



**Groundwater Sample Results,  
Level 4 Laboratory Report, Electronic Data Deliverable,  
Data Validation Report, and the Sample Location Report,  
SDG 18-0338**

*Naval Air Station Jacksonville  
Jacksonville, Florida*

July 2019

N00207\_004428  
NAS JACKSONVILLE, FL  
SSIC 5000-33c

**LABORATORY DATA PACKAGE 18-0338 REVISION 01 NAS JACKSONVILLE**  
**FL**  
06/06/2018  
BATTELLE

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**  
*GW, GW DUP, GW QC, SW, SW*  
*Batch 18-0338*  
*Package DP-18-0131*

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

Submitted by:  
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141 Longwater Drive Suite 202  
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Analyst Approval:		<a href="mailto:schumitzd@battelle.org">schumitzd@battelle.org</a> 2018.06.06 18:16:47 -04'00'
QC Chemist Approval:		Digitally signed by devinec@battelle.org DN: cn=devinec@battelle.org Date: 2018.06.06 18:20:47 -04'00'
Project Manager Approval:		Digitally signed by Jonathan Thorn Date: 2018.06.07 12:46:18 -04'00'


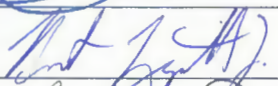



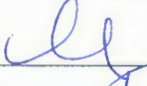
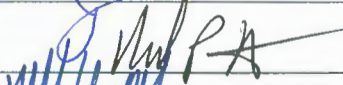

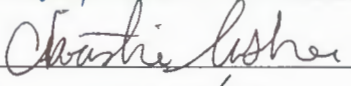

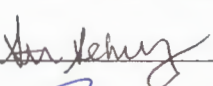



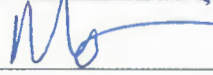

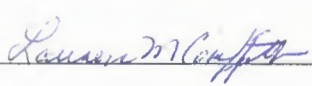
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It can be done



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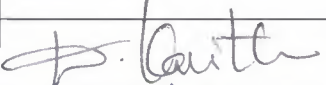




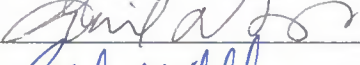
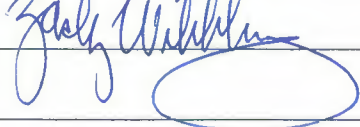
<b>1</b>	<b><i>Work Plan</i></b> Laboratory Work Plan, Addendums To Work Plan, Memos From Project Manager, Special Instructions, Chain-of-Custody Reports.	<b>1</b>
<b>2</b>	<b><i>Tables</i></b> Analytical Data Tables, Qualifier Definitions.	<b>26</b>
<b>3</b>	<b><i>Miscellaneous Documentation</i></b> Case Narrative, Miscellaneous Documentation Form, Quality Control Summary, Example Calculations, Internal Standard Recovery Report, Retention Time Window Report.	<b>40</b>
<b>4</b>	<b><i>Sample Preparation Records</i></b> Sample Preparation Records, Dilution Worksheets, Standard Preparation Records, Certificates Of Analysis, GPC Check Report.	<b>177</b>
<b>5</b>	<b><i>Analytical Calibrations</i></b> Analytical Sequence, Analytical Method, Tune Report, Initial Calibration, Pesticide Degradation Report, RF Summary, Calibration Verifications, Independent Calibration Verification Check.	<b>194</b>
<b>6</b>	<b><i>Analytical Data</i></b> Raw Data Quantification Reports.	<b>304</b>
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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
FRANC PALA		FP	4-4-2018
Carla Devine		CRD	4/4/18
Denise Schmitz		DUS	4/4/18
Carol Ann McManis		CM	4/4/2018
Rich Rostucci		RR	4/4/2018
Michael Mendez		MM	4/4/2018
Christie Usher		CU	4/4/18
Kevin Matrone		KM	4/4/18
Stephanie Schmitz		SAS	4/4/18
Jordan Tower		JT	4/4/18
KRISTEN NICHOLS		KN	4/4/18
Quimico H Brown		CB	4/4/18
Matt Schmitz		MS	4-4-18
Sam Guimaraes		SG	4-4-18
Lauren Griffith		LMG	4.4.18

## Signature Page

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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 Stender		Tracy	04/04/18
Ellyn M Fitch		EF	12-April-2018
Gail DeRuzzo		GD	4/18/18
Zachary Willenberg		Z/W	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@tetrattech.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.



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## WORK/QUALITY ASSURANCE PROJECT PLAN

### 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:	<b>5-370-06</b>
SOP Title:	<i>Extraction of Poly and Perfluoroalkyl Substances from Environmental Matrices</i>
Sample Size:	250 ml
SIS and LCS/MS Compounds:	Defined in Table 2.
Deviations:	None
Comments:	<ul style="list-style-type: none"> <li>FRB samples will only be extracted and analyzed if the associated field samples have results above the LOQ.</li> </ul>

**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



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## WORK/QUALITY ASSURANCE PROJECT PLAN

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.

- 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.



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## WORK/QUALITY ASSURANCE PROJECT PLAN

### 2.2. DELIVERABLES

<b>Deliverables Due:</b>	6/8/2018
<b>LIMS Reports:</b>	No
<b>Histograms:</b>	No
<b>Excel Tables:</b>	Yes
<b>EICs:</b>	No
<b>Chromatograms:</b>	No
<b>EDDs:</b>	Yes
<b>Comments:</b>	<ul style="list-style-type: none"> <li>• 14-day TAT</li> <li>• Level IV validation package, compliant with QSM Table B-15.</li> <li>• Tetra Tech EDD format.</li> </ul>

### 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.





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## WORK/QUALITY ASSURANCE PROJECT PLAN

**Table 5. Schedule of Laboratory Activities**

<b>Activity:</b>	<b>Start Date:</b>	<b>End Date:</b>	<b>TAT (days):</b>	<b>Comment:</b>
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)**

<b>Labor Activity:</b>	<b>Hours/ Batch:</b>	<b>Batches:</b>	<b>Total Hours:</b>	<b>Comment:</b>
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

<b>Project Test Code Name:</b>	Master_369
<b>SOP Reference:</b>	5-369 - Analysis of Perfluoroalkyl Substances in Environmental Samples by Liquid Chromatography and Tandem Mass Spectrometry (LC-MS/MS)
<b>Description:</b>	PFAS by DoD QSM 5.1 Table B-15
<b>Matrix:</b>	L - Liquid Samples, like water or sea water, prepared and analyzed under the same class of detection limits.
<b>Detection Limit Study:</b>	5-369
<b>Instrument:</b>	LC-MS/MS
<b>MQO Criteria</b>	Universal_LC
<b>Standard Report:</b>	Standard Result Report

Method Specific Reporting		Holding Times (days)	Data Flags
<b>Result Units:</b>	ng/L	<b>Unit Conversion:</b> (none)	<b>Sample:</b> 14 <b>DL_Flag:</b> U
<b>Weight Basis:</b>	LIQUID	<b>Result Format:</b> Fixed Digits	<b>Frozen:</b> 40 <b>RL_Flag:</b> J
<b>Standard Basis:</b>	SIS	<b># of Figures/Digits:</b> 2	<b>Extract:</b> 28 <b>PB_Flag:</b> B
<b>Oil Weight Basis:</b>	No	<b>Oil Weight Source:</b> Oil Weight	<b>DIL_Flag:</b> D
<b>U-Value Substitution:</b>	U-Flag=MD	<b>Histograms:</b> No	<b>HT_Flag:</b> T
<b>ECD_Reporting:</b>	No		

No:	Analyte:	Report Name:	Type	RIS	SIS	Hidden:	Graph:
1	Perfluoro-n-hexanoic acid	PFHxA	T		13C5-PFHxA	No	No
2	Perfluoro-n-heptanoic Acid	PFHpA	T		13C4-PFHpA	No	No
3	Perfluoro-n-octanoic Acid	PFOA	T		13C8-PFOA	No	No
4	Perfluorononanoic Acid	PFNA	T		13C9-PFNA	No	No
5	Perfluoro-n-decanoic Acid	PFDA	T		13C6-PFDA	No	No
6	Perfluoro-n-undecanoic acid	PFUnA	T		13C7-PFUnA	No	No
7	Perfluoro-n-dodecanoic acid	PFDoA	T		13C2-PFDoA	No	No
8	Perfluoro-n-tridecanoic acid	PFTTrDA	T		13C2-PFTeDA	No	No
9	Perfluoro-n-tetradecanoic acid	PFTeDA	T		13C2-PFTeDA	No	No
10	N-methylperfluoro-1-octanesulfonamidoacetic acid	NMeFOSAA	T		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-butanefulfonate	PFBS	T		13C3-PFBS	No	No
13	Perfluoro-1-hexanesulfonate	PFHxS	T		13C3-PFHxS	No	No
14	Perfluoro-1-octanesulfonate	PFOS	T		13C8-PFOS	No	No
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
<b>Total Analytes:</b>		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*

**Degradation Check Criteria:**

*None*



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## WORK/QUALITY ASSURANCE PROJECT PLAN

### Attachment 3: Method Quality Objectives

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



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## WORK/QUALITY ASSURANCE PROJECT PLAN

### Attachment 3: Method Quality Objectives

<b>MQO Application</b>	<i>Universal_LC</i>		
<b>MQO:</b>	<b>Acceptance Criteria</b>	<b>Qual:</b>	<b>Corrective Action:</b>
Analytical Triplicate Precision	Organics results less than 30% Relative Standard Deviation (RSD). Analyte concentration must be > 5x MDL.  Organics Results in the Original is less than 5 times the MDL	N  n	Review with Project Manager; re-analyze or justify reporting results in the project records.
Surrogate Compound Recovery	Recovery results between 50% and 150%.	N	Review with Project Manager; re-analyze or justify reporting results in the project records.
Control Oil	RPD < 30% for at least 90% of analytes	N	Results examined by project manager, task leader, or subcontractor lab manager. Reextraction, reanalysis, or justification documented.
Instrument Calibration	5-369-6: 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.

**Battelle Project No:**

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**Sample Receipt Form**Approved:  Authorized 

Project Number: NAS JAX PFAS

Client: Tetrattech

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  UnknownInitial pH 5-9?:  Yes  No  NA  
*If no, individual sample adjustments on the Auxiliary Sample Receipt Form*Total Residual Chlorine Present?:  Yes  No  NA  
*If yes, individual sample adjustments on the Auxiliary Sample Receipt Form*Head Space <1% in samples for water VOC analysis:  Yes  No  NA  
*Individual sample deviations noted on sample log*Samples Containers: Samples returned in PC-grade jars:  Yes  No  Unknown /Lot No.: UnKnown

Storage Location: Custody: Refrigerator - R0119 (NA) BDO IDs Assigned: J6241 - J6254

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

Approved By: \_\_\_\_\_ Approved On: \_\_\_\_\_

Authorized By: \_\_\_\_\_ Authorized On: \_\_\_\_\_



## Report Corrective Actions

Corrective Action No: 1 of 1

Authorized  Approved:

COC Client: Tetrattech

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: \_\_\_\_\_



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: Tetrattech

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



Chain-of-Custody

Client Contact Information		Project Manager: <u>Mark Peterson</u>			Sampling Site: <u>NAS JAY</u>		Site Information: <u>DRMO, FFTA, PSC 51</u>		
		Sampler Information (print name): <u>Dave Siefken</u>			Preservative		COC #		
		Phone: <u>924-334-7260</u>							
		Email: <u>David.Siefken @ Tetra Tech</u>			Analysis		Page#		
		Turnaround Time (TAT) Requested:							
Project Name: <u>SEO 375</u>		Normal <input type="checkbox"/> Priority <input type="checkbox"/> RUSH <input type="checkbox"/>			PFAS				
Project No.: <u>NAS JAY PFAS</u>		Time Zone:							
Sample Identification		<u>2018</u>		Matrix Sample Type	Matrix	Total # of Cont.			
	Sample Date	Sample Time							
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	MS/MSD		
J6253	DRMO - MW2 - 052418		1455			1			
Receipt Temperature: (°C)		Samples Intact: <u>Yes</u> - No			Samples on Ice: <u>Yes</u> - No		Receipt Comments:		
0.7									
Relinquished by (Print/Sign): <u>[Signature]</u>		Company: <u>Tetra Tech</u>		Date/Time: <u>5-24-18 1830</u>		Received by (Print/Sign): <u>[Signature]</u>		Company: <u>Battelle</u>	
								Date/Time: <u>5/25/18 1030</u>	
Relinquished by (Print/Sign):		Company:		Date/Time:		Received by (Print/Sign):		Company:	
Relinquished by (Print/Sign):		Company:		Date/Time:		Received by (Print/Sign):		Company:	
Comments:									



### Chain-of-Custody

<u>Client Contact Information</u>		Project Manager: <u>Marc Peterson</u>			Sampling Site: <u>DRMO</u>		Site Information:	
		Sampler Information (print name): Phone: <u>David Stiefen</u> <u>900.334.7260</u> Email:			Preservative		COC #	
		Turnaround Time (TAT) Requested:						
Project Name: <u>NAS JAK PFAS</u>		Normal Priority RUSH			Analysis		Page#	
Project No.: <u>SEO-375</u>		Time Zone:						
<u>J6254</u>	Sample Identification	Sample Date	Sample Time	Matrix Sample Type	Matrix	Total # of Cont.		
	<u>DRMO-FD03-052418</u>	<u>5/24</u>	<u>1405</u>	<u>GW</u>		<u>1</u>	<u>Cool 42</u>	
Receipt Temperature: (°C) <u>0.7</u>		Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No			Samples on Ice: <input checked="" type="radio"/> Yes <input type="radio"/> No		Receipt Comments:	
Relinquished by (Print/Sign) <u>[Signature]</u>		Company: <u>[Signature]</u>	Date/Time: <u>5-24-18 1830</u>		Received by (Print/Sign) <u>[Signature]</u>		Company: <u>Battelle</u>	Date/Time: <u>5/25/18 1030</u>
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**

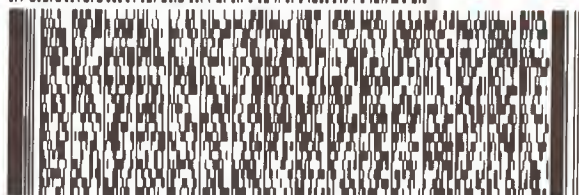
**0.7°**  
**Therm-2**  
**MOS**  
**10:30**

(781) 881-5588

REF: 112608005-SE0375

INU:

DEPT:



**FedEx**  
Express



TRK# 8115 9773 0019  
0215

**FRI - 25 MAY 10:30A**  
**PRIORITY OVERNIGHT**

**AHS RES**  
**02061**

**MA-US BOS**

**XE XPUA**



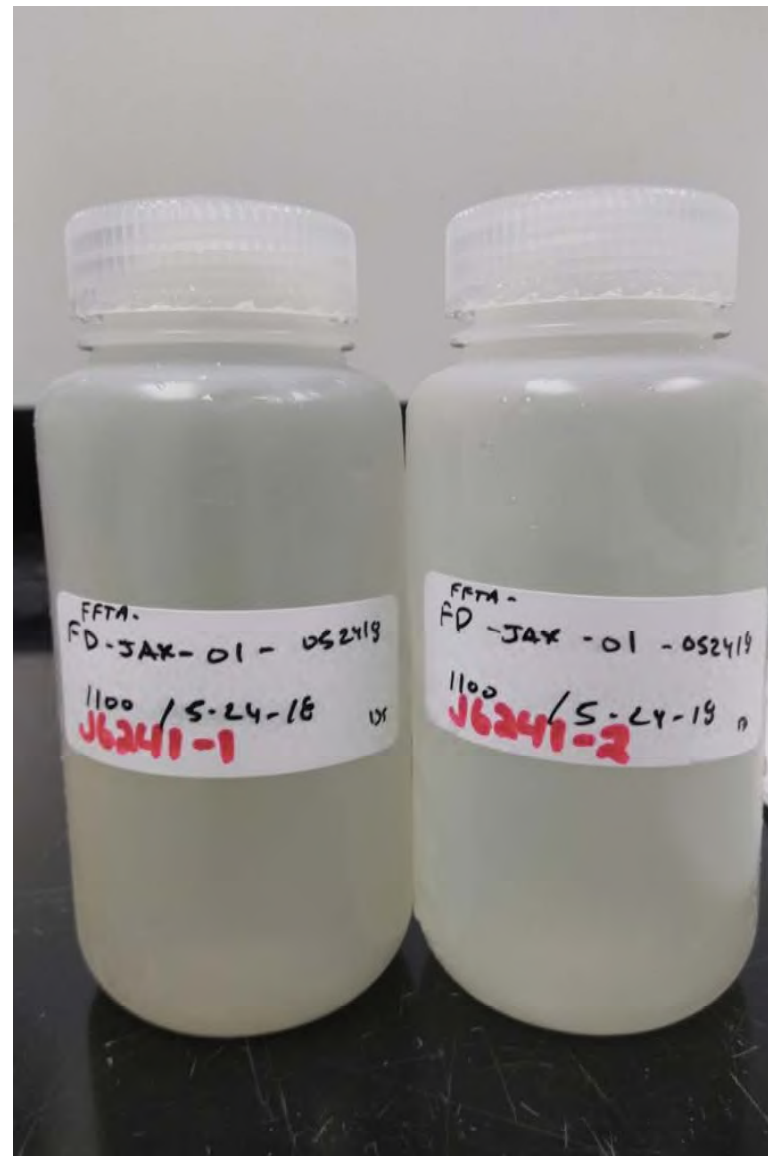
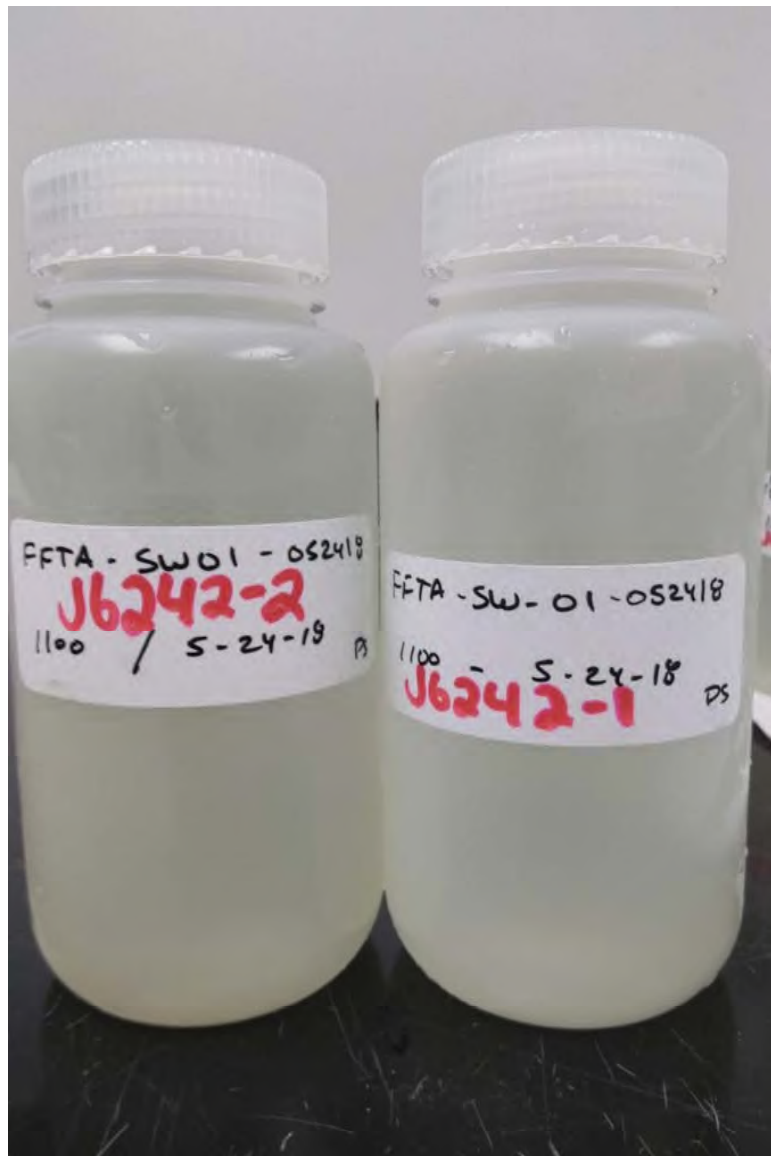
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Total Packages Total Weight

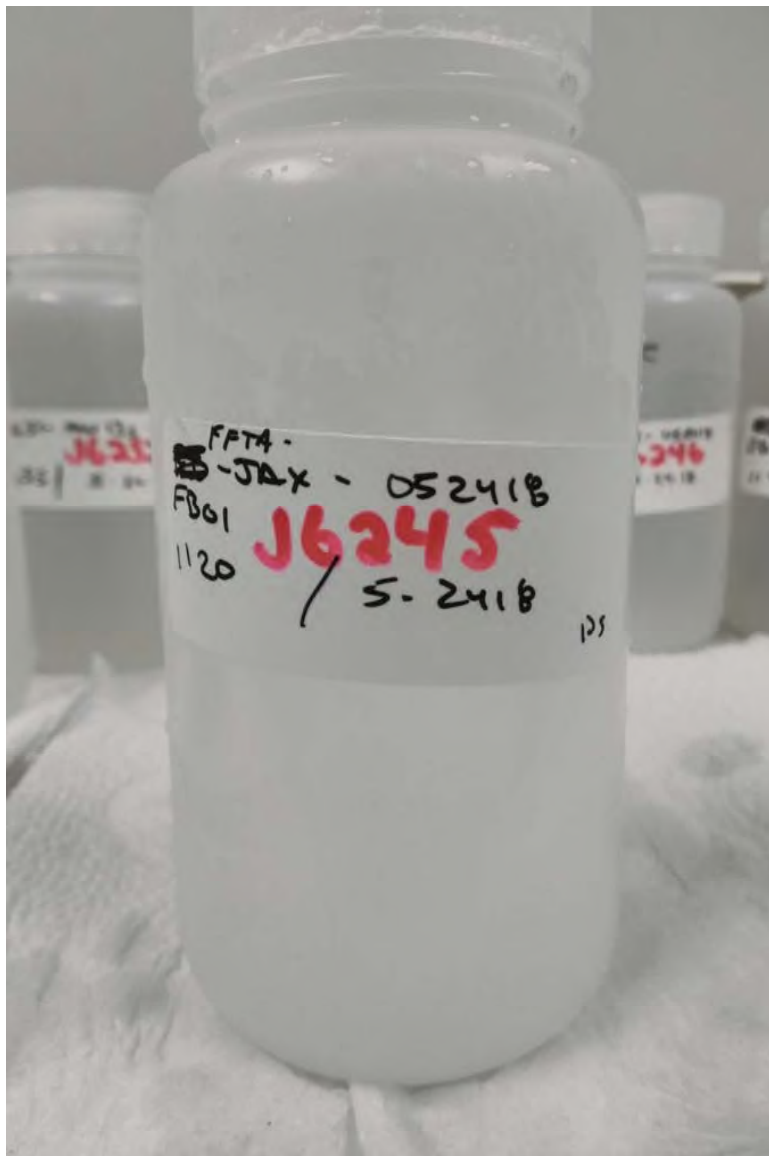
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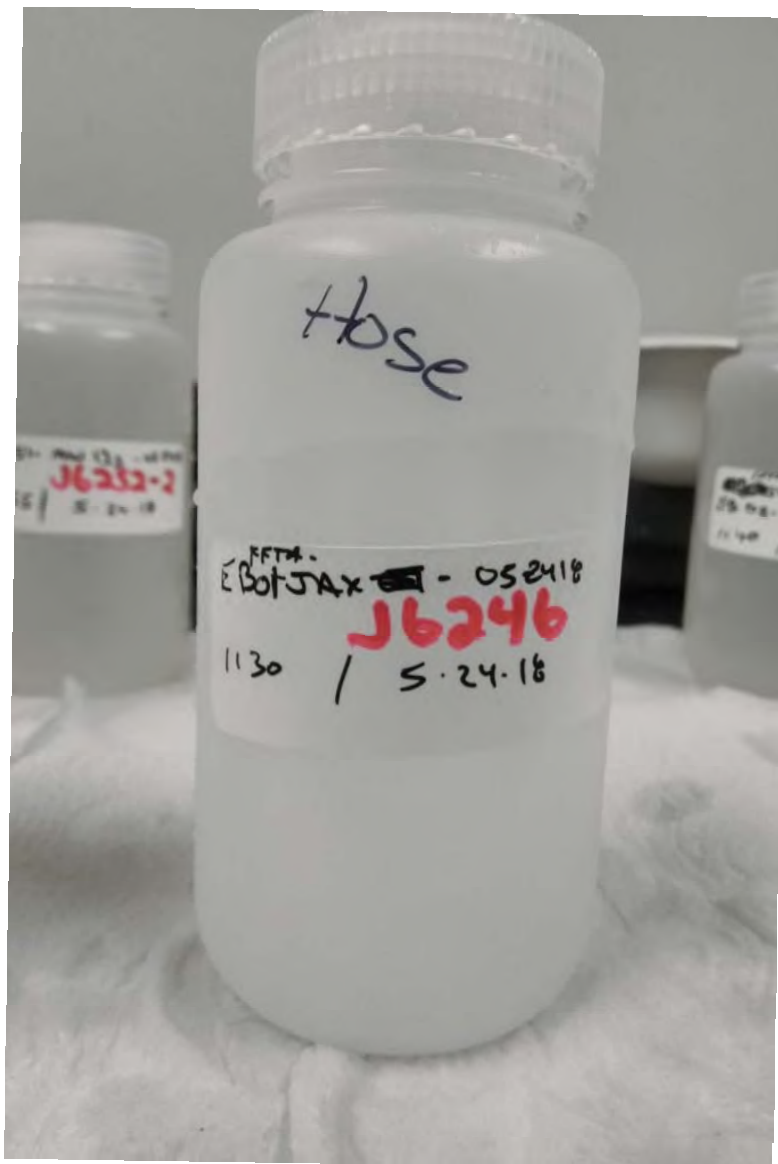
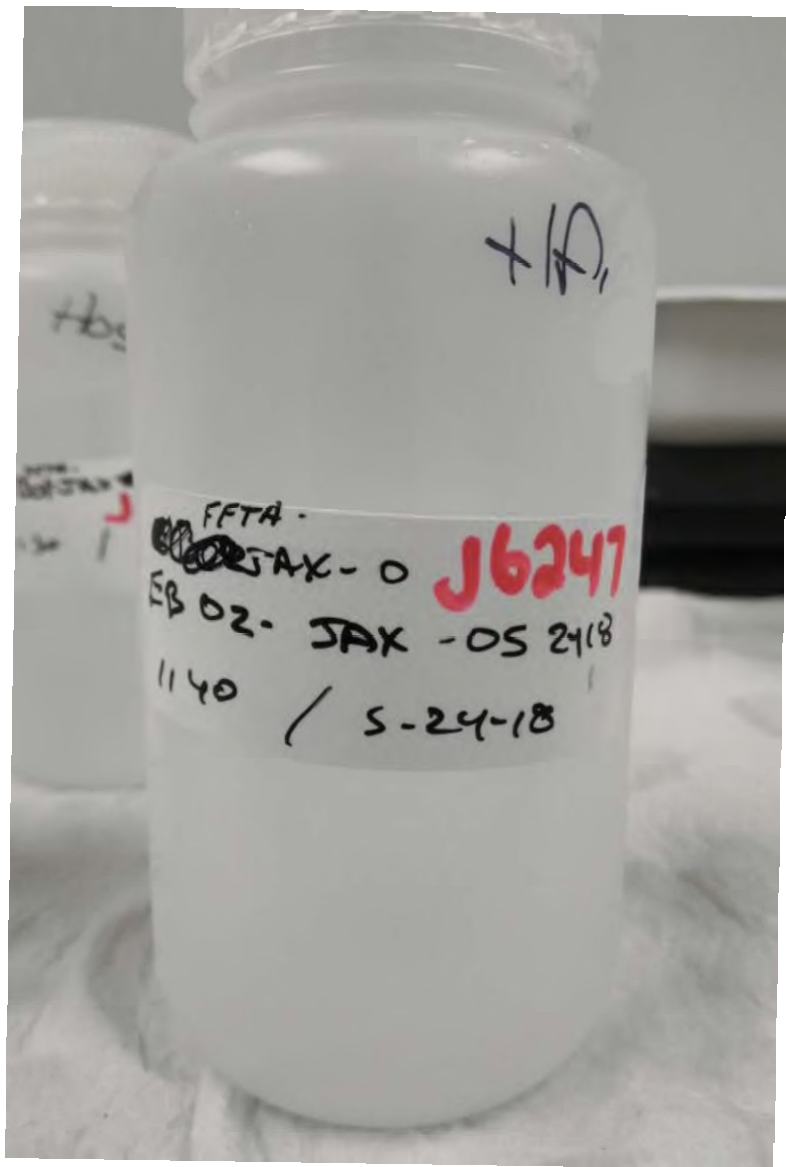
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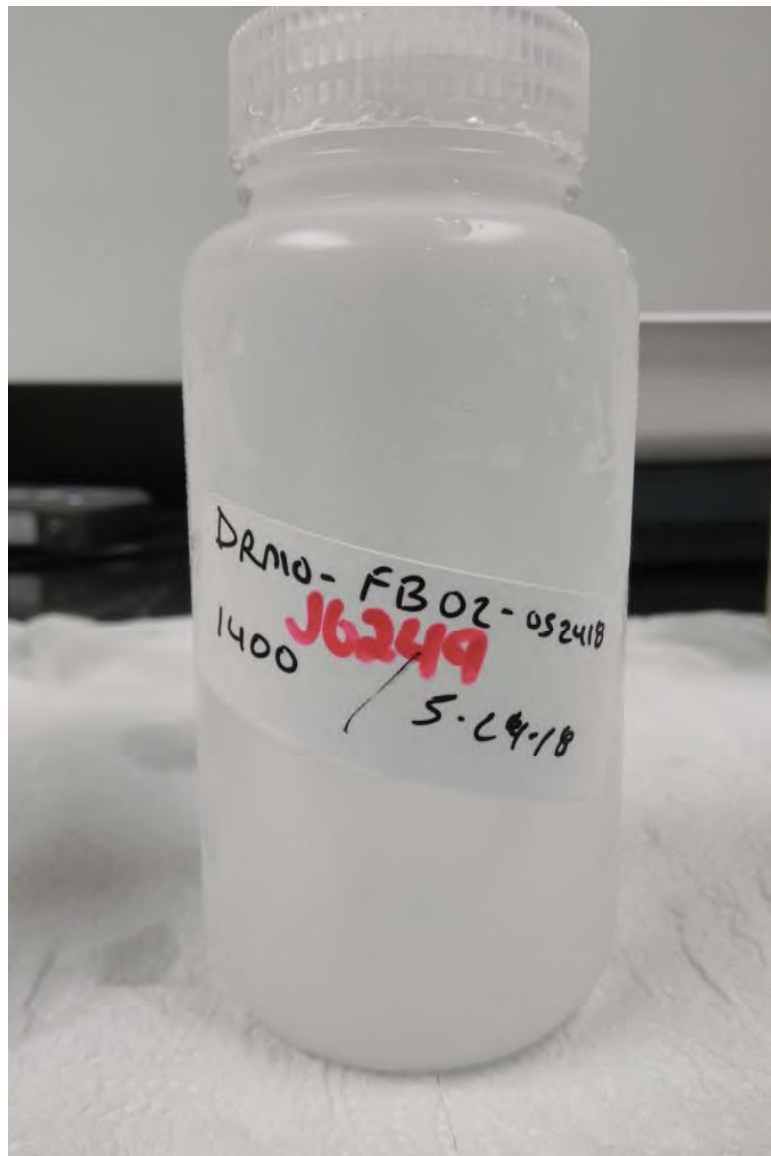


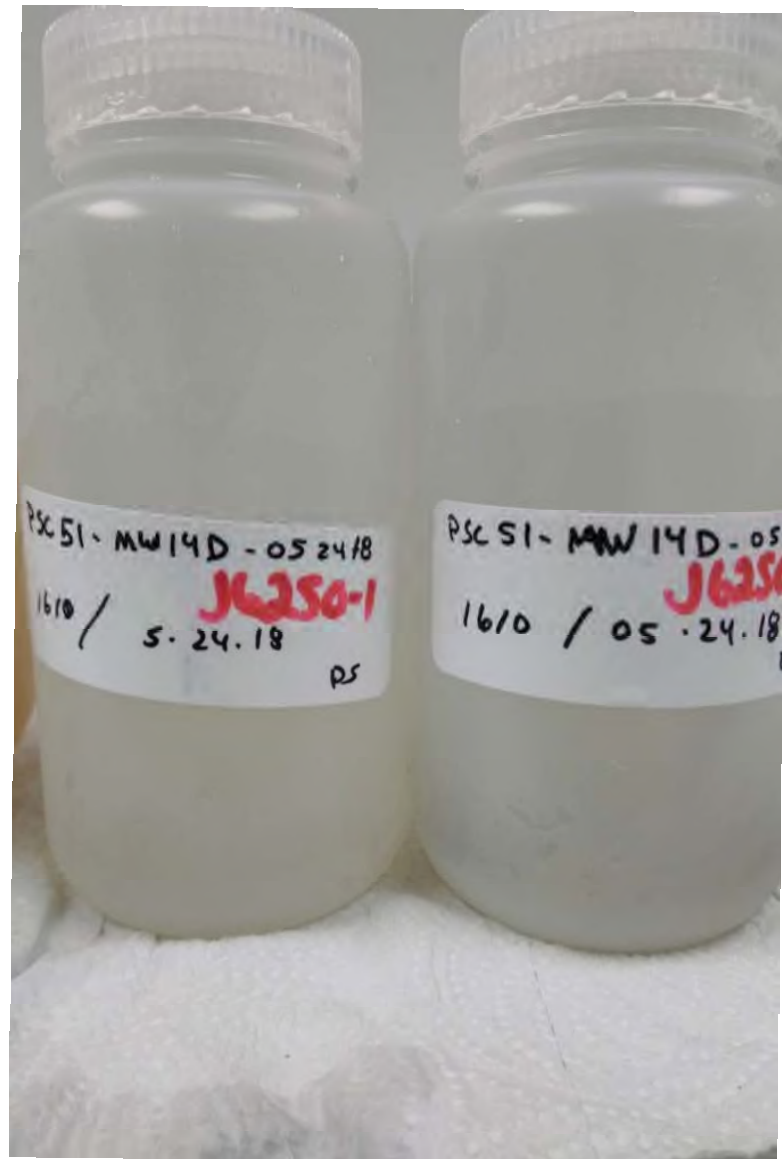
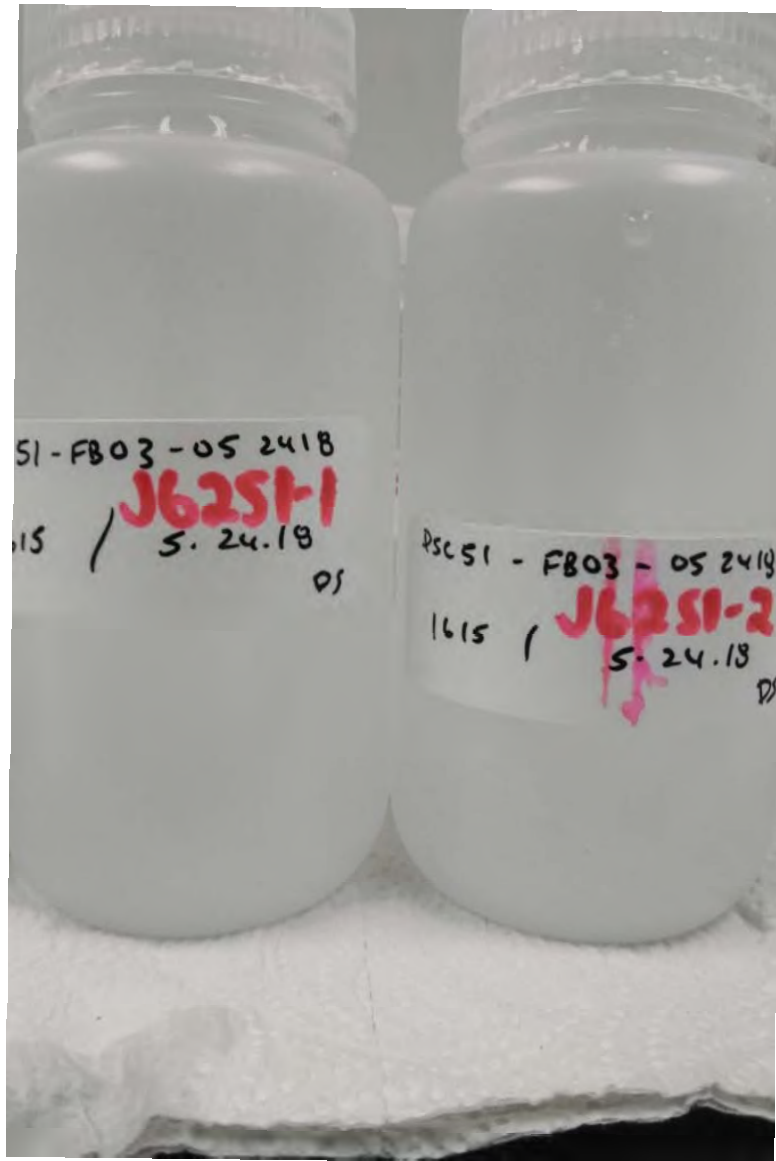


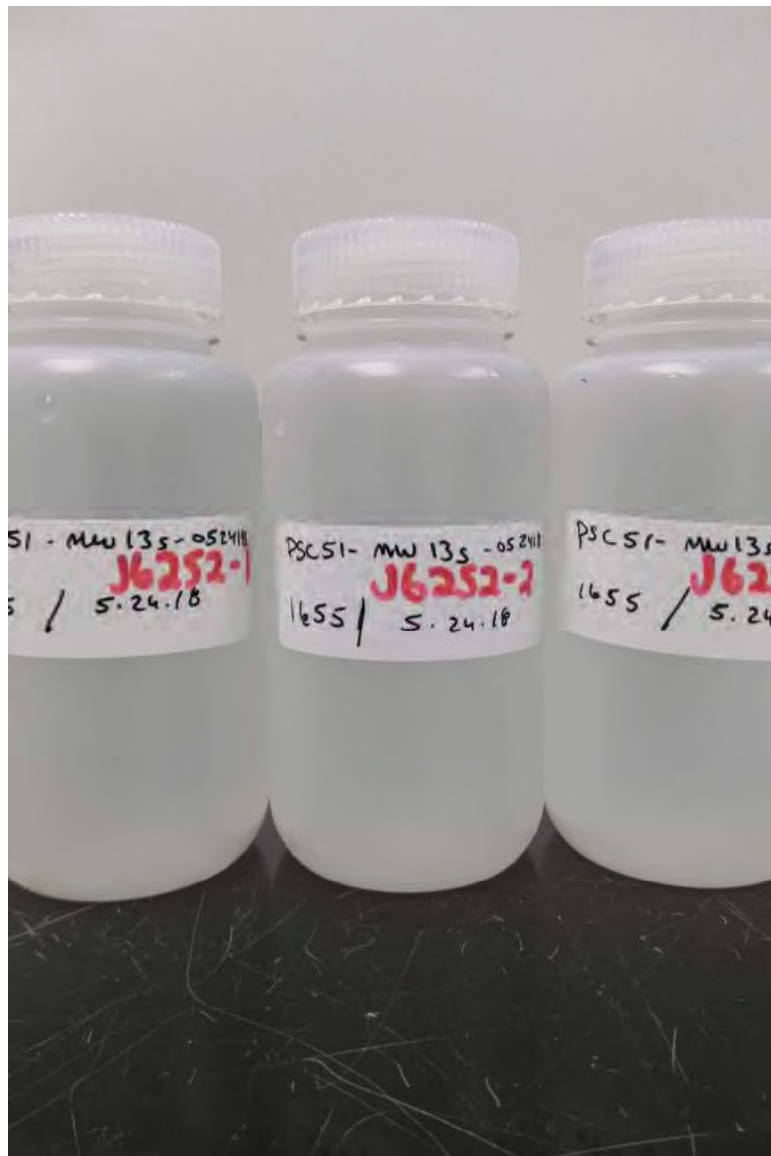


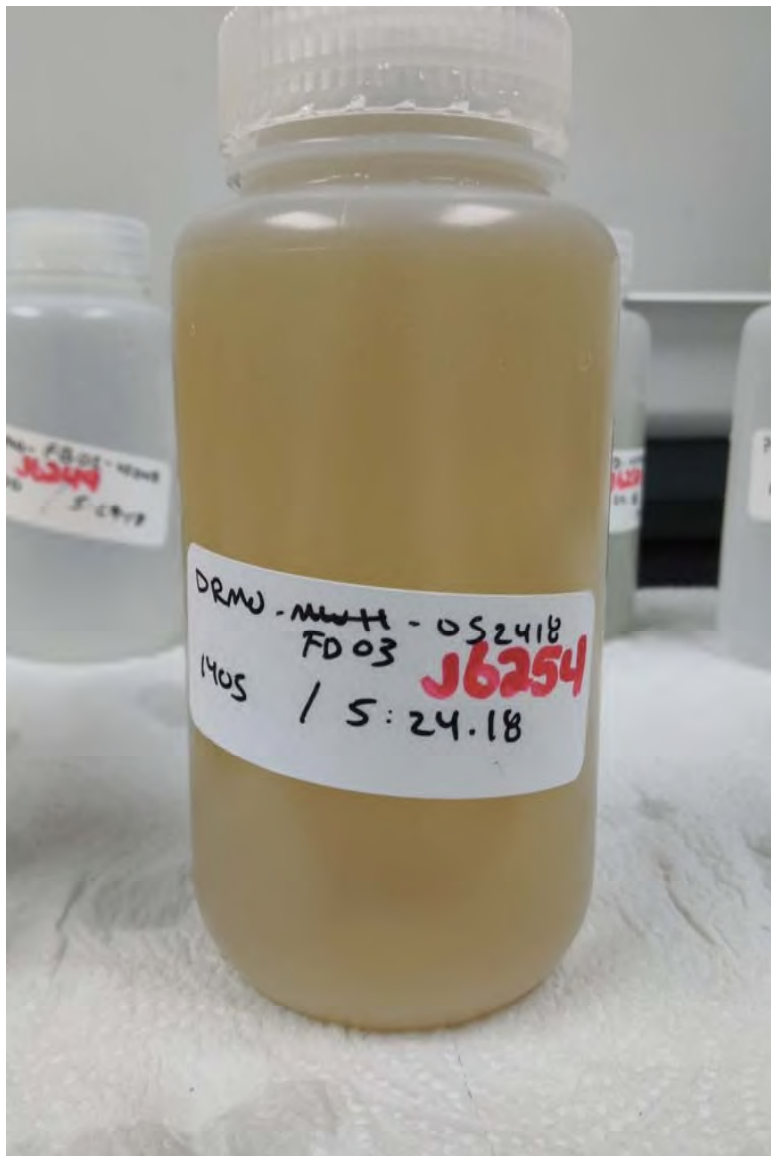












# Data Tables



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

Client ID	FFTA-EB01-052418			
Battelle ID	J6246-FS			
Sample Type	SA			
Collection Date	05/24/2018			
Extraction Date	05/29/2018			
Analysis Date	06/04/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	GW QC			
Sample Size	0.280			
Size Unit-Basis	L			
Units	ng/L	MDL	LOD	LOQ
PFHxA	0.45 U	0.17	0.45	4.46
PFHpA	0.45 U	0.14	0.45	4.46
PFOA	0.19 J	0.16	0.45	4.46
PFNA	0.89 U	0.23	0.89	4.46
PFDA	0.45 U	0.14	0.45	4.46
PFUnA	0.89 U	0.26	0.89	4.46
PFDaA	0.45 U	0.16	0.45	4.46
PFTTrDA	0.45 U	0.13	0.45	4.46
PFTeDA	0.89 U	0.22	0.89	4.46
NMeFOSAA	1.79 U	0.50	1.79	4.46
NEtFOSAA	0.89 U	0.44	0.89	4.46
PFBS	0.45 U	0.12	0.45	4.46
PFHxS	0.36 U	0.10	0.36	4.46
PFOS	0.89 J	0.17	0.45	4.46

#### Surrogate Recoveries (%)

13C5-PFHxA	72
13C4-PFHpA	69
13C8-PFOA	85
13C9-PFNA	87
13C6-PFDA	74
13C7-PFUnA	89
13C2-PFDaA	100
13C2-PFTeDA	67
d3-MeFOSAA	91
d5-EtFOSAA	127
13C3-PFBS	103
13C3-PFHxS	98
13C8-PFOS	98



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

Client ID	FFTA-EB02-052418			
Battelle ID	J6247-FS			
Sample Type	SA			
Collection Date	05/24/2018			
Extraction Date	05/29/2018			
Analysis Date	06/04/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	GW QC			
Sample Size	0.285			
Size Unit-Basis	L			
Units	ng/L	MDL	LOD	LOQ
PFHxA	0.44 U	0.17	0.44	4.39
PFHpA	0.44 U	0.14	0.44	4.39
PFOA	0.44 U	0.16	0.44	4.39
PFNA	0.88 U	0.23	0.88	4.39
PFDA	0.44 U	0.14	0.44	4.39
PFUnA	0.88 U	0.25	0.88	4.39
PFDaA	0.44 U	0.16	0.44	4.39
PFTTrDA	0.44 U	0.13	0.44	4.39
PFTeDA	0.88 U	0.22	0.88	4.39
NMeFOSAA	1.75 U	0.49	1.75	4.39
NEtFOSAA	0.88 U	0.43	0.88	4.39
PFBS	0.44 U	0.11	0.44	4.39
PFHxS	0.35 U	0.10	0.35	4.39
PFOS	0.44 U	0.17	0.44	4.39

#### Surrogate Recoveries (%)

13C5-PFHxA	134
13C4-PFHpA	136
13C8-PFOA	142
13C9-PFNA	134
13C6-PFDA	116
13C7-PFUnA	123
13C2-PFDaA	103
13C2-PFTeDA	79
d3-MeFOSAA	82
d5-EtFOSAA	116
13C3-PFBS	103
13C3-PFHxS	103
13C8-PFOS	93





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

Client ID	DRMO-MW11-052418			
Battelle ID	J6248-FS			
Sample Type	SA			
Collection Date	05/24/2018			
Extraction Date	05/29/2018			
Analysis Date	06/05/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	GW			
Sample Size	0.285			
Size Unit-Basis	L			
Units	ng/L	MDL	LOD	LOQ
PFHxA	41.40	0.18	0.46	4.62
PFHpA	15.01	0.15	0.46	4.62
PFOA	85.06	0.17	0.46	4.62
PFNA	3.14 J	0.24	0.92	4.62
PFDA	0.46 U	0.15	0.46	4.62
PFUnA	0.92 U	0.27	0.92	4.62
PFDaA	0.46 U	0.17	0.46	4.62
PFTTrDA	0.46 U	0.14	0.46	4.62
PFTeDA	0.92 U	0.23	0.92	4.62
NMeFOSAA	1.85 U	0.52	1.85	4.62
NEtFOSAA	0.92 U	0.45	0.92	4.62
PFBS	10.88	0.12	0.46	4.62
PFHxS	116.13 D	1.93	7.02	87.72
PFOS	670.42 D	3.33	8.77	87.72

#### Surrogate Recoveries (%)

13C5-PFHxA	72
13C4-PFHpA	106
13C8-PFOA	88
13C9-PFNA	83
13C6-PFDA	110
13C7-PFUnA	125
13C2-PFDaA	94
13C2-PFTeDA	57
d3-MeFOSAA	90
d5-EtFOSAA	111
13C3-PFBS	73
13C3-PFHxS	128
13C8-PFOS	99





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

Client ID	PSC51-MW14D-052418				
Battelle ID	J6250-FS				
Sample Type	SA				
Collection Date	05/24/2018				
Extraction Date	05/29/2018				
Analysis Date	06/04/2018				
Analytical Instrument	Sciex 5500 LC/MS/MS				
% Moisture	NA				
Matrix	GW				
Sample Size	0.280				
Size Unit-Basis	L				
Units	ng/L	MDL	LOD	LOQ	
PFHxA	0.45 U	0.17	0.45	4.46	
PFHpA	0.45 U	0.14	0.45	4.46	
PFOA	0.34 J	0.16	0.45	4.46	
PFNA	0.89 U	0.23	0.89	4.46	
PFDA	0.45 U	0.14	0.45	4.46	
PFUnA	0.89 U	0.26	0.89	4.46	
PFDaA	0.45 U	0.16	0.45	4.46	
PFTTrDA	0.45 U	0.13	0.45	4.46	
PFTeDA	0.89 U	0.22	0.89	4.46	
NMeFOSAA	1.79 U	0.50	1.79	4.46	
NEtFOSAA	0.89 U	0.44	0.89	4.46	
PFBS	0.36 J	0.12	0.45	4.46	
PFHxS	0.30 J	0.10	0.36	4.46	
PFOS	0.35 J	0.17	0.45	4.46	

#### Surrogate Recoveries (%)

13C5-PFHxA	107
13C4-PFHpA	118
13C8-PFOA	100
13C9-PFNA	91
13C6-PFDA	91
13C7-PFUnA	79
13C2-PFDaA	52
13C2-PFTeDA	50
d3-MeFOSAA	53
d5-EtFOSAA	52
13C3-PFBS	98
13C3-PFHxS	104
13C8-PFOS	65



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

Client ID	PSC51-MW135-052418				
Battelle ID	J6252-FS				
Sample Type	SA				
Collection Date	05/24/2018				
Extraction Date	05/29/2018				
Analysis Date	06/04/2018				
Analytical Instrument	Sciex 5500 LC/MS/MS				
% Moisture	NA				
Matrix	GW				
Sample Size	0.280				
Size Unit-Basis	L				
Units	ng/L	MDL	LOD	LOQ	
PFHxA	0.45 U	0.17	0.45	4.46	
PFHpA	0.45 U	0.14	0.45	4.46	
PFOA	0.40 J	0.16	0.45	4.46	
PFNA	0.89 U	0.23	0.89	4.46	
PFDA	0.45 U	0.14	0.45	4.46	
PFUnA	0.89 U	0.26	0.89	4.46	
PFDaA	0.45 U	0.16	0.45	4.46	
PFTTrDA	0.45 U	0.13	0.45	4.46	
PFTeDA	0.89 U	0.22	0.89	4.46	
NMeFOSAA	1.79 U	0.50	1.79	4.46	
NEtFOSAA	0.89 U	0.44	0.89	4.46	
PFBS	1.09 J	0.12	0.45	4.46	
PFHxS	0.72 J	0.10	0.36	4.46	
PFOS	1.12 J	0.17	0.45	4.46	

#### Surrogate Recoveries (%)

13C5-PFHxA	96
13C4-PFHpA	104
13C8-PFOA	79
13C9-PFNA	76
13C6-PFDA	71
13C7-PFUnA	62
13C2-PFDaA	51
13C2-PFTeDA	53
d3-MeFOSAA	61
d5-EtFOSAA	66
13C3-PFBS	100
13C3-PFHxS	92
13C8-PFOS	78



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

Client ID	DRMO-MW2-052418			
Battelle ID	J6253-FS			
Sample Type	SA			
Collection Date	05/24/2018			
Extraction Date	05/29/2018			
Analysis Date	06/05/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	GW			
Sample Size	0.270			
Size Unit-Basis	L			
Units	ng/L	MDL	LOD	LOQ
PFHxA	6.93	0.19	0.49	4.87
PFHpA	4.77 J	0.16	0.49	4.87
PFOA	13.35	0.18	0.49	4.87
PFNA	1.10 J	0.25	0.97	4.87
PFDA	0.49 U	0.16	0.49	4.87
PFUnA	0.97 U	0.28	0.97	4.87
PFDaA	0.49 U	0.18	0.49	4.87
PFTeDA	0.49 U	0.15	0.49	4.87
PFTeDA	0.97 U	0.24	0.97	4.87
NMeFOSAA	1.95 U	0.55	1.95	4.87
NEtFOSAA	0.97 U	0.48	0.97	4.87
PFBS	12.16	0.13	0.49	4.87
PFHxS	12.15	0.11	0.39	4.87
PFOS	98.11 D	3.52	9.26	92.59

#### Surrogate Recoveries (%)

13C5-PFHxA	87
13C4-PFHpA	128
13C8-PFOA	113
13C9-PFNA	116
13C6-PFDA	96
13C7-PFUnA	96
13C2-PFDaA	77
13C2-PFTeDA	62
d3-MeFOSAA	112
d5-EtFOSAA	136
13C3-PFBS	82
13C3-PFHxS	130
13C8-PFOS	127



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

Client ID	DRMO-FD03-052418			
Battelle ID	J6254-FS			
Sample Type	SA			
Collection Date	05/24/2018			
Extraction Date	05/29/2018			
Analysis Date	06/05/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	GW DUP			
Sample Size	0.280			
Size Unit-Basis	L			
Units	ng/L	MDL	LOD	LOQ
PFHxA	38.54	0.18	0.47	4.70
PFHpA	11.86	0.15	0.47	4.70
PFOA	86.14	0.17	0.47	4.70
PFNA	3.00 J	0.24	0.94	4.70
PFDA	0.47 U	0.15	0.47	4.70
PFUnA	0.94 U	0.27	0.94	4.70
PFDaA	0.47 U	0.17	0.47	4.70
PFTeDA	0.47 U	0.14	0.47	4.70
PFTeDA	0.94 U	0.23	0.94	4.70
NMeFOSAA	1.88 U	0.53	1.88	4.70
NEtFOSAA	0.94 U	0.46	0.94	4.70
PFBS	9.19	0.12	0.47	4.70
PFHxS	88.82 JD	1.96	7.14	89.29
PFOS	376.44 D	3.39	8.93	89.29

#### Surrogate Recoveries (%)

13C5-PFHxA	92
13C4-PFHpA	123
13C8-PFOA	100
13C9-PFNA	110
13C6-PFDA	109
13C7-PFUnA	111
13C2-PFDaA	100
13C2-PFTeDA	67
d3-MeFOSAA	106
d5-EtFOSAA	138
13C3-PFBS	113
13C3-PFHxS	150
13C8-PFOS	129



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	
PFDaA	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-PFDaA	70
13C2-PFTeDA	66
d3-MeFOSAA	59
d5-EtFOSAA	69
13C3-PFBS	61
13C3-PFHxS	78
13C8-PFOS	75



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

Client ID	Procedural Blank			
Battelle ID	CQ855PB-FS			
Sample Type	PB			
Collection Date	05/29/2018			
Extraction Date	05/29/2018			
Analysis Date	06/04/2018			
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
PFDaA	0.50 U	0.18	0.50	5.00
PFTTrDA	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	93
13C4-PFHpA	96
13C8-PFOA	100
13C9-PFNA	92
13C6-PFDA	99
13C7-PFUnA	97
13C2-PFDaA	79
13C2-PFTeDA	64
d3-MeFOSAA	75
d5-EtFOSAA	95
13C3-PFBS	92
13C3-PFHxS	92
13C8-PFOS	98



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

Client ID	Laboratory Control Sample					
Battelle ID	CQ856LCS-FS					
Sample Type	LCS					
Collection Date	05/29/2018					
Extraction Date	05/29/2018					
Analysis Date	06/04/2018					
Analytical Instrument	Sciex 5500 LC/MS/MS					
% Moisture	NA					
Matrix	WATER					
Sample Size	0.250					
Size Unit-Basis	L					
Units	ng/L	Target	Recovery	Qual	Control Limits Lower	Upper
PFHxA	9.16	10.10	91		51	137
PFHpA	10.07	10.00	101		48	136
PFOA	9.95	10.00	100		49	141
PFNA	9.89	10.00	99		58	122
PFDA	10.32	10.00	103		59	135
PFUnA	10.22	10.00	102		64	134
PFDoA	10.43	10.00	104		75	131
PFTeDA	11.93	10.00	119		42	148
PFTeDA	10.10	10.00	101		42	158
NMeFOSAA	12.32	10.00	123		50	146
NEtFOSAA	9.15	10.00	92		51	131
PFBS	9.57	10.10	95		56	134
PFHxS	10.81	10.10	107		52	128
PFOS	10.03	10.00	100		40	144

#### Surrogate Recoveries (%)

13C5-PFHxA	106
13C4-PFHpA	94
13C8-PFOA	93
13C9-PFNA	98
13C6-PFDA	96
13C7-PFUnA	96
13C2-PFDoA	83
13C2-PFTeDA	70
d3-MeFOSAA	76
d5-EtFOSAA	93
13C3-PFBS	103
13C3-PFHxS	85
13C8-PFOS	93



Project Client: Tetra Tech

Project Name: CTO-SE0375: Naval Air Station Jacksonville

Project ID No.: 100119154-SE0375	PSC51-MW135-052418	PSC51-MW135-052418
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Battelle ID	J6252-FS		J6252MS-FS				
	Sample Type	SA	MS				
Collection Date	05/24/2018		05/24/2018				
Extraction Date	05/29/2018		05/29/2018				
Analysis Date	06/04/2018		06/05/2018				
Analytical Instrument	Sciex 5500 LC/MS/MS		Sciex 5500 LC/MS/MS				
% Moisture	NA		NA				
Matrix	GW		GW				
Sample Size	0.280		0.285				
Size Unit-Basis	L		L				Control Limits
Units	ng/L		ng/L		Target	Recovery	Qual
					Lower	Upper	
PFHxA	0.45 U	26.17	26.58	98	51	137	
PFHpA	0.45 U	26.61	26.32	101	48	136	
PFOA	0.40 J	24.49	26.32	92	49	141	
PFNA	0.89 U	23.71	26.32	90	58	122	
PFDA	0.45 U	25.47	26.32	97	59	135	
PFUnA	0.89 U	25.47	26.32	97	64	134	
PFDoA	0.45 U	26.91	26.32	102	75	131	
PFTeDA	0.45 U	29.91	26.32	114	42	148	
PFTeDA	0.89 U	28.54	26.32	108	42	158	
NMeFOSAA	1.79 U	26.26	26.32	100	50	146	
NEtFOSAA	0.89 U	22.66	26.32	86	51	131	
PFBS	1.09 J	25.13	26.58	90	56	134	
PFHxS	0.72 J	23.87	26.58	87	52	128	
PFOS	1.12 J	22.66	26.32	82	40	144	

**Surrogate Recoveries (%)**

13C5-PFHxA	96	117
13C4-PFHpA	104	122
13C8-PFOA	79	98
13C9-PFNA	76	94
13C6-PFDA	71	98
13C7-PFUnA	62	93
13C2-PFDoA	51	86
13C2-PFTeDA	53	79
d3-MeFOSAA	61	91
d5-EtFOSAA	66	99
13C3-PFBS	100	146
13C3-PFHxS	92	147
13C8-PFOS	78	129





Project Client: Tetra Tech  
 Project Name: CTO-SE0375: Naval Air Station Jacksonville  
 Project No.: 100119154-SE0375 PSC51-MW135-052418

Battelle ID	J6252MSD-FS									
Sample Type	MSD									
Collection Date	05/24/2018									
Extraction Date	05/29/2018									
Analysis Date	06/05/2018									
Analytical Instrument	Sciex 5500 LC/MS/MS									
% Moisture	NA									
Matrix	GW									
Sample Size	0.280									
Size Unit-Basis	L									
Units	ng/L	Target	Recovery	Qual	Control Limits Lower	Upper	RPD	Qual	RPD Limit	
PFHxA	28.22	27.05	104		51	137	5.9			≤ 30
PFHpA	22.13	26.79	83		48	136	19.6			≤ 30
PFOA	23.47	26.79	86		49	141	6.7			≤ 30
PFNA	26.73	26.79	100		58	122	10.5			≤ 30
PFDA	23.66	26.79	88		59	135	9.7			≤ 30
PFUnA	24.05	26.79	90		64	134	7.5			≤ 30
PFDoA	25.86	26.79	97		75	131	5.0			≤ 30
PFTeDA	28.24	26.79	105		42	148	8.2			≤ 30
PFTeDA	26.15	26.79	98		42	158	9.7			≤ 30
NMeFOSAA	23.66	26.79	88		50	146	12.8			≤ 30
EtFOSAA	23.26	26.79	87		51	131	1.2			≤ 30
PFBS	27.63	27.05	98		56	134	8.5			≤ 30
PFHxS	23.54	27.05	84		52	128	3.5			≤ 30
PFOS	23.68	26.79	84		40	144	2.4			≤ 30

#### Surrogate Recoveries (%)

13C5-PFHxA	78
13C4-PFHpA	99
13C8-PFOA	73
13C9-PFNA	63
13C6-PFDA	73
13C7-PFUnA	81
13C2-PFDoA	75
13C2-PFTeDA	66
d3-MeFOSAA	84
d5-EtFOSAA	87
13C3-PFBS	101
13C3-PFHxS	104
13C8-PFOS	87



## Glossary of Data Qualifiers

Flag: Application:

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B	Analyte found in the sample at a concentration <10x the level found in the procedural blank
D	Dilution Run. Initial run outside the initial calibration range of the instrument
E	Estimate, result is greater than the highest concentration level in the calibration
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 13<sup>th</sup>, 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	PFTTrDA	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	PFD0A	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 18-0338**

Project:	CTO-SE0375: Naval Air Station (NAS) Jacksonville
Parameters:	PFAS
Laboratory:	Battelle, Norwell, MA
Matrix:	GW
Data Set:	DP-18-0131
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	None.
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: FFTA-EB01-052418 (J6246) – PFHpA and PFDA (both below the MDL) FFTA-EB02-052418 (J6247) – PFNA (below the MDL) PSC51-MW14D-052418 (J6250) – PFOS (below the LOQ) PSC51-MW13S-052418 (J6252) – PFHxA, PFHpA, and PFOA (PFHxA and PFHpA below the MDL; PFOA below the LOQ) DRMO-MW2-052418 (J6253) – PFUnA (below the MDL)

Holding Times	Extraction Date(s)	Analysis Date(s)
	5/29/2018	6/4 and 6/5/2018

**QA/QC Summary**  
**Batch 18-0338**

Procedural Blank (PB)	A PB was prepared with this analytical batch to ensure the sample extraction and analysis methods are free of contamination.
$\leq \frac{1}{2}$ the LOQ	No exceedances noted.
Samples >10x PB	No comments.
Laboratory Control Spike (LCS)	A LCS was prepared with this analytical batch. The percent recoveries of target analytes were calculated to measure accuracy.
Laboratory derived control limits for recovery	No exceedances noted.
	No comments.
Matrix Spike (MS) / Duplicate (MSD)	A MS/MSD were prepared with this analytical batch. The percent recoveries of target analytes were calculated to measure accuracy. The relative percent difference was calculated to measure precision.
Laboratory derived control limits for recovery, RPD $\leq$ 30%	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 quadratic 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.

**QA/QC Summary**  
**Batch 18-0338**

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



Project Client: Tetra Tech  
 Project Name: CTO-SE0375: Naval Air Station Jacksonville  
 Project Number: 100119154-SE0375  
 Preparation Batch: 18-0338  
 Data Set: DP-18-0131  
 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 - NORWELL OPERATIONS MISCELLANEOUS DOCUMENTATION FORM

<b>Project Title:</b>	CTO-SE0375: Naval Air Station Jackson	<b>Data Set Number:</b>	DP-18-0131
<b>Project Number:</b>	100119154-SE0375	<b>Prep Batch Number:</b>	18-0338
<b>Entered By:</b>	Denise Schumitz	<b>Entered On:</b>	06/05/2018
<b>Test Code (Matrix Type):</b>	Master_369(L)		

Samples that were manually integrated are noted on the quant reports with the comment (TRUE).  
DMS 4/12/2018

JV20 is not being used in method 18-0338\_Base for PFHxA. There is no impact on the data once this point is removed from the calibration.  
DMS 6/5/2018

JV28 is not being used in method 18-0338\_Base for NMeFOSAA. There is no impact on the data once this point is removed from the calibration.  
DMS 6/5/2018

Dilutions were made and run for samples J6248, J6253 and J6254. The SIS and IS are being reported from the undiluted portion of these samples.  
DMS 6/5/2018

JV20 in method 18-0338\_BASE has ion ratios of <50% for PFTTrDA.  
DMS 6/5/2018

JV05 IB in method 18-0338\_BASE has ion ratios of <50% for PFHpA, PFTTrDA and NEtFOSAA.  
DMS 6/5/2018

CQ855PB in method 18-0338\_BASE has ion ratios of <50% for PFBS, PFHpA and PFNA.  
DMS 6/5/2018

J6246 in method 18-0338\_BASE has ion ratios of <50% for PFHpA and PFDA.  
DMS 6/5/2018

J6247 in method 18-0338\_BASE has ion ratios of <50% for PFNA.  
DMS 6/5/2018

J6250 in method 18-0338\_BASE has ion ratios of <50% for PFOS.  
DMS 6/5/2018

J6252 in method 18-0338\_BASE has ion ratios of <50% for PFHxA, PFHpA, and PFOA.  
DMS 6/5/2018

J6253 in method 18-0338\_BASE has ion ratios of <50% for PFUnA.  
DMS 6/5/2018

**Task Leader Approval:**

**Supervisor Approval:**

**PM Approval:**

Digitally signed by Jonathan  
Thorn

Date: 2018.06.06 17:01:44 -04'00'



## Example Calculation for PFAS

Calculation of final concentration from area:

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

Where:

PA = Area of target / area of internal standard  
 b = y intercept from calibration curve  
 CIS = concentration of internal standard (ng/L)  
 m = slope of calibration  
 DF = dilution factor  
 S = Sample Size  
 PIV = Pre-injection volume (L)

Sample ID: J6248-FS-D(5)  
 Client Sample ID: DRMO-MW11-052418  
 Sample Size: 0.285  
 Units: L  
 Dilution Factor: 40  
 PIV (L): 0.0005  
 Target Analyte: PFOS  
 MRM Transition: 499.0 / 80.0  
 Data file: 06022018.wiff  
 Result table: 18-0338\_BASE  
 Area: 3,837,444.47  
 IS Name: 13C8-PFOS  
 IS Area: 12,944.81  
 IS Amount (ng/L): 96.66  
 y-intercept: 0.29547  
 slope: 2.99639

$$\text{Concentration} = \frac{[(3837444.47/12944.81) - 0.29547]}{2.99639} * 96.66 * 0.0005 * 40 / 0.285$$

ng/L = 670.42



Project Client: Tetra Tech  
 Project Name: CTO-SE0375: Naval Air Station Jacksonville  
 Project No.: 100119154-SE0375  
 Preparation Batch: 18-0338  
 Data Set: DP-18-0131

	CQ855PB-FS (Procedural Blank)	CQ856LCS-FS (Laboratory Control Sample)	J6252MS-FS (PSC51-MW13S-052418)	J6252MSD-FS (PSC51-MW13S-052418)	J6246-FS (FFTA-EB01-052418)	J6247-FS (FFTA-EB02-052418)	J6248-FS (DRMO-MW11-052418)	J6250-FS (PSC51-MW14D-052418)
PFHxA	-	L	L	L	-	-	L	-
PFHpA	-	L	L	L	-	-	L	-
PFOA	-	L	L	L	-	-	L	-
PFNA	-	L	L	L	-	-	-	-
PFDA	-	L	L	L	-	-	-	-
PFUnA	-	L	L	L	-	-	-	-
PFDoA	-	L	L	L	-	-	-	-
PFTTrDA	-	L	L	L	-	-	-	-
PFTeDA	-	L	L	L	-	-	-	-
NMeFOSAA	-	L	L	L	-	-	-	-
NEtFOSAA	-	L	L	L	-	-	-	-
PFBS	-	L	L	L	-	-	L	-
PFHxS	-	L	L	L	-	-	L	-
PFOS	-	L/Br	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  
 Preparation Batch: 18-0338  
 Data Set: DP-18-0:

	J6252-FS (PSC51-MW13S-052418)	J6253-FS (DRMO-MW2-052418)	J6254-FS (DRMO-FD03-052418)
PFHxA	-	L	L
PFHpA	-	-	L
PFOA	-	-	L
PFNA	-	-	-
PFDA	-	-	-
PFUnA	-	-	-
PFDoA	-	-	-
PFTTrDA	-	-	-
PFTeDA	-	-	-
NMeFOSAA	-	-	-
NEtFOSAA	-	-	-
PFBS	-	L	L
PFHxS	-	L	L
PFOS	-	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	
CQ855PB-FS(3)	Procedural Blank	6/4/18 22:59	13C2-PFOA	38,702.68	19,578.64	58,735.92	
CQ856LCS-FS(3)	Laboratory Control Sample	6/4/18 23:09	13C2-PFOA	29,776.69	19,578.64	58,735.92	
J6246-FS(3)	FFTA-EB01-052418	6/4/18 23:20	13C2-PFOA	30,440.43	19,578.64	58,735.92	
J6247-FS(3)	FFTA-A-EB02-052418	6/4/18 23:31	13C2-PFOA	34,699.34	19,578.64	58,735.92	
J6250-FS(3)	PSC51-MW14D-052418	6/4/18 23:42	13C2-PFOA	31,092.64	19,578.64	58,735.92	
J6252-FS(3)	PSC51-MW13S-052418	6/4/18 23:53	13C2-PFOA	34,821.73	19,578.64	58,735.92	
J6252MS-FS(3)	PSC51-MW13S-052418	6/5/18 0:03	13C2-PFOA	42,042.54	19,578.64	58,735.92	
J6252MSD-FS(3)	PSC51-MW13S-052418	6/5/18 0:14	13C2-PFOA	37,372.13	19,578.64	58,735.92	
JV25 CCV	CCV	6/5/18 0:25	13C2-PFOA	40,081.49	19,578.64	58,735.92	
J6248-FS(4)	DRMO-MW11-052418	6/5/18 0:47	13C2-PFOA	31,377.13	19,578.64	58,735.92	
J6248-FS-D(5)	DRMO-MW11-052418	6/5/18 0:57	13C2-PFOA	40,786.34	19,578.64	58,735.92	
J6253-FS(4)	DRMO-MW2-052418	6/5/18 1:08	13C2-PFOA	35,354.72	19,578.64	58,735.92	
J6253-FS-D(5)	DRMO-MW2-052418	6/5/18 1:19	13C2-PFOA	43,900.91	19,578.64	58,735.92	
J6254-FS(4)	DRMO-FD03-052418	6/5/18 1:30	13C2-PFOA	28,163.78	19,578.64	58,735.92	
J6254-FS-D(5)	DRMO-FD03-052418	6/5/18 1:40	13C2-PFOA	44,545.03	19,578.64	58,735.92	
JV26 CCV	CCV	6/5/18 2:02	13C2-PFOA	49,082.40	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	
CQ855PB-FS(3)	Procedural Blank	6/4/18 22:59	13C2-PFDA	38,036.56	21,029.91	63,089.72	
CQ856LCS-FS(3)	Laboratory Control Sample	6/4/18 23:09	13C2-PFDA	32,069.39	21,029.91	63,089.72	
J6246-FS(3)	FFTA-EB01-052418	6/4/18 23:20	13C2-PFDA	39,888.44	21,029.91	63,089.72	
J6247-FS(3)	FFTA-A-EB02-052418	6/4/18 23:31	13C2-PFDA	42,865.16	21,029.91	63,089.72	
J6250-FS(3)	PSC51-MW14D-052418	6/4/18 23:42	13C2-PFDA	37,518.66	21,029.91	63,089.72	
J6252-FS(3)	PSC51-MW13S-052418	6/4/18 23:53	13C2-PFDA	42,500.06	21,029.91	63,089.72	
J6252MS-FS(3)	PSC51-MW13S-052418	6/5/18 0:03	13C2-PFDA	41,124.43	21,029.91	63,089.72	
J6252MSD-FS(3)	PSC51-MW13S-052418	6/5/18 0:14	13C2-PFDA	39,000.54	21,029.91	63,089.72	
JV25 CCV	CCV	6/5/18 0:25	13C2-PFDA	48,077.59	21,029.91	63,089.72	
J6248-FS(4)	DRMO-MW11-052418	6/5/18 0:47	13C2-PFDA	31,578.29	21,029.91	63,089.72	
J6248-FS-D(5)	DRMO-MW11-052418	6/5/18 0:57	13C2-PFDA	40,987.91	21,029.91	63,089.72	
J6253-FS(4)	DRMO-MW2-052418	6/5/18 1:08	13C2-PFDA	54,645.11	21,029.91	63,089.72	
J6253-FS-D(5)	DRMO-MW2-052418	6/5/18 1:19	13C2-PFDA	45,835.28	21,029.91	63,089.72	
J6254-FS(4)	DRMO-FD03-052418	6/5/18 1:30	13C2-PFDA	37,725.88	21,029.91	63,089.72	
J6254-FS-D(5)	DRMO-FD03-052418	6/5/18 1:40	13C2-PFDA	45,971.22	21,029.91	63,089.72	
JV26 CCV	CCV	6/5/18 2:02	13C2-PFDA	47,308.08	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	10,120.73	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	
CQ855PB-FS(3)	Procedural Blank	6/4/18 22:59	13C4-PFOS	10,507.08	4,964.53	14,893.59	
CQ856LCS-FS(3)	Laboratory Control Sample	6/4/18 23:09	13C4-PFOS	7,952.43	4,964.53	14,893.59	
J6246-FS(3)	FFTA-EB01-052418	6/4/18 23:20	13C4-PFOS	8,676.36	4,964.53	14,893.59	
J6247-FS(3)	FFTA-A-EB02-052418	6/4/18 23:31	13C4-PFOS	12,186.61	4,964.53	14,893.59	
J6250-FS(3)	PSC51-MW14D-052418	6/4/18 23:42	13C4-PFOS	9,701.21	4,964.53	14,893.59	
J6252-FS(3)	PSC51-MW13S-052418	6/4/18 23:53	13C4-PFOS	9,991.18	4,964.53	14,893.59	
J6252MS-FS(3)	PSC51-MW13S-052418	6/5/18 0:03	13C4-PFOS	9,680.34	4,964.53	14,893.59	
J6252MSD-FS(3)	PSC51-MW13S-052418	6/5/18 0:14	13C4-PFOS	9,361.76	4,964.53	14,893.59	
JV25 CCV	CCV	6/5/18 0:25	13C4-PFOS	11,882.18	4,964.53	14,893.59	
J6248-FS(4)	DRMO-MW11-052418	6/5/18 0:47	13C4-PFOS	7,218.33	4,964.53	14,893.59	
J6248-FS-D(5)	DRMO-MW11-052418	6/5/18 0:57	13C4-PFOS	8,648.24	4,964.53	14,893.59	
J6253-FS(4)	DRMO-MW2-052418	6/5/18 1:08	13C4-PFOS	9,216.39	4,964.53	14,893.59	
J6253-FS-D(5)	DRMO-MW2-052418	6/5/18 1:19	13C4-PFOS	10,279.38	4,964.53	14,893.59	
J6254-FS(4)	DRMO-FD03-052418	6/5/18 1:30	13C4-PFOS	6,018.92	4,964.53	14,893.59	
J6254-FS-D(5)	DRMO-FD03-052418	6/5/18 1:40	13C4-PFOS	11,224.49	4,964.53	14,893.59	
JV26 CCV	CCV	6/5/18 2:02	13C4-PFOS	13,388.14	4,964.53	14,893.59	

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	18-0338_BASE
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
PFDaA_1	613.0 / 569.0	3.87	37	>10
PFDaA_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



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	18-0338_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	21	>10
13C8-PFOS	507.0 / 99.0	2.90	42	>10



## 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	10.30	1.39	4.17	20
PFHpA	375-85-9	9.86	1.87	5.61	20
PFOA	335-67-1	10.51	1.55	4.65	21
PFNA	375-95-1	10.08	1.27	3.81	20
PFDA	335-76-2	10.45	1.54	4.62	20
PFUnA	2058-94-8	10.44	1.47	4.41	20
PFDoA	307-55-1	11.36	1.24	3.72	20
PFTTrDA	72629-94-8	11.94	1.59	4.77	20
PFTeDA	376-06-7	11.52	2.25	6.75	20
NMeFOSAA	2355-31-9	10.67	2.03	6.09	20
NEtFOSAA	2991-50-6	10.12	1.84	5.52	20
PFOSA	754-91-6	9.08	0.00	0.00	2
PFBS	375-73-5	10.70	1.57	4.71	21
PFPeS	BDO-2114	9.60	1.07	3.21	3
PFHxS	355-46-4	10.15	1.74	5.22	20
PFHpS	375-99-6	11.00	1.02	3.06	8
PFOS	1763-23-1	10.23	1.59	4.77	21
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)
<b>PFBA</b>	375-22-4	0.14	0.5	5.0
<b>PFPeA</b>	2706-90-3	0.31	1.0	5.0
<b>PFHxA</b>	307-24-4	0.19	0.5	5.0
<b>PFHpA</b>	375-85-9	0.16	0.5	5.0
<b>PFOA</b>	335-67-1	0.18	0.5	5.0
<b>PFNA</b>	375-95-1	0.26	1.0	5.0
<b>PFDA</b>	335-76-2	0.16	0.5	5.0
<b>PFUnA</b>	2058-94-8	0.29	1.0	5.0
<b>PFDoA</b>	307-55-1	0.18	0.5	5.0
<b>PFTTrDA</b>	72629-94-8	0.15	0.5	5.0
<b>PFTeDA</b>	376-06-7	0.25	1.0	5.0
<b>NMeFOSAA</b>	2355-31-9	0.56	2.0	5.0
<b>NEtFOSAA</b>	2991-50-6	0.49	1.0	5.0
PFOSA	754-91-6	TBD	TBD	TBD
<b>PFBS</b>	375-73-5	0.13	0.5	5.0
PFPeS	BDO-2114	0.67	2.5	5.0
<b>PFHxS</b>	355-46-4	0.11	0.4	5.0
<b>PFHpS</b>	375-99-6	0.20	0.5	5.0
<b>PFOS</b>	1763-23-1	0.19	0.5	5.0
PFNS	98789-57-2	0.46	1.0	5.0
<b>PFDS</b>	2806-15-7	0.17	0.5	5.0
<b>4:2FTS</b>	BDO-2205	0.14	0.5	5.0
<b>6:2FTS</b>	27619-97-2	1.36	2.5	5.0
<b>8:2FTS</b>	39108-34-4	0.22	0.5	5.0

*Analytes on NELAP and ELAP QSM 5.1 Scope of accreditation*

## 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
PFDaA	307-55-1	Target	613.0 / 569.0	613.0 / 319.0
PFTTrDA	72629-94-8	Target	663.0 / 619.0	663.0 / 169.0
PFTeDA	376-06-7	Target	713.0 / 669.0	713.0 / 169.0
NMeFOSAA	2355-31-9	Target	570.0 / 419.0	570.0 / 512.0
NEtFOSAA	2991-50-6	Target	584.0 / 419.0	584.0 / 483.0
PFOSA	754-91-6	Target	498.0 / 78.0	498.0 / 83.0
PFBS	375-73-5	Target	299.0 / 80.0	299.0 / 99.0
PFPeS	BDO-2114	Target	349.0 / 99.0	249.0 / 80.0
PFHxS	355-46-4	Target	399.0 / 80.0	399.0 / 99.0
PFHpS	375-99-6	Target	449.0 / 80.0	449.0 / 99.0
PFOS	1763-23-1	Target	499.0 / 80.0	499.0 / 99.0
PFNS	98789-57-2	Target	549.0 / 99.0	549.0 / 80.0
PFDS	2806-15-7	Target	599.0 / 80.0	599.0 / 99.0
4:2FTS	BDO-2205	Target	327.0 / 307.0	327.0 / 80.0
6:2FTS	27619-97-2	Target	427.0 / 407.0	427.0 / 81.0
8:2FTS	39108-34-4	Target	527.0 / 507.0	527.0 / 487.0
13C4-PFBA	BDO-2105	SIS <sup>1</sup>	217.0 / 172.0	NA
13C5-PFPeA	BDO-2216	SIS <sup>1</sup>	268.0 / 223.0	NA
13C5-PFHxA	BDO-2217	SIS <sup>1</sup>	318.0 / 273.0	NA

Analyte	CAS No.	Type	Primary Transition	Secondary Transition
13C4-PFHpA	BDO-2218	SIS <sup>1</sup>	367.0 / 322.0	NA
13C8-PFOA	BDO-2219	SIS <sup>1</sup>	421.0 / 376.0	NA
13C9-PFNA	BDO-2221	SIS <sup>1</sup>	472.0 / 427.0	NA
13C6-PFDA	BDO-2222	SIS <sup>1</sup>	519.0 / 474.0	NA
13C7-PFUnA	BDO-2223	SIS <sup>1</sup>	570.0 / 525.0	NA
13C2-PFDoA	BDO-2112	SIS <sup>1</sup>	615.0 / 570.0	NA
13C2-PFTeDA	BDO-2224	SIS <sup>1</sup>	715.0 / 670.0	NA
d3-MeFOSAA	BDO-1838	SIS <sup>1</sup>	573.0 / 419.0	NA
d5-EtFOSAA	BDO-1839	SIS <sup>1</sup>	589.0 / 419.0	NA
13C8-FOSA	BDO-2225	SIS <sup>1</sup>	506.0 / 78.0	NA
13C3-PFBS	BDO-2226	SIS <sup>1</sup>	302.0 / 99.0	NA
13C3-PFHxS	BDO-2227	SIS <sup>1</sup>	402.0 / 99.0	NA
13C8-PFOS	BDO-2228	SIS <sup>1</sup>	507.0 / 99.0	NA
13C2-4:2FTS	BDO-2229	SIS <sup>1</sup>	329.0 / 81.0	NA
13C2-6:2FTS	BDO-2230	SIS <sup>1</sup>	429.0 / 81.0	NA
13C2-8:2FTS	BDO-2220	SIS <sup>1</sup>	529.0 / 81.0	NA
13C3-PFBA	BDO-2231	IS <sup>2</sup>	216.0 / 172.0	NA
13C2-PFOA	BDO-2107	IS <sup>2</sup>	415.0 / 370.0	NA
13C2-PFDA	BDO-2110	IS <sup>2</sup>	515.0 / 470.0	NA
13C4-PFOS	BDO-2121	IS <sup>2</sup>	503.0 / 99.0	NA

<sup>1</sup> – extracted internal standard (surrogate)

<sup>2</sup> – injection internal standard



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# QTRAP 5500

**LC/MS/MS Detector System**

Appendix ZEFPM003-2L

## QTRAP 5500 Preventive Maintenance Checklist

<b>Preventive Maintenance Date:</b>	22-Feb-2017
<b>Request ID:</b>	3683
<b>Company Name:</b>	Battelle Memorial Institute
<b>Instrument ID:</b>	X60666
<b>Instrument Model:</b>	QTRAP 5500
<b>Instrument Serial Number:</b>	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 <sup>-5</sup> Torr)	Acceptance Criteria
<input checked="" type="checkbox"/> CAD 0	0.5	0.4 to 1.1 x10 <sup>-5</sup> Torr
<input checked="" type="checkbox"/> CAD Low	1.9	Read Only
<input checked="" type="checkbox"/> CAD Medium	2.4	Read Only
<input checked="" type="checkbox"/> CAD High	3.4	Read Only
<input checked="" type="checkbox"/> CAD 12	3.4	2.4 to 4.5 x10 <sup>-5</sup> 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. Record 10 mca.

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 <sup>-5</sup> Torr)	Acceptance Criteria
<input checked="" type="checkbox"/> CAD 0	0.8	0.4 to 1.1 x10 <sup>-5</sup> Torr
<input checked="" type="checkbox"/> CAD Low	2.1	Read Only
<input checked="" type="checkbox"/> CAD Medium	2.6	Read Only
<input checked="" type="checkbox"/> CAD High	3.7	Read Only
<input checked="" type="checkbox"/> CAD 12	3.7	2.4 to 4.5 x10 <sup>-5</sup> Torr

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

Mass	Q1 Intensity		Q1 Width Value	Width Specs
	Value	Spec		
Scan Rate 10 Da/s Record 10 mca				
Q1 175.133	5.94 e6	≥1.2 <sup>e6</sup>	0.6933	0.6 to 0.8
Q1 500.380	2.25 e7	≥9.0 <sup>e6</sup>	0.7444	0.6 to 0.8
Q1 906.673	2.74 e7	≥1.4 <sup>e7</sup>	0.7347	0.6 to 0.8
Scan Rate 1000 Da/s Record 50 mca				
Q1 906.673	1.33 e8	≥6.8 <sup>e7</sup>	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 Value	Width Specs
	Value	Spec		
Scan Rate 10 Da/s Record 10 mca				
Q3 175.133	4.54 e6	≥1.2 <sup>e6</sup>	0.6390	0.6 to 0.8
Q3 500.380	2.13 e7	≥9.0 <sup>e6</sup>	0.7008	0.6 to 0.8
Q3 906.673	3.04 e7	≥1.4 <sup>e7</sup>	0.7683	0.6 to 0.8
Scan Rate 1000 Da/s Record 50 mca				
Q3 906.673	1.51 e8	≥6.8 <sup>e7</sup>	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 Value	Width Specs
	Value	Spec		
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	$\geq 1.0^{e7}$	0.6895	0.6 to 0.8
Q1 933.636	1000	50	6.32 e7	$\geq 4.0^{e7}$	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	$\geq 8.0^{e6}$	0.7665	0.6 to 0.8
Q3 933.636	1000	50	7.41 e7	$\geq 4.0^{e7}$	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	$\geq 7.2^{e6}$	0.1302	<0.35
ER 922.010	0.05	3.89 e7	$\geq 2.8^{e6}$	0.2603	<0.35
ScanRate : 10000 Da/s ; 50 Mca					
ER 118.087	0.05	2.55 e7	$\geq 2.4^{e7}$	0.3740	<0.65
ER 922.010	0.05	2.37 e8	$\geq 6.8^{e7}$	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	$\geq 4.4^{e7}$	0.1840	<0.35
ER 601.978	0.05	7.74 e7	$\geq 5.6^{e7}$	0.1849	<0.35
ScanRate : 10000 Da/s ; 50 Mca					
ER 431.982	0.05	3.43 e8	$\geq 1.2^{e8}$	0.4382	<0.65
ER 601.978	0.05	2.55 e8	$\geq 1.6^{e8}$	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 e6	> 4.0 e7	≥6.4 e6

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

Mass	Scan Rate (Da/s)	Fragamentation OFF		Fragmentation ON	
		Intensity	Spec	Intensity	Spec
MS3 397.2	1000	3.2 e7	Contains only 397.2	N/A	N/A
<input type="checkbox"/> 236 OR <input checked="" type="checkbox"/> 365	1000	1.19 e8	Fragment Intensity	> 4.4 e6	≥1.6x 10 <sup>e6</sup>

**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.

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	~50.0000 00	07/03/20	---	---	400 uL	1	10	~2.0000
161230-02	br-PFOSK	Neat	~50.0000 00	10/14/20	---	---	400 uL	1	10	~2.0000
161230-04	NaP3MHpS	Neat	~50.0000 00	06/10/20	---	---	400 uL	1	10	~2.0000
161230-05	NaP6MHpS	Neat	~50.0000 00	01/23/20	---	---	400 uL	1	10	~2.0000
161230-06	ipPFNS	Neat	~50.0000 00	09/23/20	---	---	400 uL	1	10	~2.0000
161230-07	T-PFOA	Neat	~50.0000 00	02/12/21	---	---	400 uL	1	10	~2.0000
161230-08	P3MHpA	Neat	~50.0000 00	06/10/20	---	---	400 uL	1	10	~2.0000
161230-09	P4MOA	Neat	~50.0000 00	06/10/20	---	---	400 uL	1	10	~2.0000
161230-10	ipPFNA	Neat	~50.0000 00	05/31/21	---	---	400 uL	1	10	~2.0000
161230-11	P355TMHxA	Neat	~50.0000 00	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: \_\_\_\_\_

Solvent: \_\_\_\_\_ Lot: \_\_\_\_\_

Override On: \_\_\_\_\_ Expires: \_\_\_\_\_ Comment

Comment:

Methanol      166003

03/12/18 DMS      09/24/19      Date extended due to manufacturers exp. Dat

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

## Standard Solution Prep Form II

Approved:

Standard Laboratory ID Number: JH20

Description: PFAS Branched

161230-12	P37DMOA	Neat	~50.0000 00	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

Override 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: \_\_\_\_\_



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: \_\_\_\_\_





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)

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

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



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: \_\_\_\_\_

## 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	~1.00000 0	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-butanefulfonic 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-butanefulfonic 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

**BAITELLE**

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	~1.00000 0	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





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-butanefulfonic 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-butanefulfonic 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



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



## 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	~1.00000 0	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



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



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	~2.00000 0	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



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

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

Balance ID: \_\_\_\_\_

Comment:

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



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: \_\_\_\_\_



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

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

**Comment:**

**Approved By:** \_\_\_\_\_ **Date:** \_\_\_\_\_





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

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

Balance ID: \_\_\_\_\_

Comment: 80/20 methanol/milli-q

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



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: \_\_\_\_\_



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

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

**Comment:** 80/20 methanol/milli-q

**Approved By:** \_\_\_\_\_ **Date:** \_\_\_\_\_



**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

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

**Comment:** 80/20 methanol/milli-q

**Approved By:** \_\_\_\_\_ **Date:** \_\_\_\_\_



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

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

Balance ID: \_\_\_\_\_

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

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



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-butanedisulfonate	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: \_\_\_\_\_



It can be done

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: \_\_\_\_\_



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-butanefulfonate	.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

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

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

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_





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

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

Balance ID: \_\_\_\_\_

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

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



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-butanedisulfonate	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: \_\_\_\_\_



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: \_\_\_\_\_



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-butanefluoride	.00005
Perfluoro-1-hexanesulfonate	.00005
Perfluoro-1-octanesulfonamide	.00005
Perfluoro-1-octanesulfonate	.00005
Perfluoro-n-butanefluoride	.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

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

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

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



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

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

Balance ID: \_\_\_\_\_

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

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



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-butanedisulfonate	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: \_\_\_\_\_



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: \_\_\_\_\_



It can be done

## 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-butanefulfonate	.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:** \_\_\_\_\_





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

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

Balance ID: \_\_\_\_\_

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

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



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-butanedisulfonate	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: \_\_\_\_\_



It can be done

## 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: \_\_\_\_\_



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-butanefluoride	.00025
Perfluoro-1-hexanesulfonate	.00025
Perfluoro-1-octanesulfonamide	.00025
Perfluoro-1-octanesulfonate	.00025
Perfluoro-n-butyric 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:** \_\_\_\_\_



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

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

Balance ID: \_\_\_\_\_

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

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



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: \_\_\_\_\_



It can be done

## 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-butanefluoride	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: \_\_\_\_\_



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-butanefluoride	.00051
Perfluoro-1-hexanesulfonate	.00051
Perfluoro-1-octanesulfonamide	.00050
Perfluoro-1-octanesulfonate	.00050
Perfluoro-n-butyric 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:** \_\_\_\_\_





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

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

Balance ID: \_\_\_\_\_

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

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



It can be done

## 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: \_\_\_\_\_



It can be done

## 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-butanefluoride	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: \_\_\_\_\_



It can be done

## Standard Solution Concentrations

Approved:

**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-butanefluoride	.00101
Perfluoro-1-hexanesulfonate	.00101
Perfluoro-1-octanesulfonamide	.00100
Perfluoro-1-octanesulfonate	.00100
Perfluoro-n-butyric 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:** \_\_\_\_\_



It can be done

## 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

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

Balance ID: \_\_\_\_\_

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

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



It can be done

## 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: \_\_\_\_\_



It can be done

## 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-butanefluoride	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: \_\_\_\_\_



It can be done

## 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-butanefulfonate	.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:** \_\_\_\_\_





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

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

Balance ID: \_\_\_\_\_

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

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



It can be done

## 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: \_\_\_\_\_



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-butanefluoride	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: \_\_\_\_\_



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-butanefulfonate	.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:** \_\_\_\_\_



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

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

Balance ID: \_\_\_\_\_

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

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



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: \_\_\_\_\_



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-butanefluoride	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: \_\_\_\_\_



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-butanefulfonate	.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:** \_\_\_\_\_





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	~1.00000 0	10/17/22	---	---	500 uL	1	10	~0.0500

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

Balance ID: \_\_\_\_\_

Comment: 96:4 Methanol/Milli-q water

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



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-butanefulfonate	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-butanefulfonate	.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: \_\_\_\_\_



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:** \_\_\_\_\_



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

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

Balance ID: \_\_\_\_\_

Comment: 96/4 methanol/milli-q

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



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



**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



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

<b>Solution Prepared By:</b> Schultz, Stephanie	<b>Date Prepared:</b> 5/10/2018	<b>Expiration Date:</b> 12/28/2018
<b>Solution Volume</b> 40 mL X 1 Vials	<b>Refrigerator/Freezer No:</b> 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



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





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

<b>Solution Prepared By:</b> Schultz, Stephanie	<b>Date Prepared:</b> 5/16/2018	<b>Expiration Date:</b> 12/28/2018
<b>Solution Volume</b> 40 mL X 1 Vials	<b>Refrigerator/Freezer No:</b> LC Laboratory: Refrigerator - R0107	

Balance ID: \_\_\_\_\_

Comment: 80/20 methanol/milli-q water

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

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-butanedisulfonate	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:** \_\_\_\_\_



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: \_\_\_\_\_



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-butanefulfonate	.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:** \_\_\_\_\_



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	~1.00000 0	03/22/22	---	---	1000 uL	1	20	~0.0500

<b>Solution Prepared By:</b> Schultz, Stephanie	<b>Date Prepared:</b> 5/22/2018	<b>Expiration Date:</b> 5/22/2019
<b>Solution Volume</b> 40 mL X 1 Vials	<b>Refrigerator/Freezer No:</b> 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



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-butanedisulfonate	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-butanedisulfonate	.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



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	--	--	<input type="checkbox"/>	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



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**CERTIFICATE OF ANALYSIS**  
DOCUMENTATION

**br-PFHxSK**

**Potassium Perfluorohexanesulfonate  
Solution/Mixture of Linear and  
Branched Isomers**

<b><u>PRODUCT CODE:</u></b>	br-PFHxSK
<b><u>LOT NUMBER:</u></b>	brPFHxSK0615
<b><u>CONCENTRATION:</u></b>	50.0 ± 2.5 µg/ml (total potassium salt) 45.5 ± 2.3 µg/ml (total PFHxS anion)
<b><u>SOLVENT(S):</u></b>	Methanol
<b><u>DATE PREPARED:</u></b> (mm/dd/yyyy)	06/29/2015
<b><u>LAST TESTED:</u></b> (mm/dd/yyyy)	07/03/2015
<b><u>EXPIRY DATE:</u></b> (mm/dd/yyyy)	07/03/2020
<b><u>RECOMMENDED STORAGE:</u></b>	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 <sup>19</sup>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).

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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 Units:	Cert Val:	Lower Limit:	Upper Limit:
br-PFOSK	BDO-2171	50.0000	98.00	--	--	<input type="checkbox"/>	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:** \_\_\_\_\_



**WELLINGTON**  
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161230-02  
**CERTIFICATE OF ANALYSIS**  
DOCUMENTATION

**br-PFOSK**

**Potassium Perfluorooctanesulfonate  
Solution/Mixture of Linear and  
Branched Isomers**

<b><u>PRODUCT CODE:</u></b>	br-PFOSK
<b><u>LOT NUMBER:</u></b>	brPFOSK1015
<b><u>CONCENTRATION:</u></b>	50 ± 2.5 µg/ml (total potassium salt) 46.4 ± 2.3 µg/ml (total PFOS anion)
<b><u>SOLVENT(S):</u></b>	Methanol
<b><u>DATE PREPARED:</u></b> (mm/dd/yyyy)	10/13/2015
<b><u>LAST TESTED:</u></b> (mm/dd/yyyy)	10/14/2015
<b><u>EXPIRY DATE:</u></b> (mm/dd/yyyy)	10/14/2020
<b><u>RECOMMENDED STORAGE:</u></b>	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 <sup>19</sup>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	--	--	<input type="checkbox"/>	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:** \_\_\_\_\_



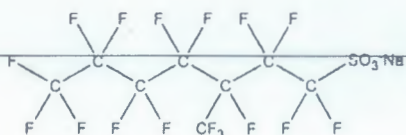
161230-04



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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) **SOLVENT(S):** Methanol  
 47.8 ± 2.4 µg/ml (NaP3MHpS anion)  
**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:**

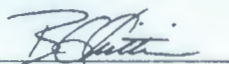
Figure 1: LC/MS Data (TIC and Mass Spectrum)  
 Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

- See page 2 for further details.

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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	--	--	<input type="checkbox"/>	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


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 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)      **SOLVENT(S):** Methanol  
 47.8 ± 2.4 µg/ml (NaP6MHpS anion)  
**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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**BATTELLE**

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	--	--	<input type="checkbox"/>	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:** \_\_\_\_\_

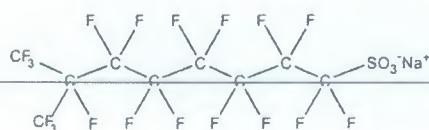


161230-06


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 DOCUMENTATION

**PRODUCT CODE:** ipPFNS **LOT NUMBER:** ipPFNS0912  
**COMPOUND:** Sodium perfluoro-7-methyloctanesulfonate  
**STRUCTURE:** **CAS #:** Not available



**MOLECULAR FORMULA:** C<sub>9</sub>F<sub>19</sub>SO<sub>3</sub>Na **MOLECULAR WEIGHT:** 572.12  
**CONCENTRATION:** 50.0 ± 2.5 µg/ml (Na salt) **SOLVENT(S):** Methanol  
 48.0 ± 2.4 µg/ml (PFNS anion)  
**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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**BATTELLE**

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	--	--	<input type="checkbox"/>	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

<b>PRODUCT CODE:</b>	T-PFOA	<b>LOT NUMBER:</b>	TPFOA0216
<b>COMPOUND:</b>	Technical Ammonium Perfluorooctanoate		
<b>STRUCTURE:</b>	(see Table A)	<b>CAS #:</b>	95328-99-7 (for linear ammonium perfluorooctanoate)
<b>MOLECULAR FORMULA:</b>	$C_8F_{15}O_2NH_4$		
<b>CONCENTRATION:</b>	50 ± 2.5 µg/ml (gravimetric)		
<b>CHEMICAL PURITY:</b>	Technical material		
<b>SOLVENT(S):</b>	Methanol/Water (<1%)		
<b>LAST TESTED:</b> (mm/dd/yyyy)	02/12/2016		
<b>EXPIRY DATE:</b> (mm/dd/yyyy)	02/12/2021		
<b>RECOMMENDED STORAGE:</b>	Store ampoule in a cool, dark place		

### DOCUMENTATION/ DATA ATTACHED:

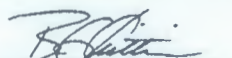
Table A: Isomeric Components and Percent Composition  
 Figure 1: LC/MS Data (TIC and Mass Spectrum)  
 Figure 2: LC/MS Data (SIR)  
 Figure 3: LC/MS/MS Data (Selected MRM Transitions)  
 Figure 4: LC/MS Elution Profile of the Perfluorooctanoic Acid Isomers

### 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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**BATTELLE**

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

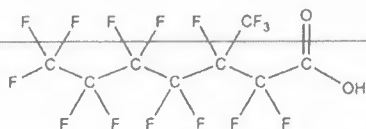
Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert	Cert Val:	Lower Limit:	Upper Limit:
P3MHPA	BDO-2178	50.0000	98.00	--	--	<input type="checkbox"/>	50	47.5	52.5

Total Analytes: 1

Notes:

**Approved by:** \_\_\_\_\_ **Approved on:** \_\_\_\_\_  
**Authorized by:** \_\_\_\_\_ **Authorized on:** \_\_\_\_\_

161230-08

**WELLINGTON**  
LABORATORIES**CERTIFICATE OF ANALYSIS**  
DOCUMENTATION**PRODUCT CODE:** P3MHPA  
**COMPOUND:** Perfluoro-3-methylheptanoic acid**LOT NUMBER:** P3MHPA0615**STRUCTURE:****CAS #:** Not available**MOLECULAR FORMULA:** C<sub>8</sub>HF<sub>15</sub>O<sub>2</sub>  
**CONCENTRATION:** 50 ± 2.5 µg/ml**MOLECULAR WEIGHT:** 414.07  
**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.

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B.G. Chittim**Date:** 06/17/2015  
(mm/dd/yyyy)**Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA**  
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

**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	--	--	<input type="checkbox"/>	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 **LOT NUMBER:** P4MOA0615  
**COMPOUND:** Perfluoro-4-methyloctanoic acid  
**STRUCTURE:** **CAS #:** Not available



**MOLECULAR FORMULA:** C<sub>9</sub>H<sub>F</sub><sub>17</sub>O<sub>2</sub> **MOLECULAR WEIGHT:** 464.08  
**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.

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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	--	--	<input type="checkbox"/>	50	47.5	52.5

Total Analytes: 1

Notes:

Approved by: \_\_\_\_\_ Approved on: \_\_\_\_\_  
 Authorized by: \_\_\_\_\_ Authorized on: \_\_\_\_\_



161230-10


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

**PRODUCT CODE:** ipPFNA  
**COMPOUND:** Perfluoro-7-methyloctanoic acid

**LOT NUMBER:** ipPFNA0516

**STRUCTURE:**

**CAS #:** Not available



**MOLECULAR FORMULA:**  $C_9H_7F_{17}O_2$   
**CONCENTRATION:**  $50 \pm 2.5 \mu\text{g/ml}$   
**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

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

**DOCUMENTATION/ DATA ATTACHED:**

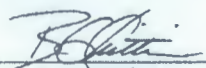
Figure 1: LC/MS Data (TIC and Mass Spectrum)  
 Figure 2: LC/MS/MS Data (Selected MRM Transitions)

**ADDITIONAL INFORMATION:**

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

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Certified By:

  
 B.G. Chittim

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 Units:	Cert Val:	Lower Limit:	Upper Limit:
P355TMHxA	BDO-2181	50.0000	98.00	--	--	<input type="checkbox"/>	50	47.5	52.5

Total Analytes: 1

Notes:

**Approved by:** \_\_\_\_\_ **Approved on:** \_\_\_\_\_  
**Authorized by:** \_\_\_\_\_ **Authorized on:** \_\_\_\_\_

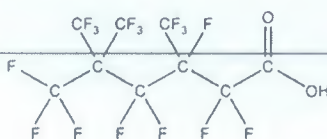
161230-11



**WELLINGTON**  
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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<sub>9</sub>H<sub>9</sub>F<sub>17</sub>O<sub>2</sub>      **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.

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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 Val:	Cert Val:	Lower Limit:	Upper Limit:
P37DMOA	BDO-2182	50.0000	98.00	--	--	<input type="checkbox"/>	50	47.5	52.5

**Total Analytes:**      1

**Notes:**

**Approved by:** \_\_\_\_\_ **Approved on:** \_\_\_\_\_  
**Authorized by:** \_\_\_\_\_ **Authorized on:** \_\_\_\_\_

161230-12

**WELLINGTON**  
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DOCUMENTATION

**PRODUCT CODE:** P37DMOA **LOT NUMBER:** P37DMOA0914  
**COMPOUND:** Perfluoro-3,7-dimethyloctanoic acid  
**STRUCTURE:** **CAS #:** 172155-07-6



**MOLECULAR FORMULA:** C<sub>10</sub>H<sub>19</sub>O<sub>2</sub> **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.

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Certified By: \_\_\_\_\_

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

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It can be done

BDO Id: 170629-02

## Reagent Receipt Report

Approved:  

**Name:** Mass-labelled PFAS Extraction Stand **Received:** 6/29/2017  
**Vendor:** Wellington Laboratories **Custodian:** Thorn, Jonathan  
**Catalogue No:** MPFAC-24ES **Expires:** 5/19/2022  
**Type:** Solution **Consumed:** \_\_\_\_\_  
**Lot No:** MPFAC24ES1016 **Stored In:** Sample Preparation - C0103  
**Quantity:** 1 ea mL **% Moisture:** 0  
**Description:** Mass-labelled PFAS Extraction Standard Solution

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	--	--	<input type="checkbox"/>			
N-methyl-d3-perfluoro-1-octanesulfo	BDO-2125	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-1-[13C8]octanesulfonamid	BDO-2225	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-[1,2,3,4,5,6,7-13C7]unde	BDO-2223	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-[1,2,3,4,5,6-13C6]decan	BDO-2222	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-[1,2,3,4,6-13C5]hexanoic	BDO-2217	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-[1,2,3,4-13C4]butanoic a	BDO-2105	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-[1,2,3,4-13C4]hepetanoic	BDO-2218	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-[1,2-13C2]dodecanoic ac	BDO-2112	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-[1,2-13C2]tetradecanoic	BDO-2224	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-[13C5]pentanoic acid	BDO-2216	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-[13C8]octanoic acid	BDO-2219	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-[13C9]nonanoic acid	BDO-2221	1.0000	100.00	--	--	<input type="checkbox"/>			
Sodium 1H,1H,2H,2H-perfluoro-1-[1,	BDO-2220	0.9580	100.00	--	--	<input type="checkbox"/>			
sodium 1H,1H,2H,2H-perfluoro-1-[1,	BDO-2229	0.9350	100.00	--	--	<input type="checkbox"/>			
sodium 1H,1H,2H,2H-perfluoro-1-[1,	BDO-2230	0.9490	100.00	--	--	<input type="checkbox"/>			
Sodium perfluoro-1-[1,2,3-13C3]hexa	BDO-2227	0.9460	100.00	--	--	<input type="checkbox"/>			
Sodium perfluoro-1-[13C8]octanesulf	BDO-2228	0.9570	100.00	--	--	<input type="checkbox"/>			
Sodium perfluoro-1-[2,3,4-13C3]buta	BDO-2226	0.9290	100.00	--	--	<input type="checkbox"/>			

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 ( $^{13}\text{C}$ ) perfluoroalkylcarboxylic acids ( $\text{C}_4$ - $\text{C}_{12}$  and  $\text{C}_{14}$ ), three mass-labelled ( $^{13}\text{C}$ ) perfluoroalkylsulfonates ( $\text{C}_4$ ,  $\text{C}_6$ , and  $\text{C}_8$ ), three mass-labelled ( $^{13}\text{C}$ ) telomer sulfonates (4:2, 6:2, and 8:2), two mass-labelled ( $^2\text{H}$ ) perfluorooctanesulfonamidoacetic acids, and perfluoro-1- $^{13}\text{C}_8$ 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- $^{13}\text{C}_8$ octanesulfonamide all have chemical purities of >98% and isotopic purities of  $\geq 99\%$ . The individual mass-labelled perfluorooctanesulfonamidoacetic acids all have chemical purities of >98% and isotopic purities of  $\geq 98\%$ .

**DOCUMENTATION/ DATA ATTACHED:**

Table A: Components and Concentrations of the Solution/Mixture

Figure 1: LC/MS Data (SIR)

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

**ADDITIONAL INFORMATION:**

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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**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  $x_1, x_2, \dots, x_n$  on which it depends is:

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

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  $\pm 5\%$  (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).



\*\*For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at [www.well-labs.com](http://www.well-labs.com) or contact us directly at [info@well-labs.com](mailto:info@well-labs.com)\*\*



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

Compound	Abbreviation	Concentration (ng/ml)		Peak Assignment in Figure 1
		as the salt	as the anion	
Perfluoro-n-[ $^{13}\text{C}_4$ ]butanoic acid	1304-PFBA MPFBA	1000		A
Perfluoro-n-[ $^{13}\text{C}_5$ ]pentanoic acid	1305-PFPeA M5PFPeA	1000		B
Perfluoro-n-[1,2,3,4,6- $^{13}\text{C}_6$ ]hexanoic acid	1305-PFHxA M5PFHxA	1000		E
Perfluoro-n-[1,2,3,4- $^{13}\text{C}_6$ ]heptanoic acid	1304-PFHpA M4PFHpA	1000		F
Perfluoro-n-[ $^{13}\text{C}_8$ ]octanoic acid	1308-PFOA M8PFOA	1000		I
Perfluoro-n-[ $^{13}\text{C}_9$ ]nonanoic acid	1309-PFNA M9PFNA	1000		J
Perfluoro-n-[1,2,3,4,5,6- $^{13}\text{C}_{10}$ ]decanoic acid	1306-PFDA M6PFDA	1000		M
Perfluoro-n-[1,2,3,4,5,6,7- $^{13}\text{C}_{11}$ ]undecanoic acid	1307-PFUdA M7PFUdA	1000		Q
Perfluoro-n-[1,2- $^{13}\text{C}_{12}$ ]dodecanoic acid	1302-PFDoA MPFDoA	1000		R
Perfluoro-n-[1,2- $^{13}\text{C}_{14}$ ]tetradecanoic acid	1302-PFTeDA M2PFTeDA	1000		S
Perfluoro-1-[ $^{13}\text{C}_8$ ]octanesulfonamide	① 1308-PFOA M8FOA	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)		Peak Assignment in Figure 1
		as the salt	as the anion	
Sodium perfluoro-1-[2,3,4- $^{13}\text{C}_3$ ]butanesulfonate	1303 - M3PFBS	1000	929	C
Sodium perfluoro-1-[1,2,3- $^{13}\text{C}_3$ ]hexanesulfonate	1303 - M3PFHxS	1000	946	G
Sodium perfluoro-1-[ $^{13}\text{C}_8$ ]octanesulfonate	1308 - M8PFOS	1000	957	K
Sodium 1H,1H,2H,2H-perfluoro-1-[1,2- $^{13}\text{C}_2$ ]hexanesulfonate	1302 - M2-4:2FTS	1000	935	D
Sodium 1H,1H,2H,2H-perfluoro-1-[1,2- $^{13}\text{C}_2$ ]octanesulfonate	1302 - M2-6:2FTS	1000	949	H
Sodium 1H,1H,2H,2H-perfluoro-1-[1,2- $^{13}\text{C}_2$ ]decanesulfonate	1302 - M2-8:2FTS	1000	958	L

① S/B 1308-FOSA JMT 7/3/17

Certified By:   
B.G. Chittim, General Manager

Date: 05/24/2017  
(mm/dd/yyyy)

**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	--	--	<input type="checkbox"/>			
Perfluoro-n-[1,2-13C2]decanoic acid	BDO-2110	2.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-[1,2-13C2]octanoic acid	BDO-2107	2.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-[2,3,4-13C3]butanoic Aci	BDO-2231	2.0000	100.00	--	--	<input type="checkbox"/>			

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 (<sup>13</sup>C) perfluoroalkylcarboxylic acids and a mass-labelled (<sup>13</sup>C) perfluoroalkylsulfonate. The components and their concentrations are given in Table A.

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

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

**DOCUMENTATION/ DATA ATTACHED:**

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

**ADDITIONAL INFORMATION:**

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

**FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE**

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

**INTENDED USE:**

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

**HAZARDS:**

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

**SYNTHESIS / CHARACTERIZATION:**

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

**HOMOGENEITY:**

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be  $\pm 5\%$  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

$x_1, x_2, \dots, x_n$  on which it depends is:

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

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  $\pm 5\%$  (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).



\*\*For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at [www.well-labs.com](http://www.well-labs.com) or contact us directly at [info@well-labs.com](mailto:info@well-labs.com)\*\*

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

Compound	Abbreviation	Concentration (ng/ml)	Peak Assignment in Figure 1
Perfluoro-n-[2,3,4- $^{13}\text{C}_3$ ]butanoic acid	13C3-PFBA M3PFBA	2000	A
Perfluoro-n-[1,2- $^{13}\text{C}_2$ ]octanoic acid	13C2-PFOA M2PFOA	2000	B
Perfluoro-n-[1,2- $^{13}\text{C}_2$ ]decanoic acid	13C2-PFDA MPFDA	2000	D
Sodium perfluoro-1-[1,2,3,4- $^{13}\text{C}_4$ ]octanesulfonate	13C4-PFOS	2000	C

Certified By:   
B.G. Chittim, General Manager

Date: 05/04/2017  
(mm/dd/yyyy)





**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

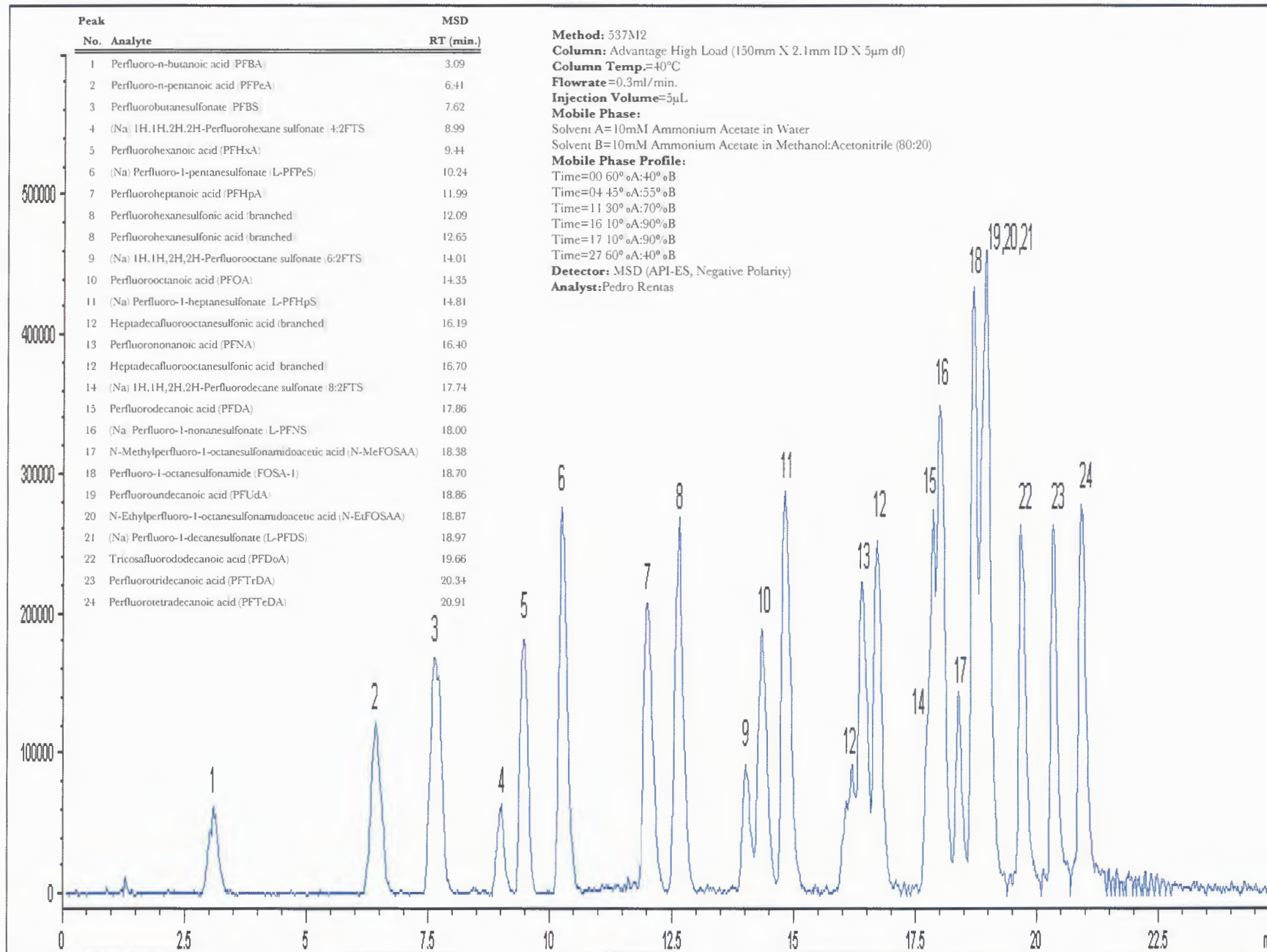
**Solvent(s):** Methanol (1 mM KOH) 031317 (98%)  
 2-Propanol 23214 (2%)

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

Volume(s) shown below were combined and diluted to (mL): 50.0 0.007  
 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	ori-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. Tricosafuorododecanoic 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 certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).



**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

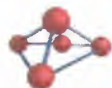
Analyte:	CAS No:	Concentration (ug/mL):	Purity:	Density:	Density Units:	Cert Val:	Lower Limit:	Upper Limit:
(Na) 1H,1H,2H,2H-Perfluorodecane	39108-34-4	1.0100	100.00	--	--	<input type="checkbox"/>		
(Na) 1H,1H,2H,2H-Perfluorohexane	BDO-2205	1.0000	100.00	--	--	<input type="checkbox"/>		
(Na) 1H,1H,2H,2H-Perfluorooctane s	27619-97-2	1.0000	100.00	--	--	<input type="checkbox"/>		
(Na) Perfluoro-1-decanesulfonate	2806-15-7	1.0100	100.00	--	--	<input type="checkbox"/>		
(NA) Perfluoro-1-heptanesulfonate	375-92-8	1.0000	100.00	--	--	<input type="checkbox"/>		
(Na) Perfluoro-1-nonanesulfonate	98789-57-2	1.0100	100.00	--	--	<input type="checkbox"/>		
N-ethylperfluoro-octanesulfonamidoa	2991-50-6	1.0000	100.00	--	--	<input type="checkbox"/>		
N-methylperfluoro-1-octanesulfonami	2355-31-9	1.0000	100.00	--	--	<input type="checkbox"/>		
Perfluoro-1-butanefulfonic Acid	375-73-5	1.0100	100.00	--	--	<input type="checkbox"/>		
Perfluoro-1-hexanesulfonic Acid	355-46-4	1.0100	100.00	--	--	<input type="checkbox"/>		
Perfluoro-1-octanesulfonamide	754-91-6	1.0000	100.00	--	--	<input type="checkbox"/>		
Perfluoro-1-octanesulphonic Acid	1763-23-1	1.0000	100.00	--	--	<input type="checkbox"/>		
Perfluoro-n-butanoic Acid	375-22-4	1.0000	100.00	--	--	<input type="checkbox"/>		
Perfluoro-n-decanoic Acid	335-76-2	1.0000	100.00	--	--	<input type="checkbox"/>		
Perfluoro-n-dodecanoic acid	307-55-1	1.0000	100.00	--	--	<input type="checkbox"/>		
Perfluoro-n-heptanoic Acid	375-85-9	1.0000	100.00	--	--	<input type="checkbox"/>		
Perfluoro-n-hexanoic acid	307-24-4	1.0100	100.00	--	--	<input type="checkbox"/>		
Perfluoro-n-octanoic Acid	335-67-1	1.0000	100.00	--	--	<input type="checkbox"/>		
Perfluorononanoic Acid	375-95-1	1.0000	100.00	--	--	<input type="checkbox"/>		
Perfluoro-n-pentanoic acid	2706-90-3	1.0000	100.00	--	--	<input type="checkbox"/>		
Perfluoro-n-tetradecanoic acid	376-06-7	1.0000	100.00	--	--	<input type="checkbox"/>		
Perfluoro-n-tridecanoic acid	72629-94-8	1.0000	100.00	--	--	<input type="checkbox"/>		
Perfluoro-n-undecanoic acid	2058-94-8	1.0000	100.00	--	--	<input type="checkbox"/>		
Sodium perfluoro-1-pentanesulfonat	BDO-2114	1.0000	100.00	--	--	<input type="checkbox"/>		

Total Analytes: 24

Notes:

Approved by: \_\_\_\_\_ Approved on: \_\_\_\_\_  
 Authorized by: \_\_\_\_\_ Authorized on: \_\_\_\_\_





Analytical Reference Material ARM



CERTIFIED WEIGHT REPORT

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):  
Methanol (1 mM KOH) 031317 (98%)  
2-Propanol 23214 (2%)

5E-05 Balance Uncertainty  
50.0 0.007 Flask Uncertainty

<i>Mario Luis</i>		101717
Formulated By:	Mario Luis	DATE
<i>Pedro L. Rentas</i>		101717
Reviewed By:	Pedro L. Rentas	DATE

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

Expanded  
SDS Information  
(Solvent Safety Info. On Attached pg.)  
CAS# OSHA PEL (TWA) LD50

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-butyanoic 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	ori-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. Tricosafuorododecanoic 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	FOSAC0916I	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	NMeFOSA00117	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	NEtFOSA00117	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 certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

171025-02

**BATTELLE**

It can be done

BDO Id: 171025-02

## Reagent Receipt Report

Approved:  

Name: PFOA - ICAL Mix Received: 10/25/2017  
 Vendor: ABSOLUTE STANDARDS Custodian: Schumitz, Matt  
 Catalogue No: 99207 Expires: 10/17/2022  
 Type: Solution Consumed: \_\_\_\_\_  
 Lot No: 101717 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	--	--	<input type="checkbox"/>			
(Na) 1H,1H,2H,2H-Perfluorohexane	BDO-2205	1.0000	100.00	--	--	<input type="checkbox"/>			
(Na) 1H,1H,2H,2H-Perfluorooctane s	27619-97-2	1.0000	100.00	--	--	<input type="checkbox"/>			
(Na) Perfluoro-1-decanesulfonate	2806-15-7	1.0100	100.00	--	--	<input type="checkbox"/>			
(NA) Perfluoro-1-heptanesulfonate	375-92-8	1.0000	100.00	--	--	<input type="checkbox"/>			
(Na) Perfluoro-1-nonanesulfonate	98789-57-2	1.0100	100.00	--	--	<input type="checkbox"/>			
N-ethylperfluoro-octanesulfonamidoa	2991-50-6	1.0000	100.00	--	--	<input type="checkbox"/>			
N-methylperfluoro-1-octanesulfonami	2355-31-9	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-1-butanefulfonic Acid	375-73-5	1.0100	100.00	--	--	<input type="checkbox"/>			
Perfluoro-1-hexanesulfonic Acid	355-46-4	1.0100	100.00	--	--	<input type="checkbox"/>			
Perfluoro-1-octanesulfonamide	754-91-6	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-1-octanesulphonic Acid	1763-23-1	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-butanoic Acid	375-22-4	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-decanoic Acid	335-76-2	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-dodecanoic acid	307-55-1	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-heptanoic Acid	375-85-9	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-hexanoic acid	307-24-4	1.0100	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-octanoic Acid	335-67-1	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluorononanoic Acid	375-95-1	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-pentanoic acid	2706-90-3	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-tetradecanoic acid	376-06-7	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-tridecanoic acid	72629-94-8	1.0000	100.00	--	--	<input type="checkbox"/>			
Perfluoro-n-undecanoic acid	2058-94-8	1.0000	100.00	--	--	<input type="checkbox"/>			
Sodium perfluoro-1-pentanesulfonat	BDO-2114	1.0000	100.00	--	--	<input type="checkbox"/>			

Total Analytes: 24

Notes:

Approved by: \_\_\_\_\_ Approved on: \_\_\_\_\_  
 Authorized by: \_\_\_\_\_ Authorized on: \_\_\_\_\_



CERTIFIED WEIGHT REPORT

171025-01

**Part Number:** 99207  
**Lot Number:** 032217  
**Description:** PFOA - LOD  
24 components  
**Expiration Date:** 032222  
**Recommended Storage:** Freezer (0 °C)  
**Nominal Concentration (µg/mL):** 1.0  
**NIST Test ID#:** 822-275#72-11

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

<i>Paul Barron</i>		032217
Formulated By:	Paul Barron	DATE
<i>Pedro L. Rentas</i>		032217
Reviewed By:	Pedro L. Rentas	DATE

Volume(s) shown below were combined and diluted to (mL): 50.0 0.007

**Note: All assigned values are anion concentrations.**

**Expanded SDS Information**  
(Solvent Safety Info. On Attached pg.)  
CAS# OSHA PEL (TWA) LD50

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	ori-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. Tricosafuorododecanoic 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	NMeFOSA0117	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	NEFOSA0117	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 certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

# Sample Preparation



It can be done

## BATTELLE - NORWELL OPERATIONS SAMPLE PREPARATION RECORDS

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**

100119154-  
SE0375

**18-0338**

**Non-Potable Water PFAS Analysis**

**GW, GW DUP, GW QC, SW, SW DUP**

SOP Numbers (see workplan for modifications)

ExtractionSOP No.            5-370

### This Batch Contains The Following Samples:

CQ855PB-FS	J6252-FS
CQ856LCS-FS	J6252MS-FS
J6246-FS	J6252MSD-FS
J6247-FS	J6253-FS
J6248-FS	J6254-FS
J6250-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**18-0338**

**Non-Potable Water PFAS Analysis  
GW, GW DUP, GW QC, SW, SW DUP**

Sample ID	Description
CQ855PB-FS	Procedural Blank
CQ856LCS-FS	Laboratory Control Sample
J6246-FS	FFTA-EB01-052418
J6247-FS	FFTA-EB02-052418
J6248-FS	DRMO-MW11-052418
J6250-FS	PSC51-MW14D-052418
J6252-FS	PSC51-MW13S-052418
J6252MS-FS	Matrix Spike of PSC51-MW13S-052418
J6252MSD-FS	Matrix Spike Duplicate of PSC51-MW13S-052418
J6253-FS	DRMO-MW2-052418
J6254-FS	DRMO-FD03-052418

Samples Assigned By:

Stephanie Schultz

Date :

May 29, 2018

Comments:



It can be done

## BATTELLE - NORWELL OPERATIONS SAMPLE CUSTODY LOG

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**100119154-  
SE0375**18-0338**

### Non-Potable Water PFAS Analysis GW, GW DUP, GW QC, SW, SW DUP

<b>Requested On/By:</b> 05/29/2018 SAS	<b>Purpose:</b> Sample Preparation
<b>Relinquished On/By:</b> 05/29/2018 MDS	<b>Last Activity:</b> Transfer
<b>Accepted On/By:</b> 05/29/2018 SAS <b>Stored In Facility:</b> Sample Preparation <b>Stored Until:</b> 05/29/2018 <b>Stored Comment:</b> NA	<b>Returned On/To:</b> <b>Returned To Facility:</b> <b>Returned Comment:</b> NA

No.	BDO-ID:	Ctrs	*	Condition:	Custody Comment:	
1	J6246	1	C	Consumed	NA	
2	J6247	1	C	Consumed	NA	
3	J6248	1	C	Consumed	NA	
4	J6250	1	C	Consumed	NA	
5	J6252	1	C	Consumed	NA	
6	J6253	1	C	Consumed	NA	
7	J6254	1	C	Consumed	NA	
<b>Total Samples</b>		7		* "C" = Consumed Container		



It can be done

## BATTELLE - NORWELL OPERATIONS LIQUID SAMPLE ID FORM

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**100119154-  
SE0375**18-0338**

### Non-Potable Water PFAS Analysis GW, GW DUP, GW QC, SW, SW DUP

Sample ID	Description	Volume (mL)	Bottles	*	Date Initials
CQ855PB-FS	Procedural Blank	250.0	NA	--	05/29/18 SAS
CQ856LCS-FS	Laboratory Control Sample	250.0	NA	--	05/29/18 SAS
J6246-FS	FFTA-EB01-052418	280.0	1	C	05/30/18 SAS
J6247-FS	FFTA-EB02-052418	285.0	1	C	05/30/18 SAS
J6248-FS	DRMO-MW11-052418	285.0	1	C	05/30/18 SAS
J6250-FS	PSC51-MW14D-052418	280.0	1	C	05/30/18 SAS
J6252-FS	PSC51-MW13S-052418	280.0	1	C	05/30/18 SAS
J6252MS-FS	Matrix Spike	285.0	2	C	05/30/18 SAS
J6252MSD-FS	Matrix Spike Duplicate	280.0	3	C	05/30/18 SAS
J6253-FS	DRMO-MW2-052418	270.0	1	C	05/30/18 SAS
J6254-FS	DRMO-FD03-052418	280.0	1	C	05/30/18 SAS

Comments:

Samples Assigned By

Stephanie Schultz

Date :

May 29, 2018

\* - "C" = Sample is Consumed





It can be done

## BATTELLE - NORWELL OPERATIONS SURROGATE SPIKE FORM

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**100119154-  
SE0375**18-0338**

### Non-Potable Water PFAS Analysis GW, GW DUP, GW QC, SW, SW DUP

Sample ID	Standard ID	Type	Vial No.	Vol Added (uL)	Date Spiked/ Spiked By	Witn'd By	Comment
CQ855PB-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA
CQ856LCS-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA
CQ856LCS-FS	JW44	LCS/MS	1	50	05/29/18 SAS	JCT	NA
J6246-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA
J6247-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA
J6248-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA
J6250-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA
J6252-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA
J6252MS-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA
J6252MS-FS	JW44	LCS/MS	1	150	05/29/18 SAS	JCT	NA
J6252MSD-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA
J6252MSD-FS	JW44	LCS/MS	1	150	05/29/18 SAS	JCT	NA
J6253-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA
J6254-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA

## Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
JV83	Pipette	D1075429B
JW44	Pipette	B1100287B
JW44	Pipette	D1075429B



It can be done

## BATTELLE - NORWELL OPERATIONS SAMPLE EXTRACTION FORM

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**100119154-  
SE0375**18-0338**

### Non-Potable Water PFAS Analysis GW, GW DUP, GW QC, SW, SW DUP

Sample ID	1st Extraction	2nd Extraction	3rd Extraction	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comment
CQ855PB-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA
CQ856LCS-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6246-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6247-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6248-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6250-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6252-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6252MS-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6252MSD-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6253-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6254-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA

**Solvents/Reagent Preparations:**

Name	ID	Expires	Lot No	Procedure	Comments
Pre-packed SPE Column	RP-180529-4	05/29/18	003737320A	Pre-packed SPE Column	

**Solvents/Reagents:**



It can be done

## BATTELLE - NORWELL OPERATIONS EXTRACT SPIKE FORM

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**100119154-  
SE0375**18-0338**

### Non-Potable Water PFAS Analysis GW, GW DUP, GW QC, 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
J6248-FS-D(5)	40	JV83	SIS	1	24	0	0	06/04/18 DMS	SAS
J6253-FS-D(5)	40	JV83	SIS	1	24	0	0	06/04/18 DMS	SAS
J6254-FS-D(5)	40	JV83	SIS	1	24	0	0	06/04/18 DMS	SAS

## Syringes/Pipettes Used:

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



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**18-0338**

### Non-Potable Water PFAS Analysis GW, GW DUP, GW QC, 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
CQ855PB-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
CQ856LCS-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6246-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6247-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6248-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6248-FS-D(5)	476	24	JW02	24	1	500	40.000	06/04/18 DMS	SAS
J6250-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6252-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6252MS-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6252MSD-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6253-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6253-FS-D(5)	476	24	JW02	24	1	500	40.000	06/04/18 DMS	SAS
J6254-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6254-FS-D(5)	476	24	JW02	24	1	500	40.000	06/04/18 DMS	SAS

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

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



It can be done

## BATTELLE - NORWELL OPERATIONS INTERNAL STANDARD SPIKING FORM

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**100119154-  
SE0375**18-0338**

**Non-Potable Water PFAS Analysis  
GW, GW DUP, GW QC, 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
------------	-----------------	------------	---------	-------------	----------	---------------------	------------------	------------------------	-----------

Syringes/Pipettes Used:

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

<b>Extract Id:</b>	<b>Comments:</b>
CQ855PB-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.



