Navy_CLEAN_PFAS_FOIA_request_covers.indd

Naval Facilities Engineering Command

Groundwater Sample Results, Level 4 Laboratory Report, Electronic Data Deliverable, Data Validation Report, and the Sample Location Report, SDG 18-0340

Naval Air Station Jacksonville
Jacksonville, Florida

July 2019

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

N00207_004430
NAS JACKSONVILLE, FL
SSIC 5000-33c

LABORATORY DATA PACKAGE 18-0340 REVISION 01 NAS JACKSONVILLE FL

06/06/2018

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Approved for public release: distribution unlimited.

CTO-SE0375: Naval Air Station Jacksonville
Project No 100119154-SE0375
PFAS by DoD QSM 5.1 Table B-15

SW, SW DUP

Batch 18-0340

Package DP-18-0133

Submitted to:
Tetra Tech
661 Anderson Drive Foster Plaza 7
Pittsburgh, PA 15220 USA

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

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CTO-SE0375: Naval Air Station Jacksonville
Project No 100119154-SE0375
PFAS by DoD QSM 5.1 Table B-15

SW, SW DUP

Batch 18-0340

Package DP-18-0133

Submitted to:
Tetra Tech
661 Anderson Drive Foster Plaza 7
Pittsburgh, PA 15220 USA

NELAP Accreditation Number: E87856 (Florida Department of Health)
DoD-ELAP Accreditation Number: 91667

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

Analyst Approval: schumitzd@battelle.org 2018.06.06 18:18:04 -04'00'

QC Chemist Approval: Digitally signed by devinec@battelle.org DN: cn=devinec@battelle.org Date: 2018.06.11 11:52:09 -04'00'

Project Manager Approval: Digitally signed by Jonathan Thorn Date: 2018.06.11 13:51:12 -04'00'

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CTO-SE0375: Naval Air Station Jacksonville
Project No 100119154-SE0375
PFAS by DoD QSM 5.1 Table B-15

SW, SW DUP

Batch 18-0340

Package DP-18-0133

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.	26
3	***Miscellaneous Documentation*** Case Narrative, Miscellaneous Documentation Form, Quality Control Summary, Example Calculations, Internal Standard Recovery Report, Retention Time Window Report.	36
4	***Sample Preparation Records*** Sample Preparation Records, Dilution Worksheets, Standard Preparation Records, Certificates Of Analysis, GPC Check Report.	176
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.	425
7	***Chromatograms*** Sample And Standard Chromatograms.	494
8	***Unused Data***	651

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Signature Page

Battelle 2018 (1 of 2)
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
Candace Perrin McCoy		CPM	4/4/2018
Rich Rostucci		RR	4/4/2018
Michael Meyer			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
Chimiao 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

Work Plan

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WORK/QUALITY ASSURANCE PROJECT PLAN

1.0 GENERAL PROJECT INFORMATION

Project Title:	Non-Potable Water PFAS Analysis
Project Number:	100119154-SE0375
Client:	Tetra Tech 661 Anderson Drive Foster Plaza 7 Pittsburgh, PA 15220 USA
Client Contact Information:	Mark Peterson NA (904) 636-6125(V) (904) 636-6165(F) mark.peterson@tetratech.com
Effective Date of QAPP:	5/23/2018
Version Number:	100119154-SE0375(L)-01
Project Manager:	Thorn, Jonathan
Laboratory Task Manager:	Thorn, Jonathan
Deliverable Due Date:	6/8/2018

2.0 SCOPE OF WORK

Overview:	PFAS analysis of groundwater and surface water samples collected from NAS Station Jacksonville.
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 in refrigerator.
Sub_Sampling:	None
Procedures:	NA
Contact:	NA
Comment:	NA
Archiving:	Dispose of remaining samples 6 months after delivery of final data. Notify client prior to disposal of samples.
Disposal:	Dispose of samples in the appropriate waste stream.

2.1.2 Sample Preparation

10 groundwater samples, 4 surface water samples, and the associated FRB samples. Matrices will be extracted in separate batches.

Samples Expected:	Samples Per Batch:	Batches Expected:
15	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	background sample will be identified on the COC
MSD	Spiked field sample for determining method accuracy and precision in the presence of matrix.	1 per batch	--	NA	background sample will be identified on the COC

2.1.3 Extraction/Preparation

2.1.3.1 Extraction

SOP No.-Rev:	**5-370-06**
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:	• FRB samples will only be extracted and analyzed if the associated field samples have results above the LOQ.

Table 2: SIS and LCS/MS Spiking Level

Standard Type	Standard Contents		Spike Amount (ng)	Volume (uL)	Comment
PFAS - DoD Low Level Labelled	JV83	SIS	~ 0.100 ng	50 uL	NA

Standard Type	Standard Contents		Spike Amount (ng)	Volume (uL)	Comment
Extracted Internal Standards (SIS)					
PFAS - DOD Second Source LCS/MS Solution	JP49	LCS/MS	~ 7.5 ng	150 uL	MS/MSD samples
PFAS - DOD Second Source LCS/MS Solution	JP49	LCS/MS	~ 2.50 ng	50 uL	LCS sample

2.1.3.2 Cleanup

None.

RIS spiking levels are presented in Table 3.

Extract PIV (uL): 500

Table 3: RIS Spiking Level

Standard Type	Standard Contents		Spike Amount (ng)	Volume (uL)	Comment
PFAS - DoD Internal Standard Spiking Solution	JW02	RIS	~ 0.050 ng	25 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: Follow QSM 5.1 Table B-15 requirements.

2.2. DELIVERABLES

Deliverables Due:	6/8/2018
LIMS Reports:	*No*
Histograms:	*No*
Excel Tables:	*Yes*
EICs:	*No*
Chromatograms:	*No*
EDDs:	*Yes*
Comments:	• 14-day TAT • Level IV validation package, compliant with QSM Table B-15. • Tetra Tech EDD format.

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
Carla R. Devine	Quality Control Officer	NA
Zachary J. Willenberg	Quality Assurance Officer	NA

4.2 COMMUNICATION

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

5.0 SCHEDULE

The project schedule is presented in Table 5.

Table 5. Schedule of Laboratory Activities

Activity:	Start Date:	End Date:	TAT (days):	Comment:
Sample Receipt	05/25/2018	05/25/2018	0	NA
Sample Preparation	05/25/2018	05/30/2018	5	NA
Instrument Analysis	05/30/2018	06/05/2018	6	NA
Quality Control Review	06/05/2018	06/06/2018	1	NA
Quality Assurance Review	06/06/2018	06/08/2018	2	NA

6.0 BUDGET

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

Table 6. Labor Budget (Laboratory Analytical Task)

Labor Activity:	Hours/ Batch:	Batches:	Total Hours:	Comment:
Sample Receipt	2	1	2	Hours are for full batch of 20 samples
Sample Preparation	8	1	8	Hours are for full batch of 20 samples
Instrument Analysis	8	1	8	Hours are for full batch of 20 samples
Quality Control Review	3	1	3	Hours are for full batch of 20 samples
Quality Assurance Review	1	1	1	Hours are for full batch of 20 samples

7.0 STAFF DEVELOPMENT

None anticipated

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WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 1: Target Samples

Shipment: **SHP-180525-01**

Status: Pending

Description: SEO 375

Range: J6241-J6254

Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
1	J6241	FFTA-FD01-052418	05/24/2018 11:00 am	SW DUP	R0119 (NA)			
2	J6242	FFTA-SW01-052418	05/24/2018 11:00 am	SW	R0119 (NA)			
3	J6246	FFTA-EB01-052418	05/24/2018 11:30 am	GW QC	R0119 (NA)			
4	J6247	FFTA-EB02-052418	05/24/2018 11:40 am	GW QC	R0119 (NA)			
5	J6248	DRMO-MW11-052418	05/24/2018 2:05 pm	GW	R0119 (NA)			
6	J6250	PSC51-MW14D-052418	05/24/2018 4:10 pm	GW	R0119 (NA)			
7	J6252	PSC51-MW13S-052418	05/24/2018 4:55 pm	GW	R0119 (NA)			MS-MSD
8	J6253	DRMO-MW2-052418	05/24/2018 2:55 pm	GW	R0119 (NA)			
9	J6254	DRMO-FD03-052418	05/24/2018 2:05 pm	GW DUP	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:***	40	***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=MD	***Histograms:***	No			***HT_Flag:***	T
ECD_Reporting:	No						

No:	Analyte:	Report Name:	Type	RIS	SIS	Hidden:	Graph:
1	Perfluoro-n-hexanoic acid	PFHxA	T		13C5-PFHxA	No	No
2	Perfluoro-n-heptanoic Acid	PFHpA	T		13C4-PFHpA	No	No
3	Perfluoro-n-octanoic Acid	PFOA	T		13C8-PFOA	No	No
4	Perfluorononanoic Acid	PFNA	T		13C9-PFNA	No	No
5	Perfluoro-n-decanoic Acid	PFDA	T		13C6-PFDA	No	No
6	Perfluoro-n-undecanoic acid	PFUnA	T		13C7-PFUnA	No	No
7	Perfluoro-n-dodecanoic acid	PFDoA	T		13C2-PFDoA	No	No
8	Perfluoro-n-tridecanoic acid	PFTrDA	T		13C2-PFTeDA	No	No
9	Perfluoro-n-tetradecanoic acid	PFTeDA	T		13C2-PFTeDA	No	No
10	N-methylperfluoro-1-octanesulfonamidoacetic acid	NMeFOSAA	T		N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid	No	No
11	N-ethylperfluoro-octanesulfonamidoacetic acid	NEtFOSAA	T		N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid	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

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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:
4	13C9-PFNA	13C9-PFNA	SIS	13C2-PFOA		No	No
5	13C6-PFDA	13C6-PFDA	SIS	13C2-PFDA		No	No
6	13C7-PFUnA	13C7-PFUnA	SIS	13C2-PFDA		No	No
7	13C2-PFDoA	13C2-PFDoA	SIS	13C2-PFDA		No	No
8	13C2-PFTeDA	13C2-PFTeDA	SIS	13C2-PFDA		No	No
9	N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid	d3-MeFOSAA	SIS	13C4-PFOS		No	No
10	N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid	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-180525-01

Battelle Project No:

Sample Receipt Form

Approved: ☐ Authorized ☐

Project Number: NAS JAX PFAS **Client:** Tetratech

Received by: Schumitz, Matt **Date/Time Received:** Friday, May 25, 2018 10:30 AM

No. of Shipping Containers: 1

SHIPMENT

Method of Delivery: Commercial Carrier **Tracking Number:** 8115 9773 0019

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	8115 9773 0019	Tape	Intact	Intact	Therm_2	0.7	14

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): 0.7 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:** J6241 - J6254

Samples logged in by: Schumitz, Matt **Date/Time:** 05/25/2018 10:30 AM

Approved By: **Approved On:**

Authorized By: **Authorized On:**

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ShpNo: SHP-180525-01

Battelle Project No:

Report Corrective Actions

Corrective Action No: 1 **of** 1

Authorized ☐ Approved: ☐

COC Client: Tetratech
COC Project: SEO 375
COC Date: 5/25/2018 10:44

	Description of Problem:	Explanation:
Client Id	Other	The client reached out to the project manager on the morning of 5/25/18 to make him aware that the samples were inbound. While he was on the phone he told him that there were errors with the ID's from the COC to the sample labels and to go by the ID's on the COC.

Documentation of project manager notification

Sample Custodian	Schumitz, Matt	**Date:**	5/25/2018 11:05:00 A
Laboratory Manager:	Thorn, Jonathan	**Date:**	5/25/2018 2:07:00 PM
Project Manager:	Thorn, Jonathan	**Date:**	5/25/2018 2:07:00 PM

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

On _____ **I contacted** _____ **at**

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

Date this form was received back to the custodian: _____

Reference Number: _____

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ShpNo SHP-180525-01

Battelle Project No: 154-SE0375

Sample Receipt Form Details

Approved: ☐ **Authorized** ☐

Project Number: NAS JAX PFAS **Client:** Tetratech

Received by: Schumitz, Matt **Date / Time Received:** Friday, May 25, 2018 10:30 AM

No. of Shipping Containers: 1

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
J6241	FFTA-FD01-052418	05/24/18 11:00	05/25/18 10:54	2	SW DUP	0.7	NA	NA	NA	R0119 (NA)			
J6242	FFTA-SW01-052418	05/24/18 11:00	05/25/18 10:54	2	SW	0.7	NA	NA	NA	R0119 (NA)			
J6243	FFTA-SD01-052418	05/24/18 11:10	05/25/18 10:54	1	SD	0.7	NA	NA	NA	F0117 (NA)			
J6244	FFTA-FD02-052418	05/24/18 11:10	05/25/18 10:54	1	SD DUP	0.7	NA	NA	NA	F0117 (NA)			
J6245	FFTA-FB01-052418	05/24/18 11:20	05/25/18 10:55	1	GW QC	0.7	NA	NA	NA	R0119 (NA)			
J6246	FFTA-EB01-052418	05/24/18 11:30	05/25/18 10:55	1	GW QC	0.7	NA	NA	NA	R0119 (NA)			
J6247	FFTA-EB02-052418	05/24/18 11:40	05/25/18 10:55	1	GW QC	0.7	NA	NA	NA	R0119 (NA)			
J6248	DRMO-MW11-052418	05/24/18 14:05	05/25/18 10:56	2	GW	0.7	NA	NA	NA	R0119 (NA)			
J6249	DRMO-FB02-052418	05/24/18 14:00	05/25/18 10:56	1	GW QC	0.7	NA	NA	NA	R0119 (NA)			
J6250	PSC51-MW14D-052418	05/24/18 16:10	05/25/18 10:56	2	GW	0.7	NA	NA	NA	R0119 (NA)			
J6251	PSC51-FB03-052418	05/24/18 16:15	05/25/18 10:57	2	GW QC	0.7	NA	NA	NA	R0119 (NA)			
J6252	PSC51-MW13S-052418	05/24/18 16:55	05/25/18 10:57	3	GW	0.7	NA	NA	NA	R0119 (NA)			MS-MSD
J6253	DRMO-MW2-052418	05/24/18 14:55	05/25/18 10:58	1	GW	0.7	NA	NA	NA	R0119 (NA)			
J6254	DRMO-FD03-052418	05/24/18 14:05	05/25/18 10:58	1	GW DUP	0.7	NA	NA	NA	R0119 (NA)			

Total Samples: 14

BATTELLE
It can be done

Chain-of-Custody

Client Contact Information

Project Manager: Mark Peterson
Sampler Information (print name): Dave Siefken
Phone: 904-334-7260
Email: David.Siefken@TetraTech

Turnaround Time (TAT) Requested:
Normal
Priority
RUSH

Sampling Site: NAS JAX

Site Information: DRMO, FFTA, PSC 51

COC #

Page#

Project Name: SEO 375
Project No.: NAS JAX PFAS
Time Zone:

Preservative: ✓
Analysis: PFAS

	Sample Identification	2018 Sample Date	Sample Time	Matrix Sample Type	~~Matrix~~	Total # of Cont.	
J6241	FFTA-FD01-052418	5/24	1100	SW		2	Cool 4°C
J6242	FFTA-SW01-052418	5/24	1100	SW		2	
J6243	FFTA-SD01-052418		1110	SD		1	
J6244	FFTA-FD02-052418		1110	SD		1	
J6245	FFTA-FB01-052418		1120	GW		1	
J6246	FFTA-EB01-052418		1130			1	
J6247	FFTA-EB02-052418		1140			1	
J6248	DRMO-MW11-052418		1405			3	~~MS/MSD~~
J6249	DRMO-FB02-052418		1400			1	
J6250	PSC51-MW14D-052418		1610			2	
J6251	PSC51-FB03-052418		1615			2	
J6252	PSC51-MW13S-052418		1655			3	MSMSD
J6253	DRMO-MW2-052418		1455			1	

Receipt Temperature:(°C) 0.7

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
David Siefken	Tetra Tech	5-24-18 1830		Battelle	5/25/18 1030
Relinquished by (Print/Sign)	Company	Date/Time	Received by (Print/Sign)	Company	Date/Time
Relinquished by (Print/Sign)	Company	Date/Time	Received by (Print/Sign)	Company	Date/Time

Comments:

BATTELLE
It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Mark Peterson	Sampling Site: DRMO	Site Information:
	Sampler Information (print name): Phone: David Siefken 904. 334. 7260 Email:	Preservative: /	COC #
Project Name: NAS JAX PFAS	Turnaround Time (TAT) Requested: Normal / Priority / RUSH	Analysis: PFAS	Page#
Project No.: SEO-375	Time Zone:		

	Sample Ident:fication	Sample Date	Sample Time	~~Sample Type~~ Matrix	~~Matrix~~	Total # of Cont.		
J6254	DRMO-FD03-052418	5/24	1405	GW		1		Cool 4°C

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

Relinquished by (Print/Sign)	Company	Date/Time	Received by (Print/Sign)	Company	Date/Time
[signature]	T +	5-24-18 1830	[signature]	Battelle	5/25/18 1030
Relinquished by (Print/Sign)	Company	Date/Time	Received by (Print/Sign)	Company	Date/Time
Relinquished by (Print/Sign)	Company	Date/Time	Received by (Print/Sign)	Company	Date/Time

Comments:

ORIGIN ID:NRBA (904) 636-6125
DISTRIBUTION
TETRA TECH INC
8640 PHILIPS HWY STE 16

JACKSONVILLE, FL 32256
UNITED STATES US

SHIP DATE: 24MAY18
ACTWGT: 54.30 LB
CAD: 006994659/SSFE1904
DIMS: 23x13x14 IN

BILL THIRD PARTY

TO SAMPLE MGMT
BATTELLE
141 LONGWATER DR
STE 202
NORWELL MA 02061

(781) 681-5588 REF: 112608005-SE0375
INV:
PO: DEPT:

0.7°
Therm-2
MOS
10:30

FedEx Express

TRK# 0215 8115 9773 0019

FRI - 25 MAY 10:30A
PRIORITY OVERNIGHT
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02061
MA-US BOS

XE XPUA

Acct. No. in Section 1 will be billed. Recipient Third Party Credit Card Cash/Check

Total Packages Total Weight Credit Card Auth.

lbs.

liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

611

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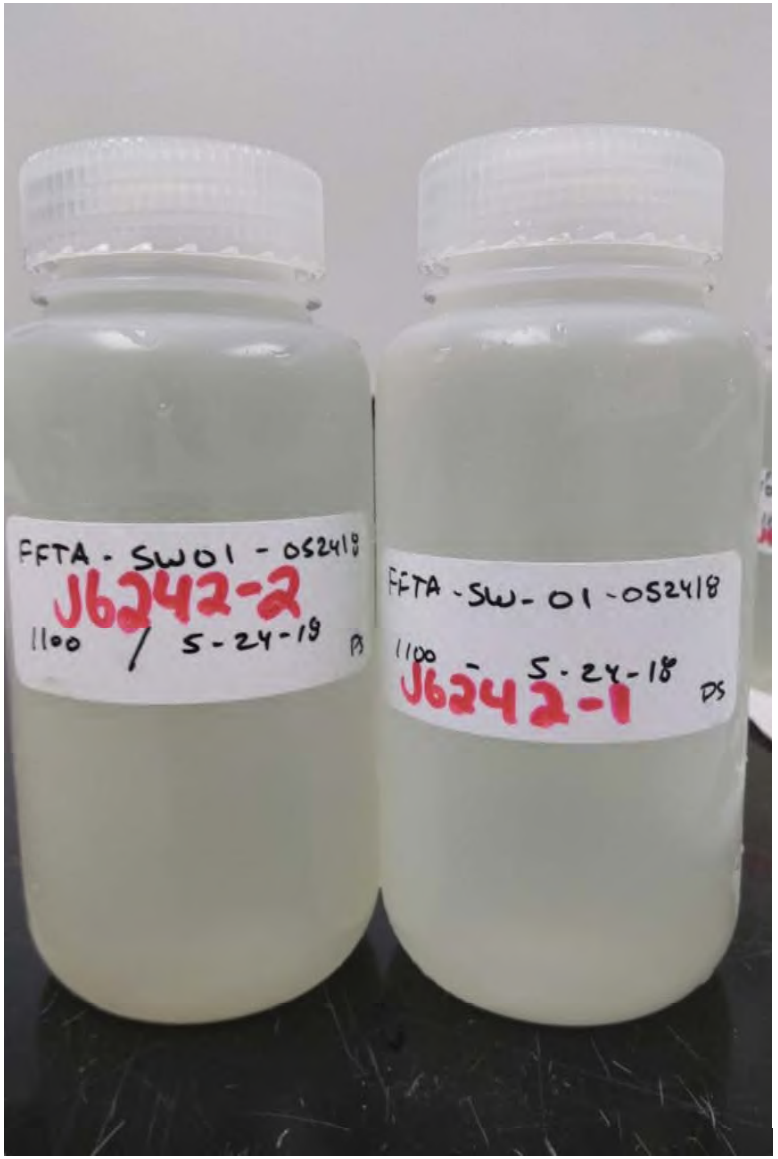
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1100 / 5-24-18
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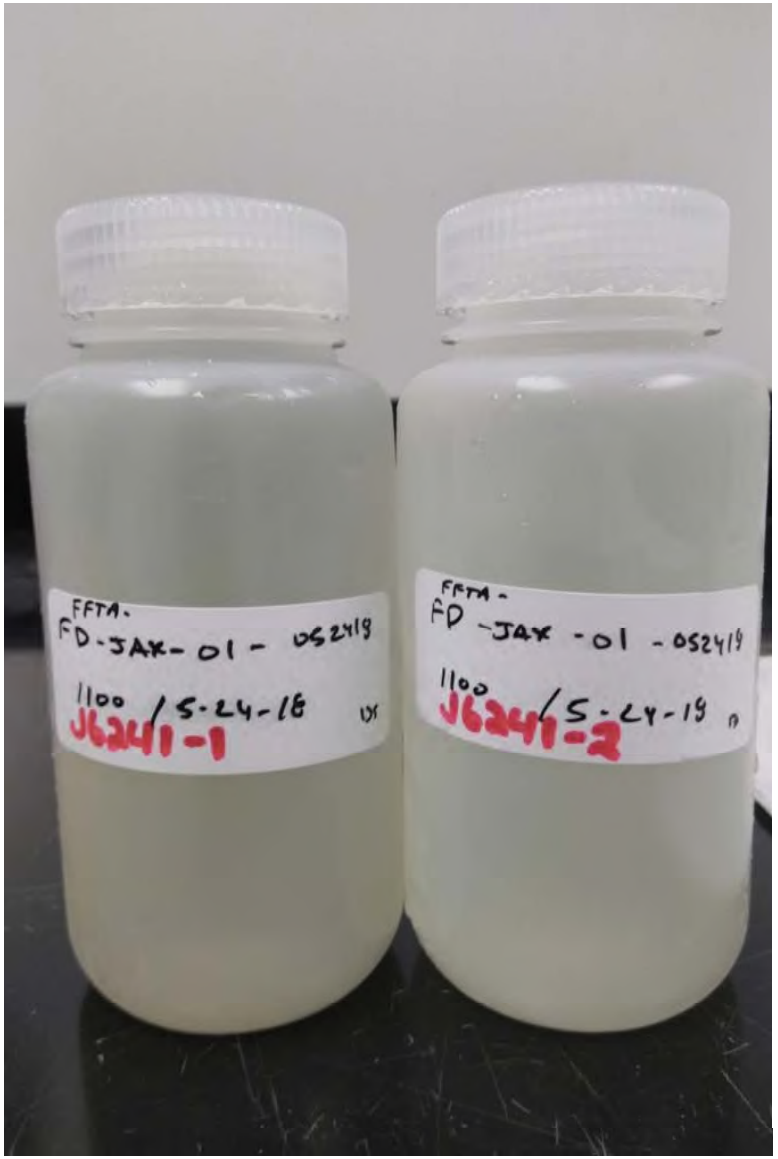
1100 - 5-24-18
J6242-1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1100 / 5-24-18
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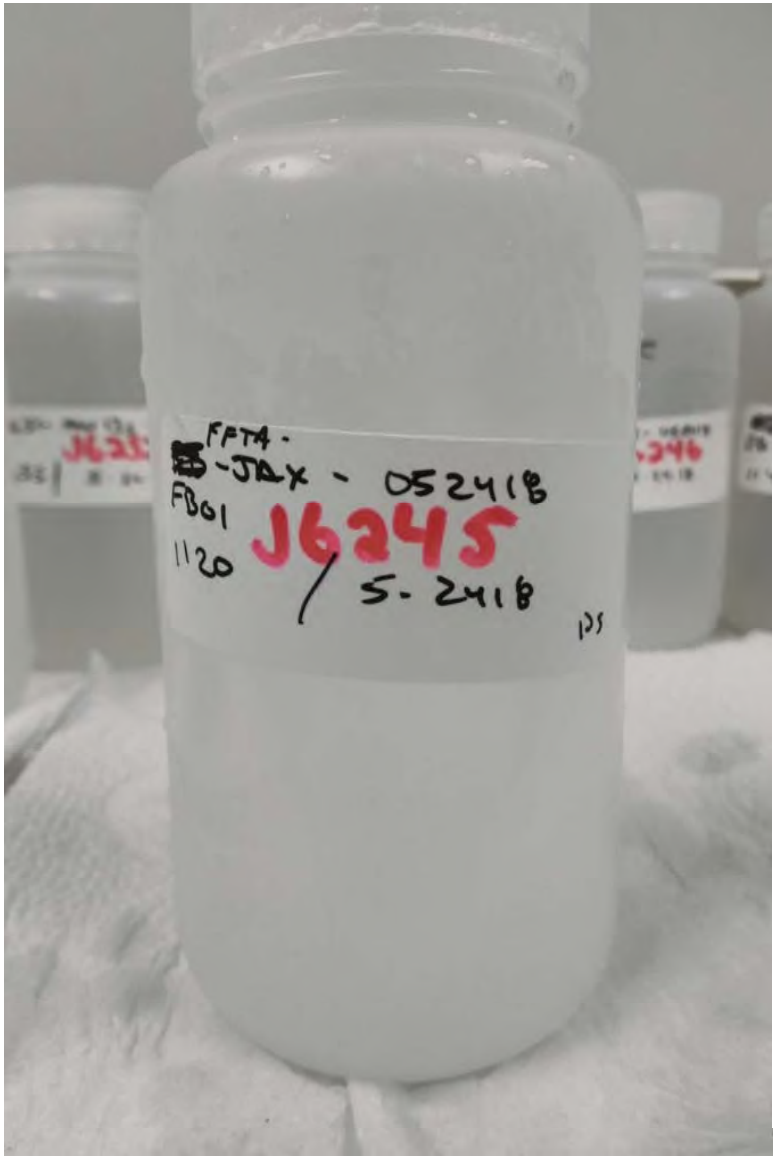
1100 / 5-24-18
J6241-2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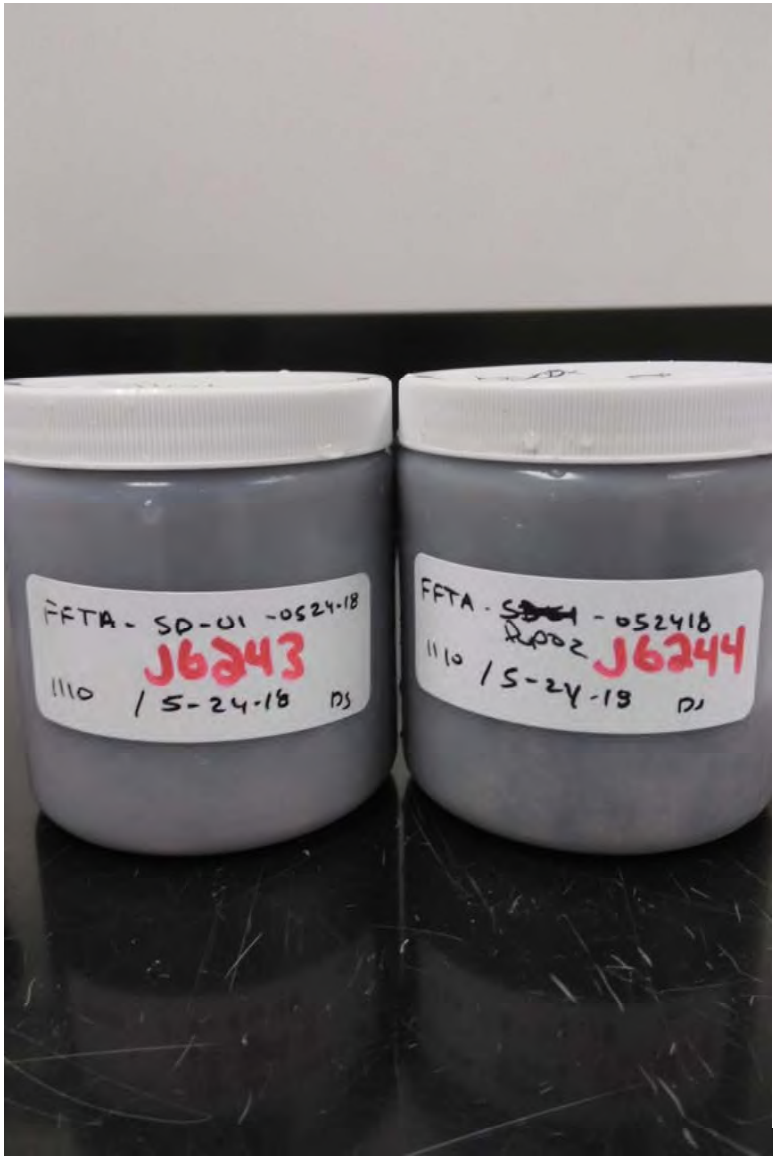
1120
/ 5-24-18
DS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J6243
1110 / 5-24-18 DS
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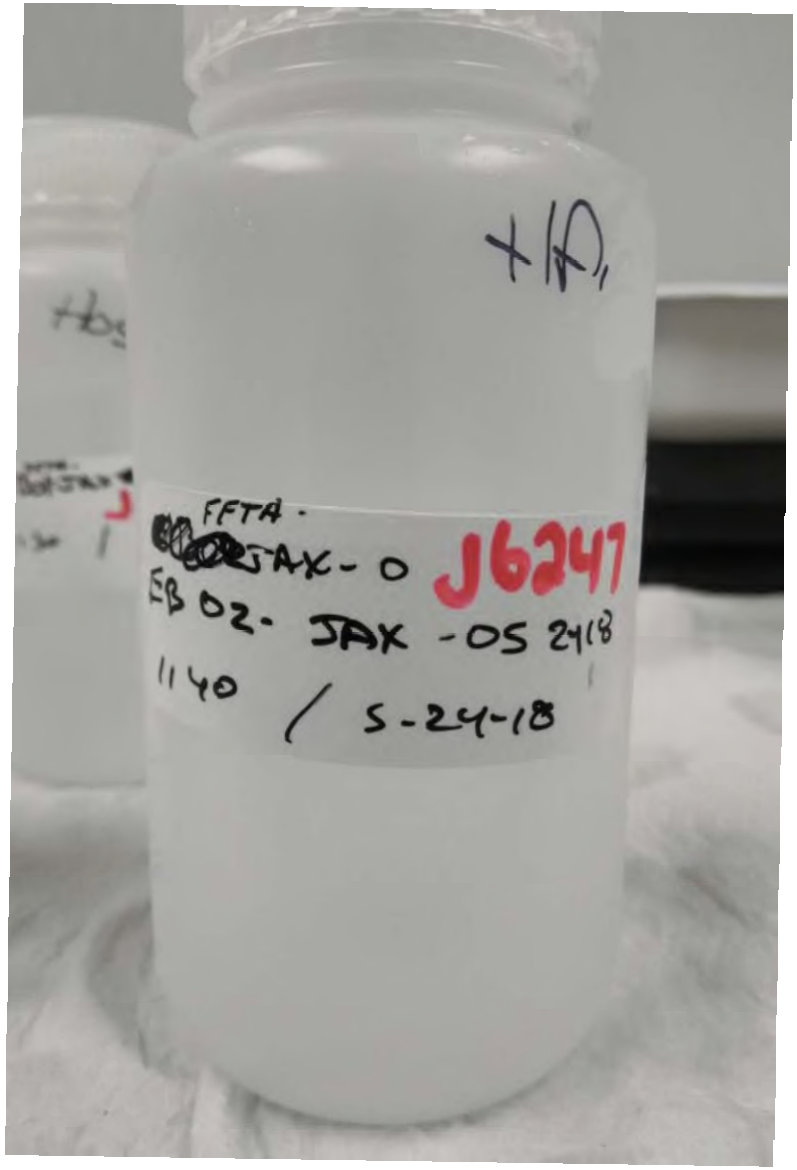
J6244
1110 / 5-24-18 DS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JAX - 0
J6247
EB 02- JAX -05 24 18
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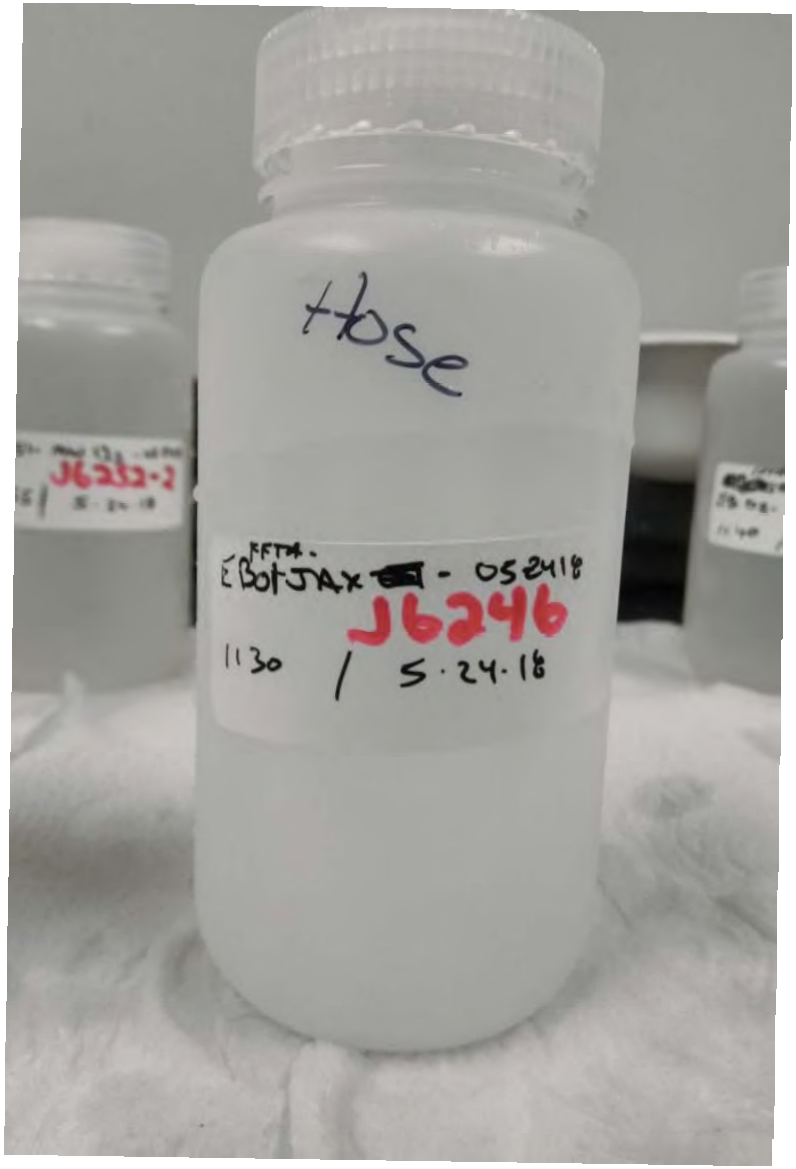
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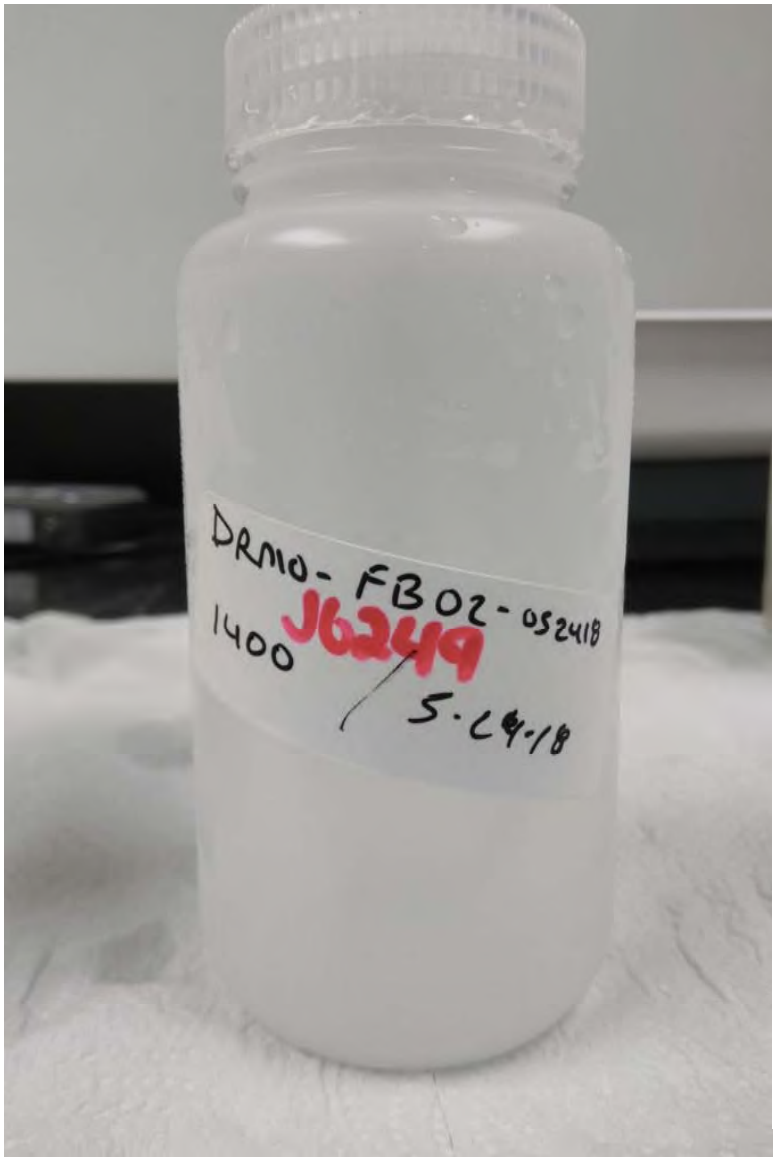
J6246
1130 / 5·24·18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1400
J6249
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RMO.MW11- 05 24 18
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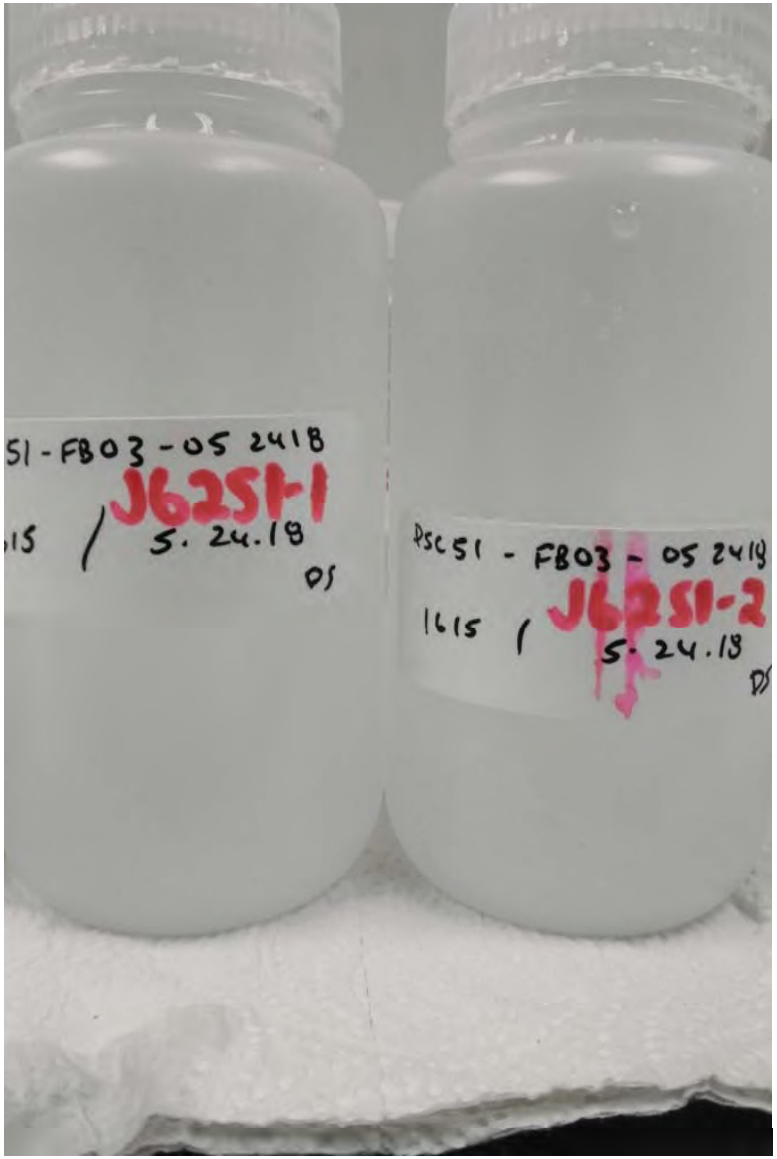
1405 / 5.24.18
DRMO.MW11.05 2418
1405 / 5.24.18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5. 24.18
DS
PSC51 - FB03 - 05 2418
1615 /
J6251-2
5. 24.18
DS

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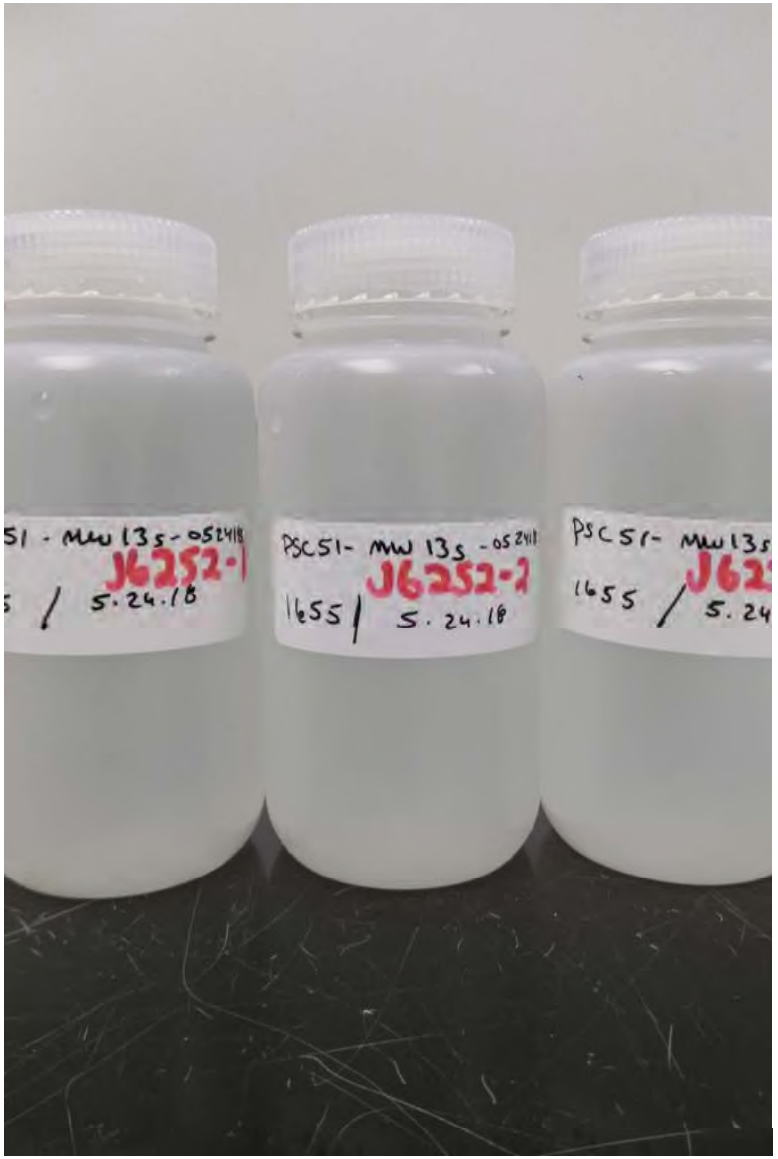
DS
PSC51-MW14D-05
1610 / 05 .24.18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J6252-2
1655 / 5.24.18
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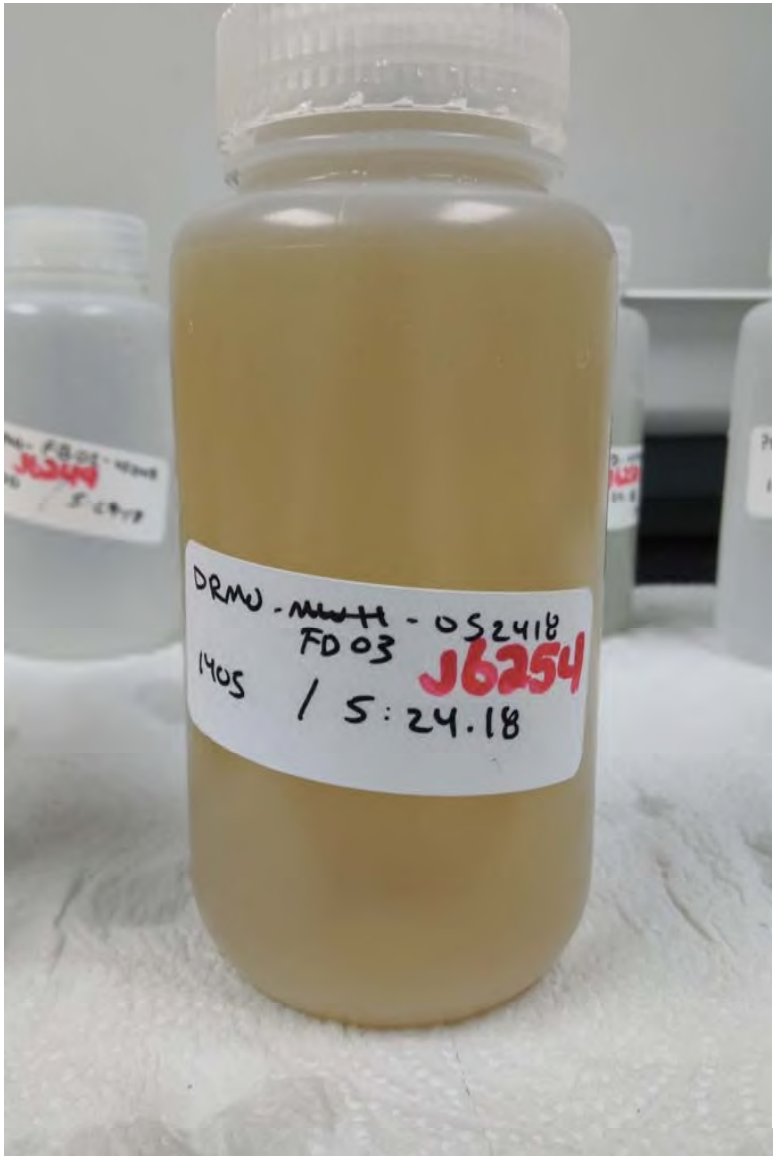
1655 / 5.24

DEMO- MW 2 -052418
J6253
1455 / 5.28.18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FD03
J6254
1405 / 5:24.18

Data Tables

BATTELLE
It can be done

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	FFTA-FD01-052418				
Battelle ID	J6241-FS				
Sample Type	SA				
Collection Date	05/24/2018				
Extraction Date	05/30/2018				
Analysis Date	05/31/2018				
Analytical Instrument	Sciex 5500 LC/MS/MS				
% Moisture	NA				
Matrix	SW DUP				
Sample Size	0.275				
Size Unit-Basis	L				
Units	ng/L		MDL	LOD	LOQ
PFHxA	966433.72	D	2698.86	7102.27	71022.73
PFHpA	37554.35	D	90.91	284.09	2840.91
PFOA	163302.36	D	2556.82	7102.27	71022.73
PFNA	228603.87	D	3693.18	14204.55	71022.73
PFDA	4540.44	D	90.91	284.09	2840.91
PFUnA	24897.69	D	164.77	568.18	2840.91
PFDoA	112.74	JD	4.26	11.84	118.37
PFTrDA	226.59	D	3.55	11.84	118.37
PFTeDA	7.84		0.23	0.91	4.55
NMeFOSAA	18.00		0.51	1.82	4.55
NEtFOSAA	41.11		0.45	0.91	4.55
PFBS	164675.06	D	1846.59	7102.27	71022.73
PFHxS	909907.10	D	1562.50	5681.82	71022.73
PFOS	13500909.99	D	67471.59	177556.82	1775568.18
Surrogate Recoveries (%)					
13C5-PFHxA	100	D			
13C4-PFHpA	114	D			
13C8-PFOA	82	D			
13C9-PFNA	54	D			
13C6-PFDA	97	D			
13C7-PFUnA	105	D			
13C2-PFDoA	93	D			
13C2-PFTeDA	94	D			
d3-MeFOSAA	129	D			
d5-EtFOSAA	150	D			
13C3-PFBS	104	D			
13C3-PFHxS	149	D			
13C8-PFOS	75	D			

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	FFTA-SW01-052418				
Battelle ID	J6242-FS				
Sample Type	SA				
Collection Date	05/24/2018				
Extraction Date	05/30/2018				
Analysis Date	05/31/2018				
Analytical Instrument	Sciex 5500 LC/MS/MS				
% Moisture	NA				
Matrix	SW				
Sample Size	0.280				
Size Unit-Basis	L				
Units	ng/L		MDL	LOD	LOQ
PFHxA	756130.79	D	2650.67	6975.45	69754.46
PFHpA	29830.28	D	89.29	279.02	2790.18
PFOA	117958.11	D	2511.16	6975.45	69754.46
PFNA	169115.57	D	3627.23	13950.89	69754.46
PFDA	3519.30	D	89.29	279.02	2790.18
PFUnA	22351.81	D	161.83	558.04	2790.18
PFDoA	156.14	D	4.19	11.63	116.26
PFTrDA	335.02	D	3.49	11.63	116.26
PFTeDA	7.35		0.22	0.89	4.46
NMeFOSAA	16.75		0.50	1.79	4.46
NEtFOSAA	34.38		0.44	0.89	4.46
PFBS	122540.36	D	1813.62	6975.45	69754.46
PFHxS	585921.79	D	1534.60	5580.36	69754.46
PFOS	5706313.82	D	66266.74	174386.16	1743861.61
Surrogate Recoveries (%)					
13C5-PFHxA	93	D			
13C4-PFHpA	107	D			
13C8-PFOA	70	D			
13C9-PFNA	52	D			
13C6-PFDA	96	D			
13C7-PFUnA	94	D			
13C2-PFDoA	86	D			
13C2-PFTeDA	88	D			
d3-MeFOSAA	117	D			
d5-EtFOSAA	136	D			
13C3-PFBS	111	D			
13C3-PFHxS	149	D			
13C8-PFOS	71	D			

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	JV05 IB			
Battelle ID	JV05 IB_05/31/2018			
Sample Type	IB			
Collection Date	NA			
Extraction Date	NA			
Analysis Date	05/31/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	Water			
Sample Size	0.250			
Size Unit-Basis	NA			
Units	ng/L	MDL	LOD	LOQ
PFHxA	- -	-	-	-
PFHpA	- -	-	-	-
PFOA	- -	-	-	-
PFNA	- -	-	-	-
PFDA	- -	-	-	-
PFUnA	- -	-	-	-
PFDoA	- -	-	-	-
PFTrDA	- -	-	-	-
PFTeDA	1.00 U	0.25	1.00	5.00
NMeFOSAA	2.00 U	0.56	2.00	5.00
NEtFOSAA	1.00 U	0.49	1.00	5.00
PFBS	- -	-	-	-
PFHxS	- -	-	-	-
PFOS	- -	-	-	-
Surrogate Recoveries (%)				
13C5-PFHxA	- -			
13C4-PFHpA	- -			
13C8-PFOA	- -			
13C9-PFNA	- -			
13C6-PFDA	- -			
13C7-PFUnA	- -			
13C2-PFDoA	- -			
13C2-PFTeDA	- -			
d3-MeFOSAA	- -			
d5-EtFOSAA	- -			
13C3-PFBS	- -			
13C3-PFHxS	- -			
13C8-PFOS	- -			

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	JV05 IB			
Battelle ID	JV05 IB_06/04/2018			
Sample Type	IB			
Collection Date	NA			
Extraction Date	NA			
Analysis Date	06/04/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	Water			
Sample Size	0.250			
Size Unit-Basis	NA			
Units	ng/L	MDL	LOD	LOQ
PFHxA	0.50 U	0.19	0.50	5.00
PFHpA	0.50 U	0.16	0.50	5.00
PFOA	0.19 J	0.18	0.50	5.00
PFNA	1.00 U	0.26	1.00	5.00
PFDA	0.50 U	0.16	0.50	5.00
PFUnA	1.00 U	0.29	1.00	5.00
PFDoA	0.50 U	0.18	0.50	5.00
PFTrDA	0.50 U	0.15	0.50	5.00
PFTeDA	1.00 U	0.25	1.00	5.00
NMeFOSAA	2.00 U	0.56	2.00	5.00
NEtFOSAA	1.00 U	0.49	1.00	5.00
PFBS	0.50 U	0.13	0.50	5.00
PFHxS	0.40 U	0.11	0.40	5.00
PFOS	0.50 U	0.19	0.50	5.00

Surrogate Recoveries (%)	
13C5-PFHxA	67
13C4-PFHpA	65
13C8-PFOA	71
13C9-PFNA	68
13C6-PFDA	72
13C7-PFUnA	67
13C2-PFDoA	70
13C2-PFTeDA	66
d3-MeFOSAA	59
d5-EtFOSAA	68
13C3-PFBS	63
13C3-PFHxS	78
13C8-PFOS	75

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	JV05 IB				JV05 IB
Battelle ID	JV05 IB_06/07/2018				JV05 IB_06/08/2018
Sample Type	IB				IB
Collection Date	NA				NA
Extraction Date	NA				NA
Analysis Date	06/07/2018				06/08/2018
Analytical Instrument	Sciex 5500 LC/MS/MS				Sciex 5500 LC/MS/MS
% Moisture	NA				NA
Matrix	Water				Water
Sample Size	0.250				0.250
Size Unit-Basis	NA				NA
Units	ng/L	MDL	LOD	LOQ	ng/L
PFHxA	0.50 U	0.19	0.50	5.00	-
PFHpA	- -	-	-	-	-
PFOA	0.50 U	0.18	0.50	5.00	-
PFNA	1.00 U	0.26	1.00	5.00	-
PFDA	- -	-	-	-	-
PFUnA	- -	-	-	-	-
PFDoA	- -	-	-	-	-
PFTrDA	- -	-	-	-	-
PFTeDA	- -	-	-	-	-
NMeFOSAA	- -	-	-	-	-
NEtFOSAA	- -	-	-	-	-
PFBS	0.50 U	0.13	0.50	5.00	-
PFHxS	0.40 U	0.11	0.40	5.00	-
PFOS	0.50 U	0.19	0.50	5.00	0.50
Surrogate Recoveries (%)					
13C5-PFHxA					
13C4-PFHpA	- -				-
13C8-PFOA	- -				-
13C9-PFNA	- -				-
13C6-PFDA	- -				-
13C7-PFUnA	- -				-
13C2-PFDoA	- -				-
13C2-PFTeDA	- -				-
d3-MeFOSAA	- -				-
d5-EtFOSAA	- -				-
13C3-PFBS	71				-
13C3-PFHxS	- -				-
13C8-PFOS					

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID

Battelle ID
Sample Type
Collection Date
Extraction Date
Analysis Date
Analytical Instrument
% Moisture
Matrix
Sample Size
Size Unit-Basis

Units		MDL	LOD	LOQ
PFHxA	-	-	-	-
PFHpA	-	-	-	-
PFOA	-	-	-	-
PFNA	-	-	-	-
PFDA	-	-	-	-
PFUnA	-	-	-	-
PFDoA	-	-	-	-
PFTrDA	-	-	-	-
PFTeDA	-	-	-	-
NMeFOSAA	-	-	-	-
NEtFOSAA	-	-	-	-
PFBS	-	-	-	-
PFHxS	-	-	-	-
PFOS	U	0.19	0.50	5.00

Surrogate Recoveries (%)

13C5-PFHxA	
13C4-PFHpA	-
13C8-PFOA	-
13C9-PFNA	-
13C6-PFDA	-
13C7-PFUnA	-
13C2-PFDoA	-
13C2-PFTeDA	-
d3-MeFOSAA	-
d5-EtFOSAA	-
13C3-PFBS	-
13C3-PFHxS	-
13C8-PFOS	

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	Procedural Blank			
Battelle ID	CQ859PB-FS			
Sample Type	PB			
Collection Date	05/30/2018			
Extraction Date	05/30/2018			
Analysis Date	06/05/2018			
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	0.50 U	0.19	0.50	5.00
PFHpA	0.50 U	0.16	0.50	5.00
PFOA	0.50 U	0.18	0.50	5.00
PFNA	1.00 U	0.26	1.00	5.00
PFDA	0.50 U	0.16	0.50	5.00
PFUnA	1.00 U	0.29	1.00	5.00
PFDoA	0.50 U	0.18	0.50	5.00
PFTrDA	0.50 U	0.15	0.50	5.00
PFTeDA	1.00 U	0.25	1.00	5.00
NMeFOSAA	2.00 U	0.56	2.00	5.00
NEtFOSAA	1.00 U	0.49	1.00	5.00
PFBS	0.50 U	0.13	0.50	5.00
PFHxS	0.40 U	0.11	0.40	5.00
PFOS	0.64 J	0.19	0.50	5.00

Surrogate Recoveries (%)

13C5-PFHxA	102
13C4-PFHpA	105
13C8-PFOA	106
13C9-PFNA	108
13C6-PFDA	99
13C7-PFUnA	103
13C2-PFDoA	72
13C2-PFTeDA	63
d3-MeFOSAA	90
d5-EtFOSAA	112
13C3-PFBS	103
13C3-PFHxS	107
13C8-PFOS	97

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	Laboratory Control Sample					
Battelle ID	CQ860LCS-FS					
Sample Type	LCS					
Collection Date	05/30/2018					
Extraction Date	05/30/2018					
Analysis Date	06/05/2018					
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	10.71	10.10	106		51	137
PFHpA	10.04	10.00	100		48	136
PFOA	9.39	10.00	94		49	141
PFNA	9.67	10.00	97		58	122
PFDA	9.20	10.00	92		59	135
PFUnA	9.63	10.00	96		64	134
PFDoA	10.44	10.00	104		75	131
PFTrDA	9.96	10.00	100		42	148
PFTeDA	10.15	10.00	102		42	158
NMeFOSAA	12.32	10.00	123		50	146
NEtFOSAA	8.66	10.00	87		51	131
PFBS	11.34	10.10	112		56	134
PFHxS	8.33	10.10	82		52	128
PFOS	10.33	10.00	103		40	144

Surrogate Recoveries (%)

13C5-PFHxA	110
13C4-PFHpA	109
13C8-PFOA	115
13C9-PFNA	114
13C6-PFDA	132
13C7-PFUnA	126
13C2-PFDoA	104
13C2-PFTeDA	101
d3-MeFOSAA	93
d5-EtFOSAA	116
13C3-PFBS	107
13C3-PFHxS	125
13C8-PFOS	103

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

Norwell Operations
141 Longwater Drive, Suite 202
Norwell, Massachusetts 02061
Telephone: 781-681-5400

July 13th, 2018

This data package has been revised to include the following updates to the reporting format:

- Use of LOD values for non-detected values (in place of the MDL value that was used in the original report).
- Use of sample specific MDL, LOD, and LOQ values (adjusted for dilution and sample size variations as compared to the MDL, LOD, and LOQ studies)

In addition to non-detect ("U" qualified) data changing to use the sample specific LOD value (not included in the table below), the information in the following table changed from the original report to the new report. The reason for these changes is the variation in sample size for individual samples when using sample specific values. This table includes information on all SDG updated and resubmitted on 7/13/2018.

SDG	Lab Sample ID	Client ID	Analyte	New Result	New Qual	Old Result	Old Qual
18-0338	J6254-FS	DRMO-FD03-052418	PFHxS	88.82	JD	88.82	D
18-0339	J6243-FS	FFTA-SD01-052418	PFHxA	91.86	JD	91.86	D
18-0339	J6243-FS	FFTA-SD01-052418	PFHxS	83.16	JD	83.16	D
18-0339	J6243MS-FS	FFTA-SD01-052418	PFHxS	116.65	JD	116.65	D
18-0339	J6244-FS	FFTA-FD02-052418	PFHxA	94.05	JD	94.05	D
18-0339	J6244-FS	FFTA-FD02-052418	PFTrDA	70.55	JD	70.55	D
18-0339	J6244-FS	FFTA-FD02-052418	PFHxS	82.28	JD	82.28	D
18-0340	J6241-FS	FFTA-FD01-052418	PFDoA	112.74	JD	112.74	D

The original data tables have been moved to the unused data section of this complete data package.

QA/QC Summary
Batch 18-0340

Project:	CTO-SE0375: Naval Air Station (NAS) Jacksonville
Parameters:	PFAS
Laboratory:	Battelle, Norwell, MA
Matrix:	SW
Data Set:	DP-18-0133
Analytical SOP:	5-369
Method Reference:	PFAS to QSM 5.1 Table B-15

Sample Custody		
Collection Date	Receipt Date	Temp (°C)
5/24/2018	5/25/2018	0.7

Corrective Actions	None – client contacted project manager to verify client IDs and matrices prior to arrival of shipment.
Sample Storage	The samples were stored refrigerated until extraction.
Related samples	Related field blank is extracted and reported in SDG 18-0351.

	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 methanol. Extracts were split 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	No MS/MSD sample was sent for surface waters, MS/MSD sample present in groundwater batch 18-0338.
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.
Analysis Comments	Samples analyzed on Sciex 5500 LC-MS/MS. The confirmation ion ratio was above 50% RPD for the following samples and analytes in the result method 18-0340_BASE_D: Procedural Blank (CQ859PB) – PFHxS, PFDA, PFOA, and PFTeDA (all detected below the MDL) FFTA-FD01-052418 (J6241) and FFTA-SW01-052418 (J6242) – PFBS, PFHpA, PFHxA, PFHxS, PFOA, and PFOS

Holding Times	Extraction Date(s)	Analysis Date(s)
	5/30/2018	5/31, 6/4, 6/5, 6/7, and 6/8/2018

QA/QC Summary
Batch 18-0340

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.

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.
	No comments.

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.

BATTELLE
It can be done

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project Number: 100119154-SE0375
Preparation Batch: 18-0340
Data Set: DP-18-0133
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	0	None
Matrix Spike / Matrix Spike Duplicate Precision	0	None
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

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
MISCELLANEOUS DOCUMENTATION FORM

Project Title:	CTO-SE0375: Naval Air Station Jackson	**Data Set Number:**	DP-18-0133
Project Number:	100119154-SE0375	**Prep Batch Number:**	18-0340
Entered By:	Denise Schumitz	**Entered On:**	06/08/2018

Test Code (Matrix Type): Master_369(L)

Samples that were manually integrated are noted on the quant reports with the comment (TRUE).
DMS 6/8/2018

JV20 is not being used in method 18-0340_BASE for PFTeDA, NMeFOSAA and NEtFOSAA. There is no impact on the data once this point is removed from the calibration.
DMS 6/8/2018

JV20 is not being used in method 18-0340_BASE_D for PFHxA . There is no impact on the data once this point is removed from the calibration.
DMS 6/8/2018

JV28 is not being used in method 18-0340_BASE_D for PFDoA and NMeFOSAA. There is no impact on the data once this point is removed from the calibration.
DMS 6/8/2018

JV20 is not being used in method 18-0340_BASE_D_1 for PFHxS and PFOS. There is no impact on the data once this point is removed from the calibration.
DMS 6/8/2018

JV28 is not being used in method 18-0340_SIS for 13C3-PFBS. There is no impact on the data once this point is removed from the calibration.
DMS 6/8/2018

JV21 is not being used in method 18-0340_BASE_D_1 for PFOS. There is no impact on the data once this point is removed from the calibration.
DMS 6/8/2018

SIS and IS is being reported from the dilutions for all authentic samples. Due to the high concentration of the natives in the samples the labeled SIS and IS are being skewed.
DMS 6/8/2018

JV20, J6241 and J6242 in method 18-0340_BASE have an ion ratio of >50% for NMeFOSAA.
DMS 6/8/2018

JV20 in method 18-0340_BASE has an ion ratio of >50% for NEtFOSAA.
DMS 6/8/2018

JV20 in method 18-0340_BASE has ion ratios of >50% for NEtFOSAA.
DMS 6/8/2018

JV21 in method 18-0340_BASE_D has ino ratio of >50% for PFHpA.
DMS 6/8/2018

JV20 in method 18-0340_BASE_D_1 has ion ratio of >50% for PFOS.
DMS 6/8/2018

JV05 IB in method 18-0340_BASE_D has ion ratio of >50% for NEtFOSAA.
DMS 6/8/2018

Task Leader Approval:

SupervisorApproval:

PM Approval:

Digitally signed by Jonathan Thorn
Date: 2018.06.08 16:05:19 -04'00'

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
MISCELLANEOUS DOCUMENTATION FORM

Project Title:	CTO-SE0375: Naval Air Station Jackson	**Data Set Number:**	DP-18-0133
Project Number:	100119154-SE0375	**Prep Batch Number:**	18-0340
Entered By:	Denise Schumitz	**Entered On:**	06/08/2018

Test Code (Matrix Type): Master_369(L)

CQ859PB in method 18-0340_BASE_D has ion ratios of >50% for PFHXS, PFDA, PFOA and PFTeDA.
DMS 6/8/2018

J6241(6) and J6242(6) in method 18-0340_BASE_D have ion ratios of >50% for PFBS, PFHpA, PFHxA, PFHxS, PFOA and PFOS.
DMS 6/8/2018

Task Leader Approval:

SupervisorApproval:

PM Approval:

Digitally signed by Jonathan Thorn
Date: 2018.06.08 16:05:31 -04'00'

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:	J6241-FS-D(3)
Client Sample ID:	FFTA-FD01-052418
Sample Size:	0.275
Units:	L
Dilution Factor:	2
PIV (L):	0.0005
Target Analyte:	NMeFOSAA_1
MRM Transition:	570.0 / 419.0
Data file:	Data18-0340_18-0338_18-0329.wiff
Result table:	8-0340_BASE
Area:	577,004.01
IS Name:	d3-MeFOSAA
IS Area:	20,545.96
IS Amount (ng/L):	100
y-intercept	0.18098
slope	0.56366

$$\text{Concentration} = \frac{[(577004.01/20545.96) - 0.18098]}{0.56366} * 100 * 0.0005 * 2 / 0.275$$

ng/L = 18.00

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375
Preparation Batch: 18-0340
Data Set: DP-18-0133

	CQ859PB-FS (Procedural Blank)	CQ860LCS-FS (Laboratory Control Sample)	J6241-FS (FFTA-FD01-052418)	J6242-FS (FFTA-SW01-052418)
PFHxA	-	L	L	L
PFHpA	-	L	L	L
PFOA	-	L	L	L
PFNA	-	L	L	L
PFDA	-	L	L	L
PFUnA	-	L	L	L
PFDoA	-	L	L	L
PFTrDA	-	L	L	L
PFTeDA	-	L	L	L
NMeFOSAA	-	L	L	L
NEtFOSAA	-	L	L	L
PFBS	-	L	L	L
PFHxS	-	L	L	L
PFOS	-	L/Br	L/Br	L/Br

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

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper
JV24	L5	6/4/18 20:17	13C2-PFOA	39,157.28	19,578.64	58,735.92

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper	Qualifier
JV20	L1	6/4/18 19:34	13C2-PFOA	36,025.71	19,578.64	58,735.92	
JV21	L2	6/4/18 19:44	13C2-PFOA	41,305.46	19,578.64	58,735.92	
JV22	L3	6/4/18 19:55	13C2-PFOA	39,696.51	19,578.64	58,735.92	
JV23	L4	6/4/18 20:06	13C2-PFOA	41,933.78	19,578.64	58,735.92	
JV24	L5	6/4/18 20:17	13C2-PFOA	39,157.28	19,578.64	58,735.92	
JV25	L6	6/4/18 20:28	13C2-PFOA	34,745.43	19,578.64	58,735.92	
JV26	L7	6/4/18 20:38	13C2-PFOA	37,482.32	19,578.64	58,735.92	
JV27	L8	6/4/18 20:49	13C2-PFOA	39,448.92	19,578.64	58,735.92	
JV28	L9	6/4/18 21:00	13C2-PFOA	49,167.01	19,578.64	58,735.92	
JV05 IB	Instrument Blank	6/4/18 21:11	13C2-PFOA	47,155.38	19,578.64	58,735.92	
JW32 ICC	ICC	6/4/18 21:22	13C2-PFOA	36,978.40	19,578.64	58,735.92	
CQ859PB-FS(3)	Procedural Balnk	6/5/18 3:28	13C2-PFOA	35,384.21	19,578.64	58,735.92	
CQ860LCS-FS(3)	Labortory Control	6/5/18 3:39	13C2-PFOA	37,143.49	19,578.64	58,735.92	
JV26 CCV	CCV	6/5/18 3:50	13C2-PFOA	40,703.57	19,578.64	58,735.92	
J6241-FS-D(6)	FFTA_FD01-052418	6/5/18 4:12	13C2-PFOA	120,962.56	19,578.64	58,735.92	N
J6241-FS-D(7)	FFTA_FD01-052418	6/5/18 4:22	13C2-PFOA	37,459.65	19,578.64	58,735.92	
J6242-FS-D(6)	FFTA-SW01-052418	6/5/18 4:44	13C2-PFOA	121,240.69	19,578.64	58,735.92	N
J6242-FS-D(7)	FFTA-SW01-052418	6/5/18 4:55	13C2-PFOA	40,293.83	19,578.64	58,735.92	
JV25 CCV	CCV	6/5/18 5:38	13C2-PFOA	42,718.87	19,578.64	58,735.92	

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper
JV24	L5	6/4/18 20:17	13C2-PFDA	42,059.81	21,029.91	63,089.72

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper	Qualifier
JV20	L1	6/4/18 19:34	13C2-PFDA	36,585.13	21,029.91	63,089.72	
JV21	L2	6/4/18 19:44	13C2-PFDA	46,522.32	21,029.91	63,089.72	
JV22	L3	6/4/18 19:55	13C2-PFDA	42,887.04	21,029.91	63,089.72	
JV23	L4	6/4/18 20:06	13C2-PFDA	46,848.40	21,029.91	63,089.72	
JV24	L5	6/4/18 20:17	13C2-PFDA	42,059.81	21,029.91	63,089.72	
JV25	L6	6/4/18 20:28	13C2-PFDA	40,285.95	21,029.91	63,089.72	
JV26	L7	6/4/18 20:38	13C2-PFDA	39,548.90	21,029.91	63,089.72	
JV27	L8	6/4/18 20:49	13C2-PFDA	42,034.21	21,029.91	63,089.72	
JV28	L9	6/4/18 21:00	13C2-PFDA	49,902.99	21,029.91	63,089.72	
JV05 IB	Instrument Blank	6/4/18 21:11	13C2-PFDA	47,439.86	21,029.91	63,089.72	
JW32 ICC	ICC	6/4/18 21:22	13C2-PFDA	40,307.55	21,029.91	63,089.72	
CQ859PB-FS(3)	Procedural Balnk	6/5/18 3:28	13C2-PFDA	40,017.16	21,029.91	63,089.72	
CQ860LCS-FS(3)	Labortory Control	6/5/18 3:39	13C2-PFDA	37,763.47	21,029.91	63,089.72	
JV26 CCV	CCV	6/5/18 3:50	13C2-PFDA	46,240.47	21,029.91	63,089.72	
J6241-FS-D(6)	FFTA_FD01-052418	6/5/18 4:12	13C2-PFDA	38,865.88	21,029.91	63,089.72	
J6241-FS-D(7)	FFTA_FD01-052418	6/5/18 4:22	13C2-PFDA	39,799.41	21,029.91	63,089.72	
J6242-FS-D(6)	FFTA-SW01-052418	6/5/18 4:44	13C2-PFDA	42,368.44	21,029.91	63,089.72	
J6242-FS-D(7)	FFTA-SW01-052418	6/5/18 4:55	13C2-PFDA	40,924.89	21,029.91	63,089.72	
JV25 CCV	CCV	6/5/18 5:38	13C2-PFDA	45,436.85	21,029.91	63,089.72	

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper
JV24	L5	6/4/18 20:17	13C4-PFOS	9,929.06	4,964.53	14,893.59

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper	Qualifier
JV20	L1	6/4/18 19:34	13C4-PFOS	9,879.32	4,964.53	14,893.59	
JV21	L2	6/4/18 19:44	13C4-PFOS	12,043.17	4,964.53	14,893.59	
JV22	L3	6/4/18 19:55	13C4-PFOS	10,528.19	4,964.53	14,893.59	
JV23	L4	6/4/18 20:06	13C4-PFOS	11,797.48	4,964.53	14,893.59	
JV24	L5	6/4/18 20:17	13C4-PFOS	9,929.06	4,964.53	14,893.59	
JV25	L6	6/4/18 20:28	13C4-PFOS	9,996.33	4,964.53	14,893.59	
JV26	L7	6/4/18 20:38	13C4-PFOS	7,985.50	4,964.53	14,893.59	
JV27	L8	6/4/18 20:49	13C4-PFOS	11,051.83	4,964.53	14,893.59	
JV28	L9	6/4/18 21:00	13C4-PFOS	9,517.13	4,964.53	14,893.59	
JV05 IB	Instrument Blank	6/4/18 21:11	13C4-PFOS	11,135.33	4,964.53	14,893.59	
JW32 ICC	ICC	6/4/18 21:22	13C4-PFOS	11,886.00	4,964.53	14,893.59	
CQ859PB-FS(3)	Procedural Balnk	6/5/18 3:28	13C4-PFOS	8,880.79	4,964.53	14,893.59	
CQ860LCS-FS(3)	Labortory Control	6/5/18 3:39	13C4-PFOS	9,945.58	4,964.53	14,893.59	
JV26 CCV	CCV	6/5/18 3:50	13C4-PFOS	11,001.50	4,964.53	14,893.59	
J6241-FS-D(6)	FFTA_FD01-052418	6/5/18 4:12	13C4-PFOS	1,164.59	4,964.53	14,893.59	N
J6241-FS-D(7)	FFTA_FD01-052418	6/5/18 4:22	13C4-PFOS	6,398.14	4,964.53	14,893.59	
J6242-FS-D(6)	FFTA-SW01-052418	6/5/18 4:44	13C4-PFOS	1,737.90	4,964.53	14,893.59	N
J6242-FS-D(7)	FFTA-SW01-052418	6/5/18 4:55	13C4-PFOS	6,897.32	4,964.53	14,893.59	
JV25 CCV	CCV	6/5/18 5:38	13C4-PFOS	9,248.91	4,964.53	14,893.59	

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper
JV24	L5	6/7/18 21:15	13C4-PFOS	17,621.34	8,810.67	26,432.01

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper	Qualifier
JV20	L1	6/7/18 20:32	13C4-PFOS	11,468.96	8,810.67	26,432.01	
JV21	L2	6/7/18 20:43	13C4-PFOS	12,130.72	8,810.67	26,432.01	
JV22	L3	6/7/18 20:53	13C4-PFOS	14,221.94	8,810.67	26,432.01	
JV23	L4	6/7/18 21:04	13C4-PFOS	15,596.73	8,810.67	26,432.01	
JV24	L5	6/7/18 21:15	13C4-PFOS	17,621.34	8,810.67	26,432.01	
JV25	L6	6/7/18 21:25	13C4-PFOS	14,985.31	8,810.67	26,432.01	
JV26	L7	6/7/18 21:36	13C4-PFOS	16,218.32	8,810.67	26,432.01	
JV27	L8	6/7/18 21:47	13C4-PFOS	16,664.04	8,810.67	26,432.01	
JV28	L9	6/7/18 21:57	13C4-PFOS	15,001.44	8,810.67	26,432.01	
JV05 IB	Instrument Blank	6/7/18 22:08	13C4-PFOS	17,807.40	8,810.67	26,432.01	
JW32 ICC	ICC	6/7/18 22:19	13C4-PFOS	12,740.39	8,810.67	26,432.01	
JV16 Branch	Branch Standard	6/7/18 22:30	13C4-PFOS	18,759.84	8,810.67	26,432.01	
J6241-FS-D(9)	FFTA_FD01-052418	6/8/18 1:21	13C4-PFOS	15,358.69	8,810.67	26,432.01	
J6242-FS-D(9)	FFTA-SW01-052418	6/8/18 1:31	13C4-PFOS	15,610.76	8,810.67	26,432.01	
JV26 CCV	CCV	6/8/18 2:14	13C4-PFOS	13,521.45	8,810.67	26,432.01	

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Mass Spectral Acquisition Rate Report

Created with Analyst Reporter
Printed: 08/06/2018 11:58:34 AM

Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	5/31/2018 6:48:14 PM	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
PFTeDA_1	713.0 / 669.0	4.36	46	>10
PFTeDA_2	713.0 / 169.0	4.35	31	>10
NMeFOSAA_1	570.0 / 419.0	3.44	36	>10
NMeFOSAA_2	570.0 / 512.0	3.44	33	>10
NEtFOSAA_1	584.0 / 419.0	3.60	24	>10
NEtFOSAA_2	584.0 / 483.0	3.60	36	>10

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Mass Spectral Acquisition Rate Report

Created with Analyst Reporter
Printed: 08/06/2018 11:55:17 AM

Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 8:38:50 PM	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
13C2-PFDoA	615.0 / 570.0	3.86	43	>10
d3-MeFOSAA	573.0 / 419.0	3.41	24	>10
d5-EtFOSAA	589.0 / 419.0	3.57	26	>10
13C5-PFHxA	318.0 / 273.0	1.77	28	>10
13C4-PFHpA	367.0 / 322.0	2.14	30	>10
13C8-PFOA	421.0 / 376.0	2.52	37	>10
13C9-PFNA	472.0 / 427.0	2.90	31	>10
13C6-PFDA	519.0 / 474.0	3.25	35	>10
13C7-PFUnA	570.0 / 525.0	3.57	30	>10
13C2-PFTeDA	715.0 / 670.0	4.33	37	>10
13C3-PFBS	302.0 / 99.0	1.48	35	>10
13C3-PFHxS	402.0 / 99.0	2.16	26	>10
13C8-PFOS	507.0 / 99.0	2.90	42	>10

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Mass Spectral Acquisition Rate Report

Created with Analyst Reporter
Printed: 08/06/2018 2:37:41 PM

Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 8:38:50 PM	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
PFBS_1	298.9 / 80.0	1.50	47	>10
PFBS_2	298.9 / 99.0	1.50	44	>10
PFHxA_1	313.0 / 269.0	1.79	23	>10
PFHxA_2	313.0 / 119.0	1.78	20	>10
PFHpA_1	363.0 / 319.0	2.15	38	>10
PFHpA_2	363.0 / 169.0	2.15	24	>10
PFHxS_1	399.0 / 80.0	2.17	40	>10
PFHxS_2	399.0 / 99.0	2.17	43	>10
PFOA_1	413.0 / 369.0	2.53	31	>10
PFOA_2	413.0 / 169.0	2.53	29	>10
PFNA_1	463.0 / 419.0	2.91	28	>10
PFNA_2	463.0 / 219.0	2.91	29	>10
PFOS_1	499.0 / 80.0	2.90	43	>10
PFOS_2	499.0 / 99.0	2.90	43	>10
PFDA_1	513.0 / 469.0	3.26	34	>10
PFDA_2	513.0 / 219.0	3.26	38	>10
PFUnA_1	563.0 / 519.0	3.58	35	>10
PFUnA_2	563.0 / 269.0	3.58	36	>10
PFDoA_1	613.0 / 569.0	3.87	37	>10
PFDoA_2	613.0 / 319.0	3.87	35	>10
PFTrDA_1	663.0 / 619.0	4.12	38	>10
PFTrDA_2	663.0 / 169.0	4.12	39	>10
PFTeDA_1	713.0 / 669.0	4.34	49	>10
PFTeDA_2	713.0 / 169.0	4.34	38	>10
NMeFOSAA_1	570.0 / 419.0	3.42	37	>10
NMeFOSAA_2	570.0 / 512.0	3.42	42	>10
NEtFOSAA_1	584.0 / 419.0	3.58	24	>10
NEtFOSAA_2	584.0 / 483.0	3.58	26	>10

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Mass Spectral Acquisition Rate Report

Created with Analyst Reporter
Printed: 08/06/2018 11:57:10 AM

Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 9:36:37 PM	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
PFBS_1	298.9 / 80.0	1.55	22	>10
PFBS_2	298.9 / 99.0	1.55	18	>10
PFHxA_1	313.0 / 269.0	1.83	19	>10
PFHxA_2	313.0 / 119.0	1.83	18	>10
PFHxS_1	399.0 / 80.0	2.21	22	>10
PFHxS_2	399.0 / 99.0	2.22	24	>10
PFOA_1	413.0 / 369.0	2.58	26	>10
PFOA_2	413.0 / 169.0	2.58	27	>10
PFNA_1	463.0 / 419.0	2.95	24	>10
PFNA_2	463.0 / 219.0	2.95	28	>10
PFOS_1	499.0 / 80.0	2.94	27	>10
PFOS_2	499.0 / 99.0	2.94	23	>10

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Mass Spectral Acquisition Rate Report

Created with Analyst Reporter
Printed: 08/06/2018 11:53:40 AM

Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:36:37	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
13C3-PFBS	302.0 / 99.0	1.53	24	>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	3 Sigma	n
PFBA	375-22-4	12.44	2.29	6.87	10
PFPeA	2706-90-3	10.77	1.61	4.83	8
PFHxA	307-24-4	10.31	1.32	3.96	22
PFHpA	375-85-9	9.87	1.78	5.34	22
PFOA	335-67-1	10.49	1.51	4.53	23
PFNA	375-95-1	10.02	1.23	3.69	22
PFDA	335-76-2	10.35	1.50	4.50	22
PFUnA	2058-94-8	10.40	1.41	4.23	22
PFDoA	307-55-1	11.29	1.20	3.60	22
PFTrDA	72629-94-8	11.80	1.59	4.77	22
PFTeDA	376-06-7	11.41	2.17	6.51	22
NMeFOSAA	2355-31-9	10.78	1.97	5.91	22
NEtFOSAA	2991-50-6	9.99	1.79	5.37	22
PFOSA	754-91-6	9.08	0.00	0.00	2
PFBS	375-73-5	10.65	1.55	4.65	23
PFPeS	BDO-2114	9.60	1.07	3.21	3
PFHxS	355-46-4	10.04	1.70	5.10	22
PFHpS	375-99-6	11.00	1.02	3.06	8
PFOS	1763-23-1	10.26	1.52	4.56	23
PFNS	98789-57-2	8.81	0.35	1.05	3
PFDS	2806-15-7	10.24	1.97	5.91	8
4:2FTS	BDO-2205	11.24	1.16	3.48	8
6:2FTS	27619-97-2	12.37	3.07	9.21	8
8:2FTS	39108-34-4	12.30	2.64	7.92	8

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

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

QTRAP 5500
Preventive Maintenance Checklist

Preventive Maintenance Date:	22-Feb-2017

Request ID:	3683
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:_____

_____

_____

_____

Performed By: Kaustubh Dhayagude **Date:** 22-Feb-2017

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	0.5	0.4 to 1.1 x10^{-5} Torr
☑ CAD Low	1.9	Read Only
☑ CAD Medium	2.4	Read Only
☑ CAD High	3.4	Read Only
☑ CAD 12	3.4	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	1.64 e6	Read Only	0.8095	Read Only
Q1 500.380	2.40 e7	Read Only	0.8592	Read Only
Q1 906.673	2.86 e7	Read Only	0.9633	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	1.26 e6	Read Only	0.6252	Read Only
Q3 500.380	2.19 e7	Read Only	0.7275	Read Only
Q3 906.673	3.02 e7	Read Only	0.7662	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: :__19.51%__ (Read Only)

Mass	MSMS Intensity		MSMS Width Value	Width Specs
	Value	Spec		
Q1 609.3	7.43 e7	Read Only	0.9981	Read Only
MS/MS 195.1	1.45 e7	Read Only	0.6582	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	1.43 e7	Read Only	0.7330	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	2.22 e7	Read Only	0.8138	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	3.35 e6	Read Only	0.6495	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	0.8	0.4 to 1.1 x10^{-5} Torr
☑ CAD Low	2.1	Read Only
☑ CAD Medium	2.6	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	5.94 e6	≥1.2^{e}6	0.6933	0.6 to 0.8
Q1 500.380	2.25 e7	≥9.0^{e}6	0.7444	0.6 to 0.8
Q1 906.673	2.74 e7	≥1.4^{e}7	0.7347	0.6 to 0.8
Scan Rate 1000 Da/s Record 50 mca				
Q1 906.673	1.33 e8	≥6.8^{e}7	0.7656	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	4.54 e6	≥1.2^{e}6	0.6390	0.6 to 0.8
Q3 500.380	2.13 e7	≥9.0^{e}6	0.7008	0.6 to 0.8
Q3 906.673	3.04 e7	≥1.4^{e}7	0.7683	0.6 to 0.8
Scan Rate 1000 Da/s Record 50 mca				
Q3 906.673	1.51 e8	≥6.8^{e}7	0.7118	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: 16.93% (≥ 10.0%)

Mass	MSMS Intensity		Width	Width Specs
	Value	Spec	Value	
Q1 609.3	5.74 e7	N/A	0.7667	Read Only
MS/MS 195.1	9.72 e6	N/A	0.6751	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	1.31 e7	≥1.0^{e}7	0.6895	0.6 to 0.8
Q1 933.636	1000	50	6.32 e7	≥4.0^{e}7	0.6740	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	1.70 e7	≥8.0^{e}6	0.7665	0.6 to 0.8
Q3 933.636	1000	50	7.41 e7	≥4.0^{e}7	0.7292	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	8.08 e6	≥7.2 ^{e}6	0.1302	<0.35
ER 922.010	0.05	3.89 e7	≥2.8 ^{e}6	0.2603	<0.35
ScanRate : 10000 Da/s ; 50 Mca					
ER 118.087	0.05	2.55 e7	≥2.4 ^{e}7	0.3740	<0.65
ER 922.010	0.05	2.37 e8	≥6.8 ^{e}7	0.5407	<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	1.05 e8	≥4.4 ^{e}7	0.1840	<0.35
ER 601.978	0.05	7.74 e7	≥5.6 ^{e}7	0.1849	<0.35
ScanRate : 10000 Da/s ; 50 Mca					
ER 431.982	0.05	3.43 e8	≥1.2 ^{e}8	0.4382	<0.65
ER 601.978	0.05	2.55 e8	≥1.6 ^{e}8	0.6205	<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	> 3.5 e6	≥2.0 ^{e}6	> 4.0 e7	≥6.4 ^{e}6

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

Mass	Scan Rate (Da/s)	Fragamentation OFF		Fragmentation ON	
		Intensity	Spec	Intensity	Spec
MS3 397.2	1000	3.2 e7	Contains only 397.2	N/A	N/A
☐ 236 OR ☑ 365	1000	1.19 e8	Fragment Intensity	> 4.4 e6	≥1.6x 10^{e}6

REVIEW:

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

END OF PREVENTIVE MAINTENANCE CHECKLIST

Document history:

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

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BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☐

Standard Laboratory ID Number: JH20

Description: PFAS Branched

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)
161230-01	br-PFHxSK	Neat	~50.000000	07/03/20	---	---	400 uL	1	10	~2.0000
161230-02	br-PFOSK	Neat	~50.000000	10/14/20	---	---	400 uL	1	10	~2.0000
161230-04	NaP3MHpS	Neat	~50.000000	06/10/20	---	---	400 uL	1	10	~2.0000
161230-05	NaP6MHpS	Neat	~50.000000	01/23/20	---	---	400 uL	1	10	~2.0000
161230-06	ipPFNS	Neat	~50.000000	09/23/20	---	---	400 uL	1	10	~2.0000
161230-07	T-PFOA	Neat	~50.000000	02/12/21	---	---	400 uL	1	10	~2.0000
161230-08	P3MHpA	Neat	~50.000000	06/10/20	---	---	400 uL	1	10	~2.0000
161230-09	P4MOA	Neat	~50.000000	06/10/20	---	---	400 uL	1	10	~2.0000
161230-10	ipPFNA	Neat	~50.000000	05/31/21	---	---	400 uL	1	10	~2.0000
161230-11	P355TMHxA	Neat	~50.000000	11/27/19	---	---	400 uL	1	10	~2.0000

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 2/1/2017 **Expiration Date:** 9/24/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** AgChem Laboratory: Cabinet - C0144

Balance ID: _____

Comment:

Solvent:	Lot:
Methanol	166003

Overide On:	Expires:	Comment
03/12/18 DMS	09/24/19	Date extended due to manufacturers exp. Dat

Approved By: _____ **Date:** _____

BATTELLE

It can be done

Standard Solution Prep Form II

Approved: ☐

Standard Laboratory ID Number: **JH20**

Description: PFAS Branched

161230-12	P37DMOA	Neat	~50.000000	09/24/19	---	---	400 uL	1	10	~2.0000

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 2/1/2017 **Expiration Date:** 9/24/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** AgChem Laboratory: Cabinet - C0144

Balance ID:

Comment:

Solvent:	Lot:
Methanol	166003

Overide On:	Expires:	Comment
03/12/18 DMS	09/24/19	Date extended due to manufacturers exp. Dat

Approved By: **Date:**

BATTELLE

It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: JH20

Description: PFAS Branched

Stock Id: 161230-01

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
br-PFHxSK	400	50.00	1	98.000	1	10	2.00000

Stock Id: 161230-02

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
br-PFOSK	400	50.00	1	98.000	1	10	2.00000

Stock Id: 161230-04

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
NaP3MFpS	400	50.00	1	98.000	1	10	2.00000

Stock Id: 161230-05

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
NaP6MHpS	400	50.00	1	98.000	1	10	2.00000

Stock Id: 161230-06

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
ipPFNS	400	50.00	1	98.000	1	10	2.00000

Stock Id: 161230-07

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
T-PFOA	400	50.00	1	97.000	1	10	2.00000

Stock Id: 161230-08

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
P3MHpA	400	50.00	1	98.000	1	10	2.00000

Stock Id: 161230-09

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
P4MOA	400	50.00	1	98.000	1	10	2.00000

Stock Id: 161230-10

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
ipPFNA	400	50.00	1	98.000	1	10	2.00000

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 2/1/2017 **Expiration Date:** 9/24/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** AgChem Laboratory: Cabinet - C0144

Comment:

Approved By: _____ **Date:** _____

BATTELLE

It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: JH20

Description: PFAS Branched

Stock Id: 161230-11

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
P355TMHxA	400	50.00	1	98.000	1	10	2.00000

Stock Id: 161230-12

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
P37DMOA	400	50.00	1	98.000	1	10	2.00000

Final Concentrations:

Analyte:	Conc (ug/mL):
br-PFHxSK	2.00000
br-PFOSK	2.00000
ipPFNA	2.00000
ipPFNS	2.00000
NaP3MFpS	2.00000
NaP6MHpS	2.00000
P355TMHxA	2.00000
P37DMOA	2.00000
P3MHpA	2.00000
P4MOA	2.00000
T-PFOA	2.00000

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
161230-01	Pipette	B1100330B
161230-02	Pipette	B1100330B
161230-04	Pipette	B1100330B
161230-05	Pipette	B1100330B
161230-06	Pipette	B1100330B
161230-07	Pipette	B1100330B
161230-08	Pipette	B1100330B
161230-09	Pipette	B1100330B
161230-10	Pipette	B1100330B
161230-11	Pipette	B1100330B
161230-12	Pipette	B1100330B

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 2/1/2017 **Expiration Date:** 9/24/2019

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** AgChem Laboratory: Cabinet - C0144

Comment:

Approved By: _____ **Date:** _____

BATTELLE

It can be done

Standard Solution Prep Form II

Approved: ☐

Standard Laboratory ID Number: JJ40

Description: PFAS - Branched 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)
JH20	PFAS Branched	Solution	~2	09/24/19	---	---	75 uL	1	25	~0.0060

Solution Prepared By: Schumitz, Denise **Date Prepared:** 3/29/2017 **Expiration Date:** 9/24/2019

Solution Volume 25 **mL X** 1 **Vials** **Refrigerator/Freezer No:** AgChem Laboratory: Room - M0150

Balance ID: _____

Comment: 96:4 Methanol:MilliQ (RP-170329-1)

Overide On:	Expires:	Comment
03/12/18 DMS	09/24/19	Date extended due to manufacturers exp. Dat

Approved By: _____ **Date:** _____

BATTELLE

It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: JJ40

Description: PFAS - Branched Stock

Stock Id: JH20

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
br-PFHxSK	75	2.00	---	---	1	25	0.00600
br-PFOSK	75	2.00	---	---	1	25	0.00600
ipPFNA	75	2.00	---	---	1	25	0.00600
ipPFNS	75	2.00	---	---	1	25	0.00600
NaP3MFpS	75	2.00	---	---	1	25	0.00600
NaP6MHpS	75	2.00	---	---	1	25	0.00600
P355TMHxA	75	2.00	---	---	1	25	0.00600
P37DMOA	75	2.00	---	---	1	25	0.00600
P3MHpA	75	2.00	---	---	1	25	0.00600
P4MOA	75	2.00	---	---	1	25	0.00600
T-PFOA	75	2.00	---	---	1	25	0.00600

Final Concentrations:

Analyte:	Conc (ug/mL):
br-PFHxSK	.00600
br-PFOSK	.00600
ipPFNA	.00600
ipPFNS	.00600
NaP3MFpS	.00600
NaP6MHpS	.00600
P355TMHxA	.00600
P37DMOA	.00600
P3MHpA	.00600
P4MOA	.00600
T-PFOA	.00600

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
JH20	Pipette	I0793912B

Solution Prepared By: Schumitz, Denise **Date Prepared:** 3/29/2017 **Expiration Date:** 9/24/2019

Solution Volume 25 **mL X** 1 **Vials** **Refrigerator/Freezer No:** AgChem Laboratory: Room - M0150

Comment: 96:4 Methanol:MilliQ (RP-170329-1)

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **JP49**

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)
171025-01	PFOA - 2nd Source	Neat	~1.000000	03/22/22	---	---	1000 uL	1	20	~0.0500

Solution Prepared By: Schumitz, Denise	**Date Prepared:** 11/3/2017	**Expiration Date:**	11/3/2018
Solution Volume 40 **mL X** 1 **Vials**	**Refrigerator/Freezer No:** LC Laboratory: Room - M0151		

Balance ID: _____

Comment: 80:20 MeOH/ Milli-Q

Approved By: Schumitz, Denise **Date:** 11/7/2017 11:11:00 AM

BATTELLE

It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: JP49

Description: PFAS - DOD Second Source LCS/MS Solution

Stock Id: 171025-01

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-butanesulfonic Acid	1000	1.01	1	100.000	1	20	0.05050
Perfluoro-1-hexanesulfonic Acid	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-octanesulphonic Acid	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-butanesulfonic Acid	.05050

Solution Prepared By: Schumitz, Denise **Date Prepared:** 11/3/2017 **Expiration Date:** 11/3/2018

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Room - M0151

Comment: 80:20 MeOH/ Milli-Q

Approved By: Schumitz, Denise **Date:** 11/7/2017 11:11:00 AM

BATTELLE

It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **JP49**

Description: PFAS - DOD Second Source LCS/MS Solution

Perfluoro-1-hexanesulfonic Acid	.05050
Perfluoro-1-octanesulfonamide	.05000
Perfluoro-1-octanesulphonic Acid	.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:

Solution Prepared By: Schumitz, Denise **Date Prepared:** 11/3/2017 **Expiration Date:** 11/3/2018

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Room - M0151

Comment: 80:20 MeOH/ Milli-Q

Approved By: Schumitz, Denise **Date:** 11/7/2017 11:11:00 AM

BATTELLE

It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: JR03

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)
171025-02	PFOA - ICAL Mix	Neat	~1.000000	10/17/22	---	---	500 uL	1	100	~0.0050

Solution Prepared By: Schumitz, Denise	**Date Prepared:**	12/28/2017	**Expiration Date:** 12/28/2018
Solution Volume 25 **mL X** 4 **Vials**	**Refrigerator/Freezer No:**	LC Laboratory: Room - M0151	

Balance ID: _____

Comment:

Approved By: Schumitz, Denise **Date:** 12/28/2017 2:31:00 PM

BATTELLE

It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: JR03

Description: PFAS -DoD Low ICAL Stock

Stock Id: 171025-02

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	1.00	1	100.000	1	100	0.00500
(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-butanesulfonic Acid	500	1.01	1	100.000	1	100	0.00505
Perfluoro-1-hexanesulfonic Acid	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-octanesulphonic Acid	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	1.00	1	100.000	1	100	0.00500
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	.00500
(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-butanesulfonic Acid	.00505

Solution Prepared By: Schumitz, Denise **Date Prepared:** 12/28/2017 **Expiration Date:** 12/28/2018

Solution Volume 25 **mL X** 4 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Room - M0151

Comment:

Approved By: Schumitz, Denise **Date:** 12/28/2017 2:31:00 PM

BATTELLE

It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **JR03**

Description: PFAS -DoD Low ICAL Stock

Perfluoro-1-hexanesulfonic Acid	.00505
Perfluoro-1-octanesulfonamide	.00500
Perfluoro-1-octanesulphonic Acid	.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	.00500
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:
171025-02	Pipette	B1100330B

Solution Prepared By: Schumitz, Denise **Date Prepared:** 12/28/2017 **Expiration Date:** 12/28/2018

Solution Volume 25 **mL X** 4 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Room - M0151

Comment:

Approved By: Schumitz, Denise **Date:** 12/28/2017 2:31:00 PM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: JR04

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)
170629-02	Mass-labelled PFAS Extraction Standard Solution	Neat	~1.000000	05/19/22	---	---	1000 uL	1	50	~0.0200

Solution Prepared By: Schumitz, Denise | **Date Prepared:** 12/28/2017 | **Expiration Date:** 12/28/2018

Solution Volume 25 **mL X** 2 **Vials** | **Refrigerator/Freezer No:** LC Laboratory: Room - M0151

Balance ID:

Comment: 96:4 Methanol: Millipore

Approved By: Schumitz, Denise **Date:** 1/10/2018 12:00:00 PM

BATTELLE

It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: JR04

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

Stock Id: 170629-02

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic aci	1000	1.00	1	100.000	1	50	0.02000
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic a	1000	1.00	1	100.000	1	50	0.02000
Perfluoro-1-[13C8]octanesulfonamide	1000	1.00	1	100.000	1	50	0.02000
Perfluoro-n-[1,2,3,4,5,6,7-13C7]undecanoic acid	1000	1.00	1	100.000	1	50	0.02000
Perfluoro-n-[1,2,3,4,5,6-13C6]decanoic acid	1000	1.00	1	100.000	1	50	0.02000
Perfluoro-n-[1,2,3,4,6-13C5]hexanoic acid	1000	1.00	1	100.000	1	50	0.02000
Perfluoro-n-[1,2,3,4-13C4]butanoic acid	1000	1.00	1	100.000	1	50	0.02000
Perfluoro-n-[1,2,3,4-13C4]hepetanoic acid	1000	1.00	1	100.000	1	50	0.02000
Perfluoro-n-[1,2-13C2]dodecanoic acid	1000	1.00	1	100.000	1	50	0.02000
Perfluoro-n-[1,2-13C2]tetradecanoic acid	1000	1.00	1	100.000	1	50	0.02000
Perfluoro-n-[13C5]pentanoic acid	1000	1.00	1	100.000	1	50	0.02000
Perfluoro-n-[13C8]octanoic acid	1000	1.00	1	100.000	1	50	0.02000
Perfluoro-n-[13C9]nonanoic acid	1000	1.00	1	100.000	1	50	0.02000
Sodium 1H,1H,2H,2H-perfluoro-1-[1,2-13C2]decan	1000	0.96	1	100.000	1	50	0.01916
sodium 1H,1H,2H,2H-perfluoro-1-[1,2-13C2]hexane	1000	0.94	1	100.000	1	50	0.01870
sodium 1H,1H,2H,2H-perfluoro-1-[1,2-13C2]octane	1000	0.95	1	100.000	1	50	0.01898
Sodium perfluoro-1-[1,2,3-13C3]hexanesulfonate	1000	0.95	1	100.000	1	50	0.01892
Sodium perfluoro-1-[13C8]octanesulfonate	1000	0.96	1	100.000	1	50	0.01914
Sodium perfluoro-1-[2,3,4-13C3]butanesulfonate	1000	0.93	1	100.000	1	50	0.01858

Final Concentrations:

Analyte:	Conc (ug/mL):
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid	.02000
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid	.02000
Perfluoro-1-[13C8]octanesulfonamide	.02000
Perfluoro-n-[1,2,3,4,5,6,7-13C7]undecanoic acid	.02000
Perfluoro-n-[1,2,3,4,5,6-13C6]decanoic acid	.02000
Perfluoro-n-[1,2,3,4,6-13C5]hexanoic acid	.02000
Perfluoro-n-[1,2,3,4-13C4]butanoic acid	.02000
Perfluoro-n-[1,2,3,4-13C4]hepetanoic acid	.02000
Perfluoro-n-[1,2-13C2]dodecanoic acid	.02000
Perfluoro-n-[1,2-13C2]tetradecanoic acid	.02000
Perfluoro-n-[13C5]pentanoic acid	.02000
Perfluoro-n-[13C8]octanoic acid	.02000
Perfluoro-n-[13C9]nonanoic acid	.02000
Sodium 1H,1H,2H,2H-perfluoro-1-[1,2-13C2]decanesulfonat	.01916

Solution Prepared By: Schumitz, Denise **Date Prepared:** 12/28/2017 **Expiration Date:** 12/28/2018

Solution Volume 25 **mL X** 2 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Room - M0151

Comment: 96:4 Methanol: Millipore

Approved By: Schumitz, Denise **Date:** 1/10/2018 12:00:00 PM

BATTELLE

It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **JR04**

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

sodium 1H,1H,2H,2H-perfluoro-1-[1,2-13C2]hexanesulfonat	.01870
sodium 1H,1H,2H,2H-perfluoro-1-[1,2-13C2]octanesulfonat	.01898
Sodium perfluoro-1-[1,2,3-13C3]hexanesulfonate	.01892
Sodium perfluoro-1-[13C8]octanesulfonate	.01914
Sodium perfluoro-1-[2,3,4-13C3]butanesulfonate	.01858

Syringes/Pipettes:

Solution Prepared By: Schumitz, Denise	**Date Prepared:**	12/28/2017 **Expiration Date:**	12/28/2018
Solution Volume 25 **mL X** 2 **Vials**	**Refrigerator/Freezer No:**	LC Laboratory: Room - M0151	

Comment: 96:4 Methanol: Millipore

Approved By: Schumitz, Denise **Date:** 1/10/2018 12:00:00 PM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **JR06**

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)
170629-03	Mass-labeled PFAS Injection Standards Solution	Neat	~2.000000	05/02/22	---	---	1000 uL	1	100	~0.0200

Solution Prepared By: Schumitz, Denise	**Date Prepared:** 12/28/2017	**Expiration Date:**	12/28/2018
Solution Volume 25 **mL X** 4 **Vials**	**Refrigerator/Freezer No:** LC Laboratory: Room - M0151		

Balance ID:

Comment: 96:4 Methanol:Millipore

Approved By: Schumitz, Denise **Date:** 12/28/2017 2:31:00 PM

BATTELLE

It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **JR06**

Description: PFAS - DoD Internal Standard Stock Solution

Stock Id: **170629-03**

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
Perfluoro-1-]1,2,3,4-13C4]octanesulfonate	1000	1.91	1	100.000	1	100	0.01910
Perfluoro-n-[1,2-13C2]decanoic acid	1000	2.00	1	100.000	1	100	0.02000
Perfluoro-n-[1,2-13C2]octanoic acid	1000	2.00	1	100.000	1	100	0.02000
Perfluoro-n-[2,3,4-13C3]butanoic Acid	1000	2.00	1	100.000	1	100	0.02000

Final Concentrations:

Analyte:	Conc (ug/mL):
Perfluoro-1-]1,2,3,4-13C4]octanesulfonate	.01910
Perfluoro-n-[1,2-13C2]decanoic acid	.02000
Perfluoro-n-[1,2-13C2]octanoic acid	.02000
Perfluoro-n-[2,3,4-13C3]butanoic Acid	.02000

Syringes/Pipettes:

Solution Prepared By: Schumitz, Denise **Date Prepared:** 12/28/2017 **Expiration Date:** 12/28/2018

Solution Volume 25 **mL X** 4 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Room - M0151

Comment: 96:4 Methanol:Millipore

Approved By: Schumitz, Denise **Date:** 12/28/2017 2:31:00 PM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☐

Standard Laboratory ID Number: **JV05**

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)
JR04	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	12/28/18	---	---	50 uL	1	10	~0.0000
JR06	PFAS - DoD Internal Standard Stock Solution	Solution	~0	12/28/18	---	---	50 uL	1	10	~0.0000

Solution Prepared By: Schumitz, Denise	**Date Prepared:** 4/25/2018	**Expiration Date:**	12/28/2018
Solution Volume 40 **mL X** 1 **Vials**	**Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0110		

Balance ID: _____

Comment:

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV05**

Description: PFAS - DoD Instrument Blank

Stock Id: JR04

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	0.02	---	---	1	10	0.00009
13C2-6:2FTS	50	0.02	---	---	1	10	0.00009
13C2-8:2FTS	50	0.02	---	---	1	10	0.00010
13C2-PFDoA	50	0.02	---	---	1	10	0.00010
13C2-PFTeDA	50	0.02	---	---	1	10	0.00010
13C3-PFBS	50	0.02	---	---	1	10	0.00009
13C3-PFHxS	50	0.02	---	---	1	10	0.00009
13C4-PFBA	50	0.02	---	---	1	10	0.00010
13C4-PFHpA	50	0.02	---	---	1	10	0.00010
13C5-PFHxA	50	0.02	---	---	1	10	0.00010
13C5-PFPeA	50	0.02	---	---	1	10	0.00010
13C6-PFDA	50	0.02	---	---	1	10	0.00010
13C7-PFUnA	50	0.02	---	---	1	10	0.00010
13C8-FOSA	50	0.02	---	---	1	10	0.00010
13C8-PFOA	50	0.02	---	---	1	10	0.00010
13C8-PFOS	50	0.02	---	---	1	10	0.00010
13C9-PFNA	50	0.02	---	---	1	10	0.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic aci	50	0.02	---	---	1	10	0.00010
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic a	50	0.02	---	---	1	10	0.00010

Stock Id: JR06

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	50	0.02	---	---	1	10	0.00010
13C2-PFOA	50	0.02	---	---	1	10	0.00010
13C3-PFBA	50	0.02	---	---	1	10	0.00010
13C4-PFOS	50	0.02	---	---	1	10	0.00010

Final Concentrations:

Analyte:	Conc (ug/mL):
13C2-4:2FTS	.00009
13C2-6:2FTS	.00009
13C2-8:2FTS	.00010
13C2-PFDA	.00010
13C2-PFDoA	.00010
13C2-PFOA	.00010

Solution Prepared By: Schumitz, Denise **Date Prepared:** 4/25/2018 **Expiration Date:** 12/28/2018

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0110

Comment:

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV05**

Description: PFAS - DoD Instrument Blank

13C2-PFTeDA	.00010
13C3-PFBA	.00010
13C3-PFBS	.00009
13C3-PFHxS	.00009
13C4-PFBA	.00010
13C4-PFHpA	.00010
13C4-PFOS	.00010
13C5-PFHxA	.00010
13C5-PFPeA	.00010
13C6-PFDA	.00010
13C7-PFUnA	.00010
13C8-FOSA	.00010
13C8-PFOA	.00010
13C8-PFOS	.00010
13C9-PFNA	.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid	.00010
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid	.00010

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
JR04	Pipette	I0793912B
JR06	Pipette	I0793912B

Solution Prepared By: Schumitz, Denise **Date Prepared:** 4/25/2018 **Expiration Date:** 12/28/2018

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0110

Comment:

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☐

Standard Laboratory ID Number: **JV16**

Description: PFAS - DoD Branched Standard

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)
JR04	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	12/28/18	---	---	25 uL	1	5	~0.0000
JR06	PFAS - DoD Internal Standard Stock Solution	Solution	~0	12/28/18	---	---	25 uL	1	5	~0.0000
JJ40	PFAS - Branched Stock	Solution	~0	09/24/19	---	---	2080 uL	1	5	~0.0000

Solution Prepared By: Schultz, Stephanie	**Date Prepared:** 4/26/2018	**Expiration Date:**	12/28/2018
Solution Volume 40 **mL X** 1 **Vials**	**Refrigerator/Freezer No:** AgChem Laboratory: Refrigerator - R0124		

Balance ID: _____

Comment: 80/20 methanol/milli-q

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV16**

Description: PFAS - DoD Branched Standard

Stock Id: JJ40

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
br-PFHxSK	2080	0.01	---	---	1	5	0.00250
br-PFOSK	2080	0.01	---	---	1	5	0.00250
ipPFNA	2080	0.01	---	---	1	5	0.00250
ipPFNS	2080	0.01	---	---	1	5	0.00250
NaP3MFpS	2080	0.01	---	---	1	5	0.00250
NaP6MHpS	2080	0.01	---	---	1	5	0.00250
P355TMHxA	2080	0.01	---	---	1	5	0.00250
P37DMOA	2080	0.01	---	---	1	5	0.00250
P3MHpA	2080	0.01	---	---	1	5	0.00250
P4MOA	2080	0.01	---	---	1	5	0.00250
T-PFOA	2080	0.01	---	---	1	5	0.00250

Stock Id: JR04

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	25	0.02	---	---	1	5	0.00009
13C2-6:2FTS	25	0.02	---	---	1	5	0.00009
13C2-8:2FTS	25	0.02	---	---	1	5	0.00010
13C2-PFDoA	25	0.02	---	---	1	5	0.00010
13C2-PFTeDA	25	0.02	---	---	1	5	0.00010
13C3-PFBS	25	0.02	---	---	1	5	0.00009
13C3-PFHxS	25	0.02	---	---	1	5	0.00009
13C4-PFBA	25	0.02	---	---	1	5	0.00010
13C4-PFHpA	25	0.02	---	---	1	5	0.00010
13C5-PFHxA	25	0.02	---	---	1	5	0.00010
13C5-PFPeA	25	0.02	---	---	1	5	0.00010
13C6-PFDA	25	0.02	---	---	1	5	0.00010
13C7-PFUnA	25	0.02	---	---	1	5	0.00010
13C8-FOSA	25	0.02	---	---	1	5	0.00010
13C8-PFOA	25	0.02	---	---	1	5	0.00010
13C8-PFOS	25	0.02	---	---	1	5	0.00010
13C9-PFNA	25	0.02	---	---	1	5	0.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic aci	25	0.02	---	---	1	5	0.00010
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic a	25	0.02	---	---	1	5	0.00010

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 4/26/2018 **Expiration Date:** 12/28/2018

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** AgChem Laboratory: Refrigerator - R0124

Comment: 80/20 methanol/milli-q

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV16**

Description: PFAS - DoD Branched Standard

Stock Id: **JR06**

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	25	0.02	---	---	1	5	0.00010
13C2-PFOA	25	0.02	---	---	1	5	0.00010
13C3-PFBA	25	0.02	---	---	1	5	0.00010
13C4-PFOS	25	0.02	---	---	1	5	0.00010

Final Concentrations:

Analyte:	Conc (ug/mL):
13C2-4:2FTS	.00009
13C2-6:2FTS	.00009
13C2-8:2FTS	.00010
13C2-PFDA	.00010
13C2-PFDoA	.00010
13C2-PFOA	.00010
13C2-PFTeDA	.00010
13C3-PFBA	.00010
13C3-PFBS	.00009
13C3-PFHxS	.00009
13C4-PFBA	.00010
13C4-PFHpA	.00010
13C4-PFOS	.00010
13C5-PFHxA	.00010
13C5-PFPeA	.00010
13C6-PFDA	.00010
13C7-PFUnA	.00010
13C8-FOSA	.00010
13C8-PFOA	.00010
13C8-PFOS	.00010
13C9-PFNA	.00010
br-PFHxSK	.00250
br-PFOSK	.00250
ipPFNA	.00250
ipPFNS	.00250
NaP3MFpS	.00250
NaP6MHpS	.00250
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid	.00010
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid	.00010

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 4/26/2018 **Expiration Date:** 12/28/2018

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** AgChem Laboratory: Refrigerator - R0124

Comment: 80/20 methanol/milli-q

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV16**

Description: PFAS - DoD Branched Standard

P355TMHxA	.00250
P37DMOA	.00250
P3MHpA	.00250
P4MOA	.00250
T-PFOA	.00250

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
JR04	Pipette	I0793912B
JR06	Pipette	I0793912B

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 4/26/2018 **Expiration Date:** 12/28/2018

Solution Volume 40 **mL X** 1 **Vials** **Refrigerator/Freezer No:** AgChem Laboratory: Refrigerator - R0124

Comment: 80/20 methanol/milli-q

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☐

Standard Laboratory ID Number: **JV20**

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)
JR03	PFAS -DoD Low ICAL Stock	Solution	~0	12/28/18	---	---	50 uL	1	10	~0.0000
JR04	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	12/28/18	---	---	50 uL	1	10	~0.0000
JR06	PFAS - DoD Internal Standard Stock Solution	Solution	~0	12/28/18	---	---	50 uL	1	10	~0.0000

Solution Prepared By: Griffith, Lauren	**Date Prepared:** 5/1/2018	**Expiration Date:**	12/28/2018
Solution Volume 25 **mL X** 1 **Vials**	**Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107		

Balance ID: _____

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV20**

Description: PFAS - DoD Calibration L1

Stock Id: JR03

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	50	0.01	---	---	1	10	0.00003
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	50	0.01	---	---	1	10	0.00003
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	50	0.01	---	---	1	10	0.00003
(Na) Perfluoro-1-decanesulfonate	50	0.01	---	---	1	10	0.00003
(NA) Perfluoro-1-heptanesulfonate	50	0.01	---	---	1	10	0.00003
(Na) Perfluoro-1-nonanesulfonate	50	0.01	---	---	1	10	0.00003
N-ethylperfluoro-octanesulfonamidoacetic acid	50	0.01	---	---	1	10	0.00003
N-methylperfluoro-1-octanesulfonamidoacetic acid	50	0.01	---	---	1	10	0.00003
Perfluoro-1-butanesulfonate	50	0.01	---	---	1	10	0.00003
Perfluoro-1-hexanesulfonate	50	0.01	---	---	1	10	0.00003
Perfluoro-1-octanesulfonamide	50	0.01	---	---	1	10	0.00003
Perfluoro-1-octanesulfonate	50	0.01	---	---	1	10	0.00003
Perfluoro-n-butanoic Acid	50	0.01	---	---	1	10	0.00003
Perfluoro-n-decanoic Acid	50	0.01	---	---	1	10	0.00003
Perfluoro-n-dodecanoic acid	50	0.01	---	---	1	10	0.00003
Perfluoro-n-heptanoic Acid	50	0.01	---	---	1	10	0.00003
Perfluoro-n-hexanoic acid	50	0.01	---	---	1	10	0.00003
Perfluoro-n-octanoic Acid	50	0.01	---	---	1	10	0.00003
Perfluorononanoic Acid	50	0.01	---	---	1	10	0.00003
Perfluoro-n-pentanoic acid	50	0.01	---	---	1	10	0.00003
Perfluoro-n-tetradecanoic acid	50	0.01	---	---	1	10	0.00003
Perfluoro-n-tridecanoic acid	50	0.01	---	---	1	10	0.00003
Perfluoro-n-undecanoic acid	50	0.01	---	---	1	10	0.00003
Sodium perfluoro-1-pentanesulfonate	50	0.01	---	---	1	10	0.00003

Stock Id: JR04

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	0.02	---	---	1	10	0.00009
13C2-6:2FTS	50	0.02	---	---	1	10	0.00009
13C2-8:2FTS	50	0.02	---	---	1	10	0.00010
13C2-PFDoA	50	0.02	---	---	1	10	0.00010
13C2-PFTeDA	50	0.02	---	---	1	10	0.00010
13C3-PFBS	50	0.02	---	---	1	10	0.00009
13C3-PFHxS	50	0.02	---	---	1	10	0.00009
13C4-PFBA	50	0.02	---	---	1	10	0.00010

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

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Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV20**

Description: PFAS - DoD Calibration L1

13C4-PFHpA	50	0.02	---	---	1	10	0.00010
13C5-PFHxA	50	0.02	---	---	1	10	0.00010
13C5-PFPeA	50	0.02	---	---	1	10	0.00010
13C6-PFDA	50	0.02	---	---	1	10	0.00010
13C7-PFUnA	50	0.02	---	---	1	10	0.00010
13C8-FOSA	50	0.02	---	---	1	10	0.00010
13C8-PFOA	50	0.02	---	---	1	10	0.00010
13C8-PFOS	50	0.02	---	---	1	10	0.00010
13C9-PFNA	50	0.02	---	---	1	10	0.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic aci	50	0.02	---	---	1	10	0.00010
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic a	50	0.02	---	---	1	10	0.00010

Stock Id: **JR06**

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	50	0.02	---	---	1	10	0.00010
13C2-PFOA	50	0.02	---	---	1	10	0.00010
13C3-PFBA	50	0.02	---	---	1	10	0.00010
13C4-PFOS	50	0.02	---	---	1	10	0.00010

Final Concentrations:

Analyte:	Conc (ug/mL):
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	.00003
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	.00003
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	.00003
(Na) Perfluoro-1-decanesulfonate	.00003
(NA) Perfluoro-1-heptanesulfonate	.00003
(Na) Perfluoro-1-nonanesulfonate	.00003
13C2-4:2FTS	.00009
13C2-6:2FTS	.00009
13C2-8:2FTS	.00010
13C2-PFDA	.00010
13C2-PFDoA	.00010
13C2-PFOA	.00010
13C2-PFTeDA	.00010
13C3-PFBA	.00010
13C3-PFBS	.00009
13C3-PFHxS	.00009
13C4-PFBA	.00010
13C4-PFHpA	.00010

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

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It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV20**

Description: PFAS - DoD Calibration L1

13C4-PFOS	.00010
13C5-PFHxA	.00010
13C5-PFPeA	.00010
13C6-PFDA	.00010
13C7-PFUnA	.00010
13C8-FOSA	.00010
13C8-PFOA	.00010
13C8-PFOS	.00010
13C9-PFNA	.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid	.00010
N-ethylperfluoro-octanesulfonamidoacetic acid	.00003
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid	.00010
N-methylperfluoro-1-octanesulfonamidoacetic acid	.00003
Perfluoro-1-butanesulfonate	.00003
Perfluoro-1-hexanesulfonate	.00003
Perfluoro-1-octanesulfonamide	.00003
Perfluoro-1-octanesulfonate	.00003
Perfluoro-n-butanoic Acid	.00003
Perfluoro-n-decanoic Acid	.00003
Perfluoro-n-dodecanoic acid	.00003
Perfluoro-n-heptanoic Acid	.00003
Perfluoro-n-hexanoic acid	.00003
Perfluoro-n-octanoic Acid	.00003
Perfluorononanoic Acid	.00003
Perfluoro-n-pentanoic acid	.00003
Perfluoro-n-tetradecanoic acid	.00003
Perfluoro-n-tridecanoic acid	.00003
Perfluoro-n-undecanoic acid	.00003
Sodium perfluoro-1-pentanesulfonate	.00003

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
JR03	Pipette	I0793912B
JR04	Pipette	I0793912B
JR06	Pipette	I0793912B

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☐

Standard Laboratory ID Number: **JV21**

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)
JR03	PFAS -DoD Low ICAL Stock	Solution	~0	12/28/18	---	---	100 uL	1	10	~0.0000
JR04	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	12/28/18	---	---	50 uL	1	10	~0.0000
JR06	PFAS - DoD Internal Standard Stock Solution	Solution	~0	12/28/18	---	---	50 uL	1	10	~0.0000

Solution Prepared By: Griffith, Lauren	**Date Prepared:** 5/1/2018	**Expiration Date:**	12/28/2018
Solution Volume 25 **mL X** 1 **Vials**	**Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107		

Balance ID: _____

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV21**

Description: PFAS - DoD Calibration L2

Stock Id: JR03

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	0.01	---	---	1	10	0.00005
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	100	0.01	---	---	1	10	0.00005
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	100	0.01	---	---	1	10	0.00005
(Na) Perfluoro-1-decanesulfonate	100	0.01	---	---	1	10	0.00005
(NA) Perfluoro-1-heptanesulfonate	100	0.01	---	---	1	10	0.00005
(Na) Perfluoro-1-nonanesulfonate	100	0.01	---	---	1	10	0.00005
N-ethylperfluoro-octanesulfonamidoacetic acid	100	0.01	---	---	1	10	0.00005
N-methylperfluoro-1-octanesulfonamidoacetic acid	100	0.01	---	---	1	10	0.00005
Perfluoro-1-butanesulfonate	100	0.01	---	---	1	10	0.00005
Perfluoro-1-hexanesulfonate	100	0.01	---	---	1	10	0.00005
Perfluoro-1-octanesulfonamide	100	0.01	---	---	1	10	0.00005
Perfluoro-1-octanesulfonate	100	0.01	---	---	1	10	0.00005
Perfluoro-n-butanoic Acid	100	0.01	---	---	1	10	0.00005
Perfluoro-n-decanoic Acid	100	0.01	---	---	1	10	0.00005
Perfluoro-n-dodecanoic acid	100	0.01	---	---	1	10	0.00005
Perfluoro-n-heptanoic Acid	100	0.01	---	---	1	10	0.00005
Perfluoro-n-hexanoic acid	100	0.01	---	---	1	10	0.00005
Perfluoro-n-octanoic Acid	100	0.01	---	---	1	10	0.00005
Perfluorononanoic Acid	100	0.01	---	---	1	10	0.00005
Perfluoro-n-pentanoic acid	100	0.01	---	---	1	10	0.00005
Perfluoro-n-tetradecanoic acid	100	0.01	---	---	1	10	0.00005
Perfluoro-n-tridecanoic acid	100	0.01	---	---	1	10	0.00005
Perfluoro-n-undecanoic acid	100	0.01	---	---	1	10	0.00005
Sodium perfluoro-1-pentanesulfonate	100	0.01	---	---	1	10	0.00005

Stock Id: JR04

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	0.02	---	---	1	10	0.00009
13C2-6:2FTS	50	0.02	---	---	1	10	0.00009
13C2-8:2FTS	50	0.02	---	---	1	10	0.00010
13C2-PFDoA	50	0.02	---	---	1	10	0.00010
13C2-PFTeDA	50	0.02	---	---	1	10	0.00010
13C3-PFBS	50	0.02	---	---	1	10	0.00009
13C3-PFHxS	50	0.02	---	---	1	10	0.00009
13C4-PFBA	50	0.02	---	---	1	10	0.00010

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

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It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV21**

Description: PFAS - DoD Calibration L2

13C4-PFHpA	50	0.02	---	---	1	10	0.00010
13C5-PFHxA	50	0.02	---	---	1	10	0.00010
13C5-PFPeA	50	0.02	---	---	1	10	0.00010
13C6-PFDA	50	0.02	---	---	1	10	0.00010
13C7-PFUnA	50	0.02	---	---	1	10	0.00010
13C8-FOSA	50	0.02	---	---	1	10	0.00010
13C8-PFOA	50	0.02	---	---	1	10	0.00010
13C8-PFOS	50	0.02	---	---	1	10	0.00010
13C9-PFNA	50	0.02	---	---	1	10	0.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic aci	50	0.02	---	---	1	10	0.00010
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic a	50	0.02	---	---	1	10	0.00010

Stock Id: **JR06**

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	50	0.02	---	---	1	10	0.00010
13C2-PFOA	50	0.02	---	---	1	10	0.00010
13C3-PFBA	50	0.02	---	---	1	10	0.00010
13C4-PFOS	50	0.02	---	---	1	10	0.00010

Final Concentrations:

Analyte:	Conc (ug/mL):
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	.00005
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	.00005
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	.00005
(Na) Perfluoro-1-decanesulfonate	.00005
(NA) Perfluoro-1-heptanesulfonate	.00005
(Na) Perfluoro-1-nonanesulfonate	.00005
13C2-4:2FTS	.00009
13C2-6:2FTS	.00009
13C2-8:2FTS	.00010
13C2-PFDA	.00010
13C2-PFDoA	.00010
13C2-PFOA	.00010
13C2-PFTeDA	.00010
13C3-PFBA	.00010
13C3-PFBS	.00009
13C3-PFHxS	.00009
13C4-PFBA	.00010
13C4-PFHpA	.00010

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV21**

Description: PFAS - DoD Calibration L2

13C4-PFOS	.00010
13C5-PFHxA	.00010
13C5-PFPeA	.00010
13C6-PFDA	.00010
13C7-PFUnA	.00010
13C8-FOSA	.00010
13C8-PFOA	.00010
13C8-PFOS	.00010
13C9-PFNA	.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid	.00010
N-ethylperfluoro-octanesulfonamidoacetic acid	.00005
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid	.00010
N-methylperfluoro-1-octanesulfonamidoacetic acid	.00005
Perfluoro-1-butanesulfonate	.00005
Perfluoro-1-hexanesulfonate	.00005
Perfluoro-1-octanesulfonamide	.00005
Perfluoro-1-octanesulfonate	.00005
Perfluoro-n-butanoic Acid	.00005
Perfluoro-n-decanoic Acid	.00005
Perfluoro-n-dodecanoic acid	.00005
Perfluoro-n-heptanoic Acid	.00005
Perfluoro-n-hexanoic acid	.00005
Perfluoro-n-octanoic Acid	.00005
Perfluorononanoic Acid	.00005
Perfluoro-n-pentanoic acid	.00005
Perfluoro-n-tetradecanoic acid	.00005
Perfluoro-n-tridecanoic acid	.00005
Perfluoro-n-undecanoic acid	.00005
Sodium perfluoro-1-pentanesulfonate	.00005

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
JR03	Pipette	I0793912B
JR04	Pipette	I0793912B
JR06	Pipette	I0793912B

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☐

Standard Laboratory ID Number: **JV22**

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)
JR03	PFAS -DoD Low ICAL Stock	Solution	~0	12/28/18	---	---	200 uL	1	10	~0.0000
JR04	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	12/28/18	---	---	50 uL	1	10	~0.0000
JR06	PFAS - DoD Internal Standard Stock Solution	Solution	~0	12/28/18	---	---	50 uL	1	10	~0.0000

Solution Prepared By: Griffith, Lauren	**Date Prepared:** 5/1/2018	**Expiration Date:**	12/28/2018
Solution Volume 25 **mL X** 1 **Vials**	**Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107		

Balance ID: _____

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV22**

Description: PFAS - DoD Calibration L3

Stock Id: JR03

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: JR04

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	0.02	---	---	1	10	0.00009
13C2-6:2FTS	50	0.02	---	---	1	10	0.00009
13C2-8:2FTS	50	0.02	---	---	1	10	0.00010
13C2-PFDoA	50	0.02	---	---	1	10	0.00010
13C2-PFTeDA	50	0.02	---	---	1	10	0.00010
13C3-PFBS	50	0.02	---	---	1	10	0.00009
13C3-PFHxS	50	0.02	---	---	1	10	0.00009
13C4-PFBA	50	0.02	---	---	1	10	0.00010

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV22**

Description: PFAS - DoD Calibration L3

13C4-PFHpA	50	0.02	---	---	1	10	0.00010
13C5-PFHxA	50	0.02	---	---	1	10	0.00010
13C5-PFPeA	50	0.02	---	---	1	10	0.00010
13C6-PFDA	50	0.02	---	---	1	10	0.00010
13C7-PFUnA	50	0.02	---	---	1	10	0.00010
13C8-FOSA	50	0.02	---	---	1	10	0.00010
13C8-PFOA	50	0.02	---	---	1	10	0.00010
13C8-PFOS	50	0.02	---	---	1	10	0.00010
13C9-PFNA	50	0.02	---	---	1	10	0.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic aci	50	0.02	---	---	1	10	0.00010
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic a	50	0.02	---	---	1	10	0.00010

Stock Id: **JR06**

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	50	0.02	---	---	1	10	0.00010
13C2-PFOA	50	0.02	---	---	1	10	0.00010
13C3-PFBA	50	0.02	---	---	1	10	0.00010
13C4-PFOS	50	0.02	---	---	1	10	0.00010

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	.00009
13C2-6:2FTS	.00009
13C2-8:2FTS	.00010
13C2-PFDA	.00010
13C2-PFDoA	.00010
13C2-PFOA	.00010
13C2-PFTeDA	.00010
13C3-PFBA	.00010
13C3-PFBS	.00009
13C3-PFHxS	.00009
13C4-PFBA	.00010
13C4-PFHpA	.00010

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

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Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV22**

Description: PFAS - DoD Calibration L3

13C4-PFOS	.00010
13C5-PFHxA	.00010
13C5-PFPeA	.00010
13C6-PFDA	.00010
13C7-PFUnA	.00010
13C8-FOSA	.00010
13C8-PFOA	.00010
13C8-PFOS	.00010
13C9-PFNA	.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid	.00010
N-ethylperfluoro-octanesulfonamidoacetic acid	.00010
N-methyl-d3-perfluoro-1-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:
JR03	Pipette	A0200765B
JR04	Pipette	I0793912B
JR06	Pipette	I0793912B

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☐

Standard Laboratory ID Number: **JV23**

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)
JR03	PFAS -DoD Low ICAL Stock	Solution	~0	12/28/18	---	---	500 uL	1	10	~0.0000
JR04	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	12/28/18	---	---	50 uL	1	10	~0.0000
JR06	PFAS - DoD Internal Standard Stock Solution	Solution	~0	12/28/18	---	---	50 uL	1	10	~0.0000

Solution Prepared By: Griffith, Lauren	**Date Prepared:** 5/1/2018	**Expiration Date:**	12/28/2018
Solution Volume 25 **mL X** 1 **Vials**	**Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107		

Balance ID: _____

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

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It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV23**

Description: PFAS - DoD Calibration L4

Stock Id: JR03

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: JR04

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	0.02	---	---	1	10	0.00009
13C2-6:2FTS	50	0.02	---	---	1	10	0.00009
13C2-8:2FTS	50	0.02	---	---	1	10	0.00010
13C2-PFDoA	50	0.02	---	---	1	10	0.00010
13C2-PFTeDA	50	0.02	---	---	1	10	0.00010
13C3-PFBS	50	0.02	---	---	1	10	0.00009
13C3-PFHxS	50	0.02	---	---	1	10	0.00009
13C4-PFBA	50	0.02	---	---	1	10	0.00010

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

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Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV23**

Description: PFAS - DoD Calibration L4

13C4-PFHpA	50	0.02	---	---	1	10	0.00010
13C5-PFHxA	50	0.02	---	---	1	10	0.00010
13C5-PFPeA	50	0.02	---	---	1	10	0.00010
13C6-PFDA	50	0.02	---	---	1	10	0.00010
13C7-PFUnA	50	0.02	---	---	1	10	0.00010
13C8-FOSA	50	0.02	---	---	1	10	0.00010
13C8-PFOA	50	0.02	---	---	1	10	0.00010
13C8-PFOS	50	0.02	---	---	1	10	0.00010
13C9-PFNA	50	0.02	---	---	1	10	0.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic aci	50	0.02	---	---	1	10	0.00010
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic a	50	0.02	---	---	1	10	0.00010

Stock Id: **JR06**

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	50	0.02	---	---	1	10	0.00010
13C2-PFOA	50	0.02	---	---	1	10	0.00010
13C3-PFBA	50	0.02	---	---	1	10	0.00010
13C4-PFOS	50	0.02	---	---	1	10	0.00010

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	.00009
13C2-6:2FTS	.00009
13C2-8:2FTS	.00010
13C2-PFDA	.00010
13C2-PFDoA	.00010
13C2-PFOA	.00010
13C2-PFTeDA	.00010
13C3-PFBA	.00010
13C3-PFBS	.00009
13C3-PFHxS	.00009
13C4-PFBA	.00010
13C4-PFHpA	.00010

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

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It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV23**

Description: PFAS - DoD Calibration L4

13C4-PFOS	.00010
13C5-PFHxA	.00010
13C5-PFPeA	.00010
13C6-PFDA	.00010
13C7-PFUnA	.00010
13C8-FOSA	.00010
13C8-PFOA	.00010
13C8-PFOS	.00010
13C9-PFNA	.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid	.00010
N-ethylperfluoro-octanesulfonamidoacetic acid	.00025
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid	.00010
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:
JR03	Pipette	C0982448K
JR04	Pipette	I0793912B
JR06	Pipette	I0793912B

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☐

Standard Laboratory ID Number: **JV24**

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)
JV29	PFAS - DoD High ICAL Stock	Solution	~1	05/01/19	---	---	100 uL	1	10	~0.0100
JR04	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	12/28/18	---	---	50 uL	1	10	~0.0000
JR06	PFAS - DoD Internal Standard Stock Solution	Solution	~0	12/28/18	---	---	50 uL	1	10	~0.0000

Solution Prepared By: Griffith, Lauren	**Date Prepared:** 5/1/2018	**Expiration Date:**	12/28/2018
Solution Volume 25 **mL X** 1 **Vials**	**Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107		

Balance ID: _____

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV24**

Description: PFAS - DoD Calibration L5

Stock Id: JR04

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	0.02	---	---	1	10	0.00009
13C2-6:2FTS	50	0.02	---	---	1	10	0.00009
13C2-8:2FTS	50	0.02	---	---	1	10	0.00010
13C2-PFDoA	50	0.02	---	---	1	10	0.00010
13C2-PFTeDA	50	0.02	---	---	1	10	0.00010
13C3-PFBS	50	0.02	---	---	1	10	0.00009
13C3-PFHxS	50	0.02	---	---	1	10	0.00009
13C4-PFBA	50	0.02	---	---	1	10	0.00010
13C4-PFHpA	50	0.02	---	---	1	10	0.00010
13C5-PFHxA	50	0.02	---	---	1	10	0.00010
13C5-PFPeA	50	0.02	---	---	1	10	0.00010
13C6-PFDA	50	0.02	---	---	1	10	0.00010
13C7-PFUnA	50	0.02	---	---	1	10	0.00010
13C8-FOSA	50	0.02	---	---	1	10	0.00010
13C8-PFOA	50	0.02	---	---	1	10	0.00010
13C8-PFOS	50	0.02	---	---	1	10	0.00010
13C9-PFNA	50	0.02	---	---	1	10	0.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic aci	50	0.02	---	---	1	10	0.00010
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic a	50	0.02	---	---	1	10	0.00010

Stock Id: JR06

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	50	0.02	---	---	1	10	0.00010
13C2-PFOA	50	0.02	---	---	1	10	0.00010
13C3-PFBA	50	0.02	---	---	1	10	0.00010
13C4-PFOS	50	0.02	---	---	1	10	0.00010

Stock Id: JV29

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	0.00050
(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

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

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Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV24**

Description: PFAS - DoD Calibration L5

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	0.00050
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

Final Concentrations:

Analyte:	Conc (ug/mL):
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	.00051
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	.00050
(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	.00009
13C2-6:2FTS	.00009
13C2-8:2FTS	.00010
13C2-PFDA	.00010
13C2-PFDoA	.00010
13C2-PFOA	.00010
13C2-PFTeDA	.00010
13C3-PFBA	.00010
13C3-PFBS	.00009
13C3-PFHxS	.00009
13C4-PFBA	.00010
13C4-PFHpA	.00010

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV24**

Description: PFAS - DoD Calibration L5

13C4-PFOS	.00010
13C5-PFHxA	.00010
13C5-PFPeA	.00010
13C6-PFDA	.00010
13C7-PFUnA	.00010
13C8-FOSA	.00010
13C8-PFOA	.00010
13C8-PFOS	.00010
13C9-PFNA	.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid	.00010
N-ethylperfluoro-octanesulfonamidoacetic acid	.00050
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid	.00010
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	.00050
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:
JR04	Pipette	I0793912B
JR06	Pipette	I0793912B
JV29	Pipette	I0793912B

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

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It can be done

Standard Solution Prep Form II

Approved: ☐

Standard Laboratory ID Number: **JV25**

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)
JV29	PFAS - DoD High ICAL Stock	Solution	~1	05/01/19	---	---	200 uL	1	10	~0.0200
JR04	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	12/28/18	---	---	50 uL	1	10	~0.0000
JR06	PFAS - DoD Internal Standard Stock Solution	Solution	~0	12/28/18	---	---	50 uL	1	10	~0.0000

Solution Prepared By: Griffith, Lauren	**Date Prepared:** 5/1/2018	**Expiration Date:**	12/28/2018
Solution Volume 25 **mL X** 1 **Vials**	**Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107		

Balance ID: _____

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

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Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV25**

Description: PFAS - DoD Calibration L6

Stock Id: JR04

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	0.02	---	---	1	10	0.00009
13C2-6:2FTS	50	0.02	---	---	1	10	0.00009
13C2-8:2FTS	50	0.02	---	---	1	10	0.00010
13C2-PFDoA	50	0.02	---	---	1	10	0.00010
13C2-PFTeDA	50	0.02	---	---	1	10	0.00010
13C3-PFBS	50	0.02	---	---	1	10	0.00009
13C3-PFHxS	50	0.02	---	---	1	10	0.00009
13C4-PFBA	50	0.02	---	---	1	10	0.00010
13C4-PFHpA	50	0.02	---	---	1	10	0.00010
13C5-PFHxA	50	0.02	---	---	1	10	0.00010
13C5-PFPeA	50	0.02	---	---	1	10	0.00010
13C6-PFDA	50	0.02	---	---	1	10	0.00010
13C7-PFUnA	50	0.02	---	---	1	10	0.00010
13C8-FOSA	50	0.02	---	---	1	10	0.00010
13C8-PFOA	50	0.02	---	---	1	10	0.00010
13C8-PFOS	50	0.02	---	---	1	10	0.00010
13C9-PFNA	50	0.02	---	---	1	10	0.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic aci	50	0.02	---	---	1	10	0.00010
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic a	50	0.02	---	---	1	10	0.00010

Stock Id: JR06

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	50	0.02	---	---	1	10	0.00010
13C2-PFOA	50	0.02	---	---	1	10	0.00010
13C3-PFBA	50	0.02	---	---	1	10	0.00010
13C4-PFOS	50	0.02	---	---	1	10	0.00010

Stock Id: JV29

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: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

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Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV25**

Description: PFAS - DoD Calibration L6

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	.00009
13C2-6:2FTS	.00009
13C2-8:2FTS	.00010
13C2-PFDA	.00010
13C2-PFDoA	.00010
13C2-PFOA	.00010
13C2-PFTeDA	.00010
13C3-PFBA	.00010
13C3-PFBS	.00009
13C3-PFHxS	.00009
13C4-PFBA	.00010
13C4-PFHpA	.00010

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

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Standard Solution Concentrations

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Standard Laboratory ID Number: **JV25**

Description: PFAS - DoD Calibration L6

13C4-PFOS	.00010
13C5-PFHxA	.00010
13C5-PFPeA	.00010
13C6-PFDA	.00010
13C7-PFUnA	.00010
13C8-FOSA	.00010
13C8-PFOA	.00010
13C8-PFOS	.00010
13C9-PFNA	.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid	.00010
N-ethylperfluoro-octanesulfonamidoacetic acid	.00100
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid	.00010
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:
JR04	Pipette	I0793912B
JR06	Pipette	I0793912B
JV29	Pipette	A0200765B

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

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Standard Solution Prep Form II

Approved: ☐

Standard Laboratory ID Number: **JV26**

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)
JV29	PFAS - DoD High ICAL Stock	Solution	~1	05/01/19	---	---	500 uL	1	10	~0.0500
JR04	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	12/28/18	---	---	50 uL	1	10	~0.0000
JR06	PFAS - DoD Internal Standard Stock Solution	Solution	~0	12/28/18	---	---	50 uL	1	10	~0.0000

Solution Prepared By: Griffith, Lauren	**Date Prepared:** 5/1/2018	**Expiration Date:**	12/28/2018
Solution Volume 25 **mL X** 1 **Vials**	**Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107		

Balance ID: _____

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

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Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV26**

Description: PFAS - DoD Calibration L7

Stock Id: JR04

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	0.02	---	---	1	10	0.00009
13C2-6:2FTS	50	0.02	---	---	1	10	0.00009
13C2-8:2FTS	50	0.02	---	---	1	10	0.00010
13C2-PFDoA	50	0.02	---	---	1	10	0.00010
13C2-PFTeDA	50	0.02	---	---	1	10	0.00010
13C3-PFBS	50	0.02	---	---	1	10	0.00009
13C3-PFHxS	50	0.02	---	---	1	10	0.00009
13C4-PFBA	50	0.02	---	---	1	10	0.00010
13C4-PFHpA	50	0.02	---	---	1	10	0.00010
13C5-PFHxA	50	0.02	---	---	1	10	0.00010
13C5-PFPeA	50	0.02	---	---	1	10	0.00010
13C6-PFDA	50	0.02	---	---	1	10	0.00010
13C7-PFUnA	50	0.02	---	---	1	10	0.00010
13C8-FOSA	50	0.02	---	---	1	10	0.00010
13C8-PFOA	50	0.02	---	---	1	10	0.00010
13C8-PFOS	50	0.02	---	---	1	10	0.00010
13C9-PFNA	50	0.02	---	---	1	10	0.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic aci	50	0.02	---	---	1	10	0.00010
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic a	50	0.02	---	---	1	10	0.00010

Stock Id: JR06

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	50	0.02	---	---	1	10	0.00010
13C2-PFOA	50	0.02	---	---	1	10	0.00010
13C3-PFBA	50	0.02	---	---	1	10	0.00010
13C4-PFOS	50	0.02	---	---	1	10	0.00010

Stock Id: JV29

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	0.05	---	---	1	10	0.00253
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	500	0.05	---	---	1	10	0.00250
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	500	0.05	---	---	1	10	0.00250
(Na) Perfluoro-1-decanesulfonate	500	0.05	---	---	1	10	0.00253
(NA) Perfluoro-1-heptanesulfonate	500	0.05	---	---	1	10	0.00250
(Na) Perfluoro-1-nonanesulfonate	500	0.05	---	---	1	10	0.00253

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

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Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV26**

Description: PFAS - DoD Calibration L7

N-ethylperfluoro-octanesulfonamidoacetic acid	500	0.05	---	---	1	10	0.00250
N-methylperfluoro-1-octanesulfonamidoacetic acid	500	0.05	---	---	1	10	0.00250
Perfluoro-1-butanesulfonate	500	0.05	---	---	1	10	0.00253
Perfluoro-1-hexanesulfonate	500	0.05	---	---	1	10	0.00253
Perfluoro-1-octanesulfonamide	500	0.05	---	---	1	10	0.00250
Perfluoro-1-octanesulfonate	500	0.05	---	---	1	10	0.00250
Perfluoro-n-butanoic Acid	500	0.05	---	---	1	10	0.00250
Perfluoro-n-decanoic Acid	500	0.05	---	---	1	10	0.00250
Perfluoro-n-dodecanoic acid	500	0.05	---	---	1	10	0.00250
Perfluoro-n-heptanoic Acid	500	0.05	---	---	1	10	0.00250
Perfluoro-n-hexanoic acid	500	0.05	---	---	1	10	0.00253
Perfluoro-n-octanoic Acid	500	0.05	---	---	1	10	0.00250
Perfluorononanoic Acid	500	0.05	---	---	1	10	0.00250
Perfluoro-n-pentanoic acid	500	0.05	---	---	1	10	0.00250
Perfluoro-n-tetradecanoic acid	500	0.05	---	---	1	10	0.00250
Perfluoro-n-tridecanoic acid	500	0.05	---	---	1	10	0.00250
Perfluoro-n-undecanoic acid	500	0.05	---	---	1	10	0.00250
Sodium perfluoro-1-pentanesulfonate	500	0.05	---	---	1	10	0.00250

Final Concentrations:

Analyte:	Conc (ug/mL):
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	.00253
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	.00250
(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	.00009
13C2-6:2FTS	.00009
13C2-8:2FTS	.00010
13C2-PFDA	.00010
13C2-PFDoA	.00010
13C2-PFOA	.00010
13C2-PFTeDA	.00010
13C3-PFBA	.00010
13C3-PFBS	.00009
13C3-PFHxS	.00009
13C4-PFBA	.00010
13C4-PFHpA	.00010

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

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Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV26**

Description: PFAS - DoD Calibration L7

13C4-PFOS	.00010
13C5-PFHxA	.00010
13C5-PFPeA	.00010
13C6-PFDA	.00010
13C7-PFUnA	.00010
13C8-FOSA	.00010
13C8-PFOA	.00010
13C8-PFOS	.00010
13C9-PFNA	.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid	.00010
N-ethylperfluoro-octanesulfonamidoacetic acid	.00250
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid	.00010
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	.00250
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:
JR04	Pipette	I0793912B
JR06	Pipette	I0793912B
JV29	Pipette	C0896244B

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☐

Standard Laboratory ID Number: **JV27**

Description: PFAS - DoD Calibration L8

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)
JV29	PFAS - DoD High ICAL Stock	Solution	~1	05/01/19	---	---	1000 uL	1	5	~0.2000
JR04	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	12/28/18	---	---	25 uL	1	5	~0.0000
JR06	PFAS - DoD Internal Standard Stock Solution	Solution	~0	12/28/18	---	---	25 uL	1	5	~0.0000

Solution Prepared By: Griffith, Lauren	**Date Prepared:** 5/1/2018	**Expiration Date:**	12/28/2018
Solution Volume 25 **mL X** 1 **Vials**	**Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107		

Balance ID: _____

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

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Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV27**

Description: PFAS - DoD Calibration L8

Stock Id: JR04

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	25	0.02	---	---	1	5	0.00009
13C2-6:2FTS	25	0.02	---	---	1	5	0.00009
13C2-8:2FTS	25	0.02	---	---	1	5	0.00010
13C2-PFDoA	25	0.02	---	---	1	5	0.00010
13C2-PFTeDA	25	0.02	---	---	1	5	0.00010
13C3-PFBS	25	0.02	---	---	1	5	0.00009
13C3-PFHxS	25	0.02	---	---	1	5	0.00009
13C4-PFBA	25	0.02	---	---	1	5	0.00010
13C4-PFHpA	25	0.02	---	---	1	5	0.00010
13C5-PFHxA	25	0.02	---	---	1	5	0.00010
13C5-PFPeA	25	0.02	---	---	1	5	0.00010
13C6-PFDA	25	0.02	---	---	1	5	0.00010
13C7-PFUnA	25	0.02	---	---	1	5	0.00010
13C8-FOSA	25	0.02	---	---	1	5	0.00010
13C8-PFOA	25	0.02	---	---	1	5	0.00010
13C8-PFOS	25	0.02	---	---	1	5	0.00010
13C9-PFNA	25	0.02	---	---	1	5	0.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic aci	25	0.02	---	---	1	5	0.00010
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic a	25	0.02	---	---	1	5	0.00010

Stock Id: JR06

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	25	0.02	---	---	1	5	0.00010
13C2-PFOA	25	0.02	---	---	1	5	0.00010
13C3-PFBA	25	0.02	---	---	1	5	0.00010
13C4-PFOS	25	0.02	---	---	1	5	0.00010

Stock Id: JV29

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	5	0.01010
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	1000	0.05	---	---	1	5	0.01000
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	1000	0.05	---	---	1	5	0.01000
(Na) Perfluoro-1-decanesulfonate	1000	0.05	---	---	1	5	0.01010
(NA) Perfluoro-1-heptanesulfonate	1000	0.05	---	---	1	5	0.01000
(Na) Perfluoro-1-nonanesulfonate	1000	0.05	---	---	1	5	0.01010

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV27**

Description: PFAS - DoD Calibration L8

N-ethylperfluoro-octanesulfonamidoacetic acid	1000	0.05	---	---	1	5	0.01000
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	0.05	---	---	1	5	0.01000
Perfluoro-1-butanesulfonate	1000	0.05	---	---	1	5	0.01010
Perfluoro-1-hexanesulfonate	1000	0.05	---	---	1	5	0.01010
Perfluoro-1-octanesulfonamide	1000	0.05	---	---	1	5	0.01000
Perfluoro-1-octanesulfonate	1000	0.05	---	---	1	5	0.01000
Perfluoro-n-butanoic Acid	1000	0.05	---	---	1	5	0.01000
Perfluoro-n-decanoic Acid	1000	0.05	---	---	1	5	0.01000
Perfluoro-n-dodecanoic acid	1000	0.05	---	---	1	5	0.01000
Perfluoro-n-heptanoic Acid	1000	0.05	---	---	1	5	0.01000
Perfluoro-n-hexanoic acid	1000	0.05	---	---	1	5	0.01010
Perfluoro-n-octanoic Acid	1000	0.05	---	---	1	5	0.01000
Perfluorononanoic Acid	1000	0.05	---	---	1	5	0.01000
Perfluoro-n-pentanoic acid	1000	0.05	---	---	1	5	0.01000
Perfluoro-n-tetradecanoic acid	1000	0.05	---	---	1	5	0.01000
Perfluoro-n-tridecanoic acid	1000	0.05	---	---	1	5	0.01000
Perfluoro-n-undecanoic acid	1000	0.05	---	---	1	5	0.01000
Sodium perfluoro-1-pentanesulfonate	1000	0.05	---	---	1	5	0.01000

Final Concentrations:

Analyte:	Conc (ug/mL):
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	.01010
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	.01000
(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	.00009
13C2-6:2FTS	.00009
13C2-8:2FTS	.00010
13C2-PFDA	.00010
13C2-PFDoA	.00010
13C2-PFOA	.00010
13C2-PFTeDA	.00010
13C3-PFBA	.00010
13C3-PFBS	.00009
13C3-PFHxS	.00009
13C4-PFBA	.00010
13C4-PFHpA	.00010

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV27**

Description: PFAS - DoD Calibration L8

13C4-PFOS	.00010
13C5-PFHxA	.00010
13C5-PFPeA	.00010
13C6-PFDA	.00010
13C7-PFUnA	.00010
13C8-FOSA	.00010
13C8-PFOA	.00010
13C8-PFOS	.00010
13C9-PFNA	.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid	.00010
N-ethylperfluoro-octanesulfonamidoacetic acid	.01000
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid	.00010
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	.01000
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:
JR04	Pipette	I0793912B
JR06	Pipette	I0793912B
JV29	Pipette	C0982448K

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☐

Standard Laboratory ID Number: **JV28**

Description: PFAS - DoD Calibration L9

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)
JV29	PFAS - DoD High ICAL Stock	Solution	~1	05/01/19	---	---	2000 uL	1	5	~0.4000
JR04	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	12/28/18	---	---	25 uL	1	5	~0.0000
JR06	PFAS - DoD Internal Standard Stock Solution	Solution	~0	12/28/18	---	---	25 uL	1	5	~0.0000

Solution Prepared By: Griffith, Lauren	**Date Prepared:** 5/1/2018	**Expiration Date:**	12/28/2018
Solution Volume 25 **mL X** 1 **Vials**	**Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107		

Balance ID: _____

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV28**

Description: PFAS - DoD Calibration L9

Stock Id: JR04

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	25	0.02	---	---	1	5	0.00009
13C2-6:2FTS	25	0.02	---	---	1	5	0.00009
13C2-8:2FTS	25	0.02	---	---	1	5	0.00010
13C2-PFDoA	25	0.02	---	---	1	5	0.00010
13C2-PFTeDA	25	0.02	---	---	1	5	0.00010
13C3-PFBS	25	0.02	---	---	1	5	0.00009
13C3-PFHxS	25	0.02	---	---	1	5	0.00009
13C4-PFBA	25	0.02	---	---	1	5	0.00010
13C4-PFHpA	25	0.02	---	---	1	5	0.00010
13C5-PFHxA	25	0.02	---	---	1	5	0.00010
13C5-PFPeA	25	0.02	---	---	1	5	0.00010
13C6-PFDA	25	0.02	---	---	1	5	0.00010
13C7-PFUnA	25	0.02	---	---	1	5	0.00010
13C8-FOSA	25	0.02	---	---	1	5	0.00010
13C8-PFOA	25	0.02	---	---	1	5	0.00010
13C8-PFOS	25	0.02	---	---	1	5	0.00010
13C9-PFNA	25	0.02	---	---	1	5	0.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic aci	25	0.02	---	---	1	5	0.00010
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic a	25	0.02	---	---	1	5	0.00010

Stock Id: JR06

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	25	0.02	---	---	1	5	0.00010
13C2-PFOA	25	0.02	---	---	1	5	0.00010
13C3-PFBA	25	0.02	---	---	1	5	0.00010
13C4-PFOS	25	0.02	---	---	1	5	0.00010

Stock Id: JV29

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	5	0.02020
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	2000	0.05	---	---	1	5	0.02000
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	2000	0.05	---	---	1	5	0.02000
(Na) Perfluoro-1-decanesulfonate	2000	0.05	---	---	1	5	0.02020
(NA) Perfluoro-1-heptanesulfonate	2000	0.05	---	---	1	5	0.02000
(Na) Perfluoro-1-nonanesulfonate	2000	0.05	---	---	1	5	0.02020

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV28**

Description: PFAS - DoD Calibration L9

N-ethylperfluoro-octanesulfonamidoacetic acid	2000	0.05	---	---	1	5	0.02000
N-methylperfluoro-1-octanesulfonamidoacetic acid	2000	0.05	---	---	1	5	0.02000
Perfluoro-1-butanesulfonate	2000	0.05	---	---	1	5	0.02020
Perfluoro-1-hexanesulfonate	2000	0.05	---	---	1	5	0.02020
Perfluoro-1-octanesulfonamide	2000	0.05	---	---	1	5	0.02000
Perfluoro-1-octanesulfonate	2000	0.05	---	---	1	5	0.02000
Perfluoro-n-butanoic Acid	2000	0.05	---	---	1	5	0.02000
Perfluoro-n-decanoic Acid	2000	0.05	---	---	1	5	0.02000
Perfluoro-n-dodecanoic acid	2000	0.05	---	---	1	5	0.02000
Perfluoro-n-heptanoic Acid	2000	0.05	---	---	1	5	0.02000
Perfluoro-n-hexanoic acid	2000	0.05	---	---	1	5	0.02020
Perfluoro-n-octanoic Acid	2000	0.05	---	---	1	5	0.02000
Perfluorononanoic Acid	2000	0.05	---	---	1	5	0.02000
Perfluoro-n-pentanoic acid	2000	0.05	---	---	1	5	0.02000
Perfluoro-n-tetradecanoic acid	2000	0.05	---	---	1	5	0.02000
Perfluoro-n-tridecanoic acid	2000	0.05	---	---	1	5	0.02000
Perfluoro-n-undecanoic acid	2000	0.05	---	---	1	5	0.02000
Sodium perfluoro-1-pentanesulfonate	2000	0.05	---	---	1	5	0.02000

Final Concentrations:

Analyte:	Conc (ug/mL):
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	.02020
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	.02000
(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	.00009
13C2-6:2FTS	.00009
13C2-8:2FTS	.00010
13C2-PFDA	.00010
13C2-PFDoA	.00010
13C2-PFOA	.00010
13C2-PFTeDA	.00010
13C3-PFBA	.00010
13C3-PFBS	.00009
13C3-PFHxS	.00009
13C4-PFBA	.00010
13C4-PFHpA	.00010

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV28**

Description: PFAS - DoD Calibration L9

13C4-PFOS	.00010
13C5-PFHxA	.00010
13C5-PFPeA	.00010
13C6-PFDA	.00010
13C7-PFUnA	.00010
13C8-FOSA	.00010
13C8-PFOA	.00010
13C8-PFOS	.00010
13C9-PFNA	.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid	.00010
N-ethylperfluoro-octanesulfonamidoacetic acid	.02000
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid	.00010
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	.02000
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:
JR04	Pipette	I0793912B
JR06	Pipette	I0793912B
JV29	Pipette	B641148506

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 12/28/2018

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

Comment: 80:20 MeOH/Milli-Q RP-180501-2

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☐

Standard Laboratory ID Number: **JV29**

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)
171025-02	PFOA - ICAL Mix	Neat	~1.000000	10/17/22	---	---	500 uL	1	10	~0.0500

Solution Prepared By: Griffith, Lauren		**Date Prepared:** 5/1/2018	**Expiration Date:** 5/1/2019
Solution Volume 25 **mL X** 1 **Vials**		**Refrigerator/Freezer No:** AgChem Laboratory: Refrigerator - R0124	

Balance ID: _____

Comment: 96:4 Methanol/Milli-q water

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV29**

Description: PFAS - DoD High ICAL Stock

Stock Id: **171025-02**

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	10	0.05050
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	500	1.00	1	100.000	1	10	0.05000
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	500	1.00	1	100.000	1	10	0.05000
(Na) Perfluoro-1-decanesulfonate	500	1.01	1	100.000	1	10	0.05050
(NA) Perfluoro-1-heptanesulfonate	500	1.00	1	100.000	1	10	0.05000
(Na) Perfluoro-1-nonanesulfonate	500	1.01	1	100.000	1	10	0.05050
N-ethylperfluoro-octanesulfonamidoacetic acid	500	1.00	1	100.000	1	10	0.05000
N-methylperfluoro-1-octanesulfonamidoacetic acid	500	1.00	1	100.000	1	10	0.05000
Perfluoro-1-butanesulfonate	500	1.01	1	100.000	1	10	0.05050
Perfluoro-1-hexanesulfonate	500	1.01	1	100.000	1	10	0.05050
Perfluoro-1-octanesulfonamide	500	1.00	1	100.000	1	10	0.05000
Perfluoro-1-octanesulfonate	500	1.00	1	100.000	1	10	0.05000
Perfluoro-n-butanoic Acid	500	1.00	1	100.000	1	10	0.05000
Perfluoro-n-decanoic Acid	500	1.00	1	100.000	1	10	0.05000
Perfluoro-n-dodecanoic acid	500	1.00	1	100.000	1	10	0.05000
Perfluoro-n-heptanoic Acid	500	1.00	1	100.000	1	10	0.05000
Perfluoro-n-hexanoic acid	500	1.01	1	100.000	1	10	0.05050
Perfluoro-n-octanoic Acid	500	1.00	1	100.000	1	10	0.05000
Perfluorononanoic Acid	500	1.00	1	100.000	1	10	0.05000
Perfluoro-n-pentanoic acid	500	1.00	1	100.000	1	10	0.05000
Perfluoro-n-tetradecanoic acid	500	1.00	1	100.000	1	10	0.05000
Perfluoro-n-tridecanoic acid	500	1.00	1	100.000	1	10	0.05000
Perfluoro-n-undecanoic acid	500	1.00	1	100.000	1	10	0.05000
Sodium perfluoro-1-pentanesulfonate	500	1.00	1	100.000	1	10	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: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 5/1/2019

Solution Volume 25 **mL X** 1 **Vials** **Refrigerator/Freezer No:** AgChem Laboratory: Refrigerator - R0124

Comment: 96:4 Methanol/Milli-q water

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JV29**

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	.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:
171025-02	Pipette	C0982448K

Solution Prepared By: Griffith, Lauren **Date Prepared:** 5/1/2018 **Expiration Date:** 5/1/2019

Solution Volume 25 **mL X** 1 **Vials** **Refrigerator/Freezer No:** AgChem Laboratory: Refrigerator - R0124

Comment: 96:4 Methanol/Milli-q water

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **JV83**

Description: PFAS - DoD Low 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)
JR04	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	12/28/18	---	---	2500 uL	1	25	~0.0000

Solution Prepared By: Schultz, Stephanie	**Date Prepared:** 5/8/2018	**Expiration Date:**	12/28/2018
Solution Volume 40 **mL X** 1 **Vials**	**Refrigerator/Freezer No:** LC Laboratory: Refrigerator - R0107		

Balance ID: _____

Comment: 96/4 methanol/milli-q

Approved By: Thorn, Jonathan **Date:** 5/10/2018 3:34:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **JV83**

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

Stock Id: **JR04**

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	0.02	---	---	1	25	0.00187
13C2-6:2FTS	2500	0.02	---	---	1	25	0.00190
13C2-8:2FTS	2500	0.02	---	---	1	25	0.00192
13C2-PFDoA	2500	0.02	---	---	1	25	0.00200
13C2-PFTeDA	2500	0.02	---	---	1	25	0.00200
13C3-PFBS	2500	0.02	---	---	1	25	0.00186
13C3-PFHxS	2500	0.02	---	---	1	25	0.00189
13C4-PFBA	2500	0.02	---	---	1	25	0.00200
13C4-PFHpA	2500	0.02	---	---	1	25	0.00200
13C5-PFHxA	2500	0.02	---	---	1	25	0.00200
13C5-PFPeA	2500	0.02	---	---	1	25	0.00200
13C6-PFDA	2500	0.02	---	---	1	25	0.00200
13C7-PFUnA	2500	0.02	---	---	1	25	0.00200
13C8-FOSA	2500	0.02	---	---	1	25	0.00200
13C8-PFOA	2500	0.02	---	---	1	25	0.00200
13C8-PFOS	2500	0.02	---	---	1	25	0.00191
13C9-PFNA	2500	0.02	---	---	1	25	0.00200
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic aci	2500	0.02	---	---	1	25	0.00200
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic a	2500	0.02	---	---	1	25	0.00200

Final Concentrations:

Analyte:	Conc (ug/mL):
13C2-4:2FTS	.00187
13C2-6:2FTS	.00190
13C2-8:2FTS	.00192
13C2-PFDoA	.00200
13C2-PFTeDA	.00200
13C3-PFBS	.00186
13C3-PFHxS	.00189
13C4-PFBA	.00200
13C4-PFHpA	.00200
13C5-PFHxA	.00200
13C5-PFPeA	.00200
13C6-PFDA	.00200
13C7-PFUnA	.00200
13C8-FOSA	.00200

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 5/8/2018 **Expiration Date:** 12/28/2018

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

Comment: 96/4 methanol/milli-q

Approved By: Thorn, Jonathan **Date:** 5/10/2018 3:34:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **JV83**

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

13C8-PFOA	.00200
13C8-PFOS	.00191
13C9-PFNA	.00200
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid	.00200

Syringes/Pipettes:

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 5/8/2018 **Expiration Date:** 12/28/2018

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

Comment: 96/4 methanol/milli-q

Approved By: Thorn, Jonathan **Date:** 5/10/2018 3:34:00 PM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **JW02**

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)
JR06	PFAS - DoD Internal Standard Stock Solution	Solution	~0	12/28/18	---	---	2500 uL	1	25	~0.0000

Solution Prepared By: Schultz, Stephanie	**Date Prepared:** 5/10/2018	**Expiration Date:**	12/28/2018
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:** 5/16/2018 2:50:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **JW02**

Description: PFAS - DoD Internal Standard Spiking Solution

Stock Id: **JR06**

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	2500	0.02	---	---	1	25	0.00200
13C2-PFOA	2500	0.02	---	---	1	25	0.00200
13C3-PFBA	2500	0.02	---	---	1	25	0.00200
13C4-PFOS	2500	0.02	---	---	1	25	0.00191

Final Concentrations:

Analyte:	Conc (ug/mL):
13C2-PFDA	.00200
13C2-PFOA	.00200
13C3-PFBA	.00200
13C4-PFOS	.00191

Syringes/Pipettes:

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 5/10/2018 **Expiration Date:** 12/28/2018

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:** 5/16/2018 2:50:00 PM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☐

Standard Laboratory ID Number: **JW32**

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)
JR04	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	12/28/18	---	---	50 uL	1	10	~0.0000
JR06	PFAS - DoD Internal Standard Stock Solution	Solution	~0	12/28/18	---	---	50 uL	1	10	~0.0000
JP49	PFAS - DOD Second Source LCS/MS Solution	Solution	~0	11/03/18	---	---	200 uL	1	10	~0.0000

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 5/16/2018 **Expiration Date:** 12/28/2018

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: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JW32**

Description: PFAS - DoD ICC

Stock Id: JP49

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
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

Stock Id: JR04

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	0.02	---	---	1	10	0.00009
13C2-6:2FTS	50	0.02	---	---	1	10	0.00009
13C2-8:2FTS	50	0.02	---	---	1	10	0.00010
13C2-PFDoA	50	0.02	---	---	1	10	0.00010
13C2-PFTeDA	50	0.02	---	---	1	10	0.00010
13C3-PFBS	50	0.02	---	---	1	10	0.00009
13C3-PFHxS	50	0.02	---	---	1	10	0.00009
13C4-PFBA	50	0.02	---	---	1	10	0.00010

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 5/16/2018 **Expiration Date:** 12/28/2018

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

Comment: 80/20 methanol/milli-q water

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JW32**

Description: PFAS - DoD ICC

13C4-PFHpA	50	0.02	---	---	1	10	0.00010
13C5-PFHxA	50	0.02	---	---	1	10	0.00010
13C5-PFPeA	50	0.02	---	---	1	10	0.00010
13C6-PFDA	50	0.02	---	---	1	10	0.00010
13C7-PFUnA	50	0.02	---	---	1	10	0.00010
13C8-FOSA	50	0.02	---	---	1	10	0.00010
13C8-PFOA	50	0.02	---	---	1	10	0.00010
13C8-PFOS	50	0.02	---	---	1	10	0.00010
13C9-PFNA	50	0.02	---	---	1	10	0.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic aci	50	0.02	---	---	1	10	0.00010
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic a	50	0.02	---	---	1	10	0.00010

Stock Id: **JR06**

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-PFDA	50	0.02	---	---	1	10	0.00010
13C2-PFOA	50	0.02	---	---	1	10	0.00010
13C3-PFBA	50	0.02	---	---	1	10	0.00010
13C4-PFOS	50	0.02	---	---	1	10	0.00010

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	.00009
13C2-6:2FTS	.00009
13C2-8:2FTS	.00010
13C2-PFDA	.00010
13C2-PFDoA	.00010
13C2-PFOA	.00010
13C2-PFTeDA	.00010
13C3-PFBA	.00010
13C3-PFBS	.00009
13C3-PFHxS	.00009
13C4-PFBA	.00010
13C4-PFHpA	.00010

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 5/16/2018 **Expiration Date:** 12/28/2018

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

Comment: 80/20 methanol/milli-q water

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: **JW32**

Description: PFAS - DoD ICC

13C4-PFOS	.00010
13C5-PFHxA	.00010
13C5-PFPeA	.00010
13C6-PFDA	.00010
13C7-PFUnA	.00010
13C8-FOSA	.00010
13C8-PFOA	.00010
13C8-PFOS	.00010
13C9-PFNA	.00010
N-ethyl-d5-perfluoro-1-octanesulfonamidoacetic acid	.00010
N-ethylperfluoro-octanesulfonamidoacetic acid	.00100
N-methyl-d3-perfluoro-1-octanesulfonamidoacetic acid	.00010
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:
JP49	Pipette	B1100287B
JR04	Pipette	I0793912B
JR06	Pipette	I0793912B

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 5/16/2018 **Expiration Date:** 12/28/2018

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

Comment: 80/20 methanol/milli-q water

Approved By: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **JW44**

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)
171025-01	PFOA - 2nd Source	Neat	~1.000000	03/22/22	---	---	1000 uL	1	20	~0.0500

Solution Prepared By: Schultz, Stephanie		**Date Prepared:** 5/22/2018	**Expiration Date:** 5/22/2019
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: Schumitz, Denise **Date:** 5/24/2018 11:02:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **JW44**

Description: PFAS - DOD Second Source LCS/MS Solution

Stock Id: **171025-01**

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:** 5/22/2018 **Expiration Date:** 5/22/2019

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

Comment: 80/20 methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 5/24/2018 11:02:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **JW44**

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:
171025-01	Pipette	C0982448K

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 5/22/2018 **Expiration Date:** 5/22/2019

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

Comment: 80/20 methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 5/24/2018 11:02:00 AM

BATTELLE

It can be done

BDO Id: 161230-01

Reagent Receipt Report

Approved:

Name:	br-PFHxSK	**Received:**	12/30/2016
Vendor:	Wellington Laboratories	**Custodian:**	Schumitz, Matt
Catalogue No:	br-PFHxSK	**Expires:**	7/3/2020
Type:	Solution	**Consumed:**	
Lot No:	br-PFHxSK0615	**Stored In:**	Sample Preparation - C0103
Quantity:	1 ea ml **% Moisture:**		
Description:	br-PFHxSK		

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:	
br-PFHxSK	BDO-2170	50.0000	98.00	--	--		50	47.5	52.5	1

Total Analytes: 1

Notes:

	Analyte:	Comment:
1	br-PFHxSK	50 +- 2.5ug/ml (total potassium salt)45.5+- 2.3 ug/ml (total PFHxS anion)

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

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

161230-01

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

br-PFHxSK

Potassium Perfluorohexanesulfonate Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-PFHxSK
LOT NUMBER:	brPFHxSK0615
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)	06/29/2015
LAST TESTED: (mm/dd/yyyy)	07/03/2015
EXPIRY DATE: (mm/dd/yyyy)	07/03/2020
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
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

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BATTELLE

It can be done

BDO Id: 161230-02

Reagent Receipt Report

Approved: ☐ ☐

Name:	br-PFOSK	**Received:**	12/30/2016
Vendor:	Wellington Laboratories	**Custodian:**	Schumitz, Matt
Catalogue No:	br-PFOSK	**Expires:**	10/14/2020
Type:	Solution	**Consumed:**	
Lot No:	br-PFOSK1015	**Stored In:**	Sample Preparation - C0103
Quantity:	1 ea ml **% Moisture:**		
Description:	br-PFOSK		

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:	
br-PFOSK	BDO-2171	50.0000	98.00	--	--	☐	50	47.5	52.5	1

Total Analytes: 1

Notes:

	Analyte:	Comment:
1	br-PFOSK	50 +- 2.5 ug/ml (total potassium salt)46.4+- 2.3 ug/ml (total PFOS anion)

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

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

161230-02

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

br-PFOSK

Potassium Perfluorooctanesulfonate Solution/Mixture of Linear and Branched Isomers

PRODUCT CODE:	br-PFOSK
LOT NUMBER:	brPFOSK1015
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)	10/13/2015
LAST TESTED: (mm/dd/yyyy)	10/14/2015
EXPIRY DATE: (mm/dd/yyyy)	10/14/2020
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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BATTELLE

It can be done

BDO Id: 161230-04

Reagent Receipt Report

Approved: ☐ ☐

Name:	NaP3MHpS	**Received:**	12/30/2016
Vendor:	Wellington Laboratories	**Custodian:**	Schumitz, Matt
Catalogue No:	NaP3MHpS	**Expires:**	6/10/2020
Type:	Solution	**Consumed:**	
Lot No:	NaP3MHpS0615	**Stored In:**	Sample Preparation - C0103
Quantity:	1 ea ml **% Moisture:**		
Description:	NaP3MHpS		

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:	
NaP3MFpS	BDO-2174	50.0000	98.00	--	--	☐	50	47.5	52.5	1

Total Analytes: 1

Notes:

	Analyte:	Comment:
1	NaP3MFpS	50.+- 2.5 ug/ml (Na salt) 47.8+- 2.4 ug/ml (anion)

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

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

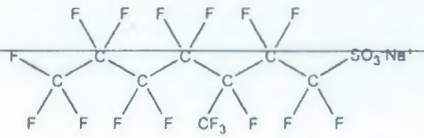
161230-04

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: NaP3MHpS
LOT NUMBER: NaP3MHpS0615
COMPOUND: Sodium perfluoro-3-methylheptanesulfonate

STRUCTURE:
CAS #: Not available



MOLECULAR FORMULA: $C_8F_{17}SO_3Na$
MOLECULAR WEIGHT: 522.11
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt)
47.8 ± 2.4 µg/ml (NaP3MHpS anion)
SOLVENT(S): Methanol
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 06/10/2015
EXPIRY DATE: (mm/dd/yyyy) 06/10/2020
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 06/11/2015 (mm/dd/yyyy)

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BATTELLE

It can be done

BDO Id: 161230-05

Reagent Receipt Report

Approved: ☐ ☐

Name:	NaP6MHpS	**Received:**	12/30/2016
Vendor:	Wellington Laboratories	**Custodian:**	Schumitz, Matt
Catalogue No:	NaP6MHpS	**Expires:**	1/23/2020
Type:	Solution	**Consumed:**	
Lot No:	NaP6MHpS0115	**Stored In:**	Sample Preparation - C0103
Quantity:	1 ea ml	**% Moisture:**	
Description:	NaP6MHpS		

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:	
NaP6MHpS	BDO-2175	50.0000	98.00	--	--	☐	50	47.5	52.5	1

Total Analytes: 1

Notes:

	Analyte:	Comment:
1	NaP6MHpS	50.+- 2.5 ug/ml (Na salt) 47.8+- 2.4 ug/ml (anion)

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

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

161230-05

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: NaP6MHpS
LOT NUMBER: NaP6MHpS0115
COMPOUND: Sodium perfluoro-6-methylheptanesulfonate

STRUCTURE:
CAS #: Not available

MOLECULAR FORMULA: $C_8F_{17}SO_3Na$
MOLECULAR WEIGHT: 522.11
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt)
47.8 ± 2.4 µg/ml (NaP6MHpS anion)
SOLVENT(S): Methanol
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 01/23/2015
EXPIRY DATE: (mm/dd/yyyy) 01/23/2020
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

- See page 2 for further details.

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Certified By: B.G. Chittim **Date:** 03/27/2015 (mm/dd/yyyy)

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It can be done

BDO Id: 161230-06

Reagent Receipt Report

Approved: ☐ ☐

Name:	ipPFNS	**Received:**	12/30/2016
Vendor:	Wellington Laboratories	**Custodian:**	Schumitz, Matt
Catalogue No:	ipPFNS	**Expires:**	9/23/2020
Type:	Solution	**Consumed:**	
Lot No:	ipPFNS0912	**Stored In:**	Sample Preparation - C0103
Quantity:	1 ea ml **% Moisture:**		
Description:	ipPFNS		

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:	
ipPFNS	BDO-2176	50.0000	98.00	--	--	☐	50	47.5	52.5	1

Total Analytes: 1

Notes:

	Analyte:	Comment:
1	ipPFNS	50.+- 2.5 ug/ml (Na salt) 48.0+- 2.4 ug/ml (PFNS anion)

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

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

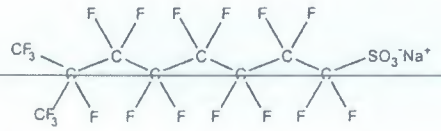
161230-06

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: ipPFNS
LOT NUMBER: ipPFNS0912
COMPOUND: Sodium perfluoro-7-methyloctanesulfonate

STRUCTURE:
CAS #: Not available



MOLECULAR FORMULA: $C_9F_{19}SO_3Na$
MOLECULAR WEIGHT: 572.12
CONCENTRATION: 50.0 ± 2.5 µg/ml (Na salt)
48.0 ± 2.4 µg/ml (PFNS anion)
SOLVENT(S): Methanol
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 09/23/2015
EXPIRY DATE: (mm/dd/yyyy) 09/23/2020
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

- See page 2 for further details.

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Certified By: B.G. Chittim **Date:** 10/02/2015 (mm/dd/yyyy)

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It can be done

BDO Id: 161230-07

Reagent Receipt Report

Approved: ☐ ☐

Name:	T-PFOA	**Received:**	12/30/2016
Vendor:	Wellington Laboratories	**Custodian:**	Schumitz, Matt
Catalogue No:	T-PFOA	**Expires:**	2/12/2021
Type:	Solution	**Consumed:**	
Lot No:	T-PFOA0216	**Stored In:**	Sample Preparation - C0103
Quantity:	1 ea ml **% Moisture:**		
Description:	T-PFOA		

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:
T-PFOA	BDO-2177	50.0000	97.00	--	--	☐	50	47.5	52.5

Total Analytes: 1

Notes:

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

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

161230-07

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	T-PFOA	**LOT NUMBER:**	TPFOA0216
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)	02/12/2016
EXPIRY DATE: (mm/dd/yyyy)	02/12/2021
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.

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Certified By: B.G. Chittim **Date:** 02/16/2016 (mm/dd/yyyy)

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It can be done

BDO Id: 161230-08

Reagent Receipt Report

Approved: ☐ ☐

Name:	P3MHpA	**Received:**	12/30/2016
Vendor:	Wellington Laboratories	**Custodian:**	Schumitz, Matt
Catalogue No:	P3MHpA	**Expires:**	6/10/2020
Type:	Solution	**Consumed:**	
Lot No:	P3MHpA	**Stored In:**	Sample Preparation - C0103
Quantity:	1 ea ml	**% Moisture:**	
Description:	P3MHpA		

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:
P3MHpA	BDO-2178	50.0000	98.00	--	--	☐	50	47.5	52.5

Total Analytes: 1

Notes:

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

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

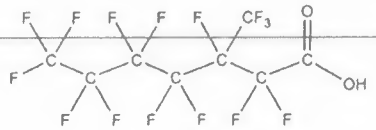
16|230 -08

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: P3MHpA
LOT NUMBER: P3MHpA0615
COMPOUND: Perfluoro-3-methylheptanoic acid

STRUCTURE:
CAS #: Not available



MOLECULAR FORMULA: $C_8HF_{15}O_2$
MOLECULAR WEIGHT: 414.07
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol, Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 06/10/2015
EXPIRY DATE: (mm/dd/yyyy) 06/10/2020
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 06/17/2015 (mm/dd/yyyy)

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BATTELLE

It can be done

BDO Id: 161230-09

Reagent Receipt Report

Approved: ☐

Name:	P4MOA	**Received:**	12/30/2016
Vendor:	Wellington Laboratories	**Custodian:**	Schumitz, Matt
Catalogue No:	P4MOA	**Expires:**	6/10/2020
Type:	Solution	**Consumed:**	
Lot No:	P4MOA0615	**Stored In:**	Sample Preparation - C0103
Quantity:	1 ea ml	**% Moisture:**	
Description:	P4MOA		

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:
P4MOA	BDO-2179	50.0000	98.00	--	--	☐	50	47.5	52.5

Total Analytes: 1

Notes:

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

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

161230-09

WELLINGTON LABORATORIES

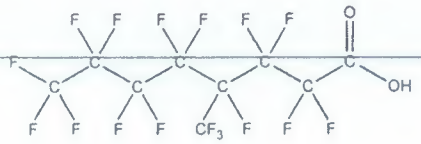
CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: P4MOA
COMPOUND: Perfluoro-4-methyloctanoic acid

LOT NUMBER: P4MOA0615

STRUCTURE:

CAS #: Not available



MOLECULAR FORMULA: $C_9HF_{17}O_2$
CONCENTRATION: 50 ± 2.5 µg/ml

MOLECULAR WEIGHT: 464.08
SOLVENT(S): Methanol
Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 06/10/2015
EXPIRY DATE: (mm/dd/yyyy) 06/10/2020
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 06/17/2015 (mm/dd/yyyy)

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BATTELLE

It can be done

BDO Id: 161230-10

Reagent Receipt Report

Approved: ☐ ☐

Name:	ipPFNA	**Received:**	12/30/2016
Vendor:	Wellington Laboratories	**Custodian:**	Schumitz, Matt
Catalogue No:	ipPFNA	**Expires:**	5/31/2021
Type:	Solution	**Consumed:**	
Lot No:	ipPFNA	**Stored In:**	Sample Preparation - C0103
Quantity:	1 ea ml **% Moisture:**		
Description:	ipPFNA		

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:
ipPFNA	BDO-2180	50.0000	98.00	--	--	☐	50	47.5	52.5

Total Analytes: 1

Notes:

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

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

161230-10

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: ipPFNA
COMPOUND: Perfluoro-7-methyloctanoic acid
LOT NUMBER: ipPFNA0516
STRUCTURE:
CAS #: Not available

MOLECULAR FORMULA: $C_9HF_{17}O_2$
MOLECULAR WEIGHT: 464.08
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol, Water (<1%)
CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 05/31/2016
EXPIRY DATE: (mm/dd/yyyy) 05/31/2021
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 06/06/2016 (mm/dd/yyyy)

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BATTELLE

It can be done

BDO Id: 161230-11

Reagent Receipt Report

Approved: ☐ ☐

Name:	P355TMHxA	**Received:**	12/30/2016
Vendor:	Wellington Laboratories	**Custodian:**	Schumitz, Matt
Catalogue No:	P355TMHxA	**Expires:**	11/27/2019
Type:	Solution	**Consumed:**	
Lot No:	P355TMHxA1114	**Stored In:**	Sample Preparation - C0103
Quantity:	1 ea ml	**% Moisture:**	
Description:	P355TMHxA		

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:
P355TMHxA	BDO-2181	50.0000	98.00	--	--	☐	50	47.5	52.5

Total Analytes: 1

Notes:

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

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

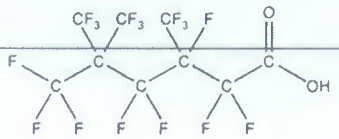
161230-11

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: P355TMHxA
LOT NUMBER: P355TMHxA1114
COMPOUND: Perfluoro-3,5,5-trimethylhexanoic acid

STRUCTURE:
CAS #: 238403-51-5



MOLECULAR FORMULA: $C_9HF_{17}O_2$
MOLECULAR WEIGHT: 464.08
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol, Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 11/27/2014
EXPIRY DATE: (mm/dd/yyyy) 11/27/2019
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 03/25/2015 (mm/dd/yyyy)

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BATTELLE

It can be done

BDO Id: 161230-12

Reagent Receipt Report

Approved: ☐ ☐

Name:	P37DMOA	**Received:**	12/30/2016
Vendor:	Wellington Laboratories	**Custodian:**	Schumitz, Matt
Catalogue No:	P37DMOA	**Expires:**	9/24/2019
Type:	Solution	**Consumed:**	
Lot No:	P37DMOA0914	**Stored In:**	Sample Preparation - C0103
Quantity:	1 ea ml **% Moisture:**		
Description:	P37DMOA		

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:
P37DMOA	BDO-2182	50.0000	98.00	--	--	☐	50	47.5	52.5

Total Analytes: 1

Notes:

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

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

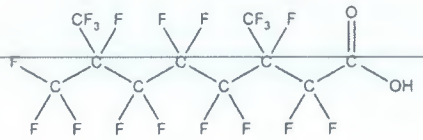
161230-12

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE: P37DMOA
LOT NUMBER: P37DMOA0914
COMPOUND: Perfluoro-3,7-dimethyloctanoic acid

STRUCTURE:
CAS #: 172155-07-6



MOLECULAR FORMULA: $C_{10}HF_{19}O_2$
MOLECULAR WEIGHT: 514.08
CONCENTRATION: 50 ± 2.5 µg/ml
SOLVENT(S): Methanol, Water (<1%)

CHEMICAL PURITY: >98%
LAST TESTED: (mm/dd/yyyy) 09/24/2014
EXPIRY DATE: (mm/dd/yyyy) 09/24/2019
RECOMMENDED STORAGE: Store ampoule in a cool, dark place

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: B.G. Chittim **Date:** 03/25/2015 (mm/dd/yyyy)

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BATTELLE

It can be done

BDO Id: 170629-02

Reagent Receipt Report

Approved: ☐ ☐

Name: Mass-labelled PFAS Extraction Stand

Vendor: Wellington Laboratories

Catalogue No: MPFAC-24ES

Type: Solution

Lot No: MPFAC24ES1016

Quantity: 1 ea mL **% Moisture:** 0

Description: Mass-labelled PFAS Extraction Standard Solution

Received: 6/29/2017

Custodian: Thorn, Jonathan

Expires: 5/19/2022

Consumed:

Stored In: Sample Preparation - C0103

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:
N-ethyl-d5-perfluoro-1-octanesulfona	BDO-2126	1.0000	100.00	--	--	☐			
N-methyl-d3-perfluoro-1-octanesulfo	BDO-2125	1.0000	100.00	--	--	☐			
Perfluoro-1-[13C8]octanesulfonamid	BDO-2225	1.0000	100.00	--	--	☐			
Perfluoro-n-[1,2,3,4,5,6,7-13C7]unde	BDO-2223	1.0000	100.00	--	--	☐			
Perfluoro-n-[1,2,3,4,5,6-13C6]decan	BDO-2222	1.0000	100.00	--	--	☐			
Perfluoro-n-[1,2,3,4,6-13C5]hexanoic	BDO-2217	1.0000	100.00	--	--	☐			
Perfluoro-n-[1,2,3,4-13C4]butanoic a	BDO-2105	1.0000	100.00	--	--	☐			
Perfluoro-n-[1,2,3,4-13C4]hepetanoic	BDO-2218	1.0000	100.00	--	--	☐			
Perfluoro-n-[1,2-13C2]dodecanoic ac	BDO-2112	1.0000	100.00	--	--	☐			
Perfluoro-n-[1,2-13C2]tetradecanoic	BDO-2224	1.0000	100.00	--	--	☐			
Perfluoro-n-[13C5]pentanoic acid	BDO-2216	1.0000	100.00	--	--	☐			
Perfluoro-n-[13C8]octanoic acid	BDO-2219	1.0000	100.00	--	--	☐			
Perfluoro-n-[13C9]nonanoic acid	BDO-2221	1.0000	100.00	--	--	☐			
Sodium 1H,1H,2H,2H-perfluoro-1-[1,	BDO-2220	0.9580	100.00	--	--	☐			
sodium 1H,1H,2H,2H-perfluoro-1-[1,	BDO-2229	0.9350	100.00	--	--	☐			
sodium 1H,1H,2H,2H-perfluoro-1-[1,	BDO-2230	0.9490	100.00	--	--	☐			
Sodium perfluoro-1-[1,2,3-13C3]hexa	BDO-2227	0.9460	100.00	--	--	☐			
Sodium perfluoro-1-[13C8]octanesulf	BDO-2228	0.9570	100.00	--	--	☐			
Sodium perfluoro-1-[2,3,4-13C3]buta	BDO-2226	0.9290	100.00	--	--	☐			

Total Analytes: 19

Notes:

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

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

170629-02

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

MPFAC-24ES

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

PRODUCT CODE:	MPFAC-24ES
LOT NUMBER:	MPFAC24ES1016
SOLVENT(S):	Methanol / Isopropanol (2%) / Water (<1%)
DATE PREPARED: (mm/dd/yyyy)	10/20/2016
LAST TESTED: (mm/dd/yyyy)	05/19/2017
EXPIRY DATE: (mm/dd/yyyy)	05/19/2022
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 ≥99%. The individual mass-labelled perfluorooctanesulfonamidoacetic acids all have chemical purities of >98% and isotopic purities of ≥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.

