Navy_CLEAN_PFAS_FOIA_request_covers.indd

NAVFAC
Naval Facilities Engineering Command

Groundwater Sample Results, Level 2 Laboratory Report, Level 4 Laboratory Report, Electronic Data Deliverable, Data Validation Report, and the Sample Location Report, SDG 18-0621

Naval Air Station Point Mugu
Point Mugu, California

July 2019

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

CTO-4164 Naval Base Ventura County, California
Project No 100110125-01
PFAS by DoD QSM 5.1 Table B-15

SD

Batch 18-0621

Package DP-18-0319

Submitted to:
CH2M
1100 NE Circle Blvd Suite 300
Corvallis, OR 97330 USA

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

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CTO-4164 Naval Base Ventura County, California
Project No 100110125-01
PFAS by DoD QSM 5.1 Table B-15

SD

Batch 18-0621

Package DP-18-0319

Submitted to:
CH2M
1100 NE Circle Blvd Suite 300
Corvallis, OR 97330 USA

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

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

Analyst Approval: Lauren Griffith 2018.10.30 16:46:42 -04'00'

QC Chemist Approval: Digitally signed by devinec@battelle.org DN: cn=devinec@battelle.org Date: 2018.11.07 22:24:28 -05'00'

Project Manager Approval: Digitally signed by Jonathan Thorn Date: 2018.11.08 09:47:31 -05'00'

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CTO-4164 Naval Base Ventura County, California
Project No 100110125-01
PFAS by DoD QSM 5.1 Table B-15

SD

Batch 18-0621

Package DP-18-0319

1	***Miscellaneous Documentation*** Case Narrative, Laboratory Accreditations.	1
2	***Chain of Custody Records*** Sample Receipt Records	11
3	***Tables*** Analytical Data Tables, Qualifier Definitions.	27

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Signature Page

Battelle 2018 (1 of 2)
Signature Page

Name (Printed)	Signature	Initials	Date
Jonathan Thorn		JRT	4/4/2018
Robert Lizotte, Jr.		BL	4.4.2018
FRANCO PALA			4-4-2018
Carla Devine		CRD	4/4/18
Denise Schumitz		DMS	4/4/18
Candace Penn McCoy		CPM	4/4/2018
Rich Rostucci		RR	4/4/2018
Michael Mehta			4/4/2018
Christie Usher		cu	4/4/18
Kevin McInerney			4/4/18
Stephanie Schultz		SAS	4/4/18
Jordan Tower		JCT	4/4/18
KRISTEN NICHOLS		KN	4/4/18
Clinton H Brown		CB	4/4/18
Matt Schumitz		MS	4-4-18
Sam Guimaraes		SG	4-4-18
Lauren Griffith			4.4.18

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Signature Page

Battelle 2018 (2 of 2)
Signature Page

Name (Printed)	Signature	Initials	Date
KAVITHA DASU		KD	04/04/18
Kayla Lamarre		KAL	04/04/18
Weidong Li		W.L	04/04/18
Tracy W Stenner		TWS	04/04/18
Ellyn M Fitch		EMF	12-April-2018
Gail DeRuzzo		GD	4/18/18
Zachary Willenberg		ZJW	4/20/18

Sample Summary

Client: CH2M
SDG: 18-0621
Project/Site: Naval Base Ventura County
CTO: 4164

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Receipt Date
CS011PB-FS	Procecural Blank	SEDIMENT	10/18/2018	10/18/2018
CS012LCS-FS	Laboratory Control Sample	SEDIMENT	10/18/2018	10/18/2018
J8777-FS	VC-PM323-324-SD01-000H	SD	10/8/2018	10/12/2018
J8778-FS	VC-PM323-324-SD01-0102	SD	10/8/2018	10/12/2018
J8779-FS	VC-PM553-SD01-000H	SD	10/8/2018	10/12/2018
J8780-FS	VC-PM553-SD01-0102	SD	10/8/2018	10/12/2018
J8781MS-FS	VC-PM553-SD01-0102-MS	SD	10/8/2018	10/12/2018
J8782MSD-FS	VC-PM553-SD01-0102-MSD	SD	10/8/2018	10/12/2018
J8783-FS	VC-PM3009-SD01-000H	SD	10/8/2018	10/12/2018
J8784-FS	VC-PM3009-SD01-0102	SD	10/8/2018	10/12/2018
J8785-FS	VC-PM372-SD01-000H	SD	10/8/2018	10/12/2018
J8786-FS	VC-PM372-SD01-0102	SD	10/8/2018	10/12/2018
J8787-FS	VC-CS11-SD01-000H	SD	10/9/2018	10/12/2018
J8788-FS	VC-CS11-SD01-0102	SD	10/9/2018	10/12/2018
J8809-FS	VC-STP-SD01-000H	SD	10/9/2018	10/12/2018
J8810-FS	VC-STP-SD01-0102	SD	10/9/2018	10/12/2018
J8811-FS	VC-STP-SD02-000H	SD	10/9/2018	10/12/2018
J8812-FS	VC-STP-SD02-0102	SD	10/9/2018	10/12/2018
J8813-FS	VC-STP-SD03-000H	SD	10/9/2018	10/12/2018
J8814-FS	VC-STP-SD03-0102	SD	10/9/2018	10/12/2018
J8815-FS	VC-STP-SD04-000H	SD	10/9/2018	10/12/2018
J8816-FS	VC-STP-SD04-0102	SD	10/9/2018	10/12/2018

Miscellaneous Documentation

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QA/QC Summary
Batch 18-0621

Project:	CTO-4164 Naval Base Ventura County, California
Parameters:	PFAS
Laboratory:	Battelle, Norwell, MA
Matrix:	SD
Data Set:	DP-18-0319
Analytical SOP:	5-369
Method Reference:	PFAS to QSM 5.1 Table B-15

Sample Custody		
Collection Date	Receipt Date	Temp (°C)
10/8-9/2018	10/12/2018	1.3 and 0.7
Corrective Actions	On COC#7 (page 5 of 8 on the hand written COC forms from the field), all samples on this page, except for the SD01 set of samples, do not match collection times from the COC to the sample label. Client verified that COC records are correct.	
Sample Storage	The samples were stored refrigerated until extraction.	
Related samples	NA	

	METHOD SUMMARIES
Sample Preparation	Solid samples were aliquoted into extraction tubes and spiked with surrogates prior to the addition of solvent. The sediment was serially extracted on the Geno/Grinder with 0.4% NH_3 in methanol. 1 mL of extract was refined using ENVI-carb SPE cartridges. Extracts were 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	All samples were pre-screened prior to extraction to check potential levels of PFAS in the samples.
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/g concentrations.
Analysis Comments	Samples analyzed on Sciex 5500 LC-MS/MS. When detected, PFHxS and PFOS contain both linear and branched isomers. Data file 5500_10242018_05-0369.wiff utilizes the calibration from data file Data18-0590_18-01588_18-0589.wiff and reported from the result table files 18-0620_18-0621_18-0622_BASE and 18-0620_18-0621_18-0622_SIS.

Holding Times	Extraction Date(s)	Analysis Date(s)
	10/18/2018	10/17, 24, and 25/2018

QA/QC Summary
Batch 18-0621

Procedural Blank (PB)	A PB was prepared with this analytical batch to ensure the sample extraction and analysis methods are free of contamination.
≤ ½ the LOQ Samples >10x PB	No exceedances noted.
	No comments.

Laboratory Control Spike (LCS)	A LCS was prepared with this analytical batch. The percent recoveries of target analytes were calculated to measure accuracy.
Laboratory derived control limits for recovery	No exceedances noted.
	No comments.

Matrix Spike and Matrix Spike Duplicate (MS/MSD)	A MS/MSD was prepared with this analytical batch. The percent recoveries of target analytes were calculated to measure accuracy.
Laboratory derived control limits for recovery and <30% RPD	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.

Internal Standard Analytes	Labelled analog compounds were added prior to analysis.
+/- 50% of the area of the L5 calibration point.	No exceedances noted.
	No comments.

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

Independent Calibration Check (ICC)	The independent check was run after each initial calibration to verify the calibration. This standard is from a different source than the ICAL.
+/- 30% of true value	No exceedances noted.
	No comments.

QA/QC Summary
Batch 18-0621

Continuing Calibration Verification (CCV)	Continuing calibration standards were run at the beginning and end of 10 injections and at the end of the sequence to ensure that initial calibration is still valid.
+/- 30% of true value	No exceedances noted.
	No comments.

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

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Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project Number: 100110125-01
Preparation Batch: 18-0621
Data Set: DP-18-0319
Test Code: Master_369

QC Parameter:	Exceed:	Justification:
Procedural Blank	0	None
PB Measurement Quality Objective	0	None
Laboratory Control Sample	0	None
Matrix Spike / Matrix Spike Duplicate Recovery	0	None
Matrix Spike / Matrix Spike Duplicate Precision	0	None
Extracted Internal Standard Analytes (Surrogates)	0	None
Instrument Calibration	0	None
Instrument Blank	0	None
Independent Calibration Check	0	None
Continuing Calibration Verification	0	None

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BATTELLE - NORWELL OPERATIONS
MISCELLANEOUS DOCUMENTATION FORM

Project Title:	CTO-4164 Naval Base Ventura County,	**Data Set Number:**	DP-18-0319
Project Number:	100110125-01	**Prep Batch Number:**	18-0621
Entered By:	Lauren Griffith	**Entered On:**	10/30/2018
Test Code (Matrix Type):	Master_369(S)		

Samples that were manually integrated are noted on the quant reports with the comment (TRUE).
LMG 10/30/18

Data file 5500_10242018_05-0369.wiff utilizes the calibration from data file Data18-0590_18-01588_18-0589.wiff
LMG 10/30/18

KB79 was not utilized for the SIS method for d3-MeFOSAA. There is no impact on the data once this point is removed.
LMG 10/30/18

Task Leader Approval:

SupervisorApproval:

PM Approval:

Digitally signed by Jonathan Thorn
Date: 2018.10.30 17:11:33 -04'00'

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01
Preparation Batch: 18-0621
Data Set: DP-18-0319

		CS011PB-FS (Procedural Blank)	CS012LCS-FS (Laboratory Control Sample)	J8781MS-FS (VC-PM553-SD01-0102-MS)	J8782MSD-FS (VC-PM553-SD01-0102-MSD)	J8777-FS (VC-PM323-324-SD01-000H)	J8778-FS (VC-PM323-324-SD01-0102)	J8779-FS (VC-PM553-SD01-000H)	J8780-FS (VC-PM553-SD01-0102)
PFHxA	307-24-4	-	L	L	L	-	-	-	-
PFHpA	375-85-9	-	L	L	L	-	-	-	-
PFOA	335-67-1	-	L	L	L	-	-	-	-
PFNA	375-95-1	-	L	L	L	-	-	-	-
PFDA	335-76-2	-	L	L	L	-	-	-	-
PFUnA	2058-94-8	-	L	L	L	-	-	-	-
PFDoA	307-55-1	-	L	L	L	-	-	-	-
PFTrDA	72629-94-8	-	L	L	L	-	-	-	-
PFTeDA	376-06-7	-	L	L	L	-	-	-	-
NMeFOSAA	2355-31-9	-	L	L	L	-	-	-	-
NEtFOSAA	2991-50-6	-	L	L	L	-	-	-	-
PFBS	375-73-5	-	L	L	L	-	-	-	-
PFHxS	355-46-4	-	L/Br	L/Br	L/Br	-	-	-	-
PFOS	1763-23-1	-	L/Br	L/Br	L/Br	L/Br	L/Br	-	-

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

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01
Preparation Batc
Data Set: DP-18-

	J8783-FS (VC-PM3009-SD01-000H)	J8784-FS (VC-PM3009-SD01-0102)	J8785-FS (VC-PM372-SD01-000H)	J8786-FS (VC-PM372-SD01-0102)	J8787-FS (VC-CS11-SD01-000H)	J8788-FS (VC-CS11-SD01-0102)	J8809-FS (VC-STP-SD01-000H)	J8810-FS (VC-STP-SD01-0102)
PFHxA	-	-	-	-	-	-	-	-
PFHpA	-	-	-	-	-	-	-	-
PFOA	-	-	-	-	-	-	-	-
PFNA	-	-	-	-	-	-	-	-
PFDA	-	-	-	-	-	-	-	-
PFUnA	-	-	-	-	-	-	-	-
PFDoA	-	-	-	-	-	-	-	-
PFTrDA	-	-	-	-	-	-	-	-
PFTeDA	-	-	-	-	-	-	-	-
NMeFOSAA	-	-	-	-	-	-	-	-
NEtFOSAA	-	-	-	-	-	-	-	-
PFBS	-	-	-	-	-	-	-	-
PFHxS	-	-	-	-	-	-	-	-
PFOS	-	-	-	-	L/Br	-	L/Br	-

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

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01
Preparation Batc
Data Set: DP-18-

	J8811-FS (VC-STP-SD02-000H)	J8812-FS (VC-STP-SD02-0102)	J8813-FS (VC-STP-SD03-000H)	J8814-FS (VC-STP-SD03-0102)	J8815-FS (VC-STP-SD04-000H)	J8816-FS (VC-STP-SD04-0102)
PFHxA	-	-	-	-	-	-
PFHpA	-	-	-	-	-	-
PFOA	-	-	-	-	-	-
PFNA	-	-	-	-	-	-
PFDA	-	-	-	-	-	-
PFUnA	-	-	-	-	-	-
PFDoA	-	-	-	-	-	-
PFTrDA	-	-	-	-	-	-
PFTeDA	-	-	-	-	-	-
NMeFOSAA	-	-	-	-	-	-
NEtFOSAA	-	-	-	-	-	-
PFBS	-	-	-	-	-	-
PFHxS	-	-	-	-	-	-
PFOS	-	L/Br	-	-	L/Br	L/Br

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

ACCREDITATIONS

Accrediting Authority	Laboratory ID
U.S. Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP)	91667
State of Florida Department of Health	E87856
State of New York Department of Health	12105
Commonwealth of Pennsylvania Department of Environmental Protection	68-05687
State of Washington Department of Ecology	C1050
State of California	3045
Commonwealth of Massachusetts	E87856

Current certificates and lists of accredited parameters are available upon request.

Custody Records

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ShpNo SHP-181012-02

Battelle Project No:

Sample Receipt Form

Approved: ☐ Authorized ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Friday, October 12, 2018 10:30 AM

No. of Shipping Containers: 2

SHIPMENT

Method of Delivery: Commercial Carrier **Tracking Number:** Fed Ex

COC Forms: ☑ Shipped with samples ☐ No Forms

Cooler(s)/Box(es)

Cntr	Type	Tracking No.	Seal	Seal	Container	Therm.	Temp C	Smps
1 of 2	Cooler	7832 0156 6760	Custody Seals	Intact	Intact	Therm_1	1.3	19
2 of 2	Cooler	7832 0156 6770	Custody Seals	Intact	Intact	Therm_1	0.7	21

Samples

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

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

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

Temperature upon receipt (°C): 1.3 Temperature Blank used ☑ Yes ☐ No
(Note: If temperature upon receipt differs from required conditions, see sample log comment field)

Samples Acidified: ☐ Yes ☐ No ☑ Unknown

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

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

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

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

Storage Location: Custody: Refrigerator - R0119 (NA) **BDO IDs Assigned:** J8777 - J8816

Samples logged in by: Schumitz, Matt **Date/Time:** 10/12/2018 10:30 AM

Approved By: **Approved On:**

Authorized By: **Authorized On:**

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ShpNo: SHP-181012-02

Battelle Project No: 0110125-01

Report Corrective Actions

Corrective Action No: 1 **of** 1

Authorized ☐ Approved: ☐

COC Client: CH2M
COC Project: NBVC Basewide SI
COC Date: 10/12/2018 11:5

	Description of Problem:	Explanation:
Custody	Jars and C-O-C do not match for time/date	On COC page 5 of 8 all samples except the SD01 set do not match collection times from COC to sample label.

Documentation of project manager notification

Sample Custodian Schumitz, Matt **Date:** 10/12/2018 12:55:00 P
Laboratory Manager: Thorn, Jonathan **Date:** 10/31/2018 1:12:00 P
Project Manager: Thorn, Jonathan **Date:** 10/31/2018 1:12:00 P

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

On 30-Oct-18 **I contacted** Hill, Tiffany **at** CH2M

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

Client verified that the COC was correct for times, see attached email.

Date this form was received back to the custodian:
Reference Number:

Thorn, Jonathan R

From: Hill, Tiffany/CVO <Tiffany.Hill@jacobs.com>
Sent: Wednesday, October 31, 2018 12:15 PM
To: Thorn, Jonathan R
Cc: Schumitz, Matthew; Schultz, Stephanie A
Subject: RE: Sample custody records

Message received from outside the Battelle network. Carefully examine it before you open any links or attachments.

Please use the CoC.

Thanks,

Tiffany Hill | Jacobs | Chemist, Global Environmental Solutions | 541.768.3109 direct | 541.908.3794 mobile | Tiffany.Hill@jacobs.com | www.jacobs.com

---

From: Thorn, Jonathan R [mailto:thorn@battelle.org]
Sent: Wednesday, October 31, 2018 5:45 AM
To: Hill, Tiffany/CVO <Tiffany.Hill@jacobs.com>
Cc: Schumitz, Matthew <SCHUMITZM@battelle.org>; Schultz, Stephanie A <schultzs@battelle.org>
Subject: [EXTERNAL] RE: Sample custody records

Hi Tiffany,
We pulled the sample, the issue was actually on custody page 5 of 8, not 8 of 8. The table below shows the samples with the times from the COC vs. the times on the jars… it looks like it was transposed on one, but not sure which (times match on both, but not to the same samples). If you can let us know which time is correct for these samples, we can get the corrective action closed.
Thank you,
Jon

BDO Id	Client Sample ID	Matrix	Collection Date	Time on Bottle
J8789	VC-CS11-SD02-000H	SD	10/9/2018 7:30	7:14
J8790	VC-CS11-SD02-0102	SD	10/9/2018 7:31	7:16
J8791	VC-CS11-SD03-000H	SD	10/9/2018 8:03	7:30
J8792	VC-CS11-SD03-0102	SD	10/9/2018 8:05	7:31
J8793	VC-CS11-SD04-000H	SD	10/9/2018 8:00	8:03
J8794	VC-CS11-SD04-0102	SD	10/9/2018 8:02	8:05
J8795	VC-CS11-SD05-000H	SD	10/9/2018 8:26	8:00
J8796	VC-CS11-SD05-0102	SD	10/9/2018 8:28	8:02
J8797	VC-CS11-SD06-000H	SD	10/9/2018 7:14	8:26
J8798	VC-CS11-SD06-0102	SD	10/9/2018 7:16	8:28

From: Thorn, Jonathan R
Sent: Tuesday, October 30, 2018 5:44 PM
To: 'Hill, Tiffany/CVO' <Tiffany.Hill@jacobs.com>
Cc: Schumitz, Matthew <SCHUMITZM@battelle.org>; Schultz, Stephanie A <schultzs@battelle.org>
Subject: Sample custody records

Hi Tiffany,
I think I totally forgot to send you these custody records for the shipment we received on 10/12, sorry about that! There was one corrective action regarding the SD samples on page 12 of the attached file.