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**18-0338****Non-Potable Water PFAS Analysis****GW, GW DUP, GW QC, SW, SW DUP**

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
CQ855PB-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
CQ855PB-FS	2	--	5/30/2018 11:04:00 AM	CQ855PB-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
CQ855PB-FS	3	--	5/30/2018 11:04:00 AM	CQ855PB-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
CQ856LCS-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
CQ856LCS-FS	2	--	5/30/2018 11:04:00 AM	CQ856LCS-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
CQ856LCS-FS	3	--	5/30/2018 11:04:00 AM	CQ856LCS-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6246-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
J6246-FS	2	--	5/30/2018 11:04:00 AM	J6246-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6246-FS	3	--	5/30/2018 11:04:00 AM	J6246-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6247-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
J6247-FS	2	--	5/30/2018 11:04:00 AM	J6247-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6247-FS	3	--	5/30/2018 11:04:00 AM	J6247-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6248-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
J6248-FS	2	C	5/30/2018 11:04:00 AM	J6248-FS	0	10000	5000	2.000	2.000	05/30/18 SAS

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

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

\* - "C" = Extract is Consumed



It can be done

## BATTELLE - NORWELL OPERATIONS PREPARATION EXTRACT SPLIT FORM

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**100119154-  
SE0375**18-0338****Non-Potable Water PFAS Analysis****GW, GW DUP, GW QC, SW, SW DUP**

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
J6248-FS	3	--	5/30/2018 11:04:00 AM	J6248-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6248-FS	4	--	6/4/2018 4:08:00 PM	J6248-FS	2	500	475	1.053	2.105	06/04/18 DMS
J6248-FS-D	5	--	6/4/2018 4:08:00 PM	J6248-FS	2	500	25	20.000	40.000	06/04/18 DMS
J6250-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
J6250-FS	2	--	5/30/2018 11:04:00 AM	J6250-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6250-FS	3	--	5/30/2018 11:04:00 AM	J6250-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6252-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
J6252-FS	2	--	5/30/2018 11:04:00 AM	J6252-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6252-FS	3	--	5/30/2018 11:04:00 AM	J6252-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6252MS-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
J6252MS-FS	2	--	5/30/2018 11:04:00 AM	J6252MS-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6252MS-FS	3	--	5/30/2018 11:04:00 AM	J6252MS-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6252MSD-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
J6252MSD-FS	2	--	5/30/2018 11:04:00 AM	J6252MSD-FS	0	10000	5000	2.000	2.000	05/30/18 SAS

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

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

\* - "C" = Extract is Consumed



It can be done

## BATTELLE - NORWELL OPERATIONS PREPARATION EXTRACT SPLIT FORM

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**100119154-  
SE0375**18-0338****Non-Potable Water PFAS Analysis****GW, GW DUP, GW QC, SW, SW DUP**

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
J6252MSD-FS	3	--	5/30/2018 11:04:00 AM	J6252MSD-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6253-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
J6253-FS	2	C	5/30/2018 11:04:00 AM	J6253-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6253-FS	3	--	5/30/2018 11:04:00 AM	J6253-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6253-FS	4	--	6/4/2018 4:08:00 PM	J6253-FS	2	500	475	1.053	2.105	06/04/18 DMS
J6253-FS-D	5	--	6/4/2018 4:08:00 PM	J6253-FS	2	500	25	20.000	40.000	06/04/18 DMS
J6254-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
J6254-FS	2	C	5/30/2018 11:04:00 AM	J6254-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6254-FS	3	--	5/30/2018 11:04:00 AM	J6254-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6254-FS	4	--	6/4/2018 4:08:00 PM	J6254-FS	2	500	475	1.053	2.105	06/04/18 DMS
J6254-FS-D	5	--	6/4/2018 4:08:00 PM	J6254-FS	2	500	25	20.000	40.000	06/04/18 DMS
<b>Extract Id:</b> CQ855PB-FS	<b>Comments:</b> 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) / Aliquot Volume (uL)] \* Prior Dilution Factor

\* - "C" = Extract is Consumed





It can be done

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

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**100119154-  
SE0375**18-0338**

### Non-Potable Water PFAS Analysis GW, GW DUP, GW QC, SW, SW DUP

<b>Purpose:</b> LC-MS/MS TRANSFER		<b>Last Activity:</b> Prep->Inst	
<b>Relinquished On/By:</b> May 31 2018 4:03PM SAS		<b>Received On/By:</b> May 31 2018 4:07PM DMS	
<b>Relinquished From:</b> Sample Preparation: NA		<b>Received Location:</b> LC Laboratory: NA	
<b>Relinquish Comment:</b> NA		<b>Received Comment:</b> NA	

No.	BDO-ID:	PIV:	DF:	Condition:	Custody Comment:
1	CQ855PB-FS(3)	500	2	Intact	NA
2	CQ856LCS-FS(3)	500	2	Intact	NA
3	J6246-FS(3)	500	2	Intact	NA
4	J6247-FS(3)	500	2	Intact	NA
5	J6248-FS(3)	500	2	Intact	NA
6	J6250-FS(3)	500	2	Intact	NA
7	J6252-FS(3)	500	2	Intact	NA
8	J6252MS-FS(3)	500	2	Intact	NA
9	J6252MSD-FS(3)	500	2	Intact	NA
10	J6253-FS(3)	500	2	Intact	NA
11	J6254-FS(3)	500	2	Intact	NA

<b>Total Extracts:</b>	11
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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**18-0338**

### Non-Potable Water PFAS Analysis GW, GW DUP, GW QC, SW, SW DUP

<b>Purpose:</b> LC-MS/MS TRANSFER		<b>Last Activity:</b> Prep->Inst			
<b>Relinquished On/By:</b> Jun 4 2018 4:11PM DMS		<b>Received On/By:</b> Jun 4 2018 4:11PM DMS			
<b>Relinquished From:</b> Sample Preparation: NA		<b>Received Location:</b> LC Laboratory: NA			
<b>Relinquish Comment:</b> NA		<b>Received Comment:</b> NA			
No.	BDO-ID:	PIV:	DF:	Condition:	Custody Comment:
1	J6248-FS(4)	500	2.105	Intact	NA
2	J6248-FS-D(5)	500	40	Intact	NA
3	J6253-FS(4)	500	2.105	Intact	NA
4	J6253-FS-D(5)	500	40	Intact	NA
5	J6254-FS(4)	500	2.105	Intact	NA
6	J6254-FS-D(5)	500	40	Intact	NA
<b>Total Extracts:</b>		6			



It can be done

**BATTELLE - NORWELL OPERATIONS  
MISCELLANEOUS DOCUMENTATION FORM**

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**

100119154-  
SE0375

**18-0338**

**Non-Potable Water PFAS Analysis  
GW, GW DUP, GW QC, SW, SW DUP**

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Entered By:

On:

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Task Leader Approval:

On:

SupervisorApproval:

On:

PM Approval:

On:

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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**18-0338**

### Non-Potable Water PFAS Analysis GW, GW DUP, GW QC, SW, SW DUP

Sample ID:	Comment:	Date/Initials:
CQ855PB-FS	Sample extraction began at 1:27pm for all samples.	05/29/18 SAS
CQ855PB-FS	Sample extraction ended at 2:16pm	05/29/18 SAS
CQ856LCS-FS	Sample extraction ended at 2:16pm	05/29/18 SAS
J6246-FS	Sample extraction ended at 2:19pm	05/29/18 SAS
J6247-FS	Sample extraction ended at 2:39pm	05/29/18 SAS
J6248-FS	Sample was a dark yellow color.	05/29/18 SAS
J6248-FS	Sample extraction ended at 2:52pm	05/29/18 SAS
J6250-FS	Sample had floating particulates.	05/29/18 SAS
J6250-FS	Sample extraction ended at 4:40pm	05/29/18 SAS
J6252-FS	Sample extraction ended at 2:54pm	05/29/18 SAS
J6252MS-FS	Sample extraction ended at 2:52pm	05/29/18 SAS
J6252MSD-FS	Sample extraction ended at 2:50pm	05/29/18 SAS
J6253-FS	Sample was a dark yellow color.	05/29/18 SAS
J6253-FS	Sample extraction ended at 2:53pm	05/29/18 SAS
J6254-FS	Sample was a dark yellow color.	05/29/18 SAS
J6254-FS	Sample extraction ended at 2:41pm	05/29/18 SAS

# Analytical Calibrations

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
19	CQ855PB-FS(3)	Procedural Blank	6/4/2018 10:59:08 PM	5-0369.dam	06022018.wiff
20	CQ856LCS-FS(3)	Laboratory Control Sample	6/4/2018 11:09:56 PM	5-0369.dam	06022018.wiff
21	J6246-FS(3)	FFTA-EB01-052418	6/4/2018 11:20:44 PM	5-0369.dam	06022018.wiff
22	J6247-FS(3)	FFTA-A-EB02-052418	6/4/2018 11:31:31 PM	5-0369.dam	06022018.wiff
23	J6250-FS(3)	PSC51-MW14D-052418	6/4/2018 11:42:19 PM	5-0369.dam	06022018.wiff
24	J6252-FS(3)	PSC51-MW13S-052418	6/4/2018 11:53:05 PM	5-0369.dam	06022018.wiff
25	J6252MS-FS(3)	PSC51-MW13S-052418	6/5/2018 12:03:52 AM	5-0369.dam	06022018.wiff
26	J6252MSD-FS(3)	PSC51-MW13S-052418	6/5/2018 12:14:39 AM	5-0369.dam	06022018.wiff
7	JV25 CCV	CCV	6/5/2018 12:25:26 AM	5-0369.dam	06022018.wiff
1	MeOH		6/5/2018 12:36:13 AM	5-0369.dam	06022018.wiff
27	J6248-FS(4)	DRMO-MW11-052418	6/5/2018 12:47:01 AM	5-0369.dam	06022018.wiff
28	J6248-FS-D(5)	DRMO-MW11-052418	6/5/2018 12:57:49 AM	5-0369.dam	06022018.wiff
29	J6253-FS(4)	DRMO-MW2-052418	6/5/2018 1:08:37 AM	5-0369.dam	06022018.wiff
30	J6253-FS-D(5)	DRMO-MW2-052418	6/5/2018 1:19:25 AM	5-0369.dam	06022018.wiff
31	J6254-FS(4)	DRMO-FD03-052418	6/5/2018 1:30:12 AM	5-0369.dam	06022018.wiff
32	J6254-FS-D(5)	DRMO-FD03-052418	6/5/2018 1:40:59 AM	5-0369.dam	06022018.wiff
1	MeOH		6/5/2018 1:51:45 AM	5-0369.dam	06022018.wiff
8	JV26 CCV	CCV	6/5/2018 2:02:32 AM	5-0369.dam	06022018.wiff



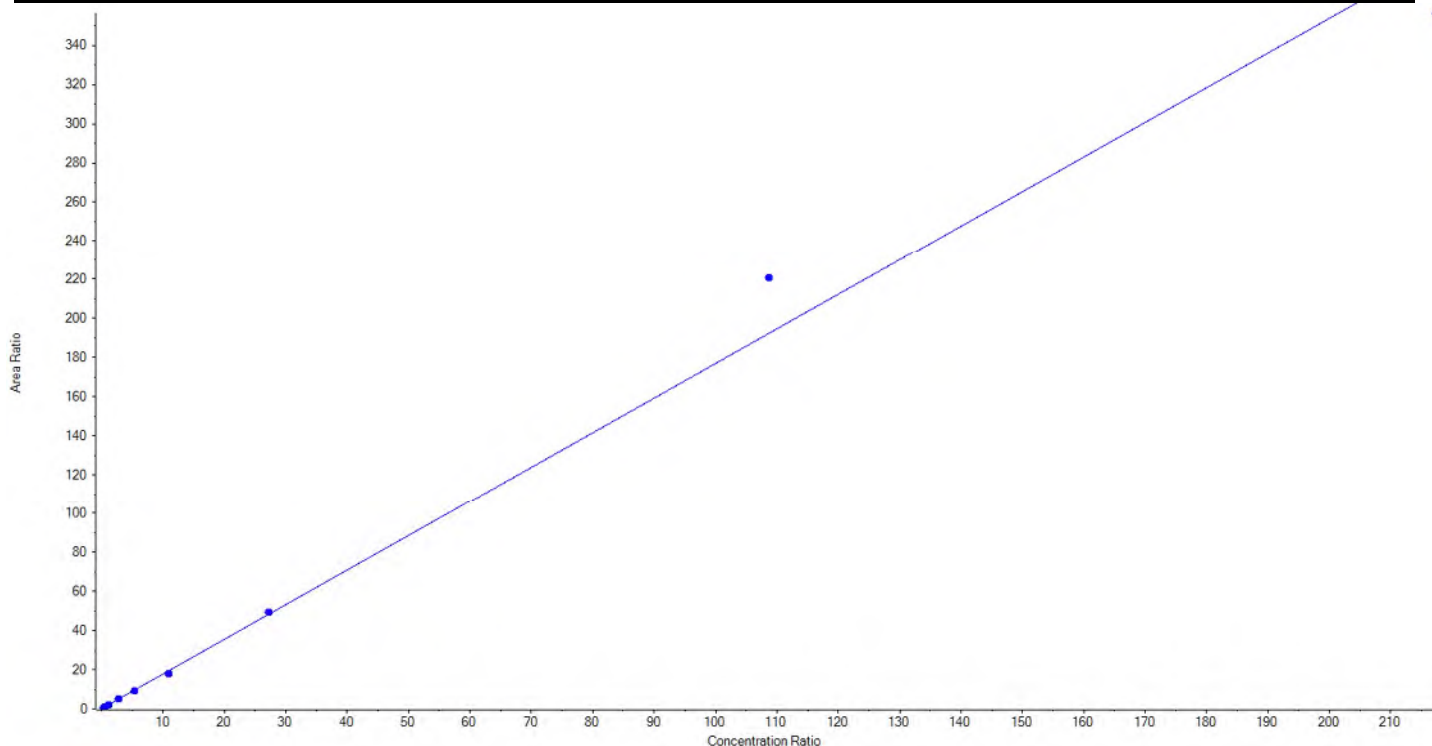
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Printed: 05/06/2018 1:53:49 PM

<b>Analyte Name</b>	PFBS_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	298.9 / 80.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C3-PFBS	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 1.76816x + 0.12377$  ( $r = 0.99496$ ) (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





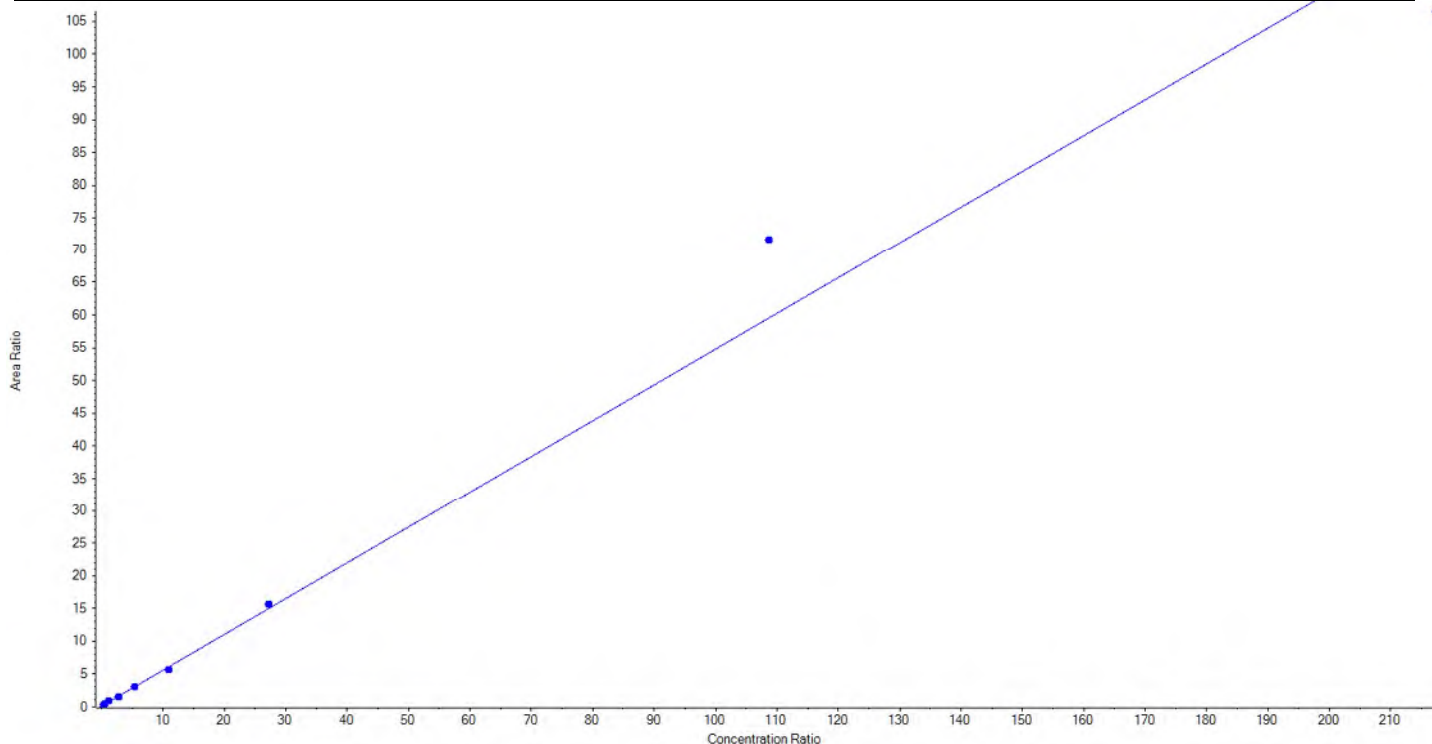
## Calibration Summary Report

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<b>Analyte Name</b>	PFBS_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	298.9 / 99.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C3-PFBS	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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







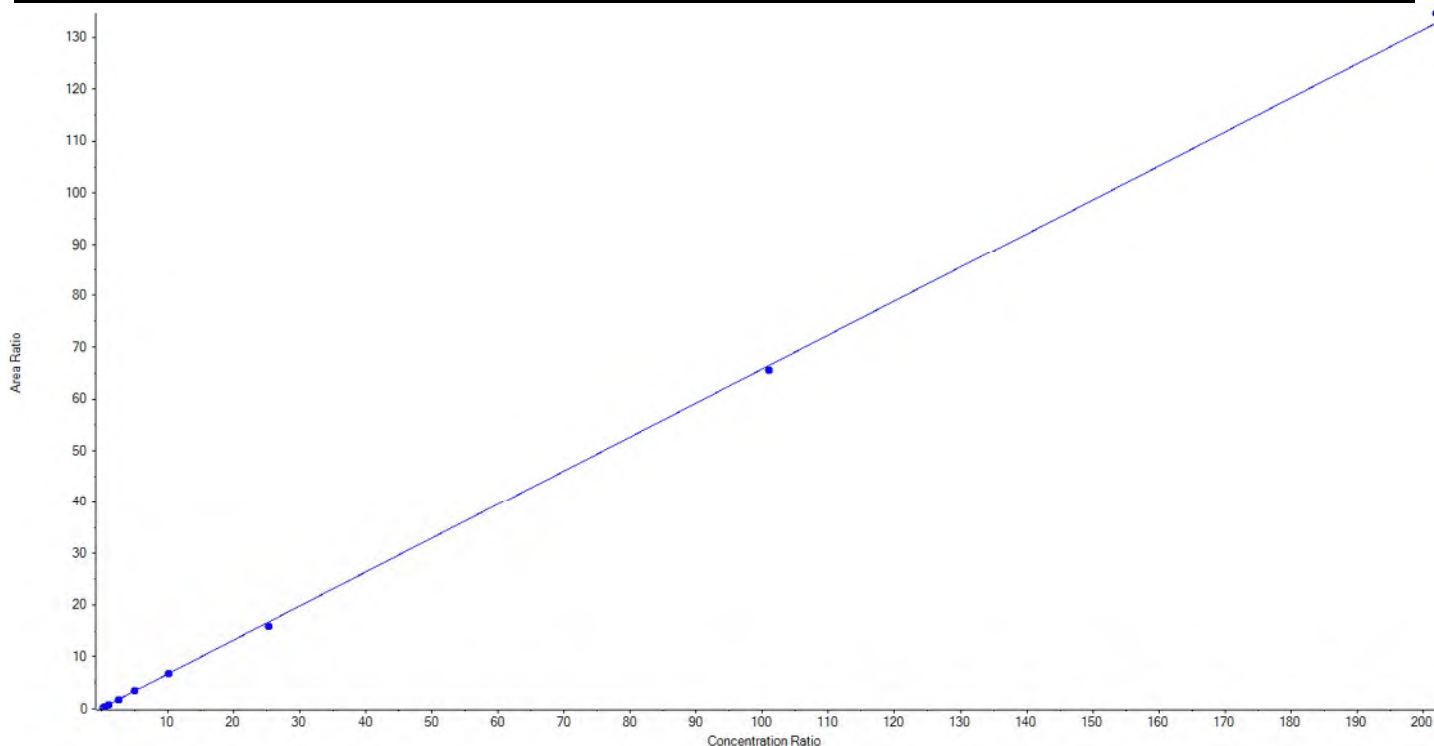
## Calibration Summary Report

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<b>Analyte Name</b>	PFHxA_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	313.0 / 269.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C5-PFHxA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.65652x + 0.14626$  ( $r = 0.99980$ ) (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	5.532306	21.9
3	JV21	L2	True	50.50	49.594148	98.2
4	JV22	L3	True	101.00	108.340209	107.3
5	JV23	L4	True	252.50	253.418132	100.4
6	JV24	L5	True	505.00	507.575341	100.5
7	JV25	L6	True	1010.00	999.237196	98.9
8	JV26	L7	True	2525.00	2393.126171	94.8
9	JV27	L8	True	10100.00	9955.372869	98.6
10	JV28	L9	True	20200.00	20477.335935	101.4





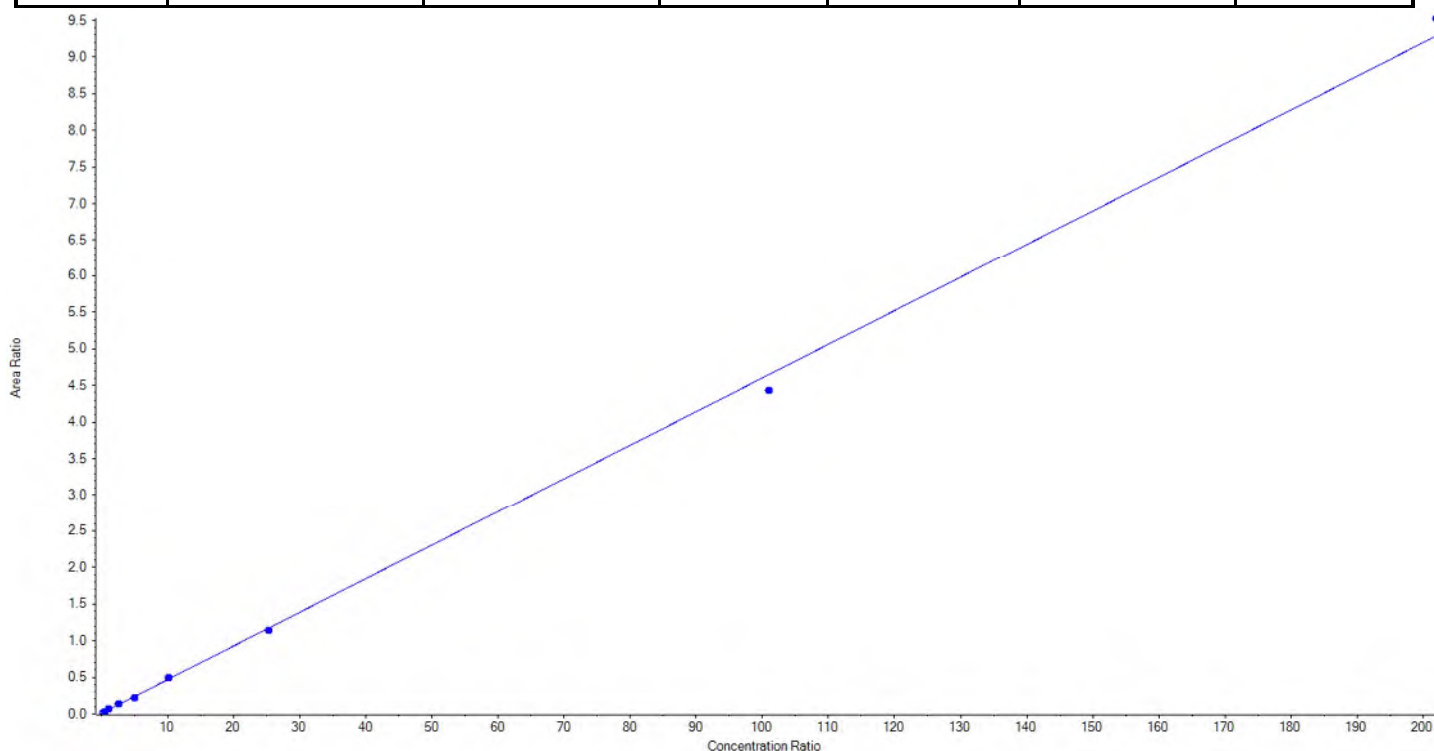
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<b>Analyte Name</b>	PFHxA_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	313.0 / 119.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C5-PFHxA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.04595x + 0.00834$  ( $r = 0.99913$ ) (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	3.411858	13.5
3	JV21	L2	True	50.50	38.413110	76.1
4	JV22	L3	True	101.00	124.794112	123.6
5	JV23	L4	True	252.50	281.758078	111.6
6	JV24	L5	True	505.00	450.356199	89.2
7	JV25	L6	True	1010.00	1055.126066	104.5
8	JV26	L7	True	2525.00	2457.711629	97.3
9	JV27	L8	True	10100.00	9620.984230	95.3
10	JV28	L9	True	20200.00	20714.856577	102.6





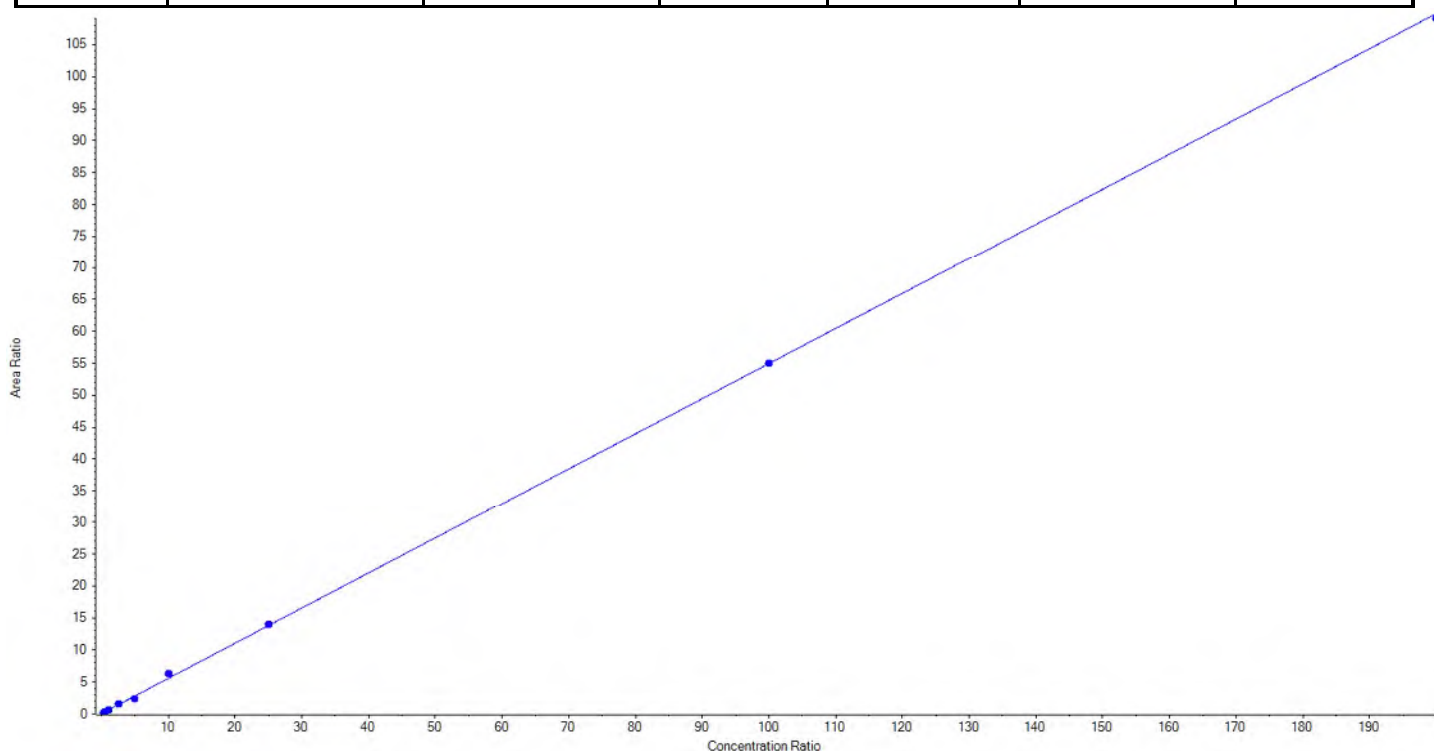
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<b>Analyte Name</b>	PFHpA_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	363.0 / 319.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C4-PFHpA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.54888x + 0.06431$  ( $r = 0.99946$ ) (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	24.621171	98.5
3	JV21	L2	True	50.00	40.081899	80.2
4	JV22	L3	True	100.00	114.612410	114.6
5	JV23	L4	True	250.00	266.771244	106.7
6	JV24	L5	True	500.00	426.606503	85.3
7	JV25	L6	True	1000.00	1135.903188	113.6
8	JV26	L7	True	2500.00	2541.689164	101.7
9	JV27	L8	True	10000.00	10015.570294	100.2
10	JV28	L9	True	20000.00	19859.144127	99.3





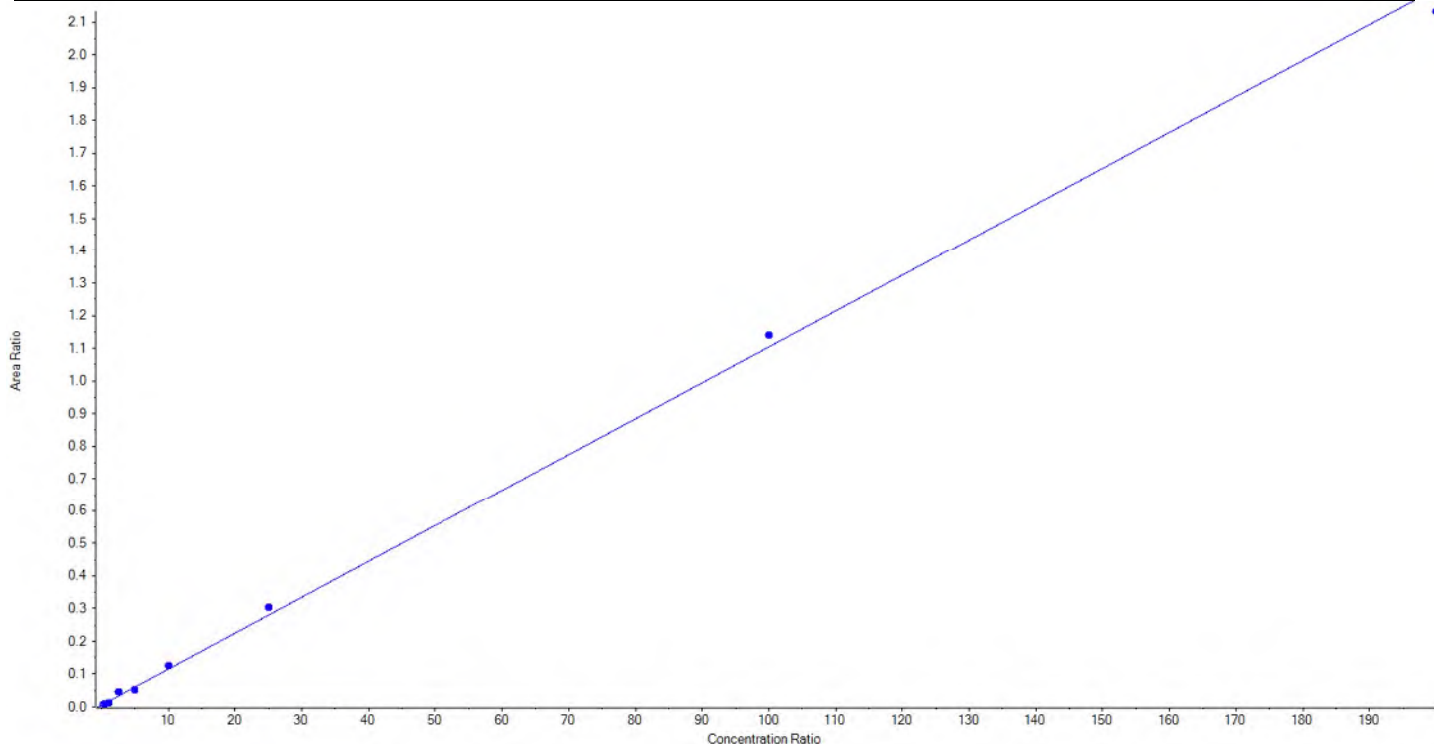
## Calibration Summary Report

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<b>Analyte Name</b>	PFHpA_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	363.0 / 169.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C4-PFHpA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.01099x + 0.00547$  ( $r = 0.99781$ ) (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	38.990233	78.0
4	JV22	L3	True	100.00	71.648287	71.7
5	JV23	L4	True	250.00	370.744655	148.3
6	JV24	L5	True	500.00	415.998547	83.2
7	JV25	L6	True	1000.00	1098.308044	109.8
8	JV26	L7	True	2500.00	2726.836198	109.1
9	JV27	L8	True	10000.00	10316.410589	103.2
10	JV28	L9	True	20000.00	19361.063447	96.8





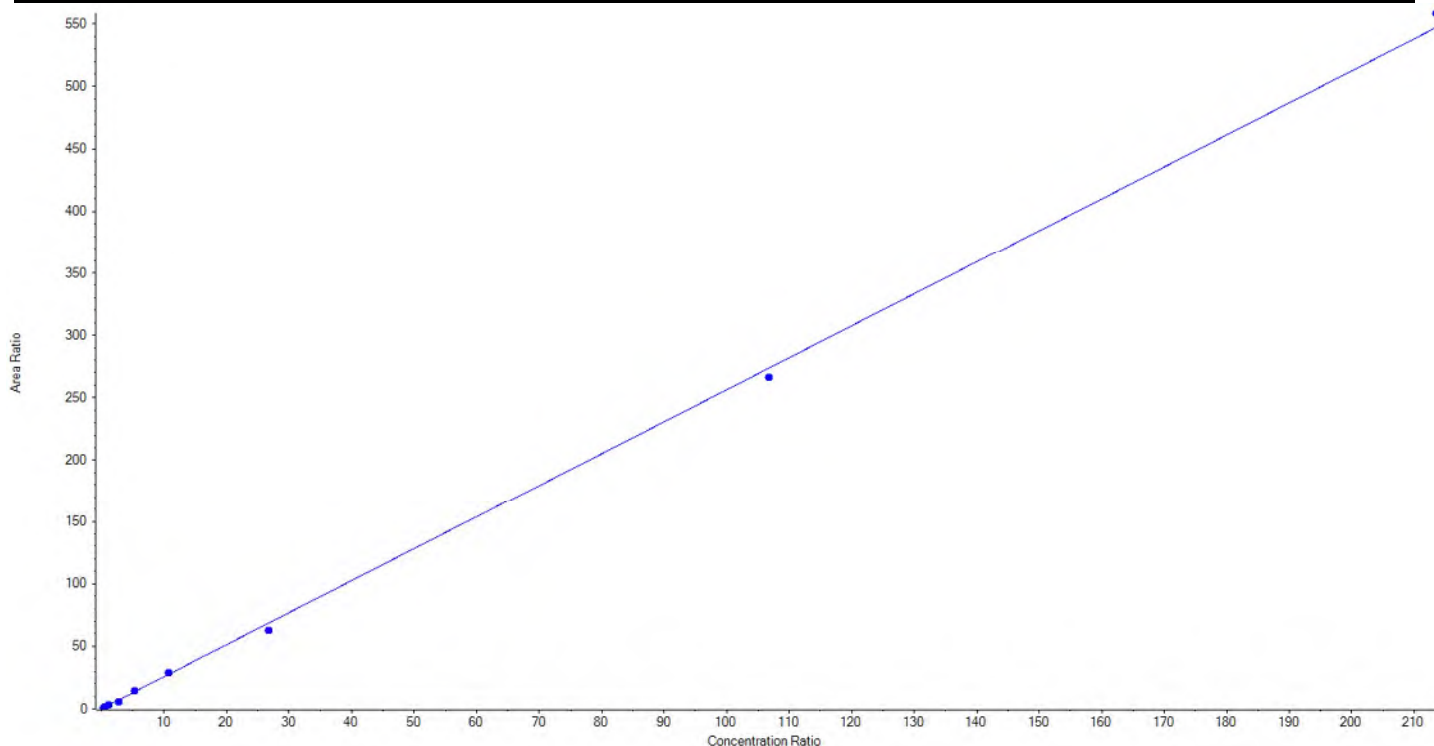
## Calibration Summary Report

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<b>Analyte Name</b>	PFHxS_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	399.0 / 80.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C3-PFHxS	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 2.56188x + 0.14000$  ( $r = 0.99936$ ) (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





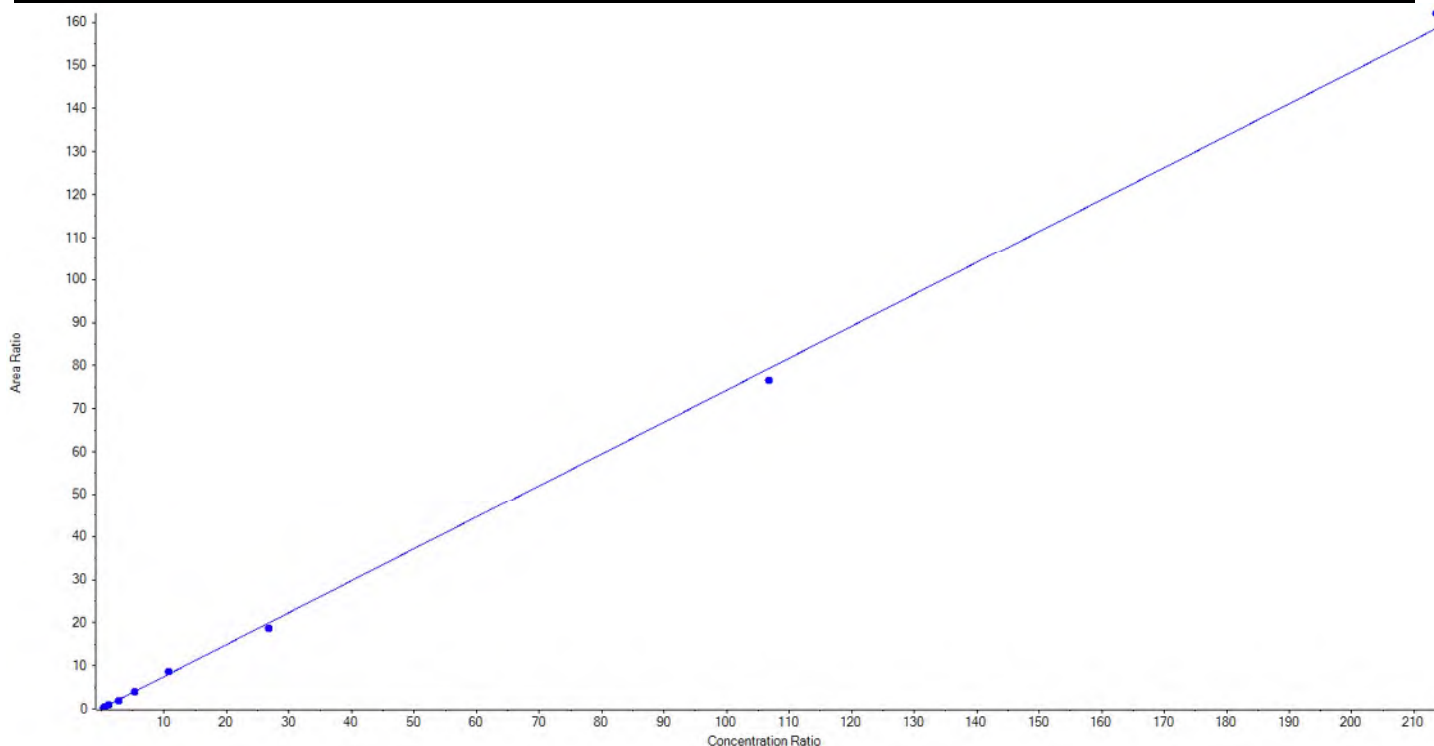
## Calibration Summary Report

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Printed: 05/06/2018 1:53:49 PM

<b>Analyte Name</b>	PFHxS_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	399.0 / 99.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C3-PFHxS	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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





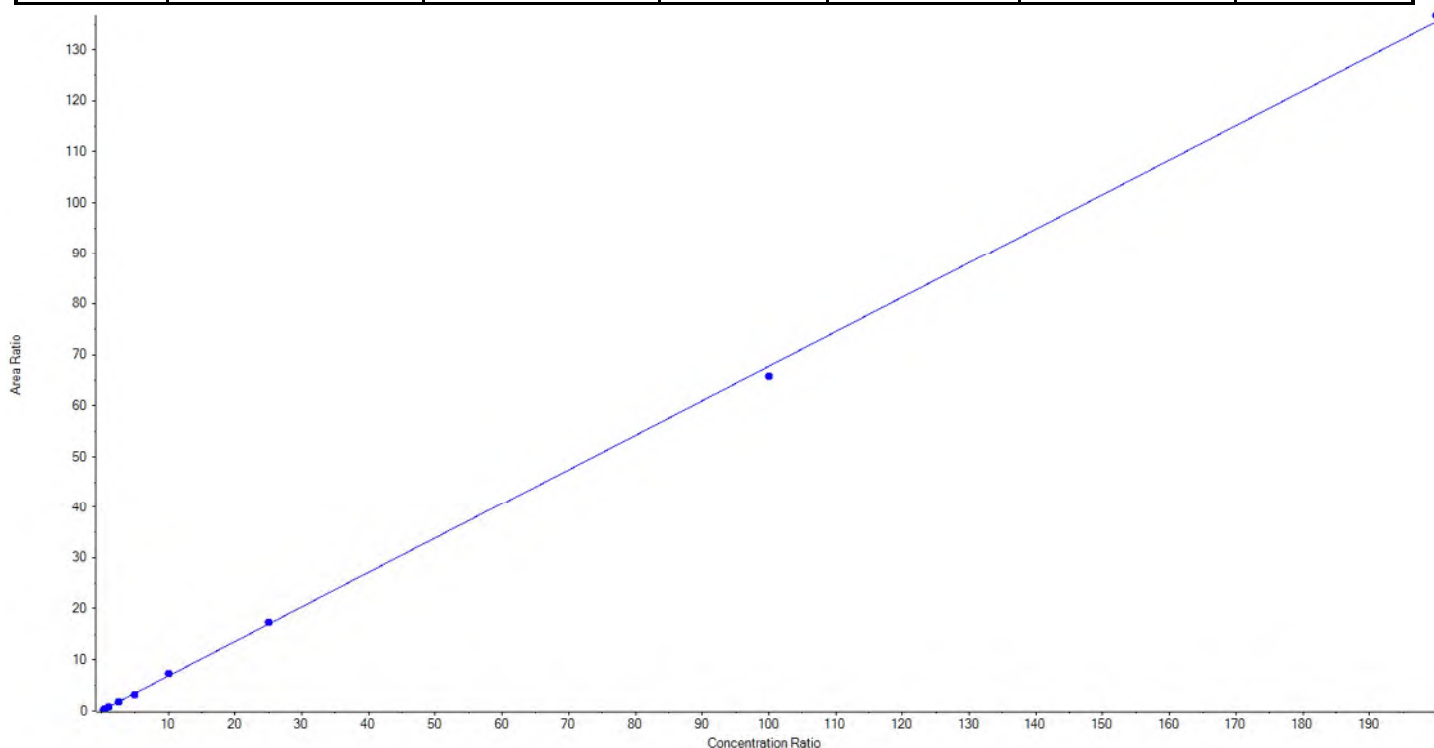
## Calibration Summary Report

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<b>Analyte Name</b>	PFOA_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	413.0 / 369.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C8-PFOA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.67721 x + 0.04216$  (r = 0.99972) (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	21.692269	86.8
3	JV21	L2	True	50.00	48.798844	97.6
4	JV22	L3	True	100.00	111.607904	111.6
5	JV23	L4	True	250.00	258.958097	103.6
6	JV24	L5	True	500.00	468.434530	93.7
7	JV25	L6	True	1000.00	1065.331022	106.5
8	JV26	L7	True	2500.00	2553.553058	102.1
9	JV27	L8	True	10000.00	9719.368185	97.2
10	JV28	L9	True	20000.00	20177.256091	100.9





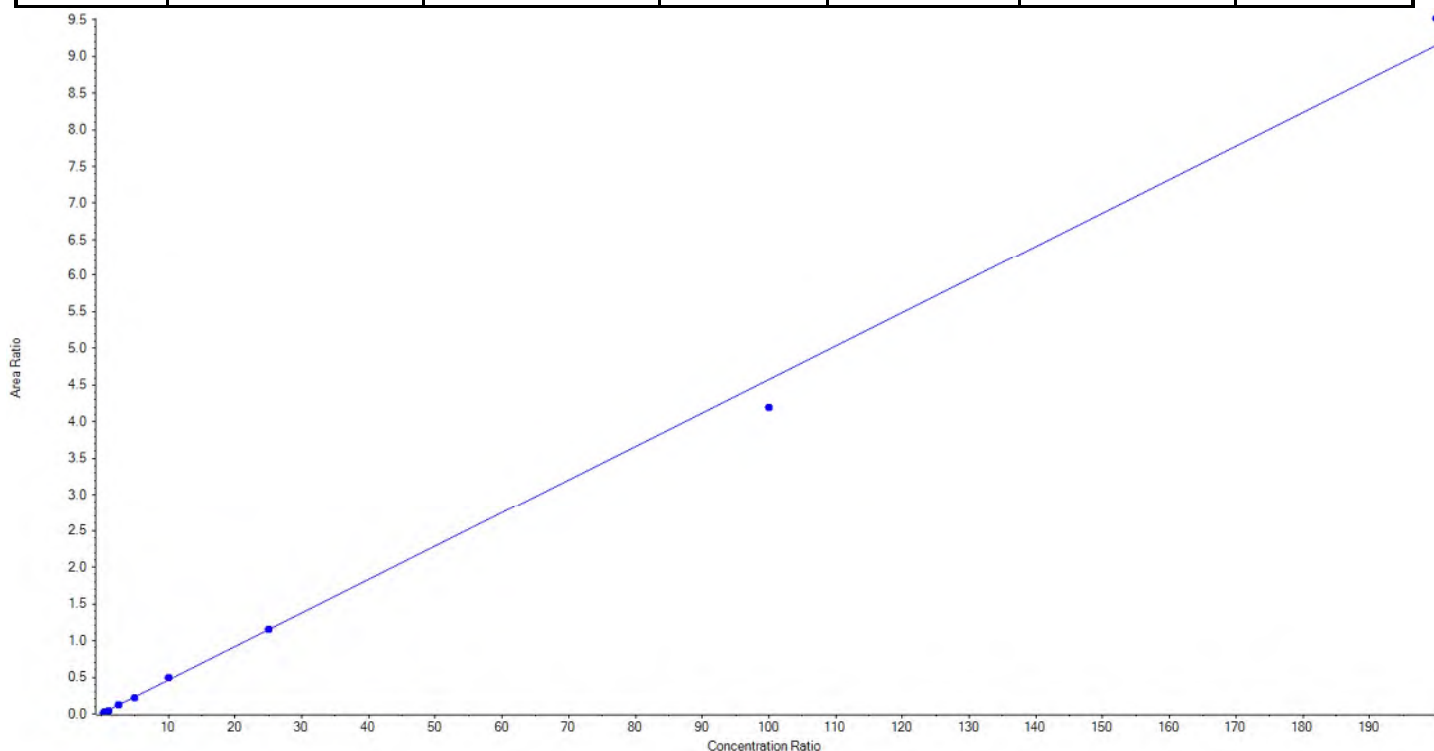
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<b>Analyte Name</b>	PFOA_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	413.0 / 169.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C8-PFOA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.04570 x + 0.00569$  ( $r = 0.99830$ ) (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	29.646241	118.6
3	JV21	L2	True	50.00	47.327708	94.7
4	JV22	L3	True	100.00	87.241942	87.2
5	JV23	L4	True	250.00	263.921523	105.6
6	JV24	L5	True	500.00	458.947120	91.8
7	JV25	L6	True	1000.00	1060.784291	106.1
8	JV26	L7	True	2500.00	2511.628490	100.5
9	JV27	L8	True	10000.00	9157.712634	91.6
10	JV28	L9	True	20000.00	20807.790052	104.0







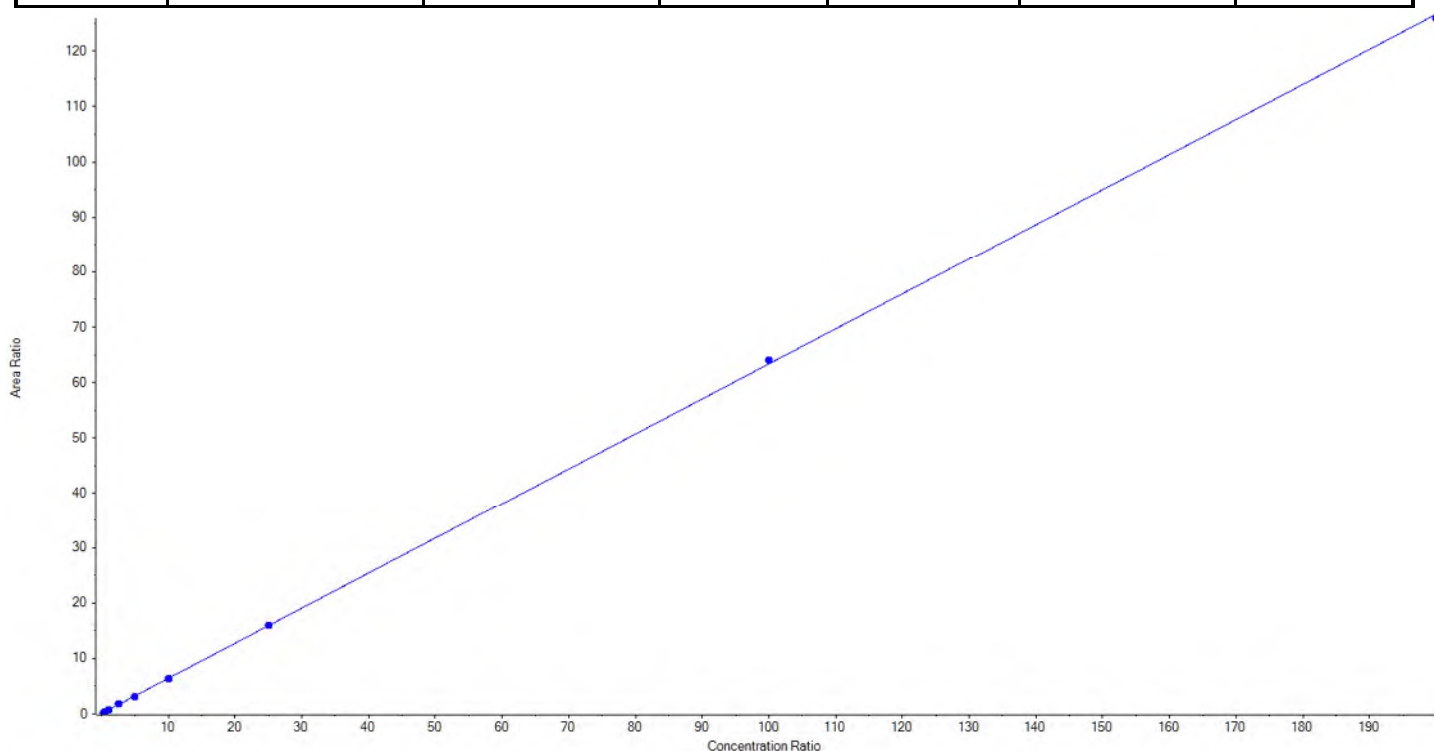
## Calibration Summary Report

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<b>Analyte Name</b>	PFNA_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	463.0 / 419.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C9-PFNA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.63271 x + 0.07945$  (r = 0.99990) (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	24.794878	99.2
3	JV21	L2	True	50.00	47.234301	94.5
4	JV22	L3	True	100.00	99.634636	99.6
5	JV23	L4	True	250.00	277.769664	111.1
6	JV24	L5	True	500.00	470.875784	94.2
7	JV25	L6	True	1000.00	1004.051505	100.4
8	JV26	L7	True	2500.00	2513.608735	100.5
9	JV27	L8	True	10000.00	10109.915260	101.1
10	JV28	L9	True	20000.00	19877.115238	99.4





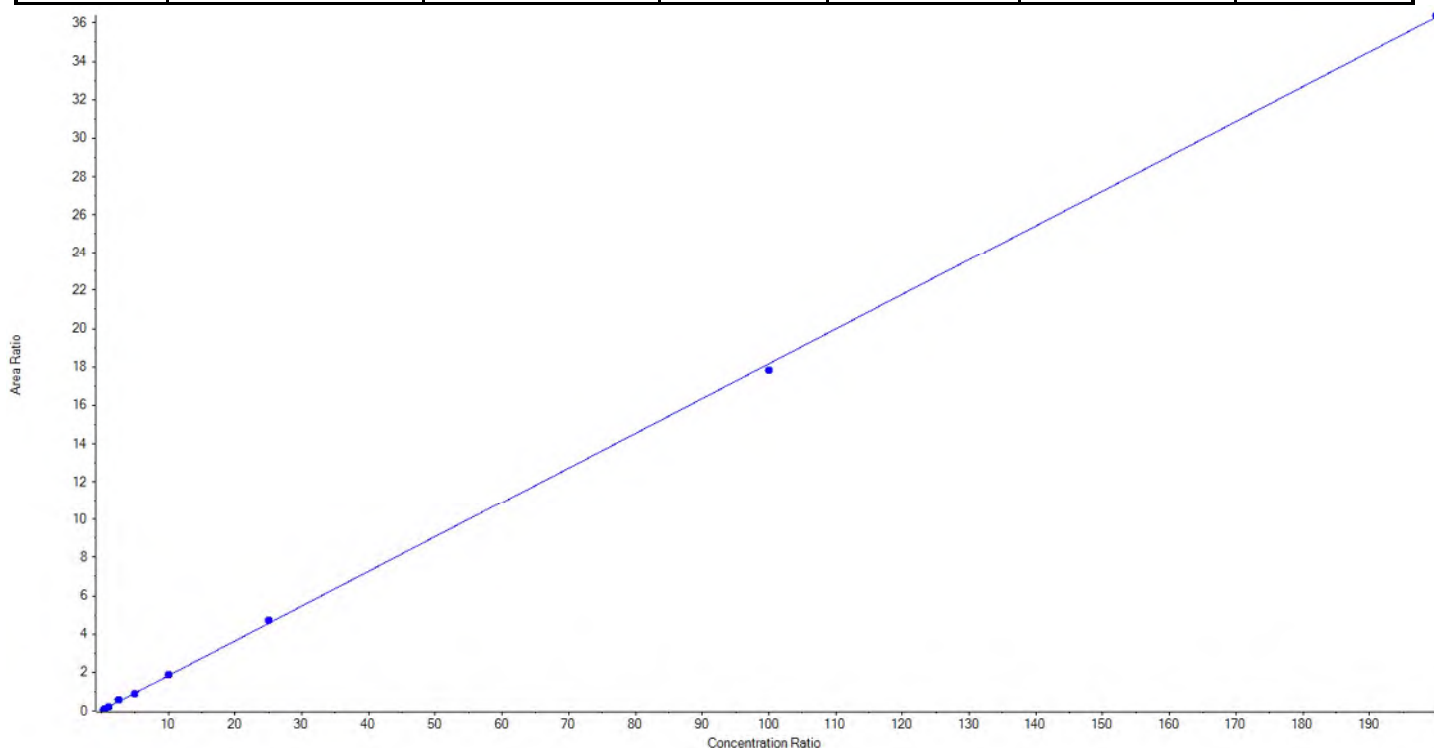
## Calibration Summary Report

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<b>Analyte Name</b>	PFNA_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	463.0 / 219.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C9-PFNA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.18146 x + 0.01780$  ( $r = 0.99967$ ) (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	19.897180	79.6
3	JV21	L2	True	50.00	42.900488	85.8
4	JV22	L3	True	100.00	113.581329	113.6
5	JV23	L4	True	250.00	299.906195	120.0
6	JV24	L5	True	500.00	480.187752	96.0
7	JV25	L6	True	1000.00	1034.249942	103.4
8	JV26	L7	True	2500.00	2582.314616	103.3
9	JV27	L8	True	10000.00	9810.311373	98.1
10	JV28	L9	True	20000.00	20041.651126	100.2





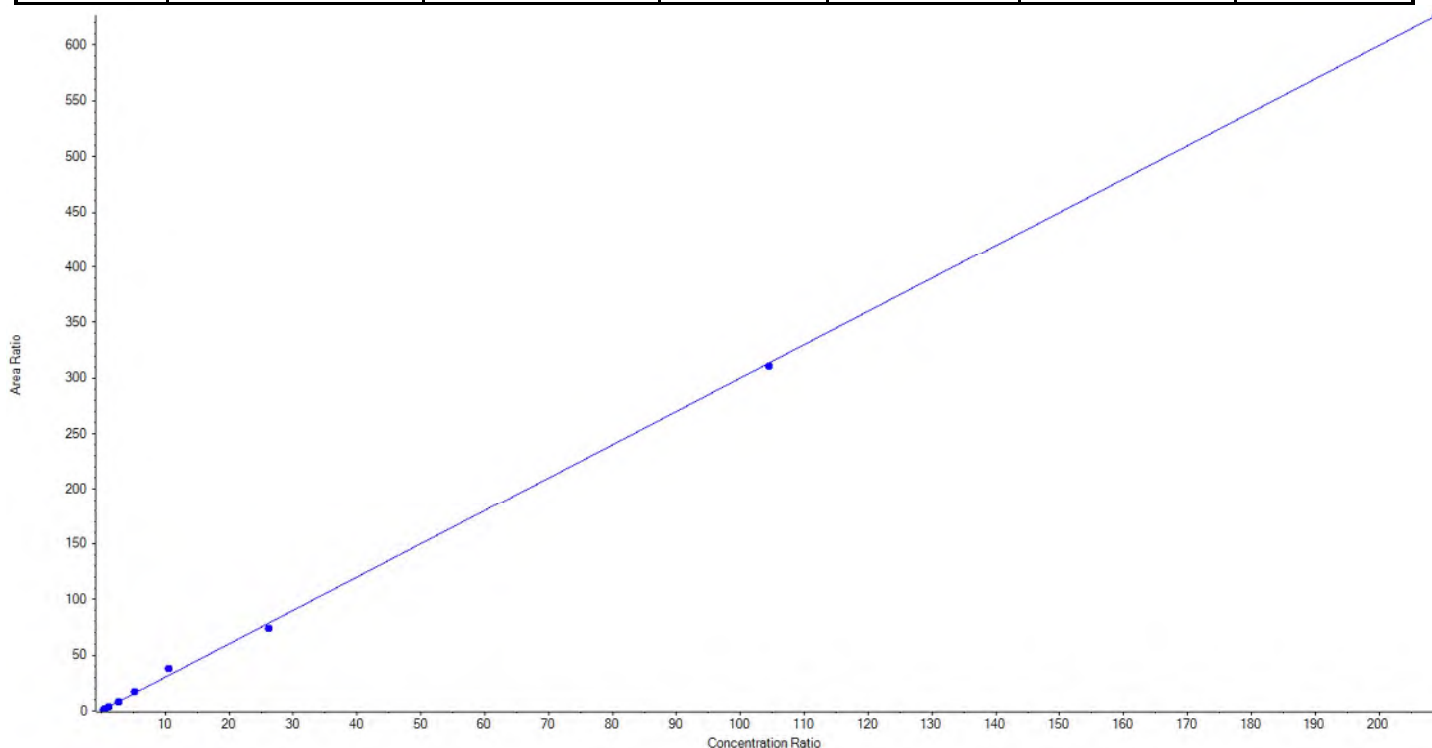
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<b>Analyte Name</b>	PFOS_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	499.0 / 80.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C8-PFOS	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 2.99639x + 0.29547$  ( $r = 0.99916$ ) (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





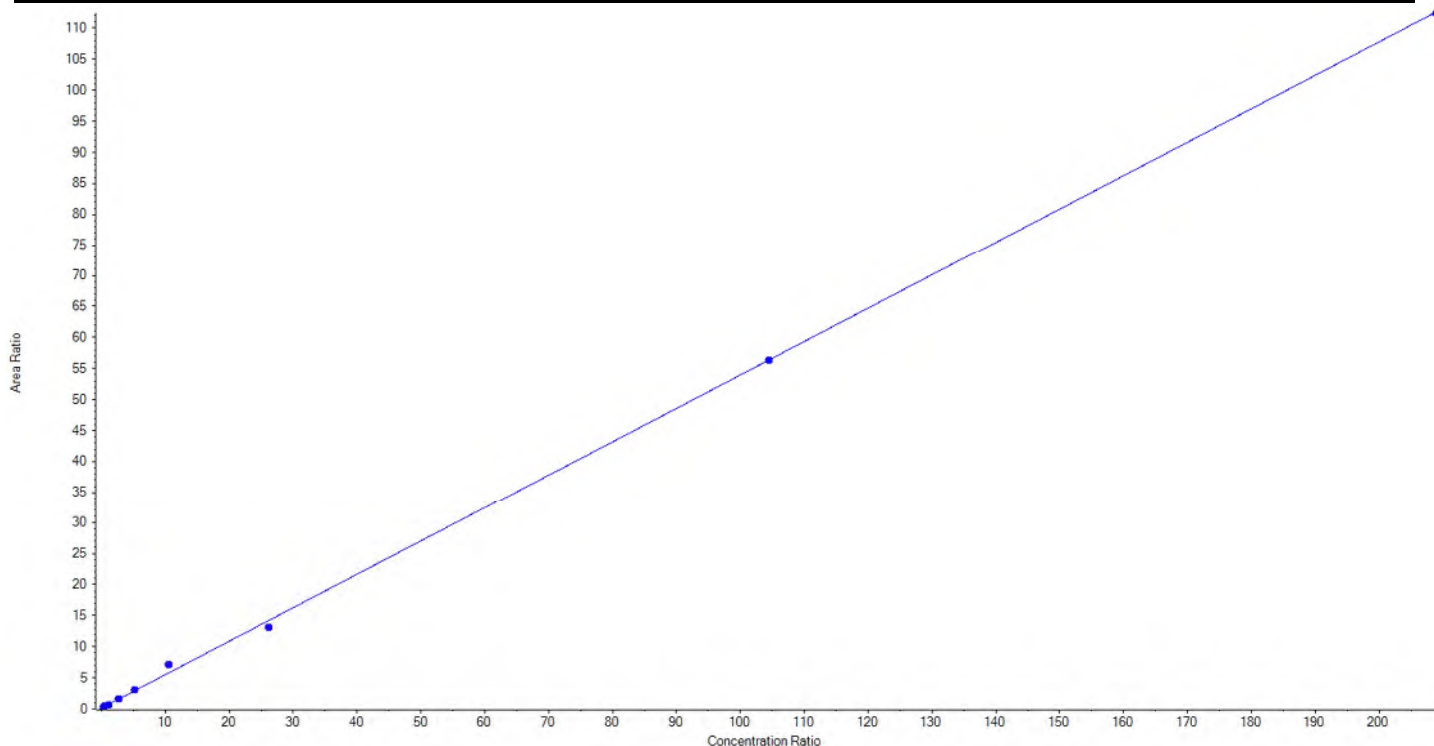
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<b>Analyte Name</b>	PFOS_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	499.0 / 99.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C8-PFOS	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.53812x + 0.13454$  ( $r = 0.99870$ ) (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	20.534763	82.1
3	JV21	L2	True	50.00	55.763550	111.5
4	JV22	L3	True	100.00	84.265546	84.3
5	JV23	L4	True	250.00	249.531054	99.8
6	JV24	L5	True	500.00	527.216071	105.4
7	JV25	L6	True	1000.00	1253.819955	125.4
8	JV26	L7	True	2500.00	2295.180202	91.8
9	JV27	L8	True	10000.00	9986.003544	99.9
10	JV28	L9	True	20000.00	19952.685315	99.8





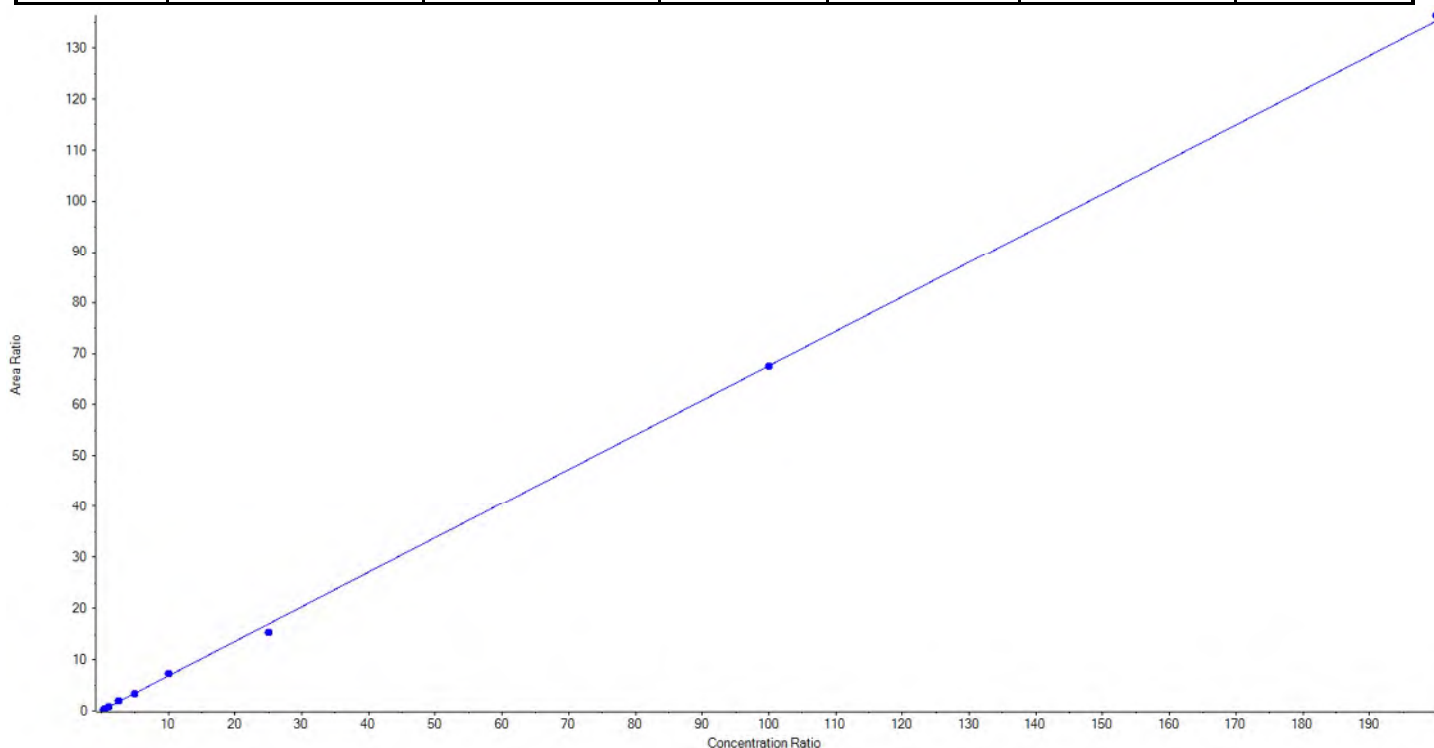
## Calibration Summary Report

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<b>Analyte Name</b>	PFDA_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	513.0 / 469.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C6-PFDA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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





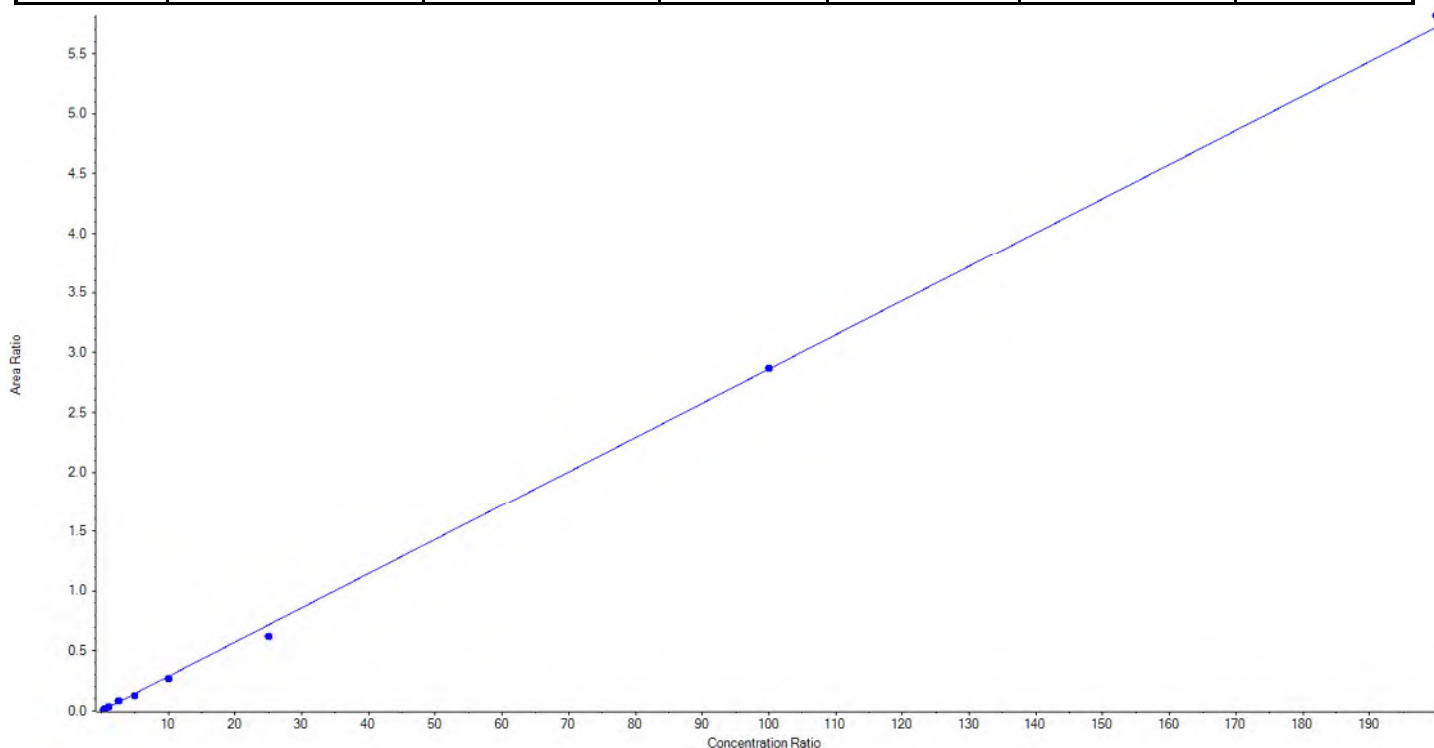
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<b>Analyte Name</b>	PFDA_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	513.0 / 219.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C6-PFDA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.02861 x + 0.00102$  (r = 0.99899) (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	18.253367	73.0
3	JV21	L2	True	50.00	57.977130	116.0
4	JV22	L3	True	100.00	124.557169	124.6
5	JV23	L4	True	250.00	281.256770	112.5
6	JV24	L5	True	500.00	449.853585	90.0
7	JV25	L6	True	1000.00	948.509191	94.9
8	JV26	L7	True	2500.00	2180.359578	87.2
9	JV27	L8	True	10000.00	10023.041773	100.2
10	JV28	L9	True	20000.00	20341.191437	101.7





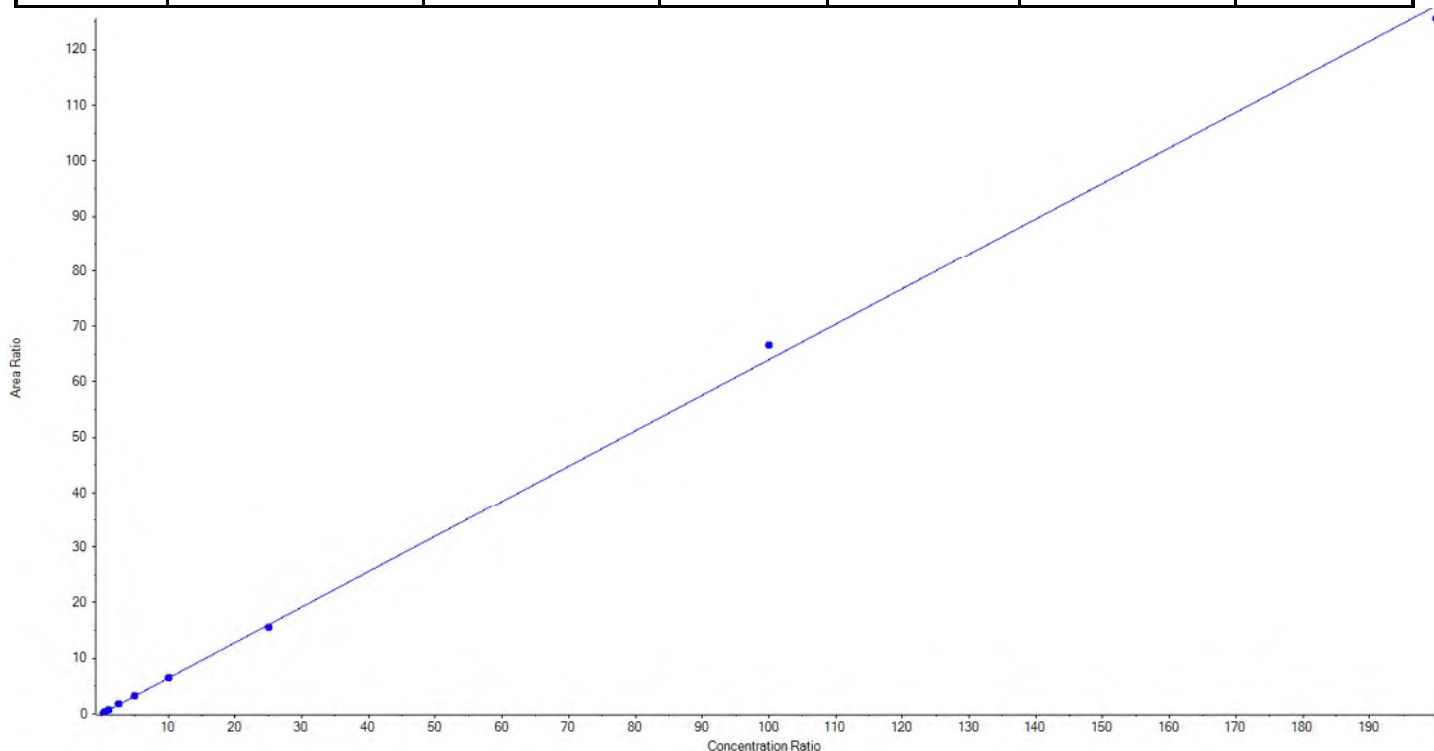
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<b>Analyte Name</b>	PFUnA_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	563.0 / 519.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C7-PFUnA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.63935x + 0.03411$  ( $r = 0.99952$ ) (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	20.084450	80.3
3	JV21	L2	True	50.00	49.801121	99.6
4	JV22	L3	True	100.00	111.194556	111.2
5	JV23	L4	True	250.00	278.217162	111.3
6	JV24	L5	True	500.00	491.317514	98.3
7	JV25	L6	True	1000.00	1001.104168	100.1
8	JV26	L7	True	2500.00	2421.794476	96.9
9	JV27	L8	True	10000.00	10415.081019	104.2
10	JV28	L9	True	20000.00	19636.405535	98.2





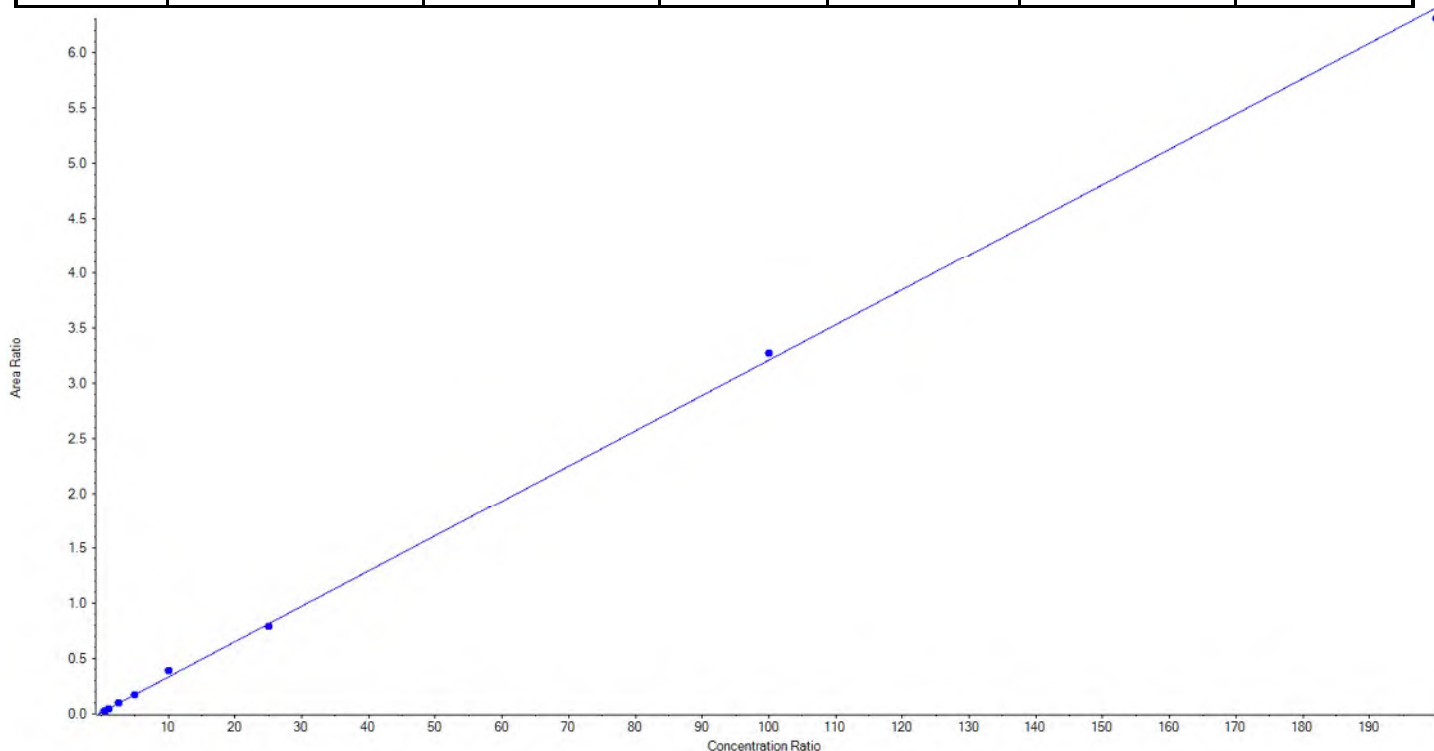
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<b>Analyte Name</b>	PFUnA_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	563.0 / 269.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C7-PFUnA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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







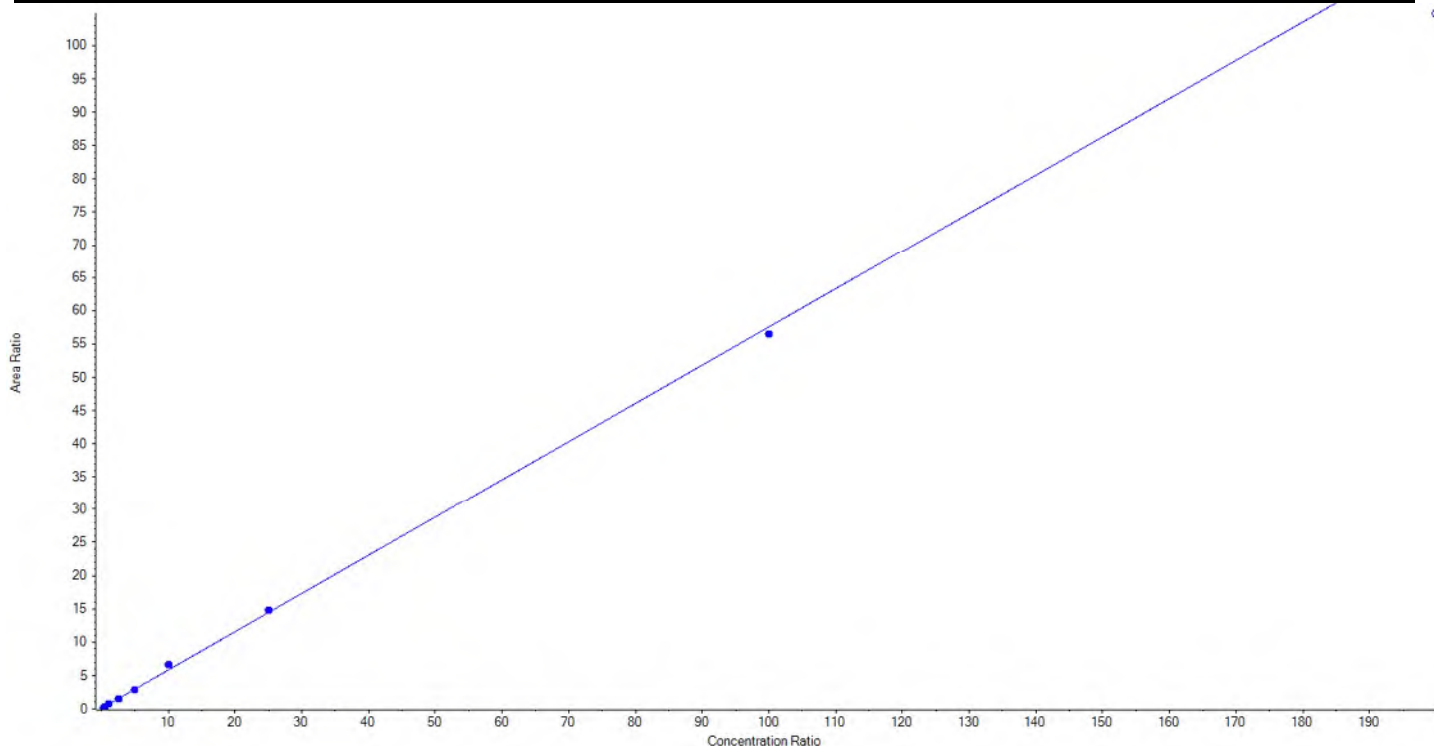
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<b>Analyte Name</b>	PFD <sub>o</sub> A_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	613.0 / 569.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C2-PFD <sub>o</sub> A	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.57472x + 0.09145$  ( $r = 0.99875$ ) (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





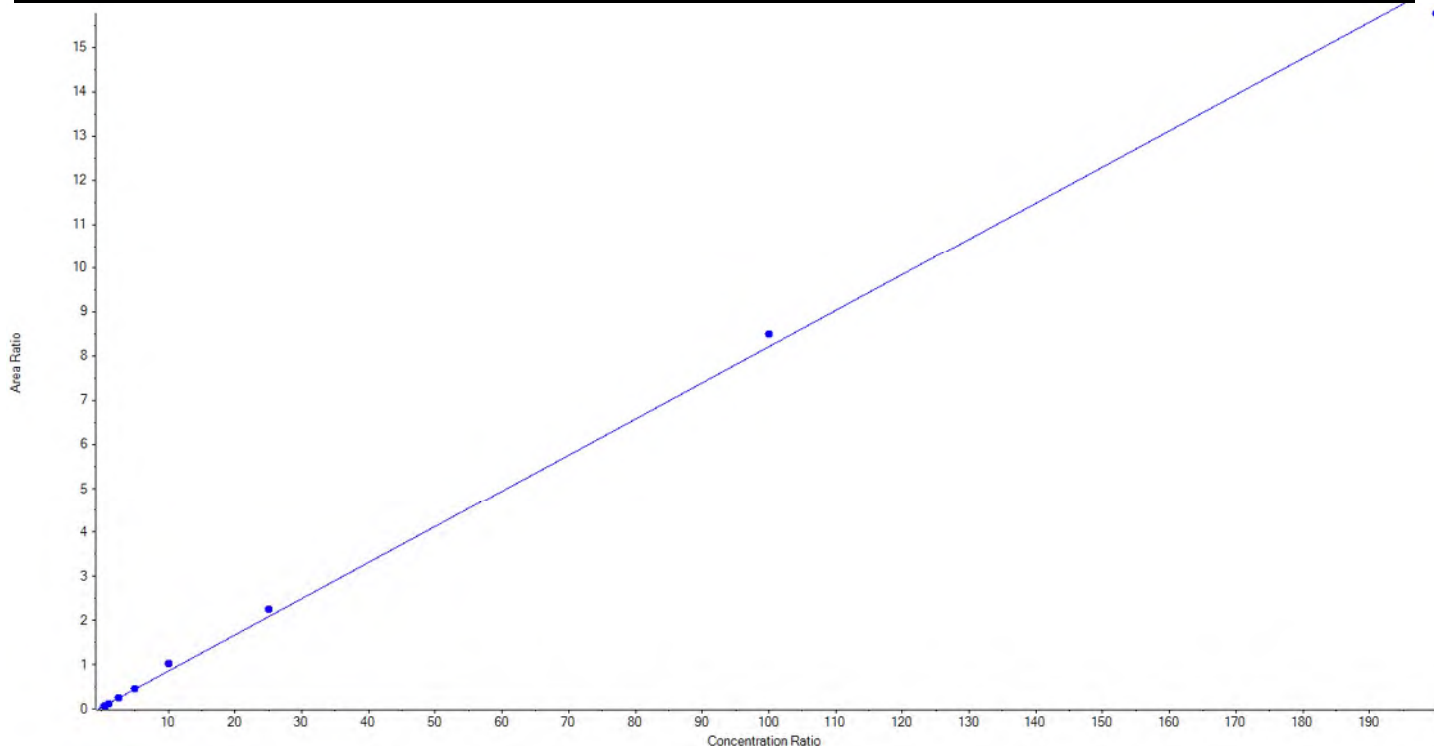
## Calibration Summary Report

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<b>Analyte Name</b>	PFD <sub>o</sub> A_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	613.0 / 319.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C2-PFD <sub>o</sub> A	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.08176x + 0.03563$  ( $r = 0.99832$ ) (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





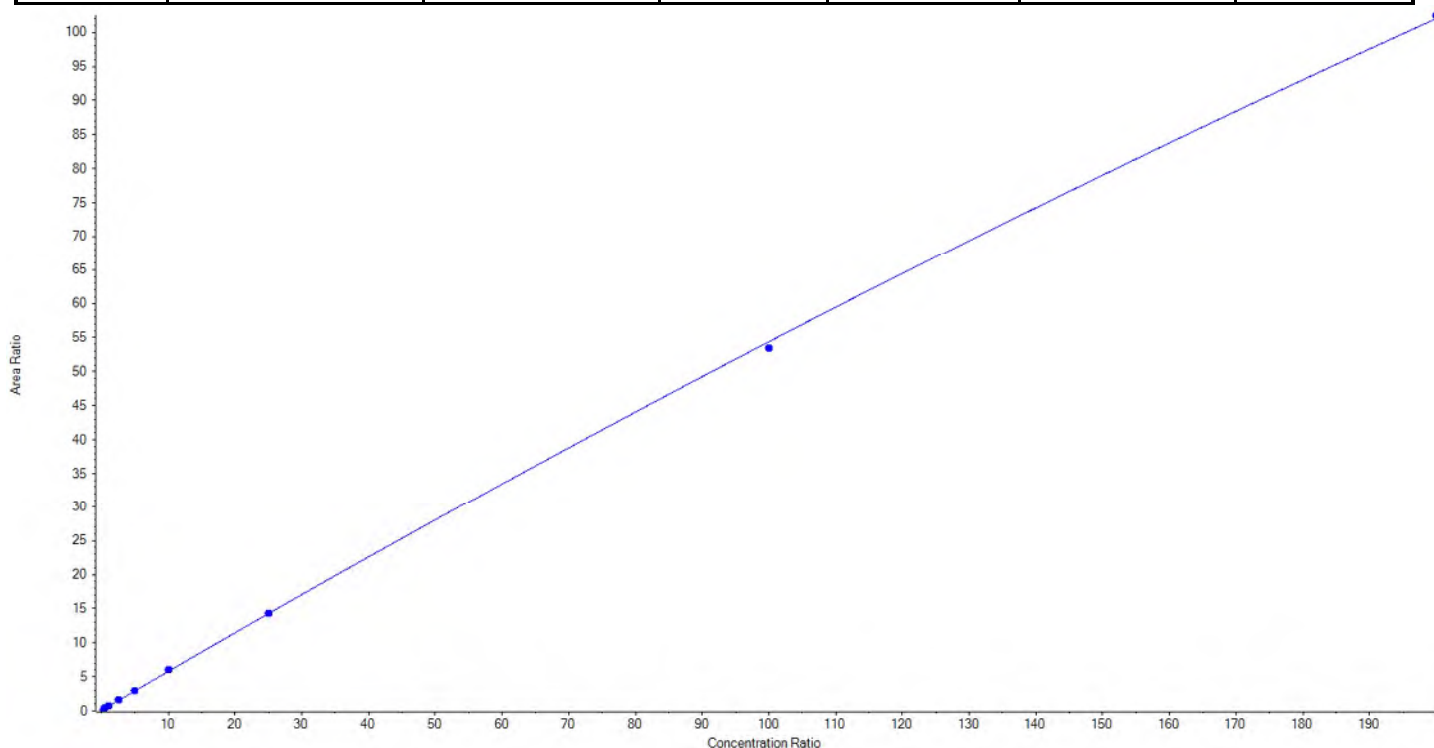
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<b>Analyte Name</b>	PFTrDA_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	663.0 / 619.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C2-PFTeDA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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





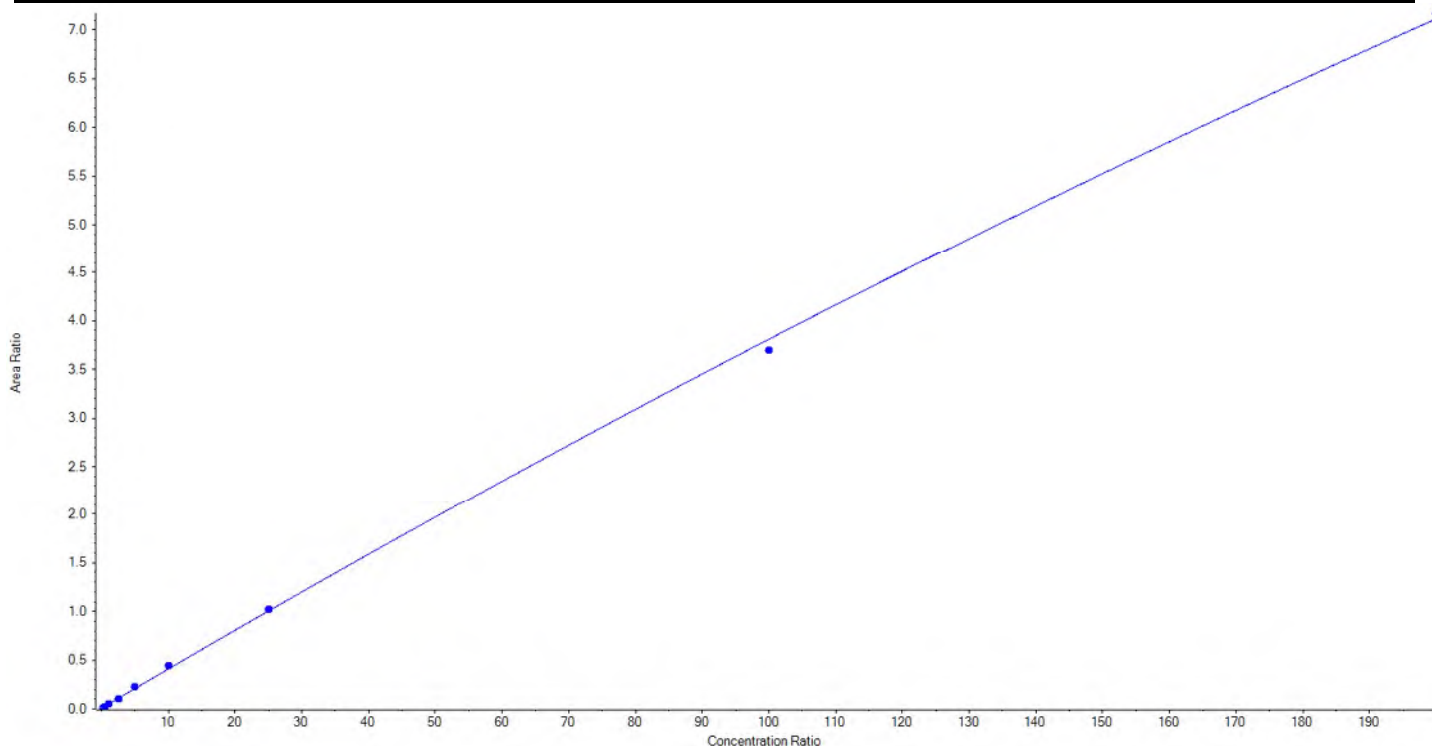
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<b>Analyte Name</b>	PFTrDA_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	663.0 / 169.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C2-PFTeDA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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





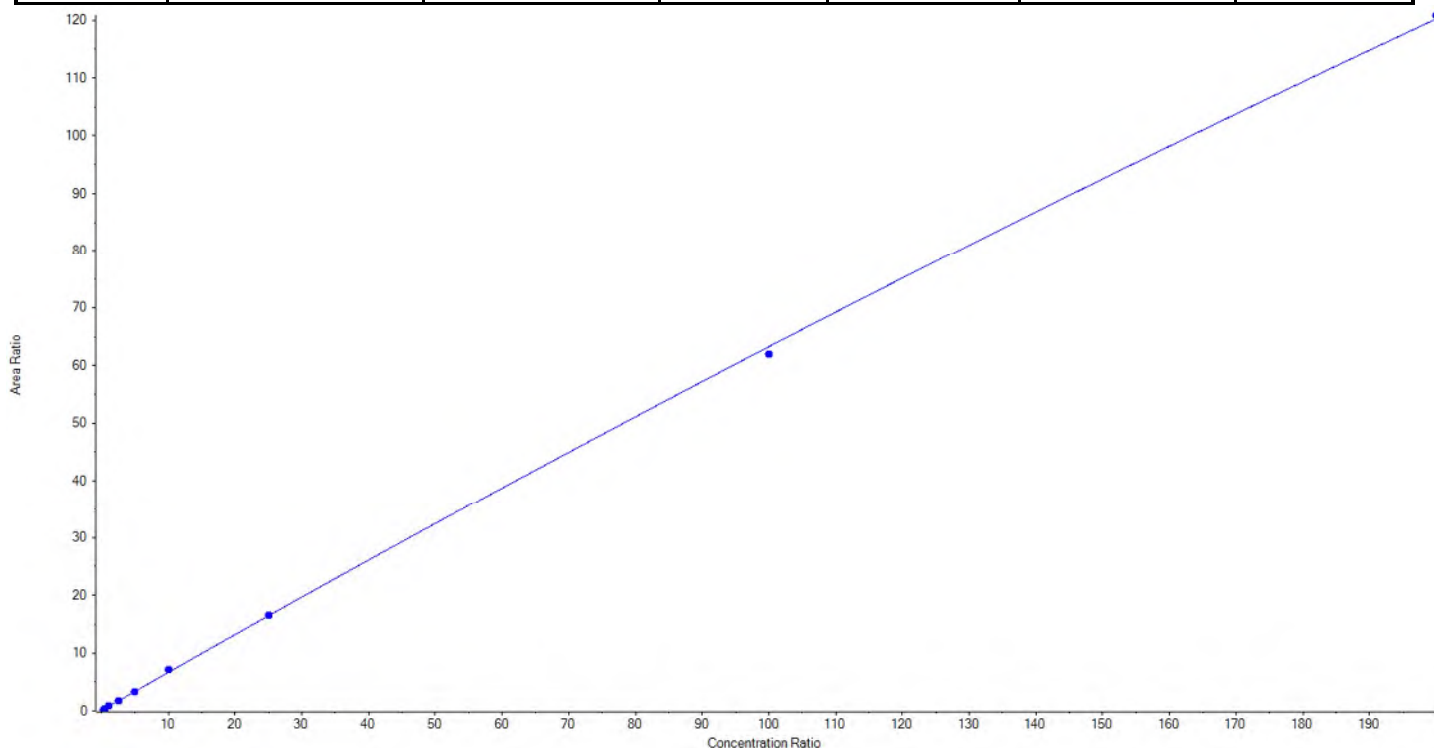
## Calibration Summary Report

Created with Analyst Reporter  
Printed: 05/06/2018 1:53:49 PM

<b>Analyte Name</b>	PFTeDA_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	713.0 / 669.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C2-PFTeDA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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





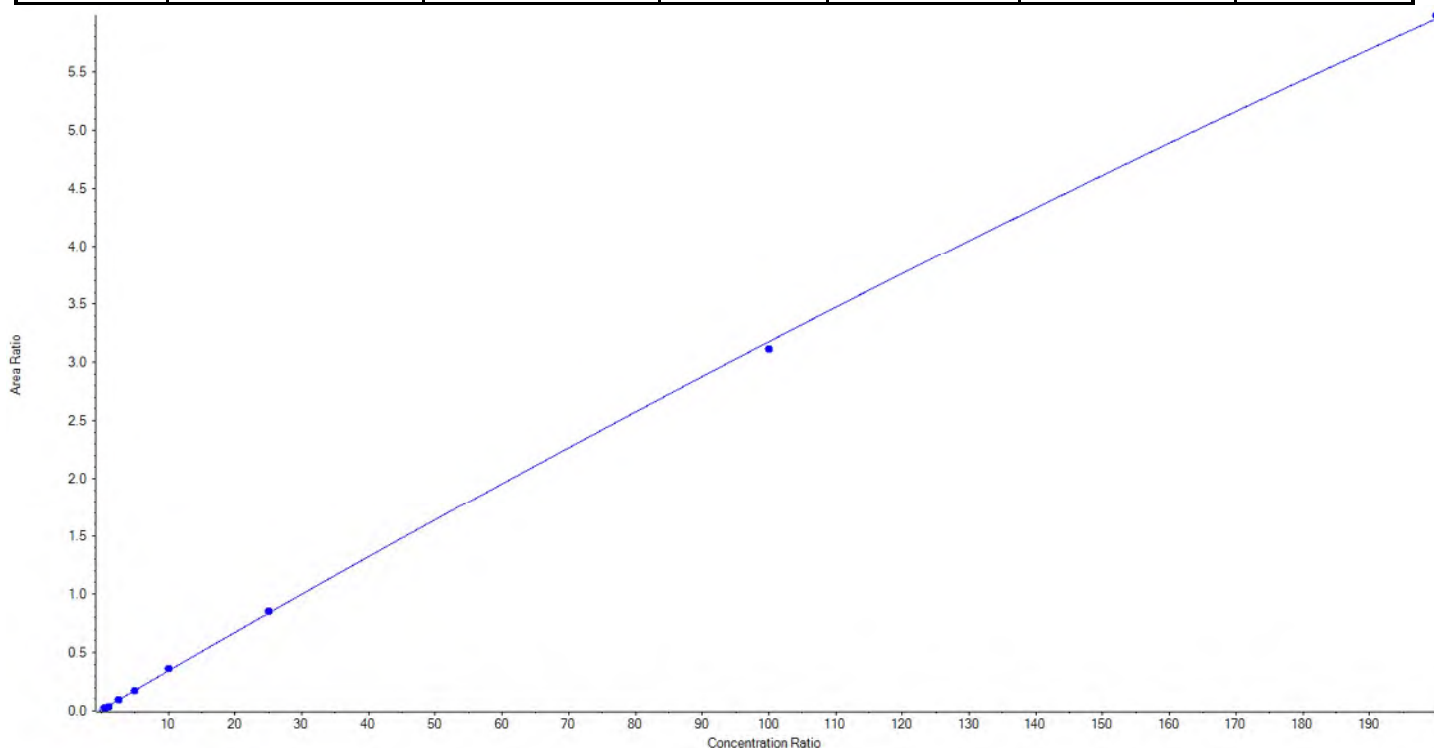
## Calibration Summary Report

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Printed: 05/06/2018 1:53:49 PM

<b>Analyte Name</b>	PFTeDA_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	713.0 / 169.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C2-PFTeDA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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





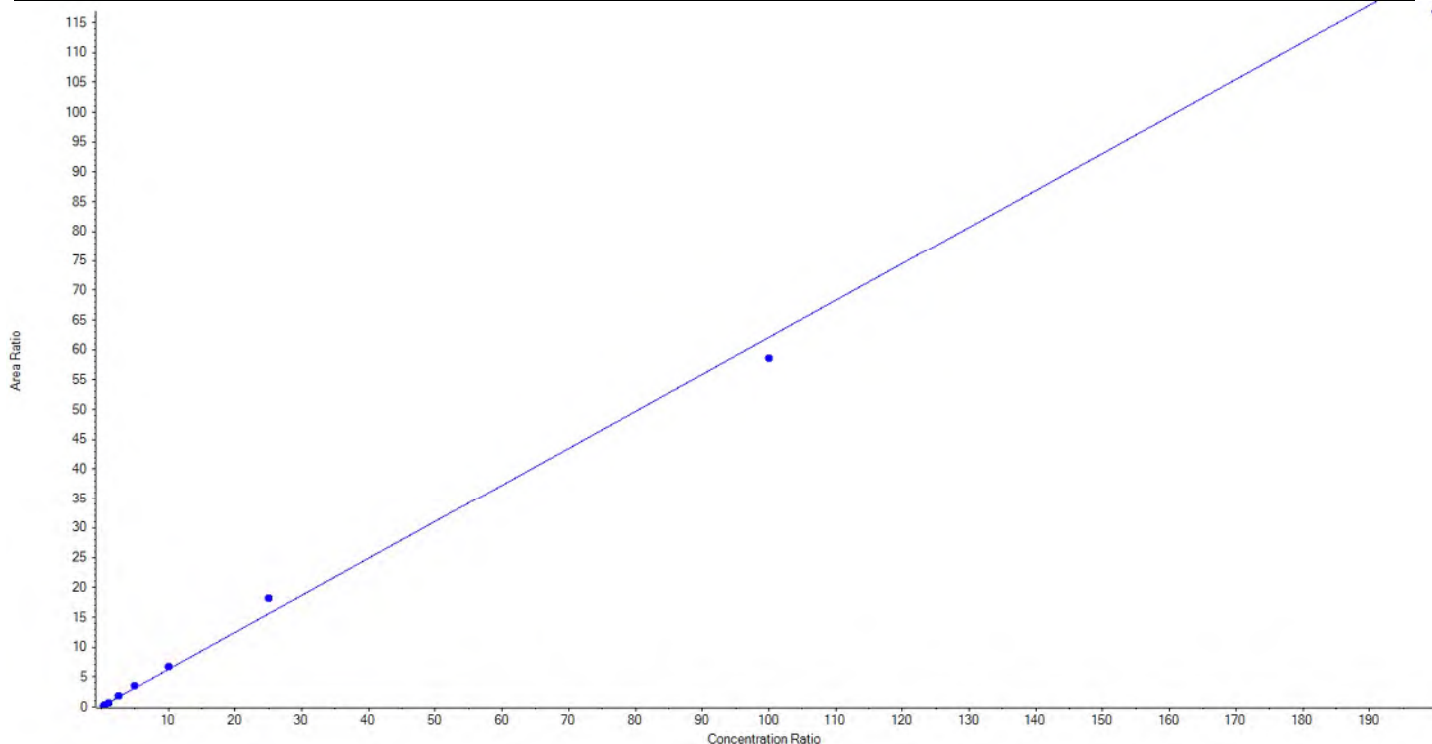
## Calibration Summary Report

Created with Analyst Reporter  
Printed: 05/06/2018 1:53:49 PM

<b>Analyte Name</b>	NMeFOSAA_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	570.0 / 419.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	d3-MeFOSAA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.62027x + 0.06299$  ( $r = 0.99559$ ) (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





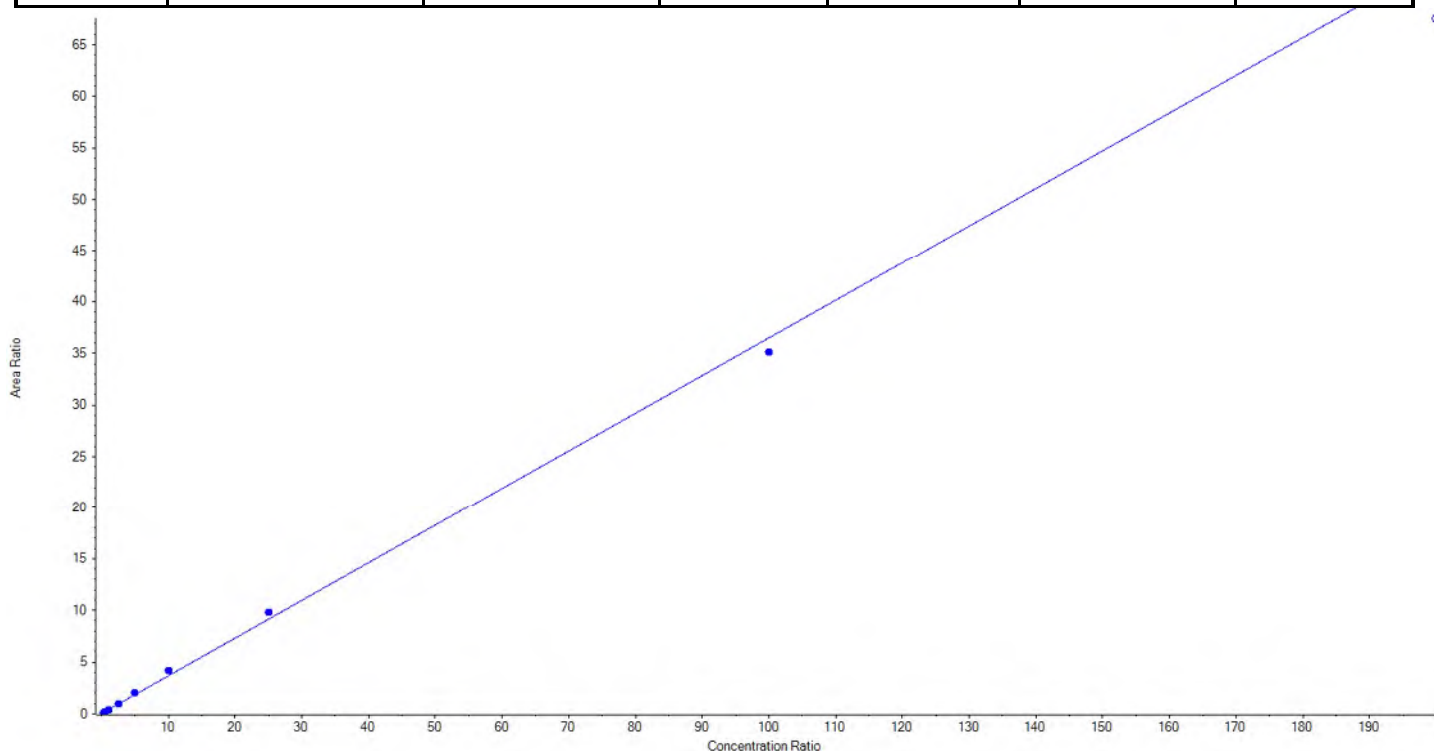
## Calibration Summary Report

Created with Analyst Reporter  
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<b>Analyte Name</b>	NMeFOSAA_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	570.0 / 512.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	d3-MeFOSAA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.36467x + 0.03706$  ( $r = 0.99800$ ) (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







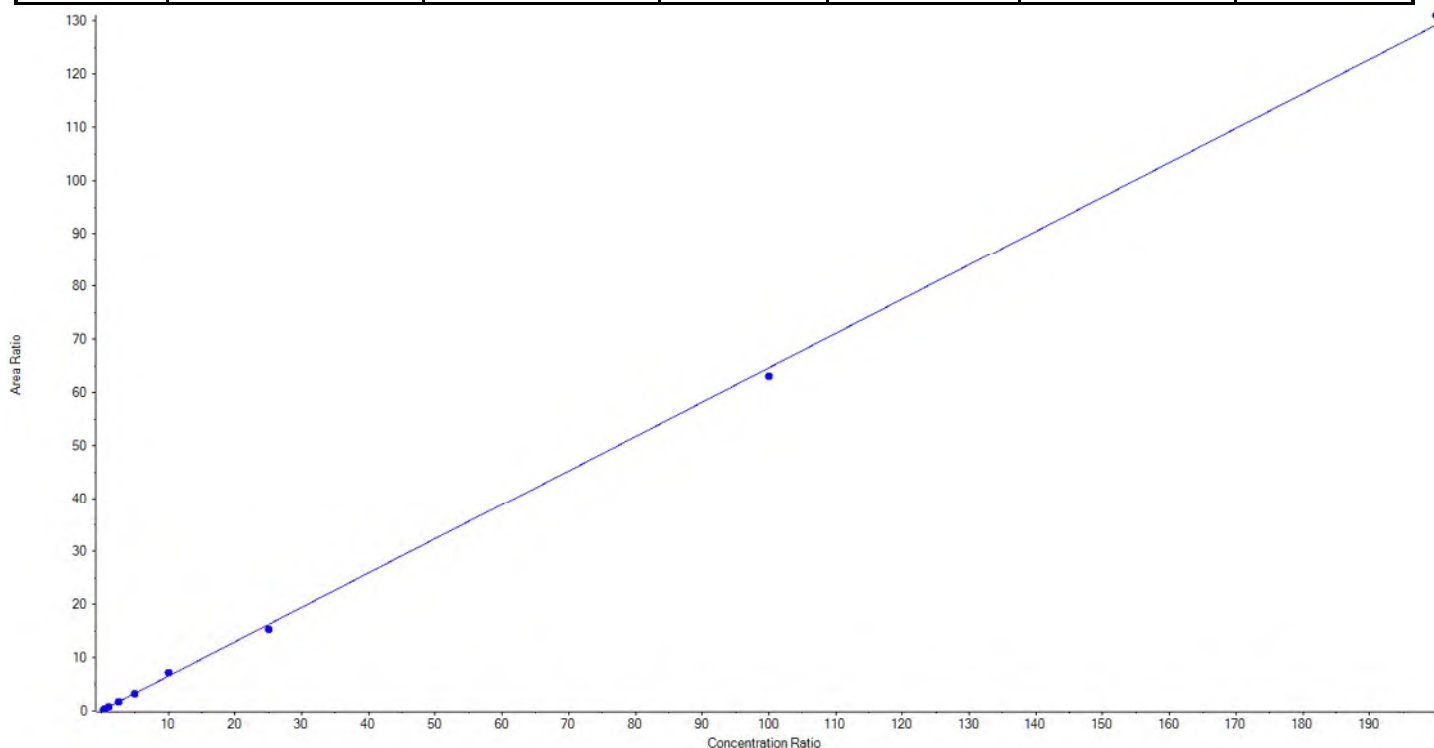
## Calibration Summary Report

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<b>Analyte Name</b>	NEtFOSAA_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	584.0 / 419.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	d5-EtFOSAA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.64602x + 0.04775$  ( $r = 0.99955$ ) (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





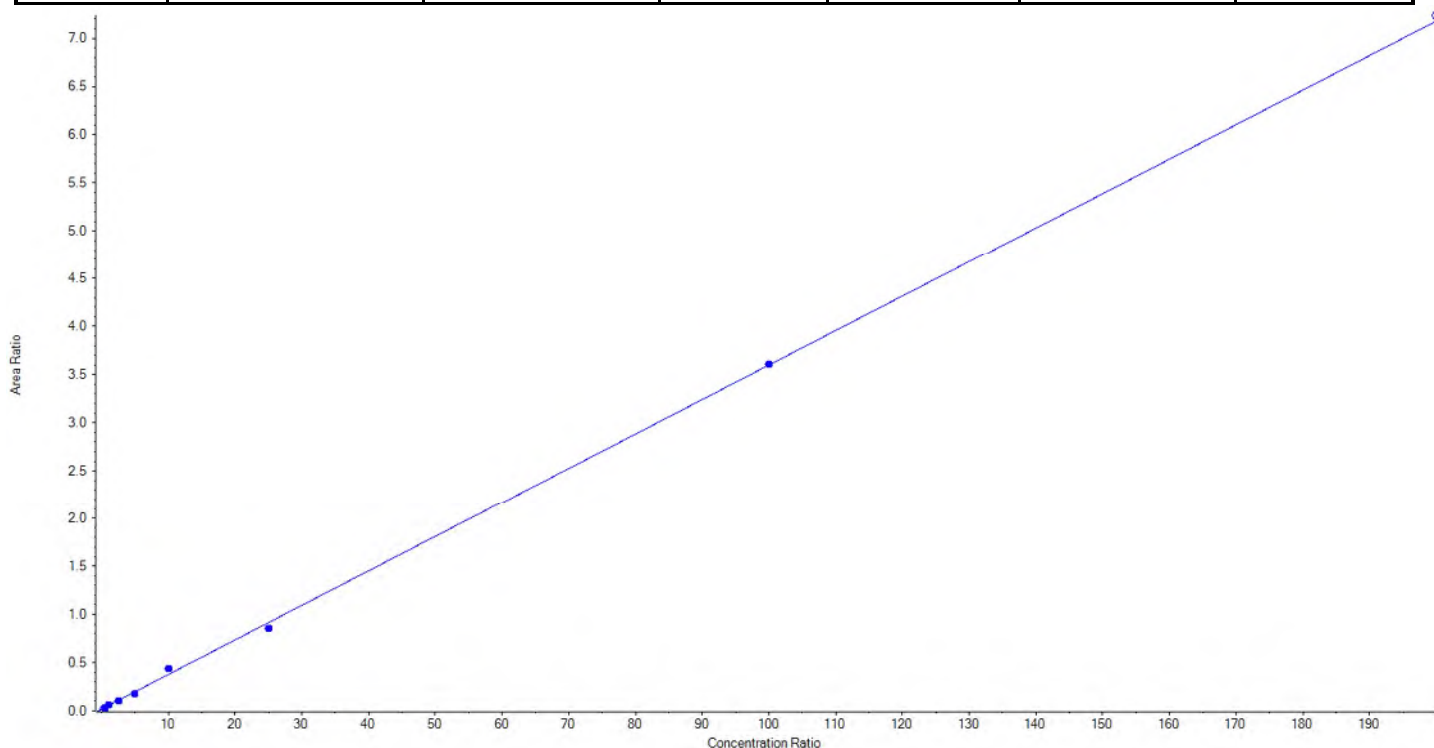
## Calibration Summary Report

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<b>Analyte Name</b>	NEtFOSAA_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	584.0 / 483.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	d5-EtFOSAA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.03579x + 0.01956$  (r = 0.99787) (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	36.759626	73.5
4	JV22	L3	True	100.00	129.128134	129.1
5	JV23	L4	True	250.00	238.489695	95.4
6	JV24	L5	True	500.00	454.068059	90.8
7	JV25	L6	True	1000.00	1171.386698	117.1
8	JV26	L7	True	2500.00	2343.425851	93.7
9	JV27	L8	True	10000.00	10026.741936	100.3
10	JV28	L9	False	20000.00	20158.584459	100.8





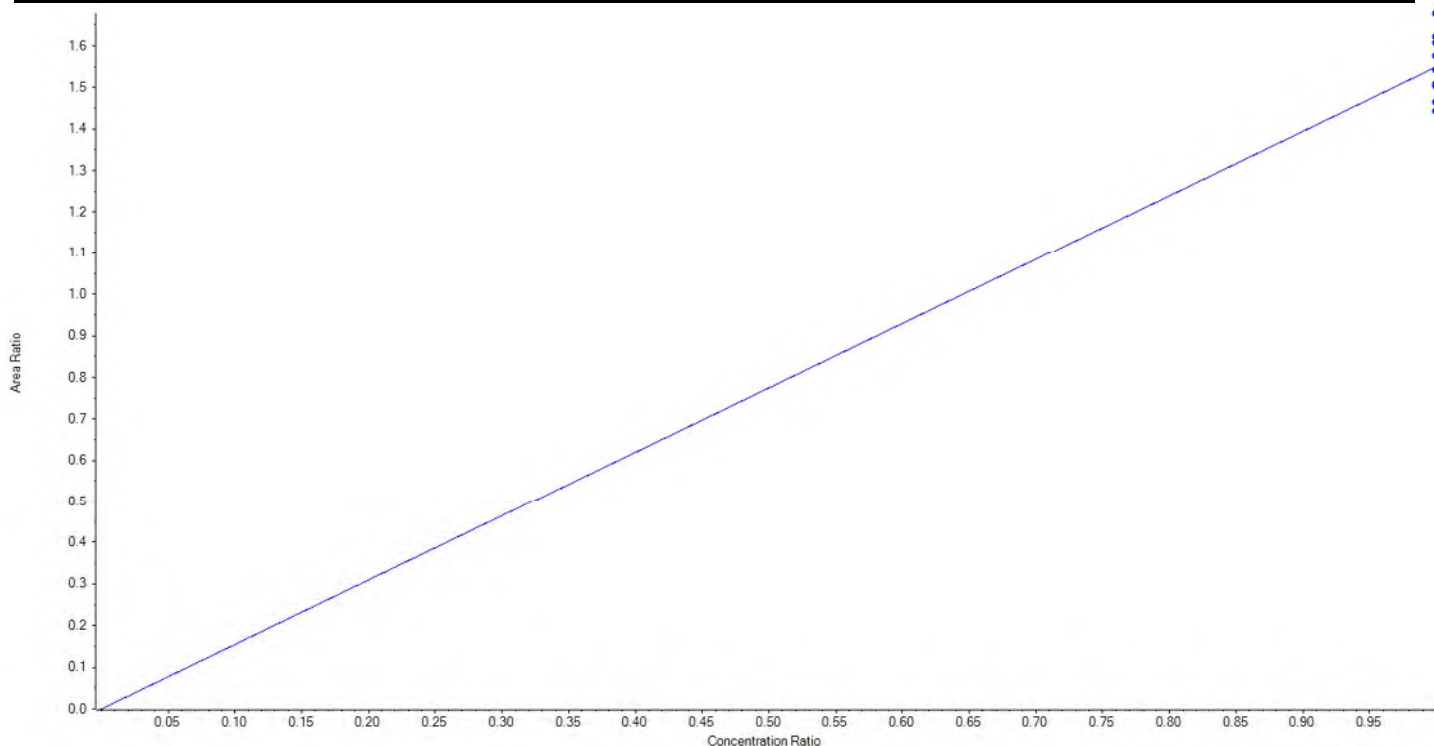
## Calibration Summary Report

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<b>Analyte Name</b>	13C2-PFDoA	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	615.0 / 570.0	<b>Result Table</b>	18-0338_SIS
<b>Internal Standard</b>	13C2-PFDA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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





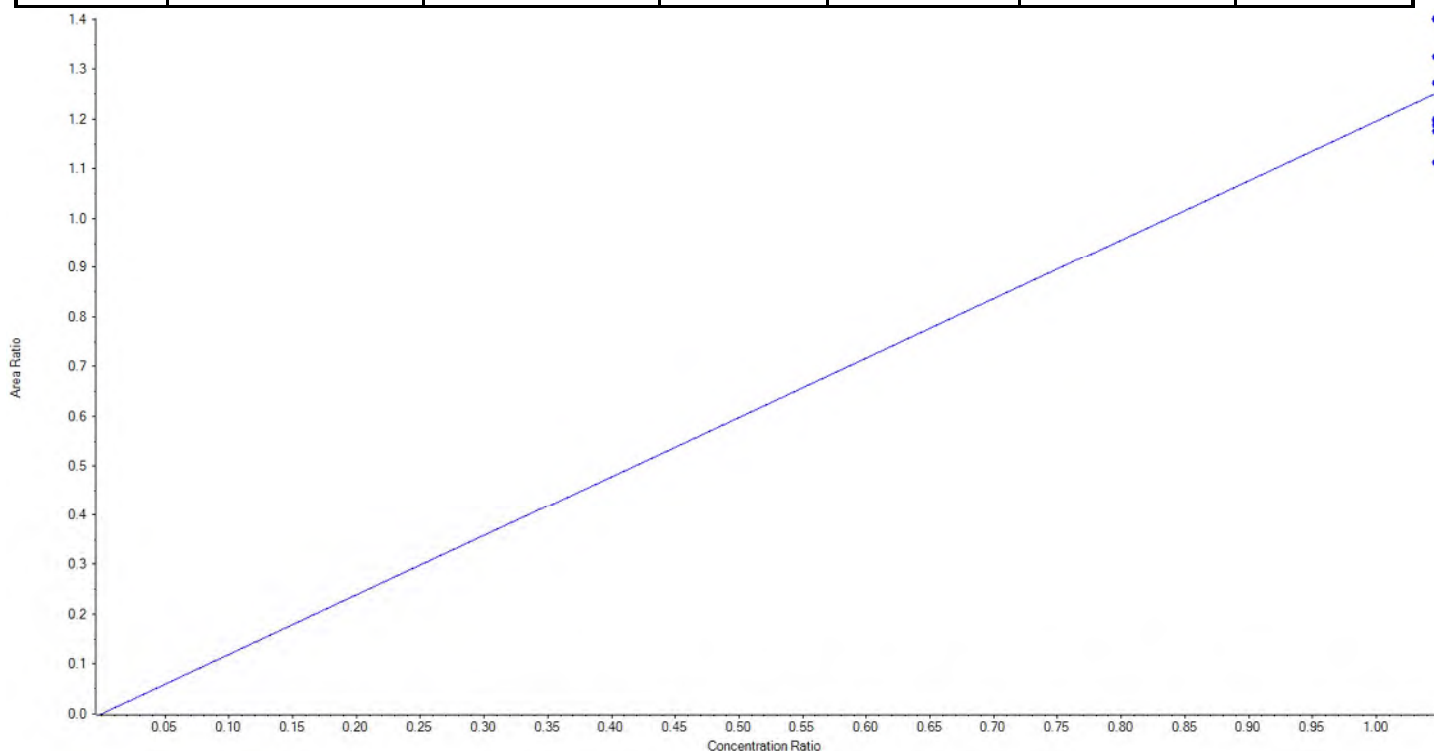
## Calibration Summary Report

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<b>Analyte Name</b>	d3-MeFOSAA	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	573.0 / 419.0	<b>Result Table</b>	18-0338_SIS
<b>Internal Standard</b>	13C4-PFOS	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 1.19574 x$  (std. dev. = 0.09867) (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	105.874301	105.9
3	JV21	L2	True	100.00	95.770605	95.8
4	JV22	L3	True	100.00	101.615843	101.6
5	JV23	L4	True	100.00	88.857346	88.9
6	JV24	L5	True	100.00	95.461521	95.5
7	JV25	L6	True	100.00	93.909132	93.9
8	JV26	L7	True	100.00	111.965296	112.0
9	JV27	L8	True	100.00	94.809358	94.8
10	JV28	L9	True	100.00	111.736599	111.7





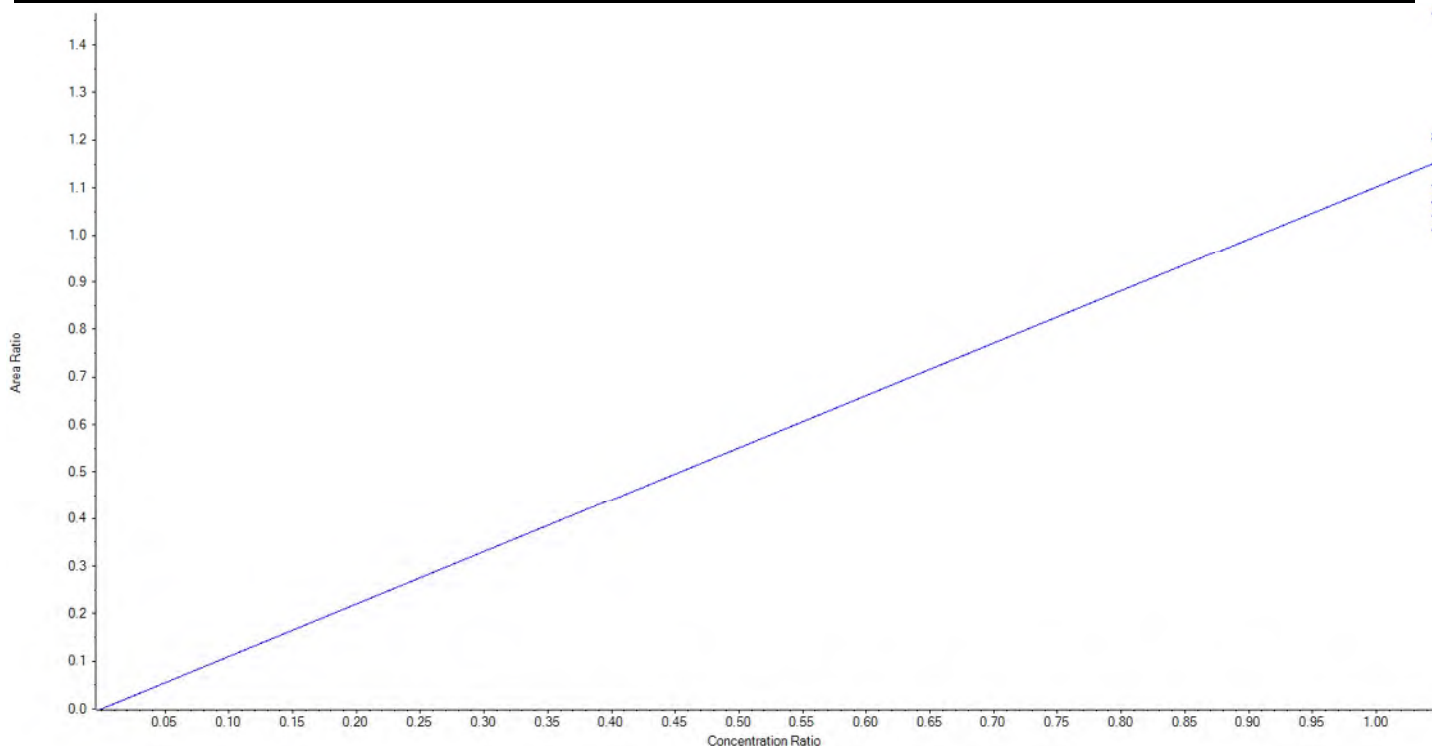
## Calibration Summary Report

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<b>Analyte Name</b>	d5-EtFOSAA	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	589.0 / 419.0	<b>Result Table</b>	18-0338_SIS
<b>Internal Standard</b>	13C4-PFOS	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 1.10165 x$  (std. dev. = 0.13293) (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	104.405578	104.4
3	JV21	L2	True	100.00	87.731050	87.7
4	JV22	L3	True	100.00	105.100931	105.1
5	JV23	L4	True	100.00	92.894236	92.9
6	JV24	L5	True	100.00	104.171421	104.2
7	JV25	L6	True	100.00	92.576738	92.6
8	JV26	L7	True	100.00	127.066832	127.1
9	JV27	L8	True	100.00	90.208339	90.2
10	JV28	L9	True	100.00	95.844875	95.8





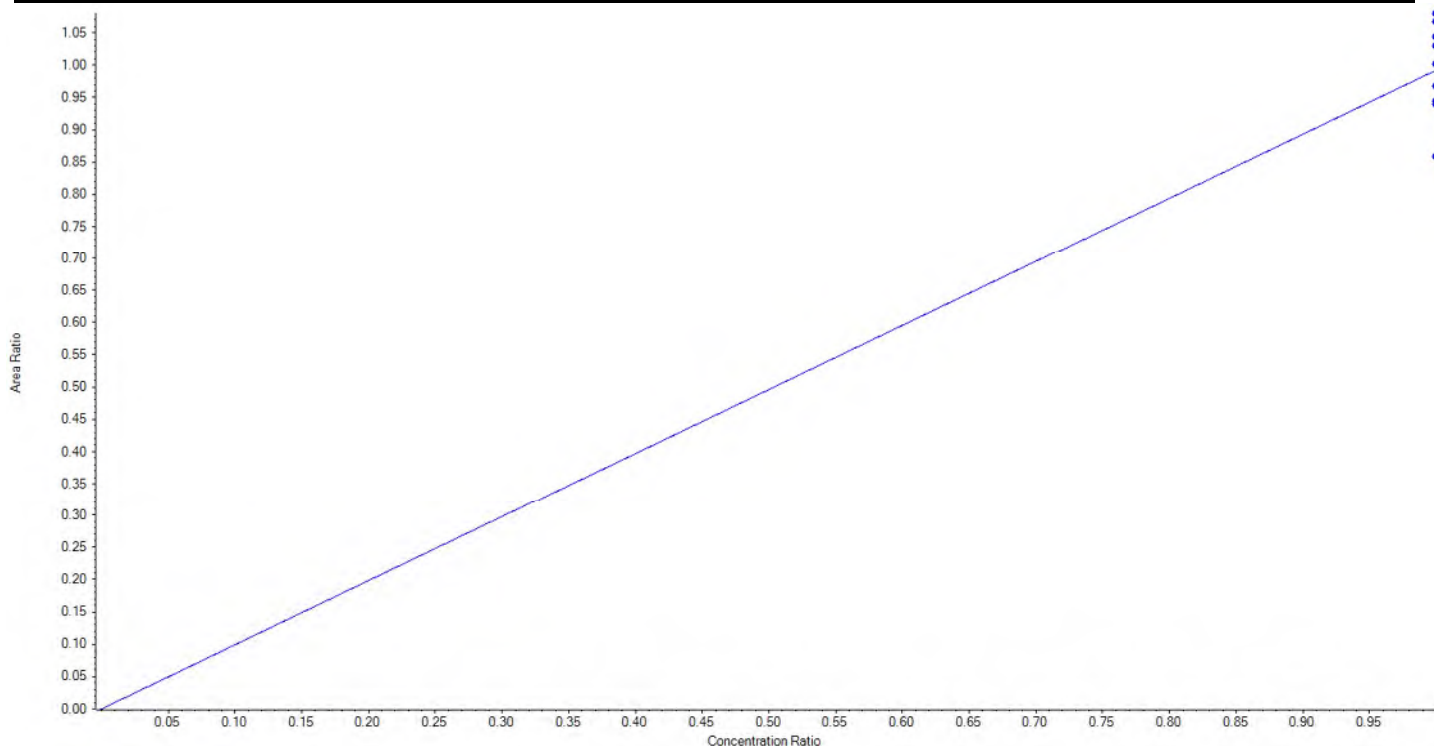
## Calibration Summary Report

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<b>Analyte Name</b>	13C5-PFHxA	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	318.0 / 273.0	<b>Result Table</b>	18-0338_SIS
<b>Internal Standard</b>	13C2-PFOA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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





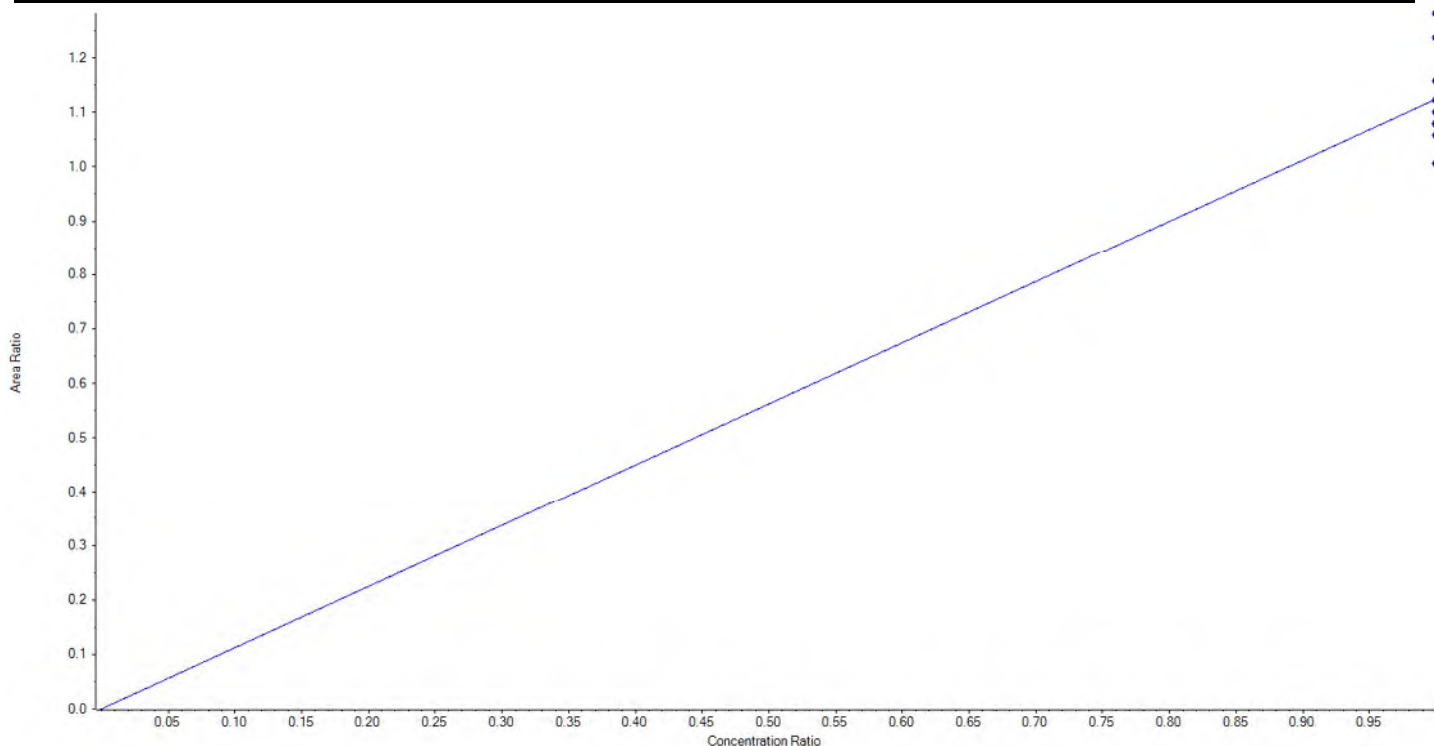
## Calibration Summary Report

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<b>Analyte Name</b>	13C4-PFHpA	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	367.0 / 322.0	<b>Result Table</b>	18-0338_SIS
<b>Internal Standard</b>	13C2-PFOA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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





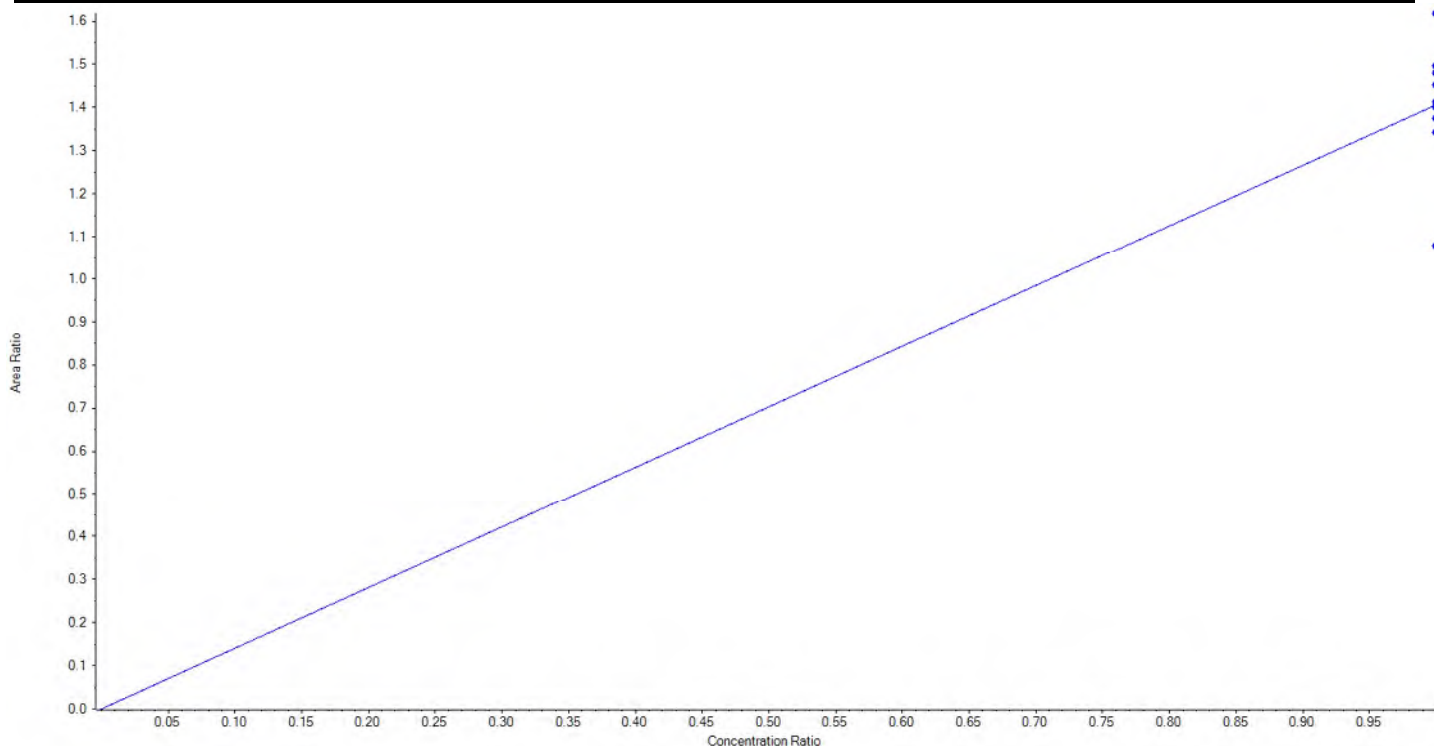
## Calibration Summary Report

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<b>Analyte Name</b>	13C8-PFOA	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	421.0 / 376.0	<b>Result Table</b>	18-0338_SIS
<b>Internal Standard</b>	13C2-PFOA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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







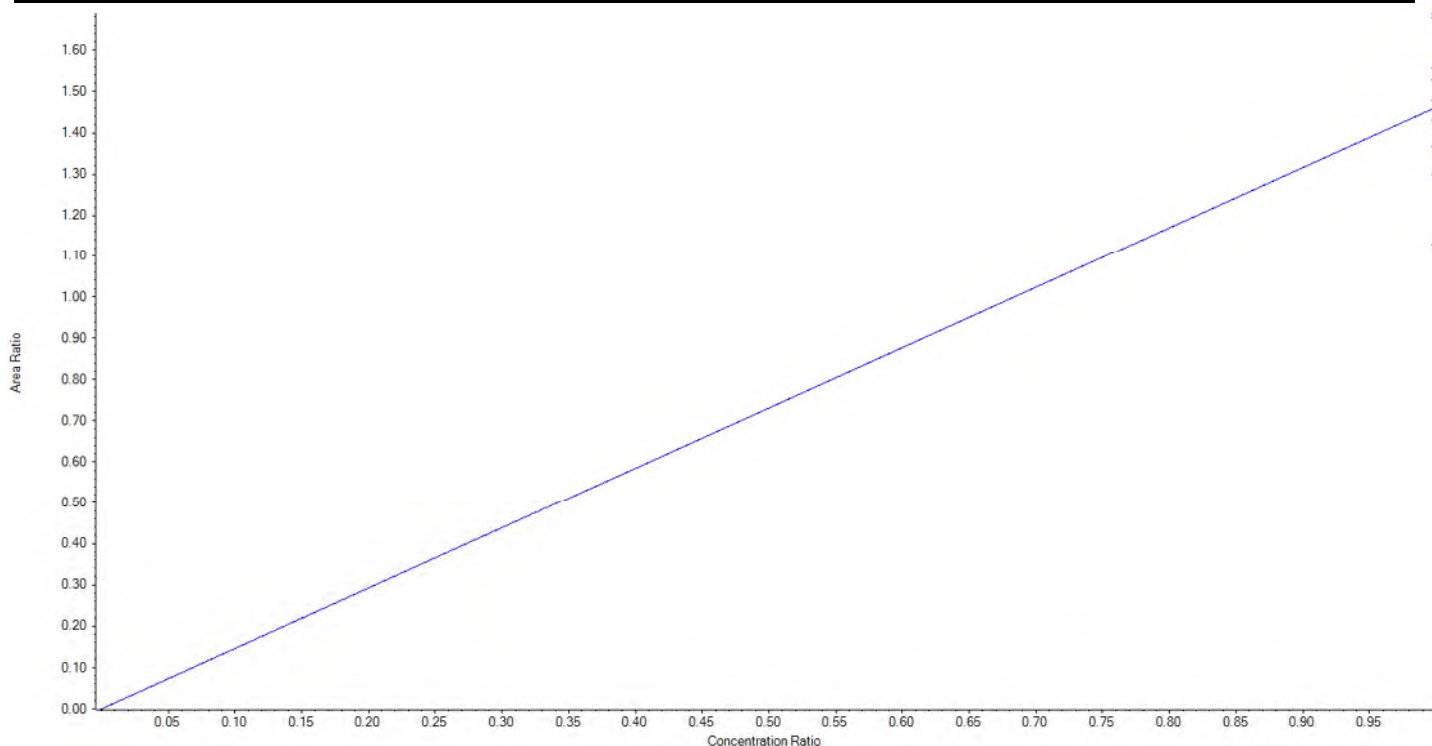
## Calibration Summary Report

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Printed: 05/06/2018 1:53:23 PM

<b>Analyte Name</b>	13C9-PFNA	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	472.0 / 427.0	<b>Result Table</b>	18-0338_SIS
<b>Internal Standard</b>	13C2-PFOA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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





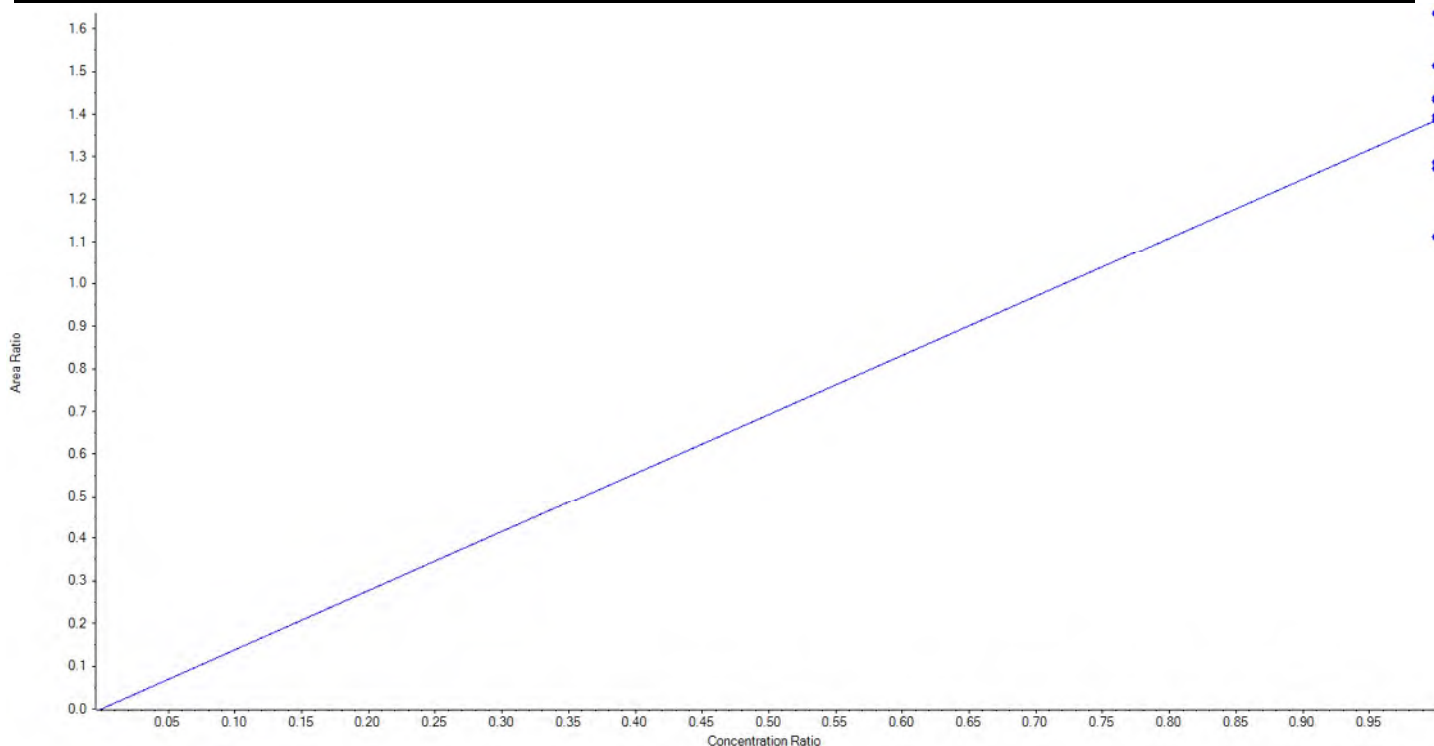
## Calibration Summary Report

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Printed: 05/06/2018 1:53:23 PM

<b>Analyte Name</b>	13C6-PFDA	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	519.0 / 474.0	<b>Result Table</b>	18-0338_SIS
<b>Internal Standard</b>	13C2-PFDA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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





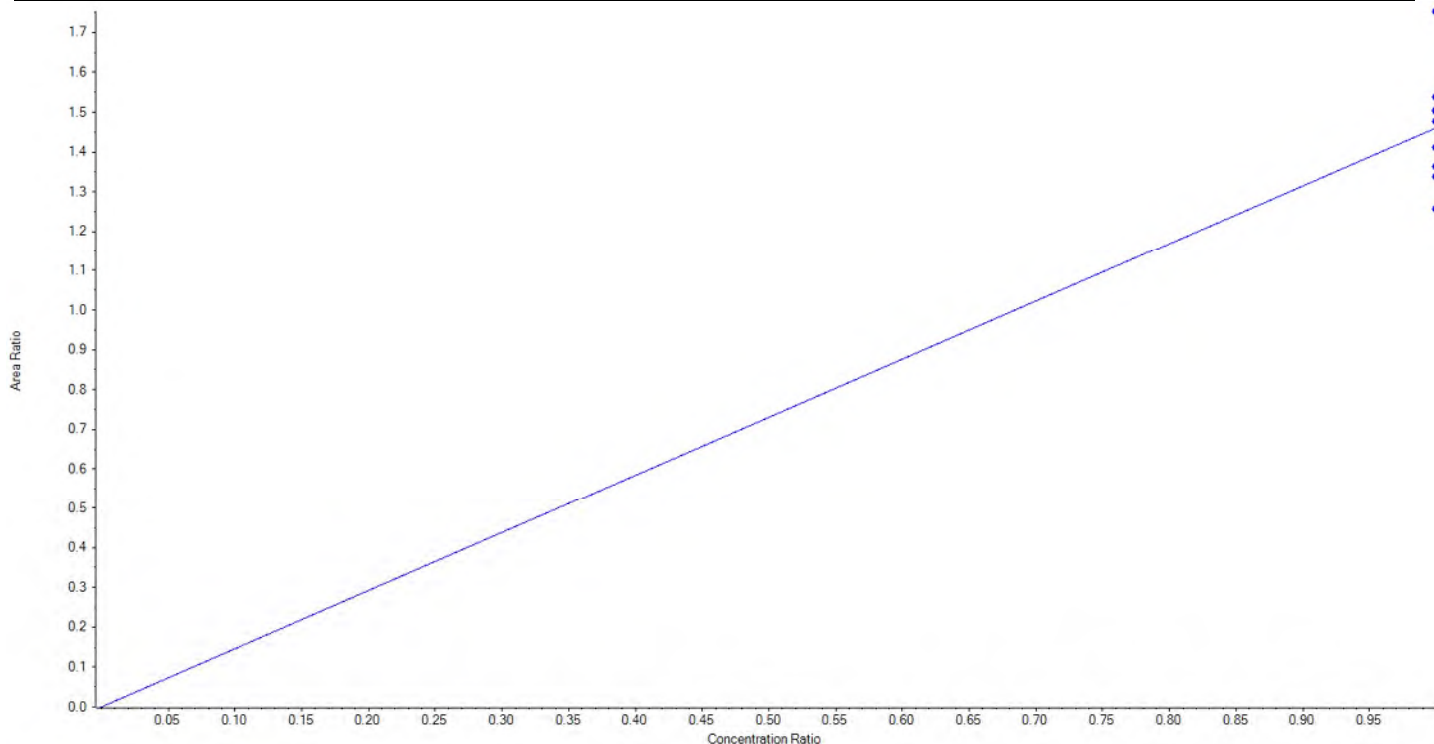
## Calibration Summary Report

Created with Analyst Reporter  
Printed: 05/06/2018 1:53:23 PM

<b>Analyte Name</b>	13C7-PFUnA	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	570.0 / 525.0	<b>Result Table</b>	18-0338_SIS
<b>Internal Standard</b>	13C2-PFDA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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





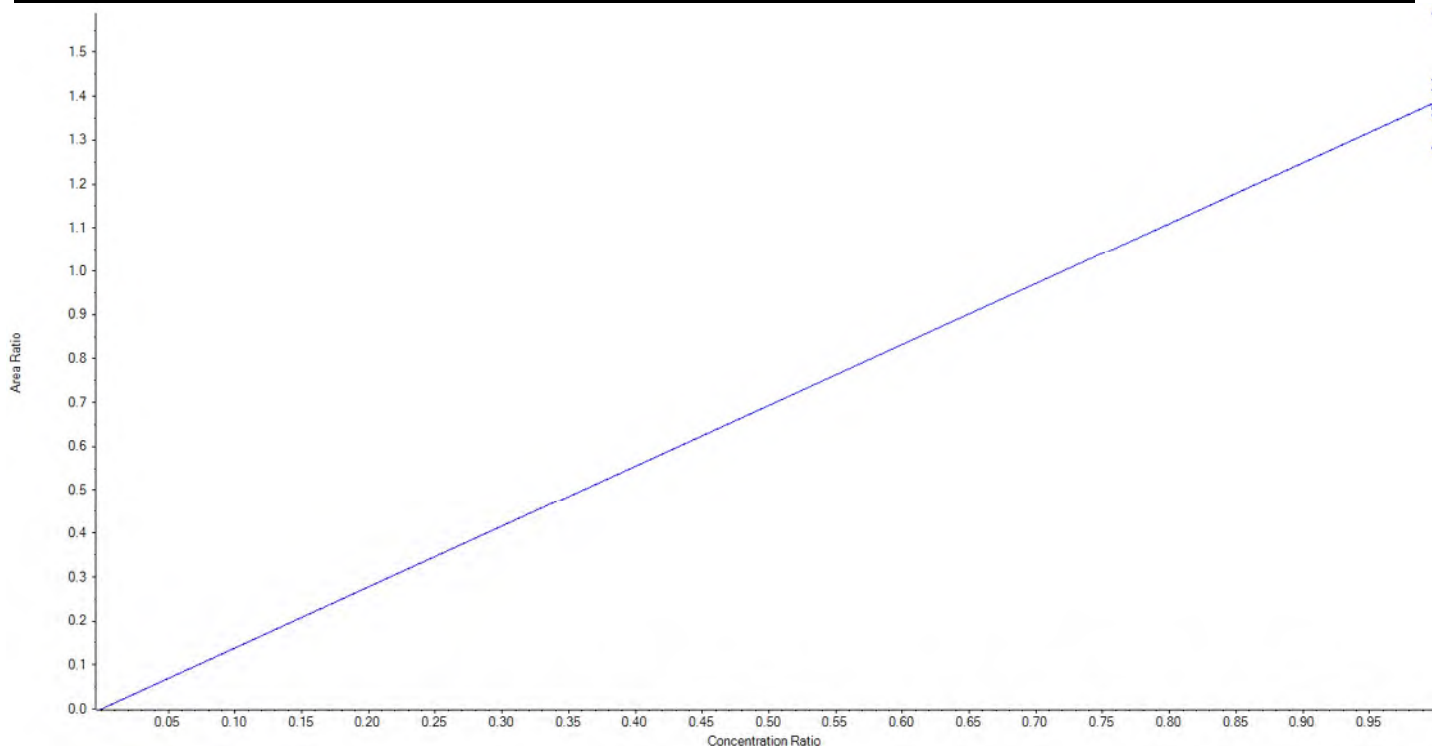
## Calibration Summary Report

Created with Analyst Reporter  
Printed: 05/06/2018 1:53:23 PM

<b>Analyte Name</b>	13C2-PFTeDA	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	715.0 / 670.0	<b>Result Table</b>	18-0338_SIS
<b>Internal Standard</b>	13C2-PFDA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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





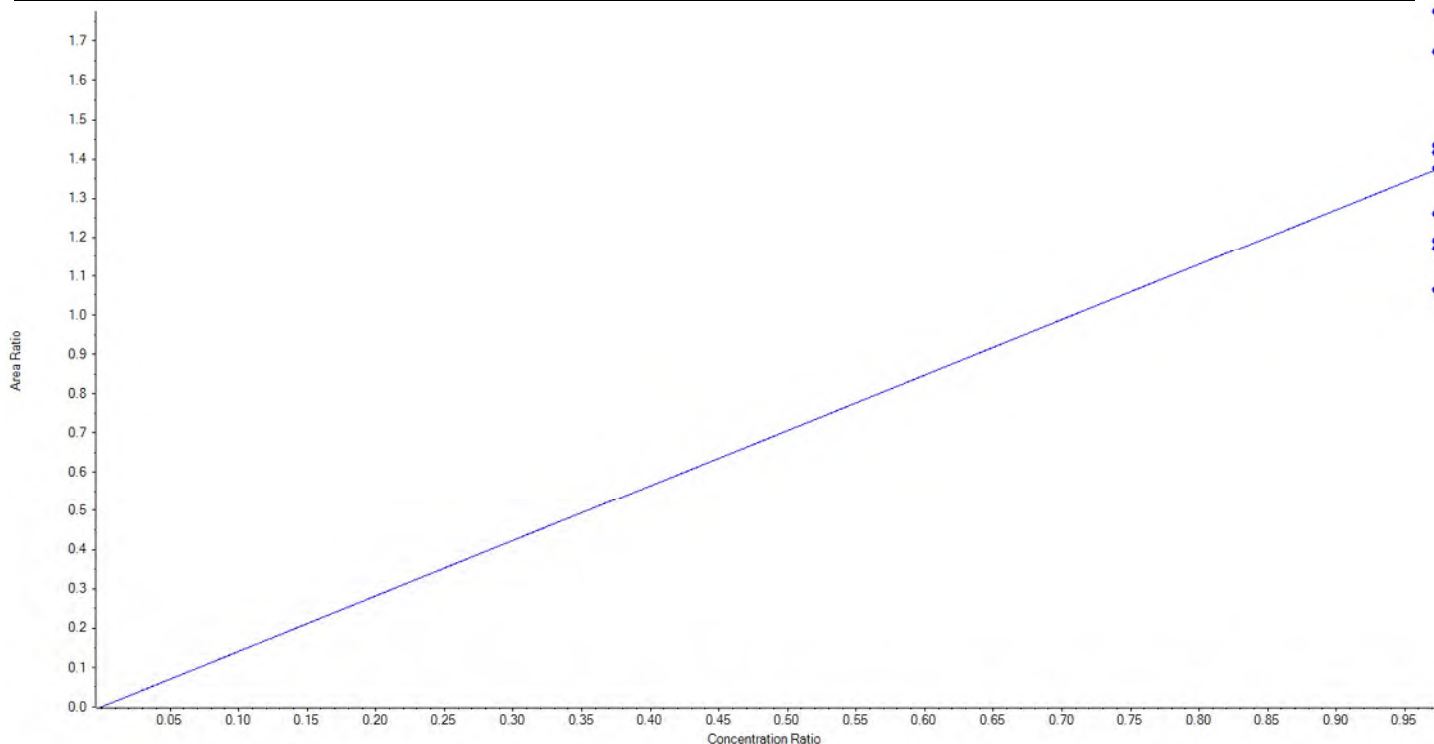
## Calibration Summary Report

Created with Analyst Reporter  
Printed: 05/06/2018 1:53:23 PM

<b>Analyte Name</b>	13C3-PFBS	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	302.0 / 99.0	<b>Result Table</b>	18-0338_SIS
<b>Internal Standard</b>	13C4-PFOS	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 1.41210 x$  (std. dev. = 0.24085) (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	95.748389	103.1
3	JV21	L2	True	92.90	71.951045	77.5
4	JV22	L3	True	92.90	80.547778	86.7
5	JV23	L4	True	92.90	85.277218	91.8
6	JV24	L5	True	92.90	93.077524	100.2
7	JV25	L6	True	92.90	97.030550	104.5
8	JV26	L7	True	92.90	113.172835	121.8
9	JV27	L8	True	92.90	79.254968	85.3
10	JV28	L9	True	92.90	120.039693	129.2





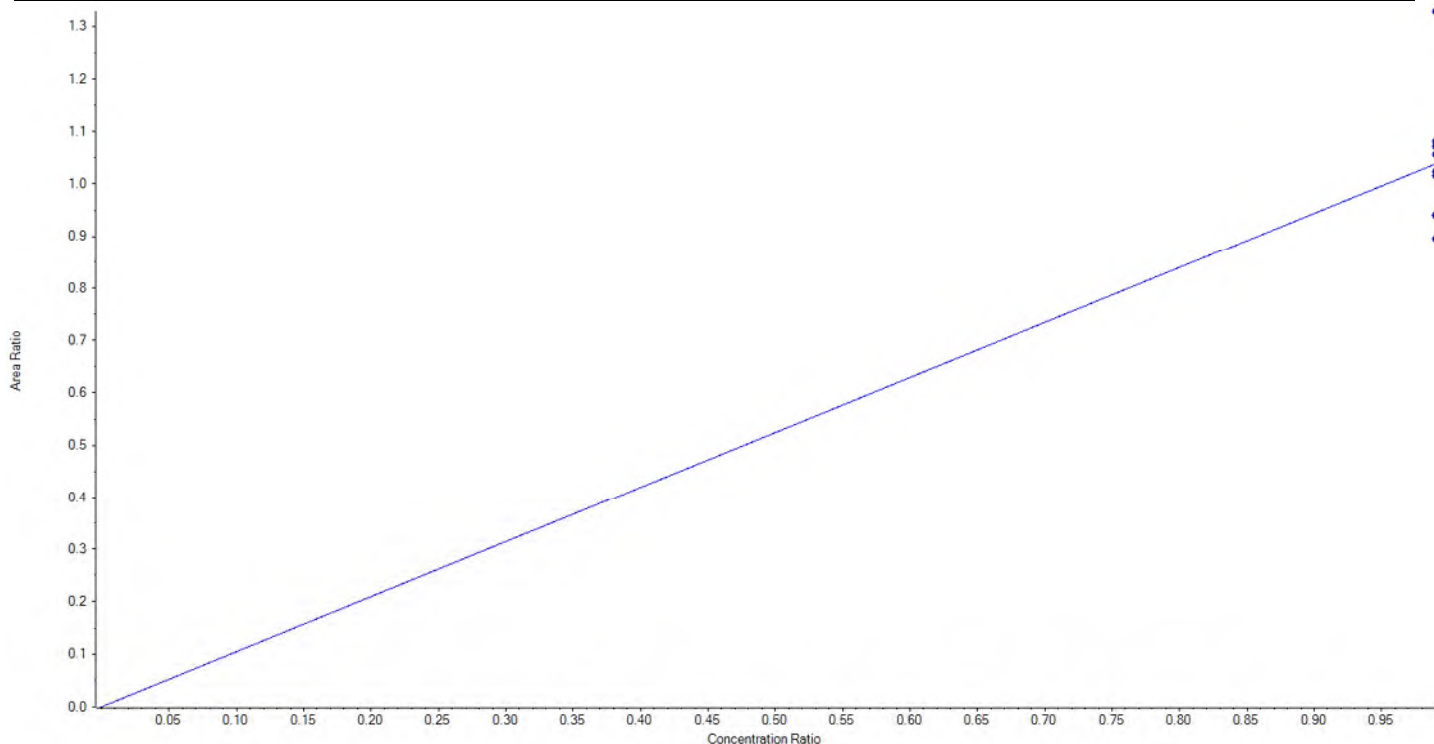
## Calibration Summary Report

Created with Analyst Reporter  
Printed: 05/06/2018 1:53:23 PM

<b>Analyte Name</b>	13C3-PFHxS	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	402.0 / 99.0	<b>Result Table</b>	18-0338_SIS
<b>Internal Standard</b>	13C4-PFOS	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 1.04891 x$  (std. dev. = 0.12767) (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	98.484886	104.1
3	JV21	L2	True	94.60	85.651161	90.5
4	JV22	L3	True	94.60	97.563193	103.1
5	JV23	L4	True	94.60	96.112618	101.6
6	JV24	L5	True	94.60	93.143455	98.5
7	JV25	L6	True	94.60	85.467347	90.4
8	JV26	L7	True	94.60	120.919180	127.8
9	JV27	L8	True	94.60	81.482237	86.1
10	JV28	L9	True	94.60	92.575922	97.9





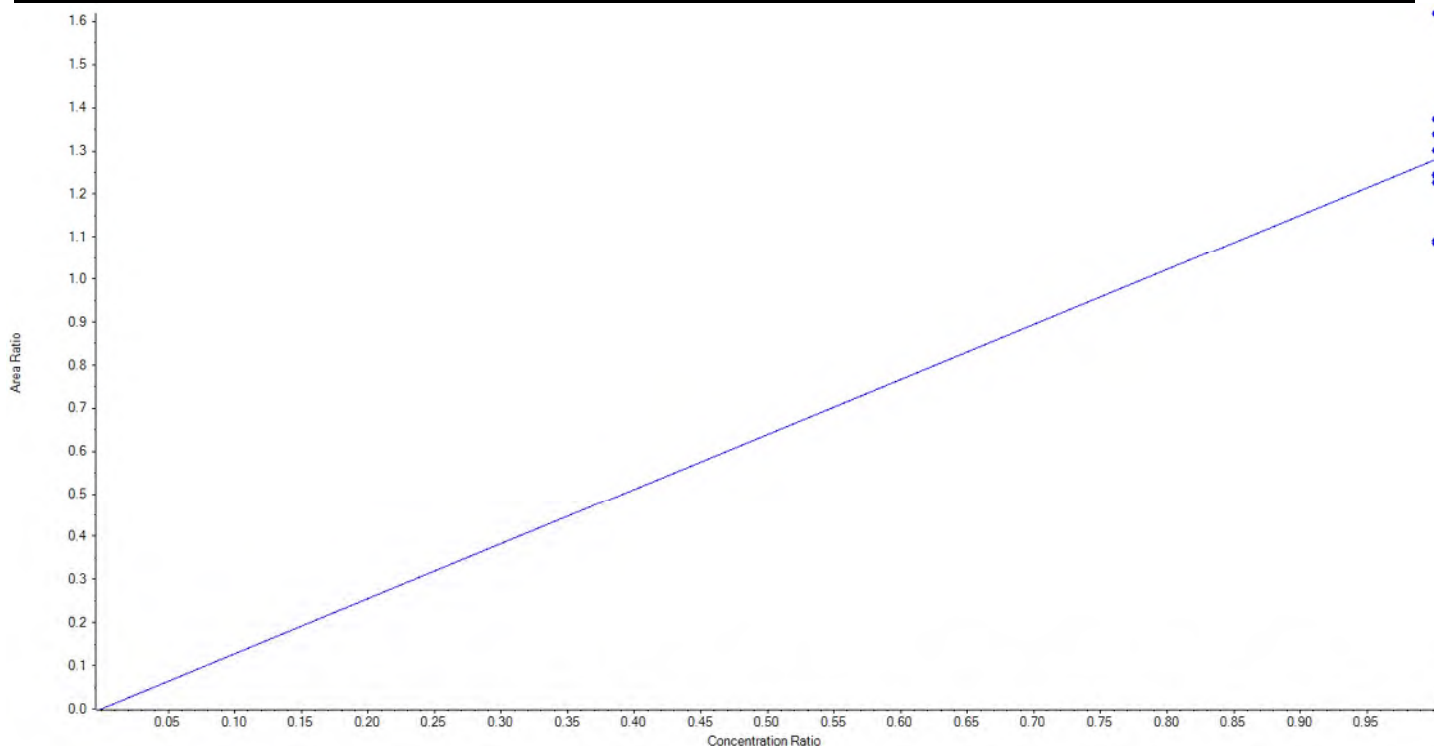
## Calibration Summary Report

Created with Analyst Reporter  
Printed: 05/06/2018 1:53:23 PM

<b>Analyte Name</b>	13C8-PFOS	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	507.0 / 99.0	<b>Result Table</b>	18-0338_SIS
<b>Internal Standard</b>	13C4-PFOS	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 1.27810 x$  (std. dev. = 0.15987) (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	99.936767	104.4
3	JV21	L2	True	95.70	92.912965	97.1
4	JV22	L3	True	95.70	102.713175	107.3
5	JV23	L4	True	95.70	97.258352	101.6
6	JV24	L5	True	95.70	93.113730	97.3
7	JV25	L6	True	95.70	81.578930	85.2
8	JV26	L7	True	95.70	120.922500	126.4
9	JV27	L8	True	95.70	81.190016	84.8
10	JV28	L9	True	95.70	91.673564	95.8









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	18-0338_BASE
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	5.532306	10.0	true
PFHxA_2	313.0 / 119.0	1.80	385.42	3.411858	6.1	true
PFHpA_1	363.0 / 319.0	2.16	9206.22	24.621171	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	21.692269	20.4	true
PFOA_2	413.0 / 169.0	2.52	1121.10	29.646241	17.3	true
PFNA_1	463.0 / 419.0	2.92	14290.41	24.794878	43.1	true
PFNA_2	463.0 / 219.0	2.92	3259.31	19.897180	29.6	true
PFOS_1	499.0 / 80.0	2.91	12261.86	20.201554	93.3	false
PFOS_2	499.0 / 99.0	2.91	3303.48	20.534763	66.6	true
PFDA_1	513.0 / 469.0	3.27	12681.04	22.779490	41.2	false
PFDA_2	513.0 / 219.0	3.25	373.37	18.253367	25.9	true
PFUnA_1	563.0 / 519.0	3.60	10420.03	20.084450	48.9	true
PFUnA_2	563.0 / 269.0	3.59	730.84	< 0	28.8	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
PFTTrDA_1	663.0 / 619.0	4.14	9495.55	17.820321	94.6	false
PFTTrDA_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

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	18-0338_BASE
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	18394.85	49.594148	24.0	true
PFHxA_2	313.0 / 119.0	1.78	1013.20	38.413110	14.7	true
PFHpA_1	363.0 / 319.0	2.16	13184.53	40.081899	38.0	true
PFHpA_2	363.0 / 169.0	2.14	452.31	38.990233	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	22778.46	48.798844	31.5	true
PFOA_2	413.0 / 169.0	2.55	1669.96	47.327708	25.8	true
PFNA_1	463.0 / 419.0	2.92	22365.06	47.234301	50.9	true
PFNA_2	463.0 / 219.0	2.92	5654.39	42.900488	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	55.763550	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	57.977130	56.4	false
PFUnA_1	563.0 / 519.0	3.59	23165.71	49.801121	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
PFTTrDA_1	663.0 / 619.0	4.13	22236.95	54.011640	145.7	false
PFTTrDA_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	398.76	36.759626	58.9	true

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	18-0338_BASE
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	108.340209	33.0	true
PFHxA_2	313.0 / 119.0	1.78	2521.08	124.794112	21.2	true
PFHpA_1	363.0 / 319.0	2.15	31838.28	114.612410	75.4	true
PFHpA_2	363.0 / 169.0	2.15	612.62	71.648287	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	111.607904	59.8	true
PFOA_2	413.0 / 169.0	2.53	2533.01	87.241942	38.4	true
PFNA_1	463.0 / 419.0	2.91	43065.74	99.634636	74.3	false
PFNA_2	463.0 / 219.0	2.91	13584.12	113.581329	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	84.265546	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	124.557169	90.1	false
PFUnA_1	563.0 / 519.0	3.59	48035.67	111.194556	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
PFTTrDA_1	663.0 / 619.0	4.13	40062.28	108.910297	188.2	false
PFTTrDA_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	839.65	129.128134	32090.9	true

<b>Sample Name</b>	JV23	<b>Injection Vial</b>	5
<b>Sample ID</b>	L4	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T20:06:27	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

### 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	253.418132	57.1	false
PFHxA_2	313.0 / 119.0	1.78	5947.06	281.758078	40.5	false
PFHpA_1	363.0 / 319.0	2.15	69394.63	266.771244	122.6	false
PFHpA_2	363.0 / 169.0	2.14	2097.76	370.744655	175.8	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	258.958097	110.5	true
PFOA_2	413.0 / 169.0	2.53	7289.07	263.921523	95.8	true
PFNA_1	463.0 / 419.0	2.91	105254.48	277.769664	136.5	false
PFNA_2	463.0 / 219.0	2.91	32203.42	299.906195	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	249.531054	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	281.256770	180.2	false
PFUnA_1	563.0 / 519.0	3.58	113775.94	278.217162	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	238.489695	326.0	false

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	18-0338_BASE
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	507.575341	70.2	false
PFHxA_2	313.0 / 119.0	1.78	7914.74	450.356199	51.5	false
PFHpA_1	363.0 / 319.0	2.15	116523.17	426.606503	171.4	false
PFHpA_2	363.0 / 169.0	2.15	2478.81	415.998547	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	468.434530	131.7	true
PFOA_2	413.0 / 169.0	2.53	12256.39	458.947120	92.8	true
PFNA_1	463.0 / 419.0	2.91	186381.14	470.875784	172.6	false
PFNA_2	463.0 / 219.0	2.91	54180.95	480.187752	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	527.216071	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	449.853585	268.4	false
PFUnA_1	563.0 / 519.0	3.58	201101.62	491.317514	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	454.068059	21436.0	false

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	18-0338_BASE
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	999.237196	100.9	false
PFHxA_2	313.0 / 119.0	1.78	18276.76	1055.126066	81.7	false
PFHpA_1	363.0 / 319.0	2.16	241019.92	1135.903188	229.0	false
PFHpA_2	363.0 / 169.0	2.16	4827.02	1098.308044	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	1065.331022	209.8	true
PFOA_2	413.0 / 169.0	2.53	25522.01	1060.784291	192.8	true
PFNA_1	463.0 / 419.0	2.91	377317.89	1004.051505	231.2	false
PFNA_2	463.0 / 219.0	2.91	111139.32	1034.249942	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	1253.819955	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	948.509191	365.1	false
PFUnA_1	563.0 / 519.0	3.58	383124.61	1001.104168	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
PFTTrDA_1	663.0 / 619.0	4.12	332464.74	1039.791932	480.6	false
PFTTrDA_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	1171.386698	235.6	false



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	18-0338_BASE
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	2393.126171	176.0	false
PFHxA_2	313.0 / 119.0	1.78	44498.48	2457.711629	147.9	false
PFHpA_1	363.0 / 319.0	2.15	566168.44	2541.689164	322.8	false
PFHpA_2	363.0 / 169.0	2.15	12325.15	2726.836198	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	2553.553058	325.2	true
PFOA_2	413.0 / 169.0	2.53	61036.08	2511.628490	335.4	true
PFNA_1	463.0 / 419.0	2.91	886828.98	2513.608735	366.6	false
PFNA_2	463.0 / 219.0	2.91	260989.83	2582.314616	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	2295.180202	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	2180.359578	504.6	false
PFUnA_1	563.0 / 519.0	3.58	943482.55	2421.794476	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
PFTTrDA_1	663.0 / 619.0	4.12	804283.29	2517.595628	731.9	false
PFTTrDA_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	2343.425851	314.8	false

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	18-0338_BASE
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	9955.372869	363.8	false
PFHxA_2	313.0 / 119.0	1.78	175150.62	9620.984230	249.7	false
PFHpA_1	363.0 / 319.0	2.15	2297925.64	10015.570294	580.4	false
PFHpA_2	363.0 / 169.0	2.15	47557.92	10316.410589	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	9719.368185	497.9	true
PFOA_2	413.0 / 169.0	2.53	221940.33	9157.712634	441.8	true
PFNA_1	463.0 / 419.0	2.91	3284664.72	10109.915260	608.6	false
PFNA_2	463.0 / 219.0	2.91	913926.97	9810.311373	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	9986.003544	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	10023.041773	643.8	false
PFUnA_1	563.0 / 519.0	3.58	3816093.45	10415.081019	734.0	false
PFUnA_2	563.0 / 269.0	3.58	187490.91	10198.758865	651.9	false
PFDaA_1	613.0 / 569.0	3.87	3809036.22	9801.217067	849.9	false
PFDaA_2	613.0 / 319.0	3.87	573132.37	10340.043532	914.1	false
PFTTrDA_1	663.0 / 619.0	4.11	3229102.82	9814.361419	1074.8	false
PFTTrDA_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	10026.741936	793.4	false



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	18-0338_BASE
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	20477.335935	548.3	false
PFHxA_2	313.0 / 119.0	1.78	402511.63	20714.856577	331.8	false
PFHpA_1	363.0 / 319.0	2.15	5393133.92	19859.144127	763.5	false
PFHpA_2	363.0 / 169.0	2.14	105467.88	19361.063447	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	20177.256091	638.9	true
PFOA_2	413.0 / 169.0	2.53	505421.75	20807.790052	823.3	true
PFNA_1	463.0 / 419.0	2.91	6987087.47	19877.115238	797.1	false
PFNA_2	463.0 / 219.0	2.91	2020248.80	20041.651126	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	19952.685315	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	20341.191437	748.5	false
PFUnA_1	563.0 / 519.0	3.58	7874848.73	19636.405535	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
PFTTrDA_1	663.0 / 619.0	4.12	7047137.50	20101.185251	1239.4	false
PFTTrDA_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	20158.584459	730.9	false