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

ANAB ACCREDITED

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 13C4-PFBA	MPFBA	1000	A
Perfluoro-n-[$^{13}C_5$]pentanoic acid 13C5PFPeA	M5PFPeA	1000	B
Perfluoro-n-[1,2,3,4,6-$^{13}C_5$]hexanoic acid 13C5-PFHxA	M5PFHxA	1000	E
Perfluoro-n-[1,2,3,4-$^{13}C_4$]heptanoic acid 13C4-PFHpA	M4PFHpA	1000	F
Perfluoro-n-[$^{13}C_8$]octanoic acid 13C8-PFOA	M8PFOA	1000	I
Perfluoro-n-[$^{13}C_9$]nonanoic acid 13C9-PFNA	M9PFNA	1000	J
Perfluoro-n-[1,2,3,4,5,6-$^{13}C_6$]decanoic acid 13C6-PFDA	M6PFDA	1000	M
Perfluoro-n-[1,2,3,4,5,6,7-$^{13}C_7$]undecanoic acid 13C7-PFUnA	M7PFUdA	1000	Q
Perfluoro-n-[1,2-$^{13}C_2$]dodecanoic acid 13C2-PFDoA	MPFDoA	1000	R
Perfluoro-n-[1,2-$^{13}C_2$]tetradecanoic acid 13C2-PFTeDA	M2PFTeDA	1000	S
Perfluoro-1-[$^{13}C_8$]octanesulfonamide (1) ~~13C8-PFOSA~~	M8FOSA	1000	N
N-methyl-d_3-perfluoro-1-octanesulfonamidoacetic acid	d3-N-MeFOSAA	1000	O d3-MeFOSAA
N-ethyl-d_5-perfluoro-1-octanesulfonamidoacetic acid	d5-N-EtFOSAA	1000	P d5-EtFOSAA

Compound	Abbreviation	Concentration (ng/ml) as the salt	Concentration (ng/ml) as the anion	Peak Assignment in Figure 1
Sodium perfluoro-1-[2,3,4-$^{13}C_3$]butanesulfonate 13C3 –	M3PFBS	1000	929	C
Sodium perfluoro-1-[1,2,3-$^{13}C_3$]hexanesulfonate 13C3 –	M3PFHxS	1000	946	G
Sodium perfluoro-1-[$^{13}C_8$]octanesulfonate 13C8 –	M8PFOS	1000	957	K
Sodium 1H,1H,2H,2H-perfluoro-1-[1,2-$^{13}C_2$]hexanesulfonate 13C2 –	M2-4:2FTS	1000	935	D
Sodium 1H,1H,2H,2H-perfluoro-1-[1,2-$^{13}C_2$]octanesulfonate 13C2 –	M2-6:2FTS	1000	949	H
Sodium 1H,1H,2H,2H-perfluoro-1-[1,2-$^{13}C_2$]decanesulfonate 13C2 –	M2-8:2FTS	1000	958	L

(1) s/b 13C8-FOSA JMT 7/3/17

Certified By: _____ **Date:** 05/24/2017 (mm/dd/yyyy)

B.G. Chittim, General Manager

BATTELLE

It can be done

BDO Id: 170629-03

Reagent Receipt Report

Approved: ☐ ☐

Name:	Mass-labeled PFAS Injection Standar	**Received:**	6/29/2017
Vendor:	Wellington Laboratories	**Custodian:**	Thorn, Jonathan
Catalogue No:	MPFAC-C-IS	**Expires:**	5/2/2022
Type:	Solution	**Consumed:**	
Lot No:	MPFACCIS0516	**Stored In:**	Sample Preparation - C0103
Quantity:	2 ea mL **% Moisture:** 0		

Description: Mass-labeled PFAS Injection Standards Solution

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:
Perfluoro-1-]1,2,3,4-13C4]octanesulf	BDO-2121	1.9100	100.00	--	--	☐			
Perfluoro-n-[1,2-13C2]decanoic acid	BDO-2110	2.0000	100.00	--	--	☐			
Perfluoro-n-[1,2-13C2]octanoic acid	BDO-2107	2.0000	100.00	--	--	☐			
Perfluoro-n-[2,3,4-13C3]butanoic Aci	BDO-2231	2.0000	100.00	--	--	☐			

Total Analytes: 4

Notes:

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

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

170629-03

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:

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HAZARDS:

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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, 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:

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

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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:

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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 13C3-PFBA	M3PFBA	2000	A
Perfluoro-n-[1,2-$^{13}C_2$]octanoic acid 13C2-PFOA	M2PFOA	2000	B
Perfluoro-n-[1,2-$^{13}C_2$]decanoic acid 13C2 PFDA	MPFDA	2000	D
Sodium perfluoro-1-[1,2,3,4-$^{13}C_4$]octanesulfonate 13C4-PFOS	MPFOS	2000	C

Certified By: _____ **Date:** 05/04/2017 (mm/dd/yyyy)

B.G. Chittim, General Manager

CERTIFIED WEIGHT REPORT

170 630-04

Part Number: 99207
Lot Number: 032117
Description: PFOA - DOD
24 components
Expiration Date: 032122
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

Justin Dippold		032117
Formulated By:	Justin Dippold	DATE
Pedro Rentas		032117
Reviewed By:	Pedro L. Rentas	DATE

Note: All assigned values are anion concentrations.

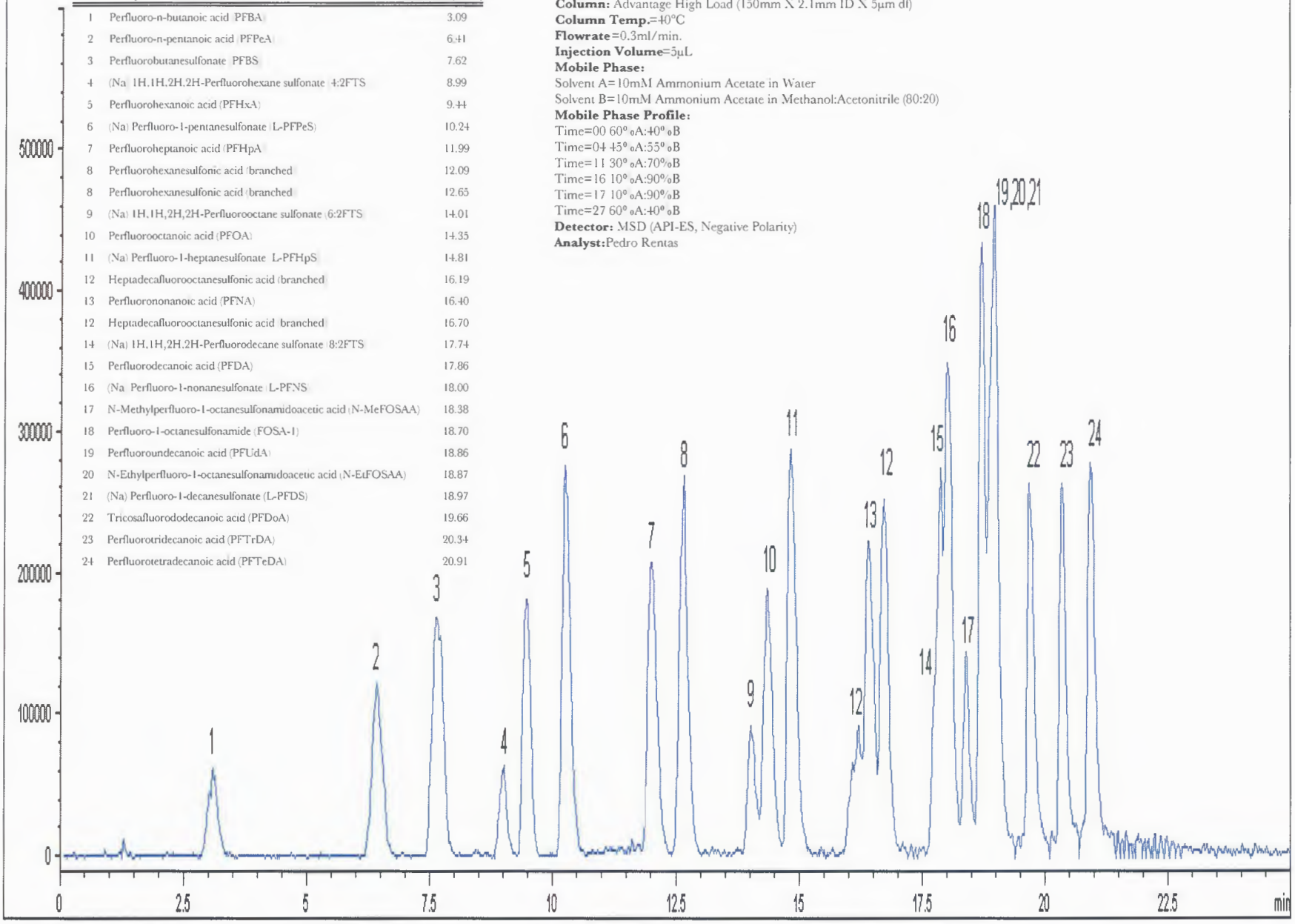
SDS Information (Solvent Safety Info. On Attached pg.)

	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: 171025-01

Reagent Receipt Report

Approved:

Name:	PFOA - 2nd Source	**Received:**	10/25/2017
Vendor:	ABSOLUTE STANDARDS	**Custodian:**	Schumitz, Matt
Catalogue No:	99207	**Expires:**	3/22/2022
Type:	Solution	**Consumed:**	
Lot No:	032217	**Stored In:**	LC Laboratory - F0111
Quantity:	5 ea ml **% Moisture:**		
Description:	PFOA-DOD		

Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:
(Na) 1H,1H,2H,2H-Perfluorodecane	39108-34-4	1.0100	100.00	--	--				
(Na) 1H,1H,2H,2H-Perfluorohexane	BDO-2205	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-butanesulfonic Acid	375-73-5	1.0100	100.00	--	--				
Perfluoro-1-hexanesulfonic Acid	355-46-4	1.0100	100.00	--	--				
Perfluoro-1-octanesulfonamide	754-91-6	1.0000	100.00	--	--				
Perfluoro-1-octanesulphonic Acid	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-pentanesulfonat	BDO-2114	1.0000	100.00	--	--				

Total Analytes: 24

Notes:

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

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

Absolute Standards, Inc.
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www.absolutestandards.com

Analytical Reference Material ARM

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

CERTIFIED WEIGHT REPORT

170285-02

Part Number: 99207
Lot Number: 101717
Description: PFOA - DOD
24 components
Expiration Date: 101722
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 1.0
NIST Test ID#: 2506734D

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:	Mario Luis	101717 DATE
Reviewed By:	Pedro L. Rentas	101717 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	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	PFPeA0617	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	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	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).

BATTELLE

It can be done

BDO Id: 171025-02

Reagent Receipt Report

Approved: ☐ ☐

Name: PFOA - ICAL Mix

Vendor: ABSOLUTE STANDARDS

Catalogue No: 99207

Type: Solution

Lot No: 101717

Quantity: 5 ea ml **% Moisture:**

Description: PFOA - DOD

Received: 10/25/2017

Custodian: Schumitz, Matt

Expires: 10/17/2022

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	BDO-2205	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-butanesulfonic Acid	375-73-5	1.0100	100.00	--	--	☐			
Perfluoro-1-hexanesulfonic Acid	355-46-4	1.0100	100.00	--	--	☐			
Perfluoro-1-octanesulfonamide	754-91-6	1.0000	100.00	--	--	☐			
Perfluoro-1-octanesulphonic Acid	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-pentanesulfonat	BDO-2114	1.0000	100.00	--	--	☐			

Total Analytes: 24

Notes:

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

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

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Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

171025-01

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.

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	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	030617	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).

Sample Preparation

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BATTELLE - NORWELL OPERATIONS
SAMPLE PREPARATION RECORDS

Project Title(s)	**Project No.(s)**
CTO-SE0375: Naval Air Station Jacksonville	100119154-SE0375

18-0340

Non-Potable Water PFAS Analysis

SW, SW DUP

SOP Numbers (see workplan for modifications)

ExtractionSOP No. 5-370

This Batch Contains The Following Samples:
CQ859PB-FS
CQ860LCS-FS
J6241-FS
J6242-FS

Laboratory Preparation Records

COMPLETE AND VALIDATED

Prep Task Leader: Stephanie Schultz

Approved By:	Date	Initials
Denise Schumitz	06/05/2018	DMS

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BATTELLE - NORWELL OPERATIONS
SAMPLE IDENTIFICATION PAGE

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340

Non-Potable Water PFAS Analysis

SW, SW DUP

Sample ID	Description
CQ859PB-FS	Procedural Blank
CQ860LCS-FS	Laboratory Control Sample
J6241-FS	FFTA-FD01-052418
J6242-FS	FFTA-SW01-052418

Samples Assigned By: Stephanie Schultz Date : May 29, 2018

Comments:

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BATTELLE - NORWELL OPERATIONS
SAMPLE CUSTODY LOG

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340
Non-Potable Water PFAS Analysis
SW, SW DUP

Requested On/By:	05/30/2018 SAS	**Purpose:**	Sample Preparation
Relinquished On/By:	05/30/2018 MDS	**Last Activity:**	Transfer

Accepted On/By:	05/30/2018 SAS	**Returned On/To:**	
Stored In Facility:	Sample Preparation	**Returned To Facility:**	
Stored Until	05/30/2018		
Stored Comment:	NA	**Returned Comment:**	NA

No.	BDO-ID:	Ctrs	*	Condition:	Custody Comment:
1	J6241	1	C	Consumed	NA
2	J6242	1	C	Consumed	NA

Total Samples 2 * "C" = Consumed Container

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BATTELLE - NORWELL OPERATIONS
LIQUID SAMPLE ID FORM

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340

Non-Potable Water PFAS Analysis

SW, SW DUP

Sample ID	Description	Volume (mL)	Bottles	*	Date Initials
CQ859PB-FS	Procedural Blank	250.0	NA	--	05/30/18 SAS
CQ860LCS-FS	Laboratory Control Sample	250.0	NA	--	05/30/18 SAS
J6241-FS	FFTA-FD01-052418	275.0	1	C	05/30/18 SAS
J6242-FS	FFTA-SW01-052418	280.0	1	C	05/30/18 SAS

Comments:

Samples Assigned By Stephanie Schultz Date : May 29, 2018

* - "C" = Sample is Consumed

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
SURROGATE SPIKE FORM

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340
Non-Potable Water PFAS Analysis
SW, SW DUP

Sample ID	Standard ID	Type	Vial No.	Vol Added (uL)	Date Spiked/ Spiked By	Witn'd By	Comment
CQ859PB-FS	JV83	SIS	1	50	05/30/18 SAS	JCT	NA
CQ860LCS-FS	JV83	SIS	1	50	05/30/18 SAS	JCT	NA
CQ860LCS-FS	JW44	LCS/MS	1	50	05/30/18 SAS	JCT	NA
J6241-FS	JV83	SIS	1	50	05/30/18 SAS	JCT	NA
J6242-FS	JV83	SIS	1	50	05/30/18 SAS	JCT	NA

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
JV83	Pipette	I0793912B
JW44	Pipette	I0793912B

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It can be done

BATTELLE - NORWELL OPERATIONS
SAMPLE EXTRACTION FORM

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340

Non-Potable Water PFAS Analysis

SW, SW DUP

Sample ID	1st Extraction	2nd Extraction	3rd Extraction	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comment
CQ859PB-FS	05/30/18 SAS	NA	NA	NA	NA	NA	NA	NA
CQ860LCS-FS	05/30/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6241-FS	05/30/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6242-FS	05/30/18 SAS	NA	NA	NA	NA	NA	NA	NA

Solvents/Reagent Preparations:

Name	ID	Expires	Lot No	Procedure	Comments
0.4% NH3 in Methanol	RP-180530-2	05/30/18	SHBG7156V	Per 100 mL, dilute 3.5 mL NH3 to 100 mL in Methanol	
0.4% NH3 in Methanol	RP-180530-2	05/30/18	177965	Per 100 mL, dilute 3.5 mL NH3 to 100 mL in Methanol	
Pre-packed SPE Column	RP-180530-4	05/30/18	003737320A	Pre-packed SPE Column	

Solvents/Reagents:

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
INTERNAL STANDARD SPIKING FORM

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340
Non-Potable Water PFAS Analysis
SW, SW DUP

(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
CQ859PB-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
CQ860LCS-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6241-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6241-FS-D(5)	476	24	JW02	25	1	500	50.000	06/08/18 DMS	NA
J6241-FS-D(7)	476	24	JW02	25	1	500	1250.000	06/04/18 DMS	SAS
J6241-FS-D(9)	476	24	JW02	25	1	500	31250.000	06/05/18 DMS	SAS
J6241-FS-D(11)	476	24	JW02	25	1	500	781250.000	06/08/18 DMS	MRM
J6242-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6242-FS-D(5)	476	24	JW02	25	1	500	50.000	06/04/18 DMS	SAS
J6242-FS-D(7)	476	24	JW02	25	1	500	1250.000	06/04/18 DMS	SAS
J6242-FS-D(9)	476	24	JW02	25	1	500	31250.000	06/05/18 DMS	SAS
J6242-FS-D(11)	476	24	JW02	25	1	500	781250.000	06/08/18 DMS	MRM

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
JV83	Pipette	I0793912B
JW02	Pipette	I0793912B

Extract Id:	Comments:
CQ859PB-FS	Samples reconstituted in 80/20 methanol/milli-q water (RP-180529-6)

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

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

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
EXTRACT SPIKE FORM

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340
Non-Potable Water PFAS Analysis
SW, SW DUP

Extract Id	DF	Std. ID	Type	Vial No.	Vol. Added (uL)	Conc (ug/mL)	Added (ng)	Date Spiked/ Spiked By	Witn'd By
J6241-FS-D(5)	50	JV83	SIS	1	24	0	0	06/04/18 DMS	MRM
J6241-FS-D(7)	1250	JV83	SIS	1	24	0	0	06/04/18 DMS	MRM
J6241-FS-D(9)	31250	JV83	SIS	1	24	0	0	06/05/18 DMS	MRM
J6241-FS-D(11)	781250	JV83	SIS	1	24	0	0	06/08/18 DMS	MRM
J6242-FS-D(5)	50	JV83	SIS	1	24	0	0	06/04/18 DMS	MRM
J6242-FS-D(7)	1250	JV83	SIS	1	24	0	0	06/04/18 DMS	MRM
J6242-FS-D(9)	31250	JV83	SIS	1	24	0	0	06/05/18 DMS	MRM
J6242-FS-D(11)	781250	JV83	SIS	1	24	0	0	06/08/18 DMS	MRM

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
JV83	Pipette	I0793912B
JW02	Pipette	I0793912B

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
PREPARATION EXTRACT SPLIT FORM

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340

Non-Potable Water PFAS Analysis

SW, SW DUP

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
CQ859PB-FS	0	C	5/30/2018 9:49:00 AM	NA		NA	NA	1.000	1.000	05/30/18 SAS
CQ859PB-FS	2	--	5/30/2018 1:03:00 PM	CQ859PB-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
CQ859PB-FS	3	--	5/30/2018 1:03:00 PM	CQ859PB-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
CQ860LCS-FS	0	C	5/30/2018 9:49:00 AM	NA		NA	NA	1.000	1.000	05/30/18 SAS
CQ860LCS-FS	2	--	5/30/2018 1:03:00 PM	CQ860LCS-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
CQ860LCS-FS	3	--	5/30/2018 1:03:00 PM	CQ860LCS-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6241-FS	0	C	5/30/2018 9:49:00 AM	NA		NA	NA	1.000	1.000	05/30/18 SAS
J6241-FS	2	--	5/30/2018 1:03:00 PM	J6241-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6241-FS	3	C	5/30/2018 1:03:00 PM	J6241-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6241-FS	4	--	6/4/2018 4:13:00 PM	J6241-FS	3	500	480	1.042	2.083	06/04/18 SAS
J6241-FS-D	5	C	6/4/2018 4:13:00 PM	J6241-FS	3	500	20	25.000	50.000	06/04/18 SAS
J6241-FS-D	6	--	6/4/2018 4:15:00 PM	J6241-FS-D	5	500	480	1.042	52.083	06/04/18 DMS
J6241-FS-D	7	C	6/4/2018 4:15:00 PM	J6241-FS-D	5	500	20	25.000	1250.000	06/04/18 DMS
J6241-FS-D	8	--	6/5/2018 3:57:00 PM	J6241-FS-D	7	500	480	1.042	1302.083	06/05/18 DMS

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

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
PREPARATION EXTRACT SPLIT FORM

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340

Non-Potable Water PFAS Analysis

SW, SW DUP

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
J6241-FS-D	9	C	6/5/2018 3:57:00 PM	J6241-FS-D	7	500	20	25.000	31250.000	06/05/18 DMS
J6241-FS-D	10	--	6/8/2018 9:42:00 AM	J6241-FS-D	9	500	480	1.042	32552.084	06/08/18 DMS
J6241-FS-D	11	--	6/8/2018 9:42:00 AM	J6241-FS-D	9	500	20	25.000	781250.000	06/08/18 DMS
J6242-FS	0	C	5/30/2018 9:49:00 AM	NA		NA	NA	1.000	1.000	05/30/18 SAS
J6242-FS	2	--	5/30/2018 1:03:00 PM	J6242-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6242-FS	3	C	5/30/2018 1:03:00 PM	J6242-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6242-FS	4	--	6/4/2018 4:13:00 PM	J6242-FS	3	500	480	1.042	2.083	06/04/18 SAS
J6242-FS-D	5	C	6/4/2018 4:13:00 PM	J6242-FS	3	500	20	25.000	50.000	06/04/18 SAS
J6242-FS-D	6	--	6/4/2018 4:15:00 PM	J6242-FS-D	5	500	480	1.042	52.083	06/04/18 DMS
J6242-FS-D	7	C	6/4/2018 4:15:00 PM	J6242-FS-D	5	500	20	25.000	1250.000	06/04/18 DMS
J6242-FS-D	8	--	6/5/2018 3:57:00 PM	J6242-FS-D	7	500	480	1.042	1302.083	06/05/18 DMS
J6242-FS-D	9	C	6/5/2018 3:57:00 PM	J6242-FS-D	7	500	20	25.000	31250.000	06/05/18 DMS
J6242-FS-D	10	--	6/8/2018 9:42:00 AM	J6242-FS-D	9	500	480	1.042	32552.084	06/08/18 DMS
J6242-FS-D	11	--	6/8/2018 9:42:00 AM	J6242-FS-D	9	500	20	25.000	781250.000	06/08/18 DMS

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

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
PREPARATION EXTRACT SPLIT FORM

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340

Non-Potable Water PFAS Analysis

SW, SW DUP

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
Extract Id:	**Comments:**									
CQ859PB-FS	Samples reconstituted in 80/20 methanol/milli-q water (RP-180529-6)									

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
EXTRACT - INSTRUMENT FACILITY CUSTODY PAGE

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340
Non-Potable Water PFAS Analysis
SW, SW DUP

Purpose:	LC-MS/MS TRANSFER	**Last Activity:**	Prep->Inst
Relinquished On/By:	May 31 2018 4:04PM SAS	**Received On/By:**	Jun 4 2018 4:13PM DMS
Relinquished From:	Sample Preparation: NA	**Received Location:**	LC Laboratory: NA
Relinquish Comment:	NA	**Received Comment:**	NA

No.	BDO-ID:	PIV:	DF:	Condition:	Custody Comment:
1	CQ859PB-FS(3)	500	2	Intact	NA
2	CQ860LCS-FS(3)	500	2	Intact	NA
3	J6241-FS(3)	500	2	Intact	NA
4	J6242-FS(3)	500	2	Intact	NA

Total Extracts: 4

Purpose:	LC-MS/MS TRANSFER	**Last Activity:**	Prep->Inst
Relinquished On/By:	Jun 4 2018 4:19PM DMS	**Received On/By:**	Jun 4 2018 4:19PM DMS
Relinquished From:	Sample Preparation: NA	**Received Location:**	LC Laboratory: NA
Relinquish Comment:	NA	**Received Comment:**	NA

No.	BDO-ID:	PIV:	DF:	Condition:	Custody Comment:
1	J6241-FS-D(6)	500	52.083	Intact	NA
2	J6241-FS-D(7)	500	1250	Intact	NA
3	J6242-FS-D(6)	500	52.083	Intact	NA
4	J6242-FS-D(7)	500	1250	Intact	NA

Total Extracts: 4

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
EXTRACT - INSTRUMENT FACILITY CUSTODY PAGE

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340
Non-Potable Water PFAS Analysis
SW, SW DUP

Purpose:	LC-MS/MS TRANSFER	**Last Activity:**	Prep->Inst
Relinquished On/By:	Jun 5 2018 4:00PM DMS	**Received On/By:**	Jun 5 2018 4:00PM DMS
Relinquished From:	Sample Preparation: NA	**Received Location:**	LC Laboratory: NA
Relinquish Comment:	NA	**Received Comment:**	NA

No.	BDO-ID:	PIV:	DF:	Condition:	Custody Comment:
1	J6241-FS-D(9)	500	31250	Intact	NA
2	J6242-FS-D(9)	500	31250	Intact	NA

Total Extracts: 2

Purpose:	LC-MS/MS TRANSFER	**Last Activity:**	Prep->Inst
Relinquished On/By:	Jun 8 2018 9:45AM DMS	**Received On/By:**	Jun 8 2018 9:46AM DMS
Relinquished From:	Sample Preparation: NA	**Received Location:**	LC Laboratory: NA
Relinquish Comment:	NA	**Received Comment:**	NA

No.	BDO-ID:	PIV:	DF:	Condition:	Custody Comment:
1	J6241-FS-D(11)	500	781250	Intact	NA
2	J6242-FS-D(11)	500	781250	Intact	NA

Total Extracts: 2

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It can be done

BATTELLE - NORWELL OPERATIONS
SAMPLE SPECIFIC COMMENTS

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340

Non-Potable Water PFAS Analysis

SW, SW DUP

Sample ID:	Comment:	Date/Initials:
CQ859PB-FS	Sample extraction began at 9:49am for all samples	05/30/18 SAS
CQ859PB-FS	Sample extraction ended at 10:40am	05/30/18 SAS
CQ860LCS-FS	Sample extraction ended at 10:39am	05/30/18 SAS
J6241-FS	Sample extraction ended at 11:33am	05/30/18 SAS
J6242-FS	Sample extraction ended at 11:27am	05/30/18 SAS

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
MISCELLANEOUS DOCUMENTATION FORM

Project Title(s)	**Project No.(s)**
CTO-SE0375: Naval Air Station Jacksonville	100119154-SE0375

18-0340

Non-Potable Water PFAS Analysis

SW, SW DUP

Entered By:	On:

Task Leader Approval:	On:
SupervisorApproval:	On:
PM Approval:	On:

Analytical Calibrations

BATTELLE

Sequence Report

Created with Analyst Reporter
Printed: 08/06/2018 2:09:40 PM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
1	MeOH		5/31/2018 5:32:37 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
2	JV20	L1	5/31/2018 5:43:25 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
3	JV21	L2	5/31/2018 5:54:13 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
4	JV22	L3	5/31/2018 6:05:02 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
5	JV23	L4	5/31/2018 6:15:51 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
6	JV24	L5	5/31/2018 6:26:39 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
7	JV25	L6	5/31/2018 6:37:26 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
8	JV26	L7	5/31/2018 6:48:14 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
9	JV27	L8	5/31/2018 6:59:02 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
10	JV28	L9	5/31/2018 7:09:48 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
11	JV05 IB	Instrument Blank	5/31/2018 7:20:37 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
12	JW32 ICC	ICC	5/31/2018 7:31:26 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
13	JV16 Branch	Branch Standard	5/31/2018 7:42:14 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
16	J6241-FS(3)	FFTA-FD01-052418	5/31/2018 8:25:25 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
17	J6242-FS(3)	FFTA-SW01-052418	5/31/2018 8:36:12 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
7	JV25 CCV	CCV	5/31/2018 8:46:59 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff

BATTELLE

Sequence Report

Created with Analyst Reporter
Printed: 08/06/2018 11:18:27 AM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
1	MeOH		6/4/2018 7:23:13 PM	5-0369.dam	06022018.wiff
2	JV20	L1	6/4/2018 7:34:02 PM	5-0369.dam	06022018.wiff
3	JV21	L2	6/4/2018 7:44:51 PM	5-0369.dam	06022018.wiff
4	JV22	L3	6/4/2018 7:55:39 PM	5-0369.dam	06022018.wiff
5	JV23	L4	6/4/2018 8:06:27 PM	5-0369.dam	06022018.wiff
6	JV24	L5	6/4/2018 8:17:14 PM	5-0369.dam	06022018.wiff
7	JV25	L6	6/4/2018 8:28:02 PM	5-0369.dam	06022018.wiff
8	JV26	L7	6/4/2018 8:38:50 PM	5-0369.dam	06022018.wiff
9	JV27	L8	6/4/2018 8:49:37 PM	5-0369.dam	06022018.wiff
10	JV28	L9	6/4/2018 9:00:25 PM	5-0369.dam	06022018.wiff
11	JV05 IB	Instrument Blank	6/4/2018 9:11:14 PM	5-0369.dam	06022018.wiff
12	JW32 ICC	ICC	6/4/2018 9:22:01 PM	5-0369.dam	06022018.wiff
13	JV16 Branch	Branch Standard	6/4/2018 9:32:48 PM	5-0369.dam	06022018.wiff
14	MeOH		6/4/2018 9:43:36 PM	5-0369.dam	06022018.wiff
37	CQ859PB-FS(3)	Procedural Balnk	6/5/2018 3:28:50 AM	5-0369.dam	06022018.wiff
38	CQ860LCS-FS(3)	Labortory Control	6/5/2018 3:39:38 AM	5-0369.dam	06022018.wiff
8	JV26 CCV	CCV	6/5/2018 3:50:26 AM	5-0369.dam	06022018.wiff
1	MeOH		6/5/2018 4:01:13 AM	5-0369.dam	06022018.wiff
39	J6241-FS-D(6)	FFTA_FD01-052418	6/5/2018 4:12:02 AM	5-0369.dam	06022018.wiff
40	J6241-FS-D(7)	FFTA_FD01-052418	6/5/2018 4:22:50 AM	5-0369.dam	06022018.wiff
1	MeOH		6/5/2018 4:33:37 AM	5-0369.dam	06022018.wiff
41	J6242-FS-D(6)	FFTA-SW01-052418	6/5/2018 4:44:26 AM	5-0369.dam	06022018.wiff
42	J6242-FS-D(7)	FFTA-SW01-052418	6/5/2018 4:55:13 AM	5-0369.dam	06022018.wiff
1	MeOH		6/5/2018 5:05:59 AM	5-0369.dam	06022018.wiff
14	MeOH		6/5/2018 5:16:48 AM	5-0369.dam	06022018.wiff
14	MeOH		6/5/2018 5:27:36 AM	5-0369.dam	06022018.wiff
7	JV25 CCV	CCV	6/5/2018 5:38:23 AM	5-0369.dam	06022018.wiff

BATTELLE

Sequence Report

Created with Analyst Reporter
Printed: 08/06/2018 2:56:04 PM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
1	MeOH		6/7/2018 8:21:48 PM	5-0369.dam	6072018.wiff
2	JV20	L1	6/7/2018 8:32:29 PM	5-0369.dam	6072018.wiff
3	JV21	L2	6/7/2018 8:43:10 PM	5-0369.dam	6072018.wiff
4	JV22	L3	6/7/2018 8:53:52 PM	5-0369.dam	6072018.wiff
5	JV23	L4	6/7/2018 9:04:34 PM	5-0369.dam	6072018.wiff
6	JV24	L5	6/7/2018 9:15:15 PM	5-0369.dam	6072018.wiff
7	JV25	L6	6/7/2018 9:25:56 PM	5-0369.dam	6072018.wiff
8	JV26	L7	6/7/2018 9:36:37 PM	5-0369.dam	6072018.wiff
9	JV27	L8	6/7/2018 9:47:16 PM	5-0369.dam	6072018.wiff
10	JV28	L9	6/7/2018 9:57:58 PM	5-0369.dam	6072018.wiff
11	JV05 IB	Instrument Blank	6/7/2018 10:08:39 PM	5-0369.dam	6072018.wiff
12	JW32 ICC	ICC	6/7/2018 10:19:21 PM	5-0369.dam	6072018.wiff
13	JV16 Branch	Branch Standard	6/7/2018 10:30:02 PM	5-0369.dam	6072018.wiff
14	MeOH		6/7/2018 10:40:43 PM	5-0369.dam	6072018.wiff
24	MeOH		6/8/2018 1:10:18 AM	5-0369.dam	6072018.wiff
25	J6241-FS-D(9)	FFTA-FD01-052418	6/8/2018 1:21:00 AM	5-0369.dam	6072018.wiff
26	J6242-FS-D(9)	FFTA-SW01-052418	6/8/2018 1:31:41 AM	5-0369.dam	6072018.wiff
14	MeOH		6/8/2018 1:42:21 AM	5-0369.dam	6072018.wiff
20	MeOH		6/8/2018 1:53:03 AM	5-0369.dam	6072018.wiff
24	MeOH		6/8/2018 2:03:44 AM	5-0369.dam	6072018.wiff
8	JV26 CCV	CCV	6/8/2018 2:14:26 AM	5-0369.dam	6072018.wiff
1	JV24 ISC	CCV	6/8/2018 1:33:43 PM	5-0369.dam	6072018.wiff
2	JV05 IB	Instrument Blank	6/8/2018 1:44:26 PM	5-0369.dam	6072018.wiff
3	J6241-FS-D(11)	FFTA-FD01-052418	6/8/2018 1:55:08 PM	5-0369.dam	6072018.wiff
4	J6242-FS-D(11)	FFTA-SW01-052418	6/8/2018 2:05:50 PM	5-0369.dam	6072018.wiff
5	JV25 CCV	CCV	6/8/2018 2:16:30 PM	5-0369.dam	6072018.wiff

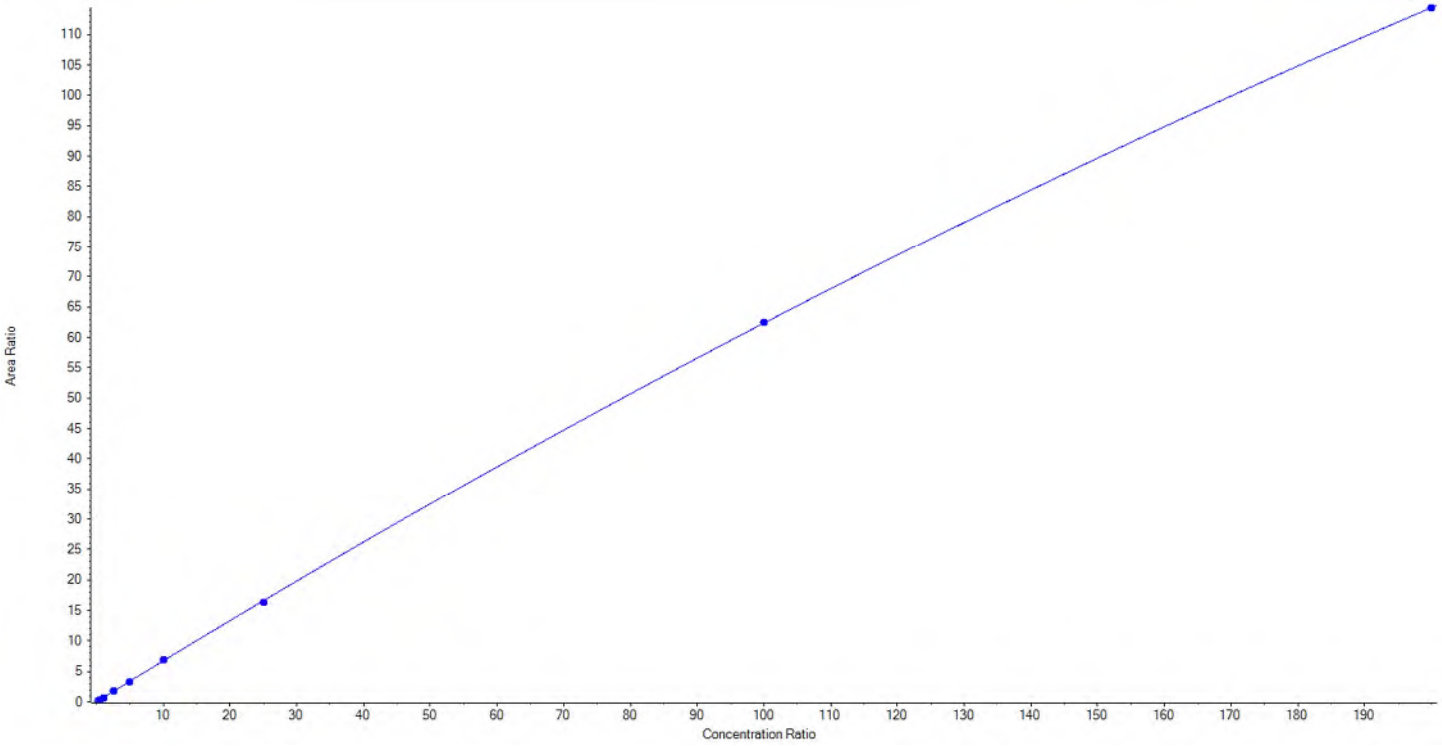
Created with Analyst Reporter
Printed: 08/06/2018 12:22:09 PM

Calibration Summary Report

Analyte Name	PFTeDA_1	**Data File**	Data18-0340_18-0338_18-0329.wiff
MRM Transition	713.0 / 669.0	**Result Table**	18-0340_BASE
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	5/31/2018 5:32:37 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = -5.10728e-4 x^2 + 0.67388 x + 0.06271 (r = 0.99994) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	21.436551	85.8
3	JV21	L2	True	50.00	49.380684	98.8
4	JV22	L3	True	100.00	97.075671	97.1
5	JV23	L4	True	250.00	265.861484	106.3
6	JV24	L5	True	500.00	481.260909	96.3
7	JV25	L6	True	1000.00	1026.878933	102.7
8	JV26	L7	True	2500.00	2468.439072	98.7
9	JV27	L8	True	10000.00	10017.655860	100.2
10	JV28	L9	True	20000.00	19993.210273	100.0



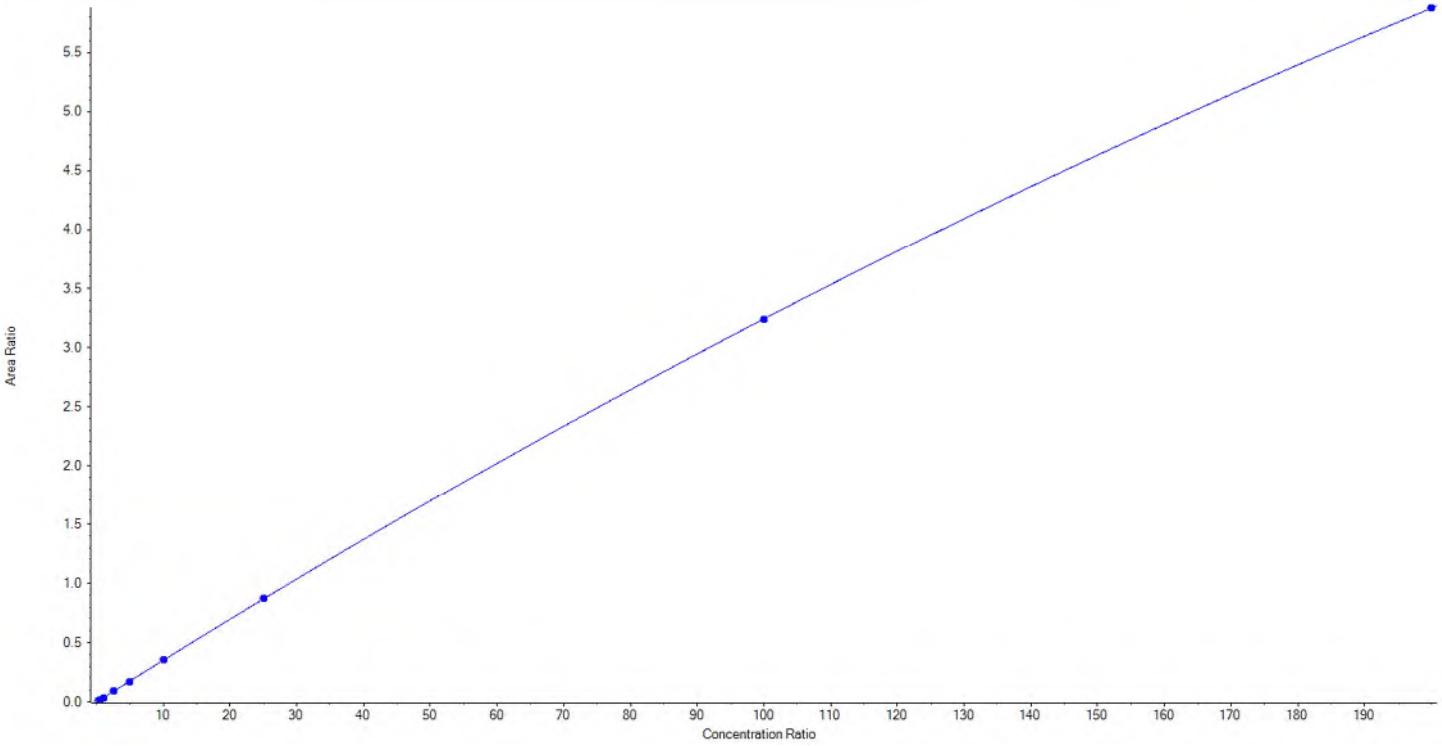
Created with Analyst Reporter
Printed: 08/06/2018 12:22:09 PM

Calibration Summary Report

Analyte Name	PFTeDA_2	**Data File**	Data18-0340_18-0338_18-0329.wiff
MRM Transition	713.0 / 169.0	**Result Table**	18-0340_BASE
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	5/31/2018 5:32:37 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = -3.02405e-5 x^2 + 0.03542 x + 5.77543e-4 (r = 0.99997) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	22.060811	88.2
3	JV21	L2	True	50.00	48.102083	96.2
4	JV22	L3	True	100.00	101.228589	101.2
5	JV23	L4	True	250.00	261.653619	104.7
6	JV24	L5	True	500.00	481.809932	96.4
7	JV25	L6	True	1000.00	1015.769348	101.6
8	JV26	L7	True	2500.00	2504.139003	100.2
9	JV27	L8	True	10000.00	9972.538344	99.7
10	JV28	L9	True	20000.00	20015.832383	100.1



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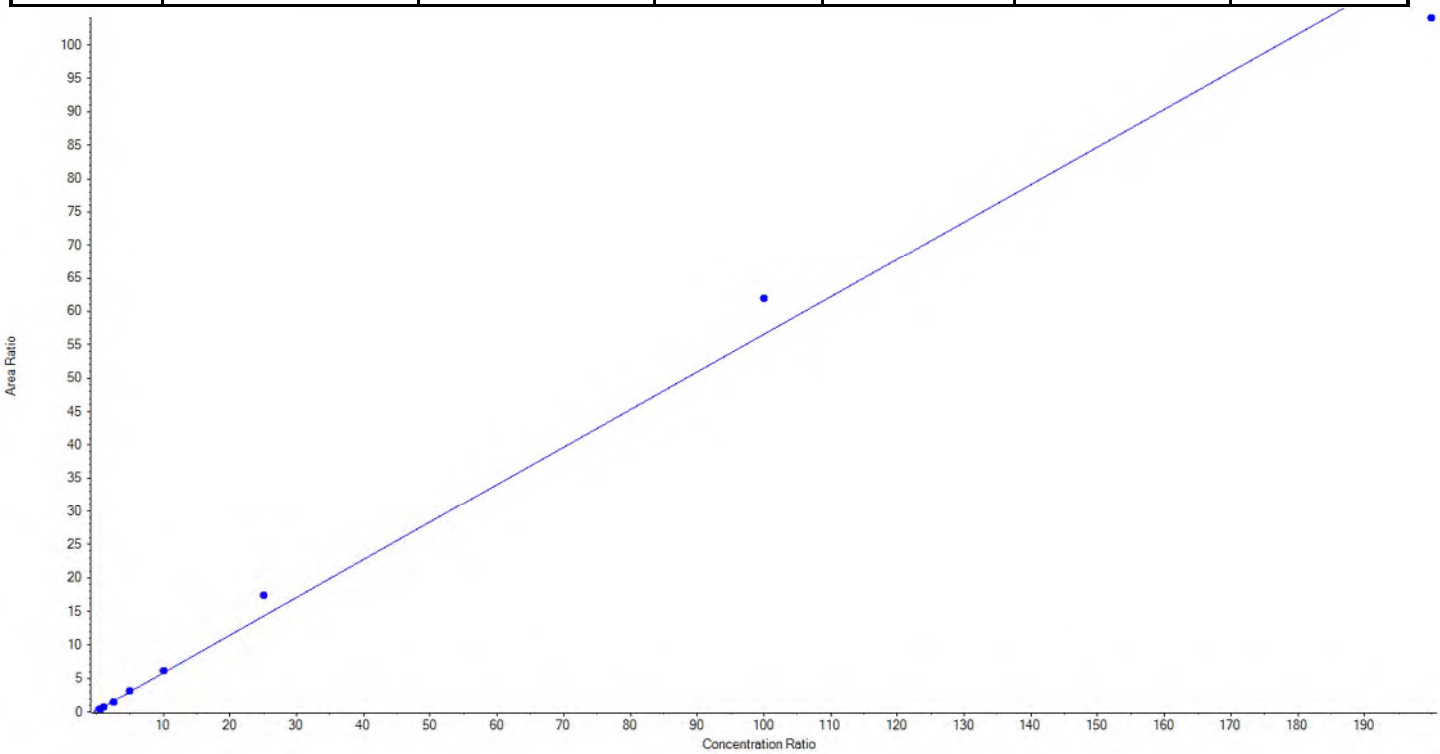
Calibration Summary Report

Analyte Name	NMeFOSAA_1	**Data File**	Data18-0340_18-0338_18-0329.wiff
MRM Transition	570.0 / 419.0	**Result Table**	18-0340_BASE
Internal Standard	d3-MeFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	5/31/2018 5:32:37 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.56366 x + 0.18098 (r = 0.99468) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	< 0	N/A
3	JV21	L2	True	50.00	43.236061	86.5
4	JV22	L3	True	100.00	87.693790	87.7
5	JV23	L4	True	250.00	223.642580	89.5
6	JV24	L5	True	500.00	530.382144	106.1
7	JV25	L6	True	1000.00	1062.930018	106.3
8	JV26	L7	True	2500.00	3054.706272	122.2
9	JV27	L8	True	10000.00	10966.465685	109.7
10	JV28	L9	True	20000.00	18430.943450	92.2



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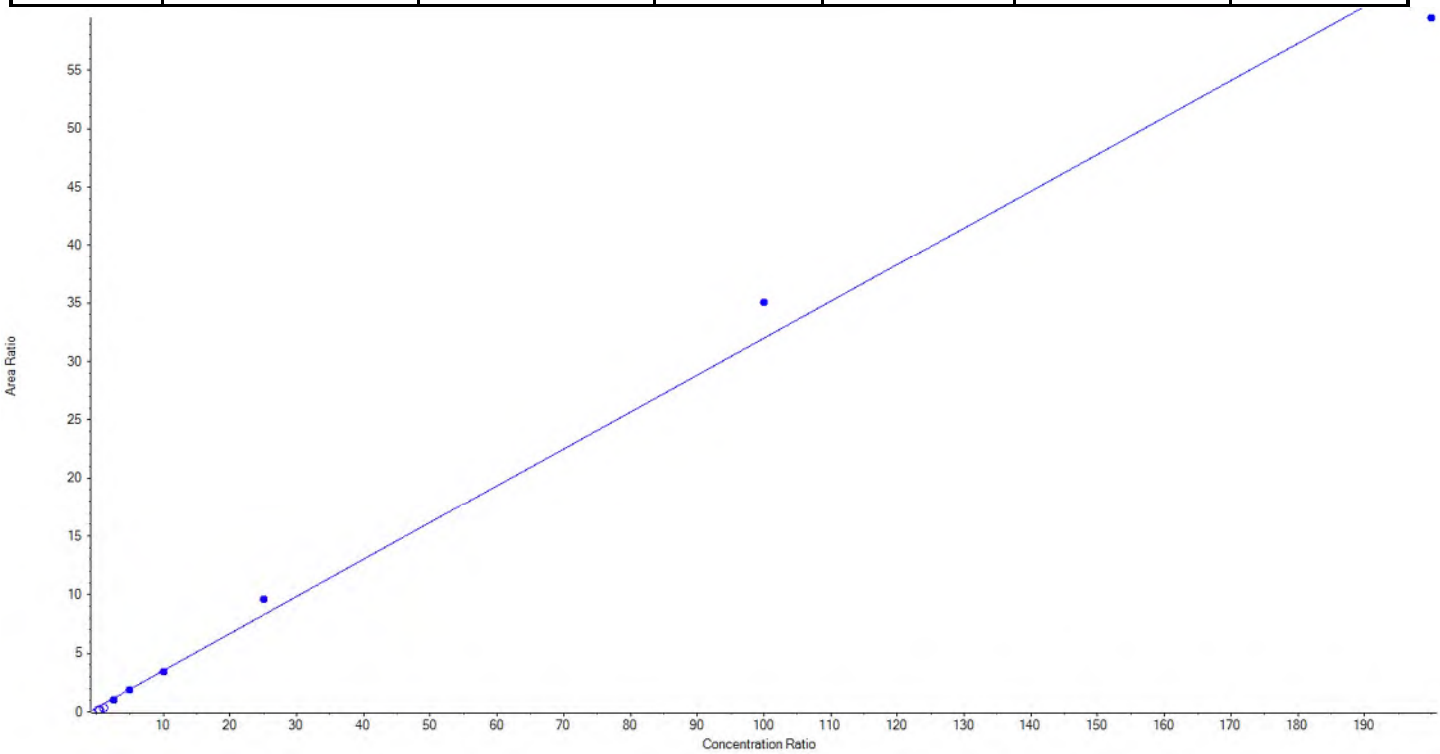
Calibration Summary Report

Analyte Name	NMeFOSAA_2	**Data File**	Data18-0340_18-0338_18-0329.wiff
MRM Transition	570.0 / 512.0	**Result Table**	18-0340_BASE
Internal Standard	d3-MeFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	5/31/2018 5:32:37 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.31631 x + 0.36040 (r = 0.99570) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	< 0	N/A
3	JV21	L2	False	50.00	< 0	N/A
4	JV22	L3	False	100.00	< 0	N/A
5	JV23	L4	True	250.00	220.034973	88.0
6	JV24	L5	True	500.00	472.048501	94.4
7	JV25	L6	True	1000.00	975.966806	97.6
8	JV26	L7	True	2500.00	2920.968059	116.8
9	JV27	L8	True	10000.00	10967.199851	109.7
10	JV28	L9	True	20000.00	18693.781810	93.5



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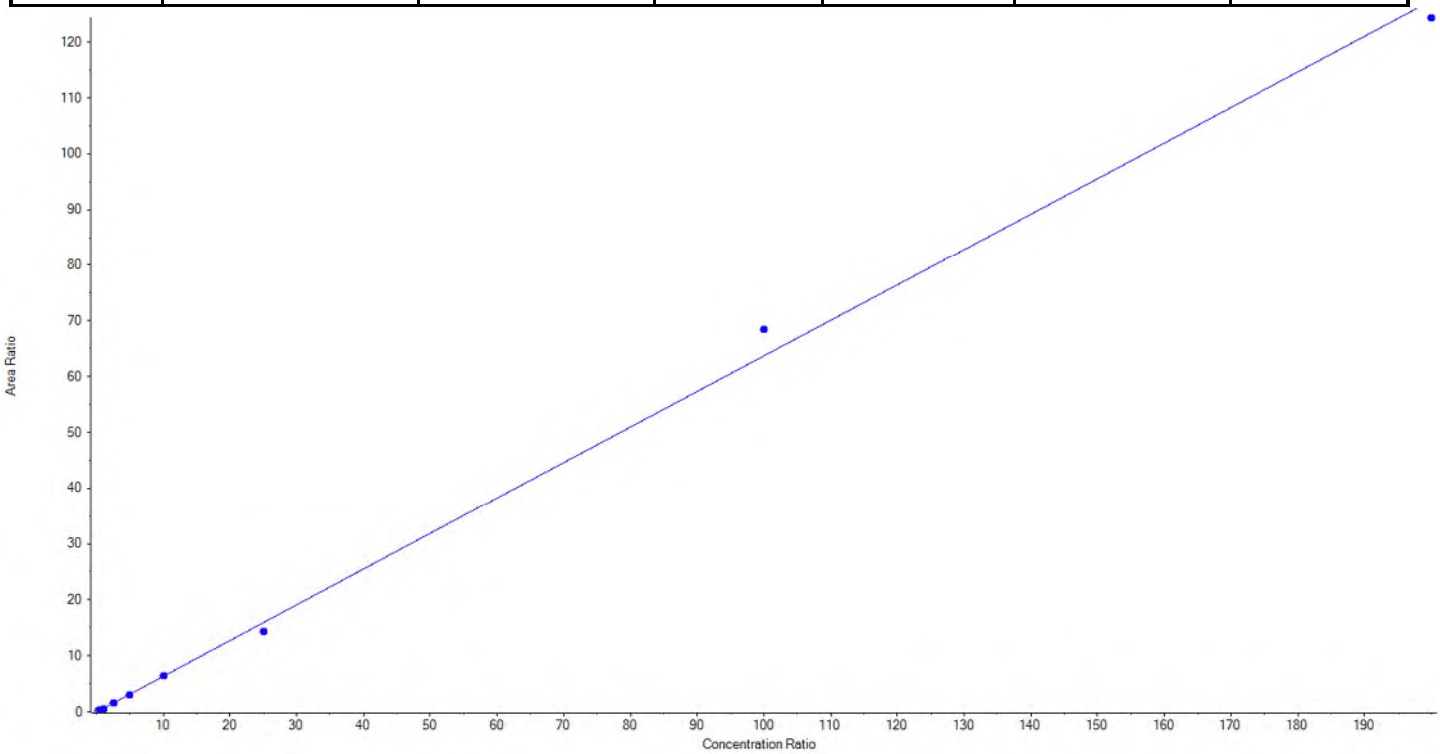
Calibration Summary Report

Analyte Name	NEtFOSAA_1	**Data File**	Data18-0340_18-0338_18-0329.wiff
MRM Transition	584.0 / 419.0	**Result Table**	18-0340_BASE
Internal Standard	d5-EtFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	5/31/2018 5:32:37 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.63712 x + -0.01445 (r = 0.99861) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	27.270860	109.1
3	JV21	L2	True	50.00	57.177278	114.4
4	JV22	L3	True	100.00	92.501893	92.5
5	JV23	L4	True	250.00	255.164458	102.1
6	JV24	L5	True	500.00	473.673727	94.7
7	JV25	L6	True	1000.00	1009.008565	100.9
8	JV26	L7	True	2500.00	2263.266176	90.5
9	JV27	L8	True	10000.00	10733.095778	107.3
10	JV28	L9	True	20000.00	19516.112125	97.6



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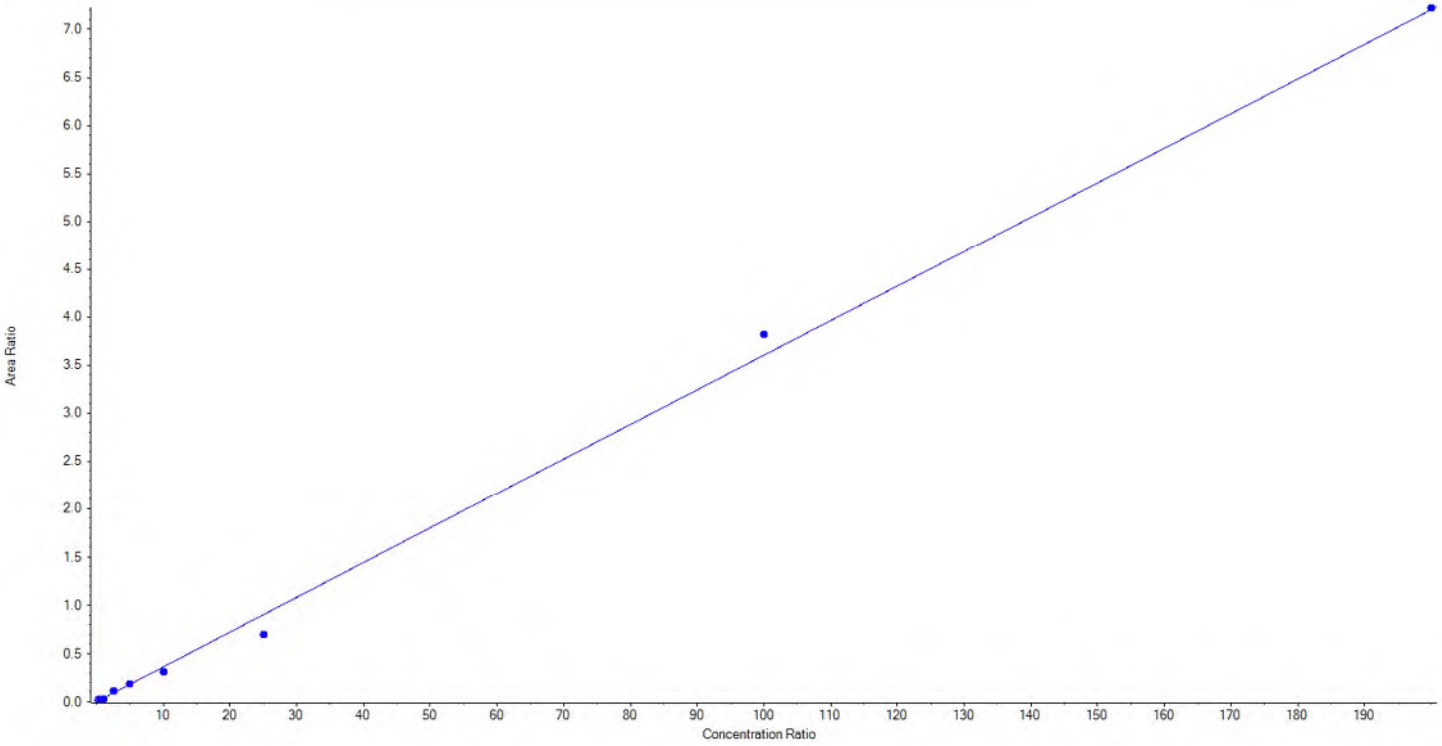
Calibration Summary Report

Analyte Name	NEtFOSAA_2	**Data File**	Data18-0340_18-0338_18-0329.wiff
MRM Transition	584.0 / 483.0	**Result Table**	18-0340_BASE
Internal Standard	d5-EtFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	5/31/2018 5:32:37 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.03601 x + 0.00311 (r = 0.99674) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	42.262971	169.1
3	JV21	L2	True	50.00	61.816051	123.6
4	JV22	L3	True	100.00	78.089730	78.1
5	JV23	L4	True	250.00	321.268913	128.5
6	JV24	L5	True	500.00	499.606855	99.9
7	JV25	L6	True	1000.00	866.796385	86.7
8	JV26	L7	True	2500.00	1923.589640	76.9
9	JV27	L8	True	10000.00	10596.369217	106.0
10	JV28	L9	True	20000.00	20052.463209	100.3



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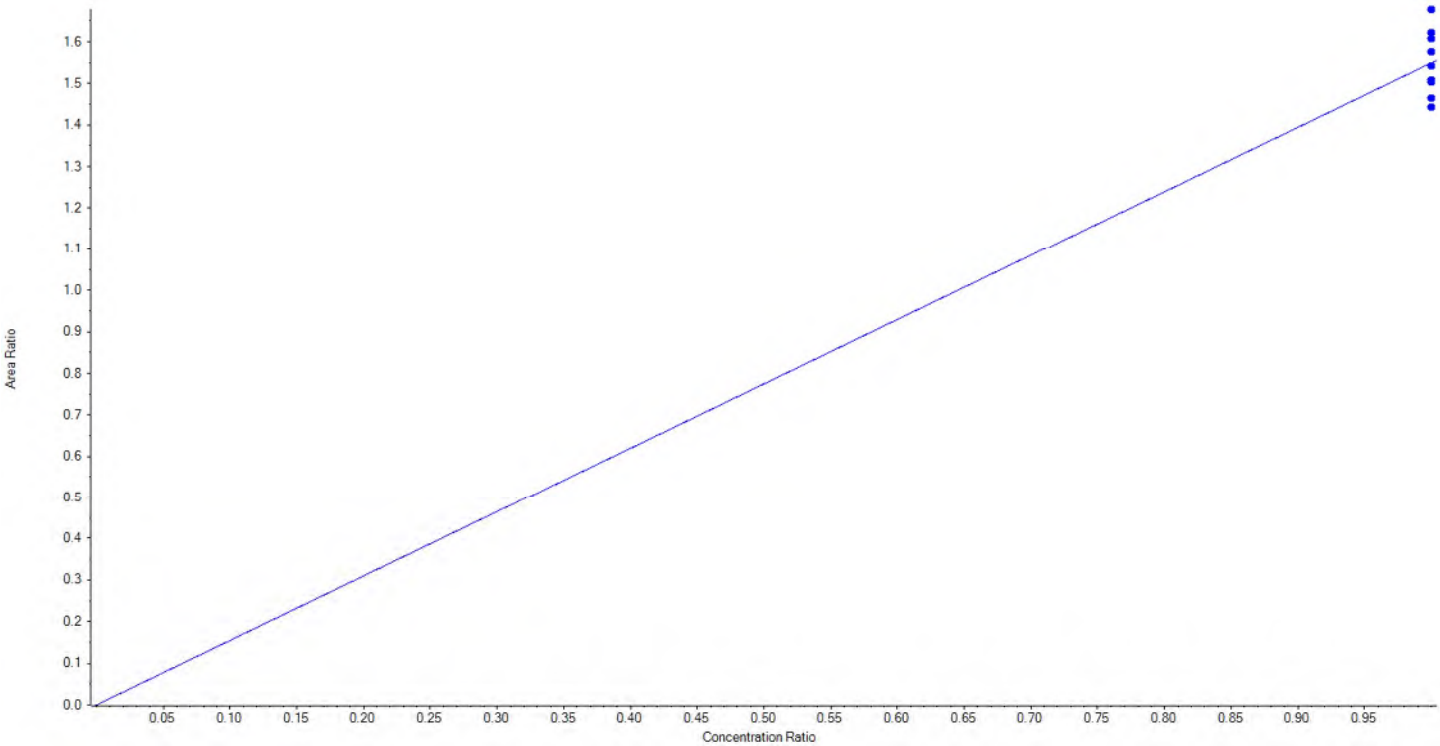
Calibration Summary Report

Analyte Name	13C2-PFDoA	**Data File**	06022018.wiff
MRM Transition	615.0 / 570.0	**Result Table**	18-0340_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.54919 x (std. dev. = 0.07730) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	100.00	108.265523	108.3
3	JV21	L2	True	100.00	97.006051	97.0
4	JV22	L3	True	100.00	93.187819	93.2
5	JV23	L4	True	100.00	97.403149	97.4
6	JV24	L5	True	100.00	104.691959	104.7
7	JV25	L6	True	100.00	94.534987	94.5
8	JV26	L7	True	100.00	101.762553	101.8
9	JV27	L8	True	100.00	103.673288	103.7
10	JV28	L9	True	100.00	99.474671	99.5



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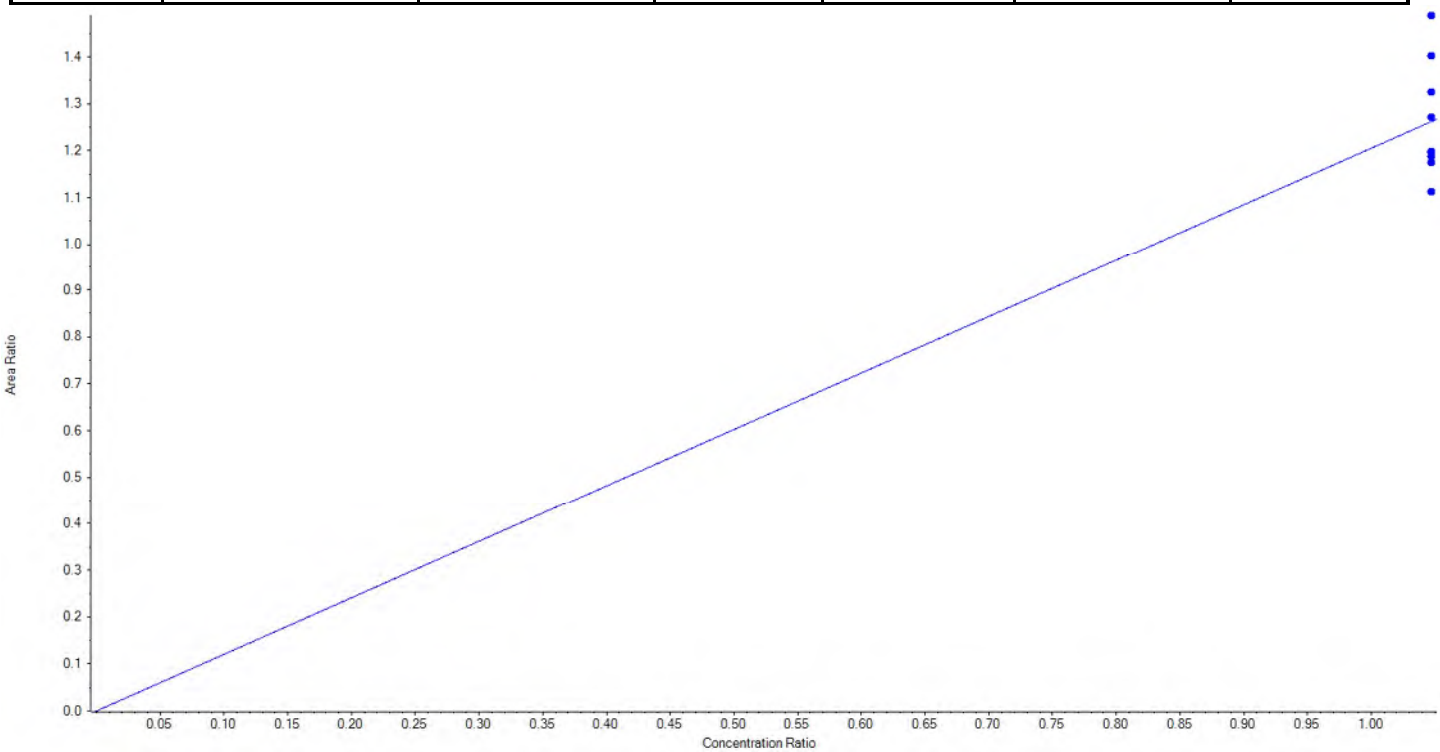
Calibration Summary Report

Analyte Name	d3-MeFOSAA	**Data File**	06022018.wiff
MRM Transition	573.0 / 419.0	**Result Table**	18-0340_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.20516 x (std. dev. = 0.11622) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	100.00	105.047166	105.1
3	JV21	L2	True	100.00	95.022404	95.0
4	JV22	L3	True	100.00	100.821977	100.8
5	JV23	L4	True	100.00	88.163155	88.2
6	JV24	L5	True	100.00	94.715736	94.7
7	JV25	L6	True	100.00	93.175474	93.2
8	JV26	L7	True	100.00	111.090576	111.1
9	JV27	L8	True	100.00	94.068667	94.1
10	JV28	L9	True	100.00	117.894843	117.9



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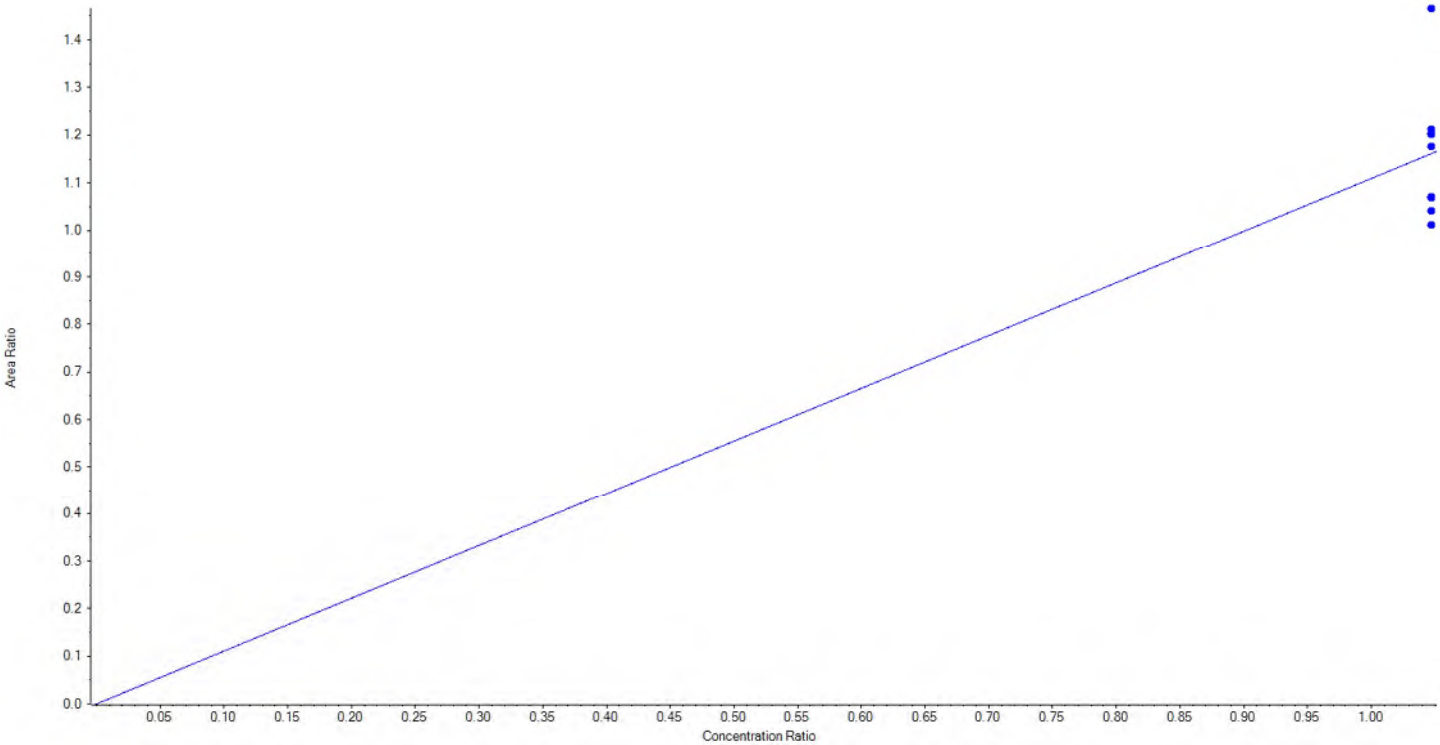
Calibration Summary Report

Analyte Name	d5-EtFOSAA	**Data File**	06022018.wiff
MRM Transition	589.0 / 419.0	**Result Table**	18-0340_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.10909 x (std. dev. = 0.13191) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	100.00	103.705147	103.7
3	JV21	L2	True	100.00	87.142484	87.1
4	JV22	L3	True	100.00	104.395835	104.4
5	JV23	L4	True	100.00	92.271031	92.3
6	JV24	L5	True	100.00	103.472560	103.5
7	JV25	L6	True	100.00	91.955664	92.0
8	JV26	L7	True	100.00	126.214372	126.2
9	JV27	L8	True	100.00	89.603153	89.6
10	JV28	L9	True	100.00	101.239753	101.2



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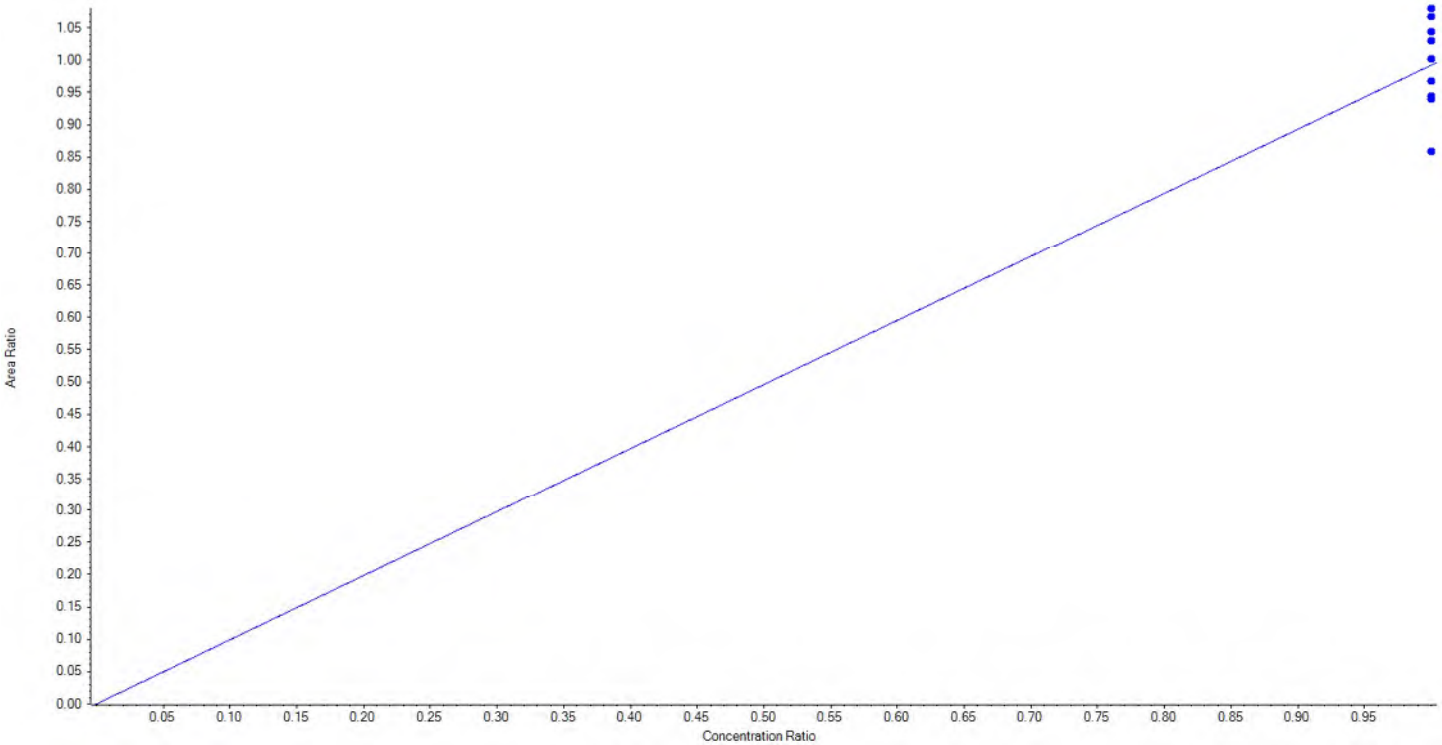
Calibration Summary Report

Analyte Name	13C5-PFHxA	**Data File**	06022018.wiff
MRM Transition	318.0 / 273.0	**Result Table**	18-0340_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.99233 x (std. dev. = 0.07139) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	100.00	108.803688	108.8
3	JV21	L2	True	100.00	95.108622	95.1
4	JV22	L3	True	100.00	97.444635	97.4
5	JV23	L4	True	100.00	103.716414	103.7
6	JV24	L5	True	100.00	94.625586	94.6
7	JV25	L6	True	100.00	107.496069	107.5
8	JV26	L7	True	100.00	105.170987	105.2
9	JV27	L8	True	100.00	101.028249	101.0
10	JV28	L9	True	100.00	86.605749	86.6



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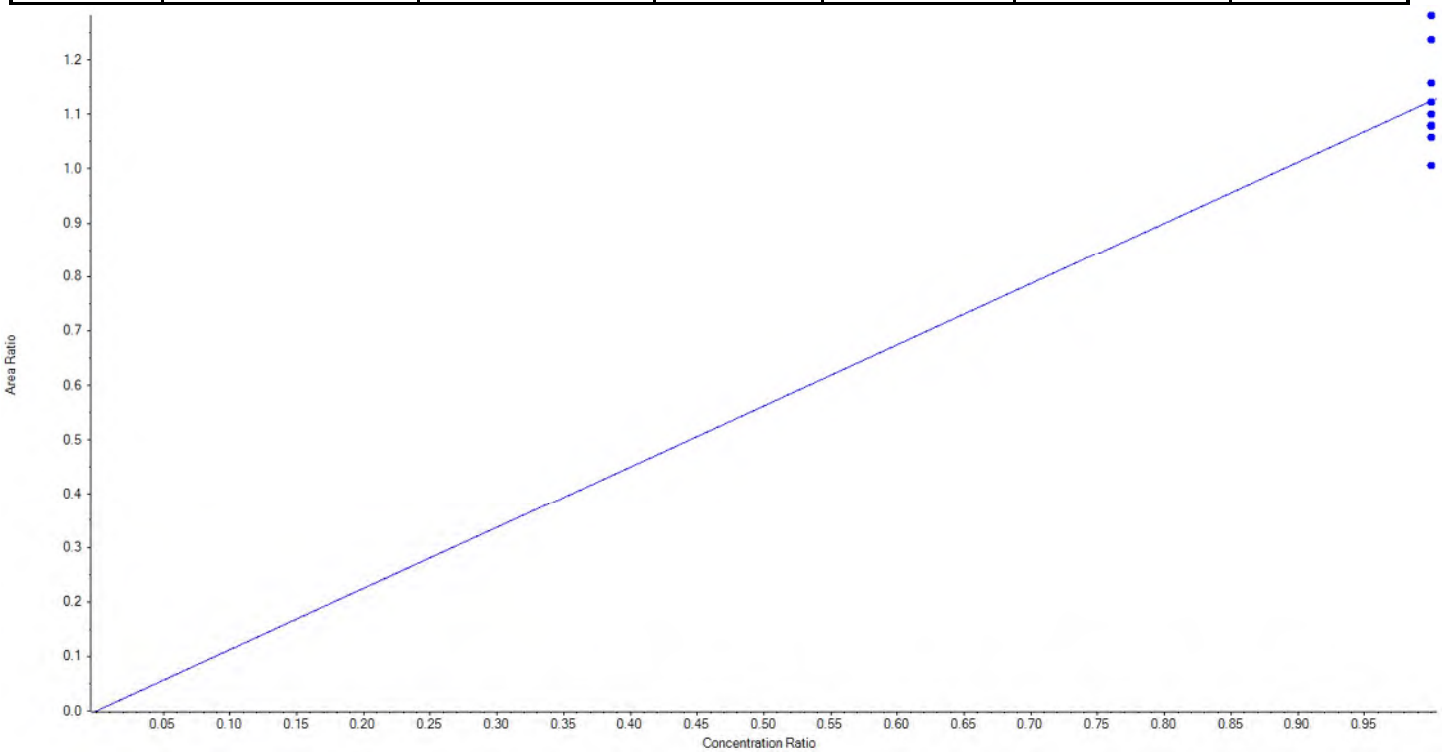
Calibration Summary Report

Analyte Name	13C4-PFHpA	**Data File**	06022018.wiff
MRM Transition	367.0 / 322.0	**Result Table**	18-0340_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.12453 x (std. dev. = 0.08762) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	100.00	113.936877	113.9
3	JV21	L2	True	100.00	99.837653	99.8
4	JV22	L3	True	100.00	102.860615	102.9
5	JV23	L4	True	100.00	96.049070	96.1
6	JV24	L5	True	100.00	109.991919	110.0
7	JV25	L6	True	100.00	97.929319	97.9
8	JV26	L7	True	100.00	95.841762	95.8
9	JV27	L8	True	100.00	94.118053	94.1
10	JV28	L9	True	100.00	89.434731	89.4



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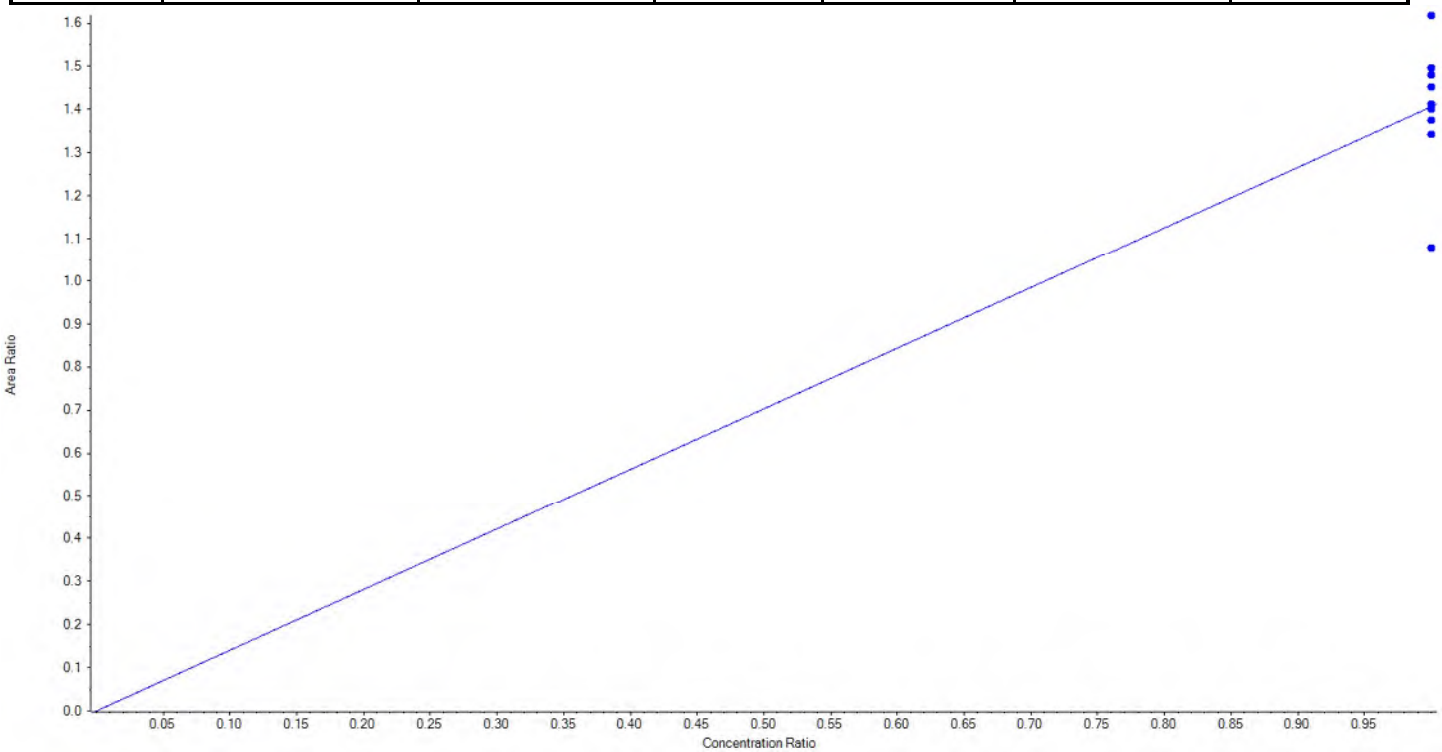
Calibration Summary Report

Analyte Name	13C8-PFOA	**Data File**	06022018.wiff
MRM Transition	421.0 / 376.0	**Result Table**	18-0340_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.40656 x (std. dev. = 0.14658) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	100.00	115.007017	115.0
3	JV21	L2	True	100.00	105.216273	105.2
4	JV22	L3	True	100.00	99.572283	99.6
5	JV23	L4	True	100.00	97.840588	97.8
6	JV24	L5	True	100.00	103.291667	103.3
7	JV25	L6	True	100.00	106.468953	106.5
8	JV26	L7	True	100.00	100.359113	100.4
9	JV27	L8	True	100.00	95.438414	95.4
10	JV28	L9	True	100.00	76.805692	76.8



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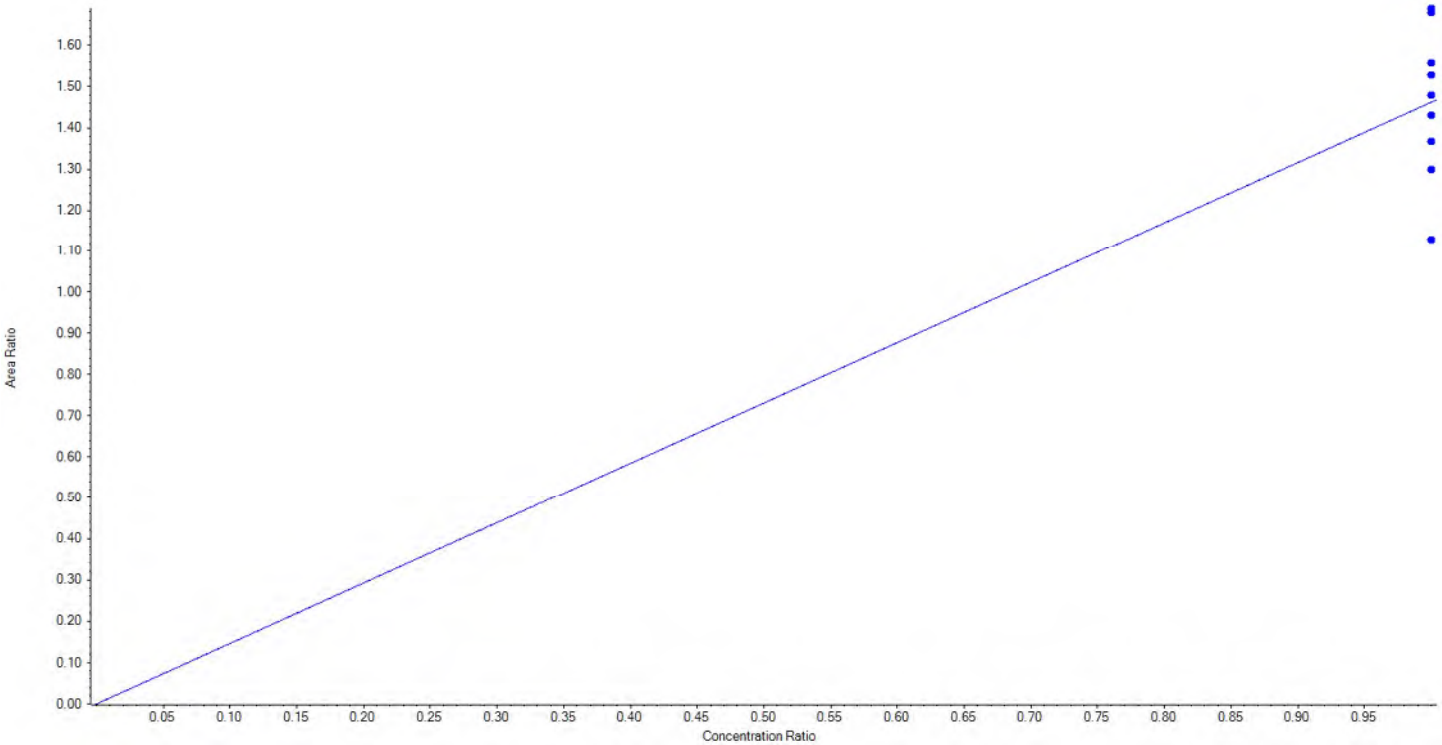
Calibration Summary Report

Analyte Name	13C9-PFNA	**Data File**	06022018.wiff
MRM Transition	472.0 / 427.0	**Result Table**	18-0340_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.46206 x (std. dev. = 0.17982) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	100.00	114.800446	114.8
3	JV21	L2	True	100.00	97.893049	97.9
4	JV22	L3	True	100.00	104.531887	104.5
5	JV23	L4	True	100.00	93.459000	93.5
6	JV24	L5	True	100.00	106.435211	106.4
7	JV25	L6	True	100.00	115.475104	115.5
8	JV26	L7	True	100.00	101.247438	101.3
9	JV27	L8	True	100.00	88.920516	88.9
10	JV28	L9	True	100.00	77.237350	77.2



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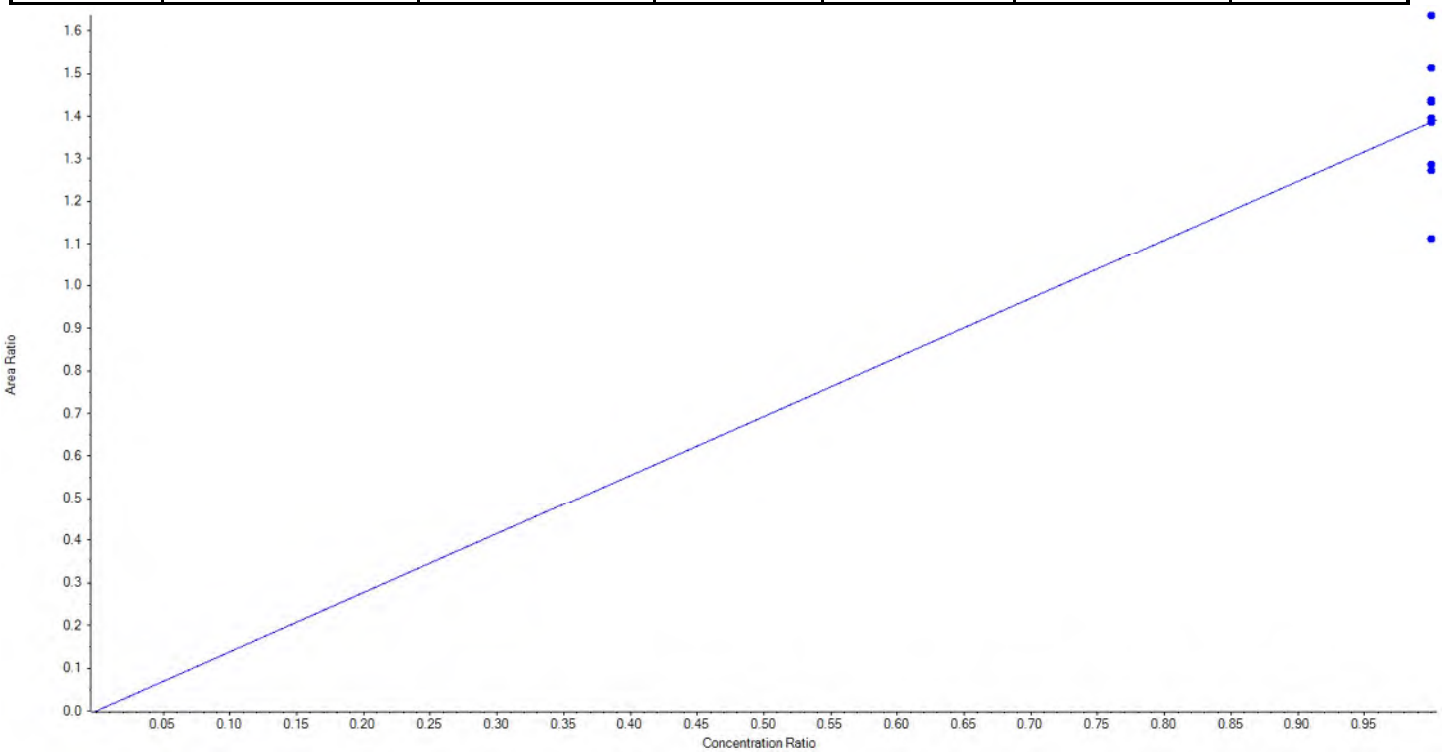
Calibration Summary Report

Analyte Name	13C6-PFDA	**Data File**	06022018.wiff
MRM Transition	519.0 / 474.0	**Result Table**	18-0340_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.38607 x (std. dev. = 0.15042) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	100.00	118.009916	118.0
3	JV21	L2	True	100.00	100.726557	100.7
4	JV22	L3	True	100.00	100.015762	100.0
5	JV23	L4	True	100.00	91.904009	91.9
6	JV24	L5	True	100.00	103.346288	103.4
7	JV25	L6	True	100.00	103.799797	103.8
8	JV26	L7	True	100.00	109.108345	109.1
9	JV27	L8	True	100.00	92.909212	92.9
10	JV28	L9	True	100.00	80.180115	80.2



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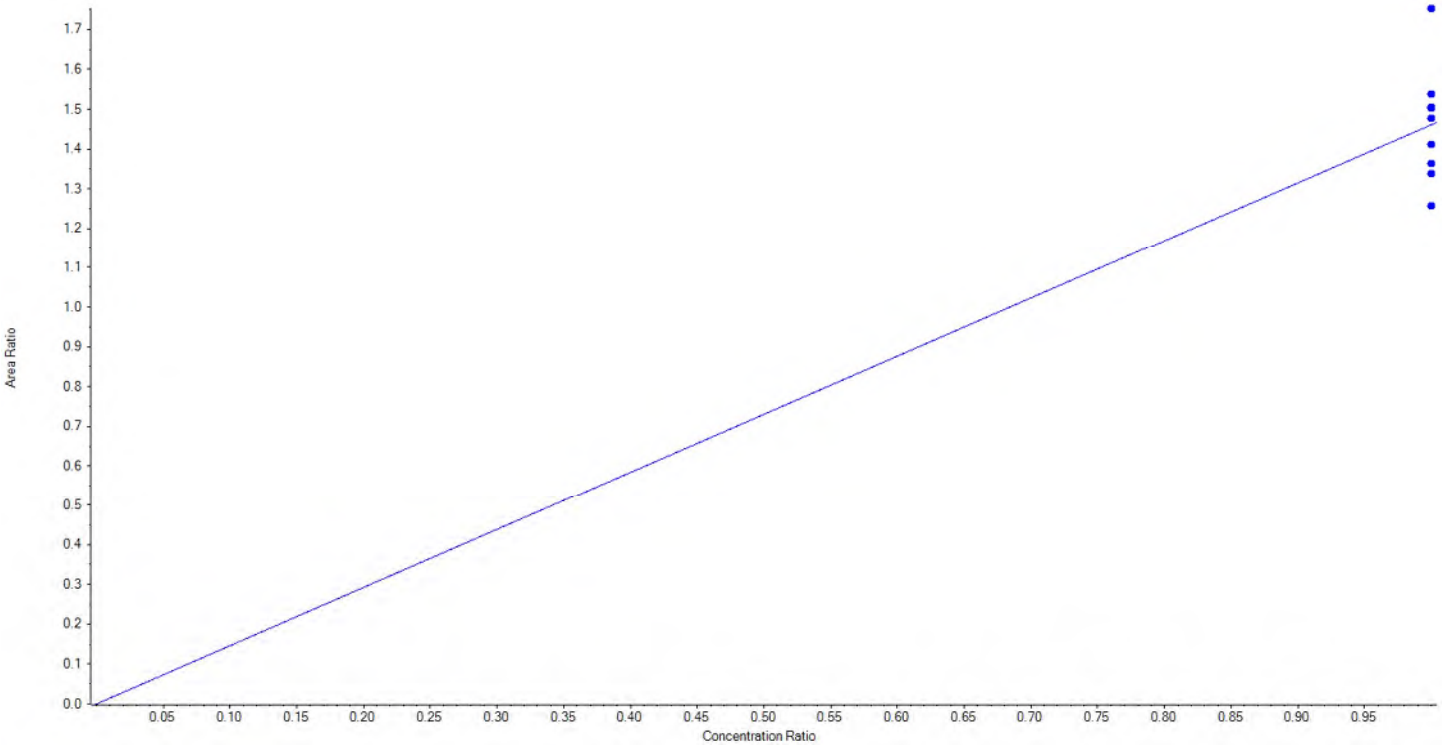
Calibration Summary Report

Analyte Name	13C7-PFUnA	**Data File**	06022018.wiff
MRM Transition	570.0 / 525.0	**Result Table**	18-0340_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.46094 x (std. dev. = 0.14293) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	100.00	119.960314	120.0
3	JV21	L2	True	100.00	96.690080	96.7
4	JV22	L3	True	100.00	102.904169	102.9
5	JV23	L4	True	100.00	91.696489	91.7
6	JV24	L5	True	100.00	103.068327	103.1
7	JV25	L6	True	100.00	101.164527	101.2
8	JV26	L7	True	100.00	105.229062	105.2
9	JV27	L8	True	100.00	93.273907	93.3
10	JV28	L9	True	100.00	86.013125	86.0



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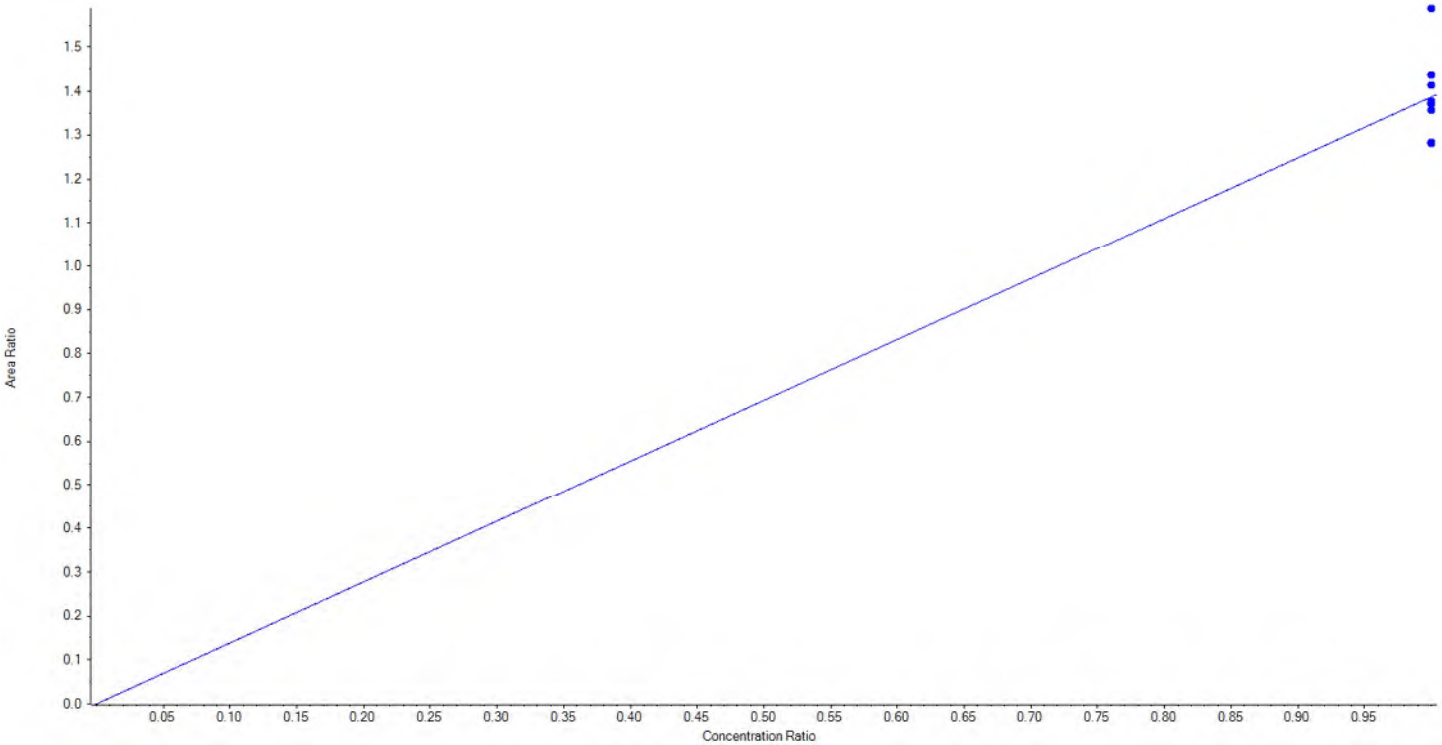
Calibration Summary Report

Analyte Name	13C2-PFTeDA	**Data File**	06022018.wiff
MRM Transition	715.0 / 670.0	**Result Table**	18-0340_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.38727 x (std. dev. = 0.09142) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	100.00	114.470696	114.5
3	JV21	L2	True	100.00	92.588118	92.6
4	JV22	L3	True	100.00	97.797163	97.8
5	JV23	L4	True	100.00	92.362857	92.4
6	JV24	L5	True	100.00	99.040668	99.0
7	JV25	L6	True	100.00	98.773766	98.8
8	JV26	L7	True	100.00	102.003778	102.0
9	JV27	L8	True	100.00	103.612343	103.6
10	JV28	L9	True	100.00	99.350611	99.4



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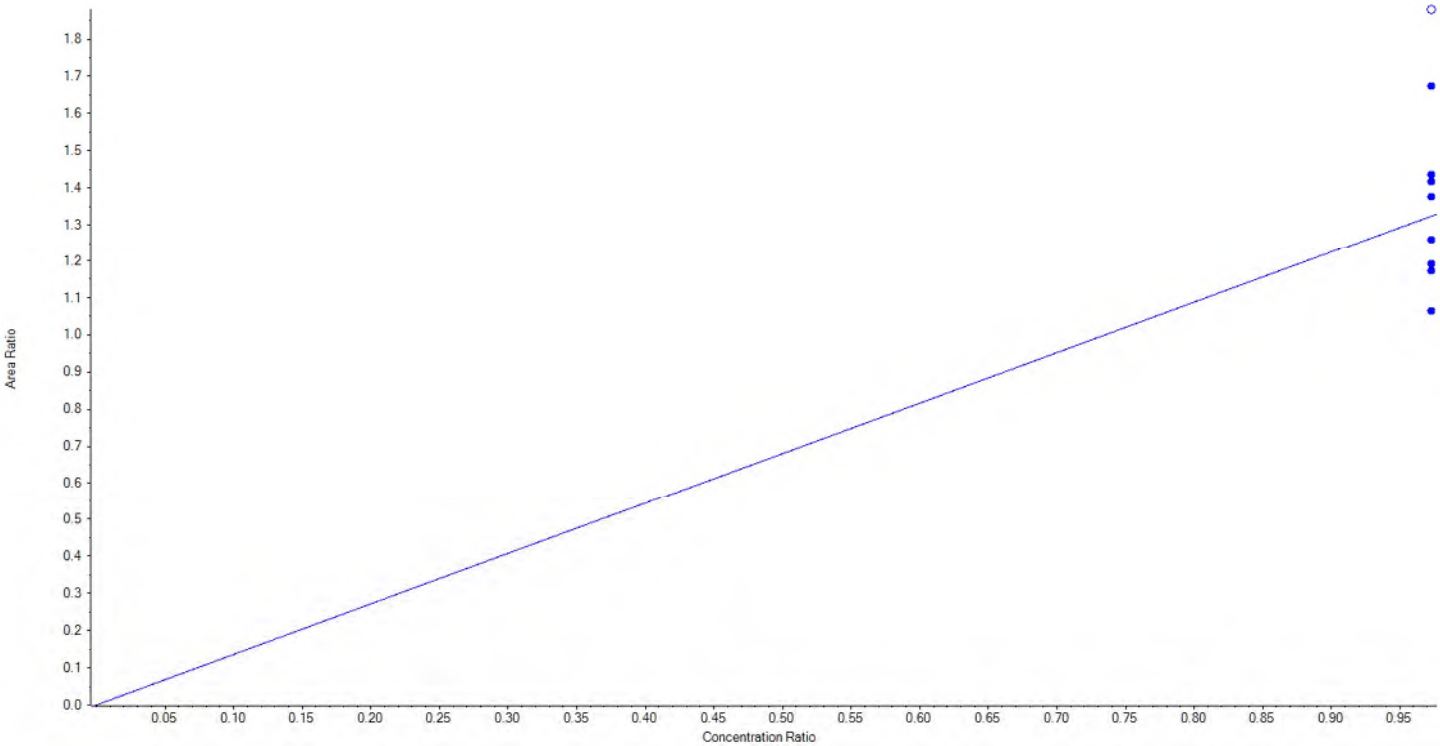
Calibration Summary Report

Analyte Name	13C3-PFBS	**Data File**	06022018.wiff
MRM Transition	302.0 / 99.0	**Result Table**	18-0340_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.36053 x (std. dev. = 0.19734) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	92.90	99.377388	107.0
3	JV21	L2	True	92.90	74.678091	80.4
4	JV22	L3	True	92.90	83.600652	90.0
5	JV23	L4	True	92.90	88.509344	95.3
6	JV24	L5	True	92.90	96.605294	104.0
7	JV25	L6	True	92.90	100.708144	108.4
8	JV26	L7	True	92.90	117.462244	126.4
9	JV27	L8	True	92.90	82.258843	88.6
10	JV28	L9	False	92.90	131.957389	142.0



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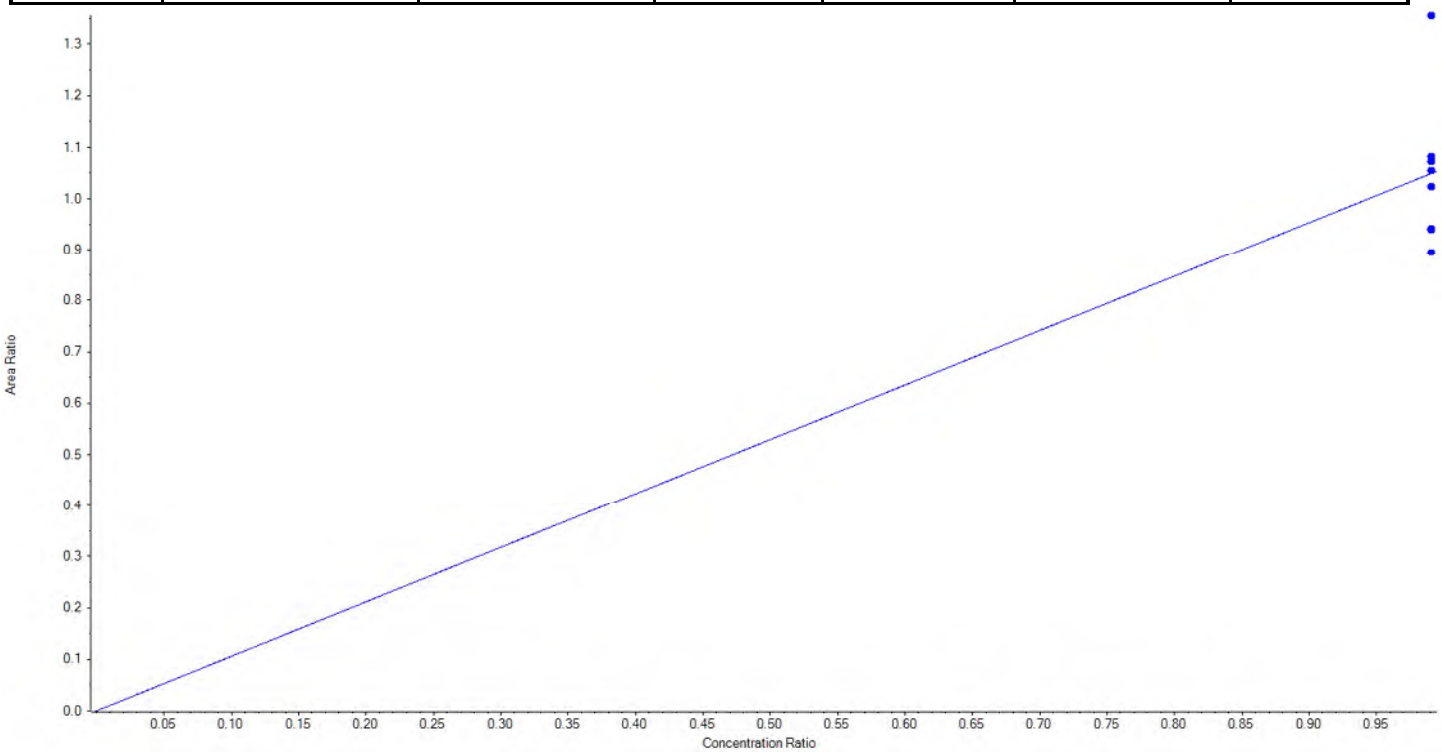
Calibration Summary Report

Analyte Name	13C3-PFHxS	**Data File**	06022018.wiff
MRM Transition	402.0 / 99.0	**Result Table**	18-0340_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.05924 x (std. dev. = 0.13591) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	94.60	97.524926	103.1
3	JV21	L2	True	94.60	84.816295	89.7
4	JV22	L3	True	94.60	96.612217	102.1
5	JV23	L4	True	94.60	95.175781	100.6
6	JV24	L5	True	94.60	92.235559	97.5
7	JV25	L6	True	94.60	84.634273	89.5
8	JV26	L7	True	94.60	122.225280	129.2
9	JV27	L8	True	94.60	80.688007	85.3
10	JV28	L9	True	94.60	97.487663	103.1



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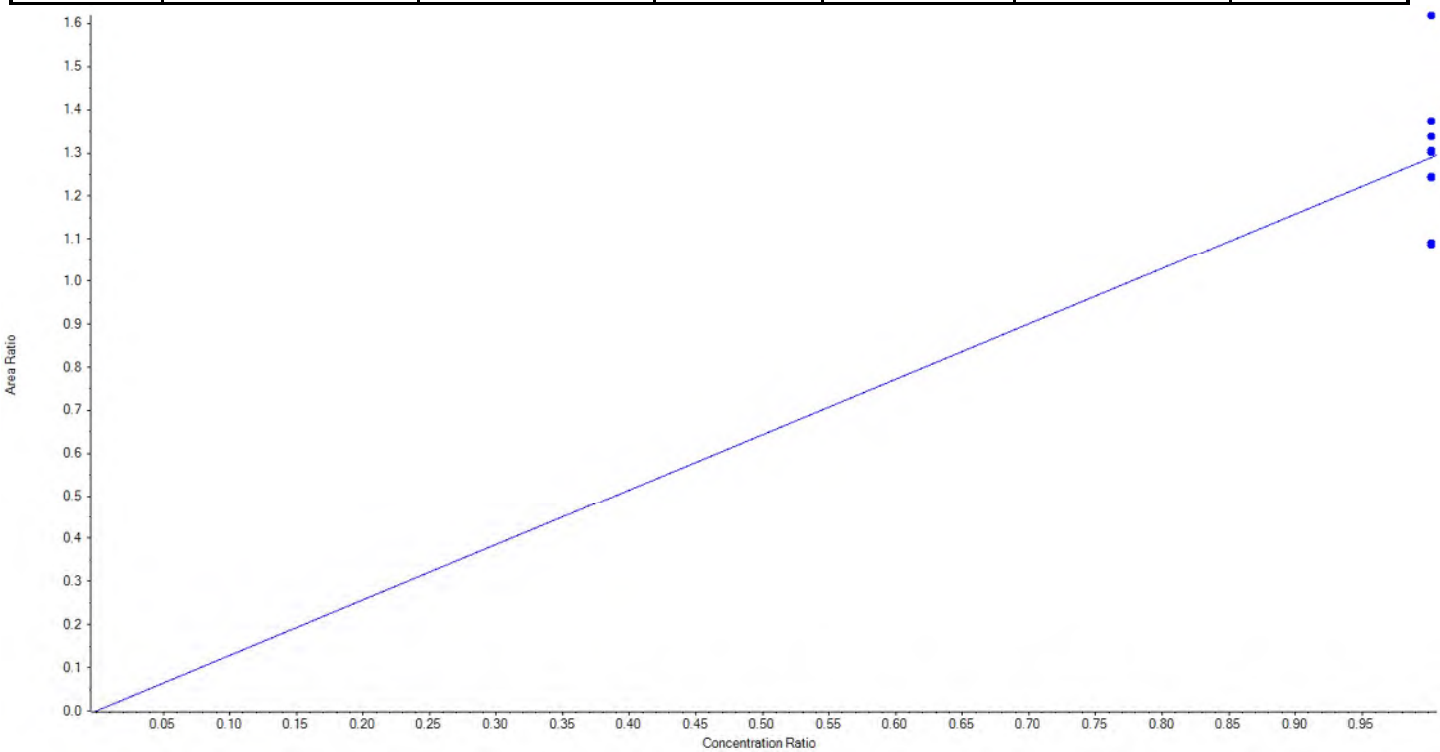
Calibration Summary Report

Analyte Name	13C8-PFOS	**Data File**	06022018.wiff
MRM Transition	507.0 / 99.0	**Result Table**	18-0340_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.28672 x (std. dev. = 0.15870) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	95.70	99.266678	103.7
3	JV21	L2	True	95.70	92.289972	96.4
4	JV22	L3	True	95.70	102.024471	106.6
5	JV23	L4	True	95.70	96.606223	101.0
6	JV24	L5	True	95.70	92.489391	96.7
7	JV25	L6	True	95.70	81.031933	84.7
8	JV26	L7	True	95.70	120.111700	125.5
9	JV27	L8	True	95.70	80.645627	84.3
10	JV28	L9	True	95.70	96.834003	101.2



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Calibration Summary Report

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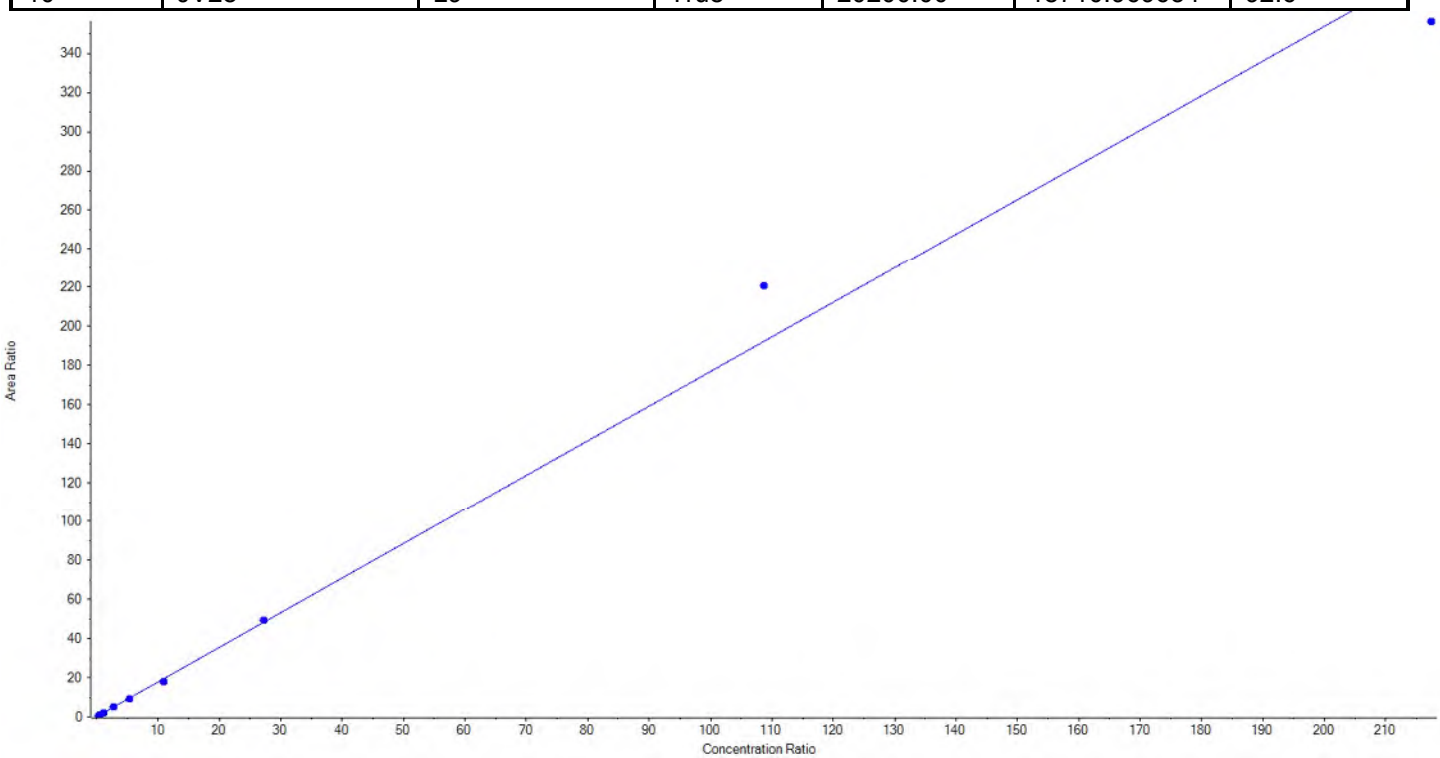
Analyte Name	PFBS_1	**Data File**	06022018.wiff
MRM Transition	298.9 / 80.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C3-PFBS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.76816 x + 0.12377 (r = 0.99496) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.25	23.430730	92.8
3	JV21	L2	True	50.50	48.077851	95.2
4	JV22	L3	True	101.00	114.049174	112.9
5	JV23	L4	True	252.50	250.040307	99.0
6	JV24	L5	True	505.00	489.667439	97.0
7	JV25	L6	True	1010.00	939.392143	93.0
8	JV26	L7	True	2525.00	2589.743424	102.6
9	JV27	L8	True	10100.00	11603.879298	114.9
10	JV28	L9	True	20200.00	18710.969634	92.6



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Calibration Summary Report

Created with Analyst Reporter
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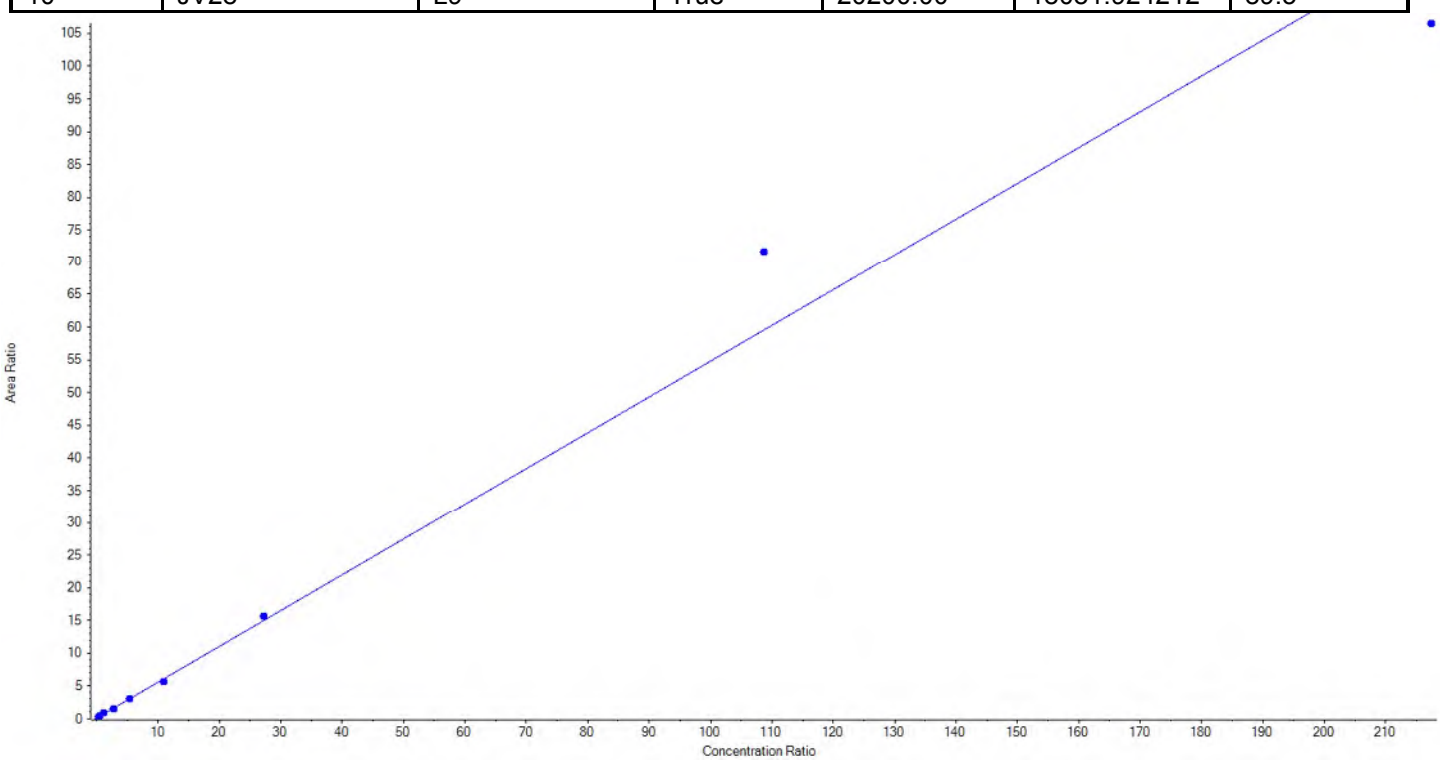
Analyte Name	PFBS_2	**Data File**	06022018.wiff
MRM Transition	298.9 / 99.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C3-PFBS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.54651 x + 0.12639 (r = 0.99038) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.25	19.874729	78.7
3	JV21	L2	True	50.50	48.059307	95.2
4	JV22	L3	True	101.00	122.755501	121.5
5	JV23	L4	True	252.50	239.174435	94.7
6	JV24	L5	True	505.00	512.945542	101.6
7	JV25	L6	True	1010.00	951.420791	94.2
8	JV26	L7	True	2525.00	2629.514433	104.1
9	JV27	L8	True	10100.00	12163.581051	120.4
10	JV28	L9	True	20200.00	18081.924212	89.5



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Calibration Summary Report

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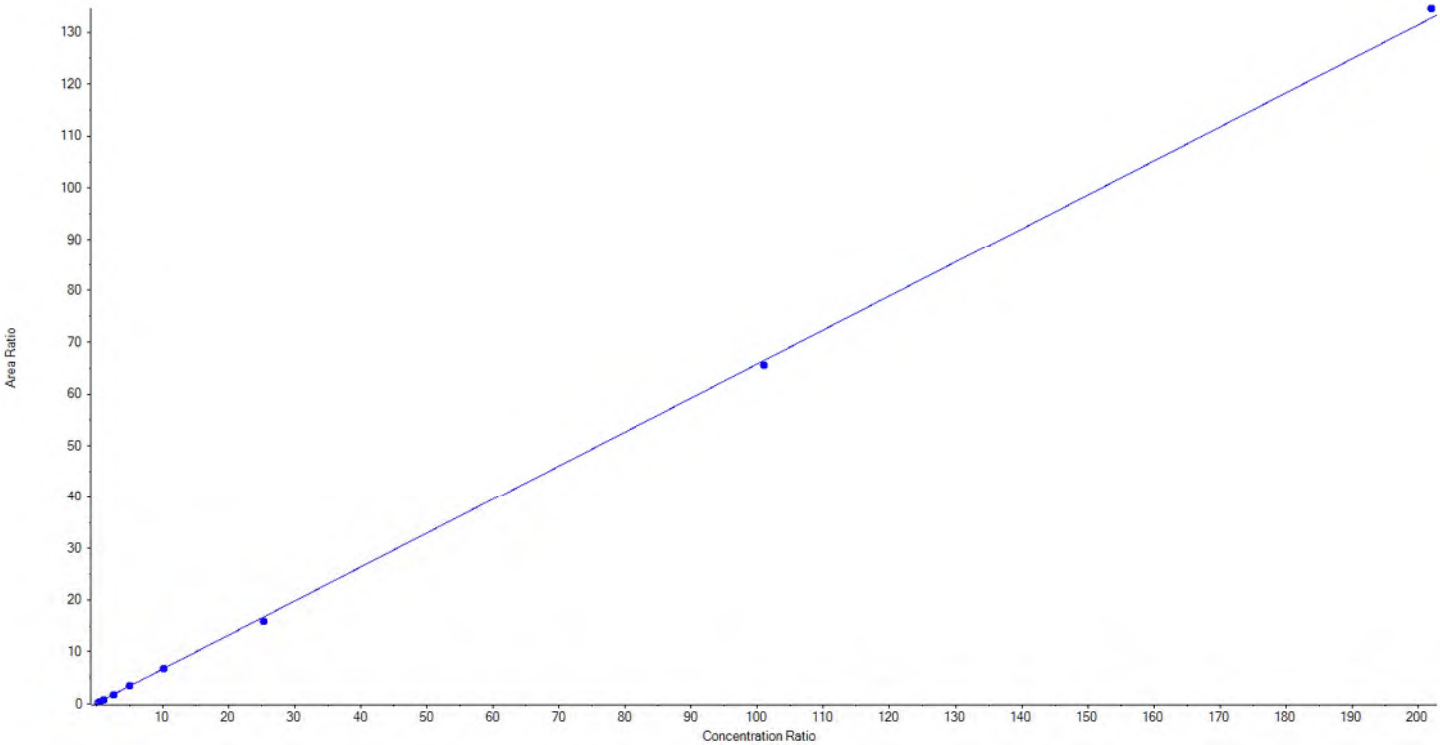
Analyte Name	PFHxA_1	**Data File**	06022018.wiff
MRM Transition	313.0 / 269.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C5-PFHxA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.65655 x + 0.14460 (r = 0.99980) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.25	5.784861	22.9
3	JV21	L2	True	50.50	49.388286	97.8
4	JV22	L3	True	101.00	108.588129	107.5
5	JV23	L4	True	252.50	253.659514	100.5
6	JV24	L5	True	505.00	507.805267	100.6
7	JV25	L6	True	1010.00	999.444962	99.0
8	JV26	L7	True	2525.00	2393.271111	94.8
9	JV27	L8	True	10100.00	9955.176959	98.6
10	JV28	L9	True	20200.00	20476.665773	101.4



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Calibration Summary Report

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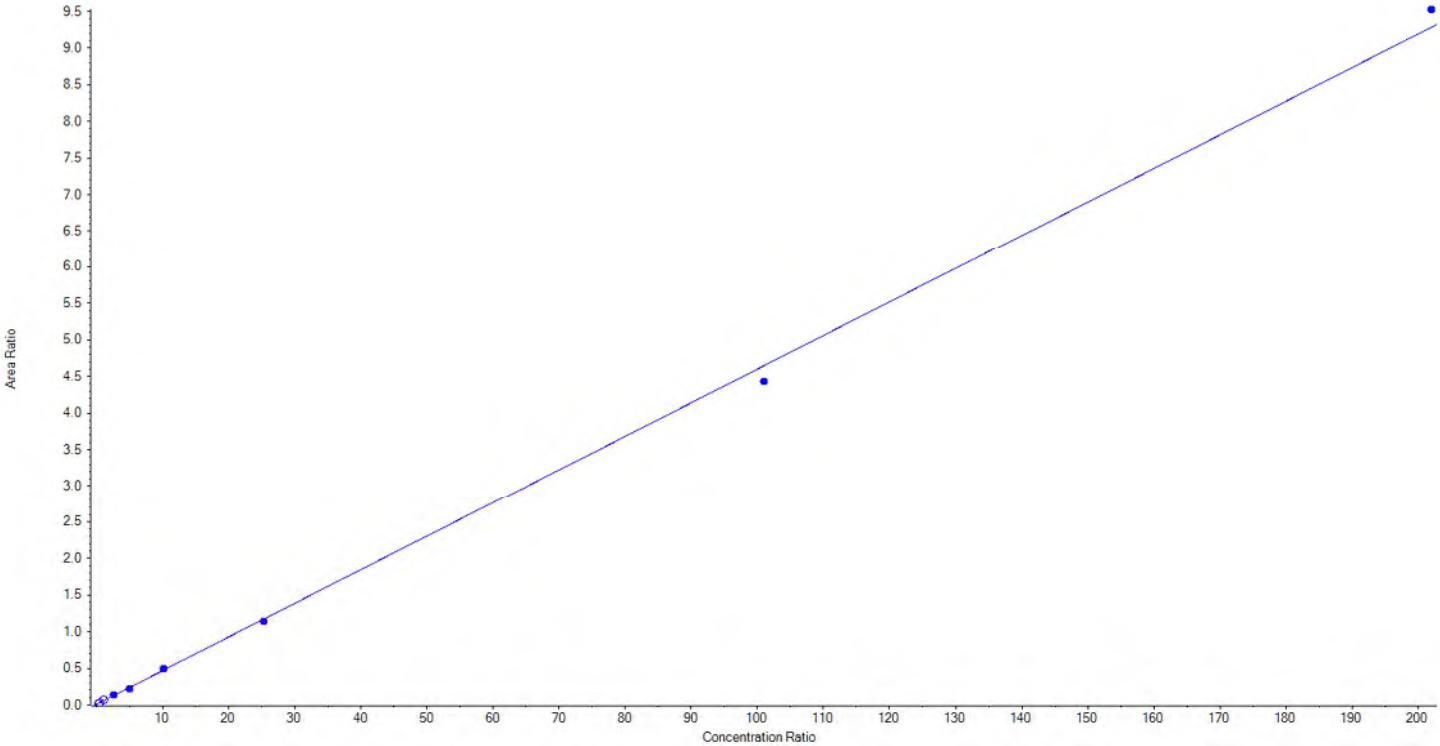
Analyte Name	PFHxA_2	**Data File**	06022018.wiff
MRM Transition	313.0 / 119.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C5-PFHxA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.04592 x + 0.00875 (r = 0.99918) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.25	0.691509	2.7
3	JV21	L2	False	50.50	31.775764	62.9
4	JV22	L3	False	101.00	138.998189	137.6
5	JV23	L4	True	252.50	280.997252	111.3
6	JV24	L5	True	505.00	449.678784	89.1
7	JV25	L6	True	1010.00	1054.747856	104.4
8	JV26	L7	True	2525.00	2458.027338	97.4
9	JV27	L8	True	10100.00	9624.843910	95.3
10	JV28	L9	True	20200.00	20724.204861	102.6



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Calibration Summary Report

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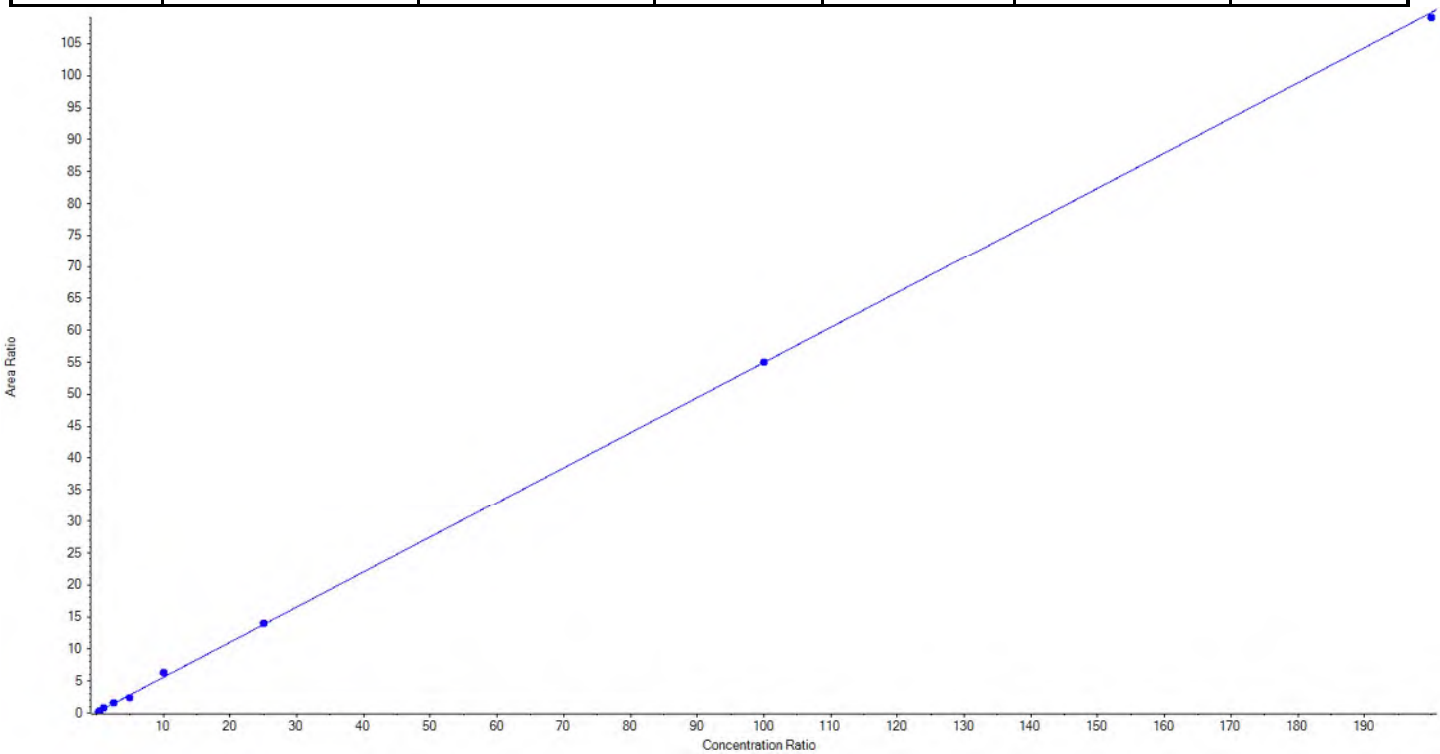
Analyte Name	PFHpA_1	**Data File**	06022018.wiff
MRM Transition	363.0 / 319.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C4-PFHpA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.54892 x + 0.06567 (r = 0.99940) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	24.371833	97.5
3	JV21	L2	True	50.00	37.207682	74.4
4	JV22	L3	True	100.00	121.332642	121.3
5	JV23	L4	True	250.00	267.155619	106.9
6	JV24	L5	True	500.00	426.324698	85.3
7	JV25	L6	True	1000.00	1135.564097	113.6
8	JV26	L7	True	2500.00	2541.236535	101.7
9	JV27	L8	True	10000.00	10014.514039	100.2
10	JV28	L9	True	20000.00	19857.292856	99.3



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Calibration Summary Report

Created with Analyst Reporter
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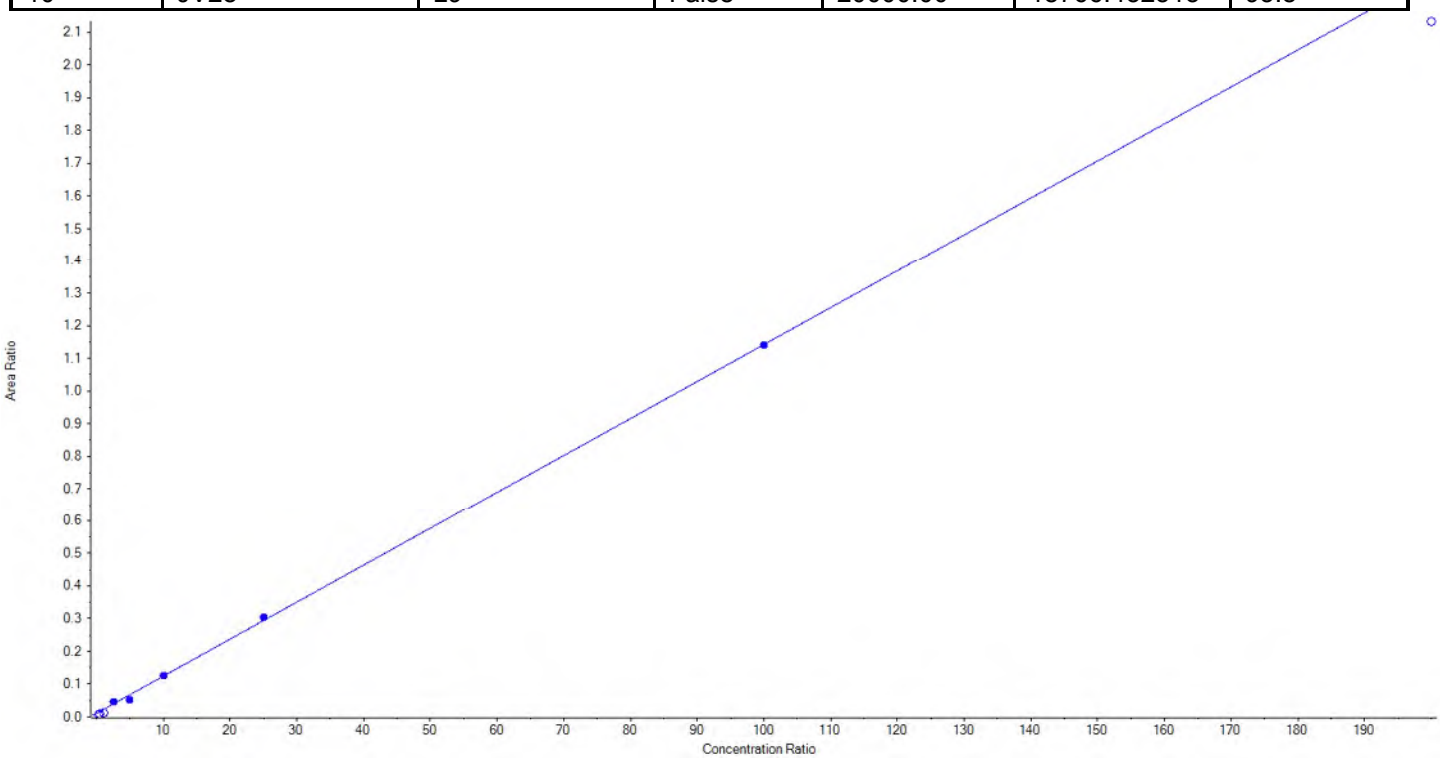
Analyte Name	PFHpA_2	**Data File**	06022018.wiff
MRM Transition	363.0 / 169.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C4-PFHpA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.01130 x + 0.01145 (r = 0.99711) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	< 0	N/A
3	JV21	L2	False	50.00	< 0	N/A
4	JV22	L3	False	100.00	16.705333	16.7
5	JV23	L4	True	250.00	311.497817	124.6
6	JV24	L5	True	500.00	351.421206	70.3
7	JV25	L6	True	1000.00	1014.640739	101.5
8	JV26	L7	True	2500.00	2597.605195	103.9
9	JV27	L8	True	10000.00	9974.835043	99.8
10	JV28	L9	False	20000.00	18766.432513	93.8



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Calibration Summary Report

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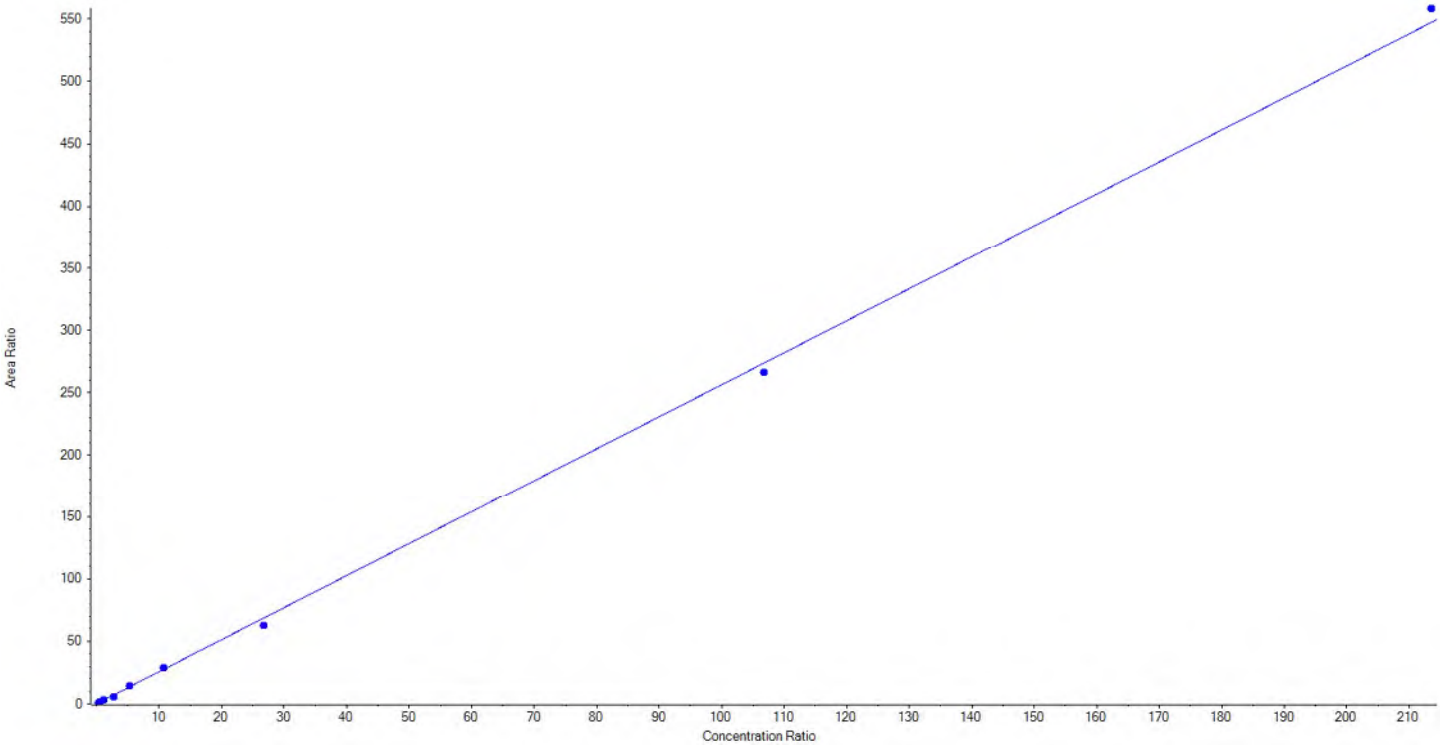
Analyte Name	PFHxS_1	**Data File**	06022018.wiff
MRM Transition	399.0 / 80.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C3-PFHxS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 2.56188 x + 0.14000 (r = 0.99936) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.25	27.002198	106.9
3	JV21	L2	True	50.50	48.651543	96.3
4	JV22	L3	True	101.00	111.928455	110.8
5	JV23	L4	True	252.50	215.699165	85.4
6	JV24	L5	True	505.00	518.961762	102.8
7	JV25	L6	True	1010.00	1074.412721	106.4
8	JV26	L7	True	2525.00	2319.270796	91.9
9	JV27	L8	True	10100.00	9841.785586	97.4
10	JV28	L9	True	20200.00	20611.537773	102.0



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Calibration Summary Report

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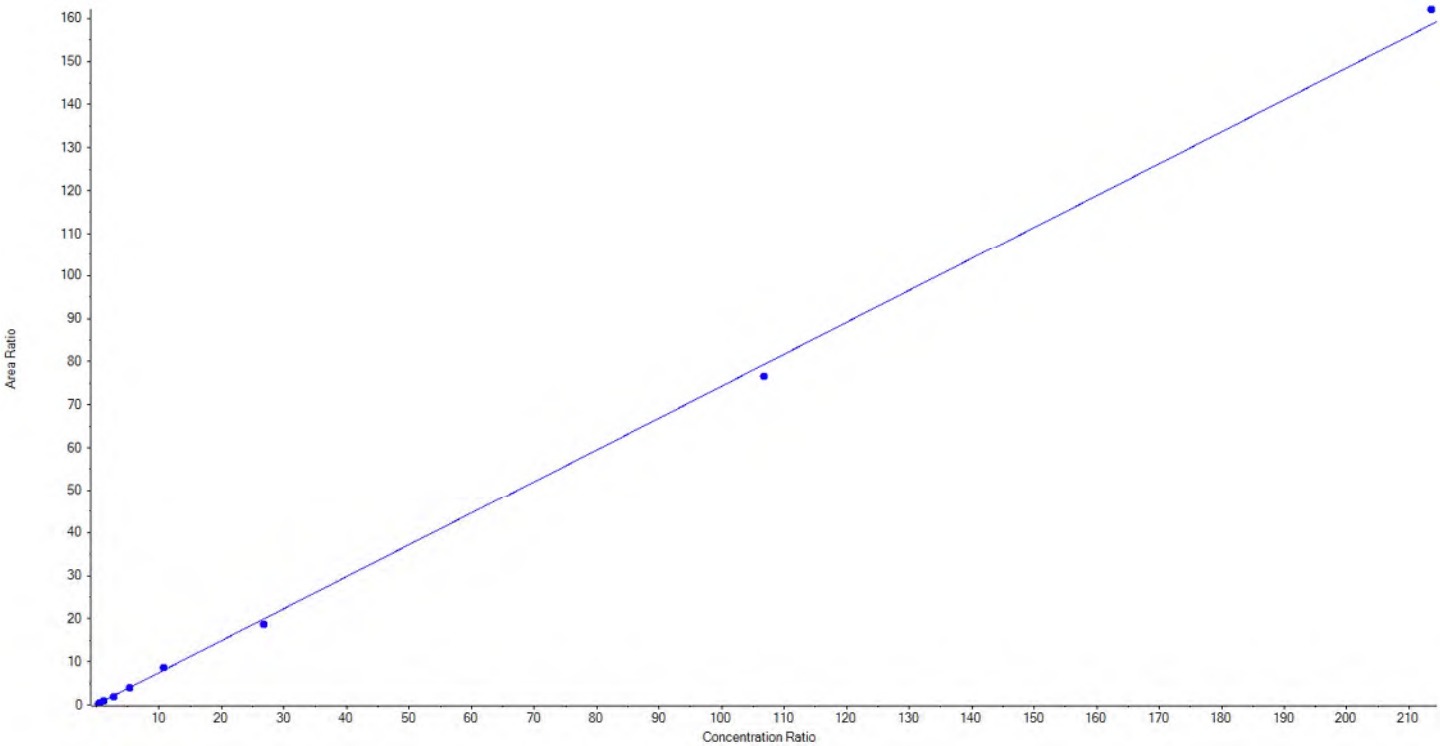
Analyte Name	PFHxS_2	**Data File**	06022018.wiff
MRM Transition	399.0 / 99.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C3-PFHxS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.74227 x + 0.08346 (r = 0.99939) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.25	23.631500	93.6
3	JV21	L2	True	50.50	55.586062	110.1
4	JV22	L3	True	101.00	109.728491	108.6
5	JV23	L4	True	252.50	223.267676	88.4
6	JV24	L5	True	505.00	498.642930	98.7
7	JV25	L6	True	1010.00	1088.100159	107.7
8	JV26	L7	True	2525.00	2374.504861	94.0
9	JV27	L8	True	10100.00	9753.715741	96.6
10	JV28	L9	True	20200.00	20642.072581	102.2



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Calibration Summary Report

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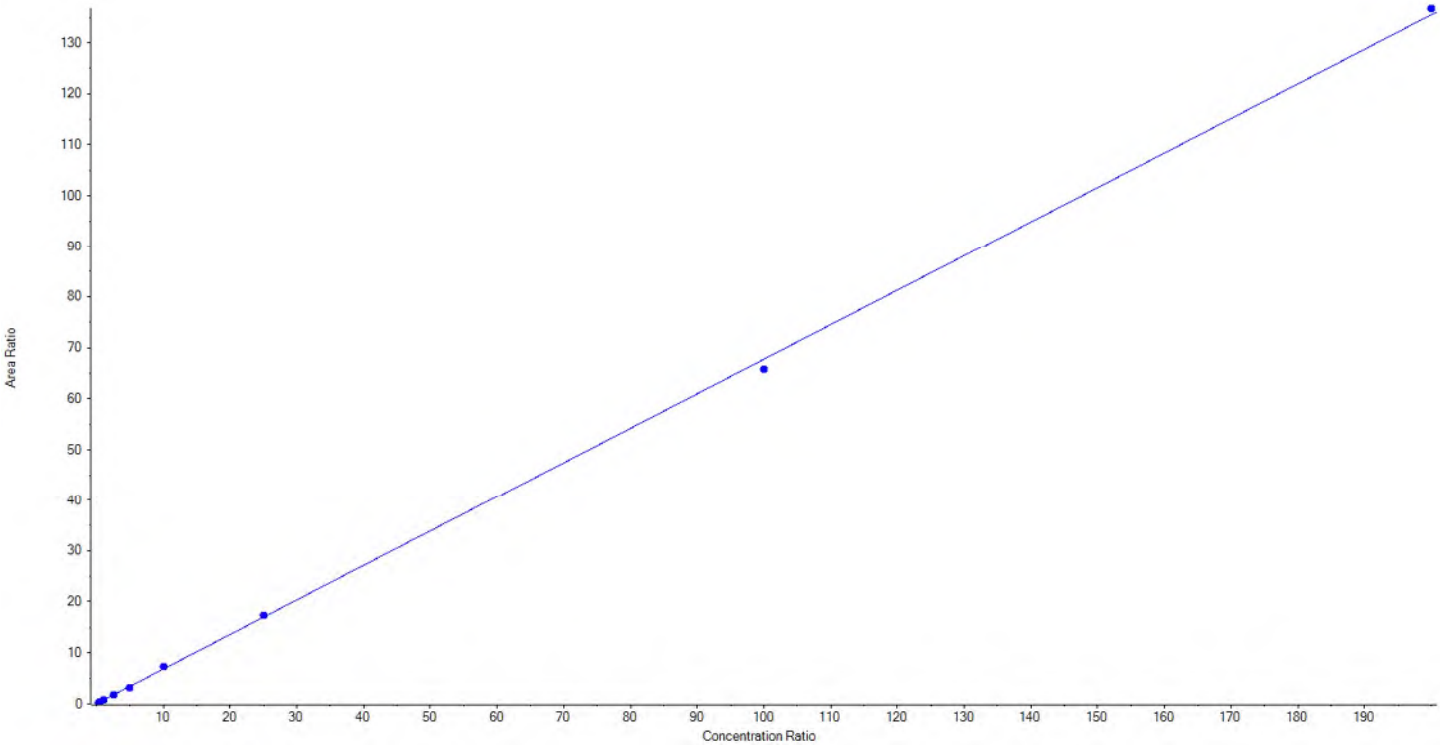
Analyte Name	PFOA_1	**Data File**	06022018.wiff
MRM Transition	413.0 / 369.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C8-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.67723 x + 0.04066 (r = 0.99971) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	21.912723	87.7
3	JV21	L2	True	50.00	48.175784	96.4
4	JV22	L3	True	100.00	111.825360	111.8
5	JV23	L4	True	250.00	259.170639	103.7
6	JV24	L5	True	500.00	468.640086	93.7
7	JV25	L6	True	1000.00	1065.516673	106.6
8	JV26	L7	True	2500.00	2553.689081	102.2
9	JV27	L8	True	10000.00	9719.265246	97.2
10	JV28	L9	True	20000.00	20176.804407	100.9



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Calibration Summary Report

Created with Analyst Reporter
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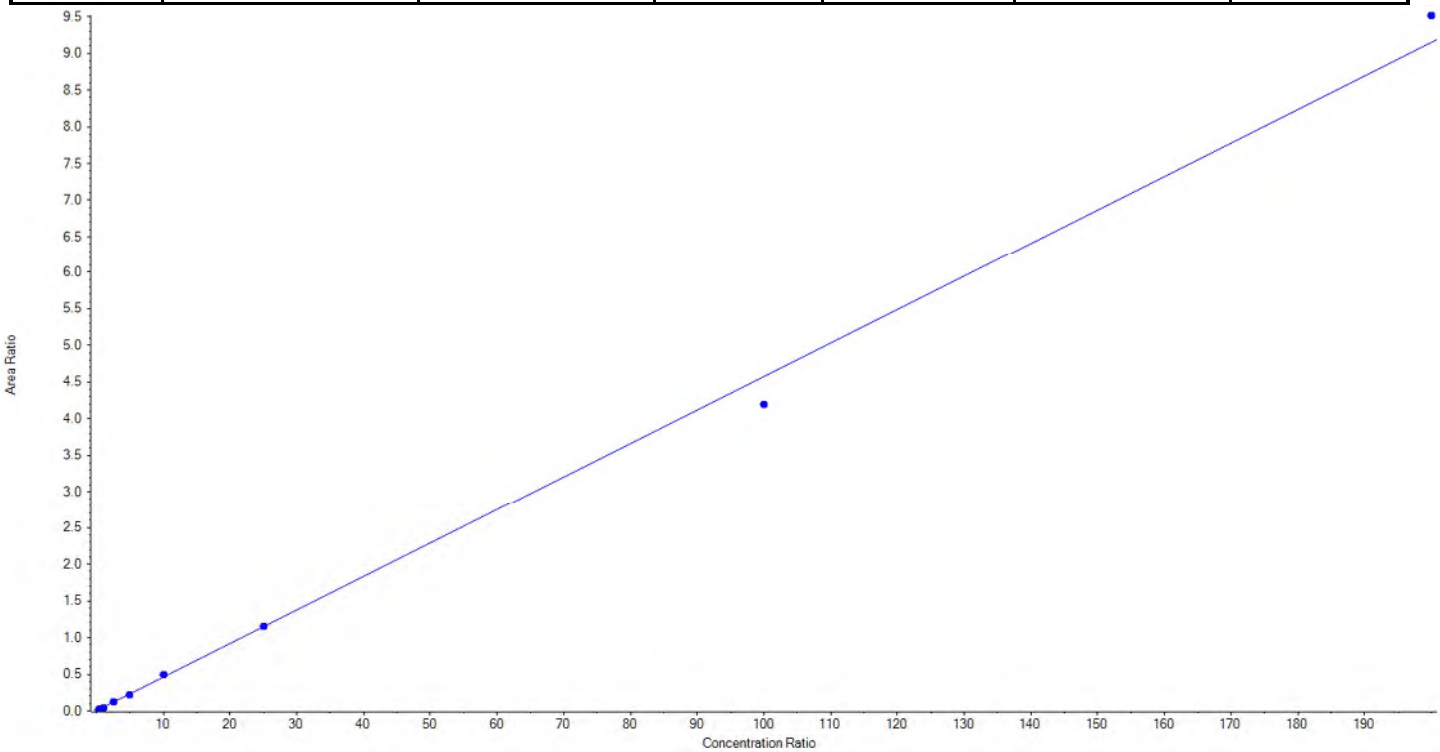
Analyte Name	PFOA_2	**Data File**	06022018.wiff
MRM Transition	413.0 / 169.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C8-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.04571 x + 0.00549 (r = 0.99829) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	30.084226	120.3
3	JV21	L2	True	50.00	46.088459	92.2
4	JV22	L3	True	100.00	87.676106	87.7
5	JV23	L4	True	250.00	264.343967	105.7
6	JV24	L5	True	500.00	459.356628	91.9
7	JV25	L6	True	1000.00	1061.153878	106.1
8	JV26	L7	True	2500.00	2511.901838	100.5
9	JV27	L8	True	10000.00	9157.545131	91.6
10	JV28	L9	True	20000.00	20806.849768	104.0



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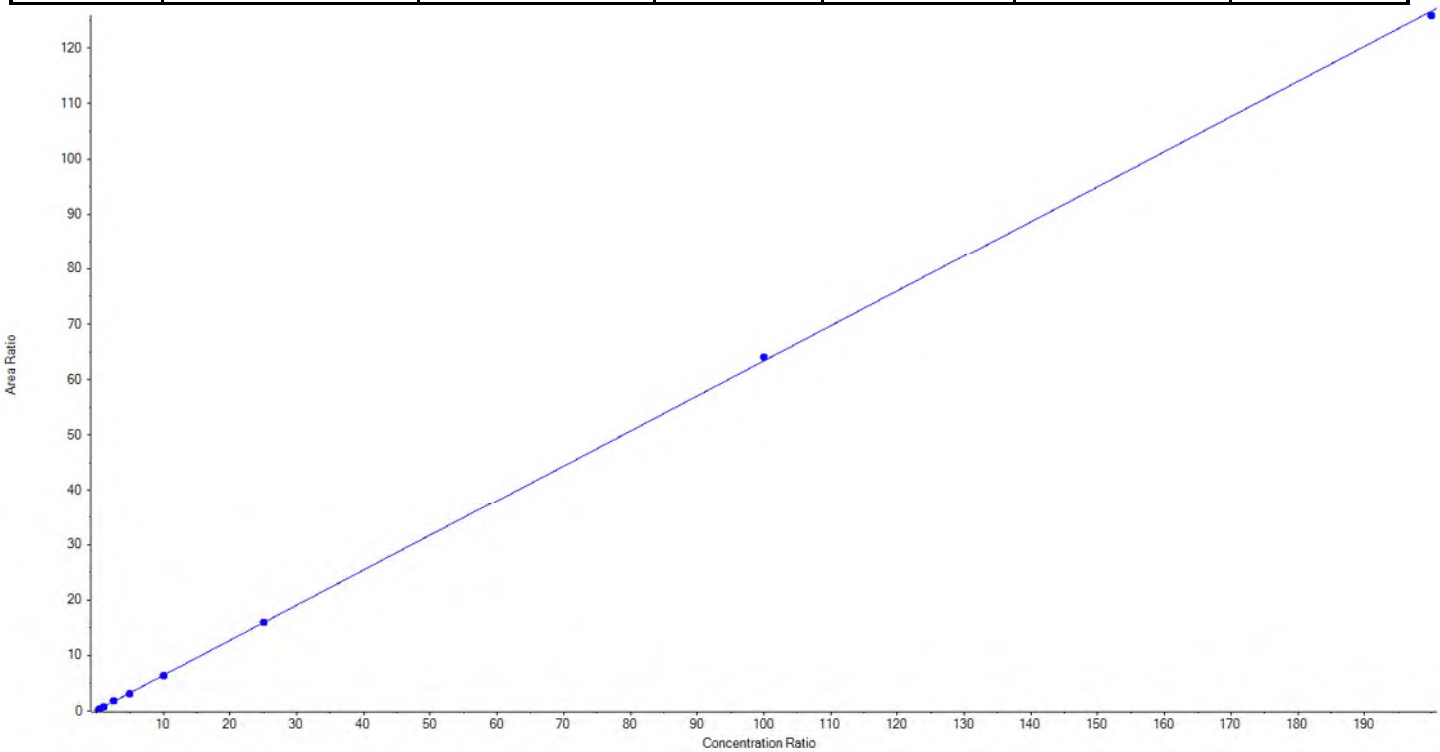
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFNA_1	**Data File**	06022018.wiff
MRM Transition	463.0 / 419.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C9-PFNA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.63272 x + 0.07862 (r = 0.99989) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	24.925904	99.7
3	JV21	L2	True	50.00	46.863845	93.7
4	JV22	L3	True	100.00	99.764178	99.8
5	JV23	L4	True	250.00	277.895674	111.2
6	JV24	L5	True	500.00	470.997965	94.2
7	JV25	L6	True	1000.00	1004.163113	100.4
8	JV26	L7	True	2500.00	2513.690409	100.6
9	JV27	L8	True	10000.00	10109.846305	101.1
10	JV28	L9	True	20000.00	19876.852607	99.4



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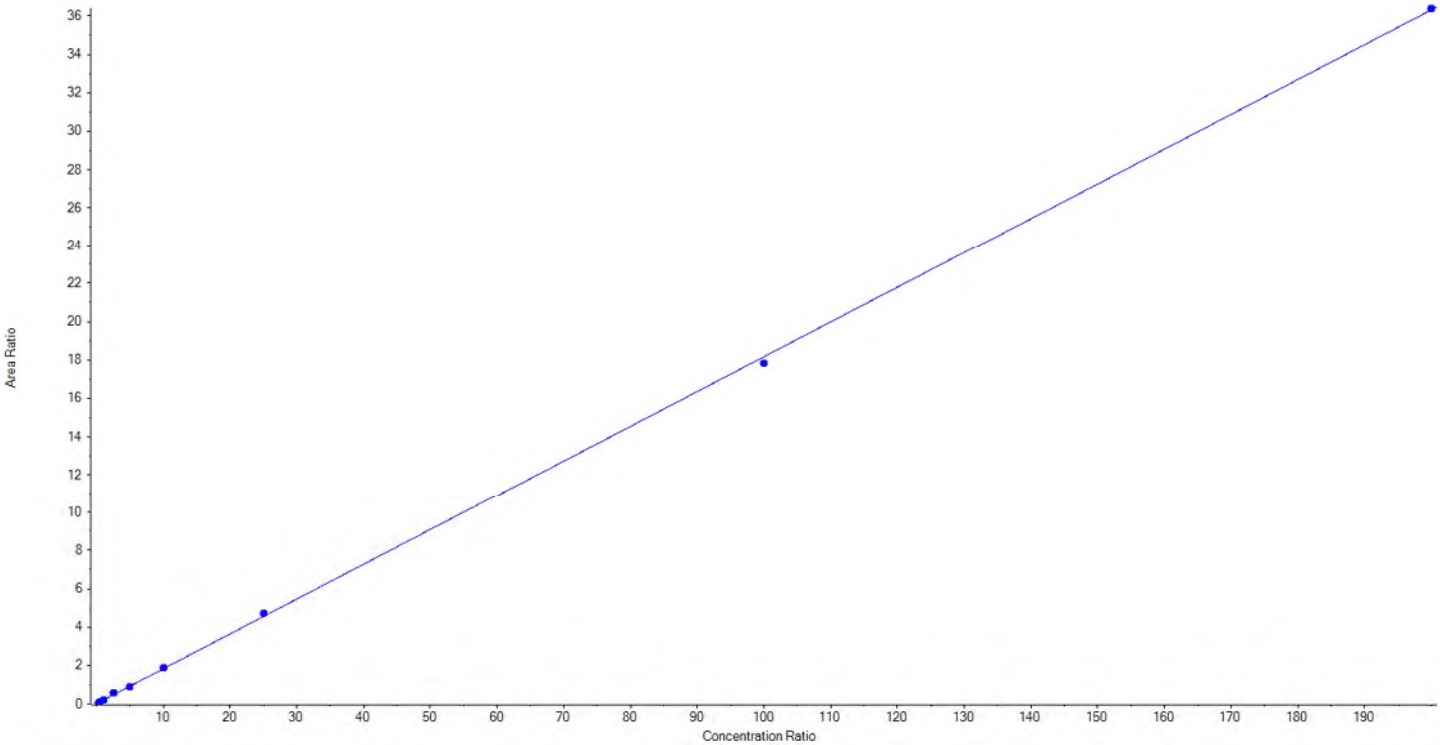
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFNA_2	**Data File**	06022018.wiff
MRM Transition	463.0 / 219.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C9-PFNA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.18151 x + 0.01583 (r = 0.99965) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	18.924490	75.7
3	JV21	L2	True	50.00	43.975981	88.0
4	JV22	L3	True	100.00	114.640986	114.6
5	JV23	L4	True	250.00	300.924108	120.4
6	JV24	L5	True	500.00	481.165274	96.2
7	JV25	L6	True	1000.00	1035.103332	103.5
8	JV26	L7	True	2500.00	2582.821176	103.3
9	JV27	L8	True	10000.00	9809.198568	98.1
10	JV28	L9	True	20000.00	20038.246085	100.2



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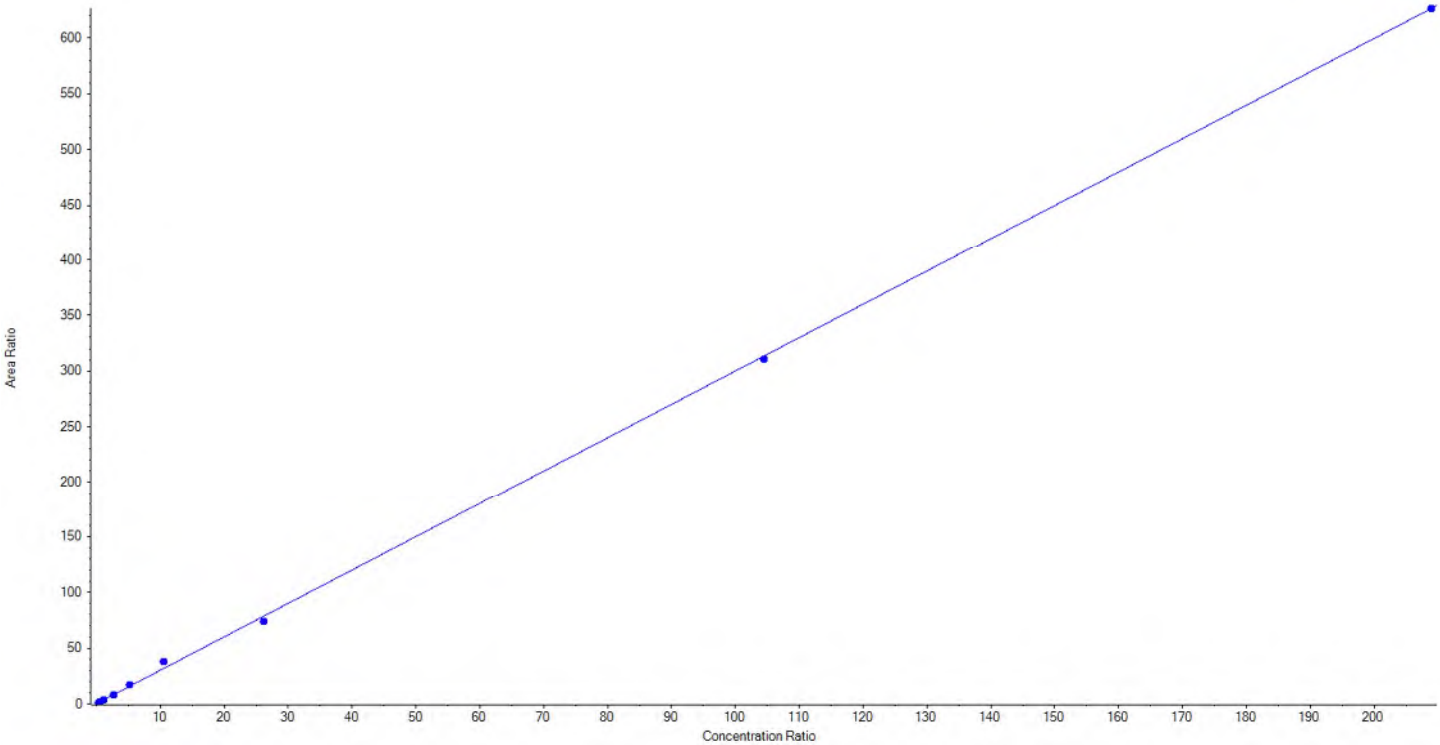
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFOS_1	**Data File**	06022018.wiff
MRM Transition	499.0 / 80.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C8-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 2.99639 x + 0.29547 (r = 0.99916) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	20.201554	80.8
3	JV21	L2	True	50.00	46.934382	93.9
4	JV22	L3	True	100.00	107.983313	108.0
5	JV23	L4	True	250.00	241.902053	96.8
6	JV24	L5	True	500.00	530.777101	106.2
7	JV25	L6	True	1000.00	1209.203973	120.9
8	JV26	L7	True	2500.00	2360.822596	94.4
9	JV27	L8	True	10000.00	9907.258193	99.1
10	JV28	L9	True	20000.00	19999.916836	100.0



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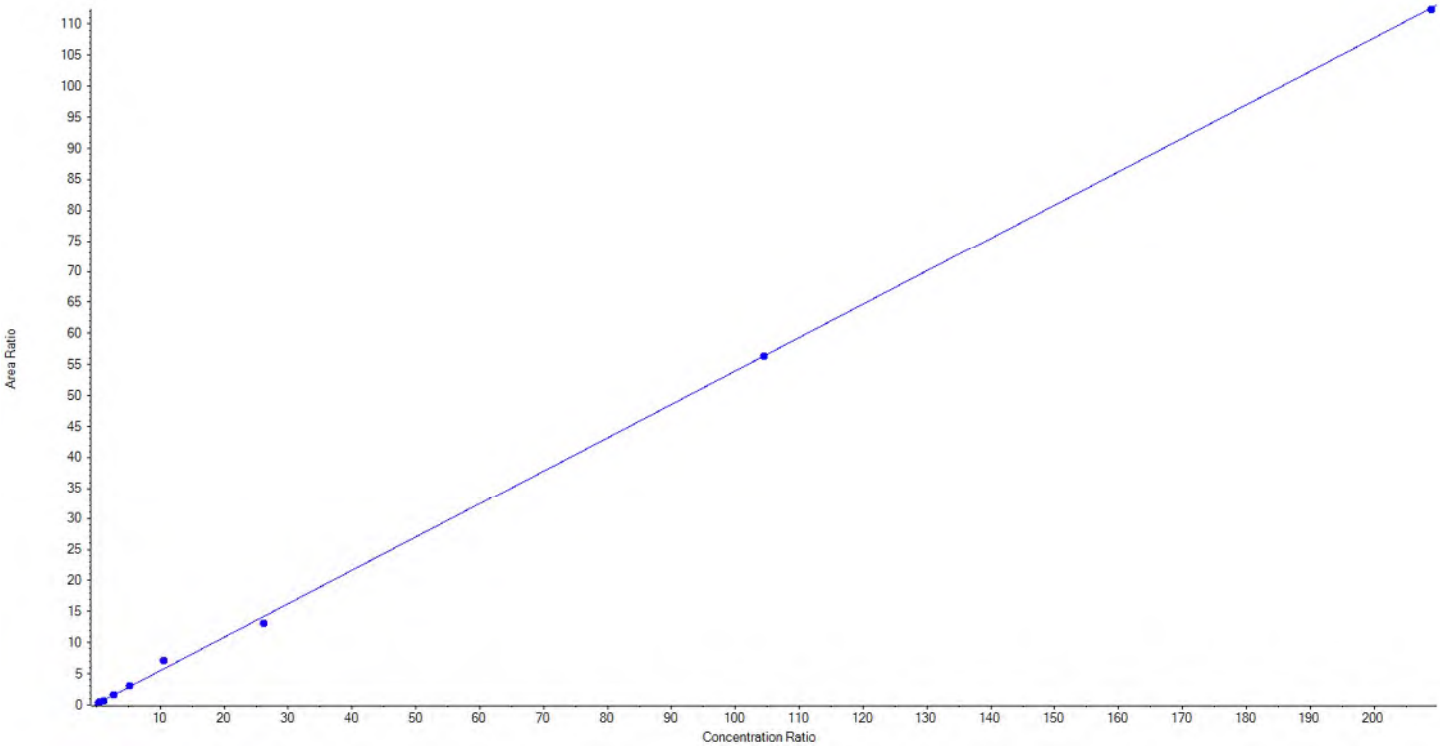
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFOS_2	**Data File**	06022018.wiff
MRM Transition	499.0 / 99.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C8-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.53809 x + 0.13608 (r = 0.99871) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	20.778798	83.1
3	JV21	L2	True	50.00	55.494486	111.0
4	JV22	L3	True	100.00	83.998084	84.0
5	JV23	L4	True	250.00	249.272880	99.7
6	JV24	L5	True	500.00	526.973503	105.4
7	JV25	L6	True	1000.00	1253.618222	125.4
8	JV26	L7	True	2500.00	2295.036995	91.8
9	JV27	L8	True	10000.00	9986.292564	99.9
10	JV28	L9	True	20000.00	19953.534467	99.8



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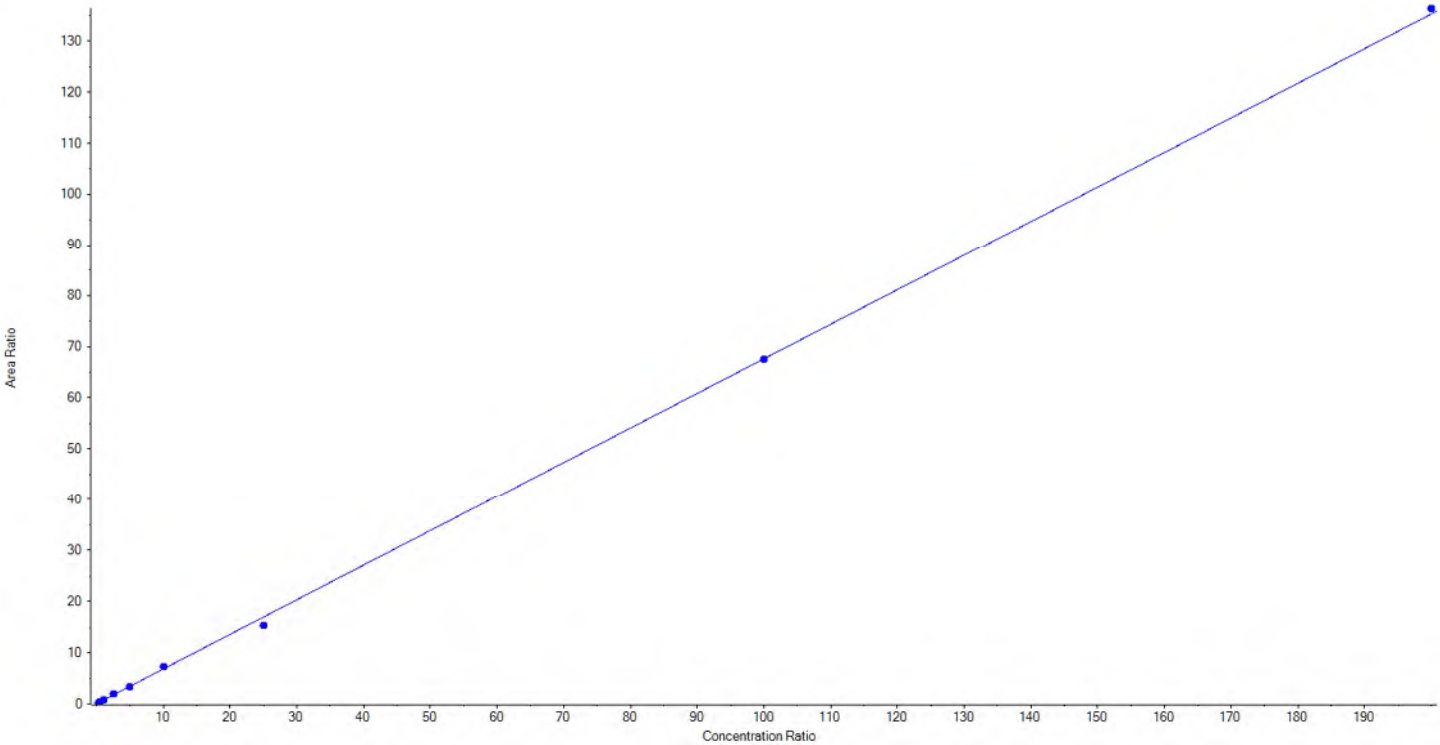
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFDA_1	**Data File**	06022018.wiff
MRM Transition	513.0 / 469.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C6-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.67587 x + 0.05795 (r = 0.99950) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	22.779490	91.1
3	JV21	L2	True	50.00	47.073995	94.2
4	JV22	L3	True	100.00	105.369767	105.4
5	JV23	L4	True	250.00	282.021923	112.8
6	JV24	L5	True	500.00	487.102517	97.4
7	JV25	L6	True	1000.00	1077.935405	107.8
8	JV26	L7	True	2500.00	2270.076428	90.8
9	JV27	L8	True	10000.00	9975.042106	99.8
10	JV28	L9	True	20000.00	20157.598369	100.8



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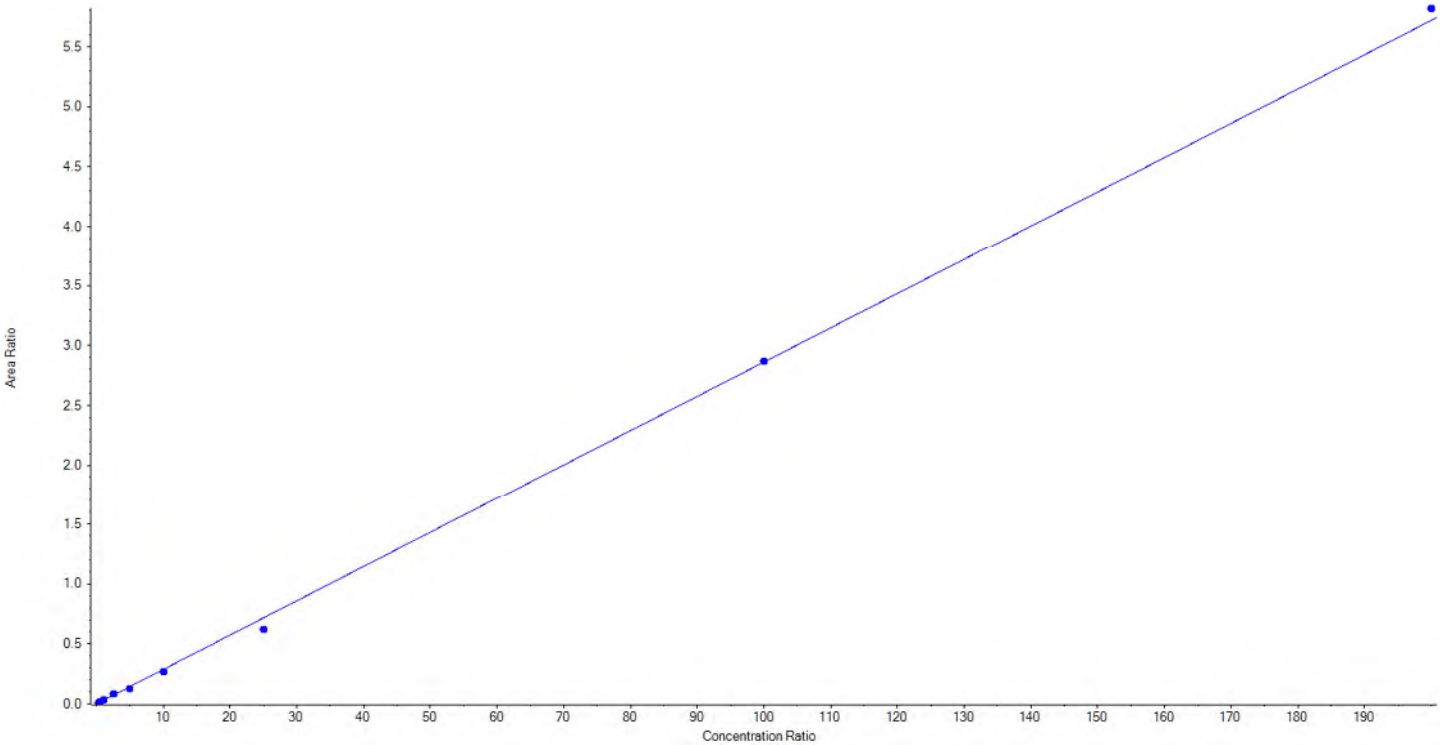
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFDA_2	**Data File**	06022018.wiff
MRM Transition	513.0 / 219.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C6-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.02860 x + 0.00137 (r = 0.99901) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	19.372613	77.5
3	JV21	L2	True	50.00	56.743012	113.5
4	JV22	L3	True	100.00	123.340221	123.3
5	JV23	L4	True	250.00	280.080235	112.0
6	JV24	L5	True	500.00	448.720530	89.7
7	JV25	L6	True	1000.00	947.504737	94.8
8	JV26	L7	True	2500.00	2179.672811	87.2
9	JV27	L8	True	10000.00	10024.377592	100.2
10	JV28	L9	True	20000.00	20345.188250	101.7



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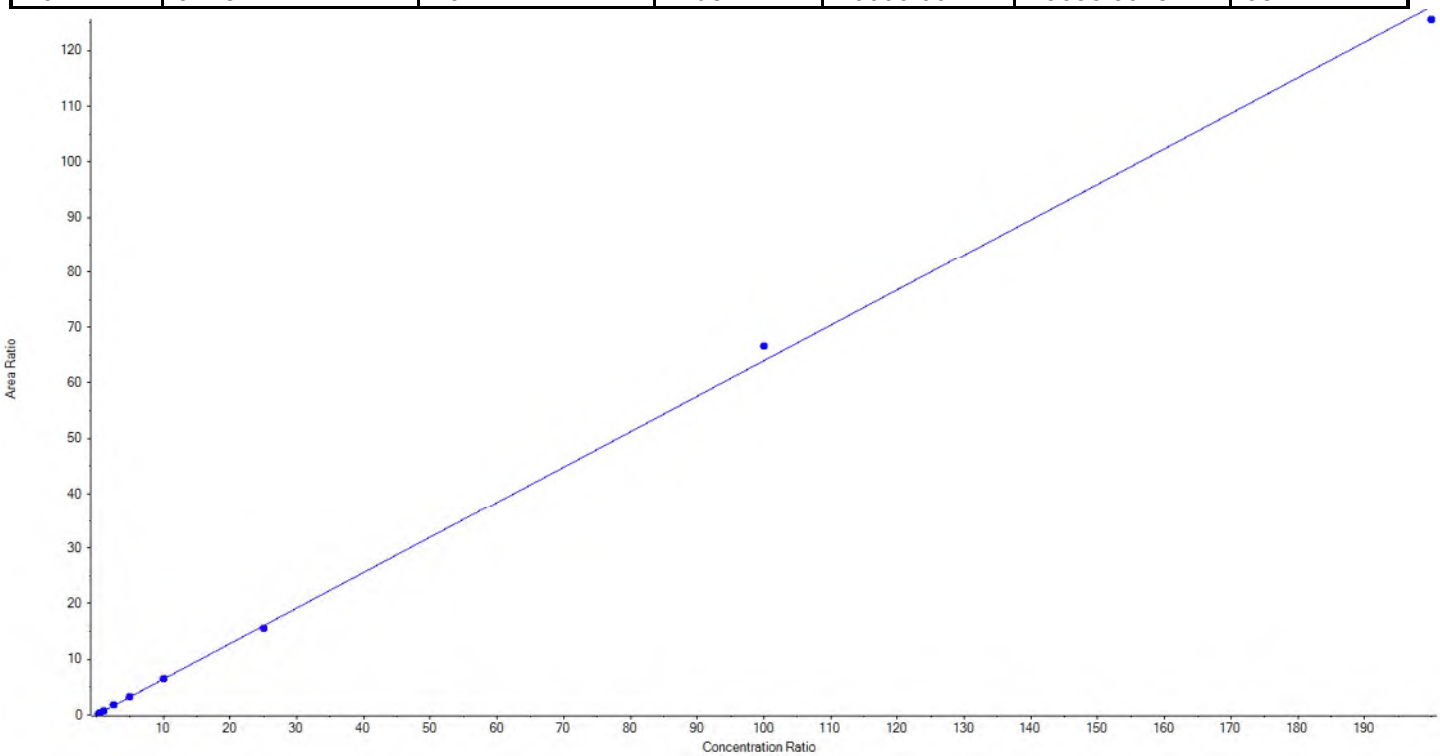
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFUnA_1	**Data File**	06022018.wiff
MRM Transition	563.0 / 519.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C7-PFUnA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.63935 x + 0.03409 (r = 0.99952) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	20.082202	80.3
3	JV21	L2	True	50.00	49.803603	99.6
4	JV22	L3	True	100.00	111.197006	111.2
5	JV23	L4	True	250.00	278.219526	111.3
6	JV24	L5	True	500.00	491.319767	98.3
7	JV25	L6	True	1000.00	1001.106158	100.1
8	JV26	L7	True	2500.00	2421.795730	96.9
9	JV27	L8	True	10000.00	10415.078133	104.2
10	JV28	L9	True	20000.00	19636.397874	98.2



