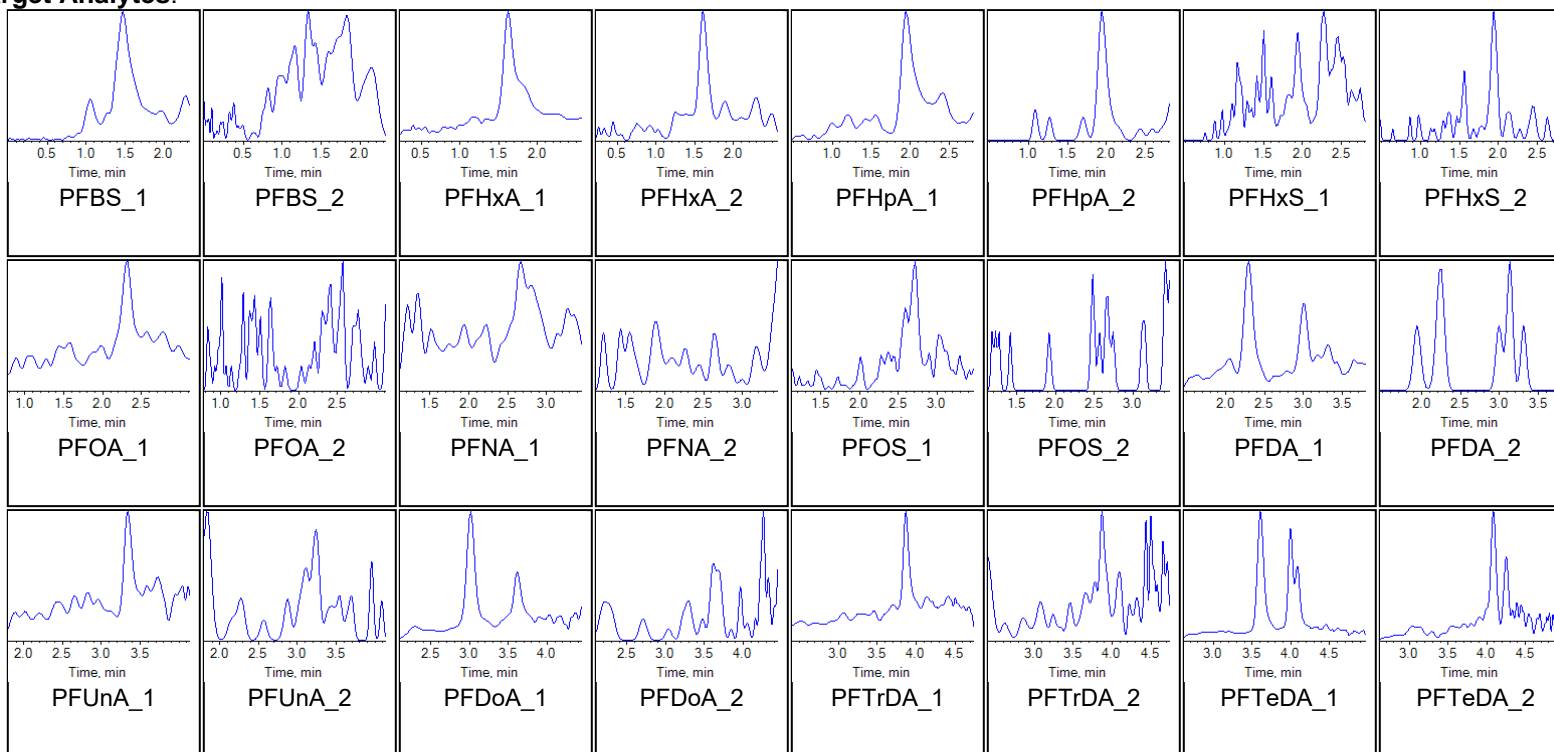
Chromatogram Report

Created with Analyst Reporter
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Sample Name	LE58 IB	Injection Vial	3
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 4:39:00 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

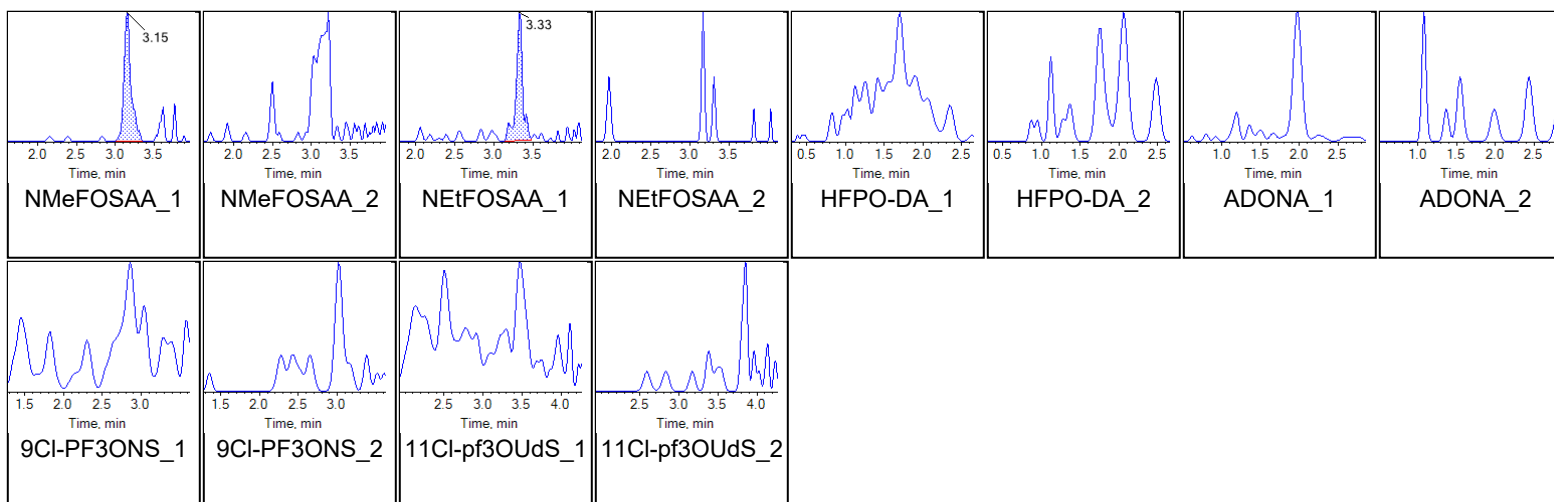
Chromatograms

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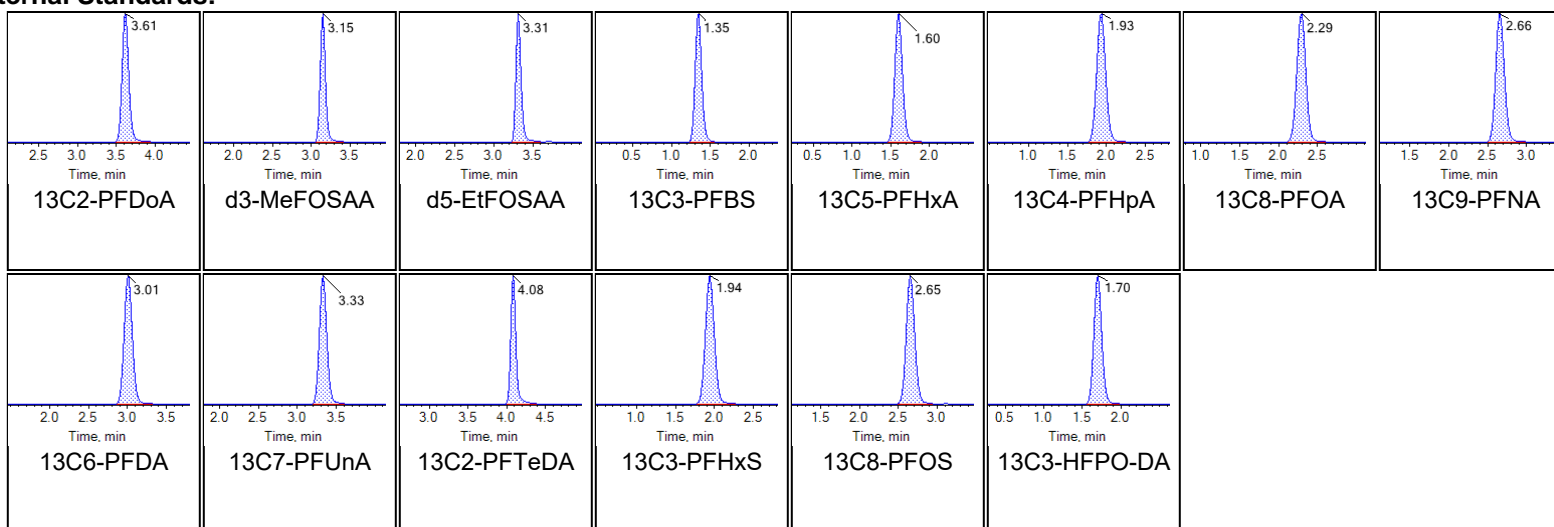




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Internal Standards:





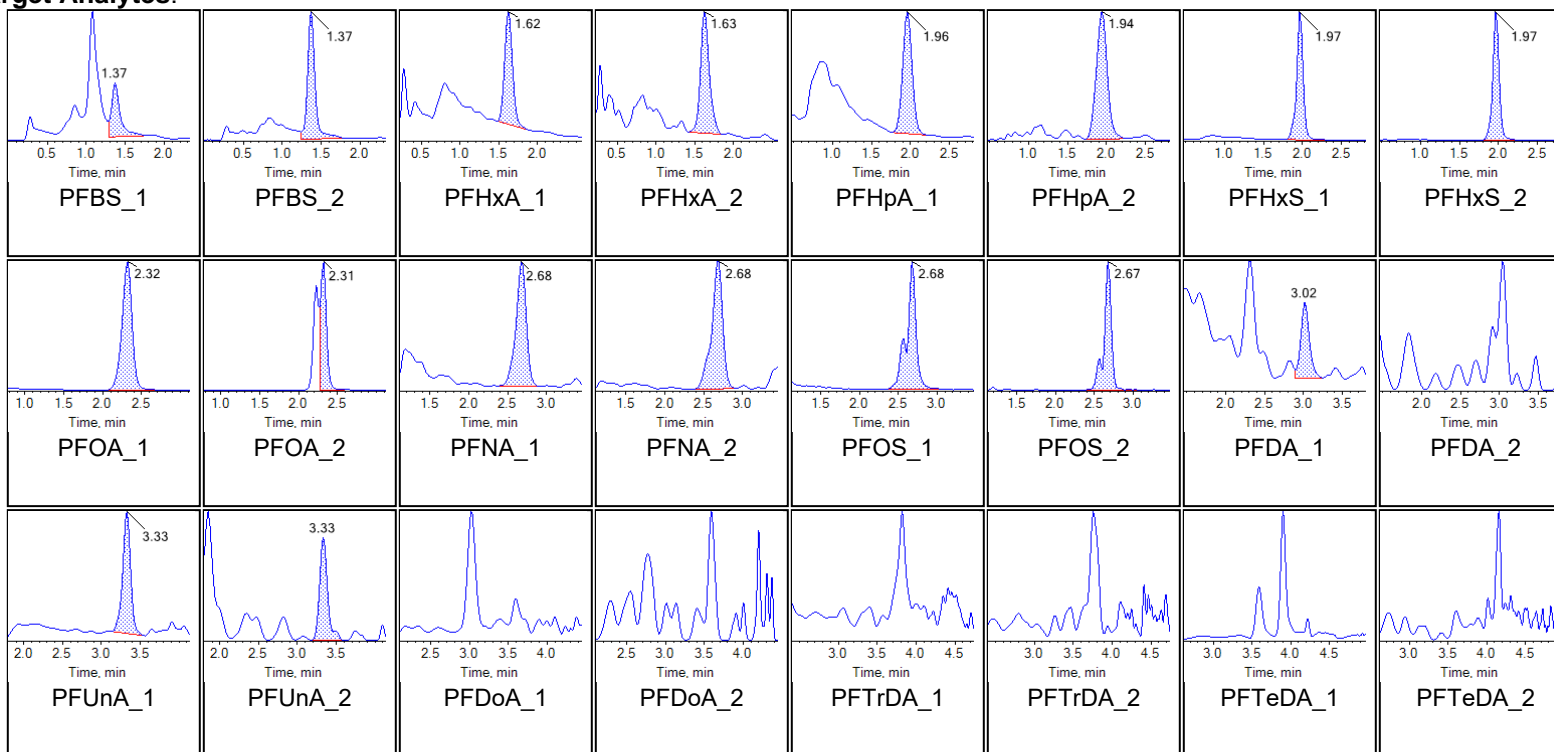
Chromatogram Report

Created with Analyst Reporter
Printed: 25/11/2020 3:13:18 PM

Sample Name	G2203-FS(0)	Injection Vial	3
Sample ID	CBD-AOA-MW06-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 7:17:24 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

Chromatograms

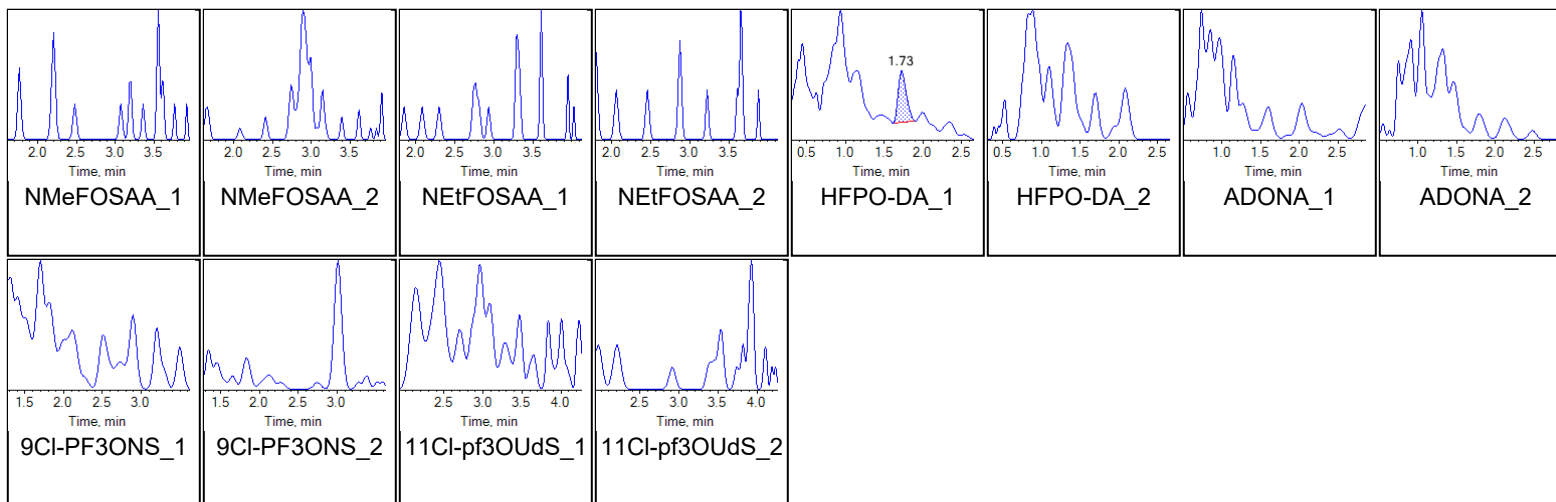
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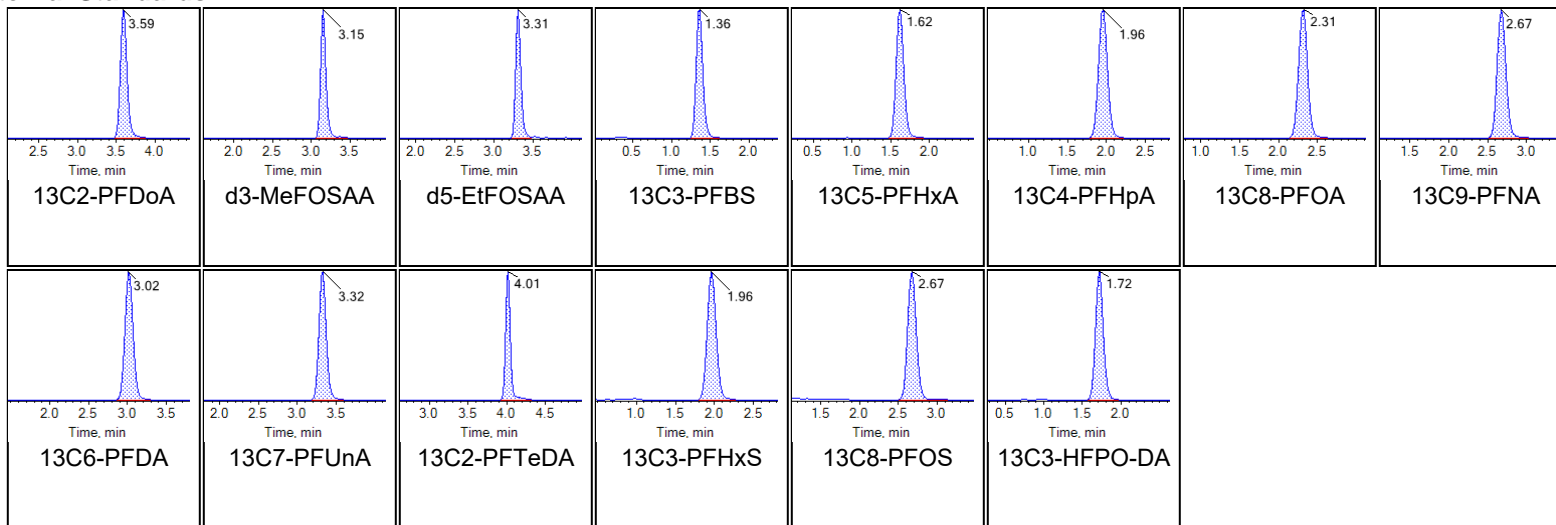


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Internal Standards:





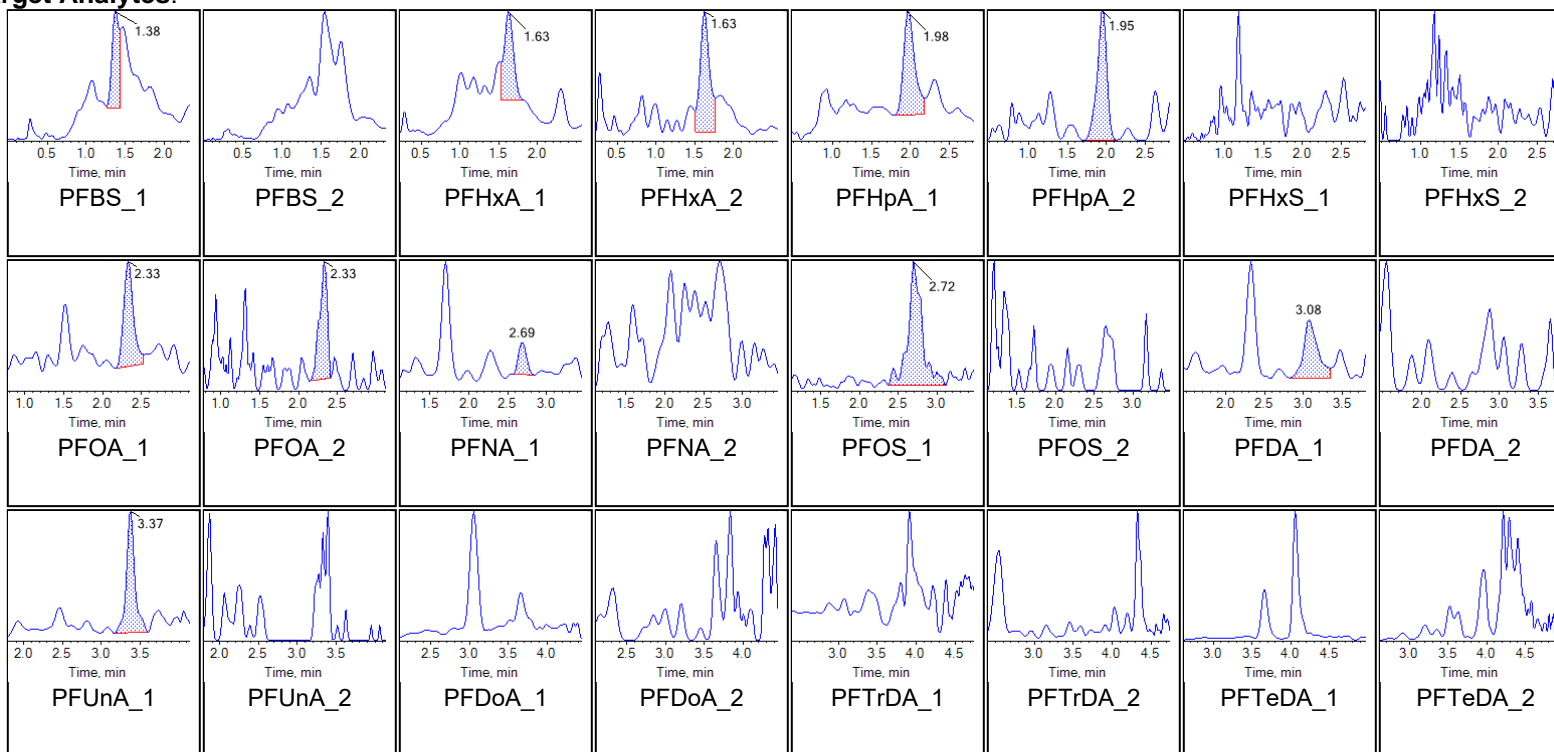
Chromatogram Report

Created with Analyst Reporter
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Sample Name	G2204-FS(0)	Injection Vial	4
Sample ID	CBD-AOA-EB01-102720-GW	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 7:27:53 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

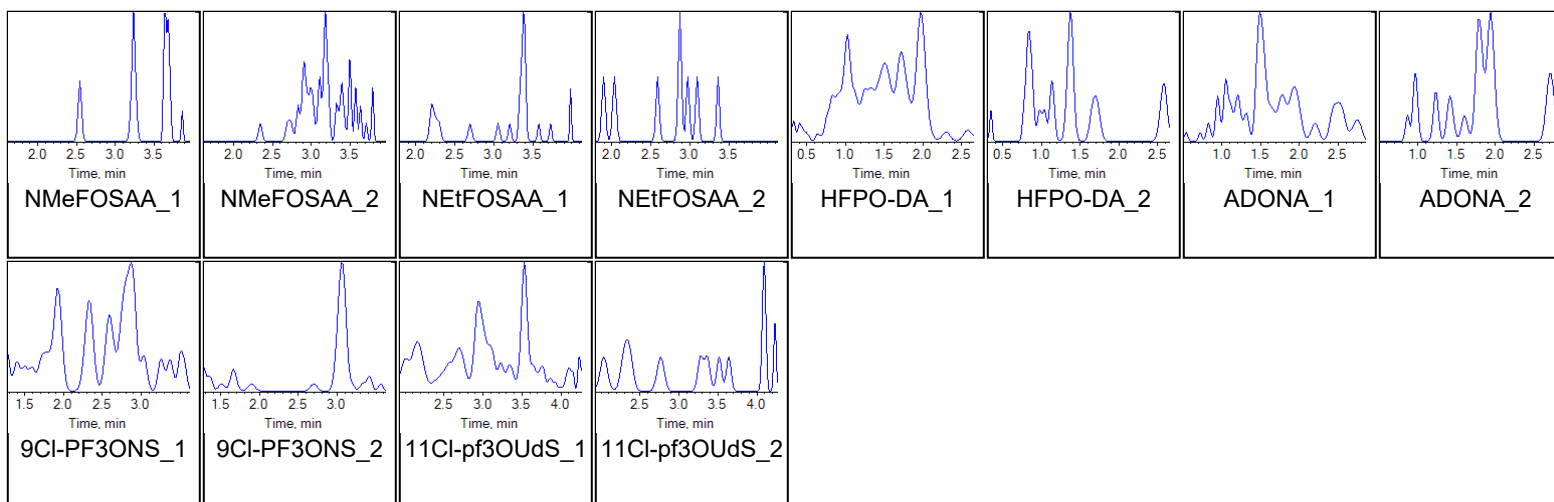
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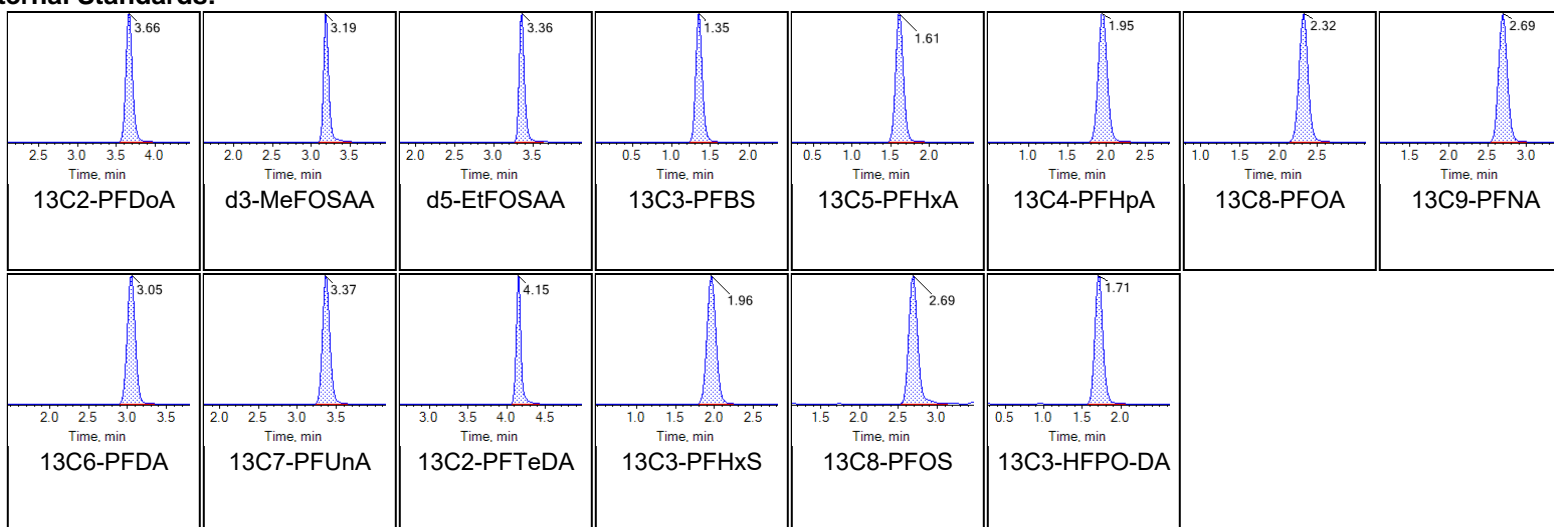




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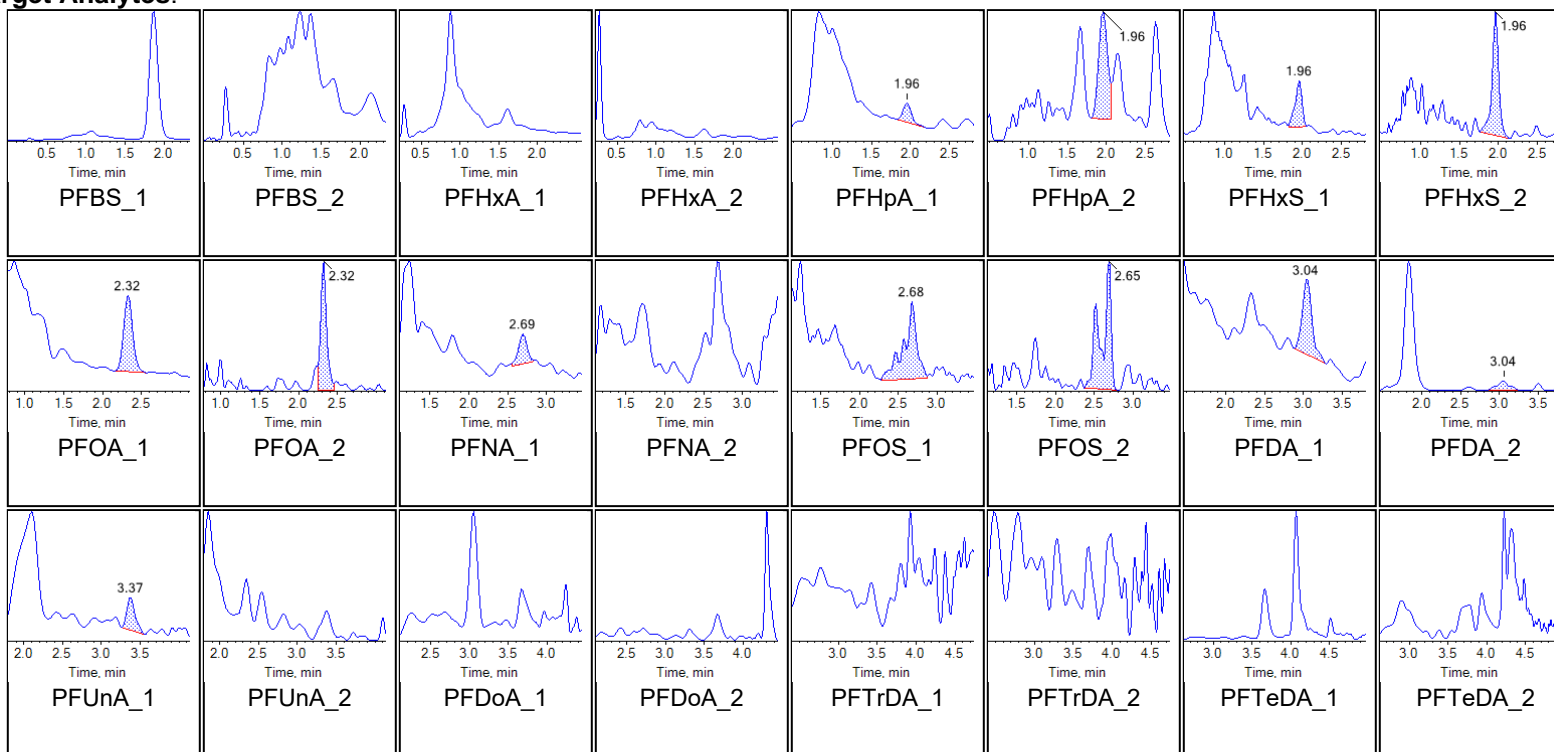
Internal Standards:



Sample Name	G2205-FS(0)	Injection Vial	5
Sample ID	CBD-AOA-MW12-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 7:38:20 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

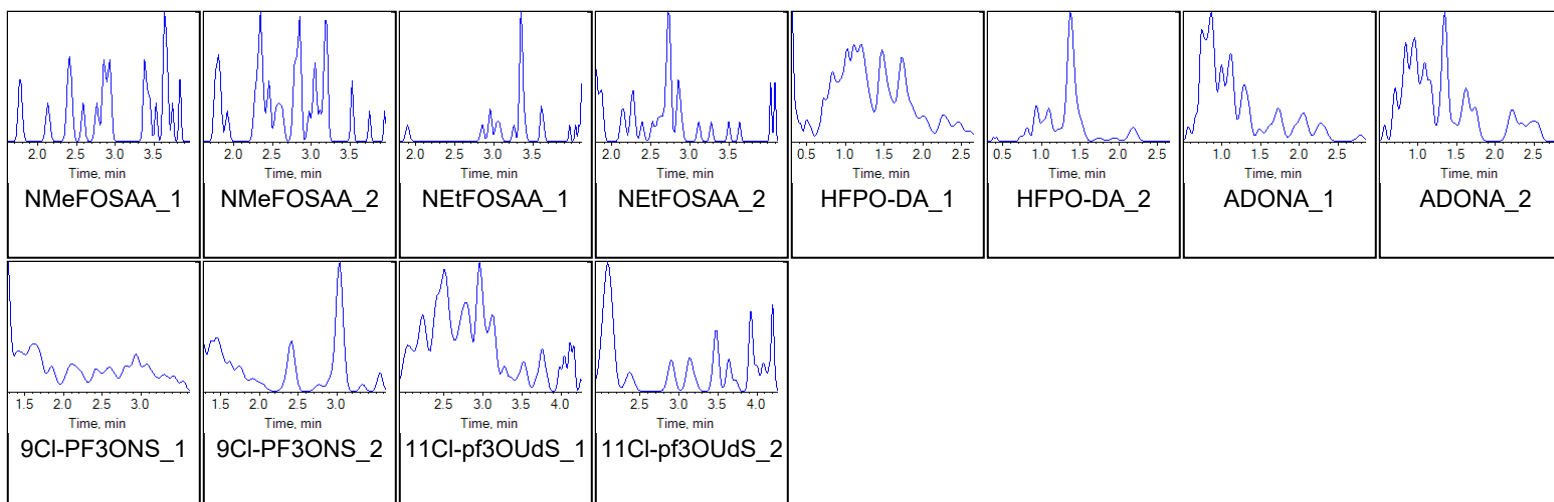
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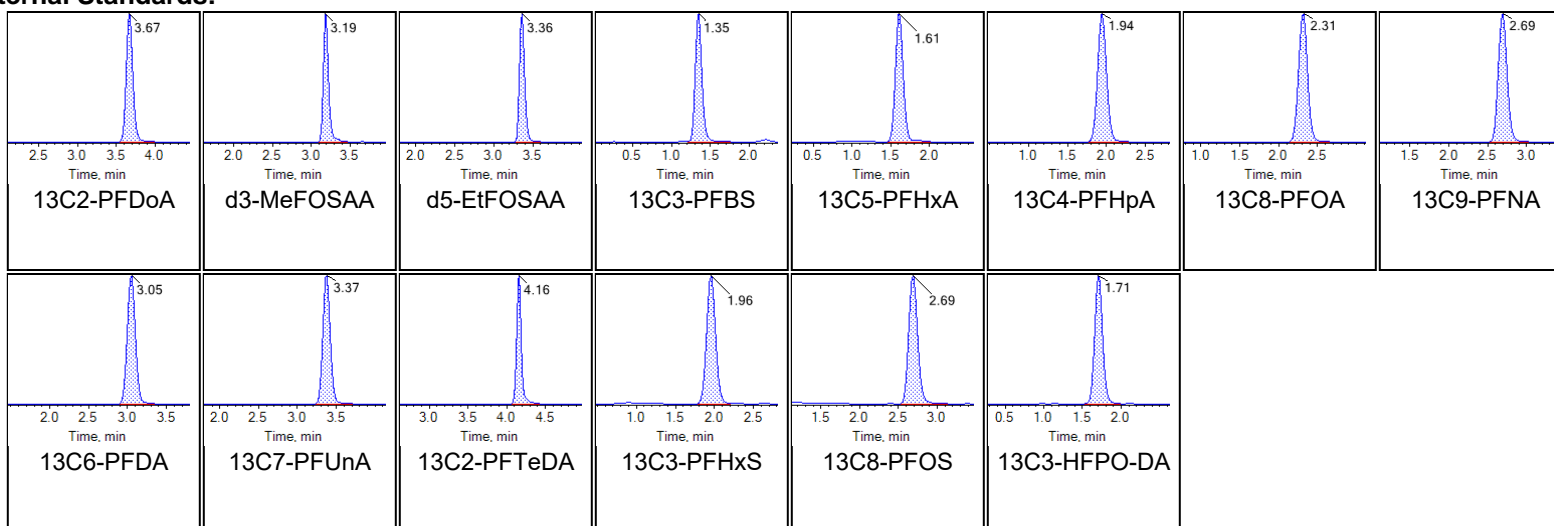




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Internal Standards:





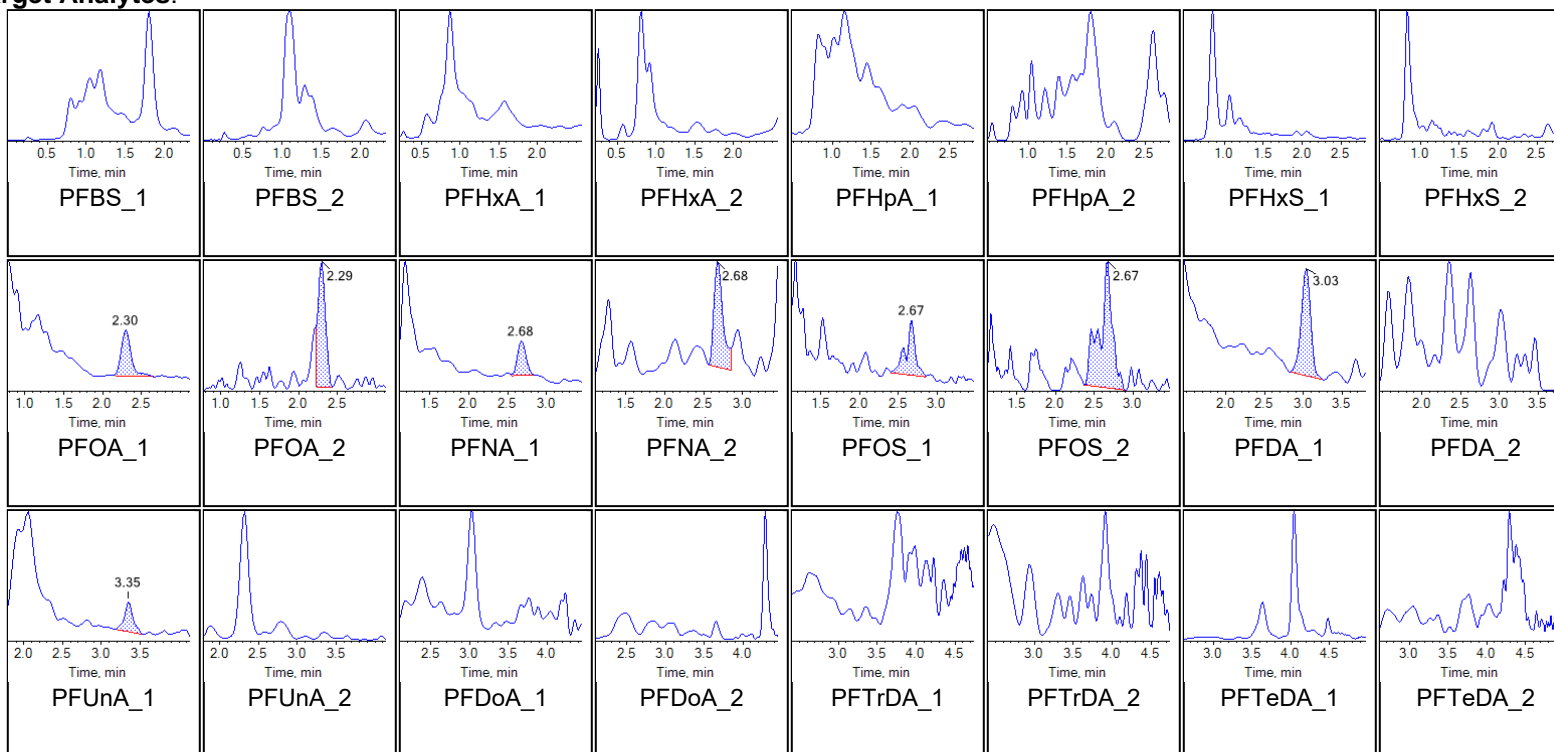
Chromatogram Report

Created with Analyst Reporter
Printed: 25/11/2020 3:13:18 PM

Sample Name	G2206-FS(0)	Injection Vial	6
Sample ID	CBD-AOA-MW11-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 7:48:47 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