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	18-0338_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	105.874301	267.9	false
d5-EtFOSAA	589.0 / 419.0	3.59	11898.48	104.405578	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	95.748389	449.2	false
13C3-PFHxS	402.0 / 99.0	2.17	10686.45	98.484886	222.3	false
13C8-PFOS	507.0 / 99.0	2.90	13213.35	99.936767	185.6	false

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	18-0338_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	95.770605	345.7	false
d5-EtFOSAA	589.0 / 419.0	3.58	12188.07	87.731050	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	71.951045	373.0	false
13C3-PFHxS	402.0 / 99.0	2.16	11329.51	85.651161	239.9	false
13C8-PFOS	507.0 / 99.0	2.90	14975.38	92.912965	186.4	false

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	18-0338_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	101.615843	230.6	false
d5-EtFOSAA	589.0 / 419.0	3.58	12764.42	105.100931	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	80.547778	348.7	false
13C3-PFHxS	402.0 / 99.0	2.16	11281.76	97.563193	256.2	false
13C8-PFOS	507.0 / 99.0	2.90	14472.40	102.713175	178.5	false

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	18-0338_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	88.857346	237.4	false
d5-EtFOSAA	589.0 / 419.0	3.57	12642.09	92.894236	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	85.277218	415.9	false
13C3-PFHxS	402.0 / 99.0	2.15	12453.94	96.112618	215.5	false
13C8-PFOS	507.0 / 99.0	2.89	15355.95	97.258352	198.3	false

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	18-0338_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	95.461521	208.4	false
d5-EtFOSAA	589.0 / 419.0	3.57	11931.57	104.171421	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	93.077524	529.4	false
13C3-PFHxS	402.0 / 99.0	2.16	10157.75	93.143455	268.9	false
13C8-PFOS	507.0 / 99.0	2.89	12373.21	93.113730	174.9	false

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	18-0338_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	93.909132	172.4	false
d5-EtFOSAA	589.0 / 419.0	3.58	10675.38	92.576738	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	97.030550	412.9	false
13C3-PFHxS	402.0 / 99.0	2.16	9383.78	85.467347	200.2	false
13C8-PFOS	507.0 / 99.0	2.90	10913.88	81.578930	159.0	false

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	18-0338_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	111.965296	143.4	false
d5-EtFOSAA	589.0 / 419.0	3.57	11705.11	127.066832	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	113.172835	419.8	false
13C3-PFHxS	402.0 / 99.0	2.16	10605.58	120.919180	300.5	true
13C8-PFOS	507.0 / 99.0	2.90	12923.20	120.922500	170.3	false



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	18-0338_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	94.809358	169.1	false
d5-EtFOSAA	589.0 / 419.0	3.57	11500.63	90.208339	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	79.254968	428.4	false
13C3-PFHxS	402.0 / 99.0	2.16	9890.86	81.482237	319.5	false
13C8-PFOS	507.0 / 99.0	2.89	12008.74	81.190016	165.0	false

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	18-0338_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	111.736599	170.5	false
d5-EtFOSAA	589.0 / 419.0	3.56	11189.78	95.844875	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	17963.81	120.039693	463.7	true
13C3-PFHxS	402.0 / 99.0	2.15	10290.74	92.575922	218.3	false
13C8-PFOS	507.0 / 99.0	2.89	12416.99	91.673564	158.4	false

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	18-0338_BASE
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	1.80	PFHxA	0.054	0.069	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	0.228	0.283	ü
PFOS_1	499.0 / 80.0	2.91	PFOS			
PFOS_2	499.0 / 99.0	2.91	PFOS	0.269	0.199	ü
PFDA_1	513.0 / 469.0	3.27	PFDA			
PFDA_2	513.0 / 219.0	3.25	PFDA	0.029	0.041	ü
PFUnA_1	563.0 / 519.0	3.60	PFUnA			
PFUnA_2	563.0 / 269.0	3.59	PFUnA	0.070	0.057	ü
PFDaA_1	613.0 / 569.0	3.88	PFDaA			
PFDaA_2	613.0 / 319.0	3.88	PFDaA	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	
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	0.068	ü

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	18-0338_BASE
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	1.78	PFHxA	0.055	0.069	ü
PFHpA_1	363.0 / 319.0	2.16	PFHpA			
PFHpA_2	363.0 / 169.0	2.14	PFHpA	0.034	0.023	ü
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	0.073	0.071	ü
PFNA_1	463.0 / 419.0	2.92	PFNA			
PFNA_2	463.0 / 219.0	2.92	PFNA	0.253	0.283	ü
PFOS_1	499.0 / 80.0	2.91	PFOS			
PFOS_2	499.0 / 99.0	2.91	PFOS	0.254	0.199	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
PFDaA_1	613.0 / 569.0	3.88	PFDaA			
PFDaA_2	613.0 / 319.0	3.88	PFDaA	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	0.087	0.068	ü

<b>Sample Name</b>	JV22	<b>Injection Vial</b>	4
<b>Sample ID</b>	L3	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T19:55:39	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## 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	1.78	PFHxA	0.077	0.069	ü
PFHpA_1	363.0 / 319.0	2.15	PFHpA			
PFHpA_2	363.0 / 169.0	2.15	PFHpA	0.019	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	0.283	ü
PFOS_1	499.0 / 80.0	2.91	PFOS			
PFOS_2	499.0 / 99.0	2.91	PFOS	0.166	0.199	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
PFDaA_1	613.0 / 569.0	3.88	PFDaA			
PFDaA_2	613.0 / 319.0	3.87	PFDaA	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	0.068	ü

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	18-0338_BASE
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	0.069	ü
PFHpA_1	363.0 / 319.0	2.15	PFHpA			
PFHpA_2	363.0 / 169.0	2.14	PFHpA	0.030	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	0.283	ü
PFOS_1	499.0 / 80.0	2.90	PFOS			
PFOS_2	499.0 / 99.0	2.91	PFOS	0.195	0.199	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
PFDaA_1	613.0 / 569.0	3.87	PFDaA			
PFDaA_2	613.0 / 319.0	3.87	PFDaA	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	0.068	ü

<b>Sample Name</b>	JV24	<b>Injection Vial</b>	6
<b>Sample ID</b>	L5	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T20:17:14	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

### 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	0.069	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	0.283	ü
PFOS_1	499.0 / 80.0	2.90	PFOS			
PFOS_2	499.0 / 99.0	2.90	PFOS	0.183	0.199	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
PFDaA_1	613.0 / 569.0	3.87	PFDaA			
PFDaA_2	613.0 / 319.0	3.87	PFDaA	0.160	0.158	ü
PFTTrDA_1	663.0 / 619.0	4.12	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	4.12	PFTTrDA	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	0.068	ü

<b>Sample Name</b>	JV25	<b>Injection Vial</b>	7
<b>Sample ID</b>	L6	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T20:28:02	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

### 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	0.069	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	0.283	ü
PFOS_1	499.0 / 80.0	2.91	PFOS			
PFOS_2	499.0 / 99.0	2.91	PFOS	0.188	0.199	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
PFDaA_1	613.0 / 569.0	3.87	PFDaA			
PFDaA_2	613.0 / 319.0	3.87	PFDaA	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	0.068	ü



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	18-0338_BASE
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	0.069	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	0.283	ü
PFOS_1	499.0 / 80.0	2.90	PFOS			
PFOS_2	499.0 / 99.0	2.90	PFOS	0.176	0.199	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
PFDaA_1	613.0 / 569.0	3.87	PFDaA			
PFDaA_2	613.0 / 319.0	3.87	PFDaA	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	0.068	ü

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	18-0338_BASE
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	0.069	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	0.283	ü
PFOS_1	499.0 / 80.0	2.90	PFOS			
PFOS_2	499.0 / 99.0	2.90	PFOS	0.181	0.199	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
PFDaA_1	613.0 / 569.0	3.87	PFDaA			
PFDaA_2	613.0 / 319.0	3.87	PFDaA	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	0.068	ü

<b>Sample Name</b>	JV28	<b>Injection Vial</b>	10
<b>Sample ID</b>	L9	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T21:00:25	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

### 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	0.069	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	0.283	ü
PFOS_1	499.0 / 80.0	2.90	PFOS			
PFOS_2	499.0 / 99.0	2.90	PFOS	0.179	0.199	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
PFDaA_1	613.0 / 569.0	3.87	PFDaA			
PFDaA_2	613.0 / 319.0	3.86	PFDaA	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	0.068	ü

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	18-0338_BASE
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	1.80	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
PFDaA_1	613.0 / 569.0	3.88	13C2-PFDaA	615.0 / 570.0	61361.92	100.00
PFDaA_2	613.0 / 319.0	3.88	13C2-PFDaA	615.0 / 570.0	61361.92	100.00
PFTeDA_1	663.0 / 619.0	4.14	13C2-PFTeDA	715.0 / 670.0	58097.73	100.00
PFTeDA_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

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	18-0338_BASE
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	1.78	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
PFDaA_1	613.0 / 569.0	3.88	13C2-PFDaA	615.0 / 570.0	69914.04	100.00
PFDaA_2	613.0 / 319.0	3.88	13C2-PFDaA	615.0 / 570.0	69914.04	100.00
PFTeDA_1	663.0 / 619.0	4.13	13C2-PFTeDA	715.0 / 670.0	59755.36	100.00
PFTeDA_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

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	18-0338_BASE
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	1.78	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
PFDaA_1	613.0 / 569.0	3.88	13C2-PFDaA	615.0 / 570.0	61914.08	100.00
PFDaA_2	613.0 / 319.0	3.87	13C2-PFDaA	615.0 / 570.0	61914.08	100.00
PFTeDA_1	663.0 / 619.0	4.13	13C2-PFTeDA	715.0 / 670.0	58185.21	100.00
PFTeDA_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

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	18-0338_BASE
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	45398.81	100.00
PFHpA_2	363.0 / 169.0	2.14	13C4-PFHpA	367.0 / 322.0	45398.81	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
PFDaA_1	613.0 / 569.0	3.87	13C2-PFDaA	615.0 / 570.0	70692.27	100.00
PFDaA_2	613.0 / 319.0	3.87	13C2-PFDaA	615.0 / 570.0	70692.27	100.00
PFTeDA_1	663.0 / 619.0	4.12	13C2-PFTeDA	715.0 / 670.0	60027.79	100.00
PFTeDA_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



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	18-0338_BASE
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
PFDaA_1	613.0 / 569.0	3.87	13C2-PFDaA	615.0 / 570.0	68215.77	100.00
PFDaA_2	613.0 / 319.0	3.87	13C2-PFDaA	615.0 / 570.0	68215.77	100.00
PFTeDA_1	663.0 / 619.0	4.12	13C2-PFTeDA	715.0 / 670.0	57788.46	100.00
PFTeDA_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



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	18-0338_BASE
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
PFDaA_1	613.0 / 569.0	3.87	13C2-PFDaA	615.0 / 570.0	58999.77	100.00
PFDaA_2	613.0 / 319.0	3.87	13C2-PFDaA	615.0 / 570.0	58999.77	100.00
PFTeDA_1	663.0 / 619.0	4.12	13C2-PFTeDA	715.0 / 670.0	55202.08	100.00
PFTeDA_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

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	18-0338_BASE
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
PFDaA_1	613.0 / 569.0	3.87	13C2-PFDaA	615.0 / 570.0	62348.58	100.00
PFDaA_2	613.0 / 319.0	3.87	13C2-PFDaA	615.0 / 570.0	62348.58	100.00
PFTeDA_1	663.0 / 619.0	4.12	13C2-PFTeDA	715.0 / 670.0	55964.28	100.00
PFTeDA_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

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	18-0338_BASE
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
PFAUnA_1	563.0 / 519.0	3.58	13C7-PFAUnA	570.0 / 525.0	57279.05	100.00
PFAUnA_2	563.0 / 269.0	3.58	13C7-PFAUnA	570.0 / 525.0	57279.05	100.00
PFDaA_1	613.0 / 569.0	3.87	13C2-PFDaA	615.0 / 570.0	67510.90	100.00
PFDaA_2	613.0 / 319.0	3.87	13C2-PFDaA	615.0 / 570.0	67510.90	100.00
PFTeDA_1	663.0 / 619.0	4.11	13C2-PFTeDA	715.0 / 670.0	60419.15	100.00
PFTeDA_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

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	18-0338_BASE
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
PFDaA_1	613.0 / 569.0	3.87	13C2-PFDaA	615.0 / 570.0	76903.00	100.00
PFDaA_2	613.0 / 319.0	3.86	13C2-PFDaA	615.0 / 570.0	76903.00	100.00
PFTeDA_1	663.0 / 619.0	4.12	13C2-PFTeDA	715.0 / 670.0	68779.24	100.00
PFTeDA_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

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	18-0338_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

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	18-0338_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

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	18-0338_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



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	18-0338_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



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	18-0338_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

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	18-0338_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

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	18-0338_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

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	18-0338_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

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	18-0338_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	10120.73	95.50
d5-EtFOSAA	589.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	10120.73	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	10120.73	95.50
13C3-PFHxS	402.0 / 99.0	2.15	13C4-PFOS	503.0 / 99.0	10120.73	95.50
13C8-PFOS	507.0 / 99.0	2.89	13C4-PFOS	503.0 / 99.0	10120.73	95.50

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	18-0338_BASE
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	1033.548412	1010.00	102.33
PFHxA_2	313.0 / 119.0	1.78	956.028826	1010.00	94.66
PFHpA_1	363.0 / 319.0	2.14	1291.331216	1000.00	129.13
PFHpA_2	363.0 / 169.0	2.14	1279.322595	1000.00	127.93
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	1047.649206	1000.00	104.76
PFOA_2	413.0 / 169.0	2.52	1015.910593	1000.00	101.59
PFNA_1	463.0 / 419.0	2.90	1024.415505	1000.00	102.44
PFNA_2	463.0 / 219.0	2.90	1037.960359	1000.00	103.80
PFOS_1	499.0 / 80.0	2.89	953.947744	1000.00	95.39
PFOS_2	499.0 / 99.0	2.89	921.341526	1000.00	92.13
PFDA_1	513.0 / 469.0	3.25	1064.124001	1000.00	106.41
PFDA_2	513.0 / 219.0	3.25	1019.716776	1000.00	101.97
PFUnA_1	563.0 / 519.0	3.57	1205.047520	1000.00	120.50
PFUnA_2	563.0 / 269.0	3.57	1003.244149	1000.00	100.32
PFDoA_1	613.0 / 569.0	3.86	1196.519429	1000.00	119.65
PFDoA_2	613.0 / 319.0	3.86	1295.153102	1000.00	129.52
PFTTrDA_1	663.0 / 619.0	4.11	1166.321162	1000.00	116.63
PFTTrDA_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	1199.156882	1000.00	119.92
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	1119.654422	1000.00	111.97

Sample Name	JV25 CCV	Injection Vial	7
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:25:26	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

### Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.48	1102.706083	1010.00	109.18
PFBS_2	298.9 / 99.0	1.48	1152.980490	1010.00	114.16
PFHxA_1	313.0 / 269.0	1.77	1043.574341	1010.00	103.32
PFHxA_2	313.0 / 119.0	1.77	894.435756	1010.00	88.56
PFHpA_1	363.0 / 319.0	2.13	938.644180	1000.00	93.86
PFHpA_2	363.0 / 169.0	2.13	838.194565	1000.00	83.82
PFHxS_1	399.0 / 80.0	2.15	955.582166	1010.00	94.61
PFHxS_2	399.0 / 99.0	2.15	894.420793	1010.00	88.56
PFOA_1	413.0 / 369.0	2.51	996.912420	1000.00	99.69
PFOA_2	413.0 / 169.0	2.51	896.559707	1000.00	89.66
PFNA_1	463.0 / 419.0	2.88	1068.657654	1000.00	106.87
PFNA_2	463.0 / 219.0	2.88	1060.887831	1000.00	106.09
PFOS_1	499.0 / 80.0	2.88	942.144784	1000.00	94.21
PFOS_2	499.0 / 99.0	2.88	981.904458	1000.00	98.19
PFDA_1	513.0 / 469.0	3.23	1065.889152	1000.00	106.59
PFDA_2	513.0 / 219.0	3.23	962.931948	1000.00	96.29
PFUnA_1	563.0 / 519.0	3.55	1129.750397	1000.00	112.98
PFUnA_2	563.0 / 269.0	3.55	1163.693167	1000.00	116.37
PFDoA_1	613.0 / 569.0	3.84	1058.147820	1000.00	105.81
PFDoA_2	613.0 / 319.0	3.83	1140.419974	1000.00	114.04
PFTTrDA_1	663.0 / 619.0	4.09	1120.179142	1000.00	112.02
PFTTrDA_2	663.0 / 169.0	4.09	1061.800273	1000.00	106.18
PFTeDA_1	713.0 / 669.0	4.31	1129.625751	1000.00	112.96
PFTeDA_2	713.0 / 169.0	4.30	1078.794389	1000.00	107.88
NMeFOSAA_1	570.0 / 419.0	3.39	1258.807648	1000.00	125.88
NMeFOSAA_2	570.0 / 512.0	3.39	1226.476155	1000.00	122.65
NEtFOSAA_1	584.0 / 419.0	3.55	1091.957230	1000.00	109.20
NEtFOSAA_2	584.0 / 483.0	3.55	1253.622311	1000.00	125.36

Sample Name	JV26 CCV	Injection Vial	8
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T02:02:32	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

### Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.49	2524.356094	2525.00	99.97
PFBS_2	298.9 / 99.0	1.49	2521.280556	2525.00	99.85
PFHxA_1	313.0 / 269.0	1.77	2672.140702	2525.00	105.83
PFHxA_2	313.0 / 119.0	1.77	2678.945667	2525.00	106.10
PFHpA_1	363.0 / 319.0	2.13	2407.908786	2500.00	96.32
PFHpA_2	363.0 / 169.0	2.13	2694.948918	2500.00	107.80
PFHxS_1	399.0 / 80.0	2.15	2249.535787	2525.00	89.09
PFHxS_2	399.0 / 99.0	2.15	2258.408038	2525.00	89.44
PFOA_1	413.0 / 369.0	2.51	2407.239659	2500.00	96.29
PFOA_2	413.0 / 169.0	2.50	2297.990383	2500.00	91.92
PFNA_1	463.0 / 419.0	2.88	2504.365549	2500.00	100.17
PFNA_2	463.0 / 219.0	2.88	2498.198952	2500.00	99.93
PFOS_1	499.0 / 80.0	2.87	2898.036469	2500.00	115.92
PFOS_2	499.0 / 99.0	2.87	2885.781047	2500.00	115.43
PFDA_1	513.0 / 469.0	3.23	2775.641298	2500.00	111.03
PFDA_2	513.0 / 219.0	3.23	2670.071955	2500.00	106.80
PFUnA_1	563.0 / 519.0	3.54	2647.350960	2500.00	105.89
PFUnA_2	563.0 / 269.0	3.54	2557.649396	2500.00	102.31
PFDoA_1	613.0 / 569.0	3.83	2651.342413	2500.00	106.05
PFDoA_2	613.0 / 319.0	3.83	2873.026744	2500.00	114.92
PFTTrDA_1	663.0 / 619.0	4.08	2697.895501	2500.00	107.92
PFTTrDA_2	663.0 / 169.0	4.08	2668.775753	2500.00	106.75
PFTeDA_1	713.0 / 669.0	4.30	2678.370808	2500.00	107.13
PFTeDA_2	713.0 / 169.0	4.30	2680.461008	2500.00	107.22
NMeFOSAA_1	570.0 / 419.0	3.39	2955.091381	2500.00	118.20
NMeFOSAA_2	570.0 / 512.0	3.39	2856.699822	2500.00	114.27
NEtFOSAA_1	584.0 / 419.0	3.54	2487.624683	2500.00	99.50
NEtFOSAA_2	584.0 / 483.0	3.54	2275.279650	2500.00	91.01



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	18-0338_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	72.956003	100.00	72.96
d5-EtFOSAA	589.0 / 419.0	3.56	82.450523	100.00	82.45
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	65.086296	92.90	70.06
13C3-PFHxS	402.0 / 99.0	2.15	84.343339	94.60	89.16
13C8-PFOS	507.0 / 99.0	2.89	85.869618	95.70	89.73

Sample Name	JV25 CCV	Injection Vial	7
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:25:26	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_SIS
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.83	88.138783	100.00	88.14
d3-MeFOSAA	573.0 / 419.0	3.38	77.491428	100.00	77.49
d5-EtFOSAA	589.0 / 419.0	3.54	83.704044	100.00	83.70
13C5-PFHxA	318.0 / 273.0	1.75	105.738762	100.00	105.74
13C4-PFHpA	367.0 / 322.0	2.12	112.695018	100.00	112.70
13C8-PFOA	421.0 / 376.0	2.50	108.902605	100.00	108.90
13C9-PFNA	472.0 / 427.0	2.87	102.667141	100.00	102.67
13C6-PFDA	519.0 / 474.0	3.22	92.584074	100.00	92.58
13C7-PFUnA	570.0 / 525.0	3.54	89.126376	100.00	89.13
13C2-PFTeDA	715.0 / 670.0	4.30	85.191436	100.00	85.19
13C3-PFBS	302.0 / 99.0	1.47	78.768331	92.90	84.79
13C3-PFHxS	402.0 / 99.0	2.14	90.006808	94.60	95.14
13C8-PFOS	507.0 / 99.0	2.87	93.907849	95.70	98.13

Sample Name	JV26 CCV	Injection Vial	8
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T02:02:32	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_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	97.223377	100.00	97.22
d3-MeFOSAA	573.0 / 419.0	3.38	81.489506	100.00	81.49
d5-EtFOSAA	589.0 / 419.0	3.54	98.482790	100.00	98.48
13C5-PFHxA	318.0 / 273.0	1.76	88.806265	100.00	88.81
13C4-PFHpA	367.0 / 322.0	2.12	94.709624	100.00	94.71
13C8-PFOA	421.0 / 376.0	2.49	96.778597	100.00	96.78
13C9-PFNA	472.0 / 427.0	2.87	94.509430	100.00	94.51
13C6-PFDA	519.0 / 474.0	3.21	93.157679	100.00	93.16
13C7-PFUnA	570.0 / 525.0	3.53	100.038964	100.00	100.04
13C2-PFTeDA	715.0 / 670.0	4.29	91.557461	100.00	91.56
13C3-PFBS	302.0 / 99.0	1.47	82.596268	92.90	88.91
13C3-PFHxS	402.0 / 99.0	2.14	87.908360	94.60	92.93
13C8-PFOS	507.0 / 99.0	2.86	73.988587	95.70	77.31

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	18-0338_BASE
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	1033.548412	124.5	false
PFHxA_2	313.0 / 119.0	1.78	16582.46	956.028826	75.1	false
PFHpA_1	363.0 / 319.0	2.14	255264.02	1291.331216	222.2	true
PFHpA_2	363.0 / 169.0	2.14	5212.39	1279.322595	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	1047.649206	206.2	true
PFOA_2	413.0 / 169.0	2.52	24662.12	1015.910593	183.6	true
PFNA_1	463.0 / 419.0	2.90	389936.57	1024.415505	246.6	false
PFNA_2	463.0 / 219.0	2.90	113000.79	1037.960359	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	921.341526	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	1019.716776	354.6	false
PFUnA_1	563.0 / 519.0	3.57	435613.56	1205.047520	363.7	false
PFUnA_2	563.0 / 269.0	3.57	18822.14	1003.244149	314.6	true
PFDoA_1	613.0 / 569.0	3.86	402014.64	1196.519429	367.2	false
PFDoA_2	613.0 / 319.0	3.86	63147.23	1295.153102	408.0	false
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	81442.76	1199.156882	820.2	true
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	1119.654422	254.4	false

Sample Name	JV25 CCV	Injection Vial	7
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:25:26	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

### Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.48	292165.19	1102.706083	918.1	false
PFBS_2	298.9 / 99.0	1.48	95616.66	1152.980490	410.1	false
PFHxA_1	313.0 / 269.0	1.77	294294.58	1043.574341	102.2	false
PFHxA_2	313.0 / 119.0	1.77	17633.95	894.435756	75.7	false
PFHpA_1	363.0 / 319.0	2.13	264960.82	938.644180	239.9	false
PFHpA_2	363.0 / 169.0	2.13	4956.12	838.194565	275.8	false
PFHxS_1	399.0 / 80.0	2.15	305623.77	955.582166	790.8	false
PFHxS_2	399.0 / 99.0	2.15	83417.14	894.420793	418.8	false
PFOA_1	413.0 / 369.0	2.51	417084.14	996.912420	202.3	true
PFOA_2	413.0 / 169.0	2.51	25506.45	896.559707	153.6	true
PFNA_1	463.0 / 419.0	2.88	411580.62	1068.657654	226.7	false
PFNA_2	463.0 / 219.0	2.88	116895.72	1060.887831	244.3	false
PFOS_1	499.0 / 80.0	2.88	444929.41	942.144784	534.3	false
PFOS_2	499.0 / 99.0	2.88	84459.63	981.904458	467.7	false
PFDA_1	513.0 / 469.0	3.23	448039.68	1065.889152	271.2	false
PFDA_2	513.0 / 219.0	3.23	17059.42	962.931948	328.7	false
PFUnA_1	563.0 / 519.0	3.55	454305.72	1129.750397	338.9	false
PFUnA_2	563.0 / 269.0	3.55	24142.15	1163.693167	283.4	false
PFDoA_1	613.0 / 569.0	3.84	405227.82	1058.147820	343.8	false
PFDoA_2	613.0 / 319.0	3.83	63547.45	1140.419974	365.8	false
PFTrDA_1	663.0 / 619.0	4.09	368225.32	1120.179142	543.8	false
PFTrDA_2	663.0 / 169.0	4.09	24688.28	1061.800273	486.6	false
PFTeDA_1	713.0 / 669.0	4.31	426880.52	1129.625751	824.1	false
PFTeDA_2	713.0 / 169.0	4.30	20960.14	1078.794389	654.2	false
NMeFOSAA_1	570.0 / 419.0	3.39	90743.57	1258.807648	580.3	false
NMeFOSAA_2	570.0 / 512.0	3.39	51990.44	1226.476155	505.4	false
NEtFOSAA_1	584.0 / 419.0	3.55	81482.30	1091.957230	527.9	false
NEtFOSAA_2	584.0 / 483.0	3.55	5372.78	1253.622311	555.3	false

Sample Name	JV26 CCV	Injection Vial	8
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T02:02:32	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

### Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.49	787619.01	2524.356094	1402.6	false
PFBS_2	298.9 / 99.0	1.49	244586.81	2521.280556	610.4	false
PFHxA_1	313.0 / 269.0	1.77	765141.14	2672.140702	164.9	false
PFHxA_2	313.0 / 119.0	1.77	53599.66	2678.945667	149.8	false
PFHpA_1	363.0 / 319.0	2.13	694244.66	2407.908786	351.4	false
PFHpA_2	363.0 / 169.0	2.13	15765.74	2694.948918	325.9	false
PFHxS_1	399.0 / 80.0	2.15	789305.32	2249.535787	967.0	false
PFHxS_2	399.0 / 99.0	2.15	230145.00	2258.408038	524.6	false
PFOA_1	413.0 / 369.0	2.51	1092011.19	2407.239659	287.9	true
PFOA_2	413.0 / 169.0	2.50	70550.53	2297.990383	255.2	true
PFNA_1	463.0 / 419.0	2.88	1080036.07	2504.365549	352.2	false
PFNA_2	463.0 / 219.0	2.88	308664.83	2498.198952	402.0	false
PFOS_1	499.0 / 80.0	2.87	1206835.37	2898.036469	663.7	false
PFOS_2	499.0 / 99.0	2.87	216900.45	2885.781047	591.9	false
PFDA_1	513.0 / 469.0	3.23	1149483.41	2775.641298	387.4	false
PFDA_2	513.0 / 219.0	3.23	46724.44	2670.071955	561.3	false
PFUnA_1	563.0 / 519.0	3.54	1172630.39	2647.350960	454.8	false
PFUnA_2	563.0 / 269.0	3.54	57467.72	2557.649396	405.5	false
PFDoA_1	613.0 / 569.0	3.83	1092273.36	2651.342413	518.1	false
PFDoA_2	613.0 / 319.0	3.83	169910.52	2873.026744	551.5	false
PFTTrDA_1	663.0 / 619.0	4.08	924151.89	2697.895501	736.6	false
PFTTrDA_2	663.0 / 169.0	4.08	64353.24	2668.775753	648.5	false
PFTeDA_1	713.0 / 669.0	4.30	1057723.43	2678.370808	1481.1	false
PFTeDA_2	713.0 / 169.0	4.30	53824.15	2680.461008	1180.9	false
NMeFOSAA_1	570.0 / 419.0	3.39	251246.66	2955.091381	795.6	false
NMeFOSAA_2	570.0 / 512.0	3.39	142810.34	2856.699822	536.6	false
NEtFOSAA_1	584.0 / 419.0	3.54	245154.31	2487.624683	807.2	false
NEtFOSAA_2	584.0 / 483.0	3.54	12684.79	2275.279650	3324.4	false

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	18-0338_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	72.956003	258.8	false
d5-EtFOSAA	589.0 / 419.0	3.56	11304.98	82.450523	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	11438.98	65.086296	388.5	false
13C3-PFHxS	402.0 / 99.0	2.15	11010.91	84.343339	242.3	false
13C8-PFOS	507.0 / 99.0	2.89	13659.53	85.869618	177.4	false

Sample Name	JV25 CCV	Injection Vial	7
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:25:26	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_SIS
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.83	65646.86	88.138783	620.2	false
d3-MeFOSAA	573.0 / 419.0	3.38	11528.81	77.491428	215.6	false
d5-EtFOSAA	589.0 / 419.0	3.54	11473.16	83.704044	182.7	false
13C5-PFHxA	318.0 / 273.0	1.75	42056.64	105.738762	610.2	false
13C4-PFHpA	367.0 / 322.0	2.12	50794.68	112.695018	610.9	false
13C8-PFOA	421.0 / 376.0	2.50	61395.87	108.902605	3372.3	false
13C9-PFNA	472.0 / 427.0	2.87	60164.58	102.667141	767.7	false
13C6-PFDA	519.0 / 474.0	3.22	61697.03	92.584074	2172.6	false
13C7-PFUnA	570.0 / 525.0	3.54	62601.07	89.126376	663.0	false
13C2-PFTeDA	715.0 / 670.0	4.30	56819.69	85.191436	744.9	false
13C3-PFBS	302.0 / 99.0	1.47	13839.16	78.768331	608.4	false
13C3-PFHxS	402.0 / 99.0	2.14	11746.49	90.006808	338.6	false
13C8-PFOS	507.0 / 99.0	2.87	14933.39	93.907849	187.7	false



Sample Name	JV26 CCV	Injection Vial	8
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T02:02:32	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_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	71254.15	97.223377	742.5	false
d3-MeFOSAA	573.0 / 419.0	3.38	13660.19	81.489506	297.9	false
d5-EtFOSAA	589.0 / 419.0	3.54	15209.73	98.482790	212.2	false
13C5-PFHxA	318.0 / 273.0	1.76	43253.96	88.806265	542.3	false
13C4-PFHpA	367.0 / 322.0	2.12	52274.45	94.709624	626.9	false
13C8-PFOA	421.0 / 376.0	2.49	66813.18	96.778597	1369.6	false
13C9-PFNA	472.0 / 427.0	2.87	67821.36	94.509430	727.4	false
13C6-PFDA	519.0 / 474.0	3.21	61085.65	93.157679	789.5	false
13C7-PFUnA	570.0 / 525.0	3.53	69141.25	100.038964	521.7	false
13C2-PFTeDA	715.0 / 670.0	4.29	60088.21	91.557461	952.1	false
13C3-PFBS	302.0 / 99.0	1.47	16350.94	82.596268	468.4	false
13C3-PFHxS	402.0 / 99.0	2.14	12926.69	87.908360	315.4	false
13C8-PFOS	507.0 / 99.0	2.86	13257.01	73.988587	160.1	false



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	18-0338_BASE
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	0.069	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	0.283	ü
PFOS_1	499.0 / 80.0	2.89	PFOS			
PFOS_2	499.0 / 99.0	2.89	PFOS	0.176	0.199	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	0.043	0.057	ü
PFDaA_1	613.0 / 569.0	3.86	PFDaA			
PFDaA_2	613.0 / 319.0	3.86	PFDaA	0.157	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	0.581	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.57	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.57	NEtFOSAA	0.063	0.068	ü

<b>Sample Name</b>	JV25 CCV	<b>Injection Vial</b>	7
<b>Sample ID</b>	CCV	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T00:25:26	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## 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	0.327	0.344	ü
PFHxA_1	313.0 / 269.0	1.77	PFHxA			
PFHxA_2	313.0 / 119.0	1.77	PFHxA	0.060	0.069	ü
PFHpA_1	363.0 / 319.0	2.13	PFHpA			
PFHpA_2	363.0 / 169.0	2.13	PFHpA	0.019	0.023	ü
PFHxS_1	399.0 / 80.0	2.15	PFHxS			
PFHxS_2	399.0 / 99.0	2.15	PFHxS	0.273	0.302	ü
PFOA_1	413.0 / 369.0	2.51	PFOA			
PFOA_2	413.0 / 169.0	2.51	PFOA	0.061	0.071	ü
PFNA_1	463.0 / 419.0	2.88	PFNA			
PFNA_2	463.0 / 219.0	2.88	PFNA	0.284	0.283	ü
PFOS_1	499.0 / 80.0	2.88	PFOS			
PFOS_2	499.0 / 99.0	2.88	PFOS	0.190	0.199	ü
PFDA_1	513.0 / 469.0	3.23	PFDA			
PFDA_2	513.0 / 219.0	3.23	PFDA	0.038	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
PFDaA_1	613.0 / 569.0	3.84	PFDaA			
PFDaA_2	613.0 / 319.0	3.83	PFDaA	0.157	0.158	ü
PFTrDA_1	663.0 / 619.0	4.09	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.09	PFTrDA	0.067	0.070	ü
PFTeDA_1	713.0 / 669.0	4.31	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	0.573	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.55	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.55	NEtFOSAA	0.066	0.068	ü

<b>Sample Name</b>	JV26 CCV	<b>Injection Vial</b>	8
<b>Sample ID</b>	CCV	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T02:02:32	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## 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	0.070	0.069	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	0.292	0.302	ü
PFOA_1	413.0 / 369.0	2.51	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	0.286	0.283	ü
PFOS_1	499.0 / 80.0	2.87	PFOS			
PFOS_2	499.0 / 99.0	2.87	PFOS	0.180	0.199	ü
PFDA_1	513.0 / 469.0	3.23	PFDA			
PFDA_2	513.0 / 219.0	3.23	PFDA	0.041	0.041	ü
PFUnA_1	563.0 / 519.0	3.54	PFUnA			
PFUnA_2	563.0 / 269.0	3.54	PFUnA	0.049	0.057	ü
PFDaA_1	613.0 / 569.0	3.83	PFDaA			
PFDaA_2	613.0 / 319.0	3.83	PFDaA	0.156	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	4.30	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.30	PFTeDA	0.051	0.053	ü
NMeFOSAA_1	570.0 / 419.0	3.39	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.39	NMeFOSAA	0.568	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.54	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.54	NEtFOSAA	0.052	0.068	ü

<b>Sample Name</b>	JW32 ICC	<b>Injection Vial</b>	12
<b>Sample ID</b>	ICC	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T21:22:01	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

### 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
PFDaA_1	613.0 / 569.0	3.86	13C2-PFDaA	615.0 / 570.0	57693.63	100.00
PFDaA_2	613.0 / 319.0	3.86	13C2-PFDaA	615.0 / 570.0	57693.63	100.00
PFTeDA_1	663.0 / 619.0	4.11	13C2-PFTeDA	715.0 / 670.0	51380.06	100.00
PFTeDA_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

<b>Sample Name</b>	JV25 CCV	<b>Injection Vial</b>	7
<b>Sample ID</b>	CCV	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T00:25:26	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

### 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	13839.16	92.90
PFBS_2	298.9 / 99.0	1.48	13C3-PFBS	302.0 / 99.0	13839.16	92.90
PFHxA_1	313.0 / 269.0	1.77	13C5-PFHxA	318.0 / 273.0	42056.64	100.00
PFHxA_2	313.0 / 119.0	1.77	13C5-PFHxA	318.0 / 273.0	42056.64	100.00
PFHpA_1	363.0 / 319.0	2.13	13C4-PFHpA	367.0 / 322.0	50794.68	100.00
PFHpA_2	363.0 / 169.0	2.13	13C4-PFHpA	367.0 / 322.0	50794.68	100.00
PFHxS_1	399.0 / 80.0	2.15	13C3-PFHxS	402.0 / 99.0	11746.49	94.60
PFHxS_2	399.0 / 99.0	2.15	13C3-PFHxS	402.0 / 99.0	11746.49	94.60
PFOA_1	413.0 / 369.0	2.51	13C8-PFOA	421.0 / 376.0	61395.87	100.00
PFOA_2	413.0 / 169.0	2.51	13C8-PFOA	421.0 / 376.0	61395.87	100.00
PFNA_1	463.0 / 419.0	2.88	13C9-PFNA	472.0 / 427.0	60164.58	100.00
PFNA_2	463.0 / 219.0	2.88	13C9-PFNA	472.0 / 427.0	60164.58	100.00
PFOS_1	499.0 / 80.0	2.88	13C8-PFOS	507.0 / 99.0	14933.39	95.70
PFOS_2	499.0 / 99.0	2.88	13C8-PFOS	507.0 / 99.0	14933.39	95.70
PFDA_1	513.0 / 469.0	3.23	13C6-PFDA	519.0 / 474.0	61697.03	100.00
PFDA_2	513.0 / 219.0	3.23	13C6-PFDA	519.0 / 474.0	61697.03	100.00
PFUnA_1	563.0 / 519.0	3.55	13C7-PFUnA	570.0 / 525.0	62601.07	100.00
PFUnA_2	563.0 / 269.0	3.55	13C7-PFUnA	570.0 / 525.0	62601.07	100.00
PFDaA_1	613.0 / 569.0	3.84	13C2-PFDaA	615.0 / 570.0	65646.86	100.00
PFDaA_2	613.0 / 319.0	3.83	13C2-PFDaA	615.0 / 570.0	65646.86	100.00
PFTeDA_1	663.0 / 619.0	4.09	13C2-PFTeDA	715.0 / 670.0	56819.69	100.00
PFTeDA_2	663.0 / 169.0	4.09	13C2-PFTeDA	715.0 / 670.0	56819.69	100.00
PFTeDA_1	713.0 / 669.0	4.31	13C2-PFTeDA	715.0 / 670.0	56819.69	100.00
PFTeDA_2	713.0 / 169.0	4.30	13C2-PFTeDA	715.0 / 670.0	56819.69	100.00
NMeFOSAA_1	570.0 / 419.0	3.39	d3-MeFOSAA	573.0 / 419.0	11528.81	100.00
NMeFOSAA_2	570.0 / 512.0	3.39	d3-MeFOSAA	573.0 / 419.0	11528.81	100.00
NEtFOSAA_1	584.0 / 419.0	3.55	d5-EtFOSAA	589.0 / 419.0	11473.16	100.00
NEtFOSAA_2	584.0 / 483.0	3.55	d5-EtFOSAA	589.0 / 419.0	11473.16	100.00

<b>Sample Name</b>	JV26 CCV	<b>Injection Vial</b>	8
<b>Sample ID</b>	CCV	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T02:02:32	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

### 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	16350.94	92.90
PFBS_2	298.9 / 99.0	1.49	13C3-PFBS	302.0 / 99.0	16350.94	92.90
PFHxA_1	313.0 / 269.0	1.77	13C5-PFHxA	318.0 / 273.0	43253.96	100.00
PFHxA_2	313.0 / 119.0	1.77	13C5-PFHxA	318.0 / 273.0	43253.96	100.00
PFHpA_1	363.0 / 319.0	2.13	13C4-PFHpA	367.0 / 322.0	52274.45	100.00
PFHpA_2	363.0 / 169.0	2.13	13C4-PFHpA	367.0 / 322.0	52274.45	100.00
PFHxS_1	399.0 / 80.0	2.15	13C3-PFHxS	402.0 / 99.0	12926.69	94.60
PFHxS_2	399.0 / 99.0	2.15	13C3-PFHxS	402.0 / 99.0	12926.69	94.60
PFOA_1	413.0 / 369.0	2.51	13C8-PFOA	421.0 / 376.0	66813.18	100.00
PFOA_2	413.0 / 169.0	2.50	13C8-PFOA	421.0 / 376.0	66813.18	100.00
PFNA_1	463.0 / 419.0	2.88	13C9-PFNA	472.0 / 427.0	67821.36	100.00
PFNA_2	463.0 / 219.0	2.88	13C9-PFNA	472.0 / 427.0	67821.36	100.00
PFOS_1	499.0 / 80.0	2.87	13C8-PFOS	507.0 / 99.0	13257.01	95.70
PFOS_2	499.0 / 99.0	2.87	13C8-PFOS	507.0 / 99.0	13257.01	95.70
PFDA_1	513.0 / 469.0	3.23	13C6-PFDA	519.0 / 474.0	61085.65	100.00
PFDA_2	513.0 / 219.0	3.23	13C6-PFDA	519.0 / 474.0	61085.65	100.00
PFUnA_1	563.0 / 519.0	3.54	13C7-PFUnA	570.0 / 525.0	69141.25	100.00
PFUnA_2	563.0 / 269.0	3.54	13C7-PFUnA	570.0 / 525.0	69141.25	100.00
PFDaA_1	613.0 / 569.0	3.83	13C2-PFDaA	615.0 / 570.0	71254.15	100.00
PFDaA_2	613.0 / 319.0	3.83	13C2-PFDaA	615.0 / 570.0	71254.15	100.00
PFTeDA_1	663.0 / 619.0	4.08	13C2-PFTeDA	715.0 / 670.0	60088.21	100.00
PFTeDA_2	663.0 / 169.0	4.08	13C2-PFTeDA	715.0 / 670.0	60088.21	100.00
PFTeDA_1	713.0 / 669.0	4.30	13C2-PFTeDA	715.0 / 670.0	60088.21	100.00
PFTeDA_2	713.0 / 169.0	4.30	13C2-PFTeDA	715.0 / 670.0	60088.21	100.00
NMeFOSAA_1	570.0 / 419.0	3.39	d3-MeFOSAA	573.0 / 419.0	13660.19	100.00
NMeFOSAA_2	570.0 / 512.0	3.39	d3-MeFOSAA	573.0 / 419.0	13660.19	100.00
NEtFOSAA_1	584.0 / 419.0	3.54	d5-EtFOSAA	589.0 / 419.0	15209.73	100.00
NEtFOSAA_2	584.0 / 483.0	3.54	d5-EtFOSAA	589.0 / 419.0	15209.73	100.00



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	18-0338_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



Sample Name	JV25 CCV	Injection Vial	7
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:25:26	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_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	3.83	13C2-PFDA	515.0 / 470.0	48077.59	100.00
d3-MeFOSAA	573.0 / 419.0	3.38	13C4-PFOS	503.0 / 99.0	11882.18	95.50
d5-EtFOSAA	589.0 / 419.0	3.54	13C4-PFOS	503.0 / 99.0	11882.18	95.50
13C5-PFHxA	318.0 / 273.0	1.75	13C2-PFOA	415.0 / 370.0	40081.49	100.00
13C4-PFHpA	367.0 / 322.0	2.12	13C2-PFOA	415.0 / 370.0	40081.49	100.00
13C8-PFOA	421.0 / 376.0	2.50	13C2-PFOA	415.0 / 370.0	40081.49	100.00
13C9-PFNA	472.0 / 427.0	2.87	13C2-PFOA	415.0 / 370.0	40081.49	100.00
13C6-PFDA	519.0 / 474.0	3.22	13C2-PFDA	515.0 / 470.0	48077.59	100.00
13C7-PFUnA	570.0 / 525.0	3.54	13C2-PFDA	515.0 / 470.0	48077.59	100.00
13C2-PFTeDA	715.0 / 670.0	4.30	13C2-PFDA	515.0 / 470.0	48077.59	100.00
13C3-PFBS	302.0 / 99.0	1.47	13C4-PFOS	503.0 / 99.0	11882.18	95.50
13C3-PFHxS	402.0 / 99.0	2.14	13C4-PFOS	503.0 / 99.0	11882.18	95.50
13C8-PFOS	507.0 / 99.0	2.87	13C4-PFOS	503.0 / 99.0	11882.18	95.50

Sample Name	JV26 CCV	Injection Vial	8
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T02:02:32	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_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	47308.08	100.00
d3-MeFOSAA	573.0 / 419.0	3.38	13C4-PFOS	503.0 / 99.0	13388.14	95.50
d5-EtFOSAA	589.0 / 419.0	3.54	13C4-PFOS	503.0 / 99.0	13388.14	95.50
13C5-PFHxA	318.0 / 273.0	1.76	13C2-PFOA	415.0 / 370.0	49082.40	100.00
13C4-PFHpA	367.0 / 322.0	2.12	13C2-PFOA	415.0 / 370.0	49082.40	100.00
13C8-PFOA	421.0 / 376.0	2.49	13C2-PFOA	415.0 / 370.0	49082.40	100.00
13C9-PFNA	472.0 / 427.0	2.87	13C2-PFOA	415.0 / 370.0	49082.40	100.00
13C6-PFDA	519.0 / 474.0	3.21	13C2-PFDA	515.0 / 470.0	47308.08	100.00
13C7-PFUnA	570.0 / 525.0	3.53	13C2-PFDA	515.0 / 470.0	47308.08	100.00
13C2-PFTeDA	715.0 / 670.0	4.29	13C2-PFDA	515.0 / 470.0	47308.08	100.00
13C3-PFBS	302.0 / 99.0	1.47	13C4-PFOS	503.0 / 99.0	13388.14	95.50
13C3-PFHxS	402.0 / 99.0	2.14	13C4-PFOS	503.0 / 99.0	13388.14	95.50
13C8-PFOS	507.0 / 99.0	2.86	13C4-PFOS	503.0 / 99.0	13388.14	95.50

# Raw Analytical Data

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	18-0338_BASE
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	5942.00	6.773021	10.5	true
PFHxA_2	313.0 / 119.0	1.77	536.38	19.317990	7.8	true
PFHpA_1	363.0 / 319.0	2.15	6737.34	24.169290	27.7	false
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
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	47.461454	26.4	true
PFOA_2	413.0 / 169.0	2.53	1299.94	48.322616	27.9	true
PFNA_1	463.0 / 419.0	2.91	10480.44	22.668628	32.6	true
PFNA_2	463.0 / 219.0	2.90	2674.90	21.541073	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	8.995860	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	253.58	15.202177	71.2	true
PFUnA_1	563.0 / 519.0	3.57	9125.39	25.192225	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
PFTTrDA_1	663.0 / 619.0	4.11	8878.70	24.781078	95.6	false
PFTTrDA_2	663.0 / 169.0	4.10	405.28	5.972559	24.8	true
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

Sample Name	JV05 IB	Injection Vial	11
Sample ID	Instrument Blank	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T21:11:14	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_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	59.491954	265.9	false
d5-EtFOSAA	589.0 / 419.0	3.56	8813.77	68.614840	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	56.731121	451.2	false
13C3-PFHxS	402.0 / 99.0	2.15	9081.66	74.254895	203.6	false
13C8-PFOS	507.0 / 99.0	2.89	10744.66	72.098971	157.9	false

Sample Name	CQ855PB-FS(3)	Injection Vial	19
Sample ID	Procedural Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T22:59:08	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

### Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.49	4189.06	9.966595	64.0	true
PFBS_2	298.9 / 99.0	1.48	2166.55	6.074968	28.8	false
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	2.14	2191.56	< 0	13.4	false
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	true
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	true
PFOA_1	413.0 / 369.0	2.51	12864.30	28.745629	19.2	true
PFOA_2	413.0 / 169.0	2.48	1135.42	33.289364	11.0	false
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	true
PFNA_2	463.0 / 219.0	2.89	1112.30	1.988421	17.6	true
PFOS_1	499.0 / 80.0	2.87	3064.12	< 0	26.0	false
PFOS_2	499.0 / 99.0	2.91	813.27	< 0	18.8	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTTrDA_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

Sample Name	CQ855PB-FS(3)	Injection Vial	19
Sample ID	Procedural Blank	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T22:59:08	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_SIS
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.84	46798.01	79.418559	724.4	false
d3-MeFOSAA	573.0 / 419.0	3.39	9914.46	75.362002	288.7	false
d5-EtFOSAA	589.0 / 419.0	3.55	11491.83	94.812678	174.7	false
13C5-PFHxA	318.0 / 273.0	1.76	35824.30	93.278196	610.4	false
13C4-PFHpA	367.0 / 322.0	2.13	41948.56	96.384318	560.7	false
13C8-PFOA	421.0 / 376.0	2.51	54319.46	99.783189	1986.9	false
13C9-PFNA	472.0 / 427.0	2.88	51967.22	91.838085	631.8	false
13C6-PFDA	519.0 / 474.0	3.23	52395.77	99.382455	1107.7	false
13C7-PFUnA	570.0 / 525.0	3.55	53773.19	96.768015	454.5	false
13C2-PFTeDA	715.0 / 670.0	4.31	33640.66	63.753352	681.5	false
13C3-PFBS	302.0 / 99.0	1.47	13363.62	86.016208	395.5	false
13C3-PFHxS	402.0 / 99.0	2.15	10085.16	87.390448	213.9	false
13C8-PFOS	507.0 / 99.0	2.88	13137.02	93.423130	138.7	false

Sample Name	CQ856LCS-FS(3)	Injection Vial	20
Sample ID	Laboratory Control Sample	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:09:56	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

### Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.49	515892.52	2393.654871	1058.0	false
PFBS_2	298.9 / 99.0	1.49	160466.61	2393.902216	432.8	false
PFHxA_1	313.0 / 269.0	1.77	477659.37	2290.278521	141.7	false
PFHxA_2	313.0 / 119.0	1.77	33935.60	2329.537100	115.6	false
PFHpA_1	363.0 / 319.0	2.14	435562.21	2517.922756	298.6	false
PFHpA_2	363.0 / 169.0	2.14	9271.21	2639.861815	284.2	false
PFHxS_1	399.0 / 80.0	2.15	513794.17	2701.705957	989.2	false
PFHxS_2	399.0 / 99.0	2.16	151012.80	2735.294232	445.2	false
PFOA_1	413.0 / 369.0	2.51	658747.81	2487.490085	260.1	true
PFOA_2	413.0 / 169.0	2.51	44057.11	2458.842810	302.2	true
PFNA_1	463.0 / 419.0	2.89	673668.00	2473.479119	312.4	false
PFNA_2	463.0 / 219.0	2.89	193053.90	2474.183479	368.9	false
PFOS_1	499.0 / 80.0	2.89	745472.50	2506.392752	583.4	false
PFOS_2	499.0 / 99.0	2.89	130194.16	2422.669473	484.5	false
PFDA_1	513.0 / 469.0	3.24	747482.31	2579.444576	390.4	false
PFDA_2	513.0 / 219.0	3.24	27947.49	2282.390406	474.2	false
PFUnA_1	563.0 / 519.0	3.56	733684.06	2555.502678	377.4	false
PFUnA_2	563.0 / 269.0	3.56	36633.53	2514.908042	315.7	false
PFDoA_1	613.0 / 569.0	3.85	622631.63	2608.697850	397.7	false
PFDoA_2	613.0 / 319.0	3.85	99268.10	2897.912869	436.5	false
PFTTrDA_1	663.0 / 619.0	4.10	525322.90	2982.106606	650.9	false
PFTTrDA_2	663.0 / 169.0	4.09	35542.90	2865.110594	450.6	false
PFTeDA_1	713.0 / 669.0	4.32	514364.93	2525.163710	896.9	false
PFTeDA_2	713.0 / 169.0	4.31	26554.65	2563.397585	792.2	false
NMeFOSAA_1	570.0 / 419.0	3.40	144505.60	3080.943582	513.2	false
NMeFOSAA_2	570.0 / 512.0	3.40	77444.59	2807.610134	790.9	false
NEtFOSAA_1	584.0 / 419.0	3.56	126037.37	2286.468979	607.3	false
NEtFOSAA_2	584.0 / 483.0	3.56	6403.60	2048.731314	395.0	false



Sample Name	CQ856LCS-FS(3)	Injection Vial	20
Sample ID	Laboratory Control Sample	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:09:56	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_SIS
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.84	41277.15	83.083514	591.1	false
d3-MeFOSAA	573.0 / 419.0	3.39	7536.84	75.692767	171.5	false
d5-EtFOSAA	589.0 / 419.0	3.55	8505.26	92.714339	168.3	false
13C5-PFHxA	318.0 / 273.0	1.76	31461.20	106.473722	655.1	false
13C4-PFHpA	367.0 / 322.0	2.13	31370.16	93.685126	733.2	false
13C8-PFOA	421.0 / 376.0	2.51	39007.52	93.135424	1029.8	false
13C9-PFNA	472.0 / 427.0	2.88	42828.86	98.377227	539.2	false
13C6-PFDA	519.0 / 474.0	3.23	42733.93	96.138410	895.1	false
13C7-PFUnA	570.0 / 525.0	3.55	44811.45	95.645721	491.0	false
13C2-PFTeDA	715.0 / 670.0	4.31	30964.56	69.600769	760.1	false
13C3-PFBS	302.0 / 99.0	1.47	11293.12	96.039971	325.4	false
13C3-PFHxS	402.0 / 99.0	2.14	7008.95	80.244675	256.1	false
13C8-PFOS	507.0 / 99.0	2.88	9463.76	88.920775	132.1	false

Sample Name	J6246-FS(3)	Injection Vial	21
Sample ID	FFTA-EB01-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:20:44	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.50	7353.45	25.088795	90.5	false
PFBS_2	298.9 / 99.0	1.50	3430.99	26.205926	42.0	false
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	2.16	2871.41	10.341396	13.1	false
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.16	6733.81	23.105417	128.7	false
PFHxS_2	399.0 / 99.0	2.15	2147.13	20.480599	35.8	false
PFOA_1	413.0 / 369.0	2.52	14717.53	53.177714	16.8	true
PFOA_2	413.0 / 169.0	2.50	1241.77	61.820173	21.2	false
PFNA_1	463.0 / 419.0	2.89	4618.96	6.302520	16.7	true
PFNA_2	463.0 / 219.0	2.89	1075.02	5.498307	17.4	true
PFOS_1	499.0 / 80.0	2.89	87789.92	248.585858	231.0	false
PFOS_2	499.0 / 99.0	2.89	16333.13	243.375573	250.4	false
PFDA_1	513.0 / 469.0	3.24	2309.78	< 0	17.2	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.56	6075.72	12.972999	28.2	true
PFUnA_2	563.0 / 269.0	3.52	419.21	< 0	12.7	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
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTTrDA_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

Sample Name	J6246-FS(3)	Injection Vial	21
Sample ID	FFTA-EB01-052418	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:20:44	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_SIS
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.83	61638.75	99.747642	795.8	false
d3-MeFOSAA	573.0 / 419.0	3.39	9914.12	91.260262	488.9	false
d5-EtFOSAA	589.0 / 419.0	3.55	12726.54	127.154507	251.5	false
13C5-PFHxA	318.0 / 273.0	1.77	21629.36	71.603833	437.0	false
13C4-PFHpA	367.0 / 322.0	2.13	23716.50	69.283563	504.4	false
13C8-PFOA	421.0 / 376.0	2.51	36584.99	85.446655	1230.7	false
13C9-PFNA	472.0 / 427.0	2.88	38707.46	86.971761	612.6	false
13C6-PFDA	519.0 / 474.0	3.23	40850.90	73.887220	1055.9	false
13C7-PFUnA	570.0 / 525.0	3.54	51907.85	89.074473	448.7	false
13C2-PFTeDA	715.0 / 670.0	4.31	37162.31	67.157642	827.8	false
13C3-PFBS	302.0 / 99.0	1.48	12229.52	95.325617	338.0	false
13C3-PFHxS	402.0 / 99.0	2.15	8794.12	92.282170	222.3	false
13C8-PFOS	507.0 / 99.0	2.88	10866.76	93.584012	164.0	false

Sample Name	J6247-FS(3)	Injection Vial	22
Sample ID	FFTA-A-EB02-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:31:31	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.49	6538.13	13.442758	99.1	false
PFBS_2	298.9 / 99.0	1.48	2262.59	0.848077	32.4	false
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	2.15	1015.92	< 0	31.8	true
PFHxS_2	399.0 / 99.0	2.17	439.78	< 0	8.0	true
PFOA_1	413.0 / 369.0	2.51	11702.21	18.779576	15.5	true
PFOA_2	413.0 / 169.0	2.49	1229.06	26.467548	17.1	false
PFNA_1	463.0 / 419.0	2.89	1314.94	< 0	8.5	true
PFNA_2	463.0 / 219.0	2.90	562.80	< 0	12.9	true
PFOS_1	499.0 / 80.0	2.88	10491.31	13.692835	108.1	false
PFOS_2	499.0 / 99.0	2.88	2112.42	2.004805	53.9	true
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTTrDA_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

Sample Name	J6247-FS(3)	Injection Vial	22
Sample ID	FFTA-A-EB02-052418	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:31:31	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_SIS
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.83	68585.75	103.282147	643.0	false
d3-MeFOSAA	573.0 / 419.0	3.38	12470.97	81.730211	214.5	false
d5-EtFOSAA	589.0 / 419.0	3.54	16342.93	116.253533	172.5	false
13C5-PFHxA	318.0 / 273.0	1.76	46060.77	133.768399	671.4	false
13C4-PFHpA	367.0 / 322.0	2.12	52923.77	135.631323	683.3	false
13C8-PFOA	421.0 / 376.0	2.50	69106.69	141.593051	930.6	false
13C9-PFNA	472.0 / 427.0	2.87	68210.78	134.451708	900.8	false
13C6-PFDA	519.0 / 474.0	3.22	68804.23	115.804488	803.4	false
13C7-PFUnA	570.0 / 525.0	3.54	77286.99	123.415334	690.2	false
13C2-PFTeDA	715.0 / 670.0	4.30	47023.43	79.076888	947.9	false
13C3-PFBS	302.0 / 99.0	1.47	17222.43	95.576107	346.0	false
13C3-PFHxS	402.0 / 99.0	2.14	12969.27	96.893703	273.8	false
13C8-PFOS	507.0 / 99.0	2.87	14486.76	88.823444	157.8	false

Sample Name	J6250-FS(3)	Injection Vial	23
Sample ID	PSC51-MW14D-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:42:19	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.46	26929.25	101.618159	59.3	true
PFBS_2	298.9 / 99.0	1.49	5371.62	48.293290	32.1	true
PFHxA_1	313.0 / 269.0	1.78	10086.86	24.111527	9.0	true
PFHxA_2	313.0 / 119.0	1.77	877.82	39.532492	9.2	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	2.15	25443.84	84.338520	96.4	false
PFHxS_2	399.0 / 99.0	2.15	7183.68	76.585073	63.7	true
PFOA_1	413.0 / 369.0	2.50	30377.46	96.237098	15.0	true
PFOA_2	413.0 / 169.0	2.48	2406.05	107.806632	26.9	true
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	true
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	2.75	26871.68	96.643291	118.7	false
PFOS_2	499.0 / 99.0	2.81	1995.93	19.946255	22.2	true
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTTrDA_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

Sample Name	J6250-FS(3)	Injection Vial	23
Sample ID	PSC51-MW14D-052418	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:42:19	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_SIS
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.83	30191.53	51.943782	593.9	true
d3-MeFOSAA	573.0 / 419.0	3.38	6454.56	53.138045	328.2	false
d5-EtFOSAA	589.0 / 419.0	3.54	5827.52	52.073498	118.7	true
13C5-PFHxA	318.0 / 273.0	1.77	33119.49	107.341950	201.9	false
13C4-PFHpA	367.0 / 322.0	2.12	41214.86	117.876315	502.2	false
13C8-PFOA	421.0 / 376.0	2.50	43778.74	100.103338	772.9	false
13C9-PFNA	472.0 / 427.0	2.87	41426.05	91.127672	493.6	false
13C6-PFDA	519.0 / 474.0	3.22	47295.87	90.947459	649.9	false
13C7-PFUnA	570.0 / 525.0	3.53	43037.54	78.517653	539.3	false
13C2-PFTeDA	715.0 / 670.0	4.30	26281.37	50.494070	755.7	true
13C3-PFBS	302.0 / 99.0	1.48	13086.02	91.226191	245.1	false
13C3-PFHxS	402.0 / 99.0	2.14	10496.71	98.512231	141.2	false
13C8-PFOS	507.0 / 99.0	2.87	8090.47	62.314195	97.9	false

Sample Name	J6252-FS(3)	Injection Vial	24
Sample ID	PSC51-MW13S-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:53:05	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

### Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.48	81710.36	304.756614	160.9	false
PFBS_2	298.9 / 99.0	1.48	19740.75	221.809756	83.6	false
PFHxA_1	313.0 / 269.0	1.77	8635.22	17.388531	9.8	true
PFHxA_2	313.0 / 119.0	1.80	1072.25	52.226705	10.1	true
PFHpA_1	363.0 / 319.0	2.14	6661.83	18.222383	21.3	true
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.14	53534.09	201.669471	160.8	false
PFHxS_2	399.0 / 99.0	2.15	16409.92	208.192840	152.8	false
PFOA_1	413.0 / 369.0	2.50	30837.84	111.089067	19.9	true
PFOA_2	413.0 / 169.0	2.47	4451.76	238.498268	42.7	false
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	true
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	2.76	101050.25	314.838358	162.6	false
PFOS_2	499.0 / 99.0	2.80	13607.94	219.231289	105.0	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTTrDA_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



Sample Name	J6252-FS(3)	Injection Vial	24
Sample ID	PSC51-MW13S-052418	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:53:05	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_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	33256.19	50.510170	539.4	false
d3-MeFOSAA	573.0 / 419.0	3.38	7569.92	60.511747	208.5	false
d5-EtFOSAA	589.0 / 419.0	3.54	7587.43	65.832016	119.0	false
13C5-PFHxA	318.0 / 273.0	1.75	33158.63	95.959918	221.7	false
13C4-PFHpA	367.0 / 322.0	2.12	40539.58	103.528374	544.0	false
13C8-PFOA	421.0 / 376.0	2.49	38815.84	79.250444	551.6	false
13C9-PFNA	472.0 / 427.0	2.87	38834.48	76.278424	601.8	false
13C6-PFDA	519.0 / 474.0	3.22	41988.98	71.278819	579.1	false
13C7-PFUnA	570.0 / 525.0	3.53	38617.86	62.196486	492.2	false
13C2-PFTeDA	715.0 / 670.0	4.30	31281.16	53.055830	775.4	false
13C3-PFBS	302.0 / 99.0	1.47	13792.68	93.361992	262.9	false
13C3-PFHxS	402.0 / 99.0	2.14	9557.19	87.091710	199.1	false
13C8-PFOS	507.0 / 99.0	2.86	9952.61	74.431999	116.9	false

Sample Name	J6252MS-FS(3)	Injection Vial	25
Sample ID	PSC51-MW13S-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:03:52	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.49	2628333.88	7162.605766	537.4	false
PFBS_2	298.9 / 99.0	1.49	810295.08	7129.225700	542.7	false
PFHxA_1	313.0 / 269.0	1.77	2393888.84	7458.352340	219.5	false
PFHxA_2	313.0 / 119.0	1.77	173313.26	7720.715414	240.2	false
PFHpA_1	363.0 / 319.0	2.13	2396515.33	7583.922578	351.7	false
PFHpA_2	363.0 / 169.0	2.13	44039.39	6922.493229	394.4	false
PFHxS_1	399.0 / 80.0	2.15	2713275.58	6802.917654	562.1	false
PFHxS_2	399.0 / 99.0	2.15	780521.51	6748.835438	775.6	false
PFOA_1	413.0 / 369.0	2.51	2732945.24	6979.000704	311.9	true
PFOA_2	413.0 / 169.0	2.51	186271.50	7042.210201	470.4	true
PFNA_1	463.0 / 419.0	2.88	2465474.60	6757.232258	358.0	false
PFNA_2	463.0 / 219.0	2.88	714983.47	6835.301232	536.5	false
PFOS_1	499.0 / 80.0	2.88	3230010.90	6457.557337	630.3	false
PFOS_2	499.0 / 99.0	2.88	557370.68	6189.967729	684.3	false
PFDA_1	513.0 / 469.0	3.23	2755945.32	7260.145207	535.3	false
PFDA_2	513.0 / 219.0	3.23	114994.79	7161.542486	483.9	true
PFUnA_1	563.0 / 519.0	3.55	2597002.88	7257.658905	490.1	true
PFUnA_2	563.0 / 269.0	3.55	139158.63	7742.422306	536.5	false
PFDoA_1	613.0 / 569.0	3.84	2411121.32	7669.138021	669.5	false
PFDoA_2	613.0 / 319.0	3.83	364733.92	8128.420411	677.9	false
PFTTrDA_1	663.0 / 619.0	4.09	2101544.89	8523.517390	811.4	false
PFTTrDA_2	663.0 / 169.0	4.09	140387.05	8097.915527	886.6	false
PFTeDA_1	713.0 / 669.0	4.31	2333379.37	8134.877150	1341.5	false
PFTeDA_2	713.0 / 169.0	4.30	118739.89	8228.885413	1312.6	false
NMeFOSAA_1	570.0 / 419.0	3.39	510278.63	7483.033037	819.3	false
NMeFOSAA_2	570.0 / 512.0	3.39	275385.97	6868.245326	648.8	false
NEtFOSAA_1	584.0 / 419.0	3.55	463929.79	6459.447977	757.7	false
NEtFOSAA_2	584.0 / 483.0	3.55	26220.17	6541.647363	408.4	false

Sample Name	J6252MS-FS(3)	Injection Vial	25
Sample ID	PSC51-MW13S-052418	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:03:52	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_SIS
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.83	54590.32	85.686345	730.1	false
d3-MeFOSAA	573.0 / 419.0	3.38	10978.88	90.580117	170.0	false
d5-EtFOSAA	589.0 / 419.0	3.54	11104.92	99.445313	248.9	false
13C5-PFHxA	318.0 / 273.0	1.76	48743.33	116.834157	313.1	false
13C4-PFHpA	367.0 / 322.0	2.12	57483.21	121.585697	517.9	false
13C8-PFOA	421.0 / 376.0	2.50	57773.21	97.696854	979.1	false
13C9-PFNA	472.0 / 427.0	2.87	57560.36	93.641657	819.7	false
13C6-PFDA	519.0 / 474.0	3.22	56098.60	98.416266	1021.5	false
13C7-PFUnA	570.0 / 525.0	3.54	55926.63	93.086344	799.2	false
13C2-PFTeDA	715.0 / 670.0	4.30	44911.70	78.722594	703.8	false
13C3-PFBS	302.0 / 99.0	1.47	19429.86	135.742953	358.8	true
13C3-PFHxS	402.0 / 99.0	2.14	14729.40	138.534454	270.5	true
13C8-PFOS	507.0 / 99.0	2.87	15951.99	123.130017	163.0	false

Sample Name	J6252MSD-FS(3)	Injection Vial	26
Sample ID	PSC51-MW13S-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:14:39	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

### Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.49	1826257.51	7737.278848	596.7	false
PFBS_2	298.9 / 99.0	1.49	591483.70	8092.893047	560.6	false
PFHxA_1	313.0 / 269.0	1.77	1504944.67	7901.296236	188.6	false
PFHxA_2	313.0 / 119.0	1.77	102148.54	7666.853378	195.2	false
PFHpA_1	363.0 / 319.0	2.13	1411029.33	6197.531059	310.1	false
PFHpA_2	363.0 / 169.0	2.14	25071.49	5461.243113	363.8	false
PFHxS_1	399.0 / 80.0	2.15	1757237.72	6590.682617	560.9	false
PFHxS_2	399.0 / 99.0	2.15	506104.78	6545.945928	670.4	false
PFOA_1	413.0 / 369.0	2.51	1698160.02	6571.704173	294.6	true
PFOA_2	413.0 / 169.0	2.51	115350.44	6608.343331	322.6	true
PFNA_1	463.0 / 419.0	2.88	1623145.18	7484.843174	317.7	false
PFNA_2	463.0 / 219.0	2.88	448587.36	7214.730567	422.6	false
PFOS_1	499.0 / 80.0	2.88	2170772.38	6629.681234	525.0	false
PFOS_2	499.0 / 99.0	2.88	374418.49	6352.460330	690.0	false
PFDA_1	513.0 / 469.0	3.23	1779997.38	6624.719923	421.2	false
PFDA_2	513.0 / 219.0	3.23	73854.86	6498.424169	405.8	false
PFUnA_1	563.0 / 519.0	3.55	1995033.99	6734.676988	449.4	false
PFUnA_2	563.0 / 269.0	3.55	101968.29	6848.354477	444.4	false
PFDoA_1	613.0 / 569.0	3.84	1897195.56	7240.599572	567.7	false
PFDoA_2	613.0 / 319.0	3.84	298376.22	7978.825199	605.0	false
PFTTrDA_1	663.0 / 619.0	4.09	1551183.63	7907.166193	862.6	false
PFTTrDA_2	663.0 / 169.0	4.09	102515.60	7427.161027	814.2	false
PFTeDA_1	713.0 / 669.0	4.31	1671461.28	7322.090634	1282.2	false
PFTeDA_2	713.0 / 169.0	4.30	86732.77	7550.603436	1135.5	false
NMeFOSAA_1	570.0 / 419.0	3.39	407384.86	6623.808928	790.6	false
NMeFOSAA_2	570.0 / 512.0	3.39	225721.05	6241.955146	652.3	false
NEtFOSAA_1	584.0 / 419.0	3.55	394867.04	6513.174675	751.6	false
NEtFOSAA_2	584.0 / 483.0	3.55	20983.87	6199.163918	794.6	false

Sample Name	J6252MSD-FS(3)	Injection Vial	26
Sample ID	PSC51-MW13S-052418	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:14:39	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_SIS
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.83	45491.21	75.292678	576.1	false
d3-MeFOSAA	573.0 / 419.0	3.38	9900.31	84.461107	242.6	false
d5-EtFOSAA	589.0 / 419.0	3.54	9373.91	86.800573	170.2	false
13C5-PFHxA	318.0 / 273.0	1.76	28930.03	78.008971	217.0	false
13C4-PFHpA	367.0 / 322.0	2.12	41402.08	98.515545	696.3	false
13C8-PFOA	421.0 / 376.0	2.50	38121.10	72.520471	812.4	false
13C9-PFNA	472.0 / 427.0	2.87	34217.23	62.622657	509.2	false
13C6-PFDA	519.0 / 474.0	3.22	39703.56	73.446919	607.4	false
13C7-PFUnA	570.0 / 525.0	3.54	46296.86	81.254634	526.3	false
13C2-PFTeDA	715.0 / 670.0	4.30	35596.32	65.792185	839.3	false
13C3-PFBS	302.0 / 99.0	1.47	12989.96	93.840064	340.3	false
13C3-PFHxS	402.0 / 99.0	2.14	10088.44	98.113669	192.5	false
13C8-PFOS	507.0 / 99.0	2.87	10442.81	83.348768	196.2	false

Sample Name	J6248-FS(4)	Injection Vial	27
Sample ID	DRMO-MW11-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:47:01	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.48	405813.08	2946.279838	127.8	false
PFBS_2	298.9 / 99.0	1.48	99403.62	2318.586739	166.7	false
PFHxA_1	313.0 / 269.0	1.76	1651338.11	11209.262824	98.5	false
PFHxA_2	313.0 / 119.0	1.76	104255.03	10114.235093	130.9	false
PFHpA_1	363.0 / 319.0	2.12	833576.71	4064.907221	107.5	false
PFHpA_2	363.0 / 169.0	2.11	14785.09	3562.057955	209.3	false
PFHxS_1	399.0 / 80.0	2.14	6394864.19	24539.610333	342.1	false
PFHxS_2	399.0 / 99.0	2.14	1803161.63	23876.228446	458.6	false
PFOA_1	413.0 / 369.0	2.50	6082679.47	23032.480132	242.8	false
PFOA_2	413.0 / 169.0	2.49	560158.61	31425.495668	517.4	false
PFNA_1	463.0 / 419.0	2.88	208008.38	850.689077	87.3	false
PFNA_2	463.0 / 219.0	2.87	65928.67	944.170797	151.7	false
PFOS_1	499.0 / 80.0	2.85	49063087.20	171369.119544	647.0	false
PFOS_2	499.0 / 99.0	2.87	8503055.21	165361.767127	931.5	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.55	10198.83	22.232743	37.5	false
PFUnA_2	563.0 / 269.0	3.50	600.28	< 0	13.2	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
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTTrDA_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

Sample Name	J6248-FS(4)	Injection Vial	27
Sample ID	DRMO-MW11-052418	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:47:01	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_SIS
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.83	45946.50	93.920324	499.1	false
d3-MeFOSAA	573.0 / 419.0	3.38	8157.32	90.256017	148.6	false
d5-EtFOSAA	589.0 / 419.0	3.54	9265.72	111.276037	153.0	false
13C5-PFHxA	318.0 / 273.0	1.75	22394.74	71.924413	69.9	false
13C4-PFHpA	367.0 / 322.0	2.11	37253.75	105.581334	227.6	false
13C8-PFOA	421.0 / 376.0	2.49	38986.38	88.336988	291.4	false
13C9-PFNA	472.0 / 427.0	2.87	38084.13	83.016652	209.9	false
13C6-PFDA	519.0 / 474.0	3.22	48223.71	110.175926	430.4	false
13C7-PFUnA	570.0 / 525.0	3.53	57865.60	125.429321	504.5	false
13C2-PFTeDA	715.0 / 670.0	4.30	25182.74	57.484953	745.1	false
13C3-PFBS	302.0 / 99.0	1.46	7220.86	67.653542	129.6	false
13C3-PFHxS	402.0 / 99.0	2.13	9620.65	121.347522	101.9	false
13C8-PFOS	507.0 / 99.0	2.86	9143.49	94.648700	64.5	false

Sample Name	J6248-FS-D(5)	Injection Vial	28
Sample ID	DRMO-MW11-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:57:49	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

### Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	N/A	N/A	N/A	N/A	true
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	true
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.15	519498.81	1654.829410	498.7	false
PFHxS_2	399.0 / 99.0	2.15	146351.73	1603.360392	455.4	false
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	true
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	true
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	true
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	2.86	3837444.47	9553.483731	594.7	false
PFOS_2	499.0 / 99.0	2.88	671981.13	9300.452708	852.7	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTTrDA_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



Sample Name	J6248-FS-D(5)	Injection Vial	28
Sample ID	DRMO-MW11-052418	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:57:49	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_SIS
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	N/A	N/A	N/A	N/A	true
d3-MeFOSAA	573.0 / 419.0	N/A	N/A	N/A	N/A	true
d5-EtFOSAA	589.0 / 419.0	N/A	N/A	N/A	N/A	true
13C5-PFHxA	318.0 / 273.0	N/A	N/A	N/A	N/A	true
13C4-PFHpA	367.0 / 322.0	N/A	N/A	N/A	N/A	true
13C8-PFOA	421.0 / 376.0	N/A	N/A	N/A	N/A	true
13C9-PFNA	472.0 / 427.0	N/A	N/A	N/A	N/A	true
13C6-PFDA	519.0 / 474.0	N/A	N/A	N/A	N/A	true
13C7-PFUnA	570.0 / 525.0	N/A	N/A	N/A	N/A	true
13C2-PFTeDA	715.0 / 670.0	N/A	N/A	N/A	N/A	true
13C3-PFBS	302.0 / 99.0	N/A	N/A	N/A	N/A	true
13C3-PFHxS	402.0 / 99.0	N/A	N/A	N/A	N/A	true
13C8-PFOS	507.0 / 99.0	N/A	N/A	N/A	N/A	true

Sample Name	J6253-FS(4)	Injection Vial	29
Sample ID	DRMO-MW2-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:08:37	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

### Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.49	617967.41	3118.928293	139.5	false
PFBS_2	298.9 / 99.0	1.48	137745.92	2232.466894	205.3	false
PFHxA_1	313.0 / 269.0	1.77	359823.97	1778.595887	53.2	false
PFHxA_2	313.0 / 119.0	1.77	25689.48	1819.060419	68.9	false
PFHpA_1	363.0 / 319.0	2.13	344468.88	1224.447504	83.0	false
PFHpA_2	363.0 / 169.0	2.13	7532.43	1300.462805	108.9	false
PFHxS_1	399.0 / 80.0	2.15	1055362.45	3117.829700	199.8	false
PFHxS_2	399.0 / 99.0	2.15	297864.25	3031.546406	367.2	false
PFOA_1	413.0 / 369.0	2.51	1303896.39	3424.607689	107.3	true
PFOA_2	413.0 / 169.0	2.50	109492.76	4256.510949	289.7	true
PFNA_1	463.0 / 419.0	2.88	111608.35	281.759132	62.1	false
PFNA_2	463.0 / 219.0	2.88	32134.76	285.656420	97.6	false
PFOS_1	499.0 / 80.0	2.87	9852823.11	20988.371309	504.3	false
PFOS_2	499.0 / 99.0	2.88	1791261.40	21232.661686	743.4	false
PFDA_1	513.0 / 469.0	3.23	17787.40	27.762013	31.8	true
PFDA_2	513.0 / 219.0	3.21	525.71	21.815576	20.1	true
PFUnA_1	563.0 / 519.0	3.55	5585.04	6.106271	24.6	true
PFUnA_2	563.0 / 269.0	3.51	522.11	< 0	15.6	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
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTTrDA_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

Sample Name	J6253-FS(4)	Injection Vial	29
Sample ID	DRMO-MW2-052418	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:08:37	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_SIS
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.83	65392.22	77.245036	936.7	false
d3-MeFOSAA	573.0 / 419.0	3.38	12886.38	111.669759	161.9	false
d5-EtFOSAA	589.0 / 419.0	3.54	14459.52	136.004161	164.9	false
13C5-PFHxA	318.0 / 273.0	1.76	30433.80	86.746558	95.1	false
13C4-PFHpA	367.0 / 322.0	2.12	50769.04	127.697345	259.0	false
13C8-PFOA	421.0 / 376.0	2.50	56120.24	112.853509	355.0	false
13C9-PFNA	472.0 / 427.0	2.87	59934.89	115.948918	290.3	false
13C6-PFDA	519.0 / 474.0	3.22	72429.34	95.626430	568.2	false
13C7-PFUnA	570.0 / 525.0	3.54	76354.90	95.642916	565.1	false
13C2-PFTeDA	715.0 / 670.0	4.30	46998.23	61.996892	957.8	false
13C3-PFBS	302.0 / 99.0	1.47	10388.44	76.230271	223.6	false
13C3-PFHxS	402.0 / 99.0	2.14	12478.49	123.271970	149.9	false
13C8-PFOS	507.0 / 99.0	2.86	14986.50	121.500711	117.5	false

Sample Name	J6253-FS-D(5)	Injection Vial	30
Sample ID	DRMO-MW2-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:19:25	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	N/A	N/A	N/A	N/A	true
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	true
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	true
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	true
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	true
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	true
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	true
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	2.88	560288.28	1324.496802	402.1	false
PFOS_2	499.0 / 99.0	2.88	104181.30	1357.058007	506.7	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTTrDA_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

Sample Name	J6253-FS-D(5)	Injection Vial	30
Sample ID	DRMO-MW2-052418	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:19:25	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_SIS
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	N/A	N/A	N/A	N/A	true
d3-MeFOSAA	573.0 / 419.0	N/A	N/A	N/A	N/A	true
d5-EtFOSAA	589.0 / 419.0	N/A	N/A	N/A	N/A	true
13C5-PFHxA	318.0 / 273.0	N/A	N/A	N/A	N/A	true
13C4-PFHpA	367.0 / 322.0	N/A	N/A	N/A	N/A	true
13C8-PFOA	421.0 / 376.0	N/A	N/A	N/A	N/A	true
13C9-PFNA	472.0 / 427.0	N/A	N/A	N/A	N/A	true
13C6-PFDA	519.0 / 474.0	N/A	N/A	N/A	N/A	true
13C7-PFUnA	570.0 / 525.0	N/A	N/A	N/A	N/A	true
13C2-PFTeDA	715.0 / 670.0	N/A	N/A	N/A	N/A	true
13C3-PFBS	302.0 / 99.0	N/A	N/A	N/A	N/A	true
13C3-PFHxS	402.0 / 99.0	N/A	N/A	N/A	N/A	true
13C8-PFOS	507.0 / 99.0	N/A	N/A	N/A	N/A	true

Sample Name	J6254-FS(4)	Injection Vial	31
Sample ID	DRM0-FD03-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:30:12	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

### Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.47	436708.91	2443.882278	109.2	false
PFBS_2	298.9 / 99.0	1.46	113110.30	2031.879361	211.0	false
PFHxA_1	313.0 / 269.0	1.72	1739763.91	10253.447549	114.1	false
PFHxA_2	313.0 / 119.0	1.72	109503.15	9223.725505	154.6	false
PFHpA_1	363.0 / 319.0	2.05	676852.25	3154.695293	129.9	true
PFHpA_2	363.0 / 169.0	2.04	15813.95	3645.635809	187.1	false
PFHxS_1	399.0 / 80.0	2.07	7097210.41	25543.259924	329.6	false
PFHxS_2	399.0 / 99.0	2.07	1950893.87	24227.925613	585.0	false
PFOA_1	413.0 / 369.0	2.42	6139712.82	22916.081206	236.9	false
PFOA_2	413.0 / 169.0	2.39	594029.65	32849.882039	476.4	false
PFNA_1	463.0 / 419.0	2.79	231533.87	798.378111	122.1	false
PFNA_2	463.0 / 219.0	2.79	74065.91	894.675527	194.9	false
PFOS_1	499.0 / 80.0	2.76	55830215.46	179040.564324	679.7	false
PFOS_2	499.0 / 99.0	2.78	9656289.89	172415.532479	956.7	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTTrDA_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

Sample Name	J6254-FS(4)	Injection Vial	31
Sample ID	DRM0-FD03-052418	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:30:12	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_SIS
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	3.76	58465.60	100.036129	735.9	false
d3-MeFOSAA	573.0 / 419.0	3.30	7961.32	105.640870	121.3	false
d5-EtFOSAA	589.0 / 419.0	3.46	9594.16	138.180747	121.1	false
13C5-PFHxA	318.0 / 273.0	1.71	25788.57	92.274105	82.4	false
13C4-PFHpA	367.0 / 322.0	2.05	38944.99	122.967695	195.4	false
13C8-PFOA	421.0 / 376.0	2.41	39551.76	99.843047	267.9	false
13C9-PFNA	472.0 / 427.0	2.78	45125.93	109.589702	268.5	false
13C6-PFDA	519.0 / 474.0	3.13	56889.83	108.795259	413.0	false
13C7-PFUnA	570.0 / 525.0	3.46	61126.25	110.906144	431.1	false
13C2-PFTeDA	715.0 / 670.0	4.24	35273.75	67.398782	1040.6	false
13C3-PFBS	302.0 / 99.0	1.45	9363.80	105.213546	175.6	false
13C3-PFHxS	402.0 / 99.0	2.06	9373.11	141.784362	123.5	true
13C8-PFOS	507.0 / 99.0	2.78	9958.83	123.631521	106.7	false

Sample Name	J6254-FS-D(5)	Injection Vial	32
Sample ID	DRM0-FD03-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:40:59	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

### Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	N/A	N/A	N/A	N/A	true
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	true
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.15	410085.14	1243.451830	420.1	false
PFHxS_2	399.0 / 99.0	2.15	118470.34	1234.290587	453.0	false
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	true
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	true
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	true
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	2.87	2064137.30	5270.164554	604.8	false
PFOS_2	499.0 / 99.0	2.87	566373.10	8042.502550	847.9	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTTrDA_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



Sample Name	J6254-FS-D(5)	Injection Vial	32
Sample ID	DRM0-FD03-052418	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:40:59	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_SIS
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	N/A	N/A	N/A	N/A	true
d3-MeFOSAA	573.0 / 419.0	N/A	N/A	N/A	N/A	true
d5-EtFOSAA	589.0 / 419.0	N/A	N/A	N/A	N/A	true
13C5-PFHxA	318.0 / 273.0	N/A	N/A	N/A	N/A	true
13C4-PFHpA	367.0 / 322.0	N/A	N/A	N/A	N/A	true
13C8-PFOA	421.0 / 376.0	N/A	N/A	N/A	N/A	true
13C9-PFNA	472.0 / 427.0	N/A	N/A	N/A	N/A	true
13C6-PFDA	519.0 / 474.0	N/A	N/A	N/A	N/A	true
13C7-PFUnA	570.0 / 525.0	N/A	N/A	N/A	N/A	true
13C2-PFTeDA	715.0 / 670.0	N/A	N/A	N/A	N/A	true
13C3-PFBS	302.0 / 99.0	N/A	N/A	N/A	N/A	true
13C3-PFHxS	402.0 / 99.0	N/A	N/A	N/A	N/A	true
13C8-PFOS	507.0 / 99.0	N/A	N/A	N/A	N/A	true

<b>Sample Name</b>	J6252-FS(3)	<b>Injection Vial</b>	24
<b>Sample ID</b>	PSC51-MW13S-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T23:53:05	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## 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	0.242	0.344	ü
PFHxA_1	313.0 / 269.0	1.77	PFHxA			
PFHxA_2	313.0 / 119.0	1.80	PFHxA	0.120	0.069	
PFHpA_1	363.0 / 319.0	2.14	PFHpA			
PFHpA_2	363.0 / 169.0	2.11	PFHpA	0.051	0.023	
PFHxS_1	399.0 / 80.0	2.14	PFHxS			
PFHxS_2	399.0 / 99.0	2.15	PFHxS	0.307	0.302	ü
PFOA_1	413.0 / 369.0	2.50	PFOA			
PFOA_2	413.0 / 169.0	2.47	PFOA	0.144	0.071	
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.283	ü
PFOS_1	499.0 / 80.0	2.76	PFOS			
PFOS_2	499.0 / 99.0	2.80	PFOS	0.135	0.199	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.057	ü
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	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	0.068	ü



Sample Name	J6253-FS(4)	Injection Vial	29
Sample ID	DRMO-MW2-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:08:37	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	0.223	0.344	ü
PFHxA_1	313.0 / 269.0	1.77	PFHxA			
PFHxA_2	313.0 / 119.0	1.77	PFHxA	0.071	0.069	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	0.282	0.302	ü
PFOA_1	413.0 / 369.0	2.51	PFOA			
PFOA_2	413.0 / 169.0	2.50	PFOA	0.084	0.071	ü
PFNA_1	463.0 / 419.0	2.88	PFNA			
PFNA_2	463.0 / 219.0	2.88	PFNA	0.288	0.283	ü
PFOS_1	499.0 / 80.0	2.87	PFOS			
PFOS_2	499.0 / 99.0	2.88	PFOS	0.182	0.199	ü
PFDA_1	513.0 / 469.0	3.23	PFDA			
PFDA_2	513.0 / 219.0	3.21	PFDA	0.030	0.041	ü
PFUnA_1	563.0 / 519.0	3.55	PFUnA			
PFUnA_2	563.0 / 269.0	3.51	PFUnA	0.094	0.057	
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	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	0.068	ü

<b>Sample Name</b>	JV05 IB	<b>Injection Vial</b>	11
<b>Sample ID</b>	Instrument Blank	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T21:11:14	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

### 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	0.090	0.069	ü
PFHpA_1	363.0 / 319.0	2.15	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.023	
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	0.283	ü
PFOS_1	499.0 / 80.0	2.90	PFOS			
PFOS_2	499.0 / 99.0	2.88	PFOS	0.243	0.199	ü
PFDA_1	513.0 / 469.0	3.25	PFDA			
PFDA_2	513.0 / 219.0	3.25	PFDA	0.023	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
PFDaA_1	613.0 / 569.0	3.86	PFDaA			
PFDaA_2	613.0 / 319.0	3.86	PFDaA	0.213	0.158	ü
PFTrDA_1	663.0 / 619.0	4.11	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.10	PFTrDA	0.046	0.070	
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	0.068	

<b>Sample Name</b>	CQ855PB-FS(3)	<b>Injection Vial</b>	19
<b>Sample ID</b>	Procedural Blank	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T22:59:08	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

### 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	0.517	0.344	
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.069	ü
PFHpA_1	363.0 / 319.0	2.14	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.023	
PFHxS_1	399.0 / 80.0	N/A	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	PFHxS	N/A	0.302	ü
PFOA_1	413.0 / 369.0	2.51	PFOA			
PFOA_2	413.0 / 169.0	2.48	PFOA	0.088	0.071	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	2.89	PFNA	N/A	0.283	
PFOS_1	499.0 / 80.0	2.87	PFOS			
PFOS_2	499.0 / 99.0	2.91	PFOS	0.265	0.199	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.057	ü
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	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	0.068	ü



Sample Name	CQ856LCS-FS(3)	Injection Vial	20
Sample ID	Laboratory Control Sample	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:09:56	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	0.071	0.069	ü
PFHpA_1	363.0 / 319.0	2.14	PFHpA			
PFHpA_2	363.0 / 169.0	2.14	PFHpA	0.021	0.023	ü
PFHxS_1	399.0 / 80.0	2.15	PFHxS			
PFHxS_2	399.0 / 99.0	2.16	PFHxS	0.294	0.302	ü
PFOA_1	413.0 / 369.0	2.51	PFOA			
PFOA_2	413.0 / 169.0	2.51	PFOA	0.067	0.071	ü
PFNA_1	463.0 / 419.0	2.89	PFNA			
PFNA_2	463.0 / 219.0	2.89	PFNA	0.287	0.283	ü
PFOS_1	499.0 / 80.0	2.89	PFOS			
PFOS_2	499.0 / 99.0	2.89	PFOS	0.175	0.199	ü
PFDA_1	513.0 / 469.0	3.24	PFDA			
PFDA_2	513.0 / 219.0	3.24	PFDA	0.037	0.041	ü
PFUnA_1	563.0 / 519.0	3.56	PFUnA			
PFUnA_2	563.0 / 269.0	3.56	PFUnA	0.050	0.057	ü
PFDaA_1	613.0 / 569.0	3.85	PFDaA			
PFDaA_2	613.0 / 319.0	3.85	PFDaA	0.159	0.158	ü
PFTrDA_1	663.0 / 619.0	4.10	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.09	PFTrDA	0.068	0.070	ü
PFTeDA_1	713.0 / 669.0	4.32	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.31	PFTeDA	0.052	0.053	ü
NMeFOSAA_1	570.0 / 419.0	3.40	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.40	NMeFOSAA	0.536	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.56	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.56	NEtFOSAA	0.051	0.068	ü

<b>Sample Name</b>	J6246-FS(3)	<b>Injection Vial</b>	21
<b>Sample ID</b>	FFTA-EB01-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T23:20:44	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

### 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	0.467	0.344	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.069	ü
PFHpA_1	363.0 / 319.0	2.16	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.023	
PFHxS_1	399.0 / 80.0	2.16	PFHxS			
PFHxS_2	399.0 / 99.0	2.15	PFHxS	0.319	0.302	ü
PFOA_1	413.0 / 369.0	2.52	PFOA			
PFOA_2	413.0 / 169.0	2.50	PFOA	0.084	0.071	ü
PFNA_1	463.0 / 419.0	2.89	PFNA			
PFNA_2	463.0 / 219.0	2.89	PFNA	0.233	0.283	ü
PFOS_1	499.0 / 80.0	2.89	PFOS			
PFOS_2	499.0 / 99.0	2.89	PFOS	0.186	0.199	ü
PFDA_1	513.0 / 469.0	3.24	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	
PFUnA_1	563.0 / 519.0	3.56	PFUnA			
PFUnA_2	563.0 / 269.0	3.52	PFUnA	0.069	0.057	ü
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	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	0.068	ü



Sample Name	J6247-FS(3)	Injection Vial	22
Sample ID	FFTA-A-EB02-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:31:31	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	0.346	0.344	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.069	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	2.15	PFHxS			
PFHxS_2	399.0 / 99.0	2.17	PFHxS	0.433	0.302	ü
PFOA_1	413.0 / 369.0	2.51	PFOA			
PFOA_2	413.0 / 169.0	2.49	PFOA	0.105	0.071	ü
PFNA_1	463.0 / 419.0	2.89	PFNA			
PFNA_2	463.0 / 219.0	2.90	PFNA	0.428	0.283	
PFOS_1	499.0 / 80.0	2.88	PFOS			
PFOS_2	499.0 / 99.0	2.88	PFOS	0.201	0.199	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.057	ü
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	N/A	0.158	ü
PFTTrDA_1	663.0 / 619.0	N/A	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	PFTTrDA	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	0.068	ü



<b>Sample Name</b>	J6250-FS(3)	<b>Injection Vial</b>	23
<b>Sample ID</b>	PSC51-MW14D-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T23:42:19	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

### Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.46	PFBS			
PFBS_2	298.9 / 99.0	1.49	PFBS	0.200	0.344	ü
PFHxA_1	313.0 / 269.0	1.78	PFHxA			
PFHxA_2	313.0 / 119.0	1.77	PFHxA	0.081	0.069	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	2.15	PFHxS			
PFHxS_2	399.0 / 99.0	2.15	PFHxS	0.282	0.302	ü
PFOA_1	413.0 / 369.0	2.50	PFOA			
PFOA_2	413.0 / 169.0	2.48	PFOA	0.079	0.071	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.283	ü
PFOS_1	499.0 / 80.0	2.75	PFOS			
PFOS_2	499.0 / 99.0	2.81	PFOS	0.074	0.199	
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.057	ü
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	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	0.068	ü



Sample Name	J6252MS-FS(3)	Injection Vial	25
Sample ID	PSC51-MW13S-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:03:52	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	0.308	0.344	ü
PFHxA_1	313.0 / 269.0	1.77	PFHxA			
PFHxA_2	313.0 / 119.0	1.77	PFHxA	0.072	0.069	ü
PFHpA_1	363.0 / 319.0	2.13	PFHpA			
PFHpA_2	363.0 / 169.0	2.13	PFHpA	0.018	0.023	ü
PFHxS_1	399.0 / 80.0	2.15	PFHxS			
PFHxS_2	399.0 / 99.0	2.15	PFHxS	0.288	0.302	ü
PFOA_1	413.0 / 369.0	2.51	PFOA			
PFOA_2	413.0 / 169.0	2.51	PFOA	0.068	0.071	ü
PFNA_1	463.0 / 419.0	2.88	PFNA			
PFNA_2	463.0 / 219.0	2.88	PFNA	0.290	0.283	ü
PFOS_1	499.0 / 80.0	2.88	PFOS			
PFOS_2	499.0 / 99.0	2.88	PFOS	0.173	0.199	ü
PFDA_1	513.0 / 469.0	3.23	PFDA			
PFDA_2	513.0 / 219.0	3.23	PFDA	0.042	0.041	ü
PFUnA_1	563.0 / 519.0	3.55	PFUnA			
PFUnA_2	563.0 / 269.0	3.55	PFUnA	0.054	0.057	ü
PFDaA_1	613.0 / 569.0	3.84	PFDaA			
PFDaA_2	613.0 / 319.0	3.83	PFDaA	0.151	0.158	ü
PFTrDA_1	663.0 / 619.0	4.09	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.09	PFTrDA	0.067	0.070	ü
PFTeDA_1	713.0 / 669.0	4.31	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.30	PFTeDA	0.051	0.053	ü
NMeFOSAA_1	570.0 / 419.0	3.39	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.39	NMeFOSAA	0.540	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.55	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.55	NEtFOSAA	0.057	0.068	ü



Sample Name	J6252MSD-FS(3)	Injection Vial	26
Sample ID	PSC51-MW13S-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:14:39	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	0.324	0.344	ü
PFHxA_1	313.0 / 269.0	1.77	PFHxA			
PFHxA_2	313.0 / 119.0	1.77	PFHxA	0.068	0.069	ü
PFHpA_1	363.0 / 319.0	2.13	PFHpA			
PFHpA_2	363.0 / 169.0	2.14	PFHpA	0.018	0.023	ü
PFHxS_1	399.0 / 80.0	2.15	PFHxS			
PFHxS_2	399.0 / 99.0	2.15	PFHxS	0.288	0.302	ü
PFOA_1	413.0 / 369.0	2.51	PFOA			
PFOA_2	413.0 / 169.0	2.51	PFOA	0.068	0.071	ü
PFNA_1	463.0 / 419.0	2.88	PFNA			
PFNA_2	463.0 / 219.0	2.88	PFNA	0.276	0.283	ü
PFOS_1	499.0 / 80.0	2.88	PFOS			
PFOS_2	499.0 / 99.0	2.88	PFOS	0.173	0.199	ü
PFDA_1	513.0 / 469.0	3.23	PFDA			
PFDA_2	513.0 / 219.0	3.23	PFDA	0.042	0.041	ü
PFUnA_1	563.0 / 519.0	3.55	PFUnA			
PFUnA_2	563.0 / 269.0	3.55	PFUnA	0.051	0.057	ü
PFDaA_1	613.0 / 569.0	3.84	PFDaA			
PFDaA_2	613.0 / 319.0	3.84	PFDaA	0.157	0.158	ü
PFTrDA_1	663.0 / 619.0	4.09	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.09	PFTrDA	0.066	0.070	ü
PFTeDA_1	713.0 / 669.0	4.31	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	0.554	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.55	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.55	NEtFOSAA	0.053	0.068	ü



Sample Name	J6248-FS(4)	Injection Vial	27
Sample ID	DRMO-MW11-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:47:01	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	0.245	0.344	ü
PFHxA_1	313.0 / 269.0	1.76	PFHxA			
PFHxA_2	313.0 / 119.0	1.76	PFHxA	0.063	0.069	ü
PFHpA_1	363.0 / 319.0	2.12	PFHpA			
PFHpA_2	363.0 / 169.0	2.11	PFHpA	0.018	0.023	ü
PFHxS_1	399.0 / 80.0	2.14	PFHxS			
PFHxS_2	399.0 / 99.0	2.14	PFHxS	0.282	0.302	ü
PFOA_1	413.0 / 369.0	2.50	PFOA			
PFOA_2	413.0 / 169.0	2.49	PFOA	0.092	0.071	ü
PFNA_1	463.0 / 419.0	2.88	PFNA			
PFNA_2	463.0 / 219.0	2.87	PFNA	0.317	0.283	ü
PFOS_1	499.0 / 80.0	2.85	PFOS			
PFOS_2	499.0 / 99.0	2.87	PFOS	0.173	0.199	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	ü
PFUnA_1	563.0 / 519.0	3.55	PFUnA			
PFUnA_2	563.0 / 269.0	3.50	PFUnA	0.059	0.057	ü
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	N/A	0.158	ü
PFTTrDA_1	663.0 / 619.0	N/A	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	PFTTrDA	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	0.068	ü



Sample Name	J6248-FS-D(5)	Injection Vial	28
Sample ID	DRMO-MW11-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:57:49	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	N/A	PFBS			
PFBS_2	298.9 / 99.0	N/A	PFBS	N/A	0.344	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.069	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	2.15	PFHxS			
PFHxS_2	399.0 / 99.0	2.15	PFHxS	0.282	0.302	ü
PFOA_1	413.0 / 369.0	N/A	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.071	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.283	ü
PFOS_1	499.0 / 80.0	2.86	PFOS			
PFOS_2	499.0 / 99.0	2.88	PFOS	0.175	0.199	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.057	ü
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	N/A	0.158	ü
PFTTrDA_1	663.0 / 619.0	N/A	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	PFTTrDA	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	0.068	ü

<b>Sample Name</b>	J6253-FS-D(5)	<b>Injection Vial</b>	30
<b>Sample ID</b>	DRMO-MW2-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T01:19:25	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

**Results Summary**

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	N/A	PFBS			
PFBS_2	298.9 / 99.0	N/A	PFBS	N/A	0.344	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.069	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	N/A	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	PFHxS	N/A	0.302	ü
PFOA_1	413.0 / 369.0	N/A	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.071	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.283	ü
PFOS_1	499.0 / 80.0	2.88	PFOS			
PFOS_2	499.0 / 99.0	2.88	PFOS	0.186	0.199	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.057	ü
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	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	0.068	ü

<b>Sample Name</b>	J6254-FS(4)	<b>Injection Vial</b>	31
<b>Sample ID</b>	DRM0-FD03-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T01:30:12	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.47	PFBS			
PFBS_2	298.9 / 99.0	1.46	PFBS	0.259	0.344	ü
PFHxA_1	313.0 / 269.0	1.72	PFHxA			
PFHxA_2	313.0 / 119.0	1.72	PFHxA	0.063	0.069	ü
PFHpA_1	363.0 / 319.0	2.05	PFHpA			
PFHpA_2	363.0 / 169.0	2.04	PFHpA	0.023	0.023	ü
PFHxS_1	399.0 / 80.0	2.07	PFHxS			
PFHxS_2	399.0 / 99.0	2.07	PFHxS	0.275	0.302	ü
PFOA_1	413.0 / 369.0	2.42	PFOA			
PFOA_2	413.0 / 169.0	2.39	PFOA	0.097	0.071	ü
PFNA_1	463.0 / 419.0	2.79	PFNA			
PFNA_2	463.0 / 219.0	2.79	PFNA	0.320	0.283	ü
PFOS_1	499.0 / 80.0	2.76	PFOS			
PFOS_2	499.0 / 99.0	2.78	PFOS	0.173	0.199	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.057	ü
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	N/A	0.158	ü
PFTTrDA_1	663.0 / 619.0	N/A	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	PFTTrDA	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	0.068	ü

<b>Sample Name</b>	J6254-FS-D(5)	<b>Injection Vial</b>	32
<b>Sample ID</b>	DRM0-FD03-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T01:40:59	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	N/A	PFBS			
PFBS_2	298.9 / 99.0	N/A	PFBS	N/A	0.344	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.069	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	2.15	PFHxS			
PFHxS_2	399.0 / 99.0	2.15	PFHxS	0.289	0.302	ü
PFOA_1	413.0 / 369.0	N/A	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.071	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.283	ü
PFOS_1	499.0 / 80.0	2.87	PFOS			
PFOS_2	499.0 / 99.0	2.87	PFOS	0.274	0.199	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.057	ü
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	N/A	0.158	ü
PFTTrDA_1	663.0 / 619.0	N/A	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	PFTTrDA	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	0.068	ü



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	18-0338_BASE
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	N/A	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
PFTeDA_1	663.0 / 619.0	4.11	13C2-PFTeDA	715.0 / 670.0	43611.52	100.00
PFTeDA_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

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	18-0338_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

Sample Name	CQ855PB-FS(3)	Injection Vial	19
Sample ID	Procedural Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T22:59:08	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	13363.62	92.90
PFBS_2	298.9 / 99.0	1.48	13C3-PFBS	302.0 / 99.0	13363.62	92.90
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	35824.30	100.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	35824.30	100.00
PFHpA_1	363.0 / 319.0	2.14	13C4-PFHpA	367.0 / 322.0	41948.56	100.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	41948.56	100.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	10085.16	94.60
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	10085.16	94.60
PFOA_1	413.0 / 369.0	2.51	13C8-PFOA	421.0 / 376.0	54319.46	100.00
PFOA_2	413.0 / 169.0	2.48	13C8-PFOA	421.0 / 376.0	54319.46	100.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	51967.22	100.00
PFNA_2	463.0 / 219.0	2.89	13C9-PFNA	472.0 / 427.0	51967.22	100.00
PFOS_1	499.0 / 80.0	2.87	13C8-PFOS	507.0 / 99.0	13137.02	95.70
PFOS_2	499.0 / 99.0	2.91	13C8-PFOS	507.0 / 99.0	13137.02	95.70
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	52395.77	100.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	52395.77	100.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	53773.19	100.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	53773.19	100.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	46798.01	100.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	46798.01	100.00
PFTeDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	33640.66	100.00
PFTeDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	33640.66	100.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	33640.66	100.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	33640.66	100.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	9914.46	100.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	9914.46	100.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	11491.83	100.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	11491.83	100.00

Sample Name	CQ855PB-FS(3)	Injection Vial	19
Sample ID	Procedural Blank	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T22:59:08	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_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	3.84	13C2-PFDA	515.0 / 470.0	38036.56	100.00
d3-MeFOSAA	573.0 / 419.0	3.39	13C4-PFOS	503.0 / 99.0	10507.08	95.50
d5-EtFOSAA	589.0 / 419.0	3.55	13C4-PFOS	503.0 / 99.0	10507.08	95.50
13C5-PFHxA	318.0 / 273.0	1.76	13C2-PFOA	415.0 / 370.0	38702.68	100.00
13C4-PFHpA	367.0 / 322.0	2.13	13C2-PFOA	415.0 / 370.0	38702.68	100.00
13C8-PFOA	421.0 / 376.0	2.51	13C2-PFOA	415.0 / 370.0	38702.68	100.00
13C9-PFNA	472.0 / 427.0	2.88	13C2-PFOA	415.0 / 370.0	38702.68	100.00
13C6-PFDA	519.0 / 474.0	3.23	13C2-PFDA	515.0 / 470.0	38036.56	100.00
13C7-PFUnA	570.0 / 525.0	3.55	13C2-PFDA	515.0 / 470.0	38036.56	100.00
13C2-PFTeDA	715.0 / 670.0	4.31	13C2-PFDA	515.0 / 470.0	38036.56	100.00
13C3-PFBS	302.0 / 99.0	1.47	13C4-PFOS	503.0 / 99.0	10507.08	95.50
13C3-PFHxS	402.0 / 99.0	2.15	13C4-PFOS	503.0 / 99.0	10507.08	95.50
13C8-PFOS	507.0 / 99.0	2.88	13C4-PFOS	503.0 / 99.0	10507.08	95.50

Sample Name	CQ856LCS-FS(3)	Injection Vial	20
Sample ID	Laboratory Control Sample	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:09:56	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	11293.12	92.90
PFBS_2	298.9 / 99.0	1.49	13C3-PFBS	302.0 / 99.0	11293.12	92.90
PFHxA_1	313.0 / 269.0	1.77	13C5-PFHxA	318.0 / 273.0	31461.20	100.00
PFHxA_2	313.0 / 119.0	1.77	13C5-PFHxA	318.0 / 273.0	31461.20	100.00
PFHpA_1	363.0 / 319.0	2.14	13C4-PFHpA	367.0 / 322.0	31370.16	100.00
PFHpA_2	363.0 / 169.0	2.14	13C4-PFHpA	367.0 / 322.0	31370.16	100.00
PFHxS_1	399.0 / 80.0	2.15	13C3-PFHxS	402.0 / 99.0	7008.95	94.60
PFHxS_2	399.0 / 99.0	2.16	13C3-PFHxS	402.0 / 99.0	7008.95	94.60
PFOA_1	413.0 / 369.0	2.51	13C8-PFOA	421.0 / 376.0	39007.52	100.00
PFOA_2	413.0 / 169.0	2.51	13C8-PFOA	421.0 / 376.0	39007.52	100.00
PFNA_1	463.0 / 419.0	2.89	13C9-PFNA	472.0 / 427.0	42828.86	100.00
PFNA_2	463.0 / 219.0	2.89	13C9-PFNA	472.0 / 427.0	42828.86	100.00
PFOS_1	499.0 / 80.0	2.89	13C8-PFOS	507.0 / 99.0	9463.76	95.70
PFOS_2	499.0 / 99.0	2.89	13C8-PFOS	507.0 / 99.0	9463.76	95.70
PFDA_1	513.0 / 469.0	3.24	13C6-PFDA	519.0 / 474.0	42733.93	100.00
PFDA_2	513.0 / 219.0	3.24	13C6-PFDA	519.0 / 474.0	42733.93	100.00
PFUnA_1	563.0 / 519.0	3.56	13C7-PFUnA	570.0 / 525.0	44811.45	100.00
PFUnA_2	563.0 / 269.0	3.56	13C7-PFUnA	570.0 / 525.0	44811.45	100.00
PFDoA_1	613.0 / 569.0	3.85	13C2-PFDoA	615.0 / 570.0	41277.15	100.00
PFDoA_2	613.0 / 319.0	3.85	13C2-PFDoA	615.0 / 570.0	41277.15	100.00
PFTeDA_1	663.0 / 619.0	4.10	13C2-PFTeDA	715.0 / 670.0	30964.56	100.00
PFTeDA_2	663.0 / 169.0	4.09	13C2-PFTeDA	715.0 / 670.0	30964.56	100.00
PFTeDA_1	713.0 / 669.0	4.32	13C2-PFTeDA	715.0 / 670.0	30964.56	100.00
PFTeDA_2	713.0 / 169.0	4.31	13C2-PFTeDA	715.0 / 670.0	30964.56	100.00
NMeFOSAA_1	570.0 / 419.0	3.40	d3-MeFOSAA	573.0 / 419.0	7536.84	100.00
NMeFOSAA_2	570.0 / 512.0	3.40	d3-MeFOSAA	573.0 / 419.0	7536.84	100.00
NEtFOSAA_1	584.0 / 419.0	3.56	d5-EtFOSAA	589.0 / 419.0	8505.26	100.00
NEtFOSAA_2	584.0 / 483.0	3.56	d5-EtFOSAA	589.0 / 419.0	8505.26	100.00

<b>Sample Name</b>	CQ856LCS-FS(3)	<b>Injection Vial</b>	20
<b>Sample ID</b>	Laboratory Control Sample	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T23:09:56	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

### Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	3.84	13C2-PFDA	515.0 / 470.0	32069.39	100.00
d3-MeFOSAA	573.0 / 419.0	3.39	13C4-PFOS	503.0 / 99.0	7952.43	95.50
d5-EtFOSAA	589.0 / 419.0	3.55	13C4-PFOS	503.0 / 99.0	7952.43	95.50
13C5-PFHxA	318.0 / 273.0	1.76	13C2-PFOA	415.0 / 370.0	29776.69	100.00
13C4-PFHpA	367.0 / 322.0	2.13	13C2-PFOA	415.0 / 370.0	29776.69	100.00
13C8-PFOA	421.0 / 376.0	2.51	13C2-PFOA	415.0 / 370.0	29776.69	100.00
13C9-PFNA	472.0 / 427.0	2.88	13C2-PFOA	415.0 / 370.0	29776.69	100.00
13C6-PFDA	519.0 / 474.0	3.23	13C2-PFDA	515.0 / 470.0	32069.39	100.00
13C7-PFUnA	570.0 / 525.0	3.55	13C2-PFDA	515.0 / 470.0	32069.39	100.00
13C2-PFTeDA	715.0 / 670.0	4.31	13C2-PFDA	515.0 / 470.0	32069.39	100.00
13C3-PFBS	302.0 / 99.0	1.47	13C4-PFOS	503.0 / 99.0	7952.43	95.50
13C3-PFHxS	402.0 / 99.0	2.14	13C4-PFOS	503.0 / 99.0	7952.43	95.50
13C8-PFOS	507.0 / 99.0	2.88	13C4-PFOS	503.0 / 99.0	7952.43	95.50

Sample Name	J6246-FS(3)	Injection Vial	21
Sample ID	FFTA-EB01-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:20:44	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	12229.52	92.90
PFBS_2	298.9 / 99.0	1.50	13C3-PFBS	302.0 / 99.0	12229.52	92.90
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	21629.36	100.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	21629.36	100.00
PFHpA_1	363.0 / 319.0	2.16	13C4-PFHpA	367.0 / 322.0	23716.50	100.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	23716.50	100.00
PFHxS_1	399.0 / 80.0	2.16	13C3-PFHxS	402.0 / 99.0	8794.12	94.60
PFHxS_2	399.0 / 99.0	2.15	13C3-PFHxS	402.0 / 99.0	8794.12	94.60
PFOA_1	413.0 / 369.0	2.52	13C8-PFOA	421.0 / 376.0	36584.99	100.00
PFOA_2	413.0 / 169.0	2.50	13C8-PFOA	421.0 / 376.0	36584.99	100.00
PFNA_1	463.0 / 419.0	2.89	13C9-PFNA	472.0 / 427.0	38707.46	100.00
PFNA_2	463.0 / 219.0	2.89	13C9-PFNA	472.0 / 427.0	38707.46	100.00
PFOS_1	499.0 / 80.0	2.89	13C8-PFOS	507.0 / 99.0	10866.76	95.70
PFOS_2	499.0 / 99.0	2.89	13C8-PFOS	507.0 / 99.0	10866.76	95.70
PFDA_1	513.0 / 469.0	3.24	13C6-PFDA	519.0 / 474.0	40850.90	100.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	40850.90	100.00
PFUnA_1	563.0 / 519.0	3.56	13C7-PFUnA	570.0 / 525.0	51907.85	100.00
PFUnA_2	563.0 / 269.0	3.52	13C7-PFUnA	570.0 / 525.0	51907.85	100.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	61638.75	100.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	61638.75	100.00
PFTeDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	37162.31	100.00
PFTeDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	37162.31	100.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	37162.31	100.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	37162.31	100.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	9914.12	100.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	9914.12	100.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	12726.54	100.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	12726.54	100.00



Sample Name	J6246-FS(3)	Injection Vial	21
Sample ID	FFTA-EB01-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:20:44	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_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	3.83	13C2-PFDA	515.0 / 470.0	39888.44	100.00
d3-MeFOSAA	573.0 / 419.0	3.39	13C4-PFOS	503.0 / 99.0	8676.36	95.50
d5-EtFOSAA	589.0 / 419.0	3.55	13C4-PFOS	503.0 / 99.0	8676.36	95.50
13C5-PFHxA	318.0 / 273.0	1.77	13C2-PFOA	415.0 / 370.0	30440.43	100.00
13C4-PFHpA	367.0 / 322.0	2.13	13C2-PFOA	415.0 / 370.0	30440.43	100.00
13C8-PFOA	421.0 / 376.0	2.51	13C2-PFOA	415.0 / 370.0	30440.43	100.00
13C9-PFNA	472.0 / 427.0	2.88	13C2-PFOA	415.0 / 370.0	30440.43	100.00
13C6-PFDA	519.0 / 474.0	3.23	13C2-PFDA	515.0 / 470.0	39888.44	100.00
13C7-PFUnA	570.0 / 525.0	3.54	13C2-PFDA	515.0 / 470.0	39888.44	100.00
13C2-PFTeDA	715.0 / 670.0	4.31	13C2-PFDA	515.0 / 470.0	39888.44	100.00
13C3-PFBS	302.0 / 99.0	1.48	13C4-PFOS	503.0 / 99.0	8676.36	95.50
13C3-PFHxS	402.0 / 99.0	2.15	13C4-PFOS	503.0 / 99.0	8676.36	95.50
13C8-PFOS	507.0 / 99.0	2.88	13C4-PFOS	503.0 / 99.0	8676.36	95.50



Sample Name	J6247-FS(3)	Injection Vial	22
Sample ID	FFTA-A-EB02-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:31:31	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	17222.43	92.90
PFBS_2	298.9 / 99.0	1.48	13C3-PFBS	302.0 / 99.0	17222.43	92.90
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	46060.77	100.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	46060.77	100.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	52923.77	100.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	52923.77	100.00
PFHxS_1	399.0 / 80.0	2.15	13C3-PFHxS	402.0 / 99.0	12969.27	94.60
PFHxS_2	399.0 / 99.0	2.17	13C3-PFHxS	402.0 / 99.0	12969.27	94.60
PFOA_1	413.0 / 369.0	2.51	13C8-PFOA	421.0 / 376.0	69106.69	100.00
PFOA_2	413.0 / 169.0	2.49	13C8-PFOA	421.0 / 376.0	69106.69	100.00
PFNA_1	463.0 / 419.0	2.89	13C9-PFNA	472.0 / 427.0	68210.78	100.00
PFNA_2	463.0 / 219.0	2.90	13C9-PFNA	472.0 / 427.0	68210.78	100.00
PFOS_1	499.0 / 80.0	2.88	13C8-PFOS	507.0 / 99.0	14486.76	95.70
PFOS_2	499.0 / 99.0	2.88	13C8-PFOS	507.0 / 99.0	14486.76	95.70
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	68804.23	100.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	68804.23	100.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	77286.99	100.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	77286.99	100.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	68585.75	100.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	68585.75	100.00
PFTeDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	47023.43	100.00
PFTeDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	47023.43	100.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	47023.43	100.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	47023.43	100.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	12470.97	100.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	12470.97	100.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	16342.93	100.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	16342.93	100.00

Sample Name	J6247-FS(3)	Injection Vial	22
Sample ID	FFTA-A-EB02-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:31:31	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_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	3.83	13C2-PFDA	515.0 / 470.0	42865.16	100.00
d3-MeFOSAA	573.0 / 419.0	3.38	13C4-PFOS	503.0 / 99.0	12186.61	95.50
d5-EtFOSAA	589.0 / 419.0	3.54	13C4-PFOS	503.0 / 99.0	12186.61	95.50
13C5-PFHxA	318.0 / 273.0	1.76	13C2-PFOA	415.0 / 370.0	34699.34	100.00
13C4-PFHpA	367.0 / 322.0	2.12	13C2-PFOA	415.0 / 370.0	34699.34	100.00
13C8-PFOA	421.0 / 376.0	2.50	13C2-PFOA	415.0 / 370.0	34699.34	100.00
13C9-PFNA	472.0 / 427.0	2.87	13C2-PFOA	415.0 / 370.0	34699.34	100.00
13C6-PFDA	519.0 / 474.0	3.22	13C2-PFDA	515.0 / 470.0	42865.16	100.00
13C7-PFUnA	570.0 / 525.0	3.54	13C2-PFDA	515.0 / 470.0	42865.16	100.00
13C2-PFTeDA	715.0 / 670.0	4.30	13C2-PFDA	515.0 / 470.0	42865.16	100.00
13C3-PFBS	302.0 / 99.0	1.47	13C4-PFOS	503.0 / 99.0	12186.61	95.50
13C3-PFHxS	402.0 / 99.0	2.14	13C4-PFOS	503.0 / 99.0	12186.61	95.50
13C8-PFOS	507.0 / 99.0	2.87	13C4-PFOS	503.0 / 99.0	12186.61	95.50

Sample Name	J6250-FS(3)	Injection Vial	23
Sample ID	PSC51-MW14D-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:42:19	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.46	13C3-PFBS	302.0 / 99.0	13086.02	92.90
PFBS_2	298.9 / 99.0	1.49	13C3-PFBS	302.0 / 99.0	13086.02	92.90
PFHxA_1	313.0 / 269.0	1.78	13C5-PFHxA	318.0 / 273.0	33119.49	100.00
PFHxA_2	313.0 / 119.0	1.77	13C5-PFHxA	318.0 / 273.0	33119.49	100.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	41214.86	100.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	41214.86	100.00
PFHxS_1	399.0 / 80.0	2.15	13C3-PFHxS	402.0 / 99.0	10496.71	94.60
PFHxS_2	399.0 / 99.0	2.15	13C3-PFHxS	402.0 / 99.0	10496.71	94.60
PFOA_1	413.0 / 369.0	2.50	13C8-PFOA	421.0 / 376.0	43778.74	100.00
PFOA_2	413.0 / 169.0	2.48	13C8-PFOA	421.0 / 376.0	43778.74	100.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	41426.05	100.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	41426.05	100.00
PFOS_1	499.0 / 80.0	2.75	13C8-PFOS	507.0 / 99.0	8090.47	95.70
PFOS_2	499.0 / 99.0	2.81	13C8-PFOS	507.0 / 99.0	8090.47	95.70
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	47295.87	100.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	47295.87	100.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	43037.54	100.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	43037.54	100.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	30123.78	100.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	30123.78	100.00
PFTeDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	26218.93	100.00
PFTeDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	26218.93	100.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	26218.93	100.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	26218.93	100.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	6454.56	100.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	6454.56	100.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	5708.00	100.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	5708.00	100.00

Sample Name	J6250-FS(3)	Injection Vial	23
Sample ID	PSC51-MW14D-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:42:19	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_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	3.83	13C2-PFDA	515.0 / 470.0	37518.66	100.00
d3-MeFOSAA	573.0 / 419.0	3.38	13C4-PFOS	503.0 / 99.0	9701.21	95.50
d5-EtFOSAA	589.0 / 419.0	3.54	13C4-PFOS	503.0 / 99.0	9701.21	95.50
13C5-PFHxA	318.0 / 273.0	1.77	13C2-PFOA	415.0 / 370.0	31092.64	100.00
13C4-PFHpA	367.0 / 322.0	2.12	13C2-PFOA	415.0 / 370.0	31092.64	100.00
13C8-PFOA	421.0 / 376.0	2.50	13C2-PFOA	415.0 / 370.0	31092.64	100.00
13C9-PFNA	472.0 / 427.0	2.87	13C2-PFOA	415.0 / 370.0	31092.64	100.00
13C6-PFDA	519.0 / 474.0	3.22	13C2-PFDA	515.0 / 470.0	37518.66	100.00
13C7-PFUnA	570.0 / 525.0	3.53	13C2-PFDA	515.0 / 470.0	37518.66	100.00
13C2-PFTeDA	715.0 / 670.0	4.30	13C2-PFDA	515.0 / 470.0	37518.66	100.00
13C3-PFBS	302.0 / 99.0	1.48	13C4-PFOS	503.0 / 99.0	9701.21	95.50
13C3-PFHxS	402.0 / 99.0	2.14	13C4-PFOS	503.0 / 99.0	9701.21	95.50
13C8-PFOS	507.0 / 99.0	2.87	13C4-PFOS	503.0 / 99.0	9701.21	95.50

Sample Name	J6252-FS(3)	Injection Vial	24
Sample ID	PSC51-MW13S-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:53:05	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	13792.68	92.90
PFBS_2	298.9 / 99.0	1.48	13C3-PFBS	302.0 / 99.0	13792.68	92.90
PFHxA_1	313.0 / 269.0	1.77	13C5-PFHxA	318.0 / 273.0	33158.63	100.00
PFHxA_2	313.0 / 119.0	1.80	13C5-PFHxA	318.0 / 273.0	33158.63	100.00
PFHpA_1	363.0 / 319.0	2.14	13C4-PFHpA	367.0 / 322.0	40539.58	100.00
PFHpA_2	363.0 / 169.0	2.11	13C4-PFHpA	367.0 / 322.0	40539.58	100.00
PFHxS_1	399.0 / 80.0	2.14	13C3-PFHxS	402.0 / 99.0	9557.19	94.60
PFHxS_2	399.0 / 99.0	2.15	13C3-PFHxS	402.0 / 99.0	9557.19	94.60
PFOA_1	413.0 / 369.0	2.50	13C8-PFOA	421.0 / 376.0	38815.84	100.00
PFOA_2	413.0 / 169.0	2.47	13C8-PFOA	421.0 / 376.0	38815.84	100.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	38834.48	100.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	38834.48	100.00
PFOS_1	499.0 / 80.0	2.76	13C8-PFOS	507.0 / 99.0	9952.61	95.70
PFOS_2	499.0 / 99.0	2.80	13C8-PFOS	507.0 / 99.0	9952.61	95.70
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	41988.98	100.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	41988.98	100.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	38617.86	100.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	38617.86	100.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	33256.19	100.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	33256.19	100.00
PFTeDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	31281.16	100.00
PFTeDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	31281.16	100.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	31281.16	100.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	31281.16	100.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	7569.92	100.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	7569.92	100.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	7587.43	100.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	7587.43	100.00

<b>Sample Name</b>	J6252-FS(3)	<b>Injection Vial</b>	24
<b>Sample ID</b>	PSC51-MW13S-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T23:53:05	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## 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	42500.06	100.00
d3-MeFOSAA	573.0 / 419.0	3.38	13C4-PFOS	503.0 / 99.0	9991.18	95.50
d5-EtFOSAA	589.0 / 419.0	3.54	13C4-PFOS	503.0 / 99.0	9991.18	95.50
13C5-PFHxA	318.0 / 273.0	1.75	13C2-PFOA	415.0 / 370.0	34821.73	100.00
13C4-PFHpA	367.0 / 322.0	2.12	13C2-PFOA	415.0 / 370.0	34821.73	100.00
13C8-PFOA	421.0 / 376.0	2.49	13C2-PFOA	415.0 / 370.0	34821.73	100.00
13C9-PFNA	472.0 / 427.0	2.87	13C2-PFOA	415.0 / 370.0	34821.73	100.00
13C6-PFDA	519.0 / 474.0	3.22	13C2-PFDA	515.0 / 470.0	42500.06	100.00
13C7-PFUnA	570.0 / 525.0	3.53	13C2-PFDA	515.0 / 470.0	42500.06	100.00
13C2-PFTeDA	715.0 / 670.0	4.30	13C2-PFDA	515.0 / 470.0	42500.06	100.00
13C3-PFBS	302.0 / 99.0	1.47	13C4-PFOS	503.0 / 99.0	9991.18	95.50
13C3-PFHxS	402.0 / 99.0	2.14	13C4-PFOS	503.0 / 99.0	9991.18	95.50
13C8-PFOS	507.0 / 99.0	2.86	13C4-PFOS	503.0 / 99.0	9991.18	95.50

Sample Name	J6252MS-FS(3)	Injection Vial	25
Sample ID	PSC51-MW13S-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:03:52	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	19262.38	92.90
PFBS_2	298.9 / 99.0	1.49	13C3-PFBS	302.0 / 99.0	19262.38	92.90
PFHxA_1	313.0 / 269.0	1.77	13C5-PFHxA	318.0 / 273.0	48743.33	100.00
PFHxA_2	313.0 / 119.0	1.77	13C5-PFHxA	318.0 / 273.0	48743.33	100.00
PFHpA_1	363.0 / 319.0	2.13	13C4-PFHpA	367.0 / 322.0	57483.21	100.00
PFHpA_2	363.0 / 169.0	2.13	13C4-PFHpA	367.0 / 322.0	57483.21	100.00
PFHxS_1	399.0 / 80.0	2.15	13C3-PFHxS	402.0 / 99.0	14716.38	94.60
PFHxS_2	399.0 / 99.0	2.15	13C3-PFHxS	402.0 / 99.0	14716.38	94.60
PFOA_1	413.0 / 369.0	2.51	13C8-PFOA	421.0 / 376.0	57773.21	100.00
PFOA_2	413.0 / 169.0	2.51	13C8-PFOA	421.0 / 376.0	57773.21	100.00
PFNA_1	463.0 / 419.0	2.88	13C9-PFNA	472.0 / 427.0	57560.36	100.00
PFNA_2	463.0 / 219.0	2.88	13C9-PFNA	472.0 / 427.0	57560.36	100.00
PFOS_1	499.0 / 80.0	2.88	13C8-PFOS	507.0 / 99.0	15951.99	95.70
PFOS_2	499.0 / 99.0	2.88	13C8-PFOS	507.0 / 99.0	15951.99	95.70
PFDA_1	513.0 / 469.0	3.23	13C6-PFDA	519.0 / 474.0	56098.60	100.00
PFDA_2	513.0 / 219.0	3.23	13C6-PFDA	519.0 / 474.0	56098.60	100.00
PFUnA_1	563.0 / 519.0	3.55	13C7-PFUnA	570.0 / 525.0	55926.63	100.00
PFUnA_2	563.0 / 269.0	3.55	13C7-PFUnA	570.0 / 525.0	55926.63	100.00
PFDoA_1	613.0 / 569.0	3.84	13C2-PFDoA	615.0 / 570.0	54590.32	100.00
PFDoA_2	613.0 / 319.0	3.83	13C2-PFDoA	615.0 / 570.0	54590.32	100.00
PFTeDA_1	663.0 / 619.0	4.09	13C2-PFTeDA	715.0 / 670.0	44911.70	100.00
PFTeDA_2	663.0 / 169.0	4.09	13C2-PFTeDA	715.0 / 670.0	44911.70	100.00
PFTeDA_1	713.0 / 669.0	4.31	13C2-PFTeDA	715.0 / 670.0	44911.70	100.00
PFTeDA_2	713.0 / 169.0	4.30	13C2-PFTeDA	715.0 / 670.0	44911.70	100.00
NMeFOSAA_1	570.0 / 419.0	3.39	d3-MeFOSAA	573.0 / 419.0	10978.88	100.00
NMeFOSAA_2	570.0 / 512.0	3.39	d3-MeFOSAA	573.0 / 419.0	10978.88	100.00
NEtFOSAA_1	584.0 / 419.0	3.55	d5-EtFOSAA	589.0 / 419.0	11104.92	100.00
NEtFOSAA_2	584.0 / 483.0	3.55	d5-EtFOSAA	589.0 / 419.0	11104.92	100.00



Sample Name	J6252MS-FS(3)	Injection Vial	25
Sample ID	PSC51-MW13S-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:03:52	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_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	3.83	13C2-PFDA	515.0 / 470.0	41124.43	100.00
d3-MeFOSAA	573.0 / 419.0	3.38	13C4-PFOS	503.0 / 99.0	9680.34	95.50
d5-EtFOSAA	589.0 / 419.0	3.54	13C4-PFOS	503.0 / 99.0	9680.34	95.50
13C5-PFHxA	318.0 / 273.0	1.76	13C2-PFOA	415.0 / 370.0	42042.54	100.00
13C4-PFHpA	367.0 / 322.0	2.12	13C2-PFOA	415.0 / 370.0	42042.54	100.00
13C8-PFOA	421.0 / 376.0	2.50	13C2-PFOA	415.0 / 370.0	42042.54	100.00
13C9-PFNA	472.0 / 427.0	2.87	13C2-PFOA	415.0 / 370.0	42042.54	100.00
13C6-PFDA	519.0 / 474.0	3.22	13C2-PFDA	515.0 / 470.0	41124.43	100.00
13C7-PFUnA	570.0 / 525.0	3.54	13C2-PFDA	515.0 / 470.0	41124.43	100.00
13C2-PFTeDA	715.0 / 670.0	4.30	13C2-PFDA	515.0 / 470.0	41124.43	100.00
13C3-PFBS	302.0 / 99.0	1.47	13C4-PFOS	503.0 / 99.0	9680.34	95.50
13C3-PFHxS	402.0 / 99.0	2.14	13C4-PFOS	503.0 / 99.0	9680.34	95.50
13C8-PFOS	507.0 / 99.0	2.87	13C4-PFOS	503.0 / 99.0	9680.34	95.50



Sample Name	J6252MSD-FS(3)	Injection Vial	26
Sample ID	PSC51-MW13S-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:14:39	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	12390.92	92.90
PFBS_2	298.9 / 99.0	1.49	13C3-PFBS	302.0 / 99.0	12390.92	92.90
PFHxA_1	313.0 / 269.0	1.77	13C5-PFHxA	318.0 / 273.0	28930.03	100.00
PFHxA_2	313.0 / 119.0	1.77	13C5-PFHxA	318.0 / 273.0	28930.03	100.00
PFHpA_1	363.0 / 319.0	2.13	13C4-PFHpA	367.0 / 322.0	41402.08	100.00
PFHpA_2	363.0 / 169.0	2.14	13C4-PFHpA	367.0 / 322.0	41402.08	100.00
PFHxS_1	399.0 / 80.0	2.15	13C3-PFHxS	402.0 / 99.0	9837.66	94.60
PFHxS_2	399.0 / 99.0	2.15	13C3-PFHxS	402.0 / 99.0	9837.66	94.60
PFOA_1	413.0 / 369.0	2.51	13C8-PFOA	421.0 / 376.0	38121.10	100.00
PFOA_2	413.0 / 169.0	2.51	13C8-PFOA	421.0 / 376.0	38121.10	100.00
PFNA_1	463.0 / 419.0	2.88	13C9-PFNA	472.0 / 427.0	34217.23	100.00
PFNA_2	463.0 / 219.0	2.88	13C9-PFNA	472.0 / 427.0	34217.23	100.00
PFOS_1	499.0 / 80.0	2.88	13C8-PFOS	507.0 / 99.0	10442.81	95.70
PFOS_2	499.0 / 99.0	2.88	13C8-PFOS	507.0 / 99.0	10442.81	95.70
PFDA_1	513.0 / 469.0	3.23	13C6-PFDA	519.0 / 474.0	39703.56	100.00
PFDA_2	513.0 / 219.0	3.23	13C6-PFDA	519.0 / 474.0	39703.56	100.00
PFUnA_1	563.0 / 519.0	3.55	13C7-PFUnA	570.0 / 525.0	46296.86	100.00
PFUnA_2	563.0 / 269.0	3.55	13C7-PFUnA	570.0 / 525.0	46296.86	100.00
PFDoA_1	613.0 / 569.0	3.84	13C2-PFDoA	615.0 / 570.0	45491.21	100.00
PFDoA_2	613.0 / 319.0	3.84	13C2-PFDoA	615.0 / 570.0	45491.21	100.00
PFTeDA_1	663.0 / 619.0	4.09	13C2-PFTeDA	715.0 / 670.0	35596.32	100.00
PFTeDA_2	663.0 / 169.0	4.09	13C2-PFTeDA	715.0 / 670.0	35596.32	100.00
PFTeDA_1	713.0 / 669.0	4.31	13C2-PFTeDA	715.0 / 670.0	35596.32	100.00
PFTeDA_2	713.0 / 169.0	4.30	13C2-PFTeDA	715.0 / 670.0	35596.32	100.00
NMeFOSAA_1	570.0 / 419.0	3.39	d3-MeFOSAA	573.0 / 419.0	9900.31	100.00
NMeFOSAA_2	570.0 / 512.0	3.39	d3-MeFOSAA	573.0 / 419.0	9900.31	100.00
NEtFOSAA_1	584.0 / 419.0	3.55	d5-EtFOSAA	589.0 / 419.0	9373.91	100.00
NEtFOSAA_2	584.0 / 483.0	3.55	d5-EtFOSAA	589.0 / 419.0	9373.91	100.00

Sample Name	J6252MSD-FS(3)	Injection Vial	26
Sample ID	PSC51-MW13S-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:14:39	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_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	3.83	13C2-PFDA	515.0 / 470.0	39000.54	100.00
d3-MeFOSAA	573.0 / 419.0	3.38	13C4-PFOS	503.0 / 99.0	9361.76	95.50
d5-EtFOSAA	589.0 / 419.0	3.54	13C4-PFOS	503.0 / 99.0	9361.76	95.50
13C5-PFHxA	318.0 / 273.0	1.76	13C2-PFOA	415.0 / 370.0	37372.13	100.00
13C4-PFHpA	367.0 / 322.0	2.12	13C2-PFOA	415.0 / 370.0	37372.13	100.00
13C8-PFOA	421.0 / 376.0	2.50	13C2-PFOA	415.0 / 370.0	37372.13	100.00
13C9-PFNA	472.0 / 427.0	2.87	13C2-PFOA	415.0 / 370.0	37372.13	100.00
13C6-PFDA	519.0 / 474.0	3.22	13C2-PFDA	515.0 / 470.0	39000.54	100.00
13C7-PFUnA	570.0 / 525.0	3.54	13C2-PFDA	515.0 / 470.0	39000.54	100.00
13C2-PFTeDA	715.0 / 670.0	4.30	13C2-PFDA	515.0 / 470.0	39000.54	100.00
13C3-PFBS	302.0 / 99.0	1.47	13C4-PFOS	503.0 / 99.0	9361.76	95.50
13C3-PFHxS	402.0 / 99.0	2.14	13C4-PFOS	503.0 / 99.0	9361.76	95.50
13C8-PFOS	507.0 / 99.0	2.87	13C4-PFOS	503.0 / 99.0	9361.76	95.50

Sample Name	J6248-FS(4)	Injection Vial	27
Sample ID	DRMO-MW11-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:47:01	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	7220.86	92.90
PFBS_2	298.9 / 99.0	1.48	13C3-PFBS	302.0 / 99.0	7220.86	92.90
PFHxA_1	313.0 / 269.0	1.76	13C5-PFHxA	318.0 / 273.0	22394.74	100.00
PFHxA_2	313.0 / 119.0	1.76	13C5-PFHxA	318.0 / 273.0	22394.74	100.00
PFHpA_1	363.0 / 319.0	2.12	13C4-PFHpA	367.0 / 322.0	37253.75	100.00
PFHpA_2	363.0 / 169.0	2.11	13C4-PFHpA	367.0 / 322.0	37253.75	100.00
PFHxS_1	399.0 / 80.0	2.14	13C3-PFHxS	402.0 / 99.0	9620.65	94.60
PFHxS_2	399.0 / 99.0	2.14	13C3-PFHxS	402.0 / 99.0	9620.65	94.60
PFOA_1	413.0 / 369.0	2.50	13C8-PFOA	421.0 / 376.0	38986.38	100.00
PFOA_2	413.0 / 169.0	2.49	13C8-PFOA	421.0 / 376.0	38986.38	100.00
PFNA_1	463.0 / 419.0	2.88	13C9-PFNA	472.0 / 427.0	38084.13	100.00
PFNA_2	463.0 / 219.0	2.87	13C9-PFNA	472.0 / 427.0	38084.13	100.00
PFOS_1	499.0 / 80.0	2.85	13C8-PFOS	507.0 / 99.0	9143.49	95.70
PFOS_2	499.0 / 99.0	2.87	13C8-PFOS	507.0 / 99.0	9143.49	95.70
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	48223.71	100.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	48223.71	100.00
PFUnA_1	563.0 / 519.0	3.55	13C7-PFUnA	570.0 / 525.0	57865.60	100.00
PFUnA_2	563.0 / 269.0	3.50	13C7-PFUnA	570.0 / 525.0	57865.60	100.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	45946.50	100.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	45946.50	100.00
PFTeDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	25182.74	100.00
PFTeDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	25182.74	100.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	25182.74	100.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	25182.74	100.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	8157.32	100.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	8157.32	100.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	9265.72	100.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	9265.72	100.00

<b>Sample Name</b>	J6248-FS(4)	<b>Injection Vial</b>	27
<b>Sample ID</b>	DRMO-MW11-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T00:47:01	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	3.83	13C2-PFDA	515.0 / 470.0	31578.29	100.00
d3-MeFOSAA	573.0 / 419.0	3.38	13C4-PFOS	503.0 / 99.0	7218.33	95.50
d5-EtFOSAA	589.0 / 419.0	3.54	13C4-PFOS	503.0 / 99.0	7218.33	95.50
13C5-PFHxA	318.0 / 273.0	1.75	13C2-PFOA	415.0 / 370.0	31377.13	100.00
13C4-PFHpA	367.0 / 322.0	2.11	13C2-PFOA	415.0 / 370.0	31377.13	100.00
13C8-PFOA	421.0 / 376.0	2.49	13C2-PFOA	415.0 / 370.0	31377.13	100.00
13C9-PFNA	472.0 / 427.0	2.87	13C2-PFOA	415.0 / 370.0	31377.13	100.00
13C6-PFDA	519.0 / 474.0	3.22	13C2-PFDA	515.0 / 470.0	31578.29	100.00
13C7-PFUnA	570.0 / 525.0	3.53	13C2-PFDA	515.0 / 470.0	31578.29	100.00
13C2-PFTeDA	715.0 / 670.0	4.30	13C2-PFDA	515.0 / 470.0	31578.29	100.00
13C3-PFBS	302.0 / 99.0	1.46	13C4-PFOS	503.0 / 99.0	7218.33	95.50
13C3-PFHxS	402.0 / 99.0	2.13	13C4-PFOS	503.0 / 99.0	7218.33	95.50
13C8-PFOS	507.0 / 99.0	2.86	13C4-PFOS	503.0 / 99.0	7218.33	95.50

Sample Name	J6248-FS-D(5)	Injection Vial	28
Sample ID	DRMO-MW11-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:57:49	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	N/A	13C3-PFBS	302.0 / 99.0	18676.53	93.83
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	18676.53	93.83
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	46310.25	101.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	46310.25	101.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	55804.96	101.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	55804.96	101.00
PFHxS_1	399.0 / 80.0	2.15	13C3-PFHxS	402.0 / 99.0	11671.72	95.55
PFHxS_2	399.0 / 99.0	2.15	13C3-PFHxS	402.0 / 99.0	11671.72	95.55
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	60117.72	101.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	60117.72	101.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	55352.64	101.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	55352.64	101.00
PFOS_1	499.0 / 80.0	2.86	13C8-PFOS	507.0 / 99.0	12944.81	96.66
PFOS_2	499.0 / 99.0	2.88	13C8-PFOS	507.0 / 99.0	12944.81	96.66
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	60042.63	101.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	60042.63	101.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	60348.48	101.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	60348.48	101.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	63948.94	101.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	63948.94	101.00
PFTeDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	56603.25	101.00
PFTeDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	56603.25	101.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	56603.25	101.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	56603.25	101.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	11230.11	101.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	11230.11	101.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	13370.87	101.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	13370.87	101.00

Sample Name	J6248-FS-D(5)	Injection Vial	28
Sample ID	DRMO-MW11-052418	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:57:49	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_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	N/A	13C2-PFDA	515.0 / 470.0	40987.91	101.00
d3-MeFOSAA	573.0 / 419.0	N/A	13C4-PFOS	503.0 / 99.0	8648.24	96.60
d5-EtFOSAA	589.0 / 419.0	N/A	13C4-PFOS	503.0 / 99.0	8648.24	96.60
13C5-PFHxA	318.0 / 273.0	N/A	13C2-PFOA	415.0 / 370.0	40786.34	101.00
13C4-PFHpA	367.0 / 322.0	N/A	13C2-PFOA	415.0 / 370.0	40786.34	101.00
13C8-PFOA	421.0 / 376.0	N/A	13C2-PFOA	415.0 / 370.0	40786.34	101.00
13C9-PFNA	472.0 / 427.0	N/A	13C2-PFOA	415.0 / 370.0	40786.34	101.00
13C6-PFDA	519.0 / 474.0	N/A	13C2-PFDA	515.0 / 470.0	40987.91	101.00
13C7-PFUnA	570.0 / 525.0	N/A	13C2-PFDA	515.0 / 470.0	40987.91	101.00
13C2-PFTeDA	715.0 / 670.0	N/A	13C2-PFDA	515.0 / 470.0	40987.91	101.00
13C3-PFBS	302.0 / 99.0	N/A	13C4-PFOS	503.0 / 99.0	8648.24	96.60
13C3-PFHxS	402.0 / 99.0	N/A	13C4-PFOS	503.0 / 99.0	8648.24	96.60
13C8-PFOS	507.0 / 99.0	N/A	13C4-PFOS	503.0 / 99.0	8648.24	96.60

Sample Name	J6253-FS(4)	Injection Vial	29
Sample ID	DRMO-MW2-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:08:37	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	10388.44	92.90
PFBS_2	298.9 / 99.0	1.48	13C3-PFBS	302.0 / 99.0	10388.44	92.90
PFHxA_1	313.0 / 269.0	1.77	13C5-PFHxA	318.0 / 273.0	30433.80	100.00
PFHxA_2	313.0 / 119.0	1.77	13C5-PFHxA	318.0 / 273.0	30433.80	100.00
PFHpA_1	363.0 / 319.0	2.13	13C4-PFHpA	367.0 / 322.0	50769.04	100.00
PFHpA_2	363.0 / 169.0	2.13	13C4-PFHpA	367.0 / 322.0	50769.04	100.00
PFHxS_1	399.0 / 80.0	2.15	13C3-PFHxS	402.0 / 99.0	12478.49	94.60
PFHxS_2	399.0 / 99.0	2.15	13C3-PFHxS	402.0 / 99.0	12478.49	94.60
PFOA_1	413.0 / 369.0	2.51	13C8-PFOA	421.0 / 376.0	56120.24	100.00
PFOA_2	413.0 / 169.0	2.50	13C8-PFOA	421.0 / 376.0	56120.24	100.00
PFNA_1	463.0 / 419.0	2.88	13C9-PFNA	472.0 / 427.0	59934.89	100.00
PFNA_2	463.0 / 219.0	2.88	13C9-PFNA	472.0 / 427.0	59934.89	100.00
PFOS_1	499.0 / 80.0	2.87	13C8-PFOS	507.0 / 99.0	14986.50	95.70
PFOS_2	499.0 / 99.0	2.88	13C8-PFOS	507.0 / 99.0	14986.50	95.70
PFDA_1	513.0 / 469.0	3.23	13C6-PFDA	519.0 / 474.0	72429.34	100.00
PFDA_2	513.0 / 219.0	3.21	13C6-PFDA	519.0 / 474.0	72429.34	100.00
PFUnA_1	563.0 / 519.0	3.55	13C7-PFUnA	570.0 / 525.0	76354.90	100.00
PFUnA_2	563.0 / 269.0	3.51	13C7-PFUnA	570.0 / 525.0	76354.90	100.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	65392.22	100.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	65392.22	100.00
PFTeDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	46998.23	100.00
PFTeDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	46998.23	100.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	46998.23	100.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	46998.23	100.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	12886.38	100.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	12886.38	100.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	14459.52	100.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	14459.52	100.00



Sample Name	J6253-FS(4)	Injection Vial	29
Sample ID	DRMO-MW2-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:08:37	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_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	3.83	13C2-PFDA	515.0 / 470.0	54645.11	100.00
d3-MeFOSAA	573.0 / 419.0	3.38	13C4-PFOS	503.0 / 99.0	9216.39	95.50
d5-EtFOSAA	589.0 / 419.0	3.54	13C4-PFOS	503.0 / 99.0	9216.39	95.50
13C5-PFHxA	318.0 / 273.0	1.76	13C2-PFOA	415.0 / 370.0	35354.72	100.00
13C4-PFHpA	367.0 / 322.0	2.12	13C2-PFOA	415.0 / 370.0	35354.72	100.00
13C8-PFOA	421.0 / 376.0	2.50	13C2-PFOA	415.0 / 370.0	35354.72	100.00
13C9-PFNA	472.0 / 427.0	2.87	13C2-PFOA	415.0 / 370.0	35354.72	100.00
13C6-PFDA	519.0 / 474.0	3.22	13C2-PFDA	515.0 / 470.0	54645.11	100.00
13C7-PFUnA	570.0 / 525.0	3.54	13C2-PFDA	515.0 / 470.0	54645.11	100.00
13C2-PFTeDA	715.0 / 670.0	4.30	13C2-PFDA	515.0 / 470.0	54645.11	100.00
13C3-PFBS	302.0 / 99.0	1.47	13C4-PFOS	503.0 / 99.0	9216.39	95.50
13C3-PFHxS	402.0 / 99.0	2.14	13C4-PFOS	503.0 / 99.0	9216.39	95.50
13C8-PFOS	507.0 / 99.0	2.86	13C4-PFOS	503.0 / 99.0	9216.39	95.50



Sample Name	J6253-FS-D(5)	Injection Vial	30
Sample ID	DRMO-MW2-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:19:25	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	N/A	13C3-PFBS	302.0 / 99.0	16642.89	93.83
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	16642.89	93.83
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	44699.69	101.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	44699.69	101.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	58477.09	101.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	58477.09	101.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	12336.43	95.55
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	12336.43	95.55
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	61040.12	101.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	61040.12	101.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	63700.68	101.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	63700.68	101.00
PFOS_1	499.0 / 80.0	2.88	13C8-PFOS	507.0 / 99.0	13548.61	96.66
PFOS_2	499.0 / 99.0	2.88	13C8-PFOS	507.0 / 99.0	13548.61	96.66
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	62220.01	101.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	62220.01	101.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	66294.62	101.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	66294.62	101.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	63109.20	101.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	63109.20	101.00
PFTeDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	55597.26	101.00
PFTeDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	55597.26	101.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	55597.26	101.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	55597.26	101.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	11666.86	101.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	11666.86	101.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	14095.58	101.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	14095.58	101.00

Sample Name	J6253-FS-D(5)	Injection Vial	30
Sample ID	DRMO-MW2-052418	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:19:25	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_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	N/A	13C2-PFDA	515.0 / 470.0	45835.28	101.00
d3-MeFOSAA	573.0 / 419.0	N/A	13C4-PFOS	503.0 / 99.0	10279.38	96.60
d5-EtFOSAA	589.0 / 419.0	N/A	13C4-PFOS	503.0 / 99.0	10279.38	96.60
13C5-PFHxA	318.0 / 273.0	N/A	13C2-PFOA	415.0 / 370.0	43900.91	101.00
13C4-PFHpA	367.0 / 322.0	N/A	13C2-PFOA	415.0 / 370.0	43900.91	101.00
13C8-PFOA	421.0 / 376.0	N/A	13C2-PFOA	415.0 / 370.0	43900.91	101.00
13C9-PFNA	472.0 / 427.0	N/A	13C2-PFOA	415.0 / 370.0	43900.91	101.00
13C6-PFDA	519.0 / 474.0	N/A	13C2-PFDA	515.0 / 470.0	45835.28	101.00
13C7-PFUnA	570.0 / 525.0	N/A	13C2-PFDA	515.0 / 470.0	45835.28	101.00
13C2-PFTeDA	715.0 / 670.0	N/A	13C2-PFDA	515.0 / 470.0	45835.28	101.00
13C3-PFBS	302.0 / 99.0	N/A	13C4-PFOS	503.0 / 99.0	10279.38	96.60
13C3-PFHxS	402.0 / 99.0	N/A	13C4-PFOS	503.0 / 99.0	10279.38	96.60
13C8-PFOS	507.0 / 99.0	N/A	13C4-PFOS	503.0 / 99.0	10279.38	96.60

Sample Name	J6254-FS(4)	Injection Vial	31
Sample ID	DRM0-FD03-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:30:12	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

### Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.47	13C3-PFBS	302.0 / 99.0	9363.80	92.90
PFBS_2	298.9 / 99.0	1.46	13C3-PFBS	302.0 / 99.0	9363.80	92.90
PFHxA_1	313.0 / 269.0	1.72	13C5-PFHxA	318.0 / 273.0	25788.57	100.00
PFHxA_2	313.0 / 119.0	1.72	13C5-PFHxA	318.0 / 273.0	25788.57	100.00
PFHpA_1	363.0 / 319.0	2.05	13C4-PFHpA	367.0 / 322.0	38944.99	100.00
PFHpA_2	363.0 / 169.0	2.04	13C4-PFHpA	367.0 / 322.0	38944.99	100.00
PFHxS_1	399.0 / 80.0	2.07	13C3-PFHxS	402.0 / 99.0	10257.83	94.60
PFHxS_2	399.0 / 99.0	2.07	13C3-PFHxS	402.0 / 99.0	10257.83	94.60
PFOA_1	413.0 / 369.0	2.42	13C8-PFOA	421.0 / 376.0	39551.76	100.00
PFOA_2	413.0 / 169.0	2.39	13C8-PFOA	421.0 / 376.0	39551.76	100.00
PFNA_1	463.0 / 419.0	2.79	13C9-PFNA	472.0 / 427.0	45125.93	100.00
PFNA_2	463.0 / 219.0	2.79	13C9-PFNA	472.0 / 427.0	45125.93	100.00
PFOS_1	499.0 / 80.0	2.76	13C8-PFOS	507.0 / 99.0	9958.83	95.70
PFOS_2	499.0 / 99.0	2.78	13C8-PFOS	507.0 / 99.0	9958.83	95.70
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	56889.83	100.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	56889.83	100.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	61126.25	100.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	61126.25	100.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	58465.60	100.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	58465.60	100.00
PFTeDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	35273.75	100.00
PFTeDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	35273.75	100.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	35273.75	100.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	35273.75	100.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	7961.32	100.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	7961.32	100.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	9594.16	100.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	9594.16	100.00

Sample Name	J6254-FS(4)	Injection Vial	31
Sample ID	DRM0-FD03-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:30:12	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_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	3.76	13C2-PFDA	515.0 / 470.0	37725.88	100.00
d3-MeFOSAA	573.0 / 419.0	3.30	13C4-PFOS	503.0 / 99.0	6018.92	95.50
d5-EtFOSAA	589.0 / 419.0	3.46	13C4-PFOS	503.0 / 99.0	6018.92	95.50
13C5-PFHxA	318.0 / 273.0	1.71	13C2-PFOA	415.0 / 370.0	28163.78	100.00
13C4-PFHpA	367.0 / 322.0	2.05	13C2-PFOA	415.0 / 370.0	28163.78	100.00
13C8-PFOA	421.0 / 376.0	2.41	13C2-PFOA	415.0 / 370.0	28163.78	100.00
13C9-PFNA	472.0 / 427.0	2.78	13C2-PFOA	415.0 / 370.0	28163.78	100.00
13C6-PFDA	519.0 / 474.0	3.13	13C2-PFDA	515.0 / 470.0	37725.88	100.00
13C7-PFUnA	570.0 / 525.0	3.46	13C2-PFDA	515.0 / 470.0	37725.88	100.00
13C2-PFTeDA	715.0 / 670.0	4.24	13C2-PFDA	515.0 / 470.0	37725.88	100.00
13C3-PFBS	302.0 / 99.0	1.45	13C4-PFOS	503.0 / 99.0	6018.92	95.50
13C3-PFHxS	402.0 / 99.0	2.06	13C4-PFOS	503.0 / 99.0	6018.92	95.50
13C8-PFOS	507.0 / 99.0	2.78	13C4-PFOS	503.0 / 99.0	6018.92	95.50