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Calibration Summary Report

Created with Analyst Reporter
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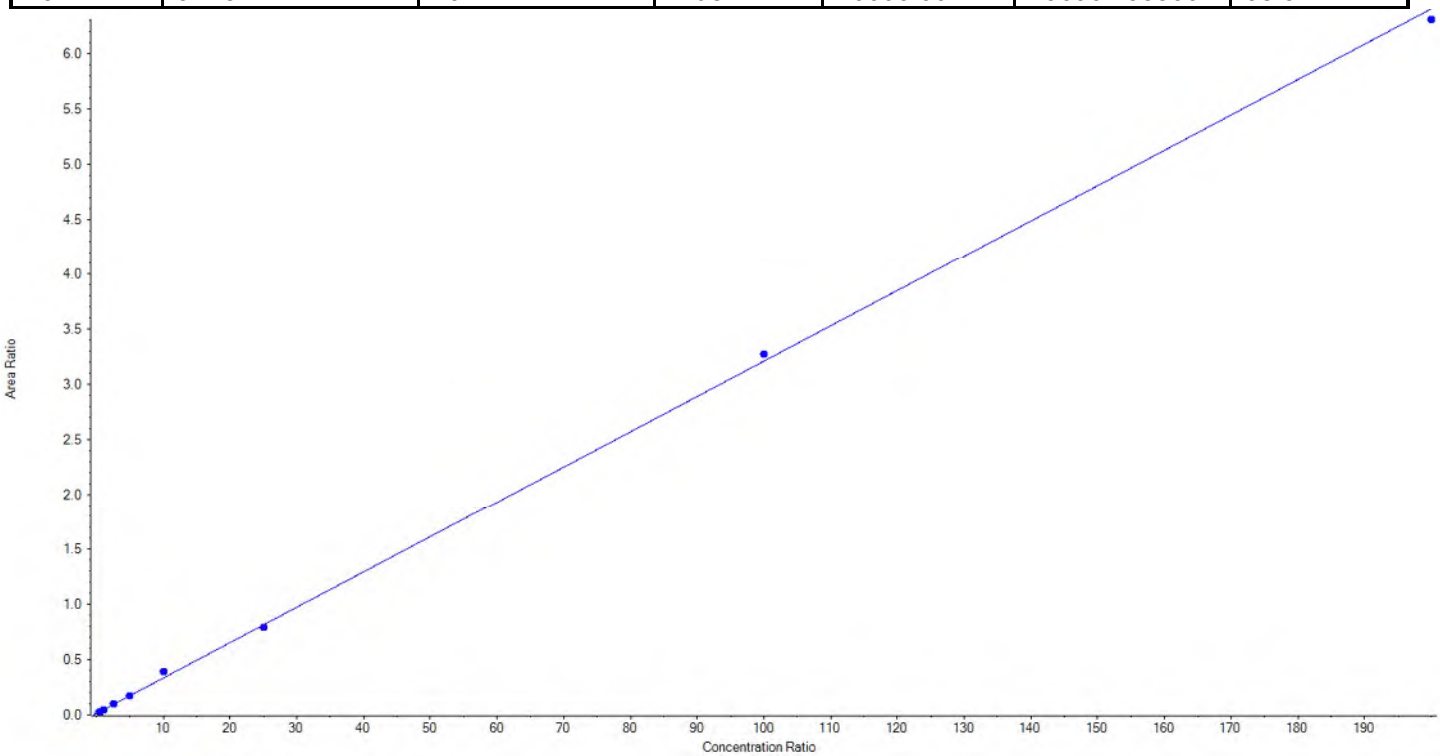
Analyte Name	PFUnA_2	**Data File**	06022018.wiff
MRM Transition	563.0 / 269.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C7-PFUnA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.03196 x + 0.01373 (r = 0.99930) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	< 0	N/A
3	JV21	L2	True	50.00	43.065320	86.1
4	JV22	L3	True	100.00	89.598884	89.6
5	JV23	L4	True	250.00	280.024039	112.0
6	JV24	L5	True	500.00	486.642009	97.3
7	JV25	L6	True	1000.00	1170.936779	117.1
8	JV26	L7	True	2500.00	2434.180604	97.4
9	JV27	L8	True	10000.00	10198.758865	102.0
10	JV28	L9	True	20000.00	19696.793500	98.5



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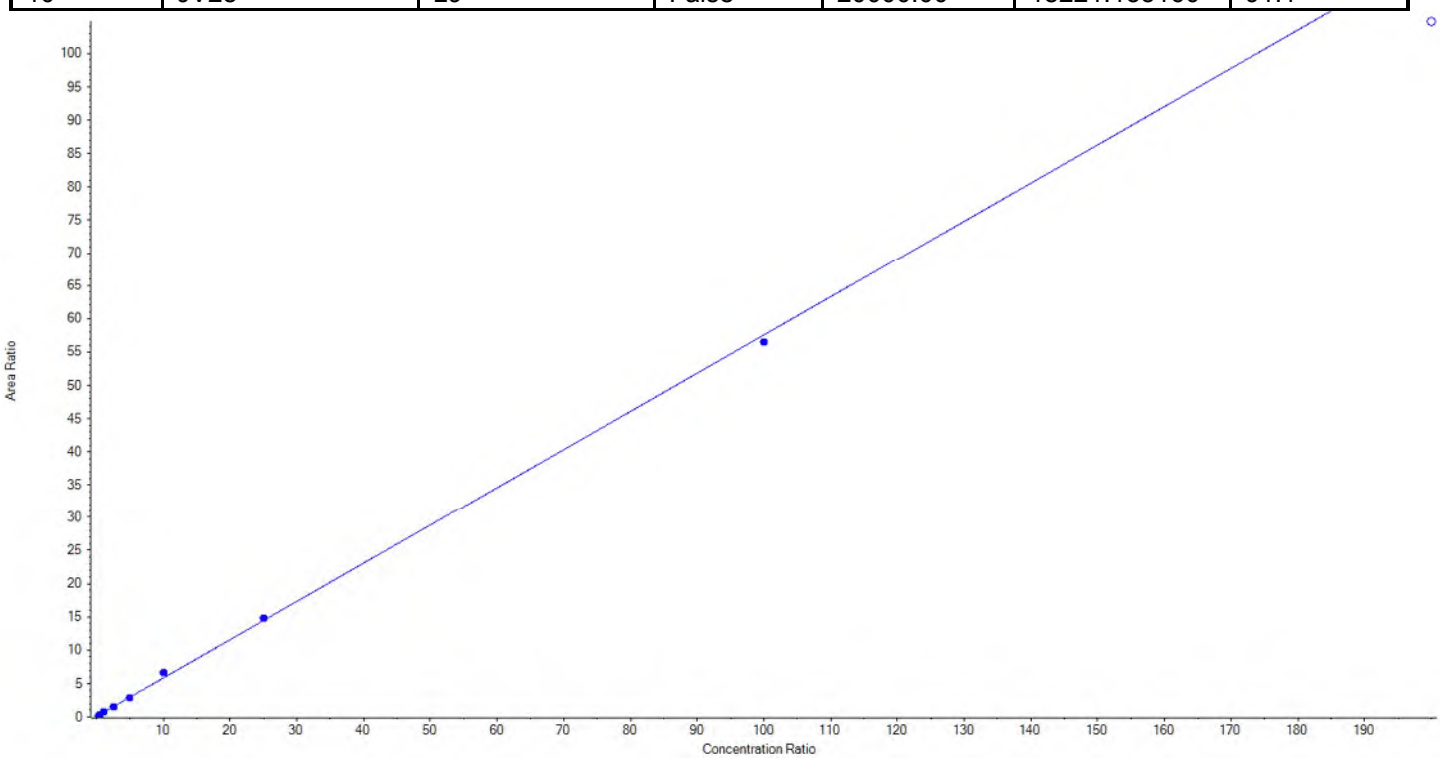
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFDoA_1	**Data File**	06022018.wiff
MRM Transition	613.0 / 569.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C2-PFDoA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.57472 x + 0.09145 (r = 0.99875) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	20.831332	83.3
3	JV21	L2	True	50.00	42.922262	85.8
4	JV22	L3	True	100.00	120.081739	120.1
5	JV23	L4	True	250.00	247.970664	99.2
6	JV24	L5	True	500.00	480.833329	96.2
7	JV25	L6	True	1000.00	1148.926056	114.9
8	JV26	L7	True	2500.00	2562.217552	102.5
9	JV27	L8	True	10000.00	9801.217067	98.0
10	JV28	L9	False	20000.00	18221.155160	91.1



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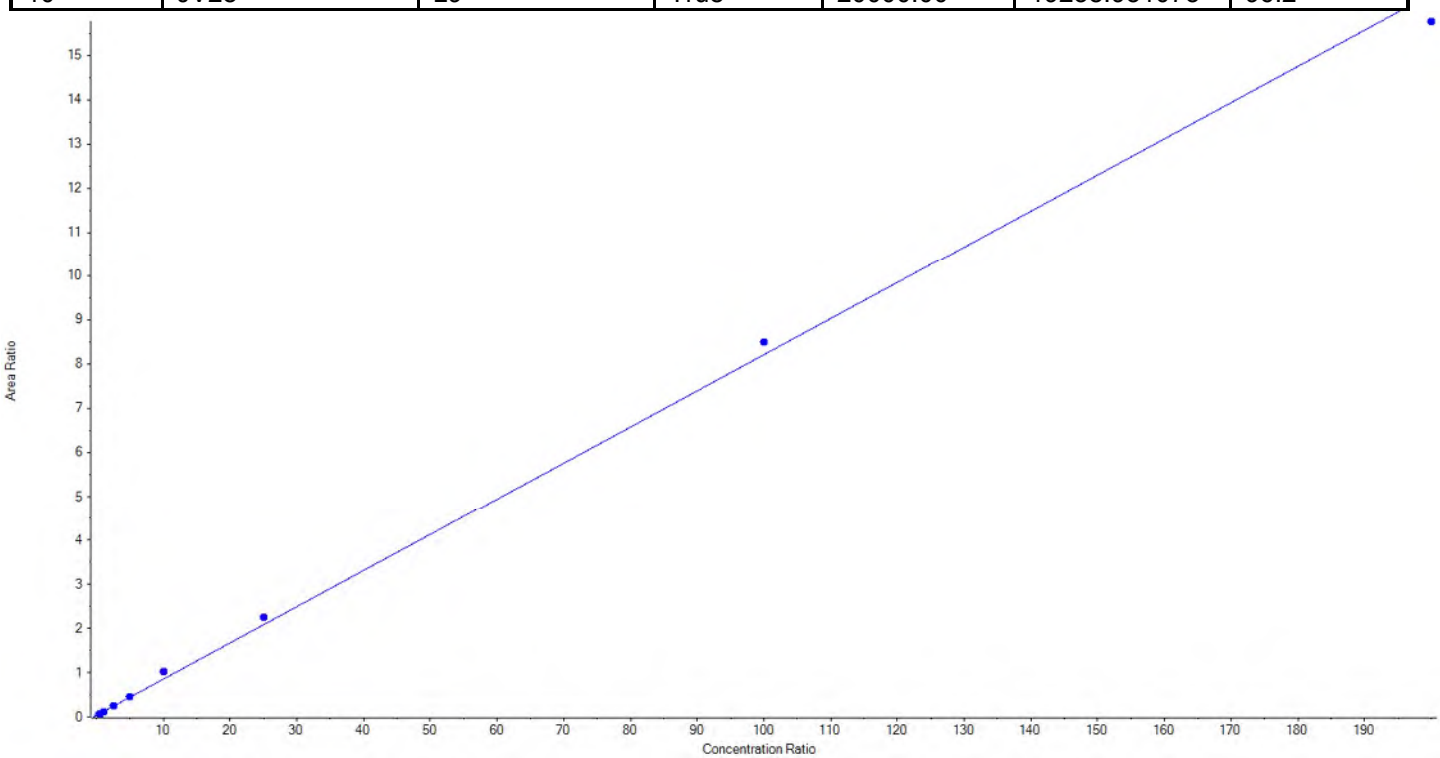
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFDoA_2	**Data File**	06022018.wiff
MRM Transition	613.0 / 319.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C2-PFDoA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.08176 x + 0.03563 (r = 0.99832) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	< 0	N/A
3	JV21	L2	True	50.00	39.687027	79.4
4	JV22	L3	True	100.00	83.880192	83.9
5	JV23	L4	True	250.00	259.821040	103.9
6	JV24	L5	True	500.00	516.488741	103.3
7	JV25	L6	True	1000.00	1217.976067	121.8
8	JV26	L7	True	2500.00	2703.172328	108.1
9	JV27	L8	True	10000.00	10340.043532	103.4
10	JV28	L9	True	20000.00	19238.931073	96.2



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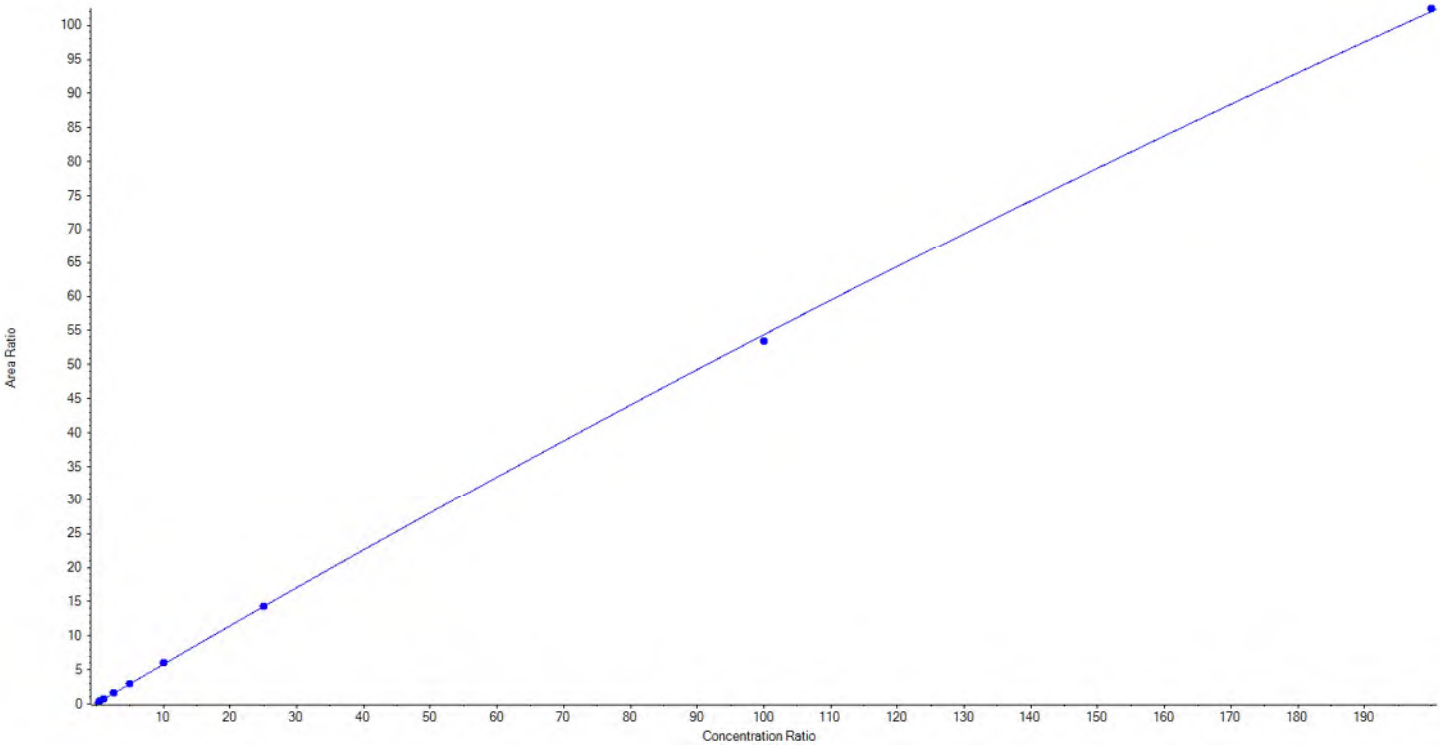
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFTrDA_1	**Data File**	06022018.wiff
MRM Transition	663.0 / 619.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = -3.35582e-4 x^2 + 0.57688 x + 0.06065 (r = 0.99984) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	17.820321	71.3
3	JV21	L2	True	50.00	54.011640	108.0
4	JV22	L3	True	100.00	108.910297	108.9
5	JV23	L4	True	250.00	267.690412	107.1
6	JV24	L5	True	500.00	506.930895	101.4
7	JV25	L6	True	1000.00	1039.791932	104.0
8	JV26	L7	True	2500.00	2517.595628	100.7
9	JV27	L8	True	10000.00	9814.361419	98.1
10	JV28	L9	True	20000.00	20101.185251	100.5



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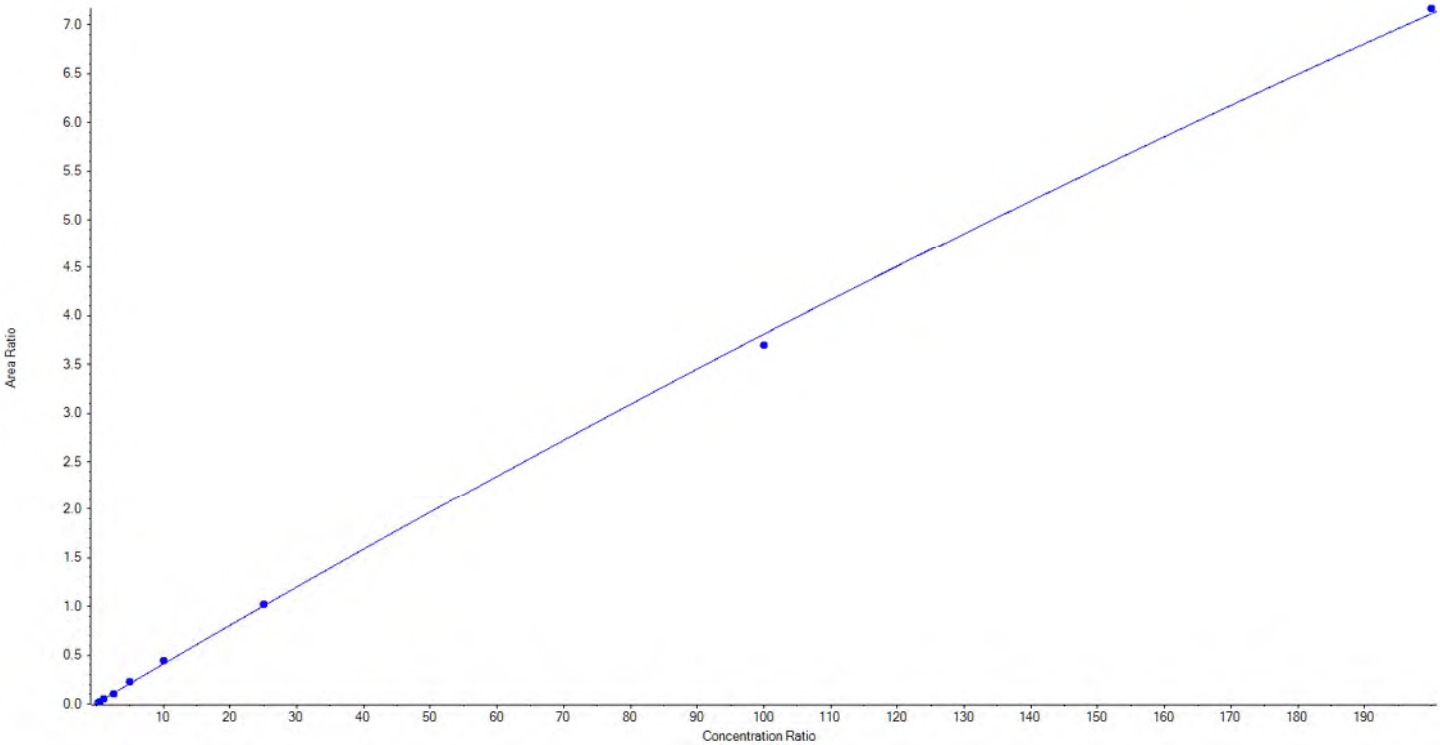
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFTrDA_2	**Data File**	06022018.wiff
MRM Transition	663.0 / 169.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = -2.49900e-5 x^2 + 0.04054 x + 0.00687 (r = 0.99951) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	4.270220	17.1
3	JV21	L2	True	50.00	35.468877	70.9
4	JV22	L3	True	100.00	116.693833	116.7
5	JV23	L4	True	250.00	243.784060	97.5
6	JV24	L5	True	500.00	535.379714	107.1
7	JV25	L6	True	1000.00	1087.288041	108.7
8	JV26	L7	True	2500.00	2535.950933	101.4
9	JV27	L8	True	10000.00	9675.448826	96.8
10	JV28	L9	True	20000.00	20176.892858	100.9



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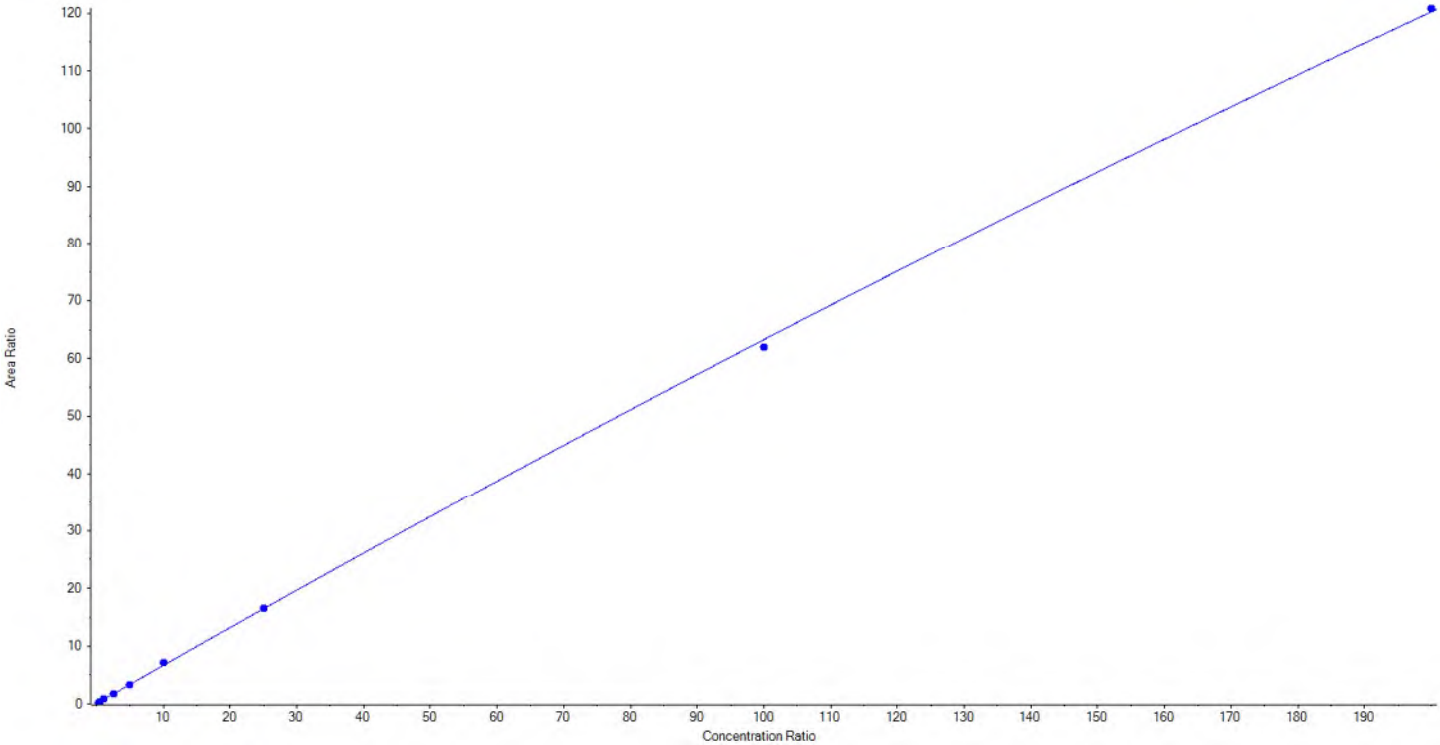
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFTeDA_1	**Data File**	06022018.wiff
MRM Transition	713.0 / 669.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = -3.13079e-4 x^2 + 0.66341 x + 0.05875 (r = 0.99980) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	20.617683	82.5
3	JV21	L2	True	50.00	48.921257	97.8
4	JV22	L3	True	100.00	110.236479	110.2
5	JV23	L4	True	250.00	263.611103	105.4
6	JV24	L5	True	500.00	488.492897	97.7
7	JV25	L6	True	1000.00	1067.843507	106.8
8	JV26	L7	True	2500.00	2526.346229	101.1
9	JV27	L8	True	10000.00	9794.187339	97.9
10	JV28	L9	True	20000.00	20107.055801	100.5



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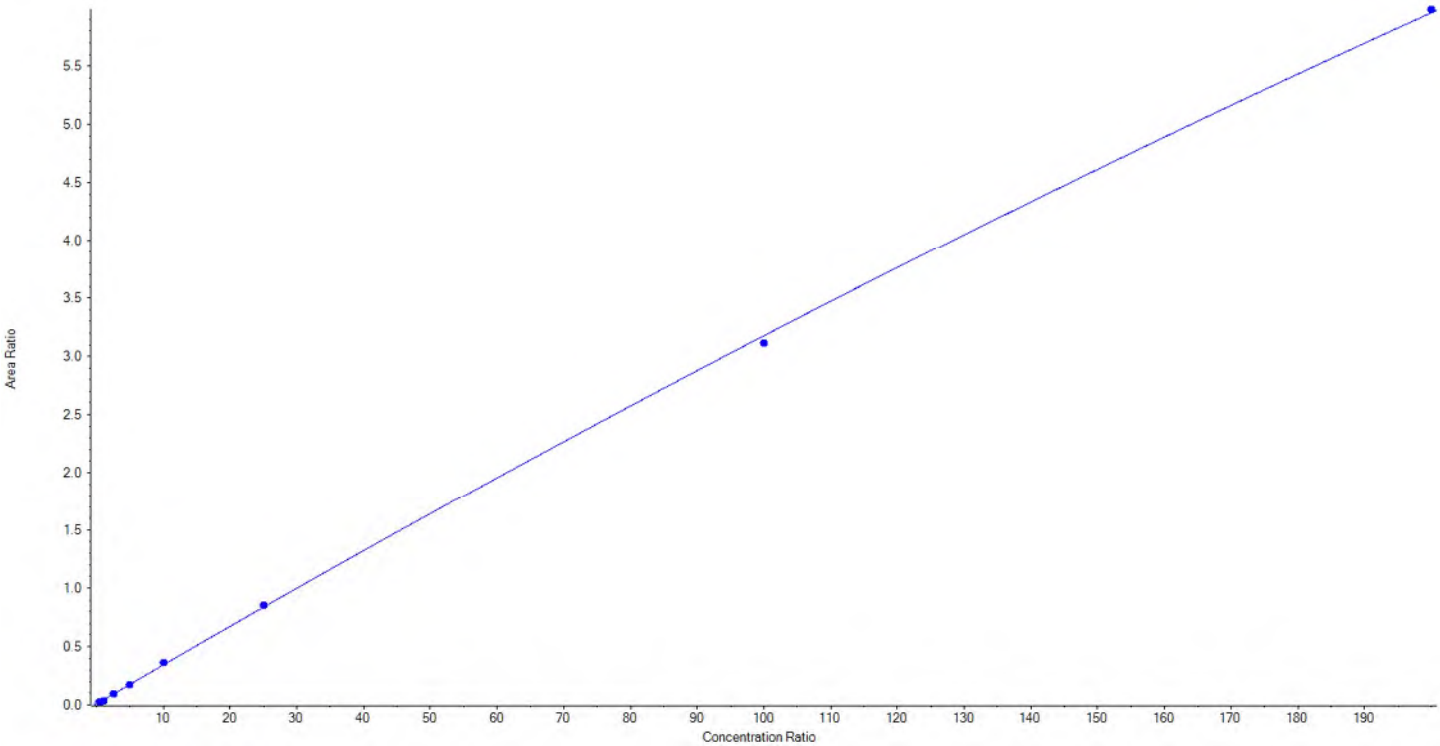
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFTeDA_2	**Data File**	06022018.wiff
MRM Transition	713.0 / 169.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = -1.94190e-5 x^2 + 0.03362 x + 0.00841 (r = 0.99982) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	3.327932	13.3
3	JV21	L2	True	50.00	51.038361	102.1
4	JV22	L3	True	100.00	90.229862	90.2
5	JV23	L4	True	250.00	258.448811	103.4
6	JV24	L5	True	500.00	488.438827	97.7
7	JV25	L6	True	1000.00	1058.685386	105.9
8	JV26	L7	True	2500.00	2558.107883	102.3
9	JV27	L8	True	10000.00	9790.262690	97.9
10	JV28	L9	True	20000.00	20108.230300	100.5



BATTELLE

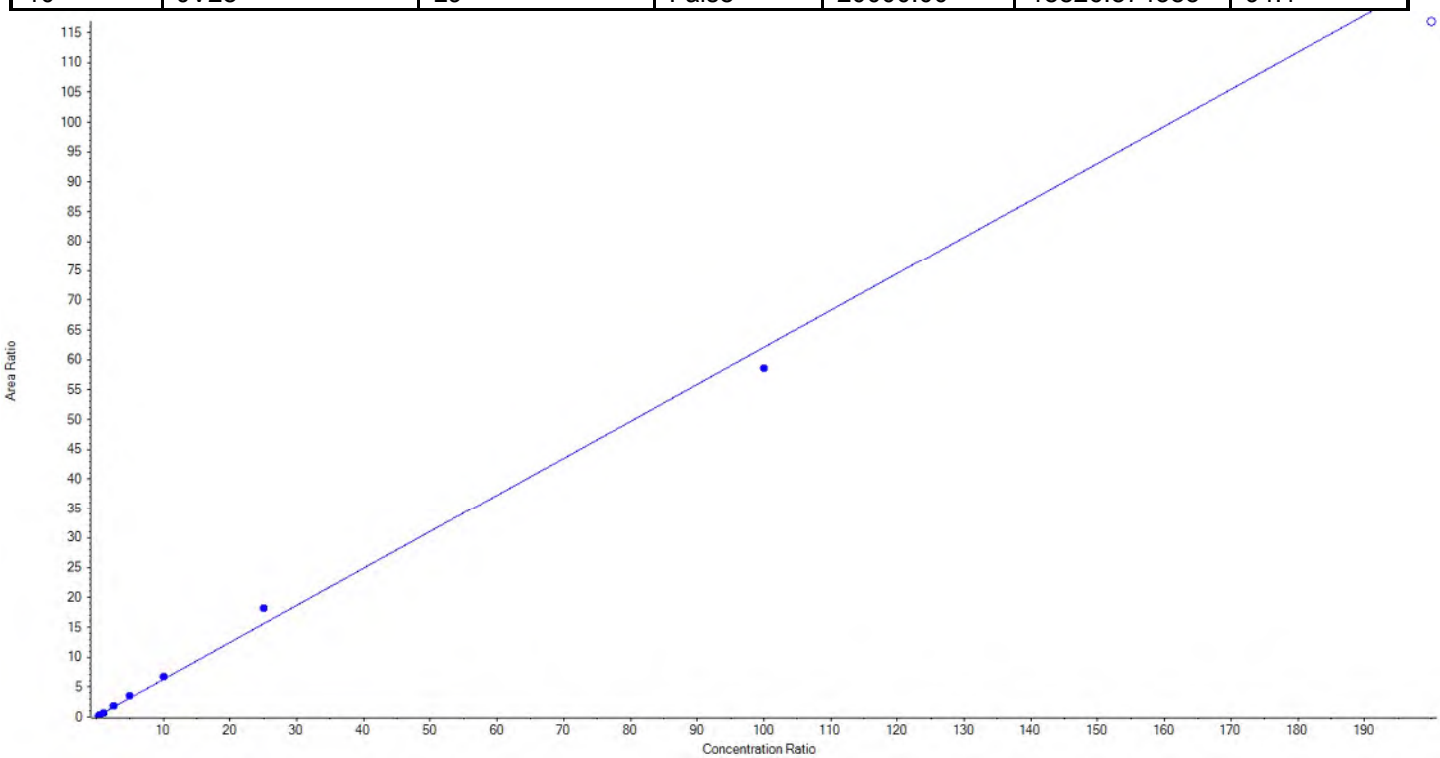
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	NMeFOSAA_1	**Data File**	06022018.wiff
MRM Transition	570.0 / 419.0	**Result Table**	18-0340_BASE_D
Internal Standard	d3-MeFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.62027 x + 0.06299 (r = 0.99559) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	19.451114	77.8
3	JV21	L2	True	50.00	45.318420	90.6
4	JV22	L3	True	100.00	91.267271	91.3
5	JV23	L4	True	250.00	275.958428	110.4
6	JV24	L5	True	500.00	556.930555	111.4
7	JV25	L6	True	1000.00	1070.771413	107.1
8	JV26	L7	True	2500.00	2926.392686	117.1
9	JV27	L8	True	10000.00	9438.910112	94.4
10	JV28	L9	False	20000.00	18826.874385	94.1



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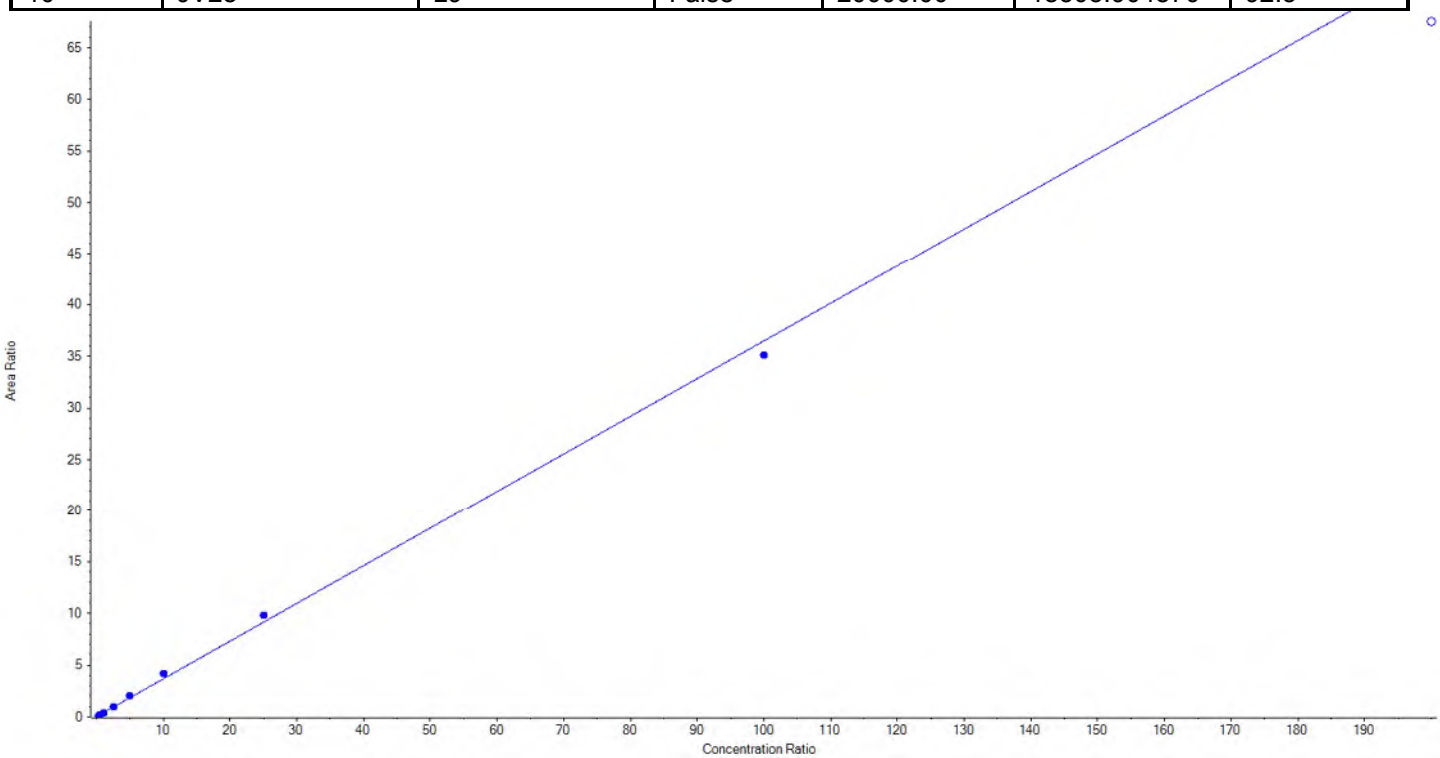
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	NMeFOSAA_2	**Data File**	06022018.wiff
MRM Transition	570.0 / 512.0	**Result Table**	18-0340_BASE_D
Internal Standard	d3-MeFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.36467 x + 0.03706 (r = 0.99800) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	18.997036	76.0
3	JV21	L2	True	50.00	44.533991	89.1
4	JV22	L3	True	100.00	106.582400	106.6
5	JV23	L4	True	250.00	256.073972	102.4
6	JV24	L5	True	500.00	538.991083	107.8
7	JV25	L6	True	1000.00	1141.521714	114.2
8	JV26	L7	True	2500.00	2693.283241	107.7
9	JV27	L8	True	10000.00	9625.016563	96.3
10	JV28	L9	False	20000.00	18505.904870	92.5



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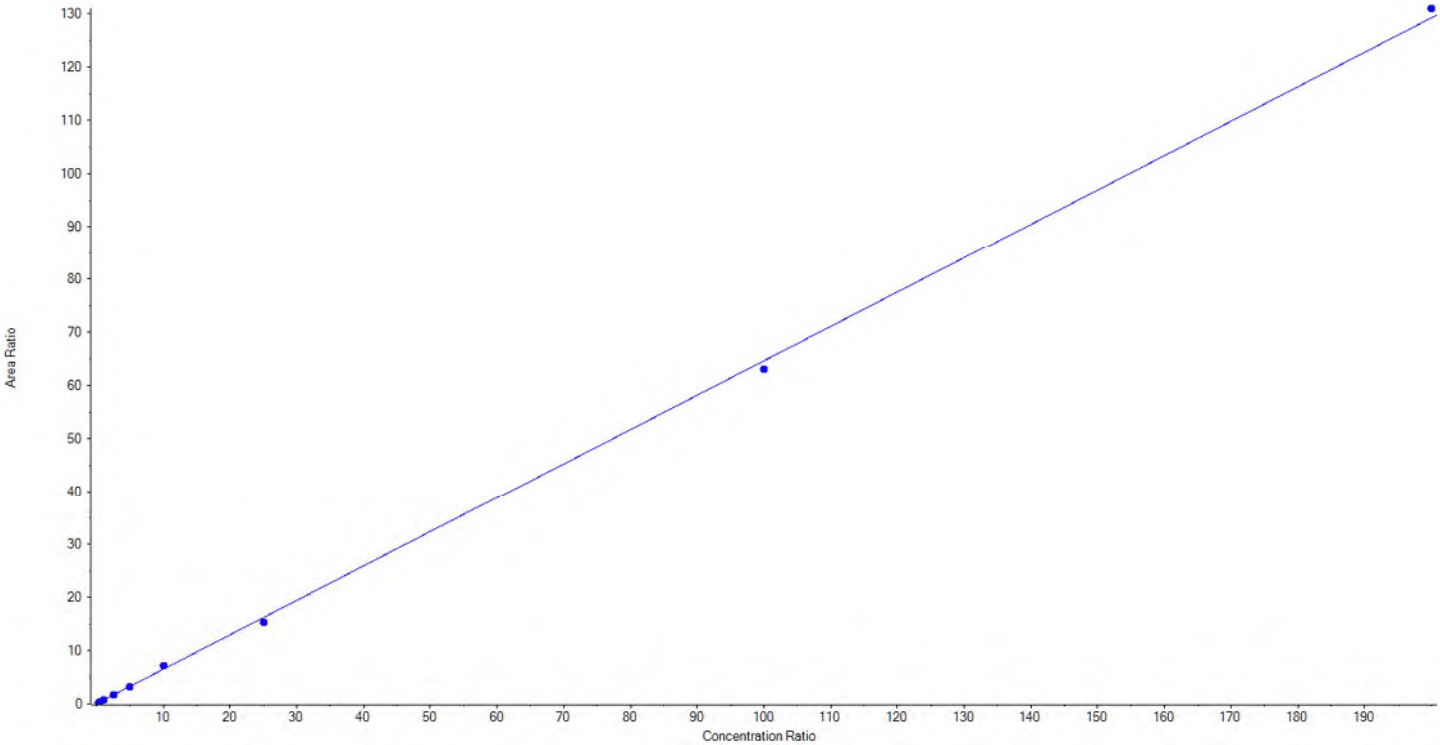
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	NEtFOSAA_1	**Data File**	06022018.wiff
MRM Transition	584.0 / 419.0	**Result Table**	18-0340_BASE_D
Internal Standard	d5-EtFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.64602 x + 0.04775 (r = 0.99955) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	23.293026	93.2
3	JV21	L2	True	50.00	51.097829	102.2
4	JV22	L3	True	100.00	101.049002	101.1
5	JV23	L4	True	250.00	257.258021	102.9
6	JV24	L5	True	500.00	478.385571	95.7
7	JV25	L6	True	1000.00	1111.914193	111.2
8	JV26	L7	True	2500.00	2371.634278	94.9
9	JV27	L8	True	10000.00	9758.856489	97.6
10	JV28	L9	True	20000.00	20271.511589	101.4



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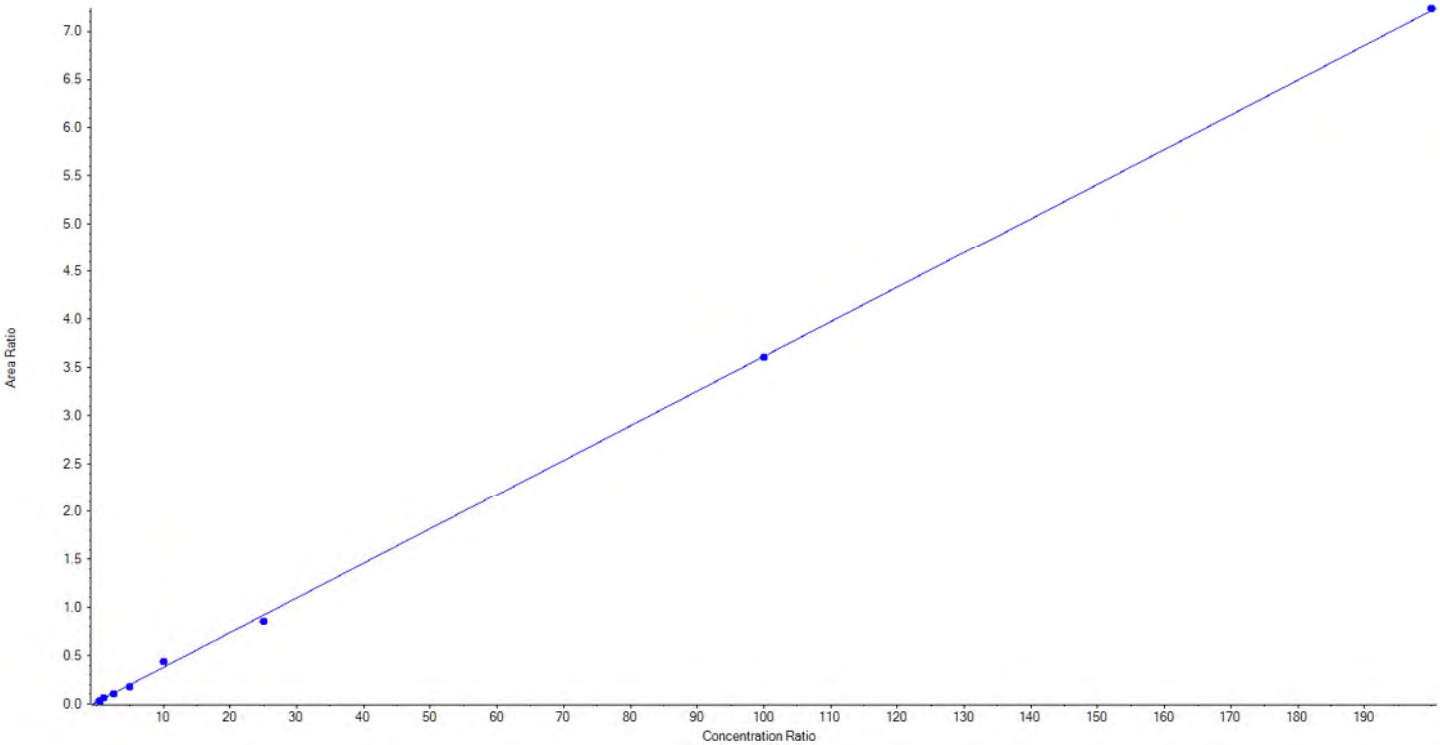
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	NEtFOSAA_2	**Data File**	06022018.wiff
MRM Transition	584.0 / 483.0	**Result Table**	18-0340_BASE_D
Internal Standard	d5-EtFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.03597 x + 0.01915 (r = 0.99914) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	< 0	N/A
3	JV21	L2	True	50.00	37.126461	74.3
4	JV22	L3	True	100.00	129.633915	129.6
5	JV23	L4	True	250.00	238.475224	95.4
6	JV24	L5	True	500.00	453.011265	90.6
7	JV25	L6	True	1000.00	1166.861666	116.7
8	JV26	L7	True	2500.00	2333.234004	93.3
9	JV27	L8	True	10000.00	9979.401223	99.8
10	JV28	L9	True	20000.00	20062.256243	100.3



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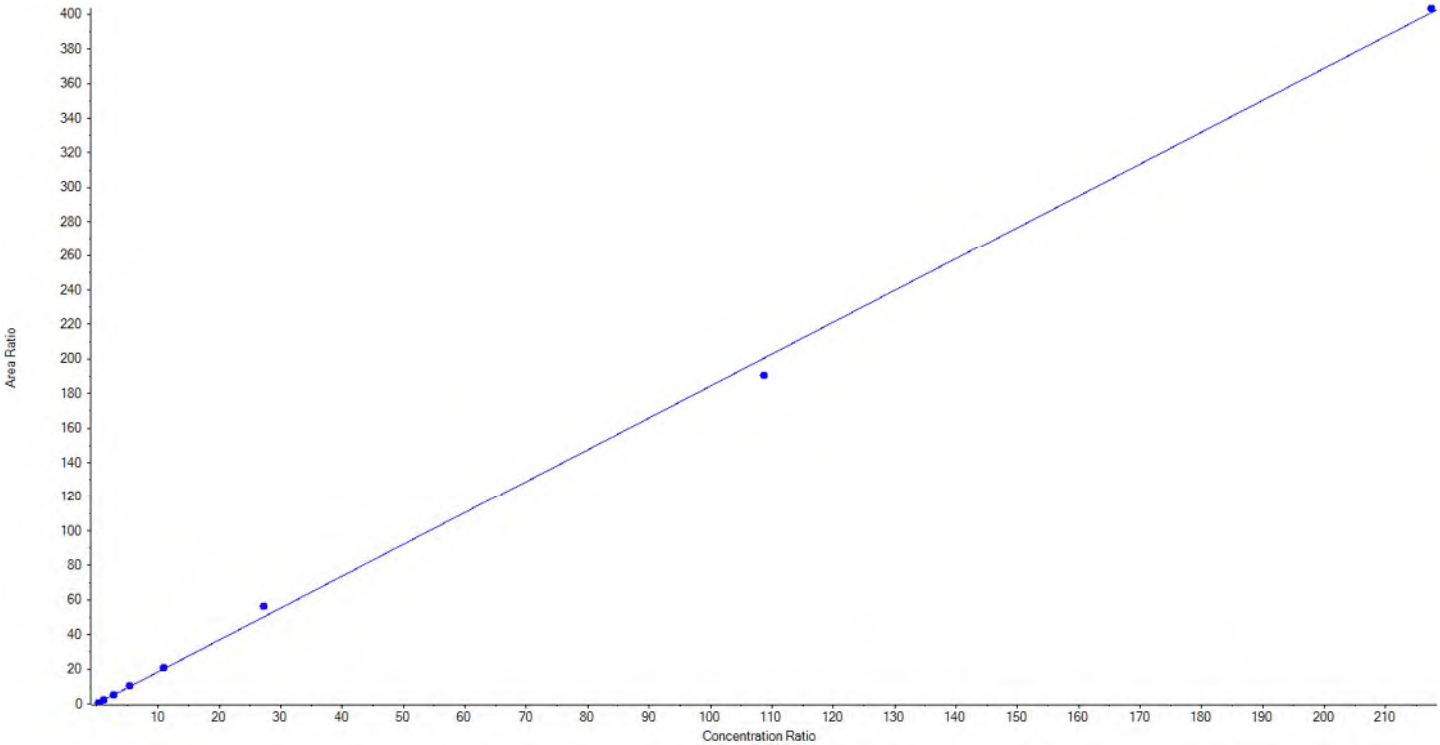
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFBS_1	**Data File**	6072018.wiff
MRM Transition	298.9 / 80.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C3-PFBS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.84377 x + 0.04421 (r = 0.99889) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.25	22.943131	90.9
3	JV21	L2	True	50.50	39.339005	77.9
4	JV22	L3	True	101.00	114.073097	112.9
5	JV23	L4	True	252.50	259.829558	102.9
6	JV24	L5	True	505.00	513.918478	101.8
7	JV25	L6	True	1010.00	1063.678573	105.3
8	JV26	L7	True	2525.00	2847.628626	112.8
9	JV27	L8	True	10100.00	9589.730089	95.0
10	JV28	L9	True	20200.00	20318.109443	100.6



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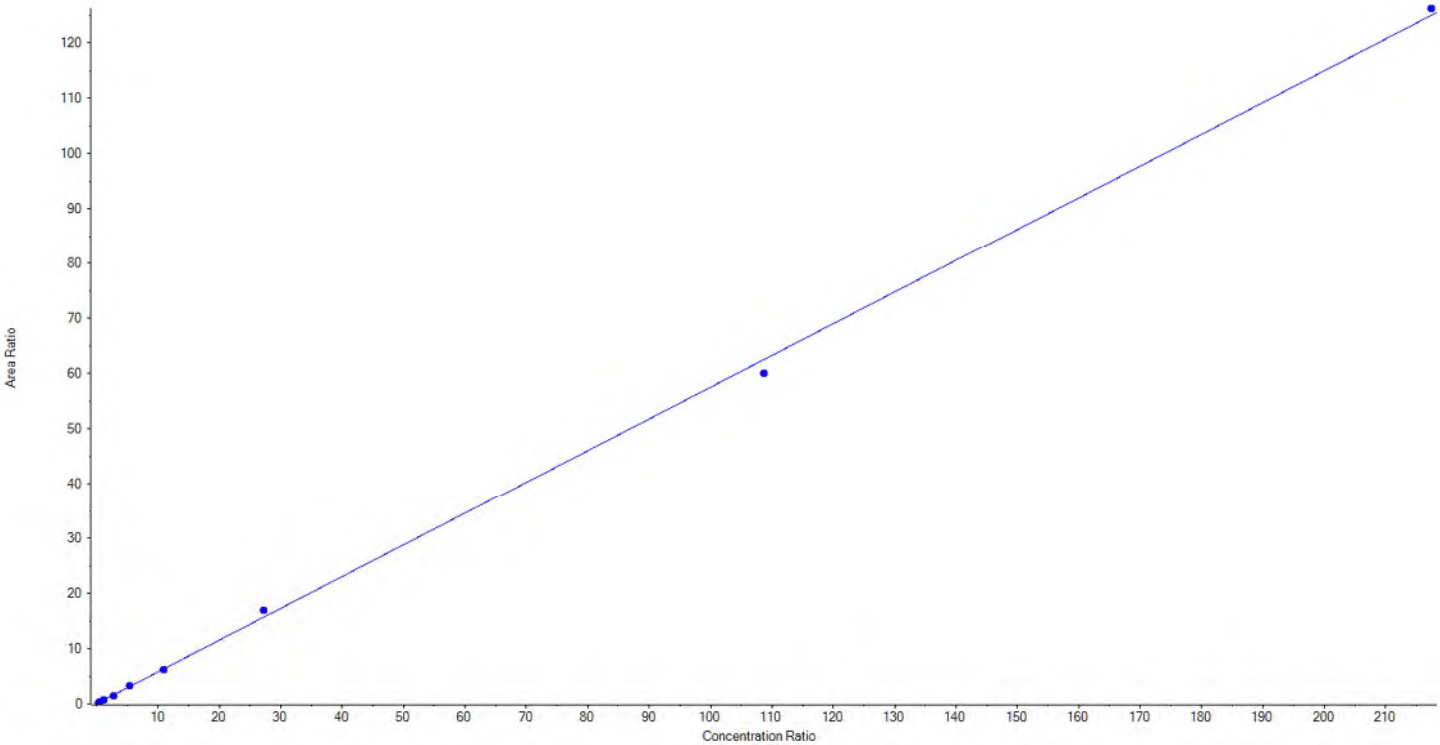
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFBS_2	**Data File**	6072018.wiff
MRM Transition	298.9 / 99.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C3-PFBS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.57485 x + 0.03128 (r = 0.99948) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.25	24.912423	98.7
3	JV21	L2	True	50.50	48.712633	96.5
4	JV22	L3	True	101.00	102.205673	101.2
5	JV23	L4	True	252.50	244.309260	96.8
6	JV24	L5	True	505.00	520.831671	103.1
7	JV25	L6	True	1010.00	995.650839	98.6
8	JV26	L7	True	2525.00	2731.008942	108.2
9	JV27	L8	True	10100.00	9703.159053	96.1
10	JV28	L9	True	20200.00	20398.459505	101.0



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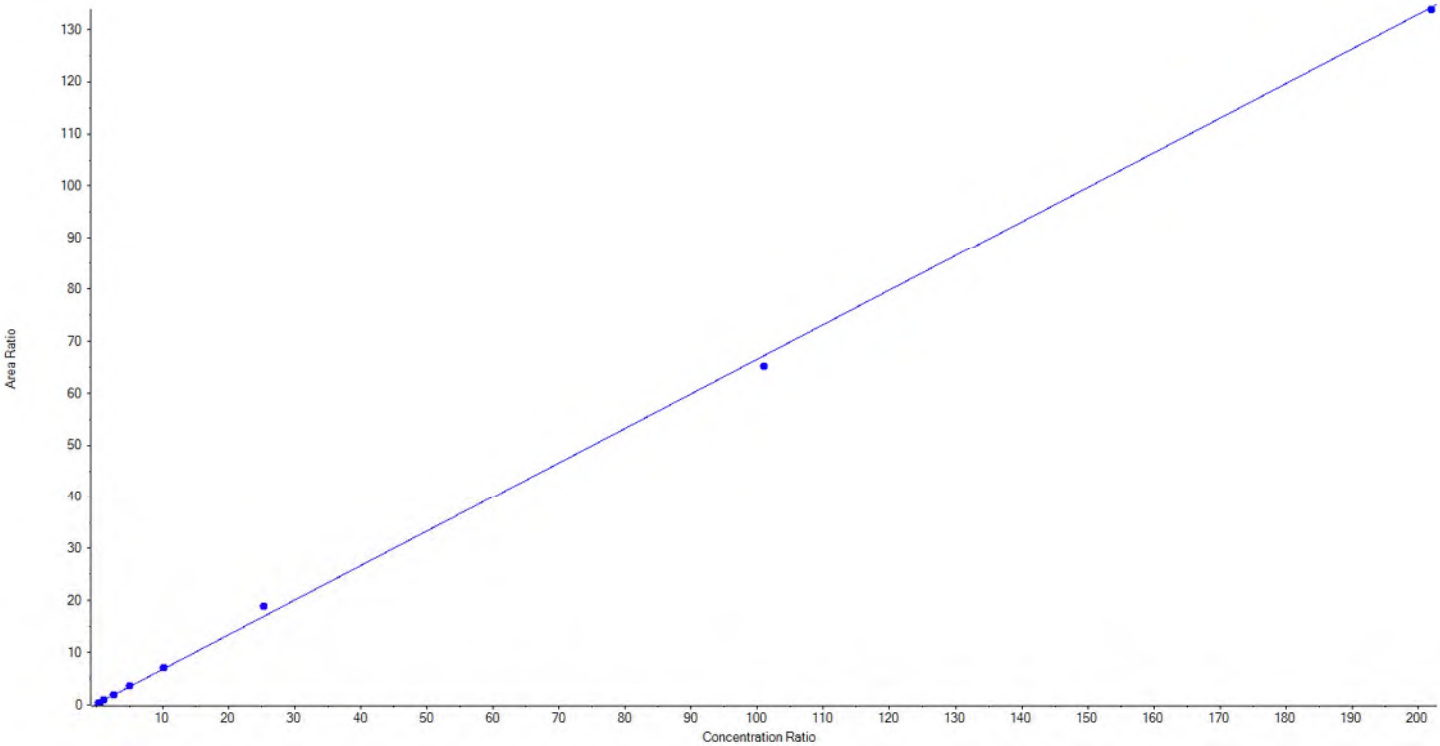
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFHxA_1	**Data File**	6072018.wiff
MRM Transition	313.0 / 269.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C5-PFHxA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.66370 x + 0.17756 (r = 0.99925) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.25	22.304831	88.3
3	JV21	L2	True	50.50	37.454645	74.2
4	JV22	L3	True	101.00	115.048578	113.9
5	JV23	L4	True	252.50	269.243911	106.6
6	JV24	L5	True	505.00	533.089291	105.6
7	JV25	L6	True	1010.00	1044.569383	103.4
8	JV26	L7	True	2525.00	2808.965200	111.3
9	JV27	L8	True	10100.00	9799.793529	97.0
10	JV28	L9	True	20200.00	20138.780632	99.7



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Calibration Summary Report

Created with Analyst Reporter
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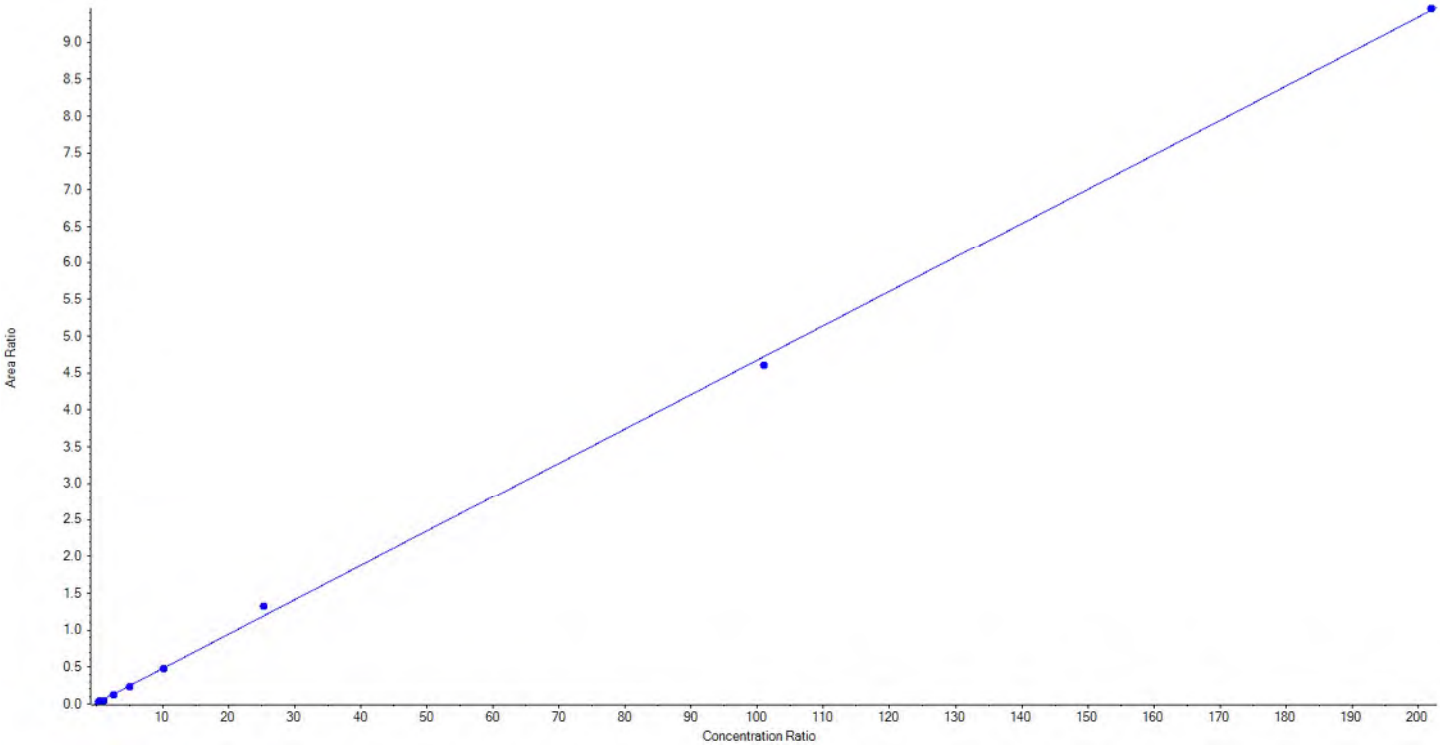
Analyte Name	PFHxA_2	**Data File**	6072018.wiff
MRM Transition	313.0 / 119.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C5-PFHxA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.04664 x + 0.01259 (r = 0.99919) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.25	31.161550	123.4
3	JV21	L2	True	50.50	57.639587	114.1
4	JV22	L3	True	101.00	73.100366	72.4
5	JV23	L4	True	252.50	222.023864	87.9
6	JV24	L5	True	505.00	472.175740	93.5
7	JV25	L6	True	1010.00	1006.463495	99.7
8	JV26	L7	True	2525.00	2809.105294	111.3
9	JV27	L8	True	10100.00	9846.220727	97.5
10	JV28	L9	True	20200.00	20251.359377	100.3



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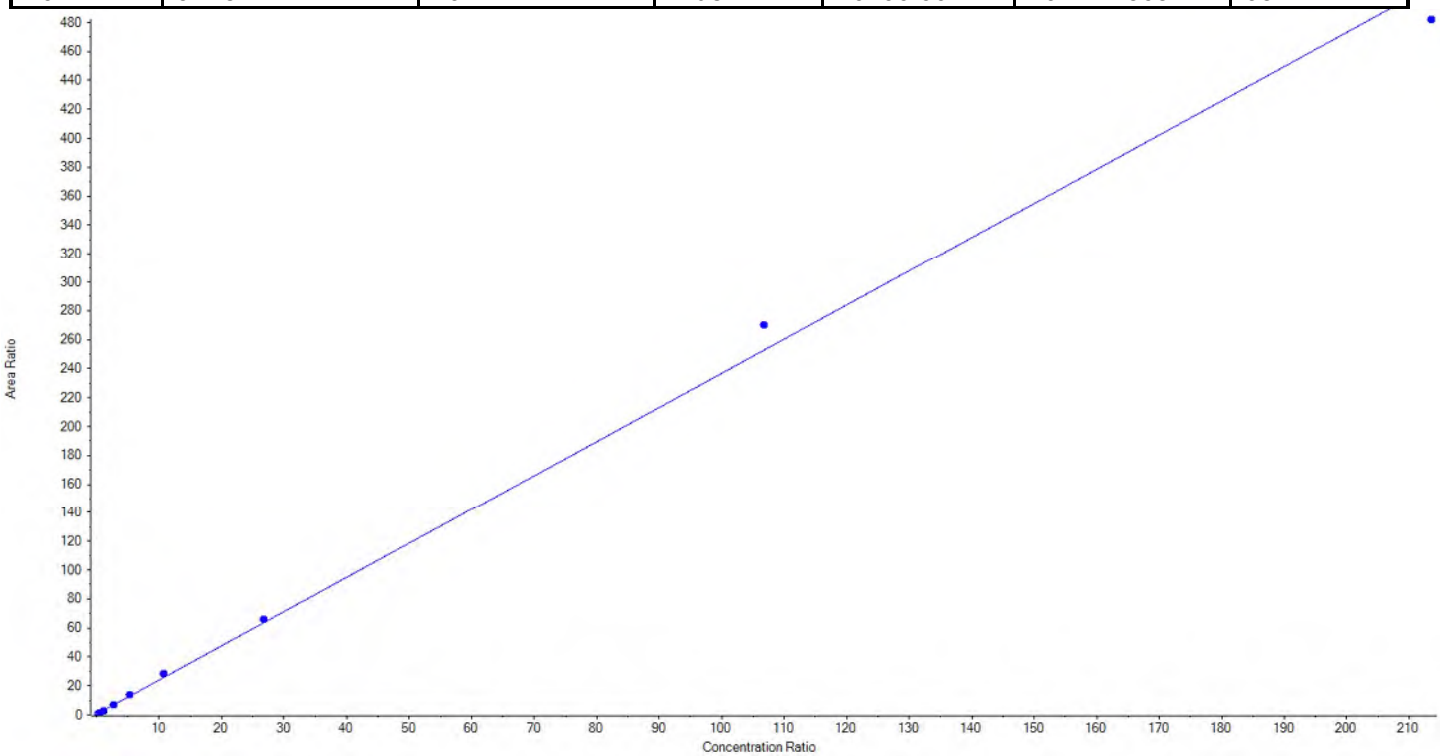
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFHxS_1	**Data File**	6072018.wiff
MRM Transition	399.0 / 80.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C3-PFHxS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 2.36367 x + 0.42259 (r = 0.99834) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.25	9.752860	38.6
3	JV21	L2	True	50.50	45.387995	89.9
4	JV22	L3	True	101.00	89.455284	88.6
5	JV23	L4	True	252.50	253.432861	100.4
6	JV24	L5	True	505.00	527.365589	104.4
7	JV25	L6	True	1010.00	1111.039507	110.0
8	JV26	L7	True	2525.00	2633.866868	104.3
9	JV27	L8	True	10100.00	10809.315573	107.0
10	JV28	L9	True	20200.00	19274.136322	95.4



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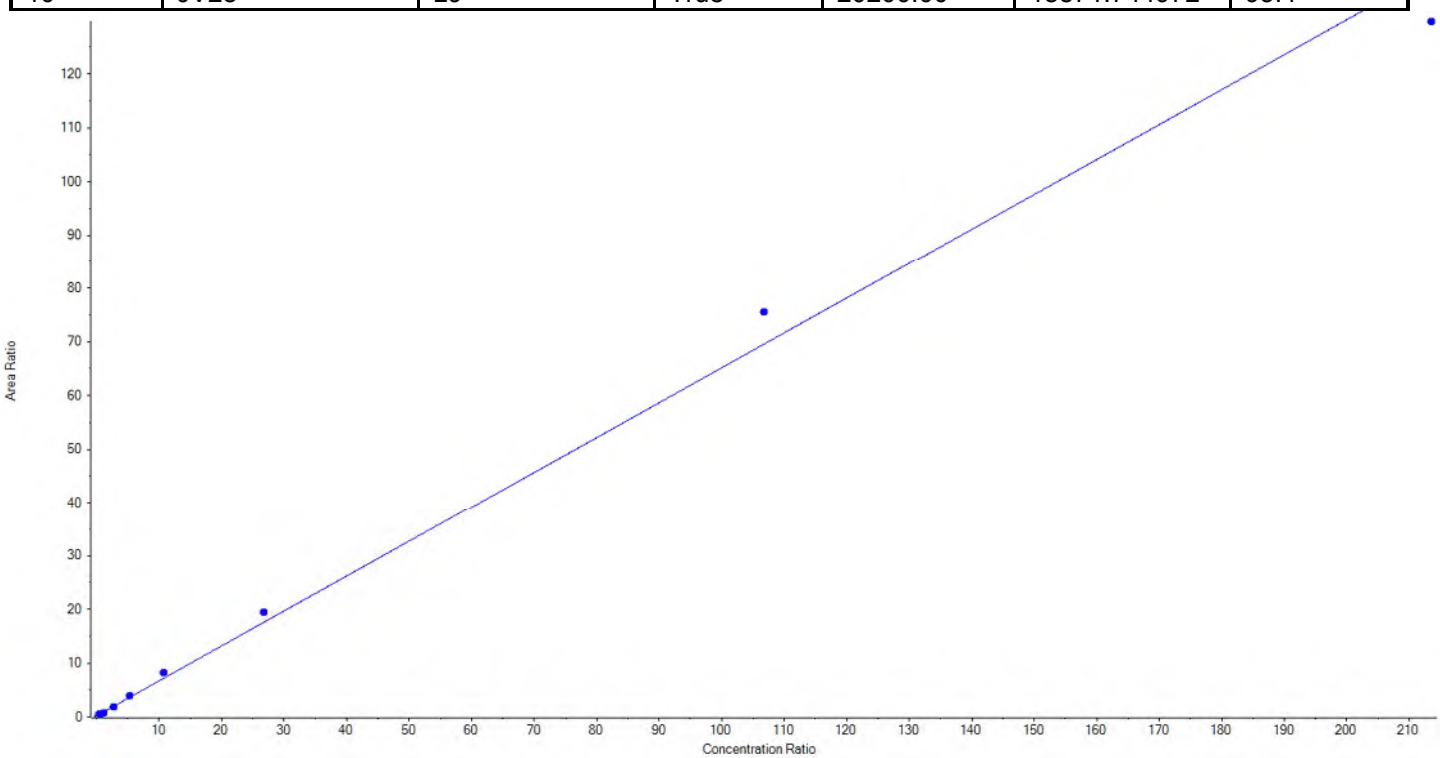
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFHxS_2	**Data File**	6072018.wiff
MRM Transition	399.0 / 99.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C3-PFHxS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.64944 x + 0.20569 (r = 0.99656) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.25	4.853831	19.2
3	JV21	L2	True	50.50	41.722055	82.6
4	JV22	L3	True	101.00	86.095976	85.2
5	JV23	L4	True	252.50	243.062956	96.3
6	JV24	L5	True	505.00	538.271166	106.6
7	JV25	L6	True	1010.00	1171.538070	116.0
8	JV26	L7	True	2525.00	2805.077301	111.1
9	JV27	L8	True	10100.00	10986.487505	108.8
10	JV28	L9	True	20200.00	18871.744972	93.4



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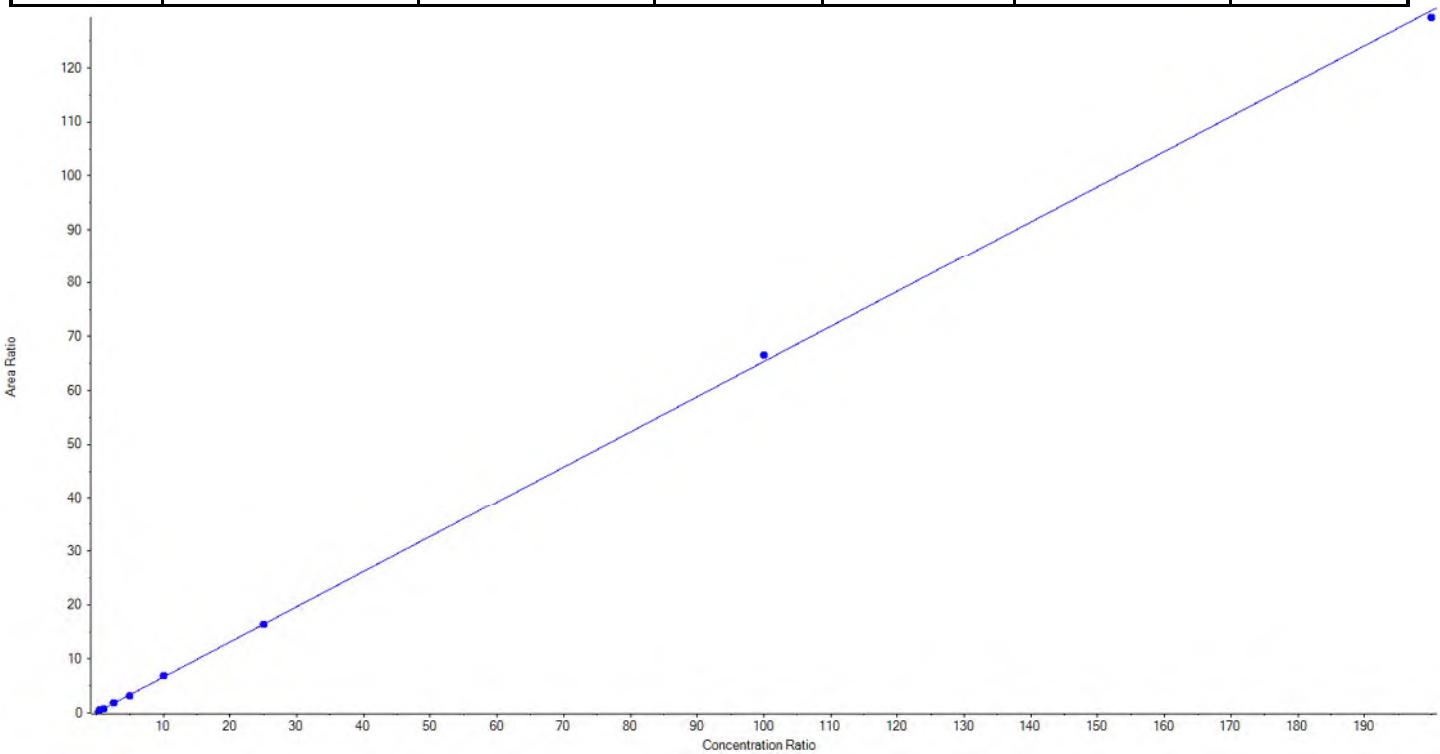
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFOA_1	**Data File**	6072018.wiff
MRM Transition	413.0 / 369.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C8-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.65267 x + 0.09107 (r = 0.99980) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	18.098123	72.4
3	JV21	L2	True	50.00	61.859763	123.7
4	JV22	L3	True	100.00	100.186034	100.2
5	JV23	L4	True	250.00	263.728976	105.5
6	JV24	L5	True	500.00	471.973791	94.4
7	JV25	L6	True	1000.00	1034.220060	103.4
8	JV26	L7	True	2500.00	2488.582766	99.5
9	JV27	L8	True	10000.00	10183.705964	101.8
10	JV28	L9	True	20000.00	19802.644523	99.0



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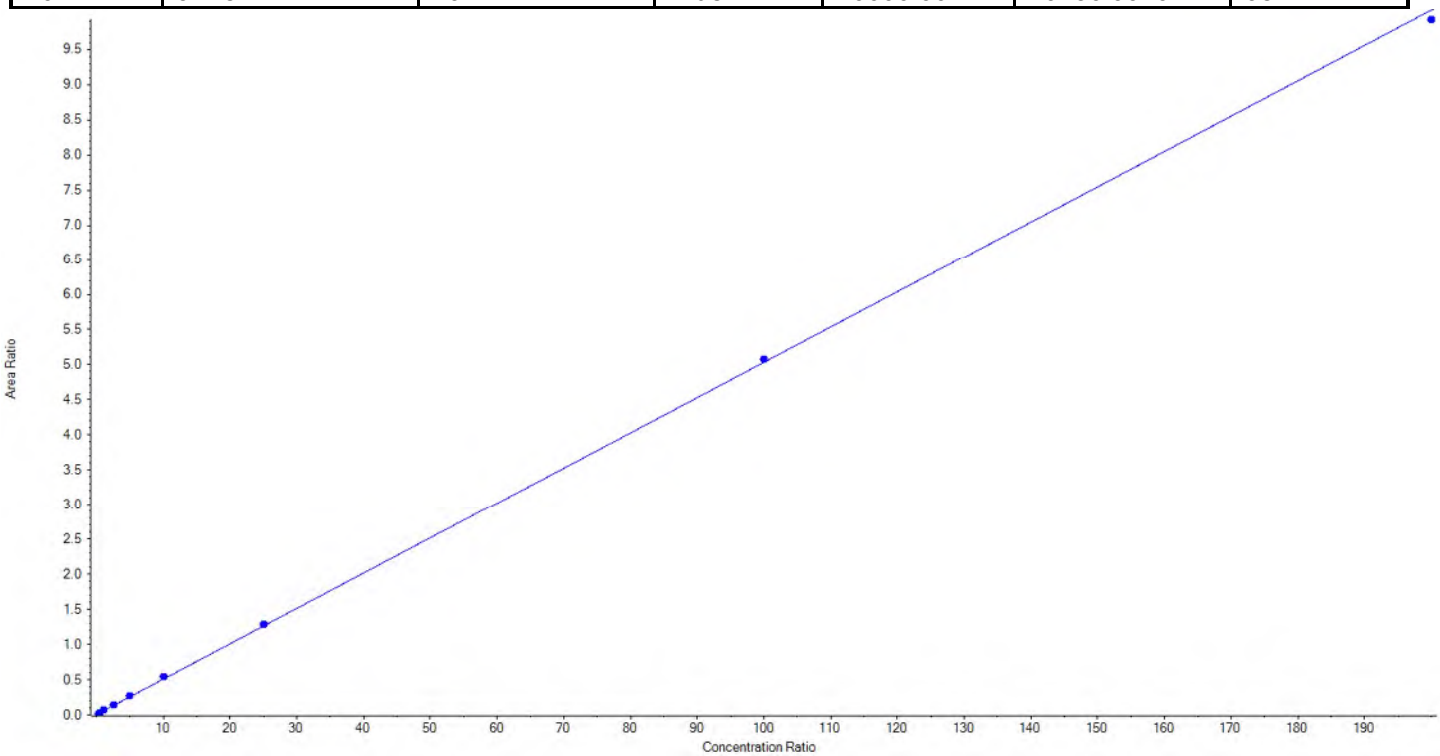
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFOA_2	**Data File**	6072018.wiff
MRM Transition	413.0 / 169.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C8-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.05028 x + 0.00540 (r = 0.99961) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	12.441327	49.8
3	JV21	L2	True	50.00	51.629941	103.3
4	JV22	L3	True	100.00	119.994280	120.0
5	JV23	L4	True	250.00	284.617570	113.9
6	JV24	L5	True	500.00	528.858321	105.8
7	JV25	L6	True	1000.00	1062.505616	106.3
8	JV26	L7	True	2500.00	2537.223548	101.5
9	JV27	L8	True	10000.00	10096.737383	101.0
10	JV28	L9	True	20000.00	19730.992014	98.7



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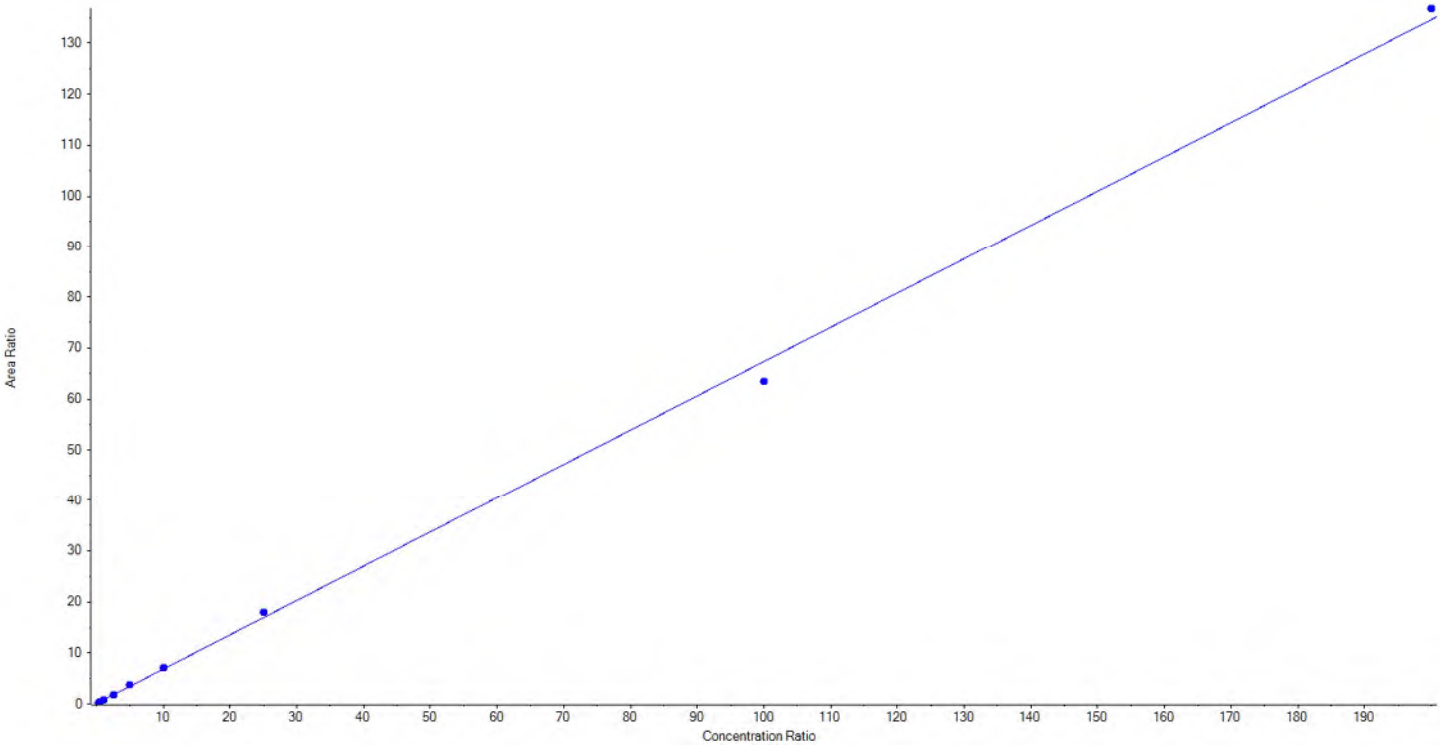
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFNA_1	**Data File**	6072018.wiff
MRM Transition	463.0 / 419.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C9-PFNA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.67253 x + 0.08413 (r = 0.99919) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	20.380243	81.5
3	JV21	L2	True	50.00	46.646813	93.3
4	JV22	L3	True	100.00	104.458467	104.5
5	JV23	L4	True	250.00	263.701795	105.5
6	JV24	L5	True	500.00	551.318989	110.3
7	JV25	L6	True	1000.00	1029.603636	103.0
8	JV26	L7	True	2500.00	2651.434689	106.1
9	JV27	L8	True	10000.00	9435.478644	94.4
10	JV28	L9	True	20000.00	20321.976724	101.6



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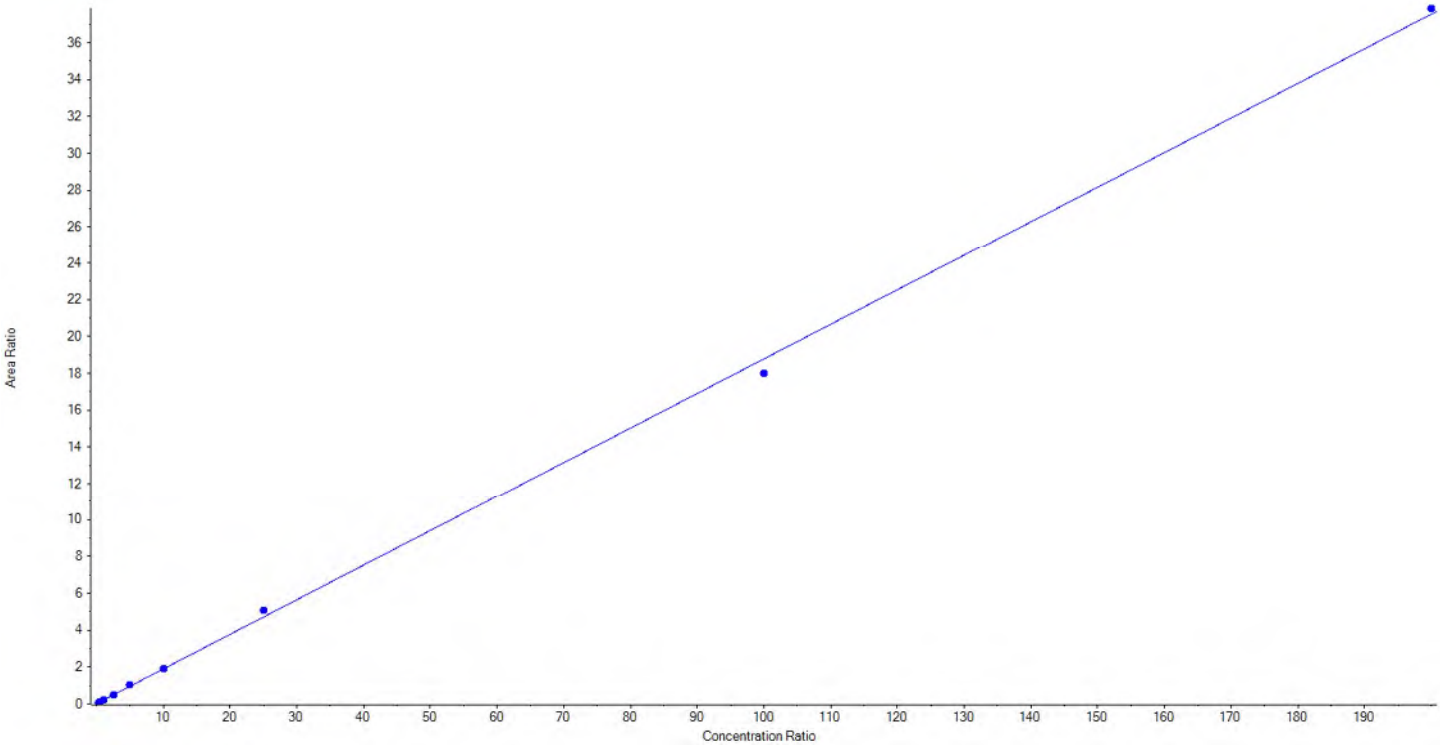
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFNA_2	**Data File**	6072018.wiff
MRM Transition	463.0 / 219.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C9-PFNA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.18770 x + 0.01753 (r = 0.99936) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	19.401848	77.6
3	JV21	L2	True	50.00	48.764204	97.5
4	JV22	L3	True	100.00	110.562507	110.6
5	JV23	L4	True	250.00	248.793870	99.5
6	JV24	L5	True	500.00	547.564450	109.5
7	JV25	L6	True	1000.00	1004.923499	100.5
8	JV26	L7	True	2500.00	2704.608737	108.2
9	JV27	L8	True	10000.00	9578.530176	95.8
10	JV28	L9	True	20000.00	20161.850707	100.8



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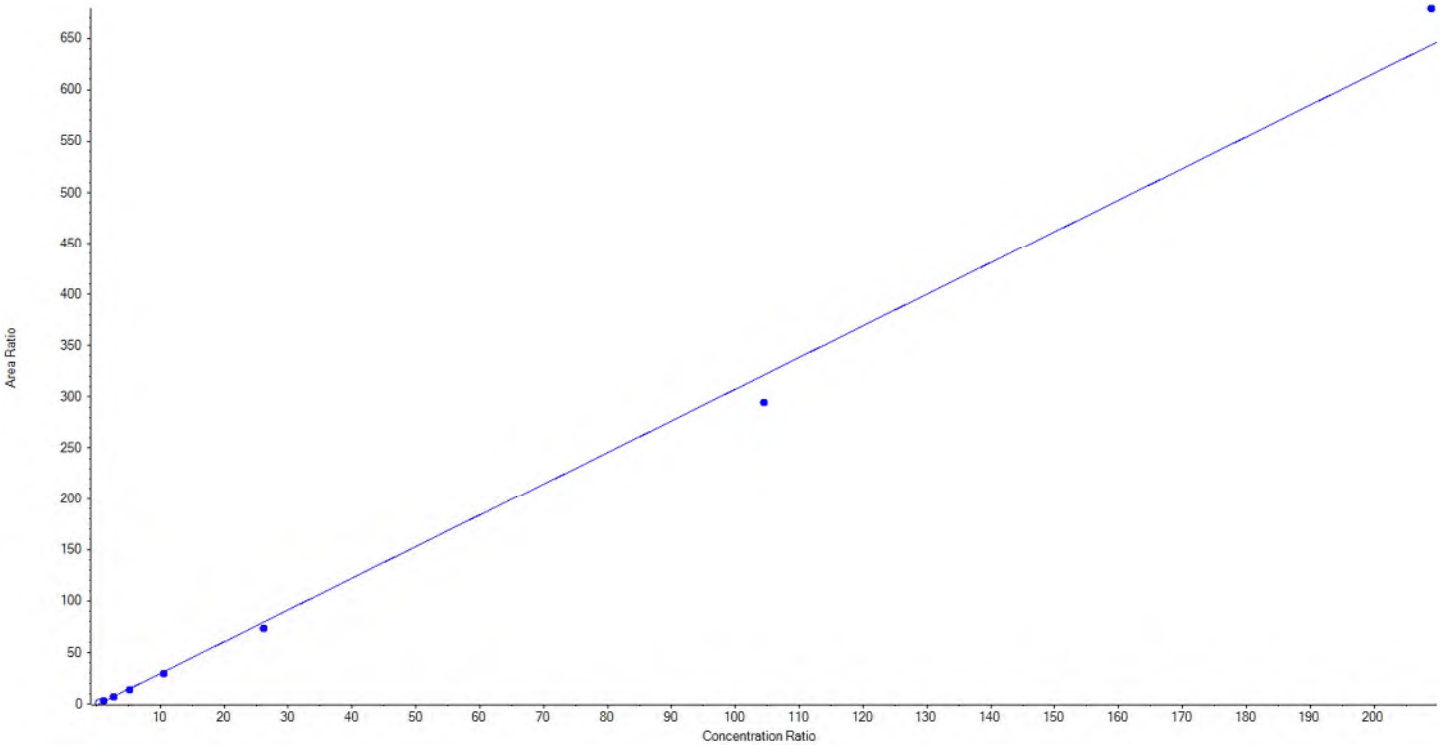
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFOS_1	**Data File**	6072018.wiff
MRM Transition	499.0 / 80.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C8-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 3.08558 x + -1.21856 (r = 0.99748) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	N/A	N/A
3	JV21	L2	False	50.00	82.820149	165.6
4	JV22	L3	True	100.00	129.733572	129.7
5	JV23	L4	True	250.00	235.569402	94.2
6	JV24	L5	True	500.00	454.217610	90.8
7	JV25	L6	True	1000.00	959.192136	95.9
8	JV26	L7	True	2500.00	2301.329728	92.1
9	JV27	L8	True	10000.00	9174.590917	91.8
10	JV28	L9	True	20000.00	21095.366634	105.5



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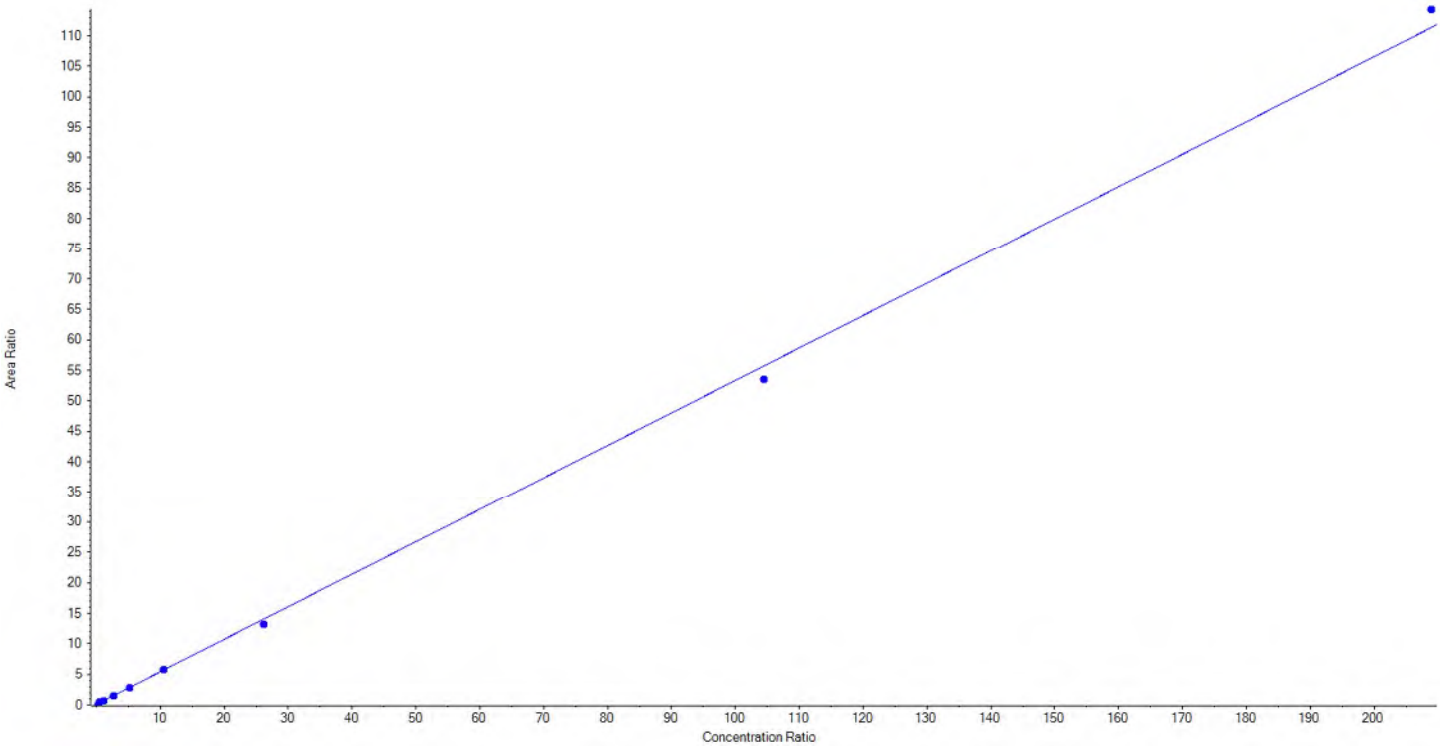
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFOS_2	**Data File**	6072018.wiff
MRM Transition	499.0 / 99.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C8-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.53221 x + 0.10898 (r = 0.99933) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	23.997962	96.0
3	JV21	L2	True	50.00	62.692160	125.4
4	JV22	L3	True	100.00	87.968313	88.0
5	JV23	L4	True	250.00	250.985901	100.4
6	JV24	L5	True	500.00	471.819806	94.4
7	JV25	L6	True	1000.00	1030.832462	103.1
8	JV26	L7	True	2500.00	2349.905622	94.0
9	JV27	L8	True	10000.00	9616.747652	96.2
10	JV28	L9	True	20000.00	20530.050123	102.7



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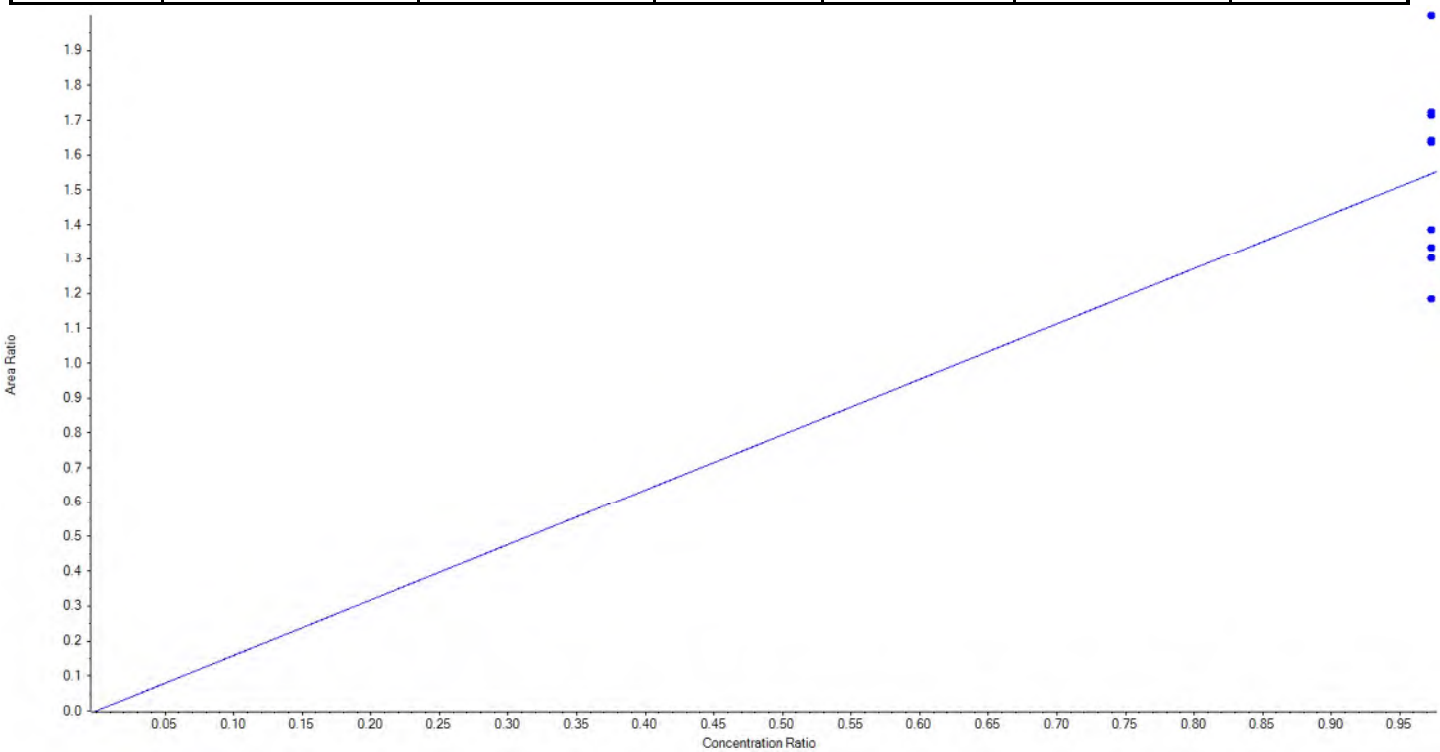
Calibration Summary Report

Analyte Name	13C3-PFBS	**Data File**	6072018.wiff
MRM Transition	302.0 / 99.0	**Result Table**	18-0340_SIS_D
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.58968 x (std. dev. = 0.26830) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	92.90	120.122306	129.3
3	JV21	L2	True	92.90	102.950879	110.8
4	JV22	L3	True	92.90	98.256449	105.8
5	JV23	L4	True	92.90	98.738375	106.3
6	JV24	L5	True	92.90	78.191083	84.2
7	JV25	L6	True	92.90	80.109585	86.2
8	JV26	L7	True	92.90	71.067112	76.5
9	JV27	L8	True	92.90	83.210187	89.6
10	JV28	L9	True	92.90	103.454023	111.4



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	Calibration Curve Concentrations (ng/L)								
	JV20	JV21	JV22	JV23	JV24	JV25	JV26	JV27	JV28
PFBA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFPeA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFHxA	25.25	50.50	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFHpA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFOA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFNA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFDA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFUnA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFDoA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFTrDA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFTeDA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
NMeFOSAA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
NEtFOSAA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFOSA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFBS	25.25	50.50	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFPeS	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFHxS (Branched)	25.25	50.50	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFHpS	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFOS (Branched)	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFNS	25.25	50.50	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFNS	25.25	50.50	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
4:2FTS	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
6:2FTS	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
8:2FTS	25.25	50.50	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
	Surrogates								
13C4-PFBA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C5-PFPeA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C5-PFHxA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C4-PFHpA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C8-PFOA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C9-PFNA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C6-PFDA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C7-PFUnA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C2-PFDoA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C2-PFTeDA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
d3-MeFOSAA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
d5-EtFOSAA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C8-FOSA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C3-PFBS	92.90	92.90	92.90	92.90	92.90	92.90	92.90	92.90	92.90
13C3-PFHxS	94.60	94.60	94.60	94.60	94.60	94.60	94.60	94.60	94.60
13C8-PFOS	95.70	95.70	95.70	95.70	95.70	95.70	95.70	95.70	95.70
13C2-4:2FTS	93.50	93.50	93.50	93.50	93.50	93.50	93.50	93.50	93.50
13C2-6:2FTS	94.90	94.90	94.90	94.90	94.90	94.90	94.90	94.90	94.90
13C2-8:2FTS	95.80	95.80	95.80	95.80	95.80	95.80	95.80	95.80	95.80
	Internal Standards								
13C3-PFBA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C2-PFOA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C2-PFDA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C4-PFOS	95.50	95.50	95.50	95.50	95.50	95.50	95.50	95.50	95.50

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Summary Quant Report

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Sample Name	JV20	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T17:43:25	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFTeDA_1	713.0 / 669.0	4.39	11015.15	21.436551	139.8	false
PFTeDA_2	713.0 / 169.0	4.38	446.22	22.060811	52.1	false
NMeFOSAA_1	570.0 / 419.0	3.46	1337.23	< 0	799.1	false
NMeFOSAA_2	570.0 / 512.0	3.46	1421.33	< 0	66.0	false
NEtFOSAA_1	584.0 / 419.0	3.64	1730.03	27.270860	97.0	false
NEtFOSAA_2	584.0 / 483.0	3.62	199.05	42.262971	48.2	false

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Summary Quant Report

Created with Analyst Reporter
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Sample Name	JV21	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T17:54:13	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFTeDA_1	713.0 / 669.0	4.38	28519.65	49.380684	233.3	false
PFTeDA_2	713.0 / 169.0	4.37	1270.40	48.102083	131.9	false
NMeFOSAA_1	570.0 / 419.0	3.46	6005.66	43.236061	225.8	false
NMeFOSAA_2	570.0 / 512.0	3.46	2351.71	< 0	108.2	false
NEtFOSAA_1	584.0 / 419.0	3.62	5470.39	57.177278	207.0	false
NEtFOSAA_2	584.0 / 483.0	3.60	396.69	61.816051	298.1	false

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Summary Quant Report

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Sample Name	JV22	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:05:02	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFTeDA_1	713.0 / 669.0	4.37	48963.88	97.075671	283.3	false
PFTeDA_2	713.0 / 169.0	4.37	2488.31	101.228589	175.6	false
NMeFOSAA_1	570.0 / 419.0	3.45	9725.04	87.693790	271.3	false
NMeFOSAA_2	570.0 / 512.0	3.45	4973.51	< 0	150.7	false
NEtFOSAA_1	584.0 / 419.0	3.62	8082.71	92.501893	171.9	false
NEtFOSAA_2	584.0 / 483.0	3.62	439.05	78.089730	100.2	false

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Summary Quant Report

Created with Analyst Reporter
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Sample Name	JV23	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:15:51	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFTeDA_1	713.0 / 669.0	4.37	127708.11	265.861484	587.2	false
PFTeDA_2	713.0 / 169.0	4.37	6421.81	261.653619	303.9	false
NMeFOSAA_1	570.0 / 419.0	3.44	22901.20	223.642580	489.6	false
NMeFOSAA_2	570.0 / 512.0	3.45	16782.38	220.034973	254.1	false
NEtFOSAA_1	584.0 / 419.0	3.61	22733.97	255.164458	332.7	false
NEtFOSAA_2	584.0 / 483.0	3.61	1676.10	321.268913	270.7	true

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Summary Quant Report

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Sample Name	JV24	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:26:39	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFTeDA_1	713.0 / 669.0	4.37	190202.72	481.260909	683.4	false
PFTeDA_2	713.0 / 169.0	4.36	9848.37	481.809932	403.0	false
NMeFOSAA_1	570.0 / 419.0	3.45	38074.04	530.382144	1036.5	false
NMeFOSAA_2	570.0 / 512.0	3.45	22258.88	472.048501	252.9	false
NEtFOSAA_1	584.0 / 419.0	3.61	35425.39	473.673727	503.3	false
NEtFOSAA_2	584.0 / 483.0	3.62	2158.59	499.606855	767.6	false

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Summary Quant Report

Created with Analyst Reporter
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Sample Name	JV25	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:37:26	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFTeDA_1	713.0 / 669.0	4.36	482630.23	1026.878933	683.2	false
PFTeDA_2	713.0 / 169.0	4.36	24887.72	1015.769348	504.7	false
NMeFOSAA_1	570.0 / 419.0	3.44	101648.29	1062.930018	796.7	false
NMeFOSAA_2	570.0 / 512.0	3.44	56775.60	975.966806	400.0	false
NEtFOSAA_1	584.0 / 419.0	3.61	87664.21	1009.008565	545.0	false
NEtFOSAA_2	584.0 / 483.0	3.60	4308.31	866.796385	862.5	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 12:25:29 PM

Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:48:14	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFTeDA_1	713.0 / 669.0	4.36	636896.88	2468.439072	743.9	false
PFTeDA_2	713.0 / 169.0	4.35	33765.70	2504.139003	653.5	false
NMeFOSAA_1	570.0 / 419.0	3.44	124139.89	3054.706272	799.1	false
NMeFOSAA_2	570.0 / 512.0	3.44	68493.41	2920.968059	425.5	false
NEtFOSAA_1	584.0 / 419.0	3.60	124540.09	2263.266176	616.1	false
NEtFOSAA_2	584.0 / 483.0	3.60	6015.14	1923.589640	855.4	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 12:25:31 PM

Sample Name	JV27	**Injection Vial**	9
Sample ID	L8	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:59:02	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFTeDA_1	713.0 / 669.0	4.35	4019247.40	10017.655860	1513.4	false
PFTeDA_2	713.0 / 169.0	4.35	208068.55	9972.538344	1345.2	false
NMeFOSAA_1	570.0 / 419.0	3.43	792035.17	10966.465685	610.4	false
NMeFOSAA_2	570.0 / 512.0	3.43	447811.59	10967.199851	717.4	false
NEtFOSAA_1	584.0 / 419.0	3.60	708379.87	10733.095778	701.0	false
NEtFOSAA_2	584.0 / 483.0	3.60	39566.04	10596.369217	434.7	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 12:25:33 PM

Sample Name	JV28	**Injection Vial**	10
Sample ID	L9	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T19:09:48	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFTeDA_1	713.0 / 669.0	4.35	4886253.00	19993.210273	1313.2	false
PFTeDA_2	713.0 / 169.0	4.35	251182.23	20015.832383	1213.9	false
NMeFOSAA_1	570.0 / 419.0	3.44	975984.81	18430.943450	641.9	false
NMeFOSAA_2	570.0 / 512.0	3.44	557928.60	18693.781810	648.5	false
NEtFOSAA_1	584.0 / 419.0	3.60	832410.90	19516.112125	770.5	false
NEtFOSAA_2	584.0 / 483.0	3.60	48364.69	20052.463209	409.5	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 11:27:53 AM

Sample Name	JV20	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:34:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.87	61361.92	108.265523	682.8	false
d3-MeFOSAA	573.0 / 419.0	3.42	13096.41	105.047166	267.9	false
d5-EtFOSAA	589.0 / 419.0	3.59	11898.48	103.705147	133.4	false
13C5-PFHxA	318.0 / 273.0	1.78	38896.69	108.803688	650.6	false
13C4-PFHpA	367.0 / 322.0	2.15	46157.94	113.936877	745.0	false
13C8-PFOA	421.0 / 376.0	2.53	58276.55	115.007017	3553.4	false
13C9-PFNA	472.0 / 427.0	2.91	60467.44	114.800446	634.6	false
13C6-PFDA	519.0 / 474.0	3.26	59842.31	118.009916	1047.4	false
13C7-PFUnA	570.0 / 525.0	3.58	64117.26	119.960314	643.6	false
13C2-PFTeDA	715.0 / 670.0	4.35	58097.73	114.470696	964.1	false
13C3-PFBS	302.0 / 99.0	1.48	13986.87	99.377388	449.2	false
13C3-PFHxS	402.0 / 99.0	2.17	10686.45	97.524926	222.3	false
13C8-PFOS	507.0 / 99.0	2.90	13213.35	99.266678	185.6	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 11:27:56 AM

Sample Name	JV21	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:44:51	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.87	69914.04	97.006051	731.2	false
d3-MeFOSAA	573.0 / 419.0	3.42	14441.35	95.022404	345.7	false
d5-EtFOSAA	589.0 / 419.0	3.58	12188.07	87.142484	190.6	false
13C5-PFHxA	318.0 / 273.0	1.77	38983.77	95.108622	1153.3	false
13C4-PFHpA	367.0 / 322.0	2.15	46373.67	99.837653	998.6	false
13C8-PFOA	421.0 / 376.0	2.53	61129.01	105.216273	1413.2	false
13C9-PFNA	472.0 / 427.0	2.91	59118.70	97.893049	838.1	false
13C6-PFDA	519.0 / 474.0	3.26	64951.72	100.726557	3160.7	false
13C7-PFUnA	570.0 / 525.0	3.58	65716.75	96.690080	434.3	false
13C2-PFTeDA	715.0 / 670.0	4.35	59755.36	92.588118	850.9	false
13C3-PFBS	302.0 / 99.0	1.48	12812.68	74.678091	373.0	false
13C3-PFHxS	402.0 / 99.0	2.16	11329.51	84.816295	239.9	false
13C8-PFOS	507.0 / 99.0	2.90	14975.38	92.289972	186.4	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 11:27:58 AM

Sample Name	JV22	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:55:39	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.87	61914.08	93.187819	639.0	false
d3-MeFOSAA	573.0 / 419.0	3.41	13395.22	100.821977	230.6	false
d5-EtFOSAA	589.0 / 419.0	3.58	12764.42	104.395835	220.0	false
13C5-PFHxA	318.0 / 273.0	1.77	38385.46	97.444635	1321.7	false
13C4-PFHpA	367.0 / 322.0	2.14	45916.74	102.860615	839.0	false
13C8-PFOA	421.0 / 376.0	2.52	55596.55	99.572283	1680.8	false
13C9-PFNA	472.0 / 427.0	2.90	60668.98	104.531887	676.5	false
13C6-PFDA	519.0 / 474.0	3.25	59453.83	100.015762	533.8	false
13C7-PFUnA	570.0 / 525.0	3.57	64475.07	102.904169	519.5	false
13C2-PFTeDA	715.0 / 670.0	4.34	58185.21	97.797163	781.4	false
13C3-PFBS	302.0 / 99.0	1.48	12539.19	83.600652	348.7	false
13C3-PFHxS	402.0 / 99.0	2.16	11281.76	96.612217	256.2	false
13C8-PFOS	507.0 / 99.0	2.90	14472.40	102.024471	178.5	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 11:28:00 AM

Sample Name	JV23	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:06:27	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.86	70692.27	97.403149	779.0	false
d3-MeFOSAA	573.0 / 419.0	3.41	13125.55	88.163155	237.4	false
d5-EtFOSAA	589.0 / 419.0	3.57	12642.09	92.271031	183.6	false
13C5-PFHxA	318.0 / 273.0	1.76	43158.67	103.716414	732.1	false
13C4-PFHpA	367.0 / 322.0	2.14	45292.56	96.049070	537.4	false
13C8-PFOA	421.0 / 376.0	2.52	57708.54	97.840588	2945.8	false
13C9-PFNA	472.0 / 427.0	2.90	57299.49	93.459000	2623.2	false
13C6-PFDA	519.0 / 474.0	3.25	59678.03	91.904009	1181.0	false
13C7-PFUnA	570.0 / 525.0	3.57	62759.61	91.696489	829.8	false
13C2-PFTeDA	715.0 / 670.0	4.34	60027.79	92.362857	792.7	false
13C3-PFBS	302.0 / 99.0	1.47	14875.94	88.509344	415.9	false
13C3-PFHxS	402.0 / 99.0	2.15	12453.94	95.175781	215.5	false
13C8-PFOS	507.0 / 99.0	2.89	15355.95	96.606223	198.3	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 11:28:02 AM

Sample Name	JV24	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:17:14	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.86	68215.77	104.691959	739.1	false
d3-MeFOSAA	573.0 / 419.0	3.41	11867.83	94.715736	208.4	false
d5-EtFOSAA	589.0 / 419.0	3.57	11931.57	103.472560	149.5	false
13C5-PFHxA	318.0 / 273.0	1.77	36768.64	94.625586	611.5	false
13C4-PFHpA	367.0 / 322.0	2.14	48433.17	109.991919	893.4	false
13C8-PFOA	421.0 / 376.0	2.52	56889.85	103.291667	4703.7	false
13C9-PFNA	472.0 / 427.0	2.90	60934.52	106.435211	881.0	false
13C6-PFDA	519.0 / 474.0	3.25	60248.67	103.346288	703.1	false
13C7-PFUnA	570.0 / 525.0	3.57	63332.30	103.068327	416.3	false
13C2-PFTeDA	715.0 / 670.0	4.34	57788.46	99.040668	860.3	false
13C3-PFBS	302.0 / 99.0	1.48	13665.17	96.605294	529.4	false
13C3-PFHxS	402.0 / 99.0	2.16	10157.75	92.235559	268.9	false
13C8-PFOS	507.0 / 99.0	2.89	12373.21	92.489391	174.9	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 11:28:04 AM

Sample Name	JV25	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:28:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.86	58999.77	94.534987	558.0	false
d3-MeFOSAA	573.0 / 419.0	3.41	11753.93	93.175474	172.4	false
d5-EtFOSAA	589.0 / 419.0	3.58	10675.38	91.955664	165.2	false
13C5-PFHxA	318.0 / 273.0	1.77	37063.52	107.496069	744.2	false
13C4-PFHpA	367.0 / 322.0	2.14	38263.08	97.929319	697.0	false
13C8-PFOA	421.0 / 376.0	2.52	52032.85	106.468953	2003.7	false
13C9-PFNA	472.0 / 427.0	2.90	58661.28	115.475104	5763.5	false
13C6-PFDA	519.0 / 474.0	3.25	57960.93	103.799797	776.8	false
13C7-PFUnA	570.0 / 525.0	3.57	59540.79	101.164527	431.8	false
13C2-PFTeDA	715.0 / 670.0	4.34	55202.08	98.773766	1050.6	false
13C3-PFBS	302.0 / 99.0	1.49	14342.05	100.708144	412.9	false
13C3-PFHxS	402.0 / 99.0	2.16	9383.78	84.634273	200.2	false
13C8-PFOS	507.0 / 99.0	2.90	10913.88	81.031933	159.0	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 11:28:06 AM

Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:38:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.86	62348.58	101.762553	1045.1	false
d3-MeFOSAA	573.0 / 419.0	3.41	11194.91	111.090576	143.4	false
d5-EtFOSAA	589.0 / 419.0	3.57	11705.11	126.214372	178.9	false
13C5-PFHxA	318.0 / 273.0	1.77	39118.21	105.170987	636.7	false
13C4-PFHpA	367.0 / 322.0	2.14	40397.17	95.841762	598.1	false
13C8-PFOA	421.0 / 376.0	2.52	52910.31	100.359113	243517.6	false
13C9-PFNA	472.0 / 427.0	2.90	55485.06	101.247438	632.7	false
13C6-PFDA	519.0 / 474.0	3.25	59810.53	109.108345	1056.9	false
13C7-PFUnA	570.0 / 525.0	3.57	60799.90	105.229062	549.4	false
13C2-PFTeDA	715.0 / 670.0	4.33	55964.28	102.003778	969.8	false
13C3-PFBS	302.0 / 99.0	1.48	13363.08	117.462244	419.8	false
13C3-PFHxS	402.0 / 99.0	2.16	10825.66	122.225280	302.2	false
13C8-PFOS	507.0 / 99.0	2.90	12923.20	120.111700	170.3	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 11:28:08 AM

Sample Name	JV27	**Injection Vial**	9
Sample ID	L8	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:49:37	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.85	67510.90	103.673288	804.0	false
d3-MeFOSAA	573.0 / 419.0	3.41	13119.59	94.068667	169.1	false
d5-EtFOSAA	589.0 / 419.0	3.57	11500.63	89.603153	175.3	false
13C5-PFHxA	318.0 / 273.0	1.77	39548.90	101.028249	564.3	false
13C4-PFHpA	367.0 / 322.0	2.14	41752.03	94.118053	618.9	false
13C8-PFOA	421.0 / 376.0	2.52	52956.02	95.438414	997.4	false
13C9-PFNA	472.0 / 427.0	2.89	51286.45	88.920516	791.4	false
13C6-PFDA	519.0 / 474.0	3.24	54131.11	92.909212	2700.1	false
13C7-PFUnA	570.0 / 525.0	3.56	57279.05	93.273907	402.3	false
13C2-PFTeDA	715.0 / 670.0	4.33	60419.15	103.612343	959.7	false
13C3-PFBS	302.0 / 99.0	1.48	12951.58	82.258843	428.4	false
13C3-PFHxS	402.0 / 99.0	2.16	9890.86	80.688007	319.5	false
13C8-PFOS	507.0 / 99.0	2.89	12008.74	80.645627	165.0	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 11:28:10 AM

Sample Name	JV28	**Injection Vial**	10
Sample ID	L9	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:00:25	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.85	76903.00	99.474671	876.9	false
d3-MeFOSAA	573.0 / 419.0	3.41	14159.30	117.894843	170.5	false
d5-EtFOSAA	589.0 / 419.0	3.56	11189.78	101.239753	183.8	false
13C5-PFHxA	318.0 / 273.0	1.77	42254.89	86.605749	533.0	false
13C4-PFHpA	367.0 / 322.0	2.13	49448.10	89.434731	550.6	false
13C8-PFOA	421.0 / 376.0	2.51	53115.86	76.805692	887.7	false
13C9-PFNA	472.0 / 427.0	2.89	55522.21	77.237350	1536.1	false
13C6-PFDA	519.0 / 474.0	3.24	55459.83	80.180115	725.8	false
13C7-PFUnA	570.0 / 525.0	3.56	62708.16	86.013125	524.9	false
13C2-PFTeDA	715.0 / 670.0	4.33	68779.24	99.350611	1145.4	false
13C3-PFBS	302.0 / 99.0	1.47	17891.46	131.957389	463.1	true
13C3-PFHxS	402.0 / 99.0	2.15	10290.74	97.487663	218.3	false
13C8-PFOS	507.0 / 99.0	2.89	12416.99	96.834003	158.4	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 2:42:16 PM

Sample Name	JV20	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:34:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.50	7968.73	23.430730	104.4	false
PFBS_2	298.9 / 99.0	1.49	3403.07	19.874729	49.5	false
PFHxA_1	313.0 / 269.0	1.79	7101.86	5.784861	10.0	true
PFHxA_2	313.0 / 119.0	1.79	352.88	0.691509	5.7	true
PFHpA_1	363.0 / 319.0	2.16	9206.22	24.371833	32.7	false
PFHpA_2	363.0 / 169.0	2.14	229.55	< 0	21.8	false
PFHxS_1	399.0 / 80.0	2.18	9310.54	27.002198	203.0	false
PFHxS_2	399.0 / 99.0	2.17	2873.36	23.631500	52.4	false
PFOA_1	413.0 / 369.0	2.54	11017.79	21.912723	20.4	true
PFOA_2	413.0 / 169.0	2.52	1121.10	30.084226	17.3	true
PFNA_1	463.0 / 419.0	2.92	14290.41	24.925904	43.1	true
PFNA_2	463.0 / 219.0	2.92	3033.95	18.924490	28.8	true
PFOS_1	499.0 / 80.0	2.91	12261.86	20.201554	93.3	false
PFOS_2	499.0 / 99.0	2.91	3341.75	20.778798	66.9	true
PFDA_1	513.0 / 469.0	3.27	12681.04	22.779490	41.2	false
PFDA_2	513.0 / 219.0	3.25	413.82	19.372613	27.3	true
PFUnA_1	563.0 / 519.0	3.60	10418.08	20.082202	48.9	true
PFUnA_2	563.0 / 269.0	3.59	739.22	< 0	29.0	true
PFDoA_1	613.0 / 569.0	3.88	12958.04	20.831332	88.7	false
PFDoA_2	613.0 / 319.0	3.88	1901.06	< 0	66.3	false
PFTrDA_1	663.0 / 619.0	4.14	9495.55	17.820321	94.6	false
PFTrDA_2	663.0 / 169.0	4.14	499.81	4.270220	33.8	false
PFTeDA_1	713.0 / 669.0	4.36	11359.33	20.617683	175.4	false
PFTeDA_2	713.0 / 169.0	4.36	553.43	3.327932	64.0	false
NMeFOSAA_1	570.0 / 419.0	3.43	2404.99	19.451114	479.0	false
NMeFOSAA_2	570.0 / 512.0	3.42	1392.68	18.997036	97.6	false
NEtFOSAA_1	584.0 / 419.0	3.59	2358.60	23.293026	99.3	false
NEtFOSAA_2	584.0 / 483.0	3.63	160.96	< 0	26.2	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 2:42:18 PM

Sample Name	JV21	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:44:51	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.50	13310.27	48.077851	215.2	false
PFBS_2	298.9 / 99.0	1.50	5241.78	48.059307	64.9	false
PFHxA_1	313.0 / 269.0	1.79	18278.02	49.388286	24.0	true
PFHxA_2	313.0 / 119.0	1.77	910.15	31.775764	14.1	true
PFHpA_1	363.0 / 319.0	2.16	12516.68	37.207682	37.2	false
PFHpA_2	363.0 / 169.0	2.14	452.31	< 0	24.9	false
PFHxS_1	399.0 / 80.0	2.17	16513.18	48.651543	176.1	false
PFHxS_2	399.0 / 99.0	2.18	5886.90	55.586062	83.0	false
PFOA_1	413.0 / 369.0	2.54	22429.63	48.175784	31.7	true
PFOA_2	413.0 / 169.0	2.55	1623.13	46.088459	25.7	true
PFNA_1	463.0 / 419.0	2.92	22177.65	46.863845	50.8	true
PFNA_2	463.0 / 219.0	2.92	5654.39	43.975981	62.2	true
PFOS_1	499.0 / 80.0	2.91	26431.57	46.934382	151.9	false
PFOS_2	499.0 / 99.0	2.91	6710.48	55.494486	93.6	false
PFDA_1	513.0 / 469.0	3.27	24428.72	47.073995	72.0	false
PFDA_2	513.0 / 219.0	3.28	1143.40	56.743012	56.4	false
PFUnA_1	563.0 / 519.0	3.59	23165.71	49.803603	79.4	false
PFUnA_2	563.0 / 269.0	3.60	1806.82	43.065320	52.0	false
PFDoA_1	613.0 / 569.0	3.88	23640.38	42.922262	111.4	false
PFDoA_2	613.0 / 319.0	3.88	4759.66	39.687027	105.4	false
PFTrDA_1	663.0 / 619.0	4.13	22236.95	54.011640	145.7	false
PFTrDA_2	663.0 / 169.0	4.12	1269.66	35.468877	64.6	false
PFTeDA_1	713.0 / 669.0	4.36	22900.00	48.921257	227.3	false
PFTeDA_2	713.0 / 169.0	4.35	1527.55	51.038361	165.5	false
NMeFOSAA_1	570.0 / 419.0	3.43	4969.06	45.318420	312.4	false
NMeFOSAA_2	570.0 / 512.0	3.42	2880.55	44.533991	116.2	false
NEtFOSAA_1	584.0 / 419.0	3.59	4605.28	51.097829	198.1	false
NEtFOSAA_2	584.0 / 483.0	3.59	396.15	37.126461	58.9	false

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Summary Quant Report

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Sample Name	JV22	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:55:39	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.50	28770.69	114.049174	339.6	false
PFBS_2	298.9 / 99.0	1.50	10639.90	122.755501	116.9	false
PFHxA_1	313.0 / 269.0	1.79	32917.11	108.588129	33.0	true
PFHxA_2	313.0 / 119.0	1.79	2786.25	138.998189	21.9	true
PFHpA_1	363.0 / 319.0	2.15	33596.77	121.332642	76.5	false
PFHpA_2	363.0 / 169.0	2.15	612.62	16.705333	81.6	false
PFHxS_1	399.0 / 80.0	2.17	35776.15	111.928455	414.1	false
PFHxS_2	399.0 / 99.0	2.17	10654.85	109.728491	124.0	false
PFOA_1	413.0 / 369.0	2.53	44364.88	111.825360	59.8	true
PFOA_2	413.0 / 169.0	2.53	2533.01	87.676106	38.4	true
PFNA_1	463.0 / 419.0	2.91	43065.74	99.764178	74.3	false
PFNA_2	463.0 / 219.0	2.91	13584.12	114.640986	98.1	false
PFOS_1	499.0 / 80.0	2.91	53207.18	107.983313	197.0	false
PFOS_2	499.0 / 99.0	2.91	8804.53	83.998084	175.8	false
PFDA_1	513.0 / 469.0	3.27	45785.82	105.369767	96.0	false
PFDA_2	513.0 / 219.0	3.27	2179.09	123.340221	90.1	false
PFUnA_1	563.0 / 519.0	3.59	48035.67	111.197006	127.4	false
PFUnA_2	563.0 / 269.0	3.59	2731.58	89.598884	79.1	false
PFDoA_1	613.0 / 569.0	3.88	48391.19	120.081739	154.0	false
PFDoA_2	613.0 / 319.0	3.87	6452.09	83.880192	136.4	false
PFTrDA_1	663.0 / 619.0	4.13	40062.28	108.910297	188.2	false
PFTrDA_2	663.0 / 169.0	4.12	3150.43	116.693833	128.0	false
PFTeDA_1	713.0 / 669.0	4.35	45948.70	110.236479	383.9	false
PFTeDA_2	713.0 / 169.0	4.35	2253.55	90.229862	225.7	false
NMeFOSAA_1	570.0 / 419.0	3.42	8426.85	91.267271	12345.6	false
NMeFOSAA_2	570.0 / 512.0	3.42	5702.82	106.582400	188.2	false
NEtFOSAA_1	584.0 / 419.0	3.59	8942.05	101.049002	370.3	false
NEtFOSAA_2	584.0 / 483.0	3.60	839.61	129.633915	32098.3	true

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Summary Quant Report

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Sample Name	JV23	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:06:27	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.49	72635.79	250.040307	519.9	false
PFBS_2	298.9 / 99.0	1.49	22810.78	239.174435	171.3	false
PFHxA_1	313.0 / 269.0	1.78	78117.72	253.659514	57.1	false
PFHxA_2	313.0 / 119.0	1.78	5947.06	280.997252	40.5	false
PFHpA_1	363.0 / 319.0	2.15	69394.63	267.155619	122.6	false
PFHpA_2	363.0 / 169.0	2.14	2113.66	311.497817	176.3	true
PFHxS_1	399.0 / 80.0	2.17	74491.80	215.699165	470.1	false
PFHxS_2	399.0 / 99.0	2.16	22856.79	223.267676	203.8	false
PFOA_1	413.0 / 369.0	2.53	103635.93	259.170639	110.5	true
PFOA_2	413.0 / 169.0	2.53	7289.07	264.343967	95.8	true
PFNA_1	463.0 / 419.0	2.91	105254.48	277.895674	136.5	false
PFNA_2	463.0 / 219.0	2.91	32203.42	300.924108	195.6	false
PFOS_1	499.0 / 80.0	2.90	120843.51	241.902053	387.1	false
PFOS_2	499.0 / 99.0	2.91	23612.06	249.272880	218.5	false
PFDA_1	513.0 / 469.0	3.26	117210.00	282.021923	144.7	false
PFDA_2	513.0 / 219.0	3.26	4862.69	280.080235	180.2	false
PFUnA_1	563.0 / 519.0	3.58	113775.94	278.219526	194.7	false
PFUnA_2	563.0 / 269.0	3.58	6478.48	280.024039	135.4	false
PFDoA_1	613.0 / 569.0	3.87	107211.20	247.970664	225.9	false
PFDoA_2	613.0 / 319.0	3.87	17535.69	259.821040	268.3	false
PFTrDA_1	663.0 / 619.0	4.12	96193.88	267.690412	281.8	false
PFTrDA_2	663.0 / 169.0	4.12	6336.05	243.784060	230.4	false
PFTeDA_1	713.0 / 669.0	4.35	108374.82	263.611103	484.8	false
PFTeDA_2	713.0 / 169.0	4.34	5713.44	258.448811	341.0	false
NMeFOSAA_1	570.0 / 419.0	3.42	23293.68	275.958428	753.3	false
NMeFOSAA_2	570.0 / 512.0	3.42	12743.34	256.073972	327.9	false
NEtFOSAA_1	584.0 / 419.0	3.58	21613.97	257.258021	375.0	false
NEtFOSAA_2	584.0 / 483.0	3.57	1326.48	238.475224	326.0	false

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Summary Quant Report

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Sample Name	JV24	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:17:14	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.50	129048.04	489.667439	679.5	false
PFBS_2	298.9 / 99.0	1.49	42962.49	512.945542	238.9	false
PFHxA_1	313.0 / 269.0	1.78	127903.96	507.805267	70.2	false
PFHxA_2	313.0 / 119.0	1.78	7914.74	449.678784	51.5	false
PFHpA_1	363.0 / 319.0	2.15	116523.17	426.324698	171.4	false
PFHpA_2	363.0 / 169.0	2.15	2478.81	351.421206	166.0	false
PFHxS_1	399.0 / 80.0	2.17	144180.07	518.961762	558.9	false
PFHxS_2	399.0 / 99.0	2.17	40590.51	498.642930	286.7	false
PFOA_1	413.0 / 369.0	2.53	182869.48	468.640086	131.7	true
PFOA_2	413.0 / 169.0	2.53	12256.39	459.356628	92.8	true
PFNA_1	463.0 / 419.0	2.91	186381.14	470.997965	172.6	false
PFNA_2	463.0 / 219.0	2.91	54180.95	481.165274	186.3	false
PFOS_1	499.0 / 80.0	2.90	209283.48	530.777101	399.5	false
PFOS_2	499.0 / 99.0	2.90	38345.34	526.973503	281.5	false
PFDA_1	513.0 / 469.0	3.27	201839.64	487.102517	194.8	false
PFDA_2	513.0 / 219.0	3.27	7815.22	448.720530	268.4	false
PFUnA_1	563.0 / 519.0	3.58	201101.62	491.319767	219.9	false
PFUnA_2	563.0 / 269.0	3.58	10719.80	486.642009	174.0	false
PFDoA_1	613.0 / 569.0	3.87	194749.18	480.833329	265.4	false
PFDoA_2	613.0 / 319.0	3.87	31236.27	516.488741	319.2	false
PFTrDA_1	663.0 / 619.0	4.12	172001.13	506.930895	380.0	false
PFTrDA_2	663.0 / 169.0	4.12	12898.12	535.379714	310.9	false
PFTeDA_1	713.0 / 669.0	4.34	190240.33	488.492897	598.2	false
PFTeDA_2	713.0 / 169.0	4.34	9950.01	488.438827	435.3	false
NMeFOSAA_1	570.0 / 419.0	3.42	41744.80	556.930555	959.5	false
NMeFOSAA_2	570.0 / 512.0	3.42	23766.33	538.991083	454.3	false
NEtFOSAA_1	584.0 / 419.0	3.58	37443.74	478.385571	473.9	false
NEtFOSAA_2	584.0 / 483.0	3.58	2172.64	453.011265	21436.0	false

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Summary Quant Report

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Sample Name	JV25	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:28:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.50	258202.02	939.392143	1460.4	false
PFBS_2	298.9 / 99.0	1.50	82085.34	951.420791	368.3	false
PFHxA_1	313.0 / 269.0	1.79	248566.26	999.444962	100.9	false
PFHxA_2	313.0 / 119.0	1.78	18276.76	1054.747856	81.7	false
PFHpA_1	363.0 / 319.0	2.16	241019.92	1135.564097	229.0	false
PFHpA_2	363.0 / 169.0	2.16	4827.02	1014.640739	402.0	false
PFHxS_1	399.0 / 80.0	2.17	274347.70	1074.412721	761.0	false
PFHxS_2	399.0 / 99.0	2.17	80898.87	1088.100159	333.4	false
PFOA_1	413.0 / 369.0	2.53	377586.61	1065.516673	209.8	true
PFOA_2	413.0 / 169.0	2.53	25522.01	1061.153878	192.8	true
PFNA_1	463.0 / 419.0	2.91	377317.89	1004.163113	231.2	false
PFNA_2	463.0 / 219.0	2.91	111139.32	1035.103332	267.8	false
PFOS_1	499.0 / 80.0	2.91	416429.63	1209.203973	570.8	false
PFOS_2	499.0 / 99.0	2.91	78413.28	1253.618222	411.1	false
PFDA_1	513.0 / 469.0	3.27	425627.35	1077.935405	265.7	false
PFDA_2	513.0 / 219.0	3.26	15787.22	947.504737	365.1	false
PFUnA_1	563.0 / 519.0	3.58	383124.61	1001.106158	277.7	false
PFUnA_2	563.0 / 269.0	3.58	23099.79	1170.936779	317.4	false
PFDoA_1	613.0 / 569.0	3.87	394977.82	1148.926056	389.0	false
PFDoA_2	613.0 / 319.0	3.87	60854.03	1217.976067	368.5	false
PFTrDA_1	663.0 / 619.0	4.12	332464.74	1039.791932	480.6	false
PFTrDA_2	663.0 / 169.0	4.12	24548.25	1087.288041	486.1	false
PFTeDA_1	713.0 / 669.0	4.34	392336.40	1067.843507	853.8	false
PFTeDA_2	713.0 / 169.0	4.34	19994.77	1058.685386	595.0	false
NMeFOSAA_1	570.0 / 419.0	3.42	78806.50	1070.771413	735.8	false
NMeFOSAA_2	570.0 / 512.0	3.42	49364.30	1141.521714	426.8	false
NEtFOSAA_1	584.0 / 419.0	3.58	77192.79	1111.914193	695.4	false
NEtFOSAA_2	584.0 / 483.0	3.58	4684.94	1166.861666	235.6	false

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Summary Quant Report

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Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:38:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.50	660325.18	2589.743424	1399.2	false
PFBS_2	298.9 / 99.0	1.50	208401.14	2629.514433	525.2	false
PFHxA_1	313.0 / 269.0	1.79	620325.11	2393.271111	176.0	false
PFHxA_2	313.0 / 119.0	1.78	44498.48	2458.027338	147.9	false
PFHpA_1	363.0 / 319.0	2.15	566168.44	2541.236535	322.8	false
PFHpA_2	363.0 / 169.0	2.15	12325.15	2597.605195	355.2	false
PFHxS_1	399.0 / 80.0	2.17	681460.07	2319.270796	990.1	false
PFHxS_2	399.0 / 99.0	2.17	202599.99	2374.504861	503.6	false
PFOA_1	413.0 / 369.0	2.53	917205.56	2553.689081	325.2	true
PFOA_2	413.0 / 169.0	2.53	61036.08	2511.901838	335.4	true
PFNA_1	463.0 / 419.0	2.91	886828.98	2513.690409	366.6	false
PFNA_2	463.0 / 219.0	2.91	260989.83	2582.821176	466.5	false
PFOS_1	499.0 / 80.0	2.90	959074.89	2360.822596	617.2	false
PFOS_2	499.0 / 99.0	2.90	168521.86	2295.036995	654.5	false
PFDA_1	513.0 / 469.0	3.26	921119.59	2270.076428	367.8	false
PFDA_2	513.0 / 219.0	3.26	37369.50	2179.672811	504.6	false
PFUnA_1	563.0 / 519.0	3.58	943482.55	2421.795730	411.2	false
PFUnA_2	563.0 / 269.0	3.58	48135.46	2434.180604	337.0	false
PFDoA_1	613.0 / 569.0	3.87	923821.46	2562.217552	462.4	false
PFDoA_2	613.0 / 319.0	3.87	140016.21	2703.172328	585.7	false
PFTrDA_1	663.0 / 619.0	4.12	804283.29	2517.595628	731.9	false
PFTrDA_2	663.0 / 169.0	4.12	57019.80	2535.950933	717.2	false
PFTeDA_1	713.0 / 669.0	4.34	930073.95	2526.346229	1104.4	false
PFTeDA_2	713.0 / 169.0	4.34	47897.36	2558.107883	889.1	false
NMeFOSAA_1	570.0 / 419.0	3.42	203910.82	2926.392686	920.2	false
NMeFOSAA_2	570.0 / 512.0	3.42	110365.72	2693.283241	689.0	false
NEtFOSAA_1	584.0 / 419.0	3.58	179895.01	2371.634278	620.6	false
NEtFOSAA_2	584.0 / 483.0	3.58	10047.48	2333.234004	314.8	false

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Summary Quant Report

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Sample Name	JV27	**Injection Vial**	9
Sample ID	L8	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:49:37	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.50	2862033.42	11603.879298	2614.9	false
PFBS_2	298.9 / 99.0	1.50	928399.14	12163.581051	915.1	false
PFHxA_1	313.0 / 269.0	1.78	2590677.08	9955.176959	363.8	false
PFHxA_2	313.0 / 119.0	1.78	175150.62	9624.843910	249.7	false
PFHpA_1	363.0 / 319.0	2.15	2297925.64	10014.514039	580.4	false
PFHpA_2	363.0 / 169.0	2.15	47557.92	9974.835043	703.3	false
PFHxS_1	399.0 / 80.0	2.17	2637569.29	9841.785586	1151.7	false
PFHxS_2	399.0 / 99.0	2.17	757789.65	9753.715741	772.4	false
PFOA_1	413.0 / 369.0	2.53	3487830.84	9719.265246	497.9	true
PFOA_2	413.0 / 169.0	2.53	221940.33	9157.545131	441.8	true
PFNA_1	463.0 / 419.0	2.91	3284664.72	10109.846305	608.6	false
PFNA_2	463.0 / 219.0	2.91	913926.97	9809.198568	536.0	false
PFOS_1	499.0 / 80.0	2.90	3728644.98	9907.258193	789.1	false
PFOS_2	499.0 / 99.0	2.90	675917.72	9986.292564	813.9	false
PFDA_1	513.0 / 469.0	3.26	3652544.07	9975.042106	597.9	false
PFDA_2	513.0 / 219.0	3.26	155276.06	10024.377592	643.8	false
PFUnA_1	563.0 / 519.0	3.58	3816093.45	10415.078133	734.0	false
PFUnA_2	563.0 / 269.0	3.58	187490.91	10198.758865	651.9	false
PFDoA_1	613.0 / 569.0	3.87	3809036.22	9801.217067	849.9	false
PFDoA_2	613.0 / 319.0	3.87	573132.37	10340.043532	914.1	false
PFTrDA_1	663.0 / 619.0	4.11	3229102.82	9814.361419	1074.8	false
PFTrDA_2	663.0 / 169.0	4.11	223266.98	9675.448826	912.4	false
PFTeDA_1	713.0 / 669.0	4.34	3747890.91	9794.187339	1666.1	false
PFTeDA_2	713.0 / 169.0	4.33	188158.87	9790.262690	1742.2	false
NMeFOSAA_1	570.0 / 419.0	3.42	768938.84	9438.910112	835.7	false
NMeFOSAA_2	570.0 / 512.0	3.41	460973.39	9625.016563	688.4	false
NEtFOSAA_1	584.0 / 419.0	3.58	725594.81	9758.856489	769.8	false
NEtFOSAA_2	584.0 / 483.0	3.58	41501.35	9979.401223	793.4	false

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Summary Quant Report

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Sample Name	JV28	**Injection Vial**	10
Sample ID	L9	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:00:25	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.49	6546575.32	18710.969634	4851.6	false
PFBS_2	298.9 / 99.0	1.49	1957068.41	18081.924212	1389.1	false
PFHxA_1	313.0 / 269.0	1.78	5686869.74	20476.665773	548.3	false
PFHxA_2	313.0 / 119.0	1.78	402511.63	20724.204861	331.8	false
PFHpA_1	363.0 / 319.0	2.15	5393133.92	19857.292856	763.5	false
PFHpA_2	363.0 / 169.0	2.14	105467.88	18766.432513	761.8	false
PFHxS_1	399.0 / 80.0	2.16	5745577.77	20611.537773	1076.9	false
PFHxS_2	399.0 / 99.0	2.16	1667610.99	20642.072581	922.7	false
PFOA_1	413.0 / 369.0	2.53	7260128.38	20176.804407	638.9	true
PFOA_2	413.0 / 169.0	2.53	505421.75	20806.849768	823.3	true
PFNA_1	463.0 / 419.0	2.91	6987087.47	19876.852607	797.1	false
PFNA_2	463.0 / 219.0	2.91	2020248.80	20038.246085	791.4	false
PFOS_1	499.0 / 80.0	2.90	7779219.11	19999.916836	774.3	false
PFOS_2	499.0 / 99.0	2.90	1394772.78	19953.534467	1036.1	false
PFDA_1	513.0 / 469.0	3.26	7558971.34	20157.598369	777.6	false
PFDA_2	513.0 / 219.0	3.26	322801.00	20345.188250	748.5	false
PFUnA_1	563.0 / 519.0	3.58	7874848.73	19636.397874	760.6	false
PFUnA_2	563.0 / 269.0	3.57	395619.21	19696.793500	942.8	false
PFDoA_1	613.0 / 569.0	3.87	8060369.71	18221.155160	715.5	false
PFDoA_2	613.0 / 319.0	3.86	1212380.49	19238.931073	916.3	false
PFTrDA_1	663.0 / 619.0	4.12	7047137.50	20101.185251	1239.4	false
PFTrDA_2	663.0 / 169.0	4.11	493085.92	20176.892858	1100.9	false
PFTeDA_1	713.0 / 669.0	4.34	8308131.50	20107.055801	1859.6	false
PFTeDA_2	713.0 / 169.0	4.34	411613.01	20108.230300	1899.0	false
NMeFOSAA_1	570.0 / 419.0	3.41	1654386.59	18826.874385	983.9	false
NMeFOSAA_2	570.0 / 512.0	3.41	956062.78	18505.904870	917.6	false
NEtFOSAA_1	584.0 / 419.0	3.58	1465920.68	20271.511589	843.5	false
NEtFOSAA_2	584.0 / 483.0	3.58	80961.27	20062.256243	730.9	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 2:43:53 PM

Sample Name	JV20	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:32:29	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	11456.26	22.943131	32.9	true
PFBS_2	298.9 / 99.0	1.54	4252.45	24.912423	24.3	true
PFHxA_1	313.0 / 269.0	1.82	27379.05	22.304831	10.6	true
PFHxA_2	313.0 / 119.0	1.83	2280.75	31.161550	10.1	true
PFHxS_1	399.0 / 80.0	2.22	14126.03	9.752860	8.5	true
PFHxS_2	399.0 / 99.0	2.21	5067.54	4.853831	8.6	true
PFOA_1	413.0 / 369.0	2.58	19811.45	18.098123	14.0	true
PFOA_2	413.0 / 169.0	2.56	1103.92	12.441327	7.4	true
PFNA_1	463.0 / 419.0	2.95	21882.18	20.380243	34.7	true
PFNA_2	463.0 / 219.0	2.95	5336.53	19.401848	22.6	true
PFOS_1	499.0 / 80.0	N/A	N/A	N/A	N/A	true
PFOS_2	499.0 / 99.0	2.95	5059.85	23.997962	5.2	true

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 2:43:55 PM

Sample Name	JV21	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:43:10	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	17149.86	39.339005	55.8	true
PFBS_2	298.9 / 99.0	1.54	6916.42	48.712633	30.7	true
PFHxA_1	313.0 / 269.0	1.83	27150.04	37.454645	14.5	true
PFHxA_2	313.0 / 119.0	1.84	2514.76	57.639587	9.0	true
PFHxS_1	399.0 / 80.0	2.22	23573.22	45.387995	12.3	true
PFHxS_2	399.0 / 99.0	2.22	7452.47	41.722055	12.3	true
PFOA_1	413.0 / 369.0	2.58	36629.41	61.859763	20.8	true
PFOA_2	413.0 / 169.0	2.57	2321.53	51.629941	11.9	true
PFNA_1	463.0 / 419.0	2.95	30617.60	46.646813	48.4	true
PFNA_2	463.0 / 219.0	2.95	8392.79	48.764204	34.3	true
PFOS_1	499.0 / 80.0	2.95	23845.31	82.820149	5.8	true
PFOS_2	499.0 / 99.0	2.95	7516.66	62.692160	6.8	true

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 2:43:57 PM

Sample Name	JV22	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:53:52	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	53691.01	114.073097	107.2	true
PFBS_2	298.9 / 99.0	1.54	15438.51	102.205673	61.7	true
PFHxA_1	313.0 / 269.0	1.84	74693.29	115.048578	23.6	true
PFHxA_2	313.0 / 119.0	1.84	3704.89	73.100366	16.4	true
PFHxS_1	399.0 / 80.0	2.22	56517.61	89.455284	23.5	true
PFHxS_2	399.0 / 99.0	2.21	16943.36	86.095976	22.2	true
PFOA_1	413.0 / 369.0	2.58	71172.30	100.186034	34.9	true
PFOA_2	413.0 / 169.0	2.57	6280.19	119.994280	28.2	true
PFNA_1	463.0 / 419.0	2.95	76363.52	104.458467	72.3	false
PFNA_2	463.0 / 219.0	2.95	21846.60	110.562507	63.4	false
PFOS_1	499.0 / 80.0	2.95	63351.41	129.733572	11.3	true
PFOS_2	499.0 / 99.0	2.95	12784.15	87.968313	12.9	true

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 2:43:59 PM

Sample Name	JV23	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:04:34	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	133326.06	259.829558	214.4	false
PFBS_2	298.9 / 99.0	1.54	39554.83	244.309260	142.2	false
PFHxA_1	313.0 / 269.0	1.83	160436.46	269.243911	34.3	false
PFHxA_2	313.0 / 119.0	1.83	9484.25	222.023864	30.2	false
PFHxS_1	399.0 / 80.0	2.21	144579.76	253.432861	46.1	true
PFHxS_2	399.0 / 99.0	2.21	40118.28	243.062956	42.5	true
PFOA_1	413.0 / 369.0	2.58	181316.08	263.728976	59.4	true
PFOA_2	413.0 / 169.0	2.57	14857.31	284.617570	60.3	true
PFNA_1	463.0 / 419.0	2.95	190607.07	263.701795	137.2	false
PFNA_2	463.0 / 219.0	2.95	49714.50	248.793870	107.7	false
PFOS_1	499.0 / 80.0	2.94	156914.98	235.569402	28.3	true
PFOS_2	499.0 / 99.0	2.94	37028.87	250.985901	30.7	true

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 2:44:01 PM

Sample Name	JV24	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:15:15	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	234946.08	513.918478	380.1	false
PFBS_2	298.9 / 99.0	1.54	74633.58	520.831671	199.3	false
PFHxA_1	313.0 / 269.0	1.83	284209.10	533.089291	54.7	false
PFHxA_2	313.0 / 119.0	1.83	17806.32	472.175740	44.7	false
PFHxS_1	399.0 / 80.0	2.21	249789.87	527.365589	59.7	true
PFHxS_2	399.0 / 99.0	2.21	71652.62	538.271166	58.6	true
PFOA_1	413.0 / 369.0	2.58	291007.35	471.973791	80.9	true
PFOA_2	413.0 / 169.0	2.58	24894.66	528.858321	72.2	true
PFNA_1	463.0 / 419.0	2.95	335868.36	551.318989	225.8	false
PFNA_2	463.0 / 219.0	2.95	92585.95	547.564450	183.5	false
PFOS_1	499.0 / 80.0	2.94	290295.54	454.217610	35.6	true
PFOS_2	499.0 / 99.0	2.94	59088.61	471.819806	43.7	true

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 2:44:03 PM

Sample Name	JV25	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:25:56	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	422735.46	1063.678573	539.7	false
PFBS_2	298.9 / 99.0	1.54	123737.92	995.650839	317.5	false
PFHxA_1	313.0 / 269.0	1.83	468821.18	1044.569383	68.8	false
PFHxA_2	313.0 / 119.0	1.83	31778.38	1006.463495	49.8	false
PFHxS_1	399.0 / 80.0	2.21	439354.45	1111.039507	87.6	true
PFHxS_2	399.0 / 99.0	2.21	128587.81	1171.538070	77.4	true
PFOA_1	413.0 / 369.0	2.58	506784.93	1034.220060	103.2	true
PFOA_2	413.0 / 169.0	2.58	39975.29	1062.505616	97.7	true
PFNA_1	463.0 / 419.0	2.95	578410.62	1029.603636	257.1	false
PFNA_2	463.0 / 219.0	2.95	157114.12	1004.923499	217.7	false
PFOS_1	499.0 / 80.0	2.94	525648.58	959.192136	50.8	true
PFOS_2	499.0 / 99.0	2.94	103362.80	1030.832462	77.0	true

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 2:44:05 PM

Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:36:37	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	1085167.91	2847.628626	1053.0	false
PFBS_2	298.9 / 99.0	1.55	324823.16	2731.008942	602.8	false
PFHxA_1	313.0 / 269.0	1.83	1177589.73	2808.965200	88.3	false
PFHxA_2	313.0 / 119.0	1.83	82756.78	2809.105294	93.4	false
PFHxS_1	399.0 / 80.0	2.21	1140082.80	2633.866868	149.2	false
PFHxS_2	399.0 / 99.0	2.22	335022.14	2805.077301	137.6	false
PFOA_1	413.0 / 369.0	2.58	1309566.00	2488.582766	169.5	true
PFOA_2	413.0 / 169.0	2.58	102716.87	2537.223548	152.5	true
PFNA_1	463.0 / 419.0	2.95	1444261.59	2651.434689	373.8	false
PFNA_2	463.0 / 219.0	2.95	410644.43	2704.608737	348.0	false
PFOS_1	499.0 / 80.0	2.94	1320448.97	2301.329728	74.1	true
PFOS_2	499.0 / 99.0	2.94	238419.01	2349.905622	131.7	true

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 2:44:07 PM

Sample Name	JV27	**Injection Vial**	9
Sample ID	L8	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:47:16	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	4394034.07	9589.730089	2139.4	false
PFBS_2	298.9 / 99.0	1.54	1386571.59	9703.159053	1336.6	false
PFHxA_1	313.0 / 269.0	1.83	4621224.85	9799.793529	145.2	false
PFHxA_2	313.0 / 119.0	1.83	326261.34	9846.220727	141.5	false
PFHxS_1	399.0 / 80.0	2.21	4615843.06	10809.315573	357.0	false
PFHxS_2	399.0 / 99.0	2.21	1290527.17	10986.487505	317.6	false
PFOA_1	413.0 / 369.0	2.57	5041781.68	10183.705964	351.9	true
PFOA_2	413.0 / 169.0	2.57	384970.62	10096.737383	313.9	true
PFNA_1	463.0 / 419.0	2.95	5448869.74	9435.478644	746.1	false
PFNA_2	463.0 / 219.0	2.95	1543238.38	9578.530176	695.0	false
PFOS_1	499.0 / 80.0	2.94	5272410.61	9174.590917	129.0	false
PFOS_2	499.0 / 99.0	2.94	959129.24	9616.747652	226.1	true

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 2:44:09 PM

Sample Name	JV28	**Injection Vial**	10
Sample ID	L9	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:57:58	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	10418628.66	20318.109443	3619.9	false
PFBS_2	298.9 / 99.0	1.54	3261605.48	20398.459505	1872.4	false
PFHxA_1	313.0 / 269.0	1.83	10670145.91	20138.780632	226.0	false
PFHxA_2	313.0 / 119.0	1.83	753952.69	20251.359377	201.2	false
PFHxS_1	399.0 / 80.0	2.21	11139572.06	19274.136322	503.1	false
PFHxS_2	399.0 / 99.0	2.21	2998923.15	18871.744972	469.1	false
PFOA_1	413.0 / 369.0	2.58	11661629.44	19802.644523	451.3	true
PFOA_2	413.0 / 169.0	2.58	894986.79	19730.992014	449.4	true
PFNA_1	463.0 / 419.0	2.95	12511546.79	20321.976724	809.5	false
PFNA_2	463.0 / 219.0	2.95	3463802.87	20161.850707	648.2	false
PFOS_1	499.0 / 80.0	2.94	12919771.50	21095.366634	196.8	true
PFOS_2	499.0 / 99.0	2.94	2174705.57	20530.050123	254.4	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 2:49:17 PM

Sample Name	JV20	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:32:29	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C3-PFBS	302.0 / 99.0	1.53	22932.69	120.122306	485.8	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 2:49:19 PM

Sample Name	JV21	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:43:10	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C3-PFBS	302.0 / 99.0	1.53	20788.54	102.950879	441.2	false

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 2:49:21 PM

Sample Name	JV22	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:53:52	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C3-PFBS	302.0 / 99.0	1.53	23260.93	98.256449	488.4	false

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 2:49:23 PM

Sample Name	JV23	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:04:34	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C3-PFBS	302.0 / 99.0	1.52	25634.62	98.738375	463.7	false

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 2:49:25 PM

Sample Name	JV24	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:15:15	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C3-PFBS	302.0 / 99.0	1.53	22935.24	78.191083	492.2	false

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 2:49:27 PM

Sample Name	JV25	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:25:56	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C3-PFBS	302.0 / 99.0	1.52	19982.85	80.109585	487.5	false

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 2:49:29 PM

Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:36:37	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C3-PFBS	302.0 / 99.0	1.53	19185.88	71.067112	536.9	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 2:49:31 PM

Sample Name	JV27	**Injection Vial**	9
Sample ID	L8	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:47:16	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C3-PFBS	302.0 / 99.0	1.53	23081.50	83.210187	465.1	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 2:49:33 PM

Sample Name	JV28	**Injection Vial**	10
Sample ID	L9	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:57:58	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C3-PFBS	302.0 / 99.0	1.53	25833.75	103.454023	590.6	false

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:03:40 PM

Sample Name	JV20	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T17:43:25	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFTeDA_1	713.0 / 669.0	4.39	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.38	PFTeDA	0.041	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.46	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.46	NMeFOSAA	1.063	0.594	
NEtFOSAA_1	584.0 / 419.0	3.64	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.62	NEtFOSAA	0.115	0.059	

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:03:42 PM

Sample Name	JV21	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T17:54:13	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFTeDA_1	713.0 / 669.0	4.38	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.37	PFTeDA	0.045	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.46	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.46	NMeFOSAA	0.392	0.594	ü
NEtFOSAA_1	584.0 / 419.0	3.62	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.60	NEtFOSAA	0.073	0.059	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:03:44 PM

Sample Name	JV22	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:05:02	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFTeDA_1	713.0 / 669.0	4.37	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.37	PFTeDA	0.051	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.45	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.45	NMeFOSAA	0.511	0.594	ü
NEtFOSAA_1	584.0 / 419.0	3.62	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.62	NEtFOSAA	0.054	0.059	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:03:46 PM

Sample Name	JV23	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:15:51	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFTeDA_1	713.0 / 669.0	4.37	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.37	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.44	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.45	NMeFOSAA	0.733	0.594	ü
NEtFOSAA_1	584.0 / 419.0	3.61	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.61	NEtFOSAA	0.074	0.059	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:03:48 PM

Sample Name	JV24	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:26:39	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFTeDA_1	713.0 / 669.0	4.37	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.36	PFTeDA	0.052	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.45	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.45	NMeFOSAA	0.585	0.594	ü
NEtFOSAA_1	584.0 / 419.0	3.61	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.62	NEtFOSAA	0.061	0.059	ü

Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:03:50 PM

Sample Name	JV25	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:37:26	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFTeDA_1	713.0 / 669.0	4.36	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.36	PFTeDA	0.052	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.44	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.44	NMeFOSAA	0.559	0.594	ü
NEtFOSAA_1	584.0 / 419.0	3.61	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.60	NEtFOSAA	0.049	0.059	ü

Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:03:52 PM

Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:48:14	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFTeDA_1	713.0 / 669.0	4.36	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.35	PFTeDA	0.053	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.44	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.44	NMeFOSAA	0.552	0.594	ü
NEtFOSAA_1	584.0 / 419.0	3.60	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.60	NEtFOSAA	0.048	0.059	ü

Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:03:54 PM

Sample Name	JV27	**Injection Vial**	9
Sample ID	L8	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:59:02	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFTeDA_1	713.0 / 669.0	4.35	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.35	PFTeDA	0.052	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.43	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.43	NMeFOSAA	0.565	0.594	ü
NEtFOSAA_1	584.0 / 419.0	3.60	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.60	NEtFOSAA	0.056	0.059	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
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Sample Name	JV28	**Injection Vial**	10
Sample ID	L9	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T19:09:48	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFTeDA_1	713.0 / 669.0	4.35	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.35	PFTeDA	0.051	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.44	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.44	NMeFOSAA	0.572	0.594	ü
NEtFOSAA_1	584.0 / 419.0	3.60	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.60	NEtFOSAA	0.058	0.059	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:05:40 PM

Sample Name	JV20	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:34:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
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	1.49	PFBS	0.427	0.344	ü
PFHxA_1	313.0 / 269.0	1.79	PFHxA			
PFHxA_2	313.0 / 119.0	1.79	PFHxA	0.050	0.070	ü
PFHpA_1	363.0 / 319.0	2.16	PFHpA			
PFHpA_2	363.0 / 169.0	2.14	PFHpA	0.025	0.023	ü
PFHxS_1	399.0 / 80.0	2.18	PFHxS			
PFHxS_2	399.0 / 99.0	2.17	PFHxS	0.309	0.302	ü
PFOA_1	413.0 / 369.0	2.54	PFOA			
PFOA_2	413.0 / 169.0	2.52	PFOA	0.102	0.071	ü
PFNA_1	463.0 / 419.0	2.92	PFNA			
PFNA_2	463.0 / 219.0	2.92	PFNA	0.212	0.282	ü
PFOS_1	499.0 / 80.0	2.91	PFOS			
PFOS_2	499.0 / 99.0	2.91	PFOS	0.273	0.200	ü
PFDA_1	513.0 / 469.0	3.27	PFDA			
PFDA_2	513.0 / 219.0	3.25	PFDA	0.033	0.041	ü
PFUnA_1	563.0 / 519.0	3.60	PFUnA			
PFUnA_2	563.0 / 269.0	3.59	PFUnA	0.071	0.057	ü
PFDoA_1	613.0 / 569.0	3.88	PFDoA			
PFDoA_2	613.0 / 319.0	3.88	PFDoA	0.147	0.158	ü
PFTrDA_1	663.0 / 619.0	4.14	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.14	PFTrDA	0.053	0.070	ü
PFTeDA_1	713.0 / 669.0	4.36	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.36	PFTeDA	0.049	0.053	ü
NMeFOSAA_1	570.0 / 419.0	3.43	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.42	NMeFOSAA	0.579	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.59	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.63	NEtFOSAA	0.068	0.066	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:05:42 PM

Sample Name	JV21	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:44:51	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
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	0.394	0.344	ü
PFHxA_1	313.0 / 269.0	1.79	PFHxA			
PFHxA_2	313.0 / 119.0	1.77	PFHxA	0.050	0.070	ü
PFHpA_1	363.0 / 319.0	2.16	PFHpA			
PFHpA_2	363.0 / 169.0	2.14	PFHpA	0.036	0.023	
PFHxS_1	399.0 / 80.0	2.17	PFHxS			
PFHxS_2	399.0 / 99.0	2.18	PFHxS	0.357	0.302	ü
PFOA_1	413.0 / 369.0	2.54	PFOA			
PFOA_2	413.0 / 169.0	2.55	PFOA	0.072	0.071	ü
PFNA_1	463.0 / 419.0	2.92	PFNA			
PFNA_2	463.0 / 219.0	2.92	PFNA	0.255	0.282	ü
PFOS_1	499.0 / 80.0	2.91	PFOS			
PFOS_2	499.0 / 99.0	2.91	PFOS	0.254	0.200	ü
PFDA_1	513.0 / 469.0	3.27	PFDA			
PFDA_2	513.0 / 219.0	3.28	PFDA	0.047	0.041	ü
PFUnA_1	563.0 / 519.0	3.59	PFUnA			
PFUnA_2	563.0 / 269.0	3.60	PFUnA	0.078	0.057	ü
PFDoA_1	613.0 / 569.0	3.88	PFDoA			
PFDoA_2	613.0 / 319.0	3.88	PFDoA	0.201	0.158	ü
PFTrDA_1	663.0 / 619.0	4.13	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.12	PFTrDA	0.057	0.070	ü
PFTeDA_1	713.0 / 669.0	4.36	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.35	PFTeDA	0.067	0.053	ü
NMeFOSAA_1	570.0 / 419.0	3.43	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.42	NMeFOSAA	0.580	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.59	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.59	NEtFOSAA	0.086	0.066	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
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Sample Name	JV22	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:55:39	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
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	0.370	0.344	ü
PFHxA_1	313.0 / 269.0	1.79	PFHxA			
PFHxA_2	313.0 / 119.0	1.79	PFHxA	0.085	0.070	ü
PFHpA_1	363.0 / 319.0	2.15	PFHpA			
PFHpA_2	363.0 / 169.0	2.15	PFHpA	0.018	0.023	ü
PFHxS_1	399.0 / 80.0	2.17	PFHxS			
PFHxS_2	399.0 / 99.0	2.17	PFHxS	0.298	0.302	ü
PFOA_1	413.0 / 369.0	2.53	PFOA			
PFOA_2	413.0 / 169.0	2.53	PFOA	0.057	0.071	ü
PFNA_1	463.0 / 419.0	2.91	PFNA			
PFNA_2	463.0 / 219.0	2.91	PFNA	0.315	0.282	ü
PFOS_1	499.0 / 80.0	2.91	PFOS			
PFOS_2	499.0 / 99.0	2.91	PFOS	0.166	0.200	ü
PFDA_1	513.0 / 469.0	3.27	PFDA			
PFDA_2	513.0 / 219.0	3.27	PFDA	0.048	0.041	ü
PFUnA_1	563.0 / 519.0	3.59	PFUnA			
PFUnA_2	563.0 / 269.0	3.59	PFUnA	0.057	0.057	ü
PFDoA_1	613.0 / 569.0	3.88	PFDoA			
PFDoA_2	613.0 / 319.0	3.87	PFDoA	0.133	0.158	ü
PFTrDA_1	663.0 / 619.0	4.13	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.12	PFTrDA	0.079	0.070	ü
PFTeDA_1	713.0 / 669.0	4.35	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.35	PFTeDA	0.049	0.053	ü
NMeFOSAA_1	570.0 / 419.0	3.42	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.42	NMeFOSAA	0.677	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.59	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.60	NEtFOSAA	0.094	0.066	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
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Sample Name	JV23	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:06:27	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.49	PFBS			
PFBS_2	298.9 / 99.0	1.49	PFBS	0.314	0.344	ü
PFHxA_1	313.0 / 269.0	1.78	PFHxA			
PFHxA_2	313.0 / 119.0	1.78	PFHxA	0.076	0.070	ü
PFHpA_1	363.0 / 319.0	2.15	PFHpA			
PFHpA_2	363.0 / 169.0	2.14	PFHpA	0.031	0.023	ü
PFHxS_1	399.0 / 80.0	2.17	PFHxS			
PFHxS_2	399.0 / 99.0	2.16	PFHxS	0.307	0.302	ü
PFOA_1	413.0 / 369.0	2.53	PFOA			
PFOA_2	413.0 / 169.0	2.53	PFOA	0.070	0.071	ü
PFNA_1	463.0 / 419.0	2.91	PFNA			
PFNA_2	463.0 / 219.0	2.91	PFNA	0.306	0.282	ü
PFOS_1	499.0 / 80.0	2.90	PFOS			
PFOS_2	499.0 / 99.0	2.91	PFOS	0.195	0.200	ü
PFDA_1	513.0 / 469.0	3.26	PFDA			
PFDA_2	513.0 / 219.0	3.26	PFDA	0.042	0.041	ü
PFUnA_1	563.0 / 519.0	3.58	PFUnA			
PFUnA_2	563.0 / 269.0	3.58	PFUnA	0.057	0.057	ü
PFDoA_1	613.0 / 569.0	3.87	PFDoA			
PFDoA_2	613.0 / 319.0	3.87	PFDoA	0.164	0.158	ü
PFTrDA_1	663.0 / 619.0	4.12	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.12	PFTrDA	0.066	0.070	ü
PFTeDA_1	713.0 / 669.0	4.35	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.34	PFTeDA	0.053	0.053	ü
NMeFOSAA_1	570.0 / 419.0	3.42	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.42	NMeFOSAA	0.547	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.58	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.57	NEtFOSAA	0.061	0.066	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
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Sample Name	JV24	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:17:14	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
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	1.49	PFBS	0.333	0.344	ü
PFHxA_1	313.0 / 269.0	1.78	PFHxA			
PFHxA_2	313.0 / 119.0	1.78	PFHxA	0.062	0.070	ü
PFHpA_1	363.0 / 319.0	2.15	PFHpA			
PFHpA_2	363.0 / 169.0	2.15	PFHpA	0.021	0.023	ü
PFHxS_1	399.0 / 80.0	2.17	PFHxS			
PFHxS_2	399.0 / 99.0	2.17	PFHxS	0.282	0.302	ü
PFOA_1	413.0 / 369.0	2.53	PFOA			
PFOA_2	413.0 / 169.0	2.53	PFOA	0.067	0.071	ü
PFNA_1	463.0 / 419.0	2.91	PFNA			
PFNA_2	463.0 / 219.0	2.91	PFNA	0.291	0.282	ü
PFOS_1	499.0 / 80.0	2.90	PFOS			
PFOS_2	499.0 / 99.0	2.90	PFOS	0.183	0.200	ü
PFDA_1	513.0 / 469.0	3.27	PFDA			
PFDA_2	513.0 / 219.0	3.27	PFDA	0.039	0.041	ü
PFUnA_1	563.0 / 519.0	3.58	PFUnA			
PFUnA_2	563.0 / 269.0	3.58	PFUnA	0.053	0.057	ü
PFDoA_1	613.0 / 569.0	3.87	PFDoA			
PFDoA_2	613.0 / 319.0	3.87	PFDoA	0.160	0.158	ü
PFTrDA_1	663.0 / 619.0	4.12	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.12	PFTrDA	0.075	0.070	ü
PFTeDA_1	713.0 / 669.0	4.34	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.34	PFTeDA	0.052	0.053	ü
NMeFOSAA_1	570.0 / 419.0	3.42	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.42	NMeFOSAA	0.569	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.58	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.58	NEtFOSAA	0.058	0.066	ü

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Summary Ion Ratio Report

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Sample Name	JV25	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:28:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
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	0.318	0.344	ü
PFHxA_1	313.0 / 269.0	1.79	PFHxA			
PFHxA_2	313.0 / 119.0	1.78	PFHxA	0.074	0.070	ü
PFHpA_1	363.0 / 319.0	2.16	PFHpA			
PFHpA_2	363.0 / 169.0	2.16	PFHpA	0.020	0.023	ü
PFHxS_1	399.0 / 80.0	2.17	PFHxS			
PFHxS_2	399.0 / 99.0	2.17	PFHxS	0.295	0.302	ü
PFOA_1	413.0 / 369.0	2.53	PFOA			
PFOA_2	413.0 / 169.0	2.53	PFOA	0.068	0.071	ü
PFNA_1	463.0 / 419.0	2.91	PFNA			
PFNA_2	463.0 / 219.0	2.91	PFNA	0.295	0.282	ü
PFOS_1	499.0 / 80.0	2.91	PFOS			
PFOS_2	499.0 / 99.0	2.91	PFOS	0.188	0.200	ü
PFDA_1	513.0 / 469.0	3.27	PFDA			
PFDA_2	513.0 / 219.0	3.26	PFDA	0.037	0.041	ü
PFUnA_1	563.0 / 519.0	3.58	PFUnA			
PFUnA_2	563.0 / 269.0	3.58	PFUnA	0.060	0.057	ü
PFDoA_1	613.0 / 569.0	3.87	PFDoA			
PFDoA_2	613.0 / 319.0	3.87	PFDoA	0.154	0.158	ü
PFTrDA_1	663.0 / 619.0	4.12	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.12	PFTrDA	0.074	0.070	ü
PFTeDA_1	713.0 / 669.0	4.34	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.34	PFTeDA	0.051	0.053	ü
NMeFOSAA_1	570.0 / 419.0	3.42	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.42	NMeFOSAA	0.626	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.58	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.58	NEtFOSAA	0.061	0.066	ü

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Summary Ion Ratio Report

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Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:38:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
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	0.316	0.344	ü
PFHxA_1	313.0 / 269.0	1.79	PFHxA			
PFHxA_2	313.0 / 119.0	1.78	PFHxA	0.072	0.070	ü
PFHpA_1	363.0 / 319.0	2.15	PFHpA			
PFHpA_2	363.0 / 169.0	2.15	PFHpA	0.022	0.023	ü
PFHxS_1	399.0 / 80.0	2.17	PFHxS			
PFHxS_2	399.0 / 99.0	2.17	PFHxS	0.297	0.302	ü
PFOA_1	413.0 / 369.0	2.53	PFOA			
PFOA_2	413.0 / 169.0	2.53	PFOA	0.067	0.071	ü
PFNA_1	463.0 / 419.0	2.91	PFNA			
PFNA_2	463.0 / 219.0	2.91	PFNA	0.294	0.282	ü
PFOS_1	499.0 / 80.0	2.90	PFOS			
PFOS_2	499.0 / 99.0	2.90	PFOS	0.176	0.200	ü
PFDA_1	513.0 / 469.0	3.26	PFDA			
PFDA_2	513.0 / 219.0	3.26	PFDA	0.041	0.041	ü
PFUnA_1	563.0 / 519.0	3.58	PFUnA			
PFUnA_2	563.0 / 269.0	3.58	PFUnA	0.051	0.057	ü
PFDoA_1	613.0 / 569.0	3.87	PFDoA			
PFDoA_2	613.0 / 319.0	3.87	PFDoA	0.152	0.158	ü
PFTrDA_1	663.0 / 619.0	4.12	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.12	PFTrDA	0.071	0.070	ü
PFTeDA_1	713.0 / 669.0	4.34	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.34	PFTeDA	0.052	0.053	ü
NMeFOSAA_1	570.0 / 419.0	3.42	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.42	NMeFOSAA	0.541	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.58	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.58	NEtFOSAA	0.056	0.066	ü

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Summary Ion Ratio Report

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Sample Name	JV27	**Injection Vial**	9
Sample ID	L8	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:49:37	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
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	0.324	0.344	ü
PFHxA_1	313.0 / 269.0	1.78	PFHxA			
PFHxA_2	313.0 / 119.0	1.78	PFHxA	0.068	0.070	ü
PFHpA_1	363.0 / 319.0	2.15	PFHpA			
PFHpA_2	363.0 / 169.0	2.15	PFHpA	0.021	0.023	ü
PFHxS_1	399.0 / 80.0	2.17	PFHxS			
PFHxS_2	399.0 / 99.0	2.17	PFHxS	0.287	0.302	ü
PFOA_1	413.0 / 369.0	2.53	PFOA			
PFOA_2	413.0 / 169.0	2.53	PFOA	0.064	0.071	ü
PFNA_1	463.0 / 419.0	2.91	PFNA			
PFNA_2	463.0 / 219.0	2.91	PFNA	0.278	0.282	ü
PFOS_1	499.0 / 80.0	2.90	PFOS			
PFOS_2	499.0 / 99.0	2.90	PFOS	0.181	0.200	ü
PFDA_1	513.0 / 469.0	3.26	PFDA			
PFDA_2	513.0 / 219.0	3.26	PFDA	0.043	0.041	ü
PFUnA_1	563.0 / 519.0	3.58	PFUnA			
PFUnA_2	563.0 / 269.0	3.58	PFUnA	0.049	0.057	ü
PFDoA_1	613.0 / 569.0	3.87	PFDoA			
PFDoA_2	613.0 / 319.0	3.87	PFDoA	0.151	0.158	ü
PFTrDA_1	663.0 / 619.0	4.11	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.11	PFTrDA	0.069	0.070	ü
PFTeDA_1	713.0 / 669.0	4.34	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.33	PFTeDA	0.050	0.053	ü
NMeFOSAA_1	570.0 / 419.0	3.42	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.41	NMeFOSAA	0.600	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.58	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.58	NEtFOSAA	0.057	0.066	ü

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Summary Ion Ratio Report

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Sample Name	JV28	**Injection Vial**	10
Sample ID	L9	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:00:25	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.49	PFBS			
PFBS_2	298.9 / 99.0	1.49	PFBS	0.299	0.344	ü
PFHxA_1	313.0 / 269.0	1.78	PFHxA			
PFHxA_2	313.0 / 119.0	1.78	PFHxA	0.071	0.070	ü
PFHpA_1	363.0 / 319.0	2.15	PFHpA			
PFHpA_2	363.0 / 169.0	2.14	PFHpA	0.020	0.023	ü
PFHxS_1	399.0 / 80.0	2.16	PFHxS			
PFHxS_2	399.0 / 99.0	2.16	PFHxS	0.290	0.302	ü
PFOA_1	413.0 / 369.0	2.53	PFOA			
PFOA_2	413.0 / 169.0	2.53	PFOA	0.070	0.071	ü
PFNA_1	463.0 / 419.0	2.91	PFNA			
PFNA_2	463.0 / 219.0	2.91	PFNA	0.289	0.282	ü
PFOS_1	499.0 / 80.0	2.90	PFOS			
PFOS_2	499.0 / 99.0	2.90	PFOS	0.179	0.200	ü
PFDA_1	513.0 / 469.0	3.26	PFDA			
PFDA_2	513.0 / 219.0	3.26	PFDA	0.043	0.041	ü
PFUnA_1	563.0 / 519.0	3.58	PFUnA			
PFUnA_2	563.0 / 269.0	3.57	PFUnA	0.050	0.057	ü
PFDoA_1	613.0 / 569.0	3.87	PFDoA			
PFDoA_2	613.0 / 319.0	3.86	PFDoA	0.150	0.158	ü
PFTrDA_1	663.0 / 619.0	4.12	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.11	PFTrDA	0.070	0.070	ü
PFTeDA_1	713.0 / 669.0	4.34	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.34	PFTeDA	0.050	0.053	ü
NMeFOSAA_1	570.0 / 419.0	3.41	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.41	NMeFOSAA	0.578	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.58	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.58	NEtFOSAA	0.055	0.066	ü

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Summary Ion Ratio Report

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Sample Name	JV20	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:32:29	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	0.371	0.322	ü
PFHxA_1	313.0 / 269.0	1.82	PFHxA			
PFHxA_2	313.0 / 119.0	1.83	PFHxA	0.083	0.070	ü
PFHxS_1	399.0 / 80.0	2.22	PFHxS			
PFHxS_2	399.0 / 99.0	2.21	PFHxS	0.359	0.289	ü
PFOA_1	413.0 / 369.0	2.58	PFOA			
PFOA_2	413.0 / 169.0	2.56	PFOA	0.056	0.076	ü
PFNA_1	463.0 / 419.0	2.95	PFNA			
PFNA_2	463.0 / 219.0	2.95	PFNA	0.244	0.273	ü
PFOS_1	499.0 / 80.0	N/A	PFOS			
PFOS_2	499.0 / 99.0	2.95	PFOS	N/A	0.211	

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:04:56 PM

Sample Name	JV21	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:43:10	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	0.403	0.322	ü
PFHxA_1	313.0 / 269.0	1.83	PFHxA			
PFHxA_2	313.0 / 119.0	1.84	PFHxA	0.093	0.070	ü
PFHxS_1	399.0 / 80.0	2.22	PFHxS			
PFHxS_2	399.0 / 99.0	2.22	PFHxS	0.316	0.289	ü
PFOA_1	413.0 / 369.0	2.58	PFOA			
PFOA_2	413.0 / 169.0	2.57	PFOA	0.063	0.076	ü
PFNA_1	463.0 / 419.0	2.95	PFNA			
PFNA_2	463.0 / 219.0	2.95	PFNA	0.274	0.273	ü
PFOS_1	499.0 / 80.0	2.95	PFOS			
PFOS_2	499.0 / 99.0	2.95	PFOS	0.315	0.211	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:04:58 PM

Sample Name	JV22	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:53:52	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	0.288	0.322	ü
PFHxA_1	313.0 / 269.0	1.84	PFHxA			
PFHxA_2	313.0 / 119.0	1.84	PFHxA	0.050	0.070	ü
PFHxS_1	399.0 / 80.0	2.22	PFHxS			
PFHxS_2	399.0 / 99.0	2.21	PFHxS	0.300	0.289	ü
PFOA_1	413.0 / 369.0	2.58	PFOA			
PFOA_2	413.0 / 169.0	2.57	PFOA	0.088	0.076	ü
PFNA_1	463.0 / 419.0	2.95	PFNA			
PFNA_2	463.0 / 219.0	2.95	PFNA	0.286	0.273	ü
PFOS_1	499.0 / 80.0	2.95	PFOS			
PFOS_2	499.0 / 99.0	2.95	PFOS	0.202	0.211	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:05:00 PM

Sample Name	JV23	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:04:34	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	0.297	0.322	ü
PFHxA_1	313.0 / 269.0	1.83	PFHxA			
PFHxA_2	313.0 / 119.0	1.83	PFHxA	0.059	0.070	ü
PFHxS_1	399.0 / 80.0	2.21	PFHxS			
PFHxS_2	399.0 / 99.0	2.21	PFHxS	0.278	0.289	ü
PFOA_1	413.0 / 369.0	2.58	PFOA			
PFOA_2	413.0 / 169.0	2.57	PFOA	0.082	0.076	ü
PFNA_1	463.0 / 419.0	2.95	PFNA			
PFNA_2	463.0 / 219.0	2.95	PFNA	0.261	0.273	ü
PFOS_1	499.0 / 80.0	2.94	PFOS			
PFOS_2	499.0 / 99.0	2.94	PFOS	0.236	0.211	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:05:02 PM

Sample Name	JV24	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:15:15	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	0.318	0.322	ü
PFHxA_1	313.0 / 269.0	1.83	PFHxA			
PFHxA_2	313.0 / 119.0	1.83	PFHxA	0.063	0.070	ü
PFHxS_1	399.0 / 80.0	2.21	PFHxS			
PFHxS_2	399.0 / 99.0	2.21	PFHxS	0.287	0.289	ü
PFOA_1	413.0 / 369.0	2.58	PFOA			
PFOA_2	413.0 / 169.0	2.58	PFOA	0.086	0.076	ü
PFNA_1	463.0 / 419.0	2.95	PFNA			
PFNA_2	463.0 / 219.0	2.95	PFNA	0.276	0.273	ü
PFOS_1	499.0 / 80.0	2.94	PFOS			
PFOS_2	499.0 / 99.0	2.94	PFOS	0.204	0.211	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:05:04 PM

Sample Name	JV25	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:25:56	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	0.293	0.322	ü
PFHxA_1	313.0 / 269.0	1.83	PFHxA			
PFHxA_2	313.0 / 119.0	1.83	PFHxA	0.068	0.070	ü
PFHxS_1	399.0 / 80.0	2.21	PFHxS			
PFHxS_2	399.0 / 99.0	2.21	PFHxS	0.293	0.289	ü
PFOA_1	413.0 / 369.0	2.58	PFOA			
PFOA_2	413.0 / 169.0	2.58	PFOA	0.079	0.076	ü
PFNA_1	463.0 / 419.0	2.95	PFNA			
PFNA_2	463.0 / 219.0	2.95	PFNA	0.272	0.273	ü
PFOS_1	499.0 / 80.0	2.94	PFOS			
PFOS_2	499.0 / 99.0	2.94	PFOS	0.197	0.211	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:05:06 PM

Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:36:37	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	0.299	0.322	ü
PFHxA_1	313.0 / 269.0	1.83	PFHxA			
PFHxA_2	313.0 / 119.0	1.83	PFHxA	0.070	0.070	ü
PFHxS_1	399.0 / 80.0	2.21	PFHxS			
PFHxS_2	399.0 / 99.0	2.22	PFHxS	0.294	0.289	ü
PFOA_1	413.0 / 369.0	2.58	PFOA			
PFOA_2	413.0 / 169.0	2.58	PFOA	0.078	0.076	ü
PFNA_1	463.0 / 419.0	2.95	PFNA			
PFNA_2	463.0 / 219.0	2.95	PFNA	0.284	0.273	ü
PFOS_1	499.0 / 80.0	2.94	PFOS			
PFOS_2	499.0 / 99.0	2.94	PFOS	0.181	0.211	ü

BATTELLE

Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:05:08 PM

Sample Name	JV27	**Injection Vial**	9
Sample ID	L8	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:47:16	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	0.316	0.322	ü
PFHxA_1	313.0 / 269.0	1.83	PFHxA			
PFHxA_2	313.0 / 119.0	1.83	PFHxA	0.071	0.070	ü
PFHxS_1	399.0 / 80.0	2.21	PFHxS			
PFHxS_2	399.0 / 99.0	2.21	PFHxS	0.280	0.289	ü
PFOA_1	413.0 / 369.0	2.57	PFOA			
PFOA_2	413.0 / 169.0	2.57	PFOA	0.076	0.076	ü
PFNA_1	463.0 / 419.0	2.95	PFNA			
PFNA_2	463.0 / 219.0	2.95	PFNA	0.283	0.273	ü
PFOS_1	499.0 / 80.0	2.94	PFOS			
PFOS_2	499.0 / 99.0	2.94	PFOS	0.182	0.211	ü

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Summary Ion Ratio Report

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Printed: 08/06/2018 3:05:10 PM

Sample Name	JV28	**Injection Vial**	10
Sample ID	L9	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:57:58	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	0.313	0.322	ü
PFHxA_1	313.0 / 269.0	1.83	PFHxA			
PFHxA_2	313.0 / 119.0	1.83	PFHxA	0.071	0.070	ü
PFHxS_1	399.0 / 80.0	2.21	PFHxS			
PFHxS_2	399.0 / 99.0	2.21	PFHxS	0.269	0.289	ü
PFOA_1	413.0 / 369.0	2.58	PFOA			
PFOA_2	413.0 / 169.0	2.58	PFOA	0.077	0.076	ü
PFNA_1	463.0 / 419.0	2.95	PFNA			
PFNA_2	463.0 / 219.0	2.95	PFNA	0.277	0.273	ü
PFOS_1	499.0 / 80.0	2.94	PFOS			
PFOS_2	499.0 / 99.0	2.94	PFOS	0.168	0.211	ü

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 12:31:27 PM

Sample Name	JV20	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T17:43:25	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFTeDA_1	713.0 / 669.0	4.39	13C2-PFTeDA	715.0 / 670.0	53177.22	100.00
PFTeDA_2	713.0 / 169.0	4.38	13C2-PFTeDA	715.0 / 670.0	53177.22	100.00
NMeFOSAA_1	570.0 / 419.0	3.46	d3-MeFOSAA	573.0 / 419.0	8685.72	100.00
NMeFOSAA_2	570.0 / 512.0	3.46	d3-MeFOSAA	573.0 / 419.0	8685.72	100.00
NEtFOSAA_1	584.0 / 419.0	3.64	d5-EtFOSAA	589.0 / 419.0	10860.22	100.00
NEtFOSAA_2	584.0 / 483.0	3.62	d5-EtFOSAA	589.0 / 419.0	10860.22	100.00

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 12:31:29 PM

Sample Name	JV21	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T17:54:13	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFTeDA_1	713.0 / 669.0	4.38	13C2-PFTeDA	715.0 / 670.0	72138.07	100.00
PFTeDA_2	713.0 / 169.0	4.37	13C2-PFTeDA	715.0 / 670.0	72138.07	100.00
NMeFOSAA_1	570.0 / 419.0	3.46	d3-MeFOSAA	573.0 / 419.0	14141.46	100.00
NMeFOSAA_2	570.0 / 512.0	3.46	d3-MeFOSAA	573.0 / 419.0	14141.46	100.00
NEtFOSAA_1	584.0 / 419.0	3.62	d5-EtFOSAA	589.0 / 419.0	15636.88	100.00
NEtFOSAA_2	584.0 / 483.0	3.60	d5-EtFOSAA	589.0 / 419.0	15636.88	100.00

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Summary Internal Standard Report

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Sample Name	JV22	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:05:02	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFTeDA_1	713.0 / 669.0	4.37	13C2-PFTeDA	715.0 / 670.0	68347.47	100.00
PFTeDA_2	713.0 / 169.0	4.37	13C2-PFTeDA	715.0 / 670.0	68347.47	100.00
NMeFOSAA_1	570.0 / 419.0	3.45	d3-MeFOSAA	573.0 / 419.0	14401.63	100.00
NMeFOSAA_2	570.0 / 512.0	3.45	d3-MeFOSAA	573.0 / 419.0	14401.63	100.00
NEtFOSAA_1	584.0 / 419.0	3.62	d5-EtFOSAA	589.0 / 419.0	14059.37	100.00
NEtFOSAA_2	584.0 / 483.0	3.62	d5-EtFOSAA	589.0 / 419.0	14059.37	100.00

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Summary Internal Standard Report

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Sample Name	JV23	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:15:51	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFTeDA_1	713.0 / 669.0	4.37	13C2-PFTeDA	715.0 / 670.0	69006.25	100.00
PFTeDA_2	713.0 / 169.0	4.37	13C2-PFTeDA	715.0 / 670.0	69006.25	100.00
NMeFOSAA_1	570.0 / 419.0	3.44	d3-MeFOSAA	573.0 / 419.0	15886.43	100.00
NMeFOSAA_2	570.0 / 512.0	3.45	d3-MeFOSAA	573.0 / 419.0	15886.43	100.00
NEtFOSAA_1	584.0 / 419.0	3.61	d5-EtFOSAA	589.0 / 419.0	14109.50	100.00
NEtFOSAA_2	584.0 / 483.0	3.61	d5-EtFOSAA	589.0 / 419.0	14109.50	100.00

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Summary Internal Standard Report

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Sample Name	JV24	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:26:39	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFTeDA_1	713.0 / 669.0	4.37	13C2-PFTeDA	715.0 / 670.0	57742.52	100.00
PFTeDA_2	713.0 / 169.0	4.36	13C2-PFTeDA	715.0 / 670.0	57742.52	100.00
NMeFOSAA_1	570.0 / 419.0	3.45	d3-MeFOSAA	573.0 / 419.0	12008.79	100.00
NMeFOSAA_2	570.0 / 512.0	3.45	d3-MeFOSAA	573.0 / 419.0	12008.79	100.00
NEtFOSAA_1	584.0 / 419.0	3.61	d5-EtFOSAA	589.0 / 419.0	11795.03	100.00
NEtFOSAA_2	584.0 / 483.0	3.62	d5-EtFOSAA	589.0 / 419.0	11795.03	100.00

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Summary Internal Standard Report

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Sample Name	JV25	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:37:26	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFTeDA_1	713.0 / 669.0	4.36	13C2-PFTeDA	715.0 / 670.0	69656.25	100.00
PFTeDA_2	713.0 / 169.0	4.36	13C2-PFTeDA	715.0 / 670.0	69656.25	100.00
NMeFOSAA_1	570.0 / 419.0	3.44	d3-MeFOSAA	573.0 / 419.0	16468.58	100.00
NMeFOSAA_2	570.0 / 512.0	3.44	d3-MeFOSAA	573.0 / 419.0	16468.58	100.00
NEtFOSAA_1	584.0 / 419.0	3.61	d5-EtFOSAA	589.0 / 419.0	13667.34	100.00
NEtFOSAA_2	584.0 / 483.0	3.60	d5-EtFOSAA	589.0 / 419.0	13667.34	100.00