Specifically samples:
VC-STP-SD0-000H (Lab ID J8809) 10/9/2018 16:05
VC-STP-SD01-0102 (Lab ID J8810) 10/9/2018 16:07

The collection times on the COC do not match what was on the sample container. I am going to ask Steph to pull these two samples in the morning to verify the time on the jar so you have both times and can make the decision on which is correct.
Thank you,
Jon

Jonathan Thorn
Laboratory Director
Analytical Chemistry Services
Office: 781.681.5565 | Mobile: 781.710.9664 | Fax: 614.458.6917
thorn@battelle.org

Battelle
141 Longwater Drive
Suite 202
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http://www.battelle.org

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ShpNo SHP-181012-02

Battelle Project No:

Sample Receipt Form Details

Approved: ☐ Authorized ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Friday, October 12, 2018 10:30 AM

No. of Shipping Containers: 2

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
J8777	VC-PM323-324-SD01-000H	10/08/18 10:22	10/12/18 11:56	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8778	VC-PM323-324-SD01-0102	10/08/18 10:23	10/12/18 11:56	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8779	VC-PM553-SD01-000H	10/08/18 10:54	10/12/18 11:57	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8780	VC-PM553-SD01-0102	10/08/18 10:55	10/12/18 11:57	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8781	VC-PM553-SD01-0102-MS	10/08/18 10:55	10/12/18 11:57	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8782	VC-PM553-SD01-0102-MSD	10/08/18 10:55	10/12/18 11:58	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8783	VC-PM3009-SD01-000H	10/08/18 11:13	10/12/18 11:58	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8784	VC-PM3009-SD01-0102	10/08/18 11:14	10/12/18 11:58	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8785	VC-PM372-SD01-000H	10/08/18 11:25	10/12/18 11:59	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8786	VC-PM372-SD01-0102	10/08/18 11:26	10/12/18 11:59	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8787	VC-CS11-SD01-000H	10/09/18 8:35	10/12/18 11:59	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8788	VC-CS11-SD01-0102	10/09/18 8:37	10/12/18 12:00	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8789	VC-CS11-SD02-000H	10/09/18 7:30	10/12/18 12:00	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8790	VC-CS11-SD02-0102	10/09/18 7:31	10/12/18 12:00	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8791	VC-CS11-SD03-000H	10/09/18 8:03	10/12/18 12:01	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8792	VC-CS11-SD03-0102	10/09/18 8:05	10/12/18 12:01	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8793	VC-CS11-SD04-000H	10/09/18 8:00	10/12/18 12:01	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8794	VC-CS11-SD04-0102	10/09/18 8:02	10/12/18 12:01	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8795	VC-CS11-SD05-000H	10/09/18 8:26	10/12/18 12:02	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8796	VC-CS11-SD05-0102	10/09/18 8:28	10/12/18 12:02	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8797	VC-CS11-SD06-000H	10/09/18 7:14	10/12/18 12:02	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8798	VC-CS11-SD06-0102	10/09/18 7:16	10/12/18 12:02	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8799	VC-CS11-SD02-000H-MS	10/09/18 7:14	10/12/18 12:03	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8800	VC-CS11-SD02-000H-MSD	10/09/18 7:14	10/12/18 12:03	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8801	VC-SD-FB12-10092018	10/09/18 17:00	10/12/18 12:03	2	AQ	1.3	NA	NA	NA	R0119 (NA)			
J8802	VC-SD-EB12-10092018	10/09/18 17:05	10/12/18 12:04	2	AQ	1.3	NA	NA	NA	R0119 (NA)			
J8803	VC-SD-EB13-10092018	10/09/18 17:10	10/12/18 12:04	2	AQ	1.3	NA	NA	NA	R0119 (NA)			
J8804	VC-S14GW02-1018	10/09/18 12:20	10/12/18 12:05	2	GW	1.3	NA	NA	NA	R0119 (NA)			

BATTELLE
It can be done

ShpNo SHP-181012-02

Battelle Project No:

Sample Receipt Form Details

Approved: ☐ Authorized ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Friday, October 12, 2018 10:30 AM

No. of Shipping Containers: 2

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
J8805	VC-S14GW02P-1018	10/09/18 12:24	10/12/18 12:05	2	GW	0.7	NA	NA	NA	R0119 (NA)			
J8806	VC-S14GW19-1018	10/09/18 14:46	10/12/18 12:06	2	GW	1.3	NA	NA	NA	R0119 (NA)			
J8807	VC-S14GW02-1018-MS	10/09/18 12:28	10/12/18 12:06	2	GW	1.3	NA	NA	NA	R0119 (NA)			
J8808	VC-S14GW02-1018-MSD	10/09/18 12:32	10/12/18 12:06	2	GW	1.3	NA	NA	NA	R0119 (NA)			
J8809	VC-STP-SD01-000H	10/09/18 16:05	10/12/18 12:07	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8810	VC-STP-SD01-0102	10/09/18 16:07	10/12/18 12:07	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8811	VC-STP-SD02-000H	10/09/18 15:56	10/12/18 12:07	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8812	VC-STP-SD02-0102	10/09/18 15:58	10/12/18 12:08	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8813	VC-STP-SD03-000H	10/09/18 15:12	10/12/18 12:08	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8814	VC-STP-SD03-0102	10/09/18 15:14	10/12/18 12:08	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8815	VC-STP-SD04-000H	10/09/18 15:38	10/12/18 12:08	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8816	VC-STP-SD04-0102	10/09/18 15:40	10/12/18 12:09	1	SD	1.3	NA	NA	NA	R0119 (NA)			

Total Samples: 40

BATTELLE
It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM323-324	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	~~Sampler Information (print name):~~ V. Kilbert Phone: 724.977-3628 Email: victoria.kilbert@jacobs.com Turnaround Time (TAT) Requested:	Preservative: NA	COC # 7
Project Name: NBVC Basewide SI Project No.: 695803	Normal X Priority ☐ RUSH ☐ Time Zone: PST	Analysis: PFAS by Method 537 Mod	Page# 1 of 8

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.		
~~VC-PM323-324-SS01-000H~~			Grab	SS		X	
~~VC-PM323-324-SB01-~~			Grab	SB		X	
~~VC-PM323-324-SB01-~~			Grab	SB		X	
~~VC-PM323-324-SS02-000H~~			Grab	SS		X	
~~VC-PM323-324-SB02-~~			Grab	SB		X	
~~VC-PM323-324-SB02-~~			Grab	SB		X	
~~VC-PM323-324-SS03-000H~~			Grab	SS		X	
~~VC-PM323-324-SB03-~~			Grab	SB		X	
~~VC-PM323-324-SB03-~~			Grab	SB		X	
VC-PM323-324-SD01-000H	10/8/18	1022	Grab	SD	1	X	J8777
VC-PM323-324-SD01-0102	10/8/18	1023	Grab	SD	1	X	J8778
~~VC-PM323-324-S-MS~~			Grab			X	

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
V. Kilbert	10/10/18 1130	Jacobs		1	10-12-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM553	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: 724-977-3628 Email:	Preservative: NA	COC # 7
Project Name: NBVC Basewide SI Project No.: 695503	Turnaround Time (TAT) Requested: Normal ☒ Priority ☐ RUSH ☐ Time Zone: (ET) PST	Analysis: PFAS by Method 537 Mod	Page# 2 of 8

Sample Identification	Sample Date	Sample Time (1054)	Sample Type	Matrix	Total # of Cont.	PFAS by Method 537 Mod	
VC-PM553-SD01-000H	10/8/18	~~10/8/18~~	Grab	SD	1	X	J8779
VC-PM553-SD01-0102	10/8/18	1055	Grab	SD	1	X	J8780
VC-PM553-SD01-0102-MS	10/8/18	1055	Grab	SD	1	X	J8781
VC-PM553-SD01-0102-MSD	10/8/18	1055	Grab	SD	1	X	J8782
~~FDT-SO-FB~~			Grab	AQ		X	
~~FDT-SO-FB~~			Grab	AQ		X	

VK

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

Relinquished by (Print/Sign)	Company	Date/Time	Received by (Print/Sign)	Company	Date/Time
V. Kilbert	Jacobs	10/10/18 1100			10-12-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE
It can be done

Chain-of-Custody

Client Contact Information
Tiffany Hill
1100 NE Circle Blvd, Suite 300
Corvallis, OR
97330

Project Manager: Eric Davis
Sampler Information (print name): V. Kilgo
Phone: 724-977-3629
Email:
Turnaround Time (TAT) Requested:
Normal X
Priority ☐
RUSH ☐
Time Zone: PST

Project Name: NBVC Basewide SI
Project No.: 695803

Sampling Site: PM3039
Site Information:

COC # 7
Page# 3 of 8

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Preservative: NA	Analysis: PFAS by Method 537 Mod
~~VC-PM3009-SS01-000H~~			~~Grab~~	~~SS~~			X
~~VC-PM3009-SB01-___~~			~~Grab~~	~~SB~~			X
~~VC-PM3009-SB01-___~~			~~Grab~~	~~SB~~			X
~~VC-PM3009-SS02-000H~~			~~Grab~~	~~SS~~			X
~~VC-PM3009-SB02-___~~			~~Grab~~	~~SB~~			X
~~VC-PM3009-SB02-___~~			~~Grab~~	~~SB~~			X
~~VC-PM3009-SS03-000H~~			~~Grab~~	~~SS~~			X
~~VC-PM3009-SB03-___~~			~~Grab~~	~~SB~~			X
~~VC-PM3009-SB03-___~~			~~Grab~~	~~SB~~			X
VC-PM3009-SD01-000H	10/3/18	1113	Grab	SD	1		X
VC-PM3009-SD01-0102	10/3/18	1114	Grab	SD	1		X
~~VC-PM3009-S-___-MS~~			~~Grab~~				X

J8783
J8784

Receipt Temperature:(°C)

Samples Intact: Yes - No

Samples on Ice: Yes - No

Receipt Comments:

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
V. Kilgo	Jacobs	10/3/18 1150	NB		10-12-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE
It can be done

Chain-of-Custody

Client Contact Information
Tiffany Hill
1100 NE Circle Blvd, Suite 300
Corvallis, OR
97330

Project Manager: Eric Davis
Sampler Information (print name): V. Kilbat
Phone: 724-977-3625
Email:
Turnaround Time (TAT) Requested:
Normal ☒
Priority ☐
RUSH ☐
Time Zone: PST

Sampling Site: PM372
Site Information:

Project Name: NBVC Basewide SI
Project No.: 695803

COC # 7
Page# 4 of 8

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Analysis: Preservative NA	Analysis: PFAS by Method 537 Mod
~~VC-PM372-SS01-000H~~			~~Grab~~	~~SS~~			X
~~VC-PM372-SB01-~~			~~Grab~~	~~SB~~			X
~~VC-PM372-SB01-~~			~~Grab~~	~~SB~~			X
~~VC-PM372-SS02-000H~~			~~Grab~~	~~SS~~			X
~~VC-PM372-SB02-~~			~~Grab~~	~~SB~~			X
~~VC-PM372-SB02-~~			~~Grab~~	~~SB~~			X
~~VC-PM372-SS03-000H~~			~~Grab~~	~~SS~~			X
~~VC-PM372-SB03-~~			~~Grab~~	~~SB~~			X
~~VC-PM372-SB03-~~			~~Grab~~	~~SB~~			X
VC-PM372-SD01-000H	10/8/18	1125	Grab	SD	1		X
VC-PM372-SD01-0102	10/8/18	1126	Grab	SD	1		X
~~VC-PM372-S~~ -MS			~~Grab~~				X

J8785
J8786

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

Relinquished by (Print/Sign)	Company	Date/Time	Received by (Print/Sign)	Company	Date/Time
V. Kilbat	Tetra Tech	10/10/18 1100			10-12-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM-CS11	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: 724-977-3628 Email:	Preservative: NA	COC # 7
Project Name: NBVC Basewide SI	Turnaround Time (TAT) Requested: Normal X Priority ☐ RUSH ☐	Analysis: PFAS by Method 537 Mod	Page# 5 of 8
Project No.: 695803	Time Zone: EST		

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	PFAS by Method 537 Mod	
VC-CS11-SD01-000H	10/9/18	0835	Grab	SD	1	X	J8787
VC-CS11-SD01-0102	10/9/18	0837	Grab	SD	1	X	88
VC-CS11-SD02-000H	10/9/18	0730	Grab	SD	1	X	89
VC-CS11-SD02-0102	10/9/18	0731	Grab	SD	1	X	90
VC-CS11-SD03-000H	10/9/18	0803	Grab	SD	1	X	91
VC-CS11-SD03-0102	10/9/18	0805	Grab	SD	1	X	92
VC-CS11-SD04-000H	10/9/18	0800	Grab	SD	1	X	93
VC-CS11-SD04-0102	10/9/18	0802	Grab	SD	1	X	94
VC-CS11-SD05-000H	10/9/18	0826	Grab	SD	1	X	95
VC-CS11-SD05-0102	10/9/18	0828	Grab	SD	1	X	96
VC-CS11-SD06-000H	10/9/18	0714	Grab	SD	1	X	97
VC-CS11-SD06-0102	10/9/18	0716	Grab	SD	1	X	J8798

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

Relinquished by (Print/Sign)	Company	Date/Time	Received by (Print/Sign)	Company	Date/Time
V. Kilbert	Jacobs	10/10/18 1100			10-12-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

Client Contact Information
Tiffany Hill
1100 NE Circle Blvd, Suite 300
Corvallis, OR
97330

Project Manager: Eric Davis
Sampler Information (print name): V. Kilb
Phone: 724-977-3628
Email:
Turnaround Time (TAT) Requested:
Normal X
Priority
RUSH
Time Zone: DST

Sampling Site: PM_CS11
Site Information:

Project Name: NBVC Basewide SI
Project No.: 695803

COC # 7
Page# 6 of 8

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Preservative: NA	Analysis: PFAS by Method 537 Mod	
VC-CS11-SD-02-000H-MS	10/9/18	0714	Grab	SD	1 ~~2~~		X	J8799
VC-CS11-SD-02-000H-SD	10/9/18	0714	Grab	SD	1 ~~2~~		X	J8800
VC ~~FDT-SD~~-FB12-10092018	10/9/18	1700	Grab	AQ	2		X	J8801
VC ~~FDT-SD~~-EB12-10092018	10/9/18	1705	Grab	AQ	2		X	J8802
VC-SD-EB13-10092018	10/9/18	1710	Grab	AQ	2		X	J8803

hand auger glove

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
V. Kilb	Jacobs	10/10/18 1100			10-12-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PIT IRP S14	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: 724-977-3628 Email: Turnaround Time (TAT) Requested:	Preservative: NA	COC # 7
Project Name: NBVC Basewide SI Project No.: 695803	Normal X Priority ☐ RUSH ☐ Time Zone: PST	Analysis: PFAS by Method 537 Mod	Page# 7 of 8

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	PFAS by Method 537 Mod	
~~VC-S14GW01-~~			Grab	GW		X	
VC-S14GW02-1018	10/9/18	1220	Grab	GW	2	X	J8804
VC-S14GW02P-1018	10/9/18	1224	Grab	GW	2	X	J8805
~~VC-S14GW03-~~			Grab	GW		X	
VC-S14GW19-1018	10/9/18	1446	Grab	GW	2	X	J8806
~~EDT-AQ-FB~~			Grab	AQ		X	
~~EDT-AQ-EB~~			Grab	AQ		X	
VC-S14GW02-1018-MS	10/9/18	1228	Gr	GW	2	X	J8807
VC-S14GW02-1018-MSD	10/9/18	1232	Gr	GW	2	X	J8808

VH

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
V. Kilbert	Jacobs	10/10/18 1150	NVB		10-12-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE
It can be done

Chain-of-Custody

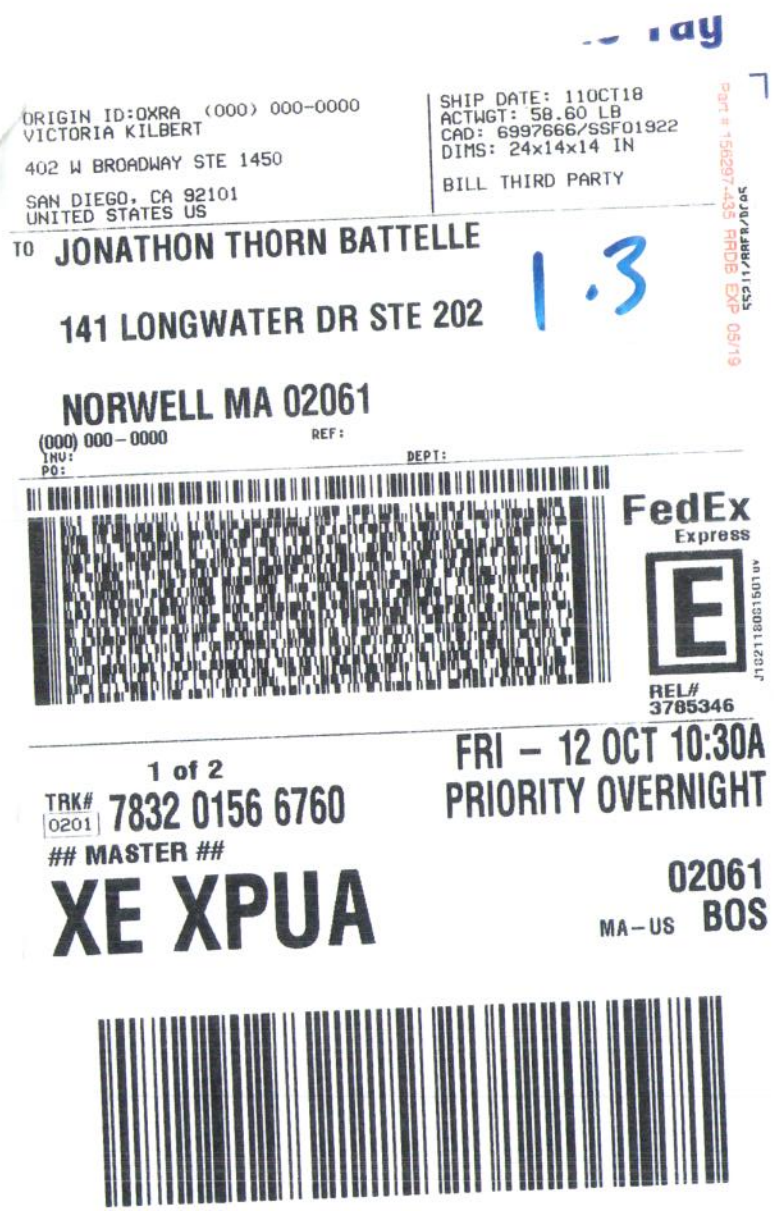
Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM STP	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: 724-977-3628 Email:	Preservative: NA	COC # 7
Project Name: NBVC Basewide SI	Turnaround Time (TAT) Requested: Normal X Priority ☐ RUSH ☐	Analysis: PFAS by Method 537 Mod	Page# 8 of 8
Project No.: 695803	Time Zone: PST		