Sample Name	J6254-FS-D(5)	Injection Vial	32
Sample ID	DRM0-FD03-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:40:59	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	N/A	13C3-PFBS	302.0 / 99.0	18452.83	93.83
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	18452.83	93.83
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	45128.98	101.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	45128.98	101.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	59552.03	101.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	59552.03	101.00
PFHxS_1	399.0 / 80.0	2.15	13C3-PFHxS	402.0 / 99.0	12248.90	95.55
PFHxS_2	399.0 / 99.0	2.15	13C3-PFHxS	402.0 / 99.0	12248.90	95.55
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	59930.90	101.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	59930.90	101.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	55382.37	101.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	55382.37	101.00
PFOS_1	499.0 / 80.0	2.87	13C8-PFOS	507.0 / 99.0	12611.82	96.66
PFOS_2	499.0 / 99.0	2.87	13C8-PFOS	507.0 / 99.0	12611.82	96.66
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	66676.01	101.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	66676.01	101.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	62334.60	101.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	62334.60	101.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	65088.77	101.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	65088.77	101.00
PFTeDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	58194.39	101.00
PFTeDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	58194.39	101.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	58194.39	101.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	58194.39	101.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	11750.86	101.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	11750.86	101.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	12877.95	101.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	12877.95	101.00

Sample Name	J6254-FS-D(5)	Injection Vial	32
Sample ID	DRM0-FD03-052418	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:40:59	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_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	N/A	13C2-PFDA	515.0 / 470.0	45971.22	101.00
d3-MeFOSAA	573.0 / 419.0	N/A	13C4-PFOS	503.0 / 99.0	11224.49	96.60
d5-EtFOSAA	589.0 / 419.0	N/A	13C4-PFOS	503.0 / 99.0	11224.49	96.60
13C5-PFHxA	318.0 / 273.0	N/A	13C2-PFOA	415.0 / 370.0	44545.03	101.00
13C4-PFHpA	367.0 / 322.0	N/A	13C2-PFOA	415.0 / 370.0	44545.03	101.00
13C8-PFOA	421.0 / 376.0	N/A	13C2-PFOA	415.0 / 370.0	44545.03	101.00
13C9-PFNA	472.0 / 427.0	N/A	13C2-PFOA	415.0 / 370.0	44545.03	101.00
13C6-PFDA	519.0 / 474.0	N/A	13C2-PFDA	515.0 / 470.0	45971.22	101.00
13C7-PFUnA	570.0 / 525.0	N/A	13C2-PFDA	515.0 / 470.0	45971.22	101.00
13C2-PFTeDA	715.0 / 670.0	N/A	13C2-PFDA	515.0 / 470.0	45971.22	101.00
13C3-PFBS	302.0 / 99.0	N/A	13C4-PFOS	503.0 / 99.0	11224.49	96.60
13C3-PFHxS	402.0 / 99.0	N/A	13C4-PFOS	503.0 / 99.0	11224.49	96.60
13C8-PFOS	507.0 / 99.0	N/A	13C4-PFOS	503.0 / 99.0	11224.49	96.60

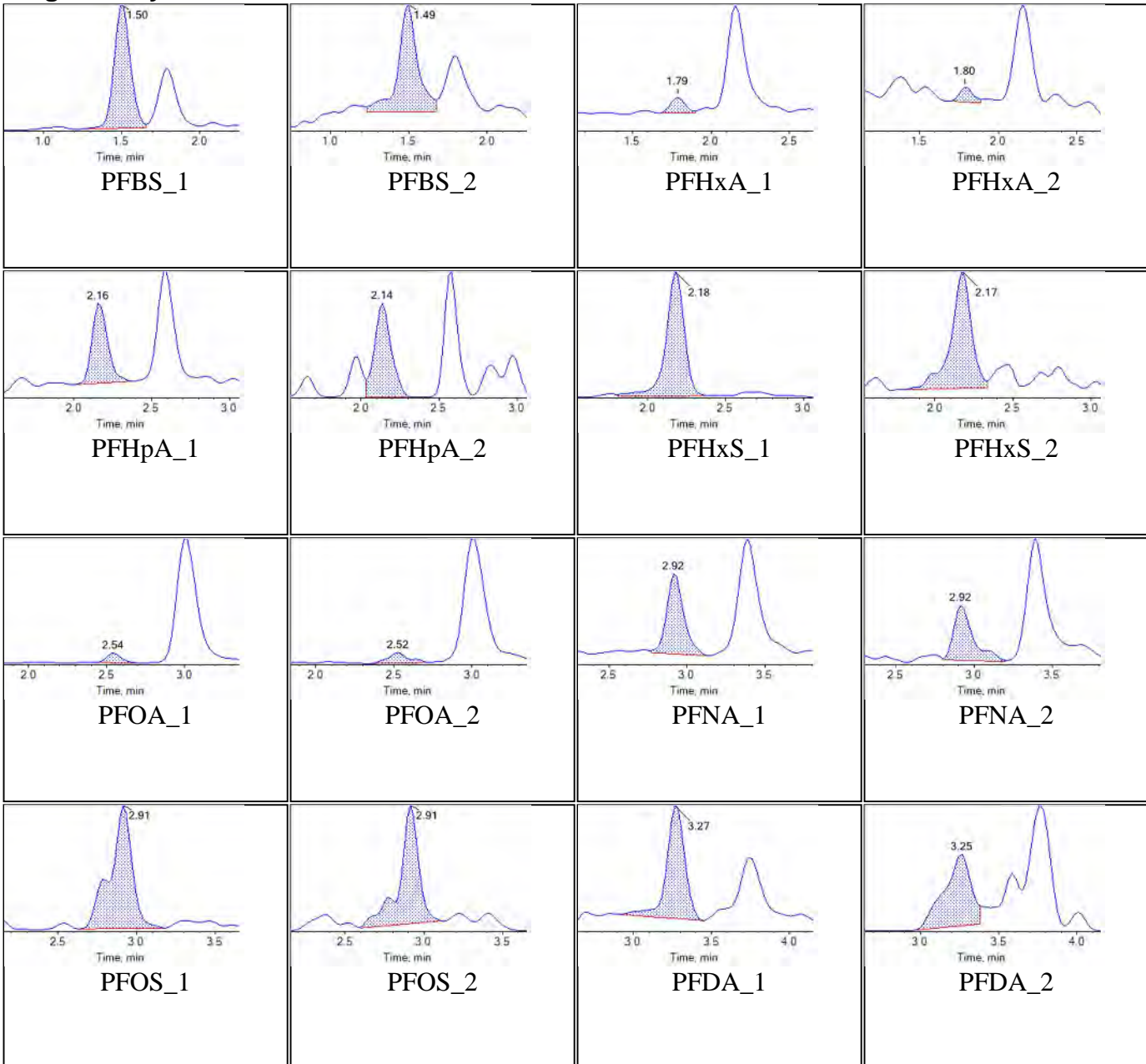
# Chromatograms



<b>Sample Name</b>	JV20	<b>Injection Vial</b>	2
<b>Sample ID</b>	L1	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T19:34:02	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:

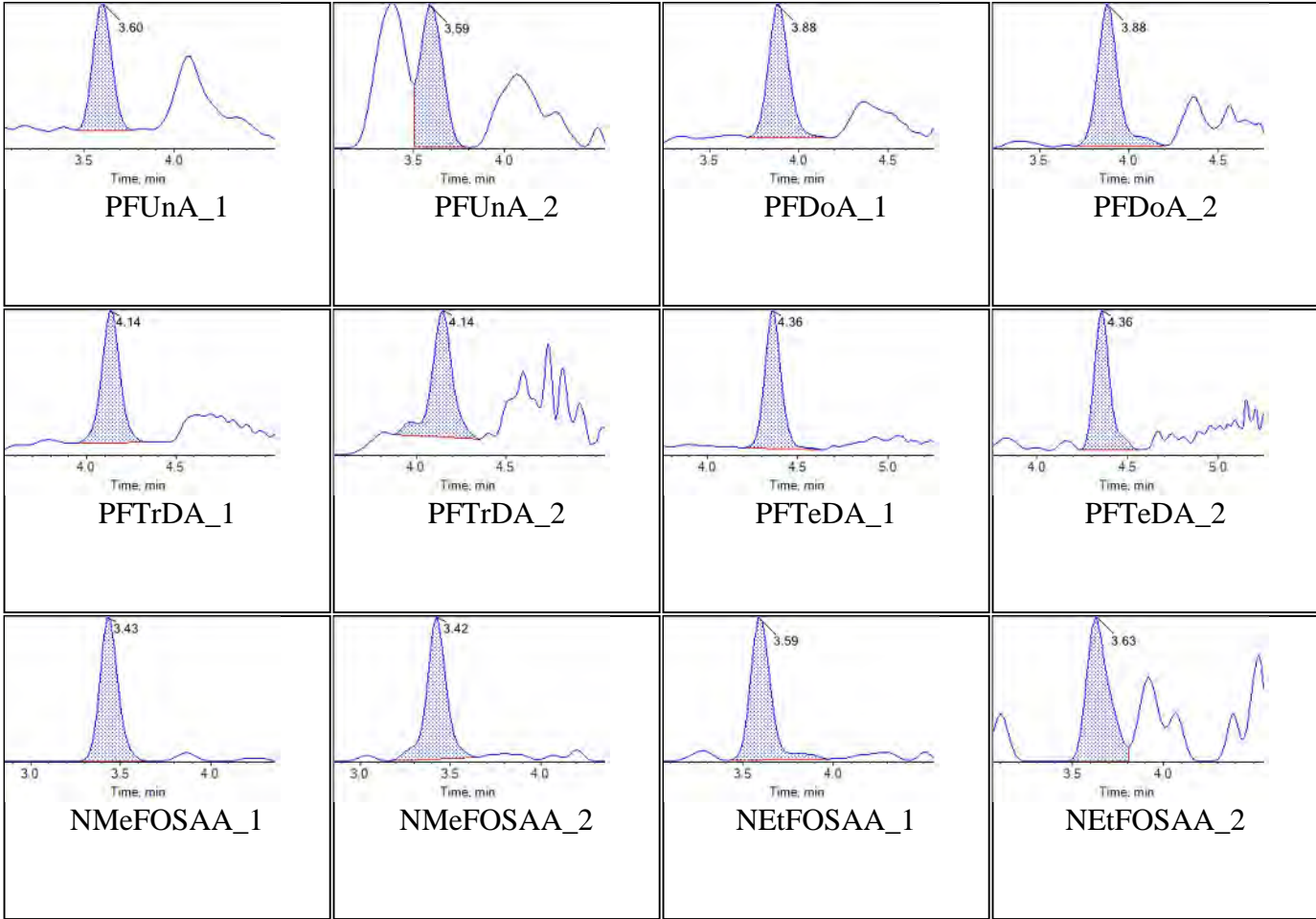


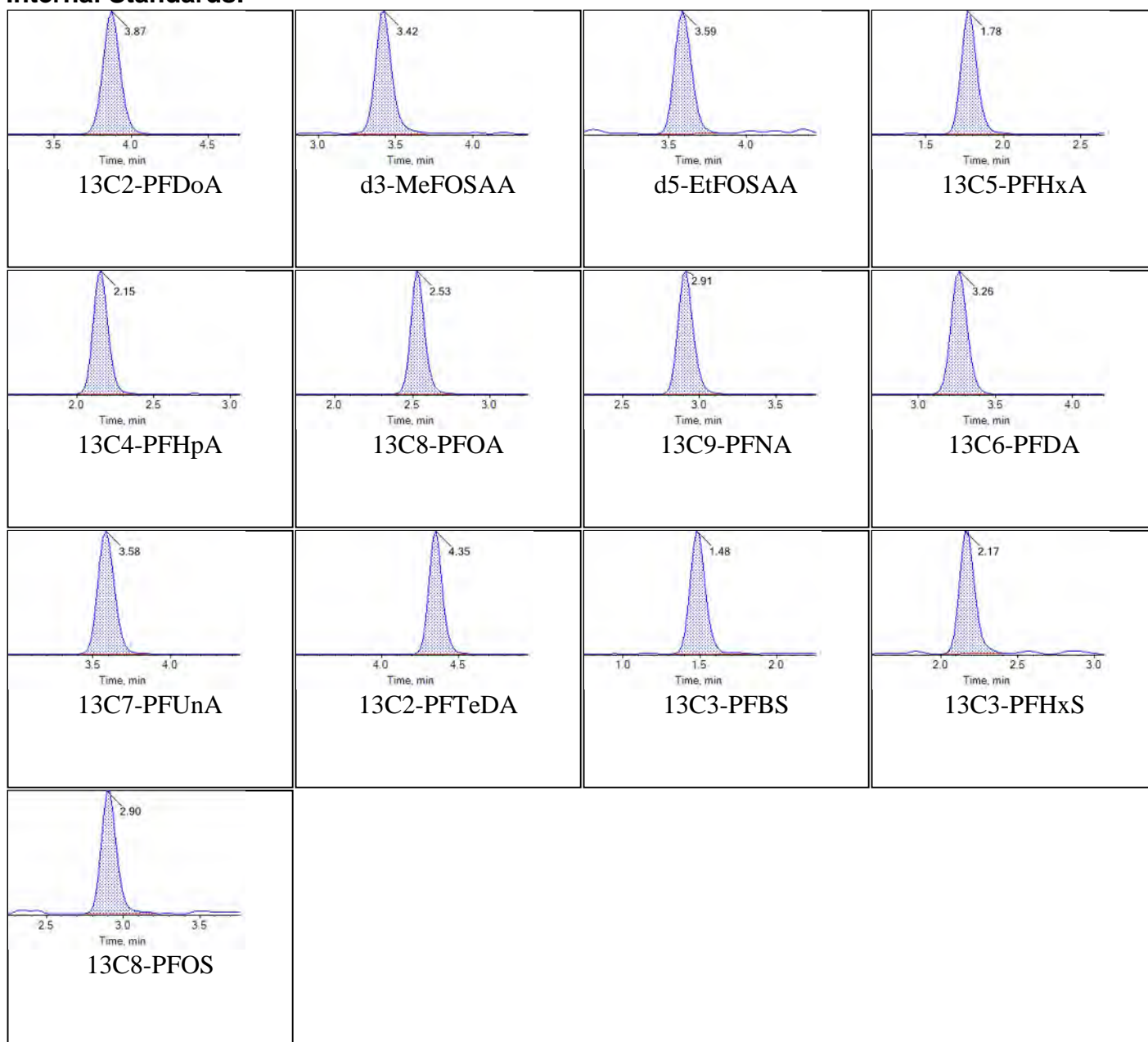




Chromatogram Report

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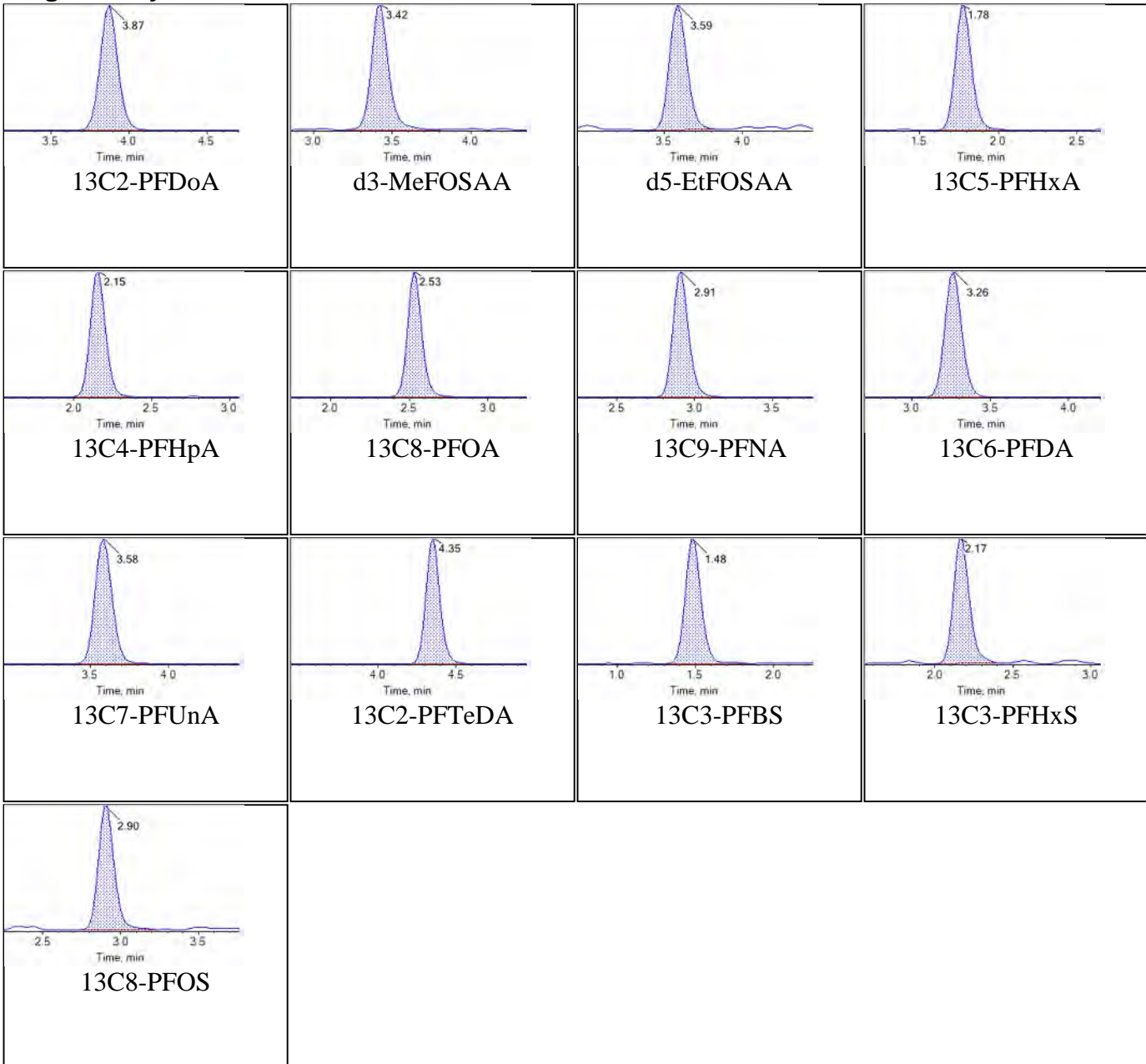


**Internal Standards:**

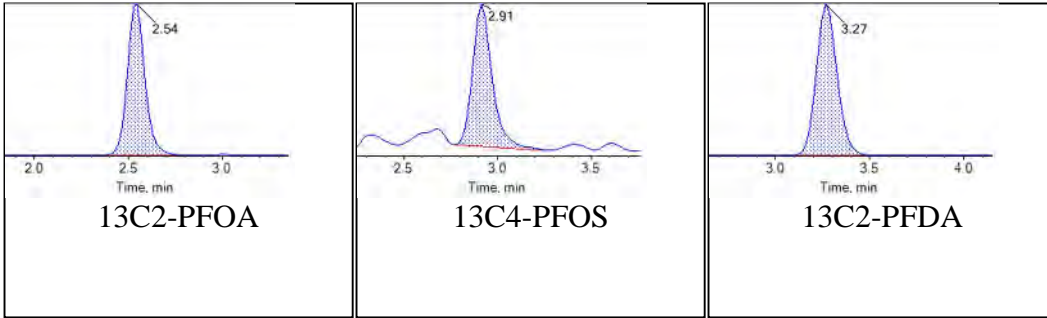
<b>Sample Name</b>	JV20	<b>Injection Vial</b>	2
<b>Sample ID</b>	L1	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T19:34:02	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



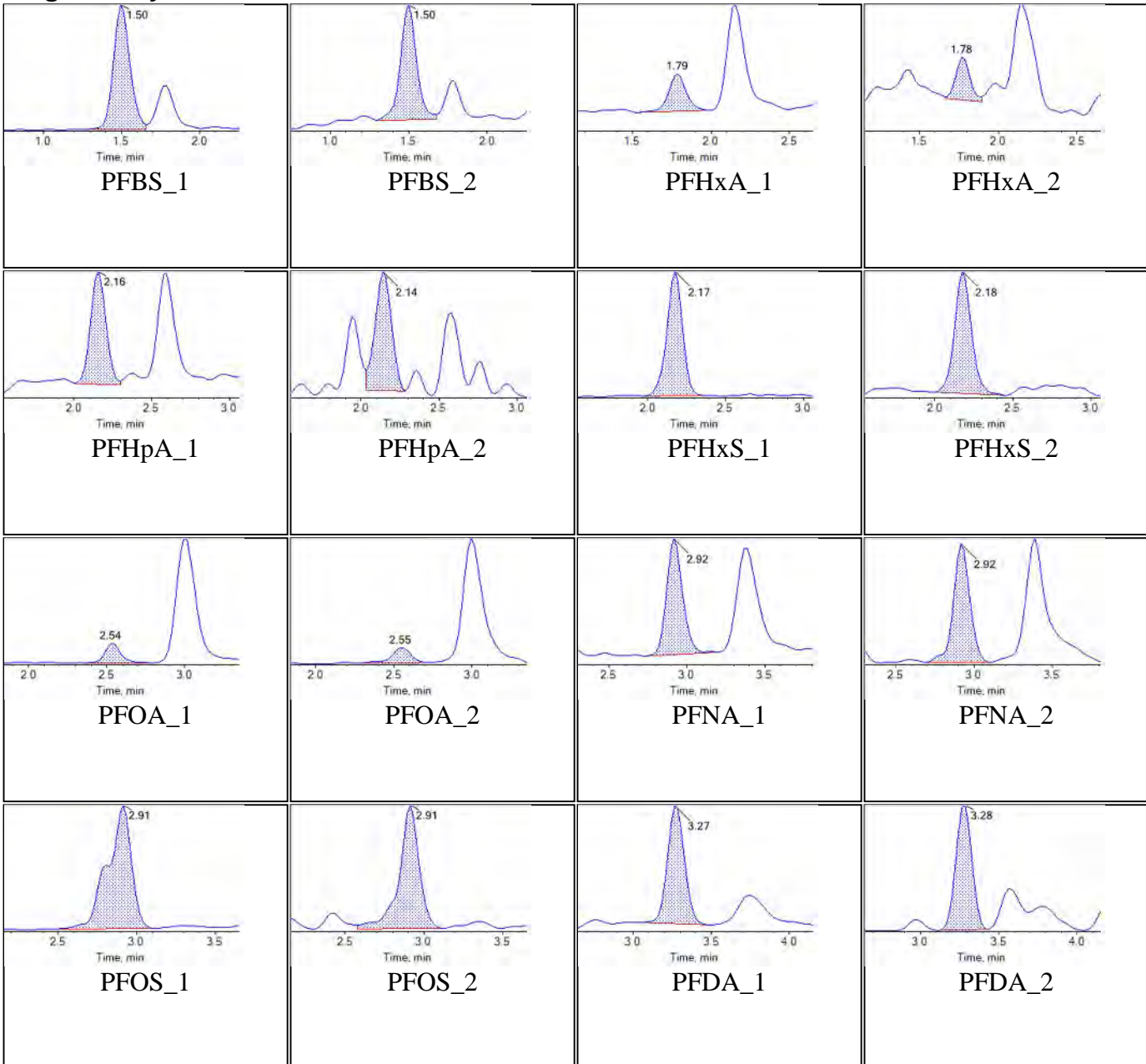
**Internal Standards:**



<b>Sample Name</b>	JV21	<b>Injection Vial</b>	3
<b>Sample ID</b>	L2	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T19:44:51	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

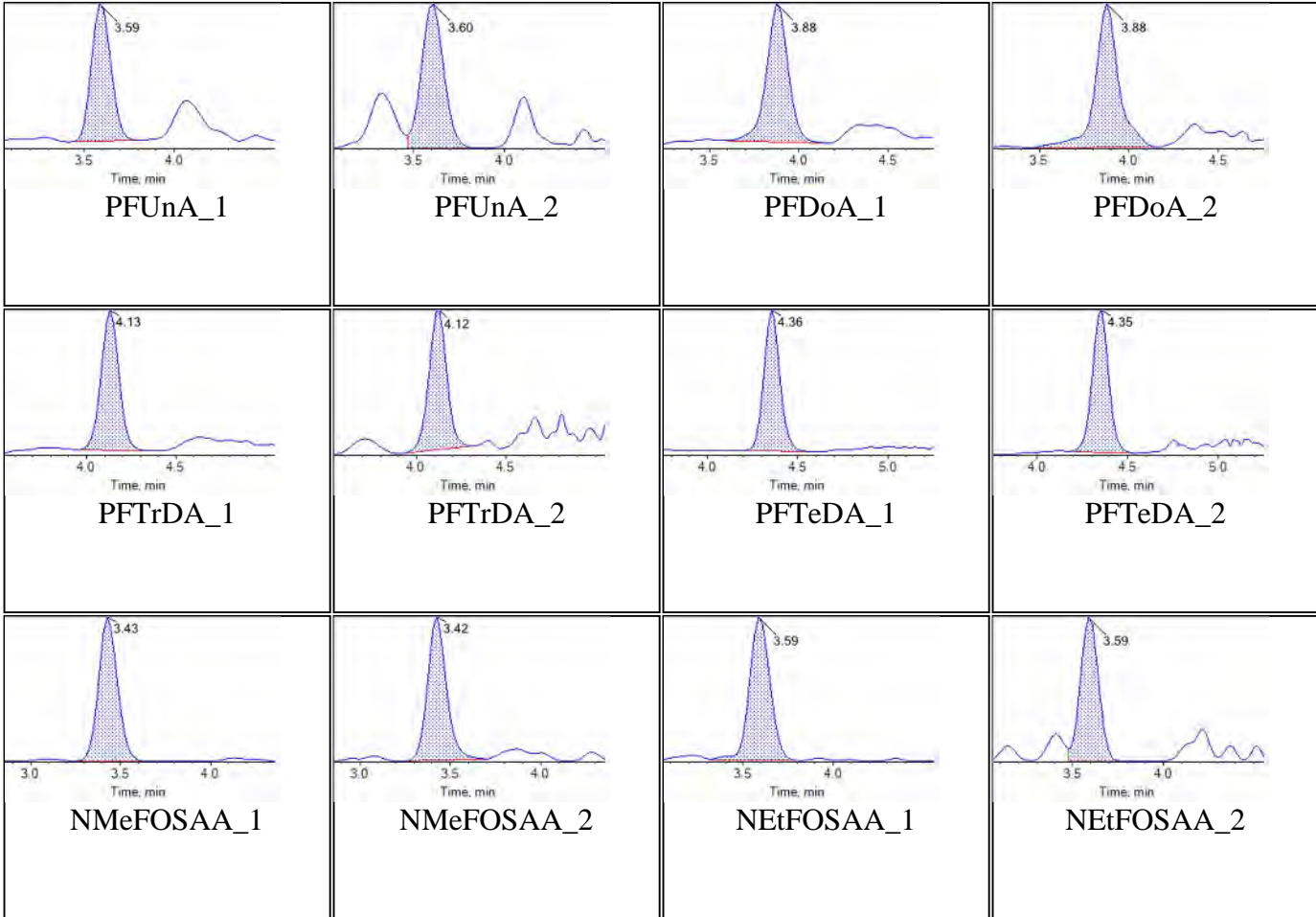
### Target Analytes:



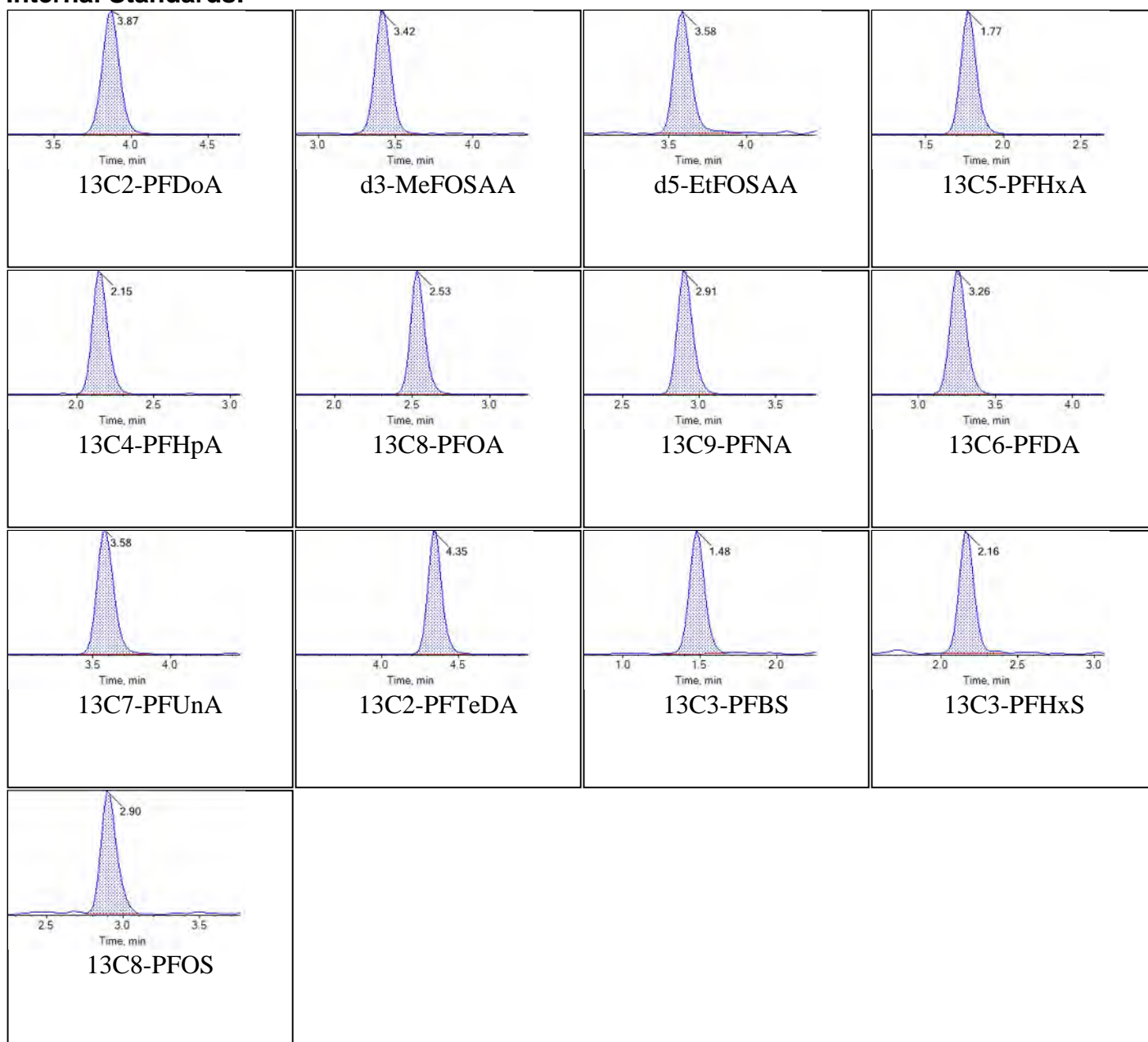


Chromatogram Report

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Printed: 05/06/2018 2:28:00 PM



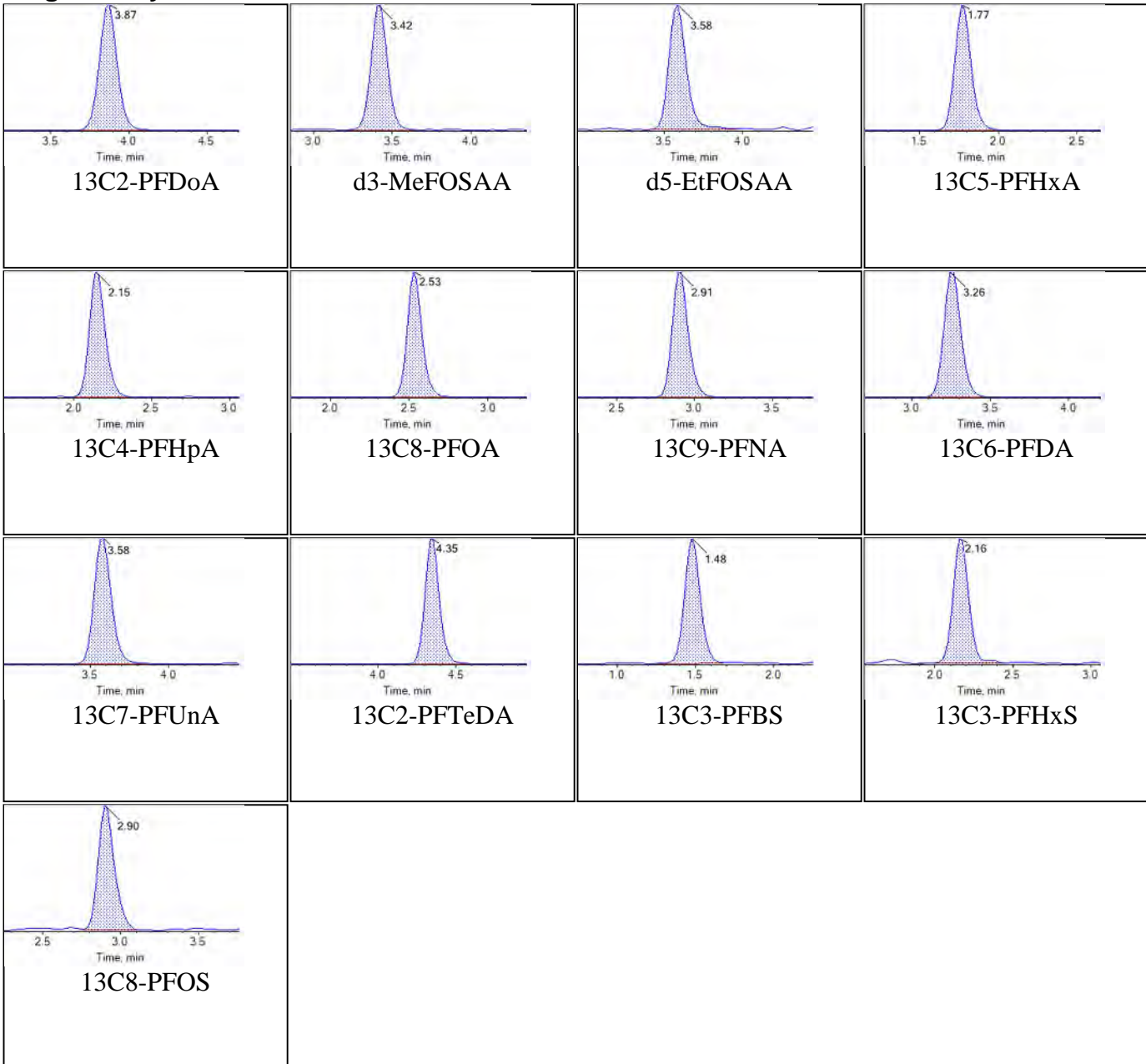


**Internal Standards:**

<b>Sample Name</b>	JV21	<b>Injection Vial</b>	3
<b>Sample ID</b>	L2	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T19:44:51	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

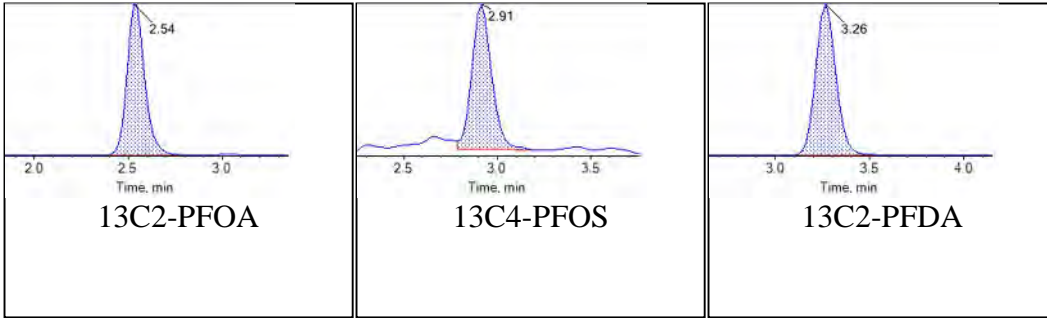
## Chromatograms

### Target Analytes:





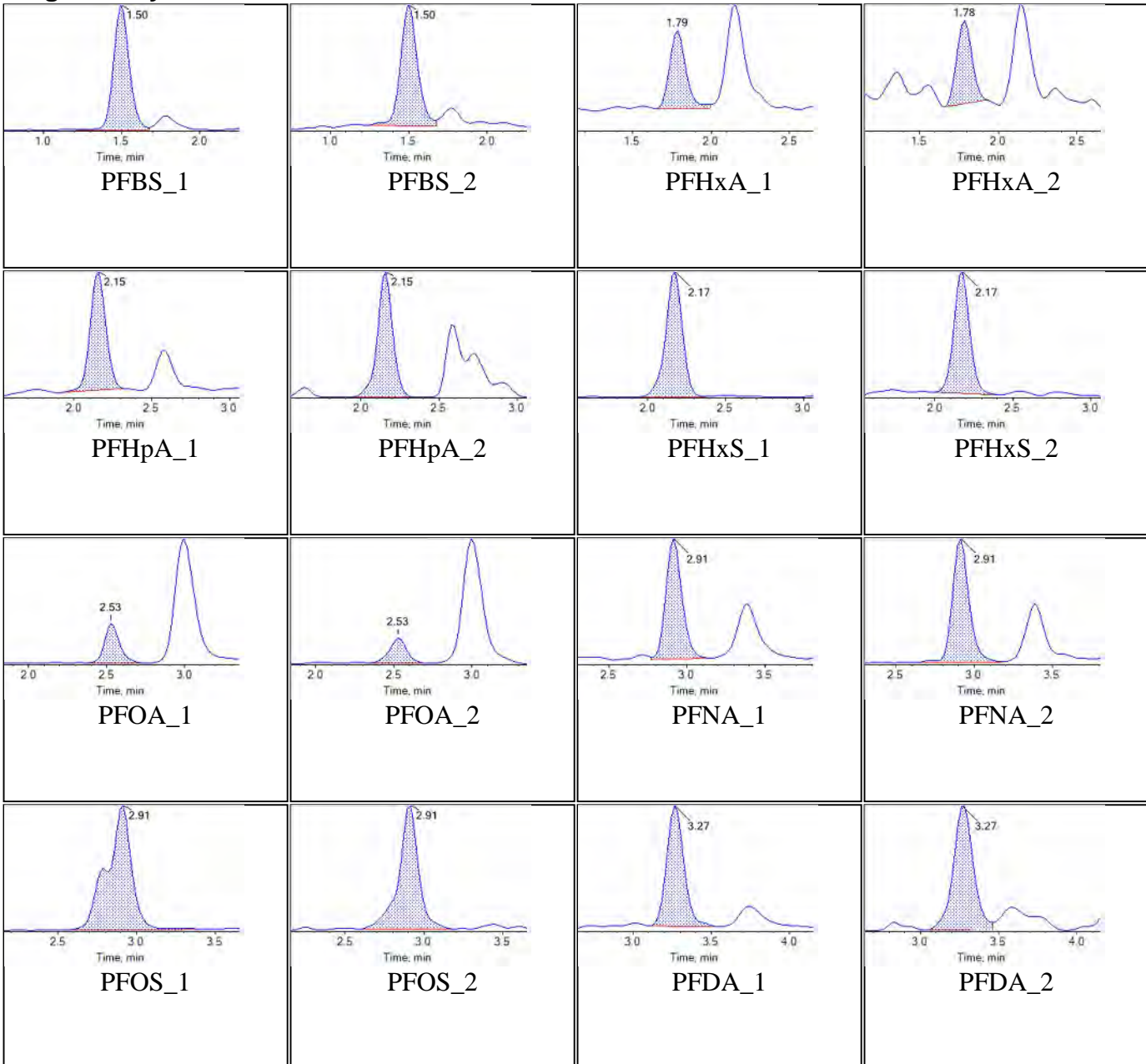
**Internal Standards:**



<b>Sample Name</b>	JV22	<b>Injection Vial</b>	4
<b>Sample ID</b>	L3	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T19:55:39	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

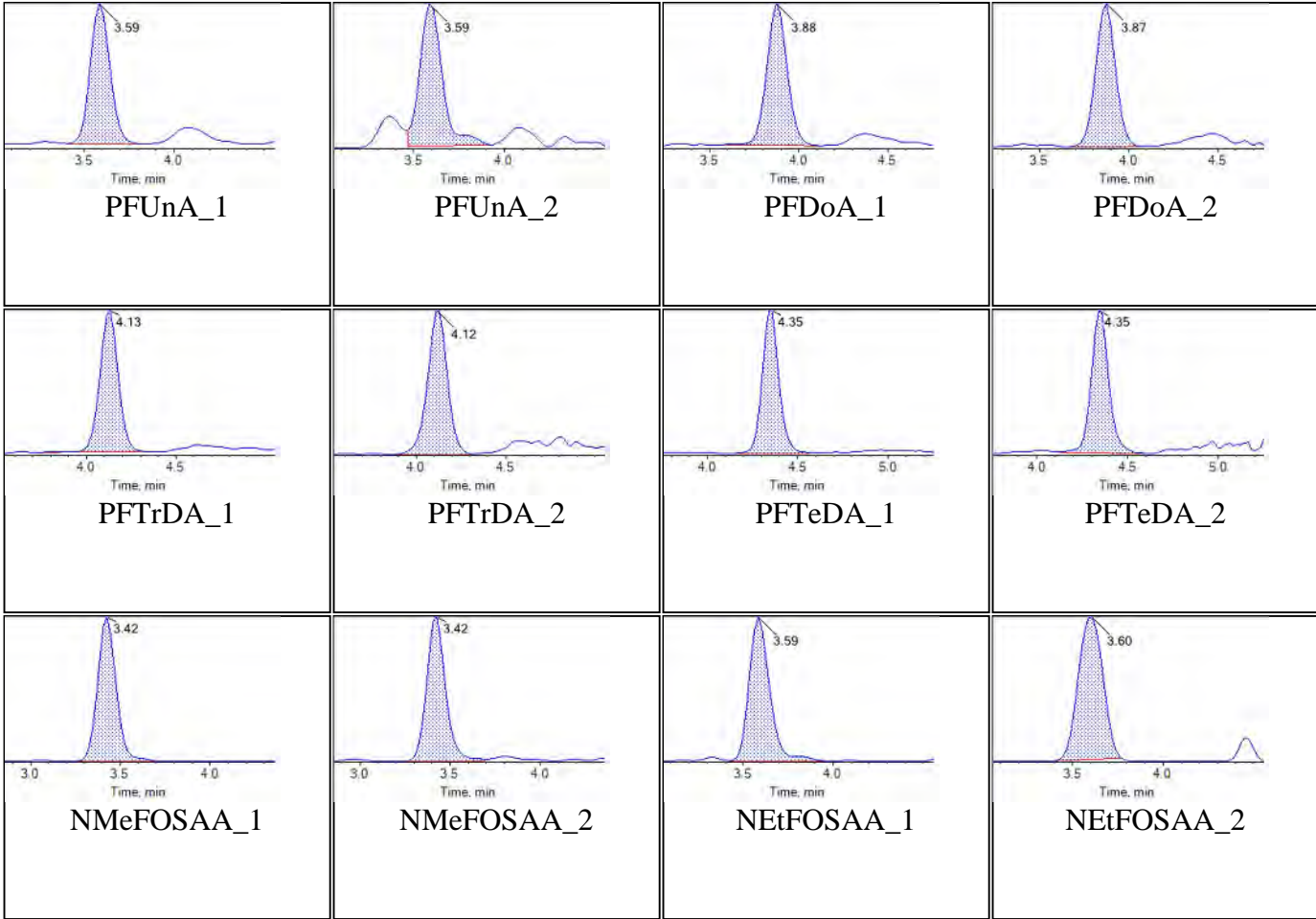
### Target Analytes:

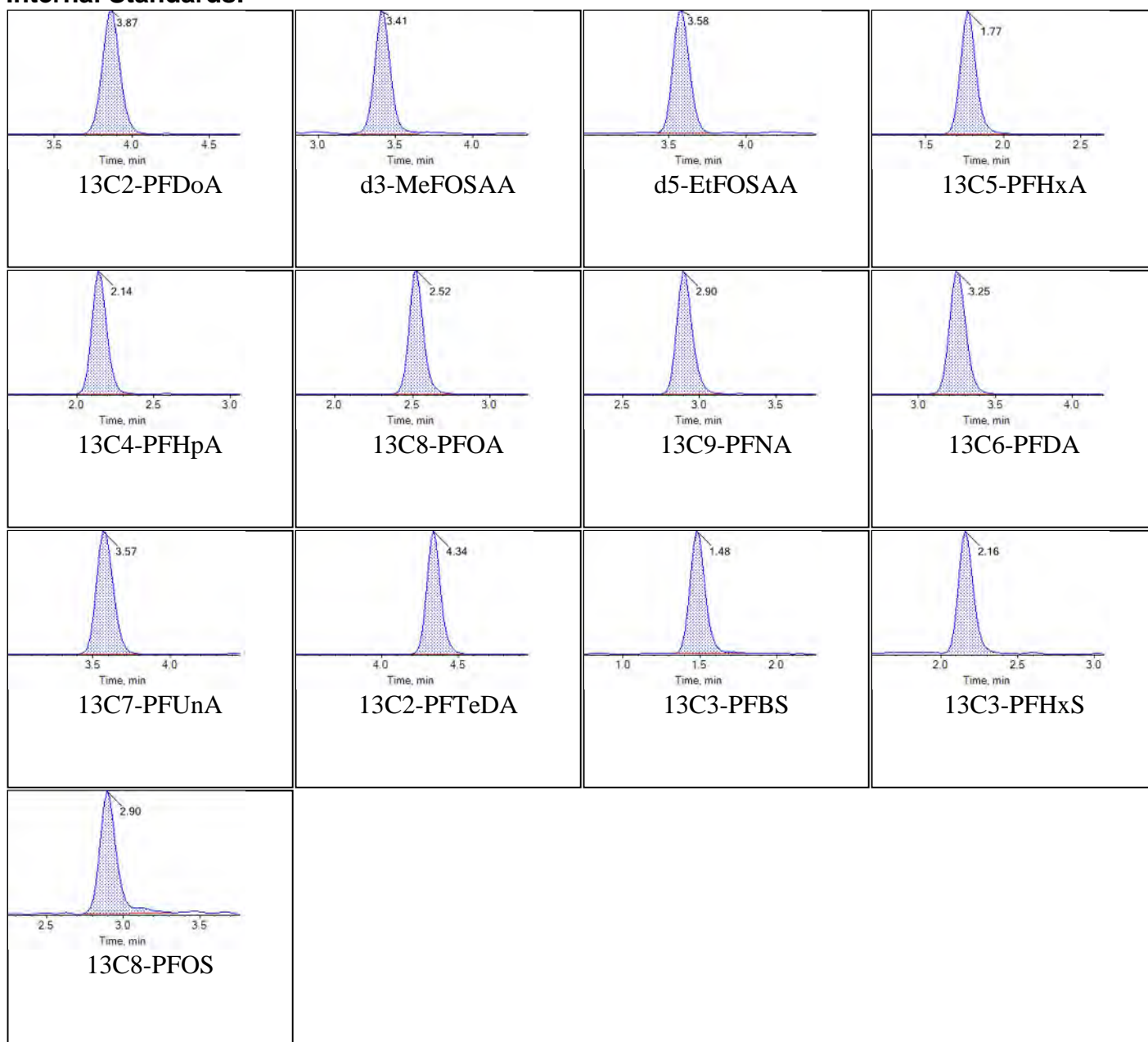




Chromatogram Report

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Printed: 05/06/2018 2:28:03 PM

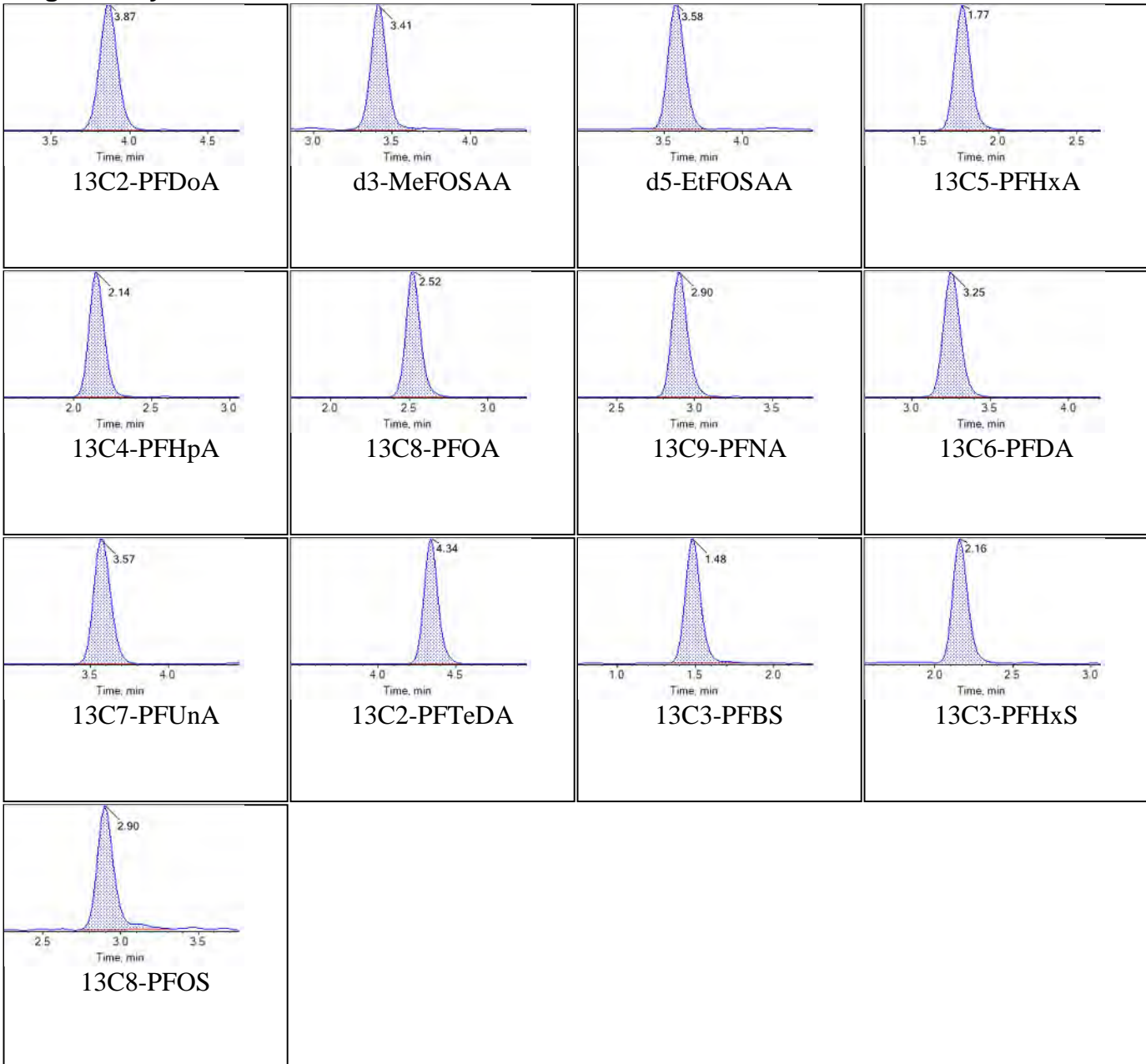


**Internal Standards:**

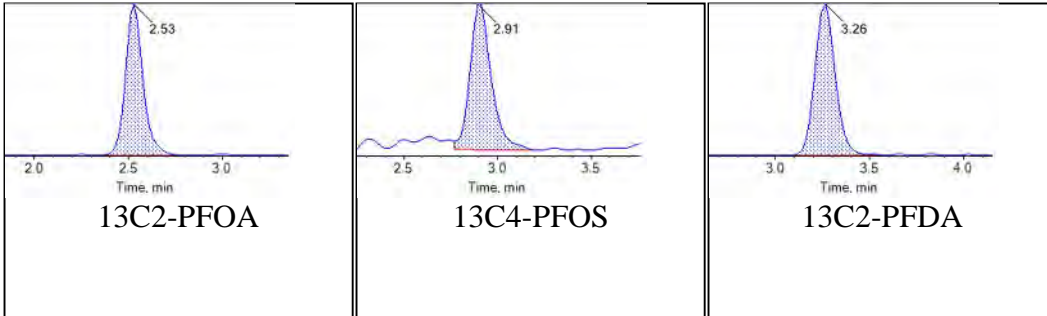
<b>Sample Name</b>	JV22	<b>Injection Vial</b>	4
<b>Sample ID</b>	L3	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T19:55:39	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



**Internal Standards:**

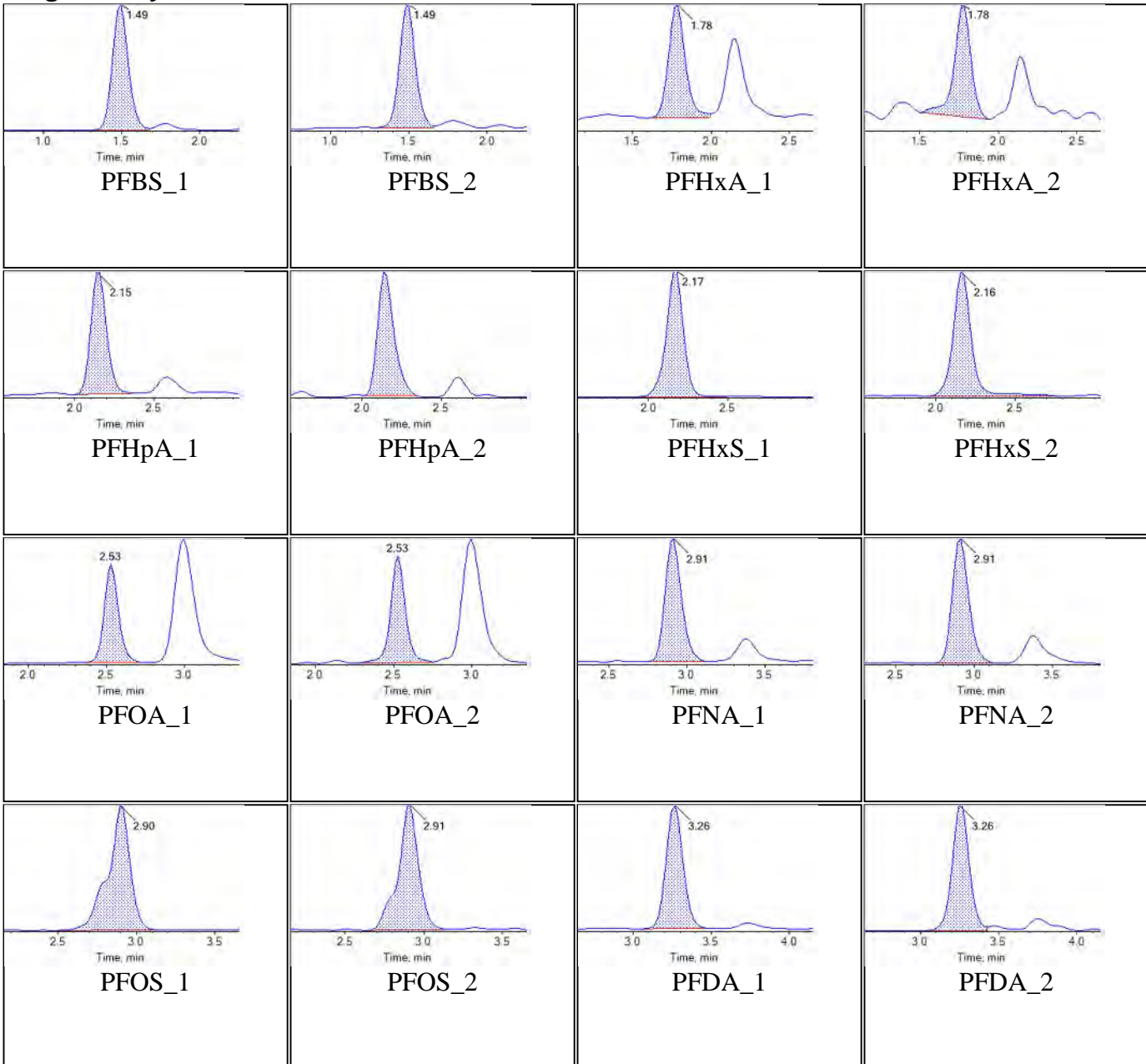




<b>Sample Name</b>	JV23	<b>Injection Vial</b>	5
<b>Sample ID</b>	L4	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T20:06:27	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

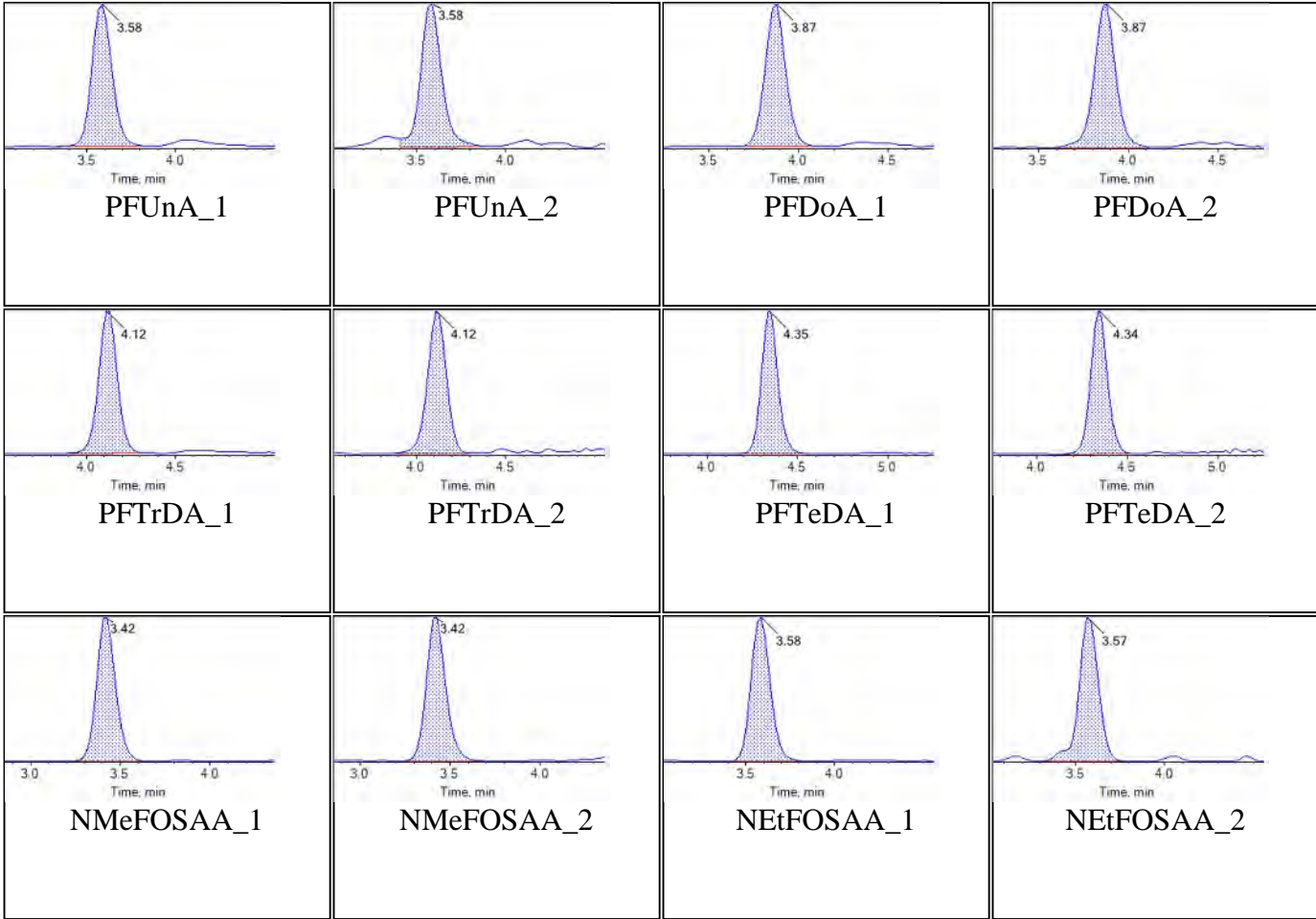
### Target Analytes:



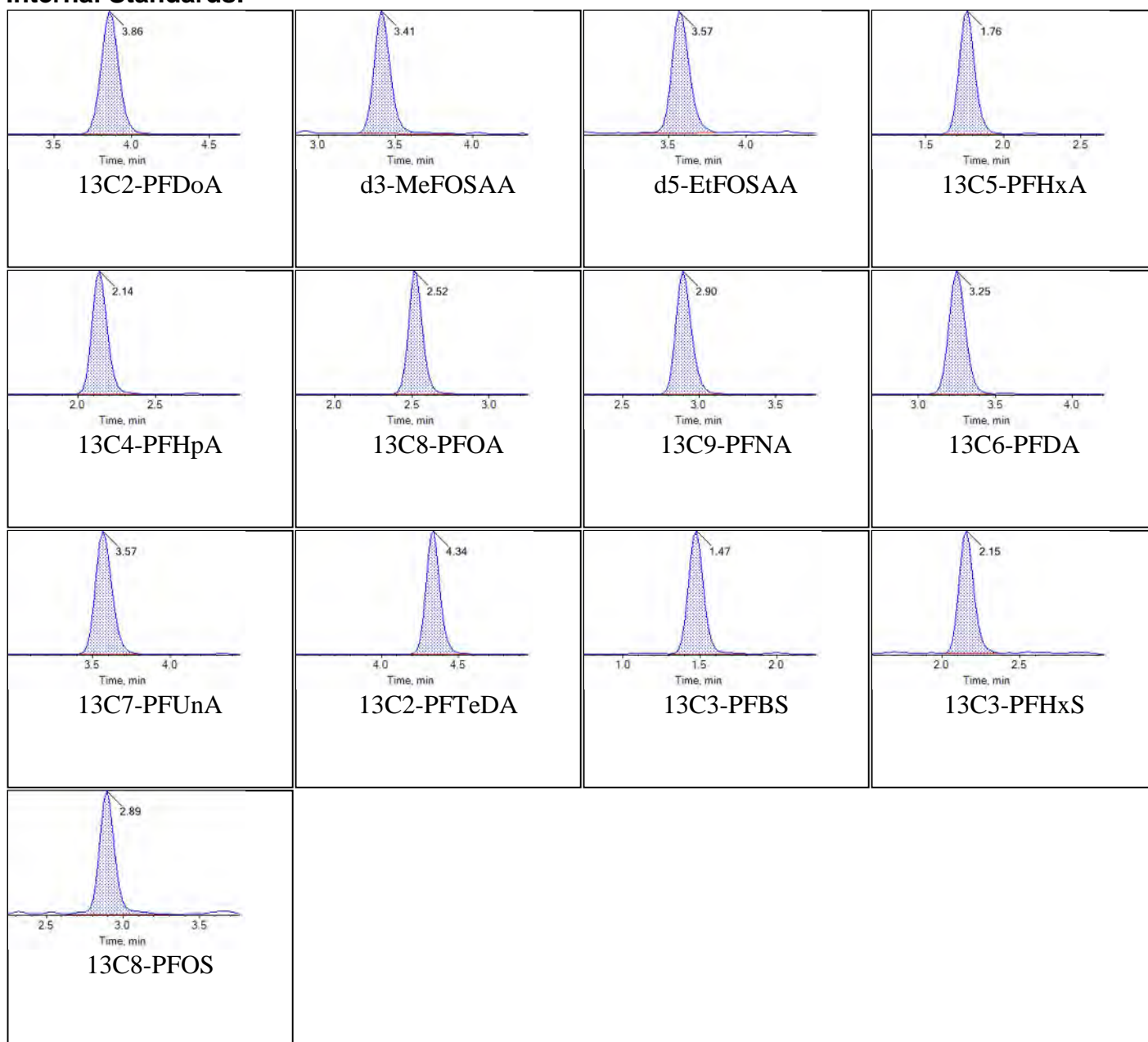


Chromatogram Report

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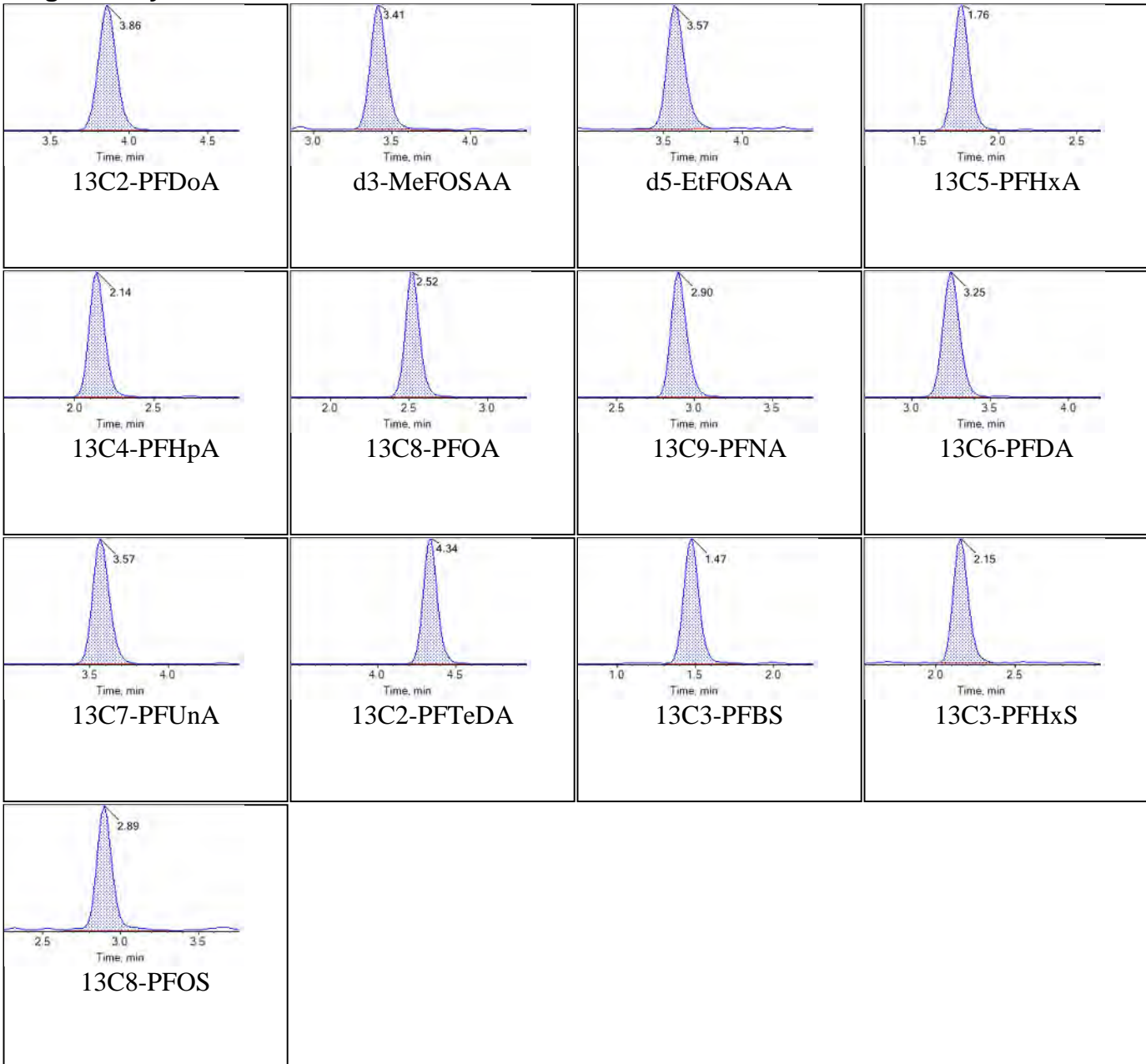


**Internal Standards:**

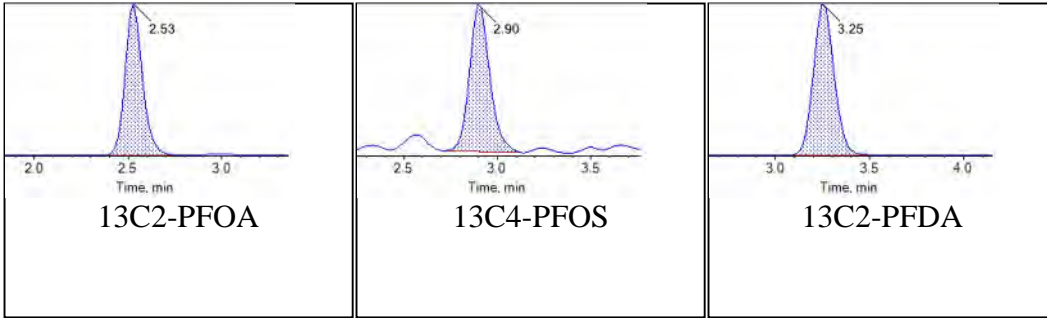
<b>Sample Name</b>	JV23	<b>Injection Vial</b>	5
<b>Sample ID</b>	L4	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T20:06:27	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



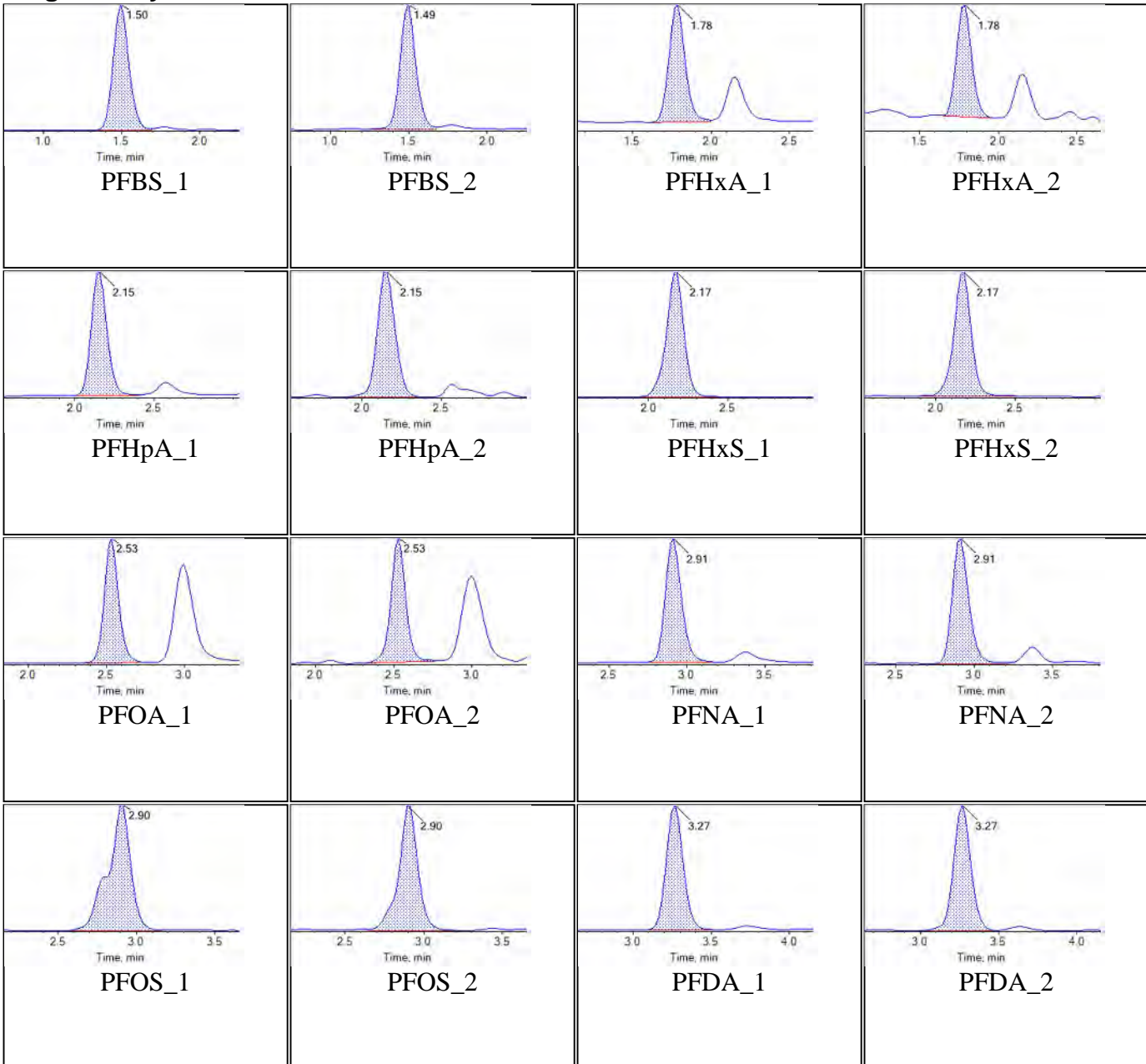
**Internal Standards:**



<b>Sample Name</b>	JV24	<b>Injection Vial</b>	6
<b>Sample ID</b>	L5	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T20:17:14	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

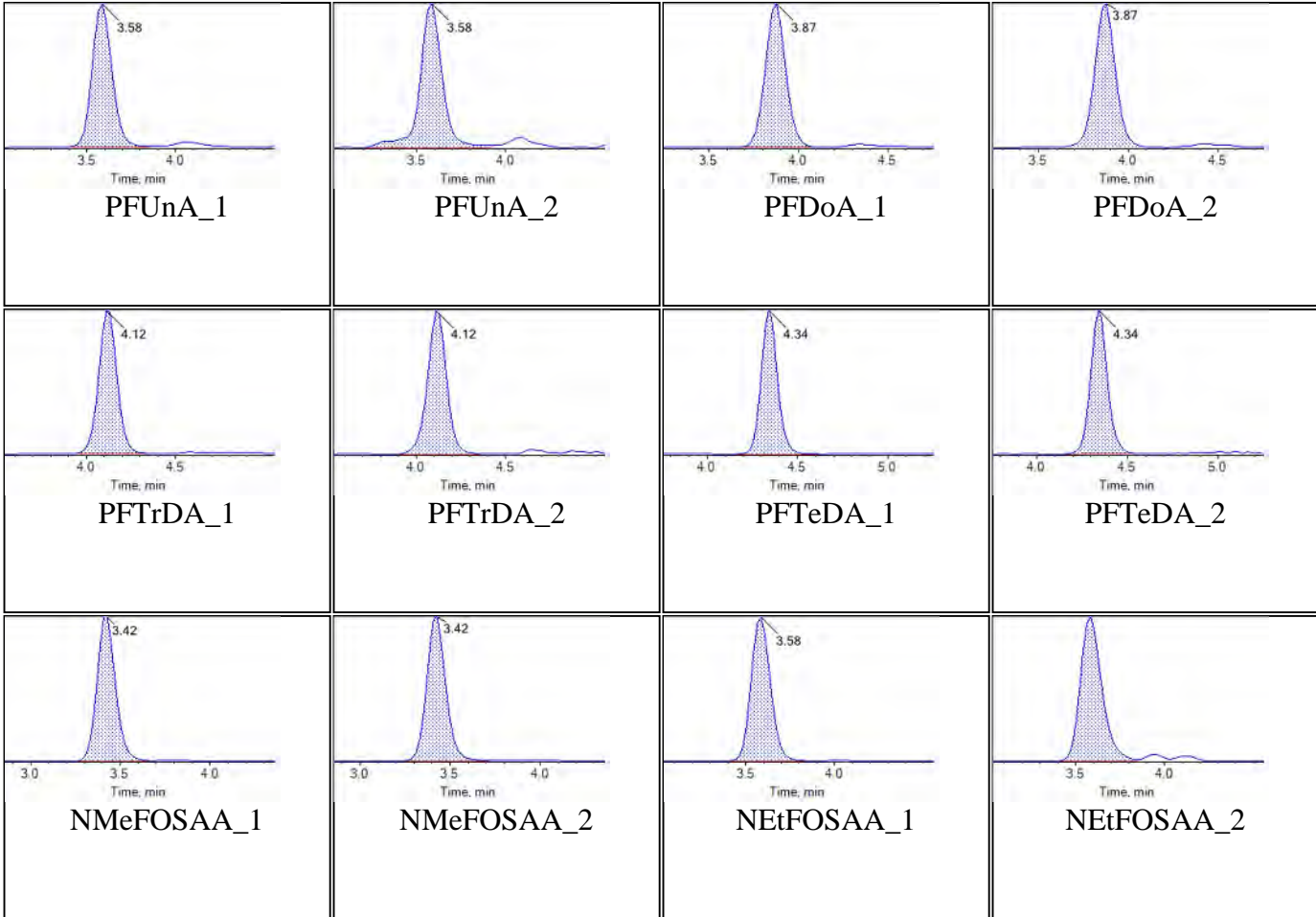
### Target Analytes:

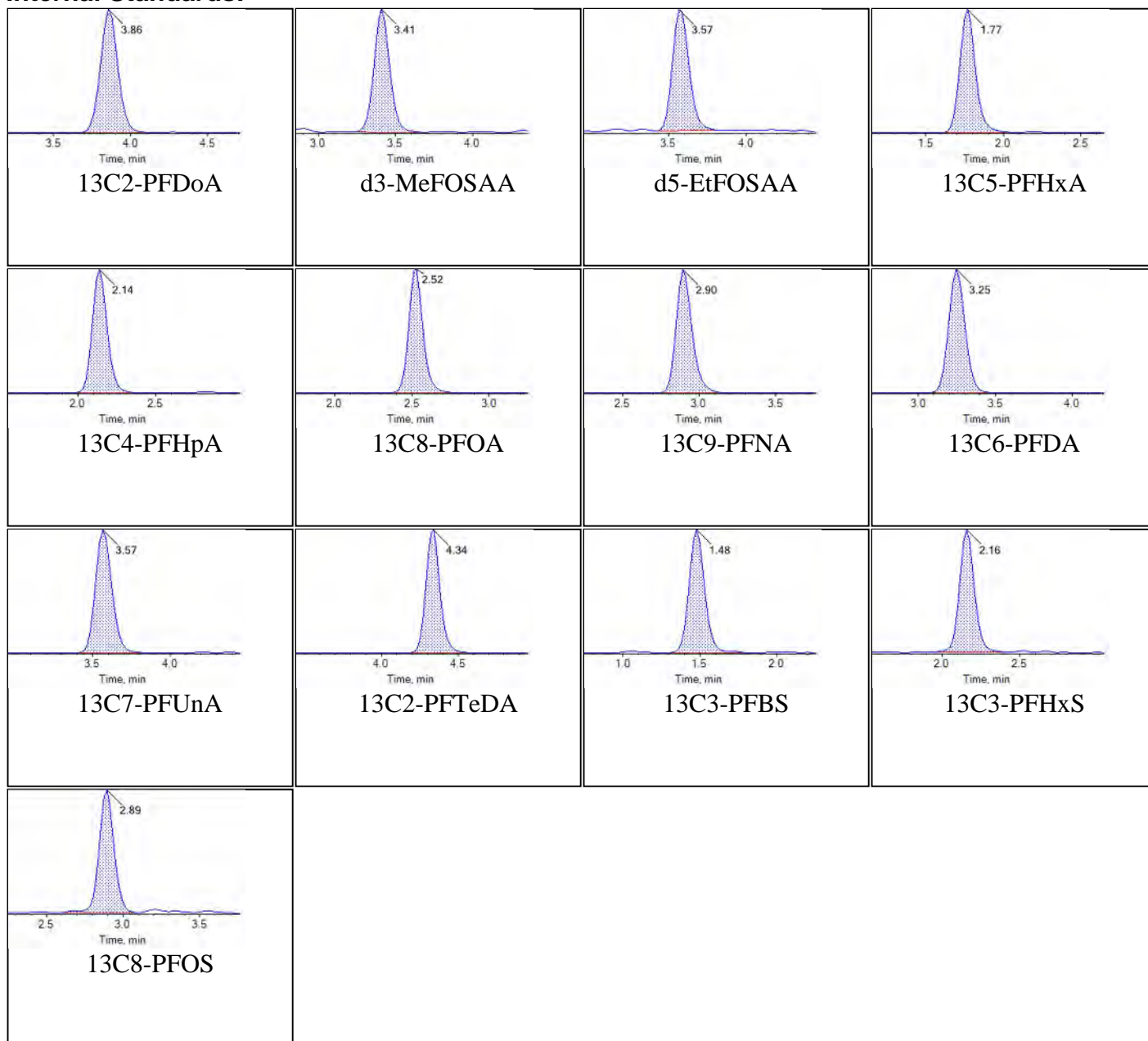




Chromatogram Report

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Printed: 05/06/2018 2:28:11 PM



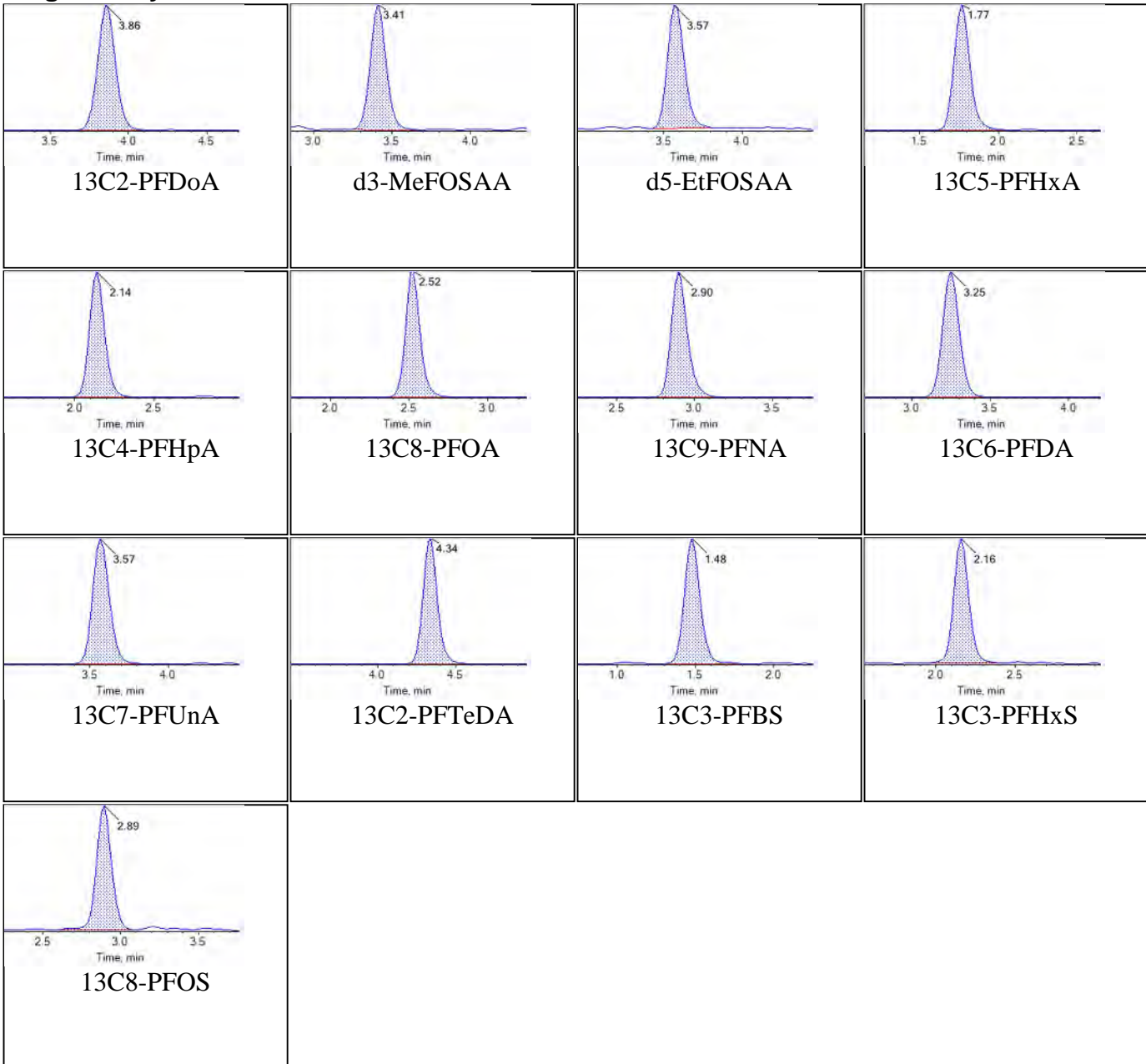
**Internal Standards:**



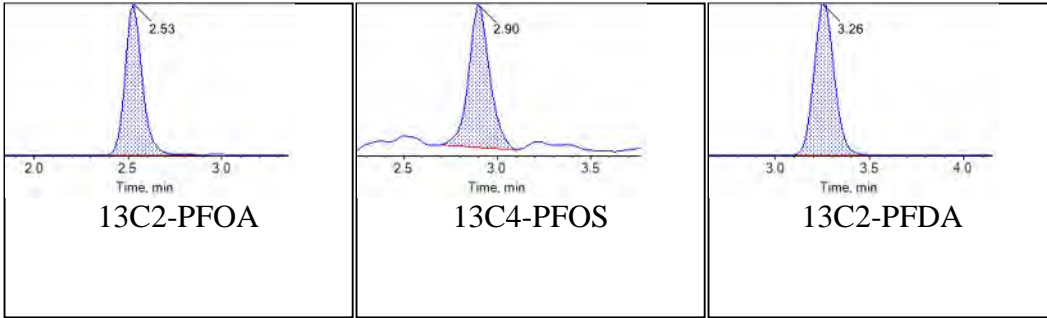
<b>Sample Name</b>	JV24	<b>Injection Vial</b>	6
<b>Sample ID</b>	L5	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T20:17:14	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



**Internal Standards:**

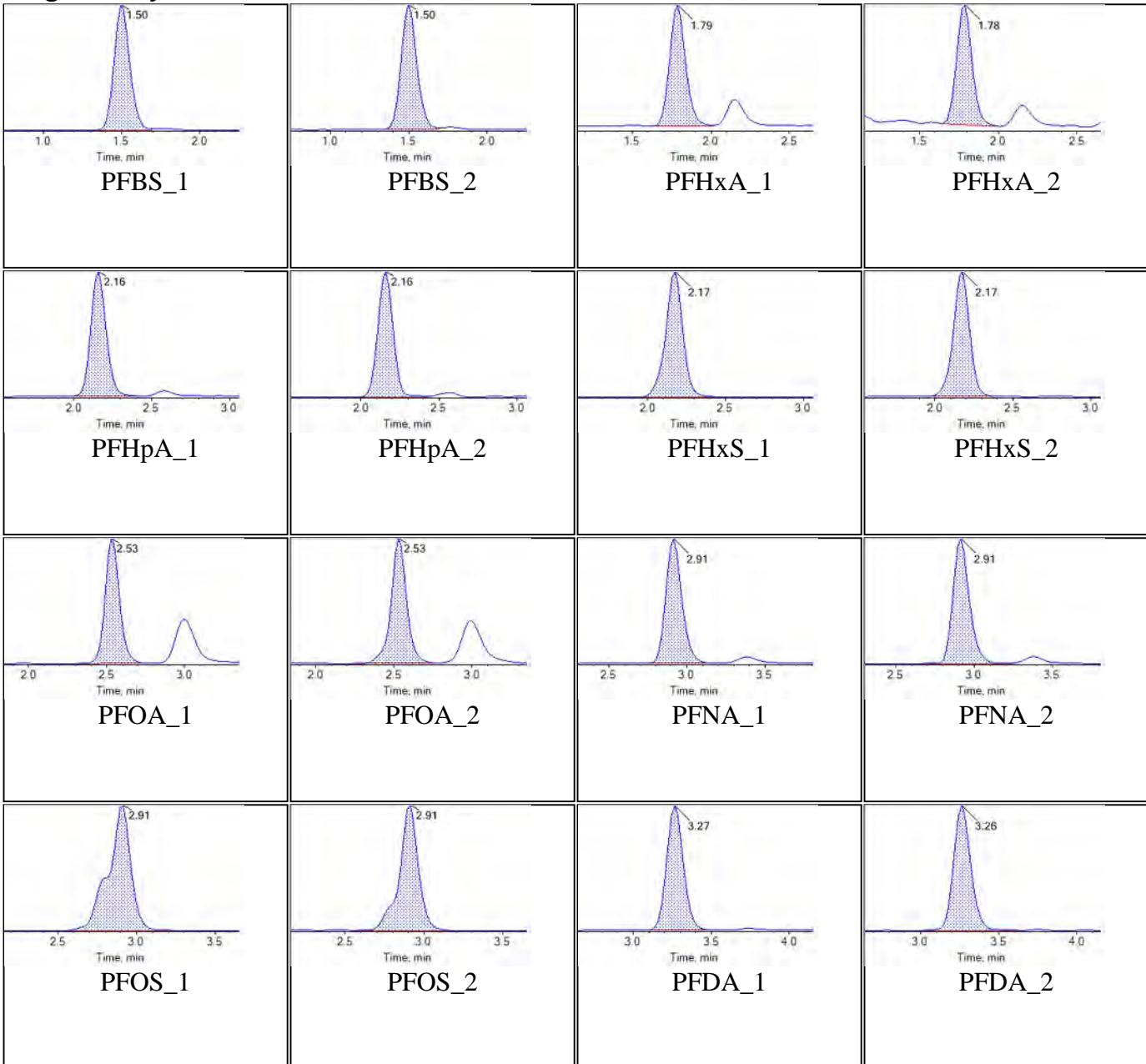




<b>Sample Name</b>	JV25	<b>Injection Vial</b>	7
<b>Sample ID</b>	L6	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T20:28:02	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

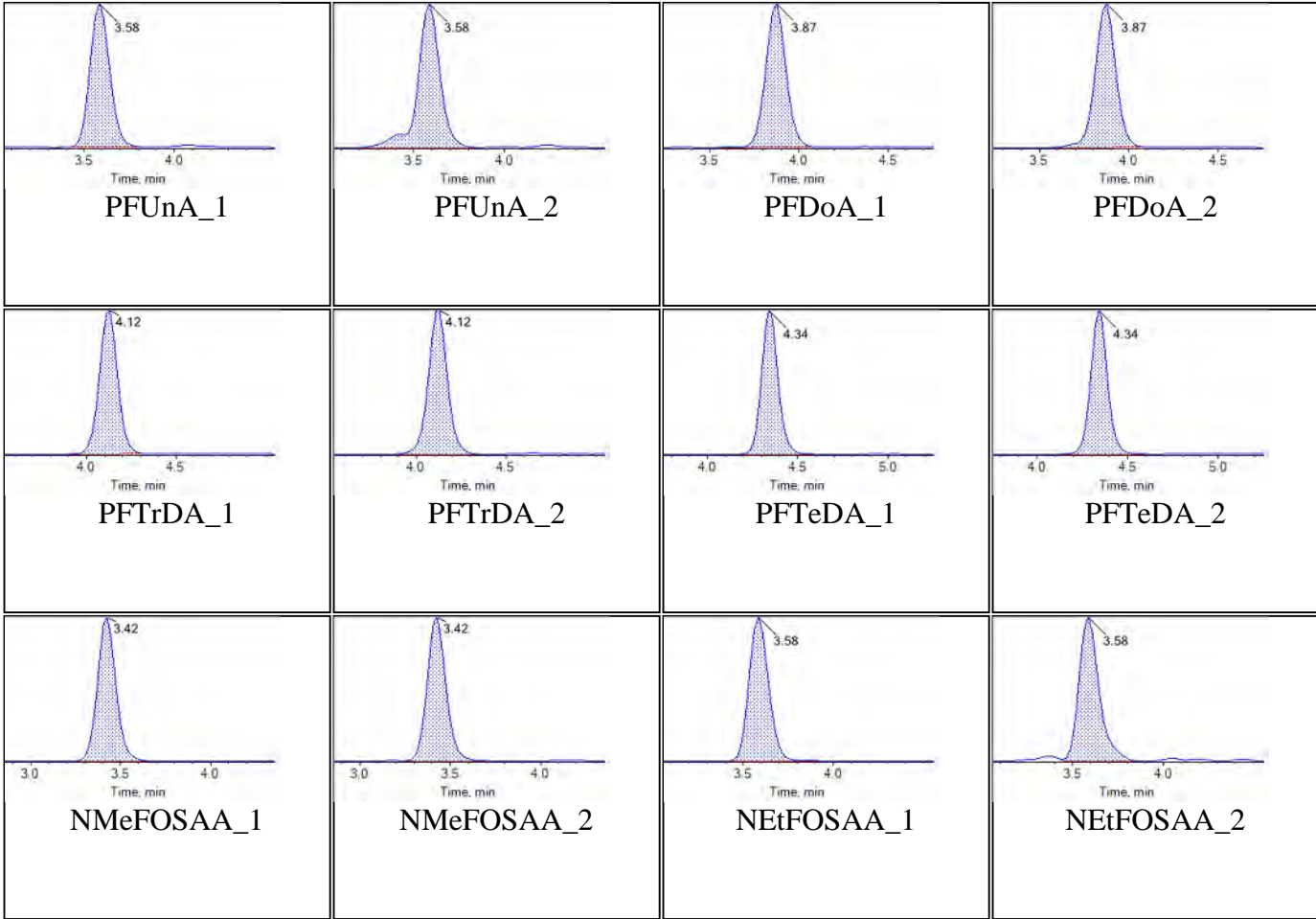
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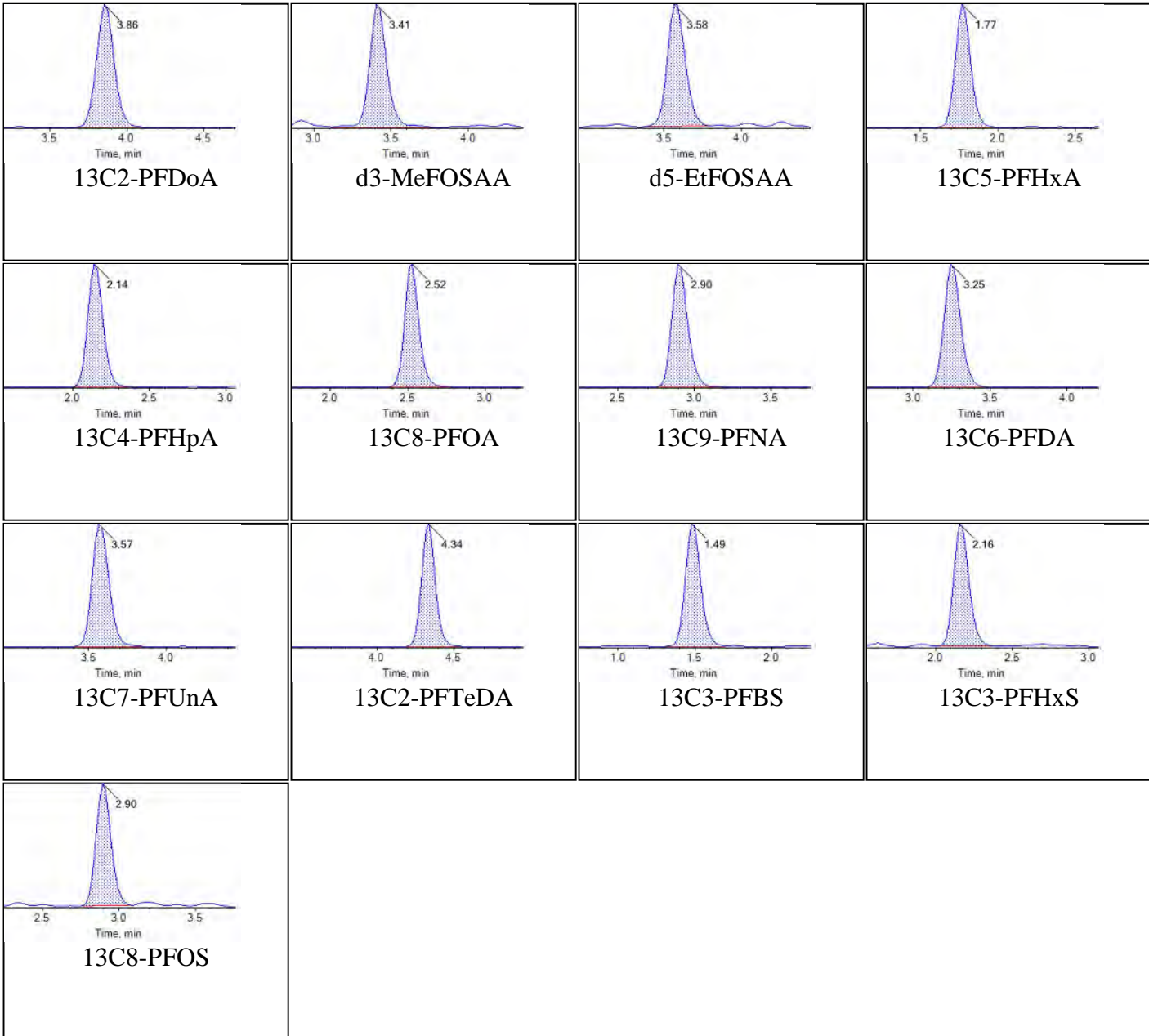




Chromatogram Report

Created with Analyst Reporter  
Printed: 05/06/2018 2:28:14 PM

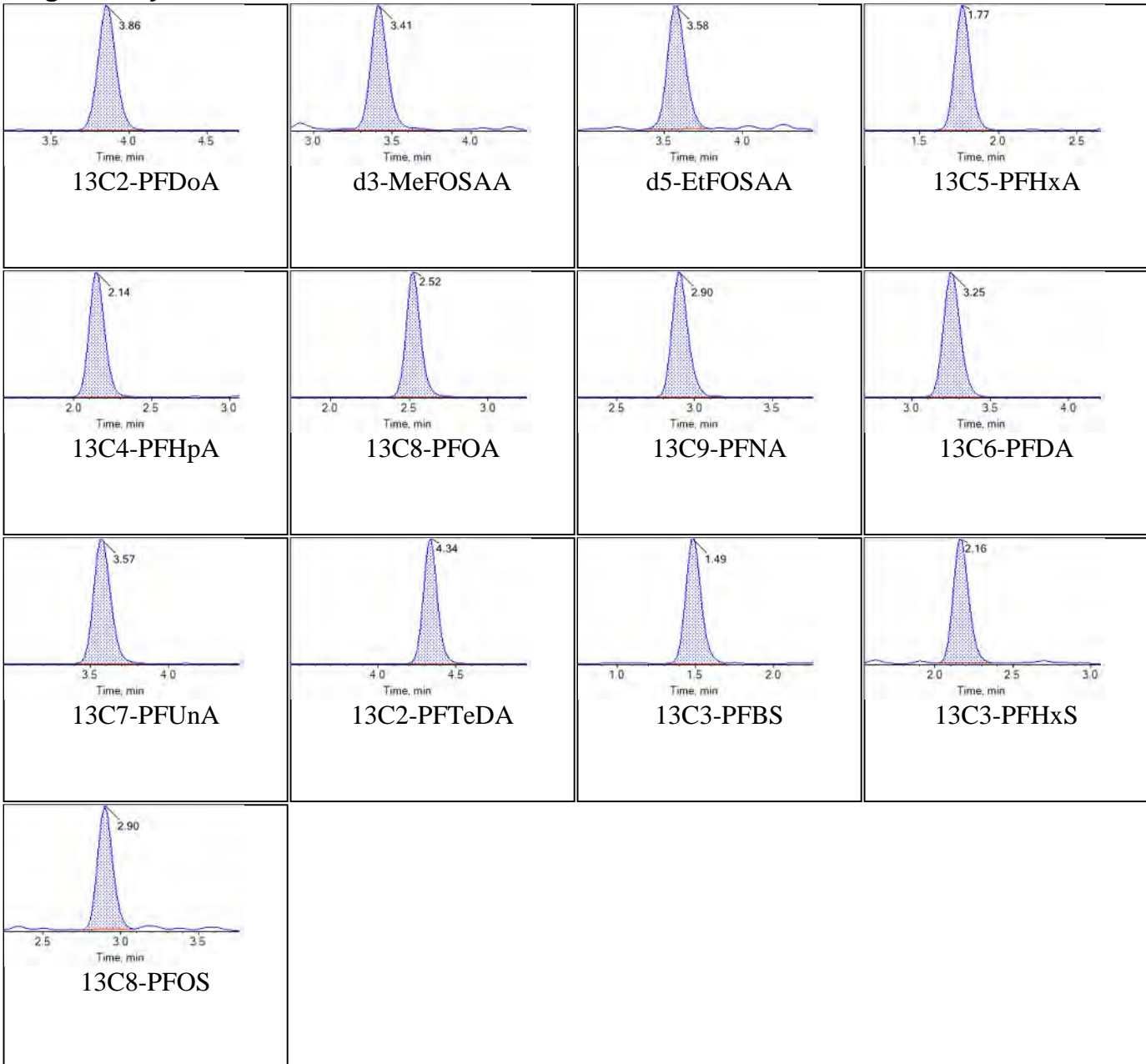


**Internal Standards:**

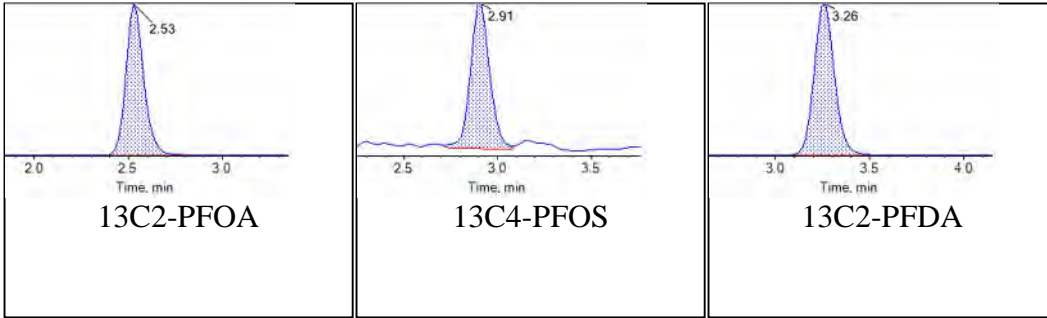
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<b>Sample ID</b>	L6	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T20:28:02	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



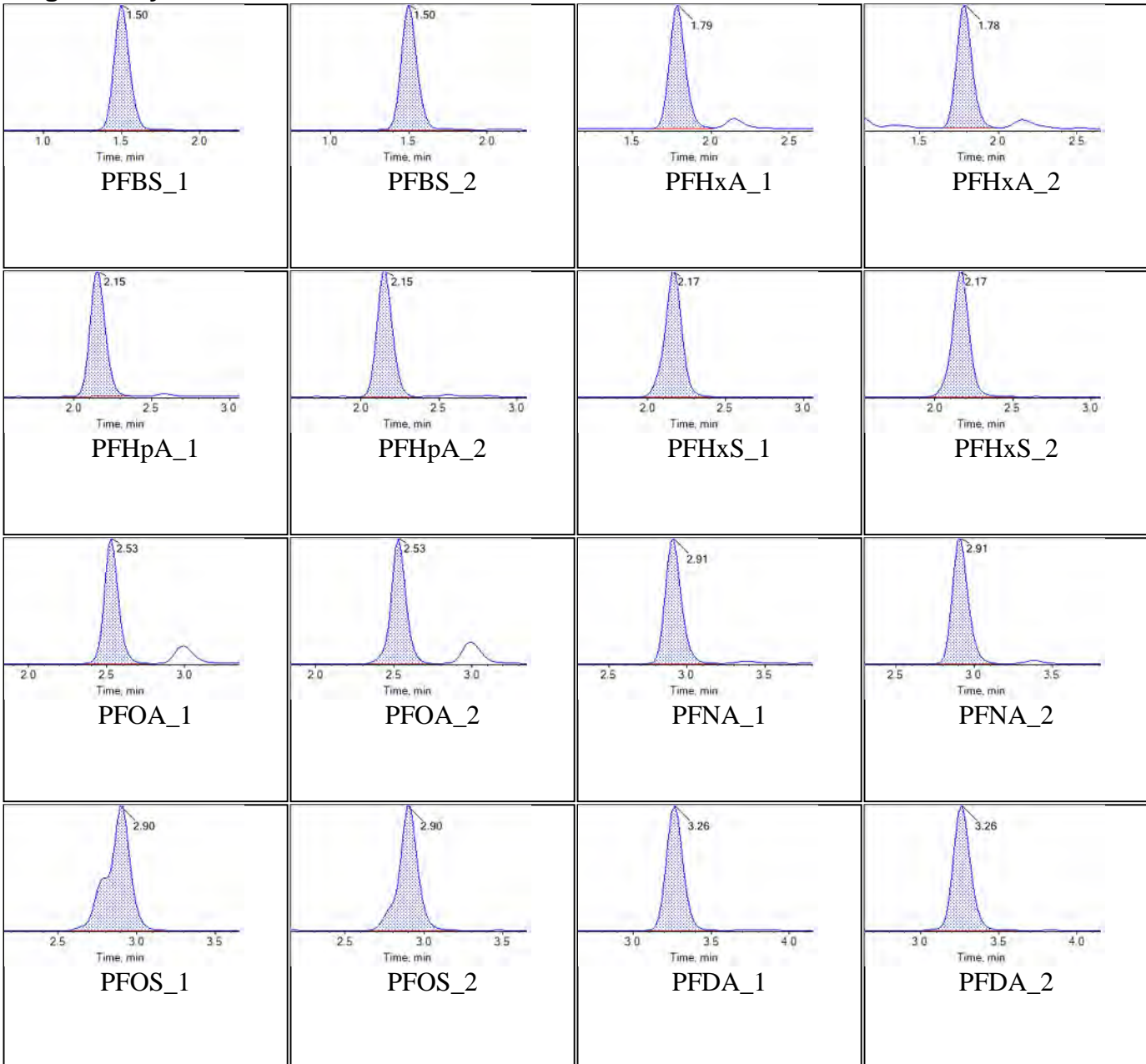
**Internal Standards:**



<b>Sample Name</b>	JV26	<b>Injection Vial</b>	8
<b>Sample ID</b>	L7	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T20:38:50	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:

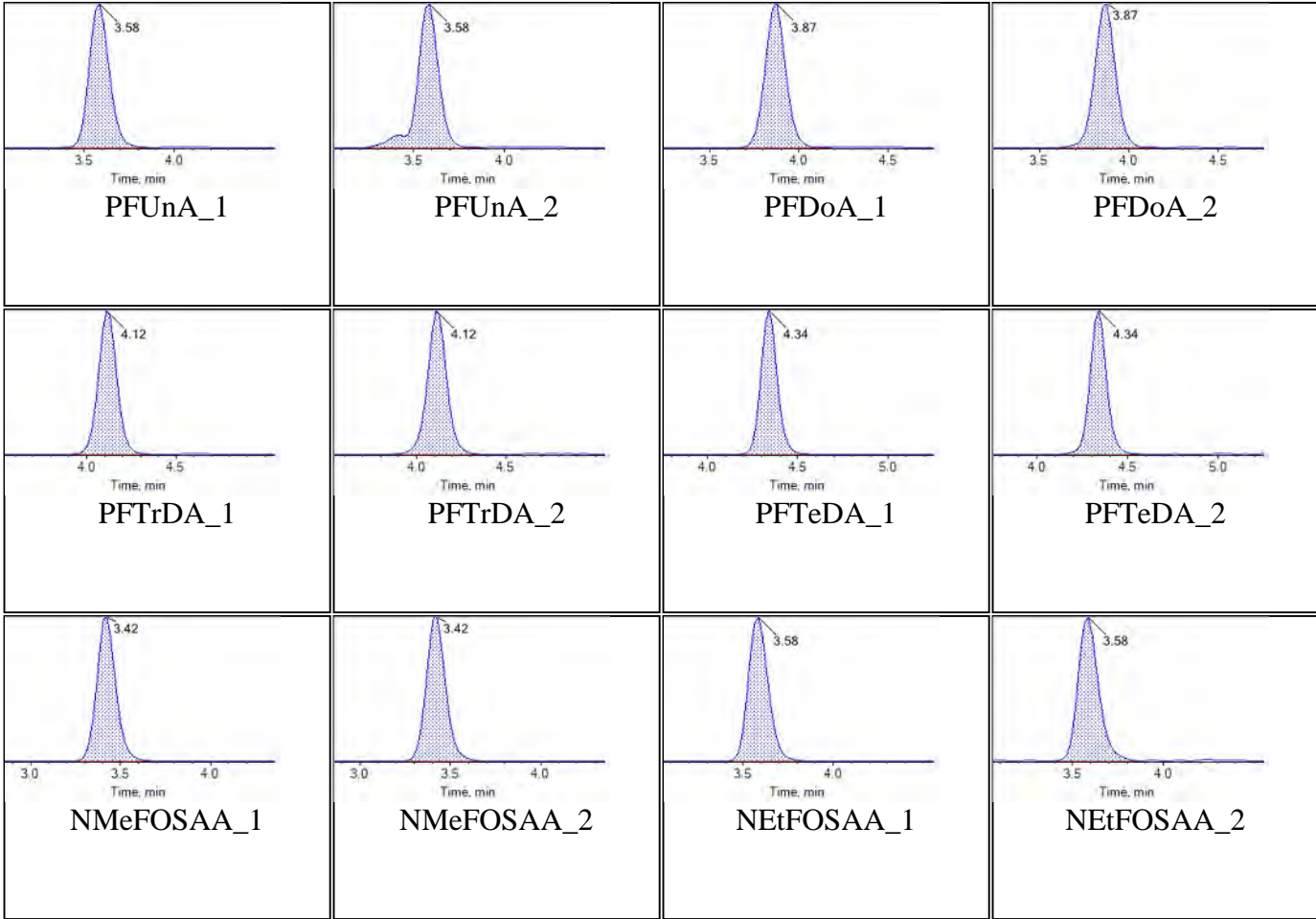


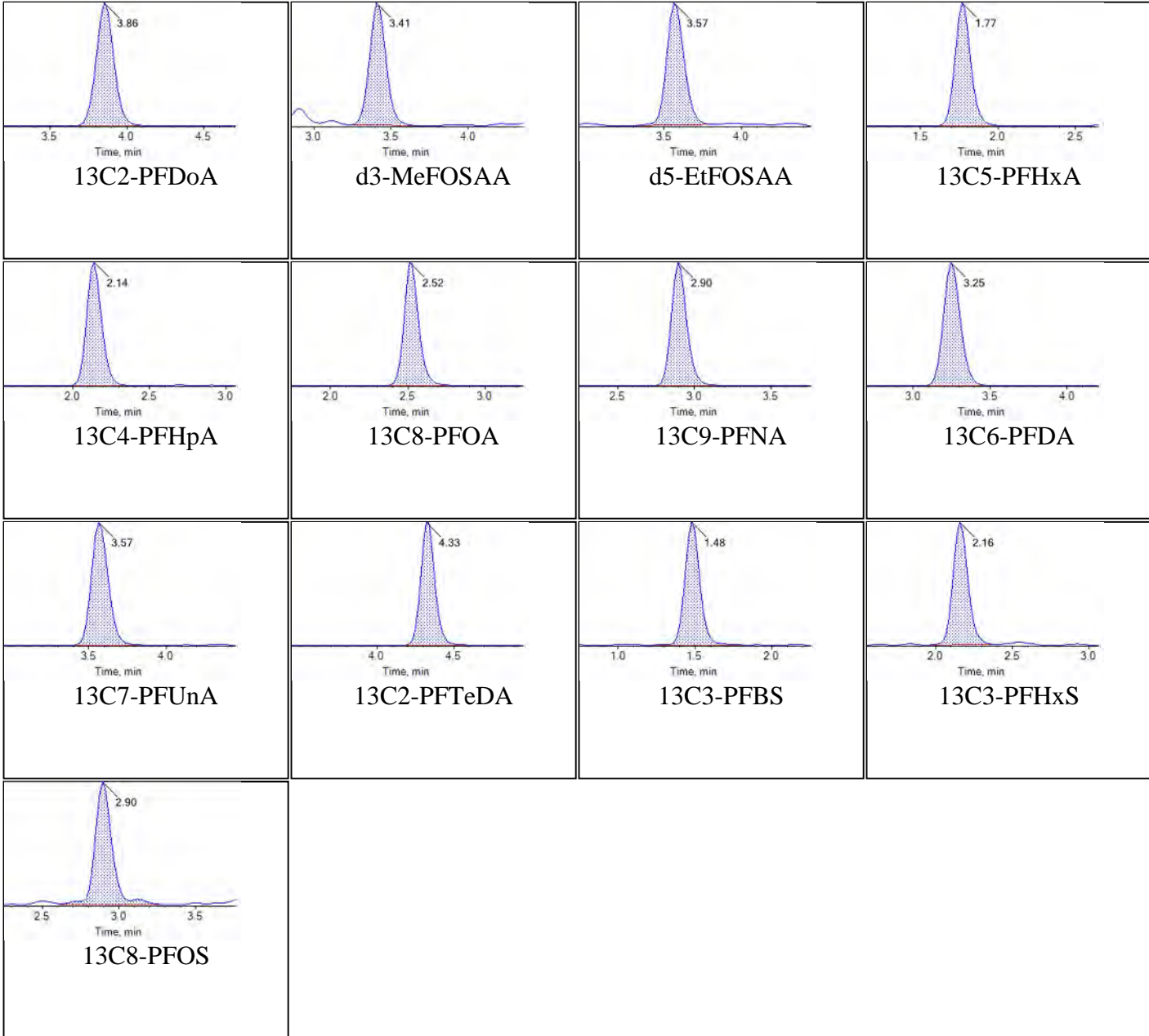




Chromatogram Report

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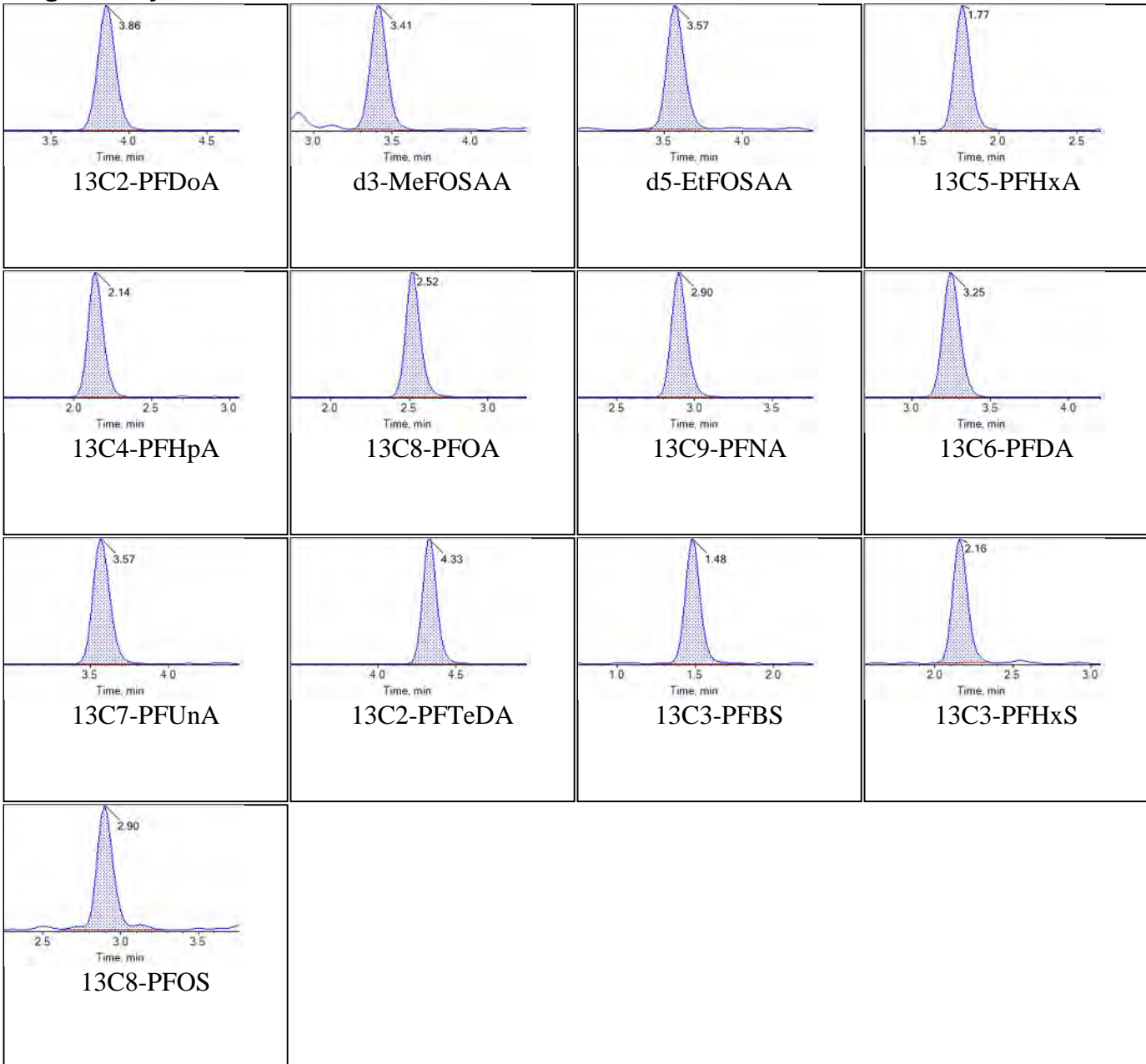
**Internal Standards:**



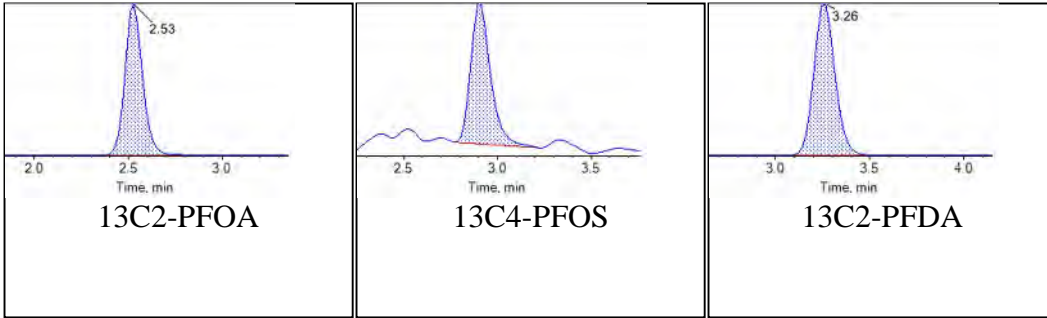
<b>Sample Name</b>	JV26	<b>Injection Vial</b>	8
<b>Sample ID</b>	L7	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T20:38:50	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



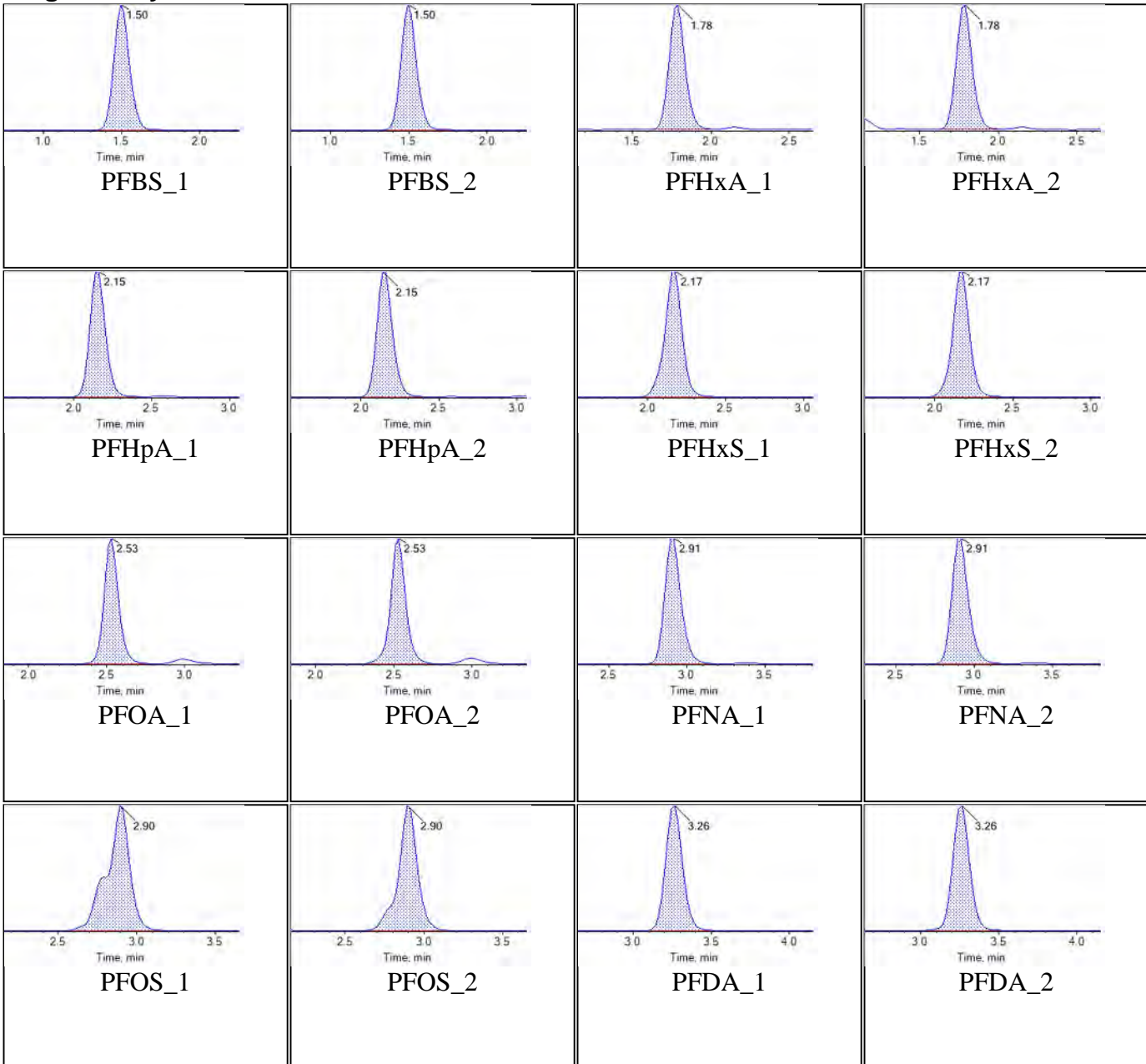
**Internal Standards:**



<b>Sample Name</b>	JV27	<b>Injection Vial</b>	9
<b>Sample ID</b>	L8	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T20:49:37	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

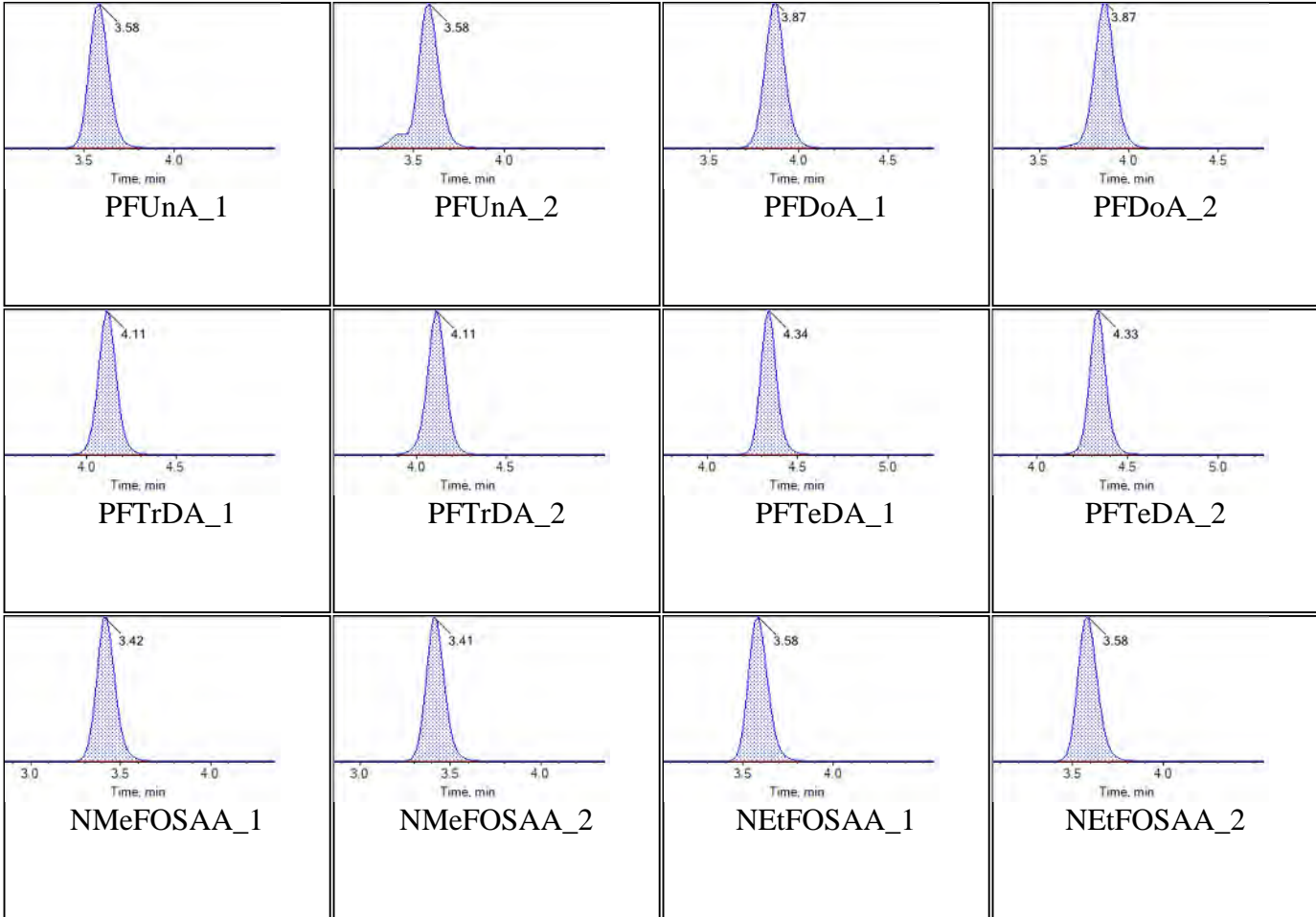
### Target Analytes:

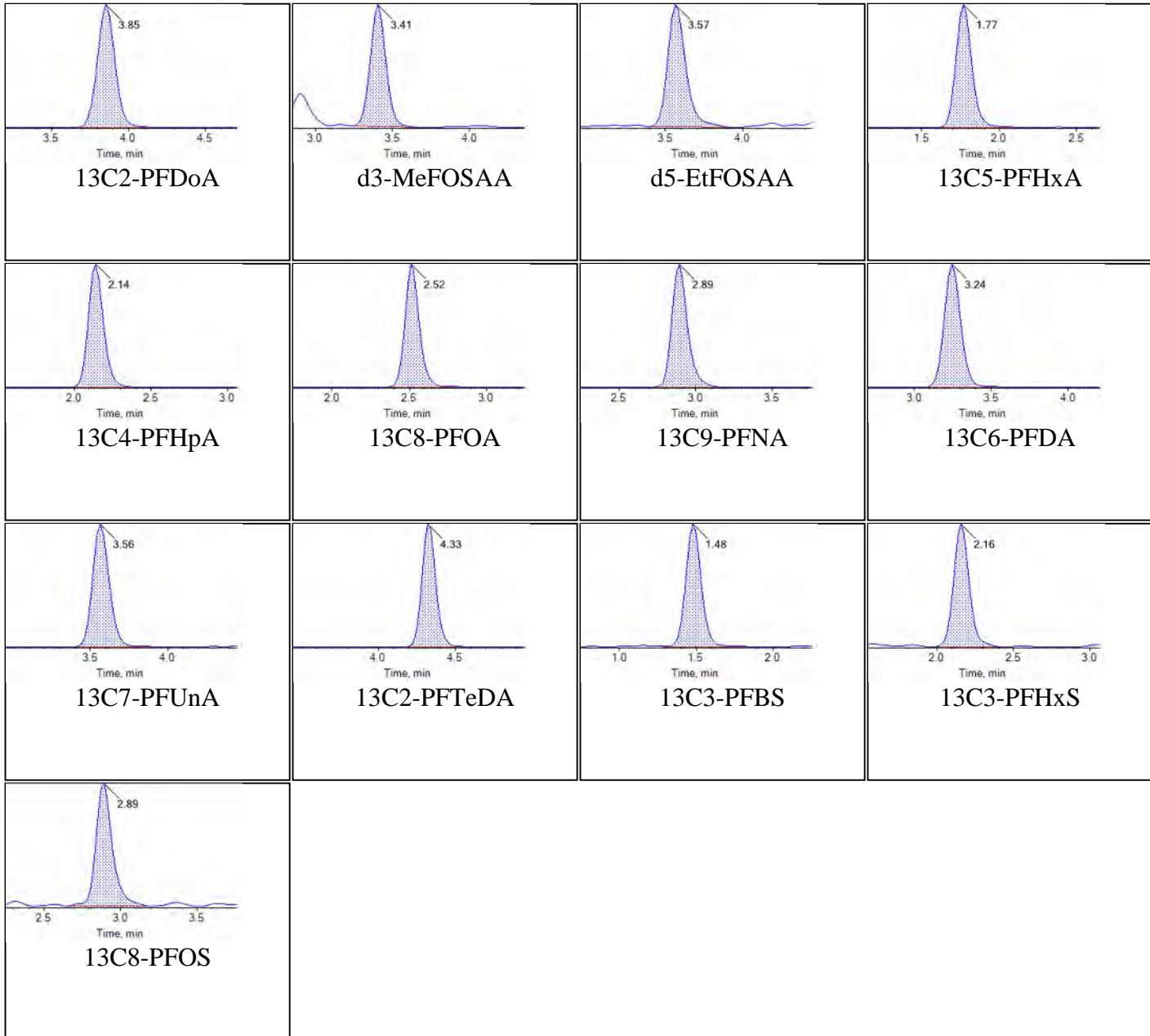




Chromatogram Report

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Printed: 05/06/2018 2:28:22 PM

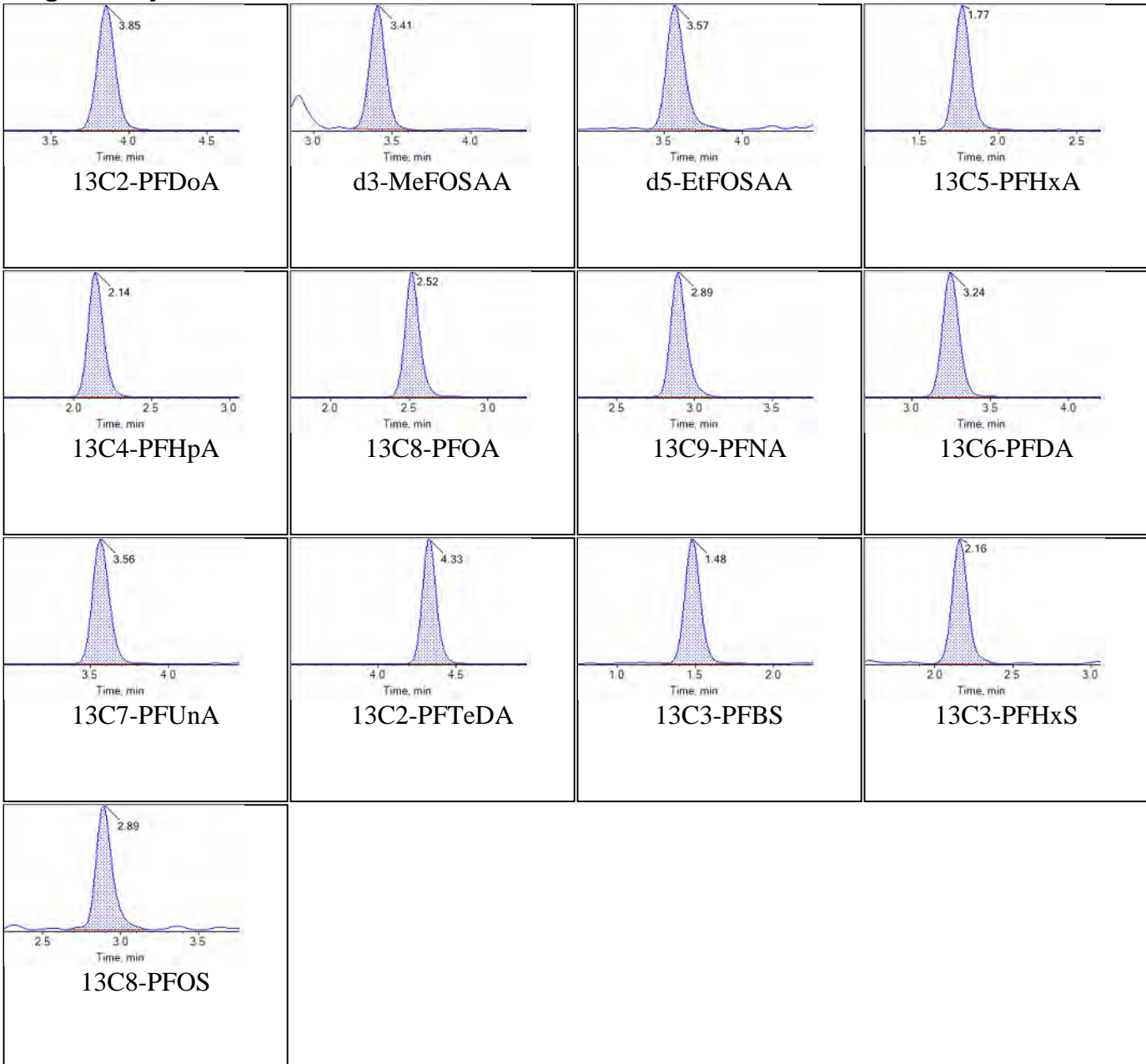


**Internal Standards:**

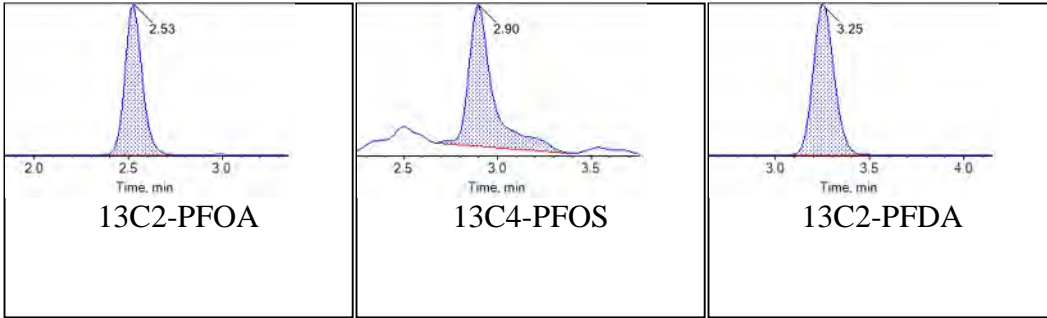
<b>Sample Name</b>	JV27	<b>Injection Vial</b>	9
<b>Sample ID</b>	L8	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T20:49:37	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



**Internal Standards:**

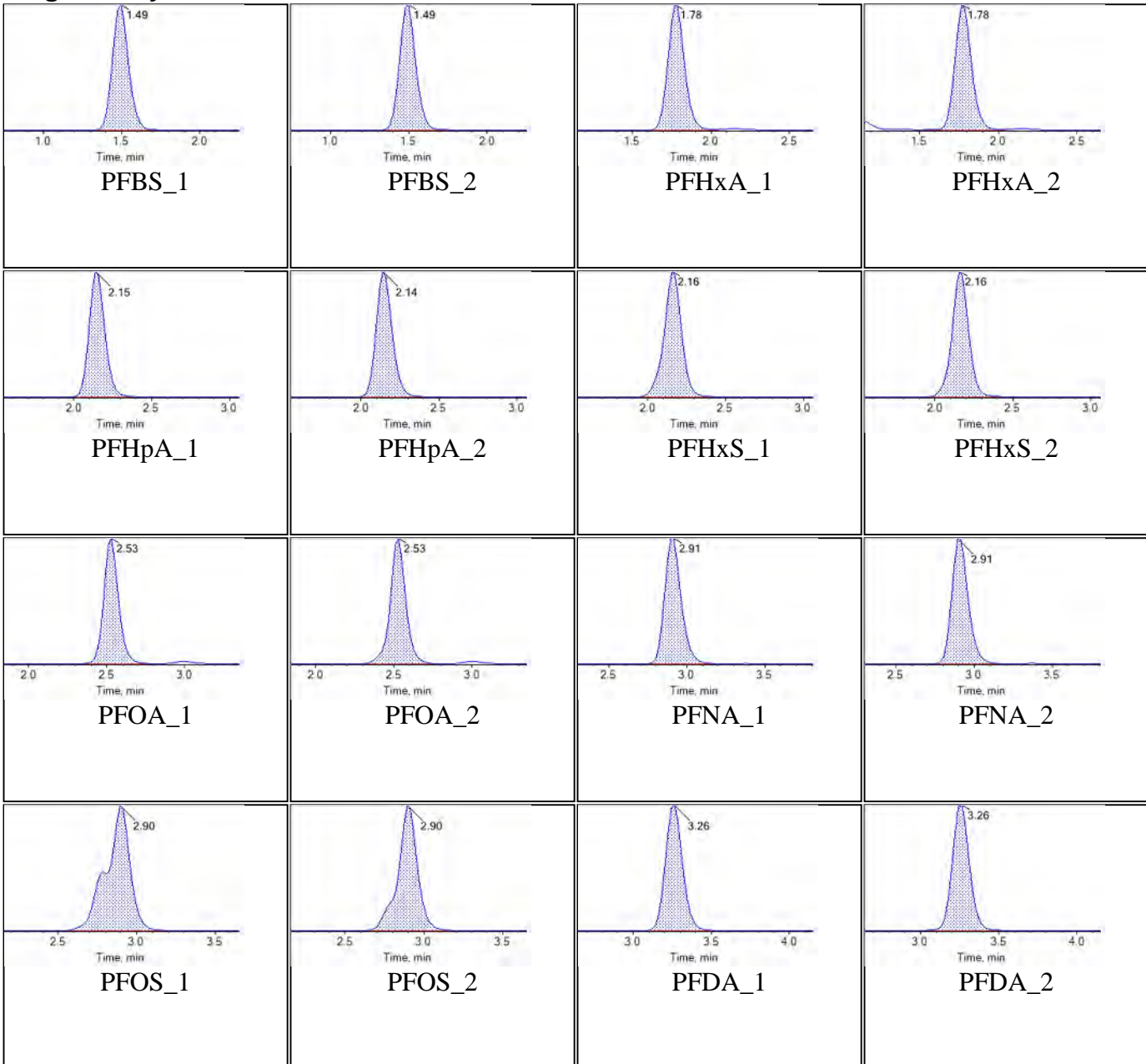




<b>Sample Name</b>	JV28	<b>Injection Vial</b>	10
<b>Sample ID</b>	L9	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T21:00:25	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:

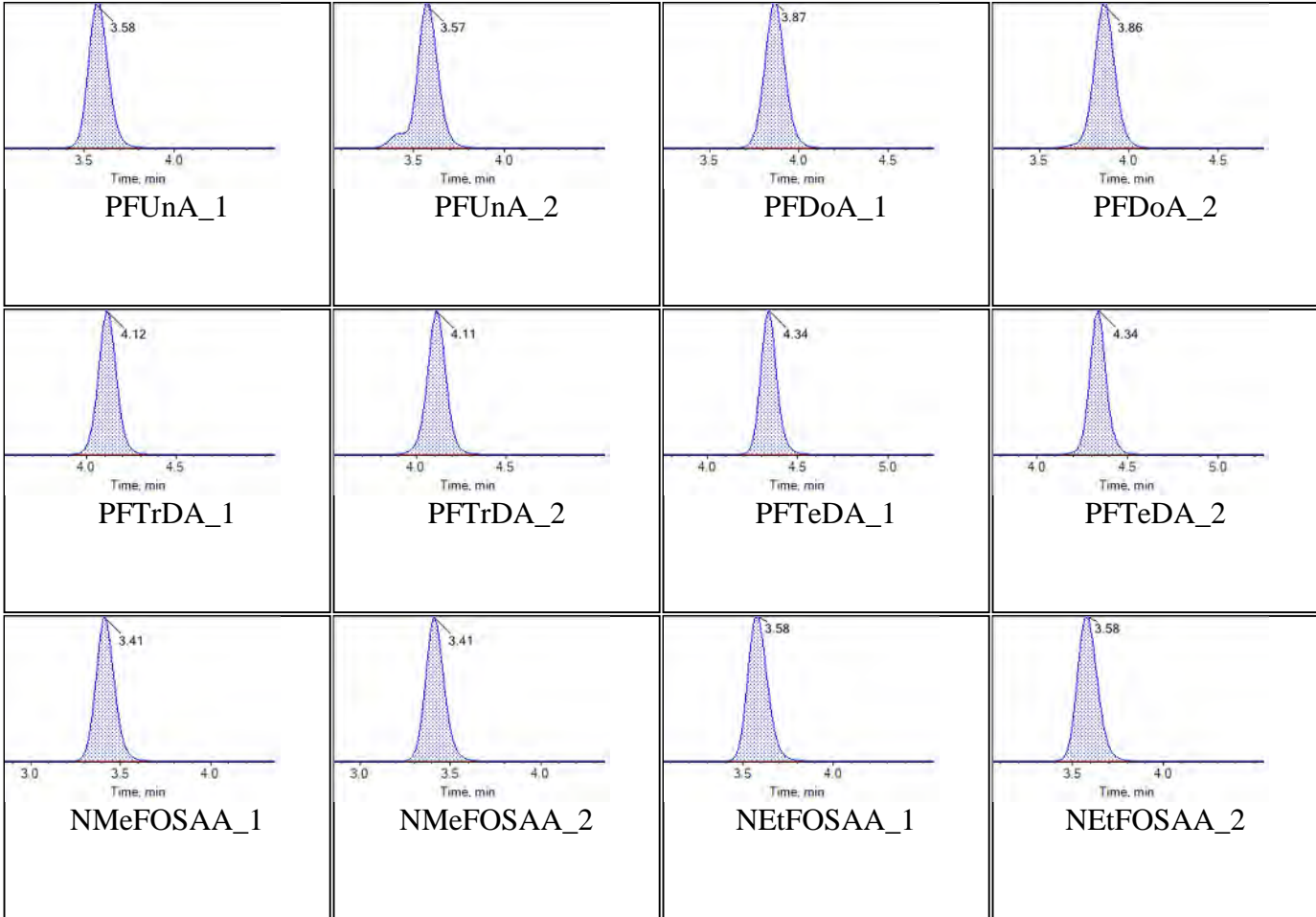


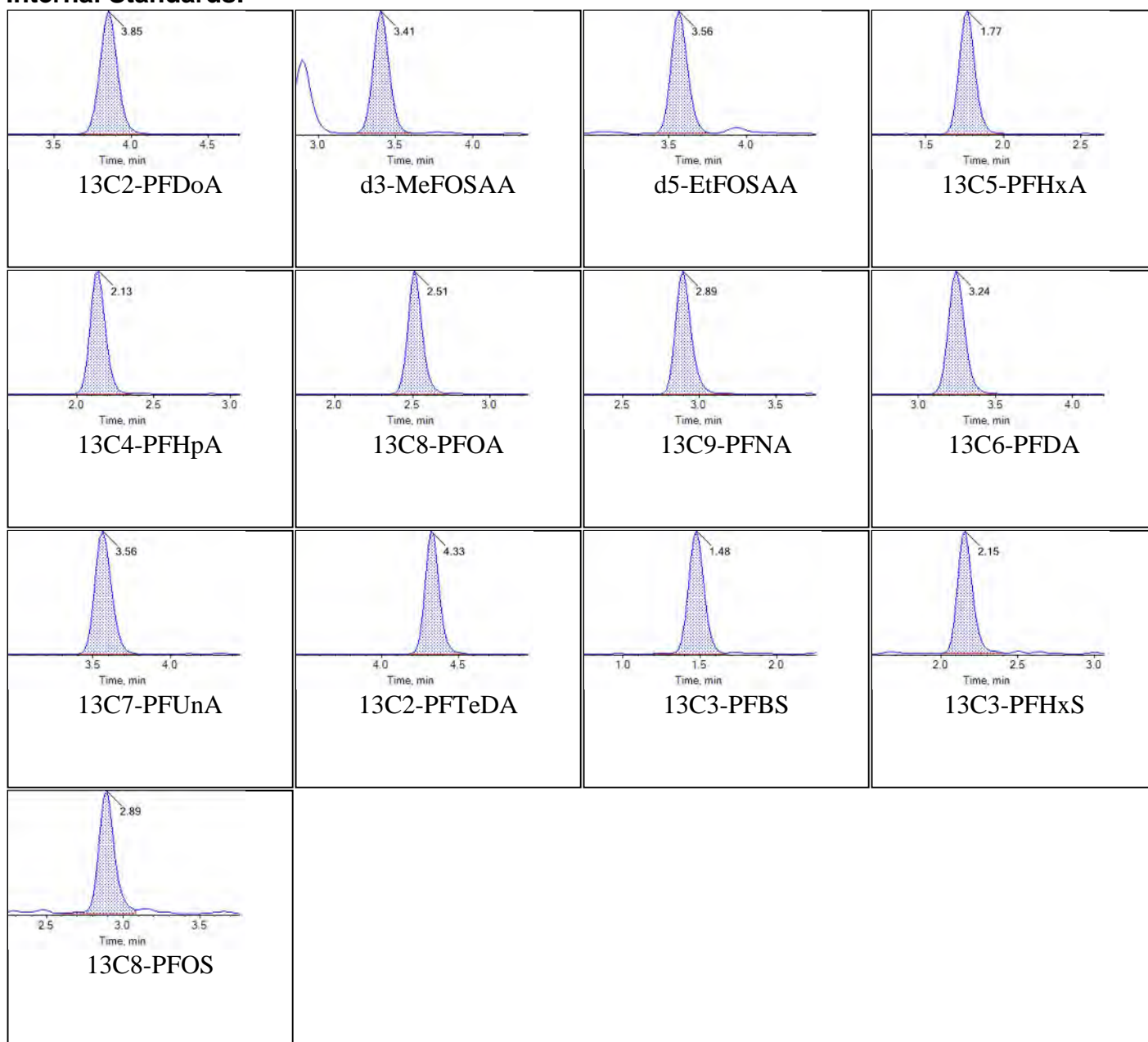




Chromatogram Report

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Printed: 05/06/2018 2:28:25 PM

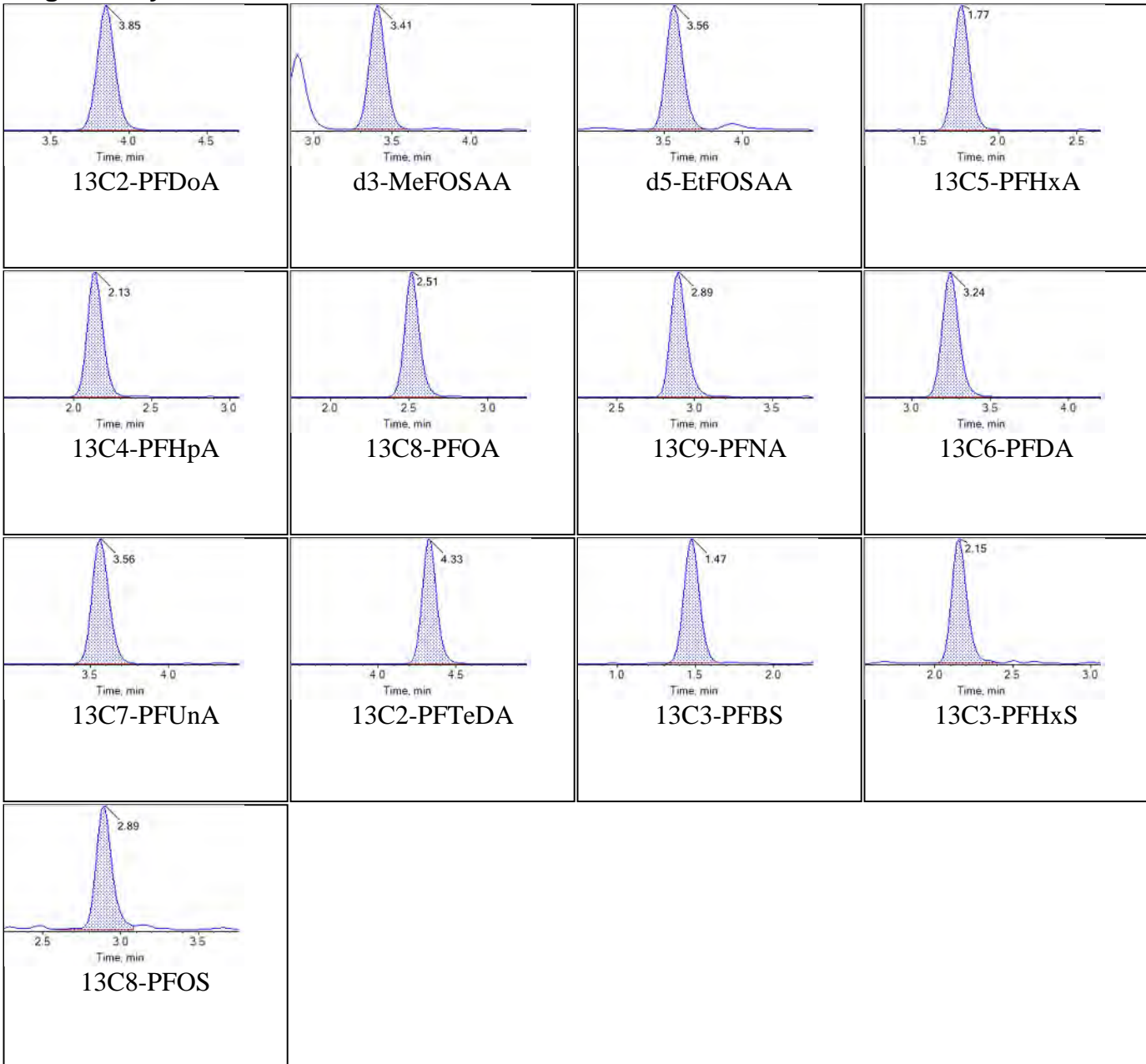


**Internal Standards:**

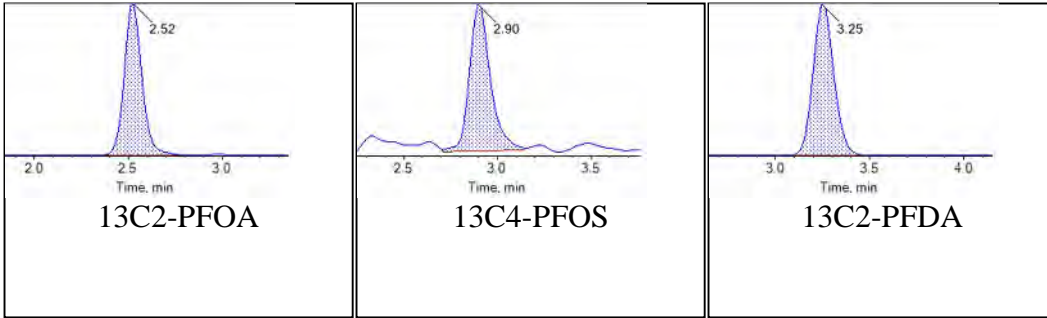
<b>Sample Name</b>	JV28	<b>Injection Vial</b>	10
<b>Sample ID</b>	L9	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Standard	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T21:00:25	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