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Summary Internal Standard Report

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Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:48:14	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFTeDA_1	713.0 / 669.0	4.36	13C2-PFTeDA	715.0 / 670.0	38869.00	100.00
PFTeDA_2	713.0 / 169.0	4.35	13C2-PFTeDA	715.0 / 670.0	38869.00	100.00
NMeFOSAA_1	570.0 / 419.0	3.44	d3-MeFOSAA	573.0 / 419.0	7134.87	100.00
NMeFOSAA_2	570.0 / 512.0	3.44	d3-MeFOSAA	573.0 / 419.0	7134.87	100.00
NEtFOSAA_1	584.0 / 419.0	3.60	d5-EtFOSAA	589.0 / 419.0	8645.47	100.00
NEtFOSAA_2	584.0 / 483.0	3.60	d5-EtFOSAA	589.0 / 419.0	8645.47	100.00

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Summary Internal Standard Report

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Sample Name	JV27	**Injection Vial**	9
Sample ID	L8	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:59:02	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFTeDA_1	713.0 / 669.0	4.35	13C2-PFTeDA	715.0 / 670.0	64365.69	100.00
PFTeDA_2	713.0 / 169.0	4.35	13C2-PFTeDA	715.0 / 670.0	64365.69	100.00
NMeFOSAA_1	570.0 / 419.0	3.43	d3-MeFOSAA	573.0 / 419.0	12775.96	100.00
NMeFOSAA_2	570.0 / 512.0	3.43	d3-MeFOSAA	573.0 / 419.0	12775.96	100.00
NEtFOSAA_1	584.0 / 419.0	3.60	d5-EtFOSAA	589.0 / 419.0	10361.26	100.00
NEtFOSAA_2	584.0 / 483.0	3.60	d5-EtFOSAA	589.0 / 419.0	10361.26	100.00

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Summary Internal Standard Report

Created with Analyst Reporter
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Sample Name	JV28	**Injection Vial**	10
Sample ID	L9	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T19:09:48	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFTeDA_1	713.0 / 669.0	4.35	13C2-PFTeDA	715.0 / 670.0	42720.64	100.00
PFTeDA_2	713.0 / 169.0	4.35	13C2-PFTeDA	715.0 / 670.0	42720.64	100.00
NMeFOSAA_1	570.0 / 419.0	3.44	d3-MeFOSAA	573.0 / 419.0	9378.32	100.00
NMeFOSAA_2	570.0 / 512.0	3.44	d3-MeFOSAA	573.0 / 419.0	9378.32	100.00
NEtFOSAA_1	584.0 / 419.0	3.60	d5-EtFOSAA	589.0 / 419.0	6695.37	100.00
NEtFOSAA_2	584.0 / 483.0	3.60	d5-EtFOSAA	589.0 / 419.0	6695.37	100.00

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Summary Internal Standard Report

Created with Analyst Reporter
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Sample Name	JV20	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:34:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_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	3.87	13C2-PFDA	515.0 / 470.0	36585.13	100.00
d3-MeFOSAA	573.0 / 419.0	3.42	13C4-PFOS	503.0 / 99.0	9879.32	95.50
d5-EtFOSAA	589.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	9879.32	95.50
13C5-PFHxA	318.0 / 273.0	1.78	13C2-PFOA	415.0 / 370.0	36025.71	100.00
13C4-PFHpA	367.0 / 322.0	2.15	13C2-PFOA	415.0 / 370.0	36025.71	100.00
13C8-PFOA	421.0 / 376.0	2.53	13C2-PFOA	415.0 / 370.0	36025.71	100.00
13C9-PFNA	472.0 / 427.0	2.91	13C2-PFOA	415.0 / 370.0	36025.71	100.00
13C6-PFDA	519.0 / 474.0	3.26	13C2-PFDA	515.0 / 470.0	36585.13	100.00
13C7-PFUnA	570.0 / 525.0	3.58	13C2-PFDA	515.0 / 470.0	36585.13	100.00
13C2-PFTeDA	715.0 / 670.0	4.35	13C2-PFDA	515.0 / 470.0	36585.13	100.00
13C3-PFBS	302.0 / 99.0	1.48	13C4-PFOS	503.0 / 99.0	9879.32	95.50
13C3-PFHxS	402.0 / 99.0	2.17	13C4-PFOS	503.0 / 99.0	9879.32	95.50
13C8-PFOS	507.0 / 99.0	2.90	13C4-PFOS	503.0 / 99.0	9879.32	95.50

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Summary Internal Standard Report

Created with Analyst Reporter
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Sample Name	JV21	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:44:51	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_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	3.87	13C2-PFDA	515.0 / 470.0	46522.32	100.00
d3-MeFOSAA	573.0 / 419.0	3.42	13C4-PFOS	503.0 / 99.0	12043.17	95.50
d5-EtFOSAA	589.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	12043.17	95.50
13C5-PFHxA	318.0 / 273.0	1.77	13C2-PFOA	415.0 / 370.0	41305.46	100.00
13C4-PFHpA	367.0 / 322.0	2.15	13C2-PFOA	415.0 / 370.0	41305.46	100.00
13C8-PFOA	421.0 / 376.0	2.53	13C2-PFOA	415.0 / 370.0	41305.46	100.00
13C9-PFNA	472.0 / 427.0	2.91	13C2-PFOA	415.0 / 370.0	41305.46	100.00
13C6-PFDA	519.0 / 474.0	3.26	13C2-PFDA	515.0 / 470.0	46522.32	100.00
13C7-PFUnA	570.0 / 525.0	3.58	13C2-PFDA	515.0 / 470.0	46522.32	100.00
13C2-PFTeDA	715.0 / 670.0	4.35	13C2-PFDA	515.0 / 470.0	46522.32	100.00
13C3-PFBS	302.0 / 99.0	1.48	13C4-PFOS	503.0 / 99.0	12043.17	95.50
13C3-PFHxS	402.0 / 99.0	2.16	13C4-PFOS	503.0 / 99.0	12043.17	95.50
13C8-PFOS	507.0 / 99.0	2.90	13C4-PFOS	503.0 / 99.0	12043.17	95.50

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 11:32:43 AM

Sample Name	JV22	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:55:39	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_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	3.87	13C2-PFDA	515.0 / 470.0	42887.04	100.00
d3-MeFOSAA	573.0 / 419.0	3.41	13C4-PFOS	503.0 / 99.0	10528.19	95.50
d5-EtFOSAA	589.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	10528.19	95.50
13C5-PFHxA	318.0 / 273.0	1.77	13C2-PFOA	415.0 / 370.0	39696.51	100.00
13C4-PFHpA	367.0 / 322.0	2.14	13C2-PFOA	415.0 / 370.0	39696.51	100.00
13C8-PFOA	421.0 / 376.0	2.52	13C2-PFOA	415.0 / 370.0	39696.51	100.00
13C9-PFNA	472.0 / 427.0	2.90	13C2-PFOA	415.0 / 370.0	39696.51	100.00
13C6-PFDA	519.0 / 474.0	3.25	13C2-PFDA	515.0 / 470.0	42887.04	100.00
13C7-PFUnA	570.0 / 525.0	3.57	13C2-PFDA	515.0 / 470.0	42887.04	100.00
13C2-PFTeDA	715.0 / 670.0	4.34	13C2-PFDA	515.0 / 470.0	42887.04	100.00
13C3-PFBS	302.0 / 99.0	1.48	13C4-PFOS	503.0 / 99.0	10528.19	95.50
13C3-PFHxS	402.0 / 99.0	2.16	13C4-PFOS	503.0 / 99.0	10528.19	95.50
13C8-PFOS	507.0 / 99.0	2.90	13C4-PFOS	503.0 / 99.0	10528.19	95.50

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 11:32:45 AM

Sample Name	JV23	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:06:27	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_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	3.86	13C2-PFDA	515.0 / 470.0	46848.40	100.00
d3-MeFOSAA	573.0 / 419.0	3.41	13C4-PFOS	503.0 / 99.0	11797.48	95.50
d5-EtFOSAA	589.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	11797.48	95.50
13C5-PFHxA	318.0 / 273.0	1.76	13C2-PFOA	415.0 / 370.0	41933.78	100.00
13C4-PFHpA	367.0 / 322.0	2.14	13C2-PFOA	415.0 / 370.0	41933.78	100.00
13C8-PFOA	421.0 / 376.0	2.52	13C2-PFOA	415.0 / 370.0	41933.78	100.00
13C9-PFNA	472.0 / 427.0	2.90	13C2-PFOA	415.0 / 370.0	41933.78	100.00
13C6-PFDA	519.0 / 474.0	3.25	13C2-PFDA	515.0 / 470.0	46848.40	100.00
13C7-PFUnA	570.0 / 525.0	3.57	13C2-PFDA	515.0 / 470.0	46848.40	100.00
13C2-PFTeDA	715.0 / 670.0	4.34	13C2-PFDA	515.0 / 470.0	46848.40	100.00
13C3-PFBS	302.0 / 99.0	1.47	13C4-PFOS	503.0 / 99.0	11797.48	95.50
13C3-PFHxS	402.0 / 99.0	2.15	13C4-PFOS	503.0 / 99.0	11797.48	95.50
13C8-PFOS	507.0 / 99.0	2.89	13C4-PFOS	503.0 / 99.0	11797.48	95.50

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Sample Name	JV24	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:17:14	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_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	3.86	13C2-PFDA	515.0 / 470.0	42059.81	100.00
d3-MeFOSAA	573.0 / 419.0	3.41	13C4-PFOS	503.0 / 99.0	9929.06	95.50
d5-EtFOSAA	589.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	9929.06	95.50
13C5-PFHxA	318.0 / 273.0	1.77	13C2-PFOA	415.0 / 370.0	39157.28	100.00
13C4-PFHpA	367.0 / 322.0	2.14	13C2-PFOA	415.0 / 370.0	39157.28	100.00
13C8-PFOA	421.0 / 376.0	2.52	13C2-PFOA	415.0 / 370.0	39157.28	100.00
13C9-PFNA	472.0 / 427.0	2.90	13C2-PFOA	415.0 / 370.0	39157.28	100.00
13C6-PFDA	519.0 / 474.0	3.25	13C2-PFDA	515.0 / 470.0	42059.81	100.00
13C7-PFUnA	570.0 / 525.0	3.57	13C2-PFDA	515.0 / 470.0	42059.81	100.00
13C2-PFTeDA	715.0 / 670.0	4.34	13C2-PFDA	515.0 / 470.0	42059.81	100.00
13C3-PFBS	302.0 / 99.0	1.48	13C4-PFOS	503.0 / 99.0	9929.06	95.50
13C3-PFHxS	402.0 / 99.0	2.16	13C4-PFOS	503.0 / 99.0	9929.06	95.50
13C8-PFOS	507.0 / 99.0	2.89	13C4-PFOS	503.0 / 99.0	9929.06	95.50

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Summary Internal Standard Report

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Sample Name	JV25	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:28:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_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	3.86	13C2-PFDA	515.0 / 470.0	40285.95	100.00
d3-MeFOSAA	573.0 / 419.0	3.41	13C4-PFOS	503.0 / 99.0	9996.33	95.50
d5-EtFOSAA	589.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	9996.33	95.50
13C5-PFHxA	318.0 / 273.0	1.77	13C2-PFOA	415.0 / 370.0	34745.43	100.00
13C4-PFHpA	367.0 / 322.0	2.14	13C2-PFOA	415.0 / 370.0	34745.43	100.00
13C8-PFOA	421.0 / 376.0	2.52	13C2-PFOA	415.0 / 370.0	34745.43	100.00
13C9-PFNA	472.0 / 427.0	2.90	13C2-PFOA	415.0 / 370.0	34745.43	100.00
13C6-PFDA	519.0 / 474.0	3.25	13C2-PFDA	515.0 / 470.0	40285.95	100.00
13C7-PFUnA	570.0 / 525.0	3.57	13C2-PFDA	515.0 / 470.0	40285.95	100.00
13C2-PFTeDA	715.0 / 670.0	4.34	13C2-PFDA	515.0 / 470.0	40285.95	100.00
13C3-PFBS	302.0 / 99.0	1.49	13C4-PFOS	503.0 / 99.0	9996.33	95.50
13C3-PFHxS	402.0 / 99.0	2.16	13C4-PFOS	503.0 / 99.0	9996.33	95.50
13C8-PFOS	507.0 / 99.0	2.90	13C4-PFOS	503.0 / 99.0	9996.33	95.50

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Summary Internal Standard Report

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Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:38:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_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	3.86	13C2-PFDA	515.0 / 470.0	39548.90	100.00
d3-MeFOSAA	573.0 / 419.0	3.41	13C4-PFOS	503.0 / 99.0	7985.50	95.50
d5-EtFOSAA	589.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	7985.50	95.50
13C5-PFHxA	318.0 / 273.0	1.77	13C2-PFOA	415.0 / 370.0	37482.32	100.00
13C4-PFHpA	367.0 / 322.0	2.14	13C2-PFOA	415.0 / 370.0	37482.32	100.00
13C8-PFOA	421.0 / 376.0	2.52	13C2-PFOA	415.0 / 370.0	37482.32	100.00
13C9-PFNA	472.0 / 427.0	2.90	13C2-PFOA	415.0 / 370.0	37482.32	100.00
13C6-PFDA	519.0 / 474.0	3.25	13C2-PFDA	515.0 / 470.0	39548.90	100.00
13C7-PFUnA	570.0 / 525.0	3.57	13C2-PFDA	515.0 / 470.0	39548.90	100.00
13C2-PFTeDA	715.0 / 670.0	4.33	13C2-PFDA	515.0 / 470.0	39548.90	100.00
13C3-PFBS	302.0 / 99.0	1.48	13C4-PFOS	503.0 / 99.0	7985.50	95.50
13C3-PFHxS	402.0 / 99.0	2.16	13C4-PFOS	503.0 / 99.0	7985.50	95.50
13C8-PFOS	507.0 / 99.0	2.90	13C4-PFOS	503.0 / 99.0	7985.50	95.50

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Sample Name	JV27	**Injection Vial**	9
Sample ID	L8	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:49:37	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_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	3.85	13C2-PFDA	515.0 / 470.0	42034.21	100.00
d3-MeFOSAA	573.0 / 419.0	3.41	13C4-PFOS	503.0 / 99.0	11051.83	95.50
d5-EtFOSAA	589.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	11051.83	95.50
13C5-PFHxA	318.0 / 273.0	1.77	13C2-PFOA	415.0 / 370.0	39448.92	100.00
13C4-PFHpA	367.0 / 322.0	2.14	13C2-PFOA	415.0 / 370.0	39448.92	100.00
13C8-PFOA	421.0 / 376.0	2.52	13C2-PFOA	415.0 / 370.0	39448.92	100.00
13C9-PFNA	472.0 / 427.0	2.89	13C2-PFOA	415.0 / 370.0	39448.92	100.00
13C6-PFDA	519.0 / 474.0	3.24	13C2-PFDA	515.0 / 470.0	42034.21	100.00
13C7-PFUnA	570.0 / 525.0	3.56	13C2-PFDA	515.0 / 470.0	42034.21	100.00
13C2-PFTeDA	715.0 / 670.0	4.33	13C2-PFDA	515.0 / 470.0	42034.21	100.00
13C3-PFBS	302.0 / 99.0	1.48	13C4-PFOS	503.0 / 99.0	11051.83	95.50
13C3-PFHxS	402.0 / 99.0	2.16	13C4-PFOS	503.0 / 99.0	11051.83	95.50
13C8-PFOS	507.0 / 99.0	2.89	13C4-PFOS	503.0 / 99.0	11051.83	95.50

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Summary Internal Standard Report

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Sample Name	JV28	**Injection Vial**	10
Sample ID	L9	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:00:25	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_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	3.85	13C2-PFDA	515.0 / 470.0	49902.99	100.00
d3-MeFOSAA	573.0 / 419.0	3.41	13C4-PFOS	503.0 / 99.0	9517.13	95.50
d5-EtFOSAA	589.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	9517.13	95.50
13C5-PFHxA	318.0 / 273.0	1.77	13C2-PFOA	415.0 / 370.0	49167.01	100.00
13C4-PFHpA	367.0 / 322.0	2.13	13C2-PFOA	415.0 / 370.0	49167.01	100.00
13C8-PFOA	421.0 / 376.0	2.51	13C2-PFOA	415.0 / 370.0	49167.01	100.00
13C9-PFNA	472.0 / 427.0	2.89	13C2-PFOA	415.0 / 370.0	49167.01	100.00
13C6-PFDA	519.0 / 474.0	3.24	13C2-PFDA	515.0 / 470.0	49902.99	100.00
13C7-PFUnA	570.0 / 525.0	3.56	13C2-PFDA	515.0 / 470.0	49902.99	100.00
13C2-PFTeDA	715.0 / 670.0	4.33	13C2-PFDA	515.0 / 470.0	49902.99	100.00
13C3-PFBS	302.0 / 99.0	1.47	13C4-PFOS	503.0 / 99.0	9517.13	95.50
13C3-PFHxS	402.0 / 99.0	2.15	13C4-PFOS	503.0 / 99.0	9517.13	95.50
13C8-PFOS	507.0 / 99.0	2.89	13C4-PFOS	503.0 / 99.0	9517.13	95.50

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Summary Internal Standard Report

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Sample Name	JV20	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:34:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
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	13986.87	92.90
PFBS_2	298.9 / 99.0	1.49	13C3-PFBS	302.0 / 99.0	13986.87	92.90
PFHxA_1	313.0 / 269.0	1.79	13C5-PFHxA	318.0 / 273.0	38896.69	100.00
PFHxA_2	313.0 / 119.0	1.79	13C5-PFHxA	318.0 / 273.0	38896.69	100.00
PFHpA_1	363.0 / 319.0	2.16	13C4-PFHpA	367.0 / 322.0	46157.94	100.00
PFHpA_2	363.0 / 169.0	2.14	13C4-PFHpA	367.0 / 322.0	46157.94	100.00
PFHxS_1	399.0 / 80.0	2.18	13C3-PFHxS	402.0 / 99.0	10686.45	94.60
PFHxS_2	399.0 / 99.0	2.17	13C3-PFHxS	402.0 / 99.0	10686.45	94.60
PFOA_1	413.0 / 369.0	2.54	13C8-PFOA	421.0 / 376.0	58276.55	100.00
PFOA_2	413.0 / 169.0	2.52	13C8-PFOA	421.0 / 376.0	58276.55	100.00
PFNA_1	463.0 / 419.0	2.92	13C9-PFNA	472.0 / 427.0	60467.44	100.00
PFNA_2	463.0 / 219.0	2.92	13C9-PFNA	472.0 / 427.0	60467.44	100.00
PFOS_1	499.0 / 80.0	2.91	13C8-PFOS	507.0 / 99.0	13213.35	95.70
PFOS_2	499.0 / 99.0	2.91	13C8-PFOS	507.0 / 99.0	13213.35	95.70
PFDA_1	513.0 / 469.0	3.27	13C6-PFDA	519.0 / 474.0	59842.31	100.00
PFDA_2	513.0 / 219.0	3.25	13C6-PFDA	519.0 / 474.0	59842.31	100.00
PFUnA_1	563.0 / 519.0	3.60	13C7-PFUnA	570.0 / 525.0	64117.26	100.00
PFUnA_2	563.0 / 269.0	3.59	13C7-PFUnA	570.0 / 525.0	64117.26	100.00
PFDoA_1	613.0 / 569.0	3.88	13C2-PFDoA	615.0 / 570.0	61361.92	100.00
PFDoA_2	613.0 / 319.0	3.88	13C2-PFDoA	615.0 / 570.0	61361.92	100.00
PFTrDA_1	663.0 / 619.0	4.14	13C2-PFTeDA	715.0 / 670.0	58097.73	100.00
PFTrDA_2	663.0 / 169.0	4.14	13C2-PFTeDA	715.0 / 670.0	58097.73	100.00
PFTeDA_1	713.0 / 669.0	4.36	13C2-PFTeDA	715.0 / 670.0	58097.73	100.00
PFTeDA_2	713.0 / 169.0	4.36	13C2-PFTeDA	715.0 / 670.0	58097.73	100.00
NMeFOSAA_1	570.0 / 419.0	3.43	d3-MeFOSAA	573.0 / 419.0	13096.41	100.00
NMeFOSAA_2	570.0 / 512.0	3.42	d3-MeFOSAA	573.0 / 419.0	13096.41	100.00
NEtFOSAA_1	584.0 / 419.0	3.59	d5-EtFOSAA	589.0 / 419.0	11898.48	100.00
NEtFOSAA_2	584.0 / 483.0	3.63	d5-EtFOSAA	589.0 / 419.0	11898.48	100.00

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Summary Internal Standard Report

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Sample Name	JV21	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:44:51	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
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	12812.68	92.90
PFBS_2	298.9 / 99.0	1.50	13C3-PFBS	302.0 / 99.0	12812.68	92.90
PFHxA_1	313.0 / 269.0	1.79	13C5-PFHxA	318.0 / 273.0	38983.77	100.00
PFHxA_2	313.0 / 119.0	1.77	13C5-PFHxA	318.0 / 273.0	38983.77	100.00
PFHpA_1	363.0 / 319.0	2.16	13C4-PFHpA	367.0 / 322.0	46373.67	100.00
PFHpA_2	363.0 / 169.0	2.14	13C4-PFHpA	367.0 / 322.0	46373.67	100.00
PFHxS_1	399.0 / 80.0	2.17	13C3-PFHxS	402.0 / 99.0	11329.51	94.60
PFHxS_2	399.0 / 99.0	2.18	13C3-PFHxS	402.0 / 99.0	11329.51	94.60
PFOA_1	413.0 / 369.0	2.54	13C8-PFOA	421.0 / 376.0	61129.01	100.00
PFOA_2	413.0 / 169.0	2.55	13C8-PFOA	421.0 / 376.0	61129.01	100.00
PFNA_1	463.0 / 419.0	2.92	13C9-PFNA	472.0 / 427.0	59118.70	100.00
PFNA_2	463.0 / 219.0	2.92	13C9-PFNA	472.0 / 427.0	59118.70	100.00
PFOS_1	499.0 / 80.0	2.91	13C8-PFOS	507.0 / 99.0	14975.38	95.70
PFOS_2	499.0 / 99.0	2.91	13C8-PFOS	507.0 / 99.0	14975.38	95.70
PFDA_1	513.0 / 469.0	3.27	13C6-PFDA	519.0 / 474.0	64951.72	100.00
PFDA_2	513.0 / 219.0	3.28	13C6-PFDA	519.0 / 474.0	64951.72	100.00
PFUnA_1	563.0 / 519.0	3.59	13C7-PFUnA	570.0 / 525.0	65716.75	100.00
PFUnA_2	563.0 / 269.0	3.60	13C7-PFUnA	570.0 / 525.0	65716.75	100.00
PFDoA_1	613.0 / 569.0	3.88	13C2-PFDoA	615.0 / 570.0	69914.04	100.00
PFDoA_2	613.0 / 319.0	3.88	13C2-PFDoA	615.0 / 570.0	69914.04	100.00
PFTrDA_1	663.0 / 619.0	4.13	13C2-PFTeDA	715.0 / 670.0	59755.36	100.00
PFTrDA_2	663.0 / 169.0	4.12	13C2-PFTeDA	715.0 / 670.0	59755.36	100.00
PFTeDA_1	713.0 / 669.0	4.36	13C2-PFTeDA	715.0 / 670.0	59755.36	100.00
PFTeDA_2	713.0 / 169.0	4.35	13C2-PFTeDA	715.0 / 670.0	59755.36	100.00
NMeFOSAA_1	570.0 / 419.0	3.43	d3-MeFOSAA	573.0 / 419.0	14441.35	100.00
NMeFOSAA_2	570.0 / 512.0	3.42	d3-MeFOSAA	573.0 / 419.0	14441.35	100.00
NEtFOSAA_1	584.0 / 419.0	3.59	d5-EtFOSAA	589.0 / 419.0	12188.07	100.00
NEtFOSAA_2	584.0 / 483.0	3.59	d5-EtFOSAA	589.0 / 419.0	12188.07	100.00

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Summary Internal Standard Report

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Sample Name	JV22	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:55:39	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
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	12539.19	92.90
PFBS_2	298.9 / 99.0	1.50	13C3-PFBS	302.0 / 99.0	12539.19	92.90
PFHxA_1	313.0 / 269.0	1.79	13C5-PFHxA	318.0 / 273.0	38385.46	100.00
PFHxA_2	313.0 / 119.0	1.79	13C5-PFHxA	318.0 / 273.0	38385.46	100.00
PFHpA_1	363.0 / 319.0	2.15	13C4-PFHpA	367.0 / 322.0	45916.74	100.00
PFHpA_2	363.0 / 169.0	2.15	13C4-PFHpA	367.0 / 322.0	45916.74	100.00
PFHxS_1	399.0 / 80.0	2.17	13C3-PFHxS	402.0 / 99.0	11281.76	94.60
PFHxS_2	399.0 / 99.0	2.17	13C3-PFHxS	402.0 / 99.0	11281.76	94.60
PFOA_1	413.0 / 369.0	2.53	13C8-PFOA	421.0 / 376.0	55596.55	100.00
PFOA_2	413.0 / 169.0	2.53	13C8-PFOA	421.0 / 376.0	55596.55	100.00
PFNA_1	463.0 / 419.0	2.91	13C9-PFNA	472.0 / 427.0	60668.98	100.00
PFNA_2	463.0 / 219.0	2.91	13C9-PFNA	472.0 / 427.0	60668.98	100.00
PFOS_1	499.0 / 80.0	2.91	13C8-PFOS	507.0 / 99.0	14472.40	95.70
PFOS_2	499.0 / 99.0	2.91	13C8-PFOS	507.0 / 99.0	14472.40	95.70
PFDA_1	513.0 / 469.0	3.27	13C6-PFDA	519.0 / 474.0	59453.83	100.00
PFDA_2	513.0 / 219.0	3.27	13C6-PFDA	519.0 / 474.0	59453.83	100.00
PFUnA_1	563.0 / 519.0	3.59	13C7-PFUnA	570.0 / 525.0	64475.07	100.00
PFUnA_2	563.0 / 269.0	3.59	13C7-PFUnA	570.0 / 525.0	64475.07	100.00
PFDoA_1	613.0 / 569.0	3.88	13C2-PFDoA	615.0 / 570.0	61914.08	100.00
PFDoA_2	613.0 / 319.0	3.87	13C2-PFDoA	615.0 / 570.0	61914.08	100.00
PFTrDA_1	663.0 / 619.0	4.13	13C2-PFTeDA	715.0 / 670.0	58185.21	100.00
PFTrDA_2	663.0 / 169.0	4.12	13C2-PFTeDA	715.0 / 670.0	58185.21	100.00
PFTeDA_1	713.0 / 669.0	4.35	13C2-PFTeDA	715.0 / 670.0	58185.21	100.00
PFTeDA_2	713.0 / 169.0	4.35	13C2-PFTeDA	715.0 / 670.0	58185.21	100.00
NMeFOSAA_1	570.0 / 419.0	3.42	d3-MeFOSAA	573.0 / 419.0	13395.22	100.00
NMeFOSAA_2	570.0 / 512.0	3.42	d3-MeFOSAA	573.0 / 419.0	13395.22	100.00
NEtFOSAA_1	584.0 / 419.0	3.59	d5-EtFOSAA	589.0 / 419.0	12764.42	100.00
NEtFOSAA_2	584.0 / 483.0	3.60	d5-EtFOSAA	589.0 / 419.0	12764.42	100.00

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Summary Internal Standard Report

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Sample Name	JV23	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:06:27	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.49	13C3-PFBS	302.0 / 99.0	14875.94	92.90
PFBS_2	298.9 / 99.0	1.49	13C3-PFBS	302.0 / 99.0	14875.94	92.90
PFHxA_1	313.0 / 269.0	1.78	13C5-PFHxA	318.0 / 273.0	43158.67	100.00
PFHxA_2	313.0 / 119.0	1.78	13C5-PFHxA	318.0 / 273.0	43158.67	100.00
PFHpA_1	363.0 / 319.0	2.15	13C4-PFHpA	367.0 / 322.0	45292.56	100.00
PFHpA_2	363.0 / 169.0	2.14	13C4-PFHpA	367.0 / 322.0	45292.56	100.00
PFHxS_1	399.0 / 80.0	2.17	13C3-PFHxS	402.0 / 99.0	12453.94	94.60
PFHxS_2	399.0 / 99.0	2.16	13C3-PFHxS	402.0 / 99.0	12453.94	94.60
PFOA_1	413.0 / 369.0	2.53	13C8-PFOA	421.0 / 376.0	57708.54	100.00
PFOA_2	413.0 / 169.0	2.53	13C8-PFOA	421.0 / 376.0	57708.54	100.00
PFNA_1	463.0 / 419.0	2.91	13C9-PFNA	472.0 / 427.0	57299.49	100.00
PFNA_2	463.0 / 219.0	2.91	13C9-PFNA	472.0 / 427.0	57299.49	100.00
PFOS_1	499.0 / 80.0	2.90	13C8-PFOS	507.0 / 99.0	15355.95	95.70
PFOS_2	499.0 / 99.0	2.91	13C8-PFOS	507.0 / 99.0	15355.95	95.70
PFDA_1	513.0 / 469.0	3.26	13C6-PFDA	519.0 / 474.0	59678.03	100.00
PFDA_2	513.0 / 219.0	3.26	13C6-PFDA	519.0 / 474.0	59678.03	100.00
PFUnA_1	563.0 / 519.0	3.58	13C7-PFUnA	570.0 / 525.0	62759.61	100.00
PFUnA_2	563.0 / 269.0	3.58	13C7-PFUnA	570.0 / 525.0	62759.61	100.00
PFDoA_1	613.0 / 569.0	3.87	13C2-PFDoA	615.0 / 570.0	70692.27	100.00
PFDoA_2	613.0 / 319.0	3.87	13C2-PFDoA	615.0 / 570.0	70692.27	100.00
PFTrDA_1	663.0 / 619.0	4.12	13C2-PFTeDA	715.0 / 670.0	60027.79	100.00
PFTrDA_2	663.0 / 169.0	4.12	13C2-PFTeDA	715.0 / 670.0	60027.79	100.00
PFTeDA_1	713.0 / 669.0	4.35	13C2-PFTeDA	715.0 / 670.0	60027.79	100.00
PFTeDA_2	713.0 / 169.0	4.34	13C2-PFTeDA	715.0 / 670.0	60027.79	100.00
NMeFOSAA_1	570.0 / 419.0	3.42	d3-MeFOSAA	573.0 / 419.0	13125.55	100.00
NMeFOSAA_2	570.0 / 512.0	3.42	d3-MeFOSAA	573.0 / 419.0	13125.55	100.00
NEtFOSAA_1	584.0 / 419.0	3.58	d5-EtFOSAA	589.0 / 419.0	12642.09	100.00
NEtFOSAA_2	584.0 / 483.0	3.57	d5-EtFOSAA	589.0 / 419.0	12642.09	100.00

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Summary Internal Standard Report

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Sample Name	JV24	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:17:14	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
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	13665.17	92.90
PFBS_2	298.9 / 99.0	1.49	13C3-PFBS	302.0 / 99.0	13665.17	92.90
PFHxA_1	313.0 / 269.0	1.78	13C5-PFHxA	318.0 / 273.0	36768.64	100.00
PFHxA_2	313.0 / 119.0	1.78	13C5-PFHxA	318.0 / 273.0	36768.64	100.00
PFHpA_1	363.0 / 319.0	2.15	13C4-PFHpA	367.0 / 322.0	48433.17	100.00
PFHpA_2	363.0 / 169.0	2.15	13C4-PFHpA	367.0 / 322.0	48433.17	100.00
PFHxS_1	399.0 / 80.0	2.17	13C3-PFHxS	402.0 / 99.0	10157.75	94.60
PFHxS_2	399.0 / 99.0	2.17	13C3-PFHxS	402.0 / 99.0	10157.75	94.60
PFOA_1	413.0 / 369.0	2.53	13C8-PFOA	421.0 / 376.0	56889.85	100.00
PFOA_2	413.0 / 169.0	2.53	13C8-PFOA	421.0 / 376.0	56889.85	100.00
PFNA_1	463.0 / 419.0	2.91	13C9-PFNA	472.0 / 427.0	60934.52	100.00
PFNA_2	463.0 / 219.0	2.91	13C9-PFNA	472.0 / 427.0	60934.52	100.00
PFOS_1	499.0 / 80.0	2.90	13C8-PFOS	507.0 / 99.0	12373.21	95.70
PFOS_2	499.0 / 99.0	2.90	13C8-PFOS	507.0 / 99.0	12373.21	95.70
PFDA_1	513.0 / 469.0	3.27	13C6-PFDA	519.0 / 474.0	60248.67	100.00
PFDA_2	513.0 / 219.0	3.27	13C6-PFDA	519.0 / 474.0	60248.67	100.00
PFUnA_1	563.0 / 519.0	3.58	13C7-PFUnA	570.0 / 525.0	63332.30	100.00
PFUnA_2	563.0 / 269.0	3.58	13C7-PFUnA	570.0 / 525.0	63332.30	100.00
PFDoA_1	613.0 / 569.0	3.87	13C2-PFDoA	615.0 / 570.0	68215.77	100.00
PFDoA_2	613.0 / 319.0	3.87	13C2-PFDoA	615.0 / 570.0	68215.77	100.00
PFTrDA_1	663.0 / 619.0	4.12	13C2-PFTeDA	715.0 / 670.0	57788.46	100.00
PFTrDA_2	663.0 / 169.0	4.12	13C2-PFTeDA	715.0 / 670.0	57788.46	100.00
PFTeDA_1	713.0 / 669.0	4.34	13C2-PFTeDA	715.0 / 670.0	57788.46	100.00
PFTeDA_2	713.0 / 169.0	4.34	13C2-PFTeDA	715.0 / 670.0	57788.46	100.00
NMeFOSAA_1	570.0 / 419.0	3.42	d3-MeFOSAA	573.0 / 419.0	11867.83	100.00
NMeFOSAA_2	570.0 / 512.0	3.42	d3-MeFOSAA	573.0 / 419.0	11867.83	100.00
NEtFOSAA_1	584.0 / 419.0	3.58	d5-EtFOSAA	589.0 / 419.0	11931.57	100.00
NEtFOSAA_2	584.0 / 483.0	3.58	d5-EtFOSAA	589.0 / 419.0	11931.57	100.00

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Summary Internal Standard Report

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Sample Name	JV25	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:28:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
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	14342.05	92.90
PFBS_2	298.9 / 99.0	1.50	13C3-PFBS	302.0 / 99.0	14342.05	92.90
PFHxA_1	313.0 / 269.0	1.79	13C5-PFHxA	318.0 / 273.0	37063.52	100.00
PFHxA_2	313.0 / 119.0	1.78	13C5-PFHxA	318.0 / 273.0	37063.52	100.00
PFHpA_1	363.0 / 319.0	2.16	13C4-PFHpA	367.0 / 322.0	38263.08	100.00
PFHpA_2	363.0 / 169.0	2.16	13C4-PFHpA	367.0 / 322.0	38263.08	100.00
PFHxS_1	399.0 / 80.0	2.17	13C3-PFHxS	402.0 / 99.0	9383.78	94.60
PFHxS_2	399.0 / 99.0	2.17	13C3-PFHxS	402.0 / 99.0	9383.78	94.60
PFOA_1	413.0 / 369.0	2.53	13C8-PFOA	421.0 / 376.0	52032.85	100.00
PFOA_2	413.0 / 169.0	2.53	13C8-PFOA	421.0 / 376.0	52032.85	100.00
PFNA_1	463.0 / 419.0	2.91	13C9-PFNA	472.0 / 427.0	58661.28	100.00
PFNA_2	463.0 / 219.0	2.91	13C9-PFNA	472.0 / 427.0	58661.28	100.00
PFOS_1	499.0 / 80.0	2.91	13C8-PFOS	507.0 / 99.0	10913.88	95.70
PFOS_2	499.0 / 99.0	2.91	13C8-PFOS	507.0 / 99.0	10913.88	95.70
PFDA_1	513.0 / 469.0	3.27	13C6-PFDA	519.0 / 474.0	57960.93	100.00
PFDA_2	513.0 / 219.0	3.26	13C6-PFDA	519.0 / 474.0	57960.93	100.00
PFUnA_1	563.0 / 519.0	3.58	13C7-PFUnA	570.0 / 525.0	59540.79	100.00
PFUnA_2	563.0 / 269.0	3.58	13C7-PFUnA	570.0 / 525.0	59540.79	100.00
PFDoA_1	613.0 / 569.0	3.87	13C2-PFDoA	615.0 / 570.0	58999.77	100.00
PFDoA_2	613.0 / 319.0	3.87	13C2-PFDoA	615.0 / 570.0	58999.77	100.00
PFTrDA_1	663.0 / 619.0	4.12	13C2-PFTeDA	715.0 / 670.0	55202.08	100.00
PFTrDA_2	663.0 / 169.0	4.12	13C2-PFTeDA	715.0 / 670.0	55202.08	100.00
PFTeDA_1	713.0 / 669.0	4.34	13C2-PFTeDA	715.0 / 670.0	55202.08	100.00
PFTeDA_2	713.0 / 169.0	4.34	13C2-PFTeDA	715.0 / 670.0	55202.08	100.00
NMeFOSAA_1	570.0 / 419.0	3.42	d3-MeFOSAA	573.0 / 419.0	11753.93	100.00
NMeFOSAA_2	570.0 / 512.0	3.42	d3-MeFOSAA	573.0 / 419.0	11753.93	100.00
NEtFOSAA_1	584.0 / 419.0	3.58	d5-EtFOSAA	589.0 / 419.0	10675.38	100.00
NEtFOSAA_2	584.0 / 483.0	3.58	d5-EtFOSAA	589.0 / 419.0	10675.38	100.00

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Summary Internal Standard Report

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Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:38:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
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	13363.08	92.90
PFBS_2	298.9 / 99.0	1.50	13C3-PFBS	302.0 / 99.0	13363.08	92.90
PFHxA_1	313.0 / 269.0	1.79	13C5-PFHxA	318.0 / 273.0	39118.21	100.00
PFHxA_2	313.0 / 119.0	1.78	13C5-PFHxA	318.0 / 273.0	39118.21	100.00
PFHpA_1	363.0 / 319.0	2.15	13C4-PFHpA	367.0 / 322.0	40397.17	100.00
PFHpA_2	363.0 / 169.0	2.15	13C4-PFHpA	367.0 / 322.0	40397.17	100.00
PFHxS_1	399.0 / 80.0	2.17	13C3-PFHxS	402.0 / 99.0	10825.66	94.60
PFHxS_2	399.0 / 99.0	2.17	13C3-PFHxS	402.0 / 99.0	10825.66	94.60
PFOA_1	413.0 / 369.0	2.53	13C8-PFOA	421.0 / 376.0	52910.31	100.00
PFOA_2	413.0 / 169.0	2.53	13C8-PFOA	421.0 / 376.0	52910.31	100.00
PFNA_1	463.0 / 419.0	2.91	13C9-PFNA	472.0 / 427.0	55485.06	100.00
PFNA_2	463.0 / 219.0	2.91	13C9-PFNA	472.0 / 427.0	55485.06	100.00
PFOS_1	499.0 / 80.0	2.90	13C8-PFOS	507.0 / 99.0	12923.20	95.70
PFOS_2	499.0 / 99.0	2.90	13C8-PFOS	507.0 / 99.0	12923.20	95.70
PFDA_1	513.0 / 469.0	3.26	13C6-PFDA	519.0 / 474.0	59810.53	100.00
PFDA_2	513.0 / 219.0	3.26	13C6-PFDA	519.0 / 474.0	59810.53	100.00
PFUnA_1	563.0 / 519.0	3.58	13C7-PFUnA	570.0 / 525.0	60799.90	100.00
PFUnA_2	563.0 / 269.0	3.58	13C7-PFUnA	570.0 / 525.0	60799.90	100.00
PFDoA_1	613.0 / 569.0	3.87	13C2-PFDoA	615.0 / 570.0	62348.58	100.00
PFDoA_2	613.0 / 319.0	3.87	13C2-PFDoA	615.0 / 570.0	62348.58	100.00
PFTrDA_1	663.0 / 619.0	4.12	13C2-PFTeDA	715.0 / 670.0	55964.28	100.00
PFTrDA_2	663.0 / 169.0	4.12	13C2-PFTeDA	715.0 / 670.0	55964.28	100.00
PFTeDA_1	713.0 / 669.0	4.34	13C2-PFTeDA	715.0 / 670.0	55964.28	100.00
PFTeDA_2	713.0 / 169.0	4.34	13C2-PFTeDA	715.0 / 670.0	55964.28	100.00
NMeFOSAA_1	570.0 / 419.0	3.42	d3-MeFOSAA	573.0 / 419.0	11194.91	100.00
NMeFOSAA_2	570.0 / 512.0	3.42	d3-MeFOSAA	573.0 / 419.0	11194.91	100.00
NEtFOSAA_1	584.0 / 419.0	3.58	d5-EtFOSAA	589.0 / 419.0	11705.11	100.00
NEtFOSAA_2	584.0 / 483.0	3.58	d5-EtFOSAA	589.0 / 419.0	11705.11	100.00

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Summary Internal Standard Report

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Sample Name	JV27	**Injection Vial**	9
Sample ID	L8	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:49:37	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
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	12951.58	92.90
PFBS_2	298.9 / 99.0	1.50	13C3-PFBS	302.0 / 99.0	12951.58	92.90
PFHxA_1	313.0 / 269.0	1.78	13C5-PFHxA	318.0 / 273.0	39548.90	100.00
PFHxA_2	313.0 / 119.0	1.78	13C5-PFHxA	318.0 / 273.0	39548.90	100.00
PFHpA_1	363.0 / 319.0	2.15	13C4-PFHpA	367.0 / 322.0	41752.03	100.00
PFHpA_2	363.0 / 169.0	2.15	13C4-PFHpA	367.0 / 322.0	41752.03	100.00
PFHxS_1	399.0 / 80.0	2.17	13C3-PFHxS	402.0 / 99.0	9890.86	94.60
PFHxS_2	399.0 / 99.0	2.17	13C3-PFHxS	402.0 / 99.0	9890.86	94.60
PFOA_1	413.0 / 369.0	2.53	13C8-PFOA	421.0 / 376.0	52956.02	100.00
PFOA_2	413.0 / 169.0	2.53	13C8-PFOA	421.0 / 376.0	52956.02	100.00
PFNA_1	463.0 / 419.0	2.91	13C9-PFNA	472.0 / 427.0	51286.45	100.00
PFNA_2	463.0 / 219.0	2.91	13C9-PFNA	472.0 / 427.0	51286.45	100.00
PFOS_1	499.0 / 80.0	2.90	13C8-PFOS	507.0 / 99.0	12008.74	95.70
PFOS_2	499.0 / 99.0	2.90	13C8-PFOS	507.0 / 99.0	12008.74	95.70
PFDA_1	513.0 / 469.0	3.26	13C6-PFDA	519.0 / 474.0	54131.11	100.00
PFDA_2	513.0 / 219.0	3.26	13C6-PFDA	519.0 / 474.0	54131.11	100.00
PFUnA_1	563.0 / 519.0	3.58	13C7-PFUnA	570.0 / 525.0	57279.05	100.00
PFUnA_2	563.0 / 269.0	3.58	13C7-PFUnA	570.0 / 525.0	57279.05	100.00
PFDoA_1	613.0 / 569.0	3.87	13C2-PFDoA	615.0 / 570.0	67510.90	100.00
PFDoA_2	613.0 / 319.0	3.87	13C2-PFDoA	615.0 / 570.0	67510.90	100.00
PFTrDA_1	663.0 / 619.0	4.11	13C2-PFTeDA	715.0 / 670.0	60419.15	100.00
PFTrDA_2	663.0 / 169.0	4.11	13C2-PFTeDA	715.0 / 670.0	60419.15	100.00
PFTeDA_1	713.0 / 669.0	4.34	13C2-PFTeDA	715.0 / 670.0	60419.15	100.00
PFTeDA_2	713.0 / 169.0	4.33	13C2-PFTeDA	715.0 / 670.0	60419.15	100.00
NMeFOSAA_1	570.0 / 419.0	3.42	d3-MeFOSAA	573.0 / 419.0	13119.59	100.00
NMeFOSAA_2	570.0 / 512.0	3.41	d3-MeFOSAA	573.0 / 419.0	13119.59	100.00
NEtFOSAA_1	584.0 / 419.0	3.58	d5-EtFOSAA	589.0 / 419.0	11500.63	100.00
NEtFOSAA_2	584.0 / 483.0	3.58	d5-EtFOSAA	589.0 / 419.0	11500.63	100.00

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Summary Internal Standard Report

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Sample Name	JV28	**Injection Vial**	10
Sample ID	L9	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:00:25	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.49	13C3-PFBS	302.0 / 99.0	18376.45	92.90
PFBS_2	298.9 / 99.0	1.49	13C3-PFBS	302.0 / 99.0	18376.45	92.90
PFHxA_1	313.0 / 269.0	1.78	13C5-PFHxA	318.0 / 273.0	42254.89	100.00
PFHxA_2	313.0 / 119.0	1.78	13C5-PFHxA	318.0 / 273.0	42254.89	100.00
PFHpA_1	363.0 / 319.0	2.15	13C4-PFHpA	367.0 / 322.0	49448.10	100.00
PFHpA_2	363.0 / 169.0	2.14	13C4-PFHpA	367.0 / 322.0	49448.10	100.00
PFHxS_1	399.0 / 80.0	2.16	13C3-PFHxS	402.0 / 99.0	10290.74	94.60
PFHxS_2	399.0 / 99.0	2.16	13C3-PFHxS	402.0 / 99.0	10290.74	94.60
PFOA_1	413.0 / 369.0	2.53	13C8-PFOA	421.0 / 376.0	53115.86	100.00
PFOA_2	413.0 / 169.0	2.53	13C8-PFOA	421.0 / 376.0	53115.86	100.00
PFNA_1	463.0 / 419.0	2.91	13C9-PFNA	472.0 / 427.0	55522.21	100.00
PFNA_2	463.0 / 219.0	2.91	13C9-PFNA	472.0 / 427.0	55522.21	100.00
PFOS_1	499.0 / 80.0	2.90	13C8-PFOS	507.0 / 99.0	12416.99	95.70
PFOS_2	499.0 / 99.0	2.90	13C8-PFOS	507.0 / 99.0	12416.99	95.70
PFDA_1	513.0 / 469.0	3.26	13C6-PFDA	519.0 / 474.0	55459.83	100.00
PFDA_2	513.0 / 219.0	3.26	13C6-PFDA	519.0 / 474.0	55459.83	100.00
PFUnA_1	563.0 / 519.0	3.58	13C7-PFUnA	570.0 / 525.0	62708.16	100.00
PFUnA_2	563.0 / 269.0	3.57	13C7-PFUnA	570.0 / 525.0	62708.16	100.00
PFDoA_1	613.0 / 569.0	3.87	13C2-PFDoA	615.0 / 570.0	76903.00	100.00
PFDoA_2	613.0 / 319.0	3.86	13C2-PFDoA	615.0 / 570.0	76903.00	100.00
PFTrDA_1	663.0 / 619.0	4.12	13C2-PFTeDA	715.0 / 670.0	68779.24	100.00
PFTrDA_2	663.0 / 169.0	4.11	13C2-PFTeDA	715.0 / 670.0	68779.24	100.00
PFTeDA_1	713.0 / 669.0	4.34	13C2-PFTeDA	715.0 / 670.0	68779.24	100.00
PFTeDA_2	713.0 / 169.0	4.34	13C2-PFTeDA	715.0 / 670.0	68779.24	100.00
NMeFOSAA_1	570.0 / 419.0	3.41	d3-MeFOSAA	573.0 / 419.0	14159.30	100.00
NMeFOSAA_2	570.0 / 512.0	3.41	d3-MeFOSAA	573.0 / 419.0	14159.30	100.00
NEtFOSAA_1	584.0 / 419.0	3.58	d5-EtFOSAA	589.0 / 419.0	11189.78	100.00
NEtFOSAA_2	584.0 / 483.0	3.58	d5-EtFOSAA	589.0 / 419.0	11189.78	100.00

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Summary Internal Standard Report

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Printed: 08/06/2018 12:29:49 PM

Sample Name	JV20	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:32:29	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	22932.69	92.90
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	22932.69	92.90
PFHxA_1	313.0 / 269.0	1.82	13C5-PFHxA	318.0 / 273.0	84089.61	100.00
PFHxA_2	313.0 / 119.0	1.83	13C5-PFHxA	318.0 / 273.0	84089.61	100.00
PFHxS_1	399.0 / 80.0	2.22	13C3-PFHxS	402.0 / 99.0	21201.59	94.60
PFHxS_2	399.0 / 99.0	2.21	13C3-PFHxS	402.0 / 99.0	21201.59	94.60
PFOA_1	413.0 / 369.0	2.58	13C8-PFOA	421.0 / 376.0	94707.09	100.00
PFOA_2	413.0 / 169.0	2.56	13C8-PFOA	421.0 / 376.0	94707.09	100.00
PFNA_1	463.0 / 419.0	2.95	13C9-PFNA	472.0 / 427.0	98926.95	100.00
PFNA_2	463.0 / 219.0	2.95	13C9-PFNA	472.0 / 427.0	98926.95	100.00
PFOS_1	499.0 / 80.0	N/A	13C8-PFOS	507.0 / 99.0	20870.53	95.70
PFOS_2	499.0 / 99.0	2.95	13C8-PFOS	507.0 / 99.0	20870.53	95.70

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 12:29:52 PM

Sample Name	JV21	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:43:10	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	20788.54	92.90
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	20788.54	92.90
PFHxA_1	313.0 / 269.0	1.83	13C5-PFHxA	318.0 / 273.0	63711.09	100.00
PFHxA_2	313.0 / 119.0	1.84	13C5-PFHxA	318.0 / 273.0	63711.09	100.00
PFHxS_1	399.0 / 80.0	2.22	13C3-PFHxS	402.0 / 99.0	15143.57	94.60
PFHxS_2	399.0 / 99.0	2.22	13C3-PFHxS	402.0 / 99.0	15143.57	94.60
PFOA_1	413.0 / 369.0	2.58	13C8-PFOA	421.0 / 376.0	74027.78	100.00
PFOA_2	413.0 / 169.0	2.57	13C8-PFOA	421.0 / 376.0	74027.78	100.00
PFNA_1	463.0 / 419.0	2.95	13C9-PFNA	472.0 / 427.0	76958.55	100.00
PFNA_2	463.0 / 219.0	2.95	13C9-PFNA	472.0 / 427.0	76958.55	100.00
PFOS_1	499.0 / 80.0	2.95	13C8-PFOS	507.0 / 99.0	16425.21	95.70
PFOS_2	499.0 / 99.0	2.95	13C8-PFOS	507.0 / 99.0	16425.21	95.70

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 12:29:54 PM

Sample Name	JV22	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:53:52	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	23260.93	92.90
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	23260.93	92.90
PFHxA_1	313.0 / 269.0	1.84	13C5-PFHxA	318.0 / 273.0	79365.18	100.00
PFHxA_2	313.0 / 119.0	1.84	13C5-PFHxA	318.0 / 273.0	79365.18	100.00
PFHxS_1	399.0 / 80.0	2.22	13C3-PFHxS	402.0 / 99.0	21265.52	94.60
PFHxS_2	399.0 / 99.0	2.21	13C3-PFHxS	402.0 / 99.0	21265.52	94.60
PFOA_1	413.0 / 369.0	2.58	13C8-PFOA	421.0 / 376.0	95539.56	100.00
PFOA_2	413.0 / 169.0	2.57	13C8-PFOA	421.0 / 376.0	95539.56	100.00
PFNA_1	463.0 / 419.0	2.95	13C9-PFNA	472.0 / 427.0	97074.96	100.00
PFNA_2	463.0 / 219.0	2.95	13C9-PFNA	472.0 / 427.0	97074.96	100.00
PFOS_1	499.0 / 80.0	2.95	13C8-PFOS	507.0 / 99.0	21371.14	95.70
PFOS_2	499.0 / 99.0	2.95	13C8-PFOS	507.0 / 99.0	21371.14	95.70

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Summary Internal Standard Report

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Sample Name	JV23	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:04:34	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	25634.62	92.90
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	25634.62	92.90
PFHxA_1	313.0 / 269.0	1.83	13C5-PFHxA	318.0 / 273.0	81666.63	100.00
PFHxA_2	313.0 / 119.0	1.83	13C5-PFHxA	318.0 / 273.0	81666.63	100.00
PFHxS_1	399.0 / 80.0	2.21	13C3-PFHxS	402.0 / 99.0	21403.87	94.60
PFHxS_2	399.0 / 99.0	2.21	13C3-PFHxS	402.0 / 99.0	21403.87	94.60
PFOA_1	413.0 / 369.0	2.58	13C8-PFOA	421.0 / 376.0	100044.77	100.00
PFOA_2	413.0 / 169.0	2.57	13C8-PFOA	421.0 / 376.0	100044.77	100.00
PFNA_1	463.0 / 419.0	2.95	13C9-PFNA	472.0 / 427.0	102609.28	100.00
PFNA_2	463.0 / 219.0	2.95	13C9-PFNA	472.0 / 427.0	102609.28	100.00
PFOS_1	499.0 / 80.0	2.94	13C8-PFOS	507.0 / 99.0	24607.45	95.70
PFOS_2	499.0 / 99.0	2.94	13C8-PFOS	507.0 / 99.0	24607.45	95.70

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Summary Internal Standard Report

Created with Analyst Reporter
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Sample Name	JV24	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:15:15	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	22935.24	92.90
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	22935.24	92.90
PFHxA_1	313.0 / 269.0	1.83	13C5-PFHxA	318.0 / 273.0	76489.30	100.00
PFHxA_2	313.0 / 119.0	1.83	13C5-PFHxA	318.0 / 273.0	76489.30	100.00
PFHxS_1	399.0 / 80.0	2.21	13C3-PFHxS	402.0 / 99.0	18367.84	94.60
PFHxS_2	399.0 / 99.0	2.21	13C3-PFHxS	402.0 / 99.0	18367.84	94.60
PFOA_1	413.0 / 369.0	2.58	13C8-PFOA	421.0 / 376.0	91756.89	100.00
PFOA_2	413.0 / 169.0	2.58	13C8-PFOA	421.0 / 376.0	91756.89	100.00
PFNA_1	463.0 / 419.0	2.95	13C9-PFNA	472.0 / 427.0	88575.06	100.00
PFNA_2	463.0 / 219.0	2.95	13C9-PFNA	472.0 / 427.0	88575.06	100.00
PFOS_1	499.0 / 80.0	2.94	13C8-PFOS	507.0 / 99.0	21621.20	95.70
PFOS_2	499.0 / 99.0	2.94	13C8-PFOS	507.0 / 99.0	21621.20	95.70

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Summary Internal Standard Report

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Sample Name	JV25	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:25:56	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	19982.85	92.90
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	19982.85	92.90
PFHxA_1	313.0 / 269.0	1.83	13C5-PFHxA	318.0 / 273.0	65934.89	100.00
PFHxA_2	313.0 / 119.0	1.83	13C5-PFHxA	318.0 / 273.0	65934.89	100.00
PFHxS_1	399.0 / 80.0	2.21	13C3-PFHxS	402.0 / 99.0	15589.37	94.60
PFHxS_2	399.0 / 99.0	2.21	13C3-PFHxS	402.0 / 99.0	15589.37	94.60
PFOA_1	413.0 / 369.0	2.58	13C8-PFOA	421.0 / 376.0	74079.17	100.00
PFOA_2	413.0 / 169.0	2.58	13C8-PFOA	421.0 / 376.0	74079.17	100.00
PFNA_1	463.0 / 419.0	2.95	13C9-PFNA	472.0 / 427.0	82529.82	100.00
PFNA_2	463.0 / 219.0	2.95	13C9-PFNA	472.0 / 427.0	82529.82	100.00
PFOS_1	499.0 / 80.0	2.94	13C8-PFOS	507.0 / 99.0	17693.88	95.70
PFOS_2	499.0 / 99.0	2.94	13C8-PFOS	507.0 / 99.0	17693.88	95.70

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 12:30:03 PM

Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:36:37	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	19185.88	92.90
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	19185.88	92.90
PFHxA_1	313.0 / 269.0	1.83	13C5-PFHxA	318.0 / 273.0	62568.98	100.00
PFHxA_2	313.0 / 119.0	1.83	13C5-PFHxA	318.0 / 273.0	62568.98	100.00
PFHxS_1	399.0 / 80.0	2.21	13C3-PFHxS	402.0 / 99.0	17213.42	94.60
PFHxS_2	399.0 / 99.0	2.22	13C3-PFHxS	402.0 / 99.0	17213.42	94.60
PFOA_1	413.0 / 369.0	2.58	13C8-PFOA	421.0 / 376.0	80177.48	100.00
PFOA_2	413.0 / 169.0	2.58	13C8-PFOA	421.0 / 376.0	80177.48	100.00
PFNA_1	463.0 / 419.0	2.95	13C9-PFNA	472.0 / 427.0	80613.98	100.00
PFNA_2	463.0 / 219.0	2.95	13C9-PFNA	472.0 / 427.0	80613.98	100.00
PFOS_1	499.0 / 80.0	2.94	13C8-PFOS	507.0 / 99.0	18092.94	95.70
PFOS_2	499.0 / 99.0	2.94	13C8-PFOS	507.0 / 99.0	18092.94	95.70

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 12:30:05 PM

Sample Name	JV27	**Injection Vial**	9
Sample ID	L8	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:47:16	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	23081.50	92.90
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	23081.50	92.90
PFHxA_1	313.0 / 269.0	1.83	13C5-PFHxA	318.0 / 273.0	70857.24	100.00
PFHxA_2	313.0 / 119.0	1.83	13C5-PFHxA	318.0 / 273.0	70857.24	100.00
PFHxS_1	399.0 / 80.0	2.21	13C3-PFHxS	402.0 / 99.0	17063.90	94.60
PFHxS_2	399.0 / 99.0	2.21	13C3-PFHxS	402.0 / 99.0	17063.90	94.60
PFOA_1	413.0 / 369.0	2.57	13C8-PFOA	421.0 / 376.0	75751.08	100.00
PFOA_2	413.0 / 169.0	2.57	13C8-PFOA	421.0 / 376.0	75751.08	100.00
PFNA_1	463.0 / 419.0	2.95	13C9-PFNA	472.0 / 427.0	85754.47	100.00
PFNA_2	463.0 / 219.0	2.95	13C9-PFNA	472.0 / 427.0	85754.47	100.00
PFOS_1	499.0 / 80.0	2.94	13C8-PFOS	507.0 / 99.0	17897.41	95.70
PFOS_2	499.0 / 99.0	2.94	13C8-PFOS	507.0 / 99.0	17897.41	95.70

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 12:30:07 PM

Sample Name	JV28	**Injection Vial**	10
Sample ID	L9	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:57:58	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	25833.75	92.90
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	25833.75	92.90
PFHxA_1	313.0 / 269.0	1.83	13C5-PFHxA	318.0 / 273.0	79723.93	100.00
PFHxA_2	313.0 / 119.0	1.83	13C5-PFHxA	318.0 / 273.0	79723.93	100.00
PFHxS_1	399.0 / 80.0	2.21	13C3-PFHxS	402.0 / 99.0	23110.92	94.60
PFHxS_2	399.0 / 99.0	2.21	13C3-PFHxS	402.0 / 99.0	23110.92	94.60
PFOA_1	413.0 / 369.0	2.58	13C8-PFOA	421.0 / 376.0	90164.47	100.00
PFOA_2	413.0 / 169.0	2.58	13C8-PFOA	421.0 / 376.0	90164.47	100.00
PFNA_1	463.0 / 419.0	2.95	13C9-PFNA	472.0 / 427.0	91488.71	100.00
PFNA_2	463.0 / 219.0	2.95	13C9-PFNA	472.0 / 427.0	91488.71	100.00
PFOS_1	499.0 / 80.0	2.94	13C8-PFOS	507.0 / 99.0	19029.24	95.70
PFOS_2	499.0 / 99.0	2.94	13C8-PFOS	507.0 / 99.0	19029.24	95.70

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 11:31:17 AM

Sample Name	JV20	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:32:29	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	11468.96	95.50

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 11:31:22 AM

Sample Name	JV21	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:43:10	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	12130.72	95.50

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 11:31:24 AM

Sample Name	JV22	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:53:52	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	14221.94	95.50

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 11:31:26 AM

Sample Name	JV23	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:04:34	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	15596.73	95.50

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 11:31:28 AM

Sample Name	JV24	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:15:15	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	17621.34	95.50

BATTELLE

Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 11:31:30 AM

Sample Name	JV25	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:25:56	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	14985.31	95.50

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 11:31:32 AM

Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:36:37	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	16218.32	95.50

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 11:31:34 AM

Sample Name	JV27	**Injection Vial**	9
Sample ID	L8	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:47:16	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	16664.04	95.50

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 11:31:36 AM

Sample Name	JV28	**Injection Vial**	10
Sample ID	L9	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:57:58	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	15001.44	95.50

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QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 12:34:23 PM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T19:31:26	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFTeDA_1	713.0 / 669.0	4.35	1092.019974	1000.00	109.20
PFTeDA_2	713.0 / 169.0	4.35	1076.396624	1000.00	107.64
NMeFOSAA_1	570.0 / 419.0	3.43	1279.639396	1000.00	127.96
NMeFOSAA_2	570.0 / 512.0	3.43	1293.441578	1000.00	129.34
NEtFOSAA_1	584.0 / 419.0	3.59	1202.417283	1000.00	120.24
NEtFOSAA_2	584.0 / 483.0	3.59	1054.381106	1000.00	105.44

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QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 12:34:26 PM

Sample Name	JV25 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T20:46:59	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFTeDA_1	713.0 / 669.0	4.34	984.591855	1000.00	98.46
PFTeDA_2	713.0 / 169.0	4.34	981.023395	1000.00	98.10
NMeFOSAA_1	570.0 / 419.0	3.43	1044.317207	1000.00	104.43
NMeFOSAA_2	570.0 / 512.0	3.43	1123.512034	1000.00	112.35
NEtFOSAA_1	584.0 / 419.0	3.59	861.991265	1000.00	86.20
NEtFOSAA_2	584.0 / 483.0	3.59	889.195734	1000.00	88.92

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QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 11:34:04 AM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:22:01	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.85	92.392625	100.00	92.39
d3-MeFOSAA	573.0 / 419.0	3.40	72.386040	100.00	72.39
d5-EtFOSAA	589.0 / 419.0	3.56	81.897383	100.00	81.90
13C5-PFHxA	318.0 / 273.0	1.76	100.963495	100.00	100.96
13C4-PFHpA	367.0 / 322.0	2.13	85.829500	100.00	85.83
13C8-PFOA	421.0 / 376.0	2.51	100.887482	100.00	100.89
13C9-PFNA	472.0 / 427.0	2.89	109.928663	100.00	109.93
13C6-PFDA	519.0 / 474.0	3.24	101.936278	100.00	101.94
13C7-PFUnA	570.0 / 525.0	3.55	95.592024	100.00	95.59
13C2-PFTeDA	715.0 / 670.0	4.32	91.885705	100.00	91.89
13C3-PFBS	302.0 / 99.0	1.48	67.883498	92.90	73.07
13C3-PFHxS	402.0 / 99.0	2.15	83.521220	94.60	88.29
13C8-PFOS	507.0 / 99.0	2.89	85.293851	95.70	89.13

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QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 11:34:06 AM

Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:50:26	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.82	91.901596	100.00	91.90
d3-MeFOSAA	573.0 / 419.0	3.38	98.379564	100.00	98.38
d5-EtFOSAA	589.0 / 419.0	3.54	109.673835	100.00	109.67
13C5-PFHxA	318.0 / 273.0	1.76	101.490247	100.00	101.49
13C4-PFHpA	367.0 / 322.0	2.12	98.422988	100.00	98.42
13C8-PFOA	421.0 / 376.0	2.49	109.374886	100.00	109.37
13C9-PFNA	472.0 / 427.0	2.87	103.568852	100.00	103.57
13C6-PFDA	519.0 / 474.0	3.22	98.997396	100.00	99.00
13C7-PFUnA	570.0 / 525.0	3.53	103.424432	100.00	103.42
13C2-PFTeDA	715.0 / 670.0	4.29	105.013962	100.00	105.01
13C3-PFBS	302.0 / 99.0	1.47	94.504784	92.90	101.73
13C3-PFHxS	402.0 / 99.0	2.14	96.072452	94.60	101.56
13C8-PFOS	507.0 / 99.0	2.87	82.497390	95.70	86.20

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QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 11:34:08 AM

Sample Name	JV25 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T05:38:23	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.81	90.232355	100.00	90.23
d3-MeFOSAA	573.0 / 419.0	3.36	110.450356	100.00	110.45
d5-EtFOSAA	589.0 / 419.0	3.52	117.383693	100.00	117.38
13C5-PFHxA	318.0 / 273.0	1.75	99.886295	100.00	99.89
13C4-PFHpA	367.0 / 322.0	2.11	92.238921	100.00	92.24
13C8-PFOA	421.0 / 376.0	2.48	98.360755	100.00	98.36
13C9-PFNA	472.0 / 427.0	2.85	94.271893	100.00	94.27
13C6-PFDA	519.0 / 474.0	3.20	100.348161	100.00	100.35
13C7-PFUnA	570.0 / 525.0	3.52	90.386364	100.00	90.39
13C2-PFTeDA	715.0 / 670.0	4.28	86.137542	100.00	86.14
13C3-PFBS	302.0 / 99.0	1.47	105.750839	92.90	113.83
13C3-PFHxS	402.0 / 99.0	2.13	98.256871	94.60	103.87
13C8-PFOS	507.0 / 99.0	2.85	92.296800	95.70	96.44

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QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:51:47 PM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:22:01	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.50	1222.613042	1010.00	121.05
PFBS_2	298.9 / 99.0	1.49	1282.054752	1010.00	126.94
PFHxA_1	313.0 / 269.0	1.78	1033.754631	1010.00	102.35
PFHxA_2	313.0 / 119.0	1.78	955.601589	1010.00	94.61
PFHpA_1	363.0 / 319.0	2.14	1296.977891	1000.00	129.70
PFHpA_2	363.0 / 169.0	2.14	1190.590783	1000.00	119.06
PFHxS_1	399.0 / 80.0	2.16	974.115132	1010.00	96.45
PFHxS_2	399.0 / 99.0	2.16	916.120612	1010.00	90.71
PFOA_1	413.0 / 369.0	2.52	1047.835447	1000.00	104.78
PFOA_2	413.0 / 169.0	2.52	1016.283156	1000.00	101.63
PFNA_1	463.0 / 419.0	2.90	1024.526709	1000.00	102.45
PFNA_2	463.0 / 219.0	2.90	1038.812918	1000.00	103.88
PFOS_1	499.0 / 80.0	2.89	953.947744	1000.00	95.39
PFOS_2	499.0 / 99.0	2.89	921.121109	1000.00	92.11
PFDA_1	513.0 / 469.0	3.25	1064.124001	1000.00	106.41
PFDA_2	513.0 / 219.0	3.25	1018.730686	1000.00	101.87
PFUnA_1	563.0 / 519.0	3.57	1205.049404	1000.00	120.50
PFUnA_2	563.0 / 269.0	3.57	1158.899483	1000.00	115.89
PFDoA_1	613.0 / 569.0	3.86	1196.519429	1000.00	119.65
PFDoA_2	613.0 / 319.0	3.86	1254.536893	1000.00	125.45
PFTrDA_1	663.0 / 619.0	4.11	1166.321162	1000.00	116.63
PFTrDA_2	663.0 / 169.0	4.11	1147.062964	1000.00	114.71
PFTeDA_1	713.0 / 669.0	4.33	1134.008209	1000.00	113.40
PFTeDA_2	713.0 / 169.0	4.33	1128.205374	1000.00	112.82
NMeFOSAA_1	570.0 / 419.0	3.41	1212.973309	1000.00	121.30
NMeFOSAA_2	570.0 / 512.0	3.41	1184.149823	1000.00	118.41
NEtFOSAA_1	584.0 / 419.0	3.57	1019.933385	1000.00	101.99
NEtFOSAA_2	584.0 / 483.0	3.57	1115.379515	1000.00	111.54

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QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:51:49 PM

Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:50:26	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.49	2639.835879	2525.00	104.55
PFBS_2	298.9 / 99.0	1.49	2707.245874	2525.00	107.22
PFHxA_1	313.0 / 269.0	1.77	2662.641936	2525.00	105.45
PFHxA_2	313.0 / 119.0	1.77	2427.067115	2525.00	96.12
PFHpA_1	363.0 / 319.0	2.13	2630.333823	2500.00	105.21
PFHpA_2	363.0 / 169.0	2.13	2855.473254	2500.00	114.22
PFHxS_1	399.0 / 80.0	2.15	2414.968635	2525.00	95.64
PFHxS_2	399.0 / 99.0	2.15	2309.208036	2525.00	91.45
PFOA_1	413.0 / 369.0	2.50	2324.498281	2500.00	92.98
PFOA_2	413.0 / 169.0	2.50	2248.025428	2500.00	89.92
PFNA_1	463.0 / 419.0	2.88	2429.010113	2500.00	97.16
PFNA_2	463.0 / 219.0	2.88	2469.227227	2500.00	98.77
PFOS_1	499.0 / 80.0	2.87	2697.453313	2500.00	107.90
PFOS_2	499.0 / 99.0	2.87	2715.631542	2500.00	108.63
PFDA_1	513.0 / 469.0	3.23	2463.954740	2500.00	98.56
PFDA_2	513.0 / 219.0	3.23	2514.214161	2500.00	100.57
PFUnA_1	563.0 / 519.0	3.55	2431.711587	2500.00	97.27
PFUnA_2	563.0 / 269.0	3.54	2320.941781	2500.00	92.84
PFDoA_1	613.0 / 569.0	3.83	2660.422602	2500.00	106.42
PFDoA_2	613.0 / 319.0	3.83	2922.470688	2500.00	116.90
PFTrDA_1	663.0 / 619.0	4.08	2301.131656	2500.00	92.05
PFTrDA_2	663.0 / 169.0	4.08	2237.444158	2500.00	89.50
PFTeDA_1	713.0 / 669.0	4.30	2551.512843	2500.00	102.06
PFTeDA_2	713.0 / 169.0	4.30	2466.947297	2500.00	98.68
NMeFOSAA_1	570.0 / 419.0	3.39	2716.449658	2500.00	108.66
NMeFOSAA_2	570.0 / 512.0	3.39	2515.810430	2500.00	100.63
NEtFOSAA_1	584.0 / 419.0	3.55	2164.068621	2500.00	86.56
NEtFOSAA_2	584.0 / 483.0	3.55	2271.114776	2500.00	90.84

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QC Summary Report

Created with Analyst Reporter
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Sample Name	JV25 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T05:38:23	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.49	1050.086688	1010.00	103.97
PFBS_2	298.9 / 99.0	1.49	1076.249163	1010.00	106.56
PFHxA_1	313.0 / 269.0	1.76	971.296007	1010.00	96.17
PFHxA_2	313.0 / 119.0	1.76	987.382842	1010.00	97.76
PFHpA_1	363.0 / 319.0	2.12	1022.745515	1000.00	102.27
PFHpA_2	363.0 / 169.0	2.12	1042.155456	1000.00	104.22
PFHxS_1	399.0 / 80.0	2.14	1162.716444	1010.00	115.12
PFHxS_2	399.0 / 99.0	2.14	1214.401227	1010.00	120.24
PFOA_1	413.0 / 369.0	2.49	911.718256	1000.00	91.17
PFOA_2	413.0 / 169.0	2.49	880.995344	1000.00	88.10
PFNA_1	463.0 / 419.0	2.86	1058.836582	1000.00	105.88
PFNA_2	463.0 / 219.0	2.86	1036.364192	1000.00	103.64
PFOS_1	499.0 / 80.0	2.86	1281.291474	1000.00	128.13
PFOS_2	499.0 / 99.0	2.86	1294.383527	1000.00	129.44
PFDA_1	513.0 / 469.0	3.21	1008.690531	1000.00	100.87
PFDA_2	513.0 / 219.0	3.21	853.545941	1000.00	85.35
PFUnA_1	563.0 / 519.0	3.53	1136.268110	1000.00	113.63
PFUnA_2	563.0 / 269.0	3.53	1026.955329	1000.00	102.70
PFDoA_1	613.0 / 569.0	3.82	1065.065666	1000.00	106.51
PFDoA_2	613.0 / 319.0	3.82	1092.556277	1000.00	109.26
PFTrDA_1	663.0 / 619.0	4.07	1032.622651	1000.00	103.26
PFTrDA_2	663.0 / 169.0	4.07	1039.853750	1000.00	103.99
PFTeDA_1	713.0 / 669.0	4.29	1064.956042	1000.00	106.50
PFTeDA_2	713.0 / 169.0	4.29	1050.703893	1000.00	105.07
NMeFOSAA_1	570.0 / 419.0	3.37	1037.106995	1000.00	103.71
NMeFOSAA_2	570.0 / 512.0	3.37	1002.510581	1000.00	100.25
NEtFOSAA_1	584.0 / 419.0	3.53	991.928253	1000.00	99.19
NEtFOSAA_2	584.0 / 483.0	3.53	844.924206	1000.00	84.49

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QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:52:27 PM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T22:19:21	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.54	1176.558923	1010.00	116.49
PFBS_2	298.9 / 99.0	1.54	1139.653412	1010.00	112.84
PFHxA_1	313.0 / 269.0	1.83	1253.351991	1010.00	124.09
PFHxA_2	313.0 / 119.0	1.83	1209.151708	1010.00	119.72
PFHxS_1	399.0 / 80.0	2.21	1063.878654	1010.00	105.33
PFHxS_2	399.0 / 99.0	2.21	1104.098639	1010.00	109.32
PFOA_1	413.0 / 369.0	2.57	1130.613191	1000.00	113.06
PFOA_2	413.0 / 169.0	2.57	1076.253546	1000.00	107.63
PFNA_1	463.0 / 419.0	2.95	1257.443907	1000.00	125.74
PFNA_2	463.0 / 219.0	2.95	1156.611404	1000.00	115.66
PFOS_1	499.0 / 80.0	2.94	1106.343032	1000.00	110.63
PFOS_2	499.0 / 99.0	2.94	1201.226723	1000.00	120.12

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QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:52:30 PM

Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T02:14:26	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.54	2575.262951	2500.00	103.01
PFBS_2	298.9 / 99.0	1.54	2551.974587	2500.00	102.08
PFHxA_1	313.0 / 269.0	1.83	2429.599165	2500.00	97.18
PFHxA_2	313.0 / 119.0	1.83	2550.814018	2500.00	102.03
PFHxS_1	399.0 / 80.0	2.21	2591.992825	2500.00	103.68
PFHxS_2	399.0 / 99.0	2.21	2625.651310	2500.00	105.03
PFOA_1	413.0 / 369.0	2.57	2378.513667	2500.00	95.14
PFOA_2	413.0 / 169.0	2.57	2399.457377	2500.00	95.98
PFNA_1	463.0 / 419.0	2.94	2523.907409	2500.00	100.96
PFNA_2	463.0 / 219.0	2.94	2568.810533	2500.00	102.75
PFOS_1	499.0 / 80.0	2.93	2268.280426	2500.00	90.73
PFOS_2	499.0 / 99.0	2.93	2526.569920	2500.00	101.06

BATTELLE

QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 3:05:33 PM

Sample Name	JV24 ISC	**Injection Vial**	1
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T13:33:43	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFOS_1	499.0 / 80.0	2.99	531.552183	500.00	106.31
PFOS_2	499.0 / 99.0	2.99	501.619494	500.00	100.32

BATTELLE

QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 3:05:35 PM

Sample Name	JV25 CCV	**Injection Vial**	5
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T14:16:30	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFOS_1	499.0 / 80.0	2.96	974.715815	1000.00	97.47
PFOS_2	499.0 / 99.0	2.97	988.790225	1000.00	98.88

BATTELLE

QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 11:34:49 AM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T22:19:21	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C3-PFBS	302.0 / 99.0	1.53	81.957917	92.90	88.22

BATTELLE

QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 11:34:54 AM

Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T02:14:26	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C3-PFBS	302.0 / 99.0	1.52	93.218431	92.90	100.34

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 12:39:39 PM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T19:31:26	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFTeDA_1	713.0 / 669.0	4.35	386770.58	1092.019974	760.5	false
PFTeDA_2	713.0 / 169.0	4.35	19882.58	1076.396624	507.5	false
NMeFOSAA_1	570.0 / 419.0	3.43	77049.18	1279.639396	672.8	false
NMeFOSAA_2	570.0 / 512.0	3.43	46390.76	1293.441578	377.3	false
NEtFOSAA_1	584.0 / 419.0	3.59	73153.54	1202.417283	400.9	false
NEtFOSAA_2	584.0 / 483.0	3.59	3662.01	1054.381106	327.7	false

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 12:39:41 PM

Sample Name	JV25 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T20:46:59	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFTeDA_1	713.0 / 669.0	4.34	380291.68	984.591855	679.0	false
PFTeDA_2	713.0 / 169.0	4.34	19746.11	981.023395	616.0	false
NMeFOSAA_1	570.0 / 419.0	3.43	74939.39	1044.317207	520.3	false
NMeFOSAA_2	570.0 / 512.0	3.43	48345.53	1123.512034	385.2	false
NEtFOSAA_1	584.0 / 419.0	3.59	62711.10	861.991265	418.4	false
NEtFOSAA_2	584.0 / 483.0	3.59	3701.35	889.195734	213.2	false

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 11:39:09 AM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:22:01	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.85	57693.63	92.392625	808.2	false
d3-MeFOSAA	573.0 / 419.0	3.40	10857.54	72.386040	258.8	false
d5-EtFOSAA	589.0 / 419.0	3.56	11304.98	81.897383	158.5	false
13C5-PFHxA	318.0 / 273.0	1.76	37048.36	100.963495	1012.7	false
13C4-PFHpA	367.0 / 322.0	2.13	35690.64	85.829500	595.6	false
13C8-PFOA	421.0 / 376.0	2.51	52473.79	100.887482	894.8	false
13C9-PFNA	472.0 / 427.0	2.89	59432.58	109.928663	872.1	false
13C6-PFDA	519.0 / 474.0	3.24	56950.88	101.936278	805.6	false
13C7-PFUnA	570.0 / 525.0	3.55	56291.24	95.592024	555.0	false
13C2-PFTeDA	715.0 / 670.0	4.32	51380.06	91.885705	779.0	false
13C3-PFBS	302.0 / 99.0	1.48	11494.92	67.883498	388.9	true
13C3-PFHxS	402.0 / 99.0	2.15	11010.91	83.521220	242.3	false
13C8-PFOS	507.0 / 99.0	2.89	13659.53	85.293851	177.4	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 11:39:12 AM

Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:50:26	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.82	65833.89	91.901596	646.5	false
d3-MeFOSAA	573.0 / 419.0	3.38	13658.34	98.379564	241.4	false
d5-EtFOSAA	589.0 / 419.0	3.54	14012.62	109.673835	161.9	false
13C5-PFHxA	318.0 / 273.0	1.76	40993.34	101.490247	445.3	false
13C4-PFHpA	367.0 / 322.0	2.12	45050.40	98.422988	1045.9	false
13C8-PFOA	421.0 / 376.0	2.49	62619.15	109.374886	267484.1	false
13C9-PFNA	472.0 / 427.0	2.87	61634.98	103.568852	766.3	false
13C6-PFDA	519.0 / 474.0	3.22	63449.95	98.997396	1138.3	false
13C7-PFUnA	570.0 / 525.0	3.53	69867.98	103.424432	607.0	false
13C2-PFTeDA	715.0 / 670.0	4.29	67364.26	105.013962	862.0	false
13C3-PFBS	302.0 / 99.0	1.47	14811.93	94.504784	378.2	false
13C3-PFHxS	402.0 / 99.0	2.14	11723.08	96.072452	355.1	false
13C8-PFOS	507.0 / 99.0	2.87	12228.54	82.497390	160.9	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 11:39:14 AM

Sample Name	JV25 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T05:38:23	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.81	63514.77	90.232355	910.2	false
d3-MeFOSAA	573.0 / 419.0	3.36	12891.35	110.450356	266.7	false
d5-EtFOSAA	589.0 / 419.0	3.52	12608.47	117.383693	164.4	false
13C5-PFHxA	318.0 / 273.0	1.75	42343.05	99.886295	632.7	false
13C4-PFHpA	367.0 / 322.0	2.11	44310.19	92.238921	998.4	false
13C8-PFOA	421.0 / 376.0	2.48	59101.52	98.360755	2129.9	false
13C9-PFNA	472.0 / 427.0	2.85	58879.96	94.271893	737.7	false
13C6-PFDA	519.0 / 474.0	3.20	63197.94	100.348161	1078.3	false
13C7-PFUnA	570.0 / 525.0	3.52	59998.99	90.386364	550.0	false
13C2-PFTeDA	715.0 / 670.0	4.28	54295.14	86.137542	929.4	false
13C3-PFBS	302.0 / 99.0	1.47	13934.14	105.750839	445.4	false
13C3-PFHxS	402.0 / 99.0	2.13	10079.62	98.256871	226.5	false
13C8-PFOS	507.0 / 99.0	2.85	11501.63	92.296800	173.4	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 3:16:08 PM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:22:01	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.50	267599.69	1222.613042	1026.3	false
PFBS_2	298.9 / 99.0	1.49	87719.33	1282.054752	324.8	false
PFHxA_1	313.0 / 269.0	1.78	256810.13	1033.754631	124.5	false
PFHxA_2	313.0 / 119.0	1.78	16582.46	955.601589	75.1	false
PFHpA_1	363.0 / 319.0	2.14	256439.17	1296.977891	222.5	true
PFHpA_2	363.0 / 169.0	2.14	5212.39	1190.590783	204.3	false
PFHxS_1	399.0 / 80.0	2.16	292011.61	974.115132	849.1	false
PFHxS_2	399.0 / 99.0	2.16	80068.25	916.120612	358.2	false
PFOA_1	413.0 / 369.0	2.52	374502.98	1047.835447	206.2	true
PFOA_2	413.0 / 169.0	2.52	24662.12	1016.283156	183.6	true
PFNA_1	463.0 / 419.0	2.90	389936.57	1024.526709	246.6	false
PFNA_2	463.0 / 219.0	2.90	113000.79	1038.812918	398.9	false
PFOS_1	499.0 / 80.0	2.89	412023.66	953.947744	550.8	false
PFOS_2	499.0 / 99.0	2.89	72603.34	921.121109	382.8	false
PFDA_1	513.0 / 469.0	3.25	412894.00	1064.124001	248.4	false
PFDA_2	513.0 / 219.0	3.25	16672.30	1018.730686	354.6	false
PFUnA_1	563.0 / 519.0	3.57	435613.56	1205.049404	363.7	false
PFUnA_2	563.0 / 269.0	3.57	21622.51	1158.899483	316.5	false
PFDoA_1	613.0 / 569.0	3.86	402014.64	1196.519429	367.2	false
PFDoA_2	613.0 / 319.0	3.86	61231.39	1254.536893	404.5	true
PFTrDA_1	663.0 / 619.0	4.11	346467.79	1166.321162	434.4	false
PFTrDA_2	663.0 / 169.0	4.11	24076.52	1147.062964	441.3	false
PFTeDA_1	713.0 / 669.0	4.33	387490.93	1134.008209	775.3	false
PFTeDA_2	713.0 / 169.0	4.33	19796.28	1128.205374	686.4	false
NMeFOSAA_1	570.0 / 419.0	3.41	82373.24	1212.973309	821.1	false
NMeFOSAA_2	570.0 / 512.0	3.41	47287.43	1184.149823	521.6	false
NEtFOSAA_1	584.0 / 419.0	3.57	75027.83	1019.933385	631.5	false
NEtFOSAA_2	584.0 / 483.0	3.57	4751.91	1115.379515	254.4	false

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 3:16:11 PM

Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:50:26	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.49	746040.76	2639.835879	1746.9	false
PFBS_2	298.9 / 99.0	1.49	237769.59	2707.245874	601.7	false
PFHxA_1	313.0 / 269.0	1.77	722559.79	2662.641936	216.4	false
PFHxA_2	313.0 / 119.0	1.77	46048.69	2427.067115	124.1	false
PFHpA_1	363.0 / 319.0	2.13	653416.78	2630.333823	385.4	false
PFHpA_2	363.0 / 169.0	2.13	15058.09	2855.473254	919.5	false
PFHxS_1	399.0 / 80.0	2.15	768333.31	2414.968635	912.5	false
PFHxS_2	399.0 / 99.0	2.15	213388.82	2309.208036	538.3	false
PFOA_1	413.0 / 369.0	2.50	988314.43	2324.498281	311.6	true
PFOA_2	413.0 / 169.0	2.50	64683.64	2248.025428	289.9	true
PFNA_1	463.0 / 419.0	2.88	952101.01	2429.010113	378.8	false
PFNA_2	463.0 / 219.0	2.88	277209.86	2469.227227	474.2	false
PFOS_1	499.0 / 80.0	2.87	1036410.52	2697.453313	723.3	false
PFOS_2	499.0 / 99.0	2.87	188382.03	2715.631542	588.0	false
PFDA_1	513.0 / 469.0	3.23	1060311.16	2463.954740	370.2	false
PFDA_2	513.0 / 219.0	3.23	45714.59	2514.214161	633.9	false
PFUnA_1	563.0 / 519.0	3.55	1088628.87	2431.711587	474.5	false
PFUnA_2	563.0 / 269.0	3.54	52786.06	2320.941781	381.6	false
PFDoA_1	613.0 / 569.0	3.83	1012620.33	2660.422602	533.1	false
PFDoA_2	613.0 / 319.0	3.83	159646.83	2922.470688	529.5	false
PFTrDA_1	663.0 / 619.0	4.08	886354.91	2301.131656	769.2	false
PFTrDA_2	663.0 / 169.0	4.08	60722.72	2237.444158	641.6	false
PFTeDA_1	713.0 / 669.0	4.30	1130508.57	2551.512843	1555.3	false
PFTeDA_2	713.0 / 169.0	4.30	55649.15	2466.947297	1233.9	false
NMeFOSAA_1	570.0 / 419.0	3.39	230995.07	2716.449658	1041.1	false
NMeFOSAA_2	570.0 / 512.0	3.39	125812.14	2515.810430	710.4	false
NEtFOSAA_1	584.0 / 419.0	3.55	196569.31	2164.068621	720.6	false
NEtFOSAA_2	584.0 / 483.0	3.55	11715.12	2271.114776	390.6	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 3:16:14 PM

Sample Name	JV25 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T05:38:23	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.49	280215.41	1050.086688	1262.7	false
PFBS_2	298.9 / 99.0	1.49	89983.12	1076.249163	365.5	false
PFHxA_1	313.0 / 269.0	1.76	276147.83	971.296007	112.2	false
PFHxA_2	313.0 / 119.0	1.76	19570.29	987.382842	87.6	false
PFHpA_1	363.0 / 319.0	2.12	251670.10	1022.745515	224.0	false
PFHpA_2	363.0 / 169.0	2.12	5727.71	1042.155456	5771.3	false
PFHxS_1	399.0 / 80.0	2.14	318795.71	1162.716444	604.0	false
PFHxS_2	399.0 / 99.0	2.14	96886.83	1214.401227	316.0	false
PFOA_1	413.0 / 369.0	2.49	367323.14	911.718256	175.6	false
PFOA_2	413.0 / 169.0	2.49	24122.56	880.995344	158.6	false
PFNA_1	463.0 / 419.0	2.86	399092.78	1058.836582	251.9	false
PFNA_2	463.0 / 219.0	2.86	111688.38	1036.364192	308.6	false
PFOS_1	499.0 / 80.0	2.86	477723.50	1281.291474	354.2	true
PFOS_2	499.0 / 99.0	2.86	87640.34	1294.383527	377.3	true
PFDA_1	513.0 / 469.0	3.21	434507.74	1008.690531	302.3	false
PFDA_2	513.0 / 219.0	3.21	15515.29	853.545941	331.0	false
PFUnA_1	563.0 / 519.0	3.53	437921.52	1136.268110	381.2	false
PFUnA_2	563.0 / 269.0	3.53	20516.58	1026.955329	257.8	false
PFDoA_1	613.0 / 569.0	3.82	394592.00	1065.065666	461.1	false
PFDoA_2	613.0 / 319.0	3.82	58998.05	1092.556277	446.0	false
PFTrDA_1	663.0 / 619.0	4.07	324784.06	1032.622651	451.1	false
PFTrDA_2	663.0 / 169.0	4.07	23114.55	1039.853750	502.3	false
PFTeDA_1	713.0 / 669.0	4.29	384860.93	1064.956042	887.5	false
PFTeDA_2	713.0 / 169.0	4.29	19522.33	1050.703893	776.6	false
NMeFOSAA_1	570.0 / 419.0	3.37	83740.69	1037.106995	877.4	false
NMeFOSAA_2	570.0 / 512.0	3.37	47606.28	1002.510581	475.4	false
NEtFOSAA_1	584.0 / 419.0	3.53	81397.59	991.928253	508.5	false
NEtFOSAA_2	584.0 / 483.0	3.53	4073.27	844.924206	463.0	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 12:35:38 PM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T22:19:21	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	406638.11	1176.558923	498.7	false
PFBS_2	298.9 / 99.0	1.54	123116.00	1139.653412	302.5	false
PFHxA_1	313.0 / 269.0	1.83	473086.85	1253.351991	70.9	false
PFHxA_2	313.0 / 119.0	1.83	32100.87	1209.151708	56.0	false
PFHxS_1	399.0 / 80.0	2.21	435349.92	1063.878654	89.4	true
PFHxS_2	399.0 / 99.0	2.21	125511.80	1104.098639	77.7	true
PFOA_1	413.0 / 369.0	2.57	523493.44	1130.613191	118.0	true
PFOA_2	413.0 / 169.0	2.57	38300.03	1076.253546	110.9	true
PFNA_1	463.0 / 419.0	2.95	578033.22	1257.443907	318.1	false
PFNA_2	463.0 / 219.0	2.95	148111.44	1156.611404	216.0	false
PFOS_1	499.0 / 80.0	2.94	476216.84	1106.343032	39.6	true
PFOS_2	499.0 / 99.0	2.94	93845.30	1201.226723	63.5	true

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 12:35:41 PM

Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T02:14:26	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	1073300.59	2575.262951	971.7	false
PFBS_2	298.9 / 99.0	1.54	331976.08	2551.974587	608.5	false
PFHxA_1	313.0 / 269.0	1.83	1090254.73	2429.599165	93.6	false
PFHxA_2	313.0 / 119.0	1.83	80396.88	2550.814018	92.3	false
PFHxS_1	399.0 / 80.0	2.21	1169982.41	2591.992825	173.0	false
PFHxS_2	399.0 / 99.0	2.21	327218.22	2625.651310	136.3	false
PFOA_1	413.0 / 369.0	2.57	1352712.90	2378.513667	208.1	true
PFOA_2	413.0 / 169.0	2.57	104981.75	2399.457377	187.4	true
PFNA_1	463.0 / 419.0	2.94	1501831.62	2523.907409	539.1	false
PFNA_2	463.0 / 219.0	2.94	426042.00	2568.810533	367.9	false
PFOS_1	499.0 / 80.0	2.93	1302283.78	2268.280426	58.2	true
PFOS_2	499.0 / 99.0	2.93	256414.37	2526.569920	134.6	true

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 3:04:15 PM

Sample Name	JV24 ISC	**Injection Vial**	1
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T13:33:43	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFOS_1	499.0 / 80.0	2.99	274376.53	531.552183	15.8	true
PFOS_2	499.0 / 99.0	2.99	49957.38	501.619494	18.5	true

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 3:04:18 PM

Sample Name	JV25 CCV	**Injection Vial**	5
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T14:16:30	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFOS_1	499.0 / 80.0	2.96	558545.16	974.715815	31.0	true
PFOS_2	499.0 / 99.0	2.97	103688.71	988.790225	38.1	true

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 11:38:11 AM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T22:19:21	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C3-PFBS	302.0 / 99.0	1.53	17381.24	81.957917	367.5	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 11:38:13 AM

Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T02:14:26	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C3-PFBS	302.0 / 99.0	1.52	20981.29	93.218431	636.3	false

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:09:17 PM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T19:31:26	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFTeDA_1	713.0 / 669.0	4.35	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.35	PFTeDA	0.051	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.43	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.43	NMeFOSAA	0.602	0.594	ü
NEtFOSAA_1	584.0 / 419.0	3.59	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.59	NEtFOSAA	0.050	0.059	ü

Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:09:20 PM

Sample Name	JV25 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T20:46:59	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFTeDA_1	713.0 / 669.0	4.34	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.34	PFTeDA	0.052	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.43	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.43	NMeFOSAA	0.645	0.594	ü
NEtFOSAA_1	584.0 / 419.0	3.59	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.59	NEtFOSAA	0.059	0.059	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:08:44 PM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:22:01	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
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	1.49	PFBS	0.328	0.344	ü
PFHxA_1	313.0 / 269.0	1.78	PFHxA			
PFHxA_2	313.0 / 119.0	1.78	PFHxA	0.065	0.070	ü
PFHpA_1	363.0 / 319.0	2.14	PFHpA			
PFHpA_2	363.0 / 169.0	2.14	PFHpA	0.020	0.023	ü
PFHxS_1	399.0 / 80.0	2.16	PFHxS			
PFHxS_2	399.0 / 99.0	2.16	PFHxS	0.274	0.302	ü
PFOA_1	413.0 / 369.0	2.52	PFOA			
PFOA_2	413.0 / 169.0	2.52	PFOA	0.066	0.071	ü
PFNA_1	463.0 / 419.0	2.90	PFNA			
PFNA_2	463.0 / 219.0	2.90	PFNA	0.290	0.282	ü
PFOS_1	499.0 / 80.0	2.89	PFOS			
PFOS_2	499.0 / 99.0	2.89	PFOS	0.176	0.200	ü
PFDA_1	513.0 / 469.0	3.25	PFDA			
PFDA_2	513.0 / 219.0	3.25	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.57	PFUnA			
PFUnA_2	563.0 / 269.0	3.57	PFUnA	0.050	0.057	ü
PFDoA_1	613.0 / 569.0	3.86	PFDoA			
PFDoA_2	613.0 / 319.0	3.86	PFDoA	0.152	0.158	ü
PFTrDA_1	663.0 / 619.0	4.11	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.11	PFTrDA	0.070	0.070	ü
PFTeDA_1	713.0 / 669.0	4.33	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.33	PFTeDA	0.051	0.053	ü
NMeFOSAA_1	570.0 / 419.0	3.41	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.41	NMeFOSAA	0.574	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.57	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.57	NEtFOSAA	0.063	0.066	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:08:47 PM

Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:50:26	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.49	PFBS			
PFBS_2	298.9 / 99.0	1.49	PFBS	0.319	0.344	ü
PFHxA_1	313.0 / 269.0	1.77	PFHxA			
PFHxA_2	313.0 / 119.0	1.77	PFHxA	0.064	0.070	ü
PFHpA_1	363.0 / 319.0	2.13	PFHpA			
PFHpA_2	363.0 / 169.0	2.13	PFHpA	0.023	0.023	ü
PFHxS_1	399.0 / 80.0	2.15	PFHxS			
PFHxS_2	399.0 / 99.0	2.15	PFHxS	0.278	0.302	ü
PFOA_1	413.0 / 369.0	2.50	PFOA			
PFOA_2	413.0 / 169.0	2.50	PFOA	0.065	0.071	ü
PFNA_1	463.0 / 419.0	2.88	PFNA			
PFNA_2	463.0 / 219.0	2.88	PFNA	0.291	0.282	ü
PFOS_1	499.0 / 80.0	2.87	PFOS			
PFOS_2	499.0 / 99.0	2.87	PFOS	0.182	0.200	ü
PFDA_1	513.0 / 469.0	3.23	PFDA			
PFDA_2	513.0 / 219.0	3.23	PFDA	0.043	0.041	ü
PFUnA_1	563.0 / 519.0	3.55	PFUnA			
PFUnA_2	563.0 / 269.0	3.54	PFUnA	0.049	0.057	ü
PFDoA_1	613.0 / 569.0	3.83	PFDoA			
PFDoA_2	613.0 / 319.0	3.83	PFDoA	0.158	0.158	ü
PFTrDA_1	663.0 / 619.0	4.08	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.08	PFTrDA	0.069	0.070	ü
PFTeDA_1	713.0 / 669.0	4.30	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.30	PFTeDA	0.049	0.053	ü
NMeFOSAA_1	570.0 / 419.0	3.39	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.39	NMeFOSAA	0.545	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.55	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.55	NEtFOSAA	0.060	0.066	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:08:49 PM

Sample Name	JV25 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T05:38:23	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.49	PFBS			
PFBS_2	298.9 / 99.0	1.49	PFBS	0.321	0.344	ü
PFHxA_1	313.0 / 269.0	1.76	PFHxA			
PFHxA_2	313.0 / 119.0	1.76	PFHxA	0.071	0.070	ü
PFHpA_1	363.0 / 319.0	2.12	PFHpA			
PFHpA_2	363.0 / 169.0	2.12	PFHpA	0.023	0.023	ü
PFHxS_1	399.0 / 80.0	2.14	PFHxS			
PFHxS_2	399.0 / 99.0	2.14	PFHxS	0.304	0.302	ü
PFOA_1	413.0 / 369.0	2.49	PFOA			
PFOA_2	413.0 / 169.0	2.49	PFOA	0.066	0.071	ü
PFNA_1	463.0 / 419.0	2.86	PFNA			
PFNA_2	463.0 / 219.0	2.86	PFNA	0.280	0.282	ü
PFOS_1	499.0 / 80.0	2.86	PFOS			
PFOS_2	499.0 / 99.0	2.86	PFOS	0.184	0.200	ü
PFDA_1	513.0 / 469.0	3.21	PFDA			
PFDA_2	513.0 / 219.0	3.21	PFDA	0.036	0.041	ü
PFUnA_1	563.0 / 519.0	3.53	PFUnA			
PFUnA_2	563.0 / 269.0	3.53	PFUnA	0.047	0.057	ü
PFDoA_1	613.0 / 569.0	3.82	PFDoA			
PFDoA_2	613.0 / 319.0	3.82	PFDoA	0.150	0.158	ü
PFTrDA_1	663.0 / 619.0	4.07	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.07	PFTrDA	0.071	0.070	ü
PFTeDA_1	713.0 / 669.0	4.29	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.29	PFTeDA	0.051	0.053	ü
NMeFOSAA_1	570.0 / 419.0	3.37	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.37	NMeFOSAA	0.569	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.53	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.53	NEtFOSAA	0.050	0.066	ü

BATTELLE

Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:09:49 PM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T22:19:21	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	0.303	0.322	ü
PFHxA_1	313.0 / 269.0	1.83	PFHxA			
PFHxA_2	313.0 / 119.0	1.83	PFHxA	0.068	0.070	ü
PFHxS_1	399.0 / 80.0	2.21	PFHxS			
PFHxS_2	399.0 / 99.0	2.21	PFHxS	0.288	0.289	ü
PFOA_1	413.0 / 369.0	2.57	PFOA			
PFOA_2	413.0 / 169.0	2.57	PFOA	0.073	0.076	ü
PFNA_1	463.0 / 419.0	2.95	PFNA			
PFNA_2	463.0 / 219.0	2.95	PFNA	0.256	0.273	ü
PFOS_1	499.0 / 80.0	2.94	PFOS			
PFOS_2	499.0 / 99.0	2.94	PFOS	0.197	0.211	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:09:51 PM

Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T02:14:26	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	0.309	0.322	ü
PFHxA_1	313.0 / 269.0	1.83	PFHxA			
PFHxA_2	313.0 / 119.0	1.83	PFHxA	0.074	0.070	ü
PFHxS_1	399.0 / 80.0	2.21	PFHxS			
PFHxS_2	399.0 / 99.0	2.21	PFHxS	0.280	0.289	ü
PFOA_1	413.0 / 369.0	2.57	PFOA			
PFOA_2	413.0 / 169.0	2.57	PFOA	0.078	0.076	ü
PFNA_1	463.0 / 419.0	2.94	PFNA			
PFNA_2	463.0 / 219.0	2.94	PFNA	0.284	0.273	ü
PFOS_1	499.0 / 80.0	2.93	PFOS			
PFOS_2	499.0 / 99.0	2.93	PFOS	0.197	0.211	ü

BATTELLE

Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:22:11 PM

Sample Name	JV24 ISC	**Injection Vial**	1
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T13:33:43	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFOS_1	499.0 / 80.0	2.99	PFOS			
PFOS_2	499.0 / 99.0	2.99	PFOS	0.182	0.211	ü

BATTELLE

Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:22:13 PM

Sample Name	JV25 CCV	**Injection Vial**	5
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T14:16:30	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFOS_1	499.0 / 80.0	2.96	PFOS			
PFOS_2	499.0 / 99.0	2.97	PFOS	0.186	0.211	ü

BATTELLE

Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 12:42:48 PM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T19:31:26	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFTeDA_1	713.0 / 669.0	4.35	13C2-PFTeDA	715.0 / 670.0	52545.62	100.00
PFTeDA_2	713.0 / 169.0	4.35	13C2-PFTeDA	715.0 / 670.0	52545.62	100.00
NMeFOSAA_1	570.0 / 419.0	3.43	d3-MeFOSAA	573.0 / 419.0	10420.85	100.00
NMeFOSAA_2	570.0 / 512.0	3.43	d3-MeFOSAA	573.0 / 419.0	10420.85	100.00
NEtFOSAA_1	584.0 / 419.0	3.59	d5-EtFOSAA	589.0 / 419.0	9567.08	100.00
NEtFOSAA_2	584.0 / 483.0	3.59	d5-EtFOSAA	589.0 / 419.0	9567.08	100.00

BATTELLE

Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 12:42:51 PM

Sample Name	JV25 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T20:46:59	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFTeDA_1	713.0 / 669.0	4.34	13C2-PFTeDA	715.0 / 670.0	57202.85	100.00
PFTeDA_2	713.0 / 169.0	4.34	13C2-PFTeDA	715.0 / 670.0	57202.85	100.00
NMeFOSAA_1	570.0 / 419.0	3.43	d3-MeFOSAA	573.0 / 419.0	12351.27	100.00
NMeFOSAA_2	570.0 / 512.0	3.43	d3-MeFOSAA	573.0 / 419.0	12351.27	100.00
NEtFOSAA_1	584.0 / 419.0	3.59	d5-EtFOSAA	589.0 / 419.0	11448.93	100.00
NEtFOSAA_2	584.0 / 483.0	3.59	d5-EtFOSAA	589.0 / 419.0	11448.93	100.00

BATTELLE

Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 11:41:59 AM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:22:01	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_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	3.85	13C2-PFDA	515.0 / 470.0	40307.55	100.00
d3-MeFOSAA	573.0 / 419.0	3.40	13C4-PFOS	503.0 / 99.0	11886.00	95.50
d5-EtFOSAA	589.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	11886.00	95.50
13C5-PFHxA	318.0 / 273.0	1.76	13C2-PFOA	415.0 / 370.0	36978.40	100.00
13C4-PFHpA	367.0 / 322.0	2.13	13C2-PFOA	415.0 / 370.0	36978.40	100.00
13C8-PFOA	421.0 / 376.0	2.51	13C2-PFOA	415.0 / 370.0	36978.40	100.00
13C9-PFNA	472.0 / 427.0	2.89	13C2-PFOA	415.0 / 370.0	36978.40	100.00
13C6-PFDA	519.0 / 474.0	3.24	13C2-PFDA	515.0 / 470.0	40307.55	100.00
13C7-PFUnA	570.0 / 525.0	3.55	13C2-PFDA	515.0 / 470.0	40307.55	100.00
13C2-PFTeDA	715.0 / 670.0	4.32	13C2-PFDA	515.0 / 470.0	40307.55	100.00
13C3-PFBS	302.0 / 99.0	1.48	13C4-PFOS	503.0 / 99.0	11886.00	95.50
13C3-PFHxS	402.0 / 99.0	2.15	13C4-PFOS	503.0 / 99.0	11886.00	95.50
13C8-PFOS	507.0 / 99.0	2.89	13C4-PFOS	503.0 / 99.0	11886.00	95.50

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Summary Internal Standard Report

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Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:50:26	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_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	3.82	13C2-PFDA	515.0 / 470.0	46240.47	100.00
d3-MeFOSAA	573.0 / 419.0	3.38	13C4-PFOS	503.0 / 99.0	11001.50	95.50
d5-EtFOSAA	589.0 / 419.0	3.54	13C4-PFOS	503.0 / 99.0	11001.50	95.50
13C5-PFHxA	318.0 / 273.0	1.76	13C2-PFOA	415.0 / 370.0	40703.57	100.00
13C4-PFHpA	367.0 / 322.0	2.12	13C2-PFOA	415.0 / 370.0	40703.57	100.00
13C8-PFOA	421.0 / 376.0	2.49	13C2-PFOA	415.0 / 370.0	40703.57	100.00
13C9-PFNA	472.0 / 427.0	2.87	13C2-PFOA	415.0 / 370.0	40703.57	100.00
13C6-PFDA	519.0 / 474.0	3.22	13C2-PFDA	515.0 / 470.0	46240.47	100.00
13C7-PFUnA	570.0 / 525.0	3.53	13C2-PFDA	515.0 / 470.0	46240.47	100.00
13C2-PFTeDA	715.0 / 670.0	4.29	13C2-PFDA	515.0 / 470.0	46240.47	100.00
13C3-PFBS	302.0 / 99.0	1.47	13C4-PFOS	503.0 / 99.0	11001.50	95.50
13C3-PFHxS	402.0 / 99.0	2.14	13C4-PFOS	503.0 / 99.0	11001.50	95.50
13C8-PFOS	507.0 / 99.0	2.87	13C4-PFOS	503.0 / 99.0	11001.50	95.50

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Summary Internal Standard Report

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Sample Name	JV25 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T05:38:23	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_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	3.81	13C2-PFDA	515.0 / 470.0	45436.85	100.00
d3-MeFOSAA	573.0 / 419.0	3.36	13C4-PFOS	503.0 / 99.0	9248.91	95.50
d5-EtFOSAA	589.0 / 419.0	3.52	13C4-PFOS	503.0 / 99.0	9248.91	95.50
13C5-PFHxA	318.0 / 273.0	1.75	13C2-PFOA	415.0 / 370.0	42718.87	100.00
13C4-PFHpA	367.0 / 322.0	2.11	13C2-PFOA	415.0 / 370.0	42718.87	100.00
13C8-PFOA	421.0 / 376.0	2.48	13C2-PFOA	415.0 / 370.0	42718.87	100.00
13C9-PFNA	472.0 / 427.0	2.85	13C2-PFOA	415.0 / 370.0	42718.87	100.00
13C6-PFDA	519.0 / 474.0	3.20	13C2-PFDA	515.0 / 470.0	45436.85	100.00
13C7-PFUnA	570.0 / 525.0	3.52	13C2-PFDA	515.0 / 470.0	45436.85	100.00
13C2-PFTeDA	715.0 / 670.0	4.28	13C2-PFDA	515.0 / 470.0	45436.85	100.00
13C3-PFBS	302.0 / 99.0	1.47	13C4-PFOS	503.0 / 99.0	9248.91	95.50
13C3-PFHxS	402.0 / 99.0	2.13	13C4-PFOS	503.0 / 99.0	9248.91	95.50
13C8-PFOS	507.0 / 99.0	2.85	13C4-PFOS	503.0 / 99.0	9248.91	95.50

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Summary Internal Standard Report

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Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:22:01	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
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	11438.98	92.90
PFBS_2	298.9 / 99.0	1.49	13C3-PFBS	302.0 / 99.0	11438.98	92.90
PFHxA_1	313.0 / 269.0	1.78	13C5-PFHxA	318.0 / 273.0	37048.36	100.00
PFHxA_2	313.0 / 119.0	1.78	13C5-PFHxA	318.0 / 273.0	37048.36	100.00
PFHpA_1	363.0 / 319.0	2.14	13C4-PFHpA	367.0 / 322.0	35690.64	100.00
PFHpA_2	363.0 / 169.0	2.14	13C4-PFHpA	367.0 / 322.0	35690.64	100.00
PFHxS_1	399.0 / 80.0	2.16	13C3-PFHxS	402.0 / 99.0	11010.91	94.60
PFHxS_2	399.0 / 99.0	2.16	13C3-PFHxS	402.0 / 99.0	11010.91	94.60
PFOA_1	413.0 / 369.0	2.52	13C8-PFOA	421.0 / 376.0	52473.79	100.00
PFOA_2	413.0 / 169.0	2.52	13C8-PFOA	421.0 / 376.0	52473.79	100.00
PFNA_1	463.0 / 419.0	2.90	13C9-PFNA	472.0 / 427.0	59432.58	100.00
PFNA_2	463.0 / 219.0	2.90	13C9-PFNA	472.0 / 427.0	59432.58	100.00
PFOS_1	499.0 / 80.0	2.89	13C8-PFOS	507.0 / 99.0	13659.53	95.70
PFOS_2	499.0 / 99.0	2.89	13C8-PFOS	507.0 / 99.0	13659.53	95.70
PFDA_1	513.0 / 469.0	3.25	13C6-PFDA	519.0 / 474.0	56950.88	100.00
PFDA_2	513.0 / 219.0	3.25	13C6-PFDA	519.0 / 474.0	56950.88	100.00
PFUnA_1	563.0 / 519.0	3.57	13C7-PFUnA	570.0 / 525.0	56291.24	100.00
PFUnA_2	563.0 / 269.0	3.57	13C7-PFUnA	570.0 / 525.0	56291.24	100.00
PFDoA_1	613.0 / 569.0	3.86	13C2-PFDoA	615.0 / 570.0	57693.63	100.00
PFDoA_2	613.0 / 319.0	3.86	13C2-PFDoA	615.0 / 570.0	57693.63	100.00
PFTrDA_1	663.0 / 619.0	4.11	13C2-PFTeDA	715.0 / 670.0	51380.06	100.00
PFTrDA_2	663.0 / 169.0	4.11	13C2-PFTeDA	715.0 / 670.0	51380.06	100.00
PFTeDA_1	713.0 / 669.0	4.33	13C2-PFTeDA	715.0 / 670.0	51380.06	100.00
PFTeDA_2	713.0 / 169.0	4.33	13C2-PFTeDA	715.0 / 670.0	51380.06	100.00
NMeFOSAA_1	570.0 / 419.0	3.41	d3-MeFOSAA	573.0 / 419.0	10857.54	100.00
NMeFOSAA_2	570.0 / 512.0	3.41	d3-MeFOSAA	573.0 / 419.0	10857.54	100.00
NEtFOSAA_1	584.0 / 419.0	3.57	d5-EtFOSAA	589.0 / 419.0	11304.98	100.00
NEtFOSAA_2	584.0 / 483.0	3.57	d5-EtFOSAA	589.0 / 419.0	11304.98	100.00

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Summary Internal Standard Report

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Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:50:26	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.49	13C3-PFBS	302.0 / 99.0	14811.93	92.90
PFBS_2	298.9 / 99.0	1.49	13C3-PFBS	302.0 / 99.0	14811.93	92.90
PFHxA_1	313.0 / 269.0	1.77	13C5-PFHxA	318.0 / 273.0	40993.34	100.00
PFHxA_2	313.0 / 119.0	1.77	13C5-PFHxA	318.0 / 273.0	40993.34	100.00
PFHpA_1	363.0 / 319.0	2.13	13C4-PFHpA	367.0 / 322.0	45050.40	100.00
PFHpA_2	363.0 / 169.0	2.13	13C4-PFHpA	367.0 / 322.0	45050.40	100.00
PFHxS_1	399.0 / 80.0	2.15	13C3-PFHxS	402.0 / 99.0	11723.08	94.60
PFHxS_2	399.0 / 99.0	2.15	13C3-PFHxS	402.0 / 99.0	11723.08	94.60
PFOA_1	413.0 / 369.0	2.50	13C8-PFOA	421.0 / 376.0	62619.15	100.00
PFOA_2	413.0 / 169.0	2.50	13C8-PFOA	421.0 / 376.0	62619.15	100.00
PFNA_1	463.0 / 419.0	2.88	13C9-PFNA	472.0 / 427.0	61634.98	100.00
PFNA_2	463.0 / 219.0	2.88	13C9-PFNA	472.0 / 427.0	61634.98	100.00
PFOS_1	499.0 / 80.0	2.87	13C8-PFOS	507.0 / 99.0	12228.54	95.70
PFOS_2	499.0 / 99.0	2.87	13C8-PFOS	507.0 / 99.0	12228.54	95.70
PFDA_1	513.0 / 469.0	3.23	13C6-PFDA	519.0 / 474.0	63449.95	100.00
PFDA_2	513.0 / 219.0	3.23	13C6-PFDA	519.0 / 474.0	63449.95	100.00
PFUnA_1	563.0 / 519.0	3.55	13C7-PFUnA	570.0 / 525.0	69867.98	100.00
PFUnA_2	563.0 / 269.0	3.54	13C7-PFUnA	570.0 / 525.0	69867.98	100.00
PFDoA_1	613.0 / 569.0	3.83	13C2-PFDoA	615.0 / 570.0	65833.89	100.00
PFDoA_2	613.0 / 319.0	3.83	13C2-PFDoA	615.0 / 570.0	65833.89	100.00
PFTrDA_1	663.0 / 619.0	4.08	13C2-PFTeDA	715.0 / 670.0	67364.26	100.00
PFTrDA_2	663.0 / 169.0	4.08	13C2-PFTeDA	715.0 / 670.0	67364.26	100.00
PFTeDA_1	713.0 / 669.0	4.30	13C2-PFTeDA	715.0 / 670.0	67364.26	100.00
PFTeDA_2	713.0 / 169.0	4.30	13C2-PFTeDA	715.0 / 670.0	67364.26	100.00
NMeFOSAA_1	570.0 / 419.0	3.39	d3-MeFOSAA	573.0 / 419.0	13658.34	100.00
NMeFOSAA_2	570.0 / 512.0	3.39	d3-MeFOSAA	573.0 / 419.0	13658.34	100.00
NEtFOSAA_1	584.0 / 419.0	3.55	d5-EtFOSAA	589.0 / 419.0	14012.62	100.00
NEtFOSAA_2	584.0 / 483.0	3.55	d5-EtFOSAA	589.0 / 419.0	14012.62	100.00

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Summary Internal Standard Report

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Sample Name	JV25 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T05:38:23	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.49	13C3-PFBS	302.0 / 99.0	13934.14	92.90
PFBS_2	298.9 / 99.0	1.49	13C3-PFBS	302.0 / 99.0	13934.14	92.90
PFHxA_1	313.0 / 269.0	1.76	13C5-PFHxA	318.0 / 273.0	42343.05	100.00
PFHxA_2	313.0 / 119.0	1.76	13C5-PFHxA	318.0 / 273.0	42343.05	100.00
PFHpA_1	363.0 / 319.0	2.12	13C4-PFHpA	367.0 / 322.0	44310.19	100.00
PFHpA_2	363.0 / 169.0	2.12	13C4-PFHpA	367.0 / 322.0	44310.19	100.00
PFHxS_1	399.0 / 80.0	2.14	13C3-PFHxS	402.0 / 99.0	10079.62	94.60
PFHxS_2	399.0 / 99.0	2.14	13C3-PFHxS	402.0 / 99.0	10079.62	94.60
PFOA_1	413.0 / 369.0	2.49	13C8-PFOA	421.0 / 376.0	59101.52	100.00
PFOA_2	413.0 / 169.0	2.49	13C8-PFOA	421.0 / 376.0	59101.52	100.00
PFNA_1	463.0 / 419.0	2.86	13C9-PFNA	472.0 / 427.0	58879.96	100.00
PFNA_2	463.0 / 219.0	2.86	13C9-PFNA	472.0 / 427.0	58879.96	100.00
PFOS_1	499.0 / 80.0	2.86	13C8-PFOS	507.0 / 99.0	11821.02	95.70
PFOS_2	499.0 / 99.0	2.86	13C8-PFOS	507.0 / 99.0	11821.02	95.70
PFDA_1	513.0 / 469.0	3.21	13C6-PFDA	519.0 / 474.0	63197.94	100.00
PFDA_2	513.0 / 219.0	3.21	13C6-PFDA	519.0 / 474.0	63197.94	100.00
PFUnA_1	563.0 / 519.0	3.53	13C7-PFUnA	570.0 / 525.0	59998.99	100.00
PFUnA_2	563.0 / 269.0	3.53	13C7-PFUnA	570.0 / 525.0	59998.99	100.00
PFDoA_1	613.0 / 569.0	3.82	13C2-PFDoA	615.0 / 570.0	63514.77	100.00
PFDoA_2	613.0 / 319.0	3.82	13C2-PFDoA	615.0 / 570.0	63514.77	100.00
PFTrDA_1	663.0 / 619.0	4.07	13C2-PFTeDA	715.0 / 670.0	54295.14	100.00
PFTrDA_2	663.0 / 169.0	4.07	13C2-PFTeDA	715.0 / 670.0	54295.14	100.00
PFTeDA_1	713.0 / 669.0	4.29	13C2-PFTeDA	715.0 / 670.0	54295.14	100.00
PFTeDA_2	713.0 / 169.0	4.29	13C2-PFTeDA	715.0 / 670.0	54295.14	100.00
NMeFOSAA_1	570.0 / 419.0	3.37	d3-MeFOSAA	573.0 / 419.0	12891.35	100.00
NMeFOSAA_2	570.0 / 512.0	3.37	d3-MeFOSAA	573.0 / 419.0	12891.35	100.00
NEtFOSAA_1	584.0 / 419.0	3.53	d5-EtFOSAA	589.0 / 419.0	12608.47	100.00
NEtFOSAA_2	584.0 / 483.0	3.53	d5-EtFOSAA	589.0 / 419.0	12608.47	100.00

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Summary Internal Standard Report

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Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T22:19:21	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	17381.24	92.90
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	17381.24	92.90
PFHxA_1	313.0 / 269.0	1.83	13C5-PFHxA	318.0 / 273.0	55683.11	100.00
PFHxA_2	313.0 / 119.0	1.83	13C5-PFHxA	318.0 / 273.0	55683.11	100.00
PFHxS_1	399.0 / 80.0	2.21	13C3-PFHxS	402.0 / 99.0	16121.33	94.60
PFHxS_2	399.0 / 99.0	2.21	13C3-PFHxS	402.0 / 99.0	16121.33	94.60
PFOA_1	413.0 / 369.0	2.57	13C8-PFOA	421.0 / 376.0	70077.04	100.00
PFOA_2	413.0 / 169.0	2.57	13C8-PFOA	421.0 / 376.0	70077.04	100.00
PFNA_1	463.0 / 419.0	2.95	13C9-PFNA	472.0 / 427.0	67679.10	100.00
PFNA_2	463.0 / 219.0	2.95	13C9-PFNA	472.0 / 427.0	67679.10	100.00
PFOS_1	499.0 / 80.0	2.94	13C8-PFOS	507.0 / 99.0	13822.45	95.70
PFOS_2	499.0 / 99.0	2.94	13C8-PFOS	507.0 / 99.0	13822.45	95.70

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Summary Internal Standard Report

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Printed: 08/06/2018 12:41:37 PM

Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T02:14:26	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	20981.29	92.90
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	20981.29	92.90
PFHxA_1	313.0 / 269.0	1.83	13C5-PFHxA	318.0 / 273.0	66875.26	100.00
PFHxA_2	313.0 / 119.0	1.83	13C5-PFHxA	318.0 / 273.0	66875.26	100.00
PFHxS_1	399.0 / 80.0	2.21	13C3-PFHxS	402.0 / 99.0	17948.39	94.60
PFHxS_2	399.0 / 99.0	2.21	13C3-PFHxS	402.0 / 99.0	17948.39	94.60
PFOA_1	413.0 / 369.0	2.57	13C8-PFOA	421.0 / 376.0	86629.35	100.00
PFOA_2	413.0 / 169.0	2.57	13C8-PFOA	421.0 / 376.0	86629.35	100.00
PFNA_1	463.0 / 419.0	2.94	13C9-PFNA	472.0 / 427.0	88042.07	100.00
PFNA_2	463.0 / 219.0	2.94	13C9-PFNA	472.0 / 427.0	88042.07	100.00
PFOS_1	499.0 / 80.0	2.93	13C8-PFOS	507.0 / 99.0	18108.44	95.70
PFOS_2	499.0 / 99.0	2.93	13C8-PFOS	507.0 / 99.0	18108.44	95.70

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Summary Internal Standard Report

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Sample Name	JV24 ISC	**Injection Vial**	1
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T13:33:43	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFOS_1	499.0 / 80.0	2.99	13C8-PFOS	507.0 / 99.0	17234.84	95.70
PFOS_2	499.0 / 99.0	2.99	13C8-PFOS	507.0 / 99.0	17234.84	95.70

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 3:20:13 PM

Sample Name	JV25 CCV	**Injection Vial**	5
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T14:16:30	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFOS_1	499.0 / 80.0	2.96	13C8-PFOS	507.0 / 99.0	18489.70	95.70
PFOS_2	499.0 / 99.0	2.97	13C8-PFOS	507.0 / 99.0	18489.70	95.70

BATTELLE

Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 11:41:02 AM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T22:19:21	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	12740.39	95.50

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 11:41:05 AM

Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T02:14:26	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	13521.45	95.50

Raw Analytical Data

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 12:46:55 PM

Sample Name	JV05 IB	**Injection Vial**	11
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T19:20:37	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFTeDA_1	713.0 / 669.0	4.35	5735.12	12.246002	99.6	false
PFTeDA_2	713.0 / 169.0	4.34	414.97	28.038300	30.8	false
NMeFOSAA_1	570.0 / 419.0	3.43	3056.15	26.437106	2212.9	false
NMeFOSAA_2	570.0 / 512.0	3.42	1556.61	< 0	62.5	false
NEtFOSAA_1	584.0 / 419.0	3.59	3264.50	64.287971	180.9	false
NEtFOSAA_2	584.0 / 483.0	3.58	116.57	30.549258	276.8	false

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 12:46:59 PM

Sample Name	J6241-FS(3)	**Injection Vial**	16
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T20:25:25	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFTeDA_1	713.0 / 669.0	4.34	205355.54	2156.587187	573.1	false
PFTeDA_2	713.0 / 169.0	4.34	10044.93	2015.589277	268.4	false
NMeFOSAA_1	570.0 / 419.0	3.27	577004.01	4950.283689	288.0	false
NMeFOSAA_2	570.0 / 512.0	3.42	63893.31	869.194488	231.5	false
NEtFOSAA_1	584.0 / 419.0	3.54	96788.14	11304.438250	244.7	false
NEtFOSAA_2	584.0 / 483.0	3.53	6406.23	13227.575909	79.8	false

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 12:47:01 PM

Sample Name	J6242-FS(3)	**Injection Vial**	17
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T20:36:12	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFTeDA_1	713.0 / 669.0	4.34	197247.42	2056.614394	606.2	false
PFTeDA_2	713.0 / 169.0	4.33	9758.84	1944.821203	258.3	false
NMeFOSAA_1	570.0 / 419.0	3.27	546061.06	4690.518841	260.0	false
NMeFOSAA_2	570.0 / 512.0	3.42	61442.04	832.965494	247.3	false
NEtFOSAA_1	584.0 / 419.0	3.54	90708.70	9626.691080	192.0	false
NEtFOSAA_2	584.0 / 483.0	3.49	6373.18	11956.106159	110.8	false

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 10:54:18 AM

Sample Name	JV05 IB	**Injection Vial**	11
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:11:14	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.85	51168.75	69.623720	1238.7	false
d3-MeFOSAA	573.0 / 419.0	3.40	8294.61	59.027177	265.9	false
d5-EtFOSAA	589.0 / 419.0	3.56	8813.77	68.154519	144.4	false
13C5-PFHxA	318.0 / 273.0	1.77	31154.28	66.577889	569.9	false
13C4-PFHpA	367.0 / 322.0	2.13	34204.89	64.504099	786.2	false
13C8-PFOA	421.0 / 376.0	2.51	46805.35	70.567906	830.2	false
13C9-PFNA	472.0 / 427.0	2.89	47022.93	68.204469	17792.7	false
13C6-PFDA	519.0 / 474.0	3.24	47254.91	71.865140	754.0	false
13C7-PFUnA	570.0 / 525.0	3.56	46755.71	67.461891	493.9	false
13C2-PFTeDA	715.0 / 670.0	4.32	43611.52	66.267051	621.9	false
13C3-PFBS	302.0 / 99.0	1.48	9340.85	58.881311	451.2	false
13C3-PFHxS	402.0 / 99.0	2.15	9081.66	73.531112	203.6	false
13C8-PFOS	507.0 / 99.0	2.89	10744.66	71.615538	157.9	false

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 10:54:20 AM

Sample Name	CQ859PB-FS(3)	**Injection Vial**	37
Sample ID	Procedural Balnk	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:28:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.82	44762.48	72.204404	598.7	false
d3-MeFOSAA	573.0 / 419.0	3.38	10123.29	90.329458	353.9	false
d5-EtFOSAA	589.0 / 419.0	3.54	11592.17	112.395572	224.4	false
13C5-PFHxA	318.0 / 273.0	1.76	35756.46	101.833001	540.8	false
13C4-PFHpA	367.0 / 322.0	2.12	41822.01	105.105570	464.1	false
13C8-PFOA	421.0 / 376.0	2.50	52537.75	105.561359	860.8	false
13C9-PFNA	472.0 / 427.0	2.87	55869.43	107.993897	725.7	false
13C6-PFDA	519.0 / 474.0	3.22	54774.85	98.752840	572.8	false
13C7-PFUnA	570.0 / 525.0	3.53	60333.74	103.200346	494.9	false
13C2-PFTeDA	715.0 / 670.0	4.29	34734.67	62.568637	918.0	false
13C3-PFBS	302.0 / 99.0	1.47	12098.96	95.629211	382.8	false
13C3-PFHxS	402.0 / 99.0	2.14	9986.39	101.383226	224.1	false
13C8-PFOS	507.0 / 99.0	2.87	11091.93	92.698604	198.6	false

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 10:54:22 AM

Sample Name	CQ860LCS-FS(3)	**Injection Vial**	38
Sample ID	Labortory Control	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:39:38	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.82	60954.37	104.190665	665.4	false
d3-MeFOSAA	573.0 / 419.0	3.38	11719.89	93.379738	239.1	false
d5-EtFOSAA	589.0 / 419.0	3.54	13436.95	116.333876	287.1	false
13C5-PFHxA	318.0 / 273.0	1.76	40598.37	110.146177	544.5	false
13C4-PFHpA	367.0 / 322.0	2.12	45397.43	108.687318	696.9	false
13C8-PFOA	421.0 / 376.0	2.50	59963.38	114.774746	1406.2	false
13C9-PFNA	472.0 / 427.0	2.87	61945.58	114.067524	734.3	false
13C6-PFDA	519.0 / 474.0	3.22	69005.40	131.833539	565.5	false
13C7-PFUnA	570.0 / 525.0	3.53	69655.68	126.255964	797.0	false
13C2-PFTeDA	715.0 / 670.0	4.29	52880.31	100.939666	829.2	false
13C3-PFBS	302.0 / 99.0	1.47	14066.07	99.274256	306.9	false
13C3-PFHxS	402.0 / 99.0	2.14	13011.87	117.955627	317.0	false
13C8-PFOS	507.0 / 99.0	2.87	13122.61	97.928159	189.3	false

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 10:54:29 AM

Sample Name	J6241-FS-D(6)	**Injection Vial**	39
Sample ID	FFTA_FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:12:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.82	48769.80	80.998745	605.0	false
d3-MeFOSAA	573.0 / 419.0	3.37	9190.79	625.372398	82.3	false
d5-EtFOSAA	589.0 / 419.0	3.54	6516.82	481.834640	90.6	false
13C5-PFHxA	318.0 / 273.0	1.76	12908.60	10.754040	212.6	false
13C4-PFHpA	367.0 / 322.0	2.11	19899.86	14.629500	1283.3	false
13C8-PFOA	421.0 / 376.0	2.50	18195.64	10.694471	263.2	false
13C9-PFNA	472.0 / 427.0	2.87	11832.10	6.690295	324.0	false
13C6-PFDA	519.0 / 474.0	3.22	38621.46	71.692694	404.2	false
13C7-PFUnA	570.0 / 525.0	3.53	41975.30	73.925204	603.2	false
13C2-PFTeDA	715.0 / 670.0	4.29	41915.01	77.739332	832.2	false
13C3-PFBS	302.0 / 99.0	1.48	9980.65	601.561059	279.9	false
13C3-PFHxS	402.0 / 99.0	2.14	9911.43	767.312109	198.5	false
13C8-PFOS	507.0 / 99.0	2.85	2830.65	180.397587	42.4	false

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 10:54:31 AM

Sample Name	J6241-FS-D(7)	**Injection Vial**	40
Sample ID	FFTA_FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:22:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.82	57381.29	93.065662	729.7	false
d3-MeFOSAA	573.0 / 419.0	3.38	10454.57	129.482713	143.0	true
d5-EtFOSAA	589.0 / 419.0	3.54	11131.68	149.810687	172.7	true
13C5-PFHxA	318.0 / 273.0	1.76	37050.46	99.672049	459.9	false
13C4-PFHpA	367.0 / 322.0	2.12	48161.50	114.331686	875.0	false
13C8-PFOA	421.0 / 376.0	2.49	43171.07	81.935492	1122.9	false
13C9-PFNA	472.0 / 427.0	2.87	29730.08	54.283373	858.9	false
13C6-PFDA	519.0 / 474.0	3.22	53728.88	97.397061	526.0	false
13C7-PFUnA	570.0 / 525.0	3.53	61292.39	105.413710	600.4	false
13C2-PFTeDA	715.0 / 670.0	4.29	52134.39	94.425090	771.8	false
13C3-PFBS	302.0 / 99.0	1.47	17160.57	188.266159	444.2	false
13C3-PFHxS	402.0 / 99.0	2.13	9972.09	140.521133	166.8	true
13C8-PFOS	507.0 / 99.0	2.87	6203.05	71.956336	120.4	false

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 10:54:35 AM

Sample Name	J6242-FS-D(6)	**Injection Vial**	41
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:44:26	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.82	42227.98	64.335950	805.4	false
d3-MeFOSAA	573.0 / 419.0	3.37	8088.30	368.800199	60.2	false
d5-EtFOSAA	589.0 / 419.0	3.53	5698.41	282.334656	108.5	false
13C5-PFHxA	318.0 / 273.0	1.76	11013.47	9.154176	171.1	false
13C4-PFHpA	367.0 / 322.0	2.11	16848.58	12.357916	699.7	false
13C8-PFOA	421.0 / 376.0	2.49	13631.26	7.993383	247.1	false
13C9-PFNA	472.0 / 427.0	2.86	8757.85	4.940642	224.2	false
13C6-PFDA	519.0 / 474.0	3.21	34195.31	58.228941	608.3	false
13C7-PFUnA	570.0 / 525.0	3.53	35282.79	57.001696	354.4	false
13C2-PFTeDA	715.0 / 670.0	4.29	36235.39	61.649606	878.7	false
13C3-PFBS	302.0 / 99.0	1.47	7693.13	310.721987	292.0	false
13C3-PFHxS	402.0 / 99.0	2.13	9999.99	518.779999	184.6	false
13C8-PFOS	507.0 / 99.0	2.84	1682.67	71.860703	22.8	false

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 10:54:37 AM

Sample Name	J6242-FS-D(7)	**Injection Vial**	42
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:55:13	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.81	54418.72	85.833453	573.1	false
d3-MeFOSAA	573.0 / 419.0	3.37	10155.81	116.679109	127.5	false
d5-EtFOSAA	589.0 / 419.0	3.53	10859.49	135.570367	169.9	true
13C5-PFHxA	318.0 / 273.0	1.76	37153.39	92.918771	467.5	false
13C4-PFHpA	367.0 / 322.0	2.11	48618.48	107.298399	740.1	false
13C8-PFOA	421.0 / 376.0	2.49	39557.60	69.796621	378.4	false
13C9-PFNA	472.0 / 427.0	2.86	30474.49	51.728793	925.1	false
13C6-PFDA	519.0 / 474.0	3.21	54519.09	96.111587	805.7	false
13C7-PFUnA	570.0 / 525.0	3.52	56437.91	94.395343	649.4	false
13C2-PFTeDA	715.0 / 670.0	4.28	50125.21	88.289367	962.5	false
13C3-PFBS	302.0 / 99.0	1.47	17776.58	180.909680	623.2	true
13C3-PFHxS	402.0 / 99.0	2.13	10763.87	140.700938	207.5	true
13C8-PFOS	507.0 / 99.0	2.85	6281.49	67.592712	109.3	false

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 3:10:53 PM

Sample Name	JV05 IB	**Injection Vial**	11
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:11:14	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.50	6280.55	28.823790	112.6	false
PFBS_2	298.9 / 99.0	1.50	2439.84	22.916898	35.9	true
PFHxA_1	313.0 / 269.0	1.80	7534.43	14.810775	10.4	true
PFHxA_2	313.0 / 119.0	1.77	499.22	15.829883	7.5	true
PFHpA_1	363.0 / 319.0	2.15	6737.34	23.919989	27.7	false
PFHpA_2	363.0 / 169.0	2.16	170.95	< 0	12.3	false
PFHxS_1	399.0 / 80.0	2.16	5861.04	18.661494	156.7	false
PFHxS_2	399.0 / 99.0	2.16	1905.89	16.109927	41.8	false
PFOA_1	413.0 / 369.0	2.53	17017.13	47.681049	26.4	true
PFOA_2	413.0 / 169.0	2.53	1299.94	48.759361	27.9	true
PFNA_1	463.0 / 419.0	2.91	10480.44	22.799696	32.6	true
PFNA_2	463.0 / 219.0	2.90	2674.90	22.621351	39.5	true
PFOS_1	499.0 / 80.0	2.90	8172.98	14.857153	74.4	false
PFOS_2	499.0 / 99.0	2.88	1989.14	8.724168	37.9	false
PFDA_1	513.0 / 469.0	3.25	10837.83	25.359968	44.9	false
PFDA_2	513.0 / 219.0	3.25	254.42	14.019329	71.3	true
PFUnA_1	563.0 / 519.0	3.57	9151.92	25.283469	49.1	true
PFUnA_2	563.0 / 269.0	3.54	702.14	4.026579	21.7	false
PFDoA_1	613.0 / 569.0	3.86	8729.58	13.772209	79.6	false
PFDoA_2	613.0 / 319.0	3.86	1854.74	0.753608	102.3	false
PFTrDA_1	663.0 / 619.0	4.11	8878.70	24.781078	95.6	false
PFTrDA_2	663.0 / 169.0	4.10	485.97	10.537172	27.2	false
PFTeDA_1	713.0 / 669.0	4.33	9504.88	23.998386	155.3	false
PFTeDA_2	713.0 / 169.0	4.33	652.72	19.511171	72.2	false
NMeFOSAA_1	570.0 / 419.0	3.41	3072.09	49.556290	198.5	false
NMeFOSAA_2	570.0 / 512.0	3.40	1547.49	40.996726	124.0	false
NEtFOSAA_1	584.0 / 419.0	3.58	2413.65	34.999047	154.5	false
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 11/06/2018 11:53:30 AM

Sample Name	CQ859PB-FS(3)	**Injection Vial**	37
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:28:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.49	3425.64	8.372936	65.4	true
PFBS_2	298.9 / 99.0	1.48	1267.71	< 0	21.9	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	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	2.14	701.90	< 0	30.3	false
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	true
PFOA_1	413.0 / 369.0	2.51	13337.12	31.480672	20.7	true
PFOA_2	413.0 / 169.0	2.52	1512.65	50.987632	19.6	true
PFNA_1	463.0 / 419.0	2.87	3116.44	< 0	15.7	true
PFNA_2	463.0 / 219.0	2.88	1179.99	2.917006	18.3	true
PFOS_1	499.0 / 80.0	2.88	58686.94	159.547911	294.2	false
PFOS_2	499.0 / 99.0	2.88	13844.33	197.783938	185.2	false
PFDA_1	513.0 / 469.0	3.22	1392.15	< 0	11.9	true
PFDA_2	513.0 / 219.0	3.26	100.08	1.582875	9.0	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	N/A	N/A	N/A	N/A	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	4.30	673.07	< 0	17.8	true
PFTeDA_2	713.0 / 169.0	4.30	91.81	< 0	10.8	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	CQ860LCS-FS(3)	**Injection Vial**	38
Sample ID	Labortory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:39:38	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.49	760667.81	2834.795928	1178.1	false
PFBS_2	298.9 / 99.0	1.49	236603.84	2837.850826	593.3	false
PFHxA_1	313.0 / 269.0	1.77	719310.73	2676.570835	191.5	false
PFHxA_2	313.0 / 119.0	1.77	49055.41	2612.136954	148.9	false
PFHpA_1	363.0 / 319.0	2.13	628460.17	2509.987440	360.9	false
PFHpA_2	363.0 / 169.0	2.13	13692.93	2566.857764	251.5	false
PFHxS_1	399.0 / 80.0	2.15	735932.13	2083.310401	995.9	false
PFHxS_2	399.0 / 99.0	2.15	211250.89	2058.493668	462.9	false
PFOA_1	413.0 / 369.0	2.51	956064.17	2348.299846	327.5	true
PFOA_2	413.0 / 169.0	2.50	66993.77	2432.412419	315.5	true
PFNA_1	463.0 / 419.0	2.88	952411.74	2417.561428	371.2	false
PFNA_2	463.0 / 219.0	2.88	281466.85	2494.664647	443.9	false
PFOS_1	499.0 / 80.0	2.87	1064578.41	2581.584094	623.8	false
PFOS_2	499.0 / 99.0	2.88	192086.10	2579.163196	594.4	false
PFDA_1	513.0 / 469.0	3.23	1076709.87	2300.059275	425.6	false
PFDA_2	513.0 / 219.0	3.23	42377.01	2142.309499	369.7	false
PFUnA_1	563.0 / 519.0	3.55	1074494.45	2407.400920	492.9	false
PFUnA_2	563.0 / 269.0	3.55	56493.92	2494.700517	374.1	false
PFDoA_1	613.0 / 569.0	3.83	919760.00	2609.593367	442.7	false
PFDoA_2	613.0 / 319.0	3.83	140091.30	2767.505466	461.0	false
PFTrDA_1	663.0 / 619.0	4.08	752075.68	2490.966045	736.1	false
PFTrDA_2	663.0 / 169.0	4.08	51461.11	2419.672152	732.8	false
PFTeDA_1	713.0 / 669.0	4.30	882714.05	2537.714216	1440.2	false
PFTeDA_2	713.0 / 169.0	4.30	46096.28	2606.706262	1042.3	false
NMeFOSAA_1	570.0 / 419.0	3.39	224642.18	3080.032497	882.4	false
NMeFOSAA_2	570.0 / 512.0	3.39	117206.75	2732.250416	674.5	false
NEtFOSAA_1	584.0 / 419.0	3.55	188566.92	2164.911111	591.4	false
NEtFOSAA_2	584.0 / 483.0	3.54	12148.57	2460.379590	1906.7	false

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Summary Quant Report

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Sample Name	J6241-FS-D(6)	**Injection Vial**	39
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:12:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.50	88984804.35	468430.865666	1888.2	false
PFBS_2	298.9 / 99.0	1.49	47087563.74	801957.887090	2569.3	false
PFHxA_1	313.0 / 269.0	1.79	138947331.66	1639438.559746	402.5	false
PFHxA_2	313.0 / 119.0	1.77	31003154.82	5229991.888737	607.6	false
PFHpA_1	363.0 / 319.0	2.11	42788412.08	391699.367361	919.5	false
PFHpA_2	363.0 / 169.0	2.07	1477861.86	656850.207244	891.0	false
PFHxS_1	399.0 / 80.0	2.13	186851725.88	696129.241394	465.3	false
PFHxS_2	399.0 / 99.0	2.14	133977888.45	1722753.395308	912.4	false
PFOA_1	413.0 / 369.0	2.49	93169307.86	756072.880253	695.3	false
PFOA_2	413.0 / 169.0	2.44	14083326.30	1693409.670266	696.8	false
PFNA_1	463.0 / 419.0	2.88	74524432.13	995453.657978	511.3	false
PFNA_2	463.0 / 219.0	2.88	26890214.00	1252102.717290	539.5	false
PFOS_1	499.0 / 80.0	2.78	268804157.21	3032924.751151	109.6	true
PFOS_2	499.0 / 99.0	2.85	192221486.33	12077409.946710	393.8	false
PFDA_1	513.0 / 469.0	3.23	11540529.19	44203.040272	653.0	false
PFDA_2	513.0 / 219.0	3.23	513140.23	46448.362692	804.8	false
PFUnA_1	563.0 / 519.0	3.55	51696789.31	192627.972405	666.5	false
PFUnA_2	563.0 / 269.0	3.54	3265170.02	243345.761854	909.0	false
PFDoA_1	613.0 / 569.0	3.83	338163.29	1190.563965	339.1	false
PFDoA_2	613.0 / 319.0	3.83	65636.56	1602.543682	397.5	false
PFTrDA_1	663.0 / 619.0	4.08	573075.79	2392.855735	632.1	false
PFTrDA_2	663.0 / 169.0	4.08	39839.97	2362.058738	707.3	false
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	J6241-FS-D(7)	**Injection Vial**	40
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:22:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.49	13844032.11	42379.794688	3113.9	false
PFBS_2	298.9 / 99.0	1.48	4480044.54	44356.392138	1912.3	false
PFHxA_1	313.0 / 269.0	1.76	59666593.88	245260.985062	816.6	false
PFHxA_2	313.0 / 119.0	1.77	4186787.85	246053.454930	791.5	false
PFHpA_1	363.0 / 319.0	2.12	4371567.13	16523.912792	608.5	false
PFHpA_2	363.0 / 169.0	2.09	117586.74	21496.400805	541.8	false
PFHxS_1	399.0 / 80.0	2.14	55540792.92	198536.142260	1163.6	false
PFHxS_2	399.0 / 99.0	2.14	20658400.11	254867.260283	1202.5	false
PFOA_1	413.0 / 369.0	2.50	12238400.78	41853.430803	682.5	false
PFOA_2	413.0 / 169.0	2.46	1285989.65	65161.606413	579.5	false
PFNA_1	463.0 / 419.0	2.88	13494708.75	71726.844817	679.3	false
PFNA_2	463.0 / 219.0	2.88	3818165.53	70748.234254	668.3	false
PFOS_1	499.0 / 80.0	2.82	185488817.21	955040.699549	521.7	true
PFOS_2	499.0 / 99.0	2.87	42783445.42	1226651.991958	847.1	false
PFDA_1	513.0 / 469.0	3.23	728582.44	1997.792363	326.0	false
PFDA_2	513.0 / 219.0	3.23	34216.63	2221.770624	389.4	false
PFUnA_1	563.0 / 519.0	3.54	4295048.06	10954.984832	688.6	false
PFUnA_2	563.0 / 269.0	3.54	203306.31	10335.496504	644.3	false
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	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	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	J6242-FS-D(6)	**Injection Vial**	41
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:44:26	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.49	93534992.77	638794.189666	1687.9	false
PFBS_2	298.9 / 99.0	1.49	50713123.59	1120532.839491	2776.8	false
PFHxA_1	313.0 / 269.0	1.79	143679085.68	1986984.308663	376.5	false
PFHxA_2	313.0 / 119.0	1.77	32542098.85	6434220.047013	737.5	false
PFHpA_1	363.0 / 319.0	2.11	46249158.55	500057.839965	848.1	false
PFHpA_2	363.0 / 169.0	2.06	1636916.25	859333.166583	824.8	false
PFHxS_1	399.0 / 80.0	2.12	189944311.88	701383.841354	438.2	true
PFHxS_2	399.0 / 99.0	2.14	142475330.94	1815793.569144	814.1	false
PFOA_1	413.0 / 369.0	2.48	99797032.18	1081037.338504	625.4	false
PFOA_2	413.0 / 169.0	2.43	15919732.03	2555199.570856	649.5	false
PFNA_1	463.0 / 419.0	2.88	80556980.97	1453756.736446	529.5	false
PFNA_2	463.0 / 219.0	2.87	30099907.37	1893548.184890	626.2	false
PFOS_1	499.0 / 80.0	2.76	251253998.12	4768988.071961	93.7	true
PFOS_2	499.0 / 99.0	2.84	202083173.63	21359423.044077	386.5	false
PFDA_1	513.0 / 469.0	3.22	13403866.74	57988.064763	635.0	false
PFDA_2	513.0 / 219.0	3.22	621077.61	63497.167658	748.8	false
PFUnA_1	563.0 / 519.0	3.54	58393841.53	258855.100853	631.4	false
PFUnA_2	563.0 / 269.0	3.54	3926977.18	348201.206919	766.7	false
PFDoA_1	613.0 / 569.0	3.83	411290.13	1678.781548	405.1	false
PFDoA_2	613.0 / 319.0	3.83	64747.68	1831.809621	377.7	false
PFTrDA_1	663.0 / 619.0	4.08	739388.73	3602.145451	761.1	false
PFTrDA_2	663.0 / 169.0	4.08	50733.08	3512.783402	660.5	false
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	J6242-FS-D(7)	**Injection Vial**	42
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:55:13	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.48	11301815.83	32893.085957	2660.1	false
PFBS_2	298.9 / 99.0	1.48	3677211.64	34610.882455	1841.7	false
PFHxA_1	313.0 / 269.0	1.76	51695835.94	211905.306020	803.2	false
PFHxA_2	313.0 / 119.0	1.76	3385383.00	198400.803120	660.5	false
PFHpA_1	363.0 / 319.0	2.12	3569728.88	13363.964347	565.0	false
PFHpA_2	363.0 / 169.0	2.09	91813.94	16604.077937	638.8	false
PFHxS_1	399.0 / 80.0	2.14	45591277.21	151744.717015	1108.7	false
PFHxS_2	399.0 / 99.0	2.14	16147599.97	185492.508504	1107.1	false
PFOA_1	413.0 / 369.0	2.49	10020352.65	37397.700734	610.6	false
PFOA_2	413.0 / 169.0	2.46	1023724.08	56609.336839	518.5	false
PFNA_1	463.0 / 419.0	2.87	11032456.94	57204.618116	588.3	false
PFNA_2	463.0 / 219.0	2.87	3179000.34	57464.388575	624.0	false
PFOS_1	499.0 / 80.0	2.82	163806455.31	832869.120887	607.9	true
PFOS_2	499.0 / 99.0	2.87	35806514.40	1013790.202313	879.5	false
PFDA_1	513.0 / 469.0	3.22	584115.07	1576.644589	304.0	false
PFDA_2	513.0 / 219.0	3.22	25395.77	1623.818998	255.3	false
PFUnA_1	563.0 / 519.0	3.54	3615190.01	10013.609721	514.6	false
PFUnA_2	563.0 / 269.0	3.54	166211.67	9171.694710	485.2	false
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	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	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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Printed: 08/06/2018 12:44:53 PM

Sample Name	JV05 IB	**Injection Vial**	11
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T22:08:39	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	8663.94	20.409103	30.6	true
PFBS_2	298.9 / 99.0	1.54	3104.11	20.958127	21.2	true
PFHxA_1	313.0 / 269.0	1.82	15244.64	10.643980	8.1	true
PFHxA_2	313.0 / 119.0	1.84	1173.35	13.965821	5.3	true
PFHxS_1	399.0 / 80.0	2.22	11584.44	15.665681	7.3	true
PFHxS_2	399.0 / 99.0	2.22	3523.97	6.107058	7.1	true
PFOA_1	413.0 / 369.0	2.57	26481.42	40.554068	17.9	true
PFOA_2	413.0 / 169.0	2.59	1963.29	41.714513	11.8	true
PFNA_1	463.0 / 419.0	2.95	17387.58	20.901678	34.2	true
PFNA_2	463.0 / 219.0	2.94	4427.51	21.145709	24.8	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

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Summary Quant Report

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Sample Name	J6241-FS-D(9)	**Injection Vial**	25
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T01:21:00	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	1426207.12	2898.281006	1243.5	true
PFBS_2	298.9 / 99.0	1.54	463295.44	3017.003197	826.8	true
PFHxA_1	313.0 / 269.0	1.82	9148717.29	17009.233390	218.1	false
PFHxA_2	313.0 / 119.0	1.83	506502.09	13395.632869	184.6	false
PFHxS_1	399.0 / 80.0	2.21	8191892.96	16014.364936	457.6	false
PFHxS_2	399.0 / 99.0	2.21	2533151.44	18012.399229	436.9	false
PFOA_1	413.0 / 369.0	2.56	1877370.36	2874.121577	238.3	true
PFOA_2	413.0 / 169.0	2.53	205361.12	4090.123320	164.7	true
PFNA_1	463.0 / 419.0	2.94	2477457.97	4023.428125	693.1	false
PFNA_2	463.0 / 219.0	2.94	687948.81	4006.261582	437.8	false
PFOS_1	499.0 / 80.0	2.92	44168200.25	70852.324820	275.8	true
PFOS_2	499.0 / 99.0	2.93	7877940.44	73208.168920	389.6	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 12:45:00 PM

Sample Name	J6242-FS-D(9)	**Injection Vial**	26
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T01:31:41	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	1165452.25	2195.923251	1037.4	true
PFBS_2	298.9 / 99.0	1.54	368547.48	2224.456454	627.3	true
PFHxA_1	313.0 / 269.0	1.82	7194665.19	13549.863751	198.9	false
PFHxA_2	313.0 / 119.0	1.83	405460.28	10861.766729	170.5	false
PFHxS_1	399.0 / 80.0	2.21	5998810.91	10499.718521	402.4	false
PFHxS_2	399.0 / 99.0	2.21	1861535.50	11847.705065	340.0	false
PFOA_1	413.0 / 369.0	2.56	1380646.81	2113.809297	211.5	true
PFOA_2	413.0 / 169.0	2.53	149762.56	2985.263631	132.7	true
PFNA_1	463.0 / 419.0	2.94	1917855.44	3030.551043	549.4	false
PFNA_2	463.0 / 219.0	2.94	548743.40	3110.414632	464.1	false
PFOS_1	499.0 / 80.0	2.92	34885457.11	51424.341612	233.2	false
PFOS_2	499.0 / 99.0	2.93	5774463.14	49294.041970	350.2	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 3:20:39 PM

Sample Name	JV05 IB	**Injection Vial**	2
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T13:44:26	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
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

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 3:20:41 PM

Sample Name	J6241-FS-D(11)	**Injection Vial**	3
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T13:55:08	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFOS_1	499.0 / 80.0	2.96	1152701.31	9504.640630	36.9	true
PFOS_2	499.0 / 99.0	2.98	240846.44	11448.179659	80.7	true

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 3:20:43 PM

Sample Name	J6242-FS-D(11)	**Injection Vial**	4
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T14:05:50	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFOS_1	499.0 / 80.0	2.96	346044.82	4090.285748	21.6	true
PFOS_2	499.0 / 99.0	2.97	81466.72	5511.617449	27.7	true

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 11:05:17 AM

Sample Name	JV05 IB	**Injection Vial**	11
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T22:08:39	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C3-PFBS	302.0 / 99.0	1.52	19433.93	65.562096	456.2	true

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 11:05:19 AM

Sample Name	J6241-FS-D(9)	**Injection Vial**	25
Sample ID	FFTA_FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T01:21:00	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C3-PFBS	302.0 / 99.0	1.53	24775.15	96.906972	660.5	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 11:05:21 AM

Sample Name	J6242-FS-D(9)	**Injection Vial**	26
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T01:31:41	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C3-PFBS	302.0 / 99.0	1.52	26714.36	102.804813	953.2	false

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 1:06:43 PM

Sample Name	JV05 IB	**Injection Vial**	11
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T19:20:37	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFTeDA_1	713.0 / 669.0	4.35	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.34	PFTeDA	0.072	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.43	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.42	NMeFOSAA	0.509	0.594	ü
NEtFOSAA_1	584.0 / 419.0	3.59	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.58	NEtFOSAA	0.036	0.059	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 1:06:48 PM

Sample Name	J6241-FS(3)	**Injection Vial**	16
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T20:25:25	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFTeDA_1	713.0 / 669.0	4.34	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.34	PFTeDA	0.049	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.27	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.42	NMeFOSAA	0.111	0.594	
NEtFOSAA_1	584.0 / 419.0	3.54	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.53	NEtFOSAA	0.066	0.059	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 1:06:51 PM

Sample Name	J6242-FS(3)	**Injection Vial**	17
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T20:36:12	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFTeDA_1	713.0 / 669.0	4.34	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.33	PFTeDA	0.050	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.27	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.42	NMeFOSAA	0.113	0.594	
NEtFOSAA_1	584.0 / 419.0	3.54	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.49	NEtFOSAA	0.070	0.059	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:12:13 PM

Sample Name	JV05 IB	**Injection Vial**	11
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:11:14	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
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	0.389	0.344	ü
PFHxA_1	313.0 / 269.0	1.80	PFHxA			
PFHxA_2	313.0 / 119.0	1.77	PFHxA	0.066	0.070	ü
PFHpA_1	363.0 / 319.0	2.15	PFHpA			
PFHpA_2	363.0 / 169.0	2.16	PFHpA	0.025	0.023	ü
PFHxS_1	399.0 / 80.0	2.16	PFHxS			
PFHxS_2	399.0 / 99.0	2.16	PFHxS	0.325	0.302	ü
PFOA_1	413.0 / 369.0	2.53	PFOA			
PFOA_2	413.0 / 169.0	2.53	PFOA	0.076	0.071	ü
PFNA_1	463.0 / 419.0	2.91	PFNA			
PFNA_2	463.0 / 219.0	2.90	PFNA	0.255	0.282	ü
PFOS_1	499.0 / 80.0	2.90	PFOS			
PFOS_2	499.0 / 99.0	2.88	PFOS	0.243	0.200	ü
PFDA_1	513.0 / 469.0	3.25	PFDA			
PFDA_2	513.0 / 219.0	3.25	PFDA	0.024	0.041	ü
PFUnA_1	563.0 / 519.0	3.57	PFUnA			
PFUnA_2	563.0 / 269.0	3.54	PFUnA	0.077	0.057	ü
PFDoA_1	613.0 / 569.0	3.86	PFDoA			
PFDoA_2	613.0 / 319.0	3.86	PFDoA	0.213	0.158	ü
PFTrDA_1	663.0 / 619.0	4.11	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.10	PFTrDA	0.055	0.070	ü
PFTeDA_1	713.0 / 669.0	4.33	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.33	PFTeDA	0.069	0.053	ü
NMeFOSAA_1	570.0 / 419.0	3.41	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.40	NMeFOSAA	0.504	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.58	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.066	

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:12:18 PM

Sample Name	CQ859PB-FS(3)	**Injection Vial**	37
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:28:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.49	PFBS			
PFBS_2	298.9 / 99.0	1.48	PFBS	0.370	0.344	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.070	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.023	ü
PFHxS_1	399.0 / 80.0	2.14	PFHxS			
PFHxS_2	399.0 / 99.0	1.76	PFHxS	1.590	0.302	
PFOA_1	413.0 / 369.0	2.51	PFOA			
PFOA_2	413.0 / 169.0	2.52	PFOA	0.113	0.071	
PFNA_1	463.0 / 419.0	2.87	PFNA			
PFNA_2	463.0 / 219.0	2.88	PFNA	0.379	0.282	ü
PFOS_1	499.0 / 80.0	2.88	PFOS			
PFOS_2	499.0 / 99.0	2.88	PFOS	0.236	0.200	ü
PFDA_1	513.0 / 469.0	3.22	PFDA			
PFDA_2	513.0 / 219.0	3.26	PFDA	0.072	0.041	
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.057	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.070	ü
PFTeDA_1	713.0 / 669.0	4.30	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.30	PFTeDA	0.136	0.053	
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.590	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.066	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:12:20 PM

Sample Name	CQ860LCS-FS(3)	**Injection Vial**	38
Sample ID	Labortory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:39:38	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.49	PFBS			
PFBS_2	298.9 / 99.0	1.49	PFBS	0.311	0.344	ü
PFHxA_1	313.0 / 269.0	1.77	PFHxA			
PFHxA_2	313.0 / 119.0	1.77	PFHxA	0.068	0.070	ü
PFHpA_1	363.0 / 319.0	2.13	PFHpA			
PFHpA_2	363.0 / 169.0	2.13	PFHpA	0.022	0.023	ü
PFHxS_1	399.0 / 80.0	2.15	PFHxS			
PFHxS_2	399.0 / 99.0	2.15	PFHxS	0.287	0.302	ü
PFOA_1	413.0 / 369.0	2.51	PFOA			
PFOA_2	413.0 / 169.0	2.50	PFOA	0.070	0.071	ü
PFNA_1	463.0 / 419.0	2.88	PFNA			
PFNA_2	463.0 / 219.0	2.88	PFNA	0.296	0.282	ü
PFOS_1	499.0 / 80.0	2.87	PFOS			
PFOS_2	499.0 / 99.0	2.88	PFOS	0.180	0.200	ü
PFDA_1	513.0 / 469.0	3.23	PFDA			
PFDA_2	513.0 / 219.0	3.23	PFDA	0.039	0.041	ü
PFUnA_1	563.0 / 519.0	3.55	PFUnA			
PFUnA_2	563.0 / 269.0	3.55	PFUnA	0.053	0.057	ü
PFDoA_1	613.0 / 569.0	3.83	PFDoA			
PFDoA_2	613.0 / 319.0	3.83	PFDoA	0.152	0.158	ü
PFTrDA_1	663.0 / 619.0	4.08	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.08	PFTrDA	0.068	0.070	ü
PFTeDA_1	713.0 / 669.0	4.30	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.30	PFTeDA	0.052	0.053	ü
NMeFOSAA_1	570.0 / 419.0	3.39	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.39	NMeFOSAA	0.522	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.55	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.54	NEtFOSAA	0.064	0.066	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:12:23 PM

Sample Name	J6241-FS-D(6)	**Injection Vial**	39
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:12:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
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	1.49	PFBS	0.529	0.344	
PFHxA_1	313.0 / 269.0	1.79	PFHxA			
PFHxA_2	313.0 / 119.0	1.77	PFHxA	0.223	0.070	
PFHpA_1	363.0 / 319.0	2.11	PFHpA			
PFHpA_2	363.0 / 169.0	2.07	PFHpA	0.035	0.023	
PFHxS_1	399.0 / 80.0	2.13	PFHxS			
PFHxS_2	399.0 / 99.0	2.14	PFHxS	0.717	0.302	
PFOA_1	413.0 / 369.0	2.49	PFOA			
PFOA_2	413.0 / 169.0	2.44	PFOA	0.151	0.071	
PFNA_1	463.0 / 419.0	2.88	PFNA			
PFNA_2	463.0 / 219.0	2.88	PFNA	0.361	0.282	ü
PFOS_1	499.0 / 80.0	2.78	PFOS			
PFOS_2	499.0 / 99.0	2.85	PFOS	0.715	0.200	
PFDA_1	513.0 / 469.0	3.23	PFDA			
PFDA_2	513.0 / 219.0	3.23	PFDA	0.045	0.041	ü
PFUnA_1	563.0 / 519.0	3.55	PFUnA			
PFUnA_2	563.0 / 269.0	3.54	PFUnA	0.063	0.057	ü
PFDoA_1	613.0 / 569.0	3.83	PFDoA			
PFDoA_2	613.0 / 319.0	3.83	PFDoA	0.194	0.158	ü
PFTrDA_1	663.0 / 619.0	4.08	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.08	PFTrDA	0.070	0.070	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.053	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.590	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.066	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:12:25 PM

Sample Name	J6241-FS-D(7)	**Injection Vial**	40
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:22:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.49	PFBS			
PFBS_2	298.9 / 99.0	1.48	PFBS	0.324	0.344	ü
PFHxA_1	313.0 / 269.0	1.76	PFHxA			
PFHxA_2	313.0 / 119.0	1.77	PFHxA	0.070	0.070	ü
PFHpA_1	363.0 / 319.0	2.12	PFHpA			
PFHpA_2	363.0 / 169.0	2.09	PFHpA	0.027	0.023	ü
PFHxS_1	399.0 / 80.0	2.14	PFHxS			
PFHxS_2	399.0 / 99.0	2.14	PFHxS	0.372	0.302	ü
PFOA_1	413.0 / 369.0	2.50	PFOA			
PFOA_2	413.0 / 169.0	2.46	PFOA	0.105	0.071	ü
PFNA_1	463.0 / 419.0	2.88	PFNA			
PFNA_2	463.0 / 219.0	2.88	PFNA	0.283	0.282	ü
PFOS_1	499.0 / 80.0	2.82	PFOS			
PFOS_2	499.0 / 99.0	2.87	PFOS	0.231	0.200	ü
PFDA_1	513.0 / 469.0	3.23	PFDA			
PFDA_2	513.0 / 219.0	3.23	PFDA	0.047	0.041	ü
PFUnA_1	563.0 / 519.0	3.54	PFUnA			
PFUnA_2	563.0 / 269.0	3.54	PFUnA	0.047	0.057	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.070	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.053	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.590	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.066	ü

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Summary Ion Ratio Report

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Sample Name	J6242-FS-D(6)	**Injection Vial**	41
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:44:26	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.49	PFBS			
PFBS_2	298.9 / 99.0	1.49	PFBS	0.542	0.344	
PFHxA_1	313.0 / 269.0	1.79	PFHxA			
PFHxA_2	313.0 / 119.0	1.77	PFHxA	0.227	0.070	
PFHpA_1	363.0 / 319.0	2.11	PFHpA			
PFHpA_2	363.0 / 169.0	2.06	PFHpA	0.035	0.023	
PFHxS_1	399.0 / 80.0	2.12	PFHxS			
PFHxS_2	399.0 / 99.0	2.14	PFHxS	0.750	0.302	
PFOA_1	413.0 / 369.0	2.48	PFOA			
PFOA_2	413.0 / 169.0	2.43	PFOA	0.160	0.071	
PFNA_1	463.0 / 419.0	2.88	PFNA			
PFNA_2	463.0 / 219.0	2.87	PFNA	0.374	0.282	ü
PFOS_1	499.0 / 80.0	2.76	PFOS			
PFOS_2	499.0 / 99.0	2.84	PFOS	0.804	0.200	
PFDA_1	513.0 / 469.0	3.22	PFDA			
PFDA_2	513.0 / 219.0	3.22	PFDA	0.046	0.041	ü
PFUnA_1	563.0 / 519.0	3.54	PFUnA			
PFUnA_2	563.0 / 269.0	3.54	PFUnA	0.067	0.057	ü
PFDoA_1	613.0 / 569.0	3.83	PFDoA			
PFDoA_2	613.0 / 319.0	3.83	PFDoA	0.157	0.158	ü
PFTrDA_1	663.0 / 619.0	4.08	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.08	PFTrDA	0.069	0.070	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.053	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.590	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.066	ü

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Summary Ion Ratio Report

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Sample Name	J6242-FS-D(7)	**Injection Vial**	42
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:55:13	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.48	PFBS			
PFBS_2	298.9 / 99.0	1.48	PFBS	0.325	0.344	ü
PFHxA_1	313.0 / 269.0	1.76	PFHxA			
PFHxA_2	313.0 / 119.0	1.76	PFHxA	0.066	0.070	ü
PFHpA_1	363.0 / 319.0	2.12	PFHpA			
PFHpA_2	363.0 / 169.0	2.09	PFHpA	0.026	0.023	ü
PFHxS_1	399.0 / 80.0	2.14	PFHxS			
PFHxS_2	399.0 / 99.0	2.14	PFHxS	0.354	0.302	ü
PFOA_1	413.0 / 369.0	2.49	PFOA			
PFOA_2	413.0 / 169.0	2.46	PFOA	0.102	0.071	ü
PFNA_1	463.0 / 419.0	2.87	PFNA			
PFNA_2	463.0 / 219.0	2.87	PFNA	0.288	0.282	ü
PFOS_1	499.0 / 80.0	2.82	PFOS			
PFOS_2	499.0 / 99.0	2.87	PFOS	0.219	0.200	ü
PFDA_1	513.0 / 469.0	3.22	PFDA			
PFDA_2	513.0 / 219.0	3.22	PFDA	0.044	0.041	ü
PFUnA_1	563.0 / 519.0	3.54	PFUnA			
PFUnA_2	563.0 / 269.0	3.54	PFUnA	0.046	0.057	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.070	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.053	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.590	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.066	ü

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Summary Ion Ratio Report

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Sample Name	JV05 IB	**Injection Vial**	11
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T22:08:39	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	0.358	0.322	ü
PFHxA_1	313.0 / 269.0	1.82	PFHxA			
PFHxA_2	313.0 / 119.0	1.84	PFHxA	0.077	0.070	ü
PFHxS_1	399.0 / 80.0	2.22	PFHxS			
PFHxS_2	399.0 / 99.0	2.22	PFHxS	0.304	0.289	ü
PFOA_1	413.0 / 369.0	2.57	PFOA			
PFOA_2	413.0 / 169.0	2.59	PFOA	0.074	0.076	ü
PFNA_1	463.0 / 419.0	2.95	PFNA			
PFNA_2	463.0 / 219.0	2.94	PFNA	0.255	0.273	ü
PFOS_1	499.0 / 80.0	N/A	PFOS			
PFOS_2	499.0 / 99.0	N/A	PFOS	N/A	0.211	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 1:05:22 PM

Sample Name	J6241-FS-D(9)	**Injection Vial**	25
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T01:21:00	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	0.325	0.322	ü
PFHxA_1	313.0 / 269.0	1.82	PFHxA			
PFHxA_2	313.0 / 119.0	1.83	PFHxA	0.055	0.070	ü
PFHxS_1	399.0 / 80.0	2.21	PFHxS			
PFHxS_2	399.0 / 99.0	2.21	PFHxS	0.309	0.289	ü
PFOA_1	413.0 / 369.0	2.56	PFOA			
PFOA_2	413.0 / 169.0	2.53	PFOA	0.109	0.076	ü
PFNA_1	463.0 / 419.0	2.94	PFNA			
PFNA_2	463.0 / 219.0	2.94	PFNA	0.278	0.273	ü
PFOS_1	499.0 / 80.0	2.92	PFOS			
PFOS_2	499.0 / 99.0	2.93	PFOS	0.178	0.211	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 1:05:25 PM

Sample Name	J6242-FS-D(9)	**Injection Vial**	26
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T01:31:41	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	0.316	0.322	ü
PFHxA_1	313.0 / 269.0	1.82	PFHxA			
PFHxA_2	313.0 / 119.0	1.83	PFHxA	0.056	0.070	ü
PFHxS_1	399.0 / 80.0	2.21	PFHxS			
PFHxS_2	399.0 / 99.0	2.21	PFHxS	0.310	0.289	ü
PFOA_1	413.0 / 369.0	2.56	PFOA			
PFOA_2	413.0 / 169.0	2.53	PFOA	0.109	0.076	ü
PFNA_1	463.0 / 419.0	2.94	PFNA			
PFNA_2	463.0 / 219.0	2.94	PFNA	0.286	0.273	ü
PFOS_1	499.0 / 80.0	2.92	PFOS			
PFOS_2	499.0 / 99.0	2.93	PFOS	0.166	0.211	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
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Sample Name	JV05 IB	**Injection Vial**	2
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T13:44:26	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFOS_1	499.0 / 80.0	N/A	PFOS			
PFOS_2	499.0 / 99.0	N/A	PFOS	N/A	0.211	ü

Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:28:08 PM

Sample Name	J6241-FS-D(11)	**Injection Vial**	3
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T13:55:08	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFOS_1	499.0 / 80.0	2.96	PFOS			
PFOS_2	499.0 / 99.0	2.98	PFOS	0.209	0.211	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:28:09 PM

Sample Name	J6242-FS-D(11)	**Injection Vial**	4
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T14:05:50	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFOS_1	499.0 / 80.0	2.96	PFOS			
PFOS_2	499.0 / 99.0	2.97	PFOS	0.235	0.211	ü

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 1:09:34 PM

Sample Name	JV05 IB	**Injection Vial**	11
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T19:20:37	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFTeDA_1	713.0 / 669.0	4.35	13C2-PFTeDA	715.0 / 670.0	39491.77	100.00
PFTeDA_2	713.0 / 169.0	4.34	13C2-PFTeDA	715.0 / 670.0	39491.77	100.00
NMeFOSAA_1	570.0 / 419.0	3.43	d3-MeFOSAA	573.0 / 419.0	9261.18	100.00
NMeFOSAA_2	570.0 / 512.0	3.42	d3-MeFOSAA	573.0 / 419.0	9261.18	100.00
NEtFOSAA_1	584.0 / 419.0	3.59	d5-EtFOSAA	589.0 / 419.0	8261.57	100.00
NEtFOSAA_2	584.0 / 483.0	3.58	d5-EtFOSAA	589.0 / 419.0	8261.57	100.00

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 1:09:38 PM

Sample Name	J6241-FS(3)	**Injection Vial**	16
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T20:25:25	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFTeDA_1	713.0 / 669.0	4.34	13C2-PFTeDA	715.0 / 670.0	14302.62	100.00
PFTeDA_2	713.0 / 169.0	4.34	13C2-PFTeDA	715.0 / 670.0	14302.62	100.00
NMeFOSAA_1	570.0 / 419.0	3.27	d3-MeFOSAA	573.0 / 419.0	20545.96	100.00
NMeFOSAA_2	570.0 / 512.0	3.42	d3-MeFOSAA	573.0 / 419.0	20545.96	100.00
NEtFOSAA_1	584.0 / 419.0	3.54	d5-EtFOSAA	589.0 / 419.0	1344.13	100.00
NEtFOSAA_2	584.0 / 483.0	3.53	d5-EtFOSAA	589.0 / 419.0	1344.13	100.00

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 1:09:40 PM

Sample Name	J6242-FS(3)	**Injection Vial**	17
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T20:36:12	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFTeDA_1	713.0 / 669.0	4.34	13C2-PFTeDA	715.0 / 670.0	14391.62	100.00
PFTeDA_2	713.0 / 169.0	4.33	13C2-PFTeDA	715.0 / 670.0	14391.62	100.00
NMeFOSAA_1	570.0 / 419.0	3.27	d3-MeFOSAA	573.0 / 419.0	20513.65	100.00
NMeFOSAA_2	570.0 / 512.0	3.42	d3-MeFOSAA	573.0 / 419.0	20513.65	100.00
NEtFOSAA_1	584.0 / 419.0	3.54	d5-EtFOSAA	589.0 / 419.0	1479.29	100.00
NEtFOSAA_2	584.0 / 483.0	3.49	d5-EtFOSAA	589.0 / 419.0	1479.29	100.00

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 10:58:01 AM

Sample Name	JV05 IB	**Injection Vial**	11
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:11:14	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_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	3.85	13C2-PFDA	515.0 / 470.0	47439.86	100.00
d3-MeFOSAA	573.0 / 419.0	3.40	13C4-PFOS	503.0 / 99.0	11135.33	95.50
d5-EtFOSAA	589.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	11135.33	95.50
13C5-PFHxA	318.0 / 273.0	1.77	13C2-PFOA	415.0 / 370.0	47155.38	100.00
13C4-PFHpA	367.0 / 322.0	2.13	13C2-PFOA	415.0 / 370.0	47155.38	100.00
13C8-PFOA	421.0 / 376.0	2.51	13C2-PFOA	415.0 / 370.0	47155.38	100.00
13C9-PFNA	472.0 / 427.0	2.89	13C2-PFOA	415.0 / 370.0	47155.38	100.00
13C6-PFDA	519.0 / 474.0	3.24	13C2-PFDA	515.0 / 470.0	47439.86	100.00
13C7-PFUnA	570.0 / 525.0	3.56	13C2-PFDA	515.0 / 470.0	47439.86	100.00
13C2-PFTeDA	715.0 / 670.0	4.32	13C2-PFDA	515.0 / 470.0	47439.86	100.00
13C3-PFBS	302.0 / 99.0	1.48	13C4-PFOS	503.0 / 99.0	11135.33	95.50
13C3-PFHxS	402.0 / 99.0	2.15	13C4-PFOS	503.0 / 99.0	11135.33	95.50
13C8-PFOS	507.0 / 99.0	2.89	13C4-PFOS	503.0 / 99.0	11135.33	95.50

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 10:58:04 AM

Sample Name	CQ859PB-FS(3)	**Injection Vial**	37
Sample ID	Procedural Balnk	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:28:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_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	3.82	13C2-PFDA	515.0 / 470.0	40017.16	100.00
d3-MeFOSAA	573.0 / 419.0	3.38	13C4-PFOS	503.0 / 99.0	8880.79	95.50
d5-EtFOSAA	589.0 / 419.0	3.54	13C4-PFOS	503.0 / 99.0	8880.79	95.50
13C5-PFHxA	318.0 / 273.0	1.76	13C2-PFOA	415.0 / 370.0	35384.21	100.00
13C4-PFHpA	367.0 / 322.0	2.12	13C2-PFOA	415.0 / 370.0	35384.21	100.00
13C8-PFOA	421.0 / 376.0	2.50	13C2-PFOA	415.0 / 370.0	35384.21	100.00
13C9-PFNA	472.0 / 427.0	2.87	13C2-PFOA	415.0 / 370.0	35384.21	100.00
13C6-PFDA	519.0 / 474.0	3.22	13C2-PFDA	515.0 / 470.0	40017.16	100.00
13C7-PFUnA	570.0 / 525.0	3.53	13C2-PFDA	515.0 / 470.0	40017.16	100.00
13C2-PFTeDA	715.0 / 670.0	4.29	13C2-PFDA	515.0 / 470.0	40017.16	100.00
13C3-PFBS	302.0 / 99.0	1.47	13C4-PFOS	503.0 / 99.0	8880.79	95.50
13C3-PFHxS	402.0 / 99.0	2.14	13C4-PFOS	503.0 / 99.0	8880.79	95.50
13C8-PFOS	507.0 / 99.0	2.87	13C4-PFOS	503.0 / 99.0	8880.79	95.50

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 10:58:06 AM

Sample Name	CQ860LCS-FS(3)	**Injection Vial**	38
Sample ID	Labortory Control	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:39:38	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_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	3.82	13C2-PFDA	515.0 / 470.0	37763.47	100.00
d3-MeFOSAA	573.0 / 419.0	3.38	13C4-PFOS	503.0 / 99.0	9945.58	95.50
d5-EtFOSAA	589.0 / 419.0	3.54	13C4-PFOS	503.0 / 99.0	9945.58	95.50
13C5-PFHxA	318.0 / 273.0	1.76	13C2-PFOA	415.0 / 370.0	37143.49	100.00
13C4-PFHpA	367.0 / 322.0	2.12	13C2-PFOA	415.0 / 370.0	37143.49	100.00
13C8-PFOA	421.0 / 376.0	2.50	13C2-PFOA	415.0 / 370.0	37143.49	100.00
13C9-PFNA	472.0 / 427.0	2.87	13C2-PFOA	415.0 / 370.0	37143.49	100.00
13C6-PFDA	519.0 / 474.0	3.22	13C2-PFDA	515.0 / 470.0	37763.47	100.00
13C7-PFUnA	570.0 / 525.0	3.53	13C2-PFDA	515.0 / 470.0	37763.47	100.00
13C2-PFTeDA	715.0 / 670.0	4.29	13C2-PFDA	515.0 / 470.0	37763.47	100.00
13C3-PFBS	302.0 / 99.0	1.47	13C4-PFOS	503.0 / 99.0	9945.58	95.50
13C3-PFHxS	402.0 / 99.0	2.14	13C4-PFOS	503.0 / 99.0	9945.58	95.50
13C8-PFOS	507.0 / 99.0	2.87	13C4-PFOS	503.0 / 99.0	9945.58	95.50

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Summary Internal Standard Report

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Sample Name	J6241-FS-D(6)	**Injection Vial**	39
Sample ID	FFTA_FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:12:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_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	3.82	13C2-PFDA	515.0 / 470.0	38865.88	100.00
d3-MeFOSAA	573.0 / 419.0	3.37	13C4-PFOS	503.0 / 99.0	1164.59	95.50
d5-EtFOSAA	589.0 / 419.0	3.54	13C4-PFOS	503.0 / 99.0	1164.59	95.50
13C5-PFHxA	318.0 / 273.0	1.76	13C2-PFOA	415.0 / 370.0	120962.56	100.00
13C4-PFHpA	367.0 / 322.0	2.11	13C2-PFOA	415.0 / 370.0	120962.56	100.00
13C8-PFOA	421.0 / 376.0	2.50	13C2-PFOA	415.0 / 370.0	120962.56	100.00
13C9-PFNA	472.0 / 427.0	2.87	13C2-PFOA	415.0 / 370.0	120962.56	100.00
13C6-PFDA	519.0 / 474.0	3.22	13C2-PFDA	515.0 / 470.0	38865.88	100.00
13C7-PFUnA	570.0 / 525.0	3.53	13C2-PFDA	515.0 / 470.0	38865.88	100.00
13C2-PFTeDA	715.0 / 670.0	4.29	13C2-PFDA	515.0 / 470.0	38865.88	100.00
13C3-PFBS	302.0 / 99.0	1.48	13C4-PFOS	503.0 / 99.0	1164.59	95.50
13C3-PFHxS	402.0 / 99.0	2.14	13C4-PFOS	503.0 / 99.0	1164.59	95.50
13C8-PFOS	507.0 / 99.0	2.85	13C4-PFOS	503.0 / 99.0	1164.59	95.50

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Summary Internal Standard Report

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Sample Name	J6241-FS-D(7)	**Injection Vial**	40
Sample ID	FFTA_FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:22:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_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	3.82	13C2-PFDA	515.0 / 470.0	39799.41	100.00
d3-MeFOSAA	573.0 / 419.0	3.38	13C4-PFOS	503.0 / 99.0	6398.14	95.50
d5-EtFOSAA	589.0 / 419.0	3.54	13C4-PFOS	503.0 / 99.0	6398.14	95.50
13C5-PFHxA	318.0 / 273.0	1.76	13C2-PFOA	415.0 / 370.0	37459.65	100.00
13C4-PFHpA	367.0 / 322.0	2.12	13C2-PFOA	415.0 / 370.0	37459.65	100.00
13C8-PFOA	421.0 / 376.0	2.49	13C2-PFOA	415.0 / 370.0	37459.65	100.00
13C9-PFNA	472.0 / 427.0	2.87	13C2-PFOA	415.0 / 370.0	37459.65	100.00
13C6-PFDA	519.0 / 474.0	3.22	13C2-PFDA	515.0 / 470.0	39799.41	100.00
13C7-PFUnA	570.0 / 525.0	3.53	13C2-PFDA	515.0 / 470.0	39799.41	100.00
13C2-PFTeDA	715.0 / 670.0	4.29	13C2-PFDA	515.0 / 470.0	39799.41	100.00
13C3-PFBS	302.0 / 99.0	1.47	13C4-PFOS	503.0 / 99.0	6398.14	95.50
13C3-PFHxS	402.0 / 99.0	2.13	13C4-PFOS	503.0 / 99.0	6398.14	95.50
13C8-PFOS	507.0 / 99.0	2.87	13C4-PFOS	503.0 / 99.0	6398.14	95.50

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Summary Internal Standard Report

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Sample Name	J6242-FS-D(6)	**Injection Vial**	41
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:44:26	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_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	3.82	13C2-PFDA	515.0 / 470.0	42368.44	100.00
d3-MeFOSAA	573.0 / 419.0	3.37	13C4-PFOS	503.0 / 99.0	1737.90	95.50
d5-EtFOSAA	589.0 / 419.0	3.53	13C4-PFOS	503.0 / 99.0	1737.90	95.50
13C5-PFHxA	318.0 / 273.0	1.76	13C2-PFOA	415.0 / 370.0	121240.69	100.00
13C4-PFHpA	367.0 / 322.0	2.11	13C2-PFOA	415.0 / 370.0	121240.69	100.00
13C8-PFOA	421.0 / 376.0	2.49	13C2-PFOA	415.0 / 370.0	121240.69	100.00
13C9-PFNA	472.0 / 427.0	2.86	13C2-PFOA	415.0 / 370.0	121240.69	100.00
13C6-PFDA	519.0 / 474.0	3.21	13C2-PFDA	515.0 / 470.0	42368.44	100.00
13C7-PFUnA	570.0 / 525.0	3.53	13C2-PFDA	515.0 / 470.0	42368.44	100.00
13C2-PFTeDA	715.0 / 670.0	4.29	13C2-PFDA	515.0 / 470.0	42368.44	100.00
13C3-PFBS	302.0 / 99.0	1.47	13C4-PFOS	503.0 / 99.0	1737.90	95.50
13C3-PFHxS	402.0 / 99.0	2.13	13C4-PFOS	503.0 / 99.0	1737.90	95.50
13C8-PFOS	507.0 / 99.0	2.84	13C4-PFOS	503.0 / 99.0	1737.90	95.50

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Summary Internal Standard Report

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Sample Name	J6242-FS-D(7)	**Injection Vial**	42
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:55:13	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_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	3.81	13C2-PFDA	515.0 / 470.0	40924.89	100.00
d3-MeFOSAA	573.0 / 419.0	3.37	13C4-PFOS	503.0 / 99.0	6897.32	95.50
d5-EtFOSAA	589.0 / 419.0	3.53	13C4-PFOS	503.0 / 99.0	6897.32	95.50
13C5-PFHxA	318.0 / 273.0	1.76	13C2-PFOA	415.0 / 370.0	40293.83	100.00
13C4-PFHpA	367.0 / 322.0	2.11	13C2-PFOA	415.0 / 370.0	40293.83	100.00
13C8-PFOA	421.0 / 376.0	2.49	13C2-PFOA	415.0 / 370.0	40293.83	100.00
13C9-PFNA	472.0 / 427.0	2.86	13C2-PFOA	415.0 / 370.0	40293.83	100.00
13C6-PFDA	519.0 / 474.0	3.21	13C2-PFDA	515.0 / 470.0	40924.89	100.00
13C7-PFUnA	570.0 / 525.0	3.52	13C2-PFDA	515.0 / 470.0	40924.89	100.00
13C2-PFTeDA	715.0 / 670.0	4.28	13C2-PFDA	515.0 / 470.0	40924.89	100.00
13C3-PFBS	302.0 / 99.0	1.47	13C4-PFOS	503.0 / 99.0	6897.32	95.50
13C3-PFHxS	402.0 / 99.0	2.13	13C4-PFOS	503.0 / 99.0	6897.32	95.50
13C8-PFOS	507.0 / 99.0	2.85	13C4-PFOS	503.0 / 99.0	6897.32	95.50

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Summary Internal Standard Report

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Sample Name	JV05 IB	**Injection Vial**	11
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:11:14	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
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	9340.85	92.90
PFBS_2	298.9 / 99.0	1.50	13C3-PFBS	302.0 / 99.0	9340.85	92.90
PFHxA_1	313.0 / 269.0	1.80	13C5-PFHxA	318.0 / 273.0	31154.28	100.00
PFHxA_2	313.0 / 119.0	1.77	13C5-PFHxA	318.0 / 273.0	31154.28	100.00
PFHpA_1	363.0 / 319.0	2.15	13C4-PFHpA	367.0 / 322.0	34204.89	100.00
PFHpA_2	363.0 / 169.0	2.16	13C4-PFHpA	367.0 / 322.0	34204.89	100.00
PFHxS_1	399.0 / 80.0	2.16	13C3-PFHxS	402.0 / 99.0	9081.66	94.60
PFHxS_2	399.0 / 99.0	2.16	13C3-PFHxS	402.0 / 99.0	9081.66	94.60
PFOA_1	413.0 / 369.0	2.53	13C8-PFOA	421.0 / 376.0	46805.35	100.00
PFOA_2	413.0 / 169.0	2.53	13C8-PFOA	421.0 / 376.0	46805.35	100.00
PFNA_1	463.0 / 419.0	2.91	13C9-PFNA	472.0 / 427.0	47022.93	100.00
PFNA_2	463.0 / 219.0	2.90	13C9-PFNA	472.0 / 427.0	47022.93	100.00
PFOS_1	499.0 / 80.0	2.90	13C8-PFOS	507.0 / 99.0	10744.66	95.70
PFOS_2	499.0 / 99.0	2.88	13C8-PFOS	507.0 / 99.0	10744.66	95.70
PFDA_1	513.0 / 469.0	3.25	13C6-PFDA	519.0 / 474.0	47254.91	100.00
PFDA_2	513.0 / 219.0	3.25	13C6-PFDA	519.0 / 474.0	47254.91	100.00
PFUnA_1	563.0 / 519.0	3.57	13C7-PFUnA	570.0 / 525.0	46755.71	100.00
PFUnA_2	563.0 / 269.0	3.54	13C7-PFUnA	570.0 / 525.0	46755.71	100.00
PFDoA_1	613.0 / 569.0	3.86	13C2-PFDoA	615.0 / 570.0	51168.75	100.00
PFDoA_2	613.0 / 319.0	3.86	13C2-PFDoA	615.0 / 570.0	51168.75	100.00
PFTrDA_1	663.0 / 619.0	4.11	13C2-PFTeDA	715.0 / 670.0	43611.52	100.00
PFTrDA_2	663.0 / 169.0	4.10	13C2-PFTeDA	715.0 / 670.0	43611.52	100.00
PFTeDA_1	713.0 / 669.0	4.33	13C2-PFTeDA	715.0 / 670.0	43611.52	100.00
PFTeDA_2	713.0 / 169.0	4.33	13C2-PFTeDA	715.0 / 670.0	43611.52	100.00
NMeFOSAA_1	570.0 / 419.0	3.41	d3-MeFOSAA	573.0 / 419.0	8294.61	100.00
NMeFOSAA_2	570.0 / 512.0	3.40	d3-MeFOSAA	573.0 / 419.0	8294.61	100.00
NEtFOSAA_1	584.0 / 419.0	3.58	d5-EtFOSAA	589.0 / 419.0	8813.77	100.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	8813.77	100.00