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Analysis	
VC-STP-SD01-000H	10/9/18	1605	Grab	SD	1	X	J8809
VC-STP-SD01-0102	10/9/18	1607	Grab	SD	1	X	J8810
VC-STP-SD02-000H	10/9/18	1556	Grab	SD	1	X	J8811
VC-STP-SD02-0102	10/9/18	1558	Grab	SD	1	X	J8812
VC-STP-SD03-000H	10/9/18	1512	Grab	SD	1	X	J8813
VC-STP-SD03-0102	10/9/18	1514	Grab	SD	1	X	J8814
VC-STP-SD04-000H	10/9/18	1538	Grab	SD	1	X	J8815
VC-STP-SD04-0102	10/9/18	1548	Grab	SD	1	X	J8816
~~VC-STP-SD-MS~~			Grab	SD		X	
~~VC-STP-SD-SD~~			Grab	SD		X	
~~FDT-SO-FB~~			Grab	AQ		X	
~~FDT-SO-EB~~			Grab	AQ		X	

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
V. Kilbert	Tetra Tech	10/10/18 1130			10-12-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:



ORIGIN ID:OXRA (000) 000-0000
VICTORIA KILBERT
402 W BROADWAY STE 1450
SAN DIEGO, CA 92101
UNITED STATES US

SHIP DATE: 11OCT18
ACTWGT: 58.60 LB
CAD: 6997666/SSFO1922
DIMS: 24x14x14 IN
BILL THIRD PARTY

TO JONATHON THORN BATTELLE
141 LONGWATER DR STE 202
NORWELL MA 02061
(000) 000-0000

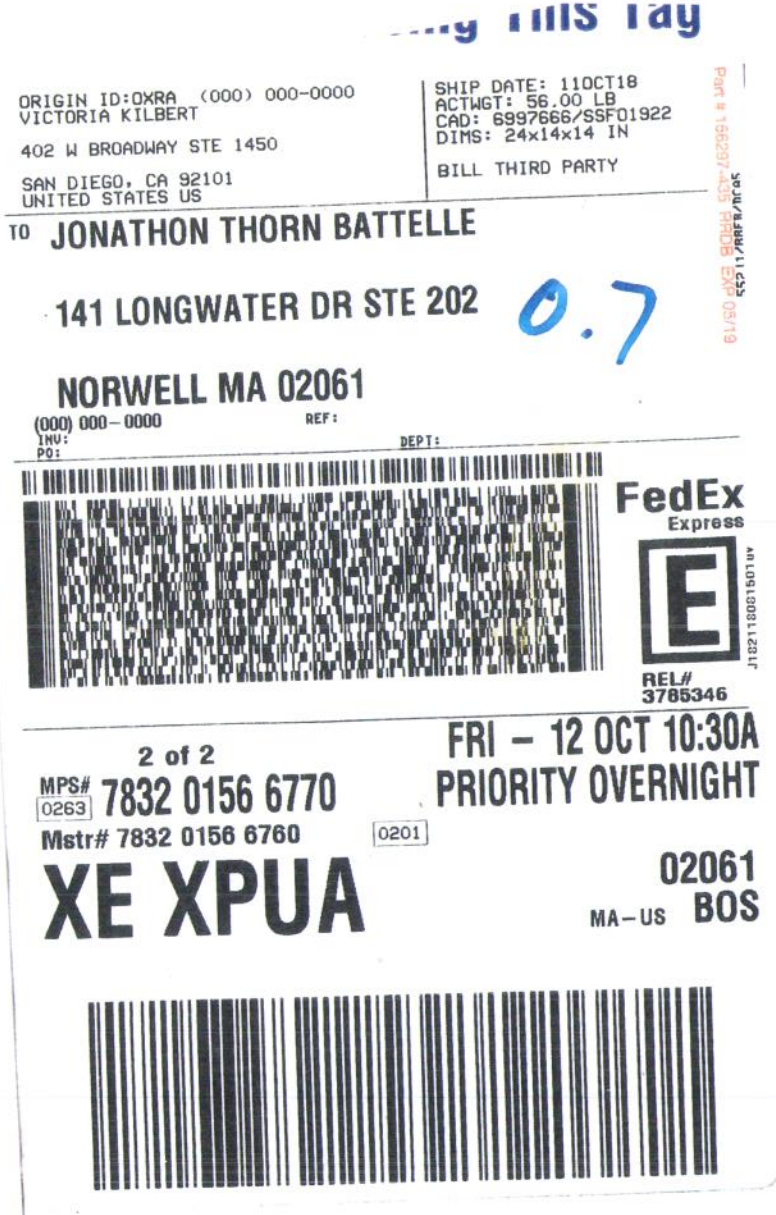
REF:
INV:
PO:
DEPT:

1.3

FedEx Express
REL# 3785346

1 of 2
TRK# 0201 7832 0156 6760
MASTER
XE XPUA

FRI - 12 OCT 10:30A
PRIORITY OVERNIGHT
02061
MA-US BOS



ORIGIN ID:OXRA (000) 000-0000
VICTORIA KILBERT
402 W BROADWAY STE 1450
SAN DIEGO, CA 92101
UNITED STATES US

SHIP DATE: 11OCT18
ACTWGT: 56.00 LB
CAD: 6997666/SSFO1922
DIMS: 24x14x14 IN
BILL THIRD PARTY

TO JONATHON THORN BATTELLE
141 LONGWATER DR STE 202
NORWELL MA 02061
(000) 000-0000

REF:
INV:
PO:
DEPT:

0.7

FedEx Express
REL# 3785346

2 of 2
MPS# 0263 7832 0156 6770
Mstr# 7832 0156 6760 0201
XE XPUA

FRI - 12 OCT 10:30A
PRIORITY OVERNIGHT
02061
MA-US BOS

Data Tables

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM323-324-SD01-000H			
Battelle ID		J8777-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		27.15			
Matrix		SD			
Sample Size		1.52			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.32 U	0.43	1.32	6.58
PFHpA	375-85-9	1.32 U	0.58	1.32	6.58
PFOA	335-67-1	1.32 U	0.66	1.32	6.58
PFNA	375-95-1	1.32 U	0.57	1.32	6.58
PFDA	335-76-2	1.32 U	0.36	1.32	6.58
PFUnA	2058-94-8	1.32 U	0.54	1.32	6.58
PFDoA	307-55-1	0.66 U	0.32	0.66	6.58
PFTrDA	72629-94-8	1.32 U	0.37	1.32	6.58
PFTeDA	376-06-7	2.63 U	0.83	2.63	6.58
NMeFOSAA	2355-31-9	3.29 U	1.47	3.29	6.58
NEtFOSAA	2991-50-6	2.63 U	0.75	2.63	6.58
PFBS	375-73-5	1.32 U	0.47	1.32	6.58
PFHxS	355-46-4	0.32 J	0.29	0.66	6.58
PFOS	1763-23-1	7.63	0.36	1.32	6.58

Surrogate Recoveries (%)

13C5-PFHxA	99
13C4-PFHpA	109
13C8-PFOA	109
13C9-PFNA	94
13C6-PFDA	113
13C7-PFUnA	122
13C2-PFDoA	123
13C2-PFTeDA	138
d3-MeFOSAA	97
d5-EtFOSAA	108
13C3-PFBS	121
13C3-PFHxS	103
13C8-PFOS	105

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM323-324-SD01-0102			
Battelle ID		J8778-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		26.86			
Matrix		SD			
Sample Size		1.54			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.30 U	0.43	1.30	6.49
PFHpA	375-85-9	1.30 U	0.57	1.30	6.49
PFOA	335-67-1	1.30 U	0.65	1.30	6.49
PFNA	375-95-1	1.30 U	0.56	1.30	6.49
PFDA	335-76-2	1.30 U	0.35	1.30	6.49
PFUnA	2058-94-8	1.30 U	0.53	1.30	6.49
PFDoA	307-55-1	0.65 U	0.31	0.65	6.49
PFTrDA	72629-94-8	1.30 U	0.36	1.30	6.49
PFTeDA	376-06-7	2.60 U	0.82	2.60	6.49
NMeFOSAA	2355-31-9	3.25 U	1.45	3.25	6.49
NEtFOSAA	2991-50-6	2.60 U	0.74	2.60	6.49
PFBS	375-73-5	1.30 U	0.47	1.30	6.49
PFHxS	355-46-4	0.46 J	0.29	0.65	6.49
PFOS	1763-23-1	14.23	0.35	1.30	6.49

Surrogate Recoveries (%)

13C5-PFHxA	104
13C4-PFHpA	112
13C8-PFOA	106
13C9-PFNA	94
13C6-PFDA	106
13C7-PFUnA	116
13C2-PFDoA	114
13C2-PFTeDA	131
d3-MeFOSAA	106
d5-EtFOSAA	113
13C3-PFBS	126
13C3-PFHxS	95
13C8-PFOS	113

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM553-SD01-000H			
Battelle ID		J8779-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		26.97			
Matrix		SD			
Sample Size		1.53			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.31 U	0.43	1.31	6.54
PFHpA	375-85-9	1.31 U	0.58	1.31	6.54
PFOA	335-67-1	1.31 U	0.65	1.31	6.54
PFNA	375-95-1	1.31 U	0.56	1.31	6.54
PFDA	335-76-2	1.31 U	0.35	1.31	6.54
PFUnA	2058-94-8	1.31 U	0.54	1.31	6.54
PFDoA	307-55-1	0.65 U	0.31	0.65	6.54
PFTrDA	72629-94-8	1.31 U	0.37	1.31	6.54
PFTeDA	376-06-7	2.61 U	0.82	2.61	6.54
NMeFOSAA	2355-31-9	3.27 U	1.46	3.27	6.54
NEtFOSAA	2991-50-6	2.61 U	0.75	2.61	6.54
PFBS	375-73-5	1.31 U	0.47	1.31	6.54
PFHxS	355-46-4	0.65 U	0.29	0.65	6.54
PFOS	1763-23-1	3.55 J	0.35	1.31	6.54

Surrogate Recoveries (%)

13C5-PFHxA	110
13C4-PFHpA	114
13C8-PFOA	117
13C9-PFNA	101
13C6-PFDA	115
13C7-PFUnA	113
13C2-PFDoA	124
13C2-PFTeDA	132
d3-MeFOSAA	99
d5-EtFOSAA	106
13C3-PFBS	129
13C3-PFHxS	127
13C8-PFOS	112

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM553-SD01-0102			
Battelle ID		J8780-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		20.00			
Matrix		SD			
Sample Size		1.55			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.29 U	0.43	1.29	6.45
PFHpA	375-85-9	1.29 U	0.57	1.29	6.45
PFOA	335-67-1	1.29 U	0.65	1.29	6.45
PFNA	375-95-1	1.29 U	0.55	1.29	6.45
PFDA	335-76-2	1.29 U	0.35	1.29	6.45
PFUnA	2058-94-8	1.29 U	0.53	1.29	6.45
PFDoA	307-55-1	0.65 U	0.31	0.65	6.45
PFTrDA	72629-94-8	1.29 U	0.36	1.29	6.45
PFTeDA	376-06-7	2.58 U	0.81	2.58	6.45
NMeFOSAA	2355-31-9	3.23 U	1.45	3.23	6.45
NEtFOSAA	2991-50-6	2.58 U	0.74	2.58	6.45
PFBS	375-73-5	1.29 U	0.46	1.29	6.45
PFHxS	355-46-4	0.65 U	0.28	0.65	6.45
PFOS	1763-23-1	0.84 J	0.35	1.29	6.45

Surrogate Recoveries (%)

13C5-PFHxA	104
13C4-PFHpA	107
13C8-PFOA	114
13C9-PFNA	100
13C6-PFDA	119
13C7-PFUnA	121
13C2-PFDoA	127
13C2-PFTeDA	144
d3-MeFOSAA	106
d5-EtFOSAA	93
13C3-PFBS	117
13C3-PFHxS	113
13C8-PFOS	105

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM3009-SD01-000H			
Battelle ID		J8783-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		21.69			
Matrix		SD			
Sample Size		1.61			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.24 U	0.41	1.24	6.21
PFHpA	375-85-9	1.24 U	0.55	1.24	6.21
PFOA	335-67-1	1.24 U	0.62	1.24	6.21
PFNA	375-95-1	1.24 U	0.53	1.24	6.21
PFDA	335-76-2	1.24 U	0.34	1.24	6.21
PFUnA	2058-94-8	1.24 U	0.51	1.24	6.21
PFDoA	307-55-1	0.91 J	0.30	0.62	6.21
PFTrDA	72629-94-8	1.24 U	0.35	1.24	6.21
PFTeDA	376-06-7	2.48 U	0.78	2.48	6.21
NMeFOSAA	2355-31-9	3.11 U	1.39	3.11	6.21
NEtFOSAA	2991-50-6	2.48 U	0.71	2.48	6.21
PFBS	375-73-5	1.24 U	0.45	1.24	6.21
PFHxS	355-46-4	0.62 U	0.27	0.62	6.21
PFOS	1763-23-1	2.81 J	0.34	1.24	6.21

Surrogate Recoveries (%)

13C5-PFHxA	120
13C4-PFHpA	133
13C8-PFOA	132
13C9-PFNA	112
13C6-PFDA	119
13C7-PFUnA	124
13C2-PFDoA	127
13C2-PFTeDA	148
d3-MeFOSAA	119
d5-EtFOSAA	132
13C3-PFBS	137
13C3-PFHxS	135
13C8-PFOS	126

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM3009-SD01-0102			
Battelle ID		J8784-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		21.00			
Matrix		SD			
Sample Size		1.56			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.28 U	0.42	1.28	6.41
PFHpA	375-85-9	1.28 U	0.56	1.28	6.41
PFOA	335-67-1	1.28 U	0.64	1.28	6.41
PFNA	375-95-1	1.28 U	0.55	1.28	6.41
PFDA	335-76-2	1.28 U	0.35	1.28	6.41
PFUnA	2058-94-8	1.28 U	0.53	1.28	6.41
PFDoA	307-55-1	0.64 U	0.31	0.64	6.41
PFTrDA	72629-94-8	1.28 U	0.36	1.28	6.41
PFTeDA	376-06-7	2.56 U	0.81	2.56	6.41
NMeFOSAA	2355-31-9	3.21 U	1.44	3.21	6.41
NEtFOSAA	2991-50-6	2.56 U	0.73	2.56	6.41
PFBS	375-73-5	1.28 U	0.46	1.28	6.41
PFHxS	355-46-4	0.64 U	0.28	0.64	6.41
PFOS	1763-23-1	2.22 J	0.35	1.28	6.41

Surrogate Recoveries (%)

13C5-PFHxA	120
13C4-PFHpA	124
13C8-PFOA	121
13C9-PFNA	110
13C6-PFDA	111
13C7-PFUnA	124
13C2-PFDoA	126
13C2-PFTeDA	136
d3-MeFOSAA	132
d5-EtFOSAA	128
13C3-PFBS	149
13C3-PFHxS	128
13C8-PFOS	132

BATTELLE
It can be done

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM372-SD01-000H			
Battelle ID		J8785-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		25.16			
Matrix		SD			
Sample Size		1.48			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.35 U	0.45	1.35	6.76
PFHpA	375-85-9	1.35 U	0.59	1.35	6.76
PFOA	335-67-1	1.35 U	0.68	1.35	6.76
PFNA	375-95-1	1.35 U	0.58	1.35	6.76
PFDA	335-76-2	1.35 U	0.36	1.35	6.76
PFUnA	2058-94-8	1.35 U	0.55	1.35	6.76
PFDoA	307-55-1	0.68 U	0.32	0.68	6.76
PFTrDA	72629-94-8	1.35 U	0.38	1.35	6.76
PFTeDA	376-06-7	2.70 U	0.85	2.70	6.76
NMeFOSAA	2355-31-9	3.38 U	1.51	3.38	6.76
NEtFOSAA	2991-50-6	2.70 U	0.77	2.70	6.76
PFBS	375-73-5	1.35 U	0.49	1.35	6.76
PFHxS	355-46-4	0.68 U	0.30	0.68	6.76
PFOS	1763-23-1	6.17 J	0.36	1.35	6.76

Surrogate Recoveries (%)

13C5-PFHxA	101
13C4-PFHpA	107
13C8-PFOA	102
13C9-PFNA	91
13C6-PFDA	97
13C7-PFUnA	115
13C2-PFDoA	123
13C2-PFTeDA	123
d3-MeFOSAA	102
d5-EtFOSAA	114
13C3-PFBS	116
13C3-PFHxS	112
13C8-PFOS	94

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM372-SD01-0102			
Battelle ID		J8786-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		20.23			
Matrix		SD			
Sample Size		1.64			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.22 U	0.40	1.22	6.10
PFHpA	375-85-9	1.22 U	0.54	1.22	6.10
PFOA	335-67-1	1.22 U	0.61	1.22	6.10
PFNA	375-95-1	1.22 U	0.52	1.22	6.10
PFDA	335-76-2	1.22 U	0.33	1.22	6.10
PFUnA	2058-94-8	1.22 U	0.50	1.22	6.10
PFDoA	307-55-1	0.61 U	0.29	0.61	6.10
PFTrDA	72629-94-8	1.22 U	0.34	1.22	6.10
PFTeDA	376-06-7	2.44 U	0.77	2.44	6.10
NMeFOSAA	2355-31-9	3.05 U	1.37	3.05	6.10
NEtFOSAA	2991-50-6	2.44 U	0.70	2.44	6.10
PFBS	375-73-5	1.22 U	0.44	1.22	6.10
PFHxS	355-46-4	0.61 U	0.27	0.61	6.10
PFOS	1763-23-1	2.10 J	0.33	1.22	6.10

Surrogate Recoveries (%)

13C5-PFHxA	101
13C4-PFHpA	108
13C8-PFOA	100
13C9-PFNA	99
13C6-PFDA	116
13C7-PFUnA	121
13C2-PFDoA	130
13C2-PFTeDA	139
d3-MeFOSAA	115
d5-EtFOSAA	125
13C3-PFBS	133
13C3-PFHxS	122
13C8-PFOS	124

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-CS11-SD01-000H			
Battelle ID		J8787-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		62.85			
Matrix		SD			
Sample Size		0.74			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	2.70 U	0.89	2.70	13.51
PFHpA	375-85-9	2.70 U	1.19	2.70	13.51
PFOA	335-67-1	2.70 U	1.35	2.70	13.51
PFNA	375-95-1	2.70 U	1.16	2.70	13.51
PFDA	335-76-2	2.70 U	0.73	2.70	13.51
PFUnA	2058-94-8	2.70 U	1.11	2.70	13.51
PFDoA	307-55-1	1.35 U	0.65	1.35	13.51
PFTrDA	72629-94-8	2.70 U	0.76	2.70	13.51
PFTeDA	376-06-7	5.41 U	1.70	5.41	13.51
NMeFOSAA	2355-31-9	6.76 U	3.03	6.76	13.51
NEtFOSAA	2991-50-6	5.41 U	1.54	5.41	13.51
PFBS	375-73-5	2.70 U	0.97	2.70	13.51
PFHxS	355-46-4	1.35 U	0.59	1.35	13.51
PFOS	1763-23-1	31.06	0.73	2.70	13.51

