Navy_CLEAN_PFAS_FOIA_request_covers.indd

Naval Facilities Engineering Command

Groundwater Sample Results, Combined Level 2 and Level 4 Laboratory Report, Electronic Data Deliverable, and Data Validation Report, SDG 18-0685

Marine Corps Base Camp Lejeune
North Carolina

July 2019

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project No 100120725-CTO5655
PFAS by DoD QSM 5.1 Table B-15

W

Batch 18-0685

Package DP-18-0377

Submitted to:
CH2M
2411 Dulles Corner Park, Suite 500
Herndon, VA 20171 USA

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

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CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project No 100120725-CTO5655
PFAS by DoD QSM 5.1 Table B-15

W

Batch 18-0685

Package DP-18-0377

Submitted to:
CH2M
2411 Dulles Corner Park, Suite 500
Herndon, VA 20171 USA

NELAP Accreditation Number: E87856 (Florida Department of Health)

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

Analyst Approval:	Lauren M. Griffith	Lauren Griffith 2018.11.26 15:07:37 -05'00'
QC Chemist Approval:	Ellyn M Fitch	fitche@battelle.org 2018.11.28 11:26:39 -05'00'
Project Manager Approval:		Digitally signed by Jonathan Thorn Date: 2018.11.28 13:31:30 -05'00'

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CTO-5655: Marine Corps Base Camp Lejeune
PFAS Analysis
Project No 100120725-CTO5655
PFAS by DoD QSM 5.1 Table B-15

W

Batch 18-0685

Package DP-18-0377

1	***Work Plan*** Laboratory Work Plan, Addendums To Work Plan, Memos From Project Manager, Special Instructions, Chain-of-Custody Reports.	1
2	***Tables*** Analytical Data Tables, Qualifier Definitions.	17
3	***Miscellaneous Documentation*** Case Narrative, Miscellaneous Documentation Form, Quality Control Summary, Example Calculations, Internal Standard Recovery Report, Retention Time Window Report.	29
4	***Sample Preparation Records*** Sample Preparation Records, Dilution Worksheets, Standard Preparation Records, Certificates Of Analysis, GPC Check Report.	173
5	***Analytical Calibrations*** Analytical Sequence, Analytical Method, Tune Report, Initial Calibration, Pesticide Degradation Report, RF Summary, Calibration Verifications, Independent Calibration Verification Check.	192
6	***Analytical Data*** Raw Data Quantification Reports.	309
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8	***Unused Data***	631

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Signature Page

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Signature Page

Name (Printed)	Signature	Initials	Date
Jonathan Thorn		JRT	4/4/2018
Robert Lizotte, Jr.		BL	4.4.2018
FRANCO PALA	Franco Pala	FP	4.4.2018
Carla Devine	Carla Devine	CRD	4/4/18
Denise Schumitz	Denise Schumitz	DMS	4/4/18
Carolus Brunmeay		CBM	4/4/2018
Rich Rostucci		RR	4/4/2018
Michael Mera			4/4/2018
Christie Usher	Christie Usher	CU	4/4/18
Kevin McInerney		KM	4/4/18
Stephanie Schultz		SAS	4/4/18
Jordan Tower	Jordan Tower	JCT	4/4/18
KRISTEN NICHOLS	K Nichols	KN	4/4/18
Quintico H Brown		CB	4/4/18
Matt Schumitz		MS	4-4-18
Sam Guimaraes		SG	4-4-18
Lauren Griffith	Lauren M Griffith	LMG	4.4.18

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Signature Page

Battelle 2018 (2 of 2)
Signature Page

Name (Printed)	Signature	Initials	Date
KAVITHA DASU		KD	04/04/18
Kayla Lamarre		KAL	04/04/18
Weidong Li		W.L	04/04/18
Tracy W Stenner		TWS	04/04/18
Ellyn M Fitch		EMF	12-April-2018
Gail DeRuzzo		GD	4/18/18
Zachary Willenberg		ZW	4/20/18
Kevin Bailey		KB	10/25/18
Andrea Kulda		AK	10/25/18
William Mendelsohn		WM	10/25/18

Sample Summary

Client: CH2M
SDG: 18-0685
Project/Site: Marine Corps Base Camp Lejeune
CTO: 5655

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Receipt Date
CS241PB-FS	Procedural Blank	WATER	11/20/2018	11/20/2018
CS242LCS-FS	Laboratory Control Sample	WATER	11/20/2018	11/20/2018
J9412-FS	RR-EFF1-18D	W	11/15/2018	11/17/2018
J9413-FS	RR-EFF1D-18D	W	11/15/2018	11/17/2018
J9418-FS	RR-EFF2-18D	W	11/16/2018	11/17/2018
J9419-FS	RR-FB-111618	W	11/16/2018	11/17/2018
J9421-FS	RR-EFF3-18D	W	11/16/2018	11/17/2018
J9422MS-FS	RR-EFF3-18D-MS	W	11/16/2018	11/17/2018
J9423MSD-FS	RR-EFF3-18D-SD	W	11/16/2018	11/17/2018

Work Plan

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WORK/QUALITY ASSURANCE PROJECT PLAN

1.0 GENERAL PROJECT INFORMATION

Project Title:	CTO-5655: PFAS Analysis
Project Number:	100120725-CTO5655
Client:	CH2M 2411 Dulles Corner Park Suite 500 Herndon, VA 20171 USA
Client Contact Information:	Jaclyn D'Onofrio Project Chemist (703) 376-5132(V) NA Jackie.Donofrio@jacobs.com
Effective Date of QAPP:	11/14/2018
Version Number:	100120725-CTO5655(L)-01
Project Manager:	Thorn, Jonathan
Laboratory Task Manager:	Thorn, Jonathan
Deliverable Due Date:	11/26/2018

2.0 SCOPE OF WORK

Overview:	Analysis of groundwater samples 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 upon arrival. Keep samples separate from PFAS samples as these may be highly contaminated.
Sub_Sampling:	None
Procedures:	NA
Contact:	NA
Comment:	None.
Archiving:	Archive unconsumed samples for 6 months after delivery of final results.
Disposal:	Dispose of samples and extracts in the appropriate waste stream.

2.1.2 Sample Preparation

None.

Samples Expected:	Samples Per Batch:	Batches Expected:
16	20	1

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 will be indicated on the CoC forms.
MSD	Spiked field sample for determining method accuracy and precision in the presence of matrix.	1 per batch	--	NA	MS/MSD will be indicated on the CoC forms.

2.1.3 Extraction/Preparation

2.1.3.1 Extraction

SOP No.-Rev:	**5-370-07**
SOP Title:	*Extraction of Poly and Perfluoroalkyl Substances from Environmental Matrices*
Sample Size:	250 ml
SIS and LCS/MS Compounds:	Defined in Table 2.
Deviations:	None.
Comments:	Samples may be highly contaminated. Pre-screening results will be done at a higher dilution than normal to ensure that the laboratory equipment is not impacted. If PFAS is not detected in the highly diluted pre-screening samples, lower level dilutions will be performed.

Table 2: SIS and LCS/MS Spiking Level

Standard Type	Standard Contents	Spike Amount (ng)	Volume (uL)	Comment
PFAS - DoD Low	KB72 SIS	~ 0.250 ng	50 uL	NA

Standard Type	Standard Contents	Spike Amount (ng)	Volume (uL)	Comment
Level Labelled Extracted Internal Standard (SIS)				
PFAS - DoD Second Source LCS/MS Solution	KB82 LCS/MS	~ 15.0 ng	300 uL	LCS/MS/MSD (MS/MSD spike may vary based on pre-screening data)

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	KC52 RIS	~ 0.250 ng	50 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: **5-369-06**

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:	11/26/2018
LIMS Reports:	*No*
Histograms:	*No*
Excel Tables:	*Yes*

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WORK/QUALITY ASSURANCE PROJECT PLAN

EICs:	*No*
Chromatograms:	*Yes*
EDDs:	*Yes*
Comments:	• Full QSM 5.1 Table B-15 compliant data package. • SNEDD EDD format (CH2M)

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
Stephanie A. Schultz	Sample Preparation	NA
Denise M. Schumitz	LC-MS/MS Analysis	NA
Matt D. Schumitz	Sample Custody	NA
Ellyn M. Fitch	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	11/17/2018	11/19/2018	2	NA
Sample Preparation	11/19/2018	11/20/2018	1	NA

Activity:	Start Date:	End Date:	TAT (days):	Comment:
Instrument Analysis	11/20/2018	11/21/2018	1	NA
Quality Control Review	11/21/2018	11/26/2018	5	NA
Quality Assurance Review	11/26/2018	11/26/2018	0	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	2	1	2	NA
Sample Preparation	6	1	6	NA
Instrument Analysis	6	1	6	NA
Quality Control Review	3	1	3	NA
Quality Assurance Review	1	1	1	NA

7.0 STAFF DEVELOPMENT

None anticipated.

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WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 1: Target Samples

Shipment: **SHP-181117-01**

Status: Pending

Description: Air Station PFAS Sampling

Range: J9412-J9423

Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
1	J9412	RR-EFF1-18D	11/15/2018 8:55 am	W	R0119 (NA)			
2	J9413	RR-EFF1D-18D	11/15/2018 9:00 am	W	R0119 (NA)			
3	J9414	AS4141-EFF1-18D	11/15/2018 11:35 am	W	R0119 (NA)			
4	J9417	AS4141-EFF1D-18D	11/15/2018 11:40 am	W	R0119 (NA)			
5	J9418	RR-EFF2-18D	11/16/2018 8:30 am	W	R0119 (NA)			
6	J9419	RR-FB-111618	11/16/2018 3:30 pm	W	R0119 (NA)			
7	J9420	AS4141-FB-111618	11/16/2018 3:40 pm	W	R0119 (NA)			
8	J9421	RR-EFF3-18D	11/16/2018 3:50 pm	W	R0119 (NA)			

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WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 2: Test Codes

Project Test Code Name:	Master_369
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 5.1 Table B-15
Matrix:	L - Liquid Samples, like water or sea water, prepared and anlyzed 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 Substition:	U-Flag=MR	***Histograms:***	No			***HT_Flag:***	T
ECD_Reporting:	No						

No:	Analyte:	Report Name:	Type	RIS	SIS	Hidden:	Graph:
1	Perfluoro-n-hexanoic acid	PFHxA	T		13C5-PFHxA	No	No
2	Perfluoro-n-heptanoic Acid	PFHpA	T		13C4-PFHpA	No	No
3	Perfluoro-n-octanoic Acid	PFOA	T		13C8-PFOA	No	No
4	Perfluorononanoic Acid	PFNA	T		13C9-PFNA	No	No
5	Perfluoro-n-decanoic Acid	PFDA	T		13C6-PFDA	No	No
6	Perfluoro-n-undecanoic acid	PFUnA	T		13C7-PFUnA	No	No
7	Perfluoro-n-dodecanoic acid	PFDoA	T		13C2-PFDoA	No	No
8	Perfluoro-n-tridecanoic acid	PFTrDA	T		13C2-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-butanesulfonate	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
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

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WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 2: Test Codes

Project Test Code Name: Master_369

No:	Analyte:	Report Name:	Type	RIS	SIS	Hidden:	Graph:
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

Total Analytes: 27

Subtract Peaks:

None

Sum Peaks:

None

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WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 2: Test Codes

Project Test Code Name: Master_369

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

Degredation Check Criteria:

None

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WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 3: Method Quality Objectives

MQO Application	***Universal_LC***		
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	

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WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 3: Method Quality Objectives

MQO Application	***Universal_LC***		
MQO:	**Acceptance Criteria**	**Qual:**	**Corrective Action:**
Analytical Triplicate Precision	Organics results less than 30% Relative Standard Deviation (RSD). 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	
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	5-369-6: 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	5-369-6: 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	5-369-6: 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.

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ShpNo SHP-181117-01

Battelle Project No:

Sample Receipt Form

Approved: ☐ Authorized ☐

Project Number: 705838.FL.FS **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Saturday, November 17, 2018 12:00 PM

No. of Shipping Containers: 1

SHIPMENT

Method of Delivery: Commercial Carrier **Tracking Number:** 7838 2339 8175

COC Forms: ☑ Shipped with samples ☐ No Forms

Cooler(s)/Box(es)

Cntr	Type	Tracking No.	Seal	Seal	Container	Therm.	Temp C	Smps
1 of 1	Cooler	7838 2339 8175	Custody Seals	Intact	Intact	Therm_1	0.9	12

Samples

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

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

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

Temperature upon receipt (°C): 0.9 Temperature Blank used ☑ Yes ☐ No
(Note: If temperature upon receipt differs from required conditions, see sample log comment field)

Samples Acidified: ☐ Yes ☐ No ☑ Unknown

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

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

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

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

Storage Location: Custody: Refrigerator - R0119 (NA) **BDO IDs Assigned:** J9412 - J9423

Samples logged in by: Schumitz, Matt **Date/Time:** 11/17/2018 12:00 PM

Approved By: **Approved On:**

Authorized By: **Authorized On:**

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ShpNo SHP-181117-01

Battelle Project No:

Sample Receipt Form Details

Approved: ☐ Authorized ☐

Project Number: 705838.FL.FS **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Saturday, November 17, 2018 12:00 PM

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:
J9412	RR-EFF1-18D	11/15/18 8:55	11/17/18 14:01	1	W	0.9	NA	NA	NA	R0119 (NA)			
J9413	RR-EFF1D-18D	11/15/18 9:00	11/17/18 14:01	1	W	0.9	NA	NA	NA	R0119 (NA)			
J9414	AS4141-EFF1-18D	11/15/18 11:35	11/17/18 14:02	1	W	0.9	NA	NA	NA	R0119 (NA)			
J9415	AS4141-EFF1-18D-MS	11/15/18 11:35	11/17/18 14:02	1	W	0.9	NA	NA	NA	R0119 (NA)			
J9416	AS4141-EFF1-18D-SD	11/15/18 11:35	11/17/18 14:02	1	W	0.9	NA	NA	NA	R0119 (NA)			
J9417	AS4141-EFF1D-18D	11/15/18 11:40	11/17/18 14:03	1	W	0.9	NA	NA	NA	R0119 (NA)			
J9418	RR-EFF2-18D	11/16/18 8:30	11/17/18 14:04	1	W	0.9	NA	NA	NA	R0119 (NA)			
J9419	RR-FB-111618	11/16/18 15:30	11/17/18 14:04	1	W	0.9	NA	NA	NA	R0119 (NA)			
J9420	AS4141-FB-111618	11/16/18 15:40	11/17/18 14:05	1	W	0.9	NA	NA	NA	R0119 (NA)			
J9421	RR-EFF3-18D	11/16/18 15:50	11/17/18 14:05	1	W	0.9	NA	NA	NA	R0119 (NA)			
J9422	RR-EFF3-18D-MS	11/16/18 15:50	11/17/18 14:05	1	W	0.9	NA	NA	NA	R0119 (NA)			
J9423	RR-EFF3-18D-SD	11/16/18 15:50	11/17/18 14:06	1	W	0.9	NA	NA	NA	R0119 (NA)			

Total Samples: 12

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Chain-of-Custody

Client Contact Information
CH2M Hill
14120 Ballantyne Corporate Place, Suite #200
Charlotte, NC 28277
Jackie.Donofrio@jacobs.com

Project Manager: Amber Baseman
Sampler Information (print name): Paula Kramer
Phone: 630-637-2236
Email: paula.kramer@jacobs.com
Turnaround Time (TAT) Requested:
Normal ☐
Priority ☐
RUSH X 7-day
Time Zone:

Sampling Site: Air Station
Site Information: MCAS New River

Project Name: Air Station PFAS Sampling
Project No.: 705838.F1.FS

COC #

Page# 1 of 1

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Preservative: 1	Analysis: PFAS		
RR-EFF1-18D	11/15/18	0855	Grab	W	1		X		J9412
RR-EFF1D-18D		0900			1		X		J9413
AS4141-EFF1-18D		1135			1		X		J9414
AS4141-EFF1-18D-MS		1135			1		X	Run QA/QC	J9415
AS4141-EFF1-18D-SD		1135			1		X	Run QA/QC	J9416
AS4141-EFF1D-18D		1140			1		X		J9417
RR-EFF2-18D	11/16/18	0830			1		X		J9418
RR-FB-111618		1530			1		X		J9419
AS4141-FB-111618		1540			1		X		J9420
RR-EFF3-18D		1550			1		X		J9421
RR-EFF3-18D-MS		1550			1		X	Run QA/QC	J9422
RR-EFF3-18-SD		1550					X	Run QA/QC	J9423

Receipt Temperature:(°C) 0.9°
Samples Intact: (Yes) No
Samples on Ice: (Yes) No
Receipt Comments:

Relinquished by (Print/Sign)	Company	Date/Time	Received by (Print/Sign)	Company	Date/Time
Paula Kramer	Jacobs	11/16/18 @ 1730	[illegible]	Battelle	11-17-18 1200

Comments:
* PFAS Method LC-MS/MS compliant with QSM 5.1 Table B-15
Project Chemist: Jackie D'Onofrio 703-376-5132

Therm 1 TB ✓

ORIGIN ID:RDUA (630) 687-2236
PAULA KRAMER
JACOBS
3120 HIGHWOODS BLVD
SUITE 214
RALEIGH, NC 27604
UNITED STATES US

SHIP DATE: 16NOV18
ACTWGT: 40.00 LB
CAD: 113487705/INET4042

BILL SENDER

TO JONATHAN THORN
BATTELLE SAMPLE RECEIVING
141 LONGWATER DRIVE
SUITE 202
NORWELL MA 02061
(781) 681-5565 REF:
INV:
PO: DEPT:

552J3/C3B2/DCA5

FedEx Express

J18211608150 1uv

SATURDAY 12:00P
PRIORITY OVERNIGHT

TRK# 0201 7838 2339 8175

X0 XPUA

02061
MA-US BOS

0.9°

MDS

12:00
11-17-18

After printing this label:
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Data Tables

BATTELLE
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Project Client: CH2M
Project Name: CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project No.: 100120725-CTO5655

Client ID		RR-EFF1-18D				
Battelle ID		J9412-FS				
Sample Type		SA				
Collection Date		11/15/2018				
Extraction Date		11/20/2018				
Analysis Date		11/25/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		NA				
Matrix		W				
Sample Size		0.280				
Size Unit-Basis		L				
Units		ng/L		MDL	LOD	LOQ
PFHxA	307-24-4	1149.15	D	8.48	22.32	223.21
PFHpA	375-85-9	453.07	D	1.43	4.46	44.64
PFOA	335-67-1	425.94	D	1.61	4.46	44.64
PFNA	375-95-1	71.56		0.23	0.89	4.46
PFDA	335-76-2	1.53	J	0.14	0.45	4.46
PFUnA	2058-94-8	0.89	U	0.26	0.89	4.46
PFDoA	307-55-1	0.45	U	0.16	0.45	4.46
PFTrDA	72629-94-8	0.45	U	0.13	0.45	4.46
PFTeDA	376-06-7	0.89	U	0.22	0.89	4.46
NMeFOSAA	2355-31-9	1.79	U	0.50	1.79	4.46
NEtFOSAA	2991-50-6	0.89	U	0.44	0.89	4.46
PFBS	375-73-5	493.37	D	5.80	22.32	223.21
PFHxS	355-46-4	3243.76	D	9.82	35.71	446.43
PFOS	1763-23-1	5190.61	D	16.96	44.64	446.43

Surrogate Recoveries (%)

13C5-PFHxA	88	D
13C4-PFHpA	96	D
13C8-PFOA	82	D
13C9-PFNA	81	D
13C6-PFDA	91	
13C7-PFUnA	76	
13C2-PFDoA	72	
13C2-PFTeDA	63	
d3-MeFOSAA	126	
d5-EtFOSAA	93	D
13C3-PFBS	110	D
13C3-PFHxS	100	D
13C8-PFOS	96	D

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It can be done

Project Client: CH2M
Project Name: CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project No.: 100120725-CTO5655

Client ID		RR-EFF1D-18D			
Battelle ID		J9413-FS			
Sample Type		SA			
Collection Date		11/15/2018			
Extraction Date		11/20/2018			
Analysis Date		11/25/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		NA			
Matrix		W			
Sample Size		0.280			
Size Unit-Basis		L			
Units		ng/L	MDL	LOD	LOQ
PFHxA	307-24-4	978.63 D	8.48	22.32	223.21
PFHpA	375-85-9	446.84 D	1.43	4.46	44.64
PFOA	335-67-1	452.64 D	1.61	4.46	44.64
PFNA	375-95-1	76.46	0.23	0.89	4.46
PFDA	335-76-2	1.54 J	0.14	0.45	4.46
PFUnA	2058-94-8	0.89 U	0.26	0.89	4.46
PFDoA	307-55-1	0.45 U	0.16	0.45	4.46
PFTrDA	72629-94-8	0.45 U	0.13	0.45	4.46
PFTeDA	376-06-7	0.89 U	0.22	0.89	4.46
NMeFOSAA	2355-31-9	1.79 U	0.50	1.79	4.46
NEtFOSAA	2991-50-6	0.89 U	0.44	0.89	4.46
PFBS	375-73-5	469.73 D	1.16	4.46	44.64
PFHxS	355-46-4	3167.76 D	4.91	17.86	223.21
PFOS	1763-23-1	5037.56 D	16.96	44.64	446.43

Surrogate Recoveries (%)

13C5-PFHxA	84 D
13C4-PFHpA	91 D
13C8-PFOA	74 D
13C9-PFNA	81 D
13C6-PFDA	85
13C7-PFUnA	72
13C2-PFDoA	71
13C2-PFTeDA	66
d3-MeFOSAA	131
d5-EtFOSAA	78 D
13C3-PFBS	148 D
13C3-PFHxS	86 D
13C8-PFOS	75 D

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Project Client: CH2M
Project Name: CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project No.: 100120725-CTO5655

Client ID		RR-EFF2-18D			
Battelle ID		J9418-FS			
Sample Type		SA			
Collection Date		11/16/2018			
Extraction Date		11/20/2018			
Analysis Date		11/25/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		NA			
Matrix		W			
Sample Size		0.280			
Size Unit-Basis		L			
Units		ng/L	MDL	LOD	LOQ
PFHxA	307-24-4	255.76 D	0.85	2.23	22.32
PFHpA	375-85-9	104.34 D	0.71	2.23	22.32
PFOA	335-67-1	209.73 D	0.80	2.23	22.32
PFNA	375-95-1	40.22	0.23	0.89	4.46
PFDA	335-76-2	1.49 J	0.14	0.45	4.46
PFUnA	2058-94-8	0.89 U	0.26	0.89	4.46
PFDoA	307-55-1	0.45 U	0.16	0.45	4.46
PFTrDA	72629-94-8	0.45 U	0.13	0.45	4.46
PFTeDA	376-06-7	0.89 U	0.22	0.89	4.46
NMeFOSAA	2355-31-9	1.79 U	0.50	1.79	4.46
NEtFOSAA	2991-50-6	0.89 U	0.44	0.89	4.46
PFBS	375-73-5	76.35 D	0.58	2.23	22.32
PFHxS	355-46-4	751.98 D	2.46	8.93	111.61
PFOS	1763-23-1	1571.61 D	4.24	11.16	111.61

Surrogate Recoveries (%)

13C5-PFHxA	79 D
13C4-PFHpA	89 D
13C8-PFOA	70 D
13C9-PFNA	63 D
13C6-PFDA	57
13C7-PFUnA	59
13C2-PFDoA	58
13C2-PFTeDA	51
d3-MeFOSAA	93
d5-EtFOSAA	138
13C3-PFBS	119 D
13C3-PFHxS	99 D
13C8-PFOS	78 D

BATTELLE
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Project Client: CH2M
Project Name: CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project No.: 100120725-CTO5655

Client ID	RR-FB-111618
Battelle ID	J9419-FS
Sample Type	SA
Collection Date	11/16/2018
Extraction Date	11/20/2018
Analysis Date	11/25/2018
Analytical Instrument	Sciex 5500 LC/MS/MS
% Moisture	NA
Matrix	W
Sample Size	0.285
Size Unit-Basis	L

		Units		ng/L	MDL	LOD	LOQ
PFHxA	307-24-4			0.44	U	0.17	0.44	4.39
PFHpA	375-85-9			0.44	U	0.14	0.44	4.39
PFOA	335-67-1			1.17	J	0.16	0.44	4.39
PFNA	375-95-1			0.88	U	0.23	0.88	4.39
PFDA	335-76-2			0.44	U	0.14	0.44	4.39
PFUnA	2058-94-8			0.88	U	0.25	0.88	4.39
PFDoA	307-55-1			0.44	U	0.16	0.44	4.39
PFTrDA	72629-94-8			0.44	U	0.13	0.44	4.39
PFTeDA	376-06-7			0.88	U	0.22	0.88	4.39
NMeFOSAA	2355-31-9			1.75	U	0.49	1.75	4.39
NEtFOSAA	2991-50-6			0.88	U	0.43	0.88	4.39
PFBS	375-73-5			0.44	U	0.11	0.44	4.39
PFHxS	355-46-4			0.35	U	0.10	0.35	4.39
PFOS	1763-23-1			0.44	U	0.17	0.44	4.39

Surrogate Recoveries (%)

13C5-PFHxA	85
13C4-PFHpA	87
13C8-PFOA	90
13C9-PFNA	92
13C6-PFDA	88
13C7-PFUnA	86
13C2-PFDoA	83
13C2-PFTeDA	79
d3-MeFOSAA	79
d5-EtFOSAA	76
13C3-PFBS	86
13C3-PFHxS	96
13C8-PFOS	84

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Project Client: CH2M
Project Name: CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project No.: 100120725-CTO5655

Client ID		RR-EFF3-18D			
Battelle ID		J9421-FS			
Sample Type		SA			
Collection Date		11/16/2018			
Extraction Date		11/20/2018			
Analysis Date		11/25/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		NA			
Matrix		W			
Sample Size		0.285			
Size Unit-Basis		L			
Units		ng/L	MDL	LOD	LOQ
PFHxA	307-24-4	367.98 D	8.33	21.93	219.30
PFHpA	375-85-9	173.69 D	0.70	2.19	21.93
PFOA	335-67-1	461.62 D	7.89	21.93	219.30
PFNA	375-95-1	33.56	0.23	0.88	4.39
PFDA	335-76-2	1.14 J	0.14	0.44	4.39
PFUnA	2058-94-8	0.88 U	0.25	0.88	4.39
PFDoA	307-55-1	0.44 U	0.16	0.44	4.39
PFTrDA	72629-94-8	0.44 U	0.13	0.44	4.39
PFTeDA	376-06-7	0.88 U	0.22	0.88	4.39
NMeFOSAA	2355-31-9	1.75 U	0.49	1.75	4.39
NEtFOSAA	2991-50-6	0.88 U	0.43	0.88	4.39
PFBS	375-73-5	104.33 D	0.57	2.19	21.93
PFHxS	355-46-4	1283.27 D	4.82	17.54	219.30
PFOS	1763-23-1	2558.03 D	8.33	21.93	219.30

Surrogate Recoveries (%)

13C5-PFHxA	88 D
13C4-PFHpA	100 D
13C8-PFOA	83 D
13C9-PFNA	57
13C6-PFDA	91
13C7-PFUnA	113
13C2-PFDoA	108
13C2-PFTeDA	96
d3-MeFOSAA	65 D
d5-EtFOSAA	80 D
13C3-PFBS	138 D
13C3-PFHxS	84 D
13C8-PFOS	71 D

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Project Client: CH2M
Project Name: CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project No.: 100120725-CTO5655

Client ID		KC73 IB			
Battelle ID		KC73 IB_11/25/2018			
Sample Type		IB			
Collection Date		NA			
Extraction Date		NA			
Analysis Date		11/25/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		NA			
Matrix		Water			
Sample Size		0.250			
Size Unit-Basis		L			
Units		ng/L	MDL	LOD	LOQ
PFHxA	307-24-4	0.50 U	0.19	0.50	5.00
PFHpA	375-85-9	0.50 U	0.16	0.50	5.00
PFOA	335-67-1	0.50 U	0.18	0.50	5.00
PFNA	375-95-1	1.00 U	0.26	1.00	5.00
PFDA	335-76-2	0.50 U	0.16	0.50	5.00
PFUnA	2058-94-8	1.00 U	0.29	1.00	5.00
PFDoA	307-55-1	0.50 U	0.18	0.50	5.00
PFTrDA	72629-94-8	0.50 U	0.15	0.50	5.00
PFTeDA	376-06-7	1.00 U	0.25	1.00	5.00
NMeFOSAA	2355-31-9	2.00 U	0.56	2.00	5.00
NEtFOSAA	2991-50-6	1.00 U	0.49	1.00	5.00
PFBS	375-73-5	0.50 U	0.13	0.50	5.00
PFHxS	355-46-4	0.40 U	0.11	0.40	5.00
PFOS	1763-23-1	0.50 U	0.19	0.50	5.00

Surrogate Recoveries (%)

13C5-PFHxA	89
13C4-PFHpA	91
13C8-PFOA	101
13C9-PFNA	98
13C6-PFDA	97
13C7-PFUnA	95
13C2-PFDoA	91
13C2-PFTeDA	90
d3-MeFOSAA	93
d5-EtFOSAA	78
13C3-PFBS	91
13C3-PFHxS	94
13C8-PFOS	93

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Project Client: CH2M
Project Name: CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project No.: 100120725-CTO5655

Client ID		Procedural Blank			
Battelle ID		CS241PB-FS			
Sample Type		PB			
Collection Date		11/20/2018			
Extraction Date		11/20/2018			
Analysis Date		11/25/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		NA			
Matrix		WATER			
Sample Size		0.250			
Size Unit-Basis		L			
Units		ng/L	MDL	LOD	LOQ
PFHxA	307-24-4	0.50 U	0.19	0.50	5.00
PFHpA	375-85-9	0.50 U	0.16	0.50	5.00
PFOA	335-67-1	1.49 J	0.18	0.50	5.00
PFNA	375-95-1	1.00 U	0.26	1.00	5.00
PFDA	335-76-2	0.50 U	0.16	0.50	5.00
PFUnA	2058-94-8	1.00 U	0.29	1.00	5.00
PFDoA	307-55-1	0.50 U	0.18	0.50	5.00
PFTrDA	72629-94-8	0.50 U	0.15	0.50	5.00
PFTeDA	376-06-7	1.00 U	0.25	1.00	5.00
NMeFOSAA	2355-31-9	2.00 U	0.56	2.00	5.00
NEtFOSAA	2991-50-6	1.00 U	0.49	1.00	5.00
PFBS	375-73-5	0.50 U	0.13	0.50	5.00
PFHxS	355-46-4	0.40 U	0.11	0.40	5.00
PFOS	1763-23-1	0.50 U	0.19	0.50	5.00

Surrogate Recoveries (%)

13C5-PFHxA	98
13C4-PFHpA	91
13C8-PFOA	95
13C9-PFNA	103
13C6-PFDA	93
13C7-PFUnA	92
13C2-PFDoA	88
13C2-PFTeDA	73
d3-MeFOSAA	98
d5-EtFOSAA	116
13C3-PFBS	103
13C3-PFHxS	105
13C8-PFOS	108

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Project Client: CH2M
Project Name: CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project No.: 100120725-CTO5655

Client ID		Laboratory Control Sample					
Battelle ID		CS242LCS-FS					
Sample Type		LCS					
Collection Date		11/20/2018					
Extraction Date		11/20/2018					
Analysis Date		11/25/2018					
Analytical Instrument		Sciex 5500 LC/MS/MS					
% Moisture		NA					
Matrix		WATER					
Sample Size		0.250					
Size Unit-Basis		L				Control Limits	
Units		ng/L	Target	Recovery	Qual	Lower	Upper
PFHxA	307-24-4	56.18	50.50	111		51	137
PFHpA	375-85-9	58.29	50.00	117		48	136
PFOA	335-67-1	55.00	50.00	110		49	141
PFNA	375-95-1	57.35	50.00	115		58	122
PFDA	335-76-2	57.01	50.00	114		59	135
PFUnA	2058-94-8	53.74	50.00	107		64	134
PFDoA	307-55-1	57.27	50.00	115		75	131
PFTrDA	72629-94-8	56.83	50.00	114		42	148
PFTeDA	376-06-7	55.84	50.00	112		42	158
NMeFOSAA	2355-31-9	53.78	50.00	108		50	146
NEtFOSAA	2991-50-6	57.63	50.00	115		51	131
PFBS	375-73-5	60.58	50.50	120		56	134
PFHxS	355-46-4	51.69	50.50	102		52	128
PFOS	1763-23-1	65.54	50.00	131		40	144

Surrogate Recoveries (%)

13C5-PFHxA	87
13C4-PFHpA	85
13C8-PFOA	84
13C9-PFNA	94
13C6-PFDA	86
13C7-PFUnA	84
13C2-PFDoA	85
13C2-PFTeDA	84
d3-MeFOSAA	93
d5-EtFOSAA	81
13C3-PFBS	89
13C3-PFHxS	92
13C8-PFOS	75

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Project Client: CH2M
Project Name: CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project No.: 100120725-CTO5655

Client ID		RR-EFF3-18D		RR-EFF3-18D-MS						
Battelle ID		J9421-FS		J9422MS-FS						
Sample Type		SA		MS						
Collection Date		11/16/2018		11/16/2018						
Extraction Date		11/20/2018		11/20/2018						
Analysis Date		11/25/2018		11/26/2018						
Analytical Instrument		Sciex 5500 LC/MS/MS		Sciex 5500 LC/MS/MS						
% Moisture		NA		NA						
Matrix		W		W						
Sample Size		0.285		0.270						
Size Unit-Basis		L		L					Control Limits	
Units		ng/L		ng/L		Target	Recovery	Qual	Lower	Upper
PFHxA	307-24-4	367.98	D	353.88	D	46.76	0	N	51	137
PFHpA	375-85-9	173.69	D	228.29	D	46.30	118		48	136
PFOA	335-67-1	461.62	D	458.70	D	46.30	0	N	49	141
PFNA	375-95-1	33.56		92.05	D	46.30	126	N	58	122
PFDA	335-76-2	1.14	J	56.37		46.30	119		59	135
PFUnA	2058-94-8	0.88	U	48.20		46.30	104		64	134
PFDoA	307-55-1	0.44	U	52.37		46.30	113		75	131
PFTrDA	72629-94-8	0.44	U	55.82		46.30	121		42	148
PFTeDA	376-06-7	0.88	U	51.92		46.30	112		42	158
NMeFOSAA	2355-31-9	1.75	U	48.09		46.30	104		50	146
NEtFOSAA	2991-50-6	0.88	U	54.16	D	46.30	117		51	131
PFBS	375-73-5	104.33	D	175.05	D	46.76	151	N	56	134
PFHxS	355-46-4	1283.27	D	1289.50	D	46.76	13	N	52	128
PFOS	1763-23-1	2558.03	D	2452.28	D	46.30	0	N	40	144
Surrogate Recoveries (%)										
13C5-PFHxA		88	D	101	D					
13C4-PFHpA		100	D	99	D					
13C8-PFOA		83	D	84	D					
13C9-PFNA		57		73	D					
13C6-PFDA		91		82						
13C7-PFUnA		113		107						
13C2-PFDoA		108		103						
13C2-PFTeDA		96		94						
d3-MeFOSAA		65	D	82	D					
d5-EtFOSAA		80	D	136	D					
13C3-PFBS		138	D	141	D					
13C3-PFHxS		84	D	98	D					
13C8-PFOS		71	D	87	D					

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Project Client: CH2M
Project Name: CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project No.: 100120725-CTO5655

Client ID		RR-EFF3-18D-SD								
Battelle ID		J9423MSD-FS								
Sample Type		MSD								
Collection Date		11/16/2018								
Extraction Date		11/20/2018								
Analysis Date		11/26/2018								
Analytical Instrument		Sciex 5500 LC/MS/MS								
% Moisture		NA								
Matrix		W								
Sample Size		0.270								
Size Unit-Basis		L					Control Limits			RPD
Units		ng/L		Target	Recovery	Qual	Lower	Upper	RPD	Qual	Limit
PFHxA	307-24-4	355.11	D	46.76	0	N	51	137	0.0		≤ 30
PFHpA	375-85-9	229.56	D	46.30	121		48	136	2.5		≤ 30
PFOA	335-67-1	420.50	D	46.30	0	N	49	141	0.0		≤ 30
PFNA	375-95-1	83.28	D	46.30	107		58	122	16.3		≤ 30
PFDA	335-76-2	54.17		46.30	115		59	135	3.4		≤ 30
PFUnA	2058-94-8	46.84		46.30	101		64	134	2.9		≤ 30
PFDoA	307-55-1	52.89		46.30	114		75	131	0.9		≤ 30
PFTrDA	72629-94-8	53.68		46.30	116		42	148	4.2		≤ 30
PFTeDA	376-06-7	50.09		46.30	108		42	158	3.6		≤ 30
NMeFOSAA	2355-31-9	54.99		46.30	119		50	146	13.5		≤ 30
NEtFOSAA	2991-50-6	51.42	D	46.30	111		51	131	5.3		≤ 30
PFBS	375-73-5	158.13	D	46.76	115		56	134	27.1		≤ 30
PFHxS	355-46-4	1205.87	D	46.76	0	N	52	128	200.0	N	≤ 30
PFOS	1763-23-1	2019.25	D	46.30	0	N	40	144	0.0		≤ 30

Surrogate Recoveries (%)

13C5-PFHxA	93	D
13C4-PFHpA	97	D
13C8-PFOA	86	D
13C9-PFNA	76	D
13C6-PFDA	81	
13C7-PFUnA	102	
13C2-PFDoA	98	
13C2-PFTeDA	94	
d3-MeFOSAA	79	D
d5-EtFOSAA	122	D
13C3-PFBS	143	D
13C3-PFHxS	101	D
13C8-PFOS	84	D

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 highers concentration level in the calibration
H	Surrogate diluted out. Used when surrogate recovery is affected by excessive dilution of the sample extract.
J	Analyte detected below the Limit of Quantitation (LOQ)
ME	Significant Matrix Interference - Estimated value.
MI	Significant Matrix Interference - value could not be determined.
n	Quality Control (QC) value is outside the accuracy or precision Data Quality Objective (DQO), but meets secondary criteria
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 Method detection limit (MDL) value, Limit of Detection (LOD) reported

Miscellaneous Documentation

QA/QC Summary
Batch 18-0685

Project:	CTO-5655: Marine Corps Base Camp Lejeune
Parameters:	PFAS
Laboratory:	Battelle, Norwell, MA
Matrix:	W
Data Set:	DP-18-0377
Analytical SOP:	5-369
Method Reference:	PFAS to QSM 5.1 Table B-15

Sample Custody		
Collection Date	Receipt Date	Temp (°C)
11/15 and 16/2018	11/17/2018	0.9
Corrective Actions	None	
Sample Storage	The water samples were stored refrigerated until extraction.	
Related samples	NA	

	METHOD SUMMARIES
Sample Preparation	Water samples were spiked with surrogates in the original sample container from the field. The water was extracted using a weak ion exchange solid phase extraction (SPE) cartridge and eluted from the SPE with 0.4% NH_3 in methanol. Extracts were and concentrated to dryness under nitrogen with a water bath set between 35 °C and 45 °C, reconstituted with 80:20 methanol/water (V/V) and fortified with internal standard. Extracts were transferred for LC-MS/MS analysis.
Prep comments	Approximately 2 mL of sample J9419-FS (RR-FB-111618) was spilled when pouring into the SPE reservoir. All field samples, excluding the blank, had a distinct petroleum odor. Samples J9412-FS (RR-EFF1-18D), J9413-FS (RR-EFF1D-18D), and J9418-FS (RR-EFF2-18D) contained floating particulate matter in the sample container from the field.
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.

QA/QC Summary
Batch 18-0685

Analysis Comments	Samples analyzed on Sciex 5500 LC-MS/MS. PFOS appears to exhibit a retention time shift because it is a branched analyte and the retention time is defined. In cases where the branched isomers for PFOS have a larger area, the analytical software labels the taller peak with the retention time, however, the entire group of peaks, branched and linear peaks, are quantified and reported. The RT does not actually shift. In cases were native PFAS compounds were reported from dilutions (above calibration in non-diluted extracts), the extracted internal standard (surrogate) used to quantify the native compound was also reported from the dilution. PFHxS and PFOS, when detected, were found as a mixture of both linear and branched isomers. The value reported is a combined total of the isomers detected.

Holding Times	Extraction Date(s)	Analysis Date(s)
	11/20/2018	11/25-26/2018

Procedural Blank (PB)	A PB was prepared with this analytical batch to ensure the sample extraction and analysis methods are free of contamination.
≤ ½ the LOQ Samples >10x PB	No exceedances noted.
	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	Ten (10) recovery and one (1) precision exceedances noted.
	All exceedences are due to levels of native PFAS compounds in the background sample as compared to the fortification levels, samples were fortified toward the higher end of the calibration curve. All analytes pass criteria in the LCS sample.

QA/QC Summary
Batch 18-0685

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	No exceedances noted.
	There are instances of extracted internal standards (surrogates) that would fall outside of the 50%-150% recovery criteria if reported from the non-diluted extract. This is due to the higher levels of native PFOA and PFOS found in the samples interfering with the 13C2-PFOA and 13C4-PFOS internal standards used to quantify the surrogates. In these cases, the surrogates are reported from dilutions, however, the native compounds are reported from the non-diluted extracts as the interferences are with the internal standards and not the surrogates used to quantify the native compounds.

Internal Standard Analytes	Labelled analog compounds were added prior to analysis.
+/- 50% of the area of the L5 calibration point.	No exceedances noted.
	Sample extracts J9413-FS(0) and J9423MSD-FS(0) exhibited high areas for internal standard 13C2-PFOA. Affected surrogates for these samples were reported from dilutions with acceptable internal standard areas. However, the native compounds are reported from the non-diluted extracts as the interferences are with the internal standards and not the surrogates used to quantify the native compounds.

Initial Calibration (ICAL)	The LC-MS/MS was calibrated with multi-level calibration curve for all compounds using linear or quadradic curve fitting.
+/- 30% of true value, $R^2 \geq 0.99$	No exceedances noted.
	No comments.

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.
≤ ½ the LOQ	No exceedances noted.
	No comments.

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Project Client: CH2M
Project Name: CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project Number: 100120725-CTO5655
Preparation Batch: 18-0685
Data Set: DP-18-0377
Test Code: Master_369

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	10	There were ten exceedences for matrix spike/ matrix spike duplicate recovery. In all cases the analytes which had unacceptable recoveries were present in the backround sample in concentrations well above the amount of standard spiked into the matrix spike and matrix spike duplicate. LMG 11/26/18
Matrix Spike / Matrix Spike Duplicate Precision	1	MS/MSD precision was not acceptable for PFHxS. The concentration of the native in the backround sample was well above the amount of standard spiked into the matrix spike and matrix spike duplicate. LMG 11/26/18
Extracted Internal Standard Analytes (Surrogates)	0	None
Instrument Calibration	0	None
Instrument Blank	0	None
Independent Calibration Check	0	None
Continuing Calibration Verification	0	None

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BATTELLE - NORWELL OPERATIONS
MISCELLANEOUS DOCUMENTATION FORM

Project Title:	CTO-5655: Marine Corps Base Camp L	**Data Set Number:**	DP-18-0377
Project Number:	100120725-CTO5655	**Prep Batch Number:**	18-0685
Entered By:	Lauren Griffith	**Entered On:**	11/26/2018
Test Code (Matrix Type):	Master_369(L)		

Samples that were manually integrated are noted on the quant reports with the comment (TRUE).
LMG 11/26/18

KC66 was not used for d3-MeFOSAA and d5-EtFOSAA for the SIS method. There is no impact on the data once these points are removed.
LMG 11/26/18

PFOS appears to exhibit a retention time shift because it is a branched analyte and the retention time is defined In cases where the branched isomers for PFOS have a larger area, the analytical software labels the taller peak with the retention time, however, the entire group of peaks, branched and linear peaks, are quantified and reported. The RT does not actually shift.
LMG 11/26/18

In cases were native PFAS compounds were reported from dilutions (above calibration in non-diluted extracts), the extracted internal standard (surrogate) used to quantify the native compound was also reported from the dilution.
LMG 11/26/18

There are instances of extracted internal standards (surrogates) that would fall outside of the 50%-150% recovery criteria if reported from the non-diluted extract. This is due to the higher levels of native PFOA and PFOS found in the samples interfering with the 13C2-PFOA and 13C4-PFOS internal standards used to quantify the surrogates. In these cases, the surrogates are reported from dilutions, however, the native compounds are reported from the non-diluted extracts as the interferences are with the internal standards and not the surrogates used to quantify the native compounds.
LMG 11/26/18

Samples J9413-FS(0) and J9423MSD-FS(0) exhibited high areas for internal standard 13C2-PFOA. Affected surrogates for these samples were reported from dilutions with acceptable internal standard areas. However, the native compounds are reported from the non-diluted extracts as the interferences are with the internal standards and not the surrogates used to quantify the native compounds.
LMG 11/26/18

Task Leader Approval:

SupervisorApproval:

PM Approval:

Digitally signed by Jonathan Thorn
Date: 2018.11.28 11:14:27 -05'00'

Example Calculation for PFAS

Calculation of final concentration from area:

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

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:	J9421-FS-D(7)
Client Sample ID:	RR-EFF3-18D
Sample Size:	0.285
Units:	L
Dilution Factor:	50.000
PIV (L):	0.001
Target Analyte:	PFOS
MRM Transition:	499.0 / 80.0
Data file:	AC_11252018_5-369.wiff
Result table:	18-0685
Area:	6,762,149.67
IS Name:	13C8-PFOS
IS Area:	26,646.94
IS Amount (ng/L):	239.25
y-intercept:	0.19012
slope:	4.16086

$$\text{Concentration} = \frac{[(6762149.67/26646.94) - 0.19012]}{4.16086} * 239.25 * 0.001 * 50 / 0.285$$

ng/L = 2,558.03

*Final concentration may vary based on rounding.

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Project No.: 100120725-CTO5655
Preparation Batch: 18-0685
Data Set: DP-18-0377

		CS241PB-FS (Procedural Blank)	CS242LCS-FS (Laboratory Control Sample)	J9422MS-FS (RR-EFF3-18D-MS)	J9423MSD-FS (RR-EFF3-18D-SD)	J9412-FS (RR-EFF1-18D)	J9413-FS (RR-EFF1D-18D)	J9418-FS (RR-EFF2-18D)	J9419-FS (RR-FB-111618)
PFHxA	307-24-4	-	L	L	L	L	L	L	-
PFHpA	375-85-9	-	L	L	L	L	L	L	-
PFOA	335-67-1	-	L	L	L	L	L	L	-
PFNA	375-95-1	-	L	L	L	L	L	L	-
PFDA	335-76-2	-	L	L	L	-	-	-	-
PFUnA	2058-94-8	-	L	L	L	-	-	-	-
PFDoA	307-55-1	-	L	L	L	-	-	-	-
PFTrDA	72629-94-8	-	L	L	L	-	-	-	-
PFTeDA	376-06-7	-	L	L	L	-	-	-	-
NMeFOSAA	2355-31-9	-	L	L	L	-	-	-	-
NEtFOSAA	2991-50-6	-	L	L	L	-	-	-	-
PFBS	375-73-5	-	L	L	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	-

"L" :Linear
"Br": branched
"L/Br": Linear/Branched
"-": Not detected

Project Client: CH2M
Project Name: CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project No.: 100120725-CTO5655
Preparation Batcl
Data Set: DP-18-

	J9421-FS (RR-EFF3-18D)
PFHxA	L
PFHpA	L
PFOA	L
PFNA	L
PFDA	-
PFUnA	-
PFDoA	-
PFTrDA	-
PFTeDA	-
NMeFOSAA	-
NEtFOSAA	-
PFBS	L
PFHxS	L/Br
PFOS	L/Br

"L" :Linear
"Br": branched
"L/Br": Linear/Bra
"-": Not detected

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Project No.: 100120725-CTO5655

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Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper
KC70	L5	11/25/18 17:28	13C2-PFOA	79,734.44	39,867.22	119,601.66

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper	Qualifier
KC66	L1	11/25/18 16:45	13C2-PFOA	87,630.66	39,867.22	119,601.66	
KC67	L2	11/25/18 16:55	13C2-PFOA	86,809.03	39,867.22	119,601.66	
KC68	L3	11/25/18 17:06	13C2-PFOA	91,781.89	39,867.22	119,601.66	
KC69	L4	11/25/18 17:17	13C2-PFOA	85,896.20	39,867.22	119,601.66	
KC70	L5	11/25/18 17:28	13C2-PFOA	79,734.44	39,867.22	119,601.66	
KC71	L6	11/25/18 17:39	13C2-PFOA	81,970.71	39,867.22	119,601.66	
KC72	L7	11/25/18 17:50	13C2-PFOA	73,142.68	39,867.22	119,601.66	
KC73 IB	IB	11/25/18 18:01	13C2-PFOA	84,908.73	39,867.22	119,601.66	
KC74 ICC	ICC	11/25/18 18:12	13C2-PFOA	84,697.49	39,867.22	119,601.66	
CS241PB-FS(0)	Procedural Blank	11/25/18 18:44	13C2-PFOA	75,808.04	39,867.22	119,601.66	
J9419-FS(0)	RR-FB-111618	11/25/18 18:55	13C2-PFOA	86,426.32	39,867.22	119,601.66	
CS242LCS-FS(0)	Laboratory Control Sample	11/25/18 19:06	13C2-PFOA	81,905.83	39,867.22	119,601.66	
J9412-FS-D(9)	RR-EFF1-18D	11/25/18 19:17	13C2-PFOA	90,337.36	39,867.22	119,601.66	
J9412-FS-D(7)	RR-EFF1-18D	11/25/18 19:28	13C2-PFOA	100,065.14	39,867.22	119,601.66	
J9412-FS-D(5)	RR-EFF1-18D	11/25/18 19:38	13C2-PFOA	103,256.84	39,867.22	119,601.66	
~~J9412-FS-D(3)~~	~~RR-EFF1-18D~~	~~11/25/18 19:49~~	~~13C2-PFOA~~	~~115,319.45~~	~~39,867.22~~	~~119,601.66~~	1
J9412-FS(0)	RR-EFF1-18D	11/25/18 20:00	13C2-PFOA	117,555.11	39,867.22	119,601.66	
KC69 CCV	CCV	11/25/18 20:22	13C2-PFOA	82,386.51	39,867.22	119,601.66	
J9413-FS-D(9)	RR-EFF1D-18D	11/25/18 20:44	13C2-PFOA	78,750.99	39,867.22	119,601.66	
J9413-FS-D(7)	RR-EFF1D-18D	11/25/18 20:55	13C2-PFOA	91,823.65	39,867.22	119,601.66	
J9413-FS-D(5)	RR-EFF1D-18D	11/25/18 21:05	13C2-PFOA	87,764.29	39,867.22	119,601.66	
~~J9413-FS-D(3)~~	~~RR-EFF1D-18D~~	~~11/25/18 21:16~~	~~13C2-PFOA~~	~~109,898.86~~	~~39,867.22~~	~~119,601.66~~	1
~~J9413-FS(0)~~	~~RR-EFF1D-18D~~	~~11/25/18 21:27~~	~~13C2-PFOA~~	~~127,362.24~~	~~39,867.22~~	~~119,601.66~~	~~N~~ 2
~~J9418-FS-D(7)~~	~~RR-EFF1D-18D~~	~~11/25/18 21:49~~	~~13C2-PFOA~~	~~88,331.21~~	~~39,867.22~~	~~119,601.66~~	1
KC70 CCV	CCV	11/25/18 22:00	13C2-PFOA	82,971.28	39,867.22	119,601.66	
J9418-FS-D(5)	RR-EFF2-18D	11/25/18 22:22	13C2-PFOA	101,283.34	39,867.22	119,601.66	
J9418-FS-D(3)	RR-EFF2-18D	11/25/18 22:32	13C2-PFOA	112,814.65	39,867.22	119,601.66	
J9418-FS(0)	RR-EFF2-18D	11/25/18 22:43	13C2-PFOA	115,137.97	39,867.22	119,601.66	
J9421-FS-D(7)	RR-EFF3-18D	11/25/18 23:05	13C2-PFOA	100,634.04	39,867.22	119,601.66	
~~J9421-FS-D(5)~~	~~RR-EFF3-18D~~	~~11/25/18 23:16~~	~~13C2-PFOA~~	~~156,647.89~~	~~39,867.22~~	~~119,601.66~~	~~N~~
J9421-FS-D(3)	RR-EFF3-18D	11/25/18 23:27	13C2-PFOA	98,104.33	39,867.22	119,601.66	
J9421-FS(0)	RR-EFF3-18D	11/25/18 23:38	13C2-PFOA	116,056.27	39,867.22	119,601.66	
KC69 CCV	CCV	11/25/18 23:59	13C2-PFOA	82,002.69	39,867.22	119,601.66	
J9422MS-FS-D(7)	RR-EFF3-18D-MS	11/26/18 0:21	13C2-PFOA	92,352.40	39,867.22	119,601.66	
J9422MS-FS-D(5)	RR-EFF3-18D-MS	11/26/18 0:32	13C2-PFOA	100,914.43	39,867.22	119,601.66	
J9422MS-FS-D(3)	RR-EFF3-18D-MS	11/26/18 0:43	13C2-PFOA	106,909.63	39,867.22	119,601.66	
J9422MS-FS(0)	RR-EFF3-18D-MS	11/26/18 0:54	13C2-PFOA	119,424.37	39,867.22	119,601.66	
J9423MSD-FS-D(7)	RR-EFF3-18D-SD	11/26/18 1:15	13C2-PFOA	104,895.85	39,867.22	119,601.66	
J9423MSD-FS-D(5)	RR-EFF3-18D-SD	11/26/18 1:26	13C2-PFOA	101,164.48	39,867.22	119,601.66	
J9423MSD-FS-D(3)	RR-EFF3-18D-SD	11/26/18 1:37	13C2-PFOA	98,475.45	39,867.22	119,601.66	
~~J9423MSD-FS(0)~~	~~RR-EFF3-18D-SD~~	~~11/26/18 1:48~~	~~13C2-PFOA~~	~~130,806.77~~	~~39,867.22~~	~~119,601.66~~	~~N~~
KC70 CCV	CCV	11/26/18 2:10	13C2-PFOA	109,553.32	39,867.22	119,601.66	

1 - see sequence for details
2 - see miscellaneous documentation for details

Project Client: CH2M
Project Name: CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project No.: 100120725-CTO5655

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper
KC70	L5	11/25/18 17:28	13C2-PFDA	96,222.91	48,111.46	144,334.37

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper	Qualifier
KC66	L1	11/25/18 16:45	13C2-PFDA	108,551.83	48,111.46	144,334.37	
KC67	L2	11/25/18 16:55	13C2-PFDA	119,285.68	48,111.46	144,334.37	
KC68	L3	11/25/18 17:06	13C2-PFDA	111,999.66	48,111.46	144,334.37	
KC69	L4	11/25/18 17:17	13C2-PFDA	106,104.65	48,111.46	144,334.37	
KC70	L5	11/25/18 17:28	13C2-PFDA	96,222.91	48,111.46	144,334.37	
KC71	L6	11/25/18 17:39	13C2-PFDA	105,716.72	48,111.46	144,334.37	
KC72	L7	11/25/18 17:50	13C2-PFDA	95,740.74	48,111.46	144,334.37	
KC73 IB	IB	11/25/18 18:01	13C2-PFDA	105,817.66	48,111.46	144,334.37	
KC74 ICC	ICC	11/25/18 18:12	13C2-PFDA	102,829.54	48,111.46	144,334.37	
CS241PB-FS(0)	Procedural Blank	11/25/18 18:44	13C2-PFDA	99,285.64	48,111.46	144,334.37	
J9419-FS(0)	RR-FB-111618	11/25/18 18:55	13C2-PFDA	106,892.48	48,111.46	144,334.37	
CS242LCS-FS(0)	Laboratory Control Sample	11/25/18 19:06	13C2-PFDA	101,342.23	48,111.46	144,334.37	
J9412-FS-D(9)	RR-EFF1-18D	11/25/18 19:17	13C2-PFDA	110,815.32	48,111.46	144,334.37	
J9412-FS-D(7)	RR-EFF1-18D	11/25/18 19:28	13C2-PFDA	134,737.03	48,111.46	144,334.37	
J9412-FS-D(5)	RR-EFF1-18D	11/25/18 19:38	13C2-PFDA	111,780.00	48,111.46	144,334.37	
~~J9412-FS-D(3)~~	~~RR-EFF1-18D~~	~~11/25/18 19:49~~	~~13C2-PFDA~~	~~128,864.48~~	~~48,111.46~~	~~144,334.37~~	1
J9412-FS(0)	RR-EFF1-18D	11/25/18 20:00	13C2-PFDA	118,663.18	48,111.46	144,334.37	
KC69 CCV	CCV	11/25/18 20:22	13C2-PFDA	100,407.57	48,111.46	144,334.37	
J9413-FS-D(9)	RR-EFF1D-18D	11/25/18 20:44	13C2-PFDA	92,235.20	48,111.46	144,334.37	
J9413-FS-D(7)	RR-EFF1D-18D	11/25/18 20:55	13C2-PFDA	116,128.68	48,111.46	144,334.37	
J9413-FS-D(5)	RR-EFF1D-18D	11/25/18 21:05	13C2-PFDA	106,481.63	48,111.46	144,334.37	
~~J9413-FS-D(3)~~	~~RR-EFF1D-18D~~	~~11/25/18 21:16~~	~~13C2-PFDA~~	~~132,340.51~~	~~48,111.46~~	~~144,334.37~~	1
J9413-FS(0)	RR-EFF1D-18D	11/25/18 21:27	13C2-PFDA	120,688.88	48,111.46	144,334.37	
~~J9418-FS-D(7)~~	~~RR-EFF1D-18D~~	~~11/25/18 21:49~~	~~13C2-PFDA~~	~~110,360.23~~	~~48,111.46~~	~~144,334.37~~	1
KC70 CCV	CCV	11/25/18 22:00	13C2-PFDA	100,248.82	48,111.46	144,334.37	
J9418-FS-D(5)	RR-EFF2-18D	11/25/18 22:22	13C2-PFDA	117,195.65	48,111.46	144,334.37	
J9418-FS-D(3)	RR-EFF2-18D	11/25/18 22:32	13C2-PFDA	114,406.46	48,111.46	144,334.37	
J9418-FS(0)	RR-EFF2-18D	11/25/18 22:43	13C2-PFDA	114,576.63	48,111.46	144,334.37	
J9421-FS-D(7)	RR-EFF3-18D	11/25/18 23:05	13C2-PFDA	126,902.07	48,111.46	144,334.37	
~~J9421-FS-D(5)~~	~~RR-EFF3-18D~~	~~11/25/18 23:16~~	~~13C2-PFDA~~	~~171,922.86~~	~~48,111.46~~	~~144,334.37~~	~~N~~
J9421-FS-D(3)	RR-EFF3-18D	11/25/18 23:27	13C2-PFDA	105,483.41	48,111.46	144,334.37	
J9421-FS(0)	RR-EFF3-18D	11/25/18 23:38	13C2-PFDA	101,858.91	48,111.46	144,334.37	
KC69 CCV	CCV	11/25/18 23:59	13C2-PFDA	94,445.43	48,111.46	144,334.37	
J9422MS-FS-D(7)	RR-EFF3-18D-MS	11/26/18 0:21	13C2-PFDA	108,305.12	48,111.46	144,334.37	
J9422MS-FS-D(5)	RR-EFF3-18D-MS	11/26/18 0:32	13C2-PFDA	111,135.31	48,111.46	144,334.37	
J9422MS-FS-D(3)	RR-EFF3-18D-MS	11/26/18 0:43	13C2-PFDA	125,887.56	48,111.46	144,334.37	
J9422MS-FS(0)	RR-EFF3-18D-MS	11/26/18 0:54	13C2-PFDA	116,449.46	48,111.46	144,334.37	
J9423MSD-FS-D(7)	RR-EFF3-18D-SD	11/26/18 1:15	13C2-PFDA	123,363.08	48,111.46	144,334.37	
J9423MSD-FS-D(5)	RR-EFF3-18D-SD	11/26/18 1:26	13C2-PFDA	116,085.71	48,111.46	144,334.37	
J9423MSD-FS-D(3)	RR-EFF3-18D-SD	11/26/18 1:37	13C2-PFDA	111,369.43	48,111.46	144,334.37	
J9423MSD-FS(0)	RR-EFF3-18D-SD	11/26/18 1:48	13C2-PFDA	131,279.30	48,111.46	144,334.37	
KC70 CCV	CCV	11/26/18 2:10	13C2-PFDA	122,406.92	48,111.46	144,334.37	

1 - see sequence for details
2 - see miscellaneous documentation for details

Project Client: CH2M
Project Name: CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project No.: 100120725-CTO5655

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper
KC70	L5	11/25/18 17:28	13C4-PFOS	30,611.60	15,305.80	45,917.40

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper	Qualifier
KC66	L1	11/25/18 16:45	13C4-PFOS	36,591.63	15,305.80	45,917.40	
KC67	L2	11/25/18 16:55	13C4-PFOS	36,722.21	15,305.80	45,917.40	
KC68	L3	11/25/18 17:06	13C4-PFOS	34,673.40	15,305.80	45,917.40	
KC69	L4	11/25/18 17:17	13C4-PFOS	30,366.93	15,305.80	45,917.40	
KC70	L5	11/25/18 17:28	13C4-PFOS	30,611.60	15,305.80	45,917.40	
KC71	L6	11/25/18 17:39	13C4-PFOS	29,987.88	15,305.80	45,917.40	
KC72	L7	11/25/18 17:50	13C4-PFOS	29,918.71	15,305.80	45,917.40	
KC73 IB	IB	11/25/18 18:01	13C4-PFOS	34,961.01	15,305.80	45,917.40	
KC74 ICC	ICC	11/25/18 18:12	13C4-PFOS	31,461.59	15,305.80	45,917.40	
CS241PB-FS(0)	Procedural Blank	11/25/18 18:44	13C4-PFOS	26,867.99	15,305.80	45,917.40	
J9419-FS(0)	RR-FB-111618	11/25/18 18:55	13C4-PFOS	33,742.45	15,305.80	45,917.40	
CS242LCS-FS(0)	Laboratory Control Sample	11/25/18 19:06	13C4-PFOS	31,219.19	15,305.80	45,917.40	
J9412-FS-D(9)	RR-EFF1-18D	11/25/18 19:17	13C4-PFOS	28,488.89	15,305.80	45,917.40	
J9412-FS-D(7)	RR-EFF1-18D	11/25/18 19:28	13C4-PFOS	36,107.06	15,305.80	45,917.40	
J9412-FS-D(5)	RR-EFF1-18D	11/25/18 19:38	13C4-PFOS	24,097.67	15,305.80	45,917.40	
~~J9412-FS-D(3)~~	~~RR-EFF1-18D~~	~~11/25/18 19:49~~	~~13C4-PFOS~~	~~27,927.84~~	~~15,305.80~~	~~45,917.40~~	1
J9412-FS(0)	RR-EFF1-18D	11/25/18 20:00	13C4-PFOS	16,589.18	15,305.80	45,917.40	
KC69 CCV	CCV	11/25/18 20:22	13C4-PFOS	33,341.26	15,305.80	45,917.40	
J9413-FS-D(9)	RR-EFF1D-18D	11/25/18 20:44	13C4-PFOS	27,978.03	15,305.80	45,917.40	
J9413-FS-D(7)	RR-EFF1D-18D	11/25/18 20:55	13C4-PFOS	31,141.27	15,305.80	45,917.40	
J9413-FS-D(5)	RR-EFF1D-18D	11/25/18 21:05	13C4-PFOS	21,404.74	15,305.80	45,917.40	
~~J9413-FS-D(3)~~	~~RR-EFF1D-18D~~	~~11/25/18 21:16~~	~~13C4-PFOS~~	~~22,454.44~~	~~15,305.80~~	~~45,917.40~~	1
J9413-FS(0)	RR-EFF1D-18D	11/25/18 21:27	13C4-PFOS	16,531.28	15,305.80	45,917.40	
~~J9418-FS-D(7)~~	~~RR-EFF1D-18D~~	~~11/25/18 21:49~~	~~13C4-PFOS~~	~~30,587.25~~	~~15,305.80~~	~~45,917.40~~	1
KC70 CCV	CCV	11/25/18 22:00	13C4-PFOS	30,323.11	15,305.80	45,917.40	
J9418-FS-D(5)	RR-EFF2-18D	11/25/18 22:22	13C4-PFOS	31,050.51	15,305.80	45,917.40	
J9418-FS-D(3)	RR-EFF2-18D	11/25/18 22:32	13C4-PFOS	29,655.40	15,305.80	45,917.40	
J9418-FS(0)	RR-EFF2-18D	11/25/18 22:43	13C4-PFOS	22,127.75	15,305.80	45,917.40	
J9421-FS-D(7)	RR-EFF3-18D	11/25/18 23:05	13C4-PFOS	37,086.68	15,305.80	45,917.40	
~~J9421-FS-D(5)~~	~~RR-EFF3-18D~~	~~11/25/18 23:16~~	~~13C4-PFOS~~	~~49,810.88~~	~~15,305.80~~	~~45,917.40~~	~~N~~
J9421-FS-D(3)	RR-EFF3-18D	11/25/18 23:27	13C4-PFOS	27,007.16	15,305.80	45,917.40	
J9421-FS(0)	RR-EFF3-18D	11/25/18 23:38	13C4-PFOS	20,071.85	15,305.80	45,917.40	
KC69 CCV	CCV	11/25/18 23:59	13C4-PFOS	28,201.29	15,305.80	45,917.40	
J9422MS-FS-D(7)	RR-EFF3-18D-MS	11/26/18 0:21	13C4-PFOS	29,602.67	15,305.80	45,917.40	
J9422MS-FS-D(5)	RR-EFF3-18D-MS	11/26/18 0:32	13C4-PFOS	31,115.95	15,305.80	45,917.40	
J9422MS-FS-D(3)	RR-EFF3-18D-MS	11/26/18 0:43	13C4-PFOS	27,372.36	15,305.80	45,917.40	
J9422MS-FS(0)	RR-EFF3-18D-MS	11/26/18 0:54	13C4-PFOS	19,871.85	15,305.80	45,917.40	
J9423MSD-FS-D(7)	RR-EFF3-18D-SD	11/26/18 1:15	13C4-PFOS	36,688.15	15,305.80	45,917.40	
J9423MSD-FS-D(5)	RR-EFF3-18D-SD	11/26/18 1:26	13C4-PFOS	29,835.51	15,305.80	45,917.40	
J9423MSD-FS-D(3)	RR-EFF3-18D-SD	11/26/18 1:37	13C4-PFOS	26,680.59	15,305.80	45,917.40	
J9423MSD-FS(0)	RR-EFF3-18D-SD	11/26/18 1:48	13C4-PFOS	20,550.92	15,305.80	45,917.40	
KC70 CCV	CCV	11/26/18 2:10	13C4-PFOS	37,224.41	15,305.80	45,917.40	

1 - see sequence for details
2 - see miscellaneous documentation for details

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Mass Spectral Acquisition Rate Report

Created with Analyst Reporter
Printed: 26/11/2018 2:12:01 PM

Sample Name	KC72	**Injection Vial**	7
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 5:50:19 PM	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
PFBS_1	298.9 / 80.0	1.57	42	>10
PFBS_2	298.9 / 99.0	1.57	53	>10
PFHxA_1	313.0 / 269.0	1.89	24	>10
PFHxA_2	313.0 / 119.0	1.89	24	>10
PFHpA_1	363.0 / 319.0	2.31	29	>10
PFHpA_2	363.0 / 169.0	2.30	29	>10
PFHxS_1	399.0 / 80.0	2.33	45	>10
PFHxS_2	399.0 / 99.0	2.33	35	>10
PFOA_1	413.0 / 369.0	2.72	35	>10
PFOA_2	413.0 / 169.0	2.72	30	>10
PFNA_1	463.0 / 419.0	3.11	28	>10
PFNA_2	463.0 / 219.0	3.11	28	>10
PFOS_1	499.0 / 80.0	3.11	40	>10
PFOS_2	499.0 / 99.0	3.11	35	>10
PFDA_1	513.0 / 469.0	3.47	29	>10
PFDA_2	513.0 / 219.0	3.47	39	>10
PFUnA_1	563.0 / 519.0	3.80	31	>10
PFUnA_2	563.0 / 269.0	3.80	33	>10
PFDoA_1	613.0 / 569.0	4.09	39	>10
PFDoA_2	613.0 / 319.0	4.09	41	>10
PFTrDA_1	663.0 / 619.0	4.34	61	>10
PFTrDA_2	663.0 / 169.0	4.34	42	>10
PFTeDA_1	713.0 / 669.0	4.56	80	>10
PFTeDA_2	713.0 / 169.0	4.55	56	>10
NMeFOSAA_1	570.0 / 419.0	3.63	24	>10
NMeFOSAA_2	570.0 / 512.0	3.63	34	>10
NEtFOSAA_1	584.0 / 419.0	3.80	43	>10
NEtFOSAA_2	584.0 / 483.0	3.80	15	>10

Mass Spectral Acquisition Rate Report

Created with Analyst Reporter
Printed: 26/11/2018 2:11:37 PM

Sample Name	KC72	**Injection Vial**	7
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 5:50:19 PM	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
13C2-PFDoA	615.0 / 570.0	4.08	25	>10
d3-MeFOSAA	573.0 / 419.0	3.62	22	>10
d5-EtFOSAA	589.0 / 419.0	3.79	18	>10
13C5-PFHxA	318.0 / 273.0	1.88	26	>10
13C4-PFHpA	367.0 / 322.0	2.29	28	>10
13C8-PFOA	421.0 / 376.0	2.71	31	>10
13C9-PFNA	472.0 / 427.0	3.10	26	>10
13C6-PFDA	519.0 / 474.0	3.46	42	>10
13C7-PFUnA	570.0 / 525.0	3.79	28	>10
13C2-PFTeDA	715.0 / 670.0	4.55	45	>10
13C3-PFBS	302.0 / 99.0	1.55	19	>10
13C3-PFHxS	402.0 / 99.0	2.32	25	>10
13C8-PFOS	507.0 / 99.0	3.10	25	>10

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It can be done

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

Analyte	CAS No.	Average (ng/L)	ST DEV	2 Sigma	n
PFBA	375-22-4	12.25	1.95	3.90	14
PFPeA	2706-90-3	10.58	1.50	3.00	10
PFHxA	307-24-4	9.93	1.26	2.52	42
PFHpA	375-85-9	9.45	1.52	3.04	42
PFOA	335-67-1	10.21	1.45	2.90	44
PFNA	375-95-1	9.74	1.18	2.36	42
PFDA	335-76-2	9.91	1.28	2.56	42
PFUnA	2058-94-8	9.87	1.26	2.52	42
PFDoA	307-55-1	10.75	1.25	2.50	42
PFTrDA	72629-94-8	11.18	1.48	2.96	42
PFTeDA	376-06-7	10.71	1.84	3.68	42
NMeFOSAA	2355-31-9	10.37	1.87	3.74	42
NEtFOSAA	2991-50-6	9.66	1.50	3.00	42
PFOSA	754-91-6	9.72	0.93	1.86	5
PFBS	375-73-5	10.07	1.41	2.82	43
PFPeS	2706-91-4	9.59	0.96	1.92	6
PFHxS	355-46-4	9.81	1.45	2.90	42
PFHpS	375-92-8	10.79	1.05	2.10	11
PFOS	1763-23-1	10.04	1.32	2.64	42
PFNS	68259-12-1	9.50	1.02	2.04	5
PFDS	335-77-3	10.11	1.77	3.54	10
4:2FTS	414911-30-1	10.81	1.37	2.74	10
6:2FTS	27619-97-2	12.34	2.80	5.60	10
8:2FTS	39108-34-4	11.96	2.44	4.88	10

BATTELLE DETECTION LIMITS FOR PFAS IN NON-POTABLE WATER

Analytical SOP 5-369
Extraction SOP 5-370

PFAS by LC-MS/MS Compliant with QSM 5.1 Compliant Table B-15

Analyte	CAS No.	MDL (ng/L)	LOD (ng/L)	LOQ (ng/L)
PFBA	375-22-4	0.14	0.5	5.0
PFPeA	2706-90-3	0.31	1.0	5.0
PFHxA	307-24-4	0.19	0.5	5.0
PFHpA	375-85-9	0.16	0.5	5.0
PFOA	335-67-1	0.18	0.5	5.0
PFNA	375-95-1	0.26	1.0	5.0
PFDA	335-76-2	0.16	0.5	5.0
PFUnA	2058-94-8	0.29	1.0	5.0
PFDoA	307-55-1	0.18	0.5	5.0
PFTrDA	72629-94-8	0.15	0.5	5.0
PFTeDA	376-06-7	0.25	1.0	5.0
NMeFOSAA	2355-31-9	0.56	2.0	5.0
NEtFOSAA	2991-50-6	0.49	1.0	5.0
PFOSA	754-91-6	TBD	TBD	TBD
PFBS	375-73-5	0.13	0.5	5.0
PFPeS	BDO-2114	0.67	2.5	5.0
PFHxS	355-46-4	0.11	0.4	5.0
PFHpS	375-99-6	0.20	0.5	5.0
PFOS	1763-23-1	0.19	0.5	5.0
PFNS	98789-57-2	0.46	1.0	5.0
PFDS	2806-15-7	0.17	0.5	5.0
4:2FTS	BDO-2205	0.14	0.5	5.0
6:2FTS	27619-97-2	1.36	2.5	5.0
8:2FTS	39108-34-4	0.22	0.5	5.0

Analytes on NELAP and ELAP QSM 5.1 Scope of accreditation

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ID 596 04/18

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

EPA 537 MOD DoD QSM 5.1 compliant with Table B-15 requirements

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
PFTrDA	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
13C4-PFBA	BDO-2105	SIS[1]	217.0 / 172.0	NA
13C5-PFPeA	BDO-2216	SIS[1]	268.0 / 223.0	NA
13C5-PFHxA	BDO-2217	SIS[1]	318.0 / 273.0	NA

Analyte	CAS No.	Type	Primary Transition	Secondary Transition
13C4-PFHpA	BDO-2218	SIS[1]	367.0 / 322.0	NA
13C8-PFOA	BDO-2219	SIS[1]	421.0 / 376.0	NA
13C9-PFNA	BDO-2221	SIS[1]	472.0 / 427.0	NA
13C6-PFDA	BDO-2222	SIS[1]	519.0 / 474.0	NA
13C7-PFUnA	BDO-2223	SIS[1]	570.0 / 525.0	NA
13C2-PFDoA	BDO-2112	SIS[1]	615.0 / 570.0	NA
13C2-PFTeDA	BDO-2224	SIS[1]	715.0 / 670.0	NA
d3-MeFOSAA	BDO-1838	SIS[1]	573.0 / 419.0	NA
d5-EtFOSAA	BDO-1839	SIS[1]	589.0 / 419.0	NA
13C8-FOSA	BDO-2225	SIS[1]	506.0 / 78.0	NA
13C3-PFBS	BDO-2226	SIS[1]	302.0 / 99.0	NA
13C3-PFHxS	BDO-2227	SIS[1]	402.0 / 99.0	NA
13C8-PFOS	BDO-2228	SIS[1]	507.0 / 99.0	NA
13C2-4:2FTS	BDO-2229	SIS[1]	329.0 / 81.0	NA
13C2-6:2FTS	BDO-2230	SIS[1]	429.0 / 81.0	NA
13C2-8:2FTS	BDO-2220	SIS[1]	529.0 / 81.0	NA
13C3-PFBA	BDO-2231	IS[2]	216.0 / 172.0	NA
13C2-PFOA	BDO-2107	IS[2]	415.0 / 370.0	NA
13C2-PFDA	BDO-2110	IS[2]	515.0 / 470.0	NA
13C4-PFOS	BDO-2121	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]
25	1	1	0.250	0.1
50	1	1	0.250	0.2
100	1	1	0.250	0.4
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
20,000	1	1	0.250	80.0

[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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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

QTRAP 5500
Preventive Maintenance Checklist

Preventive Maintenance Date:	12-June-2018

Request ID:	9749
Company Name:	Battelle Memorial Institute
Instrument ID:	X60666
Instrument Model:	QTRAP 5500
Instrument Serial Number:	AU23051004

☑ **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: Suspected issue with pulse gas manifold. TRAP testing in POSITIVE mode couldn't be finished because of pulse gas issue. The same issue will be taken care in separate service call.

Performed By: Kaustubh Dhayagude **Date:** 12-June-2018

Approved By :_____ **Date:** _____

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

PRE PM PPG PERFORMANCE EVALUATION:

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

CAD Settings	Vacuum Reading (x 10^{-5} Torr)	Acceptance Criteria
☑ CAD 0	0.6	0.4 to 1.1 x10^{-5} Torr
☑ CAD Low	1.3	Read Only
☑ CAD Medium	2.7	Read Only
☑ CAD High	3.7	Read Only
☑ CAD 12	3.7	2.4 to 4.5 x10^{-5} Torr

☑ Check for Front end contamination symptoms. Run Q1 POS PPG using PPG 2e-7for a few minutes and check for any TIC signal degradation or huge sensitivity drop where the sensitivity result can't pass specification

☑ No degradation or Sensitivity drop

☑ Check for Q3 contamination symptoms. Run Q3 POS PPG using PPG 2e-7for a few minutes and check for any TIC signal degradation or huge sensitivity drop where the sensitivity result can't pass specification

☑ No degradation or Sensitivity drop

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

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

Mass	Q1 Intensity		Q1 Width Value	Width Specs
	Value	Spec		
Q1 175.133	4.01 e6	Read Only	0.6998	Read Only
Q1 500.380	2.81 e7	Read Only	0.7038	Read Only
Q1 906.673	4.21 e7	Read Only	0.7071	Read Only

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

Mass	Q3 Intensity		Q3 Width Value	Width Specs
	Value	Spec		
Q3 175.133	5.45 e6	Read Only	0.6873	Read Only
Q3 500.380	2.69 e7	Read Only	0.7591	Read Only
Q3 906.673	4.50 e7	Read Only	0.7843	Read Only

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

☐ Perform MSMS POS in Product Ion scan with 609.3 parent and record daughter 195.1 using Reserpine 0.167 pmol/ul at the scan rate of 10 Da/s for 10 MCA. Calculate transmission efficiency comparing Q1POS 609 intensity. Transmission Efficiency: :__28.87%__ (Read Only)

Mass	MSMS Intensity		MSMS Width Value	Width Specs
	Value	Spec		
Q1 609.3	4.26 e7	Read Only	0.7011	Read Only
MS/MS 195.1	1.23 e7	Read Only	0.7069	Read Only

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

Mass	Q1 Intensity		Q1 Width Value	Width Specs
	Value	Spec		
Q1 933.636	1.42 e7	Read Only	0.7686	Read Only

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

Mass	Q3 Intensity		Q3 Width Value	Width Specs
	Value	Spec		
Q3 933.636	2.24 e7	Read Only	0.7243	Read Only

☑ Perform Product Ion scan using NEG PPG 3e-5M. Record10mca.

Mass	Scan Rate	MCA	MSMS Intensity		MSMS Width Value	Width Specs
			Value	Spec		
MSMS 45	10	10	3.31 e6	Read Only	0.6746	Read Only

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

PREVENTIVE MAINTENANCE CHECKLIST:

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

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

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

☑Pump down overnight if possible. ☐ N/A

☑Perform Maintenance on Turbo V source.

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

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

POST PM PPG PERFORMANCE TESTS:

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

CAD Settings	Vacuum Reading (x 10^{-5} Torr)	Acceptance Criteria
☑ CAD 0	0.7	0.4 to 1.1 x10^{-5} Torr
☑ CAD Low	1.3	Read Only
☑ CAD Medium	2.7	Read Only
☑ CAD High	3.7	Read Only
☑ CAD 12	3.7	2.4 to 4.5 x10^{-5} Torr

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

Mass	Q1 Intensity		Q1 Width	Width Specs
	Value	Spec	Value	
Scan Rate 10 Da/s Record 10 mca				
Q1 175.133	5.04 e6	≥1.2^{e}6	0.6737	0.6 to 0.8
Q1 500.380	1.60 e7	≥9.0^{e}6	0.6961	0.6 to 0.8
Q1 906.673	2.84 e7	≥1.4^{e}7	0.7179	0.6 to 0.8
Scan Rate 1000 Da/s Record 50 mca				
Q1 906.673	1.33 e8	≥6.8^{e}7	0.7465	0.6 to 0.8

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

Mass	Q3 Intensity		Q3 Width	Width Specs
	Value	Spec	Value	
Scan Rate 10 Da/s Record 10 mca				
Q3 175.133	5.02 e6	≥1.2^{e}6	0.6719	0.6 to 0.8
Q3 500.380	1.72 e7	≥9.0^{e}6	0.7443	0.6 to 0.8
Q3 906.673	3.00 e7	≥1.4^{e}7	0.7504	0.6 to 0.8
Scan Rate 1000 Da/s Record 50 mca				
Q3 906.673	1.46 e8	≥6.8^{e}7	0.7202	0.6 to 0.8

☑ Perform "Product of 609.3" POS and record product ion 195.1 using Reserpine 0.167pmol/uL. Record 10 mca. Calculate Transmission efficiency comparing Q1POS 609 intensity.
Transmission Efficiency: 21.10% (≥ 10.0%)

Mass	MSMS Intensity		Width	Width Specs
	Value	Spec	Value	
Q1 609.3	5.78 e7	N/A	0.6888	Read Only
MS/MS 195.1	1.22 e7	N/A	0.7003	Read Only

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

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

Mass	Scan Rate	Mca	Q1 Intensity		Q1 Width Value	Width Specs
			Value	Spec		
Q1 933.636	10	10	1.35 e7	≥1.0^{e}7	0.7486	0.6 to 0.8
Q1 933.636	1000	50	7.52 e7	≥4.0^{e}7	0.7206	0.6 to 0.8

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

Mass	Scan Rate	Mca	Q3 Intensity		Q3 Width Value	Width Specs
			Value	Spec		
Q3 933.636	10	10	2.15 e7	≥8.0^{e}6	0.7492	0.6 to 0.8
Q3 933.636	1000	50	8.33 e7	≥4.0^{e}7	0.7299	0.6 to 0.8

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

Mass	Scan Rate	Mca	MSMS Intensity		MSMS Width Value	Width Specs
			Value	Spec		
MSMS 45	10	10	3.33 e6	Read Only	0.6387	Read Only

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

Mass	Fill Time (ms)	ER Intensity		ER Width Value	Width Specs
		Value	Spec		
ScanRate : 1000 Da/s ; 50 Mca					
ER 118.087	0.05	8.54 e6	≥7.2 ^{e}6	0.1473	<0.35
ER 922.010	0.05	4.96 e7	≥2.8 ^{e}6	0.2434	<0.35
ScanRate : 10000 Da/s ; 50 Mca					
ER 118.087	0.05		≥2.4 ^{e}7		<0.65
ER 922.010	0.05		≥6.8 ^{e}7		<0.65

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

Mass	Fill Time (ms)	ER Intensity		ER Width Value	Width Specs
		Value	Spec		
ScanRate : 1000 Da/s ; 50 Mca					
ER 431.982	0.05	1.81 e8	≥4.4 ^{e}7	0.1862	<0.35
ER 601.978	0.05	1.70 e8	≥5.6 ^{e}7	0.1809	<0.35
ScanRate : 10000 Da/s ; 50 Mca					
ER 431.982	0.05	5.72 e8	≥1.2 ^{e}8	0.5102	<0.65
ER 601.978	0.05	4.52 e8	≥1.6 ^{e}8	0.6187	<0.65

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

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

Mass	Scan Rate (Da/s)	Q0 Trapping OFF		Q0 Trapping ON	
		Intensity	Spec	Intensity	Spec
EPI 397.2	10000	> 3.0 e6	≥2.0 e6	> 7.0 e6	≥6.4 e6

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

Mass	Scan Rate (Da/s)	Fragamentation OFF		Fragmentation ON	
		Intensity	Spec	Intensity	Spec
MS3 397.2	1000	Yes	Contains only 397.2	N/A	N/A
☐ 236 OR ☑ 365	1000	Yes	Fragment Intensity	> 2.0 e6	≥1.6x 10e6

REVIEW:

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

END OF PREVENTIVE MAINTENANCE CHECKLIST

Document history:

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

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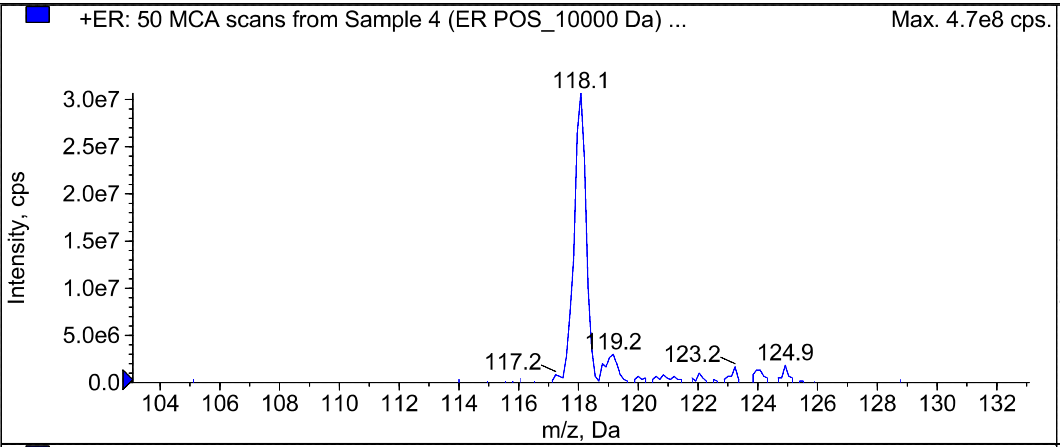

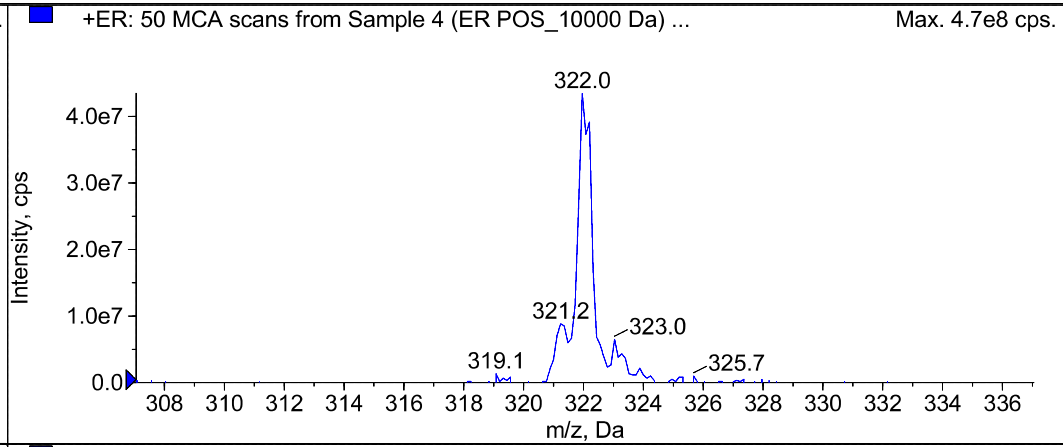

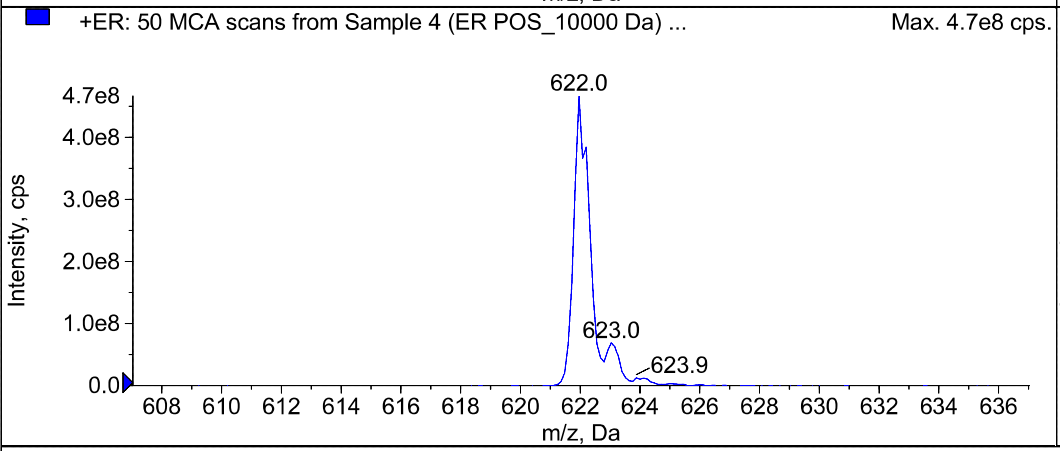

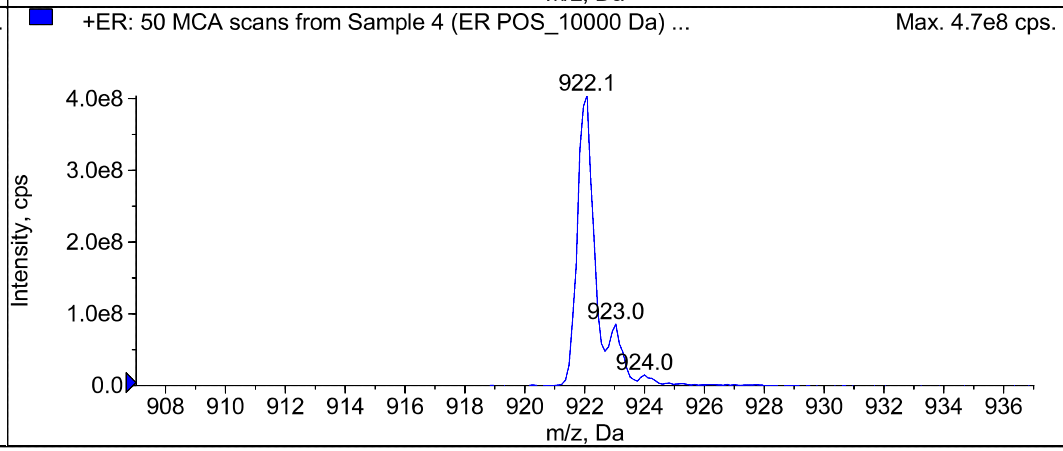

Peak List for " +ER: 50 MCA scans from Sample 4 (ER POS_10000 Da) of TRAP ER with NEW Pulse Manifold.wiff (Turbo Spray)"

	Target Mass (Da)	Found At (Da)	Intensity (cps)	Width (Da)	Mass Shift (Da)
1	118.0870	118.0702	3.0667e7	0.4146	0.0168
2	322.0490	322.0509	4.3500e7	0.4945	-1.9159e-3
3	622.0290	622.0370	4.6717e8	0.5757	-8.0044e-3
4	922.0100	922.0101	4.0400e8	0.5732	-1.4148e-4

Battelle Standard ID	Description	Intermediate Solutions	Battelle Reagent ID (purchased solutions)
KC98	PFAS - DoD Low Level Labelled Extracted Internal Standard (SIS)	KC97	180726-05
KB82	PFAS - DoD Second Source LCS/MS Solution	-	170724-01
KD57	PFAS - DoD Internal Standard Spiking Solution	JY25	180726-04
KC66	PFAS - DoD Calibration L1	KB71	180726-05
KC66	PFAS - DoD Calibration L1	JY23	180705-02
KC66	PFAS - DoD Calibration L1	JY25	180726-04
KC67	PFAS - DoD Calibration L2	JY25	180726-04
KC67	PFAS - DoD Calibration L2	JY23	180705-02
KC67	PFAS - DoD Calibration L2	KB71	180726-05
KC68	PFAS - DoD Calibration L3	KB71	180726-05
KC68	PFAS - DoD Calibration L3	KB70	180705-02
KC68	PFAS - DoD Calibration L3	JY25	180726-04
KC69	PFAS - DoD Calibration L4	JY25	180726-04
KC69	PFAS - DoD Calibration L4	KB70	180705-02
KC69	PFAS - DoD Calibration L4	KB71	180726-05
KC70	PFAS - DoD Calibration L5	KB70	180705-02
KC70	PFAS - DoD Calibration L5	KB71	180726-05
KC70	PFAS - DoD Calibration L5	JY25	180726-04
KC71	PFAS - DoD Calibration L6	JY25	180726-04
KC71	PFAS - DoD Calibration L6	KB71	180726-05
KC71	PFAS - DoD Calibration L6	KB70	180705-02
KC72	PFAS - DoD Calibration L7	KB71	180726-05
KC72	PFAS - DoD Calibration L7	JY25	180726-04
KC72	PFAS - DoD Calibration L7	KB70	180705-02
KC73	PFAS - DoD Instrument Blank	JY25	180726-04
KC73	PFAS - DoD Instrument Blank	KB71	180726-05
KC74	PFAS - DoD ICC	KB71	180726-05
KC74	PFAS - DoD ICC	KB82	170724-01
KC74	PFAS - DoD ICC	JY25	180726-04
KC75	PFAS Branched Solution (~5,000ng/L)	JX28	180618-02
KC75	PFAS Branched Solution (~5,000ng/L)	JX28	180618-03
KC75	PFAS Branched Solution (~5,000ng/L)	JX28	180618-04
KC75	PFAS Branched Solution (~5,000ng/L)	JX28	180618-06
KC75	PFAS Branched Solution (~5,000ng/L)	JX28	180618-07

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **JX28**

Description: PFAS Branched Standard Stock

Assigned Lab ID (from receipt log)	Chemical Name:	Source	Stock (ug/mL)	Expir. Date	Purity (%)	Density (g/mL)	Amount Taken	Conv. Fact.	Final Vol. (mL)	Std. Conc. (ug/mL)
180618-02	Branched NEtFOSAA Standard (50 µg/mL)	Neat	~50.000000	01/17/23	---	---	100 uL	1	10	~0.5000
180618-03	Branched NMeFOSAA Standard (50 µg/mL)	Neat	~50.000000	01/17/23	---	---	100 uL	1	10	~0.5000
180618-04	PFOA - Technical Mix	Neat	~50.000000	02/16/22	---	---	100 uL	1	10	~0.5000
180618-06	Branched PFHxS Standard (50 µg/mL)	Neat	~50.000000	01/04/22	---	---	100 uL	1	10	~0.5000
180618-07	Branched PFOS Standard (50 µg/mL)	Neat	~50.000000	01/12/22	---	---	100 uL	1	10	~0.5000

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 6/18/2018 **Expiration Date:** 6/18/2019

Solution Volume 25 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Balance ID:

Comment:

Solvent:	Lot:
Methanol (HPLC)	179315

Approved By: Thorn, Jonathan **Date:** 7/3/2018 8:10:00 AM

BATTELLE

It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: JX28

Description: PFAS Branched Standard Stock

Stock Id: 180618-02

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
N-ethylperfluoro-octanesulfonamidoacetic acid	100	50.00	1	100.000	1	10	0.50000

Stock Id: 180618-03

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
N-methylperfluoro-1-octanesulfonamidoacetic acid	100	50.00	1	100.000	1	10	0.50000

Stock Id: 180618-04

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
Perfluoro-n-octanoic Acid	100	50.00	1	100.000	1	10	0.50000

Stock Id: 180618-06

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
Perfluoro-1-hexanesulfonate	100	50.00	1	100.000	1	10	0.50000

Stock Id: 180618-07

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
Perfluoro-1-octanesulfonate	100	50.00	1	100.000	1	10	0.50000

Final Concentrations:

Analyte:	Conc (ug/mL):
N-ethylperfluoro-octanesulfonamidoacetic acid	.50000
N-methylperfluoro-1-octanesulfonamidoacetic acid	.50000
Perfluoro-1-hexanesulfonate	.50000
Perfluoro-1-octanesulfonate	.50000
Perfluoro-n-octanoic Acid	.50000

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
180618-02	Pipette	I0793912B
180618-03	Pipette	I0793912B
180618-04	Pipette	I0793912B
180618-06	Pipette	I0793912B
180618-07	Pipette	I0793912B

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 6/18/2018 **Expiration Date:** 6/18/2019

Solution Volume 25 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment:

Approved By: Thorn, Jonathan **Date:** 7/3/2018 8:10:00 AM

BATTELLE

It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: JY23

Description: PFAS - DoD Low ICAL Stock

Assigned Lab ID (from receipt log)	Chemical Name:	Source	Stock (ug/mL)	Expir. Date	Purity (%)	Density (g/mL)	Amount Taken	Conv. Fact.	Final Vol. (mL)	Std. Conc. (ug/mL)
180705-02	PFOA - DOD	Neat	~1.000000	06/19/23	---	---	500 uL	1	100	~0.0050

Solution Prepared By: Schultz, Stephanie	**Date Prepared:** 7/16/2018	**Expiration Date:**	7/16/2019
Solution Volume 40 mL X 4 Vials	**Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107		

Balance ID: _____

Comment: 96/4 Methanol/milli-q water

Approved By: Thorn, Jonathan **Date:** 8/29/2018 10:10:00 AM

BATTELLE

It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: JY23

Description: PFAS - DoD Low ICAL Stock

Stock Id: 180705-02

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	500	1.01	1	100.000	1	100	0.00505
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	500	1.01	1	100.000	1	100	0.00505
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	500	1.00	1	100.000	1	100	0.00500
(Na) Perfluoro-1-decanesulfonate	500	1.01	1	100.000	1	100	0.00505
(NA) Perfluoro-1-heptanesulfonate	500	1.00	1	100.000	1	100	0.00500
(Na) Perfluoro-1-nonanesulfonate	500	1.01	1	100.000	1	100	0.00505
N-ethylperfluoro-octanesulfonamidoacetic acid	500	1.00	1	100.000	1	100	0.00500
N-methylperfluoro-1-octanesulfonamidoacetic acid	500	1.00	1	100.000	1	100	0.00500
Perfluoro-1-butanesulfonate	500	1.01	1	100.000	1	100	0.00505
Perfluoro-1-hexanesulfonate	500	1.01	1	100.000	1	100	0.00505
Perfluoro-1-octanesulfonamide	500	1.00	1	100.000	1	100	0.00500
Perfluoro-1-octanesulfonate	500	1.00	1	100.000	1	100	0.00500
Perfluoro-n-butanoic Acid	500	1.00	1	100.000	1	100	0.00500
Perfluoro-n-decanoic Acid	500	1.00	1	100.000	1	100	0.00500
Perfluoro-n-dodecanoic acid	500	1.00	1	100.000	1	100	0.00500
Perfluoro-n-heptanoic Acid	500	1.00	1	100.000	1	100	0.00500
Perfluoro-n-hexanoic acid	500	1.01	1	100.000	1	100	0.00505
Perfluoro-n-octanoic Acid	500	1.00	1	100.000	1	100	0.00500
Perfluorononanoic Acid	500	1.00	1	100.000	1	100	0.00500
Perfluoro-n-pentanoic acid	500	1.01	1	100.000	1	100	0.00505
Perfluoro-n-tetradecanoic acid	500	1.00	1	100.000	1	100	0.00500
Perfluoro-n-tridecanoic acid	500	1.00	1	100.000	1	100	0.00500
Perfluoro-n-undecanoic acid	500	1.00	1	100.000	1	100	0.00500
Sodium perfluoro-1-pentanesulfonate	500	1.00	1	100.000	1	100	0.00500

Final Concentrations:

Analyte:	Conc (ug/mL):
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	.00505
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	.00505
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	.00500
(Na) Perfluoro-1-decanesulfonate	.00505
(NA) Perfluoro-1-heptanesulfonate	.00500
(Na) Perfluoro-1-nonanesulfonate	.00505
N-ethylperfluoro-octanesulfonamidoacetic acid	.00500
N-methylperfluoro-1-octanesulfonamidoacetic acid	.00500
Perfluoro-1-butanesulfonate	.00505

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 7/16/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 4 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 96/4 Methanol/milli-q water

Approved By: Thorn, Jonathan **Date:** 8/29/2018 10:10:00 AM

BATTELLE

It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: JY23

Description: PFAS - DoD Low ICAL Stock

Perfluoro-1-hexanesulfonate	.00505
Perfluoro-1-octanesulfonamide	.00500
Perfluoro-1-octanesulfonate	.00500
Perfluoro-n-butanoic Acid	.00500
Perfluoro-n-decanoic Acid	.00500
Perfluoro-n-dodecanoic acid	.00500
Perfluoro-n-heptanoic Acid	.00500
Perfluoro-n-hexanoic acid	.00505
Perfluoro-n-octanoic Acid	.00500
Perfluorononanoic Acid	.00500
Perfluoro-n-pentanoic acid	.00505
Perfluoro-n-tetradecanoic acid	.00500
Perfluoro-n-tridecanoic acid	.00500
Perfluoro-n-undecanoic acid	.00500
Sodium perfluoro-1-pentanesulfonate	.00500

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
180705-02	Pipette	B820865811

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 7/16/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 4 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 96/4 Methanol/milli-q water

Approved By: Thorn, Jonathan **Date:** 8/29/2018 10:10:00 AM

BATTELLE

It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: JY25

Description: PFAS - DoD Internal Standard Stock Solution

Assigned Lab ID (from receipt log)	Chemical Name:	Source	Stock (ug/mL)	Expir. Date	Purity (%)	Density (g/mL)	Amount Taken	Conv. Fact.	Final Vol. (mL)	Std. Conc. (ug/mL)
180726-04	Mass-labelled PFAS injection standards	Neat	~2.000000	05/02/22	---	---	625 uL	1	25	~0.0500

Solution Prepared By: Schultz, Stephanie	**Date Prepared:** 7/16/2018	**Expiration Date:**	7/16/2019
Solution Volume 40 mL X 1 Vials	**Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107		

Balance ID:

Comment: 96/4 Methanol/Milli-q water (RP-180803-1)

Approved By: Thorn, Jonathan **Date:** 8/29/2018 10:09:00 AM

BATTELLE

It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: JY25

Description: PFAS - DoD Internal Standard Stock Solution

Stock Id: 180726-04

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	625	2.00	1	100.000	1	25	0.05000
13C2-PFOA	625	2.00	1	100.000	1	25	0.05000
13C3-PFBA	625	2.00	1	100.000	1	25	0.05000
13C4-PFOS	625	1.91	1	100.000	1	25	0.04785

Final Concentrations:

Analyte:	Conc (ug/mL):
13C2-PFDA	.05000
13C2-PFOA	.05000
13C3-PFBA	.05000
13C4-PFOS	.04785

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
180726-04	Pipette	B820865811

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 7/16/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 96/4 Methanol/Milli-q water (RP-180803-1)

Approved By: Thorn, Jonathan **Date:** 8/29/2018 10:09:00 AM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KB70**

Description: PFAS - DoD High ICAL Stock

Assigned Lab ID (from receipt log)	Chemical Name:	Source	Stock (ug/mL)	Expir. Date	Purity (%)	Density (g/mL)	Amount Taken	Conv. Fact.	Final Vol. (mL)	Std. Conc. (ug/mL)
180705-02	PFOA - ICAL Mix	Neat	~1.000000	06/19/23	---	---	1000 uL	1	20	~0.0500

Solution Prepared By: Schultz, Stephanie	**Date Prepared:** 10/1/2018	**Expiration Date:**	10/1/2019
Solution Volume 40 **mL X** 1 **Vials**	**Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107		

Balance ID: _____

Comment: 96/4 Methanol/milli-q water

Approved By: Thorn, Jonathan **Date:** 10/12/2018 8:03:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB70

Description: PFAS - DoD High ICAL Stock

Stock Id: 180705-02

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	1000	1.01	1	100.000	1	20	0.05050
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	1000	1.01	1	100.000	1	20	0.05050
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	1000	1.00	1	100.000	1	20	0.05000
(Na) Perfluoro-1-decanesulfonate	1000	1.01	1	100.000	1	20	0.05050
(NA) Perfluoro-1-heptanesulfonate	1000	1.00	1	100.000	1	20	0.05000
(Na) Perfluoro-1-nonanesulfonate	1000	1.01	1	100.000	1	20	0.05050
N-ethylperfluoro-octanesulfonamidoacetic acid	1000	1.00	1	100.000	1	20	0.05000
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-1-butanesulfonate	1000	1.01	1	100.000	1	20	0.05050
Perfluoro-1-hexanesulfonate	1000	1.01	1	100.000	1	20	0.05050
Perfluoro-1-octanesulfonamide	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-1-octanesulfonate	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-n-butanoic Acid	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-n-decanoic Acid	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-n-dodecanoic acid	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-n-heptanoic Acid	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-n-hexanoic acid	1000	1.01	1	100.000	1	20	0.05050
Perfluoro-n-octanoic Acid	1000	1.00	1	100.000	1	20	0.05000
Perfluorononanoic Acid	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-n-pentanoic acid	1000	1.01	1	100.000	1	20	0.05050
Perfluoro-n-tetradecanoic acid	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-n-tridecanoic acid	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-n-undecanoic acid	1000	1.00	1	100.000	1	20	0.05000
Sodium perfluoro-1-pentanesulfonate	1000	1.00	1	100.000	1	20	0.05000

Final Concentrations:

Analyte:	Conc (ug/mL):
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	.05050
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	.05050
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	.05000
(Na) Perfluoro-1-decanesulfonate	.05050
(NA) Perfluoro-1-heptanesulfonate	.05000
(Na) Perfluoro-1-nonanesulfonate	.05050
N-ethylperfluoro-octanesulfonamidoacetic acid	.05000
N-methylperfluoro-1-octanesulfonamidoacetic acid	.05000
Perfluoro-1-butanesulfonate	.05050

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 10/1/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 96/4 Methanol/milli-q water

Approved By: Thorn, Jonathan **Date:** 10/12/2018 8:03:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB70**

Description: PFAS - DoD High ICAL Stock

Perfluoro-1-hexanesulfonate	.05050
Perfluoro-1-octanesulfonamide	.05000
Perfluoro-1-octanesulfonate	.05000
Perfluoro-n-butanoic Acid	.05000
Perfluoro-n-decanoic Acid	.05000
Perfluoro-n-dodecanoic acid	.05000
Perfluoro-n-heptanoic Acid	.05000
Perfluoro-n-hexanoic acid	.05050
Perfluoro-n-octanoic Acid	.05000
Perfluorononanoic Acid	.05000
Perfluoro-n-pentanoic acid	.05050
Perfluoro-n-tetradecanoic acid	.05000
Perfluoro-n-tridecanoic acid	.05000
Perfluoro-n-undecanoic acid	.05000
Sodium perfluoro-1-pentanesulfonate	.05000

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
180705-02	Pipette	B820865811

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 10/1/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 96/4 Methanol/milli-q water

Approved By: Thorn, Jonathan **Date:** 10/12/2018 8:03:00 AM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KB71**

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

Assigned Lab ID (from receipt log)	Chemical Name:	Source	Stock (ug/mL)	Expir. Date	Purity (%)	Density (g/mL)	Amount Taken	Conv. Fact.	Final Vol. (mL)	Std. Conc. (ug/mL)
180726-05	Mass-labelled PFAS Extraction Standard Solution	Neat	~1.000000	02/07/23	---	---	1000 uL	1	20	~0.0500

Solution Prepared By Schultz, Stephanie	**Date Prepared:** 10/1/2018	**Expiration Date**	10/1/2019
Solution Volume 40 **mL X** 1 **Vials**	**Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107		

Balance ID: _____

Comment: 96/4 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/4/2018 2:44:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB71**

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

Stock Id: **180726-05**

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	0.94	1	100.000	1	20	0.04675
13C2-6:2FTS	1000	0.95	1	100.000	1	20	0.04745
13C2-8:2FTS	1000	0.96	1	100.000	1	20	0.04790
13C2-PFDoA	1000	1.00	1	100.000	1	20	0.05000
13C2-PFTeDA	1000	1.00	1	100.000	1	20	0.05000
13C3-PFBS	1000	0.93	1	100.000	1	20	0.04645
13C3-PFHxS	1000	0.95	1	100.000	1	20	0.04730
13C4-PFBA	1000	1.00	1	100.000	1	20	0.05000
13C4-PFHpA	1000	1.00	1	100.000	1	20	0.05000
13C5-PFHxA	1000	1.00	1	100.000	1	20	0.05000
13C5-PFPeA	1000	1.00	1	100.000	1	20	0.05000
13C6-PFDA	1000	1.00	1	100.000	1	20	0.05000
13C7-PFUnA	1000	1.00	1	100.000	1	20	0.05000
13C8-FOSA	1000	1.00	1	100.000	1	20	0.05000
13C8-PFOA	1000	1.00	1	100.000	1	20	0.05000
13C8-PFOS	1000	0.96	1	100.000	1	20	0.04785
13C9-PFNA	1000	1.00	1	100.000	1	20	0.05000
d3-MeFOSAA	1000	1.00	1	100.000	1	20	0.05000
d5-EtFOSAA	1000	1.00	1	100.000	1	20	0.05000

Final Concentrations:

Analyte:	Conc (ug/mL):
13C2-4:2FTS	.04675
13C2-6:2FTS	.04745
13C2-8:2FTS	.04790
13C2-PFDoA	.05000
13C2-PFTeDA	.05000
13C3-PFBS	.04645
13C3-PFHxS	.04730
13C4-PFBA	.05000
13C4-PFHpA	.05000
13C5-PFHxA	.05000
13C5-PFPeA	.05000
13C6-PFDA	.05000
13C7-PFUnA	.05000
13C8-FOSA	.05000

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 10/1/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 96/4 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/4/2018 2:44:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB71**

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

13C8-PFOA	.05000
13C8-PFOS	.04785
13C9-PFNA	.05000
d3-MeFOSAA	.05000
d5-EtFOSAA	.05000

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
180726-05	Pipette	B820865811

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 10/1/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 96/4 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/4/2018 2:44:00 PM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KB82**

Description: PFAS - DoD Second Source LCS/MS Solution

Assigned Lab ID (from receipt log)	Chemical Name:	Source	Stock (ug/mL)	Expir. Date	Purity (%)	Density (g/mL)	Amount Taken	Conv. Fact.	Final Vol. (mL)	Std. Conc. (ug/mL)
170724-01	PFOA - 2nd Source	Neat	~1.000000	03/22/22	---	---	1000 uL	1	20	~0.0500

Solution Prepared By: Schultz, Stephanie	**Date Prepared:** 10/1/2018	**Expiration Date:**	10/1/2019
Solution Volume 40 **mL X** 1 **Vials**	**Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107		

Balance ID: _____

Comment: 80/20 Methanol/Milli-q water

Approved By: Thorn, Jonathan **Date:** 10/12/2018 8:05:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB82**

Description: PFAS - DoD Second Source LCS/MS Solution

Stock Id: **170724-01**

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	1000	1.01	1	100.000	1	20	0.05050
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	1000	1.00	1	100.000	1	20	0.05000
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	1000	1.00	1	100.000	1	20	0.05000
(Na) Perfluoro-1-decanesulfonate	1000	1.01	1	100.000	1	20	0.05050
(NA) Perfluoro-1-heptanesulfonate	1000	1.00	1	100.000	1	20	0.05000
(Na) Perfluoro-1-nonanesulfonate	1000	1.01	1	100.000	1	20	0.05050
N-ethylperfluoro-octanesulfonamidoacetic acid	1000	1.00	1	100.000	1	20	0.05000
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-1-butanesulfonate	1000	1.01	1	100.000	1	20	0.05050
Perfluoro-1-hexanesulfonate	1000	1.01	1	100.000	1	20	0.05050
Perfluoro-1-octanesulfonamide	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-1-octanesulfonate	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-n-butanoic Acid	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-n-decanoic Acid	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-n-dodecanoic acid	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-n-heptanoic Acid	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-n-hexanoic acid	1000	1.01	1	100.000	1	20	0.05050
Perfluoro-n-octanoic Acid	1000	1.00	1	100.000	1	20	0.05000
Perfluorononanoic Acid	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-n-pentanoic acid	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-n-tetradecanoic acid	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-n-tridecanoic acid	1000	1.00	1	100.000	1	20	0.05000
Perfluoro-n-undecanoic acid	1000	1.00	1	100.000	1	20	0.05000
Sodium perfluoro-1-pentanesulfonate	1000	1.00	1	100.000	1	20	0.05000

Final Concentrations:

Analyte:	Conc (ug/mL):
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	.05050
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	.05000
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	.05000
(Na) Perfluoro-1-decanesulfonate	.05050
(NA) Perfluoro-1-heptanesulfonate	.05000
(Na) Perfluoro-1-nonanesulfonate	.05050
N-ethylperfluoro-octanesulfonamidoacetic acid	.05000
N-methylperfluoro-1-octanesulfonamidoacetic acid	.05000
Perfluoro-1-butanesulfonate	.05050

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 10/1/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 Methanol/Milli-q water

Approved By: Thorn, Jonathan **Date:** 10/12/2018 8:05:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB82**

Description: PFAS - DoD Second Source LCS/MS Solution

Perfluoro-1-hexanesulfonate	.05050
Perfluoro-1-octanesulfonamide	.05000
Perfluoro-1-octanesulfonate	.05000
Perfluoro-n-butanoic Acid	.05000
Perfluoro-n-decanoic Acid	.05000
Perfluoro-n-dodecanoic acid	.05000
Perfluoro-n-heptanoic Acid	.05000
Perfluoro-n-hexanoic acid	.05050
Perfluoro-n-octanoic Acid	.05000
Perfluorononanoic Acid	.05000
Perfluoro-n-pentanoic acid	.05000
Perfluoro-n-tetradecanoic acid	.05000
Perfluoro-n-tridecanoic acid	.05000
Perfluoro-n-undecanoic acid	.05000
Sodium perfluoro-1-pentanesulfonate	.05000

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
170724-01	Pipette	B820865811

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 10/1/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 Methanol/Milli-q water

Approved By: Thorn, Jonathan **Date:** 10/12/2018 8:05:00 AM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KC66**

Description: PFAS - DoD Calibration L1

Assigned Lab ID (from receipt log)	Chemical Name:	Source	Stock (ug/mL)	Expir. Date	Purity (%)	Density (g/mL)	Amount Taken	Conv. Fact.	Final Vol. (mL)	Std. Conc. (ug/mL)
JY23	PFAS - DoD Low ICAL Stock	Solution	~0	07/16/19	---	---	200 uL	1	10	~0.0000
JY25	PFAS - DoD Internal Standard Stock Solution	Solution	~0	07/16/19	---	---	50 uL	1	10	~0.0000
KB71	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	10/01/19	---	---	50 uL	1	10	~0.0000

Solution Prepared By: Schultz, Stephanie	**Date Prepared:**	10/31/2018	**Expiration Date:** 7/16/2019
Solution Volume 40 **mL X** 1 **Vials**	**Refrigerator/Freezer No:**	LC Laboratory: Refrigerator - R0107	

Balance ID:

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:11:00 PM

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It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KC66

Description: PFAS - DoD Calibration L1

Stock Id: JY23

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	200	0.01	---	---	1	10	0.00010
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	200	0.01	---	---	1	10	0.00010
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	200	0.01	---	---	1	10	0.00010
(Na) Perfluoro-1-decanesulfonate	200	0.01	---	---	1	10	0.00010
(NA) Perfluoro-1-heptanesulfonate	200	0.01	---	---	1	10	0.00010
(Na) Perfluoro-1-nonanesulfonate	200	0.01	---	---	1	10	0.00010
N-ethylperfluoro-octanesulfonamidoacetic acid	200	0.01	---	---	1	10	0.00010
N-methylperfluoro-1-octanesulfonamidoacetic acid	200	0.01	---	---	1	10	0.00010
Perfluoro-1-butanesulfonate	200	0.01	---	---	1	10	0.00010
Perfluoro-1-hexanesulfonate	200	0.01	---	---	1	10	0.00010
Perfluoro-1-octanesulfonamide	200	0.01	---	---	1	10	0.00010
Perfluoro-1-octanesulfonate	200	0.01	---	---	1	10	0.00010
Perfluoro-n-butanoic Acid	200	0.01	---	---	1	10	0.00010
Perfluoro-n-decanoic Acid	200	0.01	---	---	1	10	0.00010
Perfluoro-n-dodecanoic acid	200	0.01	---	---	1	10	0.00010
Perfluoro-n-heptanoic Acid	200	0.01	---	---	1	10	0.00010
Perfluoro-n-hexanoic acid	200	0.01	---	---	1	10	0.00010
Perfluoro-n-octanoic Acid	200	0.01	---	---	1	10	0.00010
Perfluorononanoic Acid	200	0.01	---	---	1	10	0.00010
Perfluoro-n-pentanoic acid	200	0.01	---	---	1	10	0.00010
Perfluoro-n-tetradecanoic acid	200	0.01	---	---	1	10	0.00010
Perfluoro-n-tridecanoic acid	200	0.01	---	---	1	10	0.00010
Perfluoro-n-undecanoic acid	200	0.01	---	---	1	10	0.00010
Sodium perfluoro-1-pentanesulfonate	200	0.01	---	---	1	10	0.00010

Stock Id: JY25

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	50	0.05	---	---	1	10	0.00025
13C2-PFOA	50	0.05	---	---	1	10	0.00025
13C3-PFBA	50	0.05	---	---	1	10	0.00025
13C4-PFOS	50	0.05	---	---	1	10	0.00024

Stock Id: KB71

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	50	0.05	---	---	1	10	0.00023

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:11:00 PM

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Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC66**

Description: PFAS - DoD Calibration L1

13C2-6:2FTS	50	0.05	---	---	1	10	0.00024
13C2-8:2FTS	50	0.05	---	---	1	10	0.00024
13C2-PFDoA	50	0.05	---	---	1	10	0.00025
13C2-PFTeDA	50	0.05	---	---	1	10	0.00025
13C3-PFBS	50	0.05	---	---	1	10	0.00023
13C3-PFHxS	50	0.05	---	---	1	10	0.00024
13C4-PFBA	50	0.05	---	---	1	10	0.00025
13C4-PFHpA	50	0.05	---	---	1	10	0.00025
13C5-PFHxA	50	0.05	---	---	1	10	0.00025
13C5-PFPeA	50	0.05	---	---	1	10	0.00025
13C6-PFDA	50	0.05	---	---	1	10	0.00025
13C7-PFUnA	50	0.05	---	---	1	10	0.00025
13C8-FOSA	50	0.05	---	---	1	10	0.00025
13C8-PFOA	50	0.05	---	---	1	10	0.00025
13C8-PFOS	50	0.05	---	---	1	10	0.00024
13C9-PFNA	50	0.05	---	---	1	10	0.00025
d3-MeFOSAA	50	0.05	---	---	1	10	0.00025
d5-EtFOSAA	50	0.05	---	---	1	10	0.00025

Final Concentrations:

Analyte:	Conc (ug/mL):
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	.00010
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	.00010
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	.00010
(Na) Perfluoro-1-decanesulfonate	.00010
(NA) Perfluoro-1-heptanesulfonate	.00010
(Na) Perfluoro-1-nonanesulfonate	.00010
13C2-4:2FTS	.00023
13C2-6:2FTS	.00024
13C2-8:2FTS	.00024
13C2-PFDA	.00025
13C2-PFDoA	.00025
13C2-PFOA	.00025
13C2-PFTeDA	.00025
13C3-PFBA	.00025
13C3-PFBS	.00023
13C3-PFHxS	.00024
13C4-PFBA	.00025
13C4-PFHpA	.00025

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:11:00 PM

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Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC66**

Description: PFAS - DoD Calibration L1

13C4-PFOS	.00024
13C5-PFHxA	.00025
13C5-PFPeA	.00025
13C6-PFDA	.00025
13C7-PFUnA	.00025
13C8-FOSA	.00025
13C8-PFOA	.00025
13C8-PFOS	.00024
13C9-PFNA	.00025
d3-MeFOSAA	.00025
d5-EtFOSAA	.00025
N-ethylperfluoro-octanesulfonamidoacetic acid	.00010
N-methylperfluoro-1-octanesulfonamidoacetic acid	.00010
Perfluoro-1-butanesulfonate	.00010
Perfluoro-1-hexanesulfonate	.00010
Perfluoro-1-octanesulfonamide	.00010
Perfluoro-1-octanesulfonate	.00010
Perfluoro-n-butanoic Acid	.00010
Perfluoro-n-decanoic Acid	.00010
Perfluoro-n-dodecanoic acid	.00010
Perfluoro-n-heptanoic Acid	.00010
Perfluoro-n-hexanoic acid	.00010
Perfluoro-n-octanoic Acid	.00010
Perfluorononanoic Acid	.00010
Perfluoro-n-pentanoic acid	.00010
Perfluoro-n-tetradecanoic acid	.00010
Perfluoro-n-tridecanoic acid	.00010
Perfluoro-n-undecanoic acid	.00010
Sodium perfluoro-1-pentanesulfonate	.00010

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
JY23	Pipette	B814657482
JY25	Pipette	B814659662
KB71	Pipette	B814659662

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:11:00 PM

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It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KC67**

Description: PFAS - DoD Calibration L2

Assigned Lab ID (from receipt log)	Chemical Name:	Source	Stock (ug/mL)	Expir. Date	Purity (%)	Density (g/mL)	Amount Taken	Conv. Fact.	Final Vol. (mL)	Std. Conc. (ug/mL)
JY23	PFAS - DoD Low ICAL Stock	Solution	~0	07/16/19	---	---	500 uL	1	10	~0.0000
JY25	PFAS - DoD Internal Standard Stock Solution	Solution	~0	07/16/19	---	---	50 uL	1	10	~0.0000
KB71	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	10/01/19	---	---	50 uL	1	10	~0.0000

Solution Prepared By: Schultz, Stephanie	**Date Prepared:**	10/31/2018	**Expiration Date:** 7/16/2019
Solution Volume 40 **mL X** 1 **Vials**	**Refrigerator/Freezer No:**	LC Laboratory: Refrigerator - R0107	

Balance ID: _____

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:14:00 PM

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It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KC67

Description: PFAS - DoD Calibration L2

Stock Id: JY23

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	500	0.01	---	---	1	10	0.00025
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	500	0.01	---	---	1	10	0.00025
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	500	0.01	---	---	1	10	0.00025
(Na) Perfluoro-1-decanesulfonate	500	0.01	---	---	1	10	0.00025
(NA) Perfluoro-1-heptanesulfonate	500	0.01	---	---	1	10	0.00025
(Na) Perfluoro-1-nonanesulfonate	500	0.01	---	---	1	10	0.00025
N-ethylperfluoro-octanesulfonamidoacetic acid	500	0.01	---	---	1	10	0.00025
N-methylperfluoro-1-octanesulfonamidoacetic acid	500	0.01	---	---	1	10	0.00025
Perfluoro-1-butanesulfonate	500	0.01	---	---	1	10	0.00025
Perfluoro-1-hexanesulfonate	500	0.01	---	---	1	10	0.00025
Perfluoro-1-octanesulfonamide	500	0.01	---	---	1	10	0.00025
Perfluoro-1-octanesulfonate	500	0.01	---	---	1	10	0.00025
Perfluoro-n-butanoic Acid	500	0.01	---	---	1	10	0.00025
Perfluoro-n-decanoic Acid	500	0.01	---	---	1	10	0.00025
Perfluoro-n-dodecanoic acid	500	0.01	---	---	1	10	0.00025
Perfluoro-n-heptanoic Acid	500	0.01	---	---	1	10	0.00025
Perfluoro-n-hexanoic acid	500	0.01	---	---	1	10	0.00025
Perfluoro-n-octanoic Acid	500	0.01	---	---	1	10	0.00025
Perfluorononanoic Acid	500	0.01	---	---	1	10	0.00025
Perfluoro-n-pentanoic acid	500	0.01	---	---	1	10	0.00025
Perfluoro-n-tetradecanoic acid	500	0.01	---	---	1	10	0.00025
Perfluoro-n-tridecanoic acid	500	0.01	---	---	1	10	0.00025
Perfluoro-n-undecanoic acid	500	0.01	---	---	1	10	0.00025
Sodium perfluoro-1-pentanesulfonate	500	0.01	---	---	1	10	0.00025

Stock Id: JY25

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	50	0.05	---	---	1	10	0.00025
13C2-PFOA	50	0.05	---	---	1	10	0.00025
13C3-PFBA	50	0.05	---	---	1	10	0.00025
13C4-PFOS	50	0.05	---	---	1	10	0.00024

Stock Id: KB71

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	50	0.05	---	---	1	10	0.00023

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:14:00 PM

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Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC67**

Description: PFAS - DoD Calibration L2

13C2-6:2FTS	50	0.05	---	---	1	10	0.00024
13C2-8:2FTS	50	0.05	---	---	1	10	0.00024
13C2-PFDoA	50	0.05	---	---	1	10	0.00025
13C2-PFTeDA	50	0.05	---	---	1	10	0.00025
13C3-PFBS	50	0.05	---	---	1	10	0.00023
13C3-PFHxS	50	0.05	---	---	1	10	0.00024
13C4-PFBA	50	0.05	---	---	1	10	0.00025
13C4-PFHpA	50	0.05	---	---	1	10	0.00025
13C5-PFHxA	50	0.05	---	---	1	10	0.00025
13C5-PFPeA	50	0.05	---	---	1	10	0.00025
13C6-PFDA	50	0.05	---	---	1	10	0.00025
13C7-PFUnA	50	0.05	---	---	1	10	0.00025
13C8-FOSA	50	0.05	---	---	1	10	0.00025
13C8-PFOA	50	0.05	---	---	1	10	0.00025
13C8-PFOS	50	0.05	---	---	1	10	0.00024
13C9-PFNA	50	0.05	---	---	1	10	0.00025
d3-MeFOSAA	50	0.05	---	---	1	10	0.00025
d5-EtFOSAA	50	0.05	---	---	1	10	0.00025

Final Concentrations:

Analyte:	Conc (ug/mL):
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	.00025
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	.00025
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	.00025
(Na) Perfluoro-1-decanesulfonate	.00025
(NA) Perfluoro-1-heptanesulfonate	.00025
(Na) Perfluoro-1-nonanesulfonate	.00025
13C2-4:2FTS	.00023
13C2-6:2FTS	.00024
13C2-8:2FTS	.00024
13C2-PFDA	.00025
13C2-PFDoA	.00025
13C2-PFOA	.00025
13C2-PFTeDA	.00025
13C3-PFBA	.00025
13C3-PFBS	.00023
13C3-PFHxS	.00024
13C4-PFBA	.00025
13C4-PFHpA	.00025

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:14:00 PM

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It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC67**

Description: PFAS - DoD Calibration L2

13C4-PFOS	.00024
13C5-PFHxA	.00025
13C5-PFPeA	.00025
13C6-PFDA	.00025
13C7-PFUnA	.00025
13C8-FOSA	.00025
13C8-PFOA	.00025
13C8-PFOS	.00024
13C9-PFNA	.00025
d3-MeFOSAA	.00025
d5-EtFOSAA	.00025
N-ethylperfluoro-octanesulfonamidoacetic acid	.00025
N-methylperfluoro-1-octanesulfonamidoacetic acid	.00025
Perfluoro-1-butanesulfonate	.00025
Perfluoro-1-hexanesulfonate	.00025
Perfluoro-1-octanesulfonamide	.00025
Perfluoro-1-octanesulfonate	.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
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
Sodium perfluoro-1-pentanesulfonate	.00025

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
JY23	Pipette	B820865811
JY25	Pipette	B814659662
KB71	Pipette	B814659662

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:14:00 PM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KC68**

Description: PFAS - DoD Calibration L3

Assigned Lab ID (from receipt log)	Chemical Name:	Source	Stock (ug/mL)	Expir. Date	Purity (%)	Density (g/mL)	Amount Taken	Conv. Fact.	Final Vol. (mL)	Std. Conc. (ug/mL)
KB70	PFAS - DoD High ICAL Stock	Solution	~0	10/01/19	---	---	100 uL	1	10	~0.0000
JY25	PFAS - DoD Internal Standard Stock Solution	Solution	~0	07/16/19	---	---	50 uL	1	10	~0.0000
KB71	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	10/01/19	---	---	50 uL	1	10	~0.0000

Solution Prepared By: Schultz, Stephanie	**Date Prepared:**	10/31/2018	**Expiration Date:** 7/16/2019
Solution Volume 40 **mL X** 1 **Vials**	**Refrigerator/Freezer No:**	LC Laboratory: Refrigerator - R0107	

Balance ID:

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:15:00 PM

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It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC68**

Description: PFAS - DoD Calibration L3

Stock Id: JY25

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	50	0.05	---	---	1	10	0.00025
13C2-PFOA	50	0.05	---	---	1	10	0.00025
13C3-PFBA	50	0.05	---	---	1	10	0.00025
13C4-PFOS	50	0.05	---	---	1	10	0.00024

Stock Id: KB70

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	100	0.05	---	---	1	10	0.00051
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	100	0.05	---	---	1	10	0.00051
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	100	0.05	---	---	1	10	0.00050
(Na) Perfluoro-1-decanesulfonate	100	0.05	---	---	1	10	0.00051
(NA) Perfluoro-1-heptanesulfonate	100	0.05	---	---	1	10	0.00050
(Na) Perfluoro-1-nonanesulfonate	100	0.05	---	---	1	10	0.00051
N-ethylperfluoro-octanesulfonamidoacetic acid	100	0.05	---	---	1	10	0.00050
N-methylperfluoro-1-octanesulfonamidoacetic acid	100	0.05	---	---	1	10	0.00050
Perfluoro-1-butanesulfonate	100	0.05	---	---	1	10	0.00051
Perfluoro-1-hexanesulfonate	100	0.05	---	---	1	10	0.00051
Perfluoro-1-octanesulfonamide	100	0.05	---	---	1	10	0.00050
Perfluoro-1-octanesulfonate	100	0.05	---	---	1	10	0.00050
Perfluoro-n-butanoic Acid	100	0.05	---	---	1	10	0.00050
Perfluoro-n-decanoic Acid	100	0.05	---	---	1	10	0.00050
Perfluoro-n-dodecanoic acid	100	0.05	---	---	1	10	0.00050
Perfluoro-n-heptanoic Acid	100	0.05	---	---	1	10	0.00050
Perfluoro-n-hexanoic acid	100	0.05	---	---	1	10	0.00051
Perfluoro-n-octanoic Acid	100	0.05	---	---	1	10	0.00050
Perfluorononanoic Acid	100	0.05	---	---	1	10	0.00050
Perfluoro-n-pentanoic acid	100	0.05	---	---	1	10	0.00051
Perfluoro-n-tetradecanoic acid	100	0.05	---	---	1	10	0.00050
Perfluoro-n-tridecanoic acid	100	0.05	---	---	1	10	0.00050
Perfluoro-n-undecanoic acid	100	0.05	---	---	1	10	0.00050
Sodium perfluoro-1-pentanesulfonate	100	0.05	---	---	1	10	0.00050

Stock Id: KB71

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	50	0.05	---	---	1	10	0.00023

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:15:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC68**

Description: PFAS - DoD Calibration L3

13C2-6:2FTS	50	0.05	---	---	1	10	0.00024
13C2-8:2FTS	50	0.05	---	---	1	10	0.00024
13C2-PFDoA	50	0.05	---	---	1	10	0.00025
13C2-PFTeDA	50	0.05	---	---	1	10	0.00025
13C3-PFBS	50	0.05	---	---	1	10	0.00023
13C3-PFHxS	50	0.05	---	---	1	10	0.00024
13C4-PFBA	50	0.05	---	---	1	10	0.00025
13C4-PFHpA	50	0.05	---	---	1	10	0.00025
13C5-PFHxA	50	0.05	---	---	1	10	0.00025
13C5-PFPeA	50	0.05	---	---	1	10	0.00025
13C6-PFDA	50	0.05	---	---	1	10	0.00025
13C7-PFUnA	50	0.05	---	---	1	10	0.00025
13C8-FOSA	50	0.05	---	---	1	10	0.00025
13C8-PFOA	50	0.05	---	---	1	10	0.00025
13C8-PFOS	50	0.05	---	---	1	10	0.00024
13C9-PFNA	50	0.05	---	---	1	10	0.00025
d3-MeFOSAA	50	0.05	---	---	1	10	0.00025
d5-EtFOSAA	50	0.05	---	---	1	10	0.00025

Final Concentrations:

Analyte:	Conc (ug/mL):
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	.00051
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	.00051
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	.00050
(Na) Perfluoro-1-decanesulfonate	.00051
(NA) Perfluoro-1-heptanesulfonate	.00050
(Na) Perfluoro-1-nonanesulfonate	.00051
13C2-4:2FTS	.00023
13C2-6:2FTS	.00024
13C2-8:2FTS	.00024
13C2-PFDA	.00025
13C2-PFDoA	.00025
13C2-PFOA	.00025
13C2-PFTeDA	.00025
13C3-PFBA	.00025
13C3-PFBS	.00023
13C3-PFHxS	.00024
13C4-PFBA	.00025
13C4-PFHpA	.00025

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:15:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC68**

Description: PFAS - DoD Calibration L3

13C4-PFOS	.00024
13C5-PFHxA	.00025
13C5-PFPeA	.00025
13C6-PFDA	.00025
13C7-PFUnA	.00025
13C8-FOSA	.00025
13C8-PFOA	.00025
13C8-PFOS	.00024
13C9-PFNA	.00025
d3-MeFOSAA	.00025
d5-EtFOSAA	.00025
N-ethylperfluoro-octanesulfonamidoacetic acid	.00050
N-methylperfluoro-1-octanesulfonamidoacetic acid	.00050
Perfluoro-1-butanesulfonate	.00051
Perfluoro-1-hexanesulfonate	.00051
Perfluoro-1-octanesulfonamide	.00050
Perfluoro-1-octanesulfonate	.00050
Perfluoro-n-butanoic Acid	.00050
Perfluoro-n-decanoic Acid	.00050
Perfluoro-n-dodecanoic acid	.00050
Perfluoro-n-heptanoic Acid	.00050
Perfluoro-n-hexanoic acid	.00051
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
Sodium perfluoro-1-pentanesulfonate	.00050

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
JY25	Pipette	B814659662
KB70	Pipette	B814659662
KB71	Pipette	B814659662

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:15:00 PM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KC69**

Description: PFAS - DoD Calibration L4

Assigned Lab ID (from receipt log)	Chemical Name:	Source	Stock (ug/mL)	Expir. Date	Purity (%)	Density (g/mL)	Amount Taken	Conv. Fact.	Final Vol. (mL)	Std. Conc. (ug/mL)
KB70	PFAS - DoD High ICAL Stock	Solution	~0	10/01/19	---	---	1000 uL	1	50	~0.0000
JY25	PFAS - DoD Internal Standard Stock Solution	Solution	~0	07/16/19	---	---	250 uL	1	50	~0.0000
KB71	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	10/01/19	---	---	250 uL	1	50	~0.0000

Solution Prepared By: Schultz, Stephanie	**Date Prepared:**	10/31/2018	**Expiration Date:** 7/16/2019
Solution Volume 40 **mL X** 2 **Vials**	**Refrigerator/Freezer No:**	LC Laboratory: Refrigerator - R0107	

Balance ID:

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:16:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC69**

Description: PFAS - DoD Calibration L4

Stock Id: JY25

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	250	0.05	---	---	1	50	0.00025
13C2-PFOA	250	0.05	---	---	1	50	0.00025
13C3-PFBA	250	0.05	---	---	1	50	0.00025
13C4-PFOS	250	0.05	---	---	1	50	0.00024

Stock Id: KB70

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	1000	0.05	---	---	1	50	0.00101
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	1000	0.05	---	---	1	50	0.00101
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	1000	0.05	---	---	1	50	0.00100
(Na) Perfluoro-1-decanesulfonate	1000	0.05	---	---	1	50	0.00101
(NA) Perfluoro-1-heptanesulfonate	1000	0.05	---	---	1	50	0.00100
(Na) Perfluoro-1-nonanesulfonate	1000	0.05	---	---	1	50	0.00101
N-ethylperfluoro-octanesulfonamidoacetic acid	1000	0.05	---	---	1	50	0.00100
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	0.05	---	---	1	50	0.00100
Perfluoro-1-butanesulfonate	1000	0.05	---	---	1	50	0.00101
Perfluoro-1-hexanesulfonate	1000	0.05	---	---	1	50	0.00101
Perfluoro-1-octanesulfonamide	1000	0.05	---	---	1	50	0.00100
Perfluoro-1-octanesulfonate	1000	0.05	---	---	1	50	0.00100
Perfluoro-n-butanoic Acid	1000	0.05	---	---	1	50	0.00100
Perfluoro-n-decanoic Acid	1000	0.05	---	---	1	50	0.00100
Perfluoro-n-dodecanoic acid	1000	0.05	---	---	1	50	0.00100
Perfluoro-n-heptanoic Acid	1000	0.05	---	---	1	50	0.00100
Perfluoro-n-hexanoic acid	1000	0.05	---	---	1	50	0.00101
Perfluoro-n-octanoic Acid	1000	0.05	---	---	1	50	0.00100
Perfluorononanoic Acid	1000	0.05	---	---	1	50	0.00100
Perfluoro-n-pentanoic acid	1000	0.05	---	---	1	50	0.00101
Perfluoro-n-tetradecanoic acid	1000	0.05	---	---	1	50	0.00100
Perfluoro-n-tridecanoic acid	1000	0.05	---	---	1	50	0.00100
Perfluoro-n-undecanoic acid	1000	0.05	---	---	1	50	0.00100
Sodium perfluoro-1-pentanesulfonate	1000	0.05	---	---	1	50	0.00100

Stock Id: KB71

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	250	0.05	---	---	1	50	0.00023

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 2 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:16:00 PM

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It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC69**

Description: PFAS - DoD Calibration L4

13C2-6:2FTS	250	0.05	---	---	1	50	0.00024
13C2-8:2FTS	250	0.05	---	---	1	50	0.00024
13C2-PFDoA	250	0.05	---	---	1	50	0.00025
13C2-PFTeDA	250	0.05	---	---	1	50	0.00025
13C3-PFBS	250	0.05	---	---	1	50	0.00023
13C3-PFHxS	250	0.05	---	---	1	50	0.00024
13C4-PFBA	250	0.05	---	---	1	50	0.00025
13C4-PFHpA	250	0.05	---	---	1	50	0.00025
13C5-PFHxA	250	0.05	---	---	1	50	0.00025
13C5-PFPeA	250	0.05	---	---	1	50	0.00025
13C6-PFDA	250	0.05	---	---	1	50	0.00025
13C7-PFUnA	250	0.05	---	---	1	50	0.00025
13C8-FOSA	250	0.05	---	---	1	50	0.00025
13C8-PFOA	250	0.05	---	---	1	50	0.00025
13C8-PFOS	250	0.05	---	---	1	50	0.00024
13C9-PFNA	250	0.05	---	---	1	50	0.00025
d3-MeFOSAA	250	0.05	---	---	1	50	0.00025
d5-EtFOSAA	250	0.05	---	---	1	50	0.00025

Final Concentrations:

Analyte:	Conc (ug/mL):
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	.00101
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	.00101
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	.00100
(Na) Perfluoro-1-decanesulfonate	.00101
(NA) Perfluoro-1-heptanesulfonate	.00100
(Na) Perfluoro-1-nonanesulfonate	.00101
13C2-4:2FTS	.00023
13C2-6:2FTS	.00024
13C2-8:2FTS	.00024
13C2-PFDA	.00025
13C2-PFDoA	.00025
13C2-PFOA	.00025
13C2-PFTeDA	.00025
13C3-PFBA	.00025
13C3-PFBS	.00023
13C3-PFHxS	.00024
13C4-PFBA	.00025
13C4-PFHpA	.00025

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 2 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:16:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC69**

Description: PFAS - DoD Calibration L4

13C4-PFOS	.00024
13C5-PFHxA	.00025
13C5-PFPeA	.00025
13C6-PFDA	.00025
13C7-PFUnA	.00025
13C8-FOSA	.00025
13C8-PFOA	.00025
13C8-PFOS	.00024
13C9-PFNA	.00025
d3-MeFOSAA	.00025
d5-EtFOSAA	.00025
N-ethylperfluoro-octanesulfonamidoacetic acid	.00100
N-methylperfluoro-1-octanesulfonamidoacetic acid	.00100
Perfluoro-1-butanesulfonate	.00101
Perfluoro-1-hexanesulfonate	.00101
Perfluoro-1-octanesulfonamide	.00100
Perfluoro-1-octanesulfonate	.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
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
Sodium perfluoro-1-pentanesulfonate	.00100

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
JY25	Pipette	B814657482
KB70	Pipette	B820865811
KB71	Pipette	B814657482

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 2 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:16:00 PM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KC70**

Description: PFAS - DoD Calibration L5

Assigned Lab ID (from receipt log)	Chemical Name:	Source	Stock (ug/mL)	Expir. Date	Purity (%)	Density (g/mL)	Amount Taken	Conv. Fact.	Final Vol. (mL)	Std. Conc. (ug/mL)
KB70	PFAS - DoD High ICAL Stock	Solution	~0	10/01/19	---	---	2500 uL	1	50	~0.0000
JY25	PFAS - DoD Internal Standard Stock Solution	Solution	~0	07/16/19	---	---	250 uL	1	50	~0.0000
KB71	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	10/01/19	---	---	250 uL	1	50	~0.0000

Solution Prepared By: Schultz, Stephanie	**Date Prepared:**	10/31/2018	**Expiration Date:** 7/16/2019
Solution Volume 40 **mL X** 2 **Vials**	**Refrigerator/Freezer No:**	LC Laboratory: Refrigerator - R0107	

Balance ID: _____

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:17:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC70**

Description: PFAS - DoD Calibration L5

Stock Id: JY25

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	250	0.05	---	---	1	50	0.00025
13C2-PFOA	250	0.05	---	---	1	50	0.00025
13C3-PFBA	250	0.05	---	---	1	50	0.00025
13C4-PFOS	250	0.05	---	---	1	50	0.00024

Stock Id: KB70

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	2500	0.05	---	---	1	50	0.00253
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	2500	0.05	---	---	1	50	0.00253
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	2500	0.05	---	---	1	50	0.00250
(Na) Perfluoro-1-decanesulfonate	2500	0.05	---	---	1	50	0.00253
(NA) Perfluoro-1-heptanesulfonate	2500	0.05	---	---	1	50	0.00250
(Na) Perfluoro-1-nonanesulfonate	2500	0.05	---	---	1	50	0.00253
N-ethylperfluoro-octanesulfonamidoacetic acid	2500	0.05	---	---	1	50	0.00250
N-methylperfluoro-1-octanesulfonamidoacetic acid	2500	0.05	---	---	1	50	0.00250
Perfluoro-1-butanesulfonate	2500	0.05	---	---	1	50	0.00253
Perfluoro-1-hexanesulfonate	2500	0.05	---	---	1	50	0.00253
Perfluoro-1-octanesulfonamide	2500	0.05	---	---	1	50	0.00250
Perfluoro-1-octanesulfonate	2500	0.05	---	---	1	50	0.00250
Perfluoro-n-butanoic Acid	2500	0.05	---	---	1	50	0.00250
Perfluoro-n-decanoic Acid	2500	0.05	---	---	1	50	0.00250
Perfluoro-n-dodecanoic acid	2500	0.05	---	---	1	50	0.00250
Perfluoro-n-heptanoic Acid	2500	0.05	---	---	1	50	0.00250
Perfluoro-n-hexanoic acid	2500	0.05	---	---	1	50	0.00253
Perfluoro-n-octanoic Acid	2500	0.05	---	---	1	50	0.00250
Perfluorononanoic Acid	2500	0.05	---	---	1	50	0.00250
Perfluoro-n-pentanoic acid	2500	0.05	---	---	1	50	0.00253
Perfluoro-n-tetradecanoic acid	2500	0.05	---	---	1	50	0.00250
Perfluoro-n-tridecanoic acid	2500	0.05	---	---	1	50	0.00250
Perfluoro-n-undecanoic acid	2500	0.05	---	---	1	50	0.00250
Sodium perfluoro-1-pentanesulfonate	2500	0.05	---	---	1	50	0.00250

Stock Id: KB71

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	250	0.05	---	---	1	50	0.00023

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 2 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:17:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC70**

Description: PFAS - DoD Calibration L5

13C2-6:2FTS	250	0.05	---	---	1	50	0.00024
13C2-8:2FTS	250	0.05	---	---	1	50	0.00024
13C2-PFDoA	250	0.05	---	---	1	50	0.00025
13C2-PFTeDA	250	0.05	---	---	1	50	0.00025
13C3-PFBS	250	0.05	---	---	1	50	0.00023
13C3-PFHxS	250	0.05	---	---	1	50	0.00024
13C4-PFBA	250	0.05	---	---	1	50	0.00025
13C4-PFHpA	250	0.05	---	---	1	50	0.00025
13C5-PFHxA	250	0.05	---	---	1	50	0.00025
13C5-PFPeA	250	0.05	---	---	1	50	0.00025
13C6-PFDA	250	0.05	---	---	1	50	0.00025
13C7-PFUnA	250	0.05	---	---	1	50	0.00025
13C8-FOSA	250	0.05	---	---	1	50	0.00025
13C8-PFOA	250	0.05	---	---	1	50	0.00025
13C8-PFOS	250	0.05	---	---	1	50	0.00024
13C9-PFNA	250	0.05	---	---	1	50	0.00025
d3-MeFOSAA	250	0.05	---	---	1	50	0.00025
d5-EtFOSAA	250	0.05	---	---	1	50	0.00025

Final Concentrations:

Analyte:	Conc (ug/mL):
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	.00253
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	.00253
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	.00250
(Na) Perfluoro-1-decanesulfonate	.00253
(NA) Perfluoro-1-heptanesulfonate	.00250
(Na) Perfluoro-1-nonanesulfonate	.00253
13C2-4:2FTS	.00023
13C2-6:2FTS	.00024
13C2-8:2FTS	.00024
13C2-PFDA	.00025
13C2-PFDoA	.00025
13C2-PFOA	.00025
13C2-PFTeDA	.00025
13C3-PFBA	.00025
13C3-PFBS	.00023
13C3-PFHxS	.00024
13C4-PFBA	.00025
13C4-PFHpA	.00025

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 2 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:17:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC70**

Description: PFAS - DoD Calibration L5

13C4-PFOS	.00024
13C5-PFHxA	.00025
13C5-PFPeA	.00025
13C6-PFDA	.00025
13C7-PFUnA	.00025
13C8-FOSA	.00025
13C8-PFOA	.00025
13C8-PFOS	.00024
13C9-PFNA	.00025
d3-MeFOSAA	.00025
d5-EtFOSAA	.00025
N-ethylperfluoro-octanesulfonamidoacetic acid	.00250
N-methylperfluoro-1-octanesulfonamidoacetic acid	.00250
Perfluoro-1-butanesulfonate	.00253
Perfluoro-1-hexanesulfonate	.00253
Perfluoro-1-octanesulfonamide	.00250
Perfluoro-1-octanesulfonate	.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
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
Sodium perfluoro-1-pentanesulfonate	.00250

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
JY25	Pipette	B814657482
KB70	Pipette	OU16914
KB71	Pipette	B814657482

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 2 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:17:00 PM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KC71**

Description: PFAS - DoD Calibration L6

Assigned Lab ID (from receipt log)	Chemical Name:	Source	Stock (ug/mL)	Expir. Date	Purity (%)	Density (g/mL)	Amount Taken	Conv. Fact.	Final Vol. (mL)	Std. Conc. (ug/mL)
KB70	PFAS - DoD High ICAL Stock	Solution	~0	10/01/19	---	---	2000 uL	1	10	~0.0000
JY25	PFAS - DoD Internal Standard Stock Solution	Solution	~0	07/16/19	---	---	50 uL	1	10	~0.0000
KB71	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	10/01/19	---	---	50 uL	1	10	~0.0000

Solution Prepared By: Schultz, Stephanie	**Date Prepared:**	10/31/2018	**Expiration Date:** 7/16/2019
Solution Volume 40 **mL X** 1 **Vials**	**Refrigerator/Freezer No:**	LC Laboratory: Refrigerator - R0107	

Balance ID: _____

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:18:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC71**

Description: PFAS - DoD Calibration L6

Stock Id: JY25

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	50	0.05	---	---	1	10	0.00025
13C2-PFOA	50	0.05	---	---	1	10	0.00025
13C3-PFBA	50	0.05	---	---	1	10	0.00025
13C4-PFOS	50	0.05	---	---	1	10	0.00024

Stock Id: KB70

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	2000	0.05	---	---	1	10	0.01010
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	2000	0.05	---	---	1	10	0.01010
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	2000	0.05	---	---	1	10	0.01000
(Na) Perfluoro-1-decanesulfonate	2000	0.05	---	---	1	10	0.01010
(NA) Perfluoro-1-heptanesulfonate	2000	0.05	---	---	1	10	0.01000
(Na) Perfluoro-1-nonanesulfonate	2000	0.05	---	---	1	10	0.01010
N-ethylperfluoro-octanesulfonamidoacetic acid	2000	0.05	---	---	1	10	0.01000
N-methylperfluoro-1-octanesulfonamidoacetic acid	2000	0.05	---	---	1	10	0.01000
Perfluoro-1-butanesulfonate	2000	0.05	---	---	1	10	0.01010
Perfluoro-1-hexanesulfonate	2000	0.05	---	---	1	10	0.01010
Perfluoro-1-octanesulfonamide	2000	0.05	---	---	1	10	0.01000
Perfluoro-1-octanesulfonate	2000	0.05	---	---	1	10	0.01000
Perfluoro-n-butanoic Acid	2000	0.05	---	---	1	10	0.01000
Perfluoro-n-decanoic Acid	2000	0.05	---	---	1	10	0.01000
Perfluoro-n-dodecanoic acid	2000	0.05	---	---	1	10	0.01000
Perfluoro-n-heptanoic Acid	2000	0.05	---	---	1	10	0.01000
Perfluoro-n-hexanoic acid	2000	0.05	---	---	1	10	0.01010
Perfluoro-n-octanoic Acid	2000	0.05	---	---	1	10	0.01000
Perfluorononanoic Acid	2000	0.05	---	---	1	10	0.01000
Perfluoro-n-pentanoic acid	2000	0.05	---	---	1	10	0.01010
Perfluoro-n-tetradecanoic acid	2000	0.05	---	---	1	10	0.01000
Perfluoro-n-tridecanoic acid	2000	0.05	---	---	1	10	0.01000
Perfluoro-n-undecanoic acid	2000	0.05	---	---	1	10	0.01000
Sodium perfluoro-1-pentanesulfonate	2000	0.05	---	---	1	10	0.01000

Stock Id: KB71

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	50	0.05	---	---	1	10	0.00023

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:18:00 PM

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It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC71**

Description: PFAS - DoD Calibration L6

13C2-6:2FTS	50	0.05	---	---	1	10	0.00024
13C2-8:2FTS	50	0.05	---	---	1	10	0.00024
13C2-PFDoA	50	0.05	---	---	1	10	0.00025
13C2-PFTeDA	50	0.05	---	---	1	10	0.00025
13C3-PFBS	50	0.05	---	---	1	10	0.00023
13C3-PFHxS	50	0.05	---	---	1	10	0.00024
13C4-PFBA	50	0.05	---	---	1	10	0.00025
13C4-PFHpA	50	0.05	---	---	1	10	0.00025
13C5-PFHxA	50	0.05	---	---	1	10	0.00025
13C5-PFPeA	50	0.05	---	---	1	10	0.00025
13C6-PFDA	50	0.05	---	---	1	10	0.00025
13C7-PFUnA	50	0.05	---	---	1	10	0.00025
13C8-FOSA	50	0.05	---	---	1	10	0.00025
13C8-PFOA	50	0.05	---	---	1	10	0.00025
13C8-PFOS	50	0.05	---	---	1	10	0.00024
13C9-PFNA	50	0.05	---	---	1	10	0.00025
d3-MeFOSAA	50	0.05	---	---	1	10	0.00025
d5-EtFOSAA	50	0.05	---	---	1	10	0.00025

Final Concentrations:

Analyte:	Conc (ug/mL):
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	.01010
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	.01010
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	.01000
(Na) Perfluoro-1-decanesulfonate	.01010
(NA) Perfluoro-1-heptanesulfonate	.01000
(Na) Perfluoro-1-nonanesulfonate	.01010
13C2-4:2FTS	.00023
13C2-6:2FTS	.00024
13C2-8:2FTS	.00024
13C2-PFDA	.00025
13C2-PFDoA	.00025
13C2-PFOA	.00025
13C2-PFTeDA	.00025
13C3-PFBA	.00025
13C3-PFBS	.00023
13C3-PFHxS	.00024
13C4-PFBA	.00025
13C4-PFHpA	.00025

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:18:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC71**

Description: PFAS - DoD Calibration L6

13C4-PFOS	.00024
13C5-PFHxA	.00025
13C5-PFPeA	.00025
13C6-PFDA	.00025
13C7-PFUnA	.00025
13C8-FOSA	.00025
13C8-PFOA	.00025
13C8-PFOS	.00024
13C9-PFNA	.00025
d3-MeFOSAA	.00025
d5-EtFOSAA	.00025
N-ethylperfluoro-octanesulfonamidoacetic acid	.01000
N-methylperfluoro-1-octanesulfonamidoacetic acid	.01000
Perfluoro-1-butanesulfonate	.01010
Perfluoro-1-hexanesulfonate	.01010
Perfluoro-1-octanesulfonamide	.01000
Perfluoro-1-octanesulfonate	.01000
Perfluoro-n-butanoic 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
Sodium perfluoro-1-pentanesulfonate	.01000

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
JY25	Pipette	B814659662
KB70	Pipette	OU16914
KB71	Pipette	B814659662

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:18:00 PM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KC72**

Description: PFAS - DoD Calibration L7

Assigned Lab ID (from receipt log)	Chemical Name:	Source	Stock (ug/mL)	Expir. Date	Purity (%)	Density (g/mL)	Amount Taken	Conv. Fact.	Final Vol. (mL)	Std. Conc. (ug/mL)
KB70	PFAS - DoD High ICAL Stock	Solution	~0	10/01/19	---	---	4000 uL	1	10	~0.0000
JY25	PFAS - DoD Internal Standard Stock Solution	Solution	~0	07/16/19	---	---	50 uL	1	10	~0.0000
KB71	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	10/01/19	---	---	50 uL	1	10	~0.0000

Solution Prepared By: Schultz, Stephanie	**Date Prepared:**	10/31/2018	**Expiration Date:** 7/16/2019
Solution Volume 40 **mL X** 1 **Vials**	**Refrigerator/Freezer No:**	LC Laboratory: Refrigerator - R0107	

Balance ID: _____

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:21:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KC72

Description: PFAS - DoD Calibration L7

Stock Id: JY25

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	50	0.05	---	---	1	10	0.00025
13C2-PFOA	50	0.05	---	---	1	10	0.00025
13C3-PFBA	50	0.05	---	---	1	10	0.00025
13C4-PFOS	50	0.05	---	---	1	10	0.00024

Stock Id: KB70

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	4000	0.05	---	---	1	10	0.02020
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	4000	0.05	---	---	1	10	0.02020
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	4000	0.05	---	---	1	10	0.02000
(Na) Perfluoro-1-decanesulfonate	4000	0.05	---	---	1	10	0.02020
(NA) Perfluoro-1-heptanesulfonate	4000	0.05	---	---	1	10	0.02000
(Na) Perfluoro-1-nonanesulfonate	4000	0.05	---	---	1	10	0.02020
N-ethylperfluoro-octanesulfonamidoacetic acid	4000	0.05	---	---	1	10	0.02000
N-methylperfluoro-1-octanesulfonamidoacetic acid	4000	0.05	---	---	1	10	0.02000
Perfluoro-1-butanesulfonate	4000	0.05	---	---	1	10	0.02020
Perfluoro-1-hexanesulfonate	4000	0.05	---	---	1	10	0.02020
Perfluoro-1-octanesulfonamide	4000	0.05	---	---	1	10	0.02000
Perfluoro-1-octanesulfonate	4000	0.05	---	---	1	10	0.02000
Perfluoro-n-butanoic Acid	4000	0.05	---	---	1	10	0.02000
Perfluoro-n-decanoic Acid	4000	0.05	---	---	1	10	0.02000
Perfluoro-n-dodecanoic acid	4000	0.05	---	---	1	10	0.02000
Perfluoro-n-heptanoic Acid	4000	0.05	---	---	1	10	0.02000
Perfluoro-n-hexanoic acid	4000	0.05	---	---	1	10	0.02020
Perfluoro-n-octanoic Acid	4000	0.05	---	---	1	10	0.02000
Perfluorononanoic Acid	4000	0.05	---	---	1	10	0.02000
Perfluoro-n-pentanoic acid	4000	0.05	---	---	1	10	0.02020
Perfluoro-n-tetradecanoic acid	4000	0.05	---	---	1	10	0.02000
Perfluoro-n-tridecanoic acid	4000	0.05	---	---	1	10	0.02000
Perfluoro-n-undecanoic acid	4000	0.05	---	---	1	10	0.02000
Sodium perfluoro-1-pentanesulfonate	4000	0.05	---	---	1	10	0.02000

Stock Id: KB71

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	50	0.05	---	---	1	10	0.00023

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:21:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC72**

Description: PFAS - DoD Calibration L7

13C2-6:2FTS	50	0.05	---	---	1	10	0.00024
13C2-8:2FTS	50	0.05	---	---	1	10	0.00024
13C2-PFDoA	50	0.05	---	---	1	10	0.00025
13C2-PFTeDA	50	0.05	---	---	1	10	0.00025
13C3-PFBS	50	0.05	---	---	1	10	0.00023
13C3-PFHxS	50	0.05	---	---	1	10	0.00024
13C4-PFBA	50	0.05	---	---	1	10	0.00025
13C4-PFHpA	50	0.05	---	---	1	10	0.00025
13C5-PFHxA	50	0.05	---	---	1	10	0.00025
13C5-PFPeA	50	0.05	---	---	1	10	0.00025
13C6-PFDA	50	0.05	---	---	1	10	0.00025
13C7-PFUnA	50	0.05	---	---	1	10	0.00025
13C8-FOSA	50	0.05	---	---	1	10	0.00025
13C8-PFOA	50	0.05	---	---	1	10	0.00025
13C8-PFOS	50	0.05	---	---	1	10	0.00024
13C9-PFNA	50	0.05	---	---	1	10	0.00025
d3-MeFOSAA	50	0.05	---	---	1	10	0.00025
d5-EtFOSAA	50	0.05	---	---	1	10	0.00025

Final Concentrations:

Analyte:	Conc (ug/mL):
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	.02020
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	.02020
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	.02000
(Na) Perfluoro-1-decanesulfonate	.02020
(NA) Perfluoro-1-heptanesulfonate	.02000
(Na) Perfluoro-1-nonanesulfonate	.02020
13C2-4:2FTS	.00023
13C2-6:2FTS	.00024
13C2-8:2FTS	.00024
13C2-PFDA	.00025
13C2-PFDoA	.00025
13C2-PFOA	.00025
13C2-PFTeDA	.00025
13C3-PFBA	.00025
13C3-PFBS	.00023
13C3-PFHxS	.00024
13C4-PFBA	.00025
13C4-PFHpA	.00025

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:21:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC72**

Description: PFAS - DoD Calibration L7

13C4-PFOS	.00024
13C5-PFHxA	.00025
13C5-PFPeA	.00025
13C6-PFDA	.00025
13C7-PFUnA	.00025
13C8-FOSA	.00025
13C8-PFOA	.00025
13C8-PFOS	.00024
13C9-PFNA	.00025
d3-MeFOSAA	.00025
d5-EtFOSAA	.00025
N-ethylperfluoro-octanesulfonamidoacetic acid	.02000
N-methylperfluoro-1-octanesulfonamidoacetic acid	.02000
Perfluoro-1-butanesulfonate	.02020
Perfluoro-1-hexanesulfonate	.02020
Perfluoro-1-octanesulfonamide	.02000
Perfluoro-1-octanesulfonate	.02000
Perfluoro-n-butanoic Acid	.02000
Perfluoro-n-decanoic Acid	.02000
Perfluoro-n-dodecanoic acid	.02000
Perfluoro-n-heptanoic Acid	.02000
Perfluoro-n-hexanoic acid	.02020
Perfluoro-n-octanoic Acid	.02000
Perfluorononanoic Acid	.02000
Perfluoro-n-pentanoic acid	.02020
Perfluoro-n-tetradecanoic acid	.02000
Perfluoro-n-tridecanoic acid	.02000
Perfluoro-n-undecanoic acid	.02000
Sodium perfluoro-1-pentanesulfonate	.02000

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
JY25	Pipette	B814659662
KB70	Pipette	OU16914
KB71	Pipette	B814659662

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:21:00 PM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KC73**

Description: PFAS - DoD Instrument Blank

Assigned Lab ID (from receipt log)	Chemical Name:	Source	Stock (ug/mL)	Expir. Date	Purity (%)	Density (g/mL)	Amount Taken	Conv. Fact.	Final Vol. (mL)	Std. Conc. (ug/mL)
JY25	PFAS - DoD Internal Standard Stock Solution	Solution	~0	07/16/19	---	---	50 uL	1	10	~0.0000
KB71	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	10/01/19	---	---	50 uL	1	10	~0.0000

Solution Prepared By: Schultz, Stephanie	**Date Prepared:**	10/31/2018	**Expiration Date:** 7/16/2019
Solution Volume 40 **mL X** 1 **Vials**	**Refrigerator/Freezer No:**	LC Laboratory: Refrigerator - R0107	

Balance ID: _____

Comment: 80/20 methanol/milli-q water

Approved By: Thorn, Jonathan **Date:** 11/2/2018 2:47:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KC73

Description: PFAS - DoD Instrument Blank

Stock Id: JY25

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	50	0.05	---	---	1	10	0.00025
13C2-PFOA	50	0.05	---	---	1	10	0.00025
13C3-PFBA	50	0.05	---	---	1	10	0.00025
13C4-PFOS	50	0.05	---	---	1	10	0.00024

Stock Id: KB71

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	50	0.05	---	---	1	10	0.00023
13C2-6:2FTS	50	0.05	---	---	1	10	0.00024
13C2-8:2FTS	50	0.05	---	---	1	10	0.00024
13C2-PFDoA	50	0.05	---	---	1	10	0.00025
13C2-PFTeDA	50	0.05	---	---	1	10	0.00025
13C3-PFBS	50	0.05	---	---	1	10	0.00023
13C3-PFHxS	50	0.05	---	---	1	10	0.00024
13C4-PFBA	50	0.05	---	---	1	10	0.00025
13C4-PFHpA	50	0.05	---	---	1	10	0.00025
13C5-PFHxA	50	0.05	---	---	1	10	0.00025
13C5-PFPeA	50	0.05	---	---	1	10	0.00025
13C6-PFDA	50	0.05	---	---	1	10	0.00025
13C7-PFUnA	50	0.05	---	---	1	10	0.00025
13C8-FOSA	50	0.05	---	---	1	10	0.00025
13C8-PFOA	50	0.05	---	---	1	10	0.00025
13C8-PFOS	50	0.05	---	---	1	10	0.00024
13C9-PFNA	50	0.05	---	---	1	10	0.00025
d3-MeFOSAA	50	0.05	---	---	1	10	0.00025
d5-EtFOSAA	50	0.05	---	---	1	10	0.00025

Final Concentrations:

Analyte:	Conc (ug/mL):
13C2-4:2FTS	.00023
13C2-6:2FTS	.00024
13C2-8:2FTS	.00024
13C2-PFDA	.00025
13C2-PFDoA	.00025
13C2-PFOA	.00025

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Thorn, Jonathan **Date:** 11/2/2018 2:47:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC73**

Description: PFAS - DoD Instrument Blank

13C2-PFTeDA	.00025
13C3-PFBA	.00025
13C3-PFBS	.00023
13C3-PFHxS	.00024
13C4-PFBA	.00025
13C4-PFHpA	.00025
13C4-PFOS	.00024
13C5-PFHxA	.00025
13C5-PFPeA	.00025
13C6-PFDA	.00025
13C7-PFUnA	.00025
13C8-FOSA	.00025
13C8-PFOA	.00025
13C8-PFOS	.00024
13C9-PFNA	.00025
d3-MeFOSAA	.00025
d5-EtFOSAA	.00025

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
JY25	Pipette	B814659662
KB71	Pipette	B814659662

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Thorn, Jonathan **Date:** 11/2/2018 2:47:00 PM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KC74**

Description: PFAS - DoD ICC

Assigned Lab ID (from receipt log)	Chemical Name:	Source	Stock (ug/mL)	Expir. Date	Purity (%)	Density (g/mL)	Amount Taken	Conv. Fact.	Final Vol. (mL)	Std. Conc. (ug/mL)
KB82	PFAS - DoD Second Source LCS/MS Solution	Solution	~0	10/01/19	---	---	200 uL	1	10	~0.0000
JY25	PFAS - DoD Internal Standard Stock Solution	Solution	~0	07/16/19	---	---	50 uL	1	10	~0.0000
KB71	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	10/01/19	---	---	50 uL	1	10	~0.0000

Solution Prepared By: Schultz, Stephanie	**Date Prepared:**	10/31/2018	**Expiration Date:** 7/16/2019
Solution Volume 40 **mL X** 1 **Vials**	**Refrigerator/Freezer No:**	LC Laboratory: Refrigerator - R0107	

Balance ID: _____

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:22:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KC74

Description: PFAS - DoD ICC

Stock Id: JY25

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	50	0.05	---	---	1	10	0.00025
13C2-PFOA	50	0.05	---	---	1	10	0.00025
13C3-PFBA	50	0.05	---	---	1	10	0.00025
13C4-PFOS	50	0.05	---	---	1	10	0.00024

Stock Id: KB71

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	50	0.05	---	---	1	10	0.00023
13C2-6:2FTS	50	0.05	---	---	1	10	0.00024
13C2-8:2FTS	50	0.05	---	---	1	10	0.00024
13C2-PFDoA	50	0.05	---	---	1	10	0.00025
13C2-PFTeDA	50	0.05	---	---	1	10	0.00025
13C3-PFBS	50	0.05	---	---	1	10	0.00023
13C3-PFHxS	50	0.05	---	---	1	10	0.00024
13C4-PFBA	50	0.05	---	---	1	10	0.00025
13C4-PFHpA	50	0.05	---	---	1	10	0.00025
13C5-PFHxA	50	0.05	---	---	1	10	0.00025
13C5-PFPeA	50	0.05	---	---	1	10	0.00025
13C6-PFDA	50	0.05	---	---	1	10	0.00025
13C7-PFUnA	50	0.05	---	---	1	10	0.00025
13C8-FOSA	50	0.05	---	---	1	10	0.00025
13C8-PFOA	50	0.05	---	---	1	10	0.00025
13C8-PFOS	50	0.05	---	---	1	10	0.00024
13C9-PFNA	50	0.05	---	---	1	10	0.00025
d3-MeFOSAA	50	0.05	---	---	1	10	0.00025
d5-EtFOSAA	50	0.05	---	---	1	10	0.00025

Stock Id: KB82

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	200	0.05	---	---	1	10	0.00101
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	200	0.05	---	---	1	10	0.00100
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	200	0.05	---	---	1	10	0.00100
(Na) Perfluoro-1-decanesulfonate	200	0.05	---	---	1	10	0.00101
(NA) Perfluoro-1-heptanesulfonate	200	0.05	---	---	1	10	0.00100
(Na) Perfluoro-1-nonanesulfonate	200	0.05	---	---	1	10	0.00101

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:22:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC74**

Description: PFAS - DoD ICC

N-ethylperfluoro-octanesulfonamidoacetic acid	200	0.05	---	---	1	10	0.00100
N-methylperfluoro-1-octanesulfonamidoacetic acid	200	0.05	---	---	1	10	0.00100
Perfluoro-1-butanesulfonate	200	0.05	---	---	1	10	0.00101
Perfluoro-1-hexanesulfonate	200	0.05	---	---	1	10	0.00101
Perfluoro-1-octanesulfonamide	200	0.05	---	---	1	10	0.00100
Perfluoro-1-octanesulfonate	200	0.05	---	---	1	10	0.00100
Perfluoro-n-butanoic Acid	200	0.05	---	---	1	10	0.00100
Perfluoro-n-decanoic Acid	200	0.05	---	---	1	10	0.00100
Perfluoro-n-dodecanoic acid	200	0.05	---	---	1	10	0.00100
Perfluoro-n-heptanoic Acid	200	0.05	---	---	1	10	0.00100
Perfluoro-n-hexanoic acid	200	0.05	---	---	1	10	0.00101
Perfluoro-n-octanoic Acid	200	0.05	---	---	1	10	0.00100
Perfluorononanoic Acid	200	0.05	---	---	1	10	0.00100
Perfluoro-n-pentanoic acid	200	0.05	---	---	1	10	0.00100
Perfluoro-n-tetradecanoic acid	200	0.05	---	---	1	10	0.00100
Perfluoro-n-tridecanoic acid	200	0.05	---	---	1	10	0.00100
Perfluoro-n-undecanoic acid	200	0.05	---	---	1	10	0.00100
Sodium perfluoro-1-pentanesulfonate	200	0.05	---	---	1	10	0.00100

Final Concentrations:

Analyte:	Conc (ug/mL):
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	.00101
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	.00100
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	.00100
(Na) Perfluoro-1-decanesulfonate	.00101
(NA) Perfluoro-1-heptanesulfonate	.00100
(Na) Perfluoro-1-nonanesulfonate	.00101
13C2-4:2FTS	.00023
13C2-6:2FTS	.00024
13C2-8:2FTS	.00024
13C2-PFDA	.00025
13C2-PFDoA	.00025
13C2-PFOA	.00025
13C2-PFTeDA	.00025
13C3-PFBA	.00025
13C3-PFBS	.00023
13C3-PFHxS	.00024
13C4-PFBA	.00025
13C4-PFHpA	.00025

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:22:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC74**

Description: PFAS - DoD ICC

13C4-PFOS	.00024
13C5-PFHxA	.00025
13C5-PFPeA	.00025
13C6-PFDA	.00025
13C7-PFUnA	.00025
13C8-FOSA	.00025
13C8-PFOA	.00025
13C8-PFOS	.00024
13C9-PFNA	.00025
d3-MeFOSAA	.00025
d5-EtFOSAA	.00025
N-ethylperfluoro-octanesulfonamidoacetic acid	.00100
N-methylperfluoro-1-octanesulfonamidoacetic acid	.00100
Perfluoro-1-butanesulfonate	.00101
Perfluoro-1-hexanesulfonate	.00101
Perfluoro-1-octanesulfonamide	.00100
Perfluoro-1-octanesulfonate	.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
Perfluoro-n-octanoic Acid	.00100
Perfluorononanoic Acid	.00100
Perfluoro-n-pentanoic acid	.00100
Perfluoro-n-tetradecanoic acid	.00100
Perfluoro-n-tridecanoic acid	.00100
Perfluoro-n-undecanoic acid	.00100
Sodium perfluoro-1-pentanesulfonate	.00100

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
JY25	Pipette	B814659662
KB71	Pipette	B814659662
KB82	Pipette	B814657482

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:22:00 PM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KC75**

Description: PFAS Branched Solution (~5,000ng/L)

Assigned Lab ID (from receipt log)	Chemical Name:	Source	Stock (ug/mL)	Expir. Date	Purity (%)	Density (g/mL)	Amount Taken	Conv. Fact.	Final Vol. (mL)	Std. Conc. (ug/mL)
JX28	PFAS Branched Standard Stock	Solution	~0	06/18/19	---	---	100 uL	1	10	~0.0000

Solution Prepared By: Schultz, Stephanie	**Date Prepared:**	10/31/2018	**Expiration Date:** 6/18/2019
Solution Volume 40 **mL X** 1 **Vials**	**Refrigerator/Freezer No:**	LC Laboratory: Refrigerator - R0107	

Balance ID:

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:23:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC75**

Description: PFAS Branched Solution (~5,000ng/L)

Stock Id: **JX28**

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
N-ethylperfluoro-octanesulfonamidoacetic acid	100	0.50	---	---	1	10	0.00500
N-methylperfluoro-1-octanesulfonamidoacetic acid	100	0.50	---	---	1	10	0.00500
Perfluoro-1-hexanesulfonate	100	0.50	---	---	1	10	0.00500
Perfluoro-1-octanesulfonate	100	0.50	---	---	1	10	0.00500
Perfluoro-n-octanoic Acid	100	0.50	---	---	1	10	0.00500

Final Concentrations:

Analyte:	Conc (ug/mL):
N-ethylperfluoro-octanesulfonamidoacetic acid	.00500
N-methylperfluoro-1-octanesulfonamidoacetic acid	.00500
Perfluoro-1-hexanesulfonate	.00500
Perfluoro-1-octanesulfonate	.00500
Perfluoro-n-octanoic Acid	.00500

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
JX28	Pipette	B814659662

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/31/2018 **Expiration Date:** 6/18/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 80/20 methanol/milli-q water

Approved By: Lizotte Jr, Robert **Date:** 11/15/2018 5:23:00 PM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KC97**

Description: PFAS - DoD High Level Labelled Extracted Interal Standard (SIS)

Assigned Lab ID (from receipt log)	Chemical Name:	Source	Stock (ug/mL)	Expir. Date	Purity (%)	Density (g/mL)	Amount Taken	Conv. Fact.	Final Vol. (mL)	Std. Conc. (ug/mL)
180726-05	Mass-labelled PFAS Extraction Standard Solution	Neat	~1.000000	02/07/23	---	---	1000 uL	1	20	~0.0500

Solution Prepared By: Schultz, Stephanie	**Date Prepared:** 11/6/2018	**Expiration Date:**	11/6/2019
Solution Volume 40 **mL X** 1 **Vials**	**Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107		

Balance ID:

Comment: 96/4 Methanol/milli-q water (RP-181106-1)

Approved By: Schumitz, Denise **Date:** 11/9/2018 2:32:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC97**

Description: PFAS - DoD High Level Labelled Extracted Interal Standard (SIS)

Stock Id: **180726-05**

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	0.94	1	100.000	1	20	0.04675
13C2-6:2FTS	1000	0.95	1	100.000	1	20	0.04745
13C2-8:2FTS	1000	0.96	1	100.000	1	20	0.04790
13C2-PFDoA	1000	1.00	1	100.000	1	20	0.05000
13C2-PFTeDA	1000	1.00	1	100.000	1	20	0.05000
13C3-PFBS	1000	0.93	1	100.000	1	20	0.04645
13C3-PFHxS	1000	0.95	1	100.000	1	20	0.04730
13C4-PFBA	1000	1.00	1	100.000	1	20	0.05000
13C4-PFHpA	1000	1.00	1	100.000	1	20	0.05000
13C5-PFHxA	1000	1.00	1	100.000	1	20	0.05000
13C5-PFPeA	1000	1.00	1	100.000	1	20	0.05000
13C6-PFDA	1000	1.00	1	100.000	1	20	0.05000
13C7-PFUnA	1000	1.00	1	100.000	1	20	0.05000
13C8-FOSA	1000	1.00	1	100.000	1	20	0.05000
13C8-PFOA	1000	1.00	1	100.000	1	20	0.05000
13C8-PFOS	1000	0.96	1	100.000	1	20	0.04785
13C9-PFNA	1000	1.00	1	100.000	1	20	0.05000
d3-MeFOSAA	1000	1.00	1	100.000	1	20	0.05000
d5-EtFOSAA	1000	1.00	1	100.000	1	20	0.05000

Final Concentrations:

Analyte:	Conc (ug/mL):
13C2-4:2FTS	.04675
13C2-6:2FTS	.04745
13C2-8:2FTS	.04790
13C2-PFDoA	.05000
13C2-PFTeDA	.05000
13C3-PFBS	.04645
13C3-PFHxS	.04730
13C4-PFBA	.05000
13C4-PFHpA	.05000
13C5-PFHxA	.05000
13C5-PFPeA	.05000
13C6-PFDA	.05000
13C7-PFUnA	.05000
13C8-FOSA	.05000

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 11/6/2018 **Expiration Date:** 11/6/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 96/4 Methanol/milli-q water (RP-181106-1)

Approved By: Schumitz, Denise **Date:** 11/9/2018 2:32:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC97**

Description: PFAS - DoD High Level Labelled Extracted Interal Standard (SIS)

13C8-PFOA	.05000
13C8-PFOS	.04785
13C9-PFNA	.05000
d3-MeFOSAA	.05000
d5-EtFOSAA	.05000

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
180726-05	Pipette	B820865811

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 11/6/2018 **Expiration Date:** 11/6/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 96/4 Methanol/milli-q water (RP-181106-1)

Approved By: Schumitz, Denise **Date:** 11/9/2018 2:32:00 PM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KC98**

Description: PFAS - DoD Low Level Labelled Extracted Internal Standard (SIS)

Assigned Lab ID (from receipt log)	Chemical Name:	Source	Stock (ug/mL)	Expir. Date	Purity (%)	Density (g/mL)	Amount Taken	Conv. Fact.	Final Vol. (mL)	Std. Conc. (ug/mL)
KC97	PFAS - DoD High Level Labelled Extracted Interal Standard (SIS)	Solution	~0	11/06/19	---	---	2500 uL	1	25	~0.0000

Solution Prepared By: Schultz, Stephanie	**Date Prepared:** 11/6/2018	**Expiration Date:**	11/6/2019
Solution Volume 40 **mL X** 1 **Vials**	**Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107		

Balance ID: _____

Comment: 96/4 Methanol/milli-q water (RP-181106-1)

Approved By: Schumitz, Denise **Date:** 11/9/2018 2:34:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC98**

Description: PFAS - DoD Low Level Labelled Extracted Internal Standard (SIS)

Stock Id: **KC97**

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	2500	0.05	---	---	1	25	0.00468
13C2-6:2FTS	2500	0.05	---	---	1	25	0.00475
13C2-8:2FTS	2500	0.05	---	---	1	25	0.00479
13C2-PFDoA	2500	0.05	---	---	1	25	0.00500
13C2-PFTeDA	2500	0.05	---	---	1	25	0.00500
13C3-PFBS	2500	0.05	---	---	1	25	0.00465
13C3-PFHxS	2500	0.05	---	---	1	25	0.00473
13C4-PFBA	2500	0.05	---	---	1	25	0.00500
13C4-PFHpA	2500	0.05	---	---	1	25	0.00500
13C5-PFHxA	2500	0.05	---	---	1	25	0.00500
13C5-PFPeA	2500	0.05	---	---	1	25	0.00500
13C6-PFDA	2500	0.05	---	---	1	25	0.00500
13C7-PFUnA	2500	0.05	---	---	1	25	0.00500
13C8-FOSA	2500	0.05	---	---	1	25	0.00500
13C8-PFOA	2500	0.05	---	---	1	25	0.00500
13C8-PFOS	2500	0.05	---	---	1	25	0.00478
13C9-PFNA	2500	0.05	---	---	1	25	0.00500
d3-MeFOSAA	2500	0.05	---	---	1	25	0.00500
d5-EtFOSAA	2500	0.05	---	---	1	25	0.00500

Final Concentrations:

Analyte:	Conc (ug/mL):
13C2-4:2FTS	.00468
13C2-6:2FTS	.00475
13C2-8:2FTS	.00479
13C2-PFDoA	.00500
13C2-PFTeDA	.00500
13C3-PFBS	.00465
13C3-PFHxS	.00473
13C4-PFBA	.00500
13C4-PFHpA	.00500
13C5-PFHxA	.00500
13C5-PFPeA	.00500
13C6-PFDA	.00500
13C7-PFUnA	.00500
13C8-FOSA	.00500

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 11/6/2018 **Expiration Date:** 11/6/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 96/4 Methanol/milli-q water (RP-181106-1)

Approved By: Schumitz, Denise **Date:** 11/9/2018 2:34:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KC98**

Description: PFAS - DoD Low Level Labelled Extracted Internal Standard (SIS)

13C8-PFOA	.00500
13C8-PFOS	.00478
13C9-PFNA	.00500
d3-MeFOSAA	.00500
d5-EtFOSAA	.00500

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
KC97	Pipette	OU16914

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 11/6/2018 **Expiration Date:** 11/6/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 96/4 Methanol/milli-q water (RP-181106-1)

Approved By: Schumitz, Denise **Date:** 11/9/2018 2:34:00 PM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KD57**

Description: PFAS - DoD Internal Standard Spiking Solution

Assigned Lab ID (from receipt log)	Chemical Name:	Source	Stock (ug/mL)	Expir. Date	Purity (%)	Density (g/mL)	Amount Taken	Conv. Fact.	Final Vol. (mL)	Std. Conc. (ug/mL)
JY25	PFAS - DoD Internal Standard Stock Solution	Solution	~0	07/16/19	---	---	2500 uL	1	25	~0.0000

Solution Prepared By: Griffith, Lauren	**Date Prepared:**	11/16/2018	**Expiration Date:** 7/16/2019
Solution Volume 40 **mL X** 1 **Vials**	**Refrigerator/Freezer No:**	LC Laboratory: Refrigerator - R0107	

Balance ID:

Comment: 96/4 methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 11/21/2018 9:43:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KD57**

Description: PFAS - DoD Internal Standard Spiking Solution

Stock Id: **JY25**

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	2500	0.05	---	---	1	25	0.00500
13C2-PFOA	2500	0.05	---	---	1	25	0.00500
13C3-PFBA	2500	0.05	---	---	1	25	0.00500
13C4-PFOS	2500	0.05	---	---	1	25	0.00479

Final Concentrations:

Analyte:	Conc (ug/mL):
13C2-PFDA	.00500
13C2-PFOA	.00500
13C3-PFBA	.00500
13C4-PFOS	.00479

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
JY25	Pipette	B814658143

Solution Prepared By: Griffith, Lauren **Date Prepared:** 11/16/2018 **Expiration Date:** 7/16/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107

Comment: 96/4 methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 11/21/2018 9:43:00 AM

BATTELLE
It can be done

BDO Id: 170724-01

Reagent Receipt Report

Approved: ☐ **Authorized** ☐

Name: PFOA- 2nd Source
Vendor: ABSOLUTE STANDARDS
Catalogue No: 99207
Type: Solution
Lot No: 032217
Quantity: 5 ea mL **% Moisture:**
Description: PFOA - 2nd Source

Received: 7/24/2017
Custodian: Schumitz, Matt
Expires: 3/22/2022
Consumed:
Stored In: LC Laboratory - F0111

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:
(Na) 1H,1H,2H,2H-Perfluorodecane	39108-34-4	1.0100	100.00	--	--	☐			
(Na) 1H,1H,2H,2H-Perfluorohexane s	414911-30-1	1.0000	100.00	--	--	☐			
(Na) 1H,1H,2H,2H-Perfluorooctane s	27619-97-2	1.0000	100.00	--	--	☐			
(Na) Perfluoro-1-decanesulfonate	2806-15-7	1.0100	100.00	--	--	☐			
(NA) Perfluoro-1-heptanesulfonate	375-92-8	1.0000	100.00	--	--	☐			
(Na) Perfluoro-1-nonanesulfonate	98789-57-2	1.0100	100.00	--	--	☐			
N-ethylperfluoro-octanesulfonamidoa	2991-50-6	1.0000	100.00	--	--	☐			
N-methylperfluoro-1-octanesulfonami	2355-31-9	1.0000	100.00	--	--	☐			
Perfluoro-1-butanesulfonate	375-73-5	1.0100	100.00	--	--	☐			
Perfluoro-1-hexanesulfonate	355-46-4	1.0100	100.00	--	--	☐			
Perfluoro-1-octanesulfonamide	754-91-6	1.0000	100.00	--	--	☐			
Perfluoro-1-octanesulfonate	1763-23-1	1.0000	100.00	--	--	☐			
Perfluoro-n-butanoic Acid	375-22-4	1.0000	100.00	--	--	☐			
Perfluoro-n-decanoic Acid	335-76-2	1.0000	100.00	--	--	☐			
Perfluoro-n-dodecanoic acid	307-55-1	1.0000	100.00	--	--	☐			
Perfluoro-n-heptanoic Acid	375-85-9	1.0000	100.00	--	--	☐			
Perfluoro-n-hexanoic acid	307-24-4	1.0100	100.00	--	--	☐			
Perfluoro-n-octanoic Acid	335-67-1	1.0000	100.00	--	--	☐			
Perfluorononanoic Acid	375-95-1	1.0000	100.00	--	--	☐			
Perfluoro-n-pentanoic acid	2706-90-3	1.0000	100.00	--	--	☐			
Perfluoro-n-tetradecanoic acid	376-06-7	1.0000	100.00	--	--	☐			
Perfluoro-n-tridecanoic acid	72629-94-8	1.0000	100.00	--	--	☐			
Perfluoro-n-undecanoic acid	2058-94-8	1.0000	100.00	--	--	☐			
Sodium perfluoro-1-pentanesulfonate	2706-91-4	1.0000	100.00	--	--	☐			

Total Analytes: 24

Notes:

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

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

170704-01

Part Number: 99207
Lot Number: 032217
Description: PFOA - DOD
24 components
Expiration Date: 032222
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 1.0
NIST Test ID#: 822-275872-11

Solvent(s):	Lot#	
Methanol (1 mM KOH)	031317	(98%)
2-Propanol	23214	(2%)

5E-05 Balance Uncertainty
Volume(s) shown below were combined and diluted to (mL): 50.0 0.007 Flask Uncertainty

Formulated By:	Paul Barron	032217 DATE
Reviewed By:	Pedro L. Rentas	032217 DATE

Note: All assigned values are anion concentrations.

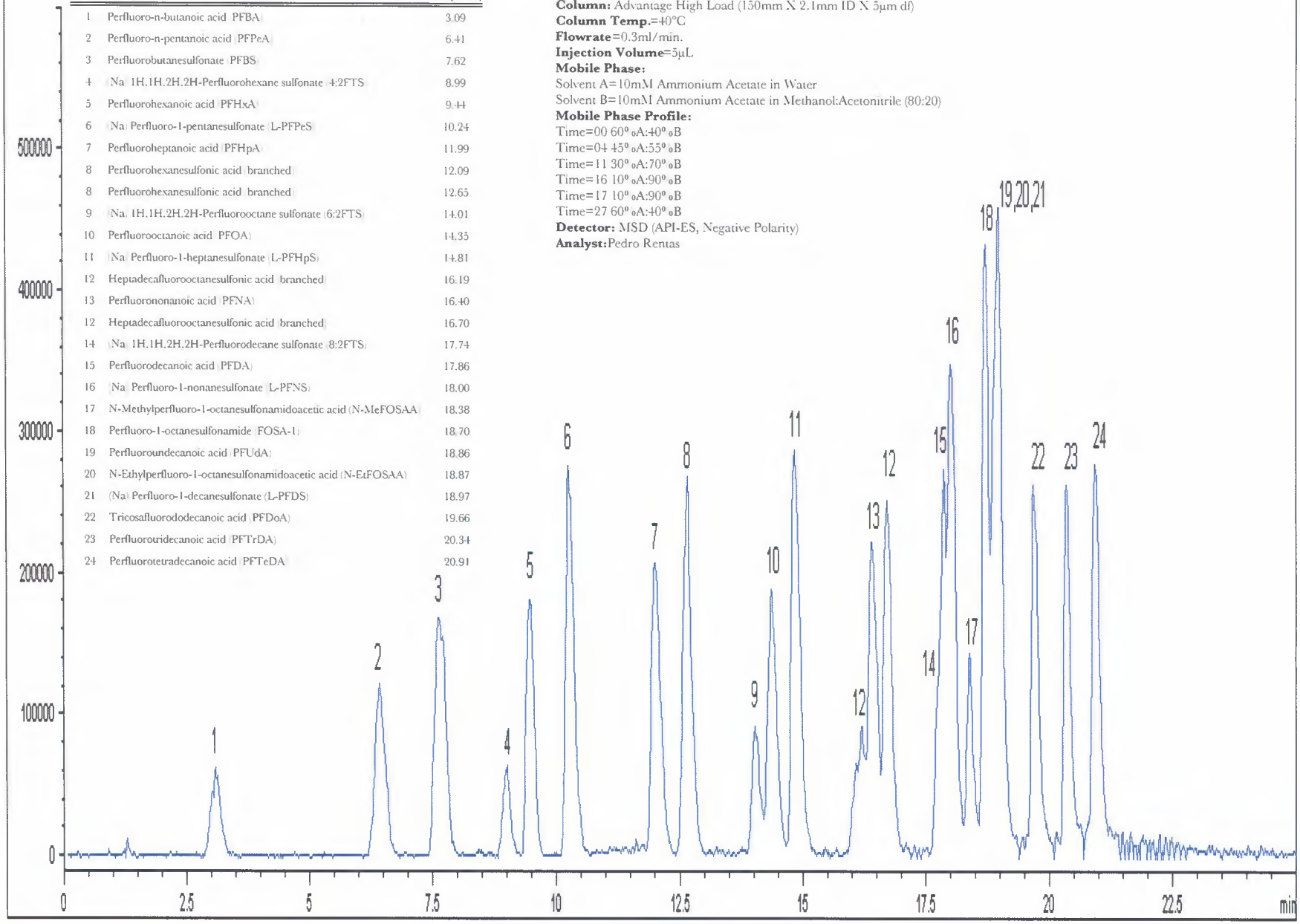
SDS Information (Solvent Safety Info. On Attached pg.)