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Summary Internal Standard Report

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Sample Name	CQ859PB-FS(3)	**Injection Vial**	37
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:28:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.49	13C3-PFBS	302.0 / 99.0	12098.96	92.90
PFBS_2	298.9 / 99.0	1.48	13C3-PFBS	302.0 / 99.0	12098.96	92.90
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	35756.46	100.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	35756.46	100.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	41822.01	100.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	41822.01	100.00
PFHxS_1	399.0 / 80.0	2.14	13C3-PFHxS	402.0 / 99.0	9986.39	94.60
PFHxS_2	399.0 / 99.0	1.76	13C3-PFHxS	402.0 / 99.0	9986.39	94.60
PFOA_1	413.0 / 369.0	2.51	13C8-PFOA	421.0 / 376.0	52537.75	100.00
PFOA_2	413.0 / 169.0	2.52	13C8-PFOA	421.0 / 376.0	52537.75	100.00
PFNA_1	463.0 / 419.0	2.87	13C9-PFNA	472.0 / 427.0	55869.43	100.00
PFNA_2	463.0 / 219.0	2.88	13C9-PFNA	472.0 / 427.0	55869.43	100.00
PFOS_1	499.0 / 80.0	2.88	13C8-PFOS	507.0 / 99.0	11091.93	95.70
PFOS_2	499.0 / 99.0	2.88	13C8-PFOS	507.0 / 99.0	11091.93	95.70
PFDA_1	513.0 / 469.0	3.22	13C6-PFDA	519.0 / 474.0	54774.85	100.00
PFDA_2	513.0 / 219.0	3.26	13C6-PFDA	519.0 / 474.0	54774.85	100.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	60333.74	100.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	60333.74	100.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	44762.48	100.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	44762.48	100.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	34734.67	100.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	34734.67	100.00
PFTeDA_1	713.0 / 669.0	4.30	13C2-PFTeDA	715.0 / 670.0	34734.67	100.00
PFTeDA_2	713.0 / 169.0	4.30	13C2-PFTeDA	715.0 / 670.0	34734.67	100.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	10123.29	100.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	10123.29	100.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	11592.17	100.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	11592.17	100.00

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Summary Internal Standard Report

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Sample Name	CQ860LCS-FS(3)	**Injection Vial**	38
Sample ID	Labortory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:39:38	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.49	13C3-PFBS	302.0 / 99.0	14066.07	92.90
PFBS_2	298.9 / 99.0	1.49	13C3-PFBS	302.0 / 99.0	14066.07	92.90
PFHxA_1	313.0 / 269.0	1.77	13C5-PFHxA	318.0 / 273.0	40598.37	100.00
PFHxA_2	313.0 / 119.0	1.77	13C5-PFHxA	318.0 / 273.0	40598.37	100.00
PFHpA_1	363.0 / 319.0	2.13	13C4-PFHpA	367.0 / 322.0	45397.43	100.00
PFHpA_2	363.0 / 169.0	2.13	13C4-PFHpA	367.0 / 322.0	45397.43	100.00
PFHxS_1	399.0 / 80.0	2.15	13C3-PFHxS	402.0 / 99.0	13011.87	94.60
PFHxS_2	399.0 / 99.0	2.15	13C3-PFHxS	402.0 / 99.0	13011.87	94.60
PFOA_1	413.0 / 369.0	2.51	13C8-PFOA	421.0 / 376.0	59963.38	100.00
PFOA_2	413.0 / 169.0	2.50	13C8-PFOA	421.0 / 376.0	59963.38	100.00
PFNA_1	463.0 / 419.0	2.88	13C9-PFNA	472.0 / 427.0	61945.58	100.00
PFNA_2	463.0 / 219.0	2.88	13C9-PFNA	472.0 / 427.0	61945.58	100.00
PFOS_1	499.0 / 80.0	2.87	13C8-PFOS	507.0 / 99.0	13122.61	95.70
PFOS_2	499.0 / 99.0	2.88	13C8-PFOS	507.0 / 99.0	13122.61	95.70
PFDA_1	513.0 / 469.0	3.23	13C6-PFDA	519.0 / 474.0	69005.40	100.00
PFDA_2	513.0 / 219.0	3.23	13C6-PFDA	519.0 / 474.0	69005.40	100.00
PFUnA_1	563.0 / 519.0	3.55	13C7-PFUnA	570.0 / 525.0	69655.68	100.00
PFUnA_2	563.0 / 269.0	3.55	13C7-PFUnA	570.0 / 525.0	69655.68	100.00
PFDoA_1	613.0 / 569.0	3.83	13C2-PFDoA	615.0 / 570.0	60954.37	100.00
PFDoA_2	613.0 / 319.0	3.83	13C2-PFDoA	615.0 / 570.0	60954.37	100.00
PFTrDA_1	663.0 / 619.0	4.08	13C2-PFTeDA	715.0 / 670.0	52880.31	100.00
PFTrDA_2	663.0 / 169.0	4.08	13C2-PFTeDA	715.0 / 670.0	52880.31	100.00
PFTeDA_1	713.0 / 669.0	4.30	13C2-PFTeDA	715.0 / 670.0	52880.31	100.00
PFTeDA_2	713.0 / 169.0	4.30	13C2-PFTeDA	715.0 / 670.0	52880.31	100.00
NMeFOSAA_1	570.0 / 419.0	3.39	d3-MeFOSAA	573.0 / 419.0	11719.89	100.00
NMeFOSAA_2	570.0 / 512.0	3.39	d3-MeFOSAA	573.0 / 419.0	11719.89	100.00
NEtFOSAA_1	584.0 / 419.0	3.55	d5-EtFOSAA	589.0 / 419.0	13436.95	100.00
NEtFOSAA_2	584.0 / 483.0	3.54	d5-EtFOSAA	589.0 / 419.0	13436.95	100.00

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Summary Internal Standard Report

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Sample Name	J6241-FS-D(6)	**Injection Vial**	39
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:12:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
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	9980.65	92.90
PFBS_2	298.9 / 99.0	1.49	13C3-PFBS	302.0 / 99.0	9980.65	92.90
PFHxA_1	313.0 / 269.0	1.79	13C5-PFHxA	318.0 / 273.0	12908.60	100.00
PFHxA_2	313.0 / 119.0	1.77	13C5-PFHxA	318.0 / 273.0	12908.60	100.00
PFHpA_1	363.0 / 319.0	2.11	13C4-PFHpA	367.0 / 322.0	19899.86	100.00
PFHpA_2	363.0 / 169.0	2.07	13C4-PFHpA	367.0 / 322.0	19899.86	100.00
PFHxS_1	399.0 / 80.0	2.13	13C3-PFHxS	402.0 / 99.0	9911.43	94.60
PFHxS_2	399.0 / 99.0	2.14	13C3-PFHxS	402.0 / 99.0	9911.43	94.60
PFOA_1	413.0 / 369.0	2.49	13C8-PFOA	421.0 / 376.0	18195.64	100.00
PFOA_2	413.0 / 169.0	2.44	13C8-PFOA	421.0 / 376.0	18195.64	100.00
PFNA_1	463.0 / 419.0	2.88	13C9-PFNA	472.0 / 427.0	11832.10	100.00
PFNA_2	463.0 / 219.0	2.88	13C9-PFNA	472.0 / 427.0	11832.10	100.00
PFOS_1	499.0 / 80.0	2.78	13C8-PFOS	507.0 / 99.0	2830.65	95.70
PFOS_2	499.0 / 99.0	2.85	13C8-PFOS	507.0 / 99.0	2830.65	95.70
PFDA_1	513.0 / 469.0	3.23	13C6-PFDA	519.0 / 474.0	38621.46	100.00
PFDA_2	513.0 / 219.0	3.23	13C6-PFDA	519.0 / 474.0	38621.46	100.00
PFUnA_1	563.0 / 519.0	3.55	13C7-PFUnA	570.0 / 525.0	41975.30	100.00
PFUnA_2	563.0 / 269.0	3.54	13C7-PFUnA	570.0 / 525.0	41975.30	100.00
PFDoA_1	613.0 / 569.0	3.83	13C2-PFDoA	615.0 / 570.0	48769.80	100.00
PFDoA_2	613.0 / 319.0	3.83	13C2-PFDoA	615.0 / 570.0	48769.80	100.00
PFTrDA_1	663.0 / 619.0	4.08	13C2-PFTeDA	715.0 / 670.0	41915.01	100.00
PFTrDA_2	663.0 / 169.0	4.08	13C2-PFTeDA	715.0 / 670.0	41915.01	100.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	41915.01	100.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	41915.01	100.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	9190.79	100.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	9190.79	100.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	6516.82	100.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	6516.82	100.00

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Summary Internal Standard Report

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Sample Name	J6241-FS-D(7)	**Injection Vial**	40
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:22:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.49	13C3-PFBS	302.0 / 99.0	17160.57	92.90
PFBS_2	298.9 / 99.0	1.48	13C3-PFBS	302.0 / 99.0	17160.57	92.90
PFHxA_1	313.0 / 269.0	1.76	13C5-PFHxA	318.0 / 273.0	37050.46	100.00
PFHxA_2	313.0 / 119.0	1.77	13C5-PFHxA	318.0 / 273.0	37050.46	100.00
PFHpA_1	363.0 / 319.0	2.12	13C4-PFHpA	367.0 / 322.0	48161.50	100.00
PFHpA_2	363.0 / 169.0	2.09	13C4-PFHpA	367.0 / 322.0	48161.50	100.00
PFHxS_1	399.0 / 80.0	2.14	13C3-PFHxS	402.0 / 99.0	10329.84	94.60
PFHxS_2	399.0 / 99.0	2.14	13C3-PFHxS	402.0 / 99.0	10329.84	94.60
PFOA_1	413.0 / 369.0	2.50	13C8-PFOA	421.0 / 376.0	43171.07	100.00
PFOA_2	413.0 / 169.0	2.46	13C8-PFOA	421.0 / 376.0	43171.07	100.00
PFNA_1	463.0 / 419.0	2.88	13C9-PFNA	472.0 / 427.0	29730.08	100.00
PFNA_2	463.0 / 219.0	2.88	13C9-PFNA	472.0 / 427.0	29730.08	100.00
PFOS_1	499.0 / 80.0	2.82	13C8-PFOS	507.0 / 99.0	6203.05	95.70
PFOS_2	499.0 / 99.0	2.87	13C8-PFOS	507.0 / 99.0	6203.05	95.70
PFDA_1	513.0 / 469.0	3.23	13C6-PFDA	519.0 / 474.0	53728.88	100.00
PFDA_2	513.0 / 219.0	3.23	13C6-PFDA	519.0 / 474.0	53728.88	100.00
PFUnA_1	563.0 / 519.0	3.54	13C7-PFUnA	570.0 / 525.0	61292.39	100.00
PFUnA_2	563.0 / 269.0	3.54	13C7-PFUnA	570.0 / 525.0	61292.39	100.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	57381.29	100.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	57381.29	100.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	52134.39	100.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	52134.39	100.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	52134.39	100.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	52134.39	100.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	11106.16	100.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	11106.16	100.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	11579.69	100.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	11579.69	100.00

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Summary Internal Standard Report

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Sample Name	J6242-FS-D(6)	**Injection Vial**	41
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:44:26	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.49	13C3-PFBS	302.0 / 99.0	7693.13	92.90
PFBS_2	298.9 / 99.0	1.49	13C3-PFBS	302.0 / 99.0	7693.13	92.90
PFHxA_1	313.0 / 269.0	1.79	13C5-PFHxA	318.0 / 273.0	11013.47	100.00
PFHxA_2	313.0 / 119.0	1.77	13C5-PFHxA	318.0 / 273.0	11013.47	100.00
PFHpA_1	363.0 / 319.0	2.11	13C4-PFHpA	367.0 / 322.0	16848.58	100.00
PFHpA_2	363.0 / 169.0	2.06	13C4-PFHpA	367.0 / 322.0	16848.58	100.00
PFHxS_1	399.0 / 80.0	2.12	13C3-PFHxS	402.0 / 99.0	9999.99	94.60
PFHxS_2	399.0 / 99.0	2.14	13C3-PFHxS	402.0 / 99.0	9999.99	94.60
PFOA_1	413.0 / 369.0	2.48	13C8-PFOA	421.0 / 376.0	13631.26	100.00
PFOA_2	413.0 / 169.0	2.43	13C8-PFOA	421.0 / 376.0	13631.26	100.00
PFNA_1	463.0 / 419.0	2.88	13C9-PFNA	472.0 / 427.0	8757.85	100.00
PFNA_2	463.0 / 219.0	2.87	13C9-PFNA	472.0 / 427.0	8757.85	100.00
PFOS_1	499.0 / 80.0	2.76	13C8-PFOS	507.0 / 99.0	1682.67	95.70
PFOS_2	499.0 / 99.0	2.84	13C8-PFOS	507.0 / 99.0	1682.67	95.70
PFDA_1	513.0 / 469.0	3.22	13C6-PFDA	519.0 / 474.0	34195.31	100.00
PFDA_2	513.0 / 219.0	3.22	13C6-PFDA	519.0 / 474.0	34195.31	100.00
PFUnA_1	563.0 / 519.0	3.54	13C7-PFUnA	570.0 / 525.0	35282.79	100.00
PFUnA_2	563.0 / 269.0	3.54	13C7-PFUnA	570.0 / 525.0	35282.79	100.00
PFDoA_1	613.0 / 569.0	3.83	13C2-PFDoA	615.0 / 570.0	42227.98	100.00
PFDoA_2	613.0 / 319.0	3.83	13C2-PFDoA	615.0 / 570.0	42227.98	100.00
PFTrDA_1	663.0 / 619.0	4.08	13C2-PFTeDA	715.0 / 670.0	36235.39	100.00
PFTrDA_2	663.0 / 169.0	4.08	13C2-PFTeDA	715.0 / 670.0	36235.39	100.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	36235.39	100.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	36235.39	100.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	8088.30	100.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	8088.30	100.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	5698.41	100.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	5698.41	100.00

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Summary Internal Standard Report

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Sample Name	J6242-FS-D(7)	**Injection Vial**	42
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:55:13	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.48	13C3-PFBS	302.0 / 99.0	18048.97	92.90
PFBS_2	298.9 / 99.0	1.48	13C3-PFBS	302.0 / 99.0	18048.97	92.90
PFHxA_1	313.0 / 269.0	1.76	13C5-PFHxA	318.0 / 273.0	37153.39	100.00
PFHxA_2	313.0 / 119.0	1.76	13C5-PFHxA	318.0 / 273.0	37153.39	100.00
PFHpA_1	363.0 / 319.0	2.12	13C4-PFHpA	367.0 / 322.0	48618.48	100.00
PFHpA_2	363.0 / 169.0	2.09	13C4-PFHpA	367.0 / 322.0	48618.48	100.00
PFHxS_1	399.0 / 80.0	2.14	13C3-PFHxS	402.0 / 99.0	11093.93	94.60
PFHxS_2	399.0 / 99.0	2.14	13C3-PFHxS	402.0 / 99.0	11093.93	94.60
PFOA_1	413.0 / 369.0	2.49	13C8-PFOA	421.0 / 376.0	39557.60	100.00
PFOA_2	413.0 / 169.0	2.46	13C8-PFOA	421.0 / 376.0	39557.60	100.00
PFNA_1	463.0 / 419.0	2.87	13C9-PFNA	472.0 / 427.0	30474.49	100.00
PFNA_2	463.0 / 219.0	2.87	13C9-PFNA	472.0 / 427.0	30474.49	100.00
PFOS_1	499.0 / 80.0	2.82	13C8-PFOS	507.0 / 99.0	6281.49	95.70
PFOS_2	499.0 / 99.0	2.87	13C8-PFOS	507.0 / 99.0	6281.49	95.70
PFDA_1	513.0 / 469.0	3.22	13C6-PFDA	519.0 / 474.0	54519.09	100.00
PFDA_2	513.0 / 219.0	3.22	13C6-PFDA	519.0 / 474.0	54519.09	100.00
PFUnA_1	563.0 / 519.0	3.54	13C7-PFUnA	570.0 / 525.0	56437.91	100.00
PFUnA_2	563.0 / 269.0	3.54	13C7-PFUnA	570.0 / 525.0	56437.91	100.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	54418.72	100.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	54418.72	100.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	50125.21	100.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	50125.21	100.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	50125.21	100.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	50125.21	100.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	10155.81	100.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	10155.81	100.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	11415.28	100.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	11415.28	100.00

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Summary Internal Standard Report

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Sample Name	JV05 IB	**Injection Vial**	11
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T22:08:39	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	19284.57	92.90
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	19284.57	92.90
PFHxA_1	313.0 / 269.0	1.82	13C5-PFHxA	318.0 / 273.0	61420.62	100.00
PFHxA_2	313.0 / 119.0	1.84	13C5-PFHxA	318.0 / 273.0	61420.62	100.00
PFHxS_1	399.0 / 80.0	2.22	13C3-PFHxS	402.0 / 99.0	14231.33	94.60
PFHxS_2	399.0 / 99.0	2.22	13C3-PFHxS	402.0 / 99.0	14231.33	94.60
PFOA_1	413.0 / 369.0	2.57	13C8-PFOA	421.0 / 376.0	74438.27	100.00
PFOA_2	413.0 / 169.0	2.59	13C8-PFOA	421.0 / 376.0	74438.27	100.00
PFNA_1	463.0 / 419.0	2.95	13C9-PFNA	472.0 / 427.0	77380.56	100.00
PFNA_2	463.0 / 219.0	2.94	13C9-PFNA	472.0 / 427.0	77380.56	100.00
PFOS_1	499.0 / 80.0	N/A	13C8-PFOS	507.0 / 99.0	16285.03	95.70
PFOS_2	499.0 / 99.0	N/A	13C8-PFOS	507.0 / 99.0	16285.03	95.70

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Summary Internal Standard Report

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Sample Name	J6241-FS-D(9)	**Injection Vial**	25
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T01:21:00	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	24775.15	92.90
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	24775.15	92.90
PFHxA_1	313.0 / 269.0	1.82	13C5-PFHxA	318.0 / 273.0	80913.50	100.00
PFHxA_2	313.0 / 119.0	1.83	13C5-PFHxA	318.0 / 273.0	80913.50	100.00
PFHxS_1	399.0 / 80.0	2.21	13C3-PFHxS	402.0 / 99.0	20451.29	94.60
PFHxS_2	399.0 / 99.0	2.21	13C3-PFHxS	402.0 / 99.0	20451.29	94.60
PFOA_1	413.0 / 369.0	2.56	13C8-PFOA	421.0 / 376.0	99597.14	100.00
PFOA_2	413.0 / 169.0	2.53	13C8-PFOA	421.0 / 376.0	99597.14	100.00
PFNA_1	463.0 / 419.0	2.94	13C9-PFNA	472.0 / 427.0	91274.93	100.00
PFNA_2	463.0 / 219.0	2.94	13C9-PFNA	472.0 / 427.0	91274.93	100.00
PFOS_1	499.0 / 80.0	2.92	13C8-PFOS	507.0 / 99.0	19344.71	95.70
PFOS_2	499.0 / 99.0	2.93	13C8-PFOS	507.0 / 99.0	19344.71	95.70

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Summary Internal Standard Report

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Sample Name	J6242-FS-D(9)	**Injection Vial**	26
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T01:31:41	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
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	26714.36	92.90
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	26714.36	92.90
PFHxA_1	313.0 / 269.0	1.82	13C5-PFHxA	318.0 / 273.0	79844.88	100.00
PFHxA_2	313.0 / 119.0	1.83	13C5-PFHxA	318.0 / 273.0	79844.88	100.00
PFHxS_1	399.0 / 80.0	2.21	13C3-PFHxS	402.0 / 99.0	22829.32	94.60
PFHxS_2	399.0 / 99.0	2.21	13C3-PFHxS	402.0 / 99.0	22829.32	94.60
PFOA_1	413.0 / 369.0	2.56	13C8-PFOA	421.0 / 376.0	99417.95	100.00
PFOA_2	413.0 / 169.0	2.53	13C8-PFOA	421.0 / 376.0	99417.95	100.00
PFNA_1	463.0 / 419.0	2.94	13C9-PFNA	472.0 / 427.0	93711.94	100.00
PFNA_2	463.0 / 219.0	2.94	13C9-PFNA	472.0 / 427.0	93711.94	100.00
PFOS_1	499.0 / 80.0	2.92	13C8-PFOS	507.0 / 99.0	21055.71	95.70
PFOS_2	499.0 / 99.0	2.93	13C8-PFOS	507.0 / 99.0	21055.71	95.70

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Summary Internal Standard Report

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Sample Name	JV05 IB	**Injection Vial**	2
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T13:44:26	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFOS_1	499.0 / 80.0	N/A	13C8-PFOS	507.0 / 99.0	14127.10	95.70
PFOS_2	499.0 / 99.0	N/A	13C8-PFOS	507.0 / 99.0	14127.10	95.70

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Summary Internal Standard Report

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Sample Name	J6241-FS-D(11)	**Injection Vial**	3
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T13:55:08	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFOS_1	499.0 / 80.0	2.96	13C8-PFOS	507.0 / 99.0	3776.47	95.70
PFOS_2	499.0 / 99.0	2.98	13C8-PFOS	507.0 / 99.0	3776.47	95.70

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Summary Internal Standard Report

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Sample Name	J6242-FS-D(11)	**Injection Vial**	4
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T14:05:50	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFOS_1	499.0 / 80.0	2.96	13C8-PFOS	507.0 / 99.0	2648.41	95.70
PFOS_2	499.0 / 99.0	2.97	13C8-PFOS	507.0 / 99.0	2648.41	95.70

BATTELLE

Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 11:02:17 AM

Sample Name	J6241-FS-D(9)	**Injection Vial**	25
Sample ID	FFTA_FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T01:21:00	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	15358.69	95.50

BATTELLE

Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 11:02:19 AM

Sample Name	J6242-FS-D(9)	**Injection Vial**	26
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T01:31:41	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	15610.76	95.50

BATTELLE

Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 11:02:14 AM

Sample Name	JV05 IB	**Injection Vial**	11
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T22:08:39	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	17807.40	95.50

Chromatograms

BATTELLE

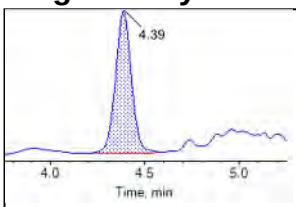
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:18:41 PM

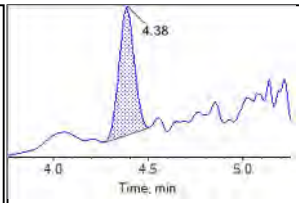
Sample Name	JV20	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T17:43:25	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Chromatograms

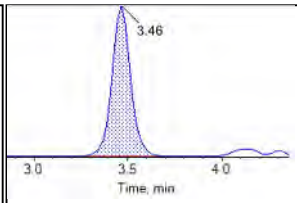
Target Analytes:



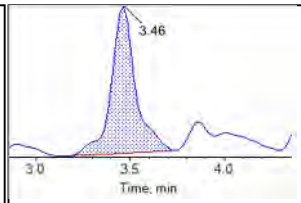
PFTeDA_1



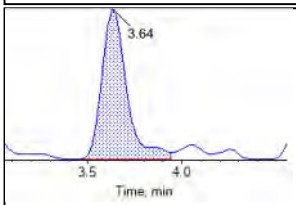
PFTeDA_2



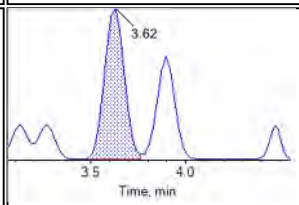
NMeFOSAA_1



NMeFOSAA_2

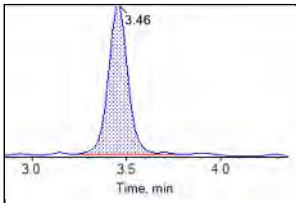


NEtFOSAA_1

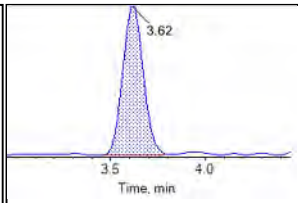


NEtFOSAA_2

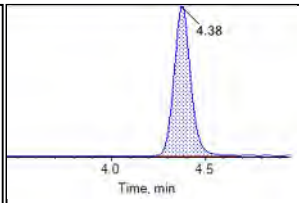
Internal Standards:



d3-MeFOSAA



d5-EtFOSAA



13C2-PFTeDA

BATTELLE

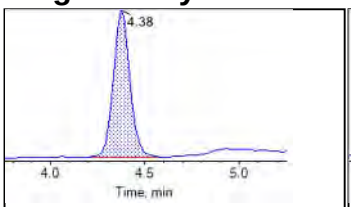
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:18:43 PM

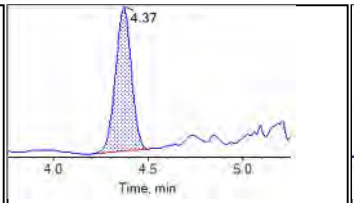
Sample Name	JV21	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T17:54:13	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Chromatograms

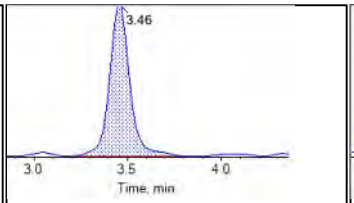
Target Analytes:



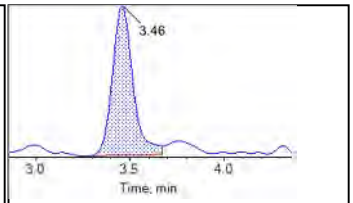
PFTeDA_1



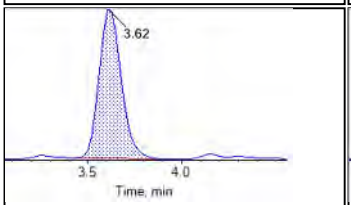
PFTeDA_2



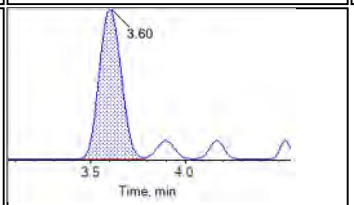
NMeFOSAA_1



NMeFOSAA_2

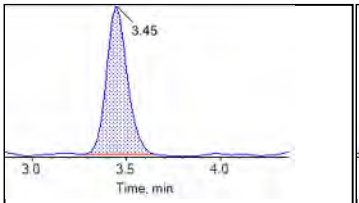


NEtFOSAA_1

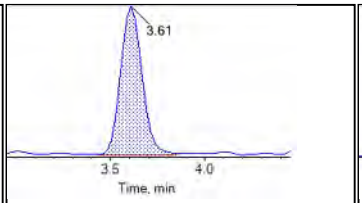


NEtFOSAA_2

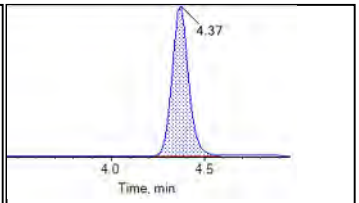
Internal Standards:



d3-MeFOSAA



d5-EtFOSAA



13C2-PFTeDA

BATTELLE

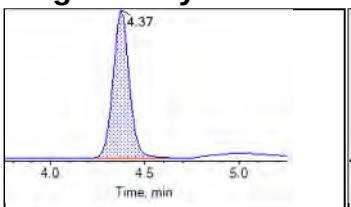
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:18:45 PM

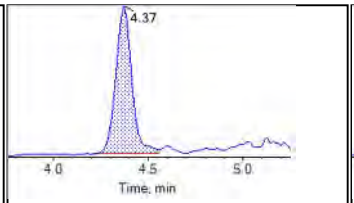
Sample Name	JV22	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:05:02	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Chromatograms

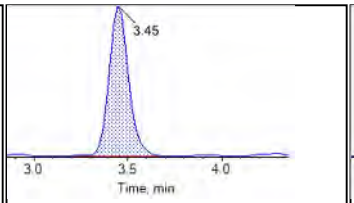
Target Analytes:



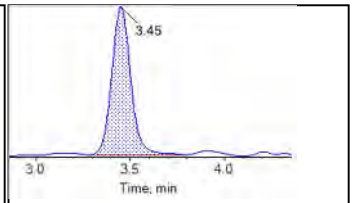
PFTeDA_1



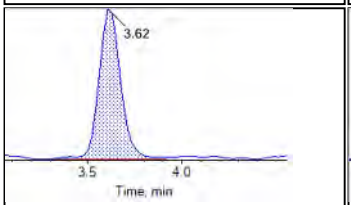
PFTeDA_2



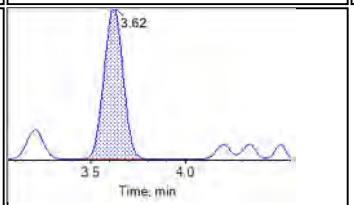
NMeFOSAA_1



NMeFOSAA_2

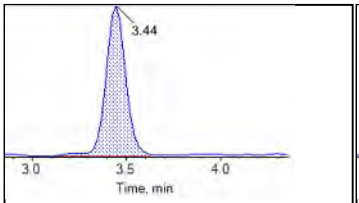


NEtFOSAA_1

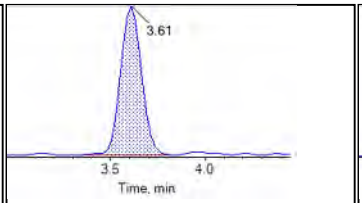


NEtFOSAA_2

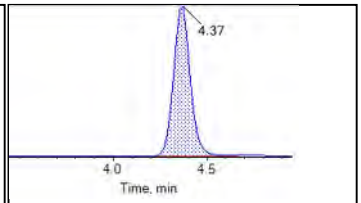
Internal Standards:



d3-MeFOSAA



d5-EtFOSAA



13C2-PFTeDA

BATTELLE

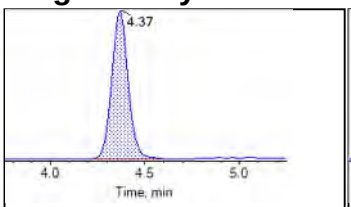
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:18:47 PM

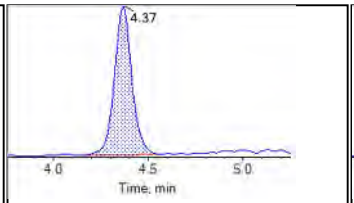
Sample Name	JV23	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:15:51	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Chromatograms

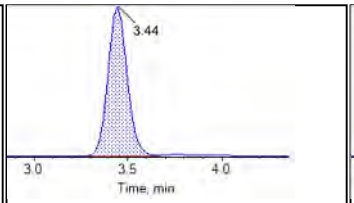
Target Analytes:



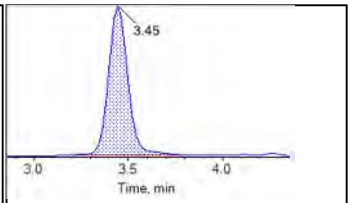
PFTeDA_1



PFTeDA_2



NMeFOSAA_1



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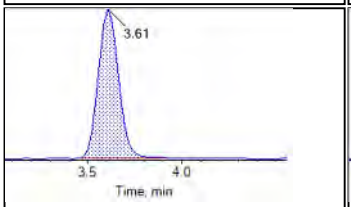
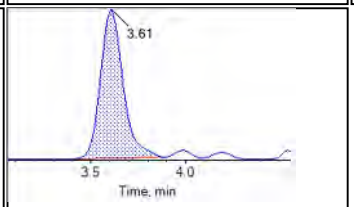
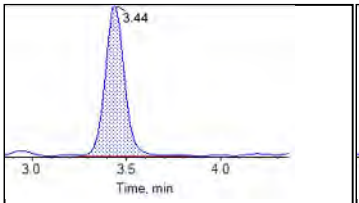


NEtFOSAA_1

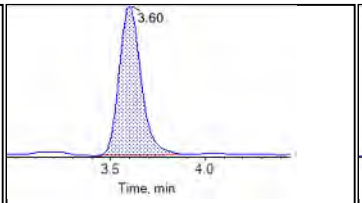


NEtFOSAA_2

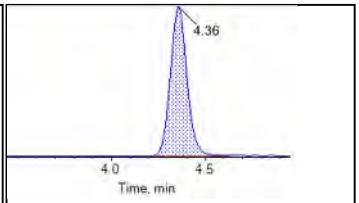
Internal Standards:



d3-MeFOSAA



d5-EtFOSAA



13C2-PFTeDA

BATTELLE

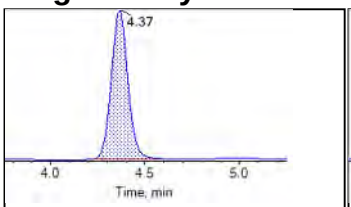
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:18:50 PM

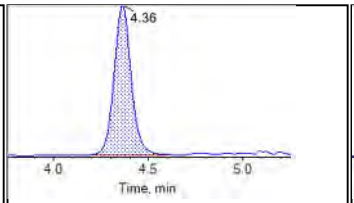
Sample Name	JV24	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:26:39	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Chromatograms

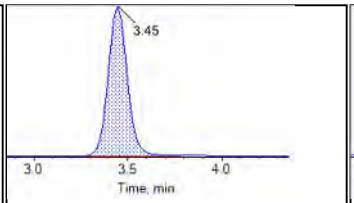
Target Analytes:



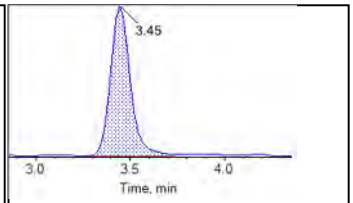
PFTeDA_1



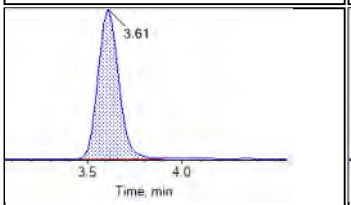
PFTeDA_2



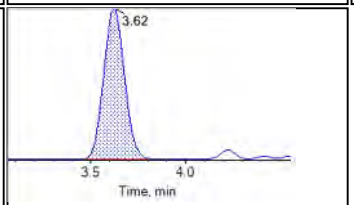
NMeFOSAA_1



NMeFOSAA_2

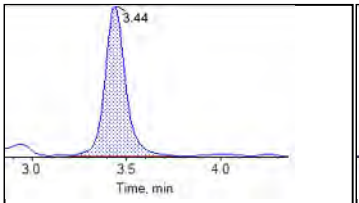


NEtFOSAA_1

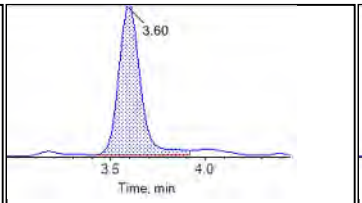


NEtFOSAA_2

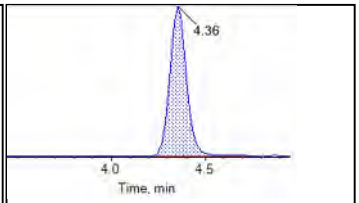
Internal Standards:



d3-MeFOSAA



d5-EtFOSAA



13C2-PFTeDA

BATTELLE

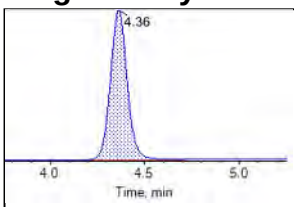
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:18:52 PM

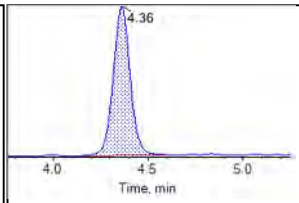
Sample Name	JV25	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:37:26	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Chromatograms

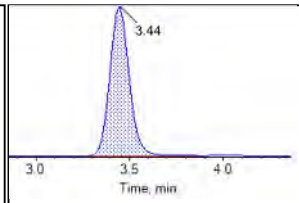
Target Analytes:



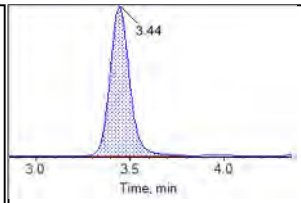
PFTeDA_1



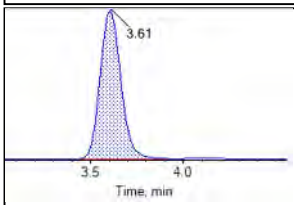
PFTeDA_2



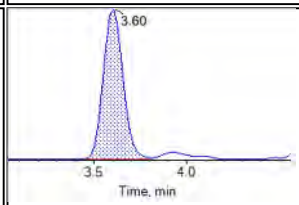
NMeFOSAA_1



NMeFOSAA_2

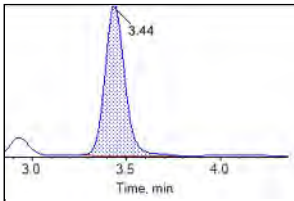


NEtFOSAA_1

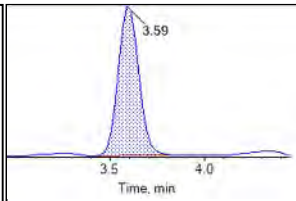


NEtFOSAA_2

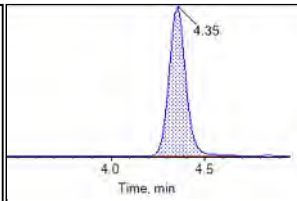
Internal Standards:



d3-MeFOSAA



d5-EtFOSAA



13C2-PFTeDA

BATTELLE

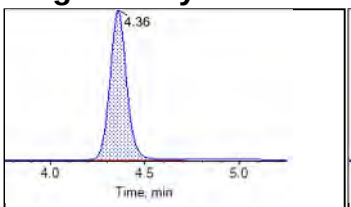
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:18:54 PM

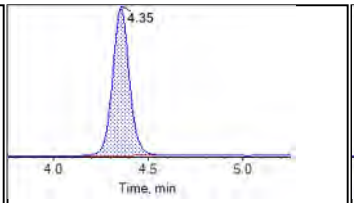
Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:48:14	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Chromatograms

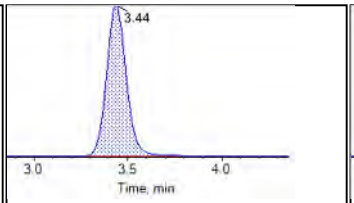
Target Analytes:



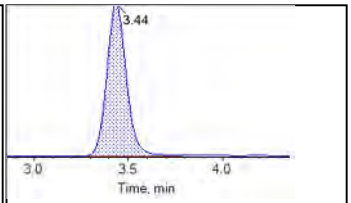
PFTeDA_1



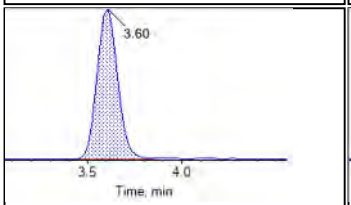
PFTeDA_2



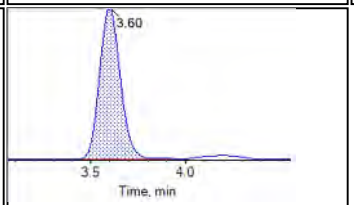
NMeFOSAA_1



NMeFOSAA_2

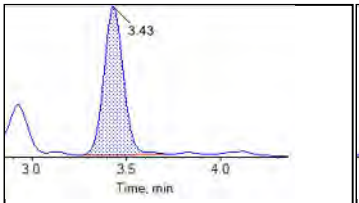


NEtFOSAA_1

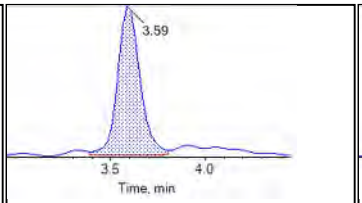


NEtFOSAA_2

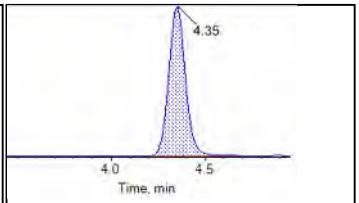
Internal Standards:



d3-MeFOSAA



d5-EtFOSAA



13C2-PFTeDA

BATTELLE

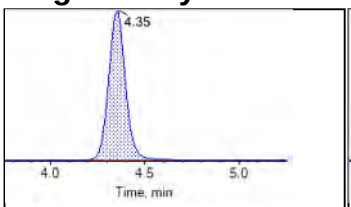
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:18:56 PM

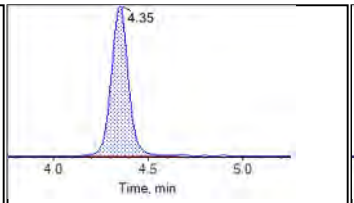
Sample Name	JV27	**Injection Vial**	9
Sample ID	L8	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T18:59:02	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Chromatograms

Target Analytes:



PFTeDA_1



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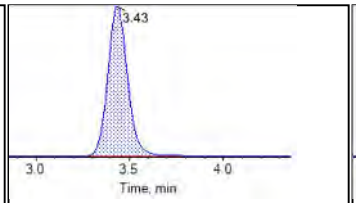
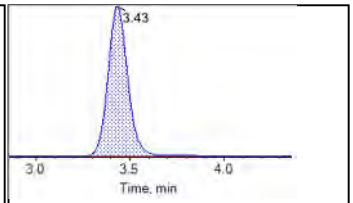
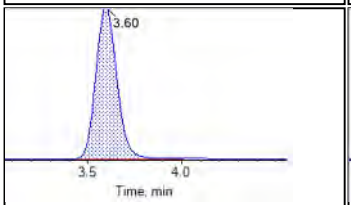


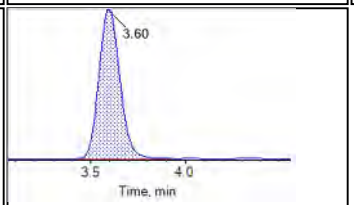
NMeFOSAA_1



NMeFOSAA_2

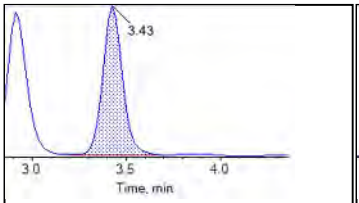


NEtFOSAA_1

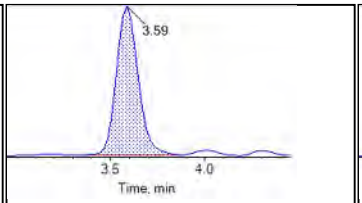


NEtFOSAA_2

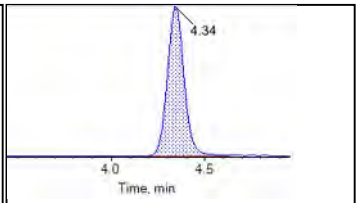
Internal Standards:



d3-MeFOSAA



d5-EtFOSAA



13C2-PFTeDA

BATTELLE

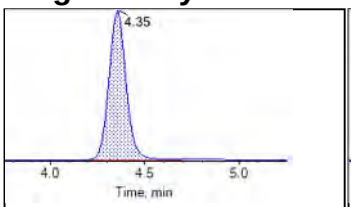
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:18:59 PM

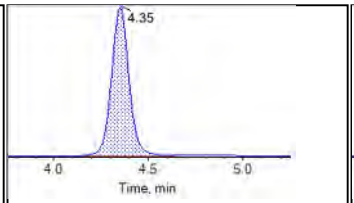
Sample Name	JV28	**Injection Vial**	10
Sample ID	L9	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T19:09:48	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Chromatograms

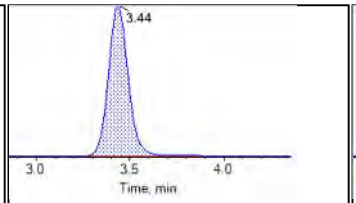
Target Analytes:



PFTeDA_1



PFTeDA_2



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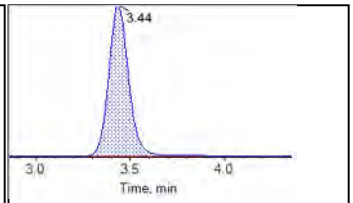
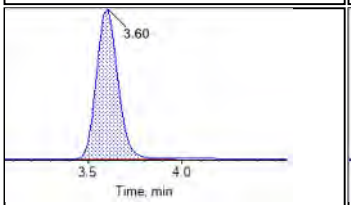
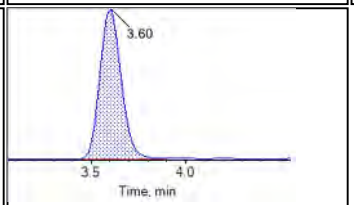


NMeFOSAA_2

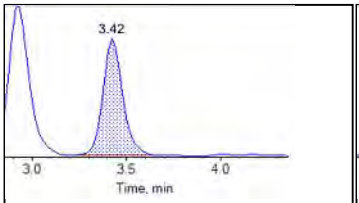


NEtFOSAA_1

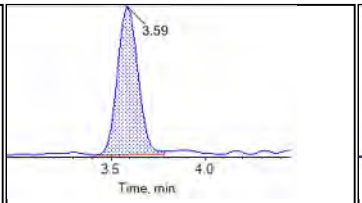


NEtFOSAA_2

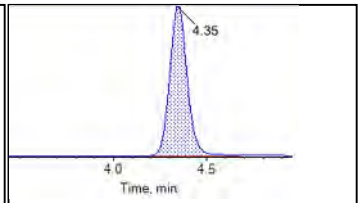
Internal Standards:



d3-MeFOSAA



d5-EtFOSAA



13C2-PFTeDA

BATTELLE

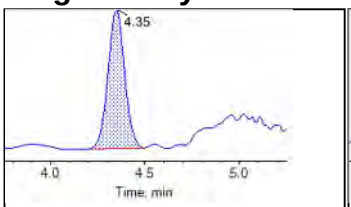
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:19:01 PM

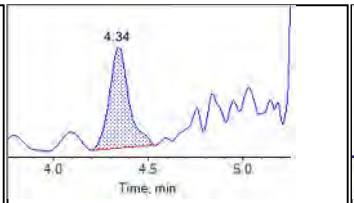
Sample Name	JV05 IB	**Injection Vial**	11
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T19:20:37	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Chromatograms

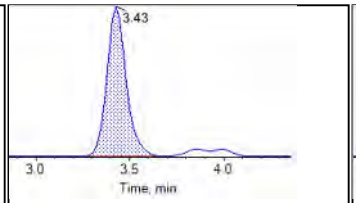
Target Analytes:



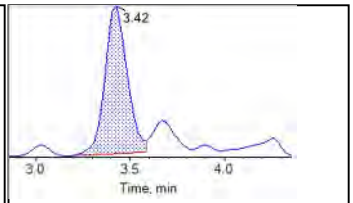
PFTeDA_1



PFTeDA_2



NMeFOSAA_1



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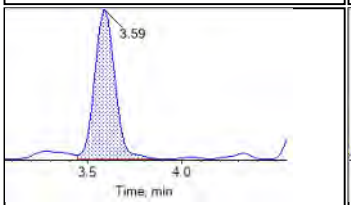

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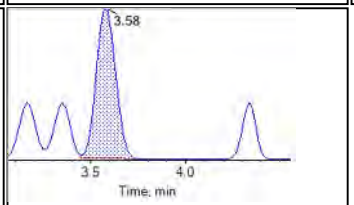
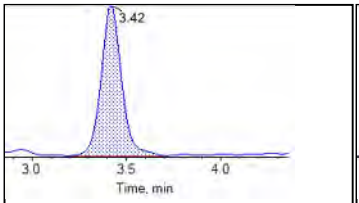
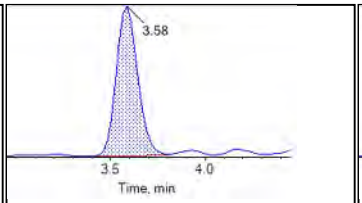


NEtFOSAA_2

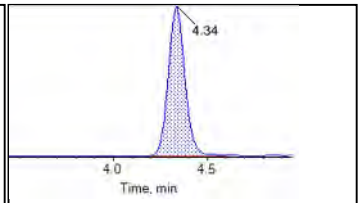
Internal Standards:



d3-MeFOSAA



d5-EtFOSAA



13C2-PFTeDA

BATTELLE

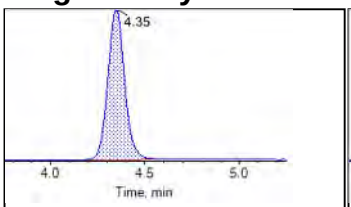
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:19:03 PM

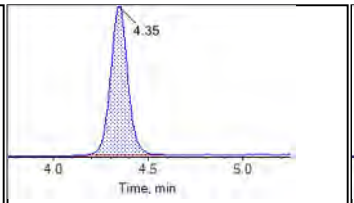
Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T19:31:26	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Chromatograms

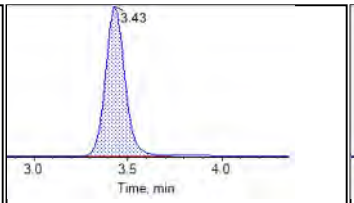
Target Analytes:



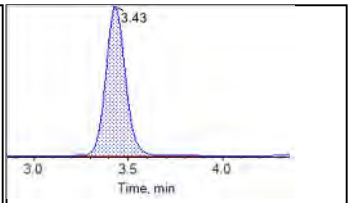
PFTeDA_1



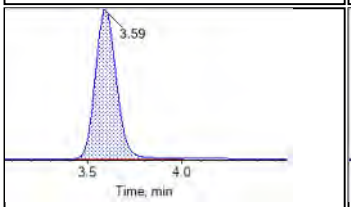
PFTeDA_2



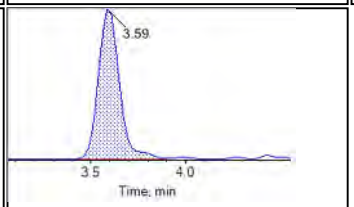
NMeFOSAA_1



NMeFOSAA_2

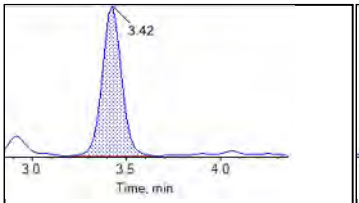


NEtFOSAA_1

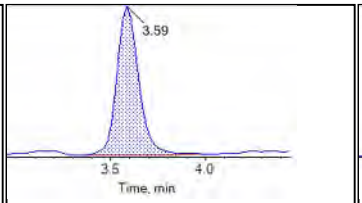


NEtFOSAA_2

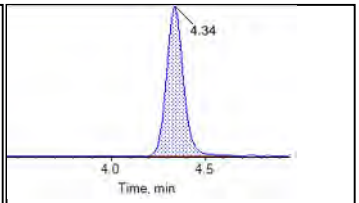
Internal Standards:



d3-MeFOSAA



d5-EtFOSAA



13C2-PFTeDA

BATTELLE

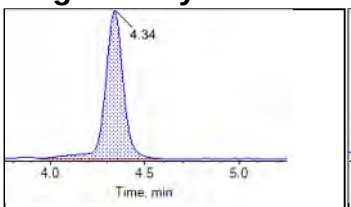
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:19:07 PM

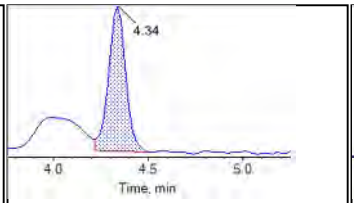
Sample Name	J6241-FS(3)	**Injection Vial**	16
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T20:25:25	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Chromatograms

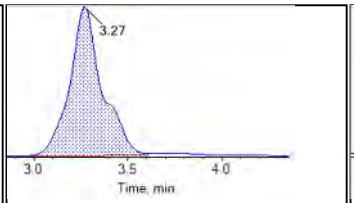
Target Analytes:



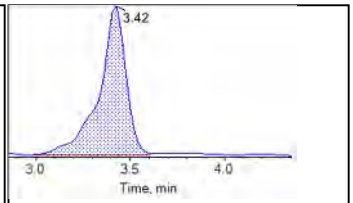
PFTeDA_1



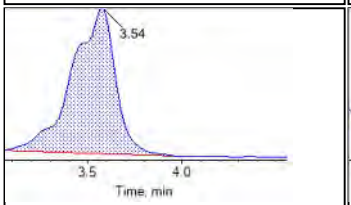
PFTeDA_2



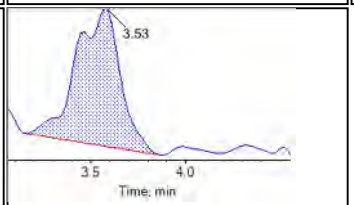
NMeFOSAA_1



NMeFOSAA_2

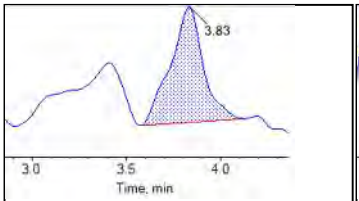


NEtFOSAA_1

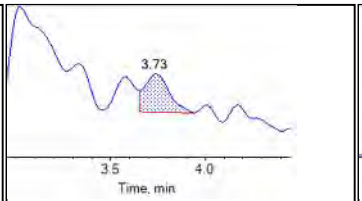


NEtFOSAA_2

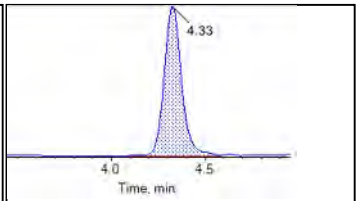
Internal Standards:



d3-MeFOSAA



d5-EtFOSAA



13C2-PFTeDA

BATTELLE

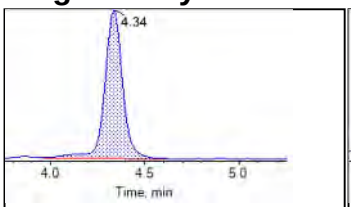
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:19:10 PM

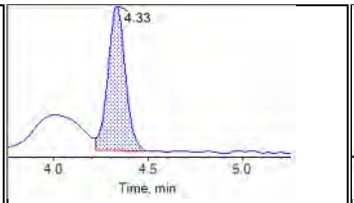
Sample Name	J6242-FS(3)	**Injection Vial**	17
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T20:36:12	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Chromatograms

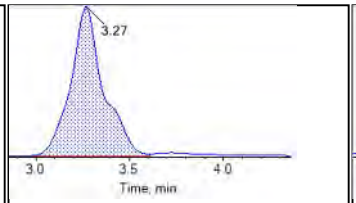
Target Analytes:



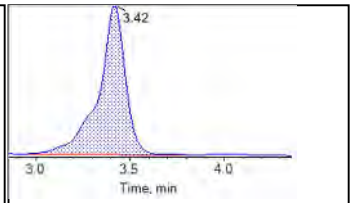
PFTeDA_1



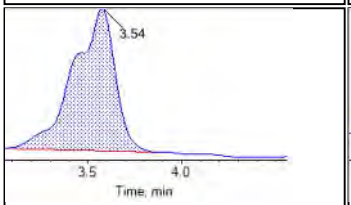
PFTeDA_2



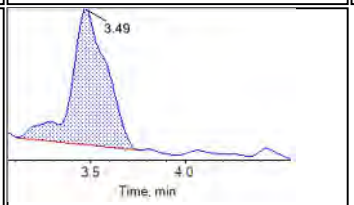
NMeFOSAA_1



NMeFOSAA_2

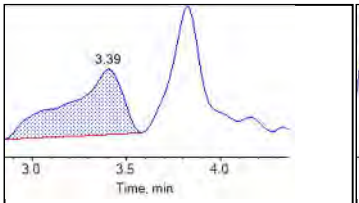


NEtFOSAA_1

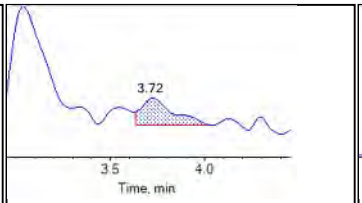


NEtFOSAA_2

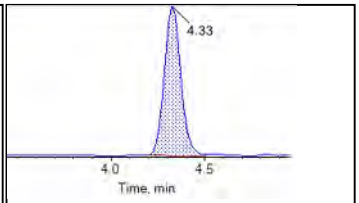
Internal Standards:



d3-MeFOSAA



d5-EtFOSAA



13C2-PFTeDA

BATTELLE

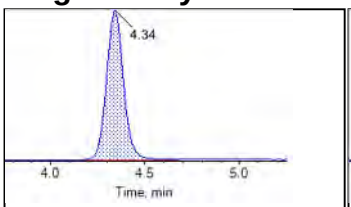
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:19:12 PM

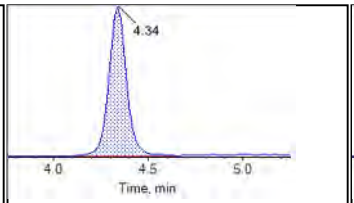
Sample Name	JV25 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T20:46:59	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Chromatograms

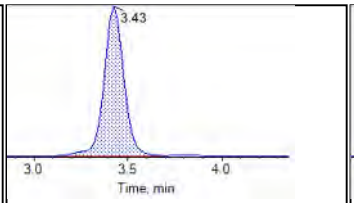
Target Analytes:



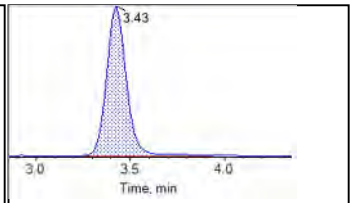
PFTeDA_1



PFTeDA_2



NMeFOSAA_1



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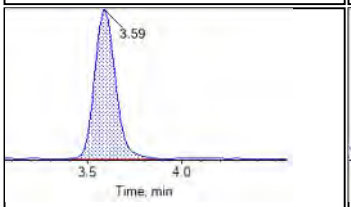
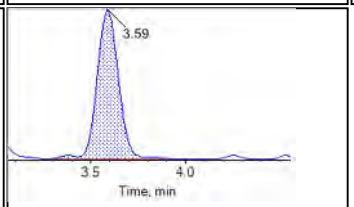
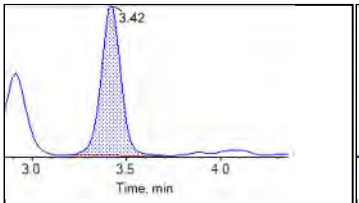


NEtFOSAA_1

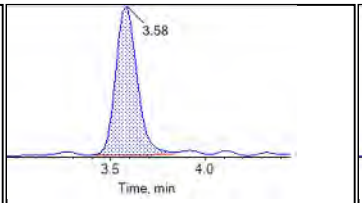


NEtFOSAA_2

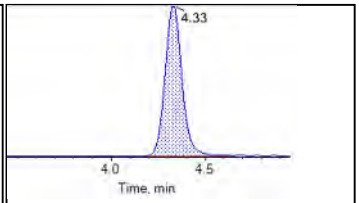
Internal Standards:



d3-MeFOSAA



d5-EtFOSAA



13C2-PFTeDA

BATTELLE

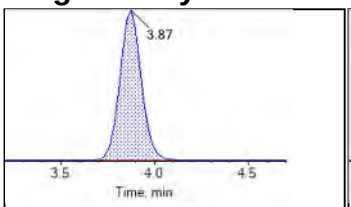
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:03 AM

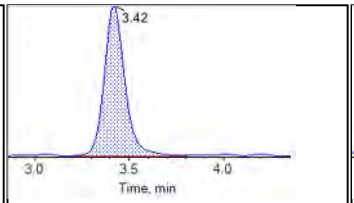
Sample Name	JV20	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:34:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Chromatograms

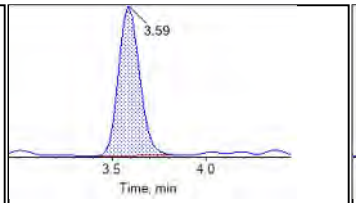
Target Analytes:



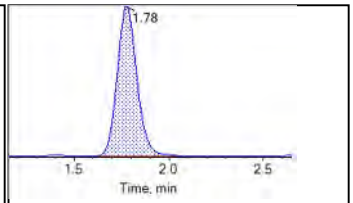
13C2-PFDoA



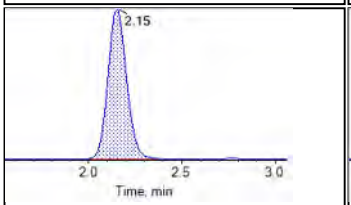
d3-MeFOSAA



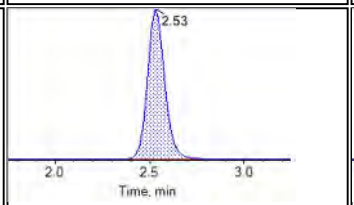
d5-EtFOSAA



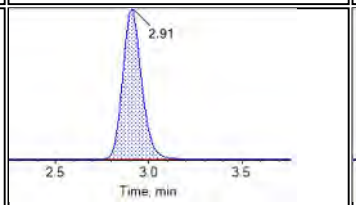
13C5-PFHxA



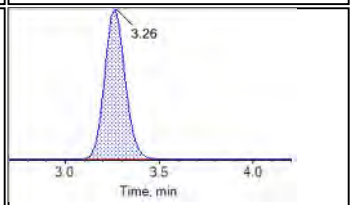
13C4-PFHpA



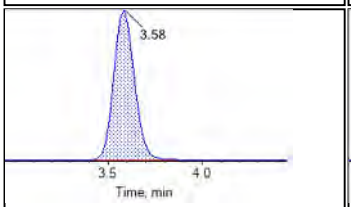
13C8-PFOA



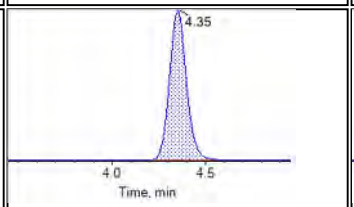
13C9-PFNA



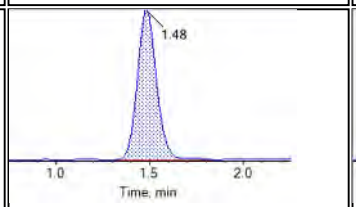
13C6-PFDA



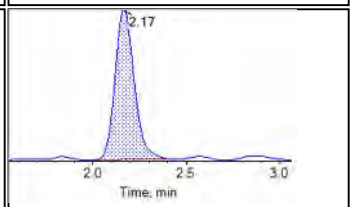
13C7-PFUnA



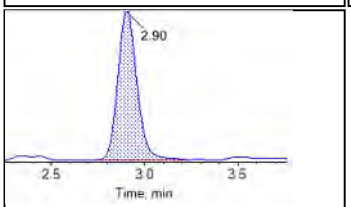
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

Created with Analyst Reporter
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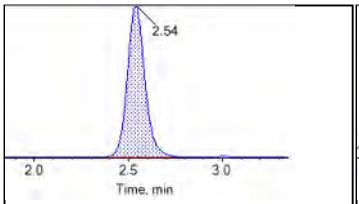
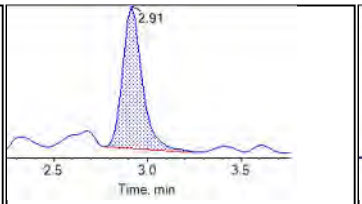
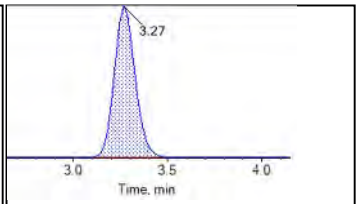
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

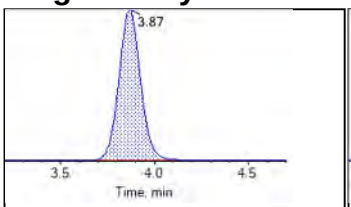
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:05 AM

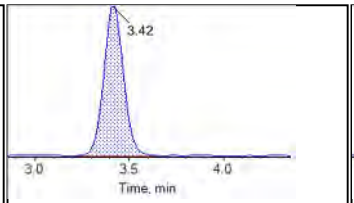
Sample Name	JV21	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:44:51	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Chromatograms

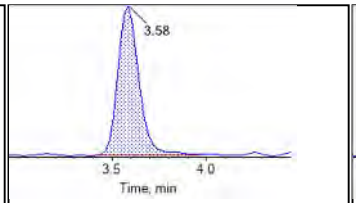
Target Analytes:



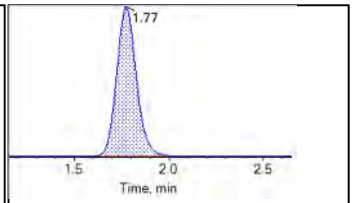
13C2-PFDoA



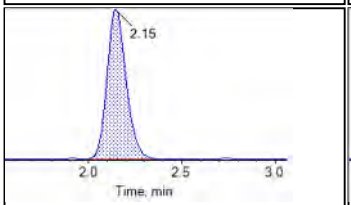
d3-MeFOSAA



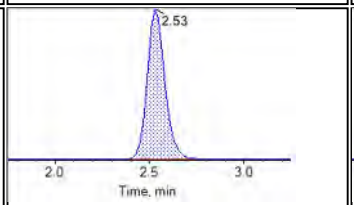
d5-EtFOSAA



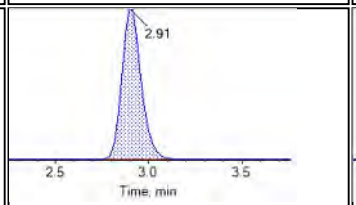
13C5-PFHxA



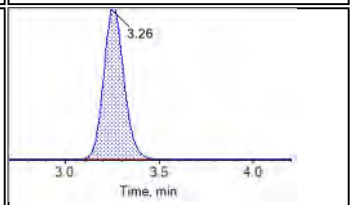
13C4-PFHpA



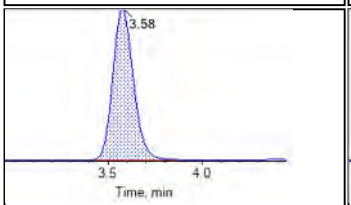
13C8-PFOA



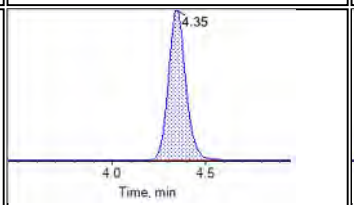
13C9-PFNA



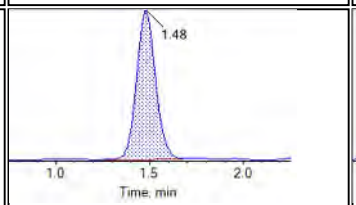
13C6-PFDA



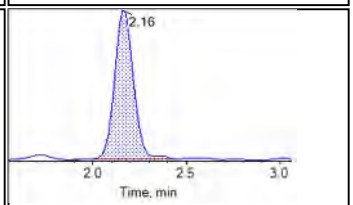
13C7-PFUnA



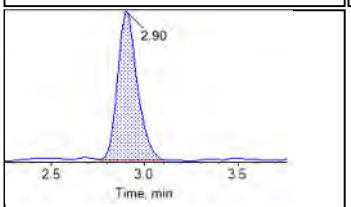
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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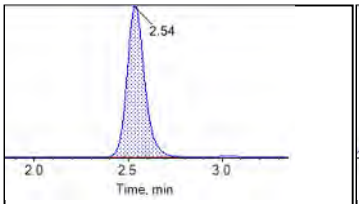
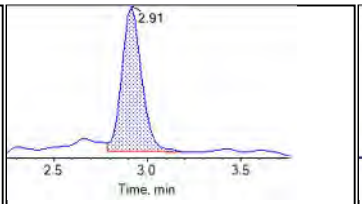
Printed: 08/06/2018 11:13:05 AM

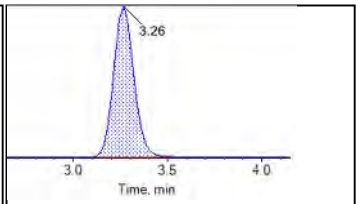
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:08 AM

Sample Name	JV22	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:55:39	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Chromatograms

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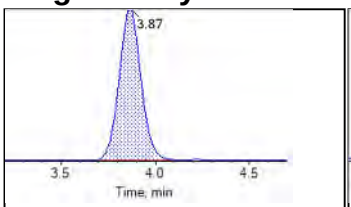
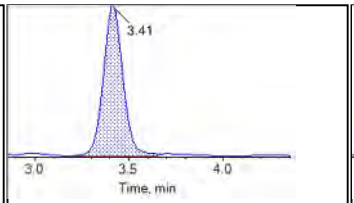
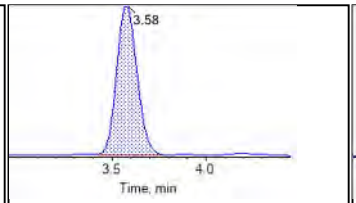


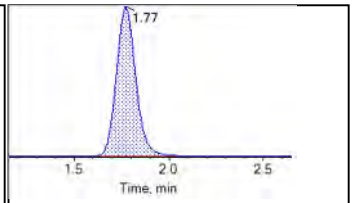
13C2-PFDoA



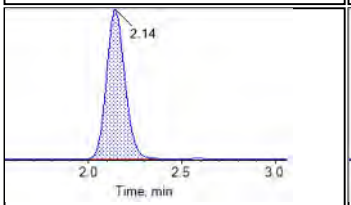
d3-MeFOSAA



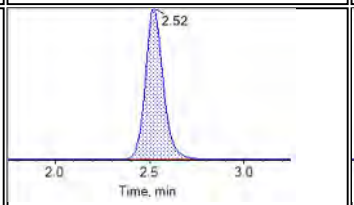
d5-EtFOSAA



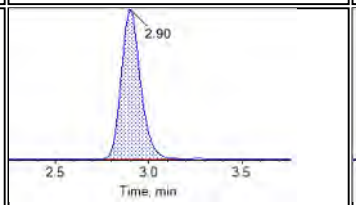
13C5-PFHxA



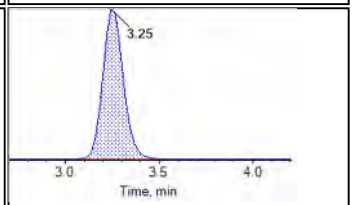
13C4-PFHpA



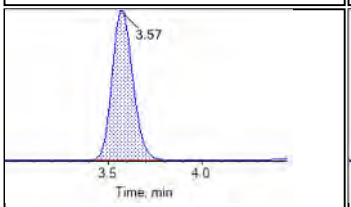
13C8-PFOA



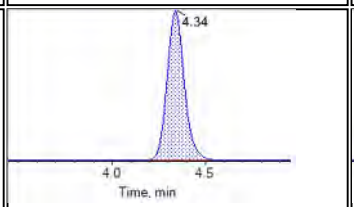
13C9-PFNA



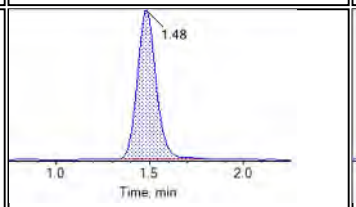
13C6-PFDA



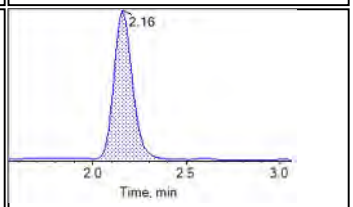
13C7-PFUnA



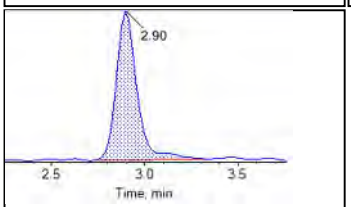
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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Printed: 08/06/2018 11:13:08 AM

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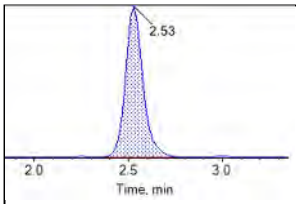
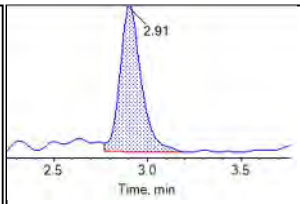
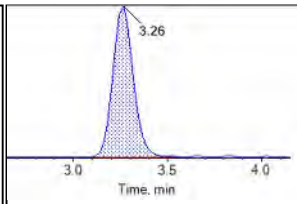


13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

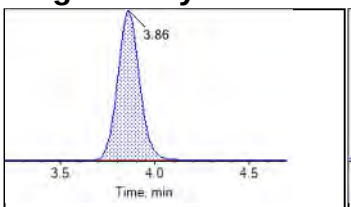
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:10 AM

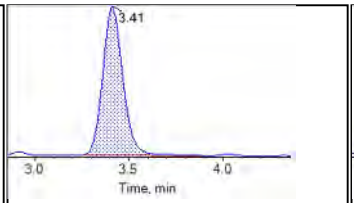
Sample Name	JV23	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:06:27	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Chromatograms

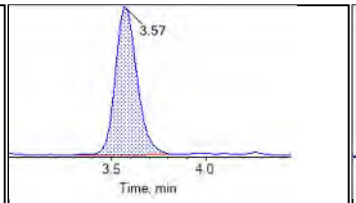
Target Analytes:



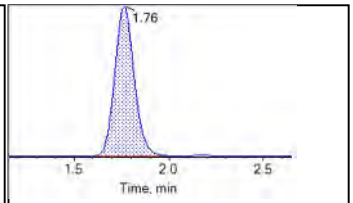
13C2-PFDoA



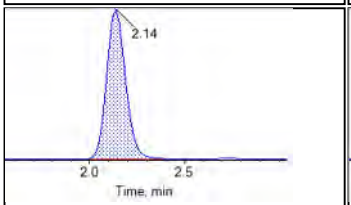
d3-MeFOSAA



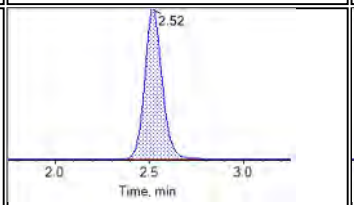
d5-EtFOSAA



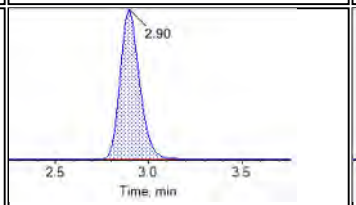
13C5-PFHxA



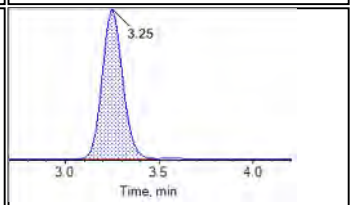
13C4-PFHpA



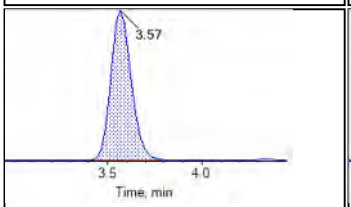
13C8-PFOA



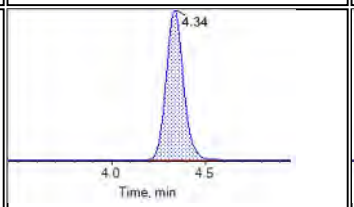
13C9-PFNA



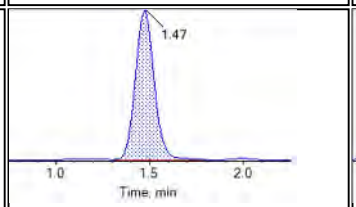
13C6-PFDA



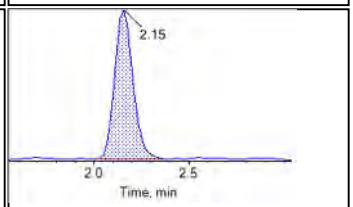
13C7-PFUnA



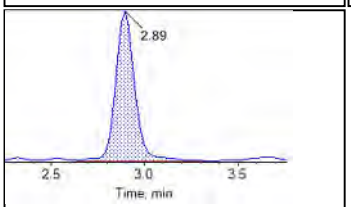
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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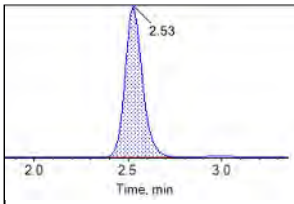
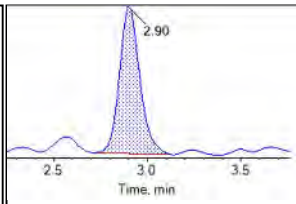
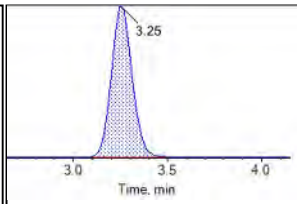
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

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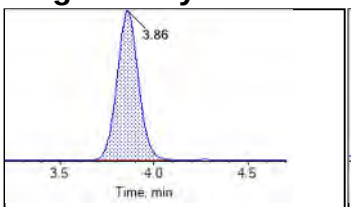
Printed: 08/06/2018 11:13:13 AM

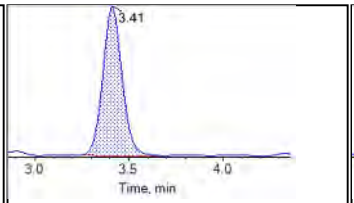
Sample Name	JV24	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:17:14	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Chromatograms

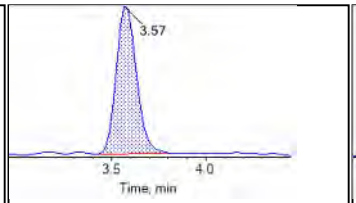
Target Analytes:



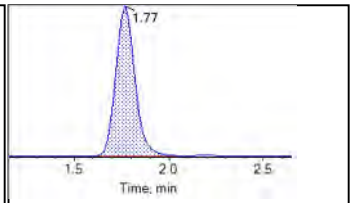
13C2-PFDoA



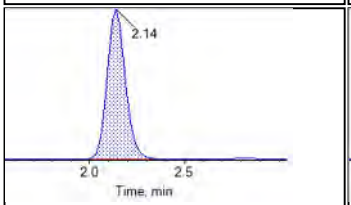
d3-MeFOSAA



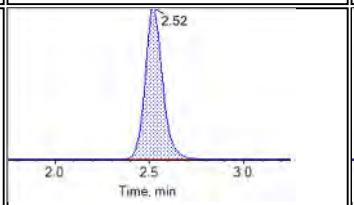
d5-EtFOSAA



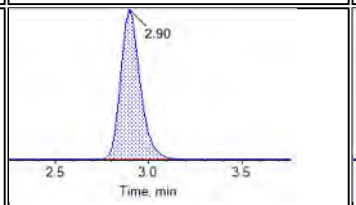
13C5-PFHxA



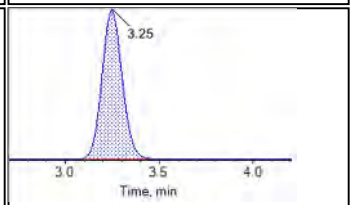
13C4-PFHpA



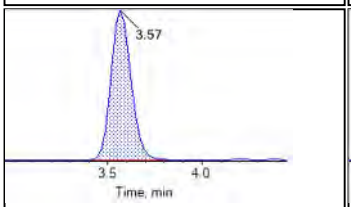
13C8-PFOA



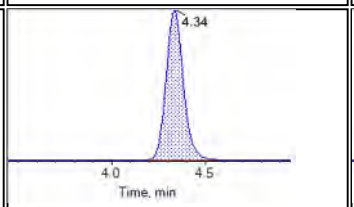
13C9-PFNA



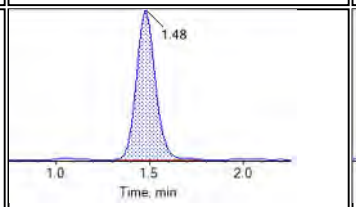
13C6-PFDA



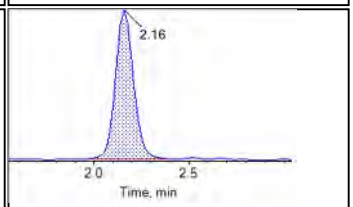
13C7-PFUnA



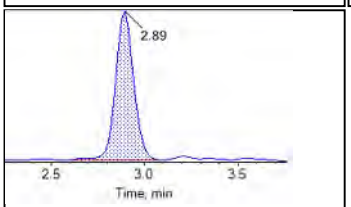
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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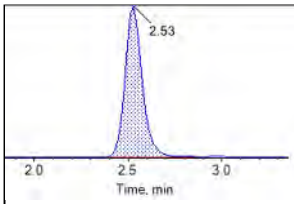
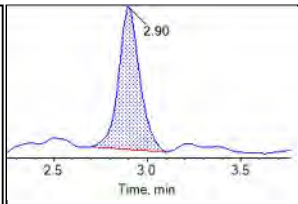
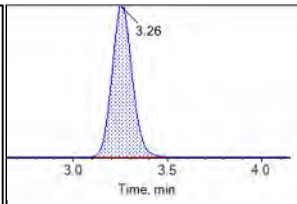
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:15 AM

Sample Name	JV25	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:28:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Chromatograms

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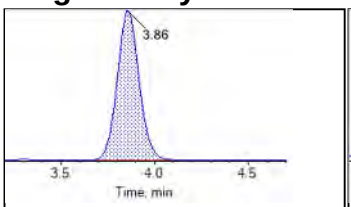
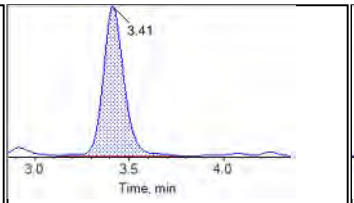
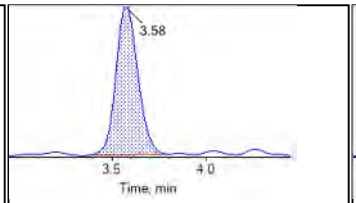


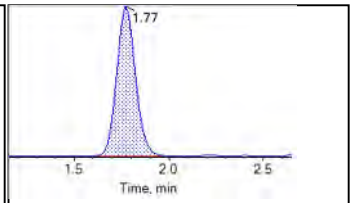
13C2-PFDoA



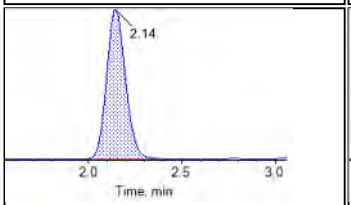
d3-MeFOSAA



d5-EtFOSAA



13C5-PFHxA



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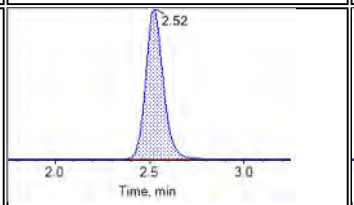
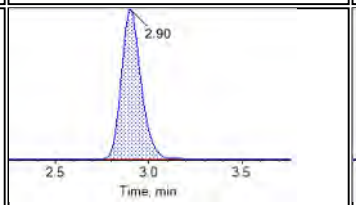
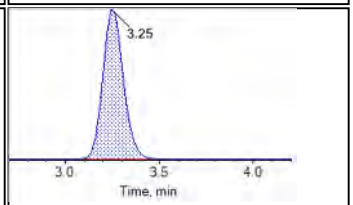


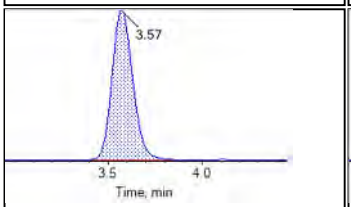
13C8-PFOA



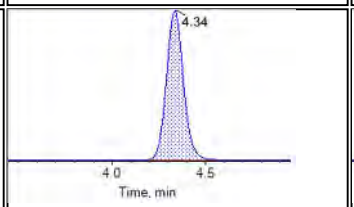
13C9-PFNA



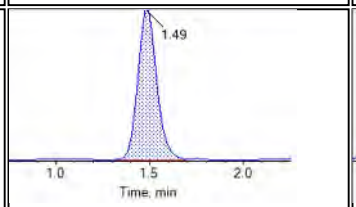
13C6-PFDA



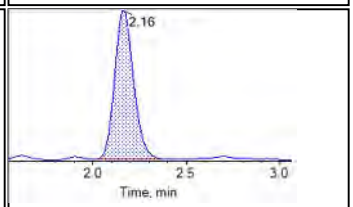
13C7-PFUnA



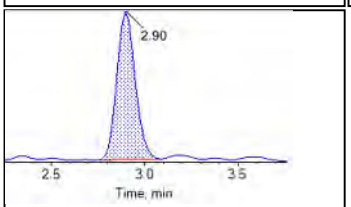
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

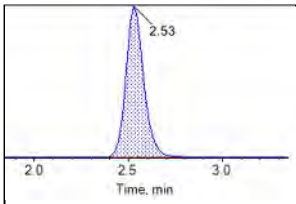


13C8-PFOS

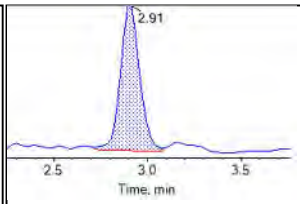
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:15 AM

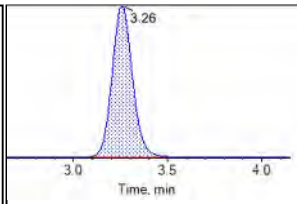
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

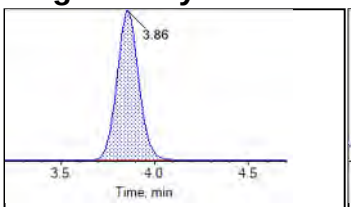
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:18 AM

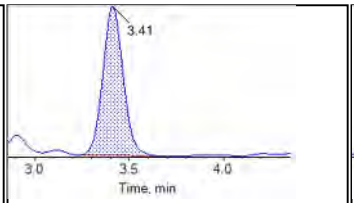
Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:38:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Chromatograms

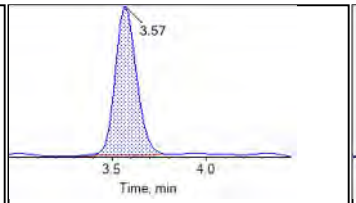
Target Analytes:



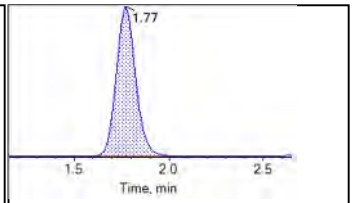
13C2-PFDoA



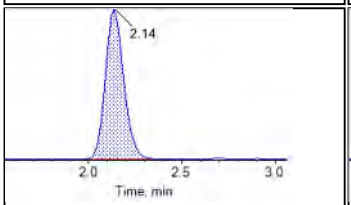
d3-MeFOSAA



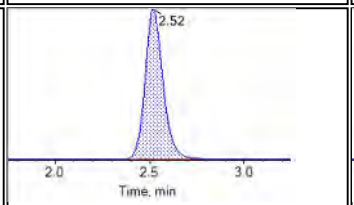
d5-EtFOSAA



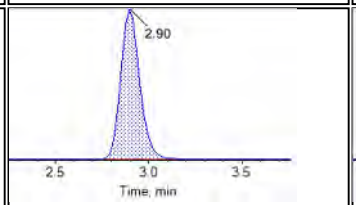
13C5-PFHxA



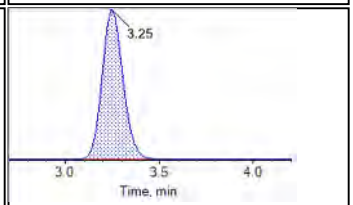
13C4-PFHpA



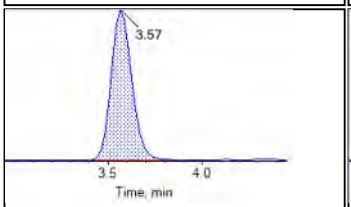
13C8-PFOA



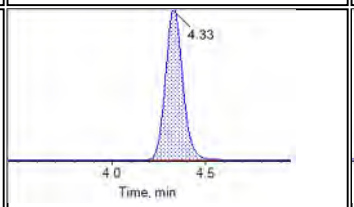
13C9-PFNA



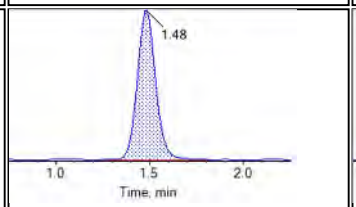
13C6-PFDA



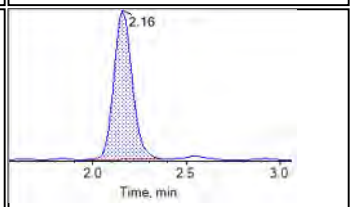
13C7-PFUnA



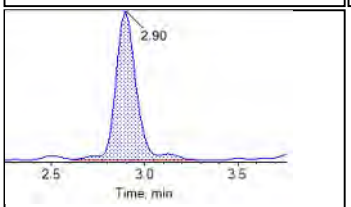
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

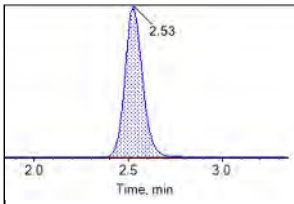


13C8-PFOS

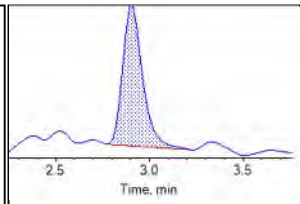
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:18 AM

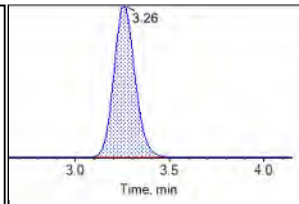
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

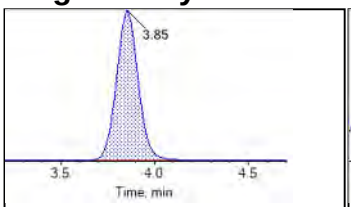
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:20 AM

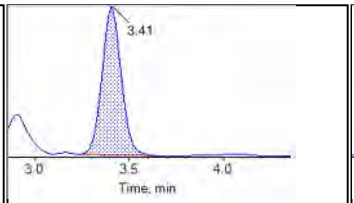
Sample Name	JV27	**Injection Vial**	9
Sample ID	L8	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:49:37	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Chromatograms

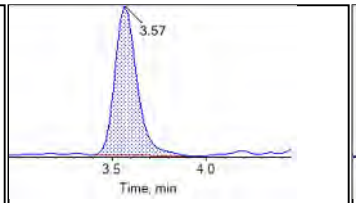
Target Analytes:



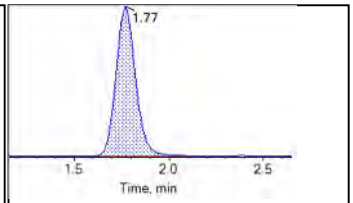
13C2-PFDoA



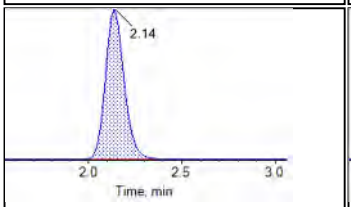
d3-MeFOSAA



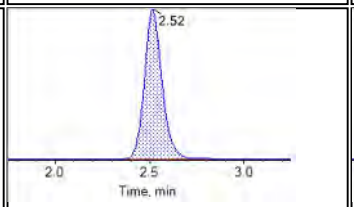
d5-EtFOSAA



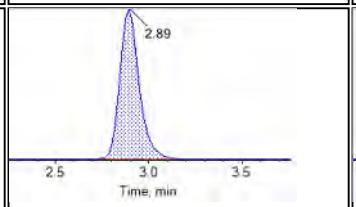
13C5-PFHxA



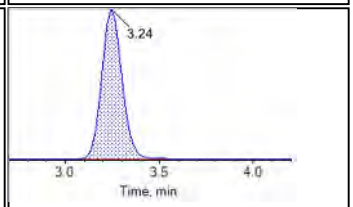
13C4-PFHpA



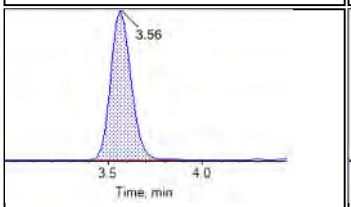
13C8-PFOA



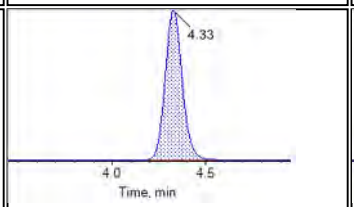
13C9-PFNA



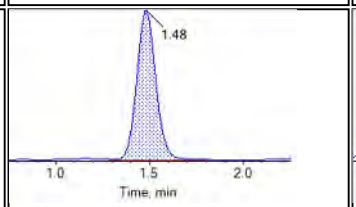
13C6-PFDA



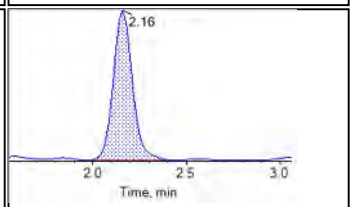
13C7-PFUnA



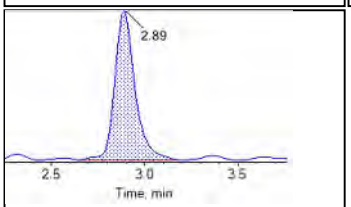
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

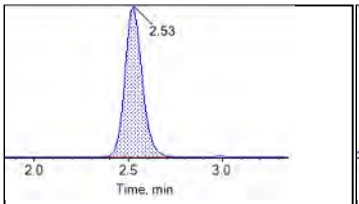


13C8-PFOS

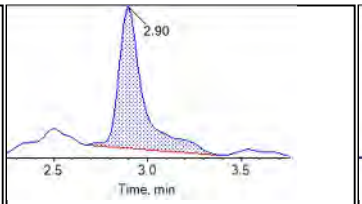
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:20 AM

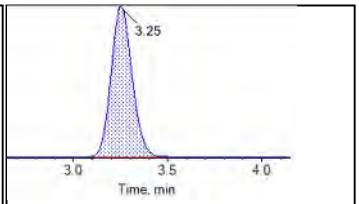
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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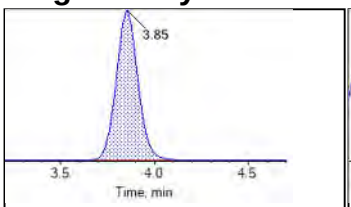
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:22 AM

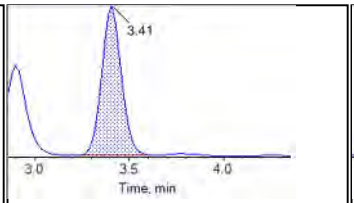
Sample Name	JV28	**Injection Vial**	10
Sample ID	L9	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:00:25	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Chromatograms

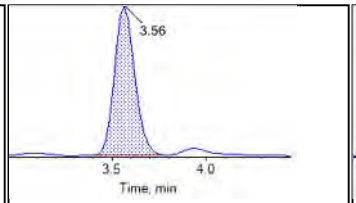
Target Analytes:



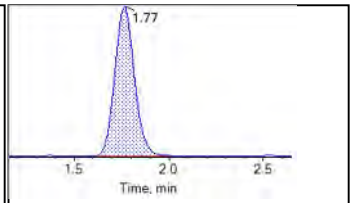
13C2-PFDoA



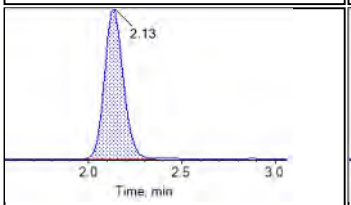
d3-MeFOSAA



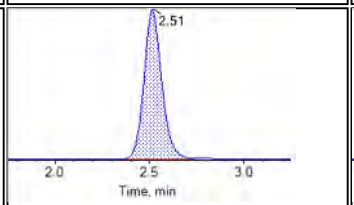
d5-EtFOSAA



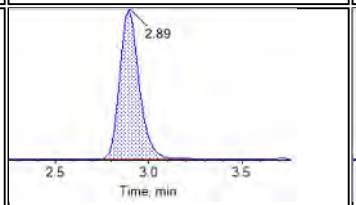
13C5-PFHxA



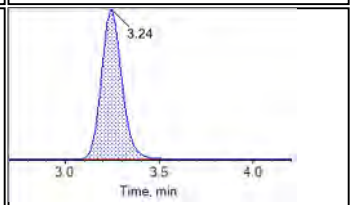
13C4-PFHpA



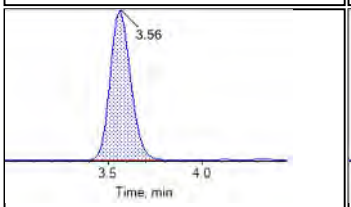
13C8-PFOA



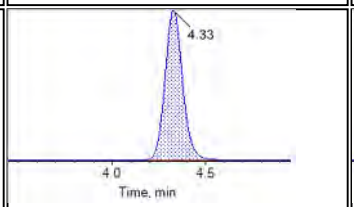
13C9-PFNA



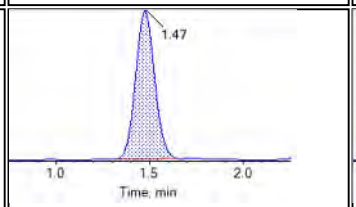
13C6-PFDA



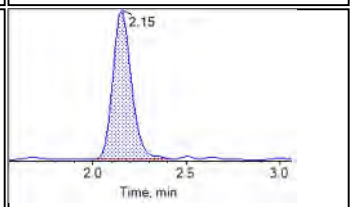
13C7-PFUnA



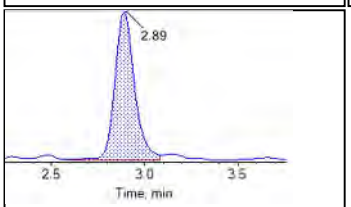
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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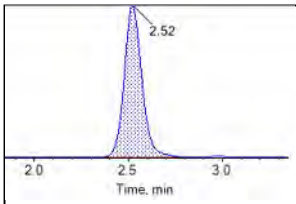
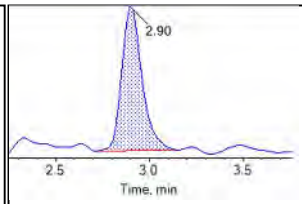
Printed: 08/06/2018 11:13:22 AM

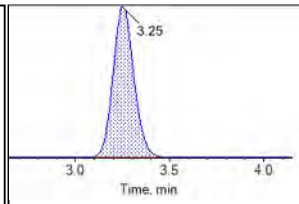
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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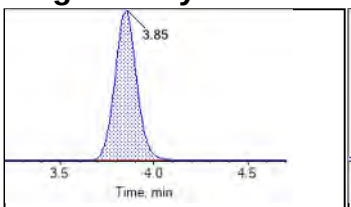
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:25 AM

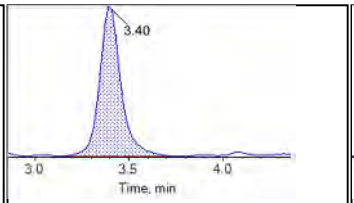
Sample Name	JV05 IB	**Injection Vial**	11
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:11:14	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Chromatograms

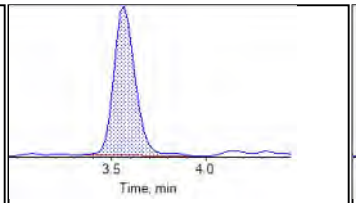
Target Analytes:



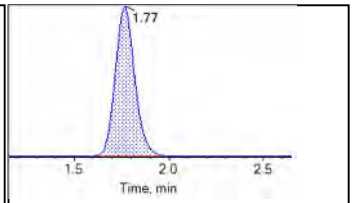
13C2-PFDoA



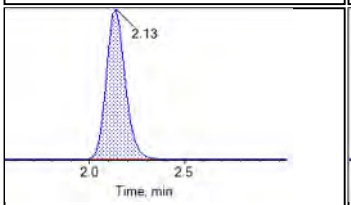
d3-MeFOSAA



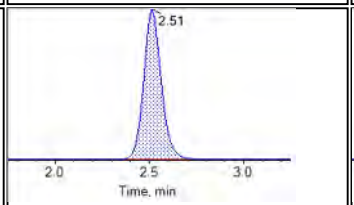
d5-EtFOSAA



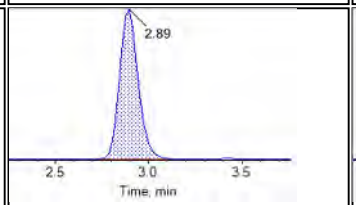
13C5-PFHxA



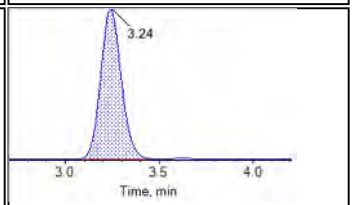
13C4-PFHpA



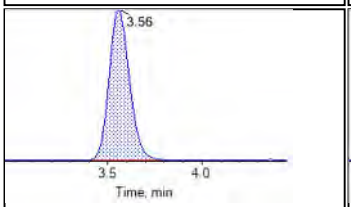
13C8-PFOA



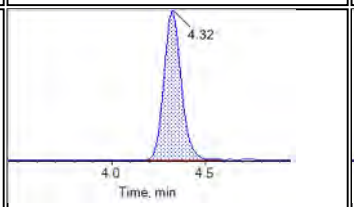
13C9-PFNA



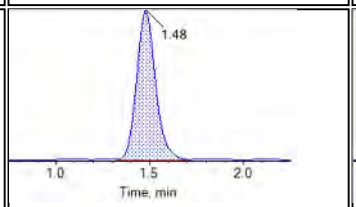
13C6-PFDA



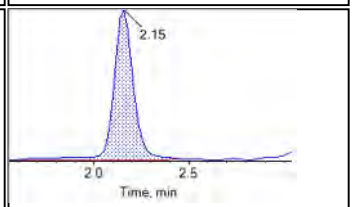
13C7-PFUnA



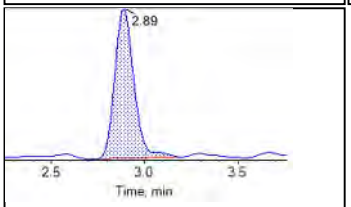
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

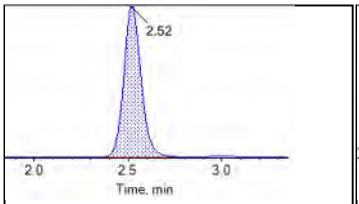


13C8-PFOS

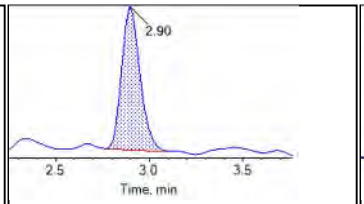
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:25 AM

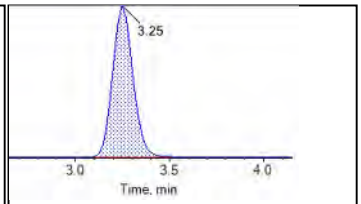
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

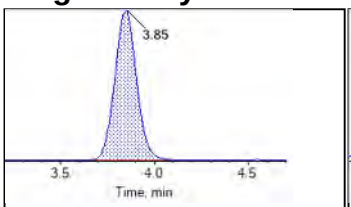
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:27 AM

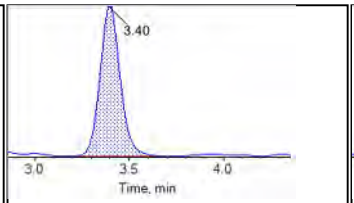
Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:22:01	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Chromatograms

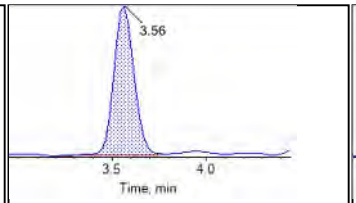
Target Analytes:



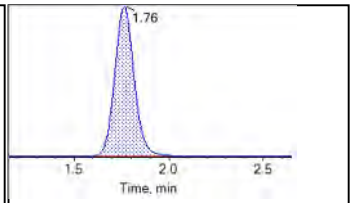
13C2-PFDoA



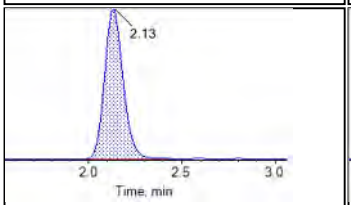
d3-MeFOSAA



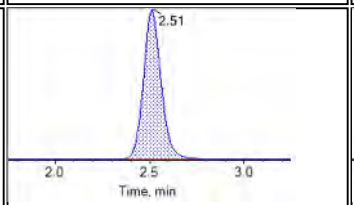
d5-EtFOSAA



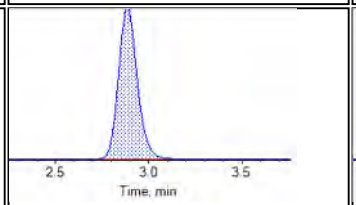
13C5-PFHxA



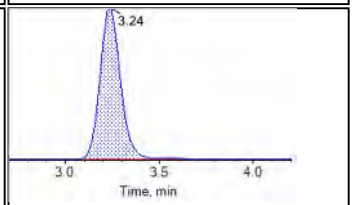
13C4-PFHpA



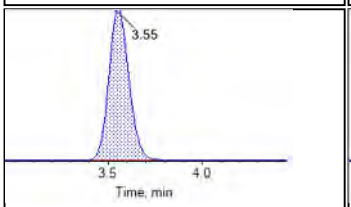
13C8-PFOA



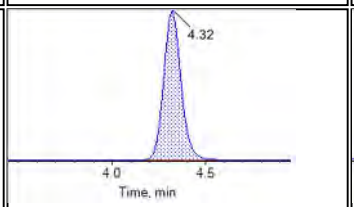
13C9-PFNA



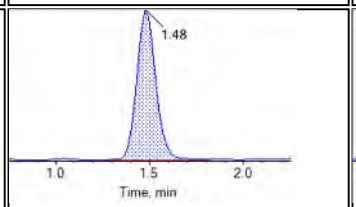
13C6-PFDA



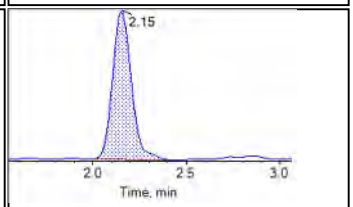
13C7-PFUnA



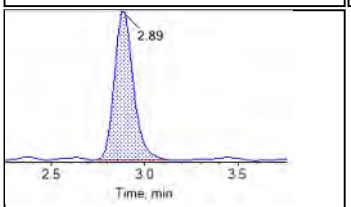
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

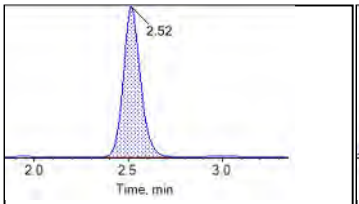


13C8-PFOS

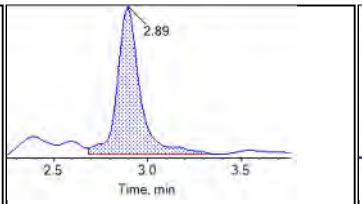
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:27 AM

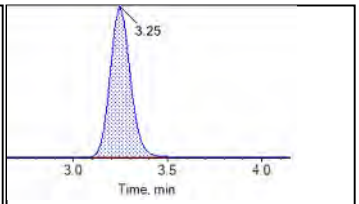
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:35 AM

Sample Name	CQ859PB-FS(3)	**Injection Vial**	37
Sample ID	Procedural Balnk	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:28:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Chromatograms

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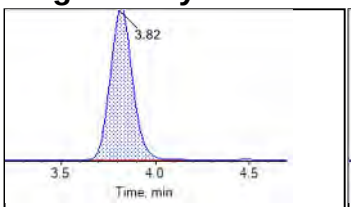
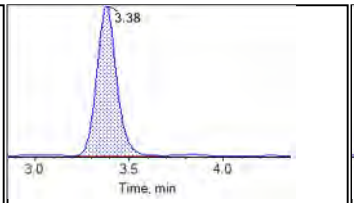
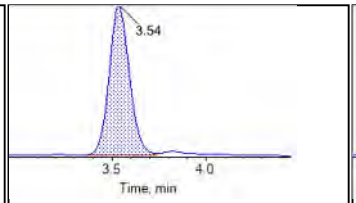


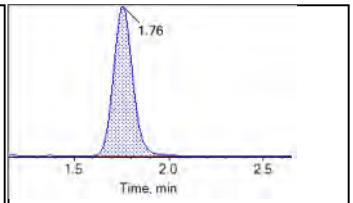
13C2-PFDoA



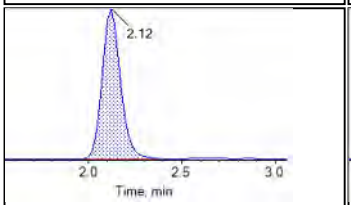
d3-MeFOSAA



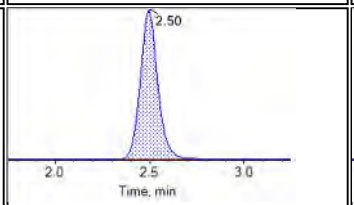
d5-EtFOSAA



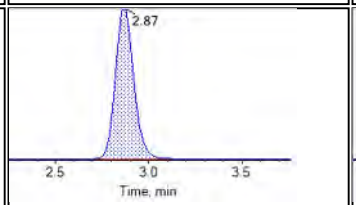
13C5-PFHxA



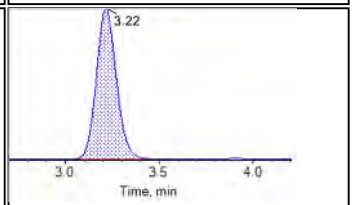
13C4-PFHpA



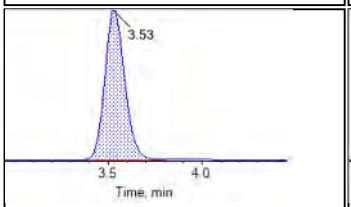
13C8-PFOA



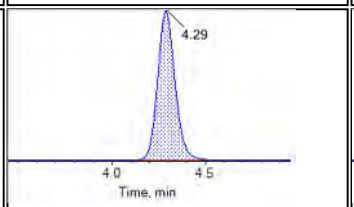
13C9-PFNA



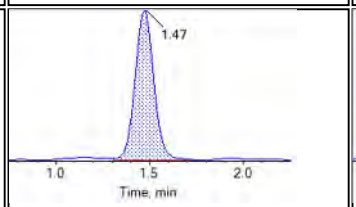
13C6-PFDA



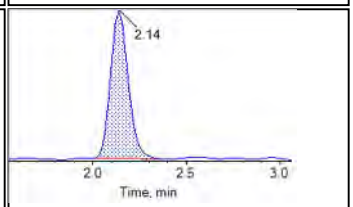
13C7-PFUnA



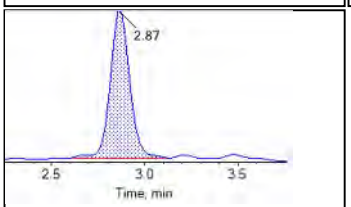
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

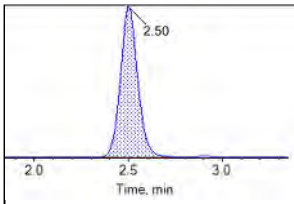


13C8-PFOS

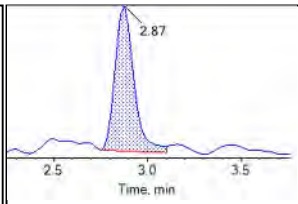
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:35 AM

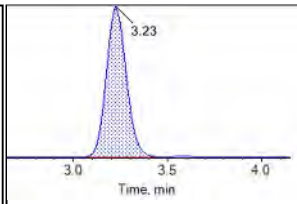
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:37 AM

Sample Name	CQ860LCS-FS(3)	**Injection Vial**	38
Sample ID	Labortory Control	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:39:38	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Chromatograms

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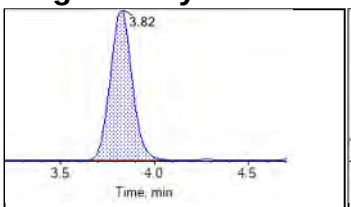
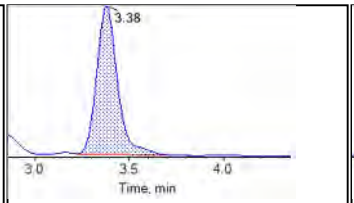
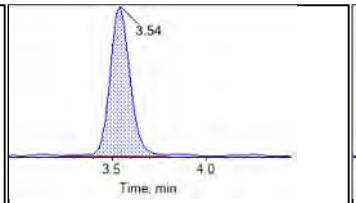


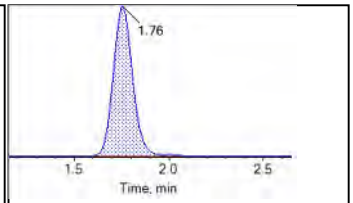
13C2-PFDoA



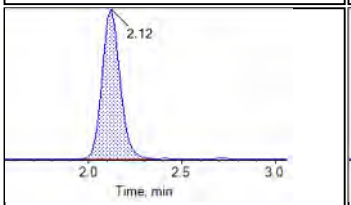
d3-MeFOSAA



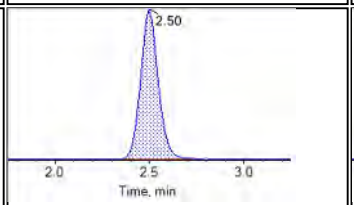
d5-EtFOSAA



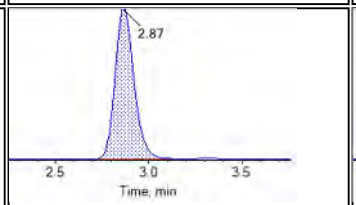
13C5-PFHxA



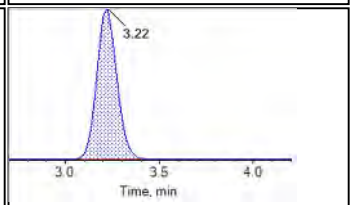
13C4-PFHpA



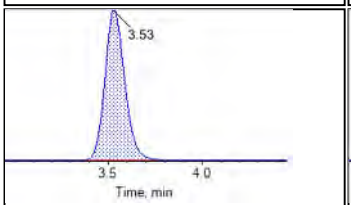
13C8-PFOA



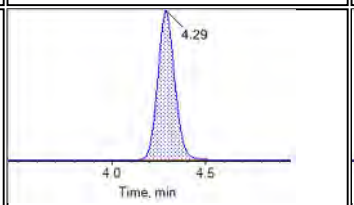
13C9-PFNA



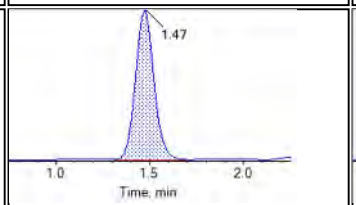
13C6-PFDA



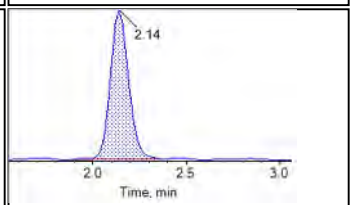
13C7-PFUnA



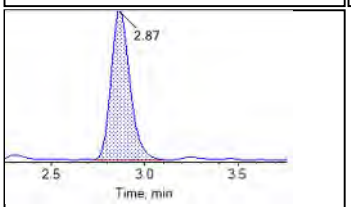
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

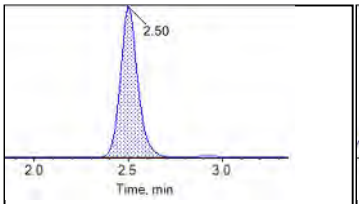


13C8-PFOS

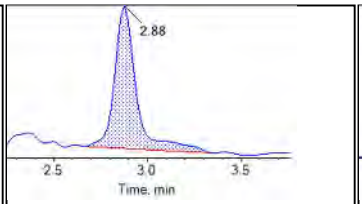
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:37 AM

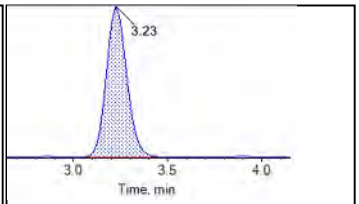
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:40 AM

Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:50:26	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Chromatograms

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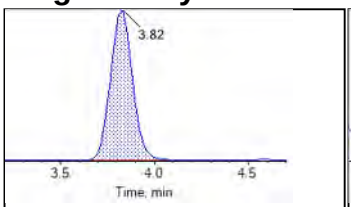
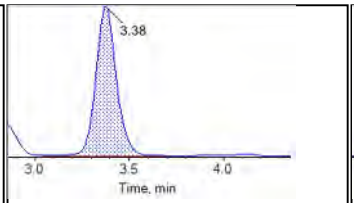
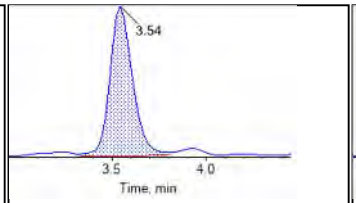


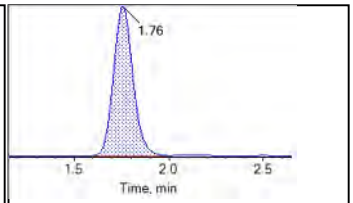
13C2-PFDoA



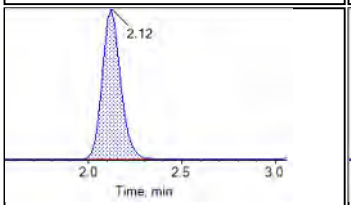
d3-MeFOSAA



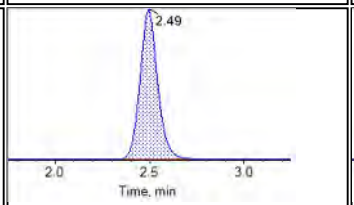
d5-EtFOSAA



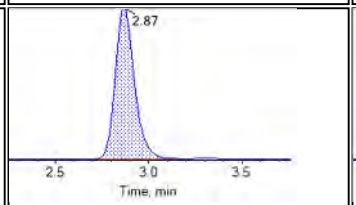
13C5-PFHxA



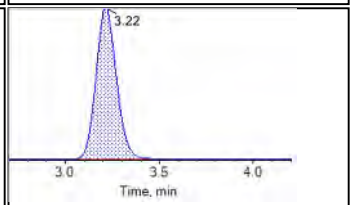
13C4-PFHpA



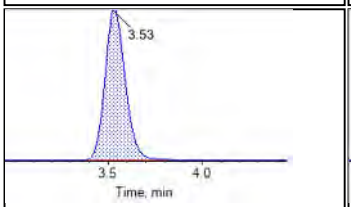
13C8-PFOA



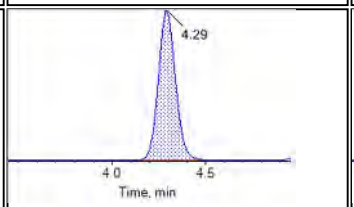
13C9-PFNA



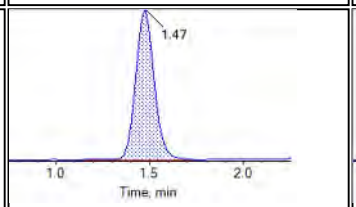
13C6-PFDA



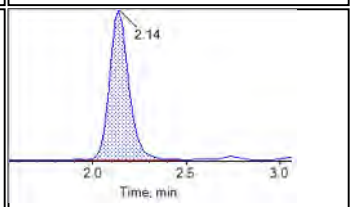
13C7-PFUnA



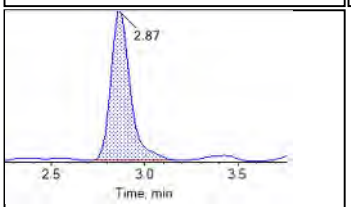
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:40 AM

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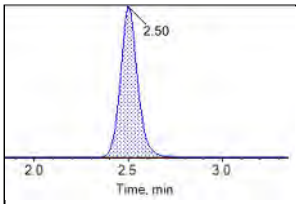
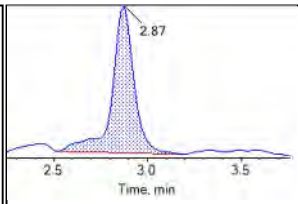
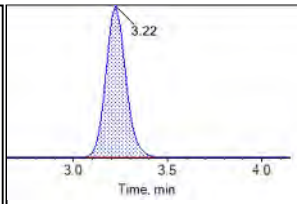


13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:45 AM

Sample Name	J6241-FS-D(6)	**Injection Vial**	39
Sample ID	FFTA_FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:12:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Chromatograms

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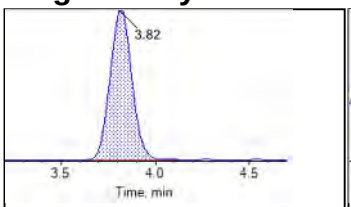
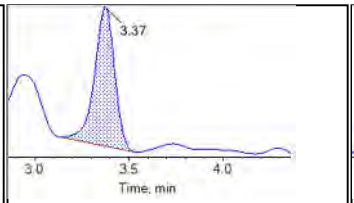
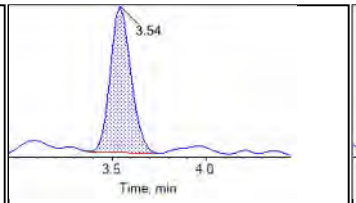


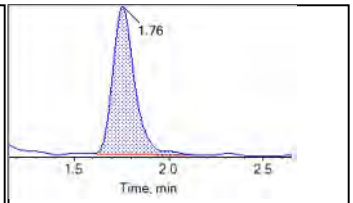
13C2-PFDoA



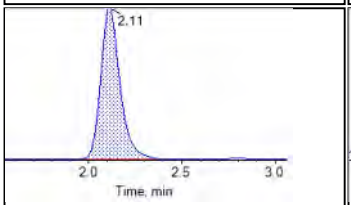
d3-MeFOSAA



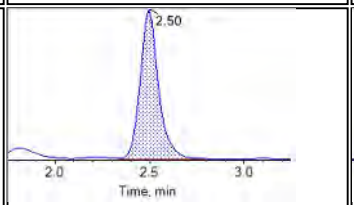
d5-EtFOSAA



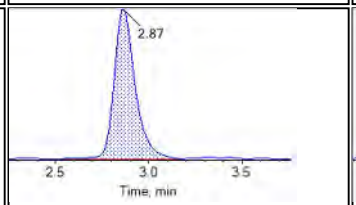
13C5-PFHxA



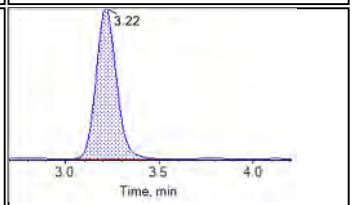
13C4-PFHpA



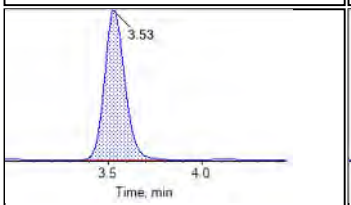
13C8-PFOA



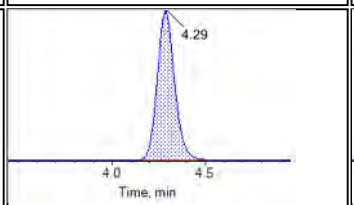
13C9-PFNA



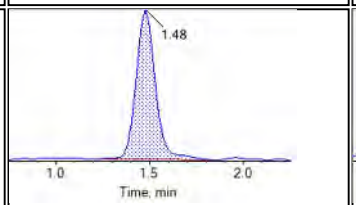
13C6-PFDA



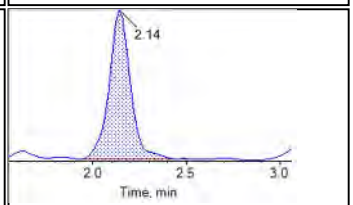
13C7-PFUnA



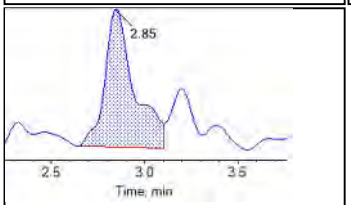
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

Created with Analyst Reporter
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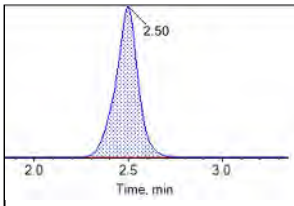
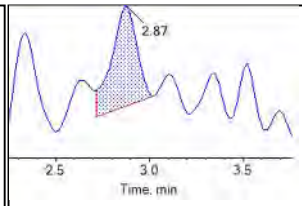
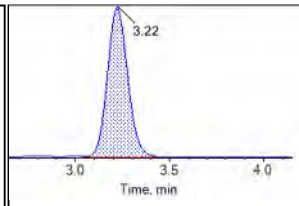
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:50 AM

Sample Name	J6241-FS-D(7)	**Injection Vial**	40
Sample ID	FFTA_FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:22:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Chromatograms

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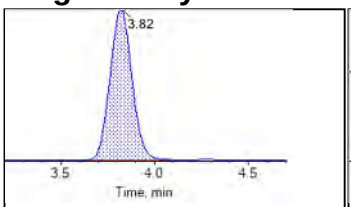
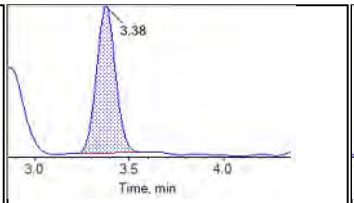
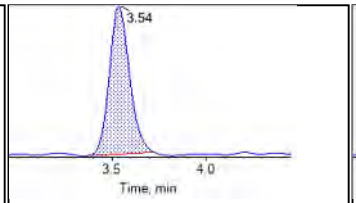


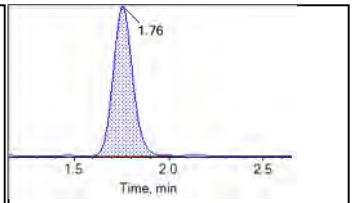
13C2-PFDoA



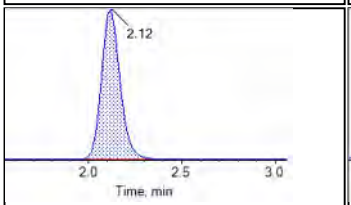
d3-MeFOSAA



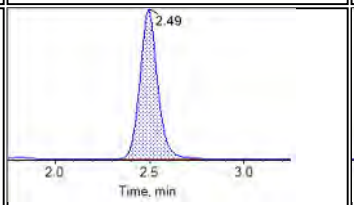
d5-EtFOSAA



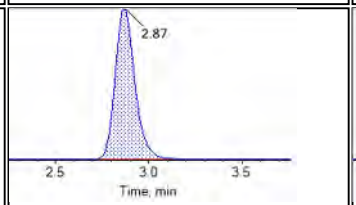
13C5-PFHxA



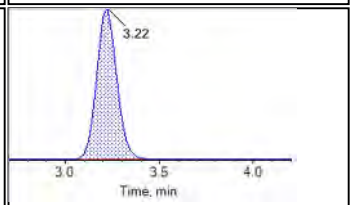
13C4-PFHpA



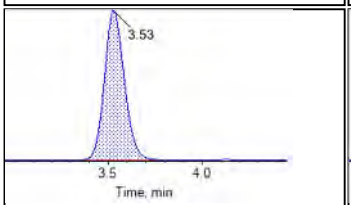
13C8-PFOA



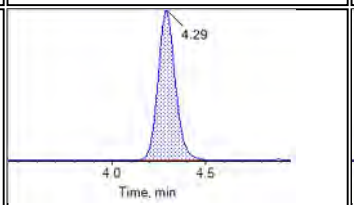
13C9-PFNA



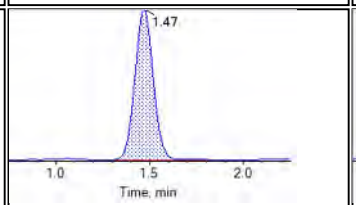
13C6-PFDA



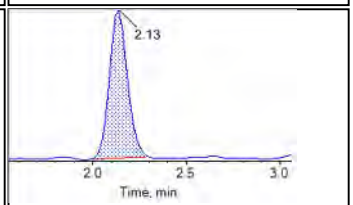
13C7-PFUnA



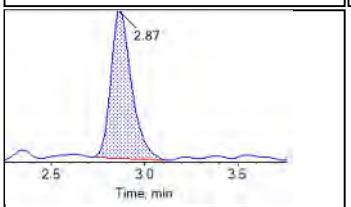
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:50 AM

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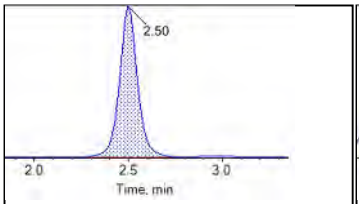
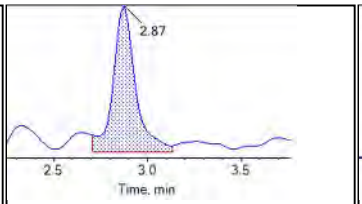
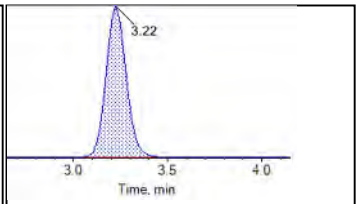


13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:13:55 AM

Sample Name	J6242-FS-D(6)	**Injection Vial**	41
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:44:26	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Chromatograms

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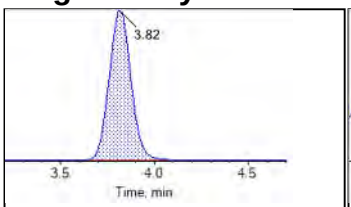
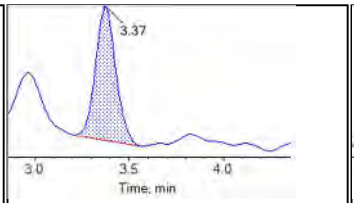
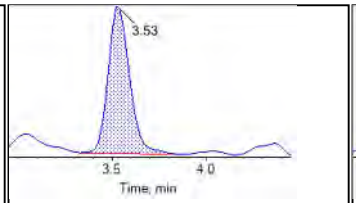


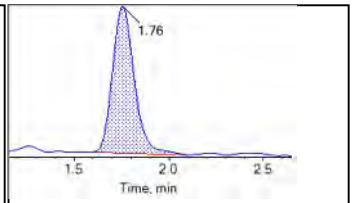
13C2-PFDoA



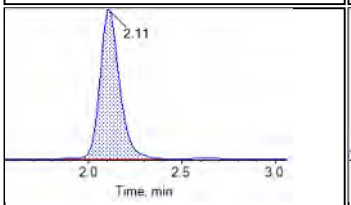
d3-MeFOSAA



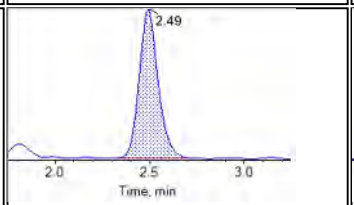
d5-EtFOSAA



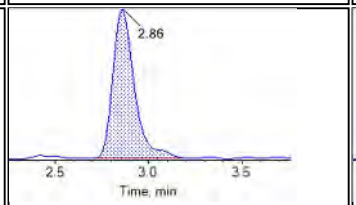
13C5-PFHxA



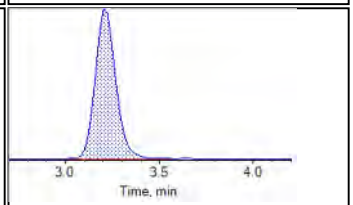
13C4-PFHpA



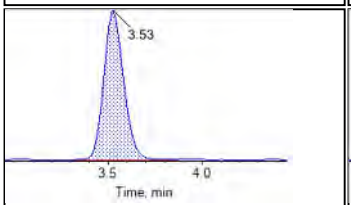
13C8-PFOA



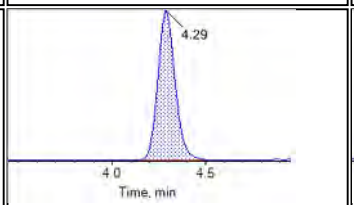
13C9-PFNA



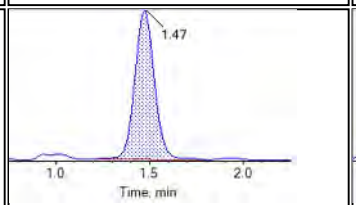
13C6-PFDA



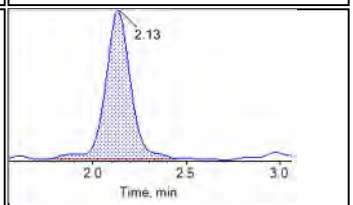
13C7-PFUnA



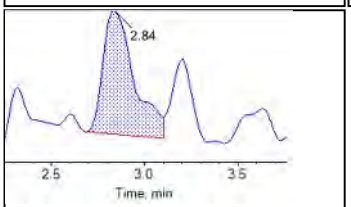
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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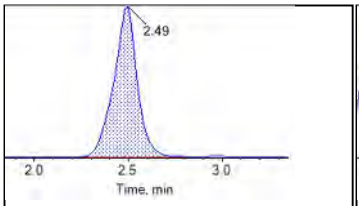
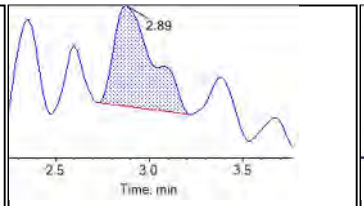
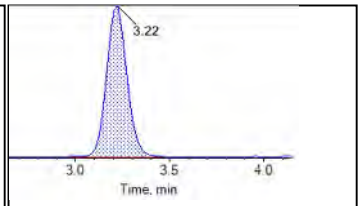


13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

Created with Analyst Reporter
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Sample Name	J6242-FS-D(7)	**Injection Vial**	42
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:55:13	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Chromatograms

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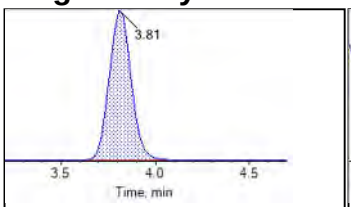
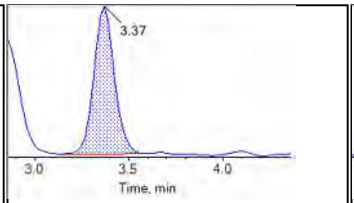
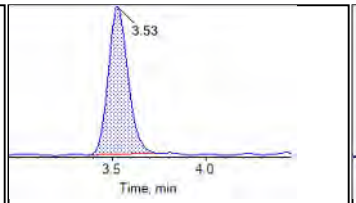


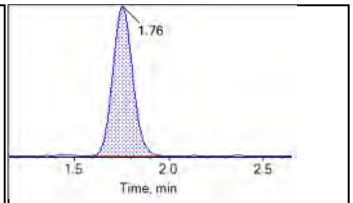
13C2-PFDoA



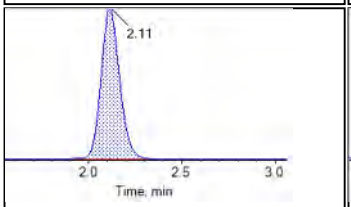
d3-MeFOSAA



d5-EtFOSAA



13C5-PFHxA



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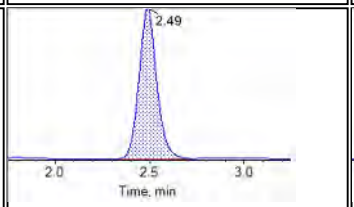
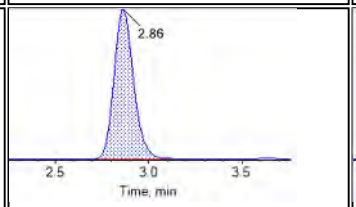
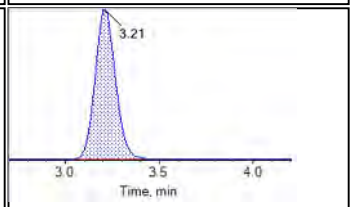


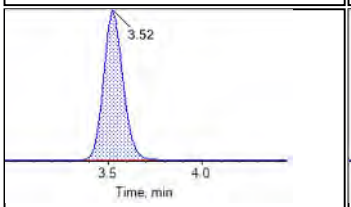
13C8-PFOA



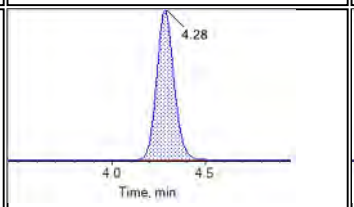
13C9-PFNA



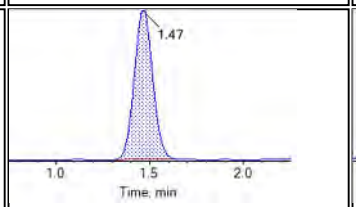
13C6-PFDA



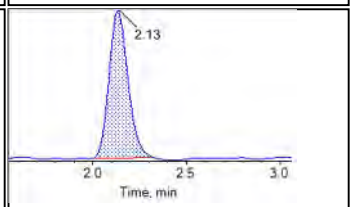
13C7-PFUnA



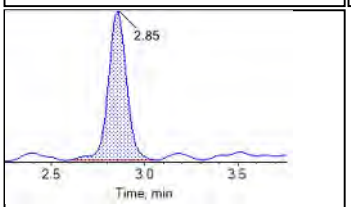
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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Printed: 08/06/2018 11:13:58 AM

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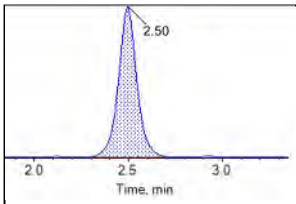
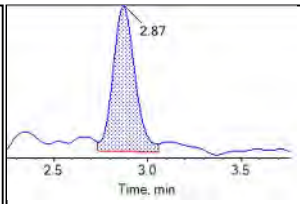
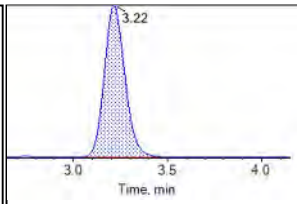


13C2-PFOA



13C4-PFOS



13C2-PFDA

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Chromatogram Report

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Printed: 08/06/2018 11:14:08 AM

Sample Name	JV25 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T05:38:23	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Chromatograms

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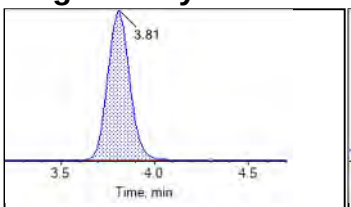
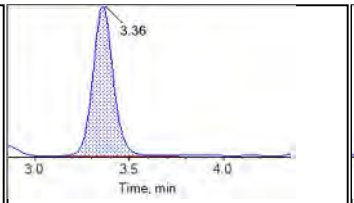
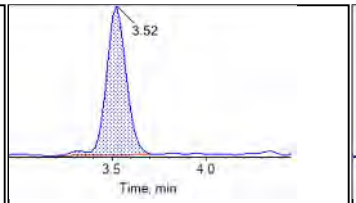


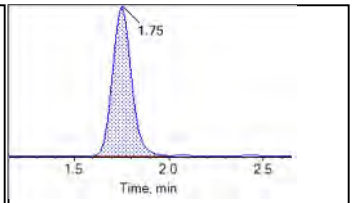
13C2-PFDoA



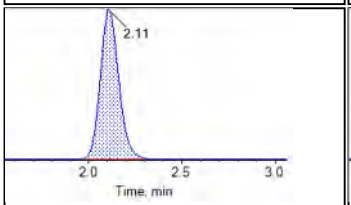
d3-MeFOSAA



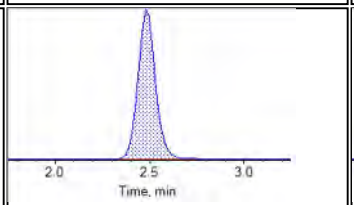
d5-EtFOSAA



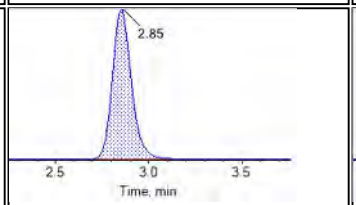
13C5-PFHxA



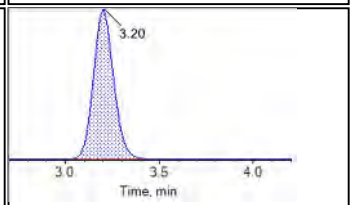
13C4-PFHpA



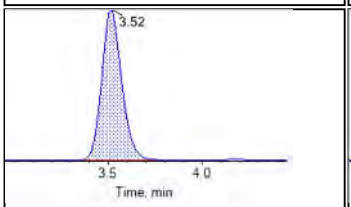
13C8-PFOA



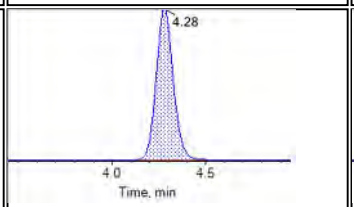
13C9-PFNA



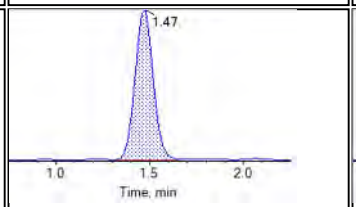
13C6-PFDA



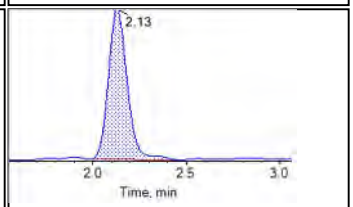
13C7-PFUnA



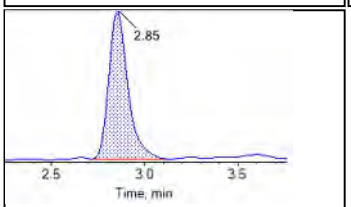
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Printed: 08/06/2018 11:14:08 AM

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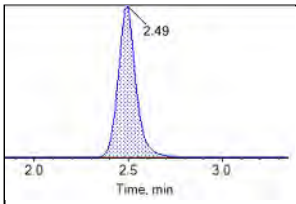
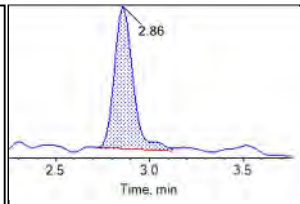
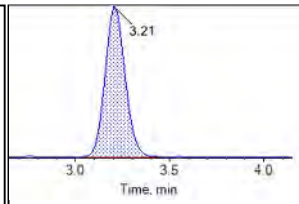


13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

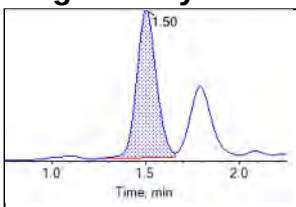
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:16:33 PM

Sample Name	JV20	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:34:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Chromatograms

Target Analytes:



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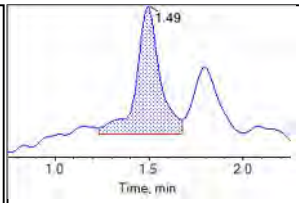
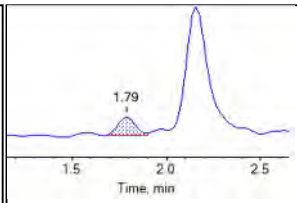
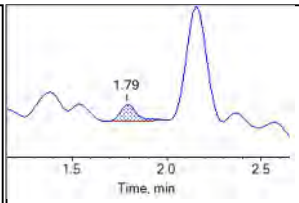


PFBS_2



PFHxA_1



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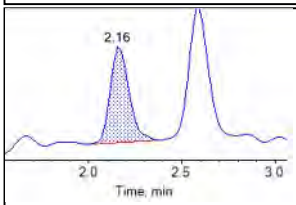

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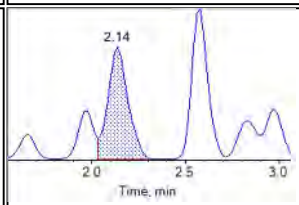

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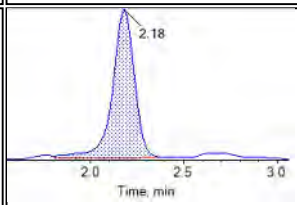

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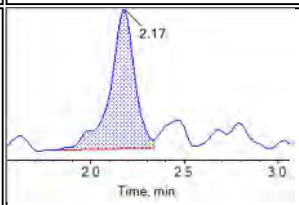

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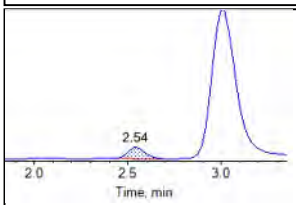

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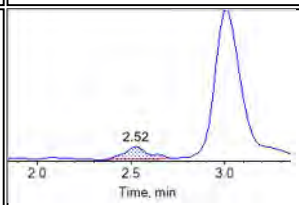

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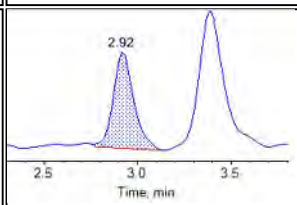

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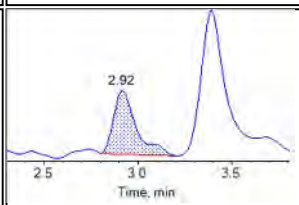

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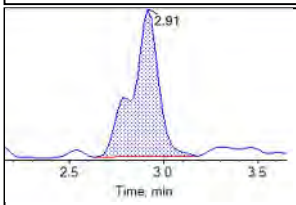

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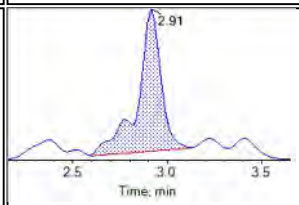

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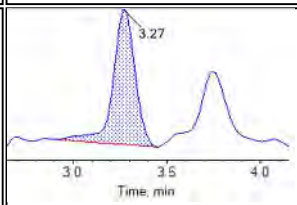

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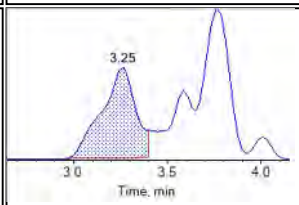

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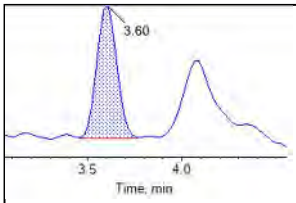

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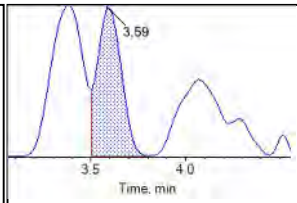

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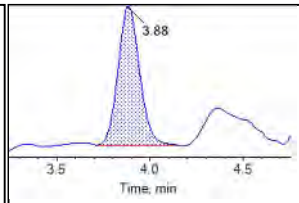

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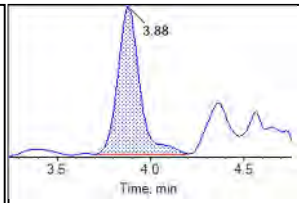

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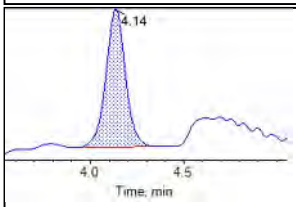

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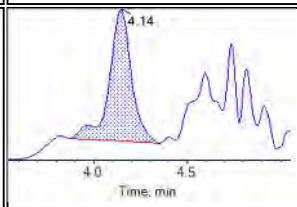

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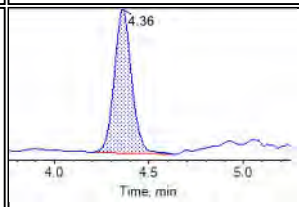

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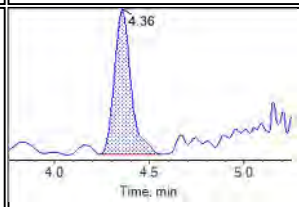

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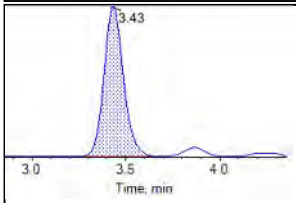

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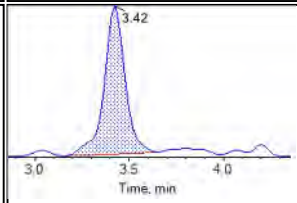

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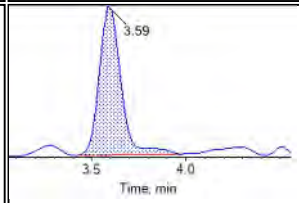

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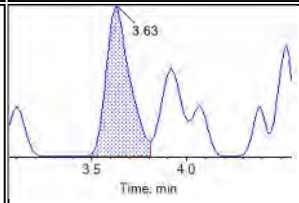

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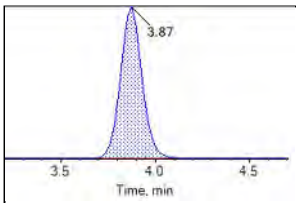

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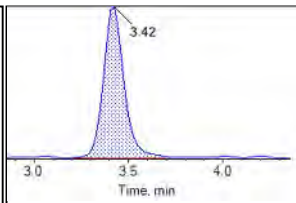

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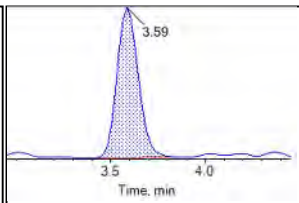

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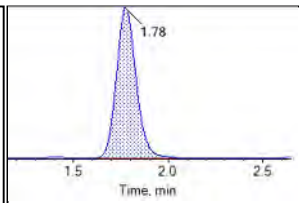

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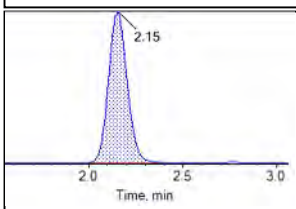

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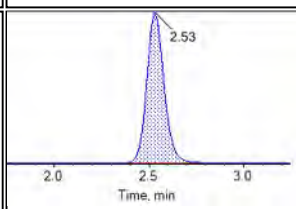

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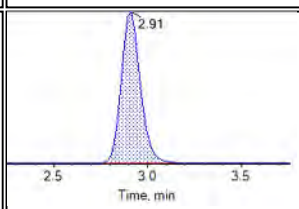

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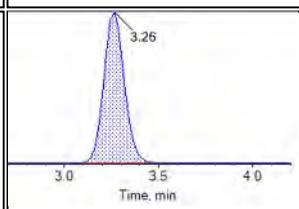

13C6-PFDA

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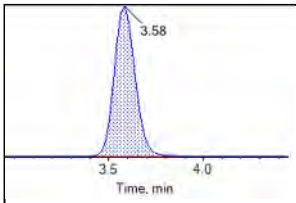

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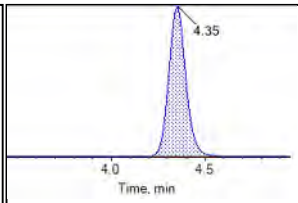

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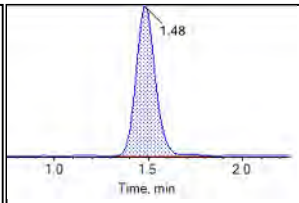

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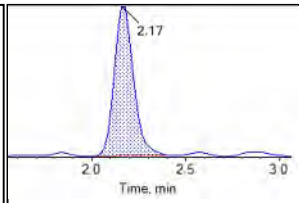

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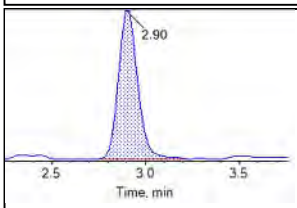

13C8-PFOS

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Chromatogram Report

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Sample Name	JV21	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:44:51	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Chromatograms

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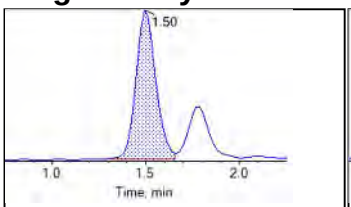

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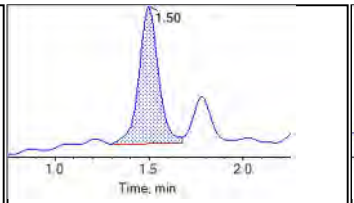

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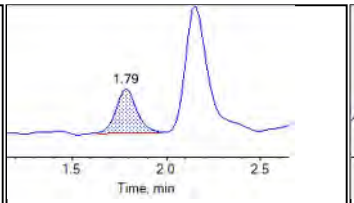

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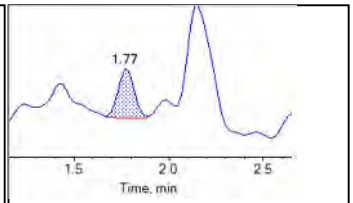

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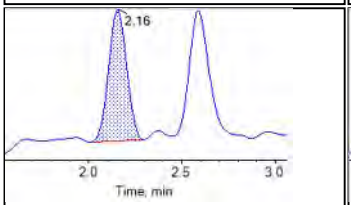

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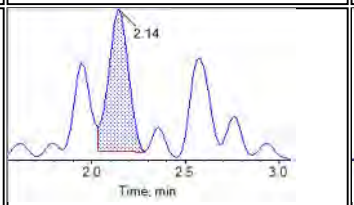

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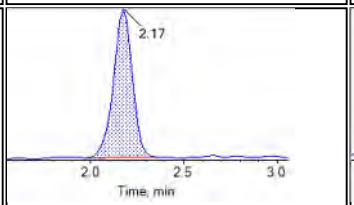

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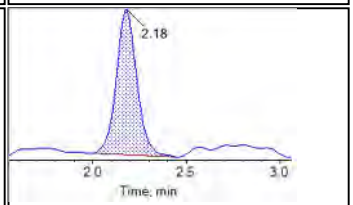

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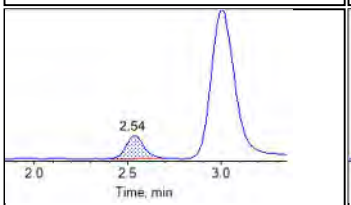

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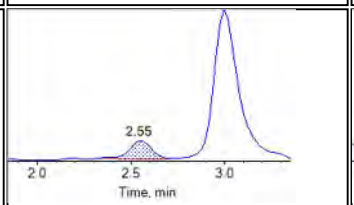

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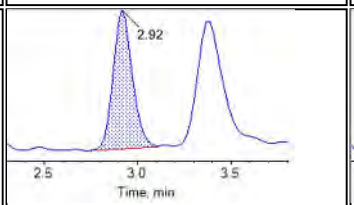

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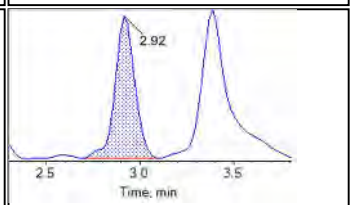

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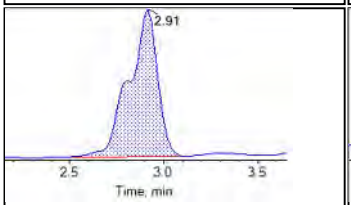

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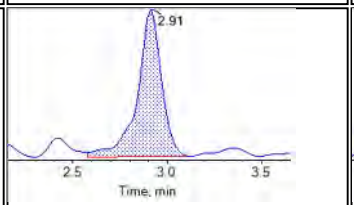

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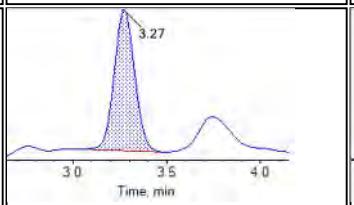

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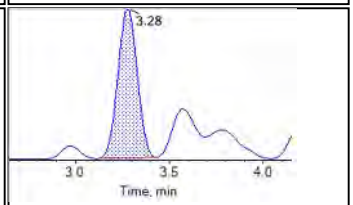

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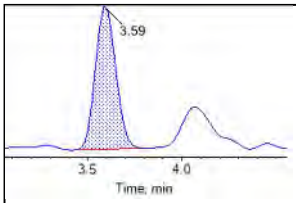

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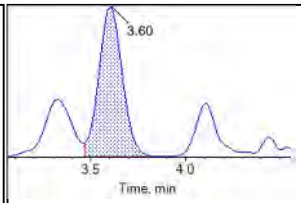

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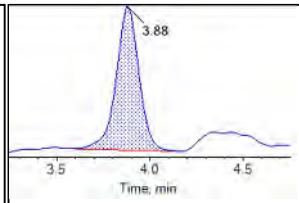

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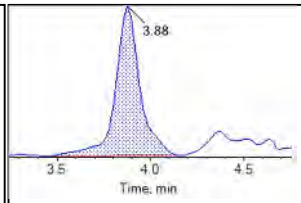

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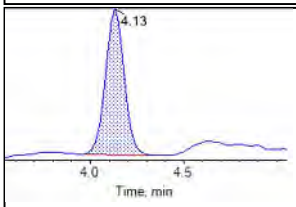

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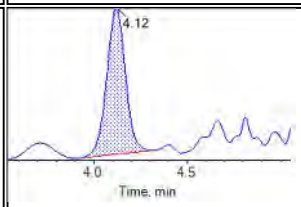

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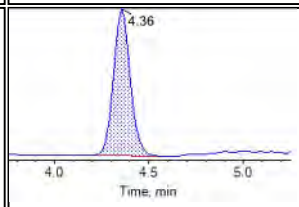

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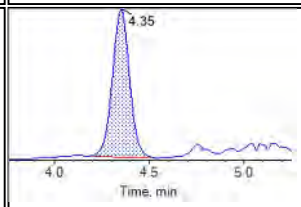

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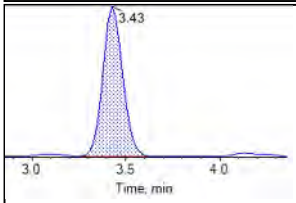

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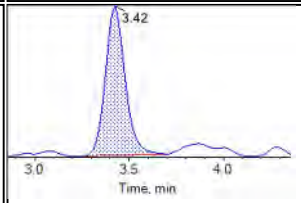

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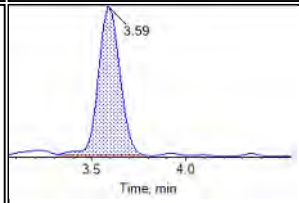

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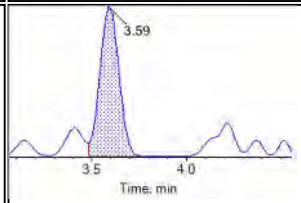

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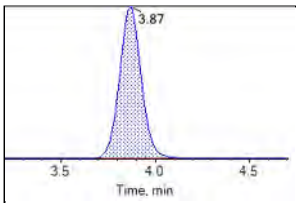

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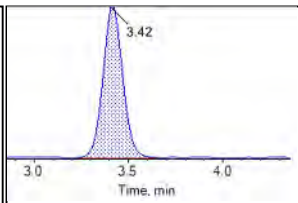

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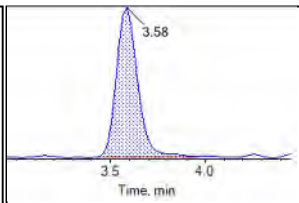

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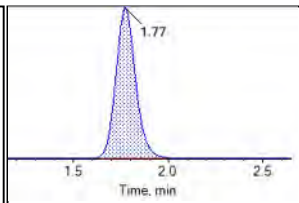

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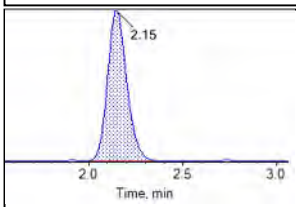

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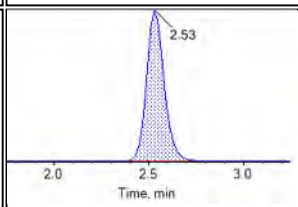

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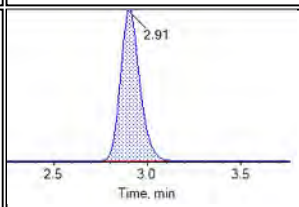

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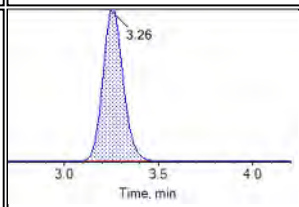

13C6-PFDA

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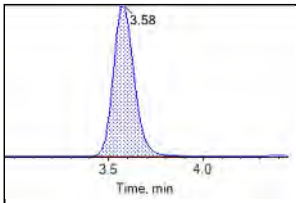

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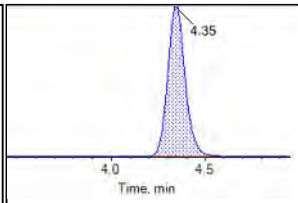

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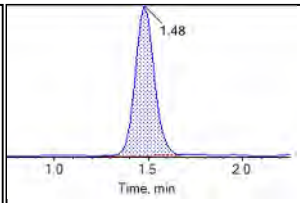

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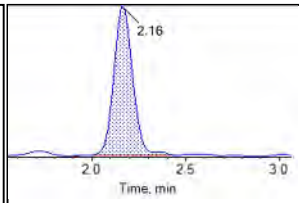

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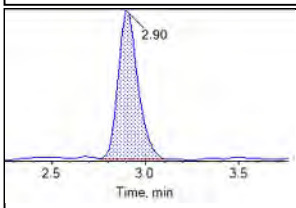

13C8-PFOS

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Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T19:55:39	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Chromatograms

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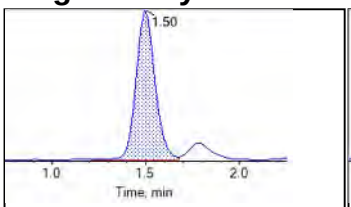

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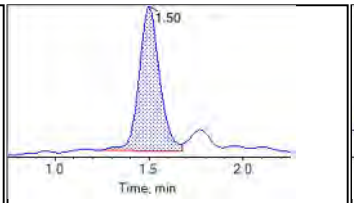

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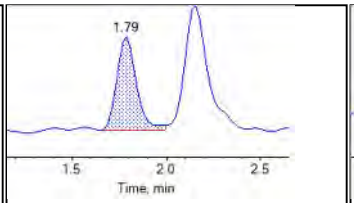

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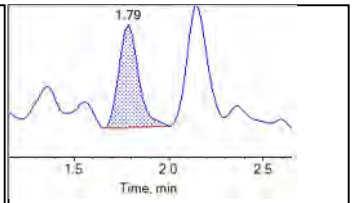

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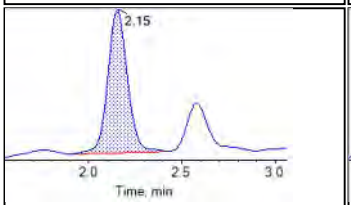

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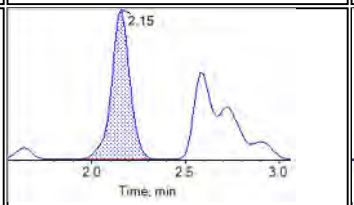

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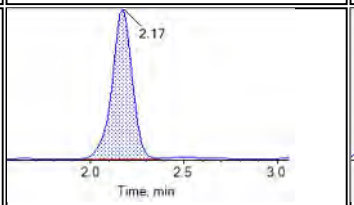

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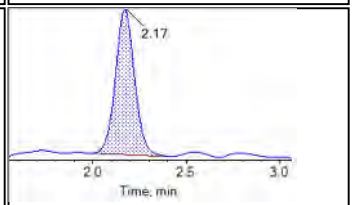

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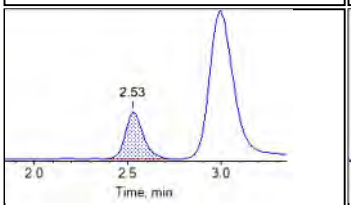

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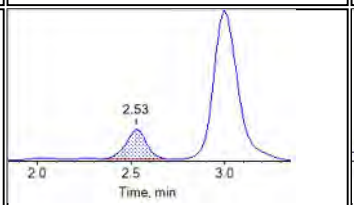

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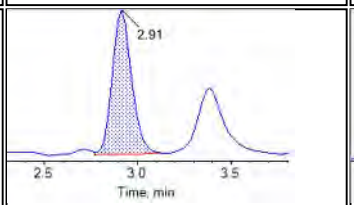

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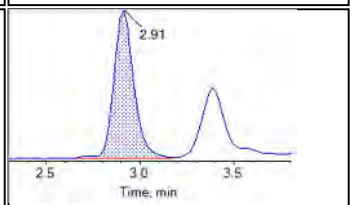

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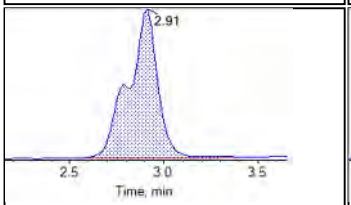

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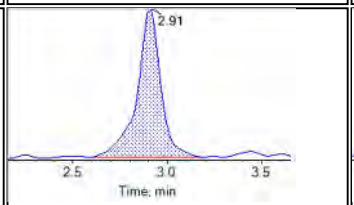

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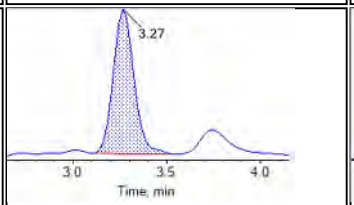

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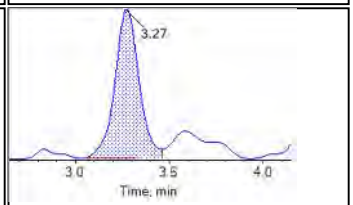

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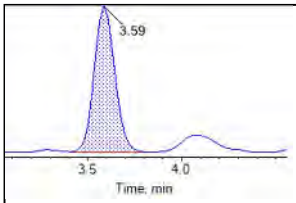

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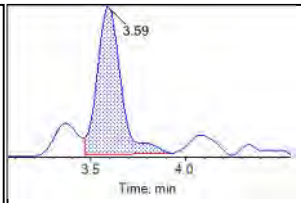

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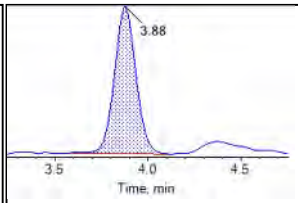

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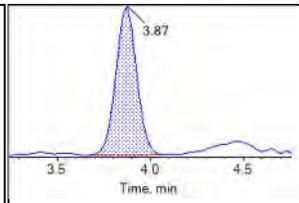

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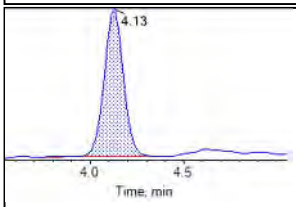

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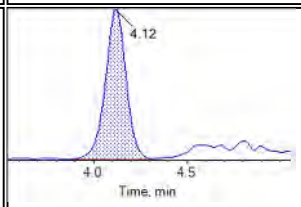

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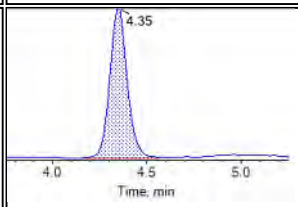

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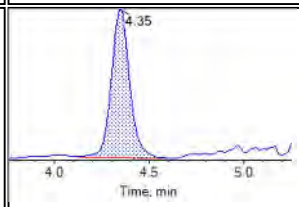

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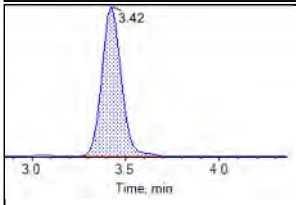

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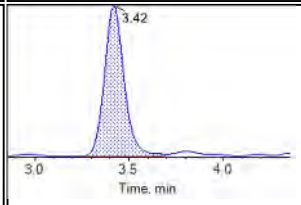

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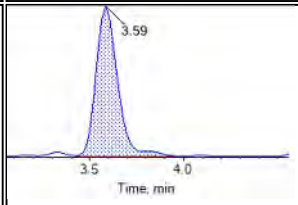

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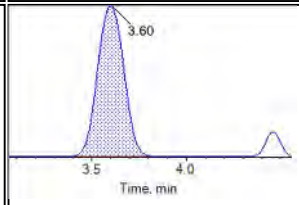

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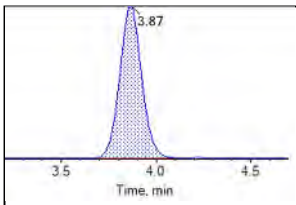
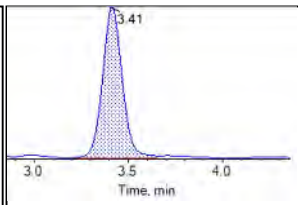


13C2-PFDoA



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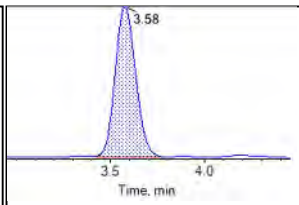

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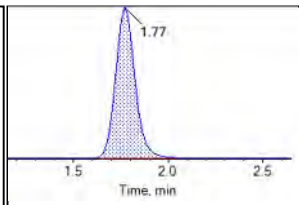

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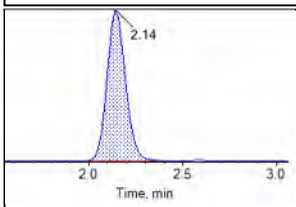

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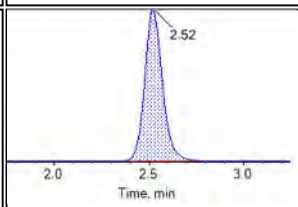
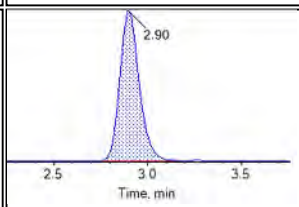
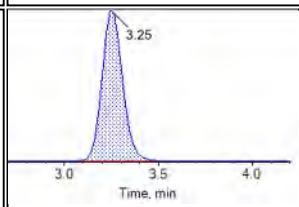


13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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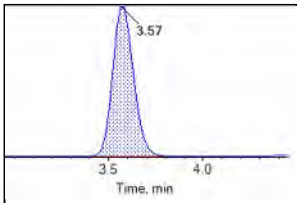
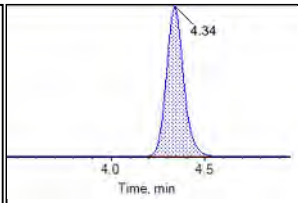


13C7-PFUnA



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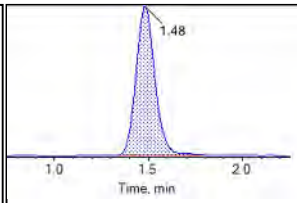
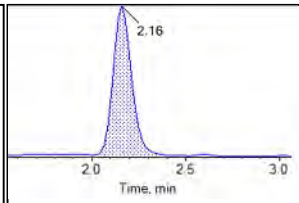


13C3-PFBS



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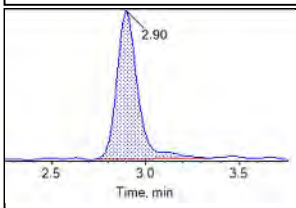

13C8-PFOS

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Chromatogram Report

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Printed: 08/06/2018 12:16:42 PM

Sample Name	JV23	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:06:27	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Chromatograms

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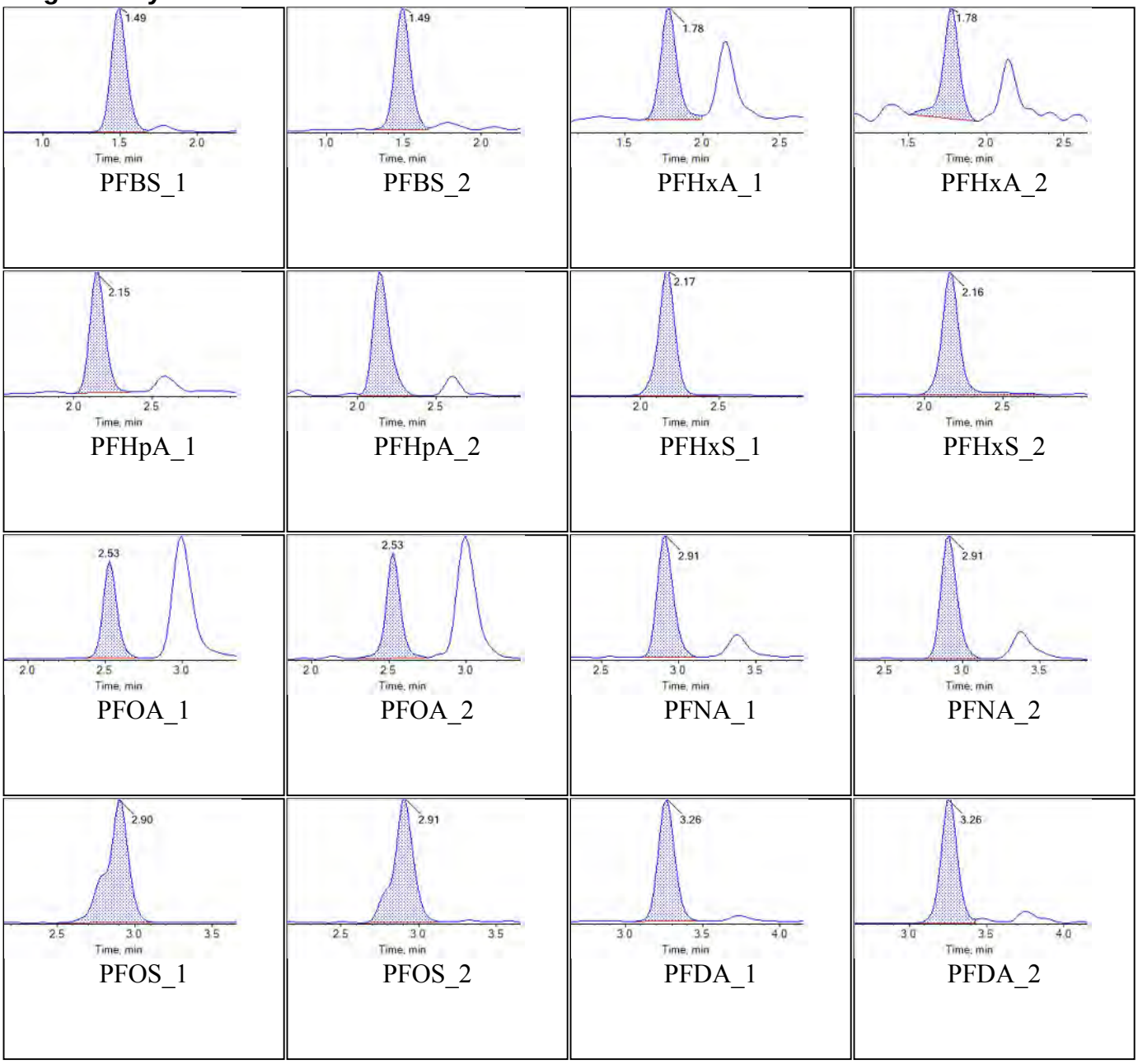

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Chromatogram Report

Created with Analyst Reporter
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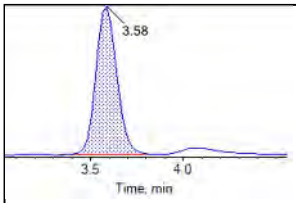

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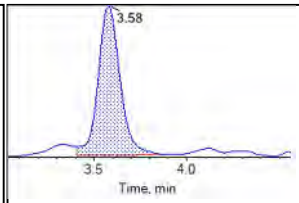

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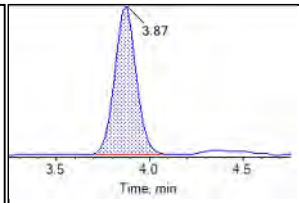

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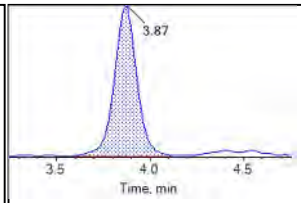

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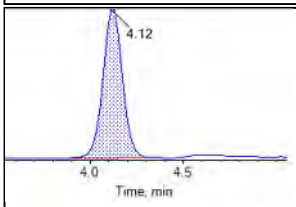

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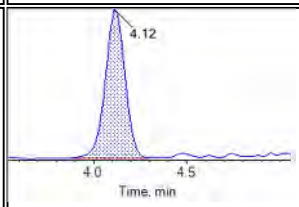

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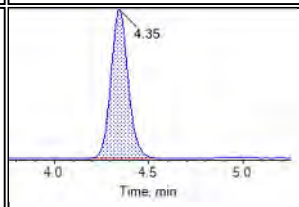

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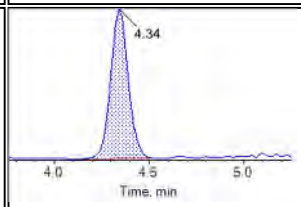

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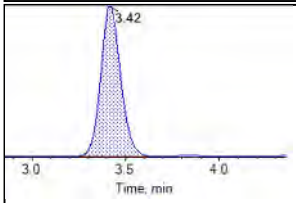

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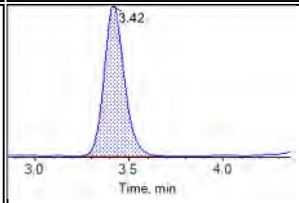

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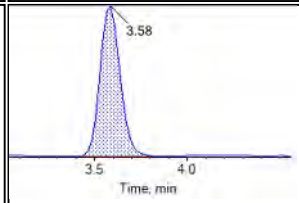

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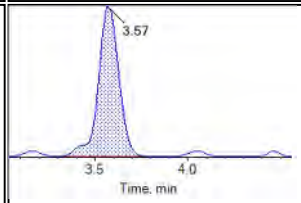

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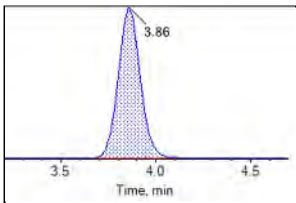

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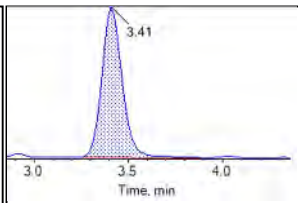
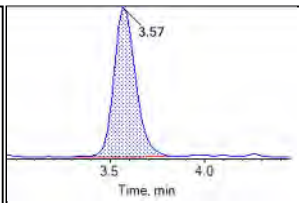
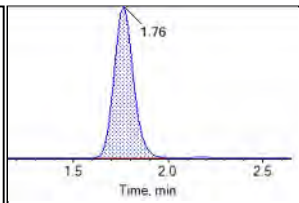


d3-MeFOSAA



d5-EtFOSAA



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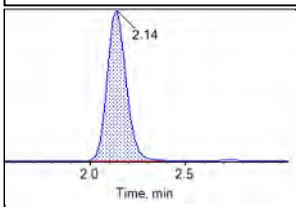

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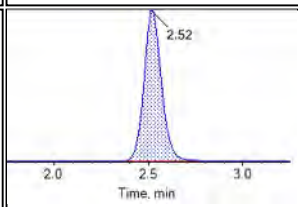
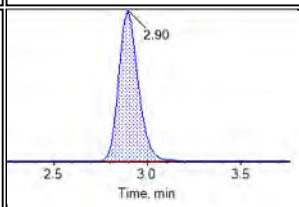
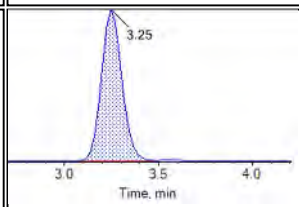


13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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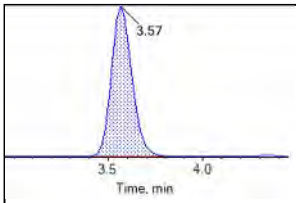
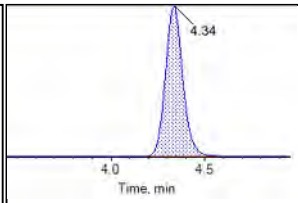
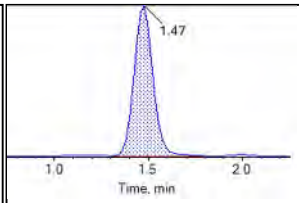


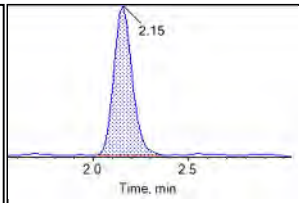
13C7-PFUnA



13C2-PFTeDA



13C3-PFBS



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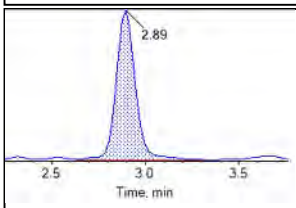

13C8-PFOS

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Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:16:45 PM

Sample Name	JV24	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:17:14	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Chromatograms

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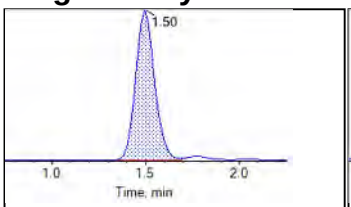

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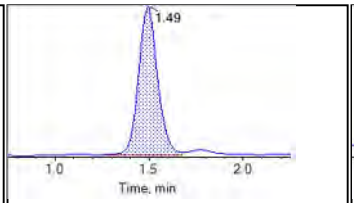
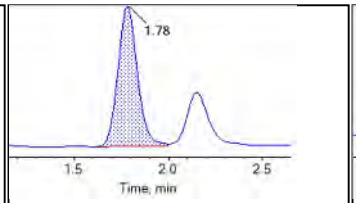
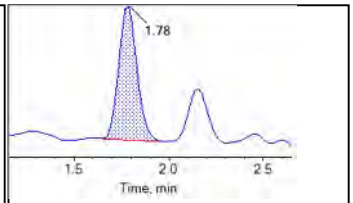


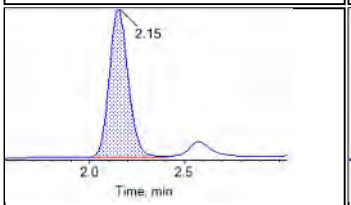
PFBS_2



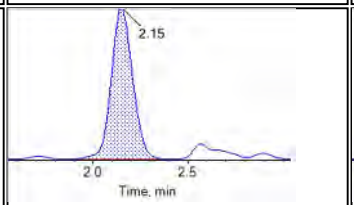
PFHxA_1



PFHxA_2



PFHpA_1



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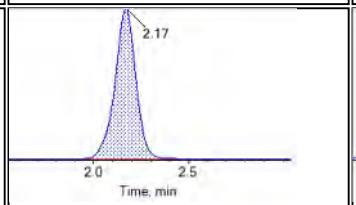

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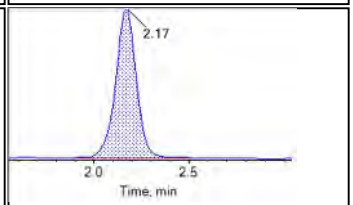

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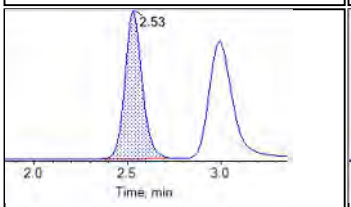

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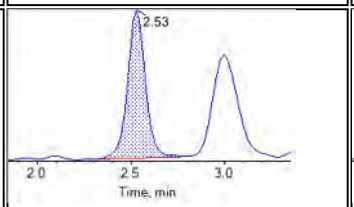

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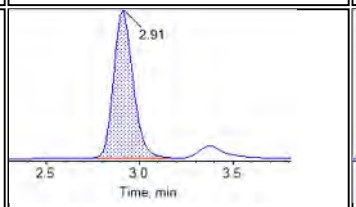

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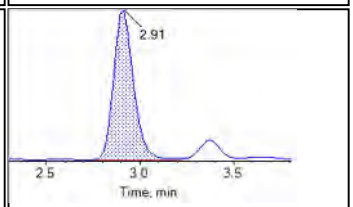

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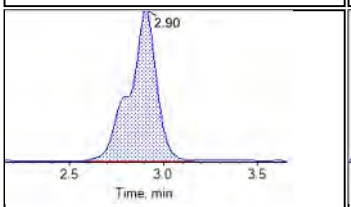

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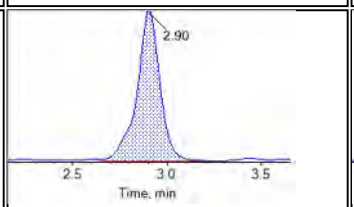