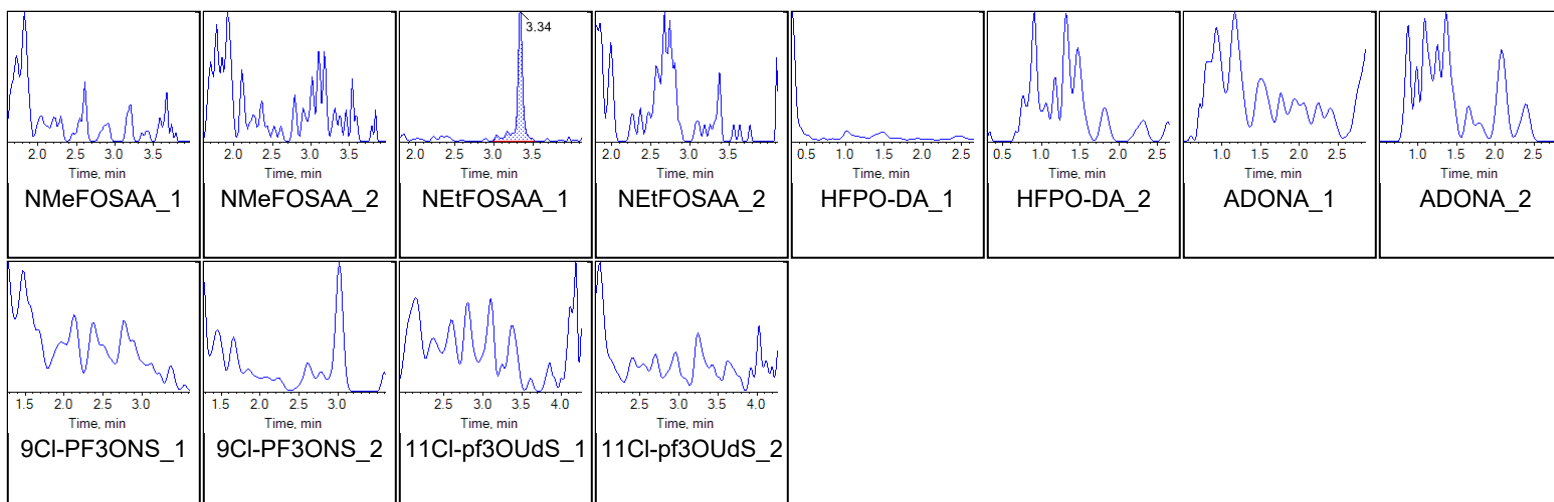
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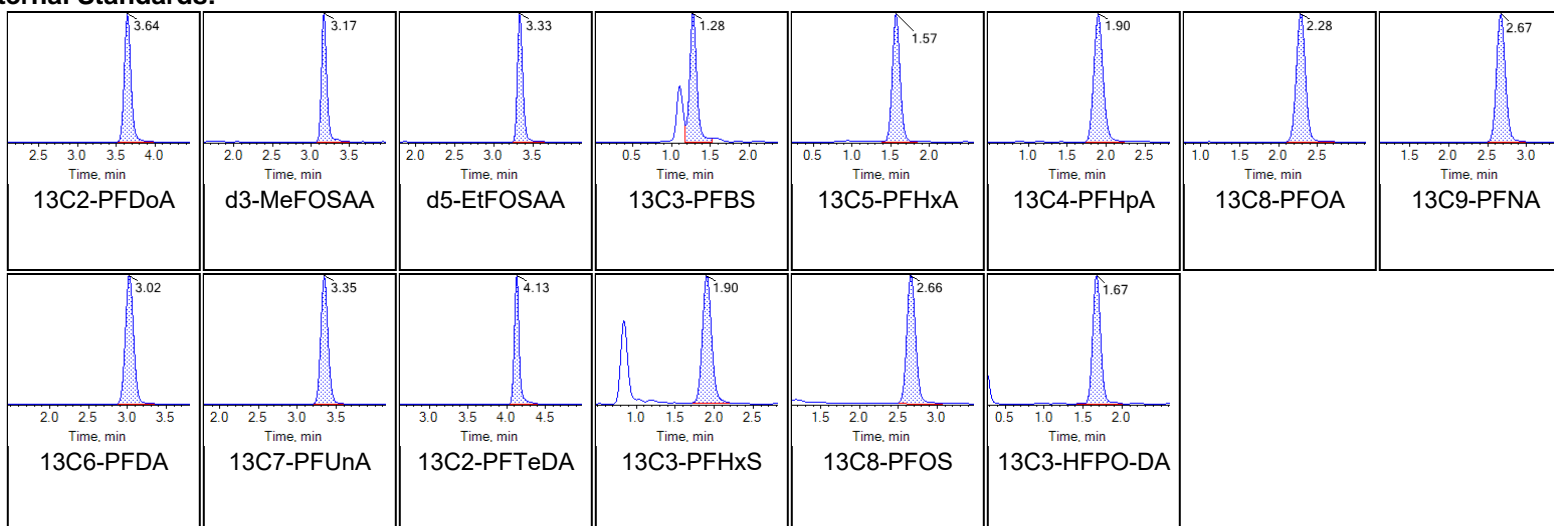




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Internal Standards:





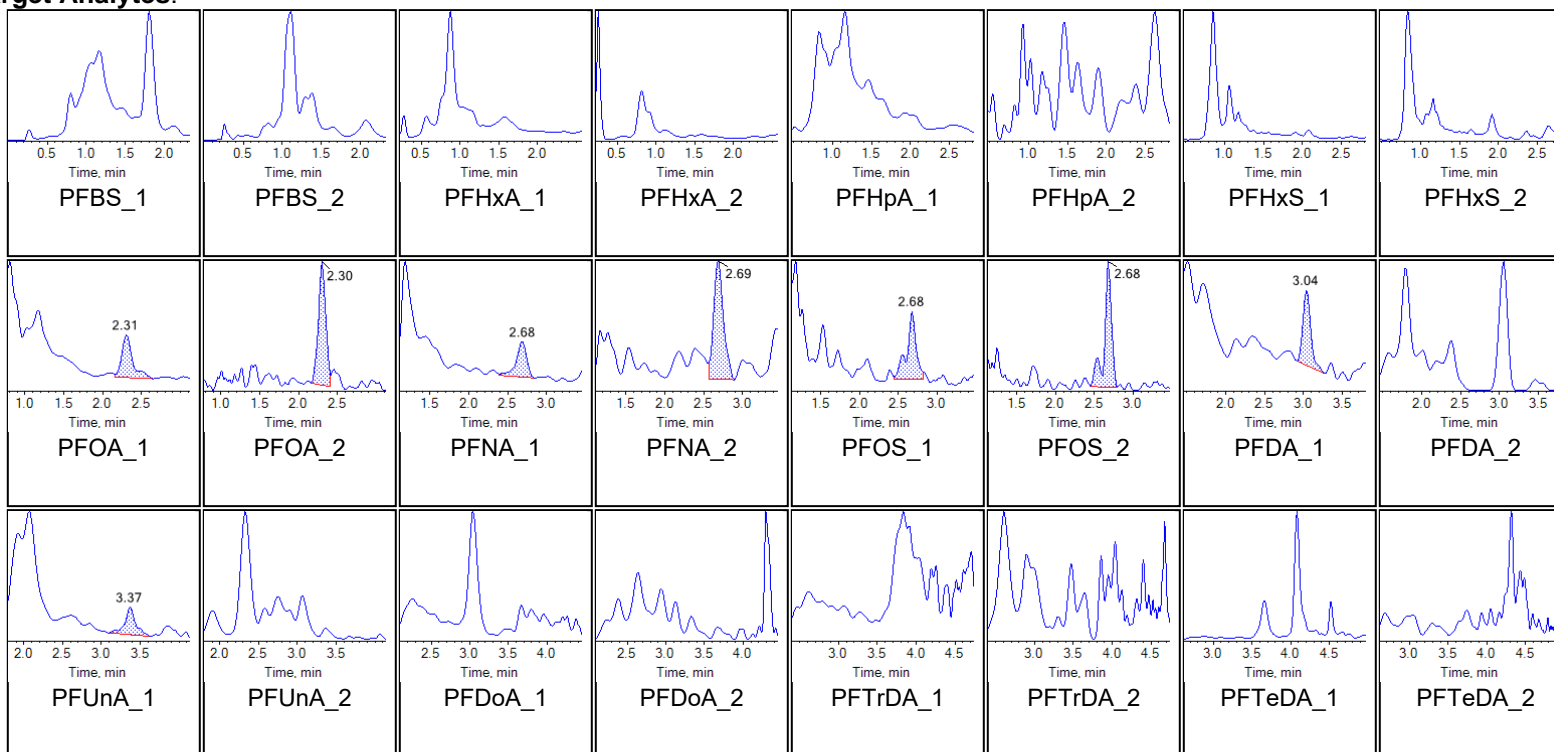
Chromatogram Report

Created with Analyst Reporter
Printed: 25/11/2020 3:13:18 PM

Sample Name	G2207-FS(0)	Injection Vial	7
Sample ID	CBD-AOA-MW11P-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 7:59:14 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

Chromatograms

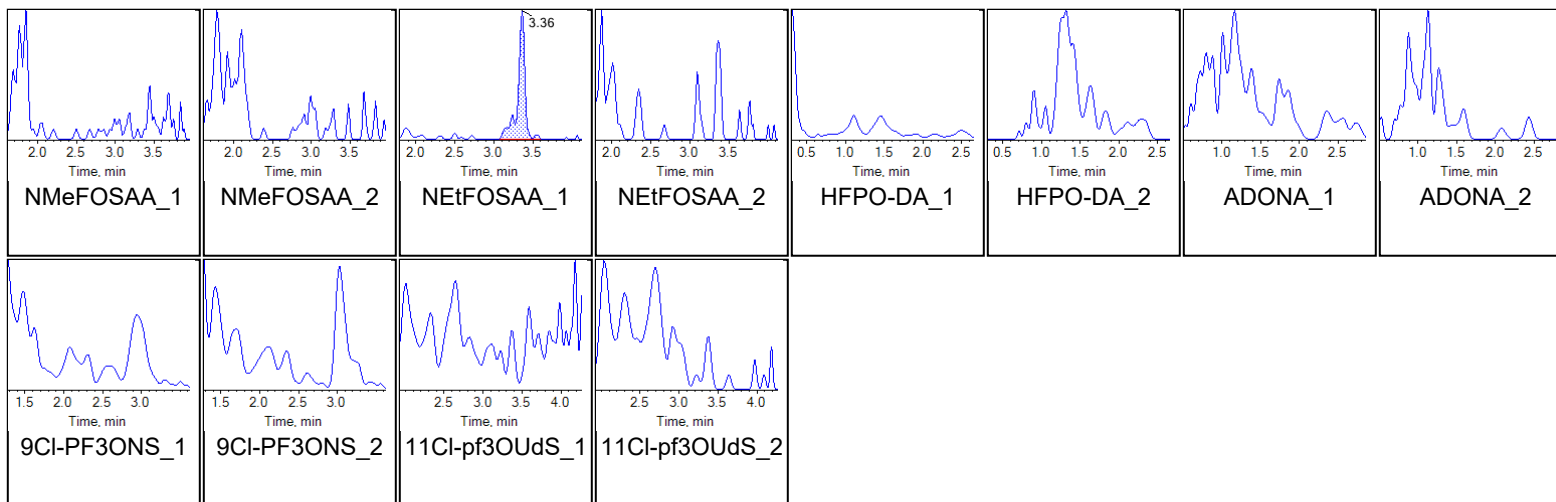
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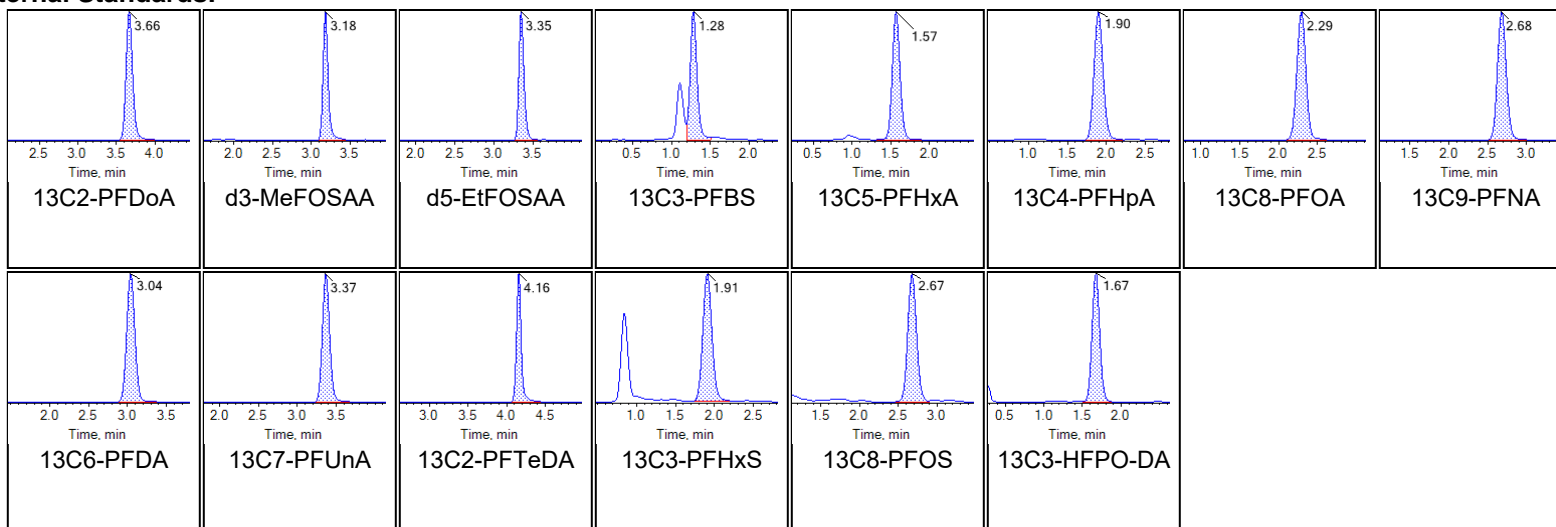


Chromatogram Report

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Internal Standards:





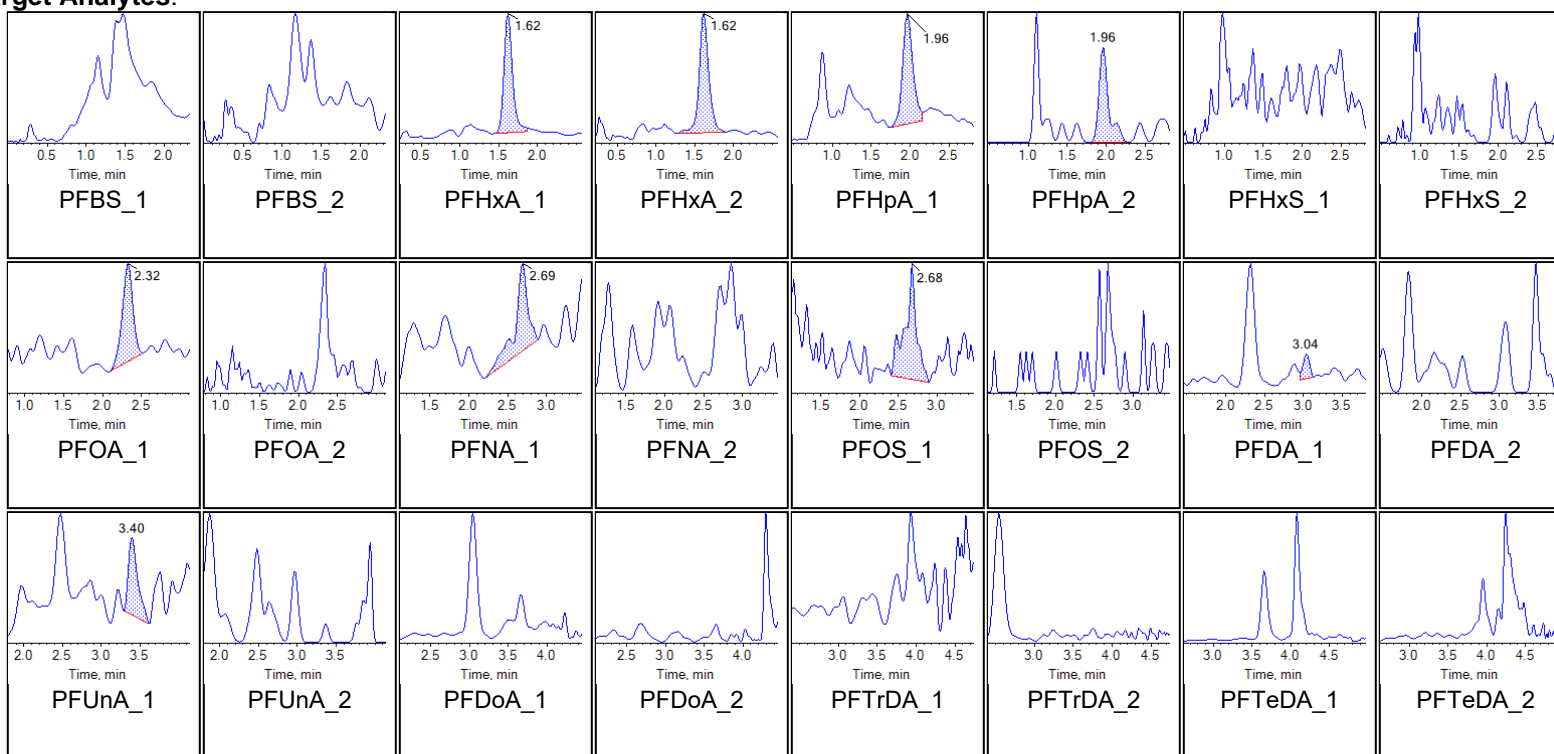
Chromatogram Report

Created with Analyst Reporter
Printed: 25/11/2020 3:13:18 PM

Sample Name	G2208-FS(0)	Injection Vial	8
Sample ID	CBD-AOA-FB01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 8:09:41 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

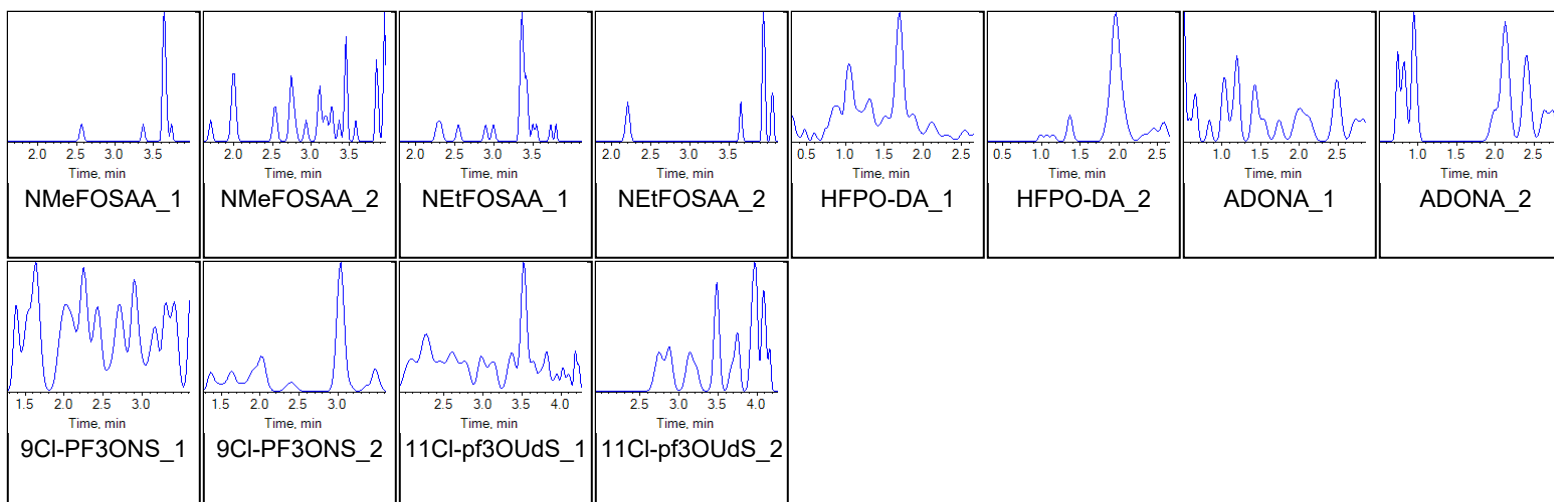
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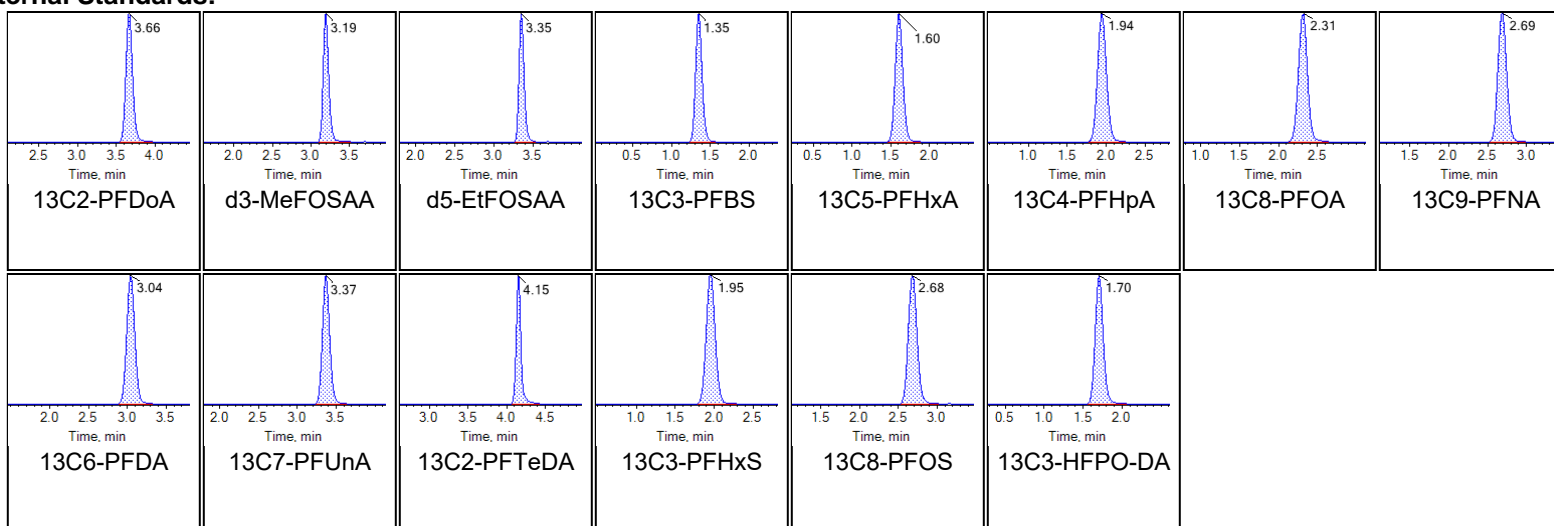




Chromatogram Report

Created with Analyst Reporter
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Internal Standards:





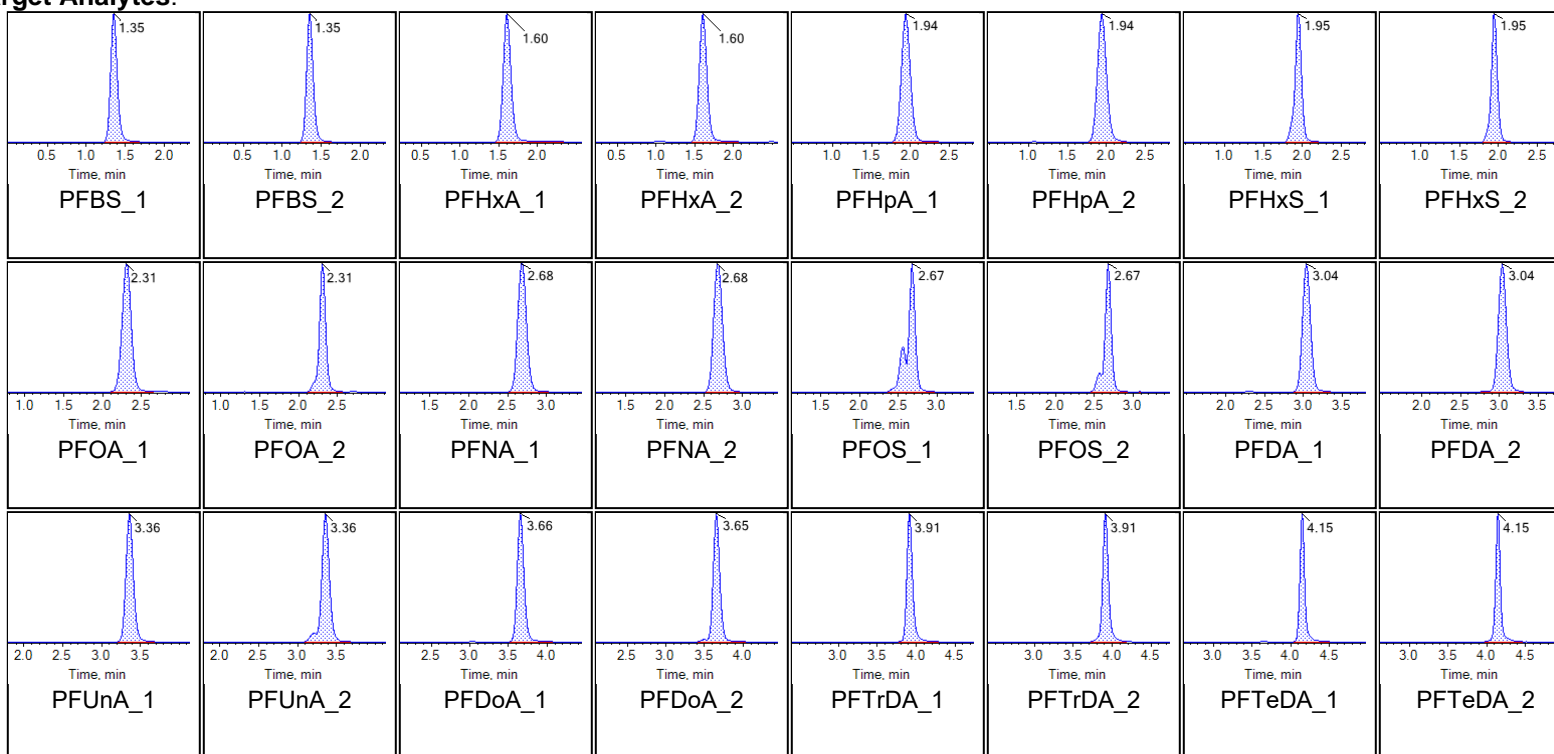
Chromatogram Report

Created with Analyst Reporter
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Sample Name	LE55 CCV	Injection Vial	11
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 8:41:06 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

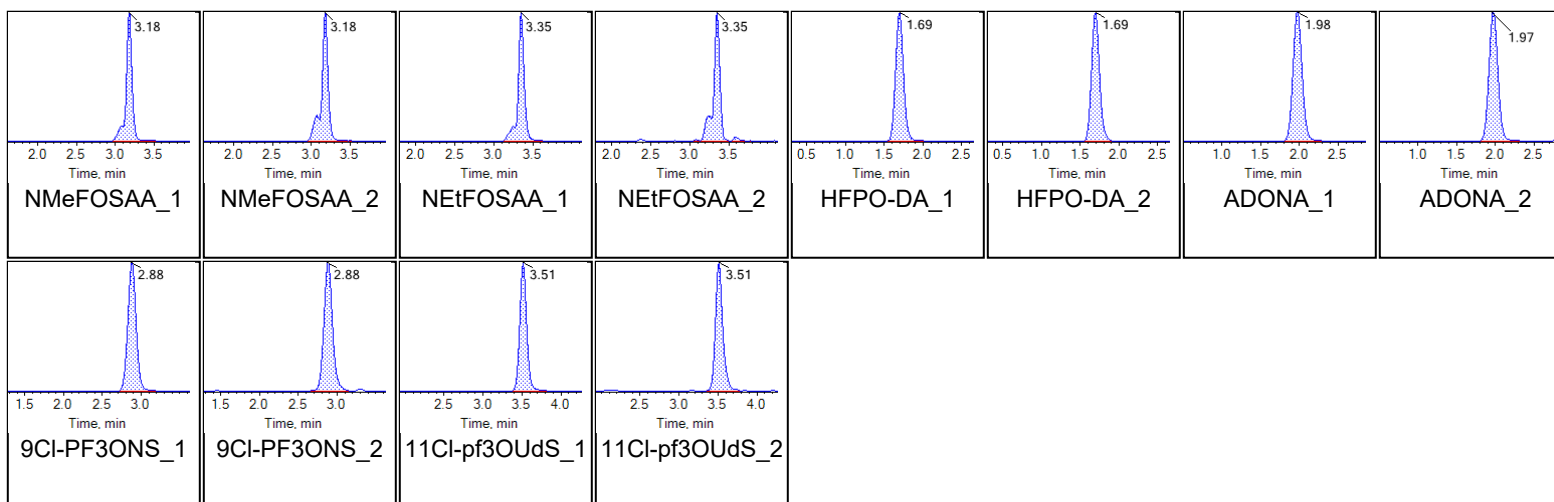
Chromatograms

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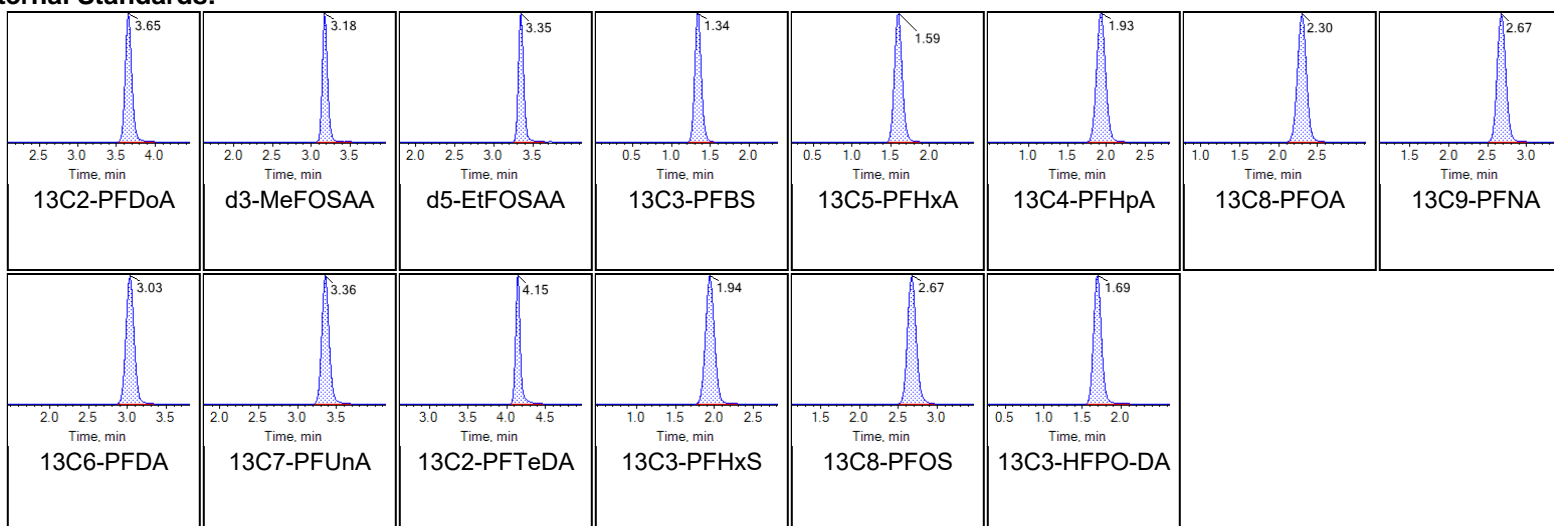




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Internal Standards:





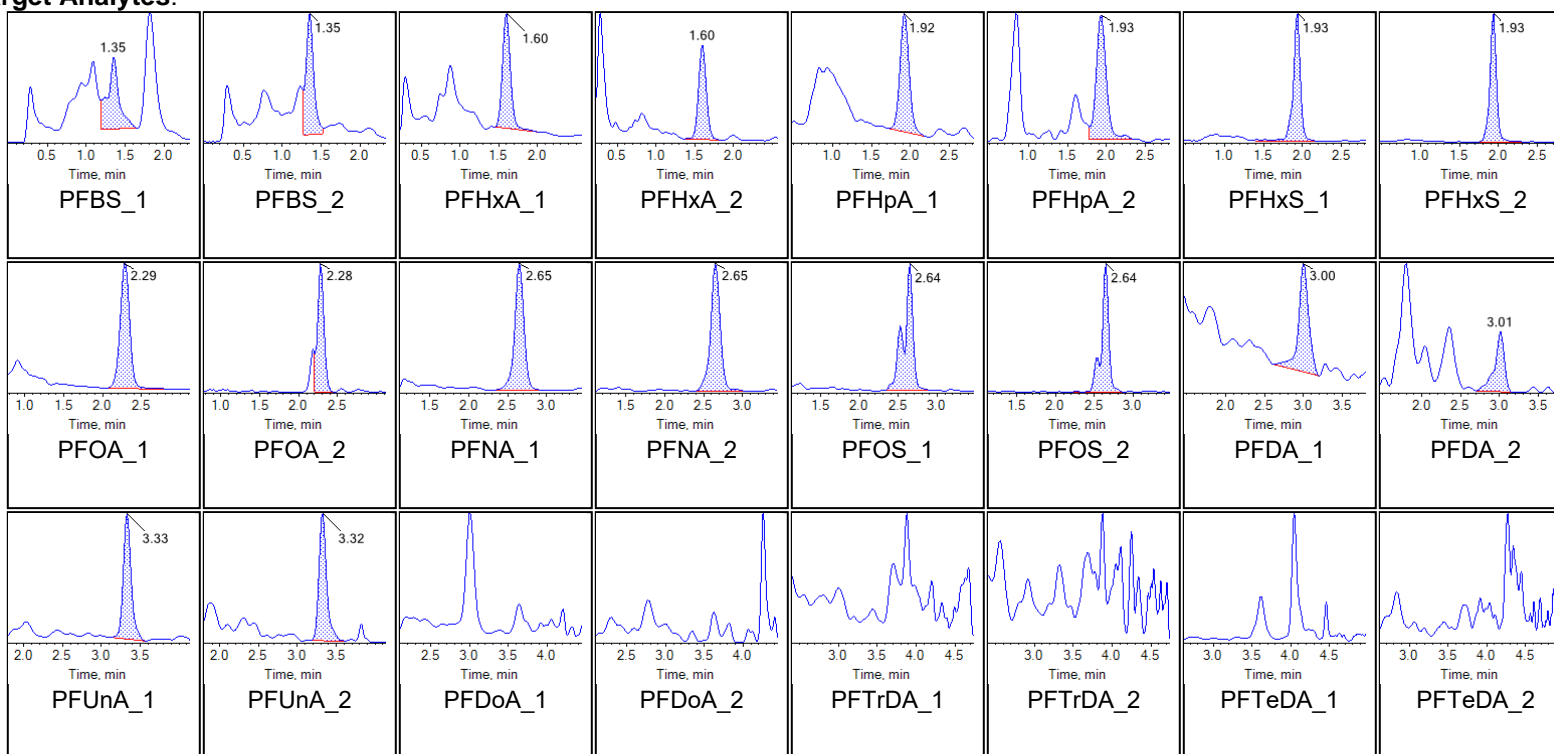
Chromatogram Report

Created with Analyst Reporter
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Sample Name	G2210-FS(0)	Injection Vial	12
Sample ID	CBD-AOA-MW14-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 8:51:35 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