Surrogate Recoveries (%)

13C5-PFHxA	93
13C4-PFHpA	90
13C8-PFOA	94
13C9-PFNA	83
13C6-PFDA	99
13C7-PFUnA	103
13C2-PFDoA	103
13C2-PFTeDA	115
d3-MeFOSAA	98
d5-EtFOSAA	98
13C3-PFBS	113
13C3-PFHxS	94
13C8-PFOS	106

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-CS11-SD01-0102				
Battelle ID		J8788-FS				
Sample Type		SA				
Collection Date		10/09/2018				
Extraction Date		10/18/2018				
Analysis Date		10/24/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		52.00				
Matrix		SD				
Sample Size		0.98				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	2.04	U	0.67	2.04	10.20
PFHpA	375-85-9	2.04	U	0.90	2.04	10.20
PFOA	335-67-1	2.04	U	1.02	2.04	10.20
PFNA	375-95-1	2.04	U	0.88	2.04	10.20
PFDA	335-76-2	2.04	U	0.55	2.04	10.20
PFUnA	2058-94-8	2.04	U	0.84	2.04	10.20
PFDoA	307-55-1	1.02	U	0.49	1.02	10.20
PFTrDA	72629-94-8	2.04	U	0.57	2.04	10.20
PFTeDA	376-06-7	4.08	U	1.29	4.08	10.20
NMeFOSAA	2355-31-9	5.10	U	2.29	5.10	10.20
NEtFOSAA	2991-50-6	4.08	U	1.16	4.08	10.20
PFBS	375-73-5	2.04	U	0.73	2.04	10.20
PFHxS	355-46-4	0.67	J	0.45	1.02	10.20
PFOS	1763-23-1	3.89	J	0.55	2.04	10.20

Surrogate Recoveries (%)

13C5-PFHxA	94
13C4-PFHpA	98
13C8-PFOA	99
13C9-PFNA	87
13C6-PFDA	110
13C7-PFUnA	115
13C2-PFDoA	124
13C2-PFTeDA	136
d3-MeFOSAA	108
d5-EtFOSAA	112
13C3-PFBS	117
13C3-PFHxS	108
13C8-PFOS	115

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD01-000H			
Battelle ID		J8809-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		41.70			
Matrix		SD			
Sample Size		1.16			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.72 U	0.57	1.72	8.62
PFHpA	375-85-9	1.72 U	0.76	1.72	8.62
PFOA	335-67-1	1.72 U	0.86	1.72	8.62
PFNA	375-95-1	1.72 U	0.74	1.72	8.62
PFDA	335-76-2	1.72 U	0.47	1.72	8.62
PFUnA	2058-94-8	1.72 U	0.71	1.72	8.62
PFDoA	307-55-1	0.86 U	0.41	0.86	8.62
PFTrDA	72629-94-8	1.72 U	0.48	1.72	8.62
PFTeDA	376-06-7	3.45 U	1.09	3.45	8.62
NMeFOSAA	2355-31-9	4.31 U	1.93	4.31	8.62
NEtFOSAA	2991-50-6	1.58 J	0.98	3.45	8.62
PFBS	375-73-5	1.72 U	0.62	1.72	8.62
PFHxS	355-46-4	0.86 U	0.38	0.86	8.62
PFOS	1763-23-1	16.53	0.47	1.72	8.62

Surrogate Recoveries (%)

13C5-PFHxA	106
13C4-PFHpA	106
13C8-PFOA	106
13C9-PFNA	99
13C6-PFDA	110
13C7-PFUnA	133
13C2-PFDoA	131
13C2-PFTeDA	141
d3-MeFOSAA	132
d5-EtFOSAA	128
13C3-PFBS	129
13C3-PFHxS	138
13C8-PFOS	122

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD01-0102				
Battelle ID		J8810-FS				
Sample Type		SA				
Collection Date		10/09/2018				
Extraction Date		10/18/2018				
Analysis Date		10/24/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		36.20				
Matrix		SD				
Sample Size		1.26				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	0.79	J	0.52	1.59	7.94
PFHpA	375-85-9	1.59	U	0.70	1.59	7.94
PFOA	335-67-1	1.04	J	0.79	1.59	7.94
PFNA	375-95-1	1.59	U	0.68	1.59	7.94
PFDA	335-76-2	1.59	U	0.43	1.59	7.94
PFUnA	2058-94-8	1.59	U	0.65	1.59	7.94
PFDoA	307-55-1	0.79	U	0.38	0.79	7.94
PFTrDA	72629-94-8	1.59	U	0.44	1.59	7.94
PFTeDA	376-06-7	3.17	U	1.00	3.17	7.94
NMeFOSAA	2355-31-9	3.97	U	1.78	3.97	7.94
NEtFOSAA	2991-50-6	3.17	U	0.90	3.17	7.94
PFBS	375-73-5	1.59	U	0.57	1.59	7.94
PFHxS	355-46-4	3.18	J	0.35	0.79	7.94
PFOS	1763-23-1	6.86	J	0.43	1.59	7.94

Surrogate Recoveries (%)

13C5-PFHxA	106
13C4-PFHpA	110
13C8-PFOA	109
13C9-PFNA	95
13C6-PFDA	106
13C7-PFUnA	109
13C2-PFDoA	116
13C2-PFTeDA	126
d3-MeFOSAA	113
d5-EtFOSAA	104
13C3-PFBS	119
13C3-PFHxS	101
13C8-PFOS	113

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD02-000H			
Battelle ID		J8811-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		36.17			
Matrix		SD			
Sample Size		1.28			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.56 U	0.52	1.56	7.81
PFHpA	375-85-9	1.56 U	0.69	1.56	7.81
PFOA	335-67-1	1.56 U	0.78	1.56	7.81
PFNA	375-95-1	1.56 U	0.67	1.56	7.81
PFDA	335-76-2	1.56 U	0.42	1.56	7.81
PFUnA	2058-94-8	1.56 U	0.64	1.56	7.81
PFDoA	307-55-1	0.78 U	0.38	0.78	7.81
PFTrDA	72629-94-8	1.56 U	0.44	1.56	7.81
PFTeDA	376-06-7	3.13 U	0.98	3.13	7.81
NMeFOSAA	2355-31-9	3.91 U	1.75	3.91	7.81
NEtFOSAA	2991-50-6	3.13 U	0.89	3.13	7.81
PFBS	375-73-5	1.56 U	0.56	1.56	7.81
PFHxS	355-46-4	0.78 U	0.34	0.78	7.81
PFOS	1763-23-1	3.80 J	0.42	1.56	7.81

Surrogate Recoveries (%)

13C5-PFHxA	89
13C4-PFHpA	91
13C8-PFOA	99
13C9-PFNA	90
13C6-PFDA	96
13C7-PFUnA	114
13C2-PFDoA	111
13C2-PFTeDA	121
d3-MeFOSAA	130
d5-EtFOSAA	131
13C3-PFBS	138
13C3-PFHxS	126
13C8-PFOS	109

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD02-0102			
Battelle ID		J8812-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		31.85			
Matrix		SD			
Sample Size		1.40			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.43 U	0.47	1.43	7.14
PFHpA	375-85-9	1.43 U	0.63	1.43	7.14
PFOA	335-67-1	1.43 U	0.71	1.43	7.14
PFNA	375-95-1	1.43 U	0.61	1.43	7.14
PFDA	335-76-2	1.43 U	0.39	1.43	7.14
PFUnA	2058-94-8	1.43 U	0.59	1.43	7.14
PFDoA	307-55-1	0.71 U	0.34	0.71	7.14
PFTrDA	72629-94-8	1.43 U	0.40	1.43	7.14
PFTeDA	376-06-7	2.86 U	0.90	2.86	7.14
NMeFOSAA	2355-31-9	3.57 U	1.60	3.57	7.14
NEtFOSAA	2991-50-6	0.94 J	0.81	2.86	7.14
PFBS	375-73-5	1.43 U	0.51	1.43	7.14
PFHxS	355-46-4	1.38 J	0.31	0.71	7.14
PFOS	1763-23-1	15.33	0.39	1.43	7.14

Surrogate Recoveries (%)

13C5-PFHxA	102
13C4-PFHpA	108
13C8-PFOA	103
13C9-PFNA	91
13C6-PFDA	95
13C7-PFUnA	108
13C2-PFDoA	106
13C2-PFTeDA	116
d3-MeFOSAA	107
d5-EtFOSAA	112
13C3-PFBS	112
13C3-PFHxS	106
13C8-PFOS	115

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD03-000H			
Battelle ID		J8813-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		47.84			
Matrix		SD			
Sample Size		1.04			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.92 U	0.63	1.92	9.62
PFHpA	375-85-9	1.92 U	0.85	1.92	9.62
PFOA	335-67-1	1.92 U	0.96	1.92	9.62
PFNA	375-95-1	1.92 U	0.83	1.92	9.62
PFDA	335-76-2	1.92 U	0.52	1.92	9.62
PFUnA	2058-94-8	1.92 U	0.79	1.92	9.62
PFDoA	307-55-1	0.96 U	0.46	0.96	9.62
PFTrDA	72629-94-8	1.92 U	0.54	1.92	9.62
PFTeDA	376-06-7	3.85 U	1.21	3.85	9.62
NMeFOSAA	2355-31-9	4.81 U	2.15	4.81	9.62
NEtFOSAA	2991-50-6	3.85 U	1.10	3.85	9.62
PFBS	375-73-5	1.92 U	0.69	1.92	9.62
PFHxS	355-46-4	0.96 U	0.42	0.96	9.62
PFOS	1763-23-1	1.33 J	0.52	1.92	9.62

Surrogate Recoveries (%)

13C5-PFHxA	99
13C4-PFHpA	107
13C8-PFOA	112
13C9-PFNA	92
13C6-PFDA	101
13C7-PFUnA	111
13C2-PFDoA	115
13C2-PFTeDA	114
d3-MeFOSAA	98
d5-EtFOSAA	92
13C3-PFBS	103
13C3-PFHxS	94
13C8-PFOS	88

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD03-0102			
Battelle ID		J8814-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/25/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		33.79			
Matrix		SD			
Sample Size		1.36			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.47 U	0.49	1.47	7.35
PFHpA	375-85-9	1.47 U	0.65	1.47	7.35
PFOA	335-67-1	1.47 U	0.74	1.47	7.35
PFNA	375-95-1	1.47 U	0.63	1.47	7.35
PFDA	335-76-2	1.47 U	0.40	1.47	7.35
PFUnA	2058-94-8	1.47 U	0.60	1.47	7.35
PFDoA	307-55-1	0.74 U	0.35	0.74	7.35
PFTrDA	72629-94-8	1.47 U	0.41	1.47	7.35
PFTeDA	376-06-7	2.94 U	0.93	2.94	7.35
NMeFOSAA	2355-31-9	3.68 U	1.65	3.68	7.35
NEtFOSAA	2991-50-6	2.94 U	0.84	2.94	7.35
PFBS	375-73-5	1.47 U	0.53	1.47	7.35
PFHxS	355-46-4	0.74 U	0.32	0.74	7.35
PFOS	1763-23-1	4.30 J	0.40	1.47	7.35

Surrogate Recoveries (%)

13C5-PFHxA	92
13C4-PFHpA	91
13C8-PFOA	91
13C9-PFNA	75
13C6-PFDA	92
13C7-PFUnA	105
13C2-PFDoA	99
13C2-PFTeDA	112
d3-MeFOSAA	112
d5-EtFOSAA	102
13C3-PFBS	103
13C3-PFHxS	98
13C8-PFOS	93

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD04-000H			
Battelle ID		J8815-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/25/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		35.90			
Matrix		SD			
Sample Size		1.33			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.50 U	0.50	1.50	7.52
PFHpA	375-85-9	1.50 U	0.66	1.50	7.52
PFOA	335-67-1	1.50 U	0.75	1.50	7.52
PFNA	375-95-1	1.50 U	0.65	1.50	7.52
PFDA	335-76-2	1.50 U	0.41	1.50	7.52
PFUnA	2058-94-8	1.50 U	0.62	1.50	7.52
PFDoA	307-55-1	0.75 U	0.36	0.75	7.52
PFTrDA	72629-94-8	1.50 U	0.42	1.50	7.52
PFTeDA	376-06-7	3.01 U	0.95	3.01	7.52
NMeFOSAA	2355-31-9	3.76 U	1.68	3.76	7.52
NEtFOSAA	2991-50-6	1.33 J	0.86	3.01	7.52
PFBS	375-73-5	1.50 U	0.54	1.50	7.52
PFHxS	355-46-4	0.53 J	0.33	0.75	7.52
PFOS	1763-23-1	9.01	0.41	1.50	7.52

Surrogate Recoveries (%)

13C5-PFHxA	101
13C4-PFHpA	105
13C8-PFOA	105
13C9-PFNA	94
13C6-PFDA	113
13C7-PFUnA	123
13C2-PFDoA	115
13C2-PFTeDA	132
d3-MeFOSAA	119
d5-EtFOSAA	107
13C3-PFBS	122
13C3-PFHxS	121
13C8-PFOS	126

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD04-0102				
Battelle ID		J8816-FS				
Sample Type		SA				
Collection Date		10/09/2018				
Extraction Date		10/18/2018				
Analysis Date		10/25/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		28.19				
Matrix		SD				
Sample Size		1.43				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.40	U	0.46	1.40	6.99
PFHpA	375-85-9	1.40	U	0.62	1.40	6.99
PFOA	335-67-1	1.40	U	0.70	1.40	6.99
PFNA	375-95-1	1.40	U	0.60	1.40	6.99
PFDA	335-76-2	1.40	U	0.38	1.40	6.99
PFUnA	2058-94-8	1.40	U	0.57	1.40	6.99
PFDoA	307-55-1	0.70	U	0.34	0.70	6.99
PFTrDA	72629-94-8	1.40	U	0.39	1.40	6.99
PFTeDA	376-06-7	2.80	U	0.88	2.80	6.99
NMeFOSAA	2355-31-9	3.50	U	1.57	3.50	6.99
NEtFOSAA	2991-50-6	0.84	J	0.80	2.80	6.99
PFBS	375-73-5	1.40	U	0.50	1.40	6.99
PFHxS	355-46-4	1.43	J	0.31	0.70	6.99
PFOS	1763-23-1	11.69		0.38	1.40	6.99

Surrogate Recoveries (%)

13C5-PFHxA	101
13C4-PFHpA	107
13C8-PFOA	101
13C9-PFNA	92
13C6-PFDA	104
13C7-PFUnA	105
13C2-PFDoA	106
13C2-PFTeDA	120
d3-MeFOSAA	123
d5-EtFOSAA	118
13C3-PFBS	140
13C3-PFHxS	117
13C8-PFOS	119

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		KB80 IB			
Battelle ID		KB80 IB_10/17/2018			
Sample Type		IB			
Collection Date		NA			
Extraction Date		NA			
Analysis Date		10/17/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		NA			
Matrix		Solid			
Sample Size		2.00			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.00 U	0.33	1.00	5.00
PFHpA	375-85-9	1.00 U	0.44	1.00	5.00
PFOA	335-67-1	1.00 U	0.50	1.00	5.00
PFNA	375-95-1	1.00 U	0.43	1.00	5.00
PFDA	335-76-2	1.00 U	0.27	1.00	5.00
PFUnA	2058-94-8	1.00 U	0.41	1.00	5.00
PFDoA	307-55-1	0.50 U	0.24	0.50	5.00
PFTrDA	72629-94-8	1.00 U	0.28	1.00	5.00
PFTeDA	376-06-7	2.00 U	0.63	2.00	5.00
NMeFOSAA	2355-31-9	2.50 U	1.12	2.50	5.00
NEtFOSAA	2991-50-6	2.00 U	0.57	2.00	5.00
PFBS	375-73-5	1.00 U	0.36	1.00	5.00
PFHxS	355-46-4	0.50 U	0.22	0.50	5.00
PFOS	1763-23-1	1.00 U	0.27	1.00	5.00

Surrogate Recoveries (%)

13C5-PFHxA	98
13C4-PFHpA	98
13C8-PFOA	101
13C9-PFNA	100
13C6-PFDA	103
13C7-PFUnA	102
13C2-PFDoA	98
13C2-PFTeDA	93
d3-MeFOSAA	104
d5-EtFOSAA	96
13C3-PFBS	95
13C3-PFHxS	103
13C8-PFOS	96

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		KB80 IB			
Battelle ID		KB80 IB_10/24/2018			
Sample Type		IB			
Collection Date		NA			
Extraction Date		NA			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		NA			
Matrix		Solid			
Sample Size		2.00			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.00 U	0.33	1.00	5.00
PFHpA	375-85-9	1.00 U	0.44	1.00	5.00
PFOA	335-67-1	1.00 U	0.50	1.00	5.00
PFNA	375-95-1	1.00 U	0.43	1.00	5.00
PFDA	335-76-2	1.00 U	0.27	1.00	5.00
PFUnA	2058-94-8	1.00 U	0.41	1.00	5.00
PFDoA	307-55-1	0.50 U	0.24	0.50	5.00
PFTrDA	72629-94-8	1.00 U	0.28	1.00	5.00
PFTeDA	376-06-7	2.00 U	0.63	2.00	5.00
NMeFOSAA	2355-31-9	2.50 U	1.12	2.50	5.00
NEtFOSAA	2991-50-6	2.00 U	0.57	2.00	5.00
PFBS	375-73-5	1.00 U	0.36	1.00	5.00
PFHxS	355-46-4	0.50 U	0.22	0.50	5.00
PFOS	1763-23-1	1.00 U	0.27	1.00	5.00

Surrogate Recoveries (%)

13C5-PFHxA	104
13C4-PFHpA	92
13C8-PFOA	92
13C9-PFNA	87
13C6-PFDA	104
13C7-PFUnA	117
13C2-PFDoA	120
13C2-PFTeDA	122
d3-MeFOSAA	91
d5-EtFOSAA	86
13C3-PFBS	107
13C3-PFHxS	90
13C8-PFOS	94

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		Procedural Blank			
Battelle ID		CS011PB-FS			
Sample Type		PB			
Collection Date		10/18/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		0.00			
Matrix		SEDIMENT			
Sample Size		2.01			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.00 U	0.33	1.00	4.98
PFHpA	375-85-9	1.00 U	0.44	1.00	4.98
PFOA	335-67-1	1.00 U	0.50	1.00	4.98
PFNA	375-95-1	1.00 U	0.43	1.00	4.98
PFDA	335-76-2	1.00 U	0.27	1.00	4.98
PFUnA	2058-94-8	1.00 U	0.41	1.00	4.98
PFDoA	307-55-1	0.50 U	0.24	0.50	4.98
PFTrDA	72629-94-8	1.00 U	0.28	1.00	4.98
PFTeDA	376-06-7	1.99 U	0.63	1.99	4.98
NMeFOSAA	2355-31-9	2.49 U	1.11	2.49	4.98
NEtFOSAA	2991-50-6	1.99 U	0.57	1.99	4.98
PFBS	375-73-5	1.00 U	0.36	1.00	4.98
PFHxS	355-46-4	0.50 U	0.22	0.50	4.98
PFOS	1763-23-1	1.00 U	0.27	1.00	4.98