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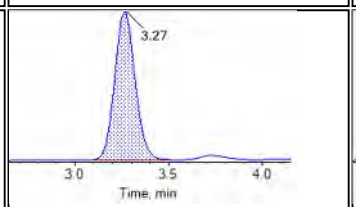

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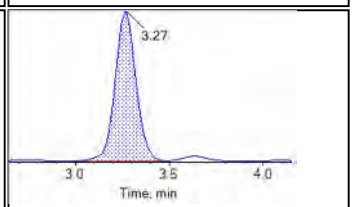

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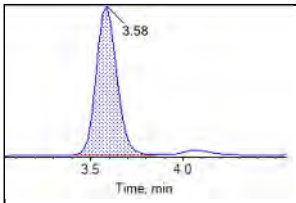

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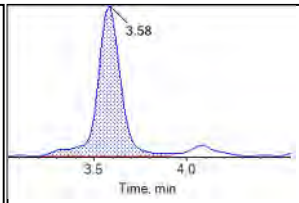

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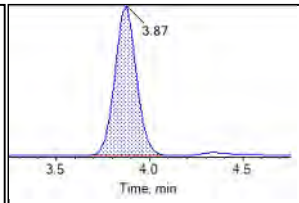

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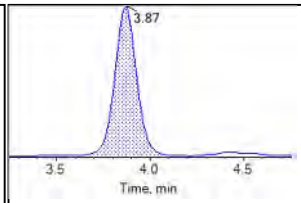

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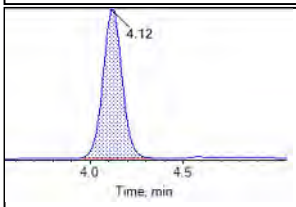

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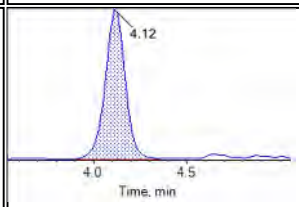

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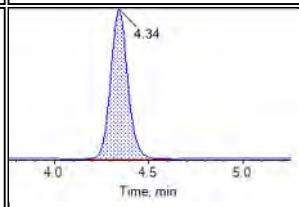

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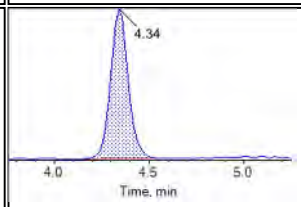

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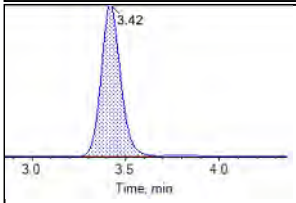

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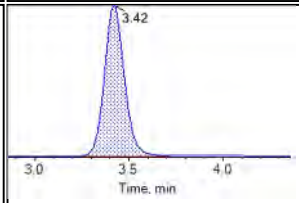

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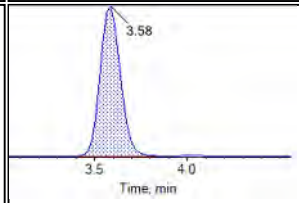

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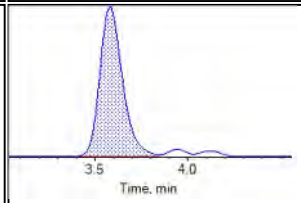

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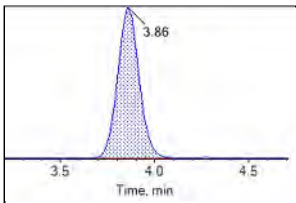

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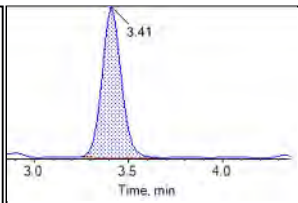

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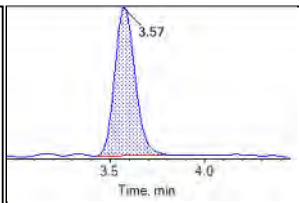

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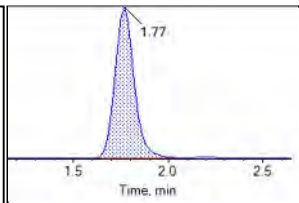

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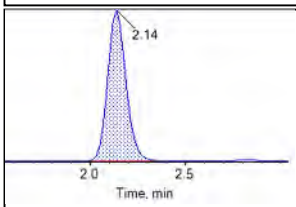

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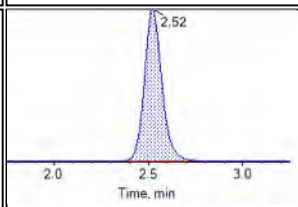

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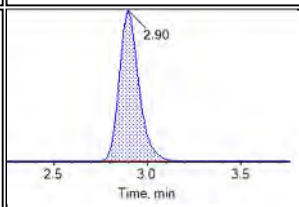

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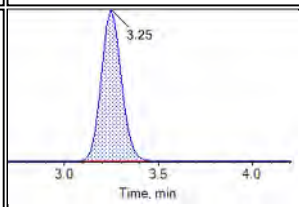

13C6-PFDA

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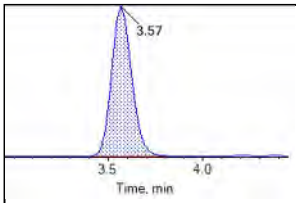
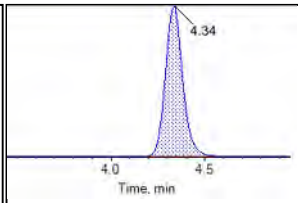


13C7-PFUnA



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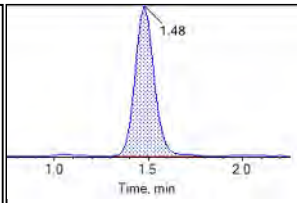

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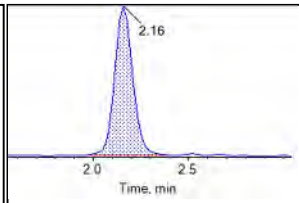

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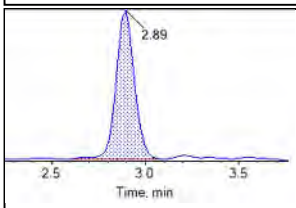

13C8-PFOS

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Sample Name	JV25	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:28:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Chromatograms

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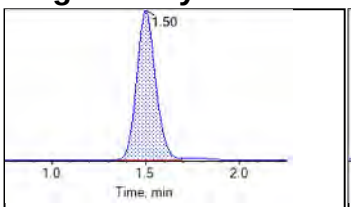

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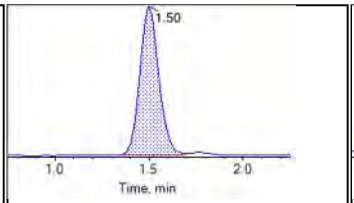

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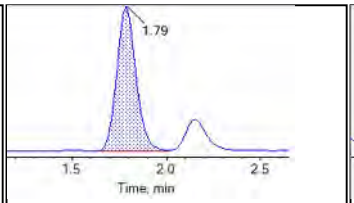

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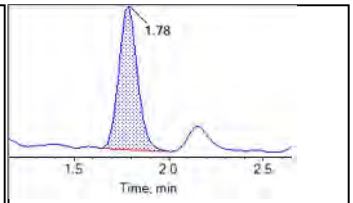

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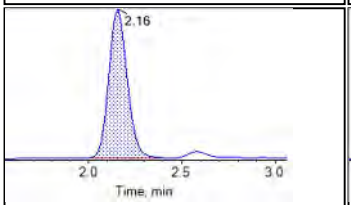

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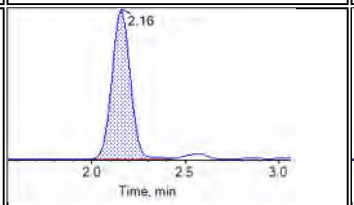

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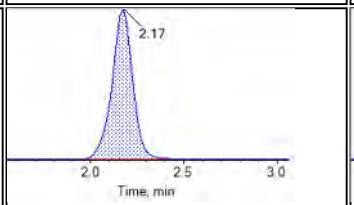

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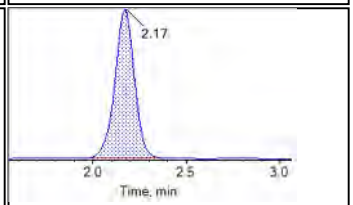

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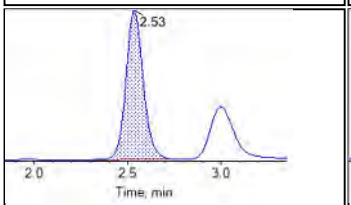

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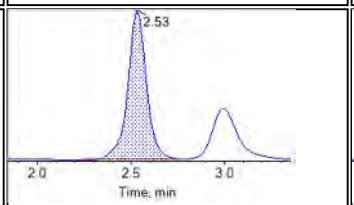

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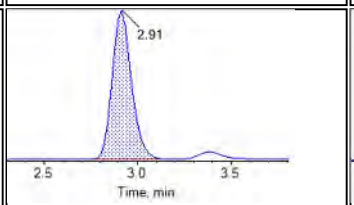

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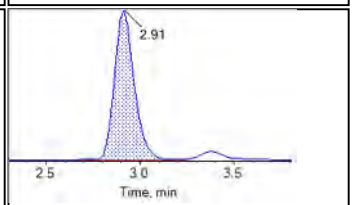

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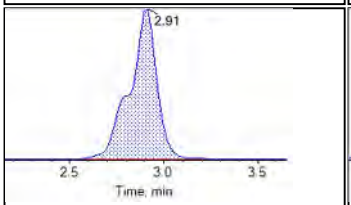

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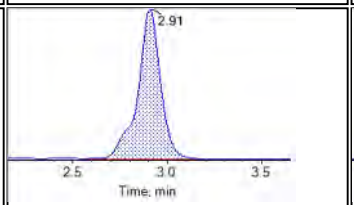

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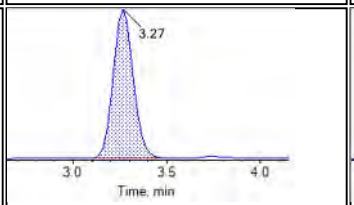

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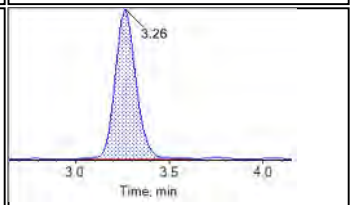

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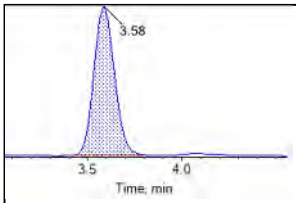

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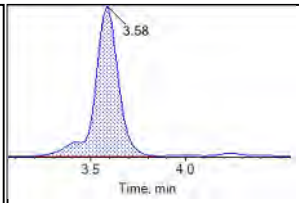

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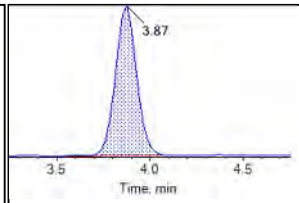

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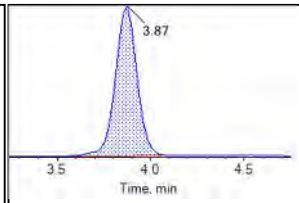

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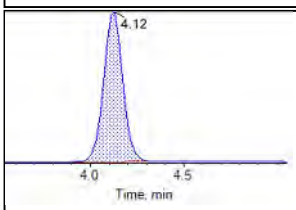

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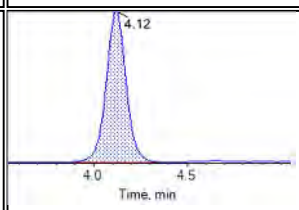

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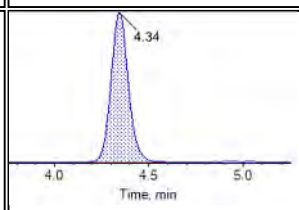

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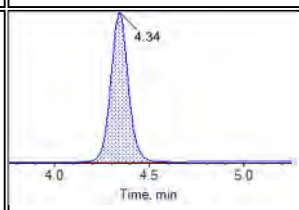

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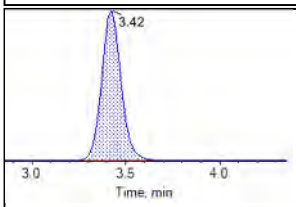

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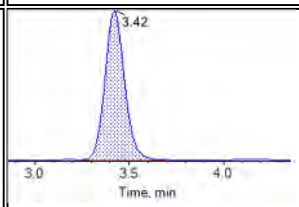

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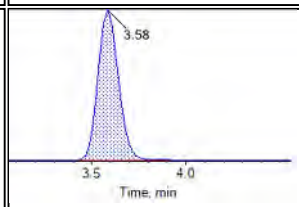

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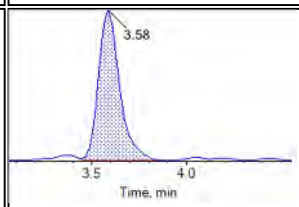

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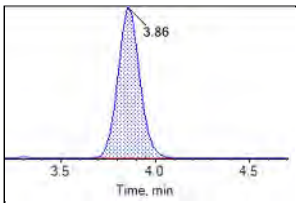

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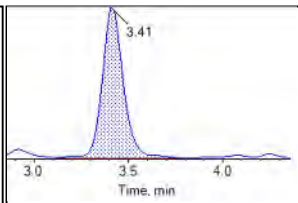

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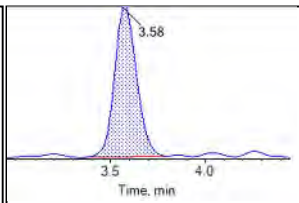

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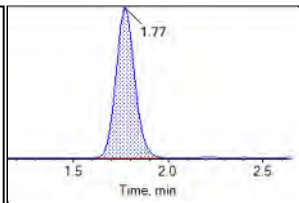

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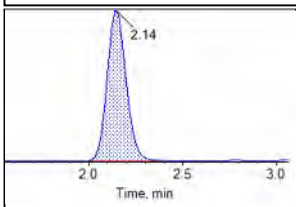

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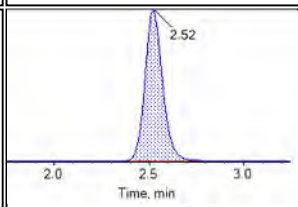

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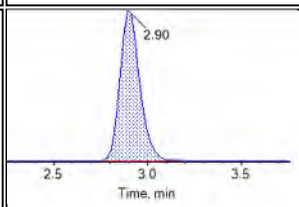

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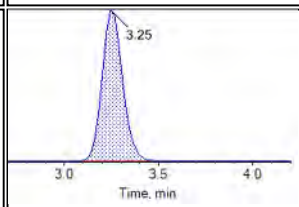

13C6-PFDA

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Chromatogram Report

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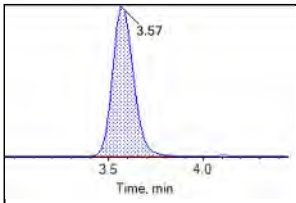

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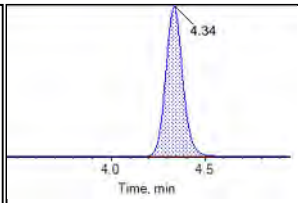

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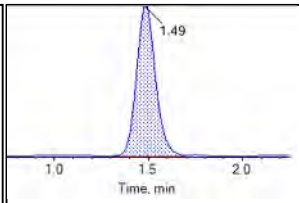

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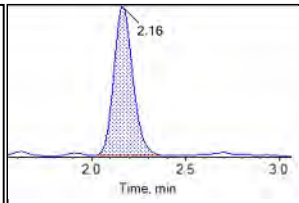

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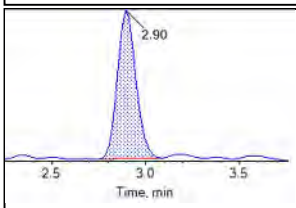

13C8-PFOS

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Chromatogram Report

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Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:38:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Chromatograms

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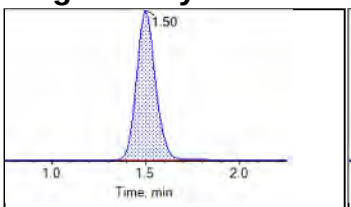

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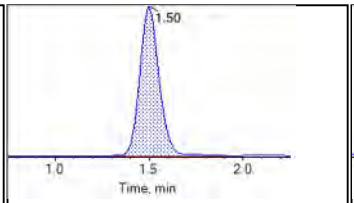

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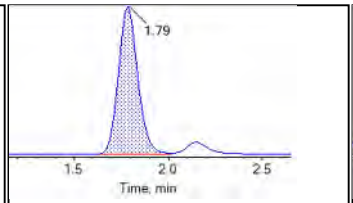

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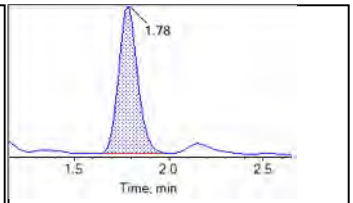

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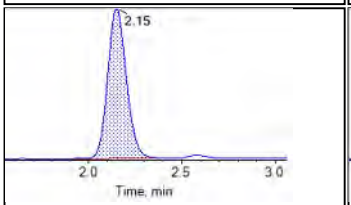

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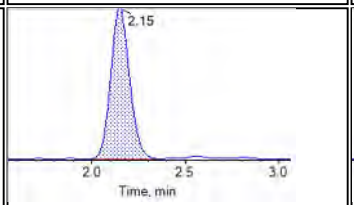

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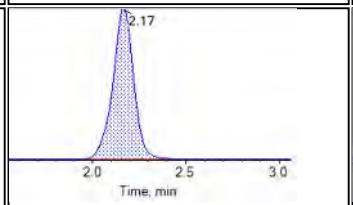

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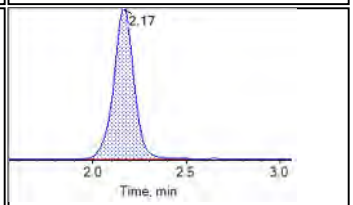

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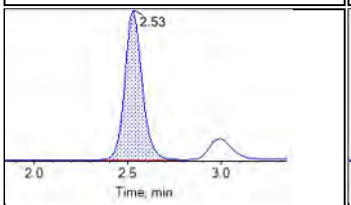

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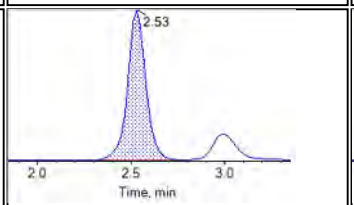

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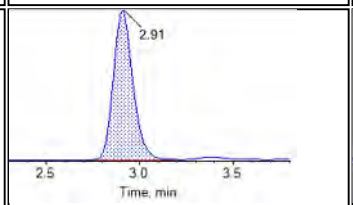

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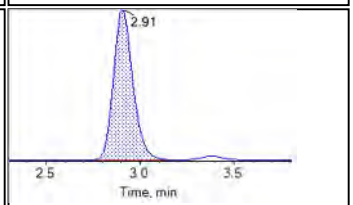

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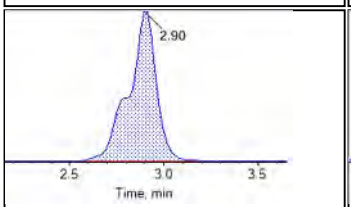

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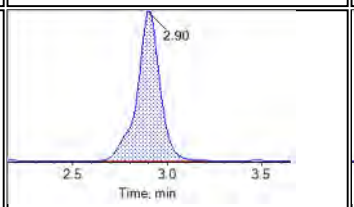

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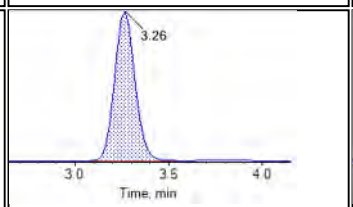

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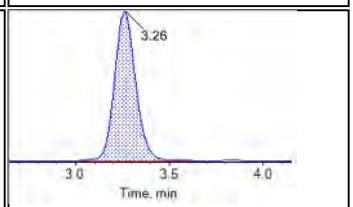

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Chromatogram Report

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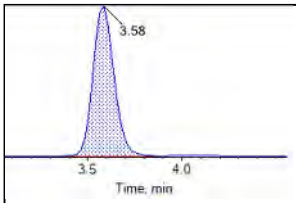

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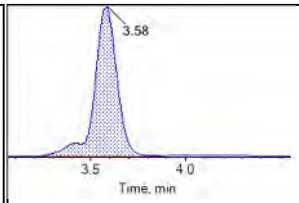

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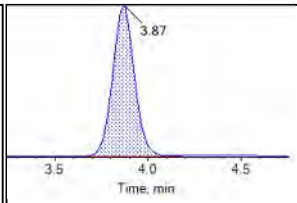

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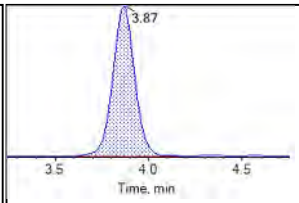

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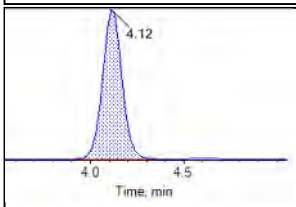

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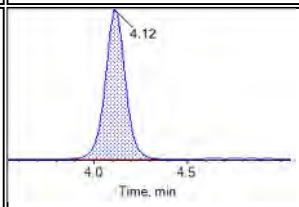

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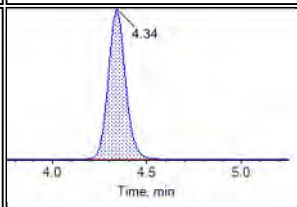

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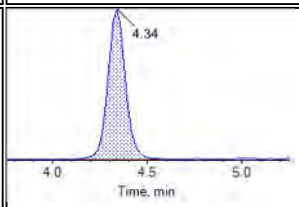

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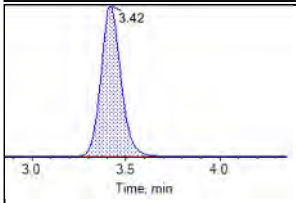

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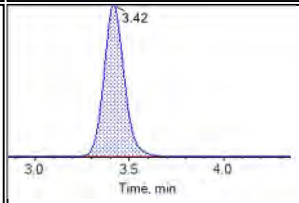

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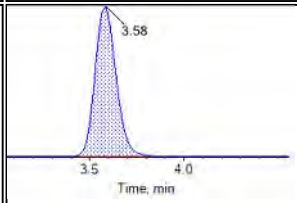

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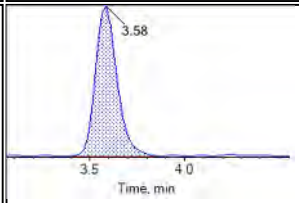

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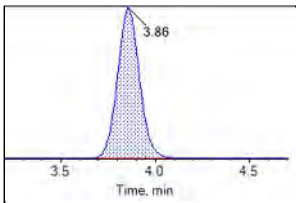
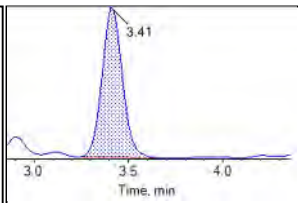


13C2-PFDoA



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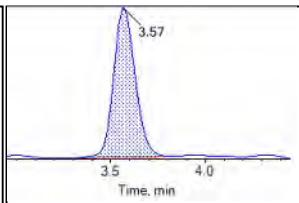

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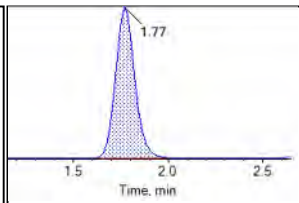

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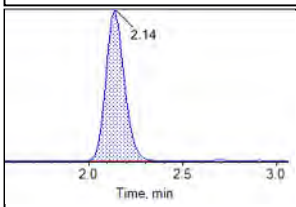

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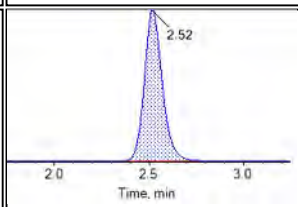

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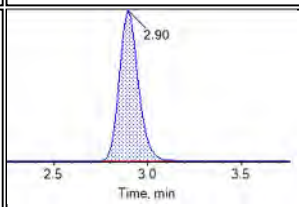

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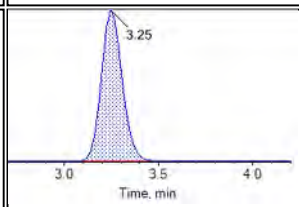

13C6-PFDA

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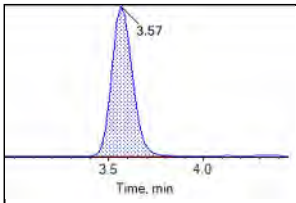
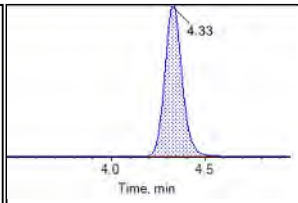


13C7-PFUnA



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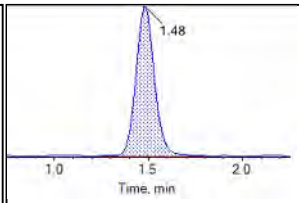
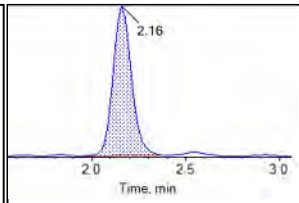


13C3-PFBS



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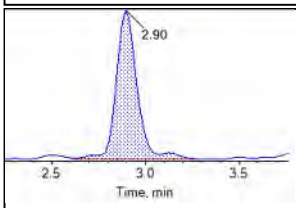

13C8-PFOS

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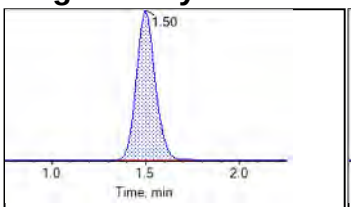
Sample Name	JV27	**Injection Vial**	9
Sample ID	L8	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T20:49:37	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Chromatograms

Target Analytes:



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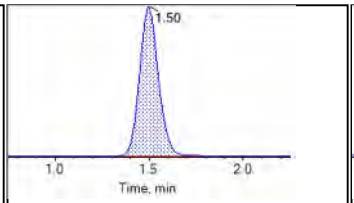

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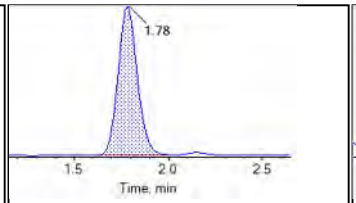

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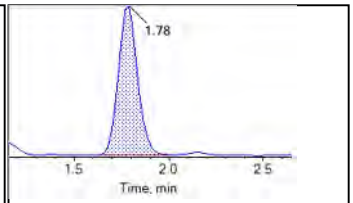

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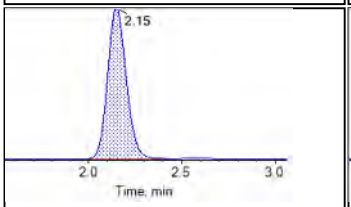

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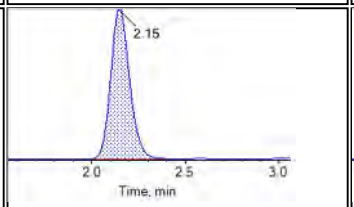

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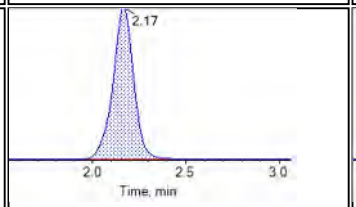

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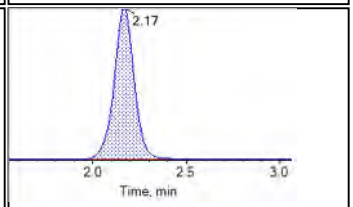

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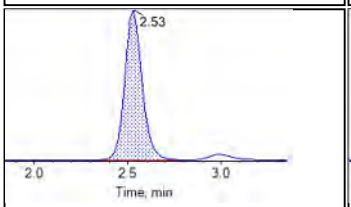

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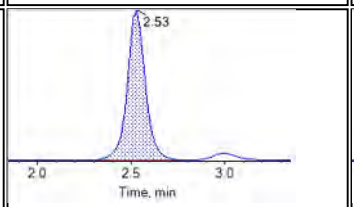

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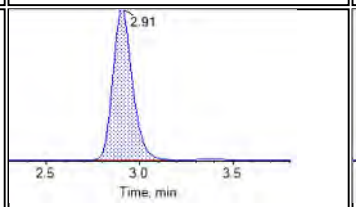

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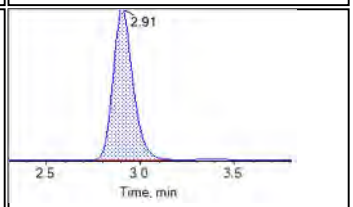

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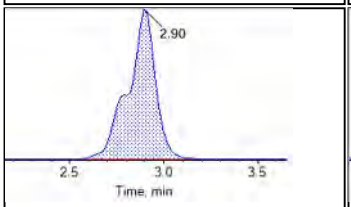

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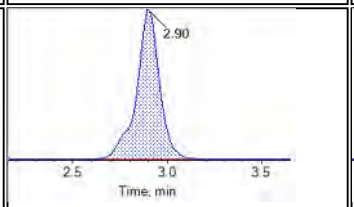

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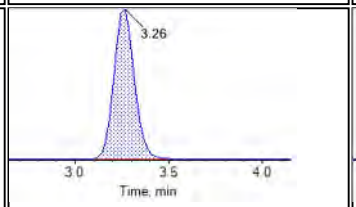

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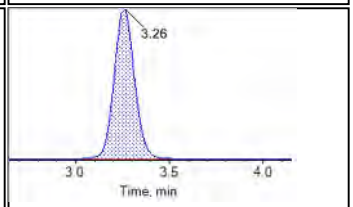

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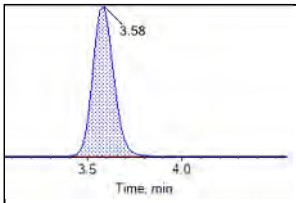

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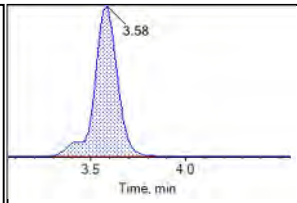

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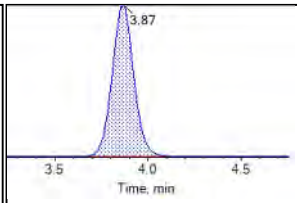

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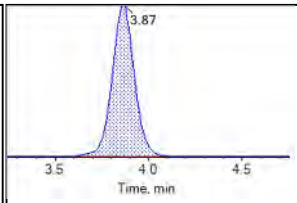

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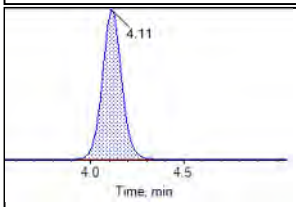

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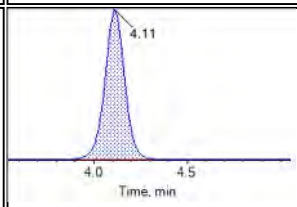

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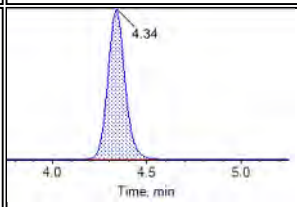

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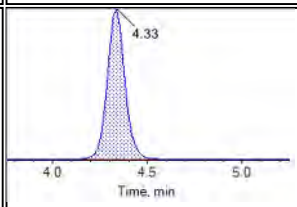

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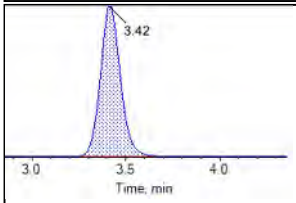

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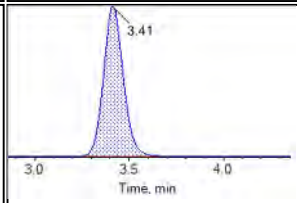

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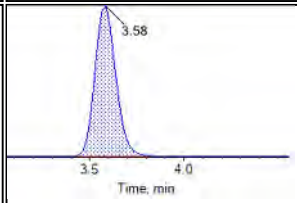

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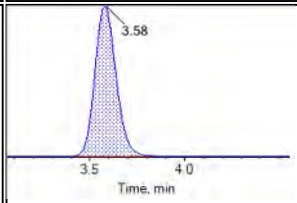

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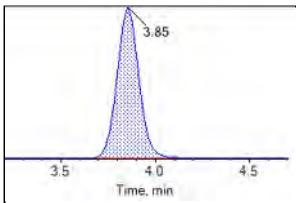

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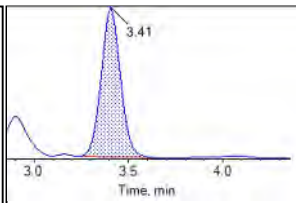

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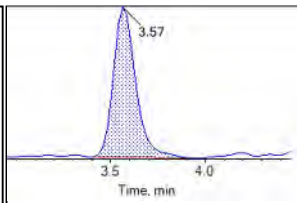

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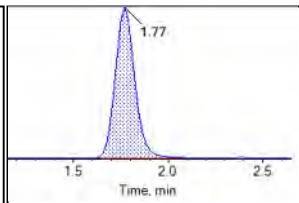

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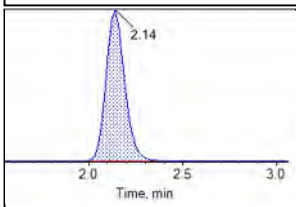

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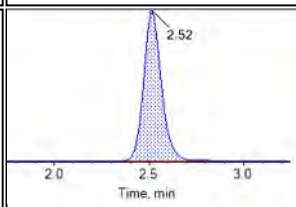

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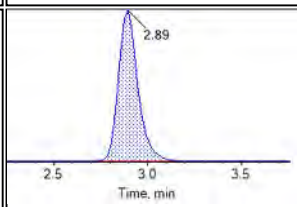

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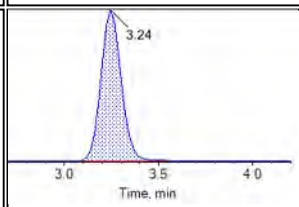

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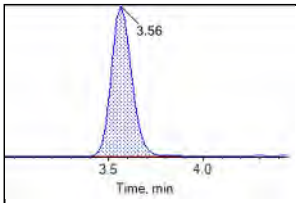

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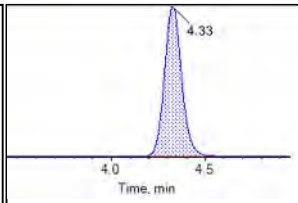

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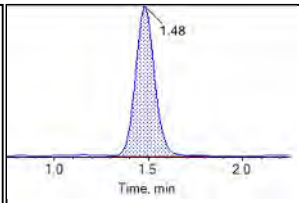
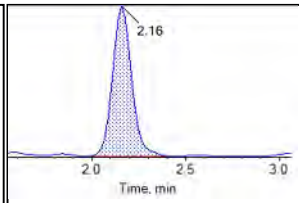
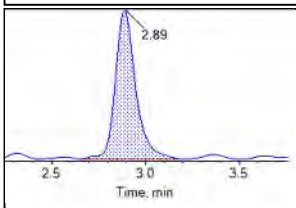


13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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Sample Name	JV28	**Injection Vial**	10
Sample ID	L9	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:00:25	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Chromatograms

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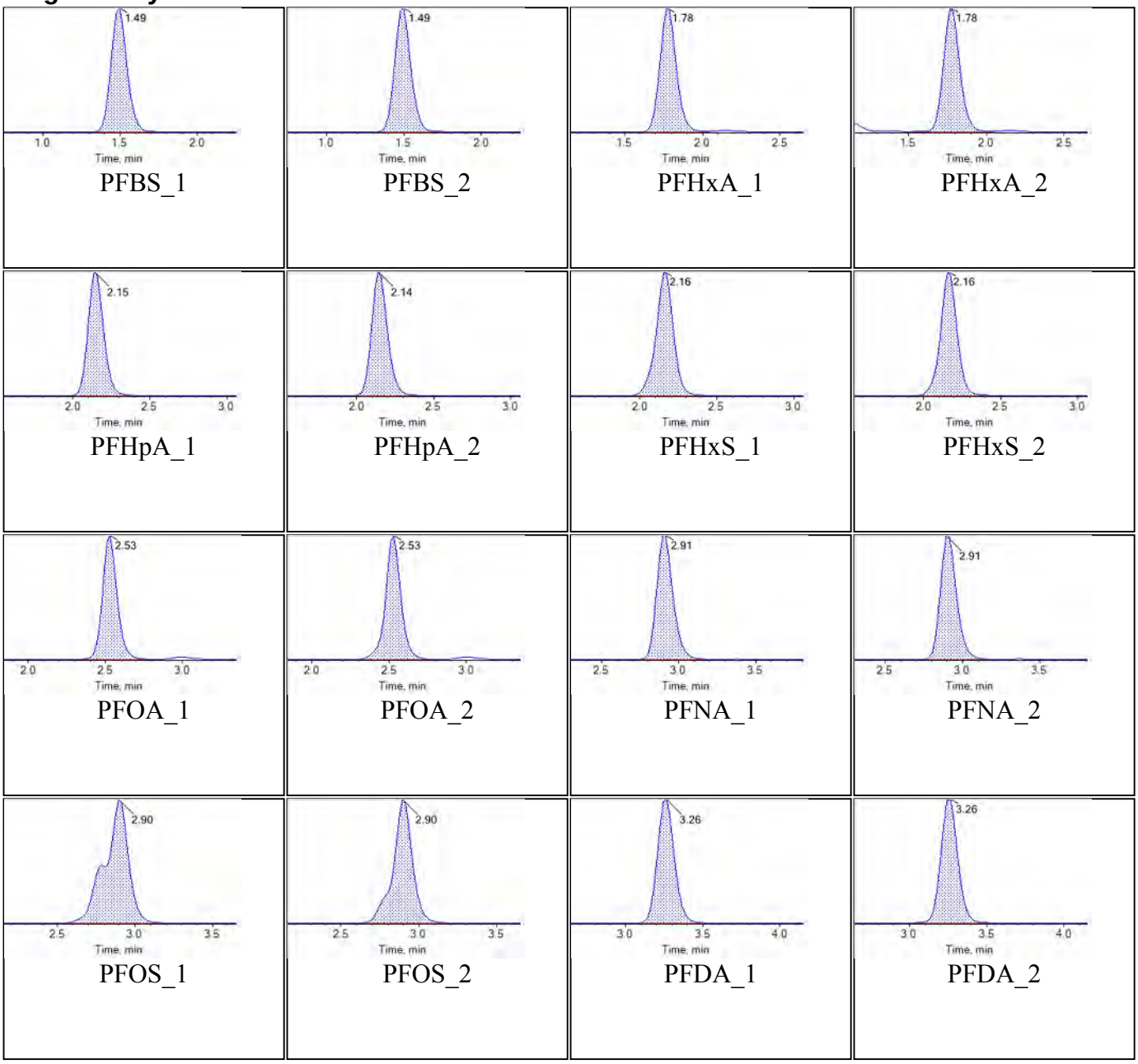

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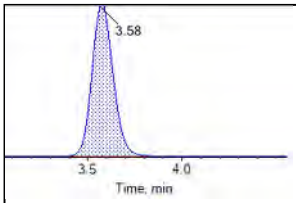
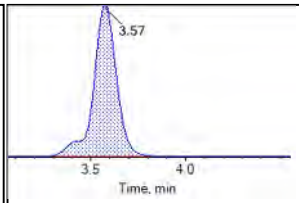
Chromatogram Report

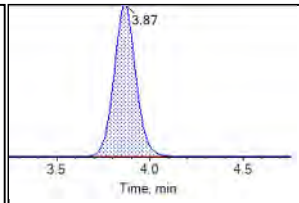
Created with Analyst Reporter
Printed: 08/06/2018 12:16:57 PM



PFUnA_1



PFUnA_2



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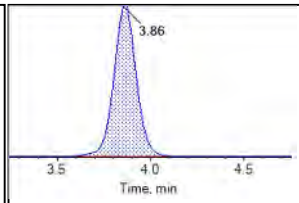
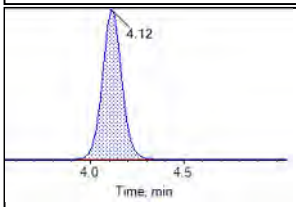
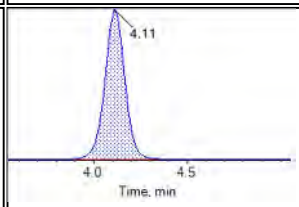


PFDoA_2



PFTrDA_1



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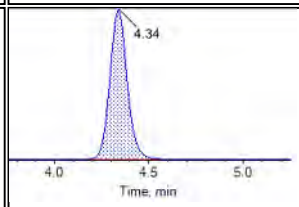

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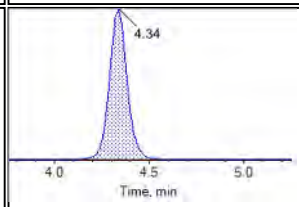

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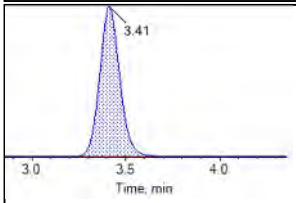

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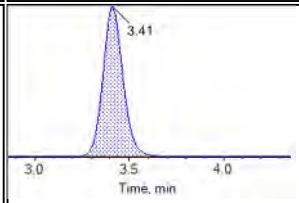

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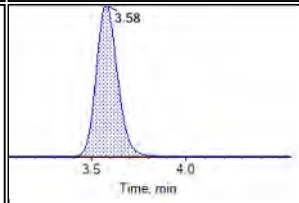

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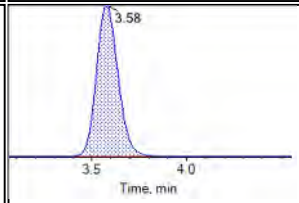
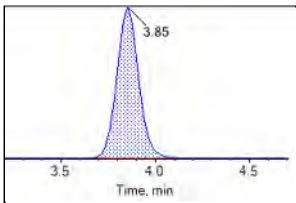
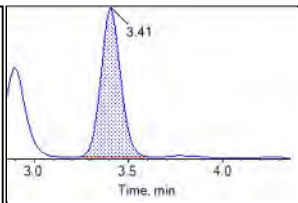


NEtFOSAA_2

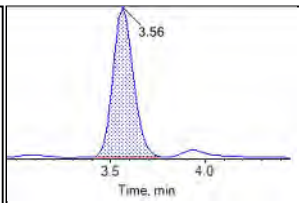
Internal Standards:



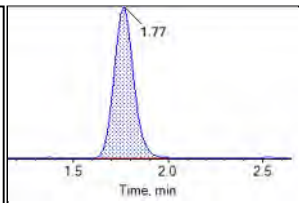
13C2-PFDoA



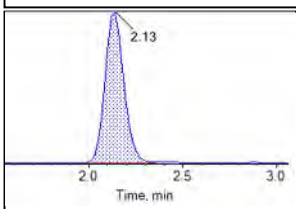
d3-MeFOSAA



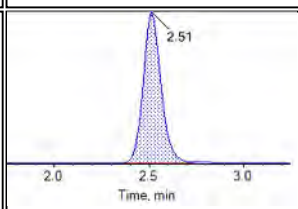
d5-EtFOSAA



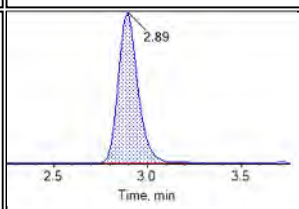
13C5-PFHxA



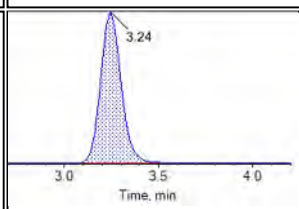
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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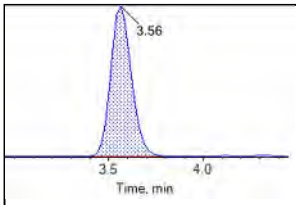
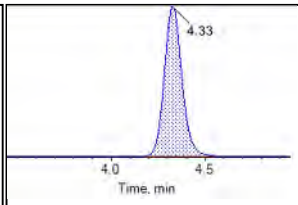
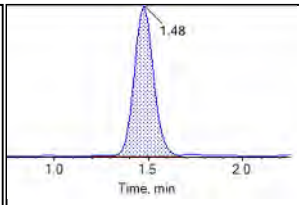


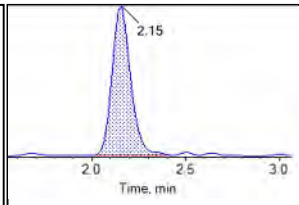
13C7-PFUnA



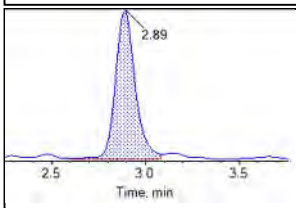
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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Sample Name	JV05 IB	**Injection Vial**	11
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:11:14	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Chromatograms

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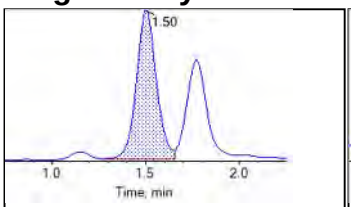
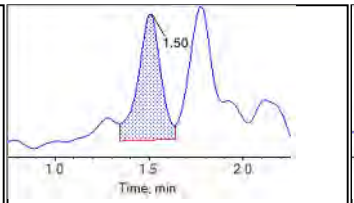
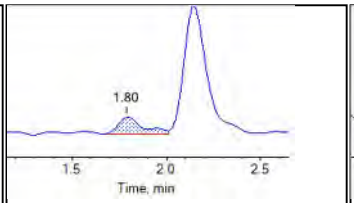


PFBS_1



PFBS_2



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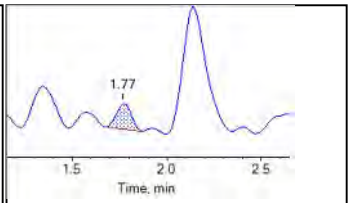

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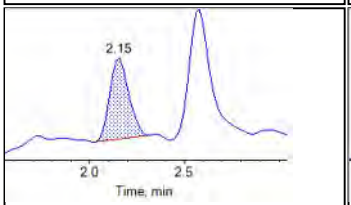

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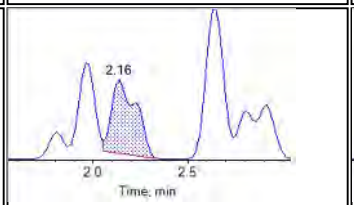

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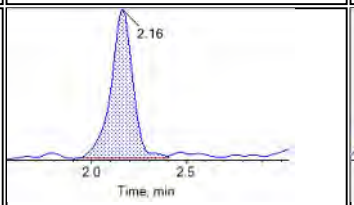
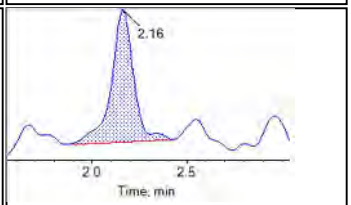
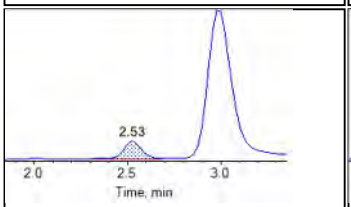


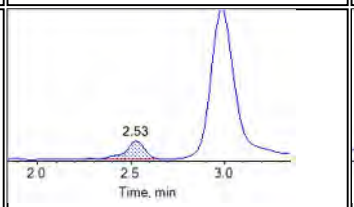
PFHxS_1



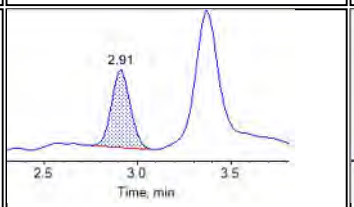
PFHxS_2



PFOA_1



PFOA_2



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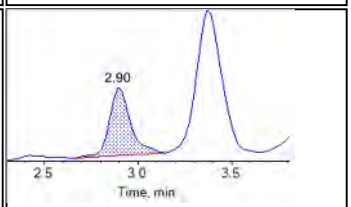

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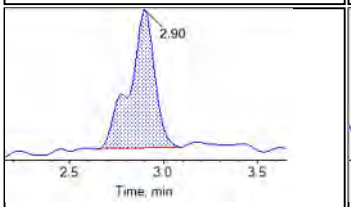
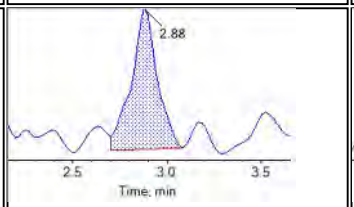
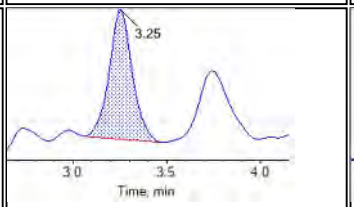


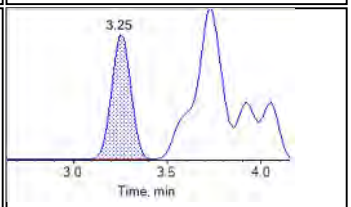
PFOS_1



PFOS_2



PFDA_1



PFDA_2

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Chromatogram Report

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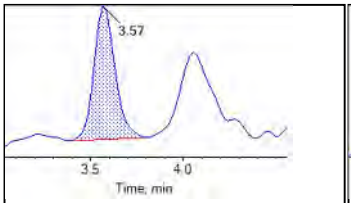
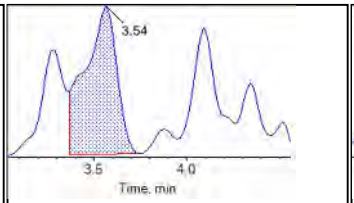
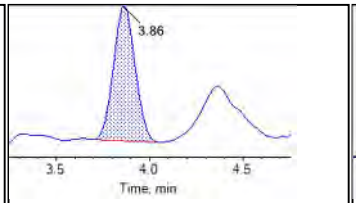


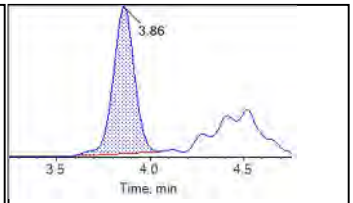
PFUnA_1



PFUnA_2



PFDoA_1



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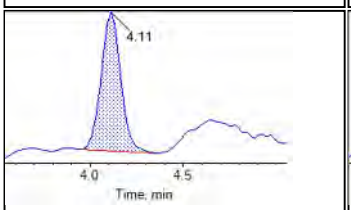

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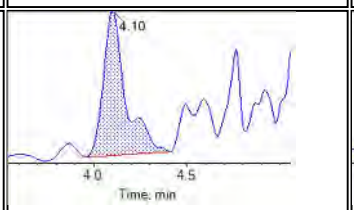
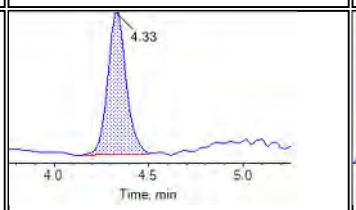


PFTrDA_2



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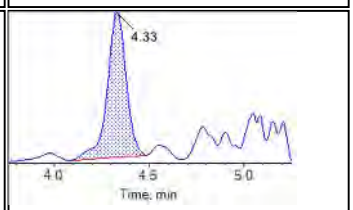

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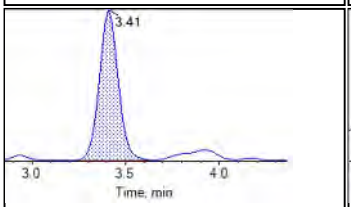

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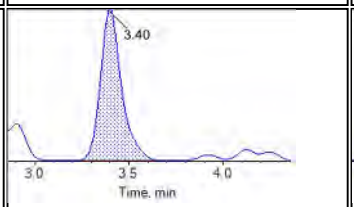

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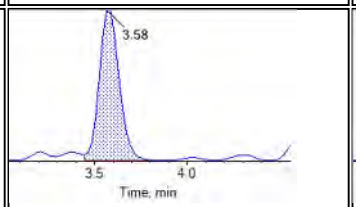

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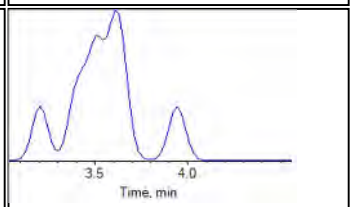

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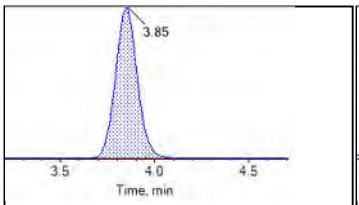

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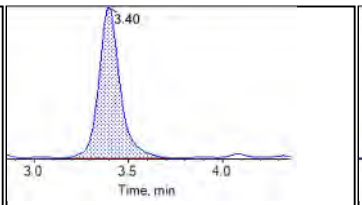

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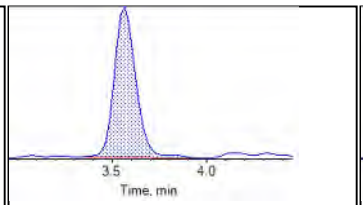

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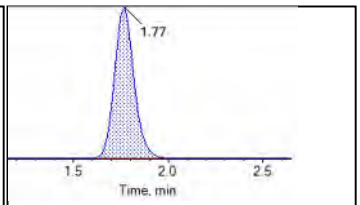

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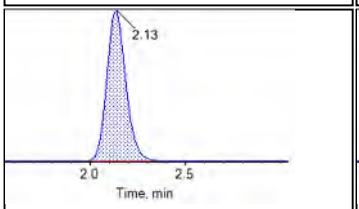

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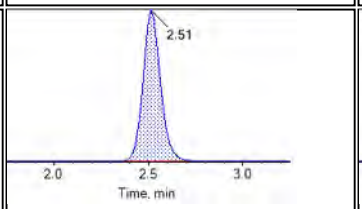
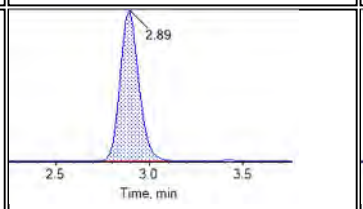


13C8-PFOA



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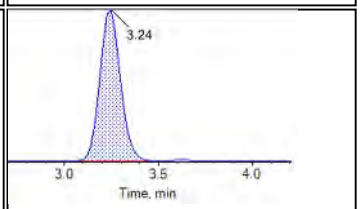

13C6-PFDA

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Chromatogram Report

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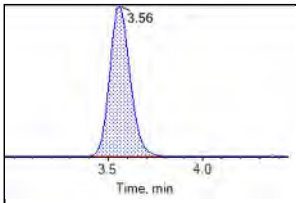
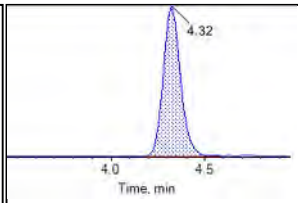


13C7-PFUnA



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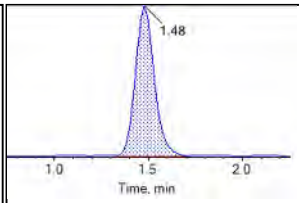

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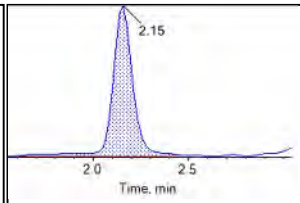

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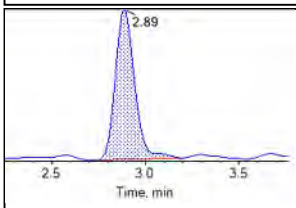

13C8-PFOS

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Chromatogram Report

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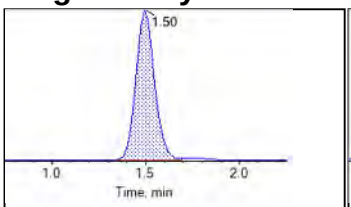
Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:22:01	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Chromatograms

Target Analytes:



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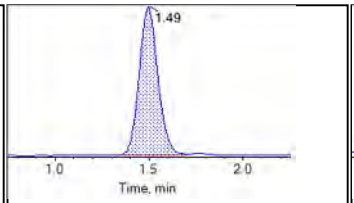

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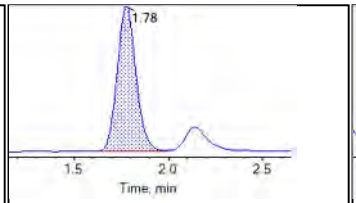

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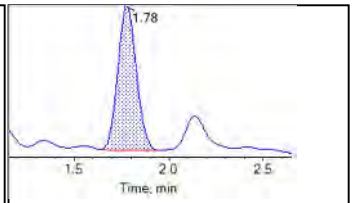

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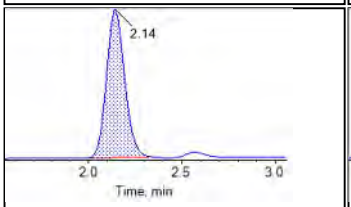

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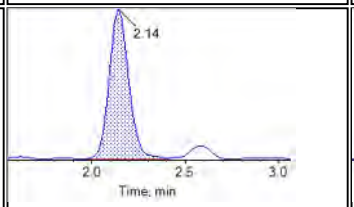

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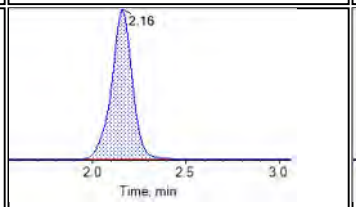

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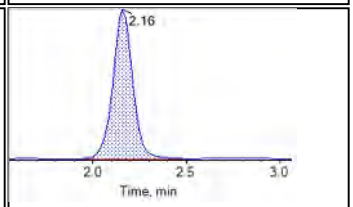

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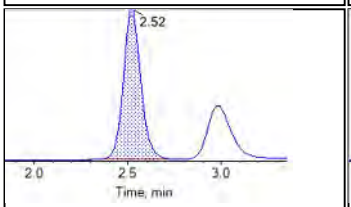

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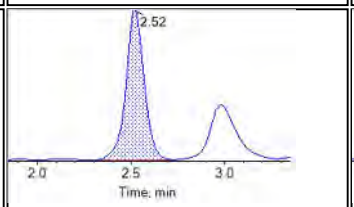

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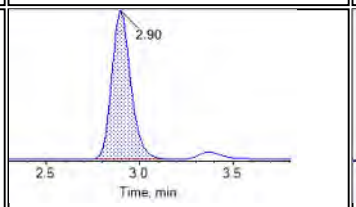

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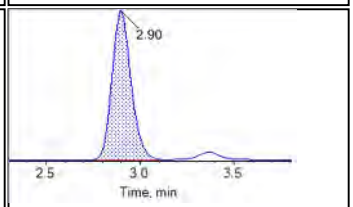

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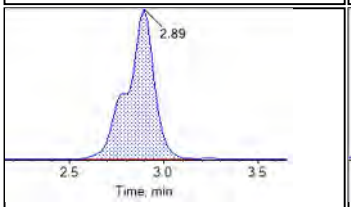

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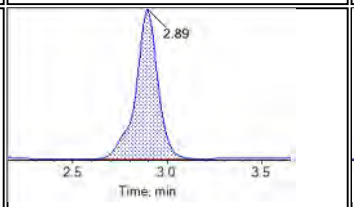

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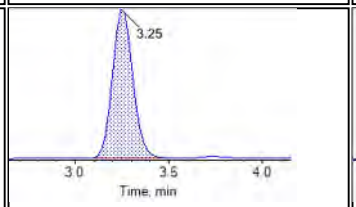

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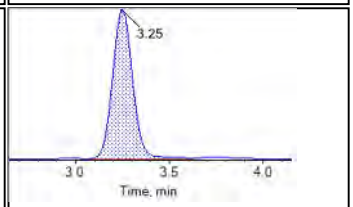

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Chromatogram Report

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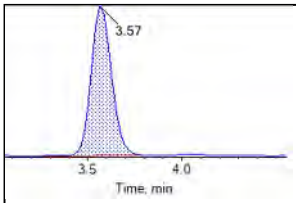

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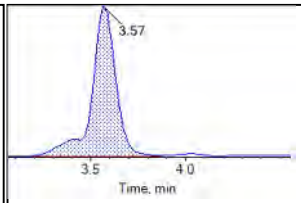

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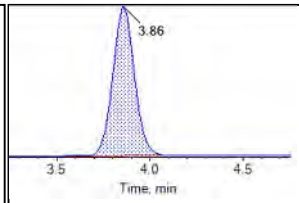

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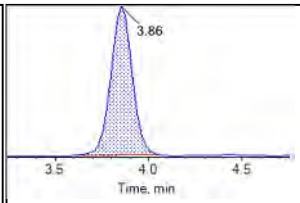

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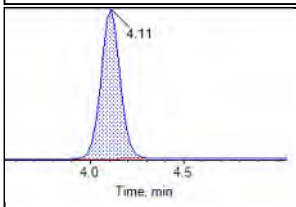

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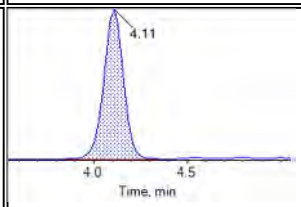

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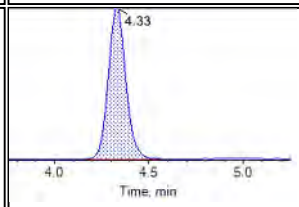

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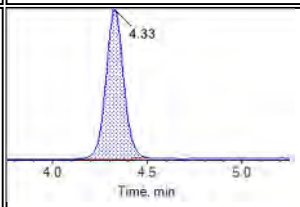

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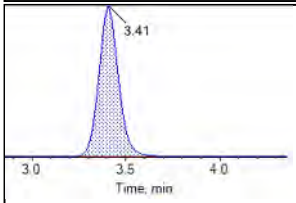

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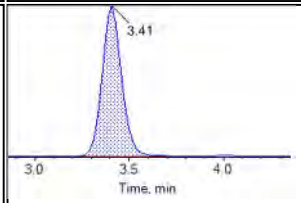

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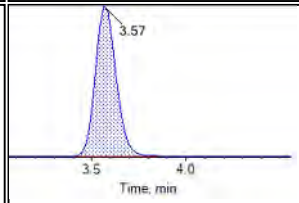

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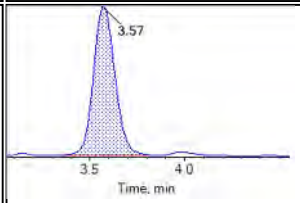

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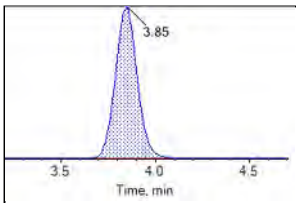

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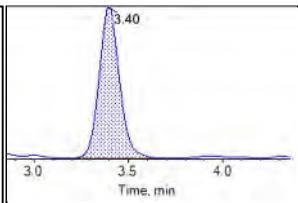

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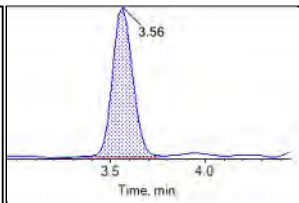

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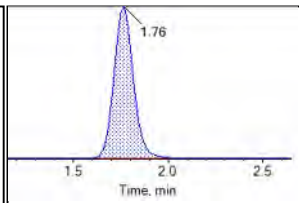

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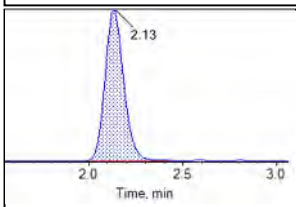
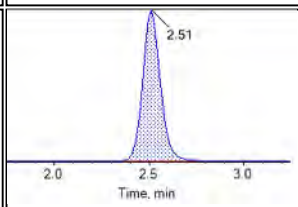
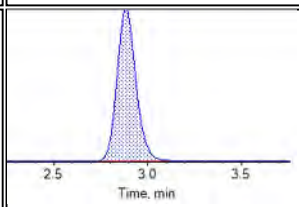


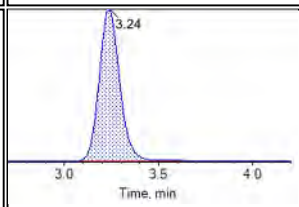
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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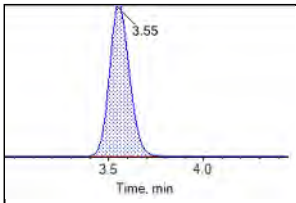
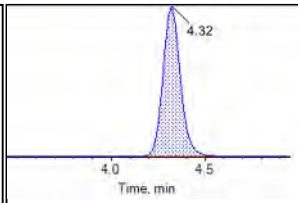
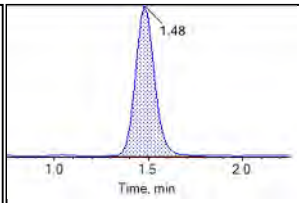


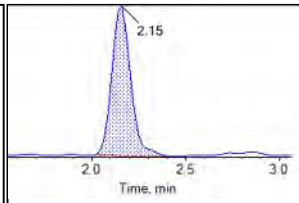
13C7-PFUnA



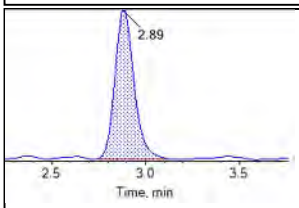
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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Printed: 11/06/2018 11:55:41 AM

Sample Name	CQ859PB-FS(3)	**Injection Vial**	37
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:28:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Chromatograms

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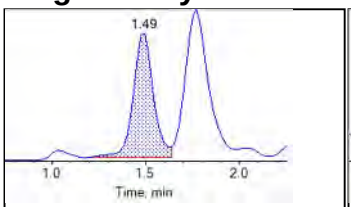
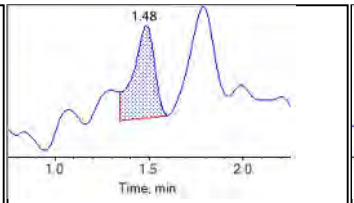


PFBS_1



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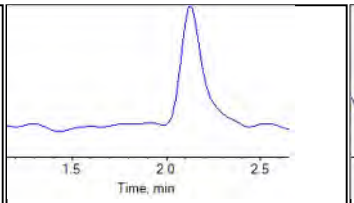

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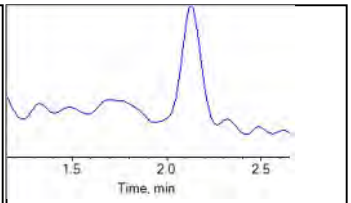

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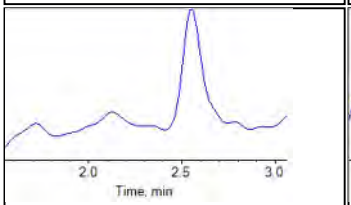

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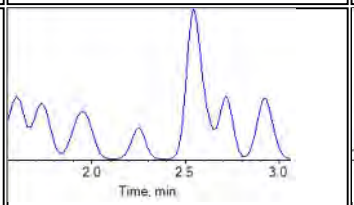

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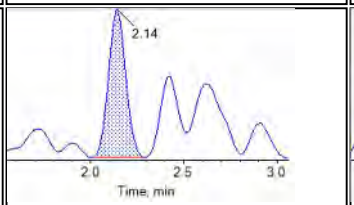

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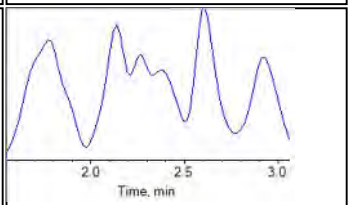

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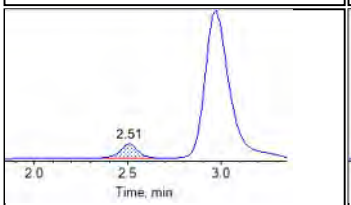

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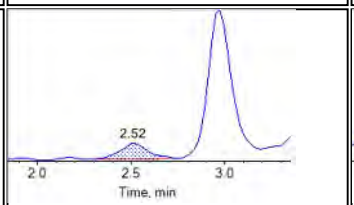

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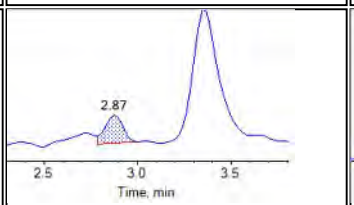

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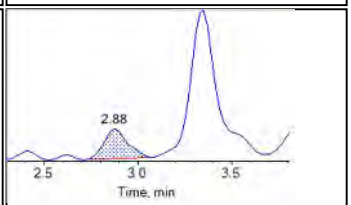

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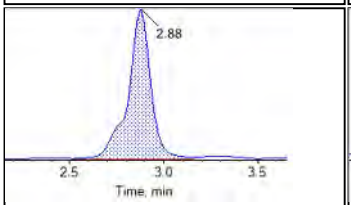

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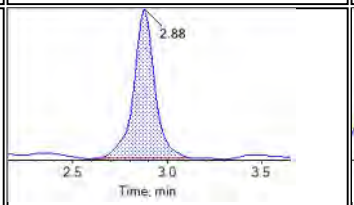

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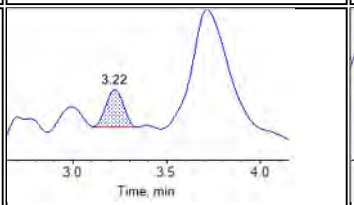

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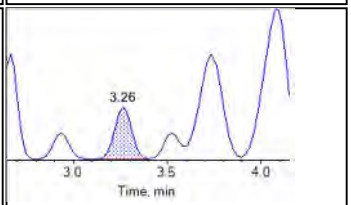

PFDA_2

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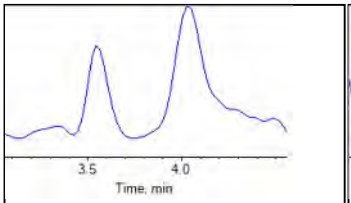

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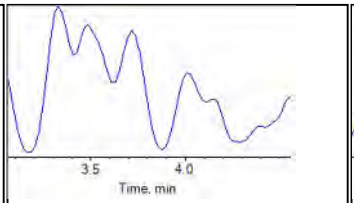

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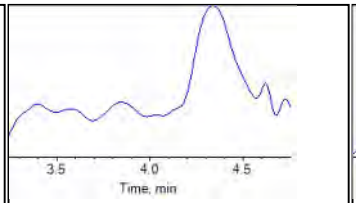

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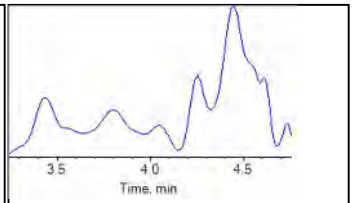

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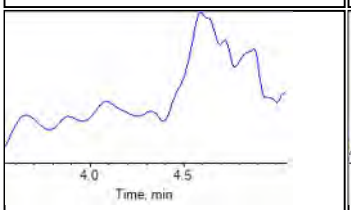

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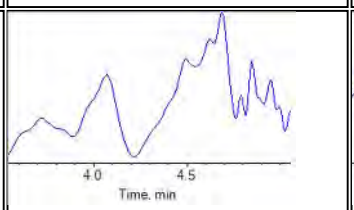

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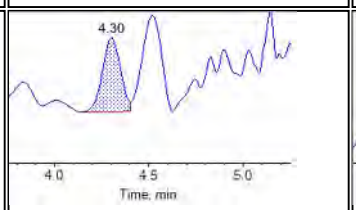

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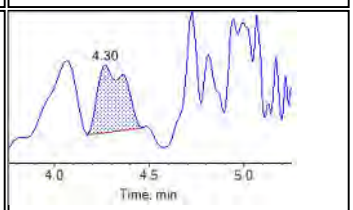

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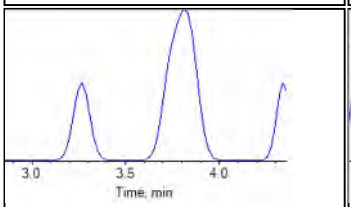

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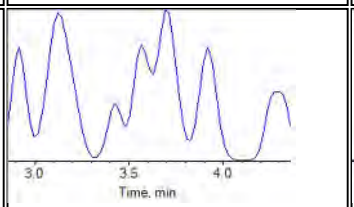

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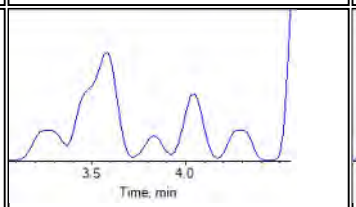

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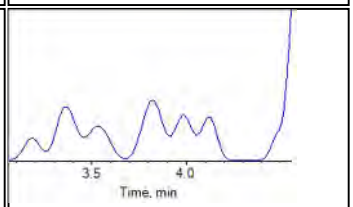
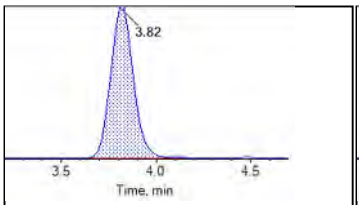


NEtFOSAA_2

Internal Standards:



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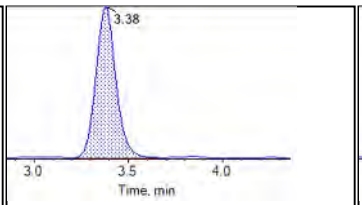

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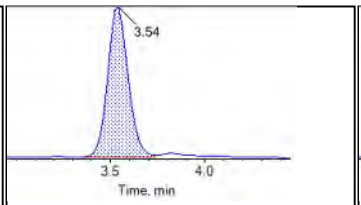

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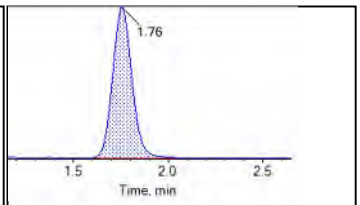
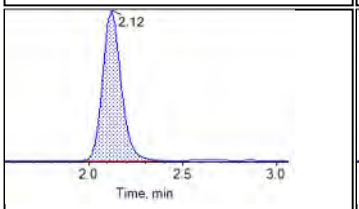


13C5-PFHxA



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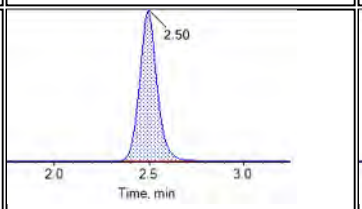
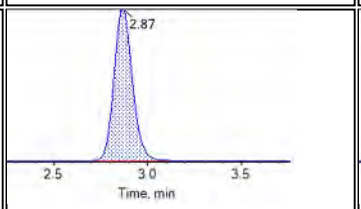


13C8-PFOA



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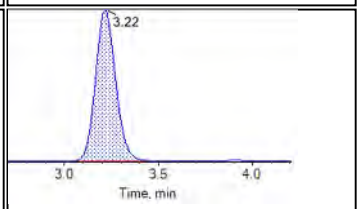

13C6-PFDA

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Chromatogram Report

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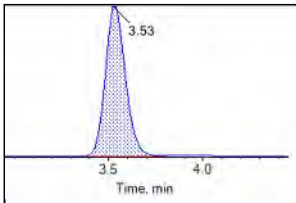
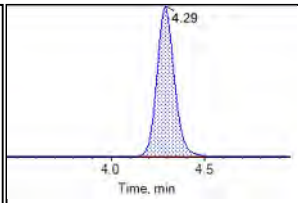
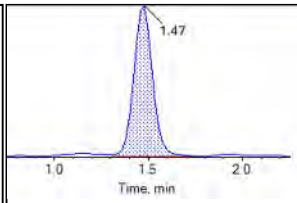
Printed: 11/06/2018 11:55:41 AM



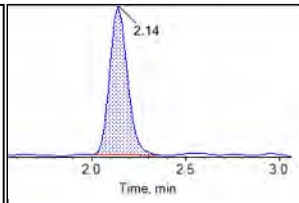
13C7-PFUnA



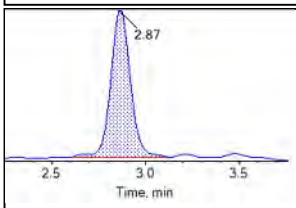
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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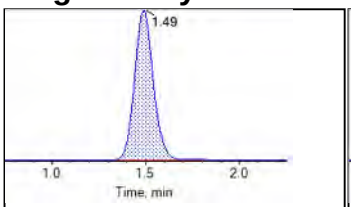
Printed: 08/06/2018 12:17:16 PM

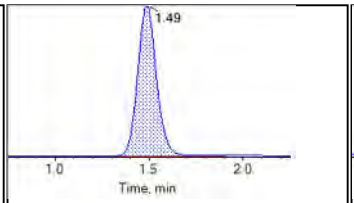
Sample Name	CQ860LCS-FS(3)	**Injection Vial**	38
Sample ID	Labortory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:39:38	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Chromatograms

Target Analytes:



PFBS_1



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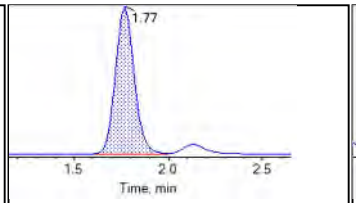

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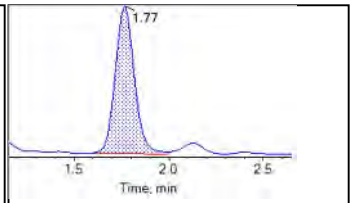

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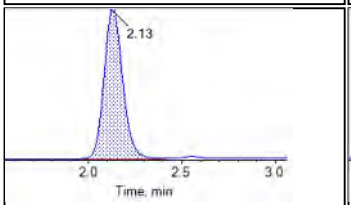

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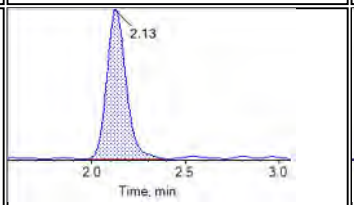

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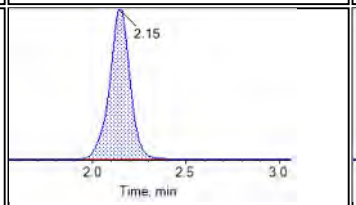

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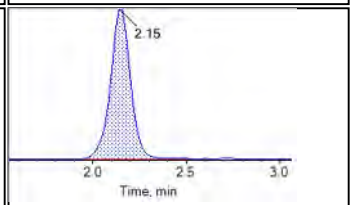

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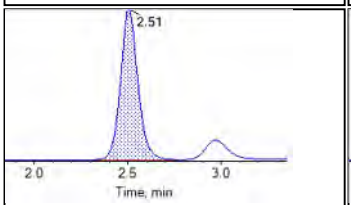

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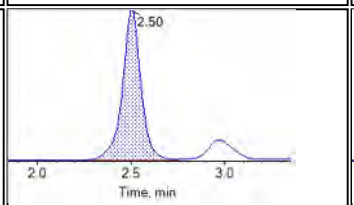

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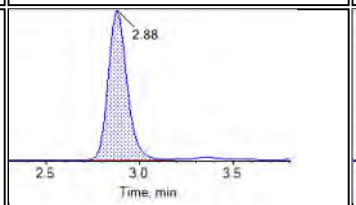

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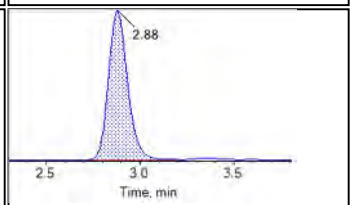

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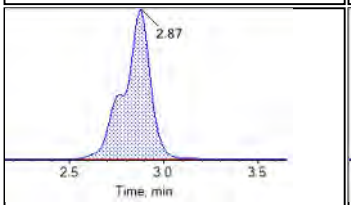

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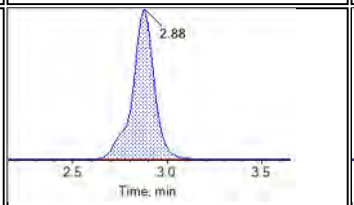

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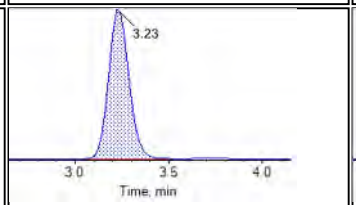

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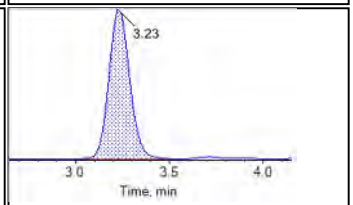

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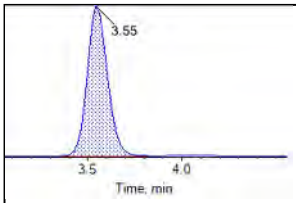

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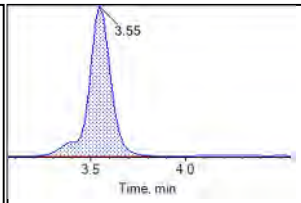

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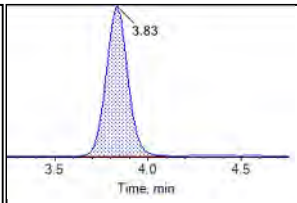

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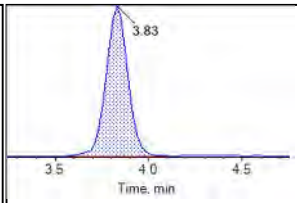

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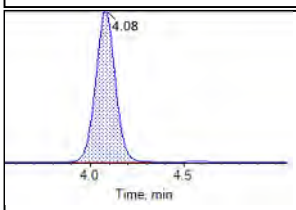

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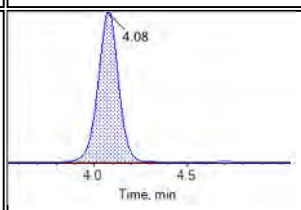

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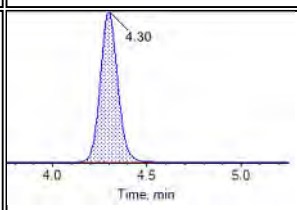

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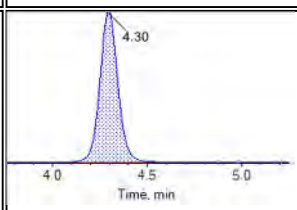

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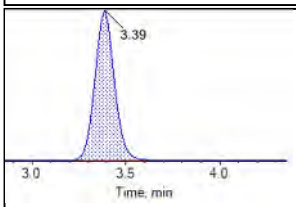

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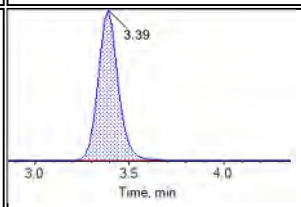

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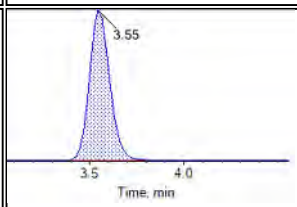

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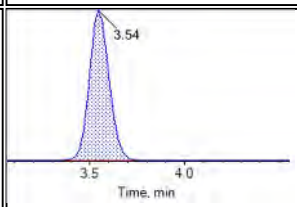

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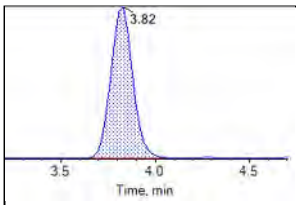

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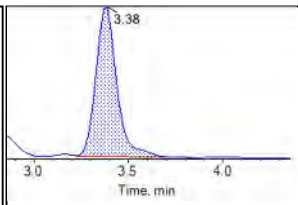

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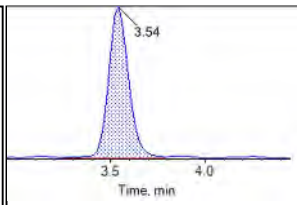

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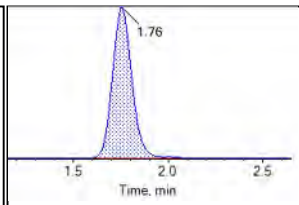

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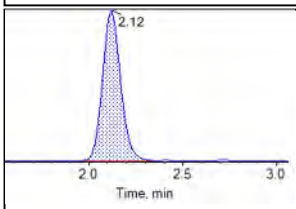

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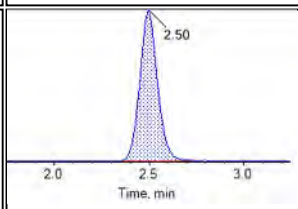

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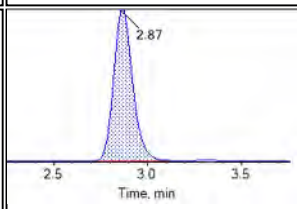

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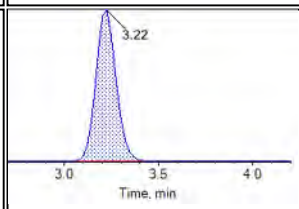

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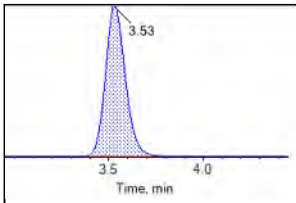

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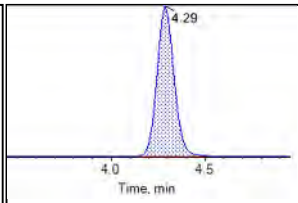

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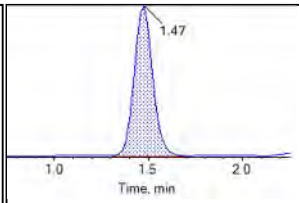

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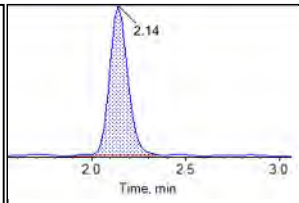

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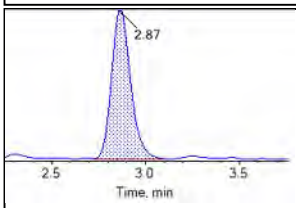

13C8-PFOS

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Chromatogram Report

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Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:50:26	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Chromatograms

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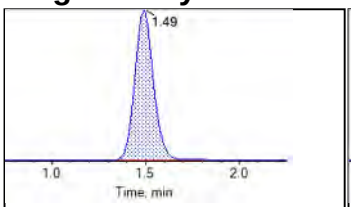

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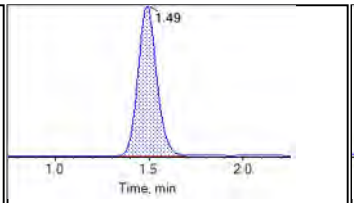

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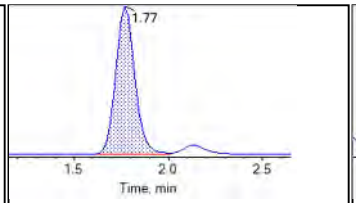

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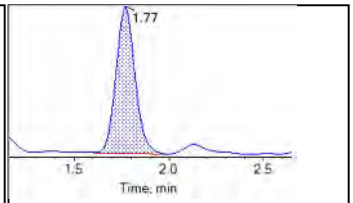

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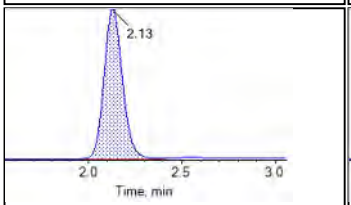

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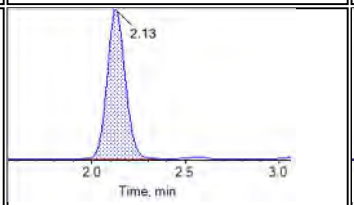

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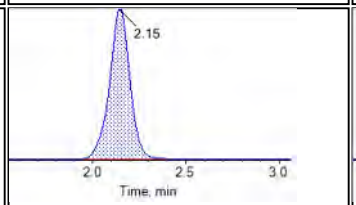

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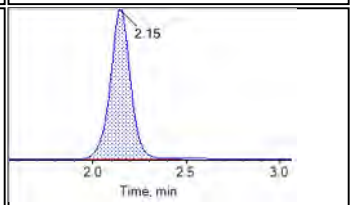

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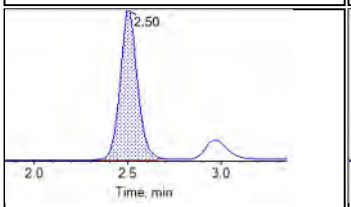

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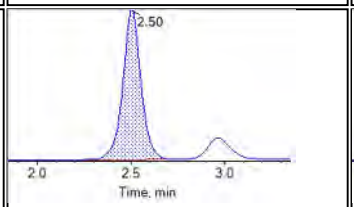

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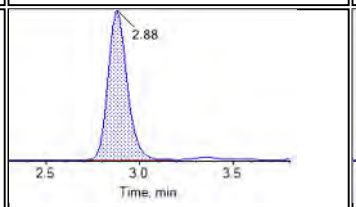

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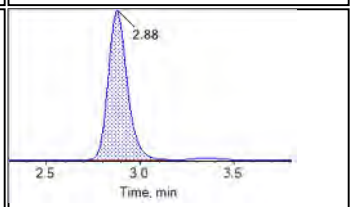

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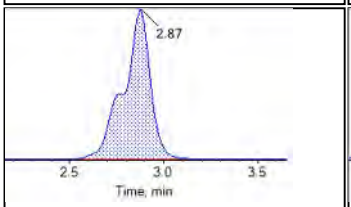

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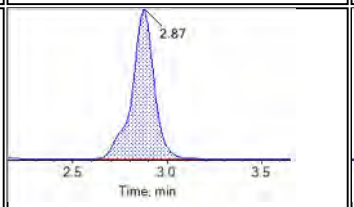

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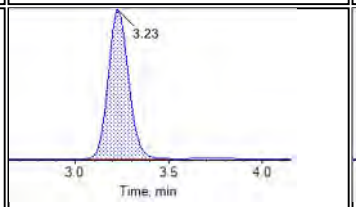

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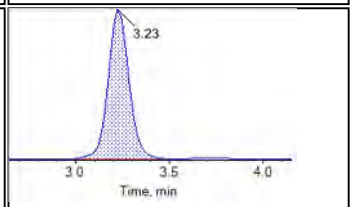

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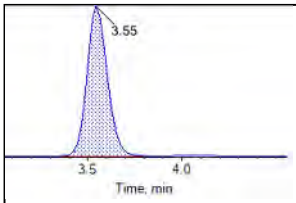

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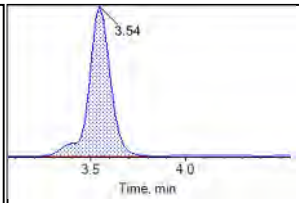

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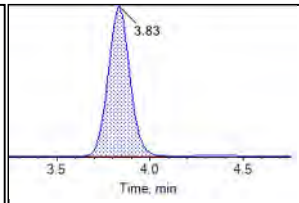

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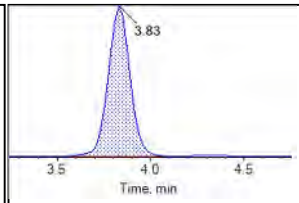

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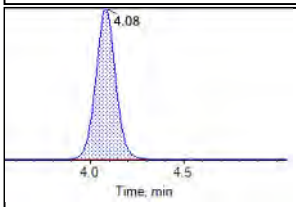

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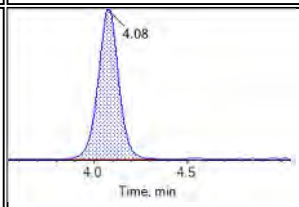

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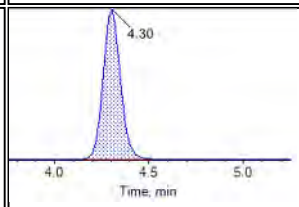

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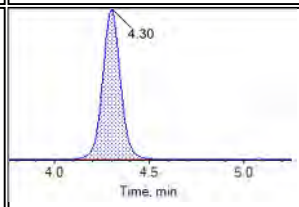

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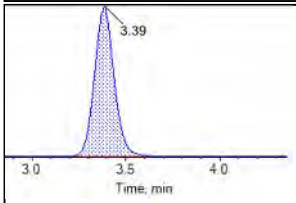

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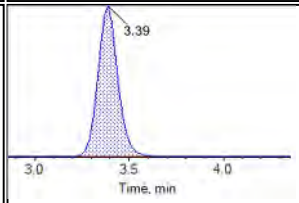

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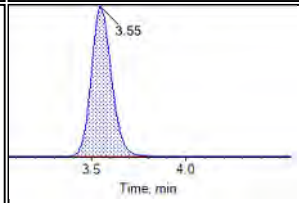

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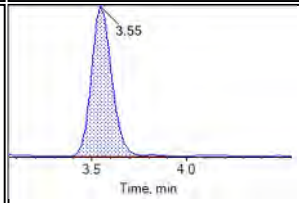

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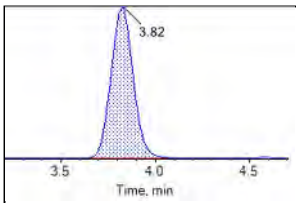

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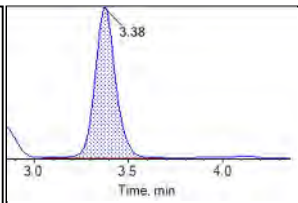

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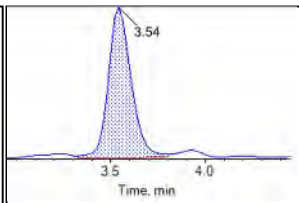

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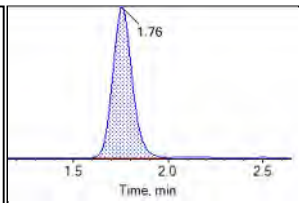

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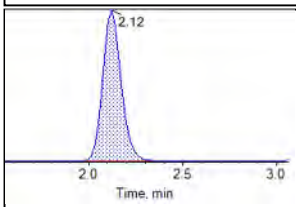

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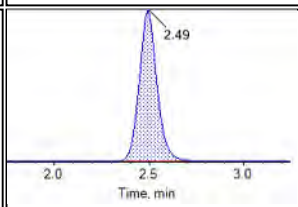

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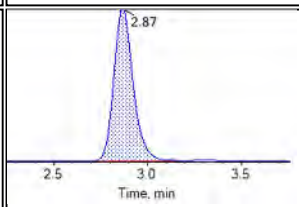

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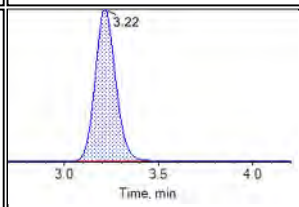

13C6-PFDA

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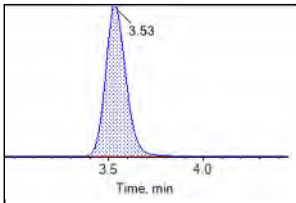
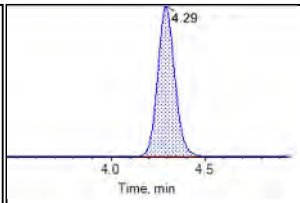


13C7-PFUnA



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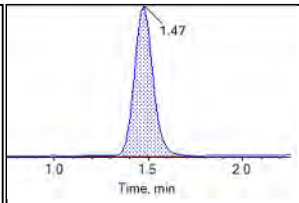

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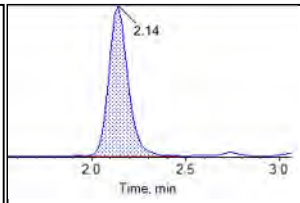

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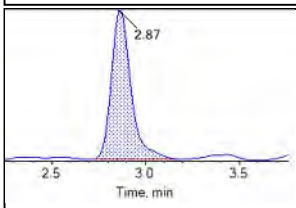

13C8-PFOS

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Sample Name	J6241-FS-D(6)	**Injection Vial**	39
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:12:02	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Chromatograms

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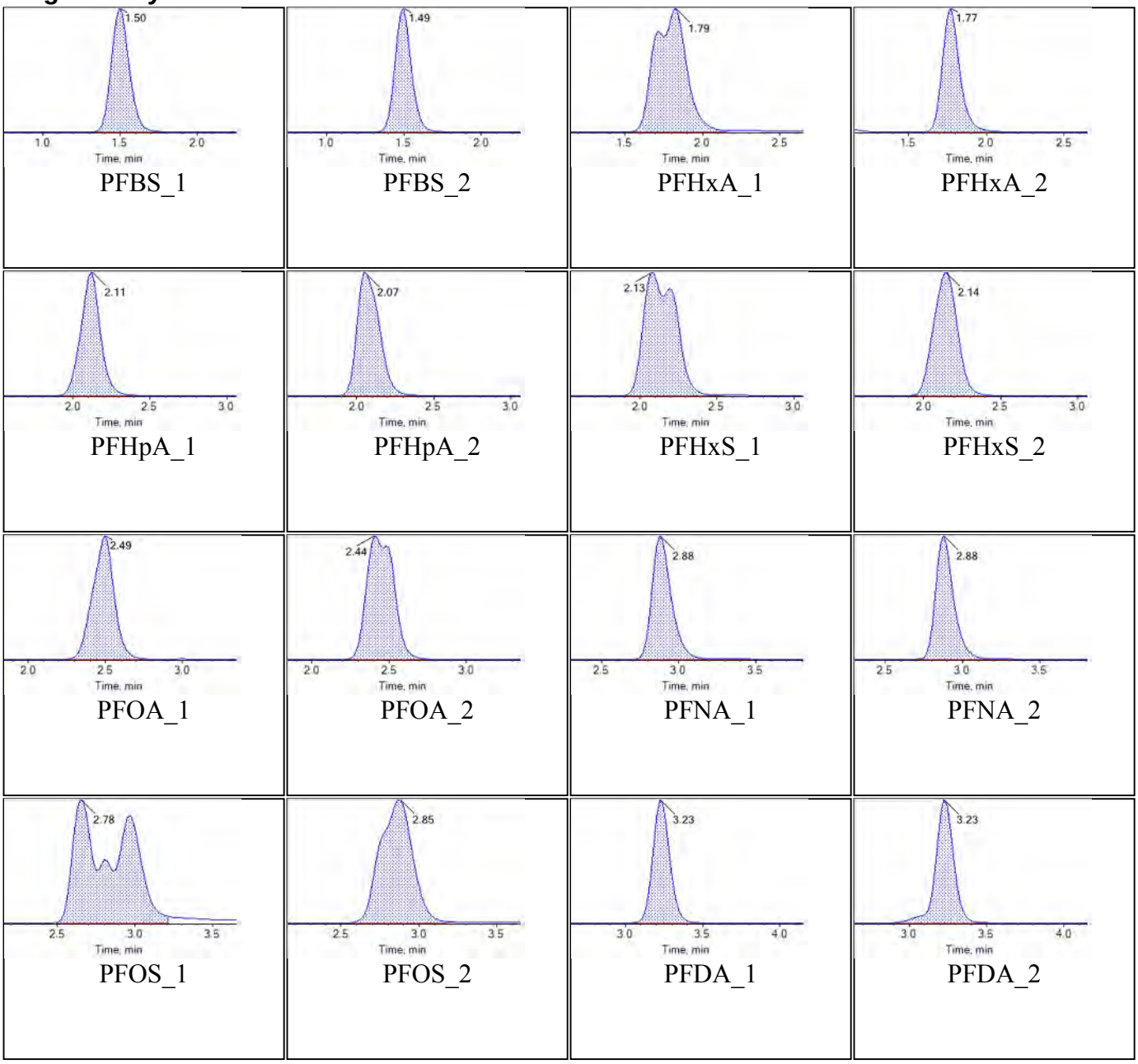

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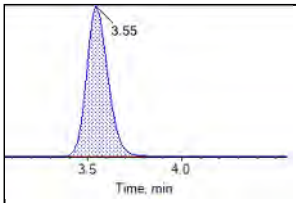

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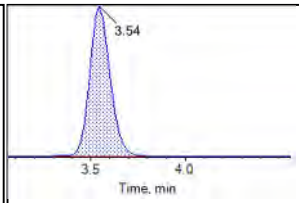

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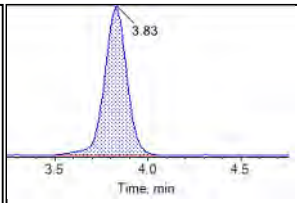

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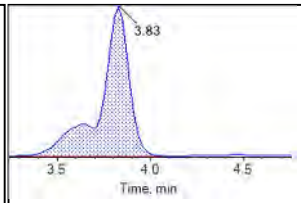

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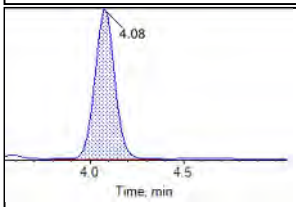

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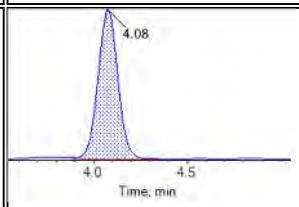

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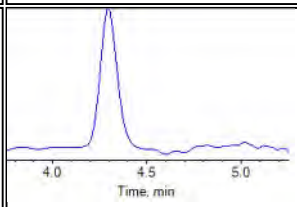

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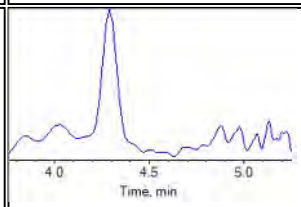

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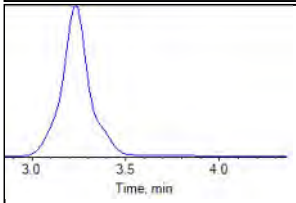

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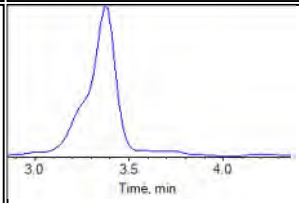

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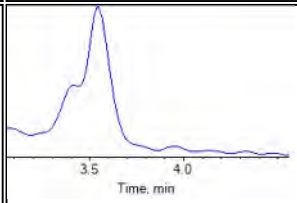

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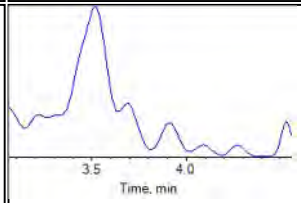

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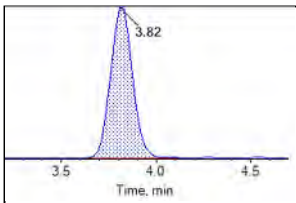

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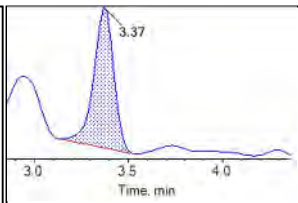

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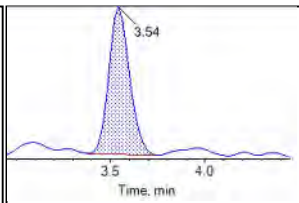

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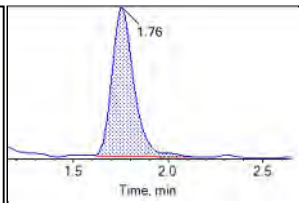

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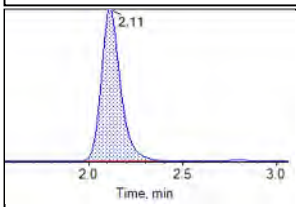

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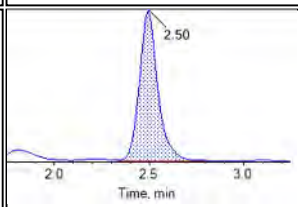

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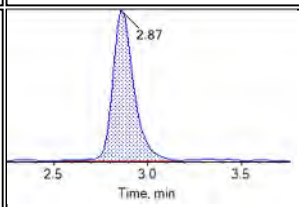

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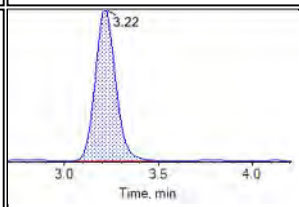

13C6-PFDA

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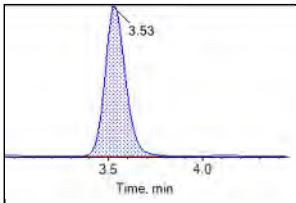
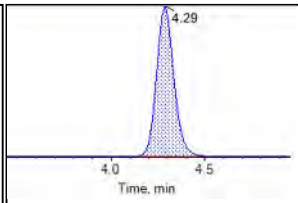
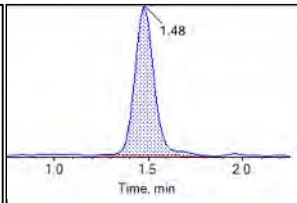


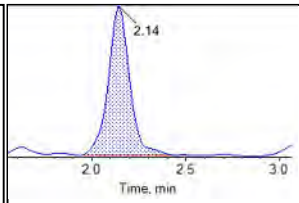
13C7-PFUnA



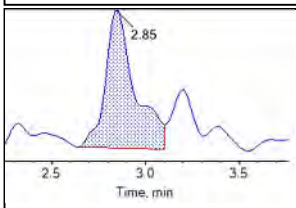
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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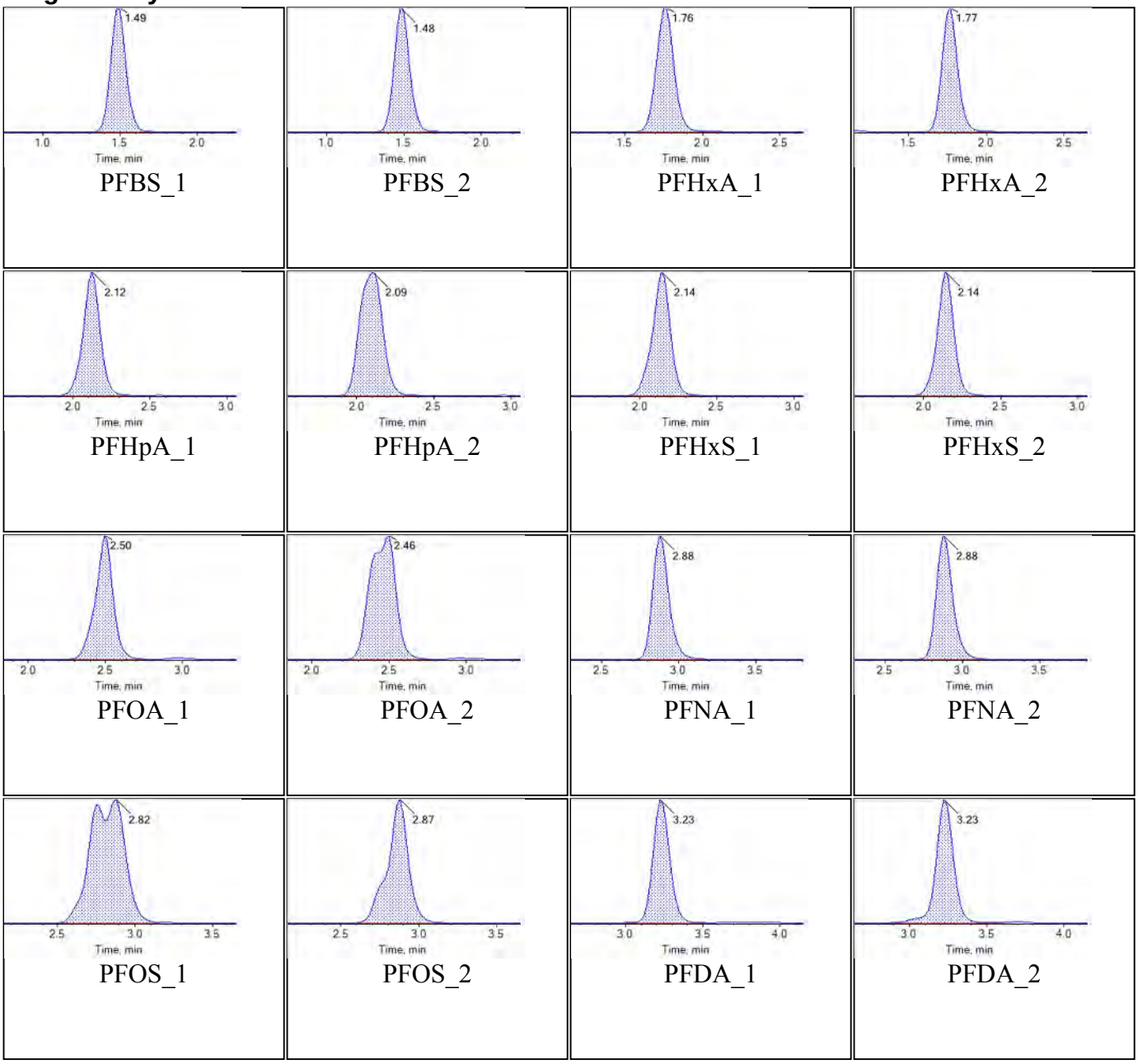
Printed: 08/06/2018 12:17:28 PM

Sample Name	J6241-FS-D(7)	**Injection Vial**	40
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:22:50	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Chromatograms

Target Analytes:



BATTELLE

Chromatogram Report

Created with Analyst Reporter
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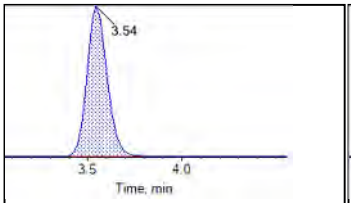
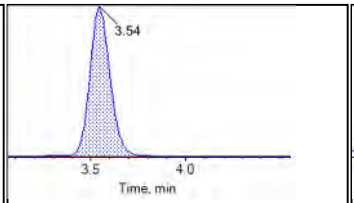
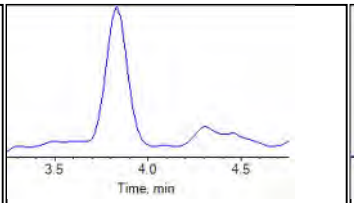


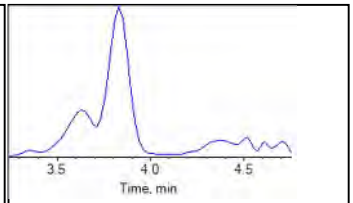
PFUnA_1



PFUnA_2



PFDoA_1



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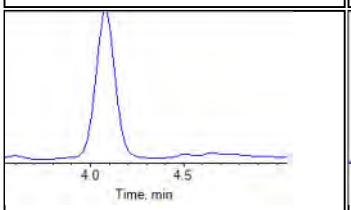
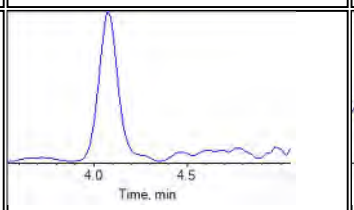


PFTrDA_1



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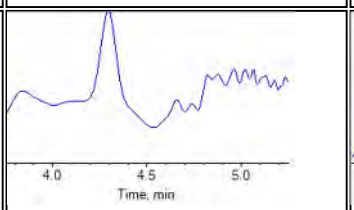

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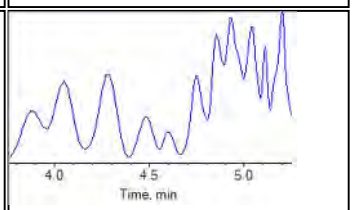

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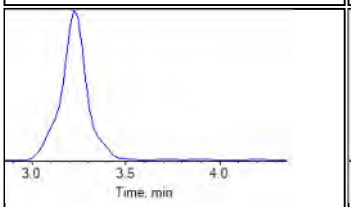

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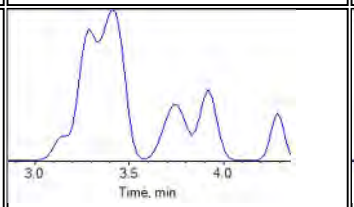
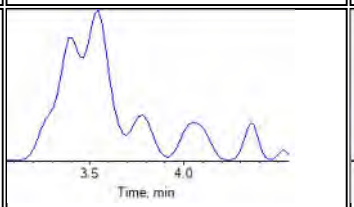
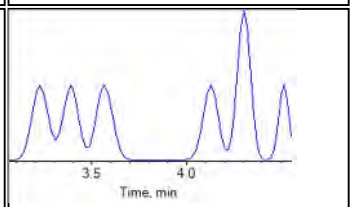


NMeFOSAA_2

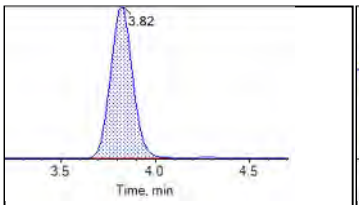


NEtFOSAA_1

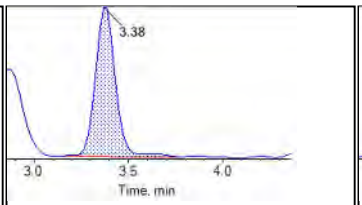


NEtFOSAA_2

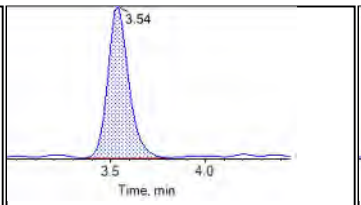
Internal Standards:



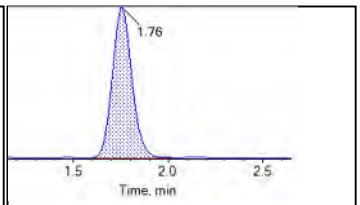
13C2-PFDoA



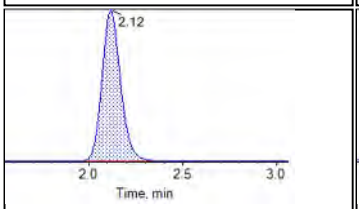
d3-MeFOSAA



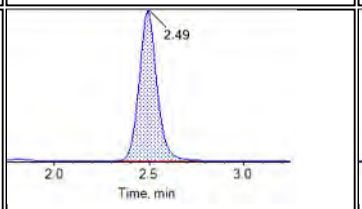
d5-EtFOSAA



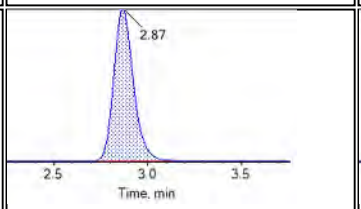
13C5-PFHxA



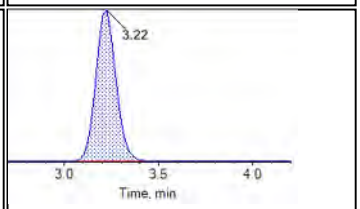
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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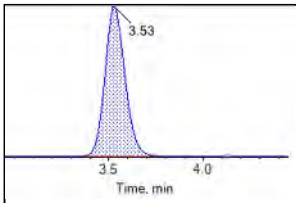
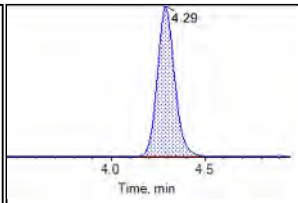


13C7-PFUnA



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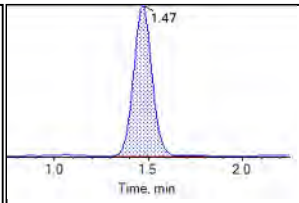
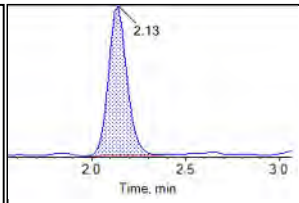
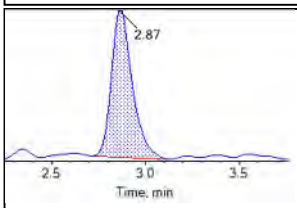


13C3-PFBS



13C3-PFHxS



13C8-PFOS

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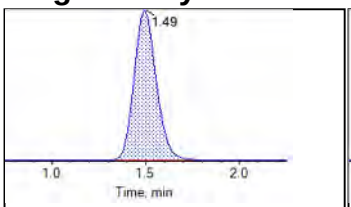
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:17:34 PM

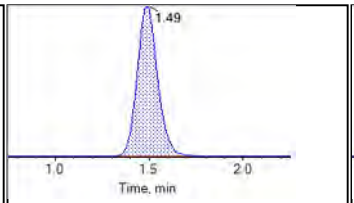
Sample Name	J6242-FS-D(6)	**Injection Vial**	41
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:44:26	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Chromatograms

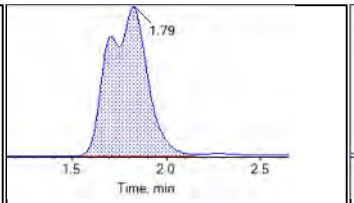
Target Analytes:



PFBS_1



PFBS_2



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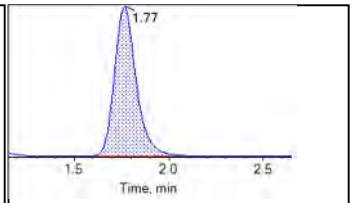
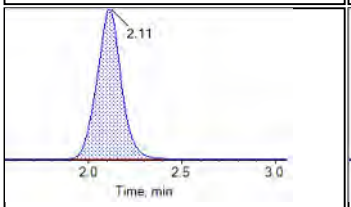
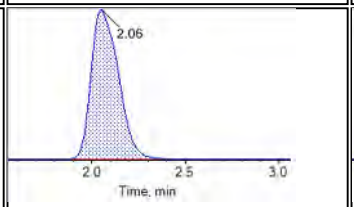


PFHxA_2



PFHpA_1



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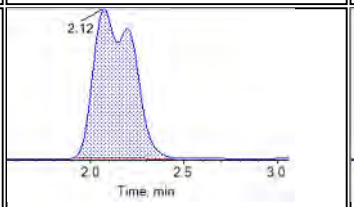
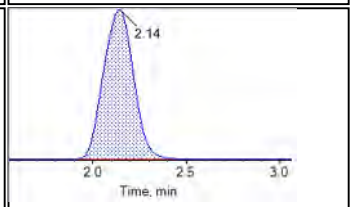
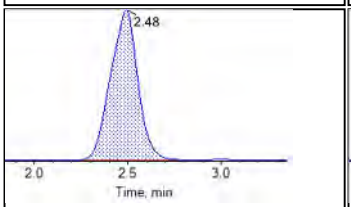


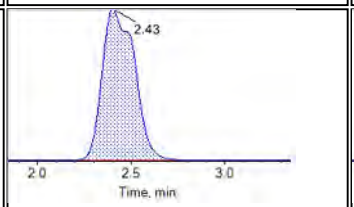
PFHxS_1



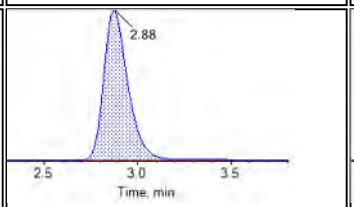
PFHxS_2



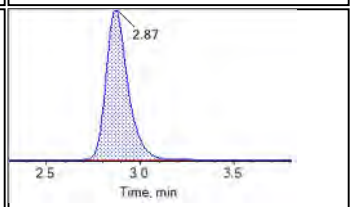
PFOA_1



PFOA_2



PFNA_1



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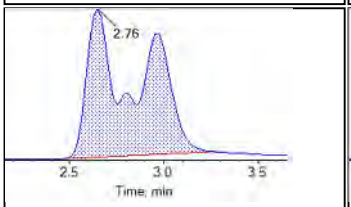
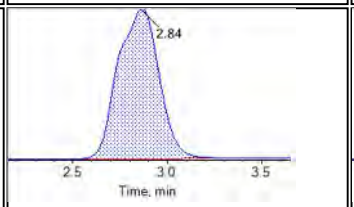
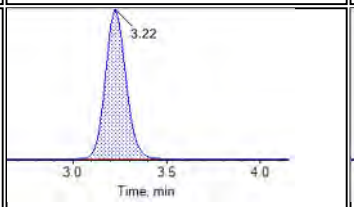


PFOS_1



PFOS_2



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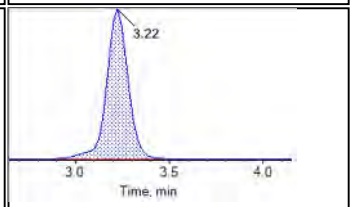

PFDA_2

BATTELLE

Chromatogram Report

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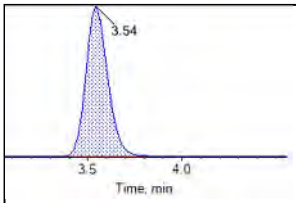

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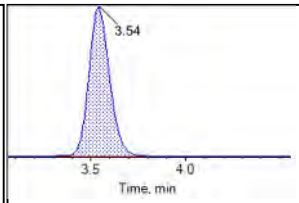
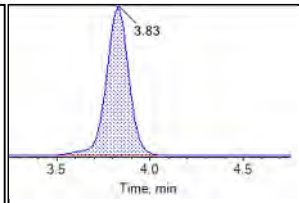


PFUnA_2



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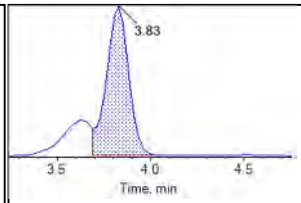
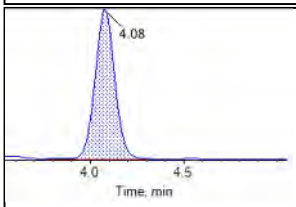


PFDoA_2



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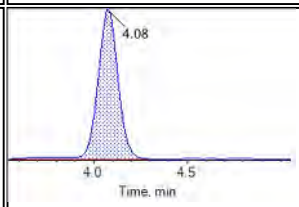

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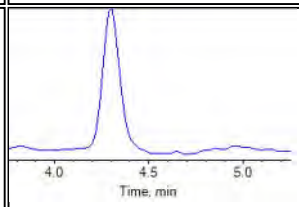

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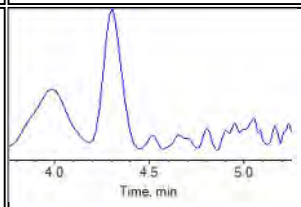

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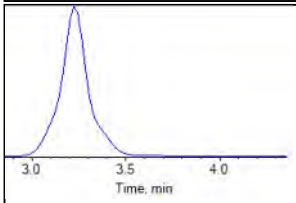

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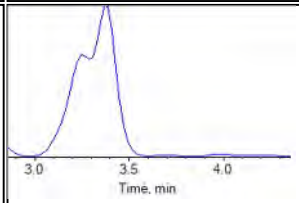

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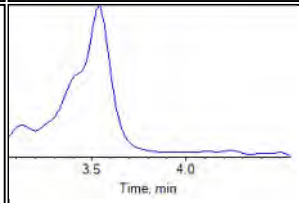

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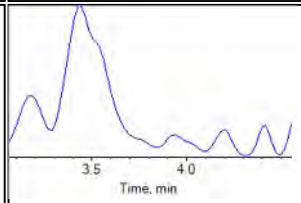

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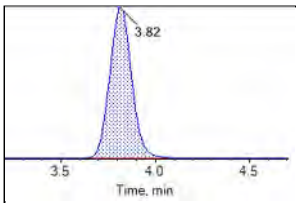

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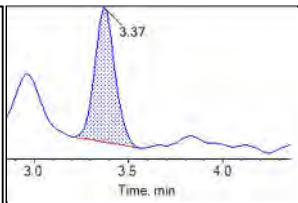

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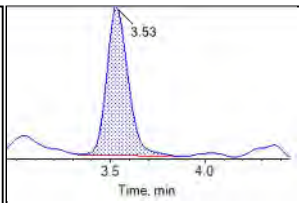

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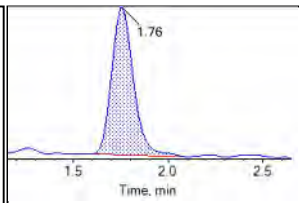

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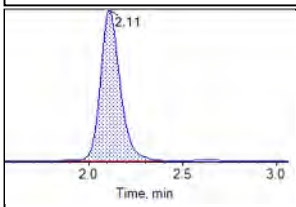

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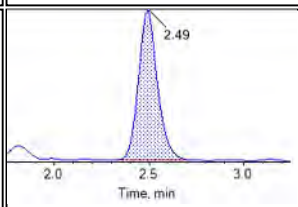

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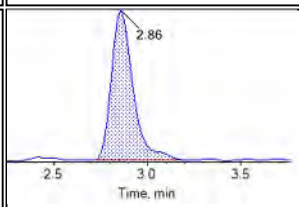

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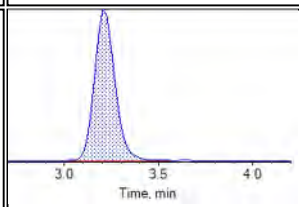

13C6-PFDA

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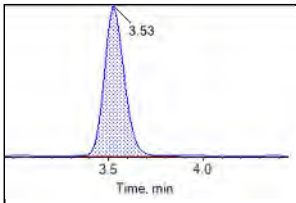
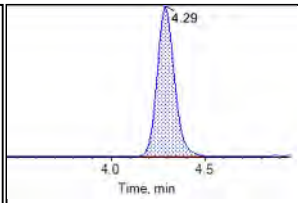


13C7-PFUnA



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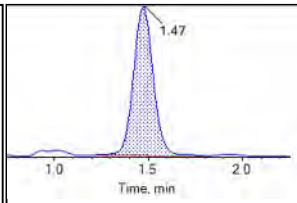

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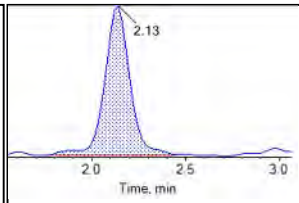

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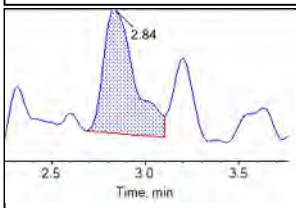

13C8-PFOS

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Chromatogram Report

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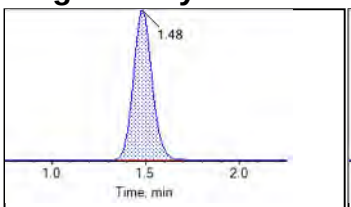
Sample Name	J6242-FS-D(7)	**Injection Vial**	42
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T04:55:13	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Chromatograms

Target Analytes:



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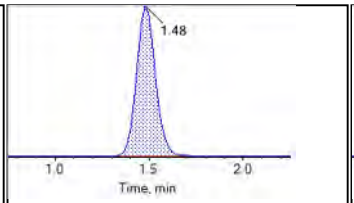

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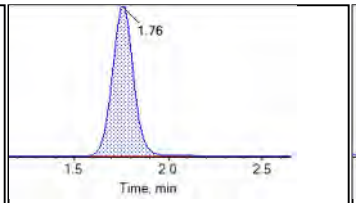

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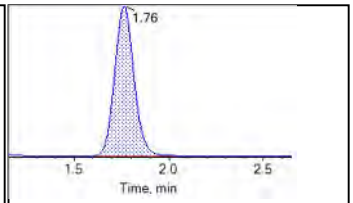

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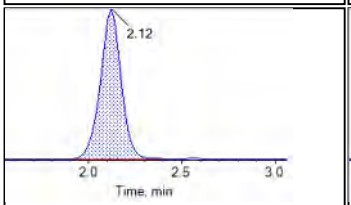

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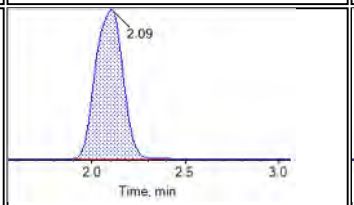

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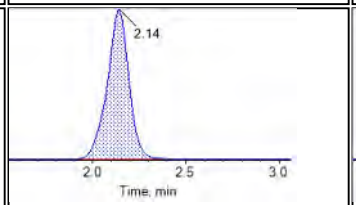

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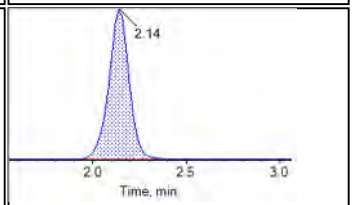

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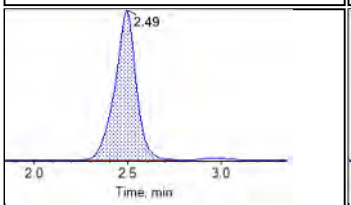

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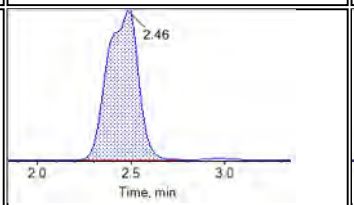

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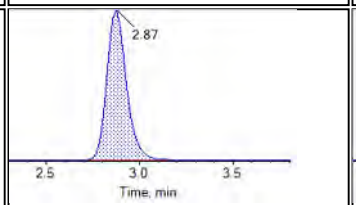

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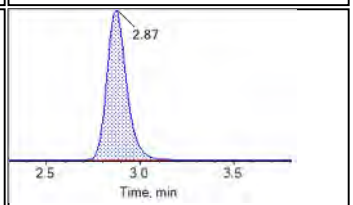

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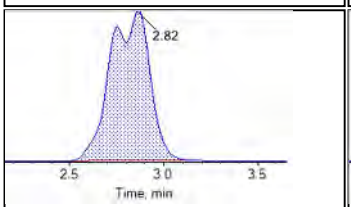

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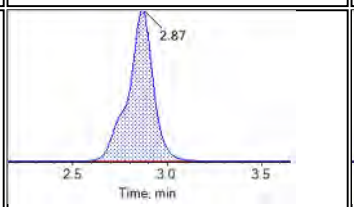

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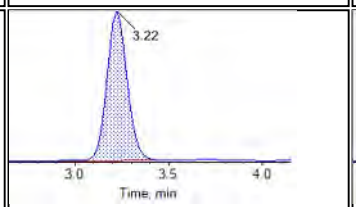

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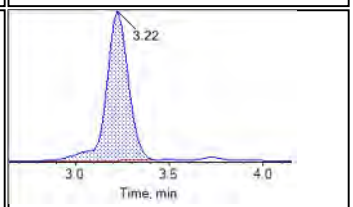

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Chromatogram Report

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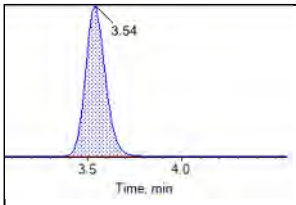

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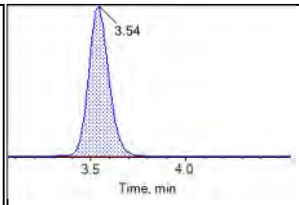

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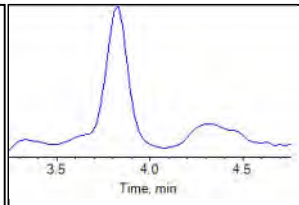

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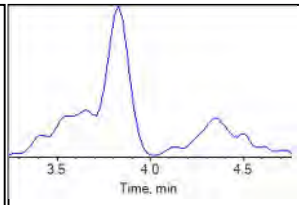

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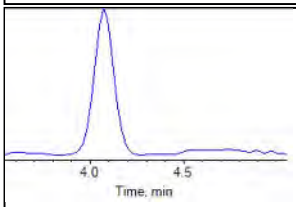

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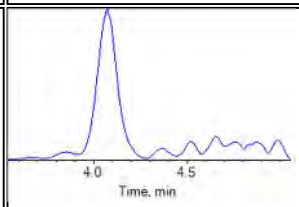

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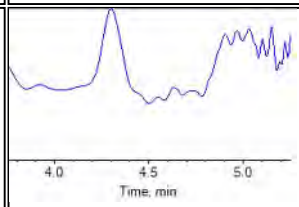

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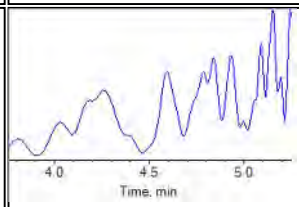

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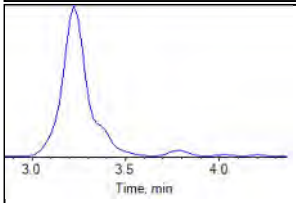

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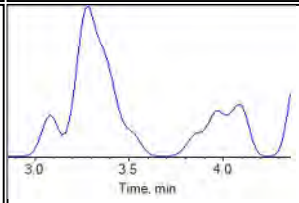

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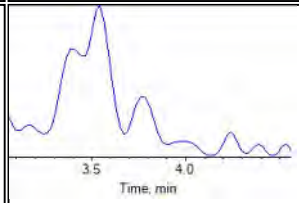

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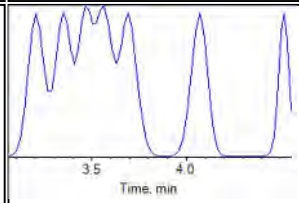

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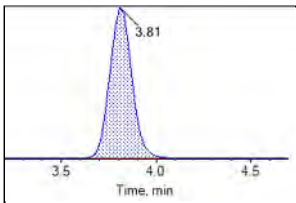

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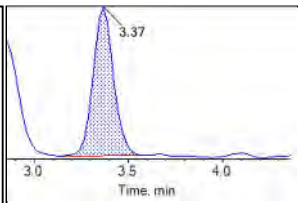

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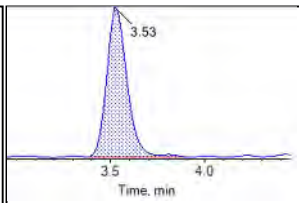

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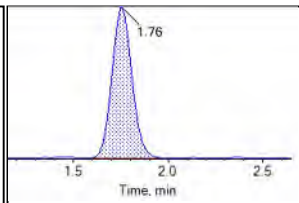

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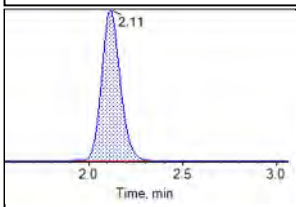

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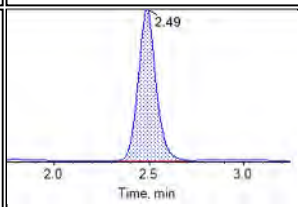

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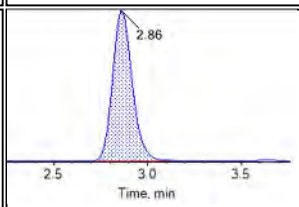

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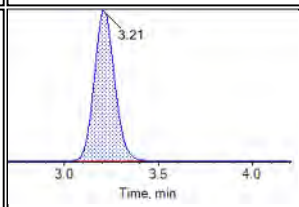

13C6-PFDA

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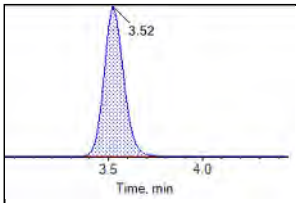

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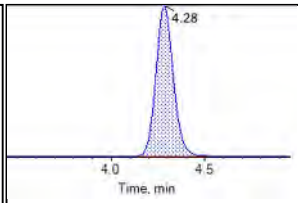

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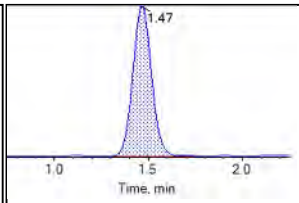

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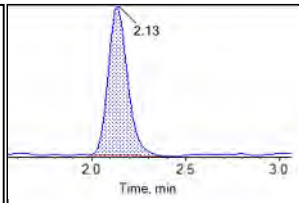

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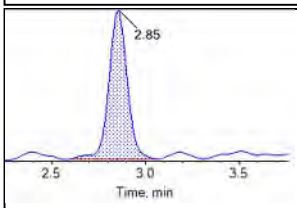

13C8-PFOS

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Sample Name	JV25 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T05:38:23	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Chromatograms

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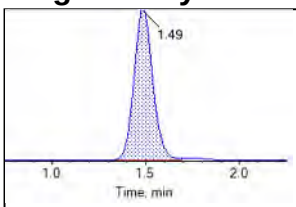

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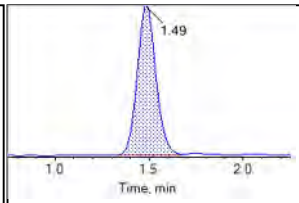

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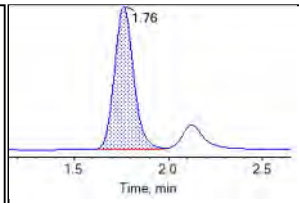

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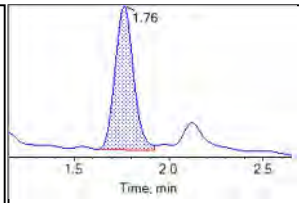

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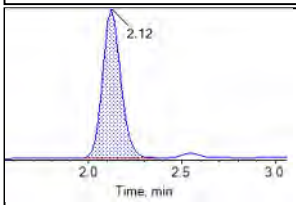

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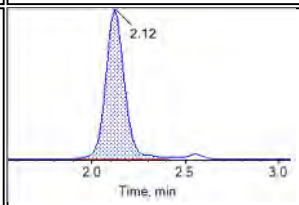

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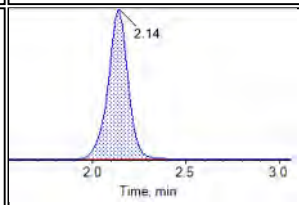

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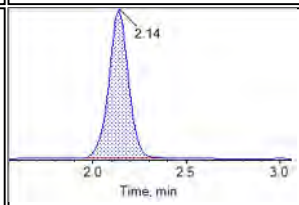

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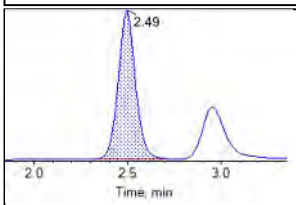

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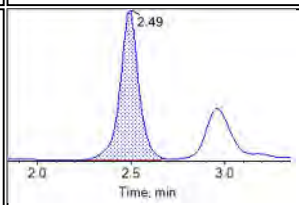

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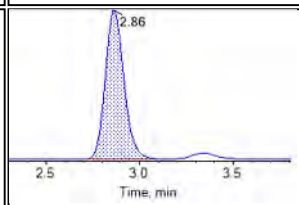

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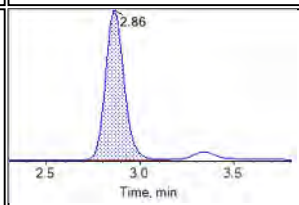

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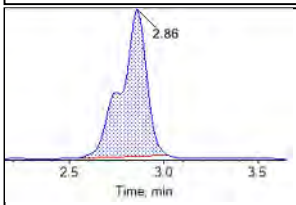

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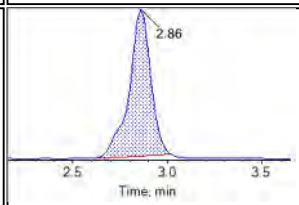

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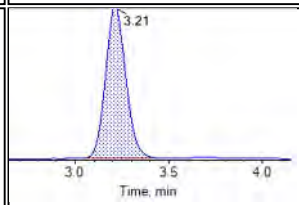

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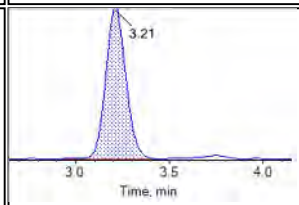

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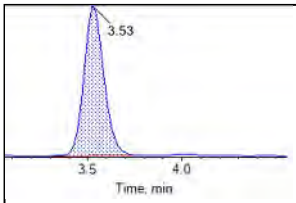

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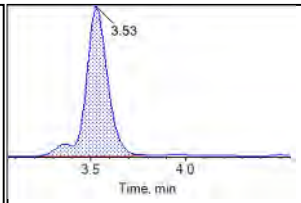

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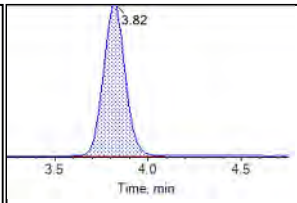

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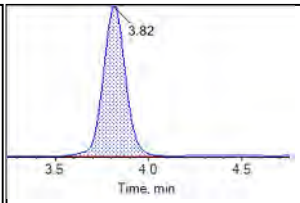

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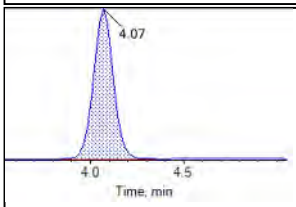

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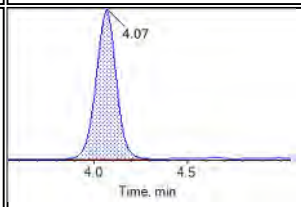

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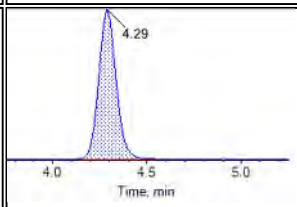

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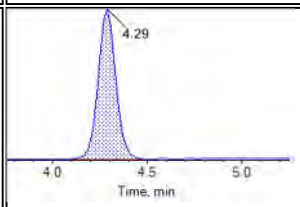

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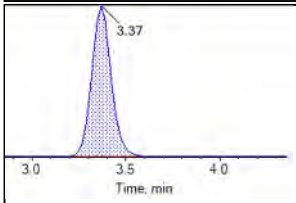

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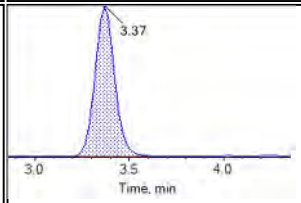

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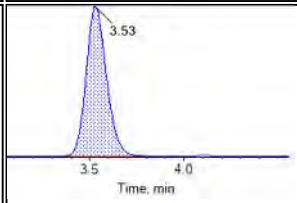

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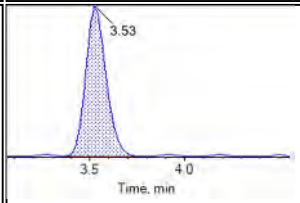

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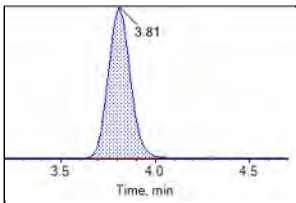

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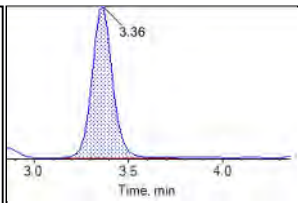

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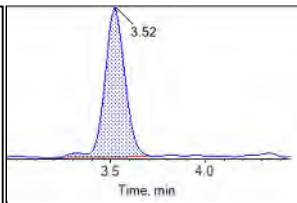

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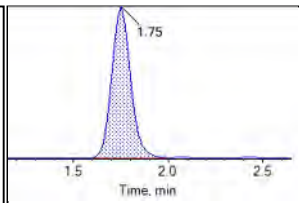

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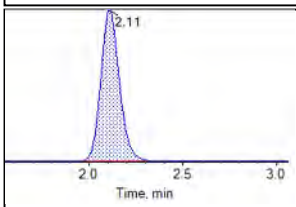

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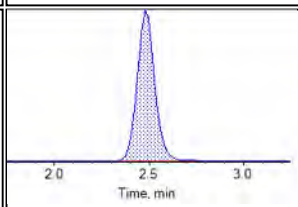

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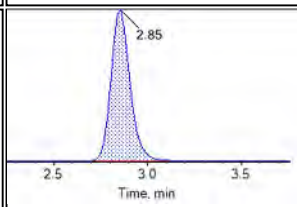

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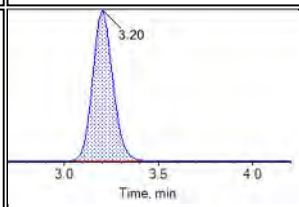

13C6-PFDA

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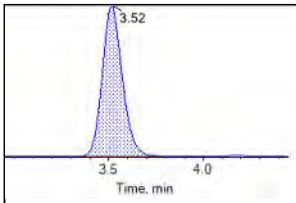

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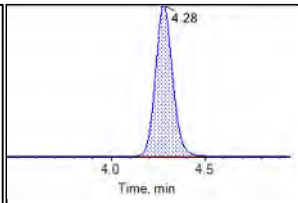

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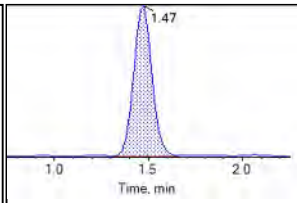

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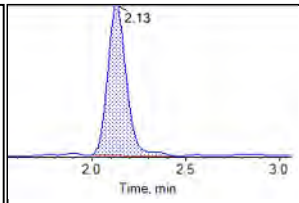

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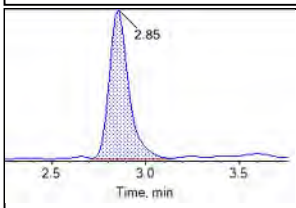

13C8-PFOS

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Chromatogram Report

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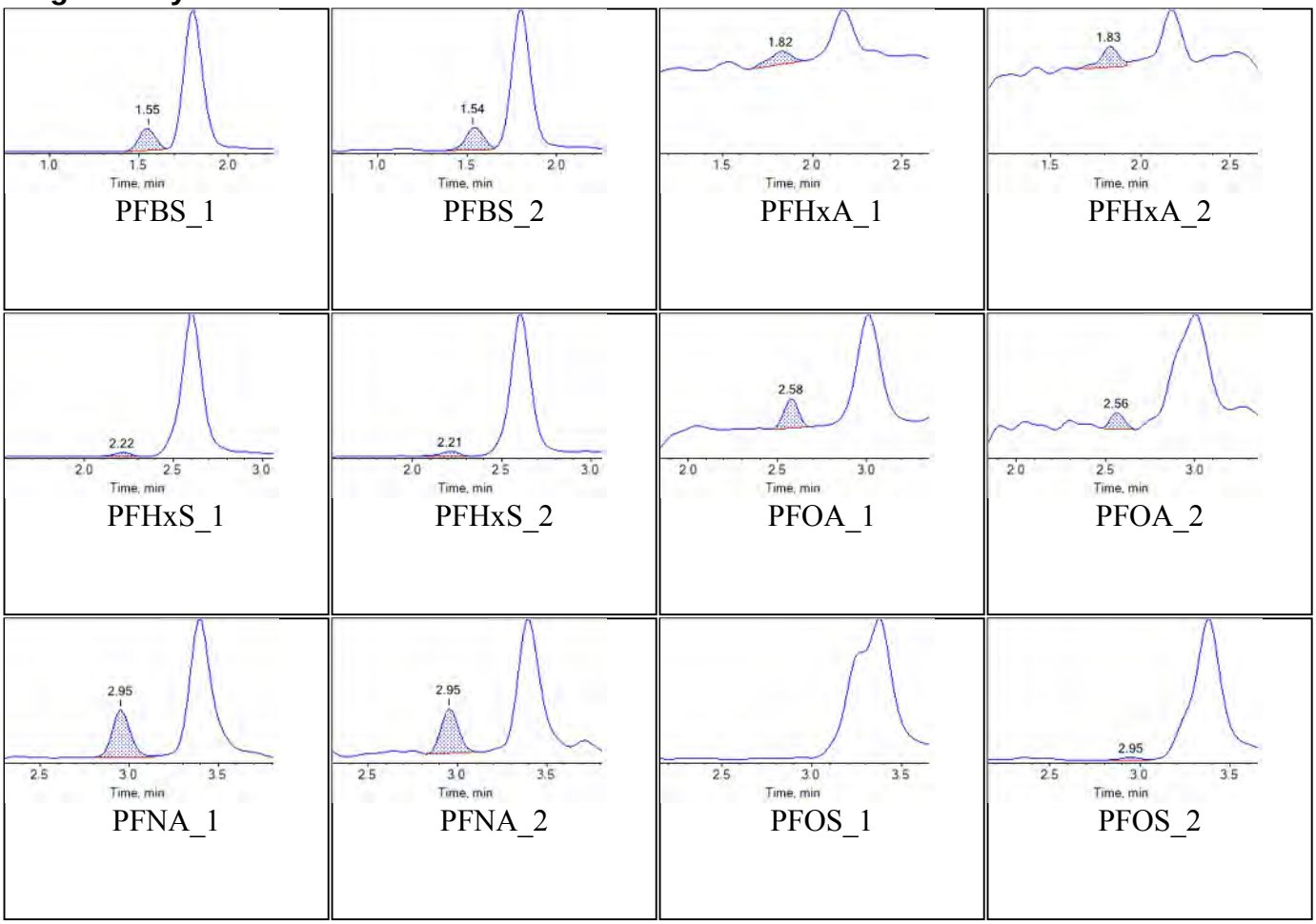
Sample Name	JV20	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:32:29	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Chromatograms

Target Analytes:



Internal Standards:

BATTELLE

Chromatogram Report

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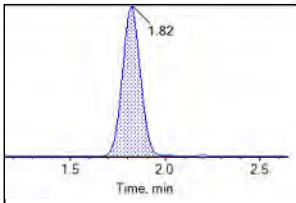
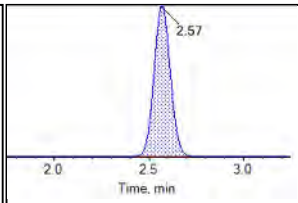
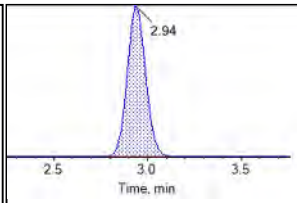


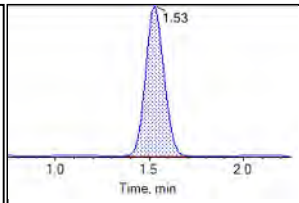
13C5-PFHxA



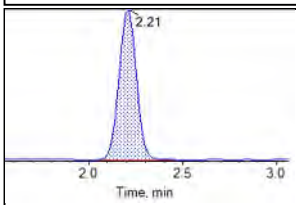
13C8-PFOA



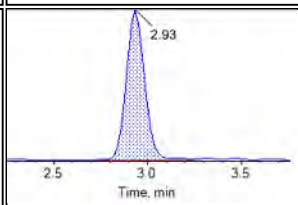
13C9-PFNA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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Sample Name	JV21	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:43:10	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Chromatograms

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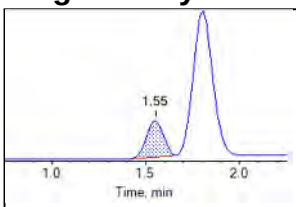
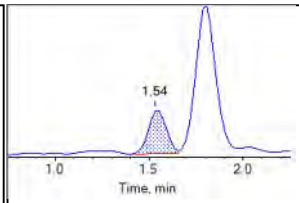
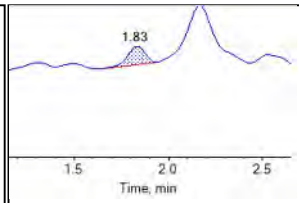


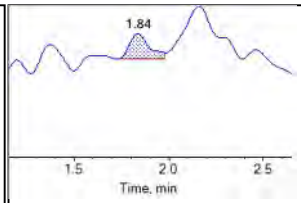
PFBS_1



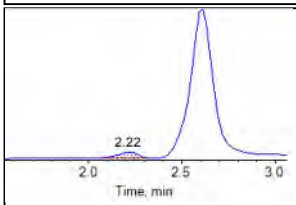
PFBS_2



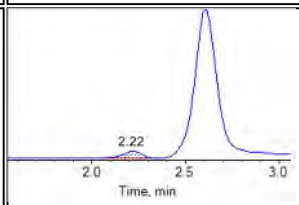
PFHxA_1



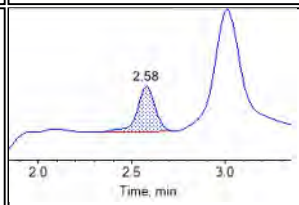
PFHxA_2



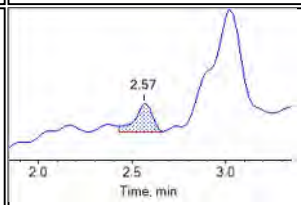
PFHxS_1



PFHxS_2



PFOA_1



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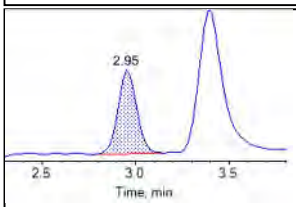
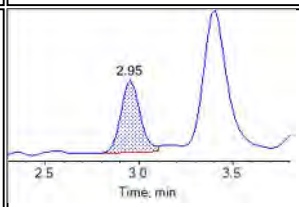
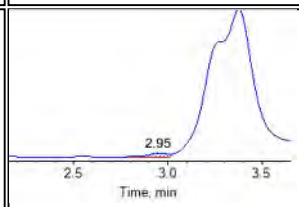


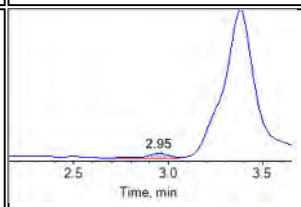
PFNA_1



PFNA_2



PFOS_1



PFOS_2

Internal Standards:

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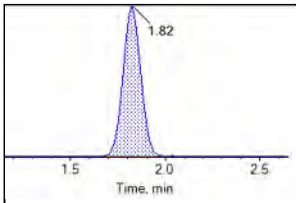
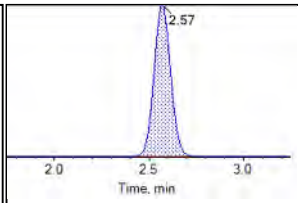
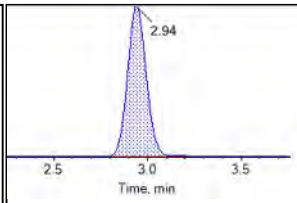


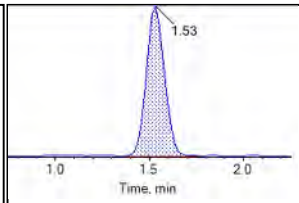
13C5-PFHxA



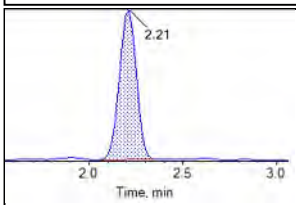
13C8-PFOA



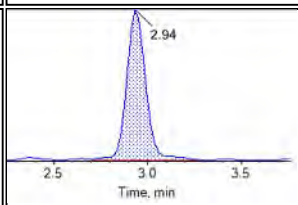
13C9-PFNA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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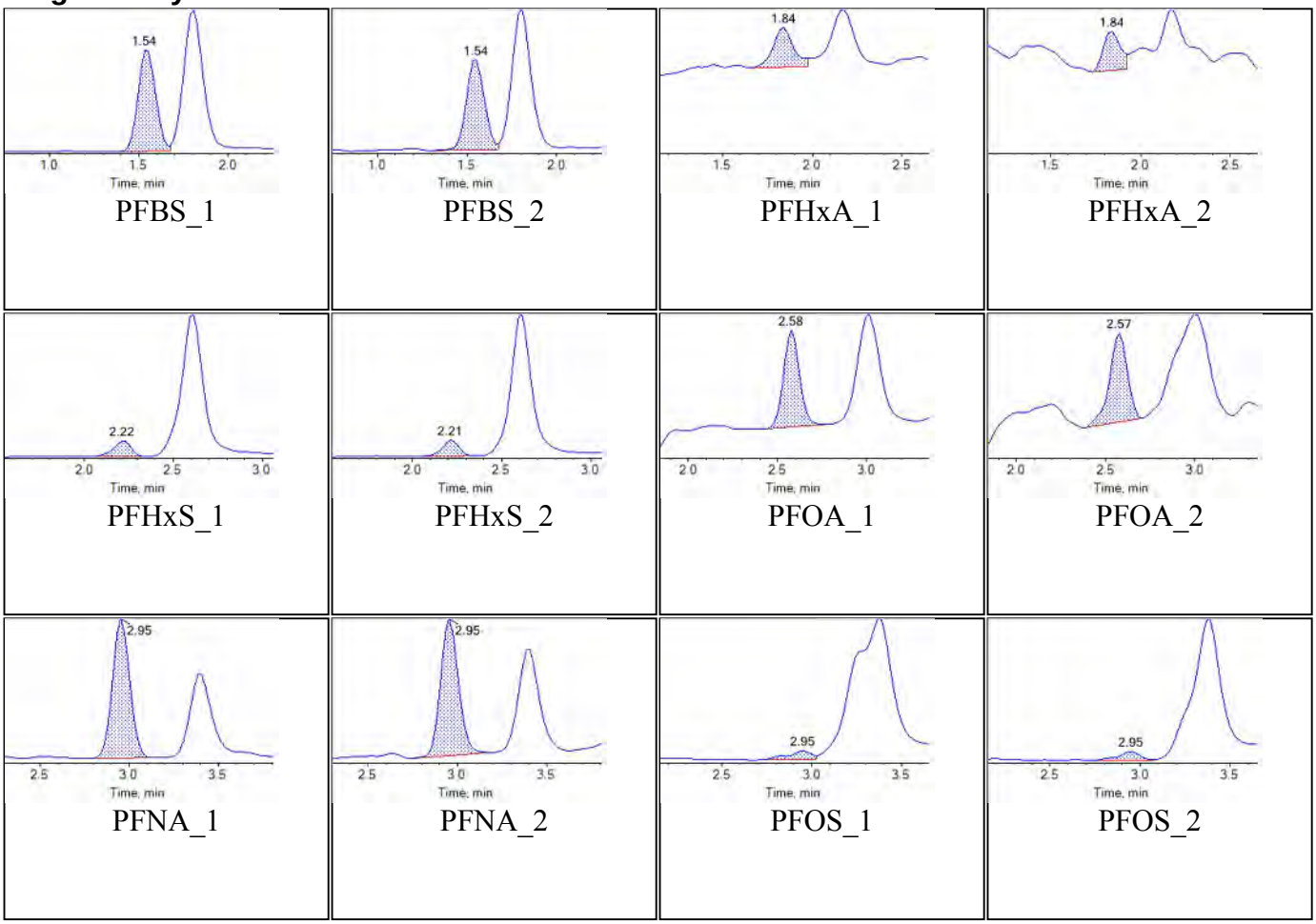
Sample Name	JV22	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:53:52	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Chromatograms

Target Analytes:



Internal Standards:

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Chromatogram Report

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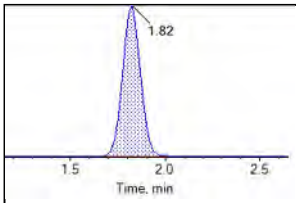

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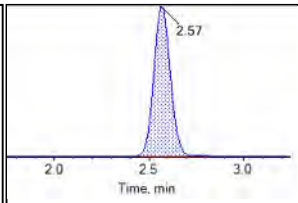
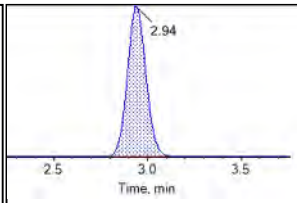
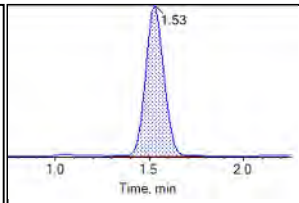


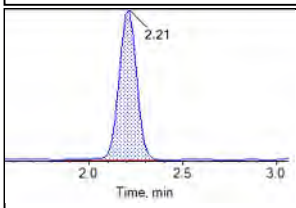
13C8-PFOA



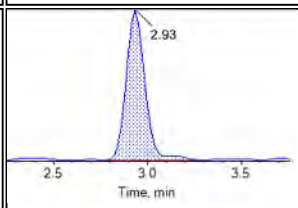
13C9-PFNA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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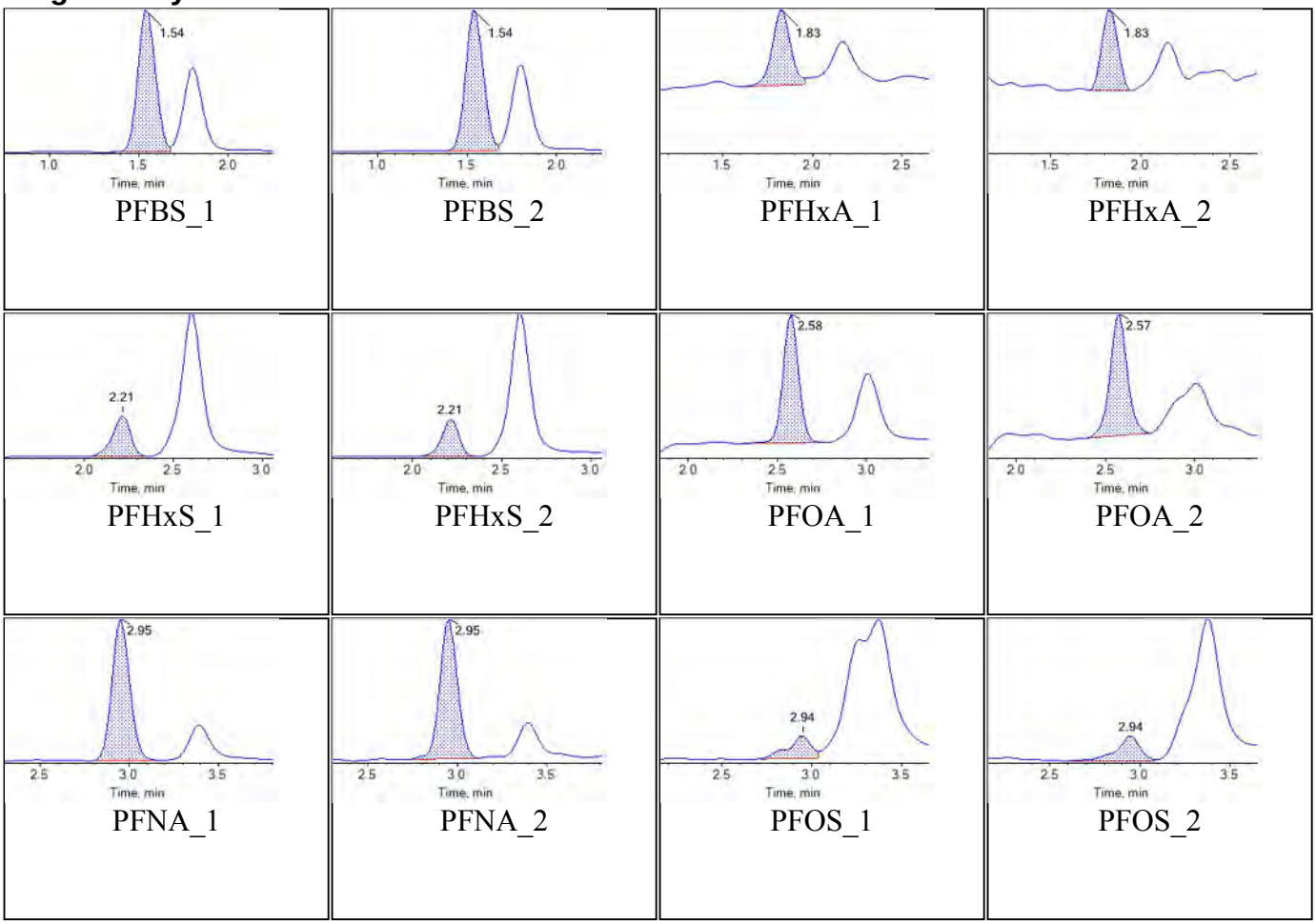
Sample Name	JV23	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:04:34	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Chromatograms

Target Analytes:



Internal Standards:

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Chromatogram Report

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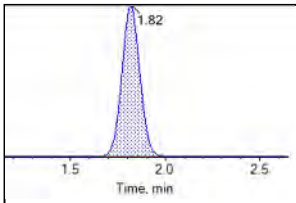
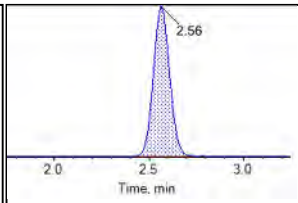
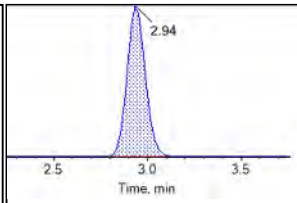


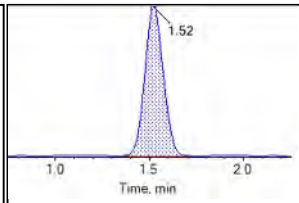
13C5-PFHxA



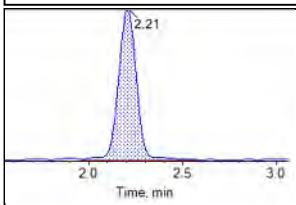
13C8-PFOA



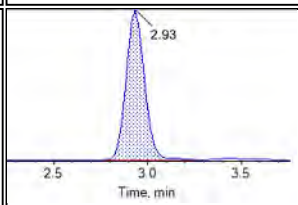
13C9-PFNA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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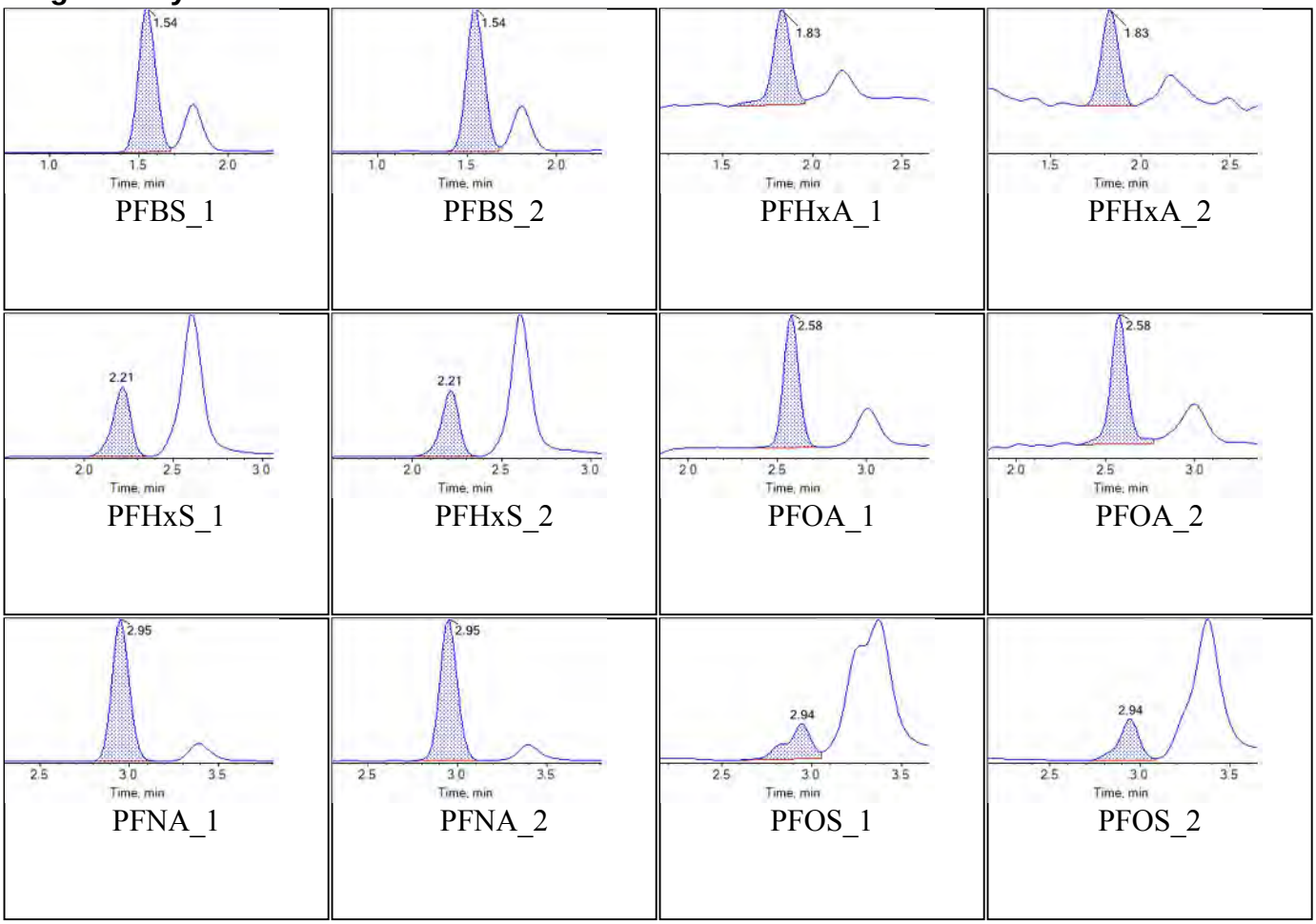
Sample Name	JV24	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:15:15	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Chromatograms

Target Analytes:



Internal Standards:

BATTELLE

Chromatogram Report

Created with Analyst Reporter
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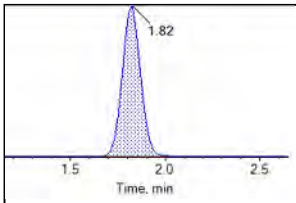
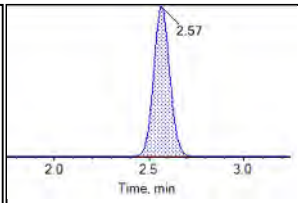
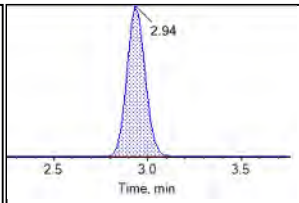


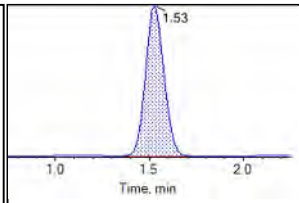
13C5-PFHxA



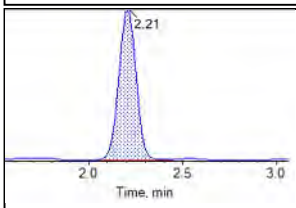
13C8-PFOA



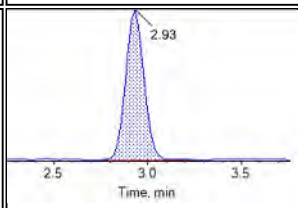
13C9-PFNA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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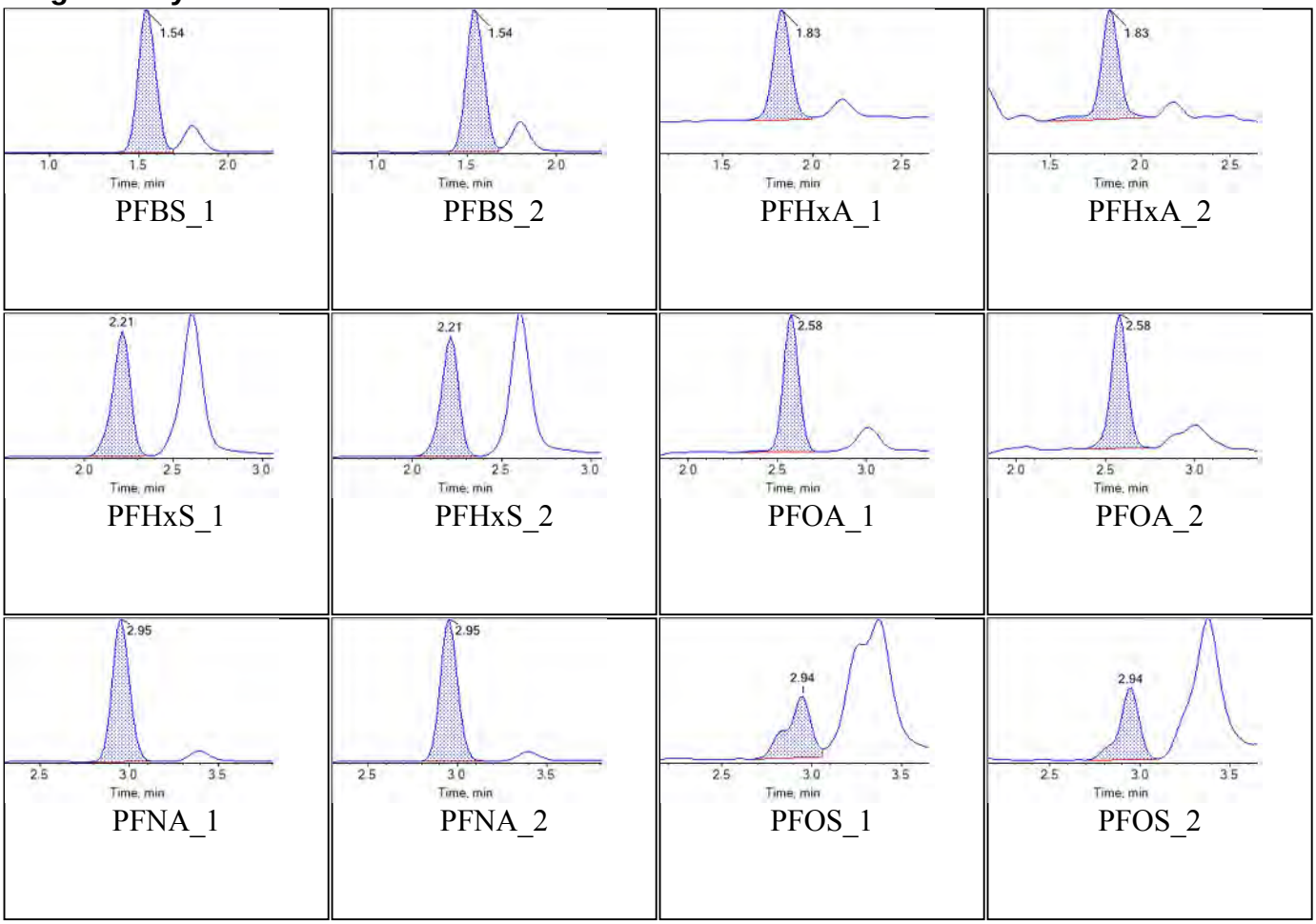
Sample Name	JV25	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:25:56	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Chromatograms

Target Analytes:



Internal Standards:

BATTELLE

Chromatogram Report

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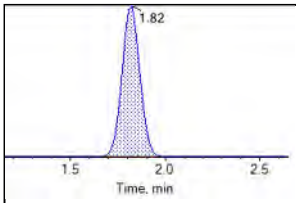
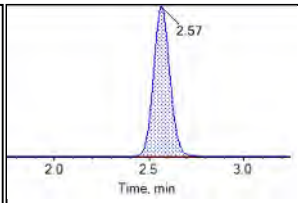
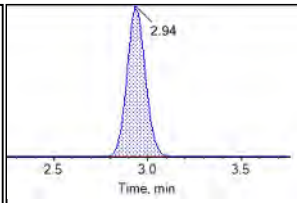


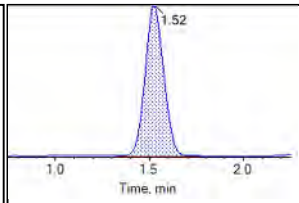
13C5-PFHxA



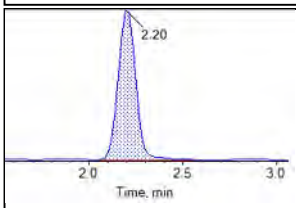
13C8-PFOA



13C9-PFNA



13C3-PFBS



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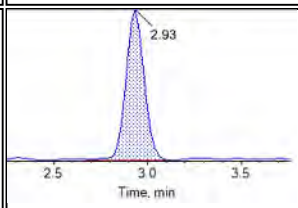

13C8-PFOS

BATTELLE

Chromatogram Report

Created with Analyst Reporter
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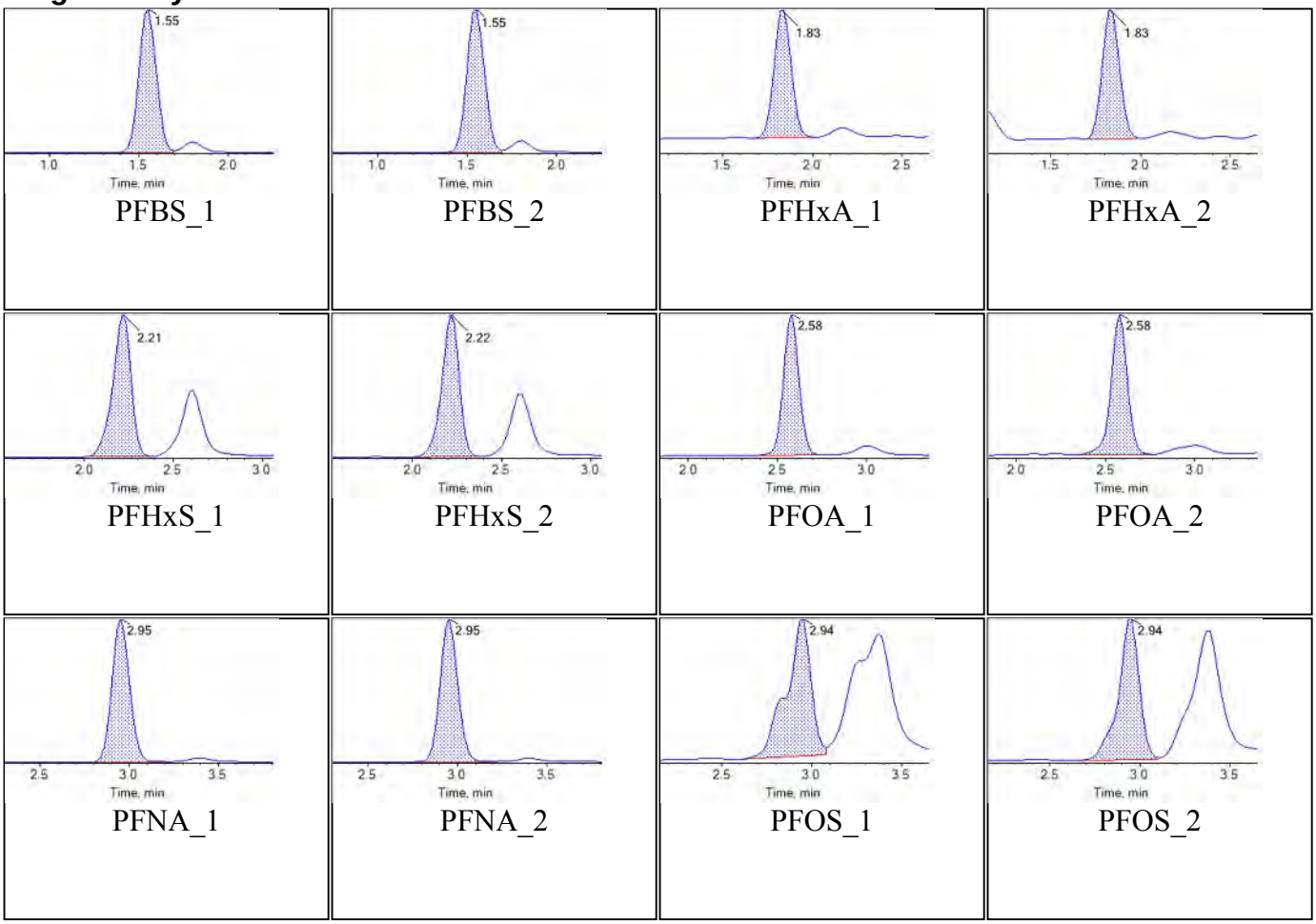
Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:36:37	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Chromatograms

Target Analytes:

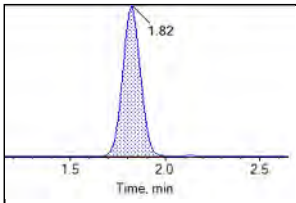


Internal Standards:

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:14:53 PM



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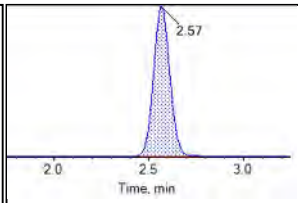

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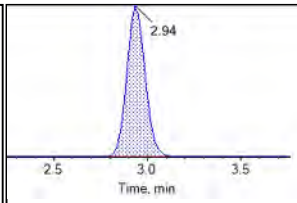

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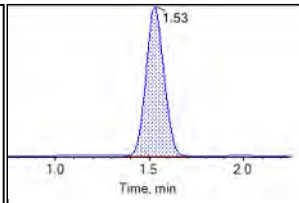

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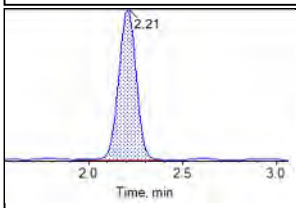

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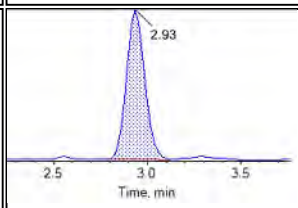


13C8-PFOS

BATTELLE

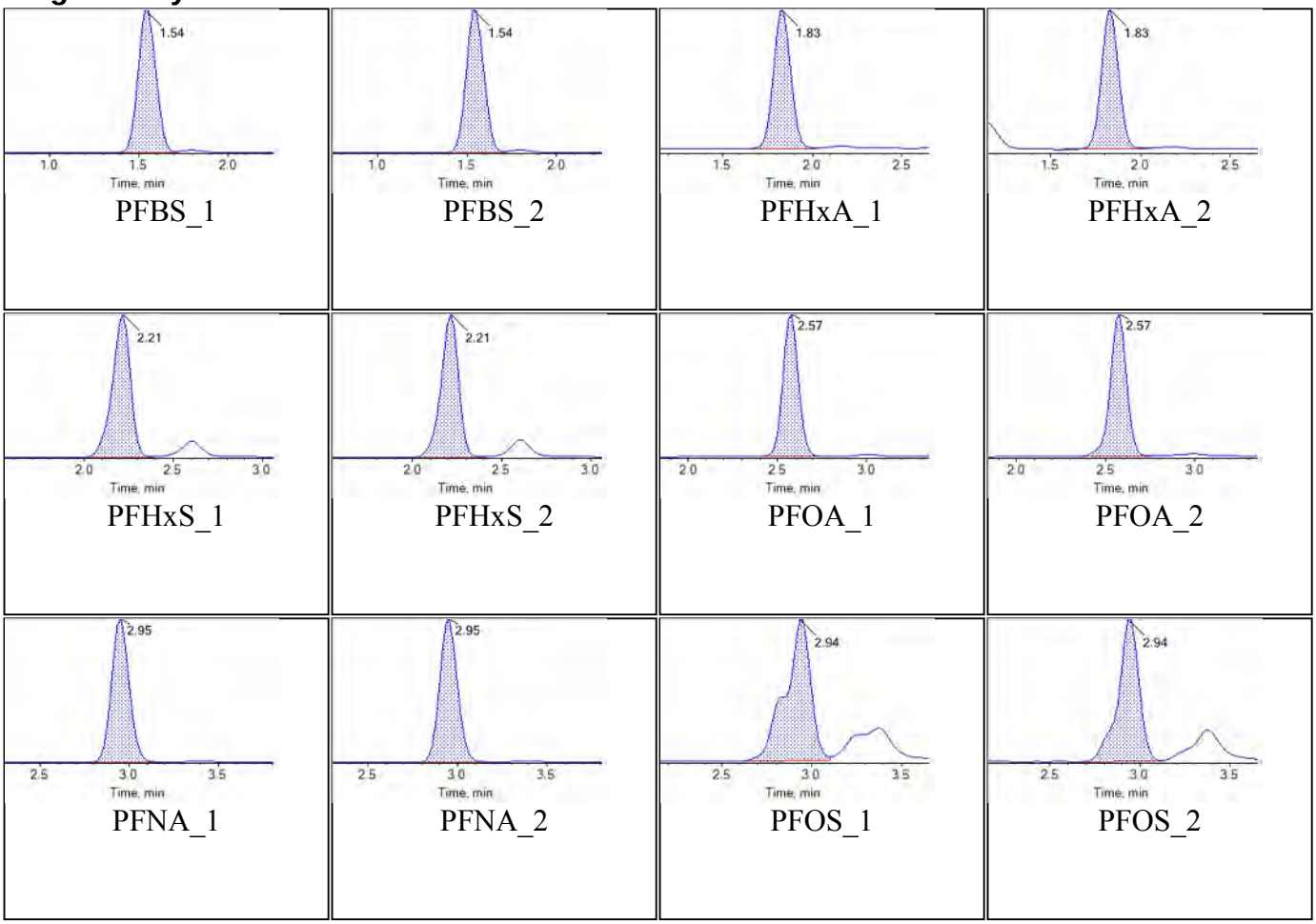
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:14:56 PM