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)	CAS#	OSHA PEL (TWA)	LD50
1. Perfluoro-n-butanoic acid	3670	PFBA0516	0.02	1.00	0.004	50.0	1.00	0.01	375-22-4	N/A	N/A
2. Perfluoro-n-pentanoic acid	3669	PFPeA0516	0.02	1.00	0.004	50.0	1.00	0.01	2706-90-3	N/A	N/A
3. Perfluorohexanoic acid	99199	030617	0.02	1.00	0.004	50.3	1.01	0.01	307-24-4	N/A	N/A
4. Perfluoroheptanoic acid	99197	030517	0.02	1.00	0.004	50.1	1.00	0.01	375-85-9	N/A	N/A
5. Perfluorooctanoic acid	99202	030617	0.02	1.00	0.004	50.2	1.00	0.01	335-67-1	N/A	ipr-rat 189mg/kg
6. Perfluorononanoic acid	99200	030617	0.02	1.00	0.004	50.1	1.00	0.01	375-95-1	N/A	N/A
7. Perfluorodecanoic acid	99195	030617	0.02	1.00	0.004	50.1	1.00	0.01	335-76-2	N/A	orl-rat 57mg/kg
8. Perfluoroundecanoic acid	99205	030617	0.02	1.00	0.004	50.1	1.00	0.01	2058-94-8	N/A	N/A
9. Tricosafluorododecanoic acid	99196	030617	0.02	1.00	0.004	50.1	1.00	0.01	307-55-1	N/A	N/A
10. Perfluorotridecanoic acid	99204	030617	0.02	1.00	0.004	50.1	1.00	0.01	72629-94-8	N/A	N/A
11. Perfluorotetradecanoic acid	99203	030617	0.02	1.00	0.004	50.1	1.00	0.01	376-06-7	N/A	N/A
12. Perfluoro-1-octanesulfonamide	3677	FOSA0916I	0.02	1.00	0.004	50.0	1.00	0.01	754-91-6	N/A	N/A
13. N-Methylperfluoro-1-octanesulfonamidoacetic acid	3667	NMeFOSAA0117	0.02	1.00	0.004	50.0	1.00	0.01	2355-31-9	N/A	N/A
14. N-Ethylperfluoro-1-octanesulfonamidoacetic acid	3664	NEtFOSAA0117	0.02	1.00	0.004	50.0	1.00	0.01	2991-50-6	N/A	N/A
15. Perfluorobutanesulfonic acid	99194	031017	0.02	1.00	0.004	50.7	1.01	0.01	375-73-5	N/A	N/A
16. Perfluoro-1-pentanesulfonic acid	3956	LPFPeS0117	0.0214	1.07	0.004	46.9	1.00	0.01	00-00-0	N/A	N/A
17. Perfluorohexanesulfonic acid (branched)	99198	030617	0.02	1.00	0.004	50.6	1.01	0.01	3871-99-6	N/A	N/A
18. Perfluoro-1-heptanesulfonic acid	3672	LPFHpS1016	0.021	1.05	0.004	47.6	1.00	0.01	375-92-8	N/A	N/A
19. Heptadecafluorooctanesulfonic acid (branched)	99201	030617	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	LPFNS0516	0.021	1.05	0.004	48.0	1.01	0.01	98789-57-2	N/A	N/A
21. Perfluoro-1-decanesulfonic acid	3671	LPFDS0217	0.021	1.05	0.004	48.2	1.01	0.01	2806-15-7	N/A	N/A
22. 1H,1H,2H,2H-Perfluorohexane sulfonic acid	3955	42FTS1216	0.0214	1.07	0.004	46.7	1.00	0.01	00-00-0	N/A	N/A
23. 1H,1H,2H,2H-Perfluorooctane sulfonic acid	3661	62FTS0616	0.021	1.05	0.004	47.4	1.00	0.01	27619-97-2	N/A	N/A
24. 1H,1H,2H,2H-Perfluorodecane sulfonic acid	3662	82FTS1216	0.021	1.05	0.004	47.9	1.01	0.01	39108-34-4	N/A	N/A

- 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 certifed (+/-) 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).

Peak No.	Analyte	MSD RT (min.)
1	Perfluoro-n-butanoic acid (PFBA)	3.09
2	Perfluoro-n-pentanoic acid (PFPeA)	6.41
3	Perfluorobutanesulfonate (PFBS)	7.62
4	(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate (4:2FTS)	8.99
5	Perfluorohexanoic acid (PFHxA)	9.44
6	(Na) Perfluoro-1-pentanesulfonate (L-PFPeS)	10.24
7	Perfluoroheptanoic acid (PFHpA)	11.99
8	Perfluorohexanesulfonic acid (branched)	12.09
8	Perfluorohexanesulfonic acid (branched)	12.65
9	(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate (6:2FTS)	14.01
10	Perfluorooctanoic acid (PFOA)	14.35
11	(Na) Perfluoro-1-heptanesulfonate (L-PFHpS)	14.81
12	Heptadecafluorooctanesulfonic acid (branched)	16.19
13	Perfluorononanoic acid (PFNA)	16.40
12	Heptadecafluorooctanesulfonic acid (branched)	16.70
14	(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate (8:2FTS)	17.74
15	Perfluorodecanoic acid (PFDA)	17.86
16	(Na) Perfluoro-1-nonanesulfonate (L-PFNS)	18.00
17	N-Methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA)	18.38
18	Perfluoro-1-octanesulfonamide (FOSA-1)	18.70
19	Perfluoroundecanoic acid (PFUdA)	18.86
20	N-Ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	18.87
21	(Na) Perfluoro-1-decanesulfonate (L-PFDS)	18.97
22	Tricosafluorododecanoic acid (PFDoA)	19.66
23	Perfluorotridecanoic acid (PFTrDA)	20.34
24	Perfluorotetradecanoic acid (PFTeDA)	20.91

Method: 537M2
Column: Advantage High Load (150mm X 2.1mm ID X 5µm df)
Column Temp.=40°C
Flowrate=0.3ml/min.
Injection Volume=5µL
Mobile Phase:
Solvent A=10mM Ammonium Acetate in Water
Solvent B=10mM Ammonium Acetate in Methanol:Acetonitrile (80:20)
Mobile Phase Profile:
Time=00 60% A:40% B
Time=04 45% A:55% B
Time=11 30% A:70% B
Time=16 10% A:90% B
Time=17 10% A:90% B
Time=27 60% A:40% B
Detector: MSD (API-ES, Negative Polarity)
Analyst: Pedro Rentas



BATTELLE

It can be done

BDO Id: 180618-02

Reagent Receipt Report

Approved: ☐ Authorized ☐

Name:	Branched NEtFOSAA Standard (50 µ	Received:	6/18/2018
Vendor:	Wellington Laboratories	Custodian:	Thorn, Jonathan
Catalogue No:	br-NEtFOSAAA	Expires:	1/17/2023
Type:	Solution	Consumed:	
Lot No:	brNEtFOSAA0118	Stored In:	Sample Preparation - C0103
Quantity:	1 ea mL % Moisture: 0		
Description:	Branched NEtFOSAA Standard (50 µg/mL)		

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

Notes:

Approved by: _____ Approved on: _____

Authorized by: _____ Authorized on: _____

180618-02

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

br-NEtFOSAA

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

PRODUCT CODE:	br-NEtFOSAA
LOT NUMBER:	brNEtFOSAA0118
CONCENTRATION:	50.0 ± 2.5 µg/ml
SOLVENT(S):	Methanol/Water (<1%)
DATE PREPARED: (mm/dd/yyyy)	01/10/2018
LAST TESTED: (mm/dd/yyyy)	01/17/2018
EXPIRY DATE: (mm/dd/yyyy)	01/17/2023
RECOMMENDED STORAGE:	Refrigerate ampoule

DESCRIPTION:

The chemical purity has been determined to be ≥98% N-ethylperfluorooctanesulfonamidoacetic acid (linear and branched isomers). The full name, structure and percent composition for each of the identified isomeric components are given in Table A.

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by ^{19}F-NMR
Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **br-NEtFOSAA; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

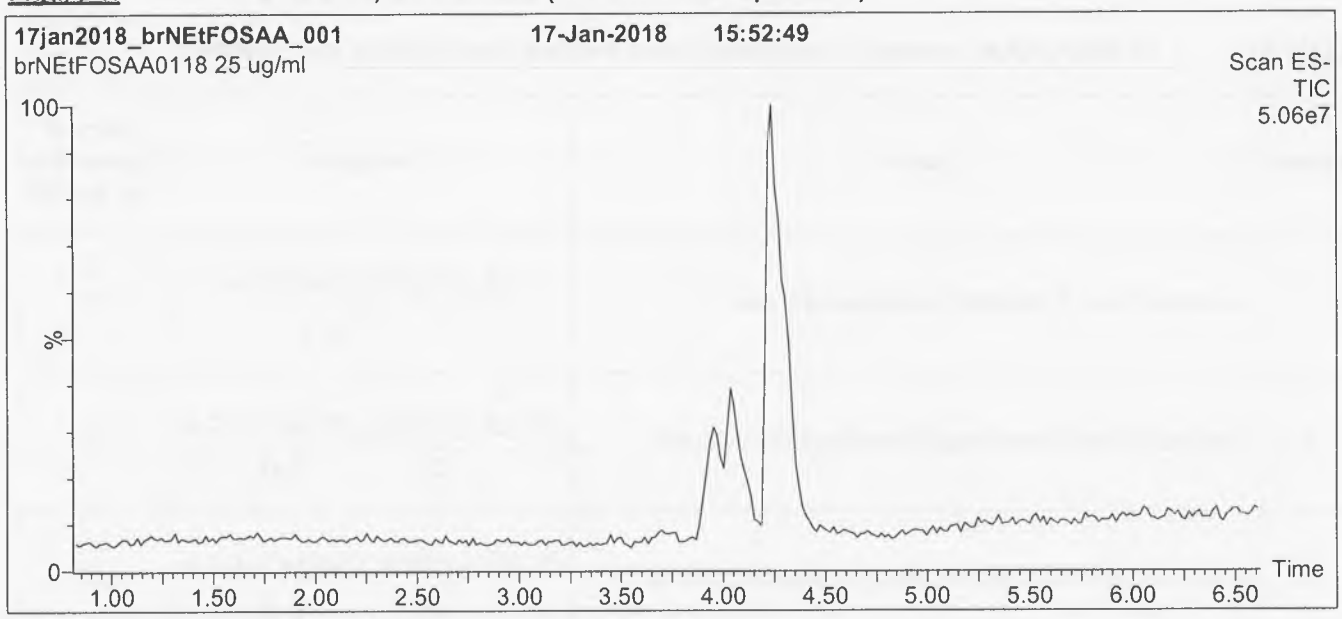
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	N-ethylperfluoro-1-octanesulfonamidoacetic acid	$CF_3(CF_2)_7SO_2N(C_2H_5)CH_2CO_2H$	77.5
2	N-ethylperfluoro-3-methylheptanesulfonamidoacetic acid	$CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(C_2H_5)CH_2CO_2H$	2.3
3	N-ethylperfluoro-4-methylheptanesulfonamidoacetic acid	$CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(C_2H_5)CH_2CO_2H$	2.2
4	N-ethylperfluoro-5-methylheptanesulfonamidoacetic acid	$CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(C_2H_5)CH_2CO_2H$	5.4
5	N-ethylperfluoro-6-methylheptanesulfonamidoacetic acid	$CF_3CF(CF_3)(CF_2)_5SO_2N(C_2H_5)CH_2CO_2H$	10.4
6	N-ethylperfluoro-5,5-dimethylhexanesulfonamidoacetic acid	$CF_3C(CF_3)_2(CF_2)_4SO_2N(C_2H_5)CH_2CO_2H$	0.3
7	N-ethylperfluoro-4,5-dimethylhexanesulfonamidoacetic acid	$CF_3CF(CF_3)CF(CF_2)_3SO_2N(C_2H_5)CH_2CO_2H$	0.3
8	N-ethylperfluoro-3,5-dimethylhexanesulfonamidoacetic acid	$CF_3CF(CF_3)CF_2CF(CF_2)_2SO_2N(C_2H_5)CH_2CO_2H$	0.3
9	Other Unidentified Isomers		1.3

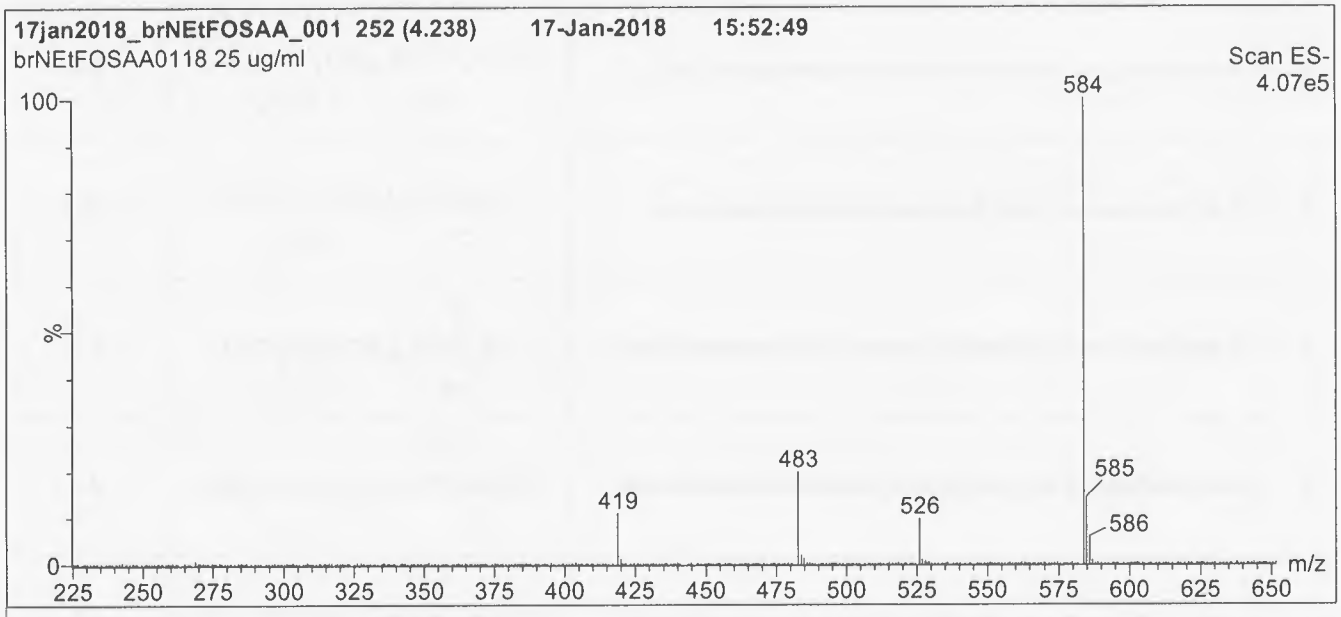
* Percent of total N-ethylperfluorooctanesulfonamidoacetic acid isomers only.

Certified By: _____ **Date:** 03/22/2018 (mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: **br-NEtFOSAA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 55% (80:20 MeOH:ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
2 min before returning to initial conditions in 0.5 min.

Time: 10 min

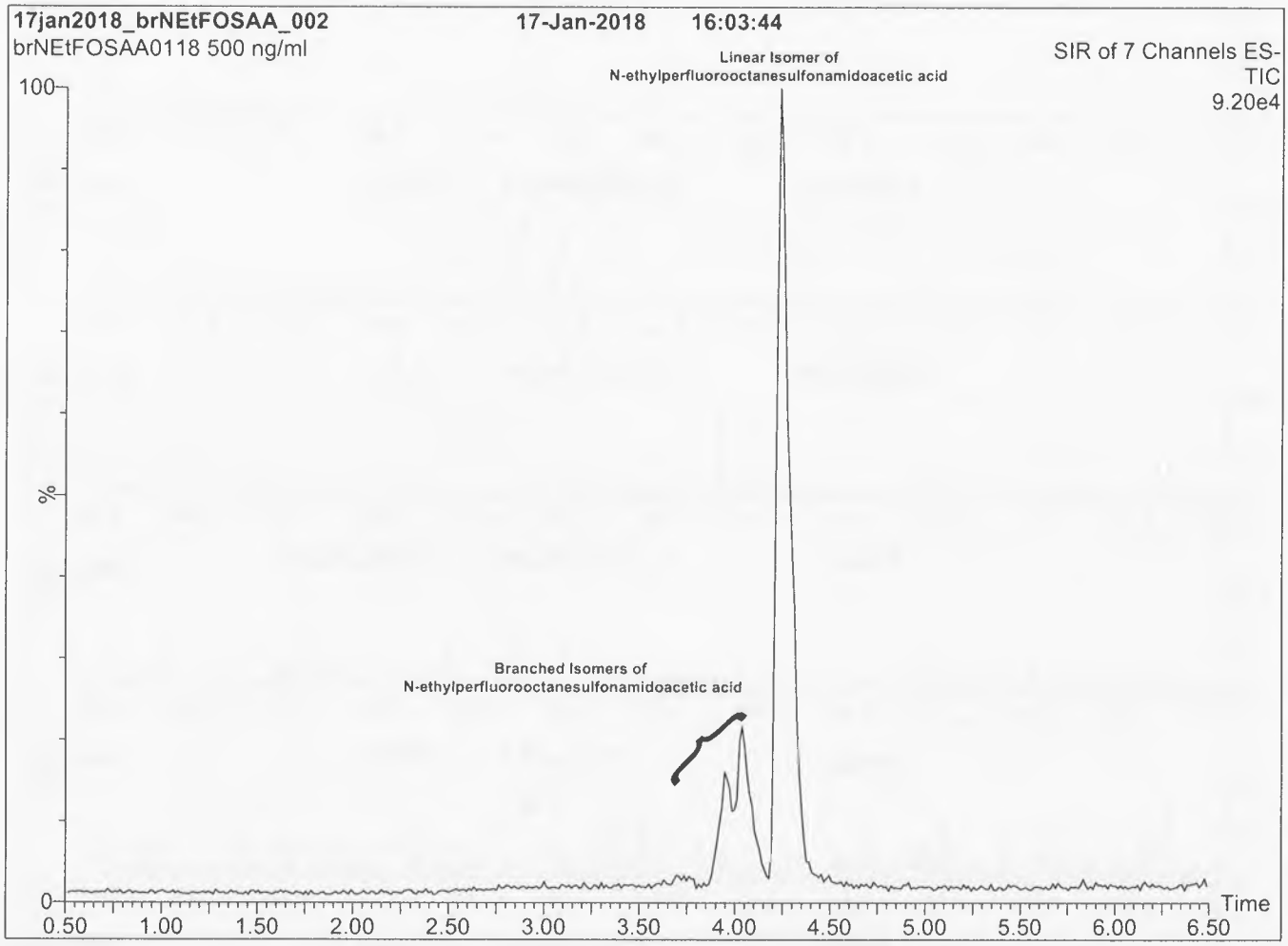
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 35.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **br-NEtFOSAA; LC/MS Data (SIR)**



Conditions for Figure 2:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 55% (80:20 MeOH:ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
2 min before returning to initial conditions in 0.5 min.

Time: 10 min

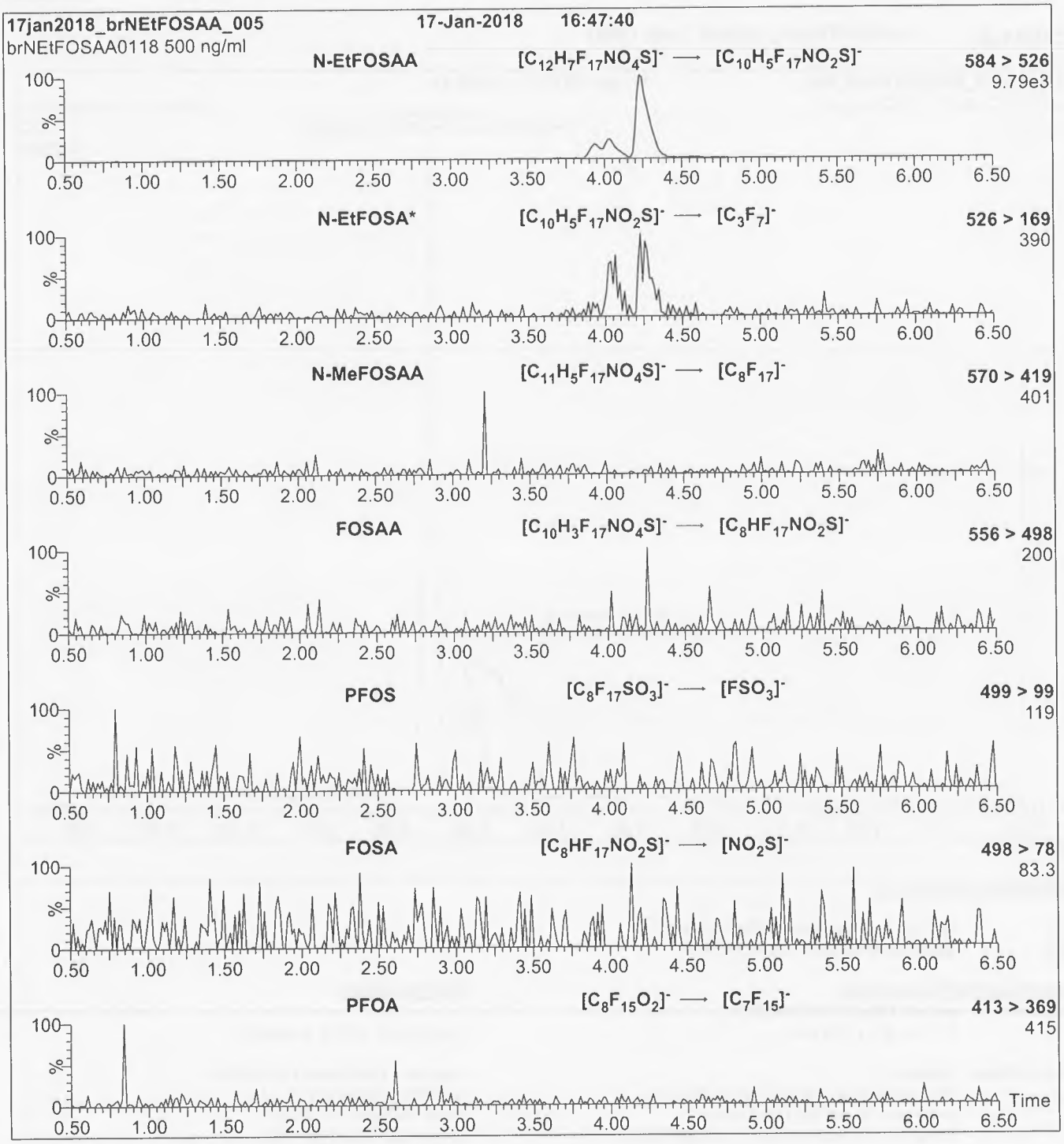
Flow: 300 µl/min

MS Parameters

Experiment: SIR (7 channels)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 15-60
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 3: **br-NEtFOSAA; LC/MS/MS Data (Selected MRM Transitions)**



***Note**: N-EtFOSA is formed by in-source fragmentation.

Conditions for Figure 3:

Injection: On-column

Mobile phase: Same as Figure 2

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.39e-3
Collision Energy (eV) = 11-40 (variable)

BATTELLE

It can be done

BDO Id: 180618-03

Reagent Receipt Report

Approved: ☐ Authorized ☐

Name:	Branched NMeFOSAA Standard (50	Received:	6/18/2018
Vendor:	Wellington Laboratories	Custodian:	Thorn, Jonathan
Catalogue No:	brNMeFOSAA	Expires:	1/17/2023
Type:	Solution	Consumed:	
Lot No:	brNMeFOSAA0118	Stored In:	Sample Preparation - C0103
Quantity:	1 ea mL % Moisture: 0		
Description:	Branched NMeFOSAA Standard (50 µg/mL)		

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

Notes:

Approved by: _____ Approved on: _____

Authorized by: _____ Authorized on: _____

180618-03

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

br-NMeFOSAA

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

PRODUCT CODE:	br-NMeFOSAA
LOT NUMBER:	brNMeFOSAA0118
CONCENTRATION:	50.0 ± 2.5 µg/ml
SOLVENT(S):	Methanol/Water (<1%)
DATE PREPARED: (mm/dd/yyyy)	01/10/2018
LAST TESTED: (mm/dd/yyyy)	01/17/2018
EXPIRY DATE: (mm/dd/yyyy)	01/17/2023
RECOMMENDED STORAGE:	Refrigerate ampoule

DESCRIPTION:

The chemical purity has been determined to be ≥98% N-methylperfluorooctanesulfonamidoacetic acid (linear and branched isomers). The full name, structure and percent composition for each of the identified isomeric components are given in Table A.

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by ^{19}F-NMR
Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **br-NMeFOSAA; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

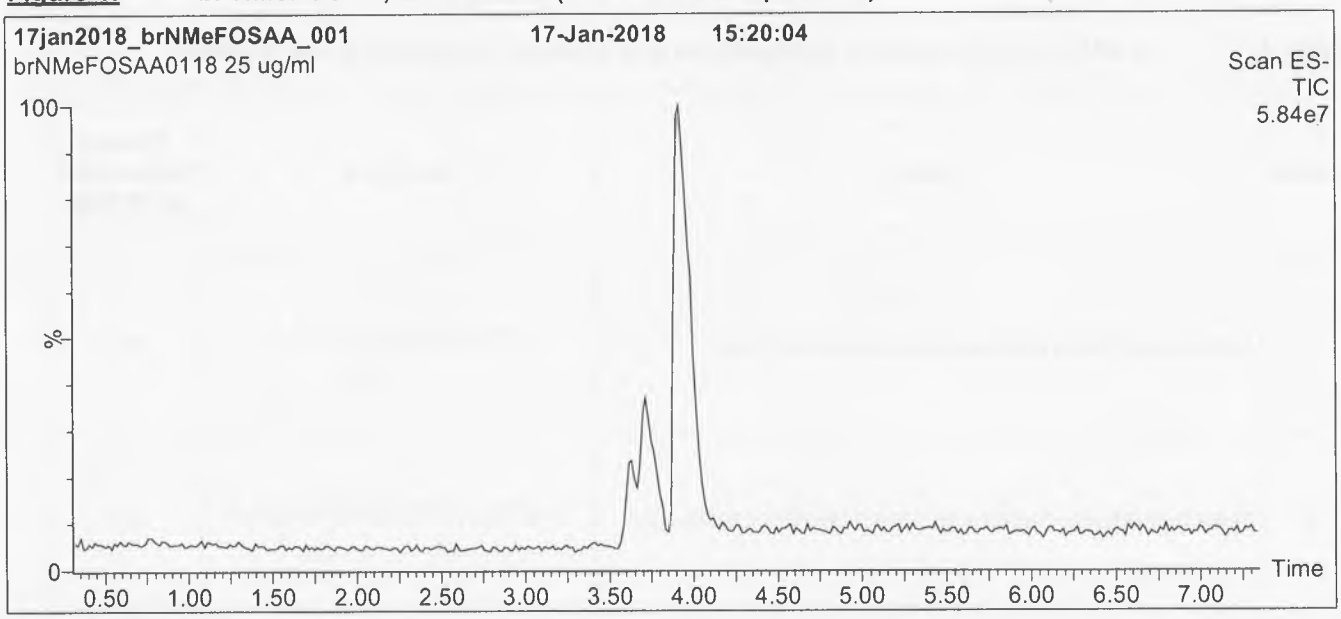
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	N-methylperfluoro-1-octanesulfonamidoacetic acid	$CF_3(CF_2)_7SO_2N(CH_3)CH_2CO_2H$	76.0
2	N-methylperfluoro-3-methylheptanesulfonamidoacetic acid	$CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_3)CH_2CO_2H$	0.7
3	N-methylperfluoro-4-methylheptanesulfonamidoacetic acid	$CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_3)CH_2CO_2H$	2.0
4	N-methylperfluoro-5-methylheptanesulfonamidoacetic acid	$CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_3)CH_2CO_2H$	6.0
5	N-methylperfluoro-6-methylheptanesulfonamidoacetic acid	$CF_3CF(CF_3)(CF_2)_5SO_2N(CH_3)CH_2CO_2H$	14.0
6	N-methylperfluoro-5,5-dimethylhexanesulfonamidoacetic acid	$CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_3)CH_2CO_2H$	0.2
7	Other Unidentified Isomers		1.1

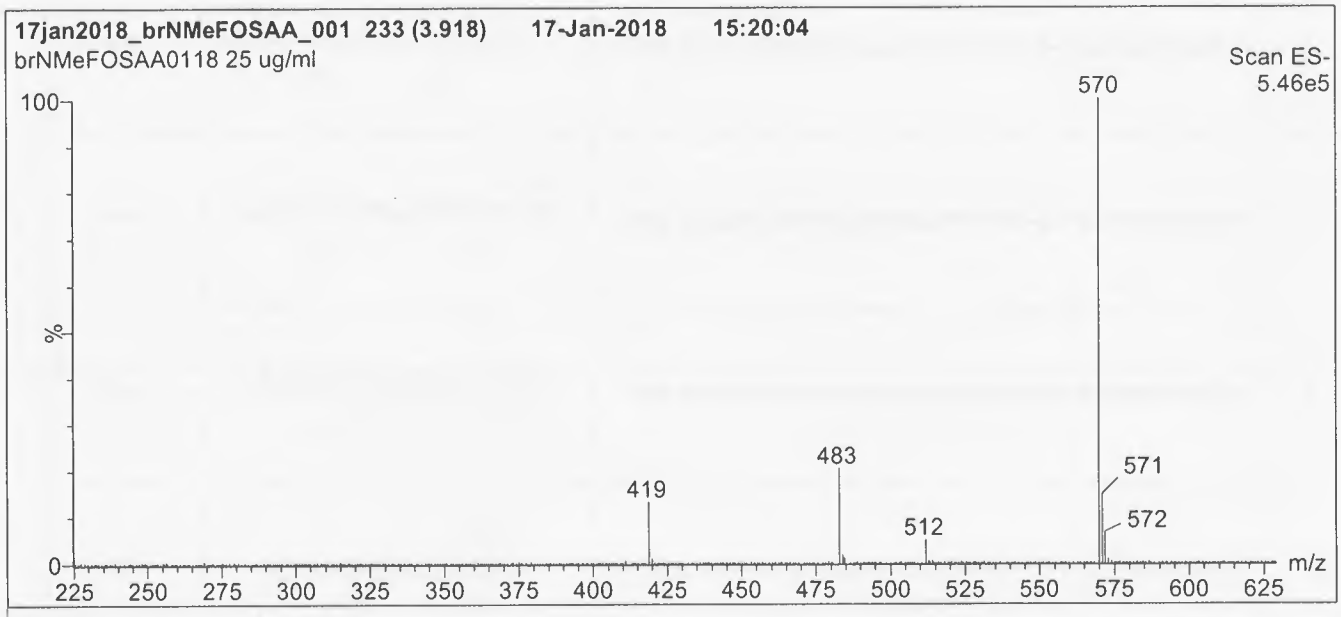
* Percent of total N-methylperfluorooctanesulfonamidoacetic acid isomers only.

Certified By: _____ **Date:** 03/22/2018 (mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: **br-NMeFOSAA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 55% (80:20 MeOH:ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
2 min before returning to initial conditions in 0.5 min.

Time: 10 min

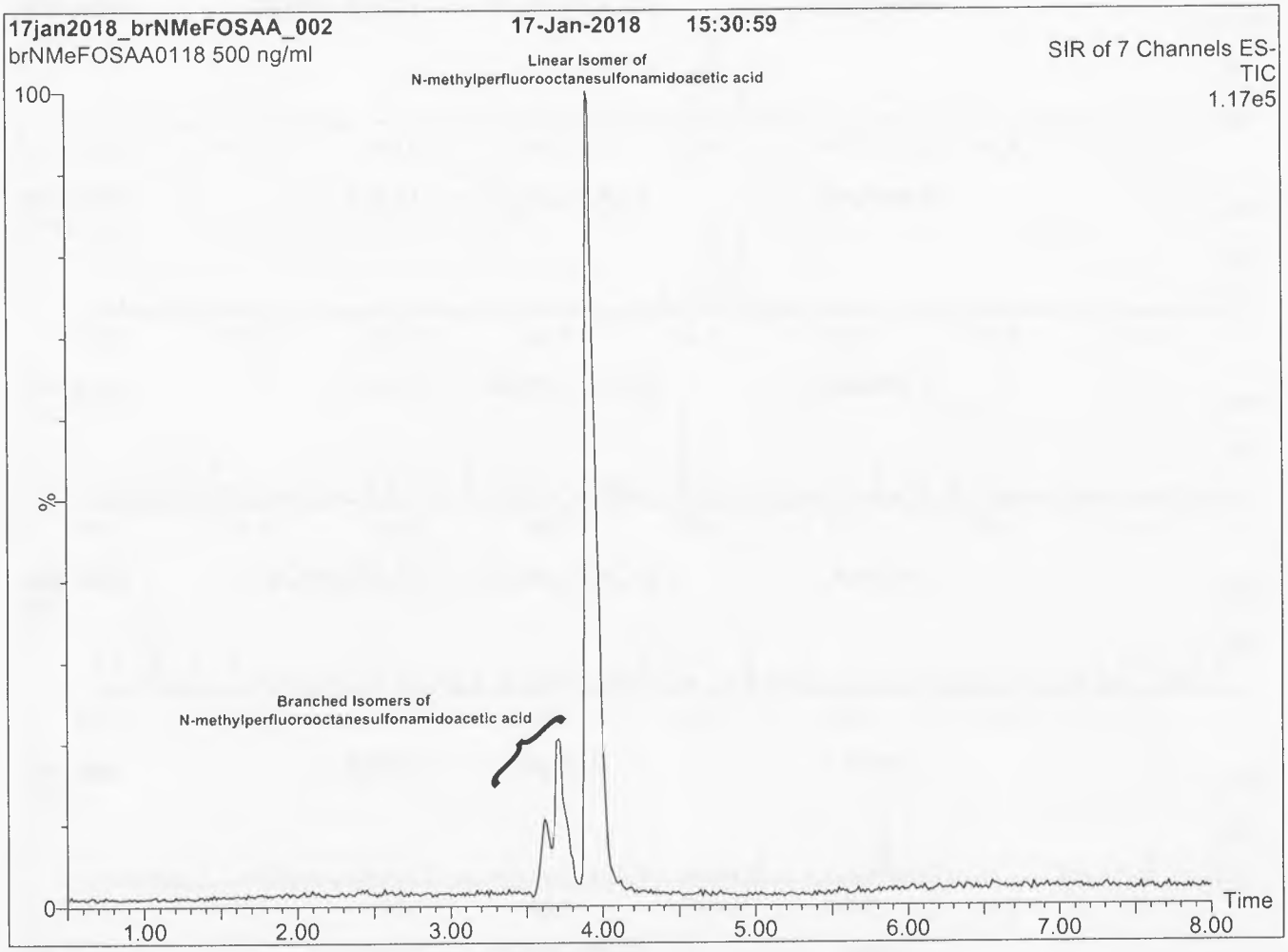
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 35.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **br-NMeFOSAA; LC/MS Data (SIR)**



Conditions for Figure 2:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 55% (80:20 MeOH:ACN) / 45% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 7 min and hold for
2 min before returning to initial conditions in 0.5 min.

Time: 10 min

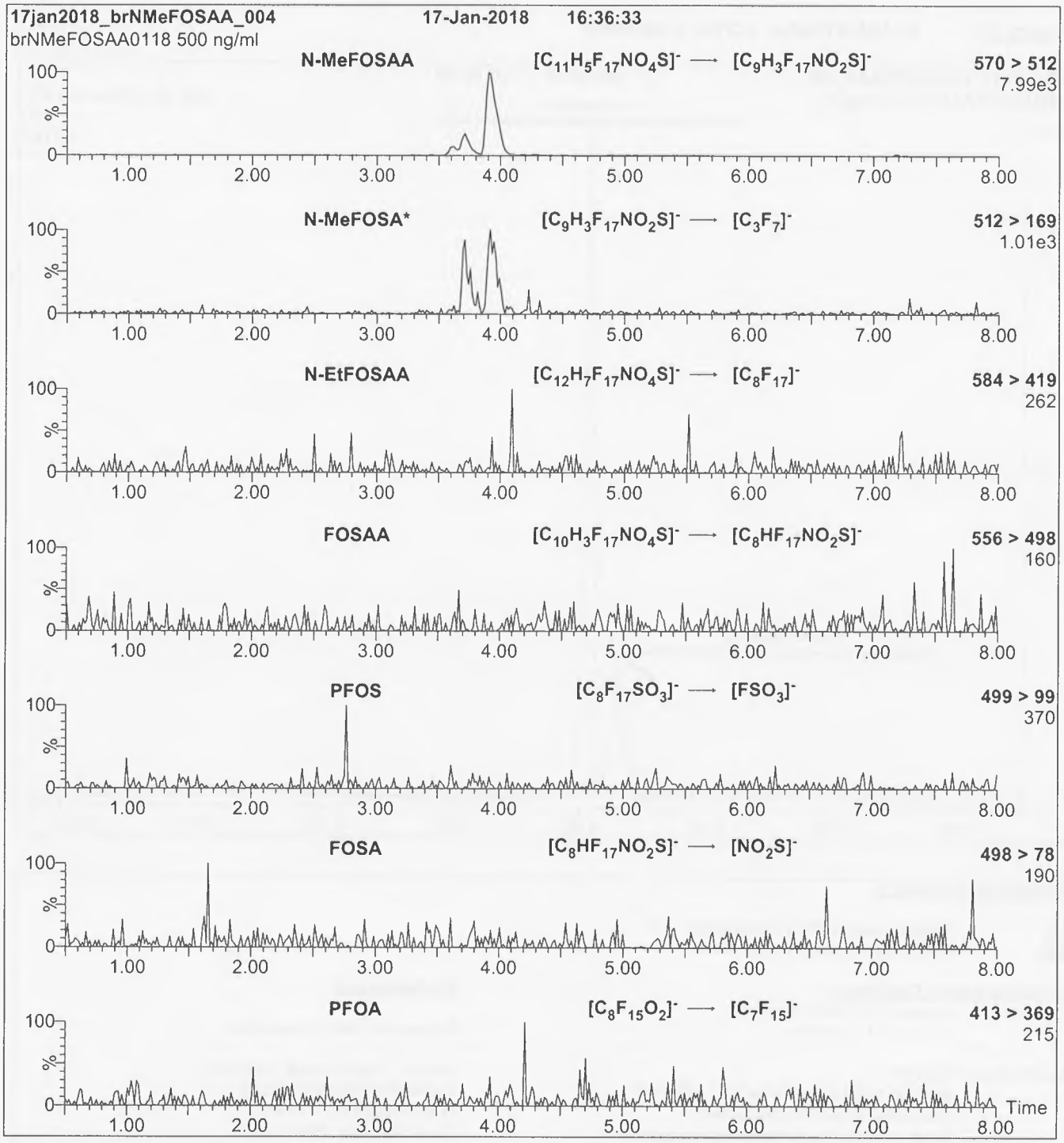
Flow: 300 µl/min

MS Parameters

Experiment: SIR (7 channels)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 15-60
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 3: **br-NMeFOSAA; LC/MS/MS Data (Selected MRM Transitions)**



***Note**: N-MeFOSA is formed by in-source fragmentation.

Conditions for Figure 3:

Injection: On-column

Mobile phase: Same as Figure 2

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.39e-3
Collision Energy (eV) = 11-40 (variable)

BATTELLE

It can be done

BDO Id: 180618-04

Reagent Receipt Report

Approved: ☐ Authorized ☐

Name:	PFOA - Technical Mix	Received:	6/18/2018
Vendor:	Wellington Laboratories	Custodian:	Thorn, Jonathan
Catalogue No:	T-PFOA	Expires:	2/16/2022
Type:	Solution	Consumed:	
Lot No:	TPFOA0217	Stored In:	Sample Preparation - C0103
Quantity:	1 ea mL % Moisture: 0		
Description:	PFOA - Technical Mix		

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

Notes:

Approved by: _____ Approved on: _____

Authorized by: _____ Authorized on: _____

180618-04

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: T-PFOA
LOT NUMBER: TPFOA0217
COMPOUND: Technical Ammonium Perfluorooctanoate

STRUCTURE: (see Table A)
CAS #: 95328-99-7 (for linear ammonium perfluorooctanoate)

MOLECULAR FORMULA: $C_8F_{15}O_2NH_4$
CONCENTRATION: 50 ± 2.5 µg/ml (gravimetric)
CHEMICAL PURITY: Technical material
SOLVENT(S): Methanol/Water (<1%)
LAST TESTED: (mm/dd/yyyy) 02/16/2017
EXPIRY DATE: (mm/dd/yyyy) 02/16/2022
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition
Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)
Figure 4: LC/MS Elution Profile of the Perfluorooctanoic Acid Isomers

ADDITIONAL INFORMATION:

- See page 2 for further details.
- This technical mixture is >97% ammonium perfluorooctanoate (branched and linear isomers). The remaining 3% consists of common impurities such as the perfluoroheptanoic and perfluorohexanoic acids.
- It is recommended that this solution be used as a *qualitative or semi-quantitative standard only*.
- Contains 4 mole eq. of NaOH to prevent conversion of any carboxylic acids to their corresponding methyl esters.
- The molecular weight of perfluoro-n-octanoic acid is 414.07 g/mol.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 02/22/2017 (mm/dd/yyyy)

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

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used for the identification and/or semi-quantitative determination of the specific chemical compound(s) it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

CHARACTERIZATION / HOMOGENEITY:

This product is a technical mixture obtained from an industrial manufacturer. It has been characterized as to its content and components using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Testing of samples in solution has shown it to be homogeneous. As this product is a technical mixture, it should not be used to quantitate any of the listed components.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

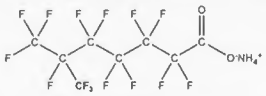
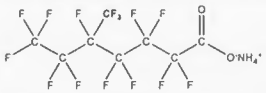
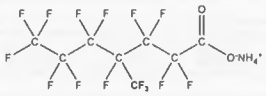
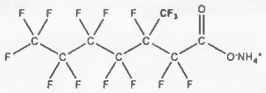
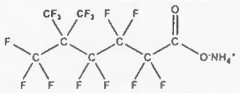
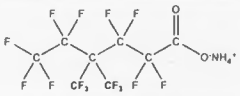
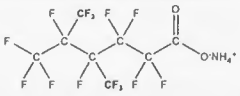
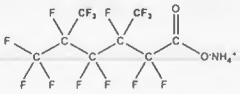
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ANSI-ASQ REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

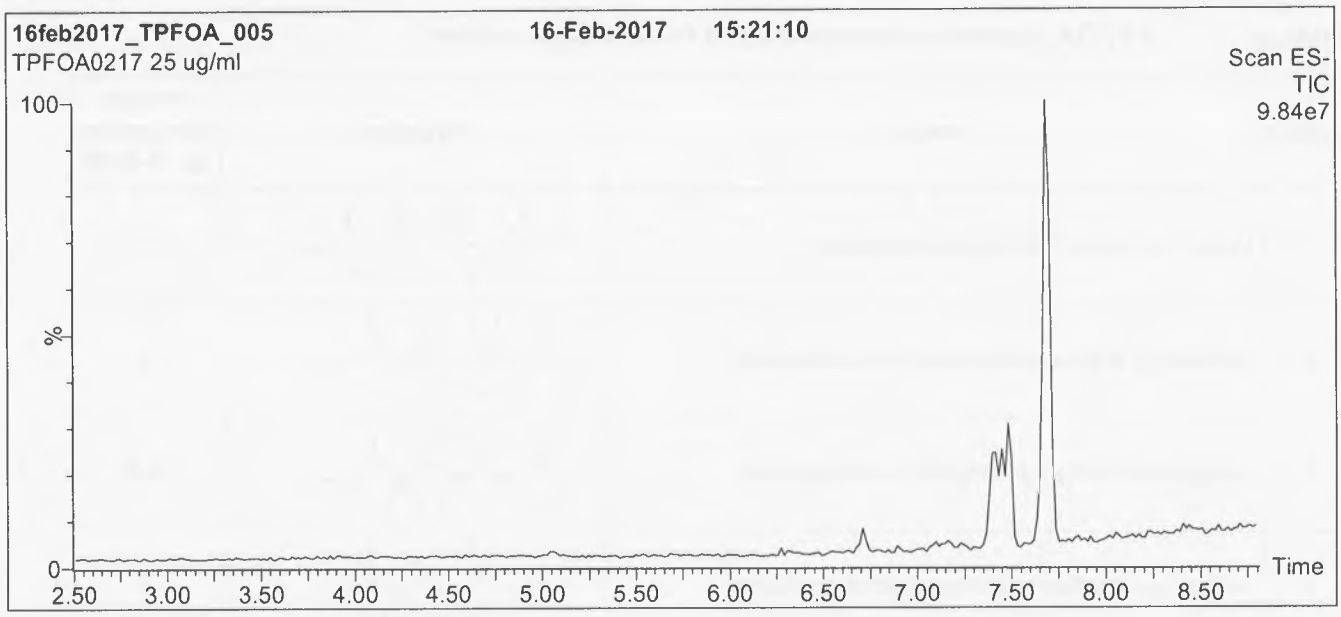
Table A: **T-PFOA; Isomeric Components and Percent Composition***

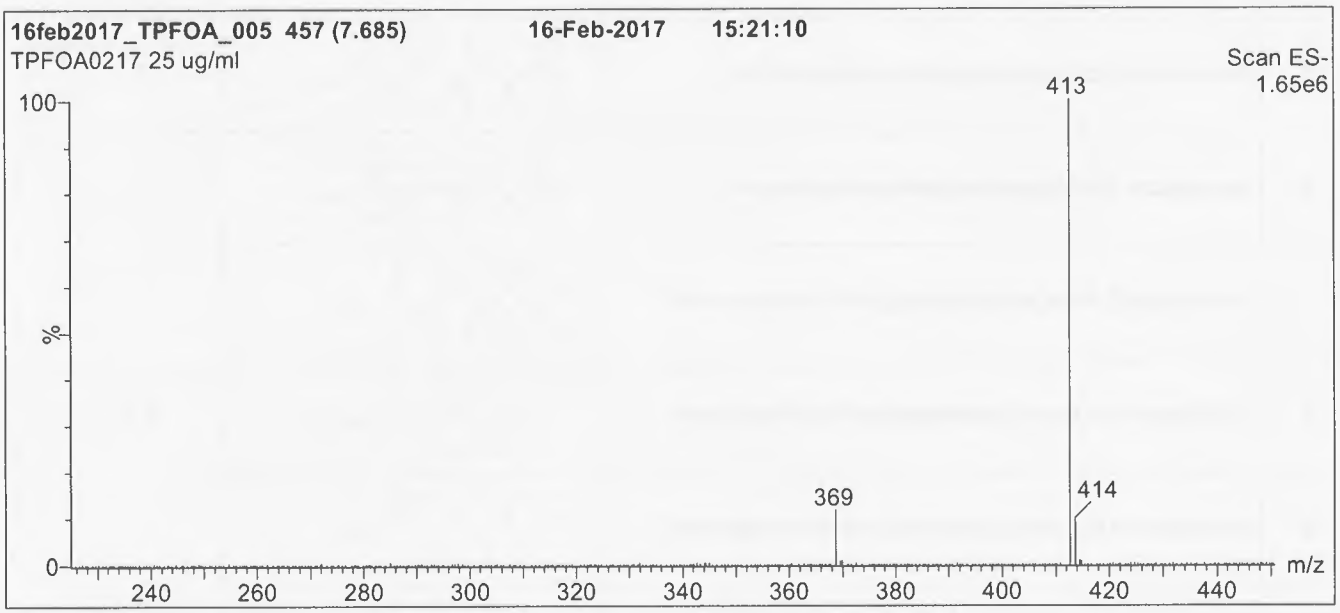
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Linear ammonium perfluoro-n-octanoate		79
2	Ammonium 6-trifluoromethylperfluoroheptanoate		9
3	Ammonium 5-trifluoromethylperfluoroheptanoate		4.5
4	Ammonium 4-trifluoromethylperfluoroheptanoate		4
5	Ammonium 3-trifluoromethylperfluoroheptanoate		3
6[a]	Ammonium 2-trifluoromethylperfluoroheptanoate		0.5
7	Ammonium 5,5-bis(trifluoromethyl)perfluorohexanoate		
8	Ammonium 4,4-bis(trifluoromethyl)perfluorohexanoate		
9[a]	Ammonium 4,5-bis(trifluoromethyl)perfluorohexanoate		
10	Ammonium 3,5-bis(trifluoromethyl)perfluorohexanoate		

* Percent Composition was determined by ^{19}F-NMR. The percentages displayed are of total ammonium perfluorooctanoate isomers only (isomers are labelled in Figure 4).

[a] Presence of this isomer could not be verified by LC/MS due to co-elution.

Figure 1: **T-PFOA; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions:

Column: Kinetex PFP
2.6 µm, 4.6 x 100 mm

Mobile phase: Gradient
Start: 30% (80:20 MeOH:ACN) / 70% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 50% organic over 5 min. Ramp to 90% organic over 5 min and hold for 1.5 min.
Return to initial conditions over 0.5 min.
Time: 13 min

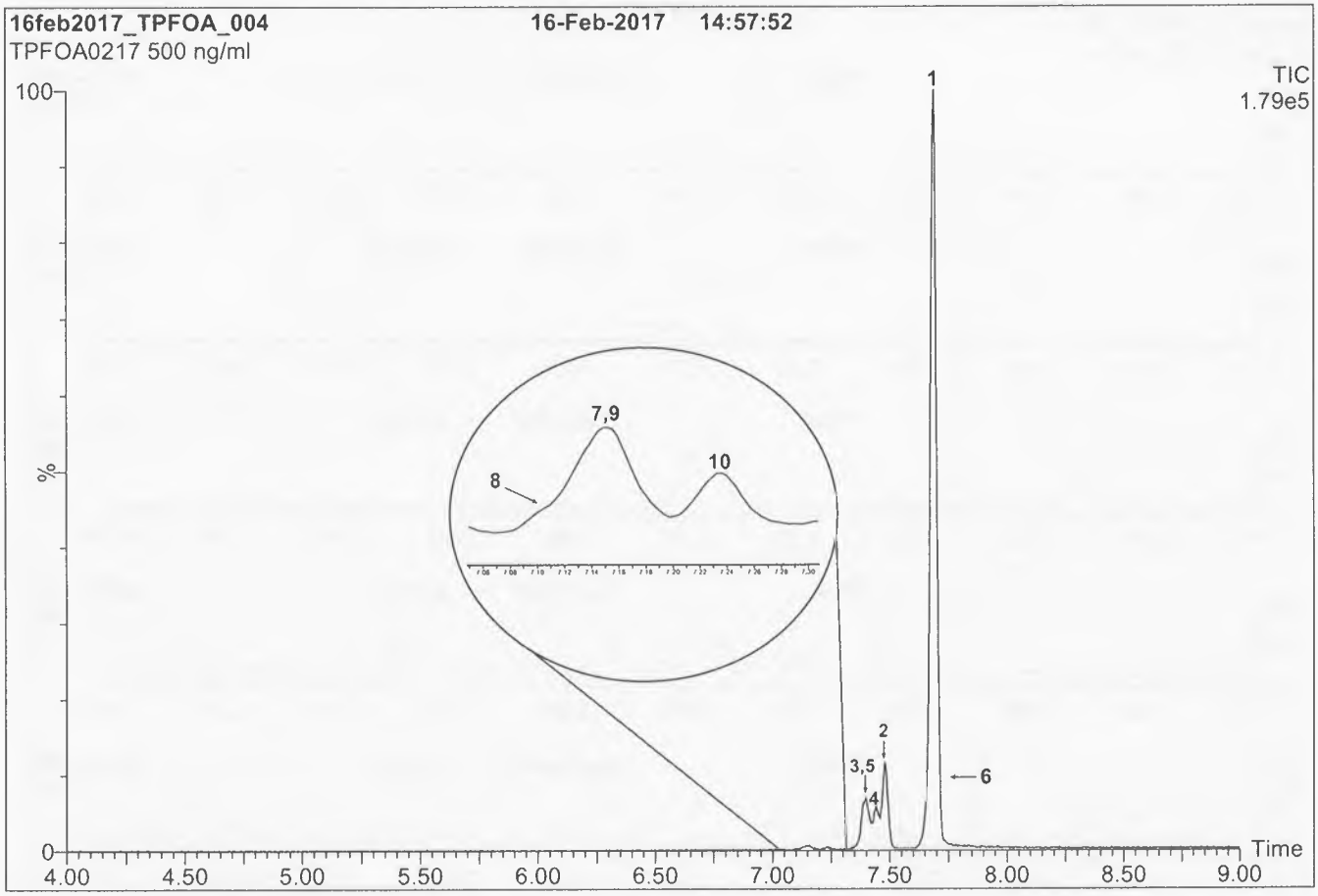
Flow: 1.0 ml/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 15.00
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **T-PFOA; LC/MS Data (SIR)**



Conditions for Figure 2:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions:

Column: Kinetex PFP
2.6 µm, 4.6 x 100 mm

Mobile phase: Gradient
Start: 30% (80:20 MeOH:ACN) / 70% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 50% organic over 5 min. Ramp to 90% organic over 5 min and hold for 1.5 min.
Return to initial conditions over 0.5 min.
Time: 13 min

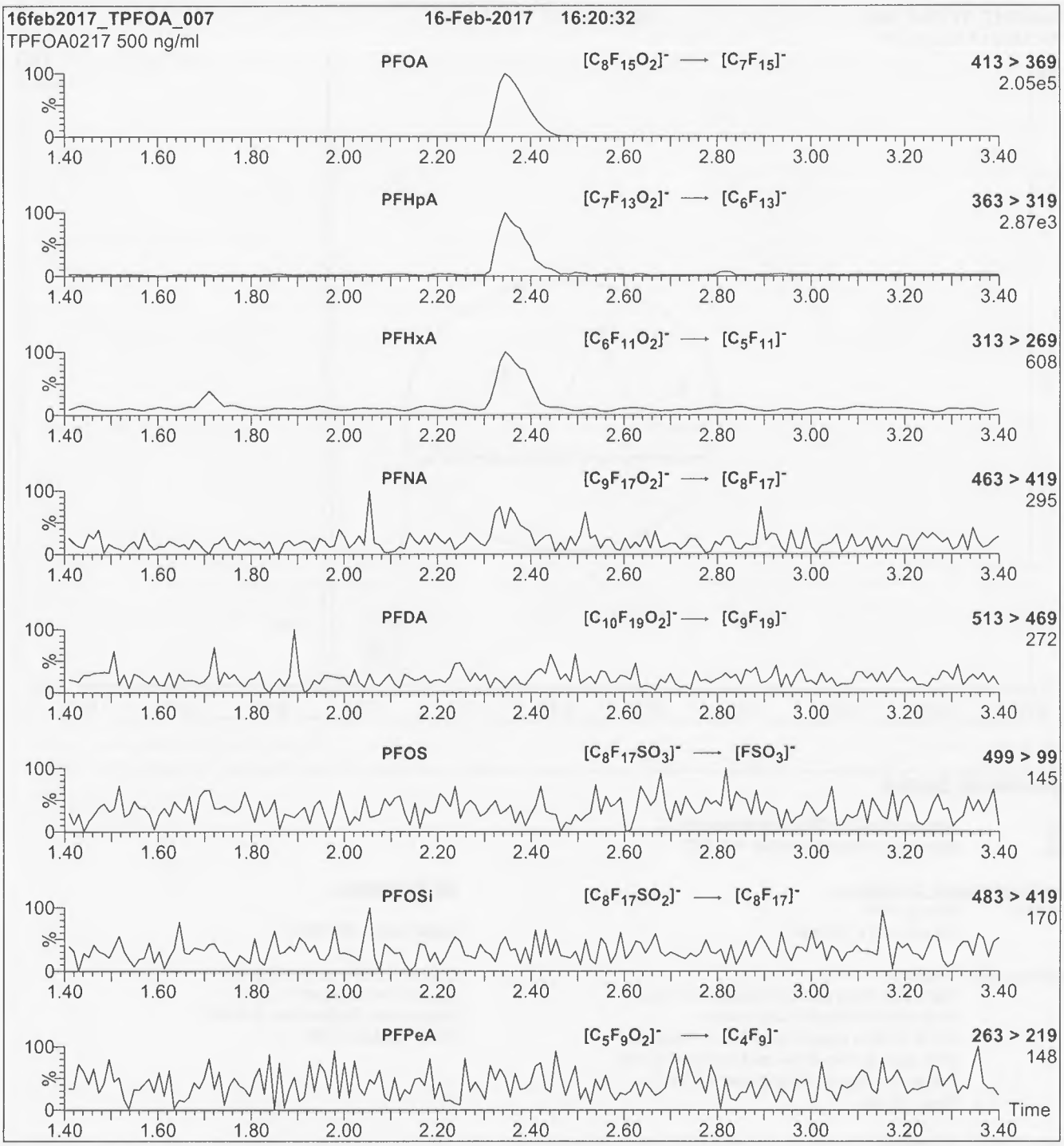
Flow: 1.0 ml/min

MS Parameters:

Experiment: SIR (ES^-)

Source conditions: see Figure 1
Source Temperature = 110 °C
Desolvation Temperature = 325 °C
Cone Voltage = 15V

Figure 3: **T-PFOA; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: Direct loop injection
10 µl (500 ng/ml T-PFOA)

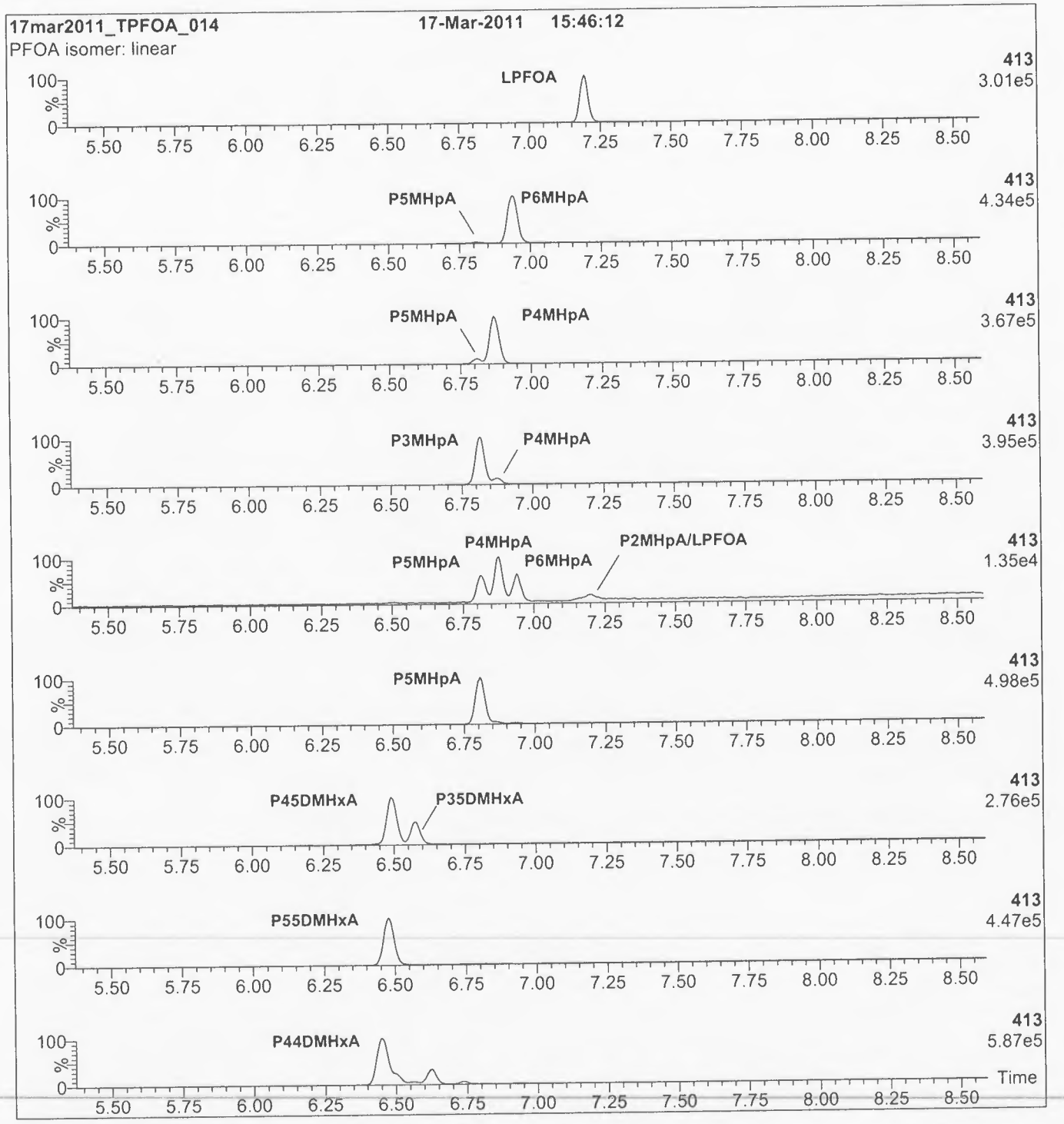
Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.39e-3
Collision Energy (eV) = variable (9-40)

Figure 4: **T-PFOA; LC/MS Elution Profile of the Perfluorooctanoic Acid Isomers**



Conditions for Figure 4:

Same as Figure 2.

BATTELLE

It can be done

BDO Id: 180618-06

Reagent Receipt Report

Approved: ☐ Authorized ☐

Name:	Branched PFHxS Standard (50 µg/m	Received:	6/18/2018
Vendor:	Wellington Laboratories	Custodian:	Thorn, Jonathan
Catalogue No:	br-PFHxSK	Expires:	1/4/2022
Type:	Solution	Consumed:	
Lot No:	brPFHxSK0117	Stored In:	Sample Preparation - C0103
Quantity:	1 ea mL % Moisture: 0		
Description:	Branched PFHxS Standard (50 µg/mL)		

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

Notes:

Approved by: _____ Approved on: _____

Authorized by: _____ Authorized on: _____

180618-06

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

br-PFHxSK

Potassium Perfluorohexanesulfonate Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-PFHxSK
LOT NUMBER:	brPFHxSK0117
CONCENTRATION:	50.0 ± 2.5 µg/ml (total potassium salt)
	45.5 ± 2.3 µg/ml (total PFHxS anion)
SOLVENT(S):	Methanol
DATE PREPARED: (mm/dd/yyyy)	01/03/2017
LAST TESTED: (mm/dd/yyyy)	01/04/2017
EXPIRY DATE: (mm/dd/yyyy)	01/04/2022
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorohexanesulfonate linear and branched isomers. The full name, structure and percent composition for each of the identified isomeric components are given in Table A.

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by ^{19}F-NMR
Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains ~ 0.5% of perfluoro-1-pentanesulfonate and ~ 0.2% of perfluoro-1-octanesulfonate.
- CAS#: 3871-99-6 (for linear isomer; potassium salt).

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

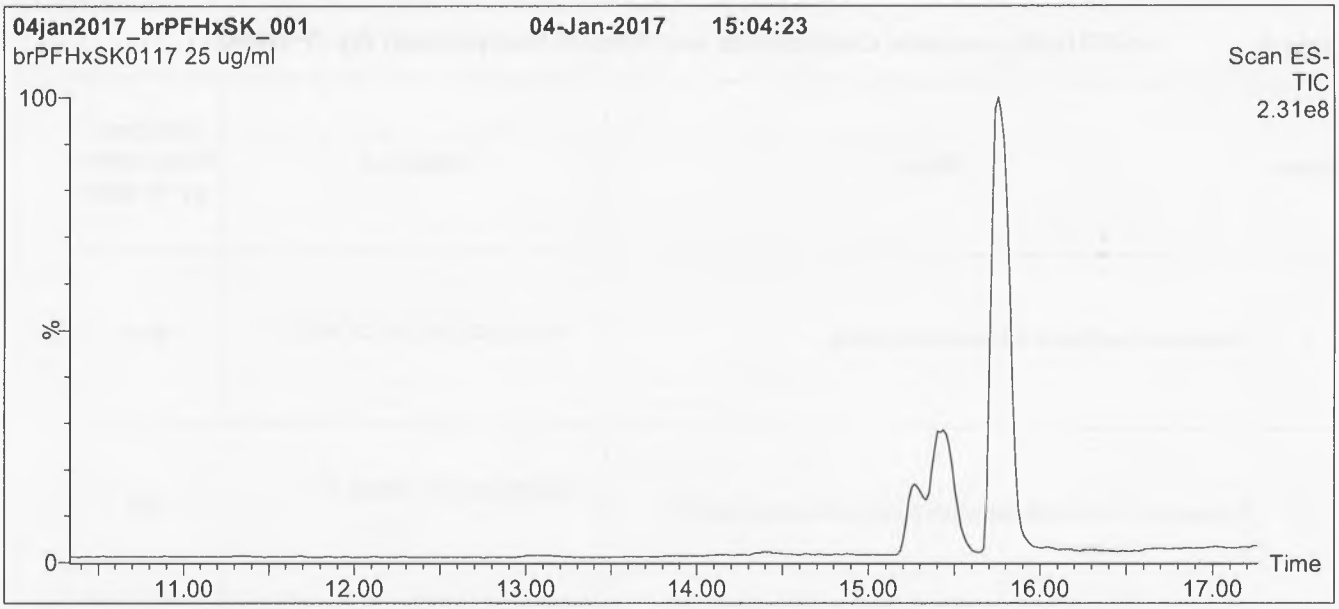
Table A: **br-PFHxSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

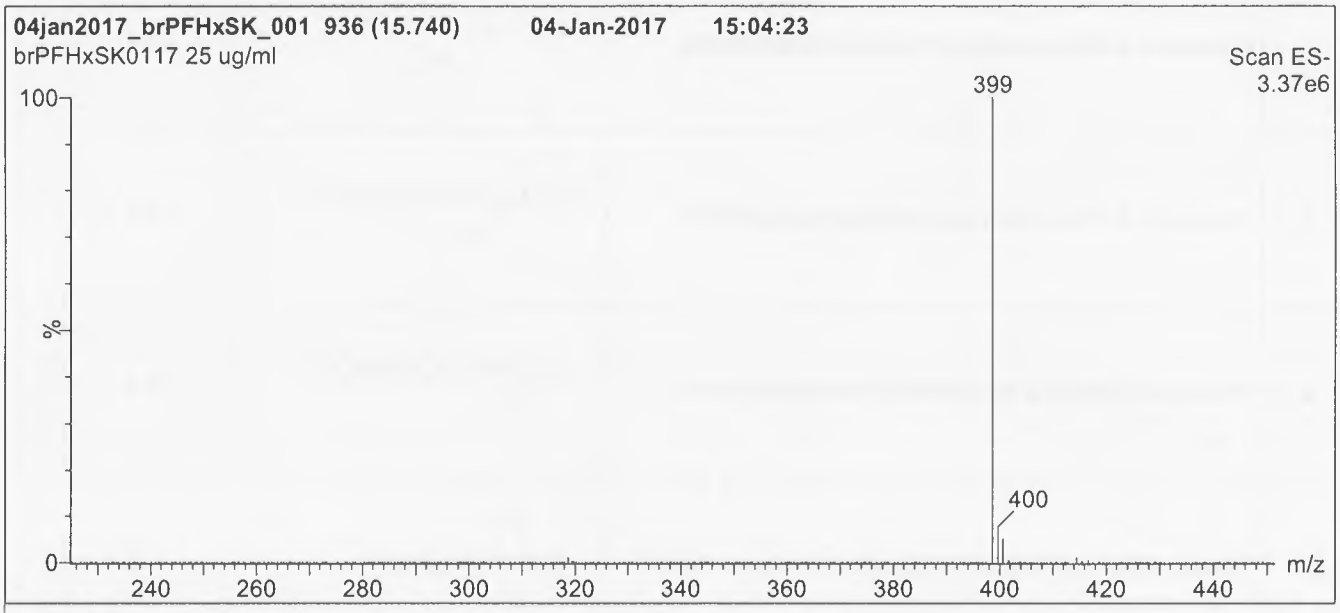
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-hexanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	81.1
2	Potassium 1-trifluoromethylperfluoropentanesulfonate**	$CF_3CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	2.9
3	Potassium 2-trifluoromethylperfluoropentanesulfonate	$CF_3CF_2CF_2CF(CF_3)CF_2SO_3^-K^+$	1.4
4	Potassium 3-trifluoromethylperfluoropentanesulfonate	$CF_3CF_2CF(CF_3)CF_2CF_2SO_3^-K^+$	5.0
5	Potassium 4-trifluoromethylperfluoropentanesulfonate	$CF_3CF(CF_3)CF_2CF_2CF_2SO_3^-K^+$	8.9
6	Potassium 3,3-di(trifluoromethyl)perfluorobutanesulfonate	$CF_3C(CF_3)_2CF_2CF_2SO_3^-K^+$	0.2
7	Other Unidentified Isomers		0.5

* Percent of total perfluorohexanesulfonate isomers only.
** Systematic Name: Potassium perfluorohexane-2-sulfonate.

Certified By: B.G. Chittim **Date:** 01/20/2017 (mm/dd/yyyy)

Figure 1: **br-PFHxSK; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 20% (80:20 MeOH:ACN) / 80% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 50% organic over 14 min. Ramp to 90% organic over 3 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 20 min

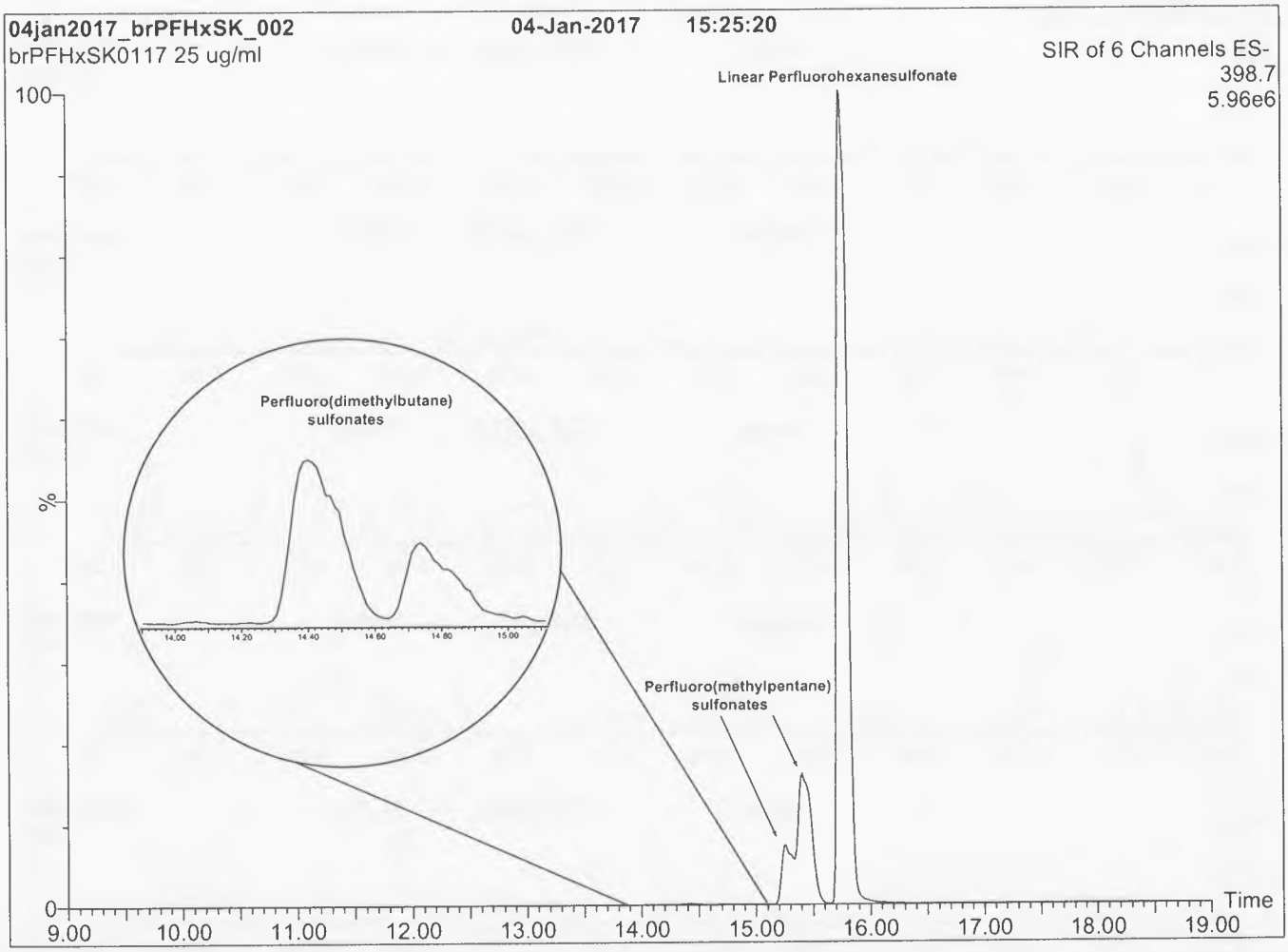
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 50.00
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 750

Figure 2: **br-PFHxSK; LC/MS Data (SIR)**



Conditions for Figure 2:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 20% (80:20 MeOH:ACN) / 80% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 50% organic over 14 min. Ramp to 90% organic over 3 min and hold for 1.5 min before returning to initial conditions in 0.5 min.
Time: 20 min

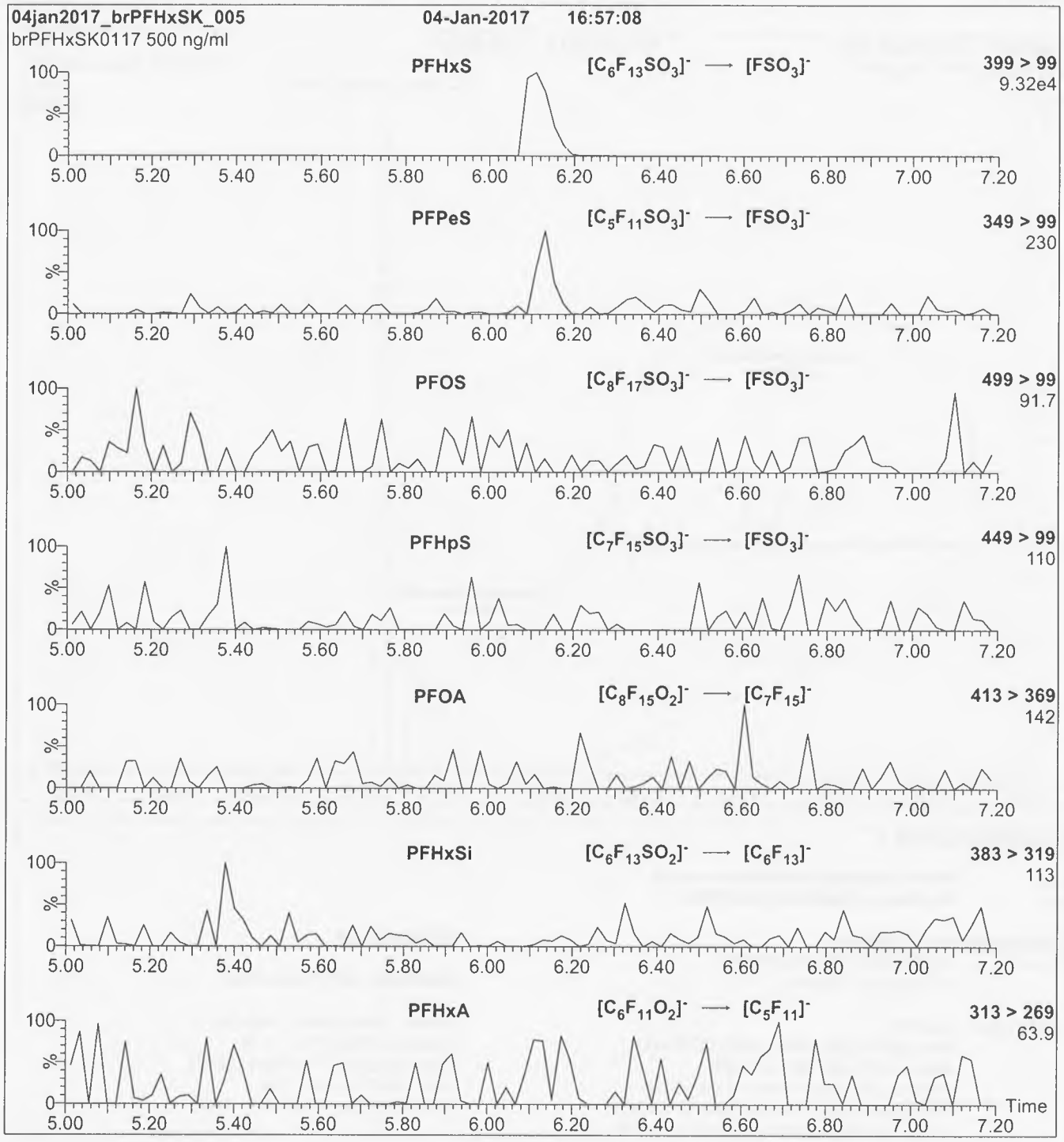
Flow: 300 µl/min

MS Parameters

Experiment: SIR (6 channels)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = variable (15-62)
Cone Gas Flow (l/hr) = 60
Desolvation Gas Flow (l/hr) = 750

Figure 3: **br-PFHxSK; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: Direct loop injection
10 µl (500 ng/ml br-PFHxSK)

Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.35e-3
Collision Energy (eV) = 30

BATTELLE

It can be done

BDO Id: 180618-07

Reagent Receipt Report

Approved: ☐ Authorized ☐

Name:	Branched PFOS Standard (50 µg/mL	Received:	6/18/2018
Vendor:	Wellington Laboratories	Custodian:	Thorn, Jonathan
Catalogue No:	br-PFOSK	Expires:	1/12/2022
Type:	Solution	Consumed:	
Lot No:	brPFOSK0117	Stored In:	Sample Preparation - C0103
Quantity:	1 ea mL % Moisture: 0		
Description:	Branched PFOS Standard (50 µg/mL)		

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

Notes:

Approved by: _____ Approved on: _____

Authorized by: _____ Authorized on: _____

180618-07

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

br-PFOSK

Potassium Perfluorooctanesulfonate Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-PFOSK
LOT NUMBER:	brPFOSK0117
CONCENTRATION:	50 ± 2.5 µg/ml (total potassium salt)
	46.4 ± 2.3 µg/ml (total PFOS anion)
SOLVENT(S):	Methanol
DATE PREPARED: (mm/dd/yyyy)	01/09/2017
LAST TESTED: (mm/dd/yyyy)	01/12/2017
EXPIRY DATE: (mm/dd/yyyy)	01/12/2022
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

The chemical purity has been determined to be ≥98% perfluorooctanesulfonate linear and branched isomers. The full name, structure and percent composition for each of the isomeric components are given in Table A.

DOCUMENTATION/ DATA ATTACHED:

Table A: Isomeric Components and Percent Composition by ^{19}F-NMR
Figure 1: LC/MS Data (TIC and Mass Spectrum)
Figure 2: LC/MS Data (SIR)
Figure 3: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- A 5-point calibration curve was generated using linear PFOS (potassium salt) and mass-labelled PFOS as an internal standard to enable quantitation of br-PFOSK using isotopic dilution.
- CAS#: 2795-39-3 (for linear isomer; potassium salt).

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

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HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products are compared to older lots in the same manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using NIST and/or NRC traceable external weights. All volumetric glassware used is of Class A tolerance and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

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LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

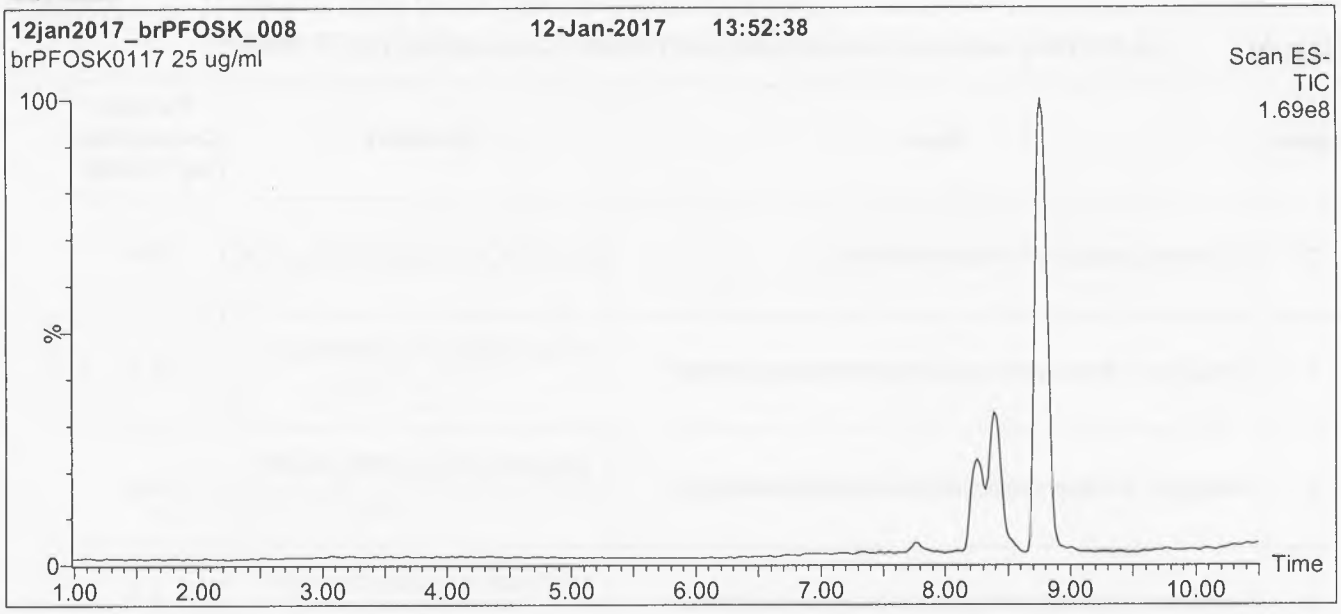
Table A: **br-PFOSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

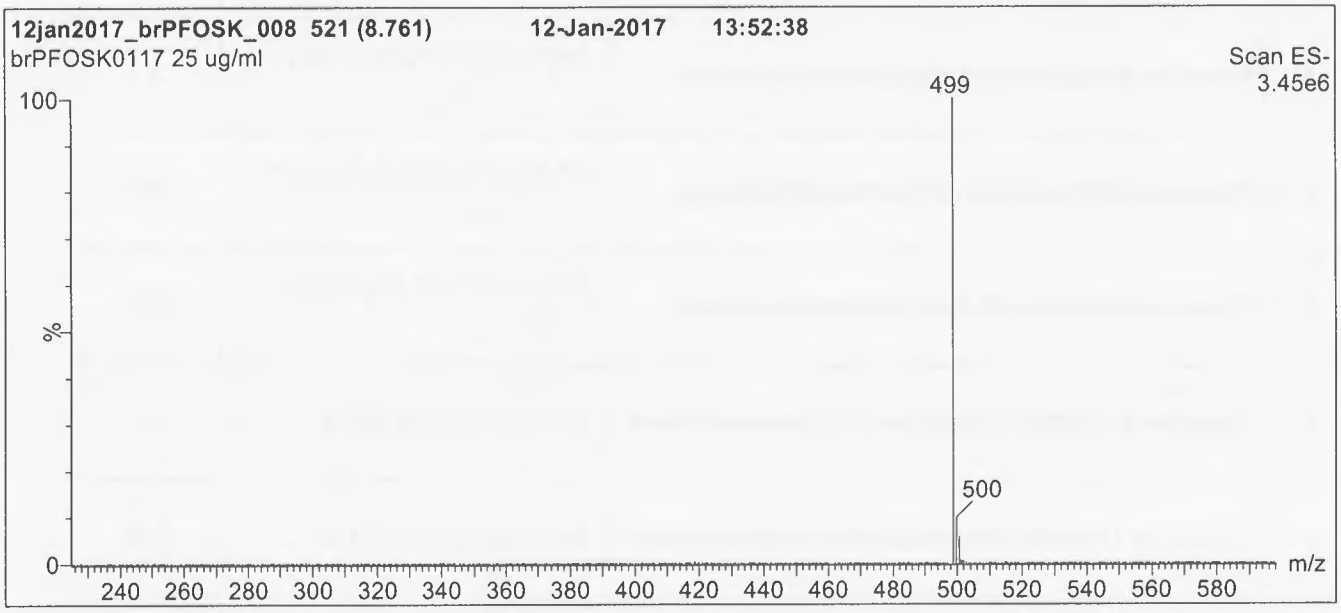
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-octanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	78.8
2	Potassium 1-trifluoromethylperfluoroheptanesulfonate**	$CF_3CF_2CF_2CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	1.2
3	Potassium 2-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF(CF_3)CF_2SO_3^-K^+$	0.6
4	Potassium 3-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF_2CF_2CF(CF_3)CF_2CF_2SO_3^-K^+$	1.9
5	Potassium 4-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF_2CF(CF_3)CF_2CF_2CF_2SO_3^-K^+$	2.2
6	Potassium 5-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF(CF_3)CF_2CF_2CF_2CF_2SO_3^-K^+$	4.5
7	Potassium 6-trifluoromethylperfluoroheptanesulfonate	$CF_3CF(CF_3)CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	10.0
8	Potassium 5,5-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3C(CF_3)(CF_3)CF_2CF_2CF_2CF_2SO_3^-K^+$	0.2
9	Potassium 4,4-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3CF_2C(CF_3)(CF_3)CF_2CF_2CF_2SO_3^-K^+$	0.03
10	Potassium 4,5-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3CF(CF_3)CF(CF_3)CF_2CF_2CF_2SO_3^-K^+$	0.4
11	Potassium 3,5-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3CF(CF_3)CF_2CF(CF_3)CF_2CF_2SO_3^-K^+$	0.07

* Percent of total perfluorooctanesulfonate isomers only. Isomers are labelled in Figure 2.
** Systematic Name: Potassium perfluorooctane-2-sulfonate.

Certified By: B.G. Chittim **Date:** 01/20/2017 (mm/dd/yyyy)

Figure 1: **br-PFOSK; LC/MS Data (TIC and Mass Spectrum)**





Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 45% (80:20 MeOH:ACN) / 55% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 12 min and hold for 2 min.
Return to initial conditions over 0.5 min.
Time: 16 min

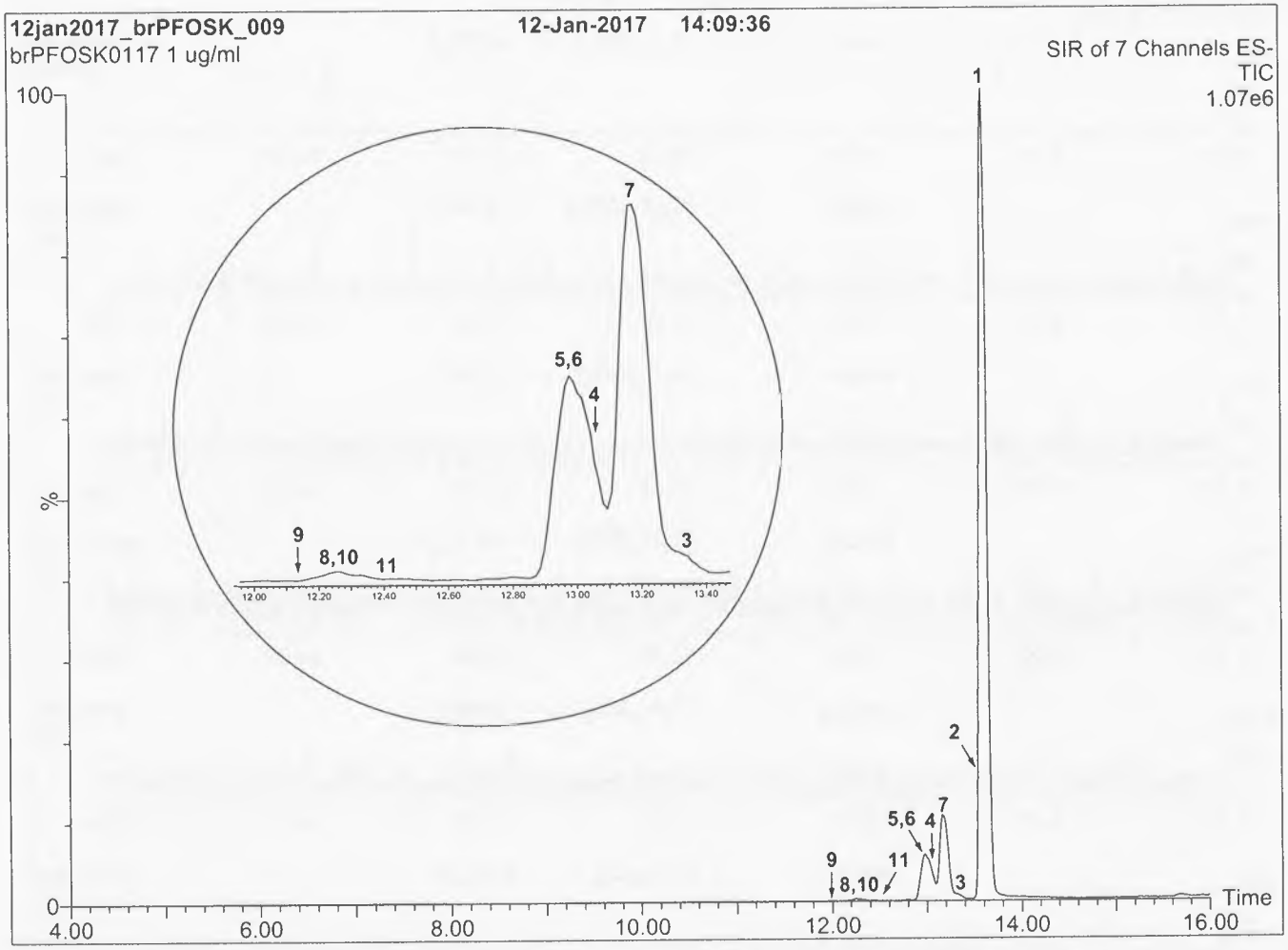
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = 60.00
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **br-PFOSK; LC/MS Data (SIR)**



Conditions for Figure 2:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

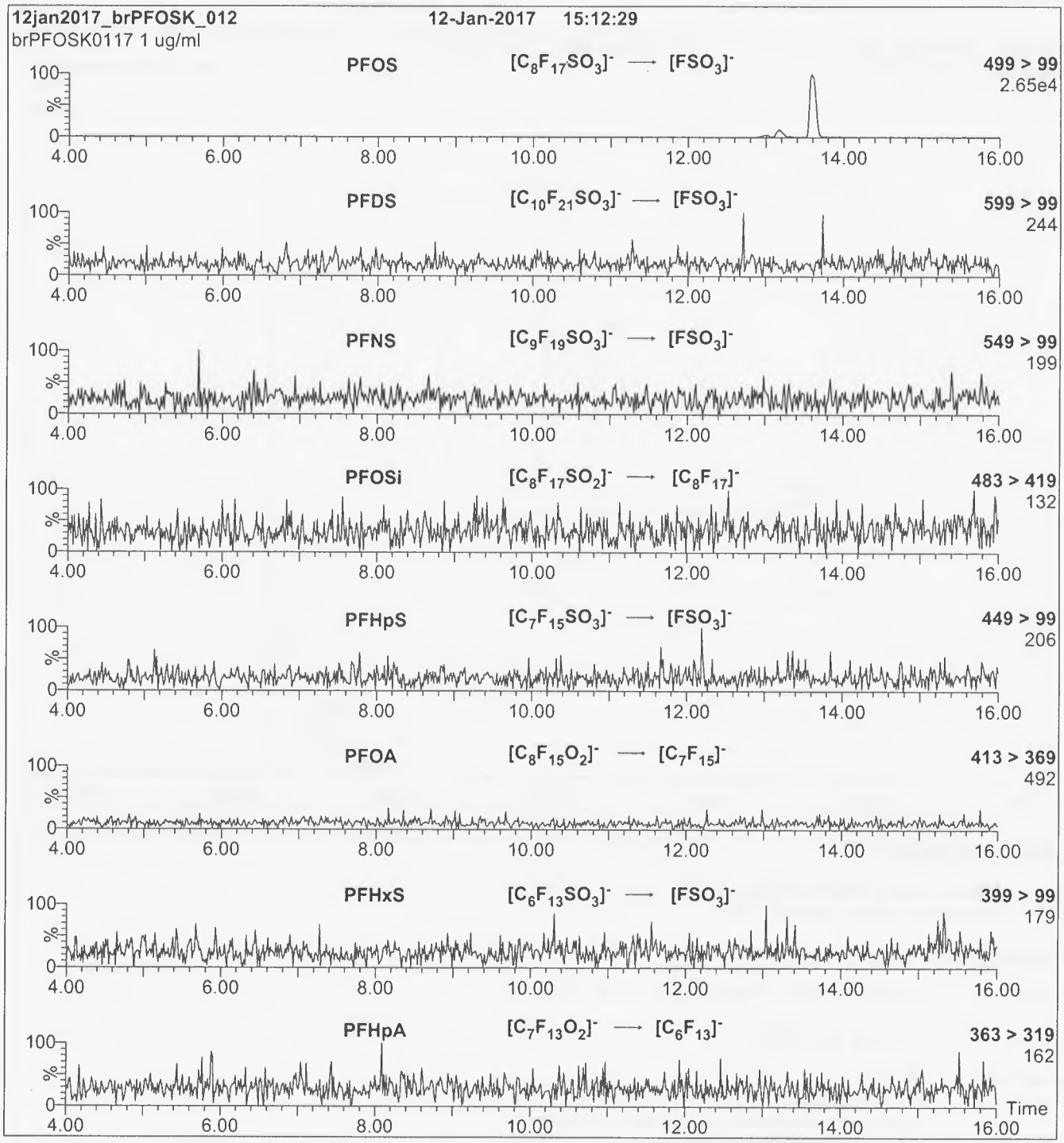
Chromatographic Conditions:

Column:	Acquity UPLC BEH Shield RP_{18} (1.7 µm, 2.1 x 100 mm)
Injection:	1.0 µg/ml of br-PFOSK
Mobile Phase:	Gradient 45% (80:20 MeOH:ACN) / 55% H_2O (both with 10 mM NH_4OAc buffer) Ramp to 90% organic over 15 min and hold for 3 min. Return to initial conditions over 1 min. Time: 20 min
Flow:	300 µl/min

MS Conditions:

SIR (ES^-)
Source = 110 °C
Desolvation = 325 °C
Cone Voltage = 60V

Figure 3: **br-PFOSK; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 3:

Injection: On-column

Mobile phase: Same as Figure 2

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.31e-3
Collision Energy (eV) = 11-50 (variable)

Absolute Standards, Inc.
800-368-1131
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Certified Reference Material CRM

ISO 9001 QS Registered
ISO 17025 & 17034 Accredited
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

180705-02

Part Number: 99207
Lot Number: 061918
Description: PFOA - DOD
24 components
Expiration Date: 061923
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 1.0
NIST Test ID#: 2684186

Solvent(s):	Lot#	
Methanol (1 mM KOH)	061918	(98%)
2-Propanol	23214	(2%)

5E-05 Balance Uncertainty
Volume(s) shown below were combined and diluted to (mL): 50.0 0.007 Flask Uncertainty

Formulated By:	Mario Luis	061918 DATE
Reviewed By:	Pedro L. Rentas	061918 DATE

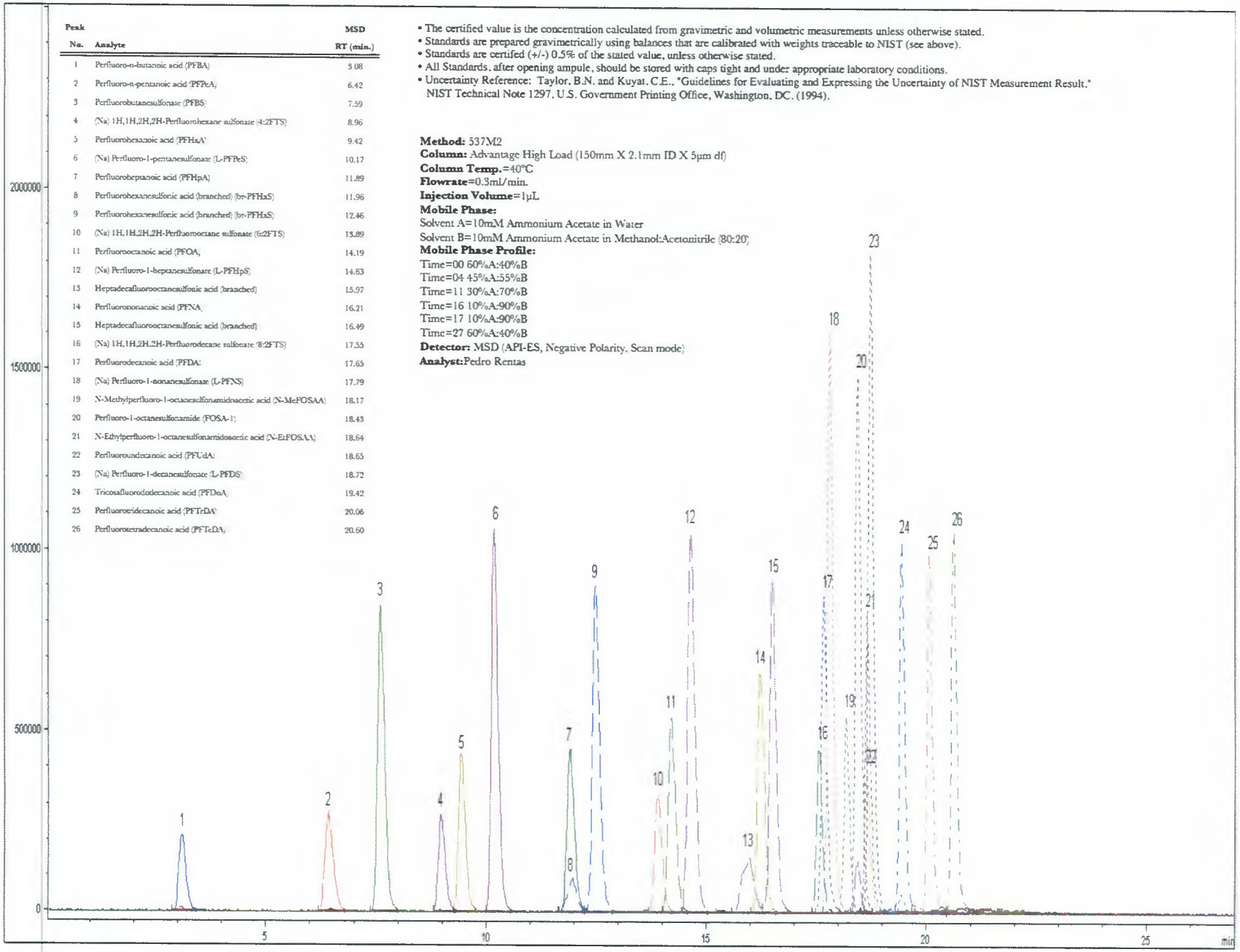
Note: All assigned values are anion concentrations.

	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-butanoic acid (linear)	99542	110317	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	110317	0.02	1.00	0.004	50.7	1.01	0.01	2706-90-3	N/A	N/A
3.	Perfluorohexanoic acid	99199	030617	0.02	1.00	0.004	50.3	1.01	0.01	307-24-4	N/A	N/A
4.	Perfluoroheptanoic acid	99197	030517	0.02	1.00	0.004	50.1	1.00	0.01	375-85-9	N/A	N/A
5.	Perfluorooctanoic acid	99202	030617	0.02	1.00	0.004	50.2	1.00	0.01	335-67-1	N/A	ipr-rat 189mg/kg
6.	Perfluorononanoic acid	99200	030617	0.02	1.00	0.004	50.1	1.00	0.01	375-95-1	N/A	N/A
7.	Perfluorodecanoic acid	99195	030617	0.02	1.00	0.004	50.1	1.00	0.01	335-76-2	N/A	orl-rat 57mg/kg
8.	Perfluoroundecanoic acid	99205	030617	0.02	1.00	0.004	50.1	1.00	0.01	2058-94-8	N/A	N/A
9.	Tricosafluorododecanoic acid	99196	030617	0.02	1.00	0.004	50.1	1.00	0.01	307-55-1	N/A	N/A
10.	Perfluorotridecanoic acid	99204	030617	0.02	1.00	0.004	50.1	1.00	0.01	72629-94-8	N/A	N/A
11.	Perfluorotetradecanoic acid	99203	030617	0.02	1.00	0.004	50.1	1.00	0.01	376-06-7	N/A	N/A
12.	Perfluoro-1-octanesulfonamide	3677	FOSA0817I	0.02	1.00	0.004	50.0	1.00	0.01	754-91-6	N/A	N/A
13.	N-Methylperfluoro-1-octanesulfonamidoacetic acid	3667	NMeFOSAA0118	0.02	1.00	0.004	50.0	1.00	0.01	2355-31-9	N/A	N/A
14.	N-Ethylperfluoro-1-octanesulfonamidoacetic acid	3664	NEtFOSAA0118	0.02	1.00	0.004	50.0	1.00	0.01	2991-50-6	N/A	N/A
15.	Perfluorobutanesulfonic acid	99194	031017	0.02	1.00	0.004	50.7	1.01	0.01	375-73-5	N/A	N/A
16.	Perfluoro-1-pentanesulfonate	99544	111017	0.02	0.98	0.004	51.3	1.00	0.01	630402-22-1	N/A	N/A
17.	Perfluorohexanesulfonic acid (branched)	99198	030617	0.02	1.00	0.004	50.6	1.01	0.01	3871-99-6	N/A	N/A
18.	Perfluoro-1-heptanesulfonic acid	3672	LPFHpS0817	0.021	1.05	0.004	47.6	1.00	0.01	375-92-8	N/A	N/A
19.	Heptadecafluorooctanesulfonic acid (branched)	99201	030617	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	LPFNS0917	0.021	1.05	0.004	48.0	1.01	0.01	98789-57-2	N/A	N/A
21.	Perfluoro-1-decanesulfonic acid	3671	LPFDS0217	0.021	1.05	0.004	48.2	1.01	0.01	2806-15-7	N/A	N/A
22.	1H,1H,2H,2H-Perfluorohexane sulfonic acid	3955	42FTS1216	0.0214	1.07	0.004	46.7	1.00	0.01	00-00-0	N/A	N/A
23.	1H,1H,2H,2H-Perfluorooctane sulfonic acid	3661	62FTS0616	0.021	1.05	0.004	47.4	1.00	0.01	27619-97-2	N/A	N/A
24.	1H,1H,2H,2H-Perfluorodecane sulfonic acid	3662	82FTS1216	0.021	1.05	0.004	47.9	1.01	0.01	39108-34-4	N/A	N/A

Peak No.	Analyte	MSD RT (min.)
1	Perfluoro-n-butanoic acid (PFBA)	5.08
2	Perfluoro-n-pentanoic acid (PFPeA)	6.42
3	Perfluorobutanesulfonate (PFBS)	7.59
4	(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate (4:2FTS)	8.96
5	Perfluorohexanoic acid (PFHxA)	9.42
6	(Na) Perfluoro-1-pentanesulfonate (L-PFPeS)	10.17
7	Perfluoroheptanoic acid (PFHpA)	11.89
8	Perfluorohexanesulfonic acid (branched) (br-PFHxS)	11.96
9	Perfluorohexanesulfonic acid (branched) (br-PFHxS)	12.46
10	(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate (6:2FTS)	13.89
11	Perfluorooctanoic acid (PFOA)	14.19
12	(Na) Perfluoro-1-heptanesulfonate (L-PFHpS)	14.63
13	Heptadecafluorooctanesulfonic acid (branched)	15.97
14	Perfluorononanoic acid (PFNA)	16.21
15	Heptadecafluorooctanesulfonic acid (branched)	16.49
16	(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate (8:2FTS)	17.55
17	Perfluorodecanoic acid (PFDA)	17.65
18	(Na) Perfluoro-1-nonanesulfonate (L-PFNS)	17.79
19	N-Methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA)	18.17
20	Perfluoro-1-octanesulfonamide (FOSA-1)	18.43
21	N-Ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	18.64
22	Perfluoroundecanoic acid (PFUdA)	18.65
23	(Na) Perfluoro-1-decanesulfonate (L-PFDS)	18.72
24	Tricosafluorododecanoic acid (PFDoA)	19.42
25	Perfluorotridecanoic acid (PFTrDA)	20.06
26	Perfluorotetradecanoic acid (PFTeDA)	20.60

- 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 certifed (+/-) 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).

Method: 537M2
Column: Advantage High Load (150mm X 2.1mm ID X 5µm df)
Column Temp.=40°C
Flowrate=0.3mL/min.
Injection Volume=1µL
Mobile Phase:
Solvent A=10mM Ammonium Acetate in Water
Solvent B=10mM Ammonium Acetate in Methanol:Acetonitrile (80:20)
Mobile Phase Profile:
Time=00 60%A:40%B
Time=04 45%A:55%B
Time=11 30%A:70%B
Time=16 10%A:90%B
Time=17 10%A:90%B
Time=27 60%A:40%B
Detector: MSD (API-ES, Negative Polarity, Scan mode)
Analyst: Pedro Rentas



BATTELLE

It can be done

BDO Id: 180726-04

Reagent Receipt Report

Approved: ☑ Authorized ☐

Name:	Mass-labelled PFAS injection standar	**Received:**	7/26/2018
Vendor:	Wellington Laboratories	**Custodian:**	Thorn, Jonathan
Catalogue No:	MPFAC-C-IS	**Expires:**	5/2/2022
Type:	Solution	**Consumed:**	
Lot No:	MPFACCIS0516	**Stored In:**	LC Laboratory - R0107
Quantity:	2 ea 1.2 mL **% Moisture:** 0		
Description:	Mass-labelled PFAS injection standards		

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:
13C2-PFDA	BDO-2110	2.0000	100.00	--	--	☐			
13C2-PFOA	BDO-2107	2.0000	100.00	--	--	☐			
13C3-PFBA	BDO-2231	2.0000	100.00	--	--	☐			
13C4-PFOS	BDO-2121	1.9140	100.00	--	--	☐			

Total Analytes: 4

Notes:

Approved by:	Lizotte Jr, Robert	**Approved on:**	7/27/2018 11:10:00 AM
Authorized by:		**Authorized on:**	

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

MPFAC-C-IS

Mass-Labelled Perfluorinated Compound Injection Standards Solution

PRODUCT CODE:	MPFAC-C-IS
LOT NUMBER:	MPFACCIS0516
SOLVENT(S):	Methanol / Water (<1%)
DATE PREPARED: (mm/dd/yyyy)	05/24/2016
LAST TESTED: (mm/dd/yyyy)	05/02/2017
EXPIRY DATE: (mm/dd/yyyy)	05/02/2022
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

MPFAC-C-IS is a solution/mixture of mass-labelled (^{13}C) perfluoroalkylcarboxylic acids and a mass-labelled (^{13}C) perfluoroalkylsulfonate. The components and their concentrations are given in Table A.

MPFAC-C-IS was designed for, and prepared to be used with, PFC-CVS-C.

The individual mass-labelled perfluoroalkylcarboxylic acids and mass-labelled perfluoroalkylsulfonate all have chemical purities of >98% and isotopic purities of ≥99%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- The mass-labelled perfluoroalkylsulfonate compound concentration is reported as the salt.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HAZARDS:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Where possible, all of our products are synthesized using single-product unambiguous routes. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner, which further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly tested by an external ISO/IEC 17025 accredited calibration company. In addition, their calibration is verified prior to each weighing using calibrated NIST and/or NRC traceable external weights. All volumetric glassware used is calibrated, of Class A tolerance, and has been tested according to the appropriate ASTM procedures, which are ultimately traceable to NIST. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

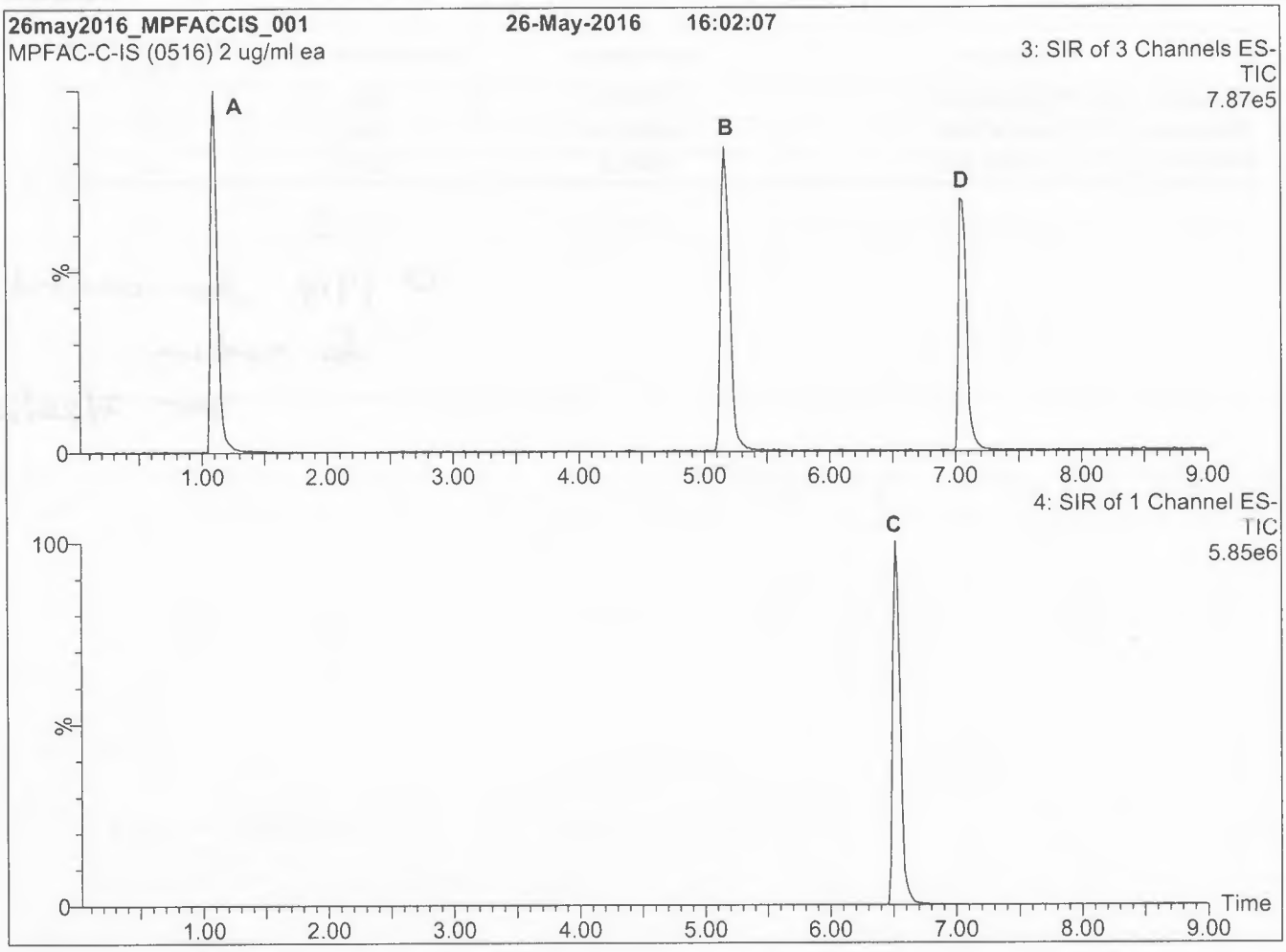
Table A: **MPFAC-C-IS; Components and Concentrations (ng/ml; ± 5% in Methanol / Water (<1%))**

Compound	Abbreviation	Concentration (ng/ml)	Peak Assignment in Figure 1
Perfluoro-n-[2,3,4-$^{13}C_3$]butanoic acid	M3PFBA	2000	A
Perfluoro-n-[1,2-$^{13}C_2$]octanoic acid	M2PFOA	2000	B
Perfluoro-n-[1,2-$^{13}C_2$]decanoic acid	MPFDA	2000	D
Sodium perfluoro-1-[1,2,3,4-$^{13}C_4$]octanesulfonate	MPFOS	2000 ①	C

① 1914 when corrected for sodium
JMT 7/26/2017

Certified By: _____ **Date:** 05/04/2017 (mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **MPFAC-C-IS; LC/MS Data (Total Ion Current Chromatogram; SIR)**



Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% (80:20 MeOH:ACN) / 50% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min
and hold for 2 min before returning
to initial conditions in 1 min.
Time: 12 min

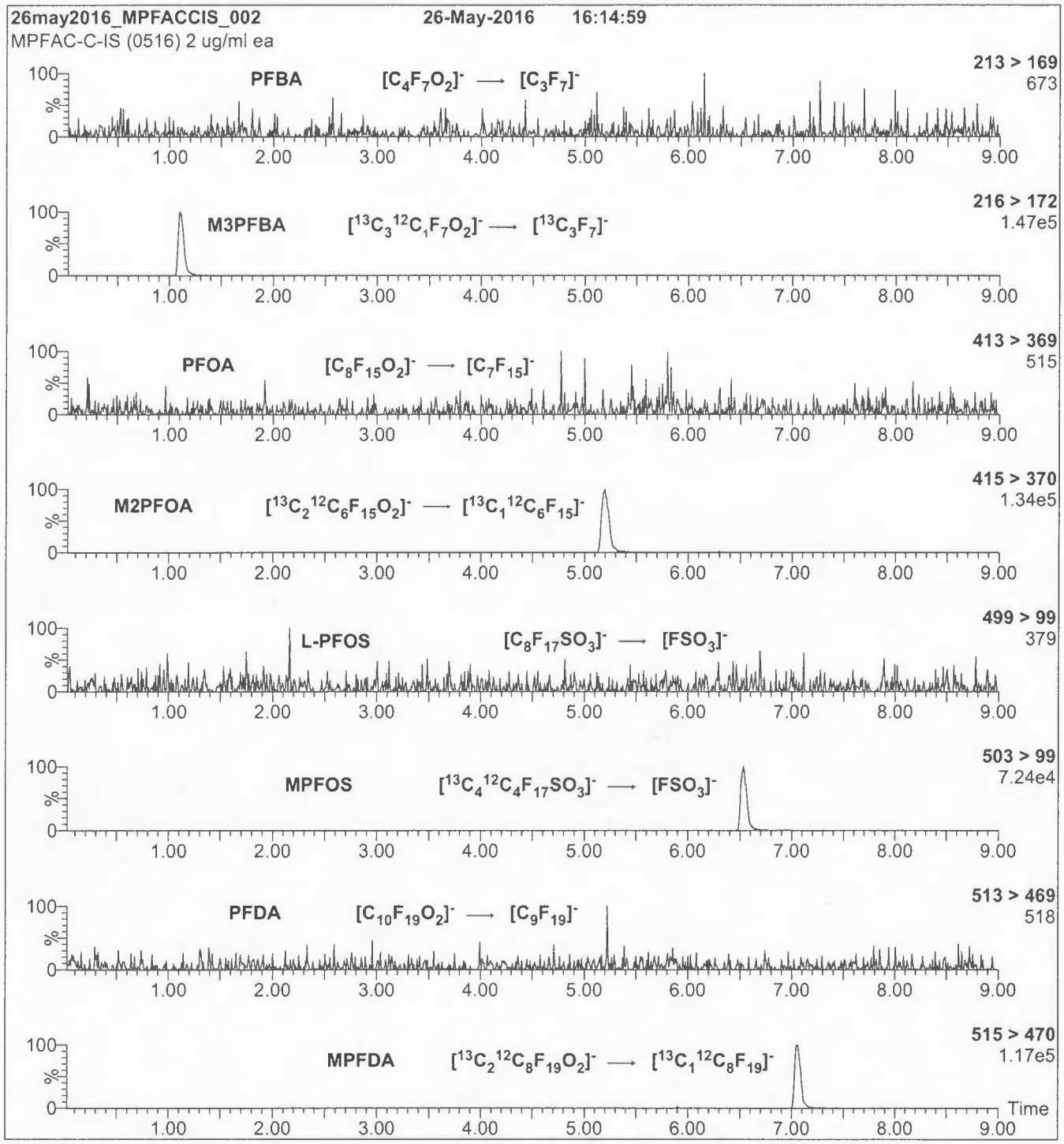
Flow: 300 µl/min

MS Parameters

Experiment: SIR

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = variable (10-80)
Cone Gas Flow (l/hr) = 50
Desolvation Gas Flow (l/hr) = 750

Figure 2: **MPFAC-C-IS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFAC-C-IS)

Mobile phase: Same as Figure 1

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.50e-3

Collision Energy (eV) = 8-50 (variable)

BATTELLE

It can be done

BDO Id: 180726-05

Reagent Receipt Report

Approved: ☑ Authorized ☐

Name: Mass-labelled PFAS Extraction Stand

Vendor: Wellington Laboratories

Catalogue No: MPFAC-24ES

Type: Solution

Lot No: MPFAC24ES0218

Quantity: 2 ea 1.2 mL **% Moisture:** 0

Description: Mass-labelled PFAS Extraction Standard Solution

Received: 7/26/2018

Custodian: Thorn, Jonathan

Expires: 2/7/2023

Consumed:

Stored In: LC Laboratory - R0107

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:
13C2-4:2FTS	BDO-2229	0.9350	100.00	--	--	☐			
13C2-6:2FTS	BDO-2230	0.9490	100.00	--	--	☐			
13C2-8:2FTS	BDO-2220	0.9580	100.00	--	--	☐			
13C2-PFDoA	BDO-2112	1.0000	100.00	--	--	☐			
13C2-PFTeDA	BDO-2224	1.0000	100.00	--	--	☐			
13C3-PFBS	BDO-2226	0.9290	100.00	--	--	☐			
13C3-PFHxS	BDO-2227	0.9460	100.00	--	--	☐			
13C4-PFBA	BDO-2105	1.0000	100.00	--	--	☐			
13C4-PFHpA	BDO-2218	1.0000	100.00	--	--	☐			
13C5-PFHxA	BDO-2217	1.0000	100.00	--	--	☐			
13C5-PFPeA	BDO-2216	1.0000	100.00	--	--	☐			
13C6-PFDA	BDO-2222	1.0000	100.00	--	--	☐			
13C7-PFUnA	BDO-2223	1.0000	100.00	--	--	☐			
13C8-FOSA	BDO-2225	1.0000	100.00	--	--	☐			
13C8-PFOA	BDO-2219	1.0000	100.00	--	--	☐			
13C8-PFOS	BDO-2228	0.9570	100.00	--	--	☐			
13C9-PFNA	BDO-2221	1.0000	100.00	--	--	☐			
d3-MeFOSAA	BDO-1838	1.0000	100.00	--	--	☐			
d5-EtFOSAA	BDO-1839	1.0000	100.00	--	--	☐			

Total Analytes: 19

Notes:

Approved by: Lizotte Jr, Robert **Approved on:** 7/27/2018 11:10:00 AM

Authorized by: **Authorized on:**

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

MPFAC-24ES

Mass-Labelled Per- and Poly-fluoroalkyl Substance Extraction Standard Solution

PRODUCT CODE:	MPFAC-24ES
LOT NUMBER:	MPFAC24ES0218
SOLVENT(S):	Methanol / Isopropanol (2%) / Water (<1%)
DATE PREPARED: (mm/dd/yyyy)	02/07/2018
LAST TESTED: (mm/dd/yyyy)	02/07/2018
EXPIRY DATE: (mm/dd/yyyy)	02/07/2023
RECOMMENDED STORAGE:	Refrigerate ampoule

DESCRIPTION:

MPFAC-24ES is a solution/mixture of ten mass-labelled (^{13}C) perfluoroalkylcarboxylic acids (C_4-C_{12} and C_{14}), three mass-labelled (^{13}C) perfluoroalkylsulfonates (C_4, C_6, and C_8), three mass-labelled (^{13}C) telomer sulfonates (4:2, 6:2, and 8:2), two mass-labelled (^{2}H) perfluorooctanesulfonamidoacetic acids, and perfluoro-1-[$^{13}C_8$]octanesulfonamide. The components and their concentrations are given in Table A.

The individual mass-labelled perfluoroalkylcarboxylic acids, mass-labelled perfluoroalkylsulfonates, mass-labelled telomer sulfonates, and perfluoro-1-[$^{13}C_8$]octanesulfonamide all have chemical purities of >98% and isotopic purities of $\geq$99%. The individual mass-labelled perfluorooctanesulfonamidoacetic acids all have chemical purities of >98% and isotopic purities of $\geq$98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
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 acids to their respective methyl esters.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **MPFAC-24ES; Components and Concentrations (ng/ml, ± 5% in Methanol / Isopropanol (2%) / Water (<1%))**

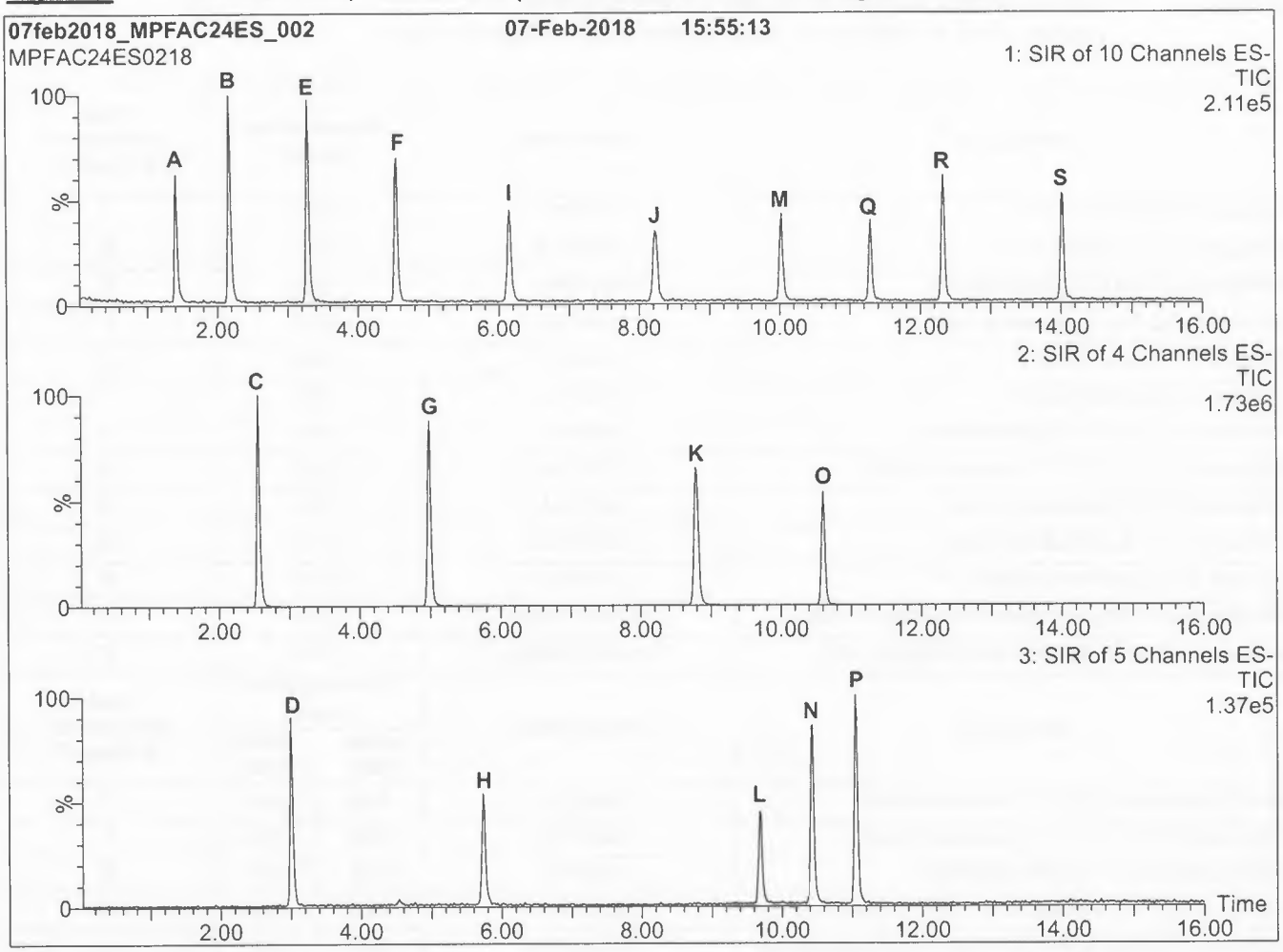
Compound	Abbreviation	Concentration (ng/ml)	Peak Assignment in Figure 1
Perfluoro-n-[$^{13}C_4$]butanoic acid	MPFBA	1000	A
Perfluoro-n-[$^{13}C_5$]pentanoic acid	M5PFPeA	1000	B
Perfluoro-n-[1,2,3,4,6-$^{13}C_5$]hexanoic acid	M5PFHxA	1000	E
Perfluoro-n-[1,2,3,4-$^{13}C_4$]heptanoic acid	M4PFHpA	1000	F
Perfluoro-n-[$^{13}C_8$]octanoic acid	M8PFOA	1000	I
Perfluoro-n-[$^{13}C_9$]nonanoic acid	M9PFNA	1000	J
Perfluoro-n-[1,2,3,4,5,6-$^{13}C_6$]decanoic acid	M6PFDA	1000	M
Perfluoro-n-[1,2,3,4,5,6,7-$^{13}C_7$]undecanoic acid	M7PFUdA	1000	Q
Perfluoro-n-[1,2-$^{13}C_2$]dodecanoic acid	MPFDoA	1000	R
Perfluoro-n-[1,2-$^{13}C_2$]tetradecanoic acid	M2PFTeDA	1000	S
Perfluoro-1-[$^{13}C_8$]octanesulfonamide	M8FOSA	1000	O
N-methyl-d_3-perfluoro-1-octanesulfonamidoacetic acid	d3-N-MeFOSAA	1000	N
N-ethyl-d_5-perfluoro-1-octanesulfonamidoacetic acid	d5-N-EtFOSAA	1000	P

Compound	Abbreviation	Concentration (ng/ml)		Peak Assignment in Figure 1
		as the salt	as the anion	
Sodium perfluoro-1-[2,3,4-$^{13}C_3$]butanesulfonate	M3PFBS	1000	929	C
Sodium perfluoro-1-[1,2,3-$^{13}C_3$]hexanesulfonate	M3PFHxS	1000	946	G
Sodium perfluoro-1-[$^{13}C_8$]octanesulfonate	M8PFOS	1000	957	K
Sodium 1H,1H,2H,2H-perfluoro-1-[1,2-$^{13}C_2$]hexanesulfonate	M2-4:2FTS	1000	935	D
Sodium 1H,1H,2H,2H-perfluoro-1-[1,2-$^{13}C_2$]octanesulfonate	M2-6:2FTS	1000	949	H
Sodium 1H,1H,2H,2H-perfluoro-1-[1,2-$^{13}C_2$]decanesulfonate	M2-8:2FTS	1000	958	L

Certified By: _____ **Date:** 02/09/2018 (mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: **MPFAC-24ES; LC/MS Data (Total Ion Current Chromatogram; SIR)**



Conditions for Figure 1:

LC: **Waters Acquity Ultra Performance LC**
MS: **Micromass Quattro *micro* API MS**

Chromatographic Conditions

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 40% (80:20 MeOH:ACN) / 60% H_2O
(both with 10 mM NH_4OAc buffer)
Ramp to 55% organic over 3.5 min.
Ramp to 70% organic over 6.5 min.
Ramp to 85% organic over 5 min and hold for
1 min before returning to initial conditions in 0.5 min.
Time: 17 min

Flow: 300 µl/min

MS Parameters

Experiment: SIR

Source: Electrospray (negative)
Capillary Voltage (kV) = 3.00
Cone Voltage (V) = variable (10-60)
Cone Gas Flow (l/hr) = 100
Desolvation Gas Flow (l/hr) = 750

Figure 2: **MPFAC-24ES; LC/MS/MS Data (Selected MRM Transitions)**

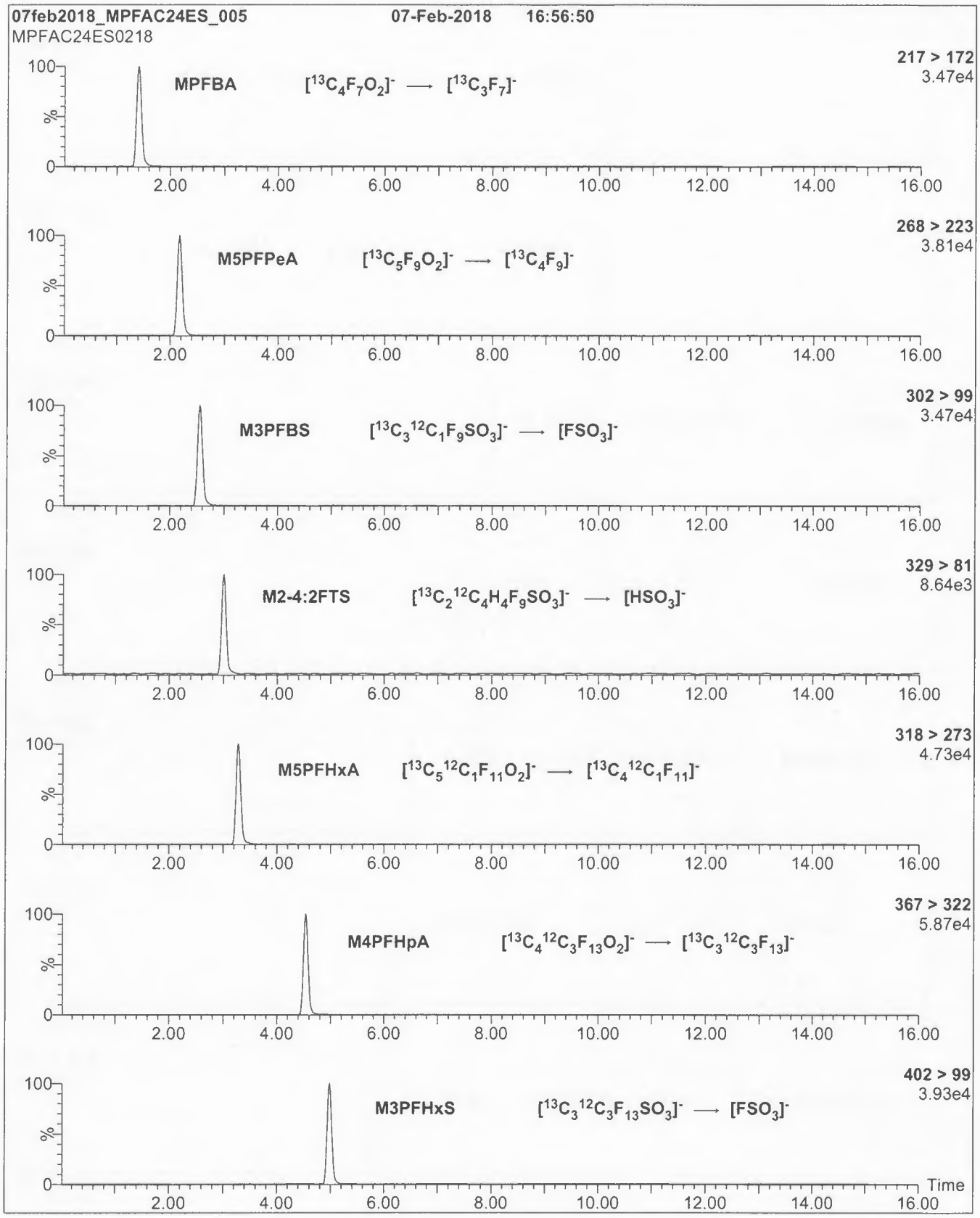


Figure 2: **MPFAC-24ES; LC/MS/MS Data (Selected MRM Transitions)**

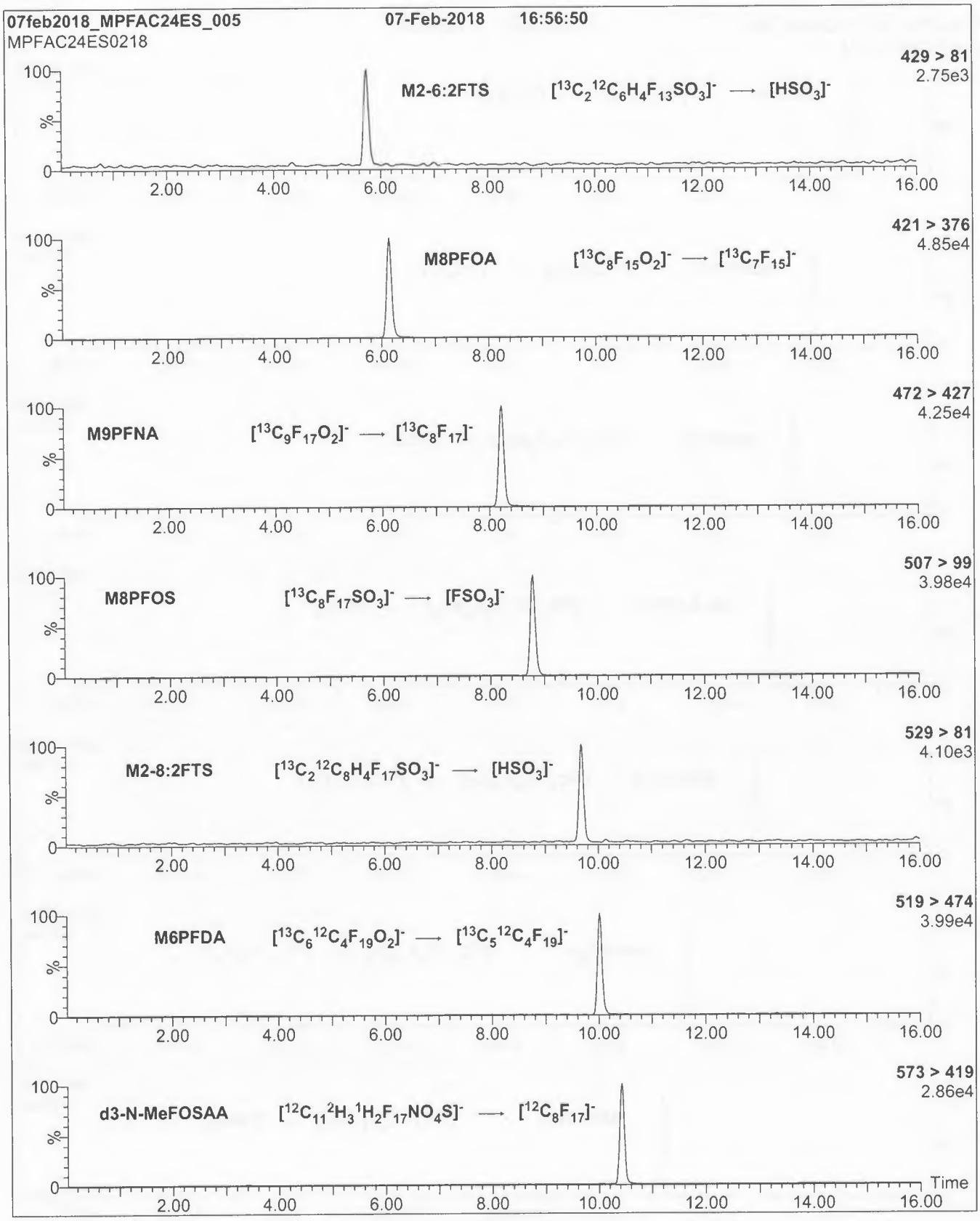
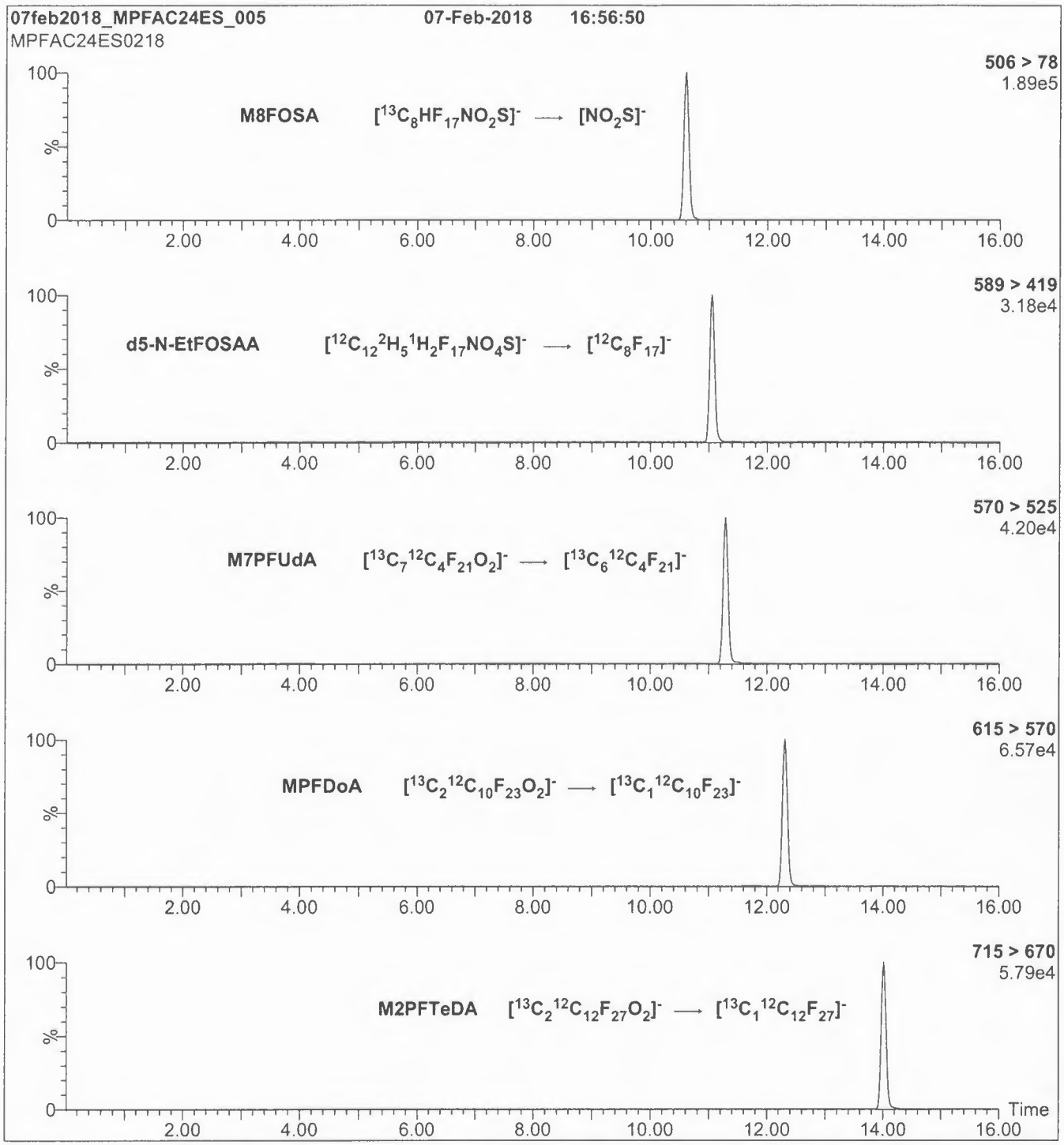


Figure 2: **MPFAC-24ES; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFAC-24ES)

Mobile phase: Same as Figure 1

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.28e-3

Collision Energy (eV) = 8-40 (variable)

Sample Preparation

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SAMPLE PREPARATION RECORDS

Project Title(s)	Project No.(s)
CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis	100120725-CTO5655

18-0685

CTO-5655: PFAS Analysis

W

SOP Numbers (see workplan for modifications)

ExtractionSOP No. 5-370

This Batch Contains The Following Samples:	
CS241PB-FS	J9421-FS
CS242LCS-FS	J9422MS-FS
J9412-FS	J9423MSD-FS
J9413-FS	
J9418-FS	
J9419-FS	

Laboratory Preparation Records

COMPLETE AND VALIDATED

Prep Task Leader: Stephanie Schultz

Approved By:	Date	Initials
Denise Schumitz	11/27/2018	DMS

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SAMPLE IDENTIFICATION PAGE

Project Title(s)
CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis

Project No.(s)
100120725-CTO5655

18-0685

CTO-5655: PFAS Analysis

W

Sample ID	Description
CS241PB-FS	Procedural Blank
CS242LCS-FS	Laboratory Control Sample
J9412-FS	RR-EFF1-18D
J9413-FS	RR-EFF1D-18D
J9418-FS	RR-EFF2-18D
J9419-FS	RR-FB-111618
J9421-FS	RR-EFF3-18D
J9422MS-FS	Matrix Spike of RR-EFF3-18D-MS
J9423MSD-FS	Matrix Spike Duplicate of RR-EFF3-18D-SD

Samples Assigned By: Jonathan Thorn Date : November 18, 2018

Comments:

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SAMPLE CUSTODY LOG

Project Title(s)
CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis

Project No.(s)
100120725-CTO5655

18-0685

CTO-5655: PFAS Analysis

W

Requested On/By:	11/20/2018 SAS	**Purpose:**	Sample Preparation
Relinquished On/By:	11/20/2018 MDS	**Last Activity:**	Transfer

Accepted On/By:	11/20/2018 SAS	**Returned On/To:**	
Stored In Facility:	Sample Preparation	**Returned To Facility:**	
Stored Until	11/20/2018		
Stored Comment:	NA	**Returned Comment:**	NA

No.	BDO-ID:	Ctrs	*	Condition:	Custody Comment:
1	J9412	1	C	Consumed	NA
2	J9413	1	C	Consumed	NA
3	J9418	1	C	Consumed	NA
4	J9419	1	C	Consumed	NA
5	J9421	1	C	Consumed	NA
Total Samples	5	* "C" = Consumed Container			

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LIQUID SAMPLE ID FORM

Project Title(s)
CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis

Project No.(s)
100120725-CTO5655

18-0685

CTO-5655: PFAS Analysis

W

Sample ID	Description	Volume (mL)	Bottles	*	Date Initials
CS241PB-FS	Procedural Blank	250.0	NA	--	11/20/18 KB
CS242LCS-FS	Laboratory Control Sample	250.0	NA	--	11/20/18 KB
J9412-FS	RR-EFF1-18D	280.0	1	C	11/20/18 SAS
J9413-FS	RR-EFF1D-18D	280.0	1	C	11/20/18 SAS
J9418-FS	RR-EFF2-18D	280.0	1	C	11/20/18 SAS
J9419-FS	RR-FB-111618	285.0	1	C	11/20/18 SAS
J9421-FS	RR-EFF3-18D	285.0	1	C	11/20/18 SAS
J9422MS-FS	Matrix Spike	270.0	1	C	11/20/18 SAS
J9423MSD-FS	Matrix Spike Duplicate	270.0	1	C	11/20/18 SAS

Comments:

Samples Assigned By Jonathan Thorn Date : November 18, 2018

* - "C" = Sample is Consumed

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SURROGATE SPIKE FORM

Project Title(s)
CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis

Project No.(s)
100120725-CTO5655

18-0685

CTO-5655: PFAS Analysis

W

Sample ID	Standard ID	Type	Vial No.	Vol Added (uL)	Date Spiked/ Spiked By	Witn'd By	Comment
CS241PB-FS	KC98	SIS	1	50	11/20/18 SAS	KB	NA
CS242LCS-FS	KB82	LCS/MS	1	250	11/20/18 SAS	KB	NA
CS242LCS-FS	KC98	SIS	1	50	11/20/18 SAS	KB	NA
J9412-FS	KC98	SIS	1	50	11/20/18 SAS	KB	NA
J9413-FS	KC98	SIS	1	50	11/20/18 SAS	KB	NA
J9418-FS	KC98	SIS	1	50	11/20/18 SAS	KB	NA
J9419-FS	KC98	SIS	1	50	11/20/18 SAS	KB	NA
J9421-FS	KC98	SIS	1	50	11/20/18 SAS	KB	NA
J9422MS-FS	KB82	LCS/MS	1	250	11/20/18 SAS	KB	NA
J9422MS-FS	KC98	SIS	1	50	11/20/18 SAS	KB	NA
J9423MSD-FS	KB82	LCS/MS	1	250	11/20/18 SAS	KB	NA
J9423MSD-FS	KC98	SIS	1	50	11/20/18 SAS	KB	NA

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
KB82	Pipette	B814657482
KC98	Pipette	B1100460B

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SAMPLE EXTRACTION FORM

Project Title(s)
CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis

Project No.(s)
100120725-CTO5655

18-0685

CTO-5655: PFAS Analysis

W

Sample ID	1st Extraction	2nd Extraction	3rd Extraction	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comment
CS241PB-FS	11/20/18 SAS	NA	NA	NA	NA	NA	NA	NA
CS242LCS-FS	11/20/18 SAS	NA	NA	NA	NA	NA	NA	NA
J9412-FS	11/20/18 KB	NA	NA	NA	NA	NA	NA	NA
J9413-FS	11/20/18 KB	NA	NA	NA	NA	NA	NA	NA
J9418-FS	11/20/18 KB	NA	NA	NA	NA	NA	NA	NA
J9419-FS	11/20/18 SAS	NA	NA	NA	NA	NA	NA	NA
J9421-FS	11/20/18 KB	NA	NA	NA	NA	NA	NA	NA
J9422MS-FS	11/20/18 KB	NA	NA	NA	NA	NA	NA	NA
J9423MSD-FS	11/20/18 KB	NA	NA	NA	NA	NA	NA	NA

Solvents/Reagent Preparations:

Name	ID	Expires	Lot No	Procedure	Comments
0.4% NH3 in Methanol	RP-181120-1	11/20/18	182000	Per 100 mL, 3.5 mL ammonia solution brought to 100 mL with methanol	
0.4% NH3 in Methanol	RP-181120-1	11/20/18	SHBJ0412	Per 100 mL, 3.5 mL ammonia solution brought to 100 mL with methanol	
Pre-packed SPE Column	RP-181120-3	11/20/18	003537220A/0035	Pre-packed SPE Column	

Solvents/Reagents:

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INTERNAL STANDARD SPIKING FORM

Project Title(s)
CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis

Project No.(s)
100120725-CTO5655

18-0685

CTO-5655: PFAS Analysis

W

(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
CS241PB-FS(0)	950	50	KD57	50	1	1000	1.000	11/21/18 KB	SAS
CS242LCS-FS(0)	950	50	KD57	50	1	1000	1.000	11/21/18 KB	SAS
J9412-FS(0)	950	50	KD57	50	1	1000	1.000	11/21/18 KB	SAS
J9412-FS-D(3)	960	40	KD57	50	1	1000	5.000	11/21/18 KB	SAS
J9412-FS-D(5)	975	25	KD57	50	1	1000	10.000	11/21/18 KB	SAS
J9412-FS-D(7)	960	40	KD57	50	1	1000	50.000	11/21/18 KB	SAS
J9412-FS-D(9)	975	25	KD57	50	1	1000	100.000	11/21/18 KB	SAS
J9413-FS(0)	950	50	KD57	50	1	1000	1.000	11/21/18 KB	SAS
J9413-FS-D(3)	960	40	KD57	50	1	1000	5.000	11/21/18 KB	SAS
J9413-FS-D(5)	975	25	KD57	50	1	1000	10.000	11/21/18 KB	SAS
J9413-FS-D(7)	960	40	KD57	50	1	1000	50.000	11/21/18 KB	SAS
J9413-FS-D(9)	975	25	KD57	50	1	1000	100.000	11/21/18 KB	SAS
J9418-FS(0)	950	50	KD57	50	1	1000	1.000	11/21/18 KB	SAS
J9418-FS-D(3)	960	40	KD57	50	1	1000	5.000	11/21/18 KB	SAS
J9418-FS-D(5)	960	40	KD57	50	1	1000	25.000	11/21/18 KB	SAS
J9418-FS-D(7)	975	25	KD57	50	1	1000	50.000	11/21/18 KB	SAS
J9419-FS(0)	950	50	KD57	50	1	1000	1.000	11/21/18 KB	SAS
J9421-FS(0)	950	50	KD57	50	1	1000	1.000	11/21/18 KB	SAS
J9421-FS-D(3)	960	40	KD57	50	1	1000	5.000	11/21/18 KB	SAS

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

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

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INTERNAL STANDARD SPIKING FORM

Project Title(s)
CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis

Project No.(s)
100120725-CTO5655

18-0685

CTO-5655: PFAS Analysis

W

(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
J9421-FS-D(5)	960	40	KD57	50	1	1000	25.000	11/21/18 KB	SAS
J9421-FS-D(7)	975	25	KD57	50	1	1000	50.000	11/21/18 KB	SAS
J9422MS-FS(0)	950	50	KD57	50	1	1000	1.000	11/21/18 KB	SAS
J9422MS-FS-D(3)	960	40	KD57	50	1	1000	5.000	11/21/18 KB	SAS
J9422MS-FS-D(5)	960	40	KD57	50	1	1000	25.000	11/21/18 KB	SAS
J9422MS-FS-D(7)	975	25	KD57	50	1	1000	50.000	11/21/18 KB	SAS
J9423MSD-FS(0)	950	50	KD57	50	1	1000	1.000	11/21/18 KB	SAS
J9423MSD-FS-D(3)	960	40	KD57	50	1	1000	5.000	11/21/18 KB	SAS
J9423MSD-FS-D(5)	960	40	KD57	50	1	1000	25.000	11/21/18 KB	SAS
J9423MSD-FS-D(7)	975	25	KD57	50	1	1000	50.000	11/21/18 KB	SAS

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
KC98	Pipette	B814659662
KD57	Pipette	B814659662

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

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

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EXTRACT SPIKE FORM

Project Title(s)
CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis

Project No.(s)
100120725-CTO5655

18-0685

CTO-5655: PFAS Analysis

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Extract Id	DF	Std. ID	Type	Vial No.	Vol. Added (uL)	Conc (ug/mL)	Added (ng)	Date Spiked/ Spiked By	Witn'd By
J9412-FS-D(3)	5	KC98	SIS	1	40	0	0	11/21/18 KB	SAS
J9412-FS-D(5)	10	KC98	SIS	1	25	0	0	11/21/18 KB	SAS
J9412-FS-D(7)	50	KC98	SIS	1	40	0	0	11/21/18 KB	SAS
J9412-FS-D(9)	100	KC98	SIS	1	25	0	0	11/21/18 KB	SAS
J9413-FS-D(3)	5	KC98	SIS	1	40	0	0	11/21/18 KB	SAS
J9413-FS-D(5)	10	KC98	SIS	1	25	0	0	11/21/18 KB	SAS
J9413-FS-D(7)	50	KC98	SIS	1	40	0	0	11/21/18 KB	SAS
J9413-FS-D(9)	100	KC98	SIS	1	25	0	0	11/21/18 KB	SAS
J9418-FS-D(3)	5	KC98	SIS	1	40	0	0	11/21/18 KB	SAS
J9418-FS-D(5)	25	KC98	SIS	1	40	0	0	11/21/18 KB	SAS
J9418-FS-D(7)	50	KC98	SIS	1	25	0	0	11/21/18 KB	SAS
J9421-FS-D(3)	5	KC98	SIS	1	40	0	0	11/21/18 KB	SAS
J9421-FS-D(5)	25	KC98	SIS	1	40	0	0	11/21/18 KB	SAS
J9421-FS-D(7)	50	KC98	SIS	1	25	0	0	11/21/18 KB	SAS
J9422MS-FS-D(3)	5	KC98	SIS	1	40	0	0	11/21/18 KB	SAS
J9422MS-FS-D(5)	25	KC98	SIS	1	40	0	0	11/21/18 KB	SAS
J9422MS-FS-D(7)	50	KC98	SIS	1	25	0	0	11/21/18 KB	SAS
J9423MSD-FS-D(3)	5	KC98	SIS	1	40	0	0	11/21/18 KB	SAS
J9423MSD-FS-D(5)	25	KC98	SIS	1	40	0	0	11/21/18 KB	SAS
J9423MSD-FS-D(7)	50	KC98	SIS	1	25	0	0	11/21/18 KB	SAS

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
KC98	Pipette	B814659662
KD57	Pipette	B814659662

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PREPARATION EXTRACT SPLIT FORM

Project Title(s)
CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis

Project No.(s)
100120725-CTO5655

18-0685

CTO-5655: PFAS Analysis

W

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
CS241PB-FS	0	--	11/20/2018 10:55:00 AM	NA		NA	NA	1.000	1.000	11/20/18 SAS
CS242LCS-FS	0	--	11/20/2018 10:55:00 AM	NA		NA	NA	1.000	1.000	11/20/18 SAS
J9412-FS	0	C	11/20/2018 10:55:00 AM	NA		NA	NA	1.000	1.000	11/20/18 KB
J9412-FS	2	--	11/21/2018 11:54:00 AM	J9412-FS	0	1000	800	1.250	1.250	11/21/18 KB
J9412-FS-D	3	C	11/21/2018 11:54:00 AM	J9412-FS	0	1000	200	5.000	5.000	11/21/18 KB
J9412-FS-D	4	--	11/21/2018 12:07:00 PM	J9412-FS-D	3	1000	500	2.000	10.000	11/21/18 KB
J9412-FS-D	5	C	11/21/2018 12:07:00 PM	J9412-FS-D	3	1000	500	2.000	10.000	11/21/18 KB
J9412-FS-D	6	--	11/21/2018 12:12:00 PM	J9412-FS-D	5	1000	800	1.250	12.500	11/21/18 KB
J9412-FS-D	7	C	11/21/2018 12:12:00 PM	J9412-FS-D	5	1000	200	5.000	50.000	11/21/18 KB
J9412-FS-D	8	--	11/21/2018 12:16:00 PM	J9412-FS-D	7	1000	500	2.000	100.000	11/21/18 KB
J9412-FS-D	9	--	11/21/2018 12:16:00 PM	J9412-FS-D	7	1000	500	2.000	100.000	11/21/18 KB
J9413-FS	0	C	11/20/2018 10:55:00 AM	NA		NA	NA	1.000	1.000	11/20/18 KB
J9413-FS	2	--	11/21/2018 11:54:00 AM	J9413-FS	0	1000	800	1.250	1.250	11/21/18 KB
J9413-FS-D	3	C	11/21/2018 11:54:00 AM	J9413-FS	0	1000	200	5.000	5.000	11/21/18 KB

Total Oil = [Sample Volume (uL) / Aliquot Volume (uL)] * [Aliquot Weight (mg)]
Dilution Factor = [Sample Volume (uL) / Aliqot Volume (uL))] * Prior Dilution Factor
* - "C" = Extract is Consumed

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BATTELLE - NORWELL OPERATIONS
PREPARATION EXTRACT SPLIT FORM

Project Title(s)
CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis

Project No.(s)
100120725-CTO5655

18-0685

CTO-5655: PFAS Analysis

W

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
J9413-FS-D	4	--	11/21/2018 12:07:00 PM	J9413-FS-D	3	1000	500	2.000	10.000	11/21/18 KB
J9413-FS-D	5	C	11/21/2018 12:07:00 PM	J9413-FS-D	3	1000	500	2.000	10.000	11/21/18 KB
J9413-FS-D	6	--	11/21/2018 12:12:00 PM	J9413-FS-D	5	1000	800	1.250	12.500	11/21/18 KB
J9413-FS-D	7	C	11/21/2018 12:12:00 PM	J9413-FS-D	5	1000	200	5.000	50.000	11/21/18 KB
J9413-FS-D	8	--	11/21/2018 12:16:00 PM	J9413-FS-D	7	1000	500	2.000	100.000	11/21/18 KB
J9413-FS-D	9	--	11/21/2018 12:16:00 PM	J9413-FS-D	7	1000	500	2.000	100.000	11/21/18 KB
J9418-FS	0	C	11/20/2018 10:55:00 AM	NA		NA	NA	1.000	1.000	11/20/18 KB
J9418-FS	2	--	11/21/2018 11:54:00 AM	J9418-FS	0	1000	800	1.250	1.250	11/21/18 KB
J9418-FS-D	3	C	11/21/2018 11:54:00 AM	J9418-FS	0	1000	200	5.000	5.000	11/21/18 KB
J9418-FS-D	4	--	11/21/2018 12:20:00 PM	J9418-FS-D	3	1000	800	1.250	6.250	11/21/18 KB
J9418-FS-D	5	C	11/21/2018 12:20:00 PM	J9418-FS-D	3	1000	200	5.000	25.000	11/21/18 KB
J9418-FS-D	6	--	11/21/2018 12:26:00 PM	J9418-FS-D	5	1000	500	2.000	50.000	11/21/18 KB
J9418-FS-D	7	--	11/21/2018 12:26:00 PM	J9418-FS-D	5	1000	500	2.000	50.000	11/21/18 KB
J9419-FS	0	--	11/20/2018 10:55:00 AM	NA		NA	NA	1.000	1.000	11/20/18 SAS

Total Oil = [Sample Volume (uL) / Aliquot Volume (uL)] * [Aliquot Weight (mg)]
Dilution Factor = [Sample Volume (uL) / Aliqot Volume (uL))] * Prior Dilution Factor
* - "C" = Extract is Consumed

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It can be done

BATTELLE - NORWELL OPERATIONS
PREPARATION EXTRACT SPLIT FORM

Project Title(s)
CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis

Project No.(s)
100120725-CTO5655

18-0685

CTO-5655: PFAS Analysis

W

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
J9421-FS	0	C	11/20/2018 10:55:00 AM	NA		NA	NA	1.000	1.000	11/20/18 KB
J9421-FS	2	--	11/21/2018 11:54:00 AM	J9421-FS	0	1000	800	1.250	1.250	11/21/18 KB
J9421-FS-D	3	C	11/21/2018 11:54:00 AM	J9421-FS	0	1000	200	5.000	5.000	11/21/18 KB
J9421-FS-D	4	--	11/21/2018 12:20:00 PM	J9421-FS-D	3	1000	800	1.250	6.250	11/21/18 KB
J9421-FS-D	5	C	11/21/2018 12:20:00 PM	J9421-FS-D	3	1000	200	5.000	25.000	11/21/18 KB
J9421-FS-D	6	--	11/21/2018 12:26:00 PM	J9421-FS-D	5	1000	500	2.000	50.000	11/21/18 KB
J9421-FS-D	7	--	11/21/2018 12:26:00 PM	J9421-FS-D	5	1000	500	2.000	50.000	11/21/18 KB
J9422MS-FS	0	C	11/20/2018 10:55:00 AM	NA		NA	NA	1.000	1.000	11/20/18 KB
J9422MS-FS	2	--	11/21/2018 11:54:00 AM	J9422MS-FS	0	1000	800	1.250	1.250	11/21/18 KB
J9422MS-FS-D	3	C	11/21/2018 11:54:00 AM	J9422MS-FS	0	1000	200	5.000	5.000	11/21/18 KB
J9422MS-FS-D	4	--	11/21/2018 12:20:00 PM	J9422MS-FS-D	3	1000	800	1.250	6.250	11/21/18 KB
J9422MS-FS-D	5	C	11/21/2018 12:20:00 PM	J9422MS-FS-D	3	1000	200	5.000	25.000	11/21/18 KB
J9422MS-FS-D	6	--	11/21/2018 12:26:00 PM	J9422MS-FS-D	5	1000	500	2.000	50.000	11/21/18 KB
J9422MS-FS-D	7	--	11/21/2018 12:26:00 PM	J9422MS-FS-D	5	1000	500	2.000	50.000	11/21/18 KB

Total Oil = [Sample Volume (uL) / Aliquot Volume (uL)] * [Aliquot Weight (mg)]
Dilution Factor = [Sample Volume (uL) / Aliqot Volume (uL))] * Prior Dilution Factor
* - "C" = Extract is Consumed

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PREPARATION EXTRACT SPLIT FORM

Project Title(s)
CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis

Project No.(s)
100120725-CTO5655

18-0685

CTO-5655: PFAS Analysis

W

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
J9423MSD-FS	0	C	11/20/2018 10:55:00 AM	NA		NA	NA	1.000	1.000	11/20/18 KB
J9423MSD-FS	2	--	11/21/2018 11:54:00 AM	J9423MSD-FS	0	1000	800	1.250	1.250	11/21/18 KB
J9423MSD-FS-D	3	C	11/21/2018 11:54:00 AM	J9423MSD-FS	0	1000	200	5.000	5.000	11/21/18 KB
J9423MSD-FS-D	4	--	11/21/2018 12:20:00 PM	J9423MSD-FS-D	3	1000	800	1.250	6.250	11/21/18 KB
J9423MSD-FS-D	5	C	11/21/2018 12:20:00 PM	J9423MSD-FS-D	3	1000	200	5.000	25.000	11/21/18 KB
J9423MSD-FS-D	6	--	11/21/2018 12:26:00 PM	J9423MSD-FS-D	5	1000	500	2.000	50.000	11/21/18 KB
J9423MSD-FS-D	7	--	11/21/2018 12:26:00 PM	J9423MSD-FS-D	5	1000	500	2.000	50.000	11/21/18 KB

Total Oil = [Sample Volume (uL) / Aliquot Volume (uL)] * [Aliquot Weight (mg)]
Dilution Factor = [Sample Volume (uL) / Aliqot Volume (uL))] * Prior Dilution Factor
* - "C" = Extract is Consumed

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BATTELLE - NORWELL OPERATIONS
EXTRACT - INSTRUMENT FACILITY CUSTODY PAGE

Project Title(s)
CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis

Project No.(s)
100120725-CTO5655

18-0685

CTO-5655: PFAS Analysis

W

Purpose:	LC-MS/MS TRANSFER	**Last Activity:**	Prep->Inst
Relinquished On/By:	Nov 21 2018 4:53PM KB	**Received On/By:**	Nov 21 2018 5:10PM DMS
Relinquished From:	Sample Preparation: NA	**Received Location:**	LC Laboratory: NA
Relinquish Comment:	NA	**Received Comment:**	Samples reconstituted in 80/20 methanol/milli-q water RP-181121-1

No.	BDO-ID:	PIV:	DF:	Condition:	Custody Comment:
1	CS241PB-FS(0)	1000	1	Intact	NA
2	CS242LCS-FS(0)	1000	1	Intact	NA
3	J9412-FS(0)	1000	1	Intact	NA
4	J9412-FS-D(3)	1000	5	Intact	NA
5	J9412-FS-D(5)	1000	10	Intact	NA
6	J9412-FS-D(7)	1000	50	Intact	NA
7	J9412-FS-D(9)	1000	100	Intact	NA
8	J9413-FS(0)	1000	1	Intact	NA
9	J9413-FS-D(3)	1000	5	Intact	NA
10	J9413-FS-D(5)	1000	10	Intact	NA
11	J9413-FS-D(7)	1000	50	Intact	NA
12	J9413-FS-D(9)	1000	100	Intact	NA
13	J9418-FS(0)	1000	1	Intact	NA
14	J9418-FS-D(3)	1000	5	Intact	NA
15	J9418-FS-D(5)	1000	25	Intact	NA
16	J9418-FS-D(7)	1000	50	Intact	NA
17	J9419-FS(0)	1000	1	Intact	NA
18	J9421-FS(0)	1000	1	Intact	NA
19	J9421-FS-D(3)	1000	5	Intact	NA
20	J9421-FS-D(5)	1000	25	Intact	NA
21	J9421-FS-D(7)	1000	50	Intact	NA
22	J9422MS-FS(0)	1000	1	Intact	NA
23	J9422MS-FS-D(3)	1000	5	Intact	NA
24	J9422MS-FS-D(5)	1000	25	Intact	NA
25	J9422MS-FS-D(7)	1000	50	Intact	NA
26	J9423MSD-FS(0)	1000	1	Intact	NA
27	J9423MSD-FS-D(3)	1000	5	Intact	NA
28	J9423MSD-FS-D(5)	1000	25	Intact	NA

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EXTRACT - INSTRUMENT FACILITY CUSTODY PAGE

Project Title(s)
CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis

Project No.(s)
100120725-CTO5655

18-0685

CTO-5655: PFAS Analysis

W

29	J9423MSD-FS-D(7)	1000	50	Intact	NA
Total Extracts:	29				

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SAMPLE SPECIFIC COMMENTS

Project Title(s)
CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis

Project No.(s)
100120725-CTO5655

18-0685

CTO-5655: PFAS Analysis

W

Sample ID:	Comment:	Date/Initials:
CS241PB-FS	Extraction started 10:55am, extraction block 1, ended at 11:46am	11/20/18 SAS
CS242LCS-FS	Extraction started 10:55am, extraction block 1, ended at 11:52am	11/20/18 SAS
J9412-FS	Sample contained floating particulates at the bottom of the bottle.	11/20/18 KB
J9412-FS	Extraction started 10:55am, extraction block 2, ended at 12:26pm	11/20/18 KB
J9413-FS	Sample contained floating particulates at the bottom of the bottle.	11/20/18 KB
J9413-FS	Extraction started 10:55am, extraction block 2, ended at 12:24pm	11/20/18 KB
J9418-FS	Sample contained floating particulates at the bottom of the bottle.	11/20/18 KB
J9418-FS	Extraction started 10:55am, extraction block 2, ended at 12:56pm	11/20/18 KB
J9419-FS	Extraction started 10:55am, extraction block 1, ended at 11:53am	11/20/18 SAS
J9419-FS	Approximately 2 mL spilled while pouring through SPE.	11/20/18 SAS
J9421-FS	Extraction started 10:55am, extraction block 2, ended at 12:19pm	11/20/18 KB
J9422MS-FS	Extraction started 10:55am, extraction block 2, ended at 12:19pm	11/20/18 KB
J9423MSD-FS	Extraction started 10:55am, extraction block 2, ended at 12:17pm	11/20/18 KB

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BATTELLE - NORWELL OPERATIONS
MISCELLANEOUS DOCUMENTATION FORM

Project Title(s)	**Project No.(s)**
CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis	100120725-CTO5655

18-0685

CTO-5655: PFAS Analysis

W

Entered By:	On:

Task Leader Approval:	On:
SupervisorApproval:	On:
PM Approval:	On:

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BATTELLE - NORWELL OPERATIONS
MISCELLANEOUS DOCUMENTATION FORM

Project Title(s)	**Project No.(s)**
CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis	100120725-CTO5655

18-0685

CTO-5655: PFAS Analysis

W

Task Leader Approval:	On:
SupervisorApproval:	On:
PM Approval:	On:

Analytical Calibrations

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Sequence Report

Created with Analyst Reporter
Printed: 26/11/2018 2:22:01 PM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File	
2	MeOH		11/25/2018 4:12:06 PM	5-0369.dam	AC_11252018_5-369.wiff	
1	KC66	L1	11/25/2018 4:45:02 PM	5-0369.dam	AC_11252018_5-369.wiff	
2	KC67	L2	11/25/2018 4:55:56 PM	5-0369.dam	AC_11252018_5-369.wiff	
3	KC68	L3	11/25/2018 5:06:49 PM	5-0369.dam	AC_11252018_5-369.wiff	
4	KC69	L4	11/25/2018 5:17:43 PM	5-0369.dam	AC_11252018_5-369.wiff	
5	KC70	L5	11/25/2018 5:28:35 PM	5-0369.dam	AC_11252018_5-369.wiff	
6	KC71	L6	11/25/2018 5:39:27 PM	5-0369.dam	AC_11252018_5-369.wiff	
7	KC72	L7	11/25/2018 5:50:19 PM	5-0369.dam	AC_11252018_5-369.wiff	
8	KC73 IB	IB	11/25/2018 6:01:12 PM	5-0369.dam	AC_11252018_5-369.wiff	
9	KC74 ICC	ICC	11/25/2018 6:12:04 PM	5-0369.dam	AC_11252018_5-369.wiff	
10	KC75	BRANCH	11/25/2018 6:22:55 PM	5-0369.dam	AC_11252018_5-369.wiff	
11	MeOH		11/25/2018 6:33:48 PM	5-0369.dam	AC_11252018_5-369.wiff	
12	CS241PB-FS(0)	Procedural Blank	11/25/2018 6:44:39 PM	5-0369.dam	AC_11252018_5-369.wiff	
13	J9419-FS(0)	RR-FB-111618	11/25/2018 6:55:32 PM	5-0369.dam	AC_11252018_5-369.wiff	
14	CS242LCS-FS(0)	Laboratory Control Sample	11/25/2018 7:06:23 PM	5-0369.dam	AC_11252018_5-369.wiff	
15	J9412-FS-D(9)	RR-EFF1-18D	11/25/2018 7:17:16 PM	5-0369.dam	AC_11252018_5-369.wiff	
16	J9412-FS-D(7)	RR-EFF1-18D	11/25/2018 7:28:08 PM	5-0369.dam	AC_11252018_5-369.wiff	
17	J9412-FS-D(5)	RR-EFF1-18D	11/25/2018 7:38:59 PM	5-0369.dam	AC_11252018_5-369.wiff	
~~18~~	~~J9412-FS-D(3)~~	~~RR-EFF1-18D~~	~~11/25/2018 7:49:50 PM~~	~~5-0369.dam~~	~~AC_11252018_5-369.wiff~~	(1)
19	J9412-FS(0)	RR-EFF1-18D	11/25/2018 8:00:42 PM	5-0369.dam	AC_11252018_5-369.wiff	
20	MeOH		11/25/2018 8:11:35 PM	5-0369.dam	AC_11252018_5-369.wiff	
21	KC69 CCV	CCV	11/25/2018 8:22:27 PM	5-0369.dam	AC_11252018_5-369.wiff	
20	MeOH		11/25/2018 8:33:19 PM	5-0369.dam	AC_11252018_5-369.wiff	
22	J9413-FS-D(9)	RR-EFF1D-18D	11/25/2018 8:44:11 PM	5-0369.dam	AC_11252018_5-369.wiff	
23	J9413-FS-D(7)	RR-EFF1D-18D	11/25/2018 8:55:04 PM	5-0369.dam	AC_11252018_5-369.wiff	
24	J9413-FS-D(5)	RR-EFF1D-18D	11/25/2018 9:05:57 PM	5-0369.dam	AC_11252018_5-369.wiff	
~~25~~	~~J9413-FS-D(3)~~	~~RR-EFF1D-18D~~	~~11/25/2018 9:16:49~~	~~5-0369.dam~~	~~AC_11252018_5-~~	(1)

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Sequence Report

Created with Analyst Reporter
Printed: 26/11/2018 2:22:01 PM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File	
			PM		369.wiff	
26	J9413-FS(0)	RR-EFF1D-18D	11/25/2018 9:27:41 PM	5-0369.dam	AC_11252018_5-369.wiff	
27	MeOH		11/25/2018 9:38:34 PM	5-0369.dam	AC_11252018_5-369.wiff	
~~28~~	~~J9418-FS-D(7)~~	~~RR-EFF2-18D~~	~~11/25/2018 9:49:25 PM~~	~~5-0369.dam~~	~~AC_11252018_5-369.wiff~~	(1)
29	KC70 CCV	CCV	11/25/2018 10:00:17 PM	5-0369.dam	AC_11252018_5-369.wiff	
27	MeOH		11/25/2018 10:11:09 PM	5-0369.dam	AC_11252018_5-369.wiff	
30	J9418-FS-D(5)	RR-EFF2-18D	11/25/2018 10:22:00 PM	5-0369.dam	AC_11252018_5-369.wiff	
31	J9418-FS-D(3)	RR-EFF2-18D	11/25/2018 10:32:52 PM	5-0369.dam	AC_11252018_5-369.wiff	
32	J9418-FS(0)	RR-EFF2-18D	11/25/2018 10:43:42 PM	5-0369.dam	AC_11252018_5-369.wiff	
33	MeOH		11/25/2018 10:54:35 PM	5-0369.dam	AC_11252018_5-369.wiff	
34	J9421-FS-D(7)	RR-EFF3-18D	11/25/2018 11:05:27 PM	5-0369.dam	AC_11252018_5-369.wiff	
~~35~~	~~J9421-FS-D(5)~~	~~RR-EFF3-18D~~	~~11/25/2018 11:16:17 PM~~	~~5-0369.dam~~	~~AC_11252018_5-369.wiff~~	(1)
36	J9421-FS-D(3)	RR-EFF3-18D	11/25/2018 11:27:08 PM	5-0369.dam	AC_11252018_5-369.wiff	
37	J9421-FS(0)	RR-EFF3-18D	11/25/2018 11:38:00 PM	5-0369.dam	AC_11252018_5-369.wiff	
38	MeOH		11/25/2018 11:48:51 PM	5-0369.dam	AC_11252018_5-369.wiff	
39	KC69 CCV	CCV	11/25/2018 11:59:42 PM	5-0369.dam	AC_11252018_5-369.wiff	
38	MeOH		11/26/2018 12:10:35 AM	5-0369.dam	AC_11252018_5-369.wiff	
40	J9422MS-FS-D(7)	RR-EFF3-18D-MS	11/26/2018 12:21:27 AM	5-0369.dam	AC_11252018_5-369.wiff	
41	J9422MS-FS-D(5)	RR-EFF3-18D-MS	11/26/2018 12:32:19 AM	5-0369.dam	AC_11252018_5-369.wiff	
42	J9422MS-FS-D(3)	RR-EFF3-18D-MS	11/26/2018 12:43:11 AM	5-0369.dam	AC_11252018_5-369.wiff	
43	J9422MS-FS(0)	RR-EFF3-18D-MS	11/26/2018 12:54:02 AM	5-0369.dam	AC_11252018_5-369.wiff	
44	MeOH		11/26/2018 1:04:53 AM	5-0369.dam	AC_11252018_5-369.wiff	
45	J9423MSD-FS-D(7)	RR-EFF3-18D-SD	11/26/2018 1:15:45 AM	5-0369.dam	AC_11252018_5-369.wiff	
46	J9423MSD-FS-D(5)	RR-EFF3-18D-SD	11/26/2018 1:26:37 AM	5-0369.dam	AC_11252018_5-369.wiff	
47	J9423MSD-FS-D(3)	RR-EFF3-18D-SD	11/26/2018 1:37:30 AM	5-0369.dam	AC_11252018_5-369.wiff	
48	J9423MSD-FS(0)	RR-EFF3-18D-SD	11/26/2018 1:48:22 AM	5-0369.dam	AC_11252018_5-369.wiff	
44	MeOH		11/26/2018 1:59:13 AM	5-0369.dam	AC_11252018_5-369.wiff	

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Sequence Report

Created with Analyst Reporter
Printed: 26/11/2018 2:22:01 PM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
49	KC70 CCV	CCV	11/26/2018 2:10:06 AM	5-0369.dam	AC_11252018_5-369.wiff

(1) Dilutions were not used and not reported. LMG 11/26/18

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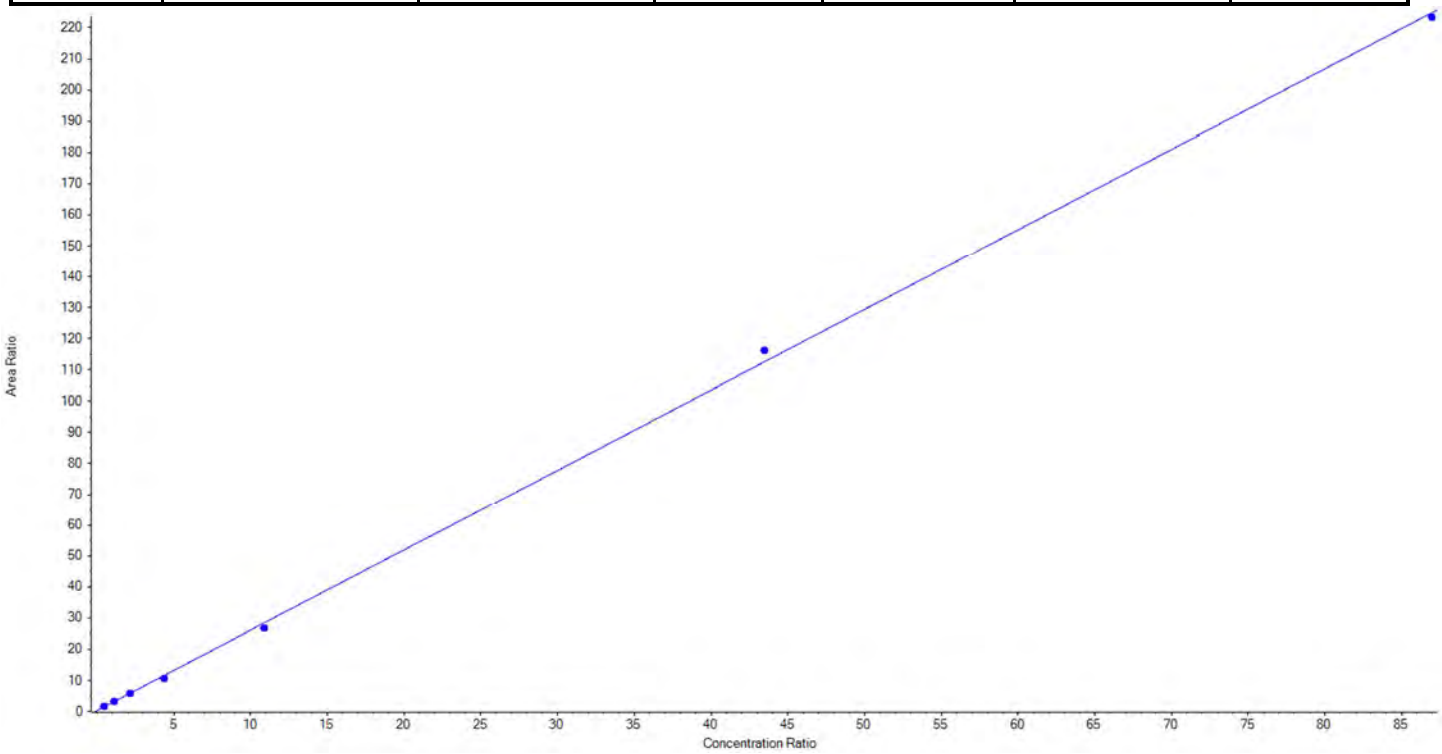
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	PFBS_1	**Data File**	AC_11252018_5-369.wiff
MRM Transition	298.9 / 80.0	**Result Table**	18-0685
Internal Standard	13C3-PFBS	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 2.58085 x + 0.30025 (r = 0.99956) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	101.00	111.308287	110.2
2	KC67	L2	True	252.50	254.426883	100.8
3	KC68	L3	True	505.00	502.202844	99.5
4	KC69	L4	True	1010.00	938.107677	92.9
5	KC70	L5	True	2525.00	2372.082359	93.9
6	KC71	L6	True	10100.00	10441.893825	103.4
7	KC72	L7	True	20200.00	20073.478125	99.4



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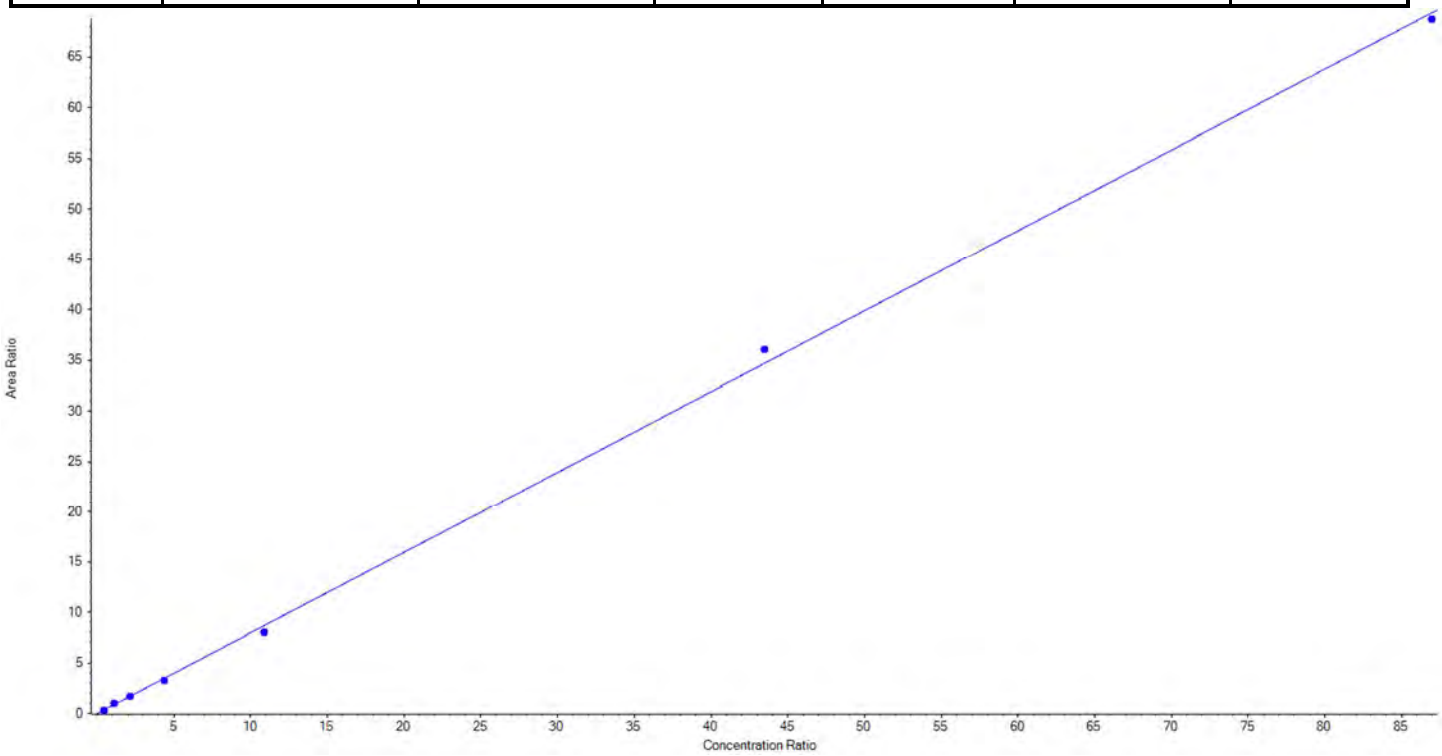
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	PFBS_2	**Data File**	AC_11252018_5-369.wiff
MRM Transition	298.9 / 99.0	**Result Table**	18-0685
Internal Standard	13C3-PFBS	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.79780 x + -0.01769 (r = 0.99938) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	101.00	99.220954	98.2
2	KC67	L2	True	252.50	286.056598	113.3
3	KC68	L3	True	505.00	492.991917	97.6
4	KC69	L4	True	1010.00	963.949841	95.4
5	KC70	L5	True	2525.00	2330.964971	92.3
6	KC71	L6	True	10100.00	10504.572419	104.0
7	KC72	L7	True	20200.00	20015.743301	99.1



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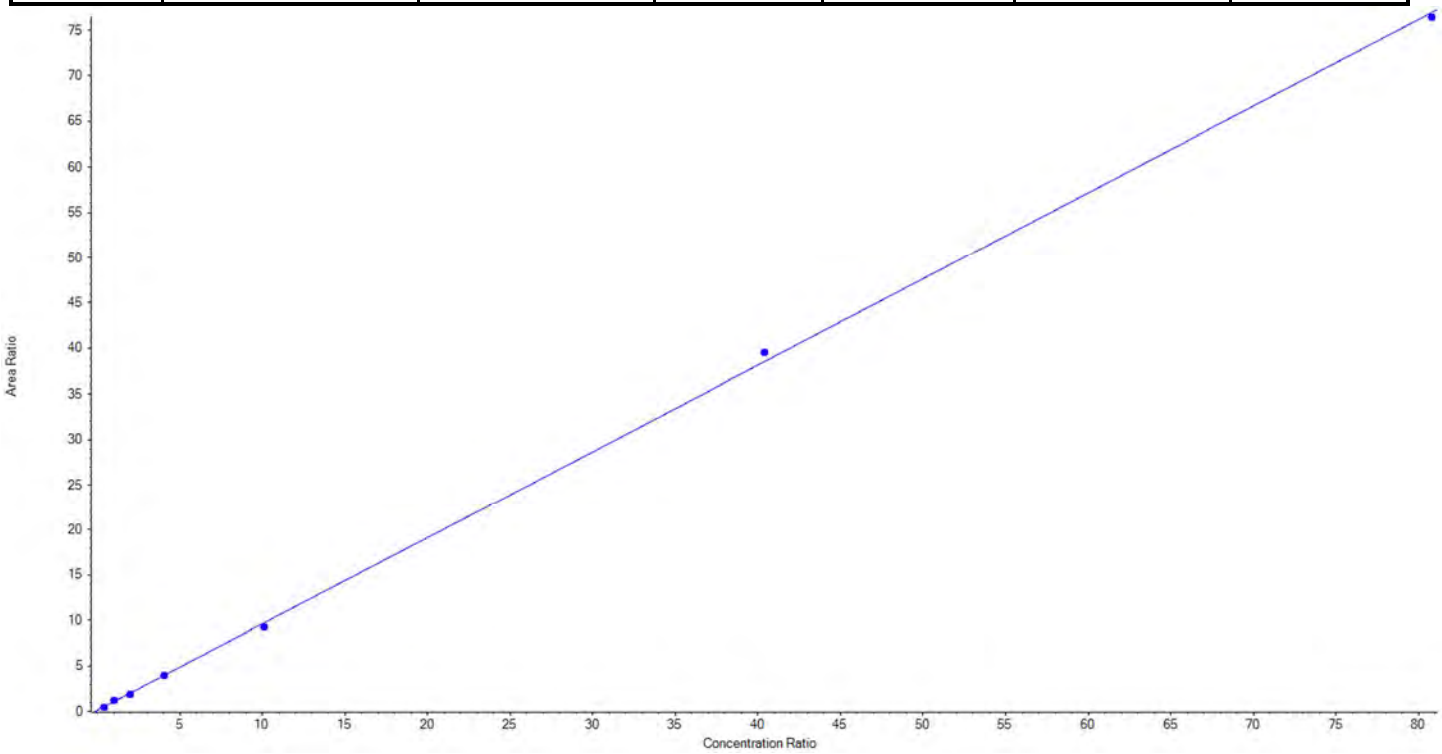
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	PFHxA_1	**Data File**	AC_11252018_5-369.wiff
MRM Transition	313.0 / 269.0	**Result Table**	18-0685
Internal Standard	13C5-PFHxA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.95080 x + 0.10903 (r = 0.99959) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	101.00	91.595453	90.7
2	KC67	L2	True	252.50	300.678459	119.1
3	KC68	L3	True	505.00	471.696592	93.4
4	KC69	L4	True	1010.00	1009.745599	100.0
5	KC70	L5	True	2525.00	2398.167086	95.0
6	KC71	L6	True	10100.00	10356.903581	102.5
7	KC72	L7	True	20200.00	20064.713230	99.3