Chromatograms

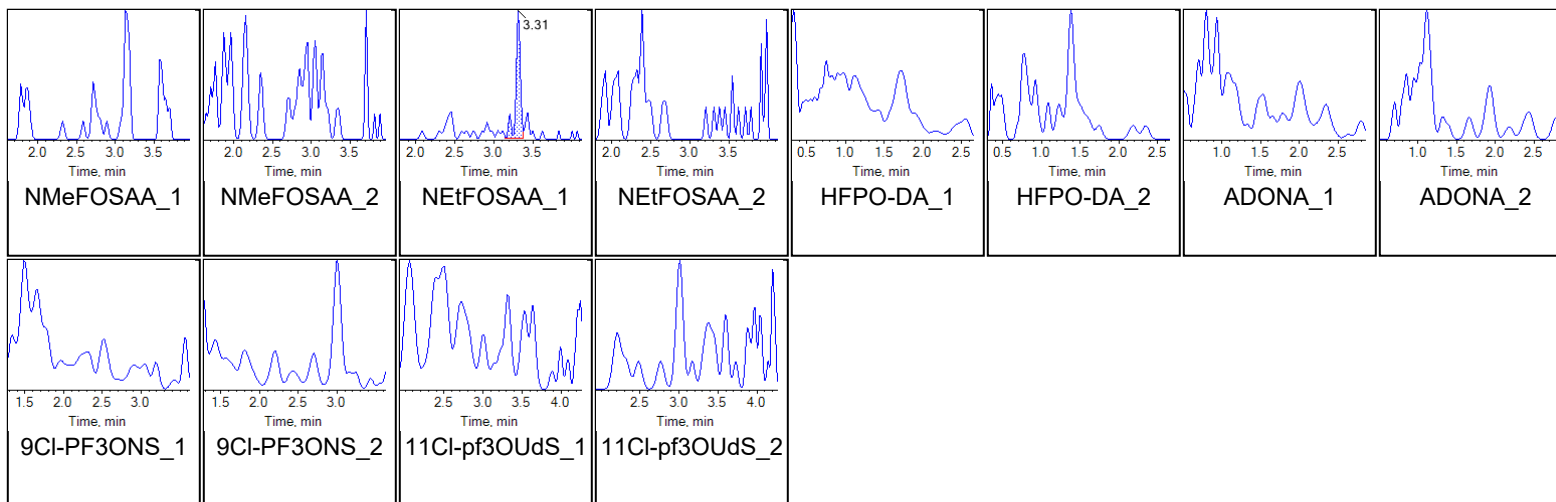
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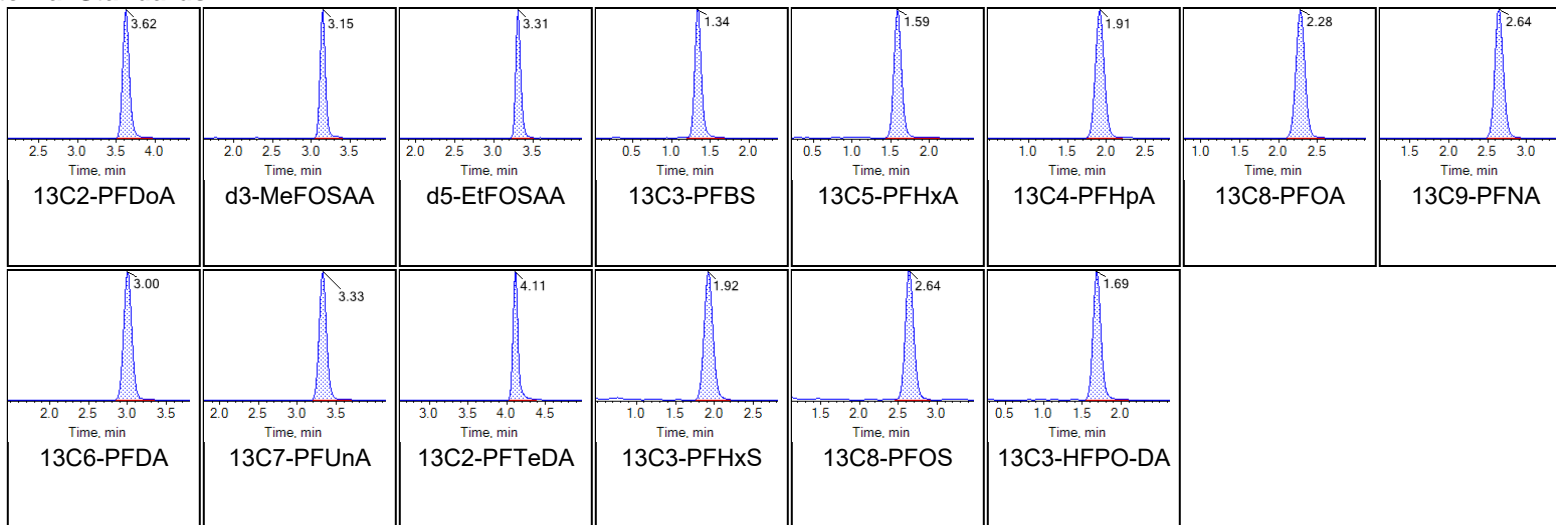


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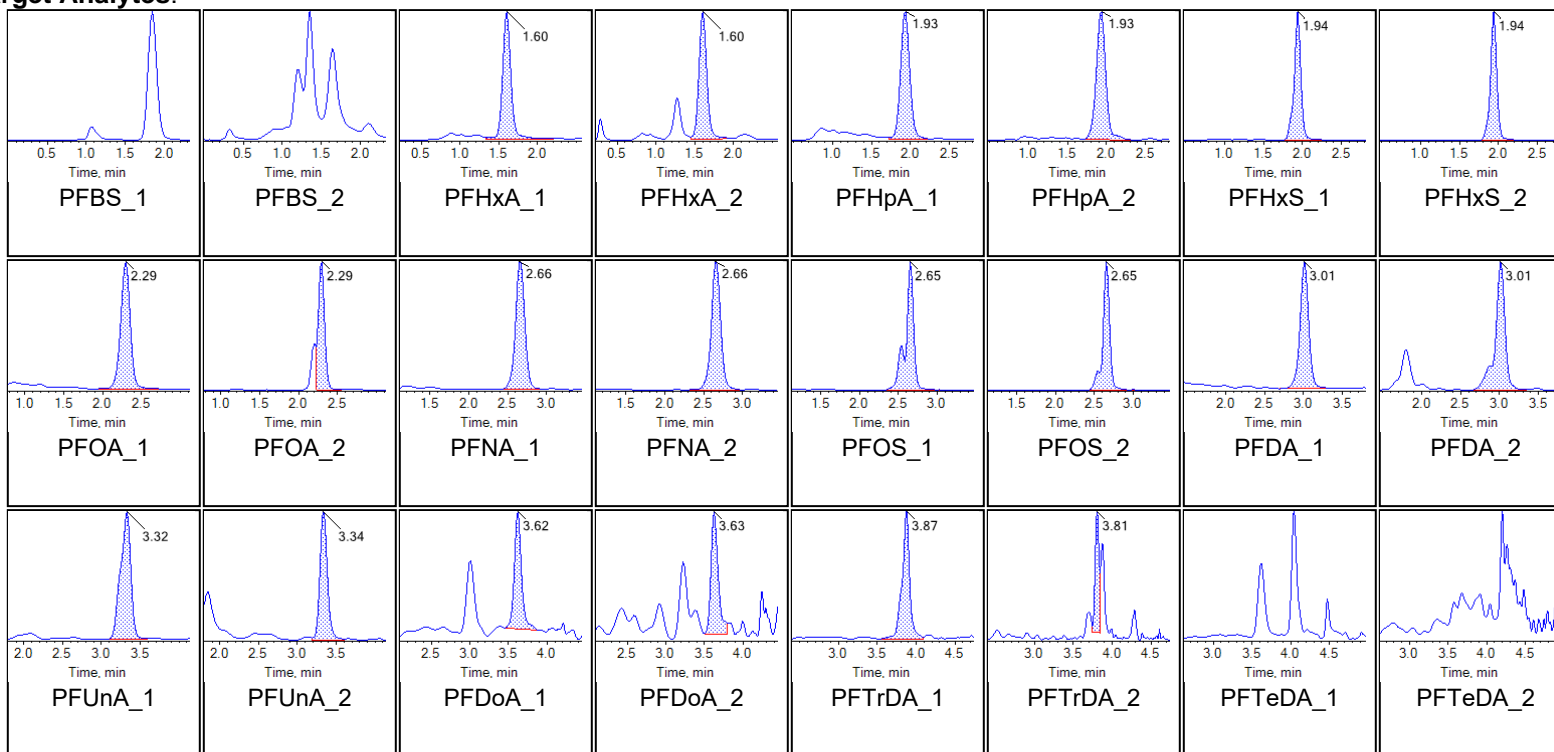
Internal Standards:



Sample Name	G2211-FS(0)	Injection Vial	13
Sample ID	CBD-AOA-MW13-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 9:02:03 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

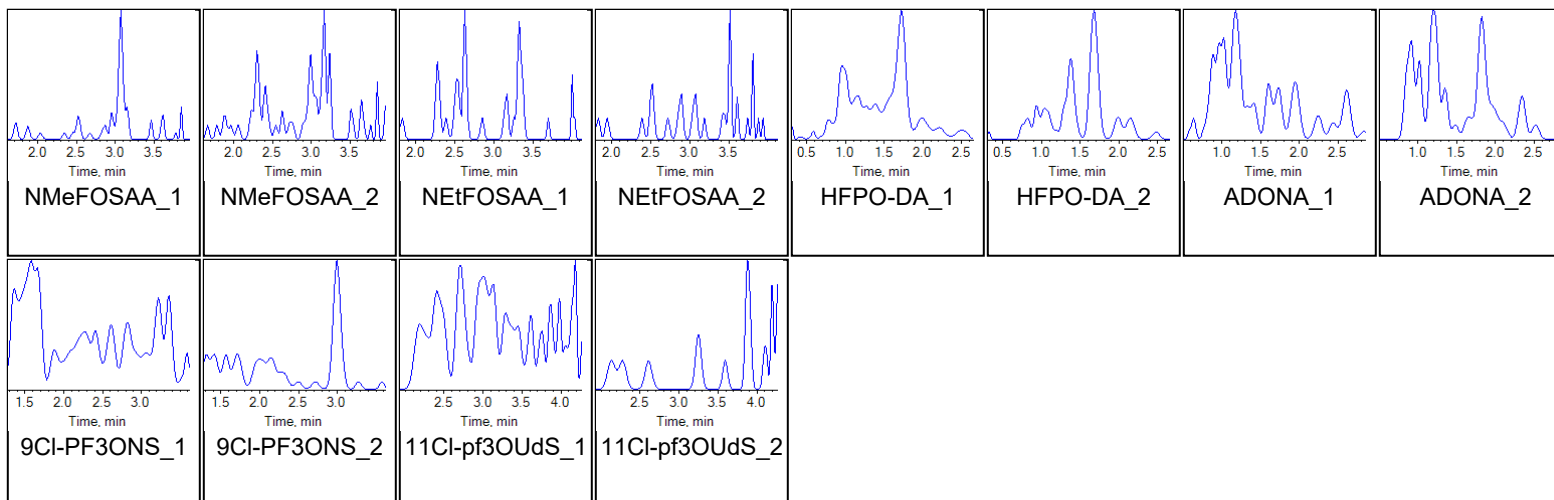
Chromatograms

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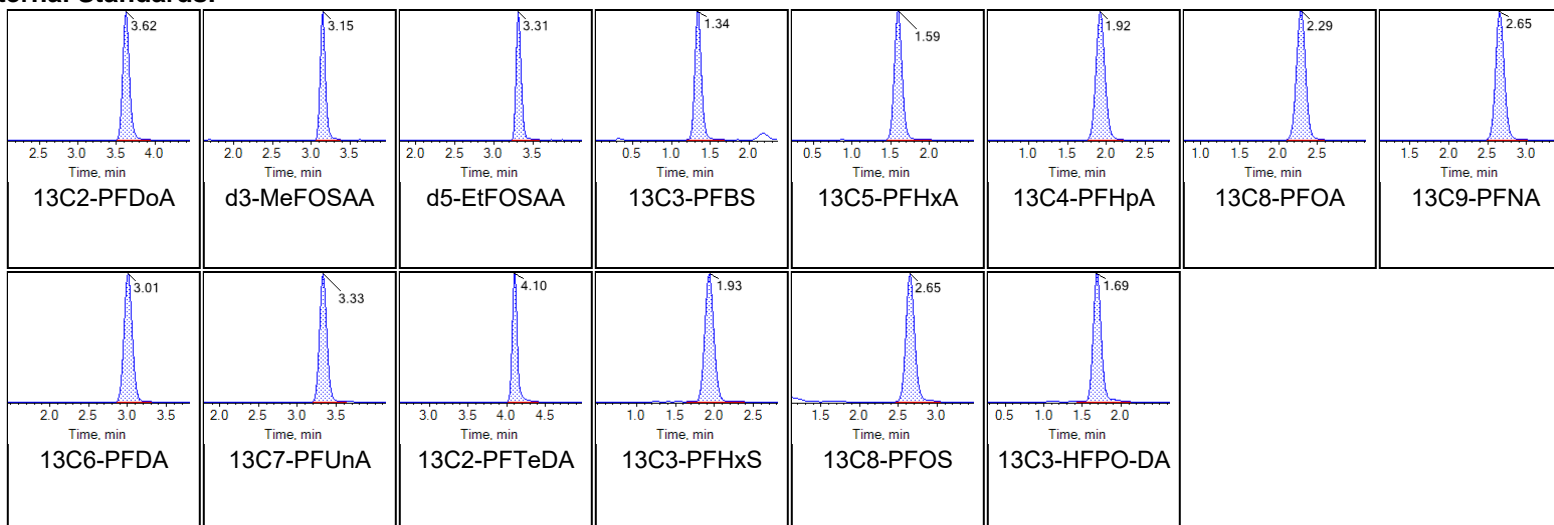




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Internal Standards:





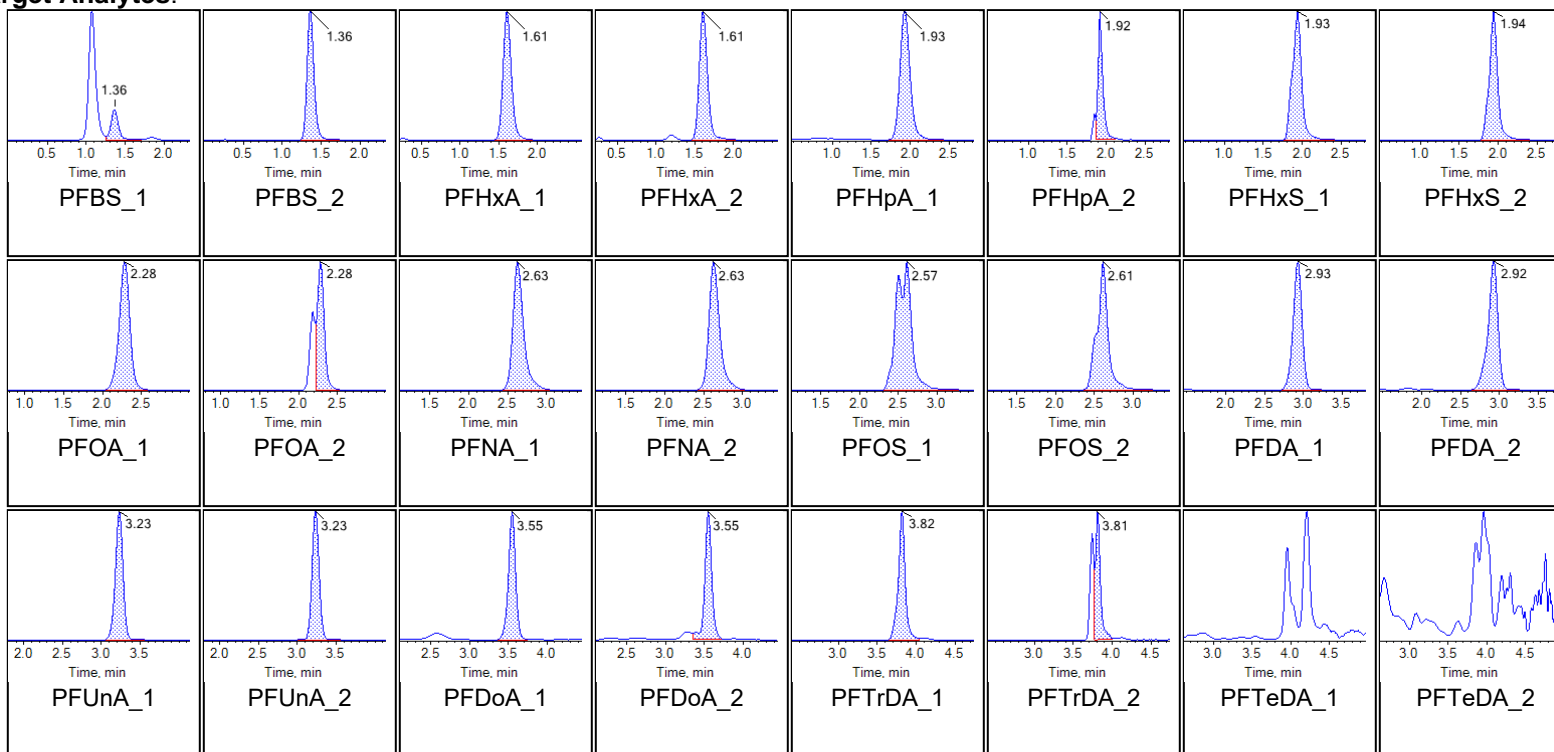
Chromatogram Report

Created with Analyst Reporter
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Sample Name	G2212-FS(0)	Injection Vial	14
Sample ID	CBD-AOA-IW01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 9:12:30 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

Chromatograms

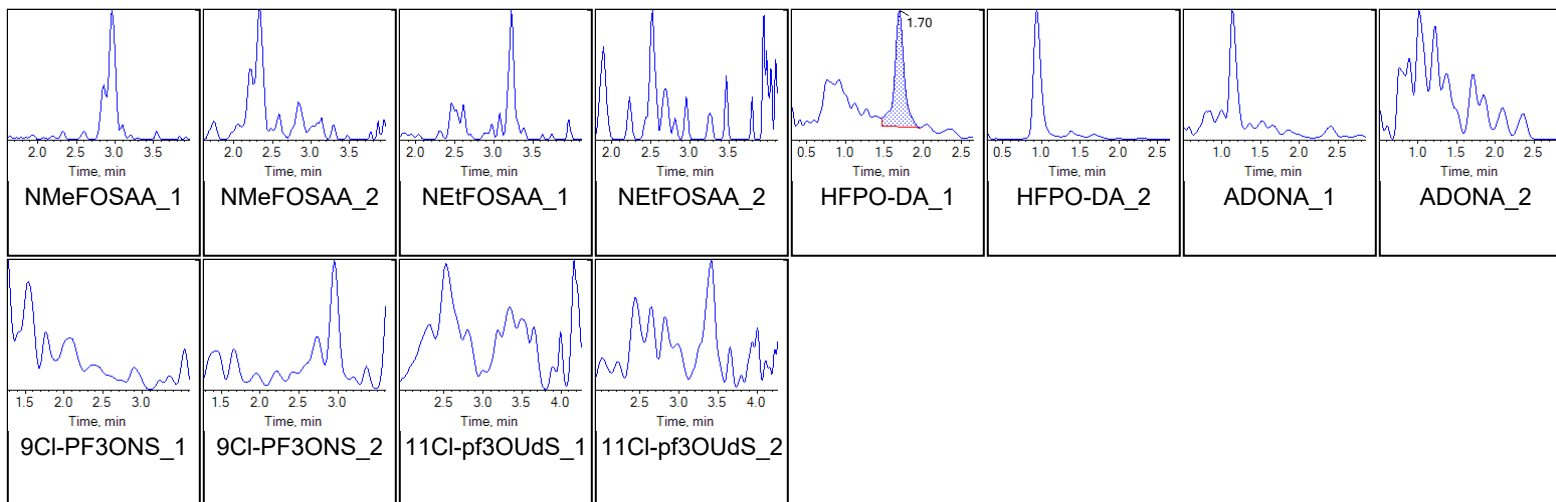
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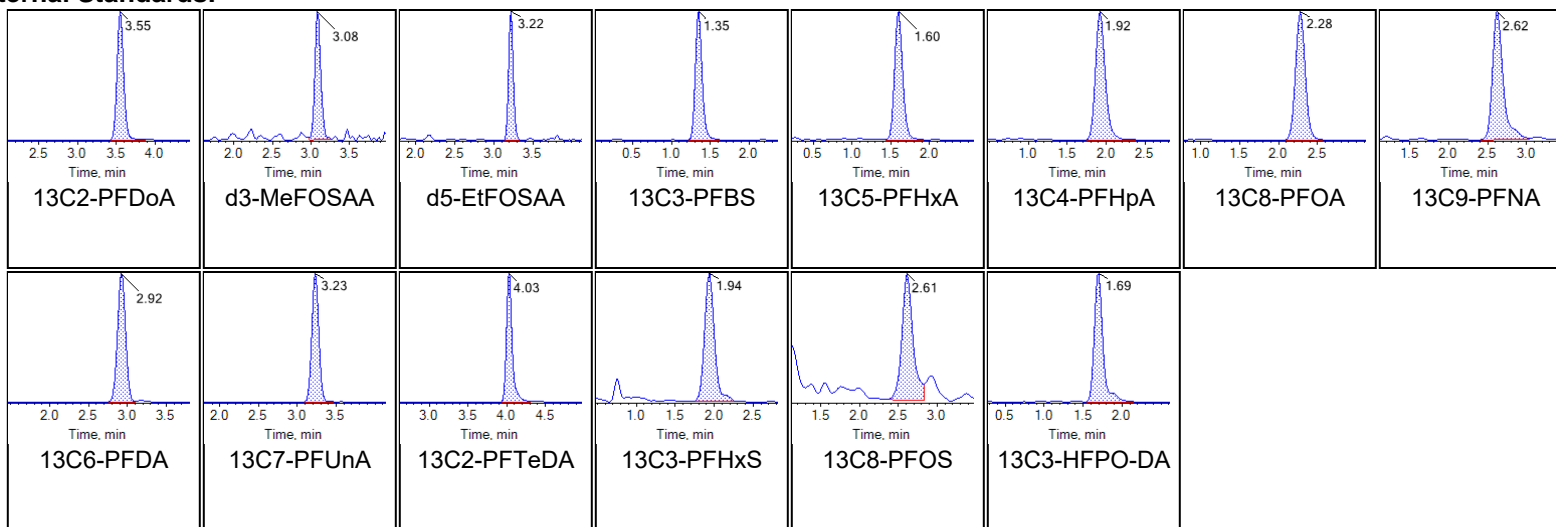


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Internal Standards:





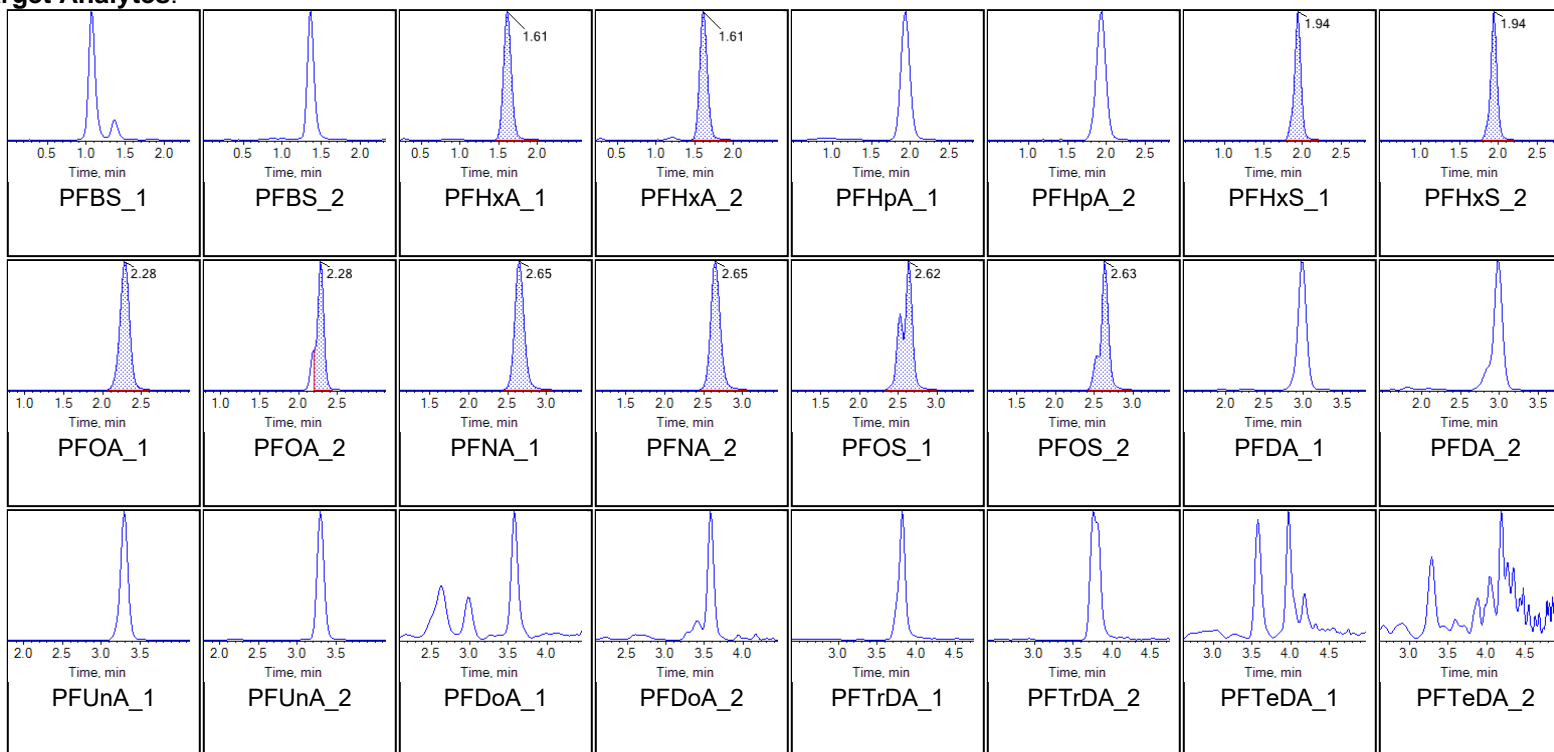
Chromatogram Report

Created with Analyst Reporter
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Sample Name	G2212-FS-D(5)	Injection Vial	16
Sample ID	CBD-AOA-IW01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 9:33:26 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

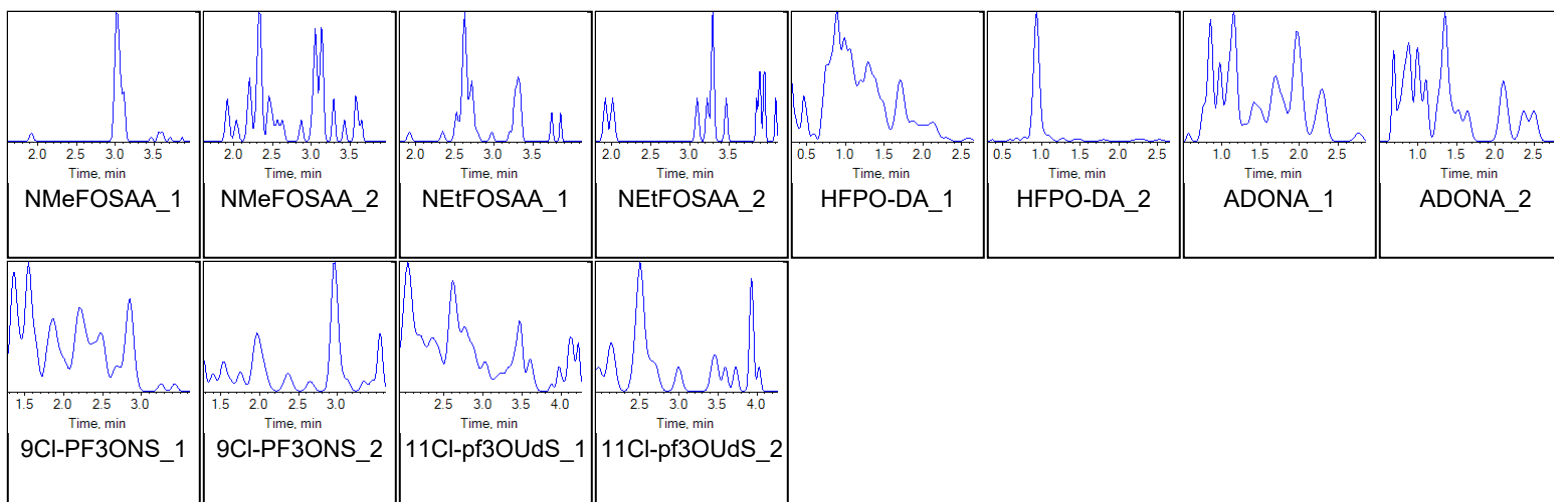
Chromatograms

Target Analytes:

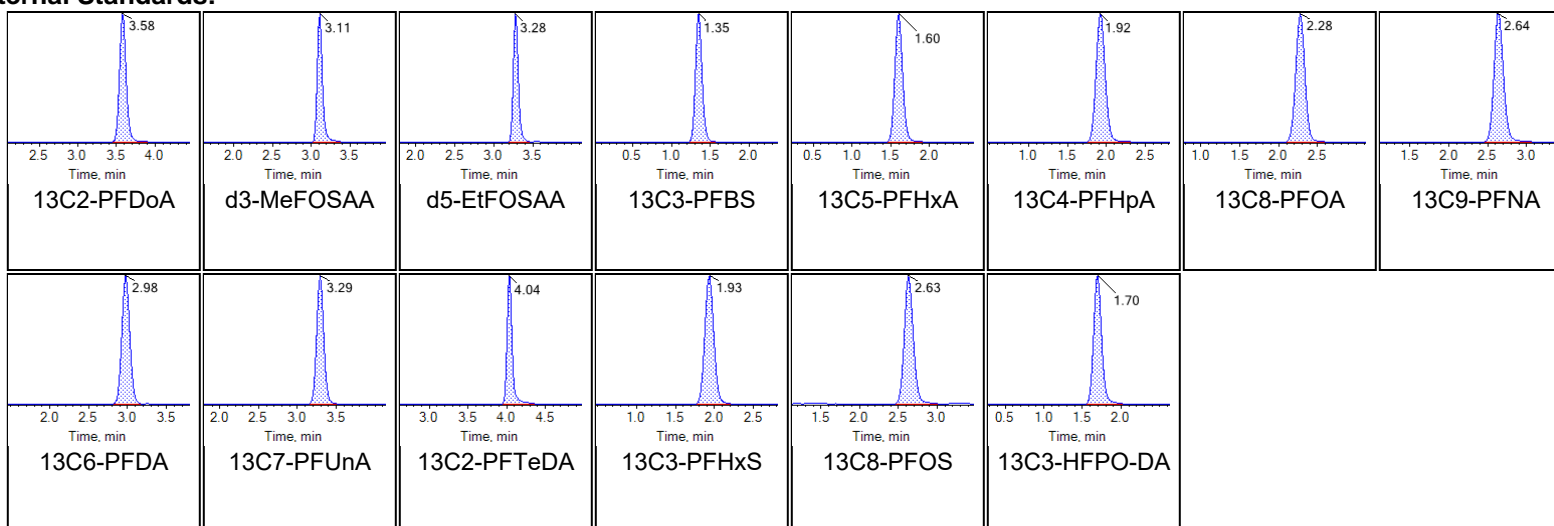




Chromatogram Report

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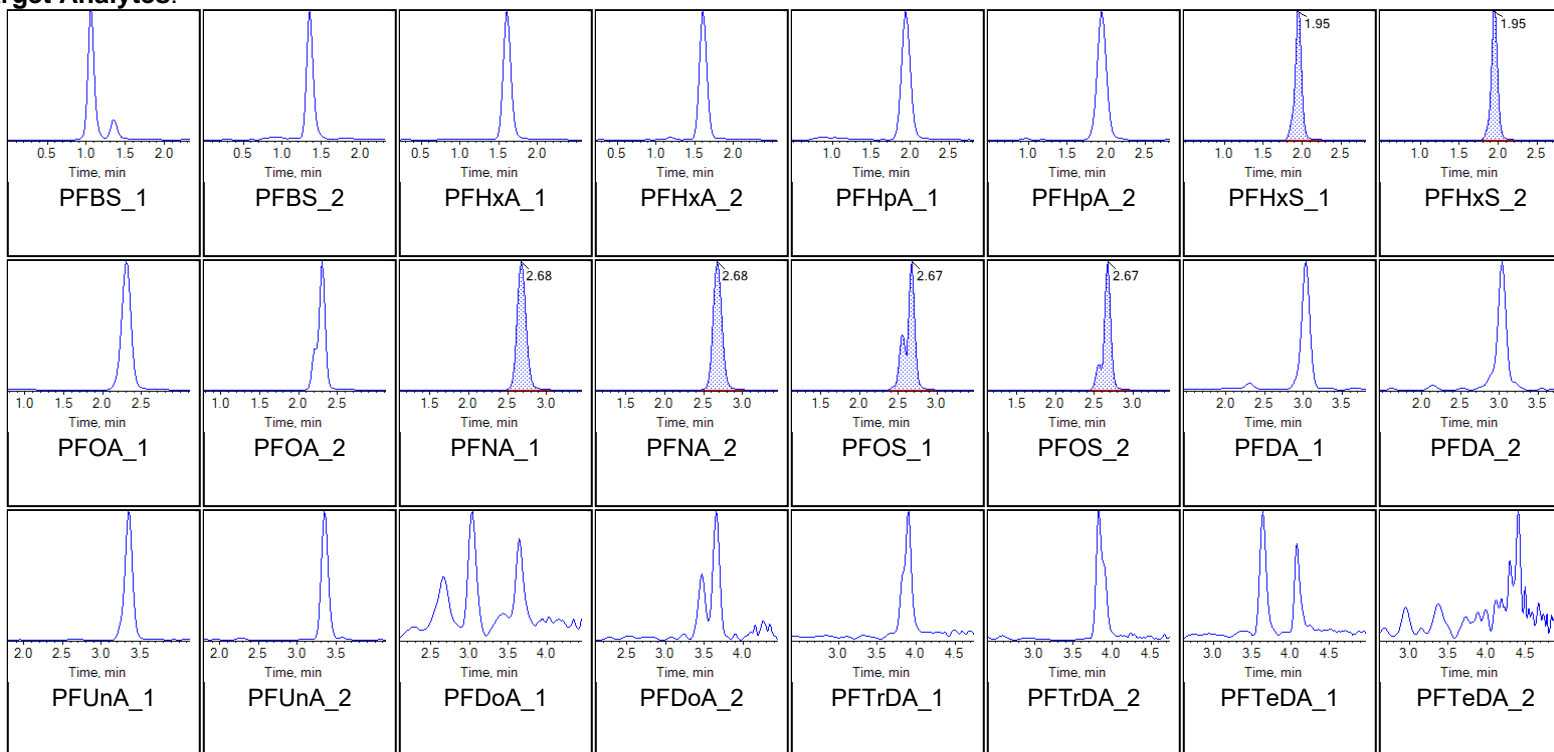
Internal Standards:



Sample Name	G2212-FS-D(7)	Injection Vial	17
Sample ID	CBD-AOA-IW01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 9:43:54 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

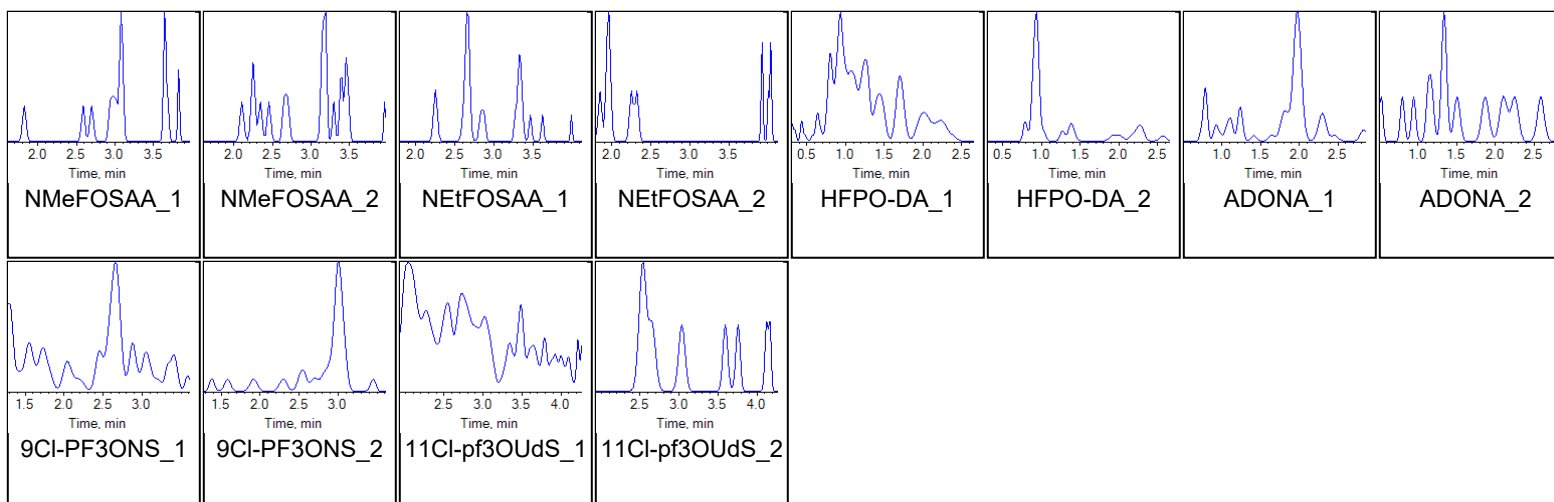
Chromatograms

Target Analytes:

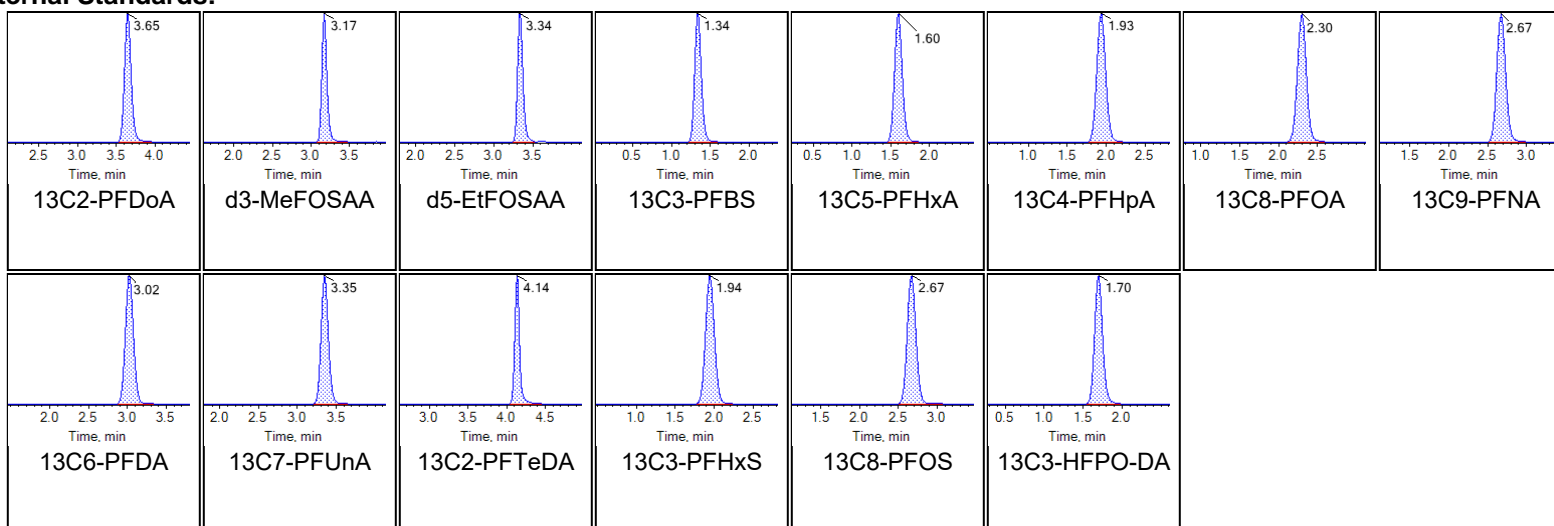




Chromatogram Report

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Internal Standards:





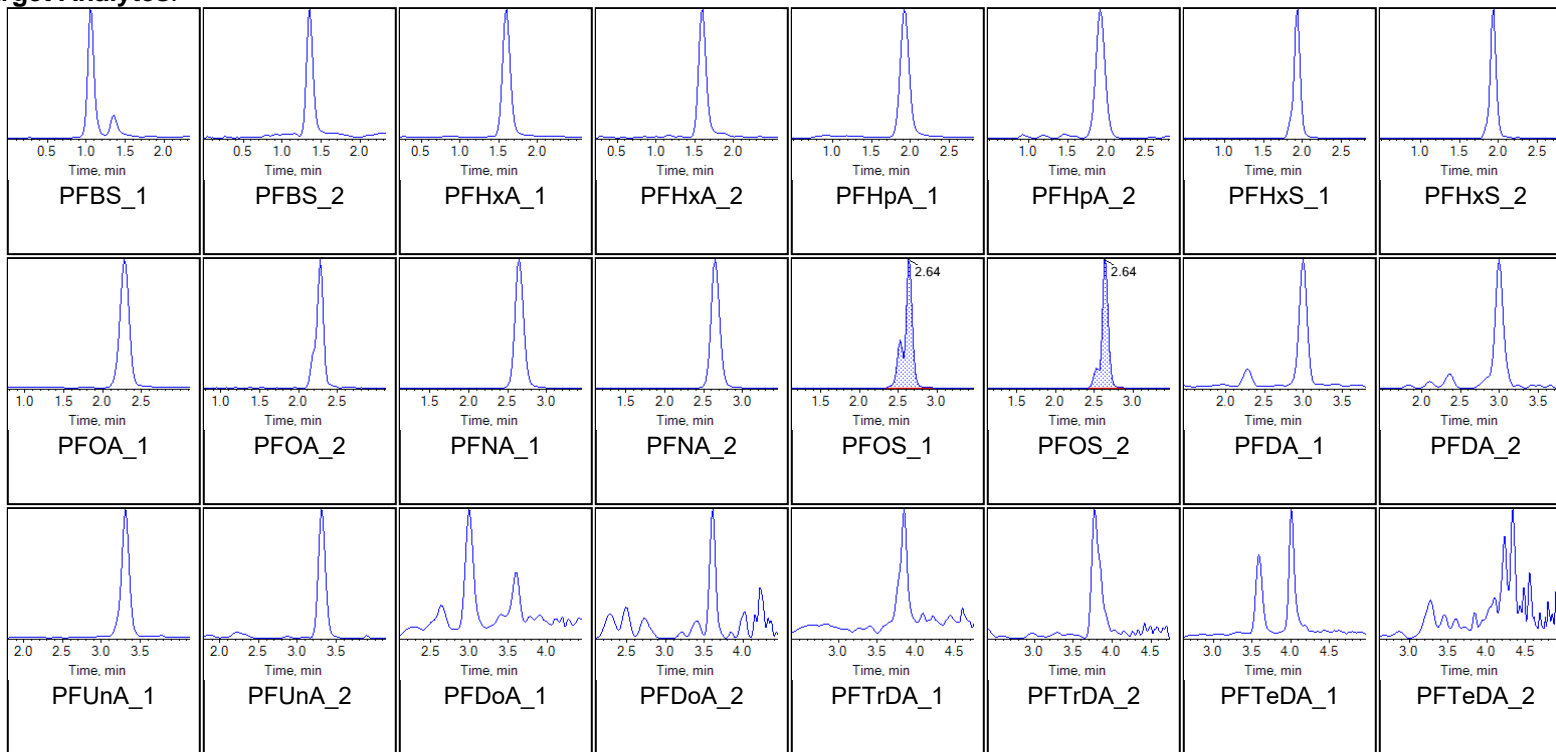
Chromatogram Report

Created with Analyst Reporter
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Sample Name	G2212-FS-D(9)	Injection Vial	18
Sample ID	CBD-AOA-IW01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 9:54:22 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

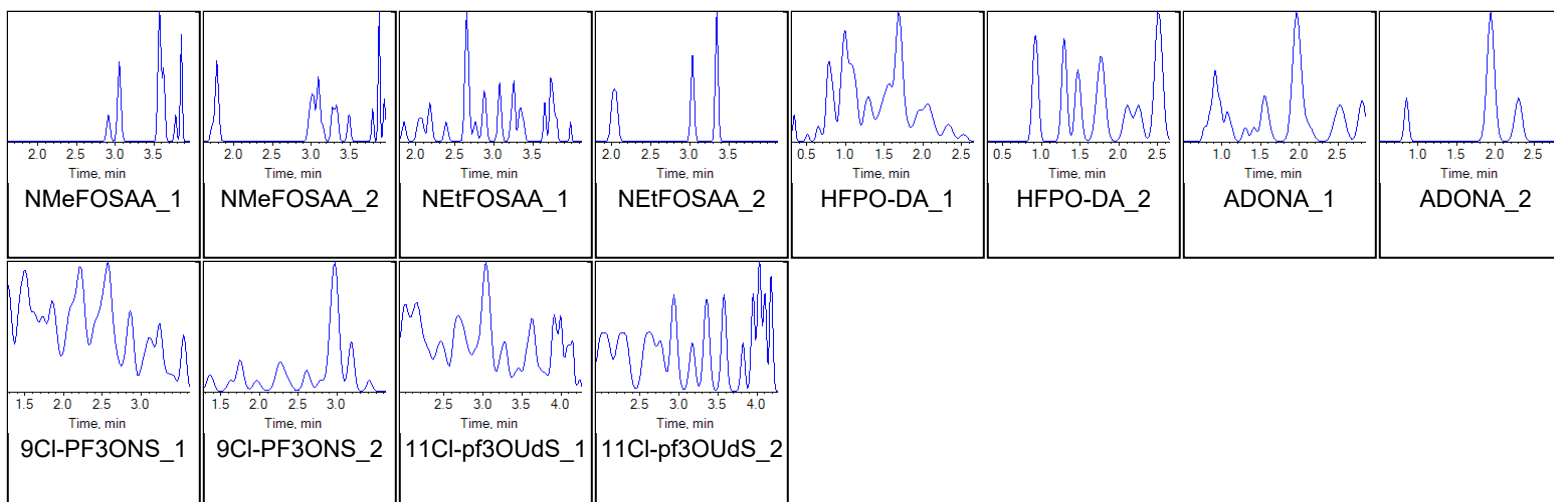
Chromatograms

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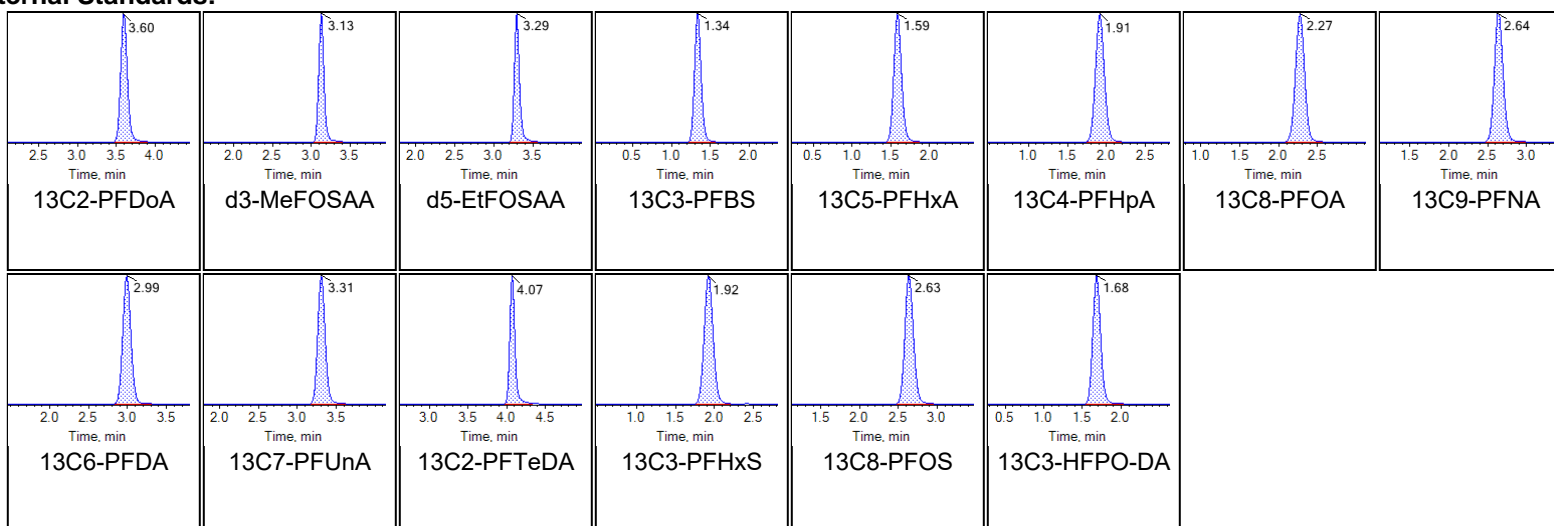




Chromatogram Report

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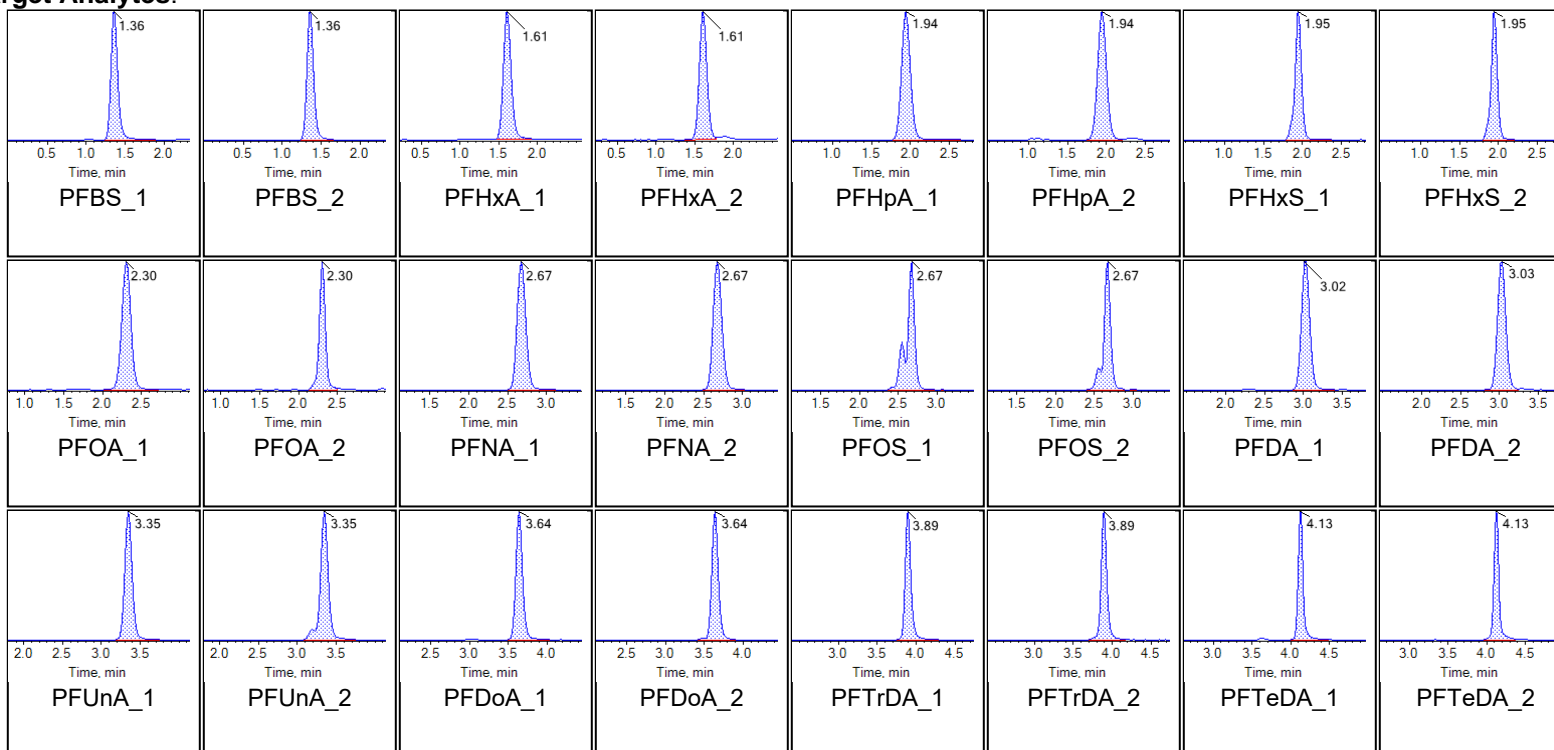
Chromatogram Report

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Printed: 25/11/2020 3:13:18 PM

Sample Name	LE54 CCV	Injection Vial	20
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 10:15:19 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375

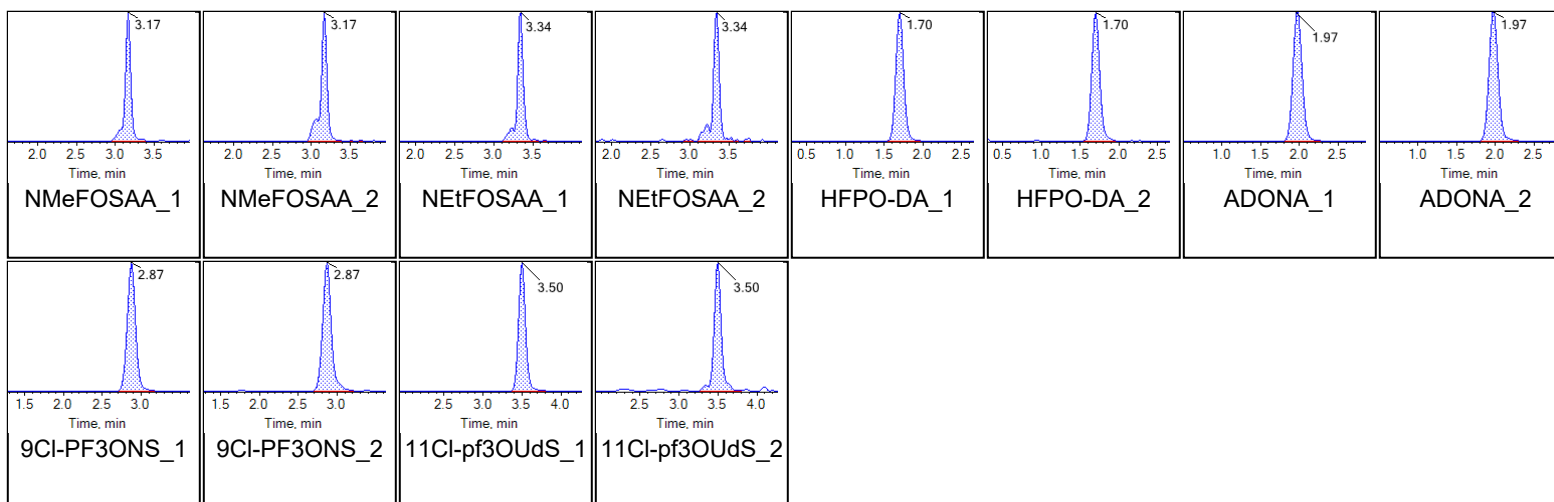
Chromatograms

Target Analytes:

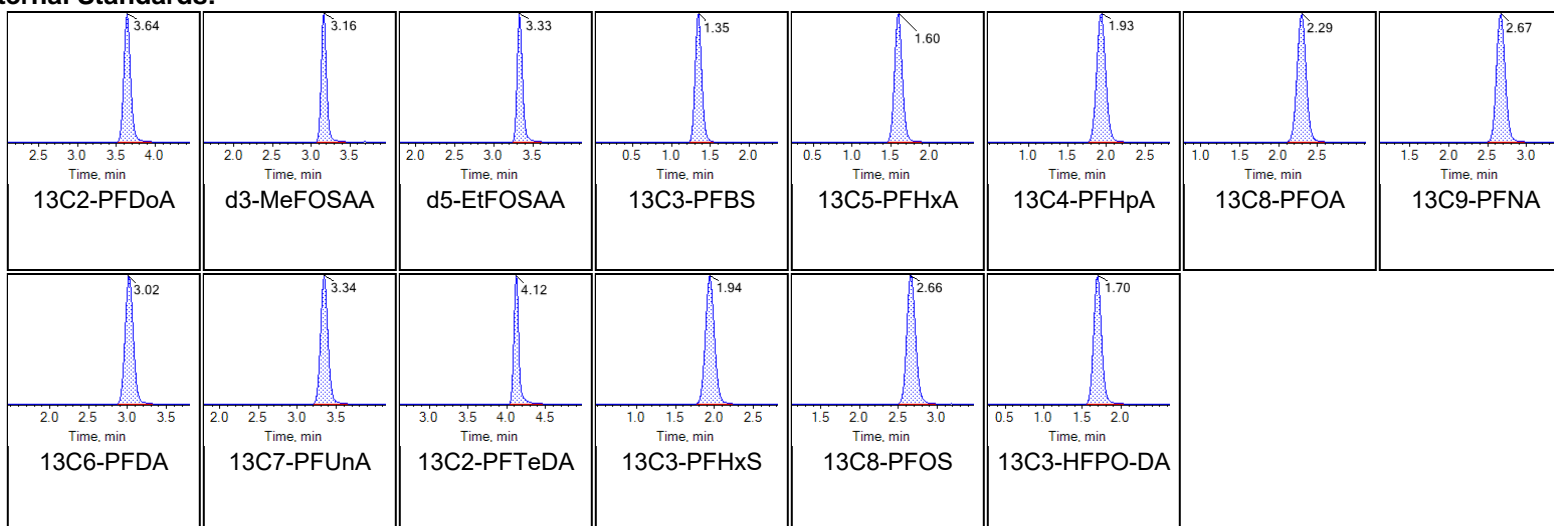




Chromatogram Report

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Printed: 25/11/2020 3:13:18 PM

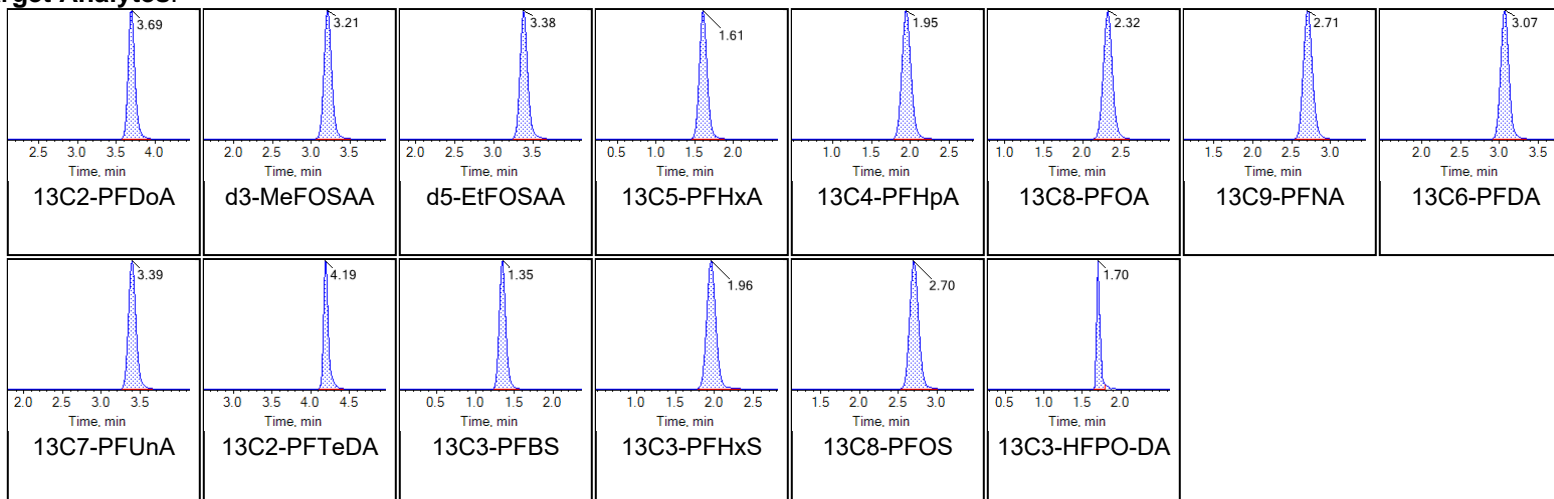
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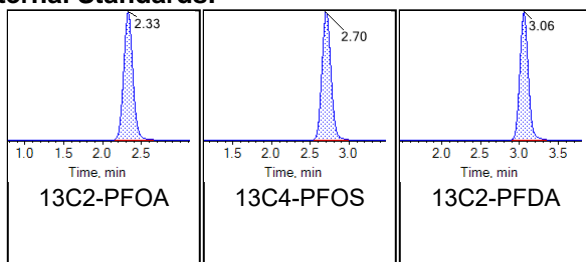
Sample Name	LE52	Injection Vial	12
Sample ID	L1	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:04:16 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





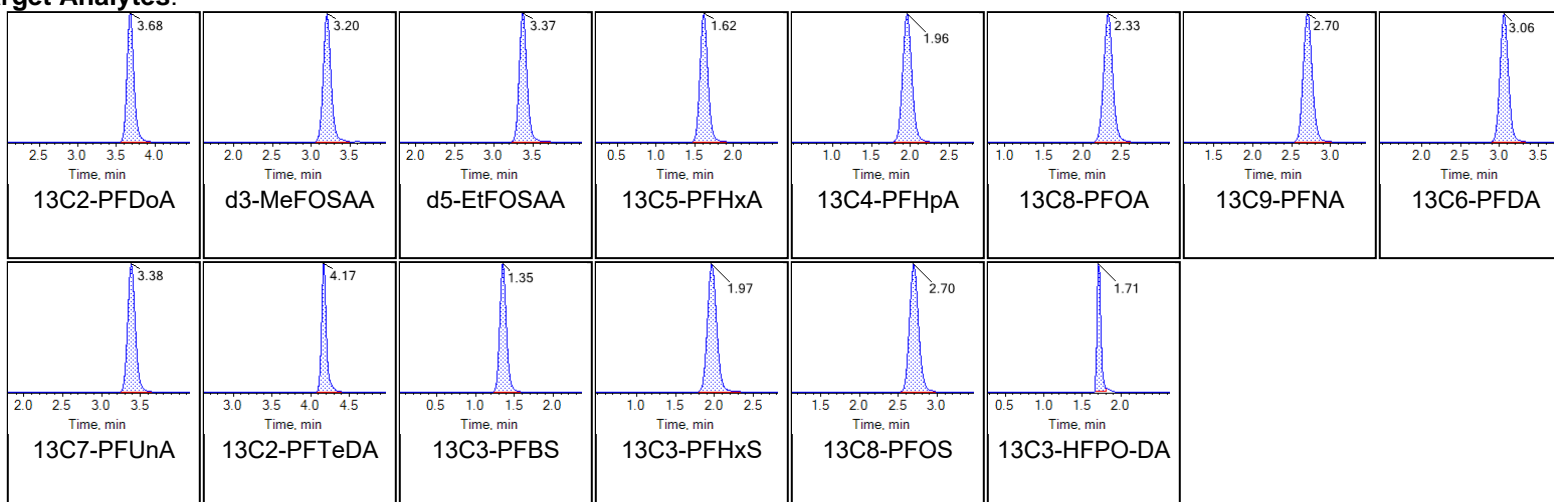
Chromatogram Report

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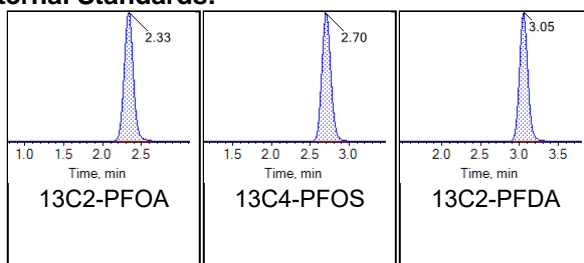
Sample Name	LE53	Injection Vial	13
Sample ID	L2	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:14:43 PM	Data File	AE_11172020_5-369.wiff
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Chromatograms

Target Analytes:



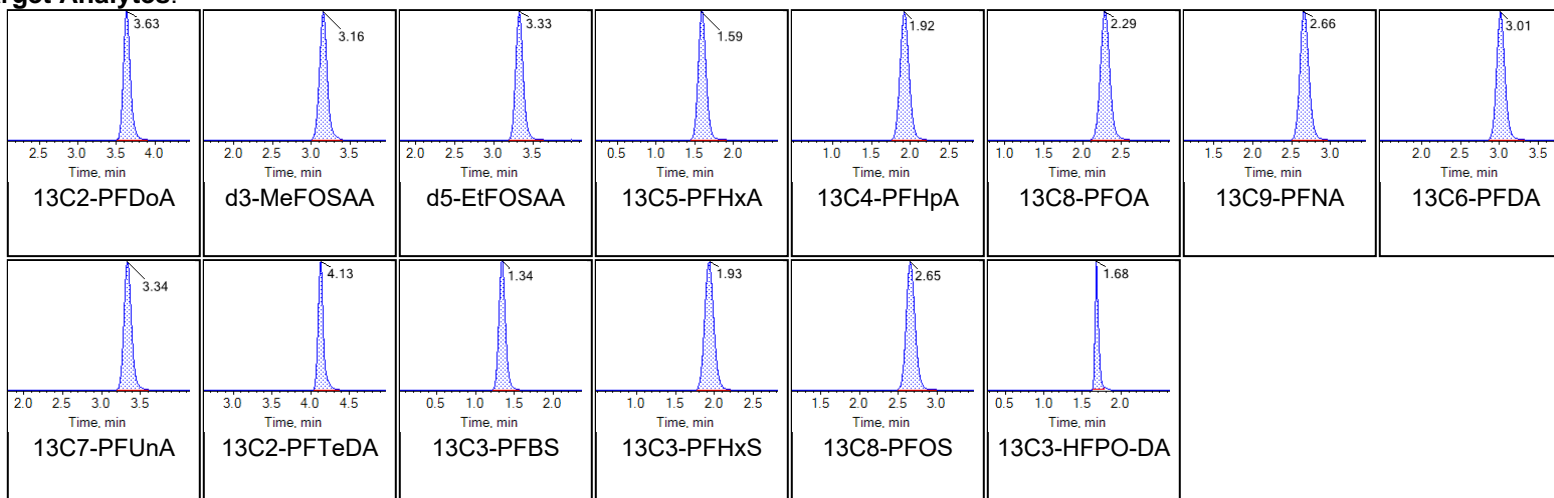
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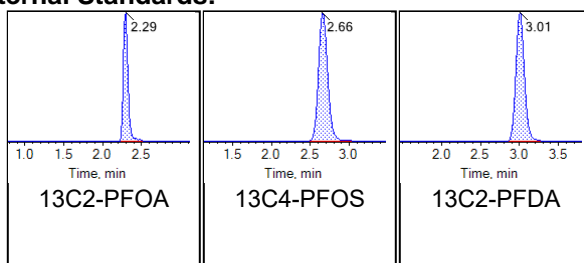
Sample Name	LE54	Injection Vial	14
Sample ID	L3	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:25:10 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



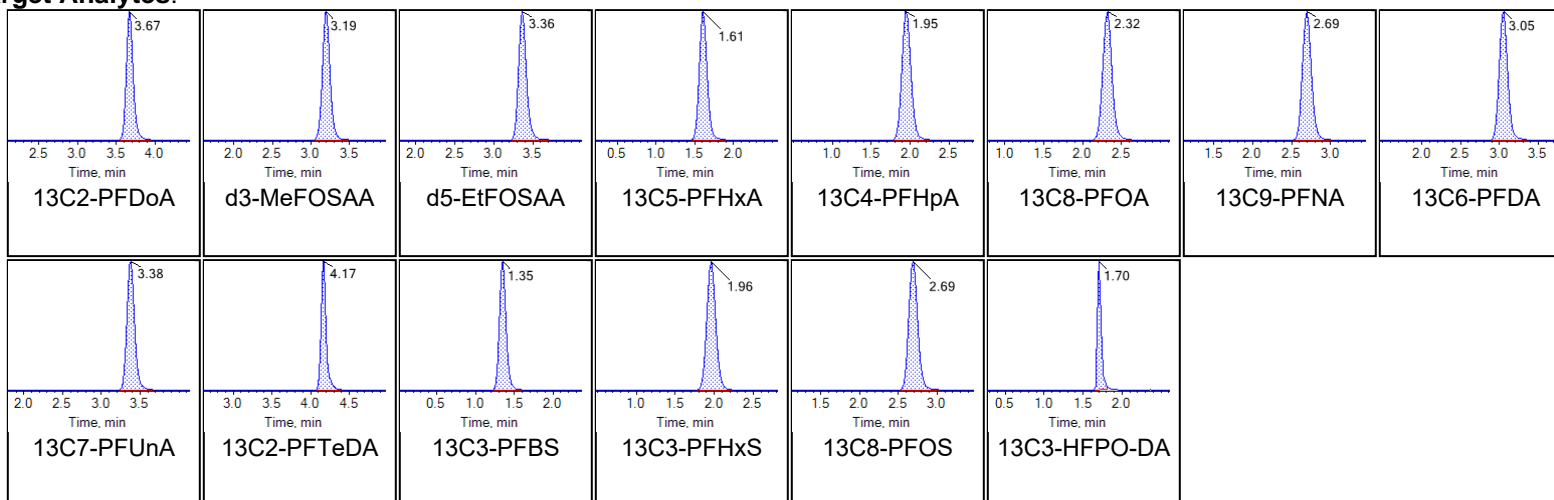
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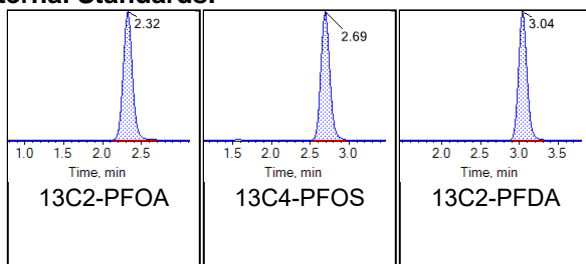
Sample Name	LE55	Injection Vial	15
Sample ID	L4	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:35:38 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



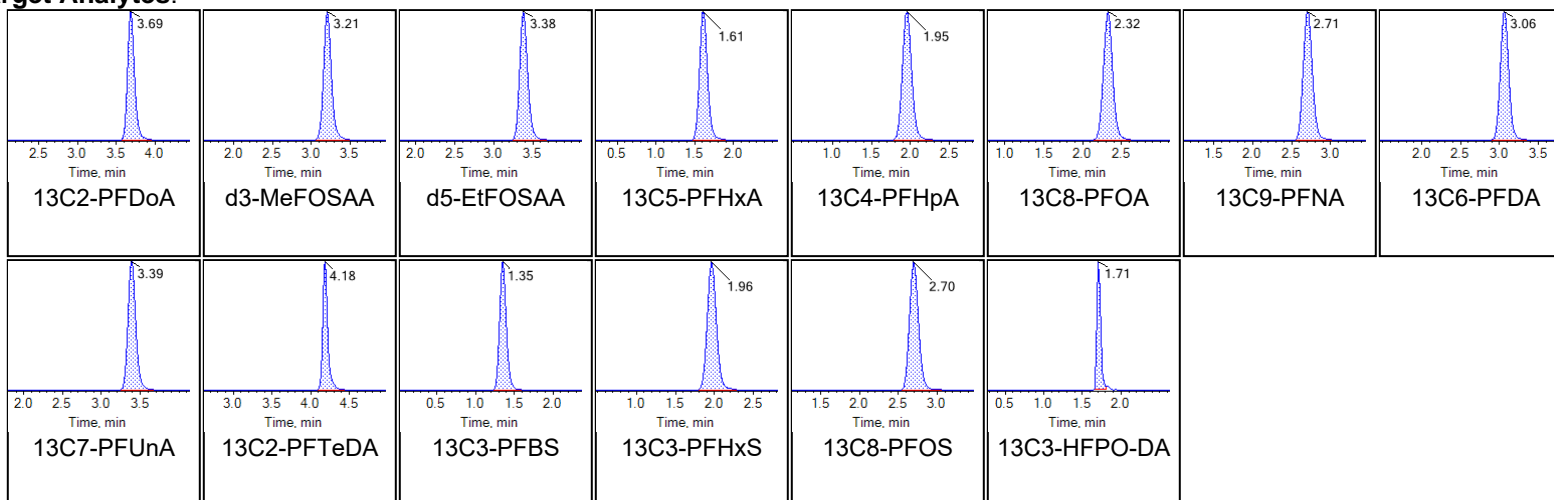
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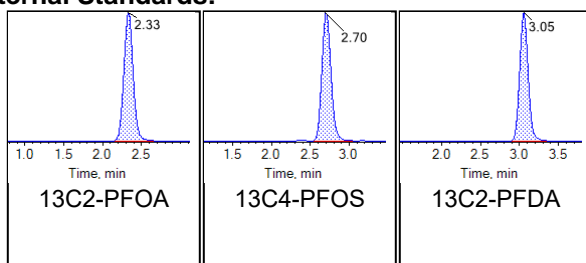
Sample Name	LE56	Injection Vial	16
Sample ID	L5	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:46:05 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



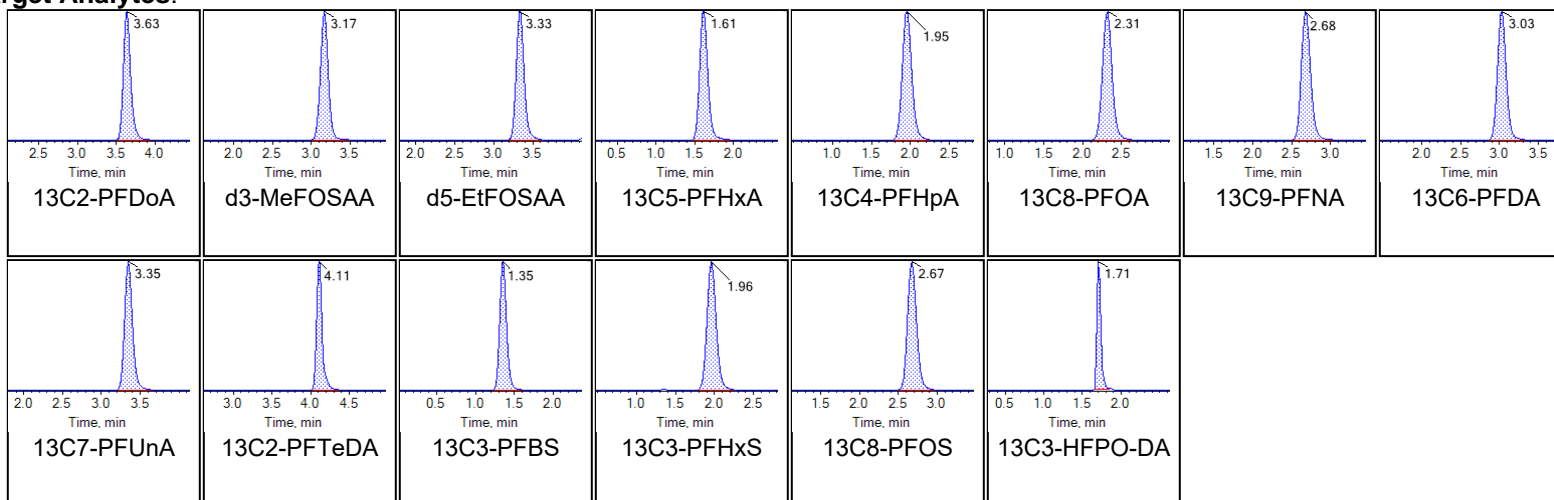
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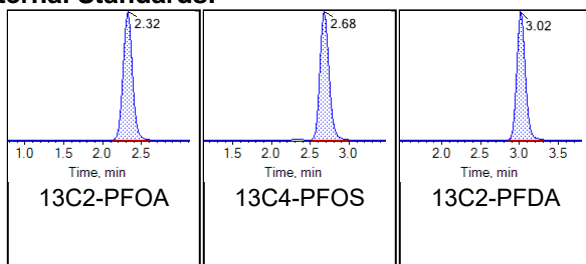
Sample Name	LE57	Injection Vial	17
Sample ID	L6	Injection Volume	10.00
Sample Type	Standard	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 8:56:32 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