Sample Name	JV27	**Injection Vial**	9
Sample ID	L8	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:47:16	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Chromatograms

Target Analytes:



Internal Standards:

BATTELLE

Chromatogram Report

Created with Analyst Reporter
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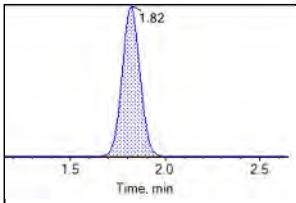

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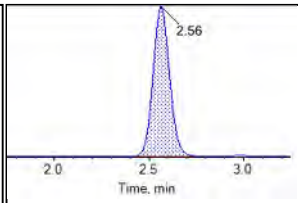

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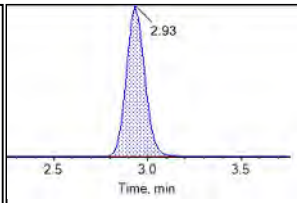

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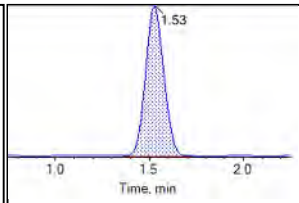

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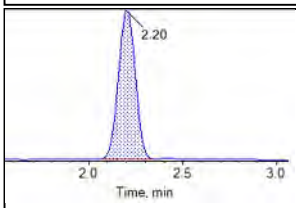

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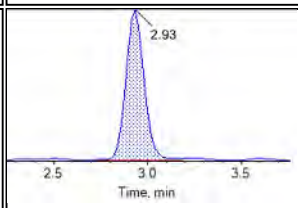


13C8-PFOS

BATTELLE

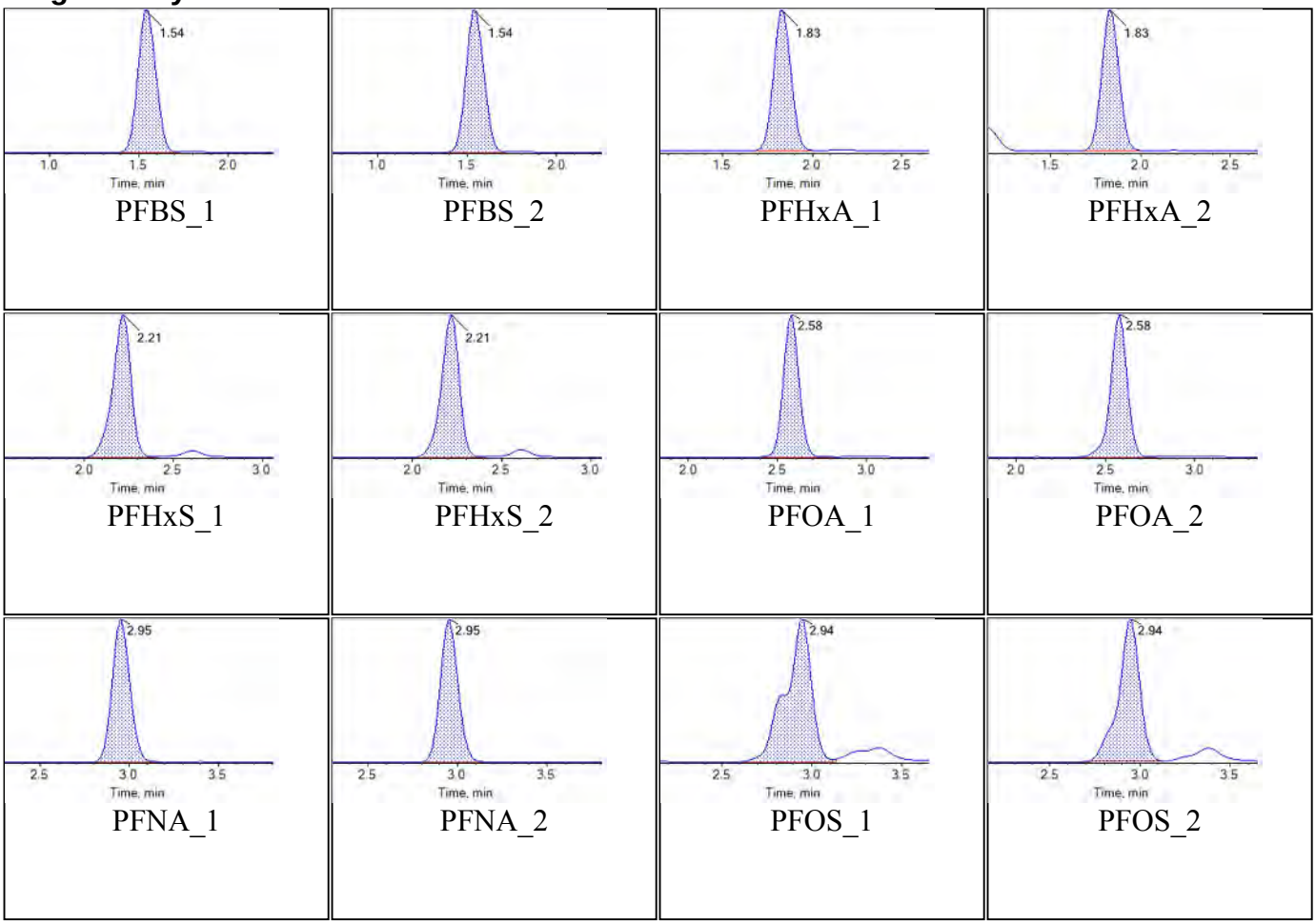
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:14:59 PM

Sample Name	JV28	**Injection Vial**	10
Sample ID	L9	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:57:58	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Chromatograms

Target Analytes:



Internal Standards:

BATTELLE

Chromatogram Report

Created with Analyst Reporter
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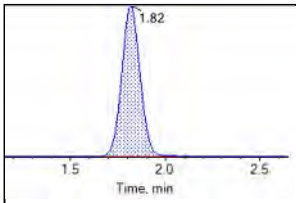

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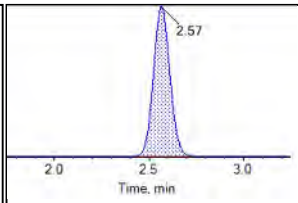

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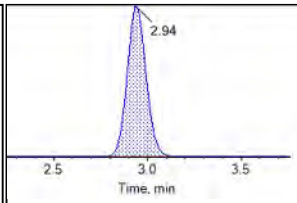

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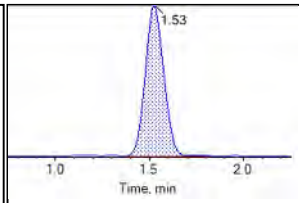

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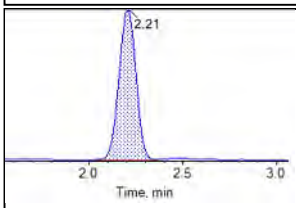

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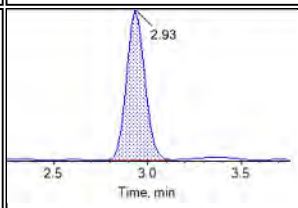


13C8-PFOS

BATTELLE

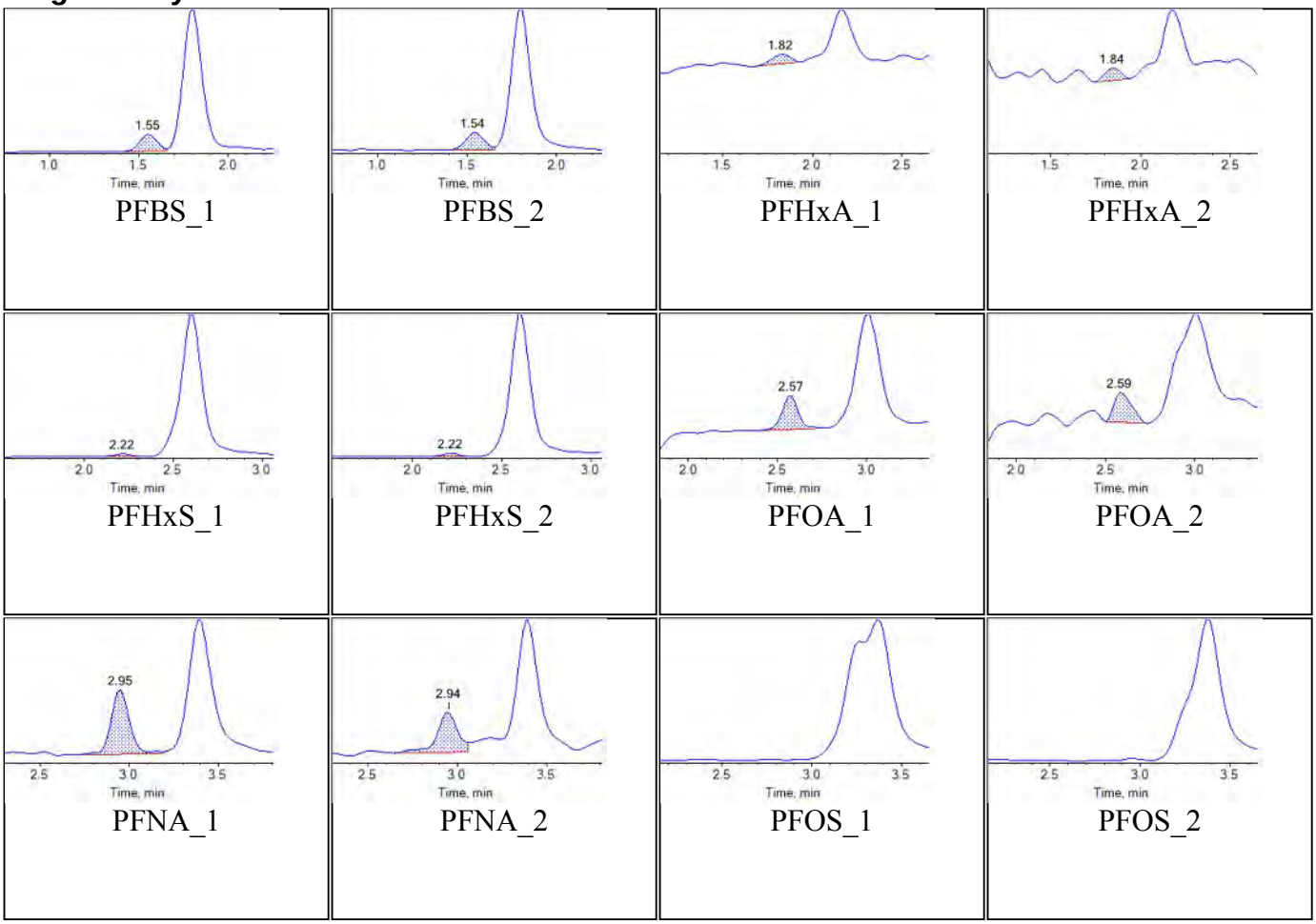
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:15:01 PM

Sample Name	JV05 IB	**Injection Vial**	11
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T22:08:39	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Chromatograms

Target Analytes:



Internal Standards:

BATTELLE

Chromatogram Report

Created with Analyst Reporter
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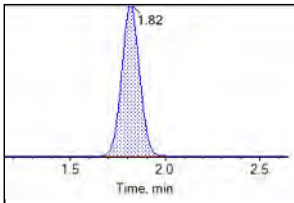

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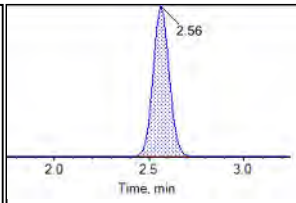

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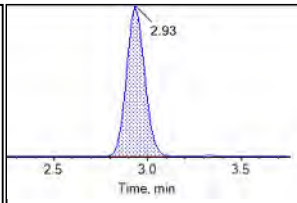
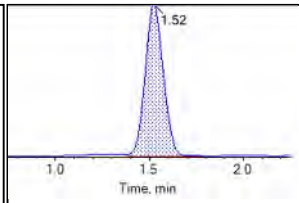


13C9-PFNA



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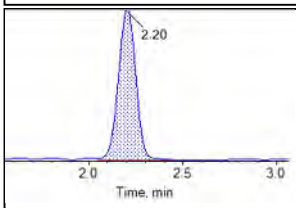
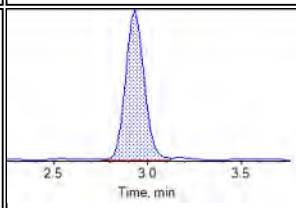


13C3-PFHxS



13C8-PFOS

BATTELLE

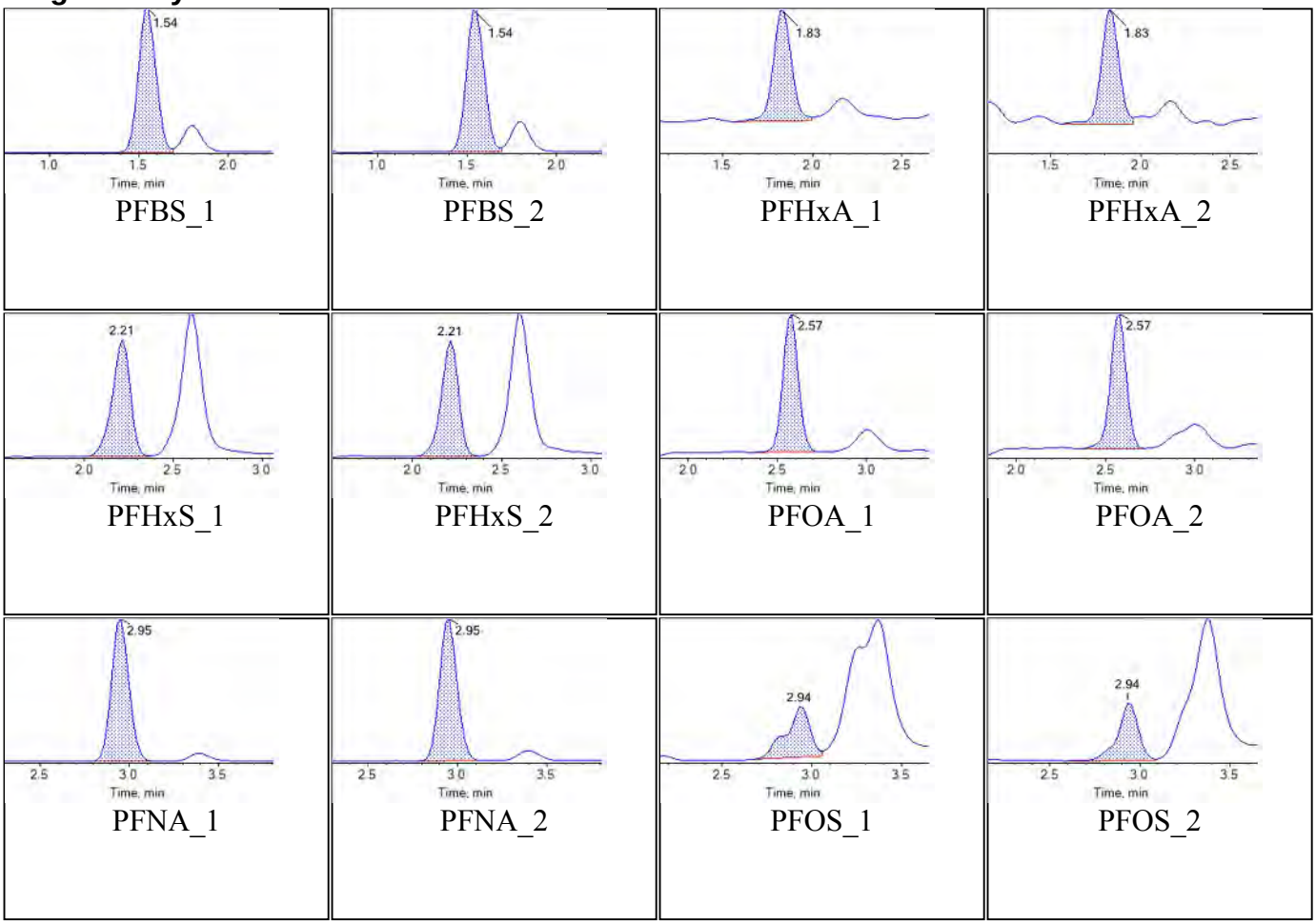
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:15:04 PM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T22:19:21	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Chromatograms

Target Analytes:



Internal Standards:

BATTELLE

Chromatogram Report

Created with Analyst Reporter
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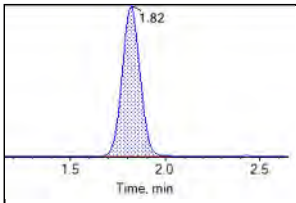
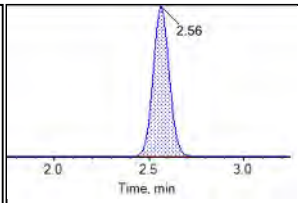


13C5-PFHxA



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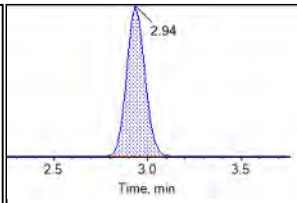
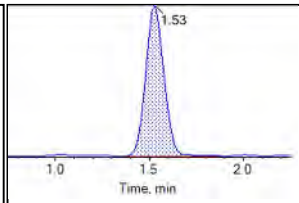


13C9-PFNA



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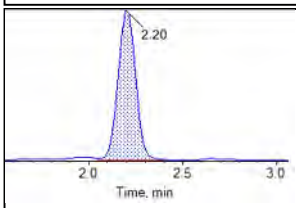

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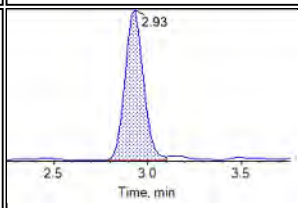


13C8-PFOS

BATTELLE

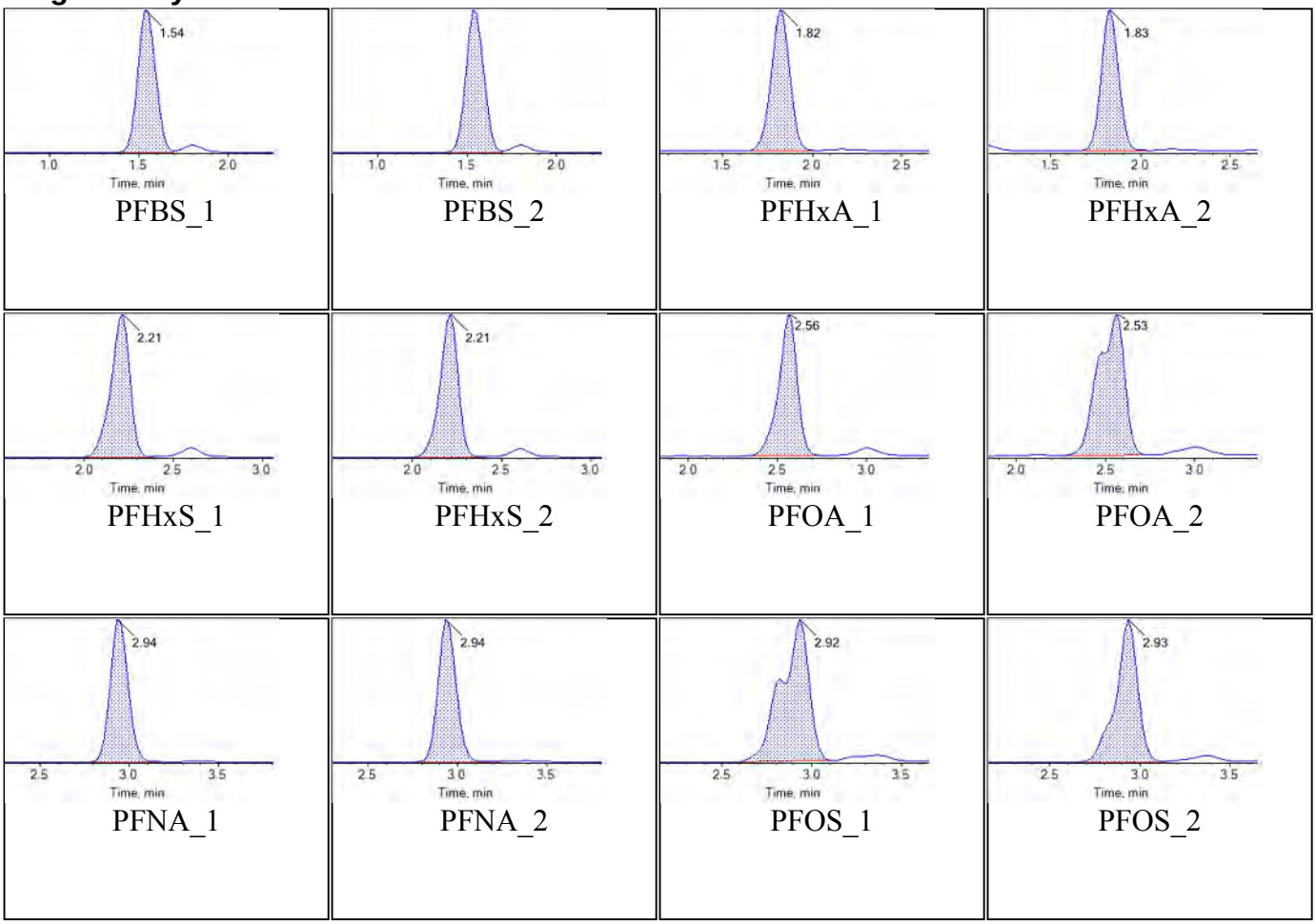
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:15:16 PM

Sample Name	J6241-FS-D(9)	**Injection Vial**	25
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T01:21:00	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Chromatograms

Target Analytes:



Internal Standards:

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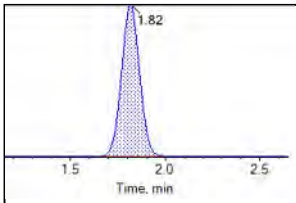
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:15:16 PM



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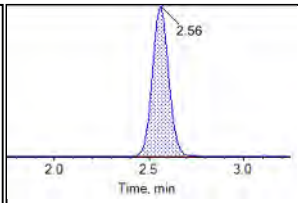

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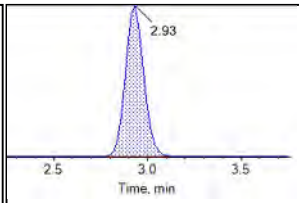
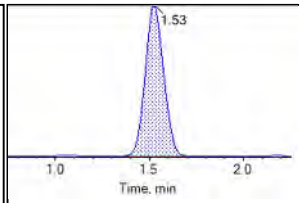
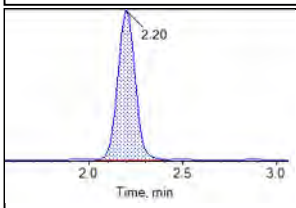


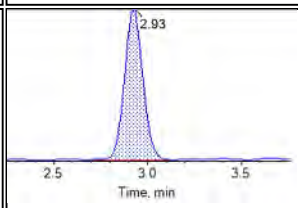
13C9-PFNA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

Chromatogram Report

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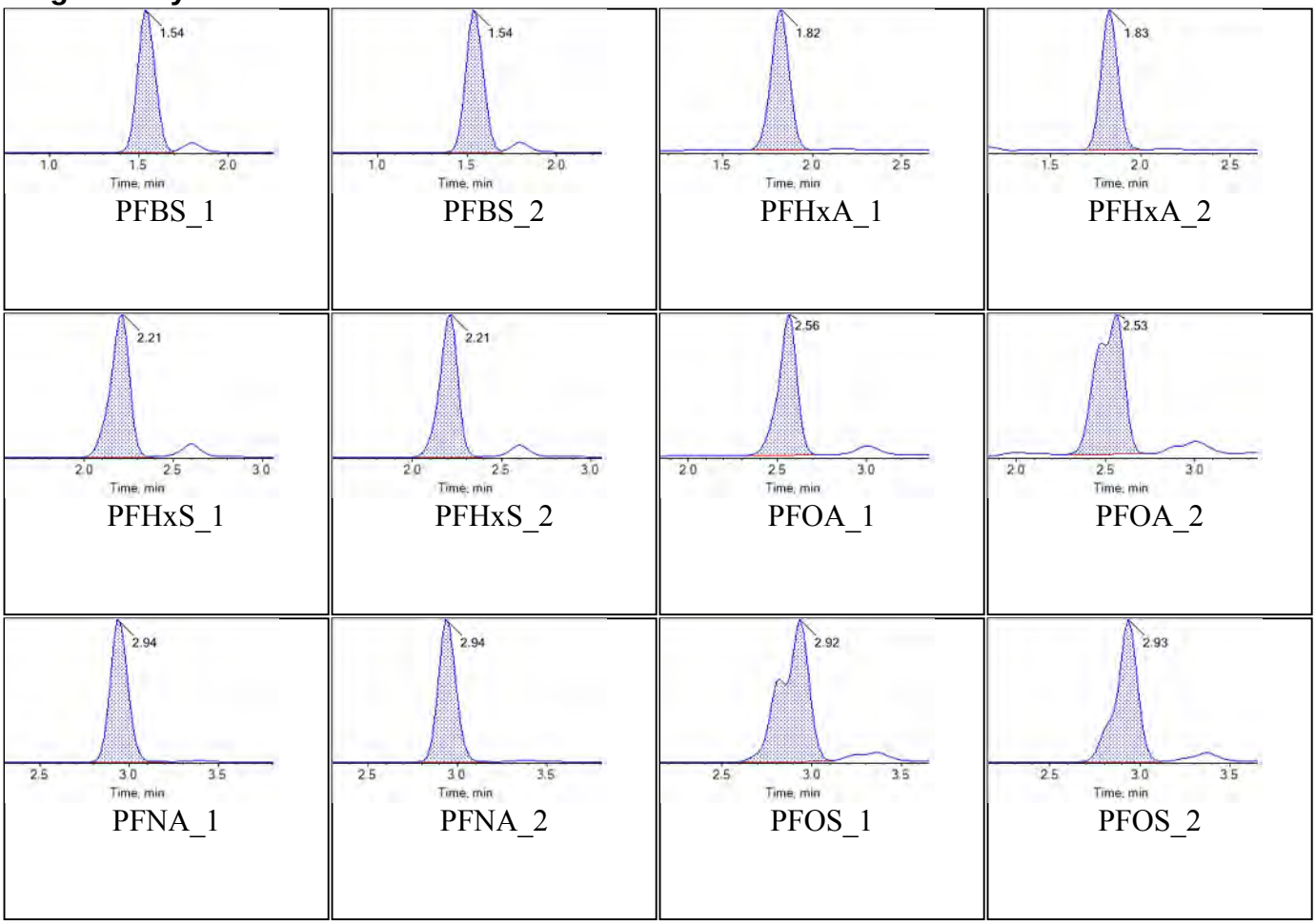
Sample Name	J6242-FS-D(9)	**Injection Vial**	26
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T01:31:41	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Chromatograms

Target Analytes:

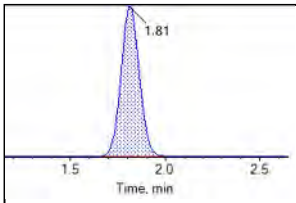


Internal Standards:

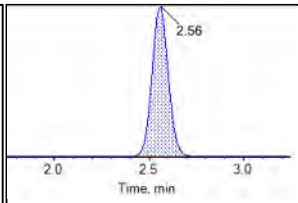
BATTELLE

Chromatogram Report

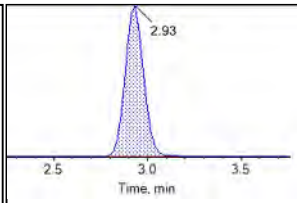
Created with Analyst Reporter
Printed: 08/06/2018 12:15:19 PM



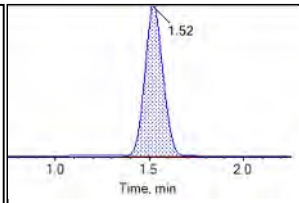
13C5-PFHxA



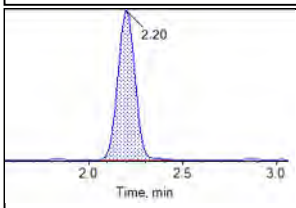
13C8-PFOA



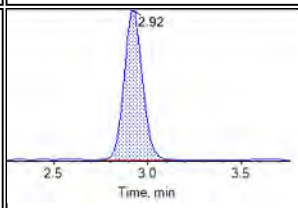
13C9-PFNA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

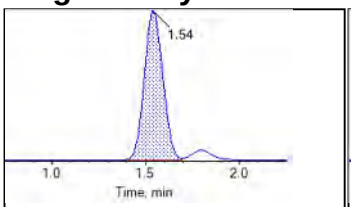
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 12:15:31 PM

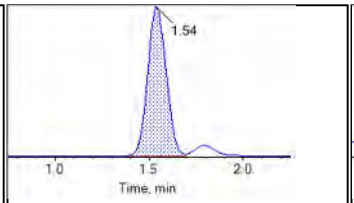
Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T02:14:26	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Chromatograms

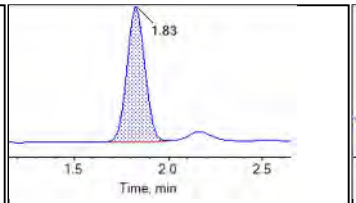
Target Analytes:



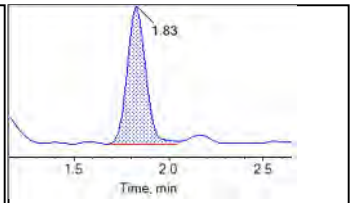
PFBS_1



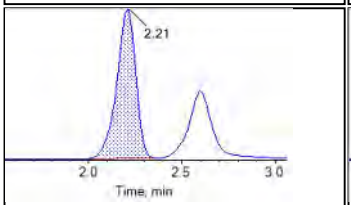
PFBS_2



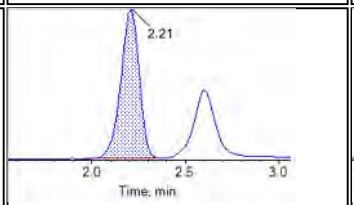
PFHxA_1



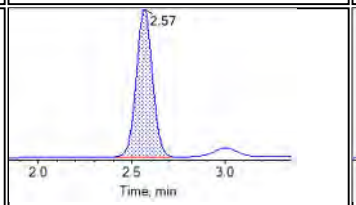
PFHxA_2



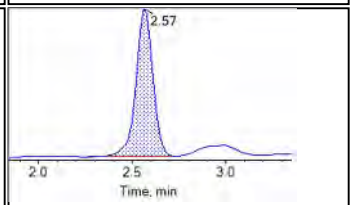
PFHxS_1



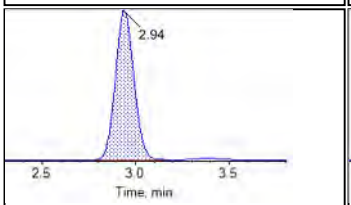
PFHxS_2



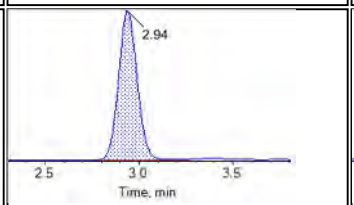
PFOA_1



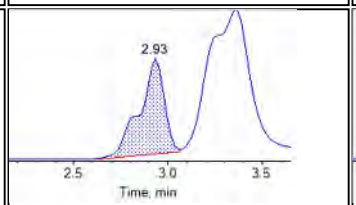
PFOA_2



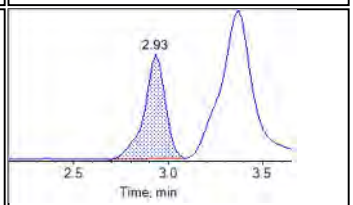
PFNA_1



PFNA_2



PFOS_1



PFOS_2

Internal Standards:

BATTELLE

Chromatogram Report

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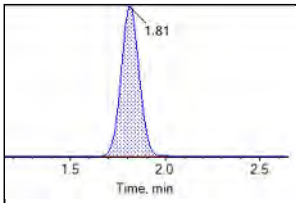
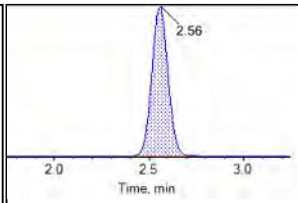
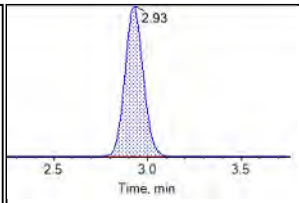


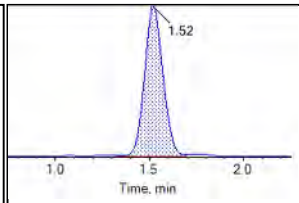
13C5-PFHxA



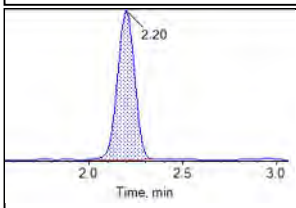
13C8-PFOA



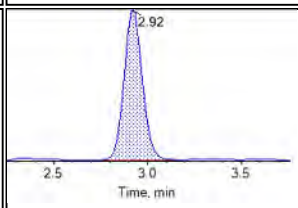
13C9-PFNA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

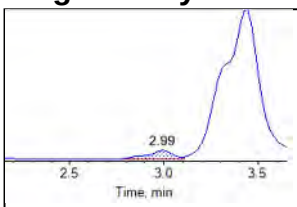
Chromatogram Report

Created with Analyst Reporter
Printed: 11/06/2018 11:59:57 AM

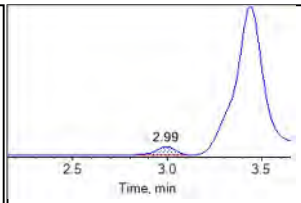
Sample Name	JV24 ISC	**Injection Vial**	1
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T13:33:43	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Chromatograms

Target Analytes:

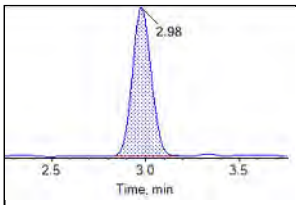


PFOS_1



PFOS_2

Internal Standards:



13C8-PFOS

BATTELLE

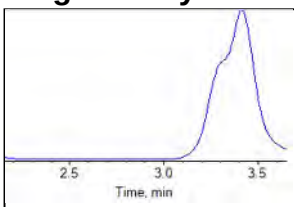
Chromatogram Report

Created with Analyst Reporter
Printed: 11/06/2018 12:00:00 PM

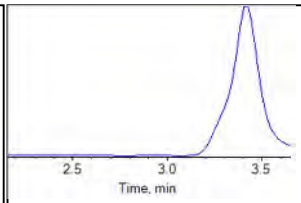
Sample Name	JV05 IB	**Injection Vial**	2
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T13:44:26	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Chromatograms

Target Analytes:

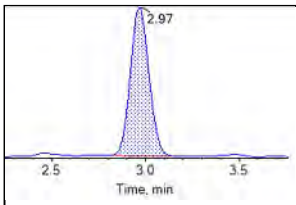


PFOS_1



PFOS_2

Internal Standards:



13C8-PFOS

BATTELLE

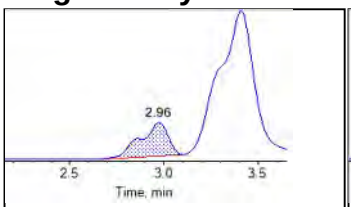
Chromatogram Report

Created with Analyst Reporter
Printed: 11/06/2018 12:00:02 PM

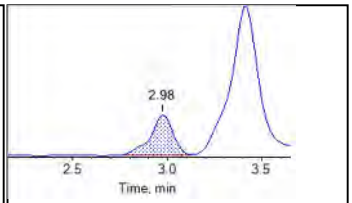
Sample Name	J6241-FS-D(11)	**Injection Vial**	3
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T13:55:08	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Chromatograms

Target Analytes:

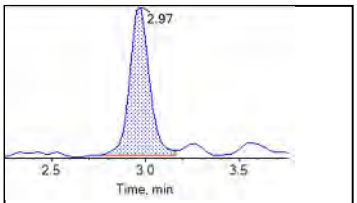


PFOS_1



PFOS_2

Internal Standards:



13C8-PFOS

BATTELLE

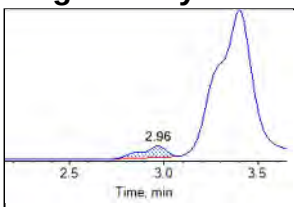
Chromatogram Report

Created with Analyst Reporter
Printed: 11/06/2018 12:00:05 PM

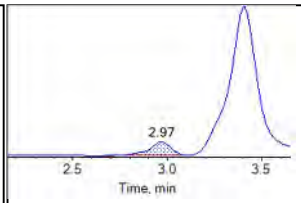
Sample Name	J6242-FS-D(11)	**Injection Vial**	4
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T14:05:50	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Chromatograms

Target Analytes:

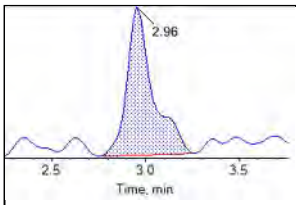


PFOS_1



PFOS_2

Internal Standards:



13C8-PFOS

BATTELLE

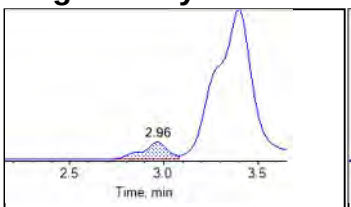
Chromatogram Report

Created with Analyst Reporter
Printed: 11/06/2018 12:00:07 PM

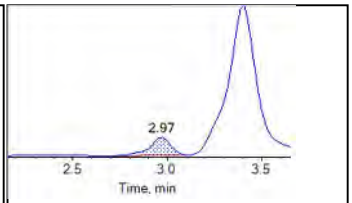
Sample Name	JV25 CCV	**Injection Vial**	5
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T14:16:30	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Chromatograms

Target Analytes:

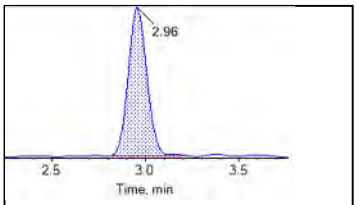


PFOS_1



PFOS_2

Internal Standards:



13C8-PFOS

BATTELLE

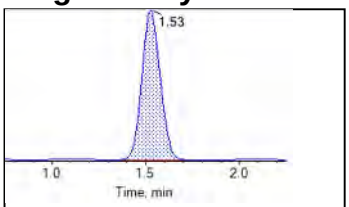
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:08:35 AM

Sample Name	JV20	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:32:29	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

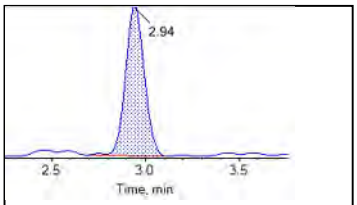
Chromatograms

Target Analytes:



13C3-PFBS

Internal Standards:



13C4-PFOS

BATTELLE

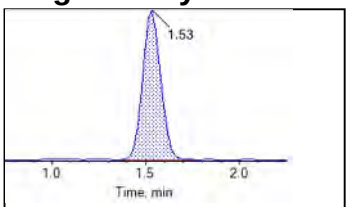
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:08:37 AM

Sample Name	JV21	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:43:10	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

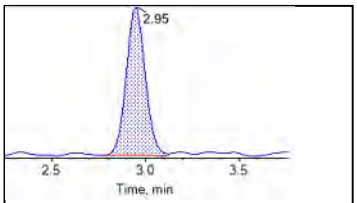
Chromatograms

Target Analytes:



13C3-PFBS

Internal Standards:



13C4-PFOS

BATTELLE

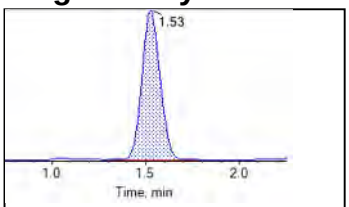
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:08:39 AM

Sample Name	JV22	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T20:53:52	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

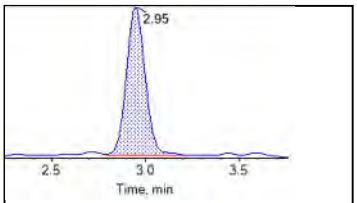
Chromatograms

Target Analytes:



13C3-PFBS

Internal Standards:



13C4-PFOS

BATTELLE

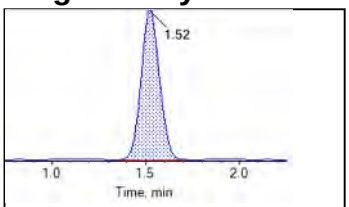
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:08:41 AM

Sample Name	JV23	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:04:34	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

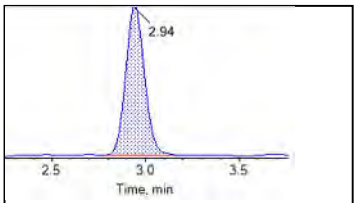
Chromatograms

Target Analytes:



13C3-PFBS

Internal Standards:



13C4-PFOS

BATTELLE

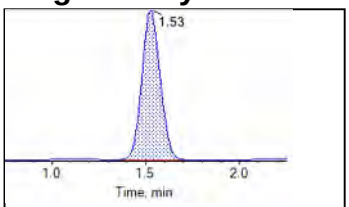
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:08:43 AM

Sample Name	JV24	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:15:15	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

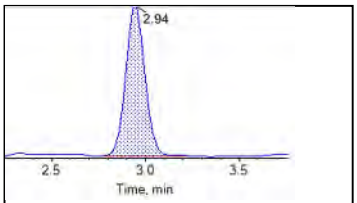
Chromatograms

Target Analytes:



13C3-PFBS

Internal Standards:



13C4-PFOS

BATTELLE

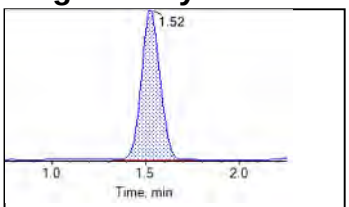
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:08:46 AM

Sample Name	JV25	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:25:56	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

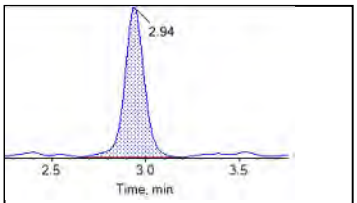
Chromatograms

Target Analytes:



13C3-PFBS

Internal Standards:



13C4-PFOS

BATTELLE

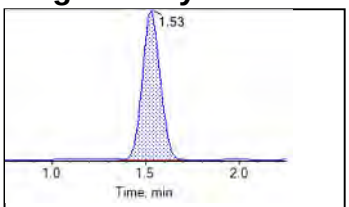
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:08:48 AM

Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:36:37	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

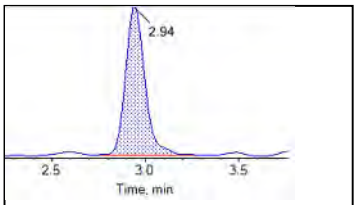
Chromatograms

Target Analytes:



13C3-PFBS

Internal Standards:



13C4-PFOS

BATTELLE

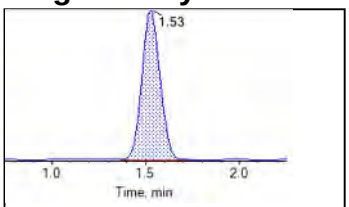
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:08:50 AM

Sample Name	JV27	**Injection Vial**	9
Sample ID	L8	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:47:16	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

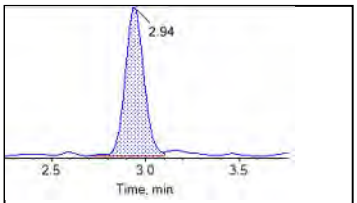
Chromatograms

Target Analytes:



13C3-PFBS

Internal Standards:



13C4-PFOS

BATTELLE

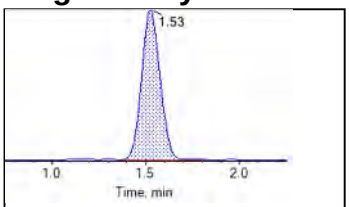
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:08:52 AM

Sample Name	JV28	**Injection Vial**	10
Sample ID	L9	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:57:58	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

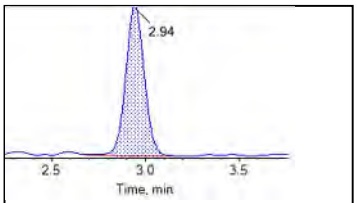
Chromatograms

Target Analytes:



13C3-PFBS

Internal Standards:



13C4-PFOS

BATTELLE

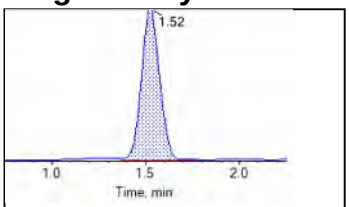
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:08:54 AM

Sample Name	JV05 IB	**Injection Vial**	11
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T22:08:39	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

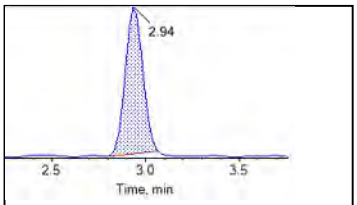
Chromatograms

Target Analytes:



13C3-PFBS

Internal Standards:



13C4-PFOS

BATTELLE

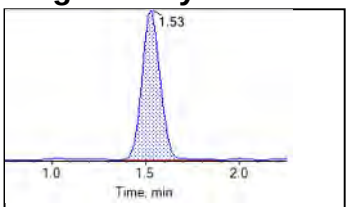
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:08:58 AM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T22:19:21	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

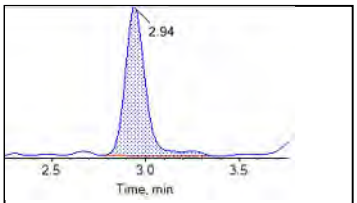
Chromatograms

Target Analytes:



13C3-PFBS

Internal Standards:



13C4-PFOS

BATTELLE

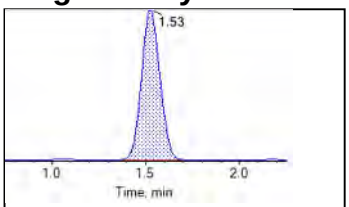
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:09:03 AM

Sample Name	J6241-FS-D(9)	**Injection Vial**	25
Sample ID	FFTA_FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T01:21:00	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

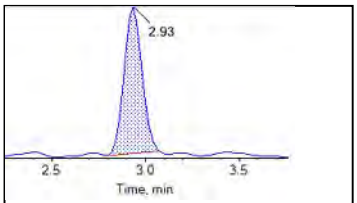
Chromatograms

Target Analytes:



13C3-PFBS

Internal Standards:



13C4-PFOS

BATTELLE

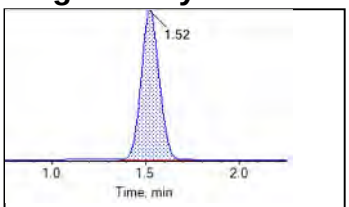
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:09:05 AM

Sample Name	J6242-FS-D(9)	**Injection Vial**	26
Sample ID	FFTA-SW01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T01:31:41	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

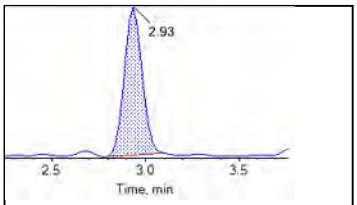
Chromatograms

Target Analytes:



13C3-PFBS

Internal Standards:



13C4-PFOS

BATTELLE

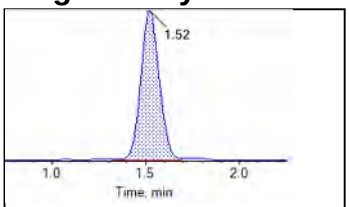
Chromatogram Report

Created with Analyst Reporter
Printed: 08/06/2018 11:09:13 AM

Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T02:14:26	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

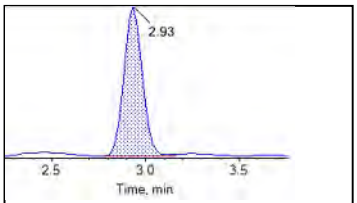
Chromatograms

Target Analytes:



13C3-PFBS

Internal Standards:



13C4-PFOS

Unused Data

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	FFTA-FD01-052418				
Battelle ID	J6241-FS				
Sample Type	SA				
Collection Date	05/24/2018				
Extraction Date	05/30/2018				
Analysis Date	05/31/2018				
Analytical Instrument	Sciex 5500 LC/MS/MS				
% Moisture	NA				
Matrix	SW DUP				
Sample Size	0.275				
Size Unit-Basis	L				
Units	ng/L		MDL	LOD	LOQ
PFHxA	966433.72	D	0.19	0.50	5.00
PFHpA	37554.35	D	0.16	0.50	5.00
PFOA	163302.36	D	0.18	0.50	5.00
PFNA	228603.87	D	0.26	1.00	5.00
PFDA	4540.44	D	0.16	0.50	5.00
PFUnA	24897.69	D	0.29	1.00	5.00
PFDoA	112.74	D	0.18	0.50	5.00
PFTrDA	226.59	D	0.15	0.50	5.00
PFTeDA	7.84		0.25	1.00	5.00
NMeFOSAA	18.00		0.56	2.00	5.00
NEtFOSAA	41.11		0.49	1.00	5.00
PFBS	164675.06	D	0.13	0.50	5.00
PFHxS	909907.10	D	0.11	0.40	5.00
PFOS	13500909.99	D	0.19	0.50	5.00
Surrogate Recoveries (%)					
13C5-PFHxA	100	D			
13C4-PFHpA	114	D			
13C8-PFOA	82	D			
13C9-PFNA	54	D			
13C6-PFDA	97	D			
13C7-PFUnA	105	D			
13C2-PFDoA	93	D			
13C2-PFTeDA	94	D			
d3-MeFOSAA	129	D			
d5-EtFOSAA	150	D			
13C3-PFBS	104	D			
13C3-PFHxS	149	D			
13C8-PFOS	75	D			

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	FFTA-SW01-052418				
Battelle ID	J6242-FS				
Sample Type	SA				
Collection Date	05/24/2018				
Extraction Date	05/30/2018				
Analysis Date	05/31/2018				
Analytical Instrument	Sciex 5500 LC/MS/MS				
% Moisture	NA				
Matrix	SW				
Sample Size	0.280				
Size Unit-Basis	L				
Units	ng/L		MDL	LOD	LOQ
PFHxA	756130.79	D	0.19	0.50	5.00
PFHpA	29830.28	D	0.16	0.50	5.00
PFOA	117958.11	D	0.18	0.50	5.00
PFNA	169115.57	D	0.26	1.00	5.00
PFDA	3519.30	D	0.16	0.50	5.00
PFUnA	22351.81	D	0.29	1.00	5.00
PFDoA	156.14	D	0.18	0.50	5.00
PFTrDA	335.02	D	0.15	0.50	5.00
PFTeDA	7.35		0.25	1.00	5.00
NMeFOSAA	16.75		0.56	2.00	5.00
NEtFOSAA	34.38		0.49	1.00	5.00
PFBS	122540.36	D	0.13	0.50	5.00
PFHxS	585921.79	D	0.11	0.40	5.00
PFOS	5706313.82	D	0.19	0.50	5.00
Surrogate Recoveries (%)					
13C5-PFHxA	93	D			
13C4-PFHpA	107	D			
13C8-PFOA	70	D			
13C9-PFNA	52	D			
13C6-PFDA	96	D			
13C7-PFUnA	94	D			
13C2-PFDoA	86	D			
13C2-PFTeDA	88	D			
d3-MeFOSAA	117	D			
d5-EtFOSAA	136	D			
13C3-PFBS	111	D			
13C3-PFHxS	149	D			
13C8-PFOS	71	D			

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	JV05 IB			
Battelle ID	JV05 IB_05/31/2018			
Sample Type	IB			
Collection Date	NA			
Extraction Date	NA			
Analysis Date	05/31/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	NA			
Sample Size	NA			
Size Unit-Basis	NA			
Units	ng/L	MDL	LOD	LOQ
PFHxA	- -	-	-	-
PFHpA	- -	-	-	-
PFOA	- -	-	-	-
PFNA	- -	-	-	-
PFDA	- -	-	-	-
PFUnA	- -	-	-	-
PFDoA	- -	-	-	-
PFTrDA	- -	-	-	-
PFTeDA	0.25 U	0.25	1.00	5.00
NMeFOSAA	0.56 U	0.56	2.00	5.00
NEtFOSAA	0.49 U	0.49	1.00	5.00
PFBS	- -	-	-	-
PFHxS	- -	-	-	-
PFOS	- -	-	-	-
Surrogate Recoveries (%)				
13C5-PFHxA	- -	-	-	-
13C4-PFHpA	- -	-	-	-
13C8-PFOA	- -	-	-	-
13C9-PFNA	- -	-	-	-
13C6-PFDA	- -	-	-	-
13C7-PFUnA	- -	-	-	-
13C2-PFDoA	- -	-	-	-
13C2-PFTeDA	- -	-	-	-
d3-MeFOSAA	- -	-	-	-
d5-EtFOSAA	- -	-	-	-
13C3-PFBS	- -	-	-	-
13C3-PFHxS	- -	-	-	-
13C8-PFOS	- -	-	-	-

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	JV05 IB			
Battelle ID	JV05 IB_06/04/2018			
Sample Type	IB			
Collection Date	NA			
Extraction Date	NA			
Analysis Date	06/04/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	NA			
Sample Size	NA			
Size Unit-Basis	NA			
Units	ng/L	MDL	LOD	LOQ
PFHxA	0.19 U	0.19	0.50	5.00
PFHpA	0.16 U	0.16	0.50	5.00
PFOA	0.19 J	0.18	0.50	5.00
PFNA	0.26 U	0.26	1.00	5.00
PFDA	0.16 U	0.16	0.50	5.00
PFUnA	0.29 U	0.29	1.00	5.00
PFDoA	0.18 U	0.18	0.50	5.00
PFTrDA	0.15 U	0.15	0.50	5.00
PFTeDA	0.25 U	0.25	1.00	5.00
NMeFOSAA	0.56 U	0.56	2.00	5.00
NEtFOSAA	0.49 U	0.49	1.00	5.00
PFBS	0.13 U	0.13	0.50	5.00
PFHxS	0.11 U	0.11	0.40	5.00
PFOS	0.19 U	0.19	0.50	5.00

Surrogate Recoveries (%)

13C5-PFHxA	67
13C4-PFHpA	65
13C8-PFOA	71
13C9-PFNA	68
13C6-PFDA	72
13C7-PFUnA	67
13C2-PFDoA	70
13C2-PFTeDA	66
d3-MeFOSAA	59
d5-EtFOSAA	68
13C3-PFBS	63
13C3-PFHxS	78
13C8-PFOS	75

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	JV05 IB			
Battelle ID	JV05 IB_06/07/2018			
Sample Type	IB			
Collection Date	NA			
Extraction Date	NA			
Analysis Date	06/07/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	NA			
Sample Size	NA			
Size Unit-Basis	NA			
Units	ng/L	MDL	LOD	LOQ
PFHxA	0.19 U	0.19	0.50	5.00
PFHpA	- -	-	-	-
PFOA	0.18 U	0.18	0.50	5.00
PFNA	0.26 U	0.26	1.00	5.00
PFDA	- -	-	-	-
PFUnA	- -	-	-	-
PFDoA	- -	-	-	-
PFTrDA	- -	-	-	-
PFTeDA	- -	-	-	-
NMeFOSAA	- -	-	-	-
NEtFOSAA	- -	-	-	-
PFBS	0.13 U	0.13	0.50	5.00
PFHxS	0.11 U	0.11	0.40	5.00
PFOS	0.19 U	0.19	0.50	5.00

Surrogate Recoveries (%)

13C5-PFHxA	
13C4-PFHpA	- -
13C8-PFOA	- -
13C9-PFNA	- -
13C6-PFDA	- -
13C7-PFUnA	- -
13C2-PFDoA	- -
13C2-PFTeDA	- -
d3-MeFOSAA	- -
d5-EtFOSAA	- -
13C3-PFBS	71
13C3-PFHxS	- -
13C8-PFOS	

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	JV05 IB			
Battelle ID	JV05 IB_06/08/2018			
Sample Type	IB			
Collection Date	NA			
Extraction Date	NA			
Analysis Date	06/08/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	NA			
Sample Size	NA			
Size Unit-Basis	NA			
Units	ng/L	MDL	LOD	LOQ
PFHxA	- -	-	-	-
PFHpA	- -	-	-	-
PFOA	- -	-	-	-
PFNA	- -	-	-	-
PFDA	- -	-	-	-
PFUnA	- -	-	-	-
PFDoA	- -	-	-	-
PFTrDA	- -	-	-	-
PFTeDA	- -	-	-	-
NMeFOSAA	- -	-	-	-
NEtFOSAA	- -	-	-	-
PFBS	- -	-	-	-
PFHxS	- -	-	-	-
PFOS	0.19 U	0.19	0.50	5.00

Surrogate Recoveries (%)

13C5-PFHxA	- -
13C4-PFHpA	- -
13C8-PFOA	- -
13C9-PFNA	- -
13C6-PFDA	- -
13C7-PFUnA	- -
13C2-PFDoA	- -
13C2-PFTeDA	- -
d3-MeFOSAA	- -
d5-EtFOSAA	- -
13C3-PFBS	- -
13C3-PFHxS	- -
13C8-PFOS	

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	Procedural Blank				
Battelle ID	CQ859PB-FS				
Sample Type	PB				
Collection Date	05/30/2018				
Extraction Date	05/30/2018				
Analysis Date	06/05/2018				
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	0.19	U	0.19	0.50	5.00
PFHpA	0.16	U	0.16	0.50	5.00
PFOA	0.18	U	0.18	0.50	5.00
PFNA	0.26	U	0.26	1.00	5.00
PFDA	0.16	U	0.16	0.50	5.00
PFUnA	0.29	U	0.29	1.00	5.00
PFDoA	0.18	U	0.18	0.50	5.00
PFTrDA	0.15	U	0.15	0.50	5.00
PFTeDA	0.25	U	0.25	1.00	5.00
NMeFOSAA	0.56	U	0.56	2.00	5.00
NEtFOSAA	0.49	U	0.49	1.00	5.00
PFBS	0.13	U	0.13	0.50	5.00
PFHxS	0.11	U	0.11	0.40	5.00
PFOS	0.64	J	0.19	0.50	5.00

Surrogate Recoveries (%)

13C5-PFHxA	102
13C4-PFHpA	105
13C8-PFOA	106
13C9-PFNA	108
13C6-PFDA	99
13C7-PFUnA	103
13C2-PFDoA	72
13C2-PFTeDA	63
d3-MeFOSAA	90
d5-EtFOSAA	112
13C3-PFBS	103
13C3-PFHxS	107
13C8-PFOS	97

BATTELLE
It can be done

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	Laboratory Control Sample
Battelle ID	CQ860LCS-FS
Sample Type	LCS
Collection Date	05/30/2018
Extraction Date	05/30/2018
Analysis Date	06/05/2018
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	10.71	10.10	106		51	137
PFHpA	10.04	10.00	100		48	136
PFOA	9.39	10.00	94		49	141
PFNA	9.67	10.00	97		58	122
PFDA	9.20	10.00	92		59	135
PFUnA	9.63	10.00	96		64	134
PFDoA	10.44	10.00	104		75	131
PFTrDA	9.96	10.00	100		42	148
PFTeDA	10.15	10.00	102		42	158
NMeFOSAA	12.32	10.00	123		50	146
NEtFOSAA	8.66	10.00	87		51	131
PFBS	11.34	10.10	112		56	134
PFHxS	8.33	10.10	82		52	128
PFOS	10.33	10.00	103		40	144

Surrogate Recoveries (%)

13C5-PFHxA	110
13C4-PFHpA	109
13C8-PFOA	115
13C9-PFNA	114
13C6-PFDA	132
13C7-PFUnA	126
13C2-PFDoA	104
13C2-PFTeDA	101
d3-MeFOSAA	93
d5-EtFOSAA	116
13C3-PFBS	107
13C3-PFHxS	125
13C8-PFOS	103

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, MDL reported

"FFTA-FD01-052418" "SOP 5-369" "Dilution" "J6241-FS" "BNO" "307-24-4" "PFHxA"
"966433.720000" "ng/L" "D" "2698.86" "MDL" "" "T" "" "" "71022.73" "LOQ" "YES"
"-99.000000" "" ".275000" ".000500" "7102.27" ""
"FFTA-FD01-052418" "SOP 5-369" "Dilution" "J6241-FS" "BNO" "375-85-9" "PFHpA"
"37554.350000" "ng/L" "D" "90.91" "MDL" "" "T" "" "" "2840.91" "LOQ" "YES" "-99.000000"
"" ".275000" ".000500" "284.09" ""
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"163302.360000" "ng/L" "D" "2556.82" "MDL" "" "T" "" "" "71022.73" "LOQ" "YES"
"-99.000000" "" ".275000" ".000500" "7102.27" ""
"FFTA-FD01-052418" "SOP 5-369" "Dilution" "J6241-FS" "BNO" "375-95-1" "PFNA"
"228603.870000" "ng/L" "D" "3693.18" "MDL" "" "T" "" "" "71022.73" "LOQ" "YES"
"-99.000000" "" ".275000" ".000500" "14204.55" ""
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"4540.440000" "ng/L" "D" "90.91" "MDL" "" "T" "" "" "2840.91" "LOQ" "YES" "-99.000000"
"" ".275000" ".000500" "284.09" ""
"FFTA-FD01-052418" "SOP 5-369" "Dilution" "J6241-FS" "BNO" "2058-94-8" "PFUnA"
"24897.690000" "ng/L" "D" "164.77" "MDL" "" "T" "" "" "2840.91" "LOQ" "YES"
"-99.000000" "" ".275000" ".000500" "568.18" ""
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"112.740000" "ng/L" "JD" "4.26" "MDL" "" "T" "" "" "118.37" "LOQ" "YES" "-99.000000"
"" ".275000" ".000500" "11.84" ""
"FFTA-FD01-052418" "SOP 5-369" "Dilution" "J6241-FS" "BNO" "72629-94-8" "PFTrDA"
"226.590000" "ng/L" "D" "3.55" "MDL" "" "T" "" "" "118.37" "LOQ" "YES" "-99.000000"
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"FFTA-FD01-052418" "SOP 5-369" "Dilution" "J6241-FS" "BNO" "375-73-5" "PFBS"
"164675.060000" "ng/L" "D" "1846.59" "MDL" "" "T" "" "" "71022.73" "LOQ" "YES"
"-99.000000" "" ".275000" ".000500" "7102.27" ""
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"FFTA-FD01-052418" "SOP 5-369" "Dilution" "J6241-FS" "BNO" "BDO-2219" "13C8-PFOA"
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"ng/L" "J" ".19" "MDL" "" "T" "" "" "5.00" "LOQ" "YES" "-99.000000" "" ".250000"
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"CQ859PB-FS" "SOP 5-369" "Initial" "CQ859PB-FS" "BNO" "BDO-2218" "13C4-PFHpA" ".420000"
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"CQ859PB-FS" "SOP 5-369" "Initial" "CQ859PB-FS" "BNO" "BDO-2219" "13C8-PFOA" ".420000"
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"Method Bla" "" "-99.000000" "SOP 5-369" "Gen Prep" "Initial" "05/30/2018 09:49" "06/05/2018 03:28"
"BNO" "COA" "NA" "T" "2.000" "NA" "NA" "" "100.000000" "18-0340" "18-0340" "DP-
18-0133" "DP-18-0133" "18-0340" "05/30/2018 09:49" "07/13/2018 15:21" ""
"112G08005-SE0375" "SE0375 – NAS Jacksonville" "CQ860LCS-FS" "" "WATER" "CQ860LCS-FS"
"LCS" "" "-99.000000" "SOP 5-369" "Gen Prep" "Initial" "05/30/2018 09:49" "06/05/2018 03:39" "BNO"
"COA" "NA" "T" "2.000" "NA" "NA" "" "100.000000" "18-0340" "18-0340" "DP-18-0133"
"DP-18-0133" "18-0340" "05/30/2018 09:49" "07/13/2018 15:21" ""
"112G08005-SE0375" "SE0375 – NAS Jacksonville" "FFTA-SW01-052418" "05/24/2018 11:00" "SW"
"J6242-FS" "NM" "SHP-180525-01" ".700000" "SOP 5-369" "Gen Prep" "Dilution" "05/30/2018
09:49" "06/05/2018 04:44" "BNO" "COA" "NA" "T" "52.083" "NA" "NA" "" "100.000000" "18-
0340" "18-0340" "DP-18-0133" "DP-18-0133" "18-0340" "05/25/2018 10:30" "07/13/2018 15:21" ""
"112G08005-SE0375" "SE0375 – NAS Jacksonville" "FFTA-SW01-052418" "05/24/2018 11:00" "SW"
"J6242-FS" "NM" "SHP-180525-01" ".700000" "SOP 5-369" "Gen Prep" "Dilution" "05/30/2018
09:49" "06/05/2018 04:55" "BNO" "COA" "NA" "T" "1250.000" "NA" "NA" "" "100.000000"
"18-0340" "18-0340" "DP-18-0133" "DP-18-0133" "18-0340" "05/25/2018 10:30" "07/13/2018 15:21" ""
"112G08005-SE0375" "SE0375 – NAS Jacksonville" "FFTA-SW01-052418" "05/24/2018 11:00" "SW"
"J6242-FS" "NM" "SHP-180525-01" ".700000" "SOP 5-369" "Gen Prep" "Dilution" "05/30/2018
09:49" "06/08/2018 01:31" "BNO" "COA" "NA" "T" "31250.000" "NA" "NA" "" "100.000000"
"18-0340" "18-0340" "DP-18-0133" "DP-18-0133" "18-0340" "05/25/2018 10:30" "07/13/2018 15:21" ""
"112G08005-SE0375" "SE0375 – NAS Jacksonville" "FFTA-SW01-052418" "05/24/2018 11:00" "SW"
"J6242-FS" "NM" "SHP-180525-01" ".700000" "SOP 5-369" "Gen Prep" "Dilution" "05/30/2018
09:49" "06/08/2018 14:05" "BNO" "COA" "NA" "T" "781250.000" "NA" "NA" "" "100.000000"
"18-0340" "18-0340" "DP-18-0133" "DP-18-0133" "18-0340" "05/25/2018 10:30" "07/13/2018 15:21" ""
"112G08005-SE0375" "SE0375 – NAS Jacksonville" "FFTA-SW01-052418" "05/24/2018 11:00" "SW"
"J6242-FS" "NM" "SHP-180525-01" ".700000" "SOP 5-369" "Gen Prep" "Initial" "05/30/2018 09:49"
"05/31/2018 20:36" "BNO" "COA" "NA" "T" "2.000" "NA" "NA" "" "100.000000" "18-0340"
"18-0340" "DP-18-0133" "DP-18-0133" "18-0340" "05/25/2018 10:30" "07/13/2018 15:21" ""

TETRA TECH

INTERNAL CORRESPONDENCE

TO:	**M. PETERSON**	**DATE:**	**JUNE 20, 2018**
FROM:	**MICHELLE L. WOEBER**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – POLYFLUOROALKYL SUBSTANCES (PFAS)**
NAVAL AIR STATION (NAS), JACKSONVILLE
JACKSONVILLE, FLORIDA
SAMPLE DELIVERY GROUP (SDG) 18-0340

SAMPLES: 2/Aqueous/PFAS

FFTA-FD01-052418 FFTA-SW01-052418

Overview

The sample set for NAS Jacksonville, SDG 18-0340 consisted of two (2) aqueous environmental samples. The two (2) samples were analyzed for polyfluoroalkyl substances (PFAS). One field duplicate sample pair was included in this SDG: FFTA-FD01-052418/FFTA-SW01-052418.

The samples were collected by Tetra Tech, Inc. on May 24, 2018 and analyzed by Battelle Norwell Operations. All analyses were conducted in accordance with EPA 537 Modified analytical and reporting protocols. The data contained in this SDG was validated with regard to the following parameters:

*	•	Data Completeness
*	•	Hold Times/Sample Preservation
*	•	Mass Calibration
*	•	LC/MS/MS System Tuning and Performance
*	•	Mass Spectral Acquisition Rate
*	•	Instrument Sensitivity Check
*	•	Ion Transition Check
*	•	Initial/Continuing Calibrations
	•	Laboratory Preparation/Method Blank Results
	•	Field Reagent and Equipment Blank Results
*	•	Extraction Internal Standard Recoveries
	•	Injection Internal Standard Recoveries
*	•	Laboratory Control Sample Recoveries
	•	Field Duplicate Precision
*	•	Compound Identification
*	•	Compound Quantitation
*	•	Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified analytical results are presented in Appendix A, results as reported by the laboratory are presented in Appendix B, and documentation supporting these findings is presented in Appendix C.

PFAS

The Relative Percent Difference (RPDs) for Pentadecafluorooctanoic Acid (PFOA), Perfluorododecanoic Acid (PFDoA), Perfluorohexanesulfonic Acid (PFHxS), Perfluorooctanesulfonic Acid (PFOS), and Perfluorotridecanoic Acid (PFTRIA) exceeded the 30% quality control limit in the field duplicate pair, FFTA-FFTA-FD01-052418/FFTA-SW01-052418. The detected results were qualified as estimated, (J), in the field duplicate pair due to field duplicate imprecision.

Additional Comments

The following contaminant was detected in the laboratory method blank at the following concentration:

Compound	Maximum Concentration (ng/L)	Action Level > or < Limit of Quantitation (LOQ)
Pentadecafluorooctanoic Acid (PFOA)[1]	0.19	< LOQ
Perfluorooctanesulfonic Acid (PFOS)[2]	0.64	< LOQ

[1] Analyte detected in method blank analyzed on 6/4/18
[2] Analyte detected in method blank analyzed on 6/5/18

No validation action was taken in the environmental samples because PFOA and PFOS concentrations were significantly greater than the LOQ. PFOA and PFOS were reported from sample analyses on 6/8/18.

The injection internal standard area (for 13C2 PFOA) was greater than the 150% upper quality control limit and the injection standard area (13C4 PFOS) was below the -50% quality limit in the analysis of the samples on 6/5/18. Only two PFAS compounds, PFTrDA and PFDoA, were reported in the affected samples at the times of 412 and 444 on 6/5/18. The extracted internal standard recoveries associated with those results were within quality control limits along with the injection standard associated with them. No validation action was necessary for the affected analytes reported at the referenced analysis times. The samples were reanalyzed at dilutions for the other PFAS analytes with acceptable results. No further action was required.

The Field Reagent Blank (FRB) results associated with the samples in this SDG (contained in SDG 18-0351) were not applied due to internal laboratory contamination from an outside sample not related to this project. The entire sample extract was used in the analyses; therefore, the laboratory was unable to reanalyze the FRB after the contamination was cleared.

The samples were initially analyzed at a 2X dilution including the quality control samples.

The following samples were analyzed at dilutions as a consequence of the high concentrations detected in the samples:

Sample	Compound	Dilution
FFTA-FD01-052418	Perfluorododecanoic Acid (PFDOA)	52.08X
	Perfluorotridecanoic Acid (PFTRIA)	52.08X
	Perfluorodecanoic Acid (PFDA)	1250X
	Perfluoroheptanoic Acid (PFHPA)	1250X
	Perfluoroundecanoic Acid (PFUNA)	1250X
	Pentadecafluorooctanoic Acid (PFOA)	31250X
	Perfluorobutanesulfonic Acid (PFBS)	31250X
	Perfluorohexanesulfonic Acid (PFHxS)	31250X
	Perfluorohexanoic Acid (PFHxA)	31250X
	Perfluorononanoic Acid (PFNA)	31250X
	Perfluorooctanesulfonic Acid (PFOS)	781250X

Sample	Compound	Dilution
FFTA-SW01-052418	Perfluorododecanoic Acid (PFDOA)	52.08X
	Perfluorotridecanoic Acid (PFTRIA)	52.08X
	Perfluorodecanoic Acid (PFDA)	1250X
	Perfluoroheptanoic Acid (PFHPA)	1250X
	Perfluoroundecanoic Acid (PFUNA)	1250X
	Pentadecafluorooctanoic Acid (PFOA)	31250X
	Perfluorobutanesulfonic Acid (PFBS)	31250X
	Perfluorohexanesulfonic Acid (PFHxS)	31250X
	Perfluorohexanoic Acid (PFHxA)	31250X
	Perfluorononanoic Acid (PFNA)	31250X
	Perfluorooctanesulfonic Acid (PFOS)	781250X

Executive Summary

Laboratory Performance Issues: A contaminant was detected in the laboratory method blank at a concentration below the LOQ and this had no affect on sample data.

Other Factors Affecting Data Quality: Field duplicate imprecision was noted for several analytes.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Superfund Methods Data Review" (January 2017), EPA Method 537 Modified, and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (2017). The text of this report has been formulated to address only those areas affecting data quality.

Michelle L. Woeber

Tetra Tech, Inc.
Michelle L. Woeber
Chemist/Data Validator

Joseph A. Samchuck

Tetra Tech, Inc.
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A - Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been “tentatively identified” or “presumptively” as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and 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, but exclusion of the data is recommended.

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's r < 0.995
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient r < 0.995
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 standard deviations is greater than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed
Z3	=	Tentatively Identified Compound aldol condensate

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

PROJ_NO: 08005-SE03	NSAMPLE	FFTA-FD01-052418			FFTA-FD01-052418-DL			FFTA-FD01-052418-DLRE			FFTA-FD01-052418-RE		
SDG: 18-0340	LAB_ID	J6241-FS			J6241-FS			J6241-FS			J6241-FS		
FRACTION: PFAS	SAMP_DATE	5/24/2018			5/24/2018			5/24/2018			5/24/2018		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	NG/L			NG/L			NG/L			NG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	FFTA-SW01-052418			FFTA-SW01-052418			FFTA-SW01-052418			FFTA-SW01-052418		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
N-ETHYLPERFLUOROOCTANE SULFONAMIDOACETATE(NEFOSA)		41.11											
N-METHYLPERFLUOROOCTANE SULFONAMIDOACETATE(NMFOSA)		18											
PENTADECAFLUOROOCTANOIC ACID (PFOA)											163302.36	J	G
PERFLUOROBUTANESULFONIC ACID (PFBS)											164675.06		
PERFLUORODECANOIC ACID (PFDA)								4540.44					
PERFLUORODODECANOIC ACID (PFDOA)					112.74	J	G						
PERFLUOROHEPTANOIC ACID (PFHPA)								37554.35					
PERFLUOROHEXANESULFONIC ACID (PFHXS)											909907.1	J	G
PERFLUOROHEXANOIC ACID (PFHXA)											966433.72		
PERFLUORONONANOIC ACID (PFNA)											228603.87		
PERFLUOROOCTANESULFONIC ACID (PFOS)													
PERFLUOROTETRADECANOIC ACID (PFTEA)		7.84											
PERFLUOROTRIDECANOIC ACID (PFTRIA)					226.59	J	G						
PERFLUOROUNDECANOIC ACID (PFUNA)								24897.69					

PROJ_NO: 08005-SE03	NSAMPLE	FFTA-FD01-052418-RE1			FFTA-SW01-052418			FFTA-SW01-052418-DL			FFTA-SW01-052418-DLRE		
SDG: 18-0340	LAB_ID	J6241-FS			J6242-FS			J6242-FS			J6242-FS		
FRACTION: PFAS	SAMP_DATE	5/24/2018			5/24/2018			5/24/2018			5/24/2018		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	NG/L			NG/L			NG/L			NG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF	FFTA-SW01-052418											
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
N-ETHYLPERFLUOROOCTANE SULFONAMIDOACETATE(NEFOSA)					34.38								
N-METHYLPERFLUOROOCTANE SULFONAMIDOACETATE(NMFOSA)					16.75								
PENTADECAFLUOROOCTANOIC ACID (PFOA)													
PERFLUOROBUTANESULFONIC ACID (PFBS)													
PERFLUORODECANOIC ACID (PFDA)											3519.3		
PERFLUORODODECANOIC ACID (PFDOA)								156.14	J	G			
PERFLUOROHEPTANOIC ACID (PFHPA)											29830.28		
PERFLUOROHEXANESULFONIC ACID (PFHXS)													
PERFLUOROHEXANOIC ACID (PFHXA)													
PERFLUORONONANOIC ACID (PFNA)													
PERFLUOROOCTANESULFONIC ACID (PFOS)		13500909.99	J	G									
PERFLUOROTETRADECANOIC ACID (PFTEA)					7.35								
PERFLUOROTRIDECANOIC ACID (PFTRIA)								335.02	J	G			
PERFLUOROUNDECANOIC ACID (PFUNA)											22351.81		

PROJ_NO: 08005-SE03	NSAMPLE	FFTA-SW01-052418-RE			FFTA-SW01-052418-RE1		
SDG: 18-0340	LAB_ID	J6242-FS			J6242-FS		
FRACTION: PFAS	SAMP_DATE	5/24/2018			5/24/2018		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	NG/L			NG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
N-ETHYLPERFLUOROOCTANE SULFONAMIDOACETATE(NEFOSA)							
N-METHYLPERFLUOROOCTANE SULFONAMIDOACETATE(NMFOSA)							
PENTADECAFLUOROOCTANOIC ACID (PFOA)		117958.11	J	G			
PERFLUOROBUTANESULFONIC ACID (PFBS)		122540.36					
PERFLUORODECANOIC ACID (PFDA)							
PERFLUORODODECANOIC ACID (PFDOA)							
PERFLUOROHEPTANOIC ACID (PFHPA)							
PERFLUOROHEXANESULFONIC ACID (PFHXS)		585921.79	J	G			
PERFLUOROHEXANOIC ACID (PFHXA)		756130.79					
PERFLUORONONANOIC ACID (PFNA)		169115.57					
PERFLUOROOCTANESULFONIC ACID (PFOS)					5706313.82	J	G
PERFLUOROTETRADECANOIC ACID (PFTEA)							
PERFLUOROTRIDECANOIC ACID (PFTRIA)							
PERFLUOROUNDECANOIC ACID (PFUNA)							

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	FFTA-FD01-052418				
Battelle ID	J6241-FS				
Sample Type	SA				
Collection Date	05/24/2018				
Extraction Date	05/30/2018				
Analysis Date	05/31/2018				
Analytical Instrument	Sciex 5500 LC/MS/MS				
% Moisture	NA				
Matrix	SW DUP				
Sample Size	0.275				
Size Unit-Basis	L				
Units	ng/L		MDL	LOD	LOQ
PFHxA	966433.72	D	0.19	0.50	5.00
PFHpA	37554.35	D	0.16	0.50	5.00
PFOA	163302.36	D	0.18	0.50	5.00
PFNA	228603.87	D	0.26	1.00	5.00
PFDA	4540.44	D	0.16	0.50	5.00
PFUnA	24897.69	D	0.29	1.00	5.00
PFDoA	112.74	D	0.18	0.50	5.00
PFTrDA	226.59	D	0.15	0.50	5.00
PFTeDA	7.84		0.25	1.00	5.00
NMeFOSAA	18.00		0.56	2.00	5.00
NEtFOSAA	41.11		0.49	1.00	5.00
PFBS	164675.06	D	0.13	0.50	5.00
PFHxS	909907.10	D	0.11	0.40	5.00
PFOS	13500909.99	D	0.19	0.50	5.00
Surrogate Recoveries (%)					
13C5-PFHxA	100	D			
13C4-PFHpA	114	D			
13C8-PFOA	82	D			
13C9-PFNA	54	D			
13C6-PFDA	97	D			
13C7-PFUnA	105	D			
13C2-PFDoA	93	D			
13C2-PFTeDA	94	D			
d3-MeFOSAA	129	D			
d5-EtFOSAA	150	D			
13C3-PFBS	104	D			
13C3-PFHxS	149	D			
13C8-PFOS	75	D			

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	FFTA-SW01-052418				
Battelle ID	J6242-FS				
Sample Type	SA				
Collection Date	05/24/2018				
Extraction Date	05/30/2018				
Analysis Date	05/31/2018				
Analytical Instrument	Sciex 5500 LC/MS/MS				
% Moisture	NA				
Matrix	SW				
Sample Size	0.280				
Size Unit-Basis	L				
Units	ng/L		MDL	LOD	LOQ
PFHxA	756130.79	D	0.19	0.50	5.00
PFHpA	29830.28	D	0.16	0.50	5.00
PFOA	117958.11	D	0.18	0.50	5.00
PFNA	169115.57	D	0.26	1.00	5.00
PFDA	3519.30	D	0.16	0.50	5.00
PFUnA	22351.81	D	0.29	1.00	5.00
PFDoA	156.14	D	0.18	0.50	5.00
PFTrDA	335.02	D	0.15	0.50	5.00
PFTeDA	7.35		0.25	1.00	5.00
NMeFOSAA	16.75		0.56	2.00	5.00
NEtFOSAA	34.38		0.49	1.00	5.00
PFBS	122540.36	D	0.13	0.50	5.00
PFHxS	585921.79	D	0.11	0.40	5.00
PFOS	5706313.82	D	0.19	0.50	5.00
Surrogate Recoveries (%)					
13C5-PFHxA	93	D			
13C4-PFHpA	107	D			
13C8-PFOA	70	D			
13C9-PFNA	52	D			
13C6-PFDA	96	D			
13C7-PFUnA	94	D			
13C2-PFDoA	86	D			
13C2-PFTeDA	88	D			
d3-MeFOSAA	117	D			
d5-EtFOSAA	136	D			
13C3-PFBS	111	D			
13C3-PFHxS	149	D			
13C8-PFOS	71	D			

APPENDIX C

SUPPORT DOCUMENTATION

ANALYTE	ORIGINAL	DUPLICATI	RL	RPD	RPD > 30%	ORIGINAL SAMPLE CONC >2xRL	DUPLICATE SAMPLE CONC >2xRL	DIFFERENCE >2XRL
N-ETHYLPERFLUOROOCTANE SULFONAMIDOACETATE(NEFOSA)	34.38	41.11	5	17.83017618	FALSE	TRUE	TRUE	FALSE
N-METHYLPERFLUOROOCTANE SULFONAMIDOACETATE(NMFOSA)	16.75	18	5	7.194244604	FALSE	TRUE	TRUE	FALSE
PENTADECAFLUOROOCTANOIC ACID (PFOA)	117958.11	163302.4	5	32.24359968	TRUE	TRUE	TRUE	TRUE
PERFLUOROBUTANESULFONIC ACID (PFBS)	122540.36	164675.1	5	29.3401378	FALSE	TRUE	TRUE	TRUE
PERFLUORODECANOIC ACID (PFDA)	3519.3	4540.44	5	25.33927893	FALSE	TRUE	TRUE	TRUE
PERFLUORODODECANOIC ACID (PFDOA)	156.14	112.74	5	32.28205891	TRUE	TRUE	TRUE	TRUE
PERFLUOROHEPTANOIC ACID (PFHPA)	29830.28	37554.35	5	22.92531695	FALSE	TRUE	TRUE	TRUE
PERFLUOROHEXANESULFONIC ACID (PFHXS)	585921.79	909907.1	5	43.31849882	TRUE	TRUE	TRUE	TRUE
PERFLUOROHEXANOIC ACID (PFHXA)	756130.79	966433.7	5	24.41742283	FALSE	TRUE	TRUE	TRUE
PERFLUORONONANOIC ACID (PFNA)	169115.57	228603.9	5	29.9147057	FALSE	TRUE	TRUE	TRUE
PERFLUOROOCTANESULFONIC ACID (PFOS)	5706313.82	13500910	5	81.16317326	TRUE	TRUE	TRUE	TRUE
PERFLUOROTETRADECANOIC ACID (PFTEA)	7.35	7.84	5	6.451612903	FALSE	FALSE	FALSE	FALSE
PERFLUOROTRIDECANOIC ACID (PFTRIA)	335.02	226.59	5	38.61398479	TRUE	TRUE	TRUE	TRUE
PERFLUOROUNDECANOIC ACID (PFUNA)	22351.81	24897.69	5	10.77632568	FALSE	TRUE	TRUE	TRUE

NAS JACKSONVILLE
SDG 18-0340

PFAS Concentration = $[(PA - b)/m] * C_{IS} * PIV * DF/S$

Where:

PA	Area of target analyte/ area of internal standard
b	y Intercept from calibration curve
C_{IS}	Concentration of internal standard (ng/L)
m	Slope of calibration
DF	Dilution factor
S	Sample Size
PIV	Pre-injection volume (L)

Target Analyte	PFOS
Sample ID	FFTA-FD01-052418
Laboratory Sample ID	J6241
Sample Size (L)	0.275
Dilution Factor	781250
PIV (L)	0.0005
PFOS Area	1152701.31
IS Area	3776.47
IS Amount (ng/L)	95.7
Calibration Curve	y = 3.08558 x + -1.21856

Concentration (ng/L)	13500926.40

(((1152701.31/3776.47)+1.21856)/3.08558)*95.7*0.0005*781250/0.275

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Summary Quant Report

Created with Analyst Reporter
Printed: 08/06/2018 3:20:41 PM

Sample Name	J6241-FS-D(11)	**Injection Vial**	3
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T13:55:08	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFOS_1	499.0 / 80.0	2.96	1152701.31	9504.640630	36.9	true
PFOS_2	499.0 / 99.0	2.98	240846.44	11448.179659	80.7	true

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Summary Internal Standard Report

Created with Analyst Reporter
Printed: 08/06/2018 3:32:15 PM

Sample Name	J6241-FS-D(11)	**Injection Vial**	3
Sample ID	FFTA-FD01-052418	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T13:55:08	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFOS_1	499.0 / 80.0	2.96	13C8-PFOS	507.0 / 99.0	3776.47	95.70
PFOS_2	499.0 / 99.0	2.98	13C8-PFOS	507.0 / 99.0	3776.47	95.70

NAS JACKSONVILLE
SDG 18-0340

LABORATORY CONTROL SAMPLE

	Result	Target	Calculation	Recovery	Reported Recovery
PFHxA	10.71	10.10 ng/L	10.71/10.1*100	106.039604	106

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:	J6241-FS-D(3)
Client Sample ID:	FFTA-FD01-052418
Sample Size:	0.275
Units:	L
Dilution Factor:	2
PIV (L):	0.0005
Target Analyte:	NMeFOSAA_1
MRM Transition:	570.0 / 419.0
Data file:	Data18-0340_18-0338_18-0329.wiff
Result table:	8-0340_BASE
Area:	577,004.01
IS Name:	d3-MeFOSAA
IS Area:	20,545.96
IS Amount (ng/L):	100
y-intercept	0.18098
slope	0.56366

$$\text{Concentration} = \frac{[(577004.01/20545.96) - 0.18098]}{0.56366} * 100 * 0.0005 * 2 / 0.275$$

ng/L = 18.00

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Chain-of-Custody

Client Contact Information

Project Manager: Mark Peterson
Sampler Information (print name): Dave Siefken
Phone: 904-334-7260
Email: David.Siefken@TetraTech

Turnaround Time (TAT) Requested:
Normal
Priority
RUSH

Sampling Site: NAS JAX

Site Information: DRMO, FFTA, PSC 51

COC #

Page#

Project Name: SEO 375
Project No.: NAS JAX PFAS
Time Zone:

Preservative: ✓
Analysis: PFAS

	Sample Identification	2018 Sample Date	Sample Time	Matrix Sample Type	~~Matrix~~	Total # of Cont.	
J6241	FFTA-FD01-052418	5/24	1100	SW		2	Cool 4°C
J6242	FFTA-SW01-052418	5/24	1100	SW		2	
J6243	FFTA-SD01-052418		1110	SD		1	
J6244	FFTA-FD02-052418		1110	SD		1	
J6245	FFTA-FB01-052418		1120	GW		1	
J6246	FFTA-EB01-052418		1130			1	
J6247	FFTA-EB02-052418		1140			1	
J6248	DRMO-MW11-052418		1405			3	~~MS/MSD~~
J6249	DRMO-FB02-052418		1400			1	
J6250	PSC51-MW14D-052418		1610			2	
J6251	PSC51-FB03-052418		1615			2	
J6252	PSC51-MW13S-052418		1655			3	MSMSD
J6253	DRMO-MW2-052418		1455			1	

Receipt Temperature:(°C) 0.7

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
David Siefken	Tetra Tech	5-24-18 1830		Battelle	5/25/18 1030
Relinquished by (Print/Sign)	Company	Date/Time	Received by (Print/Sign)	Company	Date/Time
Relinquished by (Print/Sign)	Company	Date/Time	Received by (Print/Sign)	Company	Date/Time

Comments:

BATTELLE
It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Mark Peterson	Sampling Site: DRMO	Site Information:
	Sampler Information (print name): Doug Siefken		
	Phone: 904. 334. 7260		
	Email:		
	Turnaround Time (TAT) Requested:		
Project Name: NAS JAX PFAS	Normal / Priority / RUSH		
Project No.: SEO-375	Time Zone:		

Preservative: /

Analysis: PFAS

COC #

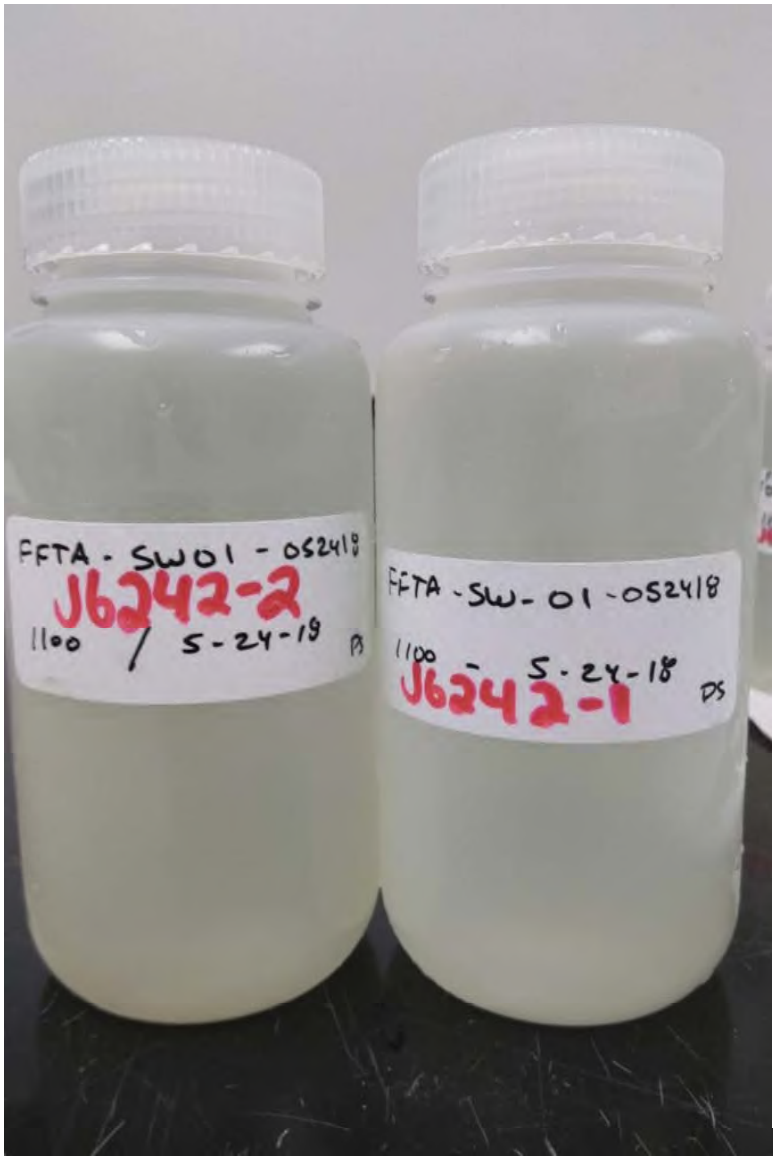
Page#

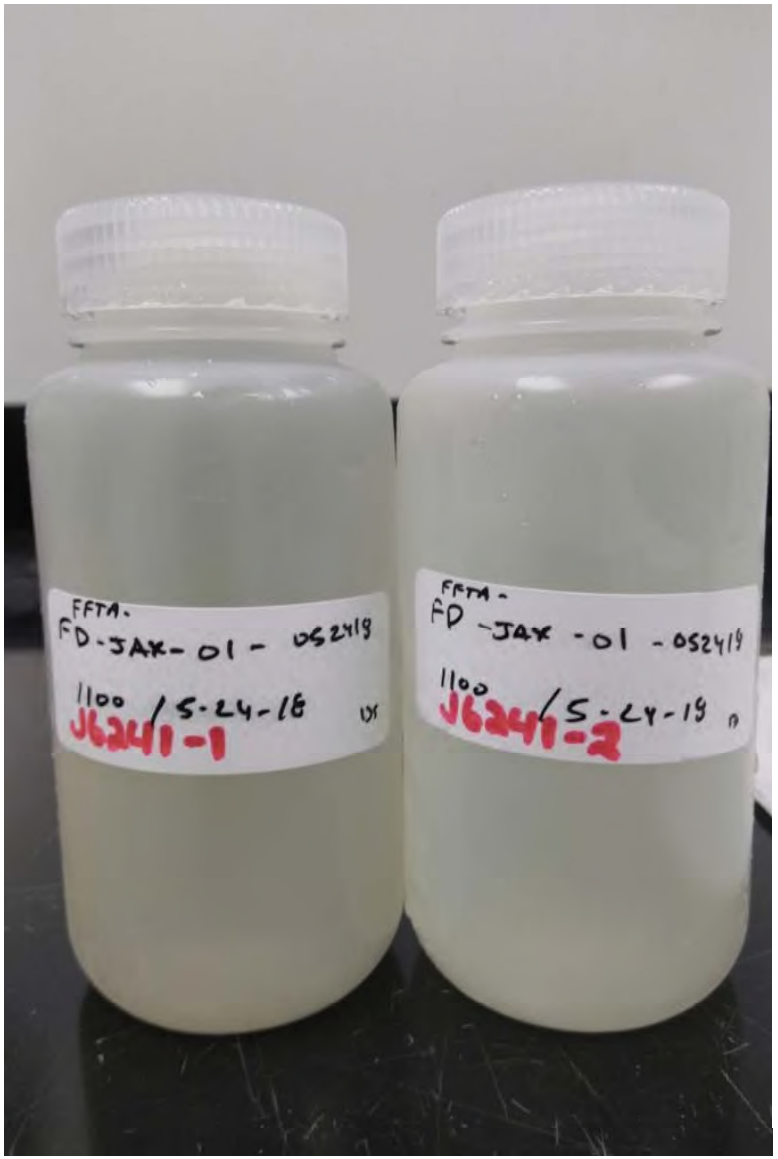
	Sample Ident:fication	Sample Date	Sample Time	~~Sample Type~~ Matrix	~~Matrix~~	Total # of Cont.		
J6254	DRMO-FD03-052418	5/24	1405	GW		1		Cool Y2

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

Relinquished by (Print/Sign)	Company	Date/Time	Received by (Print/Sign)	Company	Date/Time
[signature]	I +	5-24-18 1830	[signature]	Battelle	5/25/18 1030
Relinquished by (Print/Sign)	Company	Date/Time	Received by (Print/Sign)	Company	Date/Time
Relinquished by (Print/Sign)	Company	Date/Time	Received by (Print/Sign)	Company	Date/Time

Comments:


FFTA - SW01 - 052418
J6242-2
1100 / 5-24-18
FFTA - SW - 01 - 052418
1100 - 5-24-18
J6242-1


FFTA-
FD-JAX-01 - 052418
1100 / 5-24-18
J6241-1
FFTA-
FD -JAX -01 - 052418
1100 / 5-24-18
J6241-2

QA/QC Summary
Batch 18-0340

Project:	CTO-SE0375: Naval Air Station (NAS) Jacksonville
Parameters:	PFAS
Laboratory:	Battelle, Norwell, MA
Matrix:	SW
Data Set:	DP-18-0133
Analytical SOP:	5-369
Method Reference:	PFAS to QSM 5.1 Table B-15

Sample Custody		
Collection Date	Receipt Date	Temp (°C)
5/24/2018	5/25/2018	0.7

Corrective Actions	None – client contacted project manager to verify client IDs and matrices prior to arrival of shipment.
Sample Storage	The samples were stored refrigerated until extraction.
Related samples	Related field blank is extracted and reported in SDG 18-0351.

	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 methanol. Extracts were split 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	No MS/MSD sample was sent for surface waters, MS/MSD sample present in groundwater batch 18-0338.
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.
Analysis Comments	Samples analyzed on Sciex 5500 LC-MS/MS. The confirmation ion ratio was above 50% RPD for the following samples and analytes in the result method 18-0340_BASE_D: Procedural Blank (CQ859PB) – PFHxS, PFDA, PFOA, and PFTeDA (all detected below the MDL) FFTA-FD01-052418 (J6241) and FFTA-SW01-052418 (J6242) – PFBS, PFHpA, PFHxA, PFHxS, PFOA, and PFOS

Holding Times	Extraction Date(s)	Analysis Date(s)
	5/30/2018	5/31, 6/4, 6/5, 6/7, and 6/8/2018

QA/QC Summary
Batch 18-0340

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.

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.
	No comments.

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: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project Number: 100119154-SE0375
Preparation Batch: 18-0340
Data Set: DP-18-0133
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	0	None
Matrix Spike / Matrix Spike Duplicate Precision	0	None
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-SE0375: Naval Air Station Jackson	**Data Set Number:**	DP-18-0133
Project Number:	100119154-SE0375	**Prep Batch Number:**	18-0340
Entered By:	Denise Schumitz	**Entered On:**	06/08/2018

Test Code (Matrix Type): Master_369(L)

Samples that were manually integrated are noted on the quant reports with the comment (TRUE).
DMS 6/8/2018

JV20 is not being used in method 18-0340_BASE for PFTeDA, NMeFOSAA and NEtFOSAA. There is no impact on the data once this point is removed from the calibration.
DMS 6/8/2018

JV20 is not being used in method 18-0340_BASE_D for PFHxA . There is no impact on the data once this point is removed from the calibration.
DMS 6/8/2018

JV28 is not being used in method 18-0340_BASE_D for PFDoA and NMeFOSAA. There is no impact on the data once this point is removed from the calibration.
DMS 6/8/2018

JV20 is not being used in method 18-0340_BASE_D_1 for PFHxS and PFOS. There is no impact on the data once this point is removed from the calibration.
DMS 6/8/2018

JV28 is not being used in method 18-0340_SIS for 13C3-PFBS. There is no impact on the data once this point is removed from the calibration.
DMS 6/8/2018

JV21 is not being used in method 18-0340_BASE_D_1 for PFOS. There is no impact on the data once this point is removed from the calibration.
DMS 6/8/2018

SIS and IS is being reported from the dilutions for all authentic samples. Due to the high concentration of the natives in the samples the labeled SIS and IS are being skewed.
DMS 6/8/2018

JV20, J6241 and J6242 in method 18-0340_BASE have an ion ratio of >50% for NMeFOSAA.
DMS 6/8/2018

JV20 in method 18-0340_BASE has an ion ratio of >50% for NEtFOSAA.
DMS 6/8/2018

JV20 in method 18-0340_BASE has ion ratios of >50% for NEtFOSAA.
DMS 6/8/2018

JV21 in method 18-0340_BASE_D has ino ratio of >50% for PFHpA.
DMS 6/8/2018

JV20 in method 18-0340_BASE_D_1 has ion ratio of >50% for PFOS.
DMS 6/8/2018

JV05 IB in method 18-0340_BASE_D has ion ratio of >50% for NEtFOSAA.
DMS 6/8/2018

Task Leader Approval:

SupervisorApproval:

PM Approval:

Digitally signed by Jonathan Thorn
Date: 2018.06.08 16:05:19 -04'00'

BATTELLE
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BATTELLE - NORWELL OPERATIONS
MISCELLANEOUS DOCUMENTATION FORM

Project Title:	CTO-SE0375: Naval Air Station Jackson	**Data Set Number:**	DP-18-0133
Project Number:	100119154-SE0375	**Prep Batch Number:**	18-0340
Entered By:	Denise Schumitz	**Entered On:**	06/08/2018

Test Code (Matrix Type): Master_369(L)

CQ859PB in method 18-0340_BASE_D has ion ratios of >50% for PFHXS, PFDA, PFOA and PFTeDA.
DMS 6/8/2018

J6241(6) and J6242(6) in method 18-0340_BASE_D have ion ratios of >50% for PFBS, PFHpA, PFHxA, PFHxS, PFOA and PFOS.
DMS 6/8/2018

Task Leader Approval:

SupervisorApproval:

PM Approval:

Digitally signed by Jonathan Thorn
Date: 2018.06.08 16:05:31 -04'00'

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, MDL reported

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It can be done

ShpNo SHP-180525-01

Battelle Project No: 154-SE0375

Sample Receipt Form Details

Approved: ☐ **Authorized** ☐

Project Number: NAS JAX PFAS **Client:** Tetratech

Received by: Schumitz, Matt **Date / Time Received:** Friday, May 25, 2018 10:30 AM

No. of Shipping Containers: 1

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
J6241	FFTA-FD01-052418	05/24/18 11:00	05/25/18 10:54	2	SW DUP	0.7	NA	NA	NA	R0119 (NA)			
J6242	FFTA-SW01-052418	05/24/18 11:00	05/25/18 10:54	2	SW	0.7	NA	NA	NA	R0119 (NA)			
J6243	FFTA-SD01-052418	05/24/18 11:10	05/25/18 10:54	1	SD	0.7	NA	NA	NA	F0117 (NA)			
J6244	FFTA-FD02-052418	05/24/18 11:10	05/25/18 10:54	1	SD DUP	0.7	NA	NA	NA	F0117 (NA)			
J6245	FFTA-FB01-052418	05/24/18 11:20	05/25/18 10:55	1	GW QC	0.7	NA	NA	NA	R0119 (NA)			
J6246	FFTA-EB01-052418	05/24/18 11:30	05/25/18 10:55	1	GW QC	0.7	NA	NA	NA	R0119 (NA)			
J6247	FFTA-EB02-052418	05/24/18 11:40	05/25/18 10:55	1	GW QC	0.7	NA	NA	NA	R0119 (NA)			
J6248	DRMO-MW11-052418	05/24/18 14:05	05/25/18 10:56	2	GW	0.7	NA	NA	NA	R0119 (NA)			
J6249	DRMO-FB02-052418	05/24/18 14:00	05/25/18 10:56	1	GW QC	0.7	NA	NA	NA	R0119 (NA)			
J6250	PSC51-MW14D-052418	05/24/18 16:10	05/25/18 10:56	2	GW	0.7	NA	NA	NA	R0119 (NA)			
J6251	PSC51-FB03-052418	05/24/18 16:15	05/25/18 10:57	2	GW QC	0.7	NA	NA	NA	R0119 (NA)			
J6252	PSC51-MW13S-052418	05/24/18 16:55	05/25/18 10:57	3	GW	0.7	NA	NA	NA	R0119 (NA)			MS-MSD
J6253	DRMO-MW2-052418	05/24/18 14:55	05/25/18 10:58	1	GW	0.7	NA	NA	NA	R0119 (NA)			
J6254	DRMO-FD03-052418	05/24/18 14:05	05/25/18 10:58	1	GW DUP	0.7	NA	NA	NA	R0119 (NA)			

Total Samples: 14

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	JV05 IB			
Battelle ID	JV05 IB_05/31/2018			
Sample Type	IB			
Collection Date	NA			
Extraction Date	NA			
Analysis Date	05/31/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	NA			
Sample Size	NA			
Size Unit-Basis	NA			
Units	ng/L	MDL	LOD	LOQ
PFHxA	- -	-	-	-
PFHpA	- -	-	-	-
PFOA	- -	-	-	-
PFNA	- -	-	-	-
PFDA	- -	-	-	-
PFUnA	- -	-	-	-
PFDoA	- -	-	-	-
PFTrDA	- -	-	-	-
PFTeDA	0.25 U	0.25	1.00	5.00
NMeFOSAA	0.56 U	0.56	2.00	5.00
NEtFOSAA	0.49 U	0.49	1.00	5.00
PFBS	- -	-	-	-
PFHxS	- -	-	-	-
PFOS	- -	-	-	-
Surrogate Recoveries (%)				
13C5-PFHxA	- -	-	-	-
13C4-PFHpA	- -	-	-	-
13C8-PFOA	- -	-	-	-
13C9-PFNA	- -	-	-	-
13C6-PFDA	- -	-	-	-
13C7-PFUnA	- -	-	-	-
13C2-PFDoA	- -	-	-	-
13C2-PFTeDA	- -	-	-	-
d3-MeFOSAA	- -	-	-	-
d5-EtFOSAA	- -	-	-	-
13C3-PFBS	- -	-	-	-
13C3-PFHxS	- -	-	-	-
13C8-PFOS	- -	-	-	-

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	JV05 IB			
Battelle ID	JV05 IB_06/04/2018			
Sample Type	IB			
Collection Date	NA			
Extraction Date	NA			
Analysis Date	06/04/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	NA			
Sample Size	NA			
Size Unit-Basis	NA			
Units	ng/L	MDL	LOD	LOQ
PFHxA	0.19 U	0.19	0.50	5.00
PFHpA	0.16 U	0.16	0.50	5.00
PFOA	0.19 J	0.18	0.50	5.00
PFNA	0.26 U	0.26	1.00	5.00
PFDA	0.16 U	0.16	0.50	5.00
PFUnA	0.29 U	0.29	1.00	5.00
PFDoA	0.18 U	0.18	0.50	5.00
PFTrDA	0.15 U	0.15	0.50	5.00
PFTeDA	0.25 U	0.25	1.00	5.00
NMeFOSAA	0.56 U	0.56	2.00	5.00
NEtFOSAA	0.49 U	0.49	1.00	5.00
PFBS	0.13 U	0.13	0.50	5.00
PFHxS	0.11 U	0.11	0.40	5.00
PFOS	0.19 U	0.19	0.50	5.00

Surrogate Recoveries (%)

13C5-PFHxA	67
13C4-PFHpA	65
13C8-PFOA	71
13C9-PFNA	68
13C6-PFDA	72
13C7-PFUnA	67
13C2-PFDoA	70
13C2-PFTeDA	66
d3-MeFOSAA	59
d5-EtFOSAA	68
13C3-PFBS	63
13C3-PFHxS	78
13C8-PFOS	75

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	JV05 IB			
Battelle ID	JV05 IB_06/07/2018			
Sample Type	IB			
Collection Date	NA			
Extraction Date	NA			
Analysis Date	06/07/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	NA			
Sample Size	NA			
Size Unit-Basis	NA			
Units	ng/L	MDL	LOD	LOQ
PFHxA	0.19 U	0.19	0.50	5.00
PFHpA	- -	-	-	-
PFOA	0.18 U	0.18	0.50	5.00
PFNA	0.26 U	0.26	1.00	5.00
PFDA	- -	-	-	-
PFUnA	- -	-	-	-
PFDoA	- -	-	-	-
PFTrDA	- -	-	-	-
PFTeDA	- -	-	-	-
NMeFOSAA	- -	-	-	-
NEtFOSAA	- -	-	-	-
PFBS	0.13 U	0.13	0.50	5.00
PFHxS	0.11 U	0.11	0.40	5.00
PFOS	0.19 U	0.19	0.50	5.00

Surrogate Recoveries (%)

13C5-PFHxA	
13C4-PFHpA	- -
13C8-PFOA	- -
13C9-PFNA	- -
13C6-PFDA	- -
13C7-PFUnA	- -
13C2-PFDoA	- -
13C2-PFTeDA	- -
d3-MeFOSAA	- -
d5-EtFOSAA	- -
13C3-PFBS	71
13C3-PFHxS	- -
13C8-PFOS	

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	JV05 IB			
Battelle ID	JV05 IB_06/08/2018			
Sample Type	IB			
Collection Date	NA			
Extraction Date	NA			
Analysis Date	06/08/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	NA			
Sample Size	NA			
Size Unit-Basis	NA			
Units	ng/L	MDL	LOD	LOQ
PFHxA	- -	-	-	-
PFHpA	- -	-	-	-
PFOA	- -	-	-	-
PFNA	- -	-	-	-
PFDA	- -	-	-	-
PFUnA	- -	-	-	-
PFDoA	- -	-	-	-
PFTrDA	- -	-	-	-
PFTeDA	- -	-	-	-
NMeFOSAA	- -	-	-	-
NEtFOSAA	- -	-	-	-
PFBS	- -	-	-	-
PFHxS	- -	-	-	-
PFOS	0.19 U	0.19	0.50	5.00

Surrogate Recoveries (%)

13C5-PFHxA	- -
13C4-PFHpA	- -
13C8-PFOA	- -
13C9-PFNA	- -
13C6-PFDA	- -
13C7-PFUnA	- -
13C2-PFDoA	- -
13C2-PFTeDA	- -
d3-MeFOSAA	- -
d5-EtFOSAA	- -
13C3-PFBS	- -
13C3-PFHxS	- -
13C8-PFOS	

BATTELLE
It can be done

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	Procedural Blank				
Battelle ID	CQ859PB-FS				
Sample Type	PB				
Collection Date	05/30/2018				
Extraction Date	05/30/2018				
Analysis Date	06/05/2018				
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	0.19	U	0.19	0.50	5.00
PFHpA	0.16	U	0.16	0.50	5.00
PFOA	0.18	U	0.18	0.50	5.00
PFNA	0.26	U	0.26	1.00	5.00
PFDA	0.16	U	0.16	0.50	5.00
PFUnA	0.29	U	0.29	1.00	5.00
PFDoA	0.18	U	0.18	0.50	5.00
PFTrDA	0.15	U	0.15	0.50	5.00
PFTeDA	0.25	U	0.25	1.00	5.00
NMeFOSAA	0.56	U	0.56	2.00	5.00
NEtFOSAA	0.49	U	0.49	1.00	5.00
PFBS	0.13	U	0.13	0.50	5.00
PFHxS	0.11	U	0.11	0.40	5.00
PFOS	0.64	J	0.19	0.50	5.00

Surrogate Recoveries (%)

13C5-PFHxA	102
13C4-PFHpA	105
13C8-PFOA	106
13C9-PFNA	108
13C6-PFDA	99
13C7-PFUnA	103
13C2-PFDoA	72
13C2-PFTeDA	63
d3-MeFOSAA	90
d5-EtFOSAA	112
13C3-PFBS	103
13C3-PFHxS	107
13C8-PFOS	97

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Client ID	Laboratory Control Sample					
Battelle ID	CQ860LCS-FS					
Sample Type	LCS					
Collection Date	05/30/2018					
Extraction Date	05/30/2018					
Analysis Date	06/05/2018					
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	10.71	10.10	106		51	137
PFHpA	10.04	10.00	100		48	136
PFOA	9.39	10.00	94		49	141
PFNA	9.67	10.00	97		58	122
PFDA	9.20	10.00	92		59	135
PFUnA	9.63	10.00	96		64	134
PFDoA	10.44	10.00	104		75	131
PFTrDA	9.96	10.00	100		42	148
PFTeDA	10.15	10.00	102		42	158
NMeFOSAA	12.32	10.00	123		50	146
NEtFOSAA	8.66	10.00	87		51	131
PFBS	11.34	10.10	112		56	134
PFHxS	8.33	10.10	82		52	128
PFOS	10.33	10.00	103		40	144

Surrogate Recoveries (%)

13C5-PFHxA	110
13C4-PFHpA	109
13C8-PFOA	115
13C9-PFNA	114
13C6-PFDA	132
13C7-PFUnA	126
13C2-PFDoA	104
13C2-PFTeDA	101
d3-MeFOSAA	93
d5-EtFOSAA	116
13C3-PFBS	107
13C3-PFHxS	125
13C8-PFOS	103

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper
JV24	L5	6/4/18 20:17	13C2-PFOA	39,157.28	19,578.64	58,735.92

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper	Qualifier
JV20	L1	6/4/18 19:34	13C2-PFOA	36,025.71	19,578.64	58,735.92	
JV21	L2	6/4/18 19:44	13C2-PFOA	41,305.46	19,578.64	58,735.92	
JV22	L3	6/4/18 19:55	13C2-PFOA	39,696.51	19,578.64	58,735.92	
JV23	L4	6/4/18 20:06	13C2-PFOA	41,933.78	19,578.64	58,735.92	
JV24	L5	6/4/18 20:17	13C2-PFOA	39,157.28	19,578.64	58,735.92	
JV25	L6	6/4/18 20:28	13C2-PFOA	34,745.43	19,578.64	58,735.92	
JV26	L7	6/4/18 20:38	13C2-PFOA	37,482.32	19,578.64	58,735.92	
JV27	L8	6/4/18 20:49	13C2-PFOA	39,448.92	19,578.64	58,735.92	
JV28	L9	6/4/18 21:00	13C2-PFOA	49,167.01	19,578.64	58,735.92	
JV05 IB	Instrument Blank	6/4/18 21:11	13C2-PFOA	47,155.38	19,578.64	58,735.92	
JW32 ICC	ICC	6/4/18 21:22	13C2-PFOA	36,978.40	19,578.64	58,735.92	
CQ859PB-FS(3)	Procedural Balnk	6/5/18 3:28	13C2-PFOA	35,384.21	19,578.64	58,735.92	
CQ860LCS-FS(3)	Labortory Control	6/5/18 3:39	13C2-PFOA	37,143.49	19,578.64	58,735.92	
JV26 CCV	CCV	6/5/18 3:50	13C2-PFOA	40,703.57	19,578.64	58,735.92	
J6241-FS-D(6)	FFTA_FD01-052418	6/5/18 4:12	13C2-PFOA	120,962.56	19,578.64	58,735.92	N
J6241-FS-D(7)	FFTA_FD01-052418	6/5/18 4:22	13C2-PFOA	37,459.65	19,578.64	58,735.92	
J6242-FS-D(6)	FFTA-SW01-052418	6/5/18 4:44	13C2-PFOA	121,240.69	19,578.64	58,735.92	N
J6242-FS-D(7)	FFTA-SW01-052418	6/5/18 4:55	13C2-PFOA	40,293.83	19,578.64	58,735.92	
JV25 CCV	CCV	6/5/18 5:38	13C2-PFOA	42,718.87	19,578.64	58,735.92	

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper
JV24	L5	6/4/18 20:17	13C2-PFDA	42,059.81	21,029.91	63,089.72

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper	Qualifier
JV20	L1	6/4/18 19:34	13C2-PFDA	36,585.13	21,029.91	63,089.72	
JV21	L2	6/4/18 19:44	13C2-PFDA	46,522.32	21,029.91	63,089.72	
JV22	L3	6/4/18 19:55	13C2-PFDA	42,887.04	21,029.91	63,089.72	
JV23	L4	6/4/18 20:06	13C2-PFDA	46,848.40	21,029.91	63,089.72	
JV24	L5	6/4/18 20:17	13C2-PFDA	42,059.81	21,029.91	63,089.72	
JV25	L6	6/4/18 20:28	13C2-PFDA	40,285.95	21,029.91	63,089.72	
JV26	L7	6/4/18 20:38	13C2-PFDA	39,548.90	21,029.91	63,089.72	
JV27	L8	6/4/18 20:49	13C2-PFDA	42,034.21	21,029.91	63,089.72	
JV28	L9	6/4/18 21:00	13C2-PFDA	49,902.99	21,029.91	63,089.72	
JV05 IB	Instrument Blank	6/4/18 21:11	13C2-PFDA	47,439.86	21,029.91	63,089.72	
JW32 ICC	ICC	6/4/18 21:22	13C2-PFDA	40,307.55	21,029.91	63,089.72	
CQ859PB-FS(3)	Procedural Balnk	6/5/18 3:28	13C2-PFDA	40,017.16	21,029.91	63,089.72	
CQ860LCS-FS(3)	Labortory Control	6/5/18 3:39	13C2-PFDA	37,763.47	21,029.91	63,089.72	
JV26 CCV	CCV	6/5/18 3:50	13C2-PFDA	46,240.47	21,029.91	63,089.72	
J6241-FS-D(6)	FFTA_FD01-052418	6/5/18 4:12	13C2-PFDA	38,865.88	21,029.91	63,089.72	
J6241-FS-D(7)	FFTA_FD01-052418	6/5/18 4:22	13C2-PFDA	39,799.41	21,029.91	63,089.72	
J6242-FS-D(6)	FFTA-SW01-052418	6/5/18 4:44	13C2-PFDA	42,368.44	21,029.91	63,089.72	
J6242-FS-D(7)	FFTA-SW01-052418	6/5/18 4:55	13C2-PFDA	40,924.89	21,029.91	63,089.72	
JV25 CCV	CCV	6/5/18 5:38	13C2-PFDA	45,436.85	21,029.91	63,089.72	

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper
JV24	L5	6/4/18 20:17	13C4-PFOS	9,929.06	4,964.53	14,893.59

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper	Qualifier
JV20	L1	6/4/18 19:34	13C4-PFOS	9,879.32	4,964.53	14,893.59	
JV21	L2	6/4/18 19:44	13C4-PFOS	12,043.17	4,964.53	14,893.59	
JV22	L3	6/4/18 19:55	13C4-PFOS	10,528.19	4,964.53	14,893.59	
JV23	L4	6/4/18 20:06	13C4-PFOS	11,797.48	4,964.53	14,893.59	
JV24	L5	6/4/18 20:17	13C4-PFOS	9,929.06	4,964.53	14,893.59	
JV25	L6	6/4/18 20:28	13C4-PFOS	9,996.33	4,964.53	14,893.59	
JV26	L7	6/4/18 20:38	13C4-PFOS	7,985.50	4,964.53	14,893.59	
JV27	L8	6/4/18 20:49	13C4-PFOS	11,051.83	4,964.53	14,893.59	
JV28	L9	6/4/18 21:00	13C4-PFOS	9,517.13	4,964.53	14,893.59	
JV05 IB	Instrument Blank	6/4/18 21:11	13C4-PFOS	11,135.33	4,964.53	14,893.59	
JW32 ICC	ICC	6/4/18 21:22	13C4-PFOS	11,886.00	4,964.53	14,893.59	
CQ859PB-FS(3)	Procedural Balnk	6/5/18 3:28	13C4-PFOS	8,880.79	4,964.53	14,893.59	
CQ860LCS-FS(3)	Labortory Control	6/5/18 3:39	13C4-PFOS	9,945.58	4,964.53	14,893.59	
JV26 CCV	CCV	6/5/18 3:50	13C4-PFOS	11,001.50	4,964.53	14,893.59	
J6241-FS-D(6)	FFTA_FD01-052418	6/5/18 4:12	13C4-PFOS	1,164.59	4,964.53	14,893.59	N
J6241-FS-D(7)	FFTA_FD01-052418	6/5/18 4:22	13C4-PFOS	6,398.14	4,964.53	14,893.59	
J6242-FS-D(6)	FFTA-SW01-052418	6/5/18 4:44	13C4-PFOS	1,737.90	4,964.53	14,893.59	N
J6242-FS-D(7)	FFTA-SW01-052418	6/5/18 4:55	13C4-PFOS	6,897.32	4,964.53	14,893.59	
JV25 CCV	CCV	6/5/18 5:38	13C4-PFOS	9,248.91	4,964.53	14,893.59	

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper
JV24	L5	6/7/18 21:15	13C4-PFOS	17,621.34	8,810.67	26,432.01

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper	Qualifier
JV20	L1	6/7/18 20:32	13C4-PFOS	11,468.96	8,810.67	26,432.01	
JV21	L2	6/7/18 20:43	13C4-PFOS	12,130.72	8,810.67	26,432.01	
JV22	L3	6/7/18 20:53	13C4-PFOS	14,221.94	8,810.67	26,432.01	
JV23	L4	6/7/18 21:04	13C4-PFOS	15,596.73	8,810.67	26,432.01	
JV24	L5	6/7/18 21:15	13C4-PFOS	17,621.34	8,810.67	26,432.01	
JV25	L6	6/7/18 21:25	13C4-PFOS	14,985.31	8,810.67	26,432.01	
JV26	L7	6/7/18 21:36	13C4-PFOS	16,218.32	8,810.67	26,432.01	
JV27	L8	6/7/18 21:47	13C4-PFOS	16,664.04	8,810.67	26,432.01	
JV28	L9	6/7/18 21:57	13C4-PFOS	15,001.44	8,810.67	26,432.01	
JV05 IB	Instrument Blank	6/7/18 22:08	13C4-PFOS	17,807.40	8,810.67	26,432.01	
JW32 ICC	ICC	6/7/18 22:19	13C4-PFOS	12,740.39	8,810.67	26,432.01	
JV16 Branch	Branch Standard	6/7/18 22:30	13C4-PFOS	18,759.84	8,810.67	26,432.01	
J6241-FS-D(9)	FFTA_FD01-052418	6/8/18 1:21	13C4-PFOS	15,358.69	8,810.67	26,432.01	
J6242-FS-D(9)	FFTA-SW01-052418	6/8/18 1:31	13C4-PFOS	15,610.76	8,810.67	26,432.01	
JV26 CCV	CCV	6/8/18 2:14	13C4-PFOS	13,521.45	8,810.67	26,432.01	

Project Client: Tetra Tech
Project Name: CTO-SE0375: Naval Air Station Jacksonville
Project No.: 100119154-SE0375
Preparation Batch: 18-0340
Data Set: DP-18-0133

	CQ859PB-FS (Procedural Blank)	CQ860LCS-FS (Laboratory Control Sample)	J6241-FS (FFTA-FD01-052418)	J6242-FS (FFTA-SW01-052418)
PFHxA	-	L	L	L
PFHpA	-	L	L	L
PFOA	-	L	L	L
PFNA	-	L	L	L
PFDA	-	L	L	L
PFUnA	-	L	L	L
PFDoA	-	L	L	L
PFTrDA	-	L	L	L
PFTeDA	-	L	L	L
NMeFOSAA	-	L	L	L
NEtFOSAA	-	L	L	L
PFBS	-	L	L	L
PFHxS	-	L	L	L
PFOS	-	L/Br	L/Br	L/Br

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

BATTELLE

Mass Spectral Acquisition Rate Report

Created with Analyst Reporter
Printed: 08/06/2018 11:58:34 AM

Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	5/31/2018 6:48:14 PM	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
PFTeDA_1	713.0 / 669.0	4.36	46	>10
PFTeDA_2	713.0 / 169.0	4.35	31	>10
NMeFOSAA_1	570.0 / 419.0	3.44	36	>10
NMeFOSAA_2	570.0 / 512.0	3.44	33	>10
NEtFOSAA_1	584.0 / 419.0	3.60	24	>10
NEtFOSAA_2	584.0 / 483.0	3.60	36	>10

BATTELLE

Mass Spectral Acquisition Rate Report

Created with Analyst Reporter
Printed: 08/06/2018 11:55:17 AM

Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 8:38:50 PM	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
13C2-PFDoA	615.0 / 570.0	3.86	43	>10
d3-MeFOSAA	573.0 / 419.0	3.41	24	>10
d5-EtFOSAA	589.0 / 419.0	3.57	26	>10
13C5-PFHxA	318.0 / 273.0	1.77	28	>10
13C4-PFHpA	367.0 / 322.0	2.14	30	>10
13C8-PFOA	421.0 / 376.0	2.52	37	>10
13C9-PFNA	472.0 / 427.0	2.90	31	>10
13C6-PFDA	519.0 / 474.0	3.25	35	>10
13C7-PFUnA	570.0 / 525.0	3.57	30	>10
13C2-PFTeDA	715.0 / 670.0	4.33	37	>10
13C3-PFBS	302.0 / 99.0	1.48	35	>10
13C3-PFHxS	402.0 / 99.0	2.16	26	>10
13C8-PFOS	507.0 / 99.0	2.90	42	>10

BATTELLE

Mass Spectral Acquisition Rate Report

Created with Analyst Reporter
Printed: 08/06/2018 2:37:41 PM

Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 8:38:50 PM	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
PFBS_1	298.9 / 80.0	1.50	47	>10
PFBS_2	298.9 / 99.0	1.50	44	>10
PFHxA_1	313.0 / 269.0	1.79	23	>10
PFHxA_2	313.0 / 119.0	1.78	20	>10
PFHpA_1	363.0 / 319.0	2.15	38	>10
PFHpA_2	363.0 / 169.0	2.15	24	>10
PFHxS_1	399.0 / 80.0	2.17	40	>10
PFHxS_2	399.0 / 99.0	2.17	43	>10
PFOA_1	413.0 / 369.0	2.53	31	>10
PFOA_2	413.0 / 169.0	2.53	29	>10
PFNA_1	463.0 / 419.0	2.91	28	>10
PFNA_2	463.0 / 219.0	2.91	29	>10
PFOS_1	499.0 / 80.0	2.90	43	>10
PFOS_2	499.0 / 99.0	2.90	43	>10
PFDA_1	513.0 / 469.0	3.26	34	>10
PFDA_2	513.0 / 219.0	3.26	38	>10
PFUnA_1	563.0 / 519.0	3.58	35	>10
PFUnA_2	563.0 / 269.0	3.58	36	>10
PFDoA_1	613.0 / 569.0	3.87	37	>10
PFDoA_2	613.0 / 319.0	3.87	35	>10
PFTrDA_1	663.0 / 619.0	4.12	38	>10
PFTrDA_2	663.0 / 169.0	4.12	39	>10
PFTeDA_1	713.0 / 669.0	4.34	49	>10
PFTeDA_2	713.0 / 169.0	4.34	38	>10
NMeFOSAA_1	570.0 / 419.0	3.42	37	>10
NMeFOSAA_2	570.0 / 512.0	3.42	42	>10
NEtFOSAA_1	584.0 / 419.0	3.58	24	>10
NEtFOSAA_2	584.0 / 483.0	3.58	26	>10

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Mass Spectral Acquisition Rate Report

Created with Analyst Reporter
Printed: 08/06/2018 11:57:10 AM

Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 9:36:37 PM	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
PFBS_1	298.9 / 80.0	1.55	22	>10
PFBS_2	298.9 / 99.0	1.55	18	>10
PFHxA_1	313.0 / 269.0	1.83	19	>10
PFHxA_2	313.0 / 119.0	1.83	18	>10
PFHxS_1	399.0 / 80.0	2.21	22	>10
PFHxS_2	399.0 / 99.0	2.22	24	>10
PFOA_1	413.0 / 369.0	2.58	26	>10
PFOA_2	413.0 / 169.0	2.58	27	>10
PFNA_1	463.0 / 419.0	2.95	24	>10
PFNA_2	463.0 / 219.0	2.95	28	>10
PFOS_1	499.0 / 80.0	2.94	27	>10
PFOS_2	499.0 / 99.0	2.94	23	>10

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Mass Spectral Acquisition Rate Report

Created with Analyst Reporter
Printed: 08/06/2018 11:53:40 AM

Sample Name	JV26	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T21:36:37	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
13C3-PFBS	302.0 / 99.0	1.53	24	>10

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

Analyte	CAS No.	Average (ng/L)	ST DEV	3 Sigma	n
PFBA	375-22-4	12.44	2.29	6.87	10
PFPeA	2706-90-3	10.77	1.61	4.83	8
PFHxA	307-24-4	10.31	1.32	3.96	22
PFHpA	375-85-9	9.87	1.78	5.34	22
PFOA	335-67-1	10.49	1.51	4.53	23
PFNA	375-95-1	10.02	1.23	3.69	22
PFDA	335-76-2	10.35	1.50	4.50	22
PFUnA	2058-94-8	10.40	1.41	4.23	22
PFDoA	307-55-1	11.29	1.20	3.60	22
PFTrDA	72629-94-8	11.80	1.59	4.77	22
PFTeDA	376-06-7	11.41	2.17	6.51	22
NMeFOSAA	2355-31-9	10.78	1.97	5.91	22
NEtFOSAA	2991-50-6	9.99	1.79	5.37	22
PFOSA	754-91-6	9.08	0.00	0.00	2
PFBS	375-73-5	10.65	1.55	4.65	23
PFPeS	BDO-2114	9.60	1.07	3.21	3
PFHxS	355-46-4	10.04	1.70	5.10	22
PFHpS	375-99-6	11.00	1.02	3.06	8
PFOS	1763-23-1	10.26	1.52	4.56	23
PFNS	98789-57-2	8.81	0.35	1.05	3
PFDS	2806-15-7	10.24	1.97	5.91	8
4:2FTS	BDO-2205	11.24	1.16	3.48	8
6:2FTS	27619-97-2	12.37	3.07	9.21	8
8:2FTS	39108-34-4	12.30	2.64	7.92	8

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

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

QTRAP 5500
Preventive Maintenance Checklist

Preventive Maintenance Date:	22-Feb-2017

Request ID:	3683
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:_____

_____

_____

_____

Performed By: Kaustubh Dhayagude **Date:** 22-Feb-2017

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	0.5	0.4 to 1.1 x10^{-5} Torr
☑ CAD Low	1.9	Read Only
☑ CAD Medium	2.4	Read Only
☑ CAD High	3.4	Read Only
☑ CAD 12	3.4	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	1.64 e6	Read Only	0.8095	Read Only
Q1 500.380	2.40 e7	Read Only	0.8592	Read Only
Q1 906.673	2.86 e7	Read Only	0.9633	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	1.26 e6	Read Only	0.6252	Read Only
Q3 500.380	2.19 e7	Read Only	0.7275	Read Only
Q3 906.673	3.02 e7	Read Only	0.7662	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: :__19.51%__ (Read Only)

Mass	MSMS Intensity		MSMS Width Value	Width Specs
	Value	Spec		
Q1 609.3	7.43 e7	Read Only	0.9981	Read Only
MS/MS 195.1	1.45 e7	Read Only	0.6582	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	1.43 e7	Read Only	0.7330	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	2.22 e7	Read Only	0.8138	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	3.35 e6	Read Only	0.6495	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	0.8	0.4 to 1.1 x10^{-5} Torr
☑ CAD Low	2.1	Read Only
☑ CAD Medium	2.6	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	5.94 e6	≥1.2^{e}6	0.6933	0.6 to 0.8
Q1 500.380	2.25 e7	≥9.0^{e}6	0.7444	0.6 to 0.8
Q1 906.673	2.74 e7	≥1.4^{e}7	0.7347	0.6 to 0.8
Scan Rate 1000 Da/s Record 50 mca				
Q1 906.673	1.33 e8	≥6.8^{e}7	0.7656	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	4.54 e6	≥1.2^{e}6	0.6390	0.6 to 0.8
Q3 500.380	2.13 e7	≥9.0^{e}6	0.7008	0.6 to 0.8
Q3 906.673	3.04 e7	≥1.4^{e}7	0.7683	0.6 to 0.8
Scan Rate 1000 Da/s Record 50 mca				
Q3 906.673	1.51 e8	≥6.8^{e}7	0.7118	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: 16.93% (≥ 10.0%)

Mass	MSMS Intensity		Width	Width Specs
	Value	Spec	Value	
Q1 609.3	5.74 e7	N/A	0.7667	Read Only
MS/MS 195.1	9.72 e6	N/A	0.6751	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	1.31 e7	≥1.0^{e}7	0.6895	0.6 to 0.8
Q1 933.636	1000	50	6.32 e7	≥4.0^{e}7	0.6740	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	1.70 e7	≥8.0^{e}6	0.7665	0.6 to 0.8
Q3 933.636	1000	50	7.41 e7	≥4.0^{e}7	0.7292	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	8.08 e6	≥7.2 ^{e}6	0.1302	<0.35
ER 922.010	0.05	3.89 e7	≥2.8 ^{e}6	0.2603	<0.35
ScanRate : 10000 Da/s ; 50 Mca					
ER 118.087	0.05	2.55 e7	≥2.4 ^{e}7	0.3740	<0.65
ER 922.010	0.05	2.37 e8	≥6.8 ^{e}7	0.5407	<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	1.05 e8	≥4.4 ^{e}7	0.1840	<0.35
ER 601.978	0.05	7.74 e7	≥5.6 ^{e}7	0.1849	<0.35
ScanRate : 10000 Da/s ; 50 Mca					
ER 431.982	0.05	3.43 e8	≥1.2 ^{e}8	0.4382	<0.65
ER 601.978	0.05	2.55 e8	≥1.6 ^{e}8	0.6205	<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	> 3.5 e6	≥2.0 ^{e}6	> 4.0 e7	≥6.4 ^{e}6

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

Mass	Scan Rate (Da/s)	Fragamentation OFF		Fragmentation ON	
		Intensity	Spec	Intensity	Spec
MS3 397.2	1000	3.2 e7	Contains only 397.2	N/A	N/A
☐ 236 OR ☑ 365	1000	1.19 e8	Fragment Intensity	> 4.4 e6	≥1.6x 10^{e}6

REVIEW:

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

END OF PREVENTIVE MAINTENANCE CHECKLIST

Document history:

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

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LIQUID SAMPLE ID FORM

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340

Non-Potable Water PFAS Analysis

SW, SW DUP

Sample ID	Description	Volume (mL)	Bottles	*	Date Initials
CQ859PB-FS	Procedural Blank	250.0	NA	--	05/30/18 SAS
CQ860LCS-FS	Laboratory Control Sample	250.0	NA	--	05/30/18 SAS
J6241-FS	FFTA-FD01-052418	275.0	1	C	05/30/18 SAS
J6242-FS	FFTA-SW01-052418	280.0	1	C	05/30/18 SAS

Comments:

Samples Assigned By Stephanie Schultz Date : May 29, 2018

* - "C" = Sample is Consumed

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BATTELLE - NORWELL OPERATIONS
SURROGATE SPIKE FORM

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340
Non-Potable Water PFAS Analysis
SW, SW DUP

Sample ID	Standard ID	Type	Vial No.	Vol Added (uL)	Date Spiked/ Spiked By	Witn'd By	Comment
CQ859PB-FS	JV83	SIS	1	50	05/30/18 SAS	JCT	NA
CQ860LCS-FS	JV83	SIS	1	50	05/30/18 SAS	JCT	NA
CQ860LCS-FS	JW44	LCS/MS	1	50	05/30/18 SAS	JCT	NA
J6241-FS	JV83	SIS	1	50	05/30/18 SAS	JCT	NA
J6242-FS	JV83	SIS	1	50	05/30/18 SAS	JCT	NA

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
JV83	Pipette	I0793912B
JW44	Pipette	I0793912B

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BATTELLE - NORWELL OPERATIONS
SAMPLE EXTRACTION FORM

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340

Non-Potable Water PFAS Analysis

SW, SW DUP

Sample ID	1st Extraction	2nd Extraction	3rd Extraction	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comment
CQ859PB-FS	05/30/18 SAS	NA	NA	NA	NA	NA	NA	NA
CQ860LCS-FS	05/30/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6241-FS	05/30/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6242-FS	05/30/18 SAS	NA	NA	NA	NA	NA	NA	NA

Solvents/Reagent Preparations:

Name	ID	Expires	Lot No	Procedure	Comments
0.4% NH3 in Methanol	RP-180530-2	05/30/18	SHBG7156V	Per 100 mL, dilute 3.5 mL NH3 to 100 mL in Methanol	
0.4% NH3 in Methanol	RP-180530-2	05/30/18	177965	Per 100 mL, dilute 3.5 mL NH3 to 100 mL in Methanol	
Pre-packed SPE Column	RP-180530-4	05/30/18	003737320A	Pre-packed SPE Column	

Solvents/Reagents:

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BATTELLE - NORWELL OPERATIONS
INTERNAL STANDARD SPIKING FORM

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340
Non-Potable Water PFAS Analysis
SW, SW DUP

(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
CQ859PB-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
CQ860LCS-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6241-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6241-FS-D(5)	476	24	JW02	25	1	500	50.000	06/08/18 DMS	NA
J6241-FS-D(7)	476	24	JW02	25	1	500	1250.000	06/04/18 DMS	SAS
J6241-FS-D(9)	476	24	JW02	25	1	500	31250.000	06/05/18 DMS	SAS
J6241-FS-D(11)	476	24	JW02	25	1	500	781250.000	06/08/18 DMS	MRM
J6242-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6242-FS-D(5)	476	24	JW02	25	1	500	50.000	06/04/18 DMS	SAS
J6242-FS-D(7)	476	24	JW02	25	1	500	1250.000	06/04/18 DMS	SAS
J6242-FS-D(9)	476	24	JW02	25	1	500	31250.000	06/05/18 DMS	SAS
J6242-FS-D(11)	476	24	JW02	25	1	500	781250.000	06/08/18 DMS	MRM

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
JV83	Pipette	I0793912B
JW02	Pipette	I0793912B

Extract Id:	Comments:
CQ859PB-FS	Samples reconstituted in 80/20 methanol/milli-q water (RP-180529-6)

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

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

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BATTELLE - NORWELL OPERATIONS
EXTRACT SPIKE FORM

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340
Non-Potable Water PFAS Analysis
SW, SW DUP

Extract Id	DF	Std. ID	Type	Vial No.	Vol. Added (uL)	Conc (ug/mL)	Added (ng)	Date Spiked/ Spiked By	Witn'd By
J6241-FS-D(5)	50	JV83	SIS	1	24	0	0	06/04/18 DMS	MRM
J6241-FS-D(7)	1250	JV83	SIS	1	24	0	0	06/04/18 DMS	MRM
J6241-FS-D(9)	31250	JV83	SIS	1	24	0	0	06/05/18 DMS	MRM
J6241-FS-D(11)	781250	JV83	SIS	1	24	0	0	06/08/18 DMS	MRM
J6242-FS-D(5)	50	JV83	SIS	1	24	0	0	06/04/18 DMS	MRM
J6242-FS-D(7)	1250	JV83	SIS	1	24	0	0	06/04/18 DMS	MRM
J6242-FS-D(9)	31250	JV83	SIS	1	24	0	0	06/05/18 DMS	MRM
J6242-FS-D(11)	781250	JV83	SIS	1	24	0	0	06/08/18 DMS	MRM

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
JV83	Pipette	I0793912B
JW02	Pipette	I0793912B

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BATTELLE - NORWELL OPERATIONS
PREPARATION EXTRACT SPLIT FORM

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340

Non-Potable Water PFAS Analysis

SW, SW DUP

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
CQ859PB-FS	0	C	5/30/2018 9:49:00 AM	NA		NA	NA	1.000	1.000	05/30/18 SAS
CQ859PB-FS	2	--	5/30/2018 1:03:00 PM	CQ859PB-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
CQ859PB-FS	3	--	5/30/2018 1:03:00 PM	CQ859PB-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
CQ860LCS-FS	0	C	5/30/2018 9:49:00 AM	NA		NA	NA	1.000	1.000	05/30/18 SAS
CQ860LCS-FS	2	--	5/30/2018 1:03:00 PM	CQ860LCS-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
CQ860LCS-FS	3	--	5/30/2018 1:03:00 PM	CQ860LCS-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6241-FS	0	C	5/30/2018 9:49:00 AM	NA		NA	NA	1.000	1.000	05/30/18 SAS
J6241-FS	2	--	5/30/2018 1:03:00 PM	J6241-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6241-FS	3	C	5/30/2018 1:03:00 PM	J6241-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6241-FS	4	--	6/4/2018 4:13:00 PM	J6241-FS	3	500	480	1.042	2.083	06/04/18 SAS
J6241-FS-D	5	C	6/4/2018 4:13:00 PM	J6241-FS	3	500	20	25.000	50.000	06/04/18 SAS
J6241-FS-D	6	--	6/4/2018 4:15:00 PM	J6241-FS-D	5	500	480	1.042	52.083	06/04/18 DMS
J6241-FS-D	7	C	6/4/2018 4:15:00 PM	J6241-FS-D	5	500	20	25.000	1250.000	06/04/18 DMS
J6241-FS-D	8	--	6/5/2018 3:57:00 PM	J6241-FS-D	7	500	480	1.042	1302.083	06/05/18 DMS

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-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340

Non-Potable Water PFAS Analysis

SW, SW DUP

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
J6241-FS-D	9	C	6/5/2018 3:57:00 PM	J6241-FS-D	7	500	20	25.000	31250.000	06/05/18 DMS
J6241-FS-D	10	--	6/8/2018 9:42:00 AM	J6241-FS-D	9	500	480	1.042	32552.084	06/08/18 DMS
J6241-FS-D	11	--	6/8/2018 9:42:00 AM	J6241-FS-D	9	500	20	25.000	781250.000	06/08/18 DMS
J6242-FS	0	C	5/30/2018 9:49:00 AM	NA		NA	NA	1.000	1.000	05/30/18 SAS
J6242-FS	2	--	5/30/2018 1:03:00 PM	J6242-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6242-FS	3	C	5/30/2018 1:03:00 PM	J6242-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6242-FS	4	--	6/4/2018 4:13:00 PM	J6242-FS	3	500	480	1.042	2.083	06/04/18 SAS
J6242-FS-D	5	C	6/4/2018 4:13:00 PM	J6242-FS	3	500	20	25.000	50.000	06/04/18 SAS
J6242-FS-D	6	--	6/4/2018 4:15:00 PM	J6242-FS-D	5	500	480	1.042	52.083	06/04/18 DMS
J6242-FS-D	7	C	6/4/2018 4:15:00 PM	J6242-FS-D	5	500	20	25.000	1250.000	06/04/18 DMS
J6242-FS-D	8	--	6/5/2018 3:57:00 PM	J6242-FS-D	7	500	480	1.042	1302.083	06/05/18 DMS
J6242-FS-D	9	C	6/5/2018 3:57:00 PM	J6242-FS-D	7	500	20	25.000	31250.000	06/05/18 DMS
J6242-FS-D	10	--	6/8/2018 9:42:00 AM	J6242-FS-D	9	500	480	1.042	32552.084	06/08/18 DMS
J6242-FS-D	11	--	6/8/2018 9:42:00 AM	J6242-FS-D	9	500	20	25.000	781250.000	06/08/18 DMS

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-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340

Non-Potable Water PFAS Analysis

SW, SW DUP

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
Extract Id:	**Comments:**									
CQ859PB-FS	Samples reconstituted in 80/20 methanol/milli-q water (RP-180529-6)									

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-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340
Non-Potable Water PFAS Analysis
SW, SW DUP

Purpose:	LC-MS/MS TRANSFER	**Last Activity:**	Prep->Inst
Relinquished On/By:	May 31 2018 4:04PM SAS	**Received On/By:**	Jun 4 2018 4:13PM DMS
Relinquished From:	Sample Preparation: NA	**Received Location:**	LC Laboratory: NA
Relinquish Comment:	NA	**Received Comment:**	NA

No.	BDO-ID:	PIV:	DF:	Condition:	Custody Comment:
1	CQ859PB-FS(3)	500	2	Intact	NA
2	CQ860LCS-FS(3)	500	2	Intact	NA
3	J6241-FS(3)	500	2	Intact	NA
4	J6242-FS(3)	500	2	Intact	NA

Total Extracts: 4

Purpose:	LC-MS/MS TRANSFER	**Last Activity:**	Prep->Inst
Relinquished On/By:	Jun 4 2018 4:19PM DMS	**Received On/By:**	Jun 4 2018 4:19PM DMS
Relinquished From:	Sample Preparation: NA	**Received Location:**	LC Laboratory: NA
Relinquish Comment:	NA	**Received Comment:**	NA

No.	BDO-ID:	PIV:	DF:	Condition:	Custody Comment:
1	J6241-FS-D(6)	500	52.083	Intact	NA
2	J6241-FS-D(7)	500	1250	Intact	NA
3	J6242-FS-D(6)	500	52.083	Intact	NA
4	J6242-FS-D(7)	500	1250	Intact	NA

Total Extracts: 4

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It can be done

BATTELLE - NORWELL OPERATIONS
EXTRACT - INSTRUMENT FACILITY CUSTODY PAGE

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340
Non-Potable Water PFAS Analysis
SW, SW DUP

Purpose:	LC-MS/MS TRANSFER	**Last Activity:**	Prep->Inst
Relinquished On/By:	Jun 5 2018 4:00PM DMS	**Received On/By:**	Jun 5 2018 4:00PM DMS
Relinquished From:	Sample Preparation: NA	**Received Location:**	LC Laboratory: NA
Relinquish Comment:	NA	**Received Comment:**	NA

No.	BDO-ID:	PIV:	DF:	Condition:	Custody Comment:
1	J6241-FS-D(9)	500	31250	Intact	NA
2	J6242-FS-D(9)	500	31250	Intact	NA

Total Extracts: 2

Purpose:	LC-MS/MS TRANSFER	**Last Activity:**	Prep->Inst
Relinquished On/By:	Jun 8 2018 9:45AM DMS	**Received On/By:**	Jun 8 2018 9:46AM DMS
Relinquished From:	Sample Preparation: NA	**Received Location:**	LC Laboratory: NA
Relinquish Comment:	NA	**Received Comment:**	NA

No.	BDO-ID:	PIV:	DF:	Condition:	Custody Comment:
1	J6241-FS-D(11)	500	781250	Intact	NA
2	J6242-FS-D(11)	500	781250	Intact	NA

Total Extracts: 2

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BATTELLE - NORWELL OPERATIONS
SAMPLE SPECIFIC COMMENTS

Project Title(s)
CTO-SE0375: Naval Air Station Jacksonville

Project No.(s)
100119154-SE0375

18-0340

Non-Potable Water PFAS Analysis

SW, SW DUP

Sample ID:	Comment:	Date/Initials:
CQ859PB-FS	Sample extraction began at 9:49am for all samples	05/30/18 SAS
CQ859PB-FS	Sample extraction ended at 10:40am	05/30/18 SAS
CQ860LCS-FS	Sample extraction ended at 10:39am	05/30/18 SAS
J6241-FS	Sample extraction ended at 11:33am	05/30/18 SAS
J6242-FS	Sample extraction ended at 11:27am	05/30/18 SAS

BATTELLE

Sequence Report

Created with Analyst Reporter
Printed: 08/06/2018 2:09:40 PM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
1	MeOH		5/31/2018 5:32:37 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
2	JV20	L1	5/31/2018 5:43:25 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
3	JV21	L2	5/31/2018 5:54:13 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
4	JV22	L3	5/31/2018 6:05:02 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
5	JV23	L4	5/31/2018 6:15:51 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
6	JV24	L5	5/31/2018 6:26:39 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
7	JV25	L6	5/31/2018 6:37:26 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
8	JV26	L7	5/31/2018 6:48:14 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
9	JV27	L8	5/31/2018 6:59:02 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
10	JV28	L9	5/31/2018 7:09:48 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
11	JV05 IB	Instrument Blank	5/31/2018 7:20:37 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
12	JW32 ICC	ICC	5/31/2018 7:31:26 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
13	JV16 Branch	Branch Standard	5/31/2018 7:42:14 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
16	J6241-FS(3)	FFTA-FD01-052418	5/31/2018 8:25:25 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
17	J6242-FS(3)	FFTA-SW01-052418	5/31/2018 8:36:12 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff
7	JV25 CCV	CCV	5/31/2018 8:46:59 PM	5-0369.dam	Data18-0340_18-0338_18-0329.wiff

BATTELLE

Sequence Report

Created with Analyst Reporter
Printed: 08/06/2018 11:18:27 AM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
1	MeOH		6/4/2018 7:23:13 PM	5-0369.dam	06022018.wiff
2	JV20	L1	6/4/2018 7:34:02 PM	5-0369.dam	06022018.wiff
3	JV21	L2	6/4/2018 7:44:51 PM	5-0369.dam	06022018.wiff
4	JV22	L3	6/4/2018 7:55:39 PM	5-0369.dam	06022018.wiff
5	JV23	L4	6/4/2018 8:06:27 PM	5-0369.dam	06022018.wiff
6	JV24	L5	6/4/2018 8:17:14 PM	5-0369.dam	06022018.wiff
7	JV25	L6	6/4/2018 8:28:02 PM	5-0369.dam	06022018.wiff
8	JV26	L7	6/4/2018 8:38:50 PM	5-0369.dam	06022018.wiff
9	JV27	L8	6/4/2018 8:49:37 PM	5-0369.dam	06022018.wiff
10	JV28	L9	6/4/2018 9:00:25 PM	5-0369.dam	06022018.wiff
11	JV05 IB	Instrument Blank	6/4/2018 9:11:14 PM	5-0369.dam	06022018.wiff
12	JW32 ICC	ICC	6/4/2018 9:22:01 PM	5-0369.dam	06022018.wiff
13	JV16 Branch	Branch Standard	6/4/2018 9:32:48 PM	5-0369.dam	06022018.wiff
14	MeOH		6/4/2018 9:43:36 PM	5-0369.dam	06022018.wiff
37	CQ859PB-FS(3)	Procedural Balnk	6/5/2018 3:28:50 AM	5-0369.dam	06022018.wiff
38	CQ860LCS-FS(3)	Labortory Control	6/5/2018 3:39:38 AM	5-0369.dam	06022018.wiff
8	JV26 CCV	CCV	6/5/2018 3:50:26 AM	5-0369.dam	06022018.wiff
1	MeOH		6/5/2018 4:01:13 AM	5-0369.dam	06022018.wiff
39	J6241-FS-D(6)	FFTA_FD01-052418	6/5/2018 4:12:02 AM	5-0369.dam	06022018.wiff
40	J6241-FS-D(7)	FFTA_FD01-052418	6/5/2018 4:22:50 AM	5-0369.dam	06022018.wiff
1	MeOH		6/5/2018 4:33:37 AM	5-0369.dam	06022018.wiff
41	J6242-FS-D(6)	FFTA-SW01-052418	6/5/2018 4:44:26 AM	5-0369.dam	06022018.wiff
42	J6242-FS-D(7)	FFTA-SW01-052418	6/5/2018 4:55:13 AM	5-0369.dam	06022018.wiff
1	MeOH		6/5/2018 5:05:59 AM	5-0369.dam	06022018.wiff
14	MeOH		6/5/2018 5:16:48 AM	5-0369.dam	06022018.wiff
14	MeOH		6/5/2018 5:27:36 AM	5-0369.dam	06022018.wiff
7	JV25 CCV	CCV	6/5/2018 5:38:23 AM	5-0369.dam	06022018.wiff

BATTELLE

Sequence Report

Created with Analyst Reporter
Printed: 08/06/2018 2:56:04 PM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
1	MeOH		6/7/2018 8:21:48 PM	5-0369.dam	6072018.wiff
2	JV20	L1	6/7/2018 8:32:29 PM	5-0369.dam	6072018.wiff
3	JV21	L2	6/7/2018 8:43:10 PM	5-0369.dam	6072018.wiff
4	JV22	L3	6/7/2018 8:53:52 PM	5-0369.dam	6072018.wiff
5	JV23	L4	6/7/2018 9:04:34 PM	5-0369.dam	6072018.wiff
6	JV24	L5	6/7/2018 9:15:15 PM	5-0369.dam	6072018.wiff
7	JV25	L6	6/7/2018 9:25:56 PM	5-0369.dam	6072018.wiff
8	JV26	L7	6/7/2018 9:36:37 PM	5-0369.dam	6072018.wiff
9	JV27	L8	6/7/2018 9:47:16 PM	5-0369.dam	6072018.wiff
10	JV28	L9	6/7/2018 9:57:58 PM	5-0369.dam	6072018.wiff
11	JV05 IB	Instrument Blank	6/7/2018 10:08:39 PM	5-0369.dam	6072018.wiff
12	JW32 ICC	ICC	6/7/2018 10:19:21 PM	5-0369.dam	6072018.wiff
13	JV16 Branch	Branch Standard	6/7/2018 10:30:02 PM	5-0369.dam	6072018.wiff
14	MeOH		6/7/2018 10:40:43 PM	5-0369.dam	6072018.wiff
24	MeOH		6/8/2018 1:10:18 AM	5-0369.dam	6072018.wiff
25	J6241-FS-D(9)	FFTA-FD01-052418	6/8/2018 1:21:00 AM	5-0369.dam	6072018.wiff
26	J6242-FS-D(9)	FFTA-SW01-052418	6/8/2018 1:31:41 AM	5-0369.dam	6072018.wiff
14	MeOH		6/8/2018 1:42:21 AM	5-0369.dam	6072018.wiff
20	MeOH		6/8/2018 1:53:03 AM	5-0369.dam	6072018.wiff
24	MeOH		6/8/2018 2:03:44 AM	5-0369.dam	6072018.wiff
8	JV26 CCV	CCV	6/8/2018 2:14:26 AM	5-0369.dam	6072018.wiff
1	1 JV24 ISC	CCV	6/8/2018 1:33:43 PM	5-0369.dam	6072018.wiff
2	JV05 IB	Instrument Blank	6/8/2018 1:44:26 PM	5-0369.dam	6072018.wiff
3	J6241-FS-D(11)	FFTA-FD01-052418	6/8/2018 1:55:08 PM	5-0369.dam	6072018.wiff
4	J6242-FS-D(11)	FFTA-SW01-052418	6/8/2018 2:05:50 PM	5-0369.dam	6072018.wiff
5	JV25 CCV	CCV	6/8/2018 2:16:30 PM	5-0369.dam	6072018.wiff

1 - injections starting on 6/8/2018 are saved as result fie 18-0340_BASE_D_2, however they are quantified using the 18-0340_BASE_D_1 calibration files. JRT 6/11/2018.

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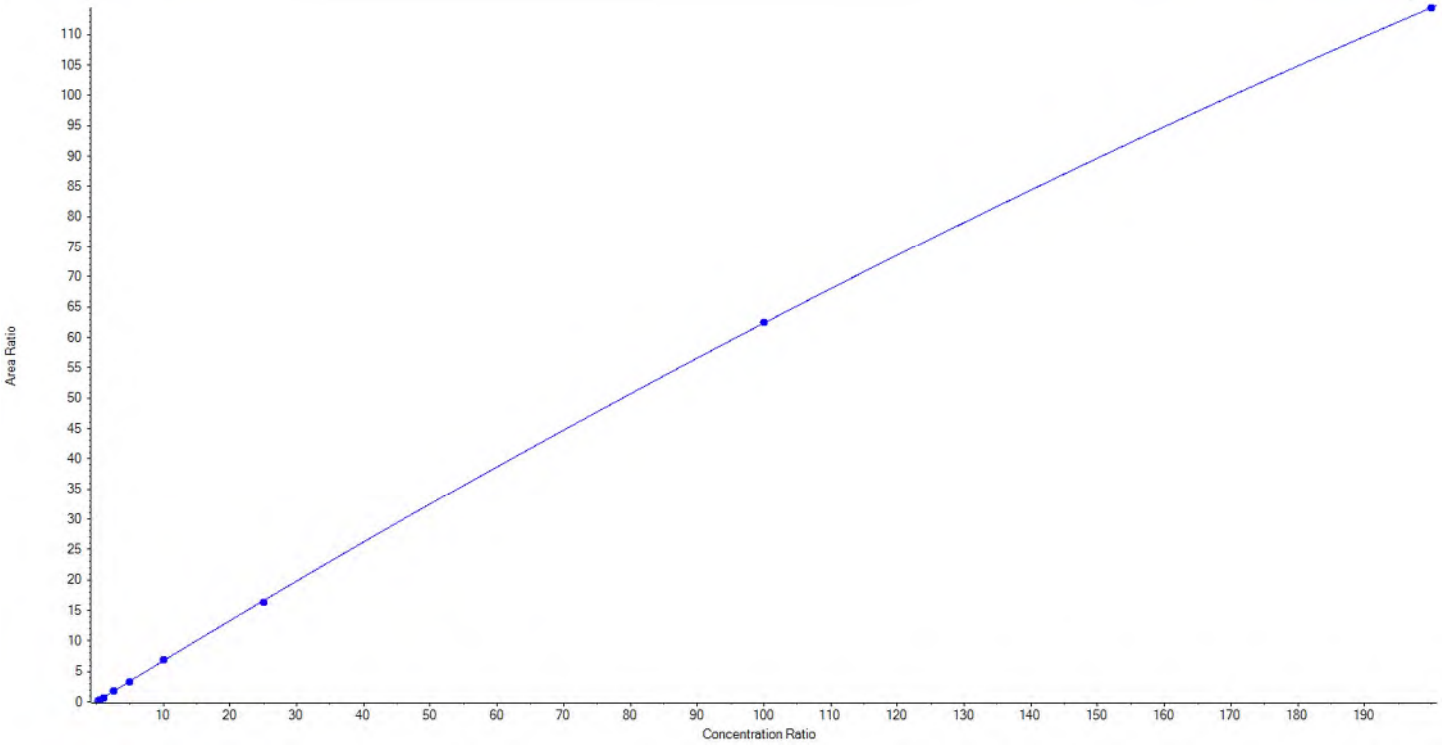
Calibration Summary Report

Analyte Name	PFTeDA_1	**Data File**	Data18-0340_18-0338_18-0329.wiff
MRM Transition	713.0 / 669.0	**Result Table**	18-0340_BASE
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	5/31/2018 5:32:37 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = -5.10728e-4 x^2 + 0.67388 x + 0.06271 (r = 0.99994) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	21.436551	85.8
3	JV21	L2	True	50.00	49.380684	98.8
4	JV22	L3	True	100.00	97.075671	97.1
5	JV23	L4	True	250.00	265.861484	106.3
6	JV24	L5	True	500.00	481.260909	96.3
7	JV25	L6	True	1000.00	1026.878933	102.7
8	JV26	L7	True	2500.00	2468.439072	98.7
9	JV27	L8	True	10000.00	10017.655860	100.2
10	JV28	L9	True	20000.00	19993.210273	100.0



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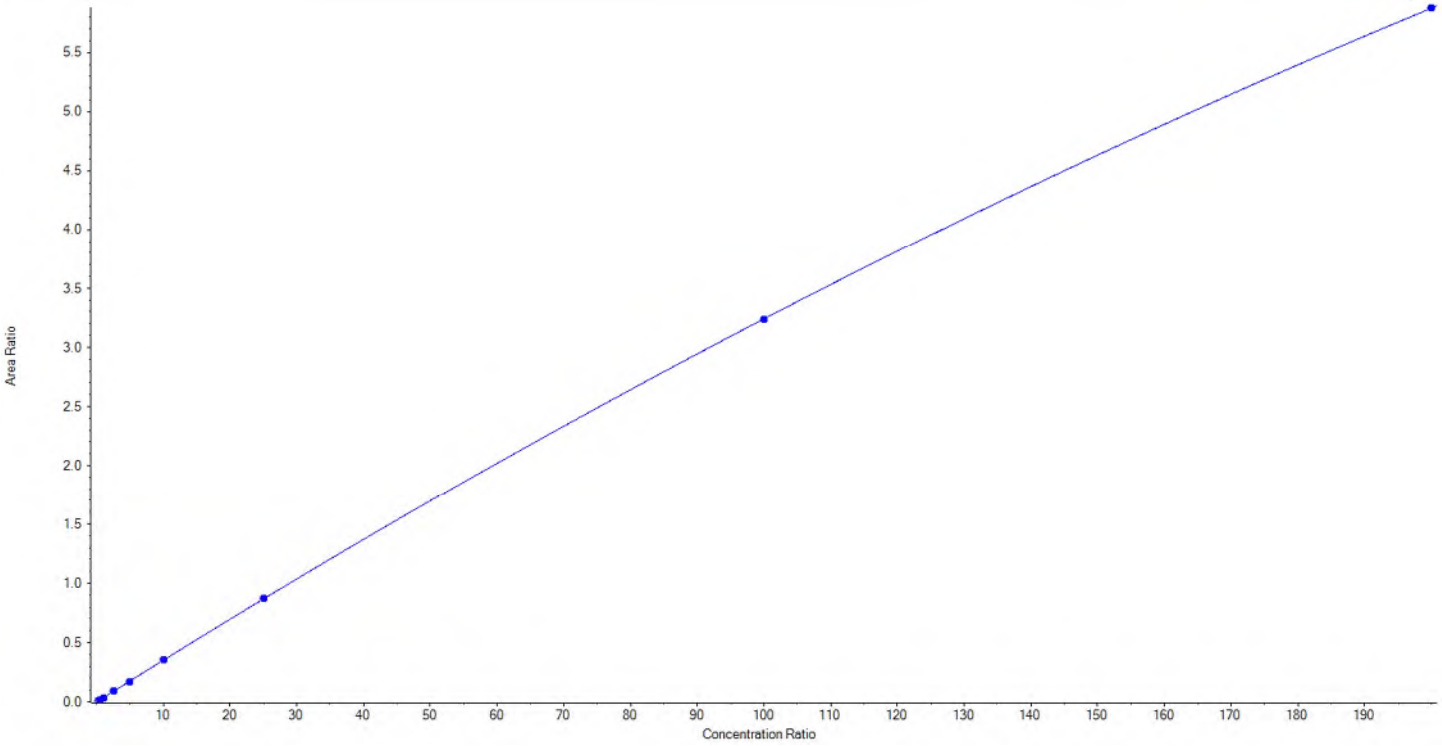
Calibration Summary Report

Analyte Name	PFTeDA_2	**Data File**	Data18-0340_18-0338_18-0329.wiff
MRM Transition	713.0 / 169.0	**Result Table**	18-0340_BASE
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	5/31/2018 5:32:37 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = -3.02405e-5 x^2 + 0.03542 x + 5.77543e-4 (r = 0.99997) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	22.060811	88.2
3	JV21	L2	True	50.00	48.102083	96.2
4	JV22	L3	True	100.00	101.228589	101.2
5	JV23	L4	True	250.00	261.653619	104.7
6	JV24	L5	True	500.00	481.809932	96.4
7	JV25	L6	True	1000.00	1015.769348	101.6
8	JV26	L7	True	2500.00	2504.139003	100.2
9	JV27	L8	True	10000.00	9972.538344	99.7
10	JV28	L9	True	20000.00	20015.832383	100.1



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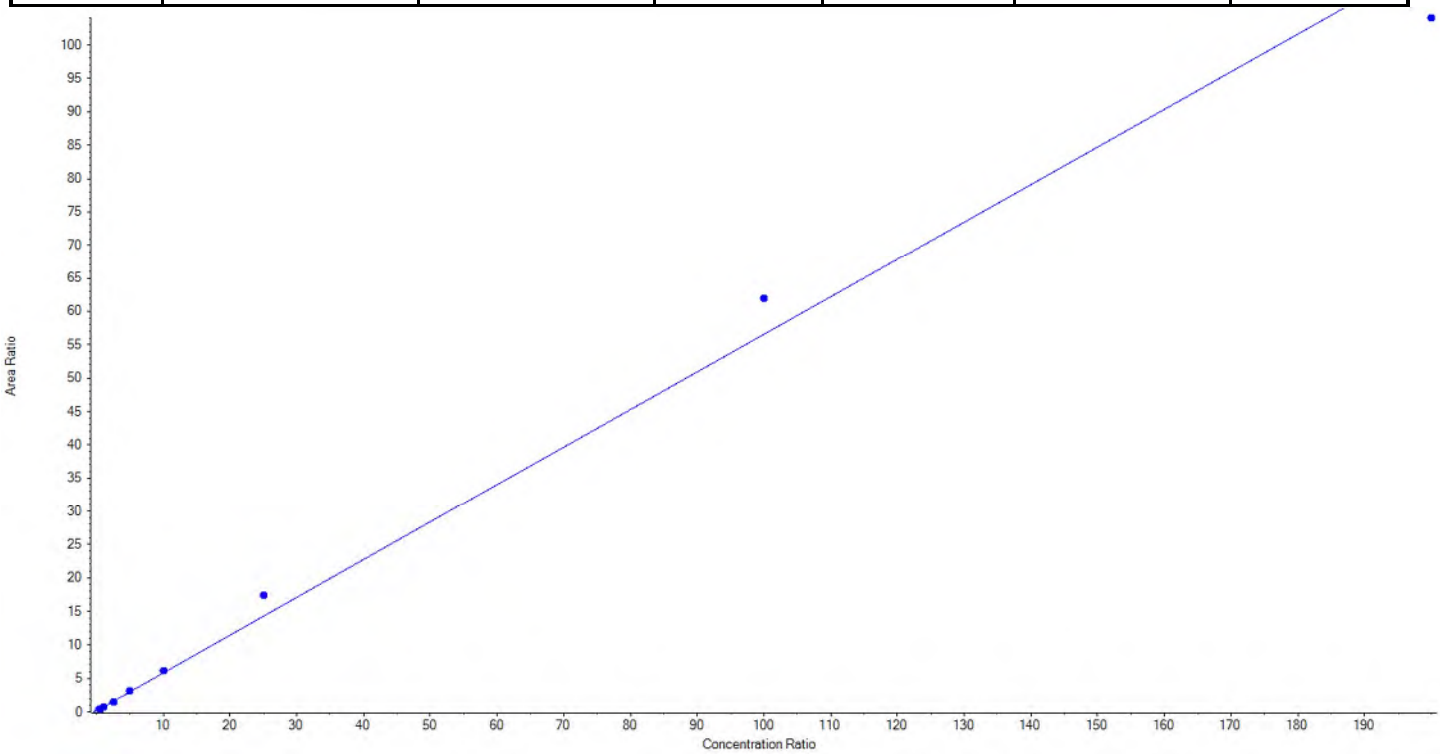
Calibration Summary Report

Analyte Name	NMeFOSAA_1	**Data File**	Data18-0340_18-0338_18-0329.wiff
MRM Transition	570.0 / 419.0	**Result Table**	18-0340_BASE
Internal Standard	d3-MeFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	5/31/2018 5:32:37 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.56366 x + 0.18098 (r = 0.99468) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	< 0	N/A
3	JV21	L2	True	50.00	43.236061	86.5
4	JV22	L3	True	100.00	87.693790	87.7
5	JV23	L4	True	250.00	223.642580	89.5
6	JV24	L5	True	500.00	530.382144	106.1
7	JV25	L6	True	1000.00	1062.930018	106.3
8	JV26	L7	True	2500.00	3054.706272	122.2
9	JV27	L8	True	10000.00	10966.465685	109.7
10	JV28	L9	True	20000.00	18430.943450	92.2



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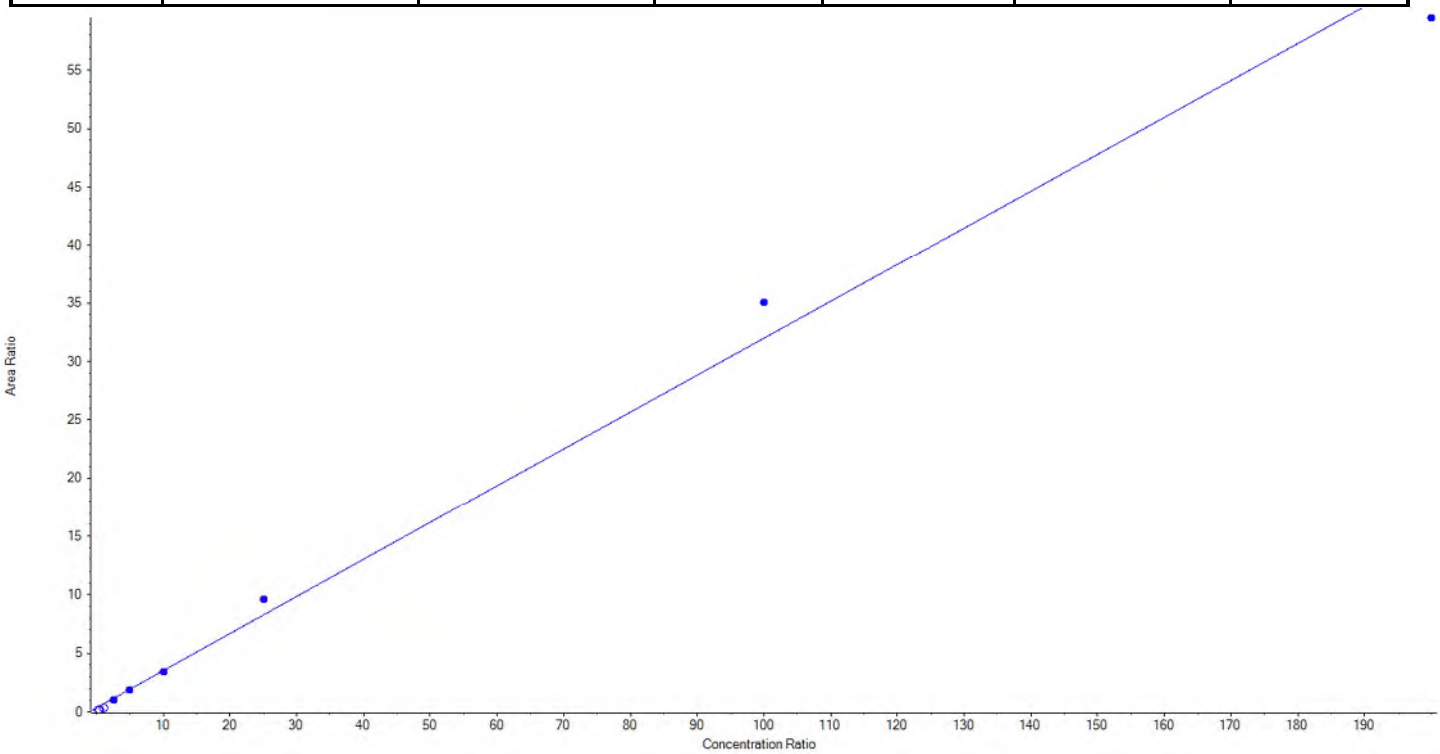
Calibration Summary Report

Analyte Name	NMeFOSAA_2	**Data File**	Data18-0340_18-0338_18-0329.wiff
MRM Transition	570.0 / 512.0	**Result Table**	18-0340_BASE
Internal Standard	d3-MeFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	5/31/2018 5:32:37 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.31631 x + 0.36040 (r = 0.99570) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	< 0	N/A
3	JV21	L2	False	50.00	< 0	N/A
4	JV22	L3	False	100.00	< 0	N/A
5	JV23	L4	True	250.00	220.034973	88.0
6	JV24	L5	True	500.00	472.048501	94.4
7	JV25	L6	True	1000.00	975.966806	97.6
8	JV26	L7	True	2500.00	2920.968059	116.8
9	JV27	L8	True	10000.00	10967.199851	109.7
10	JV28	L9	True	20000.00	18693.781810	93.5



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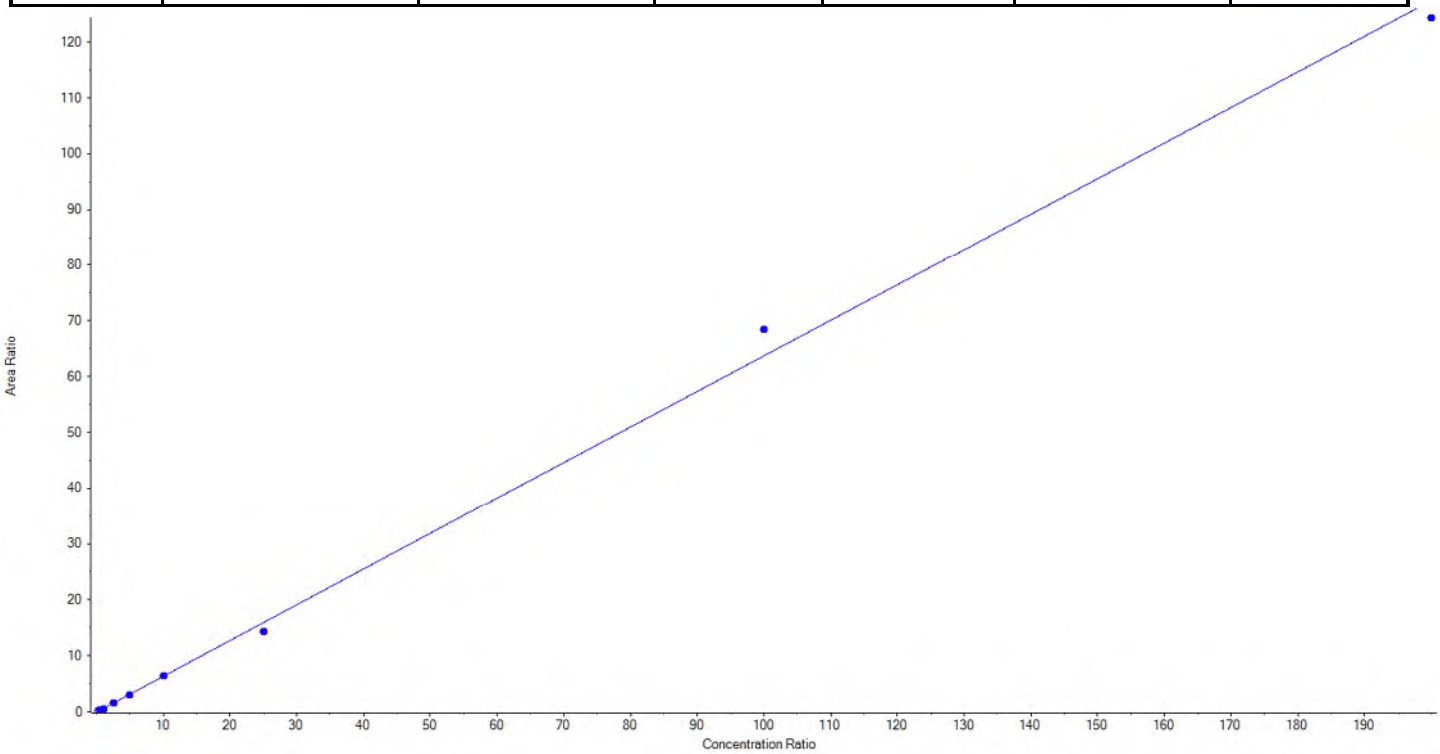
Calibration Summary Report

Analyte Name	NEtFOSAA_1	**Data File**	Data18-0340_18-0338_18-0329.wiff
MRM Transition	584.0 / 419.0	**Result Table**	18-0340_BASE
Internal Standard	d5-EtFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	5/31/2018 5:32:37 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.63712 x + -0.01445 (r = 0.99861) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	27.270860	109.1
3	JV21	L2	True	50.00	57.177278	114.4
4	JV22	L3	True	100.00	92.501893	92.5
5	JV23	L4	True	250.00	255.164458	102.1
6	JV24	L5	True	500.00	473.673727	94.7
7	JV25	L6	True	1000.00	1009.008565	100.9
8	JV26	L7	True	2500.00	2263.266176	90.5
9	JV27	L8	True	10000.00	10733.095778	107.3
10	JV28	L9	True	20000.00	19516.112125	97.6



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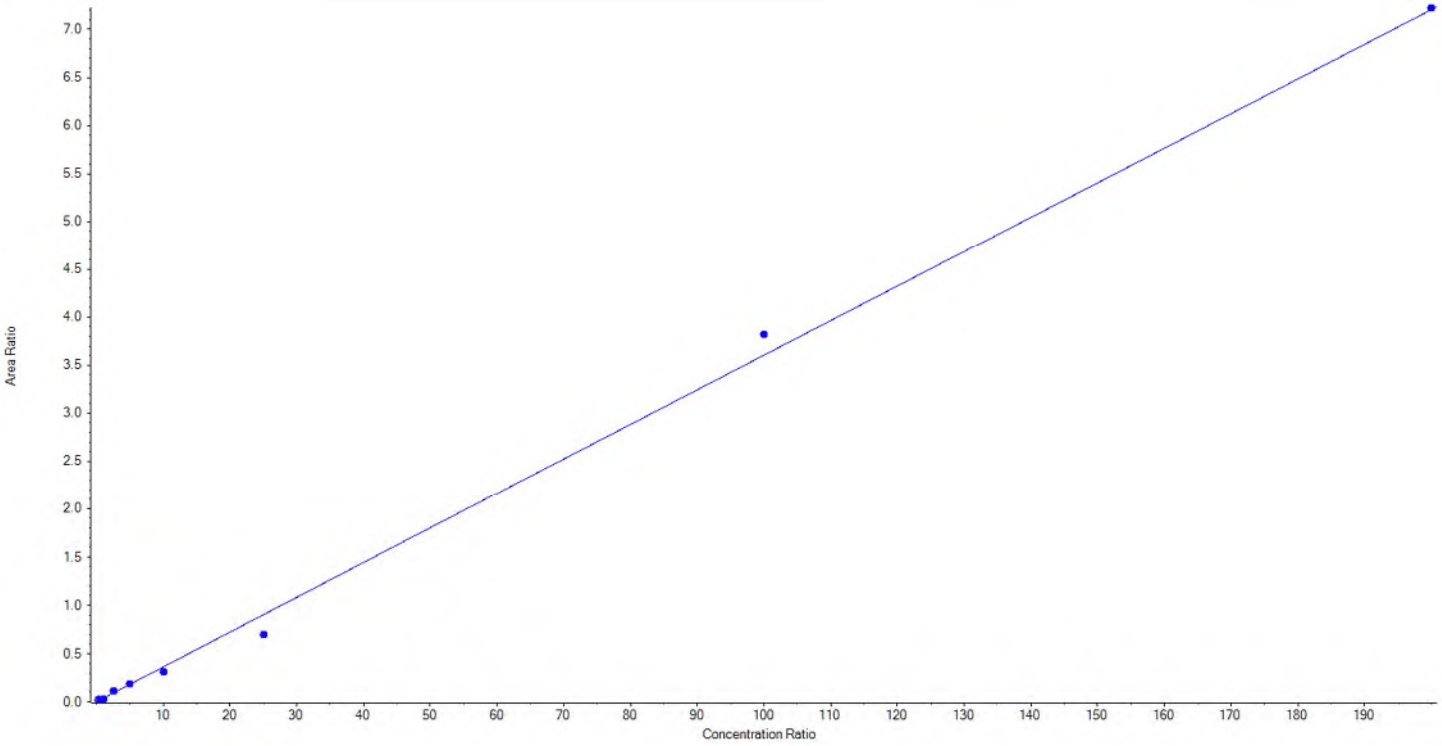
Calibration Summary Report

Analyte Name	NEtFOSAA_2	**Data File**	Data18-0340_18-0338_18-0329.wiff
MRM Transition	584.0 / 483.0	**Result Table**	18-0340_BASE
Internal Standard	d5-EtFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	5/31/2018 5:32:37 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.03601 x + 0.00311 (r = 0.99674) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	42.262971	169.1
3	JV21	L2	True	50.00	61.816051	123.6
4	JV22	L3	True	100.00	78.089730	78.1
5	JV23	L4	True	250.00	321.268913	128.5
6	JV24	L5	True	500.00	499.606855	99.9
7	JV25	L6	True	1000.00	866.796385	86.7
8	JV26	L7	True	2500.00	1923.589640	76.9
9	JV27	L8	True	10000.00	10596.369217	106.0
10	JV28	L9	True	20000.00	20052.463209	100.3



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Calibration Summary Report

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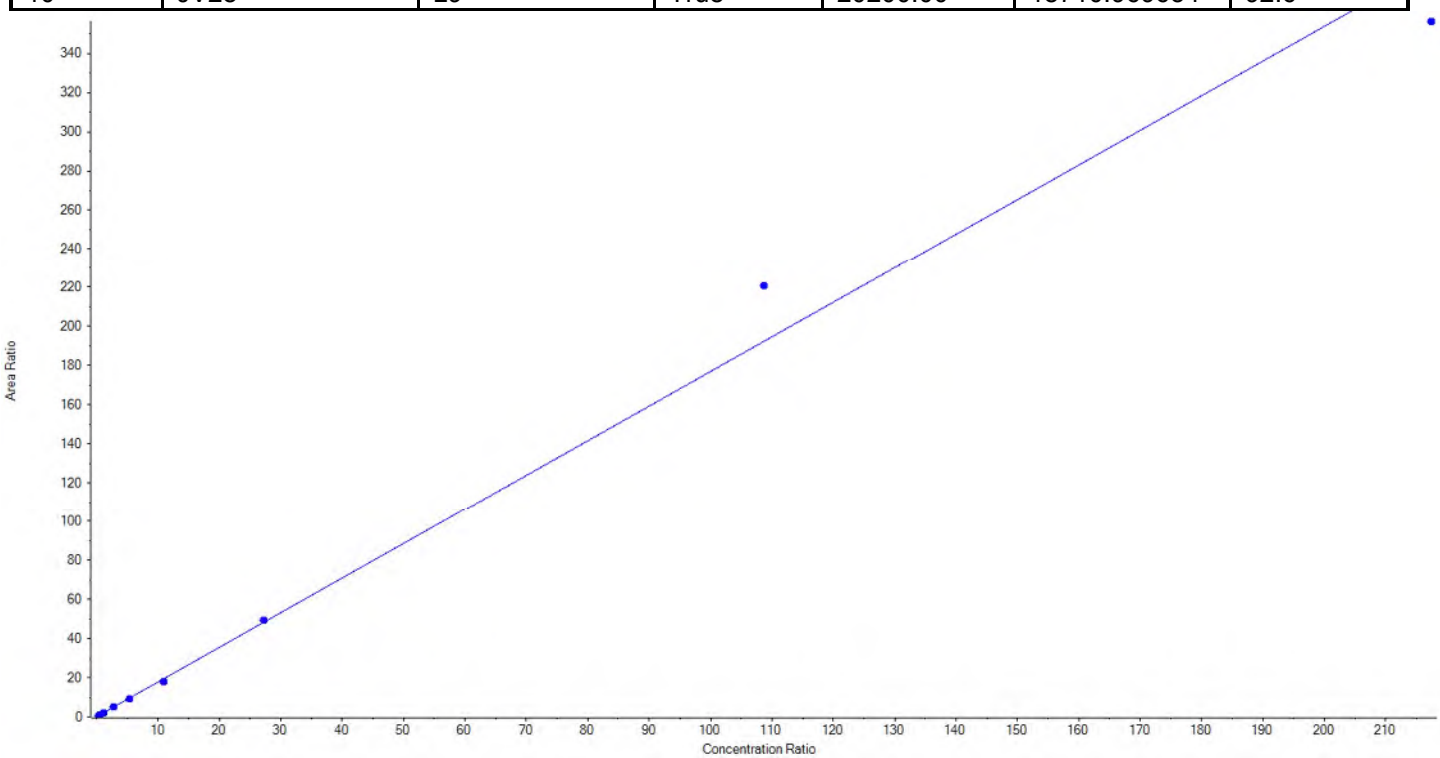
Analyte Name	PFBS_1	**Data File**	06022018.wiff
MRM Transition	298.9 / 80.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C3-PFBS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.76816 x + 0.12377 (r = 0.99496) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.25	23.430730	92.8
3	JV21	L2	True	50.50	48.077851	95.2
4	JV22	L3	True	101.00	114.049174	112.9
5	JV23	L4	True	252.50	250.040307	99.0
6	JV24	L5	True	505.00	489.667439	97.0
7	JV25	L6	True	1010.00	939.392143	93.0
8	JV26	L7	True	2525.00	2589.743424	102.6
9	JV27	L8	True	10100.00	11603.879298	114.9
10	JV28	L9	True	20200.00	18710.969634	92.6



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Calibration Summary Report

Created with Analyst Reporter
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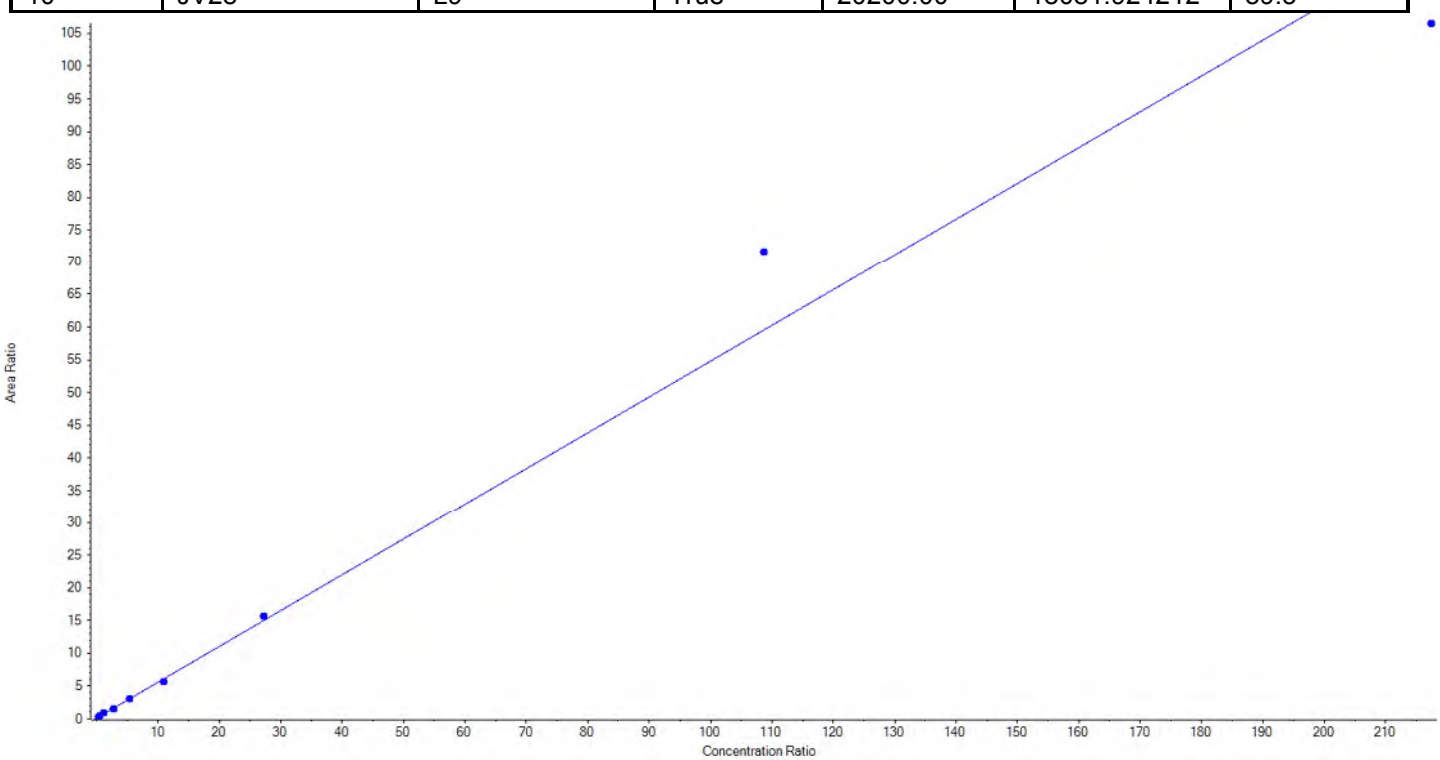
Analyte Name	PFBS_2	**Data File**	06022018.wiff
MRM Transition	298.9 / 99.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C3-PFBS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.54651 x + 0.12639 (r = 0.99038) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.25	19.874729	78.7
3	JV21	L2	True	50.50	48.059307	95.2
4	JV22	L3	True	101.00	122.755501	121.5
5	JV23	L4	True	252.50	239.174435	94.7
6	JV24	L5	True	505.00	512.945542	101.6
7	JV25	L6	True	1010.00	951.420791	94.2
8	JV26	L7	True	2525.00	2629.514433	104.1
9	JV27	L8	True	10100.00	12163.581051	120.4
10	JV28	L9	True	20200.00	18081.924212	89.5