BATTELLE

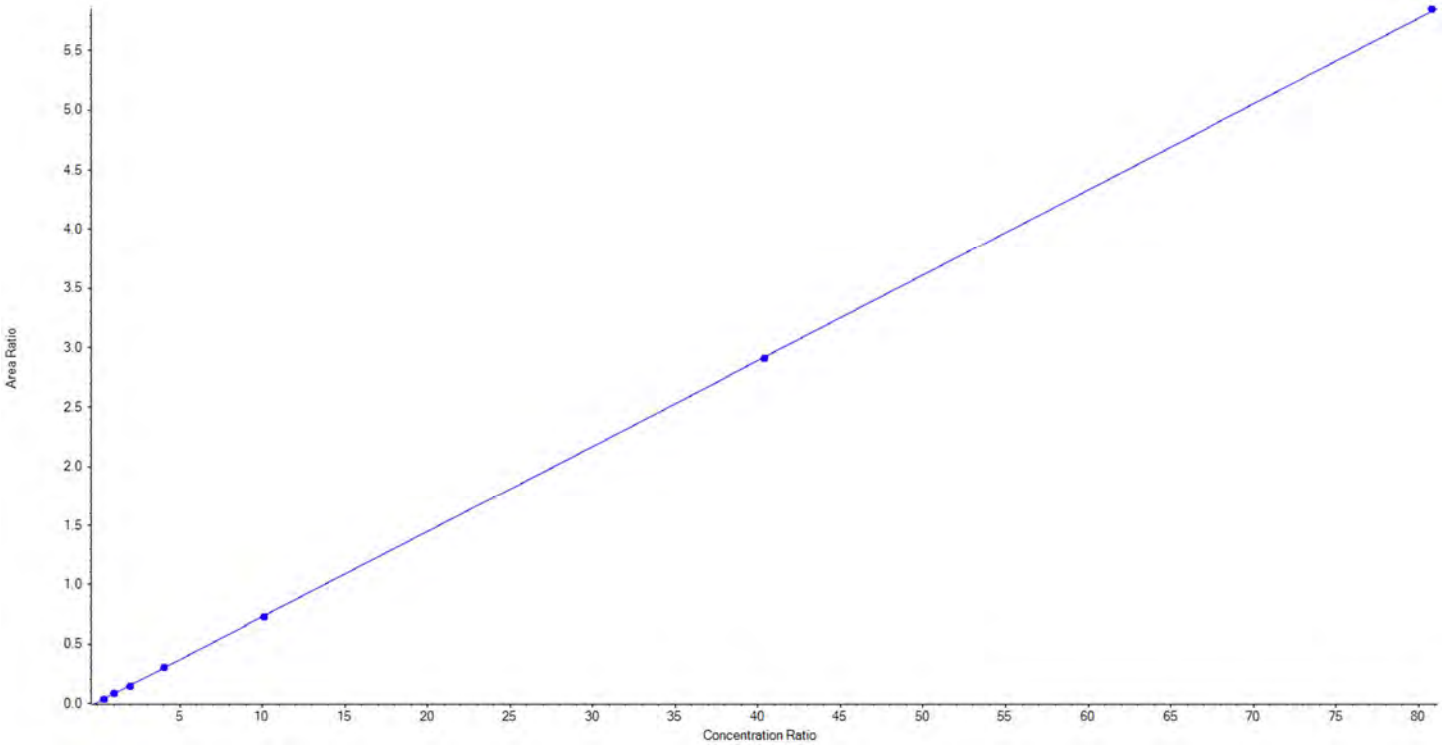
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	PFHxA_2	**Data File**	AC_11252018_5-369.wiff
MRM Transition	313.0 / 119.0	**Result Table**	18-0685
Internal Standard	13C5-PFHxA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.07206 x + 0.00759 (r = 0.99994) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	101.00	98.790855	97.8
2	KC67	L2	True	252.50	271.947978	107.7
3	KC68	L3	True	505.00	477.502914	94.6
4	KC69	L4	True	1010.00	1024.359459	101.4
5	KC70	L5	True	2525.00	2486.758637	98.5
6	KC71	L6	True	10100.00	10070.475774	99.7
7	KC72	L7	True	20200.00	20263.664384	100.3



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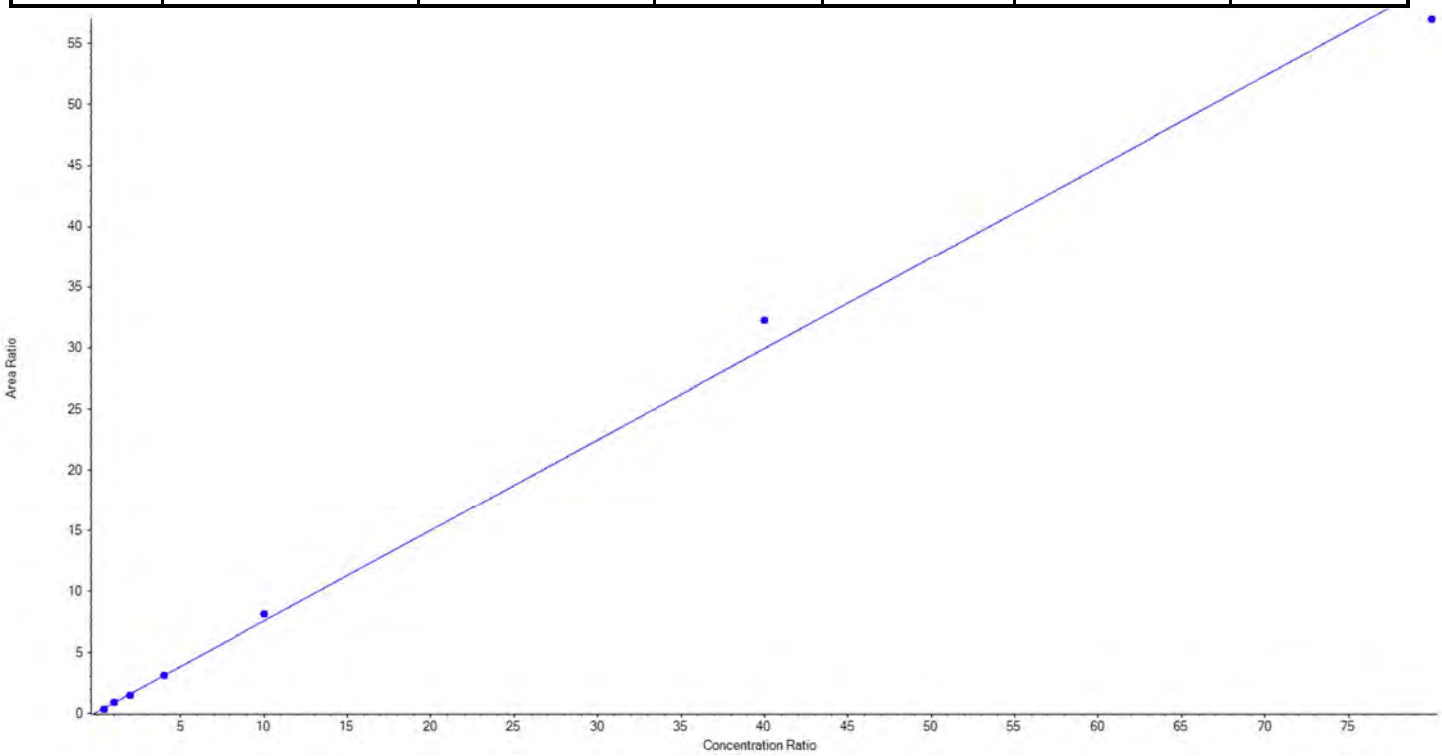
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	PFHpA_1	**Data File**	AC_11252018_5-369.wiff
MRM Transition	363.0 / 319.0	**Result Table**	18-0685
Internal Standard	13C4-PFHpA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.74609 x + 0.11277 (r = 0.99801) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	85.866735	85.9
2	KC67	L2	True	250.00	275.007637	110.0
3	KC68	L3	True	500.00	465.705398	93.1
4	KC69	L4	True	1000.00	1006.255585	100.6
5	KC70	L5	True	2500.00	2682.043282	107.3
6	KC71	L6	True	10000.00	10781.246806	107.8
7	KC72	L7	True	20000.00	19053.874556	95.3



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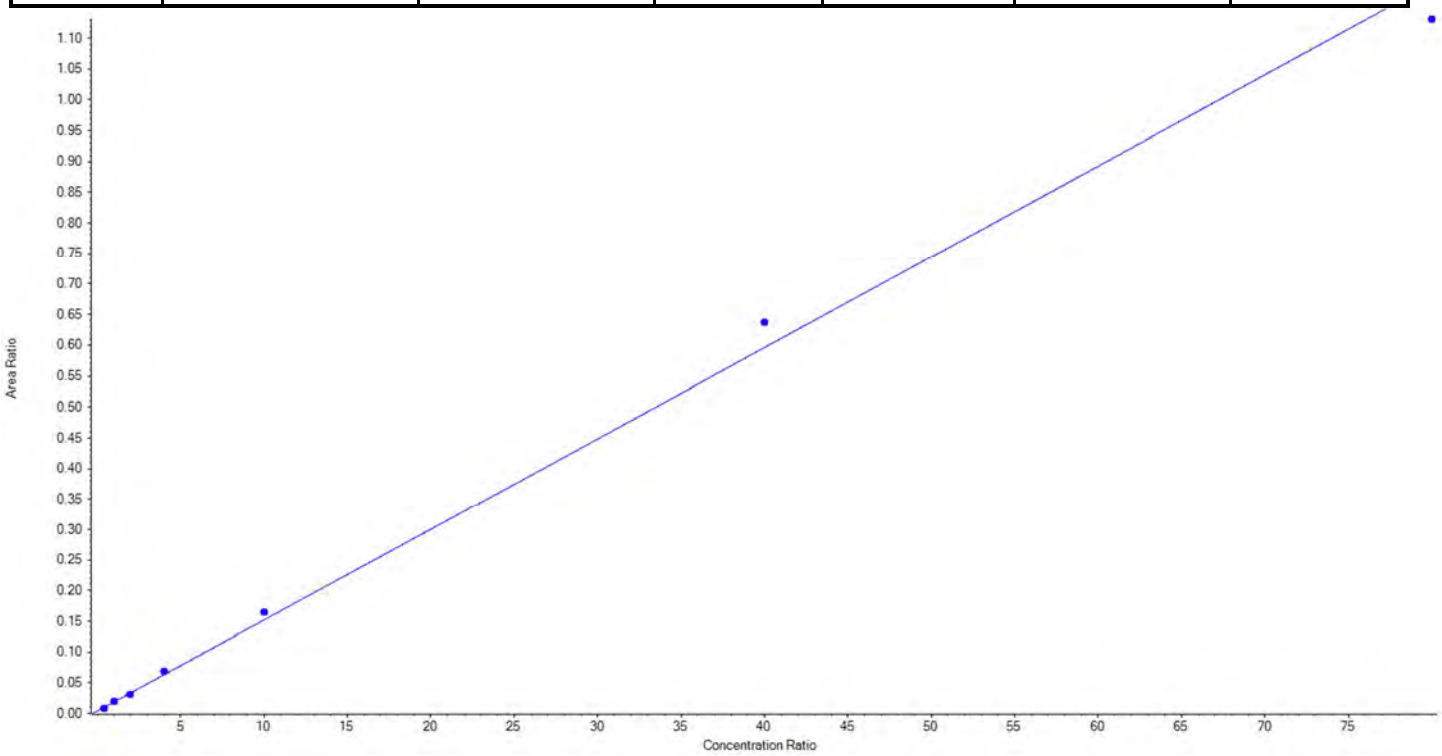
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	PFHpA_2	**Data File**	AC_11252018_5-369.wiff
MRM Transition	363.0 / 169.0	**Result Table**	18-0685
Internal Standard	13C4-PFHpA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.01481 x + 0.00371 (r = 0.99793) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	81.658585	81.7
2	KC67	L2	True	250.00	258.798520	103.5
3	KC68	L3	True	500.00	468.981333	93.8
4	KC69	L4	True	1000.00	1103.248707	110.3
5	KC70	L5	True	2500.00	2714.976302	108.6
6	KC71	L6	True	10000.00	10698.027034	107.0
7	KC72	L7	True	20000.00	19024.309520	95.1



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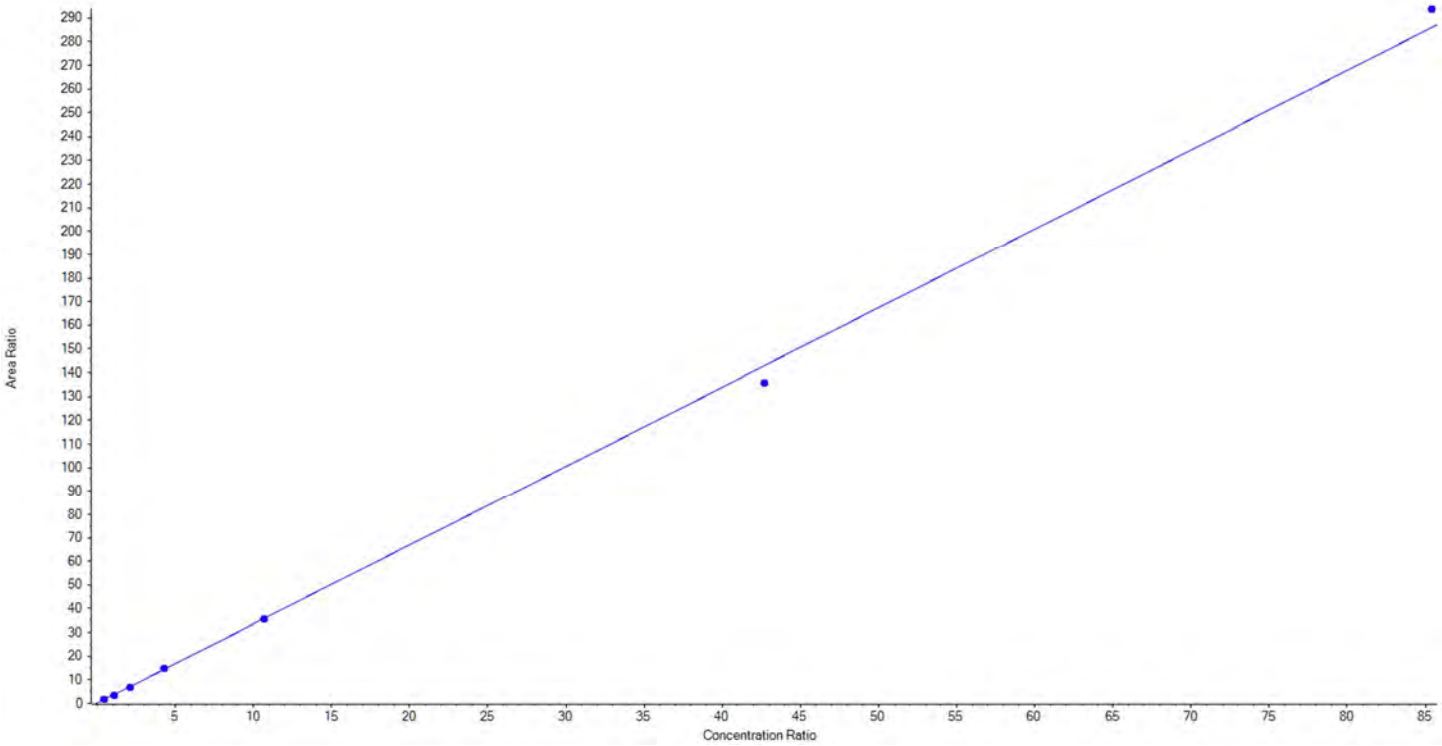
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	PFHxS_1	**Data File**	AC_11252018_5-369.wiff
MRM Transition	399.0 / 80.0	**Result Table**	18-0685
Internal Standard	13C3-PFHxS	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 3.34675 x + 0.06409 (r = 0.99930) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	101.00	112.286415	111.2
2	KC67	L2	True	252.50	237.532003	94.1
3	KC68	L3	True	505.00	486.488329	96.3
4	KC69	L4	True	1010.00	1030.852192	102.1
5	KC70	L5	True	2525.00	2492.937244	98.7
6	KC71	L6	True	10100.00	9586.678027	94.9
7	KC72	L7	True	20200.00	20746.725790	102.7



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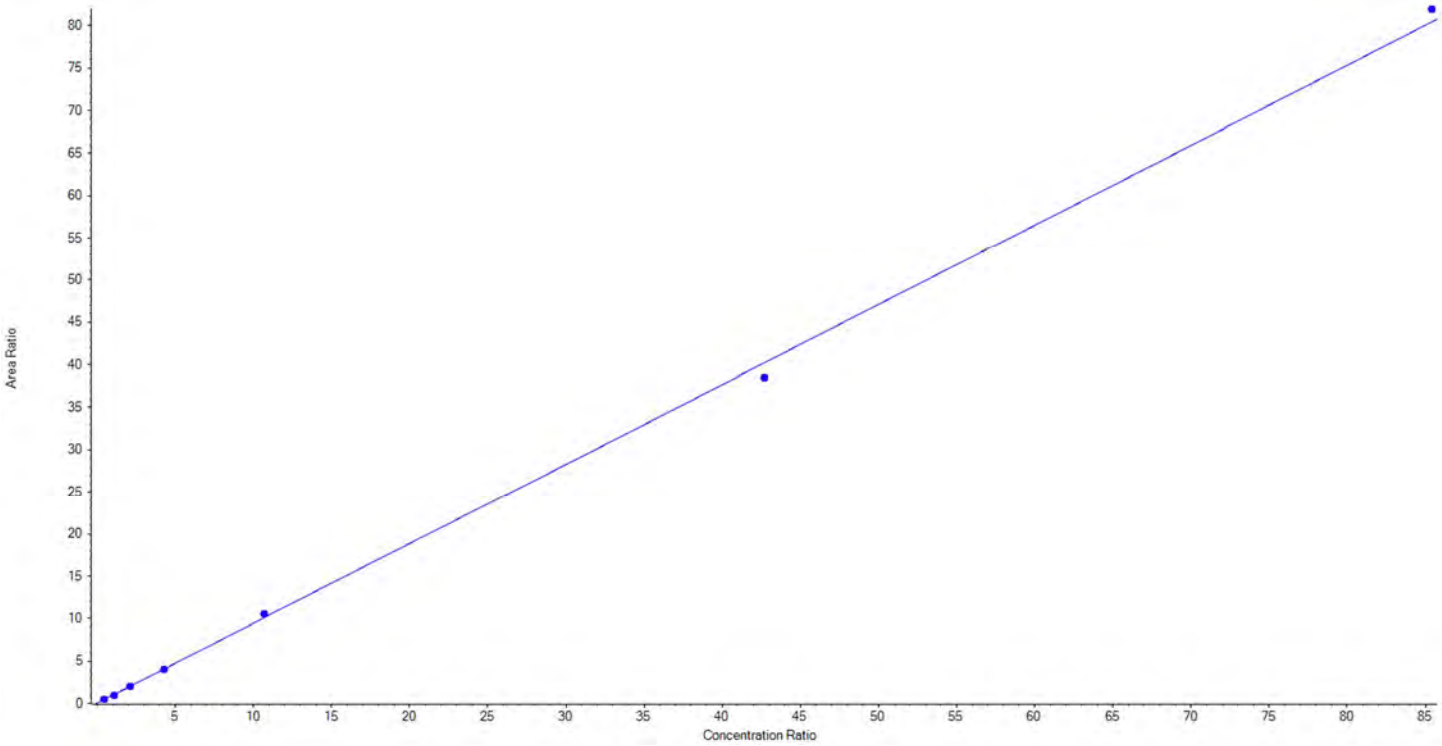
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	PFHxS_2	**Data File**	AC_11252018_5-369.wiff
MRM Transition	399.0 / 99.0	**Result Table**	18-0685
Internal Standard	13C3-PFHxS	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.94111 x + 0.02972 (r = 0.99947) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	101.00	108.592590	107.5
2	KC67	L2	True	252.50	243.055604	96.3
3	KC68	L3	True	505.00	482.517673	95.6
4	KC69	L4	True	1010.00	1000.850626	99.1
5	KC70	L5	True	2525.00	2630.183317	104.2
6	KC71	L6	True	10100.00	9649.547517	95.5
7	KC72	L7	True	20200.00	20578.752672	101.9



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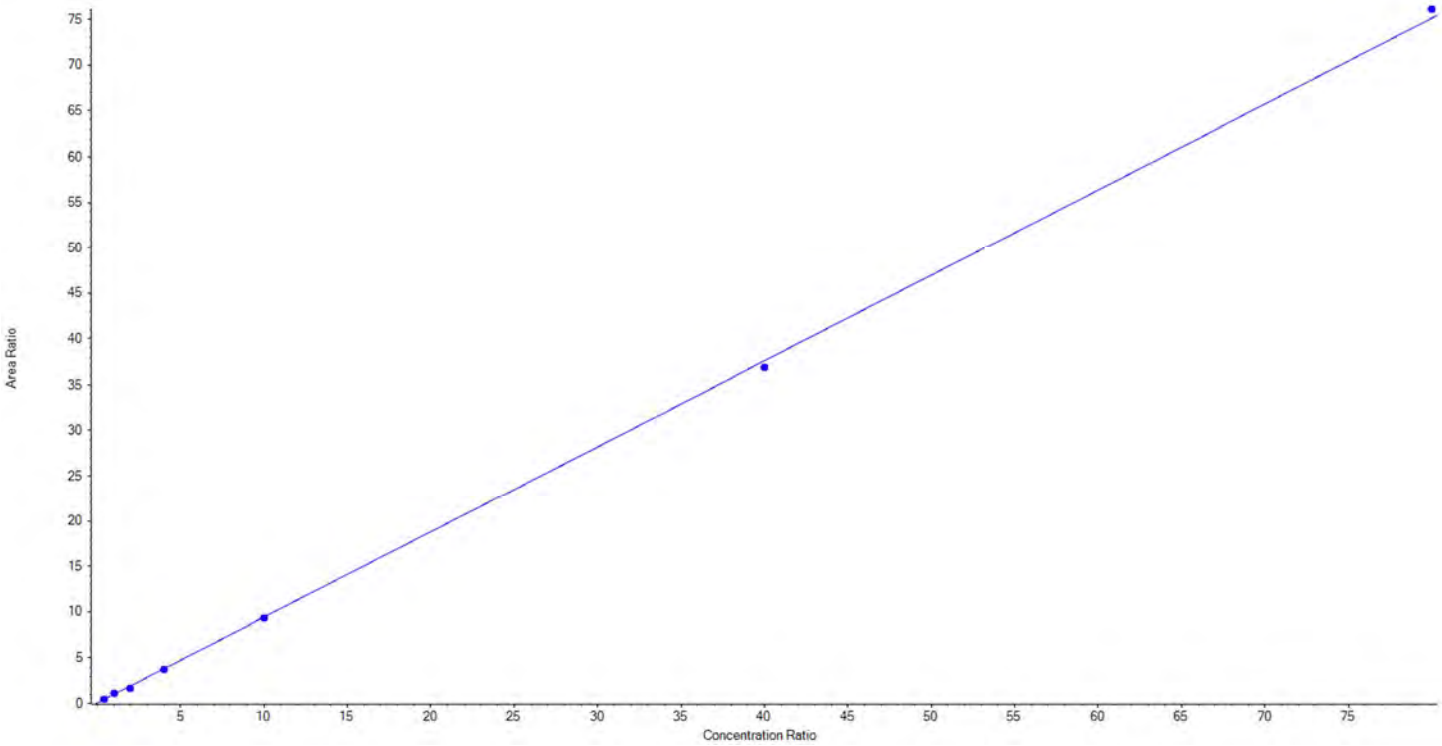
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	PFOA_1	**Data File**	AC_11252018_5-369.wiff
MRM Transition	413.0 / 369.0	**Result Table**	18-0685
Internal Standard	13C8-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.93862 x + 0.04371 (r = 0.99969) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	107.344954	107.3
2	KC67	L2	True	250.00	272.053539	108.8
3	KC68	L3	True	500.00	431.212398	86.2
4	KC69	L4	True	1000.00	989.745838	99.0
5	KC70	L5	True	2500.00	2480.990685	99.2
6	KC71	L6	True	10000.00	9806.735437	98.1
7	KC72	L7	True	20000.00	20261.917150	101.3



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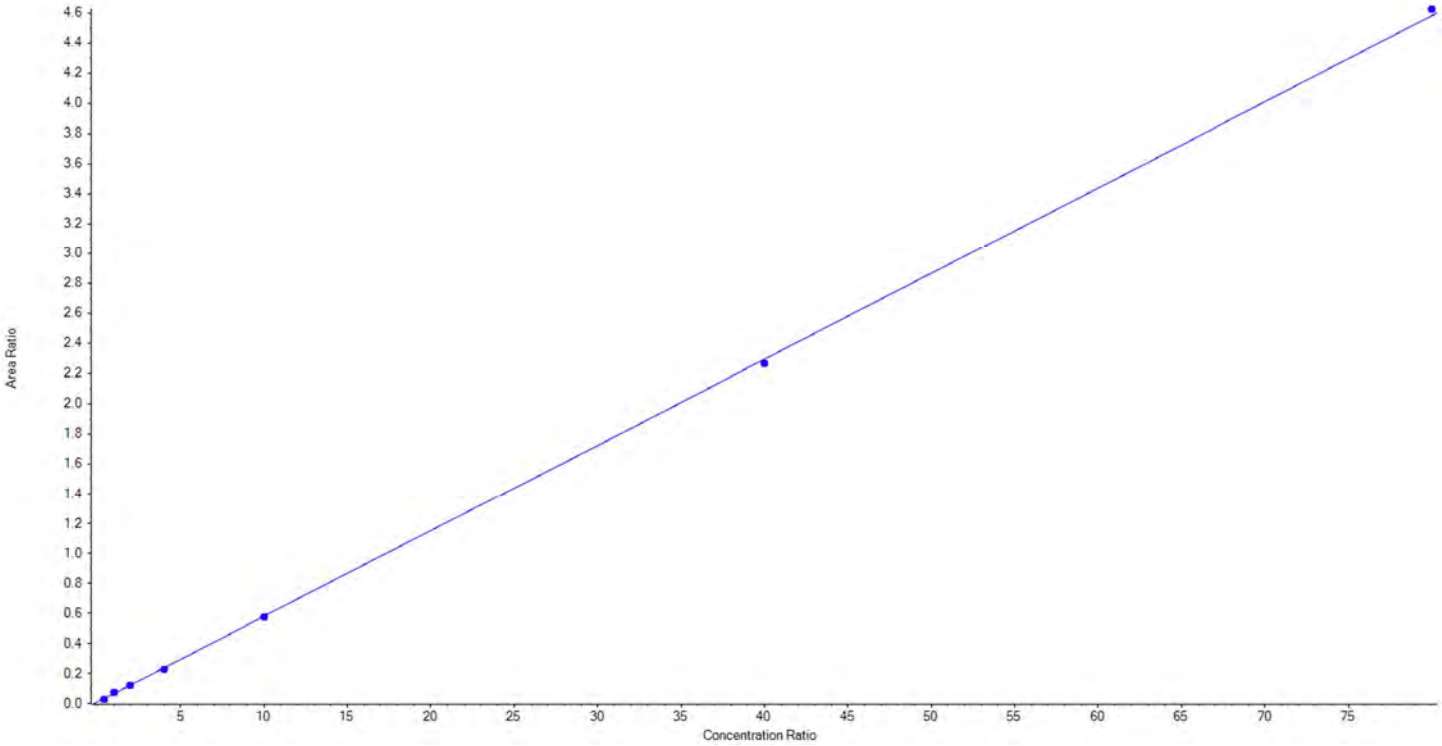
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	PFOA_2	**Data File**	AC_11252018_5-369.wiff
MRM Transition	413.0 / 169.0	**Result Table**	18-0685
Internal Standard	13C8-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.05717 x + 0.00746 (r = 0.99982) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	94.916467	94.9
2	KC67	L2	True	250.00	285.753852	114.3
3	KC68	L3	True	500.00	477.876088	95.6
4	KC69	L4	True	1000.00	968.965929	96.9
5	KC70	L5	True	2500.00	2467.627577	98.7
6	KC71	L6	True	10000.00	9866.155638	98.7
7	KC72	L7	True	20000.00	20188.704448	100.9



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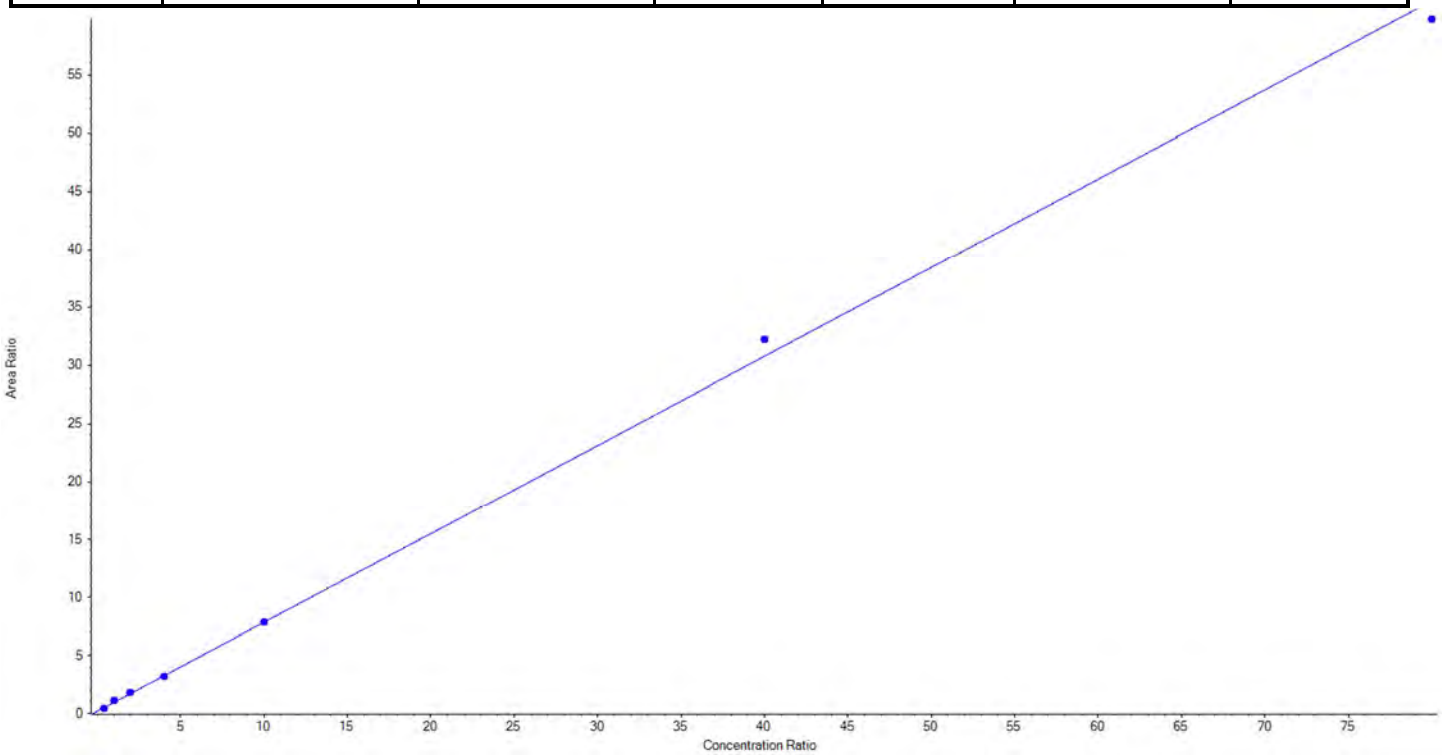
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	PFNA_1	**Data File**	AC_11252018_5-369.wiff
MRM Transition	463.0 / 419.0	**Result Table**	18-0685
Internal Standard	13C9-PFNA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.76476 x + 0.17933 (r = 0.99909) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	73.156399	73.2
2	KC67	L2	True	250.00	295.903288	118.4
3	KC68	L3	True	500.00	546.724082	109.3
4	KC69	L4	True	1000.00	971.222434	97.1
5	KC70	L5	True	2500.00	2493.758449	99.8
6	KC71	L6	True	10000.00	10483.742263	104.8
7	KC72	L7	True	20000.00	19485.493085	97.4



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Calibration Summary Report

Created with Analyst Reporter
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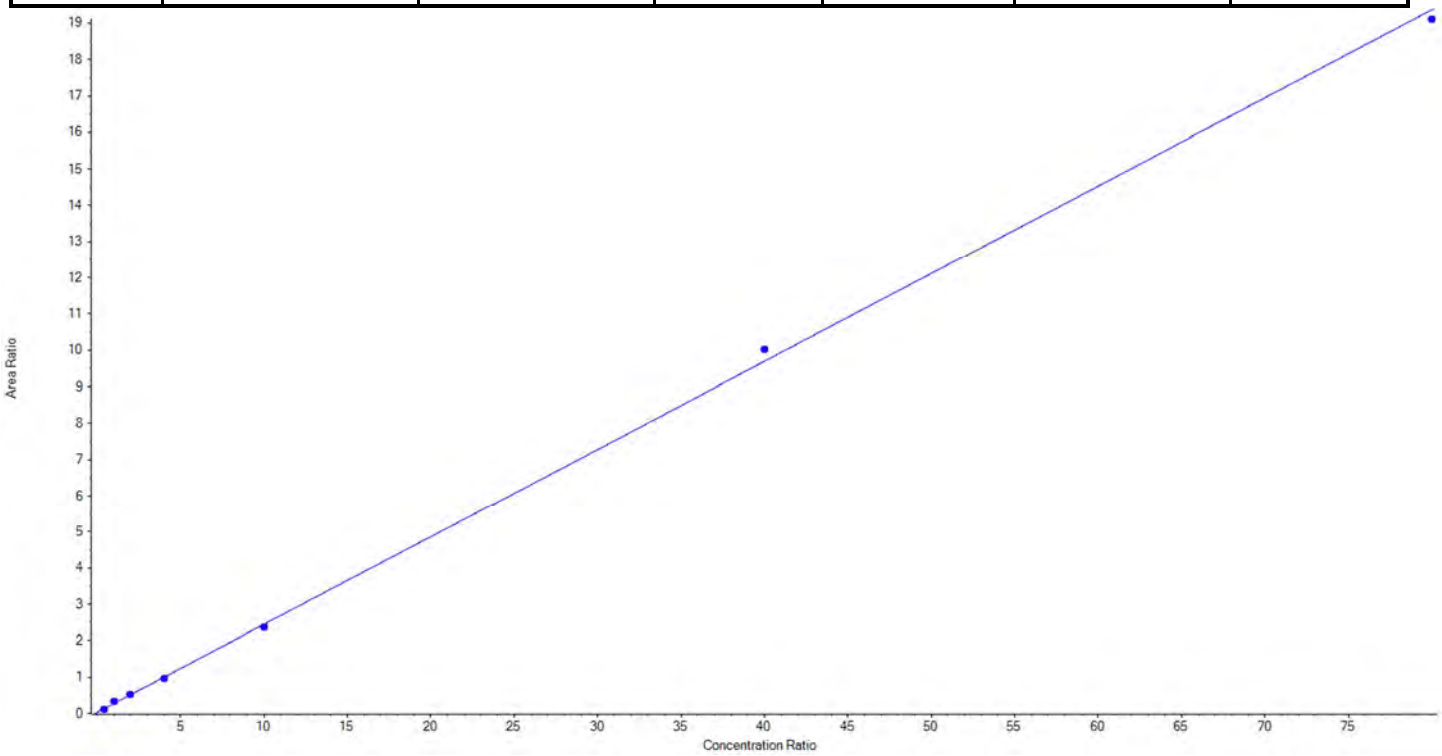
Analyte Name	PFNA_2	**Data File**	AC_11252018_5-369.wiff
MRM Transition	463.0 / 219.0	**Result Table**	18-0685
Internal Standard	13C9-PFNA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.24172 x + 0.02749 (r = 0.99942) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	78.181229	78.2
2	KC67	L2	True	250.00	306.548750	122.6
3	KC68	L3	True	500.00	520.477376	104.1
4	KC69	L4	True	1000.00	964.490520	96.5
5	KC70	L5	True	2500.00	2417.177562	96.7
6	KC71	L6	True	10000.00	10330.403712	103.3
7	KC72	L7	True	20000.00	19732.720850	98.7



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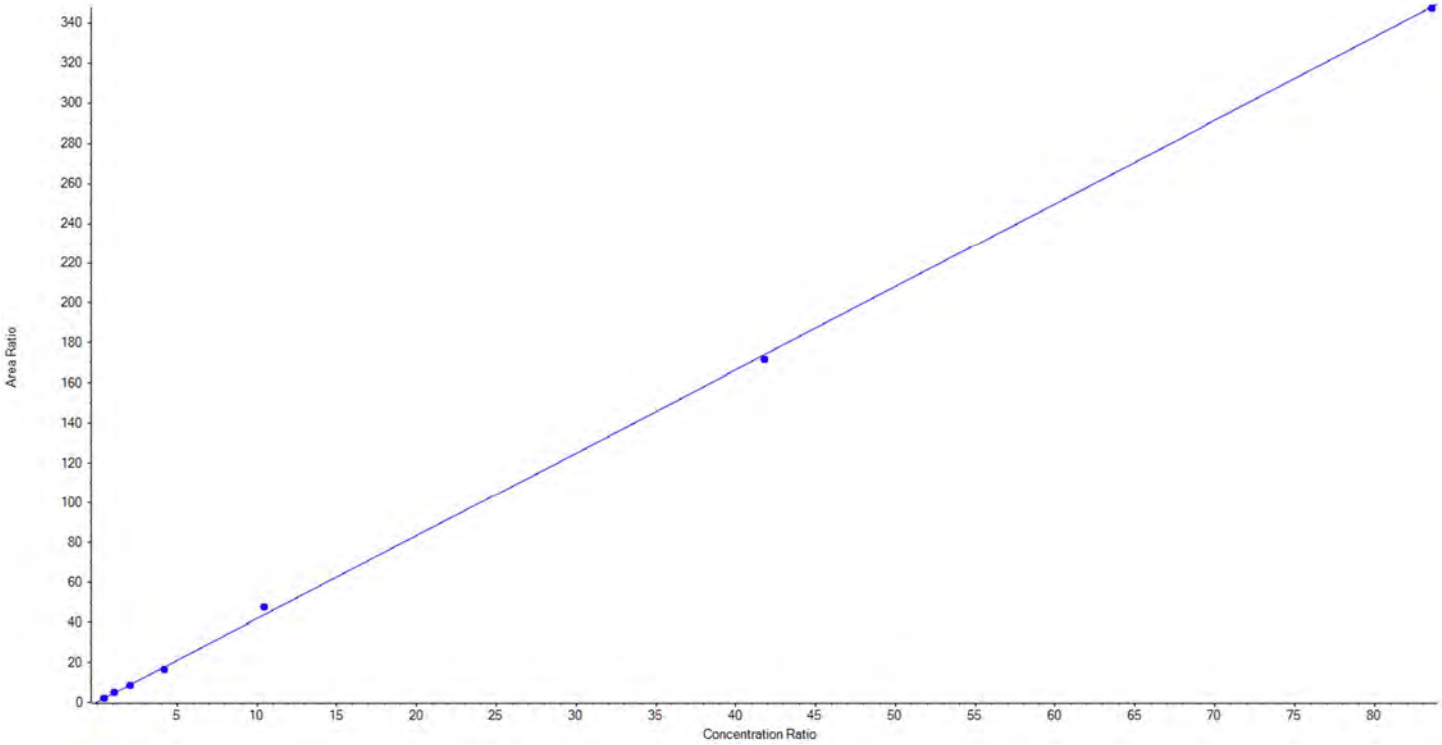
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	PFOS_1	**Data File**	AC_11252018_5-369.wiff
MRM Transition	499.0 / 80.0	**Result Table**	18-0685
Internal Standard	13C8-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 4.16086 x + 0.19012 (r = 0.99955) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	94.603463	94.6
2	KC67	L2	True	250.00	264.914842	106.0
3	KC68	L3	True	500.00	489.854480	98.0
4	KC69	L4	True	1000.00	937.669013	93.8
5	KC70	L5	True	2500.00	2729.741111	109.2
6	KC71	L6	True	10000.00	9867.414698	98.7
7	KC72	L7	True	20000.00	19965.802393	99.8



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Calibration Summary Report

Created with Analyst Reporter
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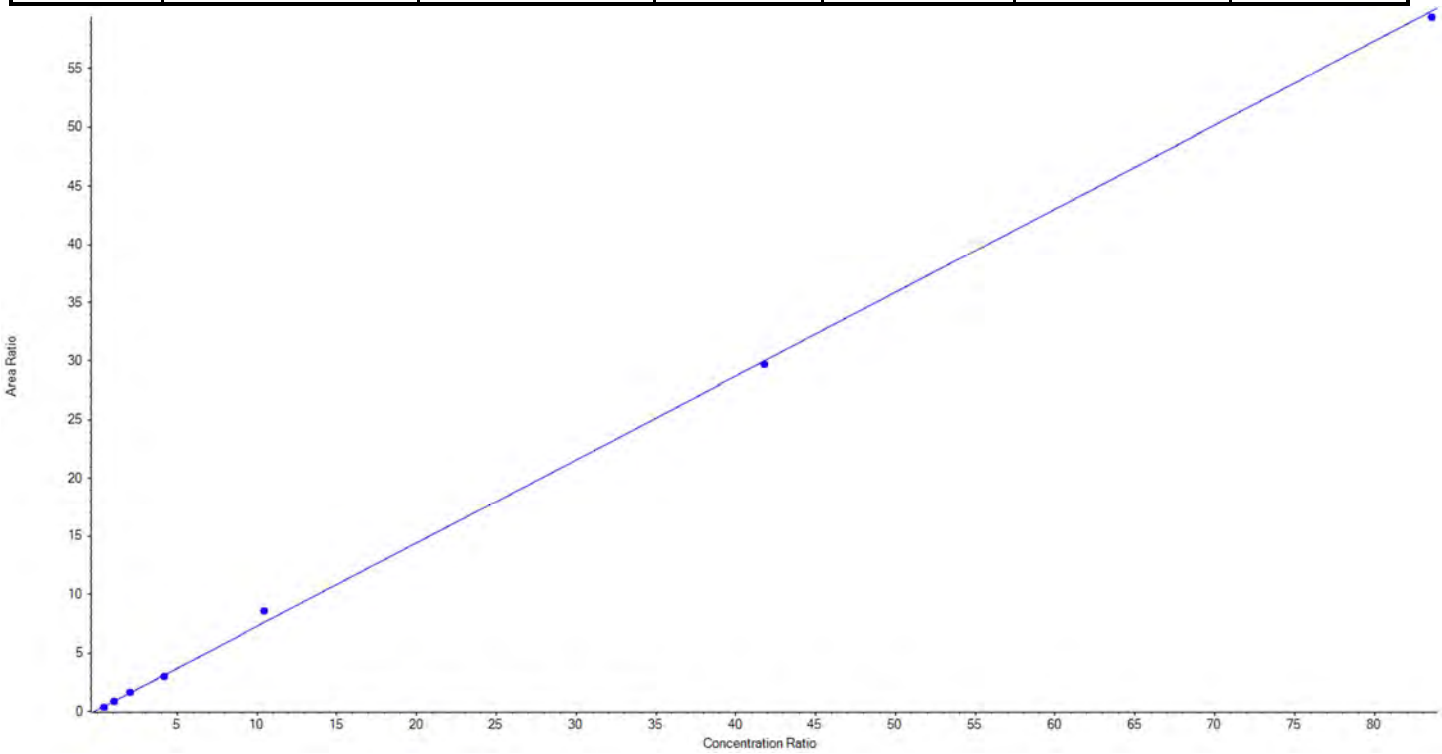
Analyte Name	PFOS_2	**Data File**	AC_11252018_5-369.wiff
MRM Transition	499.0 / 99.0	**Result Table**	18-0685
Internal Standard	13C8-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.71558 x + 0.09478 (r = 0.99926) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	89.747568	89.8
2	KC67	L2	True	250.00	254.606839	101.8
3	KC68	L3	True	500.00	506.084114	101.2
4	KC69	L4	True	1000.00	962.792874	96.3
5	KC70	L5	True	2500.00	2822.306763	112.9
6	KC71	L6	True	10000.00	9889.801368	98.9
7	KC72	L7	True	20000.00	19824.660475	99.1



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Calibration Summary Report

Created with Analyst Reporter
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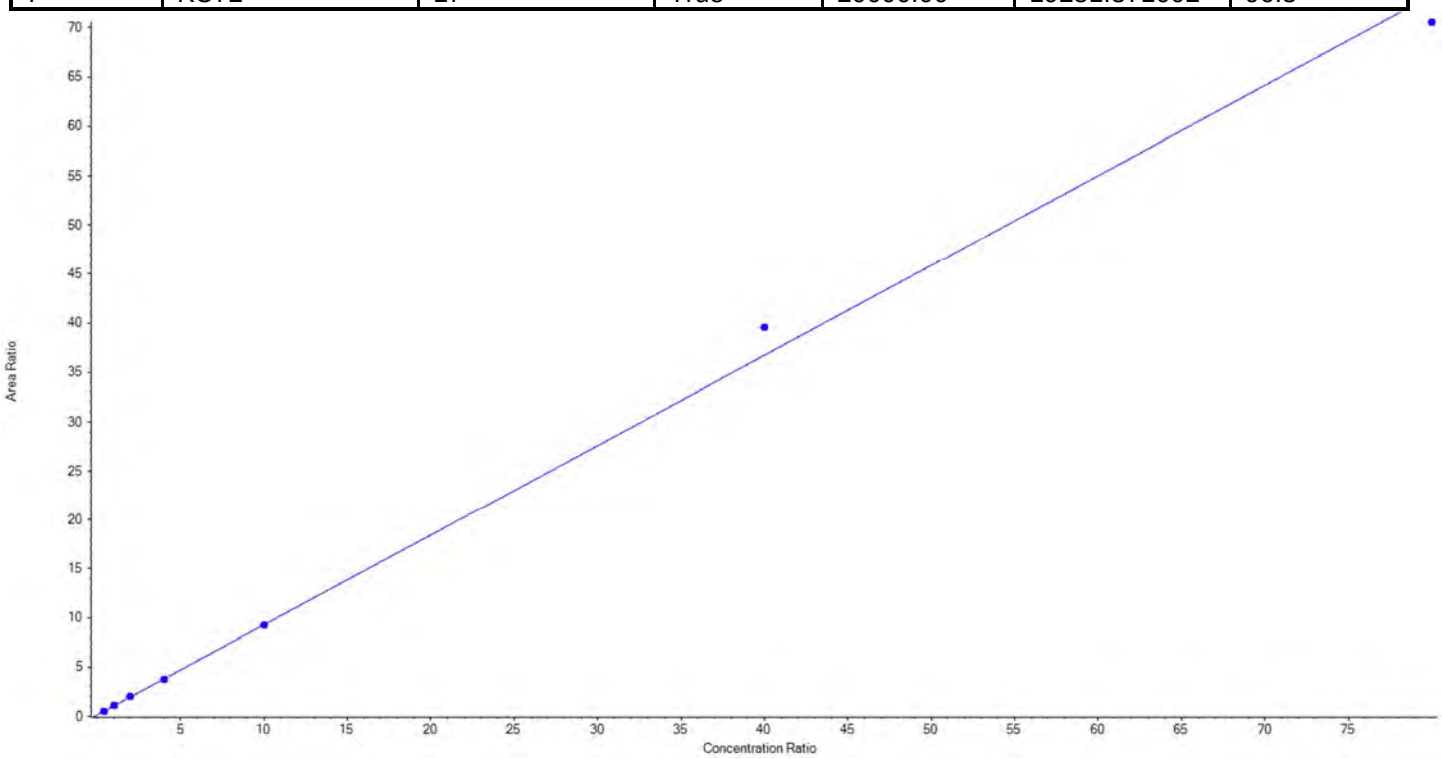
Analyte Name	PFDA_1	**Data File**	AC_11252018_5-369.wiff
MRM Transition	513.0 / 469.0	**Result Table**	18-0685
Internal Standard	13C6-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.91431 x + 0.15145 (r = 0.99862) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	92.732498	92.7
2	KC67	L2	True	250.00	260.165545	104.1
3	KC68	L3	True	500.00	505.577288	101.1
4	KC69	L4	True	1000.00	985.350941	98.5
5	KC70	L5	True	2500.00	2491.528431	99.7
6	KC71	L6	True	10000.00	10763.273694	107.6
7	KC72	L7	True	20000.00	19251.371602	96.3



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Calibration Summary Report

Created with Analyst Reporter
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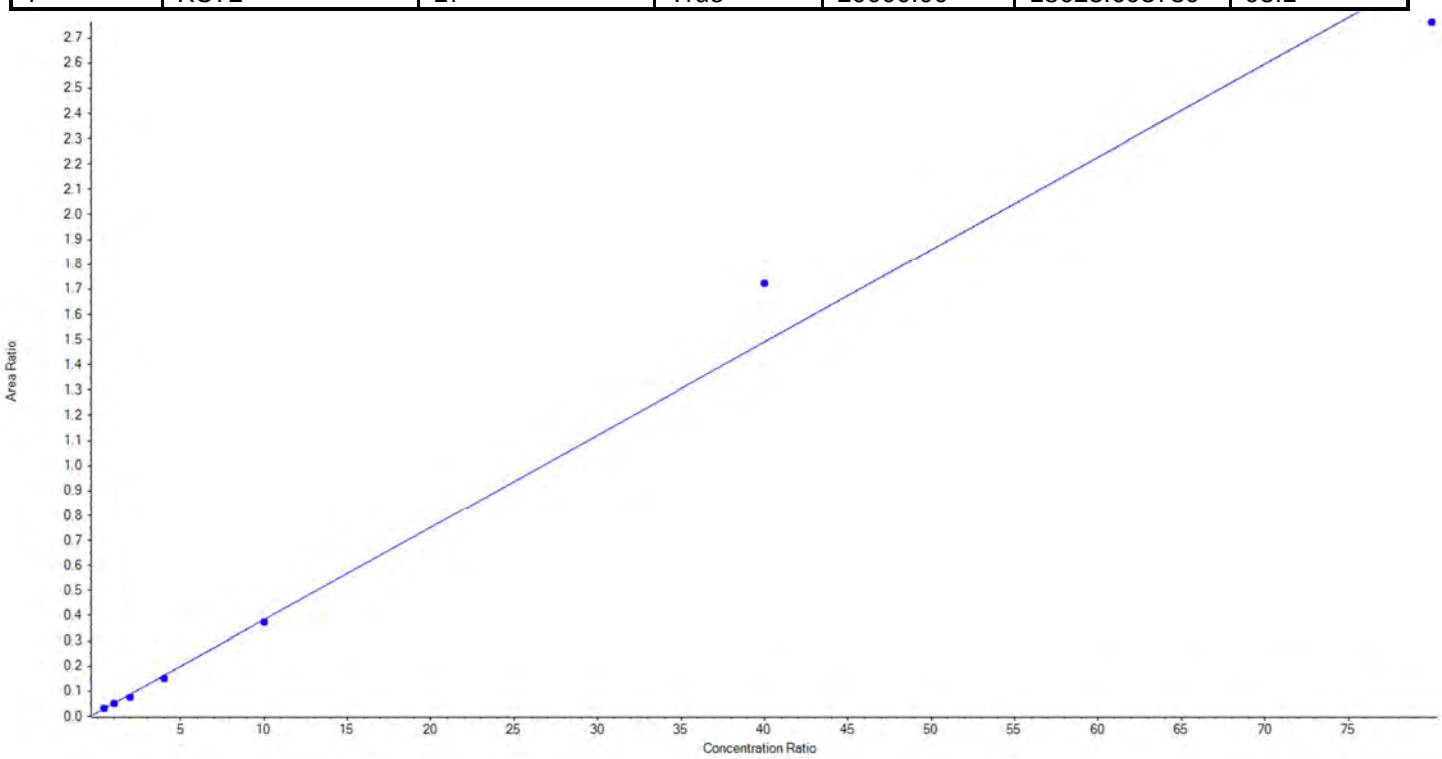
Analyte Name	PFDA_2	**Data File**	AC_11252018_5-369.wiff
MRM Transition	513.0 / 219.0	**Result Table**	18-0685
Internal Standard	13C6-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.03688 x + 0.01499 (r = 0.99411) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	122.166439	122.2
2	KC67	L2	True	250.00	239.902546	96.0
3	KC68	L3	True	500.00	418.908516	83.8
4	KC69	L4	True	1000.00	914.410768	91.4
5	KC70	L5	True	2500.00	2440.737141	97.6
6	KC71	L6	True	10000.00	11590.180852	115.9
7	KC72	L7	True	20000.00	18623.693739	93.1



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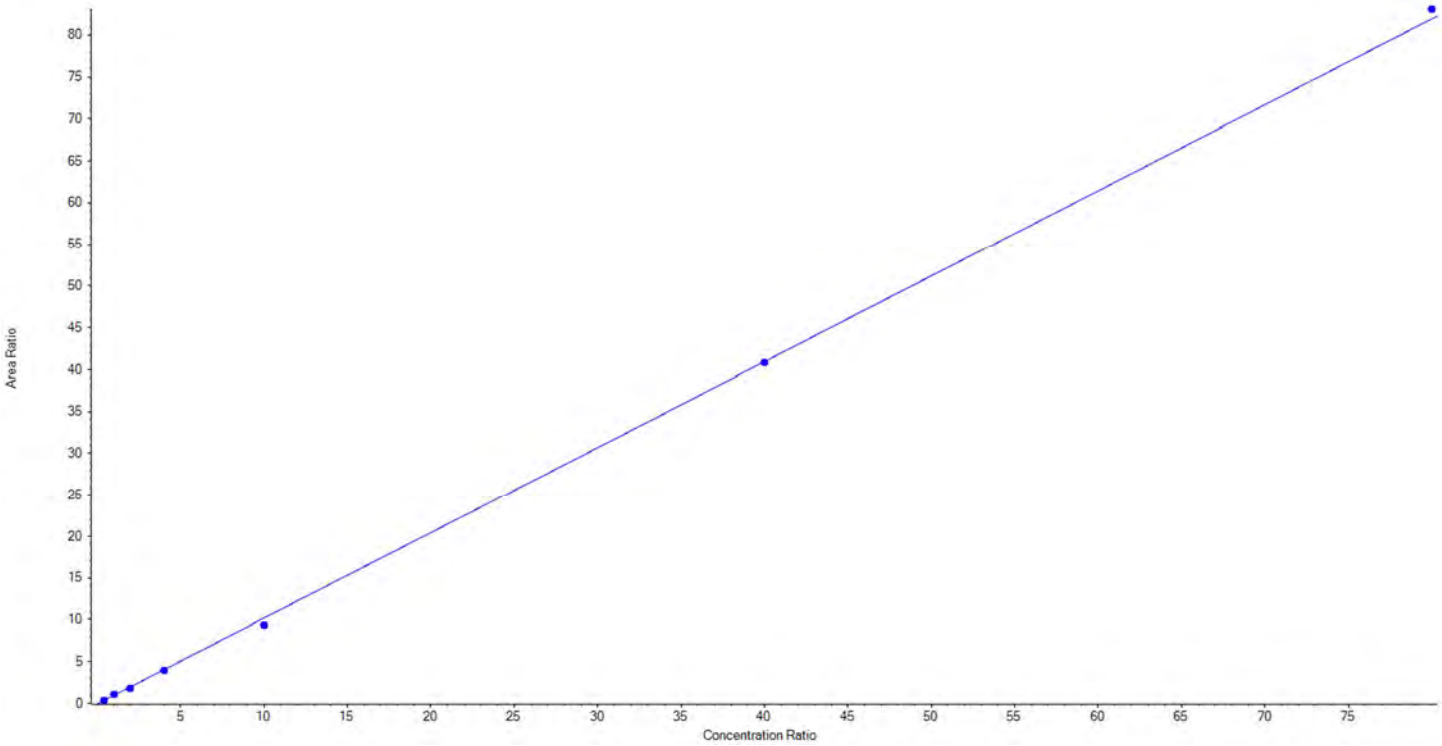
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	PFUnA_1	**Data File**	AC_11252018_5-369.wiff
MRM Transition	563.0 / 519.0	**Result Table**	18-0685
Internal Standard	13C7-PFUnA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.02508 x + -0.07064 (r = 0.99950) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	106.300729	106.3
2	KC67	L2	True	250.00	281.911727	112.8
3	KC68	L3	True	500.00	455.475052	91.1
4	KC69	L4	True	1000.00	972.870469	97.3
5	KC70	L5	True	2500.00	2287.498437	91.5
6	KC71	L6	True	10000.00	9964.573587	99.7
7	KC72	L7	True	20000.00	20281.369999	101.4



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Calibration Summary Report

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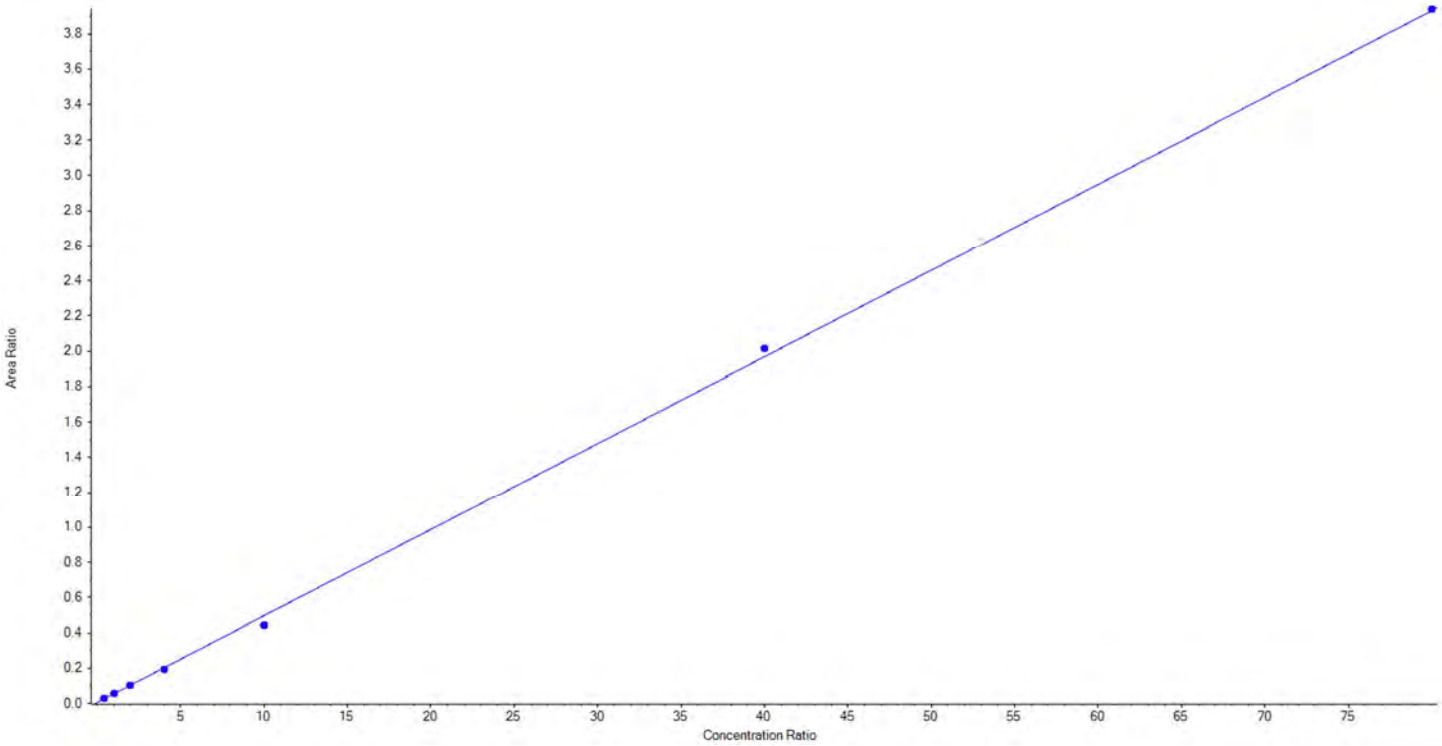
Analyte Name	PFUnA_2	**Data File**	AC_11252018_5-369.wiff
MRM Transition	563.0 / 269.0	**Result Table**	18-0685
Internal Standard	13C7-PFUnA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.04906 x + 0.00547 (r = 0.99938) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	108.472902	108.5
2	KC67	L2	True	250.00	258.149652	103.3
3	KC68	L3	True	500.00	500.410361	100.1
4	KC69	L4	True	1000.00	964.973537	96.5
5	KC70	L5	True	2500.00	2224.113154	89.0
6	KC71	L6	True	10000.00	10250.776541	102.5
7	KC72	L7	True	20000.00	20043.103852	100.2



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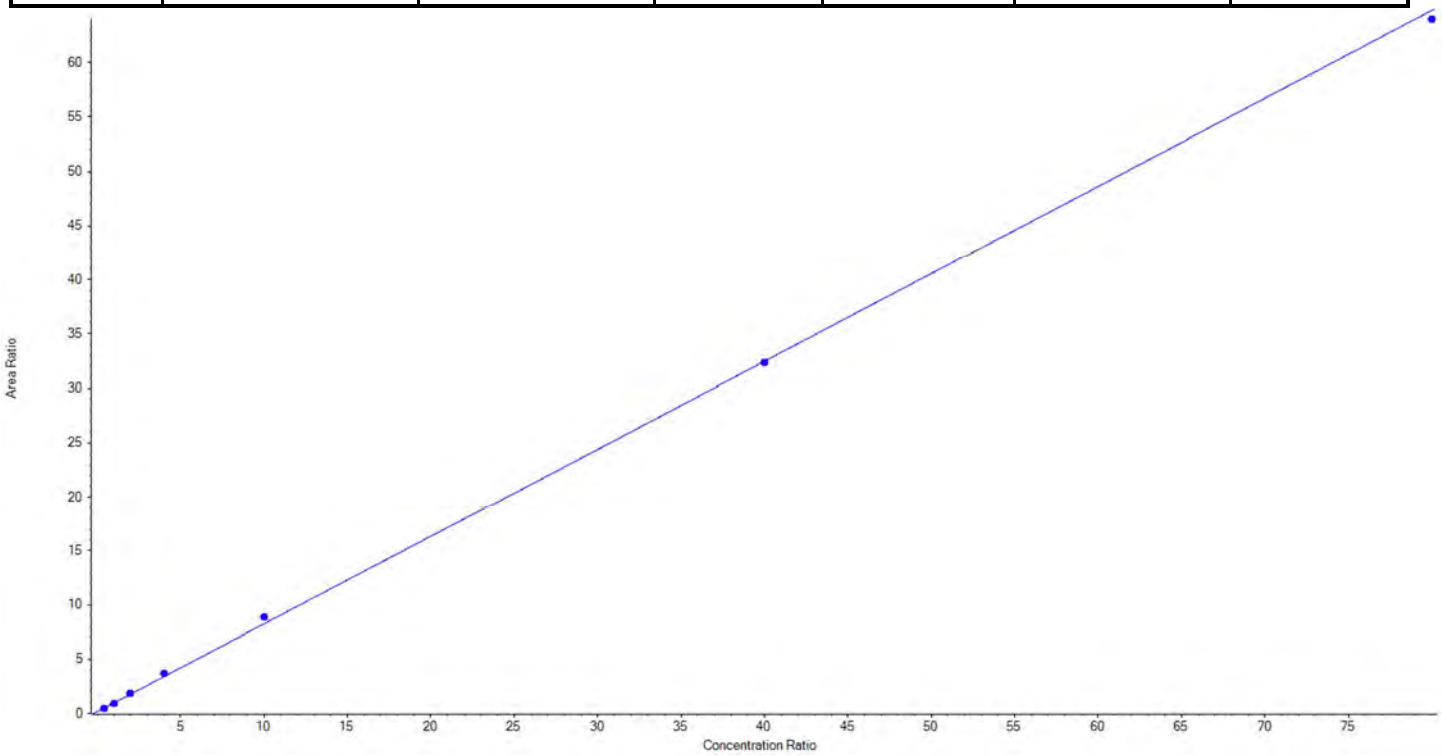
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	PFDoA_1	**Data File**	AC_11252018_5-369.wiff
MRM Transition	613.0 / 569.0	**Result Table**	18-0685
Internal Standard	13C2-PFDoA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.80790 x + 0.15392 (r = 0.99948) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	80.878060	80.9
2	KC67	L2	True	250.00	250.949511	100.4
3	KC68	L3	True	500.00	514.853454	103.0
4	KC69	L4	True	1000.00	1092.919312	109.3
5	KC70	L5	True	2500.00	2704.197811	108.2
6	KC71	L6	True	10000.00	9956.118265	99.6
7	KC72	L7	True	20000.00	19750.083587	98.8



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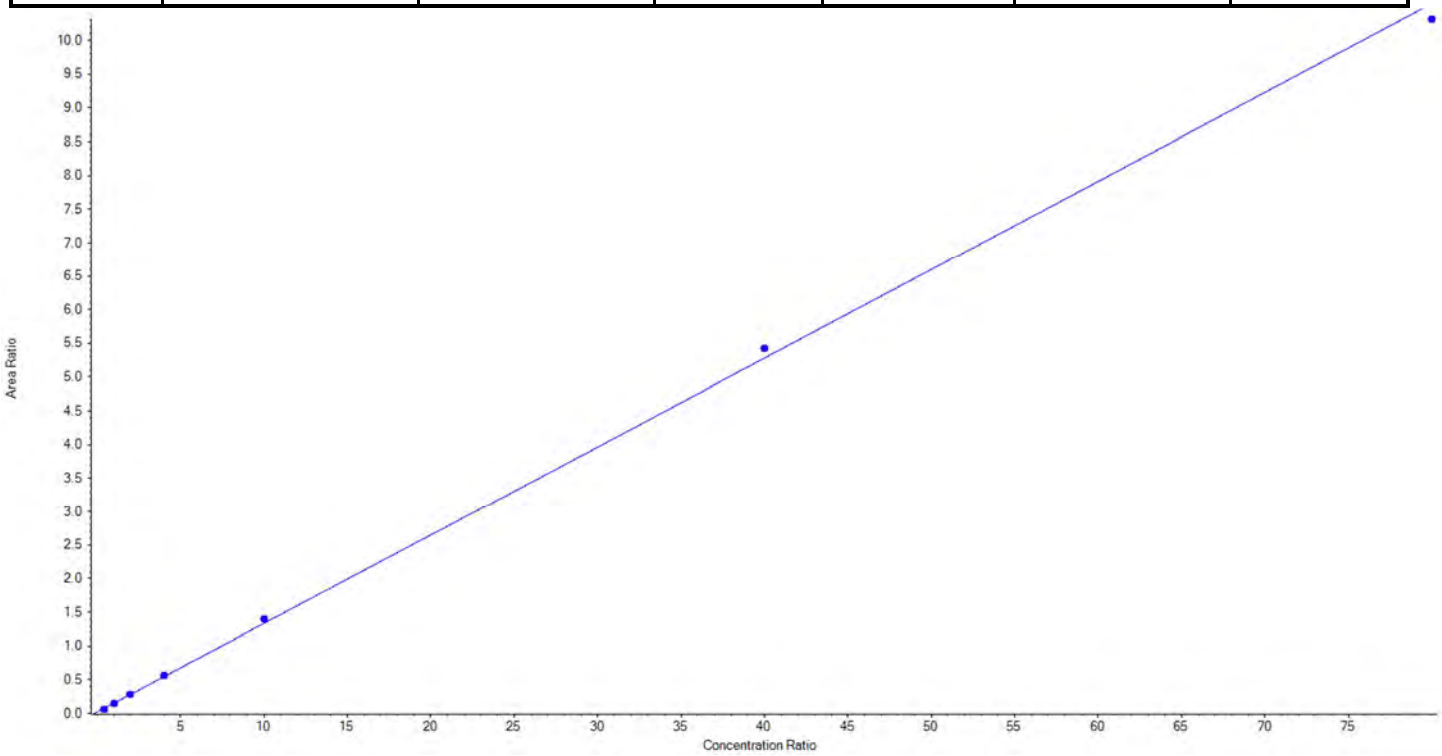
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	PFDoA_2	**Data File**	AC_11252018_5-369.wiff
MRM Transition	613.0 / 319.0	**Result Table**	18-0685
Internal Standard	13C2-PFDoA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.13155 x + 0.01860 (r = 0.99958) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	90.858308	90.9
2	KC67	L2	True	250.00	244.181114	97.7
3	KC68	L3	True	500.00	508.616638	101.7
4	KC69	L4	True	1000.00	1040.542185	104.1
5	KC70	L5	True	2500.00	2627.993742	105.1
6	KC71	L6	True	10000.00	10276.582010	102.8
7	KC72	L7	True	20000.00	19561.226003	97.8



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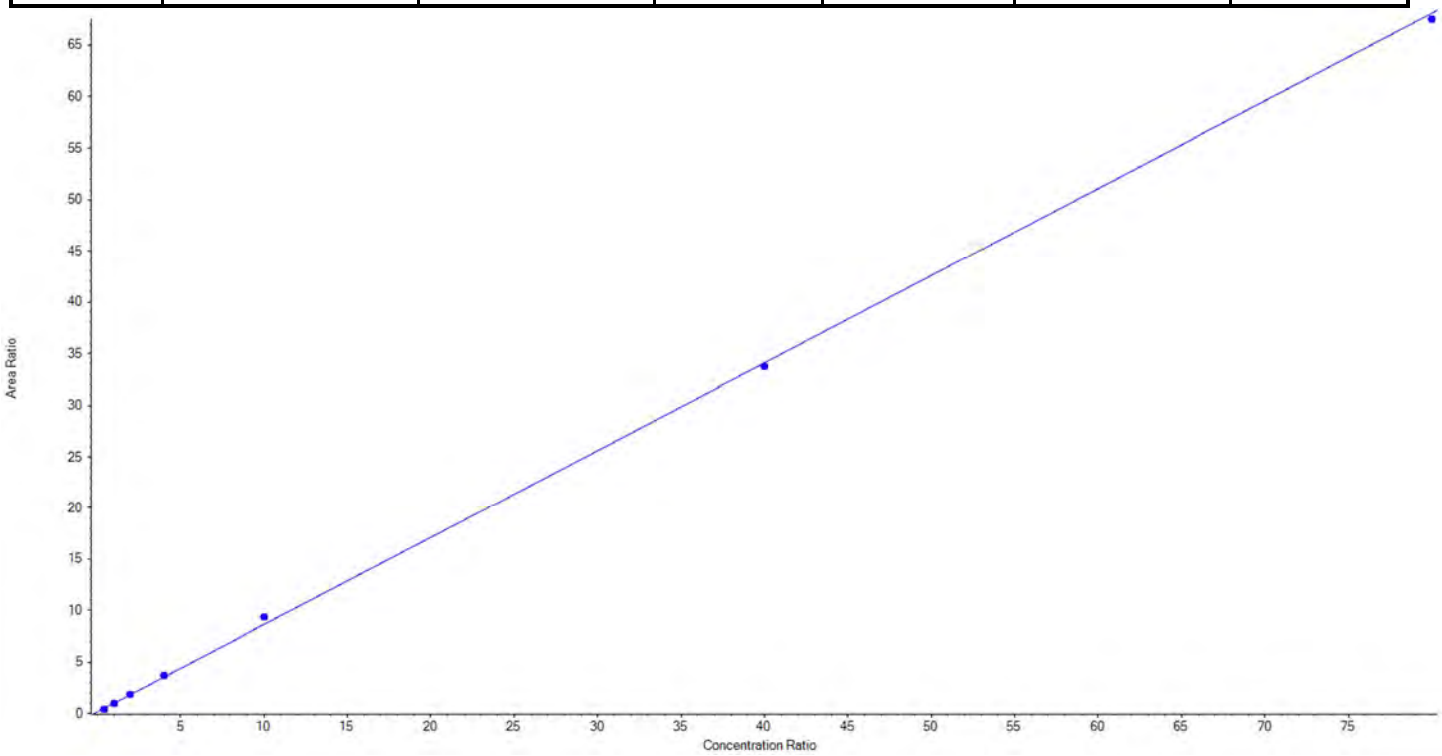
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	PFTrDA_1	**Data File**	AC_11252018_5-369.wiff
MRM Transition	663.0 / 619.0	**Result Table**	18-0685
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.84935 x + 0.12394 (r = 0.99956) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	84.973578	85.0
2	KC67	L2	True	250.00	253.482640	101.4
3	KC68	L3	True	500.00	501.472651	100.3
4	KC69	L4	True	1000.00	1065.557325	106.6
5	KC70	L5	True	2500.00	2716.098700	108.6
6	KC71	L6	True	10000.00	9899.415861	99.0
7	KC72	L7	True	20000.00	19828.999244	99.1



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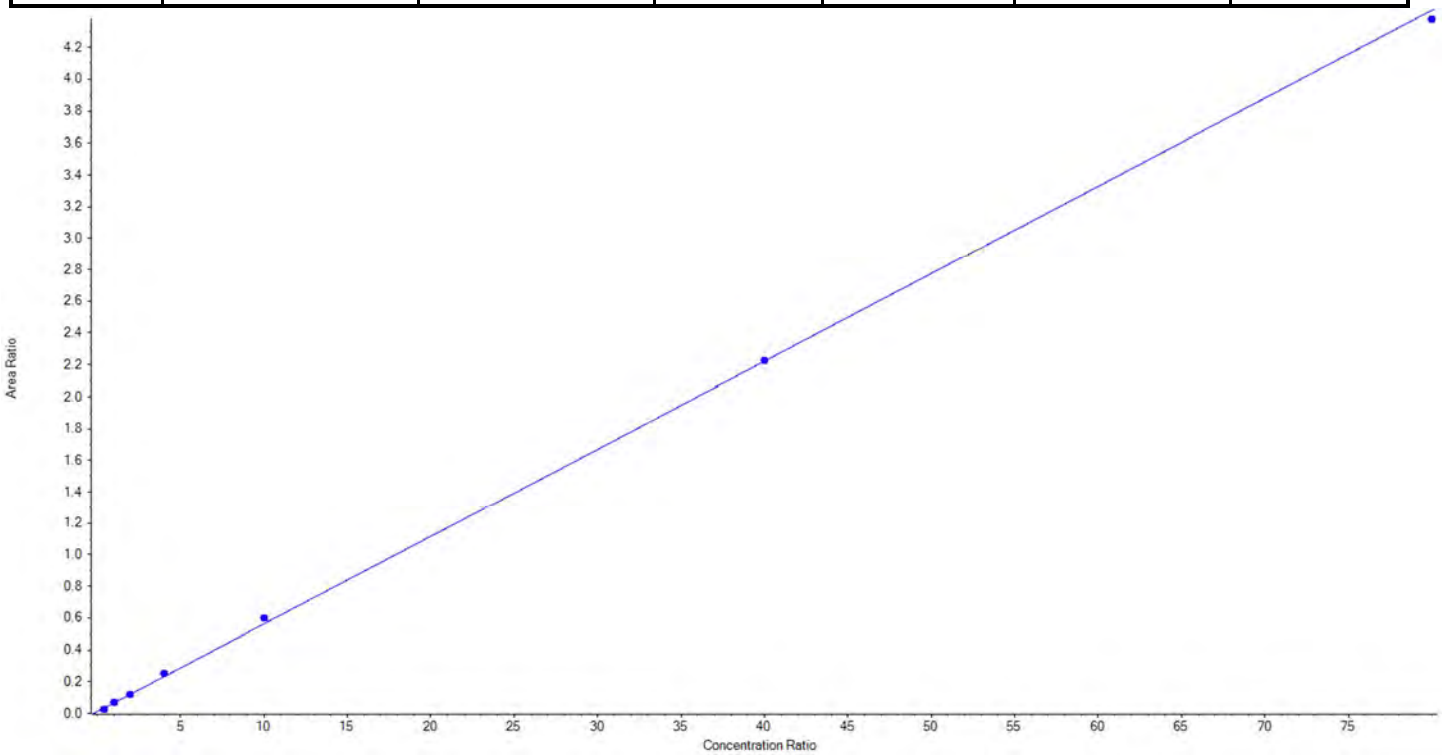
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	PFTrDA_2	**Data File**	AC_11252018_5-369.wiff
MRM Transition	663.0 / 169.0	**Result Table**	18-0685
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.05529 x + 0.01011 (r = 0.99958) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	82.124337	82.1
2	KC67	L2	True	250.00	261.518476	104.6
3	KC68	L3	True	500.00	494.296091	98.9
4	KC69	L4	True	1000.00	1087.991609	108.8
5	KC70	L5	True	2500.00	2669.861291	106.8
6	KC71	L6	True	10000.00	10008.880172	100.1
7	KC72	L7	True	20000.00	19745.328023	98.7



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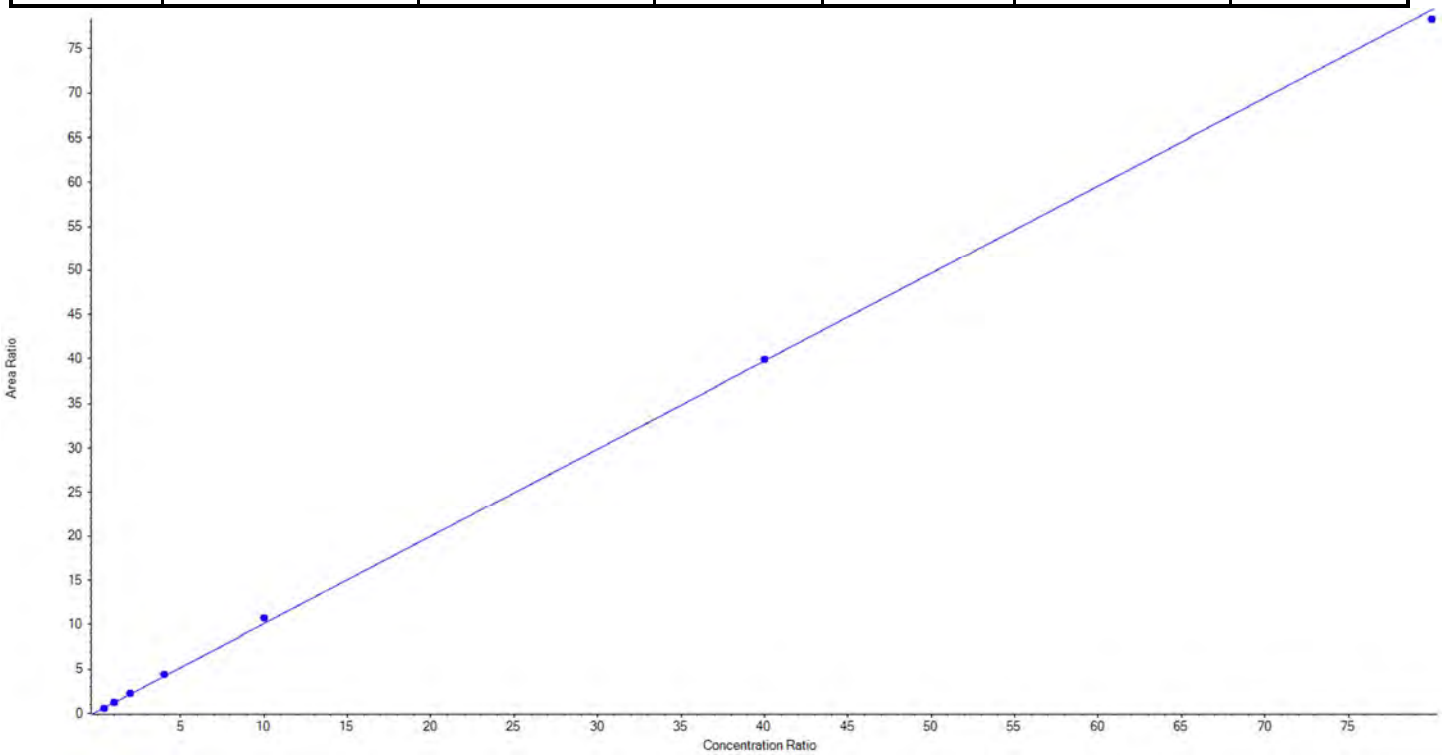
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	PFTeDA_1	**Data File**	AC_11252018_5-369.wiff
MRM Transition	713.0 / 669.0	**Result Table**	18-0685
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.98936 x + 0.20410 (r = 0.99960) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	77.123644	77.1
2	KC67	L2	True	250.00	271.946708	108.8
3	KC68	L3	True	500.00	517.383621	103.5
4	KC69	L4	True	1000.00	1049.164913	104.9
5	KC70	L5	True	2500.00	2667.791307	106.7
6	KC71	L6	True	10000.00	10031.971183	100.3
7	KC72	L7	True	20000.00	19734.618624	98.7



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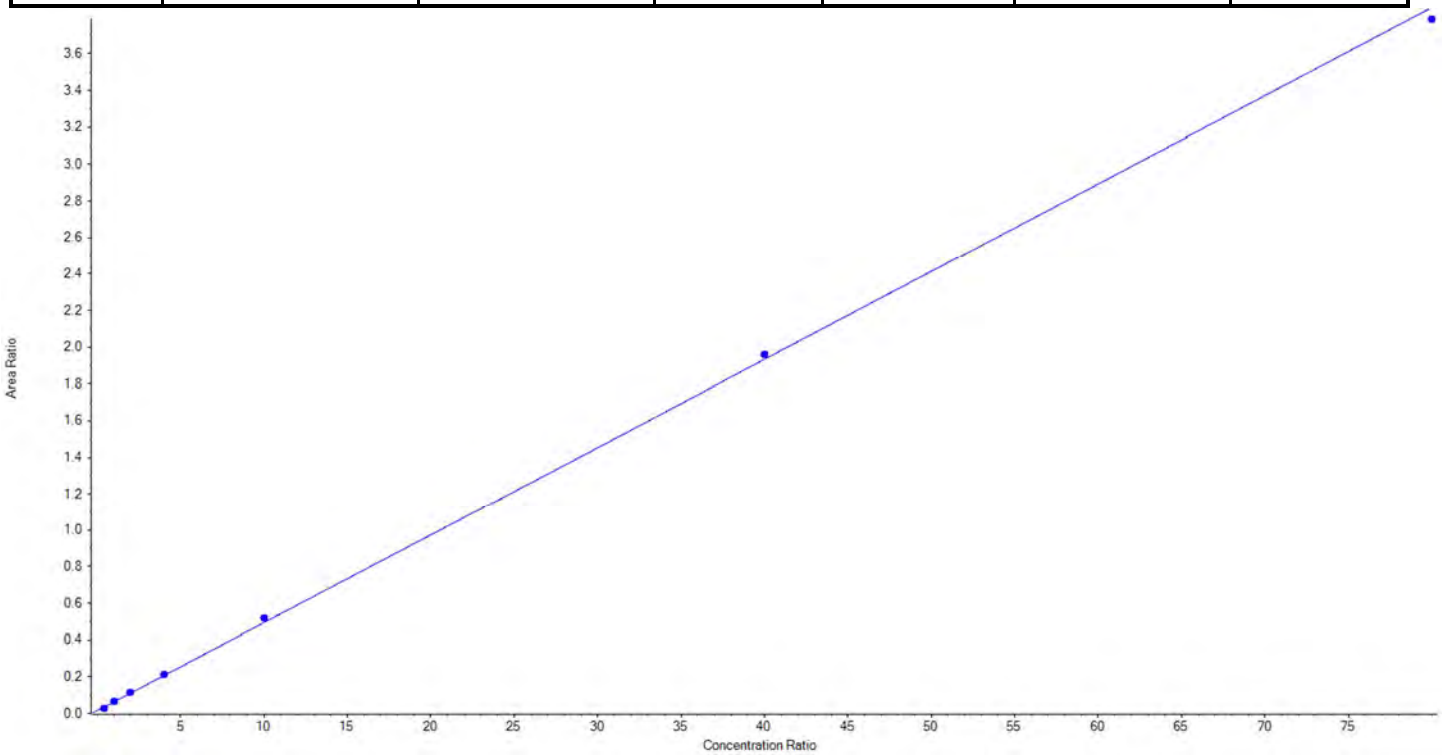
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	PFTeDA_2	**Data File**	AC_11252018_5-369.wiff
MRM Transition	713.0 / 169.0	**Result Table**	18-0685
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.04797 x + 0.01441 (r = 0.99967) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	81.339861	81.3
2	KC67	L2	True	250.00	262.650927	105.1
3	KC68	L3	True	500.00	521.792346	104.4
4	KC69	L4	True	1000.00	1045.714737	104.6
5	KC70	L5	True	2500.00	2620.829620	104.8
6	KC71	L6	True	10000.00	10149.655646	101.5
7	KC72	L7	True	20000.00	19668.016863	98.3



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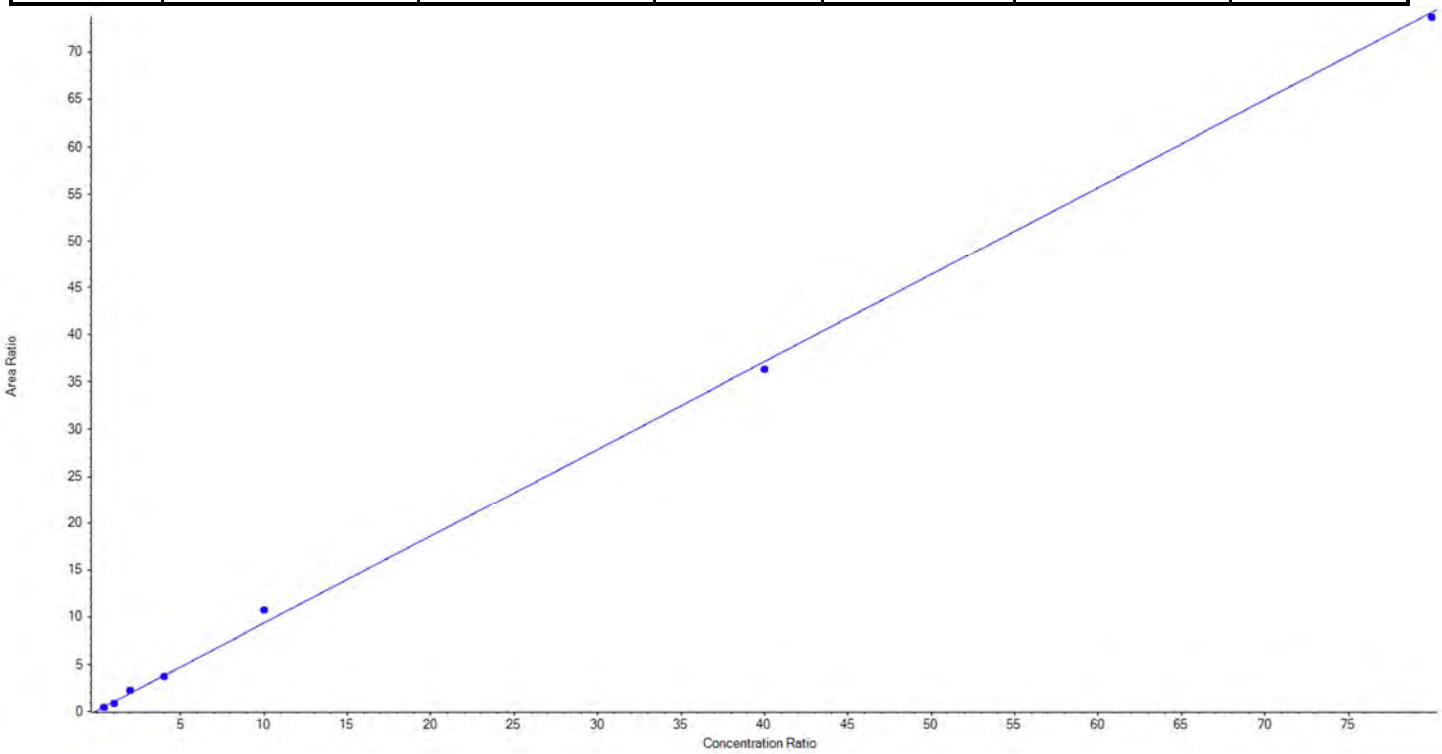
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	NMeFOSAA_1	**Data File**	AC_11252018_5-369.wiff
MRM Transition	570.0 / 419.0	**Result Table**	18-0685
Internal Standard	d3-MeFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.92642 x + 0.08687 (r = 0.99881) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	88.541801	88.5
2	KC67	L2	True	250.00	219.360809	87.7
3	KC68	L3	True	500.00	570.865787	114.2
4	KC69	L4	True	1000.00	980.040463	98.0
5	KC70	L5	True	2500.00	2864.535443	114.6
6	KC71	L6	True	10000.00	9764.395064	97.6
7	KC72	L7	True	20000.00	19862.260634	99.3



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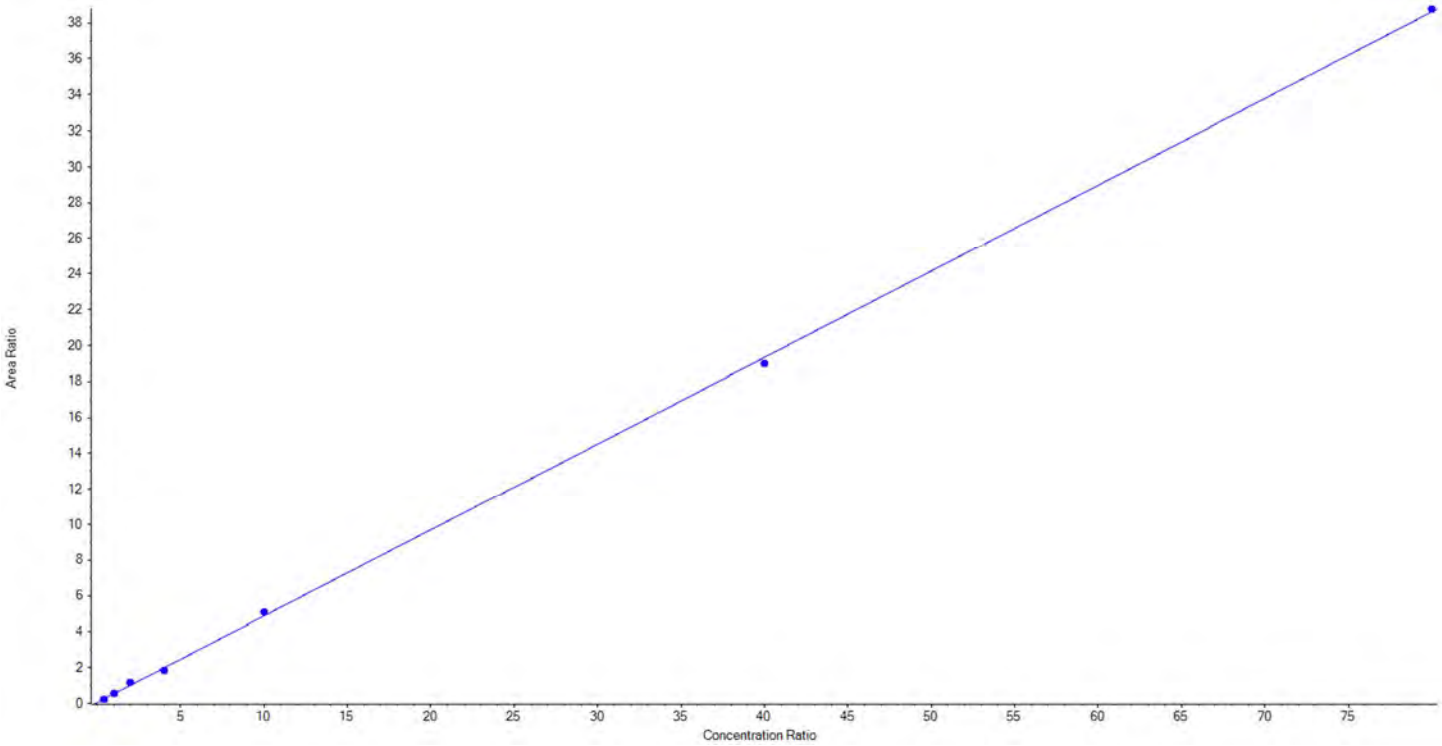
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:27:00 PM

Analyte Name	NMeFOSAA_2	**Data File**	AC_11252018_5-369.wiff
MRM Transition	570.0 / 512.0	**Result Table**	18-0685
Internal Standard	d3-MeFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.48204 x + 0.04972 (r = 0.99956) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	83.895181	83.9
2	KC67	L2	True	250.00	264.875553	106.0
3	KC68	L3	True	500.00	571.668528	114.3
4	KC69	L4	True	1000.00	928.618698	92.9
5	KC70	L5	True	2500.00	2611.243211	104.5
6	KC71	L6	True	10000.00	9812.160002	98.1
7	KC72	L7	True	20000.00	20077.538828	100.4



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Calibration Summary Report

Created with Analyst Reporter
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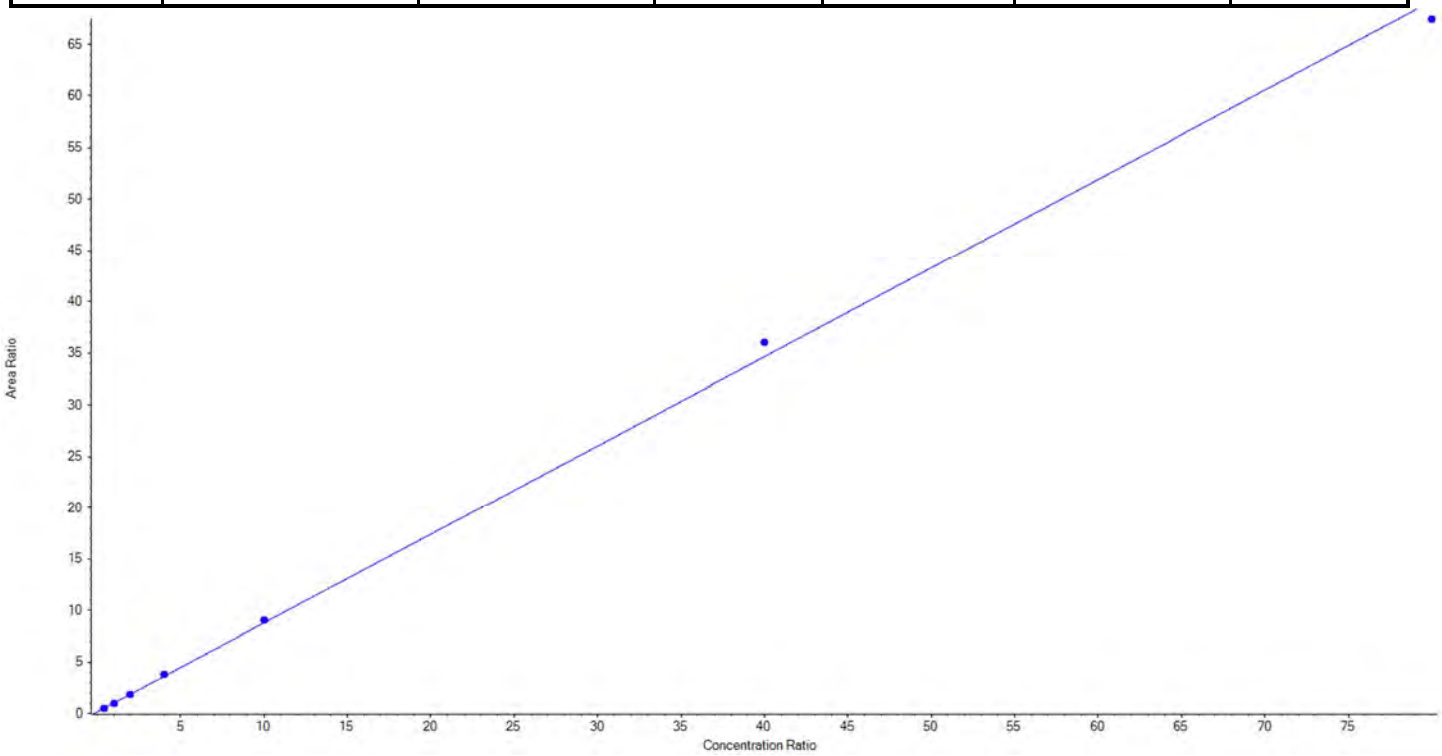
Analyte Name	NEtFOSAA_1	**Data File**	AC_11252018_5-369.wiff
MRM Transition	584.0 / 419.0	**Result Table**	18-0685
Internal Standard	d5-EtFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.86302 x + 0.13904 (r = 0.99945) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	100.00	91.589704	91.6
2	KC67	L2	True	250.00	251.051378	100.4
3	KC68	L3	True	500.00	490.327929	98.1
4	KC69	L4	True	1000.00	1054.314978	105.4
5	KC70	L5	True	2500.00	2577.104278	103.1
6	KC71	L6	True	10000.00	10396.086336	104.0
7	KC72	L7	True	20000.00	19489.525397	97.5



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Calibration Summary Report

Created with Analyst Reporter
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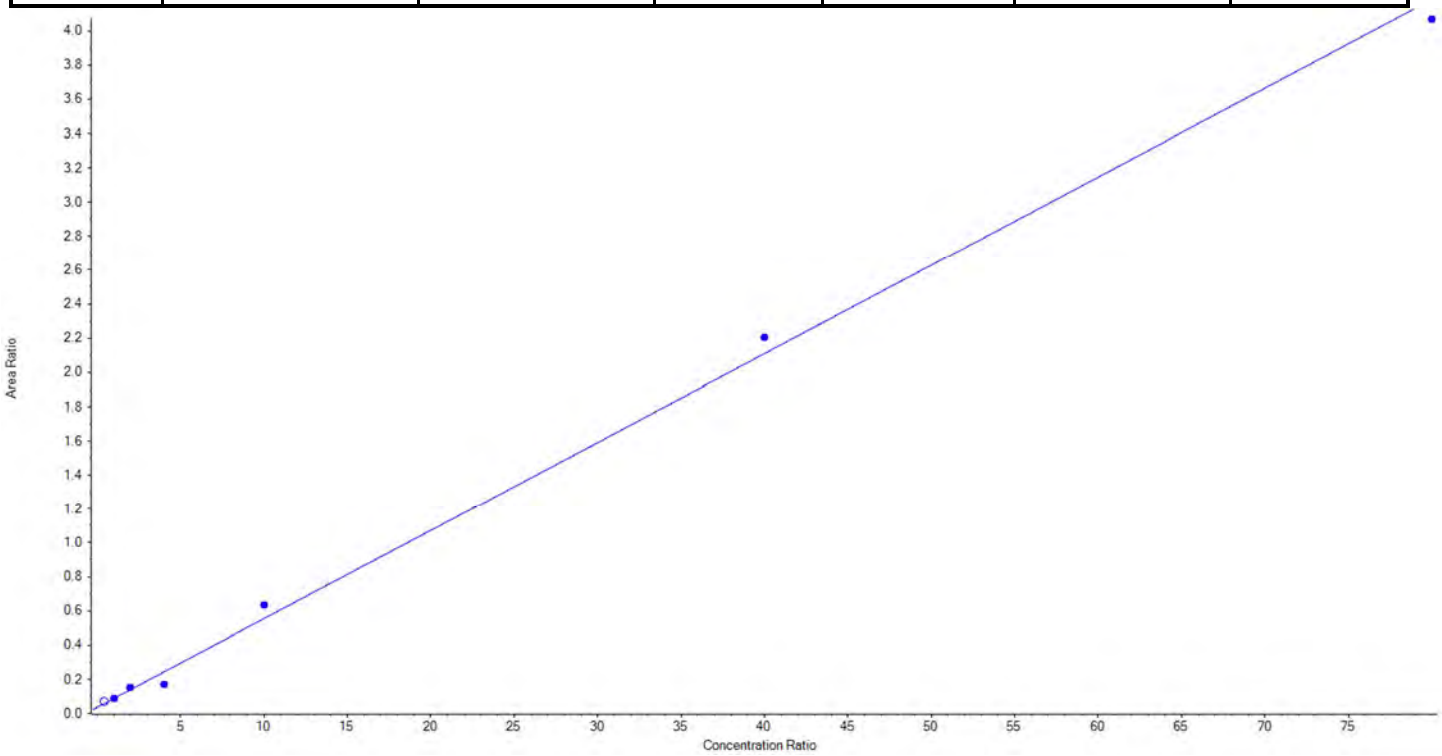
Analyte Name	NEtFOSAA_2	**Data File**	AC_11252018_5-369.wiff
MRM Transition	584.0 / 483.0	**Result Table**	18-0685
Internal Standard	d5-EtFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.05185 x + 0.03549 (r = 0.99599) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	False	100.00	173.348431	173.4
2	KC67	L2	True	250.00	263.134838	105.3
3	KC68	L3	True	500.00	569.959357	114.0
4	KC69	L4	True	1000.00	636.331577	63.6
5	KC70	L5	True	2500.00	2884.588094	115.4
6	KC71	L6	True	10000.00	10451.516276	104.5
7	KC72	L7	True	20000.00	19444.469858	97.2



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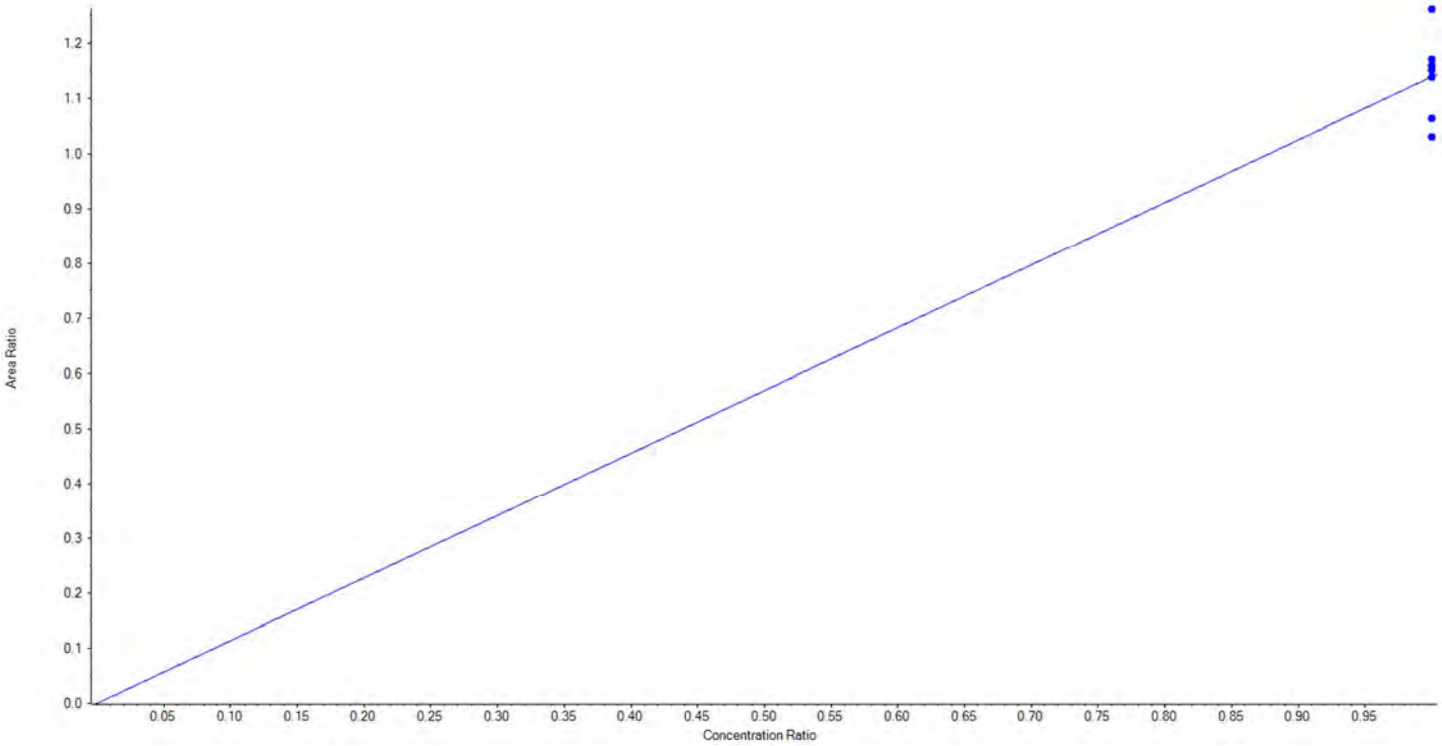
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:26:38 PM

Analyte Name	13C2-PFDoA	**Data File**	AC_11252018_5-369.wiff
MRM Transition	615.0 / 570.0	**Result Table**	18-0685_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.13923 x (std. dev. = 0.07549) (weighting: None)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	250.00	257.077134	102.8
2	KC67	L2	True	250.00	233.365449	93.4
3	KC68	L3	True	250.00	254.550030	101.8
4	KC69	L4	True	250.00	226.135688	90.5
5	KC70	L5	True	250.00	249.570279	99.8
6	KC71	L6	True	250.00	252.400827	101.0
7	KC72	L7	True	250.00	276.900593	110.8



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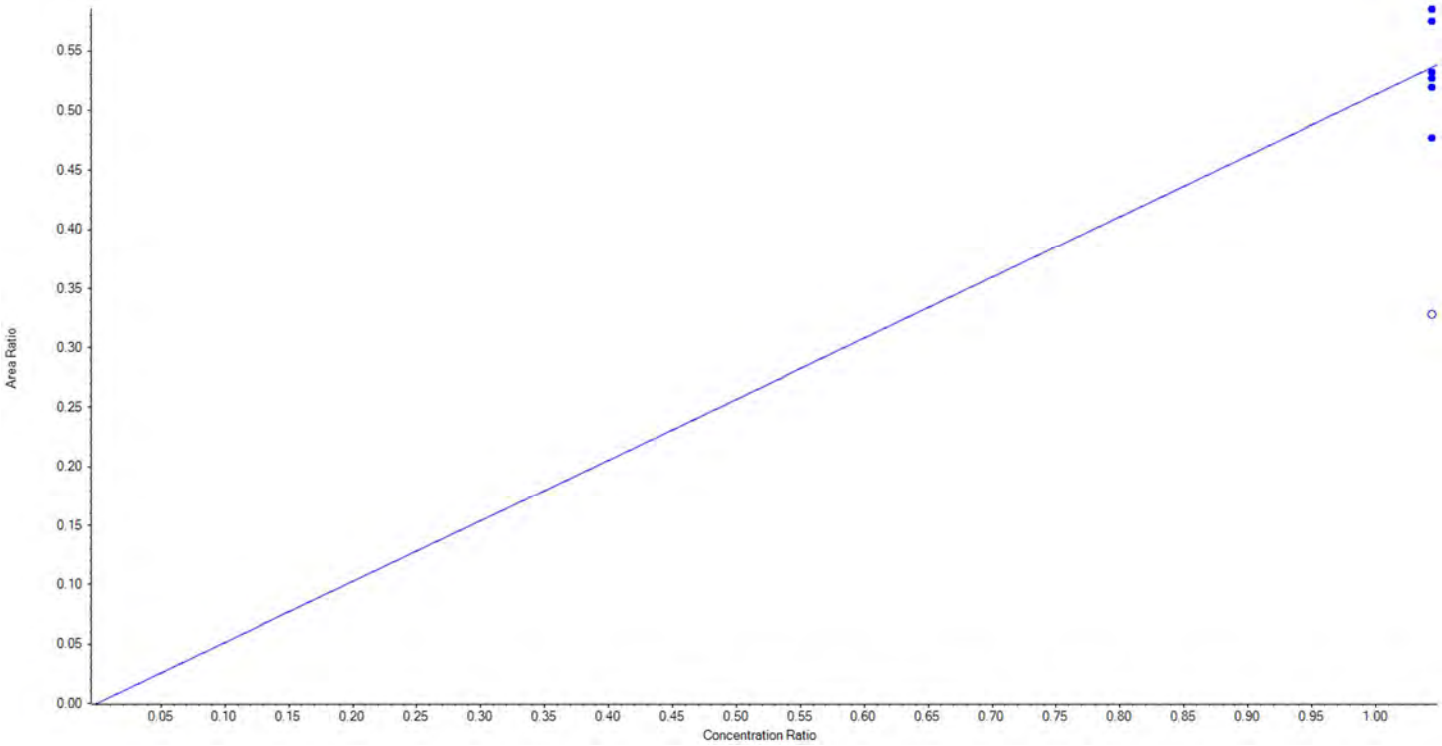
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:26:38 PM

Analyte Name	d3-MeFOSAA	**Data File**	AC_11252018_5-369.wiff
MRM Transition	573.0 / 419.0	**Result Table**	18-0685_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.51353 x (std. dev. = 0.03781) (weighting: None)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	False	250.00	152.917446	61.2
2	KC67	L2	True	250.00	242.219978	96.9
3	KC68	L3	True	250.00	245.717088	98.3
4	KC69	L4	True	250.00	268.332204	107.3
5	KC70	L5	True	250.00	222.583123	89.0
6	KC71	L6	True	250.00	272.908227	109.2
7	KC72	L7	True	250.00	248.239380	99.3



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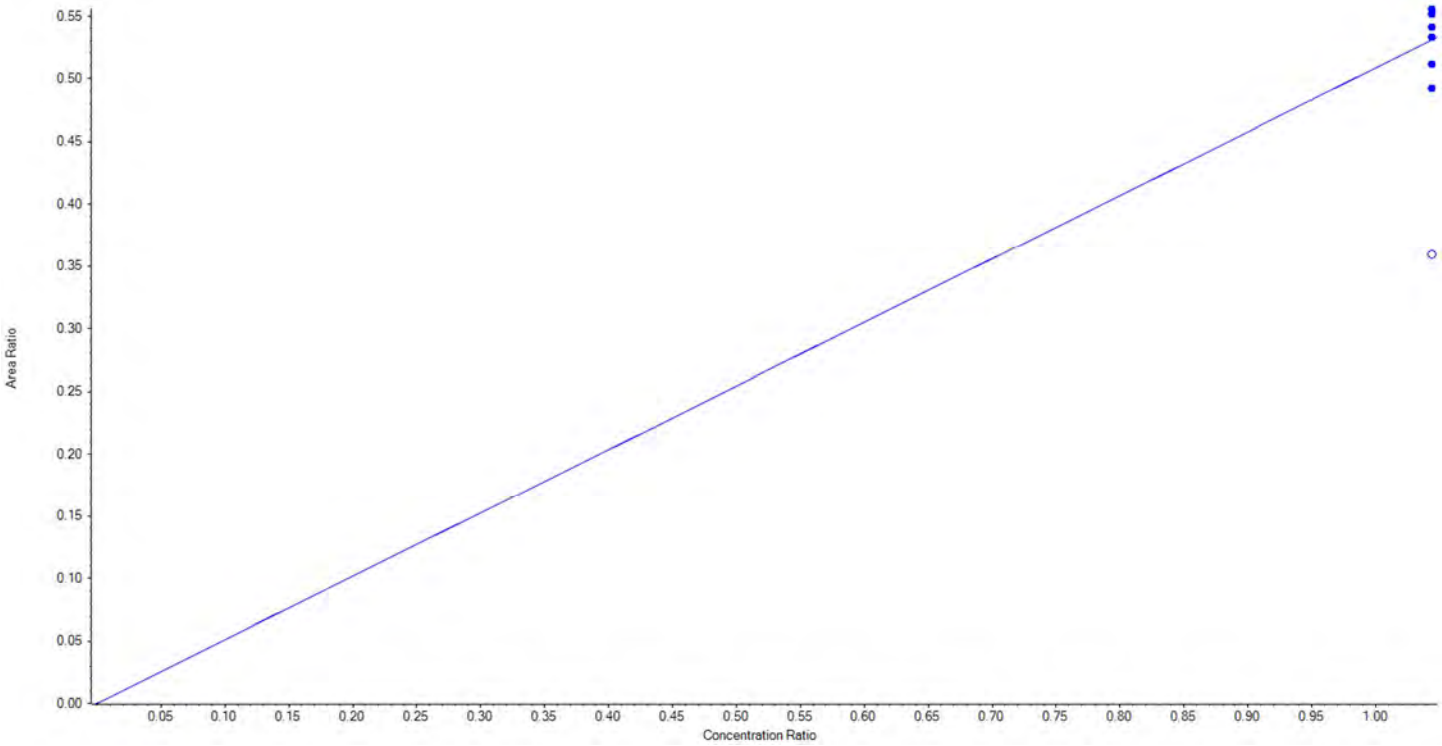
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:26:38 PM

Analyte Name	d5-EtFOSAA	**Data File**	AC_11252018_5-369.wiff
MRM Transition	589.0 / 419.0	**Result Table**	18-0685_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.50866 x (std. dev. = 0.02341) (weighting: None)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	False	250.00	169.082954	67.6
2	KC67	L2	True	250.00	231.948073	92.8
3	KC68	L3	True	250.00	250.987442	100.4
4	KC69	L4	True	250.00	259.726743	103.9
5	KC70	L5	True	250.00	240.902742	96.4
6	KC71	L6	True	250.00	261.574749	104.6
7	KC72	L7	True	250.00	254.860251	101.9



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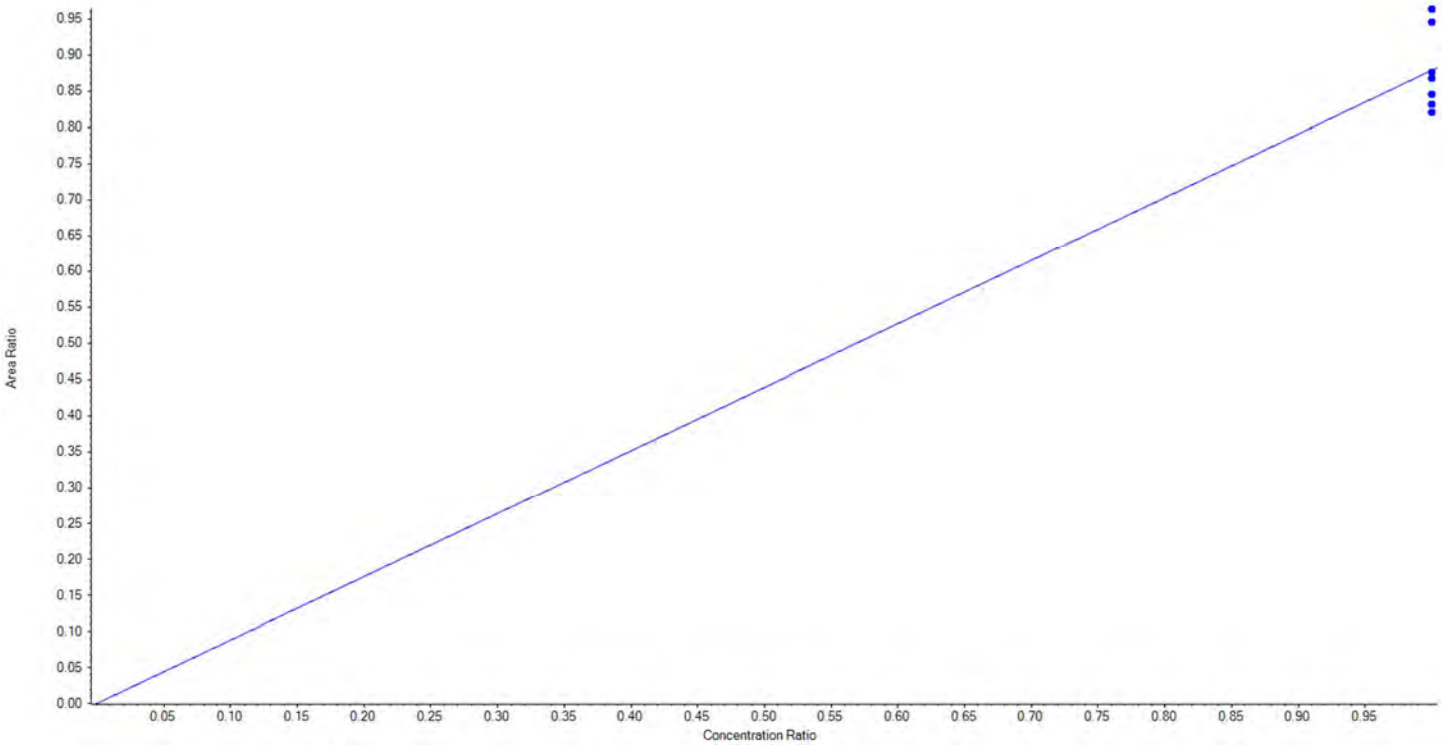
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:26:38 PM

Analyte Name	13C5-PFHxA	**Data File**	AC_11252018_5-369.wiff
MRM Transition	318.0 / 273.0	**Result Table**	18-0685_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.87855 x (std. dev. = 0.05538) (weighting: None)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	250.00	269.043474	107.6
2	KC67	L2	True	250.00	236.702789	94.7
3	KC68	L3	True	250.00	246.843155	98.7
4	KC69	L4	True	250.00	233.569588	93.4
5	KC70	L5	True	250.00	249.135914	99.7
6	KC71	L6	True	250.00	240.592787	96.2
7	KC72	L7	True	250.00	274.112292	109.6



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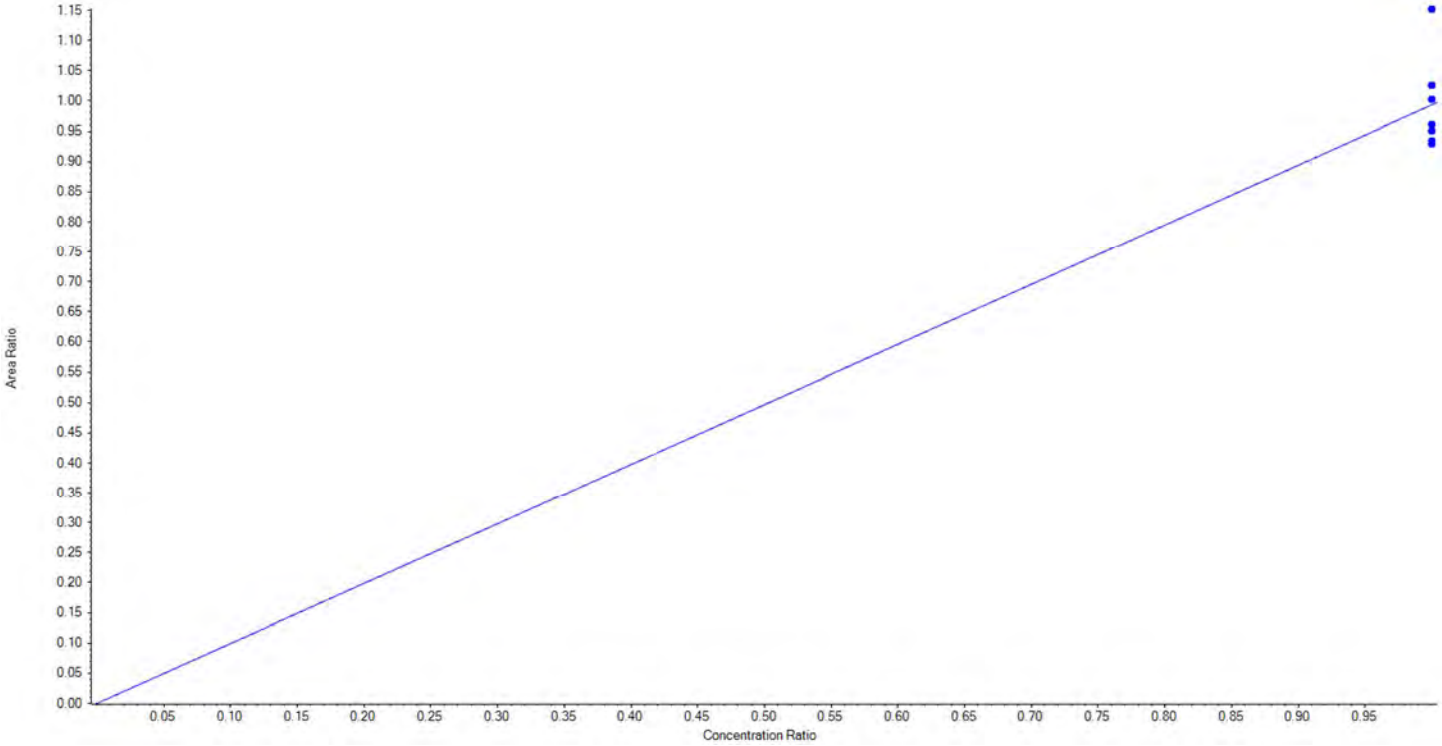
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:26:38 PM

Analyte Name	13C4-PFHpA	**Data File**	AC_11252018_5-369.wiff
MRM Transition	367.0 / 322.0	**Result Table**	18-0685_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.99342 x (std. dev. = 0.07829) (weighting: None)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	250.00	252.398537	101.0
2	KC67	L2	True	250.00	233.680193	93.5
3	KC68	L3	True	250.00	257.981701	103.2
4	KC69	L4	True	250.00	235.049694	94.0
5	KC70	L5	True	250.00	241.685150	96.7
6	KC71	L6	True	250.00	239.359703	95.7
7	KC72	L7	True	250.00	289.845022	115.9



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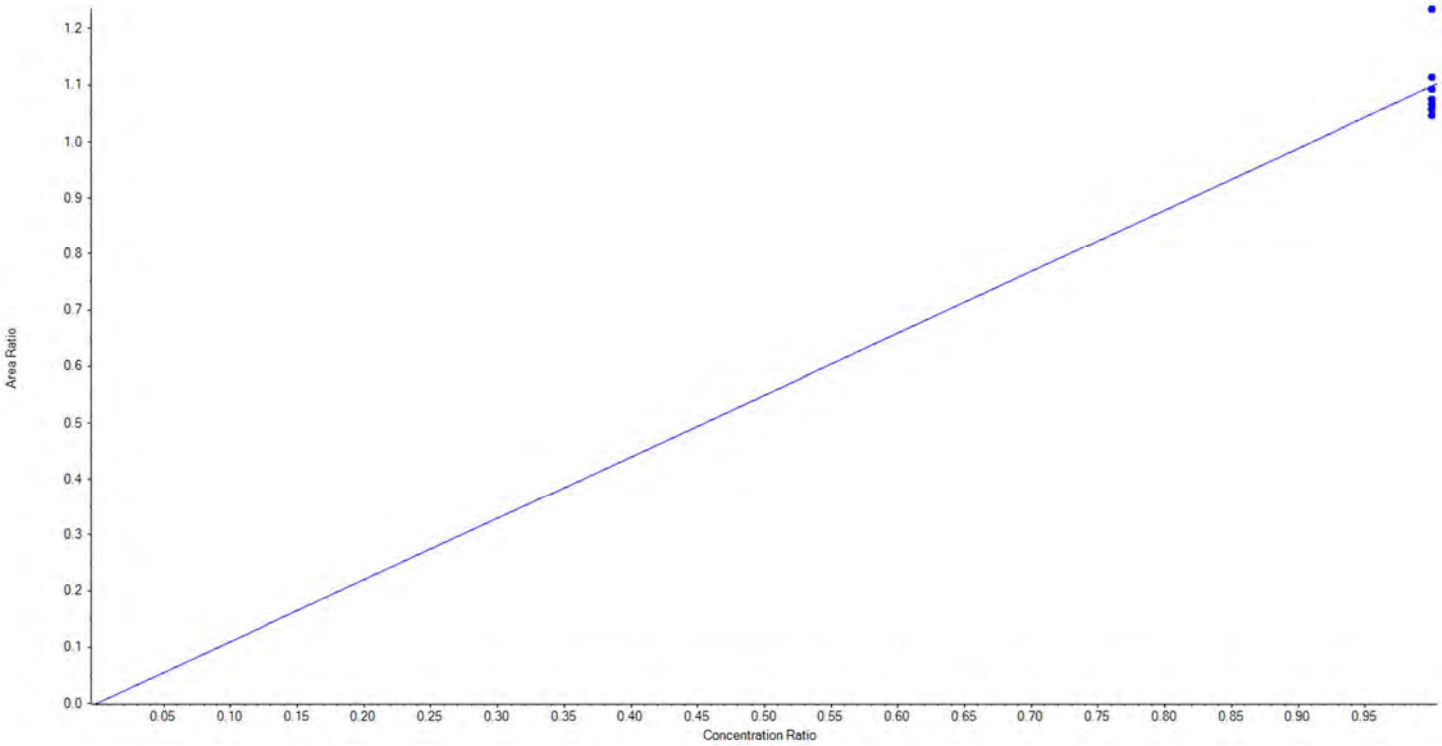
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:26:38 PM

Analyte Name	13C8-PFOA	**Data File**	AC_11252018_5-369.wiff
MRM Transition	421.0 / 376.0	**Result Table**	18-0685_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.09804 x (std. dev. = 0.06423) (weighting: None)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	250.00	238.326507	95.3
2	KC67	L2	True	250.00	253.601700	101.4
3	KC68	L3	True	250.00	281.104340	112.4
4	KC69	L4	True	250.00	242.805131	97.1
5	KC70	L5	True	250.00	244.819885	97.9
6	KC71	L6	True	250.00	240.742017	96.3
7	KC72	L7	True	250.00	248.600420	99.4



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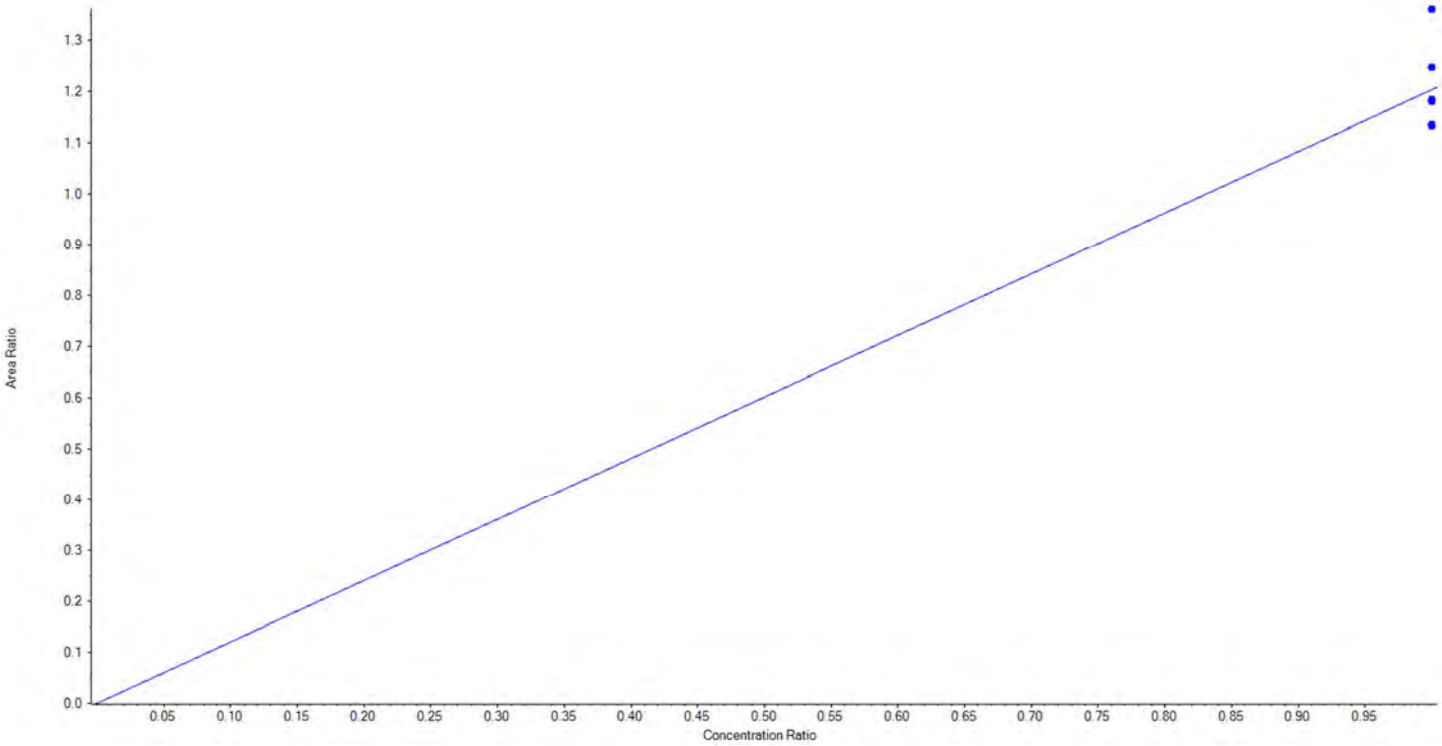
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:26:38 PM

Analyte Name	13C9-PFNA	**Data File**	AC_11252018_5-369.wiff
MRM Transition	472.0 / 427.0	**Result Table**	18-0685_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.20338 x (std. dev. = 0.07898) (weighting: None)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	250.00	245.334030	98.1
2	KC67	L2	True	250.00	235.520438	94.2
3	KC68	L3	True	250.00	236.039548	94.4
4	KC69	L4	True	250.00	245.351673	98.1
5	KC70	L5	True	250.00	259.035116	103.6
6	KC71	L6	True	250.00	246.010208	98.4
7	KC72	L7	True	250.00	282.708987	113.1



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Calibration Summary Report

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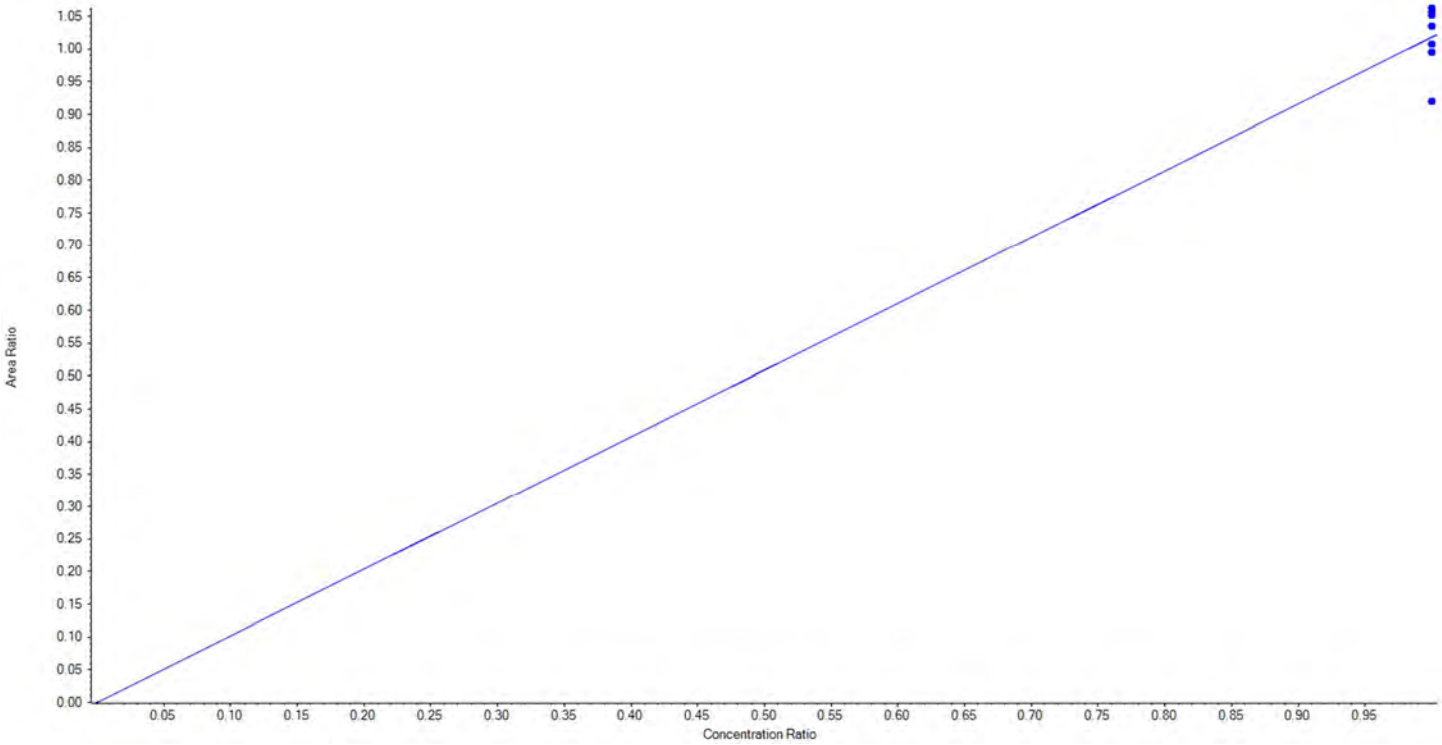
Analyte Name	13C6-PFDA	**Data File**	AC_11252018_5-369.wiff
MRM Transition	519.0 / 474.0	**Result Table**	18-0685_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.01794 x (std. dev. = 0.04997) (weighting: None)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	250.00	244.298918	97.7
2	KC67	L2	True	250.00	247.204846	98.9
3	KC68	L3	True	250.00	259.347984	103.7
4	KC69	L4	True	250.00	254.071725	101.6
5	KC70	L5	True	250.00	260.891421	104.4
6	KC71	L6	True	250.00	226.032342	90.4
7	KC72	L7	True	250.00	258.152764	103.3



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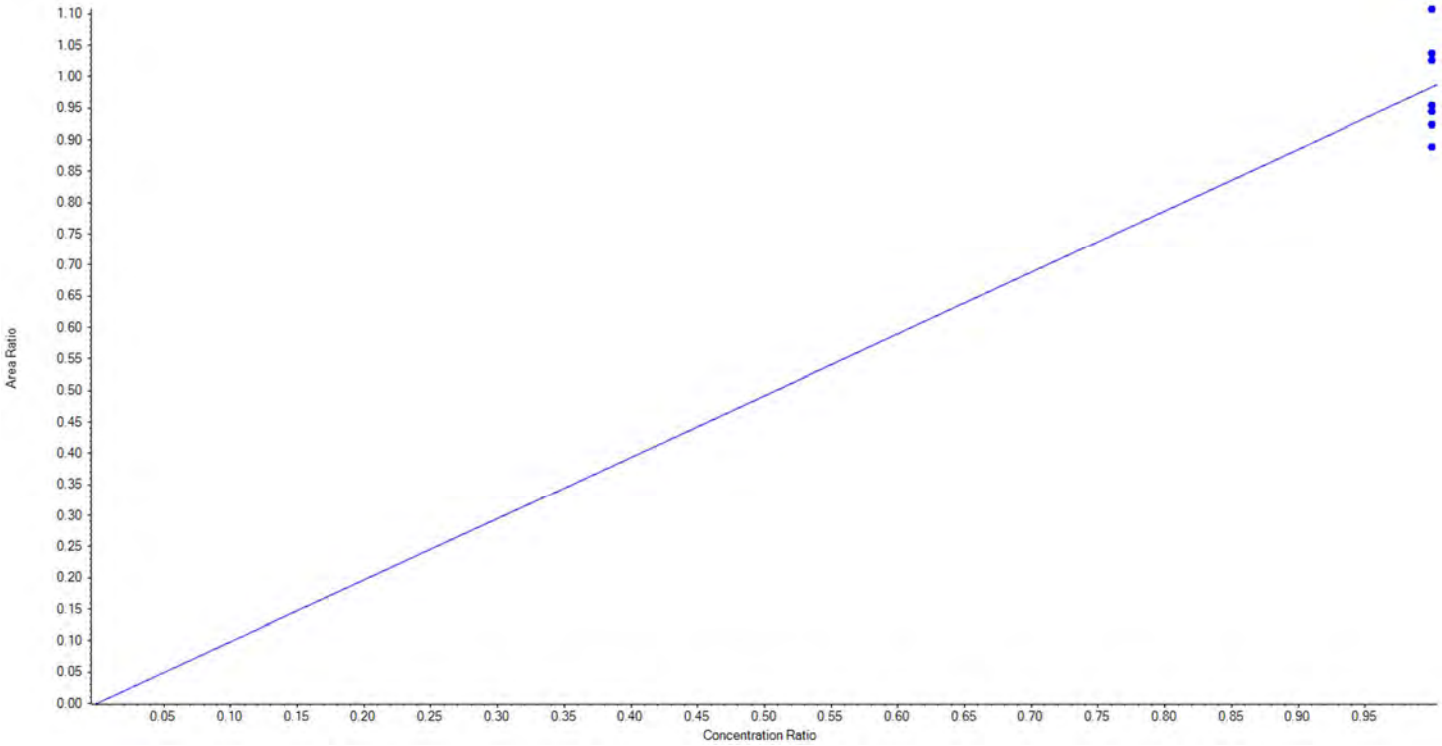
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:26:38 PM

Analyte Name	13C7-PFUnA	**Data File**	AC_11252018_5-369.wiff
MRM Transition	570.0 / 525.0	**Result Table**	18-0685_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.98321 x (std. dev. = 0.07633) (weighting: None)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	250.00	263.823286	105.5
2	KC67	L2	True	250.00	234.832796	93.9
3	KC68	L3	True	250.00	281.595277	112.6
4	KC69	L4	True	250.00	242.734854	97.1
5	KC70	L5	True	250.00	260.756933	104.3
6	KC71	L6	True	250.00	225.949294	90.4
7	KC72	L7	True	250.00	240.307559	96.1



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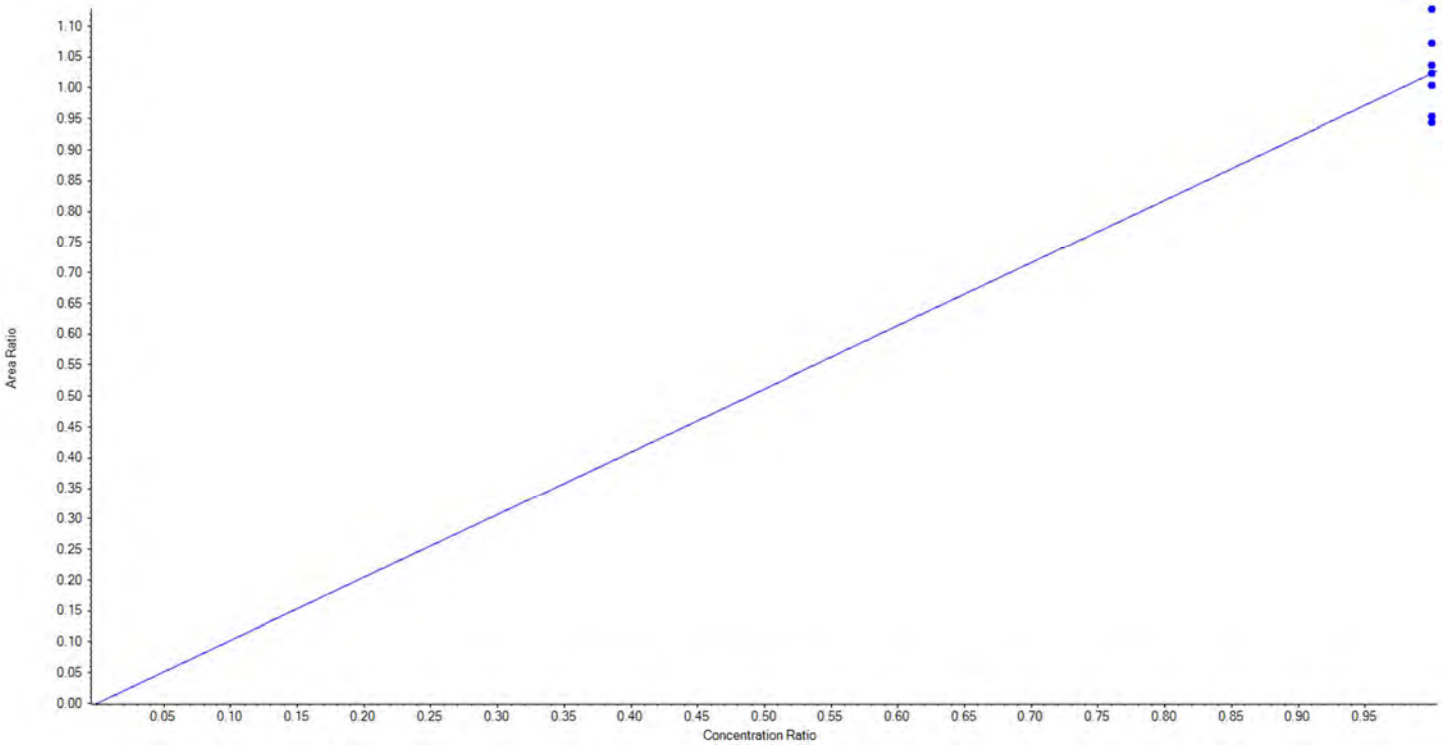
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:26:38 PM

Analyte Name	13C2-PFTeDA	**Data File**	AC_11252018_5-369.wiff
MRM Transition	715.0 / 670.0	**Result Table**	18-0685_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.02309 x (std. dev. = 0.06465) (weighting: None)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	250.00	262.201454	104.9
2	KC67	L2	True	250.00	230.707474	92.3
3	KC68	L3	True	250.00	253.431351	101.4
4	KC69	L4	True	250.00	232.937571	93.2
5	KC70	L5	True	250.00	245.264789	98.1
6	KC71	L6	True	250.00	249.942755	100.0
7	KC72	L7	True	250.00	275.514607	110.2



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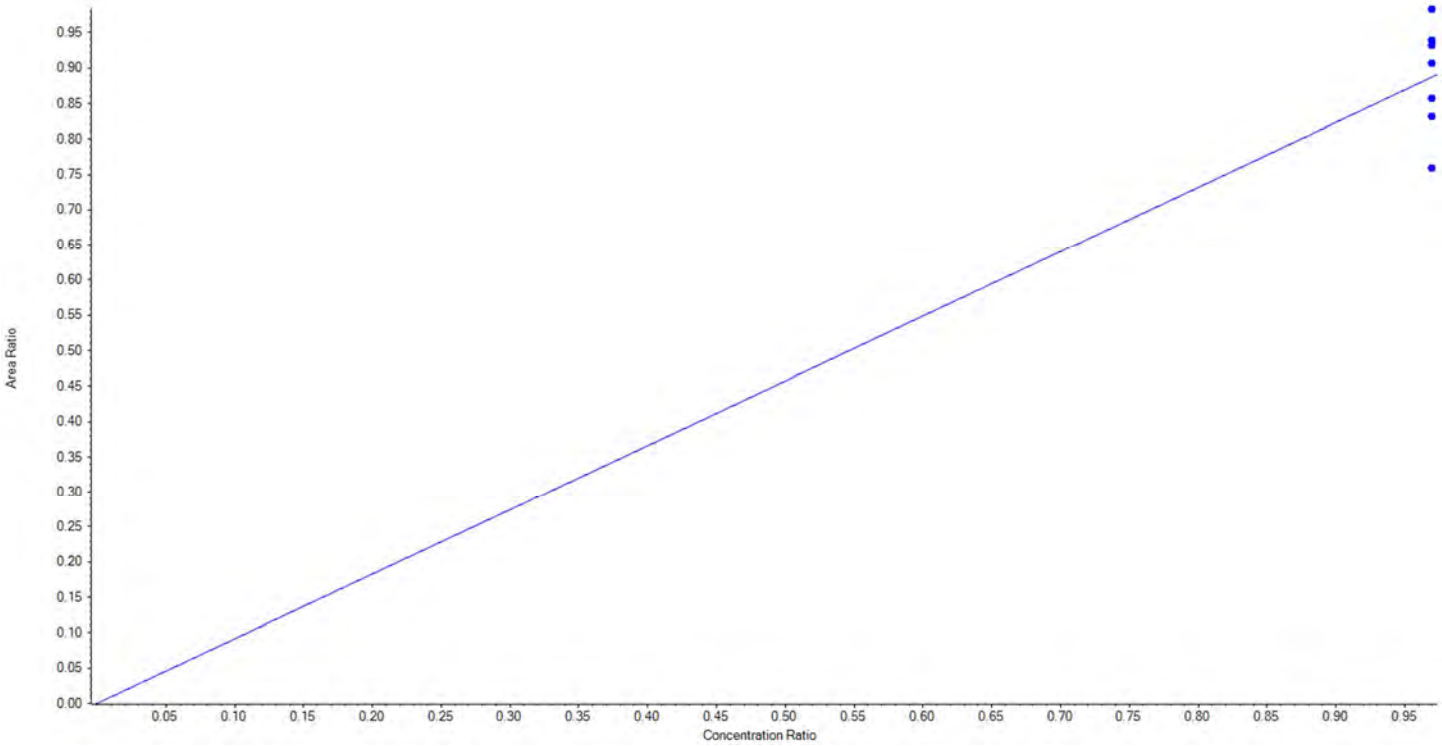
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:26:38 PM

Analyte Name	13C3-PFBS	**Data File**	AC_11252018_5-369.wiff
MRM Transition	302.0 / 99.0	**Result Table**	18-0685_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.91460 x (std. dev. = 0.07829) (weighting: None)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	232.25	217.615565	93.7
2	KC67	L2	True	232.25	198.952249	85.7
3	KC68	L3	True	232.25	224.404384	96.6
4	KC69	L4	True	232.25	245.932432	105.9
5	KC70	L5	True	232.25	237.289599	102.2
6	KC71	L6	True	232.25	244.141640	105.1
7	KC72	L7	True	232.25	257.414131	110.8



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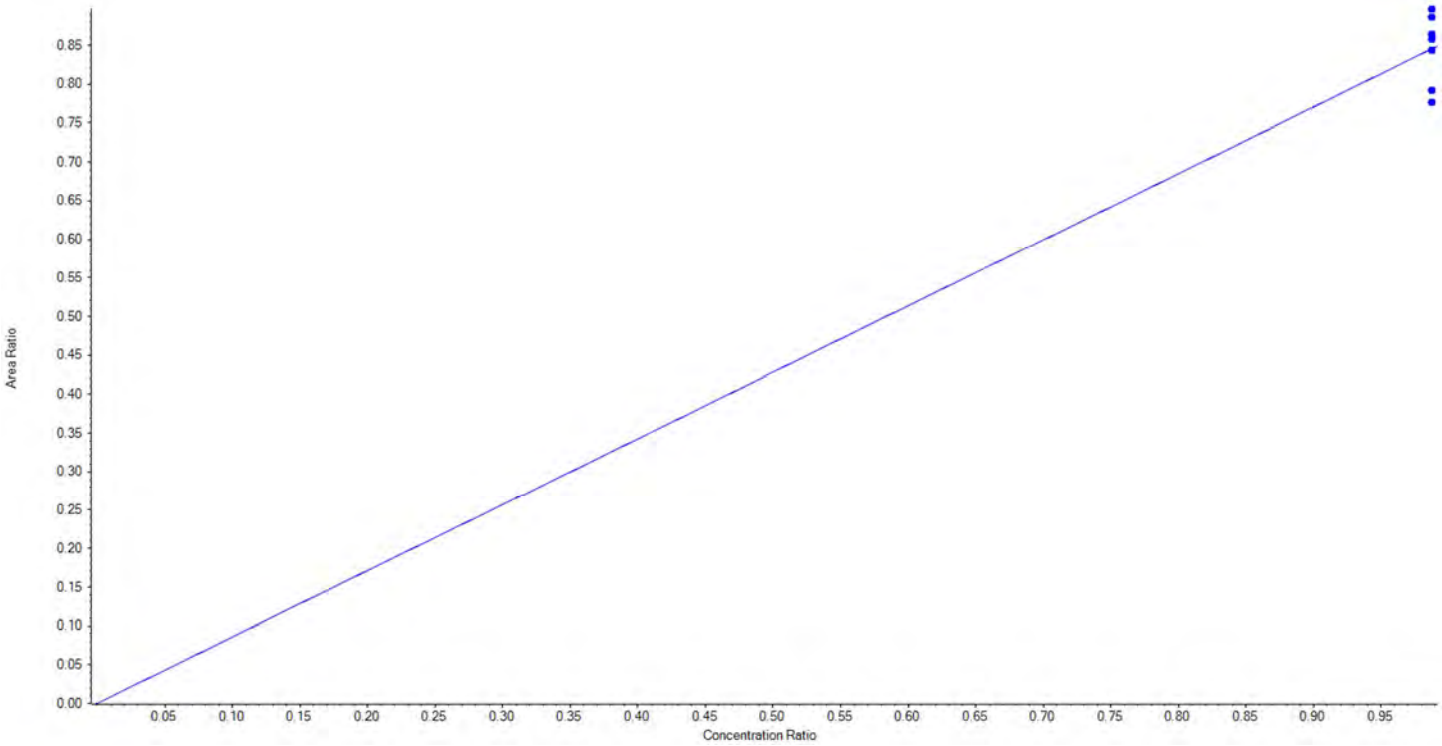
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:26:38 PM

Analyte Name	13C3-PFHxS	**Data File**	AC_11252018_5-369.wiff
MRM Transition	402.0 / 99.0	**Result Table**	18-0685_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.85616 x (std. dev. = 0.04603) (weighting: None)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	236.50	217.178758	91.8
2	KC67	L2	True	236.50	241.867214	102.3
3	KC68	L3	True	236.50	247.967973	104.9
4	KC69	L4	True	236.50	240.003760	101.5
5	KC70	L5	True	236.50	236.007857	99.8
6	KC71	L6	True	236.50	250.791988	106.0
7	KC72	L7	True	236.50	221.682450	93.7



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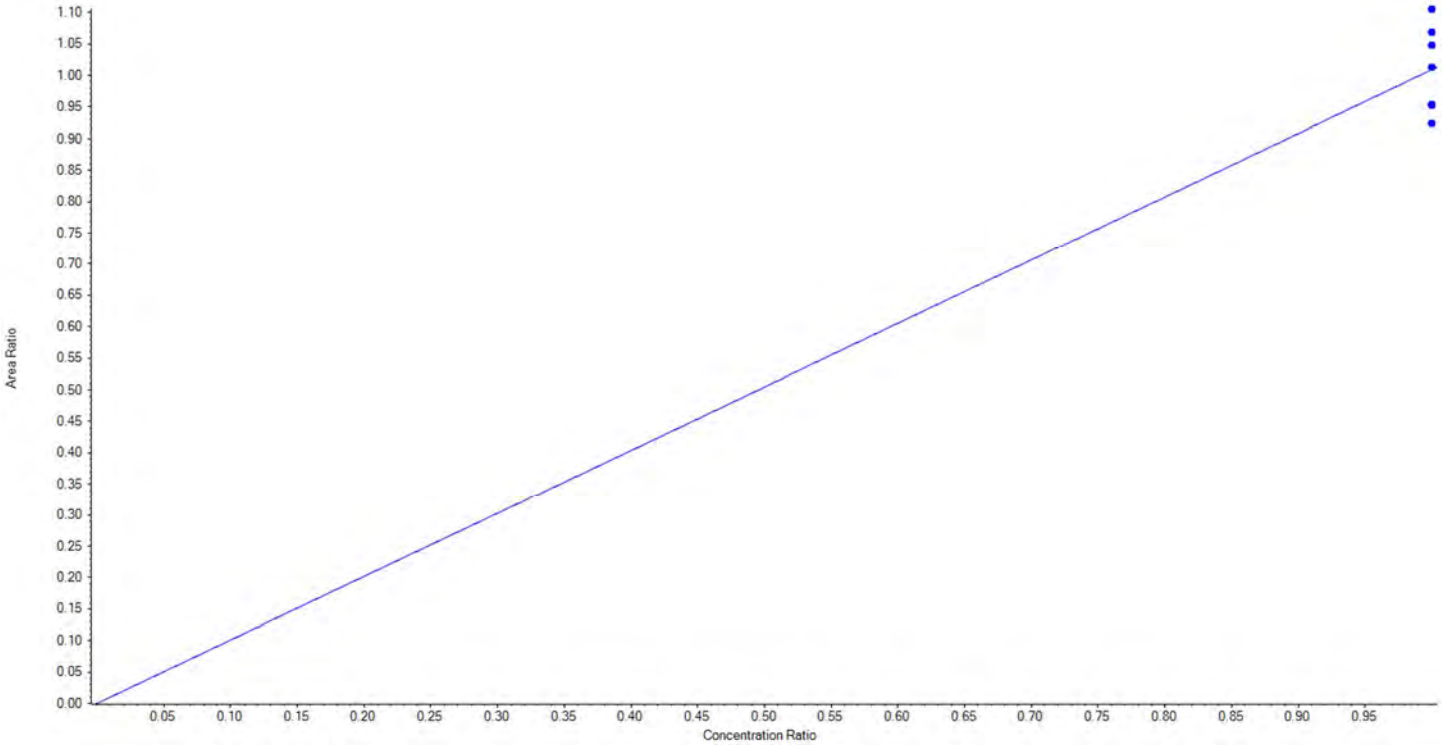
Calibration Summary Report

Created with Analyst Reporter
Printed: 26/11/2018 2:26:38 PM

Analyte Name	13C8-PFOS	**Data File**	AC_11252018_5-369.wiff
MRM Transition	507.0 / 99.0	**Result Table**	18-0685_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	11/25/2018 4:45:02 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.00915 x (std. dev. = 0.06843) (weighting: None)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
1	KC66	L1	True	239.50	225.949001	94.3
2	KC67	L2	True	239.50	226.268869	94.5
3	KC68	L3	True	239.50	248.769981	103.9
4	KC69	L4	True	239.50	262.312429	109.5
5	KC70	L5	True	239.50	219.062194	91.5
6	KC71	L6	True	239.50	253.602863	105.9
7	KC72	L7	True	239.50	240.534663	100.4



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	Isotope Dilution Calibration Curve Concentrations (ng/L)						
	KC66	KC67	KC68	KC69	KC70	KC71	KC72
PFBA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFPeA	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFHxA	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFHpA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFOA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFNA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFDA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFUnA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFDoA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFTrDA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFTeDA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
NMeFOSAA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
NEtFOSAA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFOSA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFBS	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFPeS	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFHxS (Branched)	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFHpS	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFOS (Branched)	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFDS	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFNS	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
4:2FTS	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
6:2FTS	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
8:2FTS	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
	Surrogates / Extracted Internal Standards						
13C4-PFBA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C5-PFPeA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C5-PFHxA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C4-PFHpA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C8-PFOA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C9-PFNA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C6-PFDA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C7-PFUnA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C2-PFDoA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C2-PFTeDA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
d3-MeFOSAA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
d5-EtFOSAA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C8-FOSA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C3-PFBS	232.25	232.25	232.25	232.25	232.25	232.25	232.25
13C3-PFHxS	236.50	236.50	236.50	236.50	236.50	236.50	236.50
13C8-PFOS	239.25	239.25	239.25	239.25	239.25	239.25	239.25
13C2-4:2FTS	233.75	233.75	233.75	233.75	233.75	233.75	233.75
13C2-6:2FTS	237.25	237.25	237.25	237.25	237.25	237.25	237.25
13C2-8:2FTS	239.50	239.50	239.50	239.50	239.50	239.50	239.50
	Internal Standards						
13C3-PFBA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C2-PFOA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C2-PFDA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C4-PFOS	239.25	239.25	239.25	239.25	239.25	239.25	239.25

	ICC (ng/L)
	KC74
PFBA	1,000.00
PFPeA	1,000.00
PFHxA	1,010.00
PFHpA	1,000.00
PFOA	1,000.00
PFNA	1,000.00
PFDA	1,000.00
PFUnA	1,000.00
PFDoA	1,000.00
PFTrDA	1,000.00
PFTeDA	1,000.00
NMeFOSAA	1,000.00
NEtFOSAA	1,000.00
PFOSA	1,000.00
PFBS	1,010.00
PFPeS	1,000.00
PFHxS	1,010.00
PFHpS	1,000.00
PFOS	1,000.00
PFDS	1,010.00
PFNS	1,010.00
4:2FTS	1,000.00
6:2FTS	1,000.00
8:2FTS	1,010.00
13C4-PFBA	250.00
13C5-PFPeA	250.00
13C5-PFHxA	250.00
13C4-PFHpA	250.00
13C8-PFOA	250.00
13C9-PFNA	250.00
13C6-PFDA	250.00
13C7-PFUnA	250.00
13C2-PFDoA	250.00
13C2-PFTeDA	250.00
d3-MeFOSAA	250.00
d5-EtFOSAA	250.00
13C8-FOSA	250.00
13C3-PFBS	232.25
13C3-PFHxS	236.50
13C8-PFOS	239.25
13C2-4:2FTS	233.75
13C2-6:2FTS	237.25
13C2-8:2FTS	239.50
13C3-PFBA	250.00
13C2-PFOA	250.00
13C2-PFDA	250.00
13C4-PFOS	239.25

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Summary Quant Report

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Sample Name	KC66	**Injection Vial**	1
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T16:45:02	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.61	46742.81	111.308287	117.5	false
PFBS_2	298.9 / 99.0	1.61	9826.49	99.220954	90.2	true
PFHxA_1	313.0 / 269.0	1.93	37895.47	91.595453	8.7	true
PFHxA_2	313.0 / 119.0	1.92	2987.99	98.790855	7.7	true
PFHpA_1	363.0 / 319.0	2.35	32433.79	85.866735	23.2	true
PFHpA_2	363.0 / 169.0	2.35	750.98	81.658585	16.8	true
PFHxS_1	399.0 / 80.0	2.37	46421.22	112.286415	114.4	false
PFHxS_2	399.0 / 99.0	2.37	12969.51	108.592590	110.1	false
PFOA_1	413.0 / 369.0	2.76	40977.89	107.344954	46.8	true
PFOA_2	413.0 / 169.0	2.76	2675.08	94.916467	38.1	false
PFNA_1	463.0 / 419.0	3.17	41717.21	73.156399	52.7	true
PFNA_2	463.0 / 219.0	3.17	10667.71	78.181229	61.9	false
PFOS_1	499.0 / 80.0	3.16	64451.03	94.603463	60.9	false
PFOS_2	499.0 / 99.0	3.16	12754.28	89.747568	87.5	false
PFDA_1	513.0 / 469.0	3.53	52974.50	92.732498	119.0	false
PFDA_2	513.0 / 219.0	3.51	3564.26	122.166439	36.5	false
PFUnA_1	563.0 / 519.0	3.86	41136.38	106.300729	92.6	true
PFUnA_2	563.0 / 269.0	3.85	3013.95	108.472902	26.5	true
PFDoA_1	613.0 / 569.0	4.15	52810.16	80.878060	213.3	false
PFDoA_2	613.0 / 319.0	4.15	8445.57	90.858308	106.9	false
PFTrDA_1	663.0 / 619.0	4.40	48062.81	84.973578	272.5	false
PFTrDA_2	663.0 / 169.0	4.40	3293.23	82.124337	122.1	false
PFTeDA_1	713.0 / 669.0	4.62	59323.81	77.123644	553.9	false
PFTeDA_2	713.0 / 169.0	4.62	3496.02	81.339861	193.9	false
NMeFOSAA_1	570.0 / 419.0	3.69	4999.17	88.541801	110.7	false
NMeFOSAA_2	570.0 / 512.0	3.68	2547.74	83.895181	57.3	false
NEtFOSAA_1	584.0 / 419.0	3.85	6065.35	91.589704	121.8	false
NEtFOSAA_2	584.0 / 483.0	3.87	951.91	173.348431	27.7	false

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Summary Quant Report

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Sample Name	KC67	**Injection Vial**	2
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T16:55:56	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.58	87258.44	254.426883	182.2	false
PFBS_2	298.9 / 99.0	1.58	26921.90	286.056598	188.6	false
PFHxA_1	313.0 / 269.0	1.91	90447.63	300.678459	35.0	true
PFHxA_2	313.0 / 119.0	1.90	6208.10	271.947978	23.3	true
PFHpA_1	363.0 / 319.0	2.32	75247.28	275.007637	78.8	true
PFHpA_2	363.0 / 169.0	2.32	1534.92	258.798520	44.2	true
PFHxS_1	399.0 / 80.0	2.35	108616.06	237.532003	290.7	false
PFHxS_2	399.0 / 99.0	2.34	31611.00	243.055604	212.5	false
PFOA_1	413.0 / 369.0	2.74	102989.76	272.053539	147.4	false
PFOA_2	413.0 / 169.0	2.74	7039.49	285.753852	108.9	false
PFNA_1	463.0 / 419.0	3.14	106731.51	295.903288	202.7	false
PFNA_2	463.0 / 219.0	3.14	31875.07	306.548750	181.6	false
PFOS_1	499.0 / 80.0	3.14	167698.14	264.914842	147.1	false
PFOS_2	499.0 / 99.0	3.14	29932.96	254.606839	219.9	false
PFDA_1	513.0 / 469.0	3.50	132428.01	260.165545	257.2	false
PFDA_2	513.0 / 219.0	3.50	6048.50	239.902546	86.5	false
PFUnA_1	563.0 / 519.0	3.83	119564.48	281.911727	213.8	false
PFUnA_2	563.0 / 269.0	3.83	6184.26	258.149652	91.2	false
PFDoA_1	613.0 / 569.0	4.12	122397.81	250.949511	301.2	false
PFDoA_2	613.0 / 319.0	4.12	18659.22	244.181114	155.4	false
PFTrDA_1	663.0 / 619.0	4.37	110946.79	253.482640	422.0	false
PFTrDA_2	663.0 / 169.0	4.37	7652.88	261.518476	194.1	false
PFTeDA_1	713.0 / 669.0	4.59	144191.55	271.946708	753.7	false
PFTeDA_2	713.0 / 169.0	4.59	7298.04	262.650927	305.0	false
NMeFOSAA_1	570.0 / 419.0	3.66	17364.92	219.360809	602.1	false
NMeFOSAA_2	570.0 / 512.0	3.66	10816.46	264.875553	269.9	false
NEtFOSAA_1	584.0 / 419.0	3.82	18089.81	251.051378	309.8	false
NEtFOSAA_2	584.0 / 483.0	3.82	1620.00	263.134838	147.9	true

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Summary Quant Report

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Sample Name	KC68	**Injection Vial**	3
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:06:49	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.58	174743.23	502.202844	253.1	false
PFBS_2	298.9 / 99.0	1.57	49793.43	492.991917	290.7	false
PFHxA_1	313.0 / 269.0	1.90	151509.80	471.696592	44.9	true
PFHxA_2	313.0 / 119.0	1.90	11562.01	477.502914	39.1	true
PFHpA_1	363.0 / 319.0	2.32	141378.31	465.705398	115.9	false
PFHpA_2	363.0 / 169.0	2.32	2963.51	468.981333	78.0	false
PFHxS_1	399.0 / 80.0	2.34	212589.29	486.488329	241.5	false
PFHxS_2	399.0 / 99.0	2.34	59655.08	482.517673	293.8	false
PFOA_1	413.0 / 369.0	2.73	188412.90	431.212398	211.8	false
PFOA_2	413.0 / 169.0	2.73	13228.37	477.876088	161.8	false
PFNA_1	463.0 / 419.0	3.13	193106.14	546.724082	275.6	false
PFNA_2	463.0 / 219.0	3.13	55345.02	520.477376	296.7	false
PFOS_1	499.0 / 80.0	3.13	314296.83	489.854480	178.0	false
PFOS_2	499.0 / 99.0	3.13	58044.43	506.084114	386.4	false
PFDA_1	513.0 / 469.0	3.49	236599.61	505.577288	333.4	false
PFDA_2	513.0 / 219.0	3.49	9080.93	418.908516	132.0	false
PFUnA_1	563.0 / 519.0	3.83	222888.83	455.475052	316.0	false
PFUnA_2	563.0 / 269.0	3.82	12860.20	500.410361	150.0	false
PFDoA_1	613.0 / 569.0	4.11	236150.66	514.853454	426.2	false
PFDoA_2	613.0 / 319.0	4.11	37187.74	508.616638	246.2	false
PFTrDA_1	663.0 / 619.0	4.36	212296.35	501.472651	579.7	false
PFTrDA_2	663.0 / 169.0	4.36	13873.72	494.296091	245.0	false
PFTeDA_1	713.0 / 669.0	4.58	261544.24	517.383621	901.7	false
PFTeDA_2	713.0 / 169.0	4.58	13302.56	521.792346	449.0	false
NMeFOSAA_1	570.0 / 419.0	3.65	40327.16	570.865787	920.5	false
NMeFOSAA_2	570.0 / 512.0	3.65	21094.50	571.668528	309.7	false
NEtFOSAA_1	584.0 / 419.0	3.82	34622.83	490.327929	463.3	false
NEtFOSAA_2	584.0 / 483.0	3.81	2905.09	569.959357	35394.5	false

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Summary Quant Report

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Sample Name	KC69	**Injection Vial**	4
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:17:43	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.57	305869.21	938.107677	338.7	false
PFBS_2	298.9 / 99.0	1.57	93931.04	963.949841	369.2	false
PFHxA_1	313.0 / 269.0	1.90	278443.37	1009.745599	69.2	true
PFHxA_2	313.0 / 119.0	1.90	21351.74	1024.359459	55.8	true
PFHpA_1	363.0 / 319.0	2.31	249974.24	1006.255585	159.3	false
PFHpA_2	363.0 / 169.0	2.31	5542.39	1103.248707	107.5	false
PFHxS_1	399.0 / 80.0	2.33	380386.93	1030.852192	436.4	false
PFHxS_2	399.0 / 99.0	2.33	104169.87	1000.850626	583.8	false
PFOA_1	413.0 / 369.0	2.73	344397.47	989.745838	278.8	false
PFOA_2	413.0 / 169.0	2.73	20980.31	968.965929	197.8	false
PFNA_1	463.0 / 419.0	3.13	319583.59	971.222434	309.3	false
PFNA_2	463.0 / 219.0	3.13	97389.78	964.490520	336.1	false
PFOS_1	499.0 / 80.0	3.12	552390.99	937.669013	251.4	false
PFOS_2	499.0 / 99.0	3.12	99594.13	962.792874	349.2	false
PFDA_1	513.0 / 469.0	3.49	412189.20	985.350941	428.7	false
PFDA_2	513.0 / 219.0	3.48	16450.81	914.410768	176.3	false
PFUnA_1	563.0 / 519.0	3.82	396906.94	972.870469	309.4	false
PFUnA_2	563.0 / 269.0	3.82	19737.26	964.973537	174.0	false
PFDoA_1	613.0 / 569.0	4.10	403002.37	1092.919312	422.0	false
PFDoA_2	613.0 / 319.0	4.10	61902.69	1040.542185	335.7	false
PFTrDA_1	663.0 / 619.0	4.35	378696.18	1065.557325	618.5	false
PFTrDA_2	663.0 / 169.0	4.35	25362.50	1087.991609	336.1	false
PFTeDA_1	713.0 / 669.0	4.57	440602.31	1049.164913	1110.4	false
PFTeDA_2	713.0 / 169.0	4.57	21750.61	1045.714737	662.9	false
NMeFOSAA_1	570.0 / 419.0	3.64	66045.15	980.040463	577.6	false
NMeFOSAA_2	570.0 / 512.0	3.64	32684.48	928.618698	469.1	false
NEtFOSAA_1	584.0 / 419.0	3.81	65188.26	1054.314978	530.1	false
NEtFOSAA_2	584.0 / 483.0	3.81	2888.93	636.331577	561.6	false

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Summary Quant Report

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Sample Name	KC70	**Injection Vial**	5
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:28:35	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.57	739516.92	2372.082359	609.4	false
PFBS_2	298.9 / 99.0	1.57	221617.50	2330.964971	523.1	false
PFHxA_1	313.0 / 269.0	1.89	644315.96	2398.167086	116.6	true
PFHxA_2	313.0 / 119.0	1.89	50566.00	2486.758637	97.1	true
PFHpA_1	363.0 / 319.0	2.31	621556.72	2682.043282	299.2	false
PFHpA_2	363.0 / 169.0	2.31	12603.68	2714.976302	172.8	false
PFHxS_1	399.0 / 80.0	2.33	901003.32	2492.937244	711.8	false
PFHxS_2	399.0 / 99.0	2.33	267585.69	2630.183317	1055.3	false
PFOA_1	413.0 / 369.0	2.72	802374.39	2480.990685	384.8	false
PFOA_2	413.0 / 169.0	2.72	49019.52	2467.627577	282.1	false
PFNA_1	463.0 / 419.0	3.12	776245.68	2493.758449	608.5	false
PFNA_2	463.0 / 219.0	3.12	235085.56	2417.177562	584.8	false
PFOS_1	499.0 / 80.0	3.12	1341652.78	2729.741111	313.6	false
PFOS_2	499.0 / 99.0	3.12	240275.77	2822.306763	471.3	false
PFDA_1	513.0 / 469.0	3.48	946888.80	2491.528431	686.4	false
PFDA_2	513.0 / 219.0	3.48	38332.45	2440.737141	253.3	false
PFUnA_1	563.0 / 519.0	3.81	918582.99	2287.498437	457.9	false
PFUnA_2	563.0 / 269.0	3.81	43613.18	2224.113154	290.3	false
PFDoA_1	613.0 / 569.0	4.09	973156.96	2704.197811	562.2	false
PFDoA_2	613.0 / 319.0	4.09	153368.29	2627.993742	413.8	false
PFTrDA_1	663.0 / 619.0	4.34	903178.66	2716.098700	798.7	false
PFTrDA_2	663.0 / 169.0	4.34	58009.02	2669.861291	650.4	false
PFTeDA_1	713.0 / 669.0	4.56	1039369.40	2667.791307	1568.9	false
PFTeDA_2	713.0 / 169.0	4.56	49955.92	2620.829620	857.3	false
NMeFOSAA_1	570.0 / 419.0	3.64	155801.96	2864.535443	892.9	false
NMeFOSAA_2	570.0 / 512.0	3.64	74023.87	2611.243211	703.3	false
NEtFOSAA_1	584.0 / 419.0	3.80	145009.63	2577.104278	647.8	false
NEtFOSAA_2	584.0 / 483.0	3.80	10170.24	2884.588094	442.4	false

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Summary Quant Report

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Sample Name	KC71	**Injection Vial**	6
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:39:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.57	3252548.89	10441.893825	1298.3	false
PFBS_2	298.9 / 99.0	1.57	1008362.82	10504.572419	1085.0	false
PFHxA_1	313.0 / 269.0	1.89	2737462.10	10356.903581	244.0	false
PFHxA_2	313.0 / 119.0	1.89	201694.36	10070.475774	203.2	false
PFHpA_1	363.0 / 319.0	2.30	2517335.63	10781.246806	624.8	false
PFHpA_2	363.0 / 169.0	2.31	49715.37	10698.027034	466.6	false
PFHxS_1	399.0 / 80.0	2.33	3609770.83	9586.678027	1293.7	false
PFHxS_2	399.0 / 99.0	2.33	1022040.07	9649.547517	1518.5	false
PFOA_1	413.0 / 369.0	2.72	3195042.45	9806.735437	791.3	false
PFOA_2	413.0 / 169.0	2.72	196194.25	9866.155638	595.5	false
PFNA_1	463.0 / 419.0	3.12	3130392.07	10483.742263	1204.6	false
PFNA_2	463.0 / 219.0	3.12	972202.22	10330.403712	1199.4	false
PFOS_1	499.0 / 80.0	3.11	5519712.48	9867.414698	675.4	false
PFOS_2	499.0 / 99.0	3.11	953416.82	9889.801368	861.8	false
PFDA_1	513.0 / 469.0	3.48	3844697.04	10763.273694	1076.6	false
PFDA_2	513.0 / 219.0	3.47	167798.66	11590.180852	556.4	false
PFUnA_1	563.0 / 519.0	3.81	3831670.64	9964.573587	743.7	false
PFUnA_2	563.0 / 269.0	3.81	189508.27	10250.776541	565.9	false
PFDoA_1	613.0 / 569.0	4.09	3930860.34	9956.118265	850.6	false
PFDoA_2	613.0 / 319.0	4.09	659798.56	10276.582010	668.1	false
PFTrDA_1	663.0 / 619.0	4.34	3650154.70	9899.415861	1333.3	false
PFTrDA_2	663.0 / 169.0	4.34	240474.98	10008.880172	929.7	false
PFTeDA_1	713.0 / 669.0	4.56	4315054.08	10031.971183	2422.8	false
PFTeDA_2	713.0 / 169.0	4.56	212130.13	10149.655646	1552.2	false
NMeFOSAA_1	570.0 / 419.0	3.63	628595.32	9764.395064	1492.9	false
NMeFOSAA_2	570.0 / 512.0	3.63	328750.55	9812.160002	1138.9	false
NEtFOSAA_1	584.0 / 419.0	3.80	605852.13	10396.086336	912.3	false
NEtFOSAA_2	584.0 / 483.0	3.80	37045.55	10451.516276	463.7	false

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Summary Quant Report

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Sample Name	KC72	**Injection Vial**	7
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:50:19	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.57	6569264.51	20073.478125	1861.9	false
PFBS_2	298.9 / 99.0	1.57	2021617.81	20015.743301	2304.7	false
PFHxA_1	313.0 / 269.0	1.89	5384294.71	20064.713230	381.8	false
PFHxA_2	313.0 / 119.0	1.89	412049.84	20263.664384	291.6	false
PFHpA_1	363.0 / 319.0	2.31	4799802.06	19053.874556	746.7	false
PFHpA_2	363.0 / 169.0	2.30	95283.32	19024.309520	485.2	false
PFHxS_1	399.0 / 80.0	2.33	6914297.37	20746.725790	1563.1	false
PFHxS_2	399.0 / 99.0	2.33	1928852.05	20578.752672	2012.5	false
PFOA_1	413.0 / 369.0	2.72	6078956.99	20261.917150	1149.8	false
PFOA_2	413.0 / 169.0	2.72	369297.75	20188.704448	878.8	false
PFNA_1	463.0 / 419.0	3.11	5950799.77	19485.493085	1325.5	false
PFNA_2	463.0 / 219.0	3.11	1901763.63	19732.720850	1416.5	false
PFOS_1	499.0 / 80.0	3.11	10385746.11	19965.802393	811.2	false
PFOS_2	499.0 / 99.0	3.11	1775359.50	19824.660475	1655.8	false
PFDA_1	513.0 / 469.0	3.47	7100749.22	19251.371602	1441.2	false
PFDA_2	513.0 / 219.0	3.47	277968.50	18623.693739	668.6	false
PFUnA_1	563.0 / 519.0	3.80	7518283.60	20281.369999	1131.6	false
PFUnA_2	563.0 / 269.0	3.80	356426.61	20043.103852	835.1	false
PFDoA_1	613.0 / 569.0	4.09	7729050.27	19750.083587	1206.9	false
PFDoA_2	613.0 / 319.0	4.09	1245769.54	19561.226003	1013.3	false
PFTrDA_1	663.0 / 619.0	4.34	7285517.78	19828.999244	2054.7	false
PFTrDA_2	663.0 / 169.0	4.34	472532.18	19745.328023	1296.1	false
PFTeDA_1	713.0 / 669.0	4.56	8452640.91	19734.618624	3093.8	false
PFTeDA_2	713.0 / 169.0	4.55	408904.97	19668.016863	2116.9	false
NMeFOSAA_1	570.0 / 419.0	3.63	1192946.10	19862.260634	1924.5	false
NMeFOSAA_2	570.0 / 512.0	3.63	627516.86	20077.538828	1585.3	false
NEtFOSAA_1	584.0 / 419.0	3.80	1124128.46	19489.525397	1433.9	false
NEtFOSAA_2	584.0 / 483.0	3.80	67827.40	19444.469858	478.8	false

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Summary Quant Report

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Sample Name	KC66	**Injection Vial**	1
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T16:45:02	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.13	127166.70	257.077134	1181.3	false
d3-MeFOSAA	573.0 / 419.0	3.68	11997.72	152.917446	126.4	false
d5-EtFOSAA	589.0 / 419.0	3.84	13140.35	169.082954	177.9	false
13C5-PFHxA	318.0 / 273.0	1.91	82852.17	269.043474	817.6	false
13C4-PFHpA	367.0 / 322.0	2.33	87889.54	252.398537	1059.0	false
13C8-PFOA	421.0 / 376.0	2.76	91728.64	238.326507	2201.7	false
13C9-PFNA	472.0 / 427.0	3.15	103484.96	245.334030	997.1	false
13C6-PFDA	519.0 / 474.0	3.51	107978.97	244.298918	3706.5	false
13C7-PFUnA	570.0 / 525.0	3.84	112630.91	263.823286	860.6	false
13C2-PFTeDA	715.0 / 670.0	4.62	116479.07	262.201454	2381.3	false
13C3-PFBS	302.0 / 99.0	1.58	30408.77	217.615565	318.7	false
13C3-PFHxS	402.0 / 99.0	2.36	28408.67	217.178758	264.9	false
13C8-PFOS	507.0 / 99.0	3.15	34837.11	225.949001	250.2	false

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Summary Quant Report

Created with Analyst Reporter
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Sample Name	KC67	**Injection Vial**	2
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T16:55:56	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.11	126852.11	233.365449	1620.8	false
d3-MeFOSAA	573.0 / 419.0	3.65	19072.10	242.219978	218.1	false
d5-EtFOSAA	589.0 / 419.0	3.82	18090.26	231.948073	213.0	false
13C5-PFHxA	318.0 / 273.0	1.89	72209.39	236.702789	649.8	false
13C4-PFHpA	367.0 / 322.0	2.31	80608.55	233.680193	666.9	false
13C8-PFOA	421.0 / 376.0	2.73	96692.69	253.601700	516.5	false
13C9-PFNA	472.0 / 427.0	3.13	98414.00	235.520438	1073.7	false
13C6-PFDA	519.0 / 474.0	3.49	120067.59	247.204846	1140.8	false
13C7-PFUnA	570.0 / 525.0	3.81	110167.73	234.832796	727.5	false
13C2-PFTeDA	715.0 / 670.0	4.59	112622.63	230.707474	2260.1	false
13C3-PFBS	302.0 / 99.0	1.56	27900.03	198.952249	322.0	false
13C3-PFHxS	402.0 / 99.0	2.33	31751.01	241.867214	346.1	false
13C8-PFOS	507.0 / 99.0	3.12	35010.92	226.268869	229.1	false

BATTELLE

Summary Quant Report

Created with Analyst Reporter
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Sample Name	KC68	**Injection Vial**	3
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:06:49	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.10	129916.01	254.550030	1250.3	false
d3-MeFOSAA	573.0 / 419.0	3.64	18268.03	245.717088	221.0	false
d5-EtFOSAA	589.0 / 419.0	3.81	18483.06	250.987442	185.6	false
13C5-PFHxA	318.0 / 273.0	1.89	79616.57	246.843155	669.4	false
13C4-PFHpA	367.0 / 322.0	2.31	94089.29	257.981701	829.2	false
13C8-PFOA	421.0 / 376.0	2.72	113318.57	281.104340	2814.8	false
13C9-PFNA	472.0 / 427.0	3.12	104280.98	236.039548	948.7	false
13C6-PFDA	519.0 / 474.0	3.48	118271.49	259.347984	1280.7	false
13C7-PFUnA	570.0 / 525.0	3.81	124036.47	281.595277	800.6	false
13C2-PFTeDA	715.0 / 670.0	4.58	116158.96	253.431351	2153.6	false
13C3-PFBS	302.0 / 99.0	1.56	29713.57	224.404384	410.9	false
13C3-PFHxS	402.0 / 99.0	2.33	30735.75	247.967973	396.7	false
13C8-PFOS	507.0 / 99.0	3.11	36344.97	248.769981	395.3	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:28:43 PM

Sample Name	KC69	**Injection Vial**	4
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:17:43	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.09	109339.31	226.135688	1437.9	false
d3-MeFOSAA	573.0 / 419.0	3.63	17471.63	268.332204	164.7	false
d5-EtFOSAA	589.0 / 419.0	3.80	16751.08	259.726743	175.0	false
13C5-PFHxA	318.0 / 273.0	1.89	70504.31	233.569588	712.4	false
13C4-PFHpA	367.0 / 322.0	2.30	80228.37	235.049694	891.0	false
13C8-PFOA	421.0 / 376.0	2.72	91602.72	242.805131	24461.6	false
13C9-PFNA	472.0 / 427.0	3.11	101444.00	245.351673	372487.2	false
13C6-PFDA	519.0 / 474.0	3.47	109766.86	254.071725	1068.8	false
13C7-PFUnA	570.0 / 525.0	3.80	101291.71	242.734854	940.4	false
13C2-PFTeDA	715.0 / 670.0	4.57	101146.22	232.937571	2432.2	false
13C3-PFBS	302.0 / 99.0	1.55	28519.62	245.932432	356.0	false
13C3-PFHxS	402.0 / 99.0	2.32	26053.78	240.003760	346.0	false
13C8-PFOS	507.0 / 99.0	3.11	33563.69	262.312429	233.8	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:28:48 PM

Sample Name	KC70	**Injection Vial**	5
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:28:35	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.08	109431.96	249.570279	1282.4	false
d3-MeFOSAA	573.0 / 419.0	3.63	14609.60	222.583123	132.8	false
d5-EtFOSAA	589.0 / 419.0	3.79	15662.22	240.902742	173.9	false
13C5-PFHxA	318.0 / 273.0	1.88	69808.40	249.135914	952.6	false
13C4-PFHpA	367.0 / 322.0	2.30	76575.57	241.685150	564.5	false
13C8-PFOA	421.0 / 376.0	2.71	85737.18	244.819885	11943.8	false
13C9-PFNA	472.0 / 427.0	3.11	99418.67	259.035116	1088.1	false
13C6-PFDA	519.0 / 474.0	3.47	102215.98	260.891421	1595.4	false
13C7-PFUnA	570.0 / 525.0	3.79	98678.31	260.756933	806.2	false
13C2-PFTeDA	715.0 / 670.0	4.56	96580.49	245.264789	2431.7	false
13C3-PFBS	302.0 / 99.0	1.55	27739.07	237.289599	336.2	false
13C3-PFHxS	402.0 / 99.0	2.32	25826.43	236.007857	258.3	false
13C8-PFOS	507.0 / 99.0	3.10	28255.53	219.062194	312.0	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:28:53 PM

Sample Name	KC71	**Injection Vial**	6
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:39:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.08	121592.63	252.400827	1423.0	false
d3-MeFOSAA	573.0 / 419.0	3.63	17547.78	272.908227	97.9	false
d5-EtFOSAA	589.0 / 419.0	3.79	16659.69	261.574749	218.2	false
13C5-PFHxA	318.0 / 273.0	1.88	69305.34	240.592787	756.3	false
13C4-PFHpA	367.0 / 322.0	2.29	77965.79	239.359703	630.9	false
13C8-PFOA	421.0 / 376.0	2.71	86673.67	240.742017	4118.0	false
13C9-PFNA	472.0 / 427.0	3.10	97067.80	246.010208	331661.0	false
13C6-PFDA	519.0 / 474.0	3.46	97295.95	226.032342	1558.0	false
13C7-PFUnA	570.0 / 525.0	3.79	93942.48	225.949294	833.1	false
13C2-PFTeDA	715.0 / 670.0	4.56	108133.42	249.942755	1764.1	false
13C3-PFBS	302.0 / 99.0	1.55	27958.55	244.141640	422.2	false
13C3-PFHxS	402.0 / 99.0	2.32	26885.07	250.791988	313.4	false
13C8-PFOS	507.0 / 99.0	3.10	32044.23	253.602863	326.5	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:28:57 PM

Sample Name	KC72	**Injection Vial**	7
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:50:19	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.08	120807.38	276.900593	1307.2	false
d3-MeFOSAA	573.0 / 419.0	3.62	15924.78	248.239380	79.7	false
d5-EtFOSAA	589.0 / 419.0	3.79	16194.60	254.860251	136.3	false
13C5-PFHxA	318.0 / 273.0	1.88	70457.10	274.112292	665.0	false
13C4-PFHpA	367.0 / 322.0	2.29	84242.46	289.845022	1508.2	false
13C8-PFOA	421.0 / 376.0	2.71	79863.68	248.600420	1248.9	false
13C9-PFNA	472.0 / 427.0	3.10	99534.55	282.708987	2750.6	false
13C6-PFDA	519.0 / 474.0	3.46	100636.16	258.152764	1097.3	false
13C7-PFUnA	570.0 / 525.0	3.79	90483.95	240.307559	2740.7	false
13C2-PFTeDA	715.0 / 670.0	4.55	107948.62	275.514607	1679.7	false
13C3-PFBS	302.0 / 99.0	1.55	29410.50	257.414131	446.1	false
13C3-PFHxS	402.0 / 99.0	2.32	23709.70	221.682450	303.1	false
13C8-PFOS	507.0 / 99.0	3.10	30322.88	240.534663	252.3	false

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Summary Ion Ratio Report

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Sample Name	KC66	**Injection Vial**	1
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T16:45:02	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.61	PFBS			
PFBS_2	298.9 / 99.0	1.61	PFBS	0.210	0.290	ü
PFHxA_1	313.0 / 269.0	1.93	PFHxA			
PFHxA_2	313.0 / 119.0	1.92	PFHxA	0.080	0.076	ü
PFHpA_1	363.0 / 319.0	2.35	PFHpA			
PFHpA_2	363.0 / 169.0	2.35	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.37	PFHxS			
PFHxS_2	399.0 / 99.0	2.37	PFHxS	0.280	0.283	ü
PFOA_1	413.0 / 369.0	2.76	PFOA			
PFOA_2	413.0 / 169.0	2.76	PFOA	0.070	0.064	ü
PFNA_1	463.0 / 419.0	3.17	PFNA			
PFNA_2	463.0 / 219.0	3.17	PFNA	0.260	0.297	ü
PFOS_1	499.0 / 80.0	3.16	PFOS			
PFOS_2	499.0 / 99.0	3.16	PFOS	0.200	0.181	ü
PFDA_1	513.0 / 469.0	3.53	PFDA			
PFDA_2	513.0 / 219.0	3.51	PFDA	0.070	0.045	ü
PFUnA_1	563.0 / 519.0	3.86	PFUnA			
PFUnA_2	563.0 / 269.0	3.85	PFUnA	0.070	0.054	ü
PFDoA_1	613.0 / 569.0	4.15	PFDoA			
PFDoA_2	613.0 / 319.0	4.15	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.40	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.40	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.62	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.62	PFTeDA	0.060	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.69	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.68	NMeFOSAA	0.510	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.85	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.87	NEtFOSAA	0.160	0.068	

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Summary Ion Ratio Report

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Sample Name	KC67	**Injection Vial**	2
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T16:55:56	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.58	PFBS			
PFBS_2	298.9 / 99.0	1.58	PFBS	0.310	0.290	ü
PFHxA_1	313.0 / 269.0	1.91	PFHxA			
PFHxA_2	313.0 / 119.0	1.90	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.32	PFHpA			
PFHpA_2	363.0 / 169.0	2.32	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.35	PFHxS			
PFHxS_2	399.0 / 99.0	2.34	PFHxS	0.290	0.283	ü
PFOA_1	413.0 / 369.0	2.74	PFOA			
PFOA_2	413.0 / 169.0	2.74	PFOA	0.070	0.064	ü
PFNA_1	463.0 / 419.0	3.14	PFNA			
PFNA_2	463.0 / 219.0	3.14	PFNA	0.300	0.297	ü
PFOS_1	499.0 / 80.0	3.14	PFOS			
PFOS_2	499.0 / 99.0	3.14	PFOS	0.180	0.181	ü
PFDA_1	513.0 / 469.0	3.50	PFDA			
PFDA_2	513.0 / 219.0	3.50	PFDA	0.050	0.045	ü
PFUnA_1	563.0 / 519.0	3.83	PFUnA			
PFUnA_2	563.0 / 269.0	3.83	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.12	PFDoA			
PFDoA_2	613.0 / 319.0	4.12	PFDoA	0.150	0.159	ü
PFTrDA_1	663.0 / 619.0	4.37	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.37	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.59	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.59	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.66	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.66	NMeFOSAA	0.620	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.82	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.82	NEtFOSAA	0.090	0.068	ü

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Summary Ion Ratio Report

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Sample Name	KC68	**Injection Vial**	3
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:06:49	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.58	PFBS			
PFBS_2	298.9 / 99.0	1.57	PFBS	0.280	0.290	ü
PFHxA_1	313.0 / 269.0	1.90	PFHxA			
PFHxA_2	313.0 / 119.0	1.90	PFHxA	0.080	0.076	ü
PFHpA_1	363.0 / 319.0	2.32	PFHpA			
PFHpA_2	363.0 / 169.0	2.32	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.34	PFHxS			
PFHxS_2	399.0 / 99.0	2.34	PFHxS	0.280	0.283	ü
PFOA_1	413.0 / 369.0	2.73	PFOA			
PFOA_2	413.0 / 169.0	2.73	PFOA	0.070	0.064	ü
PFNA_1	463.0 / 419.0	3.13	PFNA			
PFNA_2	463.0 / 219.0	3.13	PFNA	0.290	0.297	ü
PFOS_1	499.0 / 80.0	3.13	PFOS			
PFOS_2	499.0 / 99.0	3.13	PFOS	0.180	0.181	ü
PFDA_1	513.0 / 469.0	3.49	PFDA			
PFDA_2	513.0 / 219.0	3.49	PFDA	0.040	0.045	ü
PFUnA_1	563.0 / 519.0	3.83	PFUnA			
PFUnA_2	563.0 / 269.0	3.82	PFUnA	0.060	0.054	ü
PFDoA_1	613.0 / 569.0	4.11	PFDoA			
PFDoA_2	613.0 / 319.0	4.11	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.36	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.36	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.58	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.58	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.65	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.65	NMeFOSAA	0.520	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.82	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.81	NEtFOSAA	0.080	0.068	ü