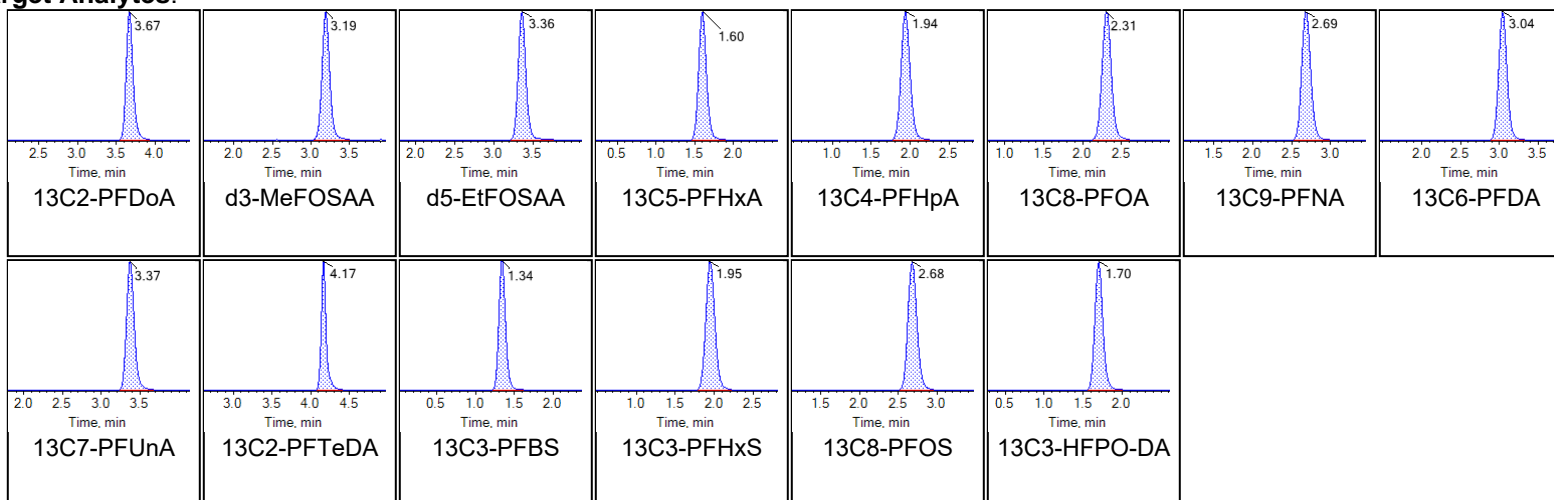
Chromatogram Report

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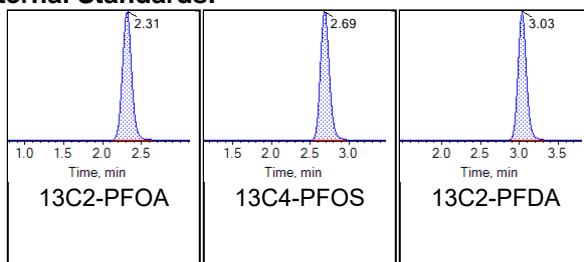
Sample Name	LE58 IB	Injection Vial	18
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 9:06:58 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



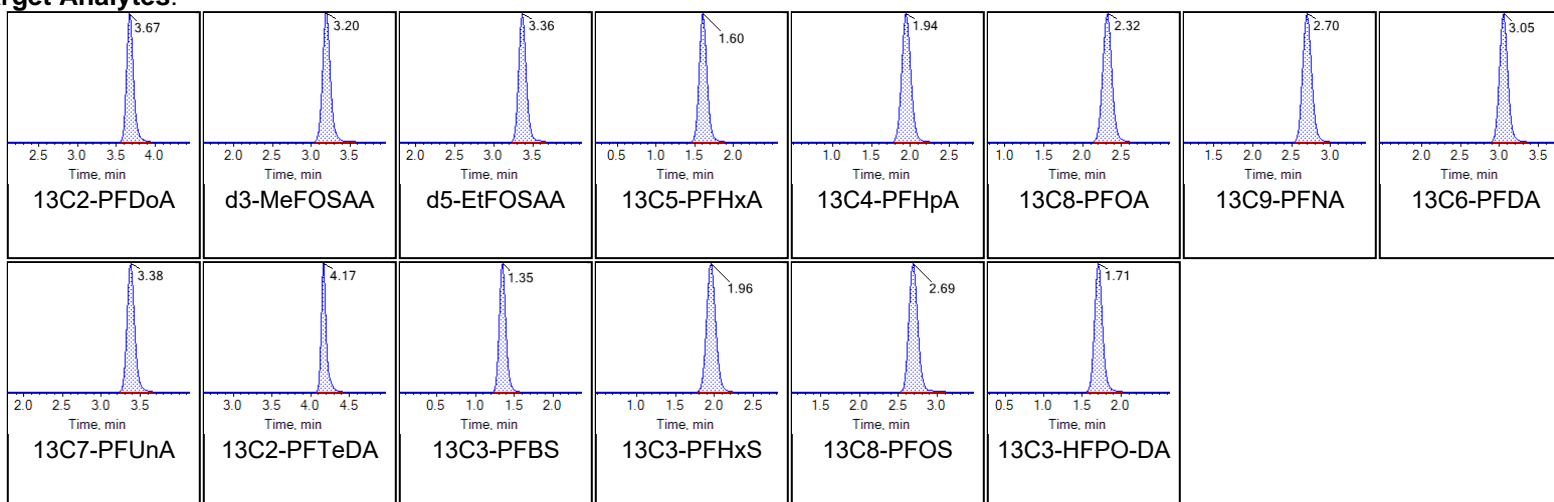
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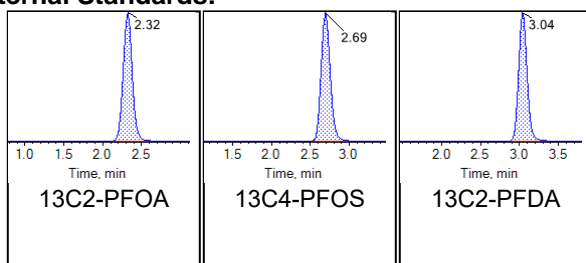
Sample Name	LE59 ICC	Injection Vial	19
Sample ID	ICC	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/17/2020 9:17:26 PM	Data File	AE_11172020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





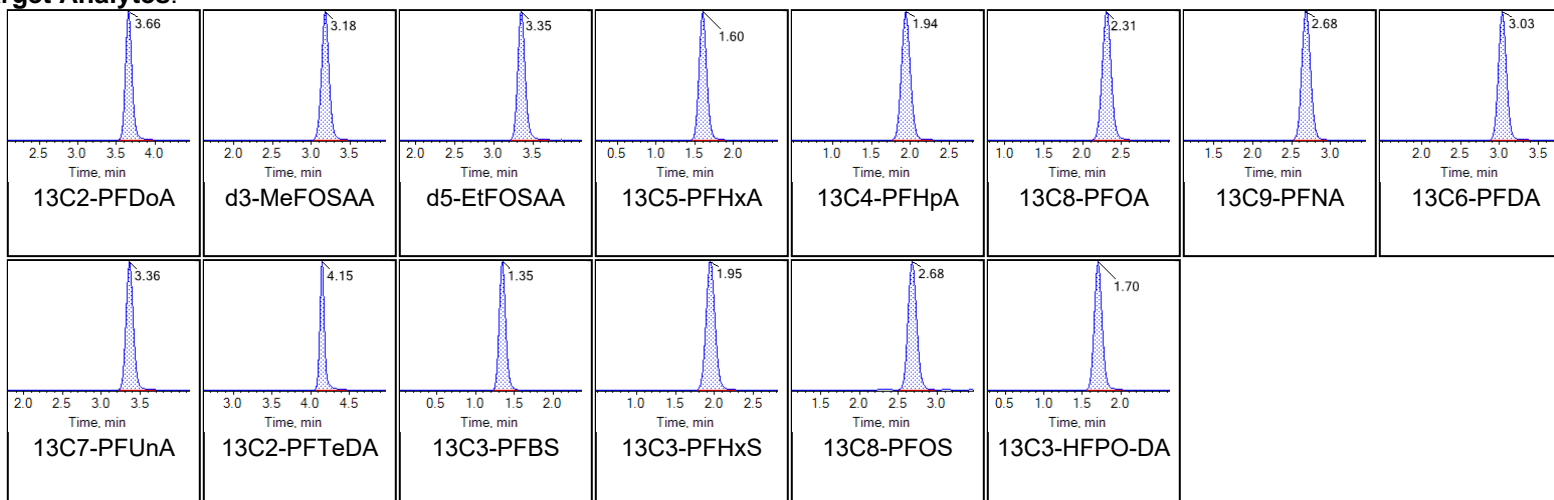
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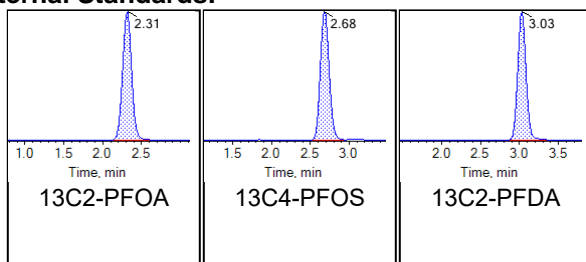
Sample Name	LE54 CCV	Injection Vial	2
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 6:54:22 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





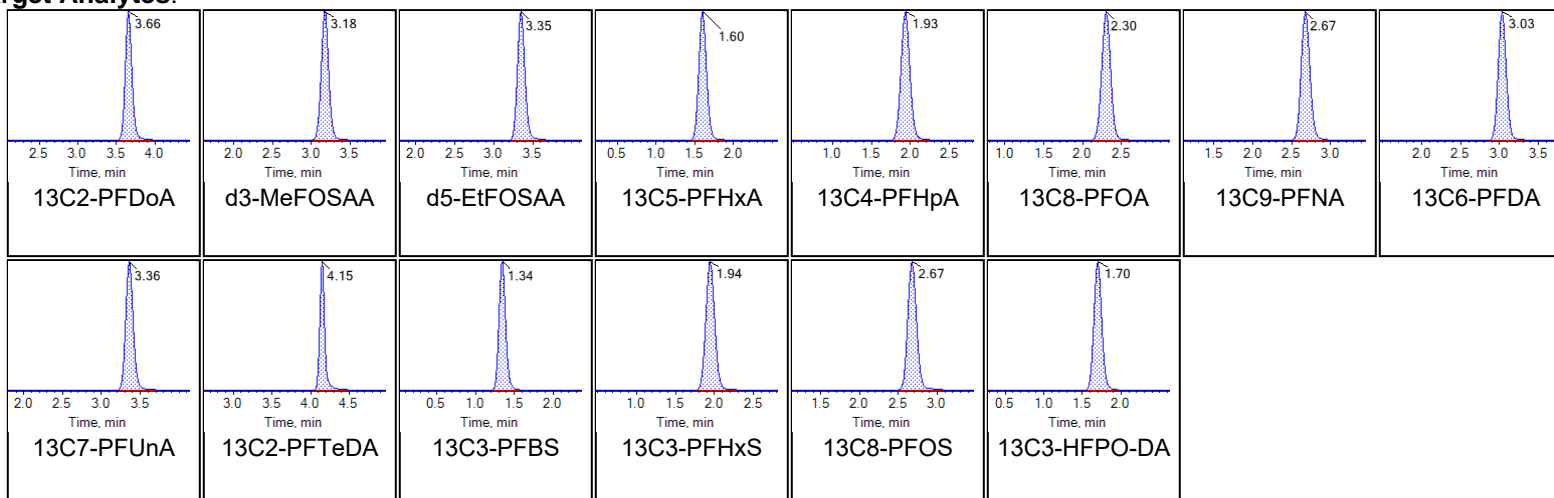
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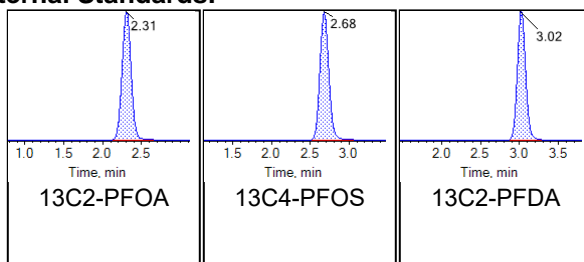
Sample Name	LE58 IB	Injection Vial	4
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 7:15:18 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





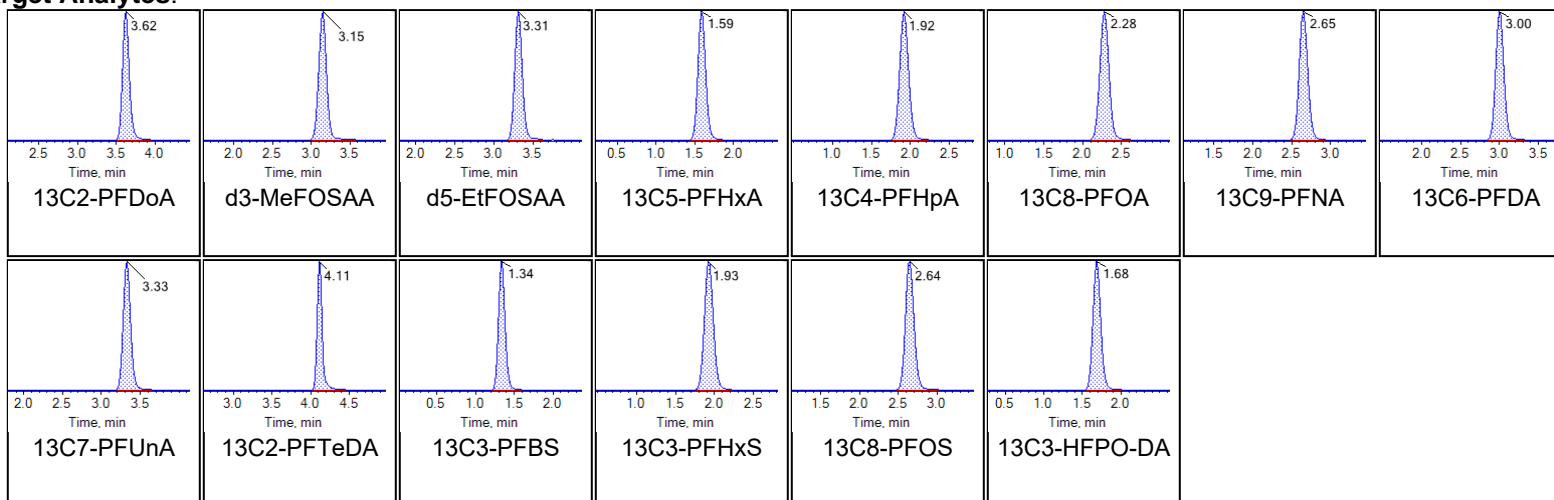
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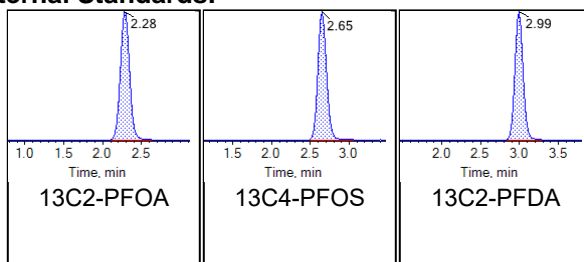
Sample Name	LE55 CCV	Injection Vial	15
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 9:10:16 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





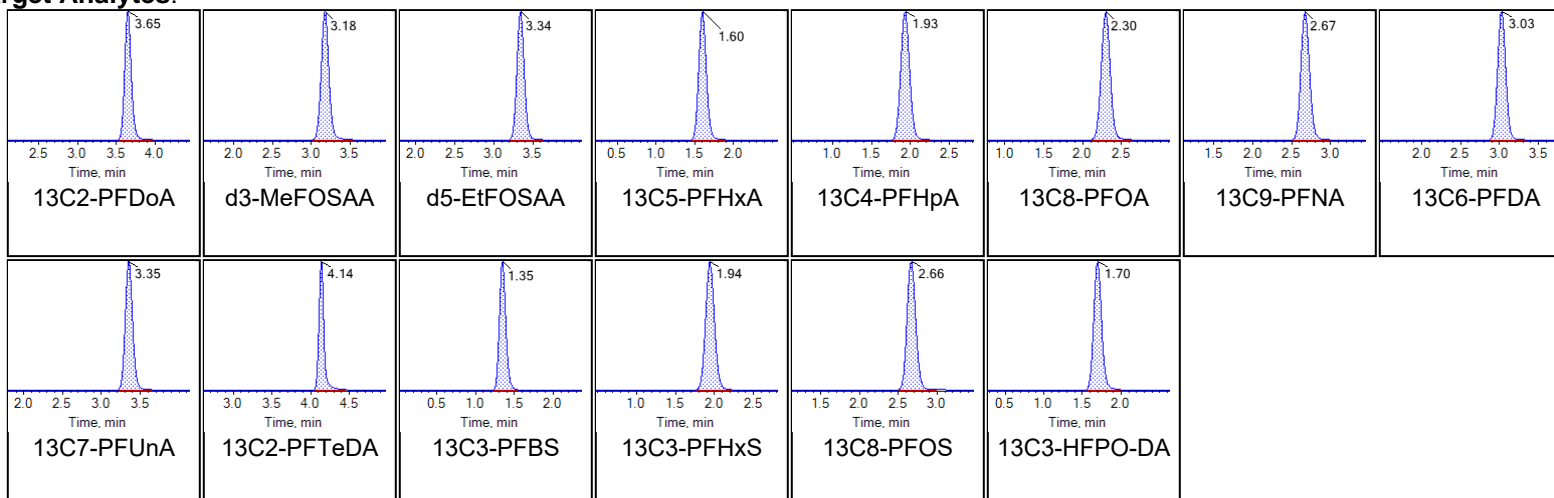
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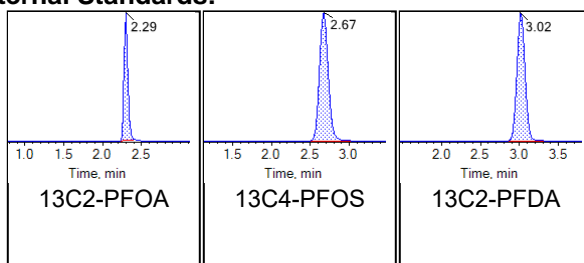
Sample Name	DB124PB-FS(0)	Injection Vial	17
Sample ID	Procedural Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 9:31:12 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





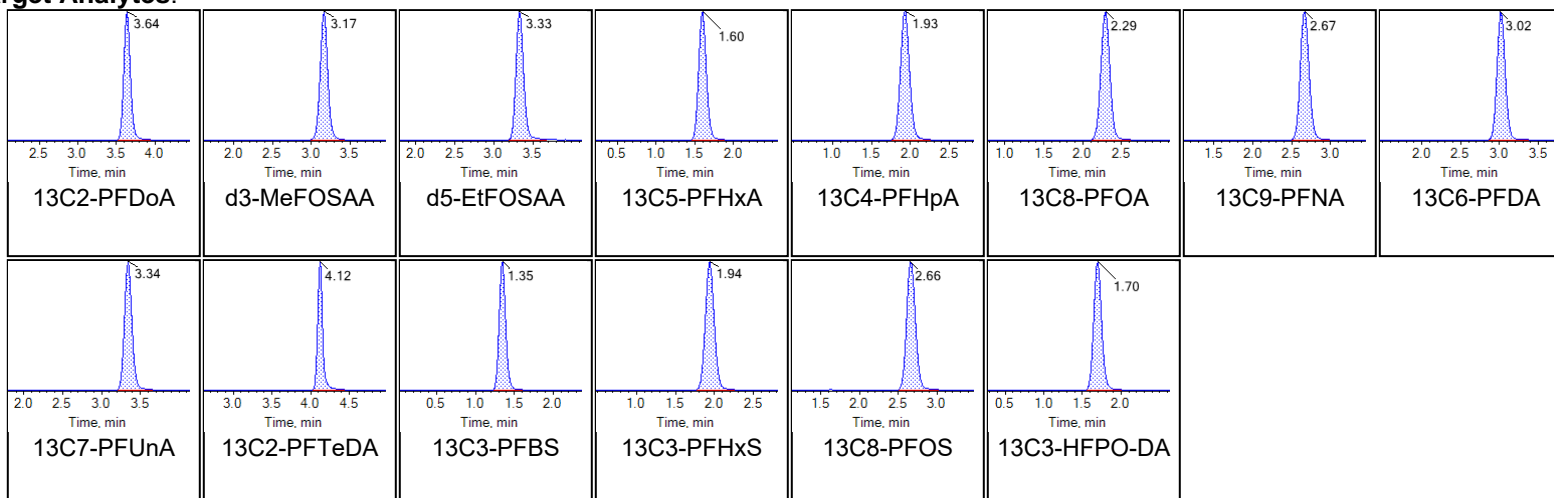
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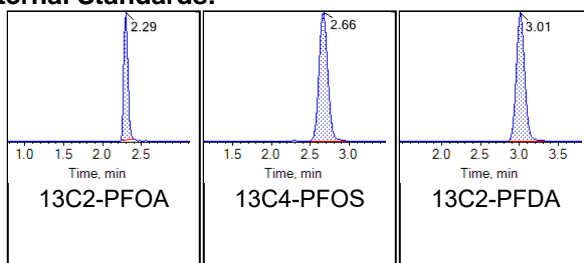
Sample Name	DB125LCS-FS(0)	Injection Vial	18
Sample ID	Laboratory Control Sample	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 9:41:40 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





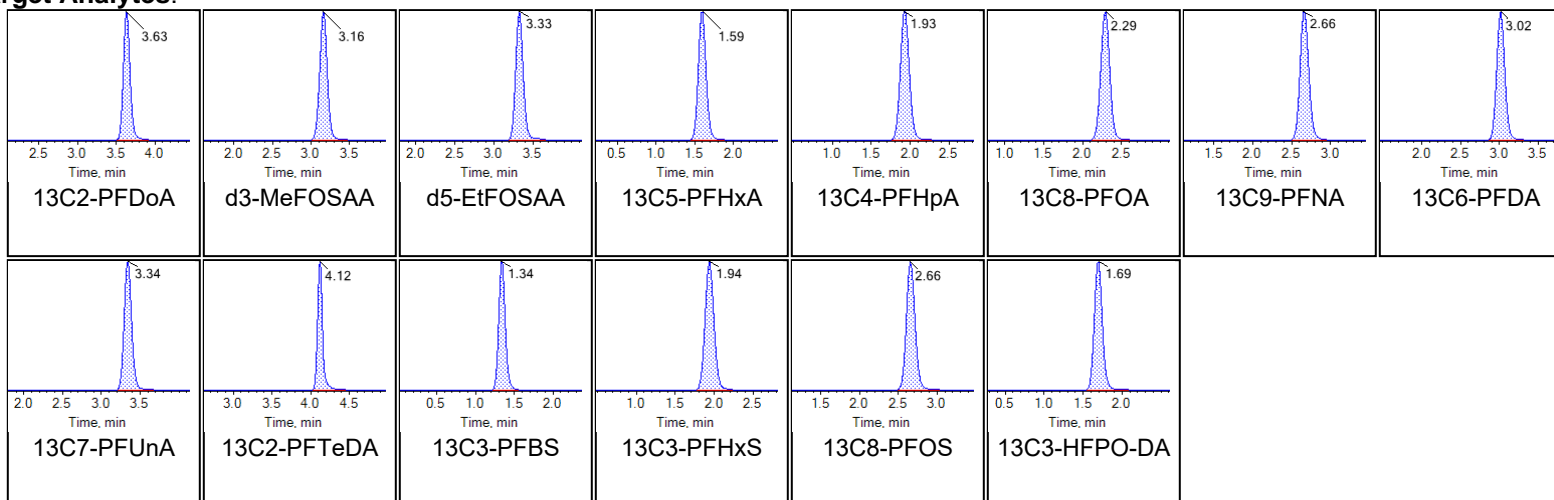
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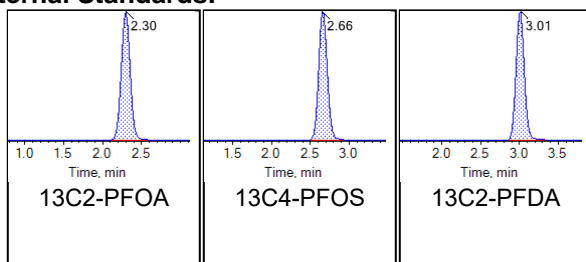
Sample Name	LE54 CCV	Injection Vial	26
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 11:05:25 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





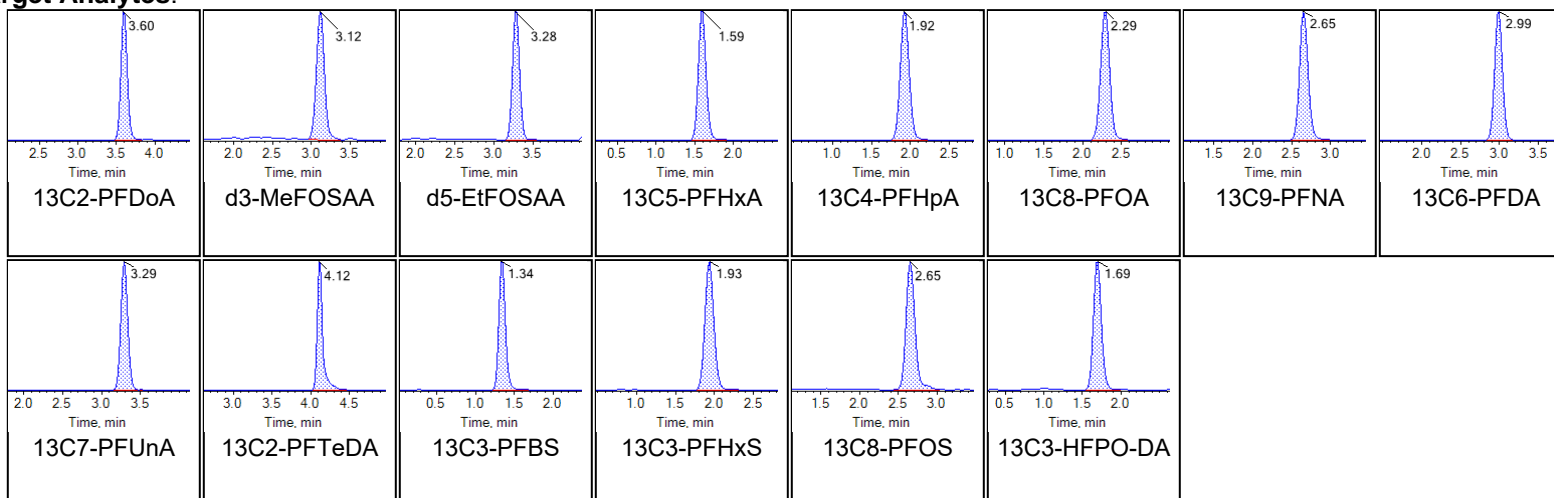
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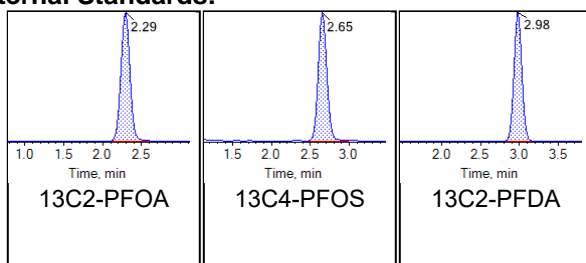
Sample Name	G2209-FS(0)	Injection Vial	27
Sample ID	CBD-AOA-EB01-102820-GW	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 11:15:54 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





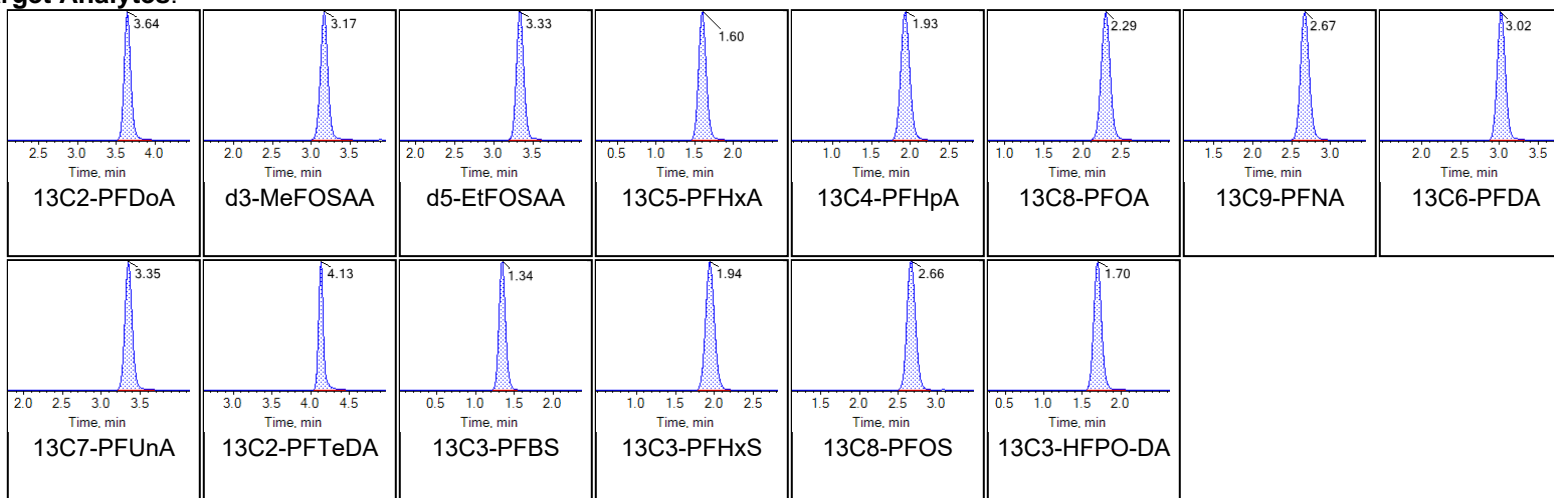
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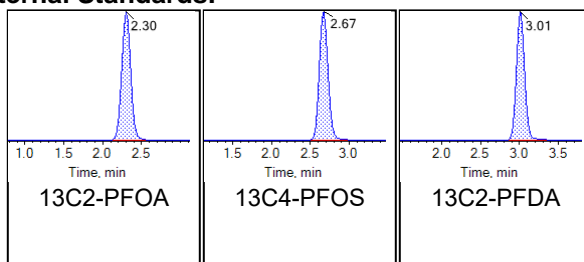
Sample Name	LE55 CCV	Injection Vial	32
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 12:08:13 AM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





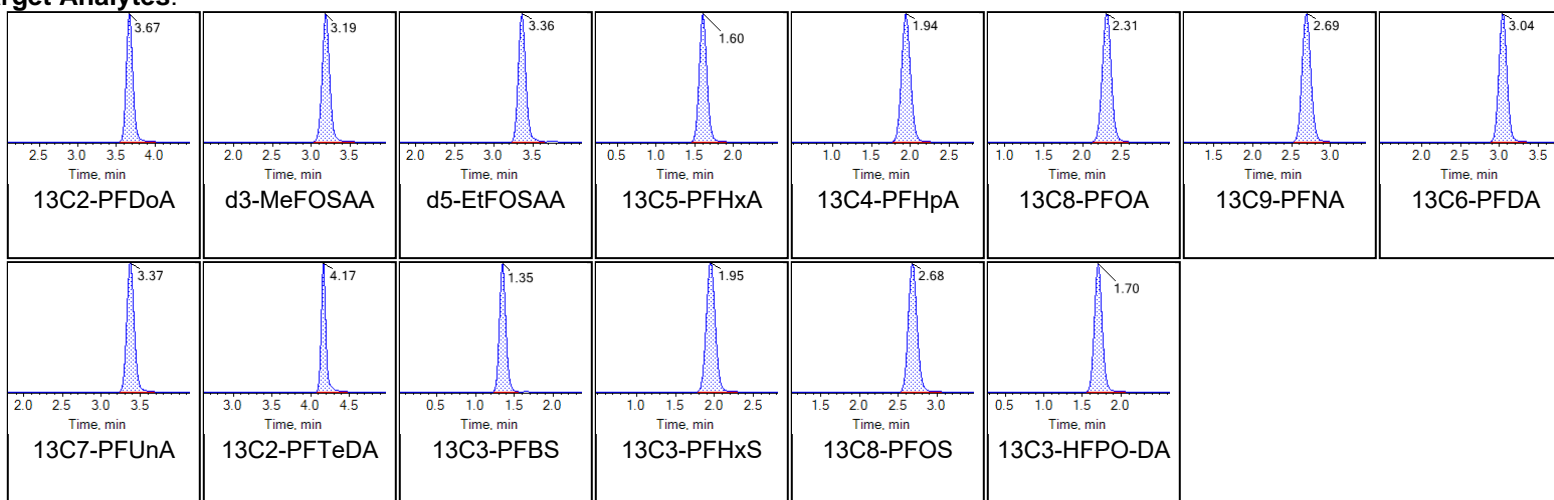
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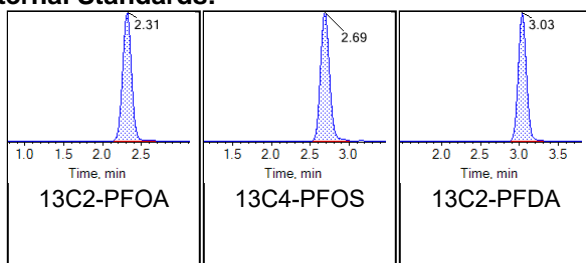
Sample Name	LE55 CCV	Injection Vial	1
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 4:18:03 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





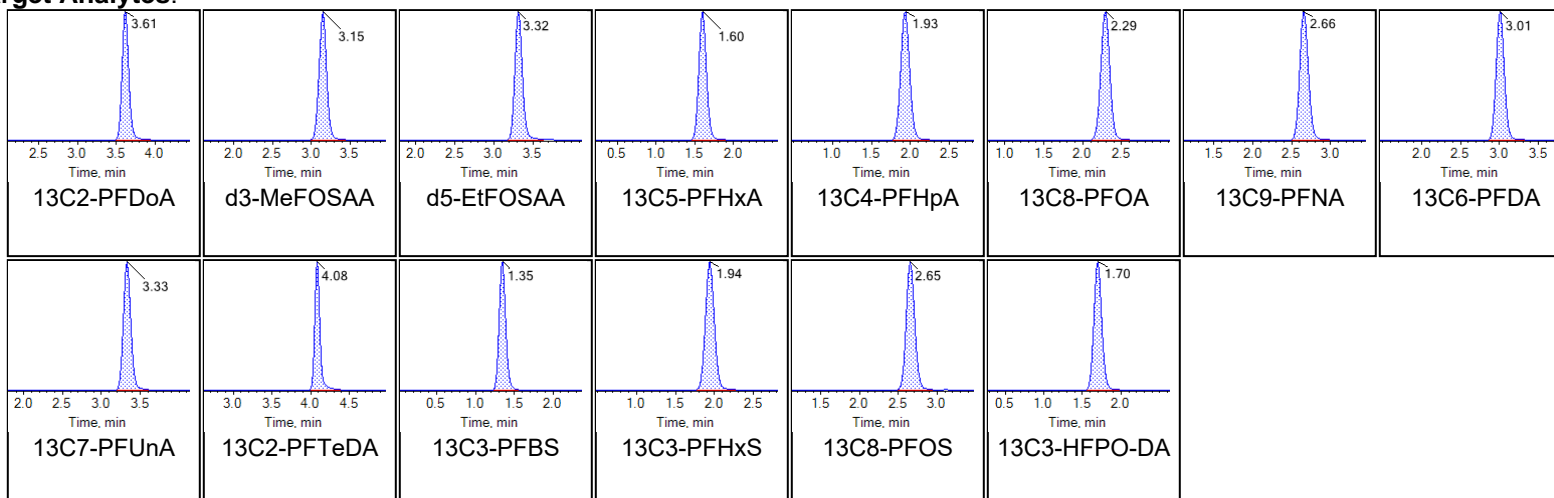
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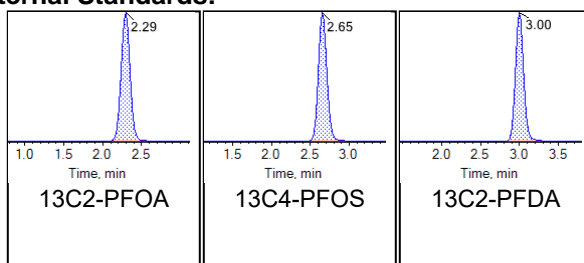
Sample Name	LE58 IB	Injection Vial	3
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 4:39:00 PM	Data File	AE_11192020_5-369.wiff
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Chromatograms

Target Analytes:



Internal Standards:





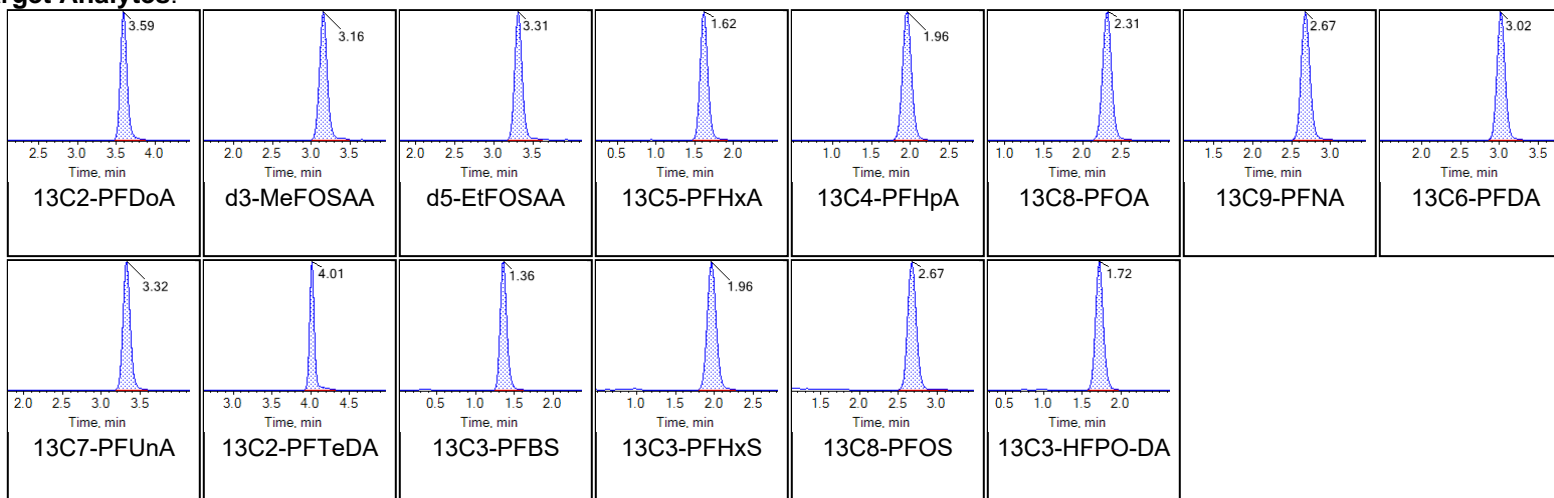
Chromatogram Report

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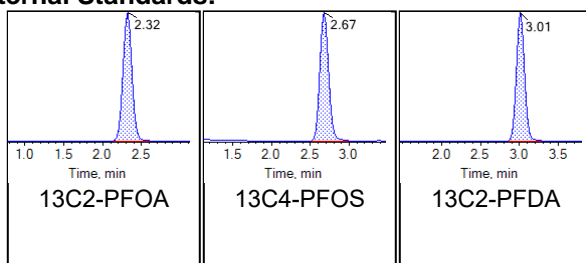
Sample Name	G2203-FS(0)	Injection Vial	3
Sample ID	CBD-AOA-MW06-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 7:17:24 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





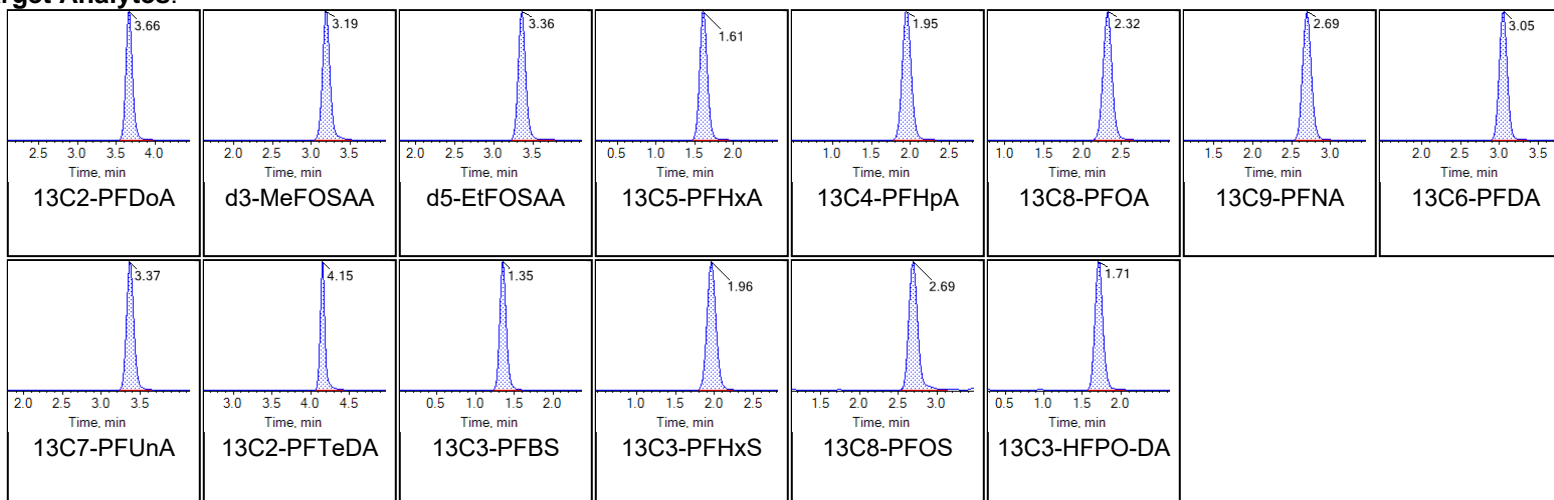
Chromatogram Report

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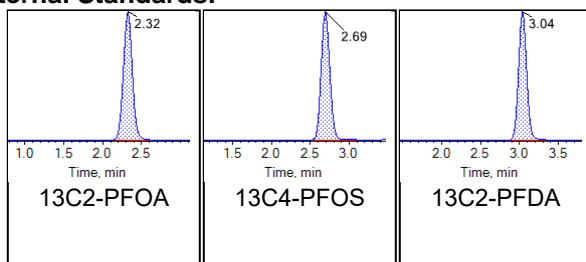
Sample Name	G2204-FS(0)	Injection Vial	4
Sample ID	CBD-AOA-EB01-102720-GW	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 7:27:53 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





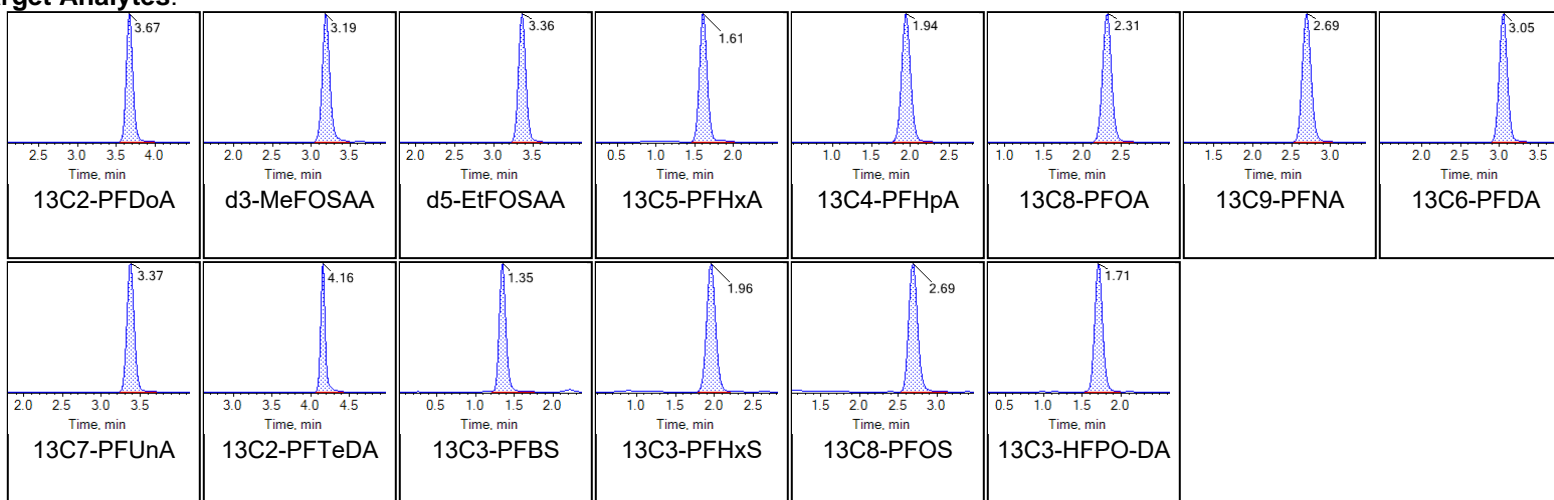
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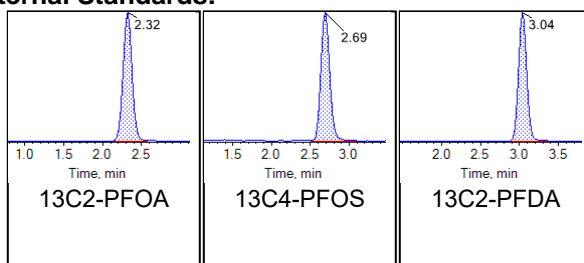
Sample Name	G2205-FS(0)	Injection Vial	5
Sample ID	CBD-AOA-MW12-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 7:38:20 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





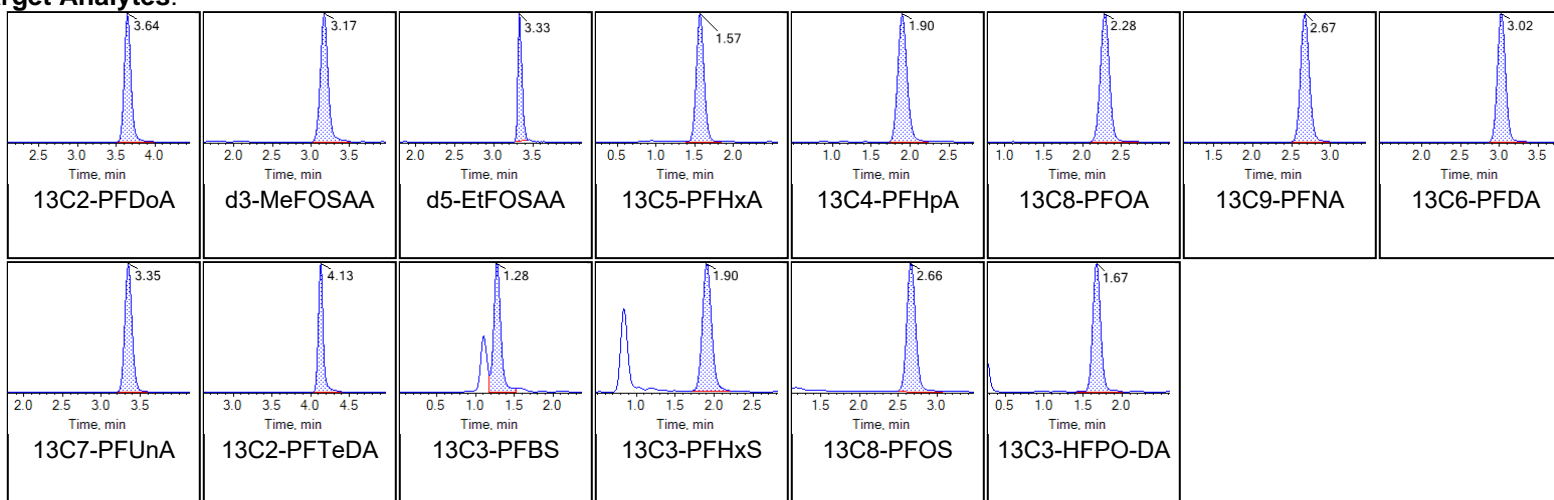
Chromatogram Report

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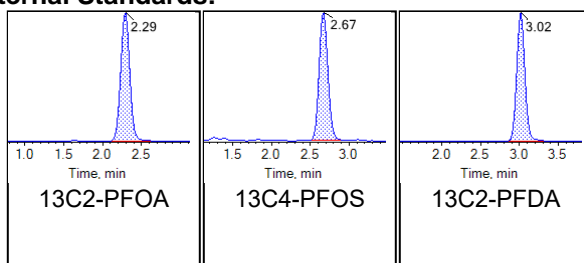
Sample Name	G2206-FS(0)	Injection Vial	6
Sample ID	CBD-AOA-MW11-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 7:48:47 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



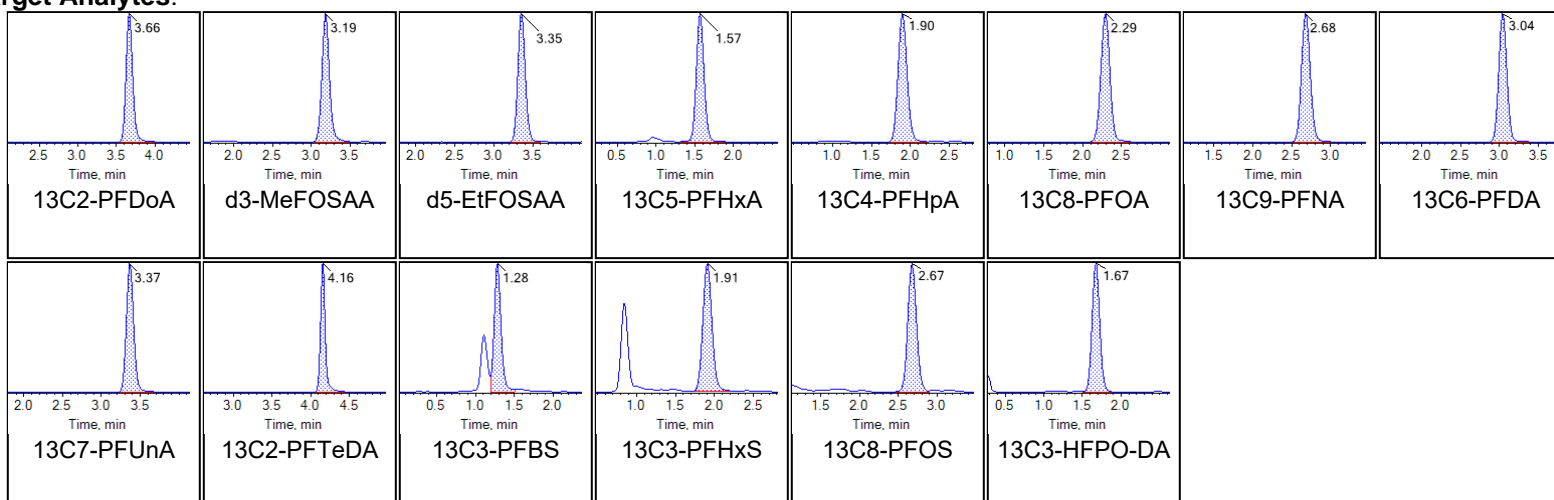
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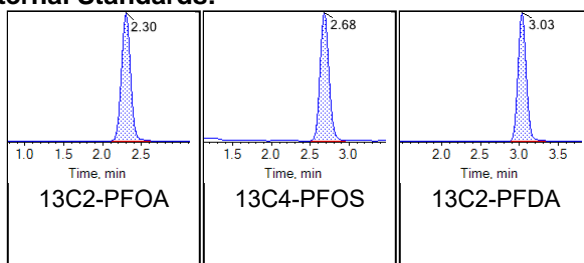
Sample Name	G2207-FS(0)	Injection Vial	7
Sample ID	CBD-AOA-MW11P-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 7:59:14 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





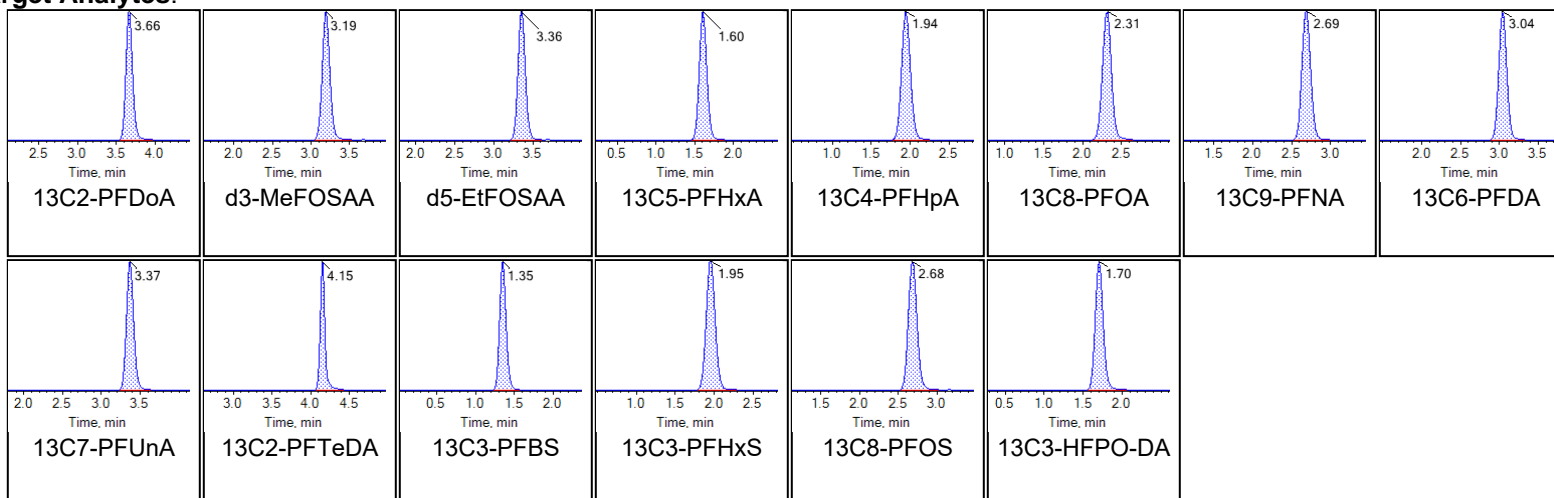
Chromatogram Report

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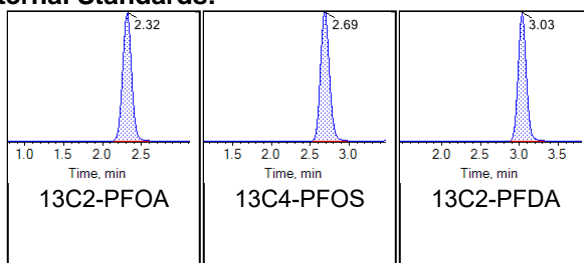
Sample Name	G2208-FS(0)	Injection Vial	8
Sample ID	CBD-AOA-FB01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
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Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





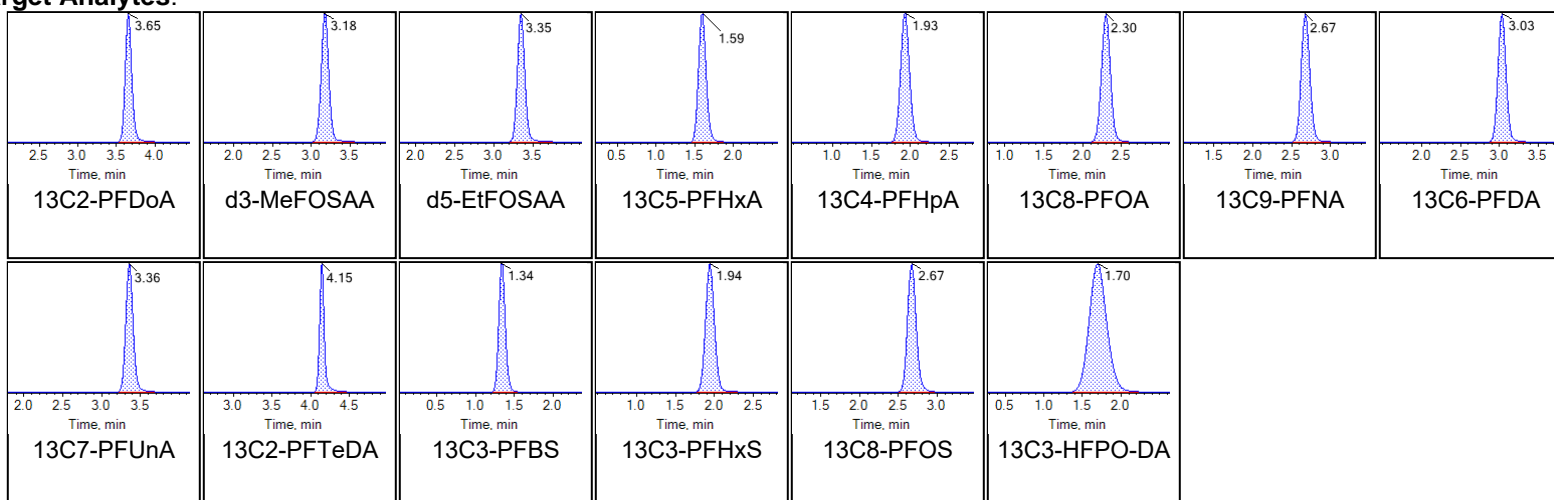
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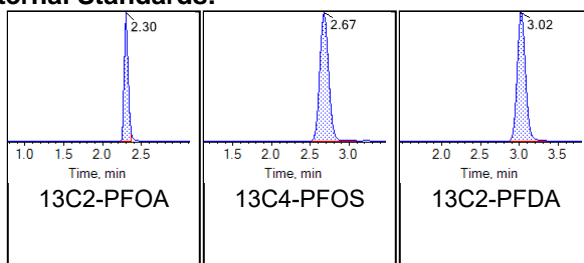
Sample Name	LE55 CCV	Injection Vial	11
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
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Chromatograms

Target Analytes:



Internal Standards:





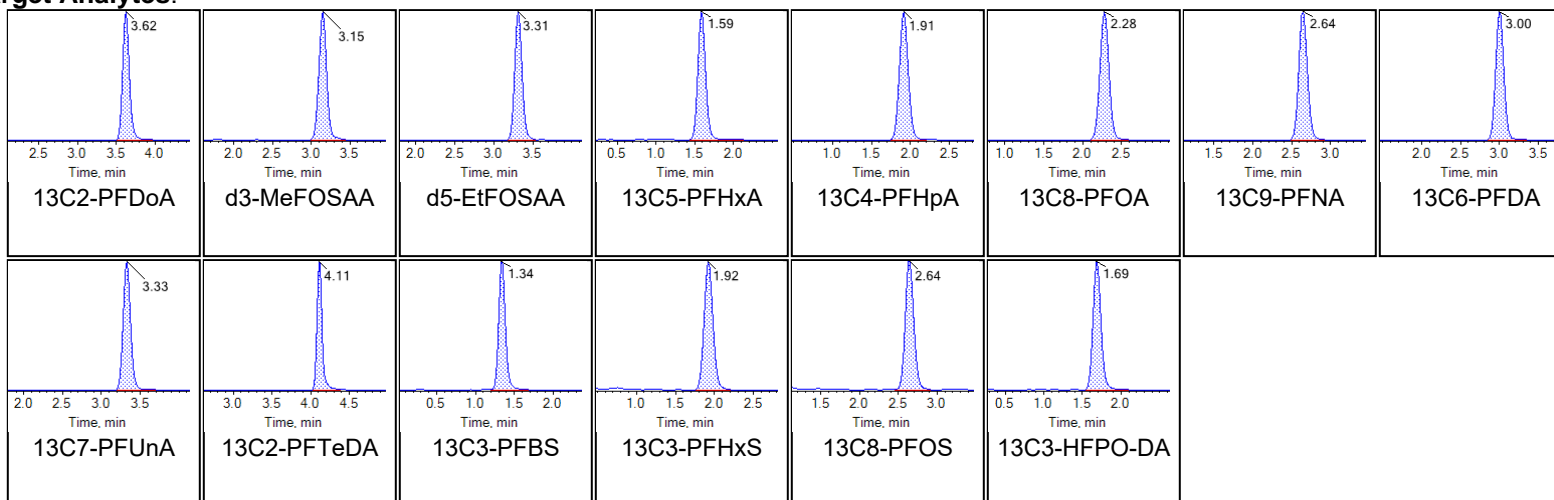
Chromatogram Report

Created with Analyst Reporter
Printed: 20/11/2020 10:40:46 AM

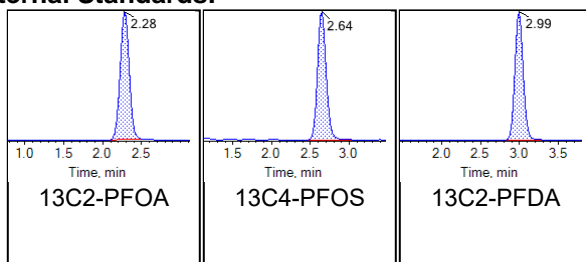
Sample Name	G2210-FS(0)	Injection Vial	12
Sample ID	CBD-AOA-MW14-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 8:51:35 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





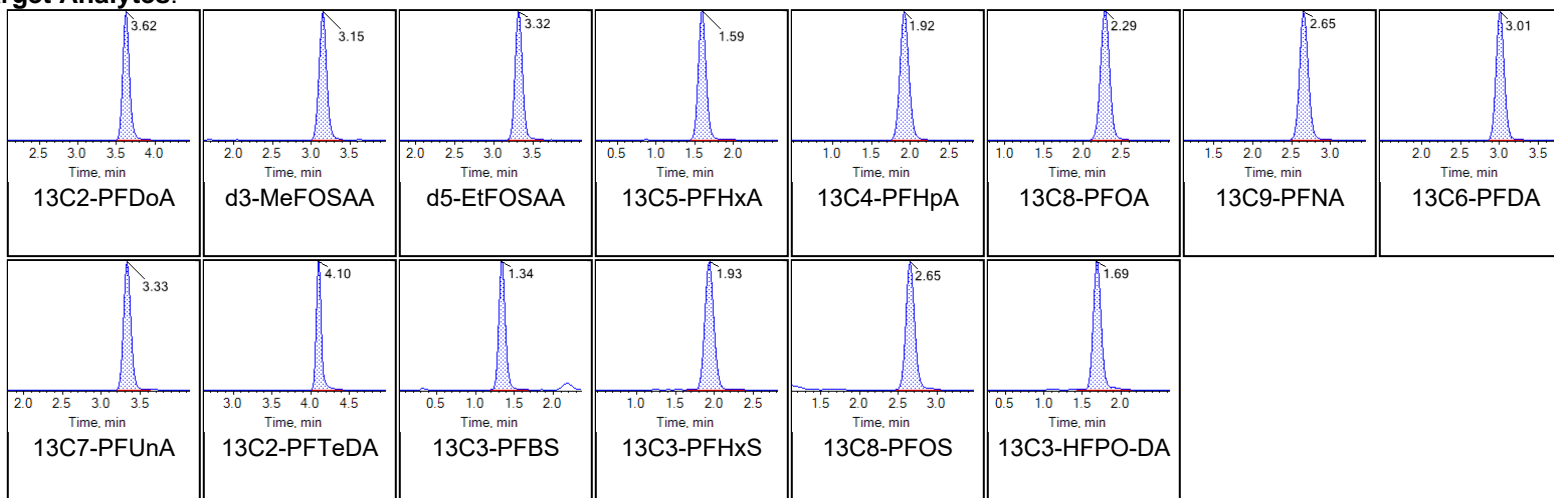
Chromatogram Report

Created with Analyst Reporter
Printed: 20/11/2020 10:40:46 AM

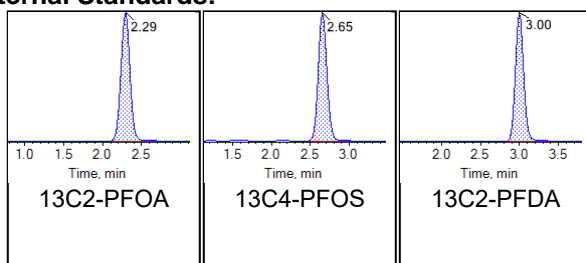
Sample Name	G2211-FS(0)	Injection Vial	13
Sample ID	CBD-AOA-MW13-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 9:02:03 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





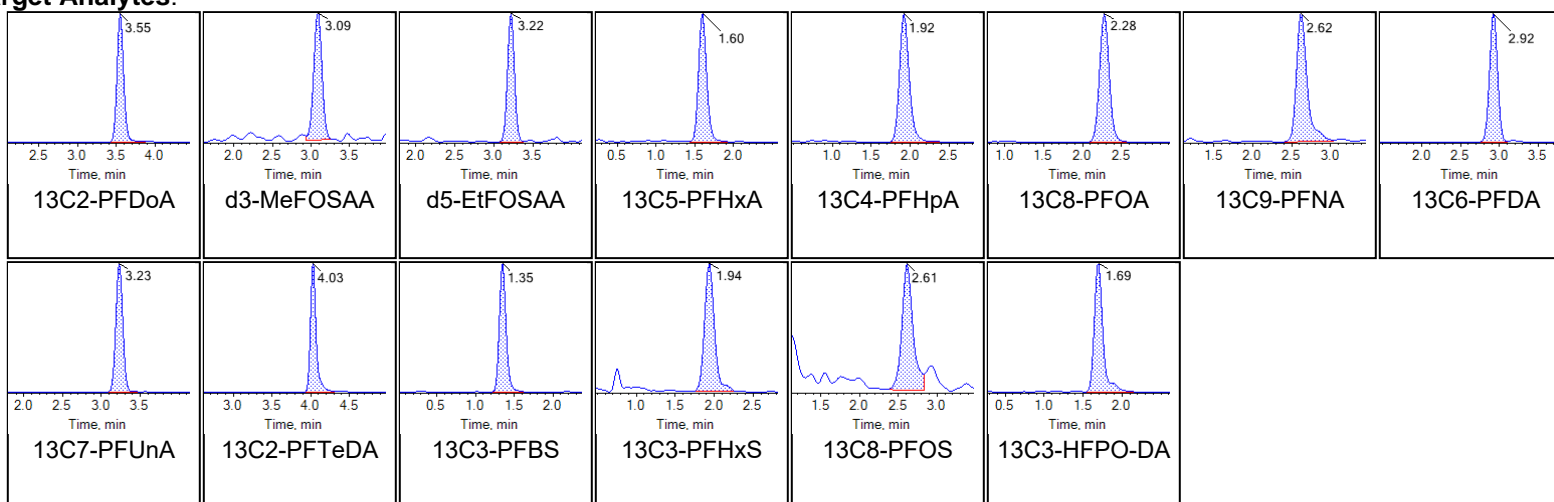
Chromatogram Report

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Printed: 20/11/2020 10:40:46 AM

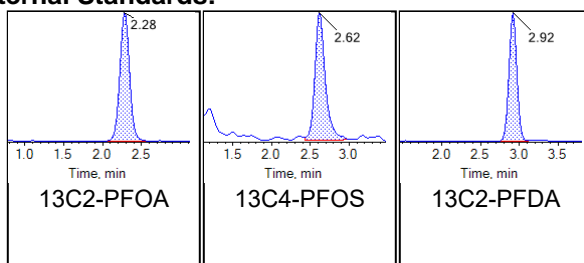
Sample Name	G2212-FS(0)	Injection Vial	14
Sample ID	CBD-AOA-IW01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 9:12:30 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



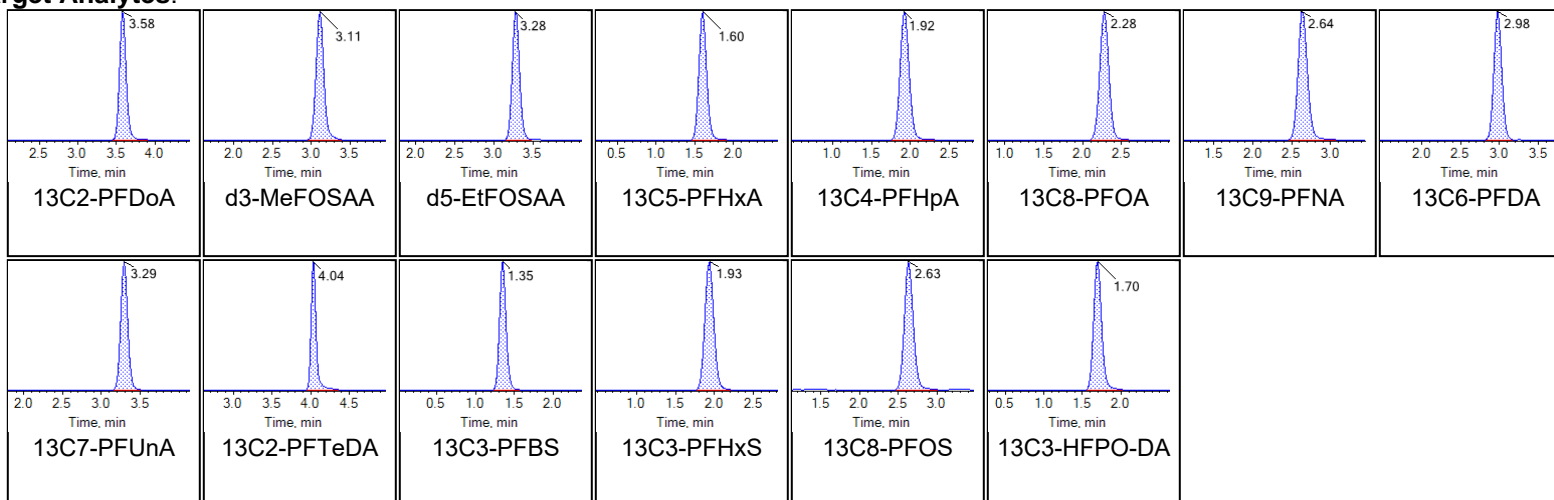
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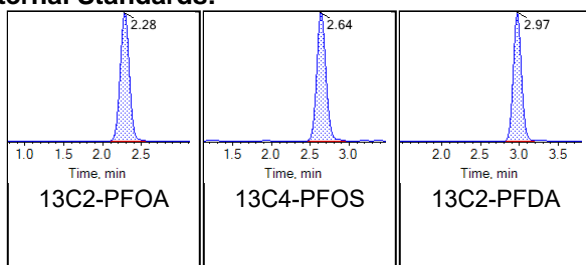
Sample Name	G2212-FS-D(5)	Injection Vial	16
Sample ID	CBD-AOA-IW01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 9:33:26 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





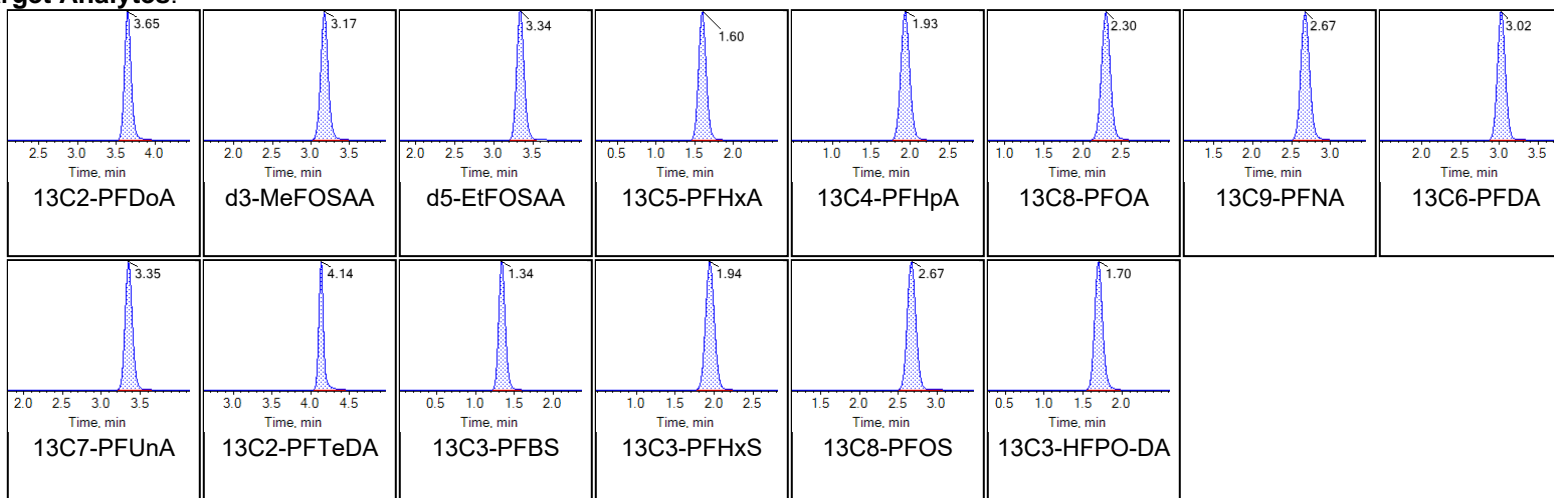
Chromatogram Report

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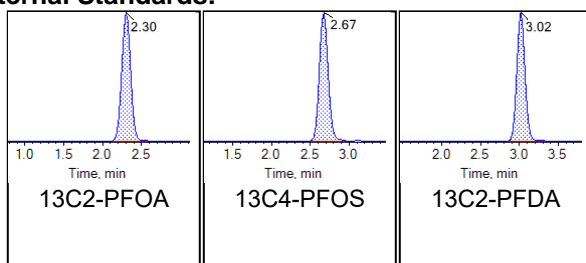
Sample Name	G2212-FS-D(7)	Injection Vial	17
Sample ID	CBD-AOA-IW01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 9:43:54 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