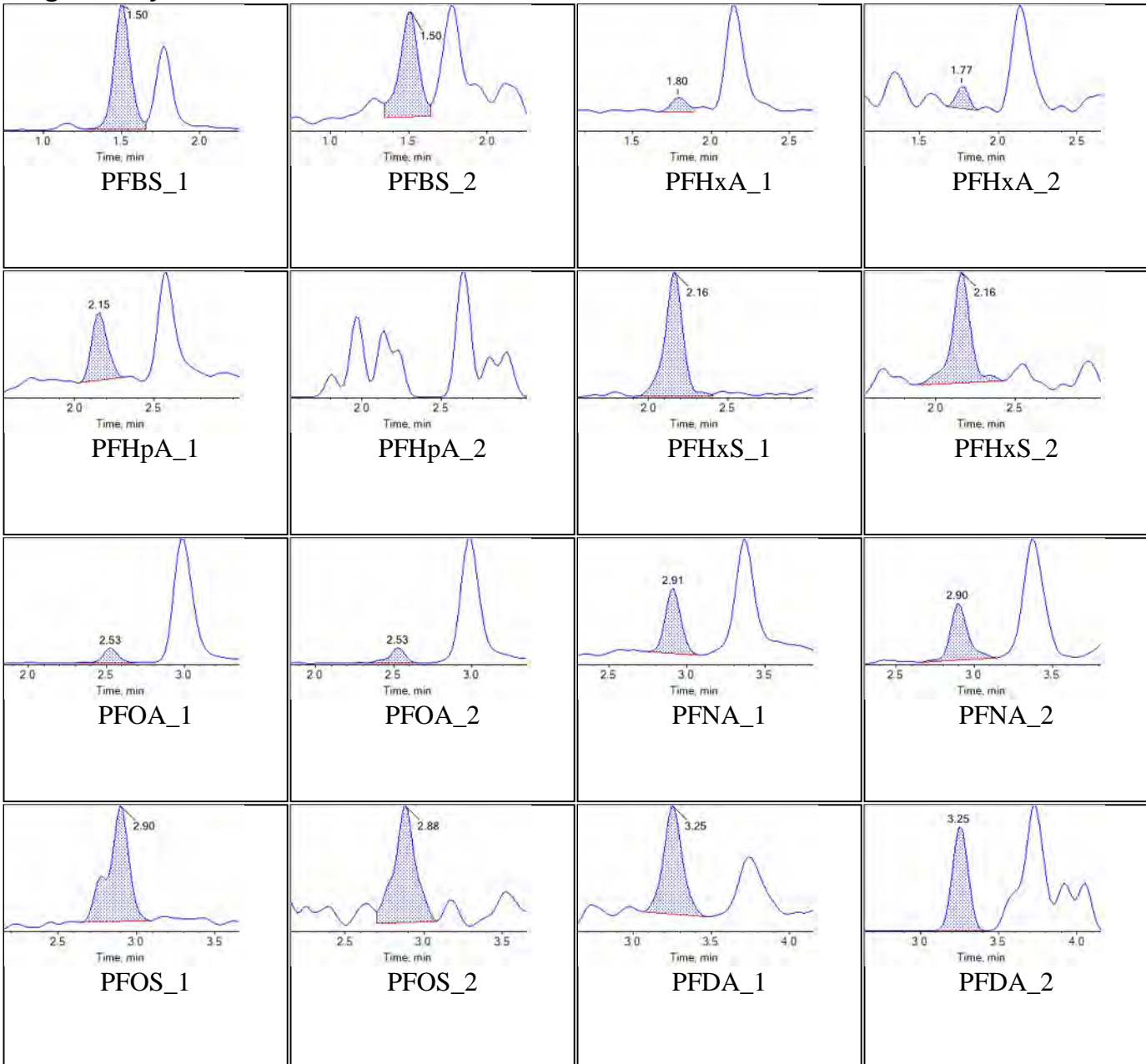
**Internal Standards:**



<b>Sample Name</b>	JV05 IB	<b>Injection Vial</b>	11
<b>Sample ID</b>	Instrument Blank	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T21:11:14	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

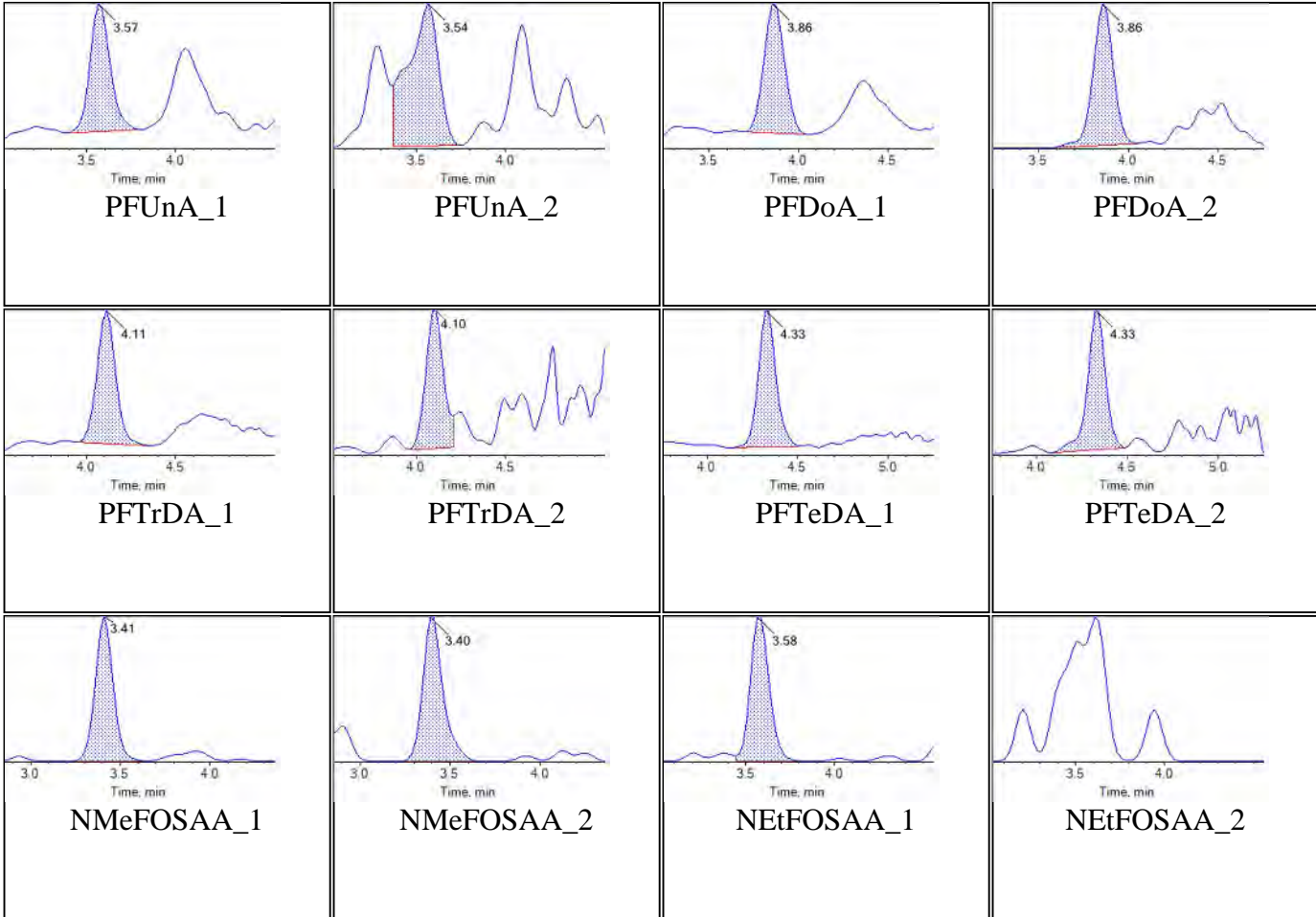
### Target Analytes:



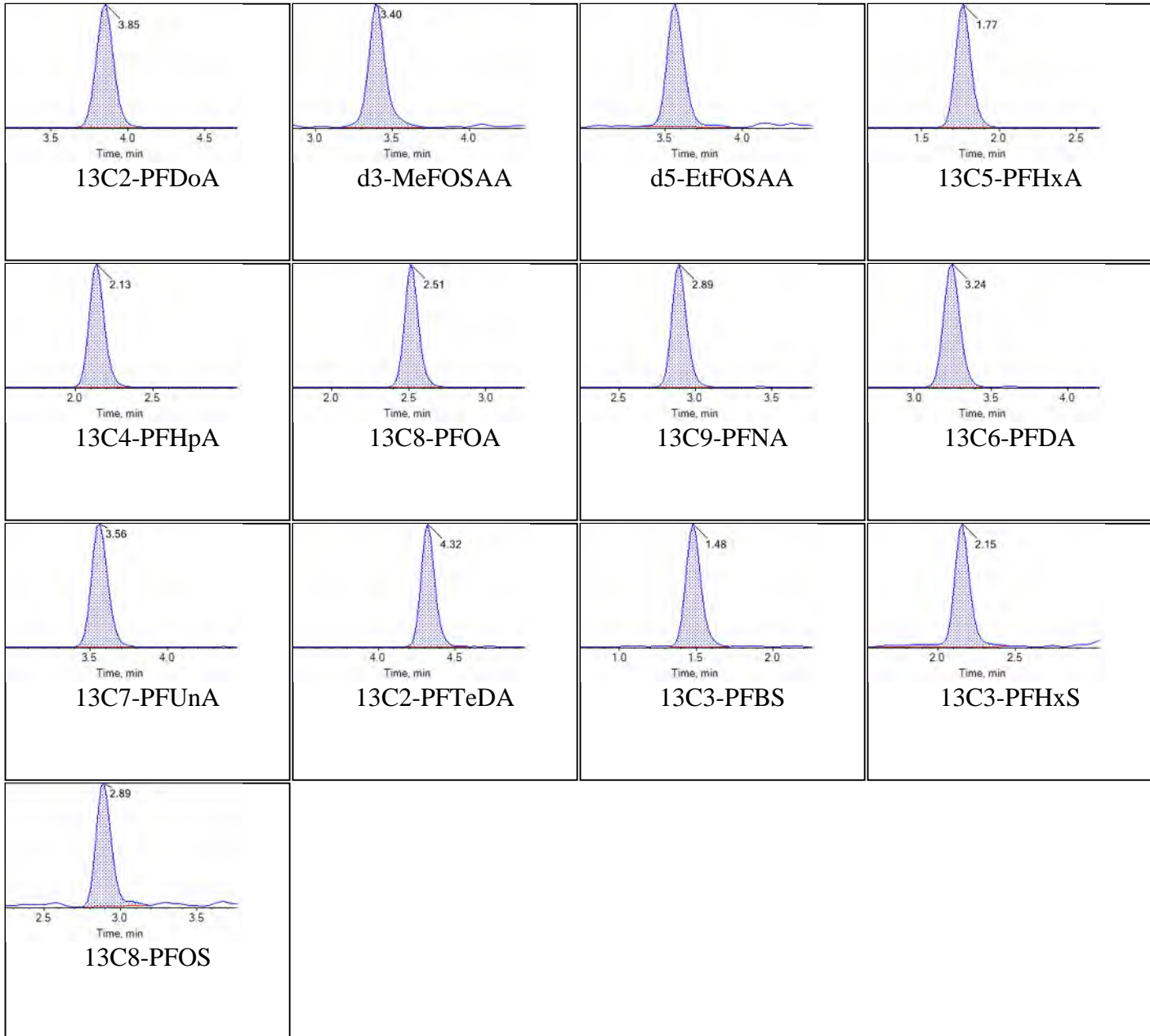


Chromatogram Report

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Printed: 05/06/2018 2:28:29 PM



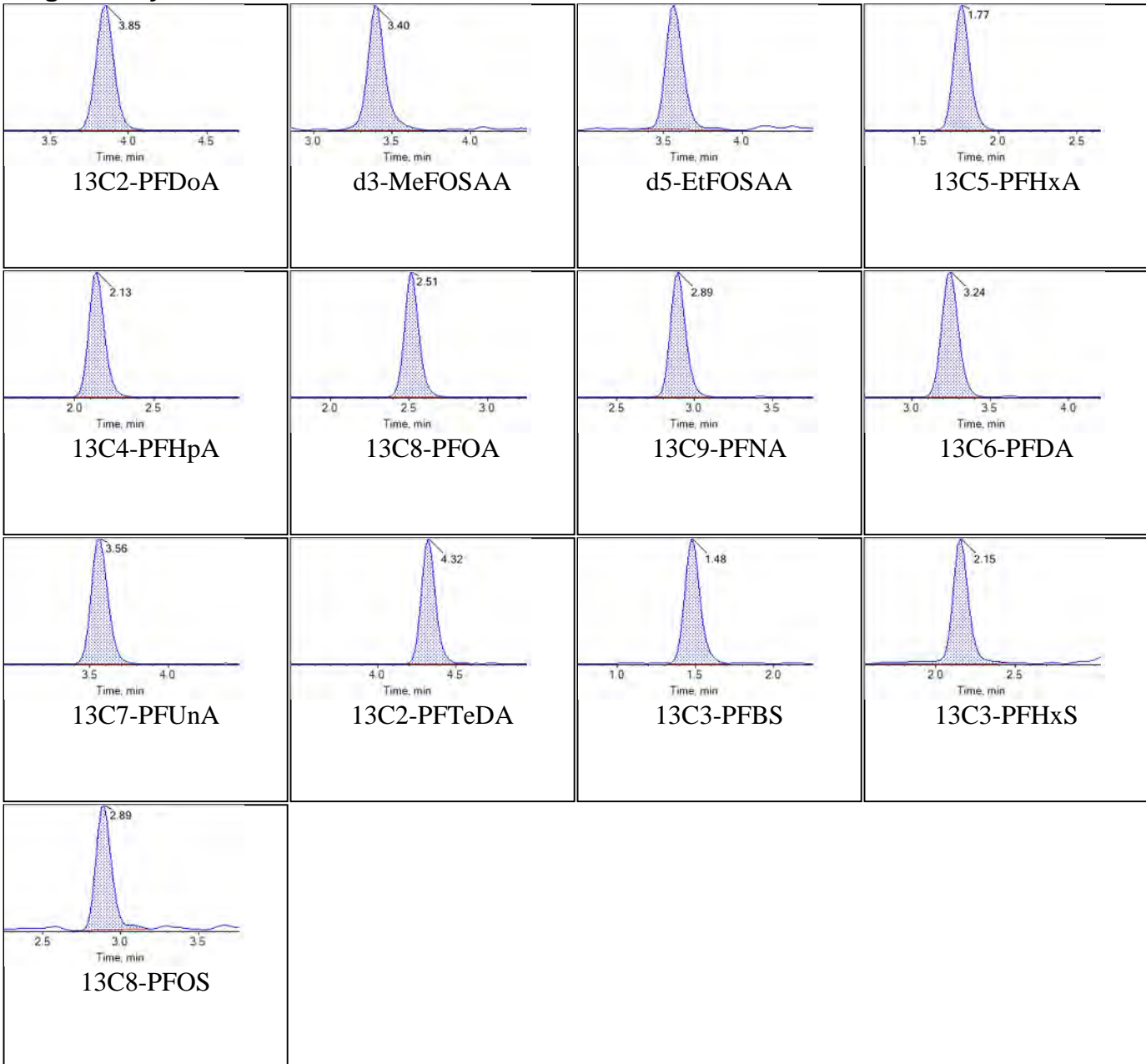


**Internal Standards:**

<b>Sample Name</b>	JV05 IB	<b>Injection Vial</b>	11
<b>Sample ID</b>	Instrument Blank	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T21:11:14	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

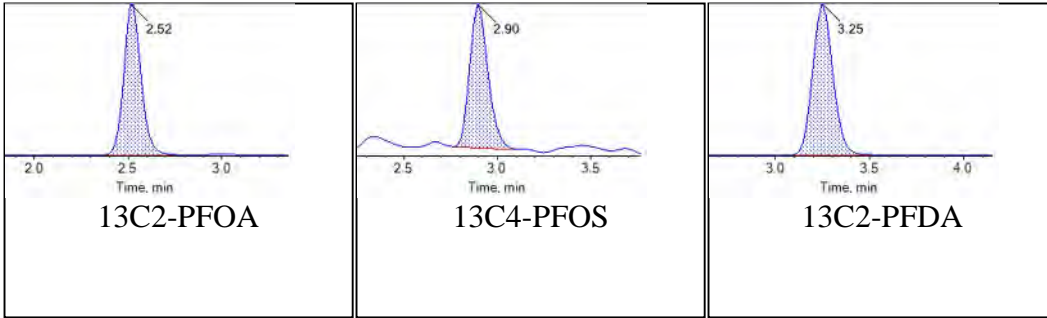
## Chromatograms

### Target Analytes:





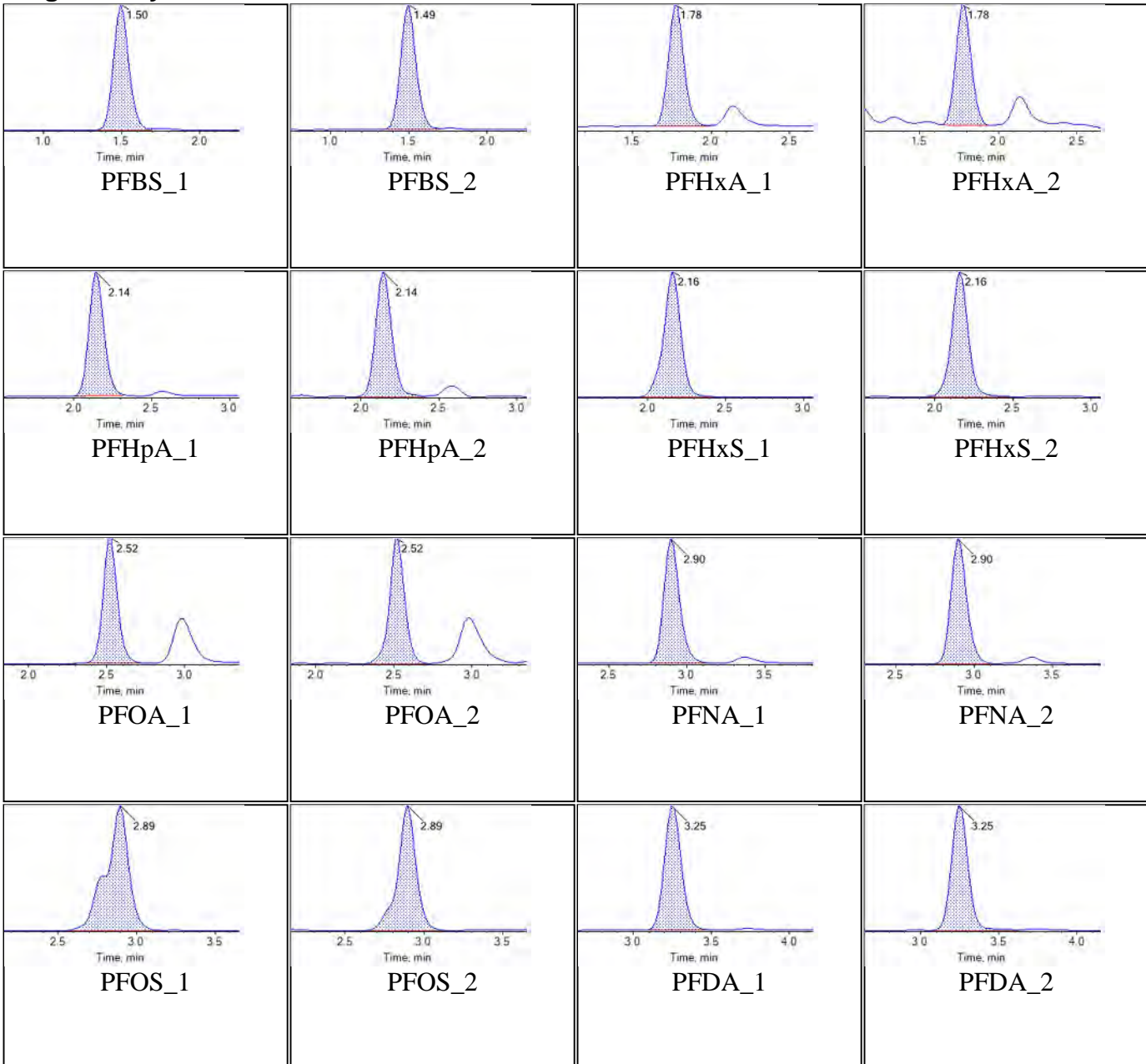
**Internal Standards:**



<b>Sample Name</b>	JW32 ICC	<b>Injection Vial</b>	12
<b>Sample ID</b>	ICC	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T21:22:01	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

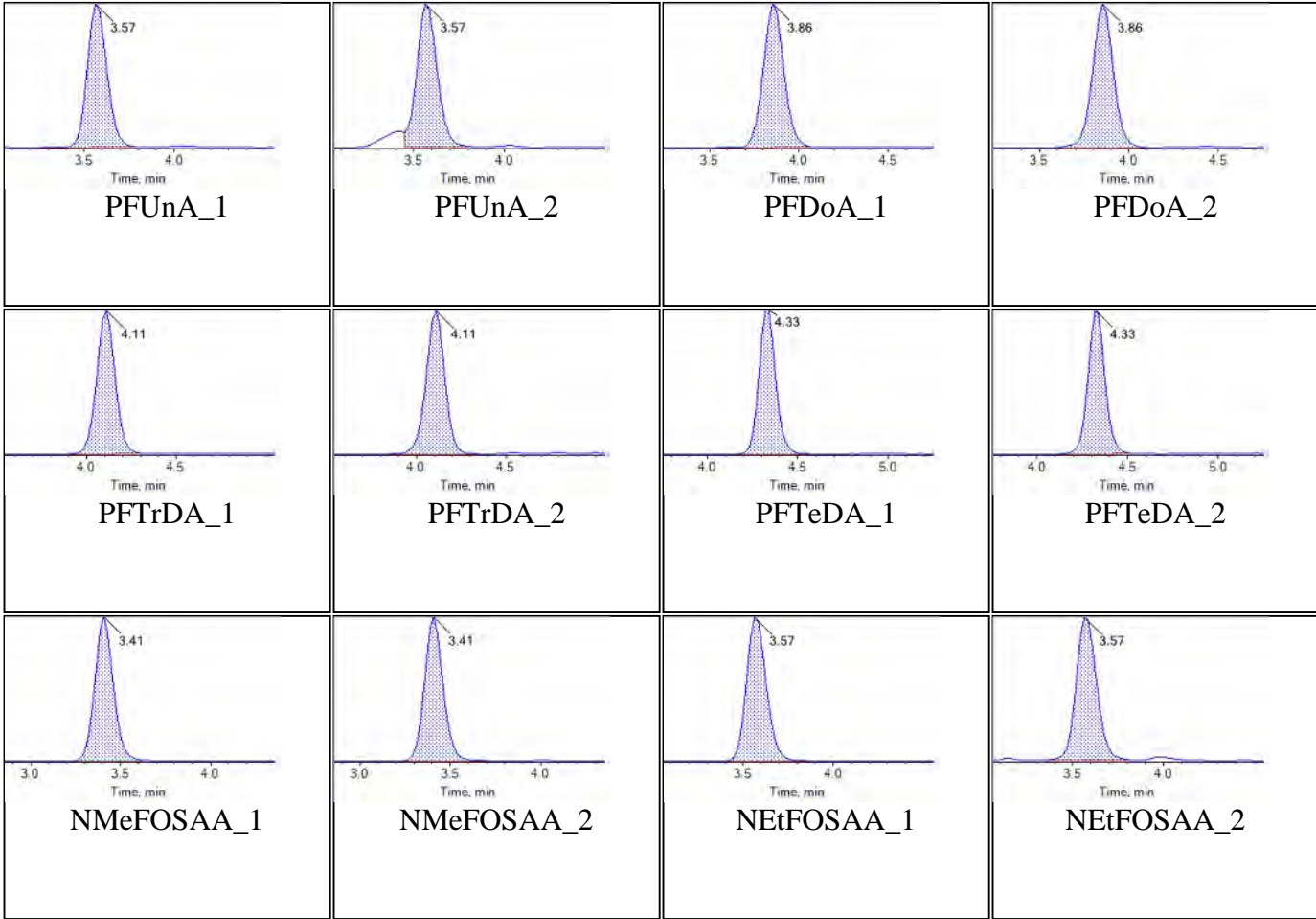
### Target Analytes:

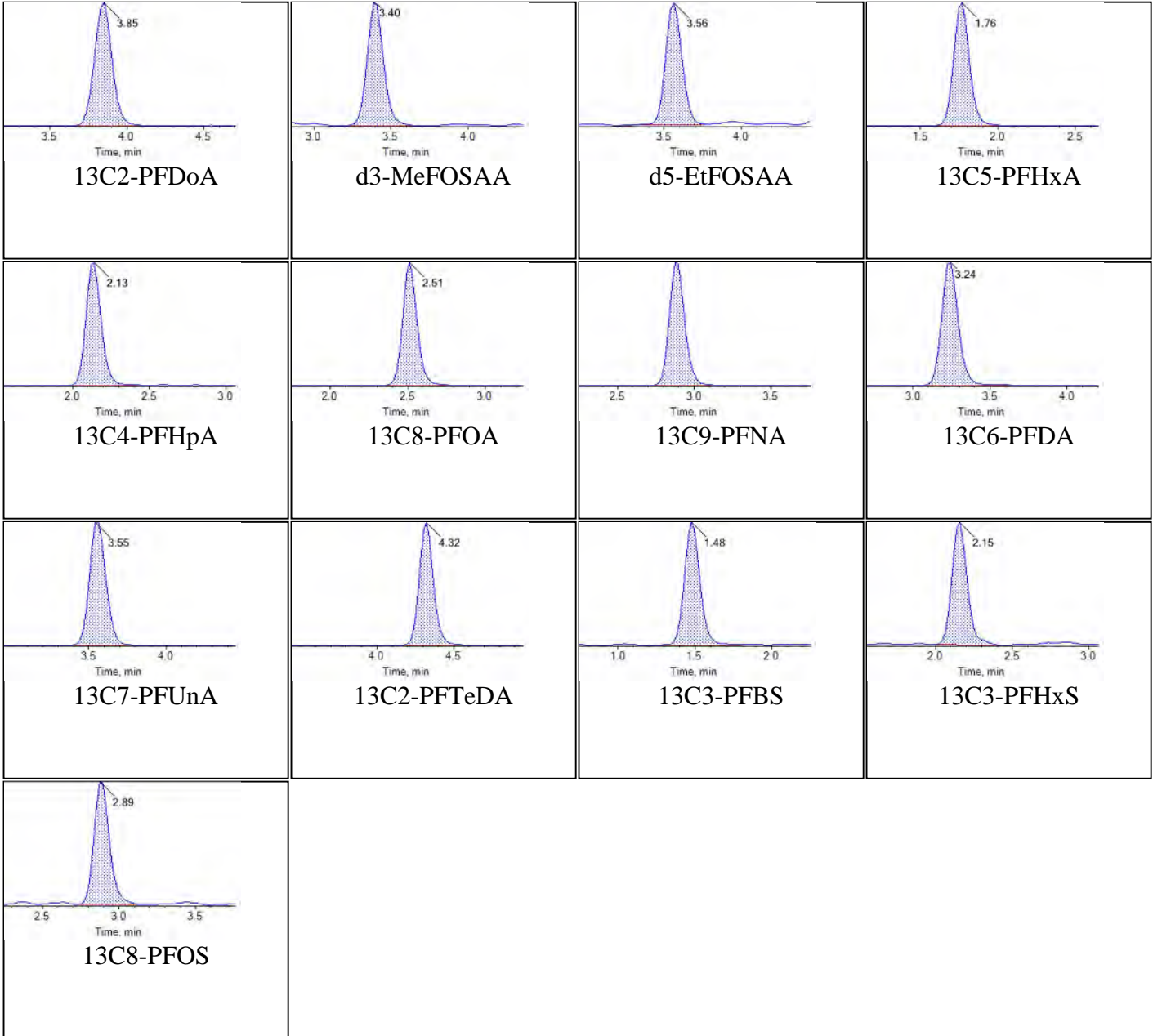




Chromatogram Report

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Printed: 05/06/2018 2:28:33 PM

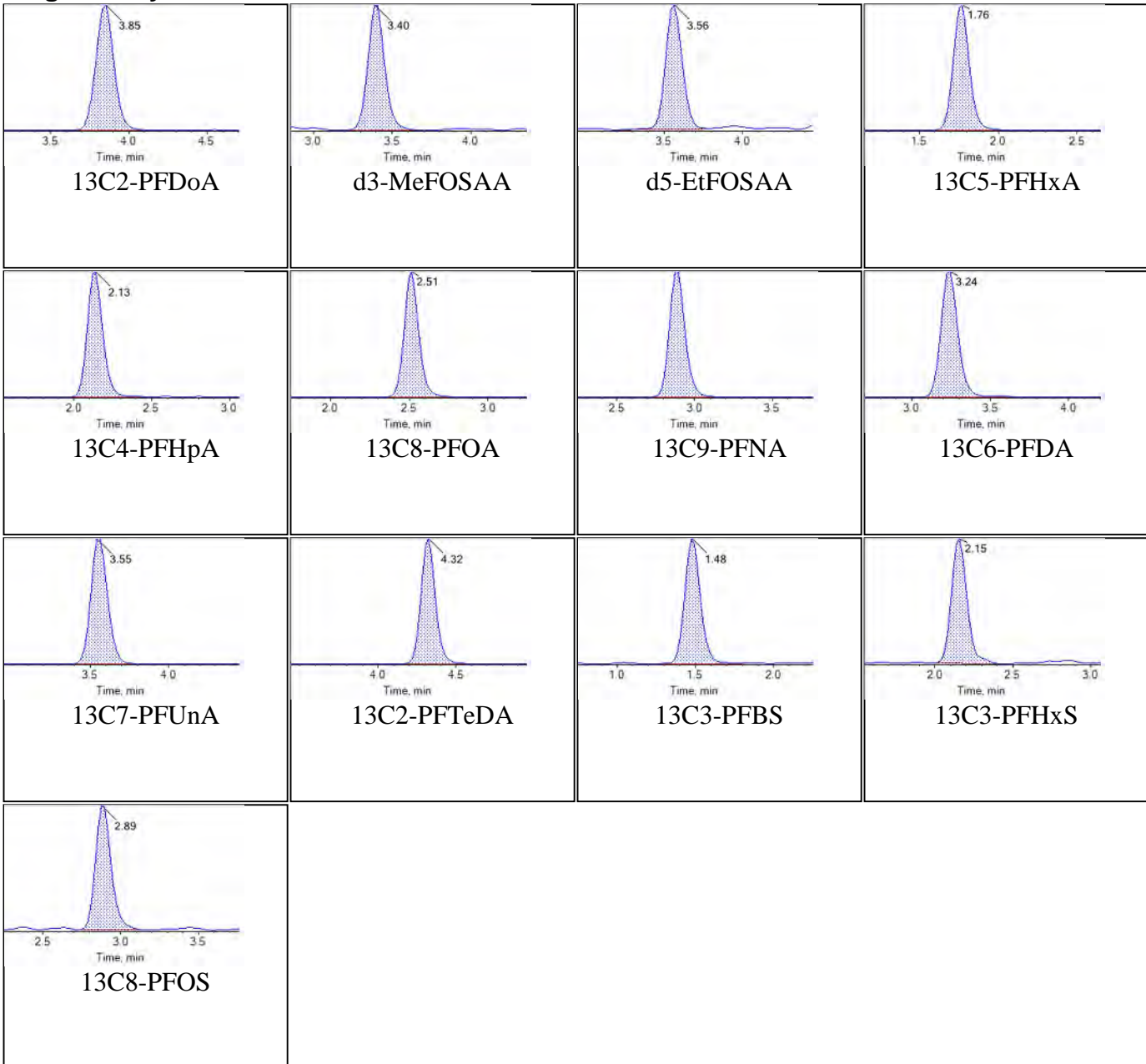


**Internal Standards:**

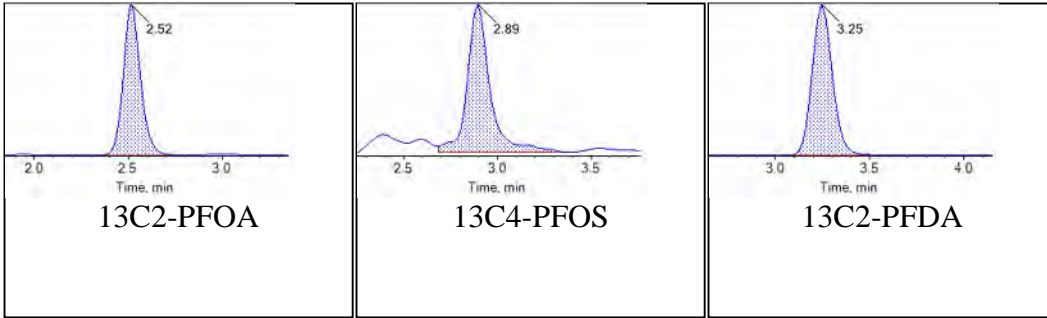
<b>Sample Name</b>	JW32 ICC	<b>Injection Vial</b>	12
<b>Sample ID</b>	ICC	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T21:22:01	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



**Internal Standards:**

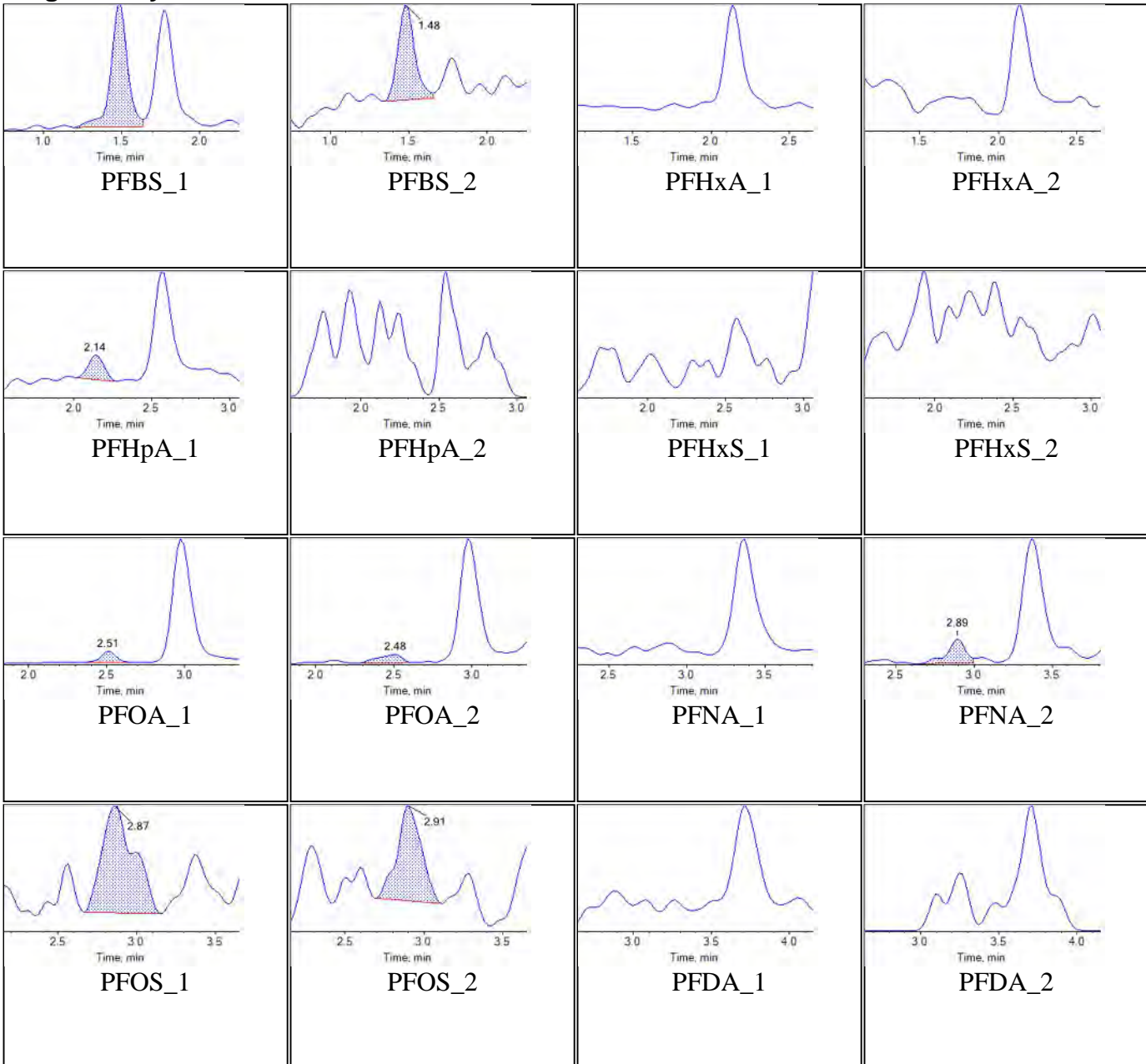




<b>Sample Name</b>	CQ855PB-FS(3)	<b>Injection Vial</b>	19
<b>Sample ID</b>	Procedural Blank	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T22:59:08	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

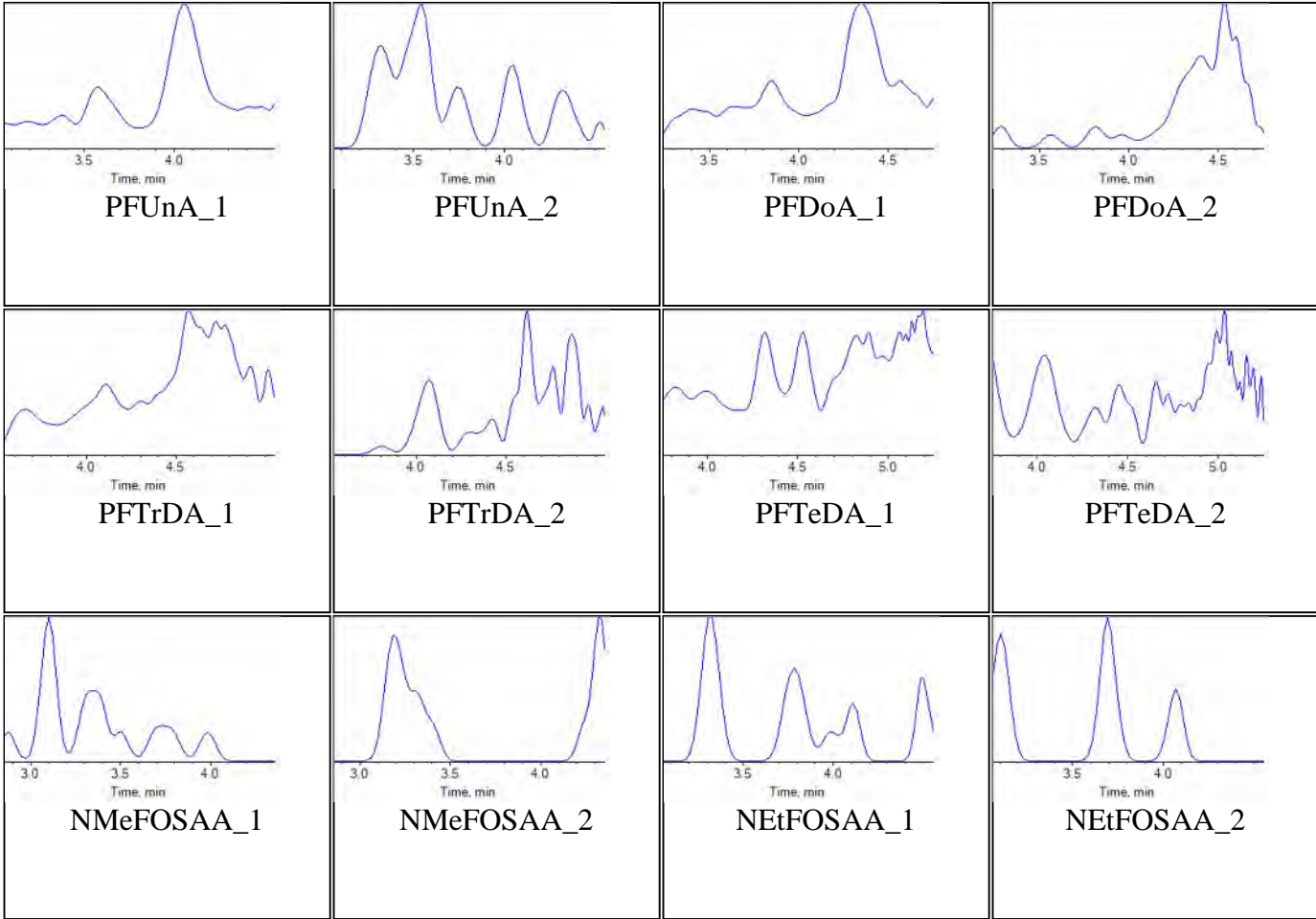
### Target Analytes:



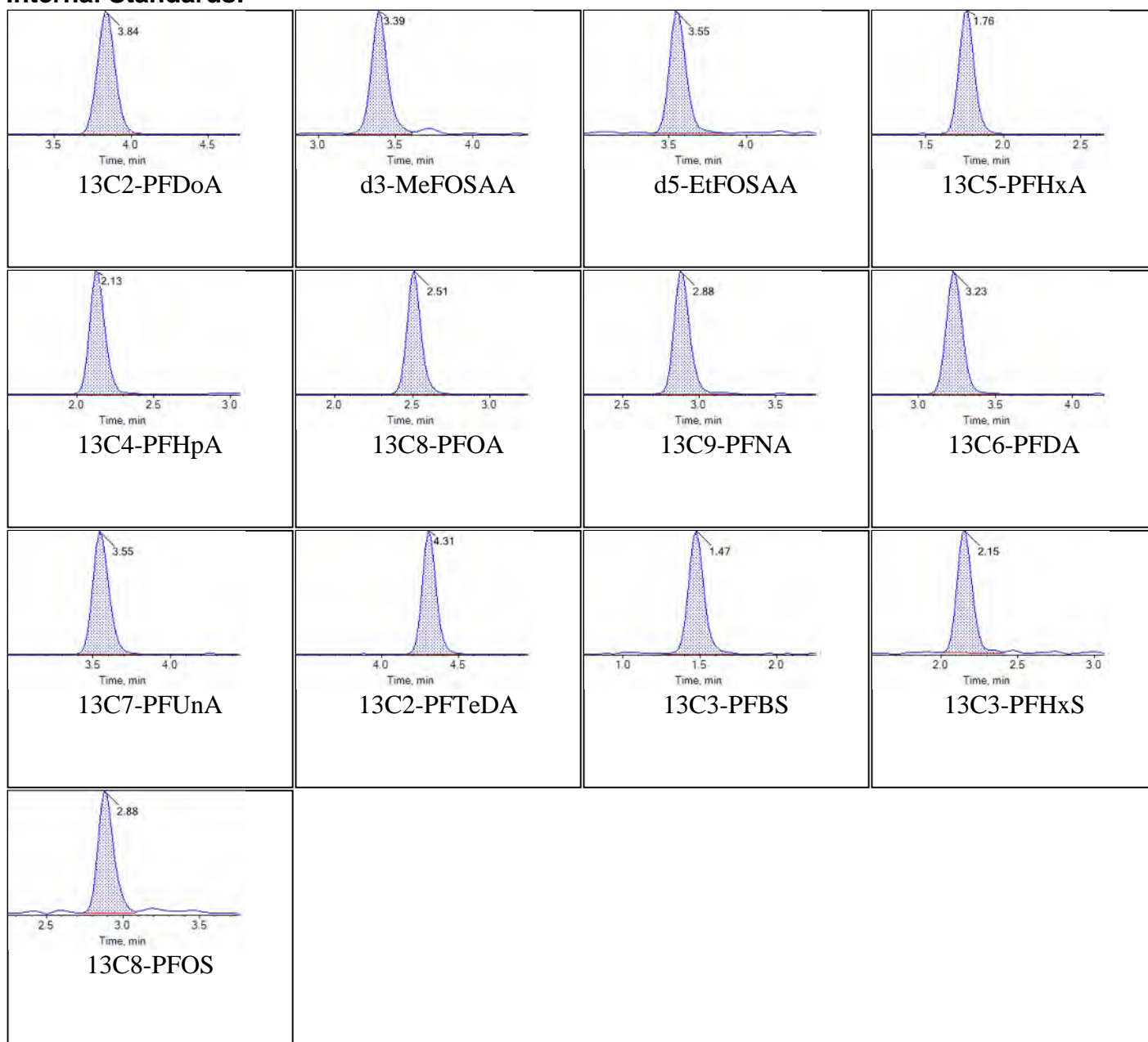


Chromatogram Report

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Printed: 05/06/2018 2:28:45 PM



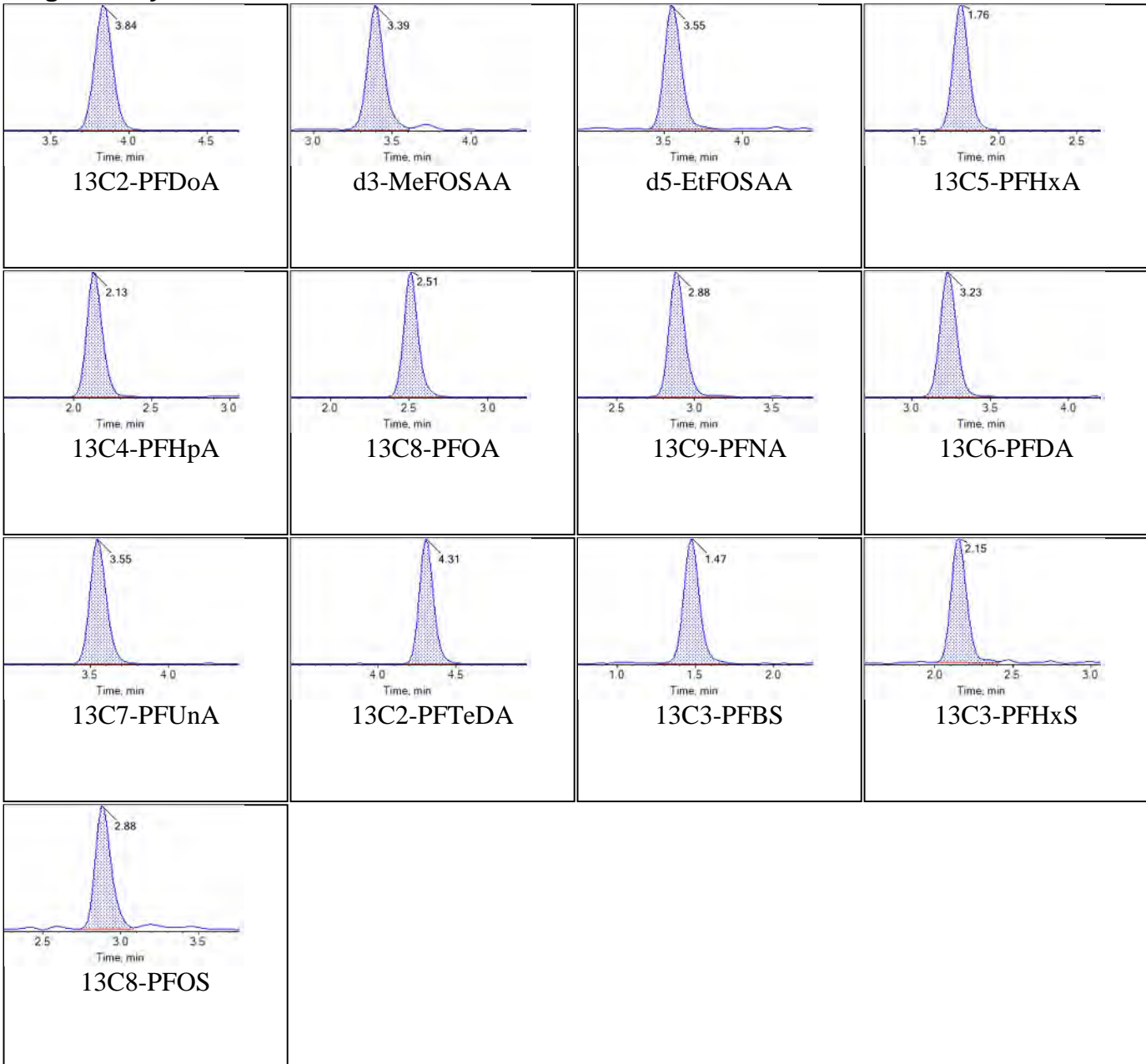


**Internal Standards:**

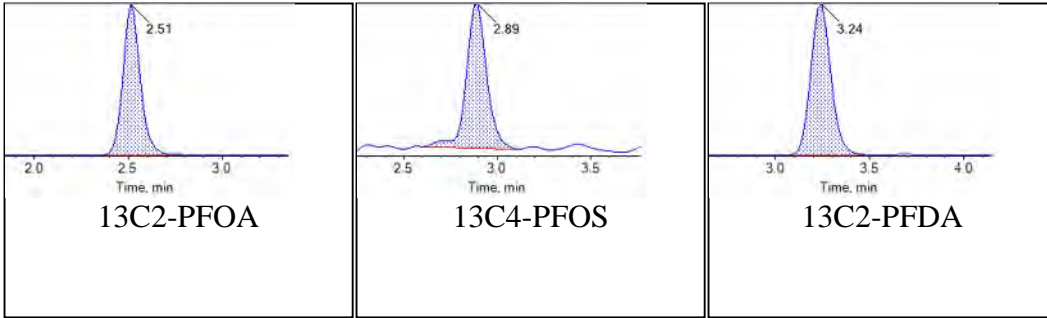
<b>Sample Name</b>	CQ855PB-FS(3)	<b>Injection Vial</b>	19
<b>Sample ID</b>	Procedural Blank	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T22:59:08	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



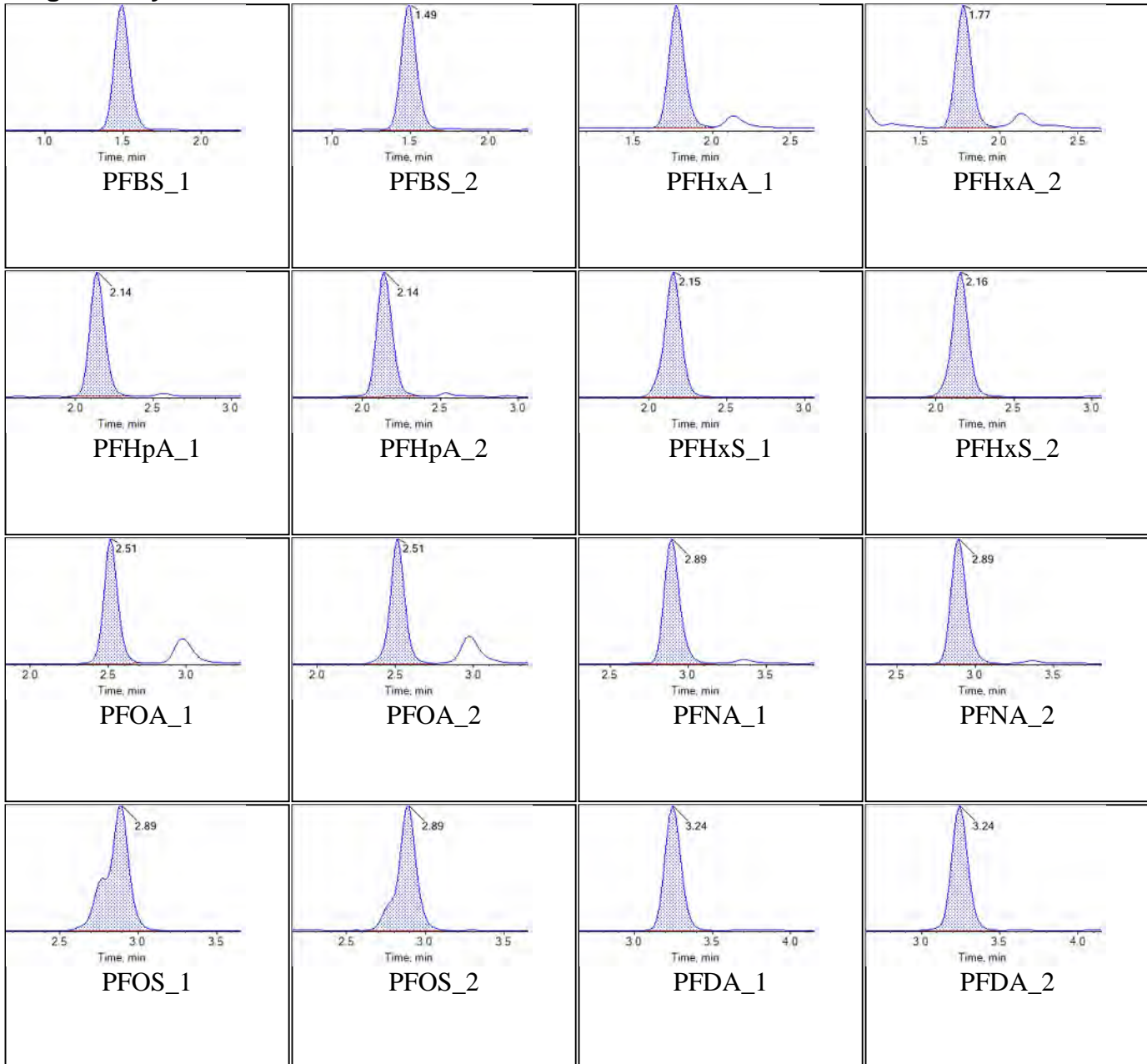
**Internal Standards:**



Sample Name	CQ856LCS-FS(3)	Injection Vial	20
Sample ID	Laboratory Control Sample	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:09:56	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

## Chromatograms

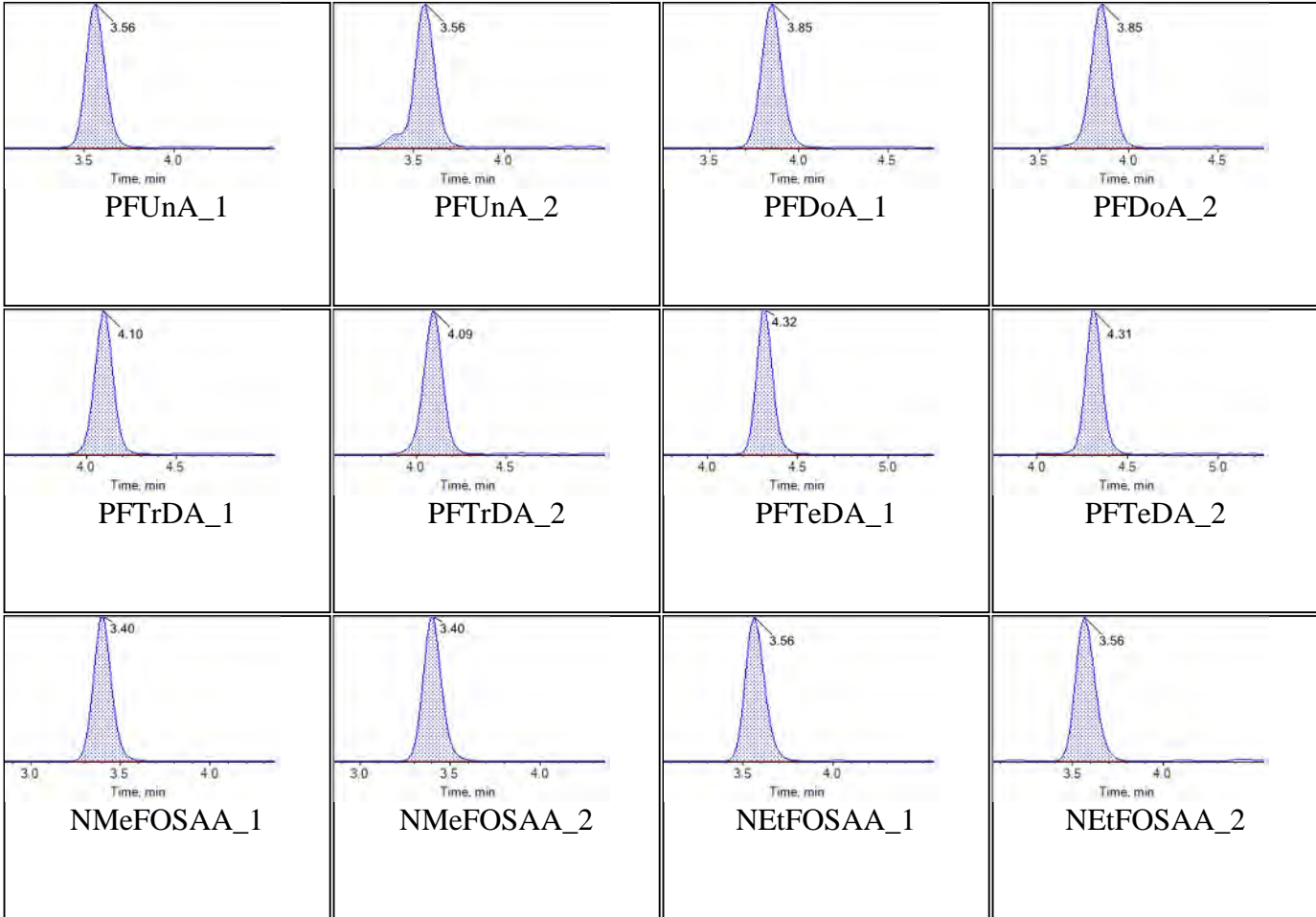
### Target Analytes:





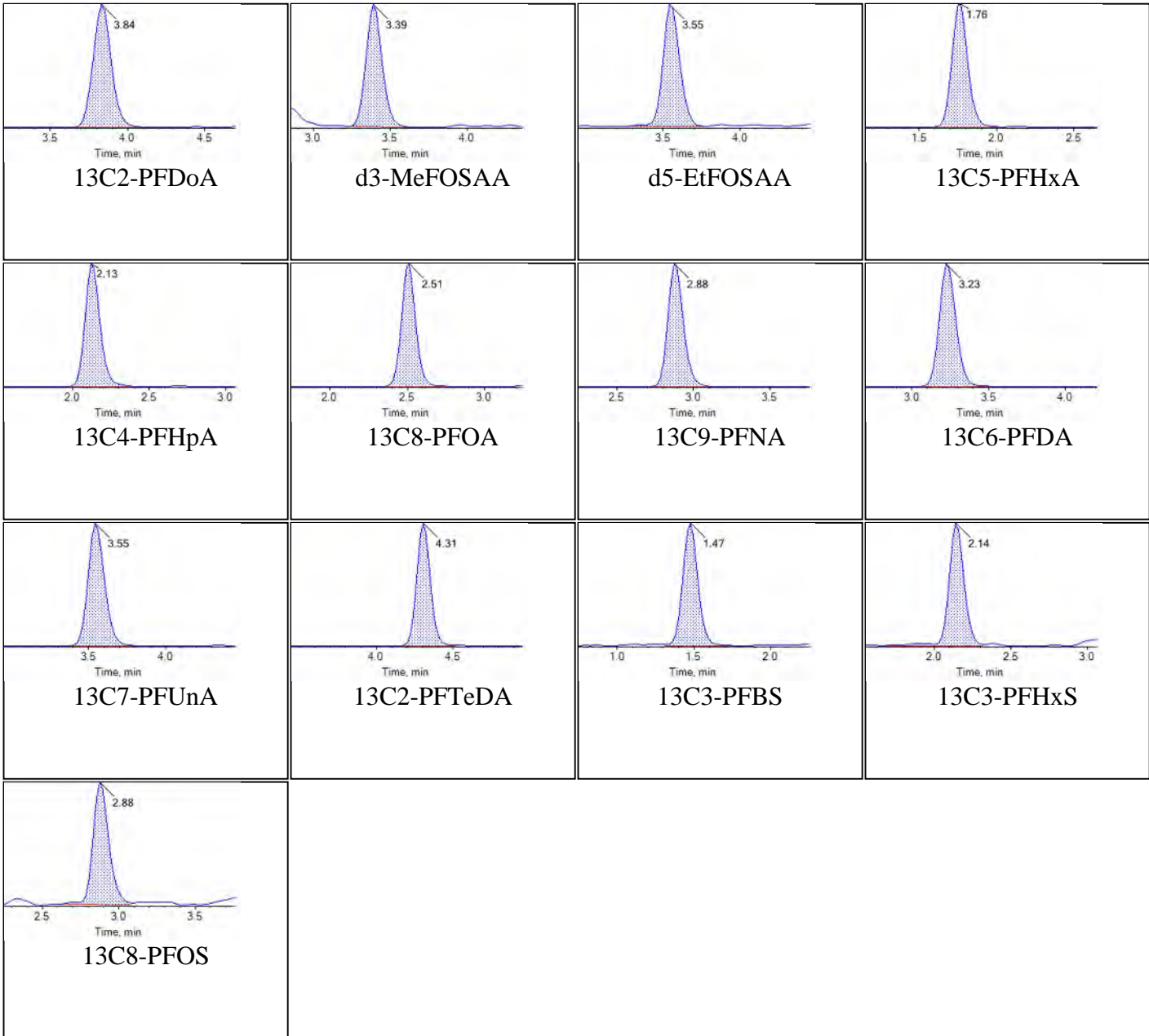
Chromatogram Report

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Internal Standards:

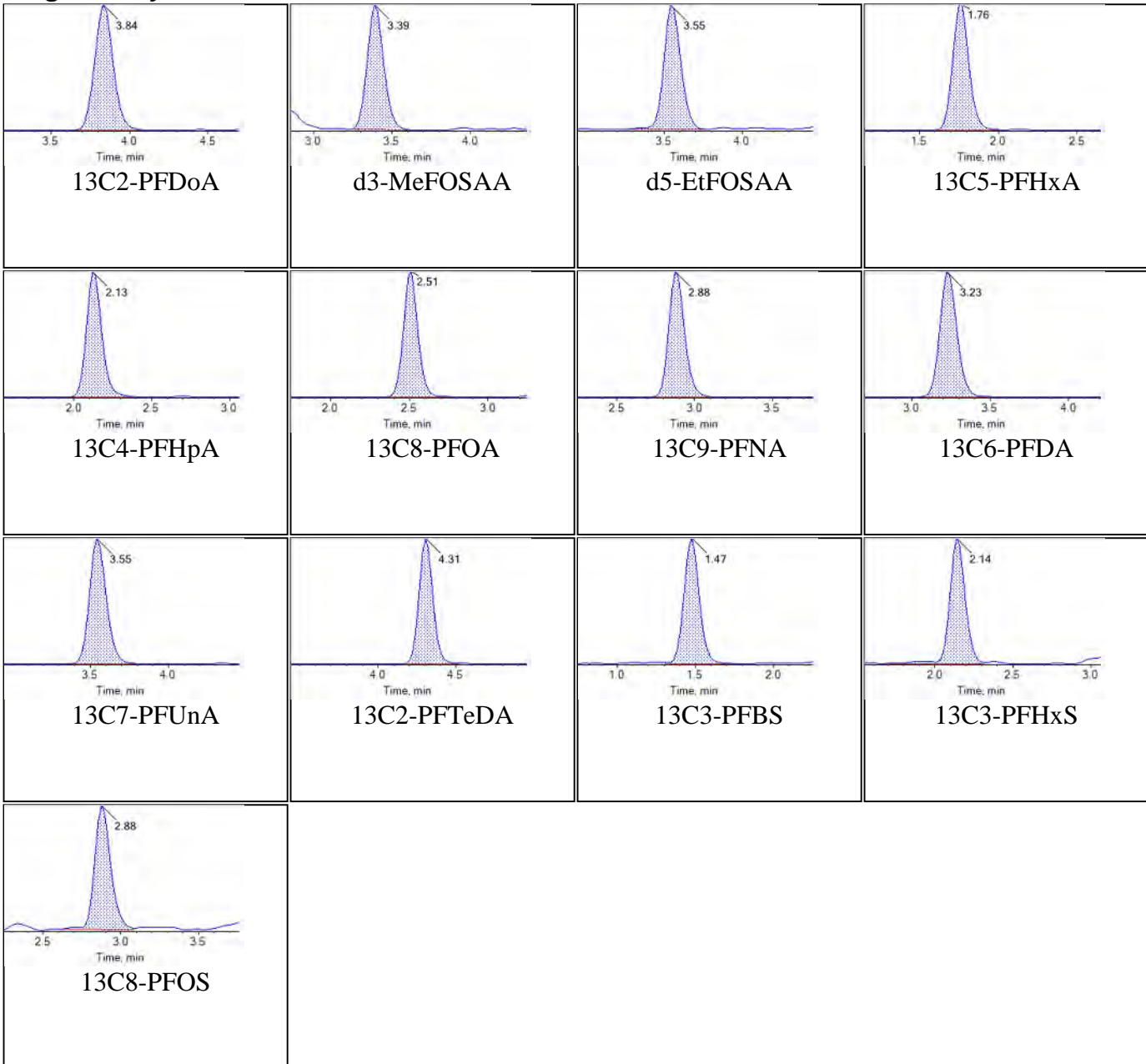




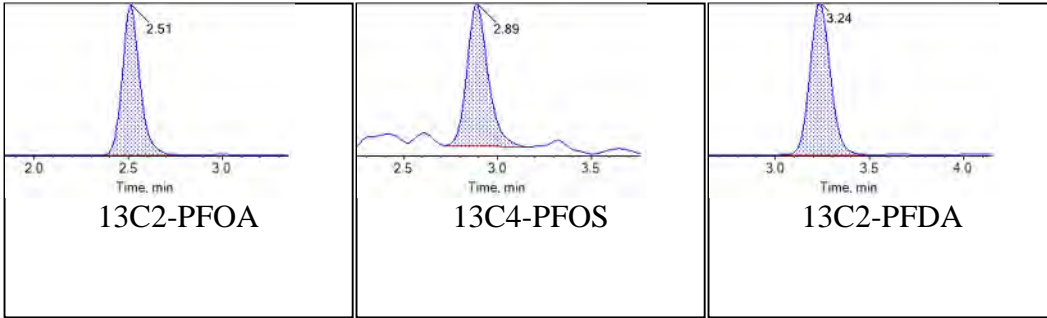
<b>Sample Name</b>	CQ856LCS-FS(3)	<b>Injection Vial</b>	20
<b>Sample ID</b>	Laboratory Control Sample	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T23:09:56	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



### Internal Standards:

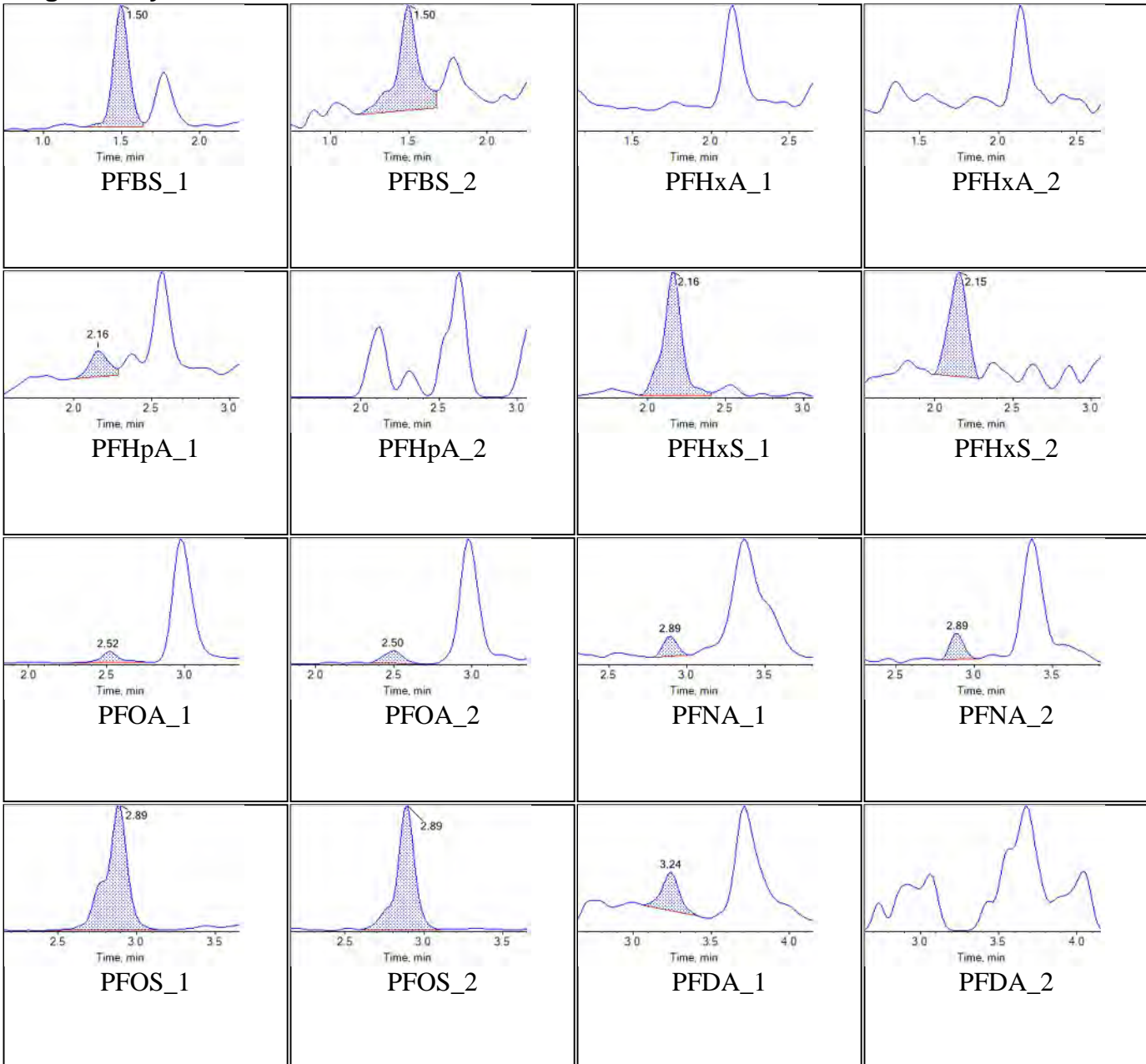




<b>Sample Name</b>	J6246-FS(3)	<b>Injection Vial</b>	21
<b>Sample ID</b>	FFTA-EB01-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T23:20:44	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

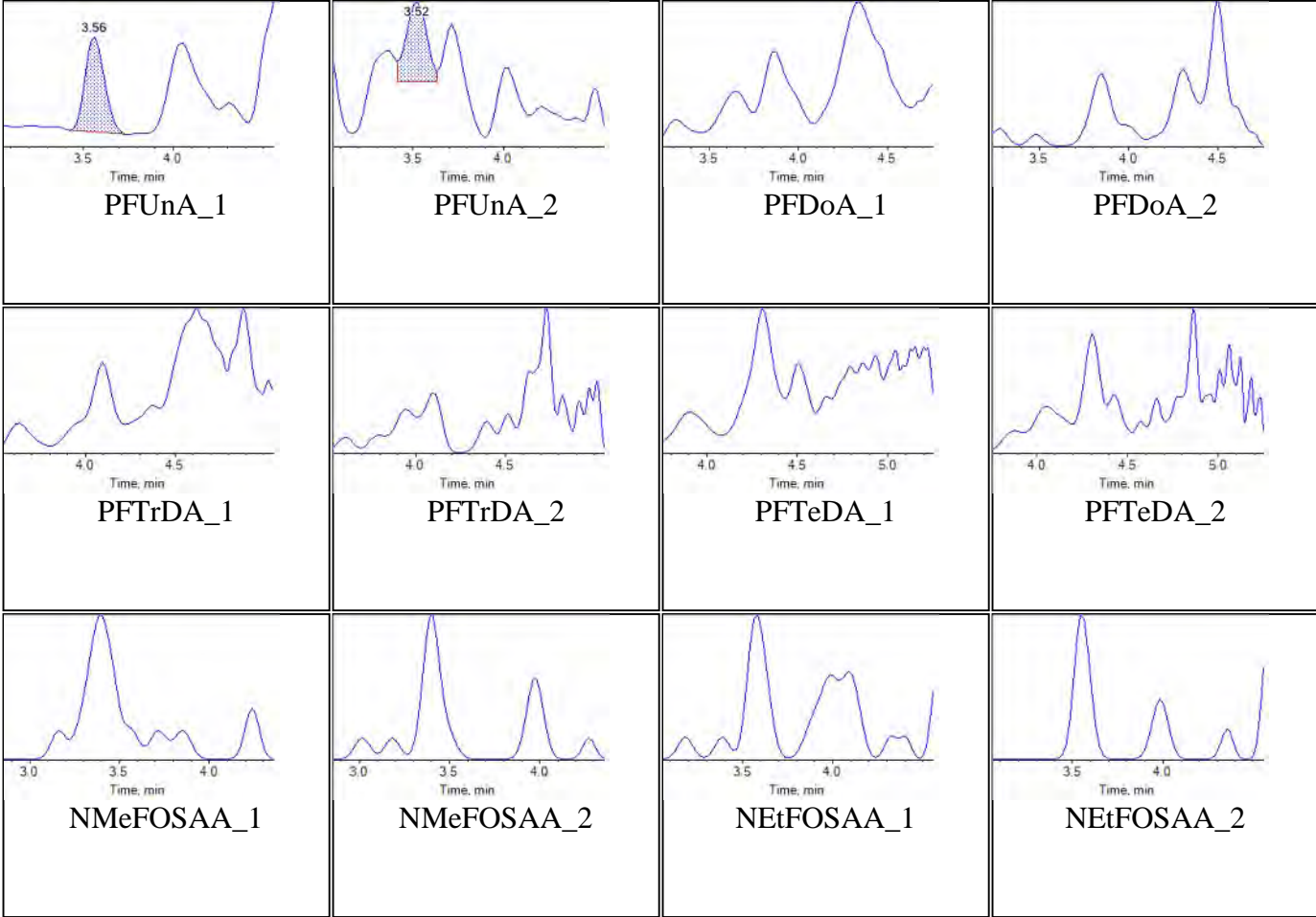
### Target Analytes:

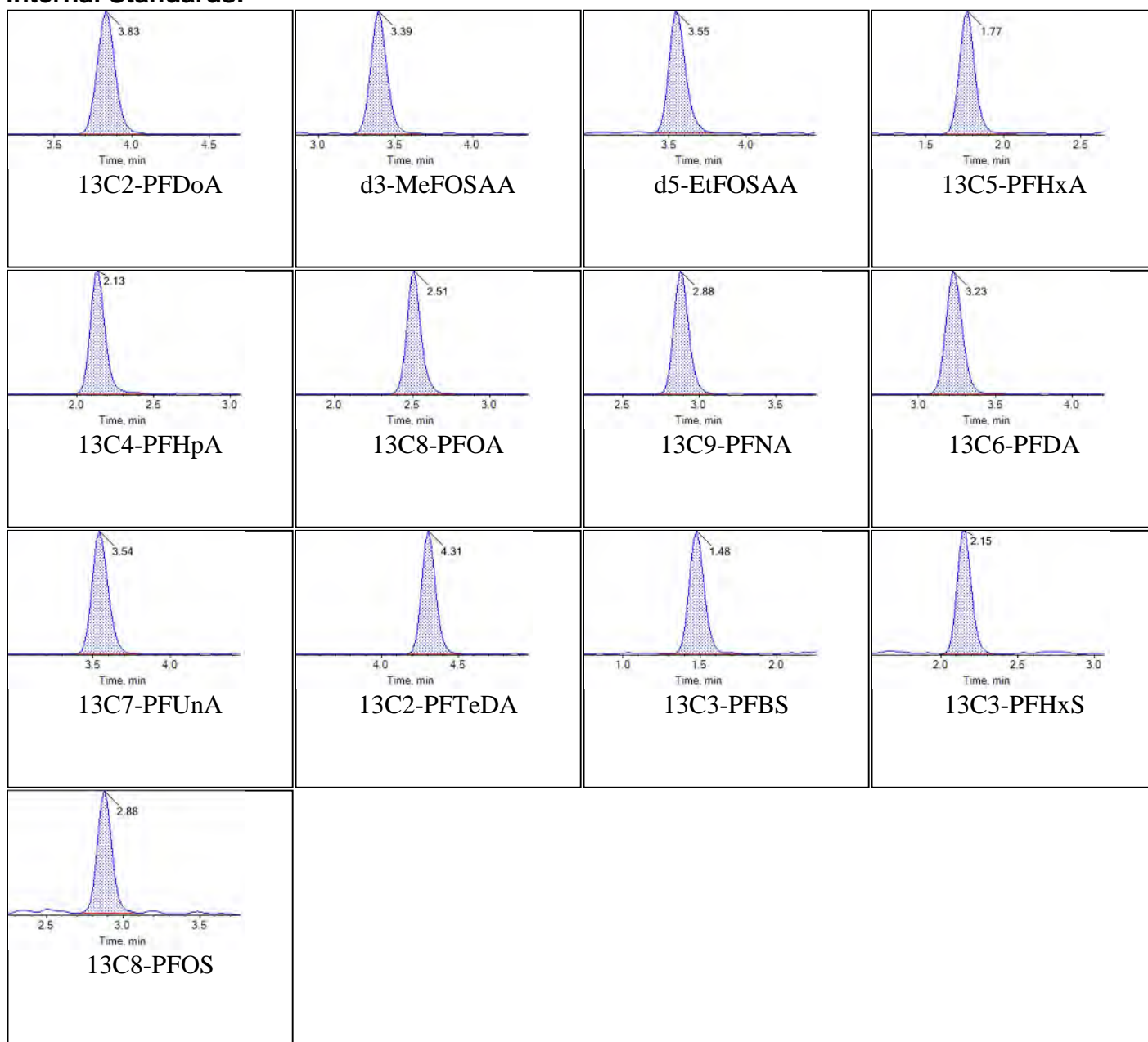




Chromatogram Report

Created with Analyst Reporter  
Printed: 05/06/2018 2:28:52 PM

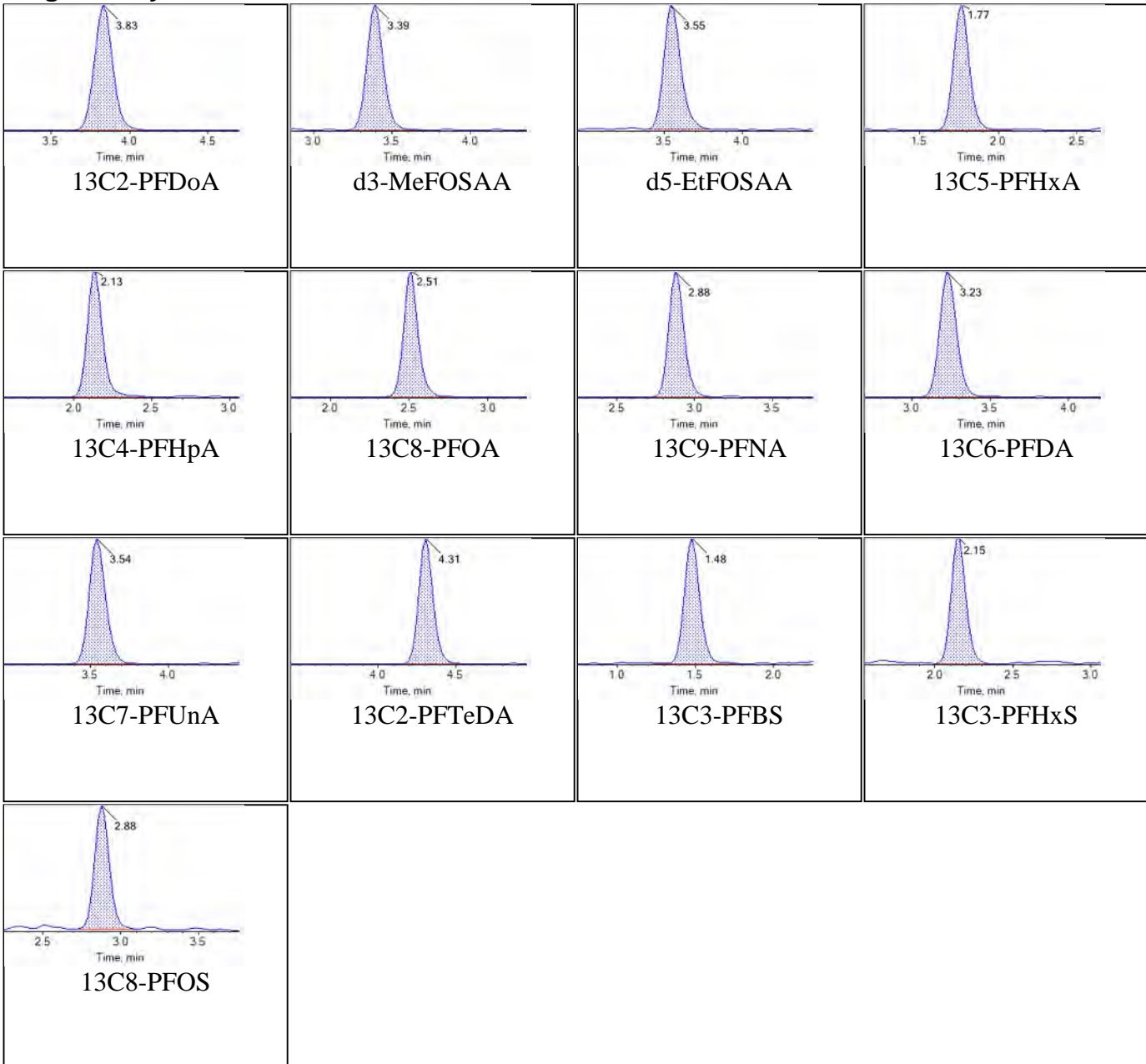


**Internal Standards:**

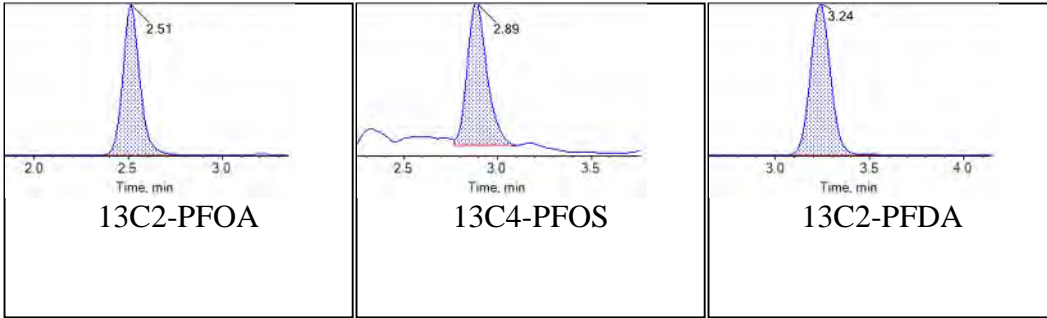
<b>Sample Name</b>	J6246-FS(3)	<b>Injection Vial</b>	21
<b>Sample ID</b>	FFTA-EB01-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T23:20:44	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



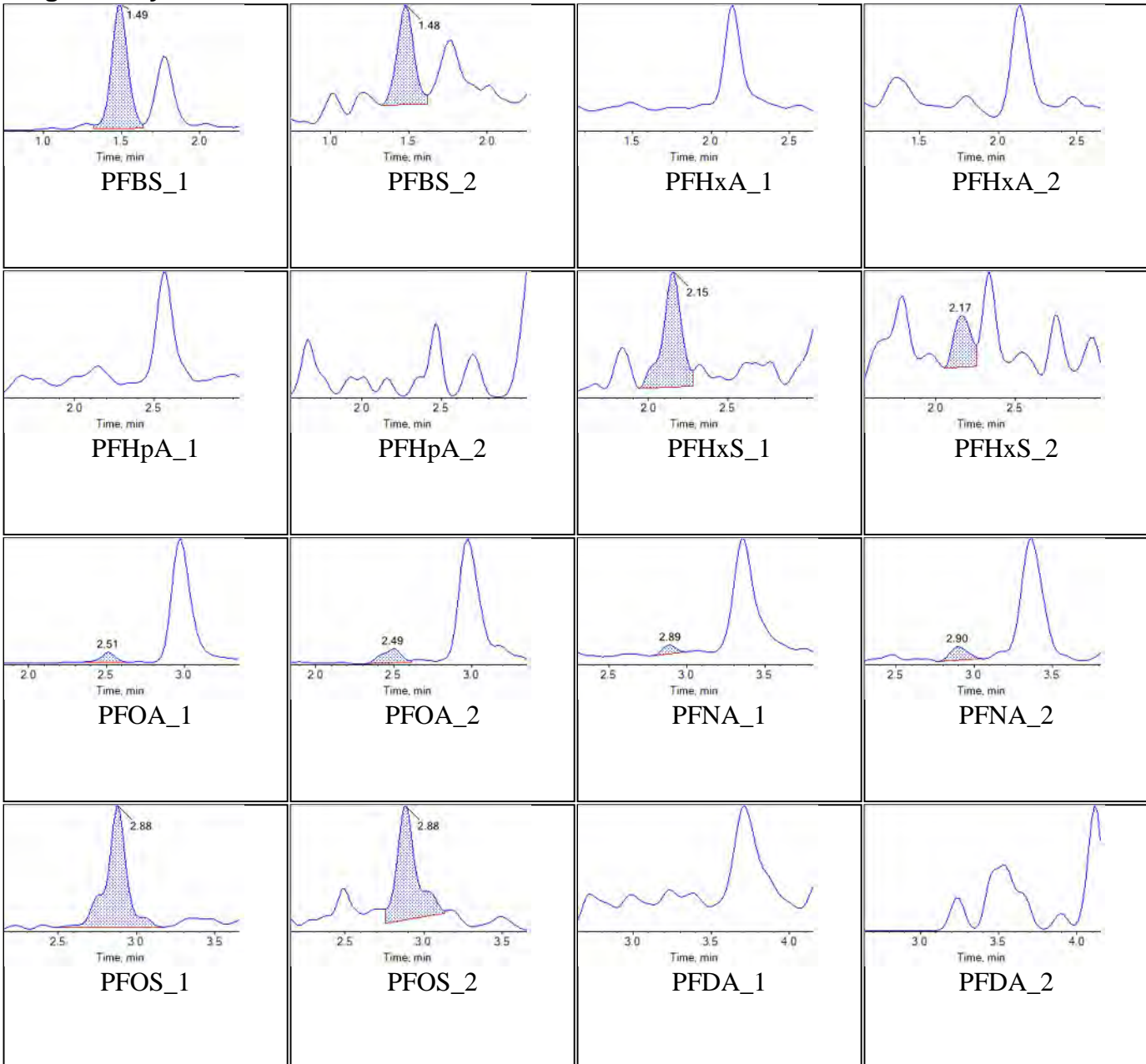
**Internal Standards:**



<b>Sample Name</b>	J6247-FS(3)	<b>Injection Vial</b>	22
<b>Sample ID</b>	FFTA-A-EB02-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T23:31:31	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:

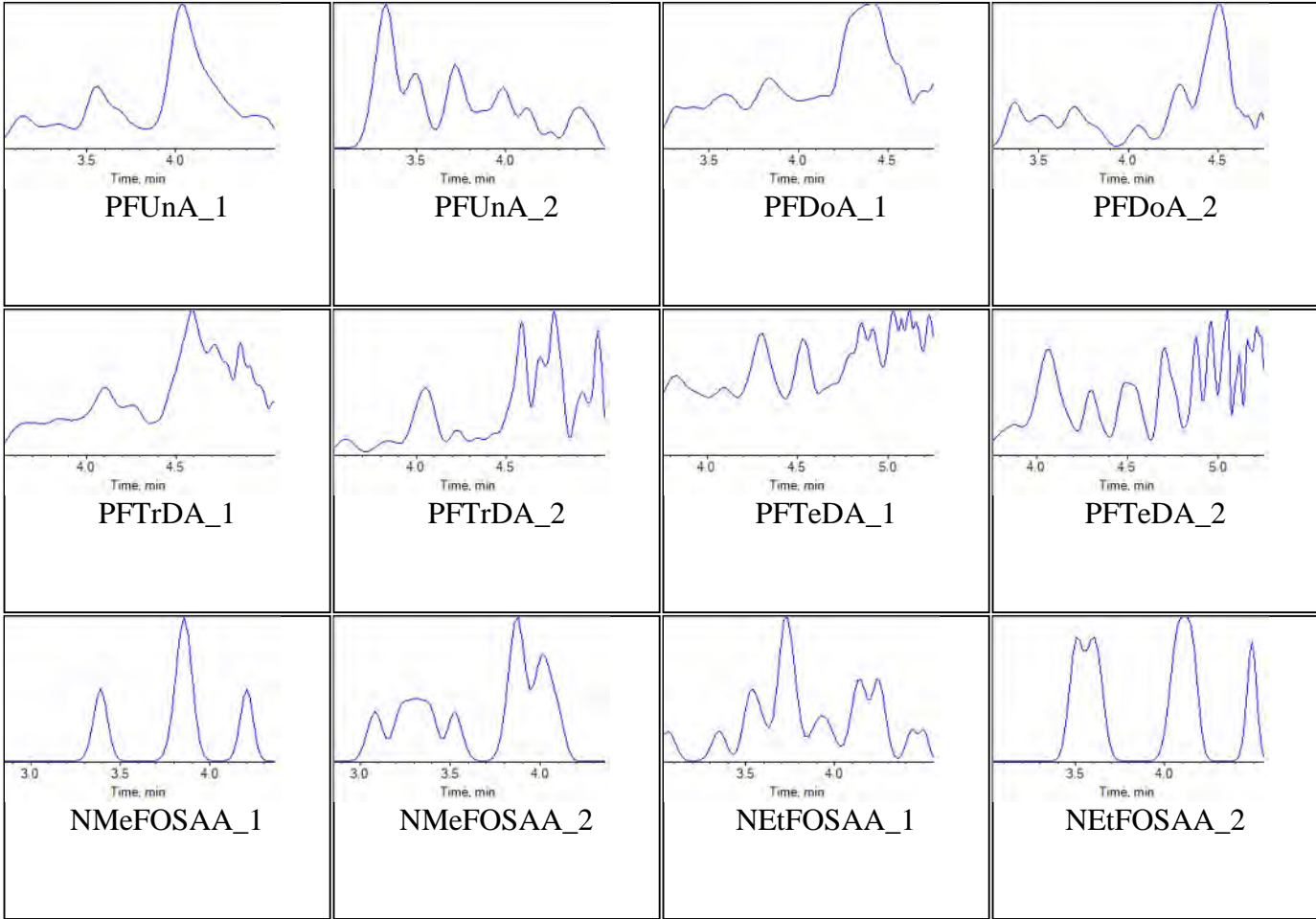


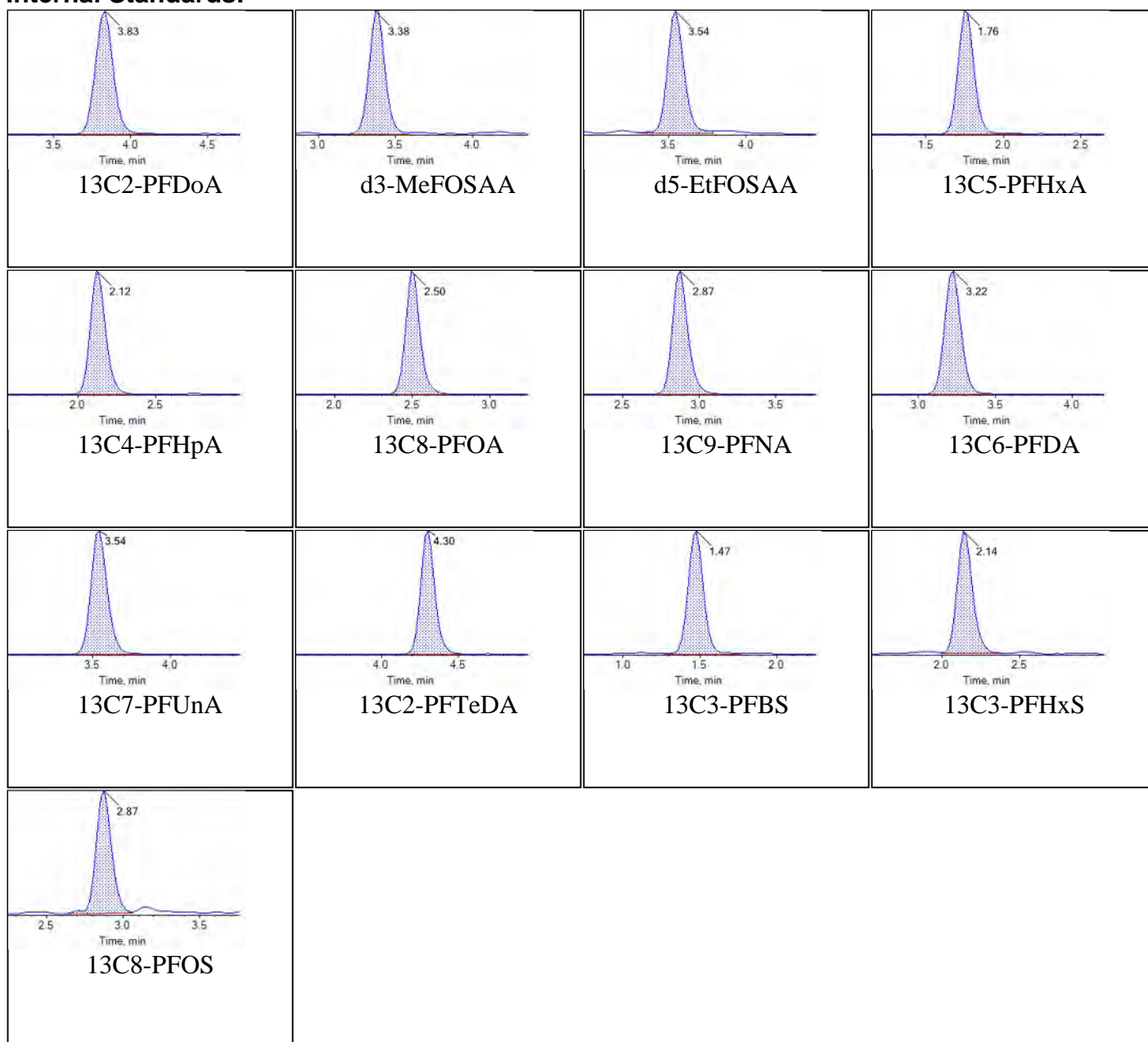




Chromatogram Report

Created with Analyst Reporter  
Printed: 05/06/2018 2:28:56 PM



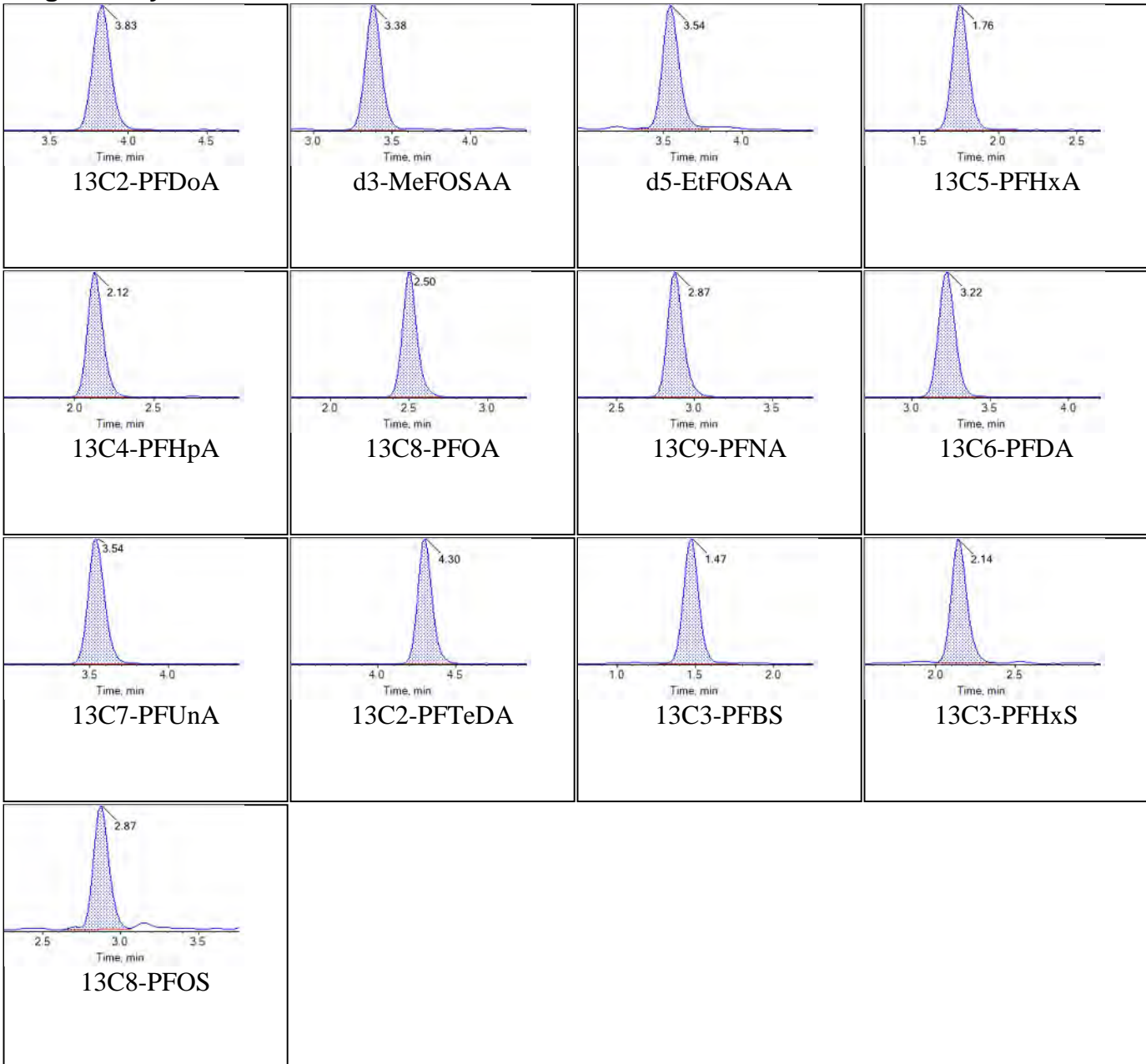
**Internal Standards:**



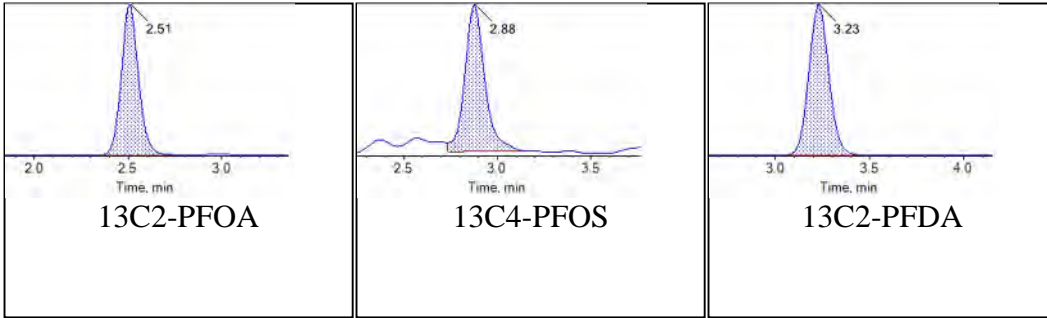
<b>Sample Name</b>	J6247-FS(3)	<b>Injection Vial</b>	22
<b>Sample ID</b>	FFTA-A-EB02-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T23:31:31	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



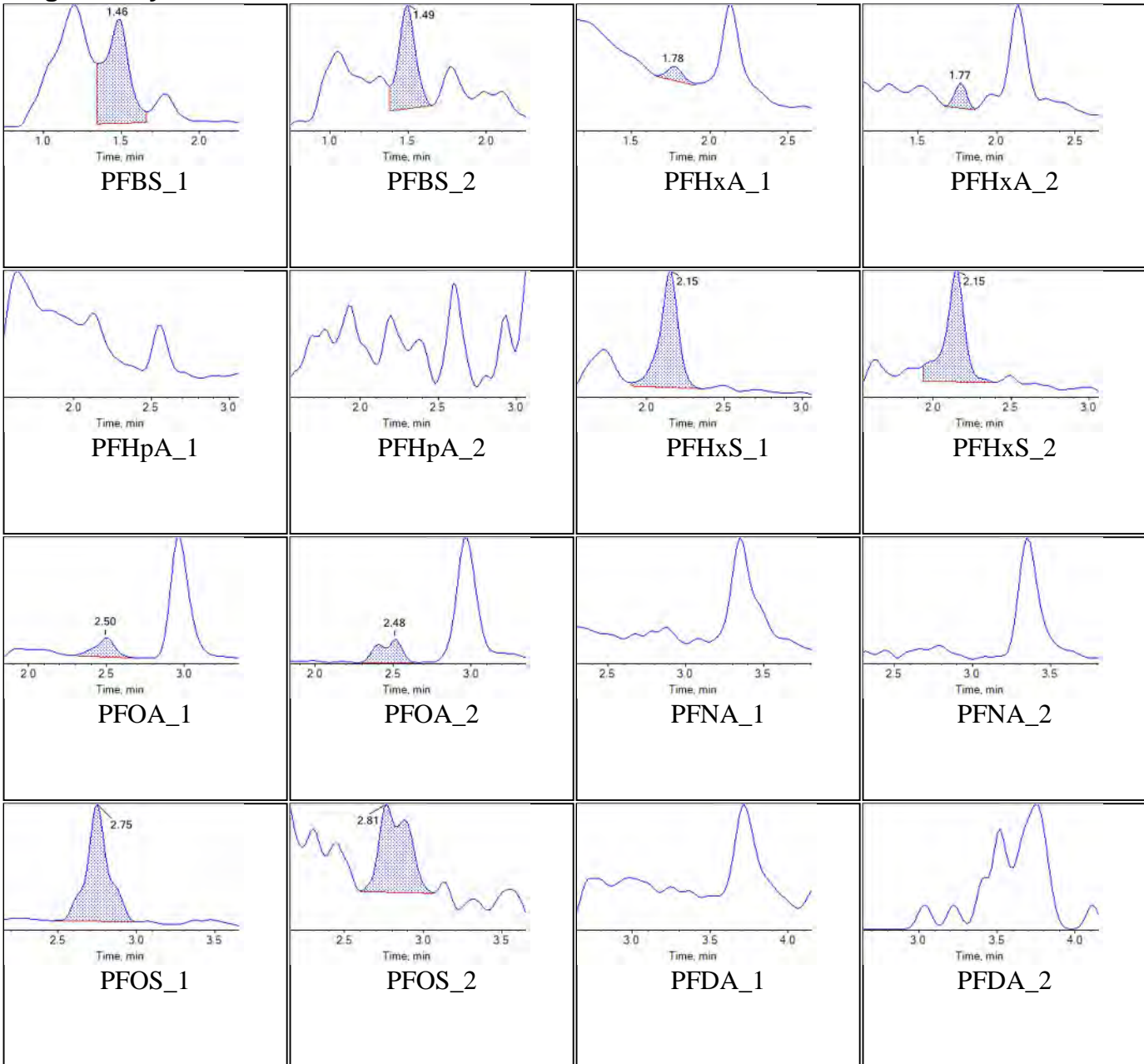
**Internal Standards:**



<b>Sample Name</b>	J6250-FS(3)	<b>Injection Vial</b>	23
<b>Sample ID</b>	PSC51-MW14D-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T23:42:19	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

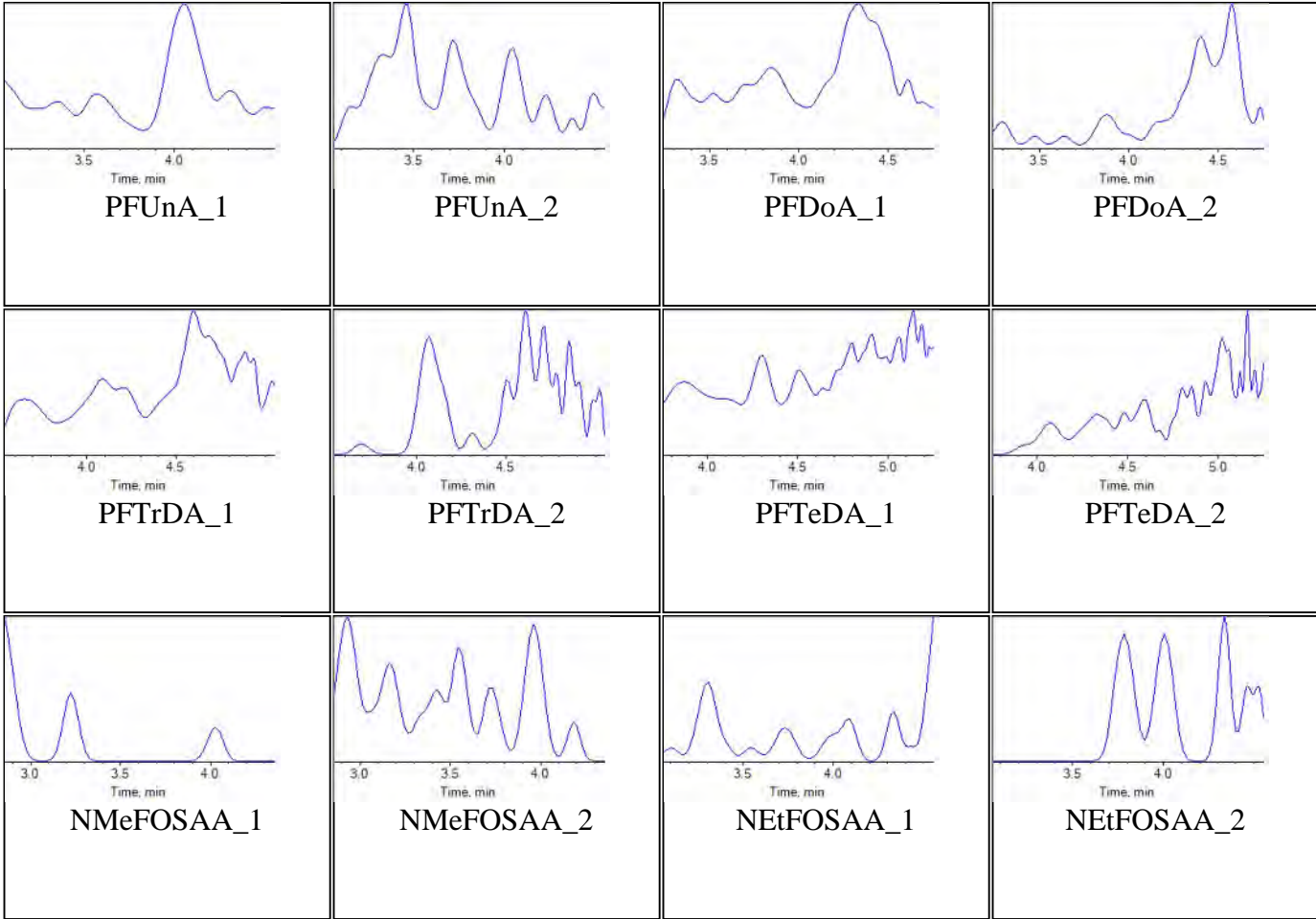
### Target Analytes:

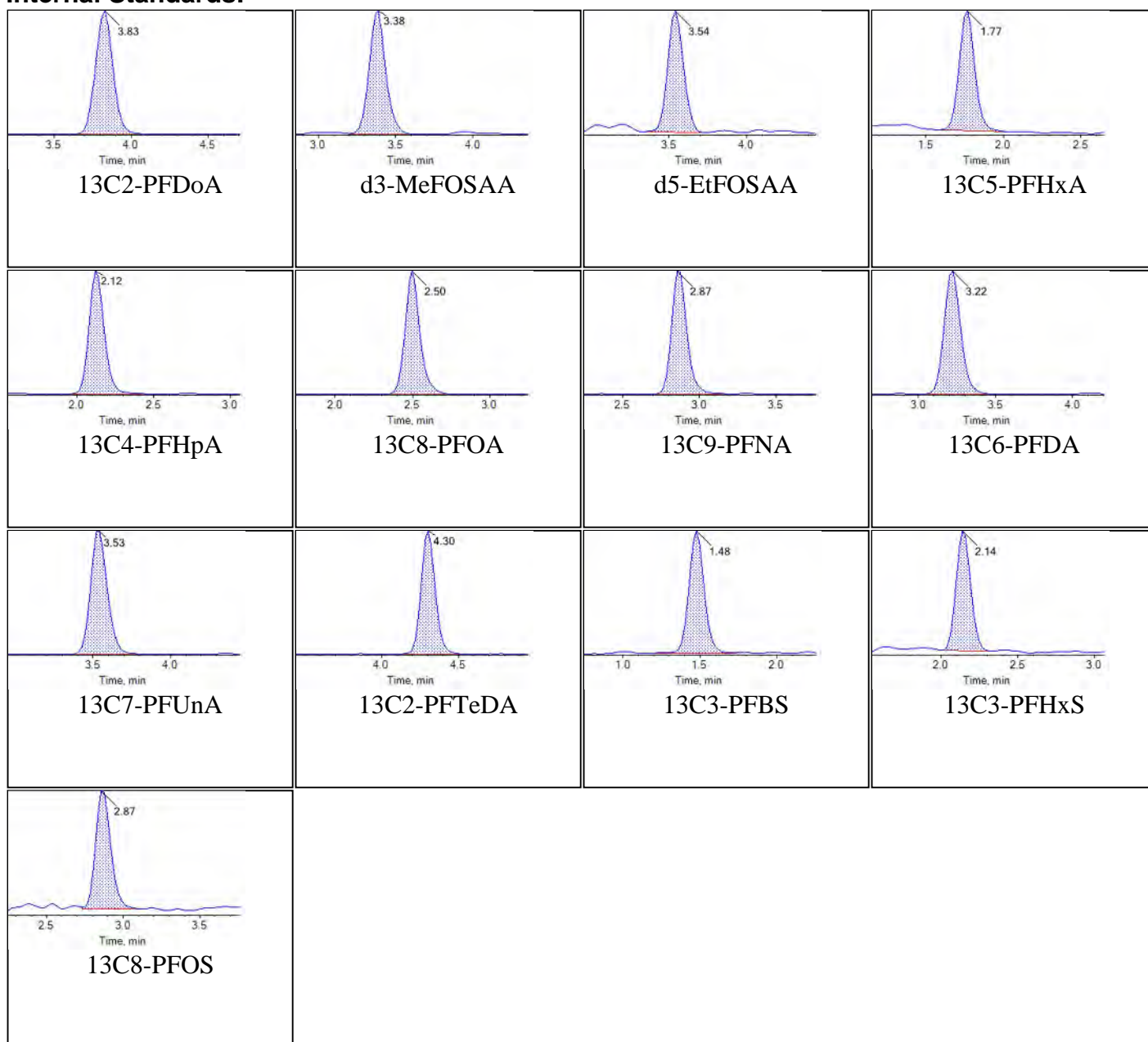




Chromatogram Report

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Printed: 06/06/2018 2:05:16 PM

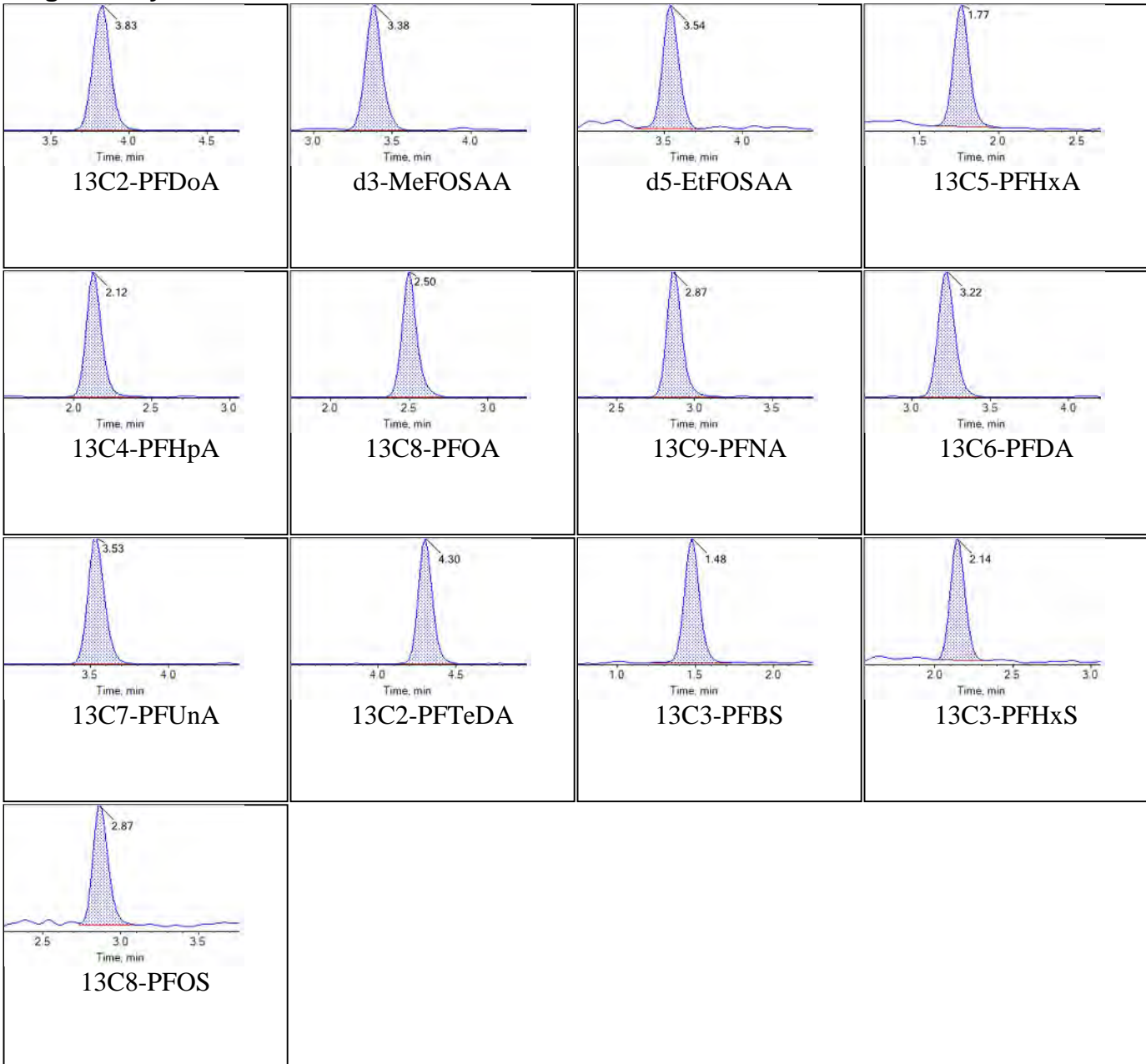


**Internal Standards:**

<b>Sample Name</b>	J6250-FS(3)	<b>Injection Vial</b>	23
<b>Sample ID</b>	PSC51-MW14D-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T23:42:19	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

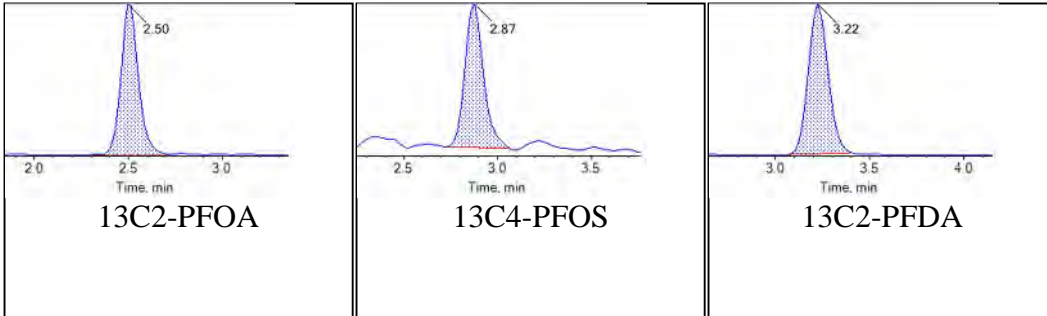
## Chromatograms

### Target Analytes:





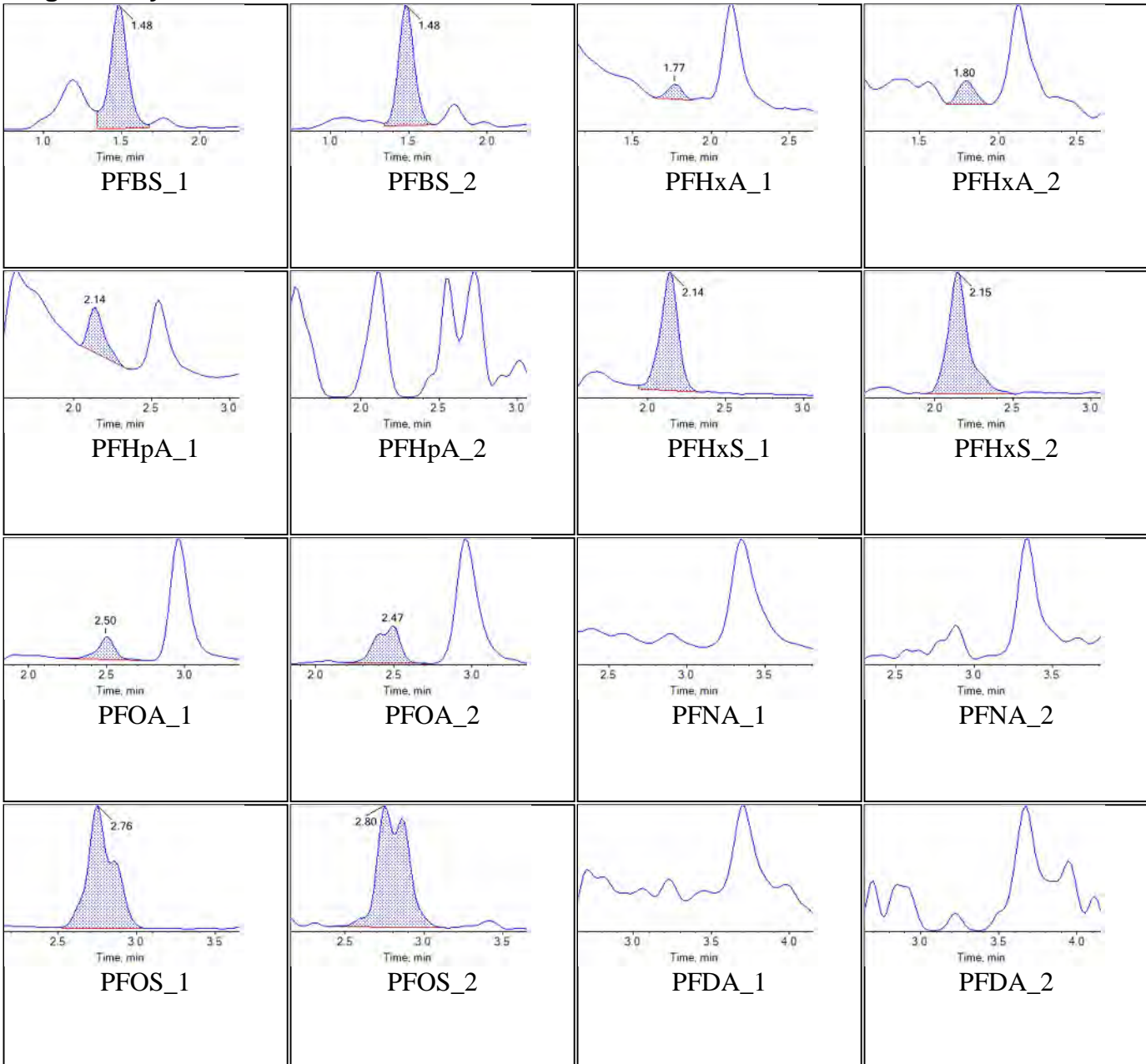
**Internal Standards:**



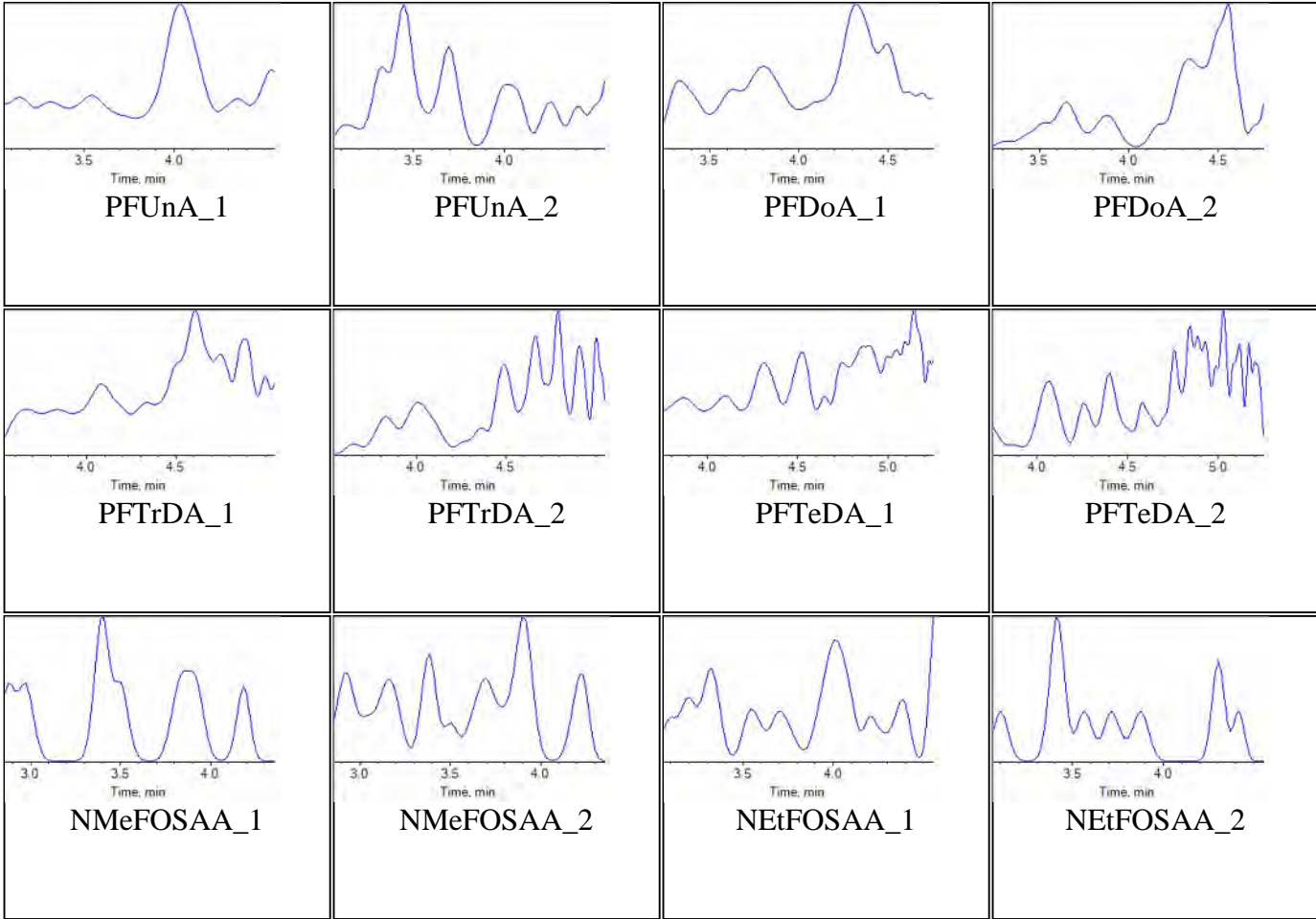
<b>Sample Name</b>	J6252-FS(3)	<b>Injection Vial</b>	24
<b>Sample ID</b>	PSC51-MW13S-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T23:53:05	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

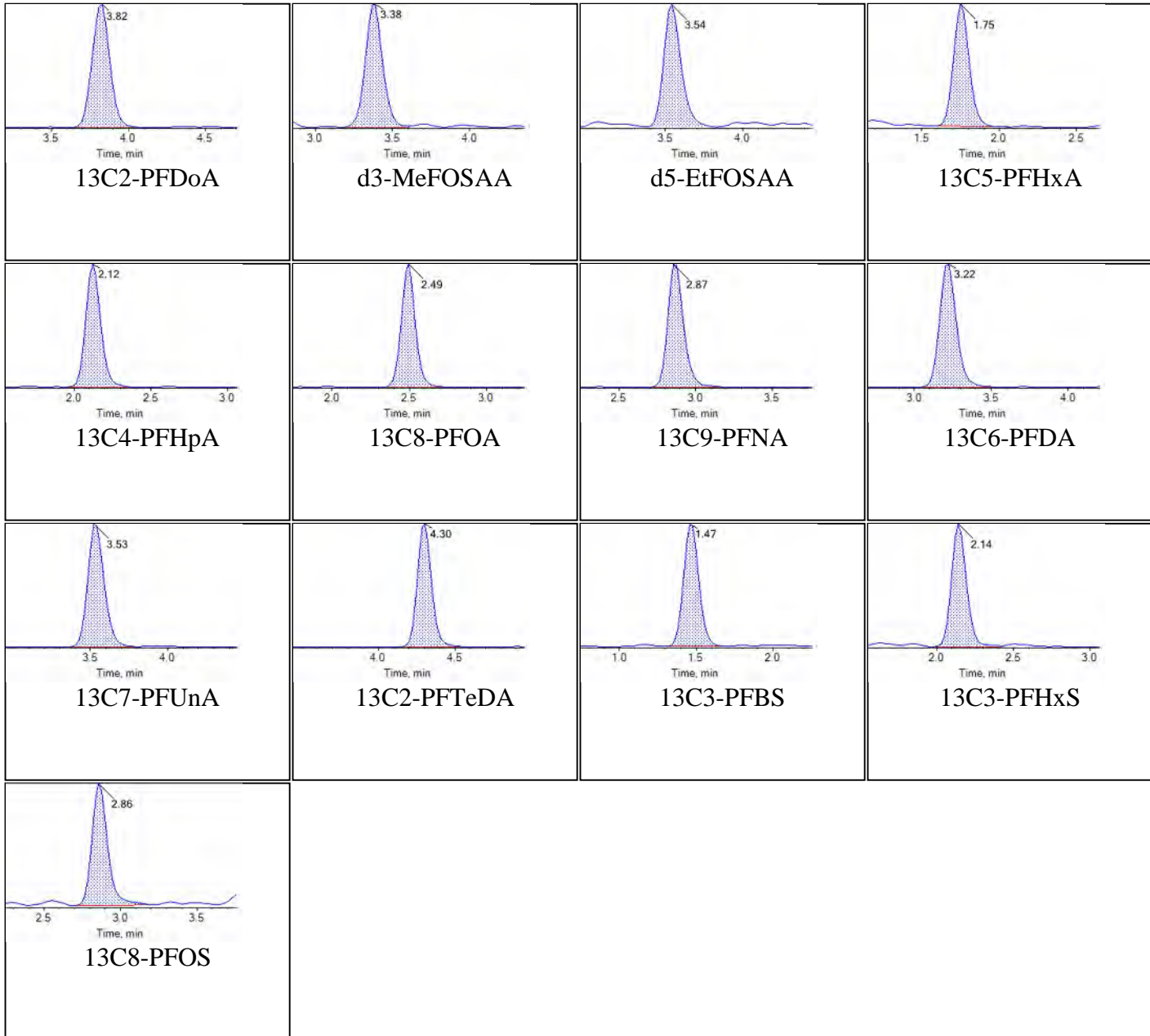
## Chromatograms

### Target Analytes:





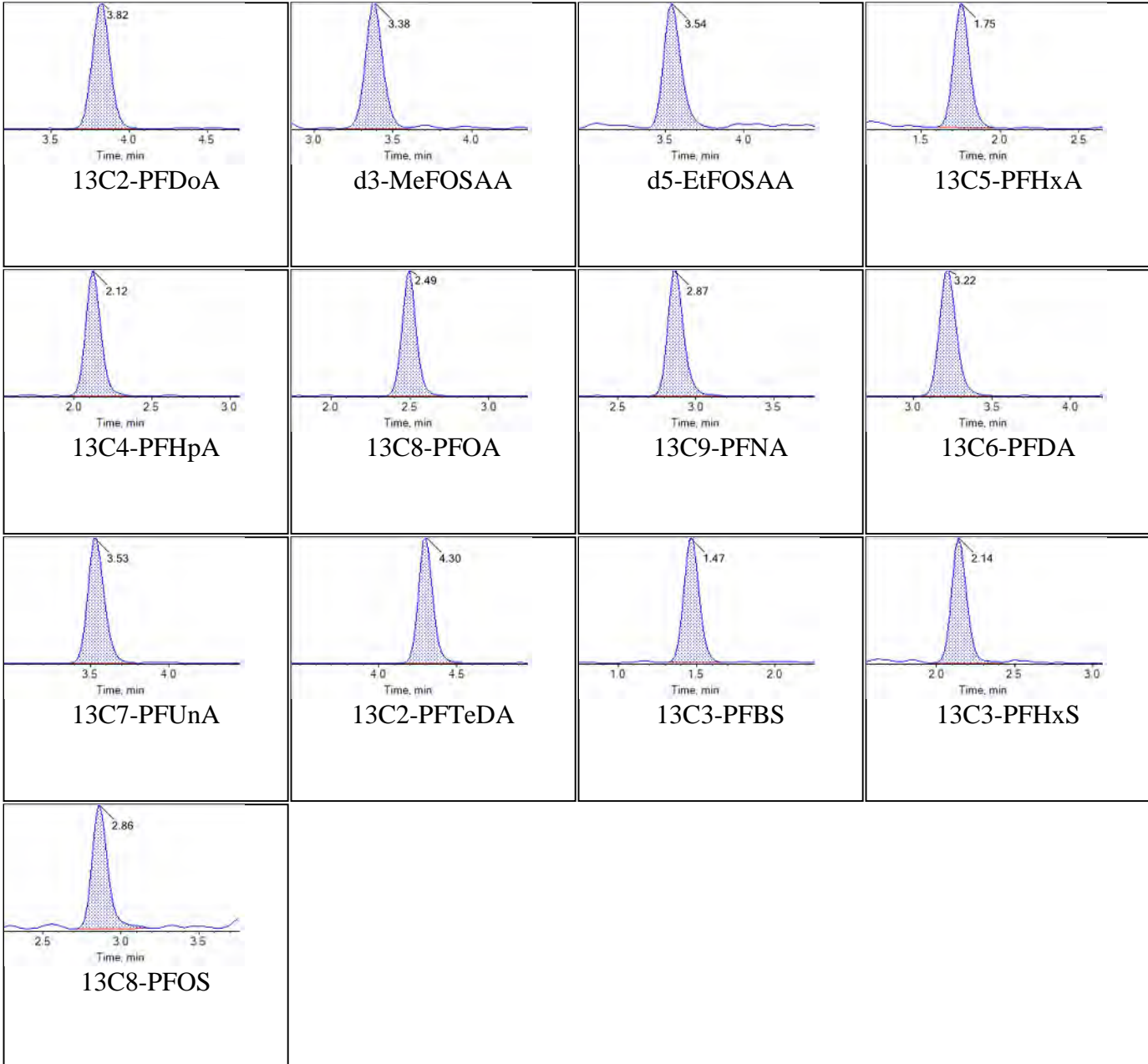


**Internal Standards:**

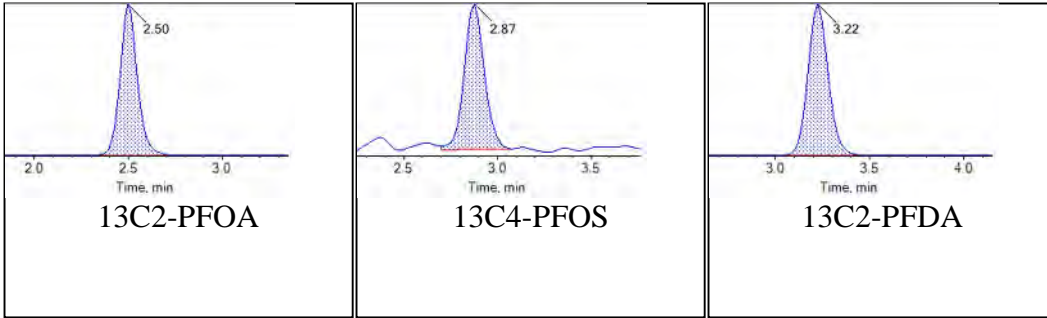
<b>Sample Name</b>	J6252-FS(3)	<b>Injection Vial</b>	24
<b>Sample ID</b>	PSC51-MW13S-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T23:53:05	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



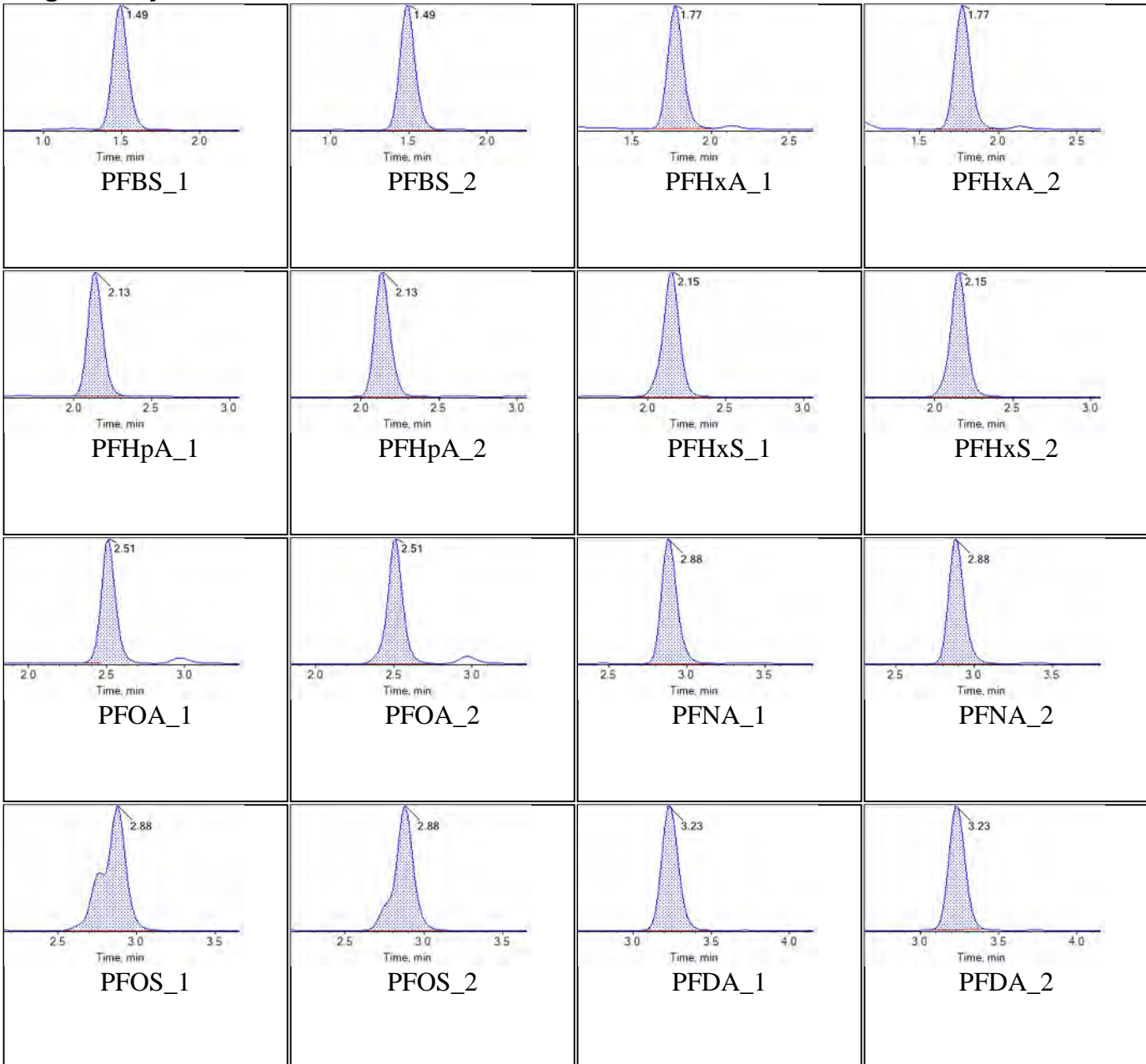
**Internal Standards:**



<b>Sample Name</b>	J6252MS-FS(3)	<b>Injection Vial</b>	25
<b>Sample ID</b>	PSC51-MW13S-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T00:03:52	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

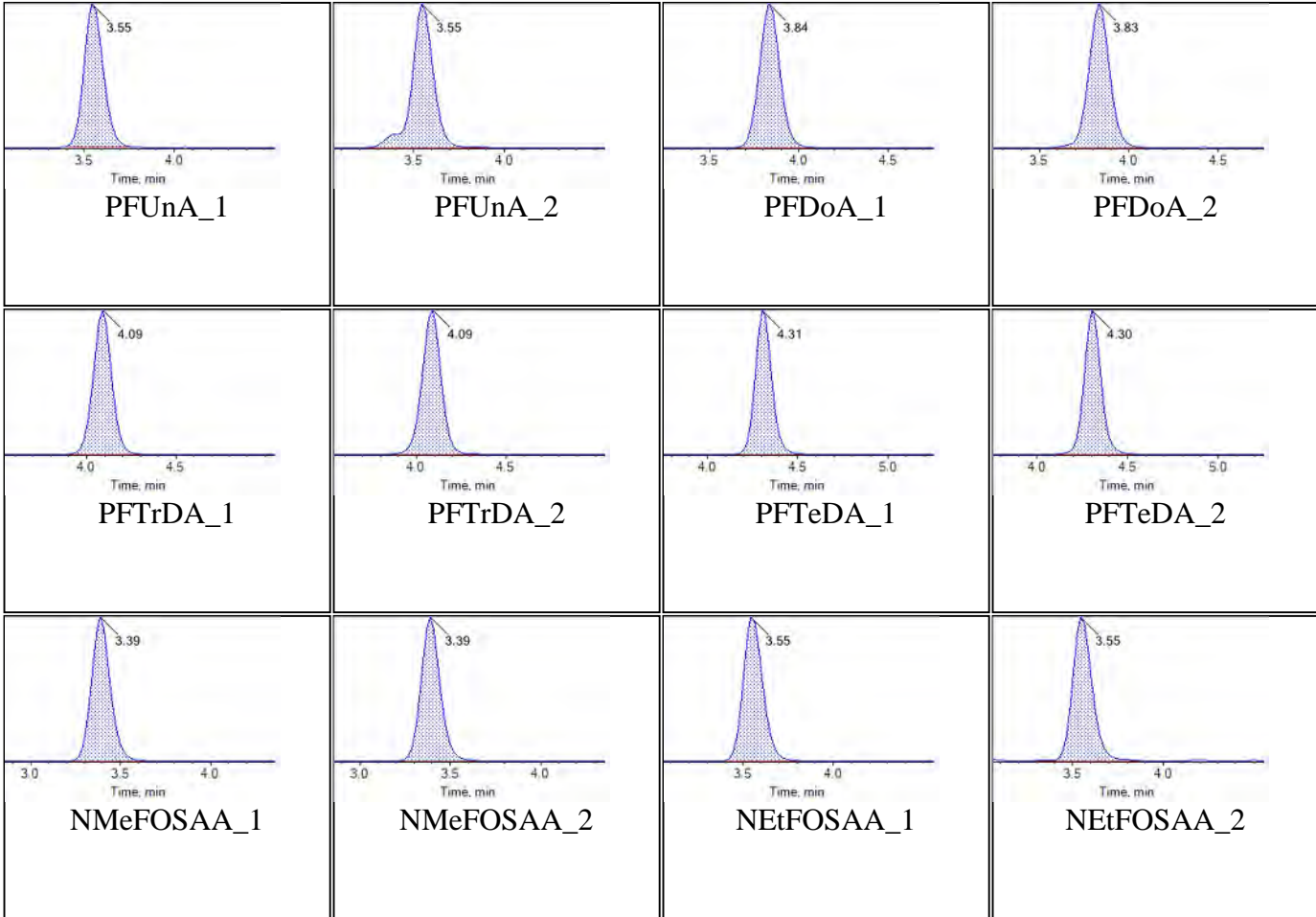
### Target Analytes:



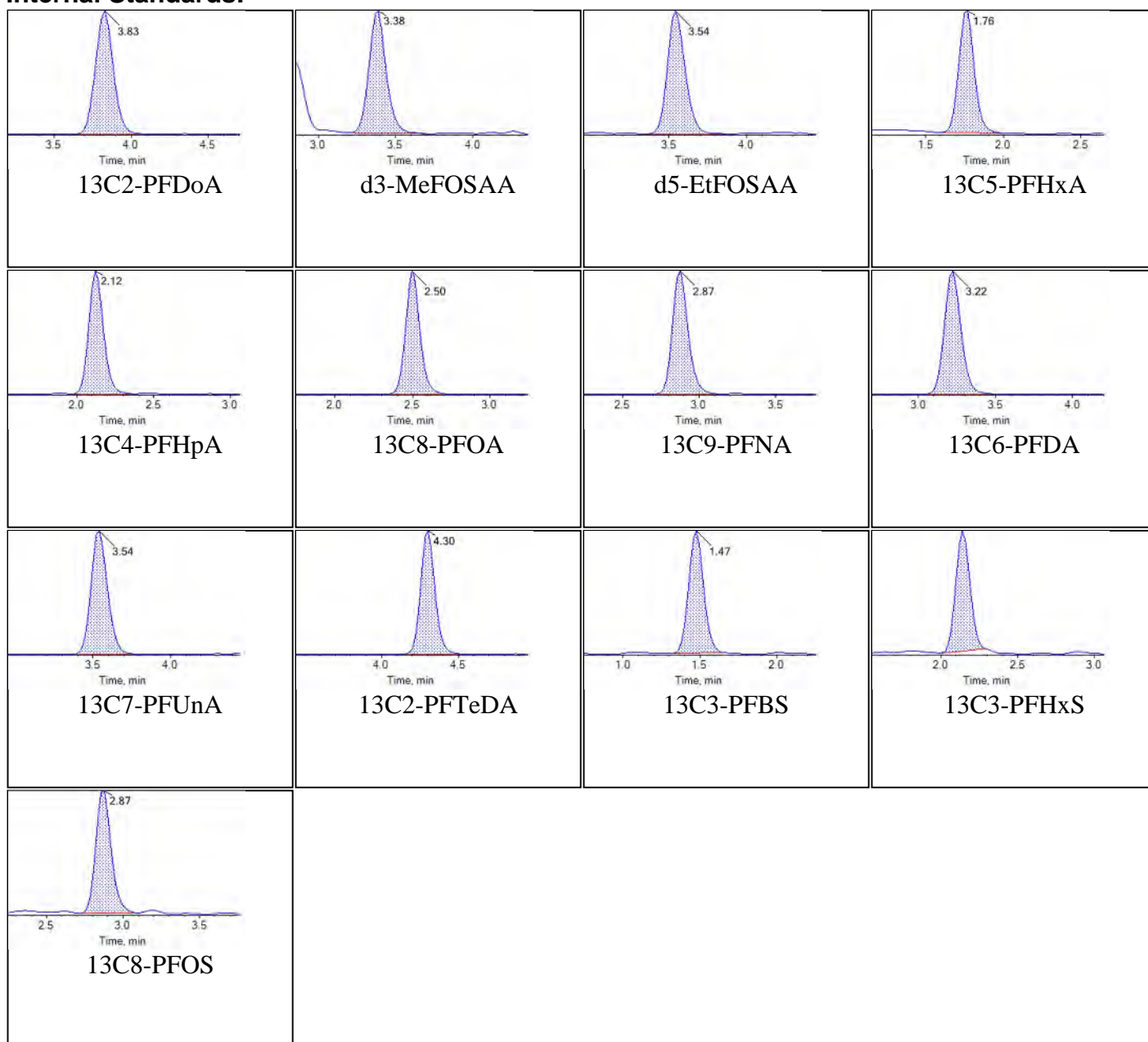


Chromatogram Report

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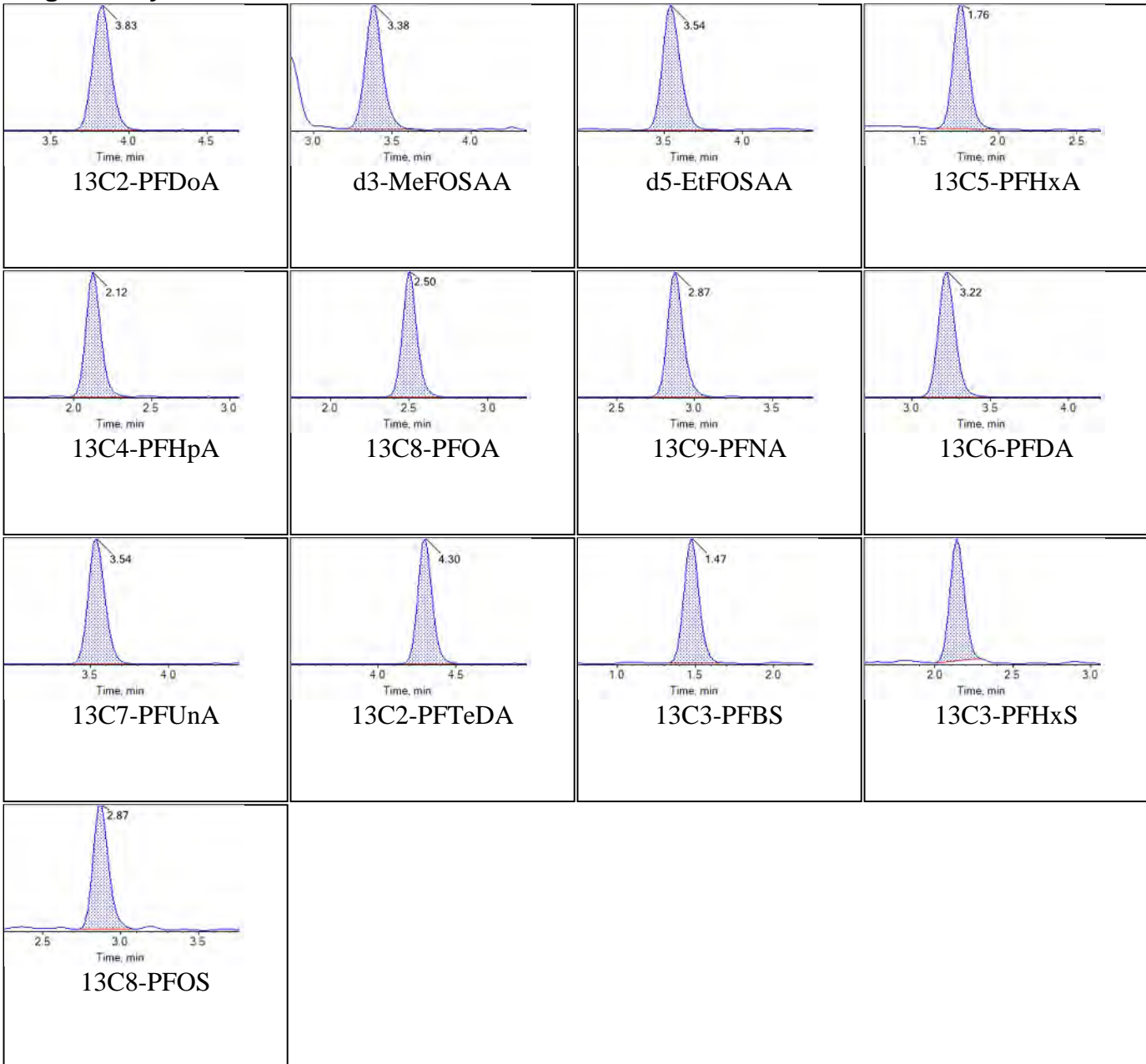


**Internal Standards:**

<b>Sample Name</b>	J6252MS-FS(3)	<b>Injection Vial</b>	25
<b>Sample ID</b>	PSC51-MW13S-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T00:03:52	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

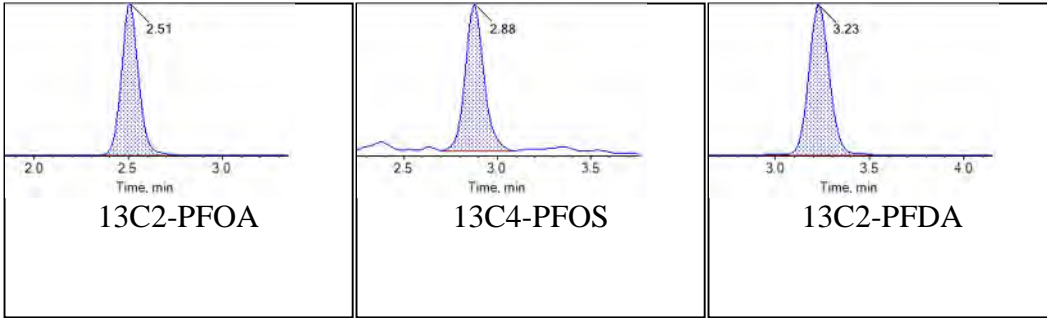
## Chromatograms

### Target Analytes:





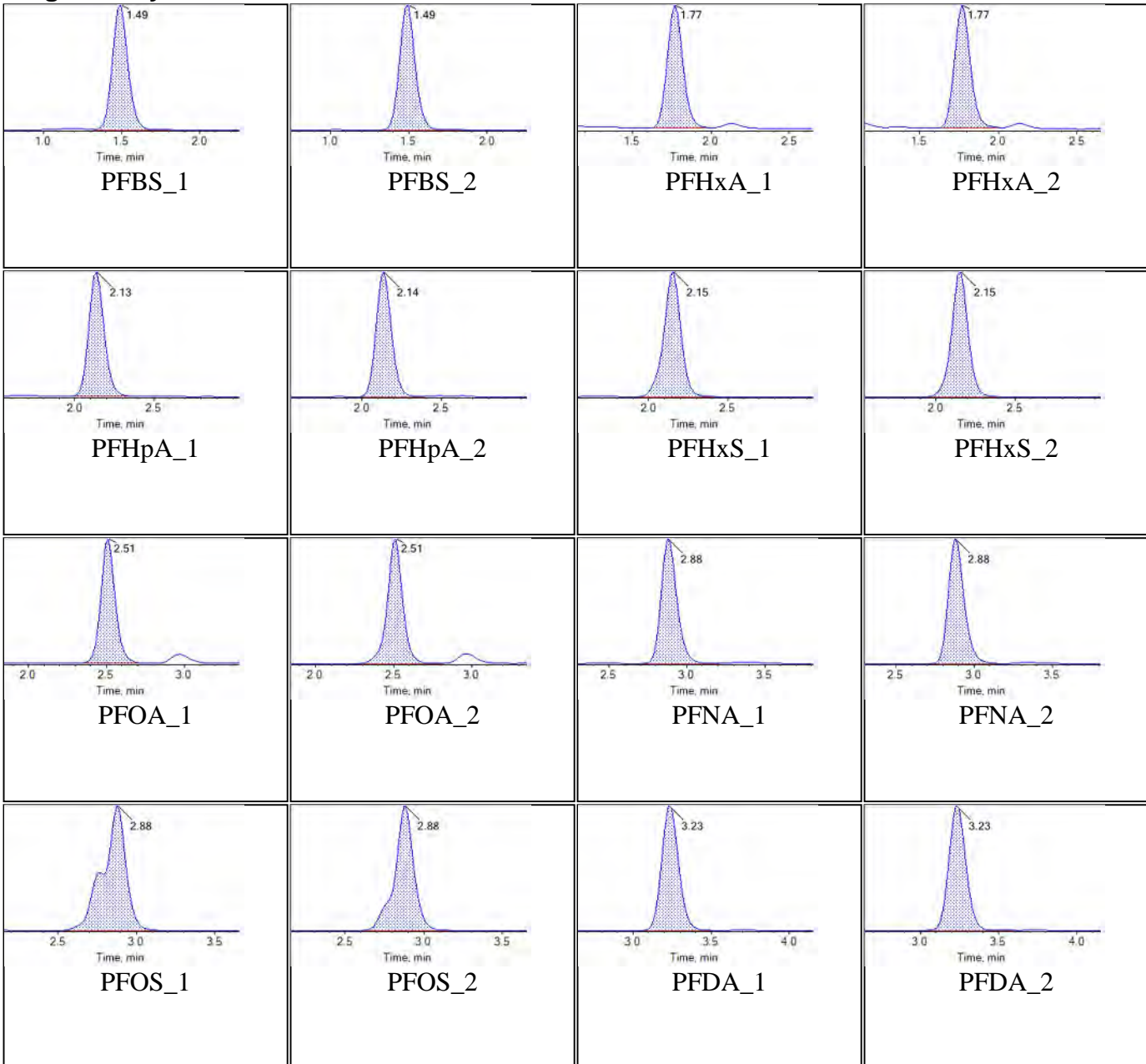
**Internal Standards:**



<b>Sample Name</b>	J6252MSD-FS(3)	<b>Injection Vial</b>	26
<b>Sample ID</b>	PSC51-MW13S-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T00:14:39	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