Surrogate Recoveries (%)

13C5-PFHxA	98
13C4-PFHpA	104
13C8-PFOA	106
13C9-PFNA	89
13C6-PFDA	99
13C7-PFUnA	110
13C2-PFDoA	106
13C2-PFTeDA	119
d3-MeFOSAA	112
d5-EtFOSAA	100
13C3-PFBS	105
13C3-PFHxS	108
13C8-PFOS	114

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		Laboratory Control Sample					
Battelle ID		CS012LCS-FS					
Sample Type		LCS					
Collection Date		10/18/2018					
Extraction Date		10/18/2018					
Analysis Date		10/24/2018					
Analytical Instrument		Sciex 5500 LC/MS/MS					
% Moisture		0.00					
Matrix		SEDIMENT					
Sample Size		1.99					
Size Unit-Basis		g				Control Limits	
Units		ng/g_Dry	Target	Recovery	Qual	Lower	Upper
PFHxA	307-24-4	15.55	15.23	102		45	135
PFHpA	375-85-9	13.91	15.08	92		60	128
PFOA	335-67-1	14.60	15.08	97		56	136
PFNA	375-95-1	14.70	15.08	98		54	130
PFDA	335-76-2	14.46	15.08	96		55	141
PFUnA	2058-94-8	14.39	15.08	95		57	137
PFDoA	307-55-1	14.84	15.08	98		62	134
PFTrDA	72629-94-8	15.29	15.08	101		51	127
PFTeDA	376-06-7	15.42	15.08	102		34	162
NMeFOSAA	2355-31-9	15.47	15.08	103		52	146
NEtFOSAA	2991-50-6	16.21	15.08	108		54	124
PFBS	375-73-5	15.73	15.23	103		57	145
PFHxS	355-46-4	17.18	15.23	113		52	132
PFOS	1763-23-1	14.05	15.08	93		50	130
Surrogate Recoveries (%)							
13C5-PFHxA		118					
13C4-PFHpA		128					
13C8-PFOA		116					
13C9-PFNA		105					
13C6-PFDA		114					
13C7-PFUnA		120					
13C2-PFDoA		127					
13C2-PFTeDA		139					
d3-MeFOSAA		135					
d5-EtFOSAA		112					
13C3-PFBS		123					
13C3-PFHxS		110					
13C8-PFOS		115					

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM553-SD01-0102	VC-PM553-SD01-0102-MS					
Battelle ID		J8780-FS	J8781MS-FS					
Sample Type		SA	MS					
Collection Date		10/08/2018	10/08/2018					
Extraction Date		10/18/2018	10/18/2018					
Analysis Date		10/24/2018	10/24/2018					
Analytical Instrument		Sciex 5500 LC/MS/MS	Sciex 5500 LC/MS/MS					
% Moisture		20.00	23.94					
Matrix		SD	SD					
Sample Size		1.55	1.55					
Size Unit-Basis		g	g				Control Limits	
Units		ng/g_Dry	ng/g_Dry	Target	Recovery	Qual	Lower	Upper
PFHxA	307-24-4	1.29 U	37.98	32.58	117		45	135
PFHpA	375-85-9	1.29 U	32.53	32.26	101		60	128
PFOA	335-67-1	1.29 U	34.55	32.26	107		56	136
PFNA	375-95-1	1.29 U	36.97	32.26	115		54	130
PFDA	335-76-2	1.29 U	32.08	32.26	99		55	141
PFUnA	2058-94-8	1.29 U	34.97	32.26	108		57	137
PFDoA	307-55-1	0.65 U	33.69	32.26	104		62	134
PFTrDA	72629-94-8	1.29 U	32.26	32.26	100		51	127
PFTeDA	376-06-7	2.58 U	32.52	32.26	101		34	162
NMeFOSAA	2355-31-9	3.23 U	38.56	32.26	120		52	146
NEtFOSAA	2991-50-6	2.58 U	36.13	32.26	112		54	124
PFBS	375-73-5	1.29 U	33.88	32.58	104		57	145
PFHxS	355-46-4	0.65 U	37.98	32.58	117		52	132
PFOS	1763-23-1	0.84 J	31.75	32.26	96		50	130
Surrogate Recoveries (%)								
13C5-PFHxA		104	101					
13C4-PFHpA		107	114					
13C8-PFOA		114	103					
13C9-PFNA		100	91					
13C6-PFDA		119	101					
13C7-PFUnA		121	108					
13C2-PFDoA		127	114					
13C2-PFTeDA		144	135					
d3-MeFOSAA		106	116					
d5-EtFOSAA		93	108					
13C3-PFBS		117	135					
13C3-PFHxS		113	107					
13C8-PFOS		105	124					

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM553-SD01-0102-MSD								
Battelle ID		J8782MSD-FS								
Sample Type		MSD								
Collection Date		10/08/2018								
Extraction Date		10/18/2018								
Analysis Date		10/24/2018								
Analytical Instrument		Sciex 5500 LC/MS/MS								
% Moisture		22.72								
Matrix		SD								
Sample Size		1.53								
Size Unit-Basis		g				Control Limits				RPD
Units		ng/g_Dry	Target	Recovery	Qual	Lower	Upper	RPD	Qual	Limit
PFHxA	307-24-4	34.42	33.01	104		45	135	11.8		≤ 30
PFHpA	375-85-9	30.46	32.68	93		60	128	8.2		≤ 30
PFOA	335-67-1	34.03	32.68	104		56	136	2.8		≤ 30
PFNA	375-95-1	35.60	32.68	109		54	130	5.4		≤ 30
PFDA	335-76-2	31.38	32.68	96		55	141	3.1		≤ 30
PFUnA	2058-94-8	34.26	32.68	105		57	137	2.8		≤ 30
PFDoA	307-55-1	33.59	32.68	103		62	134	1.0		≤ 30
PFTrDA	72629-94-8	33.23	32.68	102		51	127	2.0		≤ 30
PFTeDA	376-06-7	33.97	32.68	104		34	162	2.9		≤ 30
NMeFOSAA	2355-31-9	33.54	32.68	103		52	146	15.2		≤ 30
NEtFOSAA	2991-50-6	34.95	32.68	107		54	124	4.6		≤ 30
PFBS	375-73-5	31.72	33.01	96		57	145	8.0		≤ 30
PFHxS	355-46-4	36.55	33.01	111		52	132	5.3		≤ 30
PFOS	1763-23-1	34.37	32.68	103		50	130	7.0		≤ 30

Surrogate Recoveries (%)

13C5-PFHxA	103
13C4-PFHpA	112
13C8-PFOA	97
13C9-PFNA	90
13C6-PFDA	105
13C7-PFUnA	108
13C2-PFDoA	118
13C2-PFTeDA	131
d3-MeFOSAA	123
d5-EtFOSAA	104
13C3-PFBS	142
13C3-PFHxS	109
13C8-PFOS	114

Glossary of Data Qualifiers

Flag:	Application:
B	Analyte found in the sample at a concentration <10x the level found in the procedural blank
D	Dilution Run. Initial run outside the initial calibration range of the instrument
E	Estimate, result is greater than the highers concentration level in the calibration
H	Surrogate diluted out. Used when surrogate recovery is affected by excessive dilution of the sample extract.
J	Analyte detected below the Limit of Quantitation (LOQ)
ME	Significant Matrix Interference - Estimated value.
MI	Significant Matrix Interference - value could not be determined.
n	Quality Control (QC) value is outside the accuracy or precision Data Quality Objective (DQO), but meets secondary criteria
N	Quality Control (QC) value is outside the accuracy or precision Data Quality Objective (DQO)
NA	Not Applicable
T	Holding Time (HT) exceeded
U	Analyte not detected or detected below the Method detection limit (MDL) value, Limit of Detection (LOD) reported

CTO-4164 Naval Base Ventura County, California
Project No 100110125-01
PFAS by DoD QSM 5.1 Table B-15

SD

Batch 18-0621

Package DP-18-0319

Submitted to:
CH2M
1100 NE Circle Blvd Suite 300
Corvallis, OR 97330 USA

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

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CTO-4164 Naval Base Ventura County, California
Project No 100110125-01
PFAS by DoD QSM 5.1 Table B-15

SD

Batch 18-0621

Package DP-18-0319

Submitted to:
CH2M
1100 NE Circle Blvd Suite 300
Corvallis, OR 97330 USA

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

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

Analyst Approval: Lauren Griffith 2018.10.30 16:46:42 -04'00'

QC Chemist Approval: Digitally signed by devinec@battelle.org DN: cn=devinec@battelle.org Date: 2018.11.07 22:24:28 -05'00'

Project Manager Approval: Digitally signed by Jonathan Thorn Date: 2018.11.08 09:47:31 -05'00'

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CTO-4164 Naval Base Ventura County, California
Project No 100110125-01
PFAS by DoD QSM 5.1 Table B-15

SD

Batch 18-0621

Package DP-18-0319

1	***Work Plan*** Laboratory Work Plan, Addendums To Work Plan, Memos From Project Manager, Special Instructions, Chain-of-Custody Reports.	1
2	***Tables*** Analytical Data Tables, Qualifier Definitions.	34
3	***Miscellaneous Documentation*** Case Narrative, Miscellaneous Documentation Form, Quality Control Summary, Example Calculations, Internal Standard Recovery Report, Retention Time Window Report.	60
4	***Sample Preparation Records*** Sample Preparation Records, Dilution Worksheets, Standard Preparation Records, Certificates Of Analysis, GPC Check Report.	199
5	***Analytical Calibrations*** Analytical Sequence, Analytical Method, Tune Report, Initial Calibration, Pesticide Degradation Report, RF Summary, Calibration Verifications, Independent Calibration Verification Check.	225
6	***Analytical Data*** Raw Data Quantification Reports.	348
7	***Chromatograms*** Sample And Standard Chromatograms.	469
8	***Unused Data***	NA

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Signature Page

Battelle 2018 (1 of 2)
Signature Page

Name (Printed)	Signature	Initials	Date
Jonathan Thorn		JRT	4/4/2018
Robert Lizotte, Jr.		BL	4.4.2018
FRANCO PALA			4-4-2018
Carla Devine		CRD	4/4/18
Denise Schumitz		DMS	4/4/18
Candace Penn McCoy		CPM	4/4/2018
Rich Rostucci		RR	4/4/2018
Michael Mehta			4/4/2018
Christie Usher		cu	4/4/18
Kevin McInerney			4/4/18
Stephanie Schultz		SAS	4/4/18
Jordan Tower		JCT	4/4/18
KRISTEN NICHOLS		KN	4/4/18
Clinton H Brown		CB	4/4/18
Matt Schumitz		MS	4-4-18
Sam Guimaraes		SG	4-4-18
Lauren Griffith			4.4.18

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Battelle 2018 (2 of 2)
Signature Page

Name (Printed)	Signature	Initials	Date
KAVITHA DASU		KD	04/04/18
Kayla Lamarre		KAL	04/04/18
Weidong Li		W.L	04/04/18
Tracy W Stenner		TWS	04/04/18
Ellyn M Fitch		EMF	12-April-2018
Gail DeRuzzo		GD	4/18/18
Zachary Willenberg		ZJW	4/20/18

Sample Summary

Client: CH2M
SDG: 18-0621
Project/Site: Naval Base Ventura County
CTO: 4164

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Receipt Date
CS011PB-FS	Procecural Blank	SEDIMENT	10/18/2018	10/18/2018
CS012LCS-FS	Laboratory Control Sample	SEDIMENT	10/18/2018	10/18/2018
J8777-FS	VC-PM323-324-SD01-000H	SD	10/8/2018	10/12/2018
J8778-FS	VC-PM323-324-SD01-0102	SD	10/8/2018	10/12/2018
J8779-FS	VC-PM553-SD01-000H	SD	10/8/2018	10/12/2018
J8780-FS	VC-PM553-SD01-0102	SD	10/8/2018	10/12/2018
J8781MS-FS	VC-PM553-SD01-0102-MS	SD	10/8/2018	10/12/2018
J8782MSD-FS	VC-PM553-SD01-0102-MSD	SD	10/8/2018	10/12/2018
J8783-FS	VC-PM3009-SD01-000H	SD	10/8/2018	10/12/2018
J8784-FS	VC-PM3009-SD01-0102	SD	10/8/2018	10/12/2018
J8785-FS	VC-PM372-SD01-000H	SD	10/8/2018	10/12/2018
J8786-FS	VC-PM372-SD01-0102	SD	10/8/2018	10/12/2018
J8787-FS	VC-CS11-SD01-000H	SD	10/9/2018	10/12/2018
J8788-FS	VC-CS11-SD01-0102	SD	10/9/2018	10/12/2018
J8809-FS	VC-STP-SD01-000H	SD	10/9/2018	10/12/2018
J8810-FS	VC-STP-SD01-0102	SD	10/9/2018	10/12/2018
J8811-FS	VC-STP-SD02-000H	SD	10/9/2018	10/12/2018
J8812-FS	VC-STP-SD02-0102	SD	10/9/2018	10/12/2018
J8813-FS	VC-STP-SD03-000H	SD	10/9/2018	10/12/2018
J8814-FS	VC-STP-SD03-0102	SD	10/9/2018	10/12/2018
J8815-FS	VC-STP-SD04-000H	SD	10/9/2018	10/12/2018
J8816-FS	VC-STP-SD04-0102	SD	10/9/2018	10/12/2018

Work Plan

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WORK/QUALITY ASSURANCE PROJECT PLAN

1.0 GENERAL PROJECT INFORMATION

Project Title:	CTO-4164: Analysis of Solids
Project Number:	100110125-01
Client:	CH2M 1100 NE Circle Blvd Suite 300 Corvallis, OR 97330 USA
Client Contact Information:	Tiffany Hill Project Chemist (541) 768-3109(V) NA tiffany.hill@jacobs.com
Effective Date of QAPP:	9/17/2018
Version Number:	100110125-01(S)-01
Project Manager:	Thorn, Jonathan
Laboratory Task Manager:	Thorn, Jonathan
Deliverable Due Date:	10/19/2018

2.0 SCOPE OF WORK

Overview:	Analysis of solid samples for PFAS compounds.
Matrix:	Soil/Sediment

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 all samples frozen upon arrival.
Sub_Sampling:	None
Procedures:	NA
Contact:	NA
Comment:	None
Archiving:	Samples will be disposed of six months after submission of final data. Client will be informed prior to sample disposal.
Disposal:	Dispose of samples and extracts in the appropriate waste streams.

2.1.2 Sample Preparation

None

Samples Expected:	Samples Per Batch:	Batches Expected:
212	20	11

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	--	180507-02: Ottawa Sand Lot:1DJ0861	
LCS	Laboratory Control Sample	1 per batch	Yes	180507-02: Ottawa Sand Lot:1DJ0861	
MS	Spiked field sample for determining method accuracy in the presence of matrix.	1 per batch	--	NA	MS/MSD 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	MS/MSD will be identified on the COC.

2.1.3 Extraction/Preparation

2.1.3.1 Extraction

SOP No.-Rev: **5-370-06**

SOP Title: *Extraction of Poly and Perfluoroalkyl Substances from Environmental Matrices*

Sample Size: 2 g

SIS and LCS/MS Compounds: Defined in Table 2.

Deviations:
- no split post ENVI-Carb
- PIV changed to 1 mL

Comments:
- All solids will be prescreened prior to extraction and analysis.

Table 2: SIS and LCS/MS Spiking Level

Standard Type	Standard Contents	Spike Amount (ng)	Volume (uL)	Comment
PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	JY27 SIS	~ 2.50 ng	50 uL	NA

Standard Type	Standard Contents	Spike Amount (ng)	Volume (uL)	Comment
PFAS - DoD High Level Second Source LCS/MS Solution	KA84 LCS/MS	~ 20.0 ng	100 uL	LCS sample - vary between 100 µL and 400 µL for each batch.
PFAS - DoD High Level Second Source LCS/MS Solution	KA84 LCS/MS	~ 50 ng	250 uL	MS/MSD only - spike between 250 µL and 800 µL (vary per batch)

2.1.3.2 Cleanup

None.

RIS spiking levels are presented in Table 3.

Extract PIV (uL): 1000

Table 3: RIS Spiking Level

Standard Type	Standard Contents	Spike Amount (ng)	Volume (uL)	Comment
PFAS - DoD Internal Standard Spiking Solution	JY26 RIS	~ 0.250 ng	50 uL	NA

2.1.4 Instrumental Analysis

The list of analytes along with data quality criteria are presented in Attachment 2.

1) SOP_No-Rev: **5-369-06**

SOP_Title: *Analysis of Perfluoroalkyl Substances in Environmental Samples by Liquid Chromatography and Tandem Mass Spectrometry (LC-MS/MS)*

Deviations: None

Comments: None

2.2. DELIVERABLES

Deliverables Due:	10/19/2018
LIMS Reports:	*No*
Histograms:	*No*
Excel Tables:	*Yes*
EICs:	*No*

Chromatograms:	*No*
EDDs:	*Yes*
Comments:	• Individual data sets will be due 28 days after receipt of each sample set. • Full Level 4 data package (QSM 5.1 Table B-15 compliant) required. • SEDD file required. • weekly updates to client on status required.

3.0 QUALITY

The Method Quality Objectives are defined in Attachment 3.

4.0 ORGANIZATION AND COMMUNICATION

4.1 ORGANIZATION

The project team is defined in Table 4. Supervisors may make substitutions with Project Manager concurrence.

Table 4: Project Team and Roles

Staff Member	Role	Comment
Jonathan R. Thorn	Project Manager	NA
Stephanie A. Schultz	Sample Preparation	NA
Denise M. Schumitz	LC-MS/MS Analysis	NA
Matt D. Schumitz	Sample Custody	NA
Carla R. Devine	Quality Control Officer	NA
Zachary J. Willenberg	Quality Assurance Officer	NA

4.2 COMMUNICATION

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

5.0 SCHEDULE

The project schedule is presented in Table 5.

Table 5. Schedule of Laboratory Activities

Activity:	Start Date:	End Date:	TAT (days):	Comment:
Sample Receipt	09/20/2018	09/20/2018	0	Schedule will vary as samples arrive over time.
Sample Preparation	09/20/2018	09/25/2018	5	NA

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WORK/QUALITY ASSURANCE PROJECT PLAN

Activity:	Start Date:	End Date:	TAT (days):	Comment:
Instrument Analysis	09/25/2018	10/09/2018	14	NA
Quality Control Review	10/09/2018	10/11/2018	2	NA
Quality Assurance Review	10/11/2018	10/12/2018	1	NA

6.0 BUDGET

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

Table 6. Labor Budget (Laboratory Analytical Task)

Labor Activity:	Hours/ Batch:	Batches:	Total Hours:	Comment:
Sample Receipt	2	10	20	Hours are per batch of 20 samples.
Sample Preparation	8	10	80	NA
Instrument Analysis	8	10	80	NA
Quality Control Review	3	10	30	NA
Quality Assurance Review	1	10	10	NA

7.0 STAFF DEVELOPMENT

None anticipated.