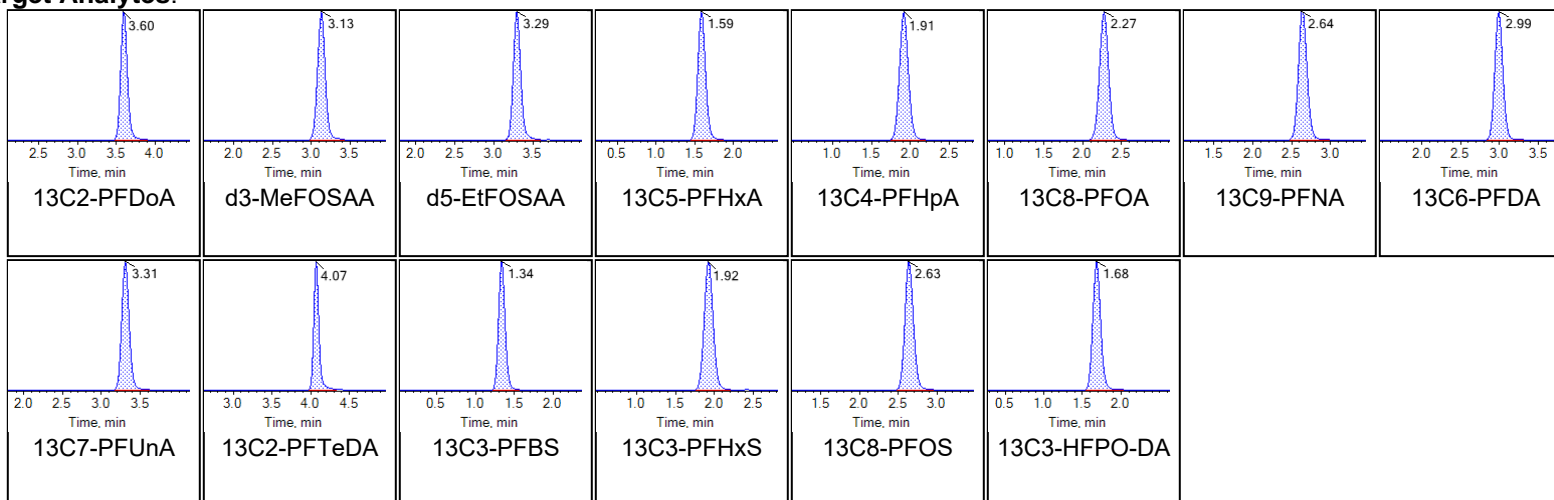
Chromatogram Report

Created with Analyst Reporter
Printed: 20/11/2020 10:40:46 AM

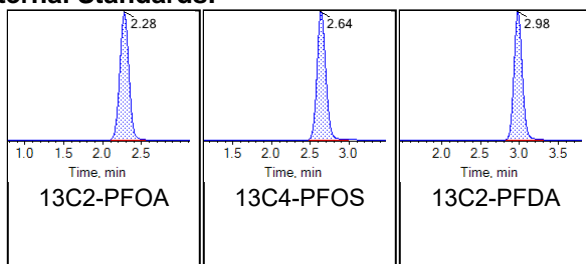
Sample Name	G2212-FS-D(9)	Injection Vial	18
Sample ID	CBD-AOA-IW01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 9:54:22 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375_SIS

Chromatograms

Target Analytes:



Internal Standards:





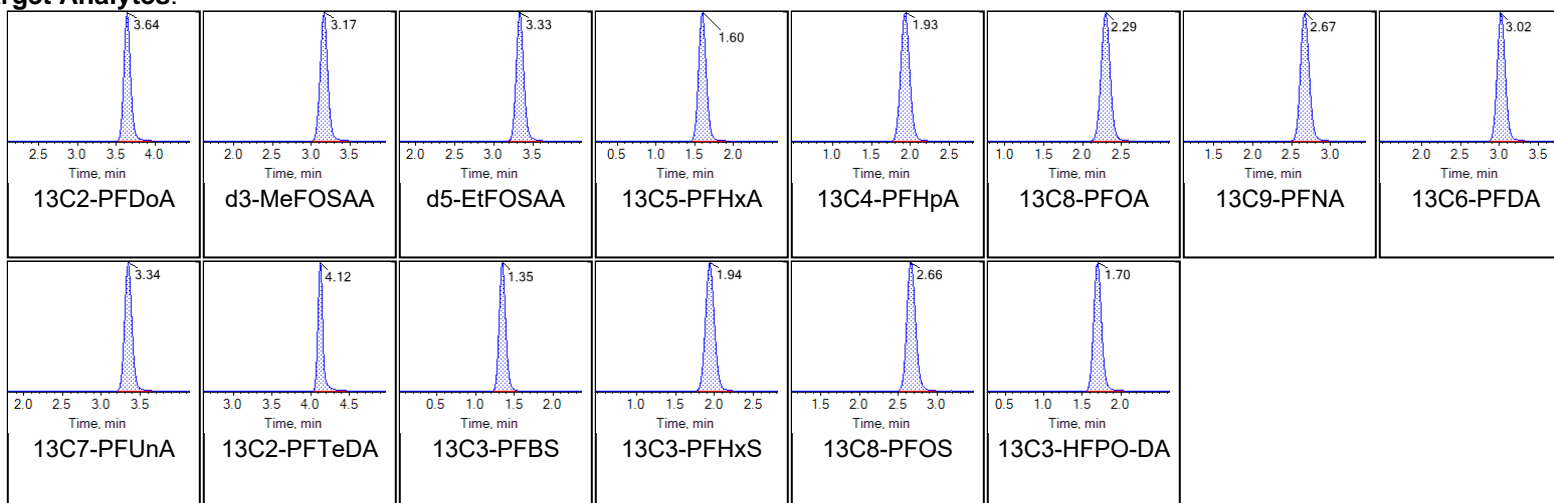
Chromatogram Report

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Printed: 20/11/2020 10:40:46 AM

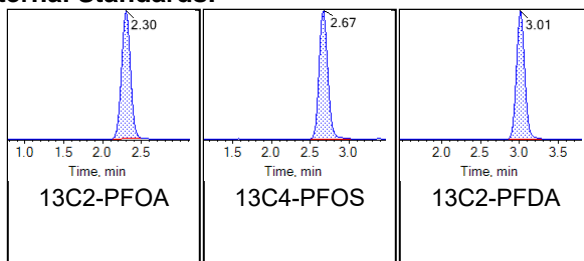
Sample Name	LE54 CCV	Injection Vial	20
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 10:15:19 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 SIS

Chromatograms

Target Analytes:



Internal Standards:



Unused Data

Sample Name	G2203-FS(0)	Injection Vial	19
Sample ID	CBD-AOA-MW06-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 9:52:09 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.63	1029597.07	637.66	6452.0	False	13C2-PFDA	1571754.98	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.16	198401.35	771.18	1254.2	False	13C4-PFOS	319704.57	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.32	232622.97	948.74	1560.8	False	13C4-PFOS	319704.57	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.59	917986.31	569.16	1349.3	False	13C2-PFOA	1117183.29	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.92	1171174.17	738.34	1541.4	False	13C2-PFOA	1117183.29	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.29	1391610.23	711.55	1455.7	False	13C2-PFOA	1117183.29	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.65	1298557.53	796.55	1556.9	False	13C4-PFOS	319704.57	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.01	1350215.22	831.41	5379.3	False	13C2-PFDA	1571754.98	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.33	1109767.52	750.84	4099.5	False	13C2-PFDA	1571754.98	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.12	342932.02	245.95	3851.5	False	13C2-PFDA	1571754.98	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.34	315818.53	761.21	2341.0	False	13C4-PFOS	319704.57	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.93	271894.90	834.61	945.0	False	13C4-PFOS	319704.57	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.65	220362.81	787.14	592.5	False	13C4-PFOS	319704.57	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.69	350169.56	872.55	1296.7	False	13C2-PFOA	1117183.29	1250.00		N/A	N/A	✓

Sample Name	G2204-FS(0)	Injection Vial	20
Sample ID	CBD-AOA-EB01-102720-GW	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 10:02:37 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	1683365.19	856.62	5386.4	False	13C2-PFDA	1912913.69	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.14	279656.63	877.88	1601.3	False	13C4-PFOS	395868.30	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.30	319132.26	1051.15	1634.4	False	13C4-PFOS	395868.30	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.58	1624876.89	691.45	4578.9	False	13C2-PFOA	1627725.49	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.91	1647855.01	713.02	5776.7	False	13C2-PFOA	1627725.49	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.27	1897319.97	665.84	9515.7	False	13C2-PFOA	1627725.49	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.64	1916713.69	949.53	5438.3	False	13C4-PFOS	395868.30	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.99	1783705.04	902.45	7749.4	False	13C2-PFDA	1912913.69	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.31	1568536.93	871.97	3873.4	False	13C2-PFDA	1912913.69	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.10	1258186.54	741.42	5095.9	False	13C2-PFDA	1912913.69	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.34	532817.03	1037.16	3975.0	False	13C4-PFOS	395868.30	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.92	343085.72	850.52	2449.8	False	13C4-PFOS	395868.30	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.63	302172.31	871.70	845.9	False	13C4-PFOS	395868.30	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.68	448186.72	766.50	1925.1	False	13C2-PFOA	1627725.49	1250.00		N/A	N/A	✓

Sample Name	G2205-FS(0)	Injection Vial	21
Sample ID	CBD-AOA-MW12-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 10:13:05 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.63	1443253.06	972.32	4745.5	False	13C2-PFDA	1444913.00	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.16	230332.98	1020.69	1213.1	False	13C4-PFOS	280428.33	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.32	311697.75	1449.29	1525.0	False	13C4-PFOS	280428.33	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.59	619283.69	457.63	1066.1	False	13C2-PFOA	937351.70	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.92	678562.51	509.86	1278.6	False	13C2-PFOA	937351.70	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.29	971325.52	591.94	1462.6	False	13C2-PFOA	937351.70	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.65	1096182.84	766.59	1920.2	False	13C4-PFOS	280428.33	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.01	1365559.37	914.67	3982.4	False	13C2-PFDA	1444913.00	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.33	1275876.38	939.00	2762.9	False	13C2-PFDA	1444913.00	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.12	1202449.77	938.08	4023.6	False	13C2-PFDA	1444913.00	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.33	244654.84	672.28	2531.3	False	13C4-PFOS	280428.33	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.93	230895.50	808.02	833.3	False	13C4-PFOS	280428.33	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.65	230246.21	937.63	526.8	False	13C4-PFOS	280428.33	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.68	337151.19	1001.29	1850.2	False	13C2-PFOA	937351.70	1250.00		N/A	N/A	✓

Sample Name	G2206-FS(0)	Injection Vial	22
Sample ID	CBD-AOA-MW11-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 10:23:33 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.63	1386949.81	948.08	3632.5	False	13C2-PFDA	1424041.92	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.15	208291.69	1062.88	652.2	False	13C4-PFOS	243527.76	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.32	327037.03	1751.03	1212.2	False	13C4-PFOS	243527.76	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.56	383024.38	337.27	948.3	False	13C2-PFOA	786636.81	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.89	278958.88	249.76	888.6	False	13C2-PFOA	786636.81	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.27	922547.97	669.93	1137.7	False	13C2-PFOA	786636.81	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.65	1143177.10	920.59	1446.3	False	13C4-PFOS	243527.76	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.01	1128807.90	767.17	2946.0	False	13C2-PFDA	1424041.92	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.33	1380802.24	1031.12	2499.1	False	13C2-PFDA	1424041.92	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.12	1328380.73	1051.52	3974.8	False	13C2-PFDA	1424041.92	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.27	171876.74	543.86	1473.4	False	13C4-PFOS	243527.76	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.89	171382.91	690.64	246.5	False	13C4-PFOS	243527.76	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.65	195456.42	916.56	432.4	False	13C4-PFOS	243527.76	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.66	138674.07	490.75	787.7	False	13C2-PFOA	786636.81	1250.00		N/A	N/A	✓

Sample Name	G2207-FS(0)	Injection Vial	23
Sample ID	CBD-AOA-MW11P-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 10:34:01 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.63	1291841.77	977.83	4100.8	False	13C2-PFDA	1286036.45	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.16	181474.08	1018.48	986.7	False	13C4-PFOS	221423.59	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.32	350626.17	2064.74	1357.7	False	13C4-PFOS	221423.59	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.56	405189.97	346.60	1194.1	False	13C2-PFOA	809753.49	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.89	321570.69	279.70	1012.4	False	13C2-PFOA	809753.49	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.27	976483.83	688.85	1097.2	False	13C2-PFOA	809753.49	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.65	1133900.92	1004.27	1528.6	False	13C4-PFOS	221423.59	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.01	1151945.84	866.91	2364.1	False	13C2-PFDA	1286036.45	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.34	1438717.95	1189.66	2359.8	False	13C2-PFDA	1286036.45	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.12	1237670.50	1084.85	4488.2	False	13C2-PFDA	1286036.45	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.28	160671.02	559.15	1354.5	False	13C4-PFOS	221423.59	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.90	168003.18	744.60	267.5	False	13C4-PFOS	221423.59	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.65	187990.49	969.56	449.6	False	13C4-PFOS	221423.59	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.66	145437.84	499.99	629.7	False	13C2-PFOA	809753.49	1250.00		N/A	N/A	✓

Sample Name	G2208-FS(0)	Injection Vial	24
Sample ID	CBD-AOA-FB01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 10:44:29 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.64	1955174.86	860.32	6705.9	False	13C2-PFDA	2212252.18	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.17	325980.54	998.92	1526.4	False	13C4-PFOS	405529.47	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.33	412916.75	1327.65	2245.2	False	13C4-PFOS	405529.47	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.60	1841209.05	798.34	3969.2	False	13C2-PFOA	1597494.54	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.93	1792539.81	790.30	8387.1	False	13C2-PFOA	1597494.54	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.30	2187297.10	782.13	8280.7	False	13C2-PFOA	1597494.54	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.67	2142980.13	1036.32	52492.0	False	13C4-PFOS	405529.47	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.02	1956107.41	855.77	4436.7	False	13C2-PFDA	2212252.18	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.34	1944046.51	934.49	10478.1	False	13C2-PFDA	2212252.18	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.12	1588731.89	809.53	4237.3	False	13C2-PFDA	2212252.18	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.35	510787.22	970.59	3967.7	False	13C4-PFOS	405529.47	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.94	379062.17	917.32	1583.2	False	13C4-PFOS	405529.47	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.66	310896.58	875.50	1308.7	False	13C4-PFOS	405529.47	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.70	314754.50	548.49	2468.4	False	13C2-PFOA	1597494.54	1250.00		N/A	N/A	✓

Sample Name	G2210-FS(0)	Injection Vial	28
Sample ID	CBD-AOA-MW14-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 11:26:21 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	1417346.04	841.95	6340.3	False	13C2-PFDA	1638687.18	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.15	199387.44	842.39	1320.2	False	13C4-PFOS	294133.07	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.32	298598.42	1323.69	1221.2	False	13C4-PFOS	294133.07	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.59	639912.34	497.94	867.6	False	13C2-PFOA	890163.48	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.92	782473.64	619.10	1276.0	False	13C2-PFOA	890163.48	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.28	1026499.24	658.72	1212.8	False	13C2-PFOA	890163.48	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.65	1226825.33	817.97	1503.5	False	13C4-PFOS	294133.07	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.01	1320919.75	780.15	3351.4	False	13C2-PFDA	1638687.18	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.33	1400174.53	908.63	2966.1	False	13C2-PFDA	1638687.18	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.11	1282824.77	882.44	4495.7	False	13C2-PFDA	1638687.18	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.34	288881.89	756.82	1939.9	False	13C4-PFOS	294133.07	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.93	242603.10	809.44	800.2	False	13C4-PFOS	294133.07	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.65	264333.53	1026.29	586.4	False	13C4-PFOS	294133.07	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.68	329511.48	1030.47	971.2	False	13C2-PFOA	890163.48	1250.00		N/A	N/A	✓

Sample Name	G2211-FS(0)	Injection Vial	29
Sample ID	CBD-AOA-MW13-1020	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 11:36:49 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	3.63	1581582.96	874.93	4443.1	False	13C2-PFDA	1759652.11	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.15	248964.36	878.31	1200.6	False	13C4-PFOS	352247.14	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.33	327928.99	1213.88	1547.3	False	13C4-PFOS	352247.14	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.59	842752.44	504.81	1940.6	False	13C2-PFOA	1156369.92	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.92	926187.95	564.11	1814.0	False	13C2-PFOA	1156369.92	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.29	1237693.45	611.41	1736.9	False	13C2-PFOA	1156369.92	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.66	1366326.88	760.69	2052.5	False	13C4-PFOS	352247.14	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.01	1390589.87	764.84	4614.3	False	13C2-PFDA	1759652.11	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.34	1437539.79	868.75	6337.7	False	13C2-PFDA	1759652.11	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.12	1224956.90	784.71	4349.8	False	13C2-PFDA	1759652.11	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.34	346550.13	758.12	1908.8	False	13C4-PFOS	352247.14	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.94	271075.33	755.22	917.3	False	13C4-PFOS	352247.14	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.65	266365.58	863.56	535.6	False	13C4-PFOS	352247.14	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.69	402138.87	968.09	2078.2	False	13C2-PFOA	1156369.92	1250.00		N/A	N/A	✓



PFAS Sample Quant Report

Created with Analyst Reporter
Printed: 20/11/2020 10:46:22 AM

Sample Name	G2212-FS(0)	Injection Vial	30
Sample ID	CBD-AOA-IW01-102820	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/18/2020 11:47:17 PM	Data File	AE_11182020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	372530.66	1500.21	1954.3	False	13C2-PFDA	241722.75	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.13	16387.81	953.65	181.7	False	13C4-PFOS	21354.69	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.27	39177.61	2392.15	457.4	False	13C4-PFOS	21354.69	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.59	332646.88	753.73	619.8	False	13C2-PFOA	305698.69	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.92	199279.40	459.12	528.4	False	13C2-PFOA	305698.69	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.29	359956.25	672.62	782.3	False	13C2-PFOA	305698.69	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.65	99436.02	913.17	458.3	False	13C4-PFOS	21354.69	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	2.96	291072.72	1165.42	1096.4	False	13C2-PFDA	241722.75	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.27	244548.81	1075.84	1300.7	False	13C2-PFDA	241722.75	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.13	520117.95	2425.50	3419.3	False	13C2-PFDA	241722.75	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.34	229584.68	8284.52	1892.0	False	13C4-PFOS	21354.69	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.93	72403.84	3327.36	373.4	False	13C4-PFOS	21354.69	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.64	25602.08	1369.12	113.9	False	13C4-PFOS	21354.69	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.69	318243.43	2898.03	828.7	False	13C2-PFOA	305698.69	1250.00		N/A	N/A	✓



PFAS Sample Quant Report

Created with Analyst Reporter
Printed: 20/11/2020 10:46:22 AM

Sample Name	G2209-FS(0)	Injection Vial	9
Sample ID	CBD-AOA-EB01-102820-GW	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	Triple Quad 6500+ Low Mass
Acquisition Date	11/19/2020 8:20:11 PM	Data File	AE_11192020_5-369.wiff
Acquisition Method	5-369.dam	Result Table	20-1375 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	412073.72	410.79	3446.4	False	13C2-PFDA	976471.25	1250.00				
d3-MeFOSAA	573.0 / 419.0	3.13	29562.36	142.04	371.9	False	13C4-PFOS	258638.93	1195.00		N/A	N/A	✓
d5-EtFOSAA	589.0 / 419.0	3.30	76050.74	383.40	706.9	False	13C4-PFOS	258638.93	1195.00		N/A	N/A	✓
13C5-PFHxA	318.0 / 273.0	1.60	949663.89	660.29	2350.4	False	13C2-PFOA	996226.51	1250.00		N/A	N/A	✓
13C4-PFHpA	367.0 / 322.0	1.93	972841.23	687.77	3492.4	False	13C2-PFOA	996226.51	1250.00		N/A	N/A	✓
13C8-PFOA	421.0 / 376.0	2.30	1276729.37	732.07	2973.3	False	13C2-PFOA	996226.51	1250.00		N/A	N/A	✓
13C9-PFNA	472.0 / 427.0	2.67	1204996.88	913.68	2924.5	False	13C4-PFOS	258638.93	1195.00		N/A	N/A	✓
13C6-PFDA	519.0 / 474.0	3.00	873442.49	865.71	3331.5	False	13C2-PFDA	976471.25	1250.00		N/A	N/A	✓
13C7-PFUnA	570.0 / 525.0	3.31	396066.16	431.33	3007.0	False	13C2-PFDA	976471.25	1250.00		N/A	N/A	✓
13C2-PFTeDA	715.0 / 670.0	4.14	340227.27	392.76	2703.9	False	13C2-PFDA	976471.25	1250.00		N/A	N/A	✓
13C3-PFBS	302.0 / 99.0	1.35	357770.68	1065.93	2313.3	False	13C4-PFOS	258638.93	1195.00		N/A	N/A	✓
13C3-PFHxS	402.0 / 99.0	1.94	290124.64	1100.83	1065.9	False	13C4-PFOS	258638.93	1195.00		N/A	N/A	✓
13C8-PFOS	507.0 / 99.0	2.66	214398.45	946.65	537.1	False	13C4-PFOS	258638.93	1195.00		N/A	N/A	✓
13C3-HFPO-DA	287.0 / 169.0	1.70	398171.86	1112.62	1089.6	False	13C2-PFOA	996226.51	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
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-24-4	1.02	1.02	NG L	J	J	J
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			Perfluoroheptanoic Acid (PFHpA)	375-85-9	1	1	NG L	U	U	U
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			Perfluorooctanoic Acid (PFOA)	335-67-1	1.5	1.5	NG L	U	U	U
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			Perfluorononanoic Acid (PFNA)	375-95-1	1	1	NG L	U	U	U
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2	0.5	0.5	NG L	U	U	U
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8	0.5	0.5	NG L	U	U	U
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1	0.5	0.5	NG L	U	U	U
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			Perfluorotridecanoic Acid (PFTeDA)	72629-94-8	0.5	0.5	NG L	U	U	U
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			Perfluorotetradecanoic Acid (PFTEdA)	376-06-7	2	2	NG L	U	U	U
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			N-Methyl Perfluoroctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	1	1	NG L	U	U	U
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			N-Ethyl Perfluoroctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	1	1	NG L	U	U	U
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.5	0.5	NG L	U	U	U
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.4	0.4	NG L	U	U	U
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			Perfluoroctane Sulfonate (PFOS)	1763-23-1	1	1	NG L	U	U	U
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	13252-13-6	0.5	0.5	NG L	U	U	U
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			4,8-dioxo-3H-perfluorononanoic acid (ADONA)	919005-14-4	1	1	NG L	U	U	U
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			11-chloroicosafuoro-3-oxadecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	1	1	NG L	U	U	U
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	0.5	0.5	NG L	U	U	U
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			13C5-PFHxA	BDO-2217	76	76			PCT REC	
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			13C4-PFHpA	BDO-2218	76	76			PCT REC	
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			13C8-PFOA	BDO-2219	76	76			PCT REC	
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			13C9-PFNA	BDO-2221	77	77			PCT REC	
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			13C6-PFDA	BDO-2222	73	73			PCT REC	
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			13C7-PFUnA	BDO-2223	71	71			PCT REC	
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			13C2-PFDoA	BDO-2112	68	68			PCT REC	
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			13C2-PFTEdA	BDO-2224	56	56			PCT REC	
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			d3-MeFOSAA	BDO-1838	62	62			PCT REC	
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			d5-EtFOSAA	BDO-1839	80	80			PCT REC	
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			13C3-PFBS	BDO-2226	87	87			PCT REC	
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			13C3-PFHxS	BDO-2227	81	81			PCT REC	
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			13C8-PFOS	BDO-2228	77	77			PCT REC	
		20201104	12:48:00	20201118	21:31:12	DB124PB-FS	1	1			13C3-HFPO-DA	BDO-2276	67	67			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-24-4	81	81			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			Perfluoroheptanoic Acid (PFHpA)	375-85-9	82	82			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			Perfluorooctanoic Acid (PFOA)	335-67-1	74	74			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			Perfluorononanoic Acid (PFNA)	375-95-1	86	86			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2	87	87			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8	80	80			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1	79	79			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			Perfluorotridecanoic Acid (PFTeDA)	72629-94-8	91	91			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			Perfluorotetradecanoic Acid (PFTEdA)	376-06-7	85	85			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			N-Methyl Perfluoroctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	87	87			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			N-Ethyl Perfluoroctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	92	92			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	84	84			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	91	91			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			Perfluoroctane Sulfonate (PFOS)	1763-23-1	77	77			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	13252-13-6	83	83			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			4,8-dioxo-3H-perfluorononanoic acid (ADONA)	919005-14-4	83	83			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			11-chloroicosafuoro-3-oxadecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	68	68			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	78	78			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			13C5-PFHxA	BDO-2217	72	72			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			13C4-PFHpA	BDO-2218	68	68			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			13C8-PFOA	BDO-2219	74	74			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			13C9-PFNA	BDO-2221	75	75			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			13C6-PFDA	BDO-2222	79	79			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			13C7-PFUnA	BDO-2223	77	77			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			13C2-PFDoA	BDO-2112	83	83			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			13C2-PFTEdA	BDO-2224	74	74			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			d3-MeFOSAA	BDO-1838	80	80			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			d5-EtFOSAA	BDO-1839	68	68			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			13C3-PFBS	BDO-2226	90	90			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			13C3-PFHxS	BDO-2227	81	81			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			13C8-PFOS	BDO-2228	87	87			PCT REC	
		20201104	12:48:00	20201118	21:41:40	DB125LCs-FS	1	1			13C3-HFPO-DA	BDO-2276	74	74			PCT REC	
		20201104	12:48:00	20201119	19:17:24	G2203-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-24-4	1.46	1.46	NG L	J	U	U
		20201104	12:48:00	20201119	19:17:24	G2203-FS	1	1			Perfluoroheptanoic Acid (PFHpA)	375-85-9	1.54	1.54	NG L	J	J	J
		20201104	12:48:00	20201119	19:17:24	G2203-FS	1	1			Perfluorooctanoic Acid (PFOA)	335-67-1	55	55				
		20201104	12:48:00	20201119	19:17:24	G2203-FS	1	1			Perfluorononanoic Acid (PFNA)	375-95-1	0.42	0.42	NG L	J	J	J
		20201104	12:48:00	20201119	19:17:24	G2203-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2	0.48	0.48	NG L	U	U	U
		20201104	12:48:00	20201119	19:17:24	G2203-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8	0.48	0.48	NG L	U	U	U
		20201104	12:48:00	20201119	19:17:24	G2203-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1	0.48	0.48	NG L	U	U	U
		20201104	12:48:00	20201119	19:17:24	G2203-FS	1	1			Perfluorotridecanoic Acid (PFTeDA)	72629-94-8	0.48	0.48	NG L	U	U	U
		20201104	12:48:00	20201119	19:17:24	G2203-FS	1	1			Perfluorotetradecanoic Acid (PFTEdA)	376-06-7	1.92	1.92	NG L	U	U	U
		20201104	12:48:00	20201119	19:17:24													

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
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	1.5	1.5	NG	L	U	U
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	1	1	NG	L	U	U
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			Perfluorodecanoic acid (PFDA)	335-76-2	0.5	0.5	NG	L	U	U
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			Perfluoroundecanoic acid (PFUnA)	2058-94-8	0.5	0.5	NG	L	U	U
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			Perfluorododecanoic acid (PFDoA)	307-55-1	0.5	0.5	NG	L	U	U
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			Perfluorotridecanoic acid (PFTeDA)	72629-94-8	0.5	0.5	NG	L	U	U
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			Perfluorotetradecanoic acid (PFTeDA)	376-06-7	2	2	NG	L	U	U
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	1	1	NG	L	U	U
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	1	1	NG	L	U	U
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.5	0.5	NG	L	U	U
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.4	0.4	NG	L	U	U
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	1	1	NG	L	U	U
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	13252-13-6	0.5	0.5	NG	L	U	U
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			4,8-dioxo-3H-perfluorononanoic acid (ADONA)	919005-14-4	0.9	0.9	NG	L	U	U
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			11-chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	1	1	NG	L	U	U
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			9-chlorohexadecafluoro-3-oxanonone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	0.5	0.5	NG	L	U	U
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			13C5-PFHxA	BDO-2217	71	71	PCT_REC			
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			13C4-PFHpA	BDO-2218	80	80	PCT_REC			
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			13C8-PFOA	BDO-2219	72	72	PCT_REC			
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			13C9-PFNA	BDO-2221	93	93	PCT_REC			
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			13C6-PFDA	BDO-2222	91	91	PCT_REC			
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			13C7-PFUnA	BDO-2223	92	92	PCT_REC			
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			13C2-PFDoA	BDO-2112	92	92	PCT_REC			
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			13C2-PFTEdA	BDO-2224	75	75	PCT_REC			
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			d3-MeFOSAA	BDO-1838	87	87	PCT_REC			
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			d5-EtFOSAA	BDO-1839	104	104	PCT_REC			
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			13C3-PFBS	BDO-2226	113	113	PCT_REC			
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			13C3-PFHxS	BDO-2227	96	96	PCT_REC			
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			13C8-PFOS	BDO-2228	90	90	PCT_REC			
		20201104	12:48:00	20201119	19:27:53	G2204-FS	1	1			13C3-HFPO-DA	BDO-2276	83	83	PCT_REC			
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-24-4	1.36	1.36	NG	L	U	UJ
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	0.9	0.9	NG	L	U	UJ
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.68	0.68	NG	L	J	J
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1	0.9	0.9	NG	L	U	U
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			Perfluorodecanoic acid (PFDA)	335-76-2	0.45	0.45	NG	L	U	U
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			Perfluoroundecanoic acid (PFUnA)	2058-94-8	0.45	0.45	NG	L	U	U
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			Perfluorododecanoic acid (PFDoA)	307-55-1	0.45	0.45	NG	L	U	U
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			Perfluorotridecanoic acid (PFTeDA)	72629-94-8	0.45	0.45	NG	L	U	U
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	375-06-7	1.82	1.82	NG	L	U	U
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2355-31-9	0.9	0.9	NG	L	U	U
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	0.9	0.9	NG	L	U	U
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.45	0.45	NG	L	U	U
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.15	0.15	NG	L	J	J
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.9	0.9	NG	L	U	U
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	13252-13-6	0.45	0.45	NG	L	U	U
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			4,8-dioxo-3H-perfluorononanoic acid (ADONA)	919005-14-4	0.9	0.9	NG	L	U	U
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			11-chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	0.9	0.9	NG	L	U	U
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			9-chlorohexadecafluoro-3-oxanonone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	0.45	0.45	NG	L	U	U
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			13C5-PFHxA	BDO-2217	42	42	PCT_REC	N		
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			13C4-PFHpA	BDO-2218	44	44	PCT_REC	N		
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			13C8-PFOA	BDO-2219	58	58	PCT_REC			
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			13C9-PFNA	BDO-2221	73	73	PCT_REC			
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			13C6-PFDA	BDO-2222	78	78	PCT_REC			
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			13C7-PFUnA	BDO-2223	84	84	PCT_REC			
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			13C2-PFDoA	BDO-2112	84	84	PCT_REC			
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			13C2-PFTEdA	BDO-2224	89	89	PCT_REC			
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			d3-MeFOSAA	BDO-1838	94	94	PCT_REC			
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			d5-EtFOSAA	BDO-1839	141	141	PCT_REC			
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			13C3-PFBS	BDO-2226	76	76	PCT_REC			
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			13C3-PFHxS	BDO-2227	80	80	PCT_REC			
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			13C8-PFOS	BDO-2228	89	89	PCT_REC			
		20201104	12:48:00	20201119	19:38:20	G2205-FS	1	1			13C3-HFPO-DA	BDO-2276	89	89	PCT_REC			
		20201104	12:48:00	20201119	19:48:47	G2206-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-24-4	1.39	1.39	NG	L	U	UJ
		20201104	12:48:00	20201119	19:48:47	G2206-FS	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9	0.92	0.92	NG	L	U	UJ
		20201104	12:48:00	20201119	19:48:47	G2206-FS	1	1			Perfluorooctanoic acid (PFOA)	335-67-1	0.68	0.68	NG	L	J	J
		20201104	12:48:00	20201119	19:48:47	G2206-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1	0.92	0.92	NG	L	U	U
		20201104	12:48:00	20201119	19:48:47	G2206-FS	1	1			Perfluorodecanoic acid (PFDA)	335-76-2	0.46	0.46	NG	L	U	U
		20201104	12:48:00	20201119	19:48:47	G2206-FS	1	1			Perfluoroundecanoic acid (PFUnA)	2058-94-8	0.46	0.46	NG	L	U	U
		20201104	12:48:00	20201119	19:48:47	G2206-FS	1	1			Perfluorododecanoic acid (PFDoA)	307-55-1	0.46	0.46	NG	L	U	U
		20201104	12:48:00	20201119	19:48:47	G2206-FS	1	1			Perfluorotridecanoic acid (PFTeDA)	72629-94-8	0.46	0.46	NG	L	U	U
		20201104	12:48:00	20201119	19:48:47	G2206-FS	1	1			Perfluorotetradecanoic acid (PFTeDA)	376-06-7	1.85	1.85	NG	L	U	U
		20201104	12:48:00	20201119	19:48:47	G2206-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	0.92	0.92	NG	L	U	U
		20201104	12:48:00	20201119	19:48:47	G2206-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	0.92	0.92	NG	L	U	U
		20201104	12:48:00	20201119	19:48:47	G2206-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.46	0.46	NG	L	U	U
		20201104	12:48:00	20201119	19:48:47	G												

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
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2	0.49	0.49	NG L	U	U	U
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8	0.49	0.49	NG L	U	U	U
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1	0.49	0.49	NG L	U	U	U
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	0.49	0.49	NG L	U	U	U
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7	1.96	1.96	NG L	U	U	U
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	0.98	0.98	NG L	U	U	U
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	0.98	0.98	NG L	U	U	U
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.49	0.49	NG L	U	U	U
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.39	0.39	NG L	U	U	U
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.98	0.98	NG L	U	U	U
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	13252-13-6	0.49	0.49	NG L	U	U	U
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			4,8-dioxo-3H-perfluorononanoic acid (ADONA)	919005-14-4	0.98	0.98	NG L	U	U	U
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			11-chloroicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	0.98	0.98	NG L	U	U	U
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	0.49	0.49	NG L	U	U	U
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			13C5-PFHxA	BDO-2217	27	27	PCT_REC	N		
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			13C4-PFHpA	BDO-2218	23	23	PCT_REC	N		
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			13C8-PFOA	BDO-2219	62	62	PCT_REC	N		
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			13C9-PFNA	BDO-2221	94	94	PCT_REC	N		
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			13C6-PFDA	BDO-2222	70	70	PCT_REC	N		
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			13C7-PFUnA	BDO-2223	91	91	PCT_REC	N		
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			13C2-PFDoA	BDO-2112	81	81	PCT_REC	N		
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			13C2-PFTEdA	BDO-2224	92	92	PCT_REC	N		
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			d3-MeFOSAA	BDO-1838	97	97	PCT_REC	N		
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			d5-EtFOSAA	BDO-1839	161	161	PCT_REC	N		
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			13C3-PFBS	BDO-2226	55	55	PCT_REC	N		
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			13C3-PFHxS	BDO-2227	61	61	PCT_REC	N		
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			13C8-PFOS	BDO-2228	78	78	PCT_REC	N		
		20201104	12:48:00	20201119	19:59:14	G2207-FS	1	1			13C3-HFPO-DA	BDO-2276	40	40	PCT_REC	N		
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-24-4	1.47	1.47	NG L	U	U	U
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			Perfluoroheptanoic Acid (PFHpA)	375-85-9	0.98	0.98	NG L	U	U	U
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			Perfluoroctanoic Acid (PFOA)	335-67-1	1.47	1.47	NG L	U	U	U
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			Perfluorononanoic Acid (PFNA)	375-95-1	0.98	0.98	NG L	U	U	U
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2	0.49	0.49	NG L	U	U	U
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8	0.49	0.49	NG L	U	U	U
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1	0.49	0.49	NG L	U	U	U
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	0.49	0.49	NG L	U	U	U
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7	1.96	1.96	NG L	U	U	U
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	0.98	0.98	NG L	U	U	U
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	0.98	0.98	NG L	U	U	U
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.49	0.49	NG L	U	U	U
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.39	0.39	NG L	U	U	U
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.98	0.98	NG L	U	U	U
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	13252-13-6	0.49	0.49	NG L	U	U	U
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			4,8-dioxo-3H-perfluorononanoic acid (ADONA)	919005-14-4	0.98	0.98	NG L	U	U	U
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			11-chloroicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	0.98	0.98	NG L	U	U	U
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	0.49	0.49	NG L	U	U	U
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			13C5-PFHxA	BDO-2217	88	88	PCT_REC	N		
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			13C4-PFHpA	BDO-2218	81	81	PCT_REC	N		
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			13C8-PFOA	BDO-2219	81	81	PCT_REC	N		
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			13C9-PFNA	BDO-2221	107	107	PCT_REC	N		
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			13C6-PFDA	BDO-2222	87	87	PCT_REC	N		
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			13C7-PFUnA	BDO-2223	98	98	PCT_REC	N		
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			13C2-PFDoA	BDO-2112	95	95	PCT_REC	N		
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			13C2-PFTEdA	BDO-2224	89	89	PCT_REC	N		
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			d3-MeFOSAA	BDO-1838	94	94	PCT_REC	N		
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			d5-EtFOSAA	BDO-1839	131	131	PCT_REC	N		
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			13C3-PFBS	BDO-2226	106	106	PCT_REC	N		
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			13C3-PFHxS	BDO-2227	96	96	PCT_REC	N		
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			13C8-PFOS	BDO-2228	93	93	PCT_REC	N		
		20201104	12:48:00	20201119	20:09:41	G2208-FS	1	1			13C3-HFPO-DA	BDO-2276	59	59	PCT_REC	N		
		20201104	12:48:00	20201118	23:15:54	G2209-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-24-4	1.34	0.68	NG L	J	U	U
		20201104	12:48:00	20201118	23:15:54	G2209-FS	1	1			Perfluoroheptanoic Acid (PFHpA)	375-85-9	0.89	0.89	NG L	U	U	U
		20201104	12:48:00	20201118	23:15:54	G2209-FS	1	1			Perfluoroctanoic Acid (PFOA)	335-67-1	1.34	1.34	NG L	U	U	U
		20201104	12:48:00	20201118	23:15:54	G2209-FS	1	1			Perfluorononanoic Acid (PFNA)	375-95-1	0.89	0.89	NG L	U	U	U
		20201104	12:48:00	20201118	23:15:54	G2209-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2	0.44	0.44	NG L	U	U	U
		20201104	12:48:00	20201118	23:15:54	G2209-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8	0.44	0.44	NG L	U	U	U
		20201104	12:48:00	20201118	23:15:54	G2209-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1	0.44	0.44	NG L	U	U	U
		20201104	12:48:00	20201118	23:15:54	G2209-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	0.29	0.29	NG L	U	U	U
		20201104	12:48:00	20201118	23:15:54	G2209-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7	1.79	1.79	NG L	U	U	U
		20201104	12:48:00	20201118	23:15:54	G2209-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	0.89	0.89	NG L	U	U	U
		20201104	12:48:00	20201118	23:15:54	G2209-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	0.89	0.89	NG L	U	U	U
		20201104	12:48:00	20201118	23:15:54	G2209-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.44	0.44	NG L	U	U	U
		20201104	12:48:00	20201118	23:15:54	G2209-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.35	0.35	NG L	U	U	U
		20201104	12:48:00	20201118	2													