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Summary Ion Ratio Report

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Sample Name	KC69	**Injection Vial**	4
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:17:43	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.57	PFBS			
PFBS_2	298.9 / 99.0	1.57	PFBS	0.310	0.290	ü
PFHxA_1	313.0 / 269.0	1.90	PFHxA			
PFHxA_2	313.0 / 119.0	1.90	PFHxA	0.080	0.076	ü
PFHpA_1	363.0 / 319.0	2.31	PFHpA			
PFHpA_2	363.0 / 169.0	2.31	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.33	PFHxS			
PFHxS_2	399.0 / 99.0	2.33	PFHxS	0.270	0.283	ü
PFOA_1	413.0 / 369.0	2.73	PFOA			
PFOA_2	413.0 / 169.0	2.73	PFOA	0.060	0.064	ü
PFNA_1	463.0 / 419.0	3.13	PFNA			
PFNA_2	463.0 / 219.0	3.13	PFNA	0.300	0.297	ü
PFOS_1	499.0 / 80.0	3.12	PFOS			
PFOS_2	499.0 / 99.0	3.12	PFOS	0.180	0.181	ü
PFDA_1	513.0 / 469.0	3.49	PFDA			
PFDA_2	513.0 / 219.0	3.48	PFDA	0.040	0.045	ü
PFUnA_1	563.0 / 519.0	3.82	PFUnA			
PFUnA_2	563.0 / 269.0	3.82	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.10	PFDoA			
PFDoA_2	613.0 / 319.0	4.10	PFDoA	0.150	0.159	ü
PFTrDA_1	663.0 / 619.0	4.35	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.35	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.57	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.57	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.64	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.64	NMeFOSAA	0.490	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.81	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.81	NEtFOSAA	0.040	0.068	ü

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Summary Ion Ratio Report

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Sample Name	KC70	**Injection Vial**	5
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:28:35	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.57	PFBS			
PFBS_2	298.9 / 99.0	1.57	PFBS	0.300	0.290	ü
PFHxA_1	313.0 / 269.0	1.89	PFHxA			
PFHxA_2	313.0 / 119.0	1.89	PFHxA	0.080	0.076	ü
PFHpA_1	363.0 / 319.0	2.31	PFHpA			
PFHpA_2	363.0 / 169.0	2.31	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.33	PFHxS			
PFHxS_2	399.0 / 99.0	2.33	PFHxS	0.300	0.283	ü
PFOA_1	413.0 / 369.0	2.72	PFOA			
PFOA_2	413.0 / 169.0	2.72	PFOA	0.060	0.064	ü
PFNA_1	463.0 / 419.0	3.12	PFNA			
PFNA_2	463.0 / 219.0	3.12	PFNA	0.300	0.297	ü
PFOS_1	499.0 / 80.0	3.12	PFOS			
PFOS_2	499.0 / 99.0	3.12	PFOS	0.180	0.181	ü
PFDA_1	513.0 / 469.0	3.48	PFDA			
PFDA_2	513.0 / 219.0	3.48	PFDA	0.040	0.045	ü
PFUnA_1	563.0 / 519.0	3.81	PFUnA			
PFUnA_2	563.0 / 269.0	3.81	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.09	PFDoA			
PFDoA_2	613.0 / 319.0	4.09	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.34	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.34	PFTrDA	0.060	0.066	ü
PFTeDA_1	713.0 / 669.0	4.56	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.56	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.64	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.64	NMeFOSAA	0.480	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.80	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.80	NEtFOSAA	0.070	0.068	ü

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Summary Ion Ratio Report

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Sample Name	KC71	**Injection Vial**	6
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:39:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.57	PFBS			
PFBS_2	298.9 / 99.0	1.57	PFBS	0.310	0.290	ü
PFHxA_1	313.0 / 269.0	1.89	PFHxA			
PFHxA_2	313.0 / 119.0	1.89	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.30	PFHpA			
PFHpA_2	363.0 / 169.0	2.31	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.33	PFHxS			
PFHxS_2	399.0 / 99.0	2.33	PFHxS	0.280	0.283	ü
PFOA_1	413.0 / 369.0	2.72	PFOA			
PFOA_2	413.0 / 169.0	2.72	PFOA	0.060	0.064	ü
PFNA_1	463.0 / 419.0	3.12	PFNA			
PFNA_2	463.0 / 219.0	3.12	PFNA	0.310	0.297	ü
PFOS_1	499.0 / 80.0	3.11	PFOS			
PFOS_2	499.0 / 99.0	3.11	PFOS	0.170	0.181	ü
PFDA_1	513.0 / 469.0	3.48	PFDA			
PFDA_2	513.0 / 219.0	3.47	PFDA	0.040	0.045	ü
PFUnA_1	563.0 / 519.0	3.81	PFUnA			
PFUnA_2	563.0 / 269.0	3.81	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.09	PFDoA			
PFDoA_2	613.0 / 319.0	4.09	PFDoA	0.170	0.159	ü
PFTrDA_1	663.0 / 619.0	4.34	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.34	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.56	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.56	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.63	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.63	NMeFOSAA	0.520	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.80	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.80	NEtFOSAA	0.060	0.068	ü

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Summary Ion Ratio Report

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Sample Name	KC72	**Injection Vial**	7
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:50:19	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.57	PFBS			
PFBS_2	298.9 / 99.0	1.57	PFBS	0.310	0.290	ü
PFHxA_1	313.0 / 269.0	1.89	PFHxA			
PFHxA_2	313.0 / 119.0	1.89	PFHxA	0.080	0.076	ü
PFHpA_1	363.0 / 319.0	2.31	PFHpA			
PFHpA_2	363.0 / 169.0	2.30	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.33	PFHxS			
PFHxS_2	399.0 / 99.0	2.33	PFHxS	0.280	0.283	ü
PFOA_1	413.0 / 369.0	2.72	PFOA			
PFOA_2	413.0 / 169.0	2.72	PFOA	0.060	0.064	ü
PFNA_1	463.0 / 419.0	3.11	PFNA			
PFNA_2	463.0 / 219.0	3.11	PFNA	0.320	0.297	ü
PFOS_1	499.0 / 80.0	3.11	PFOS			
PFOS_2	499.0 / 99.0	3.11	PFOS	0.170	0.181	ü
PFDA_1	513.0 / 469.0	3.47	PFDA			
PFDA_2	513.0 / 219.0	3.47	PFDA	0.040	0.045	ü
PFUnA_1	563.0 / 519.0	3.80	PFUnA			
PFUnA_2	563.0 / 269.0	3.80	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.09	PFDoA			
PFDoA_2	613.0 / 319.0	4.09	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.34	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.34	PFTrDA	0.060	0.066	ü
PFTeDA_1	713.0 / 669.0	4.56	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.55	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.63	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.63	NMeFOSAA	0.530	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.80	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.80	NEtFOSAA	0.060	0.068	ü

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Summary Internal Standard Report

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Sample Name	KC66	**Injection Vial**	1
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T16:45:02	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.61	13C3-PFBS	302.0 / 99.0	30408.77	232.25
PFBS_2	298.9 / 99.0	1.61	13C3-PFBS	302.0 / 99.0	30408.77	232.25
PFHxA_1	313.0 / 269.0	1.93	13C5-PFHxA	318.0 / 273.0	82852.17	250.00
PFHxA_2	313.0 / 119.0	1.92	13C5-PFHxA	318.0 / 273.0	82852.17	250.00
PFHpA_1	363.0 / 319.0	2.35	13C4-PFHpA	367.0 / 322.0	87889.54	250.00
PFHpA_2	363.0 / 169.0	2.35	13C4-PFHpA	367.0 / 322.0	87889.54	250.00
PFHxS_1	399.0 / 80.0	2.37	13C3-PFHxS	402.0 / 99.0	28081.69	236.50
PFHxS_2	399.0 / 99.0	2.37	13C3-PFHxS	402.0 / 99.0	28081.69	236.50
PFOA_1	413.0 / 369.0	2.76	13C8-PFOA	421.0 / 376.0	91728.64	250.00
PFOA_2	413.0 / 169.0	2.76	13C8-PFOA	421.0 / 376.0	91728.64	250.00
PFNA_1	463.0 / 419.0	3.17	13C9-PFNA	472.0 / 427.0	103484.96	250.00
PFNA_2	463.0 / 219.0	3.17	13C9-PFNA	472.0 / 427.0	103484.96	250.00
PFOS_1	499.0 / 80.0	3.16	13C8-PFOS	507.0 / 99.0	35115.55	239.25
PFOS_2	499.0 / 99.0	3.16	13C8-PFOS	507.0 / 99.0	35115.55	239.25
PFDA_1	513.0 / 469.0	3.53	13C6-PFDA	519.0 / 474.0	107978.97	250.00
PFDA_2	513.0 / 219.0	3.51	13C6-PFDA	519.0 / 474.0	107978.97	250.00
PFUnA_1	563.0 / 519.0	3.86	13C7-PFUnA	570.0 / 525.0	112630.91	250.00
PFUnA_2	563.0 / 269.0	3.85	13C7-PFUnA	570.0 / 525.0	112630.91	250.00
PFDoA_1	613.0 / 569.0	4.15	13C2-PFDoA	615.0 / 570.0	127166.70	250.00
PFDoA_2	613.0 / 319.0	4.15	13C2-PFDoA	615.0 / 570.0	127166.70	250.00
PFTrDA_1	663.0 / 619.0	4.40	13C2-PFTeDA	715.0 / 670.0	116479.07	250.00
PFTrDA_2	663.0 / 169.0	4.40	13C2-PFTeDA	715.0 / 670.0	116479.07	250.00
PFTeDA_1	713.0 / 669.0	4.62	13C2-PFTeDA	715.0 / 670.0	116479.07	250.00
PFTeDA_2	713.0 / 169.0	4.62	13C2-PFTeDA	715.0 / 670.0	116479.07	250.00
NMeFOSAA_1	570.0 / 419.0	3.69	d3-MeFOSAA	573.0 / 419.0	12047.00	250.00
NMeFOSAA_2	570.0 / 512.0	3.68	d3-MeFOSAA	573.0 / 419.0	12047.00	250.00
NEtFOSAA_1	584.0 / 419.0	3.85	d5-EtFOSAA	589.0 / 419.0	13324.07	250.00
NEtFOSAA_2	584.0 / 483.0	3.87	d5-EtFOSAA	589.0 / 419.0	13324.07	250.00

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Summary Internal Standard Report

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Sample Name	KC67	**Injection Vial**	2
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T16:55:56	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.58	13C3-PFBS	302.0 / 99.0	27900.03	232.25
PFBS_2	298.9 / 99.0	1.58	13C3-PFBS	302.0 / 99.0	27900.03	232.25
PFHxA_1	313.0 / 269.0	1.91	13C5-PFHxA	318.0 / 273.0	72209.39	250.00
PFHxA_2	313.0 / 119.0	1.90	13C5-PFHxA	318.0 / 273.0	72209.39	250.00
PFHpA_1	363.0 / 319.0	2.32	13C4-PFHpA	367.0 / 322.0	80608.55	250.00
PFHpA_2	363.0 / 169.0	2.32	13C4-PFHpA	367.0 / 322.0	80608.55	250.00
PFHxS_1	399.0 / 80.0	2.35	13C3-PFHxS	402.0 / 99.0	31708.56	236.50
PFHxS_2	399.0 / 99.0	2.34	13C3-PFHxS	402.0 / 99.0	31708.56	236.50
PFOA_1	413.0 / 369.0	2.74	13C8-PFOA	421.0 / 376.0	96692.69	250.00
PFOA_2	413.0 / 169.0	2.74	13C8-PFOA	421.0 / 376.0	96692.69	250.00
PFNA_1	463.0 / 419.0	3.14	13C9-PFNA	472.0 / 427.0	98414.00	250.00
PFNA_2	463.0 / 219.0	3.14	13C9-PFNA	472.0 / 427.0	98414.00	250.00
PFOS_1	499.0 / 80.0	3.14	13C8-PFOS	507.0 / 99.0	34956.56	239.25
PFOS_2	499.0 / 99.0	3.14	13C8-PFOS	507.0 / 99.0	34956.56	239.25
PFDA_1	513.0 / 469.0	3.50	13C6-PFDA	519.0 / 474.0	120067.59	250.00
PFDA_2	513.0 / 219.0	3.50	13C6-PFDA	519.0 / 474.0	120067.59	250.00
PFUnA_1	563.0 / 519.0	3.83	13C7-PFUnA	570.0 / 525.0	110167.73	250.00
PFUnA_2	563.0 / 269.0	3.83	13C7-PFUnA	570.0 / 525.0	110167.73	250.00
PFDoA_1	613.0 / 569.0	4.12	13C2-PFDoA	615.0 / 570.0	126852.11	250.00
PFDoA_2	613.0 / 319.0	4.12	13C2-PFDoA	615.0 / 570.0	126852.11	250.00
PFTrDA_1	663.0 / 619.0	4.37	13C2-PFTeDA	715.0 / 670.0	112622.63	250.00
PFTrDA_2	663.0 / 169.0	4.37	13C2-PFTeDA	715.0 / 670.0	112622.63	250.00
PFTeDA_1	713.0 / 669.0	4.59	13C2-PFTeDA	715.0 / 670.0	112622.63	250.00
PFTeDA_2	713.0 / 169.0	4.59	13C2-PFTeDA	715.0 / 670.0	112622.63	250.00
NMeFOSAA_1	570.0 / 419.0	3.66	d3-MeFOSAA	573.0 / 419.0	19299.84	250.00
NMeFOSAA_2	570.0 / 512.0	3.66	d3-MeFOSAA	573.0 / 419.0	19299.84	250.00
NEtFOSAA_1	584.0 / 419.0	3.82	d5-EtFOSAA	589.0 / 419.0	17987.40	250.00
NEtFOSAA_2	584.0 / 483.0	3.82	d5-EtFOSAA	589.0 / 419.0	17987.40	250.00

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Summary Internal Standard Report

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Sample Name	KC68	**Injection Vial**	3
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:06:49	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.58	13C3-PFBS	302.0 / 99.0	29713.57	232.25
PFBS_2	298.9 / 99.0	1.57	13C3-PFBS	302.0 / 99.0	29713.57	232.25
PFHxA_1	313.0 / 269.0	1.90	13C5-PFHxA	318.0 / 273.0	79616.57	250.00
PFHxA_2	313.0 / 119.0	1.90	13C5-PFHxA	318.0 / 273.0	79616.57	250.00
PFHpA_1	363.0 / 319.0	2.32	13C4-PFHpA	367.0 / 322.0	94089.29	250.00
PFHpA_2	363.0 / 169.0	2.32	13C4-PFHpA	367.0 / 322.0	94089.29	250.00
PFHxS_1	399.0 / 80.0	2.34	13C3-PFHxS	402.0 / 99.0	30595.12	236.50
PFHxS_2	399.0 / 99.0	2.34	13C3-PFHxS	402.0 / 99.0	30595.12	236.50
PFOA_1	413.0 / 369.0	2.73	13C8-PFOA	421.0 / 376.0	113318.57	250.00
PFOA_2	413.0 / 169.0	2.73	13C8-PFOA	421.0 / 376.0	113318.57	250.00
PFNA_1	463.0 / 419.0	3.13	13C9-PFNA	472.0 / 427.0	104280.98	250.00
PFNA_2	463.0 / 219.0	3.13	13C9-PFNA	472.0 / 427.0	104280.98	250.00
PFOS_1	499.0 / 80.0	3.13	13C8-PFOS	507.0 / 99.0	36087.44	239.25
PFOS_2	499.0 / 99.0	3.13	13C8-PFOS	507.0 / 99.0	36087.44	239.25
PFDA_1	513.0 / 469.0	3.49	13C6-PFDA	519.0 / 474.0	118271.49	250.00
PFDA_2	513.0 / 219.0	3.49	13C6-PFDA	519.0 / 474.0	118271.49	250.00
PFUnA_1	563.0 / 519.0	3.83	13C7-PFUnA	570.0 / 525.0	124036.47	250.00
PFUnA_2	563.0 / 269.0	3.82	13C7-PFUnA	570.0 / 525.0	124036.47	250.00
PFDoA_1	613.0 / 569.0	4.11	13C2-PFDoA	615.0 / 570.0	129916.01	250.00
PFDoA_2	613.0 / 319.0	4.11	13C2-PFDoA	615.0 / 570.0	129916.01	250.00
PFTrDA_1	663.0 / 619.0	4.36	13C2-PFTeDA	715.0 / 670.0	116158.96	250.00
PFTrDA_2	663.0 / 169.0	4.36	13C2-PFTeDA	715.0 / 670.0	116158.96	250.00
PFTeDA_1	713.0 / 669.0	4.58	13C2-PFTeDA	715.0 / 670.0	116158.96	250.00
PFTeDA_2	713.0 / 169.0	4.58	13C2-PFTeDA	715.0 / 670.0	116158.96	250.00
NMeFOSAA_1	570.0 / 419.0	3.65	d3-MeFOSAA	573.0 / 419.0	18311.34	250.00
NMeFOSAA_2	570.0 / 512.0	3.65	d3-MeFOSAA	573.0 / 419.0	18311.34	250.00
NEtFOSAA_1	584.0 / 419.0	3.82	d5-EtFOSAA	589.0 / 419.0	18902.04	250.00
NEtFOSAA_2	584.0 / 483.0	3.81	d5-EtFOSAA	589.0 / 419.0	18902.04	250.00

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Summary Internal Standard Report

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Sample Name	KC69	**Injection Vial**	4
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:17:43	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.57	13C3-PFBS	302.0 / 99.0	28519.62	232.25
PFBS_2	298.9 / 99.0	1.57	13C3-PFBS	302.0 / 99.0	28519.62	232.25
PFHxA_1	313.0 / 269.0	1.90	13C5-PFHxA	318.0 / 273.0	70504.31	250.00
PFHxA_2	313.0 / 119.0	1.90	13C5-PFHxA	318.0 / 273.0	70504.31	250.00
PFHpA_1	363.0 / 319.0	2.31	13C4-PFHpA	367.0 / 322.0	80228.37	250.00
PFHpA_2	363.0 / 169.0	2.31	13C4-PFHpA	367.0 / 322.0	80228.37	250.00
PFHxS_1	399.0 / 80.0	2.33	13C3-PFHxS	402.0 / 99.0	25961.69	236.50
PFHxS_2	399.0 / 99.0	2.33	13C3-PFHxS	402.0 / 99.0	25961.69	236.50
PFOA_1	413.0 / 369.0	2.73	13C8-PFOA	421.0 / 376.0	91602.72	250.00
PFOA_2	413.0 / 169.0	2.73	13C8-PFOA	421.0 / 376.0	91602.72	250.00
PFNA_1	463.0 / 419.0	3.13	13C9-PFNA	472.0 / 427.0	101444.00	250.00
PFNA_2	463.0 / 219.0	3.13	13C9-PFNA	472.0 / 427.0	101444.00	250.00
PFOS_1	499.0 / 80.0	3.12	13C8-PFOS	507.0 / 99.0	33483.57	239.25
PFOS_2	499.0 / 99.0	3.12	13C8-PFOS	507.0 / 99.0	33483.57	239.25
PFDA_1	513.0 / 469.0	3.49	13C6-PFDA	519.0 / 474.0	109766.86	250.00
PFDA_2	513.0 / 219.0	3.48	13C6-PFDA	519.0 / 474.0	109766.86	250.00
PFUnA_1	563.0 / 519.0	3.82	13C7-PFUnA	570.0 / 525.0	101291.71	250.00
PFUnA_2	563.0 / 269.0	3.82	13C7-PFUnA	570.0 / 525.0	101291.71	250.00
PFDoA_1	613.0 / 569.0	4.10	13C2-PFDoA	615.0 / 570.0	109339.31	250.00
PFDoA_2	613.0 / 319.0	4.10	13C2-PFDoA	615.0 / 570.0	109339.31	250.00
PFTrDA_1	663.0 / 619.0	4.35	13C2-PFTeDA	715.0 / 670.0	101146.22	250.00
PFTrDA_2	663.0 / 169.0	4.35	13C2-PFTeDA	715.0 / 670.0	101146.22	250.00
PFTeDA_1	713.0 / 669.0	4.57	13C2-PFTeDA	715.0 / 670.0	101146.22	250.00
PFTeDA_2	713.0 / 169.0	4.57	13C2-PFTeDA	715.0 / 670.0	101146.22	250.00
NMeFOSAA_1	570.0 / 419.0	3.64	d3-MeFOSAA	573.0 / 419.0	17760.90	250.00
NMeFOSAA_2	570.0 / 512.0	3.64	d3-MeFOSAA	573.0 / 419.0	17760.90	250.00
NEtFOSAA_1	584.0 / 419.0	3.81	d5-EtFOSAA	589.0 / 419.0	17251.82	250.00
NEtFOSAA_2	584.0 / 483.0	3.81	d5-EtFOSAA	589.0 / 419.0	17251.82	250.00

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Summary Internal Standard Report

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Sample Name	KC70	**Injection Vial**	5
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:28:35	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.57	13C3-PFBS	302.0 / 99.0	27739.07	232.25
PFBS_2	298.9 / 99.0	1.57	13C3-PFBS	302.0 / 99.0	27739.07	232.25
PFHxA_1	313.0 / 269.0	1.89	13C5-PFHxA	318.0 / 273.0	69808.40	250.00
PFHxA_2	313.0 / 119.0	1.89	13C5-PFHxA	318.0 / 273.0	69808.40	250.00
PFHpA_1	363.0 / 319.0	2.31	13C4-PFHpA	367.0 / 322.0	76575.57	250.00
PFHpA_2	363.0 / 169.0	2.31	13C4-PFHpA	367.0 / 322.0	76575.57	250.00
PFHxS_1	399.0 / 80.0	2.33	13C3-PFHxS	402.0 / 99.0	25493.79	236.50
PFHxS_2	399.0 / 99.0	2.33	13C3-PFHxS	402.0 / 99.0	25493.79	236.50
PFOA_1	413.0 / 369.0	2.72	13C8-PFOA	421.0 / 376.0	85737.18	250.00
PFOA_2	413.0 / 169.0	2.72	13C8-PFOA	421.0 / 376.0	85737.18	250.00
PFNA_1	463.0 / 419.0	3.12	13C9-PFNA	472.0 / 427.0	99418.67	250.00
PFNA_2	463.0 / 219.0	3.12	13C9-PFNA	472.0 / 427.0	99418.67	250.00
PFOS_1	499.0 / 80.0	3.12	13C8-PFOS	507.0 / 99.0	28148.27	239.25
PFOS_2	499.0 / 99.0	3.12	13C8-PFOS	507.0 / 99.0	28148.27	239.25
PFDA_1	513.0 / 469.0	3.48	13C6-PFDA	519.0 / 474.0	102215.98	250.00
PFDA_2	513.0 / 219.0	3.48	13C6-PFDA	519.0 / 474.0	102215.98	250.00
PFUnA_1	563.0 / 519.0	3.81	13C7-PFUnA	570.0 / 525.0	98678.31	250.00
PFUnA_2	563.0 / 269.0	3.81	13C7-PFUnA	570.0 / 525.0	98678.31	250.00
PFDoA_1	613.0 / 569.0	4.09	13C2-PFDoA	615.0 / 570.0	109431.96	250.00
PFDoA_2	613.0 / 319.0	4.09	13C2-PFDoA	615.0 / 570.0	109431.96	250.00
PFTrDA_1	663.0 / 619.0	4.34	13C2-PFTeDA	715.0 / 670.0	96580.49	250.00
PFTrDA_2	663.0 / 169.0	4.34	13C2-PFTeDA	715.0 / 670.0	96580.49	250.00
PFTeDA_1	713.0 / 669.0	4.56	13C2-PFTeDA	715.0 / 670.0	96580.49	250.00
PFTeDA_2	713.0 / 169.0	4.56	13C2-PFTeDA	715.0 / 670.0	96580.49	250.00
NMeFOSAA_1	570.0 / 419.0	3.64	d3-MeFOSAA	573.0 / 419.0	14558.37	250.00
NMeFOSAA_2	570.0 / 512.0	3.64	d3-MeFOSAA	573.0 / 419.0	14558.37	250.00
NEtFOSAA_1	584.0 / 419.0	3.80	d5-EtFOSAA	589.0 / 419.0	16048.99	250.00
NEtFOSAA_2	584.0 / 483.0	3.80	d5-EtFOSAA	589.0 / 419.0	16048.99	250.00

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Summary Internal Standard Report

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Sample Name	KC71	**Injection Vial**	6
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:39:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.57	13C3-PFBS	302.0 / 99.0	27958.55	232.25
PFBS_2	298.9 / 99.0	1.57	13C3-PFBS	302.0 / 99.0	27958.55	232.25
PFHxA_1	313.0 / 269.0	1.89	13C5-PFHxA	318.0 / 273.0	69305.34	250.00
PFHxA_2	313.0 / 119.0	1.89	13C5-PFHxA	318.0 / 273.0	69305.34	250.00
PFHpA_1	363.0 / 319.0	2.30	13C4-PFHpA	367.0 / 322.0	77965.79	250.00
PFHpA_2	363.0 / 169.0	2.31	13C4-PFHpA	367.0 / 322.0	77965.79	250.00
PFHxS_1	399.0 / 80.0	2.33	13C3-PFHxS	402.0 / 99.0	26595.86	236.50
PFHxS_2	399.0 / 99.0	2.33	13C3-PFHxS	402.0 / 99.0	26595.86	236.50
PFOA_1	413.0 / 369.0	2.72	13C8-PFOA	421.0 / 376.0	86673.67	250.00
PFOA_2	413.0 / 169.0	2.72	13C8-PFOA	421.0 / 376.0	86673.67	250.00
PFNA_1	463.0 / 419.0	3.12	13C9-PFNA	472.0 / 427.0	97067.80	250.00
PFNA_2	463.0 / 219.0	3.12	13C9-PFNA	472.0 / 427.0	97067.80	250.00
PFOS_1	499.0 / 80.0	3.11	13C8-PFOS	507.0 / 99.0	32129.28	239.25
PFOS_2	499.0 / 99.0	3.11	13C8-PFOS	507.0 / 99.0	32129.28	239.25
PFDA_1	513.0 / 469.0	3.48	13C6-PFDA	519.0 / 474.0	97295.95	250.00
PFDA_2	513.0 / 219.0	3.47	13C6-PFDA	519.0 / 474.0	97295.95	250.00
PFUnA_1	563.0 / 519.0	3.81	13C7-PFUnA	570.0 / 525.0	93942.48	250.00
PFUnA_2	563.0 / 269.0	3.81	13C7-PFUnA	570.0 / 525.0	93942.48	250.00
PFDoA_1	613.0 / 569.0	4.09	13C2-PFDoA	615.0 / 570.0	121592.63	250.00
PFDoA_2	613.0 / 319.0	4.09	13C2-PFDoA	615.0 / 570.0	121592.63	250.00
PFTrDA_1	663.0 / 619.0	4.34	13C2-PFTeDA	715.0 / 670.0	108133.42	250.00
PFTrDA_2	663.0 / 169.0	4.34	13C2-PFTeDA	715.0 / 670.0	108133.42	250.00
PFTeDA_1	713.0 / 669.0	4.56	13C2-PFTeDA	715.0 / 670.0	108133.42	250.00
PFTeDA_2	713.0 / 169.0	4.56	13C2-PFTeDA	715.0 / 670.0	108133.42	250.00
NMeFOSAA_1	570.0 / 419.0	3.63	d3-MeFOSAA	573.0 / 419.0	17330.77	250.00
NMeFOSAA_2	570.0 / 512.0	3.63	d3-MeFOSAA	573.0 / 419.0	17330.77	250.00
NEtFOSAA_1	584.0 / 419.0	3.80	d5-EtFOSAA	589.0 / 419.0	16816.49	250.00
NEtFOSAA_2	584.0 / 483.0	3.80	d5-EtFOSAA	589.0 / 419.0	16816.49	250.00

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Sample Name	KC72	**Injection Vial**	7
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:50:19	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.57	13C3-PFBS	302.0 / 99.0	29410.50	232.25
PFBS_2	298.9 / 99.0	1.57	13C3-PFBS	302.0 / 99.0	29410.50	232.25
PFHxA_1	313.0 / 269.0	1.89	13C5-PFHxA	318.0 / 273.0	70457.10	250.00
PFHxA_2	313.0 / 119.0	1.89	13C5-PFHxA	318.0 / 273.0	70457.10	250.00
PFHpA_1	363.0 / 319.0	2.31	13C4-PFHpA	367.0 / 322.0	84242.46	250.00
PFHpA_2	363.0 / 169.0	2.30	13C4-PFHpA	367.0 / 322.0	84242.46	250.00
PFHxS_1	399.0 / 80.0	2.33	13C3-PFHxS	402.0 / 99.0	23545.69	236.50
PFHxS_2	399.0 / 99.0	2.33	13C3-PFHxS	402.0 / 99.0	23545.69	236.50
PFOA_1	413.0 / 369.0	2.72	13C8-PFOA	421.0 / 376.0	79863.68	250.00
PFOA_2	413.0 / 169.0	2.72	13C8-PFOA	421.0 / 376.0	79863.68	250.00
PFNA_1	463.0 / 419.0	3.11	13C9-PFNA	472.0 / 427.0	99534.55	250.00
PFNA_2	463.0 / 219.0	3.11	13C9-PFNA	472.0 / 427.0	99534.55	250.00
PFOS_1	499.0 / 80.0	3.11	13C8-PFOS	507.0 / 99.0	29893.86	239.25
PFOS_2	499.0 / 99.0	3.11	13C8-PFOS	507.0 / 99.0	29893.86	239.25
PFDA_1	513.0 / 469.0	3.47	13C6-PFDA	519.0 / 474.0	100636.16	250.00
PFDA_2	513.0 / 219.0	3.47	13C6-PFDA	519.0 / 474.0	100636.16	250.00
PFUnA_1	563.0 / 519.0	3.80	13C7-PFUnA	570.0 / 525.0	90483.95	250.00
PFUnA_2	563.0 / 269.0	3.80	13C7-PFUnA	570.0 / 525.0	90483.95	250.00
PFDoA_1	613.0 / 569.0	4.09	13C2-PFDoA	615.0 / 570.0	120807.38	250.00
PFDoA_2	613.0 / 319.0	4.09	13C2-PFDoA	615.0 / 570.0	120807.38	250.00
PFTrDA_1	663.0 / 619.0	4.34	13C2-PFTeDA	715.0 / 670.0	107948.62	250.00
PFTrDA_2	663.0 / 169.0	4.34	13C2-PFTeDA	715.0 / 670.0	107948.62	250.00
PFTeDA_1	713.0 / 669.0	4.56	13C2-PFTeDA	715.0 / 670.0	107948.62	250.00
PFTeDA_2	713.0 / 169.0	4.55	13C2-PFTeDA	715.0 / 670.0	107948.62	250.00
NMeFOSAA_1	570.0 / 419.0	3.63	d3-MeFOSAA	573.0 / 419.0	16188.75	250.00
NMeFOSAA_2	570.0 / 512.0	3.63	d3-MeFOSAA	573.0 / 419.0	16188.75	250.00
NEtFOSAA_1	584.0 / 419.0	3.80	d5-EtFOSAA	589.0 / 419.0	16673.85	250.00
NEtFOSAA_2	584.0 / 483.0	3.80	d5-EtFOSAA	589.0 / 419.0	16673.85	250.00

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Sample Name	KC66	**Injection Vial**	1
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T16:45:02	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.13	13C2-PFDA	515.0 / 470.0	108551.83	250.00
d3-MeFOSAA	573.0 / 419.0	3.68	13C4-PFOS	503.0 / 99.0	36591.63	239.50
d5-EtFOSAA	589.0 / 419.0	3.84	13C4-PFOS	503.0 / 99.0	36591.63	239.50
13C5-PFHxA	318.0 / 273.0	1.91	13C2-PFOA	415.0 / 370.0	87630.66	250.00
13C4-PFHpA	367.0 / 322.0	2.33	13C2-PFOA	415.0 / 370.0	87630.66	250.00
13C8-PFOA	421.0 / 376.0	2.76	13C2-PFOA	415.0 / 370.0	87630.66	250.00
13C9-PFNA	472.0 / 427.0	3.15	13C2-PFOA	415.0 / 370.0	87630.66	250.00
13C6-PFDA	519.0 / 474.0	3.51	13C2-PFDA	515.0 / 470.0	108551.83	250.00
13C7-PFUnA	570.0 / 525.0	3.84	13C2-PFDA	515.0 / 470.0	108551.83	250.00
13C2-PFTeDA	715.0 / 670.0	4.62	13C2-PFDA	515.0 / 470.0	108551.83	250.00
13C3-PFBS	302.0 / 99.0	1.58	13C4-PFOS	503.0 / 99.0	36591.63	239.50
13C3-PFHxS	402.0 / 99.0	2.36	13C4-PFOS	503.0 / 99.0	36591.63	239.50
13C8-PFOS	507.0 / 99.0	3.15	13C4-PFOS	503.0 / 99.0	36591.63	239.50

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Summary Internal Standard Report

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Sample Name	KC67	**Injection Vial**	2
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T16:55:56	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.11	13C2-PFDA	515.0 / 470.0	119285.68	250.00
d3-MeFOSAA	573.0 / 419.0	3.65	13C4-PFOS	503.0 / 99.0	36722.21	239.50
d5-EtFOSAA	589.0 / 419.0	3.82	13C4-PFOS	503.0 / 99.0	36722.21	239.50
13C5-PFHxA	318.0 / 273.0	1.89	13C2-PFOA	415.0 / 370.0	86809.03	250.00
13C4-PFHpA	367.0 / 322.0	2.31	13C2-PFOA	415.0 / 370.0	86809.03	250.00
13C8-PFOA	421.0 / 376.0	2.73	13C2-PFOA	415.0 / 370.0	86809.03	250.00
13C9-PFNA	472.0 / 427.0	3.13	13C2-PFOA	415.0 / 370.0	86809.03	250.00
13C6-PFDA	519.0 / 474.0	3.49	13C2-PFDA	515.0 / 470.0	119285.68	250.00
13C7-PFUnA	570.0 / 525.0	3.81	13C2-PFDA	515.0 / 470.0	119285.68	250.00
13C2-PFTeDA	715.0 / 670.0	4.59	13C2-PFDA	515.0 / 470.0	119285.68	250.00
13C3-PFBS	302.0 / 99.0	1.56	13C4-PFOS	503.0 / 99.0	36722.21	239.50
13C3-PFHxS	402.0 / 99.0	2.33	13C4-PFOS	503.0 / 99.0	36722.21	239.50
13C8-PFOS	507.0 / 99.0	3.12	13C4-PFOS	503.0 / 99.0	36722.21	239.50

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Summary Internal Standard Report

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Sample Name	KC68	**Injection Vial**	3
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:06:49	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.10	13C2-PFDA	515.0 / 470.0	111999.66	250.00
d3-MeFOSAA	573.0 / 419.0	3.64	13C4-PFOS	503.0 / 99.0	34673.40	239.50
d5-EtFOSAA	589.0 / 419.0	3.81	13C4-PFOS	503.0 / 99.0	34673.40	239.50
13C5-PFHxA	318.0 / 273.0	1.89	13C2-PFOA	415.0 / 370.0	91781.89	250.00
13C4-PFHpA	367.0 / 322.0	2.31	13C2-PFOA	415.0 / 370.0	91781.89	250.00
13C8-PFOA	421.0 / 376.0	2.72	13C2-PFOA	415.0 / 370.0	91781.89	250.00
13C9-PFNA	472.0 / 427.0	3.12	13C2-PFOA	415.0 / 370.0	91781.89	250.00
13C6-PFDA	519.0 / 474.0	3.48	13C2-PFDA	515.0 / 470.0	111999.66	250.00
13C7-PFUnA	570.0 / 525.0	3.81	13C2-PFDA	515.0 / 470.0	111999.66	250.00
13C2-PFTeDA	715.0 / 670.0	4.58	13C2-PFDA	515.0 / 470.0	111999.66	250.00
13C3-PFBS	302.0 / 99.0	1.56	13C4-PFOS	503.0 / 99.0	34673.40	239.50
13C3-PFHxS	402.0 / 99.0	2.33	13C4-PFOS	503.0 / 99.0	34673.40	239.50
13C8-PFOS	507.0 / 99.0	3.11	13C4-PFOS	503.0 / 99.0	34673.40	239.50

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Summary Internal Standard Report

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Sample Name	KC69	**Injection Vial**	4
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:17:43	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.09	13C2-PFDA	515.0 / 470.0	106104.65	250.00
d3-MeFOSAA	573.0 / 419.0	3.63	13C4-PFOS	503.0 / 99.0	30366.93	239.50
d5-EtFOSAA	589.0 / 419.0	3.80	13C4-PFOS	503.0 / 99.0	30366.93	239.50
13C5-PFHxA	318.0 / 273.0	1.89	13C2-PFOA	415.0 / 370.0	85896.20	250.00
13C4-PFHpA	367.0 / 322.0	2.30	13C2-PFOA	415.0 / 370.0	85896.20	250.00
13C8-PFOA	421.0 / 376.0	2.72	13C2-PFOA	415.0 / 370.0	85896.20	250.00
13C9-PFNA	472.0 / 427.0	3.11	13C2-PFOA	415.0 / 370.0	85896.20	250.00
13C6-PFDA	519.0 / 474.0	3.47	13C2-PFDA	515.0 / 470.0	106104.65	250.00
13C7-PFUnA	570.0 / 525.0	3.80	13C2-PFDA	515.0 / 470.0	106104.65	250.00
13C2-PFTeDA	715.0 / 670.0	4.57	13C2-PFDA	515.0 / 470.0	106104.65	250.00
13C3-PFBS	302.0 / 99.0	1.55	13C4-PFOS	503.0 / 99.0	30366.93	239.50
13C3-PFHxS	402.0 / 99.0	2.32	13C4-PFOS	503.0 / 99.0	30366.93	239.50
13C8-PFOS	507.0 / 99.0	3.11	13C4-PFOS	503.0 / 99.0	30366.93	239.50

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Summary Internal Standard Report

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Sample Name	KC70	**Injection Vial**	5
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:28:35	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.08	13C2-PFDA	515.0 / 470.0	96222.91	250.00
d3-MeFOSAA	573.0 / 419.0	3.63	13C4-PFOS	503.0 / 99.0	30611.60	239.50
d5-EtFOSAA	589.0 / 419.0	3.79	13C4-PFOS	503.0 / 99.0	30611.60	239.50
13C5-PFHxA	318.0 / 273.0	1.88	13C2-PFOA	415.0 / 370.0	79734.44	250.00
13C4-PFHpA	367.0 / 322.0	2.30	13C2-PFOA	415.0 / 370.0	79734.44	250.00
13C8-PFOA	421.0 / 376.0	2.71	13C2-PFOA	415.0 / 370.0	79734.44	250.00
13C9-PFNA	472.0 / 427.0	3.11	13C2-PFOA	415.0 / 370.0	79734.44	250.00
13C6-PFDA	519.0 / 474.0	3.47	13C2-PFDA	515.0 / 470.0	96222.91	250.00
13C7-PFUnA	570.0 / 525.0	3.79	13C2-PFDA	515.0 / 470.0	96222.91	250.00
13C2-PFTeDA	715.0 / 670.0	4.56	13C2-PFDA	515.0 / 470.0	96222.91	250.00
13C3-PFBS	302.0 / 99.0	1.55	13C4-PFOS	503.0 / 99.0	30611.60	239.50
13C3-PFHxS	402.0 / 99.0	2.32	13C4-PFOS	503.0 / 99.0	30611.60	239.50
13C8-PFOS	507.0 / 99.0	3.10	13C4-PFOS	503.0 / 99.0	30611.60	239.50

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Summary Internal Standard Report

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Sample Name	KC71	**Injection Vial**	6
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:39:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.08	13C2-PFDA	515.0 / 470.0	105716.72	250.00
d3-MeFOSAA	573.0 / 419.0	3.63	13C4-PFOS	503.0 / 99.0	29987.88	239.50
d5-EtFOSAA	589.0 / 419.0	3.79	13C4-PFOS	503.0 / 99.0	29987.88	239.50
13C5-PFHxA	318.0 / 273.0	1.88	13C2-PFOA	415.0 / 370.0	81970.71	250.00
13C4-PFHpA	367.0 / 322.0	2.29	13C2-PFOA	415.0 / 370.0	81970.71	250.00
13C8-PFOA	421.0 / 376.0	2.71	13C2-PFOA	415.0 / 370.0	81970.71	250.00
13C9-PFNA	472.0 / 427.0	3.10	13C2-PFOA	415.0 / 370.0	81970.71	250.00
13C6-PFDA	519.0 / 474.0	3.46	13C2-PFDA	515.0 / 470.0	105716.72	250.00
13C7-PFUnA	570.0 / 525.0	3.79	13C2-PFDA	515.0 / 470.0	105716.72	250.00
13C2-PFTeDA	715.0 / 670.0	4.56	13C2-PFDA	515.0 / 470.0	105716.72	250.00
13C3-PFBS	302.0 / 99.0	1.55	13C4-PFOS	503.0 / 99.0	29987.88	239.50
13C3-PFHxS	402.0 / 99.0	2.32	13C4-PFOS	503.0 / 99.0	29987.88	239.50
13C8-PFOS	507.0 / 99.0	3.10	13C4-PFOS	503.0 / 99.0	29987.88	239.50

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Summary Internal Standard Report

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Sample Name	KC72	**Injection Vial**	7
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:50:19	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.08	13C2-PFDA	515.0 / 470.0	95740.74	250.00
d3-MeFOSAA	573.0 / 419.0	3.62	13C4-PFOS	503.0 / 99.0	29918.71	239.50
d5-EtFOSAA	589.0 / 419.0	3.79	13C4-PFOS	503.0 / 99.0	29918.71	239.50
13C5-PFHxA	318.0 / 273.0	1.88	13C2-PFOA	415.0 / 370.0	73142.68	250.00
13C4-PFHpA	367.0 / 322.0	2.29	13C2-PFOA	415.0 / 370.0	73142.68	250.00
13C8-PFOA	421.0 / 376.0	2.71	13C2-PFOA	415.0 / 370.0	73142.68	250.00
13C9-PFNA	472.0 / 427.0	3.10	13C2-PFOA	415.0 / 370.0	73142.68	250.00
13C6-PFDA	519.0 / 474.0	3.46	13C2-PFDA	515.0 / 470.0	95740.74	250.00
13C7-PFUnA	570.0 / 525.0	3.79	13C2-PFDA	515.0 / 470.0	95740.74	250.00
13C2-PFTeDA	715.0 / 670.0	4.55	13C2-PFDA	515.0 / 470.0	95740.74	250.00
13C3-PFBS	302.0 / 99.0	1.55	13C4-PFOS	503.0 / 99.0	29918.71	239.50
13C3-PFHxS	402.0 / 99.0	2.32	13C4-PFOS	503.0 / 99.0	29918.71	239.50
13C8-PFOS	507.0 / 99.0	3.10	13C4-PFOS	503.0 / 99.0	29918.71	239.50

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QC Summary Report

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Sample Name	KC74 ICC	**Injection Vial**	9
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:12:04	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.56	913.958753	1010.00	90.49
PFBS_2	298.9 / 99.0	1.56	931.394750	1010.00	92.22
PFHxA_1	313.0 / 269.0	1.89	924.252708	1010.00	91.51
PFHxA_2	313.0 / 119.0	1.88	982.970361	1010.00	97.32
PFHpA_1	363.0 / 319.0	2.30	993.879878	1000.00	99.39
PFHpA_2	363.0 / 169.0	2.30	1057.670647	1000.00	105.77
PFHxS_1	399.0 / 80.0	2.32	973.136751	1010.00	96.35
PFHxS_2	399.0 / 99.0	2.32	1017.568792	1010.00	100.75
PFOA_1	413.0 / 369.0	2.71	888.310959	1000.00	88.83
PFOA_2	413.0 / 169.0	2.71	740.156093	1000.00	74.02
PFNA_1	463.0 / 419.0	3.11	928.487778	1000.00	92.85
PFNA_2	463.0 / 219.0	3.11	1008.470053	1000.00	100.85
PFOS_1	499.0 / 80.0	3.11	933.829322	1000.00	93.38
PFOS_2	499.0 / 99.0	3.11	1018.439817	1000.00	101.84
PFDA_1	513.0 / 469.0	3.47	927.325679	1000.00	92.73
PFDA_2	513.0 / 219.0	3.47	875.030718	1000.00	87.50
PFUnA_1	563.0 / 519.0	3.80	973.835420	1000.00	97.38
PFUnA_2	563.0 / 269.0	3.80	1002.357292	1000.00	100.24
PFDoA_1	613.0 / 569.0	4.08	968.549059	1000.00	96.85
PFDoA_2	613.0 / 319.0	4.08	1004.341559	1000.00	100.43
PFTrDA_1	663.0 / 619.0	4.33	1030.359495	1000.00	103.04
PFTrDA_2	663.0 / 169.0	4.33	1062.140584	1000.00	106.21
PFTeDA_1	713.0 / 669.0	4.55	1006.563979	1000.00	100.66
PFTeDA_2	713.0 / 169.0	4.55	968.071675	1000.00	96.81
NMeFOSAA_1	570.0 / 419.0	3.62	1041.984174	1000.00	104.20
NMeFOSAA_2	570.0 / 512.0	3.62	1167.174603	1000.00	116.72
NEtFOSAA_1	584.0 / 419.0	3.79	878.703066	1000.00	87.87
NEtFOSAA_2	584.0 / 483.0	3.79	726.017990	1000.00	72.60

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QC Summary Report

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Sample Name	KC69 CCV	**Injection Vial**	21
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:22:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.56	985.260547	1010.00	97.55
PFBS_2	298.9 / 99.0	1.56	964.301290	1010.00	95.48
PFHxA_1	313.0 / 269.0	1.88	966.709381	1010.00	95.71
PFHxA_2	313.0 / 119.0	1.88	978.910984	1010.00	96.92
PFHpA_1	363.0 / 319.0	2.29	1096.278251	1000.00	109.63
PFHpA_2	363.0 / 169.0	2.29	1270.268571	1000.00	127.03
PFHxS_1	399.0 / 80.0	2.31	1013.516942	1010.00	100.35
PFHxS_2	399.0 / 99.0	2.31	1047.745970	1010.00	103.74
PFOA_1	413.0 / 369.0	2.70	987.234428	1000.00	98.72
PFOA_2	413.0 / 169.0	2.70	975.040460	1000.00	97.50
PFNA_1	463.0 / 419.0	3.09	1030.413275	1000.00	103.04
PFNA_2	463.0 / 219.0	3.09	1035.929554	1000.00	103.59
PFOS_1	499.0 / 80.0	3.09	1186.118812	1000.00	118.61
PFOS_2	499.0 / 99.0	3.09	1140.852723	1000.00	114.09
PFDA_1	513.0 / 469.0	3.45	1050.480692	1000.00	105.05
PFDA_2	513.0 / 219.0	3.45	911.056517	1000.00	91.11
PFUnA_1	563.0 / 519.0	3.77	907.306977	1000.00	90.73
PFUnA_2	563.0 / 269.0	3.77	1065.384839	1000.00	106.54
PFDoA_1	613.0 / 569.0	4.06	1024.017180	1000.00	102.40
PFDoA_2	613.0 / 319.0	4.06	1081.588552	1000.00	108.16
PFTrDA_1	663.0 / 619.0	4.30	1074.623277	1000.00	107.46
PFTrDA_2	663.0 / 169.0	4.30	1089.146318	1000.00	108.91
PFTeDA_1	713.0 / 669.0	4.52	1088.370453	1000.00	108.84
PFTeDA_2	713.0 / 169.0	4.52	1076.608653	1000.00	107.66
NMeFOSAA_1	570.0 / 419.0	3.61	1014.797272	1000.00	101.48
NMeFOSAA_2	570.0 / 512.0	3.60	1148.263199	1000.00	114.83
NEtFOSAA_1	584.0 / 419.0	3.77	971.737354	1000.00	97.17
NEtFOSAA_2	584.0 / 483.0	3.77	772.655692	1000.00	77.27

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QC Summary Report

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Sample Name	KC70 CCV	**Injection Vial**	29
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:00:17	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.55	2439.878733	2525.00	96.63
PFBS_2	298.9 / 99.0	1.55	2462.771985	2525.00	97.54
PFHxA_1	313.0 / 269.0	1.87	2521.425414	2525.00	99.86
PFHxA_2	313.0 / 119.0	1.87	2538.105592	2525.00	100.52
PFHpA_1	363.0 / 319.0	2.28	2573.659536	2500.00	102.95
PFHpA_2	363.0 / 169.0	2.28	2343.917495	2500.00	93.76
PFHxS_1	399.0 / 80.0	2.30	2307.052503	2525.00	91.37
PFHxS_2	399.0 / 99.0	2.30	2387.099047	2525.00	94.54
PFOA_1	413.0 / 369.0	2.69	2402.809175	2500.00	96.11
PFOA_2	413.0 / 169.0	2.69	2366.634327	2500.00	94.67
PFNA_1	463.0 / 419.0	3.09	2496.474240	2500.00	99.86
PFNA_2	463.0 / 219.0	3.09	2462.467814	2500.00	98.50
PFOS_1	499.0 / 80.0	3.09	2666.772945	2500.00	106.67
PFOS_2	499.0 / 99.0	3.09	2639.674812	2500.00	105.59
PFDA_1	513.0 / 469.0	3.44	2516.058957	2500.00	100.64
PFDA_2	513.0 / 219.0	3.44	2379.131154	2500.00	95.17
PFUnA_1	563.0 / 519.0	3.77	2429.793365	2500.00	97.19
PFUnA_2	563.0 / 269.0	3.77	2447.058294	2500.00	97.88
PFDoA_1	613.0 / 569.0	4.05	2589.432788	2500.00	103.58
PFDoA_2	613.0 / 319.0	4.05	2655.915735	2500.00	106.24
PFTrDA_1	663.0 / 619.0	4.30	2742.502367	2500.00	109.70
PFTrDA_2	663.0 / 169.0	4.29	2721.768462	2500.00	108.87
PFTeDA_1	713.0 / 669.0	4.51	2573.088918	2500.00	102.92
PFTeDA_2	713.0 / 169.0	4.51	2688.962942	2500.00	107.56
NMeFOSAA_1	570.0 / 419.0	3.60	2457.107179	2500.00	98.28
NMeFOSAA_2	570.0 / 512.0	3.60	2561.360150	2500.00	102.45
NEtFOSAA_1	584.0 / 419.0	3.76	2764.184656	2500.00	110.57
NEtFOSAA_2	584.0 / 483.0	3.76	2772.630159	2500.00	110.91

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QC Summary Report

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Sample Name	KC69 CCV	**Injection Vial**	39
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:59:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.55	1011.512594	1010.00	100.15
PFBS_2	298.9 / 99.0	1.55	991.173192	1010.00	98.14
PFHxA_1	313.0 / 269.0	1.87	1007.957027	1010.00	99.80
PFHxA_2	313.0 / 119.0	1.87	1071.623038	1010.00	106.10
PFHpA_1	363.0 / 319.0	2.28	1032.710508	1000.00	103.27
PFHpA_2	363.0 / 169.0	2.28	1098.889992	1000.00	109.89
PFHxS_1	399.0 / 80.0	2.30	1054.665223	1010.00	104.42
PFHxS_2	399.0 / 99.0	2.30	1029.613958	1010.00	101.94
PFOA_1	413.0 / 369.0	2.69	1037.565655	1000.00	103.76
PFOA_2	413.0 / 169.0	2.68	950.919427	1000.00	95.09
PFNA_1	463.0 / 419.0	3.08	1089.459088	1000.00	108.95
PFNA_2	463.0 / 219.0	3.08	1107.820100	1000.00	110.78
PFOS_1	499.0 / 80.0	3.08	1170.604013	1000.00	117.06
PFOS_2	499.0 / 99.0	3.08	1163.822415	1000.00	116.38
PFDA_1	513.0 / 469.0	3.44	985.481800	1000.00	98.55
PFDA_2	513.0 / 219.0	3.44	1137.684417	1000.00	113.77
PFUnA_1	563.0 / 519.0	3.76	837.090415	1000.00	83.71
PFUnA_2	563.0 / 269.0	3.76	936.047349	1000.00	93.60
PFDoA_1	613.0 / 569.0	4.05	989.020341	1000.00	98.90
PFDoA_2	613.0 / 319.0	4.04	1008.163297	1000.00	100.82
PFTrDA_1	663.0 / 619.0	4.29	1046.636535	1000.00	104.66
PFTrDA_2	663.0 / 169.0	4.29	1136.366082	1000.00	113.64
PFTeDA_1	713.0 / 669.0	4.50	1048.848567	1000.00	104.88
PFTeDA_2	713.0 / 169.0	4.50	1095.937834	1000.00	109.59
NMeFOSAA_1	570.0 / 419.0	3.59	1119.924646	1000.00	111.99
NMeFOSAA_2	570.0 / 512.0	3.59	1117.563626	1000.00	111.76
NEtFOSAA_1	584.0 / 419.0	3.76	1134.397657	1000.00	113.44
NEtFOSAA_2	584.0 / 483.0	3.76	876.500726	1000.00	87.65

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QC Summary Report

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Sample Name	KC70 CCV	**Injection Vial**	49
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T02:10:06	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.55	2396.599480	2525.00	94.91
PFBS_2	298.9 / 99.0	1.55	2398.030953	2525.00	94.97
PFHxA_1	313.0 / 269.0	1.87	2419.919077	2525.00	95.84
PFHxA_2	313.0 / 119.0	1.87	2634.519168	2525.00	104.34
PFHpA_1	363.0 / 319.0	2.28	2628.952885	2500.00	105.16
PFHpA_2	363.0 / 169.0	2.28	2719.083201	2500.00	108.76
PFHxS_1	399.0 / 80.0	2.30	2361.980572	2525.00	93.54
PFHxS_2	399.0 / 99.0	2.30	2399.786812	2525.00	95.04
PFOA_1	413.0 / 369.0	2.68	2513.295542	2500.00	100.53
PFOA_2	413.0 / 169.0	2.68	2567.759871	2500.00	102.71
PFNA_1	463.0 / 419.0	3.08	2603.735076	2500.00	104.15
PFNA_2	463.0 / 219.0	3.08	2783.680998	2500.00	111.35
PFOS_1	499.0 / 80.0	3.08	2718.832317	2500.00	108.75
PFOS_2	499.0 / 99.0	3.08	2850.992958	2500.00	114.04
PFDA_1	513.0 / 469.0	3.43	2446.939587	2500.00	97.88
PFDA_2	513.0 / 219.0	3.43	2579.540382	2500.00	103.18
PFUnA_1	563.0 / 519.0	3.75	2440.589820	2500.00	97.62
PFUnA_2	563.0 / 269.0	3.75	2443.809951	2500.00	97.75
PFDoA_1	613.0 / 569.0	4.04	2674.363295	2500.00	106.97
PFDoA_2	613.0 / 319.0	4.04	2672.252244	2500.00	106.89
PFTrDA_1	663.0 / 619.0	4.28	2640.542955	2500.00	105.62
PFTrDA_2	663.0 / 169.0	4.28	2686.432186	2500.00	107.46
PFTeDA_1	713.0 / 669.0	4.50	2551.408642	2500.00	102.06
PFTeDA_2	713.0 / 169.0	4.50	2625.465960	2500.00	105.02
NMeFOSAA_1	570.0 / 419.0	3.59	2349.884613	2500.00	94.00
NMeFOSAA_2	570.0 / 512.0	3.59	2299.827829	2500.00	91.99
NEtFOSAA_1	584.0 / 419.0	3.75	2446.289550	2500.00	97.85
NEtFOSAA_2	584.0 / 483.0	3.75	2689.951358	2500.00	107.60

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QC Summary Report

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Sample Name	KC74 ICC	**Injection Vial**	9
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:12:04	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	4.07	238.456896	250.00	95.38
d3-MeFOSAA	573.0 / 419.0	3.62	220.085474	250.00	88.03
d5-EtFOSAA	589.0 / 419.0	3.78	261.040088	250.00	104.42
13C5-PFHxA	318.0 / 273.0	1.87	230.205918	250.00	92.08
13C4-PFHpA	367.0 / 322.0	2.29	224.198522	250.00	89.68
13C8-PFOA	421.0 / 376.0	2.70	247.358316	250.00	98.94
13C9-PFNA	472.0 / 427.0	3.09	247.163608	250.00	98.87
13C6-PFDA	519.0 / 474.0	3.45	244.802245	250.00	97.92
13C7-PFUnA	570.0 / 525.0	3.78	225.404732	250.00	90.16
13C2-PFTeDA	715.0 / 670.0	4.54	225.361577	250.00	90.14
13C3-PFBS	302.0 / 99.0	1.54	230.284063	232.25	99.15
13C3-PFHxS	402.0 / 99.0	2.31	230.565215	236.50	97.49
13C8-PFOS	507.0 / 99.0	3.09	230.349547	239.50	96.18

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QC Summary Report

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Sample Name	KC69 CCV	**Injection Vial**	21
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:22:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	4.05	248.708385	250.00	99.48
d3-MeFOSAA	573.0 / 419.0	3.60	204.214435	250.00	81.69
d5-EtFOSAA	589.0 / 419.0	3.76	222.416513	250.00	88.97
13C5-PFHxA	318.0 / 273.0	1.87	243.839149	250.00	97.54
13C4-PFHpA	367.0 / 322.0	2.28	230.999557	250.00	92.40
13C8-PFOA	421.0 / 376.0	2.69	256.943340	250.00	102.78
13C9-PFNA	472.0 / 427.0	3.08	244.920221	250.00	97.97
13C6-PFDA	519.0 / 474.0	3.43	254.612905	250.00	101.85
13C7-PFUnA	570.0 / 525.0	3.76	260.274046	250.00	104.11
13C2-PFTeDA	715.0 / 670.0	4.52	237.956727	250.00	95.18
13C3-PFBS	302.0 / 99.0	1.54	220.727451	232.25	95.04
13C3-PFHxS	402.0 / 99.0	2.30	228.791770	236.50	96.74
13C8-PFOS	507.0 / 99.0	3.08	209.027548	239.50	87.28

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QC Summary Report

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Sample Name	KC70 CCV	**Injection Vial**	29
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:00:17	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	4.04	249.616069	250.00	99.85
d3-MeFOSAA	573.0 / 419.0	3.59	245.538555	250.00	98.22
d5-EtFOSAA	589.0 / 419.0	3.76	222.194203	250.00	88.88
13C5-PFHxA	318.0 / 273.0	1.86	232.923502	250.00	93.17
13C4-PFHpA	367.0 / 322.0	2.27	227.365965	250.00	90.95
13C8-PFOA	421.0 / 376.0	2.68	256.882476	250.00	102.75
13C9-PFNA	472.0 / 427.0	3.07	243.576082	250.00	97.43
13C6-PFDA	519.0 / 474.0	3.43	242.283302	250.00	96.91
13C7-PFUnA	570.0 / 525.0	3.75	253.643855	250.00	101.46
13C2-PFTeDA	715.0 / 670.0	4.51	241.834325	250.00	96.73
13C3-PFBS	302.0 / 99.0	1.53	254.371575	232.25	109.52
13C3-PFHxS	402.0 / 99.0	2.29	251.415138	236.50	106.31
13C8-PFOS	507.0 / 99.0	3.07	237.309138	239.50	99.09

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QC Summary Report

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Sample Name	KC69 CCV	**Injection Vial**	39
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:59:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	4.03	248.066672	250.00	99.23
d3-MeFOSAA	573.0 / 419.0	3.59	220.895691	250.00	88.36
d5-EtFOSAA	589.0 / 419.0	3.75	237.944990	250.00	95.18
13C5-PFHxA	318.0 / 273.0	1.86	220.735004	250.00	88.29
13C4-PFHpA	367.0 / 322.0	2.27	212.997846	250.00	85.20
13C8-PFOA	421.0 / 376.0	2.68	243.713038	250.00	97.49
13C9-PFNA	472.0 / 427.0	3.07	224.737045	250.00	89.89
13C6-PFDA	519.0 / 474.0	3.42	254.195510	250.00	101.68
13C7-PFUnA	570.0 / 525.0	3.75	285.887107	250.00	114.35
13C2-PFTeDA	715.0 / 670.0	4.50	236.702111	250.00	94.68
13C3-PFBS	302.0 / 99.0	1.53	245.096212	232.25	105.53
13C3-PFHxS	402.0 / 99.0	2.29	241.437638	236.50	102.09
13C8-PFOS	507.0 / 99.0	3.07	229.889114	239.50	95.99

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QC Summary Report

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Sample Name	KC70 CCV	**Injection Vial**	49
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T02:10:06	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	4.03	249.726435	250.00	99.89
d3-MeFOSAA	573.0 / 419.0	3.58	260.161642	250.00	104.06
d5-EtFOSAA	589.0 / 419.0	3.74	264.374992	250.00	105.75
13C5-PFHxA	318.0 / 273.0	1.86	226.724589	250.00	90.69
13C4-PFHpA	367.0 / 322.0	2.27	208.917472	250.00	83.57
13C8-PFOA	421.0 / 376.0	2.67	242.155507	250.00	96.86
13C9-PFNA	472.0 / 427.0	3.06	227.244002	250.00	90.90
13C6-PFDA	519.0 / 474.0	3.42	271.817081	250.00	108.73
13C7-PFUnA	570.0 / 525.0	3.74	269.085715	250.00	107.63
13C2-PFTeDA	715.0 / 670.0	4.49	257.948417	250.00	103.18
13C3-PFBS	302.0 / 99.0	1.53	269.651292	232.25	116.10
13C3-PFHxS	402.0 / 99.0	2.29	255.550888	236.50	108.06
13C8-PFOS	507.0 / 99.0	3.06	226.771786	239.50	94.69

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Summary Quant Report

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Sample Name	KC74 ICC	**Injection Vial**	9
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:12:04	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.56	289306.80	913.958753	362.4	false
PFBS_2	298.9 / 99.0	1.56	88030.83	931.394750	382.7	false
PFHxA_1	313.0 / 269.0	1.89	248324.76	924.252708	62.4	true
PFHxA_2	313.0 / 119.0	1.88	19933.16	982.970361	48.8	true
PFHpA_1	363.0 / 319.0	2.30	232319.77	993.879878	158.7	false
PFHpA_2	363.0 / 169.0	2.30	5008.94	1057.670647	100.9	false
PFHxS_1	399.0 / 80.0	2.32	352963.60	973.136751	288.0	false
PFHxS_2	399.0 / 99.0	2.32	104063.39	1017.568792	409.6	false
PFOA_1	413.0 / 369.0	2.71	310915.67	888.310959	329.6	false
PFOA_2	413.0 / 169.0	2.71	16260.80	740.156093	174.8	false
PFNA_1	463.0 / 419.0	3.11	304277.90	928.487778	340.1	false
PFNA_2	463.0 / 219.0	3.11	101024.75	1008.470053	340.1	false
PFOS_1	499.0 / 80.0	3.11	503149.03	933.829322	216.4	false
PFOS_2	499.0 / 99.0	3.11	96181.37	1018.439817	518.4	false
PFDA_1	513.0 / 469.0	3.47	363140.89	927.325679	446.7	false
PFDA_2	513.0 / 219.0	3.47	14765.97	875.030718	153.4	false
PFUnA_1	563.0 / 519.0	3.80	357553.77	973.835420	290.6	false
PFUnA_2	563.0 / 269.0	3.80	18431.19	1002.357292	174.8	false
PFDoA_1	613.0 / 569.0	4.08	366934.02	968.549059	418.6	false
PFDoA_2	613.0 / 319.0	4.08	61132.13	1004.341559	318.4	false
PFTrDA_1	663.0 / 619.0	4.33	343730.08	1030.359495	611.9	false
PFTrDA_2	663.0 / 169.0	4.33	23237.98	1062.140584	293.0	false
PFTeDA_1	713.0 / 669.0	4.55	397126.20	1006.563979	1138.2	false
PFTeDA_2	713.0 / 169.0	4.55	18980.92	968.071675	490.7	false
NMeFOSAA_1	570.0 / 419.0	3.62	58070.09	1041.984174	579.1	false
NMeFOSAA_2	570.0 / 512.0	3.62	33832.42	1167.174603	492.2	false
NEtFOSAA_1	584.0 / 419.0	3.79	56769.19	878.703066	604.8	false
NEtFOSAA_2	584.0 / 483.0	3.79	3329.41	726.017990	276.8	false

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Summary Quant Report

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Sample Name	KC69 CCV	**Injection Vial**	21
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:22:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.56	316135.76	985.260547	369.2	false
PFBS_2	298.9 / 99.0	1.56	92595.53	964.301290	314.9	false
PFHxA_1	313.0 / 269.0	1.88	267253.60	966.709381	65.5	true
PFHxA_2	313.0 / 119.0	1.88	20454.95	978.910984	58.7	true
PFHpA_1	363.0 / 319.0	2.29	255946.18	1096.278251	163.2	false
PFHpA_2	363.0 / 169.0	2.29	5972.81	1270.268571	123.1	false
PFHxS_1	399.0 / 80.0	2.31	381685.08	1013.516942	493.1	false
PFHxS_2	399.0 / 99.0	2.31	111249.31	1047.745970	640.4	false
PFOA_1	413.0 / 369.0	2.70	348683.23	987.234428	250.2	false
PFOA_2	413.0 / 169.0	2.70	21423.95	975.040460	172.9	false
PFNA_1	463.0 / 419.0	3.09	323573.16	1030.413275	309.9	false
PFNA_2	463.0 / 219.0	3.09	99955.08	1035.929554	400.0	false
PFOS_1	499.0 / 80.0	3.09	618685.98	1186.118812	223.0	false
PFOS_2	499.0 / 99.0	3.09	104222.10	1140.852723	461.8	false
PFDA_1	513.0 / 469.0	3.45	415683.24	1050.480692	402.0	false
PFDA_2	513.0 / 219.0	3.45	15549.17	911.056517	145.3	false
PFUnA_1	563.0 / 519.0	3.77	375104.78	907.306977	307.0	false
PFUnA_2	563.0 / 269.0	3.77	22052.51	1065.384839	183.6	false
PFDoA_1	613.0 / 569.0	4.06	394092.99	1024.017180	391.4	false
PFDoA_2	613.0 / 319.0	4.06	66884.18	1081.588552	309.4	false
PFTrDA_1	663.0 / 619.0	4.30	369096.17	1074.623277	641.0	false
PFTrDA_2	663.0 / 169.0	4.30	24542.84	1089.146318	422.0	false
PFTeDA_1	713.0 / 669.0	4.52	441099.58	1088.370453	1211.8	false
PFTeDA_2	713.0 / 169.0	4.52	21605.82	1076.608653	521.7	false
NMeFOSAA_1	570.0 / 419.0	3.61	57524.61	1014.797272	1371.4	false
NMeFOSAA_2	570.0 / 512.0	3.60	33847.01	1148.263199	344.2	false
NEtFOSAA_1	584.0 / 419.0	3.77	57178.86	971.737354	664.5	false
NEtFOSAA_2	584.0 / 483.0	3.77	3203.45	772.655692	240.6	false

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Summary Quant Report

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Sample Name	KC70 CCV	**Injection Vial**	29
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:00:17	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	807473.35	2439.878733	532.4	false
PFBS_2	298.9 / 99.0	1.55	248668.91	2462.771985	519.1	false
PFHxA_1	313.0 / 269.0	1.87	658678.61	2521.425414	106.4	false
PFHxA_2	313.0 / 119.0	1.87	50199.74	2538.105592	91.4	false
PFHpA_1	363.0 / 319.0	2.28	584221.41	2573.659536	243.8	false
PFHpA_2	363.0 / 169.0	2.28	10689.96	2343.917495	144.9	false
PFHxS_1	399.0 / 80.0	2.30	878043.38	2307.052503	418.6	false
PFHxS_2	399.0 / 99.0	2.30	255771.72	2387.099047	509.0	false
PFOA_1	413.0 / 369.0	2.69	848607.47	2402.809175	469.0	false
PFOA_2	413.0 / 169.0	2.69	51360.82	2366.634327	472.7	false
PFNA_1	463.0 / 419.0	3.09	760359.40	2496.474240	482.7	false
PFNA_2	463.0 / 219.0	3.09	234289.57	2462.467814	497.3	false
PFOS_1	499.0 / 80.0	3.09	1414686.97	2666.772945	288.0	false
PFOS_2	499.0 / 99.0	3.09	242719.37	2639.674812	767.4	false
PFDA_1	513.0 / 469.0	3.44	925015.82	2516.058957	772.3	false
PFDA_2	513.0 / 219.0	3.44	36189.09	2379.131154	305.9	false
PFUnA_1	563.0 / 519.0	3.77	989256.98	2429.793365	441.9	false
PFUnA_2	563.0 / 269.0	3.77	48574.06	2447.058294	336.8	false
PFDoA_1	613.0 / 569.0	4.05	971767.87	2589.432788	672.0	false
PFDoA_2	613.0 / 319.0	4.05	161489.90	2655.915735	479.3	false
PFTrDA_1	663.0 / 619.0	4.30	936705.81	2742.502367	957.0	false
PFTrDA_2	663.0 / 169.0	4.29	60729.84	2721.768462	483.8	false
PFTeDA_1	713.0 / 669.0	4.51	1030527.07	2573.088918	1628.8	false
PFTeDA_2	713.0 / 169.0	4.51	52615.03	2688.962942	979.6	false
NMeFOSAA_1	570.0 / 419.0	3.60	146257.54	2457.107179	842.2	false
NMeFOSAA_2	570.0 / 512.0	3.60	79372.33	2561.360150	635.9	false
NEtFOSAA_1	584.0 / 419.0	3.76	141702.08	2764.184656	1002.5	false
NEtFOSAA_2	584.0 / 483.0	3.76	8935.47	2772.630159	581.2	false

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Summary Quant Report

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Sample Name	KC69 CCV	**Injection Vial**	39
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:59:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	304621.10	1011.512594	376.8	false
PFBS_2	298.9 / 99.0	1.55	89404.03	991.173192	368.9	false
PFHxA_1	313.0 / 269.0	1.87	250782.52	1007.957027	63.6	true
PFHxA_2	313.0 / 119.0	1.87	20130.37	1071.623038	51.7	true
PFHpA_1	363.0 / 319.0	2.28	221734.04	1032.710508	140.7	false
PFHpA_2	363.0 / 169.0	2.28	4776.83	1098.889992	92.1	false
PFHxS_1	399.0 / 80.0	2.30	362981.90	1054.665223	339.6	false
PFHxS_2	399.0 / 99.0	2.30	99940.48	1029.613958	352.8	false
PFOA_1	413.0 / 369.0	2.69	345775.46	1037.565655	248.0	false
PFOA_2	413.0 / 169.0	2.68	19741.97	950.919427	215.5	false
PFNA_1	463.0 / 419.0	3.08	311548.08	1089.459088	394.4	false
PFNA_2	463.0 / 219.0	3.08	97456.85	1107.820100	392.0	false
PFOS_1	499.0 / 80.0	3.08	561881.41	1170.604013	219.3	false
PFOS_2	499.0 / 99.0	3.08	97774.42	1163.822415	457.3	false
PFDA_1	513.0 / 469.0	3.44	367121.68	985.481800	419.1	false
PFDA_2	513.0 / 219.0	3.44	17869.69	1137.684417	163.4	false
PFUnA_1	563.0 / 519.0	3.76	356979.49	837.090415	299.6	false
PFUnA_2	563.0 / 269.0	3.76	20088.84	936.047349	237.6	false
PFDoA_1	613.0 / 569.0	4.05	357661.04	989.020341	466.7	false
PFDoA_2	613.0 / 319.0	4.04	58625.24	1008.163297	311.2	false
PFTrDA_1	663.0 / 619.0	4.29	336650.25	1046.636535	568.0	false
PFTrDA_2	663.0 / 169.0	4.29	23919.27	1136.366082	373.2	false
PFTeDA_1	713.0 / 669.0	4.50	398410.76	1048.848567	1163.8	false
PFTeDA_2	713.0 / 169.0	4.50	20555.01	1095.937834	556.6	false
NMeFOSAA_1	570.0 / 419.0	3.59	57788.04	1119.924646	603.3	false
NMeFOSAA_2	570.0 / 512.0	3.59	30068.33	1117.563626	507.1	false
NEtFOSAA_1	584.0 / 419.0	3.76	56596.90	1134.397657	482.8	false
NEtFOSAA_2	584.0 / 483.0	3.76	3032.34	876.500726	225.2	false

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Summary Quant Report

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Sample Name	KC70 CCV	**Injection Vial**	49
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T02:10:06	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	1032355.52	2396.599480	725.0	false
PFBS_2	298.9 / 99.0	1.55	315076.12	2398.030953	580.7	false
PFHxA_1	313.0 / 269.0	1.87	812860.55	2419.919077	129.4	false
PFHxA_2	313.0 / 119.0	1.87	66944.19	2634.519168	110.6	false
PFHpA_1	363.0 / 319.0	2.28	723809.04	2628.952885	271.7	false
PFHpA_2	363.0 / 169.0	2.28	14991.45	2719.083201	203.7	false
PFHxS_1	399.0 / 80.0	2.30	1124956.71	2361.980572	558.6	false
PFHxS_2	399.0 / 99.0	2.30	321786.91	2399.786812	898.6	false
PFOA_1	413.0 / 369.0	2.68	1104578.69	2513.295542	398.2	false
PFOA_2	413.0 / 169.0	2.68	69286.74	2567.759871	352.5	false
PFNA_1	463.0 / 419.0	3.08	975963.21	2603.735076	577.4	false
PFNA_2	463.0 / 219.0	3.08	325825.37	2783.680998	680.4	false
PFOS_1	499.0 / 80.0	3.08	1719717.56	2718.832317	437.9	false
PFOS_2	499.0 / 99.0	3.08	312321.91	2850.992958	665.4	false
PFDA_1	513.0 / 469.0	3.43	1232906.54	2446.939587	568.2	false
PFDA_2	513.0 / 219.0	3.43	53579.33	2579.540382	264.8	false
PFUnA_1	563.0 / 519.0	3.75	1287185.97	2440.589820	484.7	false
PFUnA_2	563.0 / 269.0	3.75	62838.68	2443.809951	365.4	false
PFDoA_1	613.0 / 569.0	4.04	1225315.15	2674.363295	560.4	false
PFDoA_2	613.0 / 319.0	4.04	198468.84	2672.252244	408.8	false
PFTrDA_1	663.0 / 619.0	4.28	1175198.31	2640.542955	1040.1	false
PFTrDA_2	663.0 / 169.0	4.28	78084.13	2686.432186	531.2	false
PFTeDA_1	713.0 / 669.0	4.50	1331063.49	2551.408642	1763.5	false
PFTeDA_2	713.0 / 169.0	4.50	66951.19	2625.465960	1029.4	false
NMeFOSAA_1	570.0 / 419.0	3.59	186770.38	2349.884613	1125.7	false
NMeFOSAA_2	570.0 / 512.0	3.59	95228.25	2299.827829	895.4	false
NEtFOSAA_1	584.0 / 419.0	3.75	177977.57	2446.289550	684.2	false
NEtFOSAA_2	584.0 / 483.0	3.75	12302.23	2689.951358	732.9	false

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Summary Quant Report

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Sample Name	KC74 ICC	**Injection Vial**	9
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:12:04	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.07	111737.92	238.456896	1514.7	false
d3-MeFOSAA	573.0 / 419.0	3.62	14846.77	220.085474	165.9	false
d5-EtFOSAA	589.0 / 419.0	3.78	17442.68	261.040088	209.6	false
13C5-PFHxA	318.0 / 273.0	1.87	68519.22	230.205918	759.0	false
13C4-PFHpA	367.0 / 322.0	2.29	75456.66	224.198522	617.8	false
13C8-PFOA	421.0 / 376.0	2.70	92018.17	247.358316	1214.1	false
13C9-PFNA	472.0 / 427.0	3.09	100767.02	247.163608	1517.2	false
13C6-PFDA	519.0 / 474.0	3.45	102497.62	244.802245	963.2	false
13C7-PFUnA	570.0 / 525.0	3.78	91156.63	225.404732	971.5	false
13C2-PFTeDA	715.0 / 670.0	4.54	94836.05	225.361577	1666.1	false
13C3-PFBS	302.0 / 99.0	1.54	27667.61	230.284063	434.2	false
13C3-PFHxS	402.0 / 99.0	2.31	25931.42	230.565215	311.2	false
13C8-PFOS	507.0 / 99.0	3.09	30536.41	230.349547	225.3	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:41:26 PM

Sample Name	KC69 CCV	**Injection Vial**	21
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:22:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.05	113796.71	248.708385	1199.6	false
d3-MeFOSAA	573.0 / 419.0	3.60	14599.18	204.214435	146.8	false
d5-EtFOSAA	589.0 / 419.0	3.76	15749.78	222.416513	184.0	false
13C5-PFHxA	318.0 / 273.0	1.87	70596.78	243.839149	811.7	false
13C4-PFHpA	367.0 / 322.0	2.28	75624.33	230.999557	943.1	false
13C8-PFOA	421.0 / 376.0	2.69	92975.82	256.943340	1209.0	false
13C9-PFNA	472.0 / 427.0	3.08	97127.92	244.920221	2019.2	false
13C6-PFDA	519.0 / 474.0	3.43	104094.40	254.612905	970.7	false
13C7-PFUnA	570.0 / 525.0	3.76	102779.07	260.274046	969.8	false
13C2-PFTeDA	715.0 / 670.0	4.52	97777.77	237.956727	1788.9	false
13C3-PFBS	302.0 / 99.0	1.54	28103.83	220.727451	329.8	false
13C3-PFHxS	402.0 / 99.0	2.30	27269.32	228.791770	289.0	false
13C8-PFOS	507.0 / 99.0	3.08	29365.37	209.027548	346.1	false

Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:41:31 PM

Sample Name	KC70 CCV	**Injection Vial**	29
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:00:17	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.04	114031.44	249.616069	1117.0	false
d3-MeFOSAA	573.0 / 419.0	3.59	15964.43	245.538555	141.3	false
d5-EtFOSAA	589.0 / 419.0	3.76	14309.74	222.194203	185.7	false
13C5-PFHxA	318.0 / 273.0	1.86	67915.12	232.923502	635.6	false
13C4-PFHpA	367.0 / 322.0	2.27	74963.11	227.365965	1601.1	false
13C8-PFOA	421.0 / 376.0	2.68	93613.58	256.882476	3338.8	false
13C9-PFNA	472.0 / 427.0	3.07	97280.50	243.576082	772.7	false
13C6-PFDA	519.0 / 474.0	3.43	98897.03	242.283302	5505.8	false
13C7-PFUnA	570.0 / 525.0	3.75	100002.52	253.643855	893.2	false
13C2-PFTeDA	715.0 / 670.0	4.51	99213.98	241.834325	1403.5	false
13C3-PFBS	302.0 / 99.0	1.53	29455.71	254.371575	476.1	false
13C3-PFHxS	402.0 / 99.0	2.29	27253.17	251.415138	339.8	false
13C8-PFOS	507.0 / 99.0	3.07	30320.63	237.309138	221.0	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:41:36 PM

Sample Name	KC69 CCV	**Injection Vial**	39
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:59:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	106763.35	248.066672	1306.3	false
d3-MeFOSAA	573.0 / 419.0	3.59	13357.22	220.895691	143.7	false
d5-EtFOSAA	589.0 / 419.0	3.75	14251.84	237.944990	195.2	false
13C5-PFHxA	318.0 / 273.0	1.86	63609.90	220.735004	576.7	false
13C4-PFHpA	367.0 / 322.0	2.27	69406.10	212.997846	905.7	false
13C8-PFOA	421.0 / 376.0	2.68	87777.54	243.713038	369.0	false
13C9-PFNA	472.0 / 427.0	3.07	88708.68	224.737045	1025.7	false
13C6-PFDA	519.0 / 474.0	3.42	97752.82	254.195510	1197.5	false
13C7-PFUnA	570.0 / 525.0	3.75	106189.81	285.887107	798.1	false
13C2-PFTeDA	715.0 / 670.0	4.50	91486.87	236.702111	1840.9	false
13C3-PFBS	302.0 / 99.0	1.53	26395.66	245.096212	425.5	false
13C3-PFHxS	402.0 / 99.0	2.29	24340.29	241.437638	267.2	false
13C8-PFOS	507.0 / 99.0	3.07	27317.27	229.889114	237.1	false

Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:41:40 PM

Sample Name	KC70 CCV	**Injection Vial**	49
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T02:10:06	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	139297.49	249.726435	1336.3	false
d3-MeFOSAA	573.0 / 419.0	3.58	20764.95	260.161642	142.1	false
d5-EtFOSAA	589.0 / 419.0	3.74	20901.31	264.374992	209.1	false
13C5-PFHxA	318.0 / 273.0	1.86	87286.99	226.724589	851.1	false
13C4-PFHpA	367.0 / 322.0	2.27	90948.30	208.917472	638.5	false
13C8-PFOA	421.0 / 376.0	2.67	116518.91	242.155507	1311.8	false
13C9-PFNA	472.0 / 427.0	3.06	119834.35	227.244002	2460.7	false
13C6-PFDA	519.0 / 474.0	3.42	135476.26	271.817081	1243.8	false
13C7-PFUnA	570.0 / 525.0	3.74	129540.02	269.085715	785.0	false
13C2-PFTeDA	715.0 / 670.0	4.49	129215.47	257.948417	1928.4	false
13C3-PFBS	302.0 / 99.0	1.53	38331.64	269.651292	527.4	false
13C3-PFHxS	402.0 / 99.0	2.29	34006.12	255.550888	494.2	false
13C8-PFOS	507.0 / 99.0	3.06	35568.60	226.771786	267.5	false

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 26/11/2018 2:42:46 PM

Sample Name	KC74 ICC	**Injection Vial**	9
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:12:04	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.56	PFBS			
PFBS_2	298.9 / 99.0	1.56	PFBS	0.300	0.290	ü
PFHxA_1	313.0 / 269.0	1.89	PFHxA			
PFHxA_2	313.0 / 119.0	1.88	PFHxA	0.080	0.076	ü
PFHpA_1	363.0 / 319.0	2.30	PFHpA			
PFHpA_2	363.0 / 169.0	2.30	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.32	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	PFHxS	0.290	0.283	ü
PFOA_1	413.0 / 369.0	2.71	PFOA			
PFOA_2	413.0 / 169.0	2.71	PFOA	0.050	0.064	ü
PFNA_1	463.0 / 419.0	3.11	PFNA			
PFNA_2	463.0 / 219.0	3.11	PFNA	0.330	0.297	ü
PFOS_1	499.0 / 80.0	3.11	PFOS			
PFOS_2	499.0 / 99.0	3.11	PFOS	0.190	0.181	ü
PFDA_1	513.0 / 469.0	3.47	PFDA			
PFDA_2	513.0 / 219.0	3.47	PFDA	0.040	0.045	ü
PFUnA_1	563.0 / 519.0	3.80	PFUnA			
PFUnA_2	563.0 / 269.0	3.80	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.08	PFDoA			
PFDoA_2	613.0 / 319.0	4.08	PFDoA	0.170	0.159	ü
PFTrDA_1	663.0 / 619.0	4.33	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.33	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.55	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.55	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.62	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.62	NMeFOSAA	0.580	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.79	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.79	NEtFOSAA	0.060	0.068	ü

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Summary Ion Ratio Report

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Sample Name	KC69 CCV	**Injection Vial**	21
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:22:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.56	PFBS			
PFBS_2	298.9 / 99.0	1.56	PFBS	0.290	0.290	ü
PFHxA_1	313.0 / 269.0	1.88	PFHxA			
PFHxA_2	313.0 / 119.0	1.88	PFHxA	0.080	0.076	ü
PFHpA_1	363.0 / 319.0	2.29	PFHpA			
PFHpA_2	363.0 / 169.0	2.29	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.31	PFHxS			
PFHxS_2	399.0 / 99.0	2.31	PFHxS	0.290	0.283	ü
PFOA_1	413.0 / 369.0	2.70	PFOA			
PFOA_2	413.0 / 169.0	2.70	PFOA	0.060	0.064	ü
PFNA_1	463.0 / 419.0	3.09	PFNA			
PFNA_2	463.0 / 219.0	3.09	PFNA	0.310	0.297	ü
PFOS_1	499.0 / 80.0	3.09	PFOS			
PFOS_2	499.0 / 99.0	3.09	PFOS	0.170	0.181	ü
PFDA_1	513.0 / 469.0	3.45	PFDA			
PFDA_2	513.0 / 219.0	3.45	PFDA	0.040	0.045	ü
PFUnA_1	563.0 / 519.0	3.77	PFUnA			
PFUnA_2	563.0 / 269.0	3.77	PFUnA	0.060	0.054	ü
PFDoA_1	613.0 / 569.0	4.06	PFDoA			
PFDoA_2	613.0 / 319.0	4.06	PFDoA	0.170	0.159	ü
PFTrDA_1	663.0 / 619.0	4.30	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.30	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.52	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.52	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.61	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.60	NMeFOSAA	0.590	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.77	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.77	NEtFOSAA	0.060	0.068	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
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Sample Name	KC70 CCV	**Injection Vial**	29
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:00:17	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.55	PFBS			
PFBS_2	298.9 / 99.0	1.55	PFBS	0.310	0.290	ü
PFHxA_1	313.0 / 269.0	1.87	PFHxA			
PFHxA_2	313.0 / 119.0	1.87	PFHxA	0.080	0.076	ü
PFHpA_1	363.0 / 319.0	2.28	PFHpA			
PFHpA_2	363.0 / 169.0	2.28	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.290	0.283	ü
PFOA_1	413.0 / 369.0	2.69	PFOA			
PFOA_2	413.0 / 169.0	2.69	PFOA	0.060	0.064	ü
PFNA_1	463.0 / 419.0	3.09	PFNA			
PFNA_2	463.0 / 219.0	3.09	PFNA	0.310	0.297	ü
PFOS_1	499.0 / 80.0	3.09	PFOS			
PFOS_2	499.0 / 99.0	3.09	PFOS	0.170	0.181	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.44	PFDA	0.040	0.045	ü
PFUnA_1	563.0 / 519.0	3.77	PFUnA			
PFUnA_2	563.0 / 269.0	3.77	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.05	PFDoA			
PFDoA_2	613.0 / 319.0	4.05	PFDoA	0.170	0.159	ü
PFTrDA_1	663.0 / 619.0	4.30	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.29	PFTrDA	0.060	0.066	ü
PFTeDA_1	713.0 / 669.0	4.51	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.51	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.60	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.60	NMeFOSAA	0.540	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.76	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.76	NEtFOSAA	0.060	0.068	ü

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Summary Ion Ratio Report

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Sample Name	KC69 CCV	**Injection Vial**	39
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:59:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.55	PFBS			
PFBS_2	298.9 / 99.0	1.55	PFBS	0.290	0.290	ü
PFHxA_1	313.0 / 269.0	1.87	PFHxA			
PFHxA_2	313.0 / 119.0	1.87	PFHxA	0.080	0.076	ü
PFHpA_1	363.0 / 319.0	2.28	PFHpA			
PFHpA_2	363.0 / 169.0	2.28	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.280	0.283	ü
PFOA_1	413.0 / 369.0	2.69	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.060	0.064	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.310	0.297	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.170	0.181	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.44	PFDA	0.050	0.045	ü
PFUnA_1	563.0 / 519.0	3.76	PFUnA			
PFUnA_2	563.0 / 269.0	3.76	PFUnA	0.060	0.054	ü
PFDoA_1	613.0 / 569.0	4.05	PFDoA			
PFDoA_2	613.0 / 319.0	4.04	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.29	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.29	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.50	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.50	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.520	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.76	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.76	NEtFOSAA	0.050	0.068	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 26/11/2018 2:43:06 PM

Sample Name	KC70 CCV	**Injection Vial**	49
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T02:10:06	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.55	PFBS			
PFBS_2	298.9 / 99.0	1.55	PFBS	0.310	0.290	ü
PFHxA_1	313.0 / 269.0	1.87	PFHxA			
PFHxA_2	313.0 / 119.0	1.87	PFHxA	0.080	0.076	ü
PFHpA_1	363.0 / 319.0	2.28	PFHpA			
PFHpA_2	363.0 / 169.0	2.28	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.290	0.283	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.060	0.064	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.330	0.297	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.180	0.181	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.43	PFDA	0.040	0.045	ü
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	3.75	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.04	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.28	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.28	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.50	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.50	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.510	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.75	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.75	NEtFOSAA	0.070	0.068	ü

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Summary Internal Standard Report

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Sample Name	KC74 ICC	**Injection Vial**	9
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:12:04	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.56	13C3-PFBS	302.0 / 99.0	27667.61	232.25
PFBS_2	298.9 / 99.0	1.56	13C3-PFBS	302.0 / 99.0	27667.61	232.25
PFHxA_1	313.0 / 269.0	1.89	13C5-PFHxA	318.0 / 273.0	68519.22	250.00
PFHxA_2	313.0 / 119.0	1.88	13C5-PFHxA	318.0 / 273.0	68519.22	250.00
PFHpA_1	363.0 / 319.0	2.30	13C4-PFHpA	367.0 / 322.0	75456.66	250.00
PFHpA_2	363.0 / 169.0	2.30	13C4-PFHpA	367.0 / 322.0	75456.66	250.00
PFHxS_1	399.0 / 80.0	2.32	13C3-PFHxS	402.0 / 99.0	25512.16	236.50
PFHxS_2	399.0 / 99.0	2.32	13C3-PFHxS	402.0 / 99.0	25512.16	236.50
PFOA_1	413.0 / 369.0	2.71	13C8-PFOA	421.0 / 376.0	92018.17	250.00
PFOA_2	413.0 / 169.0	2.71	13C8-PFOA	421.0 / 376.0	92018.17	250.00
PFNA_1	463.0 / 419.0	3.11	13C9-PFNA	472.0 / 427.0	100767.02	250.00
PFNA_2	463.0 / 219.0	3.11	13C9-PFNA	472.0 / 427.0	100767.02	250.00
PFOS_1	499.0 / 80.0	3.11	13C8-PFOS	507.0 / 99.0	30622.68	239.25
PFOS_2	499.0 / 99.0	3.11	13C8-PFOS	507.0 / 99.0	30622.68	239.25
PFDA_1	513.0 / 469.0	3.47	13C6-PFDA	519.0 / 474.0	102497.62	250.00
PFDA_2	513.0 / 219.0	3.47	13C6-PFDA	519.0 / 474.0	102497.62	250.00
PFUnA_1	563.0 / 519.0	3.80	13C7-PFUnA	570.0 / 525.0	91156.63	250.00
PFUnA_2	563.0 / 269.0	3.80	13C7-PFUnA	570.0 / 525.0	91156.63	250.00
PFDoA_1	613.0 / 569.0	4.08	13C2-PFDoA	615.0 / 570.0	111737.92	250.00
PFDoA_2	613.0 / 319.0	4.08	13C2-PFDoA	615.0 / 570.0	111737.92	250.00
PFTrDA_1	663.0 / 619.0	4.33	13C2-PFTeDA	715.0 / 670.0	94836.05	250.00
PFTrDA_2	663.0 / 169.0	4.33	13C2-PFTeDA	715.0 / 670.0	94836.05	250.00
PFTeDA_1	713.0 / 669.0	4.55	13C2-PFTeDA	715.0 / 670.0	94836.05	250.00
PFTeDA_2	713.0 / 169.0	4.55	13C2-PFTeDA	715.0 / 670.0	94836.05	250.00
NMeFOSAA_1	570.0 / 419.0	3.62	d3-MeFOSAA	573.0 / 419.0	14708.31	250.00
NMeFOSAA_2	570.0 / 512.0	3.62	d3-MeFOSAA	573.0 / 419.0	14708.31	250.00
NEtFOSAA_1	584.0 / 419.0	3.79	d5-EtFOSAA	589.0 / 419.0	17894.70	250.00
NEtFOSAA_2	584.0 / 483.0	3.79	d5-EtFOSAA	589.0 / 419.0	17894.70	250.00

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Summary Internal Standard Report

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Sample Name	KC69 CCV	**Injection Vial**	21
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:22:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.56	13C3-PFBS	302.0 / 99.0	28103.83	232.25
PFBS_2	298.9 / 99.0	1.56	13C3-PFBS	302.0 / 99.0	28103.83	232.25
PFHxA_1	313.0 / 269.0	1.88	13C5-PFHxA	318.0 / 273.0	70596.78	250.00
PFHxA_2	313.0 / 119.0	1.88	13C5-PFHxA	318.0 / 273.0	70596.78	250.00
PFHpA_1	363.0 / 319.0	2.29	13C4-PFHpA	367.0 / 322.0	75624.33	250.00
PFHpA_2	363.0 / 169.0	2.29	13C4-PFHpA	367.0 / 322.0	75624.33	250.00
PFHxS_1	399.0 / 80.0	2.31	13C3-PFHxS	402.0 / 99.0	26493.87	236.50
PFHxS_2	399.0 / 99.0	2.31	13C3-PFHxS	402.0 / 99.0	26493.87	236.50
PFOA_1	413.0 / 369.0	2.70	13C8-PFOA	421.0 / 376.0	92975.82	250.00
PFOA_2	413.0 / 169.0	2.70	13C8-PFOA	421.0 / 376.0	92975.82	250.00
PFNA_1	463.0 / 419.0	3.09	13C9-PFNA	472.0 / 427.0	97127.92	250.00
PFNA_2	463.0 / 219.0	3.09	13C9-PFNA	472.0 / 427.0	97127.92	250.00
PFOS_1	499.0 / 80.0	3.09	13C8-PFOS	507.0 / 99.0	29718.47	239.25
PFOS_2	499.0 / 99.0	3.09	13C8-PFOS	507.0 / 99.0	29718.47	239.25
PFDA_1	513.0 / 469.0	3.45	13C6-PFDA	519.0 / 474.0	104094.40	250.00
PFDA_2	513.0 / 219.0	3.45	13C6-PFDA	519.0 / 474.0	104094.40	250.00
PFUnA_1	563.0 / 519.0	3.77	13C7-PFUnA	570.0 / 525.0	102779.07	250.00
PFUnA_2	563.0 / 269.0	3.77	13C7-PFUnA	570.0 / 525.0	102779.07	250.00
PFDoA_1	613.0 / 569.0	4.06	13C2-PFDoA	615.0 / 570.0	113796.71	250.00
PFDoA_2	613.0 / 319.0	4.06	13C2-PFDoA	615.0 / 570.0	113796.71	250.00
PFTrDA_1	663.0 / 619.0	4.30	13C2-PFTeDA	715.0 / 670.0	97777.77	250.00
PFTrDA_2	663.0 / 169.0	4.30	13C2-PFTeDA	715.0 / 670.0	97777.77	250.00
PFTeDA_1	713.0 / 669.0	4.52	13C2-PFTeDA	715.0 / 670.0	97777.77	250.00
PFTeDA_2	713.0 / 169.0	4.52	13C2-PFTeDA	715.0 / 670.0	97777.77	250.00
NMeFOSAA_1	570.0 / 419.0	3.61	d3-MeFOSAA	573.0 / 419.0	14951.68	250.00
NMeFOSAA_2	570.0 / 512.0	3.60	d3-MeFOSAA	573.0 / 419.0	14951.68	250.00
NEtFOSAA_1	584.0 / 419.0	3.77	d5-EtFOSAA	589.0 / 419.0	16366.91	250.00
NEtFOSAA_2	584.0 / 483.0	3.77	d5-EtFOSAA	589.0 / 419.0	16366.91	250.00

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Summary Internal Standard Report

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Sample Name	KC70 CCV	**Injection Vial**	29
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:00:17	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.55	13C3-PFBS	302.0 / 99.0	29455.71	232.25
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	29455.71	232.25
PFHxA_1	313.0 / 269.0	1.87	13C5-PFHxA	318.0 / 273.0	67915.12	250.00
PFHxA_2	313.0 / 119.0	1.87	13C5-PFHxA	318.0 / 273.0	67915.12	250.00
PFHpA_1	363.0 / 319.0	2.28	13C4-PFHpA	367.0 / 322.0	74963.11	250.00
PFHpA_2	363.0 / 169.0	2.28	13C4-PFHpA	367.0 / 322.0	74963.11	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	26841.98	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	26841.98	236.50
PFOA_1	413.0 / 369.0	2.69	13C8-PFOA	421.0 / 376.0	93613.58	250.00
PFOA_2	413.0 / 169.0	2.69	13C8-PFOA	421.0 / 376.0	93613.58	250.00
PFNA_1	463.0 / 419.0	3.09	13C9-PFNA	472.0 / 427.0	97280.50	250.00
PFNA_2	463.0 / 219.0	3.09	13C9-PFNA	472.0 / 427.0	97280.50	250.00
PFOS_1	499.0 / 80.0	3.09	13C8-PFOS	507.0 / 99.0	30378.50	239.25
PFOS_2	499.0 / 99.0	3.09	13C8-PFOS	507.0 / 99.0	30378.50	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	98897.03	250.00
PFDA_2	513.0 / 219.0	3.44	13C6-PFDA	519.0 / 474.0	98897.03	250.00
PFUnA_1	563.0 / 519.0	3.77	13C7-PFUnA	570.0 / 525.0	100002.52	250.00
PFUnA_2	563.0 / 269.0	3.77	13C7-PFUnA	570.0 / 525.0	100002.52	250.00
PFDoA_1	613.0 / 569.0	4.05	13C2-PFDoA	615.0 / 570.0	114031.44	250.00
PFDoA_2	613.0 / 319.0	4.05	13C2-PFDoA	615.0 / 570.0	114031.44	250.00
PFTrDA_1	663.0 / 619.0	4.30	13C2-PFTeDA	715.0 / 670.0	99213.98	250.00
PFTrDA_2	663.0 / 169.0	4.29	13C2-PFTeDA	715.0 / 670.0	99213.98	250.00
PFTeDA_1	713.0 / 669.0	4.51	13C2-PFTeDA	715.0 / 670.0	99213.98	250.00
PFTeDA_2	713.0 / 169.0	4.51	13C2-PFTeDA	715.0 / 670.0	99213.98	250.00
NMeFOSAA_1	570.0 / 419.0	3.60	d3-MeFOSAA	573.0 / 419.0	15911.24	250.00
NMeFOSAA_2	570.0 / 512.0	3.60	d3-MeFOSAA	573.0 / 419.0	15911.24	250.00
NEtFOSAA_1	584.0 / 419.0	3.76	d5-EtFOSAA	589.0 / 419.0	14636.75	250.00
NEtFOSAA_2	584.0 / 483.0	3.76	d5-EtFOSAA	589.0 / 419.0	14636.75	250.00

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Summary Internal Standard Report

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Sample Name	KC69 CCV	**Injection Vial**	39
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:59:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.55	13C3-PFBS	302.0 / 99.0	26395.66	232.25
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	26395.66	232.25
PFHxA_1	313.0 / 269.0	1.87	13C5-PFHxA	318.0 / 273.0	63609.90	250.00
PFHxA_2	313.0 / 119.0	1.87	13C5-PFHxA	318.0 / 273.0	63609.90	250.00
PFHpA_1	363.0 / 319.0	2.28	13C4-PFHpA	367.0 / 322.0	69406.10	250.00
PFHpA_2	363.0 / 169.0	2.28	13C4-PFHpA	367.0 / 322.0	69406.10	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	24216.81	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	24216.81	236.50
PFOA_1	413.0 / 369.0	2.69	13C8-PFOA	421.0 / 376.0	87777.54	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	87777.54	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	88708.68	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	88708.68	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	27344.28	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	27344.28	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	97752.82	250.00
PFDA_2	513.0 / 219.0	3.44	13C6-PFDA	519.0 / 474.0	97752.82	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	106189.81	250.00
PFUnA_2	563.0 / 269.0	3.76	13C7-PFUnA	570.0 / 525.0	106189.81	250.00
PFDoA_1	613.0 / 569.0	4.05	13C2-PFDoA	615.0 / 570.0	106763.35	250.00
PFDoA_2	613.0 / 319.0	4.04	13C2-PFDoA	615.0 / 570.0	106763.35	250.00
PFTrDA_1	663.0 / 619.0	4.29	13C2-PFTeDA	715.0 / 670.0	91486.87	250.00
PFTrDA_2	663.0 / 169.0	4.29	13C2-PFTeDA	715.0 / 670.0	91486.87	250.00
PFTeDA_1	713.0 / 669.0	4.50	13C2-PFTeDA	715.0 / 670.0	91486.87	250.00
PFTeDA_2	713.0 / 169.0	4.50	13C2-PFTeDA	715.0 / 670.0	91486.87	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	13639.11	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	13639.11	250.00
NEtFOSAA_1	584.0 / 419.0	3.76	d5-EtFOSAA	589.0 / 419.0	13957.02	250.00
NEtFOSAA_2	584.0 / 483.0	3.76	d5-EtFOSAA	589.0 / 419.0	13957.02	250.00

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Summary Internal Standard Report

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Sample Name	KC70 CCV	**Injection Vial**	49
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T02:10:06	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.55	13C3-PFBS	302.0 / 99.0	38331.64	232.25
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	38331.64	232.25
PFHxA_1	313.0 / 269.0	1.87	13C5-PFHxA	318.0 / 273.0	87286.99	250.00
PFHxA_2	313.0 / 119.0	1.87	13C5-PFHxA	318.0 / 273.0	87286.99	250.00
PFHpA_1	363.0 / 319.0	2.28	13C4-PFHpA	367.0 / 322.0	90948.30	250.00
PFHpA_2	363.0 / 169.0	2.28	13C4-PFHpA	367.0 / 322.0	90948.30	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	33591.95	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	33591.95	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	116518.91	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	116518.91	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	119834.35	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	119834.35	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	36224.36	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	36224.36	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	135476.26	250.00
PFDA_2	513.0 / 219.0	3.43	13C6-PFDA	519.0 / 474.0	135476.26	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	129540.02	250.00
PFUnA_2	563.0 / 269.0	3.75	13C7-PFUnA	570.0 / 525.0	129540.02	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	139297.49	250.00
PFDoA_2	613.0 / 319.0	4.04	13C2-PFDoA	615.0 / 570.0	139297.49	250.00
PFTrDA_1	663.0 / 619.0	4.28	13C2-PFTeDA	715.0 / 670.0	129215.47	250.00
PFTrDA_2	663.0 / 169.0	4.28	13C2-PFTeDA	715.0 / 670.0	129215.47	250.00
PFTeDA_1	713.0 / 669.0	4.50	13C2-PFTeDA	715.0 / 670.0	129215.47	250.00
PFTeDA_2	713.0 / 169.0	4.50	13C2-PFTeDA	715.0 / 670.0	129215.47	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	21236.55	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	21236.55	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	20734.00	250.00
NEtFOSAA_2	584.0 / 483.0	3.75	d5-EtFOSAA	589.0 / 419.0	20734.00	250.00

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Summary Internal Standard Report

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Sample Name	KC74 ICC	**Injection Vial**	9
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:12:04	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.07	13C2-PFDA	515.0 / 470.0	102829.54	250.00
d3-MeFOSAA	573.0 / 419.0	3.62	13C4-PFOS	503.0 / 99.0	31461.59	239.50
d5-EtFOSAA	589.0 / 419.0	3.78	13C4-PFOS	503.0 / 99.0	31461.59	239.50
13C5-PFHxA	318.0 / 273.0	1.87	13C2-PFOA	415.0 / 370.0	84697.49	250.00
13C4-PFHpA	367.0 / 322.0	2.29	13C2-PFOA	415.0 / 370.0	84697.49	250.00
13C8-PFOA	421.0 / 376.0	2.70	13C2-PFOA	415.0 / 370.0	84697.49	250.00
13C9-PFNA	472.0 / 427.0	3.09	13C2-PFOA	415.0 / 370.0	84697.49	250.00
13C6-PFDA	519.0 / 474.0	3.45	13C2-PFDA	515.0 / 470.0	102829.54	250.00
13C7-PFUnA	570.0 / 525.0	3.78	13C2-PFDA	515.0 / 470.0	102829.54	250.00
13C2-PFTeDA	715.0 / 670.0	4.54	13C2-PFDA	515.0 / 470.0	102829.54	250.00
13C3-PFBS	302.0 / 99.0	1.54	13C4-PFOS	503.0 / 99.0	31461.59	239.50
13C3-PFHxS	402.0 / 99.0	2.31	13C4-PFOS	503.0 / 99.0	31461.59	239.50
13C8-PFOS	507.0 / 99.0	3.09	13C4-PFOS	503.0 / 99.0	31461.59	239.50

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Summary Internal Standard Report

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Sample Name	KC69 CCV	**Injection Vial**	21
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:22:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.05	13C2-PFDA	515.0 / 470.0	100407.57	250.00
d3-MeFOSAA	573.0 / 419.0	3.60	13C4-PFOS	503.0 / 99.0	33341.26	239.50
d5-EtFOSAA	589.0 / 419.0	3.76	13C4-PFOS	503.0 / 99.0	33341.26	239.50
13C5-PFHxA	318.0 / 273.0	1.87	13C2-PFOA	415.0 / 370.0	82386.51	250.00
13C4-PFHpA	367.0 / 322.0	2.28	13C2-PFOA	415.0 / 370.0	82386.51	250.00
13C8-PFOA	421.0 / 376.0	2.69	13C2-PFOA	415.0 / 370.0	82386.51	250.00
13C9-PFNA	472.0 / 427.0	3.08	13C2-PFOA	415.0 / 370.0	82386.51	250.00
13C6-PFDA	519.0 / 474.0	3.43	13C2-PFDA	515.0 / 470.0	100407.57	250.00
13C7-PFUnA	570.0 / 525.0	3.76	13C2-PFDA	515.0 / 470.0	100407.57	250.00
13C2-PFTeDA	715.0 / 670.0	4.52	13C2-PFDA	515.0 / 470.0	100407.57	250.00
13C3-PFBS	302.0 / 99.0	1.54	13C4-PFOS	503.0 / 99.0	33341.26	239.50
13C3-PFHxS	402.0 / 99.0	2.30	13C4-PFOS	503.0 / 99.0	33341.26	239.50
13C8-PFOS	507.0 / 99.0	3.08	13C4-PFOS	503.0 / 99.0	33341.26	239.50

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Summary Internal Standard Report

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Sample Name	KC70 CCV	**Injection Vial**	29
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:00:17	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.04	13C2-PFDA	515.0 / 470.0	100248.82	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	30323.11	239.50
d5-EtFOSAA	589.0 / 419.0	3.76	13C4-PFOS	503.0 / 99.0	30323.11	239.50
13C5-PFHxA	318.0 / 273.0	1.86	13C2-PFOA	415.0 / 370.0	82971.28	250.00
13C4-PFHpA	367.0 / 322.0	2.27	13C2-PFOA	415.0 / 370.0	82971.28	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	82971.28	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	82971.28	250.00
13C6-PFDA	519.0 / 474.0	3.43	13C2-PFDA	515.0 / 470.0	100248.82	250.00
13C7-PFUnA	570.0 / 525.0	3.75	13C2-PFDA	515.0 / 470.0	100248.82	250.00
13C2-PFTeDA	715.0 / 670.0	4.51	13C2-PFDA	515.0 / 470.0	100248.82	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	30323.11	239.50
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	30323.11	239.50
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	30323.11	239.50

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Summary Internal Standard Report

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Sample Name	KC69 CCV	**Injection Vial**	39
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:59:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	94445.43	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	28201.29	239.50
d5-EtFOSAA	589.0 / 419.0	3.75	13C4-PFOS	503.0 / 99.0	28201.29	239.50
13C5-PFHxA	318.0 / 273.0	1.86	13C2-PFOA	415.0 / 370.0	82002.69	250.00
13C4-PFHpA	367.0 / 322.0	2.27	13C2-PFOA	415.0 / 370.0	82002.69	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	82002.69	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	82002.69	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	94445.43	250.00
13C7-PFUnA	570.0 / 525.0	3.75	13C2-PFDA	515.0 / 470.0	94445.43	250.00
13C2-PFTeDA	715.0 / 670.0	4.50	13C2-PFDA	515.0 / 470.0	94445.43	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	28201.29	239.50
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	28201.29	239.50
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	28201.29	239.50

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Summary Internal Standard Report

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Sample Name	KC70 CCV	**Injection Vial**	49
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T02:10:06	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	122406.92	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	37224.41	239.50
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	37224.41	239.50
13C5-PFHxA	318.0 / 273.0	1.86	13C2-PFOA	415.0 / 370.0	109553.32	250.00
13C4-PFHpA	367.0 / 322.0	2.27	13C2-PFOA	415.0 / 370.0	109553.32	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	109553.32	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	109553.32	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	122406.92	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	122406.92	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	122406.92	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	37224.41	239.50
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	37224.41	239.50
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	37224.41	239.50

Raw Analytical Data

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It can be done

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Summary Quant Report

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Sample Name	KC73 IB	**Injection Vial**	8
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:01:12	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.58	6460.61	< 0	37.5	true
PFBS_2	298.9 / 99.0	1.58	2426.29	30.144868	41.9	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	2.30	8434.44	< 0	15.8	true
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.33	10145.16	21.405784	57.1	false
PFHxS_2	399.0 / 99.0	2.33	2661.80	16.729073	43.0	false
PFOA_1	413.0 / 369.0	2.71	10862.35	18.963867	30.7	true
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	true
PFNA_1	463.0 / 419.0	3.11	10677.10	< 0	41.7	true
PFNA_2	463.0 / 219.0	3.11	3751.75	10.418402	59.2	true
PFOS_1	499.0 / 80.0	3.10	16459.05	17.685402	28.1	false
PFOS_2	499.0 / 99.0	3.11	2265.01	< 0	35.4	false
PFDA_1	513.0 / 469.0	3.47	9844.93	< 0	69.2	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.80	8929.35	39.245299	44.8	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.08	9969.37	< 0	95.1	false
PFDoA_2	613.0 / 319.0	4.08	1766.73	< 0	37.7	false
PFTrDA_1	663.0 / 619.0	4.33	11147.82	< 0	147.8	false
PFTrDA_2	663.0 / 169.0	4.33	685.81	< 0	24.2	false
PFTeDA_1	713.0 / 669.0	4.55	12735.75	< 0	202.6	false
PFTeDA_2	713.0 / 169.0	4.55	691.96	< 0	63.6	false
NMeFOSAA_1	570.0 / 419.0	3.63	2482.66	14.569449	357.9	false
NMeFOSAA_2	570.0 / 512.0	3.63	2183.00	38.447996	67.5	false
NEtFOSAA_1	584.0 / 419.0	3.79	1783.66	< 0	42.9	false
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	CS241PB-FS(0)	**Injection Vial**	12
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:44:39	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	N/A	N/A	N/A	N/A	true
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	true
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	true
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	true
PFOA_1	413.0 / 369.0	2.71	114318.72	371.653118	181.2	false
PFOA_2	413.0 / 169.0	2.71	5073.03	246.649055	96.9	false
PFNA_1	463.0 / 419.0	3.11	2583.20	< 0	17.8	true
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	N/A	N/A	N/A	N/A	true
PFOS_2	499.0 / 99.0	N/A	N/A	N/A	N/A	true
PFDA_1	513.0 / 469.0	3.46	1833.07	< 0	21.2	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.79	1616.15	21.600563	16.7	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.07	1371.49	< 0	19.7	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	4.31	1036.75	< 0	26.7	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.53	1004.54	< 0	19.6	true
PFTeDA_2	713.0 / 169.0	4.54	151.11	< 0	13.7	false
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	3.78	424.81	< 0	31.5	false
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J9419-FS(0)	**Injection Vial**	13
Sample ID	RR-FB-111618	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:55:32	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.56	1111.11	< 0	10.2	true
PFBS_2	298.9 / 99.0	1.54	604.49	11.976394	11.8	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	true
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	true
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	true
PFOA_1	413.0 / 369.0	2.71	111093.14	334.645576	156.8	false
PFOA_2	413.0 / 169.0	2.71	7362.90	344.201256	102.3	false
PFNA_1	463.0 / 419.0	3.09	1711.86	< 0	11.6	true
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	N/A	N/A	N/A	N/A	true
PFOS_2	499.0 / 99.0	N/A	N/A	N/A	N/A	true
PFDA_1	513.0 / 469.0	3.46	2684.23	< 0	25.6	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.79	3582.14	26.909171	28.7	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.07	5021.07	< 0	60.2	false
PFDoA_2	613.0 / 319.0	4.06	998.28	< 0	21.4	false
PFTrDA_1	663.0 / 619.0	4.32	5804.87	< 0	129.7	false
PFTrDA_2	663.0 / 169.0	4.32	435.52	< 0	22.5	true
PFTeDA_1	713.0 / 669.0	4.54	6752.75	< 0	106.5	false
PFTeDA_2	713.0 / 169.0	4.54	245.05	< 0	27.7	false
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	3.79	382.29	< 0	10.0	false
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	CS242LCS-FS(0)	**Injection Vial**	14
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:06:23	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.56	4154497.34	15145.933469	1197.3	false
PFBS_2	298.9 / 99.0	1.56	1279738.24	15124.865175	1150.6	false
PFHxA_1	313.0 / 269.0	1.89	3336035.45	14044.458359	312.3	false
PFHxA_2	313.0 / 119.0	1.88	255549.91	14198.386874	245.8	false
PFHpA_1	363.0 / 319.0	2.29	3006736.89	14573.267526	500.4	false
PFHpA_2	363.0 / 169.0	2.29	62092.83	15133.298012	391.7	false
PFHxS_1	399.0 / 80.0	2.32	4391481.96	12922.392307	1094.0	false
PFHxS_2	399.0 / 99.0	2.32	1270824.86	13295.577902	1252.1	false
PFOA_1	413.0 / 369.0	2.70	3899824.49	13750.944846	825.2	false
PFOA_2	413.0 / 169.0	2.70	249827.81	14442.689081	607.1	false
PFNA_1	463.0 / 419.0	3.10	4078933.99	14337.640664	1225.6	false
PFNA_2	463.0 / 219.0	3.10	1238577.95	13802.182858	1626.1	false
PFOS_1	499.0 / 80.0	3.10	6656991.99	16385.440755	763.3	false
PFOS_2	499.0 / 99.0	3.10	1129991.80	16151.769699	1266.5	false
PFDA_1	513.0 / 469.0	3.46	4621954.76	14252.286161	1002.5	false
PFDA_2	513.0 / 219.0	3.46	190451.64	14501.527983	582.6	false
PFUnA_1	563.0 / 519.0	3.79	4621012.24	13435.461830	700.7	false
PFUnA_2	563.0 / 269.0	3.79	232147.60	14055.649858	587.2	false
PFDoA_1	613.0 / 569.0	4.07	4553023.57	14318.444798	905.8	false
PFDoA_2	613.0 / 319.0	4.07	736064.93	14227.552689	665.5	false
PFTrDA_1	663.0 / 619.0	4.32	4236300.42	14206.416068	1621.1	false
PFTrDA_2	663.0 / 169.0	4.31	292123.13	15040.359591	983.0	false
PFTeDA_1	713.0 / 669.0	4.53	4854378.84	13959.661480	2731.8	false
PFTeDA_2	713.0 / 169.0	4.53	242989.26	14391.064288	1700.3	false
NMeFOSAA_1	570.0 / 419.0	3.62	772663.38	13445.292645	1356.6	false
NMeFOSAA_2	570.0 / 512.0	3.62	415826.33	13904.845758	1478.3	false
NEtFOSAA_1	584.0 / 419.0	3.78	692204.48	14408.634124	1064.4	false
NEtFOSAA_2	584.0 / 483.0	3.78	40559.72	13922.080179	825.0	false

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Summary Quant Report

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Sample Name	J9412-FS-D(9)	**Injection Vial**	15
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:17:16	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.56	432749.18	1250.231171	277.2	false
PFBS_2	298.9 / 99.0	1.56	128715.11	1234.115429	253.0	false
PFHxA_1	313.0 / 269.0	1.88	728037.55	2947.012971	96.7	false
PFHxA_2	313.0 / 119.0	1.88	50762.25	2711.341158	77.6	false
PFHpA_1	363.0 / 319.0	2.29	263383.71	1195.141697	148.7	false
PFHpA_2	363.0 / 169.0	2.29	6259.77	1413.188539	116.2	false
PFHxS_1	399.0 / 80.0	2.31	3092217.13	9082.540680	890.6	false
PFHxS_2	399.0 / 99.0	2.31	865249.37	9034.782610	1337.5	false
PFOA_1	413.0 / 369.0	2.70	391875.37	1331.352342	266.3	false
PFOA_2	413.0 / 169.0	2.69	30026.79	1656.918457	220.3	false
PFNA_1	463.0 / 419.0	3.10	49079.27	118.637965	138.8	false
PFNA_2	463.0 / 219.0	3.10	15990.12	154.284694	106.0	false
PFOS_1	499.0 / 80.0	3.07	7041978.46	14533.702153	537.4	false
PFOS_2	499.0 / 99.0	3.10	1126695.60	13499.657236	1034.6	false
PFDA_1	513.0 / 469.0	3.46	8117.65	< 0	55.1	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.79	3543.00	26.895358	26.7	true
PFUnA_2	563.0 / 269.0	3.79	602.74	6.489054	14.0	true
PFDoA_1	613.0 / 569.0	4.07	3808.01	< 0	46.1	false
PFDoA_2	613.0 / 319.0	4.06	651.00	< 0	16.8	true
PFTrDA_1	663.0 / 619.0	4.32	2745.82	< 0	82.8	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.53	4512.79	< 0	67.7	false
PFTeDA_2	713.0 / 169.0	4.51	407.50	< 0	26.9	false
NMeFOSAA_1	570.0 / 419.0	3.62	410.99	< 0	13.8	true
NMeFOSAA_2	570.0 / 512.0	3.62	1040.95	17.975574	25.4	false
NEtFOSAA_1	584.0 / 419.0	3.80	652.59	< 0	23.4	false
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J9412-FS-D(7)	**Injection Vial**	16
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:28:08	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.56	1095151.37	2762.890221	328.8	false
PFBS_2	298.9 / 99.0	1.56	334902.06	2765.120312	332.3	false
PFHxA_1	313.0 / 269.0	1.88	1902362.00	6435.267065	163.4	false
PFHxA_2	313.0 / 119.0	1.88	123253.98	5499.693225	146.4	false
PFHpA_1	363.0 / 319.0	2.29	673430.18	2430.438312	213.9	false
PFHpA_2	363.0 / 169.0	2.29	13591.65	2446.241091	140.1	false
PFHxS_1	399.0 / 80.0	2.31	7355680.70	20664.153701	1063.2	false
PFHxS_2	399.0 / 99.0	2.31	2083419.12	20810.961959	1659.7	false
PFOA_1	413.0 / 369.0	2.70	936112.50	2565.350909	400.4	false
PFOA_2	413.0 / 169.0	2.69	78157.29	3499.920050	331.5	false
PFNA_1	463.0 / 419.0	3.10	122931.56	353.803948	232.0	false
PFNA_2	463.0 / 219.0	3.10	35674.02	350.227449	230.9	false
PFOS_1	499.0 / 80.0	3.06	15902774.07	31532.014272	674.5	false
PFOS_2	499.0 / 99.0	3.09	2547408.96	29348.483869	1581.7	false
PFDA_1	513.0 / 469.0	3.45	12379.80	< 0	58.2	false
PFDA_2	513.0 / 219.0	3.46	549.26	< 0	13.6	true
PFUnA_1	563.0 / 519.0	3.79	2041.42	21.885638	17.3	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.04	2356.34	< 0	29.5	true
PFDoA_2	613.0 / 319.0	4.05	930.51	< 0	19.1	false
PFTrDA_1	663.0 / 619.0	4.31	1534.36	< 0	49.8	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.52	1042.58	< 0	14.1	true
PFTeDA_2	713.0 / 169.0	4.54	132.76	< 0	13.0	false
NMeFOSAA_1	570.0 / 419.0	3.59	201.84	< 0	27.9	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J9412-FS-D(5)	**Injection Vial**	17
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:38:59	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	5258915.76	13967.263613	352.9	false
PFBS_2	298.9 / 99.0	1.55	1585449.04	13653.418579	519.1	false
PFHxA_1	313.0 / 269.0	1.87	10570092.09	31460.942675	262.6	false
PFHxA_2	313.0 / 119.0	1.87	688169.37	27025.200220	298.1	false
PFHpA_1	363.0 / 319.0	2.29	3742695.54	12686.009085	405.8	false
PFHpA_2	363.0 / 169.0	2.28	72343.61	12323.413502	275.6	false
PFHxS_1	399.0 / 80.0	2.31	35129223.74	102221.344374	1648.0	false
PFHxS_2	399.0 / 99.0	2.31	11012005.11	113949.292773	1969.1	false
PFOA_1	413.0 / 369.0	2.70	4164656.55	11926.392256	535.2	false
PFOA_2	413.0 / 169.0	2.68	345297.15	16218.325821	403.0	false
PFNA_1	463.0 / 419.0	3.09	489798.20	1991.210346	341.2	false
PFNA_2	463.0 / 219.0	3.09	146703.59	1914.049140	238.7	false
PFOS_1	499.0 / 80.0	3.05	63373578.15	138985.864869	610.6	false
PFOS_2	499.0 / 99.0	3.09	10258734.35	130801.118520	2071.5	false
PFDA_1	513.0 / 469.0	3.45	21606.84	15.385931	68.7	false
PFDA_2	513.0 / 219.0	3.44	964.14	< 0	15.4	true
PFUnA_1	563.0 / 519.0	3.77	3120.30	24.292642	21.6	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.06	2163.91	< 0	30.2	true
PFDoA_2	613.0 / 319.0	4.08	949.36	< 0	24.4	true
PFTrDA_1	663.0 / 619.0	4.31	1738.43	< 0	35.8	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.52	822.71	< 0	13.2	true
PFTeDA_2	713.0 / 169.0	4.53	126.26	< 0	14.1	false
NMeFOSAA_1	570.0 / 419.0	3.59	376.11	< 0	18.7	false
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J9412-FS(0)	**Injection Vial**	19
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:00:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.53	38810739.28	132361.926618	431.0	false
PFBS_2	298.9 / 99.0	1.53	11957450.03	131955.111848	747.8	false
PFHxA_1	313.0 / 269.0	1.85	58905685.31	240954.049234	289.0	false
PFHxA_2	313.0 / 119.0	1.85	4680779.54	252644.358508	472.5	false
PFHpA_1	363.0 / 319.0	2.26	25900102.65	131834.850930	431.7	false
PFHpA_2	363.0 / 169.0	2.26	587469.94	150575.855265	514.7	false
PFHxS_1	399.0 / 80.0	2.27	127256777.44	429583.935915	627.0	false
PFHxS_2	399.0 / 99.0	2.29	68282809.60	819710.568269	1259.3	false
PFOA_1	413.0 / 369.0	2.69	39264611.96	121574.598470	735.8	false
PFOA_2	413.0 / 169.0	2.67	3383887.62	172007.990453	664.1	false
PFNA_1	463.0 / 419.0	3.09	3650736.00	20035.496093	387.6	false
PFNA_2	463.0 / 219.0	3.09	1057384.89	18385.082260	214.9	false
PFOS_1	499.0 / 80.0	3.01	198126466.56	826613.349996	482.9	false
PFOS_2	499.0 / 99.0	3.09	45942805.05	1114543.796128	1951.2	false
PFDA_1	513.0 / 469.0	3.44	187811.97	427.437301	156.8	false
PFDA_2	513.0 / 219.0	3.43	6396.90	294.321632	49.7	true
PFUnA_1	563.0 / 519.0	3.75	5933.19	33.584559	25.2	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.05	4372.04	< 0	39.7	false
PFDoA_2	613.0 / 319.0	4.09	2539.97	14.195681	21.4	false
PFTrDA_1	663.0 / 619.0	4.29	1988.16	< 0	37.2	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.49	2080.63	< 0	29.9	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J9413-FS-D(9)	**Injection Vial**	22
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:44:11	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.56	316544.20	1266.952070	271.6	false
PFBS_2	298.9 / 99.0	1.55	96876.62	1286.239940	283.5	false
PFHxA_1	313.0 / 269.0	1.88	529028.01	2629.024165	82.5	false
PFHxA_2	313.0 / 119.0	1.88	36574.39	2398.107086	68.5	false
PFHpA_1	363.0 / 319.0	2.29	199866.20	1034.629577	117.7	false
PFHpA_2	363.0 / 169.0	2.29	5313.20	1373.212046	85.7	false
PFHxS_1	399.0 / 80.0	2.31	2236888.66	8905.774383	813.4	false
PFHxS_2	399.0 / 99.0	2.31	640537.92	9066.021465	1209.3	false
PFOA_1	413.0 / 369.0	2.70	296968.58	1135.201609	250.2	false
PFOA_2	413.0 / 169.0	2.69	23498.81	1457.333683	188.6	false
PFNA_1	463.0 / 419.0	3.09	39350.61	128.664585	118.2	false
PFNA_2	463.0 / 219.0	3.09	12334.16	157.296428	98.3	false
PFOS_1	499.0 / 80.0	3.05	5198972.55	14105.167930	387.5	false
PFOS_2	499.0 / 99.0	3.09	867001.82	13656.421742	1008.5	false
PFDA_1	513.0 / 469.0	3.44	2908.20	< 0	22.7	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.07	796.42	< 0	16.2	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.52	583.44	< 0	13.3	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	3.59	342.27	< 0	71.2	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J9413-FS-D(7)	**Injection Vial**	23
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:55:04	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.56	842902.27	2425.254977	347.9	false
PFBS_2	298.9 / 99.0	1.56	246603.90	2326.081585	303.5	false
PFHxA_1	313.0 / 269.0	1.88	1422817.47	5480.316906	140.8	false
PFHxA_2	313.0 / 119.0	1.88	95309.72	4842.980650	133.6	false
PFHpA_1	363.0 / 319.0	2.29	516773.10	2255.645038	265.4	false
PFHpA_2	363.0 / 169.0	2.29	10934.54	2381.368478	113.4	false
PFHxS_1	399.0 / 80.0	2.31	5606151.49	17739.457921	1242.1	false
PFHxS_2	399.0 / 99.0	2.31	1571017.37	17675.239368	1601.9	false
PFOA_1	413.0 / 369.0	2.70	740737.42	2379.322094	362.3	false
PFOA_2	413.0 / 169.0	2.69	62045.83	3255.546897	295.5	false
PFNA_1	463.0 / 419.0	3.09	90273.33	269.474130	153.0	false
PFNA_2	463.0 / 219.0	3.09	29869.47	315.033929	201.6	false
PFOS_1	499.0 / 80.0	3.05	12324618.88	29269.020210	667.0	false
PFOS_2	499.0 / 99.0	3.09	1962821.57	27082.960564	1272.5	false
PFDA_1	513.0 / 469.0	3.45	8510.51	< 0	50.8	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.77	1718.59	21.623461	17.2	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.06	1556.31	< 0	21.5	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	4.31	659.41	< 0	25.2	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.51	462.47	< 0	8.3	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J9413-FS-D(5)	**Injection Vial**	24
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T21:05:57	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	4209341.41	13152.465705	403.7	false
PFBS_2	298.9 / 99.0	1.55	1281956.15	12989.741519	508.4	false
PFHxA_1	313.0 / 269.0	1.87	8385270.95	31577.332534	252.8	false
PFHxA_2	313.0 / 119.0	1.87	565047.79	28076.212076	271.3	false
PFHpA_1	363.0 / 319.0	2.28	2963790.16	12511.539998	358.5	false
PFHpA_2	363.0 / 169.0	2.28	62964.84	13364.126060	325.6	false
PFHxS_1	399.0 / 80.0	2.31	28388451.97	95661.588841	1321.5	false
PFHxS_2	399.0 / 99.0	2.31	8711689.66	104392.472316	1501.6	false
PFOA_1	413.0 / 369.0	2.69	3386083.48	12673.925171	530.6	false
PFOA_2	413.0 / 169.0	2.68	283786.19	17423.009053	345.5	false
PFNA_1	463.0 / 419.0	3.09	398387.17	1703.309660	276.8	false
PFNA_2	463.0 / 219.0	3.09	124523.46	1713.975921	196.1	false
PFOS_1	499.0 / 80.0	3.05	54022939.78	140816.939289	619.5	false
PFOS_2	499.0 / 99.0	3.09	8572464.63	129908.177537	1983.4	false
PFDA_1	513.0 / 469.0	3.44	18418.76	19.455615	74.3	false
PFDA_2	513.0 / 219.0	3.44	1557.31	25.986090	23.9	true
PFUnA_1	563.0 / 519.0	3.77	1544.57	21.402149	15.3	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	4.08	490.30	< 0	8.1	true
PFTrDA_1	663.0 / 619.0	4.30	619.36	< 0	19.9	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.51	603.43	< 0	10.8	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	3.59	423.49	< 0	32.8	false
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J9413-FS(0)	**Injection Vial**	26
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T21:27:41	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.52	41884492.38	129976.047053	465.5	false
PFBS_2	298.9 / 99.0	1.52	12777548.41	128302.817289	800.5	false
PFHxA_1	313.0 / 269.0	1.84	60959460.95	263022.737374	369.1	false
PFHxA_2	313.0 / 119.0	1.84	4971984.04	283071.947776	481.8	false
PFHpA_1	363.0 / 319.0	2.25	26463736.95	126619.795153	461.3	false
PFHpA_2	363.0 / 169.0	2.25	590455.12	142256.741228	585.1	false
PFHxS_1	399.0 / 80.0	2.26	129987905.31	400678.689646	656.9	false
PFHxS_2	399.0 / 99.0	2.29	71211075.32	780590.058068	1432.4	false
PFOA_1	413.0 / 369.0	2.68	40623297.01	124601.020234	821.7	false
PFOA_2	413.0 / 169.0	2.67	3588203.46	180683.123868	639.8	false
PFNA_1	463.0 / 419.0	3.08	3760628.11	21407.562276	381.1	false
PFNA_2	463.0 / 219.0	3.08	1143306.03	20619.284292	202.1	false
PFOS_1	499.0 / 80.0	3.00	200375943.43	729315.256798	499.4	false
PFOS_2	499.0 / 99.0	3.08	67899017.15	1436998.960823	2071.7	false
PFDA_1	513.0 / 469.0	3.43	179920.46	431.591615	131.0	false
PFDA_2	513.0 / 219.0	3.42	7692.90	399.825044	50.9	true
PFUnA_1	563.0 / 519.0	3.74	7156.02	37.728743	24.9	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.04	3788.22	< 0	38.2	true
PFDoA_2	613.0 / 319.0	4.08	2252.37	8.624793	22.3	false
PFTrDA_1	663.0 / 619.0	4.29	1181.17	< 0	19.5	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J9418-FS-D(5)	**Injection Vial**	30
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:22:00	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	273165.41	748.602907	238.1	false
PFBS_2	298.9 / 99.0	1.55	87234.60	806.428085	244.3	false
PFHxA_1	313.0 / 269.0	1.87	684219.96	2561.490756	81.0	false
PFHxA_2	313.0 / 119.0	1.87	45992.41	2271.006805	74.3	false
PFHpA_1	363.0 / 319.0	2.28	263417.94	1111.744857	131.2	false
PFHpA_2	363.0 / 169.0	2.28	5032.96	1043.573034	88.9	false
PFHxS_1	399.0 / 80.0	2.30	3052324.36	8422.220460	685.5	false
PFHxS_2	399.0 / 99.0	2.30	871589.66	8549.557673	714.6	false
PFOA_1	413.0 / 369.0	2.69	707108.93	2144.436077	319.2	false
PFOA_2	413.0 / 169.0	2.68	59313.47	2936.747702	301.2	false
PFNA_1	463.0 / 419.0	3.09	80603.90	226.645256	181.0	false
PFNA_2	463.0 / 219.0	3.09	27729.79	282.064792	114.7	false
PFOS_1	499.0 / 80.0	3.09	7584307.58	17602.006914	470.0	false
PFOS_2	499.0 / 99.0	3.09	1300553.17	17530.162739	1183.7	false
PFDA_1	513.0 / 469.0	3.44	10369.90	< 0	59.0	false
PFDA_2	513.0 / 219.0	3.43	732.13	< 0	19.3	true
PFUnA_1	563.0 / 519.0	3.77	1249.37	20.553652	13.7	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.04	1738.99	< 0	20.2	true
PFDoA_2	613.0 / 319.0	4.05	188.60	< 0	5.9	true
PFTrDA_1	663.0 / 619.0	4.29	485.08	< 0	16.5	true
PFTrDA_2	663.0 / 169.0	4.34	296.83	< 0	11.5	false
PFTeDA_1	713.0 / 669.0	4.50	574.09	< 0	10.7	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J9418-FS-D(3)	**Injection Vial**	31
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:32:52	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	1491953.91	4275.801588	303.8	false
PFBS_2	298.9 / 99.0	1.55	441271.18	4122.086245	302.7	false
PFHxA_1	313.0 / 269.0	1.86	4292747.10	14322.577096	189.3	false
PFHxA_2	313.0 / 119.0	1.87	286711.07	12621.228675	213.7	false
PFHpA_1	363.0 / 319.0	2.28	1745925.44	5842.778674	240.6	false
PFHpA_2	363.0 / 169.0	2.27	36171.57	6073.076096	205.5	false
PFHxS_1	399.0 / 80.0	2.30	18052176.97	52758.969732	1181.7	false
PFHxS_2	399.0 / 99.0	2.30	5306617.32	55149.855602	1787.3	false
PFOA_1	413.0 / 369.0	2.69	3806895.78	11744.983462	513.7	false
PFOA_2	413.0 / 169.0	2.68	308865.34	15628.142236	327.4	false
PFNA_1	463.0 / 419.0	3.08	422556.51	1561.227676	293.2	false
PFNA_2	463.0 / 219.0	3.08	131635.15	1568.096584	145.0	false
PFOS_1	499.0 / 80.0	3.08	36659311.05	92830.626221	708.2	false
PFOS_2	499.0 / 99.0	3.08	6104813.82	89867.724445	1966.6	false
PFDA_1	513.0 / 469.0	3.44	29399.94	42.845065	95.2	false
PFDA_2	513.0 / 219.0	3.43	1307.89	< 0	12.5	true
PFUnA_1	563.0 / 519.0	3.76	3167.20	24.906851	22.5	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.04	2116.81	< 0	26.5	true
PFDoA_2	613.0 / 319.0	4.08	719.79	< 0	9.4	true
PFTrDA_1	663.0 / 619.0	4.30	939.66	< 0	26.5	false
PFTrDA_2	663.0 / 169.0	4.29	114.09	< 0	8.3	false
PFTeDA_1	713.0 / 669.0	4.49	788.49	< 0	14.4	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	3.75	544.77	< 0	13.2	false
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J9418-FS(0)	**Injection Vial**	32
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:43:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.53	7540147.86	31841.413381	336.1	false
PFBS_2	298.9 / 99.0	1.53	2110167.60	28856.667363	380.0	false
PFHxA_1	313.0 / 269.0	1.85	19458607.98	90194.059151	235.1	false
PFHxA_2	313.0 / 119.0	1.85	1319210.68	80683.481058	311.6	false
PFHpA_1	363.0 / 319.0	2.26	7525250.63	40516.758663	306.8	false
PFHpA_2	363.0 / 169.0	2.25	160451.26	43484.494705	319.3	false
PFHxS_1	399.0 / 80.0	2.28	72794139.08	343578.930069	1202.6	false
PFHxS_2	399.0 / 99.0	2.28	24343228.38	408589.768267	1577.0	false
PFOA_1	413.0 / 369.0	2.68	18658482.86	74656.677509	779.2	false
PFOA_2	413.0 / 169.0	2.67	1578210.35	103662.153117	528.8	false
PFNA_1	463.0 / 419.0	3.08	1950680.53	11261.580006	412.4	false
PFNA_2	463.0 / 219.0	3.08	598154.71	10953.951487	121.3	false
PFOS_1	499.0 / 80.0	3.03	123456219.22	628460.351723	646.8	false
PFOS_2	499.0 / 99.0	3.08	25234898.61	746933.468707	1841.1	false
PFDA_1	513.0 / 469.0	3.43	112228.62	416.475692	123.7	false
PFDA_2	513.0 / 219.0	3.42	3543.19	256.808027	23.9	true
PFUnA_1	563.0 / 519.0	3.76	6749.53	41.849332	25.5	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.05	3321.58	< 0	32.6	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	4.30	1854.97	< 0	37.2	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.50	778.82	< 0	16.1	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	3.74	613.63	< 0	17.6	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J9421-FS-D(7)	**Injection Vial**	34
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:05:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	259339.91	560.171303	199.9	false
PFBS_2	298.9 / 99.0	1.54	77648.94	573.891481	224.9	false
PFHxA_1	313.0 / 269.0	1.87	629648.22	2097.491276	73.1	false
PFHxA_2	313.0 / 119.0	1.87	45240.58	1989.406581	68.3	false
PFHpA_1	363.0 / 319.0	2.28	280522.85	1044.076462	134.3	false
PFHpA_2	363.0 / 169.0	2.27	5283.37	963.621939	61.0	false
PFHxS_1	399.0 / 80.0	2.30	2679859.96	7314.648733	739.6	false
PFHxS_2	399.0 / 99.0	2.30	752389.44	7300.123163	873.3	false
PFOA_1	413.0 / 369.0	2.69	911121.75	2631.236432	331.3	false
PFOA_2	413.0 / 169.0	2.67	67180.61	3166.843996	238.0	false
PFNA_1	463.0 / 419.0	3.08	63050.49	158.497383	139.9	false
PFNA_2	463.0 / 219.0	3.08	17965.73	167.302861	99.3	false
PFOS_1	499.0 / 80.0	3.07	6762149.67	14580.776039	514.6	false
PFOS_2	499.0 / 99.0	3.08	1115490.04	13964.614529	988.4	false
PFDA_1	513.0 / 469.0	3.44	6527.53	< 0	40.7	false
PFDA_2	513.0 / 219.0	3.41	419.04	< 0	12.1	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.04	936.34	< 0	17.6	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.49	363.10	< 0	19.0	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J9421-FS-D(3)	**Injection Vial**	36
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:27:08	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	2189878.14	5946.814773	234.4	true
PFBS_2	298.9 / 99.0	1.54	676817.46	5977.916398	314.0	false
PFHxA_1	313.0 / 269.0	1.86	6155623.82	21205.053153	175.5	false
PFHxA_2	313.0 / 119.0	1.86	428015.25	19455.119060	231.2	false
PFHpA_1	363.0 / 319.0	2.27	2902402.05	9900.441408	333.1	false
PFHpA_2	363.0 / 169.0	2.27	67599.43	11594.587640	270.8	false
PFHxS_1	399.0 / 80.0	2.29	25243427.65	74974.540908	1608.1	false
PFHxS_2	399.0 / 99.0	2.29	7562430.84	79871.887756	2279.6	false
PFOA_1	413.0 / 369.0	2.68	7840438.60	24501.831414	607.2	false
PFOA_2	413.0 / 169.0	2.66	675283.45	34631.690542	422.9	false
PFNA_1	463.0 / 419.0	3.08	531264.40	1981.534504	285.6	false
PFNA_2	463.0 / 219.0	3.08	171203.50	2051.649578	129.3	false
PFOS_1	499.0 / 80.0	3.07	51117284.40	126486.015523	708.1	false
PFOS_2	499.0 / 99.0	3.08	8566379.38	123232.206707	1455.6	false
PFDA_1	513.0 / 469.0	3.43	34459.35	55.589843	76.6	false
PFDA_2	513.0 / 219.0	3.44	1579.66	8.638373	15.0	false
PFUnA_1	563.0 / 519.0	3.76	2119.00	22.561486	14.6	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.05	1818.42	< 0	22.5	true
PFDoA_2	613.0 / 319.0	4.05	372.52	< 0	8.2	true
PFTrDA_1	663.0 / 619.0	4.29	935.22	< 0	19.9	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.50	448.15	< 0	10.9	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	3.76	342.74	< 0	11.5	false
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J9421-FS(0)	**Injection Vial**	37
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:38:00	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.51	9387939.39	29395.499936	244.6	true
PFBS_2	298.9 / 99.0	1.50	2720264.34	27584.977844	435.3	false
PFHxA_1	313.0 / 269.0	1.83	21189760.03	85065.441295	202.5	false
PFHxA_2	313.0 / 119.0	1.83	1510828.43	80030.169459	325.6	false
PFHpA_1	363.0 / 319.0	2.24	10770429.93	46716.193888	279.6	false
PFHpA_2	363.0 / 169.0	2.24	260697.25	56930.112861	336.2	false
PFHxS_1	399.0 / 80.0	2.27	89719645.09	241431.199442	918.8	false
PFHxS_2	399.0 / 99.0	2.27	32936083.89	315178.859248	1763.6	false
PFOA_1	413.0 / 369.0	2.67	35496570.07	117979.472350	713.0	false
PFOA_2	413.0 / 169.0	2.64	3175078.34	173247.715510	516.6	false
PFNA_1	463.0 / 419.0	3.07	2340517.14	9563.894358	364.6	false
PFNA_2	463.0 / 219.0	3.07	732816.08	9503.630304	109.7	false
PFOS_1	499.0 / 80.0	3.01	157481548.63	498094.798760	631.2	false
PFOS_2	499.0 / 99.0	3.07	35084701.64	645230.123620	1932.2	false
PFDA_1	513.0 / 469.0	3.43	127299.58	325.963213	108.9	false
PFDA_2	513.0 / 219.0	3.43	5443.37	287.874963	27.5	true
PFUnA_1	563.0 / 519.0	3.75	3736.63	25.282639	16.1	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.05	2032.82	< 0	20.9	true
PFDoA_2	613.0 / 319.0	4.05	915.72	< 0	11.3	true
PFTrDA_1	663.0 / 619.0	4.29	689.35	< 0	19.0	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.50	688.74	< 0	12.7	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J9422MS-FS-D(7)	**Injection Vial**	40
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:21:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	302029.36	824.984331	250.5	false
PFBS_2	298.9 / 99.0	1.55	94782.67	870.100493	249.6	false
PFHxA_1	313.0 / 269.0	1.87	591503.38	2266.623034	73.0	false
PFHxA_2	313.0 / 119.0	1.87	40693.31	2057.255717	69.7	false
PFHpA_1	363.0 / 319.0	2.28	295314.39	1285.496795	142.6	false
PFHpA_2	363.0 / 169.0	2.27	5651.35	1212.783019	79.4	false
PFHxS_1	399.0 / 80.0	2.30	2356324.80	7394.800797	710.4	false
PFHxS_2	399.0 / 99.0	2.30	661939.38	7384.444421	907.8	false
PFOA_1	413.0 / 369.0	2.68	821143.37	2570.304073	366.2	false
PFOA_2	413.0 / 169.0	2.68	67509.03	3452.537899	273.5	false
PFNA_1	463.0 / 419.0	3.08	146026.86	469.818256	199.0	false
PFNA_2	463.0 / 219.0	3.08	42628.17	459.629114	145.4	false
PFOS_1	499.0 / 80.0	3.07	5937759.64	13242.321851	488.1	false
PFOS_2	499.0 / 99.0	3.08	1014485.60	13134.864011	917.4	false
PFDA_1	513.0 / 469.0	3.43	102490.43	262.919477	203.3	false
PFDA_2	513.0 / 219.0	3.43	4893.63	258.665792	67.2	false
PFUnA_1	563.0 / 519.0	3.76	100645.88	282.300716	189.1	false
PFUnA_2	563.0 / 269.0	3.76	5067.90	250.985877	80.2	false
PFDoA_1	613.0 / 569.0	4.04	101342.62	249.167875	266.6	false
PFDoA_2	613.0 / 319.0	4.04	13556.54	208.469118	139.9	false
PFTrDA_1	663.0 / 619.0	4.29	95019.62	273.980778	461.8	false
PFTrDA_2	663.0 / 169.0	4.28	6638.19	287.448912	182.8	false
PFTeDA_1	713.0 / 669.0	4.50	100719.13	230.940247	721.0	false
PFTeDA_2	713.0 / 169.0	4.50	5305.35	231.852002	284.2	false
NMeFOSAA_1	570.0 / 419.0	3.59	16220.28	299.596401	497.9	false
NMeFOSAA_2	570.0 / 512.0	3.59	7898.74	276.539686	226.7	false
NEtFOSAA_1	584.0 / 419.0	3.75	18641.65	328.824754	287.3	false
NEtFOSAA_2	584.0 / 483.0	3.75	730.62	69.652355	135.6	false

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Summary Quant Report

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Sample Name	J9422MS-FS-D(5)	**Injection Vial**	41
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:32:19	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	695933.18	1912.163192	279.7	false
PFBS_2	298.9 / 99.0	1.55	201483.62	1821.340387	304.4	false
PFHxA_1	313.0 / 269.0	1.87	1306553.93	3821.850999	107.4	false
PFHxA_2	313.0 / 119.0	1.87	94832.51	3661.382366	102.9	false
PFHpA_1	363.0 / 319.0	2.28	692343.32	2647.785091	192.5	false
PFHpA_2	363.0 / 169.0	2.27	14353.49	2741.414297	140.1	false
PFHxS_1	399.0 / 80.0	2.30	5023542.98	13926.560002	915.9	false
PFHxS_2	399.0 / 99.0	2.30	1421315.07	14009.261501	1266.5	false
PFOA_1	413.0 / 369.0	2.68	1739419.38	4953.911917	433.3	false
PFOA_2	413.0 / 169.0	2.68	144241.75	6728.000473	334.8	false
PFNA_1	463.0 / 419.0	3.08	280234.91	950.804125	347.3	false
PFNA_2	463.0 / 219.0	3.08	87451.16	968.195133	168.7	false
PFOS_1	499.0 / 80.0	3.07	11544573.90	23695.950563	550.2	false
PFOS_2	499.0 / 99.0	3.08	1966652.28	23451.140560	1340.2	false
PFDA_1	513.0 / 469.0	3.43	217832.16	521.708539	255.9	false
PFDA_2	513.0 / 219.0	3.43	10195.23	551.848102	109.5	false
PFUnA_1	563.0 / 519.0	3.76	225230.45	574.676501	263.3	false
PFUnA_2	563.0 / 269.0	3.76	10431.34	511.520647	165.6	false
PFDoA_1	613.0 / 569.0	4.04	215575.06	552.223130	390.7	false
PFDoA_2	613.0 / 319.0	4.04	34022.28	546.032310	255.3	false
PFTrDA_1	663.0 / 619.0	4.29	198455.28	570.236006	565.5	false
PFTrDA_2	663.0 / 169.0	4.29	13576.65	591.846775	278.6	false
PFTeDA_1	713.0 / 669.0	4.50	200026.97	473.408049	896.0	false
PFTeDA_2	713.0 / 169.0	4.50	10638.61	500.825889	459.5	false
NMeFOSAA_1	570.0 / 419.0	3.59	29371.33	553.609761	475.8	false
NMeFOSAA_2	570.0 / 512.0	3.59	14581.78	524.797928	280.3	false
NEtFOSAA_1	584.0 / 419.0	3.75	33488.23	466.535935	325.3	false
NEtFOSAA_2	584.0 / 483.0	3.76	1950.99	320.348218	302.0	false

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Summary Quant Report

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Sample Name	J9422MS-FS-D(3)	**Injection Vial**	42
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:43:11	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	3601381.29	9452.857804	287.5	false
PFBS_2	298.9 / 99.0	1.54	960195.27	8181.584598	385.7	false
PFHxA_1	313.0 / 269.0	1.86	7314111.10	23228.846434	206.4	false
PFHxA_2	313.0 / 119.0	1.86	511310.63	21426.991615	240.1	false
PFHpA_1	363.0 / 319.0	2.27	3890814.36	12327.533644	376.1	false
PFHpA_2	363.0 / 169.0	2.27	81914.70	13048.097752	270.3	false
PFHxS_1	399.0 / 80.0	2.29	27496527.90	79597.637292	1647.1	false
PFHxS_2	399.0 / 99.0	2.29	7993007.73	82280.943031	2072.4	false
PFOA_1	413.0 / 369.0	2.68	8830441.47	24849.778157	630.4	false
PFOA_2	413.0 / 169.0	2.67	750405.91	34654.778468	461.6	false
PFNA_1	463.0 / 419.0	3.08	1444135.47	4970.761611	511.7	false
PFNA_2	463.0 / 219.0	3.08	437413.20	4791.198348	207.6	false
PFOS_1	499.0 / 80.0	3.06	53747521.26	154140.966143	687.3	false
PFOS_2	499.0 / 99.0	3.07	9008274.52	150198.897449	1600.0	false
PFDA_1	513.0 / 469.0	3.43	1084719.34	3021.710968	373.3	false
PFDA_2	513.0 / 219.0	3.43	50144.10	3409.215233	180.5	false
PFUnA_1	563.0 / 519.0	3.76	1243269.83	2811.176475	597.9	false
PFUnA_2	563.0 / 269.0	3.76	64863.98	3017.534208	307.5	false
PFDoA_1	613.0 / 569.0	4.04	1143395.28	2752.592251	693.5	false
PFDoA_2	613.0 / 319.0	4.04	191577.70	2845.989086	478.8	false
PFTrDA_1	663.0 / 619.0	4.29	1094608.78	3303.277313	1033.8	false
PFTrDA_2	663.0 / 169.0	4.28	76293.10	3529.821150	627.0	false
PFTeDA_1	713.0 / 669.0	4.50	1110023.90	2855.926509	2001.9	false
PFTeDA_2	713.0 / 169.0	4.50	56440.38	2974.208460	937.5	false
NMeFOSAA_1	570.0 / 419.0	3.59	160692.25	2392.707969	708.3	false
NMeFOSAA_2	570.0 / 512.0	3.59	93464.70	2675.054006	602.0	false
NEtFOSAA_1	584.0 / 419.0	3.75	202631.24	2924.652899	1035.4	false
NEtFOSAA_2	584.0 / 483.0	3.75	10913.24	2486.981174	2088.1	false

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Summary Quant Report

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Sample Name	J9422MS-FS(0)	**Injection Vial**	43
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:54:02	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.51	15227763.20	46744.325093	283.1	false
PFBS_2	298.9 / 99.0	1.50	3963627.23	39388.024729	502.3	false
PFHxA_1	313.0 / 269.0	1.83	24779592.32	99970.018903	235.0	false
PFHxA_2	313.0 / 119.0	1.83	1772563.57	94360.184946	363.7	false
PFHpA_1	363.0 / 319.0	2.24	14171044.97	64874.618058	334.5	false
PFHpA_2	363.0 / 169.0	2.23	306769.34	70705.085758	394.0	false
PFHxS_1	399.0 / 80.0	2.27	92409754.42	258501.952892	980.1	false
PFHxS_2	399.0 / 99.0	2.26	34652333.23	344713.357324	1533.5	false
PFOA_1	413.0 / 369.0	2.67	38188094.09	124491.972631	716.7	false
PFOA_2	413.0 / 169.0	2.65	3475011.72	185979.898026	552.9	false
PFNA_1	463.0 / 419.0	3.07	6285929.77	26275.022309	490.6	false
PFNA_2	463.0 / 219.0	3.07	1921609.42	25441.138798	188.1	false
PFOS_1	499.0 / 80.0	3.00	158338086.50	498700.319520	577.4	false
PFOS_2	499.0 / 99.0	3.07	35602574.28	652004.184399	2172.1	false
PFDA_1	513.0 / 469.0	3.43	5425307.19	15218.943112	487.5	false
PFDA_2	513.0 / 219.0	3.43	250218.69	17348.679045	351.1	false
PFUnA_1	563.0 / 519.0	3.75	6530165.73	13013.556801	942.9	false
PFUnA_2	563.0 / 269.0	3.75	337576.28	14008.576642	543.6	false
PFDoA_1	613.0 / 569.0	4.04	6260039.10	14140.348264	1041.9	false
PFDoA_2	613.0 / 319.0	4.04	1020574.91	14169.672436	697.8	false
PFTrDA_1	663.0 / 619.0	4.28	5775107.04	15072.136398	1807.4	false
PFTrDA_2	663.0 / 169.0	4.28	403795.56	16180.787676	1147.7	false
PFTeDA_1	713.0 / 669.0	4.50	6264818.43	14018.758299	2826.0	false
PFTeDA_2	713.0 / 169.0	4.50	324381.94	14952.030642	1919.9	false
NMeFOSAA_1	570.0 / 419.0	3.59	972903.30	12982.963397	1629.9	false
NMeFOSAA_2	570.0 / 512.0	3.59	523721.02	13430.028043	1364.0	false
NEtFOSAA_1	584.0 / 419.0	3.75	1285920.26	12896.721281	1360.2	false
NEtFOSAA_2	584.0 / 483.0	3.75	84670.54	14008.540110	562.6	false

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Summary Quant Report

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Sample Name	J9423MSD-FS-D(7)	**Injection Vial**	45
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:15:45	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	314649.45	785.473652	244.3	false
PFBS_2	298.9 / 99.0	1.54	98822.97	830.656557	265.3	false
PFHxA_1	313.0 / 269.0	1.86	607156.33	1991.064318	75.3	false
PFHxA_2	313.0 / 119.0	1.86	43058.52	1863.662988	69.4	false
PFHpA_1	363.0 / 319.0	2.27	309567.81	1158.986077	148.7	false
PFHpA_2	363.0 / 169.0	2.27	6899.86	1280.830794	94.7	false
PFHxS_1	399.0 / 80.0	2.30	2440620.49	7057.364787	884.9	false
PFHxS_2	399.0 / 99.0	2.30	678465.24	6973.728955	1275.6	false
PFOA_1	413.0 / 369.0	2.68	876239.98	2478.613792	329.7	false
PFOA_2	413.0 / 169.0	2.67	66298.11	3060.911759	248.8	false
PFNA_1	463.0 / 419.0	3.08	150449.51	466.514092	252.2	false
PFNA_2	463.0 / 219.0	3.07	48483.38	506.980670	165.1	false
PFOS_1	499.0 / 80.0	3.07	6013879.62	10903.929993	395.3	false
PFOS_2	499.0 / 99.0	3.07	1029093.72	10828.684081	850.6	false
PFDA_1	513.0 / 469.0	3.43	112920.00	255.627957	195.7	false
PFDA_2	513.0 / 219.0	3.43	4985.06	223.517856	67.4	false
PFUnA_1	563.0 / 519.0	3.75	105757.45	267.522136	226.2	false
PFUnA_2	563.0 / 269.0	3.76	4773.94	208.177109	132.1	false
PFDoA_1	613.0 / 569.0	4.04	102041.76	223.027597	240.2	false
PFDoA_2	613.0 / 319.0	4.04	17244.69	245.547433	156.4	false
PFTrDA_1	663.0 / 619.0	4.28	101171.05	266.039770	403.6	false
PFTrDA_2	663.0 / 169.0	4.28	7445.66	296.276462	216.3	false
PFTeDA_1	713.0 / 669.0	4.50	109482.76	229.472550	661.8	false
PFTeDA_2	713.0 / 169.0	4.50	5561.68	219.387816	292.3	false
NMeFOSAA_1	570.0 / 419.0	3.59	18225.32	292.096992	312.6	false
NMeFOSAA_2	570.0 / 512.0	3.59	9267.98	282.592823	232.7	false
NEtFOSAA_1	584.0 / 419.0	3.75	15302.09	242.461460	313.8	false
NEtFOSAA_2	584.0 / 483.0	3.76	677.25	37.151249	40.7	false

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Summary Quant Report

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Sample Name	J9423MSD-FS-D(5)	**Injection Vial**	46
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:26:37	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	608218.36	1614.347599	242.8	false
PFBS_2	298.9 / 99.0	1.55	176084.43	1542.375269	311.5	false
PFHxA_1	313.0 / 269.0	1.87	1216843.02	3835.197389	102.2	false
PFHxA_2	313.0 / 119.0	1.87	82722.63	3439.598699	104.7	false
PFHpA_1	363.0 / 319.0	2.28	619891.38	2228.025772	184.3	false
PFHpA_2	363.0 / 169.0	2.27	13260.29	2378.415357	98.1	false
PFHxS_1	399.0 / 80.0	2.30	4666604.09	13023.412754	1047.4	false
PFHxS_2	399.0 / 99.0	2.30	1307009.91	12968.361147	1386.0	false
PFOA_1	413.0 / 369.0	2.68	1636316.06	4541.352303	425.9	false
PFOA_2	413.0 / 169.0	2.67	133923.49	6085.512358	308.2	false
PFNA_1	463.0 / 419.0	3.08	270709.64	875.635339	355.3	false
PFNA_2	463.0 / 219.0	3.08	88678.95	939.841830	190.1	false
PFOS_1	499.0 / 80.0	3.07	11352686.77	23816.346992	637.4	false
PFOS_2	499.0 / 99.0	3.07	1877724.73	22884.058466	1115.5	false
PFDA_1	513.0 / 469.0	3.43	200520.36	503.981746	253.3	false
PFDA_2	513.0 / 219.0	3.43	7532.35	406.342276	92.5	false
PFUnA_1	563.0 / 519.0	3.75	209191.81	505.841929	263.5	false
PFUnA_2	563.0 / 269.0	3.75	12582.58	586.142439	164.3	false
PFDoA_1	613.0 / 569.0	4.04	196233.41	503.703532	300.2	false
PFDoA_2	613.0 / 319.0	4.04	33343.52	539.963872	224.6	false
PFTrDA_1	663.0 / 619.0	4.28	182844.60	528.544751	458.7	false
PFTrDA_2	663.0 / 169.0	4.28	12097.04	528.496814	236.3	false
PFTeDA_1	713.0 / 669.0	4.50	200181.68	479.485099	846.9	false
PFTeDA_2	713.0 / 169.0	4.49	9686.58	454.948003	371.6	false
NMeFOSAA_1	570.0 / 419.0	3.59	29944.79	480.495587	966.9	false
NMeFOSAA_2	570.0 / 512.0	3.59	16831.34	518.586205	308.0	false
NEtFOSAA_1	584.0 / 419.0	3.75	30906.60	496.066577	332.3	false
NEtFOSAA_2	584.0 / 483.0	3.75	2569.24	571.029694	5042.3	false

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Summary Quant Report

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Sample Name	J9423MSD-FS-D(3)	**Injection Vial**	47
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:37:30	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	3218156.54	8539.018106	283.6	false
PFBS_2	298.9 / 99.0	1.54	888766.13	7658.139048	376.1	false
PFHxA_1	313.0 / 269.0	1.86	6249576.88	21151.635799	179.6	false
PFHxA_2	313.0 / 119.0	1.86	437279.46	19528.255654	227.2	false
PFHpA_1	363.0 / 319.0	2.27	3522346.20	12396.454584	368.2	false
PFHpA_2	363.0 / 169.0	2.26	73232.64	12956.801852	278.0	false
PFHxS_1	399.0 / 80.0	2.29	23376508.23	65609.122711	1577.2	false
PFHxS_2	399.0 / 99.0	2.29	6987820.09	69741.485442	1982.1	false
PFOA_1	413.0 / 369.0	2.68	8100111.06	25682.985816	597.5	false
PFOA_2	413.0 / 169.0	2.67	659698.97	34325.479401	503.6	false
PFNA_1	463.0 / 419.0	3.07	1257161.17	4496.897528	410.7	false
PFNA_2	463.0 / 219.0	3.07	396755.21	4520.239914	199.3	false
PFOS_1	499.0 / 80.0	3.06	48631400.68	113034.783220	691.9	false
PFOS_2	499.0 / 99.0	3.07	7969766.33	107691.506735	1508.6	false
PFDA_1	513.0 / 469.0	3.43	962776.14	2673.764945	341.9	false
PFDA_2	513.0 / 219.0	3.43	45820.73	3102.276784	185.2	false
PFUnA_1	563.0 / 519.0	3.75	1067684.91	2398.106280	432.6	false
PFUnA_2	563.0 / 269.0	3.75	57912.72	2670.219669	301.6	false
PFDoA_1	613.0 / 569.0	4.04	1060878.32	2742.193815	569.2	false
PFDoA_2	613.0 / 319.0	4.04	174329.96	2780.026848	406.6	false
PFTrDA_1	663.0 / 619.0	4.28	998093.19	3136.136560	1004.0	false
PFTrDA_2	663.0 / 169.0	4.28	69650.77	3355.016922	492.2	false
PFTeDA_1	713.0 / 669.0	4.50	1012066.99	2710.194439	1689.6	false
PFTeDA_2	713.0 / 169.0	4.49	50848.01	2786.941482	905.6	false
NMeFOSAA_1	570.0 / 419.0	3.59	155254.32	2928.418243	881.9	false
NMeFOSAA_2	570.0 / 512.0	3.59	85034.15	3081.403889	641.3	false
NEtFOSAA_1	584.0 / 419.0	3.75	171313.80	2776.419750	774.2	false
NEtFOSAA_2	584.0 / 483.0	3.75	11823.99	3064.983129	332.9	false

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Summary Quant Report

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Sample Name	J9423MSD-FS(0)	**Injection Vial**	48
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:48:22	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.50	16210503.14	45828.668644	297.4	false
PFBS_2	298.9 / 99.0	1.50	4173013.01	38192.307248	541.4	false
PFHxA_1	313.0 / 269.0	1.82	25421071.93	94027.788601	261.2	false
PFHxA_2	313.0 / 119.0	1.82	1836112.38	89613.702249	369.3	false
PFHpA_1	363.0 / 319.0	2.23	14304242.51	61195.653461	358.3	false
PFHpA_2	363.0 / 169.0	2.23	311139.94	67014.890680	378.0	false
PFHxS_1	399.0 / 80.0	2.26	95173300.73	234000.562171	1056.3	false
PFHxS_2	399.0 / 99.0	2.26	35926143.36	314117.307274	1762.2	false
PFOA_1	413.0 / 369.0	2.66	40974258.89	128428.162200	846.9	false
PFOA_2	413.0 / 169.0	2.64	3667588.31	188723.494829	621.6	false
PFNA_1	463.0 / 419.0	3.07	6702929.08	28083.995084	509.1	false
PFNA_2	463.0 / 219.0	3.07	2121227.76	28149.053011	173.6	false
PFOS_1	499.0 / 80.0	3.00	162840859.79	477593.989235	602.6	false
PFOS_2	499.0 / 99.0	3.07	29192317.26	497820.351049	2547.3	false
PFDA_1	513.0 / 469.0	3.43	5827114.61	14625.239717	523.8	false
PFDA_2	513.0 / 219.0	3.43	261589.43	16222.900661	366.4	false
PFUnA_1	563.0 / 519.0	3.75	6817572.74	12647.745685	765.6	false
PFUnA_2	563.0 / 269.0	3.75	362065.62	13986.301655	484.0	false
PFDoA_1	613.0 / 569.0	4.04	6808358.91	14279.320587	1004.4	false
PFDoA_2	613.0 / 319.0	4.04	1102646.58	14214.202320	745.5	false
PFTrDA_1	663.0 / 619.0	4.28	6264925.08	14493.344150	1809.1	false
PFTrDA_2	663.0 / 169.0	4.28	434855.88	15445.610055	1049.3	false
PFTeDA_1	713.0 / 669.0	4.49	6818381.24	13523.961479	3292.1	false
PFTeDA_2	713.0 / 169.0	4.49	353622.24	14447.313375	1534.4	false
NMeFOSAA_1	570.0 / 419.0	3.58	1069772.03	14847.576089	1261.3	false
NMeFOSAA_2	570.0 / 512.0	3.58	569787.05	15196.658722	1038.8	false
NEtFOSAA_1	584.0 / 419.0	3.74	1383394.77	13387.602325	1469.0	false
NEtFOSAA_2	584.0 / 483.0	3.75	81933.23	13067.273859	851.5	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:45:08 PM

Sample Name	KC73 IB	**Injection Vial**	8
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:01:12	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.07	109569.19	227.225719	1161.3	false
d3-MeFOSAA	573.0 / 419.0	3.62	17338.43	231.294922	215.5	false
d5-EtFOSAA	589.0 / 419.0	3.78	14475.93	194.956248	256.3	false
13C5-PFHxA	318.0 / 273.0	1.87	66698.31	223.530679	705.7	false
13C4-PFHpA	367.0 / 322.0	2.29	76413.55	226.476818	809.4	false
13C8-PFOA	421.0 / 376.0	2.70	94533.73	253.488290	1650.4	false
13C9-PFNA	472.0 / 427.0	3.09	99869.60	244.352971	17441.7	false
13C6-PFDA	519.0 / 474.0	3.45	104348.50	242.185187	1738.7	false
13C7-PFUnA	570.0 / 525.0	3.78	98904.79	237.657668	1100.9	false
13C2-PFTeDA	715.0 / 670.0	4.54	97040.24	224.087698	1950.3	false
13C3-PFBS	302.0 / 99.0	1.55	28257.17	211.649661	432.1	false
13C3-PFHxS	402.0 / 99.0	2.31	27867.26	222.976171	331.5	false
13C8-PFOS	507.0 / 99.0	3.09	32958.08	223.731924	245.0	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:45:12 PM

Sample Name	CS241PB-FS(0)	**Injection Vial**	12
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:44:39	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.06	99007.10	218.830126	1363.3	false
d3-MeFOSAA	573.0 / 419.0	3.61	14184.07	246.210168	198.5	false
d5-EtFOSAA	589.0 / 419.0	3.77	16578.70	290.529324	193.3	false
13C5-PFHxA	318.0 / 273.0	1.87	65089.39	244.325949	560.8	false
13C4-PFHpA	367.0 / 322.0	2.29	68351.13	226.900867	885.5	false
13C8-PFOA	421.0 / 376.0	2.70	79439.35	238.585404	1524.1	false
13C9-PFNA	472.0 / 427.0	3.09	93875.56	257.260986	2467.4	false
13C6-PFDA	519.0 / 474.0	3.45	93646.05	231.644793	845.9	false
13C7-PFUnA	570.0 / 525.0	3.77	90121.33	230.798961	918.5	false
13C2-PFTeDA	715.0 / 670.0	4.53	74466.84	183.273978	1394.5	false
13C3-PFBS	302.0 / 99.0	1.55	24475.47	238.544148	336.7	false
13C3-PFHxS	402.0 / 99.0	2.31	23796.94	247.761632	357.3	false
13C8-PFOS	507.0 / 99.0	3.09	29333.28	259.104860	254.1	false

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Summary Quant Report

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Printed: 26/11/2018 2:45:16 PM

Sample Name	J9419-FS(0)	**Injection Vial**	13
Sample ID	RR-FB-111618	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:55:32	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.06	100829.51	206.998745	3051.8	false
d3-MeFOSAA	573.0 / 419.0	3.61	14289.16	197.501374	180.7	false
d5-EtFOSAA	589.0 / 419.0	3.77	13610.16	189.915899	154.3	false
13C5-PFHxA	318.0 / 273.0	1.87	64410.94	212.074387	633.7	false
13C4-PFHpA	367.0 / 322.0	2.28	74317.44	216.396583	817.2	false
13C8-PFOA	421.0 / 376.0	2.70	85448.04	225.102085	1128.9	false
13C9-PFNA	472.0 / 427.0	3.09	95181.80	228.793954	1483.9	false
13C6-PFDA	519.0 / 474.0	3.45	95758.69	220.014124	1167.9	false
13C7-PFUnA	570.0 / 525.0	3.77	90230.17	214.633401	889.7	false
13C2-PFTeDA	715.0 / 670.0	4.53	86277.10	197.229885	1677.4	false
13C3-PFBS	302.0 / 99.0	1.54	25772.73	200.012262	379.0	false
13C3-PFHxS	402.0 / 99.0	2.31	27251.65	225.924975	414.2	false
13C8-PFOS	507.0 / 99.0	3.09	28578.34	201.006594	246.5	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:45:20 PM

Sample Name	CS242LCS-FS(0)	**Injection Vial**	14
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:06:23	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.06	98071.81	212.364006	947.9	false
d3-MeFOSAA	573.0 / 419.0	3.61	15510.83	231.714767	94.0	false
d5-EtFOSAA	589.0 / 419.0	3.77	13353.40	201.393287	162.2	false
13C5-PFHxA	318.0 / 273.0	1.87	62328.84	216.545334	779.3	false
13C4-PFHpA	367.0 / 322.0	2.28	68954.93	211.863500	850.8	false
13C8-PFOA	421.0 / 376.0	2.70	75473.63	209.799202	1933.0	false
13C9-PFNA	472.0 / 427.0	3.09	92621.42	234.927159	1773.3	false
13C6-PFDA	519.0 / 474.0	3.45	88414.98	214.266816	1354.8	false
13C7-PFUnA	570.0 / 525.0	3.77	83989.08	210.729353	1150.9	false
13C2-PFTeDA	715.0 / 670.0	4.53	87547.58	211.095034	1398.6	false
13C3-PFBS	302.0 / 99.0	1.54	24640.00	206.676982	366.6	false
13C3-PFHxS	402.0 / 99.0	2.31	24271.87	217.485297	382.6	false
13C8-PFOS	507.0 / 99.0	3.08	23678.22	180.002098	221.0	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:45:24 PM

Sample Name	J9412-FS-D(9)	**Injection Vial**	15
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:17:16	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.06	106526.90	210.953476	1212.2	false
d3-MeFOSAA	573.0 / 419.0	3.61	12474.00	204.206848	181.4	false
d5-EtFOSAA	589.0 / 419.0	3.77	13994.90	231.296389	223.1	false
13C5-PFHxA	318.0 / 273.0	1.87	64330.43	202.639283	491.6	false
13C4-PFHpA	367.0 / 322.0	2.28	71581.69	199.406924	785.1	false
13C8-PFOA	421.0 / 376.0	2.69	77718.50	195.875635	992.3	false
13C9-PFNA	472.0 / 427.0	3.09	90509.83	208.144520	1369.4	false
13C6-PFDA	519.0 / 474.0	3.44	96043.03	212.855849	1664.5	false
13C7-PFUnA	570.0 / 525.0	3.77	89371.63	205.065485	3052.2	false
13C2-PFTeDA	715.0 / 670.0	4.53	86760.66	191.314273	2226.4	false
13C3-PFBS	302.0 / 99.0	1.54	30489.66	280.252866	299.6	false
13C3-PFHxS	402.0 / 99.0	2.30	24074.75	236.392936	329.3	false
13C8-PFOS	507.0 / 99.0	3.09	27501.50	229.103078	187.8	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:45:28 PM

Sample Name	J9412-FS-D(7)	**Injection Vial**	16
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:28:08	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.05	126092.89	205.367077	1314.0	false
d3-MeFOSAA	573.0 / 419.0	3.61	15547.37	200.819145	185.2	false
d5-EtFOSAA	589.0 / 419.0	3.77	17566.85	229.074349	233.1	false
13C5-PFHxA	318.0 / 273.0	1.87	77382.93	220.057906	435.4	false
13C4-PFHpA	367.0 / 322.0	2.28	91423.75	229.922716	655.5	false
13C8-PFOA	421.0 / 376.0	2.69	96753.18	220.143496	1073.0	false
13C9-PFNA	472.0 / 427.0	3.08	97438.21	202.294061	874.9	false
13C6-PFDA	519.0 / 474.0	3.44	113951.46	207.707633	1489.8	false
13C7-PFUnA	570.0 / 525.0	3.77	106870.20	201.679764	843.1	false
13C2-PFTeDA	715.0 / 670.0	4.52	105346.69	191.054935	1437.3	false
13C3-PFBS	302.0 / 99.0	1.54	35324.54	256.187110	360.9	false
13C3-PFHxS	402.0 / 99.0	2.30	25206.04	195.281326	277.8	false
13C8-PFOS	507.0 / 99.0	3.08	28728.07	188.827148	266.0	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:45:32 PM

Sample Name	J9412-FS-D(5)	**Injection Vial**	17
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:38:59	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.05	121502.98	238.533861	1124.7	false
d3-MeFOSAA	573.0 / 419.0	3.60	17785.23	344.210797	180.0	false
d5-EtFOSAA	589.0 / 419.0	3.76	19347.98	378.037698	198.3	false
13C5-PFHxA	318.0 / 273.0	1.86	88259.29	243.229507	279.0	false
13C4-PFHpA	367.0 / 322.0	2.28	98564.21	240.218305	549.2	false
13C8-PFOA	421.0 / 376.0	2.69	92917.31	204.880793	987.9	false
13C9-PFNA	472.0 / 427.0	3.08	78111.12	157.155910	1199.6	false
13C6-PFDA	519.0 / 474.0	3.44	104017.02	228.538741	1316.8	false
13C7-PFUnA	570.0 / 525.0	3.76	107702.75	244.993946	775.8	false
13C2-PFTeDA	715.0 / 670.0	4.52	99683.23	217.912588	2344.2	false
13C3-PFBS	302.0 / 99.0	1.53	32806.46	356.498071	255.2	true
13C3-PFHxS	402.0 / 99.0	2.30	24828.32	288.217542	199.7	false
13C8-PFOS	507.0 / 99.0	3.08	25692.45	253.034999	200.3	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:45:42 PM

Sample Name	J9412-FS(0)	**Injection Vial**	19
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:00:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	97420.55	180.161412	907.2	false
d3-MeFOSAA	573.0 / 419.0	3.58	11224.39	315.556986	125.6	false
d5-EtFOSAA	589.0 / 419.0	3.74	16951.92	481.136814	203.9	false
13C5-PFHxA	318.0 / 273.0	1.84	64271.77	155.579865	121.7	false
13C4-PFHpA	367.0 / 322.0	2.25	65810.97	140.884246	301.6	false
13C8-PFOA	421.0 / 376.0	2.68	86013.59	166.590032	550.4	false
13C9-PFNA	472.0 / 427.0	3.08	59391.73	104.959351	354.1	false
13C6-PFDA	519.0 / 474.0	3.43	109530.45	226.693147	718.1	false
13C7-PFUnA	570.0 / 525.0	3.74	88460.85	189.551758	900.9	false
13C2-PFTeDA	715.0 / 670.0	4.48	76452.50	157.434546	1139.8	false
13C3-PFBS	302.0 / 99.0	1.51	26381.08	416.428608	168.0	false
13C3-PFHxS	402.0 / 99.0	2.28	20308.26	342.449064	126.1	true
13C8-PFOS	507.0 / 99.0	3.08	13783.96	197.196476	92.9	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:45:47 PM

Sample Name	J9413-FS-D(9)	**Injection Vial**	22
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:44:11	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.04	85733.35	203.976562	2525.9	false
d3-MeFOSAA	573.0 / 419.0	3.59	9718.83	162.008262	214.3	false
d5-EtFOSAA	589.0 / 419.0	3.76	11564.23	194.614031	153.1	false
13C5-PFHxA	318.0 / 273.0	1.86	52338.71	189.121815	447.0	false
13C4-PFHpA	367.0 / 322.0	2.28	62449.19	199.561358	2117.6	false
13C8-PFOA	421.0 / 376.0	2.69	68969.48	199.399655	5166.6	false
13C9-PFNA	472.0 / 427.0	3.08	68683.66	181.189928	981.7	false
13C6-PFDA	519.0 / 474.0	3.43	75537.12	201.132956	1005.5	false
13C7-PFUnA	570.0 / 525.0	3.76	77466.69	213.555595	886.2	false
13C2-PFTeDA	715.0 / 670.0	4.51	76343.96	202.256426	1652.8	false
13C3-PFBS	302.0 / 99.0	1.54	22014.16	206.043019	412.9	false
13C3-PFHxS	402.0 / 99.0	2.30	17823.90	178.210702	245.1	false
13C8-PFOS	507.0 / 99.0	3.08	21092.67	178.922336	236.4	false

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Summary Quant Report

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Sample Name	J9413-FS-D(7)	**Injection Vial**	23
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:55:04	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.05	109820.58	207.525483	1345.0	false
d3-MeFOSAA	573.0 / 419.0	3.60	15289.09	228.973675	200.9	false
d5-EtFOSAA	589.0 / 419.0	3.76	16920.69	255.832814	226.4	false
13C5-PFHxA	318.0 / 273.0	1.87	67908.89	210.448906	423.8	false
13C4-PFHpA	367.0 / 322.0	2.28	75503.18	206.926626	934.1	false
13C8-PFOA	421.0 / 376.0	2.69	82516.66	204.602316	1100.9	false
13C9-PFNA	472.0 / 427.0	3.08	89943.45	203.494021	735.0	false
13C6-PFDA	519.0 / 474.0	3.43	97237.69	205.643337	3395.5	false
13C7-PFUnA	570.0 / 525.0	3.76	95334.96	208.739849	991.4	false
13C2-PFTeDA	715.0 / 670.0	4.51	92245.31	194.101607	1705.5	false
13C3-PFBS	302.0 / 99.0	1.54	30931.47	260.098083	320.5	false
13C3-PFHxS	402.0 / 99.0	2.30	22613.91	203.136280	259.4	false
13C8-PFOS	507.0 / 99.0	3.08	23709.13	180.688025	198.8	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:45:58 PM

Sample Name	J9413-FS-D(5)	**Injection Vial**	24
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T21:05:57	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.04	104677.19	215.727031	10026.0	false
d3-MeFOSAA	573.0 / 419.0	3.60	14237.96	310.225952	152.7	false
d5-EtFOSAA	589.0 / 419.0	3.75	17024.03	374.478763	189.9	true
13C5-PFHxA	318.0 / 273.0	1.86	69758.40	226.179545	284.2	false
13C4-PFHpA	367.0 / 322.0	2.27	79136.79	226.916619	605.7	false
13C8-PFOA	421.0 / 376.0	2.69	71094.83	184.435125	1004.9	false
13C9-PFNA	472.0 / 427.0	3.08	73914.60	174.964142	933.5	false
13C6-PFDA	519.0 / 474.0	3.43	82740.81	190.837872	924.1	false
13C7-PFUnA	570.0 / 525.0	3.75	90223.12	215.444693	896.8	false
13C2-PFTeDA	715.0 / 670.0	4.51	89453.05	205.279121	1633.0	false
13C3-PFBS	302.0 / 99.0	1.53	28083.76	343.572413	289.3	true
13C3-PFHxS	402.0 / 99.0	2.30	21147.35	276.372084	185.5	false
13C8-PFOS	507.0 / 99.0	3.07	22071.06	244.716605	229.9	false

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Summary Quant Report

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Printed: 26/11/2018 2:46:07 PM

Sample Name	J9413-FS(0)	**Injection Vial**	26
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T21:27:41	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	97333.25	176.978759	722.0	false
d3-MeFOSAA	573.0 / 419.0	3.57	11638.71	328.351341	134.7	false
d5-EtFOSAA	589.0 / 419.0	3.73	17695.87	504.011302	232.1	false
13C5-PFHxA	318.0 / 273.0	1.83	60932.56	136.139267	103.2	false
13C4-PFHpA	367.0 / 322.0	2.24	70011.83	138.336397	339.0	false
13C8-PFOA	421.0 / 376.0	2.67	86828.68	155.219389	535.7	false
13C9-PFNA	472.0 / 427.0	3.07	57269.06	93.414876	367.4	false
13C6-PFDA	519.0 / 474.0	3.42	104006.62	211.647542	754.2	false
13C7-PFUnA	570.0 / 525.0	3.73	85125.92	179.344161	619.7	false
13C2-PFTeDA	715.0 / 670.0	4.48	82024.40	166.073419	1115.3	false
13C3-PFBS	302.0 / 99.0	1.51	24236.39	383.914535	166.7	true
13C3-PFHxS	402.0 / 99.0	2.28	21174.03	358.298800	114.0	true
13C8-PFOS	507.0 / 99.0	3.07	15033.78	215.830058	104.7	false

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Summary Quant Report

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Sample Name	J9418-FS-D(5)	**Injection Vial**	30
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:22:00	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.04	105507.82	197.560611	996.4	false
d3-MeFOSAA	573.0 / 419.0	3.59	15857.30	238.177480	178.5	false
d5-EtFOSAA	589.0 / 419.0	3.75	17008.75	257.915945	209.2	false
13C5-PFHxA	318.0 / 273.0	1.86	69457.38	195.143900	445.6	false
13C4-PFHpA	367.0 / 322.0	2.27	76784.81	190.784446	730.3	false
13C8-PFOA	421.0 / 376.0	2.68	87351.89	196.362118	8521.8	false
13C9-PFNA	472.0 / 427.0	3.07	92366.57	189.458205	866.4	false
13C6-PFDA	519.0 / 474.0	3.43	95830.07	200.821327	1003.1	false
13C7-PFUnA	570.0 / 525.0	3.75	91594.06	198.723162	662.1	false
13C2-PFTeDA	715.0 / 670.0	4.50	91232.29	190.222293	1654.0	false
13C3-PFBS	302.0 / 99.0	1.53	31693.34	267.283460	343.7	false
13C3-PFHxS	402.0 / 99.0	2.30	25978.55	234.042302	269.9	false
13C8-PFOS	507.0 / 99.0	3.07	24465.96	187.000849	218.4	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:46:21 PM

Sample Name	J9418-FS-D(3)	**Injection Vial**	31
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:32:52	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	112000.58	214.830984	920.5	false
d3-MeFOSAA	573.0 / 419.0	3.59	13281.47	208.873158	157.5	false
d5-EtFOSAA	589.0 / 419.0	3.75	21656.70	343.845351	227.8	false
13C5-PFHxA	318.0 / 273.0	1.85	78649.27	198.382708	207.7	false
13C4-PFHpA	367.0 / 322.0	2.26	99485.08	221.920867	650.4	false
13C8-PFOA	421.0 / 376.0	2.68	86245.92	174.059001	1257.4	false
13C9-PFNA	472.0 / 427.0	3.07	85275.44	157.034515	820.5	false
13C6-PFDA	519.0 / 474.0	3.43	95408.15	204.811546	1245.4	false
13C7-PFUnA	570.0 / 525.0	3.74	100578.34	223.535531	775.7	false
13C2-PFTeDA	715.0 / 670.0	4.50	94632.51	202.122238	2429.2	false
13C3-PFBS	302.0 / 99.0	1.53	31202.87	275.526721	209.0	false
13C3-PFHxS	402.0 / 99.0	2.29	24244.10	228.691761	250.5	false
13C8-PFOS	507.0 / 99.0	3.07	22100.19	176.865179	190.2	false

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Summary Quant Report

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Printed: 26/11/2018 2:46:26 PM

Sample Name	J9418-FS(0)	**Injection Vial**	32
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:43:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	75546.43	144.692187	1021.4	false
d3-MeFOSAA	573.0 / 419.0	3.59	10988.12	231.593478	105.0	false
d5-EtFOSAA	589.0 / 419.0	3.74	16261.73	346.022259	164.6	false
13C5-PFHxA	318.0 / 273.0	1.84	56708.06	140.152493	129.0	false
13C4-PFHpA	367.0 / 322.0	2.24	62177.45	135.900168	360.7	false
13C8-PFOA	421.0 / 376.0	2.67	66556.45	131.611859	463.3	false
13C9-PFNA	472.0 / 427.0	3.07	56330.87	101.639969	363.1	false
13C6-PFDA	519.0 / 474.0	3.42	67017.70	143.652428	877.3	false
13C7-PFUnA	570.0 / 525.0	3.74	66853.78	148.361957	603.3	false
13C2-PFTeDA	715.0 / 670.0	4.49	60073.07	128.117400	1246.4	false
13C3-PFBS	302.0 / 99.0	1.51	21291.76	251.969021	133.3	false
13C3-PFHxS	402.0 / 99.0	2.27	14799.58	187.094219	142.2	false
13C8-PFOS	507.0 / 99.0	3.07	11190.65	120.023942	87.9	true

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Summary Quant Report

Created with Analyst Reporter
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Sample Name	J9421-FS-D(7)	**Injection Vial**	34
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:05:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	114581.80	198.140892	1284.9	false
d3-MeFOSAA	573.0 / 419.0	3.59	12935.55	162.669850	170.3	false
d5-EtFOSAA	589.0 / 419.0	3.75	15836.51	201.055640	181.7	false
13C5-PFHxA	318.0 / 273.0	1.85	77866.60	220.181563	307.2	false
13C4-PFHpA	367.0 / 322.0	2.26	86885.39	217.273882	1028.1	false
13C8-PFOA	421.0 / 376.0	2.68	91822.61	207.743851	1697.5	false
13C9-PFNA	472.0 / 427.0	3.07	94929.09	195.970670	731.6	false
13C6-PFDA	519.0 / 474.0	3.42	105403.30	203.988177	12689.1	false
13C7-PFUnA	570.0 / 525.0	3.74	111464.80	223.337512	933.9	false
13C2-PFTeDA	715.0 / 670.0	4.50	98038.57	188.778510	1777.6	false
13C3-PFBS	302.0 / 99.0	1.53	39745.02	280.632349	388.8	false
13C3-PFHxS	402.0 / 99.0	2.29	26315.73	198.493206	313.8	false
13C8-PFOS	507.0 / 99.0	3.07	26692.25	170.811569	222.2	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:46:40 PM

Sample Name	J9421-FS-D(3)	**Injection Vial**	36
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:27:08	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	114436.08	238.070712	1387.6	false
d3-MeFOSAA	573.0 / 419.0	3.59	11996.73	207.168744	126.8	false
d5-EtFOSAA	589.0 / 419.0	3.75	17401.33	303.373877	209.1	false
13C5-PFHxA	318.0 / 273.0	1.85	76224.56	221.096260	183.0	false
13C4-PFHpA	367.0 / 322.0	2.26	97858.83	251.025325	536.7	false
13C8-PFOA	421.0 / 376.0	2.67	85189.43	197.706528	696.0	false
13C9-PFNA	472.0 / 427.0	3.07	85125.81	180.264312	555.4	false
13C6-PFDA	519.0 / 474.0	3.42	97134.24	226.155762	939.5	false
13C7-PFUnA	570.0 / 525.0	3.74	96877.17	233.523150	736.5	false
13C2-PFTeDA	715.0 / 670.0	4.50	87408.96	202.486515	1771.9	false
13C3-PFBS	302.0 / 99.0	1.52	32988.24	319.855077	221.7	false
13C3-PFHxS	402.0 / 99.0	2.28	24282.74	251.516767	203.9	false
13C8-PFOS	507.0 / 99.0	3.07	23106.70	203.052898	193.5	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:46:44 PM

Sample Name	J9421-FS(0)	**Injection Vial**	37
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:38:00	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	124947.30	269.187593	1165.1	false
d3-MeFOSAA	573.0 / 419.0	3.58	19270.17	447.752719	224.8	false
d5-EtFOSAA	589.0 / 419.0	3.74	27180.61	637.597192	227.6	false
13C5-PFHxA	318.0 / 273.0	1.82	65475.00	160.539355	120.2	false
13C4-PFHpA	367.0 / 322.0	2.23	77190.86	167.379772	329.8	false
13C8-PFOA	421.0 / 376.0	2.66	80128.55	157.196227	538.2	false
13C9-PFNA	472.0 / 427.0	3.06	79512.91	142.333019	553.0	false
13C6-PFDA	519.0 / 474.0	3.42	94746.25	228.445438	745.0	false
13C7-PFUnA	570.0 / 525.0	3.74	113125.83	282.393949	743.2	false
13C2-PFTeDA	715.0 / 670.0	4.49	99790.65	239.395035	1385.5	false
13C3-PFBS	302.0 / 99.0	1.49	27309.20	356.282512	199.7	true
13C3-PFHxS	402.0 / 99.0	2.26	26021.91	362.660238	149.4	false
13C8-PFOS	507.0 / 99.0	3.06	17743.32	209.796219	104.2	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:46:49 PM