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WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 1: Target Samples

Shipment: **SHP-180921-01**

Status: Pending

Description: NBVC Basewide SI

Range: J8201-J8271

Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility: Location: No: Comments:
1	J8201	VC-PM3009-SS01-000H	09/17/2018 2:15 pm	SS	R0119 (NA)
2	J8202	VC-PM3009-SB01-0102	09/17/2018 2:15 pm	SB	R0119 (NA)
3	J8203	VC-PM3009-SB01-0506	09/17/2018 2:15 pm	SB	R0119 (NA)
4	J8204	VC-PM3009-SS02-000H	09/17/2018 3:12 pm	SS	R0119 (NA)
5	J8205	VC-PM3009-SB02-0102	09/17/2018 3:13 pm	SB	R0119 (NA)
6	J8206	VC-PM3009-SB02-0506	09/17/2018 3:15 pm	SB	R0119 (NA)
7	J8207	VC-PM3009-SS03-000H	09/17/2018 4:16 pm	SS	R0119 (NA)
8	J8208	VC-PM3009-SB03-0102	09/17/2018 4:17 pm	SB	R0119 (NA)
9	J8209	VC-PM3009-SB03-0506	09/17/2018 4:18 pm	SB	R0119 (NA)
10	J8218	VC-PM372-SS01-000H	09/18/2018 9:36 am	SS	R0119 (NA)
11	J8219	VC-PM372-SB01-0102	09/18/2018 9:37 am	SB	R0119 (NA)
12	J8220	VC-PM372-SB01-0506	09/18/2018 9:43 am	SB	R0119 (NA)
13	J8221	VC-PM372-SS02-000H	09/18/2018 8:57 am	SS	R0119 (NA)
14	J8222	VC-PM372-SB02-0102	09/18/2018 9:03 am	SB	R0119 (NA)
15	J8223	VC-PM372-SB02-0506	09/18/2018 9:06 am	SB	R0119 (NA)
16	J8224	VC-PM372-SS03-000H	09/18/2018 10:46 am	SS	R0119 (NA)
17	J8225	VC-PM372-SB03-0102	09/18/2018 10:47 am	SB	R0119 (NA)
18	J8226	VC-PM372-SB03-0506	09/18/2018 10:49 am	SB	R0119 (NA)
19	J8229	VC-PM649-SS01-000H	09/18/2018 11:30 am	SS	R0119 (NA)
20	J8230	VC-PM649-SB01-0102	09/18/2018 11:35 am	SB	R0119 (NA)
21	J8231	VC-PM649-SB01-0506	09/18/2018 11:40 am	SB	R0119 (NA)
22	J8232	VC-PM649-SS02-000H	09/18/2018 2:25 pm	SS	R0119 (NA)
23	J8233	VC-PM649-SB02-0102	09/18/2018 2:29 pm	SB	R0119 (NA)
24	J8234	VC-PM649-SB02-0506	09/18/2018 2:30 pm	SB	R0119 (NA)
25	J8235	VC-PM649-SS03-000H	09/18/2018 1:00 pm	SS	R0119 (NA)
26	J8236	VC-PM649-SB03-0102	09/18/2018 1:12 pm	SB	R0119 (NA)
27	J8237	VC-PM649-SB03-0506	09/18/2018 1:20 pm	SB	R0119 (NA)
28	J8238	VC-PM649-SS04-000H	09/18/2018 1:15 pm	SS	R0119 (NA)
29	J8239	VC-PM649-SB04-0102	09/18/2018 1:27 pm	SB	R0119 (NA)
30	J8240	VC-PM649-SB04-0506	09/18/2018 1:40 pm	SB	R0119 (NA)
31	J8248	VC-PM365-SS01-000H	09/19/2018 10:28 am	SS	R0119 (NA)
32	J8249	VC-PM365-SB01-0102	09/19/2018 10:30 am	SB	R0119 (NA)
33	J8250	VC-PM365-SB01-0506	09/19/2018 10:37 am	SB	R0119 (NA)
34	J8251	VC-PM365-SS02-000H	09/19/2018 11:30 am	SS	R0119 (NA)
35	J8252	VC-PM365-SB02-0102	09/19/2018 11:32 am	SB	R0119 (NA)
36	J8253	VC-PM365-SB02-0506	09/19/2018 11:40 am	SB	R0119 (NA)
37	J8254	VC-PM365-SS03-000H	09/19/2018 10:26 am	SS	R0119 (NA)
38	J8255	VC-PM365-SB03-0102	09/19/2018 10:27 am	SB	R0119 (NA)
39	J8256	VC-PM365-SB03-0506	09/19/2018 10:32 am	SB	R0119 (NA)
40	J8263	VC-PM553-SS01-000H	09/19/2018 1:50 pm	SS	R0119 (NA)
41	J8264	VC-PM553-SB01-0102	09/19/2018 1:53 pm	SB	R0119 (NA)

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WORK/QUALITY ASSURANCE PROJECT PLAN

Shipment: **SHP-180921-01**

Status: Pending

Description: NBVC Basewide SI

Range: J8201-J8271

Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
42	J8265	VC-PM553-SB01-0506	09/19/2018 1:59 pm	SB	R0119 (NA)			
43	J8266	VC-PM553-SS02-000H	09/19/2018 2:40 pm	SS	R0119 (NA)			
44	J8267	VC-PM553-SB02-0102	09/19/2018 2:42 pm	SB	R0119 (NA)			
45	J8268	VC-PM553-SB02-0506	09/19/2018 2:50 pm	SB	R0119 (NA)			
46	J8269	VC-PM553-SS03-000H	09/19/2018 11:30 am	SS	R0119 (NA)			
47	J8270	VC-PM553-SB03-0102	09/19/2018 11:34 am	SB	R0119 (NA)			
48	J8271	VC-PM553-SB03-0506	09/19/2018 11:42 am	SB	R0119 (NA)			

Shipment: **SHP-180925-02**

Status: Approved

Description: NBVC Basewide SI

Range: J8291-J8334

Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
1	J8291	VC-CS94-SS01-000H	09/21/2018 10:30 am	SS	R0119 (NA)			
2	J8292	VC-CS94-SB01-0102	09/21/2018 10:33 am	SB	R0119 (NA)			
3	J8293	VC-CS94-SB01-0506	09/21/2018 10:37 am	SB	R0119 (NA)			
4	J8294	VC-CS94-SS02-000H	09/21/2018 11:24 am	SS	R0119 (NA)			
5	J8295	VC-CS94-SB02-0102	09/21/2018 11:25 am	SB	R0119 (NA)			
6	J8296	VC-CS94-SB02-0506	09/21/2018 11:33 am	SB	R0119 (NA)			
7	J8297	VC-CS94-SS03-000H	09/21/2018 10:37 am	SS	R0119 (NA)			
8	J8298	VC-CS94-SB03-0102	09/21/2018 10:38 am	SB	R0119 (NA)			
9	J8299	VC-CS94-SB03-0506	09/21/2018 10:41 am	SB	R0119 (NA)			
10	J8300	VC-CS94-SS04-000H	09/21/2018 11:57 am	SS	R0119 (NA)			
11	J8301	VC-CS94-SB04-0102	09/21/2018 11:58 am	SB	R0119 (NA)			
12	J8302	VC-CS94-SB04-0506	09/21/2018 12:04 pm	SB	R0119 (NA)			
13	J8303	VC-CS94-SS05-000H	09/21/2018 12:04 pm	SS	R0119 (NA)			
14	J8304	VC-CS94-SB05-0102	09/21/2018 12:05 pm	SB	R0119 (NA)			
15	J8305	VC-CS94-SB05-0506	09/21/2018 12:10 pm	SB	R0119 (NA)			
16	J8310	VC-PM323-324-SS01-000H	09/20/2018 1:52 pm	SS	R0119 (NA)			
17	J8311	VC-PM323-324-SB01-0102	09/20/2018 1:55 pm	SB	R0119 (NA)			
18	J8312	VC-PM323-324-SB01-0506	09/20/2018 2:10 pm	SB	R0119 (NA)			
19	J8313	VC-PM323-324-SS02-000H	09/20/2018 11:00 am	SS	R0119 (NA)			
20	J8314	VC-PM323-324-SB02-0102	09/20/2018 11:05 am	SB	R0119 (NA)			
21	J8315	VC-PM323-324-SB02-0506	09/20/2018 11:15 am	SB	R0119 (NA)			
22	J8316	VC-PM323-324-SS03-000H	09/20/2018 10:15 am	SS	R0119 (NA)			

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WORK/QUALITY ASSURANCE PROJECT PLAN

Shipment: **SHP-180925-02**

Status: Approved

Description: NBVC Basewide SI

Range: J8291-J8334

Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
23	J8317	VC-PM323-324-SB03-0102	09/20/2018 10:17 am	SB	R0119 (NA)			
24	J8318	VC-PM323-324-SB03-0506	09/20/2018 10:22 am	SB	R0119 (NA)			
25	J8327	VC-PM323-SS02-000H	09/20/2018 2:43 pm	SS	R0119 (NA)			
26	J8328	VC-PM323-SB02-0102	09/20/2018 2:44 pm	SB	R0119 (NA)			
27	J8329	VC-PM323-SB02-0506	09/20/2018 2:48 pm	SB	R0119 (NA)			
28	J8332	VC-PM324-SS02-000H	09/20/2018 1:40 pm	SS	R0119 (NA)			
29	J8333	VC-PM324-SB02-0102	09/20/2018 1:45 pm	SB	R0119 (NA)			
30	J8334	VC-PM324-SB02-0506	09/20/2018 1:51 pm	SB	R0119 (NA)			

Shipment: **SHP-180927-02**

Status: Approved

Description: NBVC Basewide SI

Range: J8352-J8411

Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
1	J8352	VC-PM323-SS01-000H	09/24/2018 9:52 am	SS	R0119 (NA)			
2	J8353	VC-PM323-SB01-0102	09/24/2018 9:53 am	SB	R0119 (NA)			
3	J8354	VC-PM323-SB01-0506	09/24/2018 10:01 am	SB	R0119 (NA)			
4	J8355	VC-PM323-SS03-000H	09/24/2018 9:20 am	SS	R0119 (NA)			
5	J8356	VC-PM323-SB03-0102	09/24/2018 9:23 am	SB	R0119 (NA)			
6	J8357	VC-PM323-SB03-0506	09/24/2018 10:30 am	SB	R0119 (NA)			
7	J8360	VC-PM324-SS01-000H	09/24/2018 1:08 pm	SS	R0119 (NA)			
8	J8361	VC-PM324-SB01-0102	09/24/2018 1:11 pm	SB	R0119 (NA)			
9	J8362	VC-PM324-SB01-0506	09/24/2018 1:30 pm	SB	R0119 (NA)			
10	J8363	VC-PM324-SS03-000H	09/24/2018 10:49 am	SS	R0119 (NA)			
11	J8364	VC-PM324-SB03-0102	09/24/2018 10:50 am	SB	R0119 (NA)			
12	J8365	VC-PM324-SB03-0506	09/24/2018 11:02 am	SB	R0119 (NA)			
13	J8373	VC-PM64B-SS01-000H	09/24/2018 2:34 pm	SS	R0119 (NA)			
14	J8374	VC-PM64B-SB01-0102	09/24/2018 2:38 pm	SB	R0119 (NA)			
15	J8375	VC-PM64B-SB01-0506	09/24/2018 2:50 pm	SB	R0119 (NA)			
16	J8376	VC-PM64B-SS02-000H	09/24/2018 3:02 pm	SS	R0119 (NA)			
17	J8377	VC-PM64B-SB02-0102	09/24/2018 3:03 pm	SB	R0119 (NA)			
18	J8378	VC-PM64B-SB02-0506	09/24/2018 3:16 pm	SB	R0119 (NA)			
19	J8379	VC-PM64B-SS03-000H	09/24/2018 1:52 pm	SS	R0119 (NA)			
20	J8380	VC-PM64B-SB03-0102	09/24/2018 1:53 pm	SB	R0119 (NA)			
21	J8381	VC-PM64B-SB03-0506	09/24/2018 2:13 pm	SB	R0119 (NA)			
22	J8386	VC-HS09-SB01-0102	09/25/2018 1:21 pm	SB	R0119 (NA)			
23	J8387	VC-HS09-SB01-0506	09/25/2018 2:04 pm	SB	R0119 (NA)			
24	J8388	VC-HS09-SB02-0102	09/25/2018 2:39 pm	SB	R0119 (NA)			

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Shipment: **SHP-180927-02**

Status: Approved

Description: NBVC Basewide SI

Range: J8352-J8411

Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
25	J8389	VC-HS09-SB02-0506	09/25/2018 2:47 pm	SB	R0119 (NA)			
26	J8390	VC-HS09-SS03-000H	09/25/2018 12:54 pm	SS	R0119 (NA)			
27	J8391	VC-HS09-SB03-0102	09/25/2018 12:55 pm	SB	R0119 (NA)			
28	J8392	VC-HS09-SB03-0506	09/25/2018 1:05 pm	SB	R0119 (NA)			
29	J8401	VC-HS09-SS01-000H	09/25/2018 1:20 pm	SS	R0119 (NA)			
30	J8402	VC-HS09-SS02-000H	09/25/2018 2:35 pm	SS	R0119 (NA)			
31	J8403	VC-AOC16-SS01-000H	09/25/2018 9:43 am	SS	R0119 (NA)			
32	J8404	VC-AOC16-SB01-0102	09/25/2018 9:43 am	SB	R0119 (NA)			
33	J8405	VC-AOC16-SB01-0506	09/25/2018 9:57 am	SB	R0119 (NA)			
34	J8406	VC-AOC16-SS02-000H	09/25/2018 10:05 am	SS	R0119 (NA)			
35	J8407	VC-AOC16-SB02-0102	09/25/2018 10:06 am	SB	R0119 (NA)			
36	J8408	VC-AOC16-SB02-0506	09/25/2018 10:10 am	SB	R0119 (NA)			
37	J8409	VC-AOC16-SS03-000H	09/25/2018 9:43 am	SS	R0119 (NA)			
38	J8410	VC-AOC16-SB03-0102	09/25/2018 9:44 am	SB	R0119 (NA)			
39	J8411	VC-AOC16-SB03-0506	09/25/2018 9:53 am	SB	R0119 (NA)			

Shipment: **SHP-180928-03**

Status: Pending

Description: NBVC Basewide SI

Range: J8438-J8476

Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
1	J8438	VC-MS09-SS01-000H	09/26/2018 9:41 am	SS	F0117 (NA)			
2	J8439	VC-MS09-SB01-0102	09/26/2018 9:43 am	SB	F0117 (NA)			
3	J8440	VC-MS09-SB01-0506	09/26/2018 9:52 am	SB	F0117 (NA)			
4	J8441	VC-MS09-SS02-000H	09/26/2018 9:30 am	SS	F0117 (NA)			
5	J8442	VC-MS09-SB02-0102	09/26/2018 9:34 am	SB	F0117 (NA)			
6	J8443	VC-MS09-SB02-0506	09/26/2018 9:41 am	SB	F0117 (NA)			
7	J8444	VC-MS09-SS03-000H	09/26/2018 10:15 am	SS	F0117 (NA)			
8	J8445	VC-MS09-SB03-0102	09/26/2018 10:20 am	SB	F0117 (NA)			
9	J8446	VC-MS09-SB03-0506	09/26/2018 10:25 am	SB	F0117 (NA)			
10	J8447	VC-MS09-SS04-000H	09/26/2018 11:16 am	SS	F0117 (NA)			
11	J8448	VC-MS09-SB04-0102	09/26/2018 11:18 am	SB	F0117 (NA)			
12	J8449	VC-MS09-SB04-0506	09/26/2018 11:25 am	SB	F0117 (NA)			
13	J8450	VC-MS09-SS05-000H	09/26/2018 10:44 am	SS	F0117 (NA)			
14	J8451	VC-MS09-SB05-0102	09/26/2018 10:45 am	SB	F0117 (NA)			
15	J8452	VC-MS09-SB05-0506	09/26/2018 10:50 am	SB	F0117 (NA)			
16	J8465	VC-PM367-SS01-000H	09/27/2018 10:12 am	SS	F0117 (NA)			
17	J8466	VC-PM367-SB01-0102	09/27/2018 10:15 am	SB	F0117 (NA)			
18	J8467	VC-PM367-SB01-0506	09/27/2018 10:26 am	SB	F0117 (NA)			
19	J8468	VC-PM367-SS02-000H	09/27/2018 9:25 am	SS	F0117 (NA)			

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Shipment: **SHP-180928-03**

Status: Pending

Description: NBVC Basewide SI

Range: J8438-J8476

Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
20	J8469	VC-PM367-SB02-0102	09/27/2018 9:31 am	SB	F0117 (NA)			
21	J8470	VC-PM367-SB02-0506	09/27/2018 9:37 am	SB	F0117 (NA)			
22	J8471	VC-PM367-SS03-000H	09/27/2018 10:19 am	SS	F0117 (NA)			
23	J8472	VC-PM367-SB03-0102	09/27/2018 10:20 am	SB	F0117 (NA)			
24	J8473	VC-PM367-SB03-0506	09/27/2018 10:26 am	SB	F0117 (NA)			
25	J8474	VC-PM367-SS04-000H	09/27/2018 9:30 am	SS	F0117 (NA)			
26	J8475	VC-PM367-SB04-0102	09/27/2018 9:31 am	SB	F0117 (NA)			
27	J8476	VC-PM367-SB04-0506	09/27/2018 9:38 am	SB	F0117 (NA)			