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
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					Perfluorododecanoic Acid (PFDoA)	307-55-1	0.5	0.5	NG L	U	U	U
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	0.5	0.5	NG L	U	U	U
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					Perfluorotetradecanoic Acid (PFTeDA)	376-06-7	2	2	NG L	U	U	U
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	1	1	NG L	U	U	U
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	1	1	NG L	U	U	U
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.75	0.75	NG L	J	J	J
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					Perfluorohexanesulfonic acid (PFHxS)	355-46-4	9.2	9.2	NG L			
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					Perfluorooctane Sulfonate (PFOS)	1763-23-1	4.25	4.25	NG L	J	U	U
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	13252-13-6	0.5	0.5	NG L	U	U	U
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	1	1	NG L	U	U	U
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					11-chlorooctadecafluoro-3-oxadecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	1	1	NG L	U	U	U
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	0.5	0.5	NG L	U	U	U
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					13C5-PFHxA	BDO-2217	40	40	PCT REC	N		
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					13C4-PFHxA	BDO-2218	51	51	PCT REC			
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					13C8-PFOA	BDO-2219	55	55	PCT REC			
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					13C9-PFNA	BDO-2221	81	81	PCT REC			
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					13C6-PFDA	BDO-2222	73	73	PCT REC			
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					13C7-PFUnA	BDO-2223	80	80	PCT REC			
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					13C2-PFDoA	BDO-2112	78	78	PCT REC			
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					13C2-PFTeDA	BDO-2224	83	83	PCT REC			
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					d3-MeFOSAA	BDO-1838	80	80	PCT REC			
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					d5-EtFOSAA	BDO-1839	114	114	PCT REC			
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					13C3-PFBS	BDO-2226	75	75	PCT REC			
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					13C3-PFHxS	BDO-2227	79	79	PCT REC			
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					13C8-PFOS	BDO-2228	97	97	PCT_REC			
20201104	12:48:00	20201119	20:51:35	G2210-FS	1	1					13C3-HFPO-DA	BDO-2276	84	84	PCT_REC			
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					Perfluorohexanoic Acid (PFHxA)	307-24-4	16.6	16.6	NG L			
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					Perfluoroheptanoic acid (PFHpA)	375-85-9	7.02	7.02	NG L			
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					Perfluorooctanoic acid (PFOA)	335-67-1	10	10	NG L			
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					Perfluorononanoic acid (PFNA)	375-95-1	3.09	3.09	NG L	J	J	J
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					Perfluorodecanoic Acid (PFDA)	335-76-2	0.89	0.89	NG L	J	J	J
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					Perfluoroundecanoic Acid (PFUnA)	2058-94-8	1.09	1.09	NG L	J	J	J
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					Perfluorododecanoic Acid (PFDoA)	307-55-1	0.5	0.5	NG L	U	U	U
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	0.5	0.5	NG L	U	U	U
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					Perfluorotetradecanoic Acid (PFTeDA)	376-06-7	2	2	NG L	U	U	U
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9	1	1	NG L	U	U	U
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6	1	1	NG L	U	U	U
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.5	0.5	NG L	U	U	U
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					Perfluorohexanesulfonic acid (PFHxS)	355-46-4	42.9	42.9	NG L			
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					Perfluorooctane Sulfonate (PFOS)	1763-23-1	17.9	17.9	NG L			
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	13252-13-6	0.5	0.5	NG L	U	U	U
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	1	1	NG L	U	U	U
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					11-chlorooctadecafluoro-3-oxadecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	1	1	NG L	U	U	U
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	0.5	0.5	NG L	U	U	U
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					13C5-PFHxA	BDO-2217	51	51	PCT REC			
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					13C4-PFHxA	BDO-2218	62	62	PCT REC			
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					13C8-PFOA	BDO-2219	66	66	PCT REC			
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					13C9-PFNA	BDO-2221	85	85	PCT REC			
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					13C6-PFDA	BDO-2222	78	78	PCT_REC			
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					13C7-PFUnA	BDO-2223	82	82	PCT_REC			
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					13C2-PFDoA	BDO-2112	76	76	PCT_REC			
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					13C2-PFTeDA	BDO-2224	74	74	PCT_REC			
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					d3-MeFOSAA	BDO-1838	91	91	PCT_REC			
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					d5-EtFOSAA	BDO-1839	123	123	PCT_REC			
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					13C3-PFBS	BDO-2226	80	80	PCT_REC			
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					13C3-PFHxS	BDO-2227	81	81	PCT_REC			
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					13C8-PFOS	BDO-2228	88	88	PCT_REC			
20201104	12:48:00	20201119	21:02:03	G2211-FS	1	1					13C3-HFPO-DA	BDO-2276	97	97	PCT_REC			

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

Client: CH2M HILL, Inc., Herndon, Virginia
 SDG: 20-1375
 Laboratory: Battelle Norwell Operations, Norwell, Massachusetts
 Site: Naval Research Laboratory (NRL), Chesapeake Beach, Maryland
 Date: January 11, 2021

PFAS			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	CBD-AOA-MW06-1020	G2203-FS	Water
2	CBD-AOA-EB01-102720-GW	G2204-FS	Water
3	CBD-AOA-MW12-1020	G2205-FS	Water
4	CBD-AOA-MW11-1020	G2206-FS	Water
5	CBD-AOA-MW11P-1020	G2207-FS	Water
6	CBD-AOA-FB01-102820	G2208-FS	Water
7	CBD-AOA-EB01-102820-GW	G2209-FS	Water
8	CBD-AOA-MW14-1020	G2210-FS	Water
9	CBD-AOA-MW13-1020	G2211-FS	Water

Λ Stage 2B/4 data validation was performed on the analytical data for six water samples, one aqueous field blank sample, and two aqueous equipment blank samples collected on October 27-28, 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
DB124PB-FS	PFHxA	1.02	U	1, 7, 8

Field QC Blank

- Field QC sample results are summarized below.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
CBD-AOA-EB01-102720-GW	None - ND	-	-	-
CBD-AOA-FB01-102820	None - ND	-	-	-
CBD-AOA-EB01-102820-GW	PFTTrDA	0.291	None	Associated Samples ND
	PFOS	1.20	U	8

Surrogate Spike Recoveries

- Several samples exhibited surrogates outside of QC limits. See summary pages behind Form Is for specifics. All associated compounds were qualified estimated (J/UJ).

Laboratory Fortified Blank (LFB)

- The LFB samples exhibited acceptable percent recoveries (%R).

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- 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

- All criteria were met.

Field Duplicate Sample Precision

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

Compound	CBD-AOA-MW11-1020 ng/L	CBD-AOA-MW11P-1020 ng/L	RPD	Qualifier
PFOA	0.681	0.765	12%	None

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

Signed:

Nancy Weaver
Nancy Weaver
Senior Chemist

Dated: 1/14/21

Qualifier	Definition
U	The analyte was not detected and was reported as less than the LOD or as defined by the customer. The LOD has been adjusted for any dilution or concentration of the sample.
J	The reported result was an estimated value with an unknown bias.
J+	The result was an estimated quantity, but the result may be biased high.
J-	The result was an estimated quantity, but the result may be biased low.
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a "tentative identification."
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value was the estimated concentration in the sample.
UJ	The analyte was not detected and was reported as less than the LOD or as defined by the customer. However, the associated numerical value is approximate.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.



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

Client ID CBD-AOA-MW06-1020

Battelle ID G2203-FS
 Sample Type SA
 Collection Date 10/27/2020
 Extraction Date 11/04/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS
 % Moisture NA
 Matrix GW
 Sample Size 0.260
 Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	Extract ID	DF	Analysis Date	DL	LOD	LOQ
PFHxA	307-24-4	1.46 /u	G2203-FS(0)	1.000	11/19/2020	0.507	1.44	4.81
PFHpA	375-85-9	1.54 J	G2203-FS(0)	1.000	11/19/2020	0.253	0.962	4.81
PFOA	335-67-1	55.0	G2203-FS(0)	1.000	11/19/2020	0.491	1.44	4.81
PFNA	375-95-1	0.426 J	G2203-FS(0)	1.000	11/19/2020	0.297	0.962	4.81
PFDA	335-76-2	0.481 U	G2203-FS(0)	1.000	11/19/2020	0.137	0.481	4.81
PFUnA	2058-94-8	0.481 U	G2203-FS(0)	1.000	11/19/2020	0.211	0.481	4.81
PFDoA	307-55-1	0.481 U	G2203-FS(0)	1.000	11/19/2020	0.185	0.481	4.81
PFTtDA	72629-94-8	0.481 U	G2203-FS(0)	1.000	11/19/2020	0.148	0.481	4.81
PFTeDA	376-06-7	1.92 YUJ	G2203-FS(0)	1.000	11/19/2020	0.705	1.92	4.81
NMeFOSAA	2355-31-9	0.962 U	G2203-FS(0)	1.000	11/19/2020	0.337	0.962	4.81
NEtFOSAA	2991-50-6	0.962 U	G2203-FS(0)	1.000	11/19/2020	0.481	0.962	4.81
PFBS	375-73-5	1.04 J	G2203-FS(0)	1.000	11/19/2020	0.138	0.481	4.81
PFHxS	355-46-4	15.1	G2203-FS(0)	1.000	11/19/2020	0.108	0.385	4.81
PFOS	1763-23-1	5.96	G2203-FS(0)	1.000	11/19/2020	0.420	0.962	4.81
HFPO-DA	13252-13-6	0.481 U	G2203-FS(0)	1.000	11/19/2020	0.238	0.481	4.81
Adona	919005-14-4	0.962 U	G2203-FS(0)	1.000	11/19/2020	0.255	0.962	4.81
9CI-PF3ONS	756426-58-1	0.481 U	G2203-FS(0)	1.000	11/19/2020	0.258	0.481	4.81
11CI-PF3OUdS	763051-92-9	0.962 U	G2203-FS(0)	1.000	11/19/2020	0.222	0.962	4.81

MBL

SSL

11/11/21

Analyzed by: Schumitz, Denise
 Printed: 11/25/2020



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

Client ID CBD-AOA-MW06-1020
Battelle ID G2203-FS
Sample Type SA
Collection Date 10/27/2020
Extraction Date 11/04/2020
Analytical Instrument Sciex 6500+ (AE) LC/MS/MS

<i>Surrogate Recoveries (%)</i>	Recovery	Extract ID	Analysis Date
13C5-PFHxA	51	G2203-FS(0)	11/19/2020
13C4-PFHpA	87	G2203-FS(0)	11/19/2020
13C8-PFOA	70	G2203-FS(0)	11/19/2020
13C9-PFNA	73	G2203-FS(0)	11/19/2020
13C6-PFDA	77	G2203-FS(0)	11/19/2020
13C7-PFUxA	67	G2203-FS(0)	11/19/2020
13C2-PFDoA	60	G2203-FS(0)	11/19/2020
13C2-PFTeDA	23	G2203-FS(0)	11/19/2020
d3-MeFOSAA	72	G2203-FS(0)	11/19/2020
d5-EtFOSAA	89	G2203-FS(0)	11/19/2020
13C3-PFBS	86	G2203-FS(0)	11/19/2020
13C3-PFFhS	92	G2203-FS(0)	11/19/2020
13C8-PFOS	83	G2203-FS(0)	11/19/2020
13C3-HFPO-DA	77	G2203-FS(0)	11/19/2020



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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-AOA-EB01-102720-GW

Battelle ID G2204-FS
 Sample Type SA
 Collection Date 10/27/2020
 Extraction Date 11/04/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS
 % Moisture NA
 Matrix AQ
 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	G2204-FS(0)	1.000	11/19/2020	0.527	1.50	5.00
PFHpA	375-85-9	1.00 U	G2204-FS(0)	1.000	11/19/2020	0.263	1.00	5.00
PFOA	335-67-1	1.50 U	G2204-FS(0)	1.000	11/19/2020	0.511	1.50	5.00
PFNA	375-95-1	1.00 U	G2204-FS(0)	1.000	11/19/2020	0.309	1.00	5.00
PFDA	335-76-2	0.500 U	G2204-FS(0)	1.000	11/19/2020	0.142	0.500	5.00
PFUnA	2058-94-8	0.500 U	G2204-FS(0)	1.000	11/19/2020	0.219	0.500	5.00
PFDoA	307-55-1	0.500 U	G2204-FS(0)	1.000	11/19/2020	0.192	0.500	5.00
PFTrDA	72629-94-8	0.500 U	G2204-FS(0)	1.000	11/19/2020	0.154	0.500	5.00
PFTeDA	376-06-7	2.00 U	G2204-FS(0)	1.000	11/19/2020	0.733	2.00	5.00
NMeFOSAA	2355-31-9	1.00 U	G2204-FS(0)	1.000	11/19/2020	0.350	1.00	5.00
NEtFOSAA	2991-50-6	1.00 U	G2204-FS(0)	1.000	11/19/2020	0.500	1.00	5.00
PFBS	375-73-5	0.500 U	G2204-FS(0)	1.000	11/19/2020	0.144	0.500	5.00
PFHxS	355-46-4	0.400 U	G2204-FS(0)	1.000	11/19/2020	0.112	0.400	5.00
PFOS	1763-23-1	1.00 U	G2204-FS(0)	1.000	11/19/2020	0.437	1.00	5.00
HFPO-DA	13252-13-6	0.500 U	G2204-FS(0)	1.000	11/19/2020	0.248	0.500	5.00
Adona	919005-14-4	1.00 U	G2204-FS(0)	1.000	11/19/2020	0.265	1.00	5.00
9Cl-PF3ONS	756426-58-1	0.500 U	G2204-FS(0)	1.000	11/19/2020	0.268	0.500	5.00
11Cl-PF3OUds	763051-92-9	1.00 U	G2204-FS(0)	1.000	11/19/2020	0.231	1.00	5.00

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 Printed: 11/25/2020



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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-AOA-MW12-1020

Battelle ID G2205-FS
 Sample Type SA
 Collection Date 10/28/2020
 Extraction Date 11/04/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS
 % Moisture NA
 Matrix GW
 Sample Size 0.275
 Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	Extract ID	DF	Analysis Date	DL	LOD	LOQ
PFHxA	307-24-4	1.36 <i>UJ</i>	G2205-FS(0)	1.000	11/19/2020	0.479	1.36	4.55
PFHpA	375-85-9	0.909 <i>UJ</i>	G2205-FS(0)	1.000	11/19/2020	0.239	0.909	4.55
PFOA	335-67-1	0.681 J	G2205-FS(0)	1.000	11/19/2020	0.465	1.36	4.55
PFNA	375-95-1	0.909 U	G2205-FS(0)	1.000	11/19/2020	0.281	0.909	4.55
PFDA	335-76-2	0.455 U	G2205-FS(0)	1.000	11/19/2020	0.129	0.455	4.55
PFUnA	2058-94-8	0.455 U	G2205-FS(0)	1.000	11/19/2020	0.199	0.455	4.55
PFDoA	307-55-1	0.455 U	G2205-FS(0)	1.000	11/19/2020	0.175	0.455	4.55
PFTeDA	72829-94-8	0.455 U	G2205-FS(0)	1.000	11/19/2020	0.140	0.455	4.55
PFTeDA	376-06-7	1.82 U	G2205-FS(0)	1.000	11/19/2020	0.666	1.82	4.55
NMeFOSAA	2355-31-9	0.909 U	G2205-FS(0)	1.000	11/19/2020	0.318	0.909	4.55
NEtFOSAA	2991-50-6	0.909 U	G2205-FS(0)	1.000	11/19/2020	0.455	0.909	4.55
PFBS	375-73-5	0.455 U	G2205-FS(0)	1.000	11/19/2020	0.131	0.455	4.55
PFHxS	355-46-4	0.152 J	G2205-FS(0)	1.000	11/19/2020	0.102	0.364	4.55
PFOS	1763-23-1	0.909 U	G2205-FS(0)	1.000	11/19/2020	0.397	0.909	4.55
HFPO-DA	13252-13-6	0.455 U	G2205-FS(0)	1.000	11/19/2020	0.225	0.455	4.55
Adona	919005-14-4	0.909 U	G2205-FS(0)	1.000	11/19/2020	0.241	0.909	4.55
9CI-PF3ONS	756426-58-1	0.455 U	G2205-FS(0)	1.000	11/19/2020	0.244	0.455	4.55
11CI-PF3OUds	763051-92-9	0.909 U	G2205-FS(0)	1.000	11/19/2020	0.210	0.909	4.55

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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-AOA-MW12-1020
 Battelle ID G2205-FS
 Sample Type SA
 Collection Date 10/28/2020
 Extraction Date 11/04/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS

<i>Surrogate Recoveries (%)</i>	Recovery	Extract ID	Analysis Date
13C5-PFHxA	42	G2205-FS(0)	11/19/2020
13C4-PFHpA	44	G2205-FS(0)	11/19/2020
13C8-PFOA	58	G2205-FS(0)	11/19/2020
13C9-PFNA	73	G2205-FS(0)	11/19/2020
13C6-PFDA	78	G2205-FS(0)	11/19/2020
13C7-PFUnA	84	G2205-FS(0)	11/19/2020
13C2-PFDoA	84	G2205-FS(0)	11/19/2020
13C2-PFTeDA	89	G2205-FS(0)	11/19/2020
d3-MeFOSAA	94	G2205-FS(0)	11/19/2020
d5-EtFOSAA	141	G2205-FS(0)	11/19/2020
13C3-PFBS	76	G2205-FS(0)	11/19/2020
13C3-PFHxS	80	G2205-FS(0)	11/19/2020
13C8-PFOS	91	G2205-FS(0)	11/19/2020
13C3-HFPO-DA	89	G2205-FS(0)	11/19/2020

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 Printed: 11/25/2020



4

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

Client ID CBD-AOA-MW11-1020

Battelle ID G2206-FS
 Sample Type SA
 Collection Date 10/28/2020
 Extraction Date 11/04/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS
 % Moisture NA
 Matrix GW
 Sample Size 0.270
 Size Unit-Basis L

Analyte	CAS No.	Result (ng/L)	Extract ID	DF	Analysis Date	DL	LOD	LOQ
PFHxA	307-24-4	1.39 U	G2206-FS(0)	1.000	11/19/2020	0.488	1.39	4.63
PFHpA	373-85-9	0.926 U	G2206-FS(0)	1.000	11/19/2020	0.244	0.926	4.63
PFOA	335-67-1	0.681 J	G2206-FS(0)	1.000	11/19/2020	0.473	1.39	4.63
PFNA	375-95-1	0.926 U	G2206-FS(0)	1.000	11/19/2020	0.286	0.926	4.63
PFDA	335-76-2	0.463 U	G2206-FS(0)	1.000	11/19/2020	0.131	0.463	4.63
PFUnA	2058-94-8	0.463 U	G2206-FS(0)	1.000	11/19/2020	0.203	0.463	4.63
PFDoA	307-55-1	0.463 U	G2206-FS(0)	1.000	11/19/2020	0.178	0.463	4.63
PFTrDA	72629-94-8	0.463 U	G2206-FS(0)	1.000	11/19/2020	0.143	0.463	4.63
PFTeDA	376-06-7	1.85 U	G2206-FS(0)	1.000	11/19/2020	0.679	1.85	4.63
NMeFOSAA	2355-31-9	0.926 U	G2206-FS(0)	1.000	11/19/2020	0.324	0.926	4.63
NEtFOSAA	2991-50-6	0.926 U	G2206-FS(0)	1.000	11/19/2020	0.463	0.926	4.63
PFBS	375-73-5	0.463 U	G2206-FS(0)	1.000	11/19/2020	0.133	0.463	4.63
PFHxS	355-46-4	0.370 U	G2206-FS(0)	1.000	11/19/2020	0.104	0.370	4.63
PFOS	1763-23-1	0.926 U	G2206-FS(0)	1.000	11/19/2020	0.405	0.926	4.63
HFPO-DA	13252-13-6	0.463 U	G2206-FS(0)	1.000	11/19/2020	0.230	0.463	4.63
Adona	919005-14-4	0.926 U	G2206-FS(0)	1.000	11/19/2020	0.245	0.926	4.63
9CI-PF3ONS	756426-58-1	0.463 U	G2206-FS(0)	1.000	11/19/2020	0.248	0.463	4.63
11CI-PF3OUds	763051-92-9	0.926 U	G2206-FS(0)	1.000	11/19/2020	0.214	0.926	4.63

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5

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

Client ID CBD-AOA-MW11P-1020

Battelle ID G2207-FS
 Sample Type SA
 Collection Date 10/28/2020
 Extraction Date 11/04/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS
 % Moisture NA
 Matrix GW
 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 UJ	G2207-FS(0)	1.000	11/19/2020	0.517	1.47	4.90	SSL
PFHpA	375-85-9	0.980 U UJ	G2207-FS(0)	1.000	11/19/2020	0.258	0.980	4.90	SSL
PFOA	335-67-1	0.765 J	G2207-FS(0)	1.000	11/19/2020	0.501	1.47	4.90	
PFNA	375-95-1	0.980 U	G2207-FS(0)	1.000	11/19/2020	0.303	0.980	4.90	
PFDA	335-76-2	0.490 U	G2207-FS(0)	1.000	11/19/2020	0.139	0.490	4.90	
PFUnA	2058-94-8	0.490 U	G2207-FS(0)	1.000	11/19/2020	0.215	0.490	4.90	
PFDoA	307-55-1	0.490 U	G2207-FS(0)	1.000	11/19/2020	0.188	0.490	4.90	
PFTrDA	72629-94-8	0.490 U	G2207-FS(0)	1.000	11/19/2020	0.151	0.490	4.90	
PFTeDA	376-06-7	1.96 U	G2207-FS(0)	1.000	11/19/2020	0.719	1.96	4.90	
NMeFOSAA	2355-31-9	0.980 U	G2207-FS(0)	1.000	11/19/2020	0.343	0.980	4.90	
NEtFOSAA	2991-50-6	0.980 U	G2207-FS(0)	1.000	11/19/2020	0.490	0.980	4.90	
PFBS	375-73-5	0.490 U	G2207-FS(0)	1.000	11/19/2020	0.141	0.490	4.90	
PFHxS	355-46-4	0.392 U	G2207-FS(0)	1.000	11/19/2020	0.110	0.392	4.90	
PFOS	1763-23-1	0.980 U	G2207-FS(0)	1.000	11/19/2020	0.428	0.980	4.90	
HFPO-DA	13252-13-6	0.490 U UJ	G2207-FS(0)	1.000	11/19/2020	0.243	0.490	4.90	SSL
Adona	919005-14-4	0.980 U	G2207-FS(0)	1.000	11/19/2020	0.260	0.980	4.90	
9CI-PF3ONS	756426-58-1	0.490 U	G2207-FS(0)	1.000	11/19/2020	0.263	0.490	4.90	
11CI-PF3OUds	763051-92-9	0.980 U	G2207-FS(0)	1.000	11/19/2020	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

Client ID CBD-AOA-FB01-102820

Battelle ID G2208-FS
 Sample Type SA
 Collection Date 10/28/2020
 Extraction Date 11/04/2020
 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	G2208-FS(0)	1.000	11/19/2020	0.517	1.47	4.90
PFHpA	375-85-9	0.980 U	G2208-FS(0)	1.000	11/19/2020	0.258	0.980	4.90
PFOA	335-67-1	1.47 U	G2208-FS(0)	1.000	11/19/2020	0.501	1.47	4.90
PFNA	375-95-1	0.980 U	G2208-FS(0)	1.000	11/19/2020	0.303	0.980	4.90
PFDA	335-76-2	0.490 U	G2208-FS(0)	1.000	11/19/2020	0.139	0.490	4.90
PFUnA	2058-94-8	0.490 U	G2208-FS(0)	1.000	11/19/2020	0.215	0.490	4.90
PFDoA	307-55-1	0.490 U	G2208-FS(0)	1.000	11/19/2020	0.188	0.490	4.90
PFTrDA	72629-94-8	0.490 U	G2208-FS(0)	1.000	11/19/2020	0.151	0.490	4.90
PFTeDA	376-06-7	1.96 U	G2208-FS(0)	1.000	11/19/2020	0.719	1.96	4.90
NMeFOSAA	2355-31-9	0.980 U	G2208-FS(0)	1.000	11/19/2020	0.343	0.980	4.90
NEtFOSAA	2991-50-6	0.980 U	G2208-FS(0)	1.000	11/19/2020	0.490	0.980	4.90
PFBS	375-73-5	0.490 U	G2208-FS(0)	1.000	11/19/2020	0.141	0.490	4.90
PFHxS	355-46-4	0.392 U	G2208-FS(0)	1.000	11/19/2020	0.110	0.392	4.90
PFOS	1763-23-1	0.980 U	G2208-FS(0)	1.000	11/19/2020	0.428	0.980	4.90
HFPO-DA	13252-13-6	0.490 U	G2208-FS(0)	1.000	11/19/2020	0.243	0.490	4.90
Adona	919003-14-4	0.980 U	G2208-FS(0)	1.000	11/19/2020	0.260	0.980	4.90
9Cl-PF3ONS	756426-58-1	0.490 U	G2208-FS(0)	1.000	11/19/2020	0.263	0.490	4.90
11Cl-PF3OUds	763051-92-9	0.980 U	G2208-FS(0)	1.000	11/19/2020	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

Client ID: CBD-AOA-E801-102820-GW

Battelle ID: G2209-FS
 Sample Type: SA
 Collection Date: 10/28/2020
 Extraction Date: 11/04/2020
 Analytical Instrument: Sclex 6500+ (AE) LC/MS/MS
 % Moisture: NA
 Matrix: AQ
 Sample Size: 0.280
 Size Unit-Basis: L

Analyte	CAS No.	Result (ng/L)	Extract ID	DF	Analysis Date	DL	LOD	LOQ
PFHxA	307-24-4	1.34 U	G2209-FS(0)	1.000	11/18/2020	0.471	1.34	4.46
PFHpA	375-85-9	0.893 U	G2209-FS(0)	1.000	11/18/2020	0.235	0.893	4.46
PFOA	335-67-1	1.34 U	G2209-FS(0)	1.000	11/18/2020	0.456	1.34	4.46
PFNA	375-95-1	0.893 U	G2209-FS(0)	1.000	11/18/2020	0.276	0.893	4.46
PFDA	335-76-2	0.446 U	G2209-FS(0)	1.000	11/18/2020	0.127	0.446	4.46
PFUnA	2058-94-8	0.446 U	G2209-FS(0)	1.000	11/18/2020	0.196	0.446	4.46
PFDoA	307-55-1	0.446 U	G2209-FS(0)	1.000	11/18/2020	0.171	0.446	4.46
PFTiDA	72629-84-8	0.291 J	G2209-FS(0)	1.000	11/18/2020	0.138	0.446	4.46
PFTeDA	376-06-7	1.79 U	G2209-FS(0)	1.000	11/18/2020	0.654	1.79	4.46
NMeFOSAA	2355-31-9	0.893 U	G2209-FS(0)	1.000	11/18/2020	0.313	0.893	4.46
NEtFOSAA	2991-50-6	0.893 U	G2209-FS(0)	1.000	11/18/2020	0.446	0.893	4.46
PFBS	375-73-5	0.446 U	G2209-FS(0)	1.000	11/18/2020	0.129	0.446	4.46
PFHxS	355-46-4	0.357 U	G2209-FS(0)	1.000	11/18/2020	0.100	0.357	4.46
PFOS	1763-23-1	1.20 J	G2209-FS(0)	1.000	11/18/2020	0.390	0.893	4.46
HFPO-DA	13252-13-6	0.446 U	G2209-FS(0)	1.000	11/18/2020	0.221	0.446	4.46
Adona	919005-14-4	0.893 U	G2209-FS(0)	1.000	11/18/2020	0.237	0.893	4.46
9CI-PF3ONS	756426-58-1	0.446 U	G2209-FS(0)	1.000	11/18/2020	0.239	0.446	4.46
11CI-PF3OUdS	763051-92-9	0.893 U	G2209-FS(0)	1.000	11/18/2020	0.206	0.893	4.46

MBL

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SSL

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Analyzed by: Schumitz, Denise
 Printed: 11/25/2020



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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-AOA-MW14-1020

Battelle ID G2210-FS
 Sample Type SA
 Collection Date 10/28/2020
 Extraction Date 11/04/2020
 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	4.36 ✓ WJ	G2210-FS(0)	1.000	11/19/2020	0.527	1.50	5.00
PFHpA	375-85-9	1.97 J	G2210-FS(0)	1.000	11/19/2020	0.263	1.00	5.00
PFOA	335-67-1	5.99	G2210-FS(0)	1.000	11/19/2020	0.511	1.50	5.00
PFNA	375-95-1	1.32 J	G2210-FS(0)	1.000	11/19/2020	0.309	1.00	5.00
PFDA	335-76-2	0.500 U	G2210-FS(0)	1.000	11/19/2020	0.142	0.500	5.00
PFUnA	2058-94-8	0.500 U	G2210-FS(0)	1.000	11/19/2020	0.219	0.500	5.00
PFDoA	307-55-1	0.500 U	G2210-FS(0)	1.000	11/19/2020	0.192	0.500	5.00
PFTrDA	72629-94-8	0.500 U	G2210-FS(0)	1.000	11/19/2020	0.154	0.500	5.00
PFTeDA	376-06-7	2.00 U	G2210-FS(0)	1.000	11/19/2020	0.733	2.00	5.00
NMeFOSAA	2355-31-9	1.00 U	G2210-FS(0)	1.000	11/19/2020	0.350	1.00	5.00
NEtFOSAA	2991-50-6	1.00 U	G2210-FS(0)	1.000	11/19/2020	0.500	1.00	5.00
PFBS	375-73-5	0.751 J	G2210-FS(0)	1.000	11/19/2020	0.144	0.500	5.00
PFHxS	355-46-4	9.20	G2210-FS(0)	1.000	11/19/2020	0.112	0.400	5.00
PFOS	1763-23-1	4.25 ✓ U	G2210-FS(0)	1.000	11/19/2020	0.437	1.00	5.00
HFPO-DA	13252-13-6	0.500 U	G2210-FS(0)	1.000	11/19/2020	0.248	0.500	5.00
Adona	919005-14-4	1.00 U	G2210-FS(0)	1.000	11/19/2020	0.265	1.00	5.00
9CI-PF3ONS	756426-58-1	0.500 U	G2210-FS(0)	1.000	11/19/2020	0.268	0.500	5.00
11CI-PF3OUds	763051-92-9	1.00 U	G2210-FS(0)	1.000	11/19/2020	0.231	1.00	5.00

MGL SSL

EGL

NW14121

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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-AOA-MW14-1020
 Battelle ID G2210-F5
 Sample Type SA
 Collection Date 10/28/2020
 Extraction Date 11/04/2020
 Analytical Instrument Sciex 6500+ (AE) LC/MS/MS

Surrogate Recoveries (%)	Recovery	Extract ID	Analysis Date
13C5-PFHxA	40	G2210-F5(0)	11/19/2020
13C4-PFHpA	51	G2210-F5(0)	11/19/2020
13C8-PFOA	55	G2210-F5(0)	11/19/2020
13C9-PFNA	81	G2210-F5(0)	11/19/2020
13C6-PFDA	73	G2210-F5(0)	11/19/2020
13C7-PFUxA	80	G2210-F5(0)	11/19/2020
13C2-PFDoA	78	G2210-F5(0)	11/19/2020
13C2-PFTeDA	83	G2210-F5(0)	11/19/2020
d3-MeFOSAA	80	G2210-F5(0)	11/19/2020
d5-EtFOSAA	114	G2210-F5(0)	11/19/2020
13C3-PFBS	75	G2210-F5(0)	11/19/2020
13C3-PFHxS	79	G2210-F5(0)	11/19/2020
13C8-PFOS	97	G2210-F5(0)	11/19/2020
13C3-HFPO-DA	84	G2210-F5(0)	11/19/2020

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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

Client ID CBD-AOA-MW13-1020

Battelle ID G2211-FS
 Sample Type SA
 Collection Date 10/28/2020
 Extraction Date 11/04/2020
 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	16.6	G2211-FS(0)	1.000	11/19/2020	0.527	1.50	5.00
PFHpA	375-85-9	7.02	G2211-FS(0)	1.000	11/19/2020	0.263	1.00	5.00
PFOA	335-67-1	10.0	G2211-FS(0)	1.000	11/19/2020	0.511	1.50	5.00
PFNA	375-95-1	3.09 J	G2211-FS(0)	1.000	11/19/2020	0.309	1.00	5.00
PFDA	335-76-2	0.898 J	G2211-FS(0)	1.000	11/19/2020	0.142	0.500	5.00
PFUnA	2058-94-8	1.09 J	G2211-FS(0)	1.000	11/19/2020	0.219	0.500	5.00
PFDoA	307-55-1	0.500 U	G2211-FS(0)	1.000	11/19/2020	0.192	0.500	5.00
PFTrDA	72629-94-8	0.500 U	G2211-FS(0)	1.000	11/19/2020	0.154	0.500	5.00
PFTeDA	376-06-7	2.00 U	G2211-FS(0)	1.000	11/19/2020	0.733	2.00	5.00
NMeFOSAA	2355-31-9	1.00 U	G2211-FS(0)	1.000	11/19/2020	0.350	1.00	5.00
NEtFOSAA	2991-50-6	1.00 U	G2211-FS(0)	1.000	11/19/2020	0.500	1.00	5.00
PFBS	375-73-5	0.500 U	G2211-FS(0)	1.000	11/19/2020	0.144	0.500	5.00
PFHxS	355-46-4	42.9	G2211-FS(0)	1.000	11/19/2020	0.112	0.400	5.00
PFOS	1763-23-1	17.9	G2211-FS(0)	1.000	11/19/2020	0.437	1.00	5.00
HFPO-DA	13252-13-6	0.500 U	G2211-FS(0)	1.000	11/19/2020	0.248	0.500	5.00
Adona	919005-14-4	1.00 U	G2211-FS(0)	1.000	11/19/2020	0.265	1.00	5.00
9CI-PF3ONS	756426-58-1	0.500 U	G2211-FS(0)	1.000	11/19/2020	0.268	0.500	5.00
11CI-PF3OUdS	763051-92-9	1.00 U	G2211-FS(0)	1.000	11/19/2020	0.231	1.00	5.00

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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			20-1375			Perfluoroalkyl Compounds	CBD-AOA-EB01-102720-GW	WQ	Water for QC samples	27-Oct-20
		CHESAPEAKE_BEACH_NRL			20-1375			Perfluoroalkyl Compounds	CBD-AOA-EB01-102820-GW	WQ	Water for QC samples	28-Oct-20
		CHESAPEAKE_BEACH_NRL			20-1375			Perfluoroalkyl Compounds	CBD-AOA-FB01-102820	WQ	Water for QC samples	28-Oct-20
CBD-AOA-MW06	SITE 00010	CHESAPEAKE_BEACH_NRL	WLM	Monitoring well	20-1375	1446208.4	362614.2	Perfluoroalkyl Compounds	CBD-AOA-MW06-1020	WG	Ground water	27-Oct-20
CBD-AOA-MW11	SITE 00010	CHESAPEAKE_BEACH_NRL	WLM	Monitoring well	20-1375	1445639.7	362615.9	Perfluoroalkyl Compounds	CBD-AOA-MW11-1020	WG	Ground water	28-Oct-20
CBD-AOA-MW11	SITE 00010	CHESAPEAKE_BEACH_NRL	WLM	Monitoring well	20-1375	1445639.7	362615.9	Perfluoroalkyl Compounds	CBD-AOA-MW11P-1020	WG	Ground water	28-Oct-20
CBD-AOA-MW12	SITE 00010	CHESAPEAKE_BEACH_NRL	WLM	Monitoring well	20-1375	1444536.7	361512.9	Perfluoroalkyl Compounds	CBD-AOA-MW12-1020	WG	Ground water	28-Oct-20
CBD-AOA-MW13	SITE 00010	CHESAPEAKE_BEACH_NRL	WLM	Monitoring well	20-1375	1445531.3	361493.9	Perfluoroalkyl Compounds	CBD-AOA-MW13-1020	WG	Ground water	28-Oct-20
CBD-AOA-MW14	SITE 00010	CHESAPEAKE_BEACH_NRL	WLM	Monitoring well	20-1375	1446350.7	360501.9	Perfluoroalkyl Compounds	CBD-AOA-MW14-1020	WG	Ground water	28-Oct-20