Sample Name	J9422MS-FS-D(7)	**Injection Vial**	40
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:21:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	105661.17	214.088623	1392.0	false
d3-MeFOSAA	573.0 / 419.0	3.58	13053.10	205.647184	149.7	false
d5-EtFOSAA	589.0 / 419.0	3.75	14192.70	225.740142	193.9	false
13C5-PFHxA	318.0 / 273.0	1.86	67759.24	208.782917	350.6	false
13C4-PFHpA	367.0 / 322.0	2.27	74779.52	203.769964	613.5	false
13C8-PFOA	421.0 / 376.0	2.68	84707.57	208.832219	475.0	false
13C9-PFNA	472.0 / 427.0	3.07	90333.61	203.206604	980.0	false
13C6-PFDA	519.0 / 474.0	3.42	92083.41	208.810297	1181.6	false
13C7-PFUnA	570.0 / 525.0	3.74	92599.88	217.397279	1366.5	false
13C2-PFTeDA	715.0 / 670.0	4.50	90086.49	203.252077	1607.2	false
13C3-PFBS	302.0 / 99.0	1.53	31900.70	282.190358	310.9	false
13C3-PFHxS	402.0 / 99.0	2.29	22785.87	215.319265	305.4	false
13C8-PFOS	507.0 / 99.0	3.07	25826.07	207.051061	225.5	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:46:54 PM

Sample Name	J9422MS-FS-D(5)	**Injection Vial**	41
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:32:19	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	111208.19	219.589666	1509.0	false
d3-MeFOSAA	573.0 / 419.0	3.59	13403.33	200.895256	144.7	false
d5-EtFOSAA	589.0 / 419.0	3.74	18699.75	282.961451	242.2	false
13C5-PFHxA	318.0 / 273.0	1.85	89218.94	251.581345	299.7	false
13C4-PFHpA	367.0 / 322.0	2.27	86384.52	215.421163	696.4	false
13C8-PFOA	421.0 / 376.0	2.68	93301.13	210.502417	1156.5	false
13C9-PFNA	472.0 / 427.0	3.07	90753.04	186.829115	1387.2	false
13C6-PFDA	519.0 / 474.0	3.42	105770.73	233.739939	1107.6	false
13C7-PFUnA	570.0 / 525.0	3.74	98537.76	225.446385	757.9	false
13C2-PFTeDA	715.0 / 670.0	4.50	96279.01	211.691721	1829.6	false
13C3-PFBS	302.0 / 99.0	1.53	32295.45	271.788508	281.9	false
13C3-PFHxS	402.0 / 99.0	2.29	25908.96	232.924436	369.0	false
13C8-PFOS	507.0 / 99.0	3.06	27508.83	209.816195	220.5	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:46:58 PM

Sample Name	J9422MS-FS-D(3)	**Injection Vial**	42
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:43:11	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	126353.25	220.257549	1176.1	false
d3-MeFOSAA	573.0 / 419.0	3.58	17318.23	295.074325	131.0	false
d5-EtFOSAA	589.0 / 419.0	3.74	19724.82	339.293381	196.3	false
13C5-PFHxA	318.0 / 273.0	1.85	82688.90	220.092398	186.9	false
13C4-PFHpA	367.0 / 322.0	2.26	105435.42	248.184945	573.3	false
13C8-PFOA	421.0 / 376.0	2.67	94603.39	201.471371	1044.4	false
13C9-PFNA	472.0 / 427.0	3.06	93865.83	182.401068	822.7	false
13C6-PFDA	519.0 / 474.0	3.42	96827.28	188.901075	2288.1	false
13C7-PFUnA	570.0 / 525.0	3.74	108524.54	219.198604	692.3	false
13C2-PFTeDA	715.0 / 670.0	4.49	96471.61	187.258282	1406.4	false
13C3-PFBS	302.0 / 99.0	1.52	34186.83	327.054020	233.9	false
13C3-PFHxS	402.0 / 99.0	2.28	25142.48	256.947304	223.4	false
13C8-PFOS	507.0 / 99.0	3.06	19599.10	169.931524	173.0	false

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Summary Quant Report

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Sample Name	J9422MS-FS(0)	**Injection Vial**	43
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:54:02	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	136533.41	257.293386	1150.4	false
d3-MeFOSAA	573.0 / 419.0	3.59	20391.77	478.582478	121.9	false
d5-EtFOSAA	589.0 / 419.0	3.74	28031.66	664.178979	186.1	false
13C5-PFHxA	318.0 / 273.0	1.82	65155.16	155.249603	112.8	false
13C4-PFHpA	367.0 / 322.0	2.23	73151.90	154.148170	318.7	false
13C8-PFOA	421.0 / 376.0	2.66	81695.14	155.749521	482.8	false
13C9-PFNA	472.0 / 427.0	3.06	78032.07	135.742797	420.9	false
13C6-PFDA	519.0 / 474.0	3.42	97208.55	205.015399	677.5	false
13C7-PFUnA	570.0 / 525.0	3.74	122541.89	267.571430	754.0	false
13C2-PFTeDA	715.0 / 670.0	4.49	112509.98	236.090153	1430.9	false
13C3-PFBS	302.0 / 99.0	1.49	29298.72	386.085308	203.5	false
13C3-PFHxS	402.0 / 99.0	2.26	24686.73	347.514901	157.0	false
13C8-PFOS	507.0 / 99.0	3.06	18085.68	215.996476	113.0	false

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Summary Quant Report

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Sample Name	J9423MSD-FS-D(7)	**Injection Vial**	45
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:15:45	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	116665.36	207.531451	1266.4	false
d3-MeFOSAA	573.0 / 419.0	3.58	15527.26	197.382684	204.3	false
d5-EtFOSAA	589.0 / 419.0	3.74	15564.65	199.750591	241.9	false
13C5-PFHxA	318.0 / 273.0	1.85	79041.61	214.423359	389.4	false
13C4-PFHpA	367.0 / 322.0	2.26	86675.22	207.942075	995.7	false
13C8-PFOA	421.0 / 376.0	2.67	93719.40	203.420481	886.5	false
13C9-PFNA	472.0 / 427.0	3.06	93655.09	185.485402	951.5	false
13C6-PFDA	519.0 / 474.0	3.42	103944.36	206.935619	2174.7	false
13C7-PFUnA	570.0 / 525.0	3.74	103048.02	212.396388	1025.0	false
13C2-PFTeDA	715.0 / 670.0	4.49	98436.36	194.982074	1504.1	false
13C3-PFBS	302.0 / 99.0	1.53	34849.76	248.740722	403.3	false
13C3-PFHxS	402.0 / 99.0	2.29	24754.74	188.747303	337.8	false
13C8-PFOS	507.0 / 99.0	3.06	31167.77	201.618307	243.2	false

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Summary Quant Report

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Sample Name	J9423MSD-FS-D(5)	**Injection Vial**	46
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:26:37	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	110139.18	208.204568	1446.6	false
d3-MeFOSAA	573.0 / 419.0	3.58	15544.88	242.993064	186.4	false
d5-EtFOSAA	589.0 / 419.0	3.74	16382.94	258.543054	206.4	false
13C5-PFHxA	318.0 / 273.0	1.85	82805.96	232.920739	332.1	false
13C4-PFHpA	367.0 / 322.0	2.26	91673.28	228.044940	692.4	false
13C8-PFOA	421.0 / 376.0	2.67	95723.90	215.434776	1315.1	false
13C9-PFNA	472.0 / 427.0	3.06	94721.94	194.517733	816.5	false
13C6-PFDA	519.0 / 474.0	3.42	100529.42	212.683572	783.4	false
13C7-PFUnA	570.0 / 525.0	3.74	104414.08	228.703578	606.1	false
13C2-PFTeDA	715.0 / 670.0	4.49	95250.88	200.500080	1526.1	false
13C3-PFBS	302.0 / 99.0	1.53	33346.20	292.675039	341.7	false
13C3-PFHxS	402.0 / 99.0	2.29	25486.46	238.959402	308.1	false
13C8-PFOS	507.0 / 99.0	3.06	26735.03	212.665617	267.4	false

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Summary Quant Report

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Sample Name	J9423MSD-FS-D(3)	**Injection Vial**	47
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:37:30	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	117671.51	231.863576	1387.7	false
d3-MeFOSAA	573.0 / 419.0	3.58	14060.59	245.780952	116.9	false
d5-EtFOSAA	589.0 / 419.0	3.74	17350.44	306.189121	192.2	false
13C5-PFHxA	318.0 / 273.0	1.85	77583.15	224.188881	217.8	false
13C4-PFHpA	367.0 / 322.0	2.26	94921.41	242.572684	653.7	false
13C8-PFOA	421.0 / 376.0	2.67	83965.11	194.130758	633.4	false
13C9-PFNA	472.0 / 427.0	3.06	90212.64	190.316339	724.4	false
13C6-PFDA	519.0 / 474.0	3.42	96955.39	213.808755	855.0	false
13C7-PFUnA	570.0 / 525.0	3.74	109367.13	249.697095	1074.8	false
13C2-PFTeDA	715.0 / 670.0	4.49	92599.58	203.173626	1728.8	false
13C3-PFBS	302.0 / 99.0	1.52	33808.01	331.815788	271.5	false
13C3-PFHxS	402.0 / 99.0	2.28	25385.64	266.158830	231.9	false
13C8-PFOS	507.0 / 99.0	3.06	24432.45	217.330958	203.1	false

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Summary Quant Report

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Sample Name	J9423MSD-FS(0)	**Injection Vial**	48
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:48:22	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	147052.05	245.811387	1207.1	false
d3-MeFOSAA	573.0 / 419.0	3.58	19137.48	434.303926	132.5	false
d5-EtFOSAA	589.0 / 419.0	3.74	29935.09	685.841930	238.4	false
13C5-PFHxA	318.0 / 273.0	1.81	71064.75	154.596124	126.1	false
13C4-PFHpA	367.0 / 322.0	2.22	78275.83	150.592422	368.5	false
13C8-PFOA	421.0 / 376.0	2.65	84969.23	147.895475	407.4	false
13C9-PFNA	472.0 / 427.0	3.05	77860.05	123.657681	370.3	false
13C6-PFDA	519.0 / 474.0	3.41	108634.40	203.231301	581.6	false
13C7-PFUnA	570.0 / 525.0	3.74	131640.55	254.968238	677.9	false
13C2-PFTeDA	715.0 / 670.0	4.49	126914.50	236.232301	1726.3	false
13C3-PFBS	302.0 / 99.0	1.48	31812.35	405.356697	186.0	false
13C3-PFHxS	402.0 / 99.0	2.25	28171.34	383.463836	154.3	false
13C8-PFOS	507.0 / 99.0	3.05	19049.04	219.984420	121.5	false

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Summary Ion Ratio Report

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Sample Name	KC73 IB	**Injection Vial**	8
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:01:12	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.58	PFBS			
PFBS_2	298.9 / 99.0	1.58	PFBS	0.380	0.290	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.076	ü
PFHpA_1	363.0 / 319.0	2.30	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.021	
PFHxS_1	399.0 / 80.0	2.33	PFHxS			
PFHxS_2	399.0 / 99.0	2.33	PFHxS	0.260	0.283	ü
PFOA_1	413.0 / 369.0	2.71	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.064	
PFNA_1	463.0 / 419.0	3.11	PFNA			
PFNA_2	463.0 / 219.0	3.11	PFNA	0.350	0.297	ü
PFOS_1	499.0 / 80.0	3.10	PFOS			
PFOS_2	499.0 / 99.0	3.11	PFOS	0.140	0.181	ü
PFDA_1	513.0 / 469.0	3.47	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.045	
PFUnA_1	563.0 / 519.0	3.80	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	
PFDoA_1	613.0 / 569.0	4.08	PFDoA			
PFDoA_2	613.0 / 319.0	4.08	PFDoA	0.180	0.159	ü
PFTrDA_1	663.0 / 619.0	4.33	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.33	PFTrDA	0.060	0.066	ü
PFTeDA_1	713.0 / 669.0	4.55	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.55	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.63	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.63	NMeFOSAA	0.880	0.525	
NEtFOSAA_1	584.0 / 419.0	3.79	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.068	

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Summary Ion Ratio Report

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Sample Name	CS241PB-FS(0)	**Injection Vial**	12
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:44:39	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	N/A	PFBS			
PFBS_2	298.9 / 99.0	N/A	PFBS	N/A	0.290	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.076	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.021	ü
PFHxS_1	399.0 / 80.0	N/A	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	PFHxS	N/A	0.283	ü
PFOA_1	413.0 / 369.0	2.71	PFOA			
PFOA_2	413.0 / 169.0	2.71	PFOA	0.040	0.064	ü
PFNA_1	463.0 / 419.0	3.11	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.297	
PFOS_1	499.0 / 80.0	N/A	PFOS			
PFOS_2	499.0 / 99.0	N/A	PFOS	N/A	0.181	ü
PFDA_1	513.0 / 469.0	3.46	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.045	
PFUnA_1	563.0 / 519.0	3.79	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	
PFDoA_1	613.0 / 569.0	4.07	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.159	
PFTrDA_1	663.0 / 619.0	4.31	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	
PFTeDA_1	713.0 / 669.0	4.53	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.54	PFTeDA	0.150	0.051	
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.78	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.068	

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Summary Ion Ratio Report

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Sample Name	J9419-FS(0)	**Injection Vial**	13
Sample ID	RR-FB-111618	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:55:32	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.56	PFBS			
PFBS_2	298.9 / 99.0	1.54	PFBS	0.540	0.290	
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.076	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.021	ü
PFHxS_1	399.0 / 80.0	N/A	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	PFHxS	N/A	0.283	ü
PFOA_1	413.0 / 369.0	2.71	PFOA			
PFOA_2	413.0 / 169.0	2.71	PFOA	0.070	0.064	ü
PFNA_1	463.0 / 419.0	3.09	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.297	
PFOS_1	499.0 / 80.0	N/A	PFOS			
PFOS_2	499.0 / 99.0	N/A	PFOS	N/A	0.181	ü
PFDA_1	513.0 / 469.0	3.46	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.045	
PFUnA_1	563.0 / 519.0	3.79	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	
PFDoA_1	613.0 / 569.0	4.07	PFDoA			
PFDoA_2	613.0 / 319.0	4.06	PFDoA	0.200	0.159	ü
PFTrDA_1	663.0 / 619.0	4.32	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.32	PFTrDA	0.080	0.066	ü
PFTeDA_1	713.0 / 669.0	4.54	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.54	PFTeDA	0.040	0.051	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.79	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.068	

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Summary Ion Ratio Report

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Sample Name	CS242LCS-FS(0)	**Injection Vial**	14
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:06:23	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.56	PFBS			
PFBS_2	298.9 / 99.0	1.56	PFBS	0.310	0.290	ü
PFHxA_1	313.0 / 269.0	1.89	PFHxA			
PFHxA_2	313.0 / 119.0	1.88	PFHxA	0.080	0.076	ü
PFHpA_1	363.0 / 319.0	2.29	PFHpA			
PFHpA_2	363.0 / 169.0	2.29	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.32	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	PFHxS	0.290	0.283	ü
PFOA_1	413.0 / 369.0	2.70	PFOA			
PFOA_2	413.0 / 169.0	2.70	PFOA	0.060	0.064	ü
PFNA_1	463.0 / 419.0	3.10	PFNA			
PFNA_2	463.0 / 219.0	3.10	PFNA	0.300	0.297	ü
PFOS_1	499.0 / 80.0	3.10	PFOS			
PFOS_2	499.0 / 99.0	3.10	PFOS	0.170	0.181	ü
PFDA_1	513.0 / 469.0	3.46	PFDA			
PFDA_2	513.0 / 219.0	3.46	PFDA	0.040	0.045	ü
PFUnA_1	563.0 / 519.0	3.79	PFUnA			
PFUnA_2	563.0 / 269.0	3.79	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.07	PFDoA			
PFDoA_2	613.0 / 319.0	4.07	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.32	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.31	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.53	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.53	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.62	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.62	NMeFOSAA	0.540	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.78	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.78	NEtFOSAA	0.060	0.068	ü

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Summary Ion Ratio Report

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Sample Name	J9412-FS-D(9)	**Injection Vial**	15
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:17:16	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.56	PFBS			
PFBS_2	298.9 / 99.0	1.56	PFBS	0.300	0.290	ü
PFHxA_1	313.0 / 269.0	1.88	PFHxA			
PFHxA_2	313.0 / 119.0	1.88	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.29	PFHpA			
PFHpA_2	363.0 / 169.0	2.29	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.31	PFHxS			
PFHxS_2	399.0 / 99.0	2.31	PFHxS	0.280	0.283	ü
PFOA_1	413.0 / 369.0	2.70	PFOA			
PFOA_2	413.0 / 169.0	2.69	PFOA	0.080	0.064	ü
PFNA_1	463.0 / 419.0	3.10	PFNA			
PFNA_2	463.0 / 219.0	3.10	PFNA	0.330	0.297	ü
PFOS_1	499.0 / 80.0	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.10	PFOS	0.160	0.181	ü
PFDA_1	513.0 / 469.0	3.46	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.045	
PFUnA_1	563.0 / 519.0	3.79	PFUnA			
PFUnA_2	563.0 / 269.0	3.79	PFUnA	0.170	0.054	
PFDoA_1	613.0 / 569.0	4.07	PFDoA			
PFDoA_2	613.0 / 319.0	4.06	PFDoA	0.170	0.159	ü
PFTrDA_1	663.0 / 619.0	4.32	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	
PFTeDA_1	713.0 / 669.0	4.53	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.51	PFTeDA	0.090	0.051	
NMeFOSAA_1	570.0 / 419.0	3.62	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.62	NMeFOSAA	2.530	0.525	
NEtFOSAA_1	584.0 / 419.0	3.80	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.068	

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Summary Ion Ratio Report

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Sample Name	J9412-FS-D(7)	**Injection Vial**	16
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:28:08	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.56	PFBS			
PFBS_2	298.9 / 99.0	1.56	PFBS	0.310	0.290	ü
PFHxA_1	313.0 / 269.0	1.88	PFHxA			
PFHxA_2	313.0 / 119.0	1.88	PFHxA	0.060	0.076	ü
PFHpA_1	363.0 / 319.0	2.29	PFHpA			
PFHpA_2	363.0 / 169.0	2.29	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.31	PFHxS			
PFHxS_2	399.0 / 99.0	2.31	PFHxS	0.280	0.283	ü
PFOA_1	413.0 / 369.0	2.70	PFOA			
PFOA_2	413.0 / 169.0	2.69	PFOA	0.080	0.064	ü
PFNA_1	463.0 / 419.0	3.10	PFNA			
PFNA_2	463.0 / 219.0	3.10	PFNA	0.290	0.297	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.09	PFOS	0.160	0.181	ü
PFDA_1	513.0 / 469.0	3.45	PFDA			
PFDA_2	513.0 / 219.0	3.46	PFDA	0.040	0.045	ü
PFUnA_1	563.0 / 519.0	3.79	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.05	PFDoA	0.390	0.159	
PFTrDA_1	663.0 / 619.0	4.31	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	
PFTeDA_1	713.0 / 669.0	4.52	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.54	PFTeDA	0.130	0.051	
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.525	
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.068	ü

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Summary Ion Ratio Report

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Sample Name	J9412-FS-D(5)	**Injection Vial**	17
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:38:59	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.55	PFBS			
PFBS_2	298.9 / 99.0	1.55	PFBS	0.300	0.290	ü
PFHxA_1	313.0 / 269.0	1.87	PFHxA			
PFHxA_2	313.0 / 119.0	1.87	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.29	PFHpA			
PFHpA_2	363.0 / 169.0	2.28	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.31	PFHxS			
PFHxS_2	399.0 / 99.0	2.31	PFHxS	0.310	0.283	ü
PFOA_1	413.0 / 369.0	2.70	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.080	0.064	ü
PFNA_1	463.0 / 419.0	3.09	PFNA			
PFNA_2	463.0 / 219.0	3.09	PFNA	0.300	0.297	ü
PFOS_1	499.0 / 80.0	3.05	PFOS			
PFOS_2	499.0 / 99.0	3.09	PFOS	0.160	0.181	ü
PFDA_1	513.0 / 469.0	3.45	PFDA			
PFDA_2	513.0 / 219.0	3.44	PFDA	0.040	0.045	ü
PFUnA_1	563.0 / 519.0	3.77	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	
PFDoA_1	613.0 / 569.0	4.06	PFDoA			
PFDoA_2	613.0 / 319.0	4.08	PFDoA	0.440	0.159	
PFTrDA_1	663.0 / 619.0	4.31	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	
PFTeDA_1	713.0 / 669.0	4.52	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.53	PFTeDA	0.150	0.051	
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.525	
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.068	ü

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Summary Ion Ratio Report

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Sample Name	J9412-FS(0)	**Injection Vial**	19
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:00:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.53	PFBS			
PFBS_2	298.9 / 99.0	1.53	PFBS	0.310	0.290	ü
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.080	0.076	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.26	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.27	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.540	0.283	
PFOA_1	413.0 / 369.0	2.69	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.090	0.064	ü
PFNA_1	463.0 / 419.0	3.09	PFNA			
PFNA_2	463.0 / 219.0	3.09	PFNA	0.290	0.297	ü
PFOS_1	499.0 / 80.0	3.01	PFOS			
PFOS_2	499.0 / 99.0	3.09	PFOS	0.230	0.181	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.43	PFDA	0.030	0.045	ü
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	
PFDoA_1	613.0 / 569.0	4.05	PFDoA			
PFDoA_2	613.0 / 319.0	4.09	PFDoA	0.580	0.159	
PFTrDA_1	663.0 / 619.0	4.29	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	
PFTeDA_1	713.0 / 669.0	4.49	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.051	
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.525	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.068	ü

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Summary Ion Ratio Report

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Sample Name	J9413-FS-D(9)	**Injection Vial**	22
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:44:11	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.56	PFBS			
PFBS_2	298.9 / 99.0	1.55	PFBS	0.310	0.290	ü
PFHxA_1	313.0 / 269.0	1.88	PFHxA			
PFHxA_2	313.0 / 119.0	1.88	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.29	PFHpA			
PFHpA_2	363.0 / 169.0	2.29	PFHpA	0.030	0.021	ü
PFHxS_1	399.0 / 80.0	2.31	PFHxS			
PFHxS_2	399.0 / 99.0	2.31	PFHxS	0.290	0.283	ü
PFOA_1	413.0 / 369.0	2.70	PFOA			
PFOA_2	413.0 / 169.0	2.69	PFOA	0.080	0.064	ü
PFNA_1	463.0 / 419.0	3.09	PFNA			
PFNA_2	463.0 / 219.0	3.09	PFNA	0.310	0.297	ü
PFOS_1	499.0 / 80.0	3.05	PFOS			
PFOS_2	499.0 / 99.0	3.09	PFOS	0.170	0.181	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.045	
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	ü
PFDoA_1	613.0 / 569.0	4.07	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.159	
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	4.52	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.051	
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.525	
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.068	ü

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Summary Ion Ratio Report

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Sample Name	J9413-FS-D(7)	**Injection Vial**	23
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:55:04	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.56	PFBS			
PFBS_2	298.9 / 99.0	1.56	PFBS	0.290	0.290	ü
PFHxA_1	313.0 / 269.0	1.88	PFHxA			
PFHxA_2	313.0 / 119.0	1.88	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.29	PFHpA			
PFHpA_2	363.0 / 169.0	2.29	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.31	PFHxS			
PFHxS_2	399.0 / 99.0	2.31	PFHxS	0.280	0.283	ü
PFOA_1	413.0 / 369.0	2.70	PFOA			
PFOA_2	413.0 / 169.0	2.69	PFOA	0.080	0.064	ü
PFNA_1	463.0 / 419.0	3.09	PFNA			
PFNA_2	463.0 / 219.0	3.09	PFNA	0.330	0.297	ü
PFOS_1	499.0 / 80.0	3.05	PFOS			
PFOS_2	499.0 / 99.0	3.09	PFOS	0.160	0.181	ü
PFDA_1	513.0 / 469.0	3.45	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.045	
PFUnA_1	563.0 / 519.0	3.77	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	
PFDoA_1	613.0 / 569.0	4.06	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.159	
PFTrDA_1	663.0 / 619.0	4.31	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	
PFTeDA_1	713.0 / 669.0	4.51	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.051	
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.525	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.068	ü

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Summary Ion Ratio Report

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Sample Name	J9413-FS-D(5)	**Injection Vial**	24
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T21:05:57	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.55	PFBS			
PFBS_2	298.9 / 99.0	1.55	PFBS	0.300	0.290	ü
PFHxA_1	313.0 / 269.0	1.87	PFHxA			
PFHxA_2	313.0 / 119.0	1.87	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.28	PFHpA			
PFHpA_2	363.0 / 169.0	2.28	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.31	PFHxS			
PFHxS_2	399.0 / 99.0	2.31	PFHxS	0.310	0.283	ü
PFOA_1	413.0 / 369.0	2.69	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.080	0.064	ü
PFNA_1	463.0 / 419.0	3.09	PFNA			
PFNA_2	463.0 / 219.0	3.09	PFNA	0.310	0.297	ü
PFOS_1	499.0 / 80.0	3.05	PFOS			
PFOS_2	499.0 / 99.0	3.09	PFOS	0.160	0.181	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.44	PFDA	0.080	0.045	
PFUnA_1	563.0 / 519.0	3.77	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	4.08	PFDoA	N/A	0.159	
PFTrDA_1	663.0 / 619.0	4.30	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	
PFTeDA_1	713.0 / 669.0	4.51	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.051	
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.525	
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.068	ü

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Summary Ion Ratio Report

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Sample Name	J9413-FS(0)	**Injection Vial**	26
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T21:27:41	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.52	PFBS			
PFBS_2	298.9 / 99.0	1.52	PFBS	0.310	0.290	ü
PFHxA_1	313.0 / 269.0	1.84	PFHxA			
PFHxA_2	313.0 / 119.0	1.84	PFHxA	0.080	0.076	ü
PFHpA_1	363.0 / 319.0	2.25	PFHpA			
PFHpA_2	363.0 / 169.0	2.25	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.26	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.550	0.283	
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.090	0.064	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.300	0.297	ü
PFOS_1	499.0 / 80.0	3.00	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.340	0.181	
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.42	PFDA	0.040	0.045	ü
PFUnA_1	563.0 / 519.0	3.74	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.08	PFDoA	0.590	0.159	
PFTrDA_1	663.0 / 619.0	4.29	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.051	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.525	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.068	ü

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Summary Ion Ratio Report

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Sample Name	J9418-FS-D(5)	**Injection Vial**	30
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:22:00	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.55	PFBS			
PFBS_2	298.9 / 99.0	1.55	PFBS	0.320	0.290	ü
PFHxA_1	313.0 / 269.0	1.87	PFHxA			
PFHxA_2	313.0 / 119.0	1.87	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.28	PFHpA			
PFHpA_2	363.0 / 169.0	2.28	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.290	0.283	ü
PFOA_1	413.0 / 369.0	2.69	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.080	0.064	ü
PFNA_1	463.0 / 419.0	3.09	PFNA			
PFNA_2	463.0 / 219.0	3.09	PFNA	0.340	0.297	ü
PFOS_1	499.0 / 80.0	3.09	PFOS			
PFOS_2	499.0 / 99.0	3.09	PFOS	0.170	0.181	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.43	PFDA	0.070	0.045	
PFUnA_1	563.0 / 519.0	3.77	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.05	PFDoA	0.110	0.159	ü
PFTrDA_1	663.0 / 619.0	4.29	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.34	PFTrDA	0.610	0.066	
PFTeDA_1	713.0 / 669.0	4.50	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.051	
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.525	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.068	ü

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Summary Ion Ratio Report

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Sample Name	J9418-FS-D(3)	**Injection Vial**	31
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:32:52	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.55	PFBS			
PFBS_2	298.9 / 99.0	1.55	PFBS	0.300	0.290	ü
PFHxA_1	313.0 / 269.0	1.86	PFHxA			
PFHxA_2	313.0 / 119.0	1.87	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.28	PFHpA			
PFHpA_2	363.0 / 169.0	2.27	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.290	0.283	ü
PFOA_1	413.0 / 369.0	2.69	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.080	0.064	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.310	0.297	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.170	0.181	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.43	PFDA	0.040	0.045	ü
PFUnA_1	563.0 / 519.0	3.76	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.08	PFDoA	0.340	0.159	
PFTrDA_1	663.0 / 619.0	4.30	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.29	PFTrDA	0.120	0.066	
PFTeDA_1	713.0 / 669.0	4.49	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.051	
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.75	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.068	

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Summary Ion Ratio Report

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Sample Name	J9418-FS(0)	**Injection Vial**	32
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:43:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.53	PFBS			
PFBS_2	298.9 / 99.0	1.53	PFBS	0.280	0.290	ü
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.25	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.28	PFHxS	0.330	0.283	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.080	0.064	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.310	0.297	ü
PFOS_1	499.0 / 80.0	3.03	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.200	0.181	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.42	PFDA	0.030	0.045	ü
PFUnA_1	563.0 / 519.0	3.76	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	
PFDoA_1	613.0 / 569.0	4.05	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.159	
PFTrDA_1	663.0 / 619.0	4.30	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	
PFTeDA_1	713.0 / 669.0	4.50	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.051	
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.74	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.068	

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Summary Ion Ratio Report

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Sample Name	J9421-FS-D(7)	**Injection Vial**	34
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:05:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.54	PFBS			
PFBS_2	298.9 / 99.0	1.54	PFBS	0.300	0.290	ü
PFHxA_1	313.0 / 269.0	1.87	PFHxA			
PFHxA_2	313.0 / 119.0	1.87	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.28	PFHpA			
PFHpA_2	363.0 / 169.0	2.27	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.280	0.283	ü
PFOA_1	413.0 / 369.0	2.69	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.070	0.064	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.280	0.297	ü
PFOS_1	499.0 / 80.0	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.160	0.181	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.41	PFDA	0.060	0.045	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	ü
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.159	
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	4.49	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.051	
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.525	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.068	ü

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Summary Ion Ratio Report

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Sample Name	J9421-FS-D(3)	**Injection Vial**	36
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:27:08	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.54	PFBS			
PFBS_2	298.9 / 99.0	1.54	PFBS	0.310	0.290	ü
PFHxA_1	313.0 / 269.0	1.86	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	2.27	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.300	0.283	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.66	PFOA	0.090	0.064	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.320	0.297	ü
PFOS_1	499.0 / 80.0	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.170	0.181	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.44	PFDA	0.050	0.045	ü
PFUnA_1	563.0 / 519.0	3.76	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	
PFDoA_1	613.0 / 569.0	4.05	PFDoA			
PFDoA_2	613.0 / 319.0	4.05	PFDoA	0.200	0.159	ü
PFTrDA_1	663.0 / 619.0	4.29	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	
PFTeDA_1	713.0 / 669.0	4.50	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.051	
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.76	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.068	

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Summary Ion Ratio Report

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Sample Name	J9421-FS(0)	**Injection Vial**	37
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:38:00	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.51	PFBS			
PFBS_2	298.9 / 99.0	1.50	PFBS	0.290	0.290	ü
PFHxA_1	313.0 / 269.0	1.83	PFHxA			
PFHxA_2	313.0 / 119.0	1.83	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.24	PFHpA			
PFHpA_2	363.0 / 169.0	2.24	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.27	PFHxS			
PFHxS_2	399.0 / 99.0	2.27	PFHxS	0.370	0.283	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.64	PFOA	0.090	0.064	ü
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.310	0.297	ü
PFOS_1	499.0 / 80.0	3.01	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.220	0.181	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.43	PFDA	0.040	0.045	ü
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	
PFDoA_1	613.0 / 569.0	4.05	PFDoA			
PFDoA_2	613.0 / 319.0	4.05	PFDoA	0.450	0.159	
PFTrDA_1	663.0 / 619.0	4.29	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	
PFTeDA_1	713.0 / 669.0	4.50	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.051	
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.525	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.068	ü

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Summary Ion Ratio Report

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Sample Name	J9422MS-FS-D(7)	**Injection Vial**	40
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:21:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.55	PFBS			
PFBS_2	298.9 / 99.0	1.55	PFBS	0.310	0.290	ü
PFHxA_1	313.0 / 269.0	1.87	PFHxA			
PFHxA_2	313.0 / 119.0	1.87	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.28	PFHpA			
PFHpA_2	363.0 / 169.0	2.27	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.280	0.283	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.080	0.064	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.290	0.297	ü
PFOS_1	499.0 / 80.0	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.170	0.181	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.43	PFDA	0.050	0.045	ü
PFUnA_1	563.0 / 519.0	3.76	PFUnA			
PFUnA_2	563.0 / 269.0	3.76	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.04	PFDoA	0.130	0.159	ü
PFTrDA_1	663.0 / 619.0	4.29	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.28	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.50	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.50	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.490	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.75	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.75	NEtFOSAA	0.040	0.068	ü

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Summary Ion Ratio Report

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Sample Name	J9422MS-FS-D(5)	**Injection Vial**	41
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:32:19	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.55	PFBS			
PFBS_2	298.9 / 99.0	1.55	PFBS	0.290	0.290	ü
PFHxA_1	313.0 / 269.0	1.87	PFHxA			
PFHxA_2	313.0 / 119.0	1.87	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.28	PFHpA			
PFHpA_2	363.0 / 169.0	2.27	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.280	0.283	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.080	0.064	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.310	0.297	ü
PFOS_1	499.0 / 80.0	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.170	0.181	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.43	PFDA	0.050	0.045	ü
PFUnA_1	563.0 / 519.0	3.76	PFUnA			
PFUnA_2	563.0 / 269.0	3.76	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.04	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.29	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.29	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.50	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.50	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.500	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.75	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.76	NEtFOSAA	0.060	0.068	ü

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Summary Ion Ratio Report

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Sample Name	J9422MS-FS-D(3)	**Injection Vial**	42
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:43:11	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.54	PFBS			
PFBS_2	298.9 / 99.0	1.54	PFBS	0.270	0.290	ü
PFHxA_1	313.0 / 269.0	1.86	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	2.27	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.290	0.283	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.080	0.064	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.300	0.297	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.170	0.181	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.43	PFDA	0.050	0.045	ü
PFUnA_1	563.0 / 519.0	3.76	PFUnA			
PFUnA_2	563.0 / 269.0	3.76	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.04	PFDoA	0.170	0.159	ü
PFTrDA_1	663.0 / 619.0	4.29	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.28	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.50	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.50	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.580	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.75	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.75	NEtFOSAA	0.050	0.068	ü

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Summary Ion Ratio Report

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Sample Name	J9422MS-FS(0)	**Injection Vial**	43
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:54:02	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.51	PFBS			
PFBS_2	298.9 / 99.0	1.50	PFBS	0.260	0.290	ü
PFHxA_1	313.0 / 269.0	1.83	PFHxA			
PFHxA_2	313.0 / 119.0	1.83	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.24	PFHpA			
PFHpA_2	363.0 / 169.0	2.23	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.27	PFHxS			
PFHxS_2	399.0 / 99.0	2.26	PFHxS	0.370	0.283	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.65	PFOA	0.090	0.064	ü
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.310	0.297	ü
PFOS_1	499.0 / 80.0	3.00	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.220	0.181	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.43	PFDA	0.050	0.045	ü
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	3.75	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.04	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.28	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.28	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.50	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.50	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.540	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.75	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.75	NEtFOSAA	0.070	0.068	ü

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Summary Ion Ratio Report

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Sample Name	J9423MSD-FS-D(7)	**Injection Vial**	45
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:15:45	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.55	PFBS			
PFBS_2	298.9 / 99.0	1.54	PFBS	0.310	0.290	ü
PFHxA_1	313.0 / 269.0	1.86	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	2.27	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.280	0.283	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.080	0.064	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.320	0.297	ü
PFOS_1	499.0 / 80.0	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.170	0.181	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.43	PFDA	0.040	0.045	ü
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	3.76	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.04	PFDoA	0.170	0.159	ü
PFTrDA_1	663.0 / 619.0	4.28	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.28	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.50	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.50	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.510	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.75	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.76	NEtFOSAA	0.040	0.068	ü

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Summary Ion Ratio Report

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Sample Name	J9423MSD-FS-D(5)	**Injection Vial**	46
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:26:37	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.55	PFBS			
PFBS_2	298.9 / 99.0	1.55	PFBS	0.290	0.290	ü
PFHxA_1	313.0 / 269.0	1.87	PFHxA			
PFHxA_2	313.0 / 119.0	1.87	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.28	PFHpA			
PFHpA_2	363.0 / 169.0	2.27	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.280	0.283	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.080	0.064	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.330	0.297	ü
PFOS_1	499.0 / 80.0	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.170	0.181	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.43	PFDA	0.040	0.045	ü
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	3.75	PFUnA	0.060	0.054	ü
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.04	PFDoA	0.170	0.159	ü
PFTrDA_1	663.0 / 619.0	4.28	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.28	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.50	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.49	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.560	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.75	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.75	NEtFOSAA	0.080	0.068	ü

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Summary Ion Ratio Report

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Sample Name	J9423MSD-FS-D(3)	**Injection Vial**	47
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:37:30	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.54	PFBS			
PFBS_2	298.9 / 99.0	1.54	PFBS	0.280	0.290	ü
PFHxA_1	313.0 / 269.0	1.86	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	2.26	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.300	0.283	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.080	0.064	ü
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.320	0.297	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.160	0.181	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.43	PFDA	0.050	0.045	ü
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	3.75	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.04	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.28	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.28	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.50	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.49	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.550	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.75	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.75	NEtFOSAA	0.070	0.068	ü

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Summary Ion Ratio Report

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Sample Name	J9423MSD-FS(0)	**Injection Vial**	48
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:48:22	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.50	PFBS			
PFBS_2	298.9 / 99.0	1.50	PFBS	0.260	0.290	ü
PFHxA_1	313.0 / 269.0	1.82	PFHxA			
PFHxA_2	313.0 / 119.0	1.82	PFHxA	0.070	0.076	ü
PFHpA_1	363.0 / 319.0	2.23	PFHpA			
PFHpA_2	363.0 / 169.0	2.23	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.26	PFHxS			
PFHxS_2	399.0 / 99.0	2.26	PFHxS	0.380	0.283	ü
PFOA_1	413.0 / 369.0	2.66	PFOA			
PFOA_2	413.0 / 169.0	2.64	PFOA	0.090	0.064	ü
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.320	0.297	ü
PFOS_1	499.0 / 80.0	3.00	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.180	0.181	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.43	PFDA	0.040	0.045	ü
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	3.75	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.04	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.28	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.28	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.49	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.49	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.58	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.58	NMeFOSAA	0.530	0.525	ü
NEtFOSAA_1	584.0 / 419.0	3.74	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.75	NEtFOSAA	0.060	0.068	ü

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Summary Internal Standard Report

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Sample Name	KC73 IB	**Injection Vial**	8
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:01:12	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.58	13C3-PFBS	302.0 / 99.0	28257.17	232.25
PFBS_2	298.9 / 99.0	1.58	13C3-PFBS	302.0 / 99.0	28257.17	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	66698.31	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	66698.31	250.00
PFHpA_1	363.0 / 319.0	2.30	13C4-PFHpA	367.0 / 322.0	76413.55	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	76413.55	250.00
PFHxS_1	399.0 / 80.0	2.33	13C3-PFHxS	402.0 / 99.0	27642.64	236.50
PFHxS_2	399.0 / 99.0	2.33	13C3-PFHxS	402.0 / 99.0	27642.64	236.50
PFOA_1	413.0 / 369.0	2.71	13C8-PFOA	421.0 / 376.0	94533.73	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	94533.73	250.00
PFNA_1	463.0 / 419.0	3.11	13C9-PFNA	472.0 / 427.0	99869.60	250.00
PFNA_2	463.0 / 219.0	3.11	13C9-PFNA	472.0 / 427.0	99869.60	250.00
PFOS_1	499.0 / 80.0	3.10	13C8-PFOS	507.0 / 99.0	33070.49	239.25
PFOS_2	499.0 / 99.0	3.11	13C8-PFOS	507.0 / 99.0	33070.49	239.25
PFDA_1	513.0 / 469.0	3.47	13C6-PFDA	519.0 / 474.0	104348.50	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	104348.50	250.00
PFUnA_1	563.0 / 519.0	3.80	13C7-PFUnA	570.0 / 525.0	98904.79	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	98904.79	250.00
PFDoA_1	613.0 / 569.0	4.08	13C2-PFDoA	615.0 / 570.0	109569.19	250.00
PFDoA_2	613.0 / 319.0	4.08	13C2-PFDoA	615.0 / 570.0	109569.19	250.00
PFTrDA_1	663.0 / 619.0	4.33	13C2-PFTeDA	715.0 / 670.0	97040.24	250.00
PFTrDA_2	663.0 / 169.0	4.33	13C2-PFTeDA	715.0 / 670.0	97040.24	250.00
PFTeDA_1	713.0 / 669.0	4.55	13C2-PFTeDA	715.0 / 670.0	97040.24	250.00
PFTeDA_2	713.0 / 169.0	4.55	13C2-PFTeDA	715.0 / 670.0	97040.24	250.00
NMeFOSAA_1	570.0 / 419.0	3.63	d3-MeFOSAA	573.0 / 419.0	17625.65	250.00
NMeFOSAA_2	570.0 / 512.0	3.63	d3-MeFOSAA	573.0 / 419.0	17625.65	250.00
NEtFOSAA_1	584.0 / 419.0	3.79	d5-EtFOSAA	589.0 / 419.0	15118.40	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	15118.40	250.00

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Summary Internal Standard Report

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Sample Name	CS241PB-FS(0)	**Injection Vial**	12
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:44:39	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	N/A	13C3-PFBS	302.0 / 99.0	24475.47	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	24475.47	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	65089.39	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	65089.39	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	68351.13	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	68351.13	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	23583.13	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	23583.13	236.50
PFOA_1	413.0 / 369.0	2.71	13C8-PFOA	421.0 / 376.0	79439.35	250.00
PFOA_2	413.0 / 169.0	2.71	13C8-PFOA	421.0 / 376.0	79439.35	250.00
PFNA_1	463.0 / 419.0	3.11	13C9-PFNA	472.0 / 427.0	93875.56	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	93875.56	250.00
PFOS_1	499.0 / 80.0	N/A	13C8-PFOS	507.0 / 99.0	28830.69	239.25
PFOS_2	499.0 / 99.0	N/A	13C8-PFOS	507.0 / 99.0	28830.69	239.25
PFDA_1	513.0 / 469.0	3.46	13C6-PFDA	519.0 / 474.0	93646.05	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	93646.05	250.00
PFUnA_1	563.0 / 519.0	3.79	13C7-PFUnA	570.0 / 525.0	90121.33	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	90121.33	250.00
PFDoA_1	613.0 / 569.0	4.07	13C2-PFDoA	615.0 / 570.0	99007.10	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	99007.10	250.00
PFTrDA_1	663.0 / 619.0	4.31	13C2-PFTeDA	715.0 / 670.0	74466.84	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	74466.84	250.00
PFTeDA_1	713.0 / 669.0	4.53	13C2-PFTeDA	715.0 / 670.0	74466.84	250.00
PFTeDA_2	713.0 / 169.0	4.54	13C2-PFTeDA	715.0 / 670.0	74466.84	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	14451.87	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	14451.87	250.00
NEtFOSAA_1	584.0 / 419.0	3.78	d5-EtFOSAA	589.0 / 419.0	16903.30	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	16903.30	250.00

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Summary Internal Standard Report

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Sample Name	J9419-FS(0)	**Injection Vial**	13
Sample ID	RR-FB-111618	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:55:32	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.56	13C3-PFBS	302.0 / 99.0	25772.73	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	25772.73	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	64410.94	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	64410.94	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	74317.44	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	74317.44	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	26783.05	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	26783.05	236.50
PFOA_1	413.0 / 369.0	2.71	13C8-PFOA	421.0 / 376.0	85448.04	250.00
PFOA_2	413.0 / 169.0	2.71	13C8-PFOA	421.0 / 376.0	85448.04	250.00
PFNA_1	463.0 / 419.0	3.09	13C9-PFNA	472.0 / 427.0	95181.80	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	95181.80	250.00
PFOS_1	499.0 / 80.0	N/A	13C8-PFOS	507.0 / 99.0	28706.90	239.25
PFOS_2	499.0 / 99.0	N/A	13C8-PFOS	507.0 / 99.0	28706.90	239.25
PFDA_1	513.0 / 469.0	3.46	13C6-PFDA	519.0 / 474.0	95758.69	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	95758.69	250.00
PFUnA_1	563.0 / 519.0	3.79	13C7-PFUnA	570.0 / 525.0	90230.17	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	90230.17	250.00
PFDoA_1	613.0 / 569.0	4.07	13C2-PFDoA	615.0 / 570.0	100829.51	250.00
PFDoA_2	613.0 / 319.0	4.06	13C2-PFDoA	615.0 / 570.0	100829.51	250.00
PFTrDA_1	663.0 / 619.0	4.32	13C2-PFTeDA	715.0 / 670.0	86277.10	250.00
PFTrDA_2	663.0 / 169.0	4.32	13C2-PFTeDA	715.0 / 670.0	86277.10	250.00
PFTeDA_1	713.0 / 669.0	4.54	13C2-PFTeDA	715.0 / 670.0	86277.10	250.00
PFTeDA_2	713.0 / 169.0	4.54	13C2-PFTeDA	715.0 / 670.0	86277.10	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	14379.42	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	14379.42	250.00
NEtFOSAA_1	584.0 / 419.0	3.79	d5-EtFOSAA	589.0 / 419.0	13725.83	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	13725.83	250.00

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Sample Name	CS242LCS-FS(0)	**Injection Vial**	14
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:06:23	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.56	13C3-PFBS	302.0 / 99.0	24640.00	232.25
PFBS_2	298.9 / 99.0	1.56	13C3-PFBS	302.0 / 99.0	24640.00	232.25
PFHxA_1	313.0 / 269.0	1.89	13C5-PFHxA	318.0 / 273.0	62328.84	250.00
PFHxA_2	313.0 / 119.0	1.88	13C5-PFHxA	318.0 / 273.0	62328.84	250.00
PFHpA_1	363.0 / 319.0	2.29	13C4-PFHpA	367.0 / 322.0	68954.93	250.00
PFHpA_2	363.0 / 169.0	2.29	13C4-PFHpA	367.0 / 322.0	68954.93	250.00
PFHxS_1	399.0 / 80.0	2.32	13C3-PFHxS	402.0 / 99.0	24006.22	236.50
PFHxS_2	399.0 / 99.0	2.32	13C3-PFHxS	402.0 / 99.0	24006.22	236.50
PFOA_1	413.0 / 369.0	2.70	13C8-PFOA	421.0 / 376.0	75473.63	250.00
PFOA_2	413.0 / 169.0	2.70	13C8-PFOA	421.0 / 376.0	75473.63	250.00
PFNA_1	463.0 / 419.0	3.10	13C9-PFNA	472.0 / 427.0	92621.42	250.00
PFNA_2	463.0 / 219.0	3.10	13C9-PFNA	472.0 / 427.0	92621.42	250.00
PFOS_1	499.0 / 80.0	3.10	13C8-PFOS	507.0 / 99.0	23345.28	239.25
PFOS_2	499.0 / 99.0	3.10	13C8-PFOS	507.0 / 99.0	23345.28	239.25
PFDA_1	513.0 / 469.0	3.46	13C6-PFDA	519.0 / 474.0	88414.98	250.00
PFDA_2	513.0 / 219.0	3.46	13C6-PFDA	519.0 / 474.0	88414.98	250.00
PFUnA_1	563.0 / 519.0	3.79	13C7-PFUnA	570.0 / 525.0	83989.08	250.00
PFUnA_2	563.0 / 269.0	3.79	13C7-PFUnA	570.0 / 525.0	83989.08	250.00
PFDoA_1	613.0 / 569.0	4.07	13C2-PFDoA	615.0 / 570.0	98071.81	250.00
PFDoA_2	613.0 / 319.0	4.07	13C2-PFDoA	615.0 / 570.0	98071.81	250.00
PFTrDA_1	663.0 / 619.0	4.32	13C2-PFTeDA	715.0 / 670.0	87547.58	250.00
PFTrDA_2	663.0 / 169.0	4.31	13C2-PFTeDA	715.0 / 670.0	87547.58	250.00
PFTeDA_1	713.0 / 669.0	4.53	13C2-PFTeDA	715.0 / 670.0	87547.58	250.00
PFTeDA_2	713.0 / 169.0	4.53	13C2-PFTeDA	715.0 / 670.0	87547.58	250.00
NMeFOSAA_1	570.0 / 419.0	3.62	d3-MeFOSAA	573.0 / 419.0	15480.93	250.00
NMeFOSAA_2	570.0 / 512.0	3.62	d3-MeFOSAA	573.0 / 419.0	15480.93	250.00
NEtFOSAA_1	584.0 / 419.0	3.78	d5-EtFOSAA	589.0 / 419.0	13877.69	250.00
NEtFOSAA_2	584.0 / 483.0	3.78	d5-EtFOSAA	589.0 / 419.0	13877.69	250.00

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Summary Internal Standard Report

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Sample Name	J9412-FS-D(9)	**Injection Vial**	15
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:17:16	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.56	13C3-PFBS	302.0 / 99.0	30489.66	232.25
PFBS_2	298.9 / 99.0	1.56	13C3-PFBS	302.0 / 99.0	30489.66	232.25
PFHxA_1	313.0 / 269.0	1.88	13C5-PFHxA	318.0 / 273.0	64330.43	250.00
PFHxA_2	313.0 / 119.0	1.88	13C5-PFHxA	318.0 / 273.0	64330.43	250.00
PFHpA_1	363.0 / 319.0	2.29	13C4-PFHpA	367.0 / 322.0	71581.69	250.00
PFHpA_2	363.0 / 169.0	2.29	13C4-PFHpA	367.0 / 322.0	71581.69	250.00
PFHxS_1	399.0 / 80.0	2.31	13C3-PFHxS	402.0 / 99.0	24046.61	236.50
PFHxS_2	399.0 / 99.0	2.31	13C3-PFHxS	402.0 / 99.0	24046.61	236.50
PFOA_1	413.0 / 369.0	2.70	13C8-PFOA	421.0 / 376.0	77718.50	250.00
PFOA_2	413.0 / 169.0	2.69	13C8-PFOA	421.0 / 376.0	77718.50	250.00
PFNA_1	463.0 / 419.0	3.10	13C9-PFNA	472.0 / 427.0	90509.83	250.00
PFNA_2	463.0 / 219.0	3.10	13C9-PFNA	472.0 / 427.0	90509.83	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	27839.45	239.25
PFOS_2	499.0 / 99.0	3.10	13C8-PFOS	507.0 / 99.0	27839.45	239.25
PFDA_1	513.0 / 469.0	3.46	13C6-PFDA	519.0 / 474.0	96043.03	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	96043.03	250.00
PFUnA_1	563.0 / 519.0	3.79	13C7-PFUnA	570.0 / 525.0	89371.63	250.00
PFUnA_2	563.0 / 269.0	3.79	13C7-PFUnA	570.0 / 525.0	89371.63	250.00
PFDoA_1	613.0 / 569.0	4.07	13C2-PFDoA	615.0 / 570.0	106526.90	250.00
PFDoA_2	613.0 / 319.0	4.06	13C2-PFDoA	615.0 / 570.0	106526.90	250.00
PFTrDA_1	663.0 / 619.0	4.32	13C2-PFTeDA	715.0 / 670.0	86760.66	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	86760.66	250.00
PFTeDA_1	713.0 / 669.0	4.53	13C2-PFTeDA	715.0 / 670.0	86760.66	250.00
PFTeDA_2	713.0 / 169.0	4.51	13C2-PFTeDA	715.0 / 670.0	86760.66	250.00
NMeFOSAA_1	570.0 / 419.0	3.62	d3-MeFOSAA	573.0 / 419.0	12336.60	250.00
NMeFOSAA_2	570.0 / 512.0	3.62	d3-MeFOSAA	573.0 / 419.0	12336.60	250.00
NEtFOSAA_1	584.0 / 419.0	3.80	d5-EtFOSAA	589.0 / 419.0	14132.90	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	14132.90	250.00

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Summary Internal Standard Report

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Sample Name	J9412-FS-D(7)	**Injection Vial**	16
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:28:08	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.56	13C3-PFBS	302.0 / 99.0	35324.54	232.25
PFBS_2	298.9 / 99.0	1.56	13C3-PFBS	302.0 / 99.0	35324.54	232.25
PFHxA_1	313.0 / 269.0	1.88	13C5-PFHxA	318.0 / 273.0	77382.93	250.00
PFHxA_2	313.0 / 119.0	1.88	13C5-PFHxA	318.0 / 273.0	77382.93	250.00
PFHpA_1	363.0 / 319.0	2.29	13C4-PFHpA	367.0 / 322.0	91423.75	250.00
PFHpA_2	363.0 / 169.0	2.29	13C4-PFHpA	367.0 / 322.0	91423.75	250.00
PFHxS_1	399.0 / 80.0	2.31	13C3-PFHxS	402.0 / 99.0	25148.83	236.50
PFHxS_2	399.0 / 99.0	2.31	13C3-PFHxS	402.0 / 99.0	25148.83	236.50
PFOA_1	413.0 / 369.0	2.70	13C8-PFOA	421.0 / 376.0	96753.18	250.00
PFOA_2	413.0 / 169.0	2.69	13C8-PFOA	421.0 / 376.0	96753.18	250.00
PFNA_1	463.0 / 419.0	3.10	13C9-PFNA	472.0 / 427.0	97438.21	250.00
PFNA_2	463.0 / 219.0	3.10	13C9-PFNA	472.0 / 427.0	97438.21	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	28989.41	239.25
PFOS_2	499.0 / 99.0	3.09	13C8-PFOS	507.0 / 99.0	28989.41	239.25
PFDA_1	513.0 / 469.0	3.45	13C6-PFDA	519.0 / 474.0	113951.46	250.00
PFDA_2	513.0 / 219.0	3.46	13C6-PFDA	519.0 / 474.0	113951.46	250.00
PFUnA_1	563.0 / 519.0	3.79	13C7-PFUnA	570.0 / 525.0	106870.20	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	106870.20	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	126092.89	250.00
PFDoA_2	613.0 / 319.0	4.05	13C2-PFDoA	615.0 / 570.0	126092.89	250.00
PFTrDA_1	663.0 / 619.0	4.31	13C2-PFTeDA	715.0 / 670.0	105346.69	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	105346.69	250.00
PFTeDA_1	713.0 / 669.0	4.52	13C2-PFTeDA	715.0 / 670.0	105346.69	250.00
PFTeDA_2	713.0 / 169.0	4.54	13C2-PFTeDA	715.0 / 670.0	105346.69	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	15890.84	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	15890.84	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	18181.71	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	18181.71	250.00

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Summary Internal Standard Report

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Sample Name	J9412-FS-D(5)	**Injection Vial**	17
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:38:59	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.55	13C3-PFBS	302.0 / 99.0	33817.23	232.25
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	33817.23	232.25
PFHxA_1	313.0 / 269.0	1.87	13C5-PFHxA	318.0 / 273.0	88259.29	250.00
PFHxA_2	313.0 / 119.0	1.87	13C5-PFHxA	318.0 / 273.0	88259.29	250.00
PFHpA_1	363.0 / 319.0	2.29	13C4-PFHpA	367.0 / 322.0	98564.21	250.00
PFHpA_2	363.0 / 169.0	2.28	13C4-PFHpA	367.0 / 322.0	98564.21	250.00
PFHxS_1	399.0 / 80.0	2.31	13C3-PFHxS	402.0 / 99.0	24283.73	236.50
PFHxS_2	399.0 / 99.0	2.31	13C3-PFHxS	402.0 / 99.0	24283.73	236.50
PFOA_1	413.0 / 369.0	2.70	13C8-PFOA	421.0 / 376.0	92917.31	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	92917.31	250.00
PFNA_1	463.0 / 419.0	3.09	13C9-PFNA	472.0 / 427.0	78111.12	250.00
PFNA_2	463.0 / 219.0	3.09	13C9-PFNA	472.0 / 427.0	78111.12	250.00
PFOS_1	499.0 / 80.0	3.05	13C8-PFOS	507.0 / 99.0	26216.35	239.25
PFOS_2	499.0 / 99.0	3.09	13C8-PFOS	507.0 / 99.0	26216.35	239.25
PFDA_1	513.0 / 469.0	3.45	13C6-PFDA	519.0 / 474.0	104017.02	250.00
PFDA_2	513.0 / 219.0	3.44	13C6-PFDA	519.0 / 474.0	104017.02	250.00
PFUnA_1	563.0 / 519.0	3.77	13C7-PFUnA	570.0 / 525.0	107702.75	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	107702.75	250.00
PFDoA_1	613.0 / 569.0	4.06	13C2-PFDoA	615.0 / 570.0	121502.98	250.00
PFDoA_2	613.0 / 319.0	4.08	13C2-PFDoA	615.0 / 570.0	121502.98	250.00
PFTrDA_1	663.0 / 619.0	4.31	13C2-PFTeDA	715.0 / 670.0	99683.23	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	99683.23	250.00
PFTeDA_1	713.0 / 669.0	4.52	13C2-PFTeDA	715.0 / 670.0	99683.23	250.00
PFTeDA_2	713.0 / 169.0	4.53	13C2-PFTeDA	715.0 / 670.0	99683.23	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	18043.78	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	18043.78	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	19996.00	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	19996.00	250.00

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Summary Internal Standard Report

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Sample Name	J9412-FS(0)	**Injection Vial**	19
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:00:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.53	13C3-PFBS	302.0 / 99.0	26381.08	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	26381.08	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	64271.77	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	64271.77	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	65810.97	250.00
PFHpA_2	363.0 / 169.0	2.26	13C4-PFHpA	367.0 / 322.0	65810.97	250.00
PFHxS_1	399.0 / 80.0	2.27	13C3-PFHxS	402.0 / 99.0	20933.22	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	20933.22	236.50
PFOA_1	413.0 / 369.0	2.69	13C8-PFOA	421.0 / 376.0	86013.59	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	86013.59	250.00
PFNA_1	463.0 / 419.0	3.09	13C9-PFNA	472.0 / 427.0	59391.73	250.00
PFNA_2	463.0 / 219.0	3.09	13C9-PFNA	472.0 / 427.0	59391.73	250.00
PFOS_1	499.0 / 80.0	3.01	13C8-PFOS	507.0 / 99.0	13781.71	239.25
PFOS_2	499.0 / 99.0	3.09	13C8-PFOS	507.0 / 99.0	13781.71	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	109530.45	250.00
PFDA_2	513.0 / 219.0	3.43	13C6-PFDA	519.0 / 474.0	109530.45	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	88460.85	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	88460.85	250.00
PFDoA_1	613.0 / 569.0	4.05	13C2-PFDoA	615.0 / 570.0	97420.55	250.00
PFDoA_2	613.0 / 319.0	4.09	13C2-PFDoA	615.0 / 570.0	97420.55	250.00
PFTrDA_1	663.0 / 619.0	4.29	13C2-PFTeDA	715.0 / 670.0	76452.50	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	76452.50	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	76452.50	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	76452.50	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	11303.70	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	11303.70	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	16973.75	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	16973.75	250.00

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Summary Internal Standard Report

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Sample Name	J9413-FS-D(9)	**Injection Vial**	22
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:44:11	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.56	13C3-PFBS	302.0 / 99.0	22014.16	232.25
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	22014.16	232.25
PFHxA_1	313.0 / 269.0	1.88	13C5-PFHxA	318.0 / 273.0	52338.71	250.00
PFHxA_2	313.0 / 119.0	1.88	13C5-PFHxA	318.0 / 273.0	52338.71	250.00
PFHpA_1	363.0 / 319.0	2.29	13C4-PFHpA	367.0 / 322.0	62449.19	250.00
PFHpA_2	363.0 / 169.0	2.29	13C4-PFHpA	367.0 / 322.0	62449.19	250.00
PFHxS_1	399.0 / 80.0	2.31	13C3-PFHxS	402.0 / 99.0	17740.25	236.50
PFHxS_2	399.0 / 99.0	2.31	13C3-PFHxS	402.0 / 99.0	17740.25	236.50
PFOA_1	413.0 / 369.0	2.70	13C8-PFOA	421.0 / 376.0	68969.48	250.00
PFOA_2	413.0 / 169.0	2.69	13C8-PFOA	421.0 / 376.0	68969.48	250.00
PFNA_1	463.0 / 419.0	3.09	13C9-PFNA	472.0 / 427.0	68683.66	250.00
PFNA_2	463.0 / 219.0	3.09	13C9-PFNA	472.0 / 427.0	68683.66	250.00
PFOS_1	499.0 / 80.0	3.05	13C8-PFOS	507.0 / 99.0	21177.35	239.25
PFOS_2	499.0 / 99.0	3.09	13C8-PFOS	507.0 / 99.0	21177.35	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	75537.12	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	75537.12	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	77466.69	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	77466.69	250.00
PFDoA_1	613.0 / 569.0	4.07	13C2-PFDoA	615.0 / 570.0	85733.35	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	85733.35	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	76343.96	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	76343.96	250.00
PFTeDA_1	713.0 / 669.0	4.52	13C2-PFTeDA	715.0 / 670.0	76343.96	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	76343.96	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	9900.04	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	9900.04	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	11728.34	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	11728.34	250.00

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Sample Name	J9413-FS-D(7)	**Injection Vial**	23
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:55:04	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.56	13C3-PFBS	302.0 / 99.0	30931.47	232.25
PFBS_2	298.9 / 99.0	1.56	13C3-PFBS	302.0 / 99.0	30931.47	232.25
PFHxA_1	313.0 / 269.0	1.88	13C5-PFHxA	318.0 / 273.0	67908.89	250.00
PFHxA_2	313.0 / 119.0	1.88	13C5-PFHxA	318.0 / 273.0	67908.89	250.00
PFHpA_1	363.0 / 319.0	2.29	13C4-PFHpA	367.0 / 322.0	75503.18	250.00
PFHpA_2	363.0 / 169.0	2.29	13C4-PFHpA	367.0 / 322.0	75503.18	250.00
PFHxS_1	399.0 / 80.0	2.31	13C3-PFHxS	402.0 / 99.0	22326.54	236.50
PFHxS_2	399.0 / 99.0	2.31	13C3-PFHxS	402.0 / 99.0	22326.54	236.50
PFOA_1	413.0 / 369.0	2.70	13C8-PFOA	421.0 / 376.0	82516.66	250.00
PFOA_2	413.0 / 169.0	2.69	13C8-PFOA	421.0 / 376.0	82516.66	250.00
PFNA_1	463.0 / 419.0	3.09	13C9-PFNA	472.0 / 427.0	89943.45	250.00
PFNA_2	463.0 / 219.0	3.09	13C9-PFNA	472.0 / 427.0	89943.45	250.00
PFOS_1	499.0 / 80.0	3.05	13C8-PFOS	507.0 / 99.0	24203.15	239.25
PFOS_2	499.0 / 99.0	3.09	13C8-PFOS	507.0 / 99.0	24203.15	239.25
PFDA_1	513.0 / 469.0	3.45	13C6-PFDA	519.0 / 474.0	97237.69	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	97237.69	250.00
PFUnA_1	563.0 / 519.0	3.77	13C7-PFUnA	570.0 / 525.0	95334.96	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	95334.96	250.00
PFDoA_1	613.0 / 569.0	4.06	13C2-PFDoA	615.0 / 570.0	109820.58	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	109820.58	250.00
PFTrDA_1	663.0 / 619.0	4.31	13C2-PFTeDA	715.0 / 670.0	92245.31	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	92245.31	250.00
PFTeDA_1	713.0 / 669.0	4.51	13C2-PFTeDA	715.0 / 670.0	92245.31	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	92245.31	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	15819.99	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	15819.99	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	17412.49	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	17412.49	250.00

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Summary Internal Standard Report

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Sample Name	J9413-FS-D(5)	**Injection Vial**	24
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T21:05:57	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.55	13C3-PFBS	302.0 / 99.0	28741.41	232.25
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	28741.41	232.25
PFHxA_1	313.0 / 269.0	1.87	13C5-PFHxA	318.0 / 273.0	69758.40	250.00
PFHxA_2	313.0 / 119.0	1.87	13C5-PFHxA	318.0 / 273.0	69758.40	250.00
PFHpA_1	363.0 / 319.0	2.28	13C4-PFHpA	367.0 / 322.0	79136.79	250.00
PFHpA_2	363.0 / 169.0	2.28	13C4-PFHpA	367.0 / 322.0	79136.79	250.00
PFHxS_1	399.0 / 80.0	2.31	13C3-PFHxS	402.0 / 99.0	20969.66	236.50
PFHxS_2	399.0 / 99.0	2.31	13C3-PFHxS	402.0 / 99.0	20969.66	236.50
PFOA_1	413.0 / 369.0	2.69	13C8-PFOA	421.0 / 376.0	71094.83	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	71094.83	250.00
PFNA_1	463.0 / 419.0	3.09	13C9-PFNA	472.0 / 427.0	73914.60	250.00
PFNA_2	463.0 / 219.0	3.09	13C9-PFNA	472.0 / 427.0	73914.60	250.00
PFOS_1	499.0 / 80.0	3.05	13C8-PFOS	507.0 / 99.0	22057.61	239.25
PFOS_2	499.0 / 99.0	3.09	13C8-PFOS	507.0 / 99.0	22057.61	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	82740.81	250.00
PFDA_2	513.0 / 219.0	3.44	13C6-PFDA	519.0 / 474.0	82740.81	250.00
PFUnA_1	563.0 / 519.0	3.77	13C7-PFUnA	570.0 / 525.0	90223.12	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	90223.12	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	104677.19	250.00
PFDoA_2	613.0 / 319.0	4.08	13C2-PFDoA	615.0 / 570.0	104677.19	250.00
PFTrDA_1	663.0 / 619.0	4.30	13C2-PFTeDA	715.0 / 670.0	89453.05	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	89453.05	250.00
PFTeDA_1	713.0 / 669.0	4.51	13C2-PFTeDA	715.0 / 670.0	89453.05	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	89453.05	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	13953.94	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	13953.94	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	17839.42	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	17839.42	250.00

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Summary Internal Standard Report

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Sample Name	J9413-FS(0)	**Injection Vial**	26
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T21:27:41	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.52	13C3-PFBS	302.0 / 99.0	28992.93	232.25
PFBS_2	298.9 / 99.0	1.52	13C3-PFBS	302.0 / 99.0	28992.93	232.25
PFHxA_1	313.0 / 269.0	1.84	13C5-PFHxA	318.0 / 273.0	60932.56	250.00
PFHxA_2	313.0 / 119.0	1.84	13C5-PFHxA	318.0 / 273.0	60932.56	250.00
PFHpA_1	363.0 / 319.0	2.25	13C4-PFHpA	367.0 / 322.0	70011.83	250.00
PFHpA_2	363.0 / 169.0	2.25	13C4-PFHpA	367.0 / 322.0	70011.83	250.00
PFHxS_1	399.0 / 80.0	2.26	13C3-PFHxS	402.0 / 99.0	22925.01	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	22925.01	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	86828.68	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	86828.68	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	57269.06	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	57269.06	250.00
PFOS_1	499.0 / 80.0	3.00	13C8-PFOS	507.0 / 99.0	15797.65	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	15797.65	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	104006.62	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	104006.62	250.00
PFUnA_1	563.0 / 519.0	3.74	13C7-PFUnA	570.0 / 525.0	85125.92	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	85125.92	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	97333.25	250.00
PFDoA_2	613.0 / 319.0	4.08	13C2-PFDoA	615.0 / 570.0	97333.25	250.00
PFTrDA_1	663.0 / 619.0	4.29	13C2-PFTeDA	715.0 / 670.0	82024.40	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	82024.40	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	82024.40	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	82024.40	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	11807.47	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	11807.47	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	17863.23	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	17863.23	250.00

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Summary Internal Standard Report

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Sample Name	J9418-FS-D(5)	**Injection Vial**	30
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:22:00	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.55	13C3-PFBS	302.0 / 99.0	31693.34	232.25
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	31693.34	232.25
PFHxA_1	313.0 / 269.0	1.87	13C5-PFHxA	318.0 / 273.0	69457.38	250.00
PFHxA_2	313.0 / 119.0	1.87	13C5-PFHxA	318.0 / 273.0	69457.38	250.00
PFHpA_1	363.0 / 319.0	2.28	13C4-PFHpA	367.0 / 322.0	76784.81	250.00
PFHpA_2	363.0 / 169.0	2.28	13C4-PFHpA	367.0 / 322.0	76784.81	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	25596.37	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	25596.37	236.50
PFOA_1	413.0 / 369.0	2.69	13C8-PFOA	421.0 / 376.0	87351.89	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	87351.89	250.00
PFNA_1	463.0 / 419.0	3.09	13C9-PFNA	472.0 / 427.0	92366.57	250.00
PFNA_2	463.0 / 219.0	3.09	13C9-PFNA	472.0 / 427.0	92366.57	250.00
PFOS_1	499.0 / 80.0	3.09	13C8-PFOS	507.0 / 99.0	24760.13	239.25
PFOS_2	499.0 / 99.0	3.09	13C8-PFOS	507.0 / 99.0	24760.13	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	95830.07	250.00
PFDA_2	513.0 / 219.0	3.43	13C6-PFDA	519.0 / 474.0	95830.07	250.00
PFUnA_1	563.0 / 519.0	3.77	13C7-PFUnA	570.0 / 525.0	91594.06	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	91594.06	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	105507.82	250.00
PFDoA_2	613.0 / 319.0	4.05	13C2-PFDoA	615.0 / 570.0	105507.82	250.00
PFTrDA_1	663.0 / 619.0	4.29	13C2-PFTeDA	715.0 / 670.0	91232.29	250.00
PFTrDA_2	663.0 / 169.0	4.34	13C2-PFTeDA	715.0 / 670.0	91232.29	250.00
PFTeDA_1	713.0 / 669.0	4.50	13C2-PFTeDA	715.0 / 670.0	91232.29	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	91232.29	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	16102.41	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	16102.41	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	17484.88	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	17484.88	250.00

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Summary Internal Standard Report

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Sample Name	J9418-FS-D(3)	**Injection Vial**	31
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:32:52	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.55	13C3-PFBS	302.0 / 99.0	31202.87	232.25
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	31202.87	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	78649.27	250.00
PFHxA_2	313.0 / 119.0	1.87	13C5-PFHxA	318.0 / 273.0	78649.27	250.00
PFHpA_1	363.0 / 319.0	2.28	13C4-PFHpA	367.0 / 322.0	99485.08	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	99485.08	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	24177.07	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	24177.07	236.50
PFOA_1	413.0 / 369.0	2.69	13C8-PFOA	421.0 / 376.0	86245.92	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	86245.92	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	85275.44	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	85275.44	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	22704.43	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	22704.43	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	95408.15	250.00
PFDA_2	513.0 / 219.0	3.43	13C6-PFDA	519.0 / 474.0	95408.15	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	100578.34	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	100578.34	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	112000.58	250.00
PFDoA_2	613.0 / 319.0	4.08	13C2-PFDoA	615.0 / 570.0	112000.58	250.00
PFTrDA_1	663.0 / 619.0	4.30	13C2-PFTeDA	715.0 / 670.0	94632.51	250.00
PFTrDA_2	663.0 / 169.0	4.29	13C2-PFTeDA	715.0 / 670.0	94632.51	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	94632.51	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	94632.51	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	13589.93	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	13589.93	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	22086.18	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	22086.18	250.00

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Summary Internal Standard Report

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Sample Name	J9418-FS(0)	**Injection Vial**	32
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:43:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.53	13C3-PFBS	302.0 / 99.0	21291.76	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	21291.76	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	56708.06	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	56708.06	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	62177.45	250.00
PFHpA_2	363.0 / 169.0	2.25	13C4-PFHpA	367.0 / 322.0	62177.45	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	14971.73	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	14971.73	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	66556.45	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	66556.45	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	56330.87	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	56330.87	250.00
PFOS_1	499.0 / 80.0	3.03	13C8-PFOS	507.0 / 99.0	11295.26	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	11295.26	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	67017.70	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	67017.70	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	66853.78	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	66853.78	250.00
PFDoA_1	613.0 / 569.0	4.05	13C2-PFDoA	615.0 / 570.0	75546.43	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	75546.43	250.00
PFTrDA_1	663.0 / 619.0	4.30	13C2-PFTeDA	715.0 / 670.0	60073.07	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	60073.07	250.00
PFTeDA_1	713.0 / 669.0	4.50	13C2-PFTeDA	715.0 / 670.0	60073.07	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	60073.07	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	10944.22	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	10944.22	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	16657.24	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	16657.24	250.00

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Summary Internal Standard Report

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Sample Name	J9421-FS-D(7)	**Injection Vial**	34
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:05:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.54	13C3-PFBS	302.0 / 99.0	39745.02	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	39745.02	232.25
PFHxA_1	313.0 / 269.0	1.87	13C5-PFHxA	318.0 / 273.0	77866.60	250.00
PFHxA_2	313.0 / 119.0	1.87	13C5-PFHxA	318.0 / 273.0	77866.60	250.00
PFHpA_1	363.0 / 319.0	2.28	13C4-PFHpA	367.0 / 322.0	86885.39	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	86885.39	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	25873.64	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	25873.64	236.50
PFOA_1	413.0 / 369.0	2.69	13C8-PFOA	421.0 / 376.0	91822.61	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	91822.61	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	94929.09	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	94929.09	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	26646.94	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	26646.94	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	105403.30	250.00
PFDA_2	513.0 / 219.0	3.41	13C6-PFDA	519.0 / 474.0	105403.30	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	111464.80	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	111464.80	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	114581.80	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	114581.80	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	98038.57	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	98038.57	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	98038.57	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	98038.57	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	13255.77	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	13255.77	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	15967.36	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	15967.36	250.00

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Summary Internal Standard Report

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Sample Name	J9421-FS-D(3)	**Injection Vial**	36
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:27:08	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.54	13C3-PFBS	302.0 / 99.0	32988.24	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	32988.24	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	76224.56	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	76224.56	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	97858.83	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	97858.83	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	23791.18	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	23791.18	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	85189.43	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	85189.43	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	85125.81	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	85125.81	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	23235.74	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	23235.74	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	97134.24	250.00
PFDA_2	513.0 / 219.0	3.44	13C6-PFDA	519.0 / 474.0	97134.24	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	96877.17	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	96877.17	250.00
PFDoA_1	613.0 / 569.0	4.05	13C2-PFDoA	615.0 / 570.0	114436.08	250.00
PFDoA_2	613.0 / 319.0	4.05	13C2-PFDoA	615.0 / 570.0	114436.08	250.00
PFTrDA_1	663.0 / 619.0	4.29	13C2-PFTeDA	715.0 / 670.0	87408.96	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	87408.96	250.00
PFTeDA_1	713.0 / 669.0	4.50	13C2-PFTeDA	715.0 / 670.0	87408.96	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	87408.96	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	12493.75	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	12493.75	250.00
NEtFOSAA_1	584.0 / 419.0	3.76	d5-EtFOSAA	589.0 / 419.0	17869.41	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	17869.41	250.00

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Summary Internal Standard Report

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Sample Name	J9421-FS(0)	**Injection Vial**	37
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:38:00	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.51	13C3-PFBS	302.0 / 99.0	28713.28	232.25
PFBS_2	298.9 / 99.0	1.50	13C3-PFBS	302.0 / 99.0	28713.28	232.25
PFHxA_1	313.0 / 269.0	1.83	13C5-PFHxA	318.0 / 273.0	65475.00	250.00
PFHxA_2	313.0 / 119.0	1.83	13C5-PFHxA	318.0 / 273.0	65475.00	250.00
PFHpA_1	363.0 / 319.0	2.24	13C4-PFHpA	367.0 / 322.0	77190.86	250.00
PFHpA_2	363.0 / 169.0	2.24	13C4-PFHpA	367.0 / 322.0	77190.86	250.00
PFHxS_1	399.0 / 80.0	2.27	13C3-PFHxS	402.0 / 99.0	26259.94	236.50
PFHxS_2	399.0 / 99.0	2.27	13C3-PFHxS	402.0 / 99.0	26259.94	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	80128.55	250.00
PFOA_2	413.0 / 169.0	2.64	13C8-PFOA	421.0 / 376.0	80128.55	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	79512.91	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	79512.91	250.00
PFOS_1	499.0 / 80.0	3.01	13C8-PFOS	507.0 / 99.0	18179.29	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	18179.29	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	94746.25	250.00
PFDA_2	513.0 / 219.0	3.43	13C6-PFDA	519.0 / 474.0	94746.25	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	113125.83	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	113125.83	250.00
PFDoA_1	613.0 / 569.0	4.05	13C2-PFDoA	615.0 / 570.0	124947.30	250.00
PFDoA_2	613.0 / 319.0	4.05	13C2-PFDoA	615.0 / 570.0	124947.30	250.00
PFTrDA_1	663.0 / 619.0	4.29	13C2-PFTeDA	715.0 / 670.0	99790.65	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	99790.65	250.00
PFTeDA_1	713.0 / 669.0	4.50	13C2-PFTeDA	715.0 / 670.0	99790.65	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	99790.65	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	19491.46	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	19491.46	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	27478.23	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	27478.23	250.00

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Summary Internal Standard Report

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Sample Name	J9422MS-FS-D(7)	**Injection Vial**	40
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:21:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.55	13C3-PFBS	302.0 / 99.0	31900.70	232.25
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	31900.70	232.25
PFHxA_1	313.0 / 269.0	1.87	13C5-PFHxA	318.0 / 273.0	67759.24	250.00
PFHxA_2	313.0 / 119.0	1.87	13C5-PFHxA	318.0 / 273.0	67759.24	250.00
PFHpA_1	363.0 / 319.0	2.28	13C4-PFHpA	367.0 / 322.0	74779.52	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	74779.52	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	22503.52	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	22503.52	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	84707.57	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	84707.57	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	90333.61	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	90333.61	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	25761.37	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	25761.37	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	92083.41	250.00
PFDA_2	513.0 / 219.0	3.43	13C6-PFDA	519.0 / 474.0	92083.41	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	92599.88	250.00
PFUnA_2	563.0 / 269.0	3.76	13C7-PFUnA	570.0 / 525.0	92599.88	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	105661.17	250.00
PFDoA_2	613.0 / 319.0	4.04	13C2-PFDoA	615.0 / 570.0	105661.17	250.00
PFTrDA_1	663.0 / 619.0	4.29	13C2-PFTeDA	715.0 / 670.0	90086.49	250.00
PFTrDA_2	663.0 / 169.0	4.28	13C2-PFTeDA	715.0 / 670.0	90086.49	250.00
PFTeDA_1	713.0 / 669.0	4.50	13C2-PFTeDA	715.0 / 670.0	90086.49	250.00
PFTeDA_2	713.0 / 169.0	4.50	13C2-PFTeDA	715.0 / 670.0	90086.49	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	13549.98	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	13549.98	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	14630.38	250.00
NEtFOSAA_2	584.0 / 483.0	3.75	d5-EtFOSAA	589.0 / 419.0	14630.38	250.00

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Summary Internal Standard Report

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Sample Name	J9422MS-FS-D(5)	**Injection Vial**	41
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:32:19	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.55	13C3-PFBS	302.0 / 99.0	32295.45	232.25
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	32295.45	232.25
PFHxA_1	313.0 / 269.0	1.87	13C5-PFHxA	318.0 / 273.0	89218.94	250.00
PFHxA_2	313.0 / 119.0	1.87	13C5-PFHxA	318.0 / 273.0	89218.94	250.00
PFHpA_1	363.0 / 319.0	2.28	13C4-PFHpA	367.0 / 322.0	86384.52	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	86384.52	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	25481.96	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	25481.96	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	93301.13	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	93301.13	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	90753.04	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	90753.04	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	28000.92	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	28000.92	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	105770.73	250.00
PFDA_2	513.0 / 219.0	3.43	13C6-PFDA	519.0 / 474.0	105770.73	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	98537.76	250.00
PFUnA_2	563.0 / 269.0	3.76	13C7-PFUnA	570.0 / 525.0	98537.76	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	111208.19	250.00
PFDoA_2	613.0 / 319.0	4.04	13C2-PFDoA	615.0 / 570.0	111208.19	250.00
PFTrDA_1	663.0 / 619.0	4.29	13C2-PFTeDA	715.0 / 670.0	96279.01	250.00
PFTrDA_2	663.0 / 169.0	4.29	13C2-PFTeDA	715.0 / 670.0	96279.01	250.00
PFTeDA_1	713.0 / 669.0	4.50	13C2-PFTeDA	715.0 / 670.0	96279.01	250.00
PFTeDA_2	713.0 / 169.0	4.50	13C2-PFTeDA	715.0 / 670.0	96279.01	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	13735.45	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	13735.45	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	19140.89	250.00
NEtFOSAA_2	584.0 / 483.0	3.76	d5-EtFOSAA	589.0 / 419.0	19140.89	250.00

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Summary Internal Standard Report

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Sample Name	J9422MS-FS-D(3)	**Injection Vial**	42
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:43:11	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.54	13C3-PFBS	302.0 / 99.0	34186.83	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	34186.83	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	82688.90	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	82688.90	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	105435.42	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	105435.42	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	24409.60	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	24409.60	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	94603.39	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	94603.39	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	93865.83	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	93865.83	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	20048.34	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	20048.34	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	96827.28	250.00
PFDA_2	513.0 / 219.0	3.43	13C6-PFDA	519.0 / 474.0	96827.28	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	108524.54	250.00
PFUnA_2	563.0 / 269.0	3.76	13C7-PFUnA	570.0 / 525.0	108524.54	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	126353.25	250.00
PFDoA_2	613.0 / 319.0	4.04	13C2-PFDoA	615.0 / 570.0	126353.25	250.00
PFTrDA_1	663.0 / 619.0	4.29	13C2-PFTeDA	715.0 / 670.0	96471.61	250.00
PFTrDA_2	663.0 / 169.0	4.28	13C2-PFTeDA	715.0 / 670.0	96471.61	250.00
PFTeDA_1	713.0 / 669.0	4.50	13C2-PFTeDA	715.0 / 670.0	96471.61	250.00
PFTeDA_2	713.0 / 169.0	4.50	13C2-PFTeDA	715.0 / 670.0	96471.61	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	17947.53	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	17947.53	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	19797.48	250.00
NEtFOSAA_2	584.0 / 483.0	3.75	d5-EtFOSAA	589.0 / 419.0	19797.48	250.00

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Summary Internal Standard Report

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Sample Name	J9422MS-FS(0)	**Injection Vial**	43
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:54:02	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.51	13C3-PFBS	302.0 / 99.0	29298.72	232.25
PFBS_2	298.9 / 99.0	1.50	13C3-PFBS	302.0 / 99.0	29298.72	232.25
PFHxA_1	313.0 / 269.0	1.83	13C5-PFHxA	318.0 / 273.0	65155.16	250.00
PFHxA_2	313.0 / 119.0	1.83	13C5-PFHxA	318.0 / 273.0	65155.16	250.00
PFHpA_1	363.0 / 319.0	2.24	13C4-PFHpA	367.0 / 322.0	73151.90	250.00
PFHpA_2	363.0 / 169.0	2.23	13C4-PFHpA	367.0 / 322.0	73151.90	250.00
PFHxS_1	399.0 / 80.0	2.27	13C3-PFHxS	402.0 / 99.0	25261.21	236.50
PFHxS_2	399.0 / 99.0	2.26	13C3-PFHxS	402.0 / 99.0	25261.21	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	81695.14	250.00
PFOA_2	413.0 / 169.0	2.65	13C8-PFOA	421.0 / 376.0	81695.14	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	78032.07	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	78032.07	250.00
PFOS_1	499.0 / 80.0	3.00	13C8-PFOS	507.0 / 99.0	18255.97	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	18255.97	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	97208.55	250.00
PFDA_2	513.0 / 219.0	3.43	13C6-PFDA	519.0 / 474.0	97208.55	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	122541.89	250.00
PFUnA_2	563.0 / 269.0	3.75	13C7-PFUnA	570.0 / 525.0	122541.89	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	136533.41	250.00
PFDoA_2	613.0 / 319.0	4.04	13C2-PFDoA	615.0 / 570.0	136533.41	250.00
PFTrDA_1	663.0 / 619.0	4.28	13C2-PFTeDA	715.0 / 670.0	112509.98	250.00
PFTrDA_2	663.0 / 169.0	4.28	13C2-PFTeDA	715.0 / 670.0	112509.98	250.00
PFTeDA_1	713.0 / 669.0	4.50	13C2-PFTeDA	715.0 / 670.0	112509.98	250.00
PFTeDA_2	713.0 / 169.0	4.50	13C2-PFTeDA	715.0 / 670.0	112509.98	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	20185.79	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	20185.79	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	28793.76	250.00
NEtFOSAA_2	584.0 / 483.0	3.75	d5-EtFOSAA	589.0 / 419.0	28793.76	250.00

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Summary Internal Standard Report

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Sample Name	J9423MSD-FS-D(7)	**Injection Vial**	45
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:15:45	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.55	13C3-PFBS	302.0 / 99.0	34849.76	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	34849.76	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	79041.61	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	79041.61	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	86675.22	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	86675.22	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	24422.31	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	24422.31	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	93719.40	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	93719.40	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	93655.09	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	93655.09	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	31681.47	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	31681.47	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	103944.36	250.00
PFDA_2	513.0 / 219.0	3.43	13C6-PFDA	519.0 / 474.0	103944.36	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	103048.02	250.00
PFUnA_2	563.0 / 269.0	3.76	13C7-PFUnA	570.0 / 525.0	103048.02	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	116665.36	250.00
PFDoA_2	613.0 / 319.0	4.04	13C2-PFDoA	615.0 / 570.0	116665.36	250.00
PFTrDA_1	663.0 / 619.0	4.28	13C2-PFTeDA	715.0 / 670.0	98436.36	250.00
PFTrDA_2	663.0 / 169.0	4.28	13C2-PFTeDA	715.0 / 670.0	98436.36	250.00
PFTeDA_1	713.0 / 669.0	4.50	13C2-PFTeDA	715.0 / 670.0	98436.36	250.00
PFTeDA_2	713.0 / 169.0	4.50	13C2-PFTeDA	715.0 / 670.0	98436.36	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	15586.78	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	15586.78	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	15677.73	250.00
NEtFOSAA_2	584.0 / 483.0	3.76	d5-EtFOSAA	589.0 / 419.0	15677.73	250.00

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Summary Internal Standard Report

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Sample Name	J9423MSD-FS-D(5)	**Injection Vial**	46
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:26:37	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.55	13C3-PFBS	302.0 / 99.0	33346.20	232.25
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	33346.20	232.25
PFHxA_1	313.0 / 269.0	1.87	13C5-PFHxA	318.0 / 273.0	82805.96	250.00
PFHxA_2	313.0 / 119.0	1.87	13C5-PFHxA	318.0 / 273.0	82805.96	250.00
PFHpA_1	363.0 / 319.0	2.28	13C4-PFHpA	367.0 / 322.0	91673.28	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	91673.28	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	25312.38	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	25312.38	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	95723.90	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	95723.90	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	94721.94	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	94721.94	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	27396.37	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	27396.37	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	100529.42	250.00
PFDA_2	513.0 / 219.0	3.43	13C6-PFDA	519.0 / 474.0	100529.42	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	104414.08	250.00
PFUnA_2	563.0 / 269.0	3.75	13C7-PFUnA	570.0 / 525.0	104414.08	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	110139.18	250.00
PFDoA_2	613.0 / 319.0	4.04	13C2-PFDoA	615.0 / 570.0	110139.18	250.00
PFTrDA_1	663.0 / 619.0	4.28	13C2-PFTeDA	715.0 / 670.0	95250.88	250.00
PFTrDA_2	663.0 / 169.0	4.28	13C2-PFTeDA	715.0 / 670.0	95250.88	250.00
PFTeDA_1	713.0 / 669.0	4.50	13C2-PFTeDA	715.0 / 670.0	95250.88	250.00
PFTeDA_2	713.0 / 169.0	4.49	13C2-PFTeDA	715.0 / 670.0	95250.88	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	16035.35	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	16035.35	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	16692.66	250.00
NEtFOSAA_2	584.0 / 483.0	3.75	d5-EtFOSAA	589.0 / 419.0	16692.66	250.00

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Summary Internal Standard Report

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Sample Name	J9423MSD-FS-D(3)	**Injection Vial**	47
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:37:30	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.54	13C3-PFBS	302.0 / 99.0	33808.01	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	33808.01	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	77583.15	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	77583.15	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	94921.41	250.00
PFHpA_2	363.0 / 169.0	2.26	13C4-PFHpA	367.0 / 322.0	94921.41	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	25176.37	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	25176.37	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	83965.11	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	83965.11	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	90212.64	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	90212.64	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	24736.11	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	24736.11	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	96955.39	250.00
PFDA_2	513.0 / 219.0	3.43	13C6-PFDA	519.0 / 474.0	96955.39	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	109367.13	250.00
PFUnA_2	563.0 / 269.0	3.75	13C7-PFUnA	570.0 / 525.0	109367.13	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	117671.51	250.00
PFDoA_2	613.0 / 319.0	4.04	13C2-PFDoA	615.0 / 570.0	117671.51	250.00
PFTrDA_1	663.0 / 619.0	4.28	13C2-PFTeDA	715.0 / 670.0	92599.58	250.00
PFTrDA_2	663.0 / 169.0	4.28	13C2-PFTeDA	715.0 / 670.0	92599.58	250.00
PFTeDA_1	713.0 / 669.0	4.50	13C2-PFTeDA	715.0 / 670.0	92599.58	250.00
PFTeDA_2	713.0 / 169.0	4.49	13C2-PFTeDA	715.0 / 670.0	92599.58	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	14193.24	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	14193.24	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	17618.55	250.00
NEtFOSAA_2	584.0 / 483.0	3.75	d5-EtFOSAA	589.0 / 419.0	17618.55	250.00

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Summary Internal Standard Report

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Sample Name	J9423MSD-FS(0)	**Injection Vial**	48
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:48:22	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.50	13C3-PFBS	302.0 / 99.0	31812.35	232.25
PFBS_2	298.9 / 99.0	1.50	13C3-PFBS	302.0 / 99.0	31812.35	232.25
PFHxA_1	313.0 / 269.0	1.82	13C5-PFHxA	318.0 / 273.0	71064.75	250.00
PFHxA_2	313.0 / 119.0	1.82	13C5-PFHxA	318.0 / 273.0	71064.75	250.00
PFHpA_1	363.0 / 319.0	2.23	13C4-PFHpA	367.0 / 322.0	78275.83	250.00
PFHpA_2	363.0 / 169.0	2.23	13C4-PFHpA	367.0 / 322.0	78275.83	250.00
PFHxS_1	399.0 / 80.0	2.26	13C3-PFHxS	402.0 / 99.0	28740.72	236.50
PFHxS_2	399.0 / 99.0	2.26	13C3-PFHxS	402.0 / 99.0	28740.72	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	84969.23	250.00
PFOA_2	413.0 / 169.0	2.64	13C8-PFOA	421.0 / 376.0	84969.23	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	77860.05	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	77860.05	250.00
PFOS_1	499.0 / 80.0	3.00	13C8-PFOS	507.0 / 99.0	19604.84	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	19604.84	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	108634.40	250.00
PFDA_2	513.0 / 219.0	3.43	13C6-PFDA	519.0 / 474.0	108634.40	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	131640.55	250.00
PFUnA_2	563.0 / 269.0	3.75	13C7-PFUnA	570.0 / 525.0	131640.55	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	147052.05	250.00
PFDoA_2	613.0 / 319.0	4.04	13C2-PFDoA	615.0 / 570.0	147052.05	250.00
PFTrDA_1	663.0 / 619.0	4.28	13C2-PFTeDA	715.0 / 670.0	126914.50	250.00
PFTrDA_2	663.0 / 169.0	4.28	13C2-PFTeDA	715.0 / 670.0	126914.50	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	126914.50	250.00
PFTeDA_2	713.0 / 169.0	4.49	13C2-PFTeDA	715.0 / 670.0	126914.50	250.00
NMeFOSAA_1	570.0 / 419.0	3.58	d3-MeFOSAA	573.0 / 419.0	19412.61	250.00
NMeFOSAA_2	570.0 / 512.0	3.58	d3-MeFOSAA	573.0 / 419.0	19412.61	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	29843.97	250.00
NEtFOSAA_2	584.0 / 483.0	3.75	d5-EtFOSAA	589.0 / 419.0	29843.97	250.00

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Summary Internal Standard Report

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Sample Name	KC73 IB	**Injection Vial**	8
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:01:12	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.07	13C2-PFDA	515.0 / 470.0	105817.66	250.00
d3-MeFOSAA	573.0 / 419.0	3.62	13C4-PFOS	503.0 / 99.0	34961.01	239.50
d5-EtFOSAA	589.0 / 419.0	3.78	13C4-PFOS	503.0 / 99.0	34961.01	239.50
13C5-PFHxA	318.0 / 273.0	1.87	13C2-PFOA	415.0 / 370.0	84908.73	250.00
13C4-PFHpA	367.0 / 322.0	2.29	13C2-PFOA	415.0 / 370.0	84908.73	250.00
13C8-PFOA	421.0 / 376.0	2.70	13C2-PFOA	415.0 / 370.0	84908.73	250.00
13C9-PFNA	472.0 / 427.0	3.09	13C2-PFOA	415.0 / 370.0	84908.73	250.00
13C6-PFDA	519.0 / 474.0	3.45	13C2-PFDA	515.0 / 470.0	105817.66	250.00
13C7-PFUnA	570.0 / 525.0	3.78	13C2-PFDA	515.0 / 470.0	105817.66	250.00
13C2-PFTeDA	715.0 / 670.0	4.54	13C2-PFDA	515.0 / 470.0	105817.66	250.00
13C3-PFBS	302.0 / 99.0	1.55	13C4-PFOS	503.0 / 99.0	34961.01	239.50
13C3-PFHxS	402.0 / 99.0	2.31	13C4-PFOS	503.0 / 99.0	34961.01	239.50
13C8-PFOS	507.0 / 99.0	3.09	13C4-PFOS	503.0 / 99.0	34961.01	239.50

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Summary Internal Standard Report

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Sample Name	CS241PB-FS(0)	**Injection Vial**	12
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:44:39	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.06	13C2-PFDA	515.0 / 470.0	99285.64	250.00
d3-MeFOSAA	573.0 / 419.0	3.61	13C4-PFOS	503.0 / 99.0	26867.99	239.50
d5-EtFOSAA	589.0 / 419.0	3.77	13C4-PFOS	503.0 / 99.0	26867.99	239.50
13C5-PFHxA	318.0 / 273.0	1.87	13C2-PFOA	415.0 / 370.0	75808.04	250.00
13C4-PFHpA	367.0 / 322.0	2.29	13C2-PFOA	415.0 / 370.0	75808.04	250.00
13C8-PFOA	421.0 / 376.0	2.70	13C2-PFOA	415.0 / 370.0	75808.04	250.00
13C9-PFNA	472.0 / 427.0	3.09	13C2-PFOA	415.0 / 370.0	75808.04	250.00
13C6-PFDA	519.0 / 474.0	3.45	13C2-PFDA	515.0 / 470.0	99285.64	250.00
13C7-PFUnA	570.0 / 525.0	3.77	13C2-PFDA	515.0 / 470.0	99285.64	250.00
13C2-PFTeDA	715.0 / 670.0	4.53	13C2-PFDA	515.0 / 470.0	99285.64	250.00
13C3-PFBS	302.0 / 99.0	1.55	13C4-PFOS	503.0 / 99.0	26867.99	239.50
13C3-PFHxS	402.0 / 99.0	2.31	13C4-PFOS	503.0 / 99.0	26867.99	239.50
13C8-PFOS	507.0 / 99.0	3.09	13C4-PFOS	503.0 / 99.0	26867.99	239.50

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Summary Internal Standard Report

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Sample Name	J9419-FS(0)	**Injection Vial**	13
Sample ID	RR-FB-111618	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:55:32	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.06	13C2-PFDA	515.0 / 470.0	106892.48	250.00
d3-MeFOSAA	573.0 / 419.0	3.61	13C4-PFOS	503.0 / 99.0	33742.45	239.50
d5-EtFOSAA	589.0 / 419.0	3.77	13C4-PFOS	503.0 / 99.0	33742.45	239.50
13C5-PFHxA	318.0 / 273.0	1.87	13C2-PFOA	415.0 / 370.0	86426.32	250.00
13C4-PFHpA	367.0 / 322.0	2.28	13C2-PFOA	415.0 / 370.0	86426.32	250.00
13C8-PFOA	421.0 / 376.0	2.70	13C2-PFOA	415.0 / 370.0	86426.32	250.00
13C9-PFNA	472.0 / 427.0	3.09	13C2-PFOA	415.0 / 370.0	86426.32	250.00
13C6-PFDA	519.0 / 474.0	3.45	13C2-PFDA	515.0 / 470.0	106892.48	250.00
13C7-PFUnA	570.0 / 525.0	3.77	13C2-PFDA	515.0 / 470.0	106892.48	250.00
13C2-PFTeDA	715.0 / 670.0	4.53	13C2-PFDA	515.0 / 470.0	106892.48	250.00
13C3-PFBS	302.0 / 99.0	1.54	13C4-PFOS	503.0 / 99.0	33742.45	239.50
13C3-PFHxS	402.0 / 99.0	2.31	13C4-PFOS	503.0 / 99.0	33742.45	239.50
13C8-PFOS	507.0 / 99.0	3.09	13C4-PFOS	503.0 / 99.0	33742.45	239.50

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Summary Internal Standard Report

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Sample Name	CS242LCS-FS(0)	**Injection Vial**	14
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:06:23	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.06	13C2-PFDA	515.0 / 470.0	101342.23	250.00
d3-MeFOSAA	573.0 / 419.0	3.61	13C4-PFOS	503.0 / 99.0	31219.19	239.50
d5-EtFOSAA	589.0 / 419.0	3.77	13C4-PFOS	503.0 / 99.0	31219.19	239.50
13C5-PFHxA	318.0 / 273.0	1.87	13C2-PFOA	415.0 / 370.0	81905.83	250.00
13C4-PFHpA	367.0 / 322.0	2.28	13C2-PFOA	415.0 / 370.0	81905.83	250.00
13C8-PFOA	421.0 / 376.0	2.70	13C2-PFOA	415.0 / 370.0	81905.83	250.00
13C9-PFNA	472.0 / 427.0	3.09	13C2-PFOA	415.0 / 370.0	81905.83	250.00
13C6-PFDA	519.0 / 474.0	3.45	13C2-PFDA	515.0 / 470.0	101342.23	250.00
13C7-PFUnA	570.0 / 525.0	3.77	13C2-PFDA	515.0 / 470.0	101342.23	250.00
13C2-PFTeDA	715.0 / 670.0	4.53	13C2-PFDA	515.0 / 470.0	101342.23	250.00
13C3-PFBS	302.0 / 99.0	1.54	13C4-PFOS	503.0 / 99.0	31219.19	239.50
13C3-PFHxS	402.0 / 99.0	2.31	13C4-PFOS	503.0 / 99.0	31219.19	239.50
13C8-PFOS	507.0 / 99.0	3.08	13C4-PFOS	503.0 / 99.0	31219.19	239.50

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Summary Internal Standard Report

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Sample Name	J9412-FS-D(9)	**Injection Vial**	15
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:17:16	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.06	13C2-PFDA	515.0 / 470.0	110815.32	250.00
d3-MeFOSAA	573.0 / 419.0	3.61	13C4-PFOS	503.0 / 99.0	28488.89	239.50
d5-EtFOSAA	589.0 / 419.0	3.77	13C4-PFOS	503.0 / 99.0	28488.89	239.50
13C5-PFHxA	318.0 / 273.0	1.87	13C2-PFOA	415.0 / 370.0	90337.36	250.00
13C4-PFHpA	367.0 / 322.0	2.28	13C2-PFOA	415.0 / 370.0	90337.36	250.00
13C8-PFOA	421.0 / 376.0	2.69	13C2-PFOA	415.0 / 370.0	90337.36	250.00
13C9-PFNA	472.0 / 427.0	3.09	13C2-PFOA	415.0 / 370.0	90337.36	250.00
13C6-PFDA	519.0 / 474.0	3.44	13C2-PFDA	515.0 / 470.0	110815.32	250.00
13C7-PFUnA	570.0 / 525.0	3.77	13C2-PFDA	515.0 / 470.0	110815.32	250.00
13C2-PFTeDA	715.0 / 670.0	4.53	13C2-PFDA	515.0 / 470.0	110815.32	250.00
13C3-PFBS	302.0 / 99.0	1.54	13C4-PFOS	503.0 / 99.0	28488.89	239.50
13C3-PFHxS	402.0 / 99.0	2.30	13C4-PFOS	503.0 / 99.0	28488.89	239.50
13C8-PFOS	507.0 / 99.0	3.09	13C4-PFOS	503.0 / 99.0	28488.89	239.50

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Summary Internal Standard Report

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Sample Name	J9412-FS-D(7)	**Injection Vial**	16
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:28:08	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.05	13C2-PFDA	515.0 / 470.0	134737.03	250.00
d3-MeFOSAA	573.0 / 419.0	3.61	13C4-PFOS	503.0 / 99.0	36107.06	239.50
d5-EtFOSAA	589.0 / 419.0	3.77	13C4-PFOS	503.0 / 99.0	36107.06	239.50
13C5-PFHxA	318.0 / 273.0	1.87	13C2-PFOA	415.0 / 370.0	100065.14	250.00
13C4-PFHpA	367.0 / 322.0	2.28	13C2-PFOA	415.0 / 370.0	100065.14	250.00
13C8-PFOA	421.0 / 376.0	2.69	13C2-PFOA	415.0 / 370.0	100065.14	250.00
13C9-PFNA	472.0 / 427.0	3.08	13C2-PFOA	415.0 / 370.0	100065.14	250.00
13C6-PFDA	519.0 / 474.0	3.44	13C2-PFDA	515.0 / 470.0	134737.03	250.00
13C7-PFUnA	570.0 / 525.0	3.77	13C2-PFDA	515.0 / 470.0	134737.03	250.00
13C2-PFTeDA	715.0 / 670.0	4.52	13C2-PFDA	515.0 / 470.0	134737.03	250.00
13C3-PFBS	302.0 / 99.0	1.54	13C4-PFOS	503.0 / 99.0	36107.06	239.50
13C3-PFHxS	402.0 / 99.0	2.30	13C4-PFOS	503.0 / 99.0	36107.06	239.50
13C8-PFOS	507.0 / 99.0	3.08	13C4-PFOS	503.0 / 99.0	36107.06	239.50

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Summary Internal Standard Report

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Sample Name	J9412-FS-D(5)	**Injection Vial**	17
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:38:59	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.05	13C2-PFDA	515.0 / 470.0	111780.00	250.00
d3-MeFOSAA	573.0 / 419.0	3.60	13C4-PFOS	503.0 / 99.0	24097.67	239.50
d5-EtFOSAA	589.0 / 419.0	3.76	13C4-PFOS	503.0 / 99.0	24097.67	239.50
13C5-PFHxA	318.0 / 273.0	1.86	13C2-PFOA	415.0 / 370.0	103256.84	250.00
13C4-PFHpA	367.0 / 322.0	2.28	13C2-PFOA	415.0 / 370.0	103256.84	250.00
13C8-PFOA	421.0 / 376.0	2.69	13C2-PFOA	415.0 / 370.0	103256.84	250.00
13C9-PFNA	472.0 / 427.0	3.08	13C2-PFOA	415.0 / 370.0	103256.84	250.00
13C6-PFDA	519.0 / 474.0	3.44	13C2-PFDA	515.0 / 470.0	111780.00	250.00
13C7-PFUnA	570.0 / 525.0	3.76	13C2-PFDA	515.0 / 470.0	111780.00	250.00
13C2-PFTeDA	715.0 / 670.0	4.52	13C2-PFDA	515.0 / 470.0	111780.00	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	24097.67	239.50
13C3-PFHxS	402.0 / 99.0	2.30	13C4-PFOS	503.0 / 99.0	24097.67	239.50
13C8-PFOS	507.0 / 99.0	3.08	13C4-PFOS	503.0 / 99.0	24097.67	239.50

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Summary Internal Standard Report

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Sample Name	J9412-FS(0)	**Injection Vial**	19
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:00:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	118663.18	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	16589.18	239.50
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	16589.18	239.50
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	117555.11	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	117555.11	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	117555.11	250.00
13C9-PFNA	472.0 / 427.0	3.08	13C2-PFOA	415.0 / 370.0	117555.11	250.00
13C6-PFDA	519.0 / 474.0	3.43	13C2-PFDA	515.0 / 470.0	118663.18	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	118663.18	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	118663.18	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	16589.18	239.50
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	16589.18	239.50
13C8-PFOS	507.0 / 99.0	3.08	13C4-PFOS	503.0 / 99.0	16589.18	239.50

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Summary Internal Standard Report

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Sample Name	J9413-FS-D(9)	**Injection Vial**	22
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:44:11	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.04	13C2-PFDA	515.0 / 470.0	92235.20	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	27978.03	239.50
d5-EtFOSAA	589.0 / 419.0	3.76	13C4-PFOS	503.0 / 99.0	27978.03	239.50
13C5-PFHxA	318.0 / 273.0	1.86	13C2-PFOA	415.0 / 370.0	78750.99	250.00
13C4-PFHpA	367.0 / 322.0	2.28	13C2-PFOA	415.0 / 370.0	78750.99	250.00
13C8-PFOA	421.0 / 376.0	2.69	13C2-PFOA	415.0 / 370.0	78750.99	250.00
13C9-PFNA	472.0 / 427.0	3.08	13C2-PFOA	415.0 / 370.0	78750.99	250.00
13C6-PFDA	519.0 / 474.0	3.43	13C2-PFDA	515.0 / 470.0	92235.20	250.00
13C7-PFUnA	570.0 / 525.0	3.76	13C2-PFDA	515.0 / 470.0	92235.20	250.00
13C2-PFTeDA	715.0 / 670.0	4.51	13C2-PFDA	515.0 / 470.0	92235.20	250.00
13C3-PFBS	302.0 / 99.0	1.54	13C4-PFOS	503.0 / 99.0	27978.03	239.50
13C3-PFHxS	402.0 / 99.0	2.30	13C4-PFOS	503.0 / 99.0	27978.03	239.50
13C8-PFOS	507.0 / 99.0	3.08	13C4-PFOS	503.0 / 99.0	27978.03	239.50

Summary Internal Standard Report

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Sample Name	J9413-FS-D(7)	**Injection Vial**	23
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:55:04	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.05	13C2-PFDA	515.0 / 470.0	116128.68	250.00
d3-MeFOSAA	573.0 / 419.0	3.60	13C4-PFOS	503.0 / 99.0	31141.27	239.50
d5-EtFOSAA	589.0 / 419.0	3.76	13C4-PFOS	503.0 / 99.0	31141.27	239.50
13C5-PFHxA	318.0 / 273.0	1.87	13C2-PFOA	415.0 / 370.0	91823.65	250.00
13C4-PFHpA	367.0 / 322.0	2.28	13C2-PFOA	415.0 / 370.0	91823.65	250.00
13C8-PFOA	421.0 / 376.0	2.69	13C2-PFOA	415.0 / 370.0	91823.65	250.00
13C9-PFNA	472.0 / 427.0	3.08	13C2-PFOA	415.0 / 370.0	91823.65	250.00
13C6-PFDA	519.0 / 474.0	3.43	13C2-PFDA	515.0 / 470.0	116128.68	250.00
13C7-PFUnA	570.0 / 525.0	3.76	13C2-PFDA	515.0 / 470.0	116128.68	250.00
13C2-PFTeDA	715.0 / 670.0	4.51	13C2-PFDA	515.0 / 470.0	116128.68	250.00
13C3-PFBS	302.0 / 99.0	1.54	13C4-PFOS	503.0 / 99.0	31141.27	239.50
13C3-PFHxS	402.0 / 99.0	2.30	13C4-PFOS	503.0 / 99.0	31141.27	239.50
13C8-PFOS	507.0 / 99.0	3.08	13C4-PFOS	503.0 / 99.0	31141.27	239.50

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Summary Internal Standard Report

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Sample Name	J9413-FS-D(5)	**Injection Vial**	24
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T21:05:57	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.04	13C2-PFDA	515.0 / 470.0	106481.63	250.00
d3-MeFOSAA	573.0 / 419.0	3.60	13C4-PFOS	503.0 / 99.0	21404.74	239.50
d5-EtFOSAA	589.0 / 419.0	3.75	13C4-PFOS	503.0 / 99.0	21404.74	239.50
13C5-PFHxA	318.0 / 273.0	1.86	13C2-PFOA	415.0 / 370.0	87764.29	250.00
13C4-PFHpA	367.0 / 322.0	2.27	13C2-PFOA	415.0 / 370.0	87764.29	250.00
13C8-PFOA	421.0 / 376.0	2.69	13C2-PFOA	415.0 / 370.0	87764.29	250.00
13C9-PFNA	472.0 / 427.0	3.08	13C2-PFOA	415.0 / 370.0	87764.29	250.00
13C6-PFDA	519.0 / 474.0	3.43	13C2-PFDA	515.0 / 470.0	106481.63	250.00
13C7-PFUnA	570.0 / 525.0	3.75	13C2-PFDA	515.0 / 470.0	106481.63	250.00
13C2-PFTeDA	715.0 / 670.0	4.51	13C2-PFDA	515.0 / 470.0	106481.63	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	21404.74	239.50
13C3-PFHxS	402.0 / 99.0	2.30	13C4-PFOS	503.0 / 99.0	21404.74	239.50
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	21404.74	239.50

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Sample Name	J9413-FS(0)	**Injection Vial**	26
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T21:27:41	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	120688.88	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	16531.28	239.50
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	16531.28	239.50
13C5-PFHxA	318.0 / 273.0	1.83	13C2-PFOA	415.0 / 370.0	127362.24	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	127362.24	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	127362.24	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	127362.24	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	120688.88	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	120688.88	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	120688.88	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	16531.28	239.50
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	16531.28	239.50
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	16531.28	239.50

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Sample Name	J9418-FS-D(5)	**Injection Vial**	30
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:22:00	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.04	13C2-PFDA	515.0 / 470.0	117195.65	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	31050.51	239.50
d5-EtFOSAA	589.0 / 419.0	3.75	13C4-PFOS	503.0 / 99.0	31050.51	239.50
13C5-PFHxA	318.0 / 273.0	1.86	13C2-PFOA	415.0 / 370.0	101283.34	250.00
13C4-PFHpA	367.0 / 322.0	2.27	13C2-PFOA	415.0 / 370.0	101283.34	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	101283.34	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	101283.34	250.00
13C6-PFDA	519.0 / 474.0	3.43	13C2-PFDA	515.0 / 470.0	117195.65	250.00
13C7-PFUnA	570.0 / 525.0	3.75	13C2-PFDA	515.0 / 470.0	117195.65	250.00
13C2-PFTeDA	715.0 / 670.0	4.50	13C2-PFDA	515.0 / 470.0	117195.65	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	31050.51	239.50
13C3-PFHxS	402.0 / 99.0	2.30	13C4-PFOS	503.0 / 99.0	31050.51	239.50
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	31050.51	239.50

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Sample Name	J9418-FS-D(3)	**Injection Vial**	31
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:32:52	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	114406.46	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	29655.40	239.50
d5-EtFOSAA	589.0 / 419.0	3.75	13C4-PFOS	503.0 / 99.0	29655.40	239.50
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	112814.65	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	112814.65	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	112814.65	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	112814.65	250.00
13C6-PFDA	519.0 / 474.0	3.43	13C2-PFDA	515.0 / 470.0	114406.46	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	114406.46	250.00
13C2-PFTeDA	715.0 / 670.0	4.50	13C2-PFDA	515.0 / 470.0	114406.46	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	29655.40	239.50
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	29655.40	239.50
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	29655.40	239.50

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Sample Name	J9418-FS(0)	**Injection Vial**	32
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:43:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	114576.63	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	22127.75	239.50
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	22127.75	239.50
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	115137.97	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	115137.97	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	115137.97	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	115137.97	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	114576.63	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	114576.63	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	114576.63	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	22127.75	239.50
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	22127.75	239.50
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	22127.75	239.50

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Summary Internal Standard Report

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Sample Name	J9421-FS-D(7)	**Injection Vial**	34
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:05:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	126902.07	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	37086.68	239.50
d5-EtFOSAA	589.0 / 419.0	3.75	13C4-PFOS	503.0 / 99.0	37086.68	239.50
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	100634.04	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	100634.04	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	100634.04	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	100634.04	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	126902.07	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	126902.07	250.00
13C2-PFTeDA	715.0 / 670.0	4.50	13C2-PFDA	515.0 / 470.0	126902.07	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	37086.68	239.50
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	37086.68	239.50
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	37086.68	239.50

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Sample Name	J9421-FS-D(3)	**Injection Vial**	36
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:27:08	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	105483.41	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	27007.16	239.50
d5-EtFOSAA	589.0 / 419.0	3.75	13C4-PFOS	503.0 / 99.0	27007.16	239.50
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	98104.33	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	98104.33	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	98104.33	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	98104.33	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	105483.41	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	105483.41	250.00
13C2-PFTeDA	715.0 / 670.0	4.50	13C2-PFDA	515.0 / 470.0	105483.41	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	27007.16	239.50
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	27007.16	239.50
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	27007.16	239.50

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Summary Internal Standard Report

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Sample Name	J9421-FS(0)	**Injection Vial**	37
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:38:00	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	101858.91	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	20071.85	239.50
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	20071.85	239.50
13C5-PFHxA	318.0 / 273.0	1.82	13C2-PFOA	415.0 / 370.0	116056.27	250.00
13C4-PFHpA	367.0 / 322.0	2.23	13C2-PFOA	415.0 / 370.0	116056.27	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	116056.27	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	116056.27	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	101858.91	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	101858.91	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	101858.91	250.00
13C3-PFBS	302.0 / 99.0	1.49	13C4-PFOS	503.0 / 99.0	20071.85	239.50
13C3-PFHxS	402.0 / 99.0	2.26	13C4-PFOS	503.0 / 99.0	20071.85	239.50
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	20071.85	239.50

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Sample Name	J9422MS-FS-D(7)	**Injection Vial**	40
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:21:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	108305.12	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	29602.67	239.50
d5-EtFOSAA	589.0 / 419.0	3.75	13C4-PFOS	503.0 / 99.0	29602.67	239.50
13C5-PFHxA	318.0 / 273.0	1.86	13C2-PFOA	415.0 / 370.0	92352.40	250.00
13C4-PFHpA	367.0 / 322.0	2.27	13C2-PFOA	415.0 / 370.0	92352.40	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	92352.40	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	92352.40	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	108305.12	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	108305.12	250.00
13C2-PFTeDA	715.0 / 670.0	4.50	13C2-PFDA	515.0 / 470.0	108305.12	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	29602.67	239.50
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	29602.67	239.50
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	29602.67	239.50

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Summary Internal Standard Report

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Sample Name	J9422MS-FS-D(5)	**Injection Vial**	41
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:32:19	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	111135.31	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	31115.95	239.50
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	31115.95	239.50
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	100914.43	250.00
13C4-PFHpA	367.0 / 322.0	2.27	13C2-PFOA	415.0 / 370.0	100914.43	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	100914.43	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	100914.43	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	111135.31	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	111135.31	250.00
13C2-PFTeDA	715.0 / 670.0	4.50	13C2-PFDA	515.0 / 470.0	111135.31	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	31115.95	239.50
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	31115.95	239.50
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	31115.95	239.50

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Summary Internal Standard Report

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Sample Name	J9422MS-FS-D(3)	**Injection Vial**	42
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:43:11	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	125887.56	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	27372.36	239.50
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	27372.36	239.50
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	106909.63	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	106909.63	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	106909.63	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	106909.63	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	125887.56	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	125887.56	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	125887.56	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	27372.36	239.50
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	27372.36	239.50
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	27372.36	239.50

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Summary Internal Standard Report

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Sample Name	J9422MS-FS(0)	**Injection Vial**	43
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:54:02	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	116449.46	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	19871.85	239.50
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	19871.85	239.50
13C5-PFHxA	318.0 / 273.0	1.82	13C2-PFOA	415.0 / 370.0	119424.37	250.00
13C4-PFHpA	367.0 / 322.0	2.23	13C2-PFOA	415.0 / 370.0	119424.37	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	119424.37	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	119424.37	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	116449.46	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	116449.46	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	116449.46	250.00
13C3-PFBS	302.0 / 99.0	1.49	13C4-PFOS	503.0 / 99.0	19871.85	239.50
13C3-PFHxS	402.0 / 99.0	2.26	13C4-PFOS	503.0 / 99.0	19871.85	239.50
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	19871.85	239.50

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Summary Internal Standard Report

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Sample Name	J9423MSD-FS-D(7)	**Injection Vial**	45
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:15:45	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	123363.08	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	36688.15	239.50
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	36688.15	239.50
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	104895.85	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	104895.85	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	104895.85	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	104895.85	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	123363.08	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	123363.08	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	123363.08	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	36688.15	239.50
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	36688.15	239.50
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	36688.15	239.50

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Summary Internal Standard Report

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Sample Name	J9423MSD-FS-D(5)	**Injection Vial**	46
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:26:37	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	116085.71	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	29835.51	239.50
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	29835.51	239.50
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	101164.48	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	101164.48	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	101164.48	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	101164.48	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	116085.71	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	116085.71	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	116085.71	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	29835.51	239.50
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	29835.51	239.50
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	29835.51	239.50

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Summary Internal Standard Report

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Sample Name	J9423MSD-FS-D(3)	**Injection Vial**	47
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:37:30	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	111369.43	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	26680.59	239.50
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	26680.59	239.50
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	98475.45	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	98475.45	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	98475.45	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	98475.45	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	111369.43	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	111369.43	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	111369.43	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	26680.59	239.50
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	26680.59	239.50
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	26680.59	239.50

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Summary Internal Standard Report

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Sample Name	J9423MSD-FS(0)	**Injection Vial**	48
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:48:22	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	131279.30	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	20550.92	239.50
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	20550.92	239.50
13C5-PFHxA	318.0 / 273.0	1.81	13C2-PFOA	415.0 / 370.0	130806.77	250.00
13C4-PFHpA	367.0 / 322.0	2.22	13C2-PFOA	415.0 / 370.0	130806.77	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	130806.77	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	130806.77	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	131279.30	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	131279.30	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	131279.30	250.00
13C3-PFBS	302.0 / 99.0	1.48	13C4-PFOS	503.0 / 99.0	20550.92	239.50
13C3-PFHxS	402.0 / 99.0	2.25	13C4-PFOS	503.0 / 99.0	20550.92	239.50
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	20550.92	239.50

Chromatograms

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Chromatogram Report

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Sample Name	KC66	**Injection Vial**	1
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T16:45:02	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

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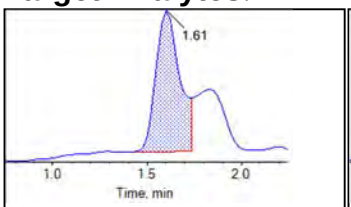
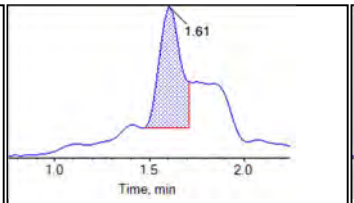


PFBS_1



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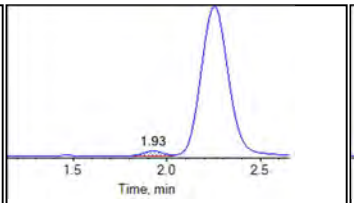

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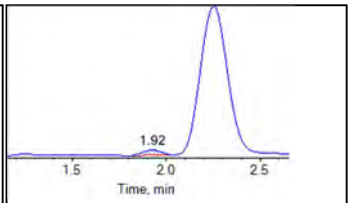
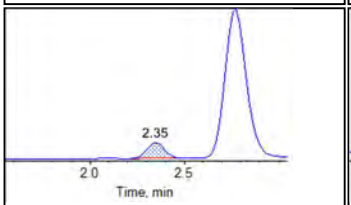


PFHxA_2



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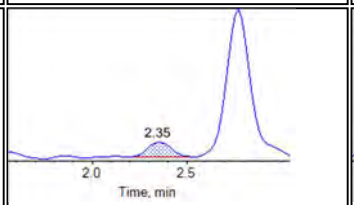
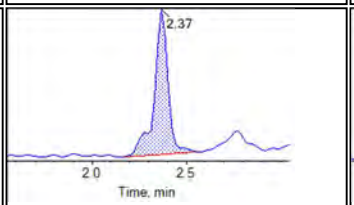


PFHpA_2



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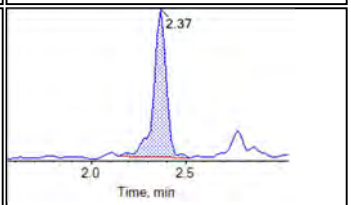

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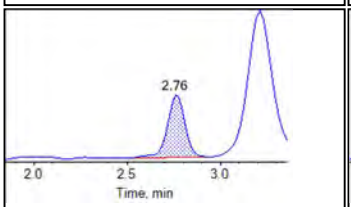

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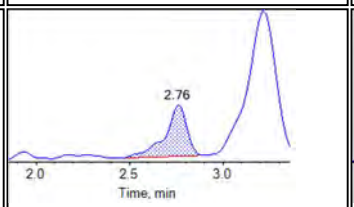

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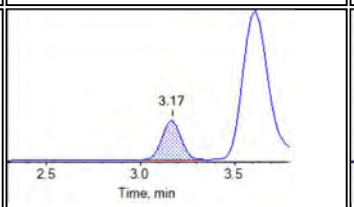

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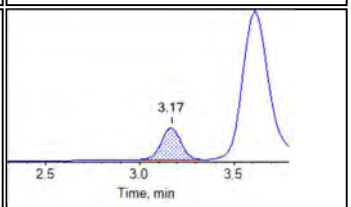

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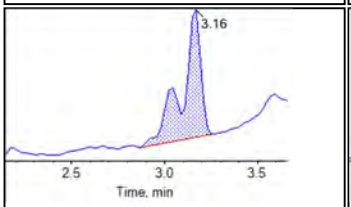

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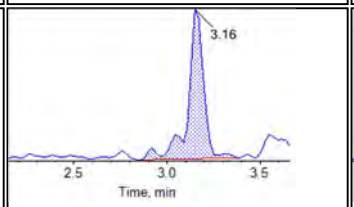

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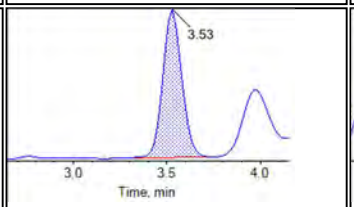

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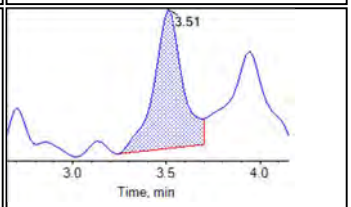

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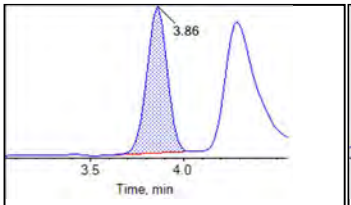

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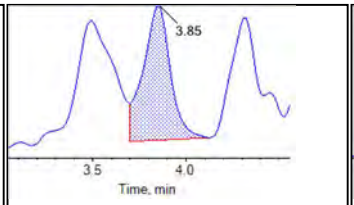

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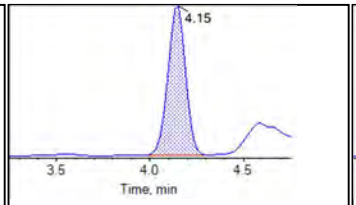

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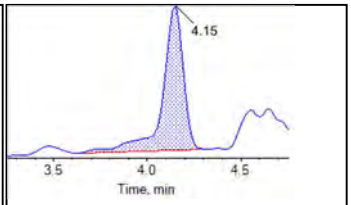

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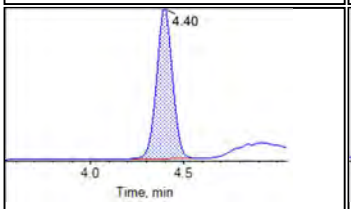

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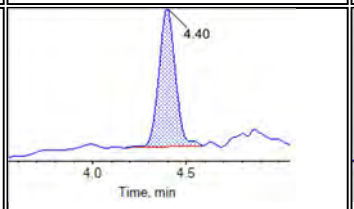

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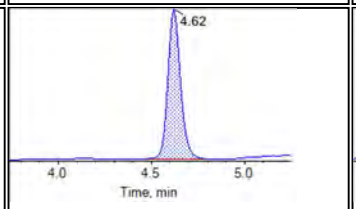

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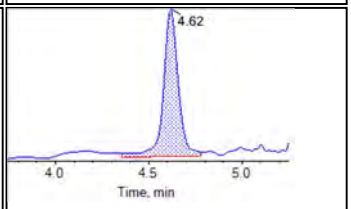

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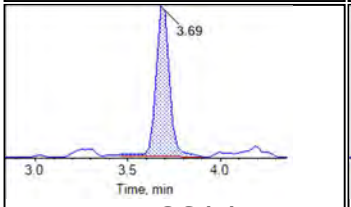

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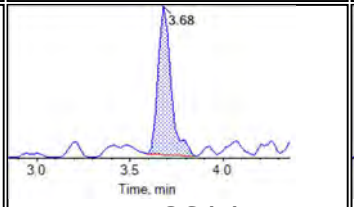

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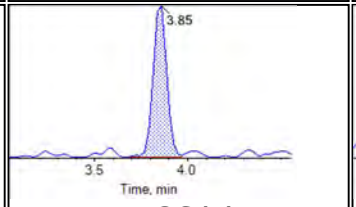

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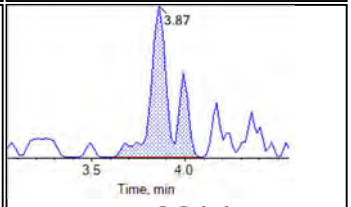

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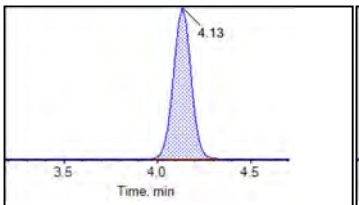

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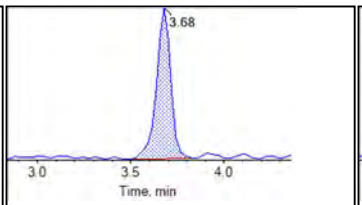

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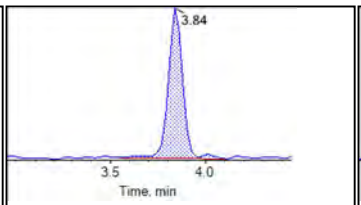

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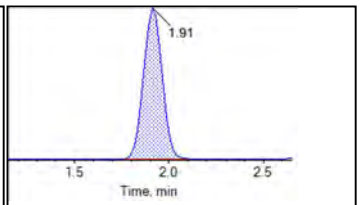

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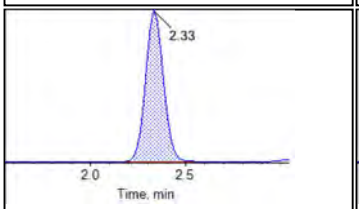

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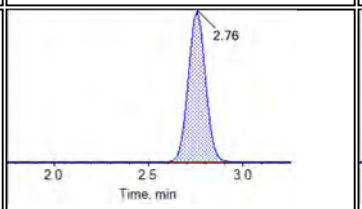

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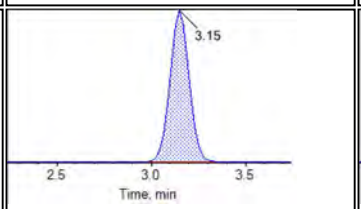

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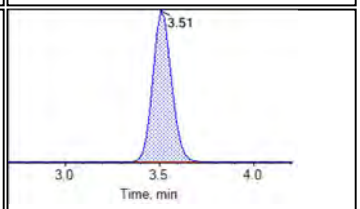

13C6-PFDA

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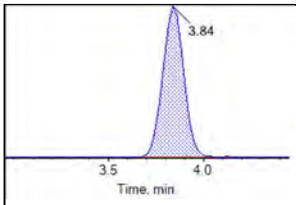
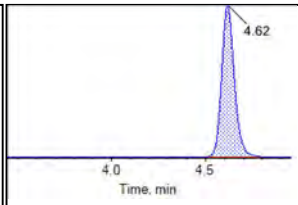


13C7-PFUnA



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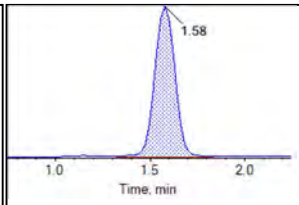

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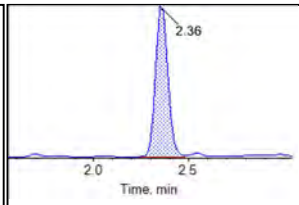

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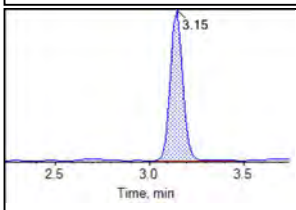

13C8-PFOS

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Sample Name	KC67	**Injection Vial**	2
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T16:55:56	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

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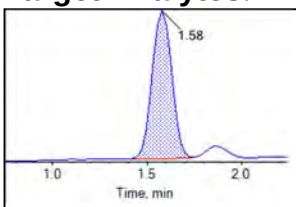

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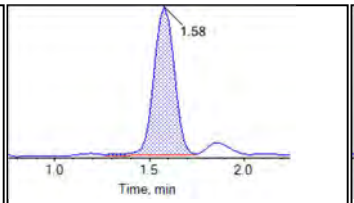

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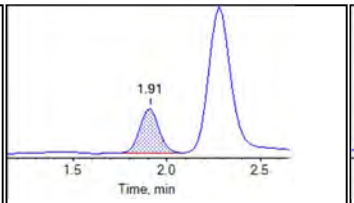

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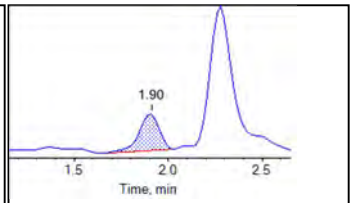

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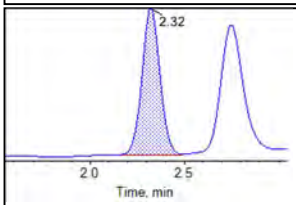

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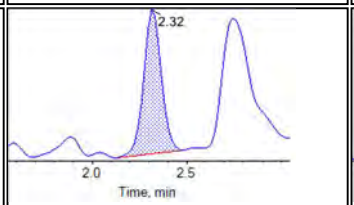

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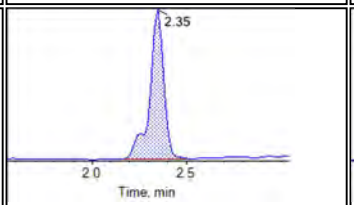

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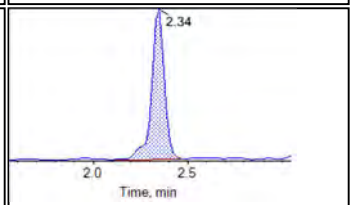

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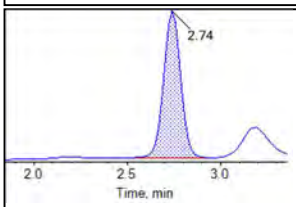

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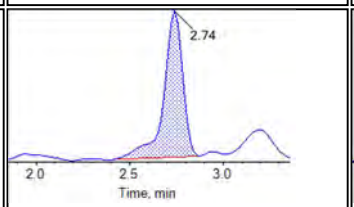

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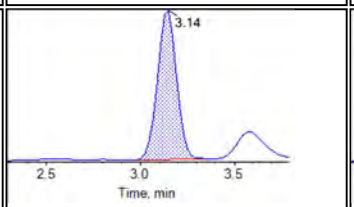

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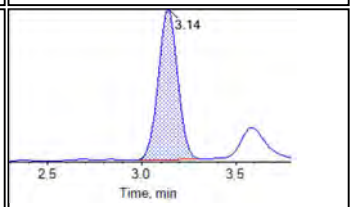

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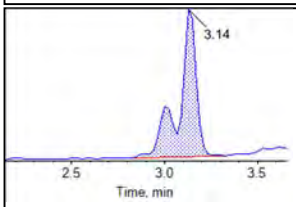

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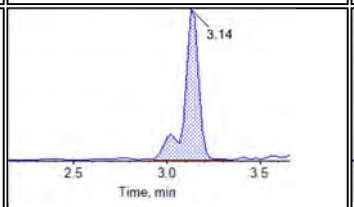

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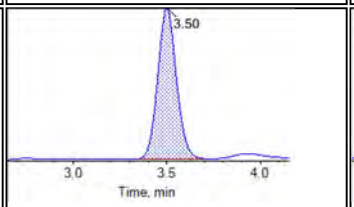

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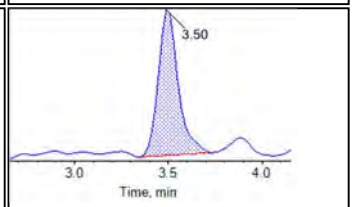

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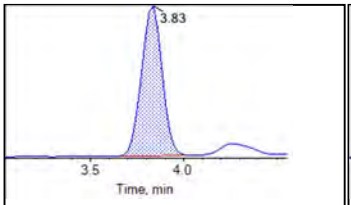

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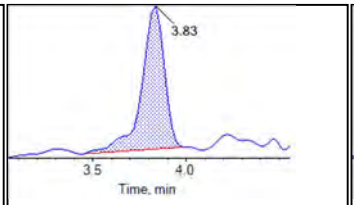

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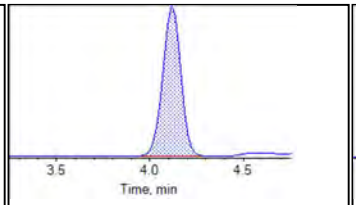

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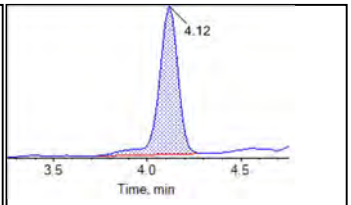

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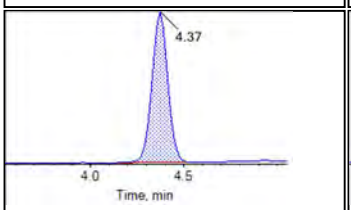

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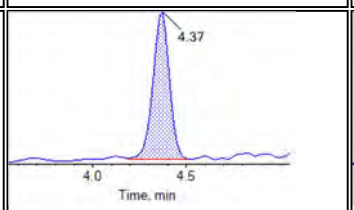

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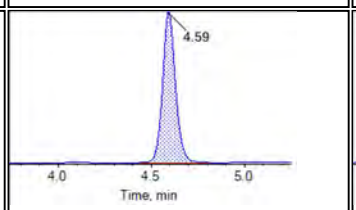

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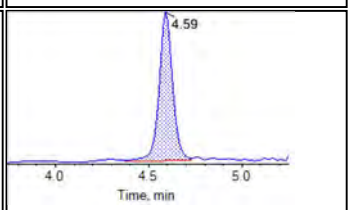

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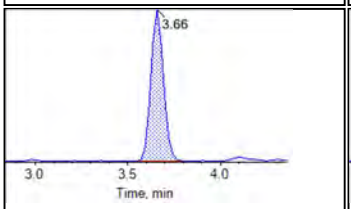

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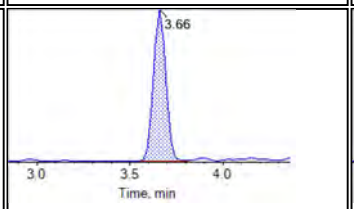

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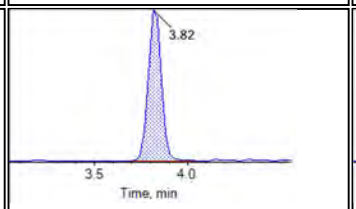

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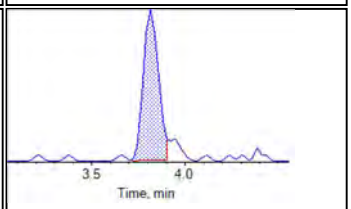

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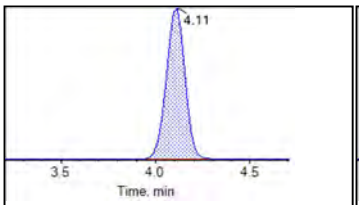

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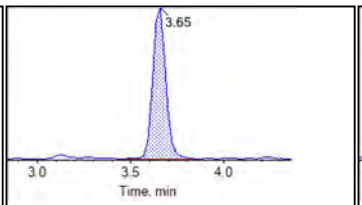

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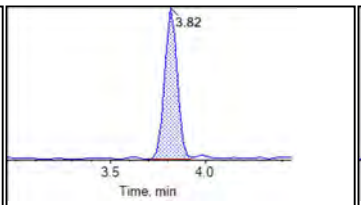

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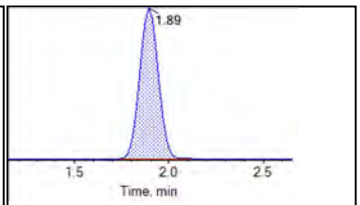

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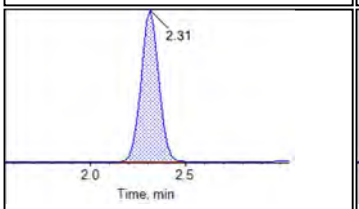

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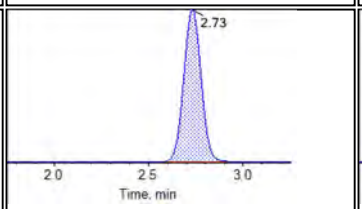

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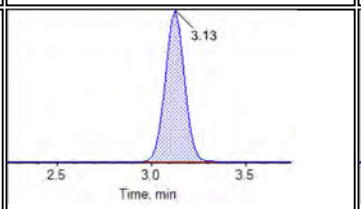
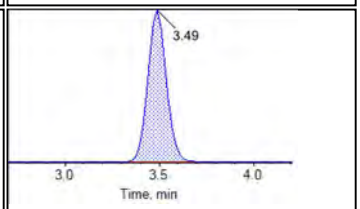


13C9-PFNA



13C6-PFDA

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Chromatogram Report

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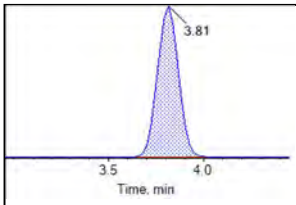
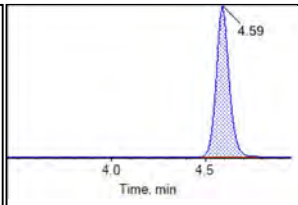


13C7-PFUnA



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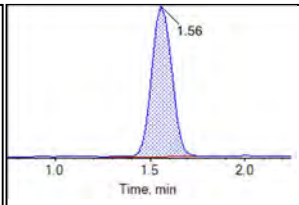

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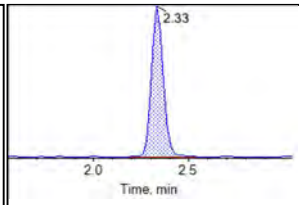

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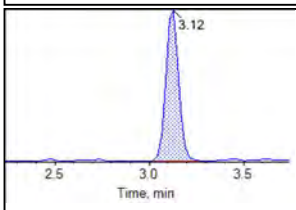

13C8-PFOS

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Chromatogram Report

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Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:06:49	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

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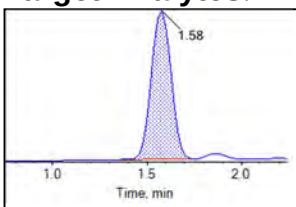

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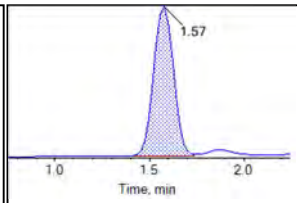

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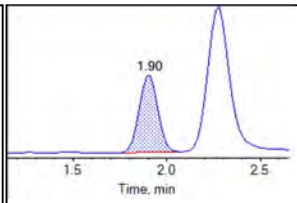

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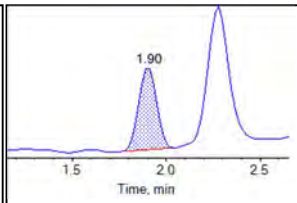

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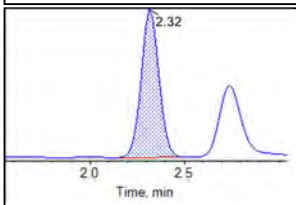

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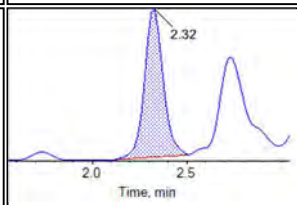

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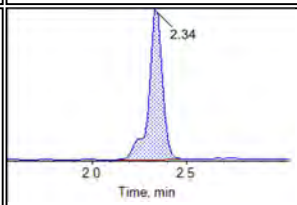

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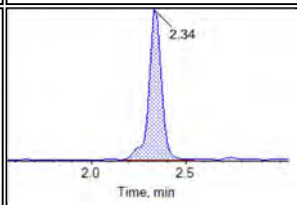

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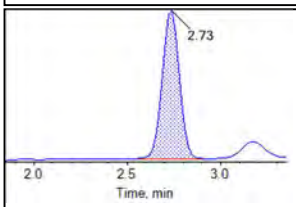

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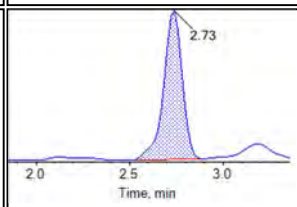

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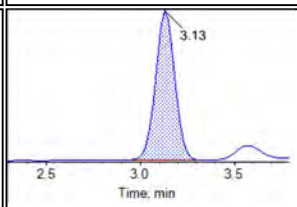

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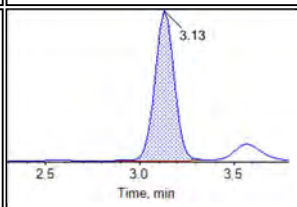

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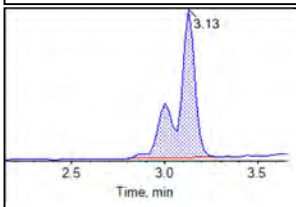

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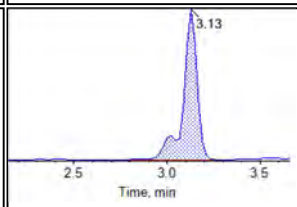

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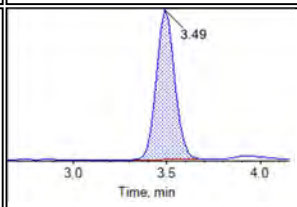

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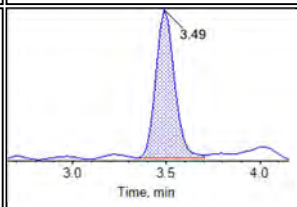

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Chromatogram Report

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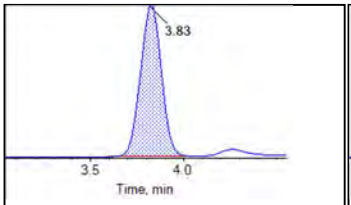

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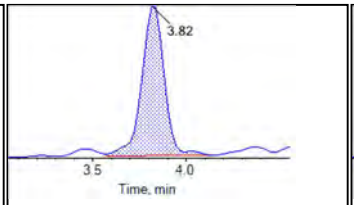

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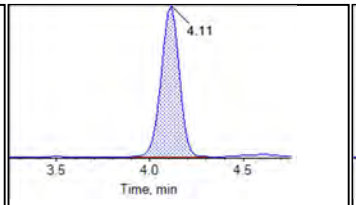

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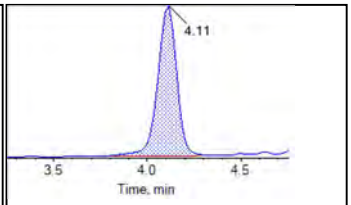

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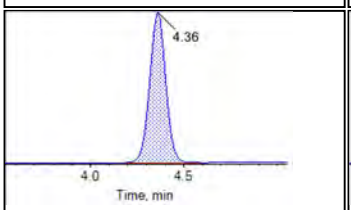

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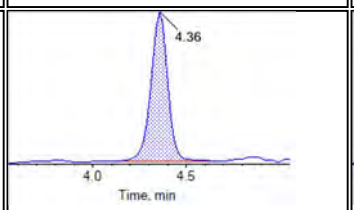

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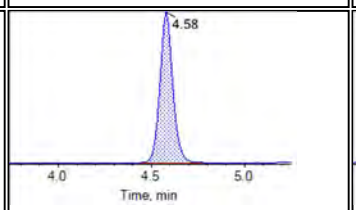

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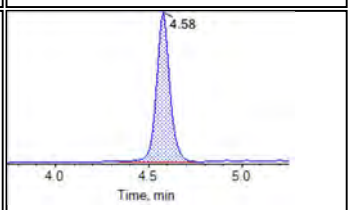

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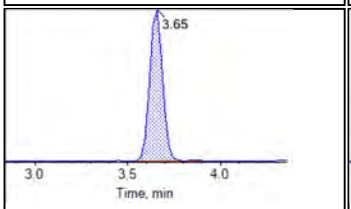

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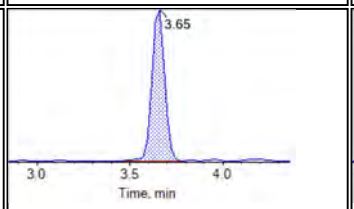

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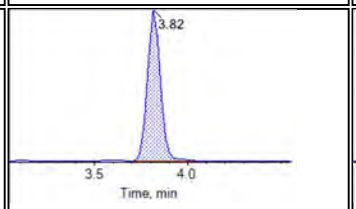

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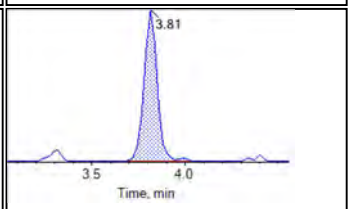

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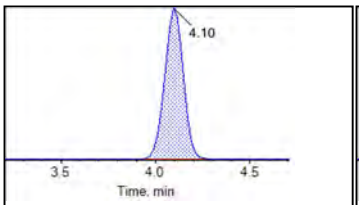

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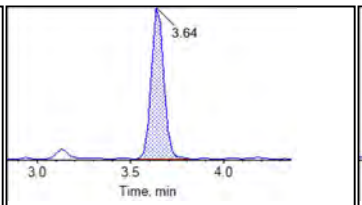

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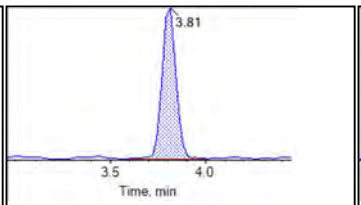

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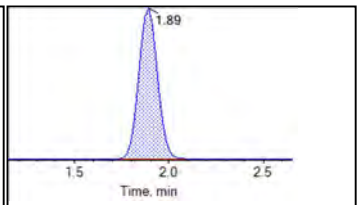

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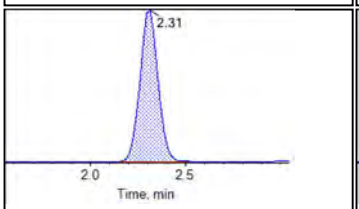

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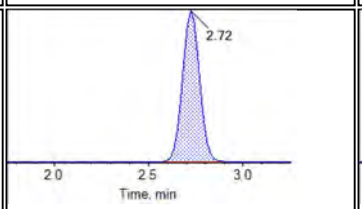

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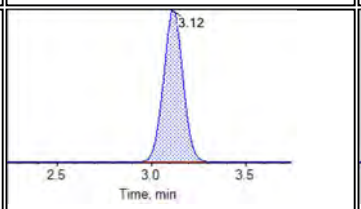

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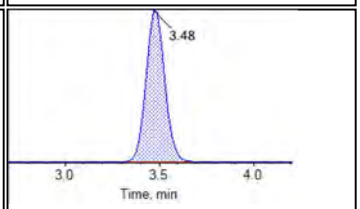

13C6-PFDA

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Chromatogram Report

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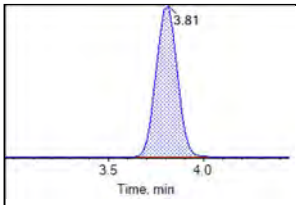

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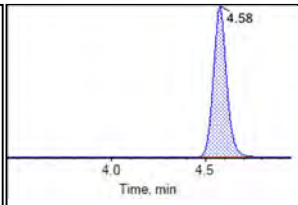

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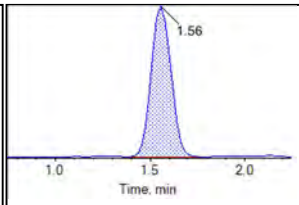
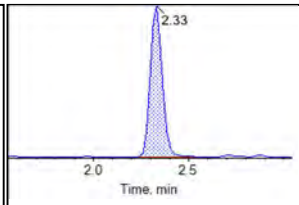


13C3-PFBS



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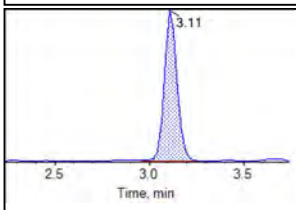

13C8-PFOS

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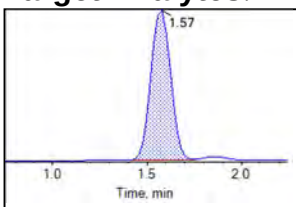
Sample Name	KC69	**Injection Vial**	4
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:17:43	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

Target Analytes:



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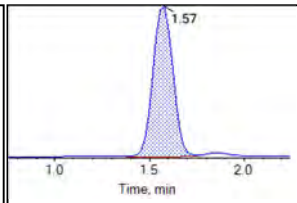

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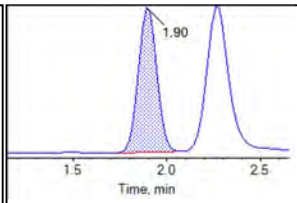

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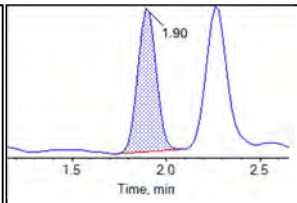

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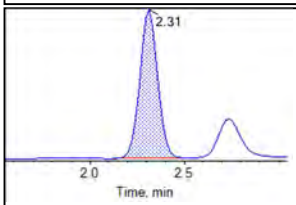

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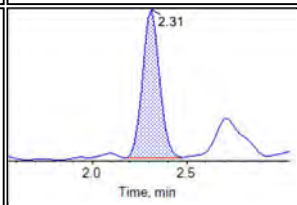

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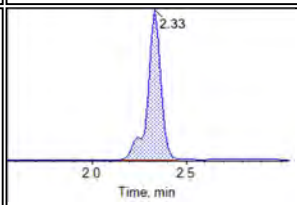

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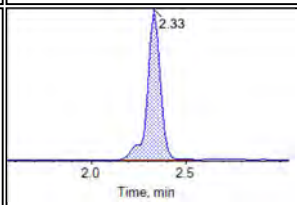

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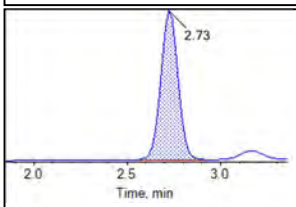

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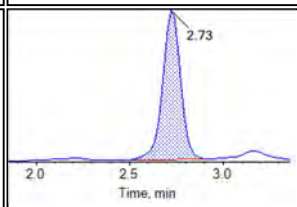

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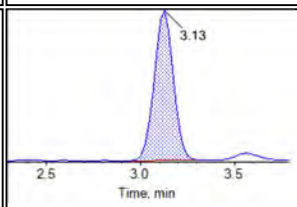

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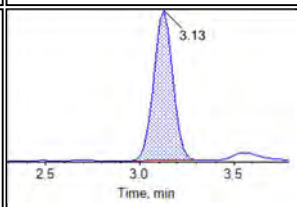

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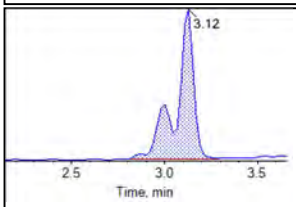

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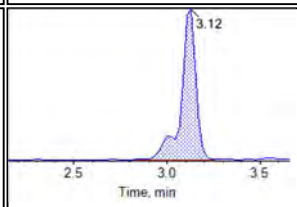

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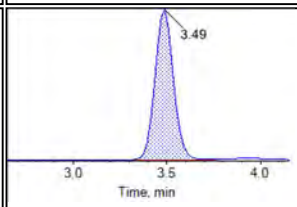

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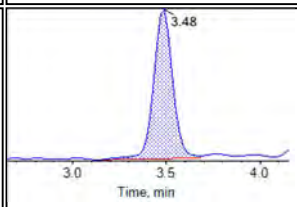

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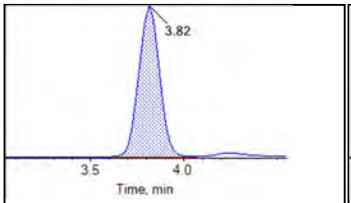

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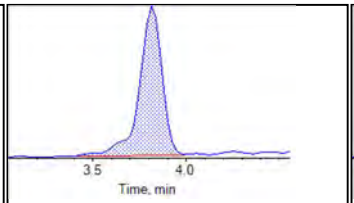

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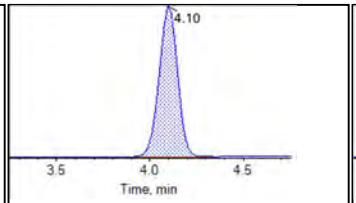

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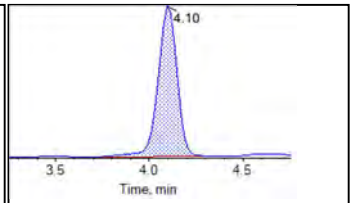

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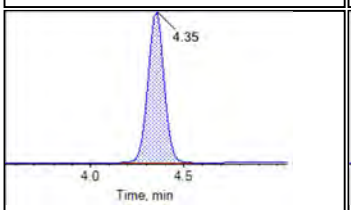

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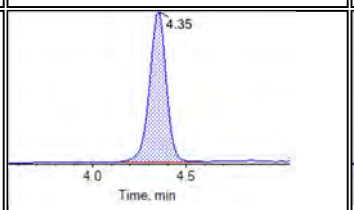

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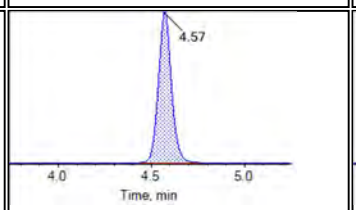

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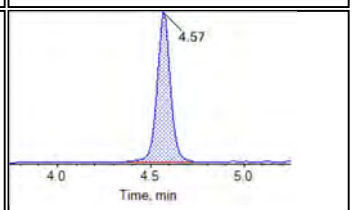

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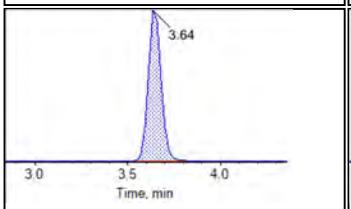

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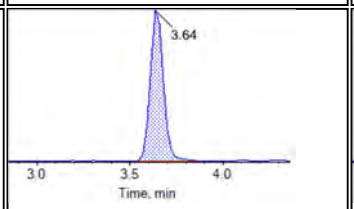

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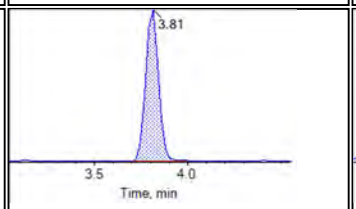

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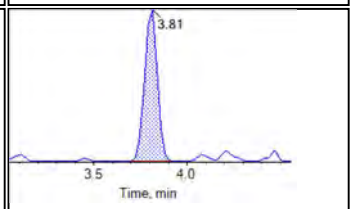

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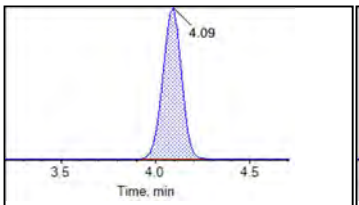

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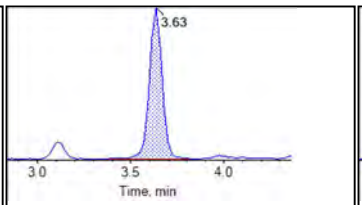

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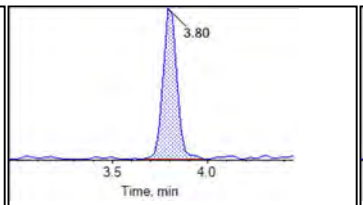

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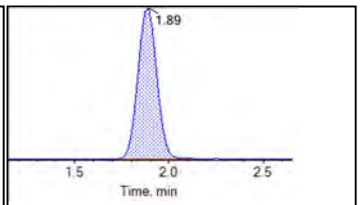

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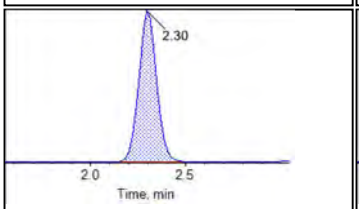

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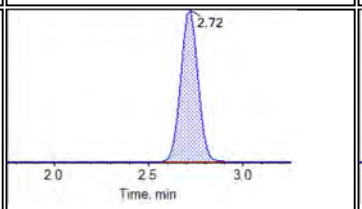

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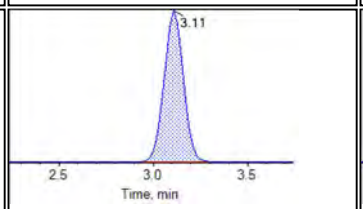

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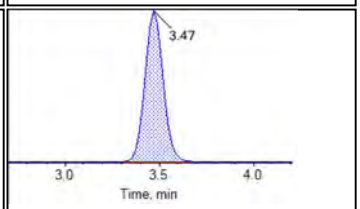

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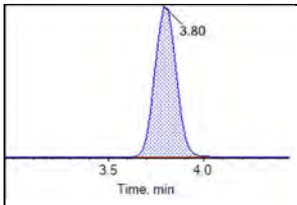

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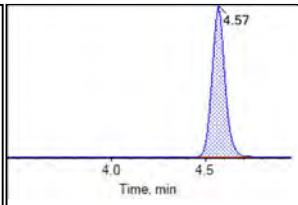

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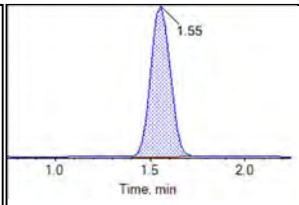
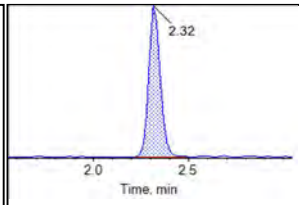
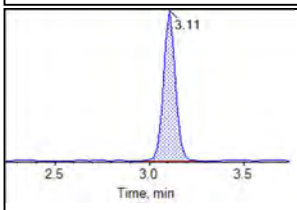


13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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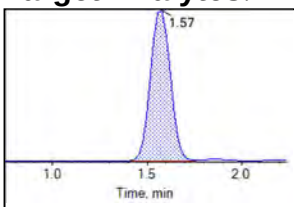
Sample Name	KC70	**Injection Vial**	5
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:28:35	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

Target Analytes:



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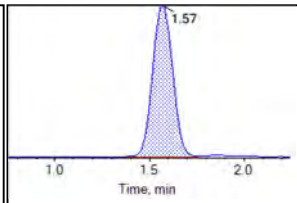

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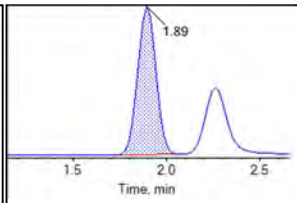

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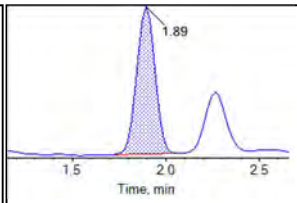

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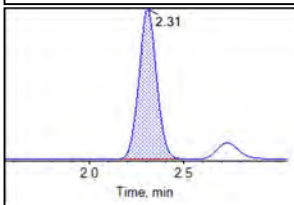

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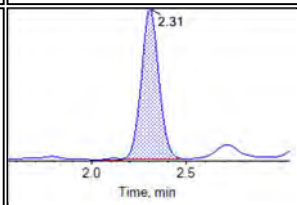

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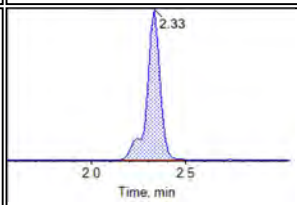

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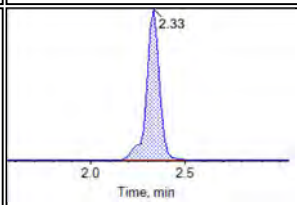

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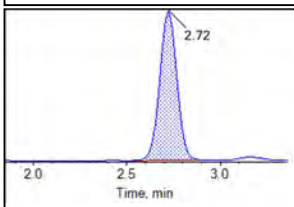

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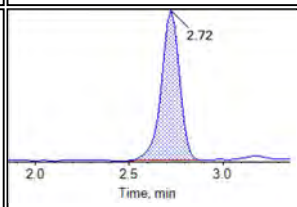

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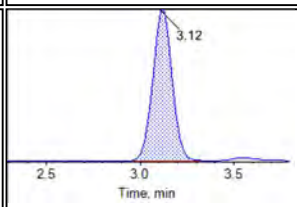

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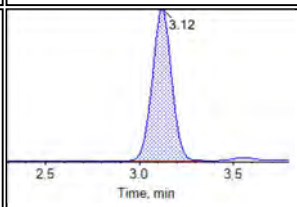

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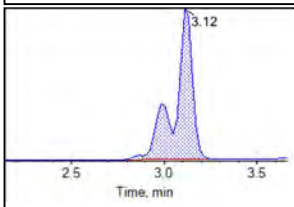

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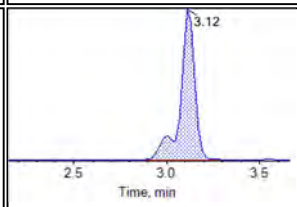

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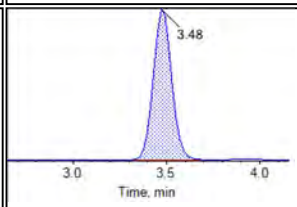

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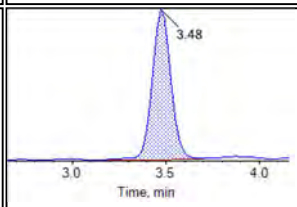

PFDA_2

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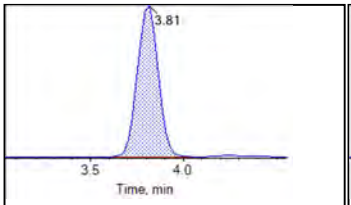

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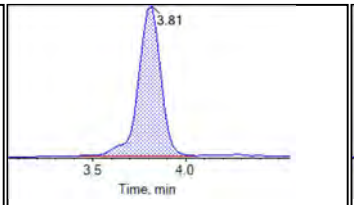

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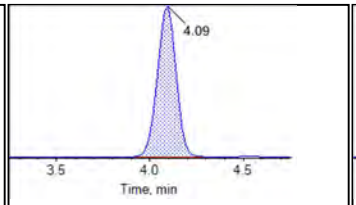

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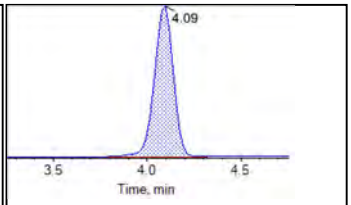

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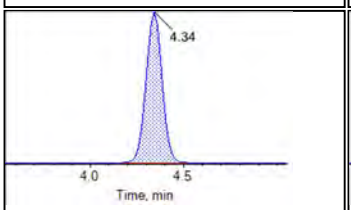

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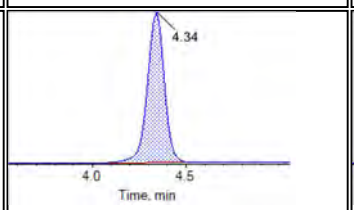

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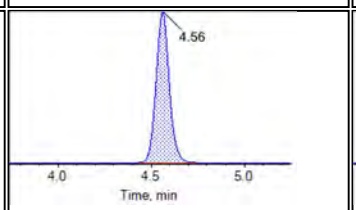

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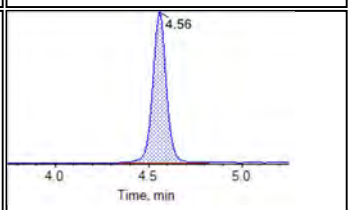

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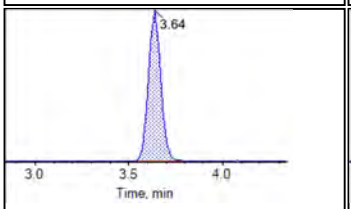

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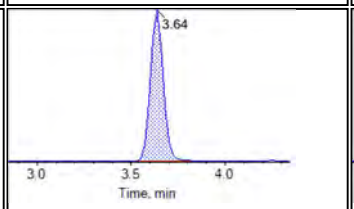

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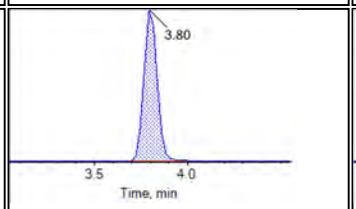

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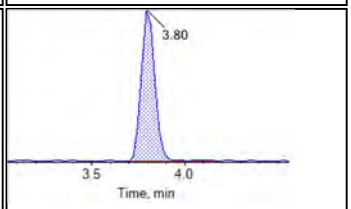
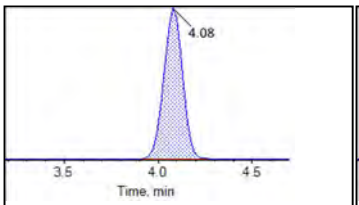
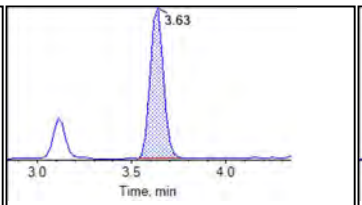


NEtFOSAA_2

Internal Standards:



13C2-PFDoA



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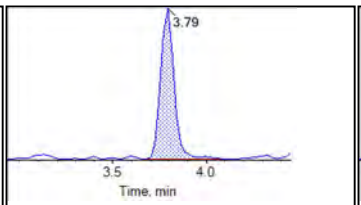

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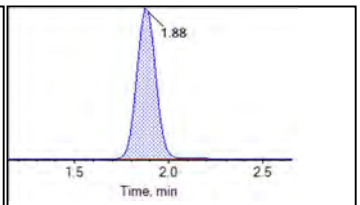
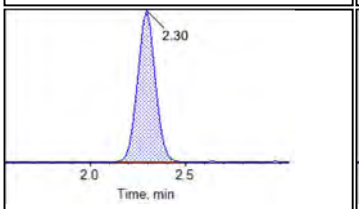


13C5-PFHxA



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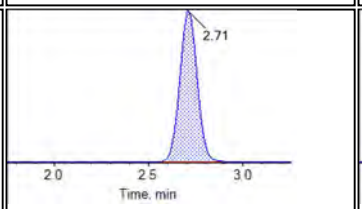
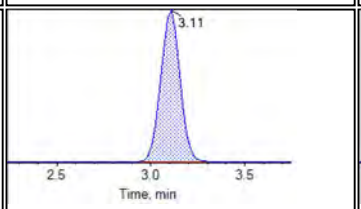


13C8-PFOA



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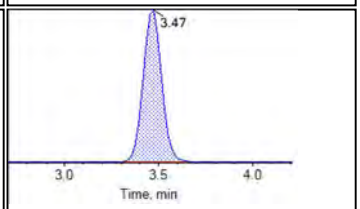

13C6-PFDA

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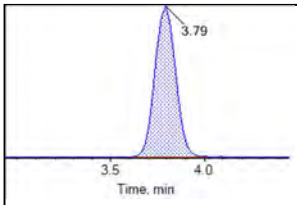
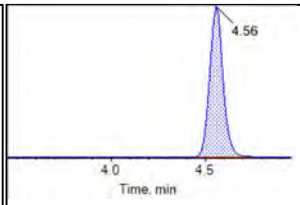


13C7-PFUnA



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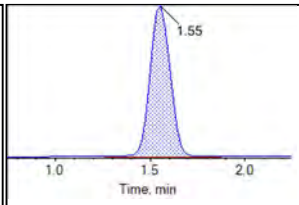
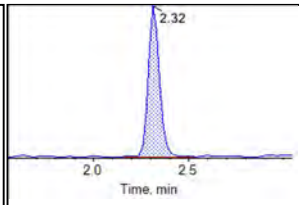


13C3-PFBS



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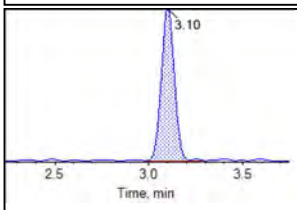

13C8-PFOS

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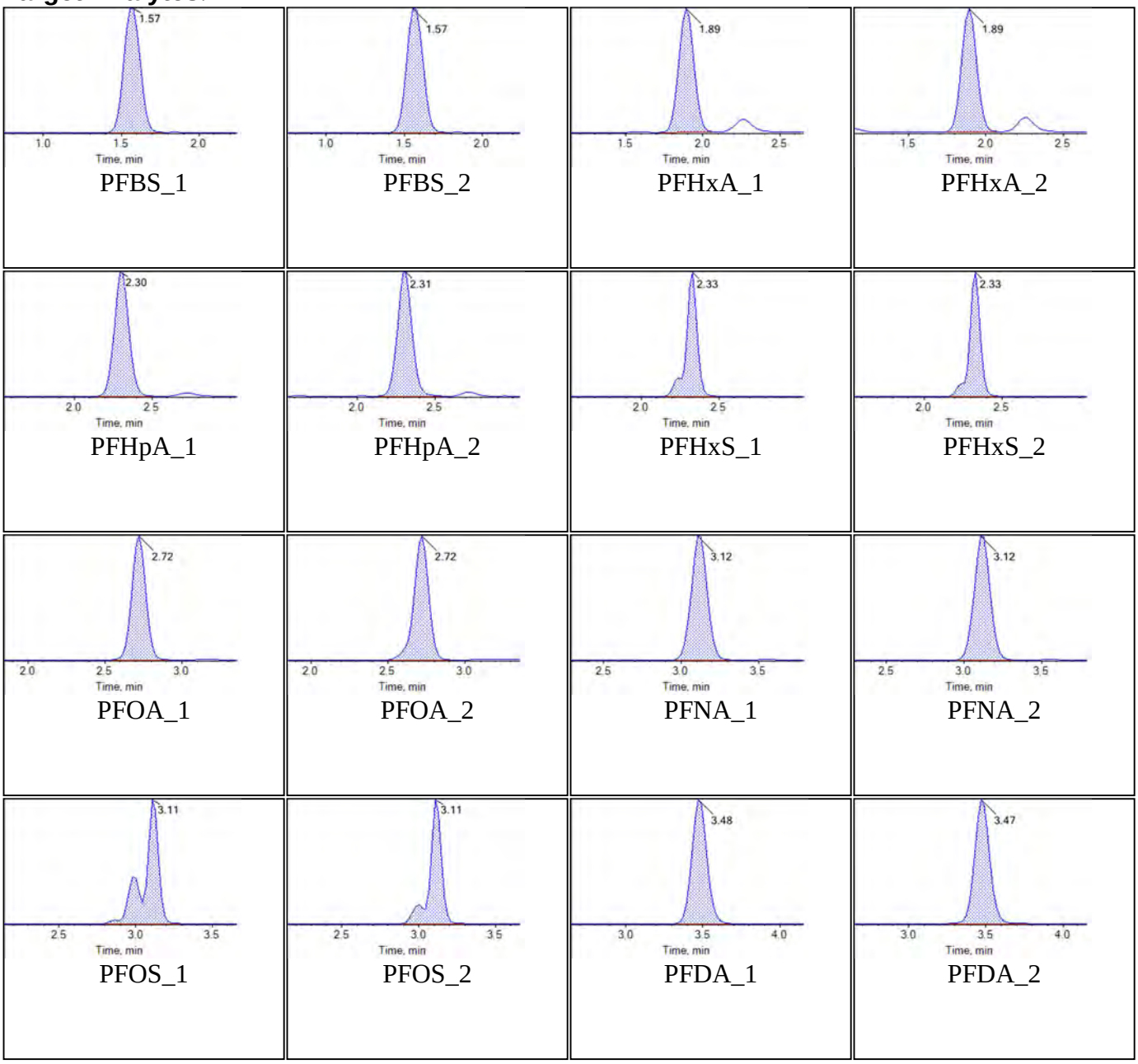
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:09:01 PM

Sample Name	KC71	**Injection Vial**	6
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:39:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

Target Analytes:



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Chromatogram Report

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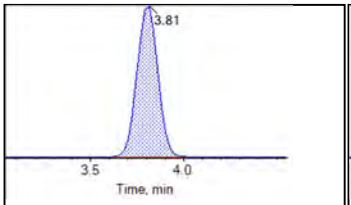

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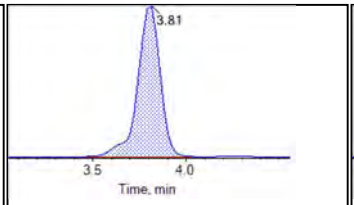

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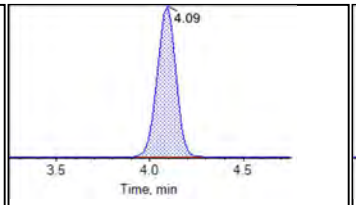

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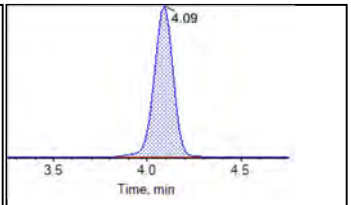

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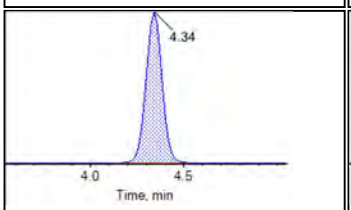
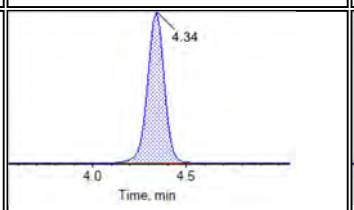
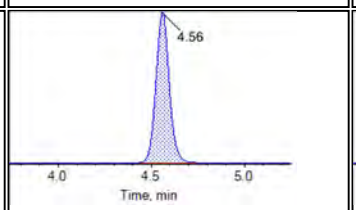


PFTrDA_1



PFTrDA_2



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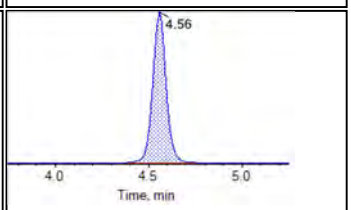

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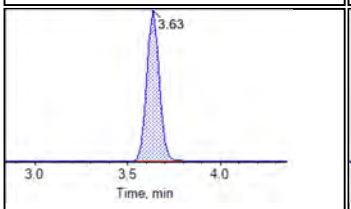

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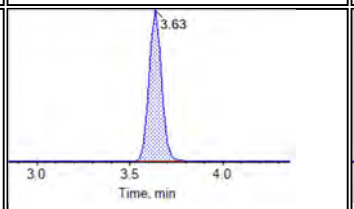

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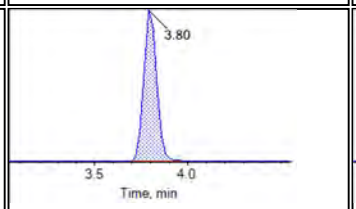

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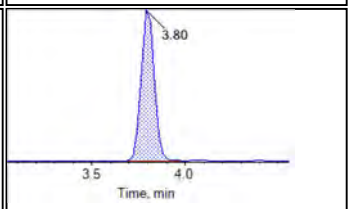

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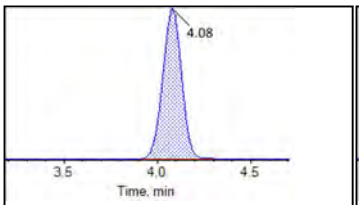
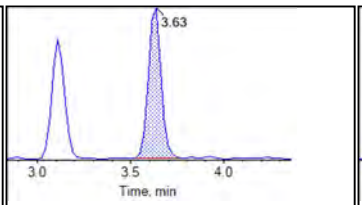


13C2-PFDoA



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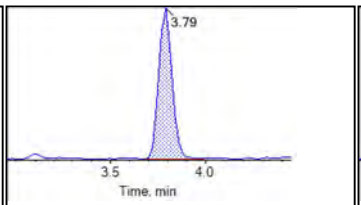

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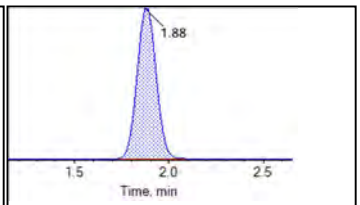

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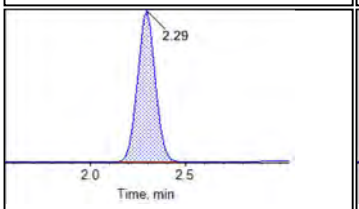

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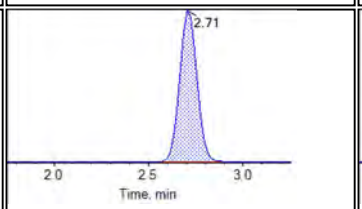

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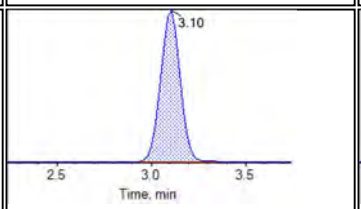

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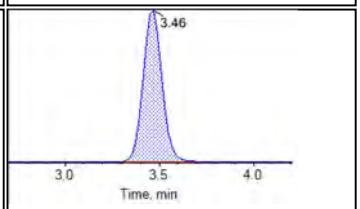

13C6-PFDA

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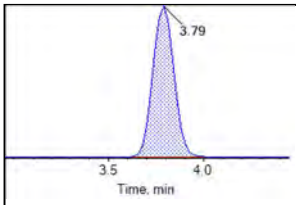
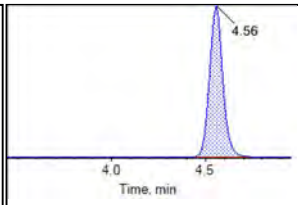


13C7-PFUnA



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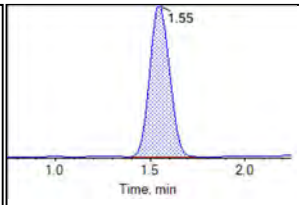
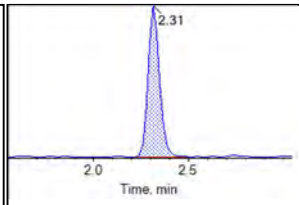


13C3-PFBS



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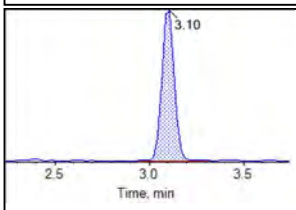

13C8-PFOS

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Chromatogram Report

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Printed: 26/11/2018 3:09:07 PM

Sample Name	KC72	**Injection Vial**	7
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:50:19	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

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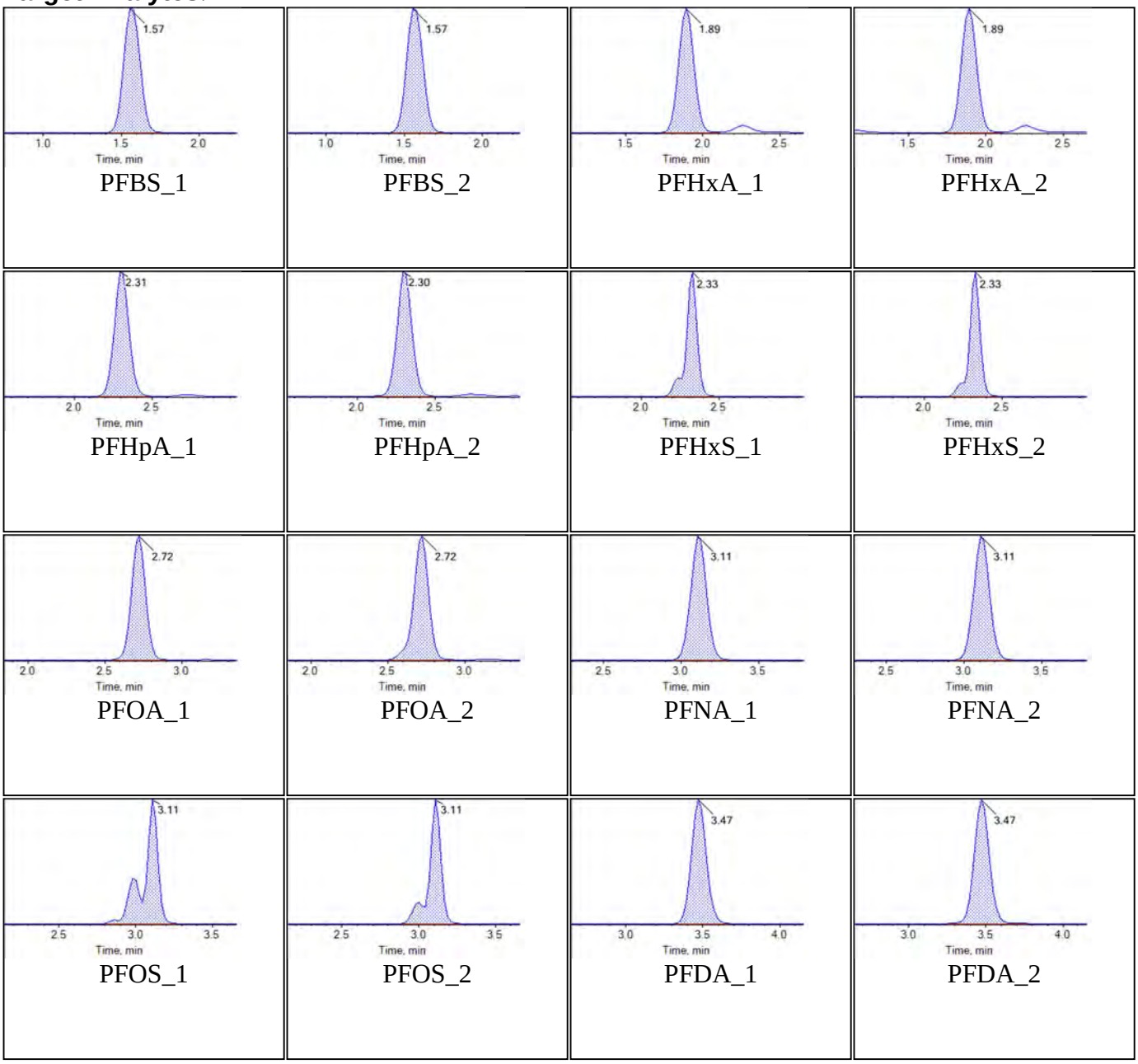

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Chromatogram Report

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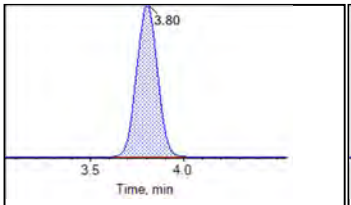

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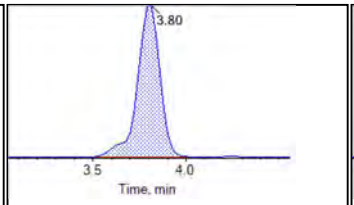

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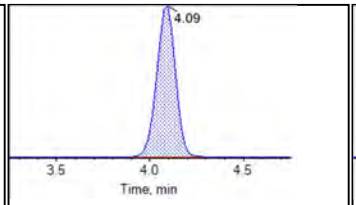

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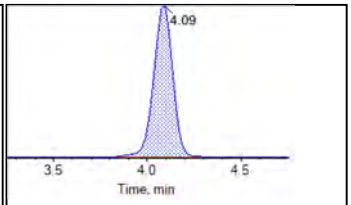

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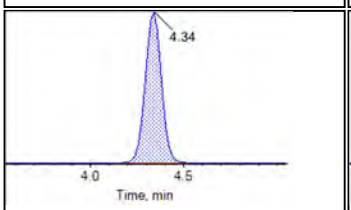

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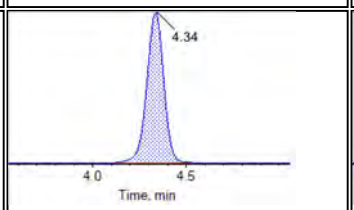

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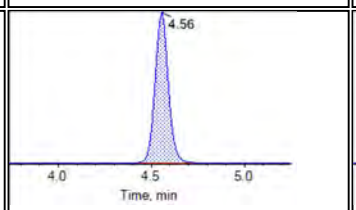

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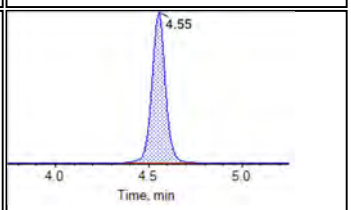

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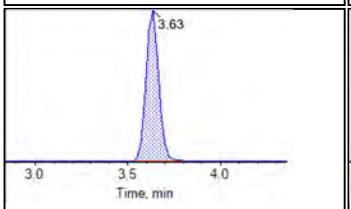

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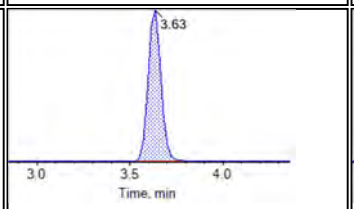

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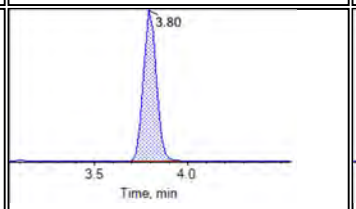

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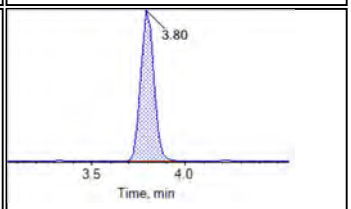

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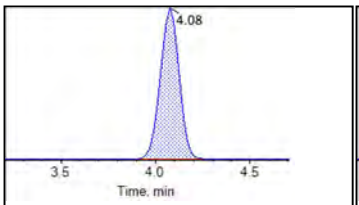

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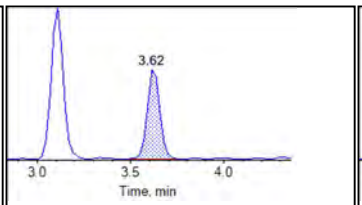
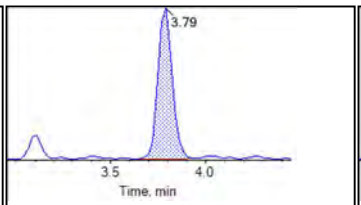
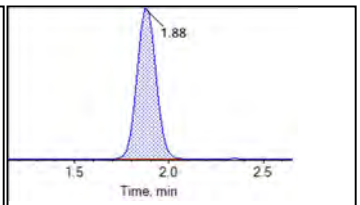