Shipment: **SHP-181009-01**

Status: Pending

Description: NBVC Basewide SI

Range: J8658-J8711

Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
1	J8658	VC-CS12-SS01-000H	10/06/2018 8:25 am	SS	R0119 (NA)			
2	J8659	VC-CS12-SB01-0102	10/06/2018 8:26 am	SB	R0119 (NA)			
3	J8660	VC-CS12-SB01-0506	10/06/2018 8:34 am	SB	R0119 (NA)			
4	J8661	VC-CS12-SS02-000H	10/06/2018 11:07 am	SS	R0119 (NA)			
5	J8662	VC-CS12-SB02-0102	10/06/2018 11:09 am	SB	R0119 (NA)			
6	J8663	VC-CS12-SB02-0506	10/06/2018 11:13 am	SB	R0119 (NA)			
7	J8664	VC-CS12-SS03-000H	10/06/2018 10:06 am	SS	R0119 (NA)			
8	J8665	VC-CS12-SB03-0102	10/06/2018 10:07 am	SB	R0119 (NA)			
9	J8666	VC-CS12-SB03-0506	10/06/2018 10:12 am	SB	R0119 (NA)			
10	J8671	VC-CS10-SS01-000H	10/06/2018 1:02 pm	SS	R0119 (NA)			
11	J8672	VC-CS10-SB01-0102	10/06/2018 1:04 pm	SB	R0119 (NA)			
12	J8673	VC-CS10-SB01-0506	10/06/2018 1:10 pm	SB	R0119 (NA)			
13	J8674	VC-CS10-SS02-000H	10/06/2018 9:55 am	SS	R0119 (NA)			
14	J8675	VC-CS10-SB02-0102	10/06/2018 9:58 am	SB	R0119 (NA)			
15	J8676	VC-CS10-SB02-0506	10/06/2018 10:06 am	SB	R0119 (NA)			
16	J8677	VC-CS10-SS03-000H	10/06/2018 11:31 am	SS	R0119 (NA)			
17	J8678	VC-CS10-SB03-0102	10/06/2018 11:33 am	SB	R0119 (NA)			
18	J8679	VC-CS10-SB03-0506	10/06/2018 11:37 am	SB	R0119 (NA)			
19	J8680	VC-CS10-SS04-000H	10/06/2018 10:35 am	SS	R0119 (NA)			
20	J8681	VC-CS10-SB04-0102	10/06/2018 10:38 am	SB	R0119 (NA)			
21	J8682	VC-CS10-SB04-0506	10/06/2018 10:41 am	SB	R0119 (NA)			
22	J8689	VC-CS10-SD01-000H	10/06/2018 1:28 pm	SD	R0119 (NA)			
23	J8690	VC-CS10-SD01-0102	10/06/2018 1:30 pm	SD	R0119 (NA)			
24	J8691	VC-CS18-SS01-000H	10/06/2018 1:52 pm	SS	R0119 (NA)			
25	J8692	VC-CS18-SB01-0102	10/06/2018 1:54 pm	SB	R0119 (NA)			
26	J8693	VC-CS18-SB01-0506	10/06/2018 2:00 pm	SB	R0119 (NA)			

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Shipment: **SHP-181009-01**

Status: Pending

Description: NBVC Basewide SI

Range: J8658-J8711

Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
27	J8694	VC-CS00-SS01-000H	10/06/2018 2:05 pm	SS	R0119 (NA)			
28	J8695	VC-CS00-SB01-0102	10/06/2018 2:07 pm	SB	R0119 (NA)			
29	J8696	VC-CS00-SB01-0506	10/06/2018 2:10 pm	SB	R0119 (NA)			
30	J8697	VC-CS00-SS02-000H	10/06/2018 3:22 pm	SS	R0119 (NA)			
31	J8698	VC-CS00-SB02-0102	10/06/2018 3:23 pm	SS	R0119 (NA)			
32	J8699	VC-CS00-SB02-0506	10/06/2018 3:27 pm	SB	R0119 (NA)			
33	J8700	VC-CS00-SS03-000H	10/06/2018 4:15 pm	SS	R0119 (NA)			
34	J8701	VC-CS00-SB03-0102	10/06/2018 4:18 pm	SB	R0119 (NA)			
35	J8702	VC-CS00-SB03-0506	10/06/2018 4:25 pm	SB	R0119 (NA)			
36	J8703	VC-CS00-SS04-000H	10/06/2018 1:13 pm	SS	R0119 (NA)			
37	J8704	VC-CS00-SB04-0102	10/06/2018 1:15 pm	SB	R0119 (NA)			
38	J8705	VC-CS00-SB04-0506	10/06/2018 1:20 pm	SB	R0119 (NA)			
39	J8706	VC-CS00-SS05-000H	10/06/2018 5:17 pm	SS	R0119 (NA)			
40	J8707	VC-CS00-SB05-0102	10/06/2018 5:19 pm	SB	R0119 (NA)			
41	J8708	VC-CS00-SB05-0506	10/06/2018 5:24 pm	SB	R0119 (NA)			
42	J8709	VC-CS00-SS06-000H	10/06/2018 5:05 pm	SS	R0119 (NA)			
43	J8710	VC-CS00-SB06-0102	10/06/2018 5:07 pm	SB	R0119 (NA)			
44	J8711	VC-CS00-SB06-0506	10/06/2018 5:10 pm	SB	R0119 (NA)			

Shipment: **SHP-181012-02**

Status: Pending

Description: NBVC Basewide SI

Range: J8777-J8816

Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
1	J8777	VC-PM323-324-SD01-000H	10/08/2018 10:22 am	SD	R0119 (NA)			
2	J8778	VC-PM323-324-SD01-0102	10/08/2018 10:23 am	SD	R0119 (NA)			
3	J8779	VC-PM553-SD01-000H	10/08/2018 10:54 am	SD	R0119 (NA)			
4	J8780	VC-PM553-SD01-0102	10/08/2018 10:55 am	SD	R0119 (NA)			
5	J8783	VC-PM3009-SD01-000H	10/08/2018 11:13 am	SD	R0119 (NA)			
6	J8784	VC-PM3009-SD01-0102	10/08/2018 11:14 am	SD	R0119 (NA)			
7	J8785	VC-PM372-SD01-000H	10/08/2018 11:25 am	SD	R0119 (NA)			
8	J8786	VC-PM372-SD01-0102	10/08/2018 11:26 am	SD	R0119 (NA)			
9	J8787	VC-CS11-SD01-000H	10/09/2018 8:35 am	SD	R0119 (NA)			
10	J8788	VC-CS11-SD01-0102	10/09/2018 8:37 am	SD	R0119 (NA)			
11	J8789	VC-CS11-SD02-000H	10/09/2018 7:30 am	SD	R0119 (NA)			
12	J8790	VC-CS11-SD02-0102	10/09/2018 7:31 am	SD	R0119 (NA)			
13	J8791	VC-CS11-SD03-000H	10/09/2018 8:03 am	SD	R0119 (NA)			
14	J8792	VC-CS11-SD03-0102	10/09/2018 8:05 am	SD	R0119 (NA)			

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Shipment: **SHP-181012-02**

Status: Pending

Description: NBVC Basewide SI

Range: J8777-J8816

Comment: NA

No:	BDO Id:	Client Sample ID:	Collection Date:	Matrix:	Storage Facility:	Location:	No:	Comments:
15	J8793	VC-CS11-SD04-000H	10/09/2018 8:00 am	SD	R0119 (NA)			
16	J8794	VC-CS11-SD04-0102	10/09/2018 8:02 am	SD	R0119 (NA)			
17	J8795	VC-CS11-SD05-000H	10/09/2018 8:26 am	SD	R0119 (NA)			
18	J8796	VC-CS11-SD05-0102	10/09/2018 8:28 am	SD	R0119 (NA)			
19	J8797	VC-CS11-SD06-000H	10/09/2018 7:14 am	SD	R0119 (NA)			
20	J8798	VC-CS11-SD06-0102	10/09/2018 7:16 am	SD	R0119 (NA)			
21	J8809	VC-STP-SD01-000H	10/09/2018 4:05 pm	SD	R0119 (NA)			
22	J8810	VC-STP-SD01-0102	10/09/2018 4:07 pm	SD	R0119 (NA)			
23	J8811	VC-STP-SD02-000H	10/09/2018 3:56 pm	SD	R0119 (NA)			
24	J8812	VC-STP-SD02-0102	10/09/2018 3:58 pm	SD	R0119 (NA)			
25	J8813	VC-STP-SD03-000H	10/09/2018 3:12 pm	SD	R0119 (NA)			
26	J8814	VC-STP-SD03-0102	10/09/2018 3:14 pm	SD	R0119 (NA)			
27	J8815	VC-STP-SD04-000H	10/09/2018 3:38 pm	SD	R0119 (NA)			
28	J8816	VC-STP-SD04-0102	10/09/2018 3:40 pm	SD	R0119 (NA)			

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Attachment 2: Test Codes

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

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

No:	Analyte:	Report Name:	Type	RIS	SIS	Hidden:	Graph:
1	Perfluoro-n-hexanoic acid	PFHxA	T		13C5-PFHxA	No	No
2	Perfluoro-n-heptanoic Acid	PFHpA	T		13C4-PFHpA	No	No
3	Perfluoro-n-octanoic Acid	PFOA	T		13C8-PFOA	No	No
4	Perfluorononanoic Acid	PFNA	T		13C9-PFNA	No	No
5	Perfluoro-n-decanoic Acid	PFDA	T		13C6-PFDA	No	No
6	Perfluoro-n-undecanoic acid	PFUnA	T		13C7-PFUnA	No	No
7	Perfluoro-n-dodecanoic acid	PFDoA	T		13C2-PFDoA	No	No
8	Perfluoro-n-tridecanoic acid	PFTrDA	T		13C2-PFTeDA	No	No
9	Perfluoro-n-tetradecanoic acid	PFTeDA	T		13C2-PFTeDA	No	No
10	N-methylperfluoro-1-octanesulfonamidoacetic acid	NMeFOSAA	T		d3-MeFOSAA	No	No
11	N-ethylperfluoro-octanesulfonamidoacetic acid	NEtFOSAA	T		d5-EtFOSAA	No	No
12	Perfluoro-1-butanesulfonate	PFBS	T		13C3-PFBS	No	No
13	Perfluoro-1-hexanesulfonate	PFHxS	T		13C3-PFHxS	No	No
14	Perfluoro-1-octanesulfonate	PFOS	T		13C8-PFOS	No	No
1	13C5-PFHxA	13C5-PFHxA	SIS	13C2-PFOA		No	No
2	13C4-PFHpA	13C4-PFHpA	SIS	13C2-PFOA		No	No
3	13C8-PFOA	13C8-PFOA	SIS	13C2-PFOA		No	No
4	13C9-PFNA	13C9-PFNA	SIS	13C2-PFOA		No	No

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Attachment 2: Test Codes

Project Test Code Name: Master_369

No:	Analyte:	Report Name:	Type	RIS	SIS	Hidden:	Graph:
5	13C6-PFDA	13C6-PFDA	SIS	13C2-PFDA		No	No
6	13C7-PFUnA	13C7-PFUnA	SIS	13C2-PFDA		No	No
7	13C2-PFDoA	13C2-PFDoA	SIS	13C2-PFDA		No	No
8	13C2-PFTeDA	13C2-PFTeDA	SIS	13C2-PFDA		No	No
9	d3-MeFOSAA	d3-MeFOSAA	SIS	13C4-PFOS		No	No
10	d5-EtFOSAA	d5-EtFOSAA	SIS	13C4-PFOS		No	No
11	13C3-PFBS	13C3-PFBS	SIS	13C4-PFOS		No	No
12	13C3-PFHxS	13C3-PFHxS	SIS	13C4-PFOS		No	No
13	13C8-PFOS	13C8-PFOS	SIS	13C4-PFOS		No	No

Total Analytes: 27

Subtract Peaks:

None

Sum Peaks:

None

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WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 2: Test Codes

Project Test Code Name: Master_369

ICAL Acceptance Criteria:

Curve Fit:	Limit Mean(%):	Mean Qual:	Limit Ind.:	Ind. Qual:	Min Points:	Points Qual:	Comments:
Linear	NA	NA	0.99	N	5	N	y = Bx + C
Quadratic	NA	NA	0.99	N	6	N	y = Ax^2 + Bx + C

Continuing Calibration Verification Criteria:

CCV Name: 5-369

Frequency Hrs:		Mean PD(%):		Individual PD(%):		RIS/SIS RT Window (min):		Area Limit Low(%):	Area Limit High(%):		Comment:
12	(N)	30	(N)	30	(N)	0.04	(N)	-50	100	(N)	NA

Independent Calibration Verification:

ICC Name: 5-369

Mean PD Limit(%):		Ind. PD Limit(%):		RIS/SIS Window Limit (Secs):		Area Limit High(%):	Area Limit Low(%):		Comment:
30	(N)	30	(N)	0.04	(N)	-50	100	(N)	NA

Mass Discrimination Criteria:

None

Degredation Check Criteria:

None

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WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 3: Method Quality Objectives

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

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WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 3: Method Quality Objectives

MQO Application	***Universal_LC***		
MQO:	**Acceptance Criteria**	**Qual:**	**Corrective Action:**
Analytical Triplicate Precision	Organics results less than 30% Relative Standard Deviation (RSD). Analyte concentration must be > 5x MDL.	N	Review with Project Manager; re-analyze or justify reporting results in the project records.
	Organics Results in the Original is less than 5 times the MDL	n	
Surrogate Compound Recovery	Recovery results between 50% and 150%.	N	Review with Project Manager; re-analyze or justify reporting results in the project records.
Control Oil	RPD < 30% for at least 90% of analytes	N	Results examined by project manager, task leader, or subcontractor lab manager. Reextraction, reanalysis, or justification documented.
Instrument Calibration	5-369-6: R-squared greater than or equal to 0.990		Results examined by project manager, task leader, or subcontractor lab manager. Reextraction, reanalysis, or justification documented.
Independent Calibration Check Solution	5-369-6: Individual PD less than or equal to 30%. Mean Percent Difference less than or equal to 30%.	N	Review with Project Manager; re-analyze or justify in project records.
Continuing Calibration Verification	5-369-6: Individual PD less than or equal to 30%. Mean Percent Difference less than or equal to 30%.	N	Review with Project Manager; re-analyze or justify in project records.

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ShpNo SHP-181012-02

Battelle Project No:

Sample Receipt Form

Approved: ☐ Authorized ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Friday, October 12, 2018 10:30 AM

No. of Shipping Containers: 2

SHIPMENT

Method of Delivery: Commercial Carrier **Tracking Number:** Fed Ex

COC Forms: ☑ Shipped with samples ☐ No Forms

Cooler(s)/Box(es)

Cntr	Type	Tracking No.	Seal	Seal	Container	Therm.	Temp C	Smps
1 of 2	Cooler	7832 0156 6760	Custody Seals	Intact	Intact	Therm_1	1.3	19
2 of 2	Cooler	7832 0156 6770	Custody Seals	Intact	Intact	Therm_1	0.7	21

Samples

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

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

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

Temperature upon receipt (°C): 1.3 Temperature Blank used ☑ Yes ☐ No
(Note: If temperature upon receipt differs from required conditions, see sample log comment field)

Samples Acidified: ☐ Yes ☐ No ☑ Unknown

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

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

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

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

Storage Location: Custody: Refrigerator - R0119 (NA) **BDO IDs Assigned:** J8777 - J8816

Samples logged in by: Schumitz, Matt **Date/Time:** 10/12/2018 10:30 AM

Approved By: **Approved On:**

Authorized By: **Authorized On:**

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ShpNo: SHP-181012-02

Battelle Project No: 0110125-01

Report Corrective Actions

Corrective Action No: 1 **of** 1

Authorized ☐ Approved: ☐

COC Client: CH2M
COC Project: NBVC Basewide SI
COC Date: 10/12/2018 11:5

	Description of Problem:	Explanation:
Custody	Jars and C-O-C do not match for time/date	On COC page 5 of 8 all samples except the SD01 set do not match collection times from COC to sample label.

Documentation of project manager notification

Sample Custodian Schumitz, Matt **Date:** 10/12/2018 12:55:00 P
Laboratory Manager: Thorn, Jonathan **Date:** 10/31/2018 1:12:00 P
Project Manager: Thorn, Jonathan **Date:** 10/31/2018 1:12:00 P

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

On 30-Oct-18 **I contacted** Hill, Tiffany **at** CH2M

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

Client verified that the COC was correct for times, see attached email.

Date this form was received back to the custodian:
Reference Number:

Thorn, Jonathan R

From: Hill, Tiffany/CVO <Tiffany.Hill@jacobs.com>
Sent: Wednesday, October 31, 2018 12:15 PM
To: Thorn, Jonathan R
Cc: Schumitz, Matthew; Schultz, Stephanie A
Subject: RE: Sample custody records

Message received from outside the Battelle network. Carefully examine it before you open any links or attachments.

Please use the CoC.

Thanks,

Tiffany Hill | Jacobs | Chemist, Global Environmental Solutions | 541.768.3109 direct | 541.908.3794 mobile | Tiffany.Hill@jacobs.com | www.jacobs.com

---

From: Thorn, Jonathan R [mailto:thorn@battelle.org]
Sent: Wednesday, October 31, 2018 5:45 AM
To: Hill, Tiffany/CVO <Tiffany.Hill@jacobs.com>
Cc: Schumitz, Matthew <SCHUMITZM@battelle.org>; Schultz, Stephanie A <schultzs@battelle.org>
Subject: [EXTERNAL] RE: Sample custody records

Hi Tiffany,
We pulled the sample, the issue was actually on custody page 5 of 8, not 8 of 8. The table below shows the samples with the times from the COC vs. the times on the jars… it looks like it was transposed on one, but not sure which (times match on both, but not to the same samples). If you can let us know which time is correct for these samples, we can get the corrective action closed.
Thank you,
Jon

BDO Id	Client Sample ID	Matrix	Collection Date	Time on Bottle
J8789	VC-CS11-SD02-000H	SD	10/9/2018 7:30	7:14
J8790	VC-CS11-SD02-0102	SD	10/9/2018 7:31	7:16
J8791	VC-CS11-SD03-000H	SD	10/9/2018 8:03	7:30
J8792	VC-CS11-SD03-0102	SD	10/9/2018 8:05	7:31
J8793	VC-CS11-SD04-000H	SD	10/9/2018 8:00	8:03
J8794	VC-CS11-SD04-0102	SD	10/9/2018 8:02	8:05
J8795	VC-CS11-SD05-000H	SD	10/9/2018 8:26	8:00
J8796	VC-CS11-SD05-0102	SD	10/9/2018 8:28	8:02
J8797	VC-CS11-SD06-000H	SD	10/9/2018 7:14	8:26
J8798	VC-CS11-SD06-0102	SD	10/9/2018 7:16	8:28

From: Thorn, Jonathan R
Sent: Tuesday, October 30, 2018 5:44 PM
To: 'Hill, Tiffany/CVO' <Tiffany.Hill@jacobs.com>
Cc: Schumitz, Matthew <SCHUMITZM@battelle.org>; Schultz, Stephanie A <schultzs@battelle.org>
Subject: Sample custody records

Hi Tiffany,
I think I totally forgot to send you these custody records for the shipment we received on 10/12, sorry about that! There was one corrective action regarding the SD samples on page 12 of the attached file.