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Calibration Summary Report

Created with Analyst Reporter
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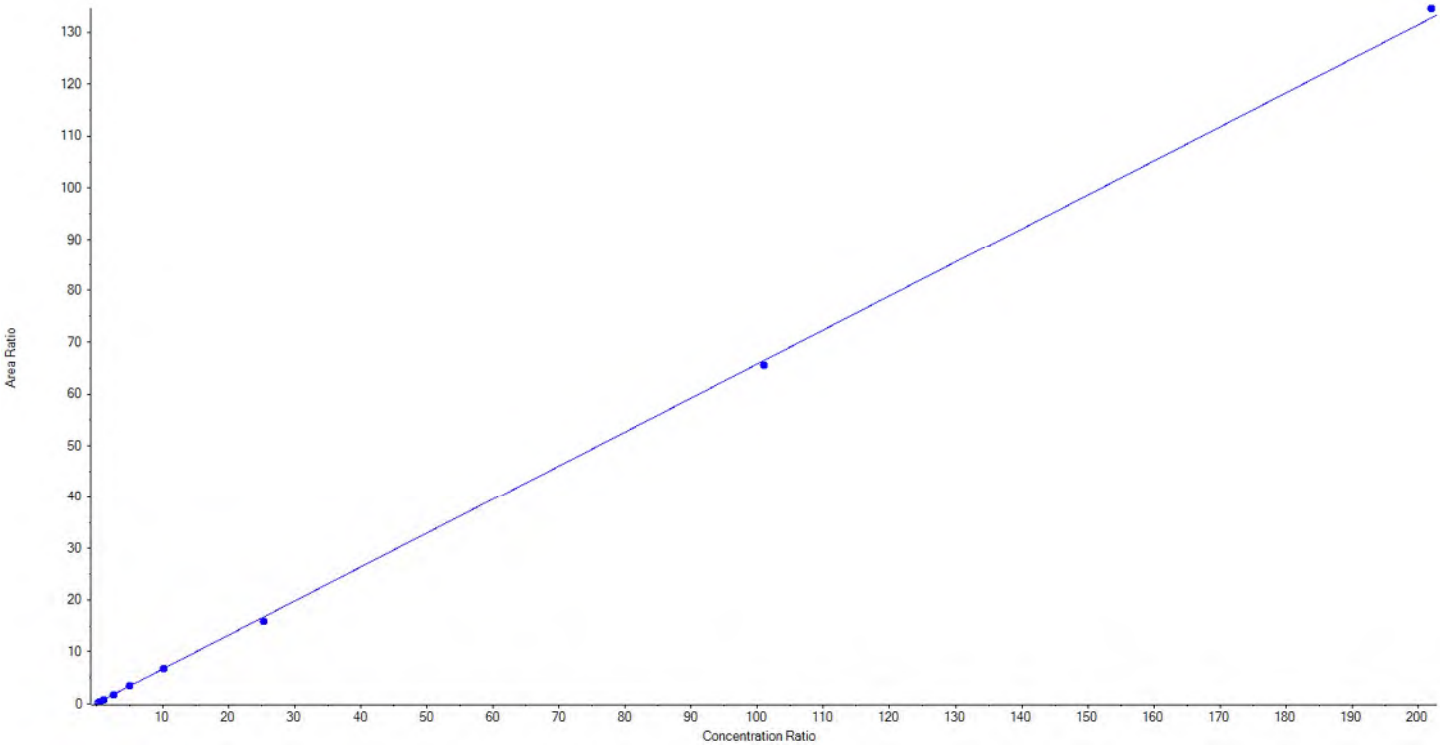
Analyte Name	PFHxA_1	**Data File**	06022018.wiff
MRM Transition	313.0 / 269.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C5-PFHxA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.65655 x + 0.14460 (r = 0.99980) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.25	5.784861	22.9
3	JV21	L2	True	50.50	49.388286	97.8
4	JV22	L3	True	101.00	108.588129	107.5
5	JV23	L4	True	252.50	253.659514	100.5
6	JV24	L5	True	505.00	507.805267	100.6
7	JV25	L6	True	1010.00	999.444962	99.0
8	JV26	L7	True	2525.00	2393.271111	94.8
9	JV27	L8	True	10100.00	9955.176959	98.6
10	JV28	L9	True	20200.00	20476.665773	101.4



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Calibration Summary Report

Created with Analyst Reporter
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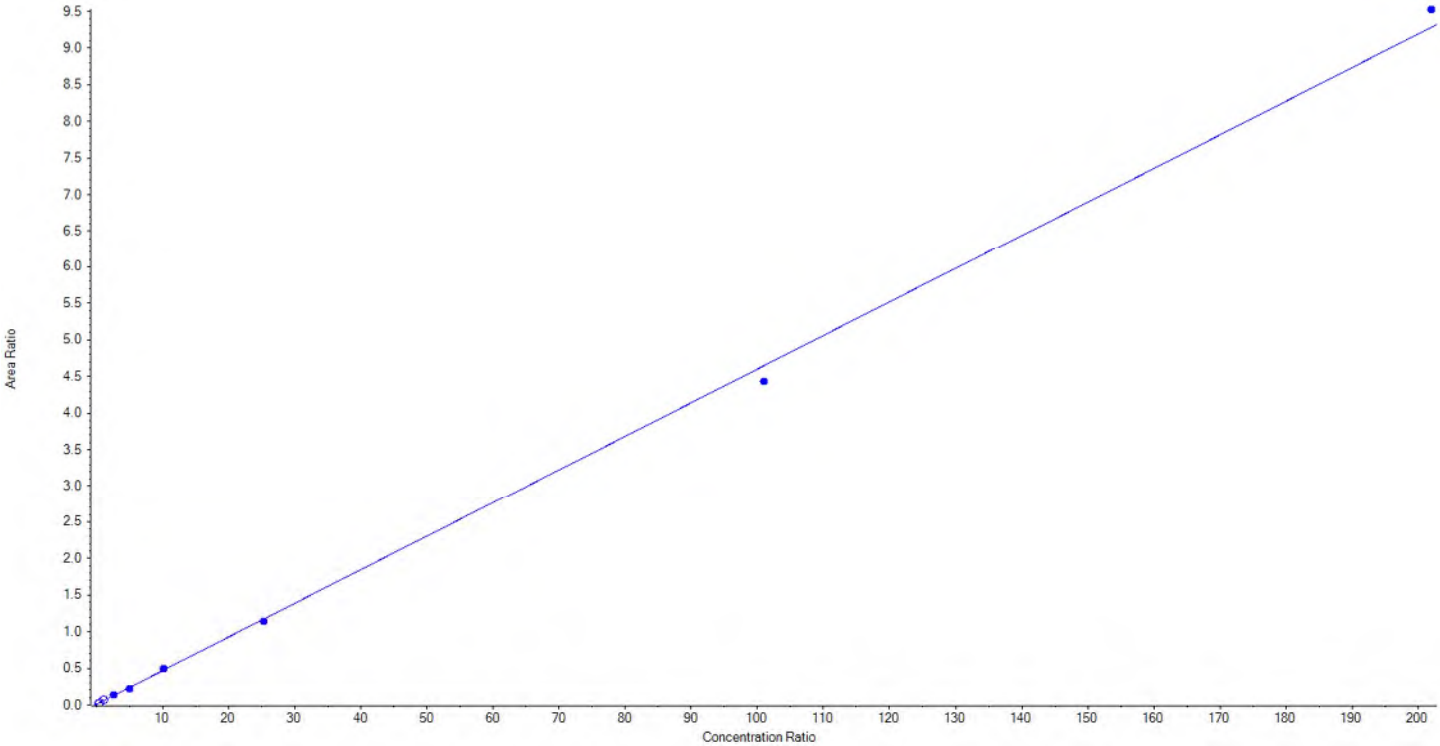
Analyte Name	PFHxA_2	**Data File**	06022018.wiff
MRM Transition	313.0 / 119.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C5-PFHxA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.04592 x + 0.00875 (r = 0.99918) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.25	0.691509	2.7
3	JV21	L2	False	50.50	31.775764	62.9
4	JV22	L3	False	101.00	138.998189	137.6
5	JV23	L4	True	252.50	280.997252	111.3
6	JV24	L5	True	505.00	449.678784	89.1
7	JV25	L6	True	1010.00	1054.747856	104.4
8	JV26	L7	True	2525.00	2458.027338	97.4
9	JV27	L8	True	10100.00	9624.843910	95.3
10	JV28	L9	True	20200.00	20724.204861	102.6



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Calibration Summary Report

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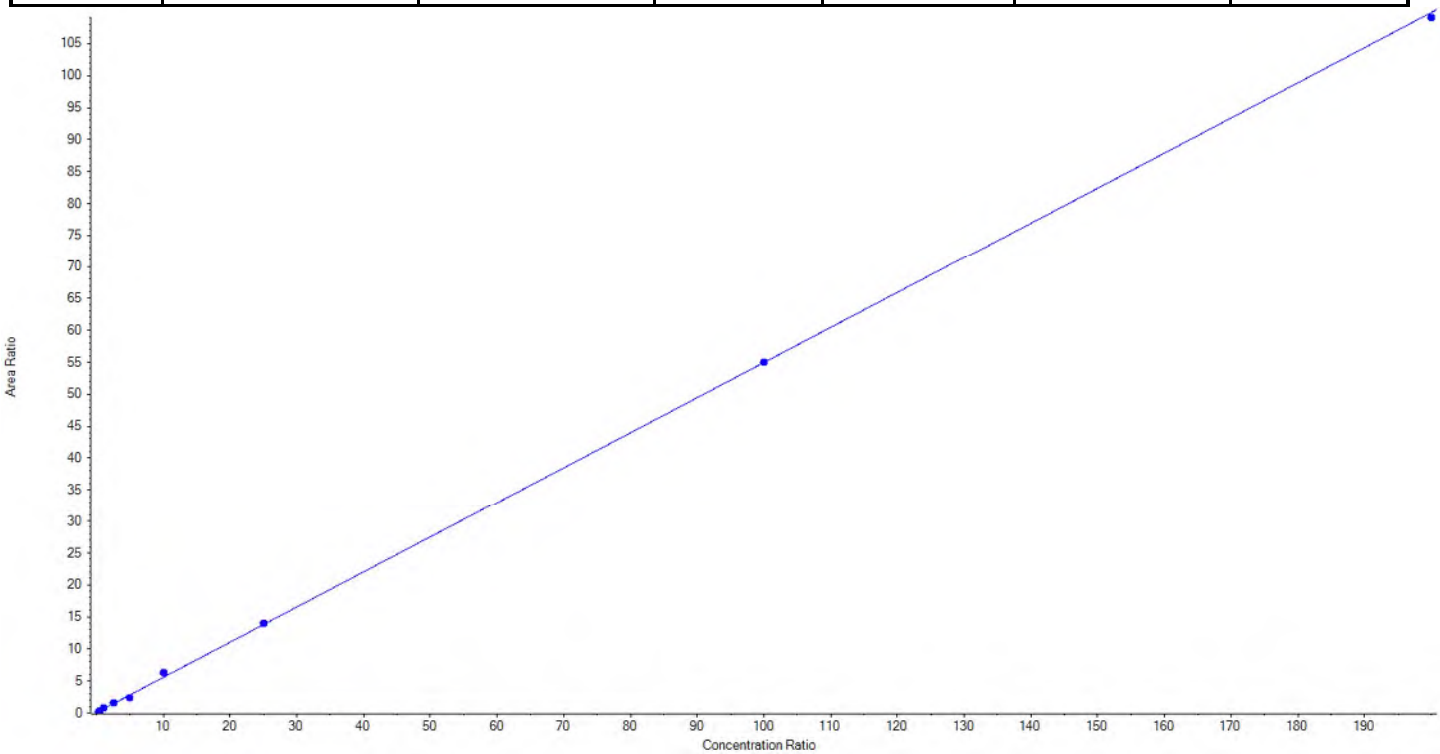
Analyte Name	PFHpA_1	**Data File**	06022018.wiff
MRM Transition	363.0 / 319.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C4-PFHpA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.54892 x + 0.06567 (r = 0.99940) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	24.371833	97.5
3	JV21	L2	True	50.00	37.207682	74.4
4	JV22	L3	True	100.00	121.332642	121.3
5	JV23	L4	True	250.00	267.155619	106.9
6	JV24	L5	True	500.00	426.324698	85.3
7	JV25	L6	True	1000.00	1135.564097	113.6
8	JV26	L7	True	2500.00	2541.236535	101.7
9	JV27	L8	True	10000.00	10014.514039	100.2
10	JV28	L9	True	20000.00	19857.292856	99.3



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Calibration Summary Report

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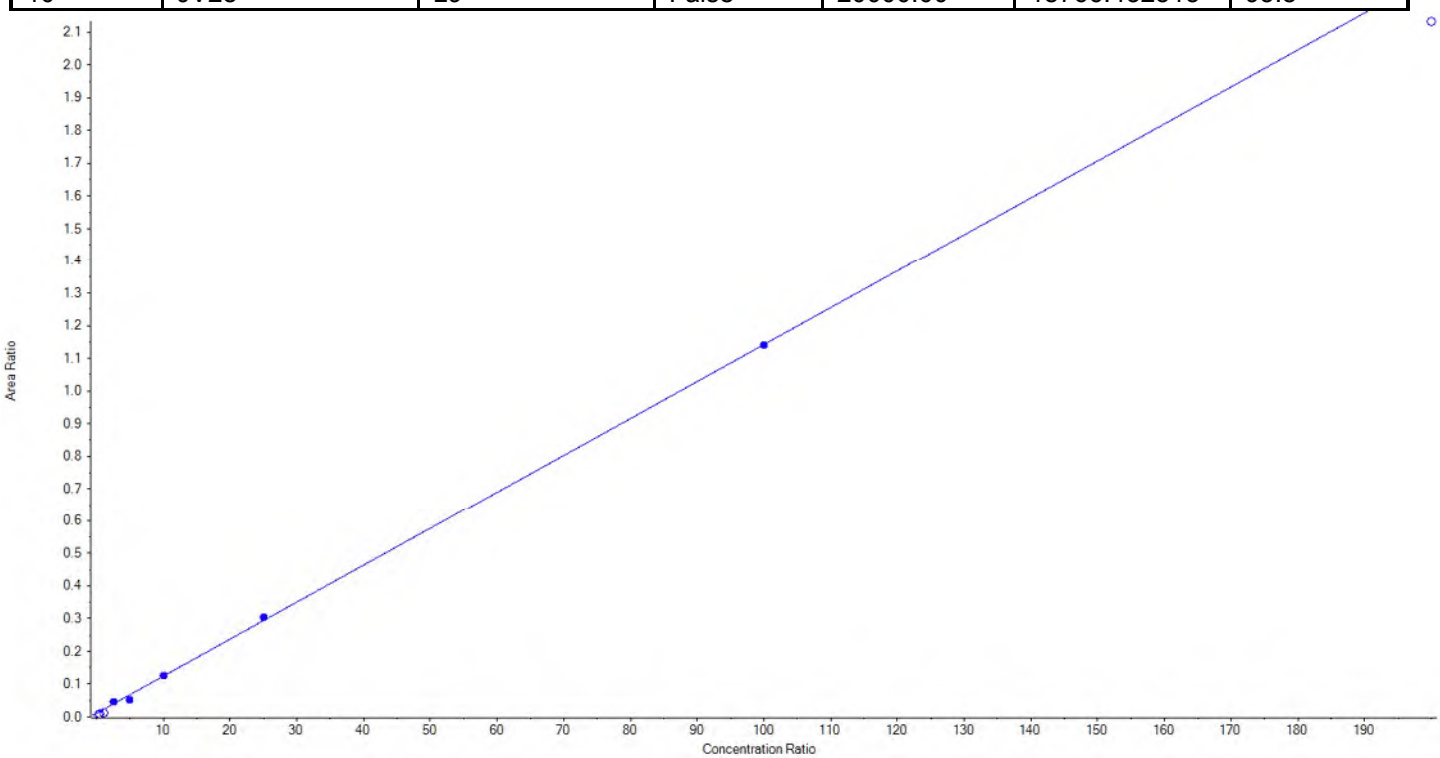
Analyte Name	PFHpA_2	**Data File**	06022018.wiff
MRM Transition	363.0 / 169.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C4-PFHpA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.01130 x + 0.01145 (r = 0.99711) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	< 0	N/A
3	JV21	L2	False	50.00	< 0	N/A
4	JV22	L3	False	100.00	16.705333	16.7
5	JV23	L4	True	250.00	311.497817	124.6
6	JV24	L5	True	500.00	351.421206	70.3
7	JV25	L6	True	1000.00	1014.640739	101.5
8	JV26	L7	True	2500.00	2597.605195	103.9
9	JV27	L8	True	10000.00	9974.835043	99.8
10	JV28	L9	False	20000.00	18766.432513	93.8



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Calibration Summary Report

Created with Analyst Reporter
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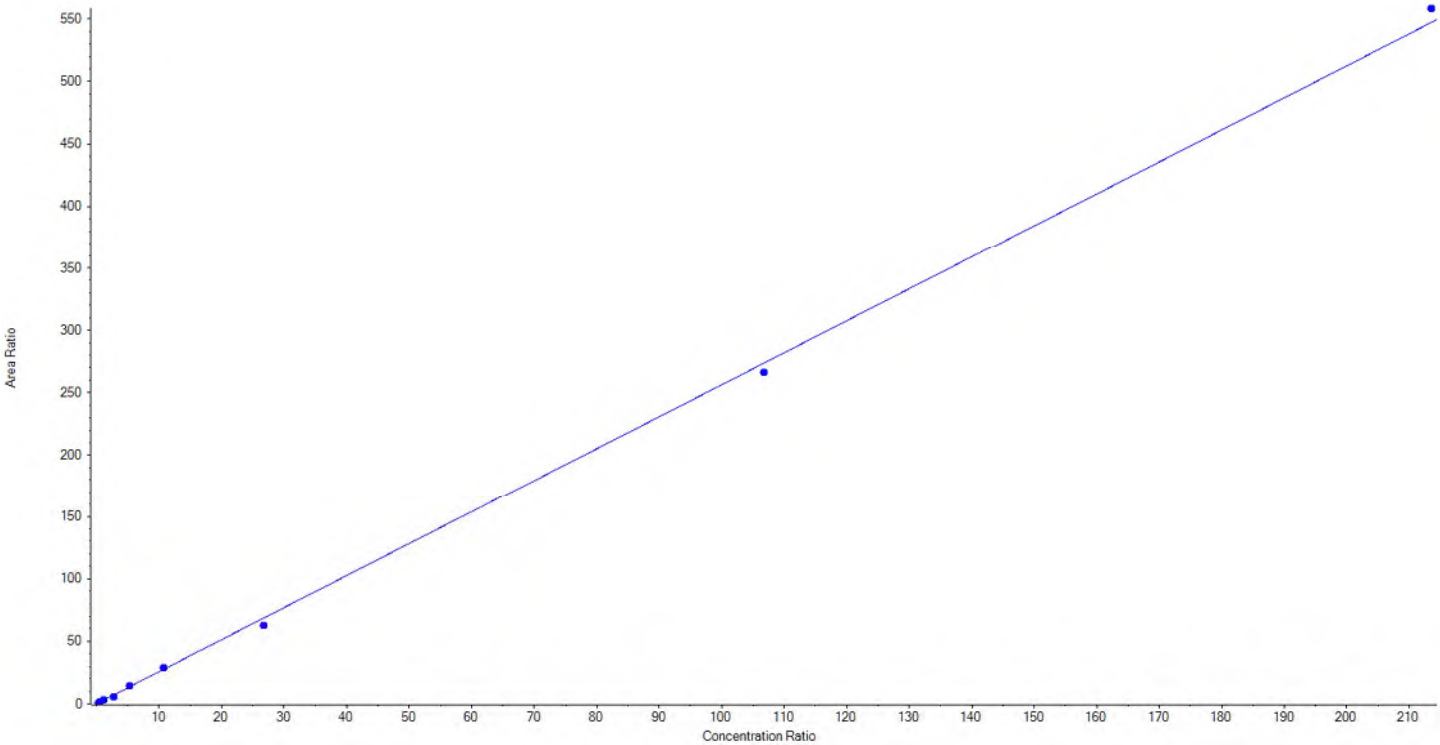
Analyte Name	PFHxS_1	**Data File**	06022018.wiff
MRM Transition	399.0 / 80.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C3-PFHxS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 2.56188 x + 0.14000 (r = 0.99936) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.25	27.002198	106.9
3	JV21	L2	True	50.50	48.651543	96.3
4	JV22	L3	True	101.00	111.928455	110.8
5	JV23	L4	True	252.50	215.699165	85.4
6	JV24	L5	True	505.00	518.961762	102.8
7	JV25	L6	True	1010.00	1074.412721	106.4
8	JV26	L7	True	2525.00	2319.270796	91.9
9	JV27	L8	True	10100.00	9841.785586	97.4
10	JV28	L9	True	20200.00	20611.537773	102.0



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Calibration Summary Report

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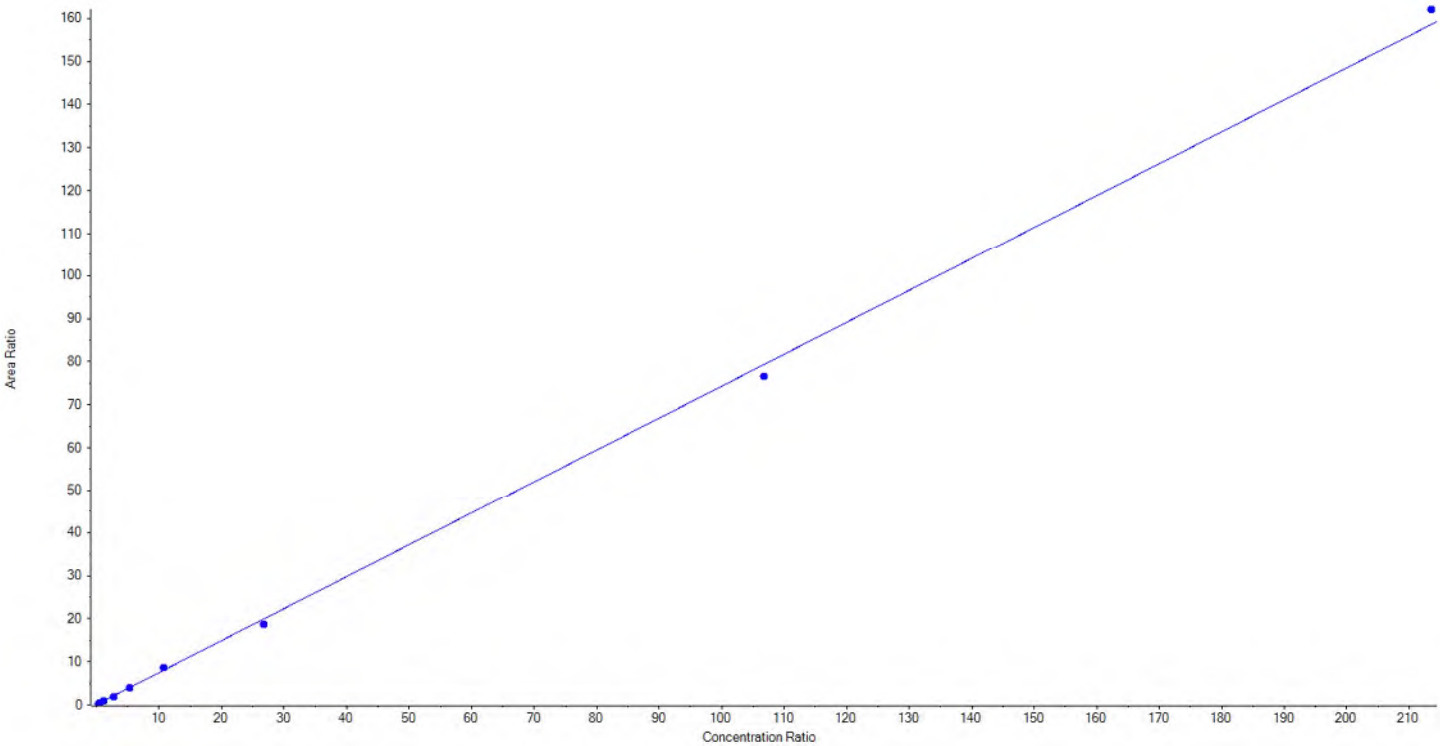
Analyte Name	PFHxS_2	**Data File**	06022018.wiff
MRM Transition	399.0 / 99.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C3-PFHxS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.74227 x + 0.08346 (r = 0.99939) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.25	23.631500	93.6
3	JV21	L2	True	50.50	55.586062	110.1
4	JV22	L3	True	101.00	109.728491	108.6
5	JV23	L4	True	252.50	223.267676	88.4
6	JV24	L5	True	505.00	498.642930	98.7
7	JV25	L6	True	1010.00	1088.100159	107.7
8	JV26	L7	True	2525.00	2374.504861	94.0
9	JV27	L8	True	10100.00	9753.715741	96.6
10	JV28	L9	True	20200.00	20642.072581	102.2



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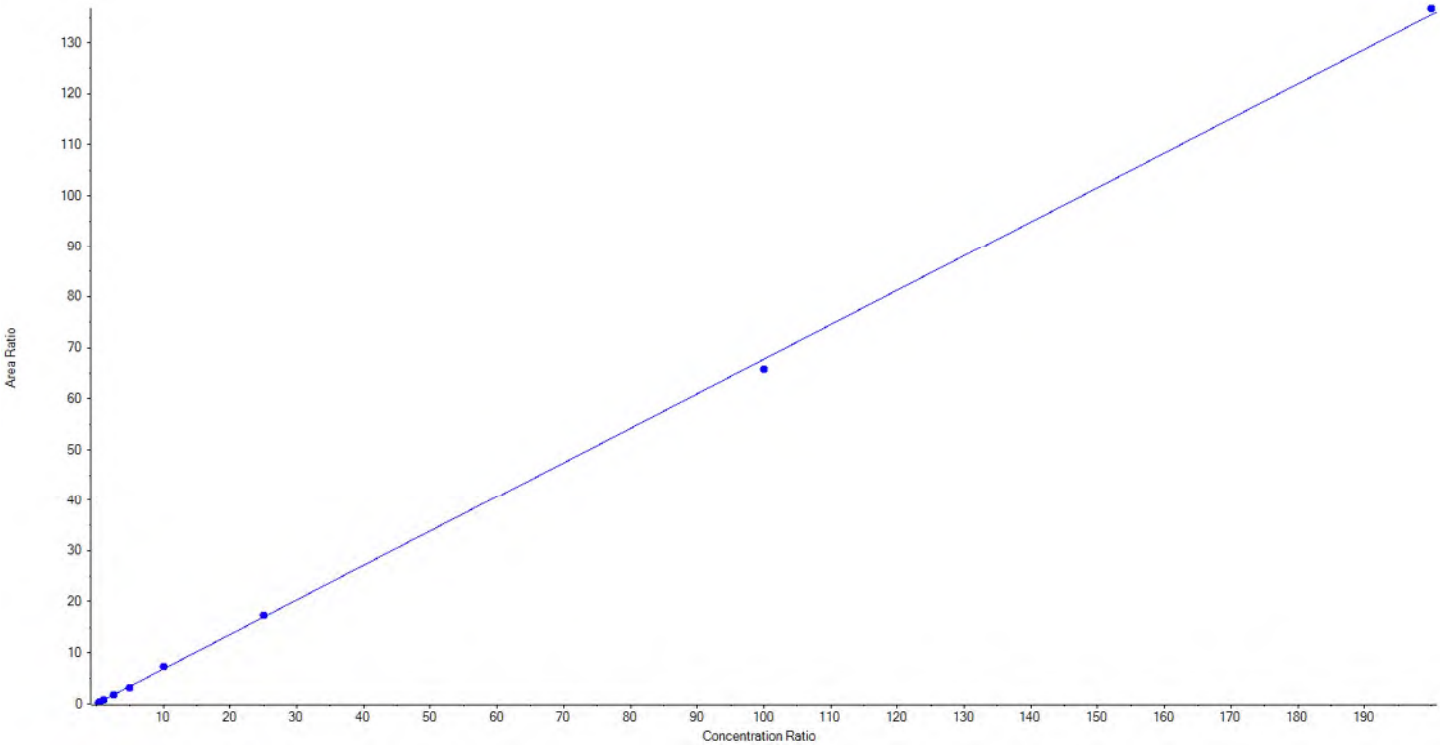
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFOA_1	**Data File**	06022018.wiff
MRM Transition	413.0 / 369.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C8-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.67723 x + 0.04066 (r = 0.99971) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	21.912723	87.7
3	JV21	L2	True	50.00	48.175784	96.4
4	JV22	L3	True	100.00	111.825360	111.8
5	JV23	L4	True	250.00	259.170639	103.7
6	JV24	L5	True	500.00	468.640086	93.7
7	JV25	L6	True	1000.00	1065.516673	106.6
8	JV26	L7	True	2500.00	2553.689081	102.2
9	JV27	L8	True	10000.00	9719.265246	97.2
10	JV28	L9	True	20000.00	20176.804407	100.9



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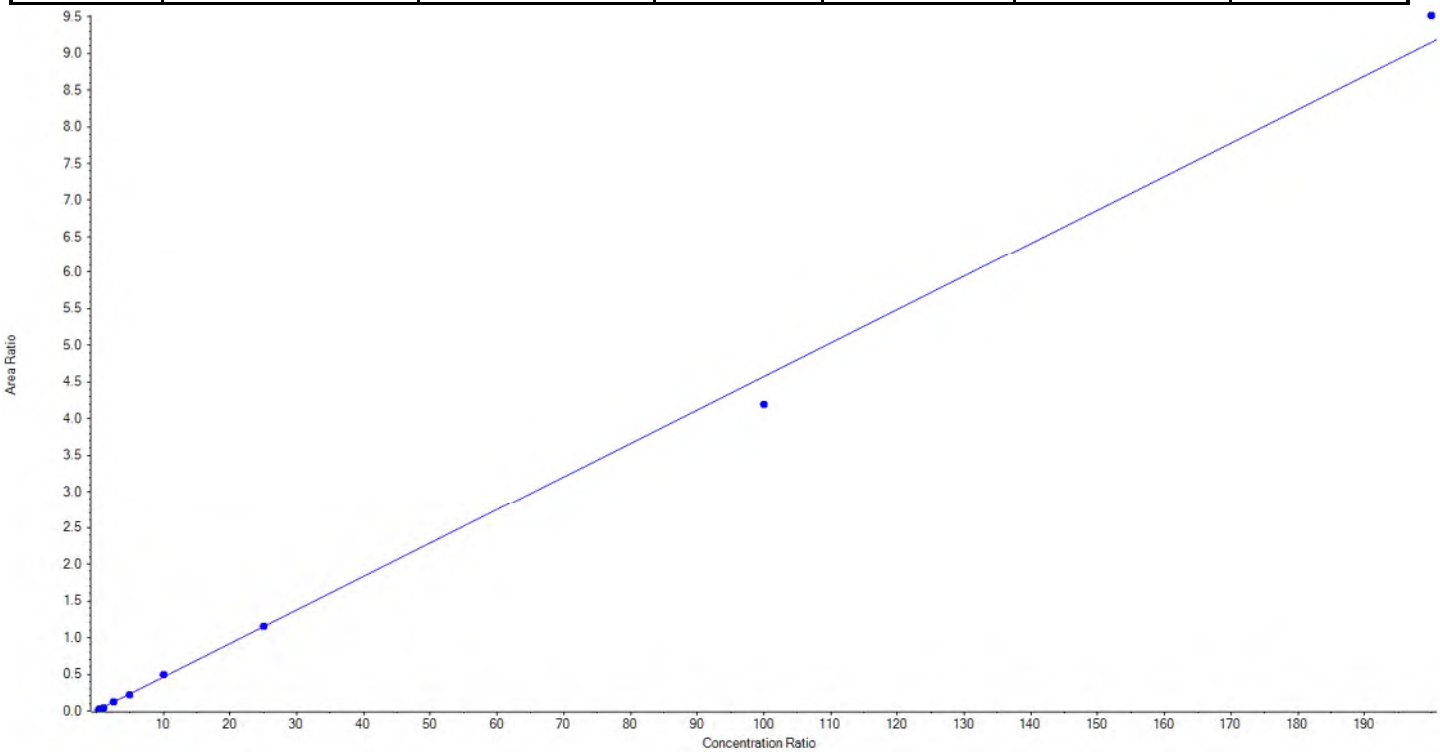
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFOA_2	**Data File**	06022018.wiff
MRM Transition	413.0 / 169.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C8-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.04571 x + 0.00549 (r = 0.99829) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	30.084226	120.3
3	JV21	L2	True	50.00	46.088459	92.2
4	JV22	L3	True	100.00	87.676106	87.7
5	JV23	L4	True	250.00	264.343967	105.7
6	JV24	L5	True	500.00	459.356628	91.9
7	JV25	L6	True	1000.00	1061.153878	106.1
8	JV26	L7	True	2500.00	2511.901838	100.5
9	JV27	L8	True	10000.00	9157.545131	91.6
10	JV28	L9	True	20000.00	20806.849768	104.0



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Calibration Summary Report

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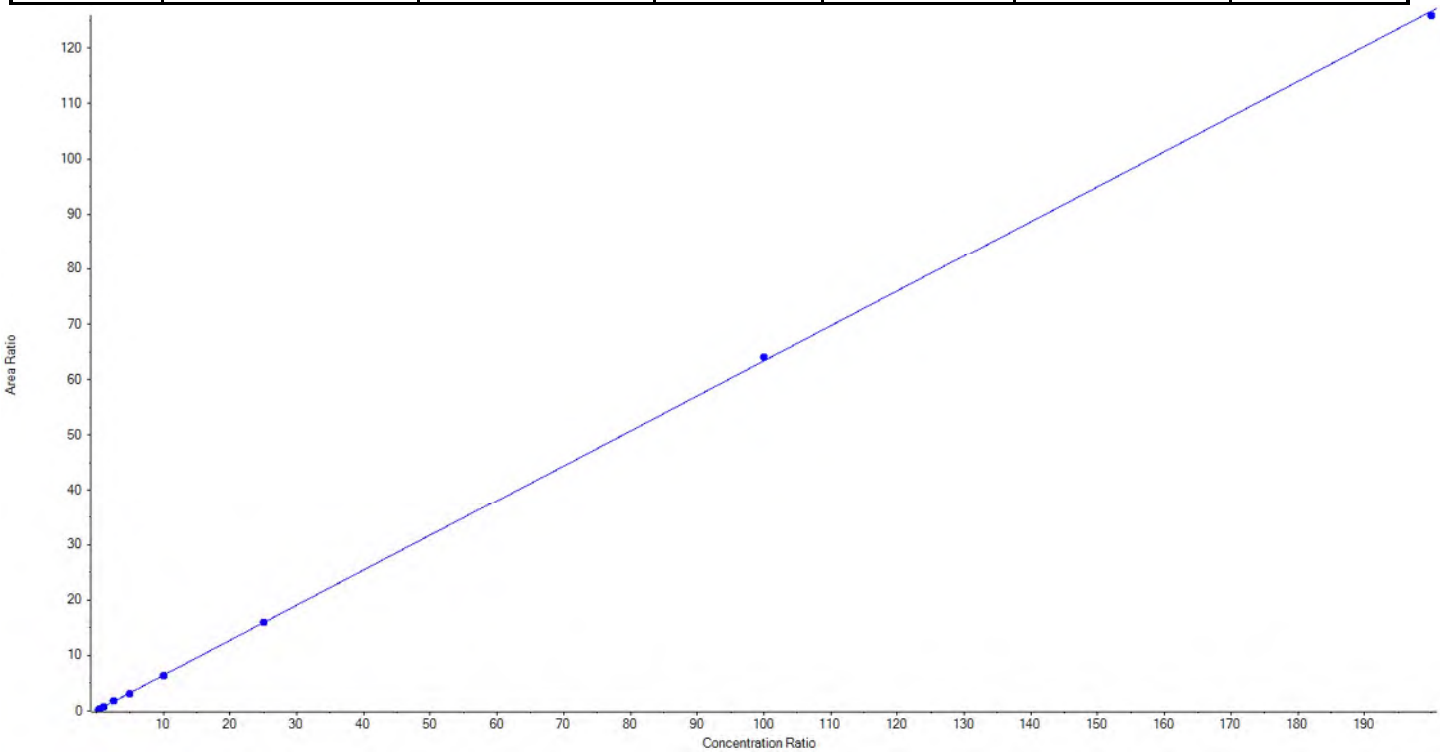
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFNA_1	**Data File**	06022018.wiff
MRM Transition	463.0 / 419.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C9-PFNA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.63272 x + 0.07862 (r = 0.99989) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	24.925904	99.7
3	JV21	L2	True	50.00	46.863845	93.7
4	JV22	L3	True	100.00	99.764178	99.8
5	JV23	L4	True	250.00	277.895674	111.2
6	JV24	L5	True	500.00	470.997965	94.2
7	JV25	L6	True	1000.00	1004.163113	100.4
8	JV26	L7	True	2500.00	2513.690409	100.6
9	JV27	L8	True	10000.00	10109.846305	101.1
10	JV28	L9	True	20000.00	19876.852607	99.4



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Calibration Summary Report

Created with Analyst Reporter
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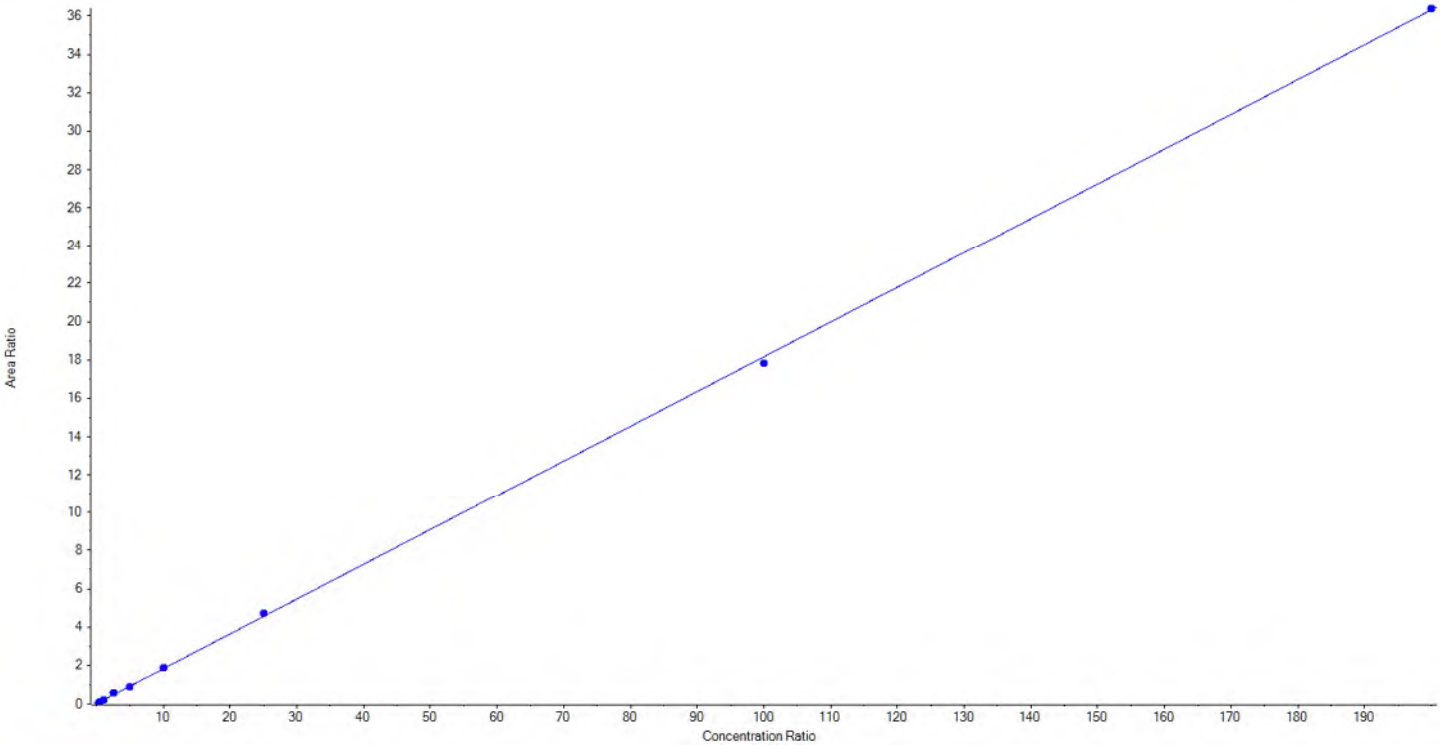
Analyte Name	PFNA_2	**Data File**	06022018.wiff
MRM Transition	463.0 / 219.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C9-PFNA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.18151 x + 0.01583 (r = 0.99965) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	18.924490	75.7
3	JV21	L2	True	50.00	43.975981	88.0
4	JV22	L3	True	100.00	114.640986	114.6
5	JV23	L4	True	250.00	300.924108	120.4
6	JV24	L5	True	500.00	481.165274	96.2
7	JV25	L6	True	1000.00	1035.103332	103.5
8	JV26	L7	True	2500.00	2582.821176	103.3
9	JV27	L8	True	10000.00	9809.198568	98.1
10	JV28	L9	True	20000.00	20038.246085	100.2



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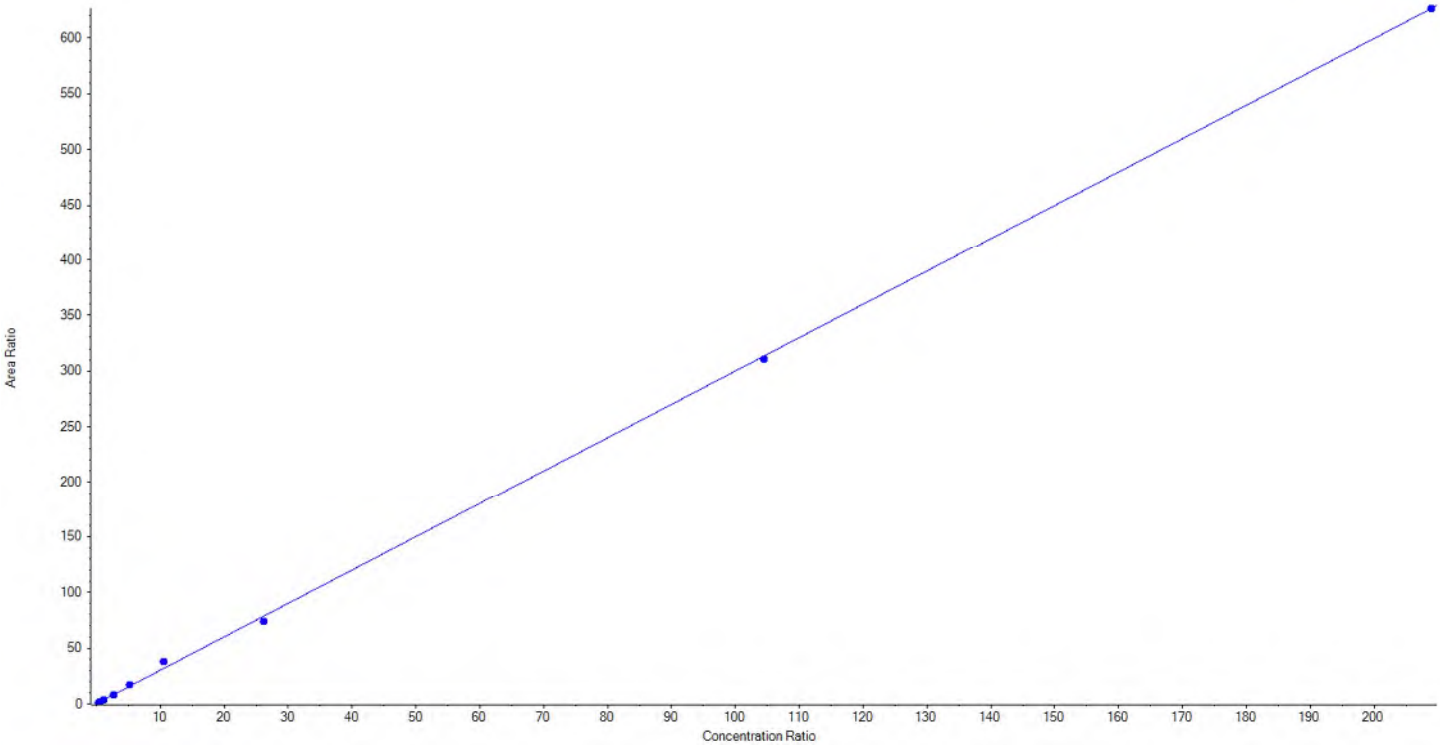
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFOS_1	**Data File**	06022018.wiff
MRM Transition	499.0 / 80.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C8-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 2.99639 x + 0.29547 (r = 0.99916) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	20.201554	80.8
3	JV21	L2	True	50.00	46.934382	93.9
4	JV22	L3	True	100.00	107.983313	108.0
5	JV23	L4	True	250.00	241.902053	96.8
6	JV24	L5	True	500.00	530.777101	106.2
7	JV25	L6	True	1000.00	1209.203973	120.9
8	JV26	L7	True	2500.00	2360.822596	94.4
9	JV27	L8	True	10000.00	9907.258193	99.1
10	JV28	L9	True	20000.00	19999.916836	100.0



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Calibration Summary Report

Created with Analyst Reporter
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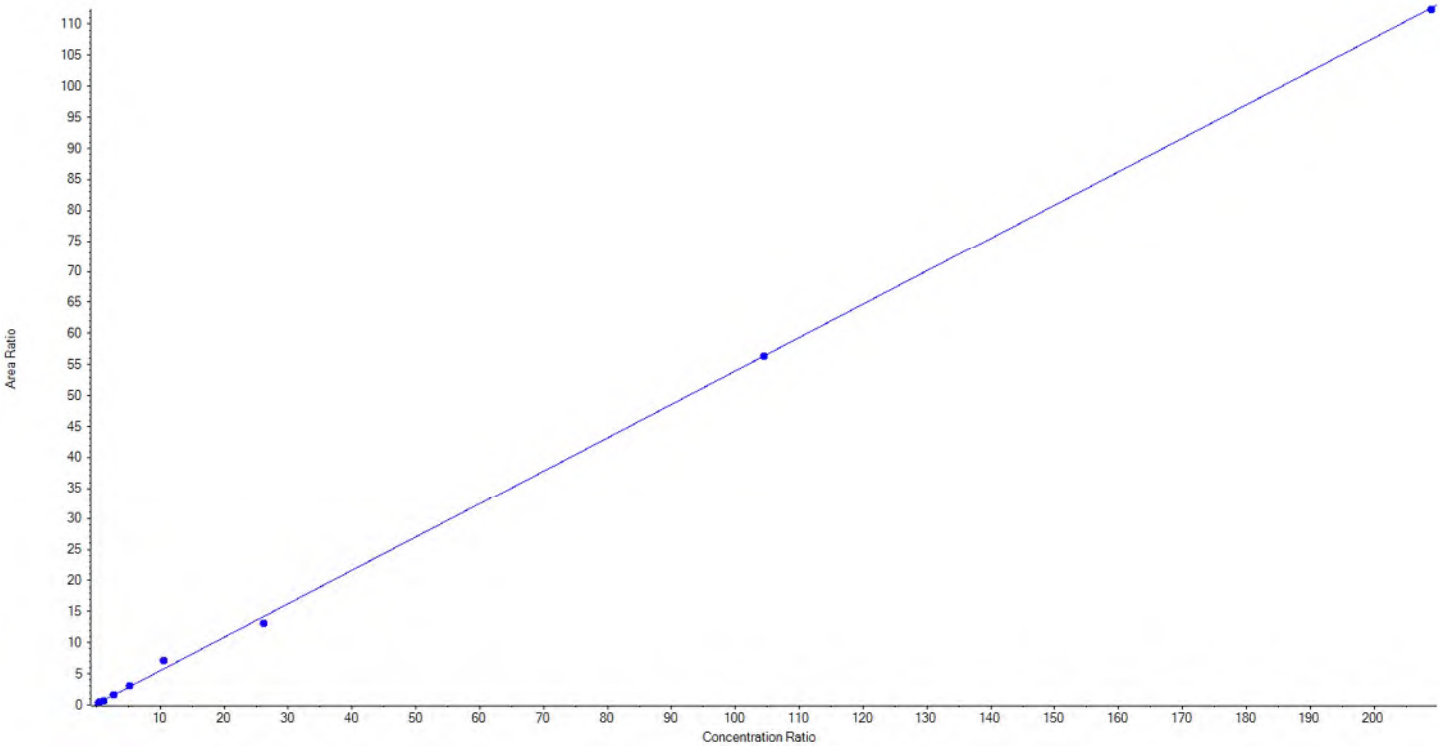
Analyte Name	PFOS_2	**Data File**	06022018.wiff
MRM Transition	499.0 / 99.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C8-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.53809 x + 0.13608 (r = 0.99871) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	20.778798	83.1
3	JV21	L2	True	50.00	55.494486	111.0
4	JV22	L3	True	100.00	83.998084	84.0
5	JV23	L4	True	250.00	249.272880	99.7
6	JV24	L5	True	500.00	526.973503	105.4
7	JV25	L6	True	1000.00	1253.618222	125.4
8	JV26	L7	True	2500.00	2295.036995	91.8
9	JV27	L8	True	10000.00	9986.292564	99.9
10	JV28	L9	True	20000.00	19953.534467	99.8



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Calibration Summary Report

Created with Analyst Reporter
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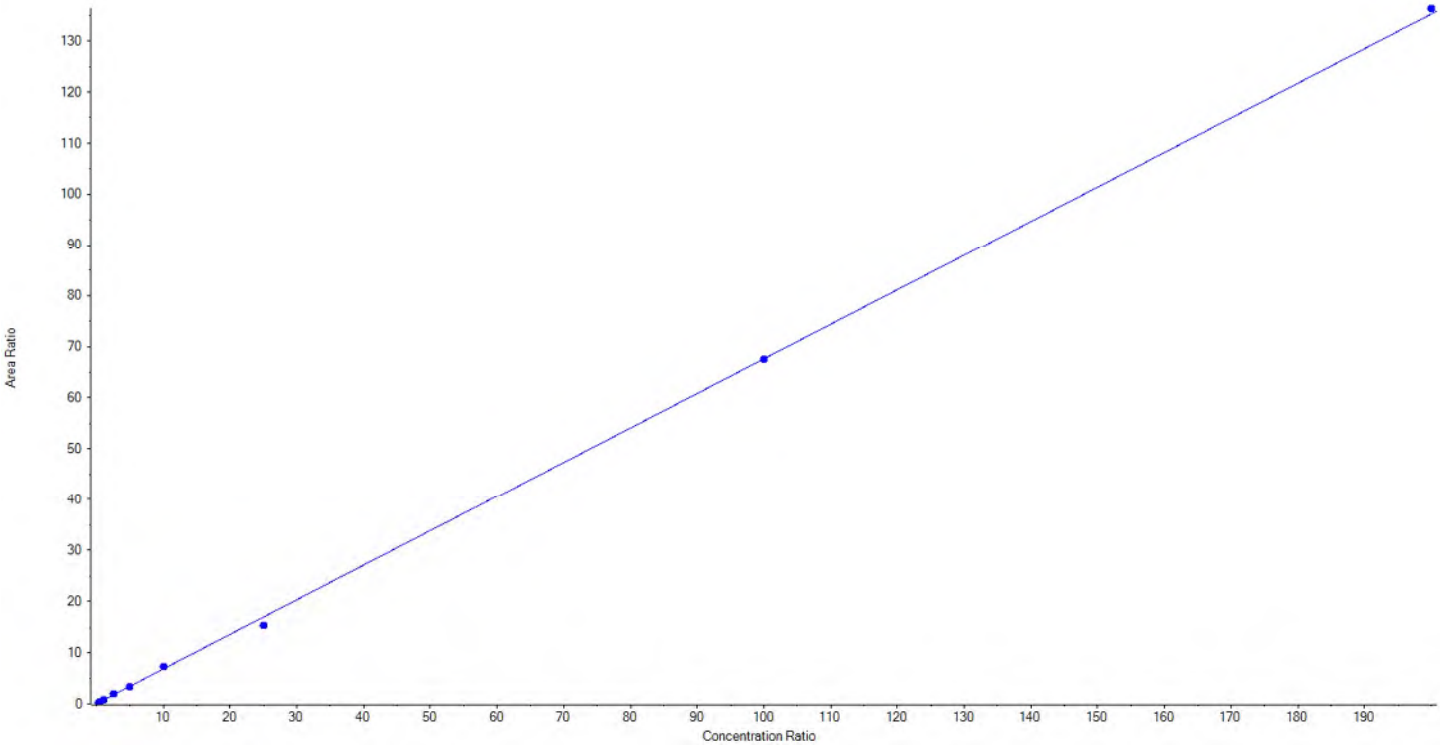
Analyte Name	PFDA_1	**Data File**	06022018.wiff
MRM Transition	513.0 / 469.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C6-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.67587 x + 0.05795 (r = 0.99950) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	22.779490	91.1
3	JV21	L2	True	50.00	47.073995	94.2
4	JV22	L3	True	100.00	105.369767	105.4
5	JV23	L4	True	250.00	282.021923	112.8
6	JV24	L5	True	500.00	487.102517	97.4
7	JV25	L6	True	1000.00	1077.935405	107.8
8	JV26	L7	True	2500.00	2270.076428	90.8
9	JV27	L8	True	10000.00	9975.042106	99.8
10	JV28	L9	True	20000.00	20157.598369	100.8



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Calibration Summary Report

Created with Analyst Reporter
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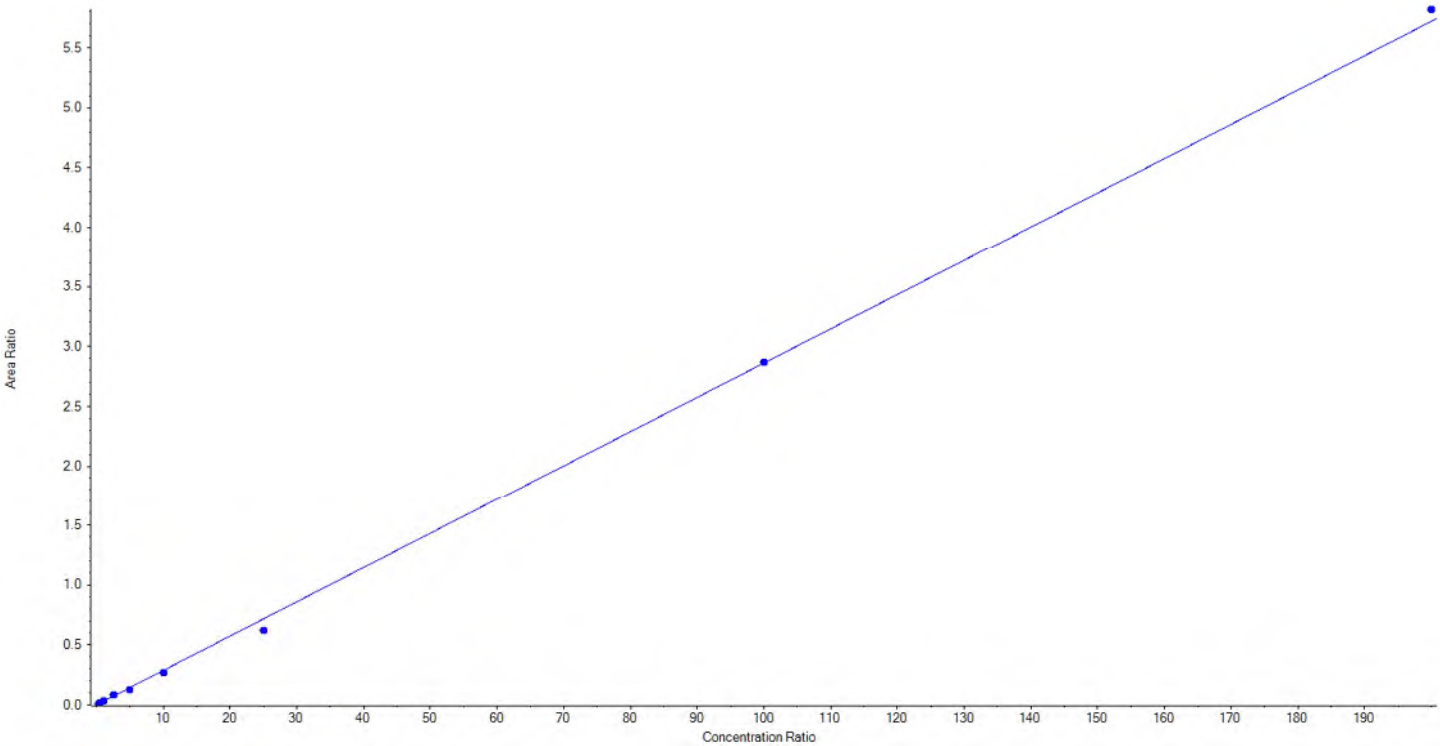
Analyte Name	PFDA_2	**Data File**	06022018.wiff
MRM Transition	513.0 / 219.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C6-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.02860 x + 0.00137 (r = 0.99901) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	19.372613	77.5
3	JV21	L2	True	50.00	56.743012	113.5
4	JV22	L3	True	100.00	123.340221	123.3
5	JV23	L4	True	250.00	280.080235	112.0
6	JV24	L5	True	500.00	448.720530	89.7
7	JV25	L6	True	1000.00	947.504737	94.8
8	JV26	L7	True	2500.00	2179.672811	87.2
9	JV27	L8	True	10000.00	10024.377592	100.2
10	JV28	L9	True	20000.00	20345.188250	101.7



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Calibration Summary Report

Created with Analyst Reporter
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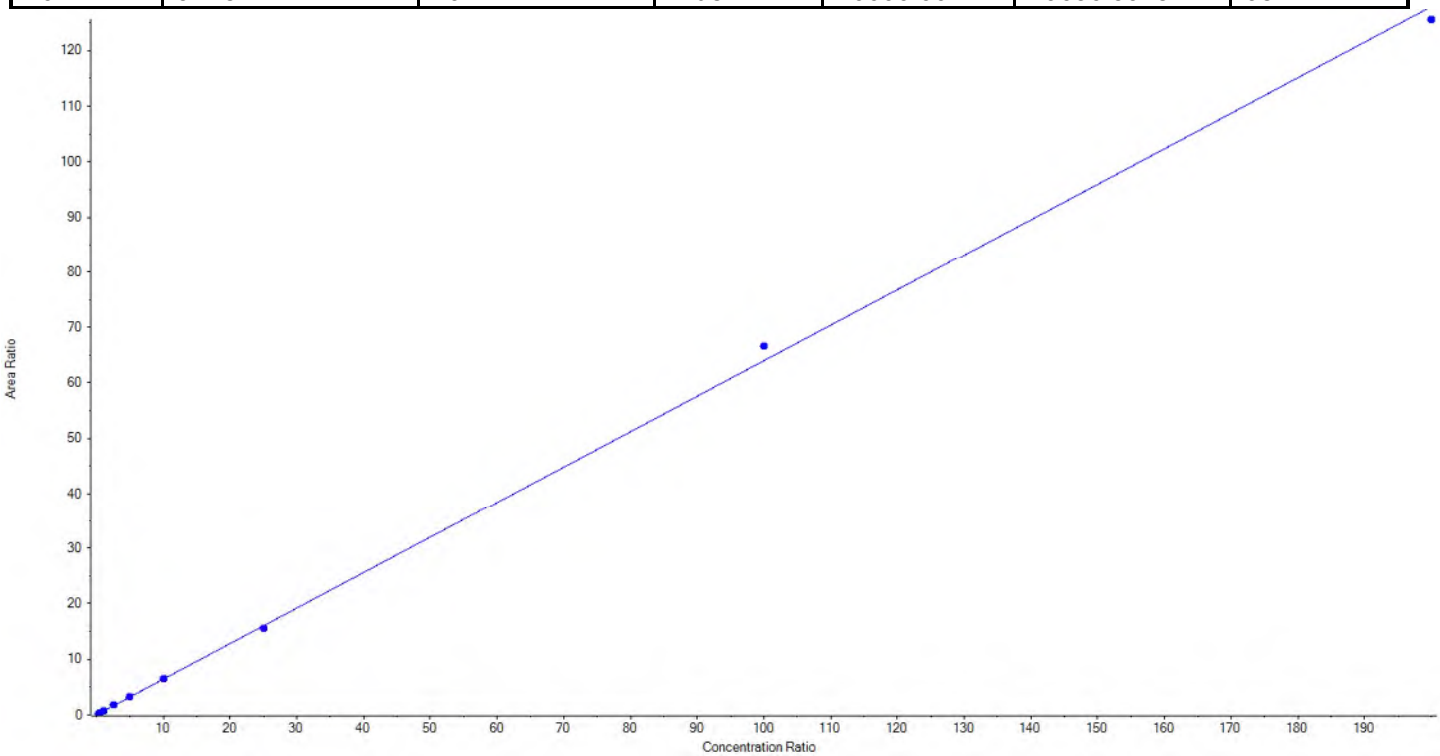
Analyte Name	PFUnA_1	**Data File**	06022018.wiff
MRM Transition	563.0 / 519.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C7-PFUnA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.63935 x + 0.03409 (r = 0.99952) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	20.082202	80.3
3	JV21	L2	True	50.00	49.803603	99.6
4	JV22	L3	True	100.00	111.197006	111.2
5	JV23	L4	True	250.00	278.219526	111.3
6	JV24	L5	True	500.00	491.319767	98.3
7	JV25	L6	True	1000.00	1001.106158	100.1
8	JV26	L7	True	2500.00	2421.795730	96.9
9	JV27	L8	True	10000.00	10415.078133	104.2
10	JV28	L9	True	20000.00	19636.397874	98.2



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Calibration Summary Report

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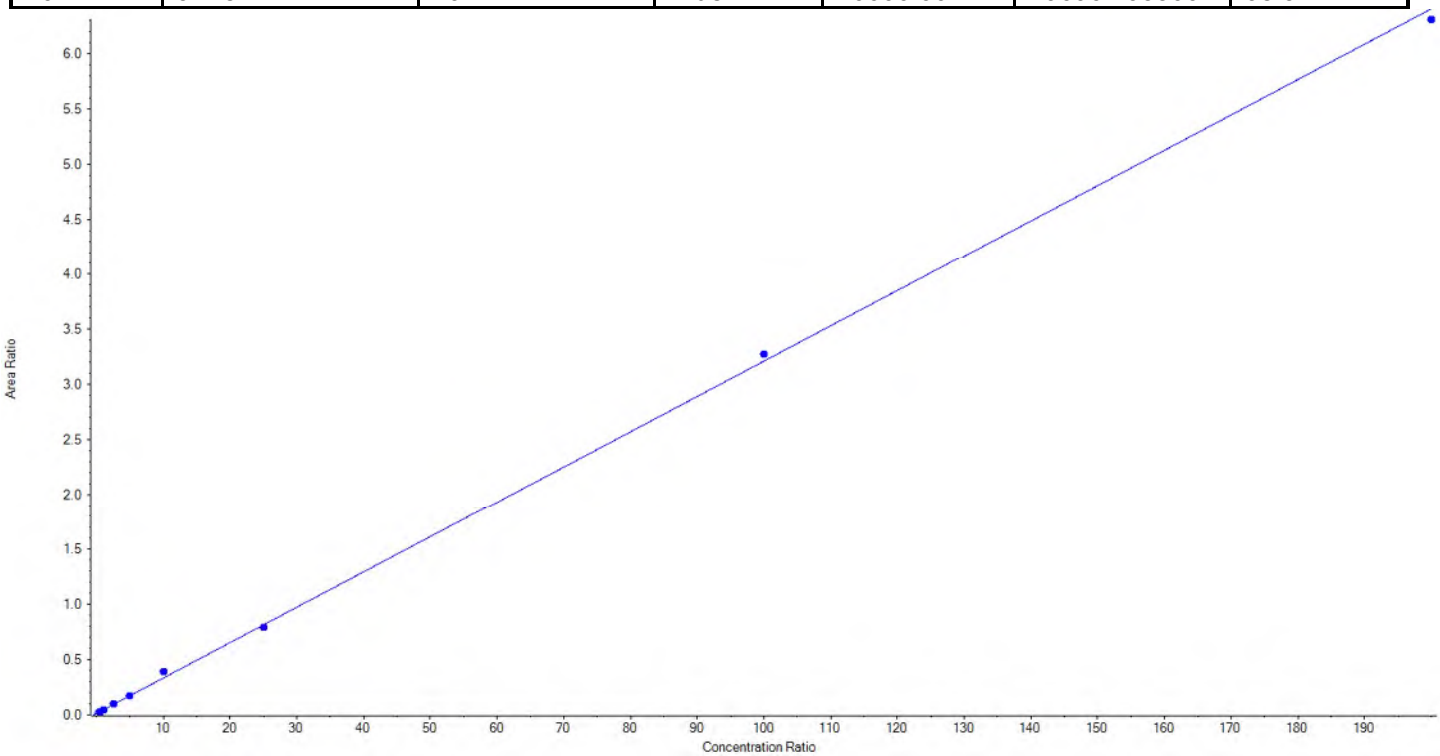
Analyte Name	PFUnA_2	**Data File**	06022018.wiff
MRM Transition	563.0 / 269.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C7-PFUnA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.03196 x + 0.01373 (r = 0.99930) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	< 0	N/A
3	JV21	L2	True	50.00	43.065320	86.1
4	JV22	L3	True	100.00	89.598884	89.6
5	JV23	L4	True	250.00	280.024039	112.0
6	JV24	L5	True	500.00	486.642009	97.3
7	JV25	L6	True	1000.00	1170.936779	117.1
8	JV26	L7	True	2500.00	2434.180604	97.4
9	JV27	L8	True	10000.00	10198.758865	102.0
10	JV28	L9	True	20000.00	19696.793500	98.5



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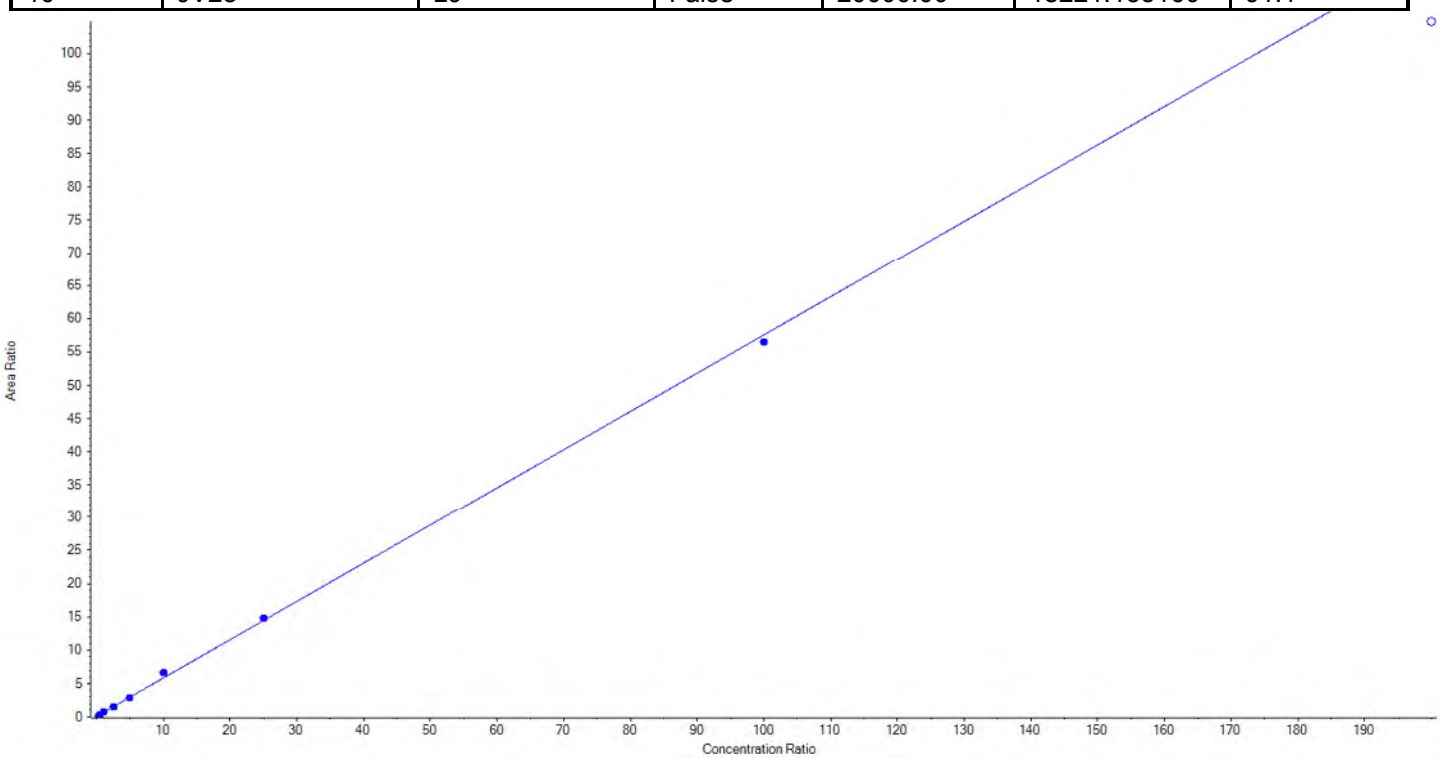
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFDoA_1	**Data File**	06022018.wiff
MRM Transition	613.0 / 569.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C2-PFDoA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.57472 x + 0.09145 (r = 0.99875) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	20.831332	83.3
3	JV21	L2	True	50.00	42.922262	85.8
4	JV22	L3	True	100.00	120.081739	120.1
5	JV23	L4	True	250.00	247.970664	99.2
6	JV24	L5	True	500.00	480.833329	96.2
7	JV25	L6	True	1000.00	1148.926056	114.9
8	JV26	L7	True	2500.00	2562.217552	102.5
9	JV27	L8	True	10000.00	9801.217067	98.0
10	JV28	L9	False	20000.00	18221.155160	91.1



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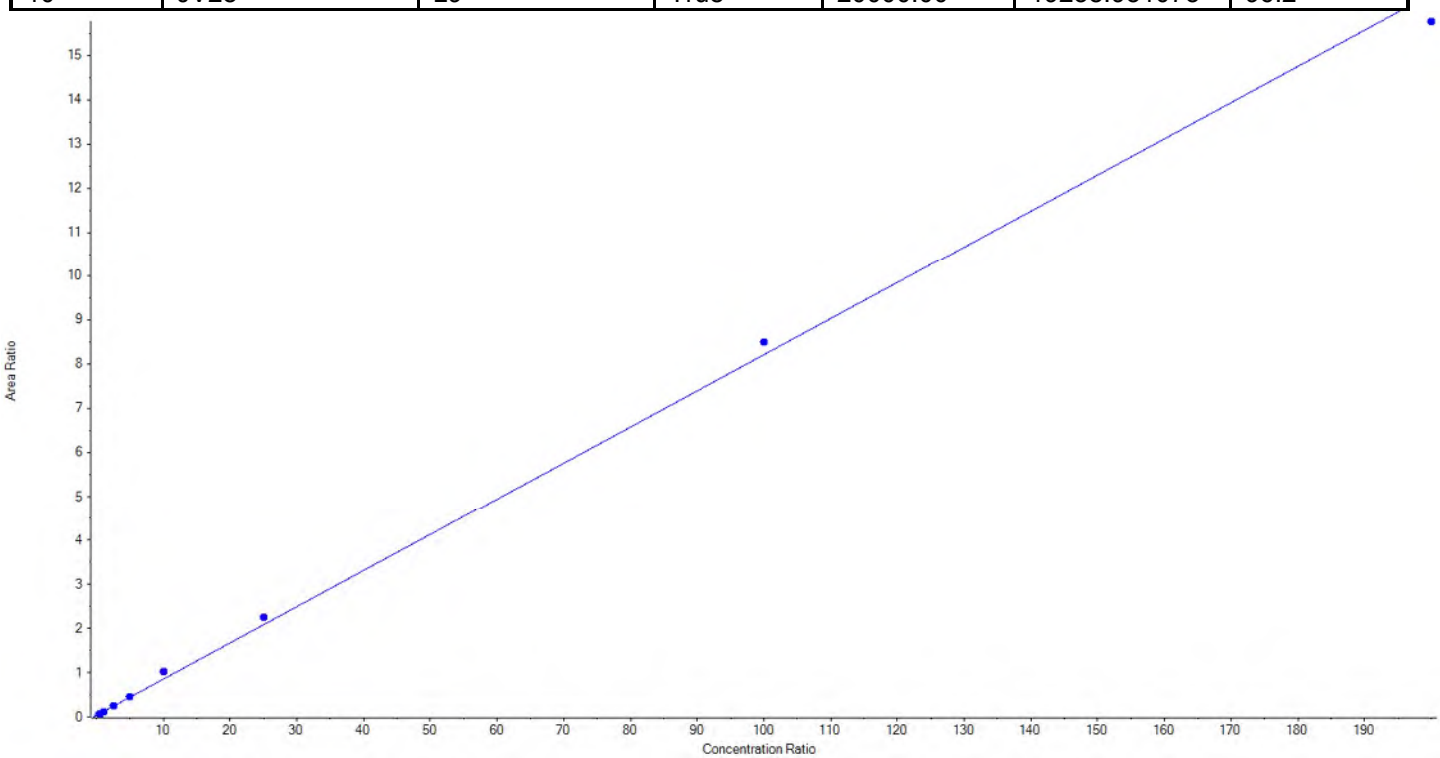
Analyte Name	PFDoA_2	**Data File**	06022018.wiff
MRM Transition	613.0 / 319.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C2-PFDoA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.08176 x + 0.03563 (r = 0.99832) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	< 0	N/A
3	JV21	L2	True	50.00	39.687027	79.4
4	JV22	L3	True	100.00	83.880192	83.9
5	JV23	L4	True	250.00	259.821040	103.9
6	JV24	L5	True	500.00	516.488741	103.3
7	JV25	L6	True	1000.00	1217.976067	121.8
8	JV26	L7	True	2500.00	2703.172328	108.1
9	JV27	L8	True	10000.00	10340.043532	103.4
10	JV28	L9	True	20000.00	19238.931073	96.2



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Calibration Summary Report

Created with Analyst Reporter
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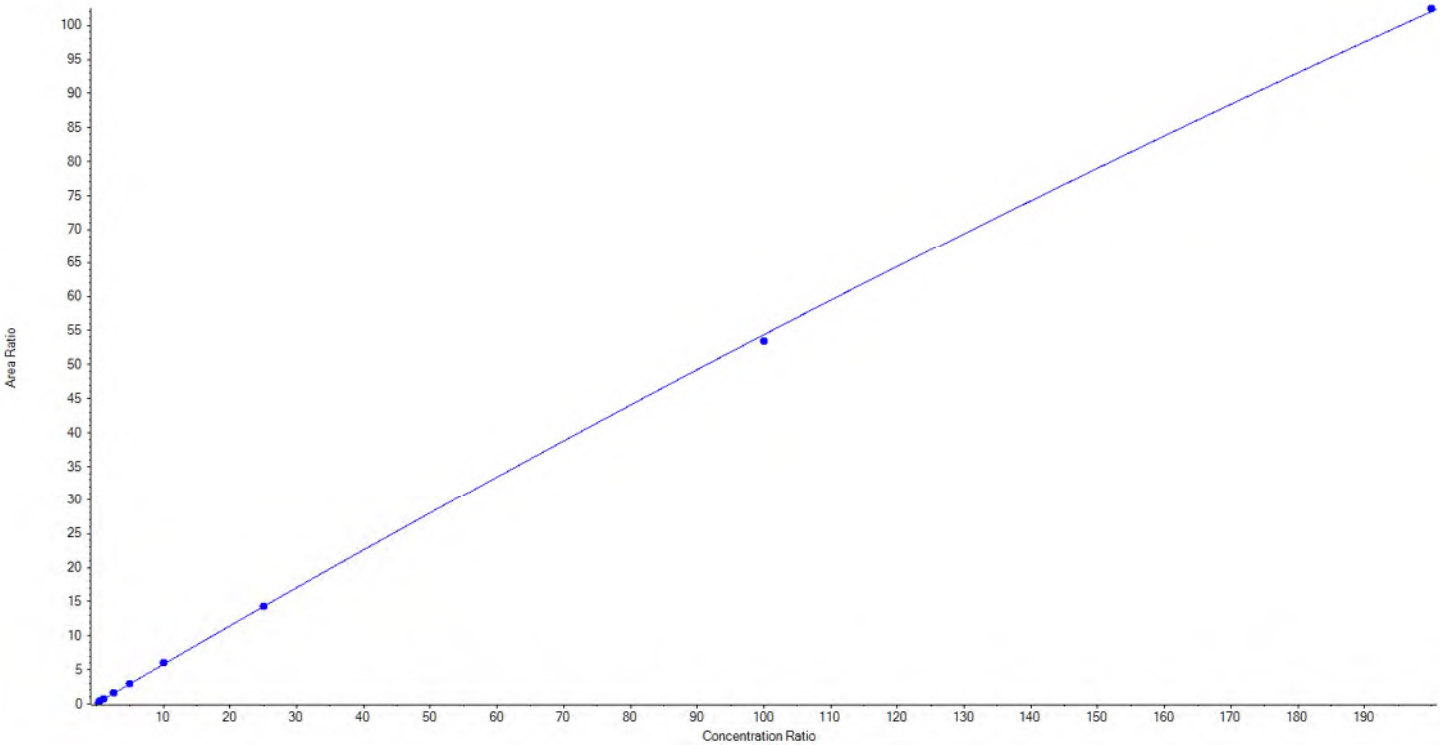
Analyte Name	PFTrDA_1	**Data File**	06022018.wiff
MRM Transition	663.0 / 619.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = -3.35582e-4 x^2 + 0.57688 x + 0.06065 (r = 0.99984) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	17.820321	71.3
3	JV21	L2	True	50.00	54.011640	108.0
4	JV22	L3	True	100.00	108.910297	108.9
5	JV23	L4	True	250.00	267.690412	107.1
6	JV24	L5	True	500.00	506.930895	101.4
7	JV25	L6	True	1000.00	1039.791932	104.0
8	JV26	L7	True	2500.00	2517.595628	100.7
9	JV27	L8	True	10000.00	9814.361419	98.1
10	JV28	L9	True	20000.00	20101.185251	100.5



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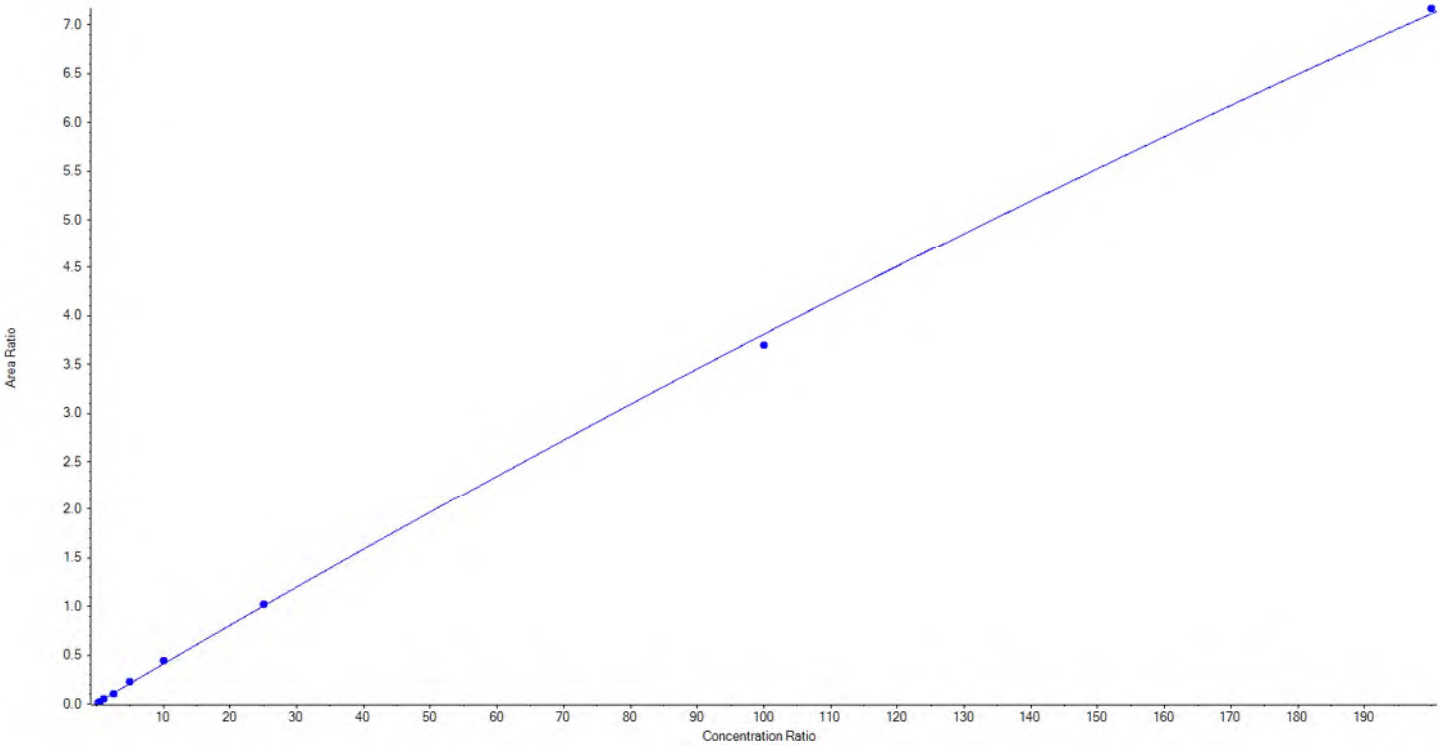
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFTrDA_2	**Data File**	06022018.wiff
MRM Transition	663.0 / 169.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = -2.49900e-5 x^2 + 0.04054 x + 0.00687 (r = 0.99951) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	4.270220	17.1
3	JV21	L2	True	50.00	35.468877	70.9
4	JV22	L3	True	100.00	116.693833	116.7
5	JV23	L4	True	250.00	243.784060	97.5
6	JV24	L5	True	500.00	535.379714	107.1
7	JV25	L6	True	1000.00	1087.288041	108.7
8	JV26	L7	True	2500.00	2535.950933	101.4
9	JV27	L8	True	10000.00	9675.448826	96.8
10	JV28	L9	True	20000.00	20176.892858	100.9



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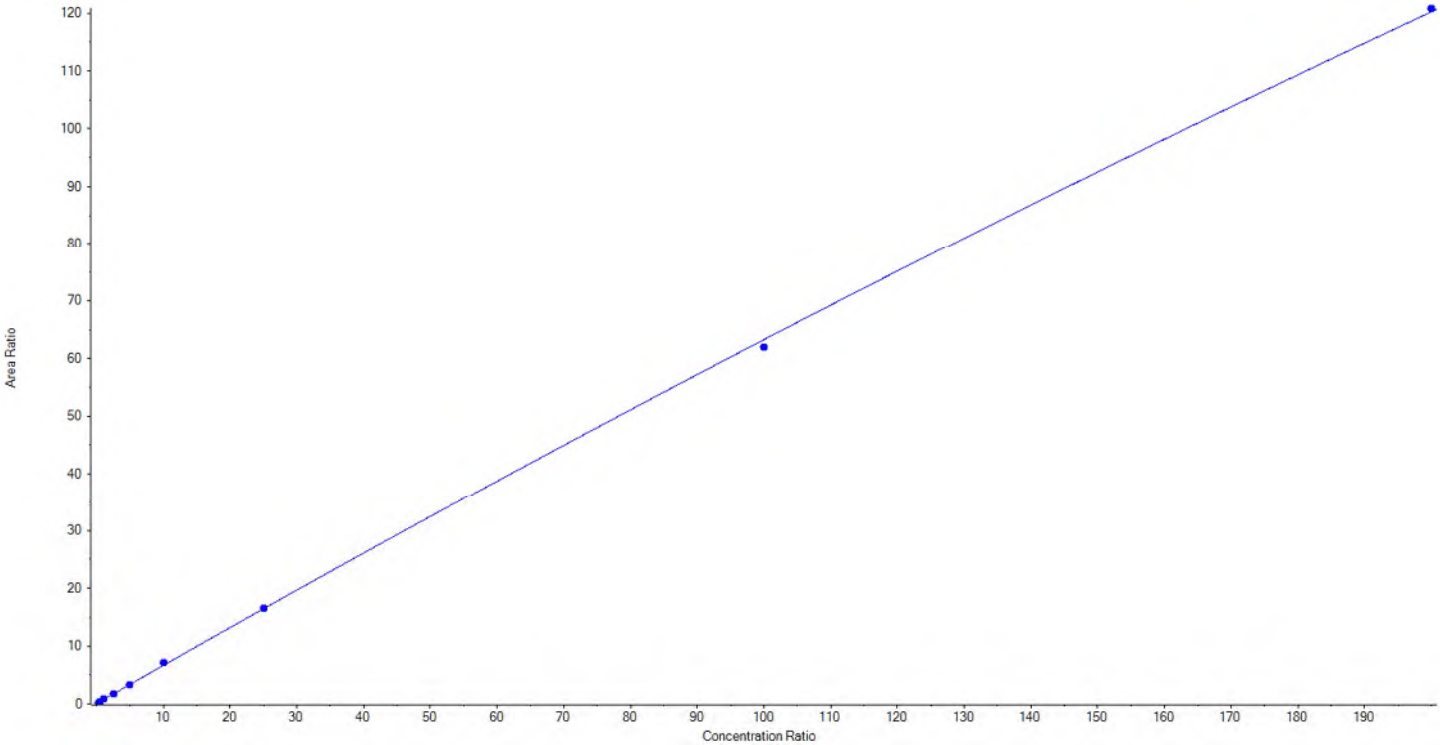
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFTeDA_1	**Data File**	06022018.wiff
MRM Transition	713.0 / 669.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = -3.13079e-4 x^2 + 0.66341 x + 0.05875 (r = 0.99980) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	20.617683	82.5
3	JV21	L2	True	50.00	48.921257	97.8
4	JV22	L3	True	100.00	110.236479	110.2
5	JV23	L4	True	250.00	263.611103	105.4
6	JV24	L5	True	500.00	488.492897	97.7
7	JV25	L6	True	1000.00	1067.843507	106.8
8	JV26	L7	True	2500.00	2526.346229	101.1
9	JV27	L8	True	10000.00	9794.187339	97.9
10	JV28	L9	True	20000.00	20107.055801	100.5



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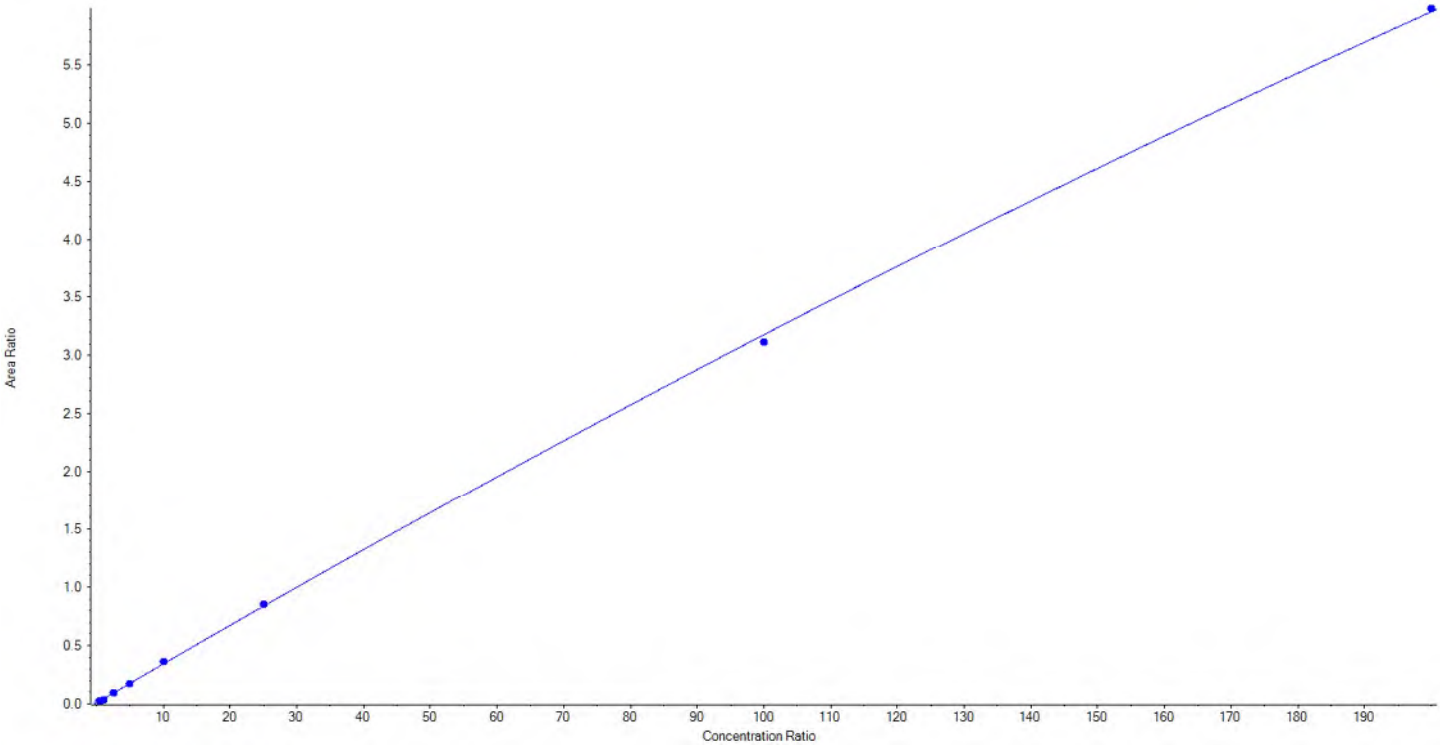
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	PFTeDA_2	**Data File**	06022018.wiff
MRM Transition	713.0 / 169.0	**Result Table**	18-0340_BASE_D
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = -1.94190e-5 x^2 + 0.03362 x + 0.00841 (r = 0.99982) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	3.327932	13.3
3	JV21	L2	True	50.00	51.038361	102.1
4	JV22	L3	True	100.00	90.229862	90.2
5	JV23	L4	True	250.00	258.448811	103.4
6	JV24	L5	True	500.00	488.438827	97.7
7	JV25	L6	True	1000.00	1058.685386	105.9
8	JV26	L7	True	2500.00	2558.107883	102.3
9	JV27	L8	True	10000.00	9790.262690	97.9
10	JV28	L9	True	20000.00	20108.230300	100.5



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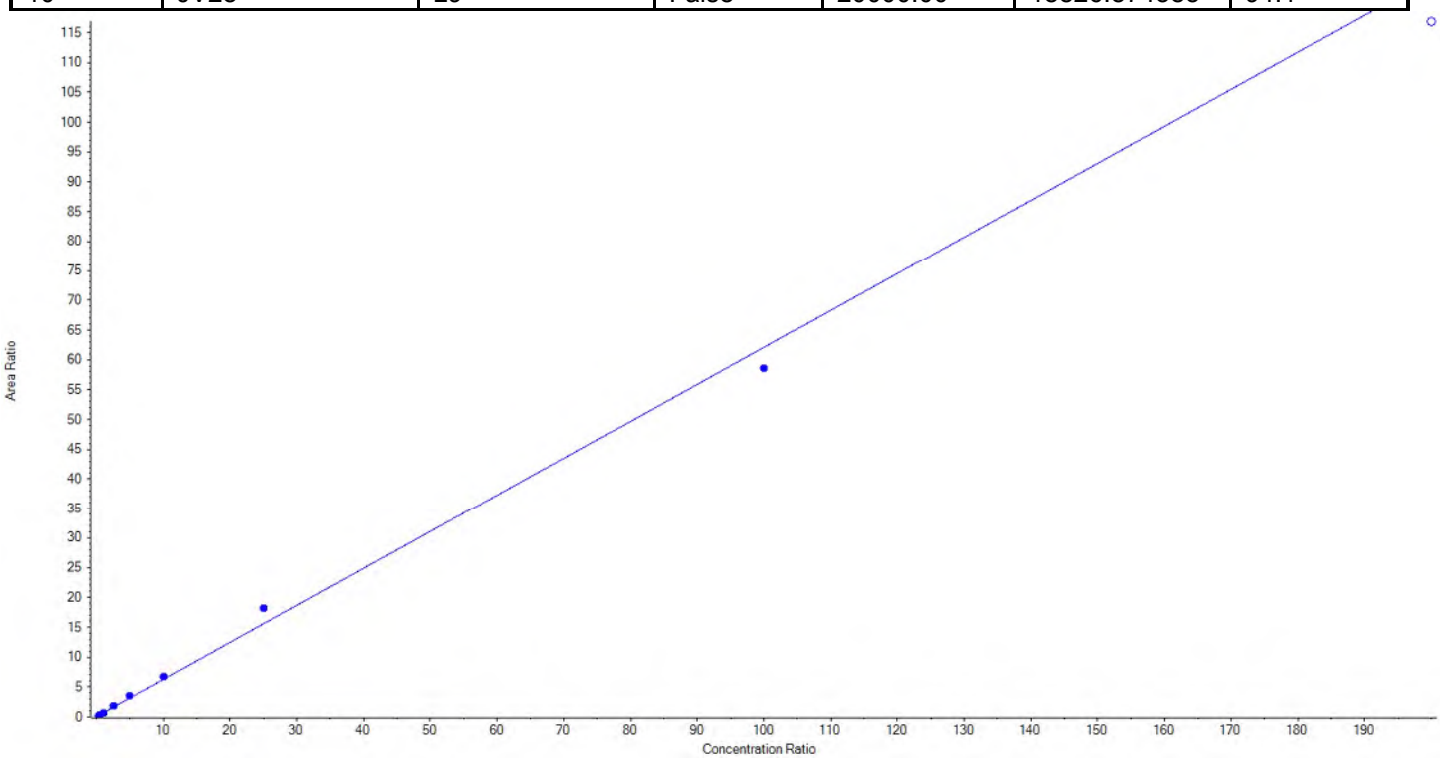
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	NMeFOSAA_1	**Data File**	06022018.wiff
MRM Transition	570.0 / 419.0	**Result Table**	18-0340_BASE_D
Internal Standard	d3-MeFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.62027 x + 0.06299 (r = 0.99559) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	19.451114	77.8
3	JV21	L2	True	50.00	45.318420	90.6
4	JV22	L3	True	100.00	91.267271	91.3
5	JV23	L4	True	250.00	275.958428	110.4
6	JV24	L5	True	500.00	556.930555	111.4
7	JV25	L6	True	1000.00	1070.771413	107.1
8	JV26	L7	True	2500.00	2926.392686	117.1
9	JV27	L8	True	10000.00	9438.910112	94.4
10	JV28	L9	False	20000.00	18826.874385	94.1



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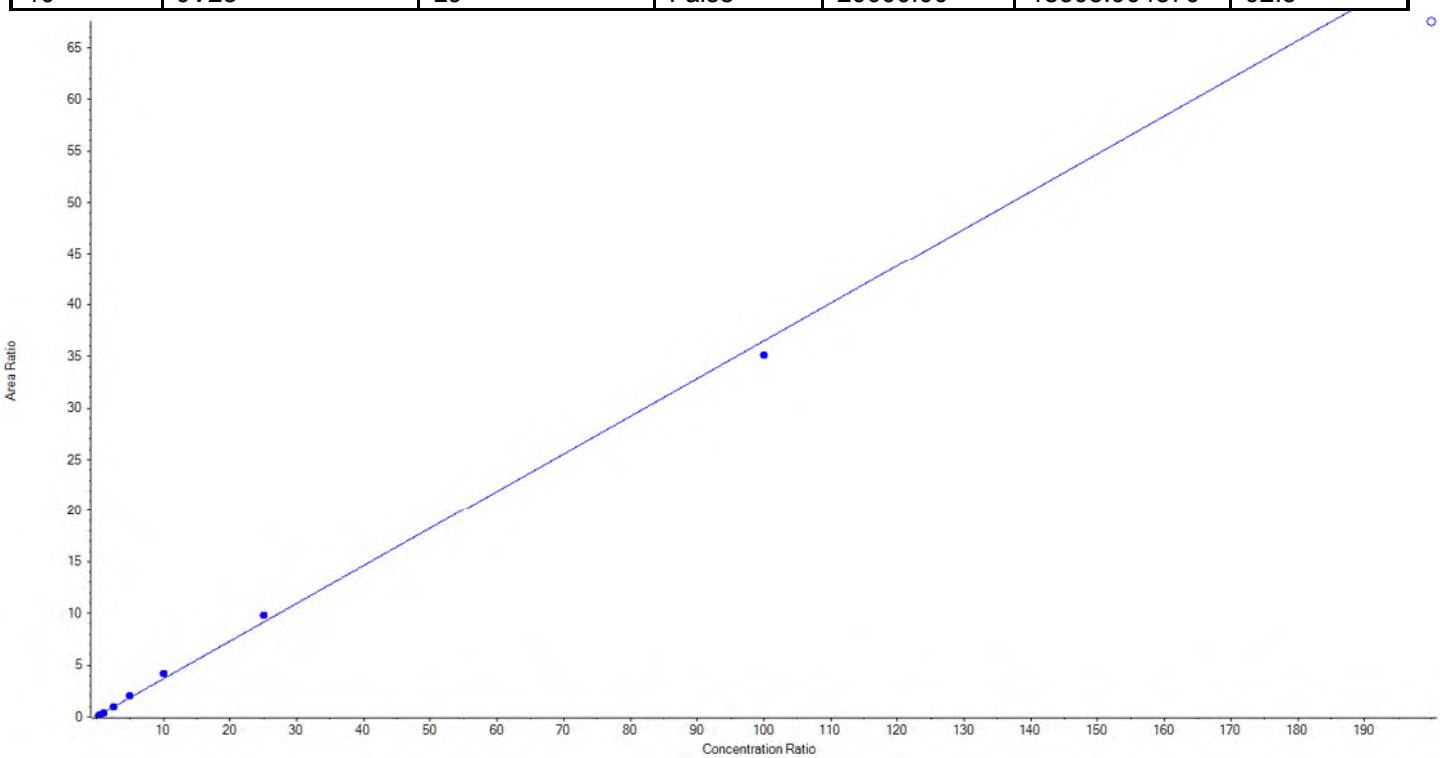
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	NMeFOSAA_2	**Data File**	06022018.wiff
MRM Transition	570.0 / 512.0	**Result Table**	18-0340_BASE_D
Internal Standard	d3-MeFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.36467 x + 0.03706 (r = 0.99800) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	18.997036	76.0
3	JV21	L2	True	50.00	44.533991	89.1
4	JV22	L3	True	100.00	106.582400	106.6
5	JV23	L4	True	250.00	256.073972	102.4
6	JV24	L5	True	500.00	538.991083	107.8
7	JV25	L6	True	1000.00	1141.521714	114.2
8	JV26	L7	True	2500.00	2693.283241	107.7
9	JV27	L8	True	10000.00	9625.016563	96.3
10	JV28	L9	False	20000.00	18505.904870	92.5



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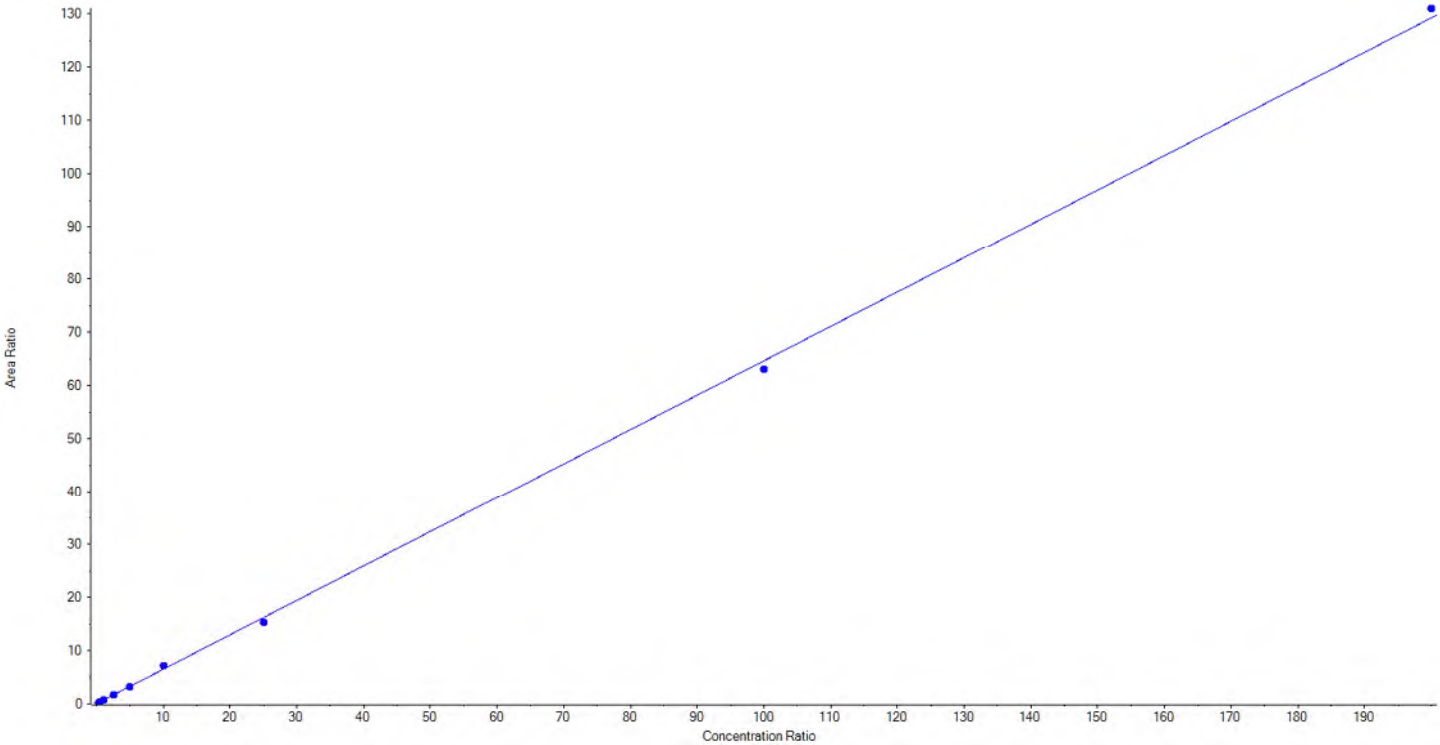
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	NEtFOSAA_1	**Data File**	06022018.wiff
MRM Transition	584.0 / 419.0	**Result Table**	18-0340_BASE_D
Internal Standard	d5-EtFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.64602 x + 0.04775 (r = 0.99955) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	23.293026	93.2
3	JV21	L2	True	50.00	51.097829	102.2
4	JV22	L3	True	100.00	101.049002	101.1
5	JV23	L4	True	250.00	257.258021	102.9
6	JV24	L5	True	500.00	478.385571	95.7
7	JV25	L6	True	1000.00	1111.914193	111.2
8	JV26	L7	True	2500.00	2371.634278	94.9
9	JV27	L8	True	10000.00	9758.856489	97.6
10	JV28	L9	True	20000.00	20271.511589	101.4



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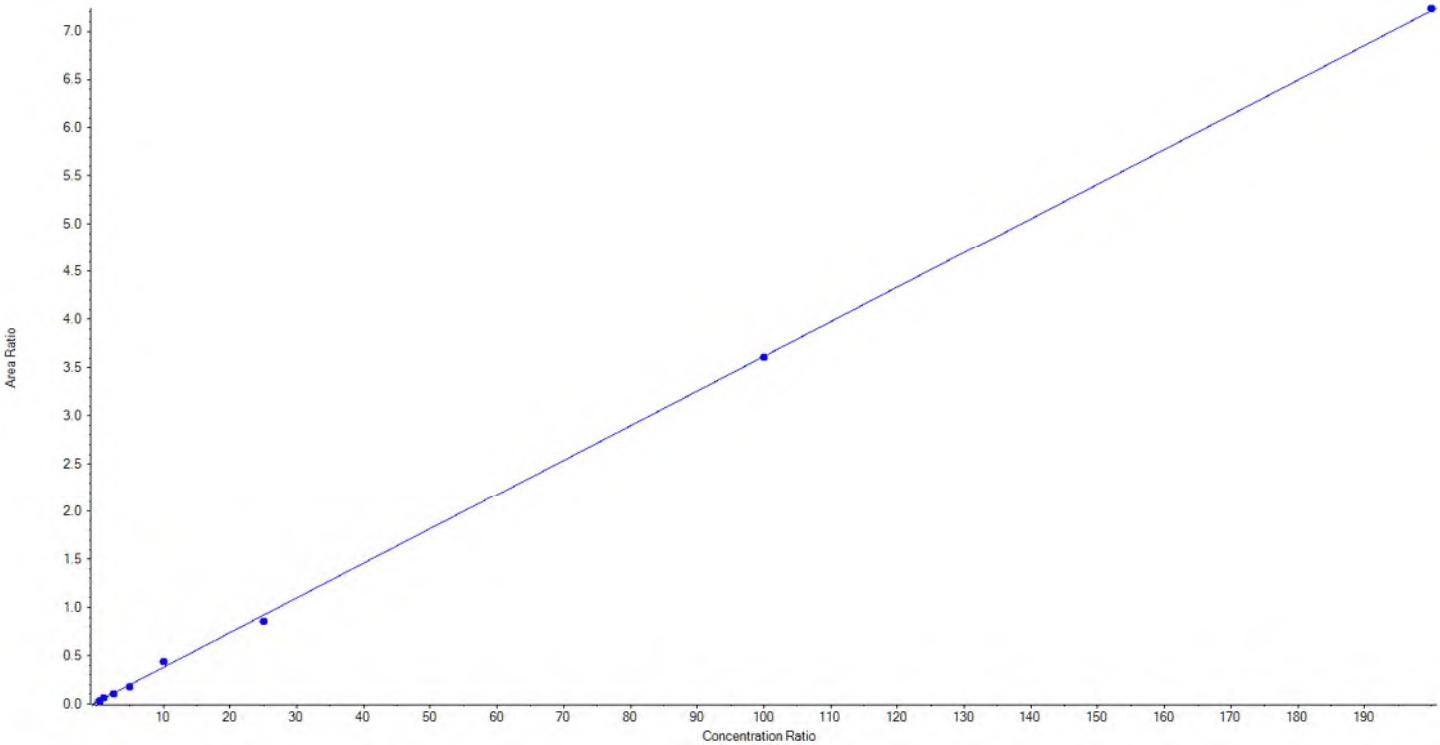
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:39:15 PM

Analyte Name	NEtFOSAA_2	**Data File**	06022018.wiff
MRM Transition	584.0 / 483.0	**Result Table**	18-0340_BASE_D
Internal Standard	d5-EtFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/4/2018 7:23:13 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.03597 x + 0.01915 (r = 0.99914) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	< 0	N/A
3	JV21	L2	True	50.00	37.126461	74.3
4	JV22	L3	True	100.00	129.633915	129.6
5	JV23	L4	True	250.00	238.475224	95.4
6	JV24	L5	True	500.00	453.011265	90.6
7	JV25	L6	True	1000.00	1166.861666	116.7
8	JV26	L7	True	2500.00	2333.234004	93.3
9	JV27	L8	True	10000.00	9979.401223	99.8
10	JV28	L9	True	20000.00	20062.256243	100.3



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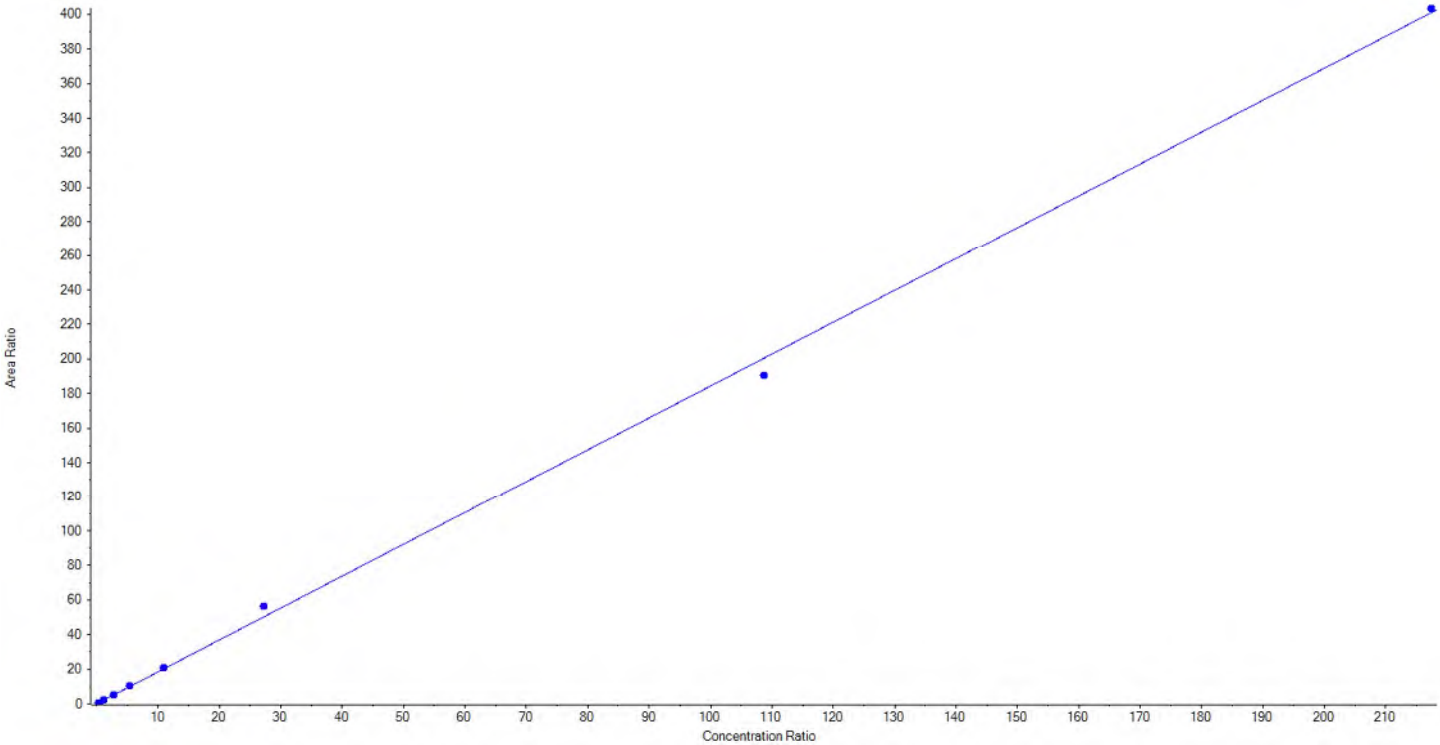
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFBS_1	**Data File**	6072018.wiff
MRM Transition	298.9 / 80.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C3-PFBS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.84377 x + 0.04421 (r = 0.99889) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.25	22.943131	90.9
3	JV21	L2	True	50.50	39.339005	77.9
4	JV22	L3	True	101.00	114.073097	112.9
5	JV23	L4	True	252.50	259.829558	102.9
6	JV24	L5	True	505.00	513.918478	101.8
7	JV25	L6	True	1010.00	1063.678573	105.3
8	JV26	L7	True	2525.00	2847.628626	112.8
9	JV27	L8	True	10100.00	9589.730089	95.0
10	JV28	L9	True	20200.00	20318.109443	100.6



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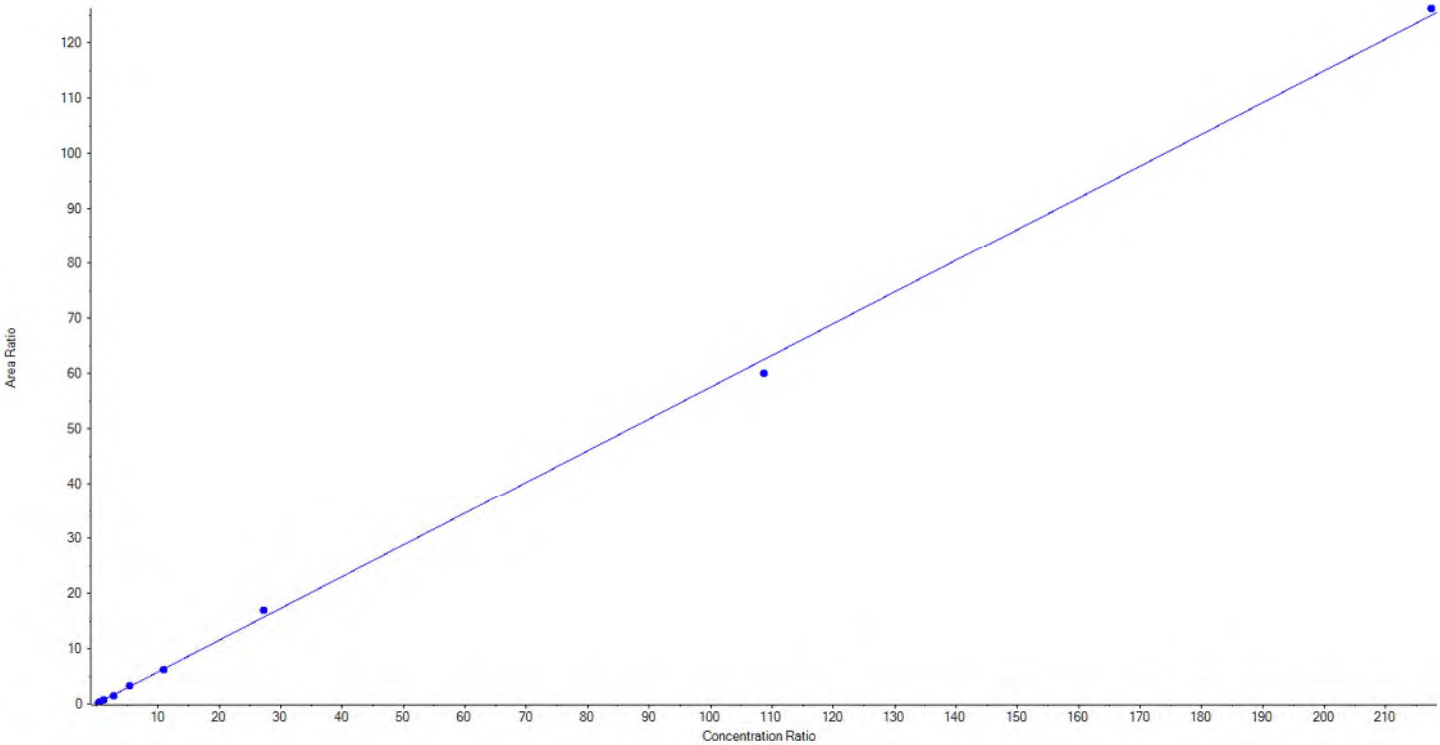
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFBS_2	**Data File**	6072018.wiff
MRM Transition	298.9 / 99.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C3-PFBS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.57485 x + 0.03128 (r = 0.99948) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.25	24.912423	98.7
3	JV21	L2	True	50.50	48.712633	96.5
4	JV22	L3	True	101.00	102.205673	101.2
5	JV23	L4	True	252.50	244.309260	96.8
6	JV24	L5	True	505.00	520.831671	103.1
7	JV25	L6	True	1010.00	995.650839	98.6
8	JV26	L7	True	2525.00	2731.008942	108.2
9	JV27	L8	True	10100.00	9703.159053	96.1
10	JV28	L9	True	20200.00	20398.459505	101.0



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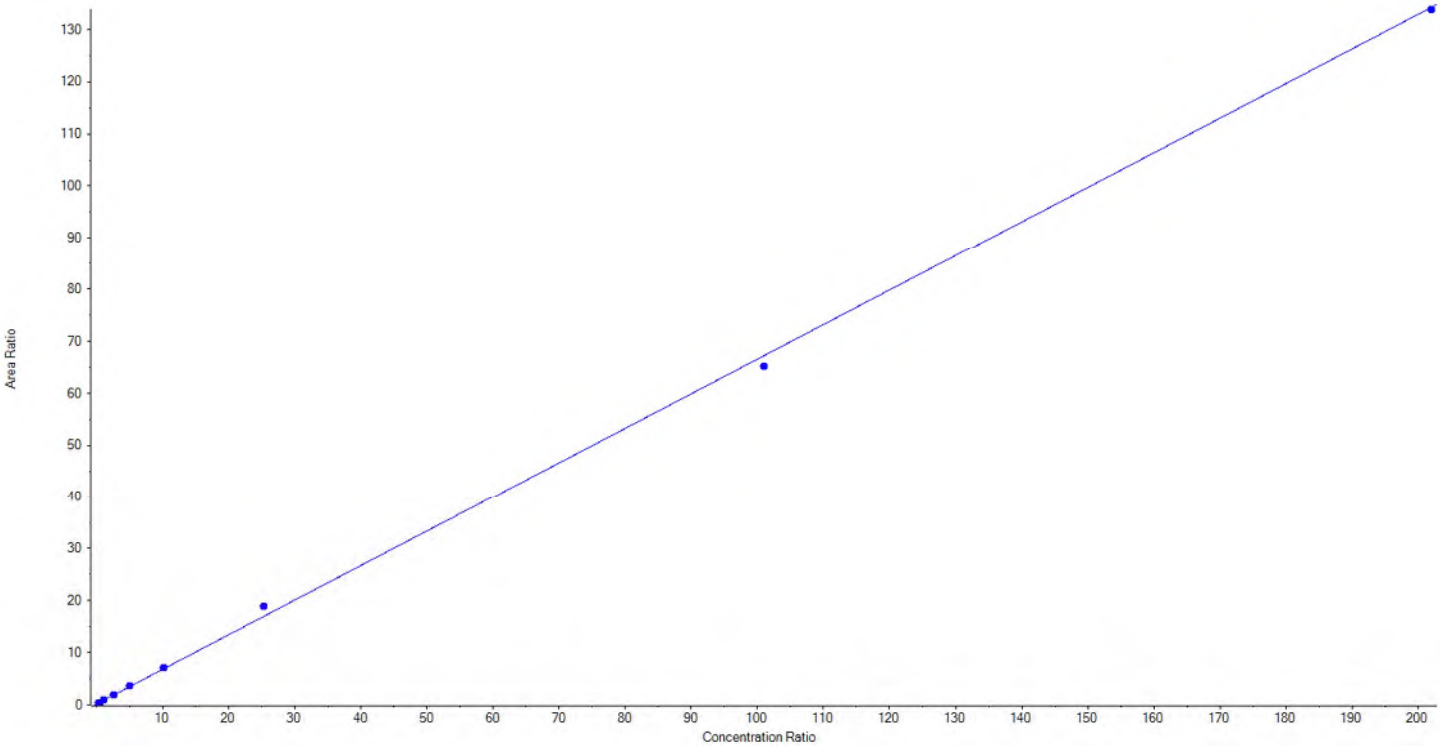
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFHxA_1	**Data File**	6072018.wiff
MRM Transition	313.0 / 269.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C5-PFHxA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.66370 x + 0.17756 (r = 0.99925) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.25	22.304831	88.3
3	JV21	L2	True	50.50	37.454645	74.2
4	JV22	L3	True	101.00	115.048578	113.9
5	JV23	L4	True	252.50	269.243911	106.6
6	JV24	L5	True	505.00	533.089291	105.6
7	JV25	L6	True	1010.00	1044.569383	103.4
8	JV26	L7	True	2525.00	2808.965200	111.3
9	JV27	L8	True	10100.00	9799.793529	97.0
10	JV28	L9	True	20200.00	20138.780632	99.7



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Calibration Summary Report

Created with Analyst Reporter
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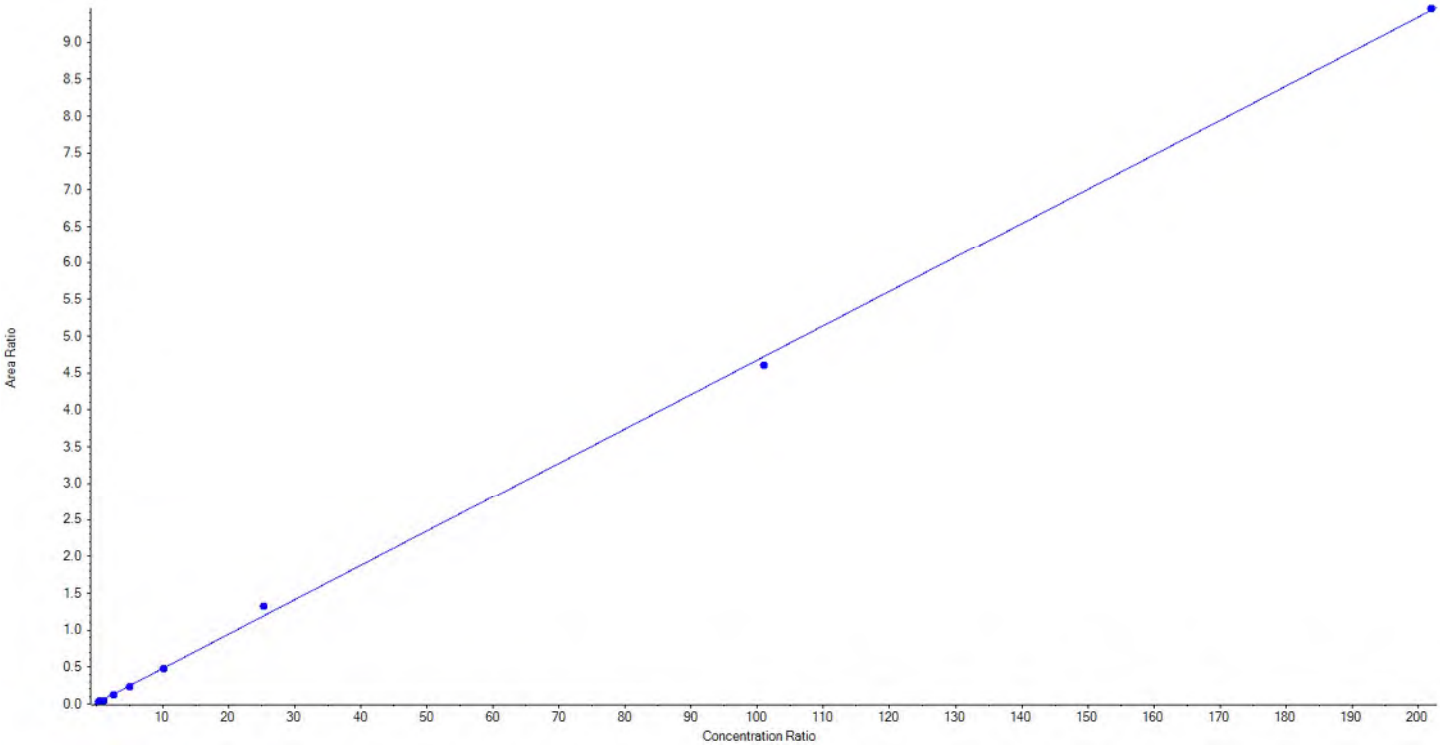
Analyte Name	PFHxA_2	**Data File**	6072018.wiff
MRM Transition	313.0 / 119.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C5-PFHxA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.04664 x + 0.01259 (r = 0.99919) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.25	31.161550	123.4
3	JV21	L2	True	50.50	57.639587	114.1
4	JV22	L3	True	101.00	73.100366	72.4
5	JV23	L4	True	252.50	222.023864	87.9
6	JV24	L5	True	505.00	472.175740	93.5
7	JV25	L6	True	1010.00	1006.463495	99.7
8	JV26	L7	True	2525.00	2809.105294	111.3
9	JV27	L8	True	10100.00	9846.220727	97.5
10	JV28	L9	True	20200.00	20251.359377	100.3



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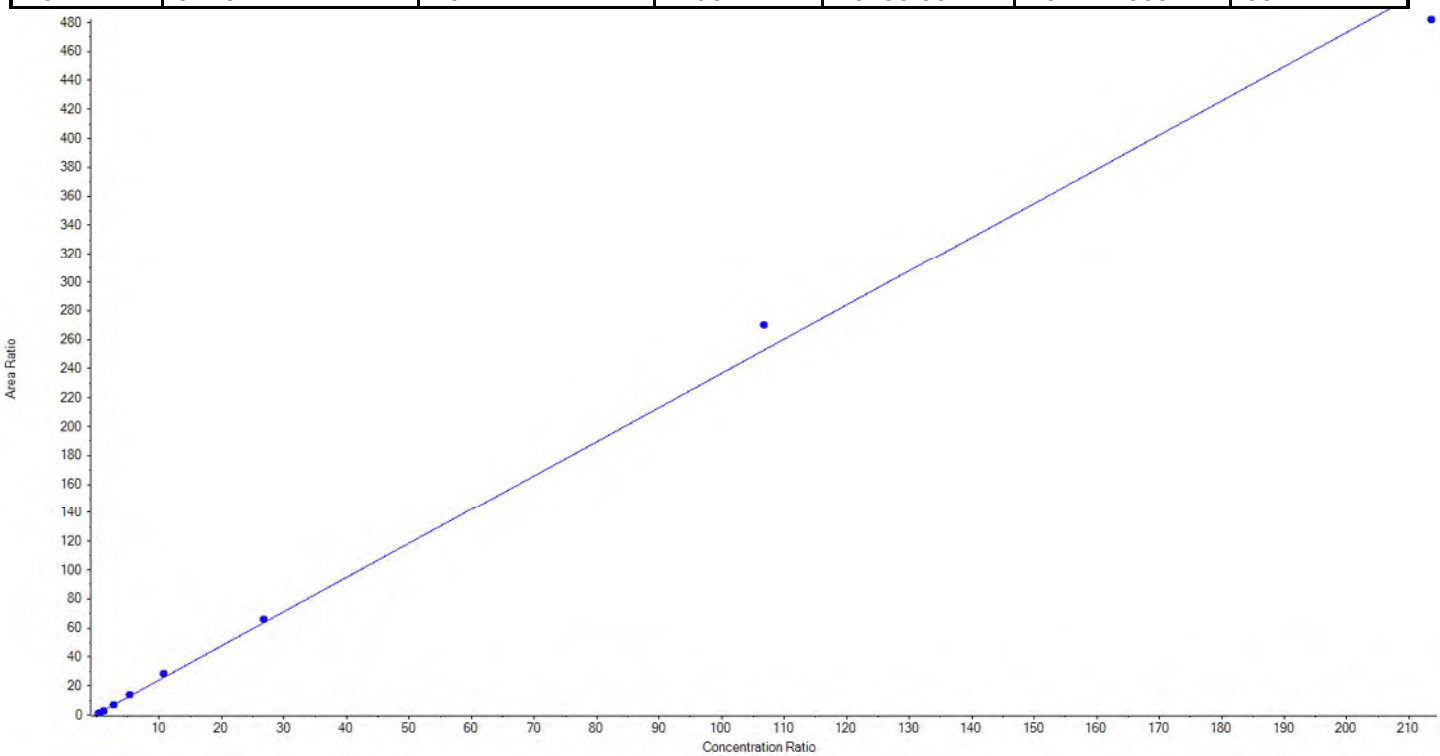
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFHxS_1	**Data File**	6072018.wiff
MRM Transition	399.0 / 80.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C3-PFHxS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 2.36367 x + 0.42259 (r = 0.99834) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.25	9.752860	38.6
3	JV21	L2	True	50.50	45.387995	89.9
4	JV22	L3	True	101.00	89.455284	88.6
5	JV23	L4	True	252.50	253.432861	100.4
6	JV24	L5	True	505.00	527.365589	104.4
7	JV25	L6	True	1010.00	1111.039507	110.0
8	JV26	L7	True	2525.00	2633.866868	104.3
9	JV27	L8	True	10100.00	10809.315573	107.0
10	JV28	L9	True	20200.00	19274.136322	95.4



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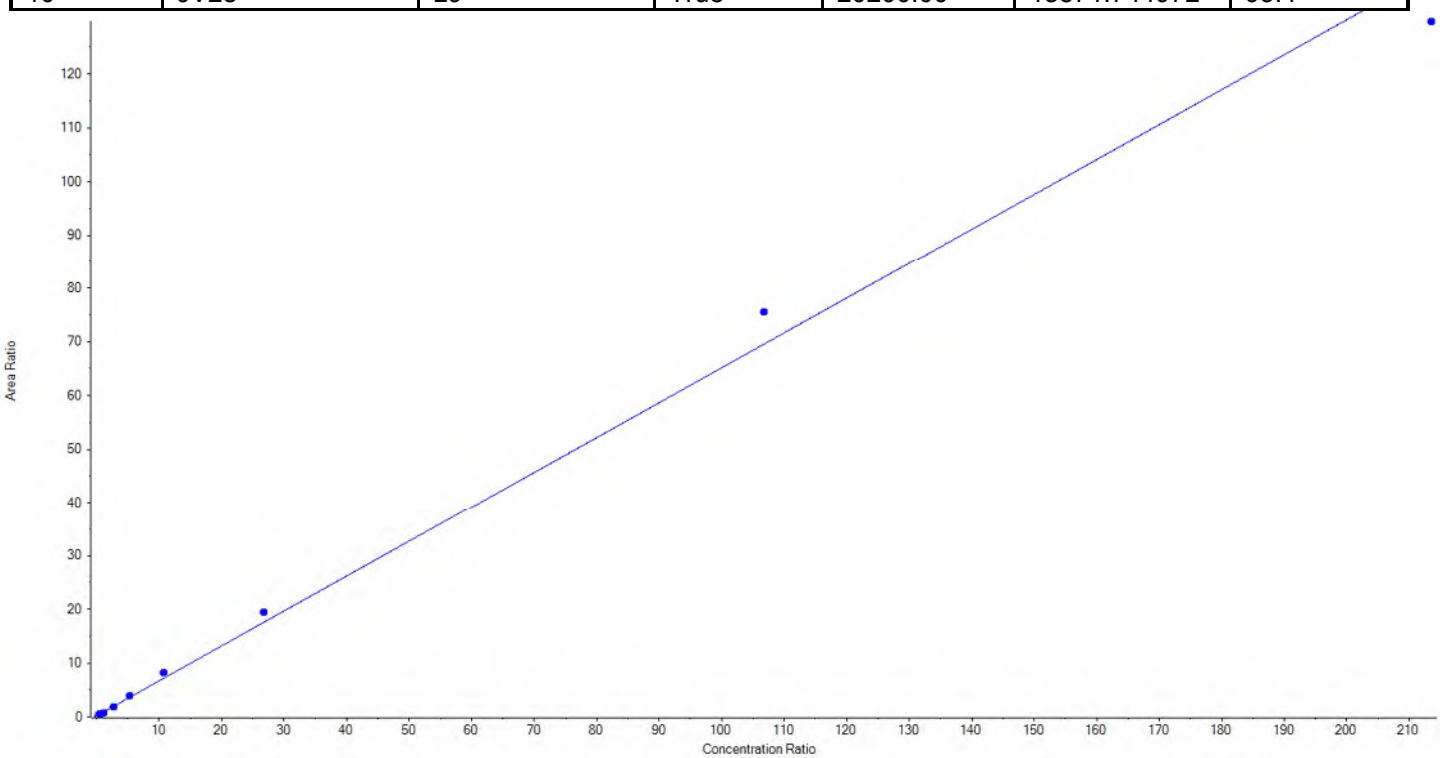
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFHxS_2	**Data File**	6072018.wiff
MRM Transition	399.0 / 99.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C3-PFHxS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.64944 x + 0.20569 (r = 0.99656) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.25	4.853831	19.2
3	JV21	L2	True	50.50	41.722055	82.6
4	JV22	L3	True	101.00	86.095976	85.2
5	JV23	L4	True	252.50	243.062956	96.3
6	JV24	L5	True	505.00	538.271166	106.6
7	JV25	L6	True	1010.00	1171.538070	116.0
8	JV26	L7	True	2525.00	2805.077301	111.1
9	JV27	L8	True	10100.00	10986.487505	108.8
10	JV28	L9	True	20200.00	18871.744972	93.4



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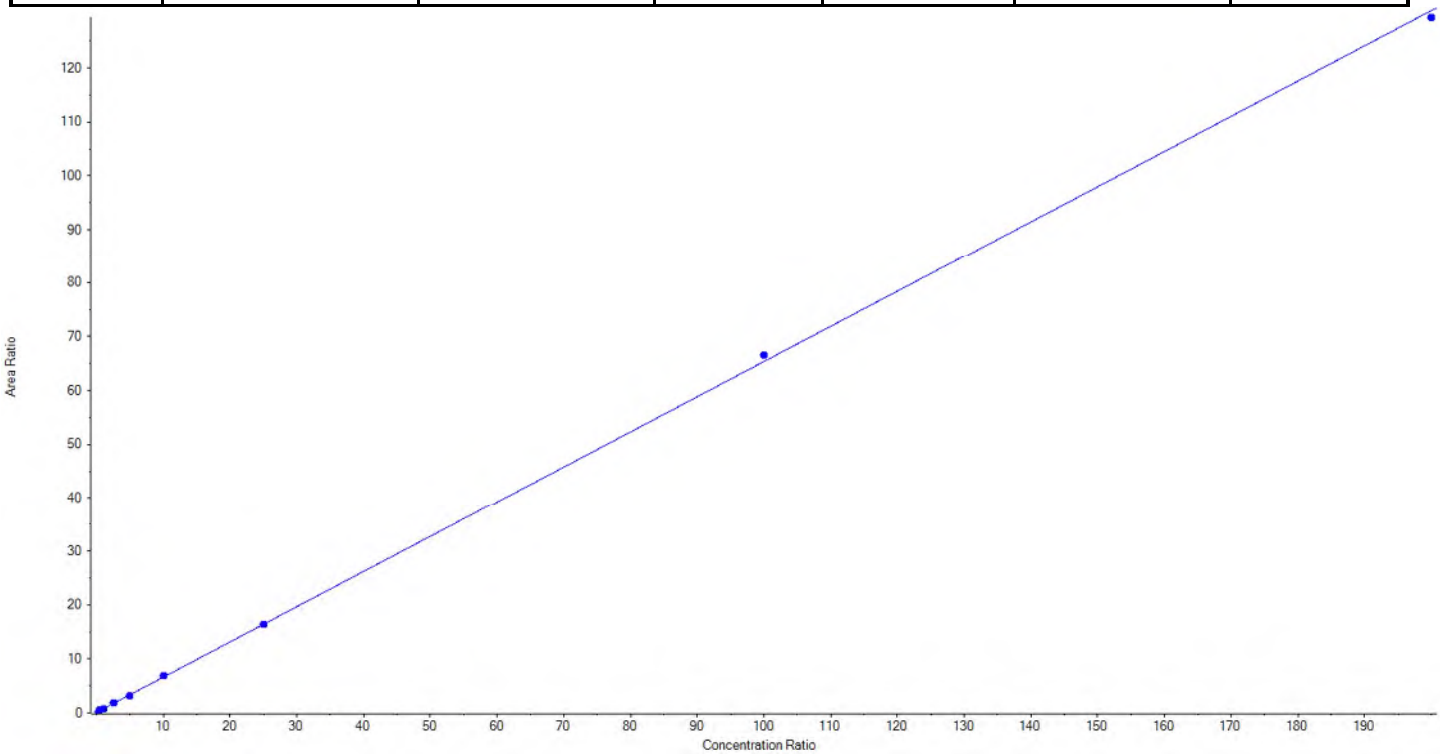
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFOA_1	**Data File**	6072018.wiff
MRM Transition	413.0 / 369.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C8-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.65267 x + 0.09107 (r = 0.99980) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	18.098123	72.4
3	JV21	L2	True	50.00	61.859763	123.7
4	JV22	L3	True	100.00	100.186034	100.2
5	JV23	L4	True	250.00	263.728976	105.5
6	JV24	L5	True	500.00	471.973791	94.4
7	JV25	L6	True	1000.00	1034.220060	103.4
8	JV26	L7	True	2500.00	2488.582766	99.5
9	JV27	L8	True	10000.00	10183.705964	101.8
10	JV28	L9	True	20000.00	19802.644523	99.0



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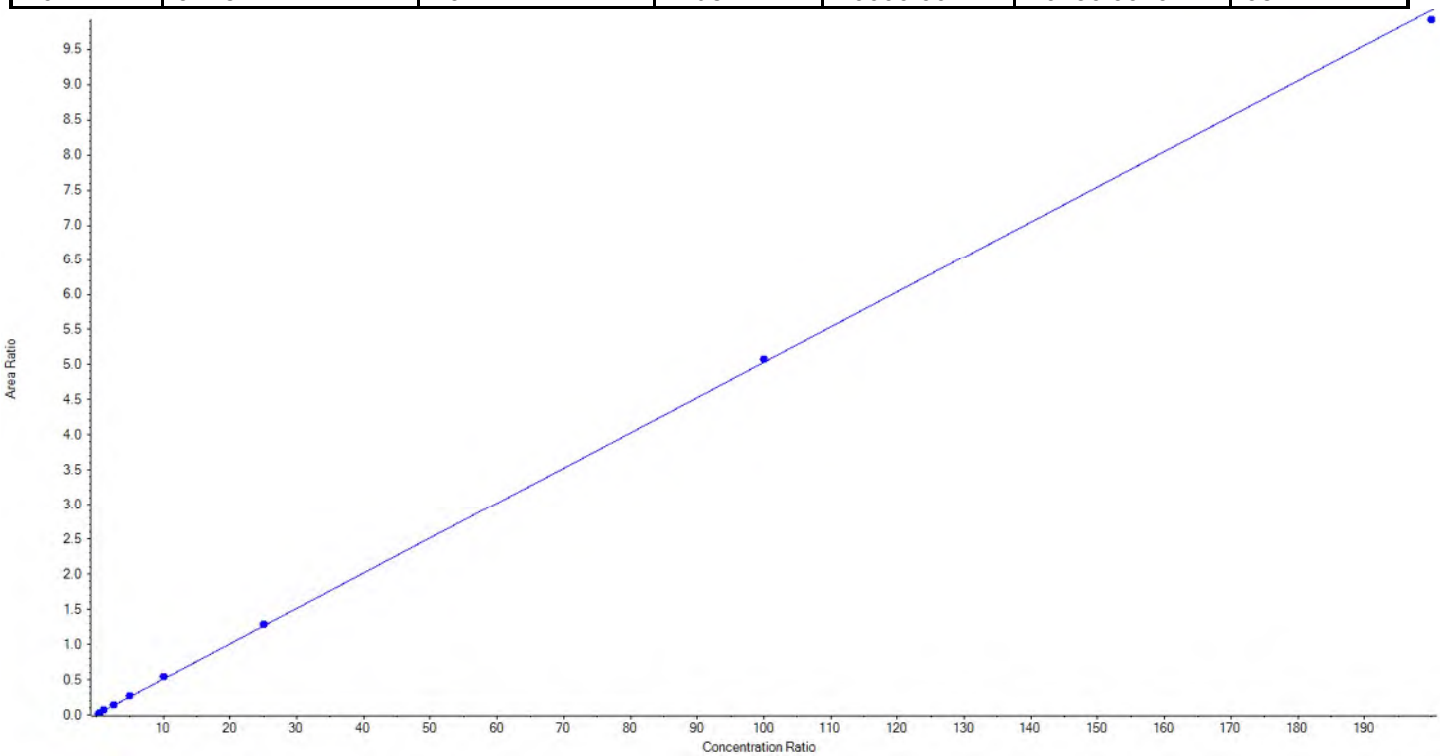
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFOA_2	**Data File**	6072018.wiff
MRM Transition	413.0 / 169.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C8-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.05028 x + 0.00540 (r = 0.99961) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	12.441327	49.8
3	JV21	L2	True	50.00	51.629941	103.3
4	JV22	L3	True	100.00	119.994280	120.0
5	JV23	L4	True	250.00	284.617570	113.9
6	JV24	L5	True	500.00	528.858321	105.8
7	JV25	L6	True	1000.00	1062.505616	106.3
8	JV26	L7	True	2500.00	2537.223548	101.5
9	JV27	L8	True	10000.00	10096.737383	101.0
10	JV28	L9	True	20000.00	19730.992014	98.7



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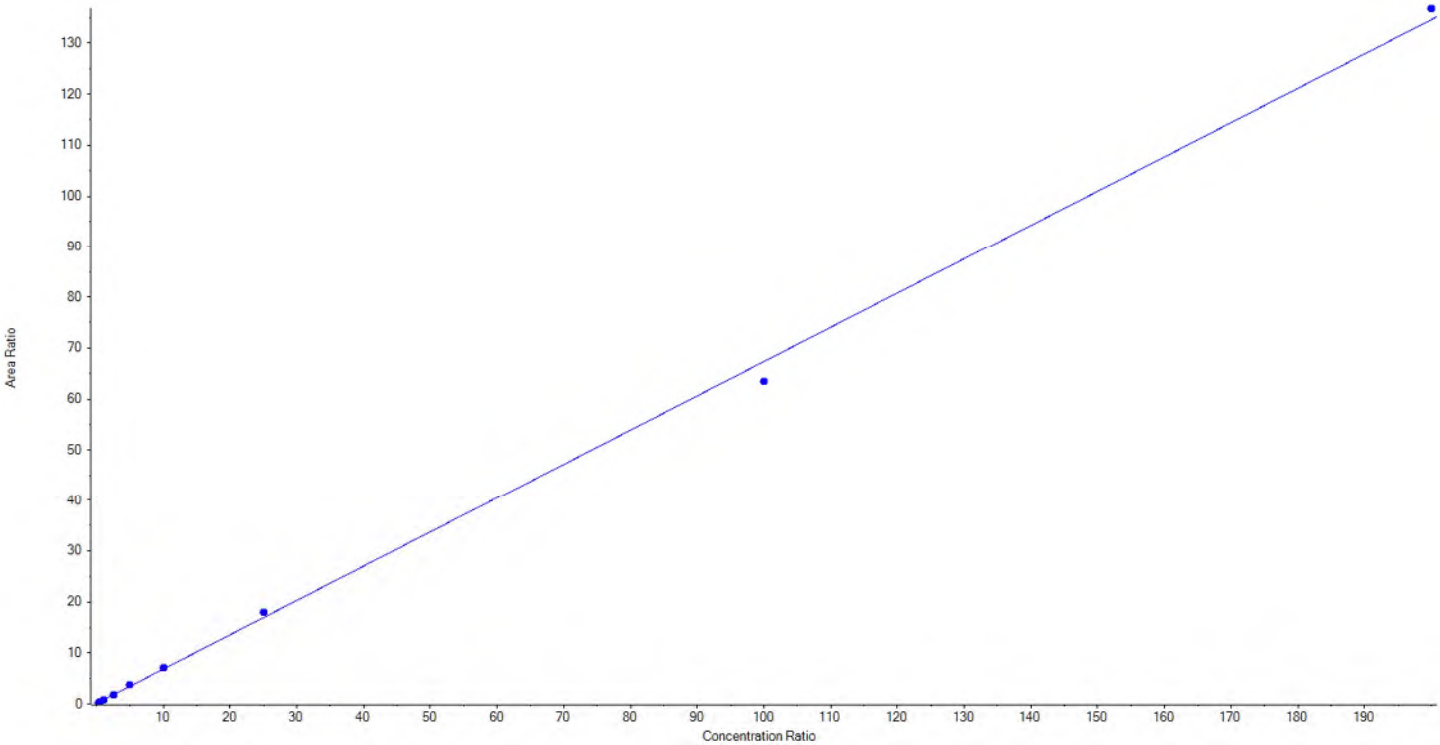
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFNA_1	**Data File**	6072018.wiff
MRM Transition	463.0 / 419.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C9-PFNA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.67253 x + 0.08413 (r = 0.99919) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	20.380243	81.5
3	JV21	L2	True	50.00	46.646813	93.3
4	JV22	L3	True	100.00	104.458467	104.5
5	JV23	L4	True	250.00	263.701795	105.5
6	JV24	L5	True	500.00	551.318989	110.3
7	JV25	L6	True	1000.00	1029.603636	103.0
8	JV26	L7	True	2500.00	2651.434689	106.1
9	JV27	L8	True	10000.00	9435.478644	94.4
10	JV28	L9	True	20000.00	20321.976724	101.6



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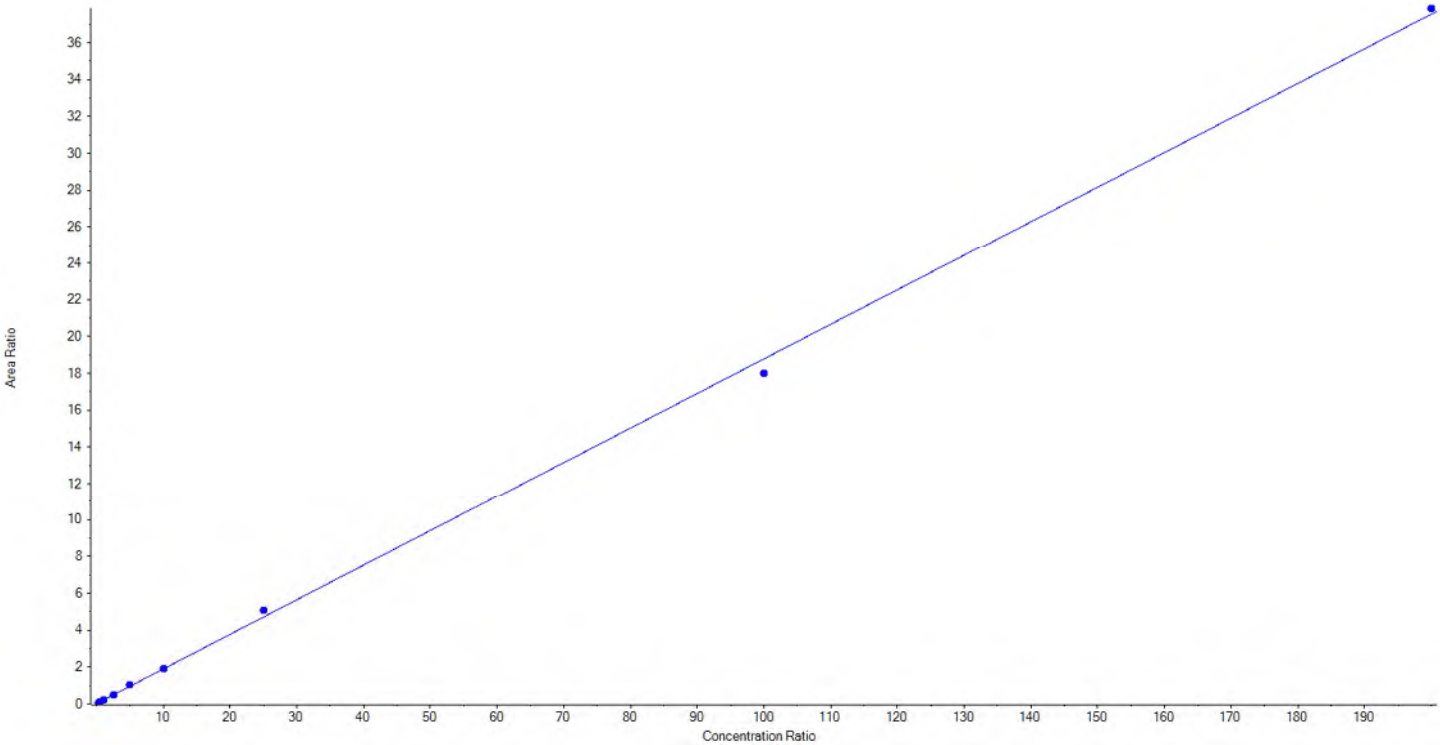
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFNA_2	**Data File**	6072018.wiff
MRM Transition	463.0 / 219.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C9-PFNA	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.18770 x + 0.01753 (r = 0.99936) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	19.401848	77.6
3	JV21	L2	True	50.00	48.764204	97.5
4	JV22	L3	True	100.00	110.562507	110.6
5	JV23	L4	True	250.00	248.793870	99.5
6	JV24	L5	True	500.00	547.564450	109.5
7	JV25	L6	True	1000.00	1004.923499	100.5
8	JV26	L7	True	2500.00	2704.608737	108.2
9	JV27	L8	True	10000.00	9578.530176	95.8
10	JV28	L9	True	20000.00	20161.850707	100.8



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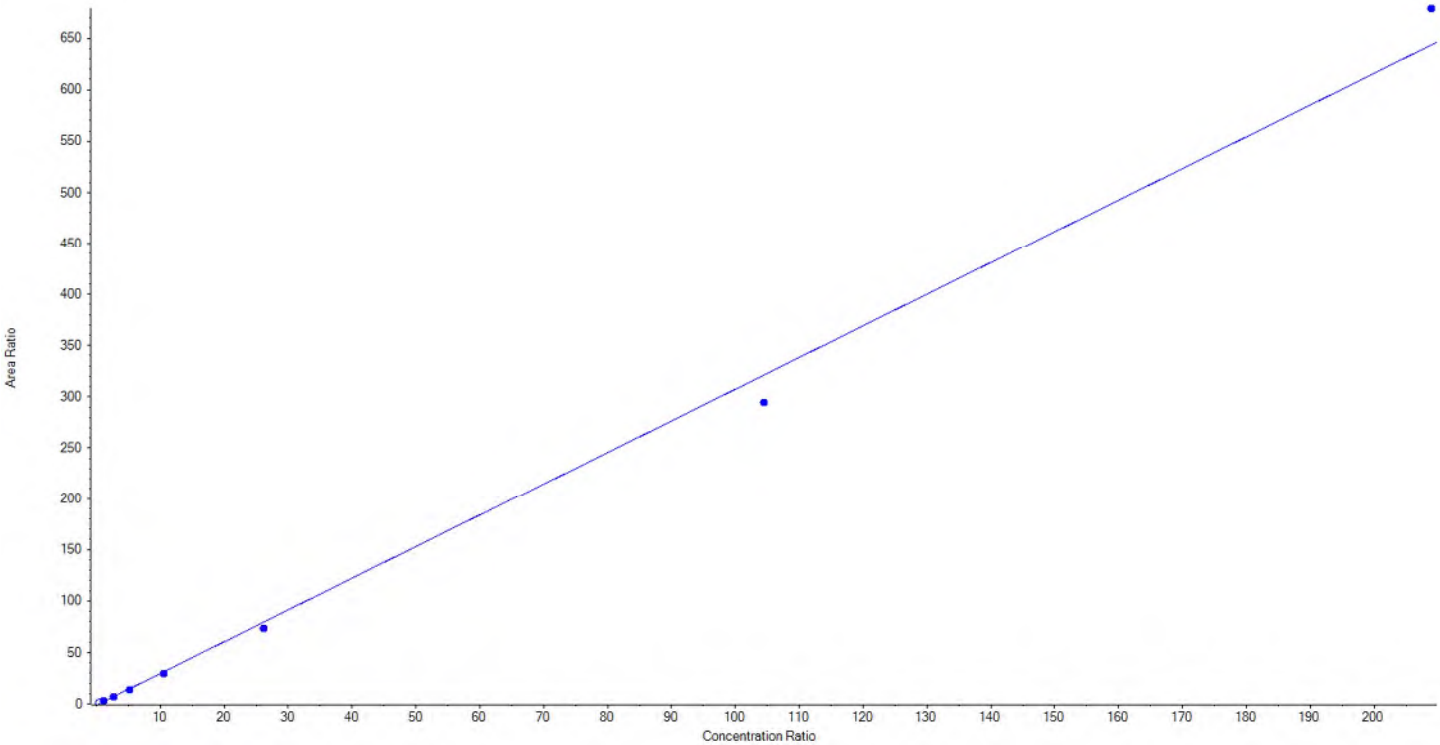
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFOS_1	**Data File**	6072018.wiff
MRM Transition	499.0 / 80.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C8-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 3.08558 x + -1.21856 (r = 0.99748) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	False	25.00	N/A	N/A
3	JV21	L2	False	50.00	82.820149	165.6
4	JV22	L3	True	100.00	129.733572	129.7
5	JV23	L4	True	250.00	235.569402	94.2
6	JV24	L5	True	500.00	454.217610	90.8
7	JV25	L6	True	1000.00	959.192136	95.9
8	JV26	L7	True	2500.00	2301.329728	92.1
9	JV27	L8	True	10000.00	9174.590917	91.8
10	JV28	L9	True	20000.00	21095.366634	105.5



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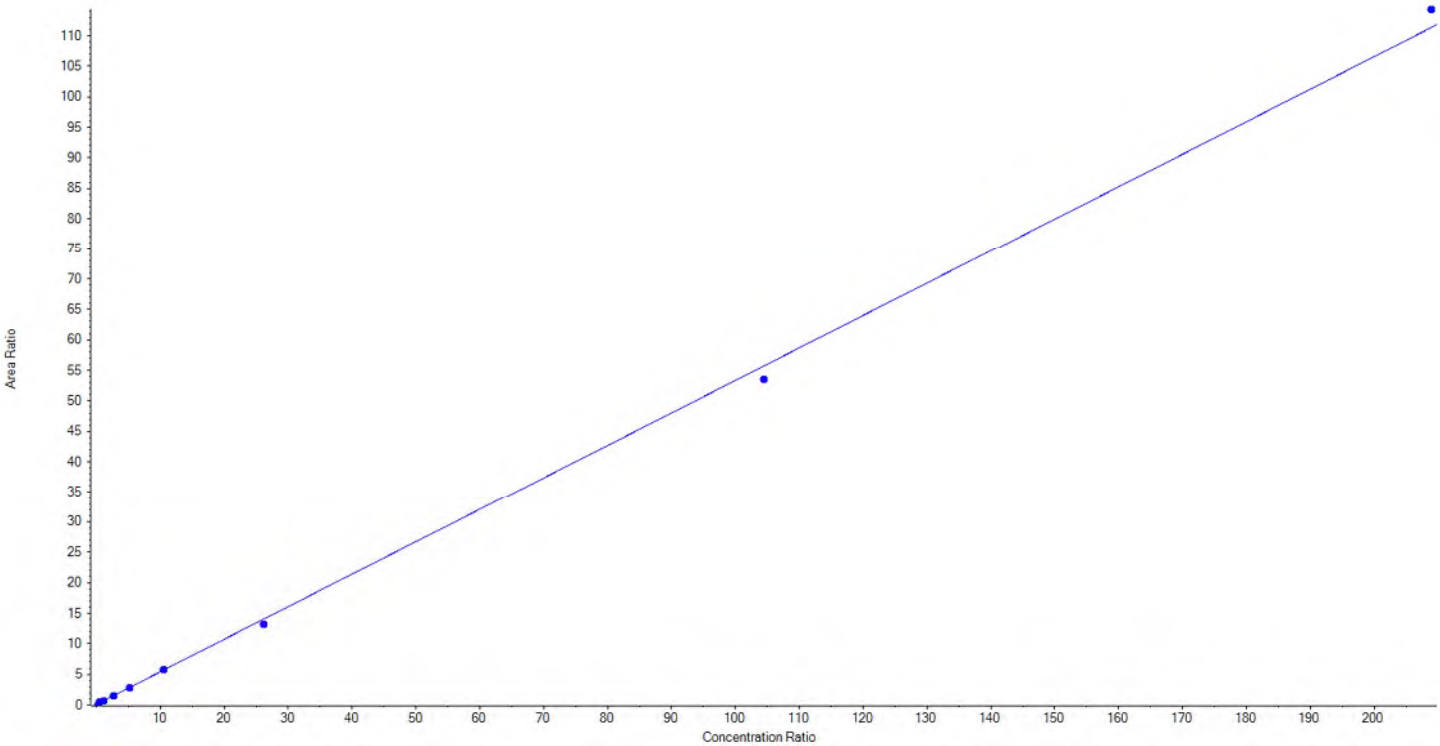
Calibration Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:40:21 PM

Analyte Name	PFOS_2	**Data File**	6072018.wiff
MRM Transition	499.0 / 99.0	**Result Table**	18-0340_BASE_D_1
Internal Standard	13C8-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	6/7/2018 8:21:48 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.53221 x + 0.10898 (r = 0.99933) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	JV20	L1	True	25.00	23.997962	96.0
3	JV21	L2	True	50.00	62.692160	125.4
4	JV22	L3	True	100.00	87.968313	88.0
5	JV23	L4	True	250.00	250.985901	100.4
6	JV24	L5	True	500.00	471.819806	94.4
7	JV25	L6	True	1000.00	1030.832462	103.1
8	JV26	L7	True	2500.00	2349.905622	94.0
9	JV27	L8	True	10000.00	9616.747652	96.2
10	JV28	L9	True	20000.00	20530.050123	102.7



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	Calibration Curve Concentrations (ng/L)								
	JV20	JV21	JV22	JV23	JV24	JV25	JV26	JV27	JV28
PFBA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFPeA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFHxA	25.25	50.50	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFHpA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFOA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFNA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFDA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFUnA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFDoA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFTrDA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFTeDA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
NMeFOSAA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
NEtFOSAA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFOSA	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFBS	25.25	50.50	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFPeS	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFHxS (Branched)	25.25	50.50	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFHpS	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFOS (Branched)	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFNS	25.25	50.50	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFNS	25.25	50.50	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
4:2FTS	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
6:2FTS	25.00	50.00	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
8:2FTS	25.25	50.50	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
	Surrogates								
13C4-PFBA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C5-PFPeA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C5-PFHxA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C4-PFHpA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C8-PFOA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C9-PFNA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C6-PFDA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C7-PFUnA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C2-PFDoA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C2-PFTeDA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
d3-MeFOSAA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
d5-EtFOSAA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C8-FOSA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C3-PFBS	92.90	92.90	92.90	92.90	92.90	92.90	92.90	92.90	92.90
13C3-PFHxS	94.60	94.60	94.60	94.60	94.60	94.60	94.60	94.60	94.60
13C8-PFOS	95.70	95.70	95.70	95.70	95.70	95.70	95.70	95.70	95.70
13C2-4:2FTS	93.50	93.50	93.50	93.50	93.50	93.50	93.50	93.50	93.50
13C2-6:2FTS	94.90	94.90	94.90	94.90	94.90	94.90	94.90	94.90	94.90
13C2-8:2FTS	95.80	95.80	95.80	95.80	95.80	95.80	95.80	95.80	95.80
	Internal Standards								
13C3-PFBA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C2-PFOA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C2-PFDA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
13C4-PFOS	95.50	95.50	95.50	95.50	95.50	95.50	95.50	95.50	95.50

Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 08/06/2018 3:03:40 PM

Sample Name	JV20	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T17:43:25	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFTeDA_1	713.0 / 669.0	4.39	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.38	PFTeDA	0.041	0.051	ü
NMeFOSAA_1	570.0 / 419.0	3.46	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.46	NMeFOSAA	1.063	0.594	
NEtFOSAA_1	584.0 / 419.0	3.64	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.62	NEtFOSAA	0.115	0.059	

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QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 12:34:23 PM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T19:31:26	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFTeDA_1	713.0 / 669.0	4.35	1092.019974	1000.00	109.20
PFTeDA_2	713.0 / 169.0	4.35	1076.396624	1000.00	107.64
NMeFOSAA_1	570.0 / 419.0	3.43	1279.639396	1000.00	127.96
NMeFOSAA_2	570.0 / 512.0	3.43	1293.441578	1000.00	129.34
NEtFOSAA_1	584.0 / 419.0	3.59	1202.417283	1000.00	120.24
NEtFOSAA_2	584.0 / 483.0	3.59	1054.381106	1000.00	105.44

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QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 12:34:26 PM

Sample Name	JV25 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-05-31T20:46:59	**Data File**	Data18-0340_18-0338_18-0329.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFTeDA_1	713.0 / 669.0	4.34	984.591855	1000.00	98.46
PFTeDA_2	713.0 / 169.0	4.34	981.023395	1000.00	98.10
NMeFOSAA_1	570.0 / 419.0	3.43	1044.317207	1000.00	104.43
NMeFOSAA_2	570.0 / 512.0	3.43	1123.512034	1000.00	112.35
NEtFOSAA_1	584.0 / 419.0	3.59	861.991265	1000.00	86.20
NEtFOSAA_2	584.0 / 483.0	3.59	889.195734	1000.00	88.92

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QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 11:34:04 AM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:22:01	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.85	92.392625	100.00	92.39
d3-MeFOSAA	573.0 / 419.0	3.40	72.386040	100.00	72.39
d5-EtFOSAA	589.0 / 419.0	3.56	81.897383	100.00	81.90
13C5-PFHxA	318.0 / 273.0	1.76	100.963495	100.00	100.96
13C4-PFHpA	367.0 / 322.0	2.13	85.829500	100.00	85.83
13C8-PFOA	421.0 / 376.0	2.51	100.887482	100.00	100.89
13C9-PFNA	472.0 / 427.0	2.89	109.928663	100.00	109.93
13C6-PFDA	519.0 / 474.0	3.24	101.936278	100.00	101.94
13C7-PFUnA	570.0 / 525.0	3.55	95.592024	100.00	95.59
13C2-PFTeDA	715.0 / 670.0	4.32	91.885705	100.00	91.89
13C3-PFBS	302.0 / 99.0	1.48	67.883498	92.90	73.07
13C3-PFHxS	402.0 / 99.0	2.15	83.521220	94.60	88.29
13C8-PFOS	507.0 / 99.0	2.89	85.293851	95.70	89.13

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QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 11:34:06 AM

Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:50:26	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.82	91.901596	100.00	91.90
d3-MeFOSAA	573.0 / 419.0	3.38	98.379564	100.00	98.38
d5-EtFOSAA	589.0 / 419.0	3.54	109.673835	100.00	109.67
13C5-PFHxA	318.0 / 273.0	1.76	101.490247	100.00	101.49
13C4-PFHpA	367.0 / 322.0	2.12	98.422988	100.00	98.42
13C8-PFOA	421.0 / 376.0	2.49	109.374886	100.00	109.37
13C9-PFNA	472.0 / 427.0	2.87	103.568852	100.00	103.57
13C6-PFDA	519.0 / 474.0	3.22	98.997396	100.00	99.00
13C7-PFUnA	570.0 / 525.0	3.53	103.424432	100.00	103.42
13C2-PFTeDA	715.0 / 670.0	4.29	105.013962	100.00	105.01
13C3-PFBS	302.0 / 99.0	1.47	94.504784	92.90	101.73
13C3-PFHxS	402.0 / 99.0	2.14	96.072452	94.60	101.56
13C8-PFOS	507.0 / 99.0	2.87	82.497390	95.70	86.20

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QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 11:34:08 AM

Sample Name	JV25 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T05:38:23	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.81	90.232355	100.00	90.23
d3-MeFOSAA	573.0 / 419.0	3.36	110.450356	100.00	110.45
d5-EtFOSAA	589.0 / 419.0	3.52	117.383693	100.00	117.38
13C5-PFHxA	318.0 / 273.0	1.75	99.886295	100.00	99.89
13C4-PFHpA	367.0 / 322.0	2.11	92.238921	100.00	92.24
13C8-PFOA	421.0 / 376.0	2.48	98.360755	100.00	98.36
13C9-PFNA	472.0 / 427.0	2.85	94.271893	100.00	94.27
13C6-PFDA	519.0 / 474.0	3.20	100.348161	100.00	100.35
13C7-PFUnA	570.0 / 525.0	3.52	90.386364	100.00	90.39
13C2-PFTeDA	715.0 / 670.0	4.28	86.137542	100.00	86.14
13C3-PFBS	302.0 / 99.0	1.47	105.750839	92.90	113.83
13C3-PFHxS	402.0 / 99.0	2.13	98.256871	94.60	103.87
13C8-PFOS	507.0 / 99.0	2.85	92.296800	95.70	96.44

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QC Summary Report

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Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-04T21:22:01	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.50	1222.613042	1010.00	121.05
PFBS_2	298.9 / 99.0	1.49	1282.054752	1010.00	126.94
PFHxA_1	313.0 / 269.0	1.78	1033.754631	1010.00	102.35
PFHxA_2	313.0 / 119.0	1.78	955.601589	1010.00	94.61
PFHpA_1	363.0 / 319.0	2.14	1296.977891	1000.00	129.70
PFHpA_2	363.0 / 169.0	2.14	1190.590783	1000.00	119.06
PFHxS_1	399.0 / 80.0	2.16	974.115132	1010.00	96.45
PFHxS_2	399.0 / 99.0	2.16	916.120612	1010.00	90.71
PFOA_1	413.0 / 369.0	2.52	1047.835447	1000.00	104.78
PFOA_2	413.0 / 169.0	2.52	1016.283156	1000.00	101.63
PFNA_1	463.0 / 419.0	2.90	1024.526709	1000.00	102.45
PFNA_2	463.0 / 219.0	2.90	1038.812918	1000.00	103.88
PFOS_1	499.0 / 80.0	2.89	953.947744	1000.00	95.39
PFOS_2	499.0 / 99.0	2.89	921.121109	1000.00	92.11
PFDA_1	513.0 / 469.0	3.25	1064.124001	1000.00	106.41
PFDA_2	513.0 / 219.0	3.25	1018.730686	1000.00	101.87
PFUnA_1	563.0 / 519.0	3.57	1205.049404	1000.00	120.50
PFUnA_2	563.0 / 269.0	3.57	1158.899483	1000.00	115.89
PFDoA_1	613.0 / 569.0	3.86	1196.519429	1000.00	119.65
PFDoA_2	613.0 / 319.0	3.86	1254.536893	1000.00	125.45
PFTrDA_1	663.0 / 619.0	4.11	1166.321162	1000.00	116.63
PFTrDA_2	663.0 / 169.0	4.11	1147.062964	1000.00	114.71
PFTeDA_1	713.0 / 669.0	4.33	1134.008209	1000.00	113.40
PFTeDA_2	713.0 / 169.0	4.33	1128.205374	1000.00	112.82
NMeFOSAA_1	570.0 / 419.0	3.41	1212.973309	1000.00	121.30
NMeFOSAA_2	570.0 / 512.0	3.41	1184.149823	1000.00	118.41
NEtFOSAA_1	584.0 / 419.0	3.57	1019.933385	1000.00	101.99
NEtFOSAA_2	584.0 / 483.0	3.57	1115.379515	1000.00	111.54

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QC Summary Report

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Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T03:50:26	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.49	2639.835879	2525.00	104.55
PFBS_2	298.9 / 99.0	1.49	2707.245874	2525.00	107.22
PFHxA_1	313.0 / 269.0	1.77	2662.641936	2525.00	105.45
PFHxA_2	313.0 / 119.0	1.77	2427.067115	2525.00	96.12
PFHpA_1	363.0 / 319.0	2.13	2630.333823	2500.00	105.21
PFHpA_2	363.0 / 169.0	2.13	2855.473254	2500.00	114.22
PFHxS_1	399.0 / 80.0	2.15	2414.968635	2525.00	95.64
PFHxS_2	399.0 / 99.0	2.15	2309.208036	2525.00	91.45
PFOA_1	413.0 / 369.0	2.50	2324.498281	2500.00	92.98
PFOA_2	413.0 / 169.0	2.50	2248.025428	2500.00	89.92
PFNA_1	463.0 / 419.0	2.88	2429.010113	2500.00	97.16
PFNA_2	463.0 / 219.0	2.88	2469.227227	2500.00	98.77
PFOS_1	499.0 / 80.0	2.87	2697.453313	2500.00	107.90
PFOS_2	499.0 / 99.0	2.87	2715.631542	2500.00	108.63
PFDA_1	513.0 / 469.0	3.23	2463.954740	2500.00	98.56
PFDA_2	513.0 / 219.0	3.23	2514.214161	2500.00	100.57
PFUnA_1	563.0 / 519.0	3.55	2431.711587	2500.00	97.27
PFUnA_2	563.0 / 269.0	3.54	2320.941781	2500.00	92.84
PFDoA_1	613.0 / 569.0	3.83	2660.422602	2500.00	106.42
PFDoA_2	613.0 / 319.0	3.83	2922.470688	2500.00	116.90
PFTrDA_1	663.0 / 619.0	4.08	2301.131656	2500.00	92.05
PFTrDA_2	663.0 / 169.0	4.08	2237.444158	2500.00	89.50
PFTeDA_1	713.0 / 669.0	4.30	2551.512843	2500.00	102.06
PFTeDA_2	713.0 / 169.0	4.30	2466.947297	2500.00	98.68
NMeFOSAA_1	570.0 / 419.0	3.39	2716.449658	2500.00	108.66
NMeFOSAA_2	570.0 / 512.0	3.39	2515.810430	2500.00	100.63
NEtFOSAA_1	584.0 / 419.0	3.55	2164.068621	2500.00	86.56
NEtFOSAA_2	584.0 / 483.0	3.55	2271.114776	2500.00	90.84

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QC Summary Report

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Sample Name	JV25 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-05T05:38:23	**Data File**	06022018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.49	1050.086688	1010.00	103.97
PFBS_2	298.9 / 99.0	1.49	1076.249163	1010.00	106.56
PFHxA_1	313.0 / 269.0	1.76	971.296007	1010.00	96.17
PFHxA_2	313.0 / 119.0	1.76	987.382842	1010.00	97.76
PFHpA_1	363.0 / 319.0	2.12	1022.745515	1000.00	102.27
PFHpA_2	363.0 / 169.0	2.12	1042.155456	1000.00	104.22
PFHxS_1	399.0 / 80.0	2.14	1162.716444	1010.00	115.12
PFHxS_2	399.0 / 99.0	2.14	1214.401227	1010.00	120.24
PFOA_1	413.0 / 369.0	2.49	911.718256	1000.00	91.17
PFOA_2	413.0 / 169.0	2.49	880.995344	1000.00	88.10
PFNA_1	463.0 / 419.0	2.86	1058.836582	1000.00	105.88
PFNA_2	463.0 / 219.0	2.86	1036.364192	1000.00	103.64
PFOS_1	499.0 / 80.0	2.86	1281.291474	1000.00	128.13
PFOS_2	499.0 / 99.0	2.86	1294.383527	1000.00	129.44
PFDA_1	513.0 / 469.0	3.21	1008.690531	1000.00	100.87
PFDA_2	513.0 / 219.0	3.21	853.545941	1000.00	85.35
PFUnA_1	563.0 / 519.0	3.53	1136.268110	1000.00	113.63
PFUnA_2	563.0 / 269.0	3.53	1026.955329	1000.00	102.70
PFDoA_1	613.0 / 569.0	3.82	1065.065666	1000.00	106.51
PFDoA_2	613.0 / 319.0	3.82	1092.556277	1000.00	109.26
PFTrDA_1	663.0 / 619.0	4.07	1032.622651	1000.00	103.26
PFTrDA_2	663.0 / 169.0	4.07	1039.853750	1000.00	103.99
PFTeDA_1	713.0 / 669.0	4.29	1064.956042	1000.00	106.50
PFTeDA_2	713.0 / 169.0	4.29	1050.703893	1000.00	105.07
NMeFOSAA_1	570.0 / 419.0	3.37	1037.106995	1000.00	103.71
NMeFOSAA_2	570.0 / 512.0	3.37	1002.510581	1000.00	100.25
NEtFOSAA_1	584.0 / 419.0	3.53	991.928253	1000.00	99.19
NEtFOSAA_2	584.0 / 483.0	3.53	844.924206	1000.00	84.49

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QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:52:27 PM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T22:19:21	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.54	1176.558923	1010.00	116.49
PFBS_2	298.9 / 99.0	1.54	1139.653412	1010.00	112.84
PFHxA_1	313.0 / 269.0	1.83	1253.351991	1010.00	124.09
PFHxA_2	313.0 / 119.0	1.83	1209.151708	1010.00	119.72
PFHxS_1	399.0 / 80.0	2.21	1063.878654	1010.00	105.33
PFHxS_2	399.0 / 99.0	2.21	1104.098639	1010.00	109.32
PFOA_1	413.0 / 369.0	2.57	1130.613191	1000.00	113.06
PFOA_2	413.0 / 169.0	2.57	1076.253546	1000.00	107.63
PFNA_1	463.0 / 419.0	2.95	1257.443907	1000.00	125.74
PFNA_2	463.0 / 219.0	2.95	1156.611404	1000.00	115.66
PFOS_1	499.0 / 80.0	2.94	1106.343032	1000.00	110.63
PFOS_2	499.0 / 99.0	2.94	1201.226723	1000.00	120.12

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QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 2:52:30 PM

Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T02:14:26	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_1
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.54	2575.262951	2500.00	103.01
PFBS_2	298.9 / 99.0	1.54	2551.974587	2500.00	102.08
PFHxA_1	313.0 / 269.0	1.83	2429.599165	2500.00	97.18
PFHxA_2	313.0 / 119.0	1.83	2550.814018	2500.00	102.03
PFHxS_1	399.0 / 80.0	2.21	2591.992825	2500.00	103.68
PFHxS_2	399.0 / 99.0	2.21	2625.651310	2500.00	105.03
PFOA_1	413.0 / 369.0	2.57	2378.513667	2500.00	95.14
PFOA_2	413.0 / 169.0	2.57	2399.457377	2500.00	95.98
PFNA_1	463.0 / 419.0	2.94	2523.907409	2500.00	100.96
PFNA_2	463.0 / 219.0	2.94	2568.810533	2500.00	102.75
PFOS_1	499.0 / 80.0	2.93	2268.280426	2500.00	90.73
PFOS_2	499.0 / 99.0	2.93	2526.569920	2500.00	101.06

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QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 3:05:33 PM

Sample Name	JV24 ISC	**Injection Vial**	1
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T13:33:43	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFOS_1	499.0 / 80.0	2.99	531.552183	500.00	106.31
PFOS_2	499.0 / 99.0	2.99	501.619494	500.00	100.32

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QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 3:05:35 PM

Sample Name	JV25 CCV	**Injection Vial**	5
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T14:16:30	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_BASE_D_2
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFOS_1	499.0 / 80.0	2.96	974.715815	1000.00	97.47
PFOS_2	499.0 / 99.0	2.97	988.790225	1000.00	98.88

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QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 11:34:49 AM

Sample Name	JW32 ICC	**Injection Vial**	12
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-07T22:19:21	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C3-PFBS	302.0 / 99.0	1.53	81.957917	92.90	88.22

BATTELLE

QC Summary Report

Created with Analyst Reporter
Printed: 08/06/2018 11:34:54 AM

Sample Name	JV26 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-06-08T02:14:26	**Data File**	6072018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0340_SIS_D
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C3-PFBS	302.0 / 99.0	1.52	93.218431	92.90	100.34

DILUTION RECORD

Battelle ID	Client ID	Analyte	Extract	Analysis Date/Time
CQ859PB-FS	Procedural Blank	PFHxA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	PFHpA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	PFOA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	PFNA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	PFDA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	PFUnA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	PFDoA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	PFTrDA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	PFTeDA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	NMeFOSAA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	NEtFOSAA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	PFBS	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	PFHxS	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	PFOS	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	13C5-PFHxA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	13C4-PFHpA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	13C8-PFOA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	13C9-PFNA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	13C6-PFDA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	13C7-PFUnA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	13C2-PFDoA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	13C2-PFTeDA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	d3-MeFOSAA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	d5-EtFOSAA	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	13C3-PFBS	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	13C3-PFHxS	CQ859PB-FS(3)	6/5/18 3:28
CQ859PB-FS	Procedural Blank	13C8-PFOS	CQ859PB-FS(3)	6/5/18 3:28
CQ860LCS-FS	Laboratory Control Sample	PFHxA	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	PFHpA	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	PFOA	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	PFNA	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	PFDA	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	PFUnA	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	PFDoA	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	PFTrDA	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	PFTeDA	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	NMeFOSAA	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	NEtFOSAA	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	PFBS	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	PFHxS	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	PFOS	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	13C5-PFHxA	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	13C4-PFHpA	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	13C8-PFOA	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	13C9-PFNA	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	13C6-PFDA	CQ860LCS-FS(3)	6/5/18 3:39

CQ860LCS-FS	Laboratory Control Sample	13C7-PFUnA	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	13C2-PFDoA	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	13C2-PFTeDA	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	d3-MeFOSAA	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	d5-EtFOSAA	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	13C3-PFBS	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	13C3-PFHxS	CQ860LCS-FS(3)	6/5/18 3:39
CQ860LCS-FS	Laboratory Control Sample	13C8-PFOS	CQ860LCS-FS(3)	6/5/18 3:39
J6241-FS	FFTA-FD01-052418	PFHxA	J6241-FS-D(9)	6/8/18 1:21
J6241-FS	FFTA-FD01-052418	PFHpA	J6241-FS-D(7)	6/5/18 4:22
J6241-FS	FFTA-FD01-052418	PFOA	J6241-FS-D(9)	6/8/18 1:21
J6241-FS	FFTA-FD01-052418	PFNA	J6241-FS-D(9)	6/8/18 1:21
J6241-FS	FFTA-FD01-052418	PFDA	J6241-FS-D(7)	6/5/18 4:22
J6241-FS	FFTA-FD01-052418	PFUnA	J6241-FS-D(7)	6/5/18 4:22
J6241-FS	FFTA-FD01-052418	PFDoA	J6241-FS-D(6)	6/5/18 4:12
J6241-FS	FFTA-FD01-052418	PFTrDA	J6241-FS-D(6)	6/5/18 4:12
J6241-FS	FFTA-FD01-052418	PFTeDA	J6241-FS(3)	5/31/18 20:25
J6241-FS	FFTA-FD01-052418	NMeFOSAA	J6241-FS(3)	5/31/18 20:25
J6241-FS	FFTA-FD01-052418	NEtFOSAA	J6241-FS(3)	5/31/18 20:25
J6241-FS	FFTA-FD01-052418	PFBS	J6241-FS-D(9)	6/8/18 1:21
J6241-FS	FFTA-FD01-052418	PFHxS	J6241-FS-D(9)	6/8/18 1:21
J6241-FS	FFTA-FD01-052418	PFOS	J6241-FS-D(11)	6/8/18 13:55
J6241-FS	FFTA-FD01-052418	13C5-PFHxA	J6241-FS-D(7)	6/5/18 4:22
J6241-FS	FFTA-FD01-052418	13C4-PFHpA	J6241-FS-D(7)	6/5/18 4:22
J6241-FS	FFTA-FD01-052418	13C8-PFOA	J6241-FS-D(7)	6/5/18 4:22
J6241-FS	FFTA-FD01-052418	13C9-PFNA	J6241-FS-D(7)	6/5/18 4:22
J6241-FS	FFTA-FD01-052418	13C6-PFDA	J6241-FS-D(7)	6/5/18 4:22
J6241-FS	FFTA-FD01-052418	13C7-PFUnA	J6241-FS-D(7)	6/5/18 4:22
J6241-FS	FFTA-FD01-052418	13C2-PFDoA	J6241-FS-D(7)	6/5/18 4:22
J6241-FS	FFTA-FD01-052418	13C2-PFTeDA	J6241-FS-D(7)	6/5/18 4:22
J6241-FS	FFTA-FD01-052418	d3-MeFOSAA	J6241-FS-D(7)	6/5/18 4:22
J6241-FS	FFTA-FD01-052418	d5-EtFOSAA	J6241-FS-D(7)	6/5/18 4:22
J6241-FS	FFTA-FD01-052418	13C3-PFBS	J6241-FS-D(9)	6/8/18 1:21
J6241-FS	FFTA-FD01-052418	13C3-PFHxS	J6241-FS-D(7)	6/5/18 4:22
J6241-FS	FFTA-FD01-052418	13C8-PFOS	J6241-FS-D(7)	6/5/18 4:22
J6242-FS	FFTA-SW01-052418	PFHxA	J6242-FS-D(9)	6/8/18 1:31
J6242-FS	FFTA-SW01-052418	PFHpA	J6242-FS-D(7)	6/5/18 4:55
J6242-FS	FFTA-SW01-052418	PFOA	J6242-FS-D(9)	6/8/18 1:31
J6242-FS	FFTA-SW01-052418	PFNA	J6242-FS-D(9)	6/8/18 1:31
J6242-FS	FFTA-SW01-052418	PFDA	J6242-FS-D(7)	6/5/18 4:55
J6242-FS	FFTA-SW01-052418	PFUnA	J6242-FS-D(7)	6/5/18 4:55
J6242-FS	FFTA-SW01-052418	PFDoA	J6242-FS-D(6)	6/5/18 4:44
J6242-FS	FFTA-SW01-052418	PFTrDA	J6242-FS-D(6)	6/5/18 4:44
J6242-FS	FFTA-SW01-052418	PFTeDA	J6242-FS(3)	5/31/18 20:36
J6242-FS	FFTA-SW01-052418	NMeFOSAA	J6242-FS(3)	5/31/18 20:36
J6242-FS	FFTA-SW01-052418	NEtFOSAA	J6242-FS(3)	5/31/18 20:36
J6242-FS	FFTA-SW01-052418	PFBS	J6242-FS-D(9)	6/8/18 1:31

J6242-FS	FFTA-SW01-052418	PFHxS	J6242-FS-D(9)	6/8/18 1:31
J6242-FS	FFTA-SW01-052418	PFOS	J6242-FS-D(11)	6/8/18 14:05
J6242-FS	FFTA-SW01-052418	13C5-PFHxA	J6242-FS-D(7)	6/5/18 4:55
J6242-FS	FFTA-SW01-052418	13C4-PFHpA	J6242-FS-D(7)	6/5/18 4:55
J6242-FS	FFTA-SW01-052418	13C8-PFOA	J6242-FS-D(7)	6/5/18 4:55
J6242-FS	FFTA-SW01-052418	13C9-PFNA	J6242-FS-D(7)	6/5/18 4:55
J6242-FS	FFTA-SW01-052418	13C6-PFDA	J6242-FS-D(7)	6/5/18 4:55
J6242-FS	FFTA-SW01-052418	13C7-PFUnA	J6242-FS-D(7)	6/5/18 4:55
J6242-FS	FFTA-SW01-052418	13C2-PFDoA	J6242-FS-D(7)	6/5/18 4:55
J6242-FS	FFTA-SW01-052418	13C2-PFTeDA	J6242-FS-D(7)	6/5/18 4:55
J6242-FS	FFTA-SW01-052418	d3-MeFOSAA	J6242-FS-D(7)	6/5/18 4:55
J6242-FS	FFTA-SW01-052418	d5-EtFOSAA	J6242-FS-D(7)	6/5/18 4:55
J6242-FS	FFTA-SW01-052418	13C3-PFBS	J6242-FS-D(9)	6/8/18 1:31
J6242-FS	FFTA-SW01-052418	13C3-PFHxS	J6242-FS-D(7)	6/5/18 4:55
J6242-FS	FFTA-SW01-052418	13C8-PFOS	J6242-FS-D(7)	6/5/18 4:55

DODCMD_ID	INSTALLATION_ID	SDG	SITE_NAME	NORM_SITE_NAME	LOCATION_NAME	LOCATION_TYPE_DESC	COORD_X	COORD_Y	CONTRACT_ID	DO_CTO_NUMBER	CONTR_NAME	SAMPLE_NAME
SOUTHEAST	JACKSONVILLE_NAS	18-0340	UST 000015	UST 000015	FFTA-SW01	Surface water body - nonspecific	440360.06	2147170.13	N6247016D9008	N6945017F0375	TETRA TECH, INC.	FFTA-SW01-052418-D
SOUTHEAST	JACKSONVILLE_NAS	18-0340	UST 000015	UST 000015	FFTA-SW01	Surface water body - nonspecific	440360.06	2147170.13	N6247016D9008	N6945017F0375	TETRA TECH, INC.	FFTA-SW01-052418

DODCMD_ID	INSTALLATION_ID	SDG	SITE_NAME	SAMPLE_MATRIX_DESC	SAMPLE_TYPE_DESC	COLLECT_DATE	ANALYTICAL_METHOD	ANALYTICAL_METHOD_GRP_DESC	RES_META_ID
SOUTHEAST	JACKSONVILLE_NAS	18-0340	UST 000015	Surface water	Field duplicate	24-May-18	537_MOD	Perfluoroalkyl Compounds	20190201100027.00
SOUTHEAST	JACKSONVILLE_NAS	18-0340	UST 000015	Surface water	Normal (Regular)	24-May-18	537_MOD	Perfluoroalkyl Compounds	20190201100027.00