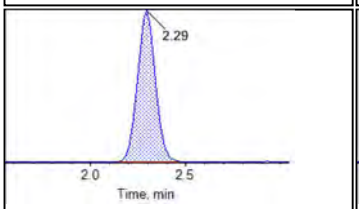
d3-MeFOSAA



d5-EtFOSAA



13C5-PFHxA



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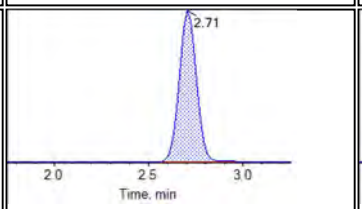
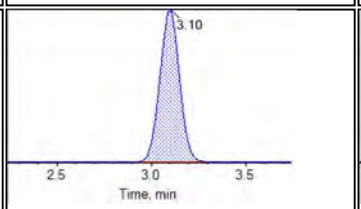


13C8-PFOA



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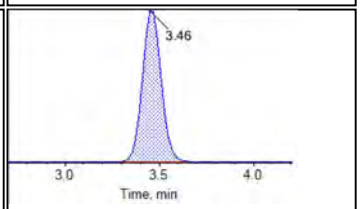

13C6-PFDA

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Chromatogram Report

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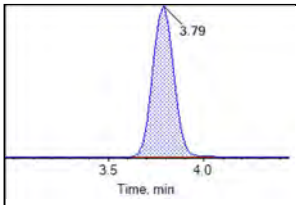
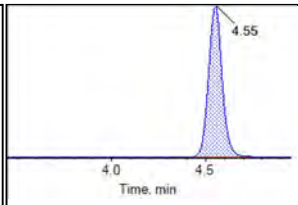


13C7-PFUnA



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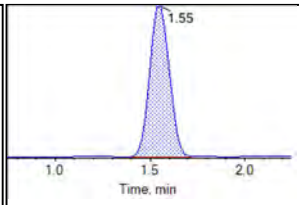

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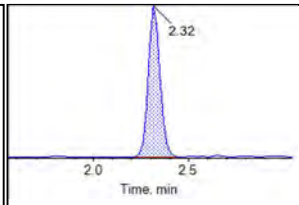

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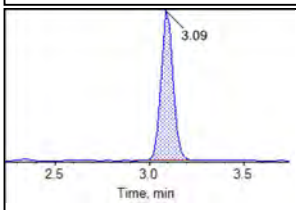

13C8-PFOS

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Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:09:13 PM

Sample Name	KC73 IB	**Injection Vial**	8
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:01:12	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

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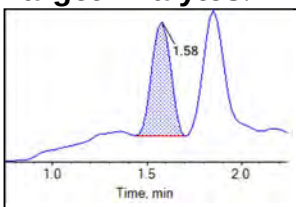

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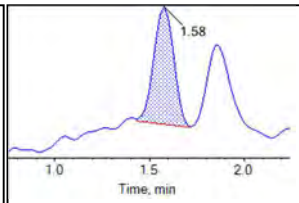
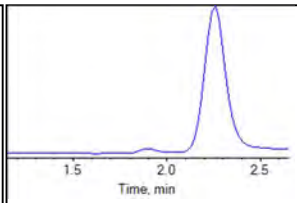
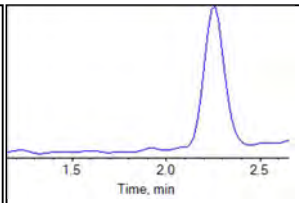


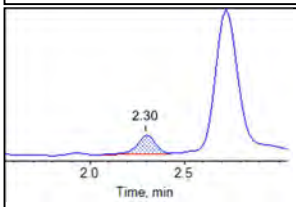
PFBS_2



PFHxA_1



PFHxA_2



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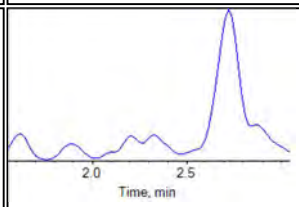

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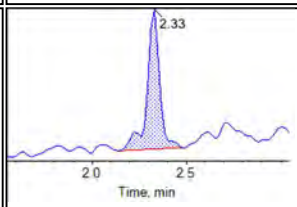

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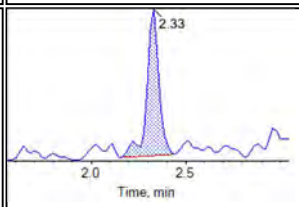

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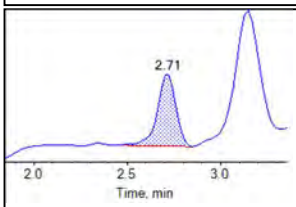

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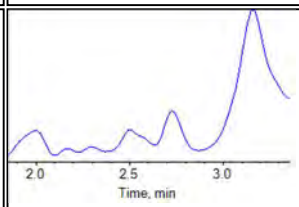

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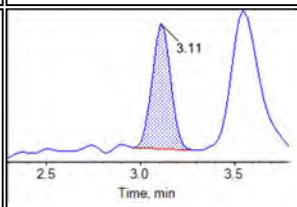

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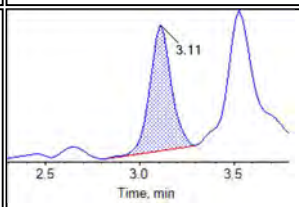

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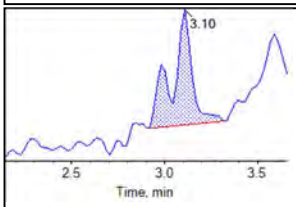

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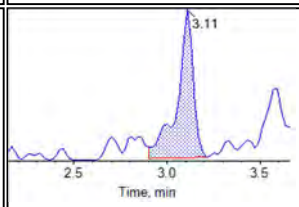

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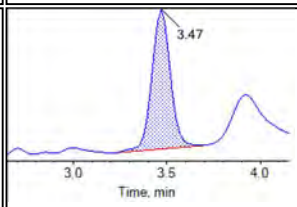

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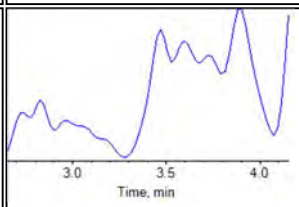

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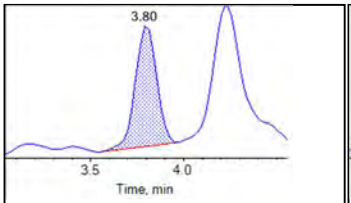

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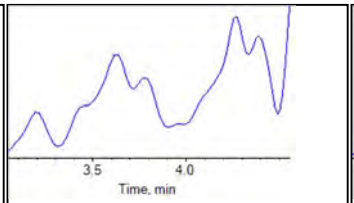

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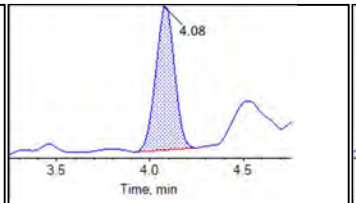

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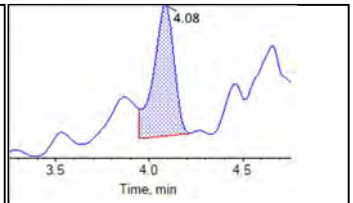

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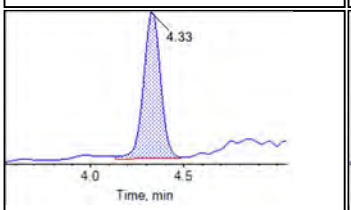

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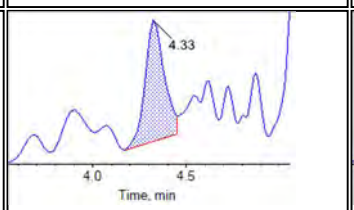

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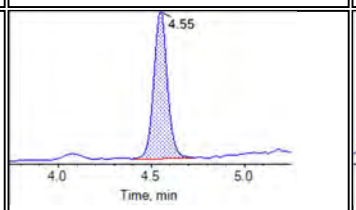

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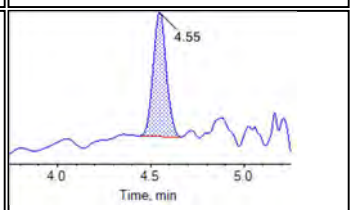

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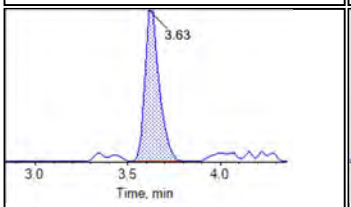

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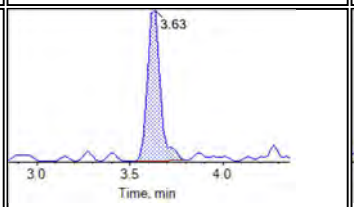

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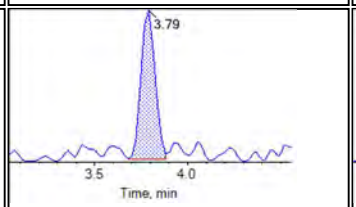

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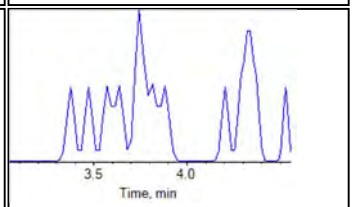

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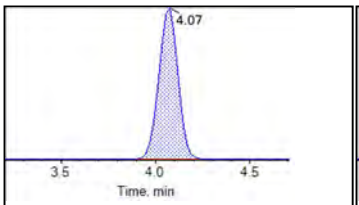

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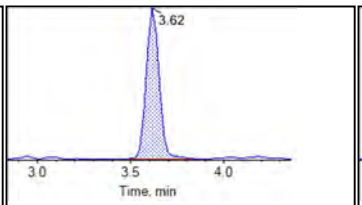

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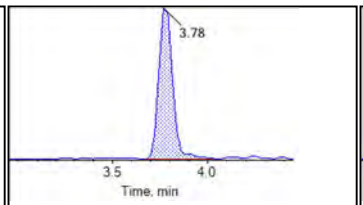

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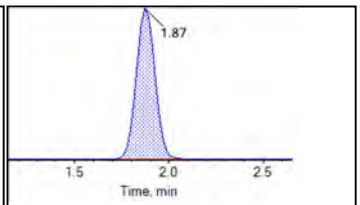

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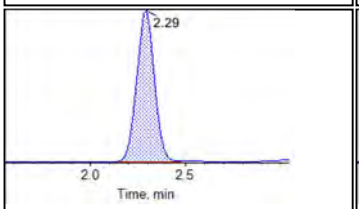

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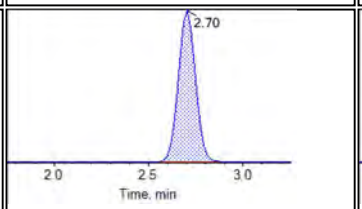

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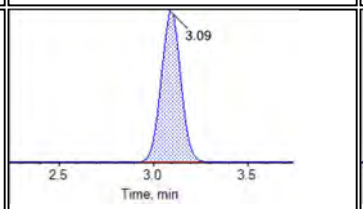

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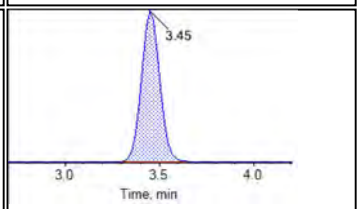

13C6-PFDA

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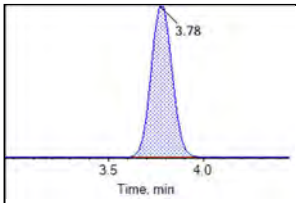

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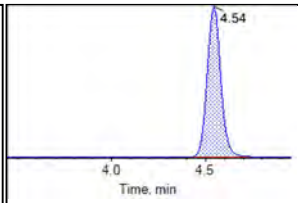

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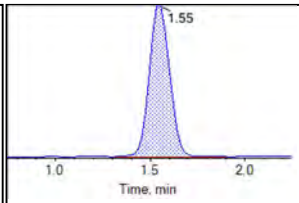

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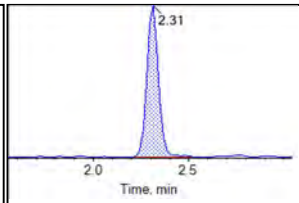

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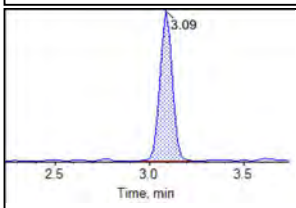

13C8-PFOS

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Chromatogram Report

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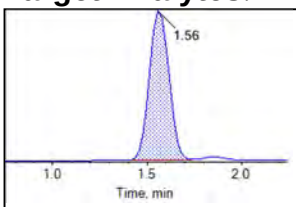
Sample Name	KC74 ICC	**Injection Vial**	9
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:12:04	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

Target Analytes:



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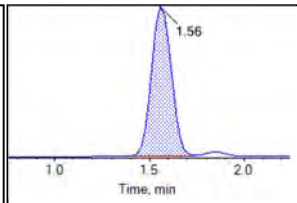

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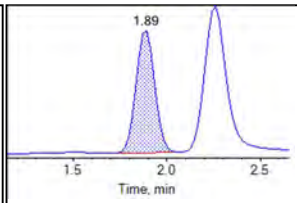

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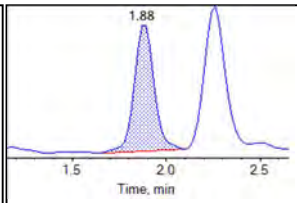

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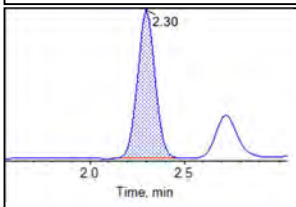

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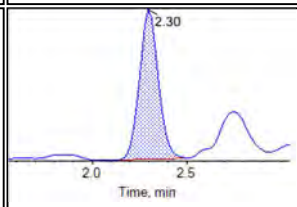

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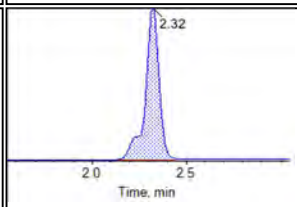

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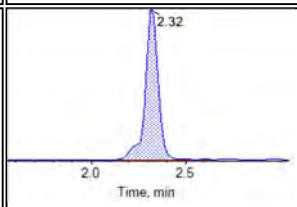

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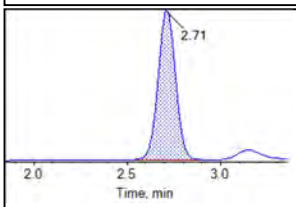

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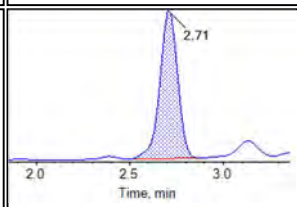

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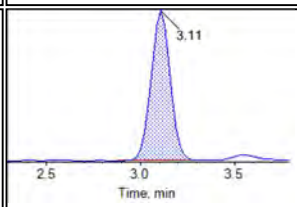

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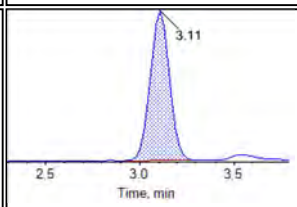

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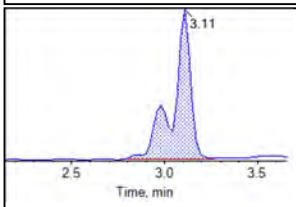

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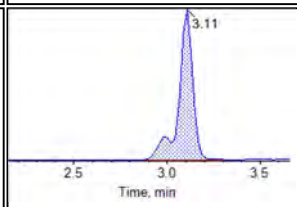

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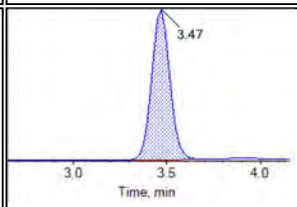

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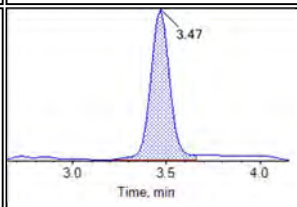

PFDA_2

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Chromatogram Report

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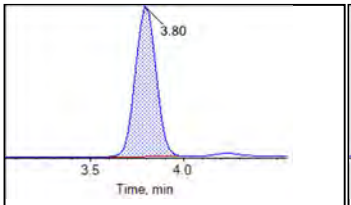

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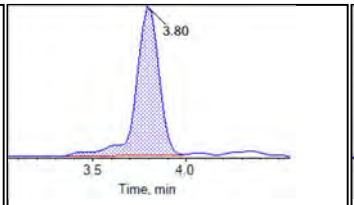

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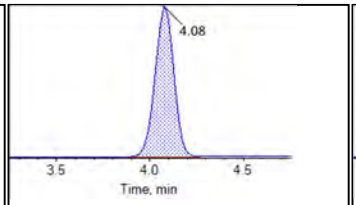

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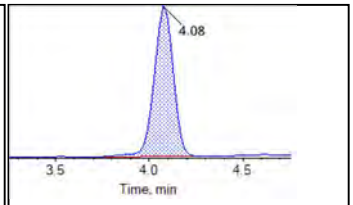

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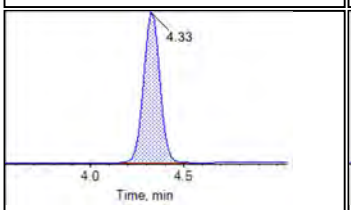

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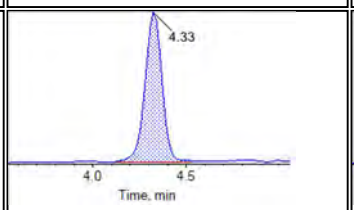

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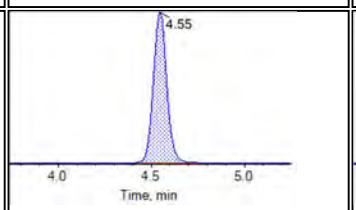

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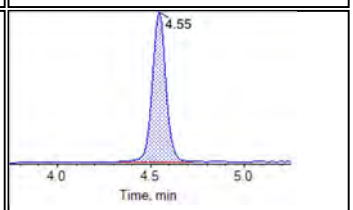

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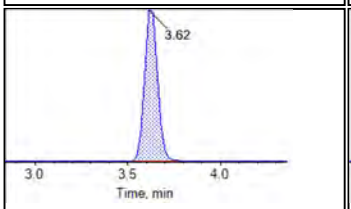

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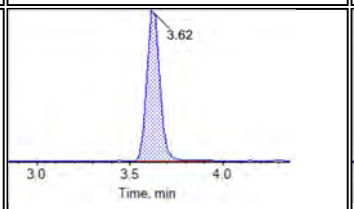

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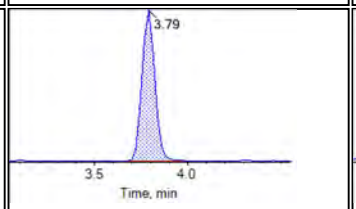

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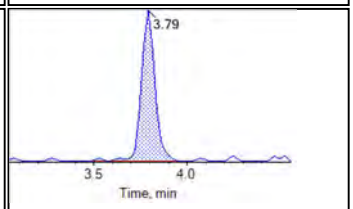

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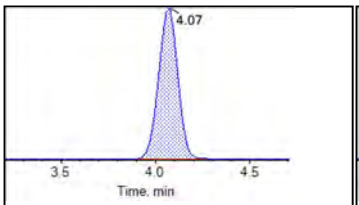

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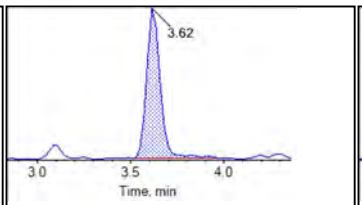

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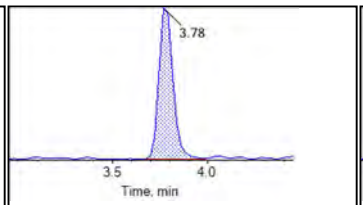

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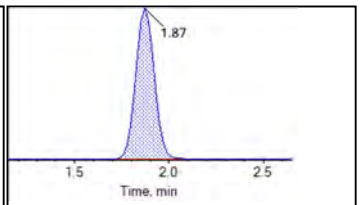

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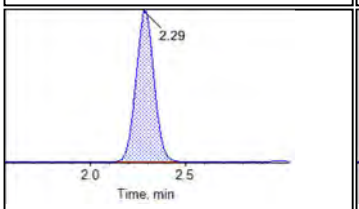

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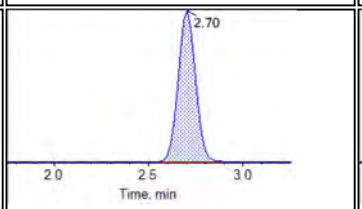

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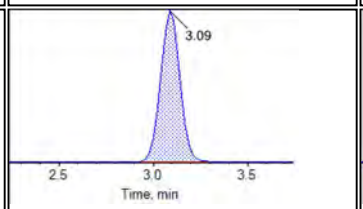

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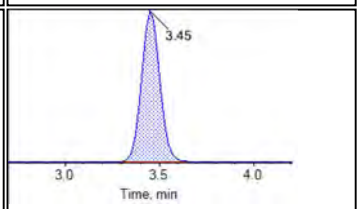

13C6-PFDA

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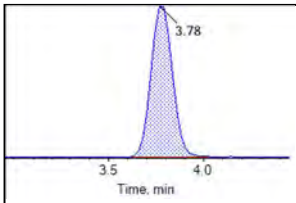
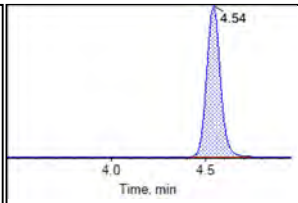


13C7-PFUnA



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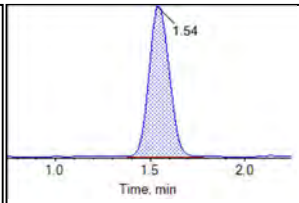

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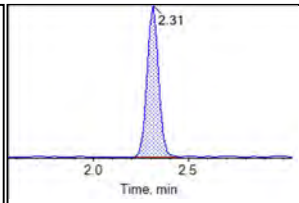

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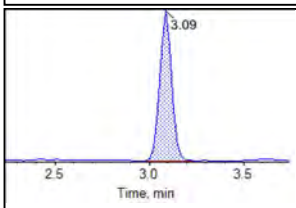

13C8-PFOS

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Chromatogram Report

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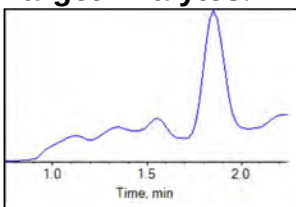
Sample Name	CS241PB-FS(0)	**Injection Vial**	12
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:44:39	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

Target Analytes:



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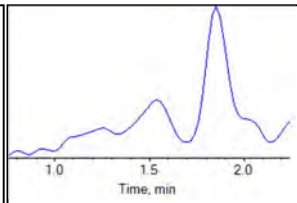

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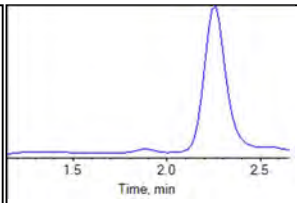

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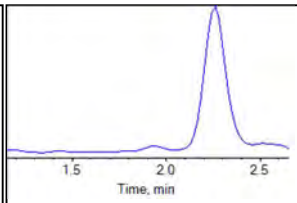

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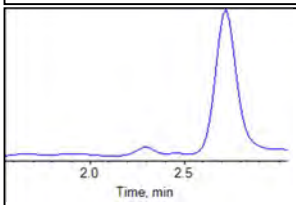

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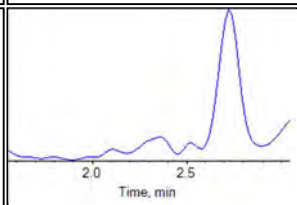

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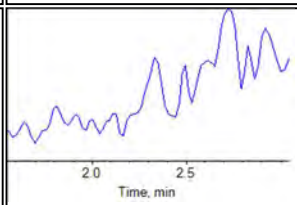

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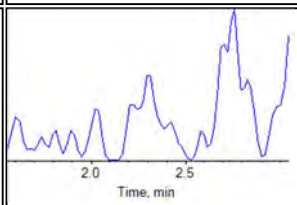

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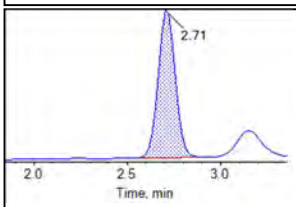

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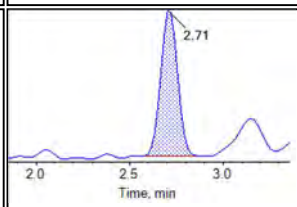

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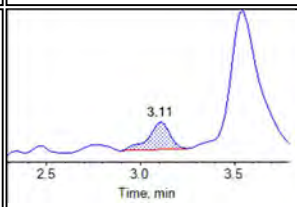

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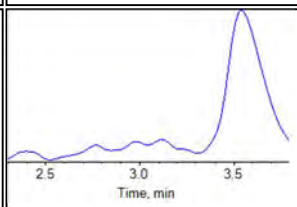

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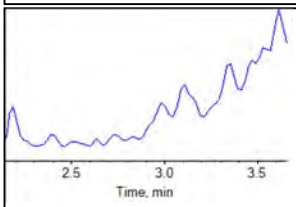

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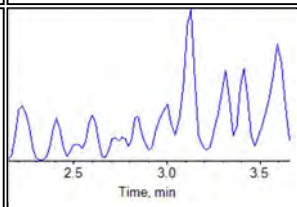

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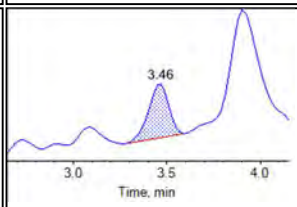

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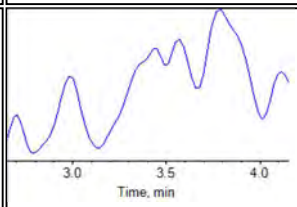

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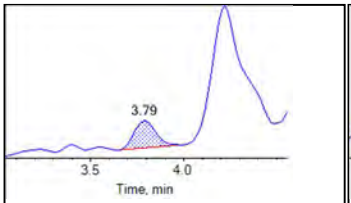

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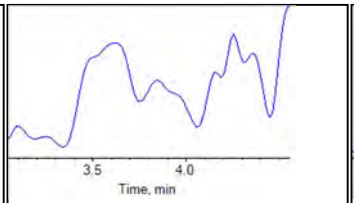

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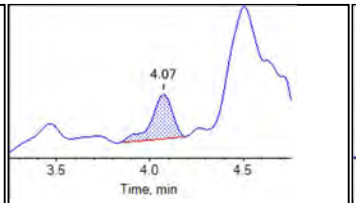

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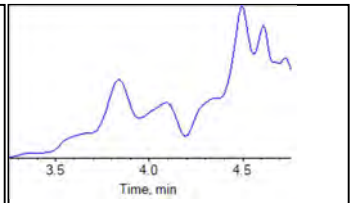

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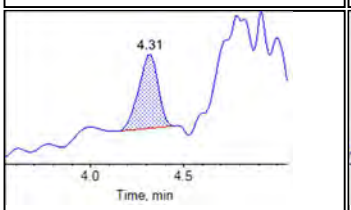

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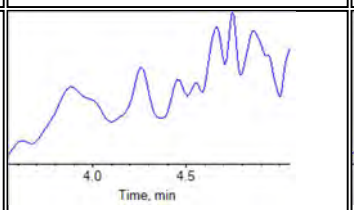

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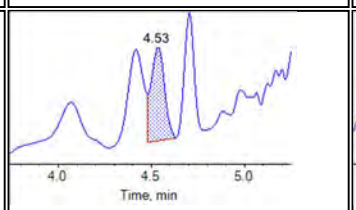

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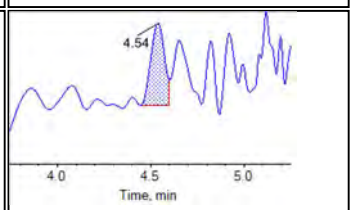

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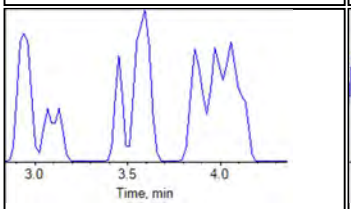

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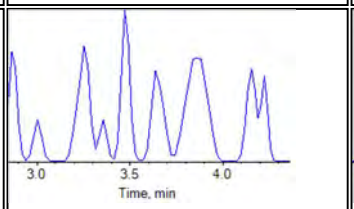

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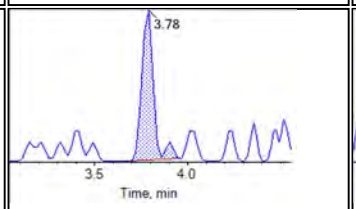

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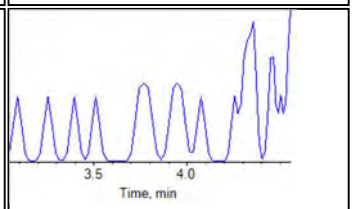

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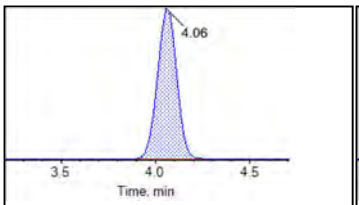
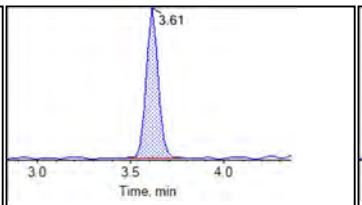


13C2-PFDoA



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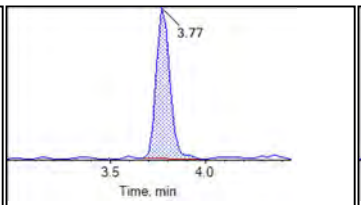

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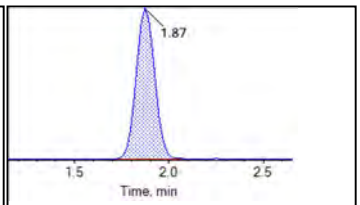

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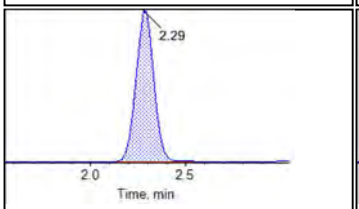

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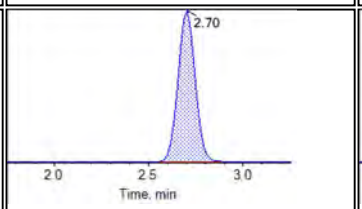
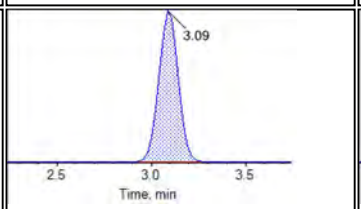
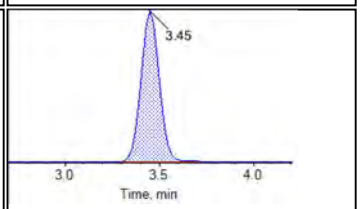


13C8-PFOA



13C9-PFNA



13C6-PFDA

BATTELLE

Chromatogram Report

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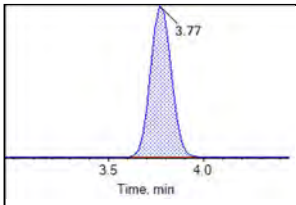
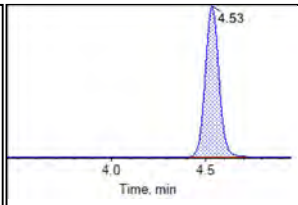


13C7-PFUnA



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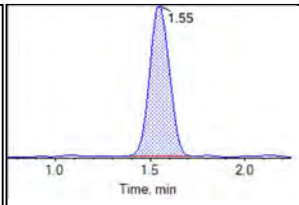
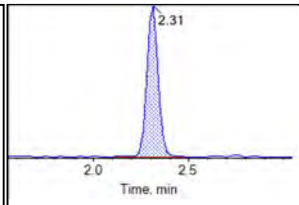


13C3-PFBS



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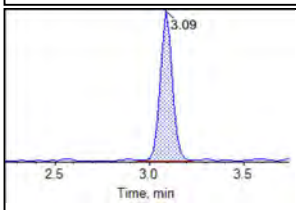

13C8-PFOS

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Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:09:36 PM

Sample Name	J9419-FS(0)	**Injection Vial**	13
Sample ID	RR-FB-111618	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:55:32	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

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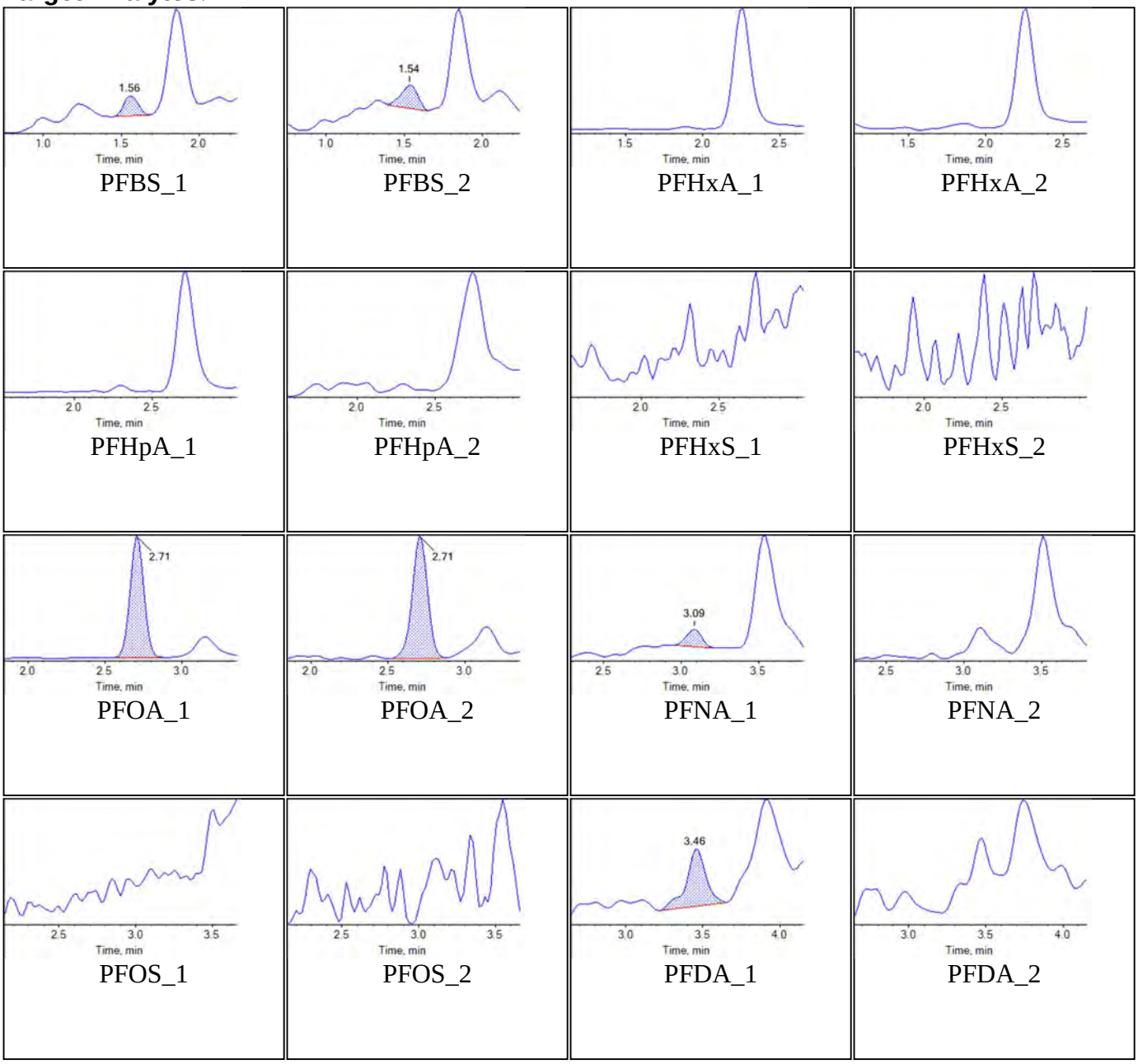

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Chromatogram Report

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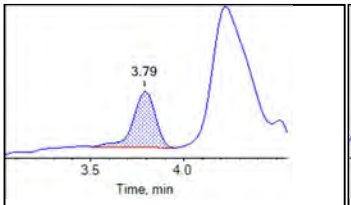

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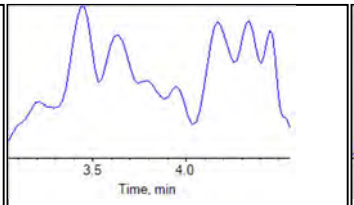

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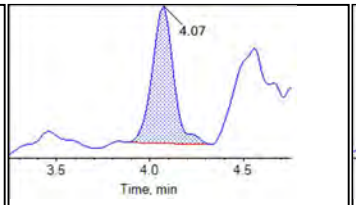

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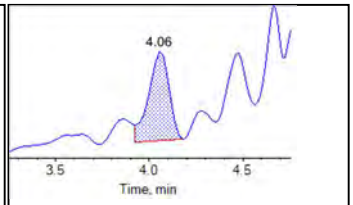

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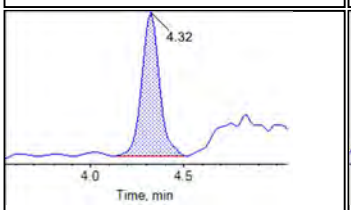

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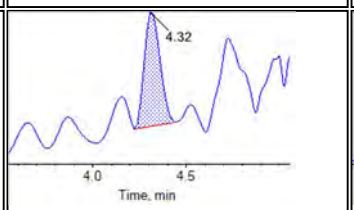

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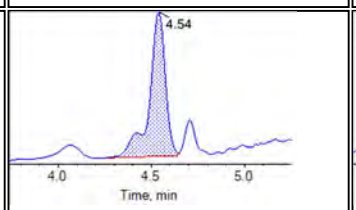

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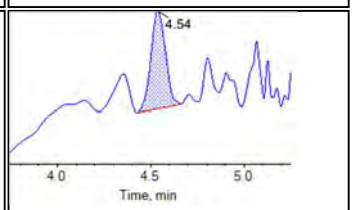

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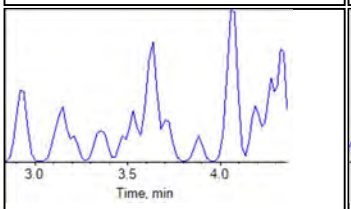

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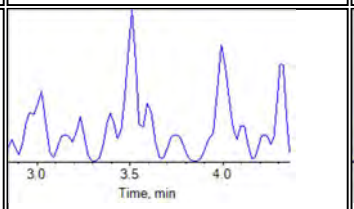

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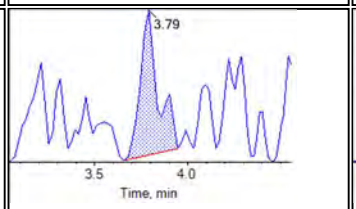

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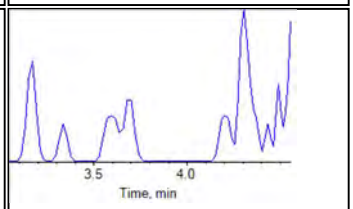

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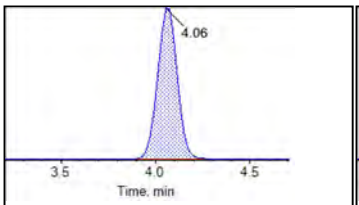

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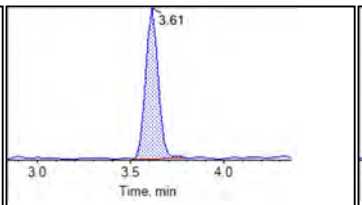

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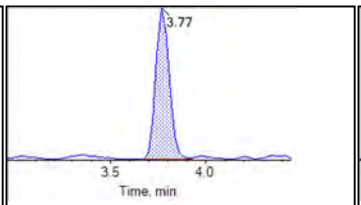
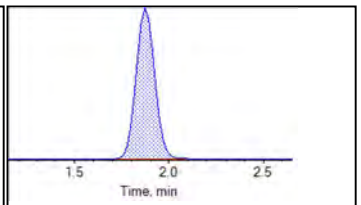
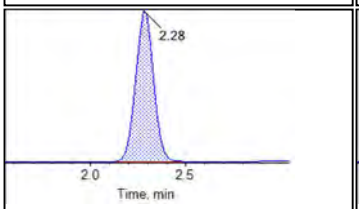


d5-EtFOSAA



13C5-PFHxA



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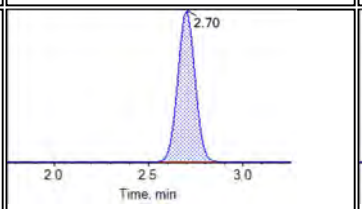
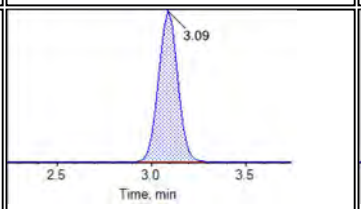
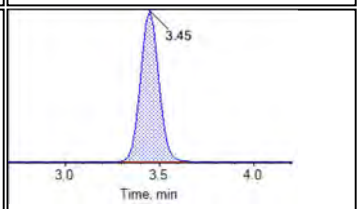


13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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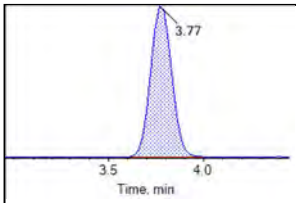
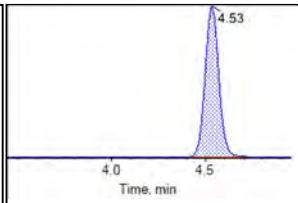


13C7-PFUnA



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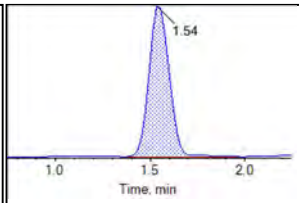

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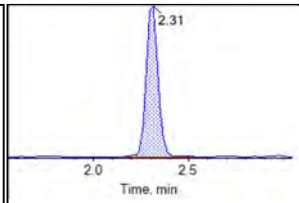

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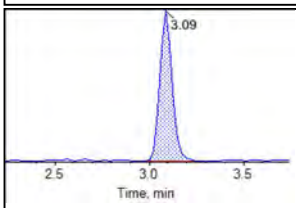

13C8-PFOS

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:09:42 PM

Sample Name	CS242LCS-FS(0)	**Injection Vial**	14
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:06:23	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

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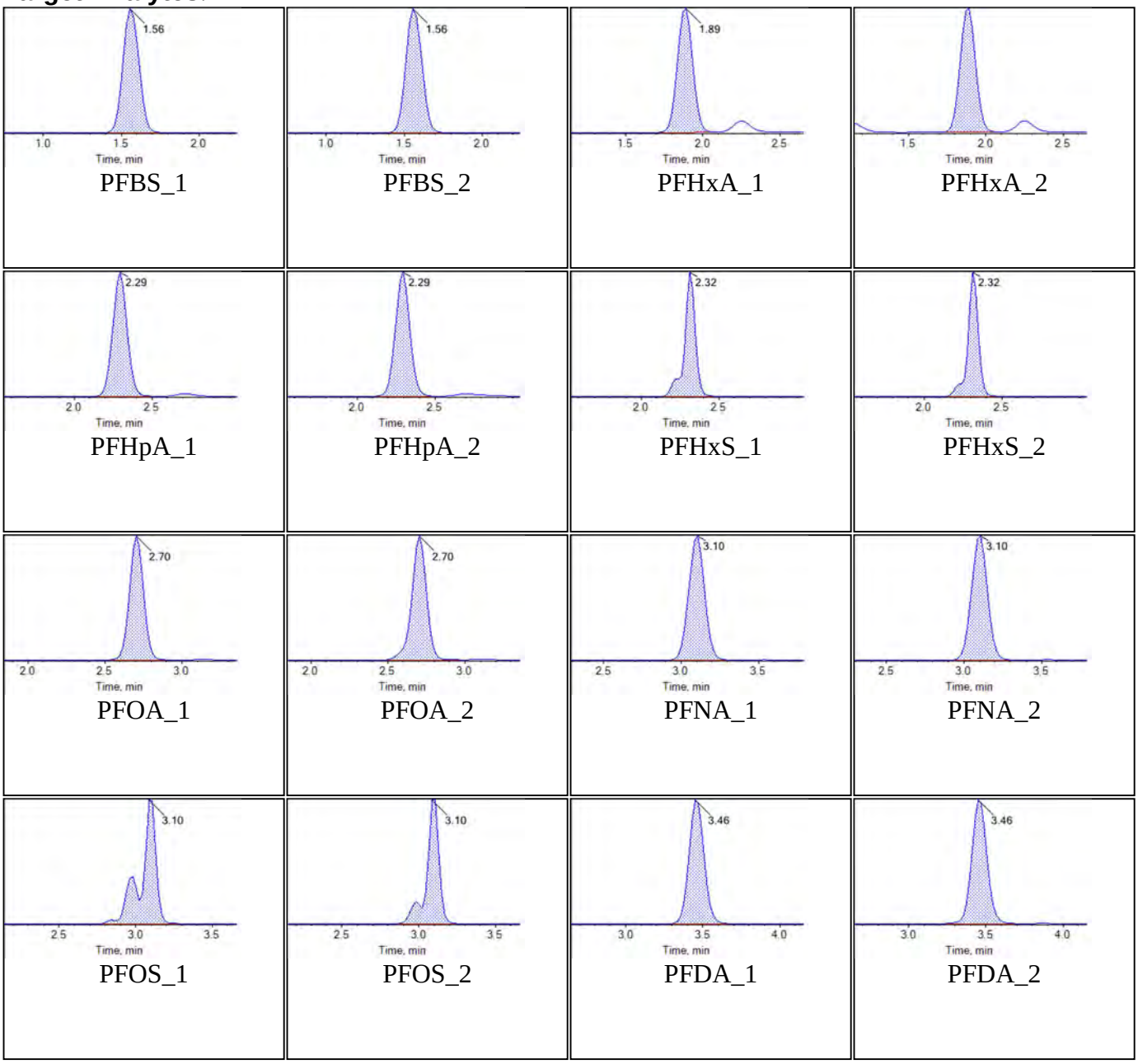

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Chromatogram Report

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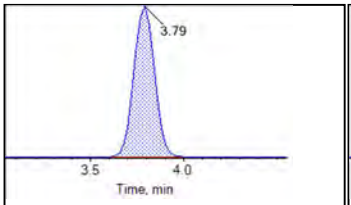

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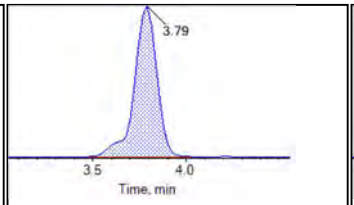
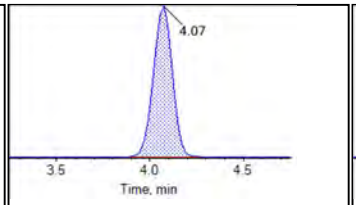


PFUnA_2



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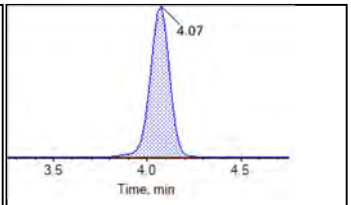
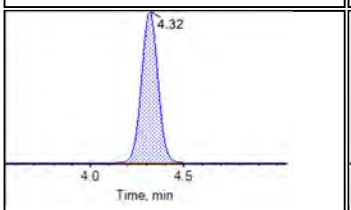


PFDoA_2



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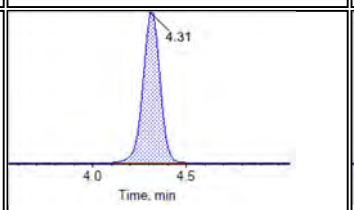

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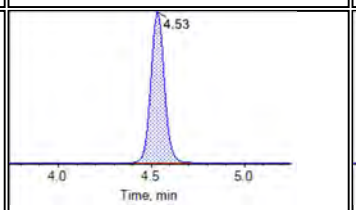

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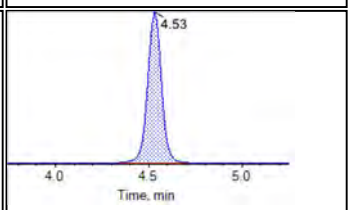

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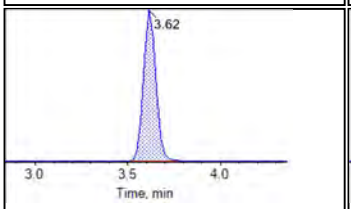
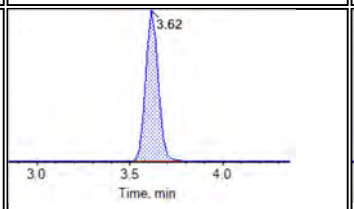


NMeFOSAA_1



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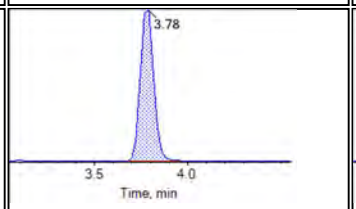

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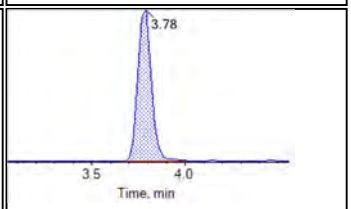

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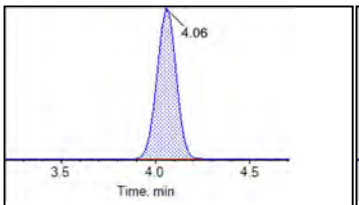
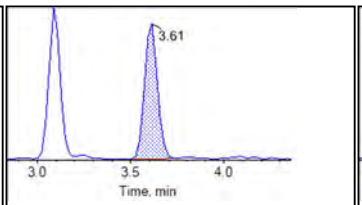
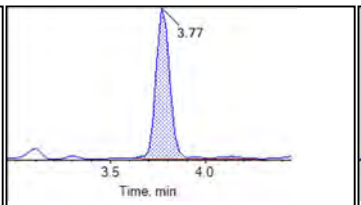


13C2-PFDoA



d3-MeFOSAA



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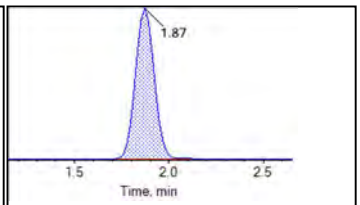
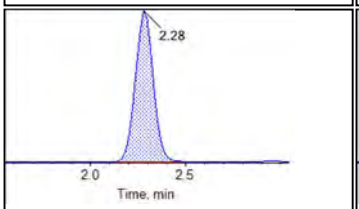


13C5-PFHxA



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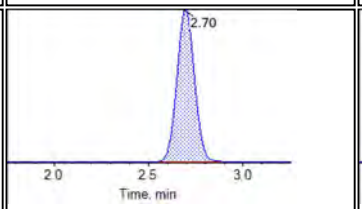
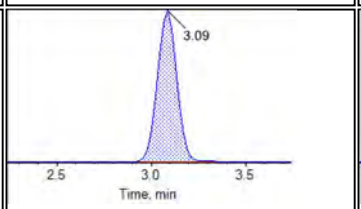
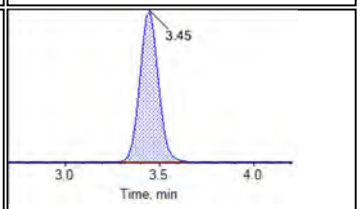


13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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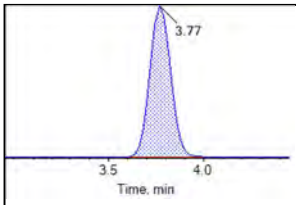
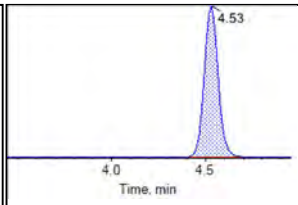
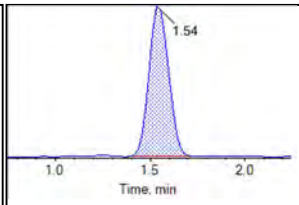


13C7-PFUnA



13C2-PFTeDA



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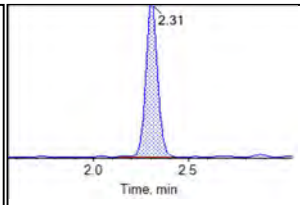

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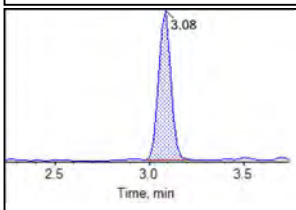

13C8-PFOS

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Chromatogram Report

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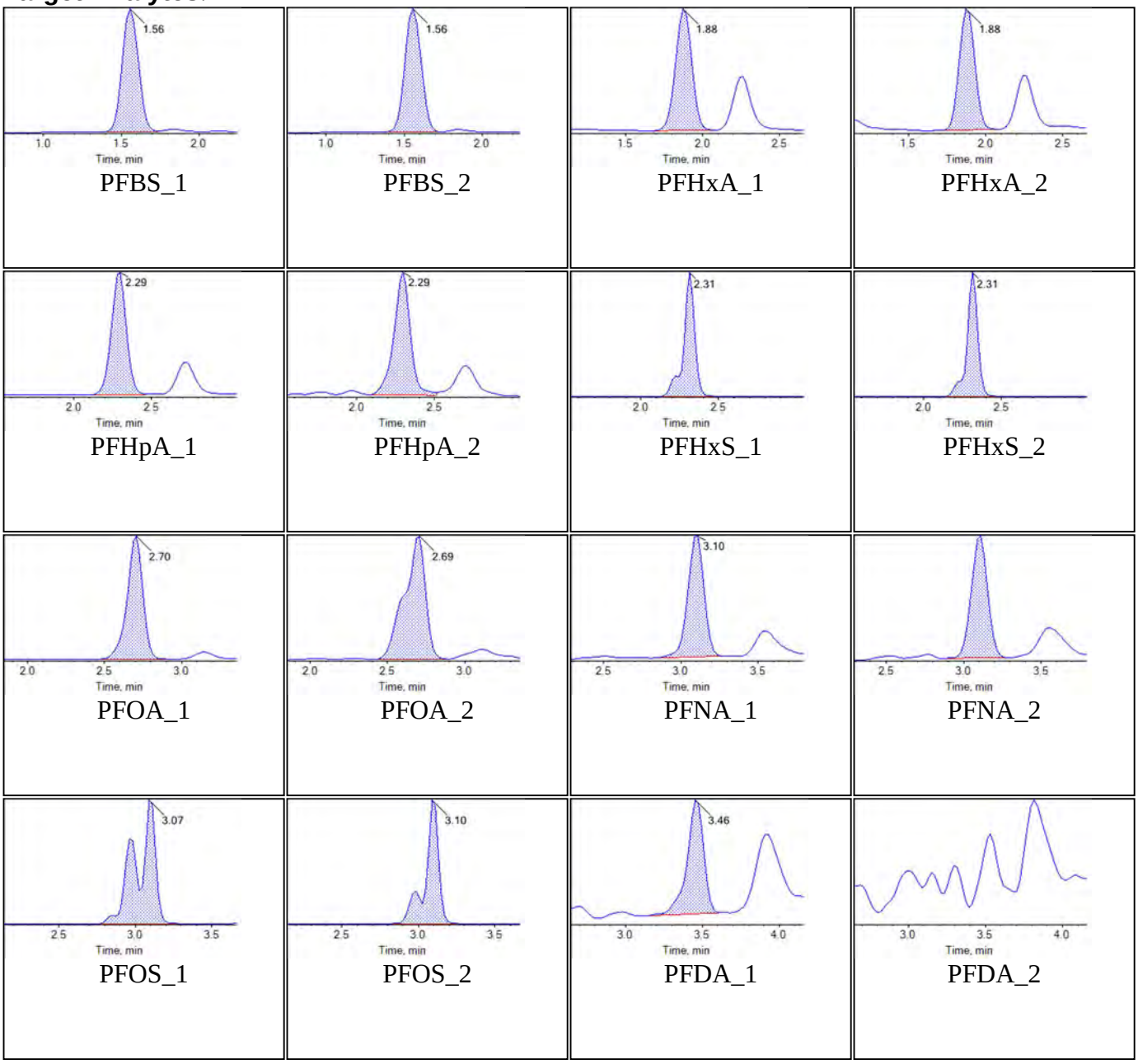
Printed: 26/11/2018 3:09:48 PM

Sample Name	J9412-FS-D(9)	**Injection Vial**	15
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:17:16	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

Target Analytes:



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Chromatogram Report

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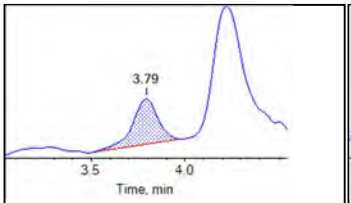

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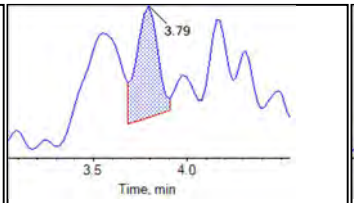

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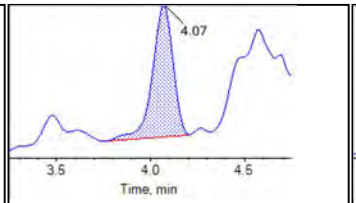

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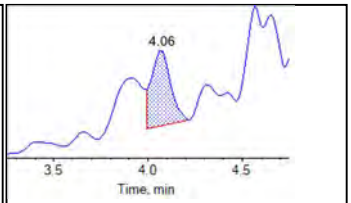

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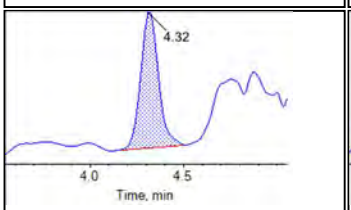
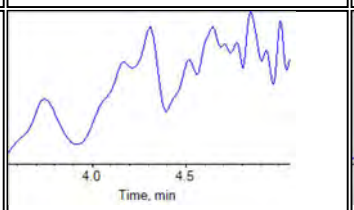


PFTrDA_1



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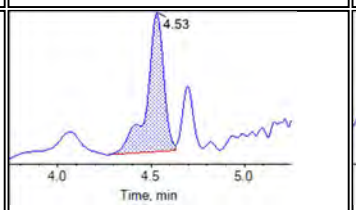

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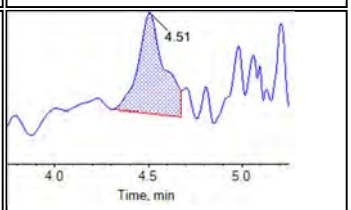

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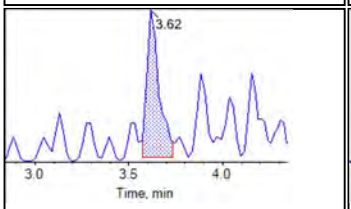

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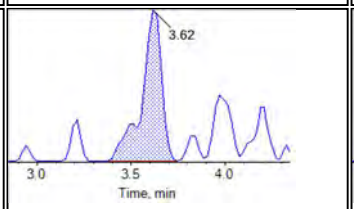

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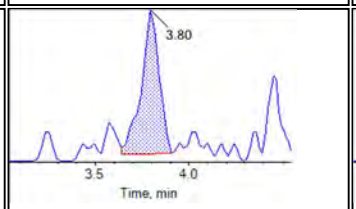

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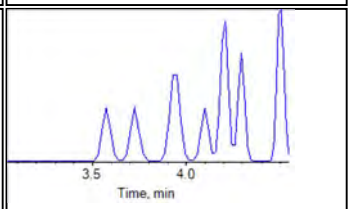

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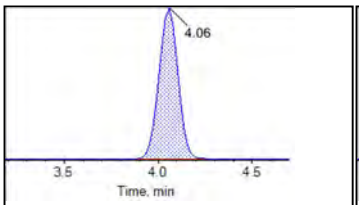

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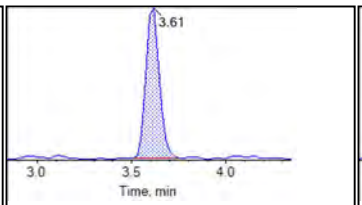
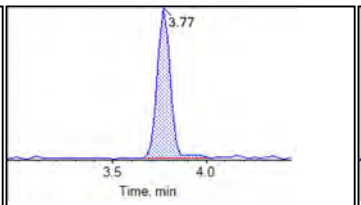
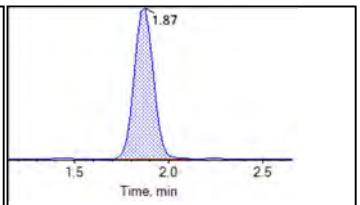


d3-MeFOSAA



d5-EtFOSAA



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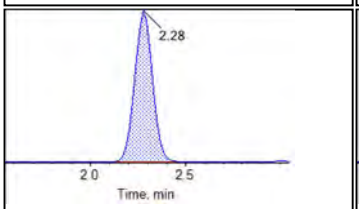

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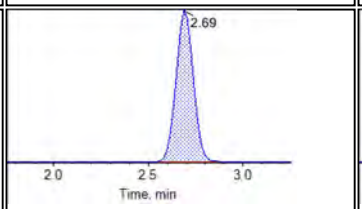
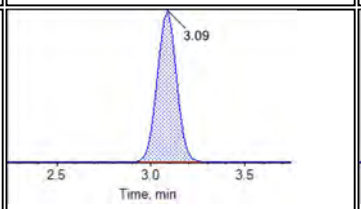
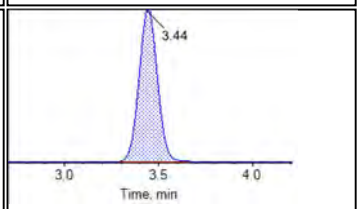


13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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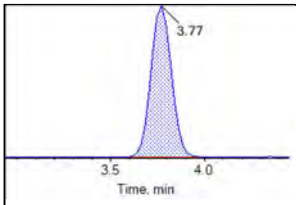
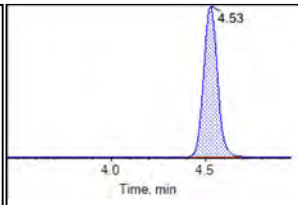
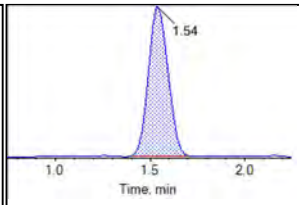


13C7-PFUnA



13C2-PFTeDA



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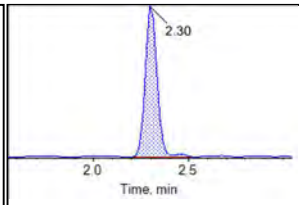

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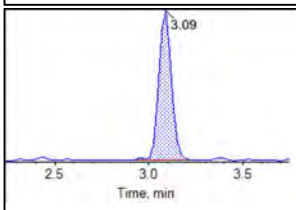


13C8-PFOS

BATTELLE

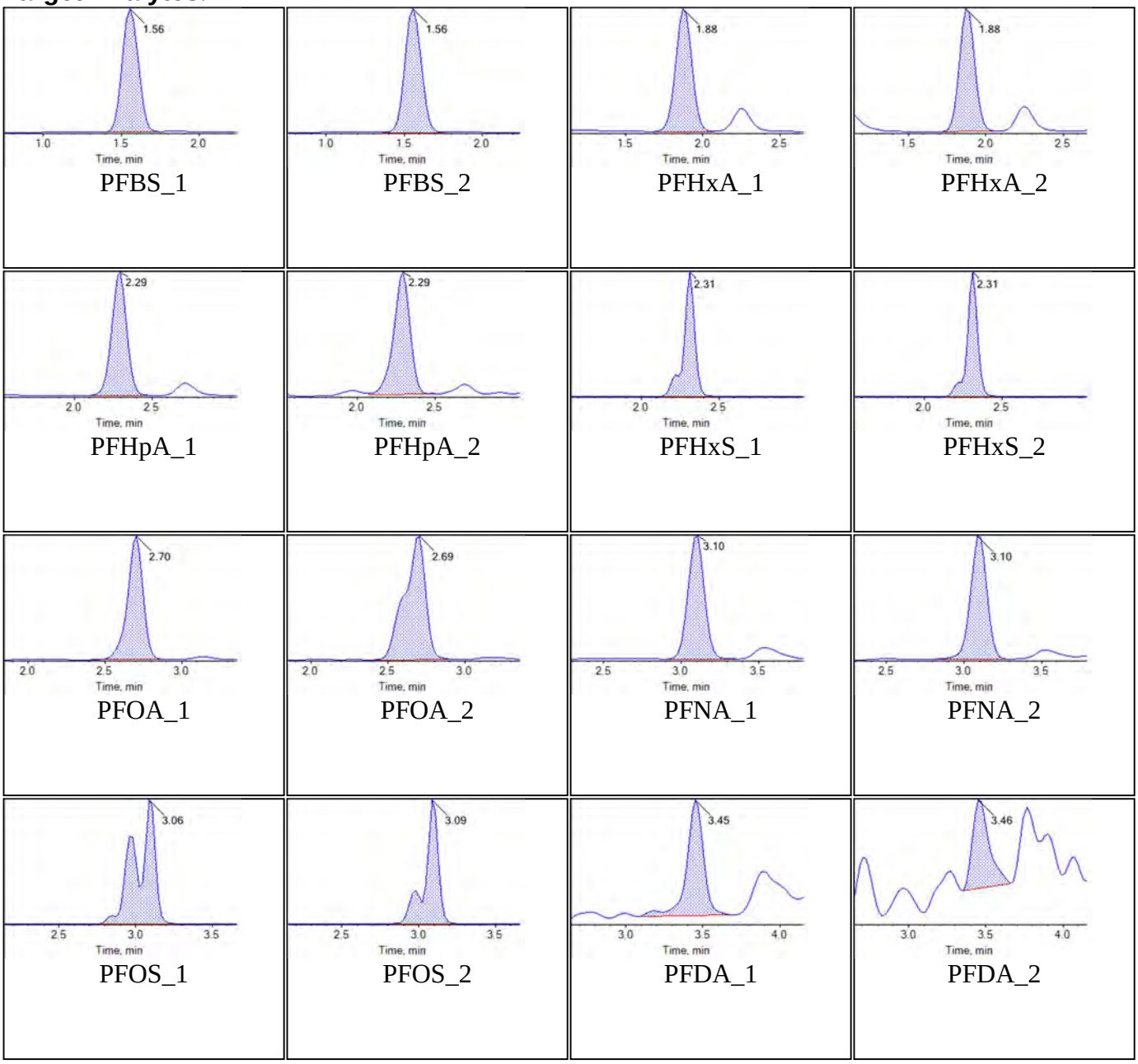
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:09:54 PM

Sample Name	J9412-FS-D(7)	**Injection Vial**	16
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:28:08	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

Target Analytes:



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Chromatogram Report

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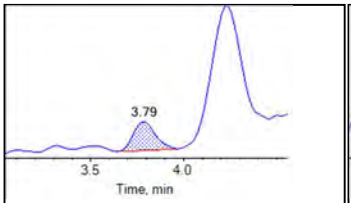
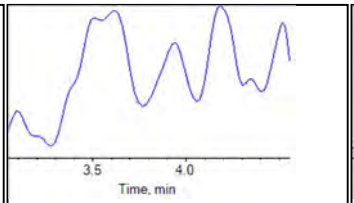
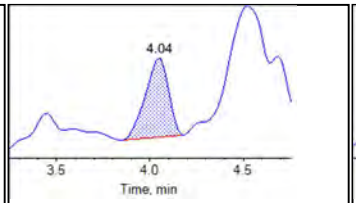


PFUnA_1



PFUnA_2



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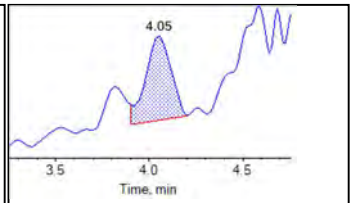
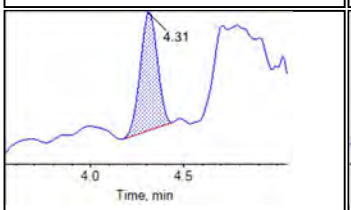
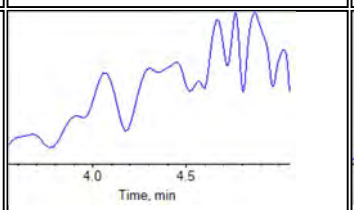


PFDoA_2



PFTrDA_1



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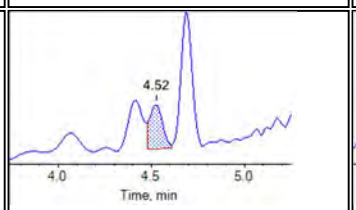
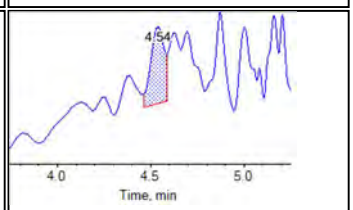


PFTeDA_1



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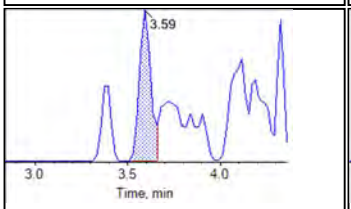

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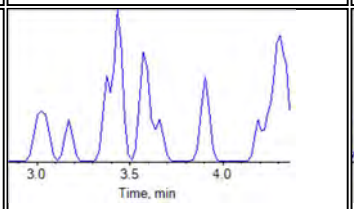

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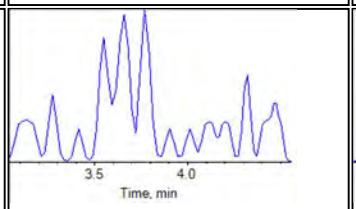

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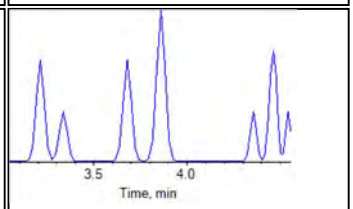

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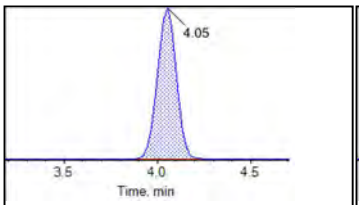
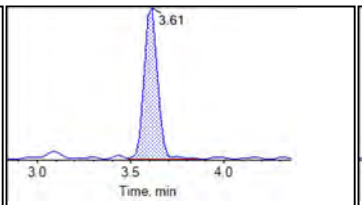


13C2-PFDoA



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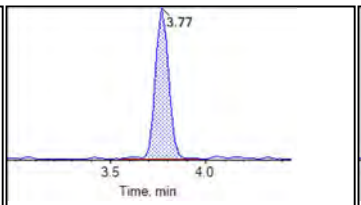

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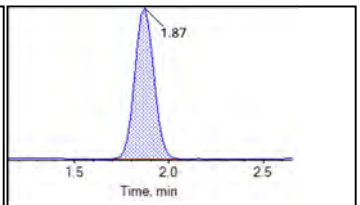

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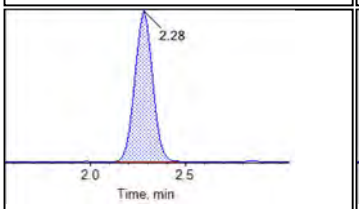
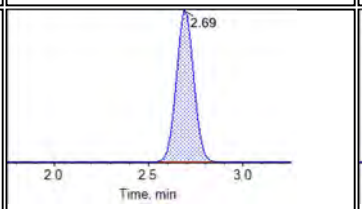
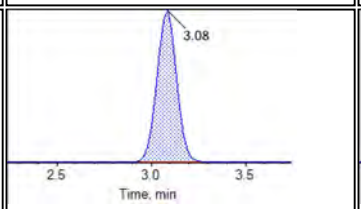


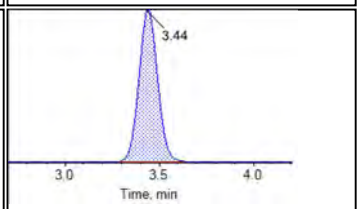
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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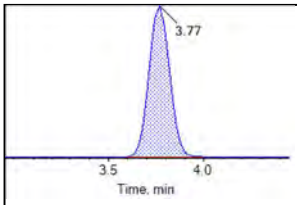
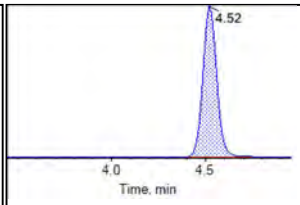


13C7-PFUnA



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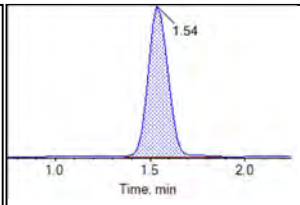

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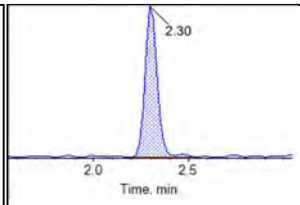

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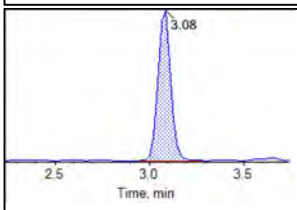

13C8-PFOS

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Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:09:59 PM

Sample Name	J9412-FS-D(5)	**Injection Vial**	17
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:38:59	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

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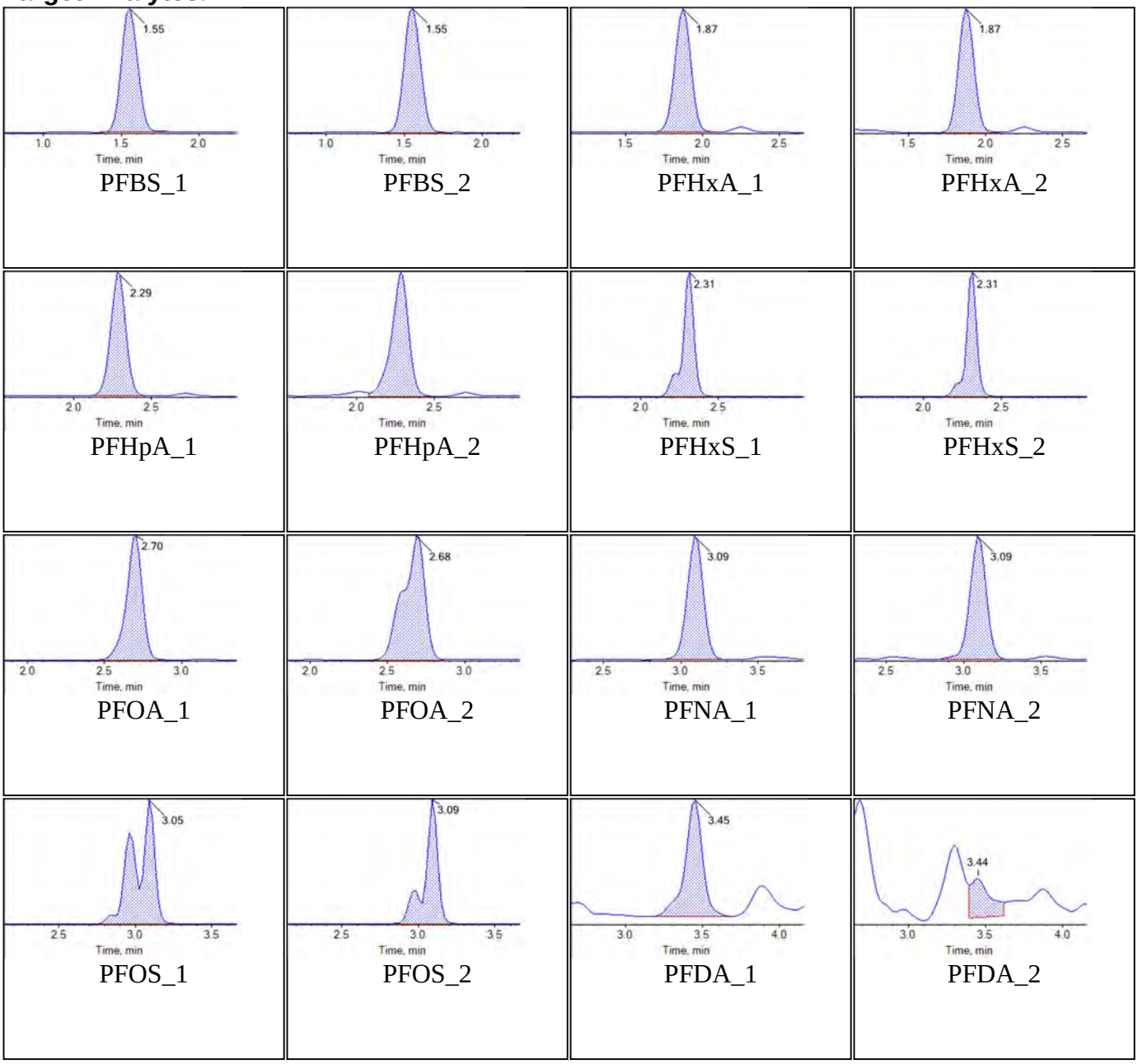

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Chromatogram Report

Created with Analyst Reporter
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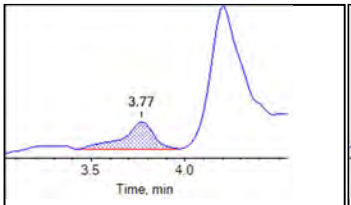

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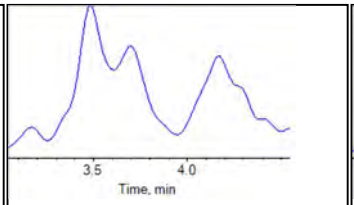

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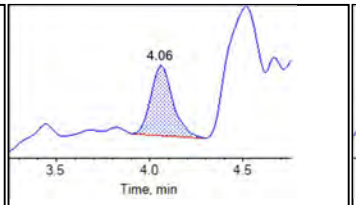

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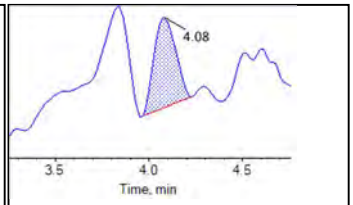

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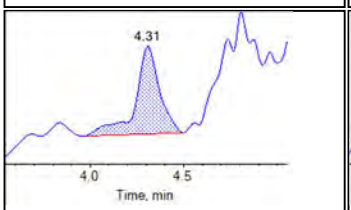

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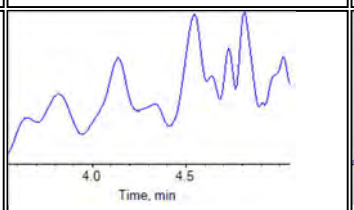

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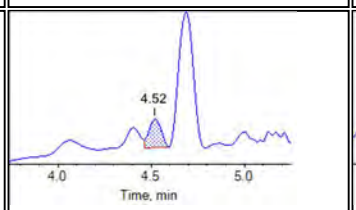

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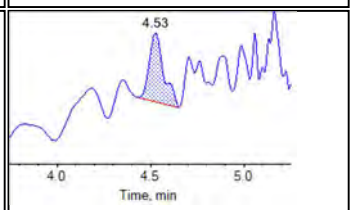

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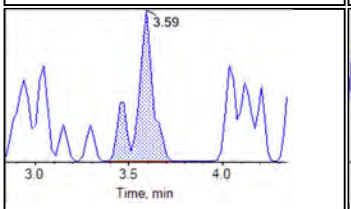

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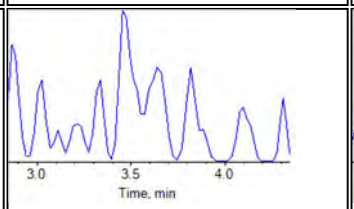

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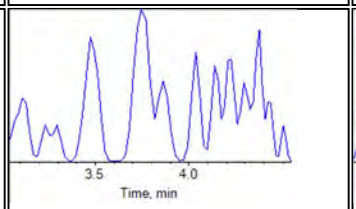

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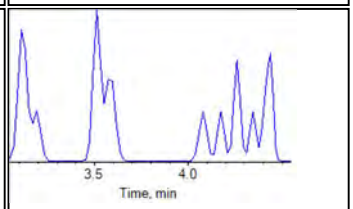

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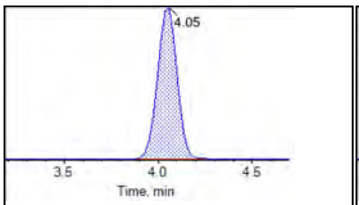

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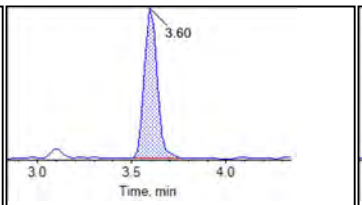
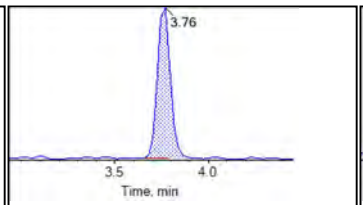
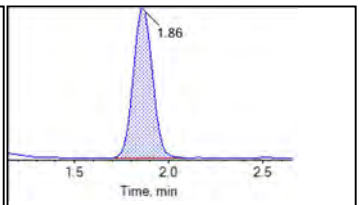


d3-MeFOSAA



d5-EtFOSAA



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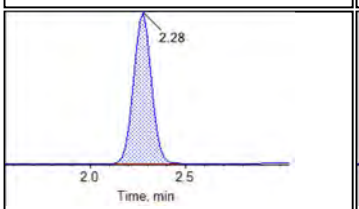

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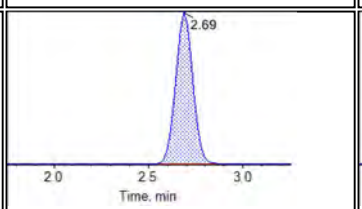
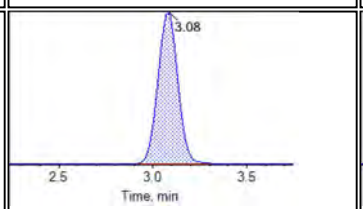
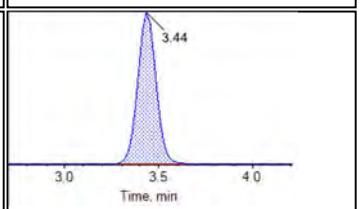


13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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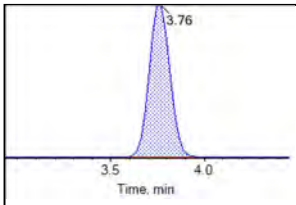
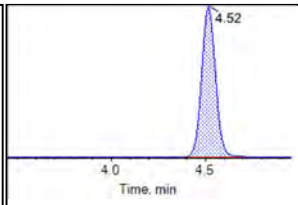
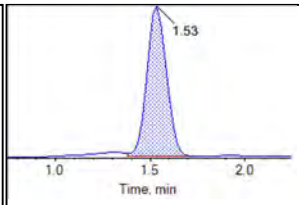


13C7-PFUnA



13C2-PFTeDA



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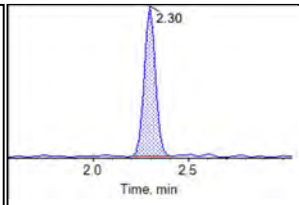

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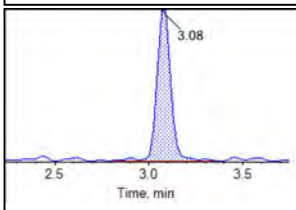


13C8-PFOS

BATTELLE

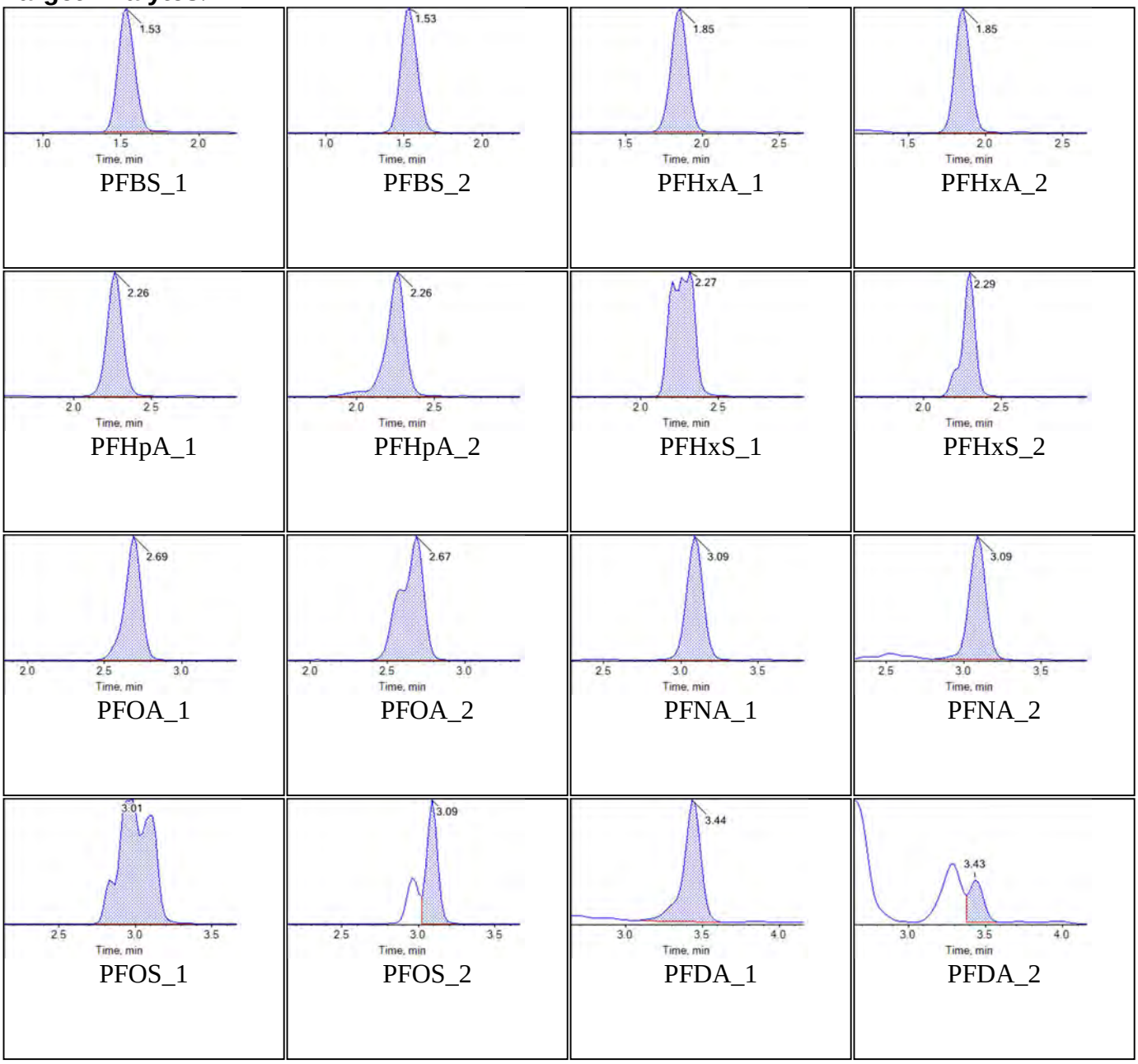
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:10:09 PM

Sample Name	J9412-FS(0)	**Injection Vial**	19
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:00:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

Target Analytes:



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Chromatogram Report

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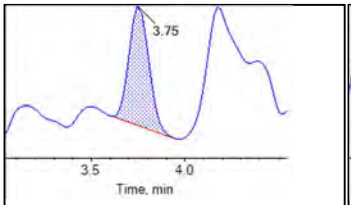
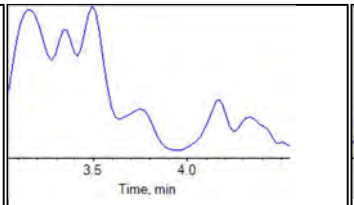
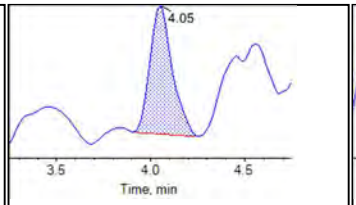


PFUnA_1



PFUnA_2



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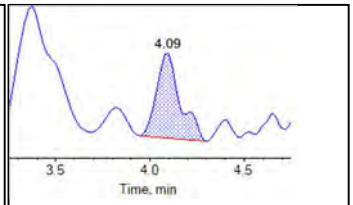
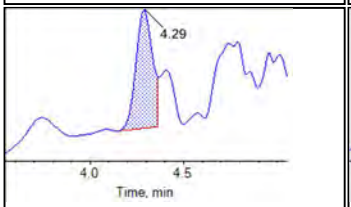
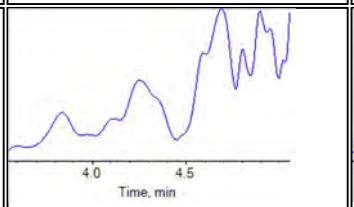


PFDoA_2



PFTrDA_1



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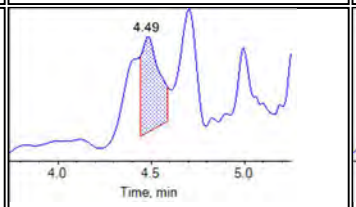

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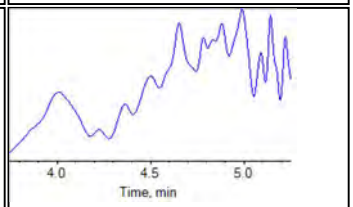

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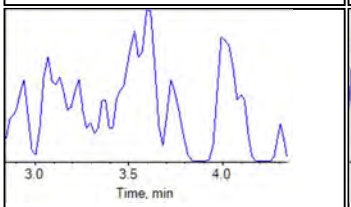

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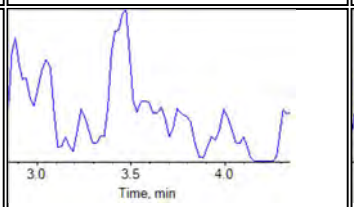

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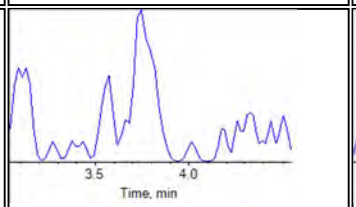

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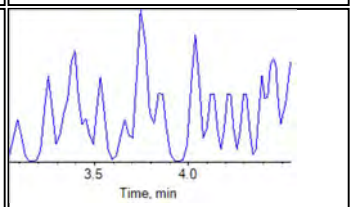

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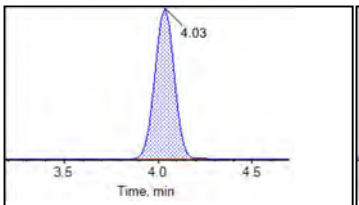

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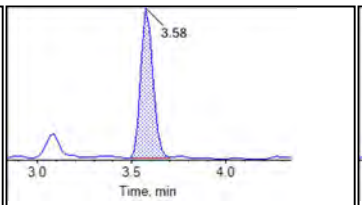

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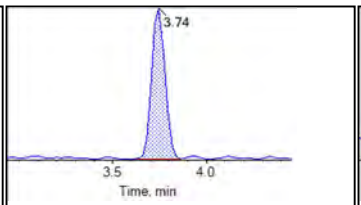

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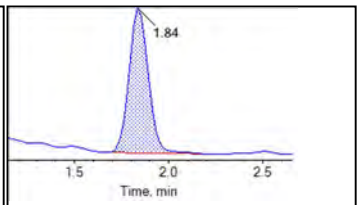

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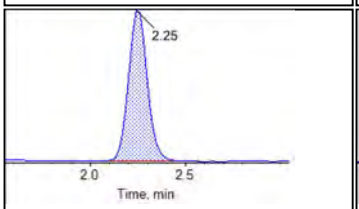

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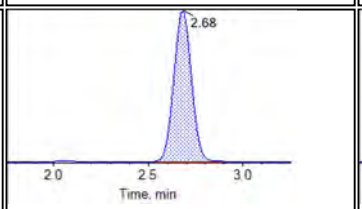

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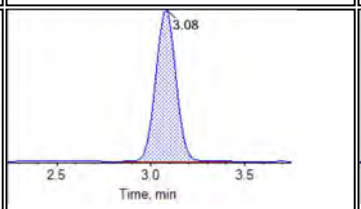

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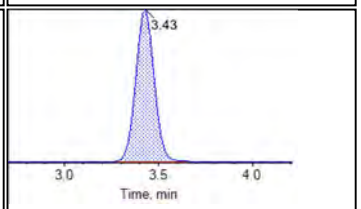

13C6-PFDA

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Chromatogram Report

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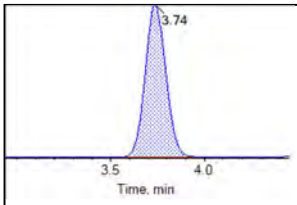
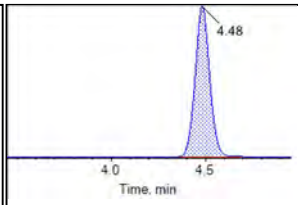


13C7-PFUnA



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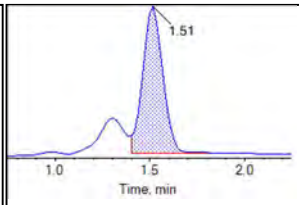

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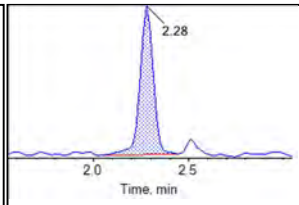

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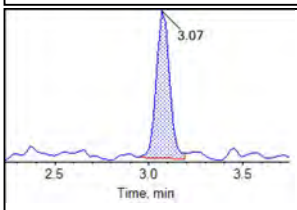

13C8-PFOS

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Chromatogram Report

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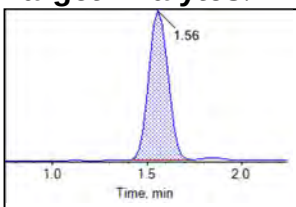
Sample Name	KC69 CCV	**Injection Vial**	21
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:22:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

Target Analytes:



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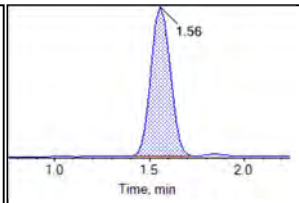

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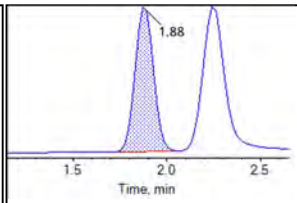

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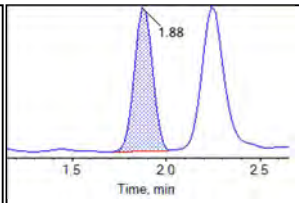

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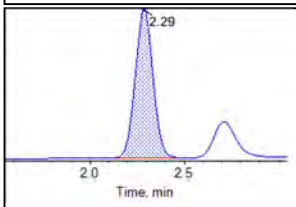

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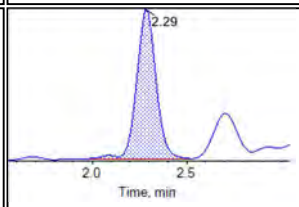

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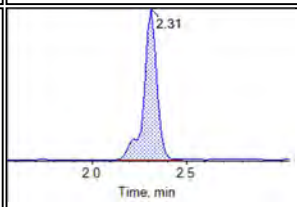

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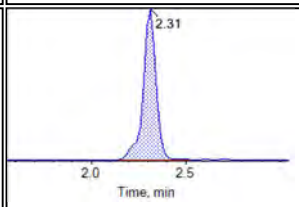

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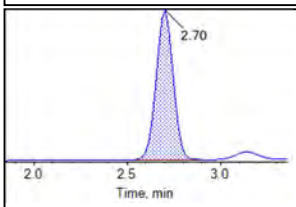

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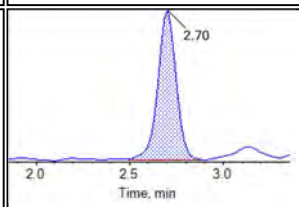

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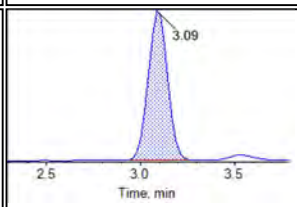

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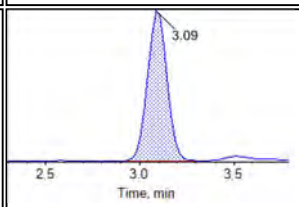

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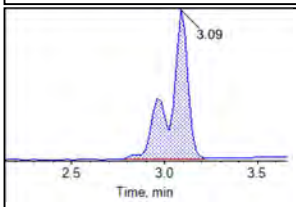

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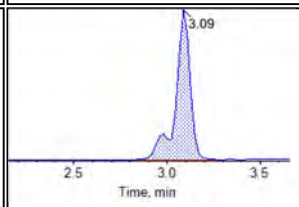

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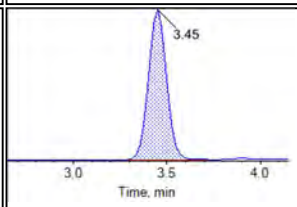

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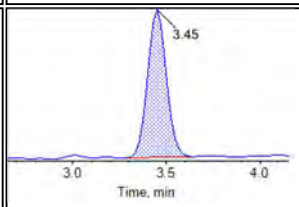

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Chromatogram Report

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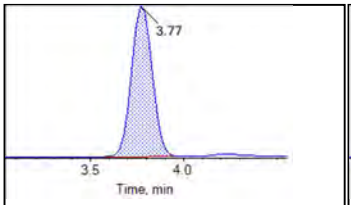

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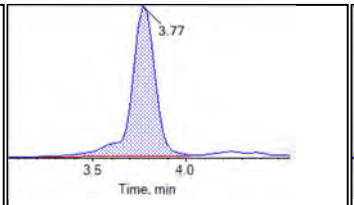

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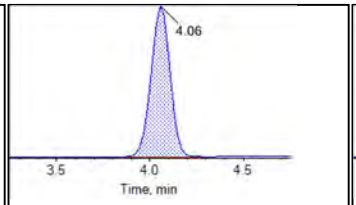

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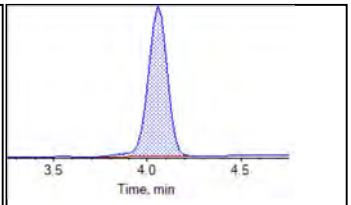

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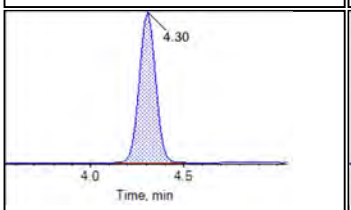

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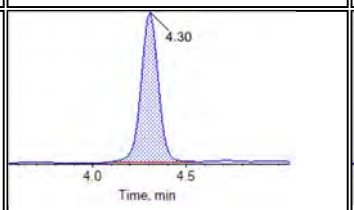

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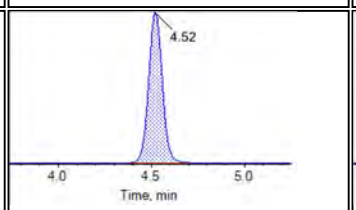

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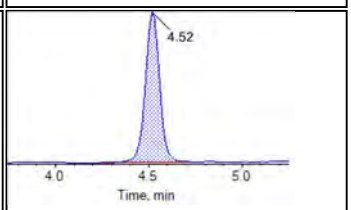

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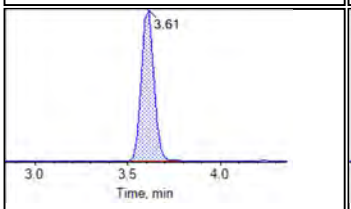

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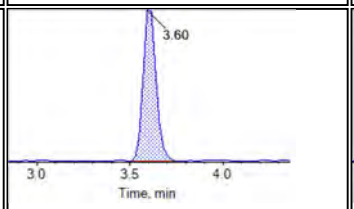

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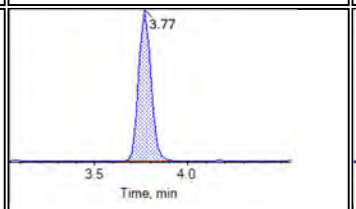

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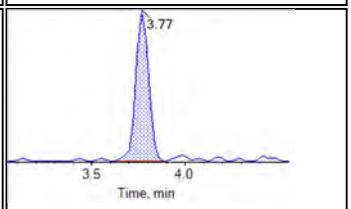

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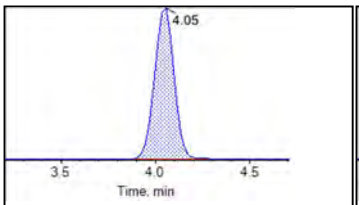

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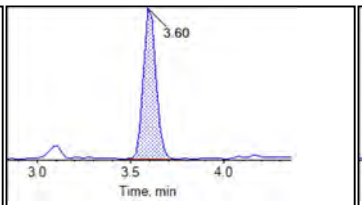

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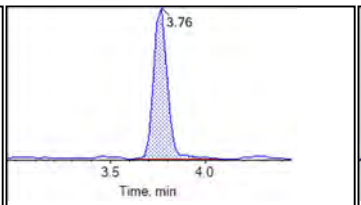

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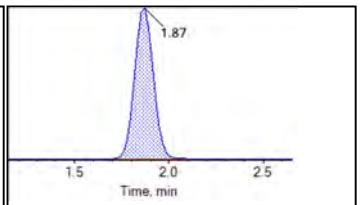
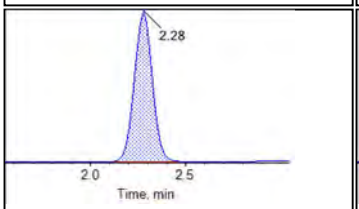
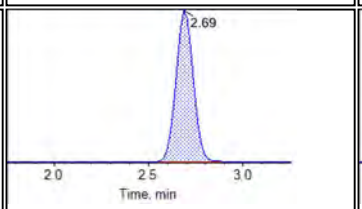


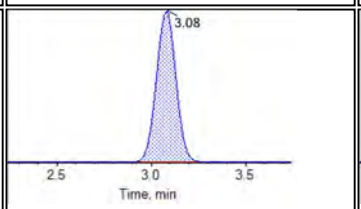
13C5-PFHxA



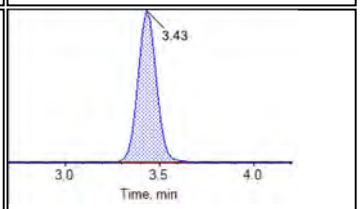
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

Chromatogram Report

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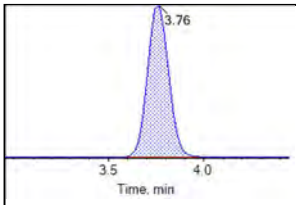
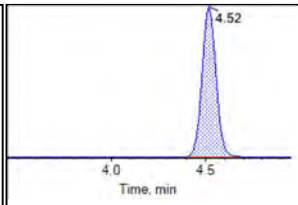
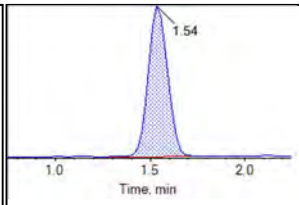


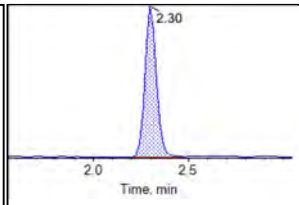
13C7-PFUnA



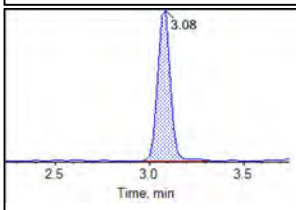
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

Chromatogram Report

Created with Analyst Reporter
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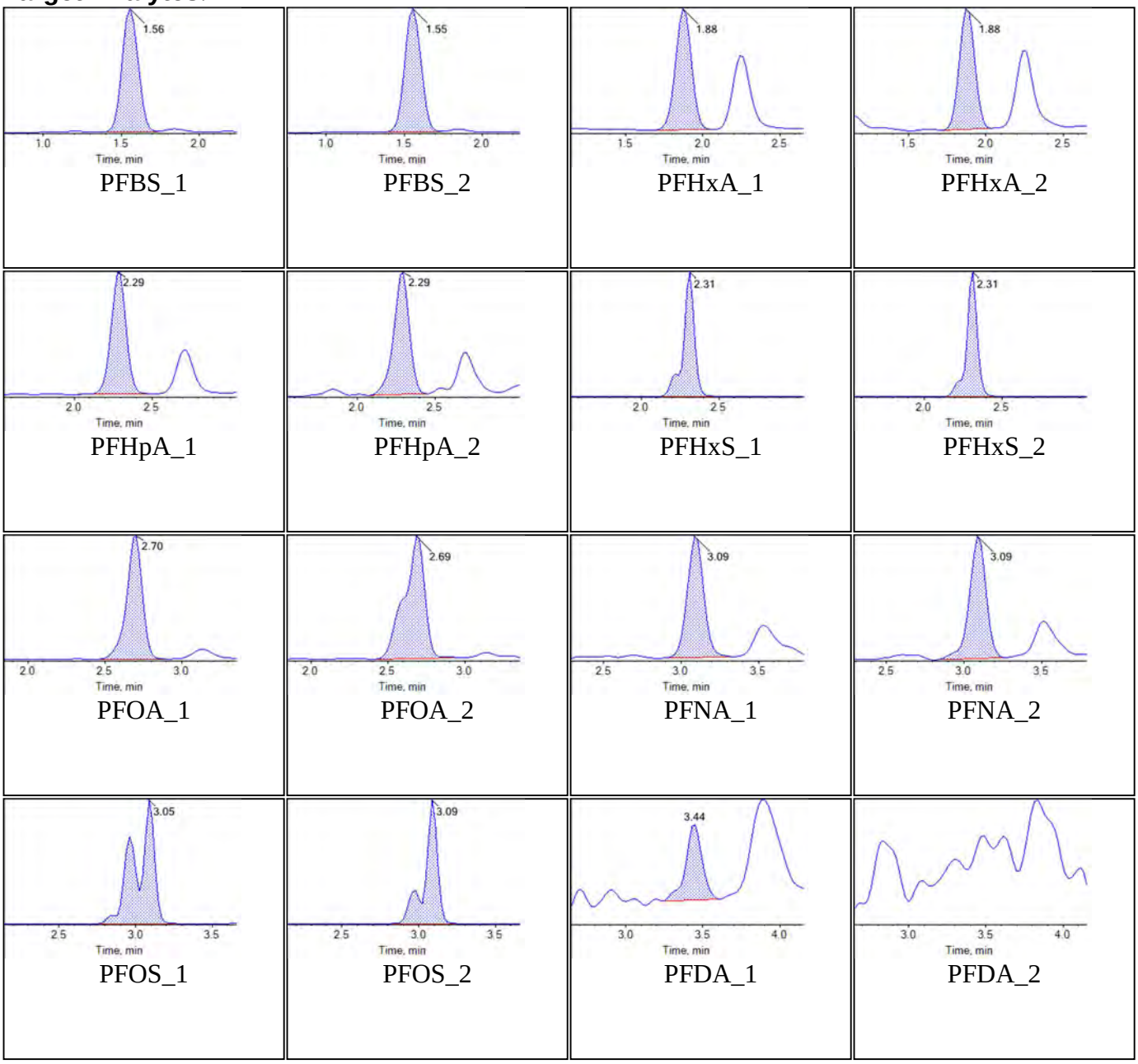
Sample Name	J9413-FS-D(9)	**Injection Vial**	22
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:44:11	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

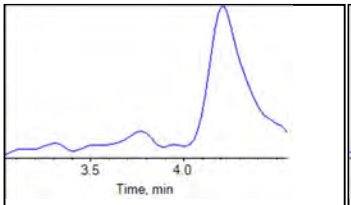
Target Analytes:



BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:10:19 PM



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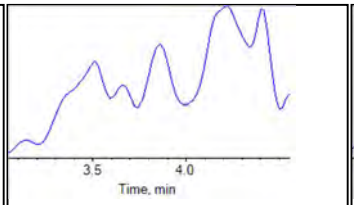
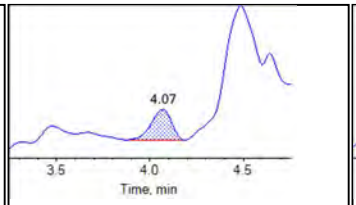
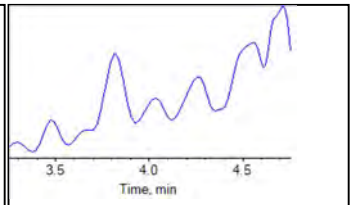


PFUnA_2



PFDoA_1



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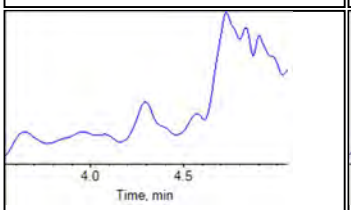
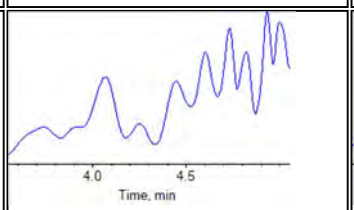


PFTrDA_1



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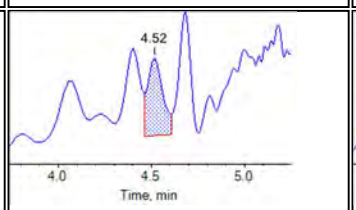

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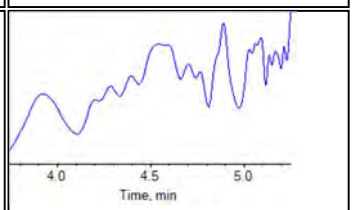

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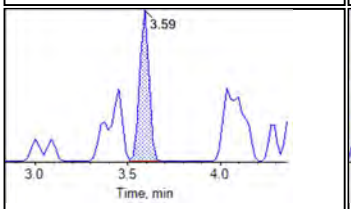

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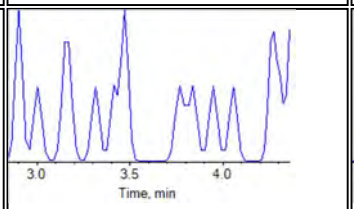

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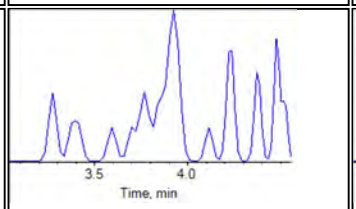

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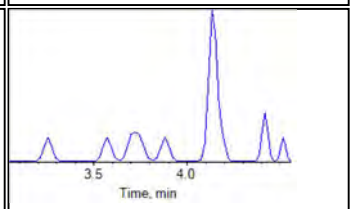
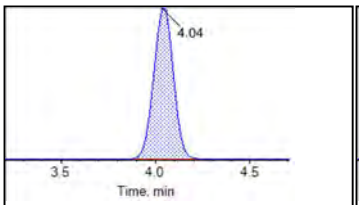
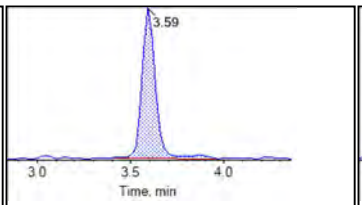


NEtFOSAA_2

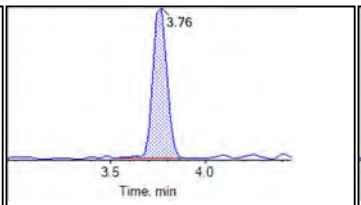
Internal Standards:



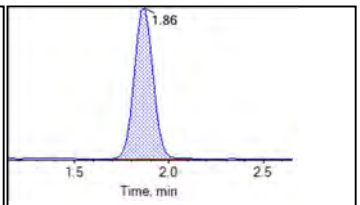
13C2-PFDoA



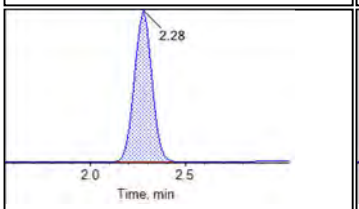
d3-MeFOSAA



d5-EtFOSAA



13C5-PFHxA



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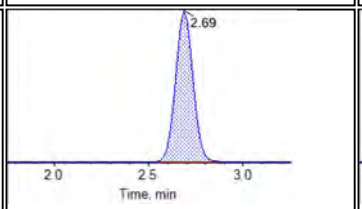
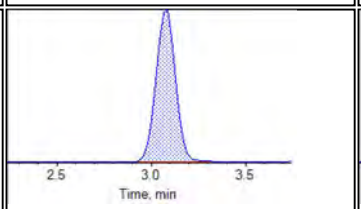
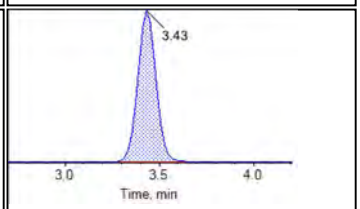


13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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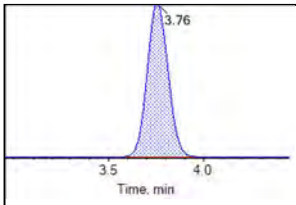
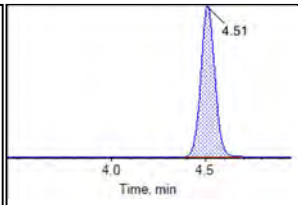
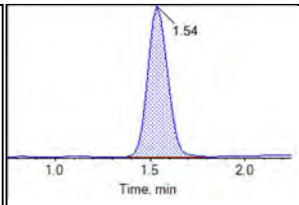


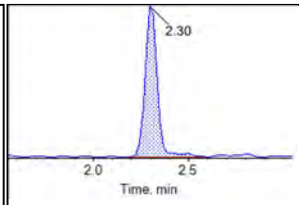
13C7-PFUnA



13C2-PFTeDA



13C3-PFBS



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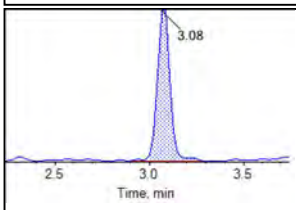


13C8-PFOS

BATTELLE

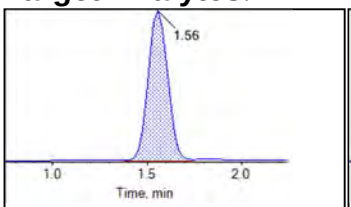
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:10:25 PM

Sample Name	J9413-FS-D(7)	**Injection Vial**	23
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:55:04	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

Target Analytes:



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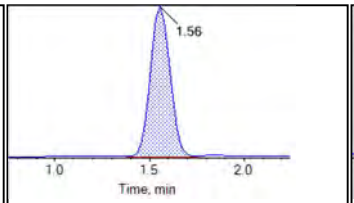
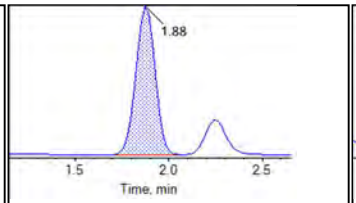
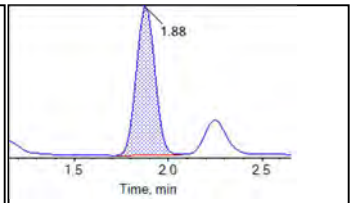


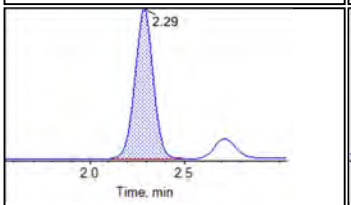
PFBS_2



PFHxA_1



PFHxA_2



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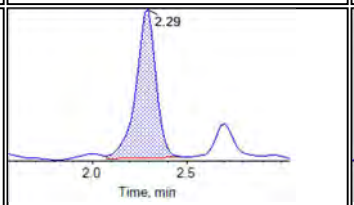

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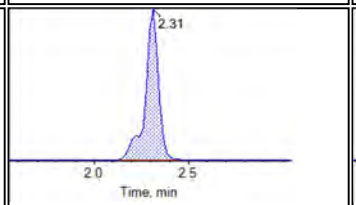
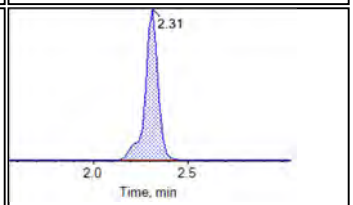
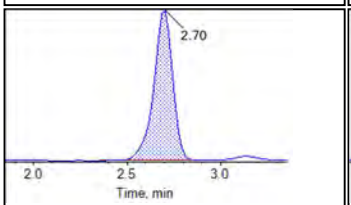


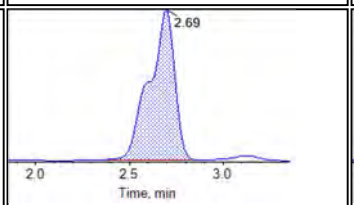
PFHxS_1



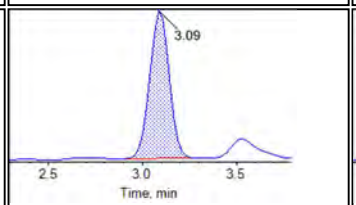
PFHxS_2



PFOA_1



PFOA_2



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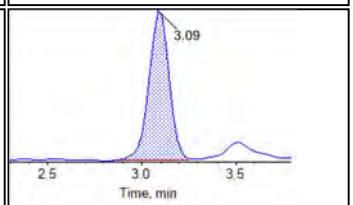
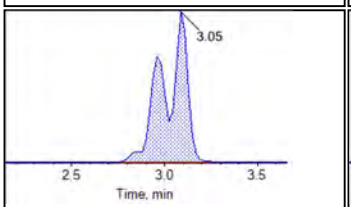
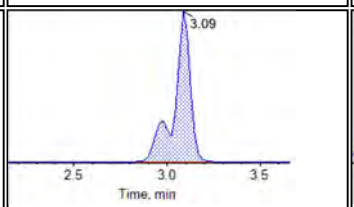


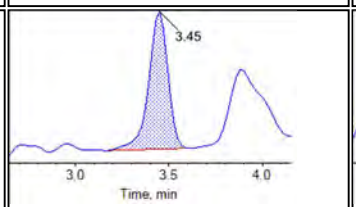
PFNA_2



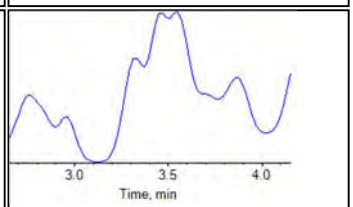
PFOS_1



PFOS_2



PFDA_1



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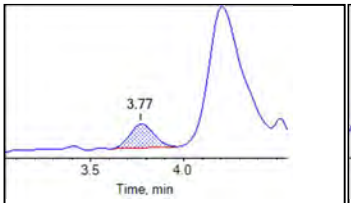

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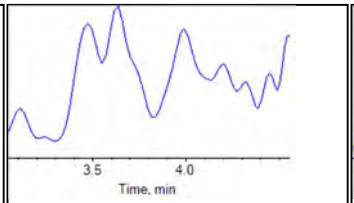

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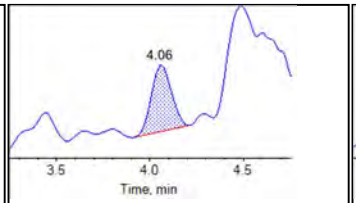

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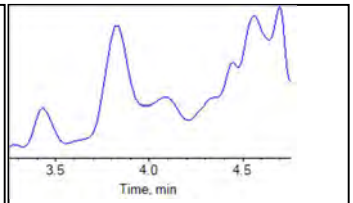

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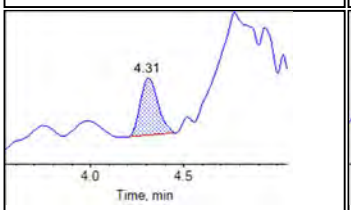

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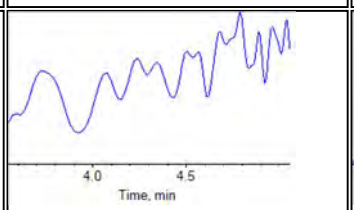

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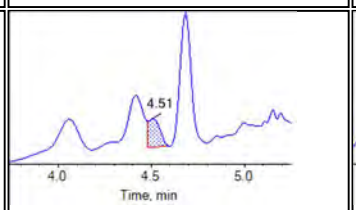

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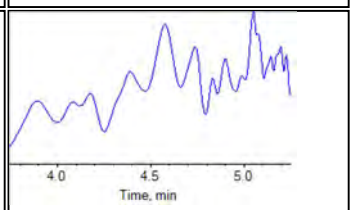

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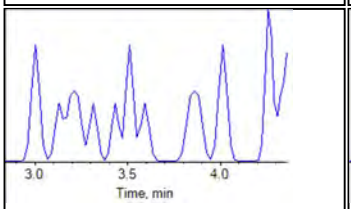

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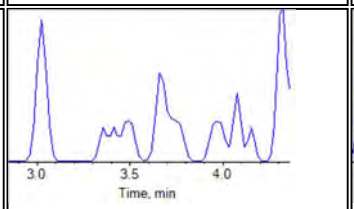

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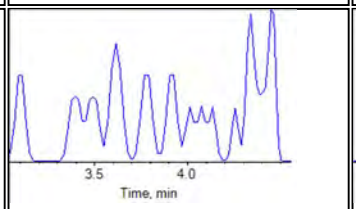

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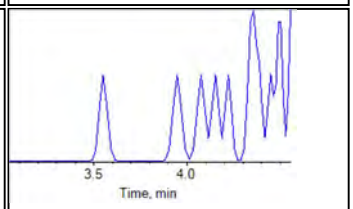

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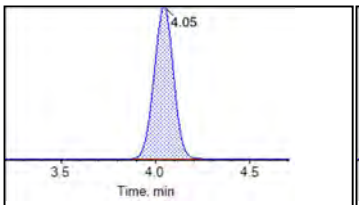

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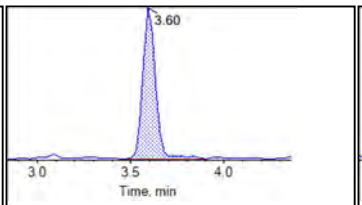

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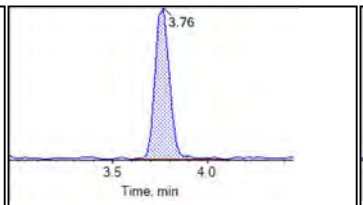

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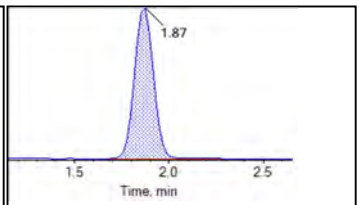

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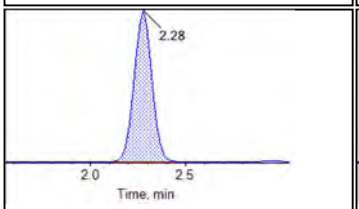

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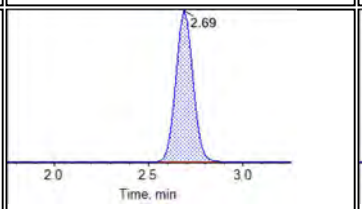

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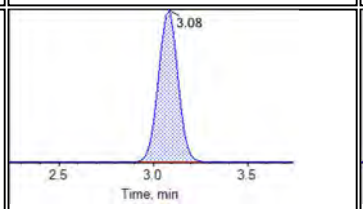

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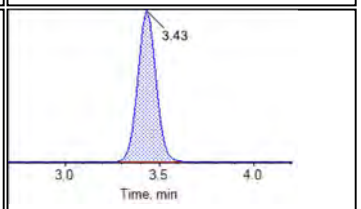

13C6-PFDA

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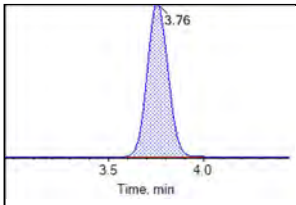

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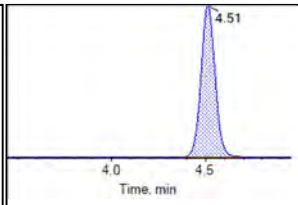

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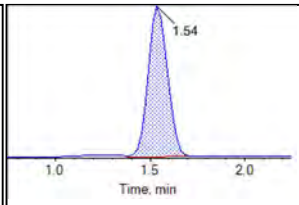

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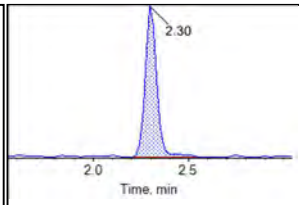

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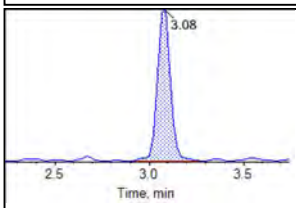

13C8-PFOS

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Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T21:05:57	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

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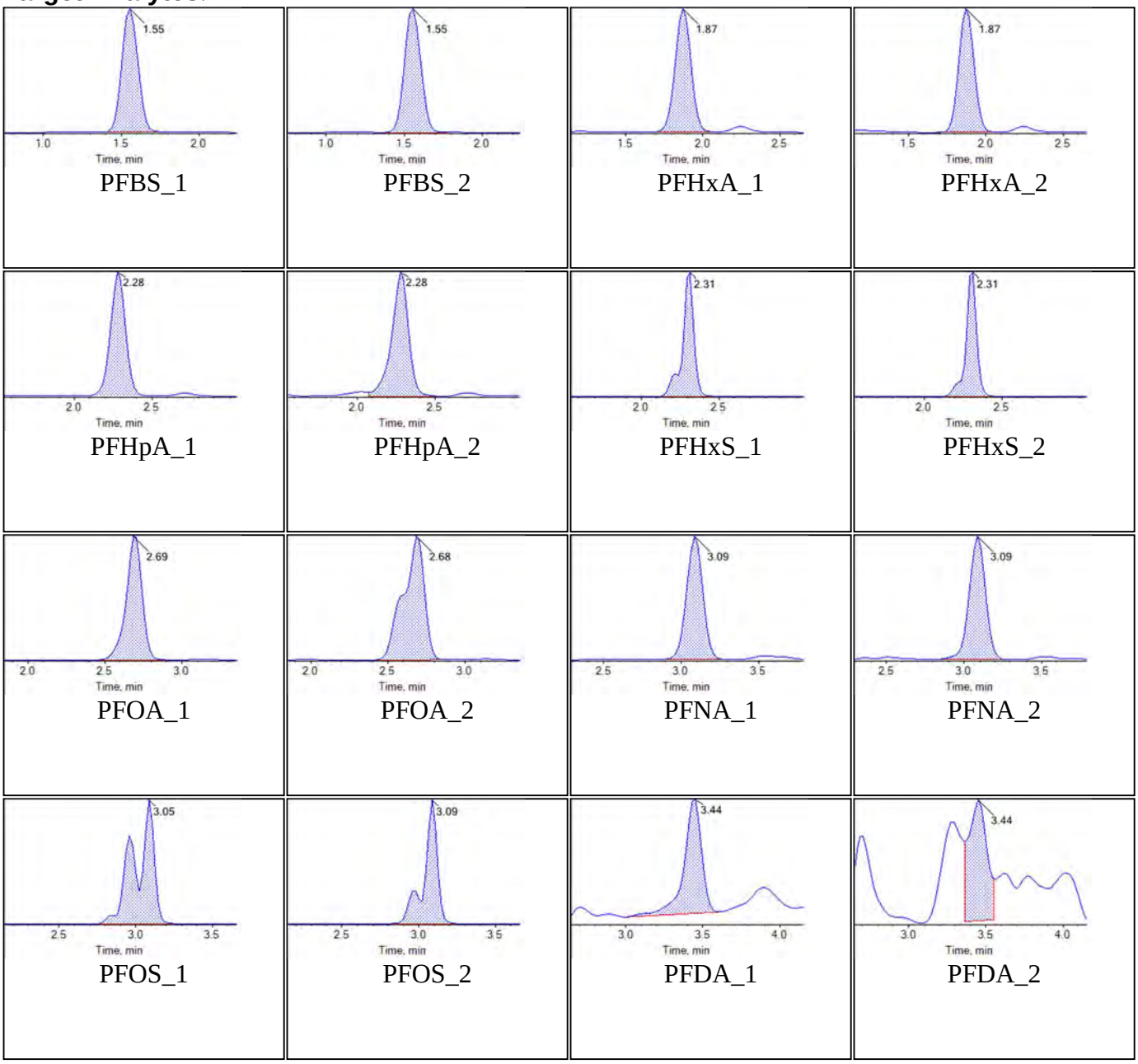

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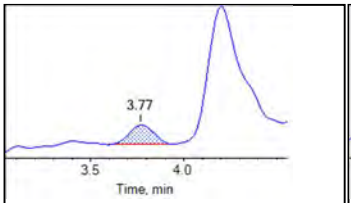

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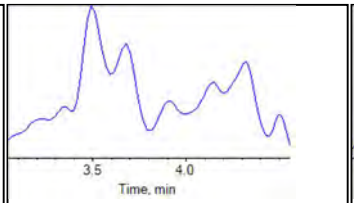

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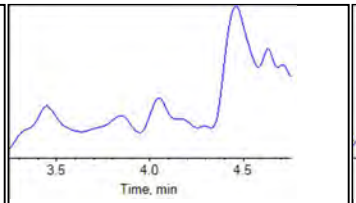

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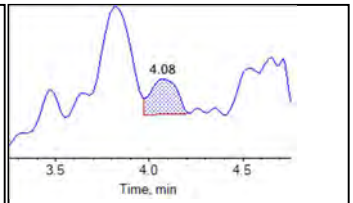

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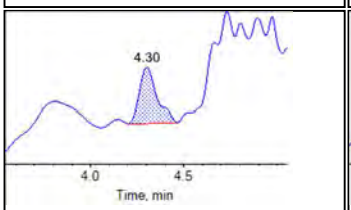

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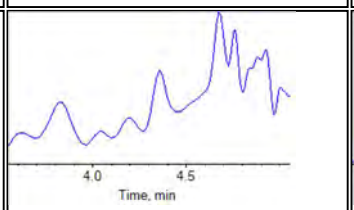

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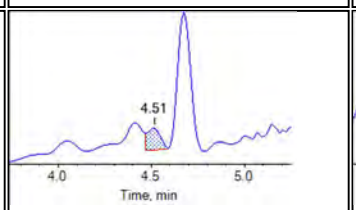

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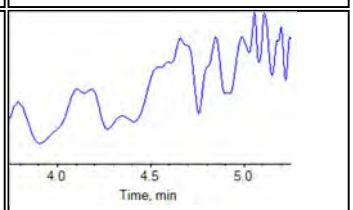

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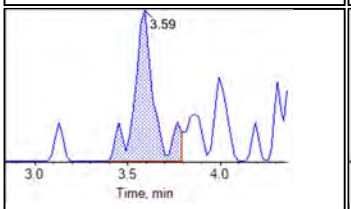

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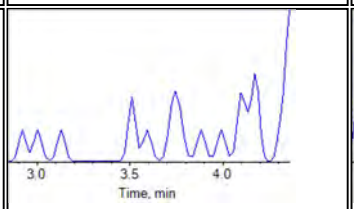

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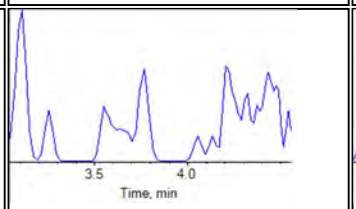

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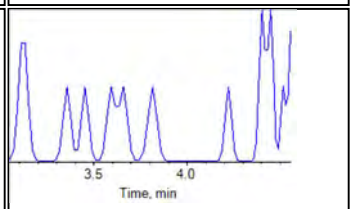

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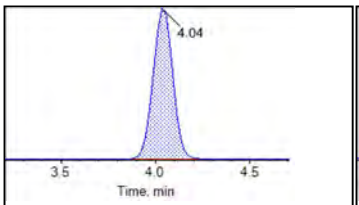

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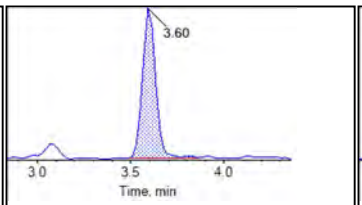

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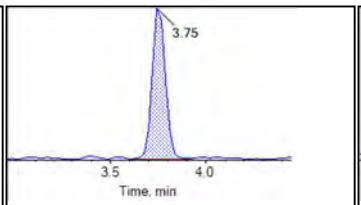

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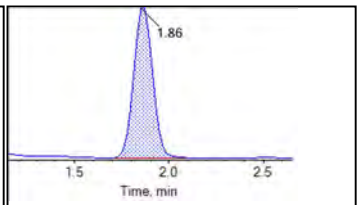

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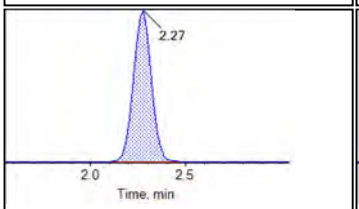

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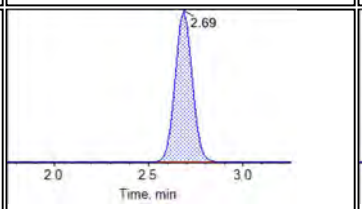

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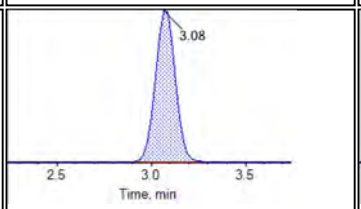

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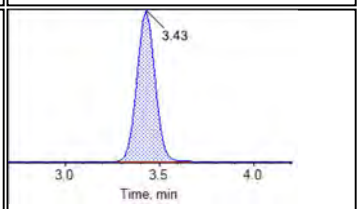

13C6-PFDA

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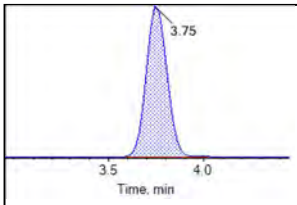

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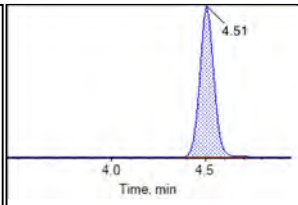

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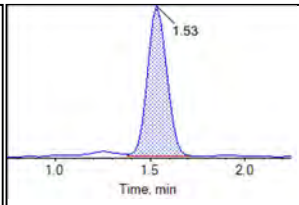

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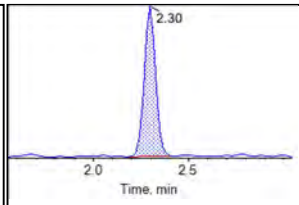
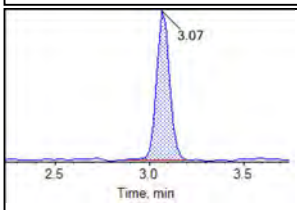


13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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Sample Name	J9413-FS(0)	**Injection Vial**	26
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T21:27:41	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

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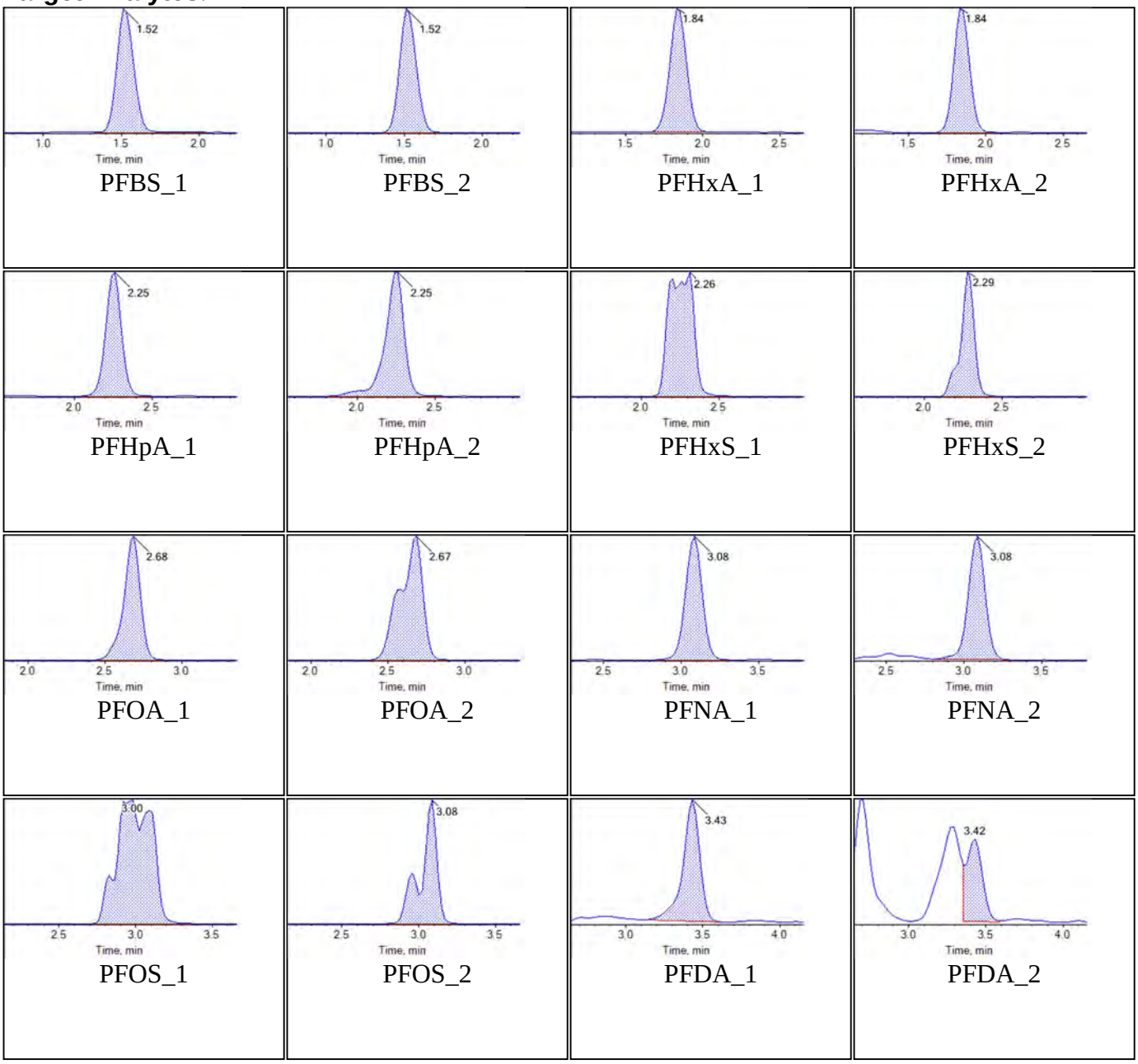

BATTELLE

Chromatogram Report

Created with Analyst Reporter
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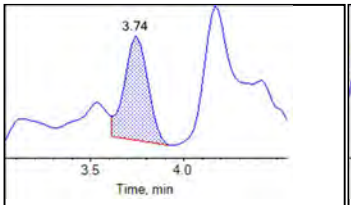

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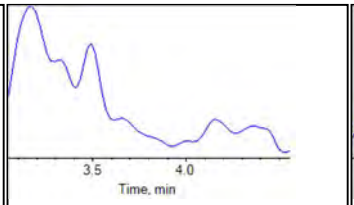

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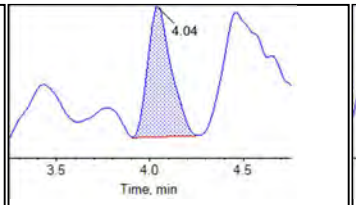

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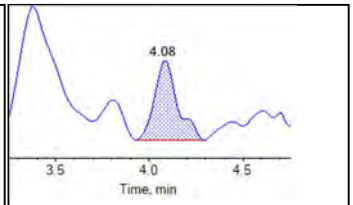

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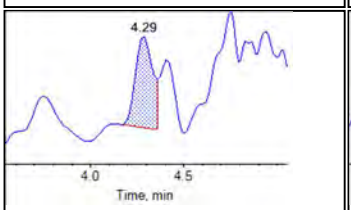

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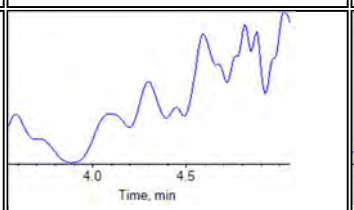

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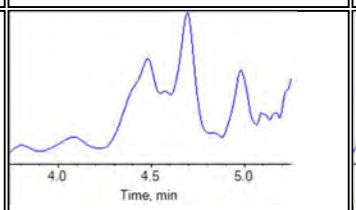

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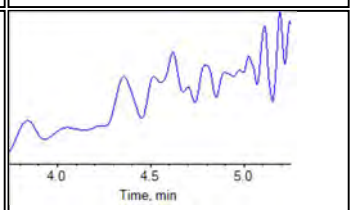

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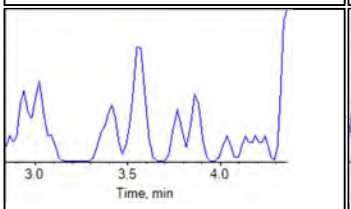

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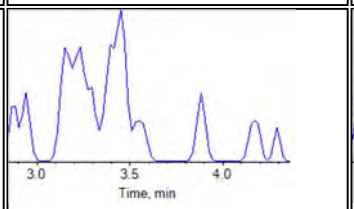

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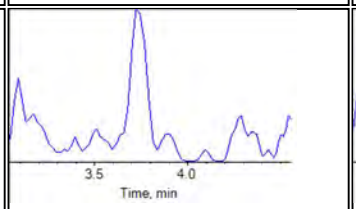

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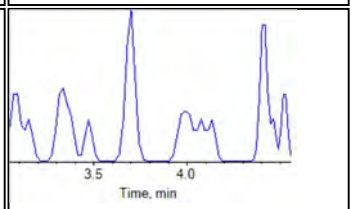

NEtFOSAA_2

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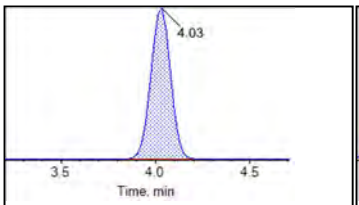

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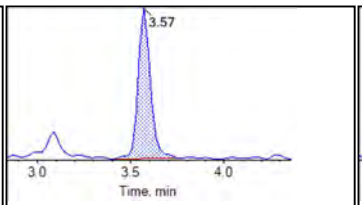

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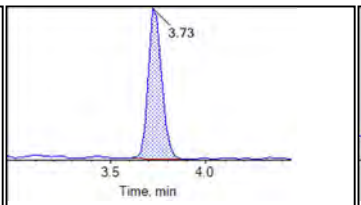
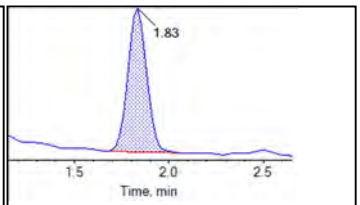


d5-EtFOSAA



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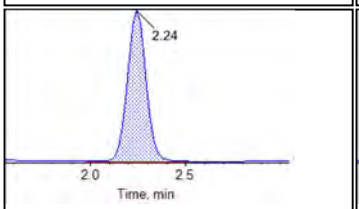

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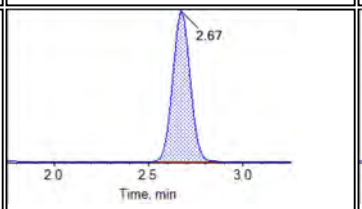

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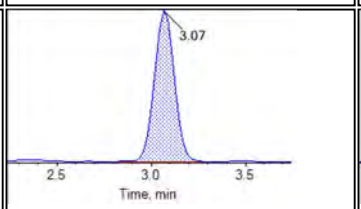
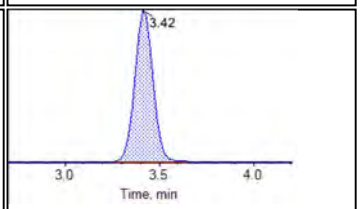


13C9-PFNA



13C6-PFDA

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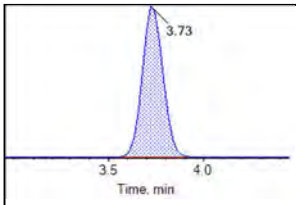
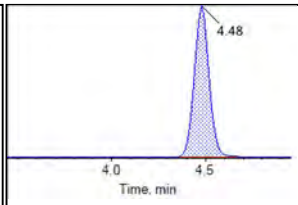


13C7-PFUnA



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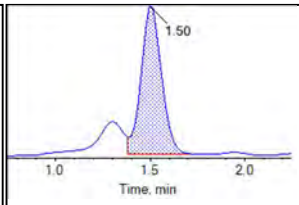

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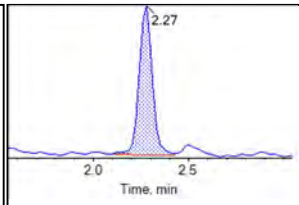

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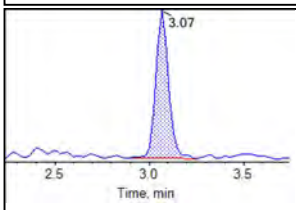

13C8-PFOS

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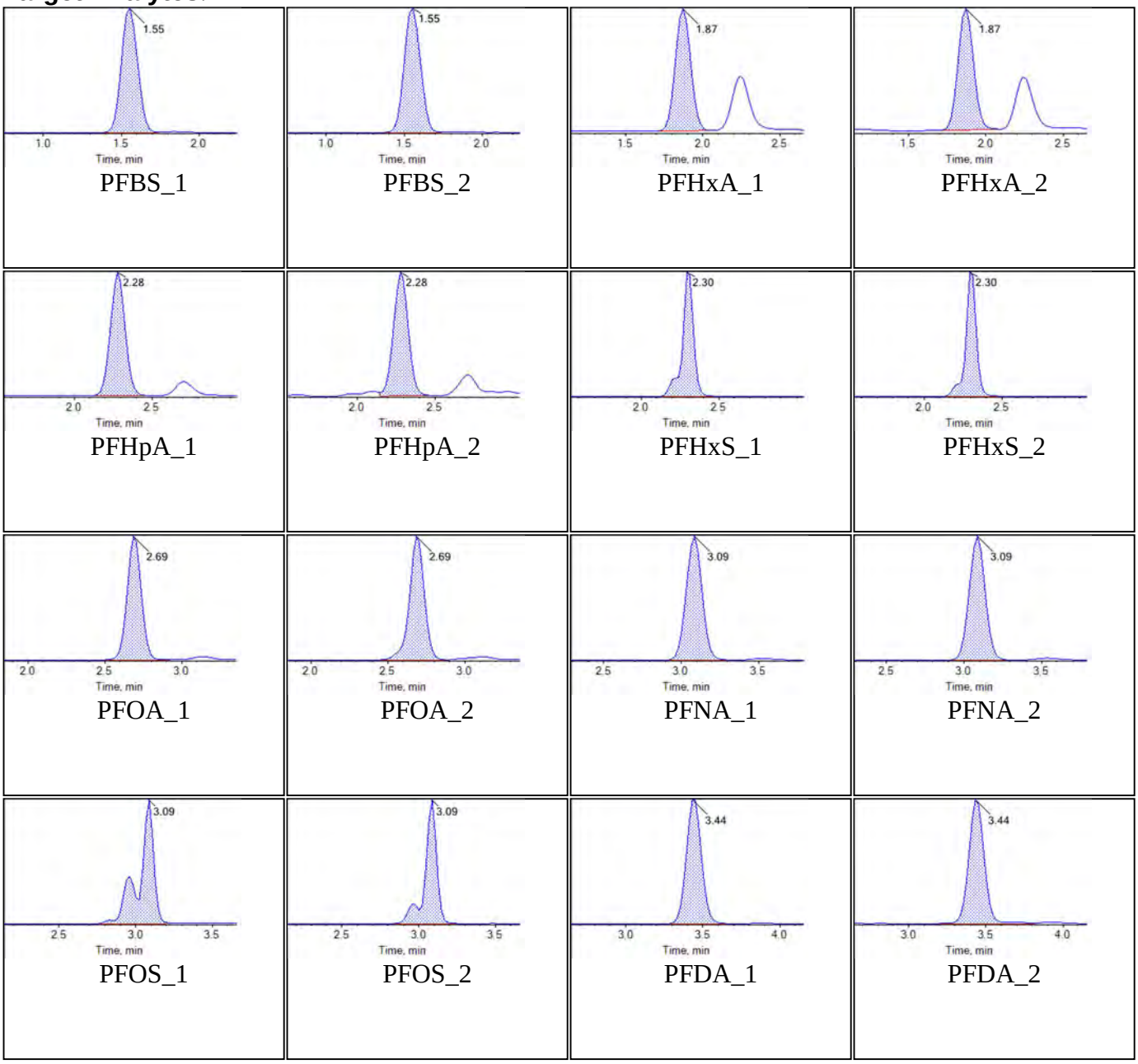
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:10:53 PM

Sample Name	KC70 CCV	**Injection Vial**	29
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:00:17	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

Target Analytes:



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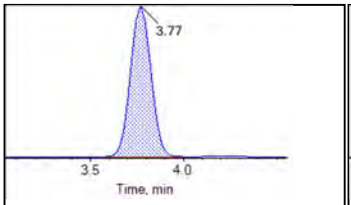

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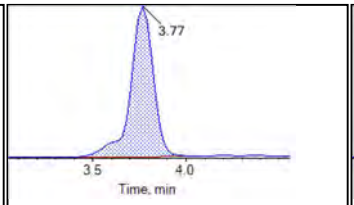
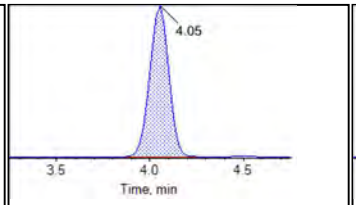
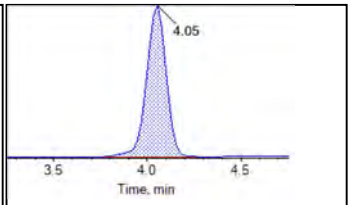


PFUnA_2



PFDoA_1



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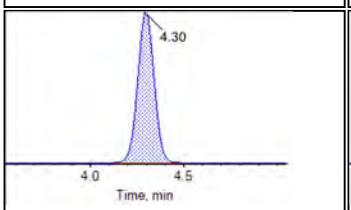

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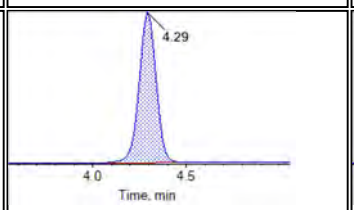

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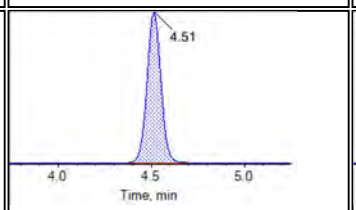

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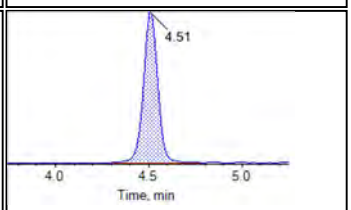

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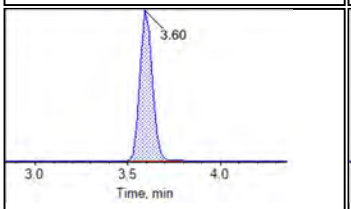

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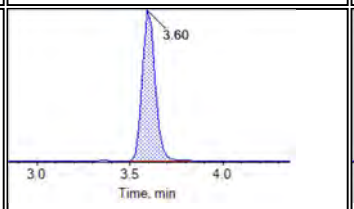

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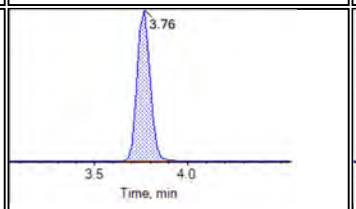

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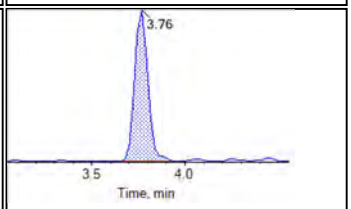

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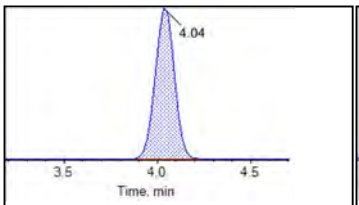

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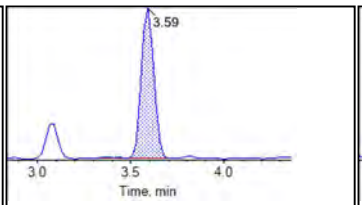

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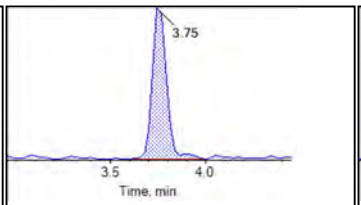
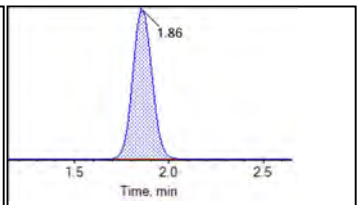
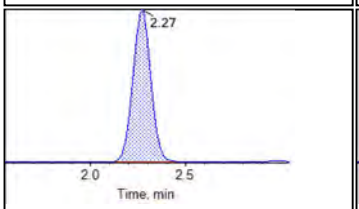


d5-EtFOSAA



13C5-PFHxA



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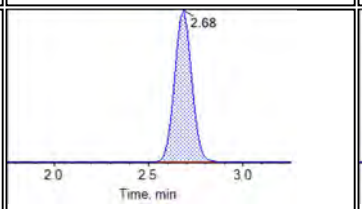

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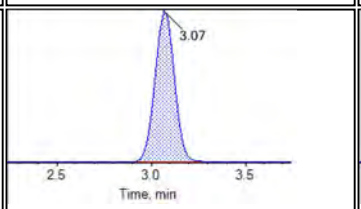

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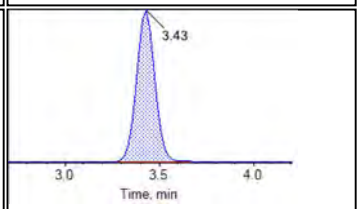

13C6-PFDA

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Chromatogram Report

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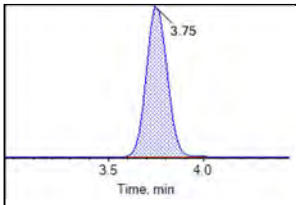
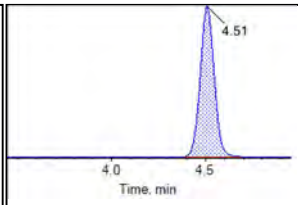
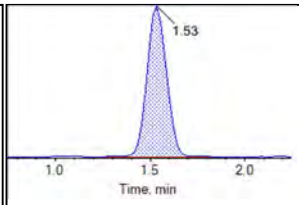


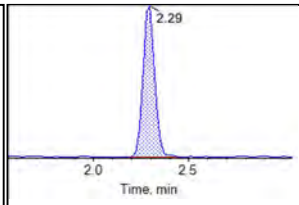
13C7-PFUnA



13C2-PFTeDA



13C3-PFBS



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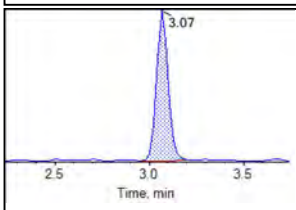

13C8-PFOS

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Chromatogram Report

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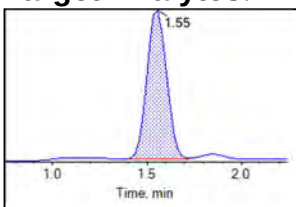
Sample Name	J9418-FS-D(5)	**Injection Vial**	30
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:22:00	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

Target Analytes:



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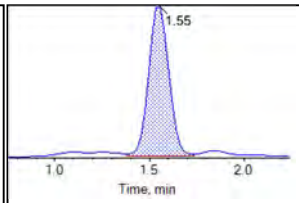

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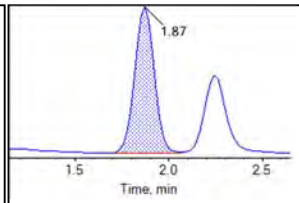

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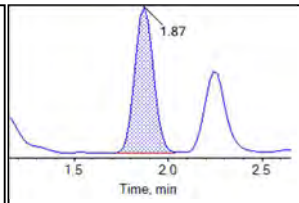

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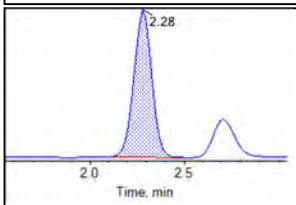

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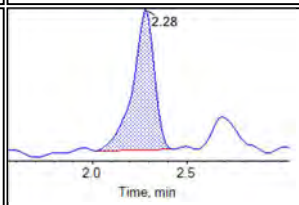

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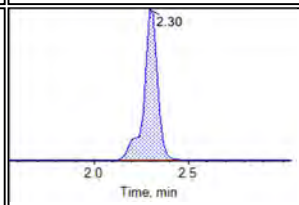

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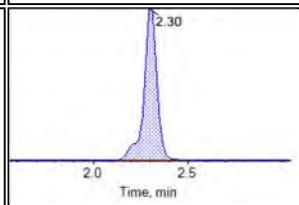

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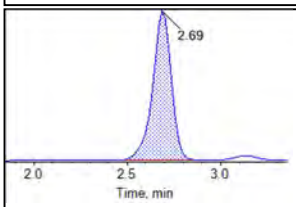

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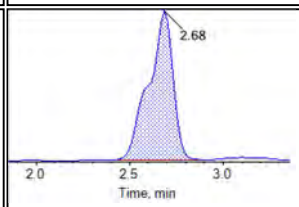

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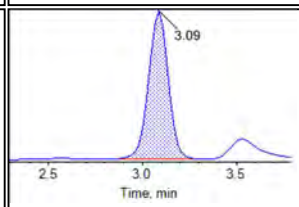

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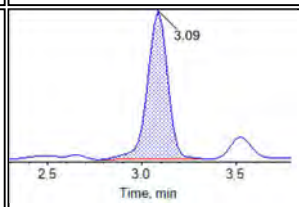

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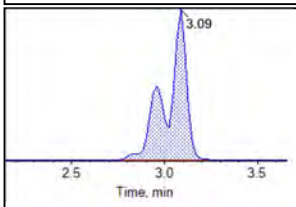
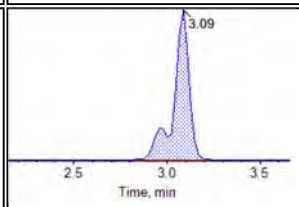


PFOS_1



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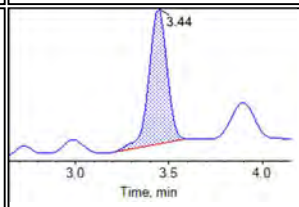

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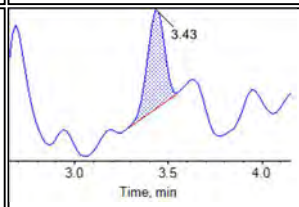

PFDA_2

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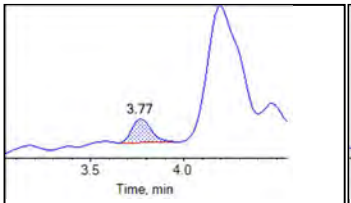

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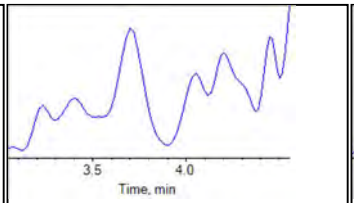

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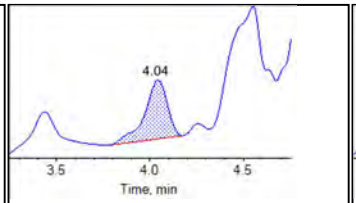

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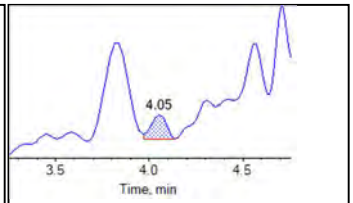

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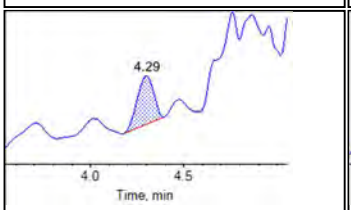

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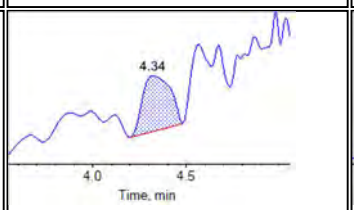

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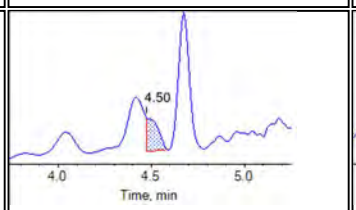

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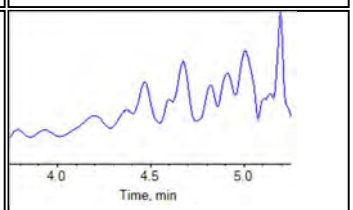

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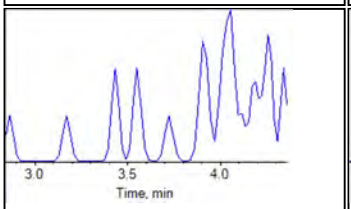

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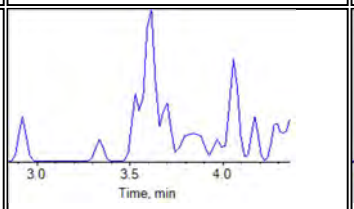

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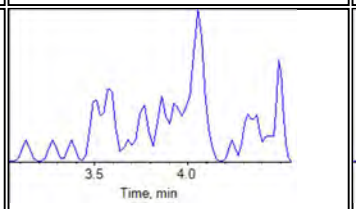

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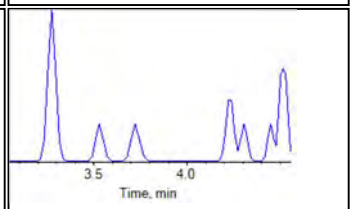
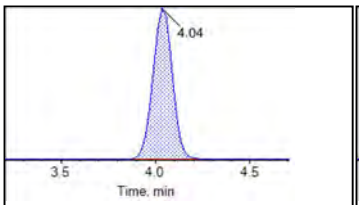
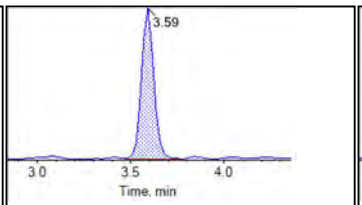


NEtFOSAA_2

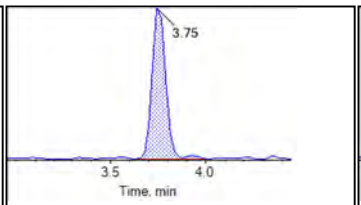
Internal Standards:



13C2-PFDoA



d3-MeFOSAA



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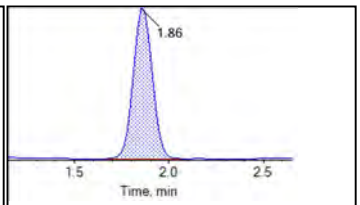
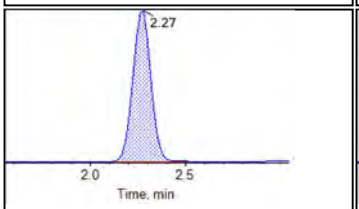


13C5-PFHxA



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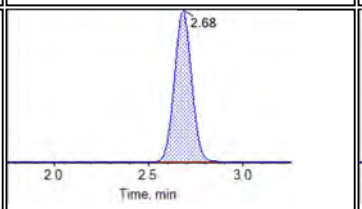
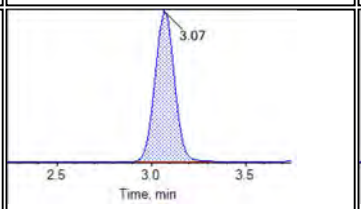


13C8-PFOA



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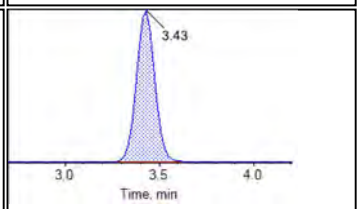

13C6-PFDA

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Chromatogram Report

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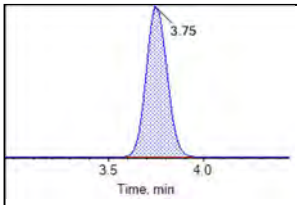
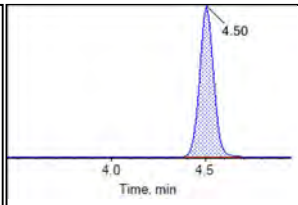
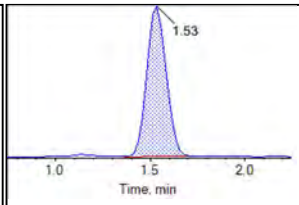


13C7-PFUnA



13C2-PFTeDA



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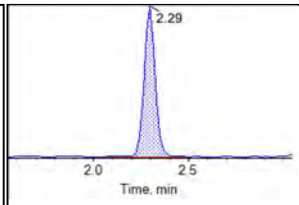
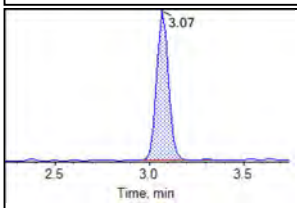


13C3-PFHxS



13C8-PFOS

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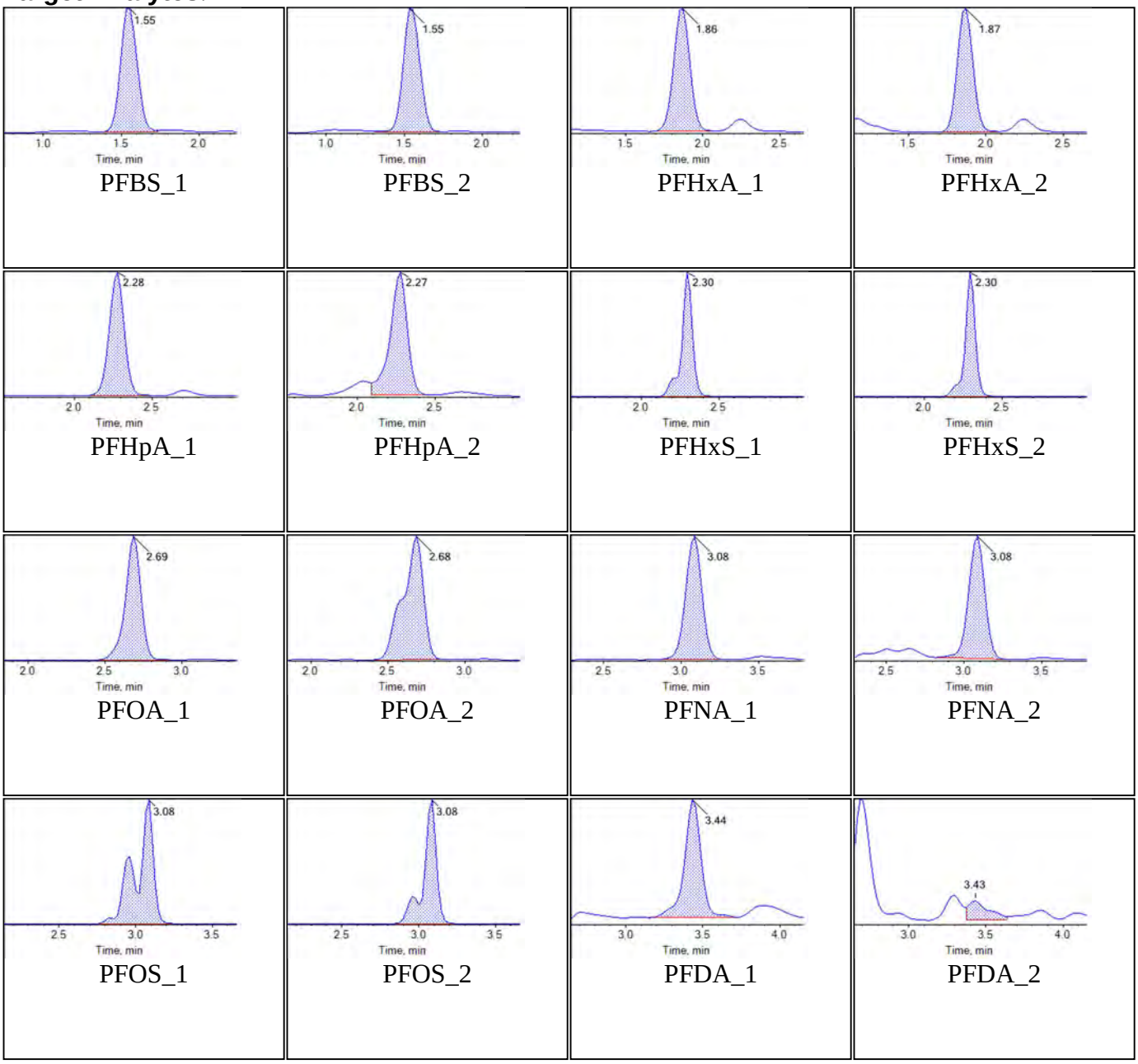
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:11:06 PM

Sample Name	J9418-FS-D(3)	**Injection Vial**	31
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:32:52	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

Target Analytes:



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Chromatogram Report

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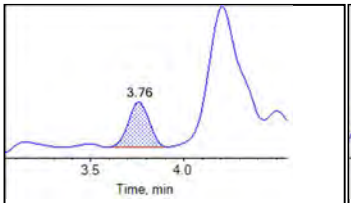

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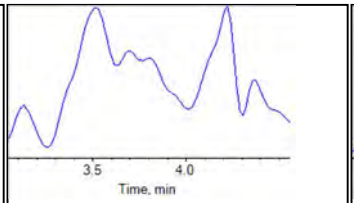

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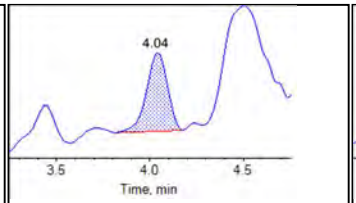

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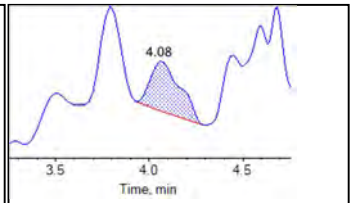
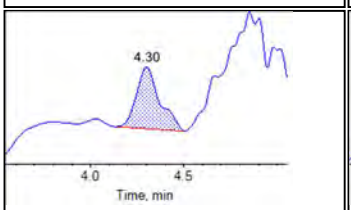
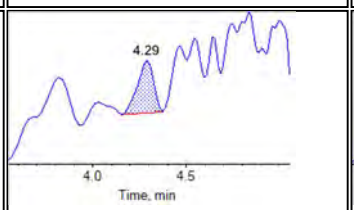


PFDoA_2



PFTrDA_1



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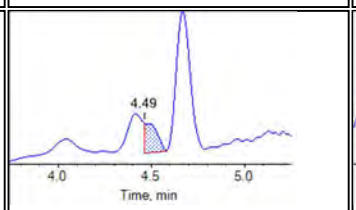

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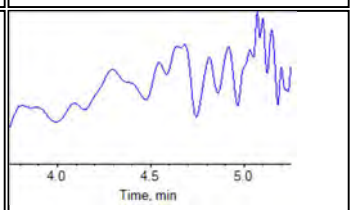

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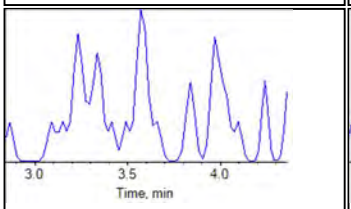

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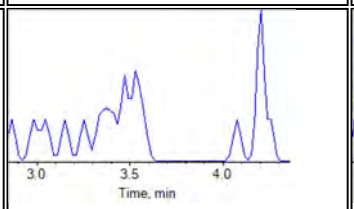

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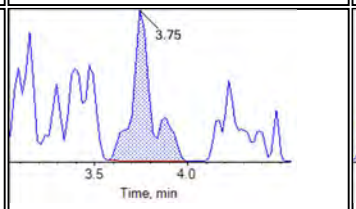

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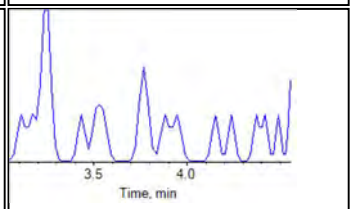

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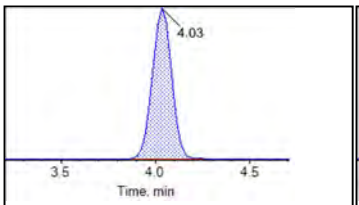
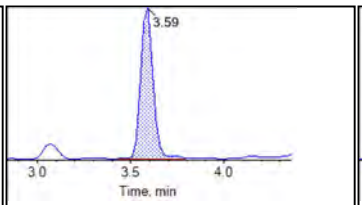


13C2-PFDoA



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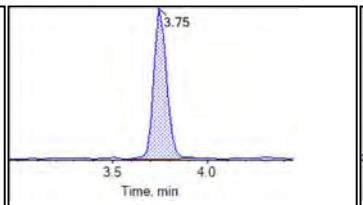

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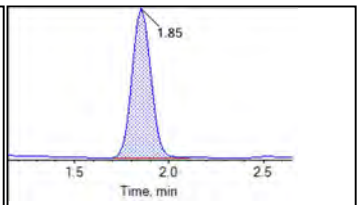

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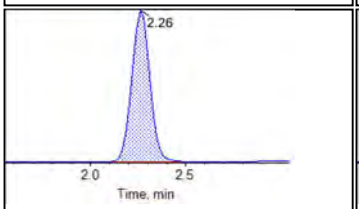

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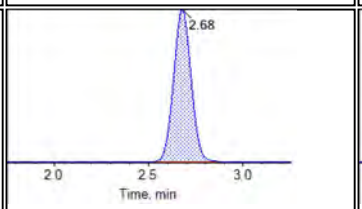
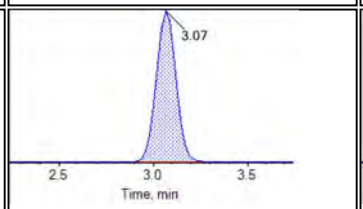


13C8-PFOA



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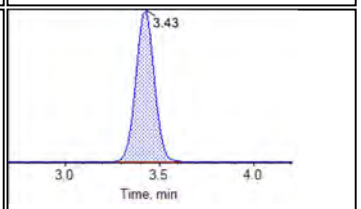

13C6-PFDA

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Chromatogram Report

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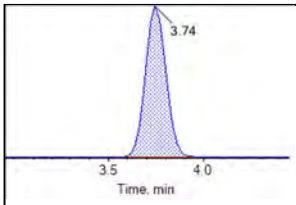
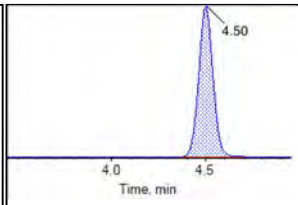


13C7-PFUnA



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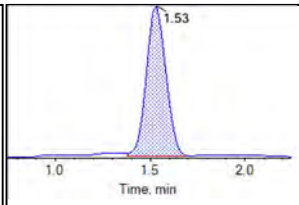
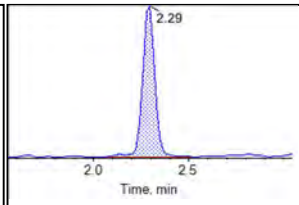


13C3-PFBS



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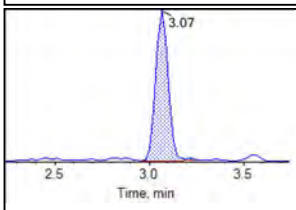

13C8-PFOS

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Chromatogram Report

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Printed: 26/11/2018 3:11:12 PM

Sample Name	J9418-FS(0)	**Injection Vial**	32
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:43:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

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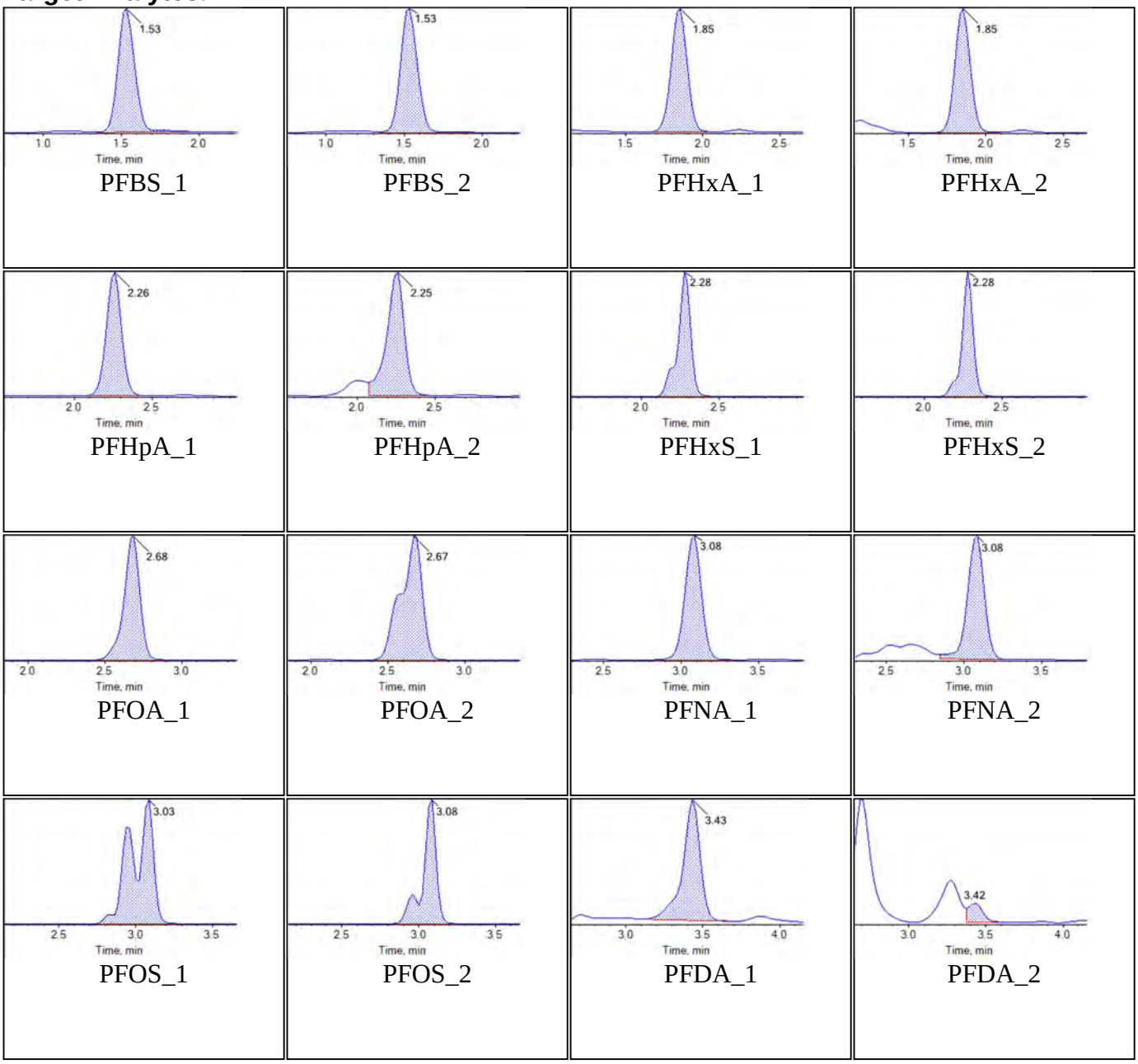

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Chromatogram Report

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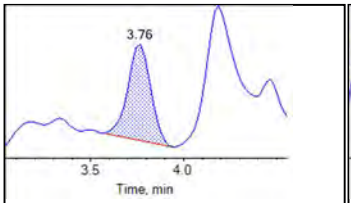

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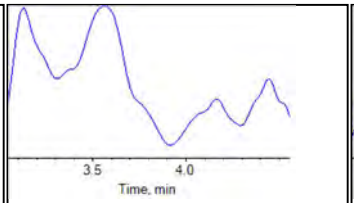

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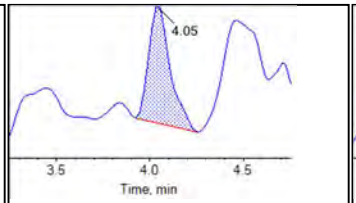

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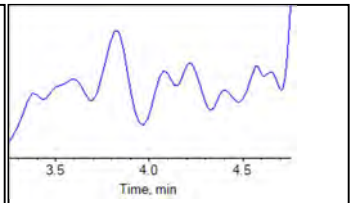

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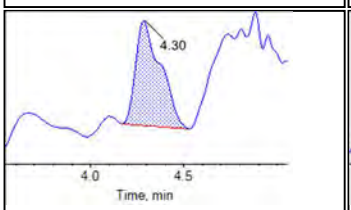

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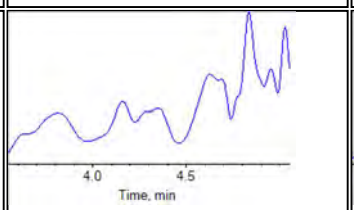

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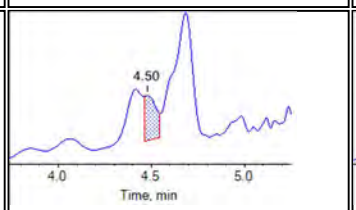

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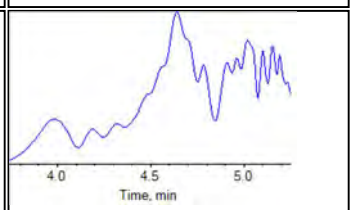

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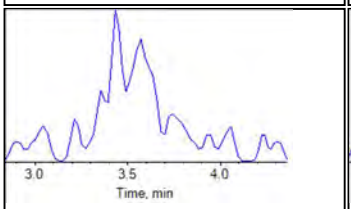

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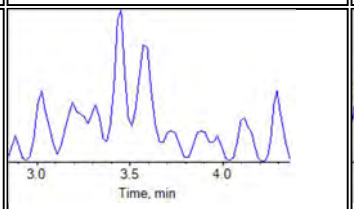

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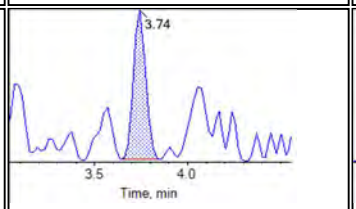

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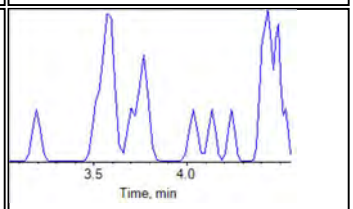

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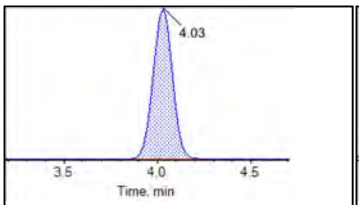

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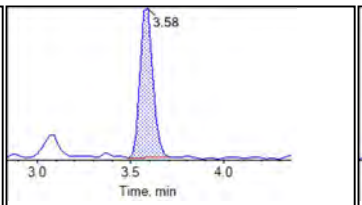
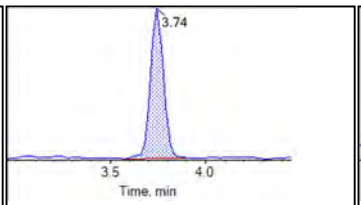
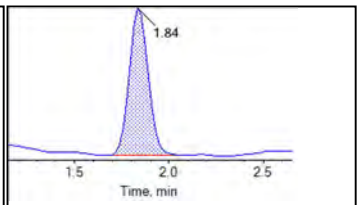


d3-MeFOSAA



d5-EtFOSAA



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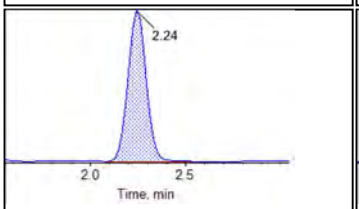

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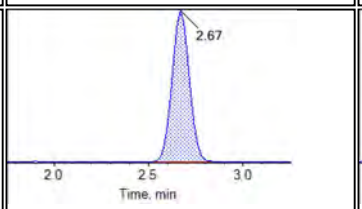
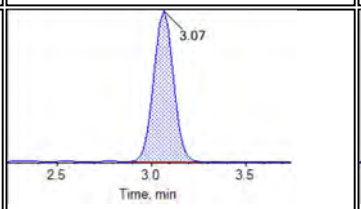


13C8-PFOA



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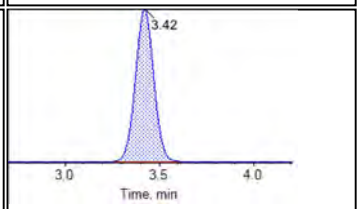

13C6-PFDA

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Chromatogram Report

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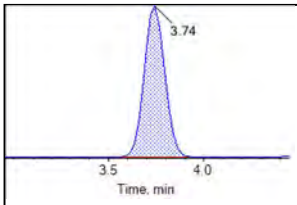
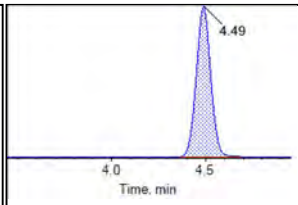


13C7-PFUnA



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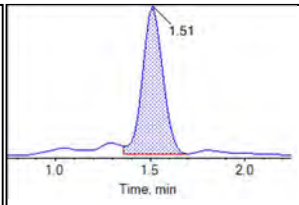

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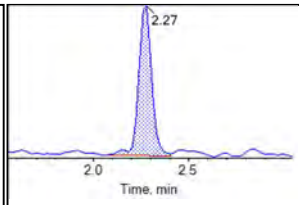

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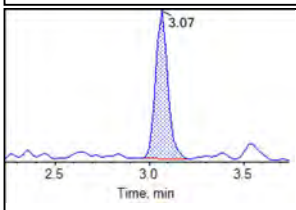