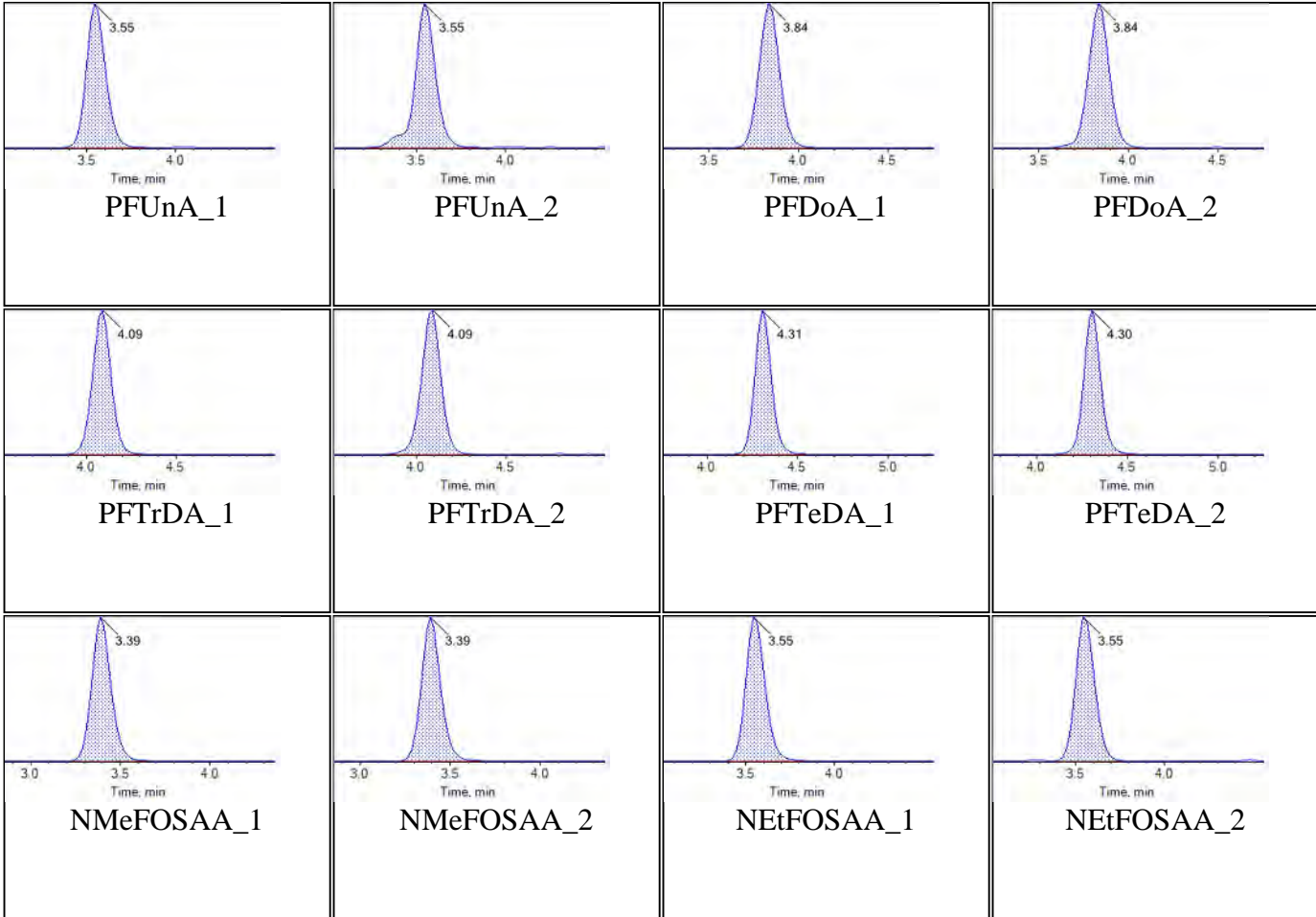
### Target Analytes:

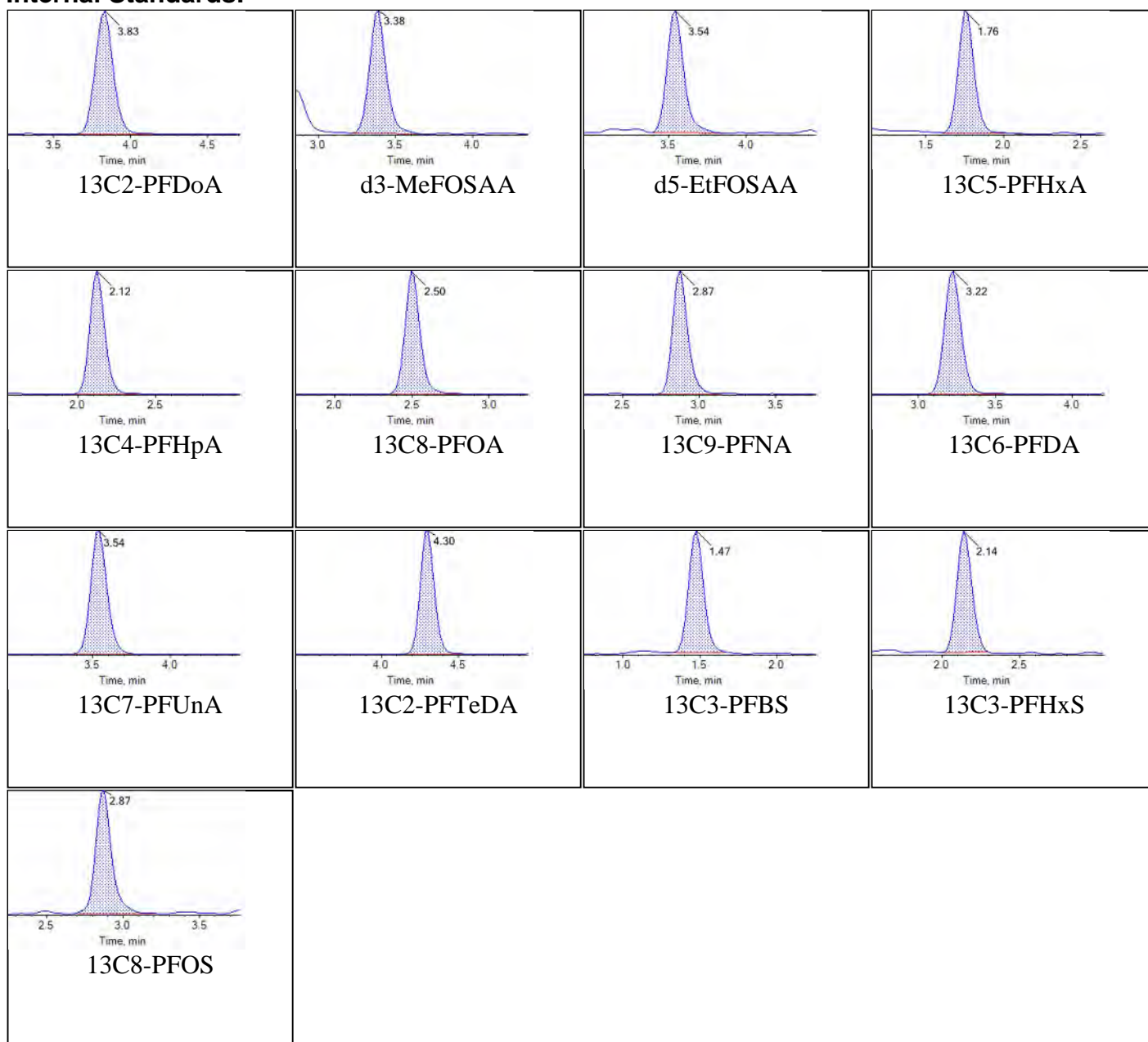




Chromatogram Report

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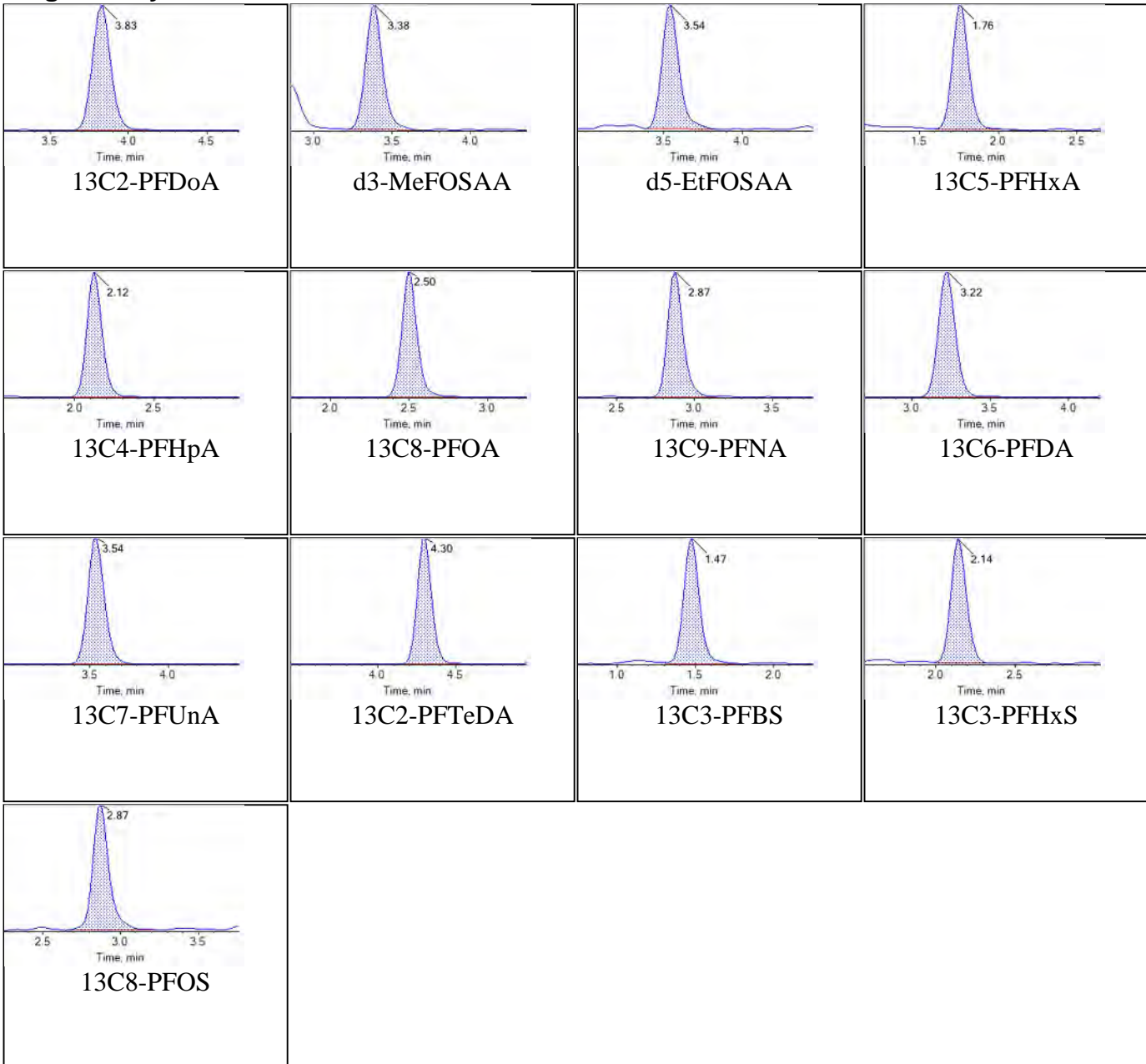


**Internal Standards:**

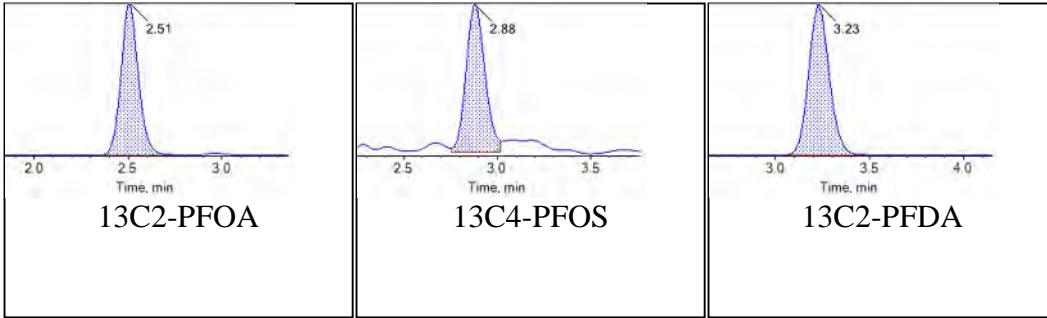
<b>Sample Name</b>	J6252MSD-FS(3)	<b>Injection Vial</b>	26
<b>Sample ID</b>	PSC51-MW13S-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T00:14:39	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



**Internal Standards:**

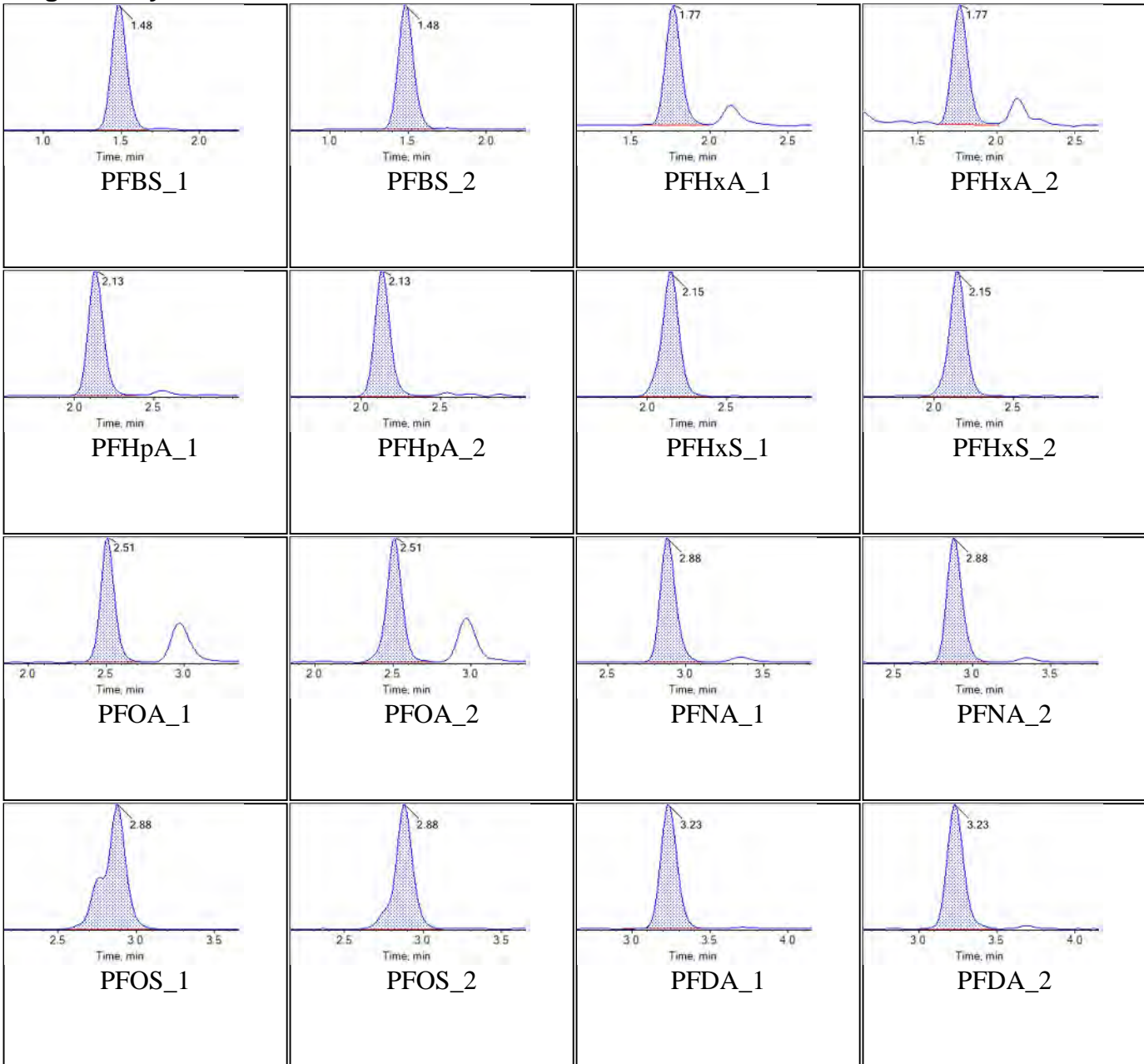




<b>Sample Name</b>	JV25 CCV	<b>Injection Vial</b>	7
<b>Sample ID</b>	CCV	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T00:25:26	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

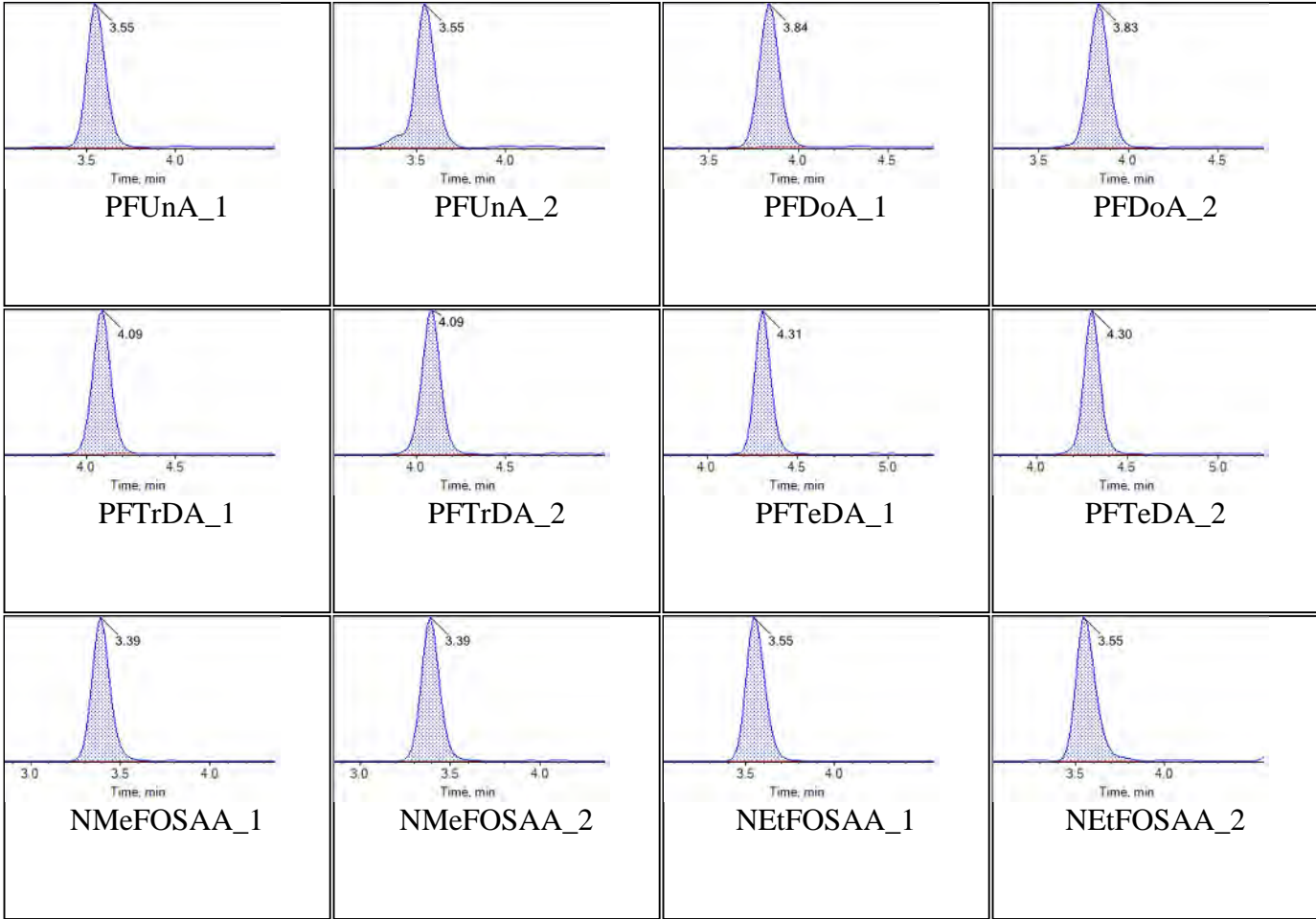
### Target Analytes:



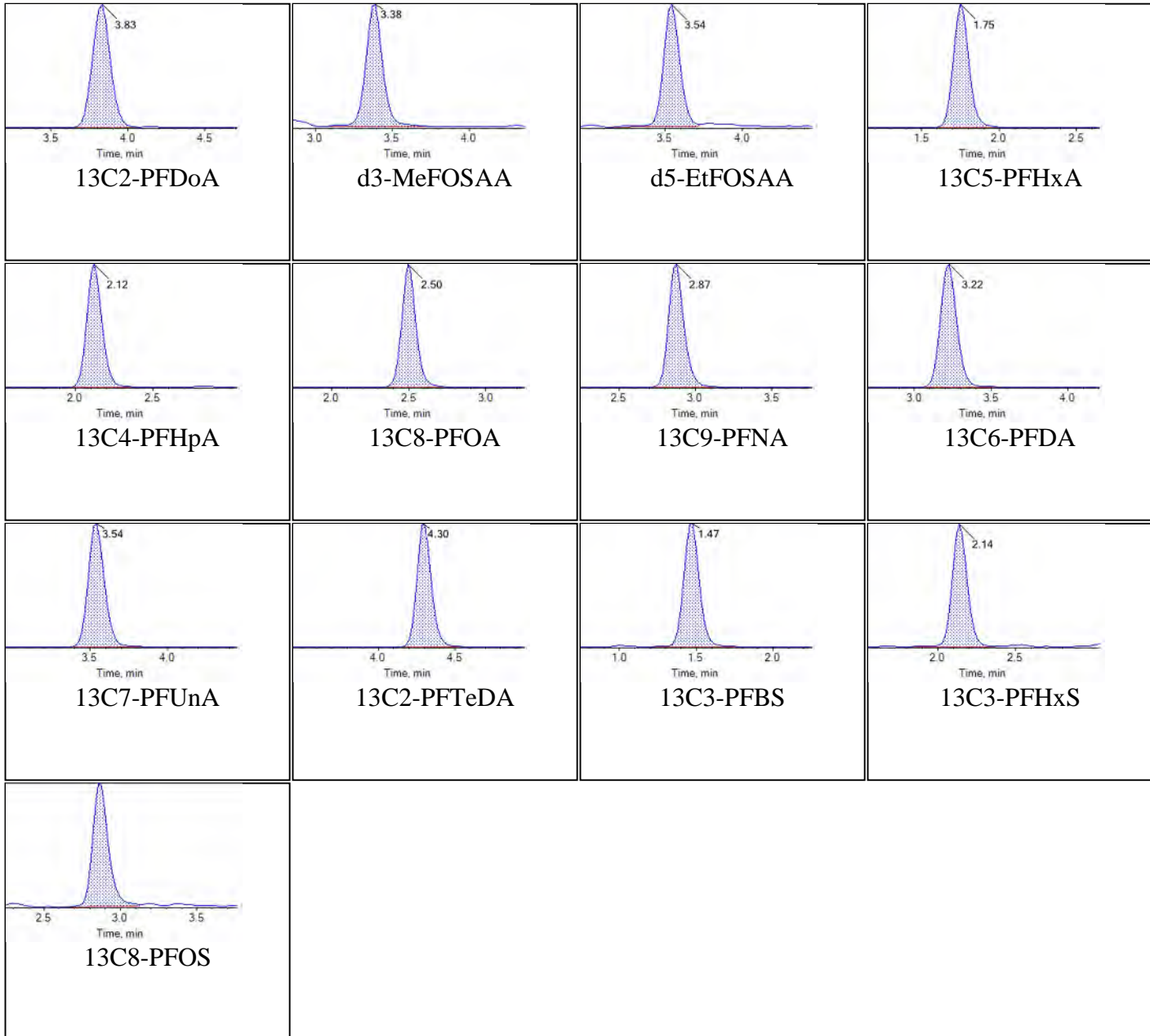


Chromatogram Report

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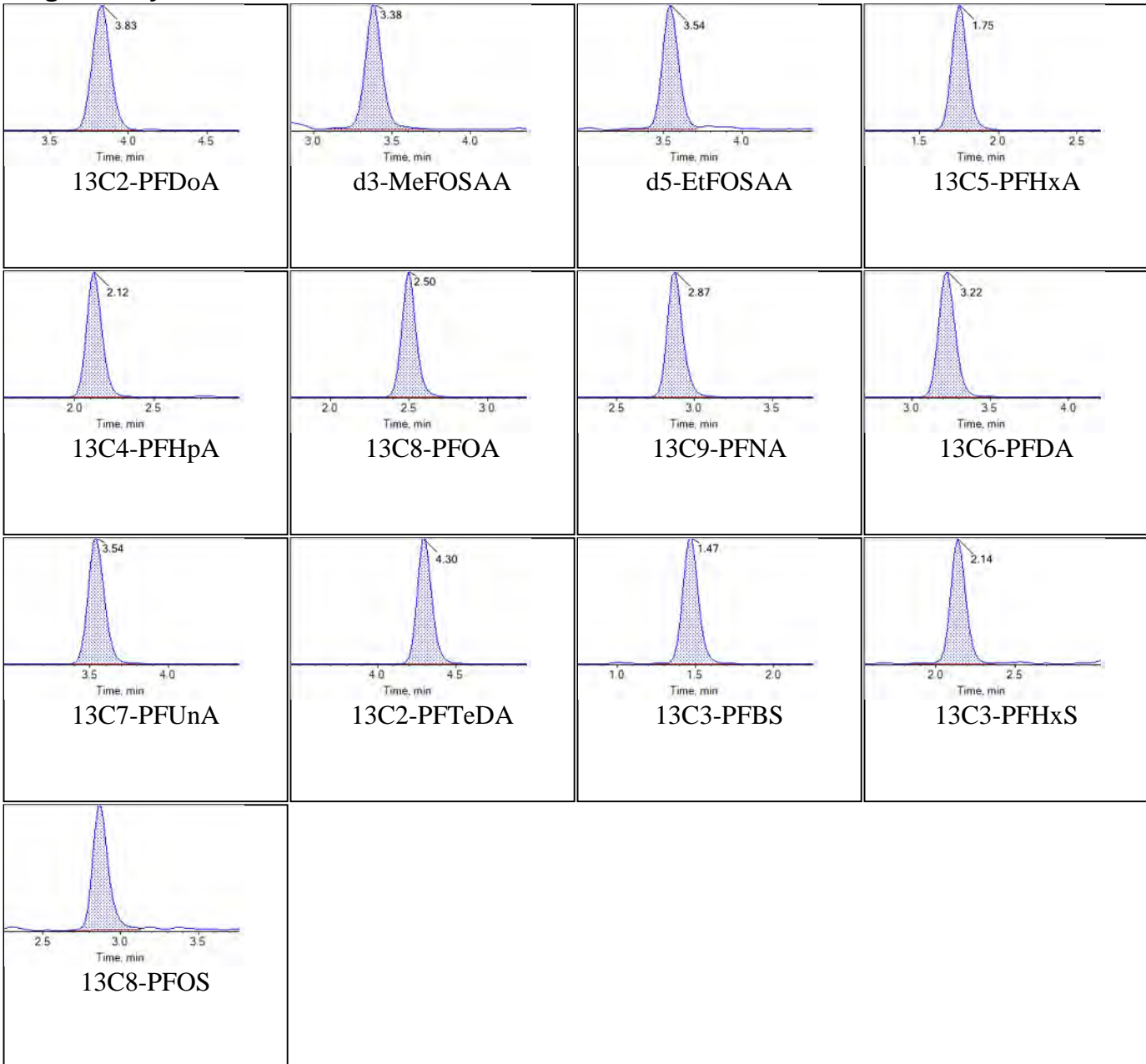


**Internal Standards:**

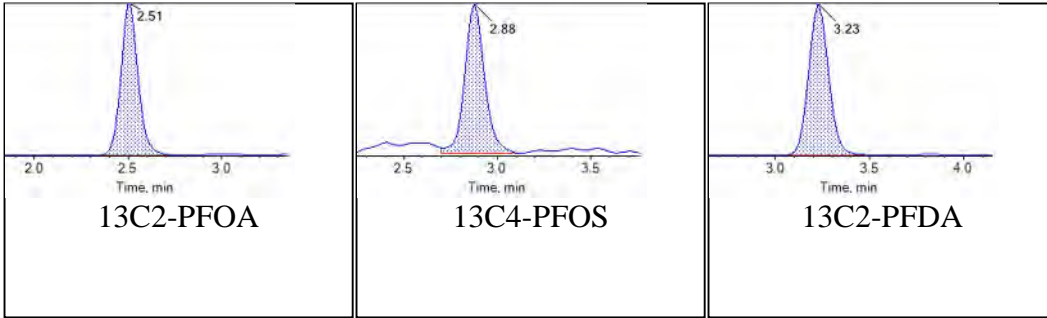
<b>Sample Name</b>	JV25 CCV	<b>Injection Vial</b>	7
<b>Sample ID</b>	CCV	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T00:25:26	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



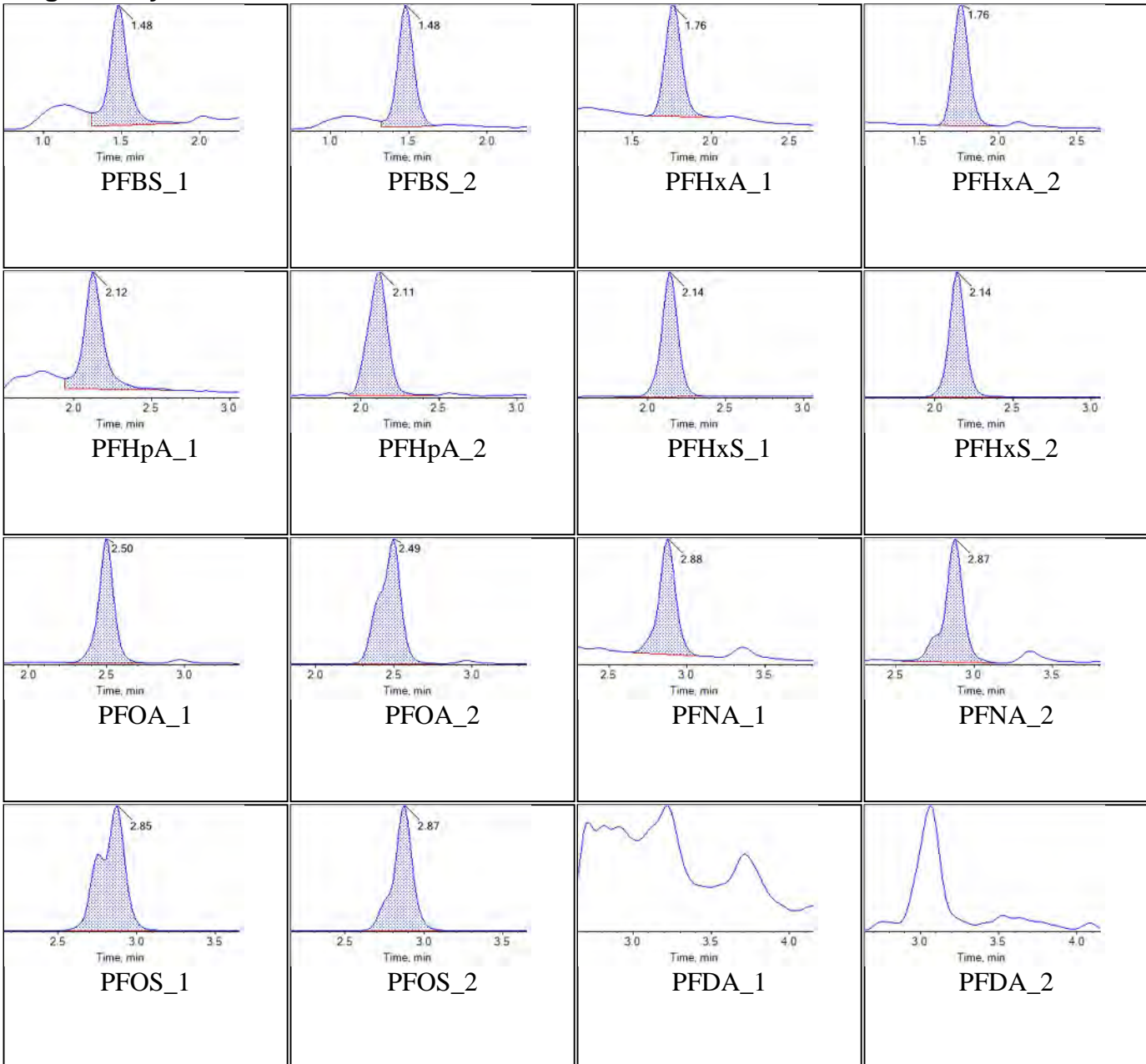
**Internal Standards:**



<b>Sample Name</b>	J6248-FS(4)	<b>Injection Vial</b>	27
<b>Sample ID</b>	DRMO-MW11-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T00:47:01	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

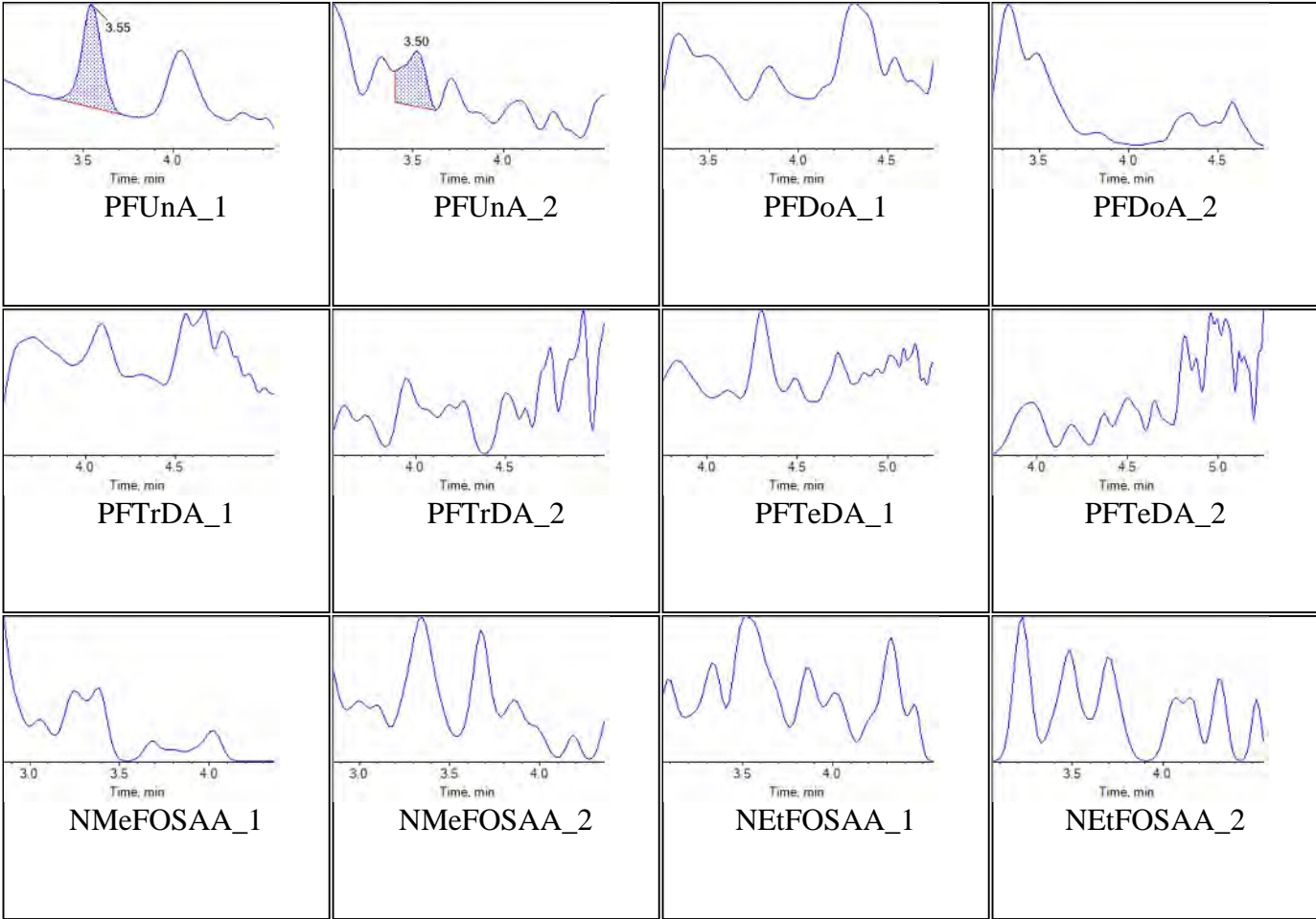
### Target Analytes:

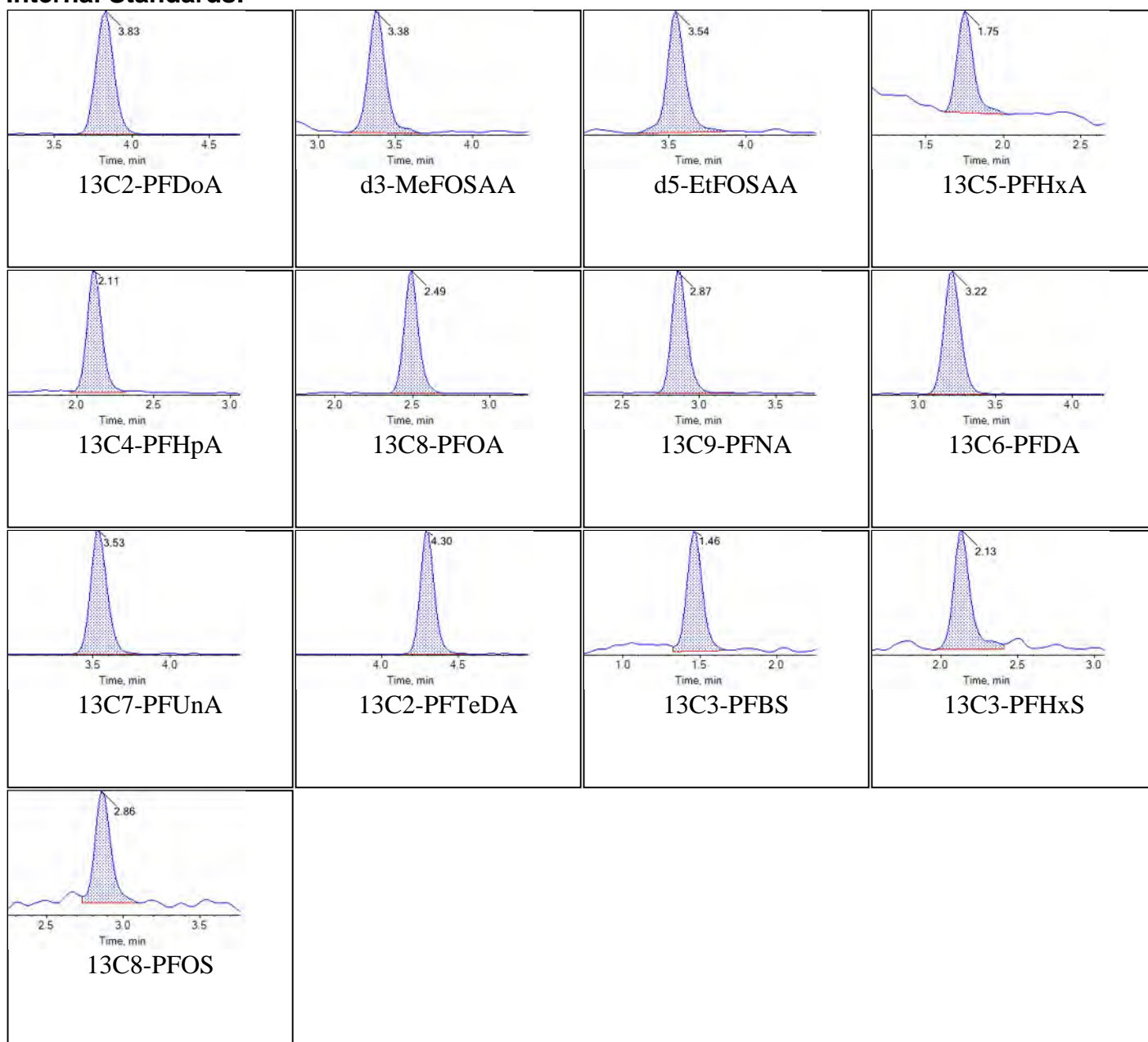




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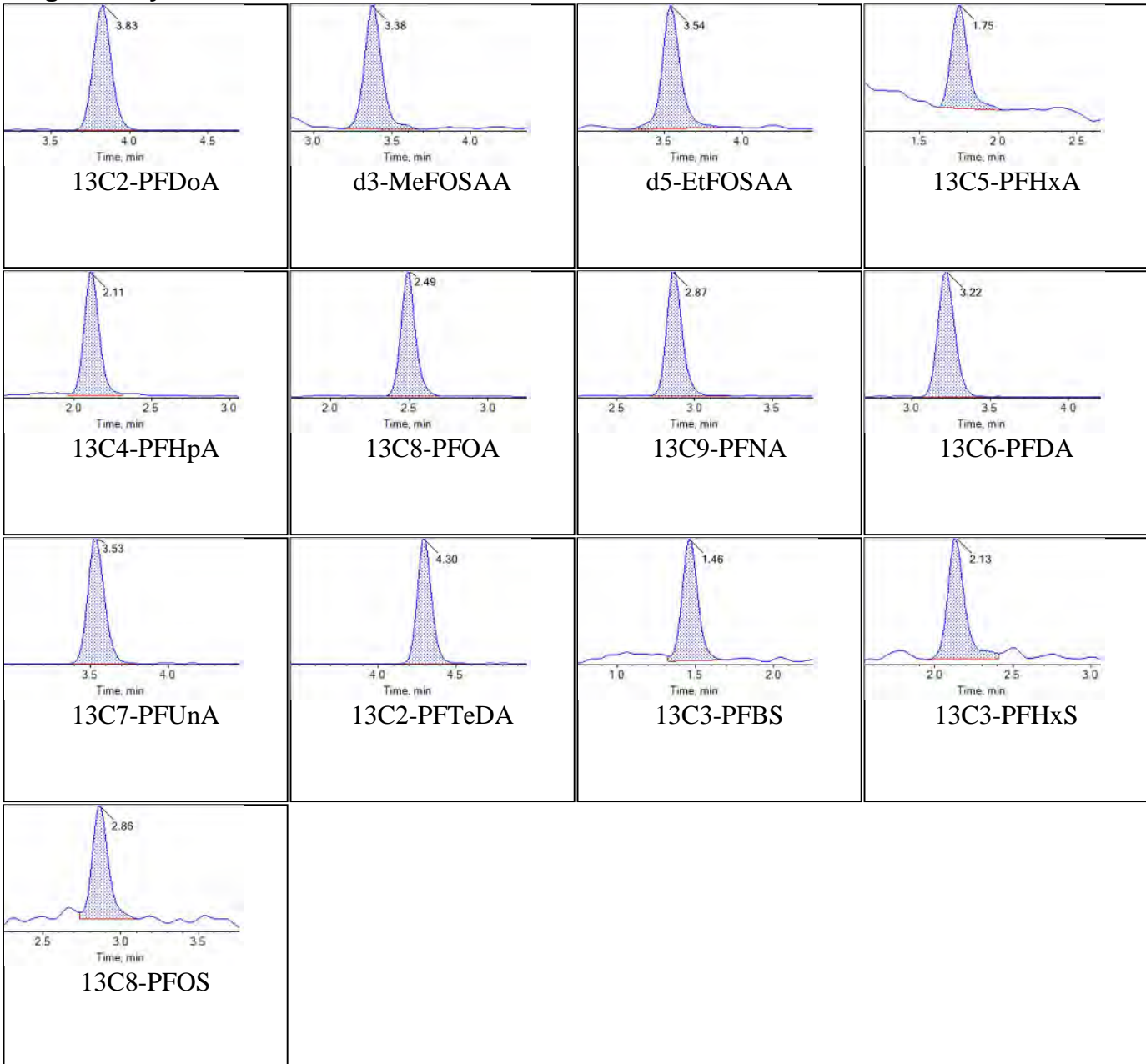
**Internal Standards:**



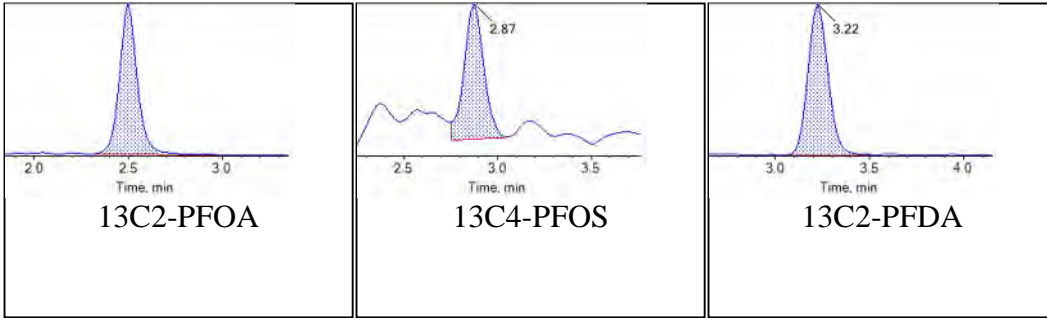
<b>Sample Name</b>	J6248-FS(4)	<b>Injection Vial</b>	27
<b>Sample ID</b>	DRMO-MW11-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T00:47:01	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



**Internal Standards:**

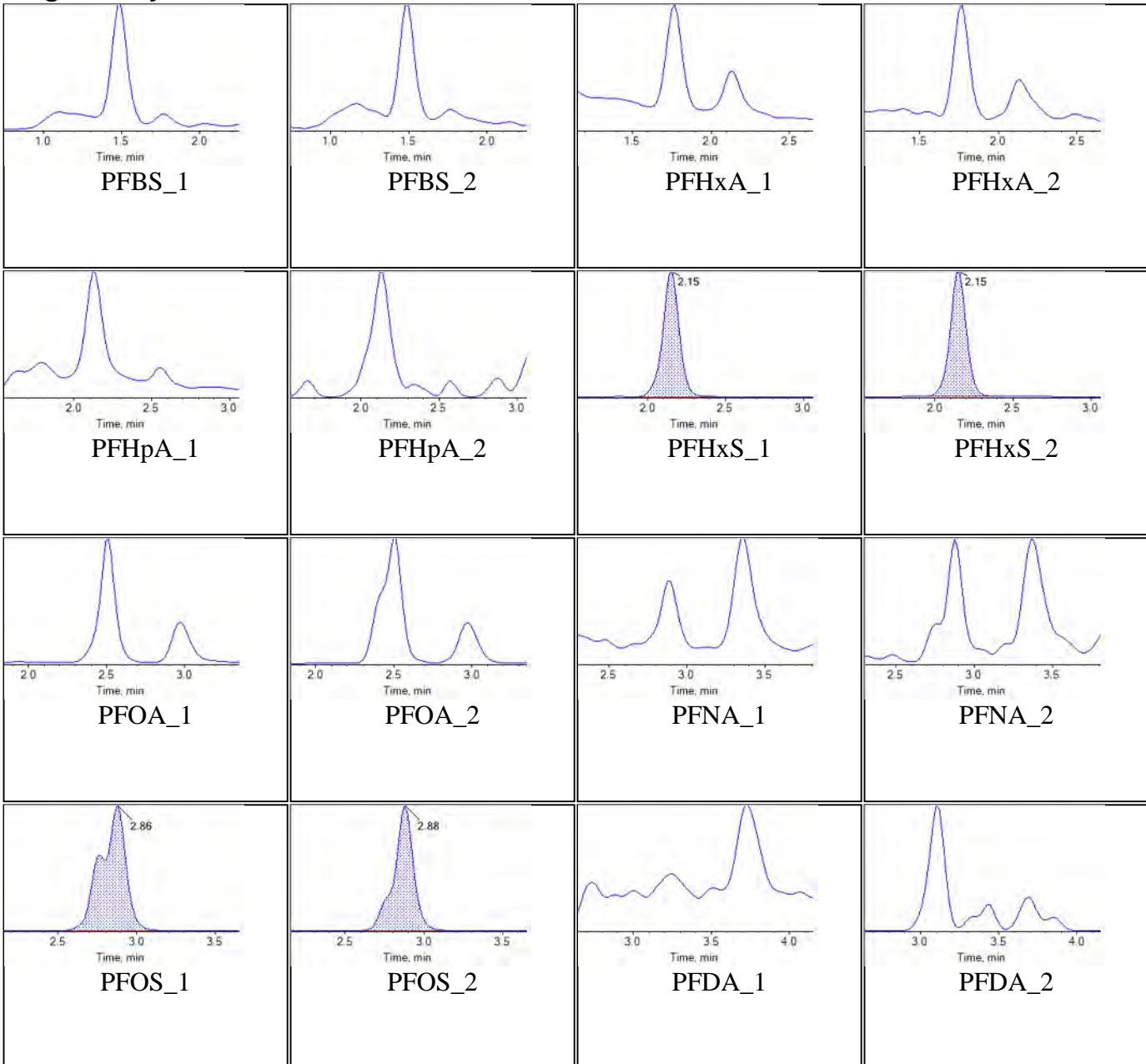




<b>Sample Name</b>	J6248-FS-D(5)	<b>Injection Vial</b>	28
<b>Sample ID</b>	DRMO-MW11-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T00:57:49	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

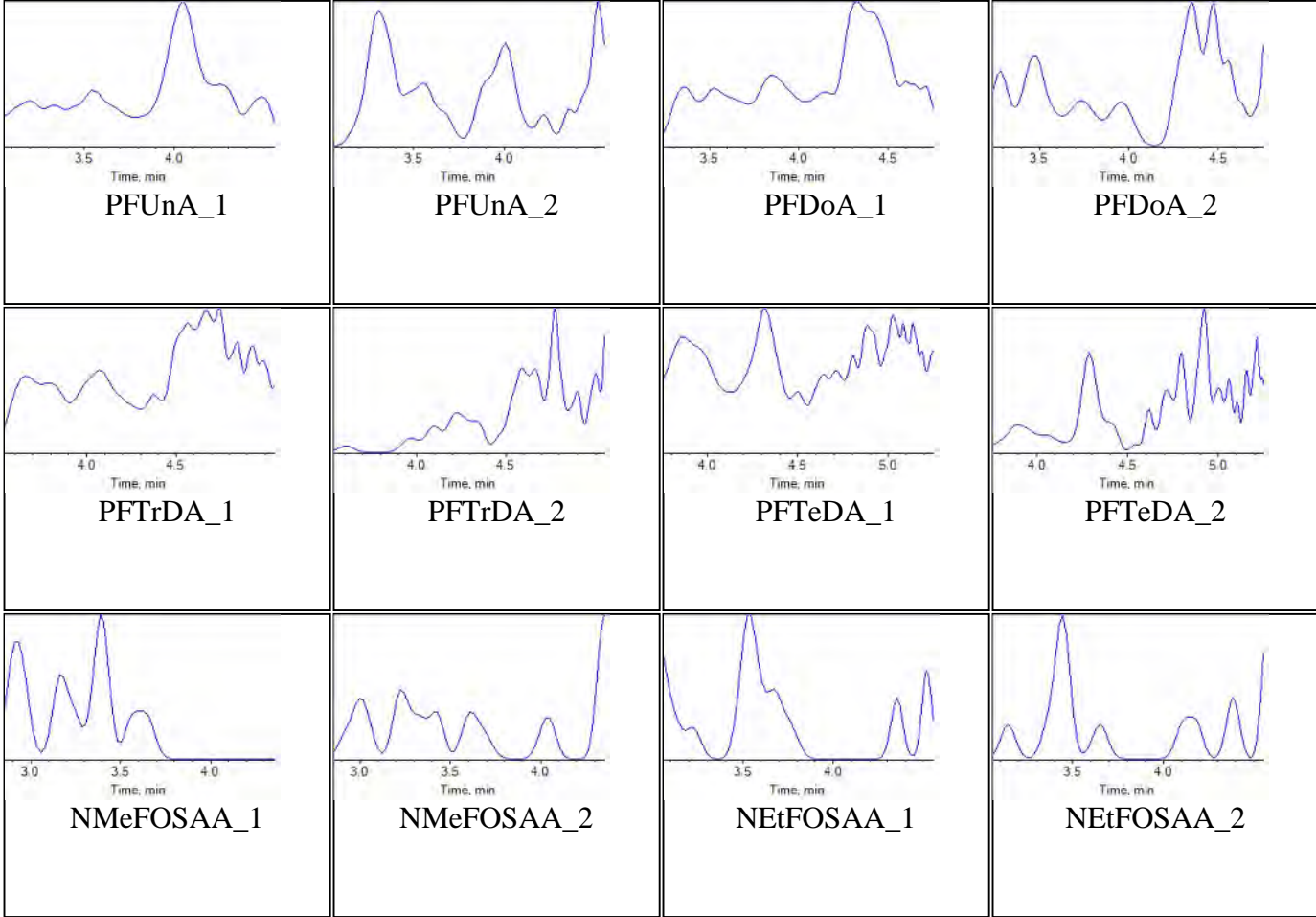
### Target Analytes:





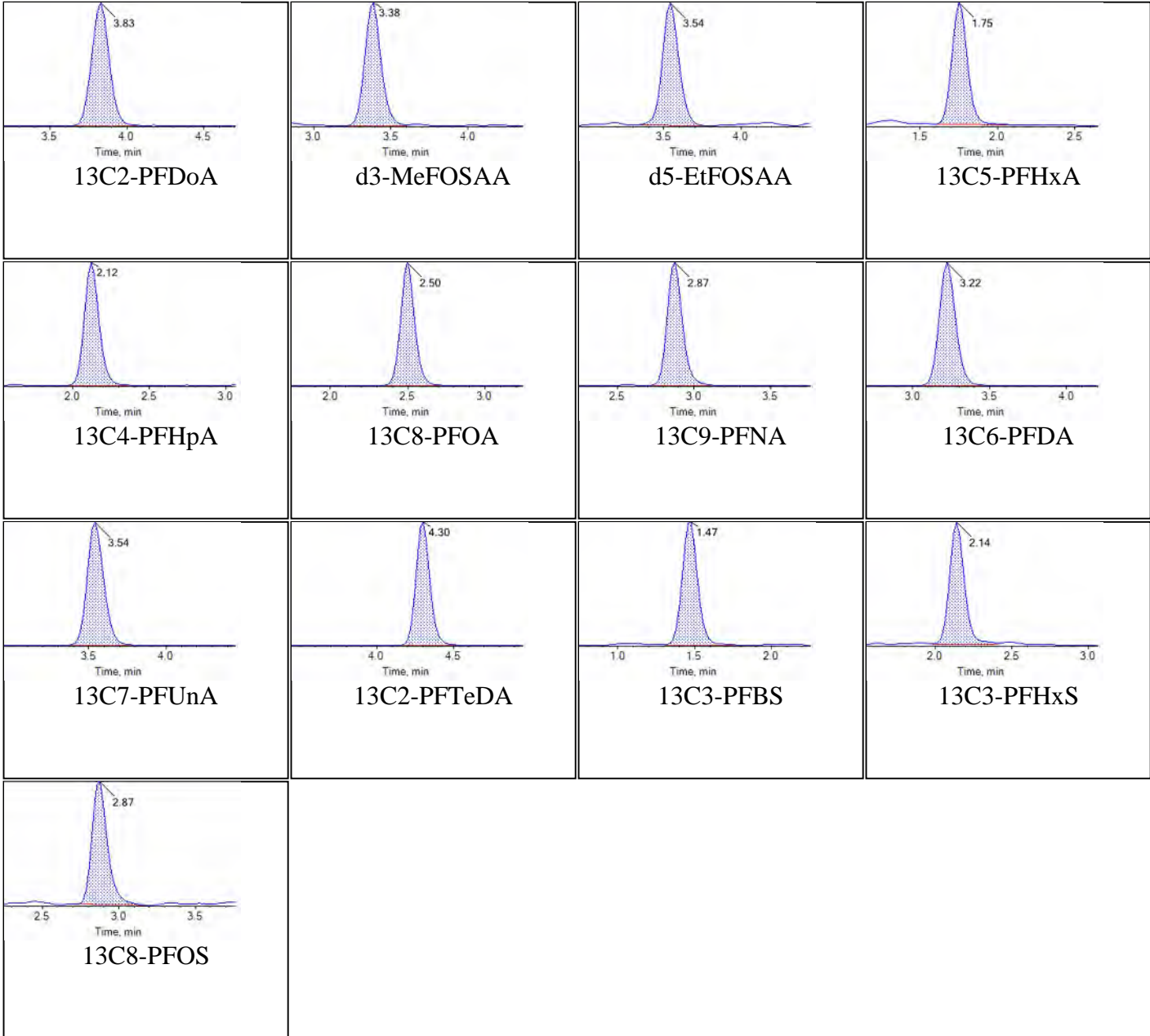
Chromatogram Report

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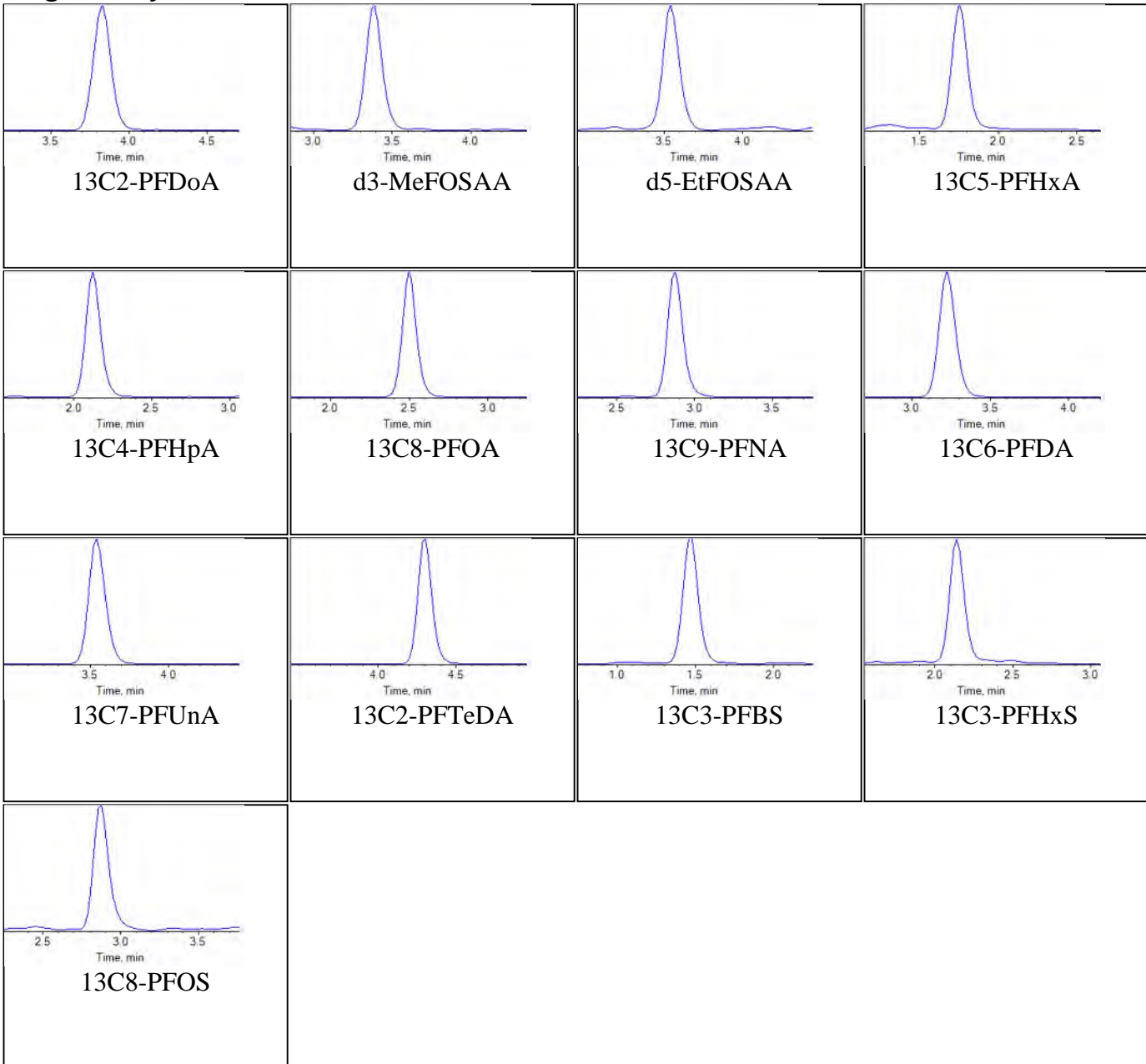
Internal Standards:



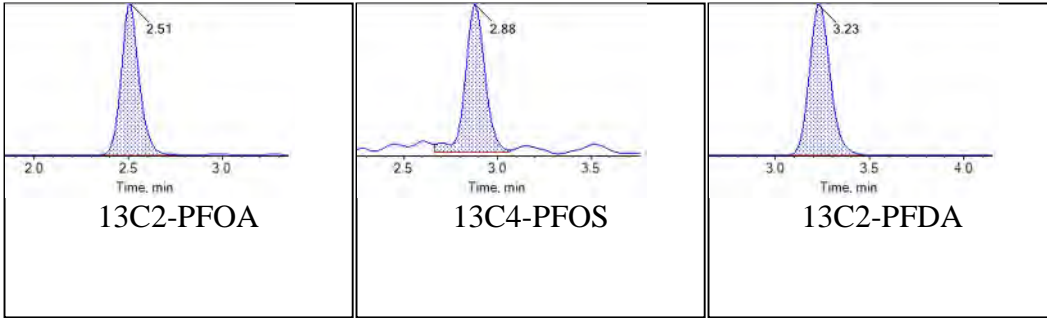
<b>Sample Name</b>	J6248-FS-D(5)	<b>Injection Vial</b>	28
<b>Sample ID</b>	DRMO-MW11-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T00:57:49	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



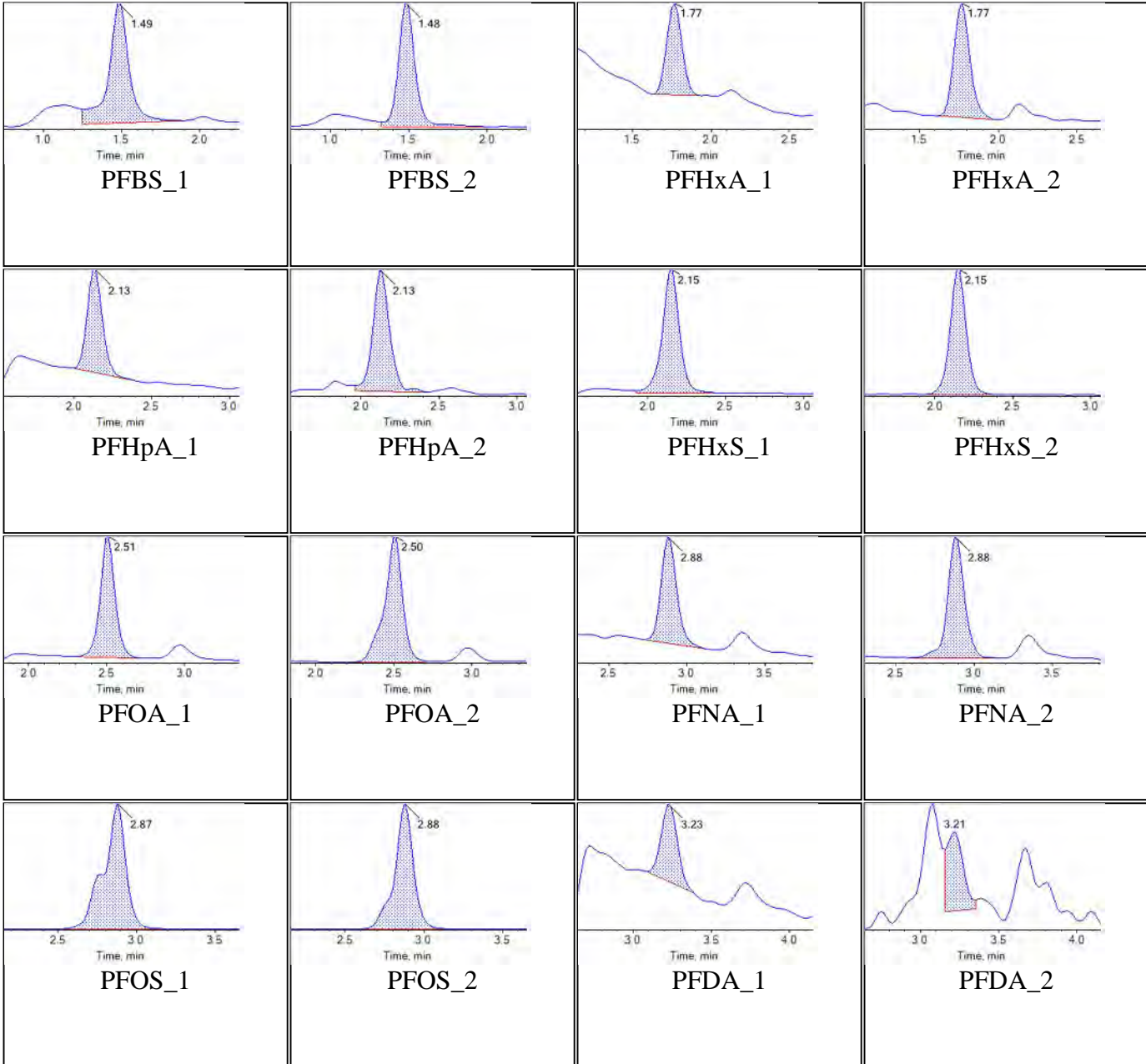
**Internal Standards:**



<b>Sample Name</b>	J6253-FS(4)	<b>Injection Vial</b>	29
<b>Sample ID</b>	DRMO-MW2-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T01:08:37	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:

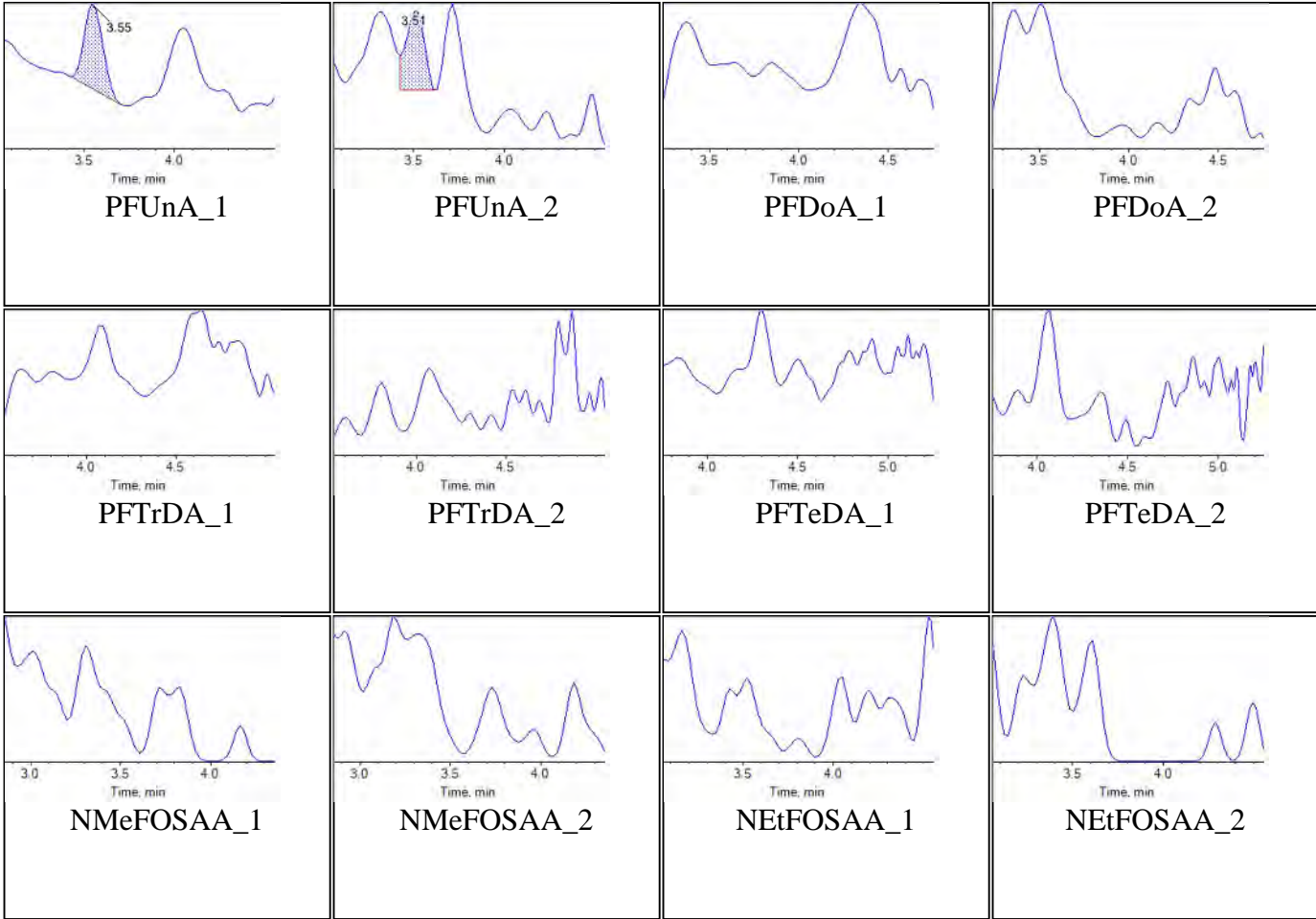


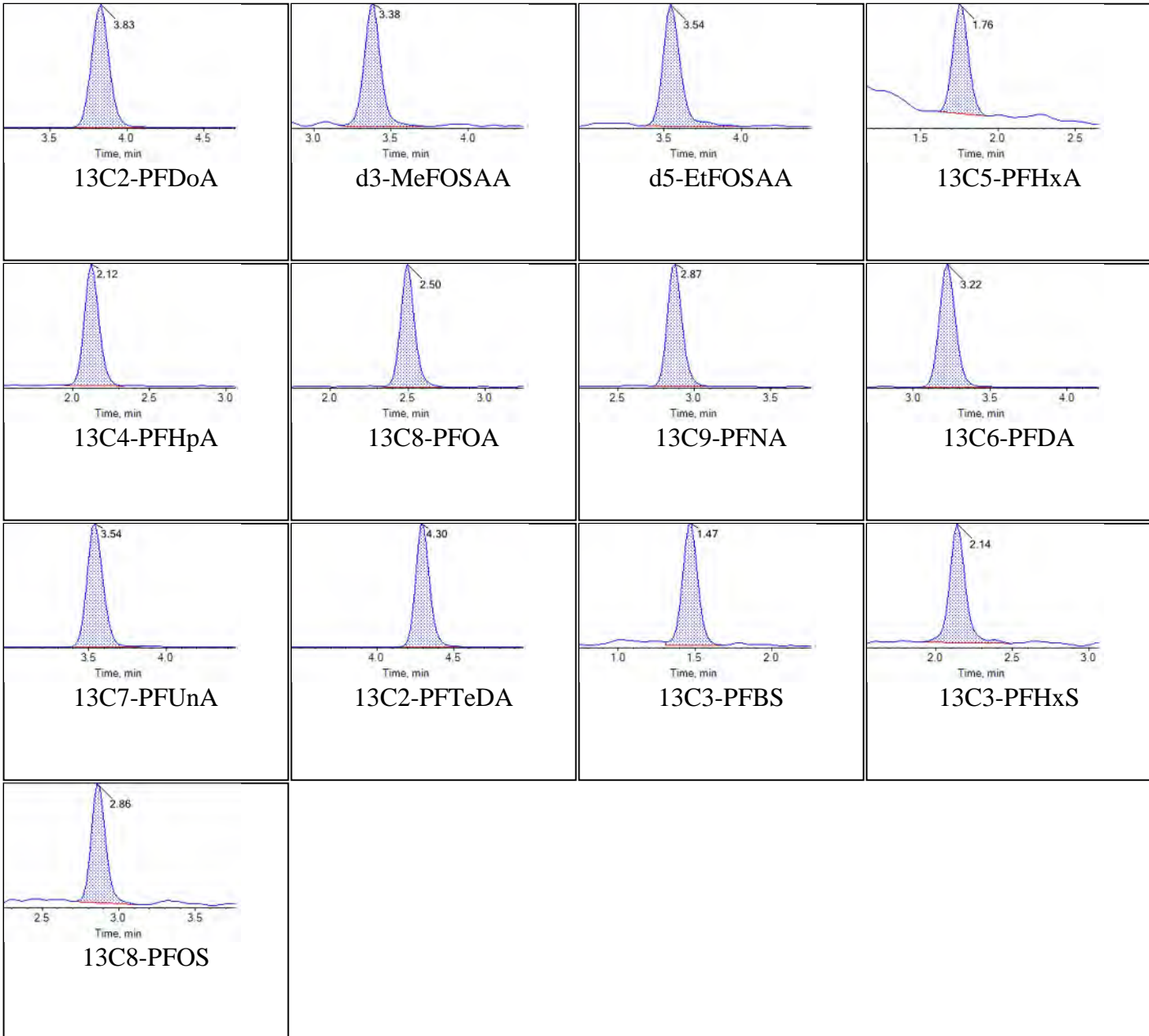




Chromatogram Report

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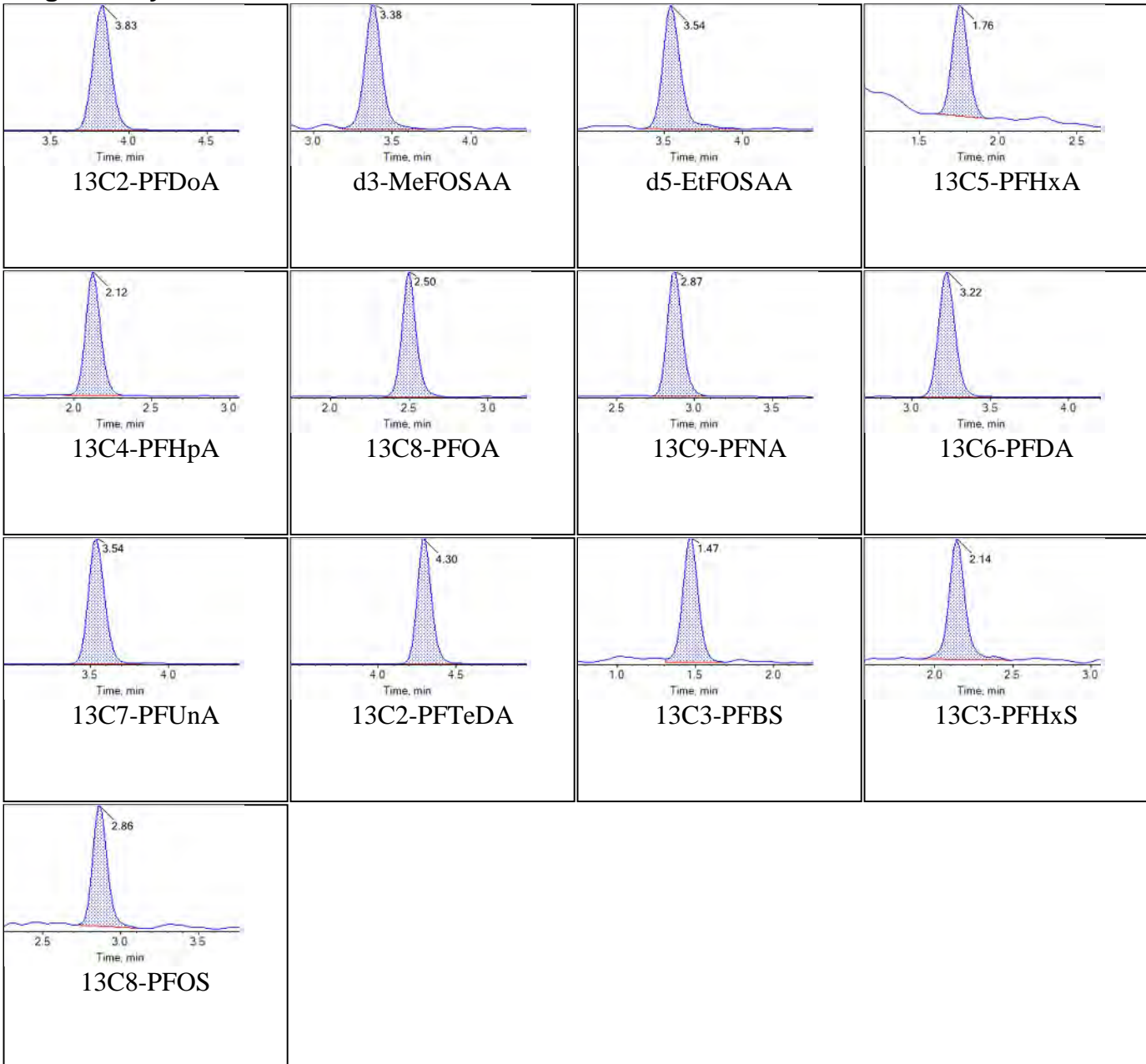
**Internal Standards:**



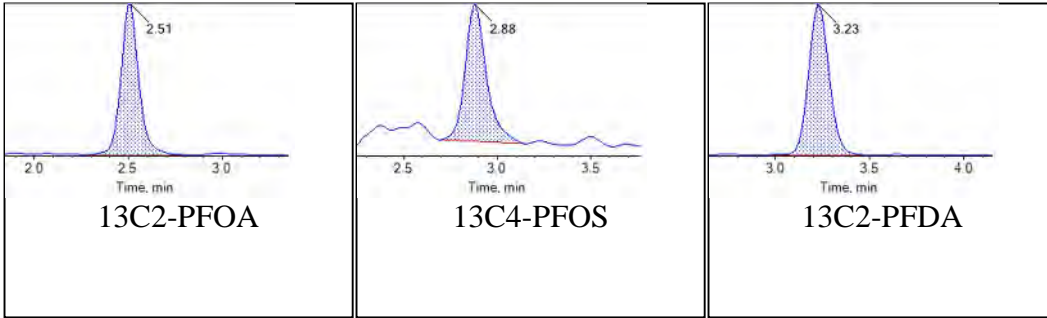
<b>Sample Name</b>	J6253-FS(4)	<b>Injection Vial</b>	29
<b>Sample ID</b>	DRMO-MW2-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T01:08:37	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



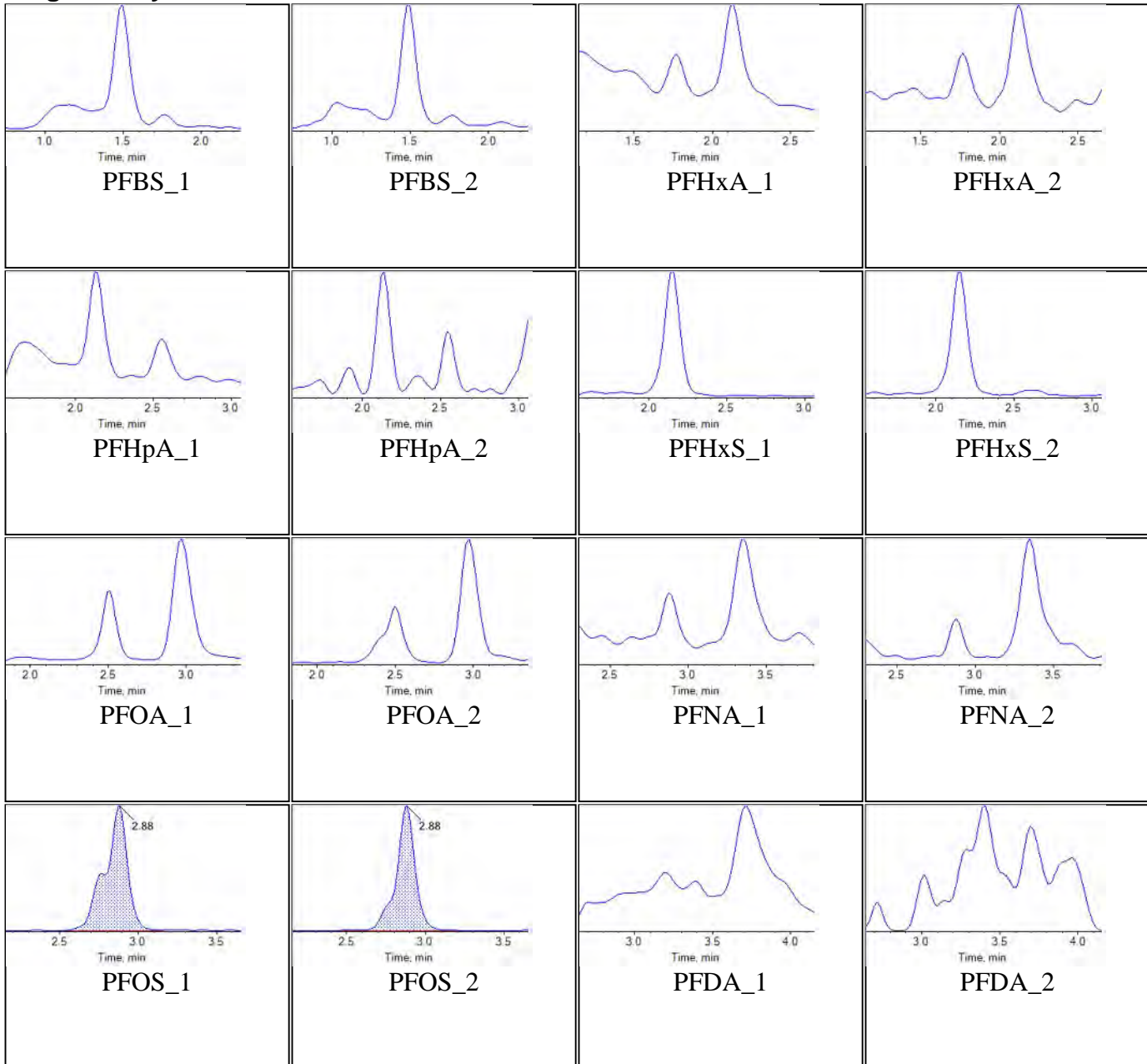
**Internal Standards:**



Sample Name	J6253-FS-D(5)	Injection Vial	30
Sample ID	DRMO-MW2-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:19:25	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

## Chromatograms

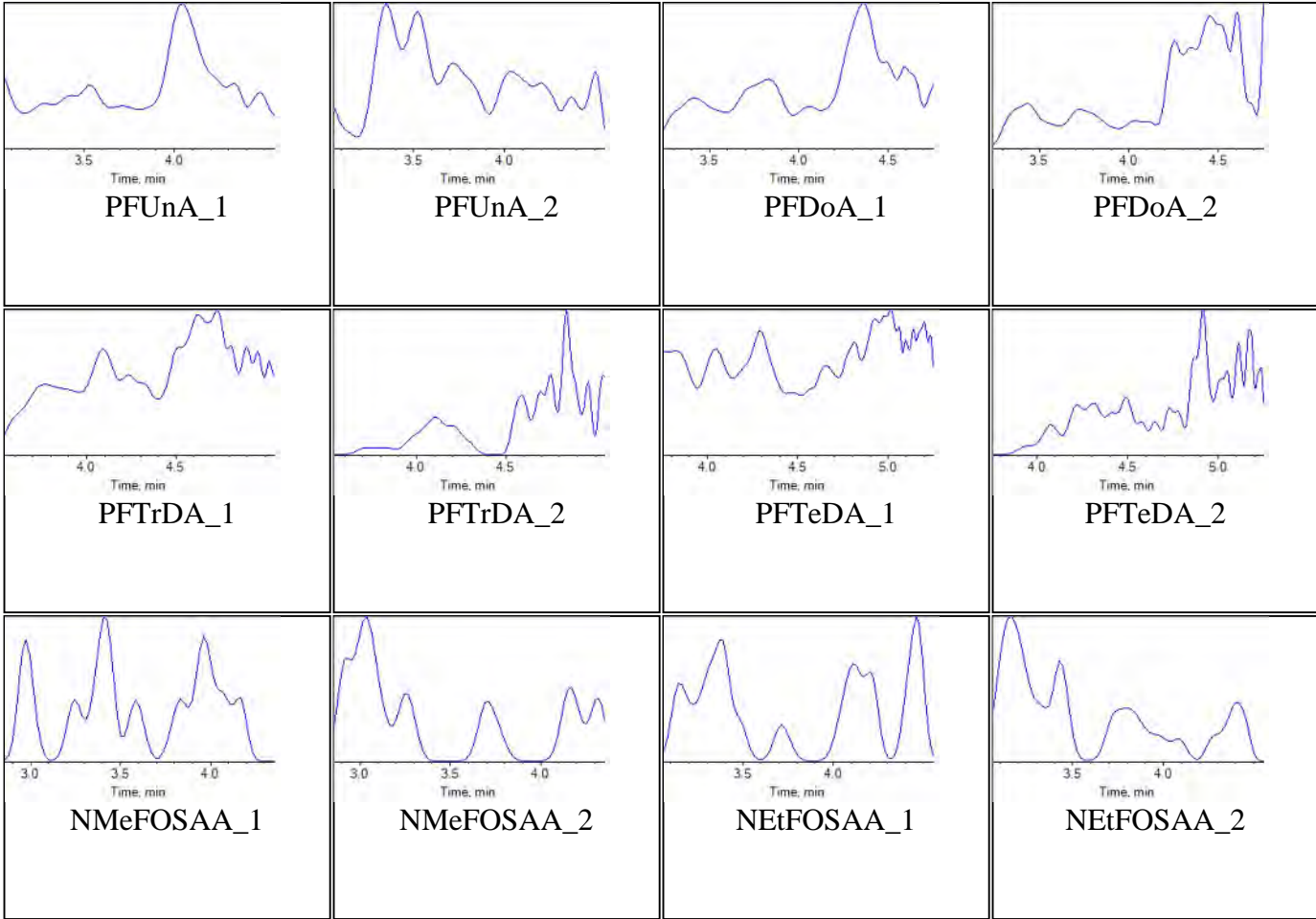
### Target Analytes:

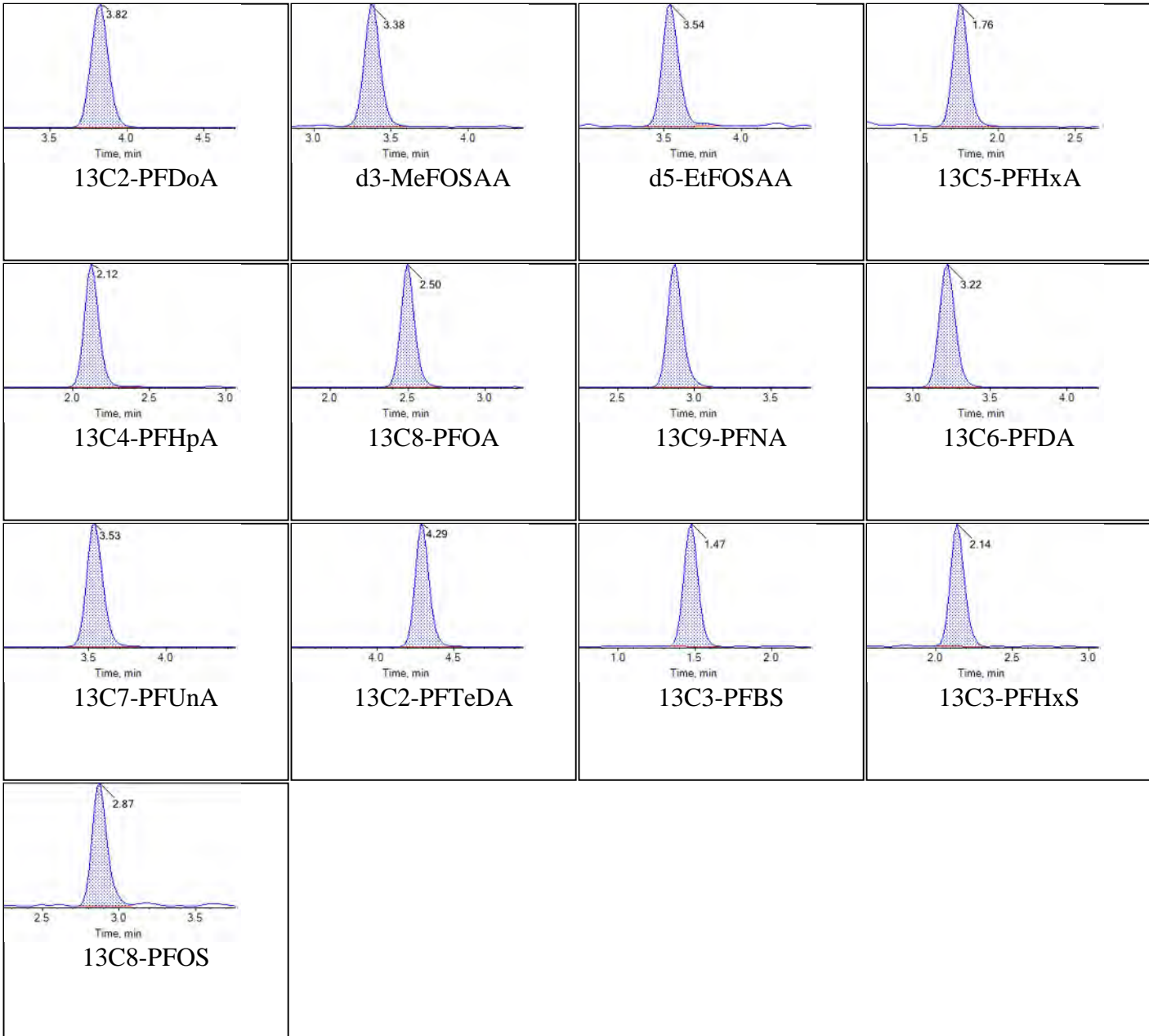




Chromatogram Report

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Printed: 05/06/2018 2:29:33 PM

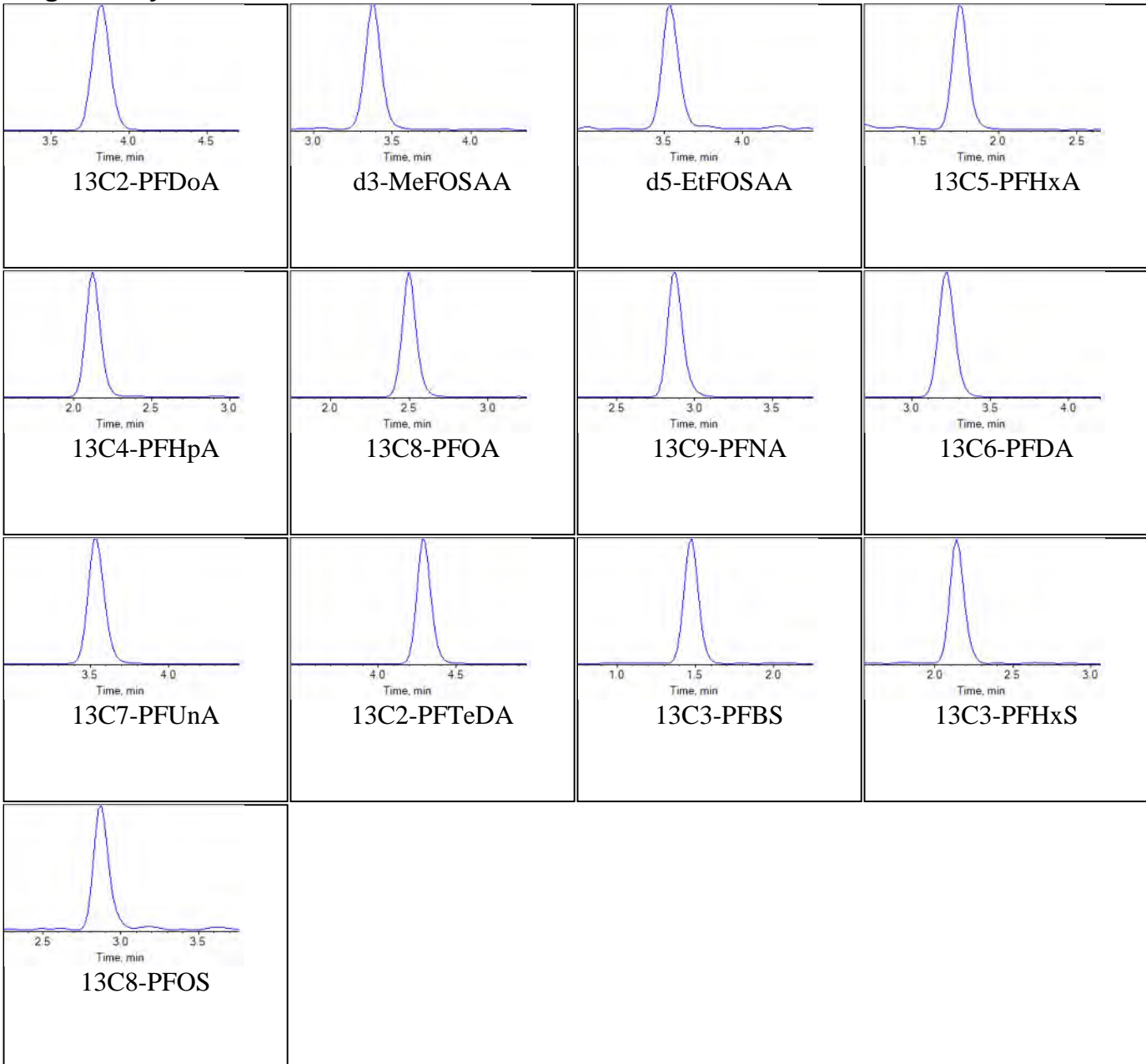


**Internal Standards:**

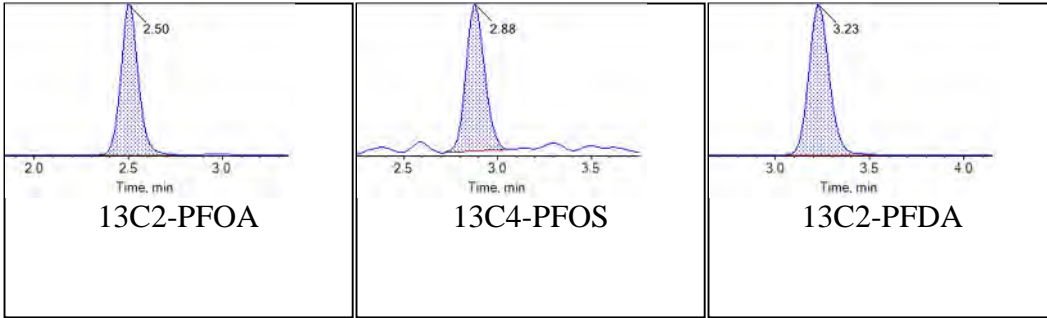
<b>Sample Name</b>	J6253-FS-D(5)	<b>Injection Vial</b>	30
<b>Sample ID</b>	DRMO-MW2-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T01:19:25	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



**Internal Standards:**

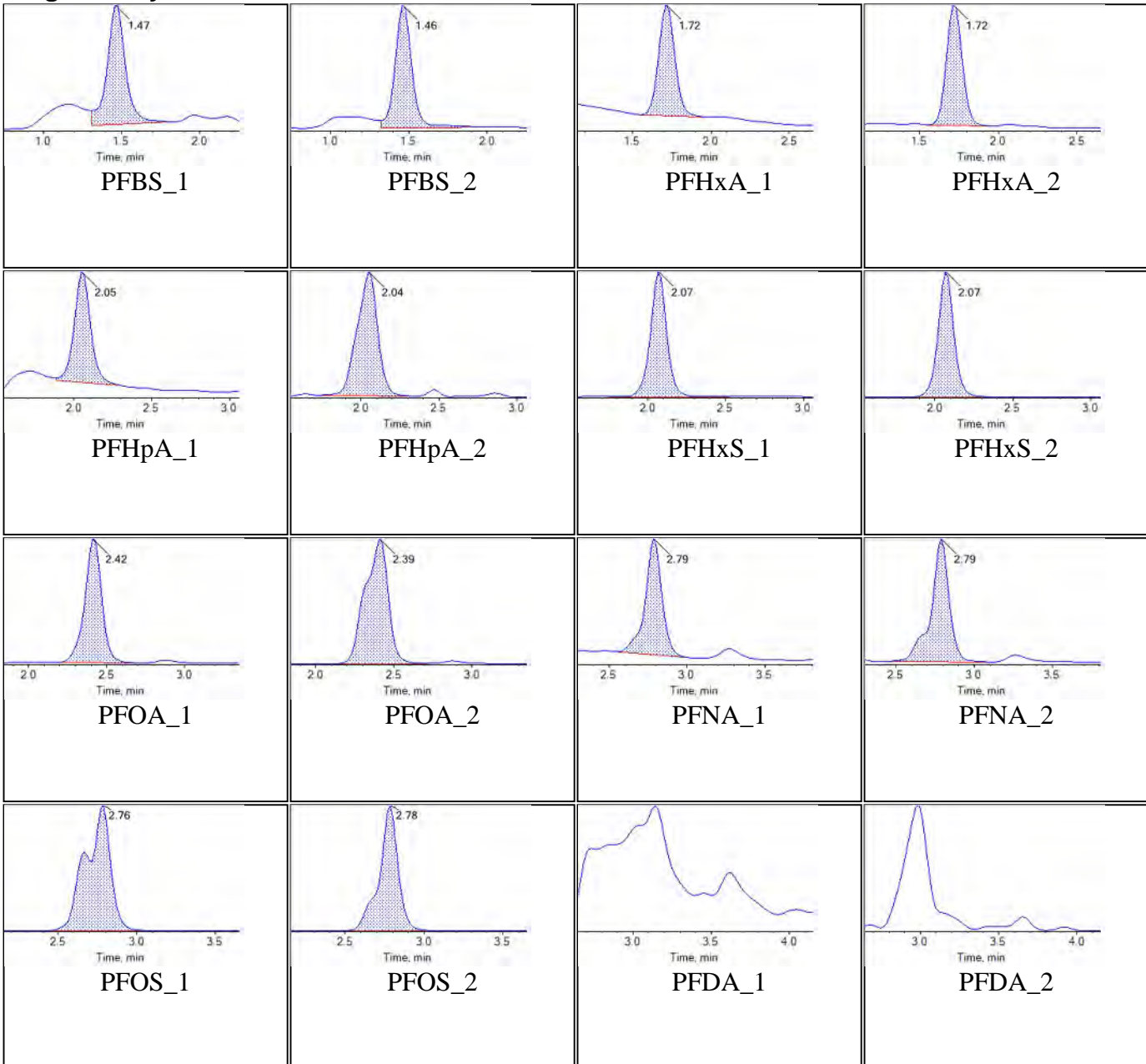




<b>Sample Name</b>	J6254-FS(4)	<b>Injection Vial</b>	31
<b>Sample ID</b>	DRM0-FD03-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T01:30:12	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

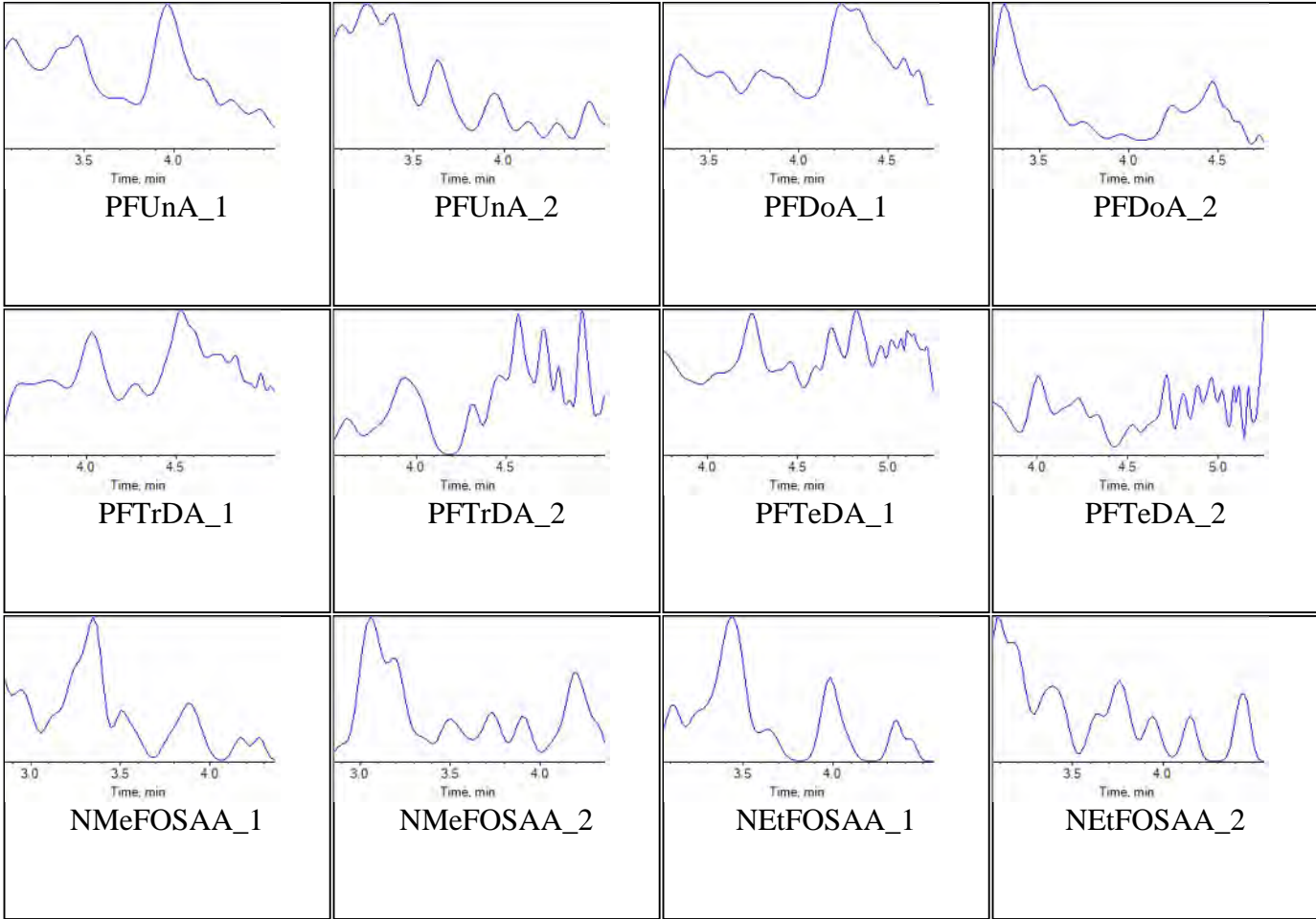
### Target Analytes:

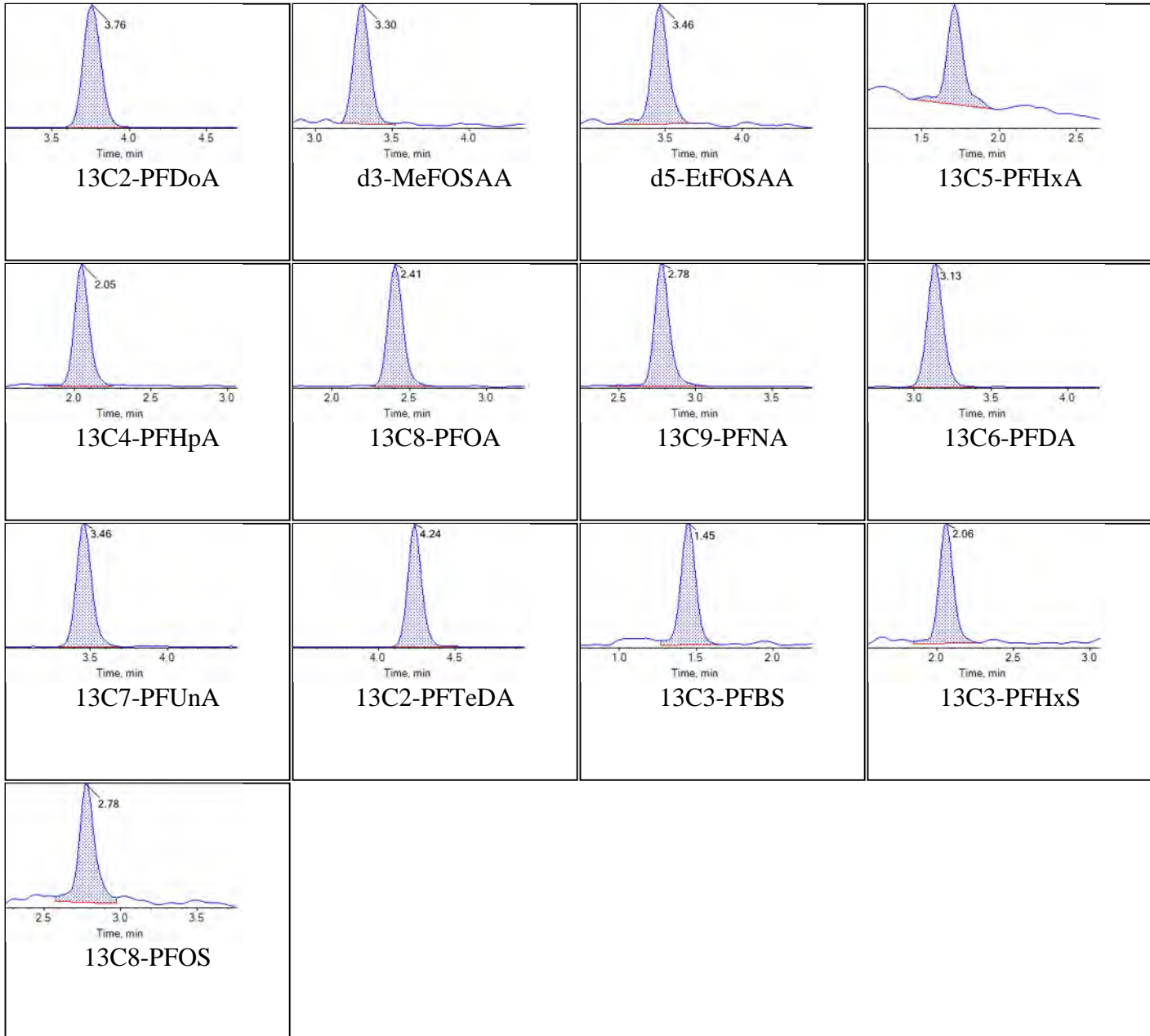




Chromatogram Report

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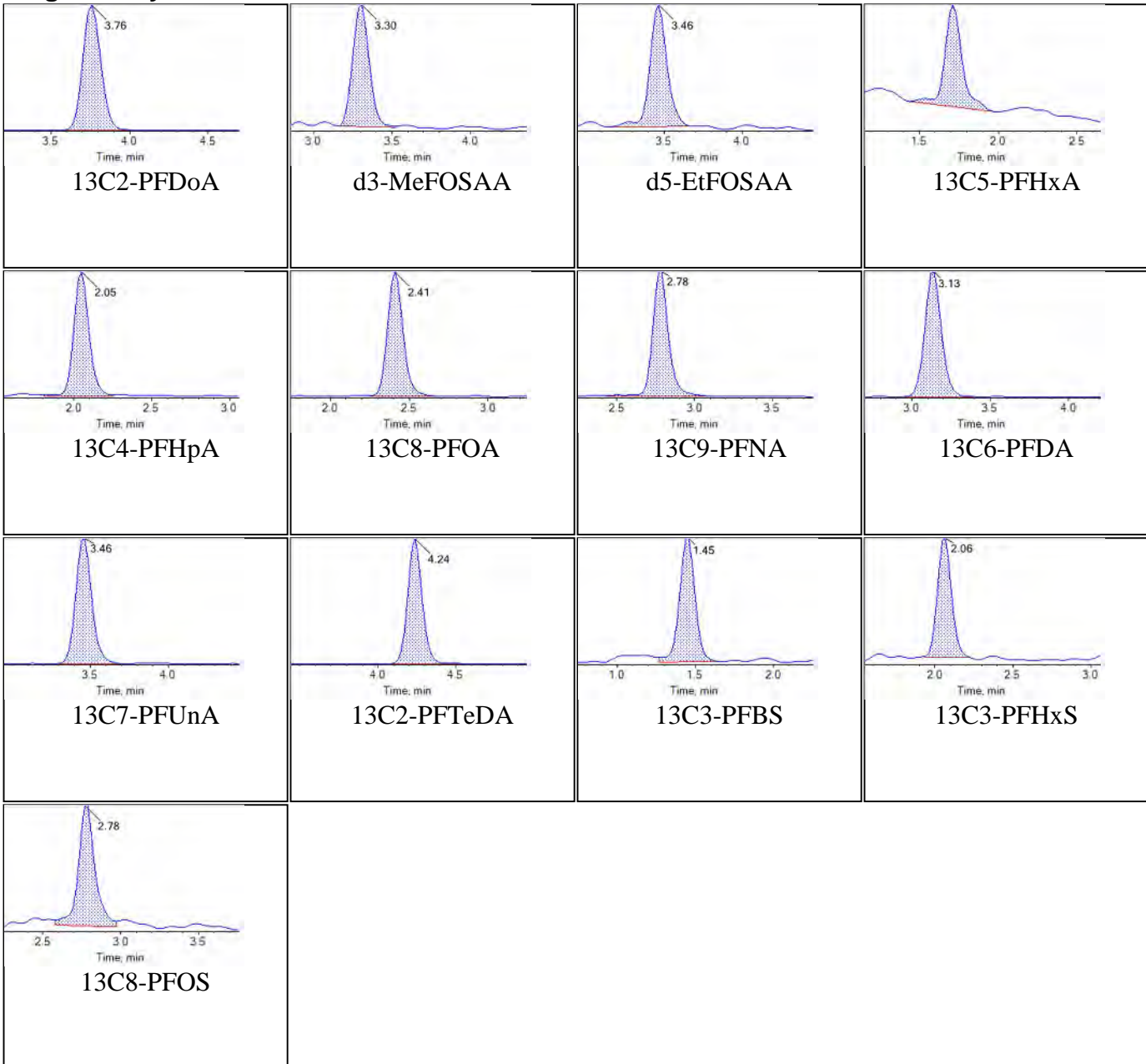


**Internal Standards:**

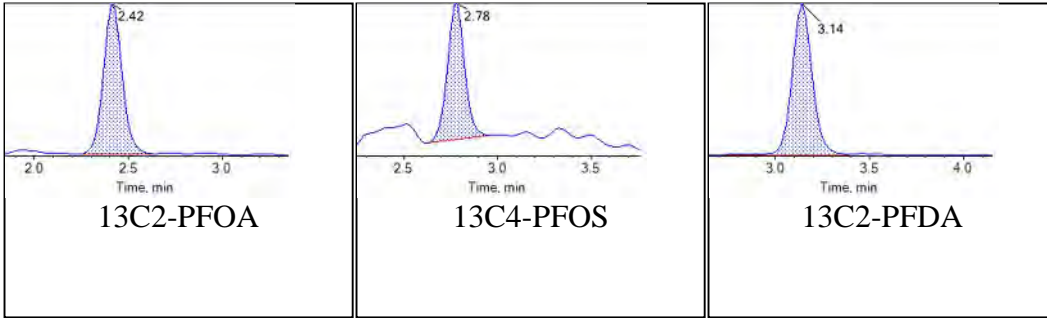
<b>Sample Name</b>	J6254-FS(4)	<b>Injection Vial</b>	31
<b>Sample ID</b>	DRM0-FD03-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T01:30:12	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



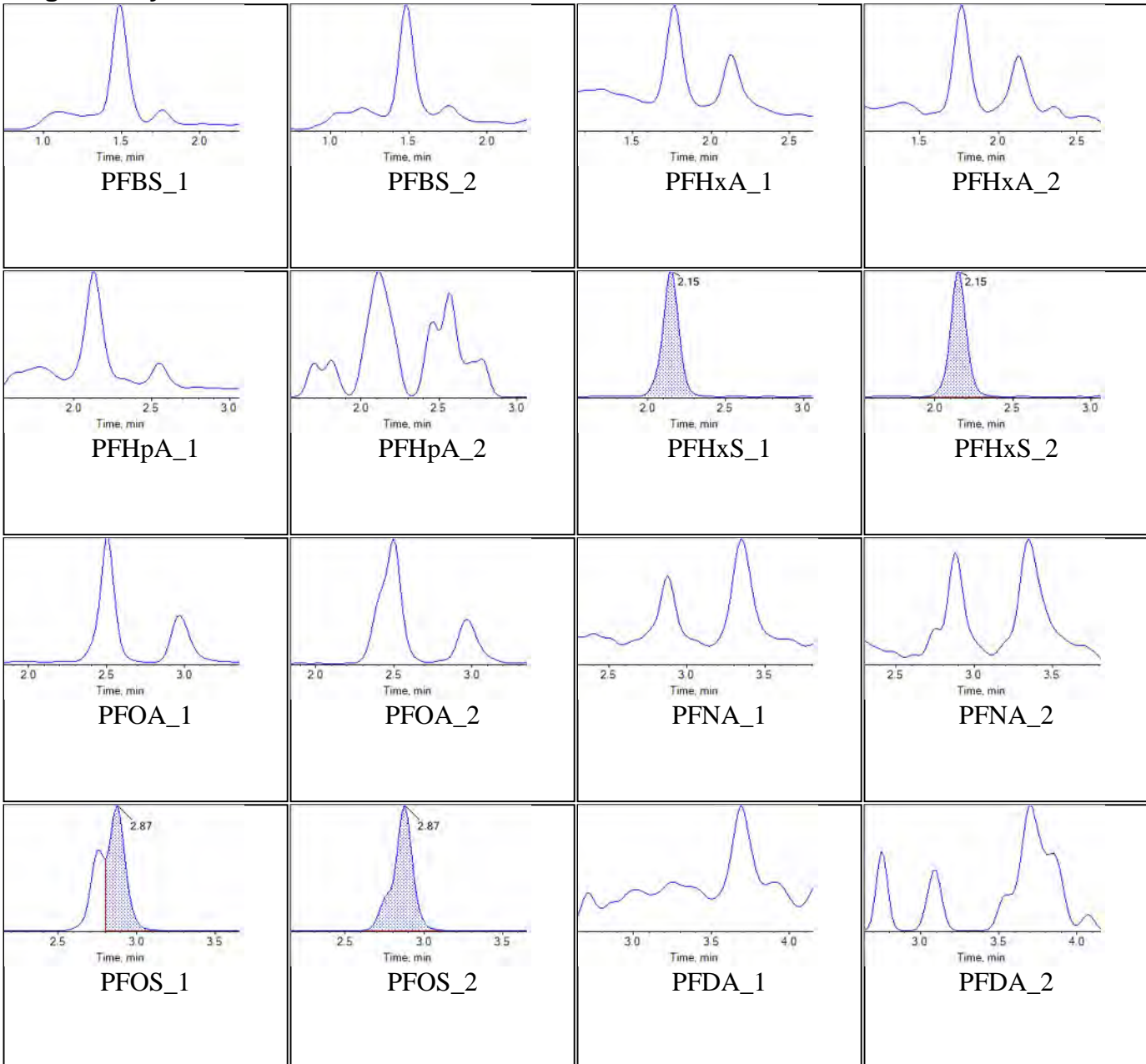
**Internal Standards:**



<b>Sample Name</b>	J6254-FS-D(5)	<b>Injection Vial</b>	32
<b>Sample ID</b>	DRM0-FD03-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T01:40:59	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:

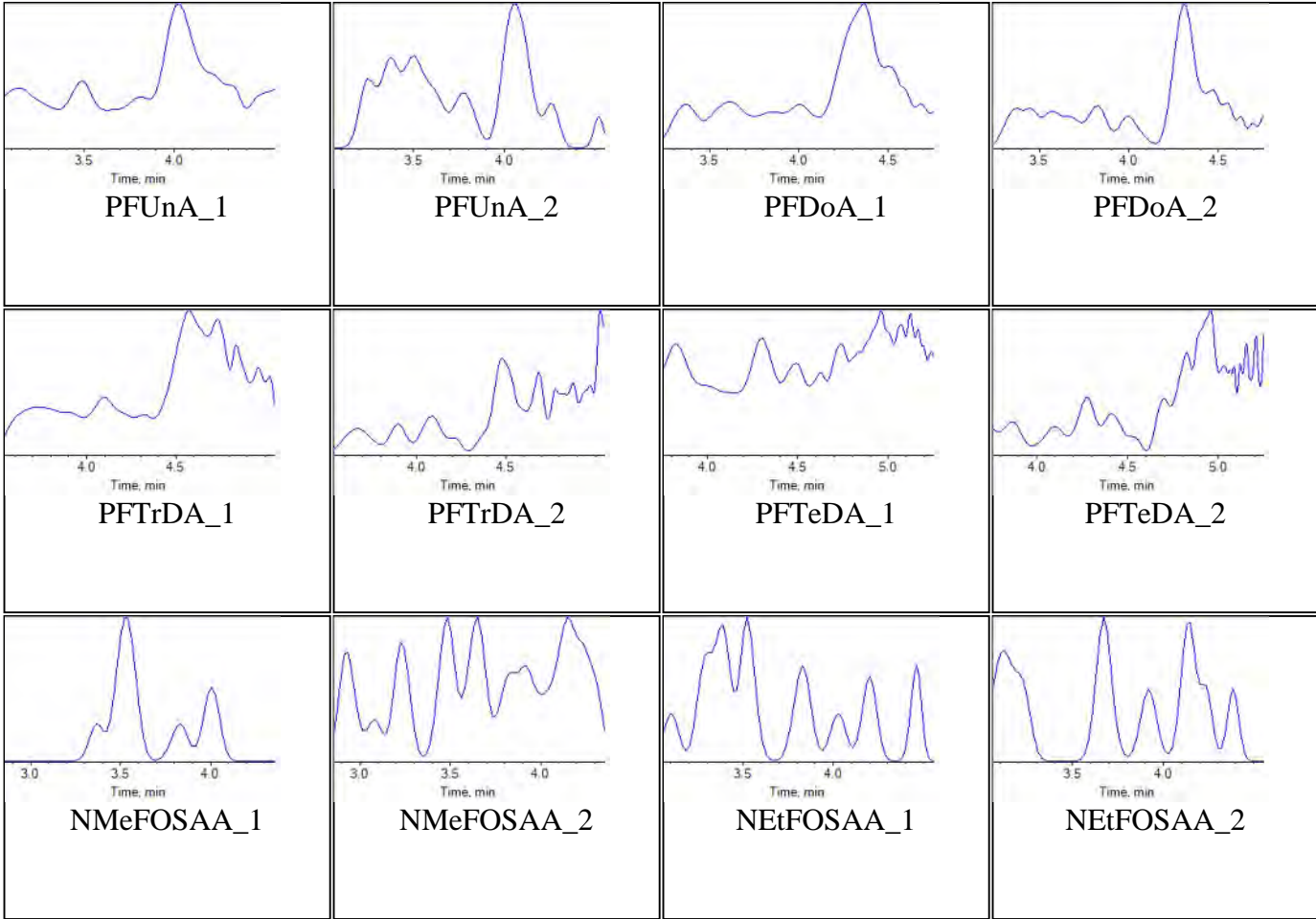




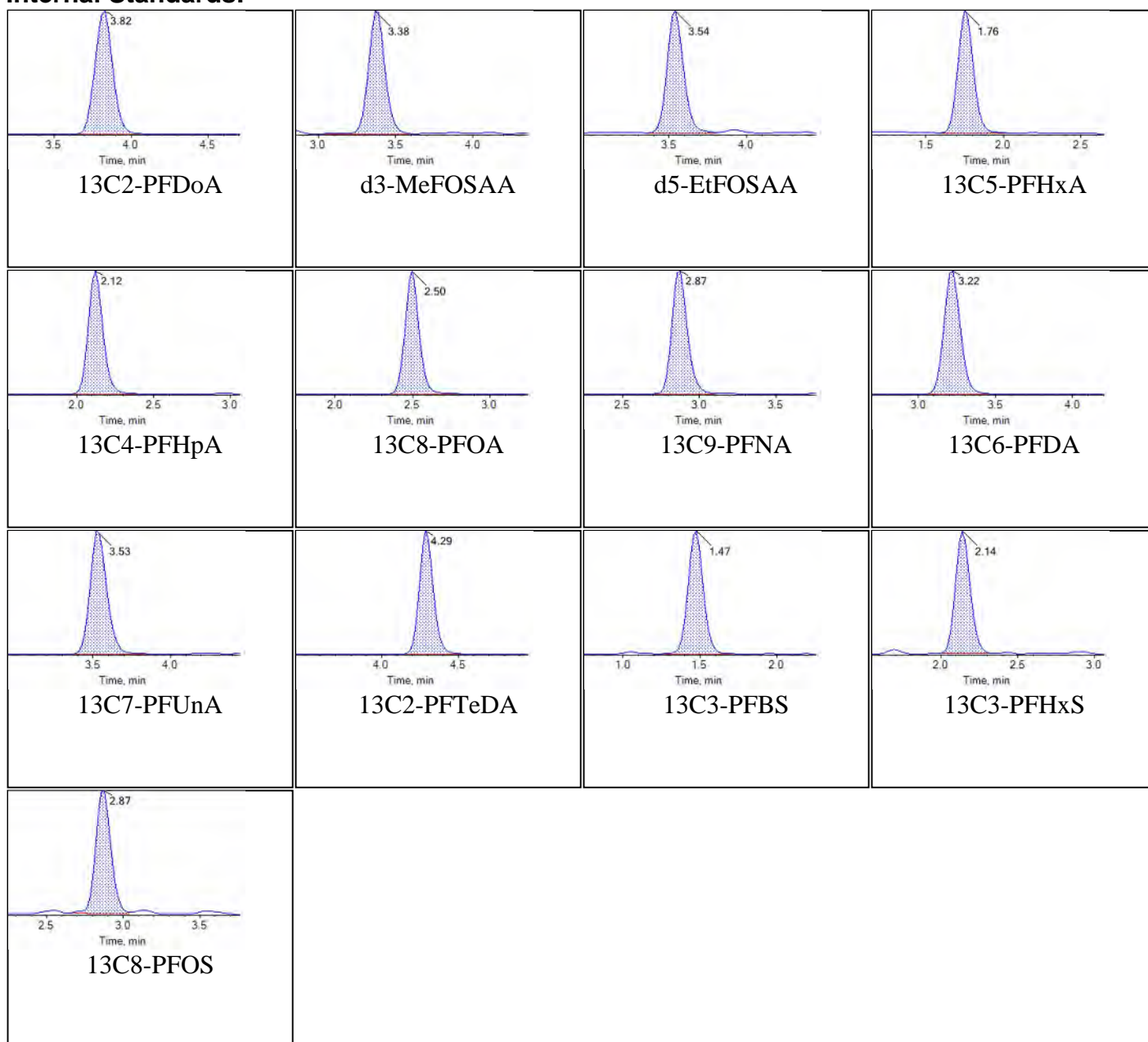


Chromatogram Report

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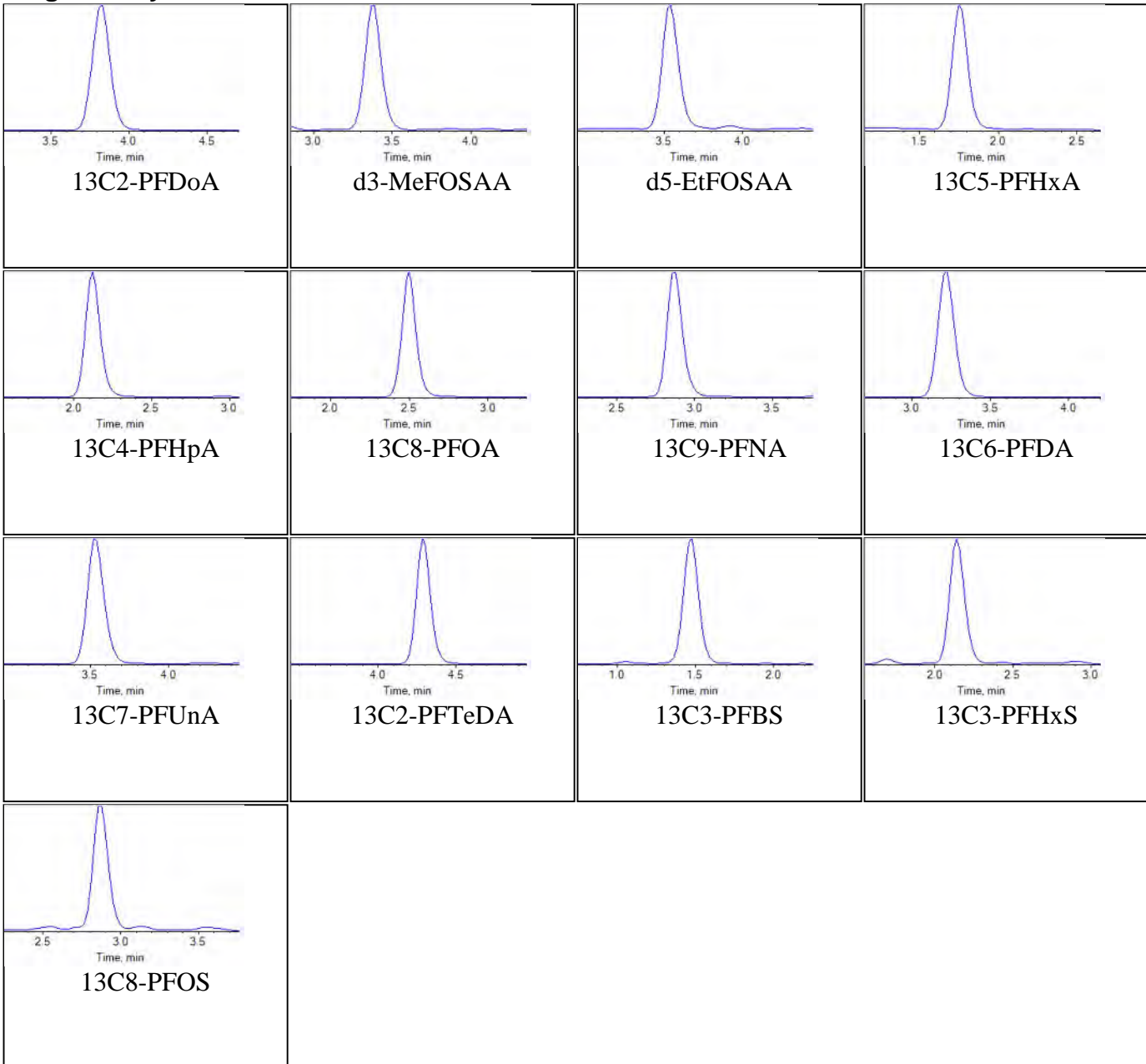


**Internal Standards:**

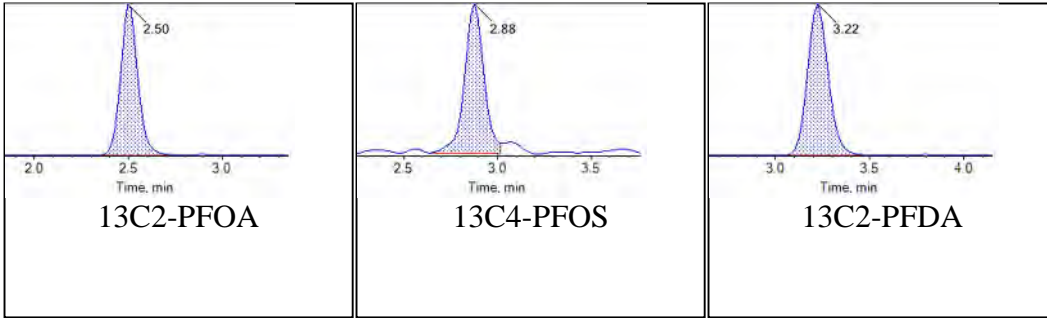
<b>Sample Name</b>	J6254-FS-D(5)	<b>Injection Vial</b>	32
<b>Sample ID</b>	DRM0-FD03-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T01:40:59	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

## Chromatograms

### Target Analytes:



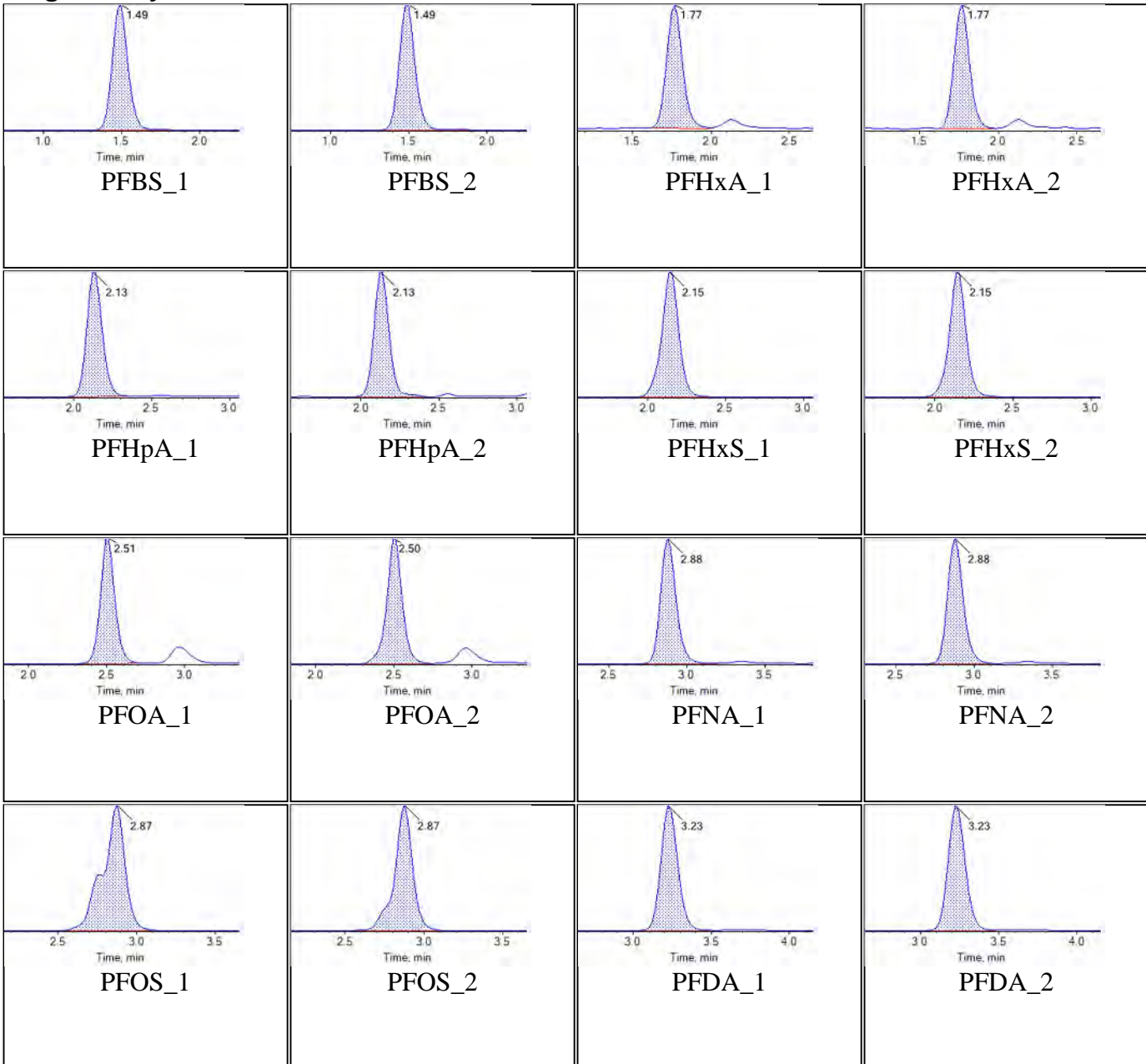
**Internal Standards:**



<b>Sample Name</b>	JV26 CCV	<b>Injection Vial</b>	8
<b>Sample ID</b>	CCV	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T02:02:32	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Chromatograms

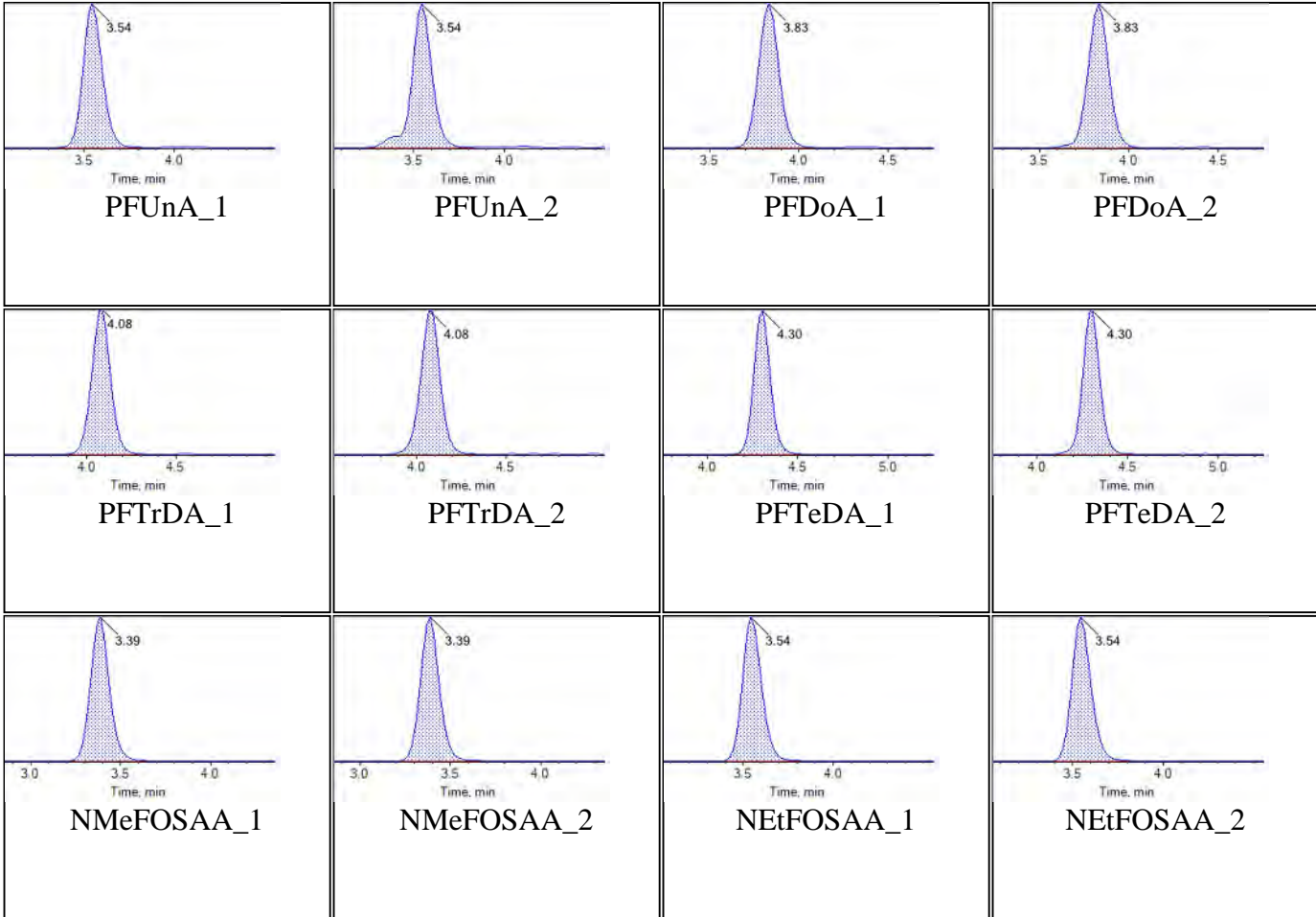
### Target Analytes:

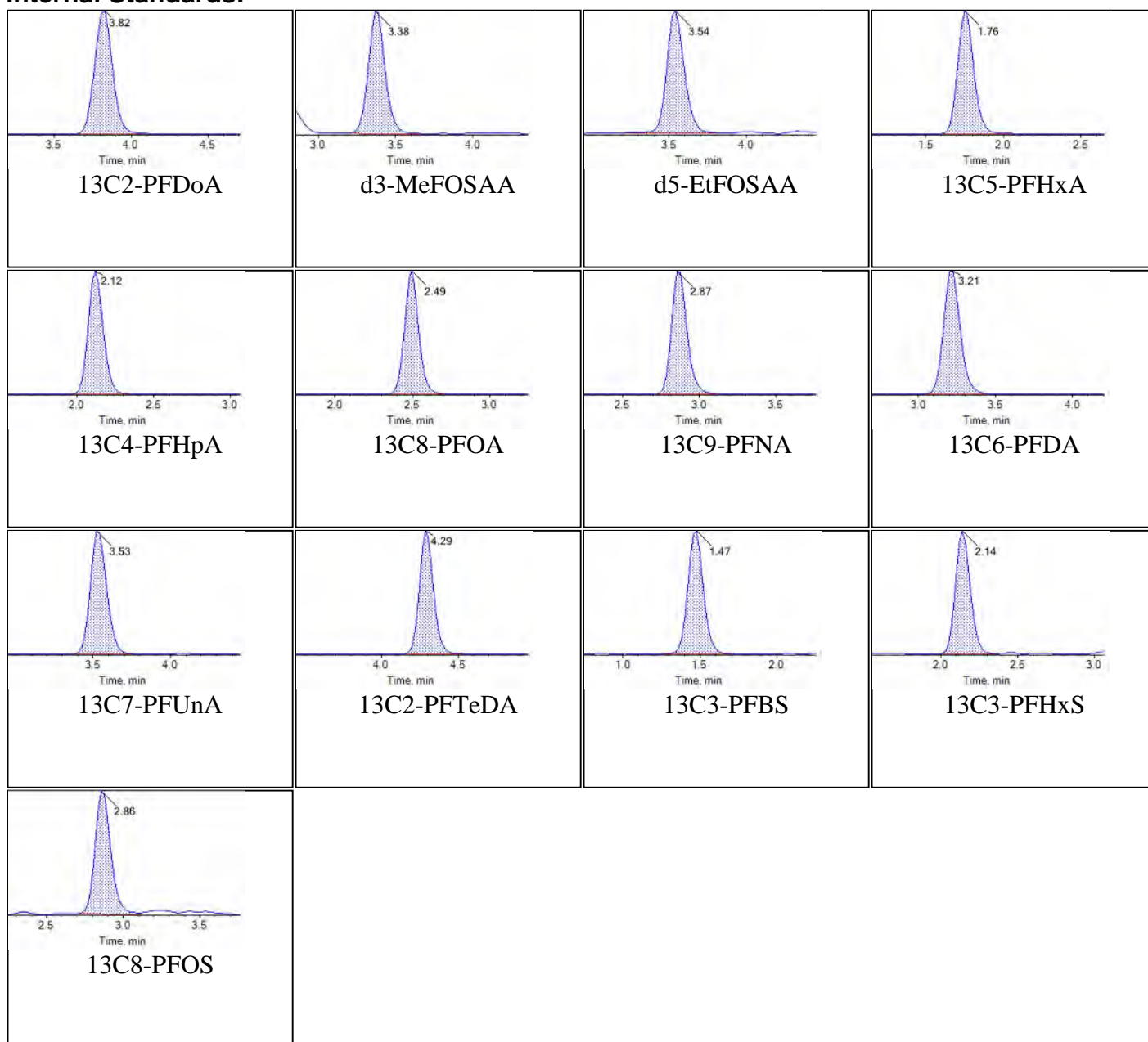




Chromatogram Report

Created with Analyst Reporter  
Printed: 05/06/2018 2:29:49 PM



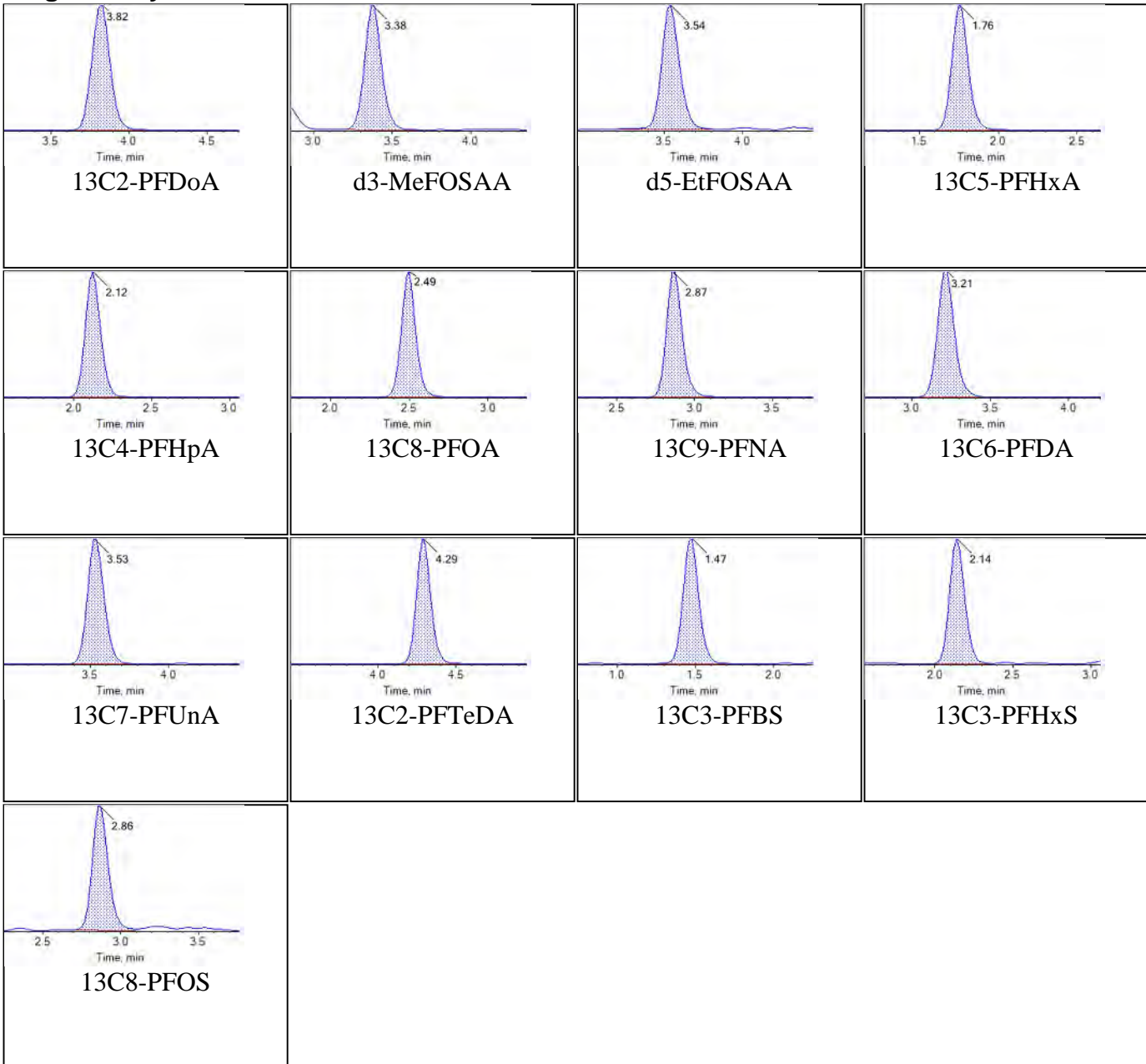
**Internal Standards:**



<b>Sample Name</b>	JV26 CCV	<b>Injection Vial</b>	8
<b>Sample ID</b>	CCV	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-05T02:02:32	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_SIS
<b>Sample Comment</b>			

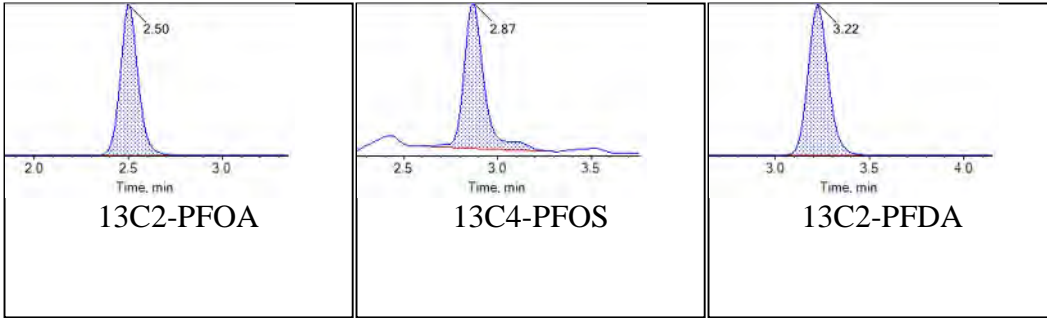
## Chromatograms

### Target Analytes:





**Internal Standards:**



# Unused Data



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

Client ID	FFTA-EB01-052418			
Battelle ID	J6246-FS			
Sample Type	SA			
Collection Date	05/24/2018			
Extraction Date	05/29/2018			
Analysis Date	06/04/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	GW QC			
Sample Size	0.280			
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	0.19 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
PFTeDA	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	0.89 J	0.19	0.50	5.00

#### Surrogate Recoveries (%)

13C5-PFHxA	72
13C4-PFHpA	69
13C8-PFOA	85
13C9-PFNA	87
13C6-PFDA	74
13C7-PFUnA	89
13C2-PFDoA	100
13C2-PFTeDA	67
d3-MeFOSAA	91
d5-EtFOSAA	127
13C3-PFBS	103
13C3-PFHxS	98
13C8-PFOS	98



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

Client ID	FFTA-EB02-052418			
Battelle ID	J6247-FS			
Sample Type	SA			
Collection Date	05/24/2018			
Extraction Date	05/29/2018			
Analysis Date	06/04/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	GW QC			
Sample Size	0.285			
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
PFTeDA	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	134
13C4-PFHpA	136
13C8-PFOA	142
13C9-PFNA	134
13C6-PFDA	116
13C7-PFUnA	123
13C2-PFDoA	103
13C2-PFTeDA	79
d3-MeFOSAA	82
d5-EtFOSAA	116
13C3-PFBS	103
13C3-PFHxS	103
13C8-PFOS	93



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

Client ID	DRMO-MW11-052418			
Battelle ID	J6248-FS			
Sample Type	SA			
Collection Date	05/24/2018			
Extraction Date	05/29/2018			
Analysis Date	06/05/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	GW			
Sample Size	0.285			
Size Unit-Basis	L			
Units	ng/L	MDL	LOD	LOQ
PFHxA	41.40	0.19	0.50	5.00
PFHpA	15.01	0.16	0.50	5.00
PFOA	85.06	0.18	0.50	5.00
PFNA	3.14 J	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
PFTeDA	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	10.88	0.13	0.50	5.00
PFHxS	116.13 D	0.11	0.40	5.00
PFOS	670.42 D	0.19	0.50	5.00

#### Surrogate Recoveries (%)

13C5-PFHxA	72
13C4-PFHpA	106
13C8-PFOA	88
13C9-PFNA	83
13C6-PFDA	110
13C7-PFUnA	125
13C2-PFDoA	94
13C2-PFTeDA	57
d3-MeFOSAA	90
d5-EtFOSAA	111
13C3-PFBS	73
13C3-PFHxS	128
13C8-PFOS	99



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

Client ID	PSC51-MW14D-052418			
Battelle ID	J6250-FS			
Sample Type	SA			
Collection Date	05/24/2018			
Extraction Date	05/29/2018			
Analysis Date	06/04/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	GW			
Sample Size	0.280			
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	0.34 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
PFTeDA	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	0.36 J	0.13	0.50	5.00
PFHxS	0.30 J	0.11	0.40	5.00
PFOS	0.35 J	0.19	0.50	5.00

#### Surrogate Recoveries (%)

13C5-PFHxA	107
13C4-PFHpA	118
13C8-PFOA	100
13C9-PFNA	91
13C6-PFDA	91
13C7-PFUnA	79
13C2-PFDoA	52
13C2-PFTeDA	50
d3-MeFOSAA	53
d5-EtFOSAA	52
13C3-PFBS	98
13C3-PFHxS	104
13C8-PFOS	65



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

Client ID	PSC51-MW13S-052418			
Battelle ID	J6252-FS			
Sample Type	SA			
Collection Date	05/24/2018			
Extraction Date	05/29/2018			
Analysis Date	06/04/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	GW			
Sample Size	0.280			
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	0.40 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
PFTeDA	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	1.09 J	0.13	0.50	5.00
PFHxS	0.72 J	0.11	0.40	5.00
PFOS	1.12 J	0.19	0.50	5.00

#### Surrogate Recoveries (%)

13C5-PFHxA	96
13C4-PFHpA	104
13C8-PFOA	79
13C9-PFNA	76
13C6-PFDA	71
13C7-PFUnA	62
13C2-PFDoA	51
13C2-PFTeDA	53
d3-MeFOSAA	61
d5-EtFOSAA	66
13C3-PFBS	100
13C3-PFHxS	92
13C8-PFOS	78





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

Client ID	DRMO-MW2-052418				
Battelle ID	J6253-FS				
Sample Type	SA				
Collection Date	05/24/2018				
Extraction Date	05/29/2018				
Analysis Date	06/05/2018				
Analytical Instrument	Sciex 5500 LC/MS/MS				
% Moisture	NA				
Matrix	GW				
Sample Size	0.270				
Size Unit-Basis	L				
Units	ng/L	MDL	LOD	LOQ	
PFHxA	6.93	0.19	0.50	5.00	
PFHpA	4.77 J	0.16	0.50	5.00	
PFOA	13.35	0.18	0.50	5.00	
PFNA	1.10 J	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	
PFTeDA	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	12.16	0.13	0.50	5.00	
PFHxS	12.15	0.11	0.40	5.00	
PFOS	98.11 D	0.19	0.50	5.00	

#### Surrogate Recoveries (%)

13C5-PFHxA	87
13C4-PFHpA	128
13C8-PFOA	113
13C9-PFNA	116
13C6-PFDA	96
13C7-PFUnA	96
13C2-PFDoA	77
13C2-PFTeDA	62
d3-MeFOSAA	112
d5-EtFOSAA	136
13C3-PFBS	82
13C3-PFHxS	130
13C8-PFOS	127



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

Client ID	DRMO-FD03-052418				
Battelle ID	J6254-FS				
Sample Type	SA				
Collection Date	05/24/2018				
Extraction Date	05/29/2018				
Analysis Date	06/05/2018				
Analytical Instrument	Sciex 5500 LC/MS/MS				
% Moisture	NA				
Matrix	GW DUP				
Sample Size	0.280				
Size Unit-Basis	L				
Units	ng/L	MDL	LOD	LOQ	
PFHxA	38.54	0.19	0.50	5.00	
PFHpA	11.86	0.16	0.50	5.00	
PFOA	86.14	0.18	0.50	5.00	
PFNA	3.00 J	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	
PFTeDA	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	9.19	0.13	0.50	5.00	
PFHxS	88.82 D	0.11	0.40	5.00	
PFOS	376.44 D	0.19	0.50	5.00	

#### Surrogate Recoveries (%)

13C5-PFHxA	92
13C4-PFHpA	123
13C8-PFOA	100
13C9-PFNA	110
13C6-PFDA	109
13C7-PFUnA	111
13C2-PFDoA	100
13C2-PFTeDA	67
d3-MeFOSAA	106
d5-EtFOSAA	138
13C3-PFBS	113
13C3-PFHxS	150
13C8-PFOS	129



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	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	0.19 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
PFTeDA	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	69
13C3-PFBS	61
13C3-PFHxS	78
13C8-PFOS	75



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

Client ID	Procedural Blank			
Battelle ID	CQ855PB-FS			
Sample Type	PB			
Collection Date	05/29/2018			
Extraction Date	05/29/2018			
Analysis Date	06/04/2018			
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
PFTeDA	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	93
13C4-PFHpA	96
13C8-PFOA	100
13C9-PFNA	92
13C6-PFDA	99
13C7-PFUnA	97
13C2-PFDoA	79
13C2-PFTeDA	64
d3-MeFOSAA	75
d5-EtFOSAA	95
13C3-PFBS	92
13C3-PFHxS	92
13C8-PFOS	98



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

Client ID	Laboratory Control Sample					
Battelle ID	CQ856LCS-FS					
Sample Type	LCS					
Collection Date	05/29/2018					
Extraction Date	05/29/2018					
Analysis Date	06/04/2018					
Analytical Instrument	Sciex 5500 LC/MS/MS					
% Moisture	NA					
Matrix	WATER					
Sample Size	0.250					
Size Unit-Basis	L					
Units	ng/L	Target	Recovery	Qual	Lower	Upper
PFHxA	9.16	10.10	91		51	137
PFHpA	10.07	10.00	101		48	136
PFOA	9.95	10.00	100		49	141
PFNA	9.89	10.00	99		58	122
PFDA	10.32	10.00	103		59	135
PFUnA	10.22	10.00	102		64	134
PFDoA	10.43	10.00	104		75	131
PFTDA	11.93	10.00	119		42	148
PFTeDA	10.10	10.00	101		42	158
NMeFOSAA	12.32	10.00	123		50	146
NEtFOSAA	9.15	10.00	92		51	131
PFBS	9.57	10.10	95		56	134
PFHxS	10.81	10.10	107		52	128
PFOS	10.03	10.00	100		40	144

#### Surrogate Recoveries (%)

13C5-PFHxA	106
13C4-PFHpA	94
13C8-PFOA	93
13C9-PFNA	98
13C6-PFDA	96
13C7-PFUnA	96
13C2-PFDoA	83
13C2-PFTeDA	70
d3-MeFOSAA	76
d5-EtFOSAA	93
13C3-PFBS	103
13C3-PFHxS	85
13C8-PFOS	93