13C8-PFOS

BATTELLE

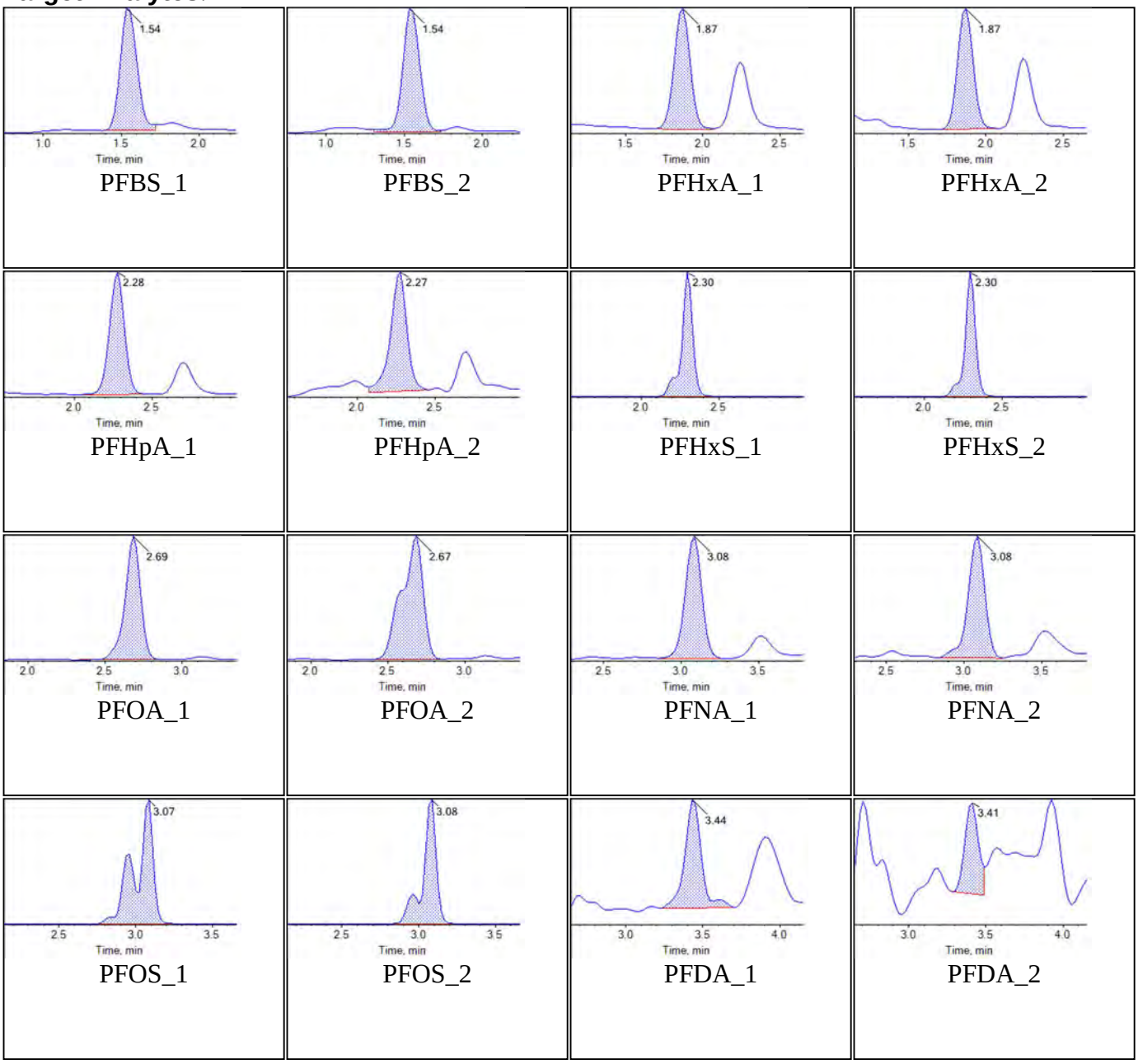
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:11:18 PM

Sample Name	J9421-FS-D(7)	**Injection Vial**	34
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:05:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

Target Analytes:



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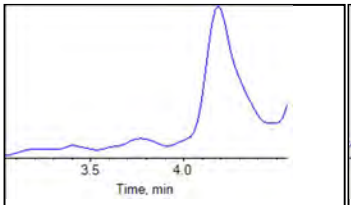
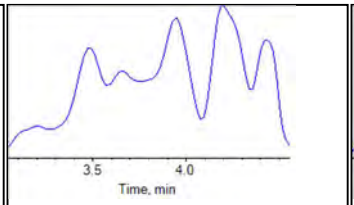
Chromatogram Report

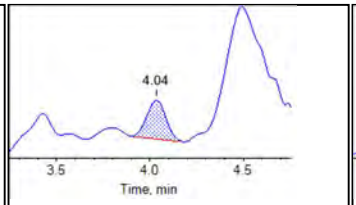
Created with Analyst Reporter
Printed: 26/11/2018 3:11:18 PM



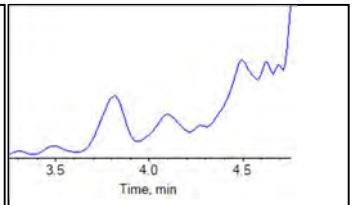
PFUnA_1



PFUnA_2



PFDoA_1



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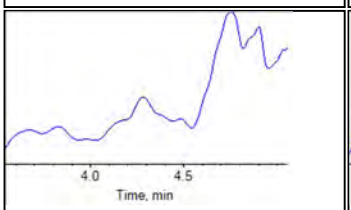

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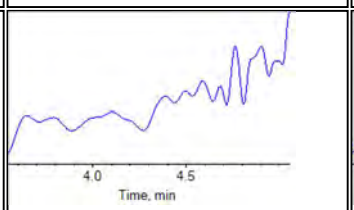

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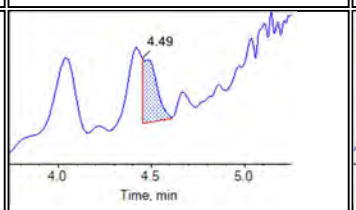

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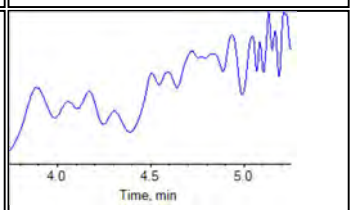

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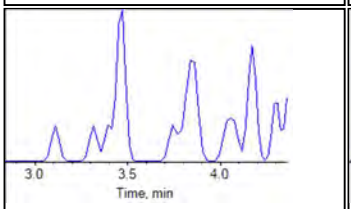

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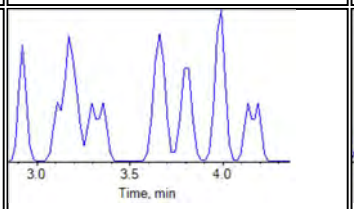

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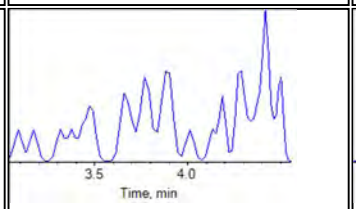

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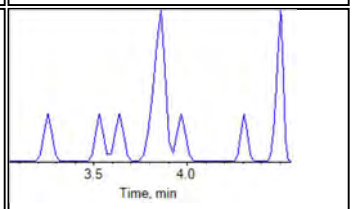

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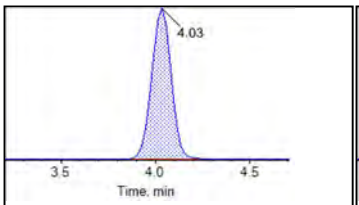
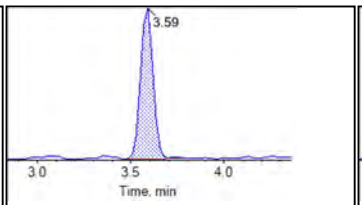


13C2-PFDoA



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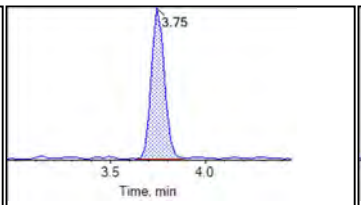

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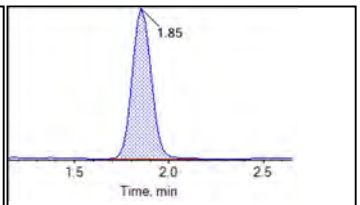

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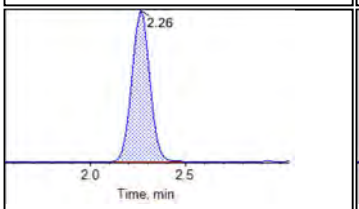

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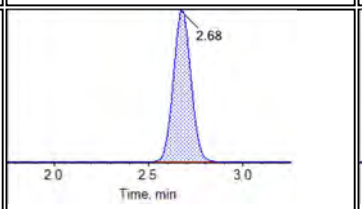
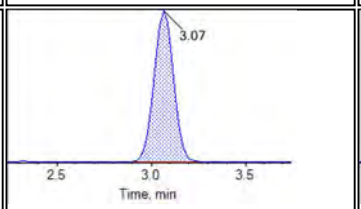
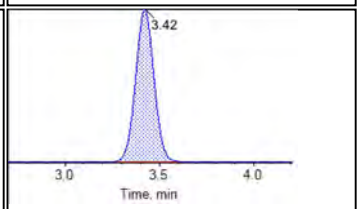


13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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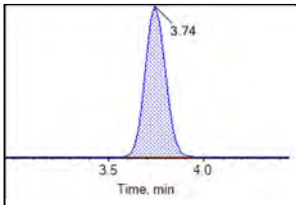
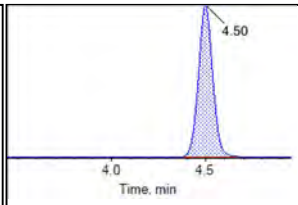


13C7-PFUnA



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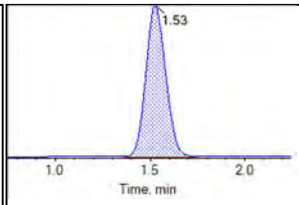
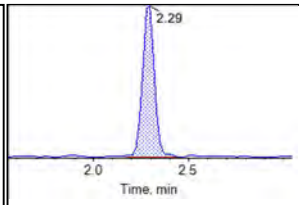


13C3-PFBS



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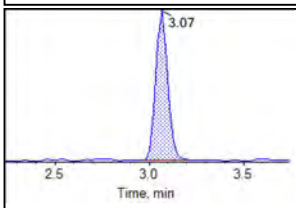

13C8-PFOS

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Chromatogram Report

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Sample Name	J9421-FS-D(3)	**Injection Vial**	36
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:27:08	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

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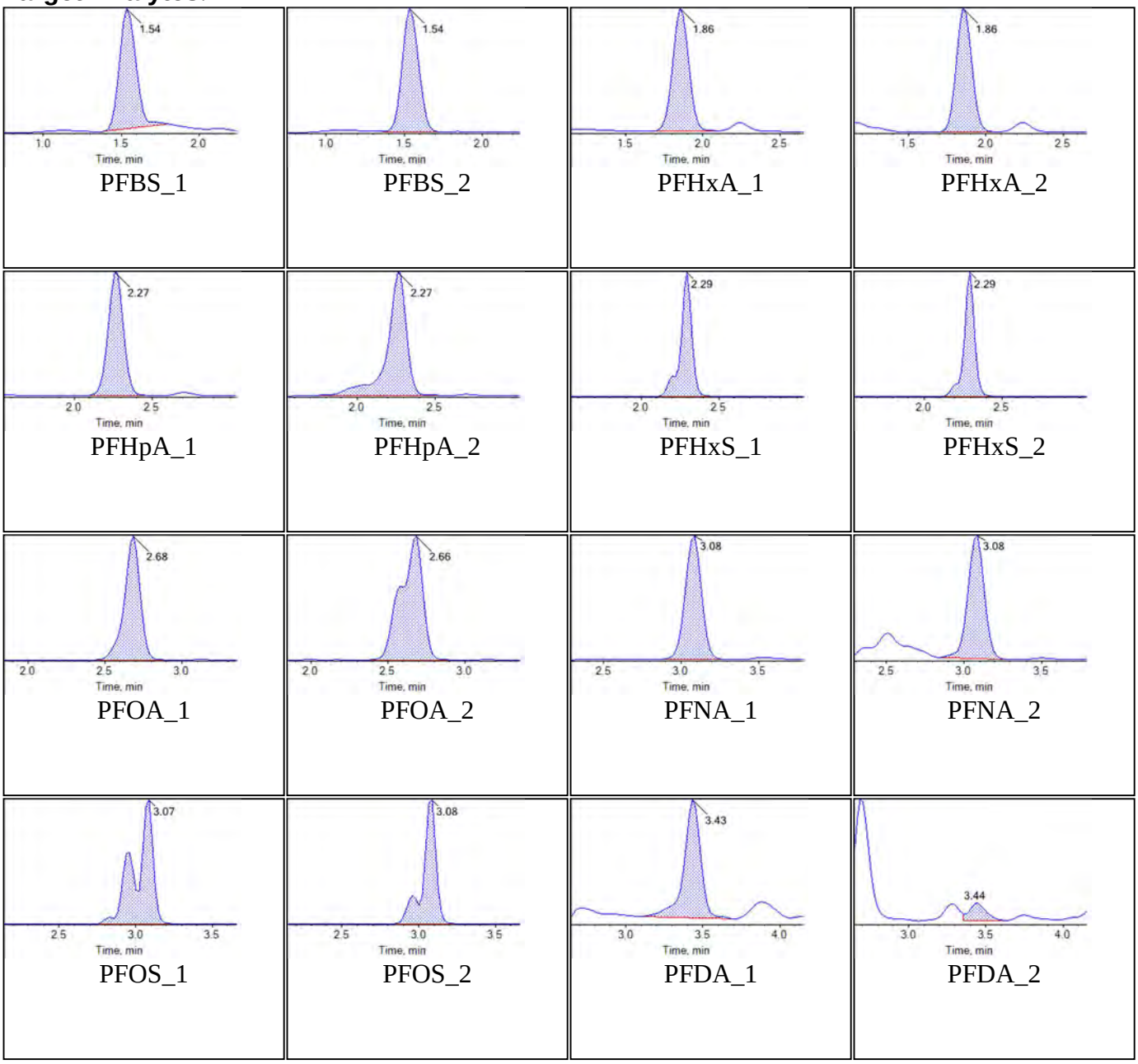

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Chromatogram Report

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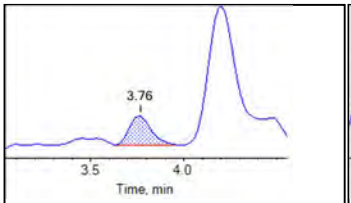

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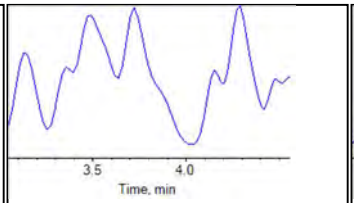

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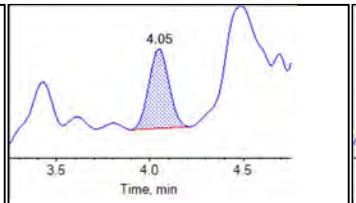

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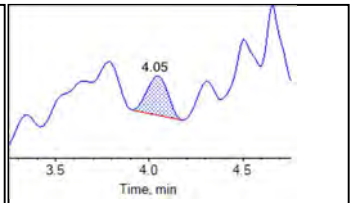

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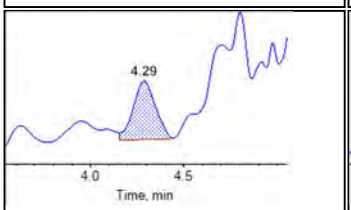

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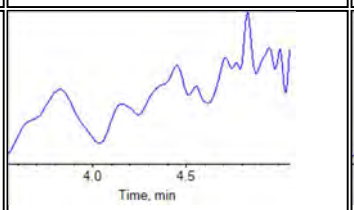

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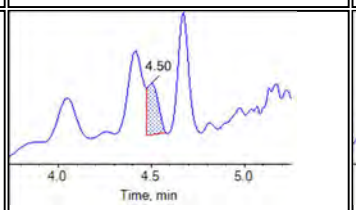

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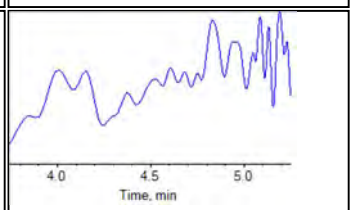

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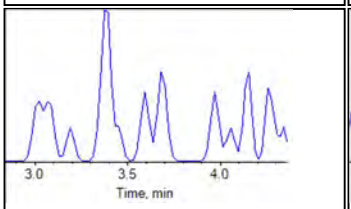

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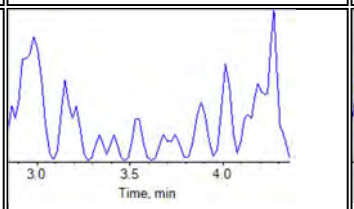

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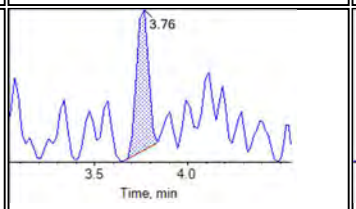

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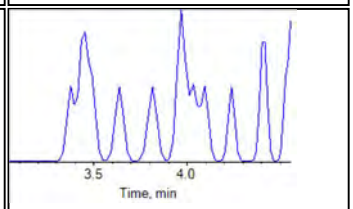

NEtFOSAA_2

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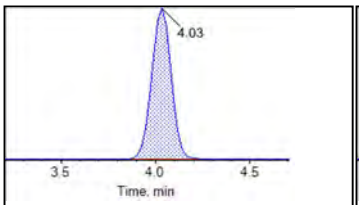

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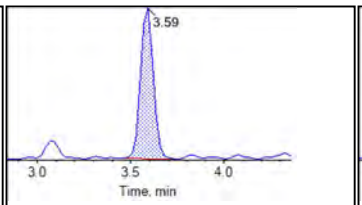
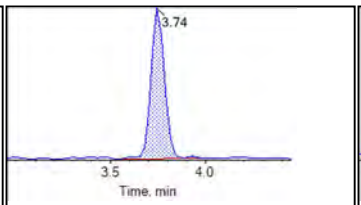
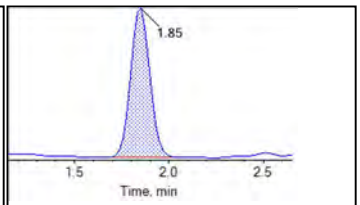


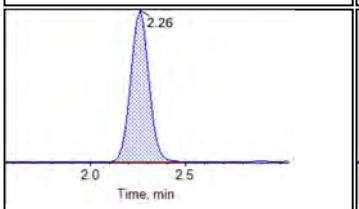
d3-MeFOSAA



d5-EtFOSAA



13C5-PFHxA



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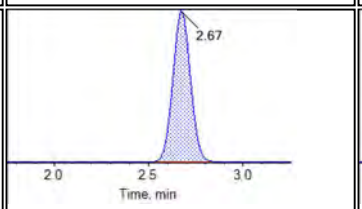
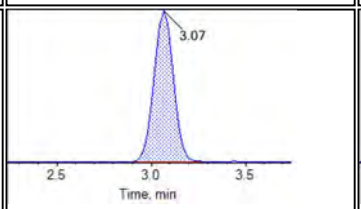
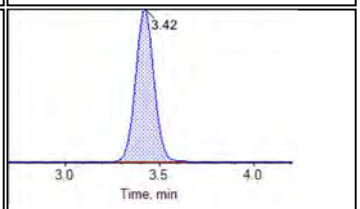


13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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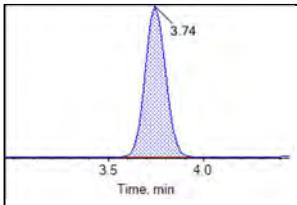
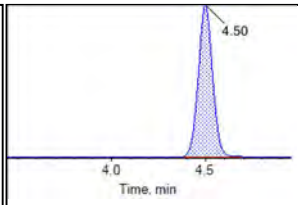
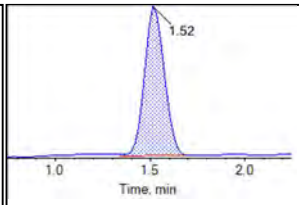


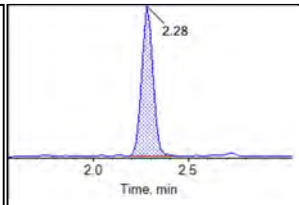
13C7-PFUnA



13C2-PFTeDA



13C3-PFBS



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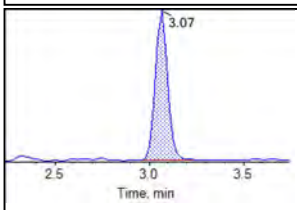

13C8-PFOS

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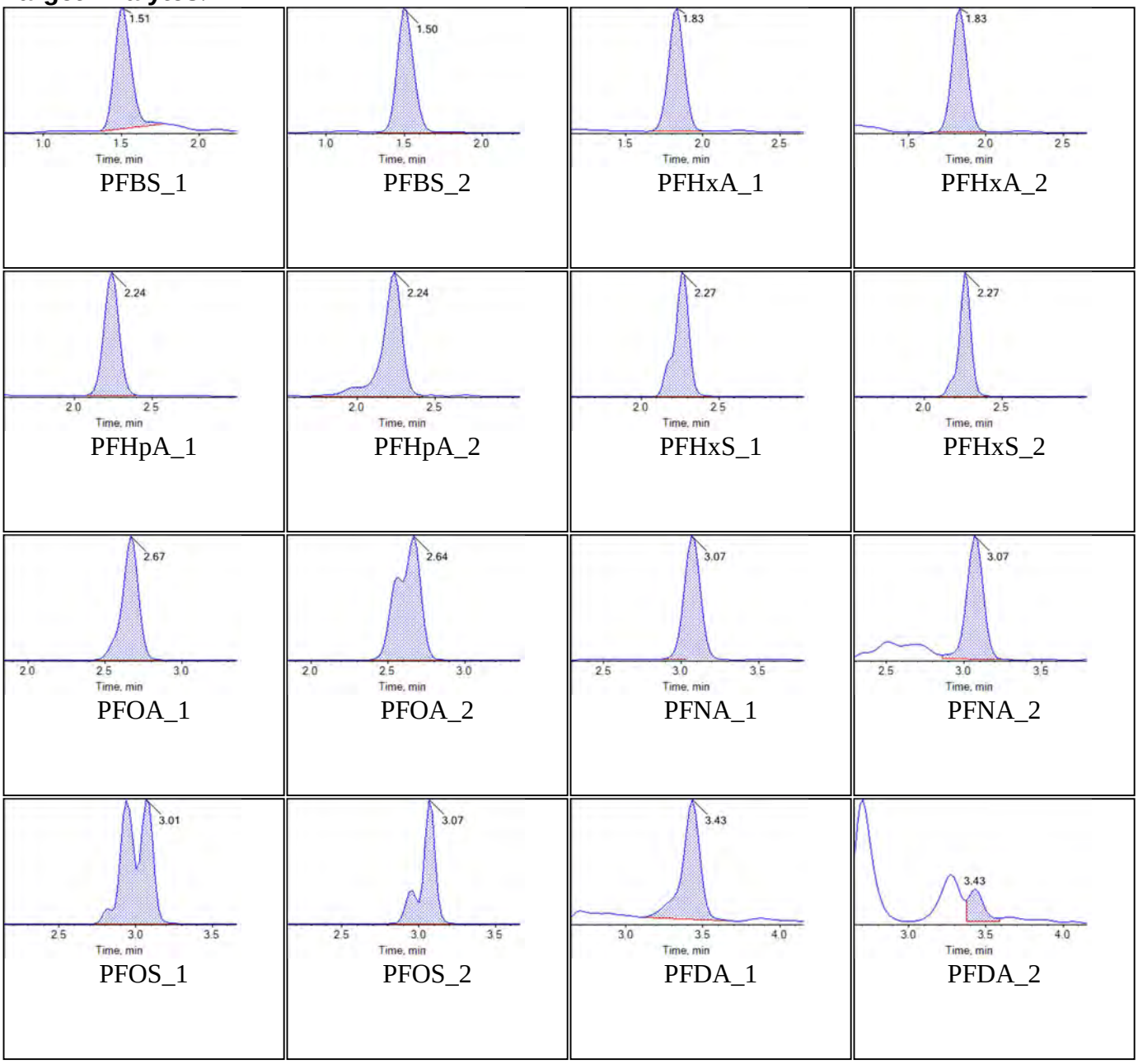
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:11:37 PM

Sample Name	J9421-FS(0)	**Injection Vial**	37
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:38:00	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

Target Analytes:



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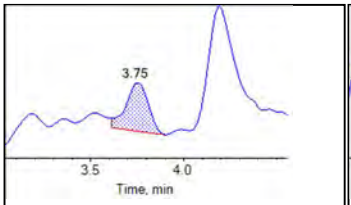
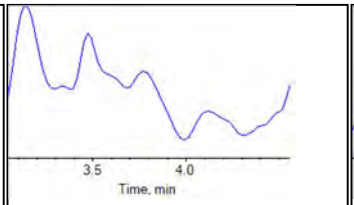


PFUnA_1



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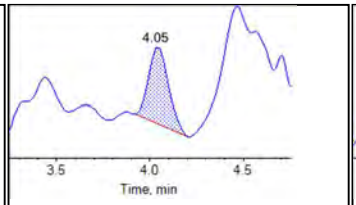

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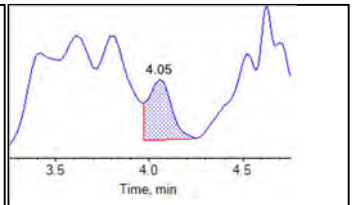

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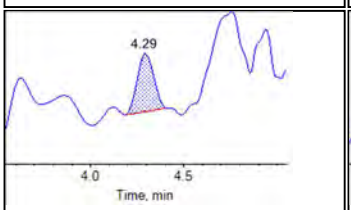

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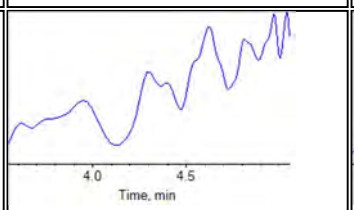

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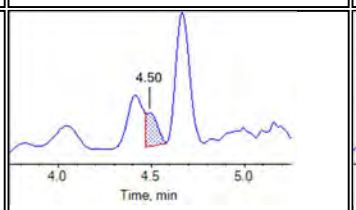

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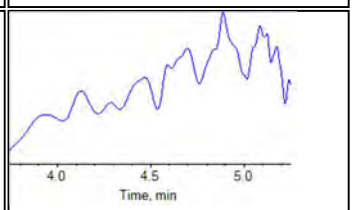

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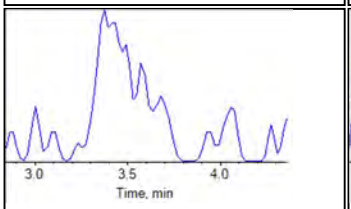

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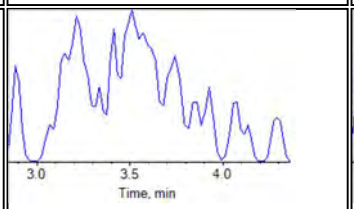

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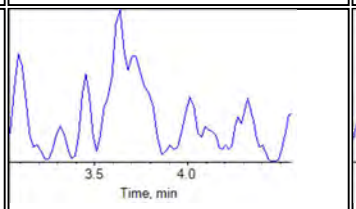

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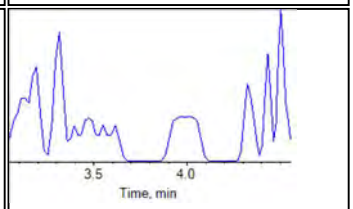

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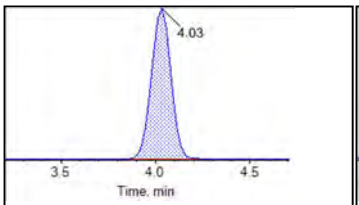

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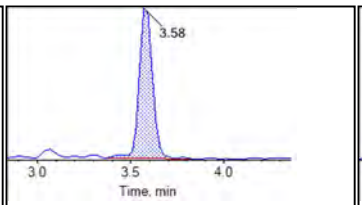

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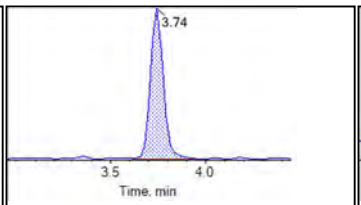

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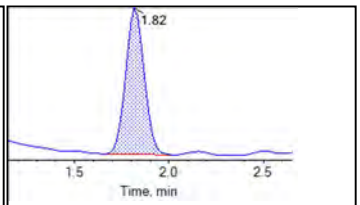

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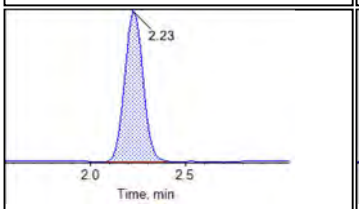

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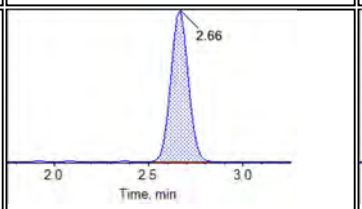

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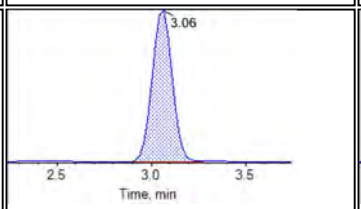

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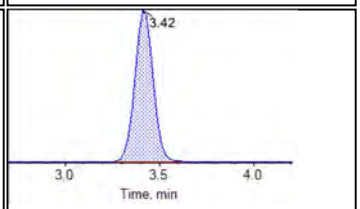

13C6-PFDA

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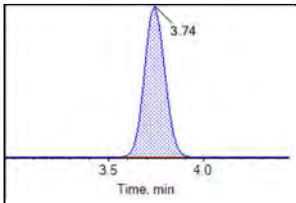
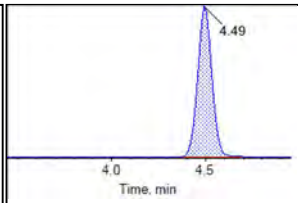


13C7-PFUnA



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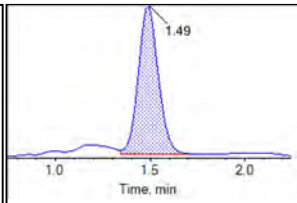

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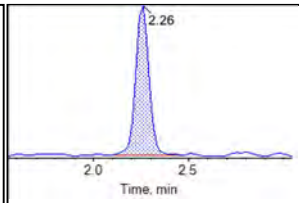

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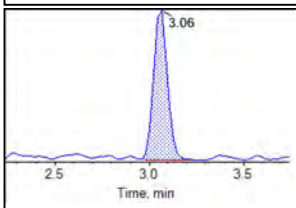

13C8-PFOS

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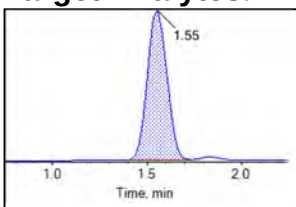
Sample Name	KC69 CCV	**Injection Vial**	39
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:59:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

Target Analytes:



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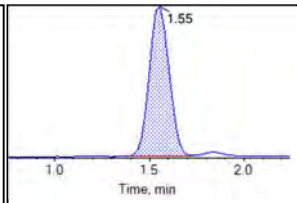

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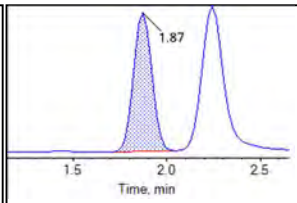

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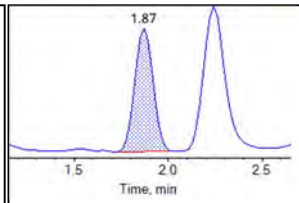

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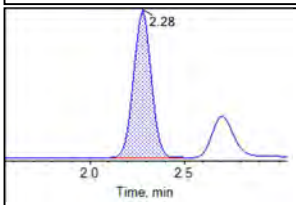

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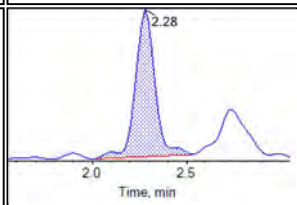

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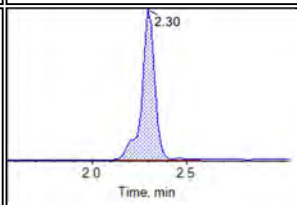

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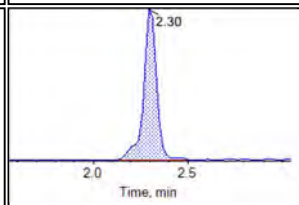

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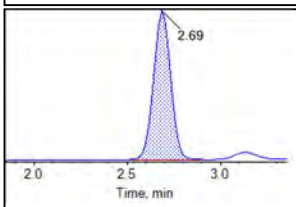

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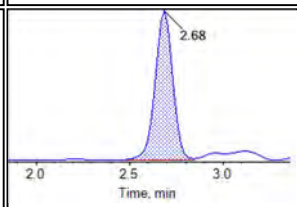

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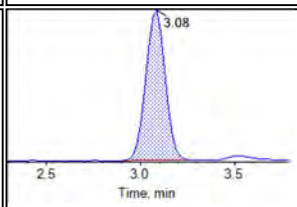

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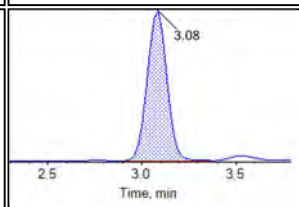

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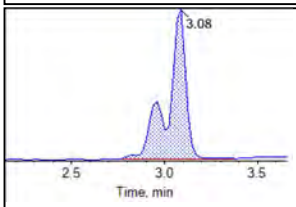

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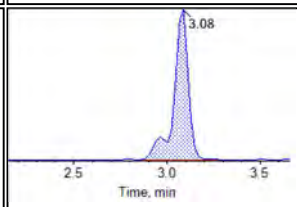

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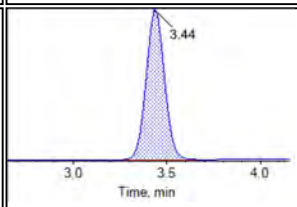

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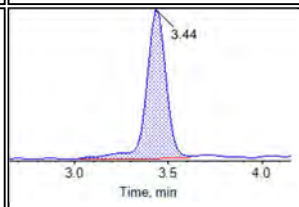

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Chromatogram Report

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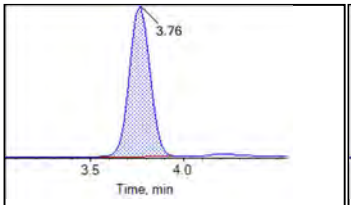

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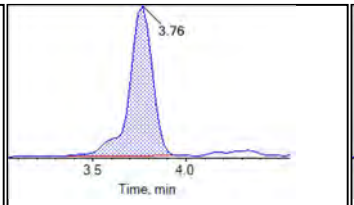

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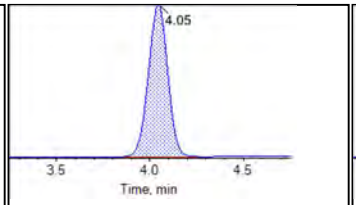

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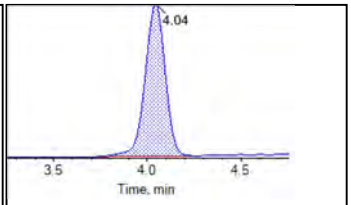

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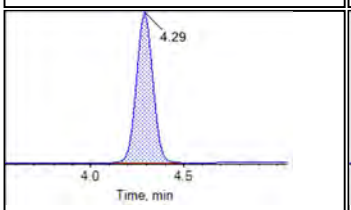

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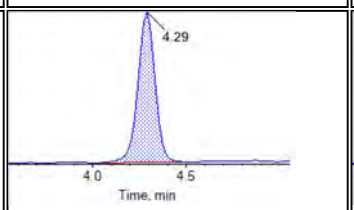

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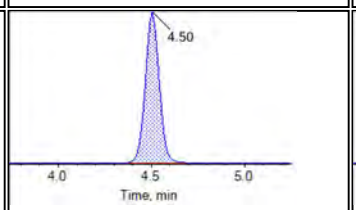

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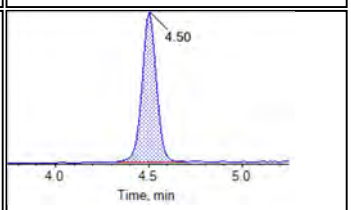

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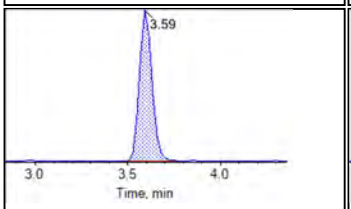

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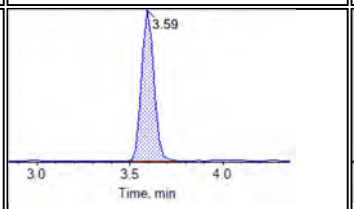

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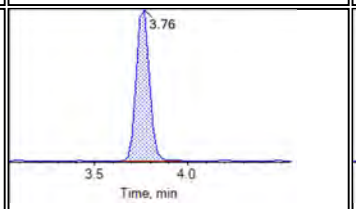

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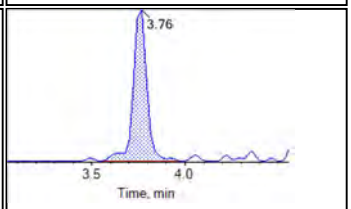

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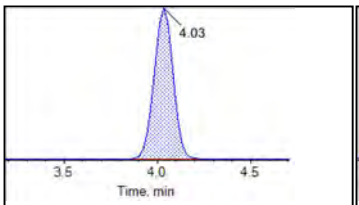
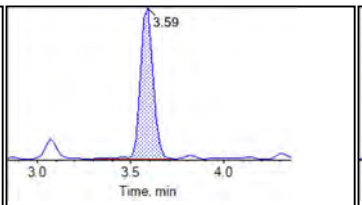


13C2-PFDoA



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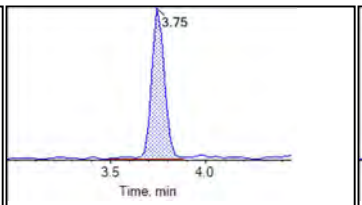

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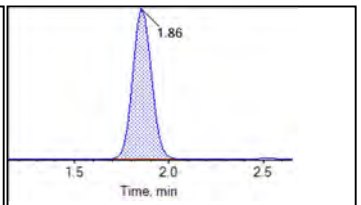

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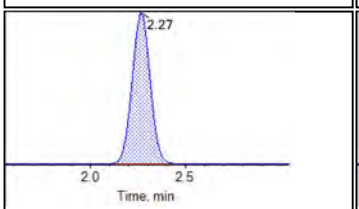

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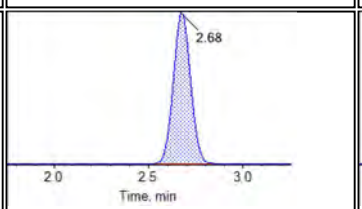

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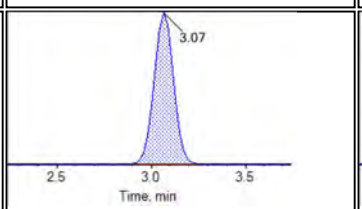
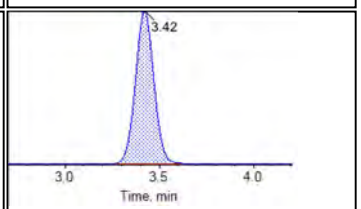


13C9-PFNA



13C6-PFDA

Chromatogram Report

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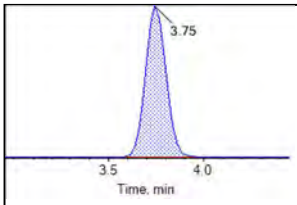
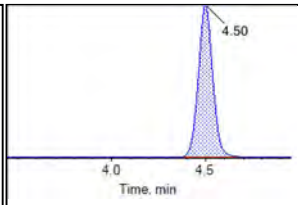


13C7-PFUnA



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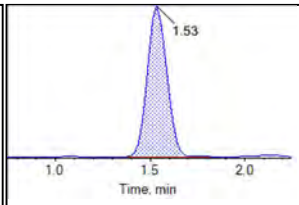

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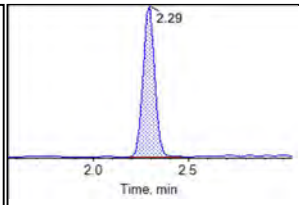

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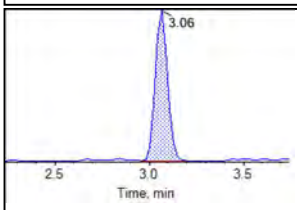

13C8-PFOS

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Chromatogram Report

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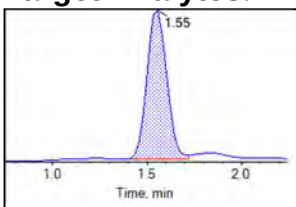
Sample Name	J9422MS-FS-D(7)	**Injection Vial**	40
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:21:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

Target Analytes:



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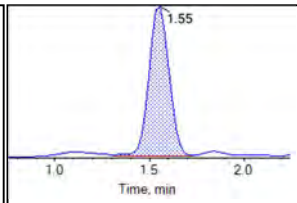

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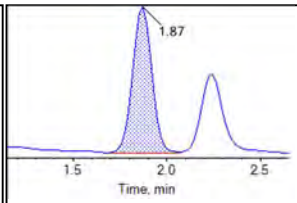

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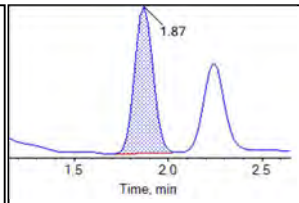

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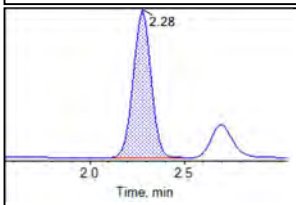

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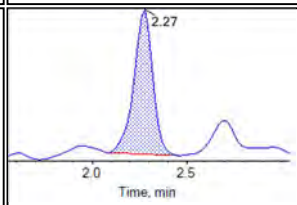

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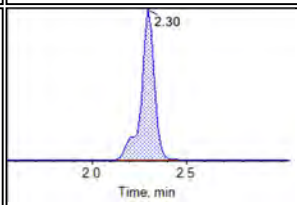

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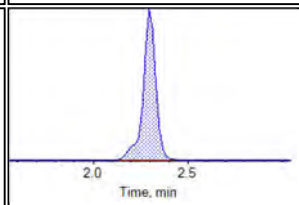

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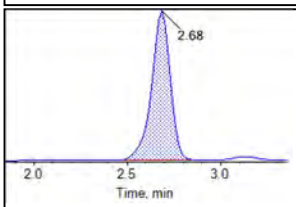

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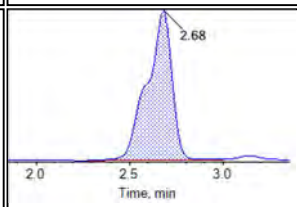

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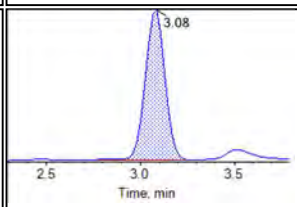

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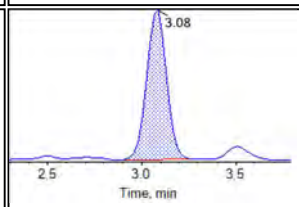

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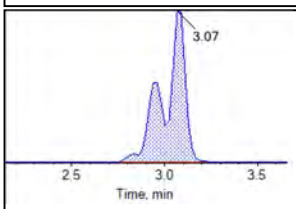

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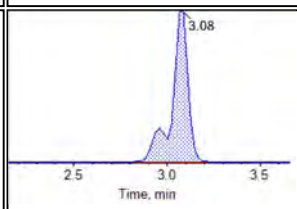

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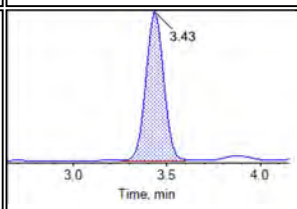

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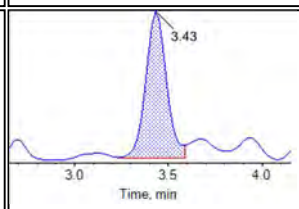

PFDA_2

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Chromatogram Report

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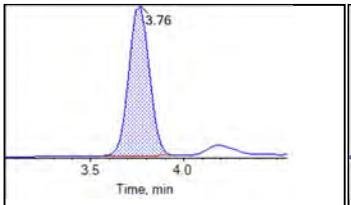

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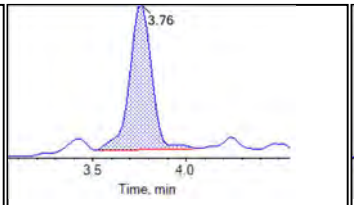

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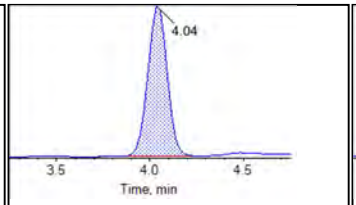

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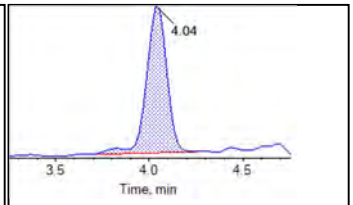

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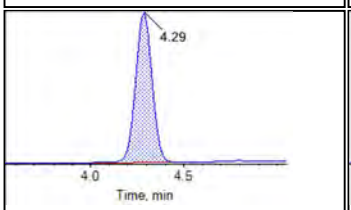

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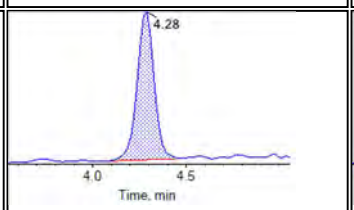

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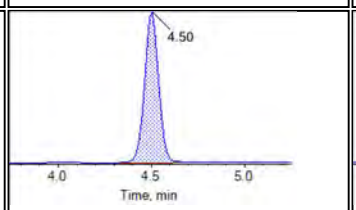

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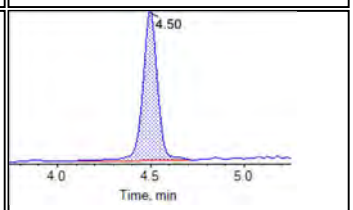

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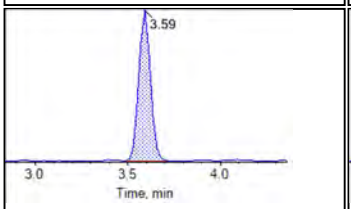

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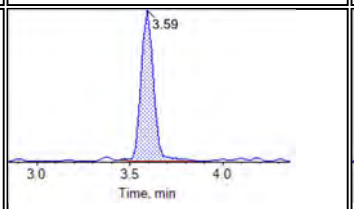

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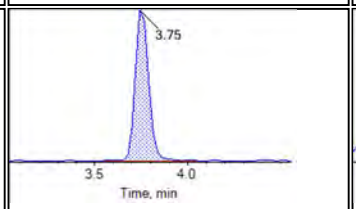

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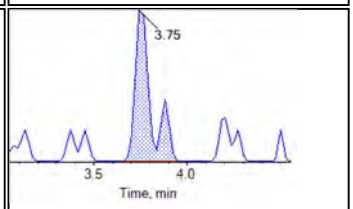

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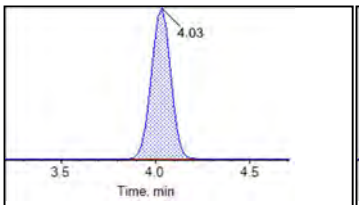

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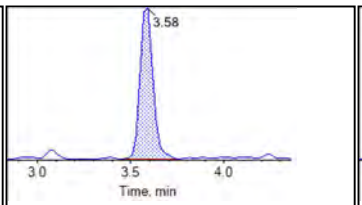

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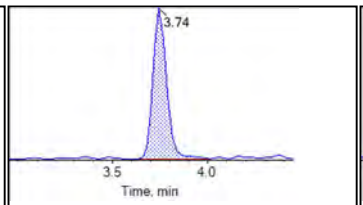

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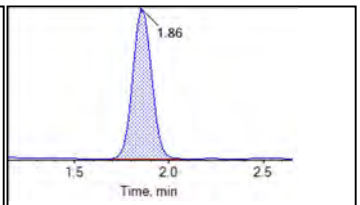

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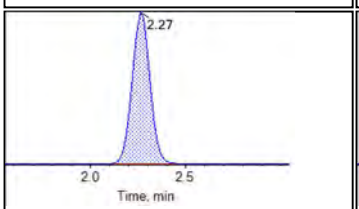

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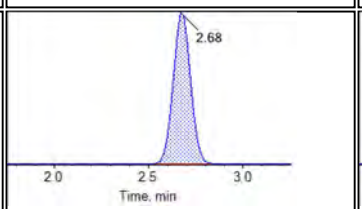

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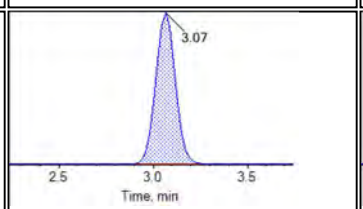

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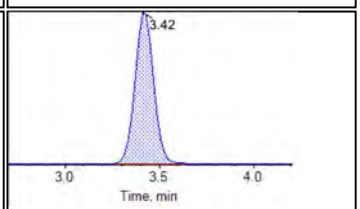

13C6-PFDA

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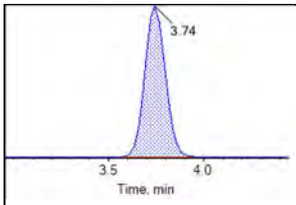

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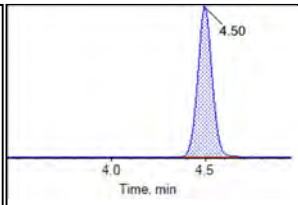
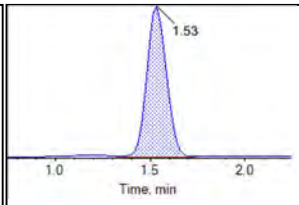
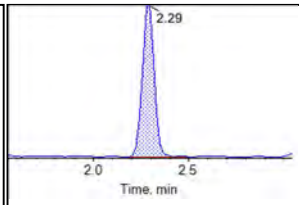


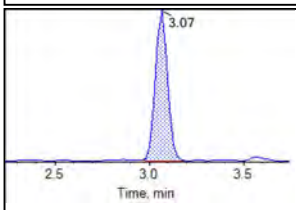
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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Sample Name	J9422MS-FS-D(5)	**Injection Vial**	41
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:32:19	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

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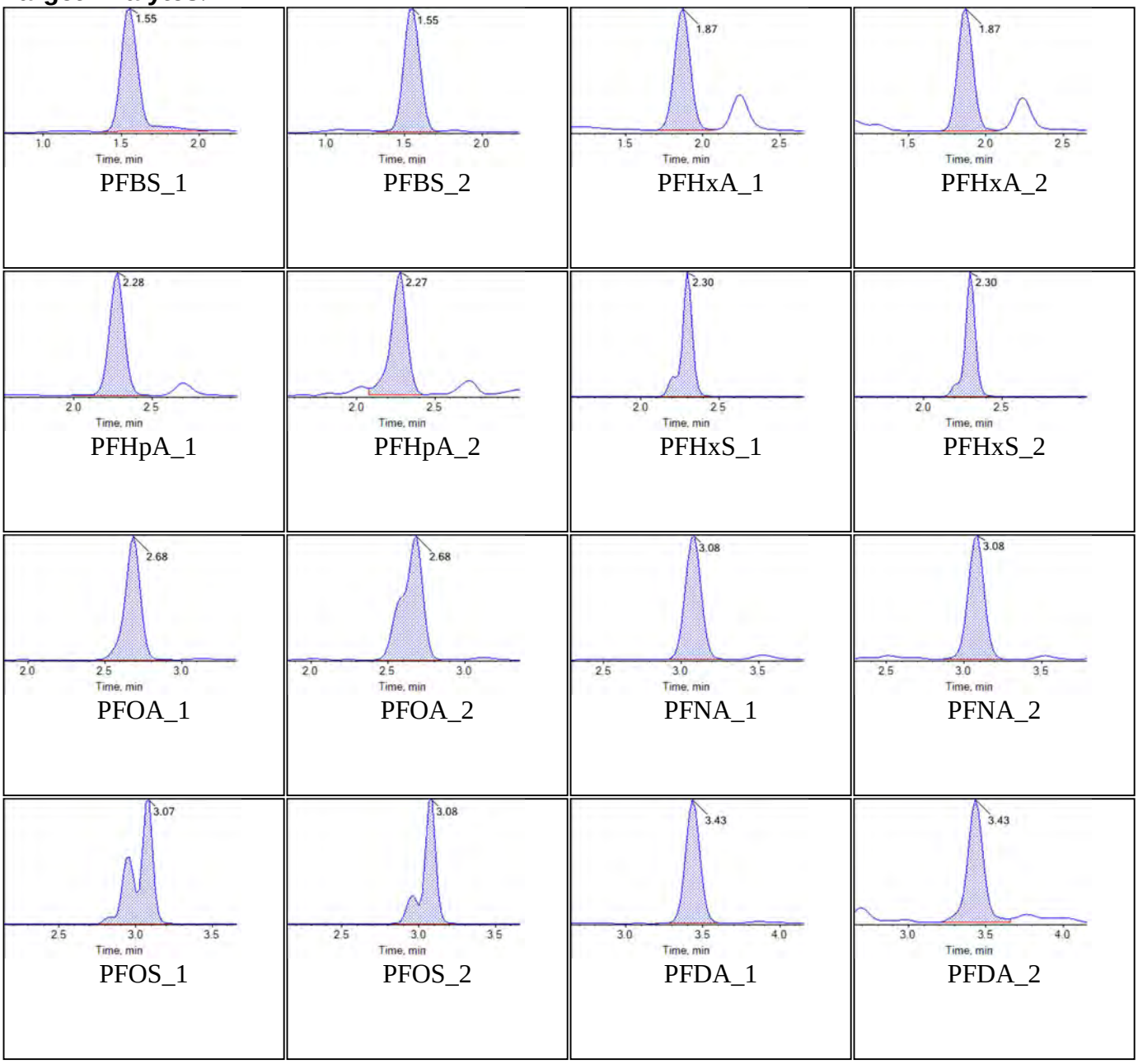

BATTELLE

Chromatogram Report

Created with Analyst Reporter
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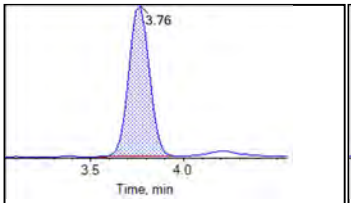

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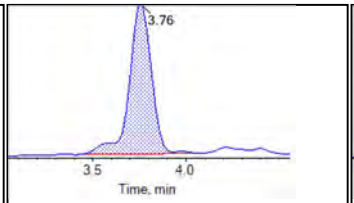
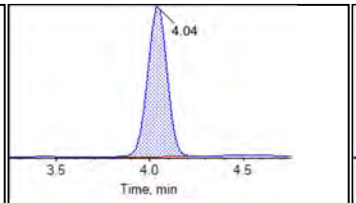
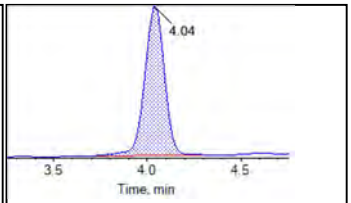


PFUnA_2



PFDoA_1



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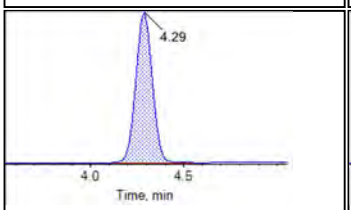
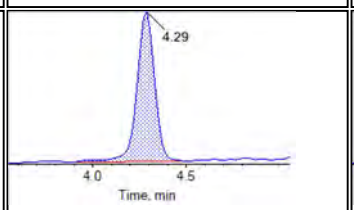


PFTrDA_1



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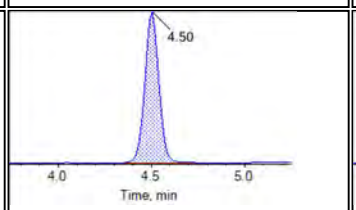

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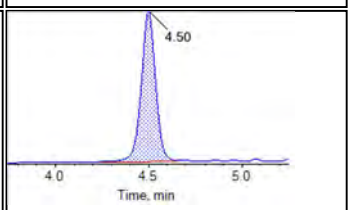

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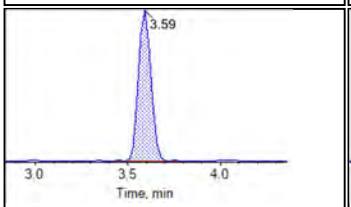

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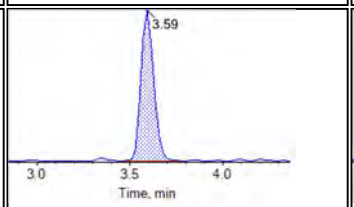
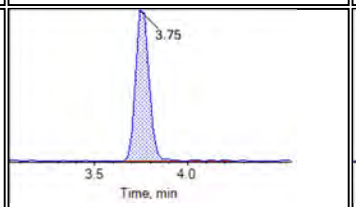


NMeFOSAA_2



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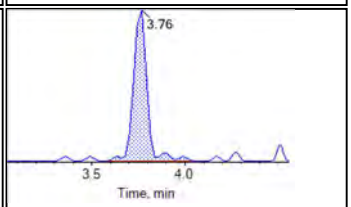
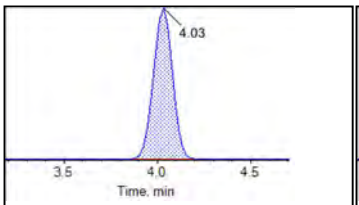
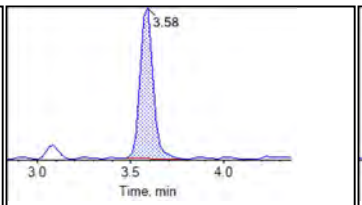


NEtFOSAA_2

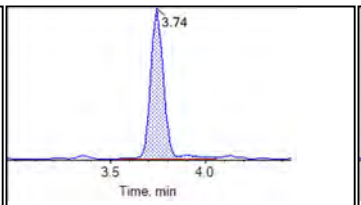
Internal Standards:



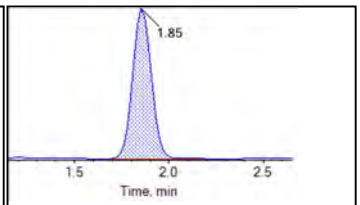
13C2-PFDoA



d3-MeFOSAA



d5-EtFOSAA



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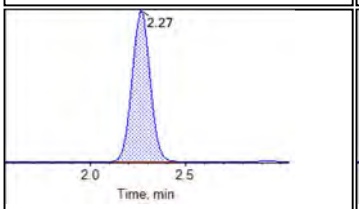

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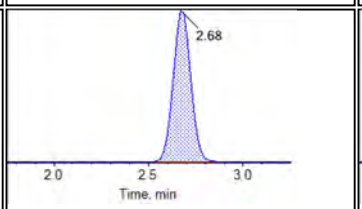
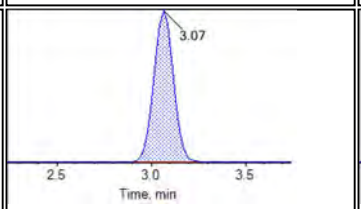
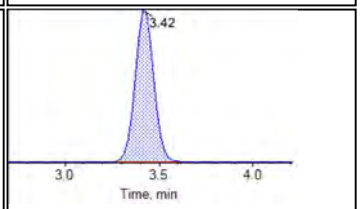


13C8-PFOA



13C9-PFNA



13C6-PFDA

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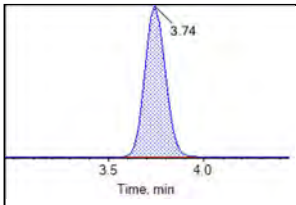
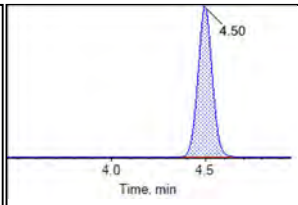


13C7-PFUnA



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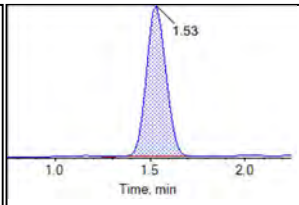
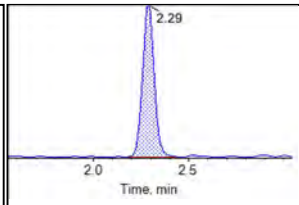


13C3-PFBS



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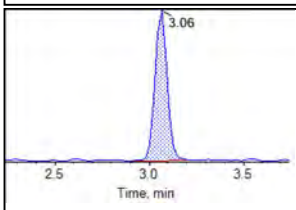

13C8-PFOS

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Chromatogram Report

Created with Analyst Reporter
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Sample Name	J9422MS-FS-D(3)	**Injection Vial**	42
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:43:11	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

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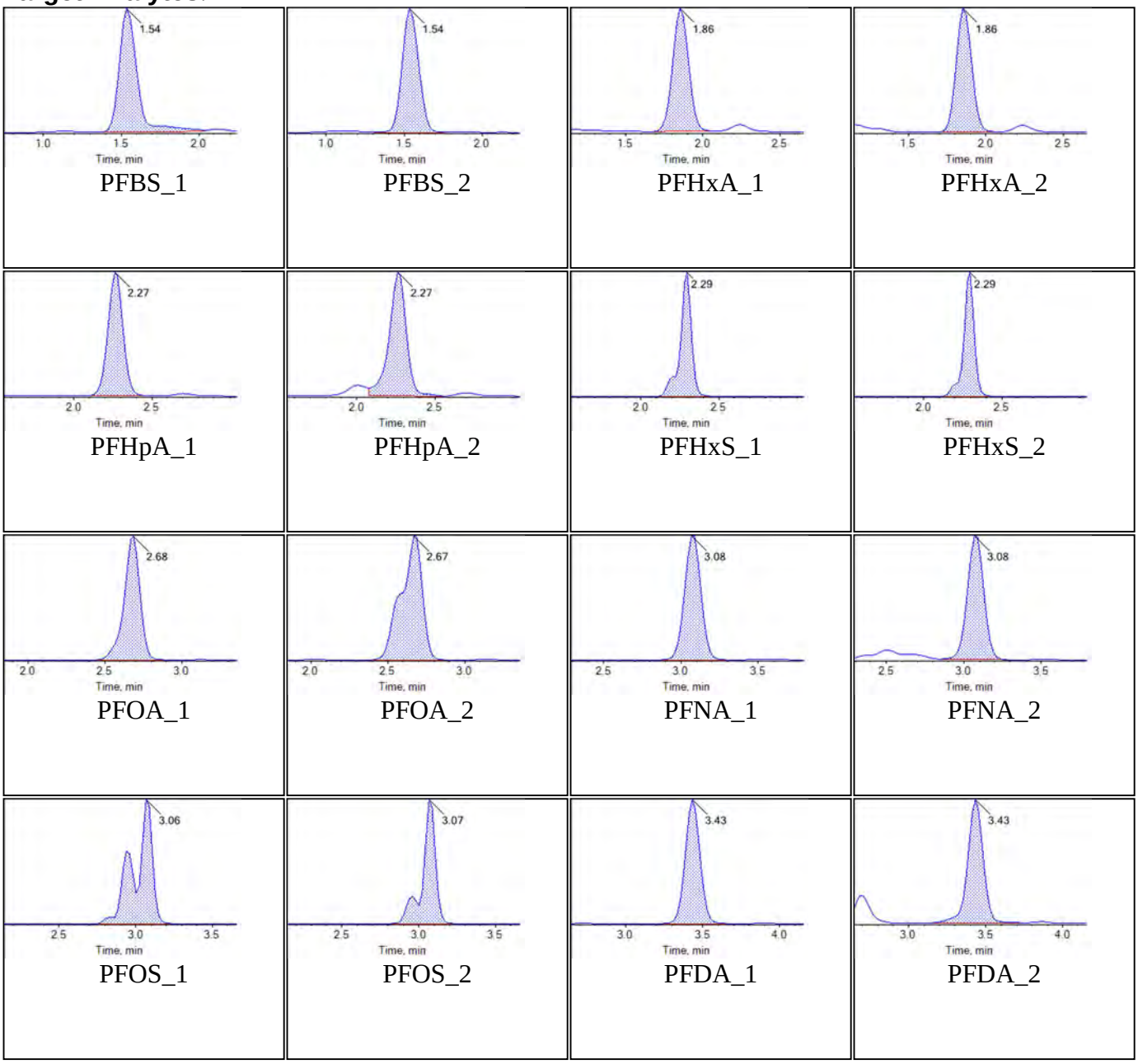

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Chromatogram Report

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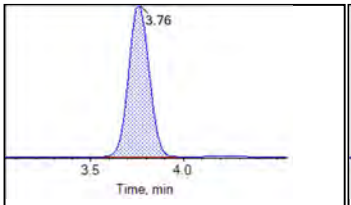
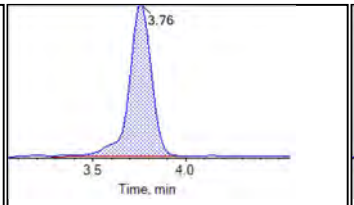
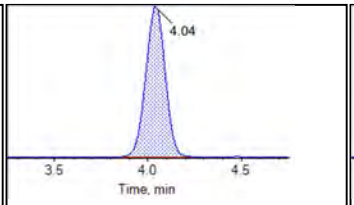


PFUnA_1



PFUnA_2



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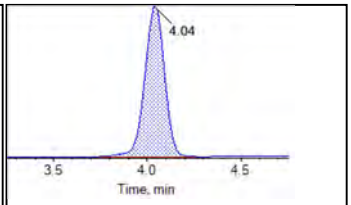
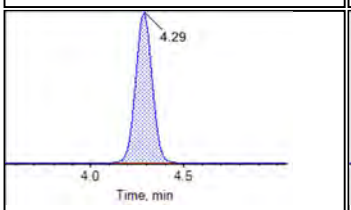


PFDoA_2



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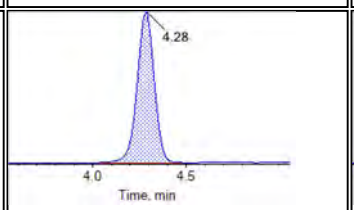

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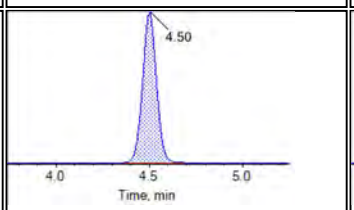

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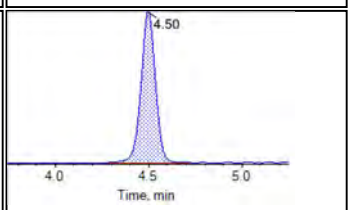

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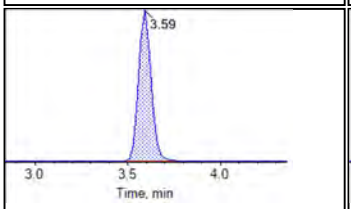

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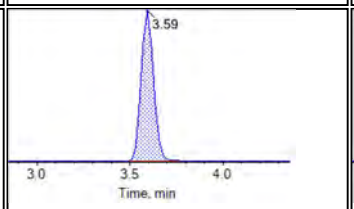

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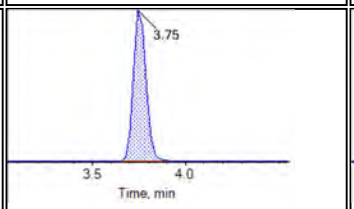

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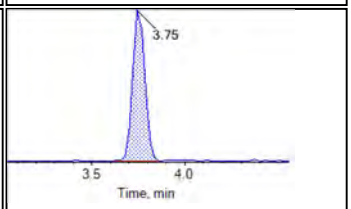

NEtFOSAA_2

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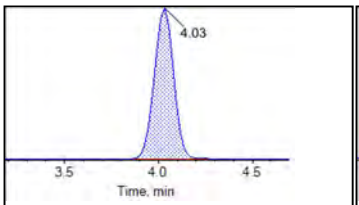

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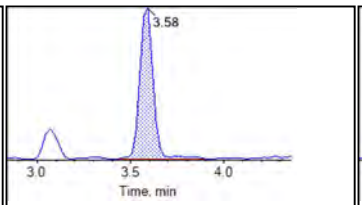
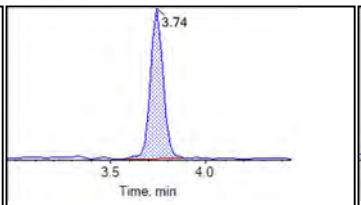
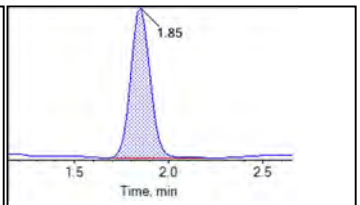


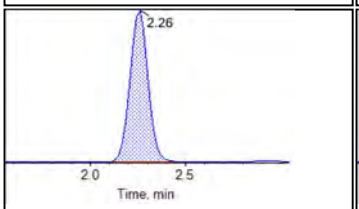
d3-MeFOSAA



d5-EtFOSAA



13C5-PFHxA



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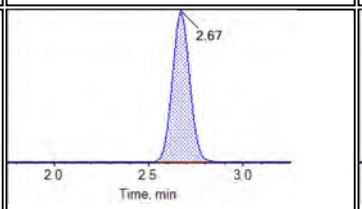
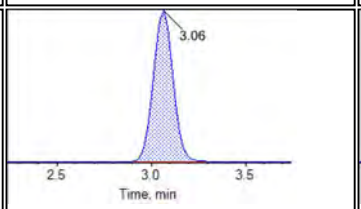


13C8-PFOA



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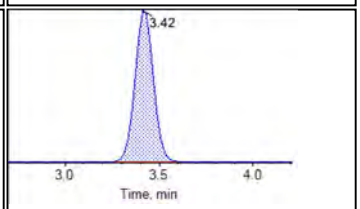

13C6-PFDA

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Chromatogram Report

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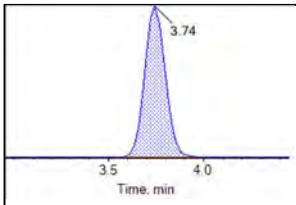
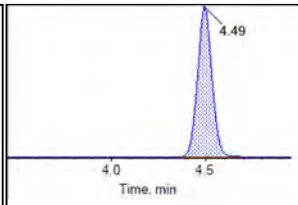
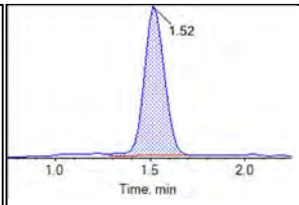


13C7-PFUnA



13C2-PFTeDA



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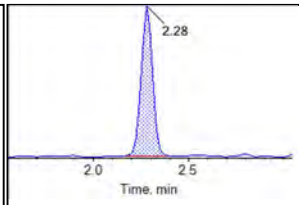
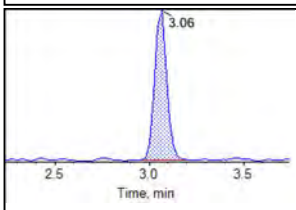


13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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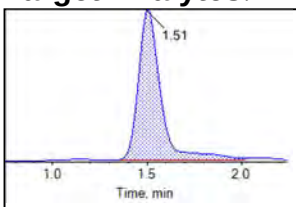
Sample Name	J9422MS-FS(0)	**Injection Vial**	43
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:54:02	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

Target Analytes:



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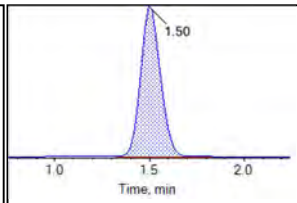

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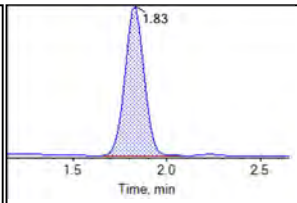

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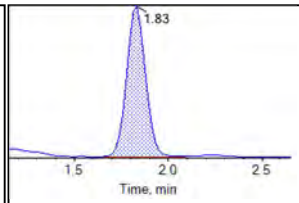

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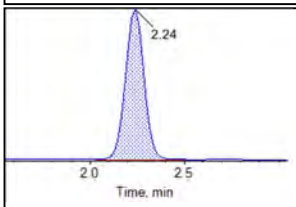

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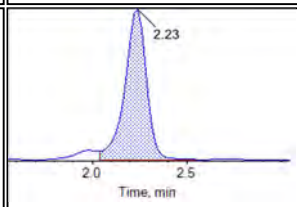

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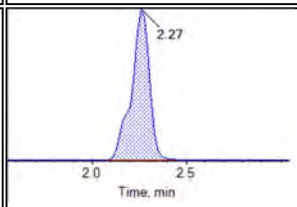

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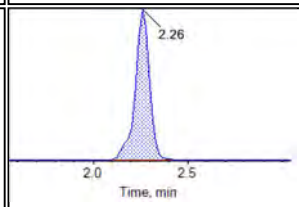

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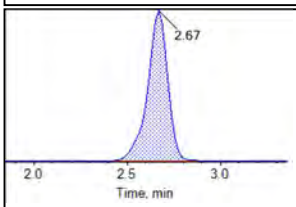

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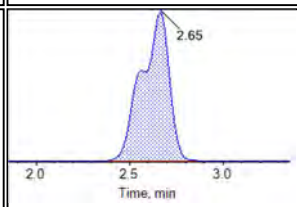

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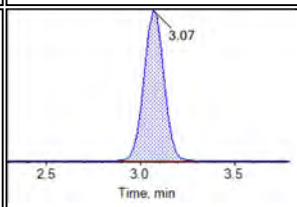

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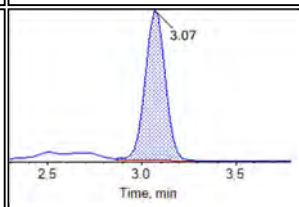

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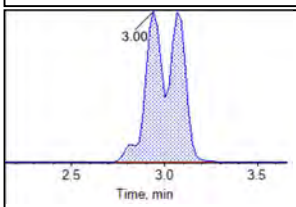
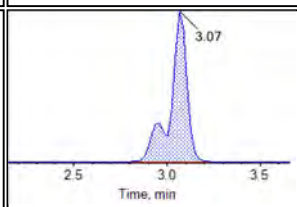


PFOS_1



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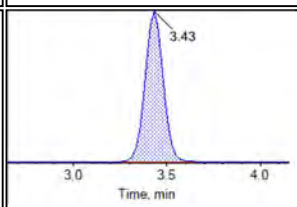

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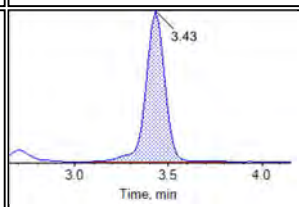

PFDA_2

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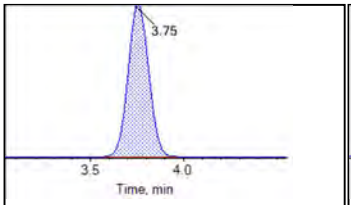

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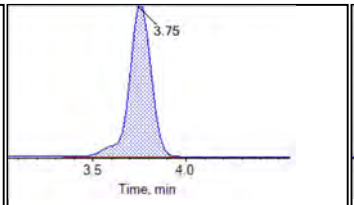

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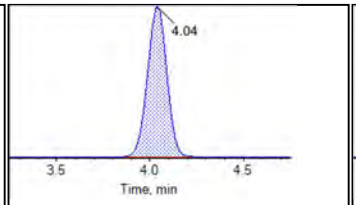

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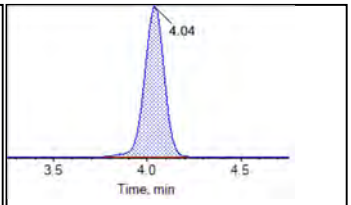

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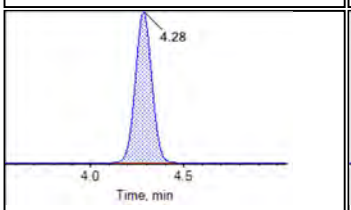

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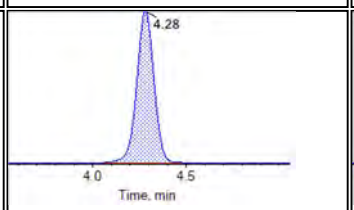

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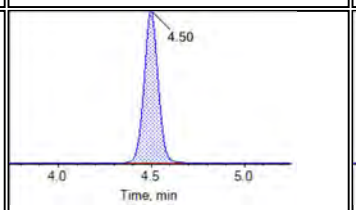

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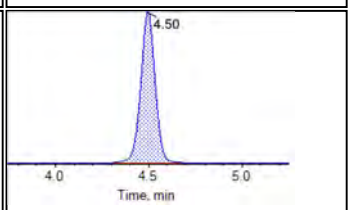

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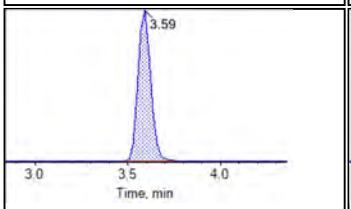

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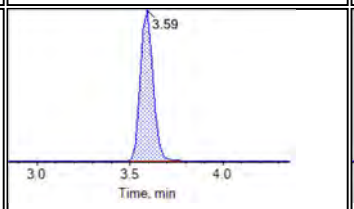

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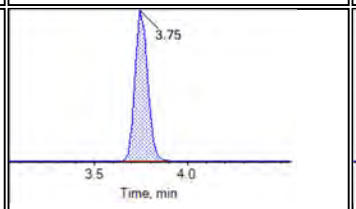

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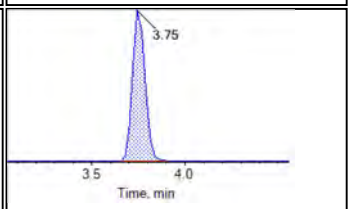
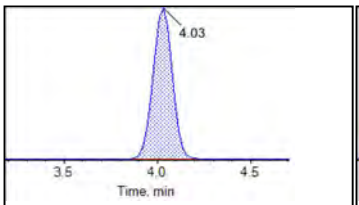
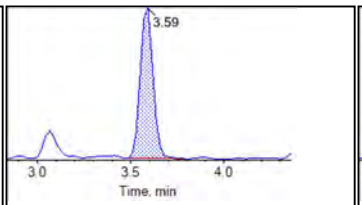


NEtFOSAA_2

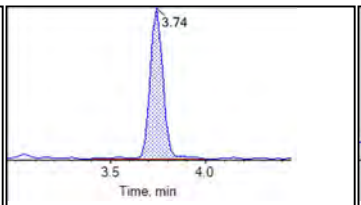
Internal Standards:



13C2-PFDoA



d3-MeFOSAA



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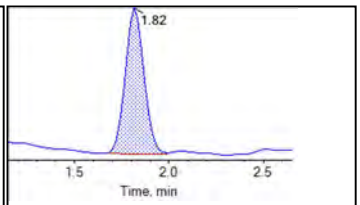
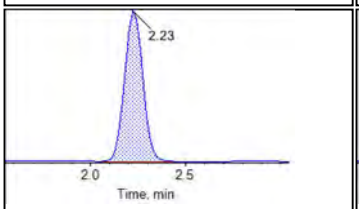


13C5-PFHxA



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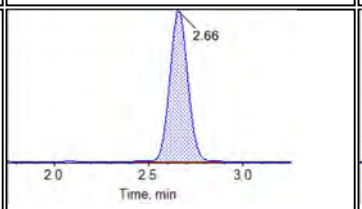
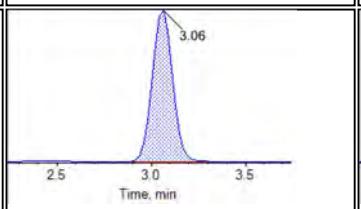
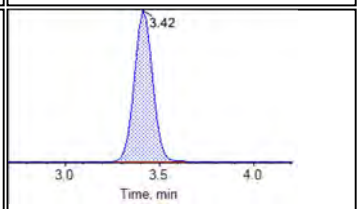


13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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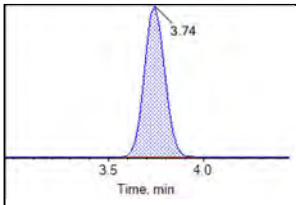
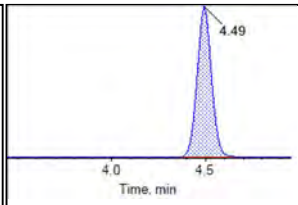
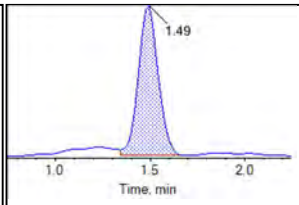


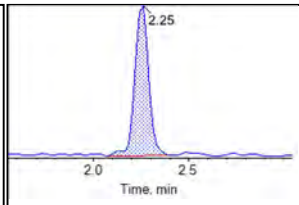
13C7-PFUnA



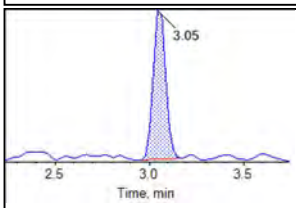
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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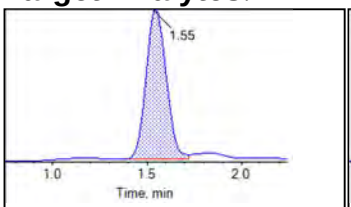
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:12:31 PM

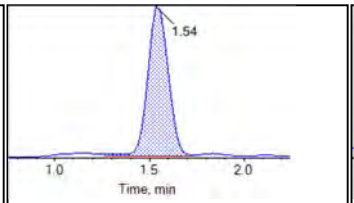
Sample Name	J9423MSD-FS-D(7)	**Injection Vial**	45
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:15:45	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

Target Analytes:



PFBS_1



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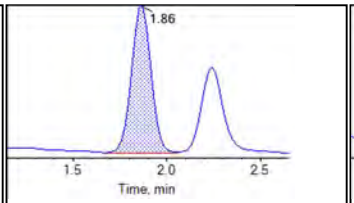

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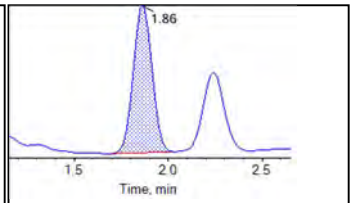

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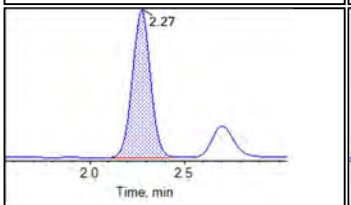

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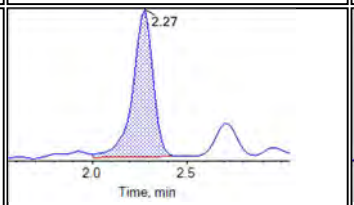

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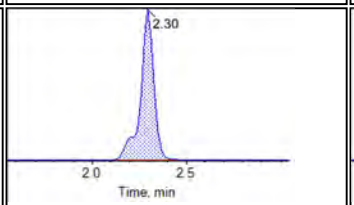

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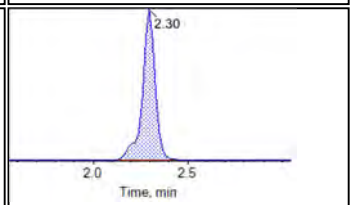

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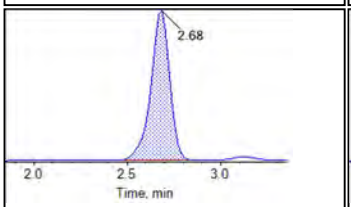

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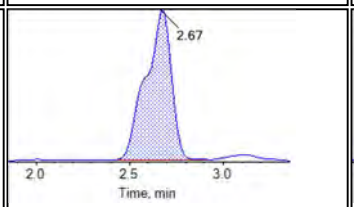

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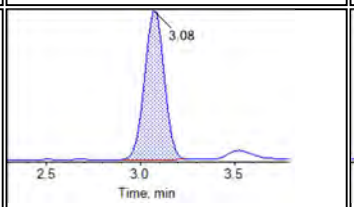

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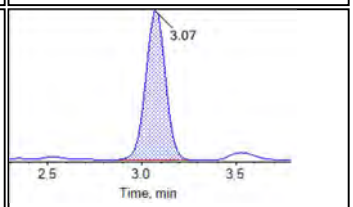

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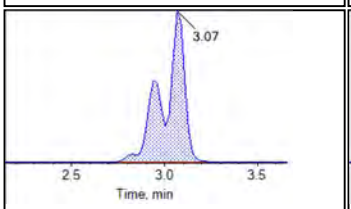

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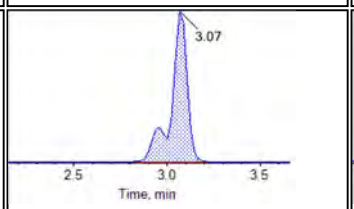

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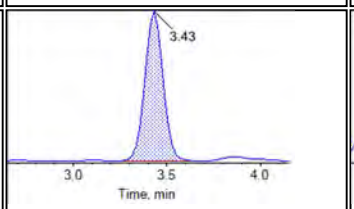

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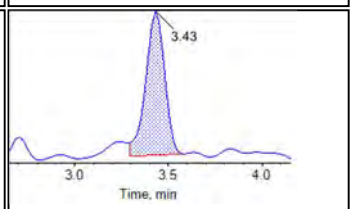

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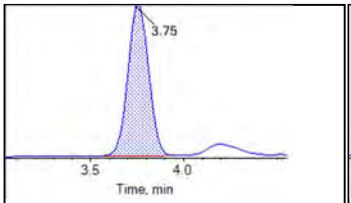

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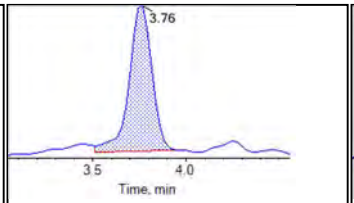

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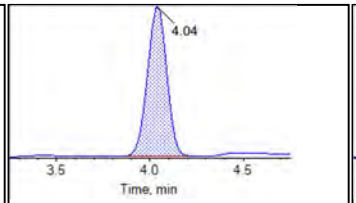

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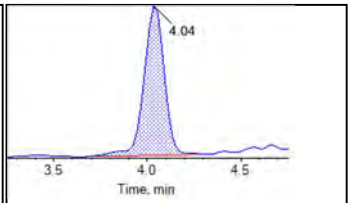

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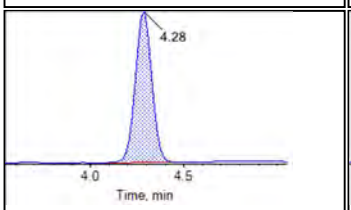

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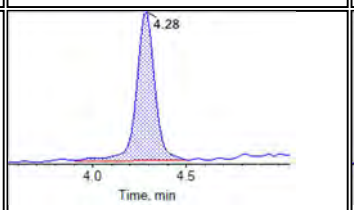

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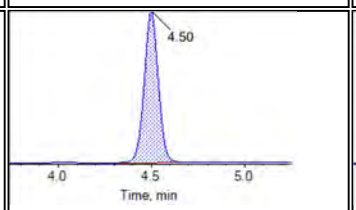

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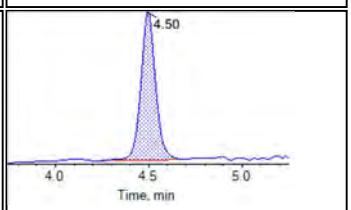

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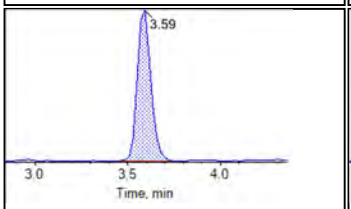

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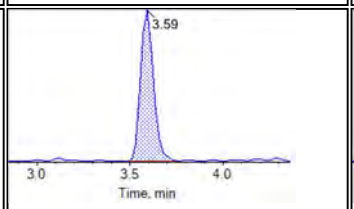

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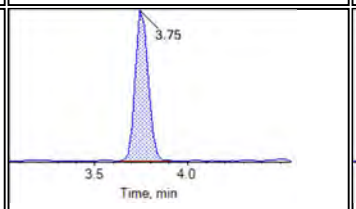

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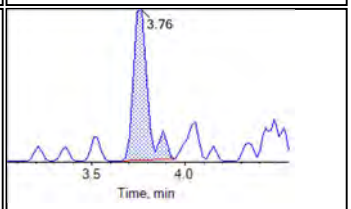

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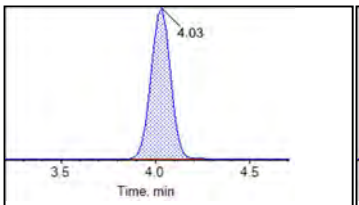

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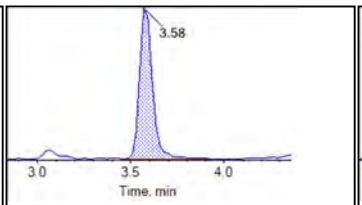

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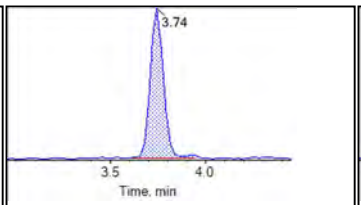

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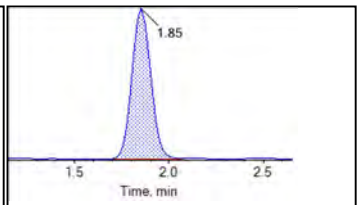

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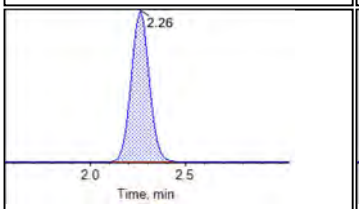

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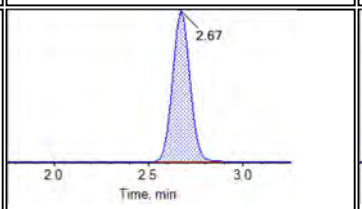

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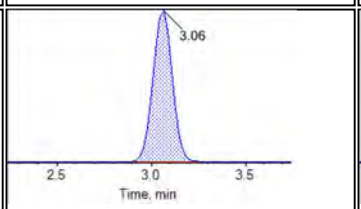

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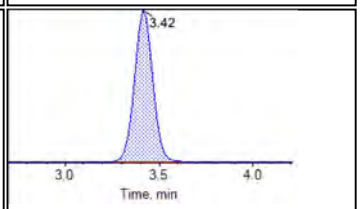

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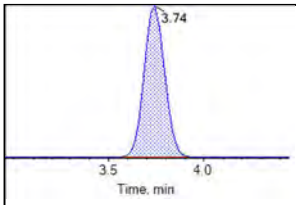

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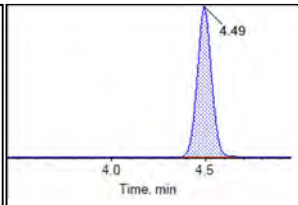

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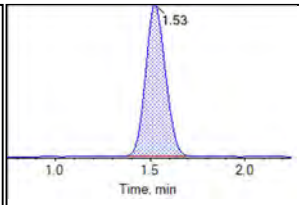

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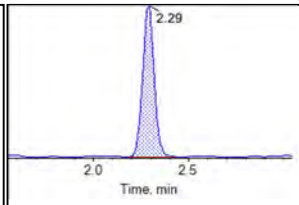

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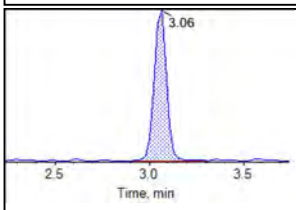

13C8-PFOS

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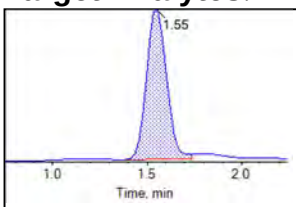
Sample Name	J9423MSD-FS-D(5)	**Injection Vial**	46
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:26:37	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

Target Analytes:



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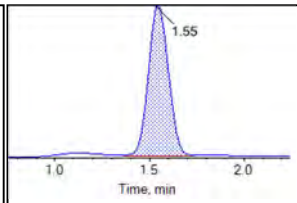

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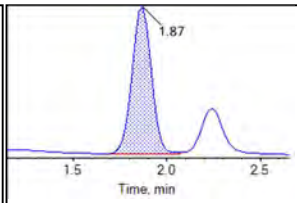

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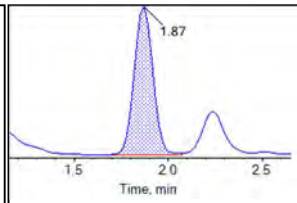

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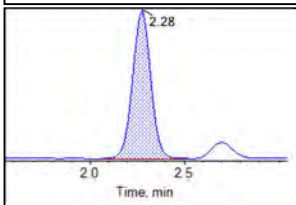

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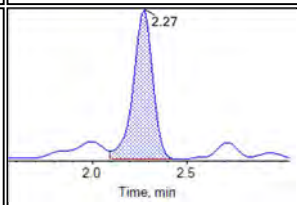

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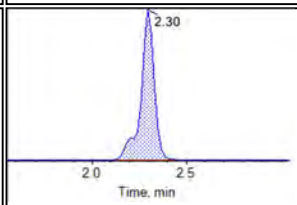

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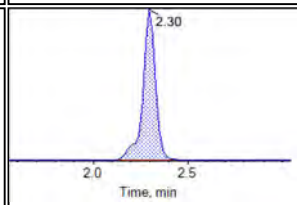

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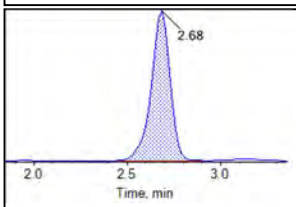

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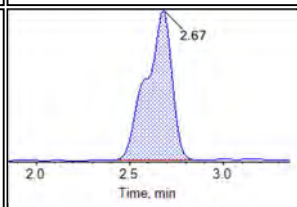

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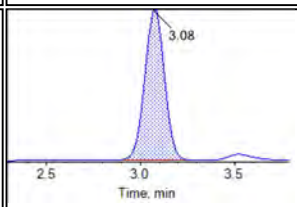

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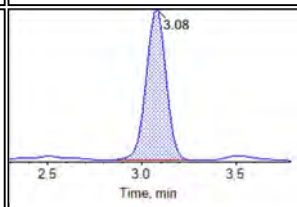

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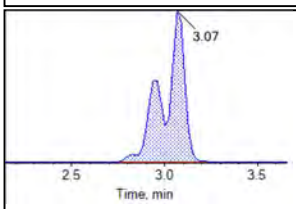

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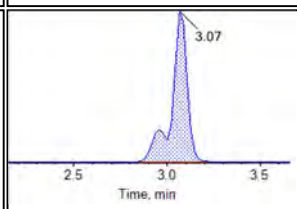

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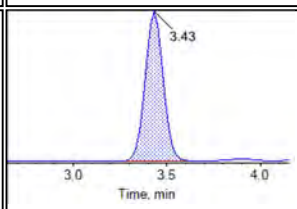

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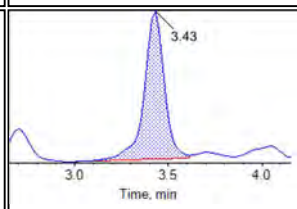

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Chromatogram Report

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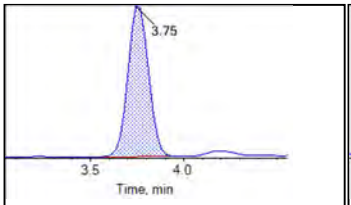

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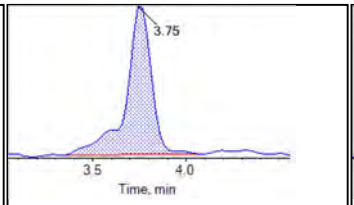

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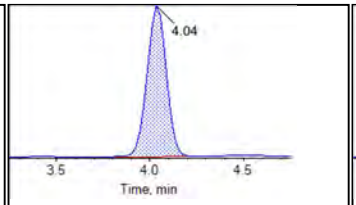

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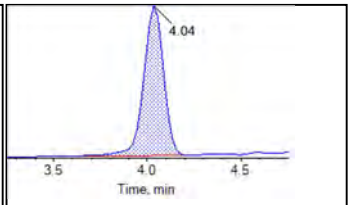

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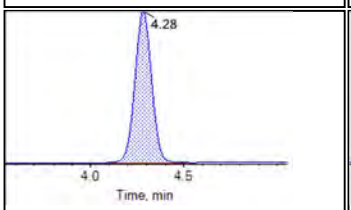

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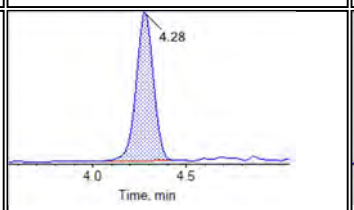

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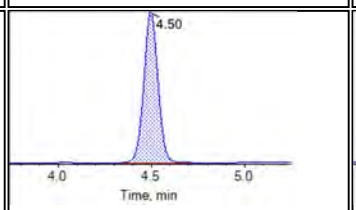

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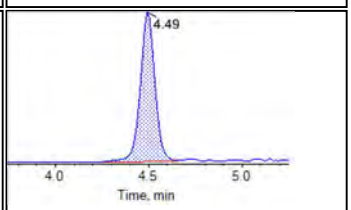

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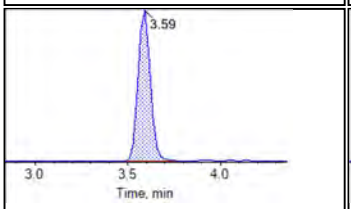

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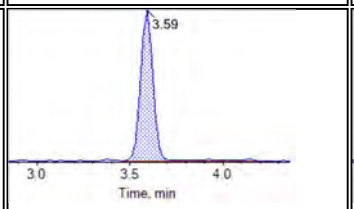

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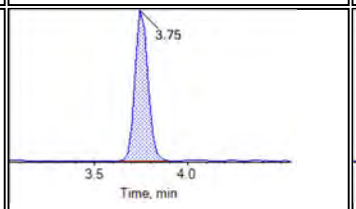

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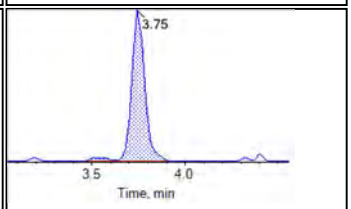

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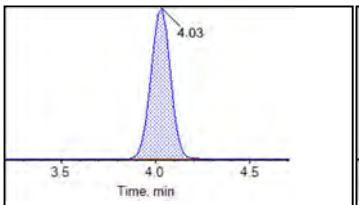

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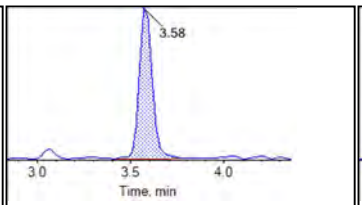

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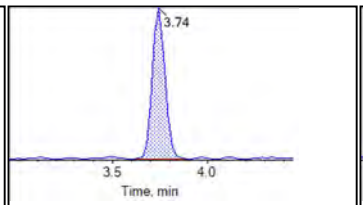

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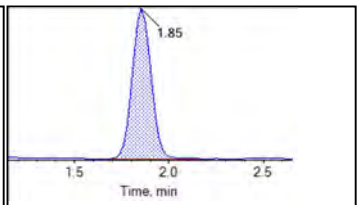

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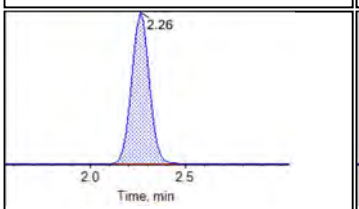

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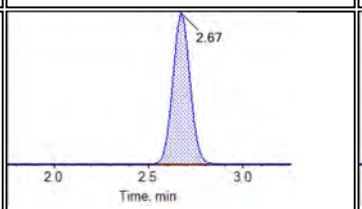

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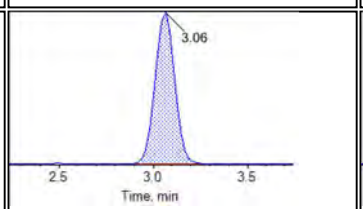

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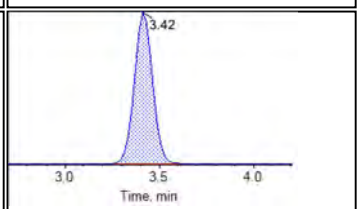

13C6-PFDA

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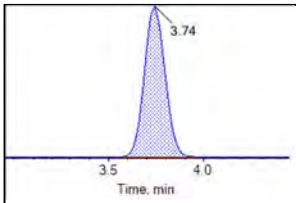

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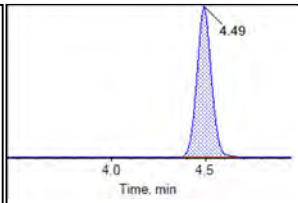

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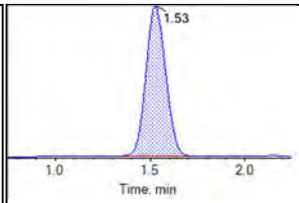

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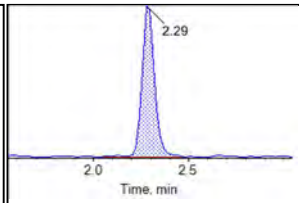

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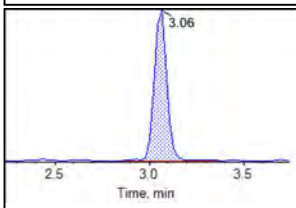

13C8-PFOS

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Sample Name	J9423MSD-FS-D(3)	**Injection Vial**	47
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:37:30	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

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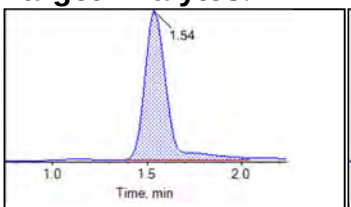

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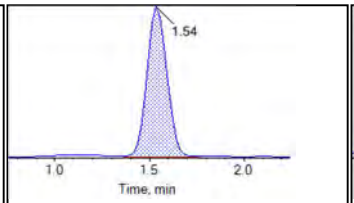

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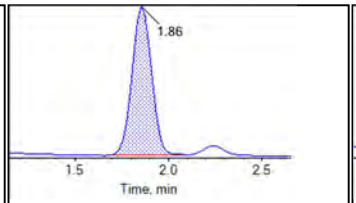

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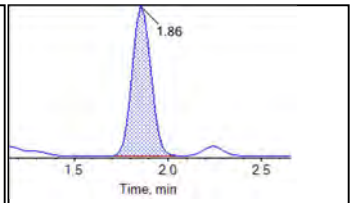

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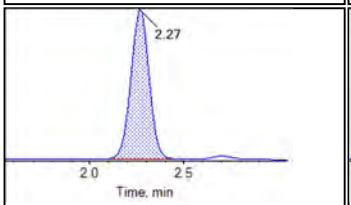

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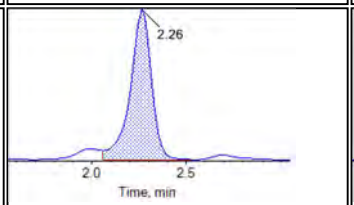

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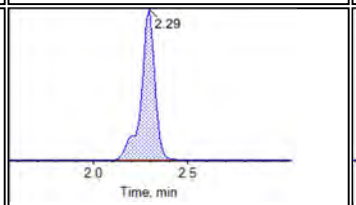

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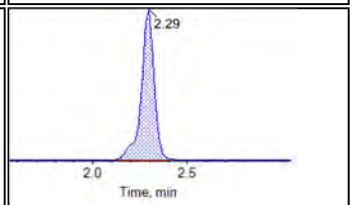

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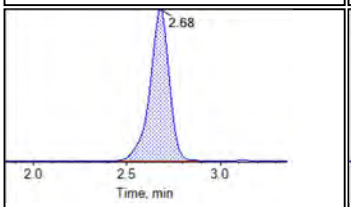

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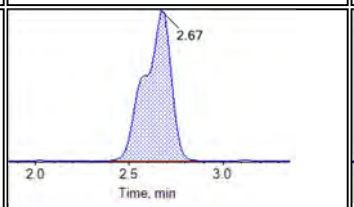

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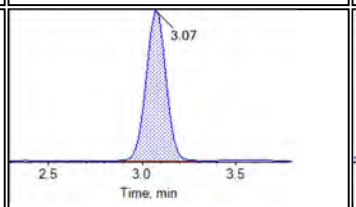

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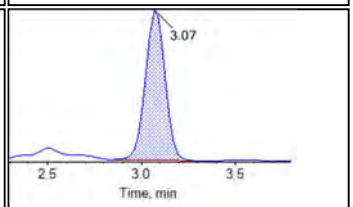

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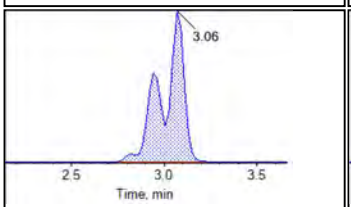

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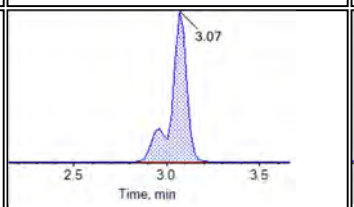

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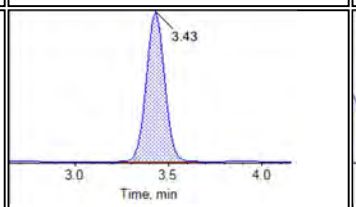

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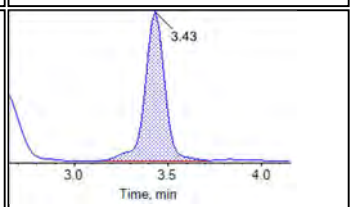

PFDA_2

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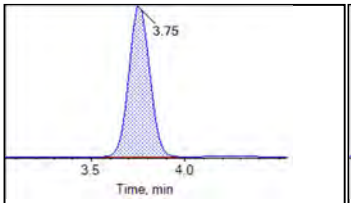

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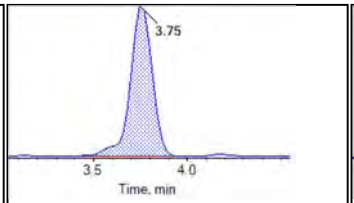

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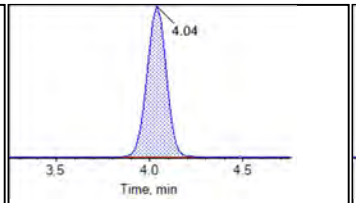

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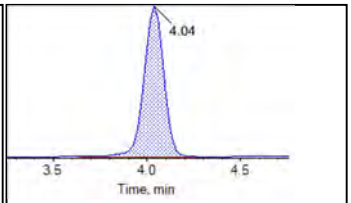

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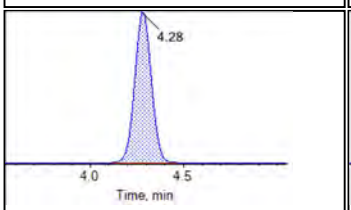

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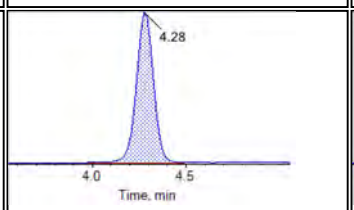

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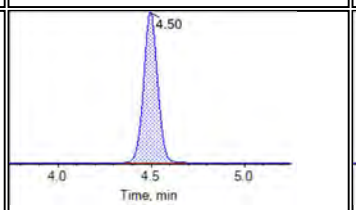

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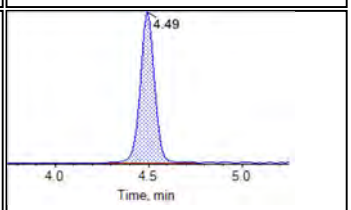

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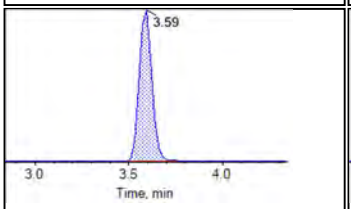

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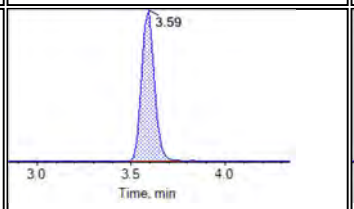

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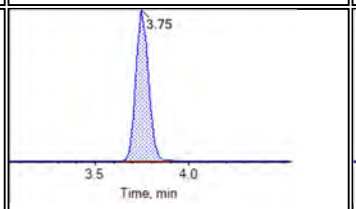

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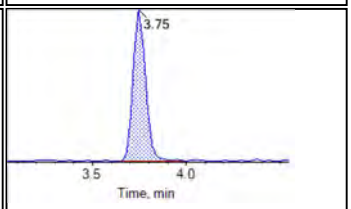

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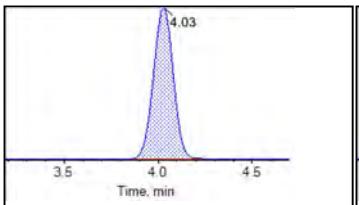
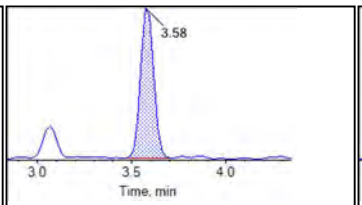


13C2-PFDoA



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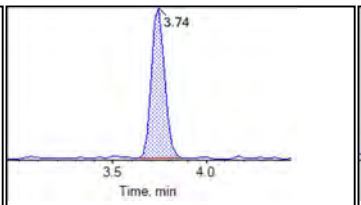

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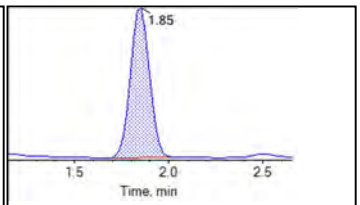
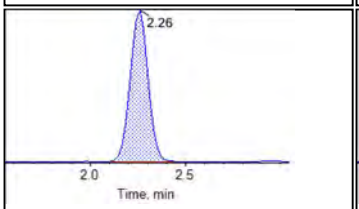
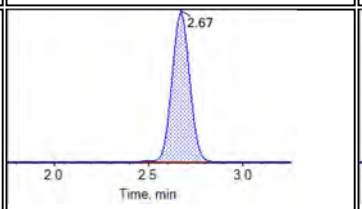


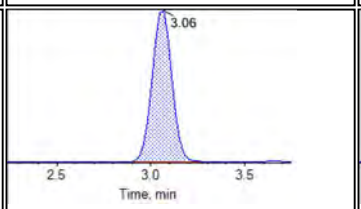
13C5-PFHxA



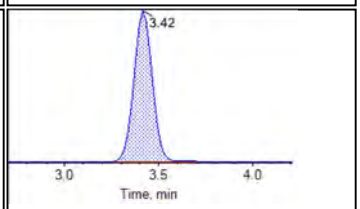
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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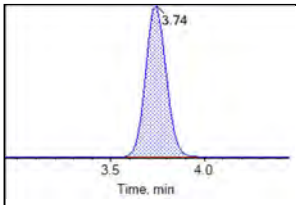
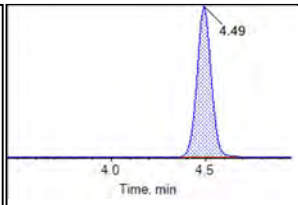


13C7-PFUnA



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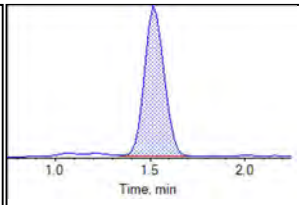
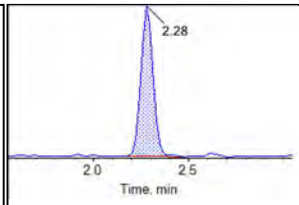


13C3-PFBS



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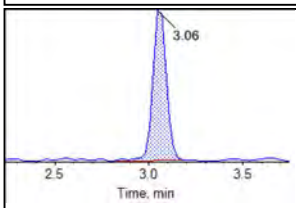

13C8-PFOS

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Chromatogram Report

Created with Analyst Reporter
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Sample Name	J9423MSD-FS(0)	**Injection Vial**	48
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:48:22	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

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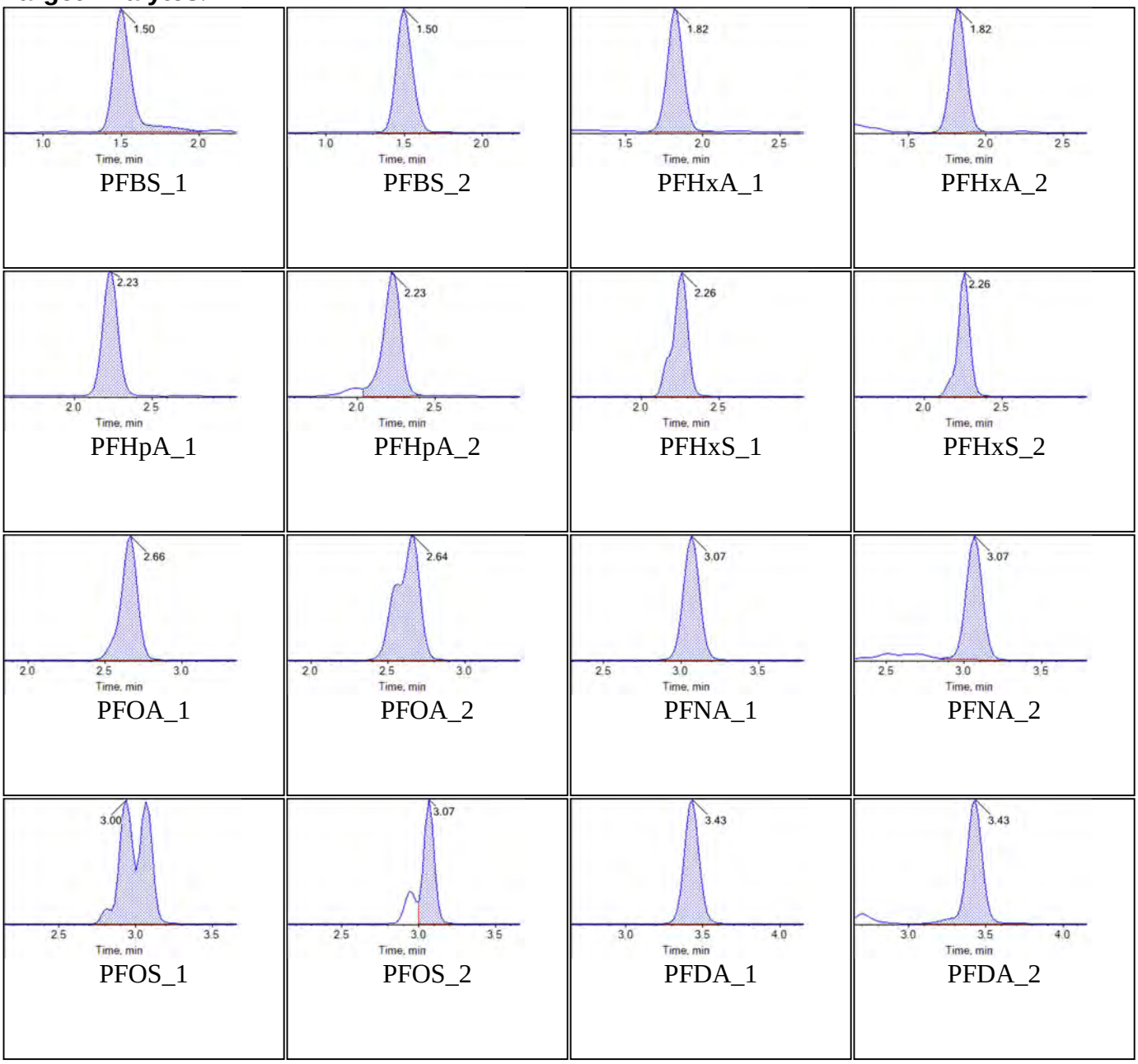

BATTELLE

Chromatogram Report

Created with Analyst Reporter
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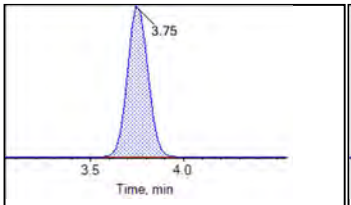

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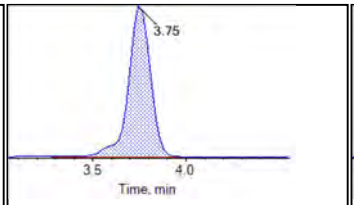

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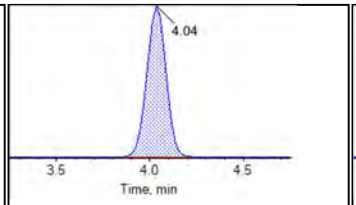

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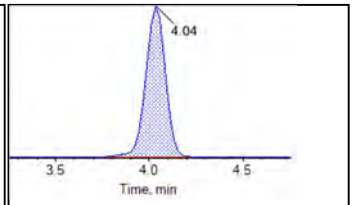

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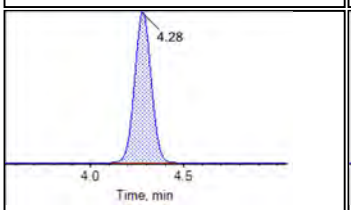

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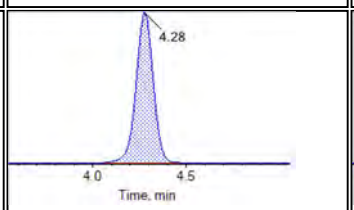

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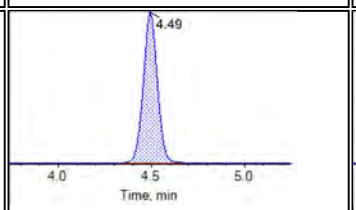

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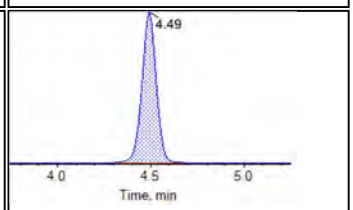

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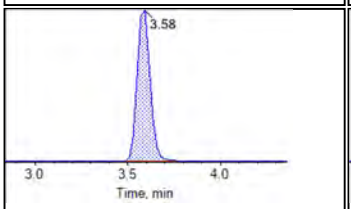

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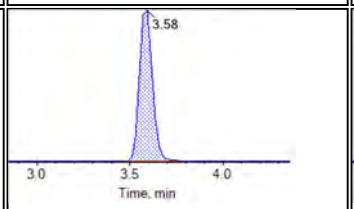

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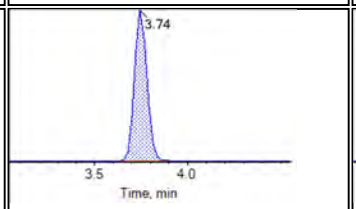

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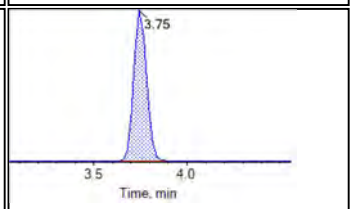

NEtFOSAA_2

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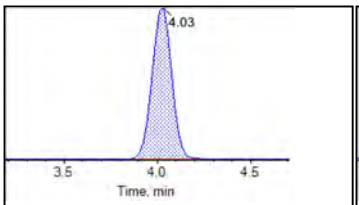

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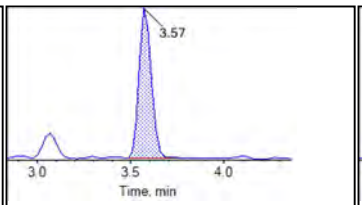
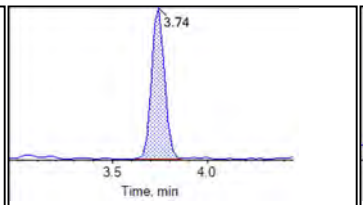


d3-MeFOSAA



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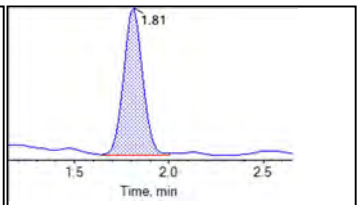
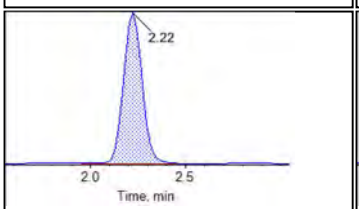


13C5-PFHxA



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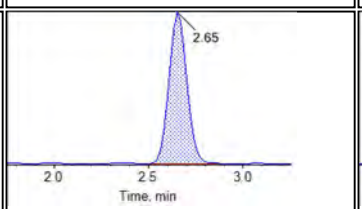

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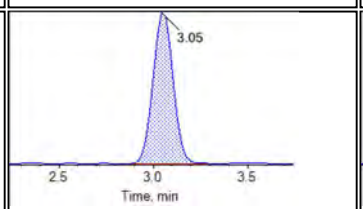
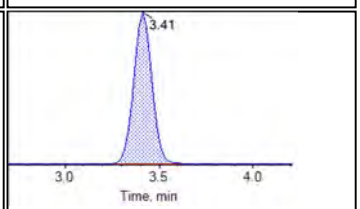


13C9-PFNA



13C6-PFDA

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Chromatogram Report

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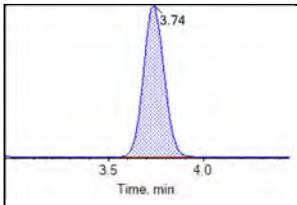
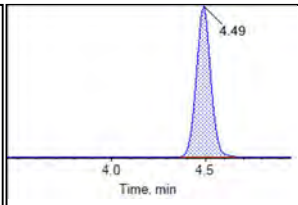
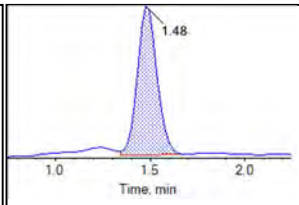


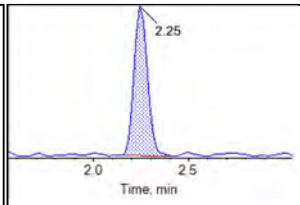
13C7-PFUnA



13C2-PFTeDA



13C3-PFBS



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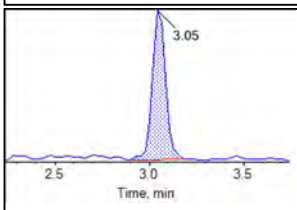

13C8-PFOS

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:12:53 PM

Sample Name	KC70 CCV	**Injection Vial**	49
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T02:10:06	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Chromatograms

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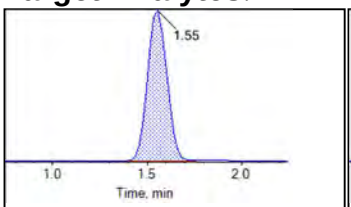
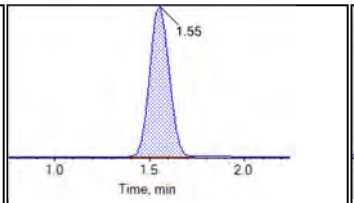
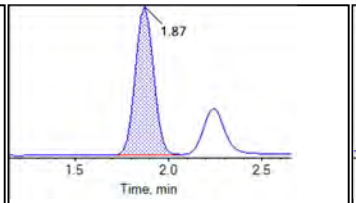


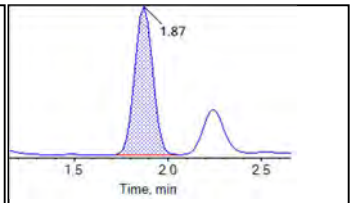
PFBS_1



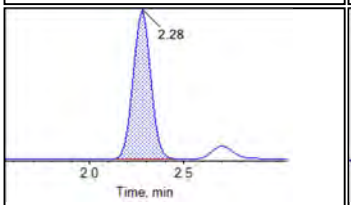
PFBS_2



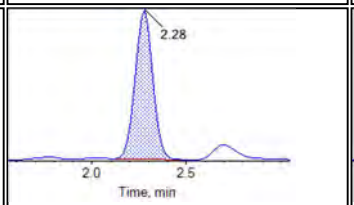
PFHxA_1



PFHxA_2



PFHpA_1



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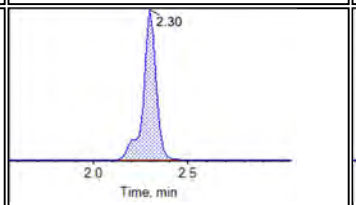

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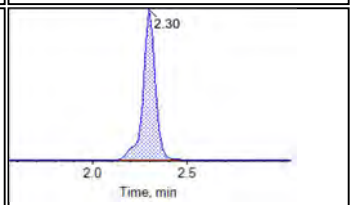

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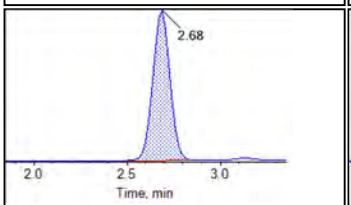

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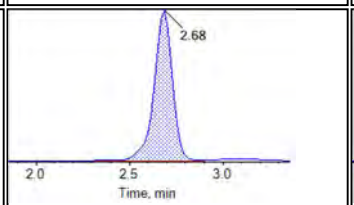
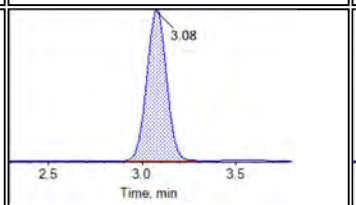


PFOA_2



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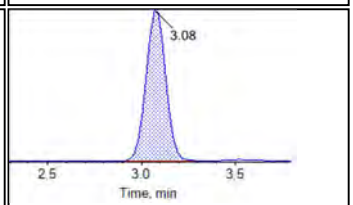

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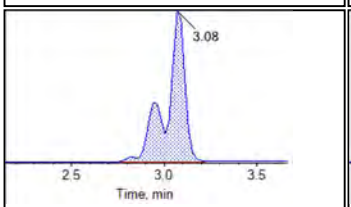
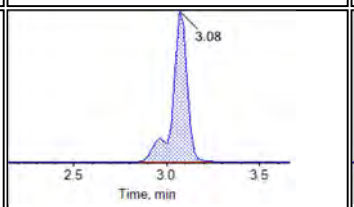


PFOS_1



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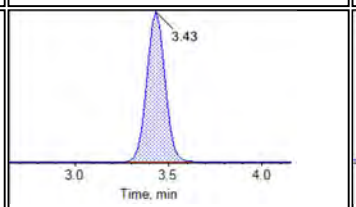

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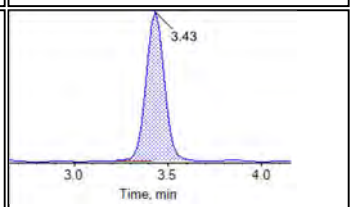

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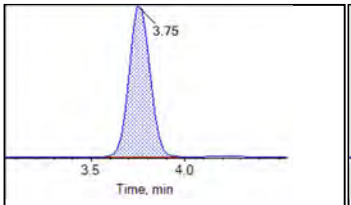

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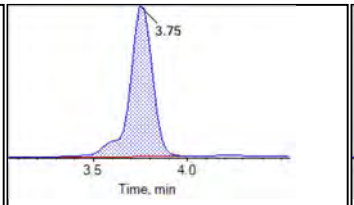

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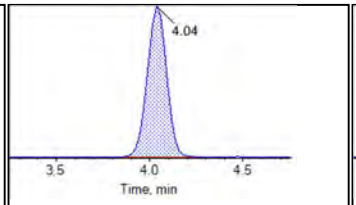

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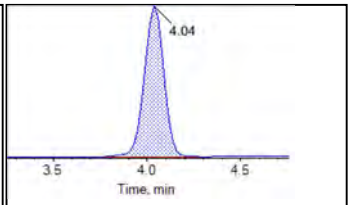

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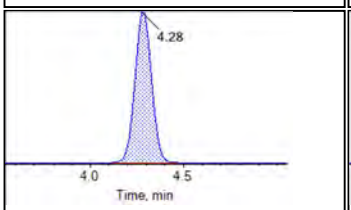

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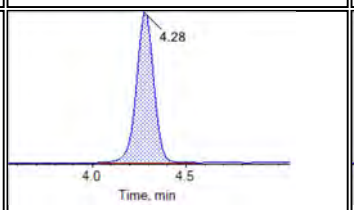

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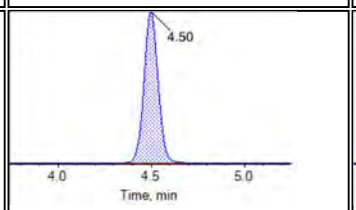

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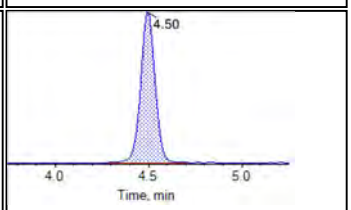

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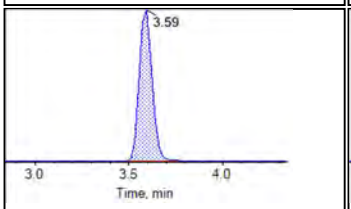

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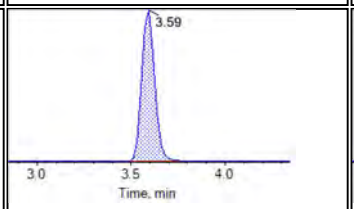

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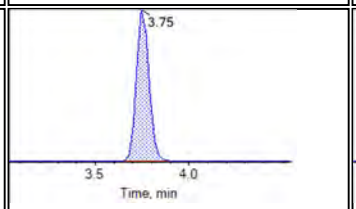

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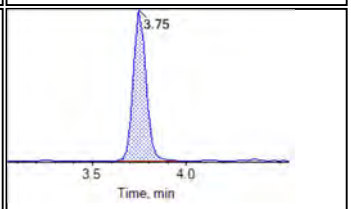

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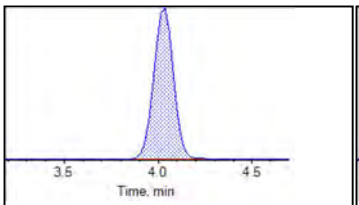
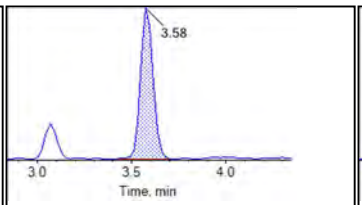
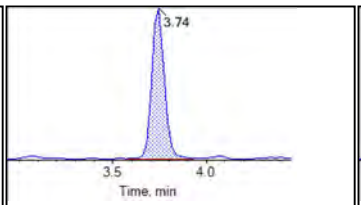


13C2-PFDoA



d3-MeFOSAA



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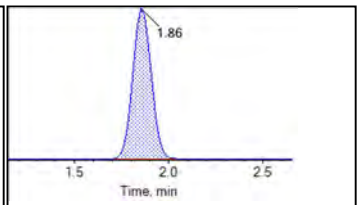

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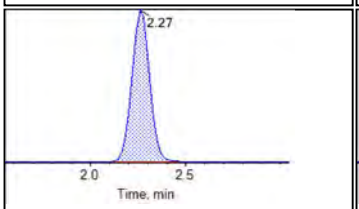
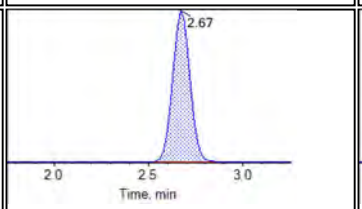
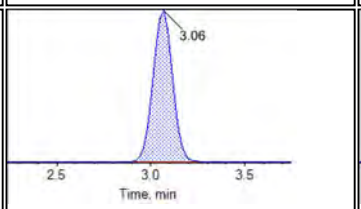


13C4-PFHpA



13C8-PFOA



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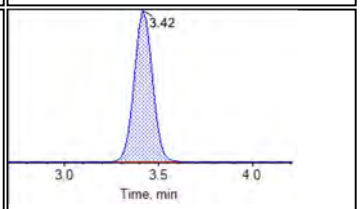

13C6-PFDA

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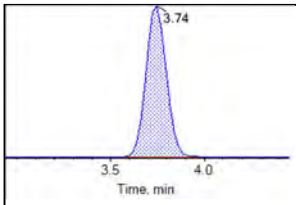
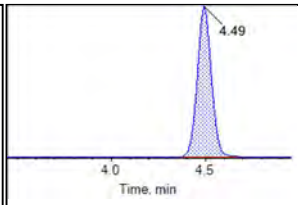
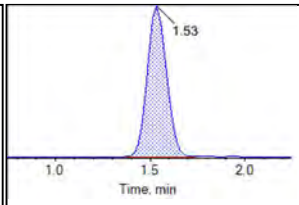


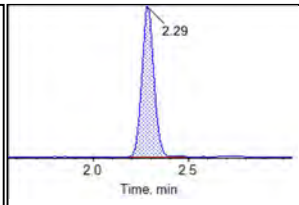
13C7-PFUnA



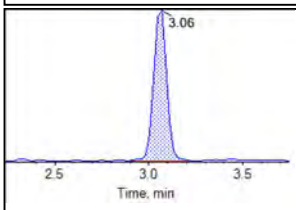
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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Sample Name	KC66	**Injection Vial**	1
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T16:45:02	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

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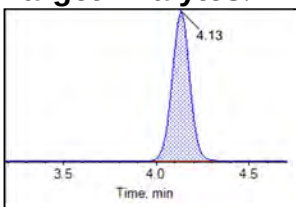
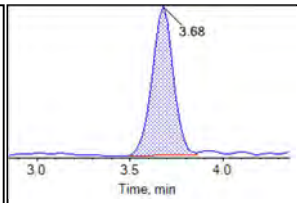


13C2-PFDoA



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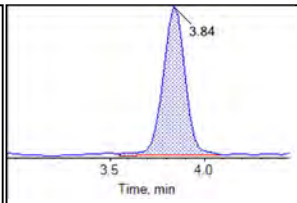
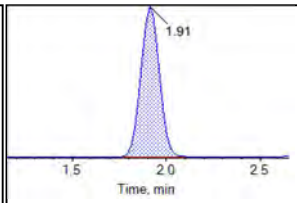
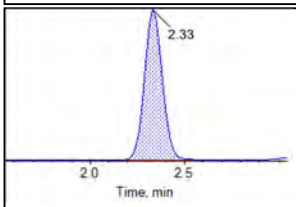


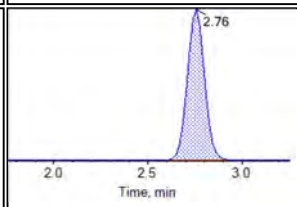
d5-EtFOSAA



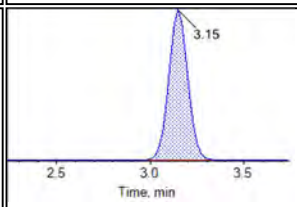
13C5-PFHxA



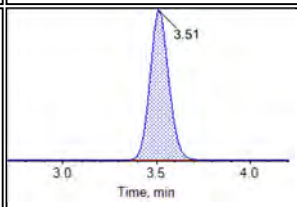
13C4-PFHpA



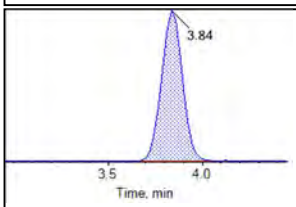
13C8-PFOA



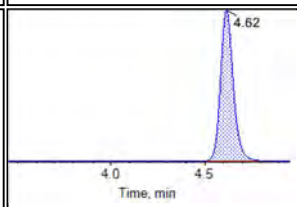
13C9-PFNA



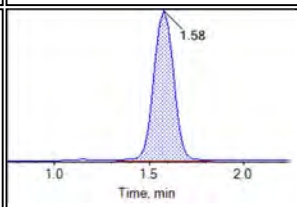
13C6-PFDA



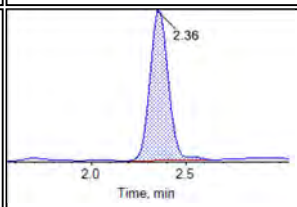
13C7-PFUnA



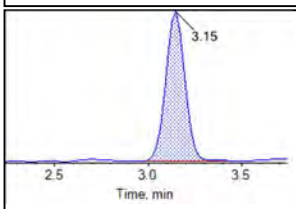
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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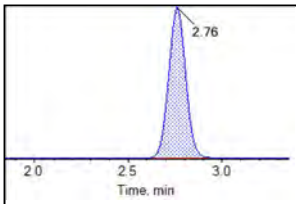
Internal Standards:



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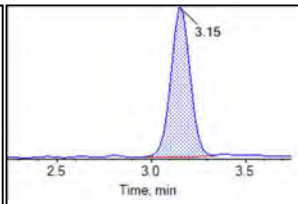
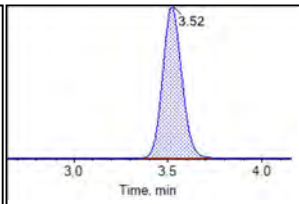


13C4-PFOS



13C2-PFDA

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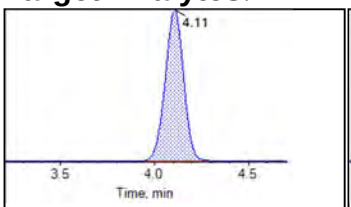
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:04:29 PM

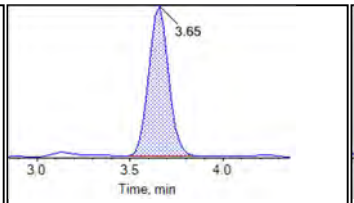
Sample Name	KC67	**Injection Vial**	2
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T16:55:56	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

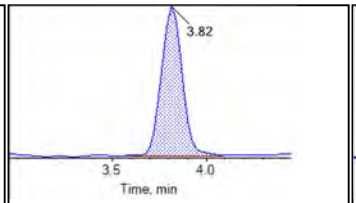
Target Analytes:



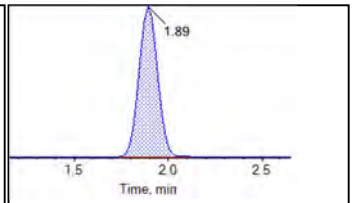
13C2-PFDoA



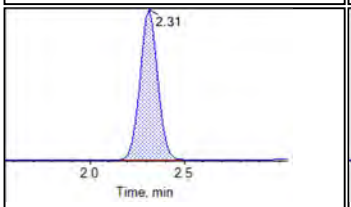
d3-MeFOSAA



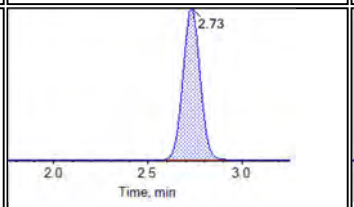
d5-EtFOSAA



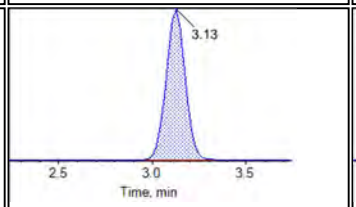
13C5-PFHxA



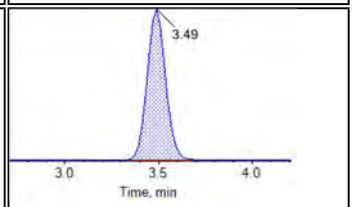
13C4-PFHpA



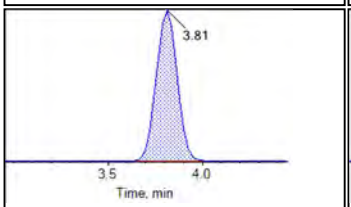
13C8-PFOA



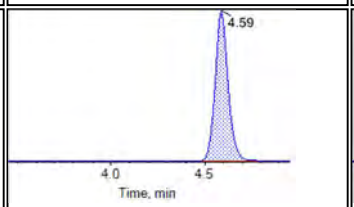
13C9-PFNA



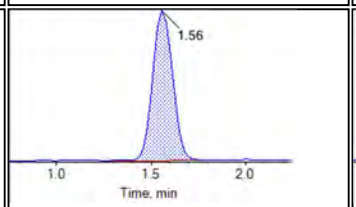
13C6-PFDA



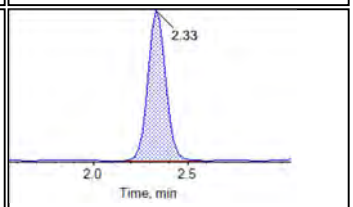
13C7-PFUnA



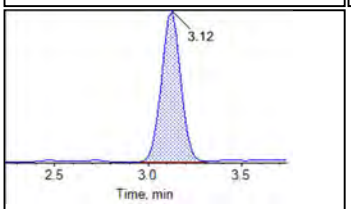
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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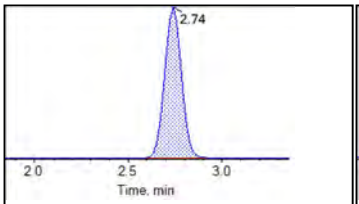
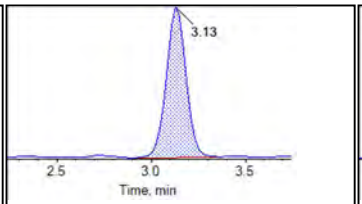
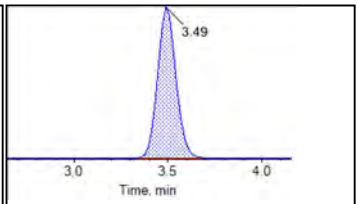


13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

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Printed: 26/11/2018 3:04:34 PM

Sample Name	KC68	**Injection Vial**	3
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:06:49	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

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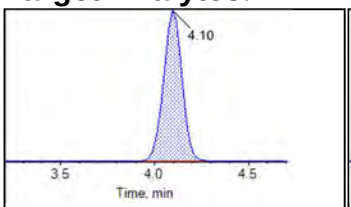
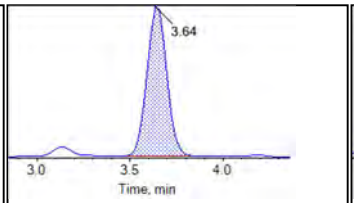
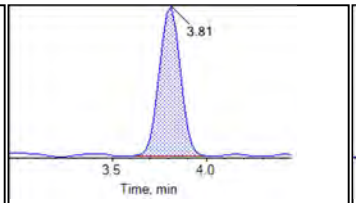


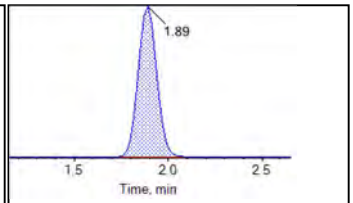
13C2-PFDoA



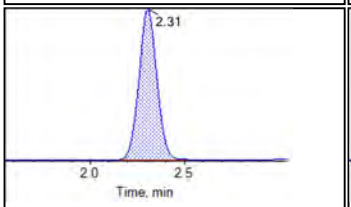
d3-MeFOSAA



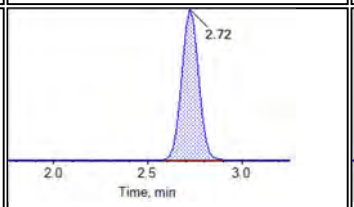
d5-EtFOSAA



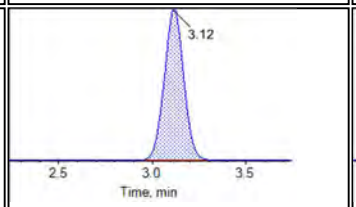
13C5-PFHxA



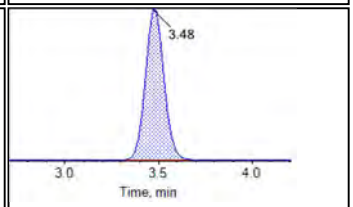
13C4-PFHpA



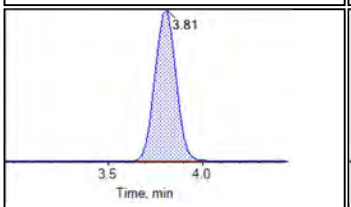
13C8-PFOA



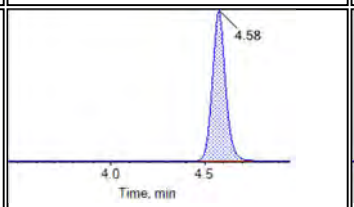
13C9-PFNA



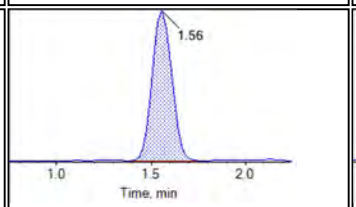
13C6-PFDA



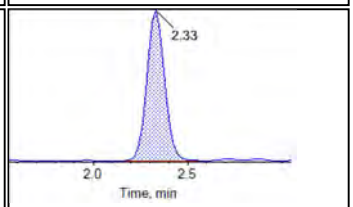
13C7-PFUnA



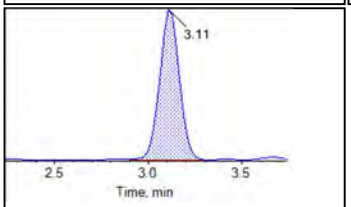
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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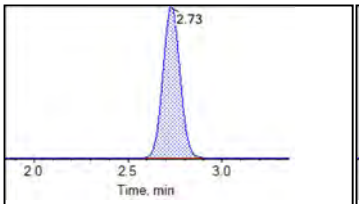
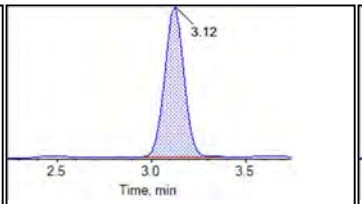
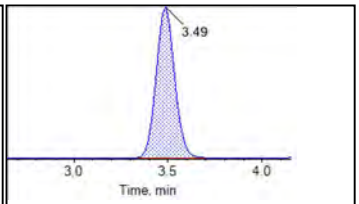
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:04:39 PM

Sample Name	KC69	**Injection Vial**	4
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:17:43	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

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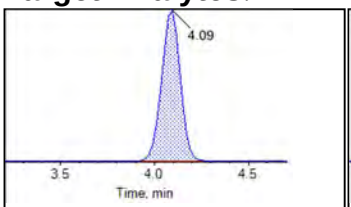
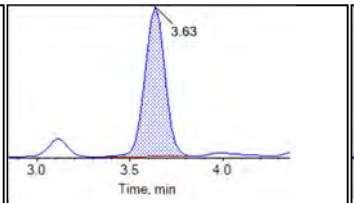
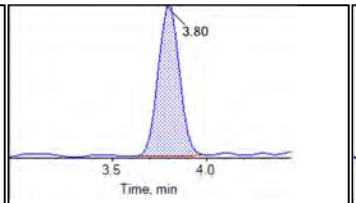


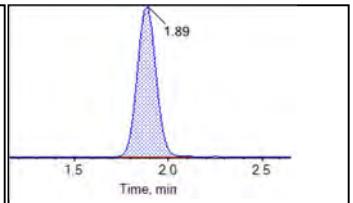
13C2-PFDoA



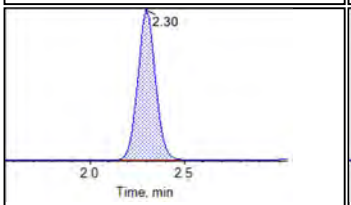
d3-MeFOSAA



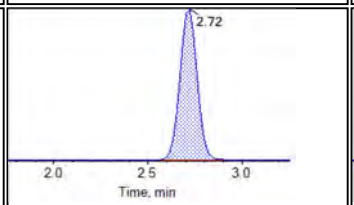
d5-EtFOSAA



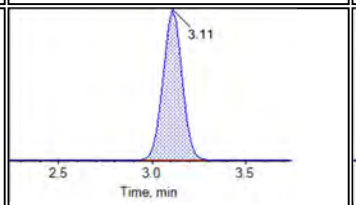
13C5-PFHxA



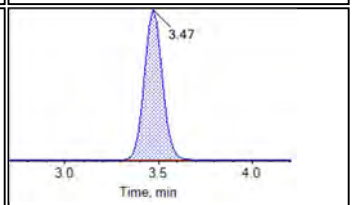
13C4-PFHpA



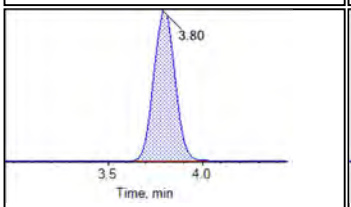
13C8-PFOA



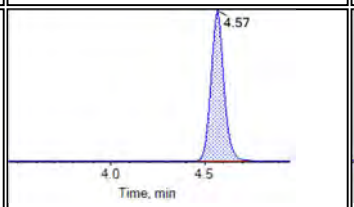
13C9-PFNA



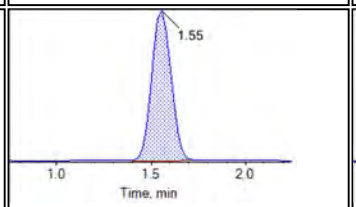
13C6-PFDA



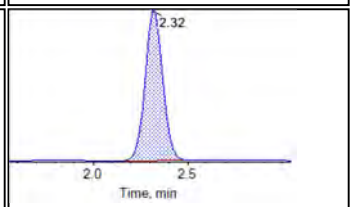
13C7-PFUnA



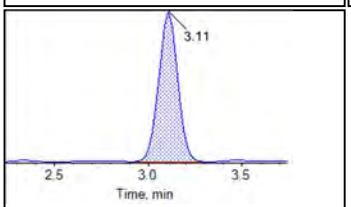
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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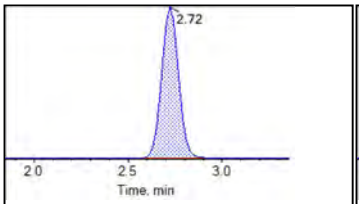

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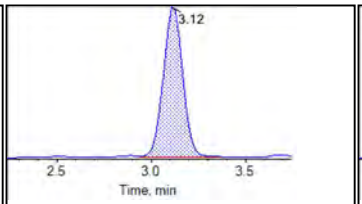
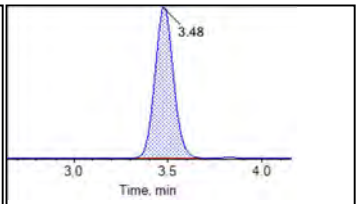


13C4-PFOS



13C2-PFDA

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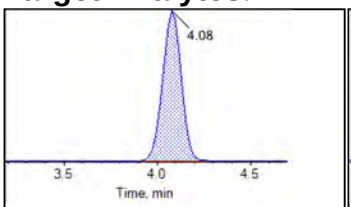
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:04:44 PM

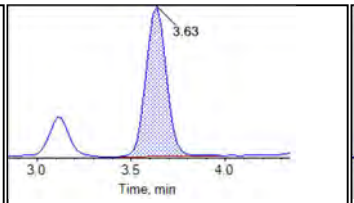
Sample Name	KC70	**Injection Vial**	5
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:28:35	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

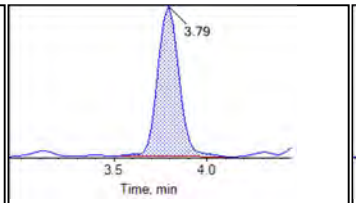
Target Analytes:



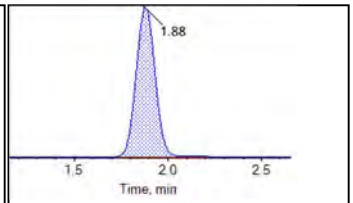
13C2-PFDoA



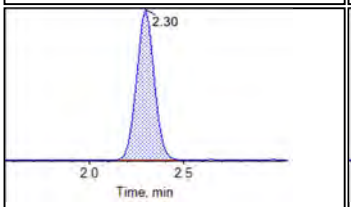
d3-MeFOSAA



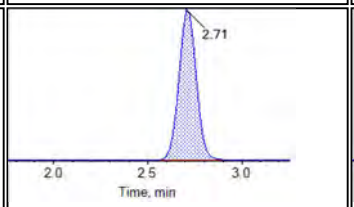
d5-EtFOSAA



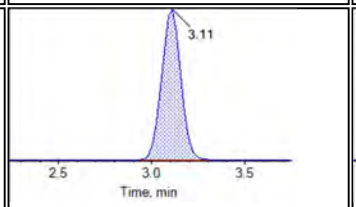
13C5-PFHxA



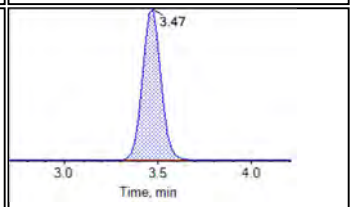
13C4-PFHpA



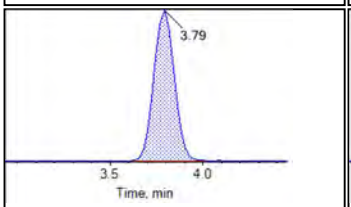
13C8-PFOA



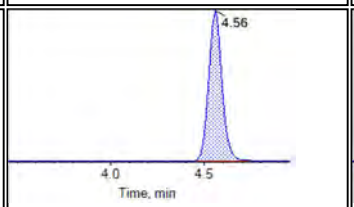
13C9-PFNA



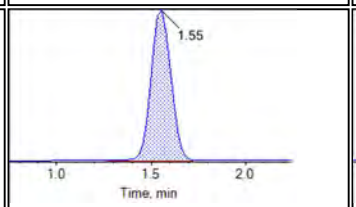
13C6-PFDA



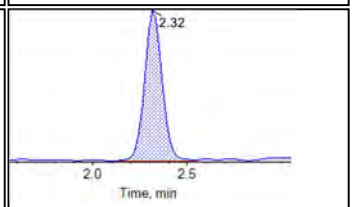
13C7-PFUnA



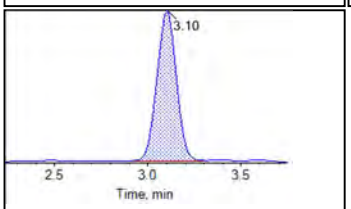
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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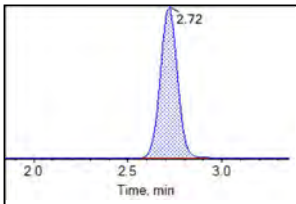
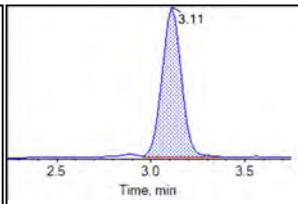
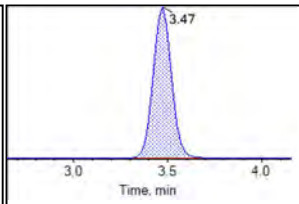
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

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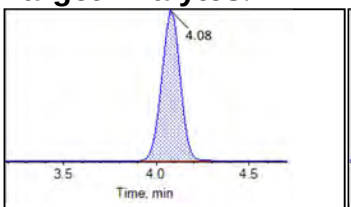
Printed: 26/11/2018 3:04:49 PM

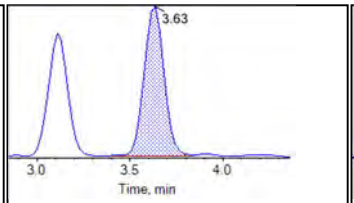
Sample Name	KC71	**Injection Vial**	6
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:39:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

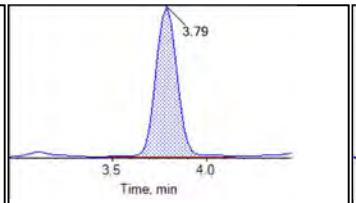
Target Analytes:



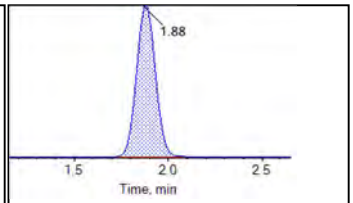
13C2-PFDoA



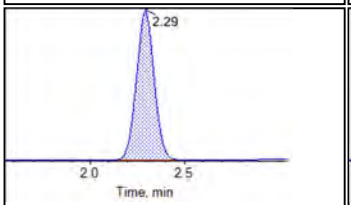
d3-MeFOSAA



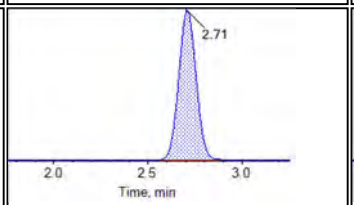
d5-EtFOSAA



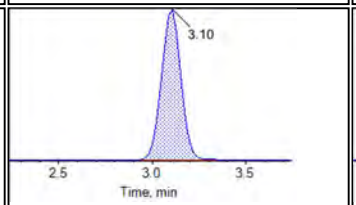
13C5-PFHxA



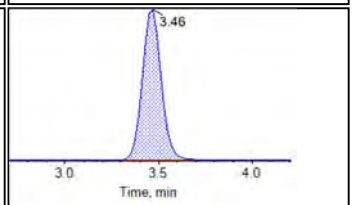
13C4-PFHpA



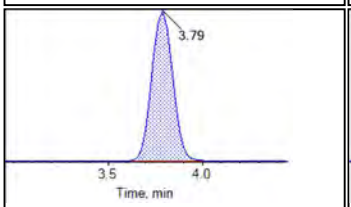
13C8-PFOA



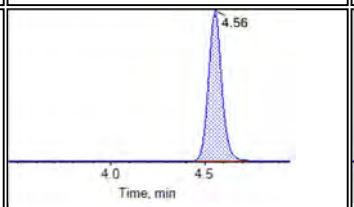
13C9-PFNA



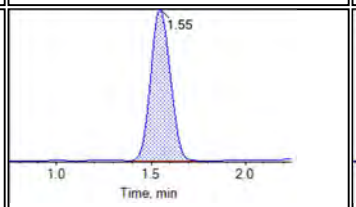
13C6-PFDA



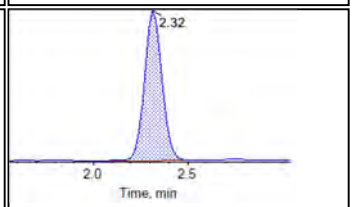
13C7-PFUnA



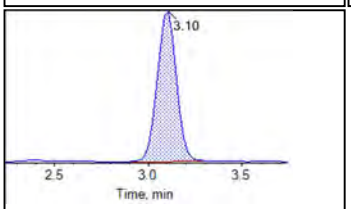
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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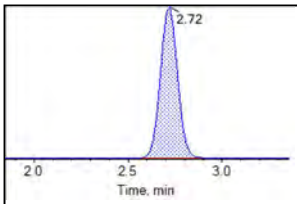
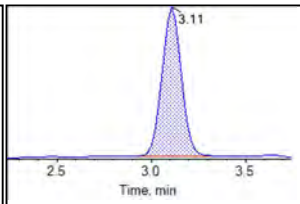
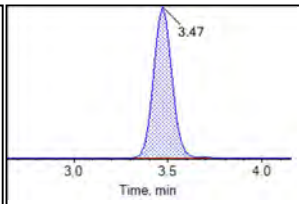
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:04:54 PM

Sample Name	KC72	**Injection Vial**	7
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T17:50:19	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

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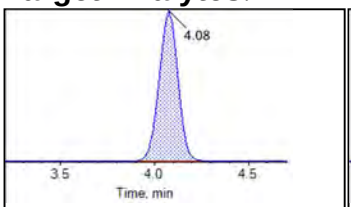
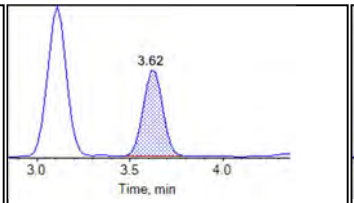
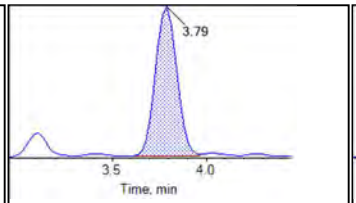


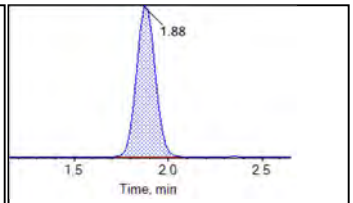
13C2-PFDoA



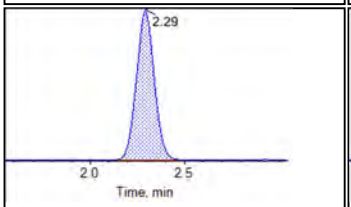
d3-MeFOSAA



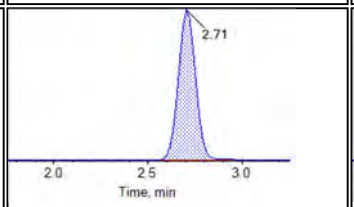
d5-EtFOSAA



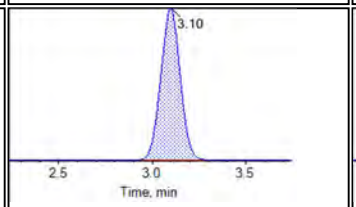
13C5-PFHxA



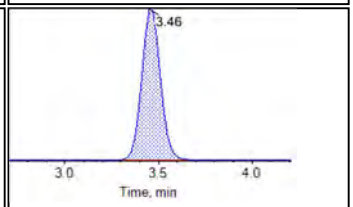
13C4-PFHpA



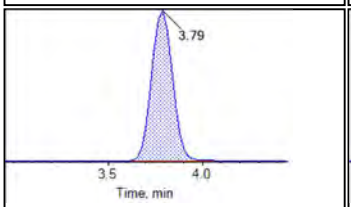
13C8-PFOA



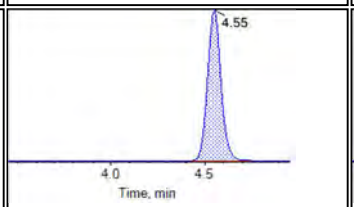
13C9-PFNA



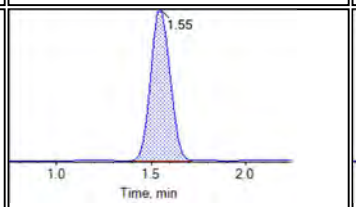
13C6-PFDA



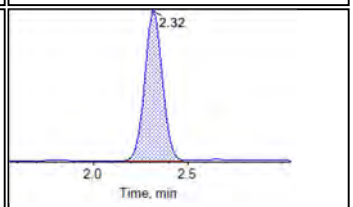
13C7-PFUnA



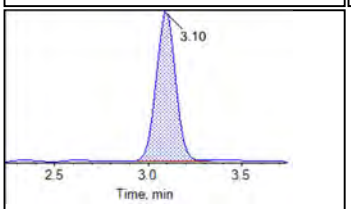
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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Printed: 26/11/2018 3:04:54 PM

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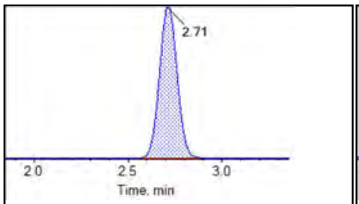
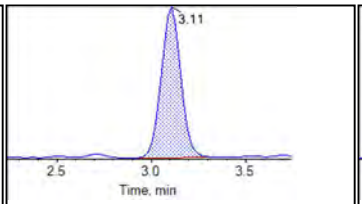
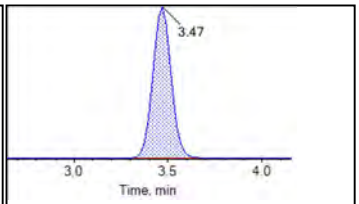


13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

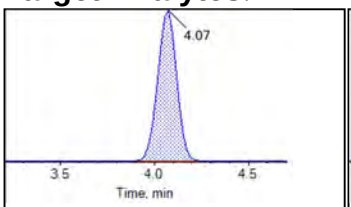
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:04:59 PM

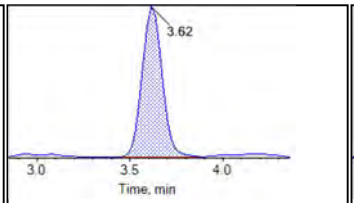
Sample Name	KC73 IB	**Injection Vial**	8
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:01:12	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

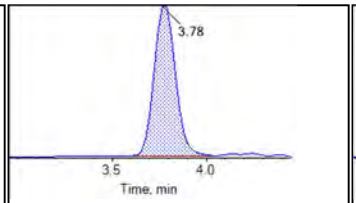
Target Analytes:



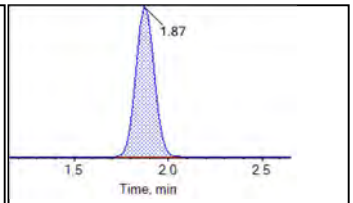
13C2-PFDoA



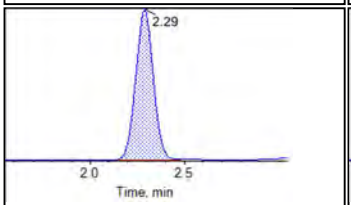
d3-MeFOSAA



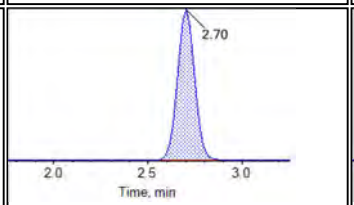
d5-EtFOSAA



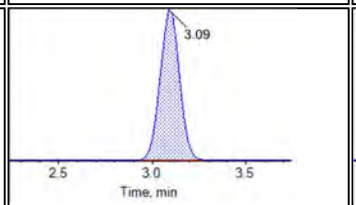
13C5-PFHxA



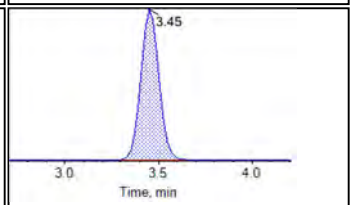
13C4-PFHpA



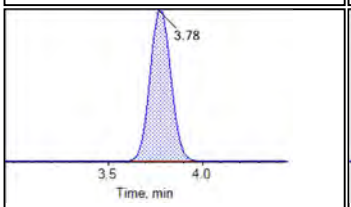
13C8-PFOA



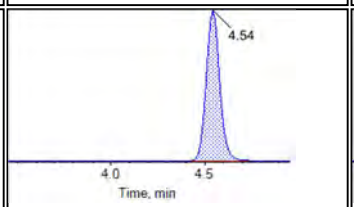
13C9-PFNA



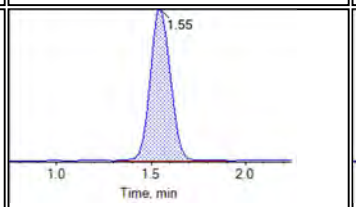
13C6-PFDA



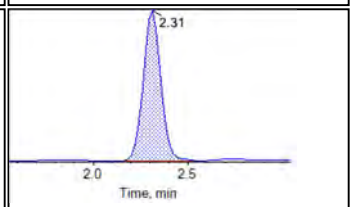
13C7-PFUnA



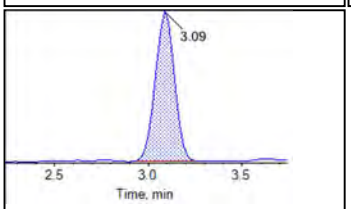
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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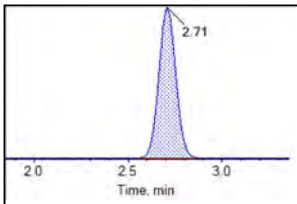
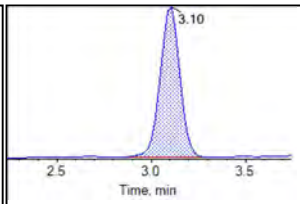
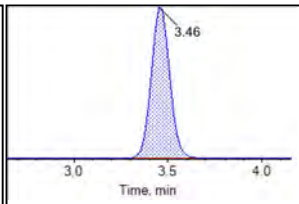
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

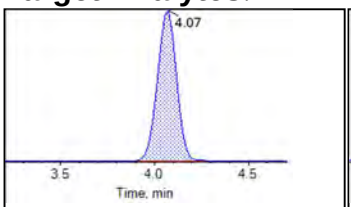
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:05:05 PM

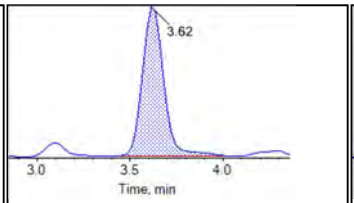
Sample Name	KC74 ICC	**Injection Vial**	9
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:12:04	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

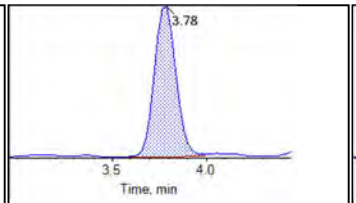
Target Analytes:



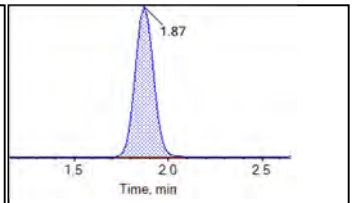
13C2-PFDoA



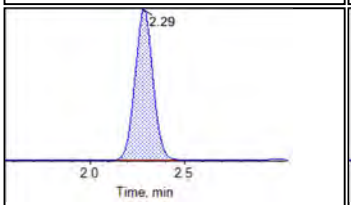
d3-MeFOSAA



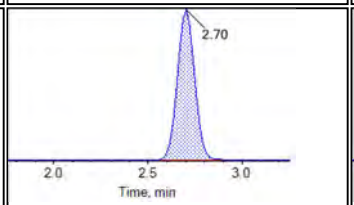
d5-EtFOSAA



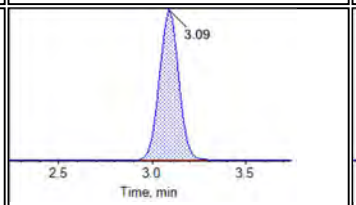
13C5-PFHxA



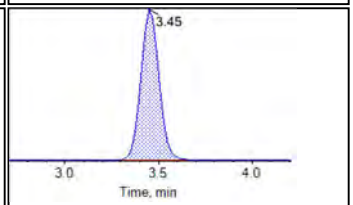
13C4-PFHpA



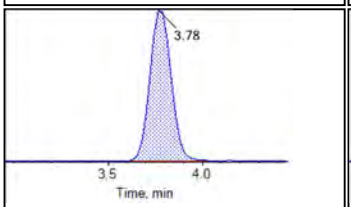
13C8-PFOA



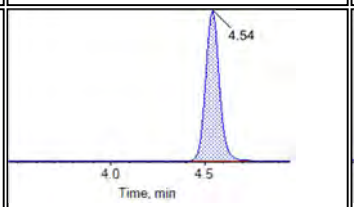
13C9-PFNA



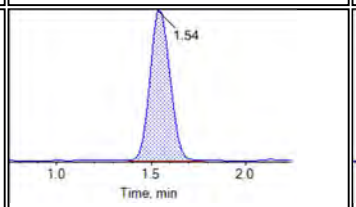
13C6-PFDA



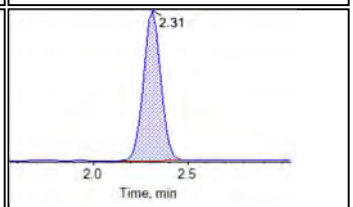
13C7-PFUnA



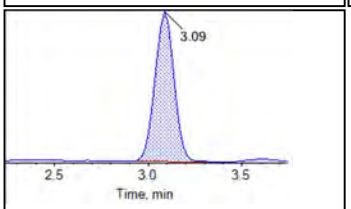
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

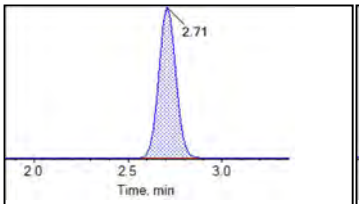


13C8-PFOS

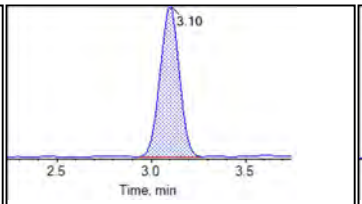
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:05:05 PM

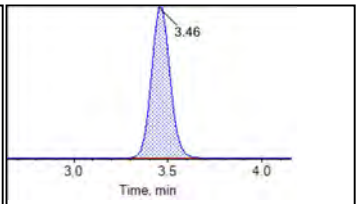
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

Created with Analyst Reporter
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Sample Name	CS241PB-FS(0)	**Injection Vial**	12
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:44:39	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

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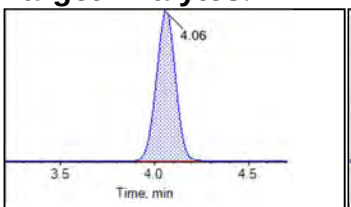
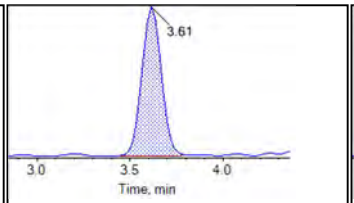
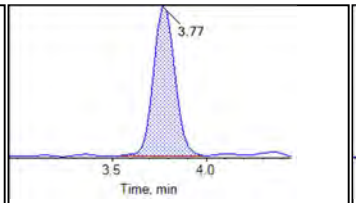


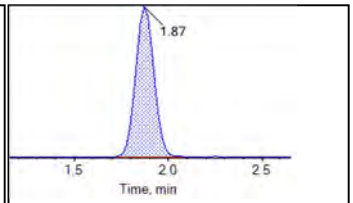
13C2-PFDoA



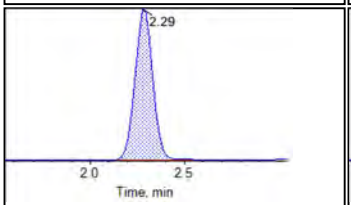
d3-MeFOSAA



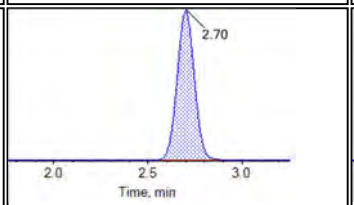
d5-EtFOSAA



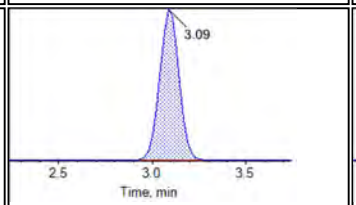
13C5-PFHxA



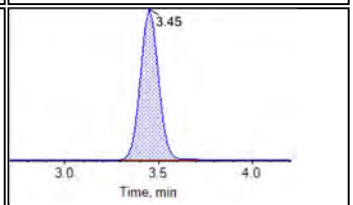
13C4-PFHpA



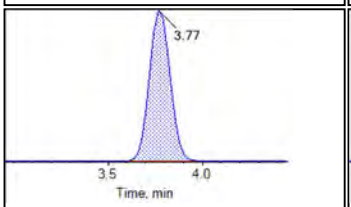
13C8-PFOA



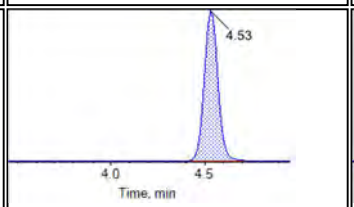
13C9-PFNA



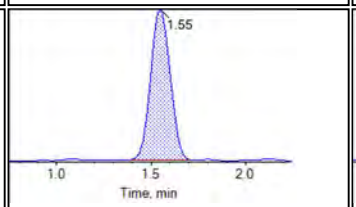
13C6-PFDA



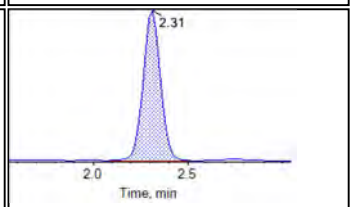
13C7-PFUnA



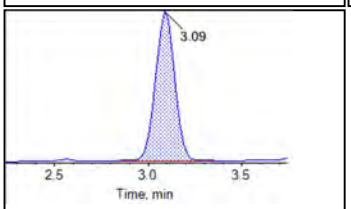
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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Printed: 26/11/2018 3:05:14 PM

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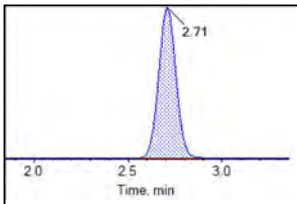
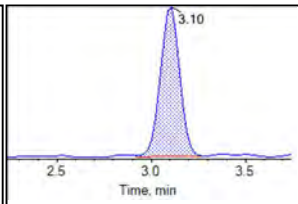
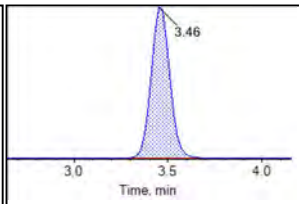


13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

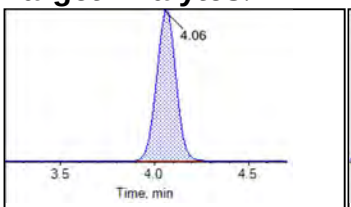
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:05:18 PM

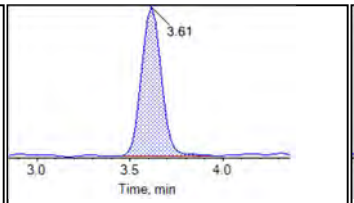
Sample Name	J9419-FS(0)	**Injection Vial**	13
Sample ID	RR-FB-111618	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T18:55:32	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

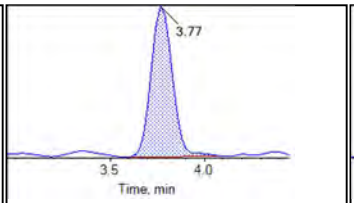
Target Analytes:



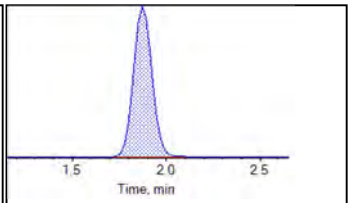
13C2-PFDoA



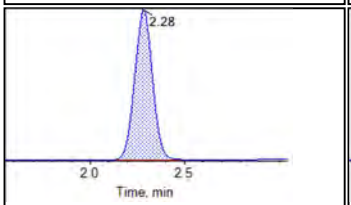
d3-MeFOSAA



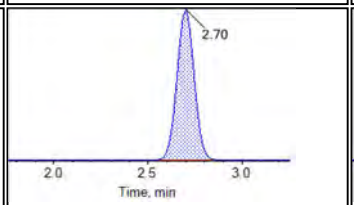
d5-EtFOSAA



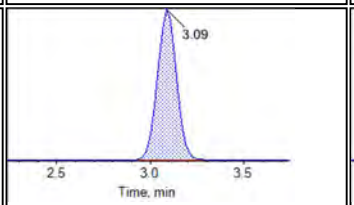
13C5-PFHxA



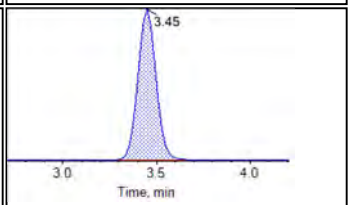
13C4-PFHpA



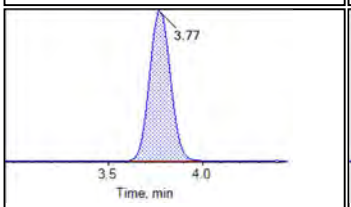
13C8-PFOA



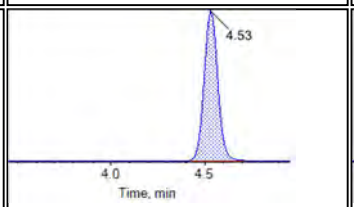
13C9-PFNA



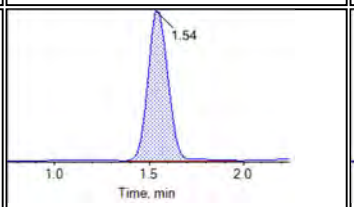
13C6-PFDA



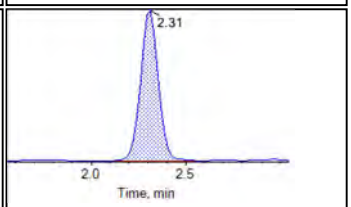
13C7-PFUnA



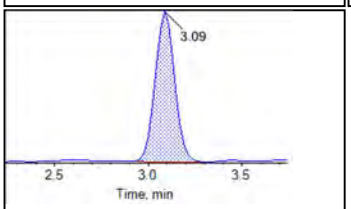
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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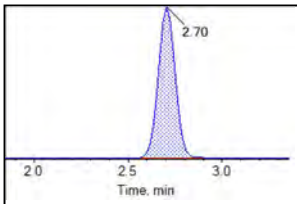
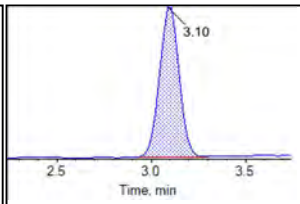
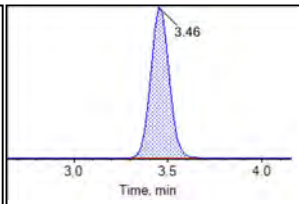
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:05:23 PM

Sample Name	CS242LCS-FS(0)	**Injection Vial**	14
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:06:23	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

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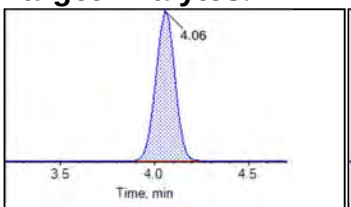
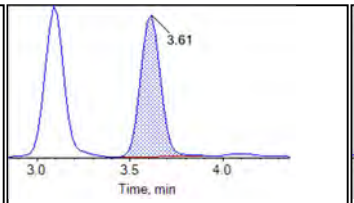
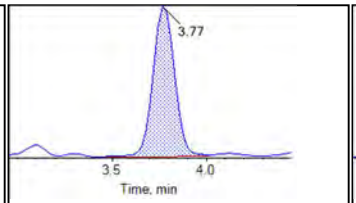


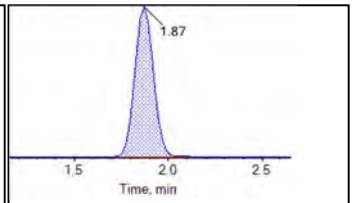
13C2-PFDoA



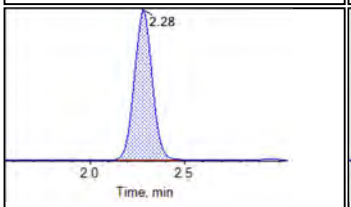
d3-MeFOSAA



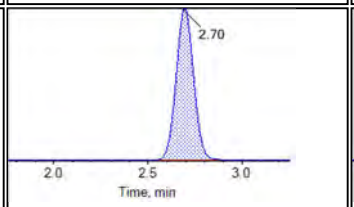
d5-EtFOSAA



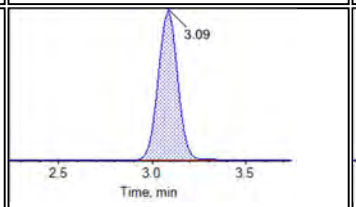
13C5-PFHxA



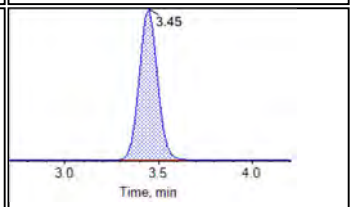
13C4-PFHpA



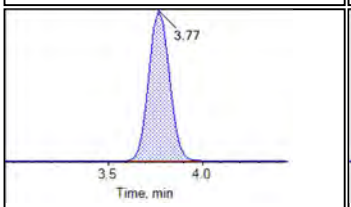
13C8-PFOA



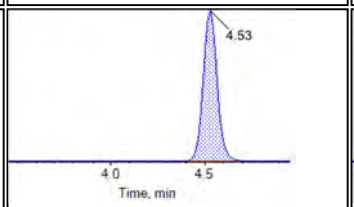
13C9-PFNA



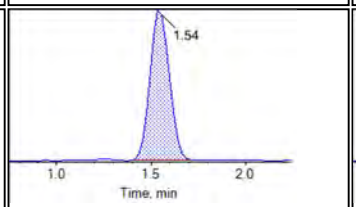
13C6-PFDA



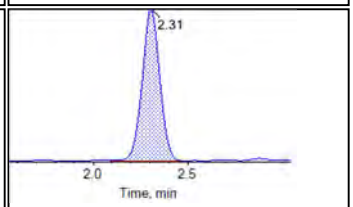
13C7-PFUnA



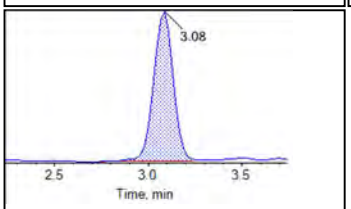
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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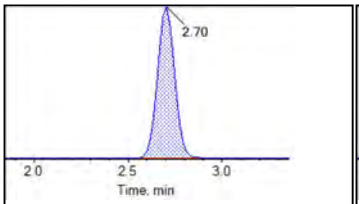
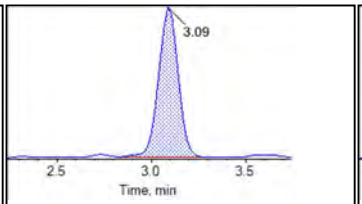
Printed: 26/11/2018 3:05:23 PM

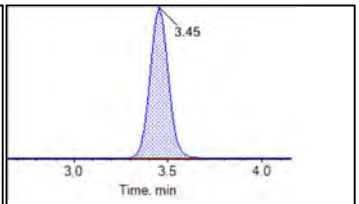
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:05:27 PM

Sample Name	J9412-FS-D(9)	**Injection Vial**	15
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:17:16	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

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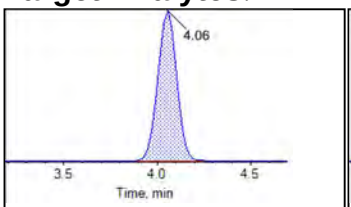
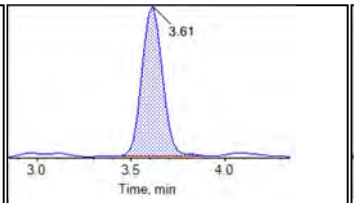
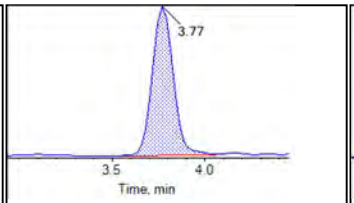


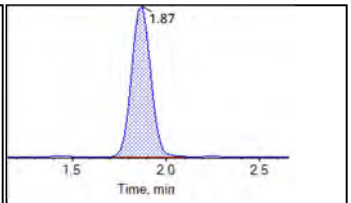
13C2-PFDoA



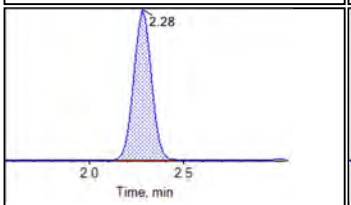
d3-MeFOSAA



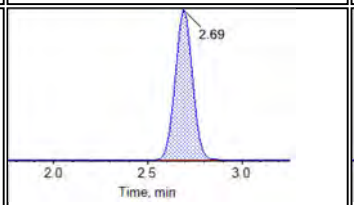
d5-EtFOSAA



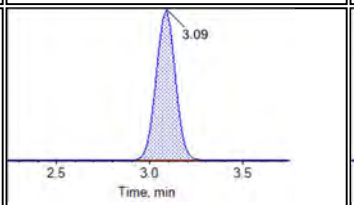
13C5-PFHxA



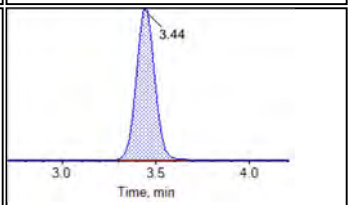
13C4-PFHpA



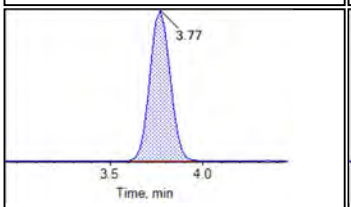
13C8-PFOA



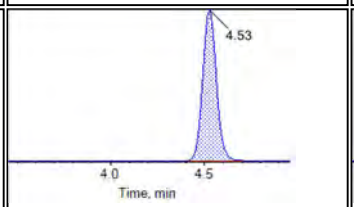
13C9-PFNA



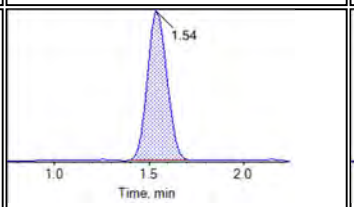
13C6-PFDA



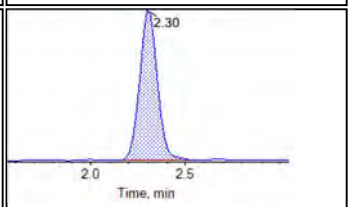
13C7-PFUnA



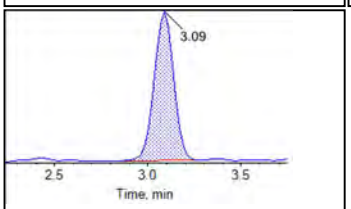
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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Printed: 26/11/2018 3:05:27 PM

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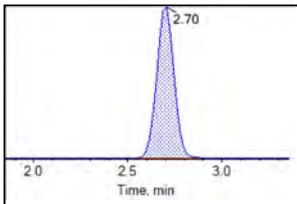
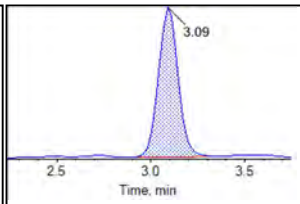
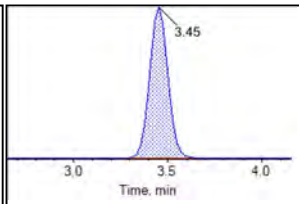


13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

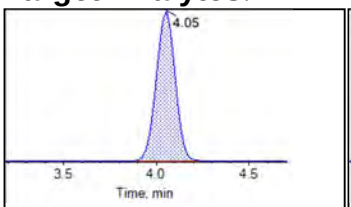
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:05:38 PM

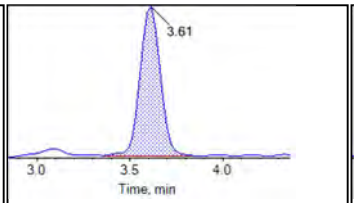
Sample Name	J9412-FS-D(7)	**Injection Vial**	16
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:28:08	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

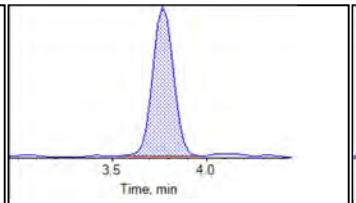
Target Analytes:



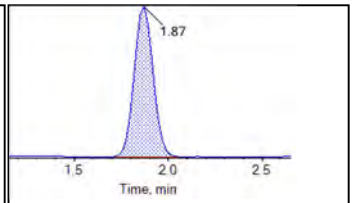
13C2-PFDoA



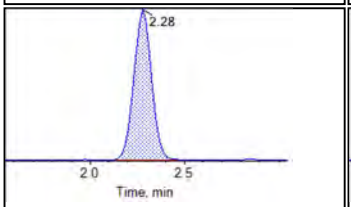
d3-MeFOSAA



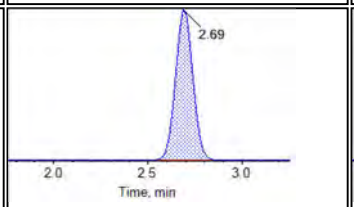
d5-EtFOSAA



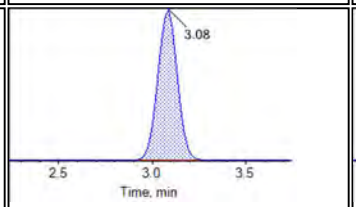
13C5-PFHxA



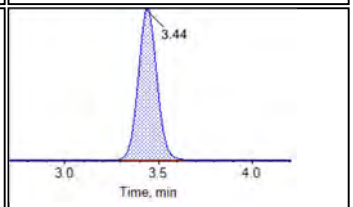
13C4-PFHpA



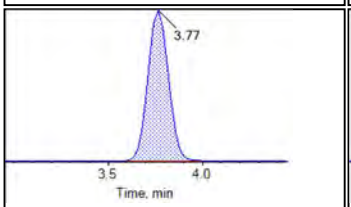
13C8-PFOA



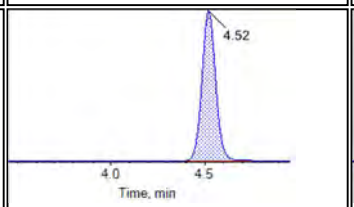
13C9-PFNA



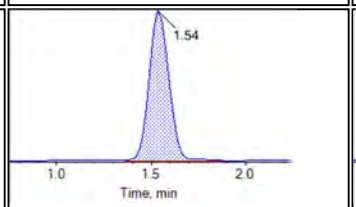
13C6-PFDA



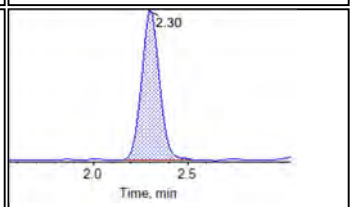
13C7-PFUnA



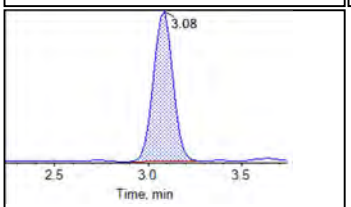
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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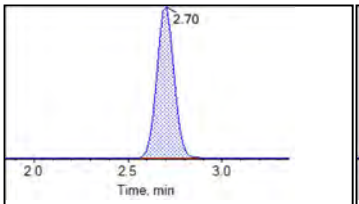
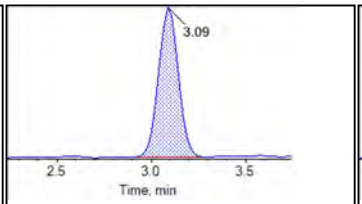
Printed: 26/11/2018 3:05:38 PM

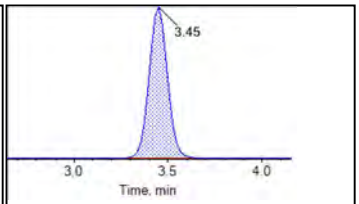
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

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Printed: 26/11/2018 3:05:43 PM

Sample Name	J9412-FS-D(5)	**Injection Vial**	17
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:38:59	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

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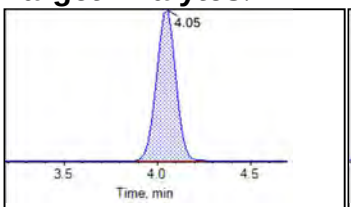
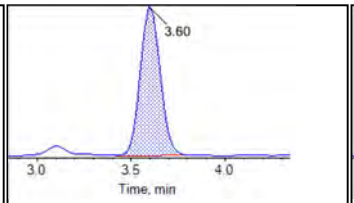
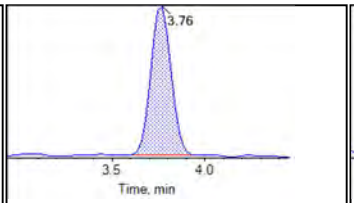


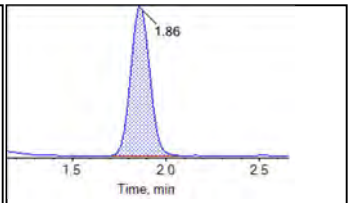
13C2-PFDoA



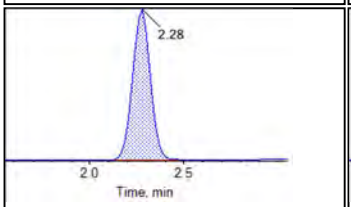
d3-MeFOSAA



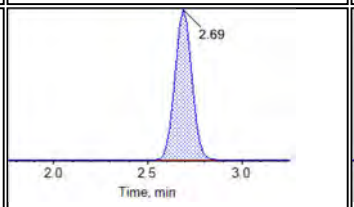
d5-EtFOSAA



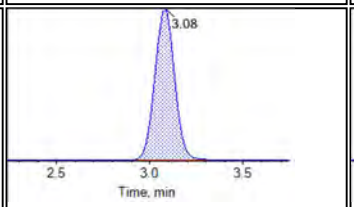
13C5-PFHxA



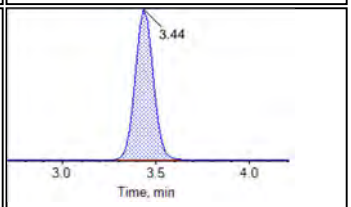
13C4-PFHpA



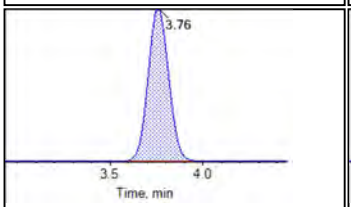
13C8-PFOA



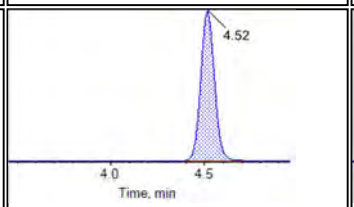
13C9-PFNA



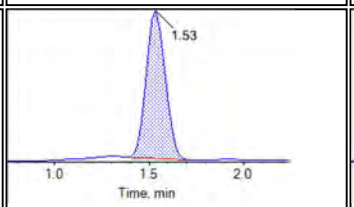
13C6-PFDA



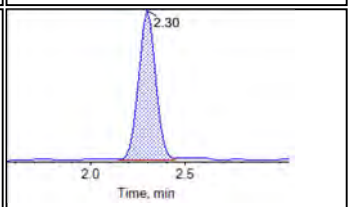
13C7-PFUnA



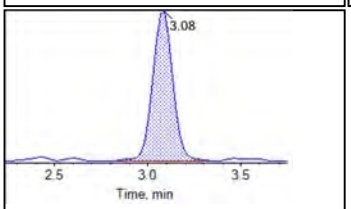
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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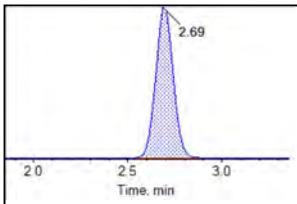
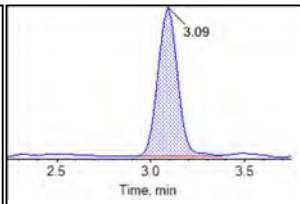
Printed: 26/11/2018 3:05:43 PM

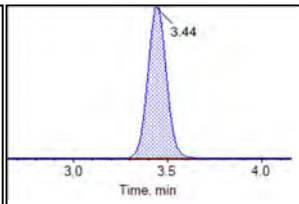
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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Chromatogram Report

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Printed: 26/11/2018 3:05:53 PM

Sample Name	J9412-FS(0)	**Injection Vial**	19
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:00:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

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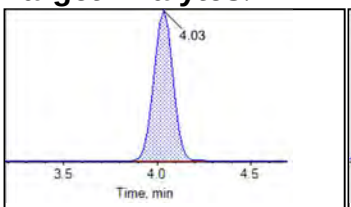
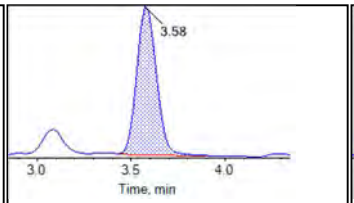
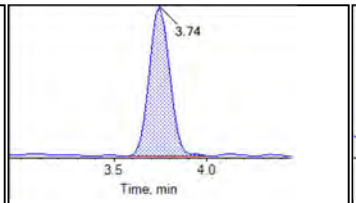


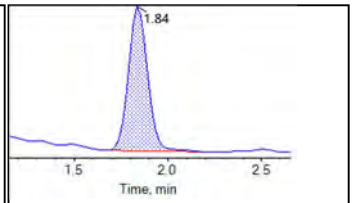
13C2-PFDoA



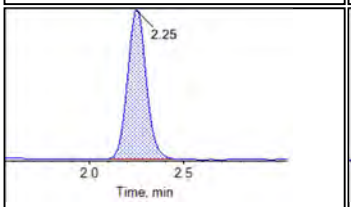
d3-MeFOSAA



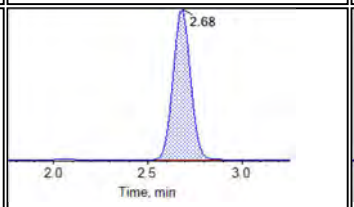
d5-EtFOSAA



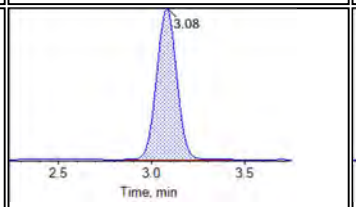
13C5-PFHxA



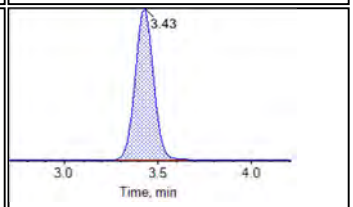
13C4-PFHpA



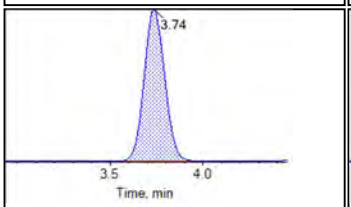
13C8-PFOA



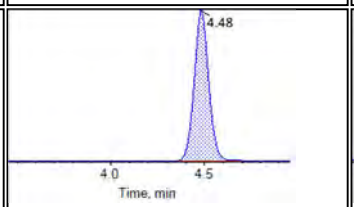
13C9-PFNA



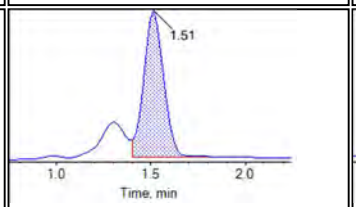
13C6-PFDA



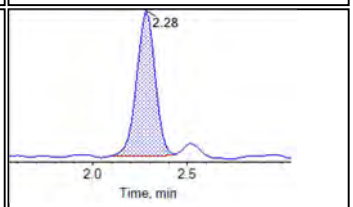
13C7-PFUnA



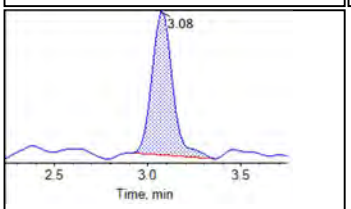
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

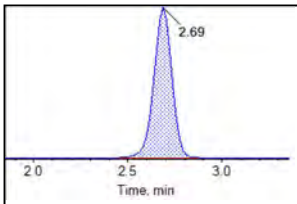


13C8-PFOS

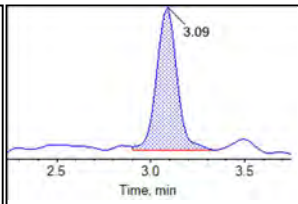
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:05:53 PM

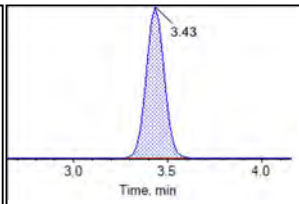
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

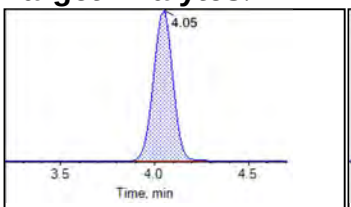
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:05:58 PM

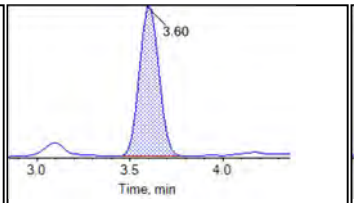
Sample Name	KC69 CCV	**Injection Vial**	21
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:22:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

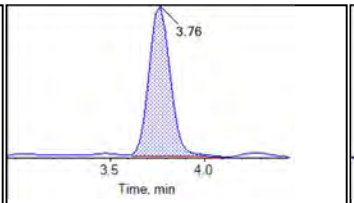
Target Analytes:



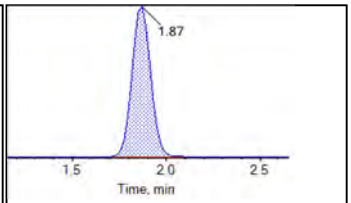
13C2-PFDoA



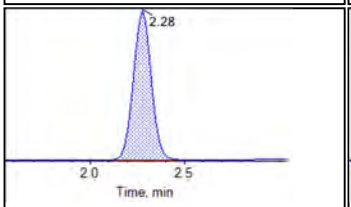
d3-MeFOSAA



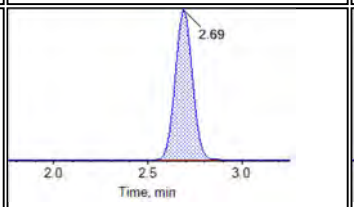
d5-EtFOSAA



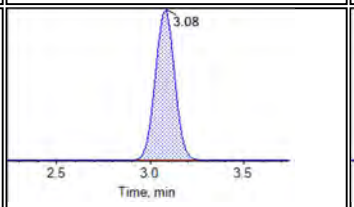
13C5-PFHxA



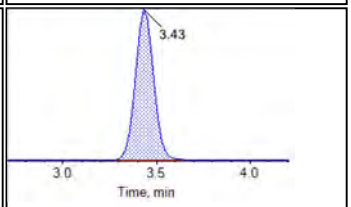
13C4-PFHpA



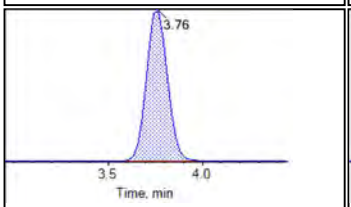
13C8-PFOA



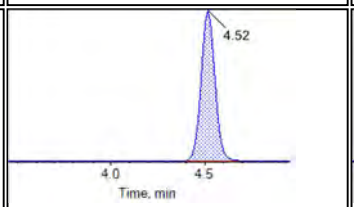
13C9-PFNA



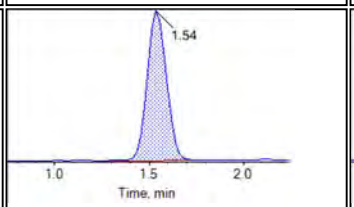
13C6-PFDA



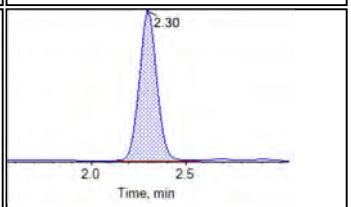
13C7-PFUnA



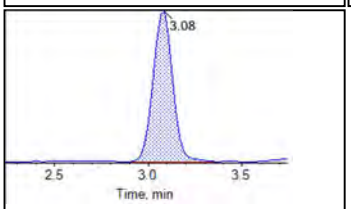
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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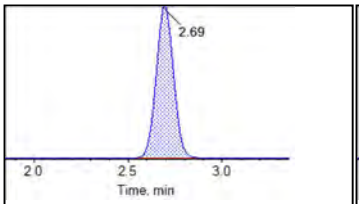
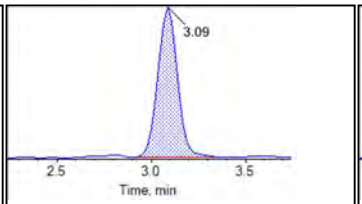
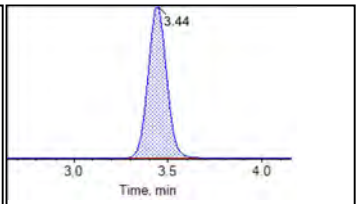
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:06:03 PM

Sample Name	J9413-FS-D(9)	**Injection Vial**	22
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:44:11	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

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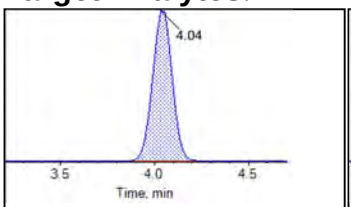
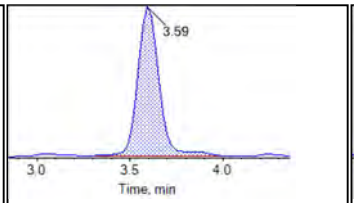
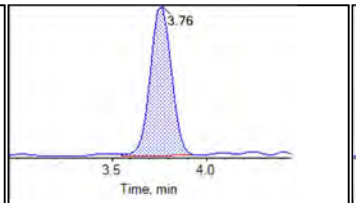


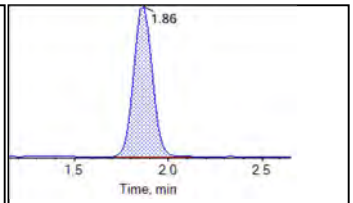
13C2-PFDoA



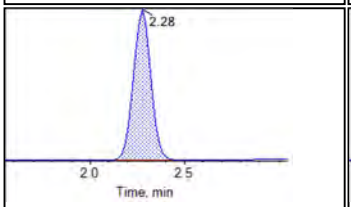
d3-MeFOSAA



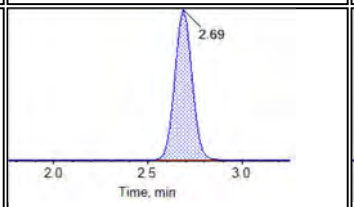
d5-EtFOSAA



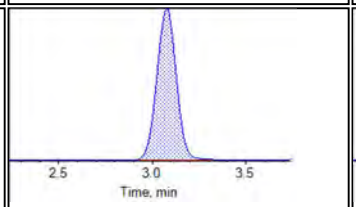
13C5-PFHxA



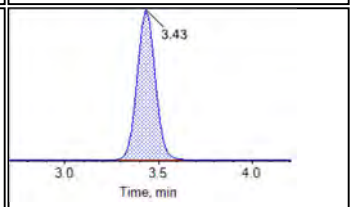
13C4-PFHpA



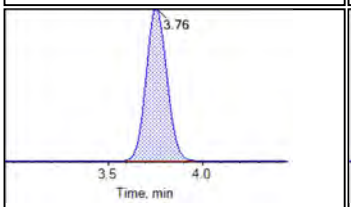
13C8-PFOA



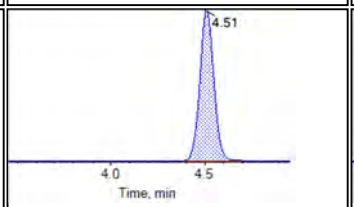
13C9-PFNA



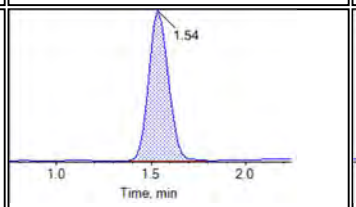
13C6-PFDA



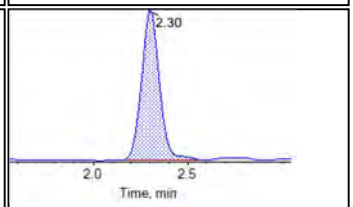
13C7-PFUnA



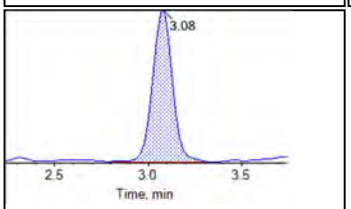
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

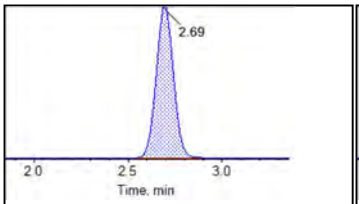


13C8-PFOS

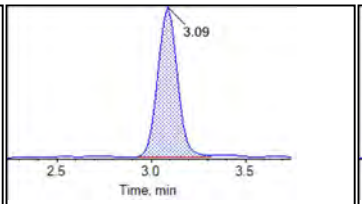
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:06:03 PM

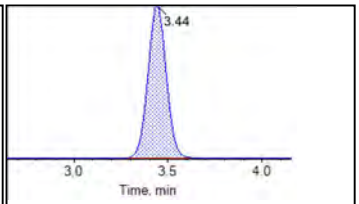
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:06:08 PM

Sample Name	J9413-FS-D(7)	**Injection Vial**	23
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T20:55:04	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

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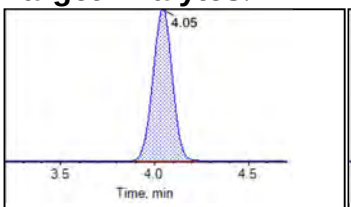
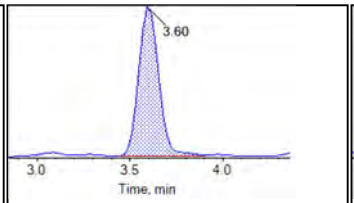
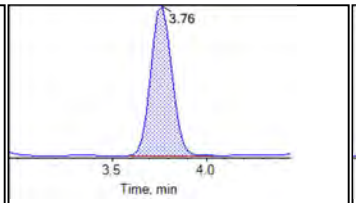


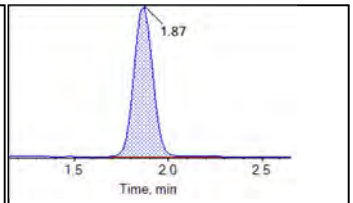
13C2-PFDoA



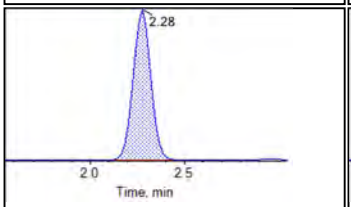
d3-MeFOSAA



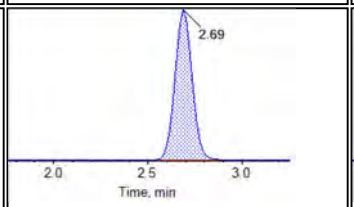
d5-EtFOSAA



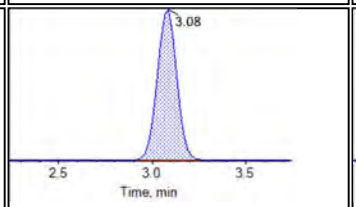
13C5-PFHxA



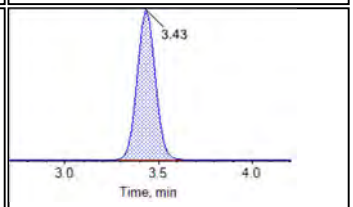
13C4-PFHpA



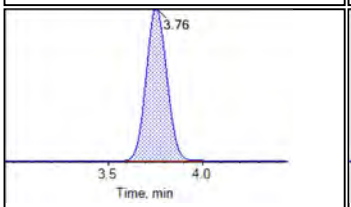
13C8-PFOA



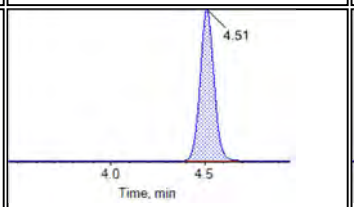
13C9-PFNA



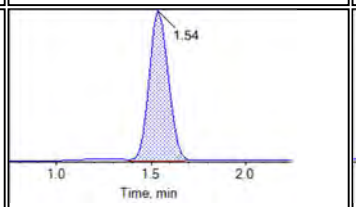
13C6-PFDA



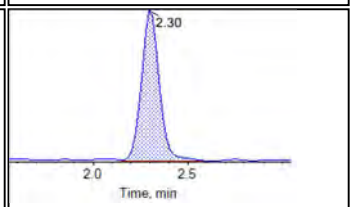
13C7-PFUnA



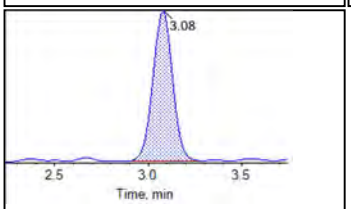
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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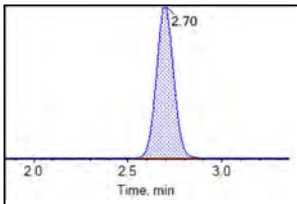
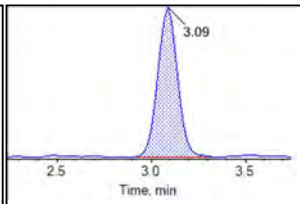
Printed: 26/11/2018 3:06:08 PM

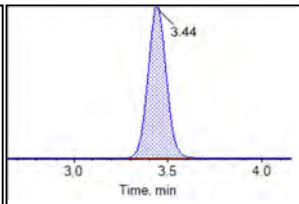
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

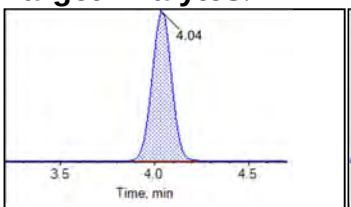
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:06:13 PM

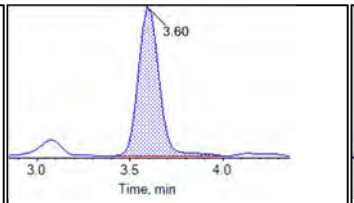
Sample Name	J9413-FS-D(5)	**Injection Vial**	24
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T21:05:57	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

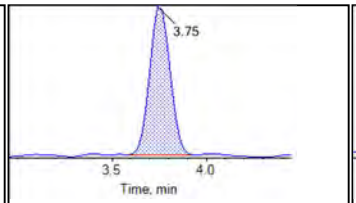
Target Analytes:



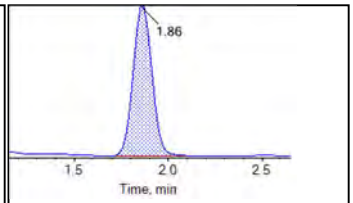
13C2-PFDoA



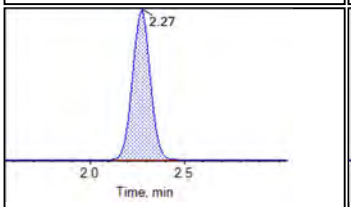
d3-MeFOSAA



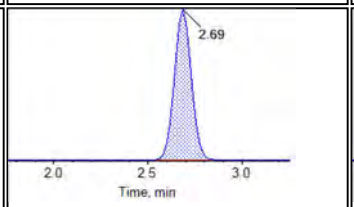
d5-EtFOSAA



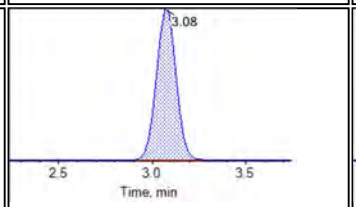
13C5-PFHxA



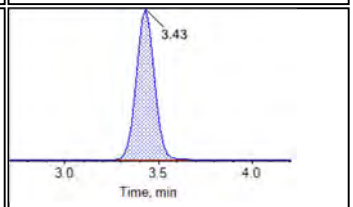
13C4-PFHpA



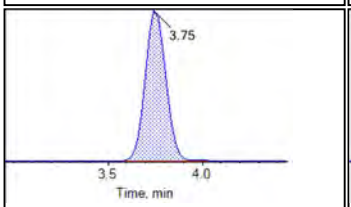
13C8-PFOA



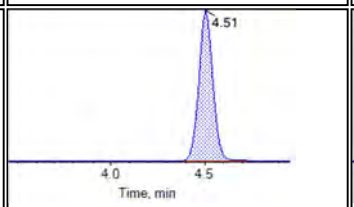
13C9-PFNA



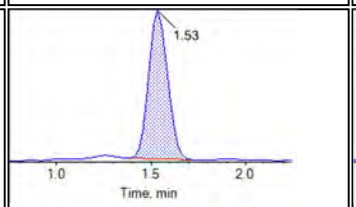
13C6-PFDA



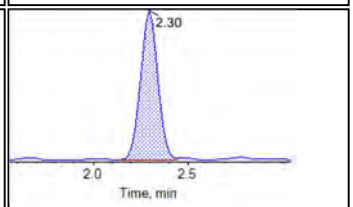
13C7-PFUnA



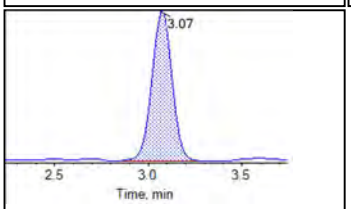
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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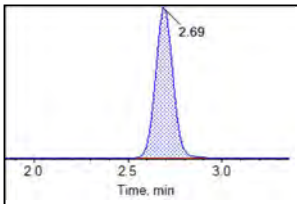
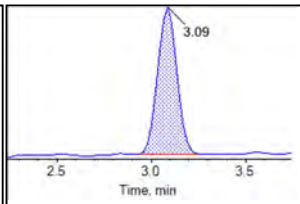
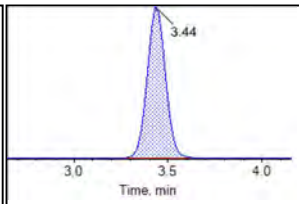


13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

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Sample Name	J9413-FS(0)	**Injection Vial**	26
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T21:27:41	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

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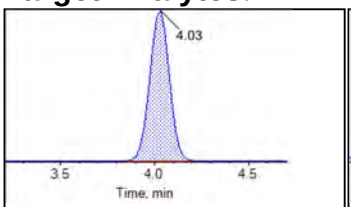
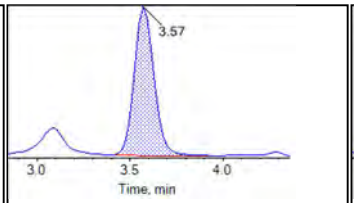
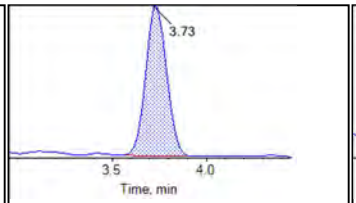


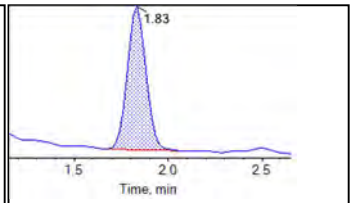
13C2-PFDoA



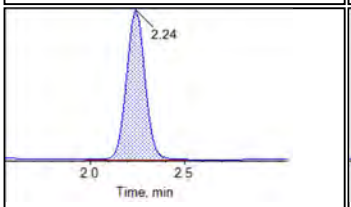
d3-MeFOSAA



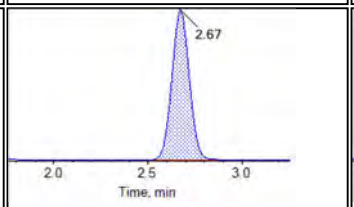
d5-EtFOSAA



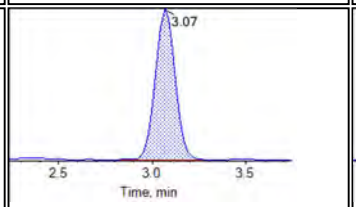
13C5-PFHxA



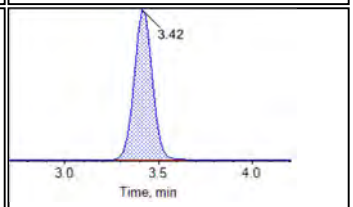
13C4-PFHpA



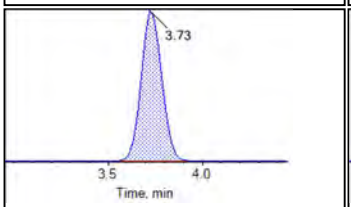
13C8-PFOA



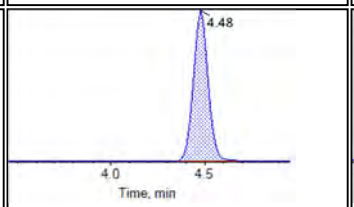
13C9-PFNA



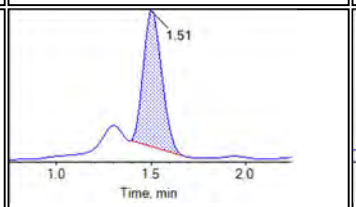
13C6-PFDA



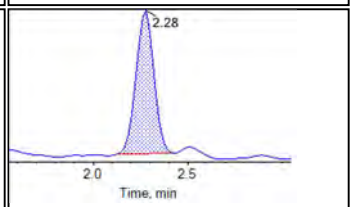
13C7-PFUnA



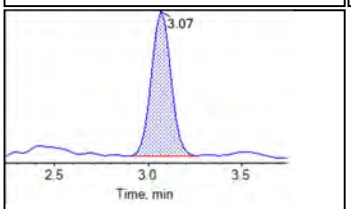
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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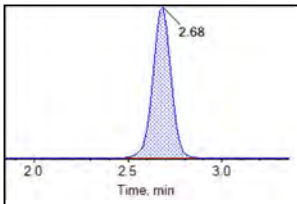
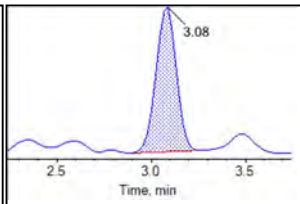
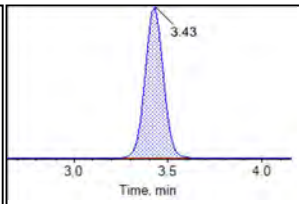
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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Chromatogram Report

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Sample Name	KC70 CCV	**Injection Vial**	29
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:00:17	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

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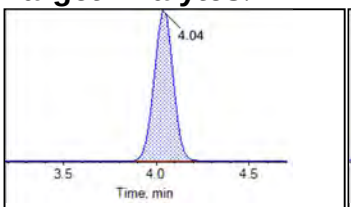
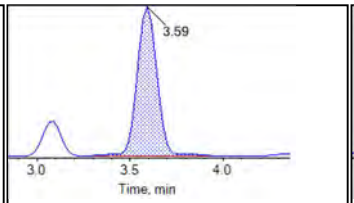


13C2-PFDoA



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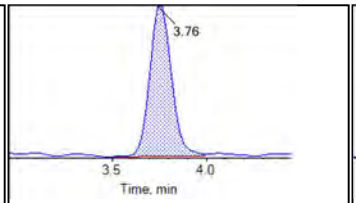
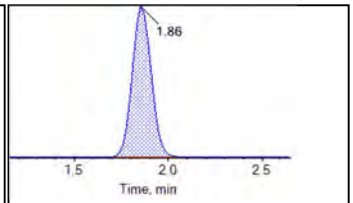
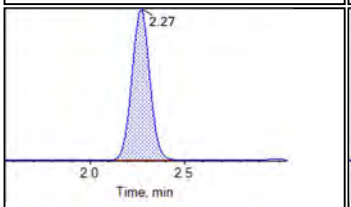


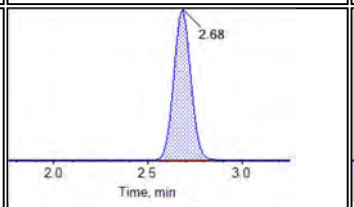
d5-EtFOSAA



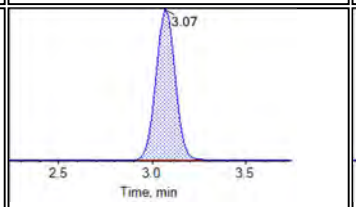
13C5-PFHxA



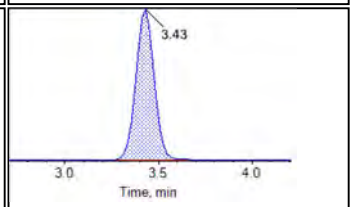
13C4-PFHpA



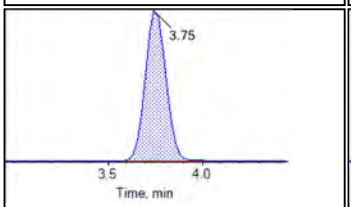
13C8-PFOA



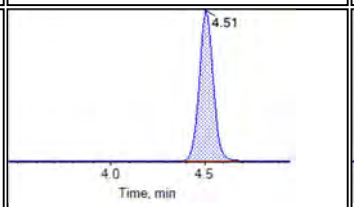
13C9-PFNA



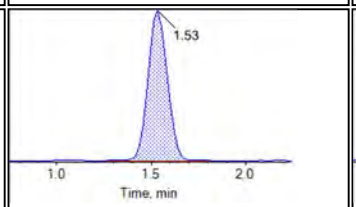
13C6-PFDA



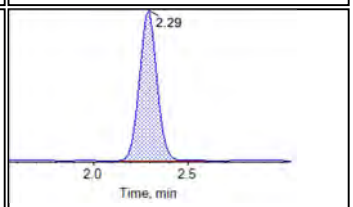
13C7-PFUnA



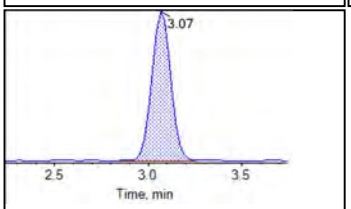
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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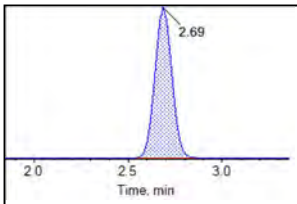

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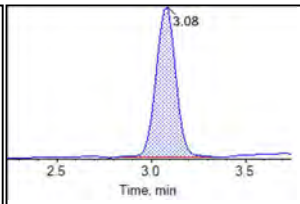
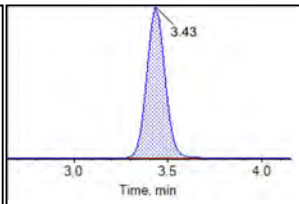


13C4-PFOS



13C2-PFDA

BATTELLE

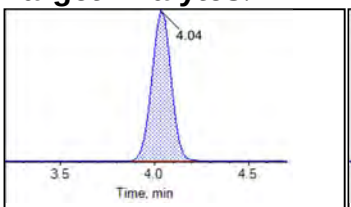
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:06:38 PM

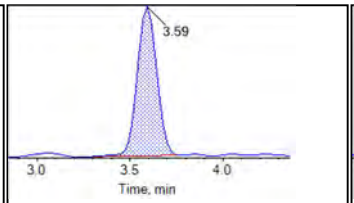
Sample Name	J9418-FS-D(5)	**Injection Vial**	30
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:22:00	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

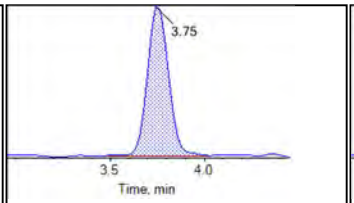
Target Analytes:



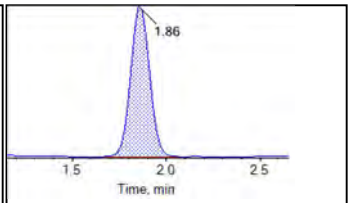
13C2-PFDoA



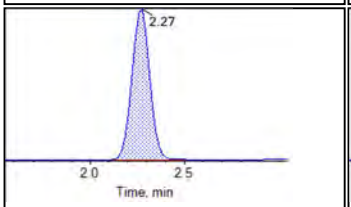
d3-MeFOSAA



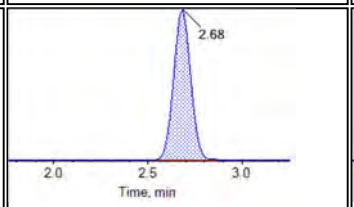
d5-EtFOSAA



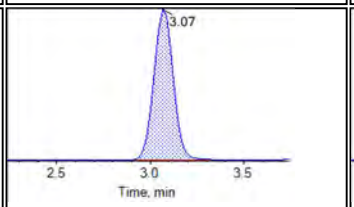
13C5-PFHxA



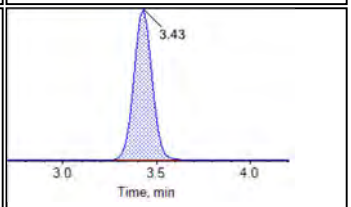
13C4-PFHpA



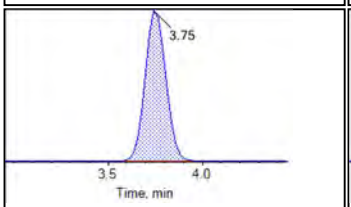
13C8-PFOA



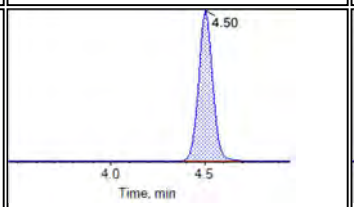
13C9-PFNA



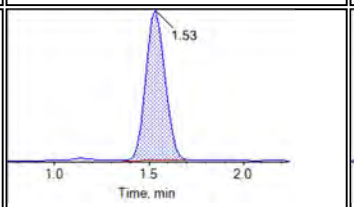
13C6-PFDA



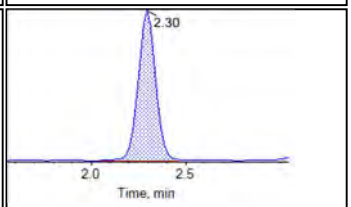
13C7-PFUnA



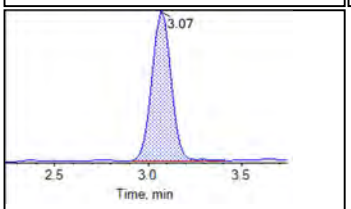
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

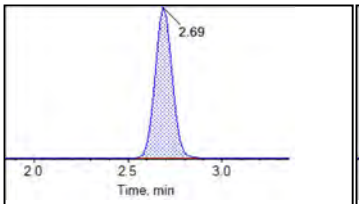


13C8-PFOS

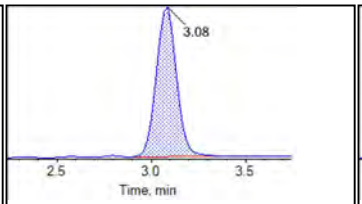
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:06:38 PM

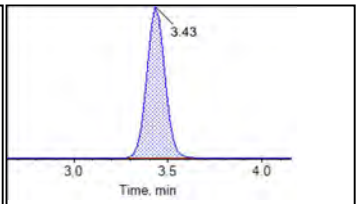
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

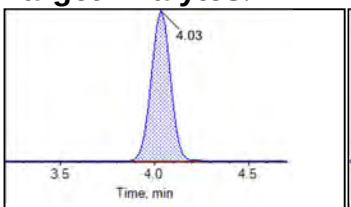
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:06:42 PM

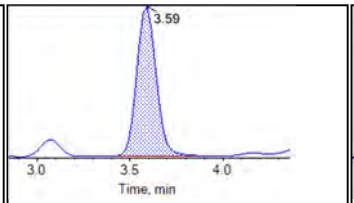
Sample Name	J9418-FS-D(3)	**Injection Vial**	31
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:32:52	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

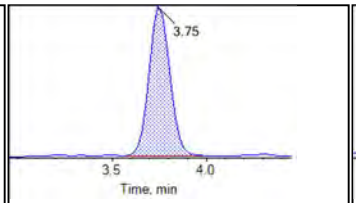
Target Analytes:



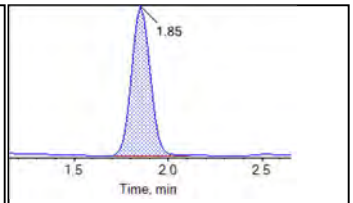
13C2-PFDoA



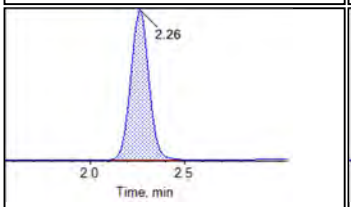
d3-MeFOSAA



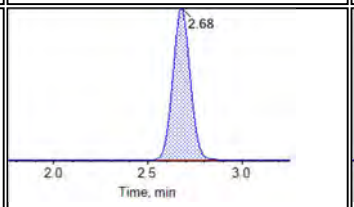
d5-EtFOSAA



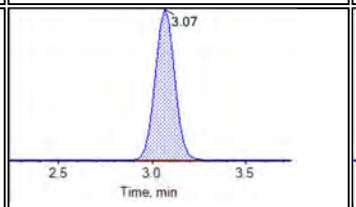
13C5-PFHxA



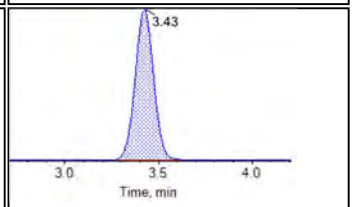
13C4-PFHpA



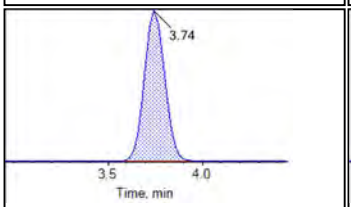
13C8-PFOA



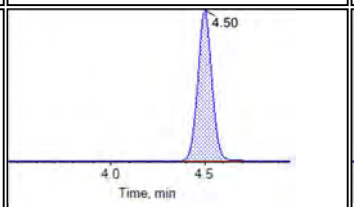
13C9-PFNA



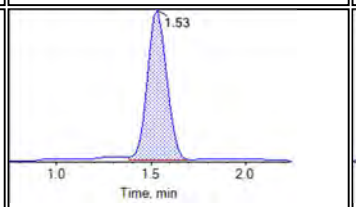
13C6-PFDA



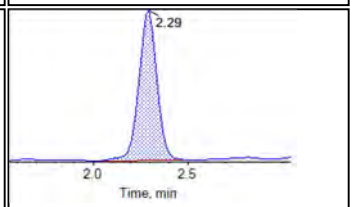
13C7-PFUnA



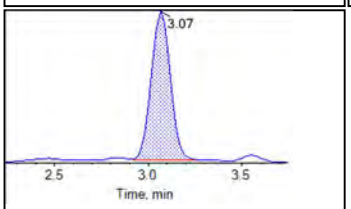
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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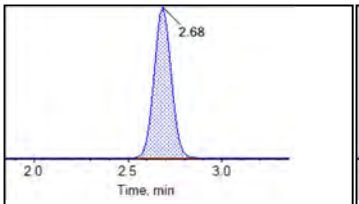
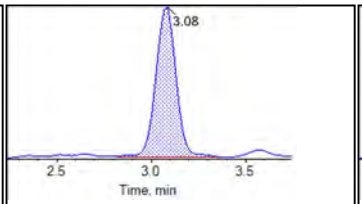
Printed: 26/11/2018 3:06:42 PM

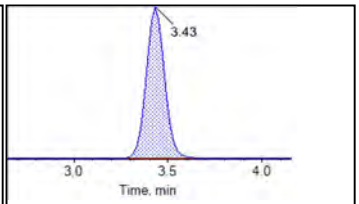
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:06:47 PM

Sample Name	J9418-FS(0)	**Injection Vial**	32
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T22:43:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

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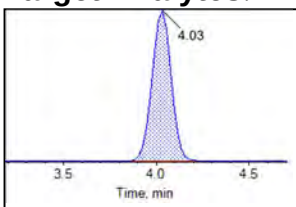
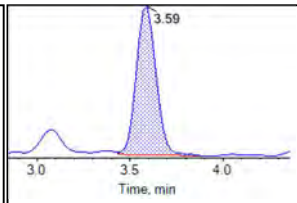
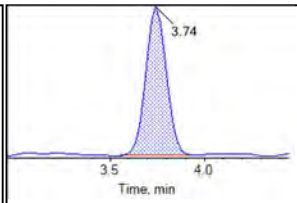


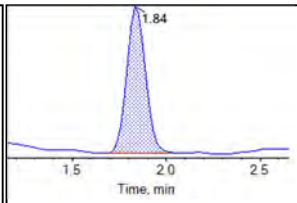
13C2-PFDoA



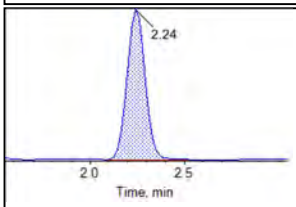
d3-MeFOSAA



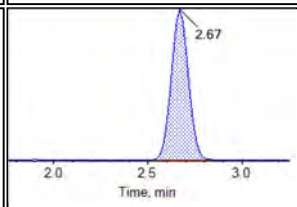
d5-EtFOSAA



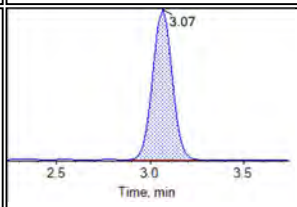
13C5-PFHxA



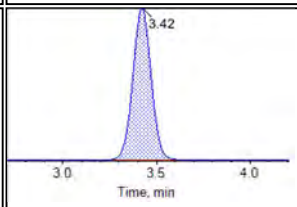
13C4-PFHpA



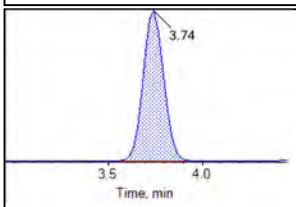
13C8-PFOA



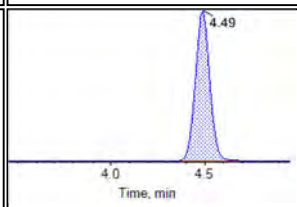
13C9-PFNA



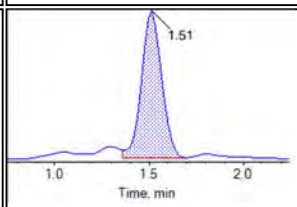
13C6-PFDA



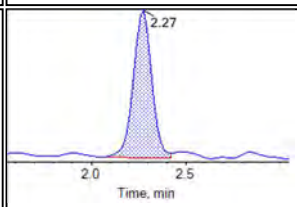
13C7-PFUnA



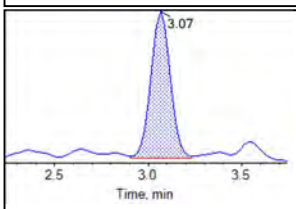
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

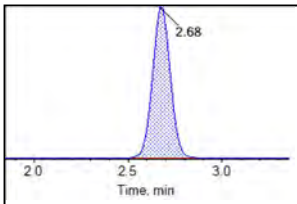


13C8-PFOS

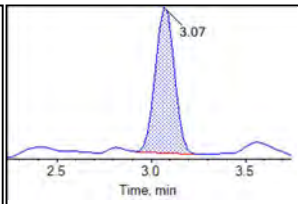
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:06:47 PM

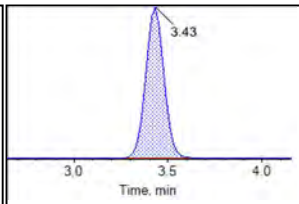
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

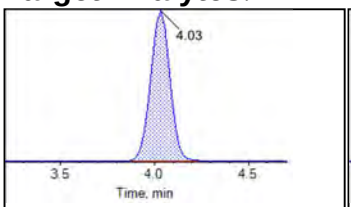
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:06:52 PM

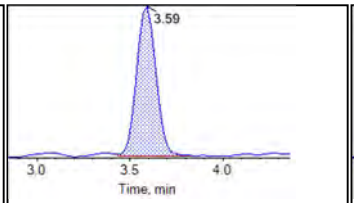
Sample Name	J9421-FS-D(7)	**Injection Vial**	34
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:05:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

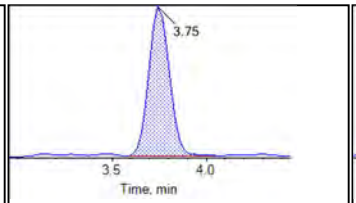
Target Analytes:



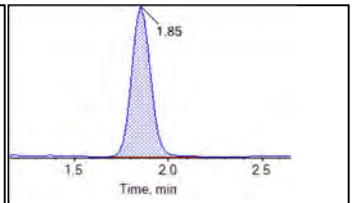
13C2-PFDoA



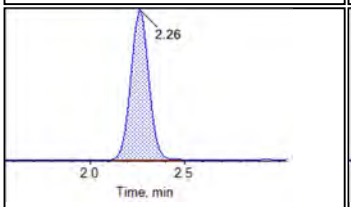
d3-MeFOSAA



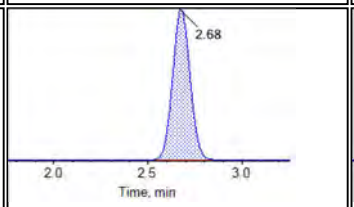
d5-EtFOSAA



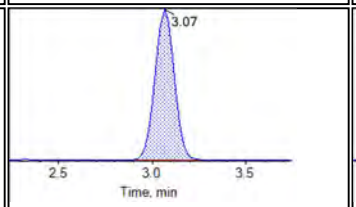
13C5-PFHxA



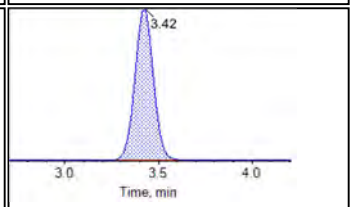
13C4-PFHpA



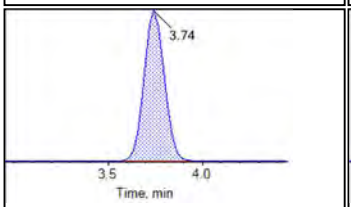
13C8-PFOA



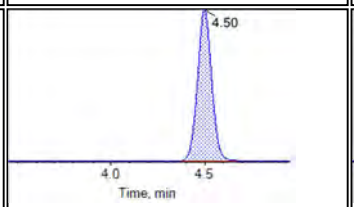
13C9-PFNA



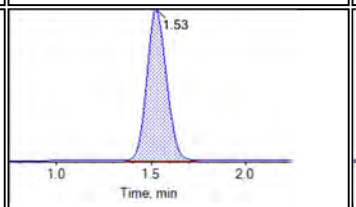
13C6-PFDA



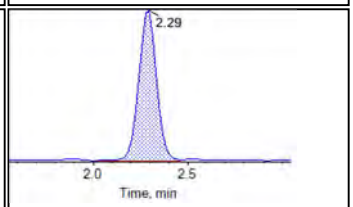
13C7-PFUnA



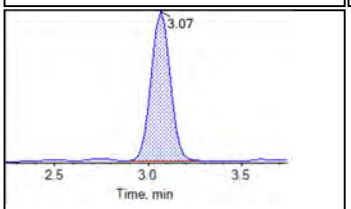
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

Created with Analyst Reporter
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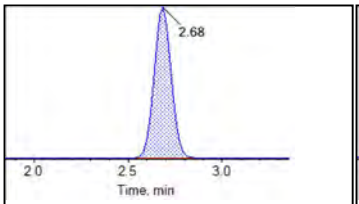
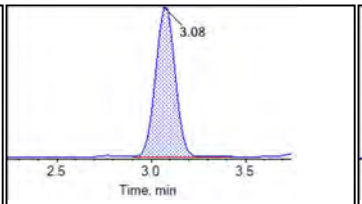
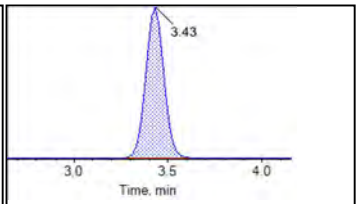


13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:07:01 PM

Sample Name	J9421-FS-D(3)	**Injection Vial**	36
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:27:08	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

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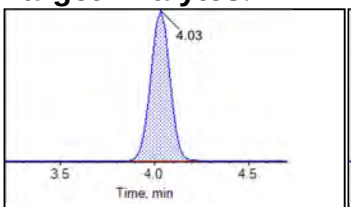
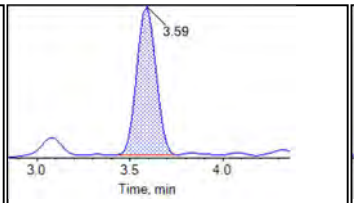
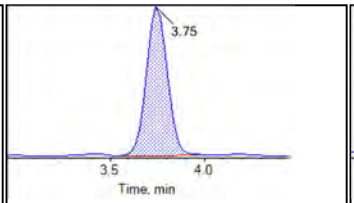


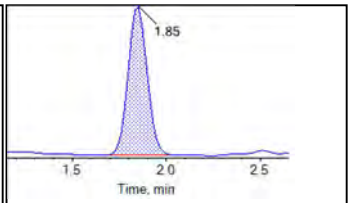
13C2-PFDoA



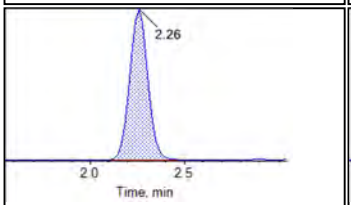
d3-MeFOSAA



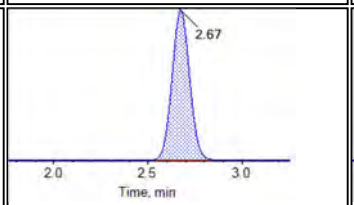
d5-EtFOSAA



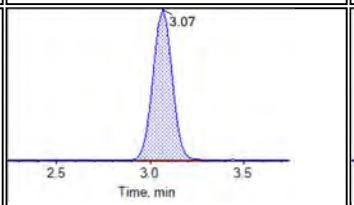
13C5-PFHxA



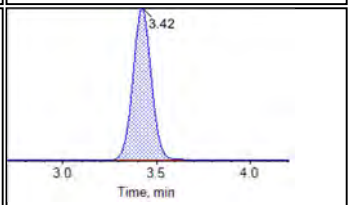
13C4-PFHpA



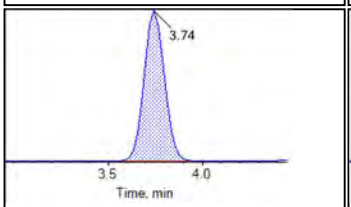
13C8-PFOA



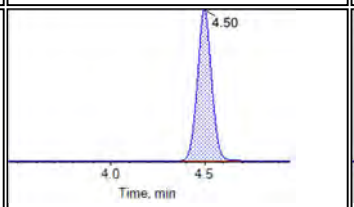
13C9-PFNA



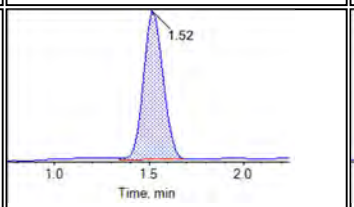
13C6-PFDA



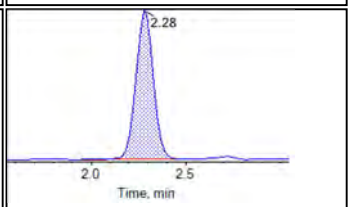
13C7-PFUnA



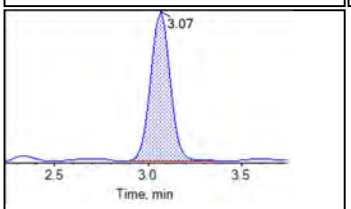
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

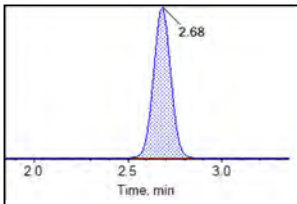


13C8-PFOS

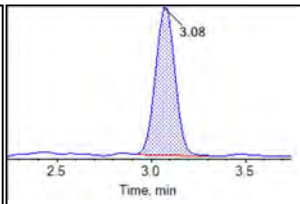
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:07:01 PM

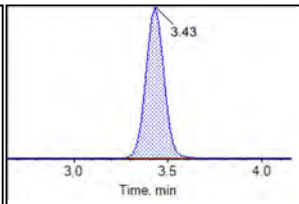
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:07:05 PM

Sample Name	J9421-FS(0)	**Injection Vial**	37
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:38:00	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

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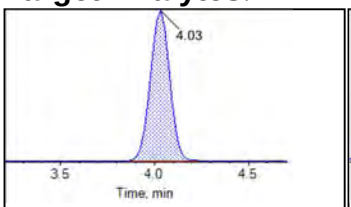
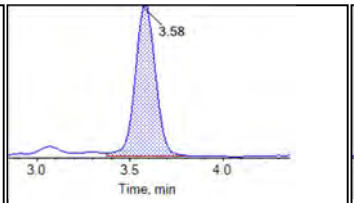
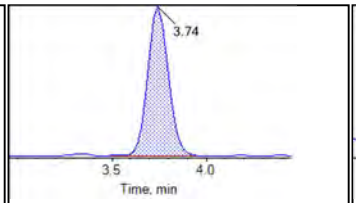


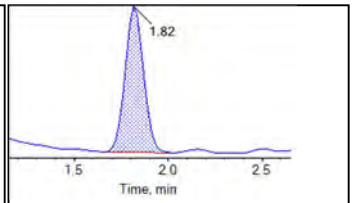
13C2-PFDoA



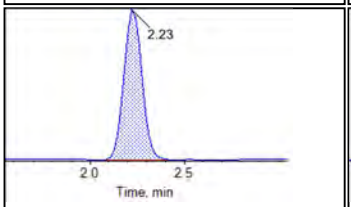
d3-MeFOSAA



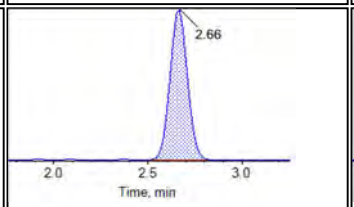
d5-EtFOSAA



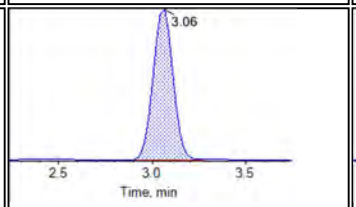
13C5-PFHxA



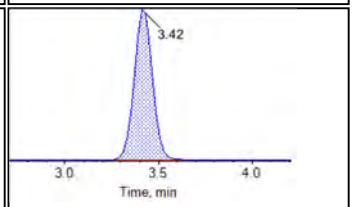
13C4-PFHpA



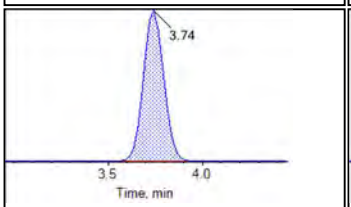
13C8-PFOA



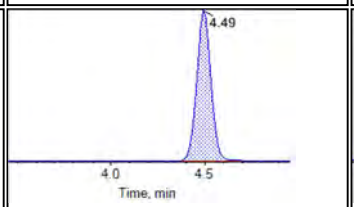
13C9-PFNA



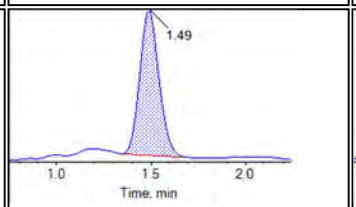
13C6-PFDA



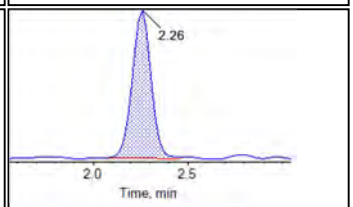
13C7-PFUnA



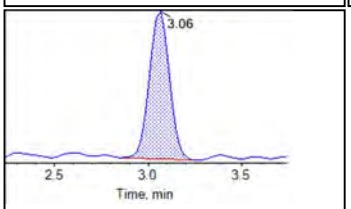
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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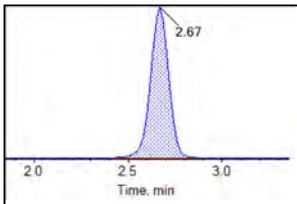
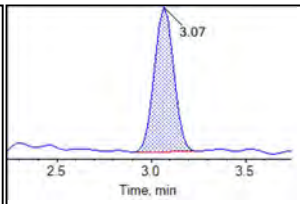
Printed: 26/11/2018 3:07:05 PM

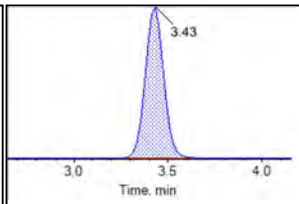
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

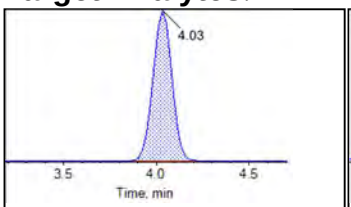
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:07:10 PM

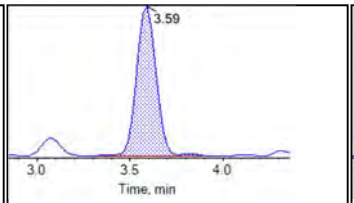
Sample Name	KC69 CCV	**Injection Vial**	39
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:59:42	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

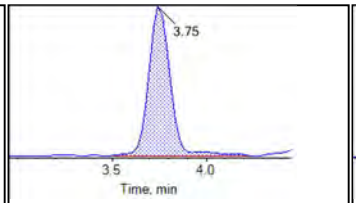
Target Analytes:



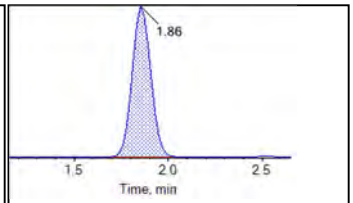
13C2-PFDoA



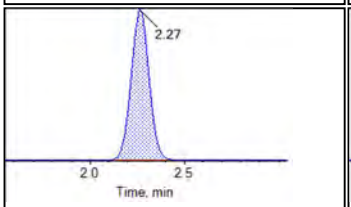
d3-MeFOSAA



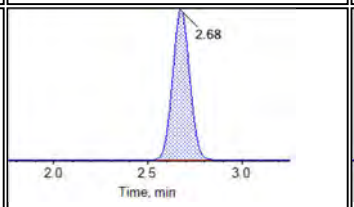
d5-EtFOSAA



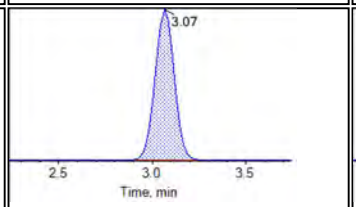
13C5-PFHxA



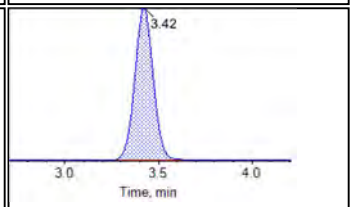
13C4-PFHpA



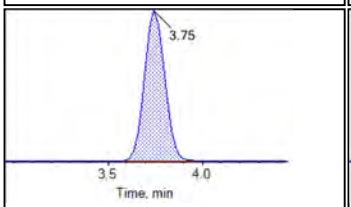
13C8-PFOA



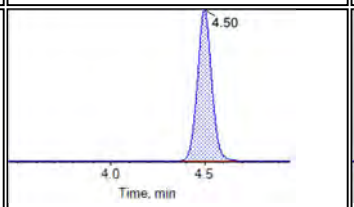
13C9-PFNA



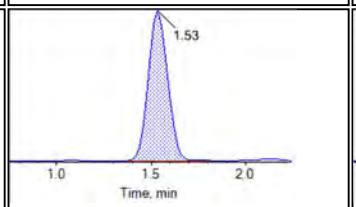
13C6-PFDA



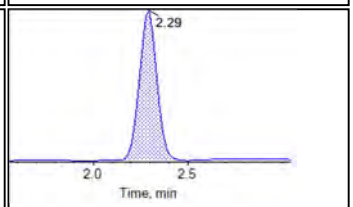
13C7-PFUnA



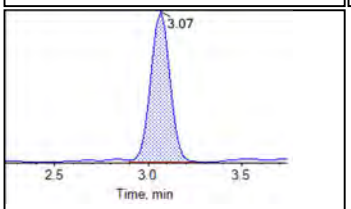
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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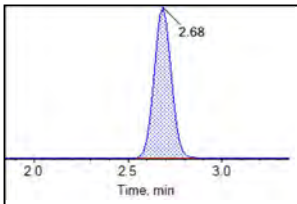
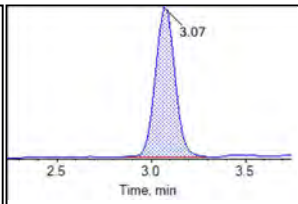
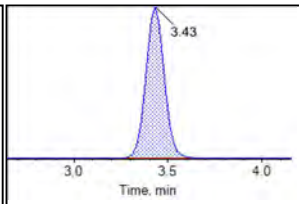


13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

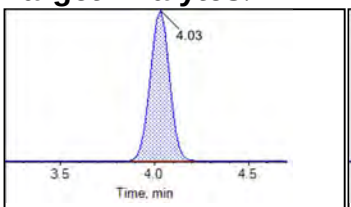
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:07:14 PM

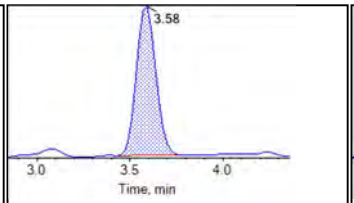
Sample Name	J9422MS-FS-D(7)	**Injection Vial**	40
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:21:27	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

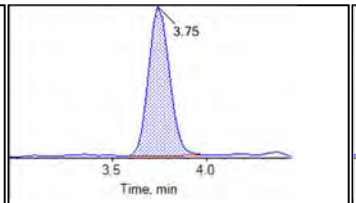
Target Analytes:



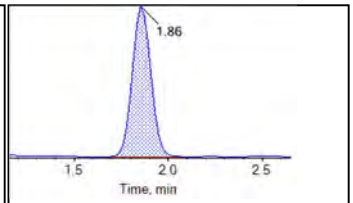
13C2-PFDoA



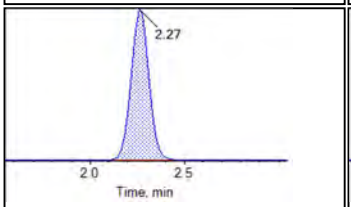
d3-MeFOSAA



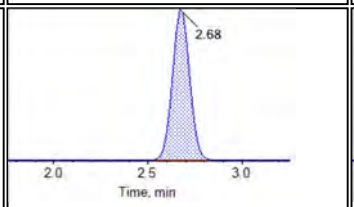
d5-EtFOSAA



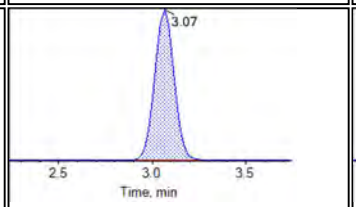
13C5-PFHxA



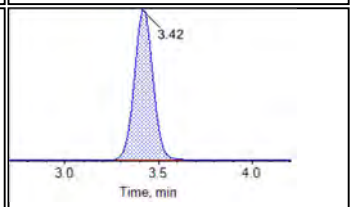
13C4-PFHpA



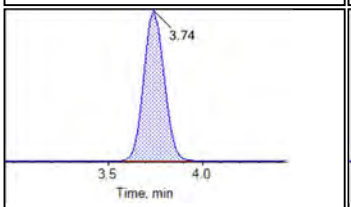
13C8-PFOA



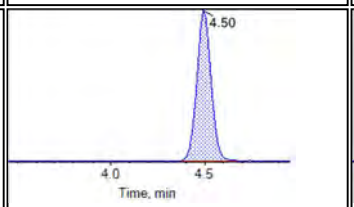
13C9-PFNA



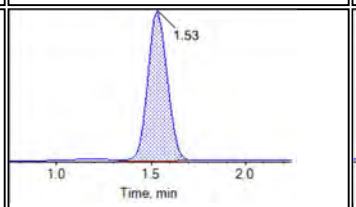
13C6-PFDA



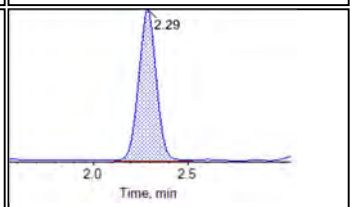
13C7-PFUnA



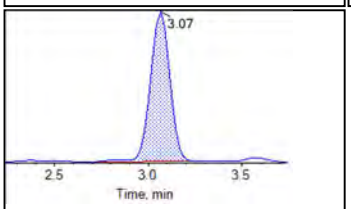
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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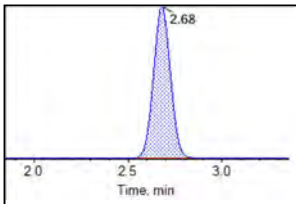
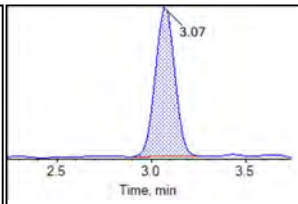
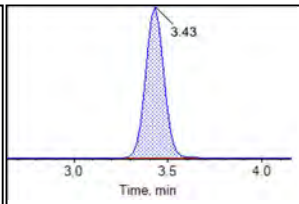
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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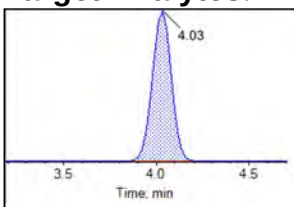
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:07:19 PM

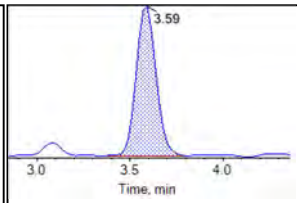
Sample Name	J9422MS-FS-D(5)	**Injection Vial**	41
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:32:19	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

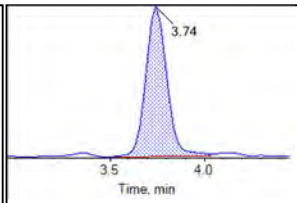
Target Analytes:



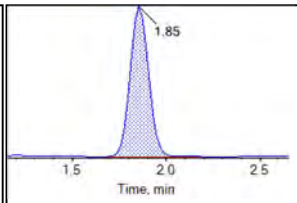
13C2-PFDoA



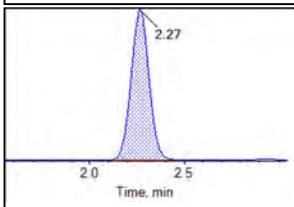
d3-MeFOSAA



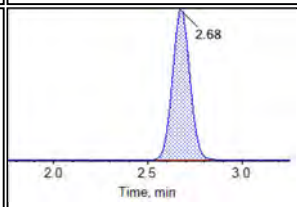
d5-EtFOSAA



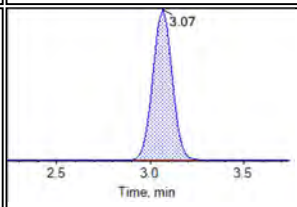
13C5-PFHxA



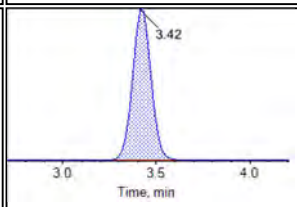
13C4-PFHpA



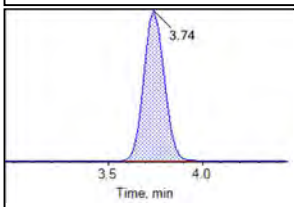
13C8-PFOA



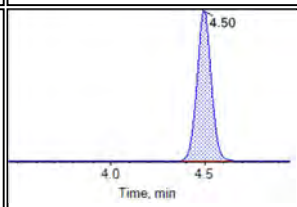
13C9-PFNA



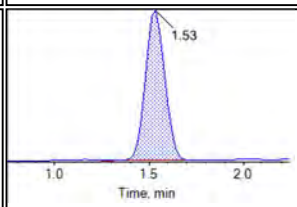
13C6-PFDA



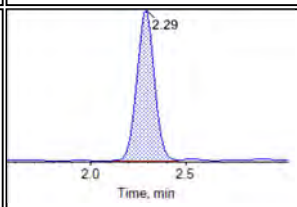
13C7-PFUnA



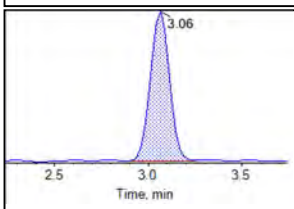
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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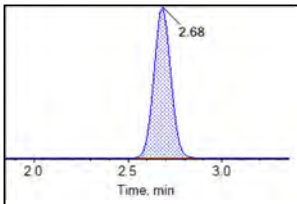
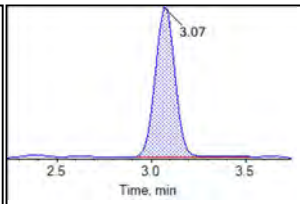
Printed: 26/11/2018 3:07:19 PM

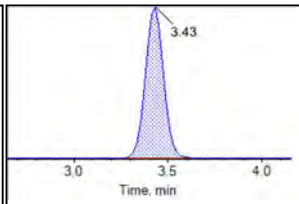
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

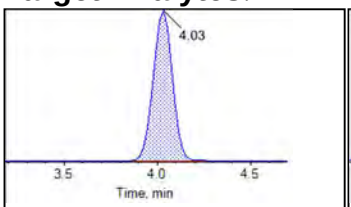
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:07:23 PM

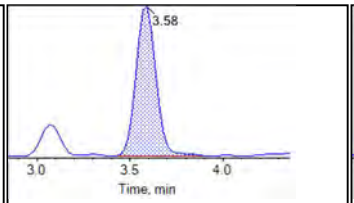
Sample Name	J9422MS-FS-D(3)	**Injection Vial**	42
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:43:11	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

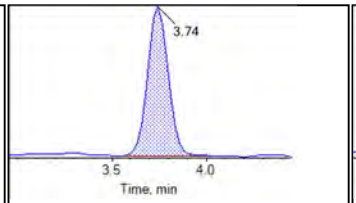
Target Analytes:



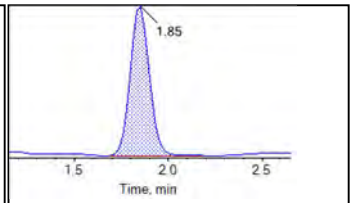
13C2-PFDoA



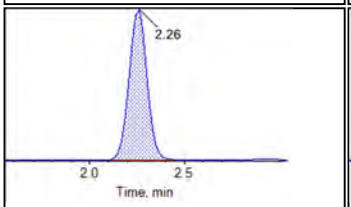
d3-MeFOSAA



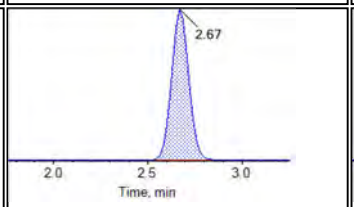
d5-EtFOSAA



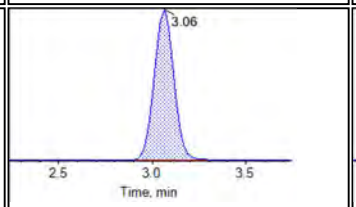
13C5-PFHxA



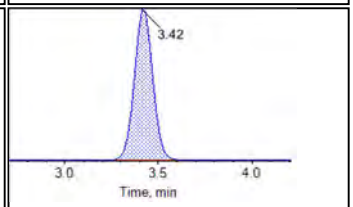
13C4-PFHpA



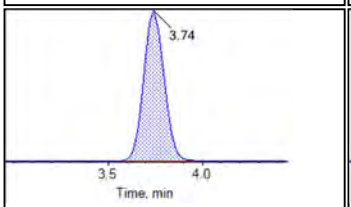
13C8-PFOA



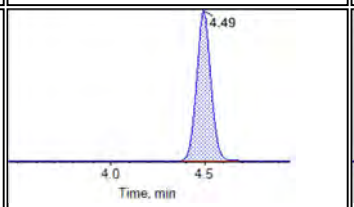
13C9-PFNA



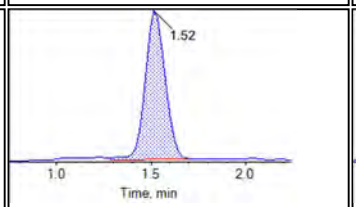
13C6-PFDA



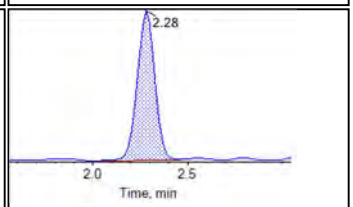
13C7-PFUnA



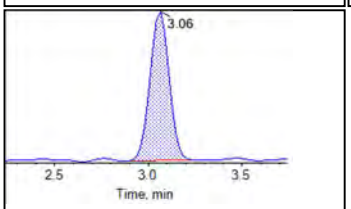
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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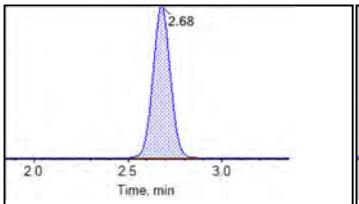
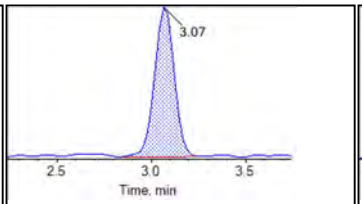
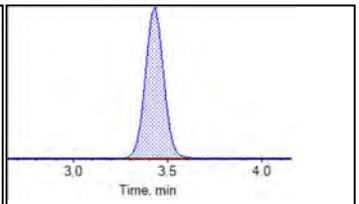
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:07:28 PM

Sample Name	J9422MS-FS(0)	**Injection Vial**	43
Sample ID	RR-EFF3-18D-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T00:54:02	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

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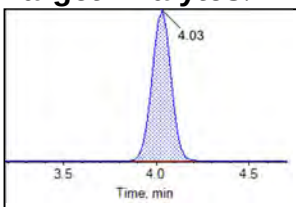
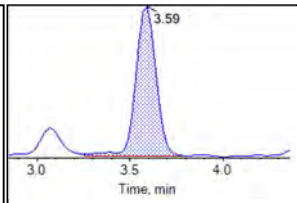
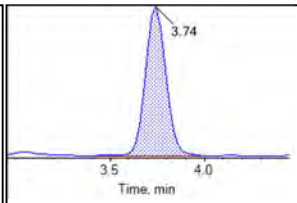


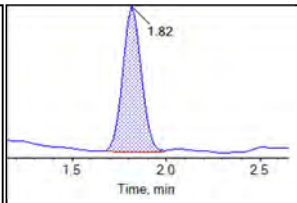
13C2-PFDoA



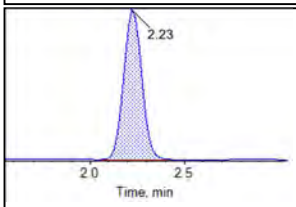
d3-MeFOSAA



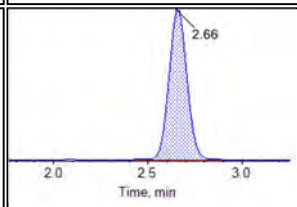
d5-EtFOSAA



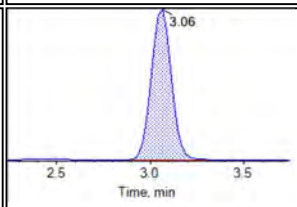
13C5-PFHxA



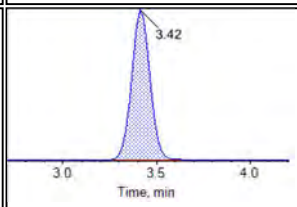
13C4-PFHpA



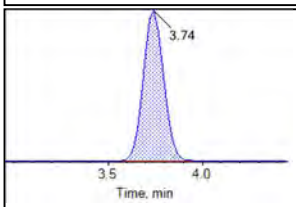
13C8-PFOA



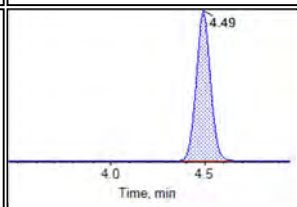
13C9-PFNA



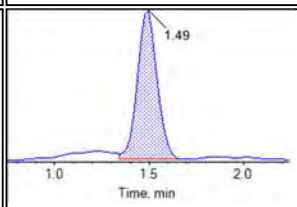
13C6-PFDA



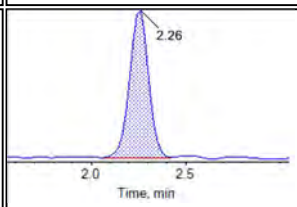
13C7-PFUnA



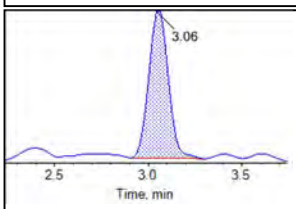
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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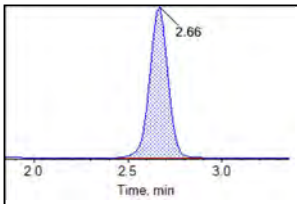
Internal Standards:



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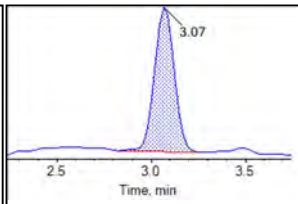
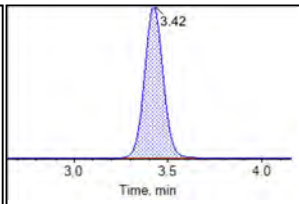


13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

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Sample Name	J9423MSD-FS-D(7)	**Injection Vial**	45
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:15:45	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

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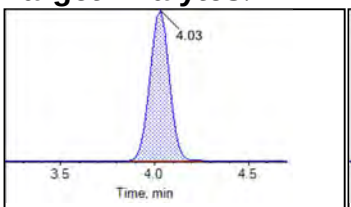
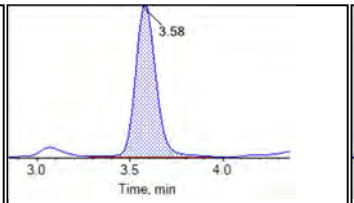
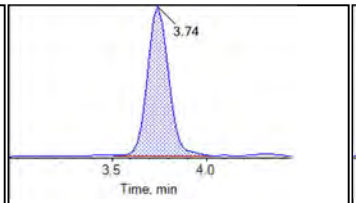


13C2-PFDoA



d3-MeFOSAA



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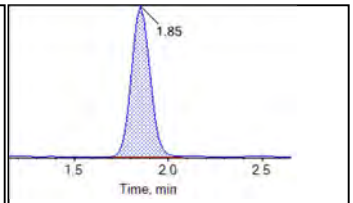
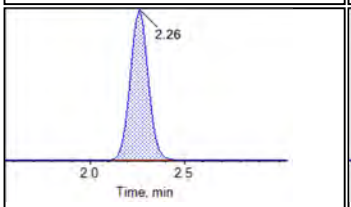


13C5-PFHxA



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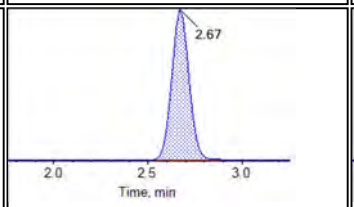

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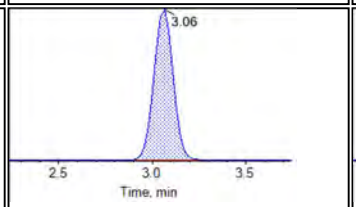
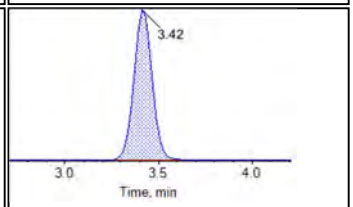


13C9-PFNA



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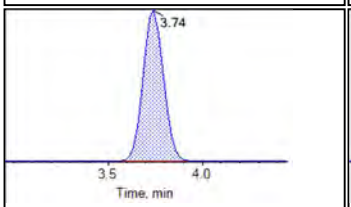

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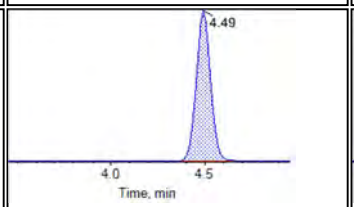
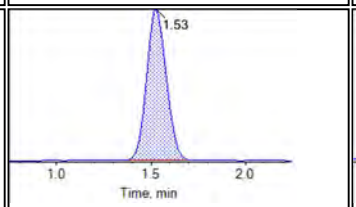
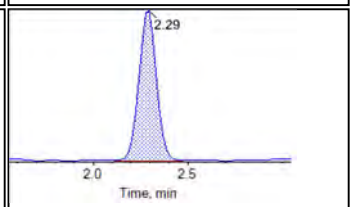


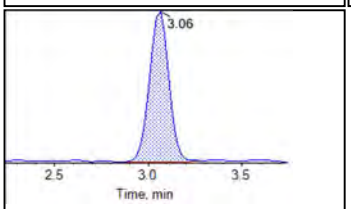
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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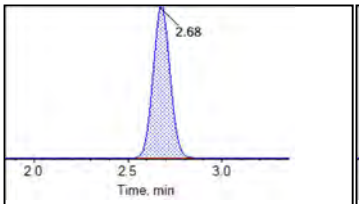
Internal Standards:



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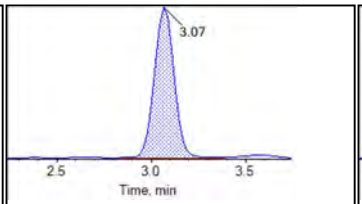
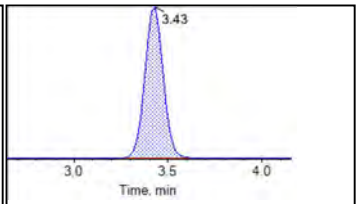


13C4-PFOS



13C2-PFDA

BATTELLE

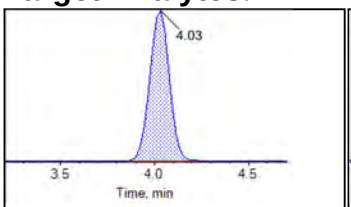
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:07:40 PM

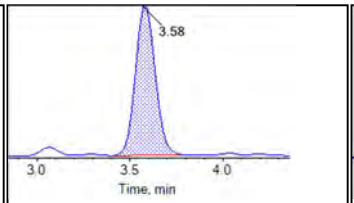
Sample Name	J9423MSD-FS-D(5)	**Injection Vial**	46
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:26:37	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

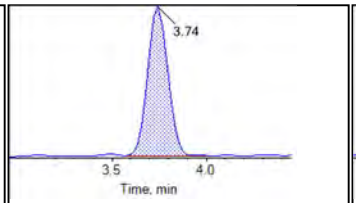
Target Analytes:



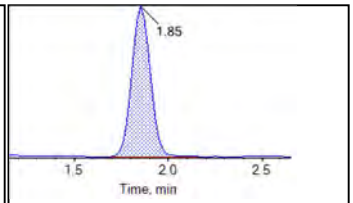
13C2-PFDoA



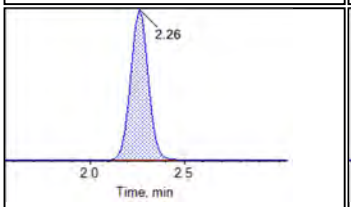
d3-MeFOSAA



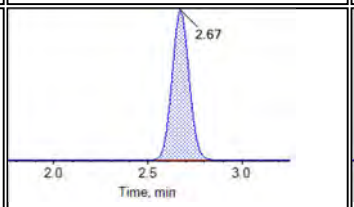
d5-EtFOSAA



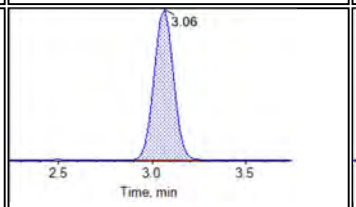
13C5-PFHxA



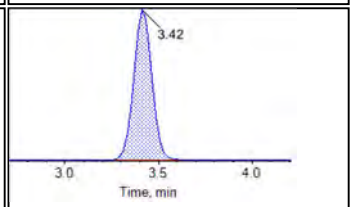
13C4-PFHpA



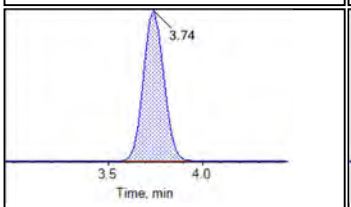
13C8-PFOA



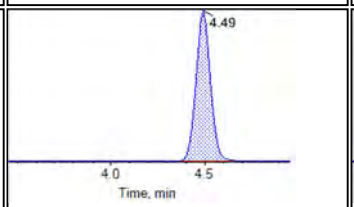
13C9-PFNA



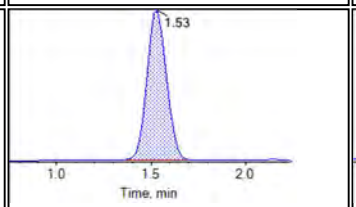
13C6-PFDA



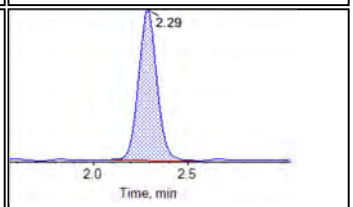
13C7-PFUnA



13C2-PFTeDA



13C3-PFBS



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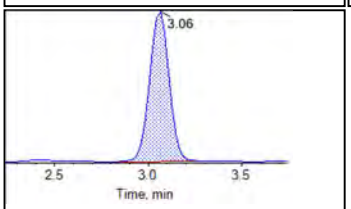
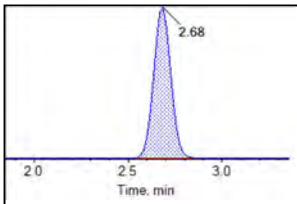


13C8-PFOS

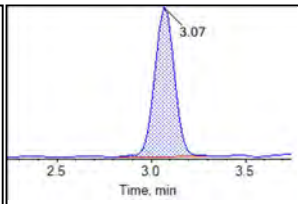
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:07:40 PM

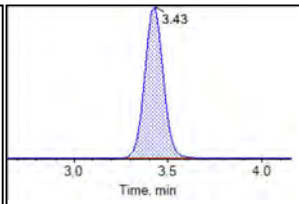
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

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Sample Name	J9423MSD-FS-D(3)	**Injection Vial**	47
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:37:30	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

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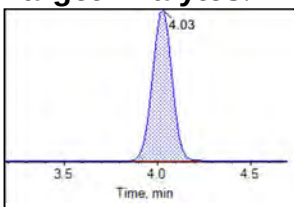
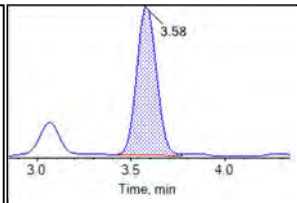
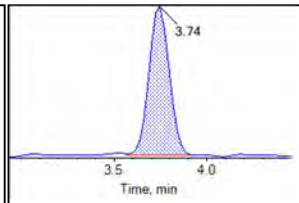


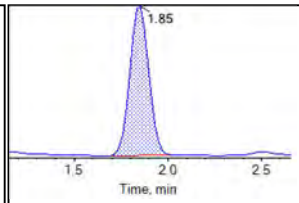
13C2-PFDoA



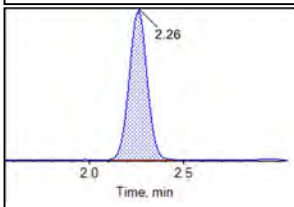
d3-MeFOSAA



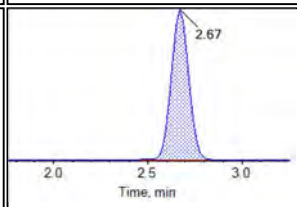
d5-EtFOSAA



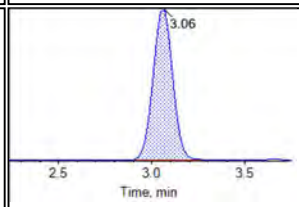
13C5-PFHxA



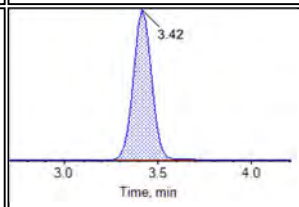
13C4-PFHpA



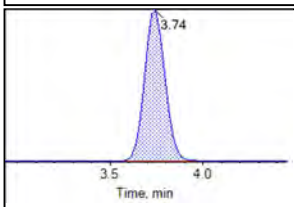
13C8-PFOA



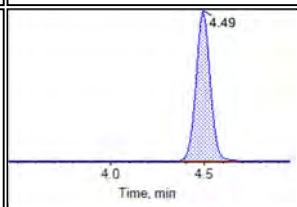
13C9-PFNA



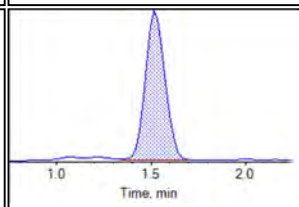
13C6-PFDA



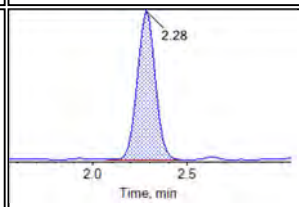
13C7-PFUnA



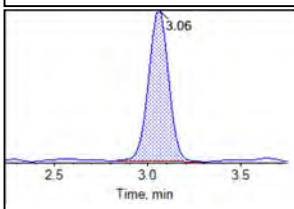
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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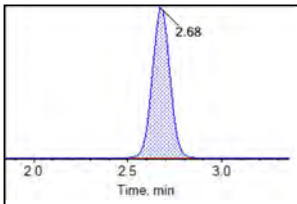
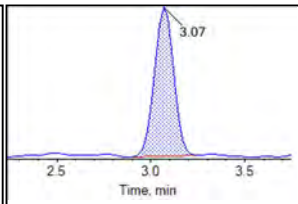
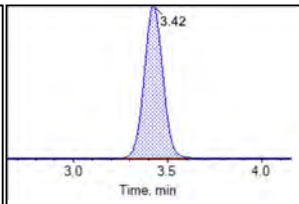
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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Chromatogram Report

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Sample Name	J9423MSD-FS(0)	**Injection Vial**	48
Sample ID	RR-EFF3-18D-SD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T01:48:22	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

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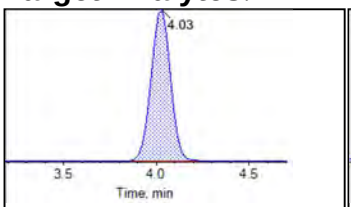
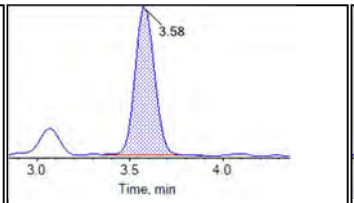
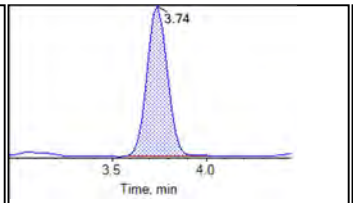


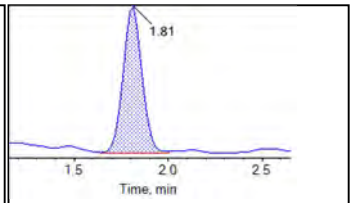
13C2-PFDoA



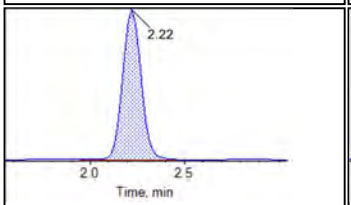
d3-MeFOSAA



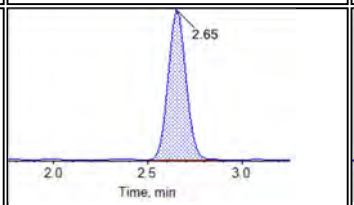
d5-EtFOSAA



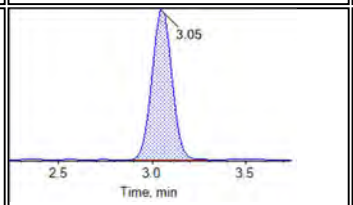
13C5-PFHxA



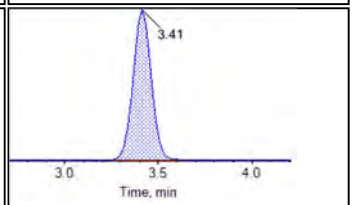
13C4-PFHpA



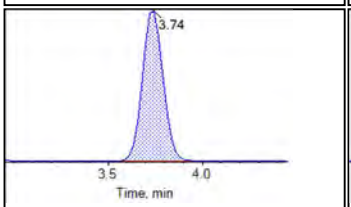
13C8-PFOA



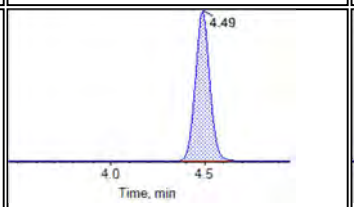
13C9-PFNA



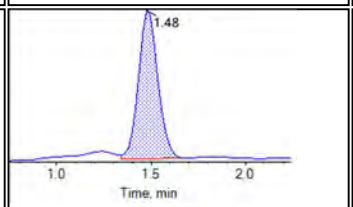
13C6-PFDA



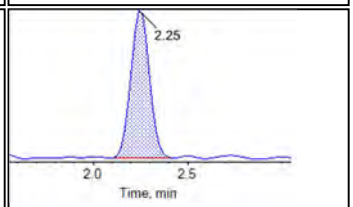
13C7-PFUnA



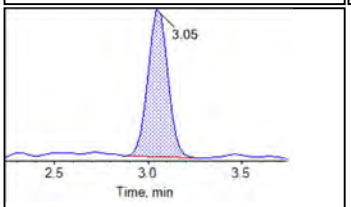
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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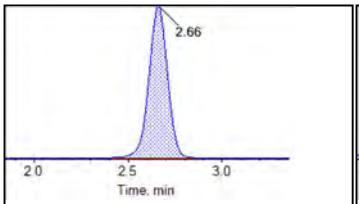
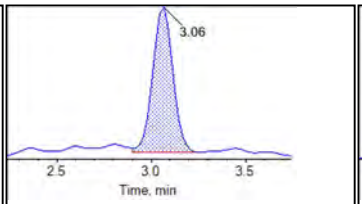
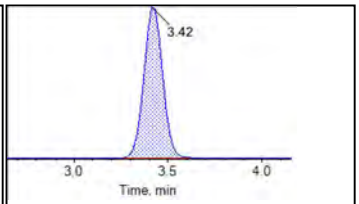
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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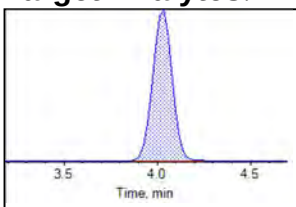
Chromatogram Report

Created with Analyst Reporter
Printed: 26/11/2018 3:07:54 PM

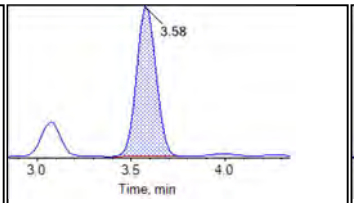
Sample Name	KC70 CCV	**Injection Vial**	49
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-26T02:10:06	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Chromatograms

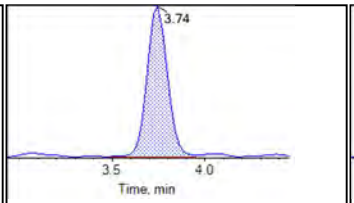
Target Analytes:



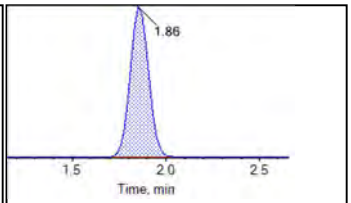
13C2-PFDoA



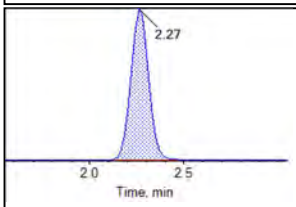
d3-MeFOSAA



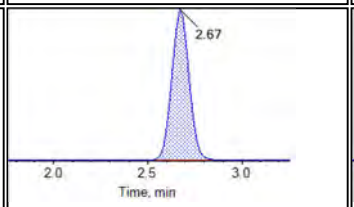
d5-EtFOSAA



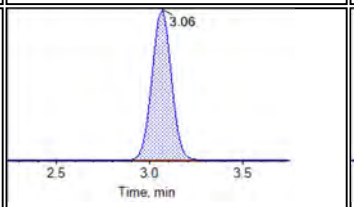
13C5-PFHxA



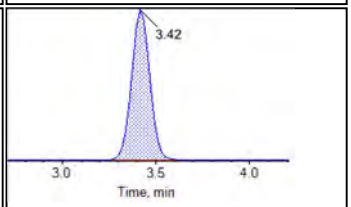
13C4-PFHpA



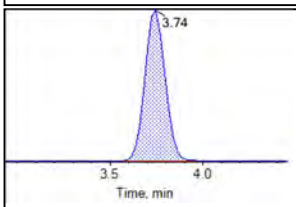
13C8-PFOA



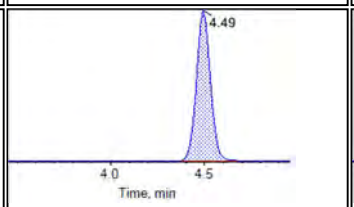
13C9-PFNA



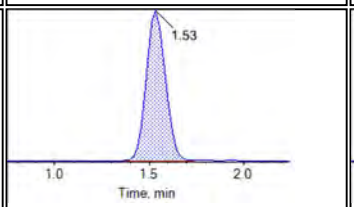
13C6-PFDA



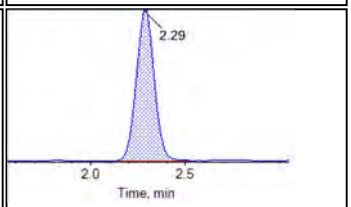
13C7-PFUnA



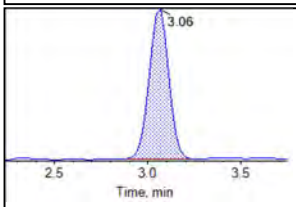
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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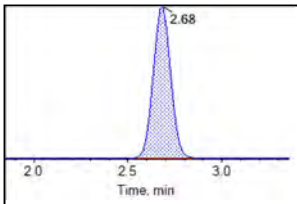
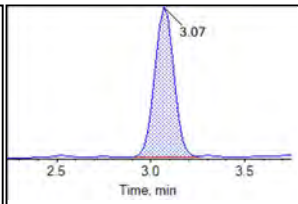
Printed: 26/11/2018 3:07:54 PM

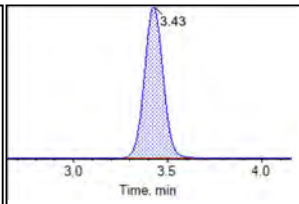
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

Unused Data

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Summary Quant Report

Created with Analyst Reporter
Printed: 26/11/2018 2:48:11 PM

Sample Name	J9412-FS-D(3)	**Injection Vial**	18
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:49:50	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	11487643.02	29568.396630	401.8	false
PFBS_2	298.9 / 99.0	1.55	3477554.27	28987.813772	596.4	false
PFHxA_1	313.0 / 269.0	1.87	22681189.03	64920.488778	300.9	false
PFHxA_2	313.0 / 119.0	1.87	1557484.86	58822.728782	334.2	false
PFHpA_1	363.0 / 319.0	2.28	8549140.49	27016.631528	396.9	false
PFHpA_2	363.0 / 169.0	2.28	170420.22	27097.712092	432.2	false
PFHxS_1	399.0 / 80.0	2.31	68337850.82	179815.466021	1186.5	false
PFHxS_2	399.0 / 99.0	2.31	23219225.45	217265.556663	2033.5	false
PFOA_1	413.0 / 369.0	2.70	9638970.73	27671.057105	702.7	false
PFOA_2	413.0 / 169.0	2.68	800818.07	37728.389634	474.8	false
PFNA_1	463.0 / 419.0	3.09	1013614.73	3955.989965	341.5	false
PFNA_2	463.0 / 219.0	3.09	317599.53	3951.407163	223.9	false
PFOS_1	499.0 / 80.0	3.03	116673871.00	341194.465812	668.3	false
PFOS_2	499.0 / 99.0	3.09	21055959.61	358018.279009	1938.4	false
PFDA_1	513.0 / 469.0	3.45	48587.61	76.737375	98.0	false
PFDA_2	513.0 / 219.0	3.44	2354.80	40.359674	27.7	true
PFUnA_1	563.0 / 519.0	3.77	3481.66	24.850453	19.5	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.06	2853.12	< 0	41.6	true
PFDoA_2	613.0 / 319.0	4.09	1570.09	< 0	15.6	false
PFTrDA_1	663.0 / 619.0	4.31	1856.87	< 0	29.0	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.51	1317.02	< 0	18.6	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	3.61	384.14	< 0	10.3	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	3.78	416.55	< 0	14.5	false
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J9413-FS-D(3)	**Injection Vial**	25
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T21:16:49	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	10042710.45	25850.813826	471.3	false
PFBS_2	298.9 / 99.0	1.55	2954996.22	24637.438210	594.6	false
PFHxA_1	313.0 / 269.0	1.87	19809056.39	59109.294568	297.7	false
PFHxA_2	313.0 / 119.0	1.87	1338166.14	52687.017213	351.3	false
PFHpA_1	363.0 / 319.0	2.28	7237104.22	24272.913917	389.4	false
PFHpA_2	363.0 / 169.0	2.28	139885.43	23602.219817	344.4	false
PFHxS_1	399.0 / 80.0	2.30	60531692.23	171594.651089	1205.2	false
PFHxS_2	399.0 / 99.0	2.30	20183175.41	203463.899818	1565.5	false
PFOA_1	413.0 / 369.0	2.69	8150816.70	25205.348006	616.0	false
PFOA_2	413.0 / 169.0	2.68	677361.15	34374.186922	450.5	false
PFNA_1	463.0 / 419.0	3.09	862333.65	3481.104026	305.5	false
PFNA_2	463.0 / 219.0	3.09	271717.66	3500.369169	191.1	false
PFOS_1	499.0 / 80.0	3.03	104872727.13	284366.758615	728.7	false
PFOS_2	499.0 / 99.0	3.09	18125422.73	285758.568556	2061.5	false
PFDA_1	513.0 / 469.0	3.44	41405.65	59.655055	98.7	false
PFDA_2	513.0 / 219.0	3.44	1811.30	8.006177	17.0	true
PFUnA_1	563.0 / 519.0	3.77	3485.62	25.117135	21.2	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.07	2158.90	< 0	18.9	true
PFDoA_2	613.0 / 319.0	4.09	835.26	< 0	9.4	true
PFTrDA_1	663.0 / 619.0	4.31	787.02	< 0	20.6	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.50	742.25	< 0	11.1	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	3.77	543.05	< 0	22.1	false
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J9418-FS-D(7)	**Injection Vial**	28
Sample ID	RR-EFF2-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T21:49:25	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	125440.67	375.935629	181.9	false
PFBS_2	298.9 / 99.0	1.55	39695.31	417.652340	171.6	false
PFHxA_1	313.0 / 269.0	1.87	284442.49	1206.144819	53.8	true
PFHxA_2	313.0 / 119.0	1.87	22304.55	1251.307638	54.8	true
PFHpA_1	363.0 / 319.0	2.28	120651.40	540.566880	83.5	false
PFHpA_2	363.0 / 169.0	2.29	3689.87	828.247128	56.3	false
PFHxS_1	399.0 / 80.0	2.31	1458256.58	4458.165176	504.5	false
PFHxS_2	399.0 / 99.0	2.31	407569.00	4428.063234	566.2	false
PFOA_1	413.0 / 369.0	2.69	323447.45	1123.910201	241.9	false
PFOA_2	413.0 / 169.0	2.69	25421.53	1432.719316	174.7	false
PFNA_1	463.0 / 419.0	3.09	35411.59	84.090949	96.5	false
PFNA_2	463.0 / 219.0	3.09	12522.95	131.243734	95.3	false
PFOS_1	499.0 / 80.0	3.09	3641606.20	8047.573641	433.7	false
PFOS_2	499.0 / 99.0	3.09	618862.28	7931.404869	806.9	false
PFDA_1	513.0 / 469.0	3.45	4905.56	< 0	41.1	true
PFDA_2	513.0 / 219.0	3.43	130.36	< 0	5.6	true
PFUnA_1	563.0 / 519.0	3.78	1741.11	22.096633	15.9	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.03	1331.41	< 0	19.1	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	4.28	778.56	< 0	24.2	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.51	395.38	< 0	9.6	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J9421-FS-D(5)	**Injection Vial**	35
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:16:17	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	690900.11	1171.071199	218.4	true
PFBS_2	298.9 / 99.0	1.55	214194.26	1206.729389	272.1	false
PFHxA_1	313.0 / 269.0	1.87	1880752.81	3742.392869	122.0	false
PFHxA_2	313.0 / 119.0	1.87	138401.86	3635.360615	135.3	false
PFHpA_1	363.0 / 319.0	2.28	891896.31	1871.282862	198.9	false
PFHpA_2	363.0 / 169.0	2.28	18713.72	1954.740571	106.8	false
PFHxS_1	399.0 / 80.0	2.30	7965951.64	15143.250183	990.4	false
PFHxS_2	399.0 / 99.0	2.30	2251976.88	15221.014103	1296.3	false
PFOA_1	413.0 / 369.0	2.69	2455917.23	4813.844857	491.8	false
PFOA_2	413.0 / 169.0	2.67	204407.03	6561.478329	366.5	false
PFNA_1	463.0 / 419.0	3.08	168322.56	326.531298	213.2	false
PFNA_2	463.0 / 219.0	3.08	51873.92	347.106688	112.1	false
PFOS_1	499.0 / 80.0	3.07	17714557.81	22972.072257	630.2	false
PFOS_2	499.0 / 99.0	3.08	2898156.72	21832.061064	1199.8	false
PFDA_1	513.0 / 469.0	3.43	14404.45	< 0	69.2	false
PFDA_2	513.0 / 219.0	3.44	2127.75	< 0	26.6	false
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.05	1843.81	< 0	25.3	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	4.30	603.98	< 0	19.2	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.51	522.29	< 0	15.8	true
PFTeDA_2	713.0 / 169.0	4.55	129.66	< 0	17.8	false
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J9412-FS-D(3)	**Injection Vial**	18
Sample ID	RR-EFF1-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T19:49:50	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.05	134257.12	228.628978	1227.8	false
d3-MeFOSAA	573.0 / 419.0	3.60	19817.86	330.947914	215.5	false
d5-EtFOSAA	589.0 / 419.0	3.76	22219.82	374.608618	236.1	false
13C5-PFHxA	318.0 / 273.0	1.86	91820.84	226.575709	226.7	false
13C4-PFHpA	367.0 / 322.0	2.27	105885.31	231.067488	518.6	false
13C8-PFOA	421.0 / 376.0	2.69	92741.14	183.102110	901.8	false
13C9-PFNA	472.0 / 427.0	3.08	82536.04	148.688626	920.4	false
13C6-PFDA	519.0 / 474.0	3.43	112444.79	214.301708	774.9	false
13C7-PFUnA	570.0 / 525.0	3.75	111382.27	219.773596	1753.5	false
13C2-PFTeDA	715.0 / 670.0	4.51	110750.85	210.009128	221274.2	false
13C3-PFBS	302.0 / 99.0	1.53	34930.02	327.517453	261.6	false
13C3-PFHxS	402.0 / 99.0	2.30	26782.83	268.267018	195.1	false
13C8-PFOS	507.0 / 99.0	3.07	19572.46	166.325216	164.9	false

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Summary Quant Report

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Sample Name	J9413-FS-D(3)	**Injection Vial**	25
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T21:16:49	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.04	123132.01	204.176307	1230.8	false
d3-MeFOSAA	573.0 / 419.0	3.60	16873.79	350.469771	179.1	false
d5-EtFOSAA	589.0 / 419.0	3.75	21980.90	460.912002	266.7	false
13C5-PFHxA	318.0 / 273.0	1.86	88073.73	228.048830	223.8	false
13C4-PFHpA	367.0 / 322.0	2.27	99751.35	228.418518	722.9	false
13C8-PFOA	421.0 / 376.0	2.68	86091.07	178.356267	895.1	false
13C9-PFNA	472.0 / 427.0	3.07	79637.93	150.543991	644.6	false
13C6-PFDA	519.0 / 474.0	3.43	112019.93	207.884455	1346.9	false
13C7-PFUnA	570.0 / 525.0	3.75	107740.06	207.003205	622.6	false
13C2-PFTeDA	715.0 / 670.0	4.50	103170.84	190.497149	1842.8	false
13C3-PFBS	302.0 / 99.0	1.53	30421.83	354.777486	219.5	true
13C3-PFHxS	402.0 / 99.0	2.29	24861.85	309.727277	222.2	false
13C8-PFOS	507.0 / 99.0	3.07	20755.87	219.375903	153.4	false

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Summary Quant Report

Created with Analyst Reporter
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Sample Name	J9418-FS-D(7)	**Injection Vial**	28
Sample ID	RR-EFF1D-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T21:49:25	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.04	88790.16	176.554761	1027.2	false
d3-MeFOSAA	573.0 / 419.0	3.59	11822.08	180.257592	188.0	false
d5-EtFOSAA	589.0 / 419.0	3.75	12322.61	189.686798	158.1	false
13C5-PFHxA	318.0 / 273.0	1.86	60567.89	195.120485	570.5	false
13C4-PFHpA	367.0 / 322.0	2.27	69901.93	199.150160	741.8	false
13C8-PFOA	421.0 / 376.0	2.68	75866.02	195.549424	1060.9	false
13C9-PFNA	472.0 / 427.0	3.07	81112.70	190.770547	1347.3	false
13C6-PFDA	519.0 / 474.0	3.43	92801.05	206.518904	77941.1	false
13C7-PFUnA	570.0 / 525.0	3.75	87199.29	200.906047	746.7	false
13C2-PFTeDA	715.0 / 670.0	4.51	82291.24	182.207121	2085.2	false
13C3-PFBS	302.0 / 99.0	1.53	28013.96	239.831895	346.5	false
13C3-PFHxS	402.0 / 99.0	2.30	23406.40	214.063379	292.2	false
13C8-PFOS	507.0 / 99.0	3.07	25875.86	200.772562	244.1	false

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Summary Quant Report

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Sample Name	J9421-FS-D(5)	**Injection Vial**	35
Sample ID	RR-EFF3-18D	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-11-25T23:16:17	**Data File**	AC_11252018_5-369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0685_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.04	170458.94	217.577177	1315.2	false
d3-MeFOSAA	573.0 / 419.0	3.58	22072.43	206.664590	202.8	false
d5-EtFOSAA	589.0 / 419.0	3.75	24896.44	235.335661	243.4	false
13C5-PFHxA	318.0 / 273.0	1.86	131134.57	238.213983	288.6	false
13C4-PFHpA	367.0 / 322.0	2.27	156546.63	251.492387	741.3	false
13C8-PFOA	421.0 / 376.0	2.68	135557.30	197.025205	1725.6	false
13C9-PFNA	472.0 / 427.0	3.07	142863.21	189.466530	831.1	false
13C6-PFDA	519.0 / 474.0	3.42	146740.72	209.621829	3034.7	false
13C7-PFUnA	570.0 / 525.0	3.74	149682.57	221.375866	628.0	false
13C2-PFTeDA	715.0 / 670.0	4.50	142073.56	201.931439	2265.7	false
13C3-PFBS	302.0 / 99.0	1.53	51894.11	272.814086	316.6	false
13C3-PFHxS	402.0 / 99.0	2.29	38163.31	214.323622	316.3	false
13C8-PFOS	507.0 / 99.0	3.07	43748.48	208.443742	312.5	false

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	CH2M_Code	Analysis_Group	Analytical_Method	PRC_Code	Lab_Code	Lab_Name	Leachate_Method	SAMPLE_BASIS	Extraction_Method	Result_Type	Lab_QC_type	SAMPLE_MEDIUM	QC_Level	DateTime_Collected	Date_Received	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	GC_Column_Type	Analysis_Result_Type	Result_Narrative	QC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	QSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch	Validator_Name	Val_Date
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-24-4		0.5	NG_L	U			TRG					20171116		0.19	0.19	5.1	70	0.5	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9		0.5	NG_L	U			TRG					20171116		0.16	0.16	5.1	70	0.5	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			Perfluorooctanoic acid (PFOA)	335-67-1		1.49	NG_L	J			TRG					20171116		0.18	0.18	5.1	70	0.5	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1		1	NG_L	U			TRG					20171116		0.26	0.26	5.1	70	1	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2		0.5	NG_L	U			TRG					20171116		0.16	0.16	5.1	70	0.5	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		1	NG_L	U			TRG					20171116		0.29	0.29	5.1	70	1	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1		0.5	NG_L	U			TRG					20171116		0.18	0.18	5.1	70	0.5	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		0.5	NG_L	U			TRG					20171116		0.15	0.15	5.1	70	0.5	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		1	NG_L	U			TRG					20171116		0.25	0.25	5.1	70	1	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		2	NG_L	U			TRG					20171116		0.56	0.56	5.1	70	2	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		1	NG_L	U			TRG					20171116		0.49	0.49	5.1	70	1	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.5	NG_L	U			TRG					20171116		0.13	0.13	5.1	70	0.5	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		0.4	NG_L	U			TRG					20171116		0.11	0.11	5.1	70	0.4	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.5	NG_L	U			TRG					20171116		0.19	0.19	5.1	70	0.5	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			13C5-PFHxA	BDO-2217		98	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			13C4-PFHpA	BDO-2218		91	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			13C8-PFOA	BDO-2219		95	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			13C9-PFNA	BDO-2221		103	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			13C6-PFDA	BDO-2222		93	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			13C7-PFUnA	BDO-2223		92	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			13C2-PFDoA	BDO-2112		88	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			13C2-PFTeDA	BDO-2224		73	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			d3-MeFOSAA	BDO-1838		98	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			d5-EtFOSAA	BDO-1839		116	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			13C3-PFBS	BDO-2226		103	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			13C3-PFHxS	BDO-2227		105	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS241PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	18:44:39	CS241PB-FS	1	1			13C8-PFOS	BDO-2228		108	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-24-4		111	PCT_REC				TRG		LSA	137	51	20171116		0.19	0.19	5.1		0.5	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9		117	PCT_REC				TRG		LSA	136	48	20171116		0.16	0.16	5.1		0.5	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			Perfluorooctanoic acid (PFOA)	335-67-1		110	PCT_REC				TRG		LSA	141	49	20171116		0.18	0.18	5.1		0.5	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1		115	PCT_REC				TRG		LSA	122	58	20171116		0.26	0.26	5.1		1	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2		114	PCT_REC				TRG		LSA	135	59	20171116		0.16	0.16	5.1		0.5	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		107	PCT_REC				TRG		LSA	134	64	20171116		0.29	0.29	5.1		1	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1		115	PCT_REC				TRG		LSA	131	75	20171116		0.18	0.18	5.1		0.5	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		114	PCT_REC				TRG		LSA	148	42	20171116		0.15	0.15	5.1		0.5	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		112	PCT_REC				TRG		LSA	158	42	20171116		0.25	0.25	5.1		1	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		108	PCT_REC				TRG		LSA	146	50	20171116		0.56	0.56	5.1		2	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		115	PCT_REC				TRG		LSA	131	51	20171116		0.49	0.49	5.1		1	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5		120	PCT_REC				TRG		LSA	134	56	20171116		0.13	0.13	5.1		0.5	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		102	PCT_REC				TRG		LSA	128	52	20171116		0.11	0.11	5.1		0.4	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1		131	PCT_REC				TRG		LSA	144	40	20171116		0.19	0.19	5.1		0.5	5	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			13C5-PFHxA	BDO-2217		87	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			13C4-PFHpA	BDO-2218		85	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			13C8-PFOA	BDO-2219		84	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			13C9-PFNA	BDO-2221		94	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			13C6-PFDA	BDO-2222		86	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			13C7-PFUnA	BDO-2223		84	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			13C2-PFDoA	BDO-2112		85	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			13C2-PFTeDA	BDO-2224		84	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			d3-MeFOSAA	BDO-1838		93	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			d5-EtFOSAA	BDO-1839		81	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			13C3-PFBS	BDO-2226		89	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			13C3-PFHxS	BDO-2227		92	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS242LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181125	19:06:23	CS242LCS-FS	1	1			13C8-PFOS	BDO-2228		75	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	19:28:08	J9412-FS	50	1			Perfluorohexanoic Acid (PFHxA)	307-24-4		1149.15	NG_L	D			TRG					20171116		8.48	8.48	5.1	70	22.32	223.21	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	19:38:59	J9412-FS	10	1			Perfluoroheptanoic acid (PFHpA)	375-85-9		453.07	NG_L	D			TRG					20171116		1.43	1.43	5.1	70	4.46	44.64	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	19:38:59	J9412-FS	10	1			Perfluorooctanoic acid (PFOA)	335-67-1		425.94	NG_L	D			TRG					20171116		1.61	1.61	5.1	70	4.46	44.64	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	20:00:42	J9412-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1		71.56	NG_L				TRG					20171116		0.23	0.23	5.1	70	0.89	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	20:00:42	J9412-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2		1.53	NG_L	J			TRG					20171116		0.14	0.14	5.1	70	0.45	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	20:00:42	J9412-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		0.89	NG_L	U			TRG					20171116		0.26	0.26	5.1	70	0.89	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	20:00:42	J9412-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1		0.45	NG_L	U			TRG					20171116		0.16	0.16	5.1	70	0.45	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	20:00:42	J9412-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		0.45	NG_L	U			TRG					20171116		0.13	0.13	5.1	70	0.45	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	20:00:42	J9412-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		0.89	NG_L	U			TRG					20171116		0.22	0.22	5.1	70	0.89	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	20:00:42	J9412-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		1.79	NG_L	U			TRG					20171116		0.5	0.5	5.1	70	1.79	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	20:00:42	J9412-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		0.89	NG_L	U			TRG					20171116		0.44	0.44	5.1	70	0.89	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	19:28:08	J9412-FS	50	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5		493.37	NG_L	D			TRG					20171116		5.8	5.8	5.1	70	22.32	223.21	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	19:17:16	J9412-FS	100	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		3243.76	NG_L	D			TRG					20171116		9.82	9.82	5.1	70	35.71	446.43	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	19:17:16	J9412-FS	100	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1		5190.61	NG_L	D			TRG					20171116		16.96	16.96	5.1	70	44.64	446.43	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	19:28:08	J9412-FS	50	1			13C5-PFHxA	BDO-2217		88	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	19:38:59	J9412-FS	10	1			13C4-PFHpA	BDO-2218		96	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	19:38:59	J9412-FS	10	1			13C8-PFOA	BDO-2219		82	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	19:28:08	J9412-FS	50	1			13C9-PFNA	BDO-2221		81	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	20:00:42	J9412-FS	1	1			13C6-PFDA	BDO-2222		91	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	20:00:42	J9412-FS	1	1			13C7-PFUnA	BDO-2223		76	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	20:00:42	J9412-FS	1	1			13C2-PFDoA	BDO-2112		72	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	20:00:42	J9412-FS	1	1			13C2-PFTeDA	BDO-2224		63	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	20:00:42	J9412-FS	1	1			d3-MeFOSAA	BDO-1838		126	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	19:17:16	J9412-FS	100	1			d5-EtFOSAA	BDO-1839		93	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	19:28:08	J9412-FS	50	1			13C3-PFBS	BDO-2226		110	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	19:17:16	J9412-FS	100	1			13C3-PFHxS	BDO-2227		100	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 08:55	11/17/2018			20181120	10:55:00	20181125	19:17:16	J9412-FS	100	1			13C8-PFOS	BDO-2228		96	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	20:55:04	J9413-FS	50	1			Perfluorohexanoic Acid (PFHxA)	307-24-4		978.63	NG_L	D			TRG					20171116		8.48	8.48	5.1	70	22.32	223.21	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	21:05:57	J9413-FS	10	1			Perfluoroheptanoic acid (PFHpA)	375-85-9		446.84	NG_L	D			TRG					20171116		1.43	1.43	5.1	70	4.46	44.64	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	21:05:57	J9413-FS	10	1			Perfluorooctanoic acid (PFOA)	335-67-1		452.64	NG_L	D			TRG					20171116		1.61	1.61	5.1	70	4.46	44.64	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	21:27:41	J9413-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1		76.46	NG_L				TRG					20171116		0.23	0.23	5.1	70	0.89	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	21:27:41	J9413-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2		1.54	NG_L	J			TRG					20171116		0.14	0.14	5.1	70	0.45	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	21:27:41	J9413-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		0.89	NG_L	U			TRG					20171116		0.26	0.26	5.1	70	0.89	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	21:27:41	J9413-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1		0.45	NG_L	U			TRG					20171116		0.16	0.16	5.1	70	0.45	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	21:27:41	J9413-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		0.45	NG_L	U			TRG					20171116		0.13	0.13	5.1	70	0.45	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	21:27:41	J9413-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		0.89	NG_L	U			TRG					20171116		0.22	0.22	5.1	70	0.89	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	21:27:41	J9413-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		1.79	NG_L	U			TRG					20171116		0.5	0.5	5.1	70	1.79	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	21:27:41	J9413-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		0.89	NG_L	U			TRG					20171116		0.44	0.44	5.1	70	0.89	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	21:05:57	J9413-FS	10	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5		469.73	NG_L	D			TRG					20171116		1.16	1.16	5.1	70	4.46	44.64	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	20:55:04	J9413-FS	50	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		3167.76	NG_L	D			TRG					20171116		4.91	4.91	5.1	70	17.86	223.21	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	20:44:11	J9413-FS	100	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1		5037.56	NG_L	D			TRG					20171116		16.96	16.96	5.1	70	44.64	446.43	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	20:55:04	J9413-FS	50	1			13C5-PFHxA	BDO-2217		84	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	21:05:57	J9413-FS	10	1			13C4-PFHpA	BDO-2218		91	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	21:05:57	J9413-FS	10	1			13C8-PFOA	BDO-2219		74	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	20:55:04	J9413-FS	50	1			13C9-PFNA	BDO-2221		81	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	21:27:41	J9413-FS	1	1			13C6-PFDA	BDO-2222		85	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	21:27:41	J9413-FS	1	1			13C7-PFUnA	BDO-2223		72	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	21:27:41	J9413-FS	1	1			13C2-PFDoA	BDO-2112		71	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	21:27:41	J9413-FS	1	1			13C2-PFTeDA	BDO-2224		66	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	21:27:41	J9413-FS	1	1			d3-MeFOSAA	BDO-1838		131	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	20:44:11	J9413-FS	100	1			d5-EtFOSAA	BDO-1839		78	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	21:05:57	J9413-FS	10	1			13C3-PFBS	BDO-2226		148	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	20:55:04	J9413-FS	50	1			13C3-PFHxS	BDO-2227		86	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 09:00	11/17/2018			20181120	10:55:00	20181125	20:44:11	J9413-FS	100	1			13C8-PFOS	BDO-2228		75	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:32:52	J9418-FS	5	1			Perfluorohexanoic Acid (PFHxA)	307-24-4		255.76	NG_L	D			TRG					20171116		0.85	0.85	5.1	70	2.23	22.32	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:32:52	J9418-FS	5	1			Perfluoroheptanoic acid (PFHpA)	375-85-9		104.34	NG_L	D			TRG					20171116		0.71	0.71	5.1	70	2.23	22.32	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:32:52	J9418-FS	5	1			Perfluorooctanoic acid (PFOA)	335-67-1		209.73	NG_L	D			TRG					20171116		0.8	0.8	5.1	70	2.23	22.32	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:43:42	J9418-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1		40.22	NG_L				TRG					20171116		0.23	0.23	5.1	70	0.89	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:43:42	J9418-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2		1.49	NG_L	J			TRG					20171116		0.14	0.14	5.1	70	0.45	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:43:42	J9418-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		0.89	NG_L	U			TRG					20171116		0.26	0.26	5.1	70	0.89	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:43:42	J9418-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1		0.45	NG_L	U			TRG					20171116		0.16	0.16	5.1	70	0.45	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:43:42	J9418-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		0.45	NG_L	U			TRG					20171116		0.13	0.13	5.1	70	0.45	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:43:42	J9418-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		0.89	NG_L	U			TRG					20171116		0.22	0.22	5.1	70	0.89	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:43:42	J9418-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		1.79	NG_L	U			TRG					20171116		0.5	0.5	5.1	70	1.79	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:43:42	J9418-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		0.89	NG_L	U			TRG					20171116		0.44	0.44	5.1	70	0.89	4.46	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:32:52	J9418-FS	5	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5		76.35	NG_L	D			TRG					20171116		0.58	0.58	5.1	70	2.23	22.32	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:22:00	J9418-FS	25	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		751.98	NG_L	D			TRG					20171116		2.46	2.46	5.1	70	8.93	111.61	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:22:00	J9418-FS	25	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1		1571.61	NG_L	D			TRG					20171116		4.24	4.24	5.1	70	11.16	111.61	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:32:52	J9418-FS	5	1			13C5-PFHxA	BDO-2217		79	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:32:52	J9418-FS	5	1			13C4-PFHpA	BDO-2218		89	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:32:52	J9418-FS	5	1			13C8-PFOA	BDO-2219		70	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:32:52	J9418-FS	5	1			13C9-PFNA	BDO-2221		63	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:43:42	J9418-FS	1	1			13C6-PFDA	BDO-2222		57	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:43:42	J9418-FS	1	1			13C7-PFUnA	BDO-2223		59	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:43:42	J9418-FS	1	1			13C2-PFDoA	BDO-2112		58	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:43:42	J9418-FS	1	1			13C2-PFTeDA	BDO-2224		51	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:43:42	J9418-FS	1	1			d3-MeFOSAA	BDO-1838		93	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:43:42	J9418-FS	1	1			d5-EtFOSAA	BDO-1839		138	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:32:52	J9418-FS	5	1			13C3-PFBS	BDO-2226		119	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:22:00	J9418-FS	25	1			13C3-PFHxS	BDO-2227		99	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF2-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 08:30	11/17/2018			20181120	10:55:00	20181125	22:22:00	J9418-FS	25	1			13C8-PFOS	BDO-2228		78	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-24-4		0.44	NG_L	U			TRG					20171116		0.17	0.17	5.1	70	0.44	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9		0.44	NG_L	U			TRG					20171116		0.14	0.14	5.1	70	0.44	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			Perfluorooctanoic acid (PFOA)	335-67-1		1.17	NG_L	J			TRG					20171116		0.16	0.16	5.1	70	0.44	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1		0.88	NG_L	U			TRG					20171116		0.23	0.23	5.1	70	0.88	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2		0.44	NG_L	U			TRG					20171116		0.14	0.14	5.1	70	0.44	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		0.88	NG_L	U			TRG					20171116		0.25	0.25	5.1	70	0.88	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1		0.44	NG_L	U			TRG					20171116		0.16	0.16	5.1	70	0.44	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		0.44	NG_L	U			TRG					20171116		0.13	0.13	5.1	70	0.44	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		0.88	NG_L	U			TRG					20171116		0.22	0.22	5.1	70	0.88	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		1.75	NG_L	U			TRG					20171116		0.49	0.49	5.1	70	1.75	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		0.88	NG_L	U			TRG					20171116		0.43	0.43	5.1	70	0.88	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.44	NG_L	U			TRG					20171116		0.11	0.11	5.1	70	0.44	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		0.35	NG_L	U			TRG					20171116		0.1	0.1	5.1	70	0.35	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.44	NG_L	U			TRG					20171116		0.17	0.17	5.1	70	0.44	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			13C5-PFHxA	BDO-2217		85	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			13C4-PFHpA	BDO-2218		87	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			13C8-PFOA	BDO-2219		90	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			13C9-PFNA	BDO-2221		92	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			13C6-PFDA	BDO-2222		88	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			13C7-PFUnA	BDO-2223		86	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			13C2-PFDoA	BDO-2112		83	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			13C2-PFTeDA	BDO-2224		79	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			d3-MeFOSAA	BDO-1838		79	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			d5-EtFOSAA	BDO-1839		76	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			13C3-PFBS	BDO-2226		86	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			13C3-PFHxS	BDO-2227		96	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:30	11/17/2018			20181120	10:55:00	20181125	18:55:32	J9419-FS	1	1			13C8-PFOS	BDO-2228		84	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:05:27	J9421-FS	50	1			Perfluorohexanoic Acid (PFHxA)	307-24-4		367.98	NG_L	D			TRG					20171116		8.33	8.33	5.1	70	21.93	219.3	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:27:08	J9421-FS	5	1			Perfluoroheptanoic acid (PFHpA)	375-85-9		173.69	NG_L	D			TRG					20171116		0.7	0.7	5.1	70	2.19	21.93	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:05:27	J9421-FS	50	1			Perfluorooctanoic acid (PFOA)	335-67-1		461.62	NG_L	D			TRG					20171116		7.89	7.89	5.1	70	21.93	219.3	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:38:00	J9421-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1		33.56	NG_L				TRG					20171116		0.23	0.23	5.1	70	0.88	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:38:00	J9421-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2		1.14	NG_L	J			TRG					20171116		0.14	0.14	5.1	70	0.44	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:38:00	J9421-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		0.88	NG_L	U			TRG					20171116		0.25	0.25	5.1	70	0.88	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:38:00	J9421-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1		0.44	NG_L	U			TRG					20171116		0.16	0.16	5.1	70	0.44	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:38:00	J9421-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		0.44	NG_L	U			TRG					20171116		0.13	0.13	5.1	70	0.44	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:38:00	J9421-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		0.88	NG_L	U			TRG					20171116		0.22	0.22	5.1	70	0.88	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:38:00	J9421-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		1.75	NG_L	U			TRG					20171116		0.49	0.49	5.1	70	1.75	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:38:00	J9421-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		0.88	NG_L	U			TRG					20171116		0.43	0.43	5.1	70	0.88	4.39	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:27:08	J9421-FS	5	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5		104.33	NG_L	D			TRG					20171116		0.57	0.57	5.1	70	2.19	21.93	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:05:27	J9421-FS	50	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		1283.27	NG_L	D			TRG					20171116		4.82	4.82	5.1	70	17.54	219.3	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:05:27	J9421-FS	50	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1		2558.03	NG_L	D			TRG					20171116		8.33	8.33	5.1	70	21.93	219.3	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:05:27	J9421-FS	50	1			13C5-PFHxA	BDO-2217		88	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:27:08	J9421-FS	5	1			13C4-PFHpA	BDO-2218		100	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:05:27	J9421-FS	50	1			13C8-PFOA	BDO-2219		83	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:38:00	J9421-FS	1	1			13C9-PFNA	BDO-2221		57	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:38:00	J9421-FS	1	1			13C6-PFDA	BDO-2222		91	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:38:00	J9421-FS	1	1			13C7-PFUnA	BDO-2223		113	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:38:00	J9421-FS	1	1			13C2-PFDoA	BDO-2112		108	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:38:00	J9421-FS	1	1			13C2-PFTeDA	BDO-2224		96	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:05:27	J9421-FS	50	1			d3-MeFOSAA	BDO-1838		65	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:05:27	J9421-FS	50	1			d5-EtFOSAA	BDO-1839		80	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:27:08	J9421-FS	5	1			13C3-PFBS	BDO-2226		138	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:05:27	J9421-FS	50	1			13C3-PFHxS	BDO-2227		84	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181125	23:05:27	J9421-FS	50	1			13C8-PFOS	BDO-2228		71	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:32:19	J9422MS-FS	25	1			Perfluorohexanoic Acid (PFHxA)	307-24-4		0	PCT_REC	N			TRG		LSA	137	51	20171116		4.4	4.4	5.1		11.57	115.74	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:43:11	J9422MS-FS	5	1			Perfluoroheptanoic acid (PFHpA)	375-85-9		118	PCT_REC				TRG		LSA	136	48	20171116		0.74	0.74	5.1		2.31	23.15	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:32:19	J9422MS-FS	25	1			Perfluorooctanoic acid (PFOA)	335-67-1		0	PCT_REC	N			TRG		LSA	141	49	20171116		4.17	4.17	5.1		11.57	115.74	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:43:11	J9422MS-FS	5	1			Perfluorononanoic acid (PFNA)	375-95-1		126	PCT_REC	N			TRG		LSA	122	58	20171116		1.2	1.2	5.1		4.63	23.15	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:54:02	J9422MS-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2		119	PCT_REC				TRG		LSA	135	59	20171116		0.15	0.15	5.1		0.46	4.63	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:54:02	J9422MS-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		104	PCT_REC				TRG		LSA	134	64	20171116		0.27	0.27	5.1		0.93	4.63	18-0685	DP-18-0377		

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	CH2M_Code	Analysis_Group	Analytical_Method	PRC_Code	Lab_Code	Lab_Name	Leachate_Method	SAMPLE_BASIS	Extraction_Method	Result_Type	Lab_QC_type	SAMPLE_MEDIUM	QC_Level	DateTime_Collected	Date_Received	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	GC_Column_Type	Analysis_Result_Type	Result_Narrative	QC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	QSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch	Validator_Name	Val_Date
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:54:02	J9422MS-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1		113	PCT_REC				TRG		LSA	131	75	20171116		0.17	0.17	5.1		0.46	4.63	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:54:02	J9422MS-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		121	PCT_REC				TRG		LSA	148	42	20171116		0.14	0.14	5.1		0.46	4.63	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:54:02	J9422MS-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		112	PCT_REC				TRG		LSA	158	42	20171116		0.23	0.23	5.1		0.93	4.63	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:54:02	J9422MS-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		104	PCT_REC				TRG		LSA	146	50	20171116		0.52	0.52	5.1		1.85	4.63	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:43:11	J9422MS-FS	5	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		117	PCT_REC				TRG		LSA	131	51	20171116		2.27	2.27	5.1		4.63	23.15	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:43:11	J9422MS-FS	5	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5		151	PCT_REC	N			TRG		LSA	134	56	20171116		0.6	0.6	5.1		2.31	23.15	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:32:19	J9422MS-FS	25	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		13	PCT_REC	N			TRG		LSA	128	52	20171116		2.55	2.55	5.1		9.26	115.74	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:21:27	J9422MS-FS	50	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0	PCT_REC	N			TRG		LSA	144	40	20171116		8.8	8.8	5.1		23.15	231.48	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:32:19	J9422MS-FS	25	1			13C5-PFHxA	BDO-2217		101	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:43:11	J9422MS-FS	5	1			13C4-PFHpA	BDO-2218		99	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:32:19	J9422MS-FS	25	1			13C8-PFOA	BDO-2219		84	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:43:11	J9422MS-FS	5	1			13C9-PFNA	BDO-2221		73	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:54:02	J9422MS-FS	1	1			13C6-PFDA	BDO-2222		82	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:54:02	J9422MS-FS	1	1			13C7-PFUnA	BDO-2223		107	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:54:02	J9422MS-FS	1	1			13C2-PFDoA	BDO-2112		103	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:54:02	J9422MS-FS	1	1			13C2-PFTeDA	BDO-2224		94	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:21:27	J9422MS-FS	50	1			d3-MeFOSAA	BDO-1838		82	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:43:11	J9422MS-FS	5	1			d5-EtFOSAA	BDO-1839		136	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:43:11	J9422MS-FS	5	1			13C3-PFBS	BDO-2226		141	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:32:19	J9422MS-FS	25	1			13C3-PFHxS	BDO-2227		98	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	00:21:27	J9422MS-FS	50	1			13C8-PFOS	BDO-2228		87	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:26:37	J9423MSD-FS	25	1			Perfluorohexanoic Acid (PFHxA)	307-24-4		0	PCT_REC	N			TRG		LSA	137	51	20171116		4.4	4.4	5.1		11.57	115.74	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:37:30	J9423MSD-FS	5	1			Perfluoroheptanoic acid (PFHpA)	375-85-9		121	PCT_REC				TRG		LSA	136	48	20171116		0.74	0.74	5.1		2.31	23.15	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:26:37	J9423MSD-FS	25	1			Perfluorooctanoic acid (PFOA)	335-67-1		0	PCT_REC	N			TRG		LSA	141	49	20171116		4.17	4.17	5.1		11.57	115.74	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:37:30	J9423MSD-FS	5	1			Perfluorononanoic acid (PFNA)	375-95-1		107	PCT_REC				TRG		LSA	122	58	20171116		1.2	1.2	5.1		4.63	23.15	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:48:22	J9423MSD-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2		115	PCT_REC				TRG		LSA	135	59	20171116		0.15	0.15	5.1		0.46	4.63	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:48:22	J9423MSD-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		101	PCT_REC				TRG		LSA	134	64	20171116		0.27	0.27	5.1		0.93	4.63	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:48:22	J9423MSD-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1		114	PCT_REC				TRG		LSA	131	75	20171116		0.17	0.17	5.1		0.46	4.63	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:48:22	J9423MSD-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		116	PCT_REC				TRG		LSA	148	42	20171116		0.14	0.14	5.1		0.46	4.63	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:48:22	J9423MSD-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		108	PCT_REC				TRG		LSA	158	42	20171116		0.23	0.23	5.1		0.93	4.63	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:48:22	J9423MSD-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		119	PCT_REC				TRG		LSA	146	50	20171116		0.52	0.52	5.1		1.85	4.63	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:37:30	J9423MSD-FS	5	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		111	PCT_REC				TRG		LSA	131	51	20171116		2.27	2.27	5.1		4.63	23.15	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:37:30	J9423MSD-FS	5	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5		115	PCT_REC				TRG		LSA	134	56	20171116		0.6	0.6	5.1		2.31	23.15	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:26:37	J9423MSD-FS	25	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		0	PCT_REC	N			TRG		LSA	128	52	20171116		2.55	2.55	5.1		9.26	115.74	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:15:45	J9423MSD-FS	50	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0	PCT_REC	N			TRG		LSA	144	40	20171116		8.8	8.8	5.1		23.15	231.48	18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:26:37	J9423MSD-FS	25	1			13C5-PFHxA	BDO-2217		93	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:37:30	J9423MSD-FS	5	1			13C4-PFHpA	BDO-2218		97	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:26:37	J9423MSD-FS	25	1			13C8-PFOA	BDO-2219		86	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:37:30	J9423MSD-FS	5	1			13C9-PFNA	BDO-2221		76	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:48:22	J9423MSD-FS	1	1			13C6-PFDA	BDO-2222		81	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:48:22	J9423MSD-FS	1	1			13C7-PFUnA	BDO-2223		102	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:48:22	J9423MSD-FS	1	1			13C2-PFDoA	BDO-2112		98	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:48:22	J9423MSD-FS	1	1			13C2-PFTeDA	BDO-2224		94	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:15:45	J9423MSD-FS	50	1			d3-MeFOSAA	BDO-1838		79	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:37:30	J9423MSD-FS	5	1			d5-EtFOSAA	BDO-1839		122	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:37:30	J9423MSD-FS	5	1			13C3-PFBS	BDO-2226		143	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:26:37	J9423MSD-FS	25	1			13C3-PFHxS	BDO-2227		101	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	RR-EFF3-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/16/2018 15:50	11/17/2018			20181120	10:55:00	20181126	01:15:45	J9423MSD-FS	50	1			13C8-PFOS	BDO-2228		84	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0685	DP-18-0377		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-24-4		0.5	NG_L	U			TRG					20171116		0.19	0.19	5.1	70	0.5	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9		0.5	NG_L	U			TRG					20171116		0.16	0.16	5.1	70	0.5	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			Perfluorooctanoic acid (PFOA)	335-67-1		1.31	NG_L	J			TRG					20171116		0.18	0.18	5.1	70	0.5	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1		1	NG_L	U			TRG					20171116		0.26	0.26	5.1	70	1	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2		0.5	NG_L	U			TRG					20171116		0.16	0.16	5.1	70	0.5	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		1	NG_L	U			TRG					20171116		0.29	0.29	5.1	70	1	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1		0.5	NG_L	U			TRG					20171116		0.18	0.18	5.1	70	0.5	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		0.5	NG_L	U			TRG					20171116		0.15	0.15	5.1	70	0.5	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		1	NG_L	U			TRG					20171116		0.25	0.25	5.1	70	1	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		2	NG_L	U			TRG					20171116		0.56	0.56	5.1	70	2	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		1	NG_L	U			TRG					20171116		0.49	0.49	5.1	70	1	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.5	NG_L	U			TRG					20171116		0.13	0.13	5.1	70	0.5	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		0.4	NG_L	U			TRG					20171116		0.11	0.11	5.1	70	0.4	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.5	NG_L	U			TRG					20171116		0.19	0.19	5.1	70	0.5	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			13C5-PFHxA	BDO-2217		79	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			13C4-PFHpA	BDO-2218		85	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			13C8-PFOA	BDO-2219		93	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			13C9-PFNA	BDO-2221		88	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			13C6-PFDA	BDO-2222		87	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			13C7-PFUnA	BDO-2223		90	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			13C2-PFDoA	BDO-2112		77	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			13C2-PFTeDA	BDO-2224		78	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			d3-MeFOSAA	BDO-1838		79	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			d5-EtFOSAA	BDO-1839		75	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			13C3-PFBS	BDO-2226		78	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			13C3-PFHxS	BDO-2227		71	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS243PB-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BLK	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:13:14	CS243PB-FS	1	1			13C8-PFOS	BDO-2228		80	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-24-4		114	PCT_REC				TRG		LSA	137	51	20171116		0.19	0.19	5.1		0.5	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9		109	PCT_REC				TRG		LSA	136	48	20171116		0.16	0.16	5.1		0.5	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			Perfluorooctanoic acid (PFOA)	335-67-1		106	PCT_REC				TRG		LSA	141	49	20171116		0.18	0.18	5.1		0.5	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1		113	PCT_REC				TRG		LSA	122	58	20171116		0.26	0.26	5.1		1	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2		119	PCT_REC				TRG		LSA	135	59	20171116		0.16	0.16	5.1		0.5	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		118	PCT_REC				TRG		LSA	134	64	20171116		0.29	0.29	5.1		1	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1		111	PCT_REC				TRG		LSA	131	75	20171116		0.18	0.18	5.1		0.5	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		107	PCT_REC				TRG		LSA	148	42	20171116		0.15	0.15	5.1		0.5	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		106	PCT_REC				TRG		LSA	158	42	20171116		0.25	0.25	5.1		1	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		108	PCT_REC				TRG		LSA	146	50	20171116		0.56	0.56	5.1		2	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		126	PCT_REC				TRG		LSA	131	51	20171116		0.49	0.49	5.1		1	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5		111	PCT_REC				TRG		LSA	134	56	20171116		0.13	0.13	5.1		0.5	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		116	PCT_REC				TRG		LSA	128	52	20171116		0.11	0.11	5.1		0.4	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1		118	PCT_REC				TRG		LSA	144	40	20171116		0.19	0.19	5.1		0.5	5	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			13C5-PFHxA	BDO-2217		90	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			13C4-PFHpA	BDO-2218		89	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			13C8-PFOA	BDO-2219		88	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			13C9-PFNA	BDO-2221		90	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			13C6-PFDA	BDO-2222		79	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			13C7-PFUnA	BDO-2223		82	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			13C2-PFDoA	BDO-2112		85	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			13C2-PFTeDA	BDO-2224		88	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			d3-MeFOSAA	BDO-1838		102	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			d5-EtFOSAA	BDO-1839		78	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			13C3-PFBS	BDO-2226		100	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			13C3-PFHxS	BDO-2227		89	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	CS244LCS-FS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	BS	W	4	11/20/2018 10:55	11/20/2018			20181120	10:55:00	20181121	22:24:08	CS244LCS-FS	1	1			13C8-PFOS	BDO-2228		91	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:07:35	J9414-FS	25	1			Perfluorohexanoic Acid (PFHxA)	307-24-4		380.5	NG_L	D			TRG					20171116		4.4	4.4	5.1	70	11.57	115.74	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	22:56:43	J9414-FS	5	1			Perfluoroheptanoic acid (PFHpA)	375-85-9		108.28	NG_L	D			TRG					20171116		0.74	0.74	5.1	70	2.31	23.15	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	22:56:43	J9414-FS	5	1			Perfluorooctanoic acid (PFOA)	335-67-1		163.95	NG_L	D			TRG					20171116		0.83	0.83	5.1	70	2.31	23.15	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	22:45:53	J9414-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1		5.45	NG_L				TRG					20171116		0.24	0.24	5.1	70	0.93	4.63	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	22:45:53	J9414-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2		0.64	NG_L	J			TRG					20171116		0.15	0.15	5.1	70	0.46	4.63	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	22:45:53	J9414-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		0.93	NG_L	U			TRG					20171116		0.27	0.27	5.1	70	0.93	4.63	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	22:45:53	J9414-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1		0.46	NG_L	U			TRG					20171116		0.17	0.17	5.1	70	0.46	4.63	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	22:45:53	J9414-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		0.46	NG_L	U			TRG					20171116		0.14	0.14	5.1	70	0.46	4.63	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	22:45:53	J9414-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		0.93	NG_L	U			TRG					20171116		0.23	0.23	5.1	70	0.93	4.63	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	22:45:53	J9414-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		1.85	NG_L	U			TRG					20171116		0.52	0.52	5.1	70	1.85	4.63	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	22:45:53	J9414-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		0.93	NG_L	U			TRG					20171116		0.45	0.45	5.1	70	0.93	4.63	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:07:35	J9414-FS	25	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5		219.28	NG_L	D			TRG					20171116		3.01	3.01	5.1	70	11.57	115.74	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:07:35	J9414-FS	25	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		1731.41	NG_L	D			TRG					20171116		2.55	2.55	5.1	70	9.26	115.74	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:18:26	J9414-FS	125	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1		7178.57	NG_L	D			TRG					20171116		21.99	21.99	5.1	70	57.87	578.7	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:07:35	J9414-FS	25	1			13C5-PFHxA	BDO-2217		80	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	22:56:43	J9414-FS	5	1			13C4-PFHpA	BDO-2218		96	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	22:56:43	J9414-FS	5	1			13C8-PFOA	BDO-2219		78	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:07:35	J9414-FS	25	1			13C9-PFNA	BDO-2221		79	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	22:45:53	J9414-FS	1	1			13C6-PFDA	BDO-2222		86	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	22:45:53	J9414-FS	1	1			13C7-PFUnA	BDO-2223		85	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	22:45:53	J9414-FS	1	1			13C2-PFDoA	BDO-2112		73	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	22:45:53	J9414-FS	1	1			13C2-PFTeDA	BDO-2224		75	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:18:26	J9414-FS	125	1			d3-MeFOSAA	BDO-1838		77	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:18:26	J9414-FS	125	1			d5-EtFOSAA	BDO-1839		96	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:07:35	J9414-FS	25	1			13C3-PFBS	BDO-2226		111	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:07:35	J9414-FS	25	1			13C3-PFHxS	BDO-2227		97	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:18:26	J9414-FS	125	1			13C8-PFOS	BDO-2228		81	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:51:01	J9415MS-FS	25	1			Perfluorohexanoic Acid (PFHxA)	307-24-4		0	PCT_REC	N			TRG		LSA	137	51	20171116		4.24	4.24	5.1		11.16	111.61	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:40:09	J9415MS-FS	5	1			Perfluoroheptanoic acid (PFHpA)	375-85-9		74	PCT_REC				TRG		LSA	136	48	20171116		0.71	0.71	5.1		2.23	22.32	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:40:09	J9415MS-FS	5	1			Perfluorooctanoic acid (PFOA)	335-67-1		78	PCT_REC				TRG		LSA	141	49	20171116		0.8	0.8	5.1		2.23	22.32	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181127	11:52:28	J9415MS-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1		120	PCT_REC				TRG		LSA	122	58	20171116		0.23	0.23	5.1		0.89	4.46	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181127	11:52:28	J9415MS-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2		121	PCT_REC				TRG		LSA	135	59	20171116		0.14	0.14	5.1		0.45	4.46	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181127	11:52:28	J9415MS-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		110	PCT_REC				TRG		LSA	134	64	20171116		0.26	0.26	5.1		0.89	4.46	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181127	11:52:28	J9415MS-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1		120	PCT_REC				TRG		LSA	131	75	20171116		0.16	0.16	5.1		0.45	4.46	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181127	11:52:28	J9415MS-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		138	PCT_REC				TRG		LSA	148	42	20171116		0.13	0.13	5.1		0.45	4.46	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181127	11:52:28	J9415MS-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		116	PCT_REC				TRG		LSA	158	42	20171116		0.22	0.22	5.1		0.89	4.46	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181127	11:52:28	J9415MS-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		113	PCT_REC				TRG		LSA	146	50	20171116		0.5	0.5	5.1		1.79	4.46	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:40:09	J9415MS-FS	5	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		94	PCT_REC				TRG		LSA	131	51	20171116		2.19	2.19	5.1		4.46	22.32	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:51:01	J9415MS-FS	25	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5		9	PCT_REC	N			TRG		LSA	134	56	20171116		2.9	2.9	5.1		11.16	111.61	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:51:01	J9415MS-FS	25	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		0	PCT_REC	N			TRG		LSA	128	52	20171116		2.46	2.46	5.1		8.93	111.61	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181127	15:50:29	J9415MS-FS	250	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1		4458	PCT_REC	N			TRG		LSA	144	40	20171116		42.41	42.41	5.1		111.61	1116.07	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:51:01	J9415MS-FS	25	1			13C5-PFHxA	BDO-2217		89	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:40:09	J9415MS-FS	5	1			13C4-PFHpA	BDO-2218		101	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:40:09	J9415MS-FS	5	1			13C8-PFOA	BDO-2219		86	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:51:01	J9415MS-FS	25	1			13C9-PFNA	BDO-2221		75	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181127	11:52:28	J9415MS-FS	1	1			13C6-PFDA	BDO-2222		87	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181127	11:52:28	J9415MS-FS	1	1			13C7-PFUnA	BDO-2223		90	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181127	11:52:28	J9415MS-FS	1	1			13C2-PFDoA	BDO-2112		89	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181127	11:52:28	J9415MS-FS	1	1			13C2-PFTeDA	BDO-2224		82	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181127	15:50:29	J9415MS-FS	250	1			d3-MeFOSAA	BDO-1838		113	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:40:09	J9415MS-FS	5	1			d5-EtFOSAA	BDO-1839		142	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:51:01	J9415MS-FS	25	1			13C3-PFBS	BDO-2226		117	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181121	23:51:01	J9415MS-FS	25	1			13C3-PFHxS	BDO-2227		98	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-MS	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MS	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181127	15:50:29	J9415MS-FS	250	1			13C8-PFOS	BDO-2228		89	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:56:15	J9416MSD-FS	25	1			Perfluorohexanoic Acid (PFHxA)	307-24-4		27	PCT_REC	N			TRG		LSA	137	51	20171116		4.17	4.17	5.1		10.96	109.65	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:45:22	J9416MSD-FS	5	1			Perfluoroheptanoic acid (PFHpA)	375-85-9		102	PCT_REC				TRG		LSA	136	48	20171116		0.7	0.7	5.1		2.19	21.93	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:45:22	J9416MSD-FS	5	1			Perfluorooctanoic acid (PFOA)	335-67-1		115	PCT_REC				TRG		LSA	141	49	20171116		0.79	0.79	5.1		2.19	21.93	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:34:31	J9416MSD-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1		116	PCT_REC				TRG		LSA	122	58	20171116		0.23	0.23	5.1		0.88	4.39	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:34:31	J9416MSD-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2		109	PCT_REC				TRG		LSA	135	59	20171116		0.14	0.14	5.1		0.44	4.39	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:34:31	J9416MSD-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		110	PCT_REC				TRG		LSA	134	64	20171116		0.25	0.25	5.1		0.88	4.39	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:34:31	J9416MSD-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1		111	PCT_REC				TRG		LSA	131	75	20171116		0.16	0.16	5.1		0.44	4.39	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:34:31	J9416MSD-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		134	PCT_REC				TRG		LSA	148	42	20171116		0.13	0.13	5.1		0.44	4.39	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:34:31	J9416MSD-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		114	PCT_REC				TRG		LSA	158	42	20171116		0.22	0.22	5.1		0.88	4.39	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:34:31	J9416MSD-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		99	PCT_REC				TRG		LSA	146	50	20171116		0.49	0.49	5.1		1.75	4.39	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:34:31	J9416MSD-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		118	PCT_REC				TRG		LSA	131	51	20171116		0.43	0.43	5.1		0.88	4.39	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:56:15	J9416MSD-FS	25	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5		94	PCT_REC				TRG		LSA	134	56	20171116		2.85	2.85	5.1		10.96	109.65	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:56:15	J9416MSD-FS	25	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		0	PCT_REC	N			TRG		LSA	128	52	20171116		2.41	2.41	5.1		8.77	109.65	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	01:07:07	J9416MSD-FS	125	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1		1284	PCT_REC	N			TRG		LSA	144	40	20171116		20.83	20.83	5.1		54.82	548.25	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:56:15	J9416MSD-FS	25	1			13C5-PFHxA	BDO-2217		88	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:45:22	J9416MSD-FS	5	1			13C4-PFHpA	BDO-2218		101	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:45:22	J9416MSD-FS	5	1			13C8-PFOA	BDO-2219		82	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:56:15	J9416MSD-FS	25	1			13C9-PFNA	BDO-2221		82	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:34:31	J9416MSD-FS	1	1			13C6-PFDA	BDO-2222		84	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:34:31	J9416MSD-FS	1	1			13C7-PFUnA	BDO-2223		82	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:34:31	J9416MSD-FS	1	1			13C2-PFDoA	BDO-2112		81	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:34:31	J9416MSD-FS	1	1			13C2-PFTeDA	BDO-2224		78	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	01:07:07	J9416MSD-FS	125	1			d3-MeFOSAA	BDO-1838		90	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	01:07:07	J9416MSD-FS	125	1			d5-EtFOSAA	BDO-1839		100	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:56:15	J9416MSD-FS	25	1			13C3-PFBS	BDO-2226		103	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	00:56:15	J9416MSD-FS	25	1			13C3-PFHxS	BDO-2227		99	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1-18D-SD	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	MSD	W	4	11/15/2018 11:35	11/17/2018			20181120	10:55:00	20181122	01:07:07	J9416MSD-FS	125	1			13C8-PFOS	BDO-2228		79	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181128	10:37:28	J9417-FS	25	1			Perfluorohexanoic Acid (PFHxA)	307-24-4		342.54	NG_L	D			TRG					20171116		4.24	4.24	5.1	70	11.16	111.61	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181128	10:26:35	J9417-FS	5	1			Perfluoroheptanoic acid (PFHpA)	375-85-9		107.87	NG_L	D			TRG					20171116		0.71	0.71	5.1	70	2.23	22.32	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181128	10:26:35	J9417-FS	5	1			Perfluorooctanoic acid (PFOA)	335-67-1		154.06	NG_L	D			TRG					20171116		0.8	0.8	5.1	70	2.23	22.32	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181122	01:17:59	J9417-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1		6.02	NG_L				TRG					20171116		0.23	0.23	5.1	70	0.89	4.46	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181122	01:17:59	J9417-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2		0.96	NG_L	J			TRG					20171116		0.14	0.14	5.1	70	0.45	4.46	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181122	01:17:59	J9417-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		0.89	NG_L	U			TRG					20171116		0.26	0.26	5.1	70	0.89	4.46	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181122	01:17:59	J9417-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1		0.45	NG_L	U			TRG					20171116		0.16	0.16	5.1	70	0.45	4.46	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181122	01:17:59	J9417-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		0.45	NG_L	U			TRG					20171116		0.13	0.13	5.1	70	0.45	4.46	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181122	01:17:59	J9417-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		0.89	NG_L	U			TRG					20171116		0.22	0.22	5.1	70	0.89	4.46	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181122	01:17:59	J9417-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		1.79	NG_L	U			TRG					20171116		0.5	0.5	5.1	70	1.79	4.46	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181122	01:17:59	J9417-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		0.89	NG_L	U			TRG					20171116		0.44	0.44	5.1	70	0.89	4.46	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181128	10:26:35	J9417-FS	5	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5		216.49	NG_L	D			TRG					20171116		0.58	0.58	5.1	70	2.23	22.32	18-0686	DP-18-0378		

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	CH2M_Code	Analysis_Group	Analytical_Method	PRC_Code	Lab_Code	Lab_Name	Leachate_Method	SAMPLE_BASIS	Extraction_Method	Result_Type	Lab_QC_type	SAMPLE_MEDIUM	QC_Level	DateTime_Collected	Date_Received	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	GC_Column_Type	Analysis_Result_Type	Result_Narrative	QC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	QSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch	Validator_Name	Val_Date
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181128	10:37:28	J9417-FS	25	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		1795.05	NG_L	D			TRG					20171116		2.46	2.46	5.1	70	8.93	111.61	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181128	10:48:21	J9417-FS	125	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1		7318.07	NG_L	D			TRG					20171116		21.21	21.21	5.1	70	55.8	558.04	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181128	10:37:28	J9417-FS	25	1			13C5-PFHxA	BDO-2217		90	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181128	10:26:35	J9417-FS	5	1			13C4-PFHpA	BDO-2218		100	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181128	10:26:35	J9417-FS	5	1			13C8-PFOA	BDO-2219		88	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181128	10:48:21	J9417-FS	125	1			13C9-PFNA	BDO-2221		87	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181122	01:17:59	J9417-FS	1	1			13C6-PFDA	BDO-2222		89	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181122	01:17:59	J9417-FS	1	1			13C7-PFUnA	BDO-2223		88	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181122	01:17:59	J9417-FS	1	1			13C2-PFDoA	BDO-2112		79	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181122	01:17:59	J9417-FS	1	1			13C2-PFTeDA	BDO-2224		77	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181128	12:13:10	J9417-FS	125	1			d3-MeFOSAA	BDO-1838		111	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181128	12:13:10	J9417-FS	125	1			d5-EtFOSAA	BDO-1839		117	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181128	10:26:35	J9417-FS	5	1			13C3-PFBS	BDO-2226		147	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181128	10:37:28	J9417-FS	25	1			13C3-PFHxS	BDO-2227		92	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-EFF1D-18D	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	DL1	REG	W	4	11/15/2018 11:40	11/17/2018			20181120	10:55:00	20181128	10:48:21	J9417-FS	125	1			13C8-PFOS	BDO-2228		102	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			Perfluorohexanoic Acid (PFHxA)	307-24-4		0.45	NG_L	U			TRG					20171116		0.17	0.17	5.1	70	0.45	4.55	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			Perfluoroheptanoic acid (PFHpA)	375-85-9		0.45	NG_L	U			TRG					20171116		0.15	0.15	5.1	70	0.45	4.55	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			Perfluorooctanoic acid (PFOA)	335-67-1		1.21	NG_L	J			TRG					20171116		0.16	0.16	5.1	70	0.45	4.55	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			Perfluorononanoic acid (PFNA)	375-95-1		0.91	NG_L	U			TRG					20171116		0.24	0.24	5.1	70	0.91	4.55	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			Perfluorodecanoic Acid (PFDA)	335-76-2		0.45	NG_L	U			TRG					20171116		0.15	0.15	5.1	70	0.45	4.55	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			Perfluoroundecanoic Acid (PFUnA)	2058-94-8		0.91	NG_L	U			TRG					20171116		0.26	0.26	5.1	70	0.91	4.55	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			Perfluorododecanoic Acid (PFDoA)	307-55-1		0.45	NG_L	U			TRG					20171116		0.16	0.16	5.1	70	0.45	4.55	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		0.45	NG_L	U			TRG					20171116		0.14	0.14	5.1	70	0.45	4.55	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			Perfluorotetradecanoic Acid (PFTeDA)	376-06-7		0.91	NG_L	U			TRG					20171116		0.23	0.23	5.1	70	0.91	4.55	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			N-Methyl Perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	2355-31-9		1.82	NG_L	U			TRG					20171116		0.51	0.51	5.1	70	1.82	4.55	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			N-Ethyl Perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	2991-50-6		0.91	NG_L	U			TRG					20171116		0.45	0.45	5.1	70	0.91	4.55	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			Perfluorobutanesulfonic acid (PFBS)	375-73-5		0.45	NG_L	U			TRG					20171116		0.12	0.12	5.1	70	0.45	4.55	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		0.36	NG_L	U			TRG					20171116		0.1	0.1	5.1	70	0.36	4.55	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.45	NG_L	U			TRG					20171116		0.17	0.17	5.1	70	0.45	4.55	18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			13C5-PFHxA	BDO-2217		86	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			13C4-PFHpA	BDO-2218		91	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			13C8-PFOA	BDO-2219		97	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			13C9-PFNA	BDO-2221		91	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			13C6-PFDA	BDO-2222		90	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			13C7-PFUnA	BDO-2223		98	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			13C2-PFDoA	BDO-2112		82	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			13C2-PFTeDA	BDO-2224		81	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			d3-MeFOSAA	BDO-1838		82	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			d5-EtFOSAA	BDO-1839		91	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			13C3-PFBS	BDO-2226		81	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			13C3-PFHxS	BDO-2227		83	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		
N6247016D9000	5655		CAMP_LEJEUNE_MCB	AS4141-FB-111618	NONS	SVOA	537_MOD	ORG	BMSL	BATTELLE	NONE	N	METHOD	000	REG	W	4	11/16/2018 15:40	11/17/2018			20181120	10:55:00	20181121	22:35:01	J9420-FS	1	1			13C8-PFOS	BDO-2228		86	PCT_REC				SURR		SLSP	150	50	20171116				5.1				18-0686	DP-18-0378		

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
MCB CAMP LEJEUNE RAPID REFUELER, NORTH CAROLINA

Client: CH2M HILL, Inc., Herndon, Virginia
SDG: 18-0685
Laboratory: Battelle Norwell Operations, Norwell, Massachusetts
Site: MCB Camp Lejeune Rapid Refueler, CTO-5655, North Carolina
Date: December 2, 2018

PFCs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	RR-EFF1-18D	J9412-FS	Water
2	RR-EFF1D-18D	J9413-FS	Water
3	RR-EFF2-18D	J9418-FS	Water
4	RR-FB-111618	J9419-FS	Water
5	RR-EFF3-18D	J9421-FS	Water
5MS	RR-EFF3-18DMS	J9422-FSMS	Water
5MSD	RR-EFF3-18DMSD	J9423-FSMSD	Water

A Stage 3 data validation was performed on the analytical data for four water samples and one aqueous field blank sample collected on November 15-16, 2018 by CH2M HILL at the MCB Camp Lejeune Rapid Refueler site in North Carolina. The samples were analyzed under the Battelle SOP Method for "Analysis of Perfluoroalkyl Substances in Environmental Samples by Liquid Chromatography and Tandem Mass Spectrometry (LC-MS/MS)".

Specific method references are as follows:

Analysis	*Method References*
PFCs	SOP 5-369

The data have been validated according to the protocols and quality control (QC) requirements of the analytical method, the DoD Quality Systems Manual for Environmental Laboratories, Version 5.1, February 2018, the DoD Final General Data Validation Guidelines, February 2018, the Final Sampling and Analysis Plan Underground Storage Tank Sites Rapid Refueler and AS-4141 Treatment Systems Per- and Polyfluoroalkyl Substances Investigation, October 2018, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratories Program National Functional Guidelines for Organic Superfund Methods Data Review," January 2017;
- 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
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Field Duplicate sample precision

A Stage 3 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 rejections of data.

Overall the data is 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.

Perfluorinated Compounds (PFCs)

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) and RRF criteria were met.

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- Field QC samples were free of contamination.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
RR-FB-111618	PFOA	1.17	None	All Associated >10X

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values except for the following.

EDS Sample ID	Compound	MS %R/MSD %R/RPD	Qualifier
5	PFHxA	0%/0%/NC	None - 4X Rule Applies
	PFOA	0%/0%/NC	
	PFNA	126%/OK/OK	J
	PFBS	151%/OK/OK	
	PFHxS	13%/0%/200	None - 4X Rule Applies
	PFOS	0%/0%/NC	

Laboratory Control Samples

- The LCS samples exhibited acceptable percent recoveries (%R).

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. The reporting limits were adjusted accordingly. No action was required.

Field Duplicate Sample Precision

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

Compound	RR-EFF1-18D ng/L	RR-EFF1D-18D ng/L	RPD	Qualifier
PFHxA	1149.15	978.63	16%	None
PFHpA	453.07	446.84	1%	
PFOA	425.94	452.64	6%	
PFNA	71.56	76.46	7%	
PFDA	1.53	1.54	1%	
PFBS	493.37	469.73	5%	
PFHxS	3243.76	3167.76	2%	
PFOS	5190.61	5037.56	3%	

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

Signed: Nancy Weaver Dated: 12/3/18

Nancy Weaver
Senior Chemist

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.

BATTELLE
It can be done

Project Client: CH2M
Project Name: CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project No.: 100120725-CTO5655

Client ID		RR-EFF1-18D			
Battelle ID		J9412-FS			
Sample Type		SA			
Collection Date		11/15/2018			
Extraction Date		11/20/2018			
Analysis Date		11/25/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		NA			
Matrix		W			
Sample Size		0.280			
Size Unit-Basis		L			
Units		ng/L	MDL	LOD	LOQ
PFHxA	307-24-4	1149.15 D	8.48	22.32	223.21
PFHpA	**375-85-9**	**453.07 D**	**1.43**	**4.46**	**44.64**
PFOA	335-67-1	425.94 D	1.61	4.46	44.64
PFNA	**375-95-1**	**71.56**	**0.23**	**0.89**	**4.46**
PFDA	335-76-2	1.53 J	0.14	0.45	4.46
PFUnA	**2058-94-8**	**0.89 U**	**0.26**	**0.89**	**4.46**
PFDoA	307-55-1	0.45 U	0.16	0.45	4.46
PFTrDA	**72629-94-8**	**0.45 U**	**0.13**	**0.45**	**4.46**
PFTeDA	376-06-7	0.89 U	0.22	0.89	4.46
NMeFOSAA	**2355-31-9**	**1.79 U**	**0.50**	**1.79**	**4.46**
NEtFOSAA	2991-50-6	0.89 U	0.44	0.89	4.46
PFBS	**375-73-5**	**493.37 D**	**5.80**	**22.32**	**223.21**
PFHxS	355-46-4	3243.76 D	9.82	35.71	446.43
PFOS	**1763-23-1**	**5190.61 D**	**16.96**	**44.64**	**446.43**

Surrogate Recoveries (%)

13C5-PFHxA	88 D
13C4-PFHpA	**96 D**
13C8-PFOA	82 D
13C9-PFNA	**81 D**
13C6-PFDA	91
13C7-PFUnA	**76**
13C2-PFDoA	72
13C2-PFTeDA	**63**
d3-MeFOSAA	126
d5-EtFOSAA	**93 D**
13C3-PFBS	110 D
13C3-PFHxS	**100 D**
13C8-PFOS	96 D

BATTELLE
It can be done

2

Project Client: CH2M
Project Name: CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project No.: 100120725-CTO5655

Client ID	RR-EFF1D-18D
Battelle ID	J9413-FS
Sample Type	SA
Collection Date	11/15/2018
Extraction Date	11/20/2018
Analysis Date	11/25/2018
Analytical Instrument	Sciex 5500 LC/MS/MS
% Moisture	NA
Matrix	W
Sample Size	0.280
Size Unit-Basis	L

Units		ng/L	MDL	LOD	LOQ
PFHxA	307-24-4	978.63 D	8.48	22.32	223.21
PFHpA	**375-85-9**	**446.84 D**	**1.43**	**4.46**	**44.64**
PFOA	335-67-1	452.64 D	1.61	4.46	44.64
PFNA	**375-95-1**	**76.46**	**0.23**	**0.89**	**4.46**
PFDA	335-76-2	1.54 J	0.14	0.45	4.46
PFUnA	**2058-94-8**	**0.89 U**	**0.26**	**0.89**	**4.46**
PFDoA	307-55-1	0.45 U	0.16	0.45	4.46
PFTrDA	**72629-94-8**	**0.45 U**	**0.13**	**0.45**	**4.46**
PFTeDA	376-06-7	0.89 U	0.22	0.89	4.46
NMeFOSAA	**2355-31-9**	**1.79 U**	**0.50**	**1.79**	**4.46**
NEtFOSAA	2991-50-6	0.89 U	0.44	0.89	4.46
PFBS	**375-73-5**	**469.73 D**	**1.16**	**4.46**	**44.64**
PFHxS	355-46-4	3167.76 D	4.91	17.86	223.21
PFOS	**1763-23-1**	**5037.56 D**	**16.96**	**44.64**	**446.43**

Surrogate Recoveries (%)

13C5-PFHxA	84 D
13C4-PFHpA	**91 D**
13C8-PFOA	74 D
13C9-PFNA	**81 D**
13C6-PFDA	85
13C7-PFUnA	**72**
13C2-PFDoA	71
13C2-PFTeDA	**66**
d3-MeFOSAA	131
d5-EtFOSAA	**78 D**
13C3-PFBS	148 D
13C3-PFHxS	**86 D**
13C8-PFOS	75 D

BATTELLE
It can be done

3

Project Client: CH2M
Project Name: CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project No.: 100120725-CTO5655

Client ID		RR-EFF2-18D			
Battelle ID		J9418-FS			
Sample Type		SA			
Collection Date		11/16/2018			
Extraction Date		11/20/2018			
Analysis Date		11/25/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		NA			
Matrix		W			
Sample Size		0.280			
Size Unit-Basis		L			
Units		ng/L	MDL	LOD	LOQ
PFHxA	307-24-4	255.76	0.85	2.23	22.32
PFHpA	**375-85-9**	**104.34**	**0.71**	**2.23**	**22.32**
PFOA	335-67-1	209.73	0.80	2.23	22.32
PFNA	**375-95-1**	**40.22**	**0.23**	**0.89**	**4.46**
PFDA	335-76-2	1.49 J	0.14	0.45	4.46
PFUnA	**2058-94-8**	**0.89 U**	**0.26**	**0.89**	**4.46**
PFDoA	307-55-1	0.45 U	0.16	0.45	4.46
PFTrDA	**72629-94-8**	**0.45 U**	**0.13**	**0.45**	**4.46**
PFTeDA	376-06-7	0.89 U	0.22	0.89	4.46
NMeFOSAA	**2355-31-9**	**1.79 U**	**0.50**	**1.79**	**4.46**
NEtFOSAA	2991-50-6	0.89 U	0.44	0.89	4.46
PFBS	**375-73-5**	**76.35**	**0.58**	**2.23**	**22.32**
PFHxS	355-46-4	751.98	2.46	8.93	111.61
PFOS	**1763-23-1**	**1571.61**	**4.24**	**11.16**	**111.61**

Surrogate Recoveries (%)

13C5-PFHxA	79
13C4-PFHpA	**89**
13C8-PFOA	70
13C9-PFNA	**63**
13C6-PFDA	57
13C7-PFUnA	**59**
13C2-PFDoA	58
13C2-PFTeDA	**51**
d3-MeFOSAA	93
d5-EtFOSAA	**138**
13C3-PFBS	119
13C3-PFHxS	**99**
13C8-PFOS	78

BATTELLE
It can be done

Project Client: CH2M
Project Name: CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project No.: 100120725-CTO5655

4

Client ID	RR-FB-111618
Battelle ID	J9419-FS
Sample Type	SA
Collection Date	11/16/2018
Extraction Date	11/20/2018
Analysis Date	11/25/2018
Analytical Instrument	Sciex 5500 LC/MS/MS
% Moisture	NA
Matrix	W
Sample Size	0.285
Size Unit-Basis	L

		Units	ng/L	MDL	LOD	LOQ
PFHxA	307-24-4		0.44 U	0.17	0.44	4.39
PFHpA	**375-85-9**		**0.44 U**	**0.14**	**0.44**	**4.39**
PFOA	335-67-1		1.17 J	0.16	0.44	4.39
PFNA	**375-95-1**		**0.88 U**	**0.23**	**0.88**	**4.39**
PFDA	335-76-2		0.44 U	0.14	0.44	4.39
PFUnA	**2058-94-8**		**0.88 U**	**0.25**	**0.88**	**4.39**
PFDoA	307-55-1		0.44 U	0.16	0.44	4.39
PFTrDA	**72629-94-8**		**0.44 U**	**0.13**	**0.44**	**4.39**
PFTeDA	376-06-7		0.88 U	0.22	0.88	4.39
NMeFOSAA	**2355-31-9**		**1.75 U**	**0.49**	**1.75**	**4.39**
NEtFOSAA	2991-50-6		0.88 U	0.43	0.88	4.39
PFBS	**375-73-5**		**0.44 U**	**0.11**	**0.44**	**4.39**
PFHxS	355-46-4		0.35 U	0.10	0.35	4.39
PFOS	**1763-23-1**		**0.44 U**	**0.17**	**0.44**	**4.39**

Surrogate Recoveries (%)

13C5-PFHxA	85
13C4-PFHpA	**87**
13C8-PFOA	90
13C9-PFNA	**92**
13C6-PFDA	88
13C7-PFUnA	**86**
13C2-PFDoA	83
13C2-PFTeDA	**79**
d3-MeFOSAA	79
d5-EtFOSAA	**76**
13C3-PFBS	86
13C3-PFHxS	**96**
13C8-PFOS	84

BATTELLE
It can be done

Project Client: CH2M
Project Name: CTO-5655: Marine Corps Base Camp Lejeune PFAS Analysis
Project No.: 100120725-CTO5655

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Client ID	RR-EFF3-18D
Battelle ID	J9421-FS
Sample Type	SA
Collection Date	11/16/2018
Extraction Date	11/20/2018
Analysis Date	11/25/2018
Analytical Instrument	Sciex 5500 LC/MS/MS
% Moisture	NA
Matrix	W
Sample Size	0.285
Size Unit-Basis	L

		Units: ng/L	MDL	LOD	LOQ	
PFHxA	307-24-4	367.98 D	8.33	21.93	219.30	
PFHpA	**375-85-9**	**173.69 D**	**0.70**	**2.19**	**21.93**	
PFOA	335-67-1	461.62 D	7.89	21.93	219.30	
PFNA	**375-95-1**	**33.56 J**	**0.23**	**0.88**	**4.39**	MSH
PFDA	335-76-2	1.14 J	0.14	0.44	4.39	
PFUnA	**2058-94-8**	**0.88 U**	**0.25**	**0.88**	**4.39**	
PFDoA	307-55-1	0.44 U	0.16	0.44	4.39	
PFTrDA	**72629-94-8**	**0.44 U**	**0.13**	**0.44**	**4.39**	
PFTeDA	376-06-7	0.88 U	0.22	0.88	4.39	
NMeFOSAA	**2355-31-9**	**1.75 U**	**0.49**	**1.75**	**4.39**	
NEtFOSAA	2991-50-6	0.88 U	0.43	0.88	4.39	
PFBS	**375-73-5**	**104.33 D J**	**0.57**	**2.19**	**21.93**	MSH
PFHxS	355-46-4	1283.27 D	4.82	17.54	219.30	
PFOS	**1763-23-1**	**2558.03 D**	**8.33**	**21.93**	**219.30**	

Surrogate Recoveries (%)

13C5-PFHxA	88 D
13C4-PFHpA	**100 D**
13C8-PFOA	83 D
13C9-PFNA	**57**
13C6-PFDA	91
13C7-PFUnA	**113**
13C2-PFDoA	108
13C2-PFTeDA	**96**
d3-MeFOSAA	65 D
d5-EtFOSAA	**80 D**
13C3-PFBS	138 D
13C3-PFHxS	**84 D**
13C8-PFOS	71 D