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

Client ID	PSC51-MW13S-052418	PSC51-MW13S-052418				Control Limits			
Battelle ID	J6252-FS	J6252MS-FS	Target	Recovery	Qual	Lower	Upper		
Sample Type	SA	MS	Units	ng/L	ng/L	ng/L	ng/L		
Collection Date	05/24/2018	05/24/2018	PFHxA	0.19 U	26.17	26.58	98	51	137
Extraction Date	05/29/2018	05/29/2018	PFHpA	0.16 U	26.61	26.32	101	48	136
Analysis Date	06/04/2018	06/05/2018	PFOA	0.40 J	24.49	26.32	92	49	141
Analytical Instrument	Sciex 5500 LC/MS/MS	Sciex 5500 LC/MS/MS	PFNA	0.26 U	23.71	26.32	90	58	122
% Moisture	NA	NA	PFDA	0.16 U	25.47	26.32	97	59	135
Matrix	GW	GW	PFUnA	0.29 U	25.47	26.32	97	64	134
Sample Size	0.280	0.285	PFDoA	0.18 U	26.91	26.32	102	75	131
Size Unit-Basis	L	L	PFTDA	0.15 U	29.91	26.32	114	42	148
Units	ng/L	ng/L	PFTeDA	0.25 U	28.54	26.32	108	42	158
			NMeFOSAA	0.56 U	26.26	26.32	100	50	146
			NEtFOSAA	0.49 U	22.66	26.32	86	51	131
			PFBS	1.09 J	24.21	26.58	87	56	134
			PFHxS	0.72 J	23.87	26.58	87	52	128
			PFOS	1.12 J	22.66	26.32	82	40	144

#### Surrogate Recoveries (%)

13C5-PFHxA	96	117
13C4-PFHpA	104	122
13C8-PFOA	79	98
13C9-PFNA	76	94
13C6-PFDA	71	98
13C7-PFUnA	62	93
13C2-PFDoA	51	86
13C2-PFTeDA	53	79
d3-MeFOSAA	61	91
d5-EtFOSAA	66	99
13C3-PFBS	100	146
13C3-PFHxS	92	147
13C8-PFOS	78	129



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

Client ID PSC51-MW13S-052418

Battelle ID J6252MSD-FS  
 Sample Type MSD  
 Collection Date 05/24/2018  
 Extraction Date 05/29/2018  
 Analysis Date 06/05/2018  
 Analytical Instrument Sciex 5500 LC/MS/MS  
 % Moisture NA  
 Matrix GW  
 Sample Size 0.280  
 Size Unit-Basis L

Units	ng/L	Target	Recovery	Qual	Control Limits		RPD	Qual	RPD Limit
					Lower	Upper			
PFHxA	28.22	27.05	104		51	137	5.9		≤ 30
PFHpA	22.13	26.79	83		48	136	19.6		≤ 30
PFOA	23.47	26.79	86		49	141	6.7		≤ 30
PFNA	26.73	26.79	100		58	122	10.5		≤ 30
PFDA	23.66	26.79	88		59	135	9.7		≤ 30
PFUnA	24.05	26.79	90		64	134	7.5		≤ 30
PFDoA	25.86	26.79	97		75	131	5.0		≤ 30
PFTrDA	28.24	26.79	105		42	148	8.2		≤ 30
PFTeDA	26.15	26.79	98		42	158	9.7		≤ 30
NMeFOSAA	23.66	26.79	88		50	146	12.8		≤ 30
NEtFOSAA	23.26	26.79	87		51	131	1.2		≤ 30
PFBS	27.63	27.05	98		56	134	11.9		≤ 30
PFHxS	23.54	27.05	84		52	128	3.5		≤ 30
PFOS	23.68	26.79	84		40	144	0.0		≤ 30

**Surrogate Recoveries (%)**

13C5-PFHxA	78
13C4-PFHpA	99
13C8-PFOA	73
13C9-PFNA	63
13C6-PFDA	73
13C7-PFUnA	81
13C2-PFDoA	75
13C2-PFTeDA	66
d3-MeFOSAA	84
d5-EtFOSAA	87
13C3-PFBS	101
13C3-PFHxS	104
13C8-PFOS	87





## Glossary of Data Qualifiers

Flag:      Application:

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B	Analyte found in the sample at a concentration <10x the level found in the procedural blank
D	Dilution Run. Initial run outside the initial calibration range of the instrument
E	Estimate, result is greater than the highest concentration level in the calibration
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

"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"307-24-4"	"PFHxA"	".500000"	
"ng/L"	"U"	".190000"	"MDL"	""	"T"	""	"5.000000"	"LOQ"
"YES"	"-99.000000"	""	".250000"	".000500"	".500000"	""	""	""
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"375-85-9"	"PFHpA"	".500000"	
"ng/L"	"U"	".160000"	"MDL"	""	"T"	""	"5.000000"	"LOQ"
"YES"	"-99.000000"	""	".250000"	".000500"	".500000"	""	""	""
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"335-67-1"	"PFOA"	".500000"	"ng/L"
"U"	".180000"	"MDL"	""	"T"	""	"5.000000"	"LOQ"	"YES"
"-99.000000"	""	".250000"	".000500"	".500000"	""	""	""	""
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"375-95-1"	"PFNA"	"1.000000"	
"ng/L"	"U"	".260000"	"MDL"	""	"T"	""	"5.000000"	"LOQ"
"YES"	"-99.000000"	""	".250000"	".000500"	"1.000000"	""	""	""
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"335-76-2"	"PFDA"	".500000"	"ng/L"
"U"	".160000"	"MDL"	""	"T"	""	"5.000000"	"LOQ"	"YES"
"-99.000000"	""	".250000"	".000500"	".500000"	""	""	""	""
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"2058-94-8"	"PFUnA"	"1.000000"	
"ng/L"	"U"	".290000"	"MDL"	""	"T"	""	"5.000000"	"LOQ"
"YES"	"-99.000000"	""	".250000"	".000500"	"1.000000"	""	""	""
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"307-55-1"	"PFDoA"	".500000"	
"ng/L"	"U"	".180000"	"MDL"	""	"T"	""	"5.000000"	"LOQ"
"YES"	"-99.000000"	""	".250000"	".000500"	".500000"	""	""	""
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"72629-94-8"	"PFTTrDA"	".500000"	
"ng/L"	"U"	".150000"	"MDL"	""	"T"	""	"5.000000"	"LOQ"
"YES"	"-99.000000"	""	".250000"	".000500"	".500000"	""	""	""
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"376-06-7"	"PFTeDA"	"1.000000"	
"ng/L"	"U"	".250000"	"MDL"	""	"T"	""	"5.000000"	"LOQ"
"YES"	"-99.000000"	""	".250000"	".000500"	"1.000000"	""	""	""
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"2355-31-9"	"NMeFOSAA"		
"2.000000"	"ng/L"	"U"	".560000"	"MDL"	""	"T"	""	"5.000000"
"LOQ"	"YES"	"-99.000000"	""	".250000"	".000500"	"2.000000"	""	""
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"2991-50-6"	"NEtFOSAA"	"1.000000"	
"ng/L"	"U"	".490000"	"MDL"	""	"T"	""	"5.000000"	"LOQ"
"YES"	"-99.000000"	""	".250000"	".000500"	"1.000000"	""	""	""
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"375-73-5"	"PFBS"	".500000"	"ng/L"
"U"	".130000"	"MDL"	""	"T"	""	"5.000000"	"LOQ"	"YES"
"-99.000000"	""	".250000"	".000500"	".500000"	""	""	""	""
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"355-46-4"	"PFHxS"	".400000"	
"ng/L"	"U"	".110000"	"MDL"	""	"T"	""	"5.000000"	"LOQ"
"YES"	"-99.000000"	""	".250000"	".000500"	".400000"	""	""	""
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"1763-23-1"	"PFOS"	".500000"	
"ng/L"	"U"	".190000"	"MDL"	""	"T"	""	"5.000000"	"LOQ"
"YES"	"-99.000000"	""	".250000"	".000500"	".500000"	""	""	""
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"BDO-2217"	"13C5-PFHxA"	".370000"	
"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"93.00"	"-99.000000"	"NA"
"YES"	".400000"	""	".250000"	".000500"	".500000"	""	""	""
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"BDO-2218"	"13C4-PFHpA"	".390000"	
"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"96.00"	"-99.000000"	"NA"
"YES"	".400000"	""	".250000"	".000500"	".500000"	""	""	""
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"BDO-2219"	"13C8-PFOA"	".400000"	
"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"100.00"	"-99.000000"	"NA"
"YES"	".400000"	""	".250000"	".000500"	".500000"	""	""	""
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"BDO-2221"	"13C9-PFNA"	".370000"	
"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"92.00"	"-99.000000"	"NA"
"YES"	".400000"	""	".250000"	".000500"	".500000"	""	""	""

".250000"	".000500"	".500000"	""						
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"BDO-2222"	"13C6-PFDA"	".400000"		
"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"99.00"	""	"-99.000000"	"NA"
"YES"	".400000"	""							
".250000"	".000500"	".500000"	""						
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"BDO-2223"	"13C7-PFUnA"	".390000"		
"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"97.00"	""	"-99.000000"	"NA"
"YES"	".400000"	""							
".250000"	".000500"	".500000"	""						
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"BDO-2112"	"13C2-PFD <sub>o</sub> A"	".320000"		
"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"79.00"	""	"-99.000000"	"NA"
"YES"	".400000"	""							
".250000"	".000500"	".500000"	""						
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"BDO-2224"	"13C2-PFTeDA"			
".260000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"64.00"	""	"-99.000000"
"NA"	"YES"								
".400000"	""	".250000"	".000500"	".500000"	""				
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"BDO-2125"	"d3-MeFOSAA"			
".300000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"75.00"	""	"-99.000000"
"NA"	"YES"								
".400000"	""	".250000"	".000500"	".500000"	""				
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"BDO-2126"	"d5-EtFOSAA"	".380000"		
"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"95.00"	""	"-99.000000"	"NA"
"YES"	".400000"	""							
".250000"	".000500"	".500000"	""						
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"BDO-2226"	"13C3-PFBS"	".340000"		
"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"92.00"	""	"-99.000000"	"NA"
"YES"	".370000"	""							
".250000"	".000500"	".500000"	""						
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"BDO-2227"	"13C3-PFHxS"	".350000"		
"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"92.00"	""	"-99.000000"	"NA"
"YES"	".370000"	""							
".250000"	".000500"	".500000"	""						
"CQ855PB-FS"	"SOP 5-369"	"Initial"	"CQ855PB-FS"	"BNO"	"BDO-2228"	"13C8-PFOS"	".370000"		
"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"98.00"	""	"-99.000000"	"NA"
"YES"	".380000"	""							
".250000"	".000500"	".500000"	""						
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"307-24-4"	"PFHxA"	"9.160000"		
"ng/L"	""	".190000"	"MDL"	""	"T"	"91.00"	""	"5.000000"	"LOQ"
"YES"	"10.100000"	""							
".250000"	".000500"	".500000"	""						
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"375-85-9"	"PFHpA"	"10.070000"		
"ng/L"	""	".160000"	"MDL"	""	"T"	"101.00"	""	"5.000000"	"LOQ"
"YES"	"10.000000"	""							
".250000"	".000500"	".500000"	""						
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"335-67-1"	"PFOA"	"9.950000"		
"ng/L"	""	".180000"	"MDL"	""	"T"	"100.00"	""	"5.000000"	"LOQ"
"YES"	"10.000000"	""							
".250000"	".000500"	".500000"	""						
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"375-95-1"	"PFNA"	"9.890000"		
"ng/L"	""	".260000"	"MDL"	""	"T"	"99.00"	""	"5.000000"	"LOQ"
"YES"	"10.000000"	""							
".250000"	".000500"	".1.000000"	""						
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"335-76-2"	"PFDA"	"10.320000"		
"ng/L"	""	".160000"	"MDL"	""	"T"	"103.00"	""	"5.000000"	"LOQ"
"YES"	"10.000000"	""							
".250000"	".000500"	".500000"	""						
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"2058-94-8"	"PFUnA"	"10.220000"		
"ng/L"	""	".290000"	"MDL"	""	"T"	"102.00"	""	"5.000000"	"LOQ"
"YES"	"10.000000"	""							
".250000"	".000500"	".1.000000"	""						
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"307-55-1"	"PFD <sub>o</sub> A"	"10.430000"		
"ng/L"	""	".180000"	"MDL"	""	"T"	"104.00"	""	"5.000000"	"LOQ"
"YES"	"10.000000"	""							
".250000"	".000500"	".500000"	""						
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"72629-94-8"	"PFT <sub>r</sub> DA"			
"11.930000"	"ng/L"	""	".150000"	"MDL"	""	"T"	"119.00"	""	"5.000000"
"LOQ"	"YES"								
".10.000000"	""	".250000"	".000500"	".500000"	""				
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"376-06-7"	"PFTeDA"	"10.100000"		
"ng/L"	""	".250000"	"MDL"	""	"T"	"101.00"	""	"5.000000"	"LOQ"
"YES"	"10.000000"	""							

".250000"	".000500"	"1.000000"	""									
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"2355-31-9"	"NMeFOSAA"						
"12.320000"	"ng/L"	""	".560000"	"MDL"	""	"T"	"123.00"	""	"5.000000"	"LOQ"	"YES"	
"10.000000"	""	".250000"	".000500"	"2.000000"	""							
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"2991-50-6"	"NEtFOSAA"						
"9.150000"	"ng/L"	""	".490000"	"MDL"	""	"T"	"92.00"	""	"5.000000"	"LOQ"	"YES"	
"10.000000"	""	".250000"	".000500"	"1.000000"	""							
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"375-73-5"	"PFBS"	"9.570000"					
"ng/L"	""	".130000"	"MDL"	""	"T"	"95.00"	""	"5.000000"	"LOQ"	"YES"	"10.100000"	""
".250000"	".000500"	".500000"	""									
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"355-46-4"	"PFHxS"	"10.810000"					
"ng/L"	""	".110000"	"MDL"	""	"T"	"107.00"	""	"5.000000"	"LOQ"	"YES"	"10.100000"	""
".250000"	".000500"	".400000"	""									
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"1763-23-1"	"PFOS"	"10.030000"					
"ng/L"	""	".190000"	"MDL"	""	"T"	"100.00"	""	"5.000000"	"LOQ"	"YES"	"10.000000"	""
".250000"	".000500"	".500000"	""									
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"BDO-2217"	"13C5-PFHxA"						
".430000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"106.00"	""	"-99.000000"	"NA"	"YES"	
".400000"	""	".250000"	".000500"	".500000"	""							
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"BDO-2218"	"13C4-PFHpA"						
".370000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"94.00"	""	"-99.000000"	"NA"	"YES"	
".400000"	""	".250000"	".000500"	".500000"	""							
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"BDO-2219"	"13C8-PFOA"						
".370000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"93.00"	""	"-99.000000"	"NA"	"YES"	
".400000"	""	".250000"	".000500"	".500000"	""							
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"BDO-2221"	"13C9-PFNA"						
".390000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"98.00"	""	"-99.000000"	"NA"	"YES"	
".400000"	""	".250000"	".000500"	".500000"	""							
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"BDO-2222"	"13C6-PFDA"						
".380000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"96.00"	""	"-99.000000"	"NA"	"YES"	
".400000"	""	".250000"	".000500"	".500000"	""							
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"BDO-2223"	"13C7-PFUnA"						
".380000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"96.00"	""	"-99.000000"	"NA"	"YES"	
".400000"	""	".250000"	".000500"	".500000"	""							
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"BDO-2112"	"13C2-PFDoA"						
".330000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"83.00"	""	"-99.000000"	"NA"	"YES"	
".400000"	""	".250000"	".000500"	".500000"	""							
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"BDO-2224"	"13C2-PFTeDA"						
".280000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"70.00"	""	"-99.000000"	"NA"	"YES"	
".400000"	""	".250000"	".000500"	".500000"	""							
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"BDO-2125"	"d3-MeFOSAA"						
".300000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"76.00"	""	"-99.000000"	"NA"	"YES"	
".400000"	""	".250000"	".000500"	".500000"	""							
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"BDO-2126"	"d5-EtFOSAA"						
".370000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"93.00"	""	"-99.000000"	"NA"	"YES"	
".400000"	""	".250000"	".000500"	".500000"	""							
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"BDO-2226"	"13C3-PFBS"						
".380000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"103.00"	""	"-99.000000"	"NA"	"YES"	
".370000"	""	".250000"	".000500"	".500000"	""							
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"BDO-2227"	"13C3-PFHxS"						
".320000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"85.00"	""	"-99.000000"	"NA"	"YES"	
".370000"	""	".250000"	".000500"	".500000"	""							
"CQ856LCS-FS"	"SOP 5-369"	"Initial"	"CQ856LCS-FS"	"BNO"	"BDO-2228"	"13C8-PFOS"						
".360000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"93.00"	""	"-99.000000"	"NA"	"YES"	

".380000"	""	".250000"	".000500"	".500000"	""				
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"307-24-4"	"PFHxA"	".450000"		
"ng/L"	"U"	".170000"	"MDL"	""	"T"	""	"4.460000"	"LOQ"	"YES"
".280000"	".000500"	".450000"	""						
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"375-85-9"	"PFHpA"	".450000"		
"ng/L"	"U"	".140000"	"MDL"	""	"T"	""	"4.460000"	"LOQ"	"YES"
".280000"	".000500"	".450000"	""						
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"335-67-1"	"PFOA"	".190000"		
"ng/L"	"J"	".160000"	"MDL"	""	"T"	""	"4.460000"	"LOQ"	"YES"
".280000"	".000500"	".450000"	""						
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"375-95-1"	"PFNA"	".890000"		
"ng/L"	"U"	".230000"	"MDL"	""	"T"	""	"4.460000"	"LOQ"	"YES"
".280000"	".000500"	".890000"	""						
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"335-76-2"	"PFDA"	".450000"		
"ng/L"	"U"	".140000"	"MDL"	""	"T"	""	"4.460000"	"LOQ"	"YES"
".280000"	".000500"	".450000"	""						
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"2058-94-8"	"PFUnA"	".890000"		
"ng/L"	"U"	".260000"	"MDL"	""	"T"	""	"4.460000"	"LOQ"	"YES"
".280000"	".000500"	".890000"	""						
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"307-55-1"	"PFDoA"	".450000"		
"ng/L"	"U"	".160000"	"MDL"	""	"T"	""	"4.460000"	"LOQ"	"YES"
".280000"	".000500"	".450000"	""						
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"72629-94-8"	"PFTrDA"			
".450000"	"ng/L"	"U"	".130000"	"MDL"	""	"T"	""	"4.460000"	"LOQ"
"-99.000000"	""	".280000"	".000500"	".450000"	""				
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"376-06-7"	"PFTeDA"			
".890000"	"ng/L"	"U"	".220000"	"MDL"	""	"T"	""	"4.460000"	"LOQ"
"-99.000000"	""	".280000"	".000500"	".890000"	""				
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"2355-31-9"	"NMeFOSAA"			
"1.790000"	"ng/L"	"U"	".500000"	"MDL"	""	"T"	""	"4.460000"	"LOQ"
"-99.000000"	""	".280000"	".000500"	"1.790000"	""				
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"2991-50-6"	"NEtFOSAA"			
".890000"	"ng/L"	"U"	".440000"	"MDL"	""	"T"	""	"4.460000"	"LOQ"
"-99.000000"	""	".280000"	".000500"	".890000"	""				
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"375-73-5"	"PFBS"	".450000"		
"ng/L"	"U"	".120000"	"MDL"	""	"T"	""	"4.460000"	"LOQ"	"YES"
".280000"	".000500"	".450000"	""						
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"355-46-4"	"PFHxS"	".360000"		
"ng/L"	"U"	".100000"	"MDL"	""	"T"	""	"4.460000"	"LOQ"	"YES"
".280000"	".000500"	".360000"	""						
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"1763-23-1"	"PFOS"	".890000"		
"ng/L"	"J"	".170000"	"MDL"	""	"T"	""	"4.460000"	"LOQ"	"YES"
".280000"	".000500"	".450000"	""						
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"BDO-2217"	"13C5-PFHxA"			
".260000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"72.00"	""	"-99.000000"
".350000"	""	".280000"	".000500"	".500000"	""				
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"BDO-2218"	"13C4-PFHpA"			
".250000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"69.00"	""	"-99.000000"
".350000"	""	".280000"	".000500"	".500000"	""				
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"BDO-2219"	"13C8-PFOA"			
".310000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"85.00"	""	"-99.000000"
".350000"	""	".280000"	".000500"	".500000"	""				
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"BDO-2221"	"13C9-PFNA"			
".310000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"87.00"	""	"-99.000000"

".350000"	""	".280000"	".000500"	".500000"	""							
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"BDO-2222"	"13C6-PFDA"						
".260000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"74.00"	""	"-99.000000"	"NA"	"YES"	
".350000"	""	".280000"	".000500"	".500000"	""							
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"BDO-2223"	"13C7-PFUnA"						
".320000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"89.00"	""	"-99.000000"	"NA"	"YES"	
".350000"	""	".280000"	".000500"	".500000"	""							
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"BDO-2112"	"13C2-PFD <sub>o</sub> A"						
".360000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"100.00"	""	"-99.000000"	"NA"	"YES"	
".350000"	""	".280000"	".000500"	".500000"	""							
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"BDO-2224"	"13C2-PFTeDA"						
".240000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"67.00"	""	"-99.000000"	"NA"	"YES"	
".350000"	""	".280000"	".000500"	".500000"	""							
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"BDO-2125"	"d3-MeFOSAA"						
".330000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"91.00"	""	"-99.000000"	"NA"	"YES"	
".350000"	""	".280000"	".000500"	".500000"	""							
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"BDO-2126"	"d5-EtFOSAA"						
".450000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"127.00"	""	"-99.000000"	"NA"	"YES"	
".350000"	""	".280000"	".000500"	".500000"	""							
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"BDO-2226"	"13C3-PFBS"						
".340000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"103.00"	""	"-99.000000"	"NA"	"YES"	
".330000"	""	".280000"	".000500"	".500000"	""							
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"BDO-2227"	"13C3-PFH <sub>x</sub> S"						
".330000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"98.00"	""	"-99.000000"	"NA"	"YES"	
".330000"	""	".280000"	".000500"	".500000"	""							
"FFTA-EB01-052418"	"SOP 5-369"	"Initial"	"J6246-FS"	"BNO"	"BDO-2228"	"13C8-PFOS"	".330000"					
"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"98.00"	""	"-99.000000"	"NA"	"YES"	".340000"	
""	".280000"	".000500"	".500000"	""								
"FFTA-EB02-052418"	"SOP 5-369"	"Initial"	"J6247-FS"	"BNO"	"307-24-4"	"PFH <sub>x</sub> A"	".440000"					
"ng/L"	"U"	".170000"	"MDL"	""	"T"	""	"4.390000"	"LOQ"	"YES"	"-99.000000"	""	
".285000"	""	".000500"	".440000"	""								
"FFTA-EB02-052418"	"SOP 5-369"	"Initial"	"J6247-FS"	"BNO"	"375-85-9"	"PFH <sub>p</sub> A"	".440000"					
"ng/L"	"U"	".140000"	"MDL"	""	"T"	""	"4.390000"	"LOQ"	"YES"	"-99.000000"	""	
".285000"	""	".000500"	".440000"	""								
"FFTA-EB02-052418"	"SOP 5-369"	"Initial"	"J6247-FS"	"BNO"	"335-67-1"	"PFOA"	".440000"					
"ng/L"	"U"	".160000"	"MDL"	""	"T"	""	"4.390000"	"LOQ"	"YES"	"-99.000000"	""	
".285000"	""	".000500"	".440000"	""								
"FFTA-EB02-052418"	"SOP 5-369"	"Initial"	"J6247-FS"	"BNO"	"375-95-1"	"PFNA"	".880000"					
"ng/L"	"U"	".230000"	"MDL"	""	"T"	""	"4.390000"	"LOQ"	"YES"	"-99.000000"	""	
".285000"	""	".000500"	".880000"	""								
"FFTA-EB02-052418"	"SOP 5-369"	"Initial"	"J6247-FS"	"BNO"	"335-76-2"	"PFDA"	".440000"					
"ng/L"	"U"	".140000"	"MDL"	""	"T"	""	"4.390000"	"LOQ"	"YES"	"-99.000000"	""	
".285000"	""	".000500"	".440000"	""								
"FFTA-EB02-052418"	"SOP 5-369"	"Initial"	"J6247-FS"	"BNO"	"2058-94-8"	"PFUnA"	".880000"					
"ng/L"	"U"	".250000"	"MDL"	""	"T"	""	"4.390000"	"LOQ"	"YES"	"-99.000000"	""	
".285000"	""	".000500"	".880000"	""								
"FFTA-EB02-052418"	"SOP 5-369"	"Initial"	"J6247-FS"	"BNO"	"307-55-1"	"PFD <sub>o</sub> A"	".440000"					
"ng/L"	"U"	".160000"	"MDL"	""	"T"	""	"4.390000"	"LOQ"	"YES"	"-99.000000"	""	
".285000"	""	".000500"	".440000"	""								
"FFTA-EB02-052418"	"SOP 5-369"	"Initial"	"J6247-FS"	"BNO"	"72629-94-8"	"PFT <sub>r</sub> DA"	".440000"					
"ng/L"	"U"	".130000"	"MDL"	""	"T"	""	"4.390000"	"LOQ"	"YES"	"-99.000000"	""	
".285000"	""	".000500"	".440000"	""								
"FFTA-EB02-052418"	"SOP 5-369"	"Initial"	"J6247-FS"	"BNO"	"376-06-7"	"PFTeDA"	".880000"					
"ng/L"	"U"	".220000"	"MDL"	""	"T"	""	"4.390000"	"LOQ"	"YES"	"-99.000000"	""	

".285000" ".000500" ".880000" ""  
"FFTA-EB02-052418" "SOP 5-369" "Initial" "J6247-FS" "BNO" "2355-31-9" "NMeFOSAA"  
"1.750000" "ng/L" "U" ".490000" "MDL" "" "T" "" "" "4.390000" "LOQ" "YES"  
"-99.000000" "" ".285000" ".000500" "1.750000" ""  
"FFTA-EB02-052418" "SOP 5-369" "Initial" "J6247-FS" "BNO" "2991-50-6" "NEtFOSAA" ".880000"  
"ng/L" "U" ".430000" "MDL" "" "T" "" "" "4.390000" "LOQ" "YES" "-99.000000" ""  
".285000" ".000500" ".880000" ""  
"FFTA-EB02-052418" "SOP 5-369" "Initial" "J6247-FS" "BNO" "375-73-5" "PFBS" ".440000"  
"ng/L" "U" ".110000" "MDL" "" "T" "" "" "4.390000" "LOQ" "YES" "-99.000000" ""  
".285000" ".000500" ".440000" ""  
"FFTA-EB02-052418" "SOP 5-369" "Initial" "J6247-FS" "BNO" "355-46-4" "PFHxS" ".350000"  
"ng/L" "U" ".100000" "MDL" "" "T" "" "" "4.390000" "LOQ" "YES" "-99.000000" ""  
".285000" ".000500" ".350000" ""  
"FFTA-EB02-052418" "SOP 5-369" "Initial" "J6247-FS" "BNO" "1763-23-1" "PFOS" ".440000"  
"ng/L" "U" ".170000" "MDL" "" "T" "" "" "4.390000" "LOQ" "YES" "-99.000000" ""  
".285000" ".000500" ".440000" ""  
"FFTA-EB02-052418" "SOP 5-369" "Initial" "J6247-FS" "BNO" "BDO-2217" "13C5-PFHxA" ".470000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "134.00" "" "-99.000000" "NA" "YES" ".350000"  
"" ".285000" ".000500" ".500000" ""  
"FFTA-EB02-052418" "SOP 5-369" "Initial" "J6247-FS" "BNO" "BDO-2218" "13C4-PFHpA" ".480000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "136.00" "" "-99.000000" "NA" "YES" ".350000"  
"" ".285000" ".000500" ".500000" ""  
"FFTA-EB02-052418" "SOP 5-369" "Initial" "J6247-FS" "BNO" "BDO-2219" "13C8-PFOA" ".500000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "142.00" "" "-99.000000" "NA" "YES" ".350000"  
"" ".285000" ".000500" ".500000" ""  
"FFTA-EB02-052418" "SOP 5-369" "Initial" "J6247-FS" "BNO" "BDO-2221" "13C9-PFNA" ".470000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "134.00" "" "-99.000000" "NA" "YES" ".350000"  
"" ".285000" ".000500" ".500000" ""  
"FFTA-EB02-052418" "SOP 5-369" "Initial" "J6247-FS" "BNO" "BDO-2222" "13C6-PFDA" ".410000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "116.00" "" "-99.000000" "NA" "YES" ".350000"  
"" ".285000" ".000500" ".500000" ""  
"FFTA-EB02-052418" "SOP 5-369" "Initial" "J6247-FS" "BNO" "BDO-2223" "13C7-PFUnA" ".430000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "123.00" "" "-99.000000" "NA" "YES" ".350000"  
"" ".285000" ".000500" ".500000" ""  
"FFTA-EB02-052418" "SOP 5-369" "Initial" "J6247-FS" "BNO" "BDO-2112" "13C2-PFD<sub>o</sub>A" ".360000"  
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"" ".285000" ".000500" ".500000" ""  
"FFTA-EB02-052418" "SOP 5-369" "Initial" "J6247-FS" "BNO" "BDO-2224" "13C2-PFTeDA" ".280000"  
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"" ".285000" ".000500" ".500000" ""  
"FFTA-EB02-052418" "SOP 5-369" "Initial" "J6247-FS" "BNO" "BDO-2125" "d3-MeFOSAA" ".290000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "82.00" "" "-99.000000" "NA" "YES" ".350000"  
"" ".285000" ".000500" ".500000" ""  
"FFTA-EB02-052418" "SOP 5-369" "Initial" "J6247-FS" "BNO" "BDO-2126" "d5-EtFOSAA" ".410000"  
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"" ".285000" ".000500" ".500000" ""  
"FFTA-EB02-052418" "SOP 5-369" "Initial" "J6247-FS" "BNO" "BDO-2226" "13C3-PFBS" ".340000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "103.00" "" "-99.000000" "NA" "YES" ".320000"  
"" ".285000" ".000500" ".500000" ""  
"FFTA-EB02-052418" "SOP 5-369" "Initial" "J6247-FS" "BNO" "BDO-2227" "13C3-PFHxS" ".340000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "103.00" "" "-99.000000" "NA" "YES" ".330000"  
"" ".285000" ".000500" ".500000" ""  
"FFTA-EB02-052418" "SOP 5-369" "Initial" "J6247-FS" "BNO" "BDO-2228" "13C8-PFOS" ".310000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "93.00" "" "-99.000000" "NA" "YES" ".330000"

""	".285000"	".000500"	".500000"	""									
"DRMO-MW11-052418"	"ng/L"	""	".180000"	"SOP 5-369"	"MDL"	""	"T"	""	"J6248-FS"	"BNO"	"307-24-4"	"PFHxA"	"41.400000"
".285000"	".000500"	".460000"	""	""	""	""	""	""	"4.620000"	"LOQ"	"YES"	"-99.000000"	""
"DRMO-MW11-052418"	"ng/L"	""	".150000"	"SOP 5-369"	"MDL"	""	"T"	""	"J6248-FS"	"BNO"	"375-85-9"	"PFHpA"	"15.010000"
".285000"	".000500"	".460000"	""	""	""	""	""	""	"4.620000"	"LOQ"	"YES"	"-99.000000"	""
"DRMO-MW11-052418"	"ng/L"	""	".170000"	"SOP 5-369"	"MDL"	""	"T"	""	"J6248-FS"	"BNO"	"335-67-1"	"PFOA"	"85.060000"
".285000"	".000500"	".460000"	""	""	""	""	""	""	"4.620000"	"LOQ"	"YES"	"-99.000000"	""
"DRMO-MW11-052418"	"ng/L"	"J"	".240000"	"SOP 5-369"	"MDL"	""	"T"	""	"J6248-FS"	"BNO"	"375-95-1"	"PFNA"	"3.140000"
".285000"	".000500"	".920000"	""	""	""	""	""	""	"4.620000"	"LOQ"	"YES"	"-99.000000"	""
"DRMO-MW11-052418"	"ng/L"	"U"	".150000"	"SOP 5-369"	"MDL"	""	"T"	""	"J6248-FS"	"BNO"	"335-76-2"	"PFDA"	".460000"
".285000"	".000500"	".460000"	""	""	""	""	""	""	"4.620000"	"LOQ"	"YES"	"-99.000000"	""
"DRMO-MW11-052418"	"ng/L"	"U"	".270000"	"SOP 5-369"	"MDL"	""	"T"	""	"J6248-FS"	"BNO"	"2058-94-8"	"PFUnA"	".920000"
".285000"	".000500"	".920000"	""	""	""	""	""	""	"4.620000"	"LOQ"	"YES"	"-99.000000"	""
"DRMO-MW11-052418"	"ng/L"	"U"	".170000"	"SOP 5-369"	"MDL"	""	"T"	""	"J6248-FS"	"BNO"	"307-55-1"	"PFDoA"	".460000"
".285000"	".000500"	".460000"	""	""	""	""	""	""	"4.620000"	"LOQ"	"YES"	"-99.000000"	""
"DRMO-MW11-052418"	"ng/L"	"U"	".140000"	"SOP 5-369"	"MDL"	""	"T"	""	"J6248-FS"	"BNO"	"72629-94-8"	"PFTTrDA"	".460000"
".285000"	".000500"	".460000"	""	""	""	""	""	""	"4.620000"	"LOQ"	"YES"	"-99.000000"	""
"DRMO-MW11-052418"	"ng/L"	"U"	".230000"	"SOP 5-369"	"MDL"	""	"T"	""	"J6248-FS"	"BNO"	"376-06-7"	"PFTeDA"	".920000"
".285000"	".000500"	".920000"	""	""	""	""	""	""	"4.620000"	"LOQ"	"YES"	"-99.000000"	""
"DRMO-MW11-052418"	"ng/L"	"U"	".520000"	"SOP 5-369"	"MDL"	""	"T"	""	"J6248-FS"	"BNO"	"2355-31-9"	"NMeFOSAA"	
"1.850000"	"-99.000000"	""	".285000"	".000500"	"1.850000"	""	""	""	"4.620000"	"LOQ"	"YES"		
"DRMO-MW11-052418"	"ng/L"	"U"	".450000"	"SOP 5-369"	"MDL"	""	"T"	""	"J6248-FS"	"BNO"	"2991-50-6"	"NEtFOSAA"	".920000"
".285000"	".000500"	".920000"	""	""	""	""	""	""	"4.620000"	"LOQ"	"YES"	"-99.000000"	""
"DRMO-MW11-052418"	"ng/L"	""	".120000"	"SOP 5-369"	"MDL"	""	"T"	""	"J6248-FS"	"BNO"	"375-73-5"	"PFBS"	"10.880000"
".285000"	".000500"	".460000"	""	""	""	""	""	""	"4.620000"	"LOQ"	"YES"	"-99.000000"	""
"DRMO-MW11-052418"	"ng/L"	"D"	".1930000"	"SOP 5-369"	"MDL"	""	"T"	""	"J6248-FS"	"BNO"	"355-46-4"	"PFHxS"	
"116.130000"	"-99.000000"	""	".285000"	".000500"	"7.020000"	""	""	""	"87.720000"	"LOQ"	"YES"		
"DRMO-MW11-052418"	"ng/L"	"D"	".3330000"	"SOP 5-369"	"MDL"	""	"T"	""	"J6248-FS"	"BNO"	"1763-23-1"	"PFOS"	
"670.420000"	"-99.000000"	""	".285000"	".000500"	"8.770000"	""	""	""	"87.720000"	"LOQ"	"YES"		
"DRMO-MW11-052418"	"ng/L"	""	"-99.000000"	"NA"	"SIS"	""	""	""	"J6248-FS"	"BNO"	"BDO-2217"	"13C5-PFHxA"	
".250000"	".350000"	""	".285000"	".000500"	".500000"	""	""	""	"72.00"	""	"-99.000000"	"NA"	"YES"
"DRMO-MW11-052418"	"ng/L"	""	"-99.000000"	"NA"	"SIS"	""	""	""	"J6248-FS"	"BNO"	"BDO-2218"	"13C4-PFHpA"	
".370000"	".350000"	""	".285000"	".000500"	".500000"	""	""	""	"106.00"	""	"-99.000000"	"NA"	"YES"
"DRMO-MW11-052418"	"ng/L"	""	"-99.000000"	"NA"	"SIS"	""	""	""	"J6248-FS"	"BNO"	"BDO-2219"	"13C8-PFOA"	".310000"
""	".285000"	".000500"	".500000"	""	""	""	""	""	"88.00"	""	"-99.000000"	"NA"	"YES"
"DRMO-MW11-052418"	"ng/L"	""	"-99.000000"	"NA"	"SIS"	""	""	""	"J6248-FS"	"BNO"	"BDO-2221"	"13C9-PFNA"	".290000"
""	".285000"	".000500"	".500000"	""	""	""	""	""	"83.00"	""	"-99.000000"	"NA"	"YES"



""	".285000"	".000500"	".500000"	""								
"DRMO-MW11-052418"	"ng/L"	"U"	".170000"	"MDL"	"T"	"J6248-FS"	"BNO"	"BDO-2222"	"13C6-PFDA"	".390000"		
""	".285000"	".000500"	".500000"	""		"NA"	"NA"	"YES"	".350000"			
"DRMO-MW11-052418"	"ng/L"	"U"	".140000"	"MDL"	"T"	"J6248-FS"	"BNO"	"BDO-2223"	"13C7-PFUnA"			
".440000"	".350000"	"U"	".285000"	".000500"	".500000"	"NA"	"NA"	"YES"				
"DRMO-MW11-052418"	"ng/L"	"U"	".140000"	"MDL"	"T"	"J6248-FS"	"BNO"	"BDO-2112"	"13C2-PFDoA"			
".330000"	".350000"	"U"	".285000"	".000500"	".500000"	"NA"	"NA"	"YES"				
"DRMO-MW11-052418"	"ng/L"	"U"	".230000"	"MDL"	"T"	"J6248-FS"	"BNO"	"BDO-2224"	"13C2-PFTeDA"			
".200000"	".350000"	"U"	".285000"	".000500"	".500000"	"NA"	"NA"	"YES"				
"DRMO-MW11-052418"	"ng/L"	"U"	".280000"	".000500"	".450000"	"J6248-FS"	"BNO"	"BDO-2125"	"d3-MeFOSAA"			
".320000"	".350000"	"U"	".285000"	".000500"	".500000"	"NA"	"NA"	"YES"				
"DRMO-MW11-052418"	"ng/L"	"U"	".280000"	".000500"	".450000"	"J6248-FS"	"BNO"	"BDO-2126"	"d5-EtFOSAA"			
".390000"	".350000"	"U"	".285000"	".000500"	".500000"	"NA"	"NA"	"YES"				
"DRMO-MW11-052418"	"ng/L"	"U"	".220000"	"MDL"	"T"	"J6248-FS"	"BNO"	"BDO-2226"	"13C3-PFBS"	".240000"		
".330000"	".350000"	"U"	".285000"	".000500"	".500000"	"NA"	"NA"	"YES"	".320000"			
"DRMO-MW11-052418"	"ng/L"	"U"	".280000"	".000500"	".450000"	"J6248-FS"	"BNO"	"BDO-2227"	"13C3-PFHxS"			
".430000"	".350000"	"U"	".285000"	".000500"	".500000"	"NA"	"NA"	"YES"				
"DRMO-MW11-052418"	"ng/L"	"U"	".280000"	".000500"	".450000"	"J6248-FS"	"BNO"	"BDO-2228"	"13C8-PFOS"	".330000"		
".330000"	".350000"	"U"	".285000"	".000500"	".500000"	"NA"	"NA"	"YES"	".330000"			
"PSC51-MW14D-052418"	"ng/L"	"U"	".170000"	"MDL"	"T"	"J6250-FS"	"BNO"	"307-24-4"	"PFHxA"	".450000"		
".280000"	".350000"	"U"	".285000"	".000500"	".500000"	"NA"	"NA"	"YES"	".320000"			
"PSC51-MW14D-052418"	"ng/L"	"U"	".140000"	"MDL"	"T"	"J6250-FS"	"BNO"	"375-85-9"	"PFHpA"	".450000"		
".280000"	".350000"	"U"	".285000"	".000500"	".500000"	"NA"	"NA"	"YES"	".320000"			
"PSC51-MW14D-052418"	"ng/L"	"U"	".160000"	"MDL"	"T"	"J6250-FS"	"BNO"	"335-67-1"	"PFOA"	".340000"		
".280000"	".350000"	"U"	".285000"	".000500"	".500000"	"NA"	"NA"	"YES"	".330000"			
"PSC51-MW14D-052418"	"ng/L"	"U"	".230000"	"MDL"	"T"	"J6250-FS"	"BNO"	"375-95-1"	"PFNA"	".890000"		
".280000"	".350000"	"U"	".285000"	".000500"	".500000"	"NA"	"NA"	"YES"	".330000"			
"PSC51-MW14D-052418"	"ng/L"	"U"	".140000"	"MDL"	"T"	"J6250-FS"	"BNO"	"335-76-2"	"PFDA"	".450000"		
".280000"	".350000"	"U"	".285000"	".000500"	".500000"	"NA"	"NA"	"YES"	".330000"			
"PSC51-MW14D-052418"	"ng/L"	"U"	".260000"	"MDL"	"T"	"J6250-FS"	"BNO"	"2058-94-8"	"PFUnA"	".890000"		
".280000"	".350000"	"U"	".285000"	".000500"	".500000"	"NA"	"NA"	"YES"	".330000"			
"PSC51-MW14D-052418"	"ng/L"	"U"	".160000"	"MDL"	"T"	"J6250-FS"	"BNO"	"307-55-1"	"PFDoA"	".450000"		
".280000"	".350000"	"U"	".285000"	".000500"	".500000"	"NA"	"NA"	"YES"	".330000"			
"PSC51-MW14D-052418"	"ng/L"	"U"	".130000"	"MDL"	"T"	"J6250-FS"	"BNO"	"72629-94-8"	"PFTrDA"	".450000"		
".280000"	".350000"	"U"	".285000"	".000500"	".500000"	"NA"	"NA"	"YES"	".330000"			
"PSC51-MW14D-052418"	"ng/L"	"U"	".220000"	"MDL"	"T"	"J6250-FS"	"BNO"	"376-06-7"	"PFTeDA"	".890000"		
".280000"	".350000"	"U"	".285000"	".000500"	".500000"	"NA"	"NA"	"YES"	".330000"			

".280000"	".000500"	".890000"	""						
"PSC51-MW14D-052418"	"SOP 5-369"	"Initial"	"J6250-FS"	"BNO"	"2355-31-9"	"NMeFOSAA"			
"1.790000"	"ng/L"	"U"	".500000"	"MDL"	""	"T"	""	"4.460000"	"LOQ"
"-99.000000"	""	".280000"	".000500"	".1.790000"	""				
"PSC51-MW14D-052418"	"SOP 5-369"	"Initial"	"J6250-FS"	"BNO"	"2991-50-6"	"NEtFOSAA"	".890000"		
"ng/L"	"U"	".440000"	"MDL"	""	"T"	""	"4.460000"	"LOQ"	"YES"
".280000"	".000500"	".890000"	""						
"PSC51-MW14D-052418"	"SOP 5-369"	"Initial"	"J6250-FS"	"BNO"	"375-73-5"	"PFBS"	".360000"		
"ng/L"	"J"	".120000"	"MDL"	""	"T"	""	"4.460000"	"LOQ"	"YES"
"-99.000000"	""								
".280000"	".000500"	".450000"	""						
"PSC51-MW14D-052418"	"SOP 5-369"	"Initial"	"J6250-FS"	"BNO"	"355-46-4"	"PFHxS"	".300000"		
"ng/L"	"J"	".100000"	"MDL"	""	"T"	""	"4.460000"	"LOQ"	"YES"
"-99.000000"	""								
".280000"	".000500"	".360000"	""						
"PSC51-MW14D-052418"	"SOP 5-369"	"Initial"	"J6250-FS"	"BNO"	"1763-23-1"	"PFOS"	".350000"		
"ng/L"	"J"	".170000"	"MDL"	""	"T"	""	"4.460000"	"LOQ"	"YES"
"-99.000000"	""								
".280000"	".000500"	".450000"	""						
"PSC51-MW14D-052418"	"SOP 5-369"	"Initial"	"J6250-FS"	"BNO"	"BDO-2217"	"13C5-PFHxA"			
".380000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"107.00"	""	"-99.000000"
"NA"	""	"SIS"	"107.00"	""	"-99.000000"	"NA"	"YES"		
".350000"	""	".280000"	".000500"	".500000"	""				
"PSC51-MW14D-052418"	"SOP 5-369"	"Initial"	"J6250-FS"	"BNO"	"BDO-2218"	"13C4-PFHpA"			
".420000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"118.00"	""	"-99.000000"
"NA"	""	"SIS"	"118.00"	""	"-99.000000"	"NA"	"YES"		
".350000"	""	".280000"	".000500"	".500000"	""				
"PSC51-MW14D-052418"	"SOP 5-369"	"Initial"	"J6250-FS"	"BNO"	"BDO-2219"	"13C8-PFOA"	".360000"		
"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"100.00"	""	"-99.000000"	"NA"
"NA"	""	"SIS"	"100.00"	""	"-99.000000"	"NA"	"YES"	".350000"	
""	".280000"	".000500"	".500000"	""					
"PSC51-MW14D-052418"	"SOP 5-369"	"Initial"	"J6250-FS"	"BNO"	"BDO-2221"	"13C9-PFNA"	".330000"		
"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"91.00"	""	"-99.000000"	"NA"
"NA"	""	"SIS"	"91.00"	""	"-99.000000"	"NA"	"YES"	".350000"	
""	".280000"	".000500"	".500000"	""					
"PSC51-MW14D-052418"	"SOP 5-369"	"Initial"	"J6250-FS"	"BNO"	"BDO-2222"	"13C6-PFDA"	".320000"		
"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"91.00"	""	"-99.000000"	"NA"
"NA"	""	"SIS"	"91.00"	""	"-99.000000"	"NA"	"YES"	".350000"	
""	".280000"	".000500"	".500000"	""					
"PSC51-MW14D-052418"	"SOP 5-369"	"Initial"	"J6250-FS"	"BNO"	"BDO-2223"	"13C7-PFUnA"			
".280000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"79.00"	""	"-99.000000"
"NA"	""	"SIS"	"79.00"	""	"-99.000000"	"NA"	"YES"		
".350000"	""	".280000"	".000500"	".500000"	""				
"PSC51-MW14D-052418"	"SOP 5-369"	"Initial"	"J6250-FS"	"BNO"	"BDO-2112"	"13C2-PFDoA"			
".190000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"52.00"	""	"-99.000000"
"NA"	""	"SIS"	"52.00"	""	"-99.000000"	"NA"	"YES"		
".350000"	""	".280000"	".000500"	".500000"	""				
"PSC51-MW14D-052418"	"SOP 5-369"	"Initial"	"J6250-FS"	"BNO"	"BDO-2224"	"13C2-PFTeDA"			
".180000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"50.00"	""	"-99.000000"
"NA"	""	"SIS"	"50.00"	""	"-99.000000"	"NA"	"YES"		
".350000"	""	".280000"	".000500"	".500000"	""				
"PSC51-MW14D-052418"	"SOP 5-369"	"Initial"	"J6250-FS"	"BNO"	"BDO-2125"	"d3-MeFOSAA"			
".190000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"53.00"	""	"-99.000000"
"NA"	""	"SIS"	"53.00"	""	"-99.000000"	"NA"	"YES"		
".350000"	""	".280000"	".000500"	".500000"	""				
"PSC51-MW14D-052418"	"SOP 5-369"	"Initial"	"J6250-FS"	"BNO"	"BDO-2126"	"d5-EtFOSAA"			
".190000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"52.00"	""	"-99.000000"
"NA"	""	"SIS"	"52.00"	""	"-99.000000"	"NA"	"YES"		
".350000"	""	".280000"	".000500"	".500000"	""				
"PSC51-MW14D-052418"	"SOP 5-369"	"Initial"	"J6250-FS"	"BNO"	"BDO-2226"	"13C3-PFBS"	".330000"		
"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"98.00"	""	"-99.000000"	"NA"
"NA"	""	"SIS"	"98.00"	""	"-99.000000"	"NA"	"YES"	".330000"	
""	".280000"	".000500"	".500000"	""					
"PSC51-MW14D-052418"	"SOP 5-369"	"Initial"	"J6250-FS"	"BNO"	"BDO-2227"	"13C3-PFHxS"			
".350000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"104.00"	""	"-99.000000"
"NA"	""	"SIS"	"104.00"	""	"-99.000000"	"NA"	"YES"		
".330000"	""	".280000"	".000500"	".500000"	""				
"PSC51-MW14D-052418"	"SOP 5-369"	"Initial"	"J6250-FS"	"BNO"	"BDO-2228"	"13C8-PFOS"	".220000"		
"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"65.00"	""	"-99.000000"	"NA"
"NA"	""	"SIS"	"65.00"	""	"-99.000000"	"NA"	"YES"	".340000"	

""	".280000"	".000500"	".500000"	""					
"PSC51-MW13S-052418"	"ng/L"	"U"	".170000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"307-24-4"	"PFHxA" ".450000"
".280000"	".000500"	".450000"	""	"MDL"	""	"T"	""	"4.460000"	"LOQ"
"PSC51-MW13S-052418"	"ng/L"	"U"	".140000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"375-85-9"	"PFHpA" ".450000"
".280000"	".000500"	".450000"	""	"MDL"	""	"T"	""	"4.460000"	"LOQ"
"PSC51-MW13S-052418"	"ng/L"	"J"	".160000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"335-67-1"	"PFOA" ".400000"
".280000"	".000500"	".450000"	""	"MDL"	""	"T"	""	"4.460000"	"LOQ"
"PSC51-MW13S-052418"	"ng/L"	"U"	".230000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"375-95-1"	"PFNA" ".890000"
".280000"	".000500"	".890000"	""	"MDL"	""	"T"	""	"4.460000"	"LOQ"
"PSC51-MW13S-052418"	"ng/L"	"U"	".140000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"335-76-2"	"PFDA" ".450000"
".280000"	".000500"	".450000"	""	"MDL"	""	"T"	""	"4.460000"	"LOQ"
"PSC51-MW13S-052418"	"ng/L"	"U"	".260000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"2058-94-8"	"PFUnA" ".890000"
".280000"	".000500"	".890000"	""	"MDL"	""	"T"	""	"4.460000"	"LOQ"
"PSC51-MW13S-052418"	"ng/L"	"U"	".160000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"307-55-1"	"PFDoA" ".450000"
".280000"	".000500"	".450000"	""	"MDL"	""	"T"	""	"4.460000"	"LOQ"
"PSC51-MW13S-052418"	"ng/L"	"U"	".130000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"72629-94-8"	"PFTrDA" ".450000"
".280000"	".000500"	".450000"	""	"MDL"	""	"T"	""	"4.460000"	"LOQ"
"PSC51-MW13S-052418"	"ng/L"	"U"	".220000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"376-06-7"	"PFTeDA" ".890000"
".280000"	".000500"	".890000"	""	"MDL"	""	"T"	""	"4.460000"	"LOQ"
"PSC51-MW13S-052418"	"ng/L"	"U"	".500000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"2355-31-9"	"NMeFOSAA"
"1.790000"	"-99.000000"	""	".280000"	"MDL"	""	"T"	""	"4.460000"	"LOQ"
".000500"	".1790000"	""	""	""	""	""	""	""	""
"PSC51-MW13S-052418"	"ng/L"	"U"	".440000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"2991-50-6"	"NEtFOSAA" ".890000"
".280000"	".000500"	".890000"	""	"MDL"	""	"T"	""	"4.460000"	"LOQ"
"PSC51-MW13S-052418"	"ng/L"	"J"	".120000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"375-73-5"	"PFBS" "1.090000"
".280000"	".000500"	".450000"	""	"MDL"	""	"T"	""	"4.460000"	"LOQ"
"PSC51-MW13S-052418"	"ng/L"	"J"	".100000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"355-46-4"	"PFHxS" ".720000"
".280000"	".000500"	".360000"	""	"MDL"	""	"T"	""	"4.460000"	"LOQ"
"PSC51-MW13S-052418"	"ng/L"	"J"	".170000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"1763-23-1"	"PFOS" "1.120000"
".280000"	".000500"	".450000"	""	"MDL"	""	"T"	""	"4.460000"	"LOQ"
"PSC51-MW13S-052418"	"ng/L"	""	"-99.000000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"BDO-2217"	"13C5-PFHxA"
".340000"	".350000"	""	".280000"	"NA"	""	"SIS"	"96.00"	""	"-99.000000"
".000500"	".500000"	""	""	""	""	""	""	""	""
"PSC51-MW13S-052418"	"ng/L"	""	"-99.000000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"BDO-2218"	"13C4-PFHpA"
".370000"	".350000"	""	".280000"	"NA"	""	"SIS"	"104.00"	""	"-99.000000"
".000500"	".500000"	""	""	""	""	""	""	""	""
"PSC51-MW13S-052418"	"ng/L"	""	"-99.000000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"BDO-2219"	"13C8-PFOA" ".280000"
".280000"	".350000"	""	""	"NA"	""	"SIS"	"79.00"	""	"-99.000000"
""	".280000"	".000500"	".500000"	""	""	""	""	""	""
"PSC51-MW13S-052418"	"ng/L"	""	"-99.000000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"BDO-2221"	"13C9-PFNA" ".270000"
".280000"	".350000"	""	""	"NA"	""	"SIS"	"76.00"	""	"-99.000000"
""	""	""	""	""	""	""	""	""	""

""	".280000"	".000500"	".500000"	""								
"PSC51-MW13S-052418"	"ng/L"	"-99.000000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"BDO-2222"	"13C6-PFDA"	".250000"			
""	".280000"	".000500"	".500000"	""								
"PSC51-MW13S-052418"	"ng/L"	"-99.000000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"BDO-2223"	"13C7-PFUnA"				
".220000"			"NA"	"SIS"	"62.00"		"-99.000000"	"NA"	"YES"			
".350000"		".280000"	".000500"	".500000"	""							
"PSC51-MW13S-052418"	"ng/L"	"-99.000000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"BDO-2112"	"13C2-PFDoA"				
".180000"			"NA"	"SIS"	"51.00"		"-99.000000"	"NA"	"YES"			
".350000"		".280000"	".000500"	".500000"	""							
"PSC51-MW13S-052418"	"ng/L"	"-99.000000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"BDO-2224"	"13C2-PFTeDA"				
".190000"			"NA"	"SIS"	"53.00"		"-99.000000"	"NA"	"YES"			
".350000"		".280000"	".000500"	".500000"	""							
"PSC51-MW13S-052418"	"ng/L"	"-99.000000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"BDO-2125"	"d3-MeFOSAA"				
".220000"			"NA"	"SIS"	"61.00"		"-99.000000"	"NA"	"YES"			
".350000"		".280000"	".000500"	".500000"	""							
"PSC51-MW13S-052418"	"ng/L"	"-99.000000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"BDO-2126"	"d5-EtFOSAA"				
".240000"			"NA"	"SIS"	"66.00"		"-99.000000"	"NA"	"YES"			
".350000"		".280000"	".000500"	".500000"	""							
"PSC51-MW13S-052418"	"ng/L"	"-99.000000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"BDO-2226"	"13C3-PFBS"	".330000"			
""	".280000"	".000500"	".500000"	""								
"PSC51-MW13S-052418"	"ng/L"	"-99.000000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"BDO-2227"	"13C3-PFHxS"				
".310000"			"NA"	"SIS"	"92.00"		"-99.000000"	"NA"	"YES"			
".330000"		".280000"	".000500"	".500000"	""							
"PSC51-MW13S-052418"	"ng/L"	"-99.000000"	"SOP 5-369"	"Initial"	"J6252-FS"	"BNO"	"BDO-2228"	"13C8-PFOS"	".270000"			
""	".280000"	".000500"	".500000"	""								
"PSC51-MW13S-052418MS"	"ng/L"	".170000"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"307-24-4"	"PFHxA"				
"26.170000"			"MDL"	"T"	"98.00"		"4.390000"	"LOQ"	"YES"			
"26.570000"	"J6252MS-FS"	".285000"	".000500"	".440000"	""							
"PSC51-MW13S-052418MS"	"ng/L"	".140000"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"375-85-9"	"PFHpA"				
"26.610000"			"MDL"	"T"	"101.00"		"4.390000"	"LOQ"	"YES"			
"26.310000"	"J6252MS-FS"	".285000"	".000500"	".440000"	""							
"PSC51-MW13S-052418MS"	"ng/L"	".160000"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"335-67-1"	"PFOA"				
"24.490000"			"MDL"	"T"	"92.00"		"4.390000"	"LOQ"	"YES"			
"26.310000"	"J6252MS-FS"	".285000"	".000500"	".440000"	""							
"PSC51-MW13S-052418MS"	"ng/L"	".230000"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"375-95-1"	"PFNA"				
"23.710000"			"MDL"	"T"	"90.00"		"4.390000"	"LOQ"	"YES"			
"26.310000"	"J6252MS-FS"	".285000"	".000500"	".880000"	""							
"PSC51-MW13S-052418MS"	"ng/L"	".140000"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"335-76-2"	"PFDA"				
"25.470000"			"MDL"	"T"	"97.00"		"4.390000"	"LOQ"	"YES"			
"26.310000"	"J6252MS-FS"	".285000"	".000500"	".440000"	""							
"PSC51-MW13S-052418MS"	"ng/L"	".250000"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"2058-94-8"	"PFUnA"				
"25.470000"			"MDL"	"T"	"97.00"		"4.390000"	"LOQ"	"YES"			
"26.310000"	"J6252MS-FS"	".285000"	".000500"	".880000"	""							
"PSC51-MW13S-052418MS"	"ng/L"	".160000"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"307-55-1"	"PFDoA"				
"26.910000"			"MDL"	"T"	"102.00"		"4.390000"	"LOQ"	"YES"			
"26.310000"	"J6252MS-FS"	".285000"	".000500"	".440000"	""							
"PSC51-MW13S-052418MS"	"ng/L"	".130000"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"72629-94-8"	"PFTTrDA"				
"29.910000"			"MDL"	"T"	"114.00"		"4.390000"	"LOQ"	"YES"			
"26.310000"	"J6252MS-FS"	".285000"	".000500"	".440000"	""							
"PSC51-MW13S-052418MS"	"ng/L"	".220000"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"376-06-7"	"PFTeDA"				
"28.540000"			"MDL"	"T"	"108.00"		"4.390000"	"LOQ"	"YES"			

"26.310000"	"J6252MS-FS"	".285000"	".000500"	".880000"	""			
"PSC51-MW13S-052418MS"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"2355-31-9"	"NMeFOSAA"		
"26.260000"	"ng/L"	""	".490000"	"MDL"	""	"T"	"100.00"	""
"4.390000"	"LOQ"	"YES"						
"26.310000"	"J6252MS-FS"	".285000"	".000500"	"1.750000"	""			
"PSC51-MW13S-052418MS"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"2991-50-6"	"NEtFOSAA"		
"22.660000"	"ng/L"	""	".430000"	"MDL"	""	"T"	"86.00"	""
"4.390000"	"LOQ"	"YES"						
"26.310000"	"J6252MS-FS"	".285000"	".000500"	".880000"	""			
"PSC51-MW13S-052418MS"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"375-73-5"	"PFBS"		
"25.130000"	"ng/L"	""	".110000"	"MDL"	""	"T"	"90.00"	""
"4.390000"	"LOQ"	"YES"						
"26.570000"	"J6252MS-FS"	".285000"	".000500"	".440000"	""			
"PSC51-MW13S-052418MS"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"355-46-4"	"PFHxS"		
"23.870000"	"ng/L"	""	".100000"	"MDL"	""	"T"	"87.00"	""
"4.390000"	"LOQ"	"YES"						
"26.570000"	"J6252MS-FS"	".285000"	".000500"	".350000"	""			
"PSC51-MW13S-052418MS"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"1763-23-1"	"PFOS"		
"22.660000"	"ng/L"	""	".170000"	"MDL"	""	"T"	"82.00"	""
"4.390000"	"LOQ"	"YES"						
"26.310000"	"J6252MS-FS"	".285000"	".000500"	".440000"	""			
"PSC51-MW13S-052418MS"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"BDO-2217"	"13C5-PFHxA"	".410000"	"ng/L"
""	""	""	"-99.000000"	"NA"	""	"SIS"	"117.00"	""
""	""	""	"-99.000000"	"NA"	""			
"YES"	".350000"	"J6252MS-FS"	".285000"	".000500"	".500000"	""		
"PSC51-MW13S-052418MS"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"BDO-2218"	"13C4-PFHpA"	".430000"	"ng/L"
""	""	""	"-99.000000"	"NA"	""	"SIS"	"122.00"	""
""	""	""	"-99.000000"	"NA"	""			
"YES"	".350000"	"J6252MS-FS"	".285000"	".000500"	".500000"	""		
"PSC51-MW13S-052418MS"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"BDO-2219"	"13C8-PFOA"	".340000"	"ng/L"
""	""	""	"-99.000000"	"NA"	""	"SIS"	"98.00"	""
""	""	""	"-99.000000"	"NA"	""			
"YES"	".350000"	"J6252MS-FS"	".285000"	".000500"	".500000"	""		
"PSC51-MW13S-052418MS"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"BDO-2221"	"13C9-PFNA"	".330000"	"ng/L"
""	""	""	"-99.000000"	"NA"	""	"SIS"	"94.00"	""
""	""	""	"-99.000000"	"NA"	""			
"YES"	".350000"	"J6252MS-FS"	".285000"	".000500"	".500000"	""		
"PSC51-MW13S-052418MS"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"BDO-2222"	"13C6-PFDA"	".350000"	"ng/L"
""	""	""	"-99.000000"	"NA"	""	"SIS"	"98.00"	""
""	""	""	"-99.000000"	"NA"	""			
"YES"	".350000"	"J6252MS-FS"	".285000"	".000500"	".500000"	""		
"PSC51-MW13S-052418MS"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"BDO-2223"	"13C7-PFUnA"	".330000"	"ng/L"
""	""	""	"-99.000000"	"NA"	""	"SIS"	"93.00"	""
""	""	""	"-99.000000"	"NA"	""			
"YES"	".350000"	"J6252MS-FS"	".285000"	".000500"	".500000"	""		
"PSC51-MW13S-052418MS"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"BDO-2112"	"13C2-PFDoA"	".300000"	"ng/L"
""	""	""	"-99.000000"	"NA"	""	"SIS"	"86.00"	""
""	""	""	"-99.000000"	"NA"	""			
"YES"	".350000"	"J6252MS-FS"	".285000"	".000500"	".500000"	""		
"PSC51-MW13S-052418MS"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"BDO-2224"	"13C2-PFTeDA"	".280000"	"ng/L"
""	""	""	"-99.000000"	"NA"	""	"SIS"	"79.00"	""
""	""	""	"-99.000000"	"NA"	""			
"YES"	".350000"	"J6252MS-FS"	".285000"	".000500"	".500000"	""		
"PSC51-MW13S-052418MS"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"BDO-2125"	"d3-MeFOSAA"	".320000"	"ng/L"
""	""	""	"-99.000000"	"NA"	""	"SIS"	"91.00"	""
""	""	""	"-99.000000"	"NA"	""			
"YES"	".350000"	"J6252MS-FS"	".285000"	".000500"	".500000"	""		
"PSC51-MW13S-052418MS"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"BDO-2126"	"d5-EtFOSAA"	".350000"	"ng/L"
""	""	""	"-99.000000"	"NA"	""	"SIS"	"99.00"	""
""	""	""	"-99.000000"	"NA"	""			
"YES"	".350000"	"J6252MS-FS"	".285000"	".000500"	".500000"	""		
"PSC51-MW13S-052418MS"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"BDO-2226"	"13C3-PFBS"	".480000"	"ng/L"
""	""	""	"-99.000000"	"NA"	""	"SIS"	"146.00"	""
""	""	""	"-99.000000"	"NA"	""			
"YES"	".320000"	"J6252MS-FS"	".285000"	".000500"	".500000"	""		
"PSC51-MW13S-052418MS"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"BDO-2227"	"13C3-PFHxS"	".490000"	"ng/L"
""	""	""	"-99.000000"	"NA"	""	"SIS"	"147.00"	""
""	""	""	"-99.000000"	"NA"	""			
"YES"	".330000"	"J6252MS-FS"	".285000"	".000500"	".500000"	""		
"PSC51-MW13S-052418MS"	"SOP 5-369"	"Initial"	"J6252MS-FS"	"BNO"	"BDO-2228"	"13C8-PFOS"	".430000"	"ng/L"
""	""	""	"-99.000000"	"NA"	""	"SIS"	"129.00"	""
""	""	""	"-99.000000"	"NA"	""			
"YES"	".430000"	"J6252MS-FS"	".285000"	".000500"	".500000"	""		

".330000"	"J6252MS-FS"	".285000"	".000500"	".500000"	""													
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"307-24-4"	"PFHxA"												
"28.220000"	"ng/L"	""	".170000"	"MDL"	""	"T"	"104.00"	"5.9"	"4.460000"	"LOQ"	"YES"							
"27.050000"	"J6252MSD-FS"	".280000"	".000500"	".450000"	""													
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"375-85-9"	"PFHpA"												
"22.130000"	"ng/L"	""	".140000"	"MDL"	""	"T"	"83.00"	"19.6"	"4.460000"	"LOQ"	"YES"							
"26.780000"	"J6252MSD-FS"	".280000"	".000500"	".450000"	""													
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"335-67-1"	"PFOA"												
"23.470000"	"ng/L"	""	".160000"	"MDL"	""	"T"	"86.00"	"6.7"	"4.460000"	"LOQ"	"YES"							
"26.780000"	"J6252MSD-FS"	".280000"	".000500"	".450000"	""													
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"375-95-1"	"PFNA"												
"26.730000"	"ng/L"	""	".230000"	"MDL"	""	"T"	"100.00"	"10.5"	"4.460000"	"LOQ"	"YES"							
"26.780000"	"J6252MSD-FS"	".280000"	".000500"	".890000"	""													
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"335-76-2"	"PFDA"												
"23.660000"	"ng/L"	""	".140000"	"MDL"	""	"T"	"88.00"	"9.7"	"4.460000"	"LOQ"	"YES"							
"26.780000"	"J6252MSD-FS"	".280000"	".000500"	".450000"	""													
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"2058-94-8"	"PFUnA"												
"24.050000"	"ng/L"	""	".260000"	"MDL"	""	"T"	"90.00"	"7.5"	"4.460000"	"LOQ"	"YES"							
"26.780000"	"J6252MSD-FS"	".280000"	".000500"	".890000"	""													
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"307-55-1"	"PFD <sub>o</sub> A"												
"25.860000"	"ng/L"	""	".160000"	"MDL"	""	"T"	"97.00"	"5.0"	"4.460000"	"LOQ"	"YES"							
"26.780000"	"J6252MSD-FS"	".280000"	".000500"	".450000"	""													
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"72629-94-8"	"PFT <sub>r</sub> DA"												
"28.240000"	"ng/L"	""	".130000"	"MDL"	""	"T"	"105.00"	"8.2"	"4.460000"	"LOQ"	"YES"							
"26.780000"	"J6252MSD-FS"	".280000"	".000500"	".450000"	""													
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"376-06-7"	"PFT <sub>e</sub> DA"												
"26.150000"	"ng/L"	""	".220000"	"MDL"	""	"T"	"98.00"	"9.7"	"4.460000"	"LOQ"	"YES"							
"26.780000"	"J6252MSD-FS"	".280000"	".000500"	".890000"	""													
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"2355-31-9"	"NMeFOSAA"												
"23.660000"	"ng/L"	""	".500000"	"MDL"	""	"T"	"88.00"	"12.8"	"4.460000"	"LOQ"	"YES"							
"26.780000"	"J6252MSD-FS"	".280000"	".000500"	"1.790000"	""													
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"2991-50-6"	"NEtFOSAA"												
"23.260000"	"ng/L"	""	".440000"	"MDL"	""	"T"	"87.00"	"1.2"	"4.460000"	"LOQ"	"YES"							
"26.780000"	"J6252MSD-FS"	".280000"	".000500"	".890000"	""													
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"375-73-5"	"PFBS"												
"27.630000"	"ng/L"	""	".120000"	"MDL"	""	"T"	"98.00"	"8.5"	"4.460000"	"LOQ"	"YES"							
"27.050000"	"J6252MSD-FS"	".280000"	".000500"	".450000"	""													
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"355-46-4"	"PFHxS"												
"23.540000"	"ng/L"	""	".100000"	"MDL"	""	"T"	"84.00"	"3.5"	"4.460000"	"LOQ"	"YES"							
"27.050000"	"J6252MSD-FS"	".280000"	".000500"	".360000"	""													
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"1763-23-1"	"PFOS"												
"23.680000"	"ng/L"	""	".170000"	"MDL"	""	"T"	"84.00"	"2.4"	"4.460000"	"LOQ"	"YES"							
"26.780000"	"J6252MSD-FS"	".280000"	".000500"	".450000"	""													
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"BDO-2217"	"13C5-PFHxA"	".280000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"78.00"	""	"-99.000000"	"NA"	
"YES"	".350000"	"J6252MSD-FS"	".280000"	".000500"	".500000"	""												
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"BDO-2218"	"13C4-PFHpA"	".350000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"99.00"	""	"-99.000000"	"NA"	
"YES"	".350000"	"J6252MSD-FS"	".280000"	".000500"	".500000"	""												
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"BDO-2219"	"13C8-PFOA"	".260000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"73.00"	""	"-99.000000"	"NA"	"YES"
".350000"	"J6252MSD-FS"	".280000"	".000500"	".500000"	""													
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"BDO-2221"	"13C9-PFNA"	".220000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"63.00"	""	"-99.000000"	"NA"	"YES"

".350000"	"J6252MSD-FS"	".280000"	".000500"	".500000"	""						
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"BDO-2222"	"13C6-PFDA"					
".260000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"73.00"	""	"-99.000000"	"NA"	"YES"
".350000"	"J6252MSD-FS"	".280000"	".000500"	".500000"	""						
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"BDO-2223"	"13C7-PFUnA"	".290000"	"ng/L"	""	"-99.000000"	"NA"
"YES"	".350000"	"J6252MSD-FS"	".280000"	".000500"	".500000"	""	"SIS"	"81.00"	""	"-99.000000"	"NA"
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"BDO-2112"	"13C2-PFDoA"	".270000"	"ng/L"	""	"-99.000000"	"NA"
"YES"	".350000"	"J6252MSD-FS"	".280000"	".000500"	".500000"	""	"SIS"	"75.00"	""	"-99.000000"	"NA"
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"BDO-2224"	"13C2-PFTeDA"	".230000"	"ng/L"	""	"-99.000000"	"NA"
"YES"	".350000"	"J6252MSD-FS"	".280000"	".000500"	".500000"	""	"SIS"	"66.00"	""	"-99.000000"	"NA"
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"BDO-2125"	"d3-MeFOSAA"	".300000"	"ng/L"	""	"-99.000000"	"NA"
"YES"	".350000"	"J6252MSD-FS"	".280000"	".000500"	".500000"	""	"SIS"	"84.00"	""	"-99.000000"	"NA"
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"BDO-2126"	"d5-EtFOSAA"	".310000"	"ng/L"	""	"-99.000000"	"NA"
"YES"	".350000"	"J6252MSD-FS"	".280000"	".000500"	".500000"	""	"SIS"	"87.00"	""	"-99.000000"	"NA"
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"BDO-2226"	"13C3-PFBS"	".340000"	"ng/L"	""	"-99.000000"	"NA"
".330000"	"J6252MSD-FS"	".280000"	".000500"	".500000"	""	"SIS"	"101.00"	""	"-99.000000"	"NA"	"YES"
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"BDO-2227"	"13C3-PFHxS"	".350000"	"ng/L"	""	"-99.000000"	"NA"
".330000"	"J6252MSD-FS"	".280000"	".000500"	".500000"	""	"SIS"	"104.00"	""	"-99.000000"	"NA"	"YES"
"PSC51-MW13S-052418MSD"	"SOP 5-369"	"Initial"	"J6252MSD-FS"	"BNO"	"BDO-2228"	"13C8-PFOS"	".300000"	"ng/L"	""	"-99.000000"	"NA"
".340000"	"J6252MSD-FS"	".280000"	".000500"	".500000"	""	"SIS"	"87.00"	""	"-99.000000"	"NA"	"YES"
"DRMO-MW2-052418"	"SOP 5-369"	"Initial"	"J6253-FS"	"BNO"	"307-24-4"	"PFHxA"	".190000"	"MDL"	""	"T"	""
"ng/L"	""	".190000"	"MDL"	""	"T"	""	"4.870000"	"LOQ"	"YES"	"-99.000000"	""
".270000"	".000500"	".490000"	""								
"DRMO-MW2-052418"	"SOP 5-369"	"Initial"	"J6253-FS"	"BNO"	"375-85-9"	"PFHpA"	".160000"	"MDL"	""	"T"	""
"ng/L"	"J"	".160000"	"MDL"	""	"T"	""	"4.870000"	"LOQ"	"YES"	"-99.000000"	""
".270000"	".000500"	".490000"	""								
"DRMO-MW2-052418"	"SOP 5-369"	"Initial"	"J6253-FS"	"BNO"	"335-67-1"	"PFOA"	".180000"	"MDL"	""	"T"	""
"ng/L"	""	".180000"	"MDL"	""	"T"	""	"4.870000"	"LOQ"	"YES"	"-99.000000"	""
".270000"	".000500"	".490000"	""								
"DRMO-MW2-052418"	"SOP 5-369"	"Initial"	"J6253-FS"	"BNO"	"375-95-1"	"PFNA"	".250000"	"MDL"	""	"T"	""
"ng/L"	"J"	".250000"	"MDL"	""	"T"	""	"4.870000"	"LOQ"	"YES"	"-99.000000"	""
".270000"	".000500"	".970000"	""								
"DRMO-MW2-052418"	"SOP 5-369"	"Initial"	"J6253-FS"	"BNO"	"335-76-2"	"PFDA"	".160000"	"MDL"	""	"T"	""
"ng/L"	"U"	".160000"	"MDL"	""	"T"	""	"4.870000"	"LOQ"	"YES"	"-99.000000"	""
".270000"	".000500"	".490000"	""								
"DRMO-MW2-052418"	"SOP 5-369"	"Initial"	"J6253-FS"	"BNO"	"2058-94-8"	"PFUnA"	".280000"	"MDL"	""	"T"	""
"ng/L"	"U"	".280000"	"MDL"	""	"T"	""	"4.870000"	"LOQ"	"YES"	"-99.000000"	""
".270000"	".000500"	".970000"	""								
"DRMO-MW2-052418"	"SOP 5-369"	"Initial"	"J6253-FS"	"BNO"	"307-55-1"	"PFDoA"	".180000"	"MDL"	""	"T"	""
"ng/L"	"U"	".180000"	"MDL"	""	"T"	""	"4.870000"	"LOQ"	"YES"	"-99.000000"	""
".270000"	".000500"	".490000"	""								
"DRMO-MW2-052418"	"SOP 5-369"	"Initial"	"J6253-FS"	"BNO"	"72629-94-8"	"PFTTrDA"	".150000"	"MDL"	""	"T"	""
"ng/L"	"U"	".150000"	"MDL"	""	"T"	""	"4.870000"	"LOQ"	"YES"	"-99.000000"	""
".270000"	".000500"	".490000"	""								
"DRMO-MW2-052418"	"SOP 5-369"	"Initial"	"J6253-FS"	"BNO"	"376-06-7"	"PFTeDA"	".240000"	"MDL"	""	"T"	""
"ng/L"	"U"	".240000"	"MDL"	""	"T"	""	"4.870000"	"LOQ"	"YES"	"-99.000000"	""

".270000" ".000500" ".970000" ""  
"DRMO-MW2-052418" "SOP 5-369" "Initial" "J6253-FS" "BNO" "2355-31-9" "NMeFOSAA"  
"1.950000" "ng/L" "U" ".550000" "MDL" "" "T" "" "" "4.870000" "LOQ" "YES"  
"-99.000000" "" ".270000" ".000500" "1.950000" ""  
"DRMO-MW2-052418" "SOP 5-369" "Initial" "J6253-FS" "BNO" "2991-50-6" "NEtFOSAA" ".970000"  
"ng/L" "U" ".480000" "MDL" "" "T" "" "" "4.870000" "LOQ" "YES" "-99.000000" ""  
".270000" ".000500" ".970000" ""  
"DRMO-MW2-052418" "SOP 5-369" "Initial" "J6253-FS" "BNO" "375-73-5" "PFBS" "12.160000"  
"ng/L" "" ".130000" "MDL" "" "T" "" "" "4.870000" "LOQ" "YES" "-99.000000" ""  
".270000" ".000500" ".490000" ""  
"DRMO-MW2-052418" "SOP 5-369" "Initial" "J6253-FS" "BNO" "355-46-4" "PFHxS" "12.150000"  
"ng/L" "" ".110000" "MDL" "" "T" "" "" "4.870000" "LOQ" "YES" "-99.000000" ""  
".270000" ".000500" ".390000" ""  
"DRMO-MW2-052418" "SOP 5-369" "Dilution" "J6253-FS" "BNO" "1763-23-1" "PFOS" "98.110000"  
"ng/L" "D" "3.520000" "MDL" "" "T" "" "" "92.590000" "LOQ" "YES" "-99.000000" ""  
".270000" ".000500" "9.260000" ""  
"DRMO-MW2-052418" "SOP 5-369" "Initial" "J6253-FS" "BNO" "BDO-2217" "13C5-PFHxA" ".320000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "87.00" "" "-99.000000" "NA" "YES" ".370000"  
"" ".270000" ".000500" ".500000" ""  
"DRMO-MW2-052418" "SOP 5-369" "Initial" "J6253-FS" "BNO" "BDO-2218" "13C4-PFHpA" ".470000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "128.00" "" "-99.000000" "NA" "YES" ".370000"  
"" ".270000" ".000500" ".500000" ""  
"DRMO-MW2-052418" "SOP 5-369" "Initial" "J6253-FS" "BNO" "BDO-2219" "13C8-PFOA" ".420000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "113.00" "" "-99.000000" "NA" "YES" ".370000"  
"" ".270000" ".000500" ".500000" ""  
"DRMO-MW2-052418" "SOP 5-369" "Initial" "J6253-FS" "BNO" "BDO-2221" "13C9-PFNA" ".430000"  
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"" ".270000" ".000500" ".500000" ""  
"DRMO-MW2-052418" "SOP 5-369" "Initial" "J6253-FS" "BNO" "BDO-2222" "13C6-PFDA" ".350000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "96.00" "" "-99.000000" "NA" "YES" ".370000"  
"" ".270000" ".000500" ".500000" ""  
"DRMO-MW2-052418" "SOP 5-369" "Initial" "J6253-FS" "BNO" "BDO-2223" "13C7-PFUnA" ".350000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "96.00" "" "-99.000000" "NA" "YES" ".370000"  
"" ".270000" ".000500" ".500000" ""  
"DRMO-MW2-052418" "SOP 5-369" "Initial" "J6253-FS" "BNO" "BDO-2112" "13C2-PFDoA" ".290000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "77.00" "" "-99.000000" "NA" "YES" ".370000"  
"" ".270000" ".000500" ".500000" ""  
"DRMO-MW2-052418" "SOP 5-369" "Initial" "J6253-FS" "BNO" "BDO-2224" "13C2-PFTeDA" ".230000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "62.00" "" "-99.000000" "NA" "YES" ".370000"  
"" ".270000" ".000500" ".500000" ""  
"DRMO-MW2-052418" "SOP 5-369" "Initial" "J6253-FS" "BNO" "BDO-2125" "d3-MeFOSAA" ".410000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "112.00" "" "-99.000000" "NA" "YES" ".370000"  
"" ".270000" ".000500" ".500000" ""  
"DRMO-MW2-052418" "SOP 5-369" "Initial" "J6253-FS" "BNO" "BDO-2126" "d5-EtFOSAA" ".500000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "136.00" "" "-99.000000" "NA" "YES" ".370000"  
"" ".270000" ".000500" ".500000" ""  
"DRMO-MW2-052418" "SOP 5-369" "Initial" "J6253-FS" "BNO" "BDO-2226" "13C3-PFBS" ".280000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "82.00" "" "-99.000000" "NA" "YES" ".340000"  
"" ".270000" ".000500" ".500000" ""  
"DRMO-MW2-052418" "SOP 5-369" "Initial" "J6253-FS" "BNO" "BDO-2227" "13C3-PFHxS" ".460000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "130.00" "" "-99.000000" "NA" "YES" ".350000"  
"" ".270000" ".000500" ".500000" ""  
"DRMO-MW2-052418" "SOP 5-369" "Initial" "J6253-FS" "BNO" "BDO-2228" "13C8-PFOS" ".450000"  
"ng/L" "" "-99.000000" "NA" "" "SIS" "127.00" "" "-99.000000" "NA" "YES" ".350000"



""	".270000"	".000500"	".500000"	""															
"DRMO-FD03-052418"	"SOP 5-369"	"Initial"	"J6254-FS"	"BNO"	"307-24-4"	"PFHxA"	"38.540000"												
"ng/L"	""	".180000"	"MDL"	""	"T"	""	""	"4.700000"	"LOQ"	"YES"	"-99.000000"	""							
".280000"	".000500"	".470000"	""																
"DRMO-FD03-052418"	"SOP 5-369"	"Initial"	"J6254-FS"	"BNO"	"375-85-9"	"PFHpA"	"11.860000"												
"ng/L"	""	".150000"	"MDL"	""	"T"	""	""	"4.700000"	"LOQ"	"YES"	"-99.000000"	""							
".280000"	".000500"	".470000"	""																
"DRMO-FD03-052418"	"SOP 5-369"	"Initial"	"J6254-FS"	"BNO"	"335-67-1"	"PFOA"	"86.140000"												
"ng/L"	""	".170000"	"MDL"	""	"T"	""	""	"4.700000"	"LOQ"	"YES"	"-99.000000"	""							
".280000"	".000500"	".470000"	""																
"DRMO-FD03-052418"	"SOP 5-369"	"Initial"	"J6254-FS"	"BNO"	"375-95-1"	"PFNA"	"3.000000"												
"ng/L"	"J"	".240000"	"MDL"	""	"T"	""	""	"4.700000"	"LOQ"	"YES"	"-99.000000"	""							
".280000"	".000500"	".940000"	""																
"DRMO-FD03-052418"	"SOP 5-369"	"Initial"	"J6254-FS"	"BNO"	"335-76-2"	"PFDA"	".470000"												
"ng/L"	"U"	".150000"	"MDL"	""	"T"	""	""	"4.700000"	"LOQ"	"YES"	"-99.000000"	""							
".280000"	".000500"	".470000"	""																
"DRMO-FD03-052418"	"SOP 5-369"	"Initial"	"J6254-FS"	"BNO"	"2058-94-8"	"PFUnA"	".940000"												
"ng/L"	"U"	".270000"	"MDL"	""	"T"	""	""	"4.700000"	"LOQ"	"YES"	"-99.000000"	""							
".280000"	".000500"	".940000"	""																
"DRMO-FD03-052418"	"SOP 5-369"	"Initial"	"J6254-FS"	"BNO"	"307-55-1"	"PFDoA"	".470000"												
"ng/L"	"U"	".170000"	"MDL"	""	"T"	""	""	"4.700000"	"LOQ"	"YES"	"-99.000000"	""							
".280000"	".000500"	".470000"	""																
"DRMO-FD03-052418"	"SOP 5-369"	"Initial"	"J6254-FS"	"BNO"	"72629-94-8"	"PFTrDA"													
".470000"	"ng/L"	"U"	".140000"	"MDL"	""	"T"	""	""	"4.700000"	"LOQ"	"YES"								
"-99.000000"	""	".280000"	".000500"	".470000"	""														
"DRMO-FD03-052418"	"SOP 5-369"	"Initial"	"J6254-FS"	"BNO"	"376-06-7"	"PFTeDA"													
".940000"	"ng/L"	"U"	".230000"	"MDL"	""	"T"	""	""	"4.700000"	"LOQ"	"YES"								
"-99.000000"	""	".280000"	".000500"	".940000"	""														
"DRMO-FD03-052418"	"SOP 5-369"	"Initial"	"J6254-FS"	"BNO"	"2355-31-9"	"NMeFOSAA"													
"1.880000"	"ng/L"	"U"	".530000"	"MDL"	""	"T"	""	""	"4.700000"	"LOQ"	"YES"								
"-99.000000"	""	".280000"	".000500"	"1.880000"	""														
"DRMO-FD03-052418"	"SOP 5-369"	"Initial"	"J6254-FS"	"BNO"	"2991-50-6"	"NEtFOSAA"													
".940000"	"ng/L"	"U"	".460000"	"MDL"	""	"T"	""	""	"4.700000"	"LOQ"	"YES"								
"-99.000000"	""	".280000"	".000500"	".940000"	""														
"DRMO-FD03-052418"	"SOP 5-369"	"Initial"	"J6254-FS"	"BNO"	"375-73-5"	"PFBS"	"9.190000"												
"ng/L"	""	".120000"	"MDL"	""	"T"	""	""	"4.700000"	"LOQ"	"YES"	"-99.000000"	""							
".280000"	".000500"	".470000"	""																
"DRMO-FD03-052418"	"SOP 5-369"	"Dilution"	"J6254-FS"	"BNO"	"355-46-4"	"PFHxS"	"88.820000"												
"ng/L"	"JD"	"1.960000"	"MDL"	""	"T"	""	""	"89.290000"	"LOQ"	"YES"	"-99.000000"	""							
".280000"	".000500"	"7.140000"	""																
"DRMO-FD03-052418"	"SOP 5-369"	"Dilution"	"J6254-FS"	"BNO"	"1763-23-1"	"PFOS"													
"376.440000"	"ng/L"	"D"	"3.390000"	"MDL"	""	"T"	""	""	"89.290000"	"LOQ"	"YES"								
"-99.000000"	""	".280000"	".000500"	"8.930000"	""														
"DRMO-FD03-052418"	"SOP 5-369"	"Initial"	"J6254-FS"	"BNO"	"BDO-2217"	"13C5-PFHxA"													
".330000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"92.00"	""	"-99.000000"	"NA"	"YES"								
".350000"	""	".280000"	".000500"	".500000"	""														
"DRMO-FD03-052418"	"SOP 5-369"	"Initial"	"J6254-FS"	"BNO"	"BDO-2218"	"13C4-PFHpA"													
".440000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"123.00"	""	"-99.000000"	"NA"	"YES"								
".350000"	""	".280000"	".000500"	".500000"	""														
"DRMO-FD03-052418"	"SOP 5-369"	"Initial"	"J6254-FS"	"BNO"	"BDO-2219"	"13C8-PFOA"													
".360000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"100.00"	""	"-99.000000"	"NA"	"YES"								
".350000"	""	".280000"	".000500"	".500000"	""														
"DRMO-FD03-052418"	"SOP 5-369"	"Initial"	"J6254-FS"	"BNO"	"BDO-2221"	"13C9-PFNA"													
".390000"	"ng/L"	""	"-99.000000"	"NA"	""	"SIS"	"110.00"	""	"-99.000000"	"NA"	"YES"								

".350000" "" ".280000" ".000500" ".500000" ""  
 "DRMO-FD03-052418" "SOP 5-369" "Initial" "J6254-FS" "BNO" "BDO-2222" "13C6-PFDA"  
 ".390000" "ng/L" "" "-99.000000" "NA" "" "SIS" "109.00" "" "-99.000000" "NA" "YES"  
 ".350000" "" ".280000" ".000500" ".500000" ""  
 "DRMO-FD03-052418" "SOP 5-369" "Initial" "J6254-FS" "BNO" "BDO-2223" "13C7-PFUnA"  
 ".400000" "ng/L" "" "-99.000000" "NA" "" "SIS" "111.00" "" "-99.000000" "NA" "YES"  
 ".350000" "" ".280000" ".000500" ".500000" ""  
 "DRMO-FD03-052418" "SOP 5-369" "Initial" "J6254-FS" "BNO" "BDO-2112" "13C2-PFD<sub>o</sub>A"  
 ".360000" "ng/L" "" "-99.000000" "NA" "" "SIS" "100.00" "" "-99.000000" "NA" "YES"  
 ".350000" "" ".280000" ".000500" ".500000" ""  
 "DRMO-FD03-052418" "SOP 5-369" "Initial" "J6254-FS" "BNO" "BDO-2224" "13C2-PFTeDA"  
 ".240000" "ng/L" "" "-99.000000" "NA" "" "SIS" "67.00" "" "-99.000000" "NA" "YES"  
 ".350000" "" ".280000" ".000500" ".500000" ""  
 "DRMO-FD03-052418" "SOP 5-369" "Initial" "J6254-FS" "BNO" "BDO-2125" "d3-MeFOSAA"  
 ".380000" "ng/L" "" "-99.000000" "NA" "" "SIS" "106.00" "" "-99.000000" "NA" "YES"  
 ".350000" "" ".280000" ".000500" ".500000" ""  
 "DRMO-FD03-052418" "SOP 5-369" "Initial" "J6254-FS" "BNO" "BDO-2126" "d5-EtFOSAA"  
 ".490000" "ng/L" "" "-99.000000" "NA" "" "SIS" "138.00" "" "-99.000000" "NA" "YES"  
 ".350000" "" ".280000" ".000500" ".500000" ""  
 "DRMO-FD03-052418" "SOP 5-369" "Initial" "J6254-FS" "BNO" "BDO-2226" "13C3-PFBS"  
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 ".330000" "" ".280000" ".000500" ".500000" ""  
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 ".440000" "ng/L" "" "-99.000000" "NA" "" "SIS" "129.00" "" "-99.000000" "NA" "YES"  
 ".340000" "" ".280000" ".000500" ".500000" ""  
 "112G08005-SE0375" "SE0375 – NAS Jacksonville" "CQ855PB-FS" "" "WATER" "CQ855PB-FS"  
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 "BNO" "COA" "NA" "T" "2.000" "NA" "NA" "" "100.000000" "18-0338" "18-0338" "DP-18-0131" "DP-18-0131" "18-0338" "05/29/2018 13:27" "07/13/2018 15:10" ""  
 "112G08005-SE0375" "SE0375 – NAS Jacksonville" "CQ856LCS-FS" "" "WATER" "CQ856LCS-FS"  
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 "18-0338" "DP-18-0131" "DP-18-0131" "18-0338" "05/25/2018 10:30" "07/13/2018 15:10" ""  
 "112G08005-SE0375" "SE0375 – NAS Jacksonville" "FFTA-EB02-052418" "05/24/2018 11:40" "GW QC"  
 "J6247-FS" "NM" "SHP-180525-01" ".700000" "SOP 5-369" "Gen Prep" "Initial" "05/29/2018 13:27"  
 "06/04/2018 23:31" "BNO" "COA" "NA" "T" "2.000" "NA" "NA" "" "100.000000" "18-0338"  
 "18-0338" "DP-18-0131" "DP-18-0131" "18-0338" "05/25/2018 10:30" "07/13/2018 15:10" ""  
 "112G08005-SE0375" "SE0375 – NAS Jacksonville" "DRMO-MW11-052418" "05/24/2018 14:05" "GW"  
 "J6248-FS" "NM" "SHP-180525-01" ".700000" "SOP 5-369" "Gen Prep" "Dilution" "05/29/2018  
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 "112G08005-SE0375" "SE0375 – NAS Jacksonville" "DRMO-MW11-052418" "05/24/2018 14:05" "GW"  
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"06/04/2018 23:42" "BNO" "COA" "NA" "T" "2.000" "NA" "NA" "" "100.000000" "18-0338"  
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"18-0338" "DP-18-0131" "DP-18-0131" "18-0338" "05/25/2018 10:30" "07/13/2018 15:10" ""  
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0338" "18-0338" "DP-18-0131" "DP-18-0131" "18-0338" "05/25/2018 10:30" "07/13/2018 15:10" ""  
"112G08005-SE0375" "SE0375 – NAS Jacksonville" "DRMO-MW2-052418" "05/24/2018 14:55" "GW"  
"J6253-FS" "NM" "SHP-180525-01" ".700000" "SOP 5-369" "Gen Prep" "Initial" "05/29/2018 13:27"  
"06/05/2018 01:08" "BNO" "COA" "NA" "T" "2.105" "NA" "NA" "" "100.000000" "18-0338"  
"18-0338" "DP-18-0131" "DP-18-0131" "18-0338" "05/25/2018 10:30" "07/13/2018 15:10" ""  
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"J6254-FS" "NM" "SHP-180525-01" ".700000" "SOP 5-369" "Gen Prep" "Dilution" "05/29/2018  
13:27" "06/05/2018 01:40" "BNO" "COA" "NA" "T" "40.000" "NA" "NA" "" "100.000000" "18-  
0338" "18-0338" "DP-18-0131" "DP-18-0131" "18-0338" "05/25/2018 10:30" "07/13/2018 15:10" ""  
"112G08005-SE0375" "SE0375 – NAS Jacksonville" "DRMO-FD03-052418" "05/24/2018 14:05" "GW DUP"  
"J6254-FS" "NM" "SHP-180525-01" ".700000" "SOP 5-369" "Gen Prep" "Initial" "05/29/2018 13:27"  
"06/05/2018 01:30" "BNO" "COA" "NA" "T" "2.105" "NA" "NA" "" "100.000000" "18-0338"  
"18-0338" "DP-18-0131" "DP-18-0131" "18-0338" "05/25/2018 10:30" "07/13/2018 15:10" ""



**TETRA TECH**

**INTERNAL CORRESPONDENCE**

**TO:** M. PETERSON   **DATE:** JUNE 15, 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) 18-0338

**SAMPLES:** 7/Aqueous/PFAS

DRMO-FD03-052418	DRMO-MW11R-052418	DRMO-MW2-052418
FFTA-EB01-052418	FFTA-EB02-052418	PSC51-MW13S-052418
PSC51-MW14D-052418		

**Overview**

The sample set for NAS Jacksonville, SDG 18-0338 consisted of five (5) aqueous environmental samples and two (2) equipment blanks. All seven (7) samples were analyzed for polyfluoroalkyl substances (PFAS). One field duplicate sample pair was included in this SDG: DRMO-FD03-052418/DRMO-MW11R-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 Blank and Equipment Blank Results
- \* • Extraction Internal Standard Recoveries
- \* • Injection Internal Standard Recoveries
- \* • Laboratory Control Sample Recoveries
- \* • Matrix Spike/Matrix Spike Sample Duplicate Results
- 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 following contaminant was detected in the instrument blank at the following maximum concentration:

<u>Compound</u>	<u>Maximum Concentration (ng/L)</u>	<u>Action Level &gt; or &lt; Limit of Quantitation (LOQ)</u>
Pentadecafluorooctanoic acid (PFOA)	0.19	< LOQ

The detected results reported for PFOA below the LOQ in the environmental samples were qualified as non-detected, (U). The equipment blanks are not qualified for laboratory blank contamination.

The Relative Percent Difference (RPD) for perfluorooctane sulfonic acid (PFOS) exceeded the 30% quality control limit in the field duplicate pair, DRMO-FD03-052418/DRMO-MW11R-052418. The detected results were qualified as estimated, (J), in the field duplicate pair due to field duplicate imprecision.

**Additional Comments**

Sample DRMO-MW11-052418 (on sample Chain of Custody (COC)) was renamed DRMO-MW11R-052418 in the database because this is a replacement well for the original monitoring well.

The following contaminants were detected in the equipment blank, FFTA-EB01-052418, at the following concentrations:

<u>Compound</u>	<u>Maximum Concentration (ng/L)</u>	<u>Action Level &gt; or &lt; LOQ</u>
PFOA	0.19	< LOQ
PFOS	0.89	< LOQ

No validation action was taken in the environmental samples in this SDG because the equipment blank is associated with samples collected at a different location.

The Field Reagent Blanks (FRBs) associated with the samples in this SDG (contained in SDG 18-0351) were not applied due to internal laboratory contamination from a sample not related to this project. All of the sample volume for both FRB samples was used in the analyses; therefore, the laboratory was unable to reanalyze the FRBs after the contamination was cleared.

All samples were initially analyzed at a 2X dilution including the quality control samples.

The following samples were analyzed at dilutions:

<u>Sample</u>	<u>Compound</u>	<u>Dilution</u>
DRMO-FD03-052418	Perfluorohexanesulfonic acid (PFHxS)	40X
	PFOS	40X
DRMO-MW11R-052418	PFHxS	40X
	PFOS	40X
DRMO-MW2-052418	PFOS	40X

Detected results reported below the Limit of Quantitation (LOQ) but above the Method Detection Limit (MDL) were qualified as estimated, (J). Non-detected results were reported to the MDL in the database.

**Executive Summary**

**Laboratory Performance Issues:** One contaminant was detected in the instrument blank below the LOQ.

**Other Factors Affecting Data Quality:** One sample was renamed in the database. Some samples required further dilutions. One equipment blank contained contaminants below the LOQ. Field duplicate imprecision was noted for one compound. Detected results below the LOQ were estimated.

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.



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Tetra Tech, Inc.  
Michelle L. Woeber  
Chemist/Data Validator



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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.

<b>U</b>	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted method detection limit for sample and method.
<b>J</b>	The analyte was positively identified and 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).
<b>J+</b>	The result is an estimated quantity, but the result may be biased high.
<b>J-</b>	The result is an estimated quantity, but the result may be biased low.
<b>UJ</b>	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
<b>R</b>	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.
<b>UR</b>	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.

**APPENDIX A**

**QUALIFIED ANALYTICAL RESULTS**



**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 ( $< 2 \times$  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
- Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
- Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

<b>PROJ_NO: 08005-SE03</b> <b>SDG: 18-0338</b> <b>FRACTION: PFAS</b> <b>MEDIA: WATER</b>	NSAMPLE	DRMO-FD03-052418			DRMO-MW11R-052418			DRMO-MW2-052418			FFTA-EB01-052418		
	LAB_ID	J6254-FS			J6248-FS			J6253-FS			J6246-FS		
	SAMP_DATE	5/24/2018			5/24/2018			5/24/2018			5/24/2018		
	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	DRMO-MW11R-052418											
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
N-ETHYLPERFLUOROOCCTANE SULFONAMIDOACETATE(NEFOSA)	0.49	U		0.49	U		0.49	U		0.49	U		
N-METHYLPERFLUOROOCCTANE SULFONAMIDOACETATE(NMFOSA)	0.56	U		0.56	U		0.56	U		0.56	U		
PENTADEC AFLUOROOCCTANOIC ACID (PFOA)	86.14			85.06			13.35			0.19	J	P	
PERFLUOROBUTANESULFONIC ACID (PFBS)	9.19			10.88			12.16			0.13	U		
PERFLUORODECANOIC ACID (PFDA)	0.16	U		0.16	U		0.16	U		0.16	U		
PERFLUORODODECANOIC ACID (PFDOA)	0.18	U		0.18	U		0.18	U		0.18	U		
PERFLUOROHEPTANOIC ACID (PFHPA)	11.86			15.01			4.77	J	P	0.16	U		
PERFLUOROHEXANESULFONIC ACID (PFHXS)	88.82			116.13			12.15			0.11	U		
PERFLUOROHEXANOIC ACID (PFHXA)	38.54			41.4			6.93			0.19	U		
PERFLUORONONANOIC ACID (PFNA)	3	J	P	3.14	J	P	1.1	J	P	0.26	U		
PERFLUOROOCCTANESULFONIC ACID (PFOS)	376.44	J	G	670.42	J	G	98.11			0.89	J	P	
PERFLUOROTETRADECANOIC ACID (PFTEA)	0.25	U		0.25	U		0.25	U		0.25	U		
PERFLUOROTRIDECANOIC ACID (PFTRIA)	0.15	U		0.15	U		0.15	U		0.15	U		
PERFLUOROUNDECANOIC ACID (PFUNA)	0.29	U		0.29	U		0.29	U		0.29	U		

<b>PROJ_NO: 08005-SE03</b> <b>SDG: 18-0338</b> <b>FRACTION: PFAS</b> <b>MEDIA: WATER</b>	NSAMPLE	FFTA-EB02-052418			PSC51-MW13S-052418			PSC51-MW14D-052418		
	LAB_ID	J6247-FS			J6252-FS			J6250-FS		
	SAMP_DATE	5/24/2018			5/24/2018			5/24/2018		
	QC_TYPE	NM			NM			NM		
	UNITS	NG/L			NG/L			NG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
N-ETHYLPERFLUOROOCCTANE SULFONAMIDOACETATE(NEFOSA)	0.49	U		0.49	U		0.49	U		
N-METHYLPERFLUOROOCCTANE SULFONAMIDOACETATE(NMFOSA)	0.56	U		0.56	U		0.56	U		
PENTADEC AFLUOROOCCTANOIC ACID (PFOA)	0.18	U		0.4	U	A	0.34	U	A	
PERFLUOROBUTANESULFONIC ACID (PFBS)	0.13	U		1.09	J	P	0.36	J	P	
PERFLUORODECANOIC ACID (PFDA)	0.16	U		0.16	U		0.16	U		
PERFLUORODODECANOIC ACID (PFDOA)	0.18	U		0.18	U		0.18	U		
PERFLUOROHEPTANOIC ACID (PFHPA)	0.16	U		0.16	U		0.16	U		
PERFLUOROHEXANESULFONIC ACID (PFHXS)	0.11	U		0.72	J	P	0.3	J	P	
PERFLUOROHEXANOIC ACID (PFHXA)	0.19	U		0.19	U		0.19	U		
PERFLUORONONANOIC ACID (PFNA)	0.26	U		0.26	U		0.26	U		
PERFLUOROOCCTANESULFONIC ACID (PFOS)	0.19	U		1.12	J	P	0.35	J	P	
PERFLUOROTETRADECANOIC ACID (PFTEA)	0.25	U		0.25	U		0.25	U		
PERFLUOROTRIDECANOIC ACID (PFTRIA)	0.15	U		0.15	U		0.15	U		
PERFLUOROUNDECANOIC ACID (PFUNA)	0.29	U		0.29	U		0.29	U		

**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-EB01-052418			
Battelle ID	J6246-FS			
Sample Type	SA			
Collection Date	05/24/2018			
Extraction Date	05/29/2018			
Analysis Date	06/04/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	GW QC			
Sample Size	0.280			
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	0.19 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
PFTeDA	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	0.89 J	0.19	0.50	5.00

#### Surrogate Recoveries (%)

13C5-PFHxA	72
13C4-PFHpA	69
13C8-PFOA	85
13C9-PFNA	87
13C6-PFDA	74
13C7-PFUnA	89
13C2-PFDoA	100
13C2-PFTeDA	67
d3-MeFOSAA	91
d5-EtFOSAA	127
13C3-PFBS	103
13C3-PFHxS	98
13C8-PFOS	98



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

Client ID	FFTA-EB02-052418			
Battelle ID	J6247-FS			
Sample Type	SA			
Collection Date	05/24/2018			
Extraction Date	05/29/2018			
Analysis Date	06/04/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	GW QC			
Sample Size	0.285			
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	0.19 U	0.19	0.50	5.00

#### Surrogate Recoveries (%)

13C5-PFHxA	134
13C4-PFHpA	136
13C8-PFOA	142
13C9-PFNA	134
13C6-PFDA	116
13C7-PFUnA	123
13C2-PFDoA	103
13C2-PFTeDA	79
d3-MeFOSAA	82
d5-EtFOSAA	116
13C3-PFBS	103
13C3-PFHxS	103
13C8-PFOS	93



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

Client ID	DRMO-MW11R-052418				
Battelle ID	J6248-FS				
Sample Type	SA				
Collection Date	05/24/2018				
Extraction Date	05/29/2018				
Analysis Date	06/05/2018				
Analytical Instrument	Sciex 5500 LC/MS/MS				
% Moisture	NA				
Matrix	GW				
Sample Size	0.285				
Size Unit-Basis	L				
Units	ng/L	MDL	LOD	LOQ	
PFHxA	41.40	0.19	0.50	5.00	
PFHpA	15.01	0.16	0.50	5.00	
PFOA	85.06	0.18	0.50	5.00	
PFNA	3.14 J	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	
PFTeDA	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	10.88	0.13	0.50	5.00	
PFHxS	116.13 D	0.11	0.40	5.00	
PFOS	670.42 D	0.19	0.50	5.00	

#### Surrogate Recoveries (%)

13C5-PFHxA	72
13C4-PFHpA	106
13C8-PFOA	88
13C9-PFNA	83
13C6-PFDA	110
13C7-PFUnA	125
13C2-PFDoA	94
13C2-PFTeDA	57
d3-MeFOSAA	90
d5-EtFOSAA	111
13C3-PFBS	73
13C3-PFHxS	128
13C8-PFOS	99



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

Client ID	PSC51-MW14D-052418			
Battelle ID	J6250-FS			
Sample Type	SA			
Collection Date	05/24/2018			
Extraction Date	05/29/2018			
Analysis Date	06/04/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	GW			
Sample Size	0.280			
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	0.34 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
PFTeDA	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	0.36 J	0.13	0.50	5.00
PFHxS	0.30 J	0.11	0.40	5.00
PFOS	0.35 J	0.19	0.50	5.00

#### Surrogate Recoveries (%)

13C5-PFHxA	107
13C4-PFHpA	118
13C8-PFOA	100
13C9-PFNA	91
13C6-PFDA	91
13C7-PFUnA	79
13C2-PFDoA	52
13C2-PFTeDA	50
d3-MeFOSAA	53
d5-EtFOSAA	52
13C3-PFBS	98
13C3-PFHxS	104
13C8-PFOS	65





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

Client ID	PSC51-MW13S-052418			
Battelle ID	J6252-FS			
Sample Type	SA			
Collection Date	05/24/2018			
Extraction Date	05/29/2018			
Analysis Date	06/04/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	NA			
Matrix	GW			
Sample Size	0.280			
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	0.40 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
PFTeDA	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	1.09 J	0.13	0.50	5.00
PFHxS	0.72 J	0.11	0.40	5.00
PFOS	1.12 J	0.19	0.50	5.00

#### Surrogate Recoveries (%)

13C5-PFHxA	96
13C4-PFHpA	104
13C8-PFOA	79
13C9-PFNA	76
13C6-PFDA	71
13C7-PFUnA	62
13C2-PFDoA	51
13C2-PFTeDA	53
d3-MeFOSAA	61
d5-EtFOSAA	66
13C3-PFBS	100
13C3-PFHxS	92
13C8-PFOS	78



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

Client ID	DRMO-MW2-052418				
Battelle ID	J6253-FS				
Sample Type	SA				
Collection Date	05/24/2018				
Extraction Date	05/29/2018				
Analysis Date	06/05/2018				
Analytical Instrument	Sciex 5500 LC/MS/MS				
% Moisture	NA				
Matrix	GW				
Sample Size	0.270				
Size Unit-Basis	L				
Units	ng/L	MDL	LOD	LOQ	
PFHxA	6.93	0.19	0.50	5.00	
PFHpA	4.77 J	0.16	0.50	5.00	
PFOA	13.35	0.18	0.50	5.00	
PFNA	1.10 J	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	
PFTeDA	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	12.16	0.13	0.50	5.00	
PFHxS	12.15	0.11	0.40	5.00	
PFOS	98.11 D	0.19	0.50	5.00	

#### Surrogate Recoveries (%)

13C5-PFHxA	87
13C4-PFHpA	128
13C8-PFOA	113
13C9-PFNA	116
13C6-PFDA	96
13C7-PFUnA	96
13C2-PFDoA	77
13C2-PFTeDA	62
d3-MeFOSAA	112
d5-EtFOSAA	136
13C3-PFBS	82
13C3-PFHxS	130
13C8-PFOS	127



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

Client ID	DRMO-FD03-052418				
Battelle ID	J6254-FS				
Sample Type	SA				
Collection Date	05/24/2018				
Extraction Date	05/29/2018				
Analysis Date	06/05/2018				
Analytical Instrument	Sciex 5500 LC/MS/MS				
% Moisture	NA				
Matrix	GW DUP				
Sample Size	0.280				
Size Unit-Basis	L				
Units	ng/L	MDL	LOD	LOQ	
PFHxA	38.54	0.19	0.50	5.00	
PFHpA	11.86	0.16	0.50	5.00	
PFOA	86.14	0.18	0.50	5.00	
PFNA	3.00 J	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	
PFTeDA	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	9.19	0.13	0.50	5.00	
PFHxS	88.82 D	0.11	0.40	5.00	
PFOS	376.44 D	0.19	0.50	5.00	

#### Surrogate Recoveries (%)

13C5-PFHxA	92
13C4-PFHpA	123
13C8-PFOA	100
13C9-PFNA	110
13C6-PFDA	109
13C7-PFUnA	111
13C2-PFDoA	100
13C2-PFTeDA	67
d3-MeFOSAA	106
d5-EtFOSAA	138
13C3-PFBS	113
13C3-PFHxS	150
13C8-PFOS	129

**APPENDIX C**

**SUPPORT DOCUMENTATION**

NAS JACKSONVILLE  
SDG 18-0338

$$\text{Concentration} \quad \frac{[(PA - b)/m] * C_{IS} * PIV * DF}{S}$$

Where:

PA	Area of target analyte/ area of internal standard
b	y Intercept from calibration curve
C <sub>IS</sub>	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	DRMO-FD03-052418
Laboratory Sample ID	J6254
Sample Size (L)	0.28
Dilution Factor	40
PIV (L)	0.0005
PFOS Area	2064137.3
IS Area	12611.82
IS Amount (ng/L)	96.66
Calibration Curve	y = 2.99639 x + 0.29547
Concentration (ng/L)	376.44

$$(((2064137.3/12611.82)-0.29547)/2.99639)*96.66*0.0005*40/0.280$$

Sample Name	J6254-FS-D(5)	Injection Vial	32
Sample ID	DRM0-FD03-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:40:59	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

### Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	N/A	N/A	N/A	N/A	true
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	true
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.15	410085.14	1243.451830	420.1	false
PFHxS_2	399.0 / 99.0	2.15	118470.34	1234.290587	453.0	false
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	true
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	true
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	true
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	2.87	2064137.30	5270.164554	604.8	false
PFOS_2	499.0 / 99.0	2.87	566373.10	8042.502550	847.9	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTTrDA_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

Sample Name	J6254-FS-D(5)	Injection Vial	32
Sample ID	DRM0-FD03-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:40:59	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

### Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	N/A	13C3-PFBS	302.0 / 99.0	18452.83	93.83
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	18452.83	93.83
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	45128.98	101.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	45128.98	101.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	59552.03	101.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	59552.03	101.00
PFHxS_1	399.0 / 80.0	2.15	13C3-PFHxS	402.0 / 99.0	12248.90	95.55
PFHxS_2	399.0 / 99.0	2.15	13C3-PFHxS	402.0 / 99.0	12248.90	95.55
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	59930.90	101.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	59930.90	101.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	55382.37	101.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	55382.37	101.00
PFOS_1	499.0 / 80.0	2.87	13C8-PFOS	507.0 / 99.0	12611.82	96.66
PFOS_2	499.0 / 99.0	2.87	13C8-PFOS	507.0 / 99.0	12611.82	96.66
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	66676.01	101.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	66676.01	101.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	62334.60	101.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	62334.60	101.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	65088.77	101.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	65088.77	101.00
PFTeDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	58194.39	101.00
PFTeDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	58194.39	101.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	58194.39	101.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	58194.39	101.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	11750.86	101.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	11750.86	101.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	12877.95	101.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	12877.95	101.00



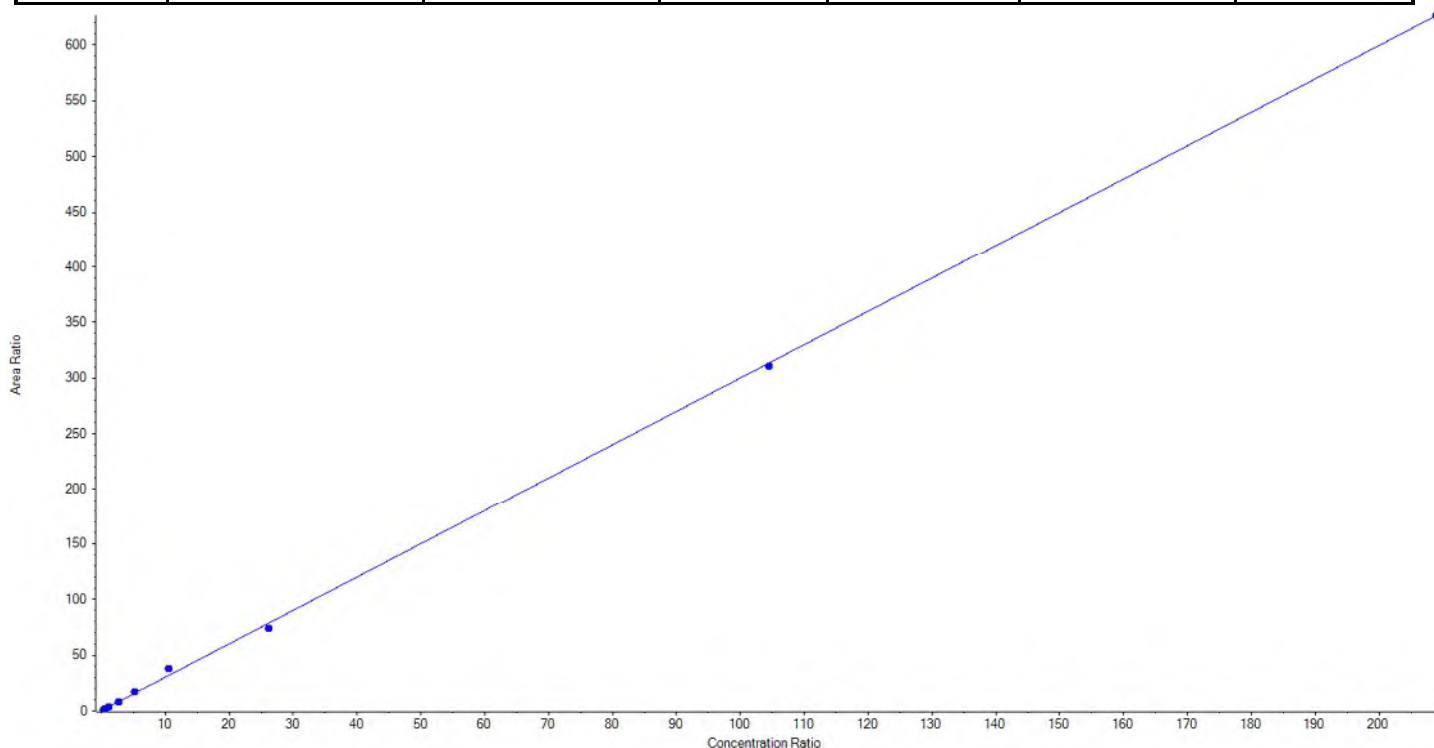
## Calibration Summary Report

Created with Analyst Reporter  
Printed: 05/06/2018 1:53:49 PM

<b>Analyte Name</b>	PFOS_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	499.0 / 80.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C8-PFOS	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 2.99639x + 0.29547$  (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







It can be done

## BATTELLE - NORWELL OPERATIONS LIQUID SAMPLE ID FORM

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**100119154-  
SE0375**18-0338**

### Non-Potable Water PFAS Analysis GW, GW DUP, GW QC, SW, SW DUP

Sample ID	Description	Volume (mL)	Bottles	*	Date Initials
CQ855PB-FS	Procedural Blank	250.0	NA	--	05/29/18 SAS
CQ856LCS-FS	Laboratory Control Sample	250.0	NA	--	05/29/18 SAS
J6246-FS	FFTA-EB01-052418	280.0	1	C	05/30/18 SAS
J6247-FS	FFTA-EB02-052418	285.0	1	C	05/30/18 SAS
J6248-FS	DRMO-MW11-052418	285.0	1	C	05/30/18 SAS
J6250-FS	PSC51-MW14D-052418	280.0	1	C	05/30/18 SAS
J6252-FS	PSC51-MW13S-052418	280.0	1	C	05/30/18 SAS
J6252MS-FS	Matrix Spike	285.0	2	C	05/30/18 SAS
J6252MSD-FS	Matrix Spike Duplicate	280.0	3	C	05/30/18 SAS
J6253-FS	DRMO-MW2-052418	270.0	1	C	05/30/18 SAS
J6254-FS	DRMO-FD03-052418	280.0	1	C	05/30/18 SAS

Comments:

Samples Assigned By

Stephanie Schultz

Date :

May 29, 2018

\* - "C" = Sample is Consumed



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**18-0338**

### Non-Potable Water PFAS Analysis GW, GW DUP, GW QC, 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
CQ855PB-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
CQ856LCS-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6246-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6247-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6248-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6248-FS-D(5)	476	24	JW02	24	1	500	40.000	06/04/18 DMS	SAS
J6250-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6252-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6252MS-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6252MSD-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6253-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6253-FS-D(5)	476	24	JW02	24	1	500	40.000	06/04/18 DMS	SAS
J6254-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6254-FS-D(5)	476	24	JW02	24	1	500	40.000	06/04/18 DMS	SAS

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

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

NAS JACKSONVILLE  
SDG 18-0338

LABORATORY CONTROL SAMPLE

	Result	Target	Calculation	Recovery	Reported Recovery
PFHxA	9.16 ng/L	10.10 ng/L	$9.16/10.1*100$	90.7	91

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

	Result	Target	Calculation	Recovery	Reported Recovery	RPD	Reported RPD	QC Limits	RPD Limit
PSC51-MW13S-052419	0.19 U								
MS	26.17 ng/L	26.58 ng/L	$26.17/26.58*100$	98.5	98			51-137	
MSD	28.22 ng/L	27.05 ng/L	$28.22/27.05*100$	104.3	104	5.8	5.9	51-137	30

ANALYTE	ORIGINAL	DUPLICATE	RL	RPD	RPD > 30%
PENTADECAFLUOROOCCTANOIC ACID (PFOA)	85.06	86.14	5	1.26	FALSE
PERFLUOROBUTANESULFONIC ACID (PFBS)	10.88	9.19	5	16.84	FALSE
PERFLUOROHEPTANOIC ACID (PFHPA)	15.01	11.86	5	23.45	FALSE
PERFLUOROHEXANESULFONIC ACID (PFHXS)	116.13	88.82	5	26.65	FALSE
PERFLUOROHEXANOIC ACID (PFHXA)	41.4	38.54	5	7.16	FALSE
PERFLUORONONANOIC ACID (PFNA)	3.14	3	5	4.56	FALSE
PERFLUOROOCCTANESULFONIC ACID (PFOS)	670.42	376.44	5	56.16	TRUE

ORIGINAL SAMPLE CONC >2xRL	DUPLICATE SAMPLE CONC >2xRL	DIFFERENCE >2xRL
TRUE	TRUE	FALSE
TRUE	FALSE	FALSE
TRUE	TRUE	FALSE
TRUE	TRUE	TRUE
TRUE	TRUE	FALSE
FALSE	FALSE	FALSE
TRUE	TRUE	TRUE

SDG 18-0338

DRMO-FD03-052418/DRMO-MW11-052418



## Example Calculation for PFAS

Calculation of final concentration from area:

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

Where:

- PA = Area of target / area of internal standard
- b = y intercept from calibration curve
- CIS = concentration of internal standard (ng/L)
- m = slope of calibration
- DF = dilution factor
- S = Sample Size
- PIV = Pre-injection volume (L)

Sample ID: J6248-FS-D(5)  
 Client Sample ID: DRMO-MW11-052418  
 Sample Size: 0.285  
 Units: L  
 Dilution Factor: 40  
 PIV (L): 0.0005  
 Target Analyte: PFOS  
 MRM Transition: 499.0 / 80.0  
 Data file: 06022018.wiff  
 Result table: 18-0338\_BASE  
 Area: 3,837,444.47  
 IS Name: 13C8-PFOS  
 IS Area: 12,944.81  
 IS Amount (ng/L): 96.66  
 y-intercept: 0.29547  
 slope: 2.99639

$$\text{Concentration} = \frac{[(3837444.47/12944.81) - 0.29547]}{2.99639} * 96.66 * 0.0005 * 40 / 0.285$$

$$\text{ng/L} = 670.42$$



It can be done

Chain-of-Custody

Client Contact Information		Project Manager: <u>Mark Peterson</u>		Sampling Site: <u>NAS JAY</u>		Site Information: <u>DRMO, FFTA, PSC 51</u>	
Sampler Information (print name): <u>Dave Siefken</u> Phone: <u>904-334-7260</u> Email: <u>David.Siefken@TetraTech</u>		Turnaround Time (TAT) Requested:		Preservative		COC #	
Project Name: <u>SEO 375</u>		Normal <input type="checkbox"/> Priority <input type="checkbox"/> RUSH <input type="checkbox"/>		Analysis		Page#	
Project No.: <u>NAS JAY PFAS</u>		Time Zone:		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	MS/MSD	
J6253 DRMO - MW2 - 052418		1455			1		
Receipt Temperature: (°C) <u>0.7</u>		Samples Intact: <u>Yes</u> - No		Samples on Ice: <u>Yes</u> - No		Receipt Comments:	
Relinquished by (Print/Sign): <u>[Signature] David Siefken</u>		Company: <u>Tetra Tech</u>		Date/Time: <u>5-24-18 1830</u>		Received by (Print/Sign): <u>[Signature]</u>	
		Company:		Date/Time:		Company: <u>Battelle</u>	
		Date/Time:		Date/Time:		Date/Time: <u>5/25/18 1030</u>	
Relinquished by (Print/Sign):		Company:		Date/Time:		Received by (Print/Sign):	
		Company:		Date/Time:		Company:	
		Date/Time:		Date/Time:		Date/Time:	
Comments:							



It can be done

Chain-of-Custody

Client Contact Information		Project Manager: <u>Marc Peterson</u>		Sampling Site: <u>DRMO</u>		Site Information:	
Sampler Information (print name): Phone: <u>Douglas Siefman</u> 900.334.7260		Email:		Preservative: <u>/</u>		COC #	
Turnaround Time (TAT) Requested:		Normal Priority RUSH		Analysis: <u>PFAS</u>		Page#	
Project Name: <u>NAG JAK PFAS</u>		Time Zone:					
Project No.: <u>SEO-375</u>							
Sample Identification		Sample Date	Sample Time	Matrix Sample Type	Matrix	Total # of Cont.	
<u>J6254 DRMO-FD03-052418</u>		<u>5/24</u>	<u>1405</u>	<u>GW</u>		<u>1</u>	<u>Cool 42</u>
Receipt Temperature: (°C) <u>0.7</u>		Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No		Samples on Ice: <input checked="" type="radio"/> Yes <input type="radio"/> No		Receipt Comments:	
Relinquished by (Print/Sign) <u>[Signature]</u>		Company: <u>I +</u>	Date/Time: <u>5-24-18 1830</u>	Received by (Print/Sign) <u>[Signature]</u>		Company: <u>Battelle</u>	Date/Time: <u>5/25/18 1030</u>
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 Project No:**

It can be done

**Sample Receipt Form**Approved:  Authorized 

Project Number: NAS JAX PFAS

Client: Tetrattech

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  UnknownInitial pH 5-9?:  Yes  No  NA*If no, individual sample adjustments on the Auxiliary Sample Receipt Form*Total Residual Chlorine Present?:  Yes  No  NA*If yes, individual sample adjustments on the Auxiliary Sample Receipt Form*Head Space <1% in samples for water VOC analysis:  Yes  No  NA*Individual sample deviations noted on sample log***Samples Containers:**Samples returned in PC-grade jars:  Yes  No  Unknown /Lot No.: UnKnown

Storage Location: Custody: Refrigerator - R0119 (NA)

BDO IDs Assigned: J6241 - J6254

Samples logged in by: Schumitz, Matt

Date/Time: 05/25/2018 10:30 AM

Approved By:

Approved On:

Authorized By:

Authorized On:



## Report Corrective Actions

Corrective Action No: 1 of 1

Authorized  Approved:

COC Client: Tetrattech

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: \_\_\_\_\_



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: Tetrattech

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

**QA/QC Summary  
Batch 18-0338**

Project:	CTO-SE0375: Naval Air Station (NAS) Jacksonville
Parameters:	PFAS
Laboratory:	Battelle, Norwell, MA
Matrix:	GW
Data Set:	DP-18-0131
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	None.
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: FFTA-EB01-052418 (J6246) – PFHpA and PFDA (both below the MDL) FFTA-EB02-052418 (J6247) – PFNA (below the MDL) PSC51-MW14D-052418 (J6250) – PFOS (below the LOQ) PSC51-MW13S-052418 (J6252) – PFHxA, PFHpA, and PFOA (PFHxA and PFHpA below the MDL; PFOA below the LOD, and PFOS below the LOQ) DRMO-MW2-052418 (J6253) – PFUnA (below the MDL)

Holding Times	Extraction Date(s)	Analysis Date(s)
	5/29/2018	6/4 and 6/5/2018

**QA/QC Summary**  
**Batch 18-0338**

Procedural Blank (PB)	A PB was prepared with this analytical batch to ensure the sample extraction and analysis methods are free of contamination.
$\leq \frac{1}{2}$ the LOQ Samples >10x PB	No exceedances noted.
	No comments.
Laboratory Control Spike (LCS)	A LCS was prepared with this analytical batch. The percent recoveries of target analytes were calculated to measure accuracy.
Laboratory derived control limits for recovery	No exceedances noted.
	No comments.
Matrix Spike (MS) / Duplicate (MSD)	A MS/MSD were prepared with this analytical batch. The percent recoveries of target analytes were calculated to measure accuracy. The relative percent difference was calculated to measure precision.
Laboratory derived control limits for recovery, RPD $\leq$ 30%	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 quadratic 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.

**QA/QC Summary**  
**Batch 18-0338**

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



## Glossary of Data Qualifiers

Flag:      Application:

---

B	Analyte found in the sample at a concentration <10x the level found in the procedural blank
D	Dilution Run. Initial run outside the initial calibration range of the instrument
E	Estimate, result is greater than the highest concentration level in the calibration
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



It can be done

## BATTELLE - NORWELL OPERATIONS SAMPLE IDENTIFICATION PAGE

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**100119154-  
SE0375**18-0338**

**Non-Potable Water PFAS Analysis  
GW, GW DUP, GW QC, SW, SW DUP**

Sample ID	Description
CQ855PB-FS	Procedural Blank
CQ856LCS-FS	Laboratory Control Sample
J6246-FS	FFTA-EB01-052418
J6247-FS	FFTA-EB02-052418
J6248-FS	DRMO-MW11-052418
J6250-FS	PSC51-MW14D-052418
J6252-FS	PSC51-MW13S-052418
J6252MS-FS	Matrix Spike of PSC51-MW13S-052418
J6252MSD-FS	Matrix Spike Duplicate of PSC51-MW13S-052418
J6253-FS	DRMO-MW2-052418
J6254-FS	DRMO-FD03-052418

Samples Assigned By:

Stephanie Schultz

Date :

May 29, 2018

Comments:



## BATTELLE - NORWELL OPERATIONS MISCELLANEOUS DOCUMENTATION FORM

<b>Project Title:</b>	CTO-SE0375: Naval Air Station Jackson	<b>Data Set Number:</b>	DP-18-0131
<b>Project Number:</b>	100119154-SE0375	<b>Prep Batch Number:</b>	18-0338
<b>Entered By:</b>	Denise Schumitz	<b>Entered On:</b>	06/05/2018
<b>Test Code (Matrix Type):</b>	Master_369(L)		

Samples that were manually integrated are noted on the quant reports with the comment (TRUE).  
DMS 4/12/2018

JV20 is not being used in method 18-0338\_Base for PFHxA. There is no impact on the data once this point is removed from the calibration.  
DMS 6/5/2018

JV28 is not being used in method 18-0338\_Base for NMeFOSAA. There is no impact on the data once this point is removed from the calibration.  
DMS 6/5/2018

Dilutions were made and run for samples J6248, J6253 and J6254. The SIS and IS are being reported from the undiluted portion of these samples.  
DMS 6/5/2018

JV20 in method 18-0338\_BASE has ion ratios of <50% for PFTTrDA.  
DMS 6/5/2018

JV05 IB in method 18-0338\_BASE has ion ratios of <50% for PFHpA, PFTTrDA and NEtFOSAA.  
DMS 6/5/2018

CQ855PB in method 18-0338\_BASE has ion ratios of <50% for PFBS, PFHpA and PFNA.  
DMS 6/5/2018

J6246 in method 18-0338\_BASE has ion ratios of <50% for PFHpA and PFDA.  
DMS 6/5/2018

J6247 in method 18-0338\_BASE has ion ratios of <50% for PFNA.  
DMS 6/5/2018

J6250 in method 18-0338\_BASE has ion ratios of <50% for PFOS.  
DMS 6/5/2018

J6252 in method 18-0338\_BASE has ion ratios of <50% for PFHxA, PFHpA, and PFOA.  
DMS 6/5/2018

J6253 in method 18-0338\_BASE has ion ratios of <50% for PFUnA.  
DMS 6/5/2018

**Task Leader Approval:**

**Supervisor Approval:**

**PM Approval:**



Digitally signed by Jonathan  
Thorn

Date: 2018.06.06 17:01:44 -04'00'





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	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	0.19 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	0.19 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	69
13C3-PFBS	61
13C3-PFHxS	78
13C8-PFOS	75



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

Client ID	Procedural Blank			
Battelle ID	CQ855PB-FS			
Sample Type	PB			
Collection Date	05/29/2018			
Extraction Date	05/29/2018			
Analysis Date	06/04/2018			
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
PFTeDA	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	93
13C4-PFHpA	96
13C8-PFOA	100
13C9-PFNA	92
13C6-PFDA	99
13C7-PFUnA	97
13C2-PFDoA	79
13C2-PFTeDA	64
d3-MeFOSAA	75
d5-EtFOSAA	95
13C3-PFBS	92
13C3-PFHxS	92
13C8-PFOS	98



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

Client ID	Laboratory Control Sample					
Battelle ID	CQ856LCS-FS					
Sample Type	LCS					
Collection Date	05/29/2018					
Extraction Date	05/29/2018					
Analysis Date	06/04/2018					
Analytical Instrument	Sciex 5500 LC/MS/MS					
% Moisture	NA					
Matrix	WATER					
Sample Size	0.250					
Size Unit-Basis	L					
Units	ng/L	Target	Recovery	Qual	Lower	Upper
PFHxA	9.16	10.10	91		51	137
PFHpA	10.07	10.00	101		48	136
PFOA	9.95	10.00	100		49	141
PFNA	9.89	10.00	99		58	122
PFDA	10.32	10.00	103		59	135
PFUnA	10.22	10.00	102		64	134
PFDoA	10.43	10.00	104		75	131
PFTDA	11.93	10.00	119		42	148
PFTeDA	10.10	10.00	101		42	158
NMeFOSAA	12.32	10.00	123		50	146
NEtFOSAA	9.15	10.00	92		51	131
PFBS	9.57	10.10	95		56	134
PFHxS	10.81	10.10	107		52	128
PFOS	10.03	10.00	100		40	144

#### Surrogate Recoveries (%)

13C5-PFHxA	106
13C4-PFHpA	94
13C8-PFOA	93
13C9-PFNA	98
13C6-PFDA	96
13C7-PFUnA	96
13C2-PFDoA	83
13C2-PFTeDA	70
d3-MeFOSAA	76
d5-EtFOSAA	93
13C3-PFBS	103
13C3-PFHxS	85
13C8-PFOS	93



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

Client ID	PSC51-MW13S-052418	PSC51-MW13S-052418				Control Limits	
Battelle ID	J6252-FS	J6252MS-FS				Lower	Upper
Sample Type	SA	MS					
Collection Date	05/24/2018	05/24/2018					
Extraction Date	05/29/2018	05/29/2018					
Analysis Date	06/04/2018	06/05/2018					
Analytical Instrument	Sciex 5500 LC/MS/MS	Sciex 5500 LC/MS/MS					
% Moisture	NA	NA					
Matrix	GW	GW					
Sample Size	0.280	0.285					
Size Unit-Basis	L	L					
Units	ng/L	ng/L	Target	Recovery	Qual	Lower	Upper
PFHxA	0.19 U	26.17	26.58	98		51	137
PFHpA	0.16 U	26.61	26.32	101		48	136
PFOA	0.40 J	24.49	26.32	92		49	141
PFNA	0.26 U	23.71	26.32	90		58	122
PFDA	0.16 U	25.47	26.32	97		59	135
PFUnA	0.29 U	25.47	26.32	97		64	134
PFDoA	0.18 U	26.91	26.32	102		75	131
PFTeDA	0.15 U	29.91	26.32	114		42	148
PFTeDA	0.25 U	28.54	26.32	108		42	158
NMeFOSAA	0.56 U	26.26	26.32	100		50	146
NEtFOSAA	0.49 U	22.66	26.32	86		51	131
PFBS	1.09 J	25.13	26.58	90		56	134
PFHxS	0.72 J	23.87	26.58	87		52	128
PFOS	1.12 J	22.66	26.32	82		40	144

#### Surrogate Recoveries (%)

13C5-PFHxA	96	117
13C4-PFHpA	104	122
13C8-PFOA	79	98
13C9-PFNA	76	94
13C6-PFDA	71	98
13C7-PFUnA	62	93
13C2-PFDoA	51	86
13C2-PFTeDA	53	79
d3-MeFOSAA	61	91
d5-EtFOSAA	66	99
13C3-PFBS	100	146
13C3-PFHxS	92	147
13C8-PFOS	78	129



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

Client ID PSC51-MW13S-052418

Battelle ID J6252MSD-FS  
 Sample Type MSD  
 Collection Date 05/24/2018  
 Extraction Date 05/29/2018  
 Analysis Date 06/05/2018  
 Analytical Instrument Sciex 5500 LC/MS/MS  
 % Moisture NA  
 Matrix GW  
 Sample Size 0.280  
 Size Unit-Basis L

Units	ng/L	Target	Recovery	Qual	Control Limits		RPD	Qual	RPD Limit
					Lower	Upper			
PFHxA	28.22	27.05	104		51	137	5.9		≤ 30
PFHpA	22.13	26.79	83		48	136	19.6		≤ 30
PFOA	23.47	26.79	86		49	141	6.7		≤ 30
PFNA	26.73	26.79	100		58	122	10.5		≤ 30
PFDA	23.66	26.79	88		59	135	9.7		≤ 30
PFUnA	24.05	26.79	90		64	134	7.5		≤ 30
PFDoA	25.86	26.79	97		75	131	5.0		≤ 30
PFTrDA	28.24	26.79	105		42	148	8.2		≤ 30
PFTeDA	26.15	26.79	98		42	158	9.7		≤ 30
NMeFOSAA	23.66	26.79	88		50	146	12.8		≤ 30
NEtFOSAA	23.26	26.79	87		51	131	1.2		≤ 30
PFBS	27.63	27.05	98		56	134	8.5		≤ 30
PFHxS	23.54	27.05	84		52	128	3.5		≤ 30
PFOS	23.68	26.79	84		40	144	0.0		≤ 30

**Surrogate Recoveries (%)**

13C5-PFHxA	78
13C4-PFHpA	99
13C8-PFOA	73
13C9-PFNA	63
13C6-PFDA	73
13C7-PFUnA	81
13C2-PFDoA	75
13C2-PFTeDA	66
d3-MeFOSAA	84
d5-EtFOSAA	87
13C3-PFBS	101
13C3-PFHxS	104
13C8-PFOS	87



Project Client: Tetra Tech  
 Project Name: CTO-SE0375: Naval Air Station Jacksonville  
 Project No.: 100119154-SE0375  
 Preparation Batch: 18-0338  
 Data Set: DP-18-0131

	CQ855PB-FS (Procedural Blank)	CQ856LCS-FS (Laboratory Control Sample)	J6252MS-FS (PSC51-MW13S-052418)	J6252MSD-FS (PSC51-MW13S-052418)	J6246-FS (FFTA-EB01-052418)	J6247-FS (FFTA-EB02-052418)	J6248-FS (DRMO-MW11-052418)	J6250-FS (PSC51-MW14D-052418)
PFHxA	-	L	L	L	-	-	L	-
PFHpA	-	L	L	L	-	-	L	-
PFOA	-	L	L	L	-	-	L	-
PFNA	-	L	L	L	-	-	-	-
PFDA	-	L	L	L	-	-	-	-
PFUnA	-	L	L	L	-	-	-	-
PFDoA	-	L	L	L	-	-	-	-
PFTTrDA	-	L	L	L	-	-	-	-
PFTeDA	-	L	L	L	-	-	-	-
NMeFOSAA	-	L	L	L	-	-	-	-
NEtFOSAA	-	L	L	L	-	-	-	-
PFBS	-	L	L	L	-	-	L	-
PFHxS	-	L	L	L	-	-	L	-
PFOS	-	L/Br	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  
 Preparation Batch: 18-0338  
 Data Set: DP-18-0:

	J6252-FS (PSC51-MW13S-052418)	J6253-FS (DRMO-MW2-052418)	J6254-FS (DRMO-FD03-052418)
PFHxA	-	L	L
PFHpA	-	-	L
PFOA	-	-	L
PFNA	-	-	-
PFDA	-	-	-
PFUnA	-	-	-
PFDoA	-	-	-
PFTTrDA	-	-	-
PFTeDA	-	-	-
NMeFOSAA	-	-	-
NEtFOSAA	-	-	-
PFBS	-	L	L
PFHxS	-	L	L
PFOS	-	L/Br	L/Br

"L": Linear

"Br": branched

"L/Br": Linear/Branched

"-": Not detected

## INJECTED INTERNAL STANDARDS



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	
CQ855PB-FS(3)	Procedural Blank	6/4/18 22:59	13C2-PFOA	38,702.68	19,578.64	58,735.92	
CQ856LCS-FS(3)	Laboratory Control Sample	6/4/18 23:09	13C2-PFOA	29,776.69	19,578.64	58,735.92	
J6246-FS(3)	FFTA-EB01-052418	6/4/18 23:20	13C2-PFOA	30,440.43	19,578.64	58,735.92	
J6247-FS(3)	FFTA-A-EB02-052418	6/4/18 23:31	13C2-PFOA	34,699.34	19,578.64	58,735.92	
J6250-FS(3)	PSC51-MW14D-052418	6/4/18 23:42	13C2-PFOA	31,092.64	19,578.64	58,735.92	
J6252-FS(3)	PSC51-MW13S-052418	6/4/18 23:53	13C2-PFOA	34,821.73	19,578.64	58,735.92	
J6252MS-FS(3)	PSC51-MW13S-052418	6/5/18 0:03	13C2-PFOA	42,042.54	19,578.64	58,735.92	
J6252MSD-FS(3)	PSC51-MW13S-052418	6/5/18 0:14	13C2-PFOA	37,372.13	19,578.64	58,735.92	
JV25 CCV	CCV	6/5/18 0:25	13C2-PFOA	40,081.49	19,578.64	58,735.92	
J6248-FS(4)	DRMO-MW11-052418	6/5/18 0:47	13C2-PFOA	31,377.13	19,578.64	58,735.92	
J6248-FS-D(5)	DRMO-MW11-052418	6/5/18 0:57	13C2-PFOA	40,786.34	19,578.64	58,735.92	
J6253-FS(4)	DRMO-MW2-052418	6/5/18 1:08	13C2-PFOA	35,354.72	19,578.64	58,735.92	
J6253-FS-D(5)	DRMO-MW2-052418	6/5/18 1:19	13C2-PFOA	43,900.91	19,578.64	58,735.92	
J6254-FS(4)	DRMO-FD03-052418	6/5/18 1:30	13C2-PFOA	28,163.78	19,578.64	58,735.92	
J6254-FS-D(5)	DRMO-FD03-052418	6/5/18 1:40	13C2-PFOA	44,545.03	19,578.64	58,735.92	
JV26 CCV	CCV	6/5/18 2:02	13C2-PFOA	49,082.40	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	
CQ855PB-FS(3)	Procedural Blank	6/4/18 22:59	13C2-PFDA	38,036.56	21,029.91	63,089.72	
CQ856LCS-FS(3)	Laboratory Control Sample	6/4/18 23:09	13C2-PFDA	32,069.39	21,029.91	63,089.72	
J6246-FS(3)	FFTA-EB01-052418	6/4/18 23:20	13C2-PFDA	39,888.44	21,029.91	63,089.72	
J6247-FS(3)	FFTA-A-EB02-052418	6/4/18 23:31	13C2-PFDA	42,865.16	21,029.91	63,089.72	
J6250-FS(3)	PSC51-MW14D-052418	6/4/18 23:42	13C2-PFDA	37,518.66	21,029.91	63,089.72	
J6252-FS(3)	PSC51-MW13S-052418	6/4/18 23:53	13C2-PFDA	42,500.06	21,029.91	63,089.72	
J6252MS-FS(3)	PSC51-MW13S-052418	6/5/18 0:03	13C2-PFDA	41,124.43	21,029.91	63,089.72	
J6252MSD-FS(3)	PSC51-MW13S-052418	6/5/18 0:14	13C2-PFDA	39,000.54	21,029.91	63,089.72	
JV25 CCV	CCV	6/5/18 0:25	13C2-PFDA	48,077.59	21,029.91	63,089.72	
J6248-FS(4)	DRMO-MW11-052418	6/5/18 0:47	13C2-PFDA	31,578.29	21,029.91	63,089.72	
J6248-FS-D(5)	DRMO-MW11-052418	6/5/18 0:57	13C2-PFDA	40,987.91	21,029.91	63,089.72	
J6253-FS(4)	DRMO-MW2-052418	6/5/18 1:08	13C2-PFDA	54,645.11	21,029.91	63,089.72	
J6253-FS-D(5)	DRMO-MW2-052418	6/5/18 1:19	13C2-PFDA	45,835.28	21,029.91	63,089.72	
J6254-FS(4)	DRMO-FD03-052418	6/5/18 1:30	13C2-PFDA	37,725.88	21,029.91	63,089.72	
J6254-FS-D(5)	DRMO-FD03-052418	6/5/18 1:40	13C2-PFDA	45,971.22	21,029.91	63,089.72	
JV26 CCV	CCV	6/5/18 2:02	13C2-PFDA	47,308.08	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	10,120.73	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	
CQ855PB-FS(3)	Procedural Blank	6/4/18 22:59	13C4-PFOS	10,507.08	4,964.53	14,893.59	
CQ856LCS-FS(3)	Laboratory Control Sample	6/4/18 23:09	13C4-PFOS	7,952.43	4,964.53	14,893.59	
J6246-FS(3)	FFTA-EB01-052418	6/4/18 23:20	13C4-PFOS	8,676.36	4,964.53	14,893.59	
J6247-FS(3)	FFTA-A-EB02-052418	6/4/18 23:31	13C4-PFOS	12,186.61	4,964.53	14,893.59	
J6250-FS(3)	PSC51-MW14D-052418	6/4/18 23:42	13C4-PFOS	9,701.21	4,964.53	14,893.59	
J6252-FS(3)	PSC51-MW13S-052418	6/4/18 23:53	13C4-PFOS	9,991.18	4,964.53	14,893.59	
J6252MS-FS(3)	PSC51-MW13S-052418	6/5/18 0:03	13C4-PFOS	9,680.34	4,964.53	14,893.59	
J6252MSD-FS(3)	PSC51-MW13S-052418	6/5/18 0:14	13C4-PFOS	9,361.76	4,964.53	14,893.59	
JV25 CCV	CCV	6/5/18 0:25	13C4-PFOS	11,882.18	4,964.53	14,893.59	
J6248-FS(4)	DRMO-MW11-052418	6/5/18 0:47	13C4-PFOS	7,218.33	4,964.53	14,893.59	
J6248-FS-D(5)	DRMO-MW11-052418	6/5/18 0:57	13C4-PFOS	8,648.24	4,964.53	14,893.59	
J6253-FS(4)	DRMO-MW2-052418	6/5/18 1:08	13C4-PFOS	9,216.39	4,964.53	14,893.59	
J6253-FS-D(5)	DRMO-MW2-052418	6/5/18 1:19	13C4-PFOS	10,279.38	4,964.53	14,893.59	
J6254-FS(4)	DRMO-FD03-052418	6/5/18 1:30	13C4-PFOS	6,018.92	4,964.53	14,893.59	
J6254-FS-D(5)	DRMO-FD03-052418	6/5/18 1:40	13C4-PFOS	11,224.49	4,964.53	14,893.59	
JV26 CCV	CCV	6/5/18 2:02	13C4-PFOS	13,388.14	4,964.53	14,893.59	

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	18-0338_BASE
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
PFDaA_1	613.0 / 569.0	3.87	37	>10
PFDaA_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

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	18-0338_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	21	>10
13C8-PFOS	507.0 / 99.0	2.90	42	>10



## 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	10.30	1.39	4.17	20
PFHpA	375-85-9	9.86	1.87	5.61	20
PFOA	335-67-1	10.51	1.55	4.65	21
PFNA	375-95-1	10.08	1.27	3.81	20
PFDA	335-76-2	10.45	1.54	4.62	20
PFUnA	2058-94-8	10.44	1.47	4.41	20
PFDoA	307-55-1	11.36	1.24	3.72	20
PFTTrDA	72629-94-8	11.94	1.59	4.77	20
PFTeDA	376-06-7	11.52	2.25	6.75	20
NMeFOSAA	2355-31-9	10.67	2.03	6.09	20
NEtFOSAA	2991-50-6	10.12	1.84	5.52	20
PFOSA	754-91-6	9.08	0.00	0.00	2
PFBS	375-73-5	10.70	1.57	4.71	21
PFPeS	BDO-2114	9.60	1.07	3.21	3
PFHxS	355-46-4	10.15	1.74	5.22	20
PFHpS	375-99-6	11.00	1.02	3.06	8
PFOS	1763-23-1	10.23	1.59	4.77	21
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)
<b>PFBA</b>	375-22-4	0.14	0.5	5.0
<b>PFPeA</b>	2706-90-3	0.31	1.0	5.0
<b>PFHxA</b>	307-24-4	0.19	0.5	5.0
<b>PFHpA</b>	375-85-9	0.16	0.5	5.0
<b>PFOA</b>	335-67-1	0.18	0.5	5.0
<b>PFNA</b>	375-95-1	0.26	1.0	5.0
<b>PFDA</b>	335-76-2	0.16	0.5	5.0
<b>PFUnA</b>	2058-94-8	0.29	1.0	5.0
<b>PFDoA</b>	307-55-1	0.18	0.5	5.0
<b>PFTTrDA</b>	72629-94-8	0.15	0.5	5.0
<b>PFTeDA</b>	376-06-7	0.25	1.0	5.0
<b>NMeFOSAA</b>	2355-31-9	0.56	2.0	5.0
<b>NEtFOSAA</b>	2991-50-6	0.49	1.0	5.0
PFOSA	754-91-6	TBD	TBD	TBD
<b>PFBS</b>	375-73-5	0.13	0.5	5.0
PFPeS	BDO-2114	0.67	2.5	5.0
<b>PFHxS</b>	355-46-4	0.11	0.4	5.0
<b>PFHpS</b>	375-99-6	0.20	0.5	5.0
<b>PFOS</b>	1763-23-1	0.19	0.5	5.0
PFNS	98789-57-2	0.46	1.0	5.0
<b>PFDS</b>	2806-15-7	0.17	0.5	5.0
<b>4:2FTS</b>	BDO-2205	0.14	0.5	5.0
<b>6:2FTS</b>	27619-97-2	1.36	2.5	5.0
<b>8:2FTS</b>	39108-34-4	0.22	0.5	5.0

*Analytes on NELAP and ELAP QSM 5.1 Scope of accreditation*

**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
PFDaA	307-55-1	Target	613.0 / 569.0	613.0 / 319.0
PFTTrDA	72629-94-8	Target	663.0 / 619.0	663.0 / 169.0
PFTeDA	376-06-7	Target	713.0 / 669.0	713.0 / 169.0
NMeFOSAA	2355-31-9	Target	570.0 / 419.0	570.0 / 512.0
NEtFOSAA	2991-50-6	Target	584.0 / 419.0	584.0 / 483.0
PFOSA	754-91-6	Target	498.0 / 78.0	498.0 / 83.0
PFBS	375-73-5	Target	299.0 / 80.0	299.0 / 99.0
PFPeS	BDO-2114	Target	349.0 / 99.0	249.0 / 80.0
PFHxS	355-46-4	Target	399.0 / 80.0	399.0 / 99.0
PFHpS	375-99-6	Target	449.0 / 80.0	449.0 / 99.0
PFOS	1763-23-1	Target	499.0 / 80.0	499.0 / 99.0
PFNS	98789-57-2	Target	549.0 / 99.0	549.0 / 80.0
PFDS	2806-15-7	Target	599.0 / 80.0	599.0 / 99.0
4:2FTS	BDO-2205	Target	327.0 / 307.0	327.0 / 80.0
6:2FTS	27619-97-2	Target	427.0 / 407.0	427.0 / 81.0
8:2FTS	39108-34-4	Target	527.0 / 507.0	527.0 / 487.0
13C4-PFBA	BDO-2105	SIS <sup>1</sup>	217.0 / 172.0	NA
13C5-PFPeA	BDO-2216	SIS <sup>1</sup>	268.0 / 223.0	NA
13C5-PFHxA	BDO-2217	SIS <sup>1</sup>	318.0 / 273.0	NA

Analyte	CAS No.	Type	Primary Transition	Secondary Transition
13C4-PFHpA	BDO-2218	SIS <sup>1</sup>	367.0 / 322.0	NA
13C8-PFOA	BDO-2219	SIS <sup>1</sup>	421.0 / 376.0	NA
13C9-PFNA	BDO-2221	SIS <sup>1</sup>	472.0 / 427.0	NA
13C6-PFDA	BDO-2222	SIS <sup>1</sup>	519.0 / 474.0	NA
13C7-PFUnA	BDO-2223	SIS <sup>1</sup>	570.0 / 525.0	NA
13C2-PFDoA	BDO-2112	SIS <sup>1</sup>	615.0 / 570.0	NA
13C2-PFTeDA	BDO-2224	SIS <sup>1</sup>	715.0 / 670.0	NA
d3-MeFOSAA	BDO-1838	SIS <sup>1</sup>	573.0 / 419.0	NA
d5-EtFOSAA	BDO-1839	SIS <sup>1</sup>	589.0 / 419.0	NA
13C8-FOSA	BDO-2225	SIS <sup>1</sup>	506.0 / 78.0	NA
13C3-PFBS	BDO-2226	SIS <sup>1</sup>	302.0 / 99.0	NA
13C3-PFHxS	BDO-2227	SIS <sup>1</sup>	402.0 / 99.0	NA
13C8-PFOS	BDO-2228	SIS <sup>1</sup>	507.0 / 99.0	NA
13C2-4:2FTS	BDO-2229	SIS <sup>1</sup>	329.0 / 81.0	NA
13C2-6:2FTS	BDO-2230	SIS <sup>1</sup>	429.0 / 81.0	NA
13C2-8:2FTS	BDO-2220	SIS <sup>1</sup>	529.0 / 81.0	NA
13C3-PFBA	BDO-2231	IS <sup>2</sup>	216.0 / 172.0	NA
13C2-PFOA	BDO-2107	IS <sup>2</sup>	415.0 / 370.0	NA
13C2-PFDA	BDO-2110	IS <sup>2</sup>	515.0 / 470.0	NA
13C4-PFOS	BDO-2121	IS <sup>2</sup>	503.0 / 99.0	NA

<sup>1</sup> – extracted internal standard (surrogate)

<sup>2</sup> – injection internal standard





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# QTRAP 5500

**LC/MS/MS Detector System**

Appendix ZEFPM003-2L

**MASS CALIBRATION & TUNE CHECK**

## QTRAP 5500 Preventive Maintenance Checklist

<b>Preventive Maintenance Date:</b>	22-Feb-2017
<b>Request ID:</b>	3683
<b>Company Name:</b>	Battelle Memorial Institute
<b>Instrument ID:</b>	X60666
<b>Instrument Model:</b>	QTRAP 5500
<b>Instrument Serial Number:</b>	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 <sup>-5</sup> Torr)	Acceptance Criteria
<input checked="" type="checkbox"/> CAD 0	0.5	0.4 to 1.1 x10 <sup>-5</sup> Torr
<input checked="" type="checkbox"/> CAD Low	1.9	Read Only
<input checked="" type="checkbox"/> CAD Medium	2.4	Read Only
<input checked="" type="checkbox"/> CAD High	3.4	Read Only
<input checked="" type="checkbox"/> CAD 12	3.4	2.4 to 4.5 x10 <sup>-5</sup> 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. Record 10 mca.

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 <sup>-5</sup> Torr)	Acceptance Criteria
<input checked="" type="checkbox"/> CAD 0	0.8	0.4 to 1.1 x10 <sup>-5</sup> Torr
<input checked="" type="checkbox"/> CAD Low	2.1	Read Only
<input checked="" type="checkbox"/> CAD Medium	2.6	Read Only
<input checked="" type="checkbox"/> CAD High	3.7	Read Only
<input checked="" type="checkbox"/> CAD 12	3.7	2.4 to 4.5 x10 <sup>-5</sup> Torr

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

Mass	Q1 Intensity		Q1 Width Value	Width Specs
	Value	Spec		
Scan Rate 10 Da/s Record 10 mca				
Q1 175.133	5.94 e6	≥1.2 <sup>e6</sup>	0.6933	0.6 to 0.8
Q1 500.380	2.25 e7	≥9.0 <sup>e6</sup>	0.7444	0.6 to 0.8
Q1 906.673	2.74 e7	≥1.4 <sup>e7</sup>	0.7347	0.6 to 0.8
Scan Rate 1000 Da/s Record 50 mca				
Q1 906.673	1.33 e8	≥6.8 <sup>e7</sup>	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 Value	Width Specs
	Value	Spec		
Scan Rate 10 Da/s Record 10 mca				
Q3 175.133	4.54 e6	≥1.2 <sup>e6</sup>	0.6390	0.6 to 0.8
Q3 500.380	2.13 e7	≥9.0 <sup>e6</sup>	0.7008	0.6 to 0.8
Q3 906.673	3.04 e7	≥1.4 <sup>e7</sup>	0.7683	0.6 to 0.8
Scan Rate 1000 Da/s Record 50 mca				
Q3 906.673	1.51 e8	≥6.8 <sup>e7</sup>	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 Value	Width Specs
	Value	Spec		
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	$\geq 1.0^{e7}$	0.6895	0.6 to 0.8
Q1 933.636	1000	50	6.32 e7	$\geq 4.0^{e7}$	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	$\geq 8.0^{e6}$	0.7665	0.6 to 0.8
Q3 933.636	1000	50	7.41 e7	$\geq 4.0^{e7}$	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	$\geq 7.2^{e6}$	0.1302	<0.35
ER 922.010	0.05	3.89 e7	$\geq 2.8^{e6}$	0.2603	<0.35
ScanRate : 10000 Da/s ; 50 Mca					
ER 118.087	0.05	2.55 e7	$\geq 2.4^{e7}$	0.3740	<0.65
ER 922.010	0.05	2.37 e8	$\geq 6.8^{e7}$	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	$\geq 4.4^{e7}$	0.1840	<0.35
ER 601.978	0.05	7.74 e7	$\geq 5.6^{e7}$	0.1849	<0.35
ScanRate : 10000 Da/s ; 50 Mca					
ER 431.982	0.05	3.43 e8	$\geq 1.2^{e8}$	0.4382	<0.65
ER 601.978	0.05	2.55 e8	$\geq 1.6^{e8}$	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 e6	> 4.0 e7	≥6.4 e6

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

Mass	Scan Rate (Da/s)	Fragamentation OFF		Fragmentation ON	
		Intensity	Spec	Intensity	Spec
MS3 397.2	1000	3.2 e7	Contains only 397.2	N/A	N/A
<input type="checkbox"/> 236 OR <input checked="" type="checkbox"/> 365	1000	1.19 e8	Fragment Intensity	> 4.4 e6	≥1.6x 10 <sup>e6</sup>

**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.



It can be done

## BATTELLE - NORWELL OPERATIONS LIQUID SAMPLE ID FORM

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**100119154-  
SE0375**18-0338**

### Non-Potable Water PFAS Analysis GW, GW DUP, GW QC, SW, SW DUP

Sample ID	Description	Volume (mL)	Bottles	*	Date Initials
CQ855PB-FS	Procedural Blank	250.0	NA	--	05/29/18 SAS
CQ856LCS-FS	Laboratory Control Sample	250.0	NA	--	05/29/18 SAS
J6246-FS	FFTA-EB01-052418	280.0	1	C	05/30/18 SAS
J6247-FS	FFTA-EB02-052418	285.0	1	C	05/30/18 SAS
J6248-FS	DRMO-MW11-052418	285.0	1	C	05/30/18 SAS
J6250-FS	PSC51-MW14D-052418	280.0	1	C	05/30/18 SAS
J6252-FS	PSC51-MW13S-052418	280.0	1	C	05/30/18 SAS
J6252MS-FS	Matrix Spike	285.0	2	C	05/30/18 SAS
J6252MSD-FS	Matrix Spike Duplicate	280.0	3	C	05/30/18 SAS
J6253-FS	DRMO-MW2-052418	270.0	1	C	05/30/18 SAS
J6254-FS	DRMO-FD03-052418	280.0	1	C	05/30/18 SAS

Comments:

Samples Assigned By

Stephanie Schultz

Date :

May 29, 2018

\* - "C" = Sample is Consumed





It can be done

## BATTELLE - NORWELL OPERATIONS SURROGATE SPIKE FORM

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**100119154-  
SE0375**18-0338**

### Non-Potable Water PFAS Analysis GW, GW DUP, GW QC, SW, SW DUP

Sample ID	Standard ID	Type	Vial No.	Vol Added (uL)	Date Spiked/ Spiked By	Witn'd By	Comment
CQ855PB-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA
CQ856LCS-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA
CQ856LCS-FS	JW44	LCS/MS	1	50	05/29/18 SAS	JCT	NA
J6246-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA
J6247-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA
J6248-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA
J6250-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA
J6252-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA
J6252MS-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA
J6252MS-FS	JW44	LCS/MS	1	150	05/29/18 SAS	JCT	NA
J6252MSD-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA
J6252MSD-FS	JW44	LCS/MS	1	150	05/29/18 SAS	JCT	NA
J6253-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA
J6254-FS	JV83	SIS	1	50	05/29/18 SAS	JCT	NA

## Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
JV83	Pipette	D1075429B
JW44	Pipette	B1100287B
JW44	Pipette	D1075429B



It can be done

## BATTELLE - NORWELL OPERATIONS SAMPLE EXTRACTION FORM

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**100119154-  
SE0375**18-0338**

### Non-Potable Water PFAS Analysis GW, GW DUP, GW QC, SW, SW DUP

Sample ID	1st Extraction	2nd Extraction	3rd Extraction	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comment
CQ855PB-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA
CQ856LCS-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6246-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6247-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6248-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6250-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6252-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6252MS-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6252MSD-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6253-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA
J6254-FS	05/29/18 SAS	NA	NA	NA	NA	NA	NA	NA

**Solvents/Reagent Preparations:**

Name	ID	Expires	Lot No	Procedure	Comments
Pre-packed SPE Column	RP-180529-4	05/29/18	003737320A	Pre-packed SPE Column	

**Solvents/Reagents:**



It can be done

## BATTELLE - NORWELL OPERATIONS EXTRACT SPIKE FORM

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**100119154-  
SE0375**18-0338**

### Non-Potable Water PFAS Analysis GW, GW DUP, GW QC, 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
J6248-FS-D(5)	40	JV83	SIS	1	24	0	0	06/04/18 DMS	SAS
J6253-FS-D(5)	40	JV83	SIS	1	24	0	0	06/04/18 DMS	SAS
J6254-FS-D(5)	40	JV83	SIS	1	24	0	0	06/04/18 DMS	SAS

## Syringes/Pipettes Used:

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



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**18-0338**

### Non-Potable Water PFAS Analysis GW, GW DUP, GW QC, 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
CQ855PB-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
CQ856LCS-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6246-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6247-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6248-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6248-FS-D(5)	476	24	JW02	24	1	500	40.000	06/04/18 DMS	SAS
J6250-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6252-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6252MS-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6252MSD-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6253-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6253-FS-D(5)	476	24	JW02	24	1	500	40.000	06/04/18 DMS	SAS
J6254-FS(3)	475	25	JW02	25	1	500	2.000	05/31/18 SAS	JCT
J6254-FS-D(5)	476	24	JW02	24	1	500	40.000	06/04/18 DMS	SAS

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

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



It can be done

## BATTELLE - NORWELL OPERATIONS INTERNAL STANDARD SPIKING FORM

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**100119154-  
SE0375**18-0338**

**Non-Potable Water PFAS Analysis  
GW, GW DUP, GW QC, 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
------------	-----------------	------------	---------	-------------	----------	---------------------	------------------	------------------------	-----------

Syringes/Pipettes Used:

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

<b>Extract Id:</b>	<b>Comments:</b>
CQ855PB-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.



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**18-0338****Non-Potable Water PFAS Analysis****GW, GW DUP, GW QC, SW, SW DUP**

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
CQ855PB-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
CQ855PB-FS	2	--	5/30/2018 11:04:00 AM	CQ855PB-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
CQ855PB-FS	3	--	5/30/2018 11:04:00 AM	CQ855PB-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
CQ856LCS-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
CQ856LCS-FS	2	--	5/30/2018 11:04:00 AM	CQ856LCS-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
CQ856LCS-FS	3	--	5/30/2018 11:04:00 AM	CQ856LCS-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6246-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
J6246-FS	2	--	5/30/2018 11:04:00 AM	J6246-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6246-FS	3	--	5/30/2018 11:04:00 AM	J6246-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6247-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
J6247-FS	2	--	5/30/2018 11:04:00 AM	J6247-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6247-FS	3	--	5/30/2018 11:04:00 AM	J6247-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6248-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
J6248-FS	2	C	5/30/2018 11:04:00 AM	J6248-FS	0	10000	5000	2.000	2.000	05/30/18 SAS

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

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

\* - "C" = Extract is Consumed



It can be done

## BATTELLE - NORWELL OPERATIONS PREPARATION EXTRACT SPLIT FORM

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**100119154-  
SE0375**18-0338****Non-Potable Water PFAS Analysis****GW, GW DUP, GW QC, SW, SW DUP**

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
J6248-FS	3	--	5/30/2018 11:04:00 AM	J6248-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6248-FS	4	--	6/4/2018 4:08:00 PM	J6248-FS	2	500	475	1.053	2.105	06/04/18 DMS
J6248-FS-D	5	--	6/4/2018 4:08:00 PM	J6248-FS	2	500	25	20.000	40.000	06/04/18 DMS
J6250-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
J6250-FS	2	--	5/30/2018 11:04:00 AM	J6250-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6250-FS	3	--	5/30/2018 11:04:00 AM	J6250-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6252-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
J6252-FS	2	--	5/30/2018 11:04:00 AM	J6252-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6252-FS	3	--	5/30/2018 11:04:00 AM	J6252-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6252MS-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
J6252MS-FS	2	--	5/30/2018 11:04:00 AM	J6252MS-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6252MS-FS	3	--	5/30/2018 11:04:00 AM	J6252MS-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6252MSD-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
J6252MSD-FS	2	--	5/30/2018 11:04:00 AM	J6252MSD-FS	0	10000	5000	2.000	2.000	05/30/18 SAS

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

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

\* - "C" = Extract is Consumed



It can be done

## BATTELLE - NORWELL OPERATIONS PREPARATION EXTRACT SPLIT FORM

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**100119154-  
SE0375**18-0338****Non-Potable Water PFAS Analysis****GW, GW DUP, GW QC, SW, SW DUP**

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
J6252MSD-FS	3	--	5/30/2018 11:04:00 AM	J6252MSD-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6253-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
J6253-FS	2	C	5/30/2018 11:04:00 AM	J6253-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6253-FS	3	--	5/30/2018 11:04:00 AM	J6253-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6253-FS	4	--	6/4/2018 4:08:00 PM	J6253-FS	2	500	475	1.053	2.105	06/04/18 DMS
J6253-FS-D	5	--	6/4/2018 4:08:00 PM	J6253-FS	2	500	25	20.000	40.000	06/04/18 DMS
J6254-FS	0	C	5/29/2018 1:27:00 PM	NA		NA	NA	1.000	1.000	05/29/18 SAS
J6254-FS	2	C	5/30/2018 11:04:00 AM	J6254-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6254-FS	3	--	5/30/2018 11:04:00 AM	J6254-FS	0	10000	5000	2.000	2.000	05/30/18 SAS
J6254-FS	4	--	6/4/2018 4:08:00 PM	J6254-FS	2	500	475	1.053	2.105	06/04/18 DMS
J6254-FS-D	5	--	6/4/2018 4:08:00 PM	J6254-FS	2	500	25	20.000	40.000	06/04/18 DMS
<b>Extract Id:</b> CQ855PB-FS	<b>Comments:</b> 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) / Aliquot Volume (uL)] \* Prior Dilution Factor

\* - "C" = Extract is Consumed





It can be done

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

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**100119154-  
SE0375**18-0338**

### Non-Potable Water PFAS Analysis GW, GW DUP, GW QC, SW, SW DUP

<b>Purpose:</b> LC-MS/MS TRANSFER		<b>Last Activity:</b> Prep->Inst	
<b>Relinquished On/By:</b> May 31 2018 4:03PM SAS		<b>Received On/By:</b> May 31 2018 4:07PM DMS	
<b>Relinquished From:</b> Sample Preparation: NA		<b>Received Location:</b> LC Laboratory: NA	
<b>Relinquish Comment:</b> NA		<b>Received Comment:</b> NA	

No.	BDO-ID:	PIV:	DF:	Condition:	Custody Comment:
1	CQ855PB-FS(3)	500	2	Intact	NA
2	CQ856LCS-FS(3)	500	2	Intact	NA
3	J6246-FS(3)	500	2	Intact	NA
4	J6247-FS(3)	500	2	Intact	NA
5	J6248-FS(3)	500	2	Intact	NA
6	J6250-FS(3)	500	2	Intact	NA
7	J6252-FS(3)	500	2	Intact	NA
8	J6252MS-FS(3)	500	2	Intact	NA
9	J6252MSD-FS(3)	500	2	Intact	NA
10	J6253-FS(3)	500	2	Intact	NA
11	J6254-FS(3)	500	2	Intact	NA

<b>Total Extracts:</b>	11
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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**18-0338**

### Non-Potable Water PFAS Analysis GW, GW DUP, GW QC, SW, SW DUP

<b>Purpose:</b> LC-MS/MS TRANSFER		<b>Last Activity:</b> Prep->Inst			
<b>Relinquished On/By:</b> Jun 4 2018 4:11PM DMS		<b>Received On/By:</b> Jun 4 2018 4:11PM DMS			
<b>Relinquished From:</b> Sample Preparation: NA		<b>Received Location:</b> LC Laboratory: NA			
<b>Relinquish Comment:</b> NA		<b>Received Comment:</b> NA			
No.	BDO-ID:	PIV:	DF:	Condition:	Custody Comment:
1	J6248-FS(4)	500	2.105	Intact	NA
2	J6248-FS-D(5)	500	40	Intact	NA
3	J6253-FS(4)	500	2.105	Intact	NA
4	J6253-FS-D(5)	500	40	Intact	NA
5	J6254-FS(4)	500	2.105	Intact	NA
6	J6254-FS-D(5)	500	40	Intact	NA
<b>Total Extracts:</b>		6			



It can be done

**BATTELLE - NORWELL OPERATIONS  
MISCELLANEOUS DOCUMENTATION FORM**

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**

100119154-  
SE0375

**18-0338**

**Non-Potable Water PFAS Analysis  
GW, GW DUP, GW QC, SW, SW DUP**

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Entered By:

On:

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Task Leader Approval:

On:

SupervisorApproval:

On:

PM Approval:

On:

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## BATTELLE - NORWELL OPERATIONS SAMPLE SPECIFIC COMMENTS

**Project Title(s)**

CTO-SE0375: Naval Air Station Jacksonville

**Project No.(s)**100119154-  
SE0375**18-0338**

### Non-Potable Water PFAS Analysis GW, GW DUP, GW QC, SW, SW DUP

Sample ID:	Comment:	Date/Initials:
CQ855PB-FS	Sample extraction began at 1:27pm for all samples.	05/29/18 SAS
CQ855PB-FS	Sample extraction ended at 2:16pm	05/29/18 SAS
CQ856LCS-FS	Sample extraction ended at 2:16pm	05/29/18 SAS
J6246-FS	Sample extraction ended at 2:19pm	05/29/18 SAS
J6247-FS	Sample extraction ended at 2:39pm	05/29/18 SAS
J6248-FS	Sample was a dark yellow color.	05/29/18 SAS
J6248-FS	Sample extraction ended at 2:52pm	05/29/18 SAS
J6250-FS	Sample had floating particulates.	05/29/18 SAS
J6250-FS	Sample extraction ended at 4:40pm	05/29/18 SAS
J6252-FS	Sample extraction ended at 2:54pm	05/29/18 SAS
J6252MS-FS	Sample extraction ended at 2:52pm	05/29/18 SAS
J6252MSD-FS	Sample extraction ended at 2:50pm	05/29/18 SAS
J6253-FS	Sample was a dark yellow color.	05/29/18 SAS
J6253-FS	Sample extraction ended at 2:53pm	05/29/18 SAS
J6254-FS	Sample was a dark yellow color.	05/29/18 SAS
J6254-FS	Sample extraction ended at 2:41pm	05/29/18 SAS

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
19	CQ855PB-FS(3)	Procedural Blank	6/4/2018 10:59:08 PM	5-0369.dam	06022018.wiff
20	CQ856LCS-FS(3)	Laboratory Control Sample	6/4/2018 11:09:56 PM	5-0369.dam	06022018.wiff
21	J6246-FS(3)	FFTA-EB01-052418	6/4/2018 11:20:44 PM	5-0369.dam	06022018.wiff
22	J6247-FS(3)	FFTA-A-EB02-052418	6/4/2018 11:31:31 PM	5-0369.dam	06022018.wiff
23	J6250-FS(3)	PSC51-MW14D-052418	6/4/2018 11:42:19 PM	5-0369.dam	06022018.wiff
24	J6252-FS(3)	PSC51-MW13S-052418	6/4/2018 11:53:05 PM	5-0369.dam	06022018.wiff
25	J6252MS-FS(3)	PSC51-MW13S-052418	6/5/2018 12:03:52 AM	5-0369.dam	06022018.wiff
26	J6252MSD-FS(3)	PSC51-MW13S-052418	6/5/2018 12:14:39 AM	5-0369.dam	06022018.wiff
7	JV25 CCV	CCV	6/5/2018 12:25:26 AM	5-0369.dam	06022018.wiff
1	MeOH		6/5/2018 12:36:13 AM	5-0369.dam	06022018.wiff
27	J6248-FS(4)	DRMO-MW11-052418	6/5/2018 12:47:01 AM	5-0369.dam	06022018.wiff
28	J6248-FS-D(5)	DRMO-MW11-052418	6/5/2018 12:57:49 AM	5-0369.dam	06022018.wiff
29	J6253-FS(4)	DRMO-MW2-052418	6/5/2018 1:08:37 AM	5-0369.dam	06022018.wiff
30	J6253-FS-D(5)	DRMO-MW2-052418	6/5/2018 1:19:25 AM	5-0369.dam	06022018.wiff
31	J6254-FS(4)	DRMO-FD03-052418	6/5/2018 1:30:12 AM	5-0369.dam	06022018.wiff
32	J6254-FS-D(5)	DRMO-FD03-052418	6/5/2018 1:40:59 AM	5-0369.dam	06022018.wiff
1	MeOH		6/5/2018 1:51:45 AM	5-0369.dam	06022018.wiff
8	JV26 CCV	CCV	6/5/2018 2:02:32 AM	5-0369.dam	06022018.wiff



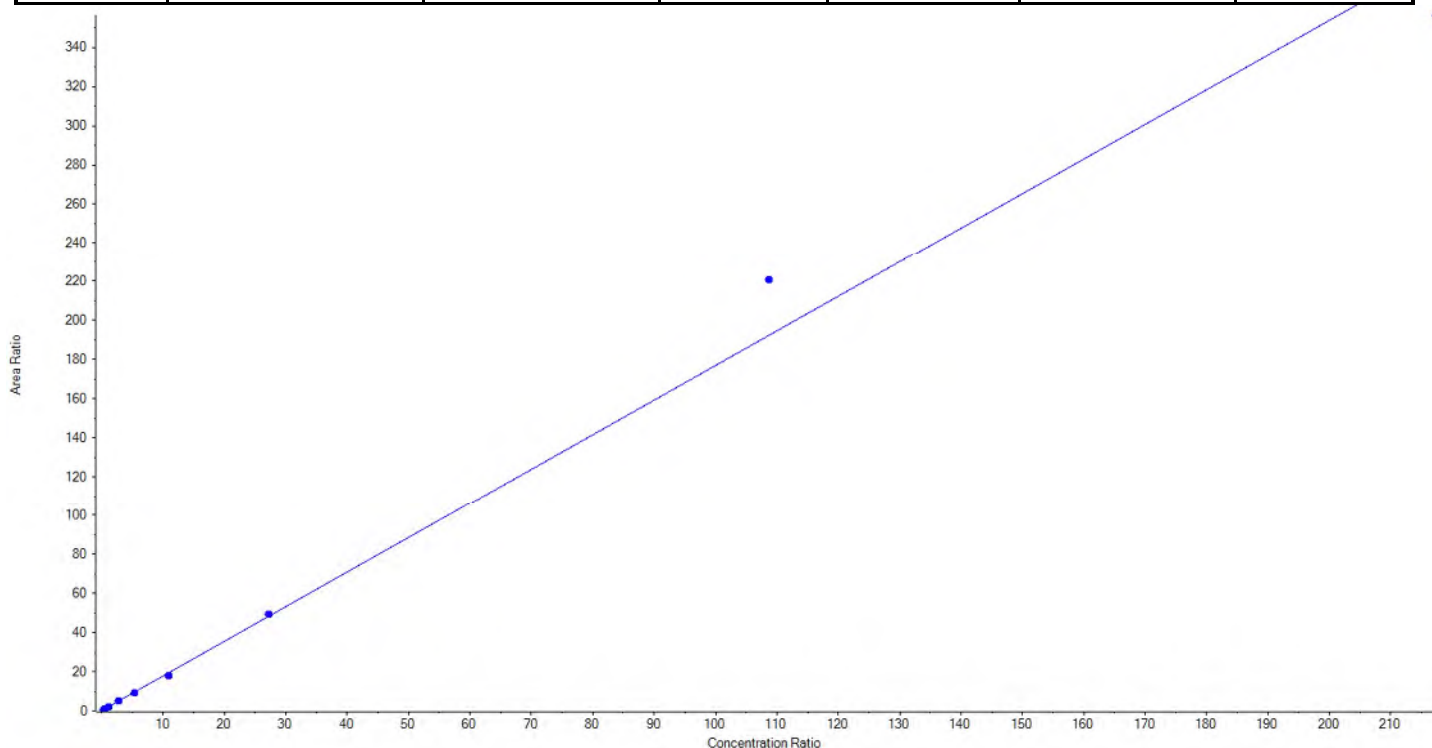
## Calibration Summary Report

Created with Analyst Reporter  
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<b>Analyte Name</b>	PFBS_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	298.9 / 80.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C3-PFBS	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 1.76816x + 0.12377$  ( $r = 0.99496$ ) (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





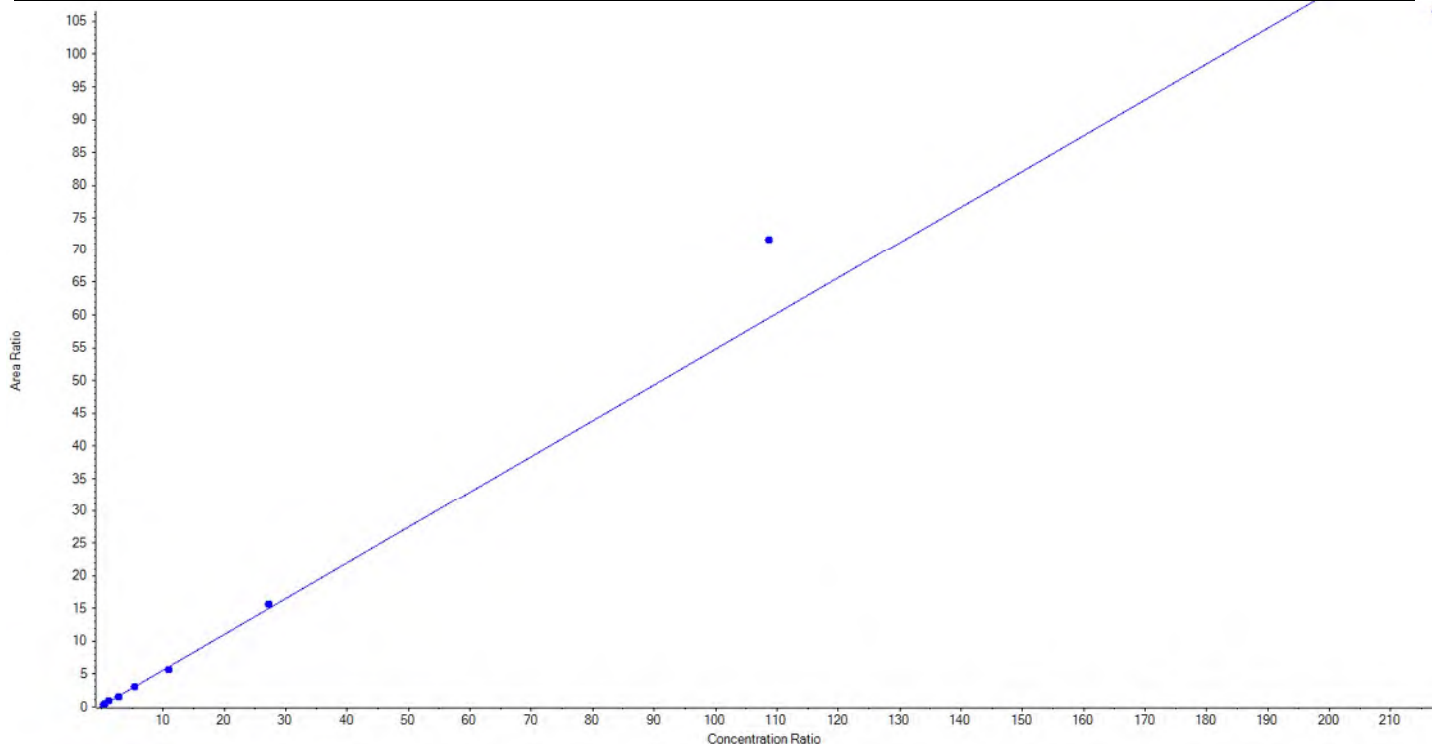
## Calibration Summary Report

Created with Analyst Reporter  
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<b>Analyte Name</b>	PFBS_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	298.9 / 99.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C3-PFBS	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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





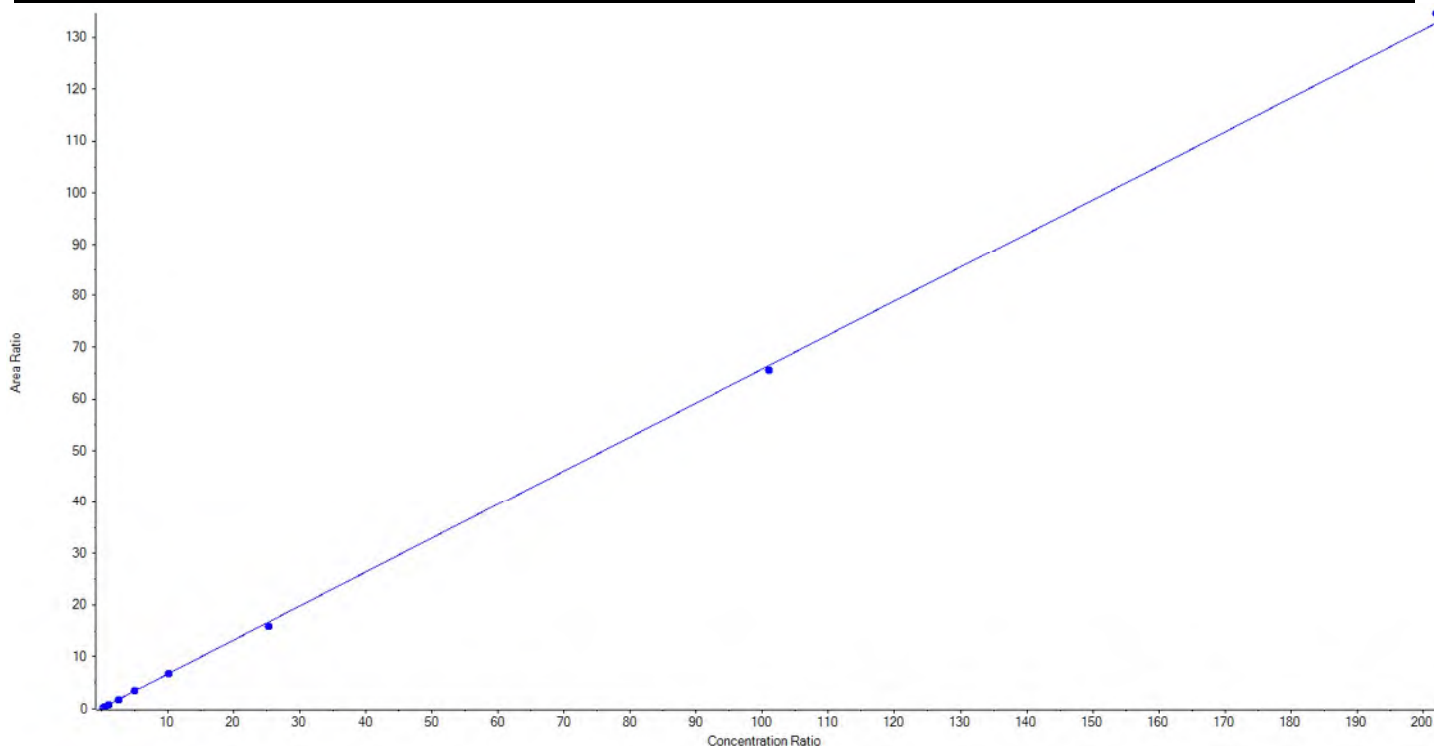
## Calibration Summary Report

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<b>Analyte Name</b>	PFHxA_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	313.0 / 269.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C5-PFHxA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.65652x + 0.14626$  ( $r = 0.99980$ ) (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	5.532306	21.9
3	JV21	L2	True	50.50	49.594148	98.2
4	JV22	L3	True	101.00	108.340209	107.3
5	JV23	L4	True	252.50	253.418132	100.4
6	JV24	L5	True	505.00	507.575341	100.5
7	JV25	L6	True	1010.00	999.237196	98.9
8	JV26	L7	True	2525.00	2393.126171	94.8
9	JV27	L8	True	10100.00	9955.372869	98.6
10	JV28	L9	True	20200.00	20477.335935	101.4







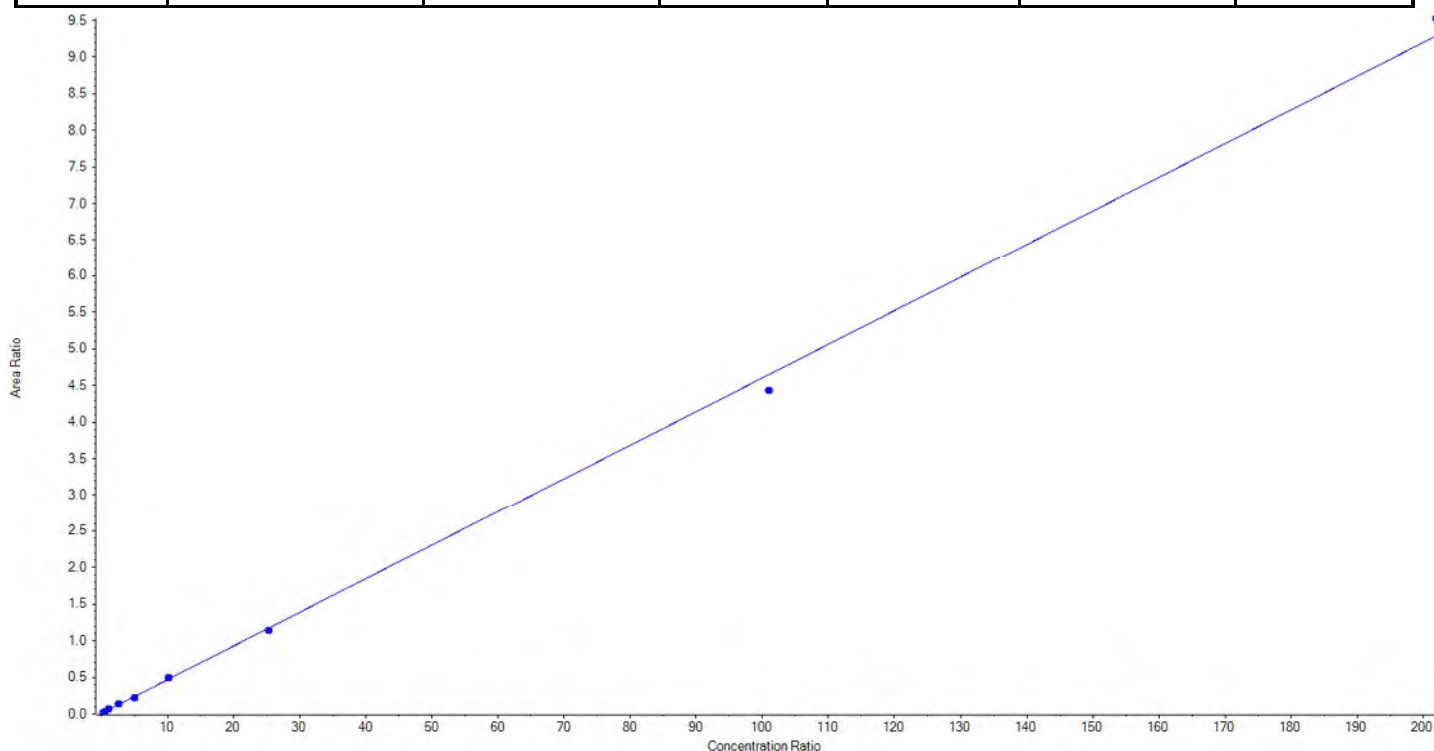
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<b>Analyte Name</b>	PFHxA_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	313.0 / 119.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C5-PFHxA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.04595x + 0.00834$  ( $r = 0.99913$ ) (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	3.411858	13.5
3	JV21	L2	True	50.50	38.413110	76.1
4	JV22	L3	True	101.00	124.794112	123.6
5	JV23	L4	True	252.50	281.758078	111.6
6	JV24	L5	True	505.00	450.356199	89.2
7	JV25	L6	True	1010.00	1055.126066	104.5
8	JV26	L7	True	2525.00	2457.711629	97.3
9	JV27	L8	True	10100.00	9620.984230	95.3
10	JV28	L9	True	20200.00	20714.856577	102.6





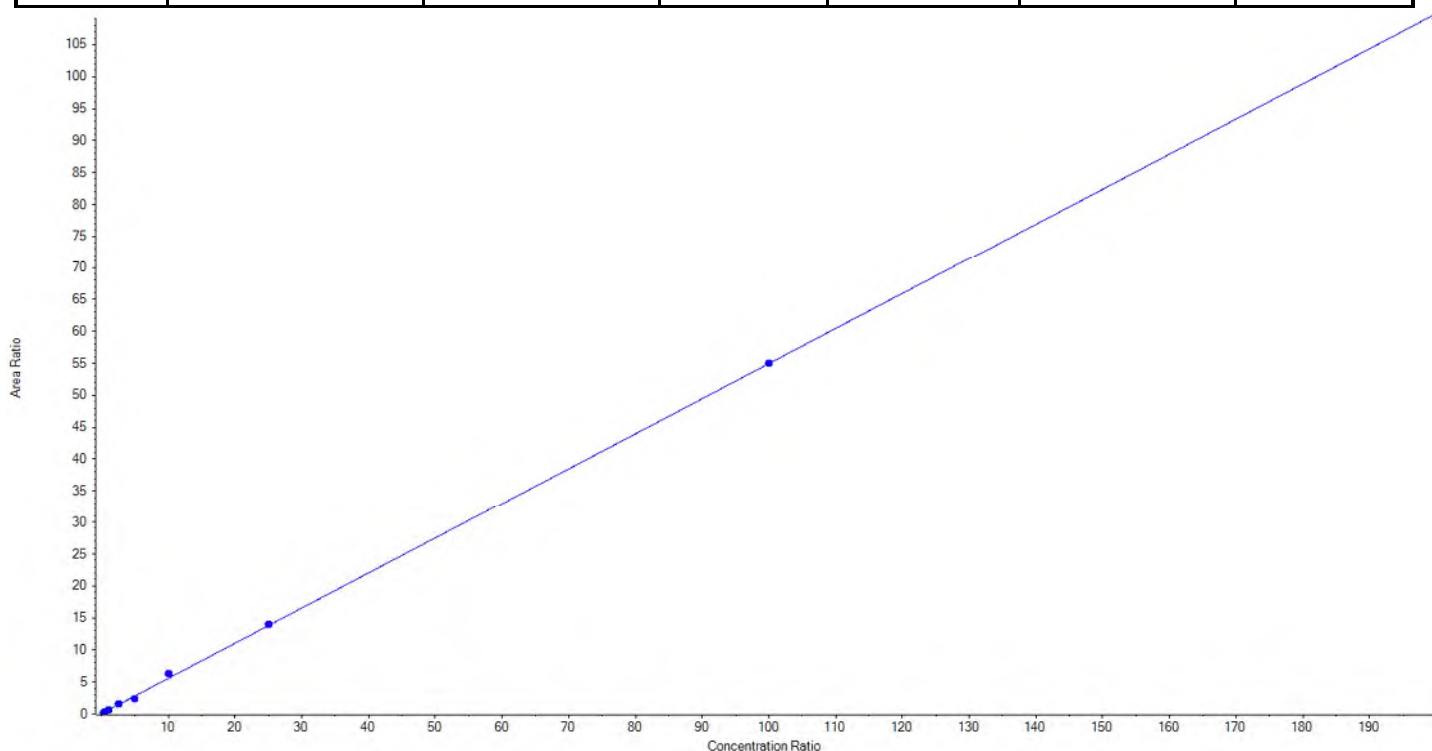
## Calibration Summary Report

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<b>Analyte Name</b>	PFHpA_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	363.0 / 319.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C4-PFHpA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.54888x + 0.06431$  ( $r = 0.99946$ ) (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	24.621171	98.5
3	JV21	L2	True	50.00	40.081899	80.2
4	JV22	L3	True	100.00	114.612410	114.6
5	JV23	L4	True	250.00	266.771244	106.7
6	JV24	L5	True	500.00	426.606503	85.3
7	JV25	L6	True	1000.00	1135.903188	113.6
8	JV26	L7	True	2500.00	2541.689164	101.7
9	JV27	L8	True	10000.00	10015.570294	100.2
10	JV28	L9	True	20000.00	19859.144127	99.3





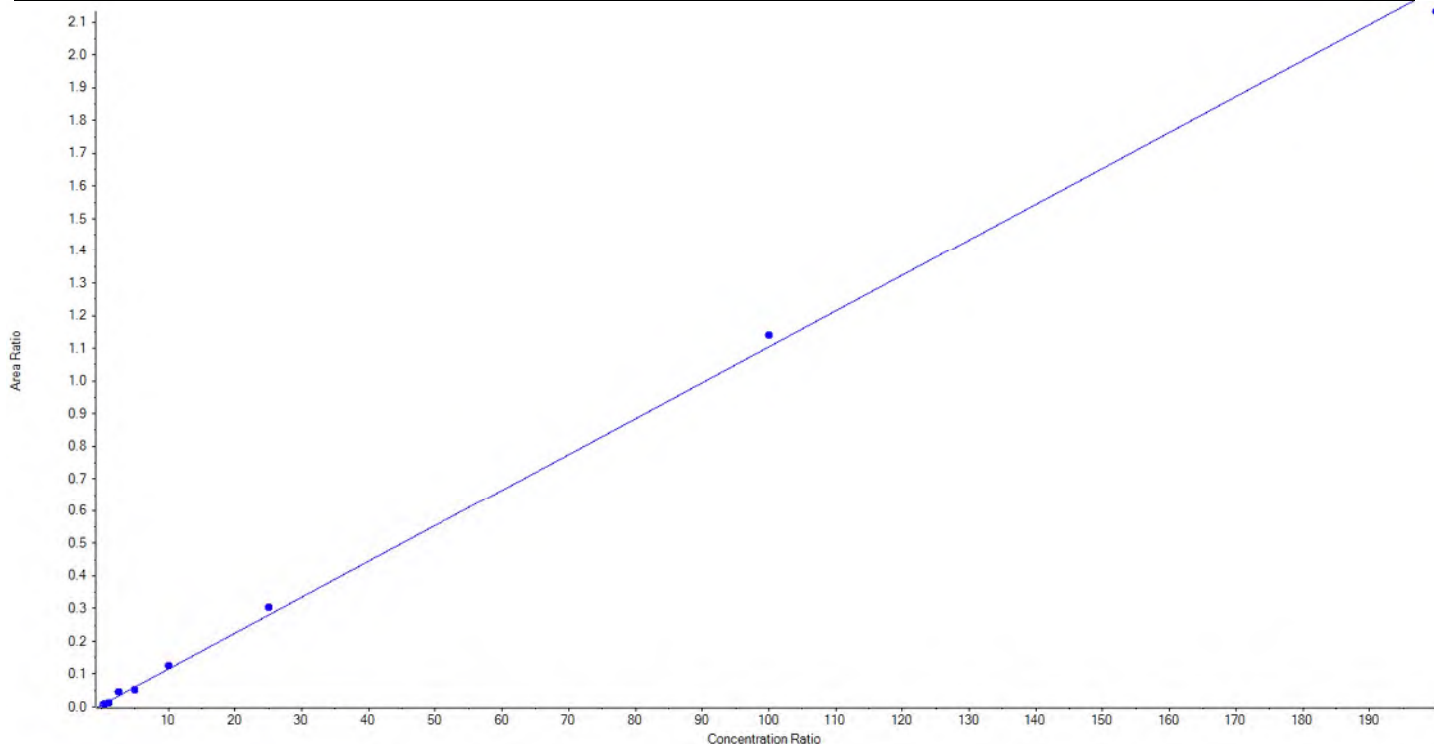
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<b>Analyte Name</b>	PFHpA_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	363.0 / 169.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C4-PFHpA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.01099x + 0.00547$  ( $r = 0.99781$ ) (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	38.990233	78.0
4	JV22	L3	True	100.00	71.648287	71.7
5	JV23	L4	True	250.00	370.744655	148.3
6	JV24	L5	True	500.00	415.998547	83.2
7	JV25	L6	True	1000.00	1098.308044	109.8
8	JV26	L7	True	2500.00	2726.836198	109.1
9	JV27	L8	True	10000.00	10316.410589	103.2
10	JV28	L9	True	20000.00	19361.063447	96.8





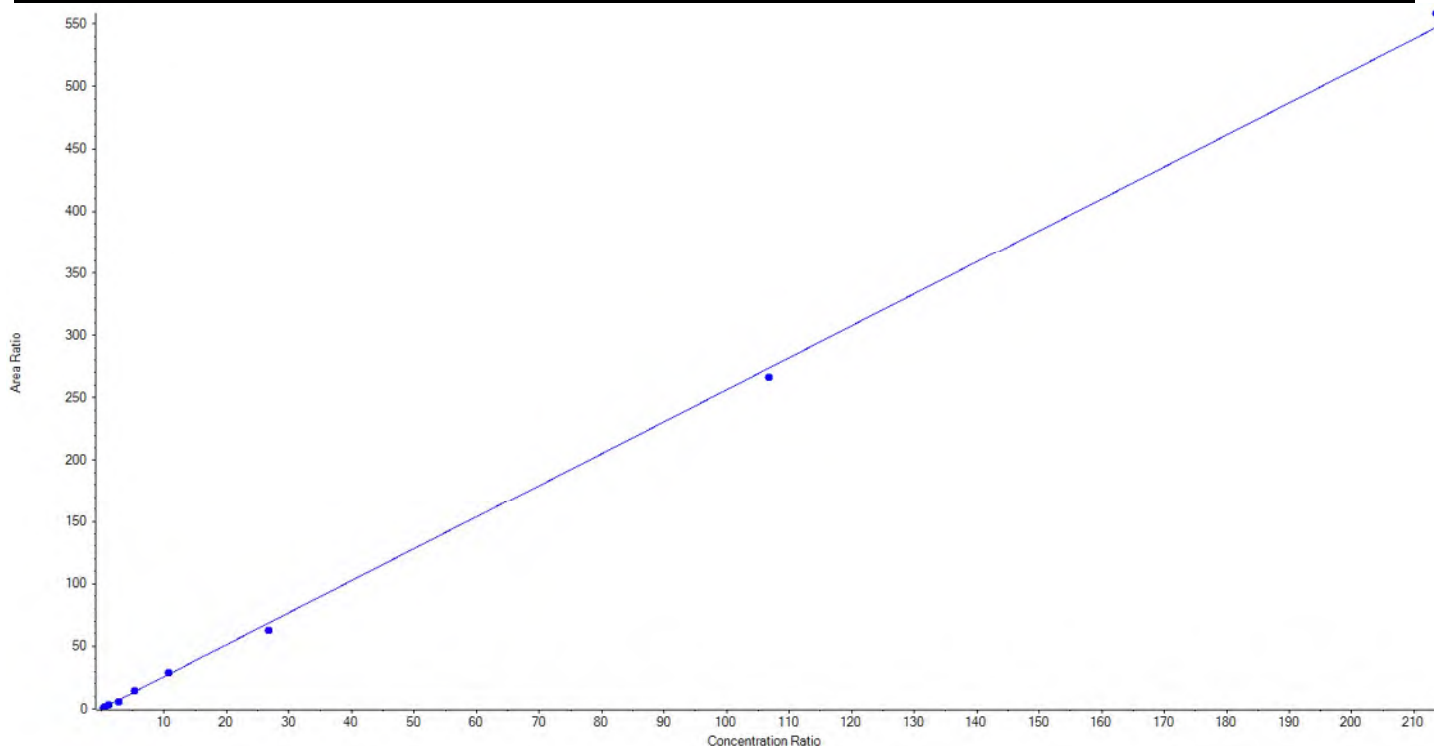
## Calibration Summary Report

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<b>Analyte Name</b>	PFHxS_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	399.0 / 80.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C3-PFHxS	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 2.56188x + 0.14000$  ( $r = 0.99936$ ) (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





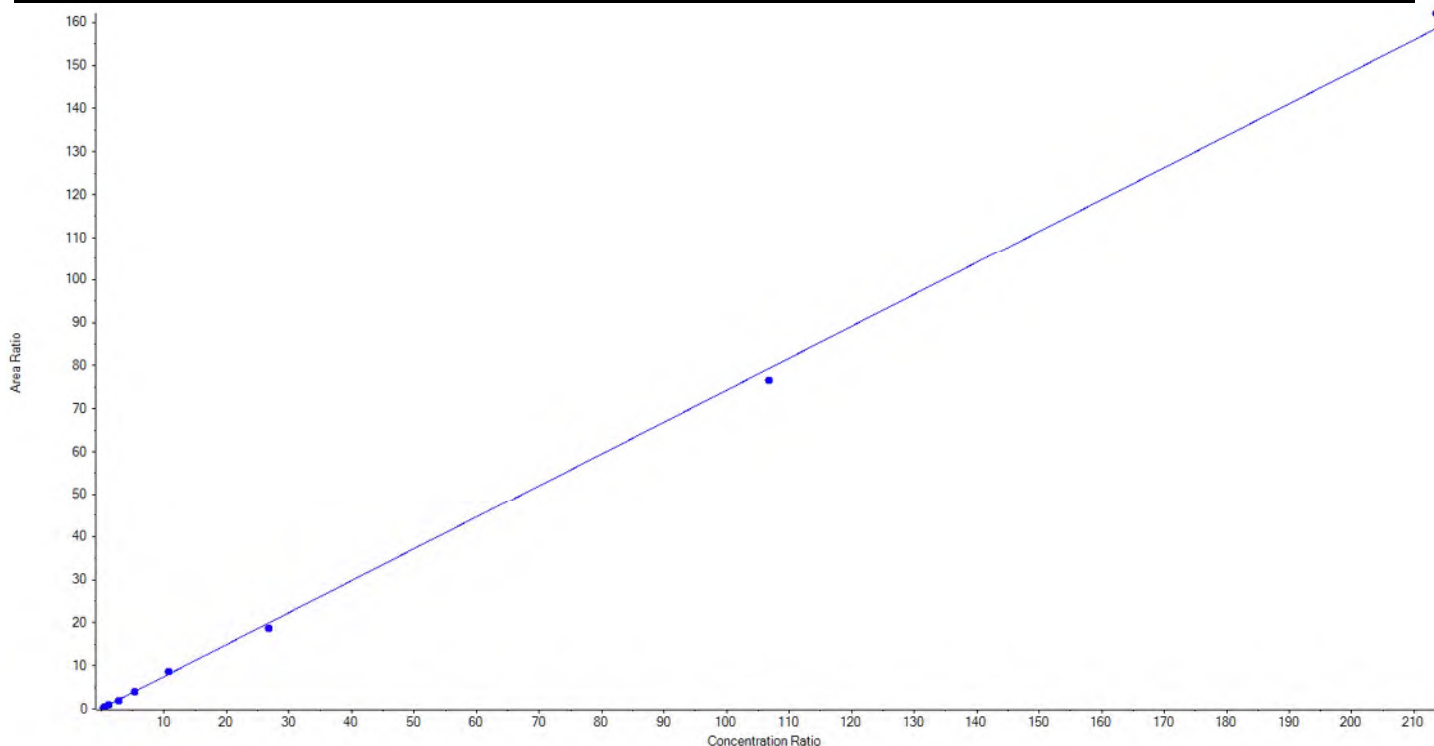
## Calibration Summary Report

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<b>Analyte Name</b>	PFHxS_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	399.0 / 99.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C3-PFHxS	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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





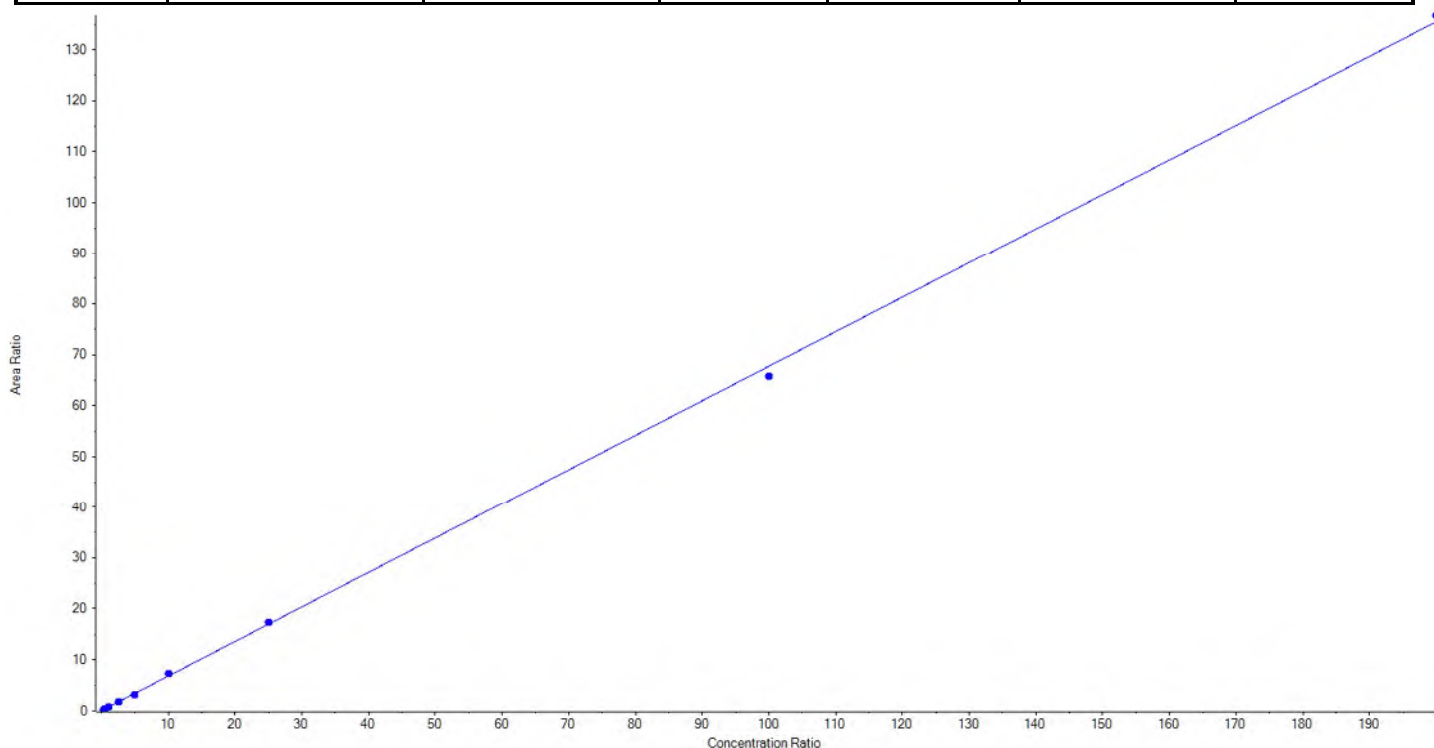
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<b>Analyte Name</b>	PFOA_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	413.0 / 369.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C8-PFOA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.67721x + 0.04216$  ( $r = 0.99972$ ) (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	21.692269	86.8
3	JV21	L2	True	50.00	48.798844	97.6
4	JV22	L3	True	100.00	111.607904	111.6
5	JV23	L4	True	250.00	258.958097	103.6
6	JV24	L5	True	500.00	468.434530	93.7
7	JV25	L6	True	1000.00	1065.331022	106.5
8	JV26	L7	True	2500.00	2553.553058	102.1
9	JV27	L8	True	10000.00	9719.368185	97.2
10	JV28	L9	True	20000.00	20177.256091	100.9





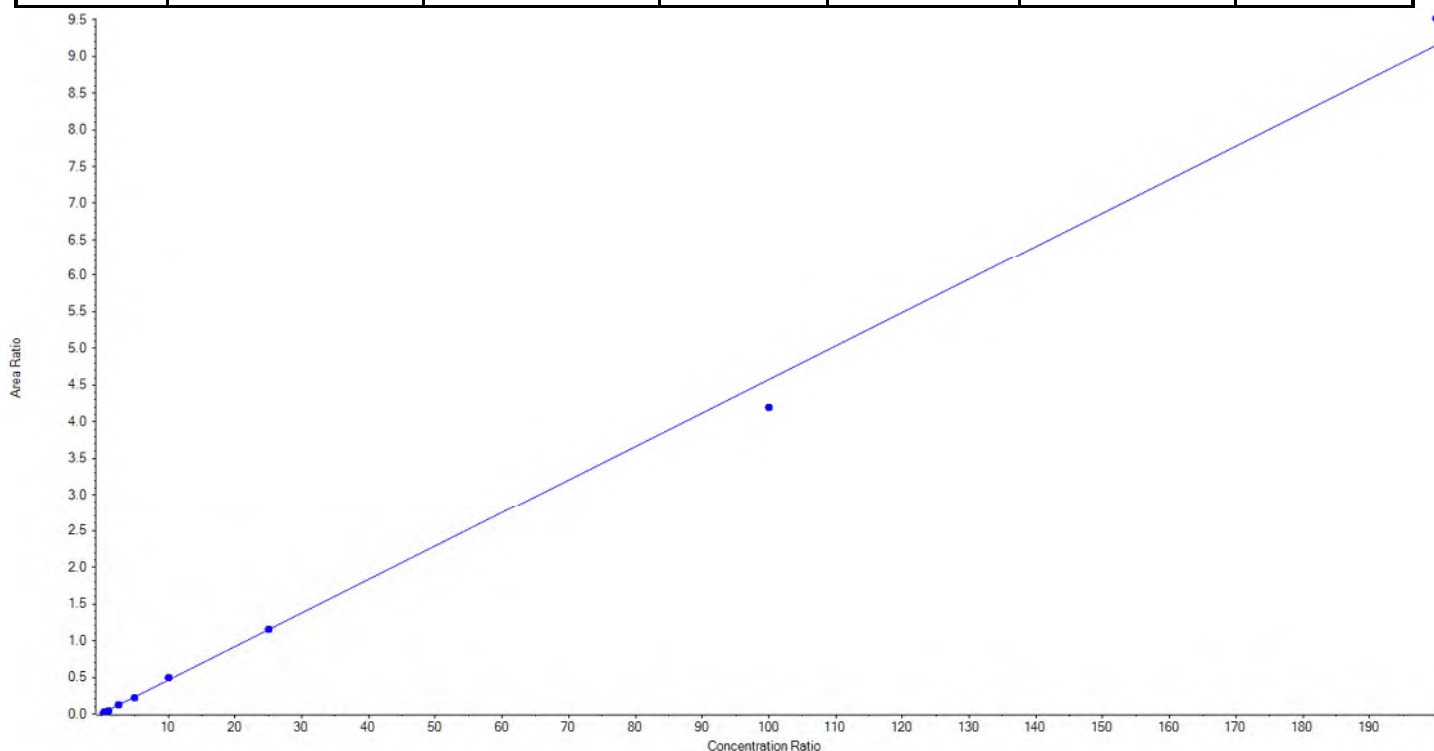
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<b>Analyte Name</b>	PFOA_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	413.0 / 169.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C8-PFOA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.04570 x + 0.00569$  (r = 0.99830) (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	29.646241	118.6
3	JV21	L2	True	50.00	47.327708	94.7
4	JV22	L3	True	100.00	87.241942	87.2
5	JV23	L4	True	250.00	263.921523	105.6
6	JV24	L5	True	500.00	458.947120	91.8
7	JV25	L6	True	1000.00	1060.784291	106.1
8	JV26	L7	True	2500.00	2511.628490	100.5
9	JV27	L8	True	10000.00	9157.712634	91.6
10	JV28	L9	True	20000.00	20807.790052	104.0





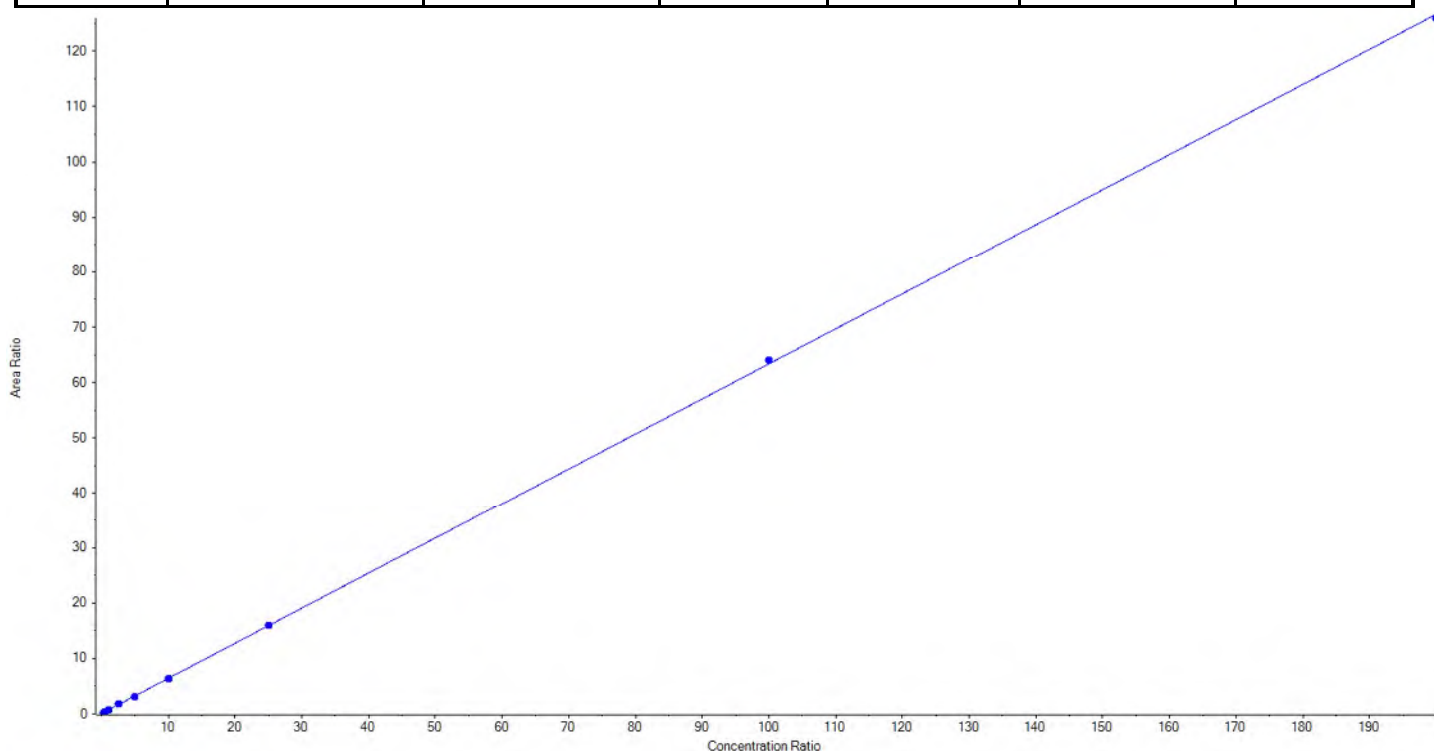
## Calibration Summary Report

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<b>Analyte Name</b>	PFNA_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	463.0 / 419.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C9-PFNA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.63271 x + 0.07945$  (r = 0.99990) (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	24.794878	99.2
3	JV21	L2	True	50.00	47.234301	94.5
4	JV22	L3	True	100.00	99.634636	99.6
5	JV23	L4	True	250.00	277.769664	111.1
6	JV24	L5	True	500.00	470.875784	94.2
7	JV25	L6	True	1000.00	1004.051505	100.4
8	JV26	L7	True	2500.00	2513.608735	100.5
9	JV27	L8	True	10000.00	10109.915260	101.1
10	JV28	L9	True	20000.00	19877.115238	99.4







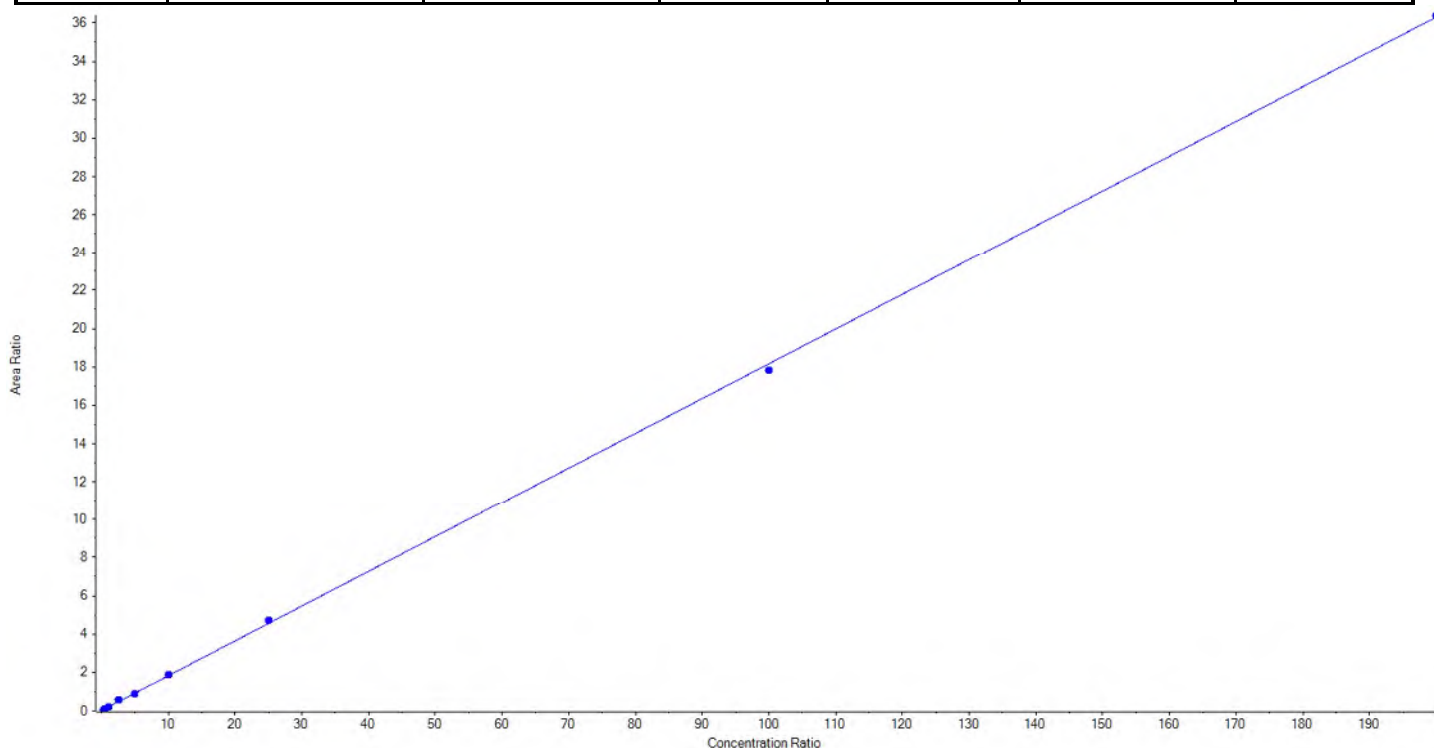
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<b>Analyte Name</b>	PFNA_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	463.0 / 219.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C9-PFNA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.18146 x + 0.01780$  (r = 0.99967) (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	19.897180	79.6
3	JV21	L2	True	50.00	42.900488	85.8
4	JV22	L3	True	100.00	113.581329	113.6
5	JV23	L4	True	250.00	299.906195	120.0
6	JV24	L5	True	500.00	480.187752	96.0
7	JV25	L6	True	1000.00	1034.249942	103.4
8	JV26	L7	True	2500.00	2582.314616	103.3
9	JV27	L8	True	10000.00	9810.311373	98.1
10	JV28	L9	True	20000.00	20041.651126	100.2





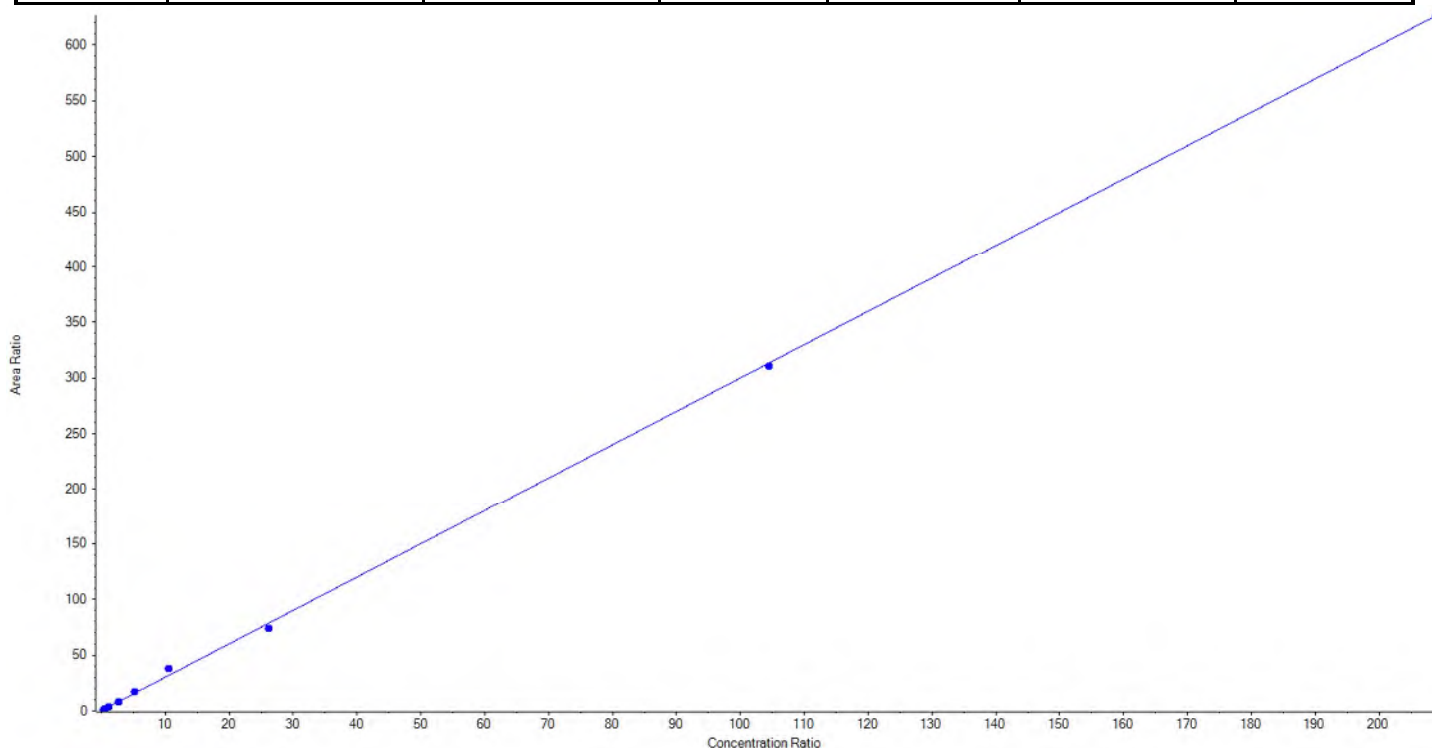
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<b>Analyte Name</b>	PFOS_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	499.0 / 80.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C8-PFOS	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 2.99639x + 0.29547$  ( $r = 0.99916$ ) (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





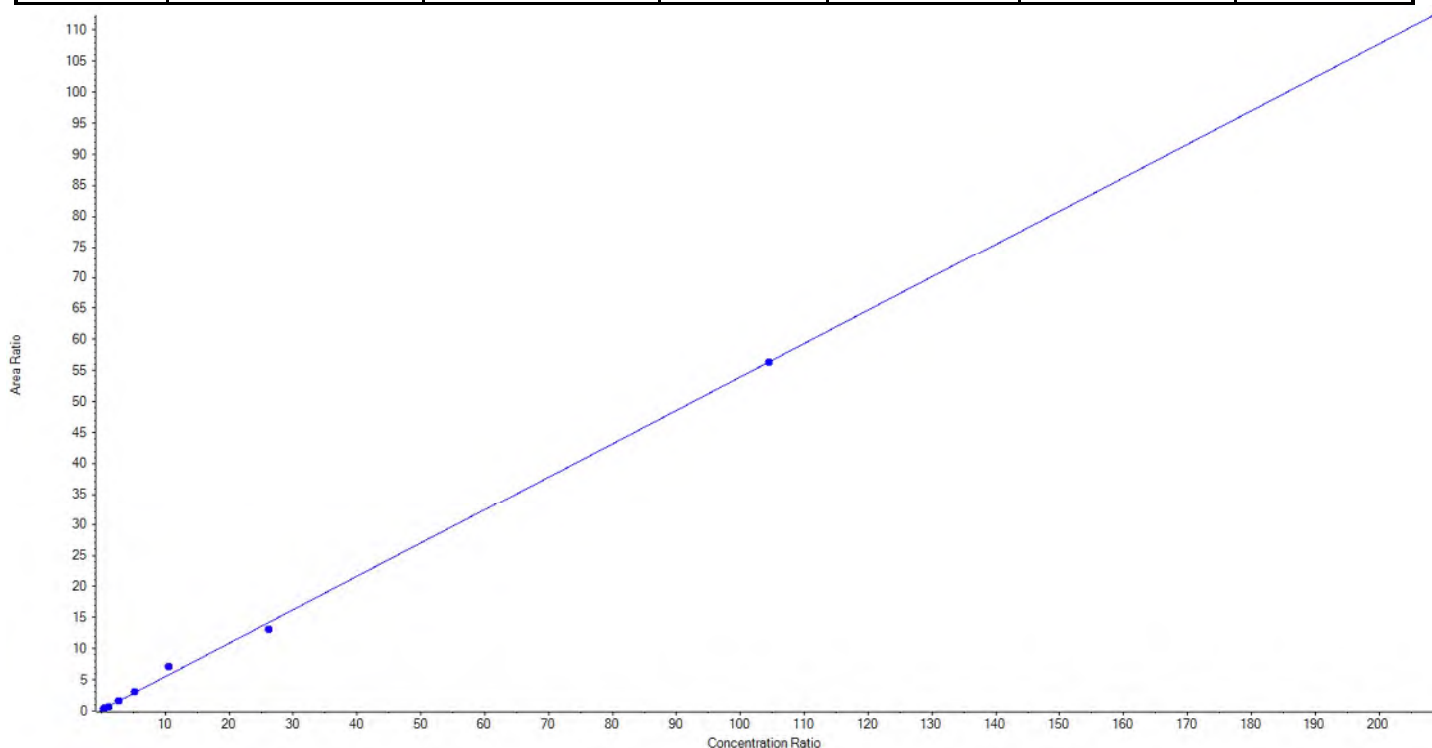
## Calibration Summary Report

Created with Analyst Reporter  
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<b>Analyte Name</b>	PFOS_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	499.0 / 99.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C8-PFOS	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.53812x + 0.13454$  ( $r = 0.99870$ ) (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	20.534763	82.1
3	JV21	L2	True	50.00	55.763550	111.5
4	JV22	L3	True	100.00	84.265546	84.3
5	JV23	L4	True	250.00	249.531054	99.8
6	JV24	L5	True	500.00	527.216071	105.4
7	JV25	L6	True	1000.00	1253.819955	125.4
8	JV26	L7	True	2500.00	2295.180202	91.8
9	JV27	L8	True	10000.00	9986.003544	99.9
10	JV28	L9	True	20000.00	19952.685315	99.8





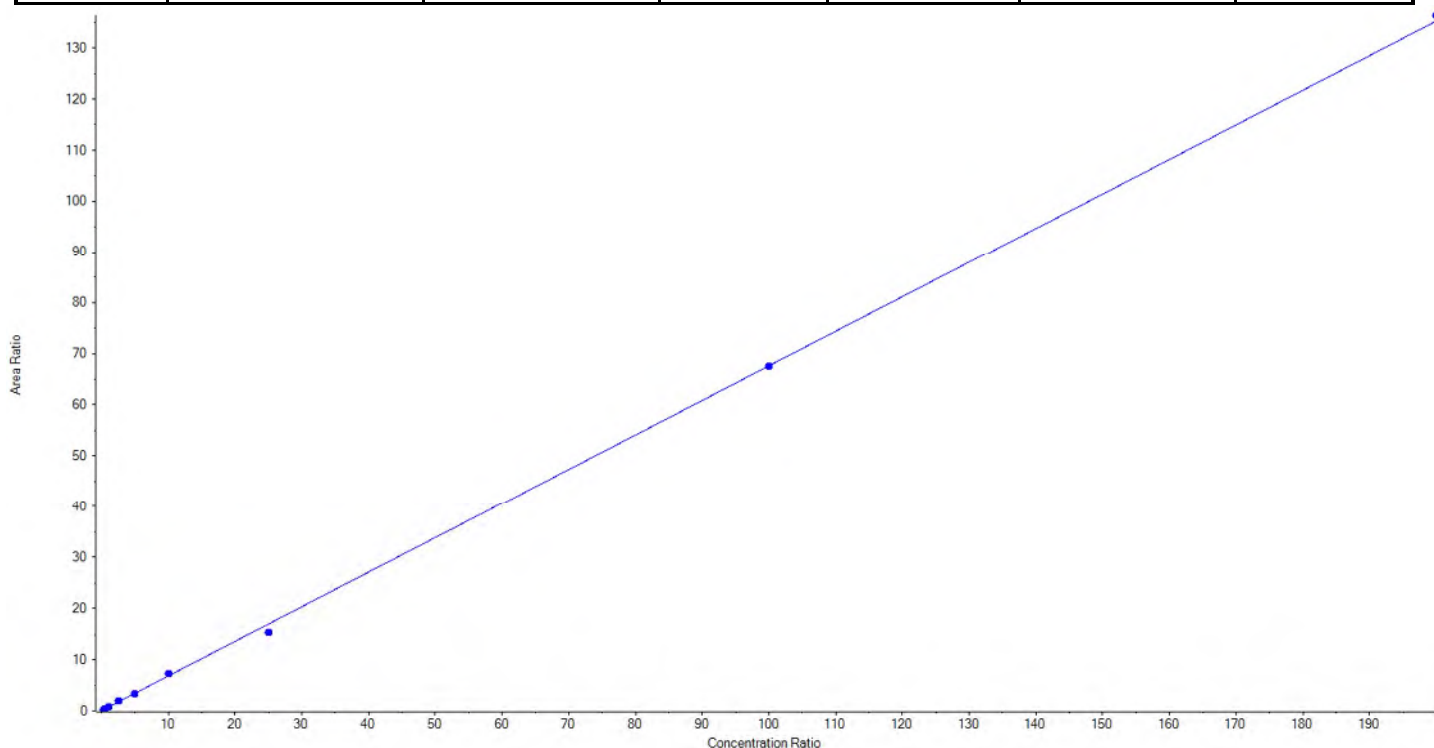
## Calibration Summary Report

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<b>Analyte Name</b>	PFDA_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	513.0 / 469.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C6-PFDA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.67587x + 0.05795$  ( $r = 0.99950$ ) (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





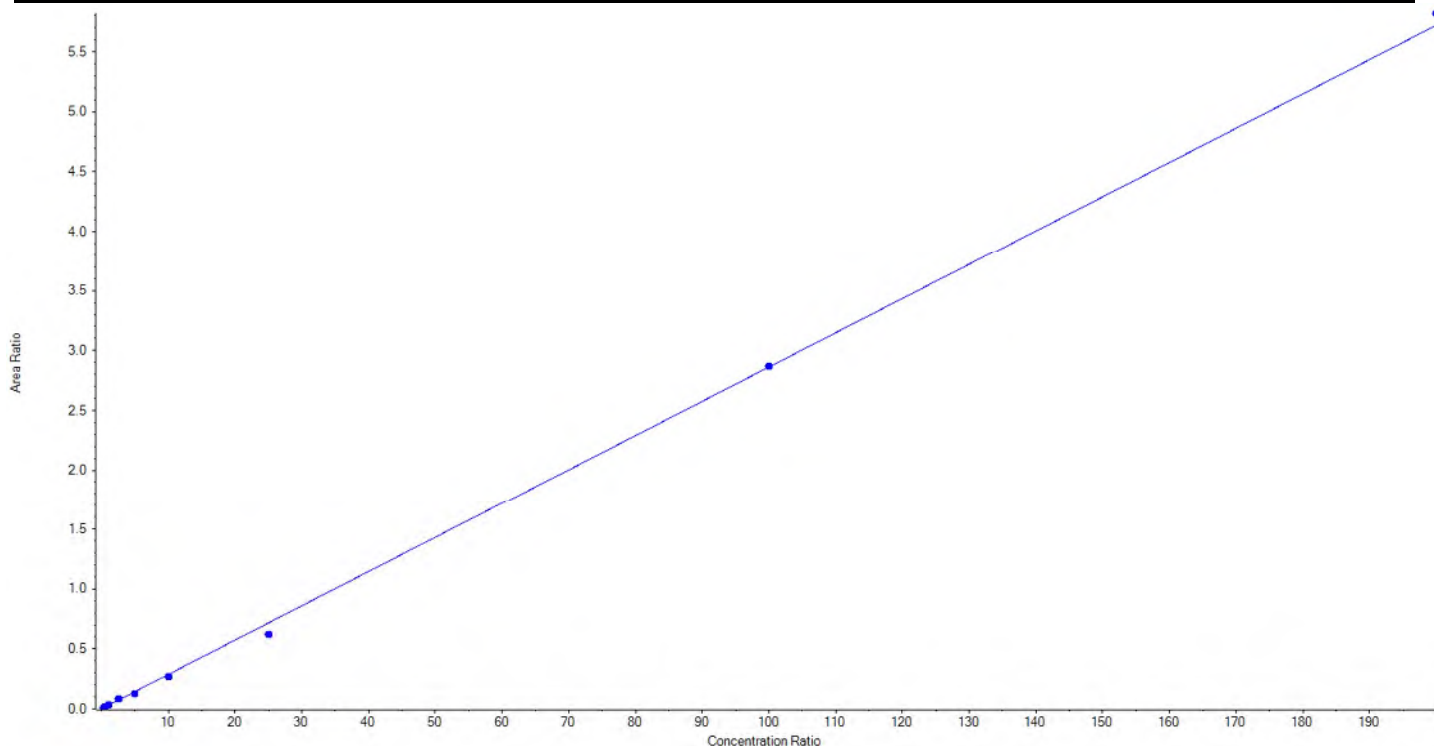
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<b>Analyte Name</b>	PFDA_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	513.0 / 219.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C6-PFDA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.02861 x + 0.00102$  (r = 0.99899) (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	18.253367	73.0
3	JV21	L2	True	50.00	57.977130	116.0
4	JV22	L3	True	100.00	124.557169	124.6
5	JV23	L4	True	250.00	281.256770	112.5
6	JV24	L5	True	500.00	449.853585	90.0
7	JV25	L6	True	1000.00	948.509191	94.9
8	JV26	L7	True	2500.00	2180.359578	87.2
9	JV27	L8	True	10000.00	10023.041773	100.2
10	JV28	L9	True	20000.00	20341.191437	101.7





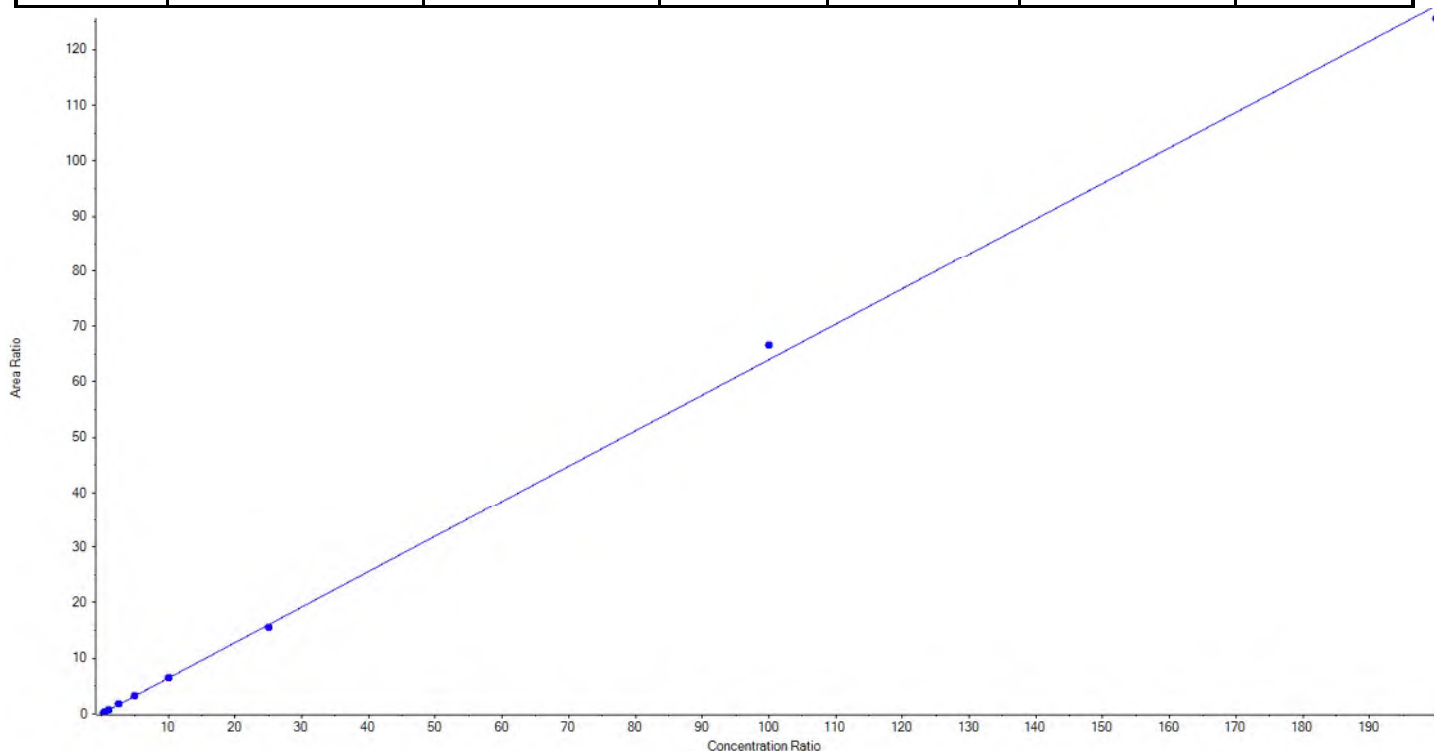
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<b>Analyte Name</b>	PFUnA_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	563.0 / 519.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C7-PFUnA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.63935x + 0.03411$  ( $r = 0.99952$ ) (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	20.084450	80.3
3	JV21	L2	True	50.00	49.801121	99.6
4	JV22	L3	True	100.00	111.194556	111.2
5	JV23	L4	True	250.00	278.217162	111.3
6	JV24	L5	True	500.00	491.317514	98.3
7	JV25	L6	True	1000.00	1001.104168	100.1
8	JV26	L7	True	2500.00	2421.794476	96.9
9	JV27	L8	True	10000.00	10415.081019	104.2
10	JV28	L9	True	20000.00	19636.405535	98.2





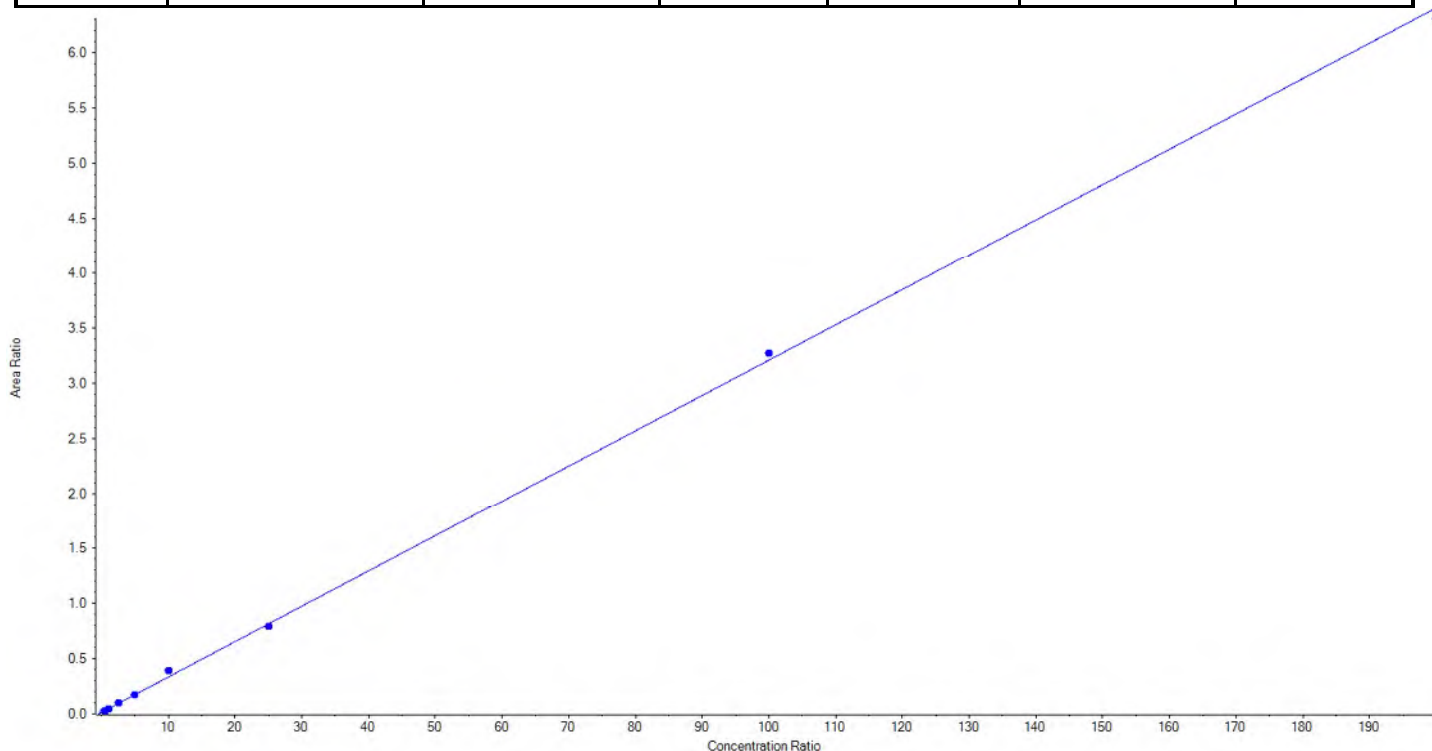
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<b>Analyte Name</b>	PFUnA_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	563.0 / 269.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C7-PFUnA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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





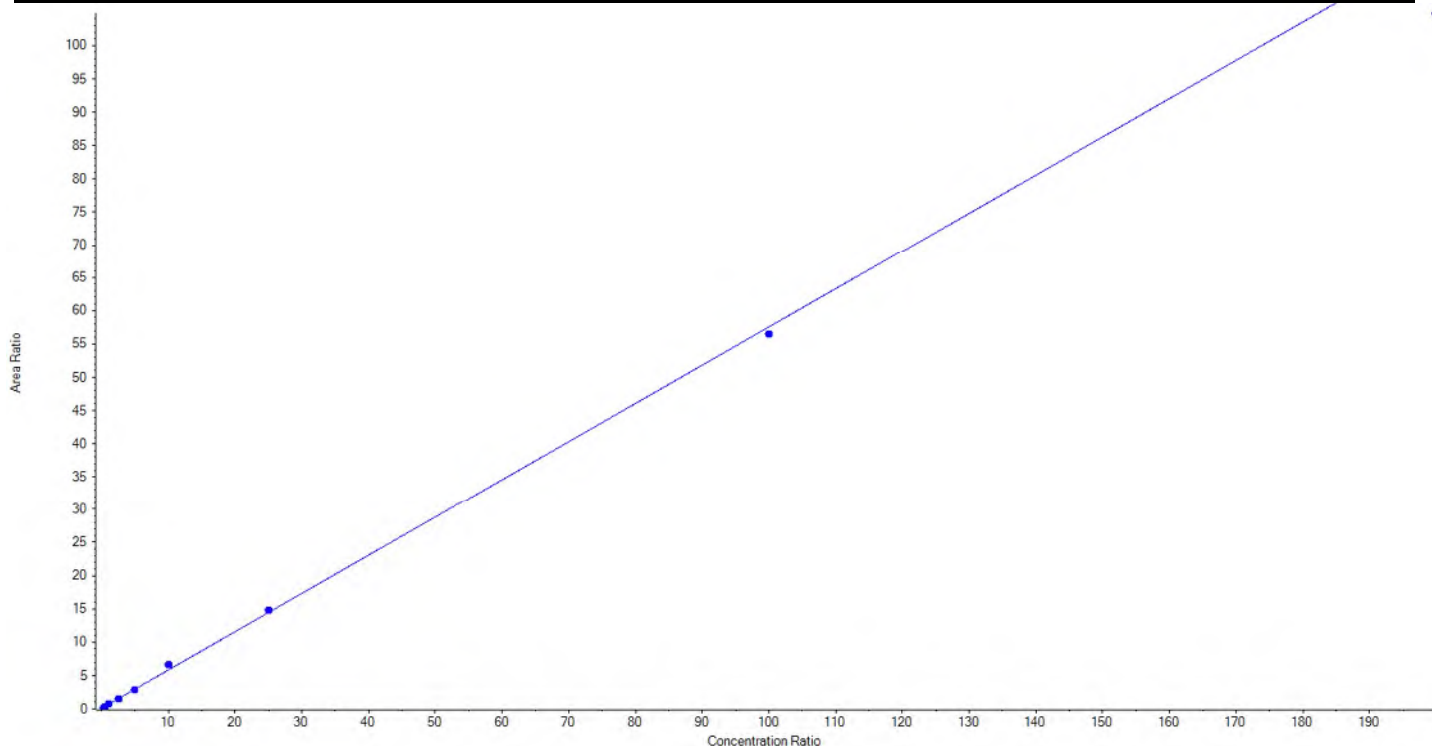
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<b>Analyte Name</b>	PFD <sub>o</sub> A_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	613.0 / 569.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C2-PFD <sub>o</sub> A	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.57472x + 0.09145$  ( $r = 0.99875$ ) (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







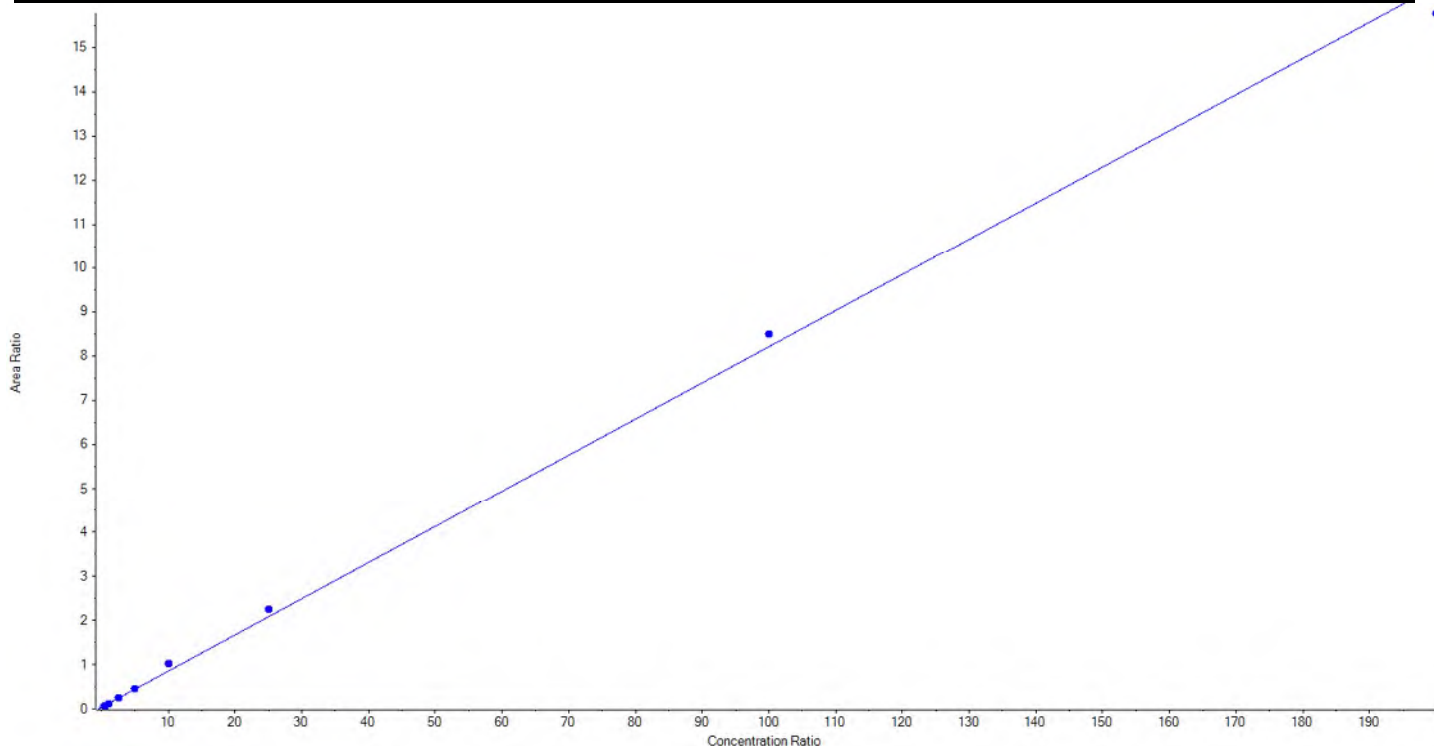
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<b>Analyte Name</b>	PFD <sub>o</sub> A_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	613.0 / 319.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C2-PFD <sub>o</sub> A	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.08176x + 0.03563$  ( $r = 0.99832$ ) (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





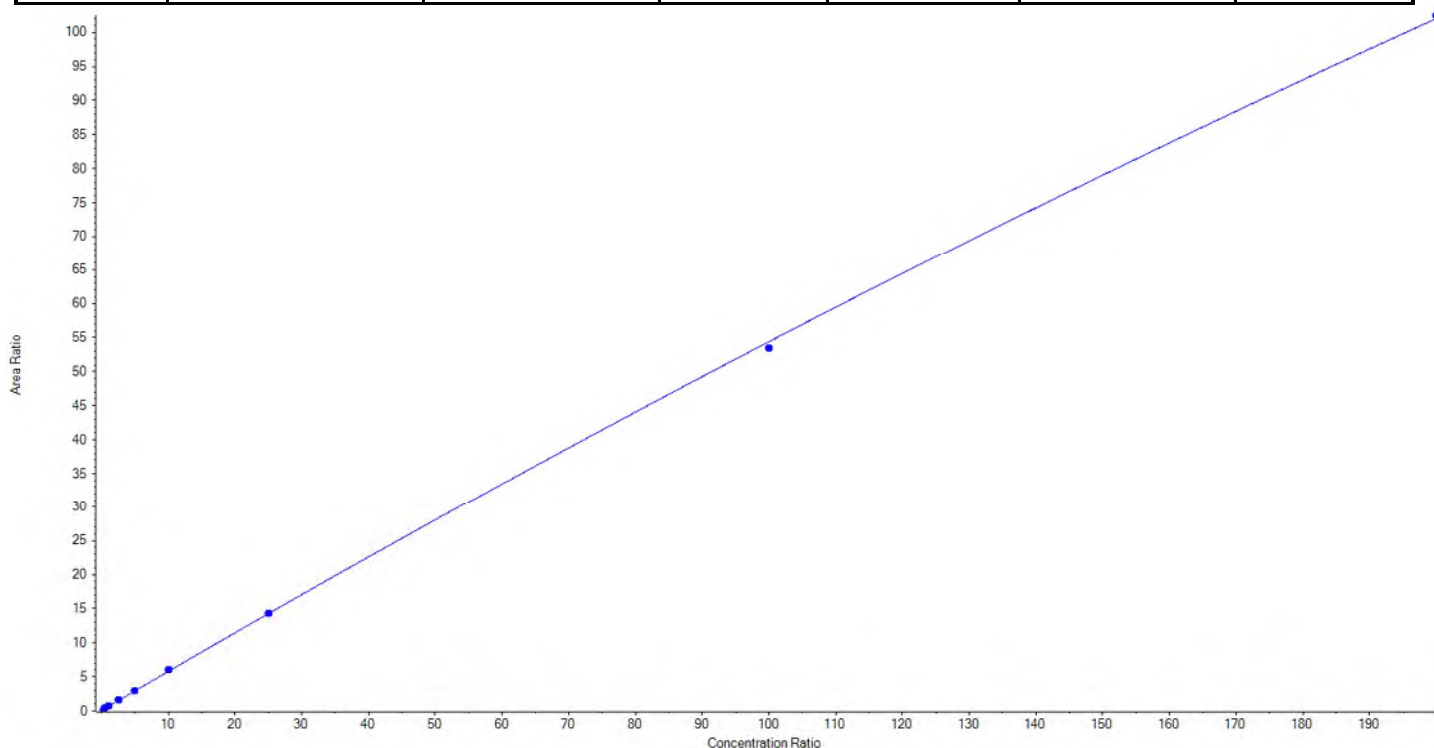
## Calibration Summary Report

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<b>Analyte Name</b>	PFTrDA_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	663.0 / 619.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C2-PFTeDA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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





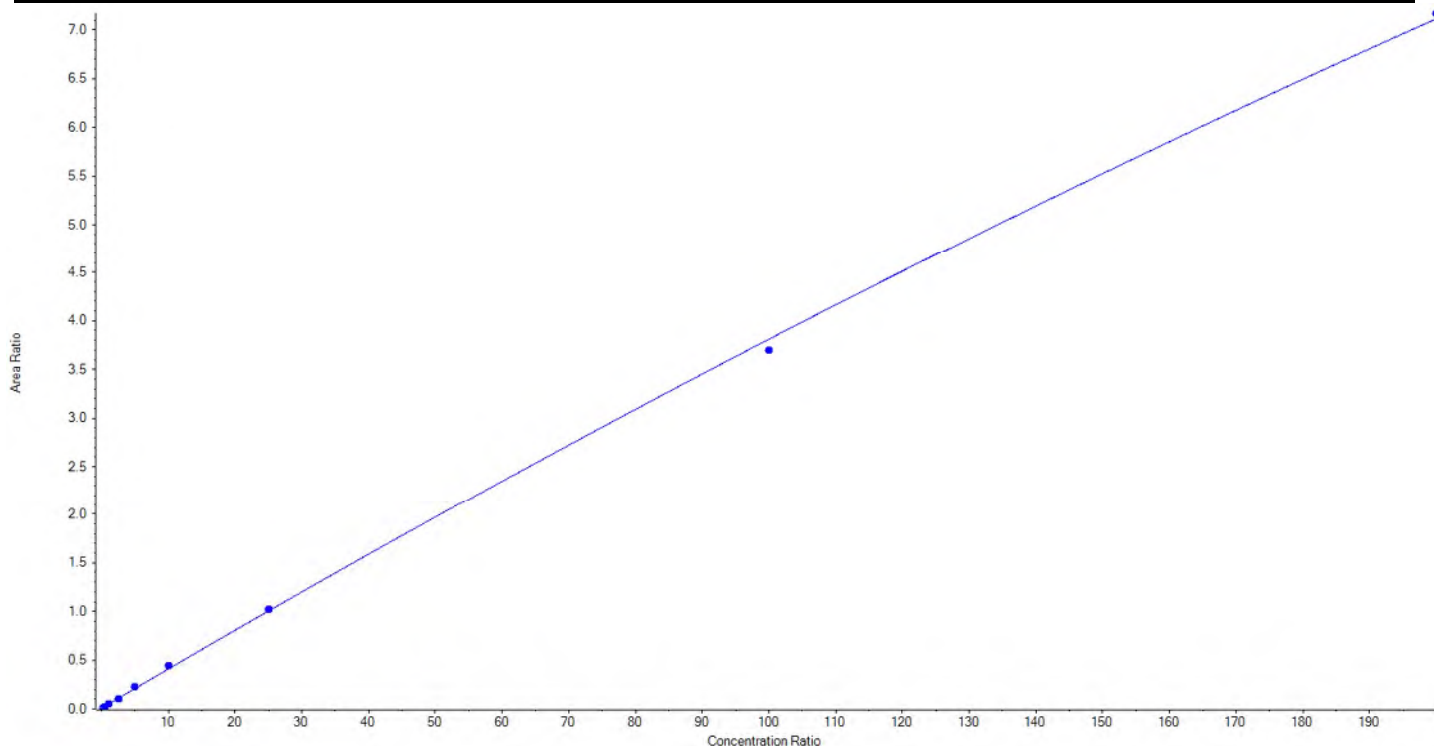
## Calibration Summary Report

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<b>Analyte Name</b>	PFTrDA_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	663.0 / 169.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C2-PFTeDA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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





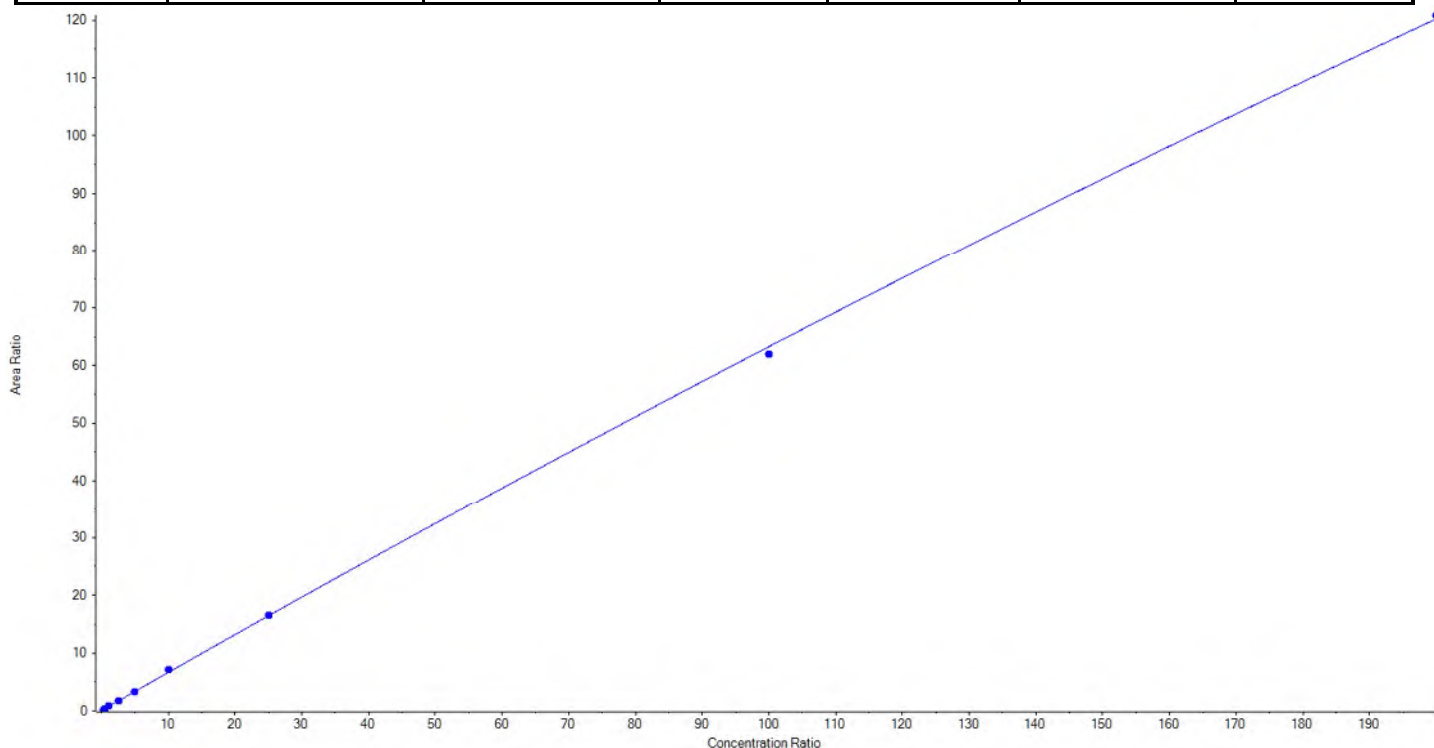
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<b>Analyte Name</b>	PFTeDA_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	713.0 / 669.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C2-PFTeDA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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





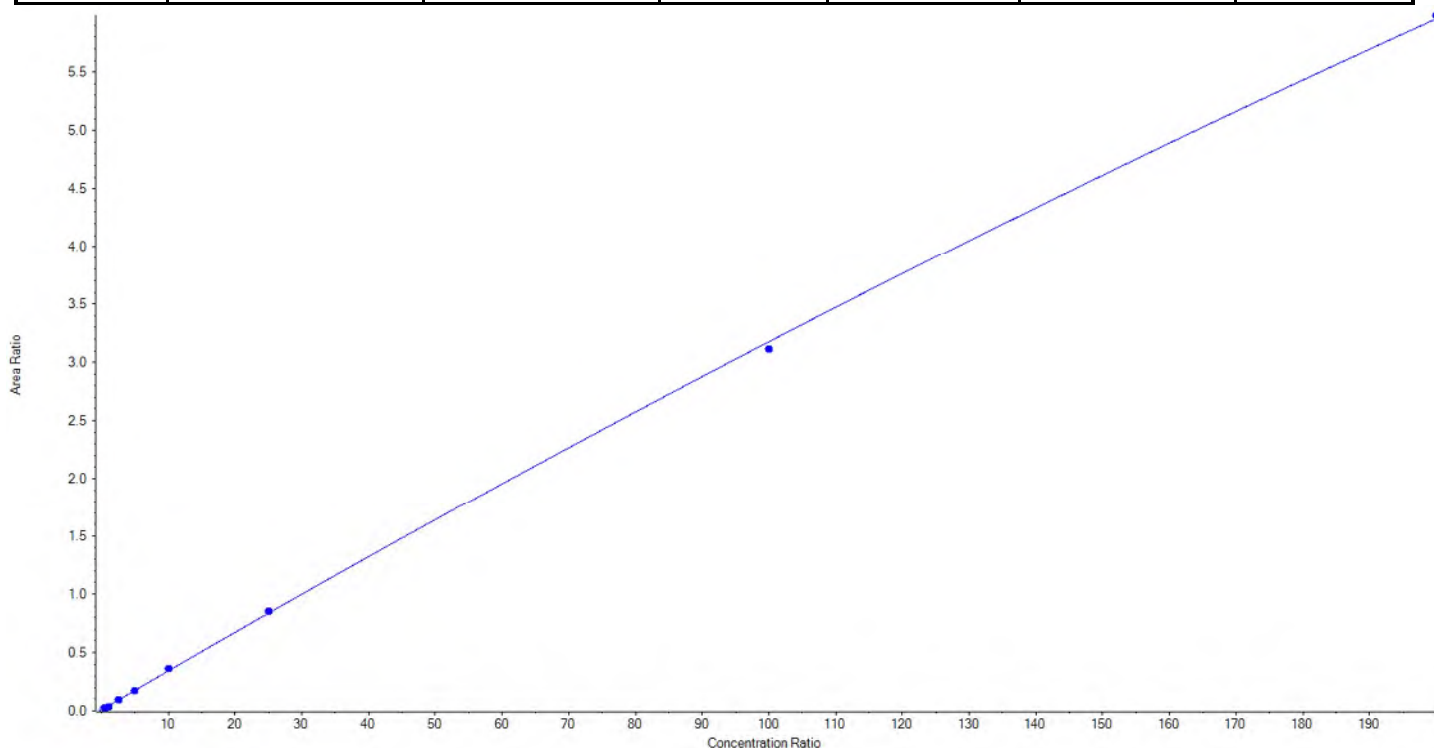
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<b>MRM Transition</b>	713.0 / 169.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	13C2-PFTeDA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

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





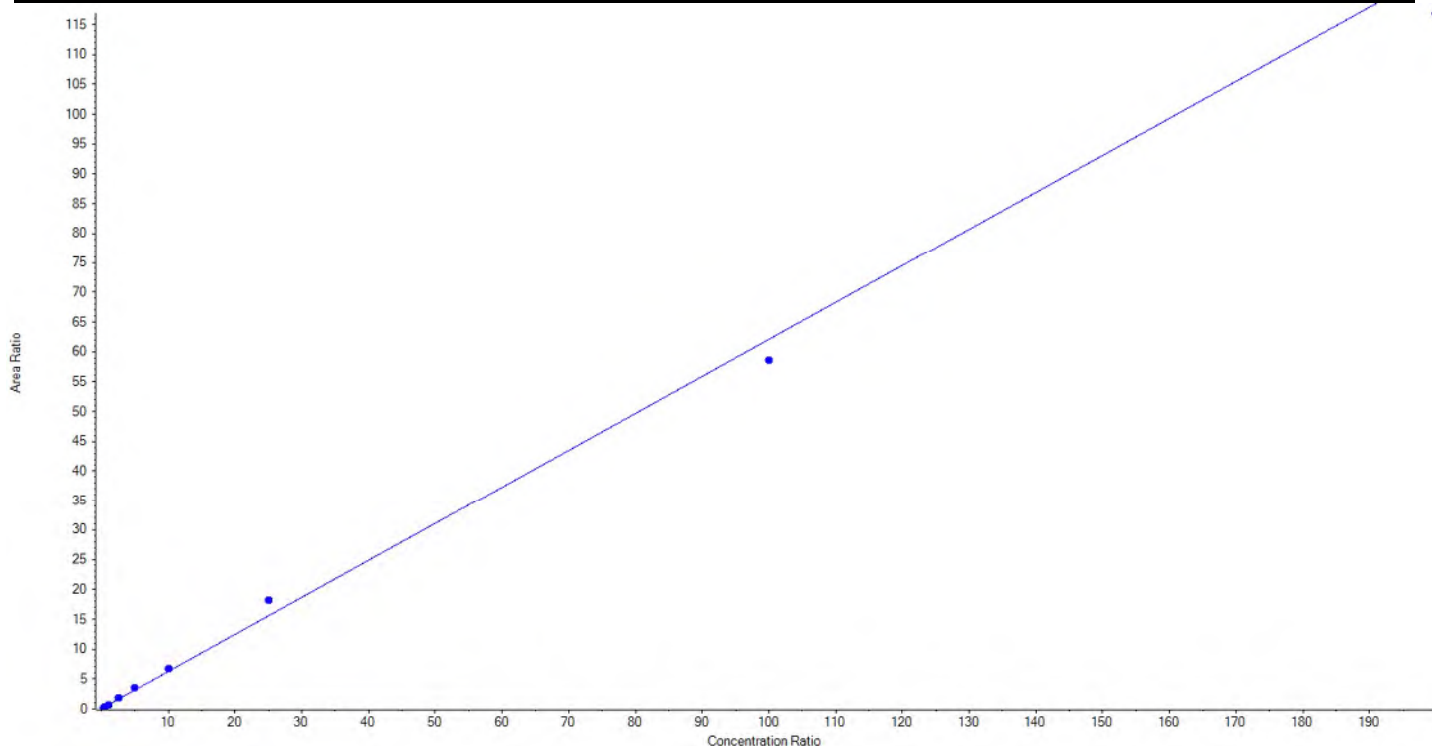
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<b>Analyte Name</b>	NMeFOSAA_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	570.0 / 419.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	d3-MeFOSAA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.62027x + 0.06299$  ( $r = 0.99559$ ) (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





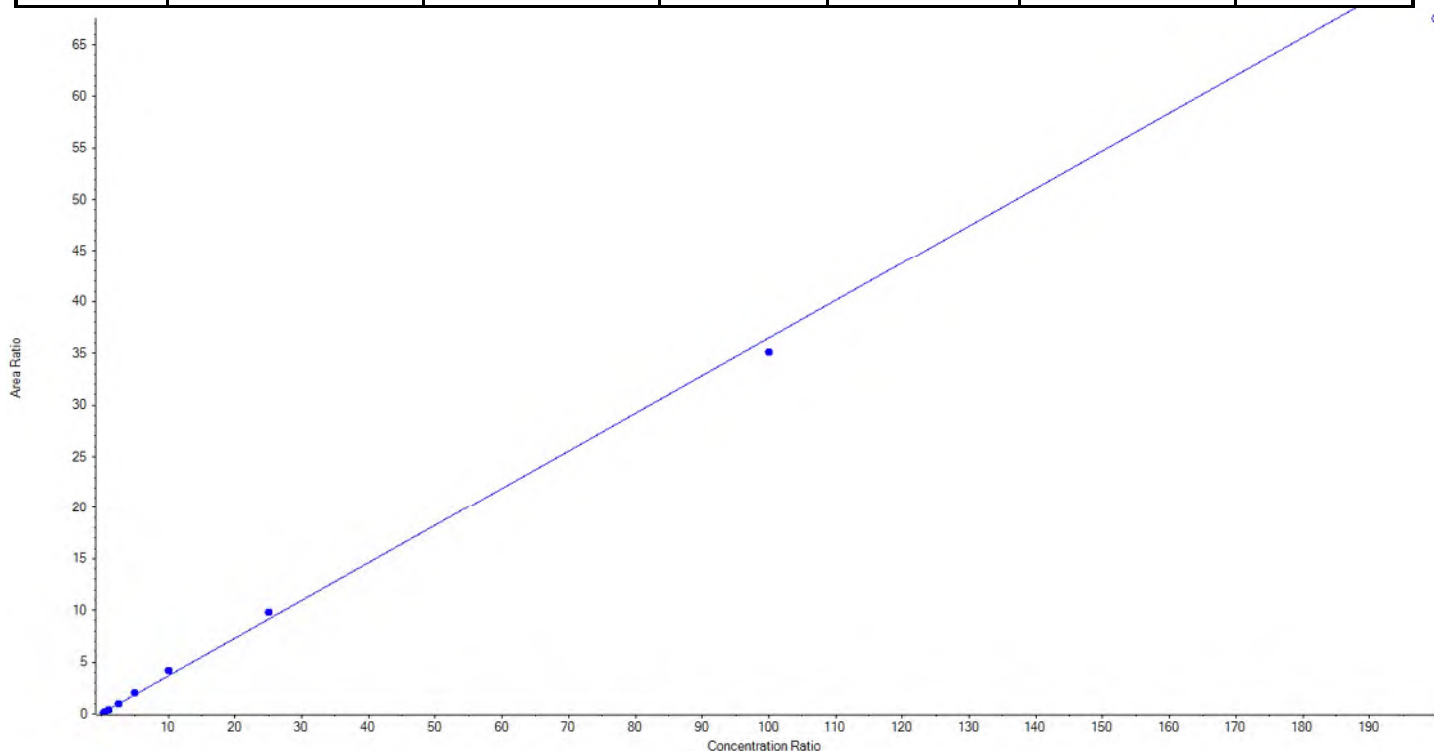
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<b>Analyte Name</b>	NMeFOSAA_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	570.0 / 512.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	d3-MeFOSAA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	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





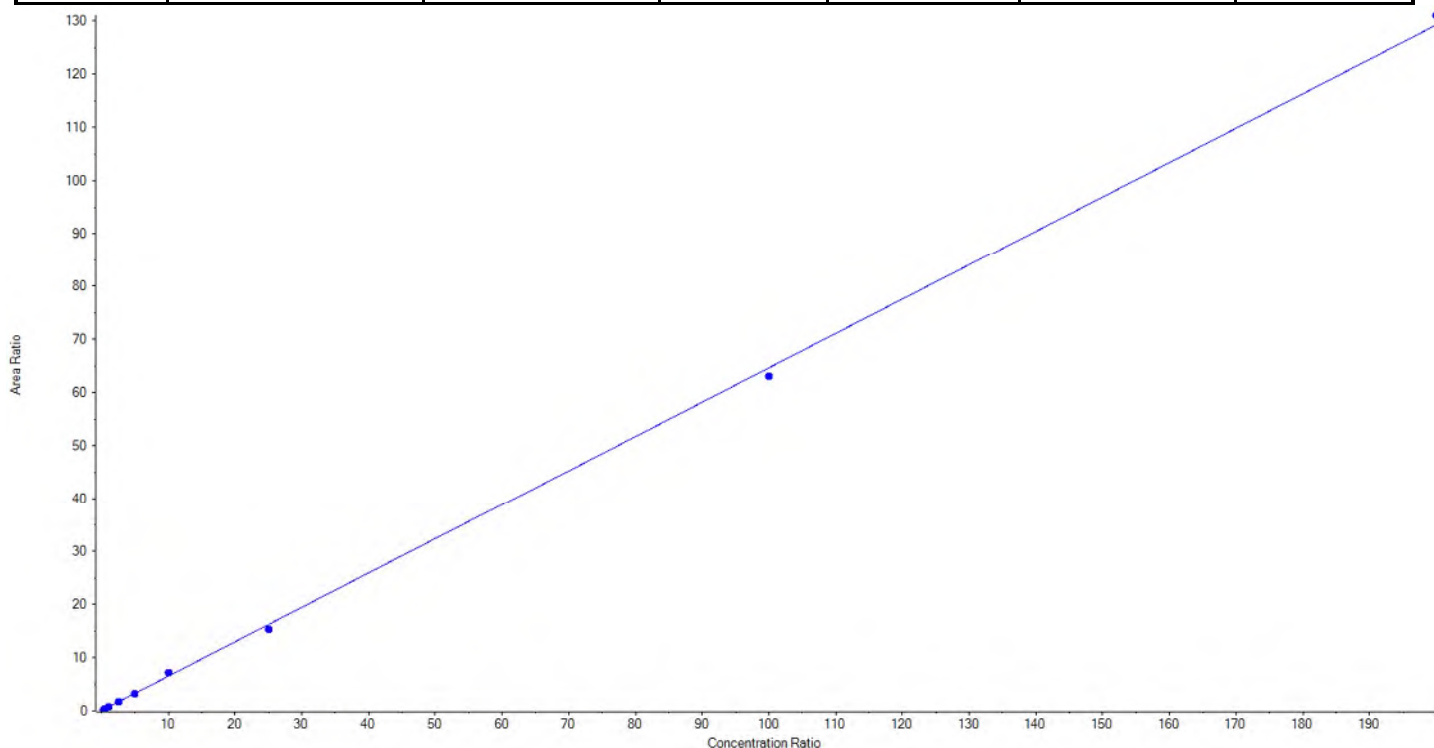
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<b>Analyte Name</b>	NEtFOSAA_1	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	584.0 / 419.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	d5-EtFOSAA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.64602x + 0.04775$  ( $r = 0.99955$ ) (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







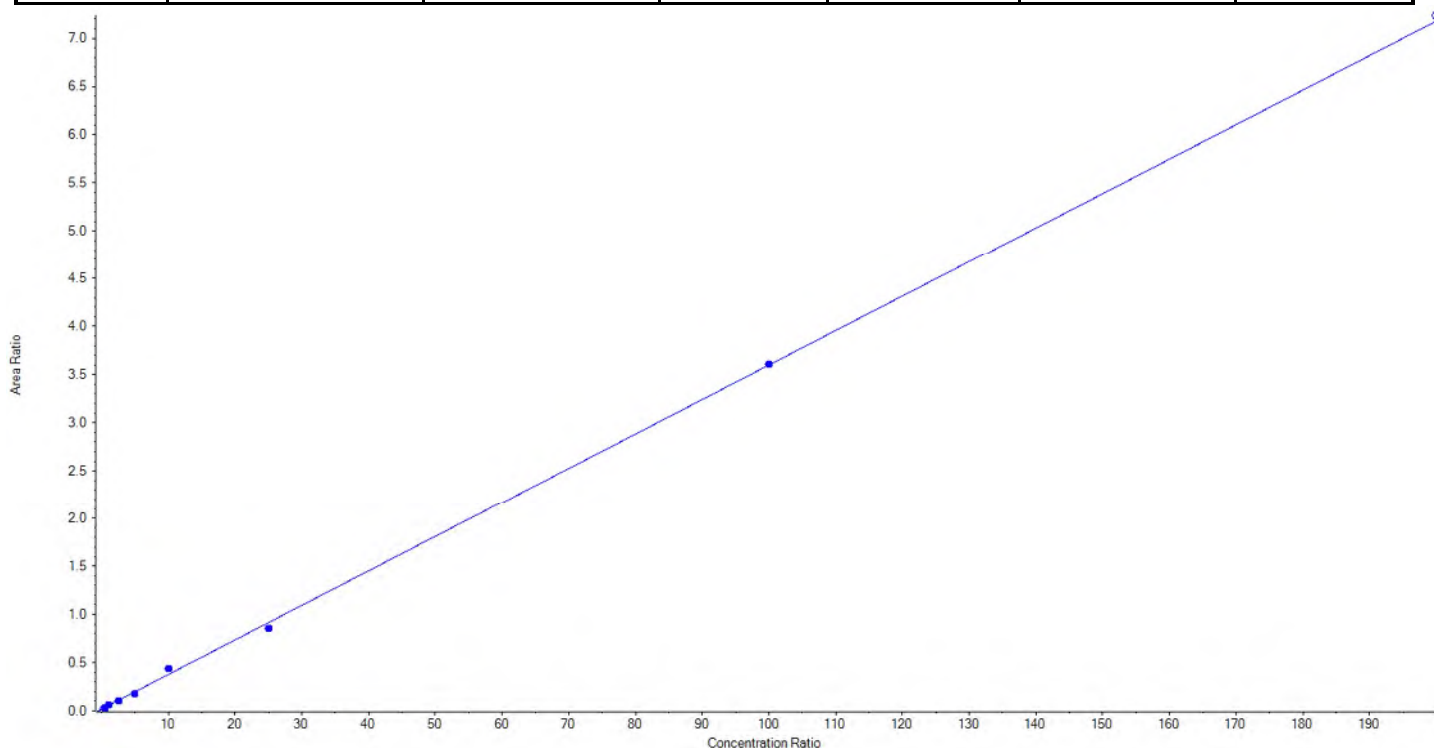
## Calibration Summary Report

Created with Analyst Reporter  
Printed: 05/06/2018 1:53:49 PM

<b>Analyte Name</b>	NEtFOSAA_2	<b>Data File</b>	06022018.wiff
<b>MRM Transition</b>	584.0 / 483.0	<b>Result Table</b>	18-0338_BASE
<b>Internal Standard</b>	d5-EtFOSAA	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	6/4/2018 7:23:13 PM	<b>Acquisition Method</b>	5-0369.dam

Regression Equation:  $y = 0.03579x + 0.01956$  ( $r = 0.99787$ ) (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	36.759626	73.5
4	JV22	L3	True	100.00	129.128134	129.1
5	JV23	L4	True	250.00	238.489695	95.4
6	JV24	L5	True	500.00	454.068059	90.8
7	JV25	L6	True	1000.00	1171.386698	117.1
8	JV26	L7	True	2500.00	2343.425851	93.7
9	JV27	L8	True	10000.00	10026.741936	100.3
10	JV28	L9	False	20000.00	20158.584459	100.8



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	18-0338_BASE
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	1033.548412	1010.00	102.33
PFHxA_2	313.0 / 119.0	1.78	956.028826	1010.00	94.66
PFHpA_1	363.0 / 319.0	2.14	1291.331216	1000.00	129.13
PFHpA_2	363.0 / 169.0	2.14	1279.322595	1000.00	127.93
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	1047.649206	1000.00	104.76
PFOA_2	413.0 / 169.0	2.52	1015.910593	1000.00	101.59
PFNA_1	463.0 / 419.0	2.90	1024.415505	1000.00	102.44
PFNA_2	463.0 / 219.0	2.90	1037.960359	1000.00	103.80
PFOS_1	499.0 / 80.0	2.89	953.947744	1000.00	95.39
PFOS_2	499.0 / 99.0	2.89	921.341526	1000.00	92.13
PFDA_1	513.0 / 469.0	3.25	1064.124001	1000.00	106.41
PFDA_2	513.0 / 219.0	3.25	1019.716776	1000.00	101.97
PFUnA_1	563.0 / 519.0	3.57	1205.047520	1000.00	120.50
PFUnA_2	563.0 / 269.0	3.57	1003.244149	1000.00	100.32
PFDoA_1	613.0 / 569.0	3.86	1196.519429	1000.00	119.65
PFDoA_2	613.0 / 319.0	3.86	1295.153102	1000.00	129.52
PFTTrDA_1	663.0 / 619.0	4.11	1166.321162	1000.00	116.63
PFTTrDA_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	1199.156882	1000.00	119.92
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	1119.654422	1000.00	111.97

Sample Name	JV25 CCV	Injection Vial	7
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:25:26	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.48	1102.706083	1010.00	109.18
PFBS_2	298.9 / 99.0	1.48	1152.980490	1010.00	114.16
PFHxA_1	313.0 / 269.0	1.77	1043.574341	1010.00	103.32
PFHxA_2	313.0 / 119.0	1.77	894.435756	1010.00	88.56
PFHpA_1	363.0 / 319.0	2.13	938.644180	1000.00	93.86
PFHpA_2	363.0 / 169.0	2.13	838.194565	1000.00	83.82
PFHxS_1	399.0 / 80.0	2.15	955.582166	1010.00	94.61
PFHxS_2	399.0 / 99.0	2.15	894.420793	1010.00	88.56
PFOA_1	413.0 / 369.0	2.51	996.912420	1000.00	99.69
PFOA_2	413.0 / 169.0	2.51	896.559707	1000.00	89.66
PFNA_1	463.0 / 419.0	2.88	1068.657654	1000.00	106.87
PFNA_2	463.0 / 219.0	2.88	1060.887831	1000.00	106.09
PFOS_1	499.0 / 80.0	2.88	942.144784	1000.00	94.21
PFOS_2	499.0 / 99.0	2.88	981.904458	1000.00	98.19
PFDA_1	513.0 / 469.0	3.23	1065.889152	1000.00	106.59
PFDA_2	513.0 / 219.0	3.23	962.931948	1000.00	96.29
PFUnA_1	563.0 / 519.0	3.55	1129.750397	1000.00	112.98
PFUnA_2	563.0 / 269.0	3.55	1163.693167	1000.00	116.37
PFDoA_1	613.0 / 569.0	3.84	1058.147820	1000.00	105.81
PFDoA_2	613.0 / 319.0	3.83	1140.419974	1000.00	114.04
PFTTrDA_1	663.0 / 619.0	4.09	1120.179142	1000.00	112.02
PFTTrDA_2	663.0 / 169.0	4.09	1061.800273	1000.00	106.18
PFTeDA_1	713.0 / 669.0	4.31	1129.625751	1000.00	112.96
PFTeDA_2	713.0 / 169.0	4.30	1078.794389	1000.00	107.88
NMeFOSAA_1	570.0 / 419.0	3.39	1258.807648	1000.00	125.88
NMeFOSAA_2	570.0 / 512.0	3.39	1226.476155	1000.00	122.65
NEtFOSAA_1	584.0 / 419.0	3.55	1091.957230	1000.00	109.20
NEtFOSAA_2	584.0 / 483.0	3.55	1253.622311	1000.00	125.36

Sample Name	JV26 CCV	Injection Vial	8
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T02:02:32	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

### Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.49	2524.356094	2525.00	99.97
PFBS_2	298.9 / 99.0	1.49	2521.280556	2525.00	99.85
PFHxA_1	313.0 / 269.0	1.77	2672.140702	2525.00	105.83
PFHxA_2	313.0 / 119.0	1.77	2678.945667	2525.00	106.10
PFHpA_1	363.0 / 319.0	2.13	2407.908786	2500.00	96.32
PFHpA_2	363.0 / 169.0	2.13	2694.948918	2500.00	107.80
PFHxS_1	399.0 / 80.0	2.15	2249.535787	2525.00	89.09
PFHxS_2	399.0 / 99.0	2.15	2258.408038	2525.00	89.44
PFOA_1	413.0 / 369.0	2.51	2407.239659	2500.00	96.29
PFOA_2	413.0 / 169.0	2.50	2297.990383	2500.00	91.92
PFNA_1	463.0 / 419.0	2.88	2504.365549	2500.00	100.17
PFNA_2	463.0 / 219.0	2.88	2498.198952	2500.00	99.93
PFOS_1	499.0 / 80.0	2.87	2898.036469	2500.00	115.92
PFOS_2	499.0 / 99.0	2.87	2885.781047	2500.00	115.43
PFDA_1	513.0 / 469.0	3.23	2775.641298	2500.00	111.03
PFDA_2	513.0 / 219.0	3.23	2670.071955	2500.00	106.80
PFUnA_1	563.0 / 519.0	3.54	2647.350960	2500.00	105.89
PFUnA_2	563.0 / 269.0	3.54	2557.649396	2500.00	102.31
PFDoA_1	613.0 / 569.0	3.83	2651.342413	2500.00	106.05
PFDoA_2	613.0 / 319.0	3.83	2873.026744	2500.00	114.92
PFTTrDA_1	663.0 / 619.0	4.08	2697.895501	2500.00	107.92
PFTTrDA_2	663.0 / 169.0	4.08	2668.775753	2500.00	106.75
PFTeDA_1	713.0 / 669.0	4.30	2678.370808	2500.00	107.13
PFTeDA_2	713.0 / 169.0	4.30	2680.461008	2500.00	107.22
NMeFOSAA_1	570.0 / 419.0	3.39	2955.091381	2500.00	118.20
NMeFOSAA_2	570.0 / 512.0	3.39	2856.699822	2500.00	114.27
NEtFOSAA_1	584.0 / 419.0	3.54	2487.624683	2500.00	99.50
NEtFOSAA_2	584.0 / 483.0	3.54	2275.279650	2500.00	91.01

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	18-0338_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	72.956003	100.00	72.96
d5-EtFOSAA	589.0 / 419.0	3.56	82.450523	100.00	82.45
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	65.086296	92.90	70.06
13C3-PFHxS	402.0 / 99.0	2.15	84.343339	94.60	89.16
13C8-PFOS	507.0 / 99.0	2.89	85.869618	95.70	89.73

Sample Name	JV25 CCV	Injection Vial	7
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:25:26	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_SIS
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	3.83	88.138783	100.00	88.14
d3-MeFOSAA	573.0 / 419.0	3.38	77.491428	100.00	77.49
d5-EtFOSAA	589.0 / 419.0	3.54	83.704044	100.00	83.70
13C5-PFHxA	318.0 / 273.0	1.75	105.738762	100.00	105.74
13C4-PFHpA	367.0 / 322.0	2.12	112.695018	100.00	112.70
13C8-PFOA	421.0 / 376.0	2.50	108.902605	100.00	108.90
13C9-PFNA	472.0 / 427.0	2.87	102.667141	100.00	102.67
13C6-PFDA	519.0 / 474.0	3.22	92.584074	100.00	92.58
13C7-PFUnA	570.0 / 525.0	3.54	89.126376	100.00	89.13
13C2-PFTeDA	715.0 / 670.0	4.30	85.191436	100.00	85.19
13C3-PFBS	302.0 / 99.0	1.47	78.768331	92.90	84.79
13C3-PFHxS	402.0 / 99.0	2.14	90.006808	94.60	95.14
13C8-PFOS	507.0 / 99.0	2.87	93.907849	95.70	98.13

Sample Name	JV26 CCV	Injection Vial	8
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T02:02:32	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_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	97.223377	100.00	97.22
d3-MeFOSAA	573.0 / 419.0	3.38	81.489506	100.00	81.49
d5-EtFOSAA	589.0 / 419.0	3.54	98.482790	100.00	98.48
13C5-PFHxA	318.0 / 273.0	1.76	88.806265	100.00	88.81
13C4-PFHpA	367.0 / 322.0	2.12	94.709624	100.00	94.71
13C8-PFOA	421.0 / 376.0	2.49	96.778597	100.00	96.78
13C9-PFNA	472.0 / 427.0	2.87	94.509430	100.00	94.51
13C6-PFDA	519.0 / 474.0	3.21	93.157679	100.00	93.16
13C7-PFUnA	570.0 / 525.0	3.53	100.038964	100.00	100.04
13C2-PFTeDA	715.0 / 670.0	4.29	91.557461	100.00	91.56
13C3-PFBS	302.0 / 99.0	1.47	82.596268	92.90	88.91
13C3-PFHxS	402.0 / 99.0	2.14	87.908360	94.60	92.93
13C8-PFOS	507.0 / 99.0	2.86	73.988587	95.70	77.31

<b>Sample Name</b>	JW32 ICC	<b>Injection Vial</b>	12
<b>Sample ID</b>	ICC	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Quality Control	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T21:22:01	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## 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	0.069	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	0.283	ü
PFOS_1	499.0 / 80.0	2.89	PFOS			
PFOS_2	499.0 / 99.0	2.89	PFOS	0.176	0.199	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	0.043	0.057	ü
PFDaA_1	613.0 / 569.0	3.86	PFDaA			
PFDaA_2	613.0 / 319.0	3.86	PFDaA	0.157	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	0.581	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.57	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.57	NEtFOSAA	0.063	0.068	ü





Sample Name	JV25 CCV	Injection Vial	7
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:25:26	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	0.327	0.344	ü
PFHxA_1	313.0 / 269.0	1.77	PFHxA			
PFHxA_2	313.0 / 119.0	1.77	PFHxA	0.060	0.069	ü
PFHpA_1	363.0 / 319.0	2.13	PFHpA			
PFHpA_2	363.0 / 169.0	2.13	PFHpA	0.019	0.023	ü
PFHxS_1	399.0 / 80.0	2.15	PFHxS			
PFHxS_2	399.0 / 99.0	2.15	PFHxS	0.273	0.302	ü
PFOA_1	413.0 / 369.0	2.51	PFOA			
PFOA_2	413.0 / 169.0	2.51	PFOA	0.061	0.071	ü
PFNA_1	463.0 / 419.0	2.88	PFNA			
PFNA_2	463.0 / 219.0	2.88	PFNA	0.284	0.283	ü
PFOS_1	499.0 / 80.0	2.88	PFOS			
PFOS_2	499.0 / 99.0	2.88	PFOS	0.190	0.199	ü
PFDA_1	513.0 / 469.0	3.23	PFDA			
PFDA_2	513.0 / 219.0	3.23	PFDA	0.038	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
PFDaA_1	613.0 / 569.0	3.84	PFDaA			
PFDaA_2	613.0 / 319.0	3.83	PFDaA	0.157	0.158	ü
PFTrDA_1	663.0 / 619.0	4.09	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.09	PFTrDA	0.067	0.070	ü
PFTeDA_1	713.0 / 669.0	4.31	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	0.573	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.55	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.55	NEtFOSAA	0.066	0.068	ü



Sample Name	JV26 CCV	Injection Vial	8
Sample ID	CCV	Injection Volume	10.00
Sample Type	Quality Control	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T02:02:32	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	0.070	0.069	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	0.292	0.302	ü
PFOA_1	413.0 / 369.0	2.51	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	0.286	0.283	ü
PFOS_1	499.0 / 80.0	2.87	PFOS			
PFOS_2	499.0 / 99.0	2.87	PFOS	0.180	0.199	ü
PFDA_1	513.0 / 469.0	3.23	PFDA			
PFDA_2	513.0 / 219.0	3.23	PFDA	0.041	0.041	ü
PFUnA_1	563.0 / 519.0	3.54	PFUnA			
PFUnA_2	563.0 / 269.0	3.54	PFUnA	0.049	0.057	ü
PFDaA_1	613.0 / 569.0	3.83	PFDaA			
PFDaA_2	613.0 / 319.0	3.83	PFDaA	0.156	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	4.30	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.30	PFTeDA	0.051	0.053	ü
NMeFOSAA_1	570.0 / 419.0	3.39	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.39	NMeFOSAA	0.568	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.54	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.54	NEtFOSAA	0.052	0.068	ü



Sample Name	J6252-FS(3)	Injection Vial	24
Sample ID	PSC51-MW13S-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:53:05	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	0.242	0.344	ü
PFHxA_1	313.0 / 269.0	1.77	PFHxA			
PFHxA_2	313.0 / 119.0	1.80	PFHxA	0.120	0.069	
PFHpA_1	363.0 / 319.0	2.14	PFHpA			
PFHpA_2	363.0 / 169.0	2.11	PFHpA	0.051	0.023	
PFHxS_1	399.0 / 80.0	2.14	PFHxS			
PFHxS_2	399.0 / 99.0	2.15	PFHxS	0.307	0.302	ü
PFOA_1	413.0 / 369.0	2.50	PFOA			
PFOA_2	413.0 / 169.0	2.47	PFOA	0.144	0.071	
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.283	ü
PFOS_1	499.0 / 80.0	2.76	PFOS			
PFOS_2	499.0 / 99.0	2.80	PFOS	0.135	0.199	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.057	ü
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	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	0.068	ü



Sample Name	J6253-FS(4)	Injection Vial	29
Sample ID	DRMO-MW2-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:08:37	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	0.223	0.344	ü
PFHxA_1	313.0 / 269.0	1.77	PFHxA			
PFHxA_2	313.0 / 119.0	1.77	PFHxA	0.071	0.069	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	0.282	0.302	ü
PFOA_1	413.0 / 369.0	2.51	PFOA			
PFOA_2	413.0 / 169.0	2.50	PFOA	0.084	0.071	ü
PFNA_1	463.0 / 419.0	2.88	PFNA			
PFNA_2	463.0 / 219.0	2.88	PFNA	0.288	0.283	ü
PFOS_1	499.0 / 80.0	2.87	PFOS			
PFOS_2	499.0 / 99.0	2.88	PFOS	0.182	0.199	ü
PFDA_1	513.0 / 469.0	3.23	PFDA			
PFDA_2	513.0 / 219.0	3.21	PFDA	0.030	0.041	ü
PFUnA_1	563.0 / 519.0	3.55	PFUnA			
PFUnA_2	563.0 / 269.0	3.51	PFUnA	0.094	0.057	
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	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	0.068	ü



Sample Name	J6246-FS(3)	Injection Vial	21
Sample ID	FFTA-EB01-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-04T23:20:44	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	0.467	0.344	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.069	ü
PFHpA_1	363.0 / 319.0	2.16	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.023	
PFHxS_1	399.0 / 80.0	2.16	PFHxS			
PFHxS_2	399.0 / 99.0	2.15	PFHxS	0.319	0.302	ü
PFOA_1	413.0 / 369.0	2.52	PFOA			
PFOA_2	413.0 / 169.0	2.50	PFOA	0.084	0.071	ü
PFNA_1	463.0 / 419.0	2.89	PFNA			
PFNA_2	463.0 / 219.0	2.89	PFNA	0.233	0.283	ü
PFOS_1	499.0 / 80.0	2.89	PFOS			
PFOS_2	499.0 / 99.0	2.89	PFOS	0.186	0.199	ü
PFDA_1	513.0 / 469.0	3.24	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	
PFUnA_1	563.0 / 519.0	3.56	PFUnA			
PFUnA_2	563.0 / 269.0	3.52	PFUnA	0.069	0.057	ü
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	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	0.068	ü

<b>Sample Name</b>	J6247-FS(3)	<b>Injection Vial</b>	22
<b>Sample ID</b>	FFTA-A-EB02-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T23:31:31	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

### 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	0.346	0.344	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.069	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	2.15	PFHxS			
PFHxS_2	399.0 / 99.0	2.17	PFHxS	0.433	0.302	ü
PFOA_1	413.0 / 369.0	2.51	PFOA			
PFOA_2	413.0 / 169.0	2.49	PFOA	0.105	0.071	ü
PFNA_1	463.0 / 419.0	2.89	PFNA			
PFNA_2	463.0 / 219.0	2.90	PFNA	0.428	0.283	
PFOS_1	499.0 / 80.0	2.88	PFOS			
PFOS_2	499.0 / 99.0	2.88	PFOS	0.201	0.199	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.057	ü
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	N/A	0.158	ü
PFTTrDA_1	663.0 / 619.0	N/A	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	PFTTrDA	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	0.068	ü

<b>Sample Name</b>	J6250-FS(3)	<b>Injection Vial</b>	23
<b>Sample ID</b>	PSC51-MW14D-052418	<b>Injection Volume</b>	10.00
<b>Sample Type</b>	Unknown	<b>Instrument Name</b>	QTRAP 5500
<b>Acquisition Date</b>	2018-06-04T23:42:19	<b>Data File</b>	06022018.wiff
<b>Acquisition Method</b>	5-0369.dam	<b>Result Table</b>	18-0338_BASE
<b>Sample Comment</b>			

## Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.46	PFBS			
PFBS_2	298.9 / 99.0	1.49	PFBS	0.200	0.344	ü
PFHxA_1	313.0 / 269.0	1.78	PFHxA			
PFHxA_2	313.0 / 119.0	1.77	PFHxA	0.081	0.069	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	2.15	PFHxS			
PFHxS_2	399.0 / 99.0	2.15	PFHxS	0.282	0.302	ü
PFOA_1	413.0 / 369.0	2.50	PFOA			
PFOA_2	413.0 / 169.0	2.48	PFOA	0.079	0.071	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.283	ü
PFOS_1	499.0 / 80.0	2.75	PFOS			
PFOS_2	499.0 / 99.0	2.81	PFOS	0.074	0.199	
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.057	ü
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	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	0.068	ü



Sample Name	J6252MS-FS(3)	Injection Vial	25
Sample ID	PSC51-MW13S-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:03:52	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	0.308	0.344	ü
PFHxA_1	313.0 / 269.0	1.77	PFHxA			
PFHxA_2	313.0 / 119.0	1.77	PFHxA	0.072	0.069	ü
PFHpA_1	363.0 / 319.0	2.13	PFHpA			
PFHpA_2	363.0 / 169.0	2.13	PFHpA	0.018	0.023	ü
PFHxS_1	399.0 / 80.0	2.15	PFHxS			
PFHxS_2	399.0 / 99.0	2.15	PFHxS	0.288	0.302	ü
PFOA_1	413.0 / 369.0	2.51	PFOA			
PFOA_2	413.0 / 169.0	2.51	PFOA	0.068	0.071	ü
PFNA_1	463.0 / 419.0	2.88	PFNA			
PFNA_2	463.0 / 219.0	2.88	PFNA	0.290	0.283	ü
PFOS_1	499.0 / 80.0	2.88	PFOS			
PFOS_2	499.0 / 99.0	2.88	PFOS	0.173	0.199	ü
PFDA_1	513.0 / 469.0	3.23	PFDA			
PFDA_2	513.0 / 219.0	3.23	PFDA	0.042	0.041	ü
PFUnA_1	563.0 / 519.0	3.55	PFUnA			
PFUnA_2	563.0 / 269.0	3.55	PFUnA	0.054	0.057	ü
PFDaA_1	613.0 / 569.0	3.84	PFDaA			
PFDaA_2	613.0 / 319.0	3.83	PFDaA	0.151	0.158	ü
PFTrDA_1	663.0 / 619.0	4.09	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.09	PFTrDA	0.067	0.070	ü
PFTeDA_1	713.0 / 669.0	4.31	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.30	PFTeDA	0.051	0.053	ü
NMeFOSAA_1	570.0 / 419.0	3.39	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.39	NMeFOSAA	0.540	0.590	ü
NEtFOSAA_1	584.0 / 419.0	3.55	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.55	NEtFOSAA	0.057	0.068	ü





Sample Name	J6248-FS(4)	Injection Vial	27
Sample ID	DRMO-MW11-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:47:01	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
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	0.245	0.344	ü
PFHxA_1	313.0 / 269.0	1.76	PFHxA			
PFHxA_2	313.0 / 119.0	1.76	PFHxA	0.063	0.069	ü
PFHpA_1	363.0 / 319.0	2.12	PFHpA			
PFHpA_2	363.0 / 169.0	2.11	PFHpA	0.018	0.023	ü
PFHxS_1	399.0 / 80.0	2.14	PFHxS			
PFHxS_2	399.0 / 99.0	2.14	PFHxS	0.282	0.302	ü
PFOA_1	413.0 / 369.0	2.50	PFOA			
PFOA_2	413.0 / 169.0	2.49	PFOA	0.092	0.071	ü
PFNA_1	463.0 / 419.0	2.88	PFNA			
PFNA_2	463.0 / 219.0	2.87	PFNA	0.317	0.283	ü
PFOS_1	499.0 / 80.0	2.85	PFOS			
PFOS_2	499.0 / 99.0	2.87	PFOS	0.173	0.199	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	ü
PFUnA_1	563.0 / 519.0	3.55	PFUnA			
PFUnA_2	563.0 / 269.0	3.50	PFUnA	0.059	0.057	ü
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	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	0.068	ü



Sample Name	J6248-FS-D(5)	Injection Vial	28
Sample ID	DRMO-MW11-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T00:57:49	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	N/A	PFBS			
PFBS_2	298.9 / 99.0	N/A	PFBS	N/A	0.344	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.069	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	2.15	PFHxS			
PFHxS_2	399.0 / 99.0	2.15	PFHxS	0.282	0.302	ü
PFOA_1	413.0 / 369.0	N/A	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.071	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.283	ü
PFOS_1	499.0 / 80.0	2.86	PFOS			
PFOS_2	499.0 / 99.0	2.88	PFOS	0.175	0.199	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.057	ü
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	N/A	0.158	ü
PFTTrDA_1	663.0 / 619.0	N/A	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	PFTTrDA	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	0.068	ü



Sample Name	J6253-FS-D(5)	Injection Vial	30
Sample ID	DRMO-MW2-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:19:25	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	N/A	PFBS			
PFBS_2	298.9 / 99.0	N/A	PFBS	N/A	0.344	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.069	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	N/A	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	PFHxS	N/A	0.302	ü
PFOA_1	413.0 / 369.0	N/A	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.071	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.283	ü
PFOS_1	499.0 / 80.0	2.88	PFOS			
PFOS_2	499.0 / 99.0	2.88	PFOS	0.186	0.199	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.057	ü
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	N/A	0.158	ü
PFTTrDA_1	663.0 / 619.0	N/A	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	PFTTrDA	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	0.068	ü



Sample Name	J6254-FS(4)	Injection Vial	31
Sample ID	DRM0-FD03-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:30:12	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.47	PFBS			
PFBS_2	298.9 / 99.0	1.46	PFBS	0.259	0.344	ü
PFHxA_1	313.0 / 269.0	1.72	PFHxA			
PFHxA_2	313.0 / 119.0	1.72	PFHxA	0.063	0.069	ü
PFHpA_1	363.0 / 319.0	2.05	PFHpA			
PFHpA_2	363.0 / 169.0	2.04	PFHpA	0.023	0.023	ü
PFHxS_1	399.0 / 80.0	2.07	PFHxS			
PFHxS_2	399.0 / 99.0	2.07	PFHxS	0.275	0.302	ü
PFOA_1	413.0 / 369.0	2.42	PFOA			
PFOA_2	413.0 / 169.0	2.39	PFOA	0.097	0.071	ü
PFNA_1	463.0 / 419.0	2.79	PFNA			
PFNA_2	463.0 / 219.0	2.79	PFNA	0.320	0.283	ü
PFOS_1	499.0 / 80.0	2.76	PFOS			
PFOS_2	499.0 / 99.0	2.78	PFOS	0.173	0.199	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.057	ü
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	N/A	0.158	ü
PFTTrDA_1	663.0 / 619.0	N/A	PFTTrDA			
PFTTrDA_2	663.0 / 169.0	N/A	PFTTrDA	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	0.068	ü



Sample Name	J6254-FS-D(5)	Injection Vial	32
Sample ID	DRM0-FD03-052418	Injection Volume	10.00
Sample Type	Unknown	Instrument Name	QTRAP 5500
Acquisition Date	2018-06-05T01:40:59	Data File	06022018.wiff
Acquisition Method	5-0369.dam	Result Table	18-0338_BASE
Sample Comment			

## Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	N/A	PFBS			
PFBS_2	298.9 / 99.0	N/A	PFBS	N/A	0.344	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.069	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	2.15	PFHxS			
PFHxS_2	399.0 / 99.0	2.15	PFHxS	0.289	0.302	ü
PFOA_1	413.0 / 369.0	N/A	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.071	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.283	ü
PFOS_1	499.0 / 80.0	2.87	PFOS			
PFOS_2	499.0 / 99.0	2.87	PFOS	0.274	0.199	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.057	ü
PFDaA_1	613.0 / 569.0	N/A	PFDaA			
PFDaA_2	613.0 / 319.0	N/A	PFDaA	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	0.068	ü

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	18-0338	SITE 00046	SITE 00046	DRMO-MW11R	Monitoring well	432232.53	2132031.76	N6247016D9008	N6945017F0375	TETRA TECH, INC.	DRMO-MW11R-052418-D
SOUTHEAST	JACKSONVILLE_NAS	18-0338	SITE 00046	SITE 00046	DRMO-MW2	Monitoring well	432117.26	2132606.8	N6247016D9008	N6945017F0375	TETRA TECH, INC.	DRMO-MW2-052418
SOUTHEAST	JACKSONVILLE_NAS	18-0338	SITE 00046	SITE 00046	DRMO-MW11R	Monitoring well	432232.53	2132031.76	N6247016D9008	N6945017F0375	TETRA TECH, INC.	DRMO-MW11R-052418
SOUTHEAST	JACKSONVILLE_NAS	18-0338	SITE 00051	SITE 00051	PSC51-MW-14D	Monitoring well	435602.9316	2131240.144	N6247016D9008	N6945017F0375	TETRA TECH, INC.	PSC51-MW14D-052418
SOUTHEAST	JACKSONVILLE_NAS	18-0338	SITE 00051	SITE 00051	PSC51-MW-13S	Monitoring well	435603.9842	2131242.29	N6247016D9008	N6945017F0375	TETRA TECH, INC.	PSC51-MW13S-052418
SOUTHEAST	JACKSONVILLE_NAS	18-0338							N6247016D9008	N6945017F0375	TETRA TECH, INC.	FFTA-EB02-052418
SOUTHEAST	JACKSONVILLE_NAS	18-0338							N6247016D9008	N6945017F0375	TETRA TECH, INC.	FFTA-EB01-052418

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	18-0338	SITE 00046	Ground water	Field duplicate	24-May-18	537	Perfluoroalkyl Compounds	20190201100027.00
SOUTHEAST	JACKSONVILLE_NAS	18-0338	SITE 00046	Ground water	Normal (Regular)	24-May-18	537	Perfluoroalkyl Compounds	20190201100027.00
SOUTHEAST	JACKSONVILLE_NAS	18-0338	SITE 00046	Ground water	Normal (Regular)	24-May-18	537	Perfluoroalkyl Compounds	20190201100027.00
SOUTHEAST	JACKSONVILLE_NAS	18-0338	SITE 00051	Ground water	Normal (Regular)	24-May-18	537	Perfluoroalkyl Compounds	20190201100027.00
SOUTHEAST	JACKSONVILLE_NAS	18-0338	SITE 00051	Ground water	Normal (Regular)	24-May-18	537	Perfluoroalkyl Compounds	20190201100027.00
SOUTHEAST	JACKSONVILLE_NAS	18-0338		Water for QC samples	QC Sample	24-May-18	537	Perfluoroalkyl Compounds	20190201100027.00
SOUTHEAST	JACKSONVILLE_NAS	18-0338		Water for QC samples	QC Sample	24-May-18	537	Perfluoroalkyl Compounds	20190201100027.00