Specifically samples:
VC-STP-SD0-000H (Lab ID J8809) 10/9/2018 16:05
VC-STP-SD01-0102 (Lab ID J8810) 10/9/2018 16:07

The collection times on the COC do not match what was on the sample container. I am going to ask Steph to pull these two samples in the morning to verify the time on the jar so you have both times and can make the decision on which is correct.
Thank you,
Jon

Jonathan Thorn
Laboratory Director
Analytical Chemistry Services
Office: 781.681.5565 | Mobile: 781.710.9664 | Fax: 614.458.6917
thorn@battelle.org

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ShpNo SHP-181012-02

Battelle Project No:

Sample Receipt Form Details

Approved: ☐ Authorized ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Friday, October 12, 2018 10:30 AM

No. of Shipping Containers: 2

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
J8777	VC-PM323-324-SD01-000H	10/08/18 10:22	10/12/18 11:56	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8778	VC-PM323-324-SD01-0102	10/08/18 10:23	10/12/18 11:56	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8779	VC-PM553-SD01-000H	10/08/18 10:54	10/12/18 11:57	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8780	VC-PM553-SD01-0102	10/08/18 10:55	10/12/18 11:57	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8781	VC-PM553-SD01-0102-MS	10/08/18 10:55	10/12/18 11:57	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8782	VC-PM553-SD01-0102-MSD	10/08/18 10:55	10/12/18 11:58	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8783	VC-PM3009-SD01-000H	10/08/18 11:13	10/12/18 11:58	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8784	VC-PM3009-SD01-0102	10/08/18 11:14	10/12/18 11:58	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8785	VC-PM372-SD01-000H	10/08/18 11:25	10/12/18 11:59	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8786	VC-PM372-SD01-0102	10/08/18 11:26	10/12/18 11:59	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8787	VC-CS11-SD01-000H	10/09/18 8:35	10/12/18 11:59	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8788	VC-CS11-SD01-0102	10/09/18 8:37	10/12/18 12:00	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8789	VC-CS11-SD02-000H	10/09/18 7:30	10/12/18 12:00	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8790	VC-CS11-SD02-0102	10/09/18 7:31	10/12/18 12:00	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8791	VC-CS11-SD03-000H	10/09/18 8:03	10/12/18 12:01	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8792	VC-CS11-SD03-0102	10/09/18 8:05	10/12/18 12:01	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8793	VC-CS11-SD04-000H	10/09/18 8:00	10/12/18 12:01	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8794	VC-CS11-SD04-0102	10/09/18 8:02	10/12/18 12:01	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8795	VC-CS11-SD05-000H	10/09/18 8:26	10/12/18 12:02	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8796	VC-CS11-SD05-0102	10/09/18 8:28	10/12/18 12:02	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8797	VC-CS11-SD06-000H	10/09/18 7:14	10/12/18 12:02	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8798	VC-CS11-SD06-0102	10/09/18 7:16	10/12/18 12:02	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8799	VC-CS11-SD02-000H-MS	10/09/18 7:14	10/12/18 12:03	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8800	VC-CS11-SD02-000H-MSD	10/09/18 7:14	10/12/18 12:03	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8801	VC-SD-FB12-10092018	10/09/18 17:00	10/12/18 12:03	2	AQ	1.3	NA	NA	NA	R0119 (NA)			
J8802	VC-SD-EB12-10092018	10/09/18 17:05	10/12/18 12:04	2	AQ	1.3	NA	NA	NA	R0119 (NA)			
J8803	VC-SD-EB13-10092018	10/09/18 17:10	10/12/18 12:04	2	AQ	1.3	NA	NA	NA	R0119 (NA)			
J8804	VC-S14GW02-1018	10/09/18 12:20	10/12/18 12:05	2	GW	1.3	NA	NA	NA	R0119 (NA)			

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ShpNo SHP-181012-02

Battelle Project No:

Sample Receipt Form Details

Approved: ☐ Authorized ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Friday, October 12, 2018 10:30 AM

No. of Shipping Containers: 2

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
J8805	VC-S14GW02P-1018	10/09/18 12:24	10/12/18 12:05	2	GW	0.7	NA	NA	NA	R0119 (NA)			
J8806	VC-S14GW19-1018	10/09/18 14:46	10/12/18 12:06	2	GW	1.3	NA	NA	NA	R0119 (NA)			
J8807	VC-S14GW02-1018-MS	10/09/18 12:28	10/12/18 12:06	2	GW	1.3	NA	NA	NA	R0119 (NA)			
J8808	VC-S14GW02-1018-MSD	10/09/18 12:32	10/12/18 12:06	2	GW	1.3	NA	NA	NA	R0119 (NA)			
J8809	VC-STP-SD01-000H	10/09/18 16:05	10/12/18 12:07	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8810	VC-STP-SD01-0102	10/09/18 16:07	10/12/18 12:07	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8811	VC-STP-SD02-000H	10/09/18 15:56	10/12/18 12:07	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8812	VC-STP-SD02-0102	10/09/18 15:58	10/12/18 12:08	1	SD	0.7	NA	NA	NA	R0119 (NA)			
J8813	VC-STP-SD03-000H	10/09/18 15:12	10/12/18 12:08	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8814	VC-STP-SD03-0102	10/09/18 15:14	10/12/18 12:08	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8815	VC-STP-SD04-000H	10/09/18 15:38	10/12/18 12:08	1	SD	1.3	NA	NA	NA	R0119 (NA)			
J8816	VC-STP-SD04-0102	10/09/18 15:40	10/12/18 12:09	1	SD	1.3	NA	NA	NA	R0119 (NA)			

Total Samples: 40

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Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM323-324	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	~~Sampler Information (print name):~~ V. Kilbert Phone: 724.977-3628 Email: victoria.kilbert@jacobs.com Turnaround Time (TAT) Requested:	Preservative: NA	COC # 7
Project Name: NBVC Basewide SI Project No.: 695803	Normal X Priority ☐ RUSH ☐ Time Zone: PST	Analysis: PFAS by Method 537 Mod	Page# 1 of 8

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.		
~~VC-PM323-324-SS01-000H~~			Grab	SS		X	
~~VC-PM323-324-SB01-~~			Grab	SB		X	
~~VC-PM323-324-SB01-~~			Grab	SB		X	
~~VC-PM323-324-SS02-000H~~			Grab	SS		X	
~~VC-PM323-324-SB02-~~			Grab	SB		X	
~~VC-PM323-324-SB02-~~			Grab	SB		X	
~~VC-PM323-324-SS03-000H~~			Grab	SS		X	
~~VC-PM323-324-SB03-~~			Grab	SB		X	
~~VC-PM323-324-SB03-~~			Grab	SB		X	
VC-PM323-324-SD01-000H	10/8/18	1022	Grab	SD	1	X	J8777
VC-PM323-324-SD01-0102	10/8/18	1023	Grab	SD	1	X	J8778
~~VC-PM323-324-S~~ -MS			Grab			X	

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
V. Kilbert	10/10/18 1130	Jacobs		1	10-12-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

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Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM553	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: 724-977-3628 Email: Turnaround Time (TAT) Requested:	Preservative: NA	COC # 7
Project Name: NBVC Basewide SI Project No.: 695503	Normal X Priority ☐ RUSH ☐ Time Zone: (PT) PST	Analysis: PFAS by Method 537 Mod	Page# 2 of 8

Sample Identification	Sample Date	Sample Time (1054)	Sample Type	Matrix	Total # of Cont.	Analysis	
VC-PM553-SD01-000H	10/8/18	~~10/8/18~~	Grab	SD	1	X	J8779
VC-PM553-SD01-0102	10/8/18	1055	Grab	SD	1	X	J8780
VC-PM553-SD01-0102-MS	10/8/18	1055	Grab	SD	1	X	J8781
VC-PM553-SD01-0102-MSD	10/8/18	1055	Grab	SD	1	X	J8782
~~FDT-SO-FB~~			Grab	AQ		X	
~~FDT-SO-EB~~			Grab	AQ		X	

VK

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

Relinquished by (Print/Sign)	Company	Date/Time	Received by (Print/Sign)	Company	Date/Time
V. Kilbert	Jacobs	10/10/18 1100			10-12-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

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Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM3039	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilgo Phone: 724-977-3629 Email:	Preservative: NA	COC # 7
Project Name: NBVC Basewide SI	Turnaround Time (TAT) Requested: Normal X Priority ☐ RUSH ☐	Analysis: PFAS by Method 537 Mod	Page# 3 of 8
Project No.: 695803	Time Zone: PST		

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	PFAS by Method 537 Mod	
~~VC-PM3009-SS01-000H~~			~~Grab~~	~~SS~~		X	
~~VC-PM3009-SB01-___~~			~~Grab~~	~~SB~~		X	
~~VC-PM3009-SB01-___~~			~~Grab~~	~~SB~~		X	
~~VC-PM3009-SS02-000H~~			~~Grab~~	~~SS~~		X	
~~VC-PM3009-SB02-___~~			~~Grab~~	~~SB~~		X	
~~VC-PM3009-SB02-___~~			~~Grab~~	~~SB~~		X	
~~VC-PM3009-SS03-000H~~			~~Grab~~	~~SS~~		X	
~~VC-PM3009-SB03-___~~			~~Grab~~	~~SB~~		X	
~~VC-PM3009-SB03-___~~			~~Grab~~	~~SB~~		X	
VC-PM3009-SD01-000H	10/8/18	1113	Grab	SD	1	X	J8783
VC-PM3009-SD01-0102	10/8/18	1114	Grab	SD	1	X	J8784
~~VC-PM3009-S-___-MS~~			~~Grab~~			X	

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
V. Kilgo	Jacobs	10/10/18 1150	NB		10-12-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM372	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbat Phone: 724-977-3625 Email:	Preservative: NA	COC # 7
Project Name: NBVC Basewide SI	Turnaround Time (TAT) Requested: Normal ☒ Priority ☐ RUSH ☐	Analysis: PFAS by Method 537 Mod	Page# 4 of 8
Project No.: 695803	Time Zone: PST		

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Analysis: PFAS by Method 537 Mod	
~~VC-PM372-SS01-000H~~			~~Grab~~	~~SS~~		X	
~~VC-PM372-SB01-~~			~~Grab~~	~~SB~~		X	
~~VC-PM372-SB01-~~			~~Grab~~	~~SB~~		X	
~~VC-PM372-SS02-000H~~			~~Grab~~	~~SS~~		X	
~~VC-PM372-SB02-~~			~~Grab~~	~~SB~~		X	
~~VC-PM372-SB02-~~			~~Grab~~	~~SB~~		X	
~~VC-PM372-SS03-000H~~			~~Grab~~	~~SS~~		X	
~~VC-PM372-SB03-~~			~~Grab~~	~~SB~~		X	
~~VC-PM372-SB03-~~			~~Grab~~	~~SB~~		X	
VC-PM372-SD01-000H	10/8/18	1125	Grab	SD	1	X	J8785
VC-PM372-SD01-0102	10/8/18	1126	Grab	SD	1	X	J8786
~~VC-PM372-S~~ -MS			~~Grab~~			X	

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
V. Kilbat	Jacobs	10/10/18 1100			10-12-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM-CS11	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: 724-977-3628 Email:	Preservative: NA	COC # 7
Project Name: NBVC Basewide SI Project No.: 695803	Turnaround Time (TAT) Requested: Normal X Priority ☐ RUSH ☐ Time Zone: PST	Analysis: PFAS by Method 537 Mod	Page# 5 of 8

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	PFAS by Method 537 Mod	
VC-CS11-SD01-000H	10/9/18	0835	Grab	SD	1	X	J8787
VC-CS11-SD01-0102	10/9/18	0837	Grab	SD	1	X	88
VC-CS11-SD02-000H	10/9/18	0730	Grab	SD	1	X	89
VC-CS11-SD02-0102	10/9/18	0731	Grab	SD	1	X	90
VC-CS11-SD03-000H	10/9/18	0803	Grab	SD	1	X	91
VC-CS11-SD03-0102	10/9/18	0805	Grab	SD	1	X	92
VC-CS11-SD04-000H	10/9/18	0800	Grab	SD	1	X	93
VC-CS11-SD04-0102	10/9/18	0802	Grab	SD	1	X	94
VC-CS11-SD05-000H	10/9/18	0826	Grab	SD	1	X	95
VC-CS11-SD05-0102	10/9/18	0828	Grab	SD	1	X	96
VC-CS11-SD06-000H	10/9/18	0714	Grab	SD	1	X	97
VC-CS11-SD06-0102	10/9/18	0716	Grab	SD	1	X	J8798

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

Relinquished by (Print/Sign)	Company	Date/Time	Received by (Print/Sign)	Company	Date/Time
V. Kilbert	Jacobs	10/10/18 1100			10-12-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM_CS11	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: 724-977-3628 Email: Turnaround Time (TAT) Requested:	Preservative: NA	COC # 7
Project Name: NBVC Basewide SI Project No.: 695803	Normal ☒ Priority ☐ RUSH ☐ Time Zone: PST	Analysis: PFAS by Method 537 Mod	Page# 6 of 8

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	PFAS by Method 537 Mod	
VC-CS11-SD-02-0001-MS	10/9/18	0714	Grab	SD	1 ~~2~~	X	J8799
VC-CS11-SD-02-0001-SD	10/9/18	0714	Grab	SD	1 ~~2~~	X	J8800
VC ~~FDT-SD~~-FB12-10092018	10/9/18	1700	Grab	AQ	2	X	J8801
VC ~~FDT-SD~~-EB12-10092018	10/9/18	1705	Grab	AQ	2	X	J8802
VC-SD-EB13-10092018	10/9/18	1710	Grab	AQ	2	X	J8803

hand auger glove

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
V. Kilbert	Jacobs	10/10/18 1100	[signature]		10-12-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PIT IRP S14	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: 724-977-3628 Email:	Preservative: NA	COC # 7
Project Name: NBVC Basewide SI Project No.: 695803	Turnaround Time (TAT) Requested: Normal X Priority ☐ RUSH ☐ Time Zone: PST	Analysis: PFAS by Method 537 Mod	Page# 7 of 8

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	PFAS by Method 537 Mod	
~~VC-S14GW01-~~			Grab	GW		X	
VC-S14GW02-1018	10/9/18	1220	Grab	GW	2	X	J8804
VC-S14GW02P-1018	10/9/18	1224	Grab	GW	2	X	J8805
~~VC-S14GW03-~~			Grab	GW		X	
VC-S14GW19-1018	10/9/18	1446	Grab	GW	2	X	J8806
~~EDT-AQ-FB~~			Grab	AQ		X	
~~EDT-AQ-EB~~			Grab	AQ		X	
VC-S14GW02-1018-MS	10/9/18	1228	Gr	GW	2	X	J8807
VC-S14GW02-1018-MSD	10/9/18	1232	Gr	GW	2	X	J8808
							VH

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
V. Kilbert	Jacobs	10/10/18 1150	NVB		10-12-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE
It can be done

Chain-of-Custody

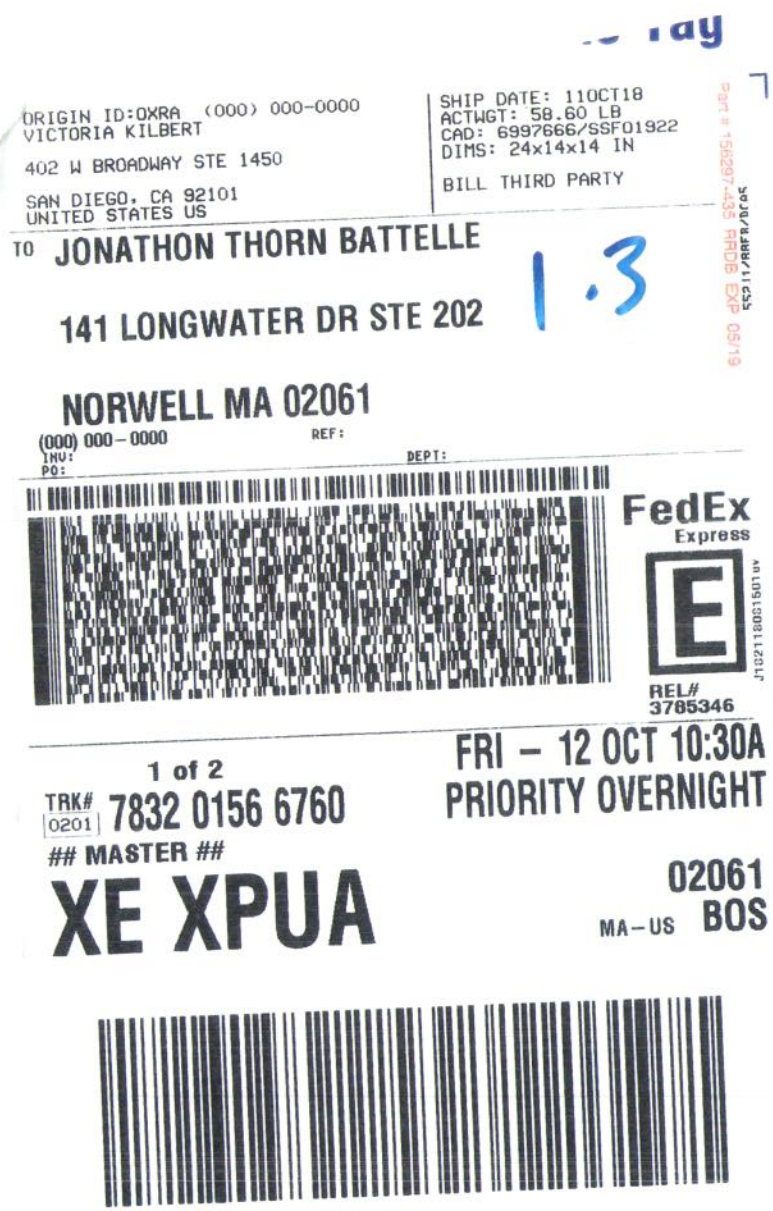
Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM STP	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: 724-977-3628 Email:	Preservative: NA	COC # 7
Project Name: NBVC Basewide SI	Turnaround Time (TAT) Requested: Normal X Priority ☐ RUSH ☐	Analysis: PFAS by Method 537 Mod	Page# 8 of 8
Project No.: 695803	Time Zone: PST		

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Analysis	
VC-STP-SD01-000H	10/9/18	1605	Grab	SD	1	X	J8809
VC-STP-SD01-0102	10/9/18	1607	Grab	SD	1	X	J8810
VC-STP-SD02-000H	10/9/18	1556	Grab	SD	1	X	J8811
VC-STP-SD02-0102	10/9/18	1558	Grab	SD	1	X	J8812
VC-STP-SD03-000H	10/9/18	1512	Grab	SD	1	X	J8813
VC-STP-SD03-0102	10/9/18	1514	Grab	SD	1	X	J8814
VC-STP-SD04-000H	10/9/18	1538	Grab	SD	1	X	J8815
VC-STP-SD04-0102	10/9/18	1548	Grab	SD	1	X	J8816
~~VC-STP-SD-MS~~			Grab	SD		X	
~~VC-STP-SD-SD~~			Grab	SD		X	
~~FDT-SO-FB~~			Grab	AQ		X	
~~FDT-SO-EB~~			Grab	AQ		X	

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
V. Kilbert	Tetra Tech	10/10/18 1130			10-12-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:



ORIGIN ID:OXRA (000) 000-0000
VICTORIA KILBERT
402 W BROADWAY STE 1450
SAN DIEGO, CA 92101
UNITED STATES US

SHIP DATE: 11OCT18
ACTWGT: 58.60 LB
CAD: 6997666/SSF01922
DIMS: 24x14x14 IN
BILL THIRD PARTY

TO JONATHON THORN BATTELLE
141 LONGWATER DR STE 202
NORWELL MA 02061
(000) 000-0000

REF:
INV:
PO:
DEPT:

1.3

FedEx Express
REL# 3785346

1 of 2
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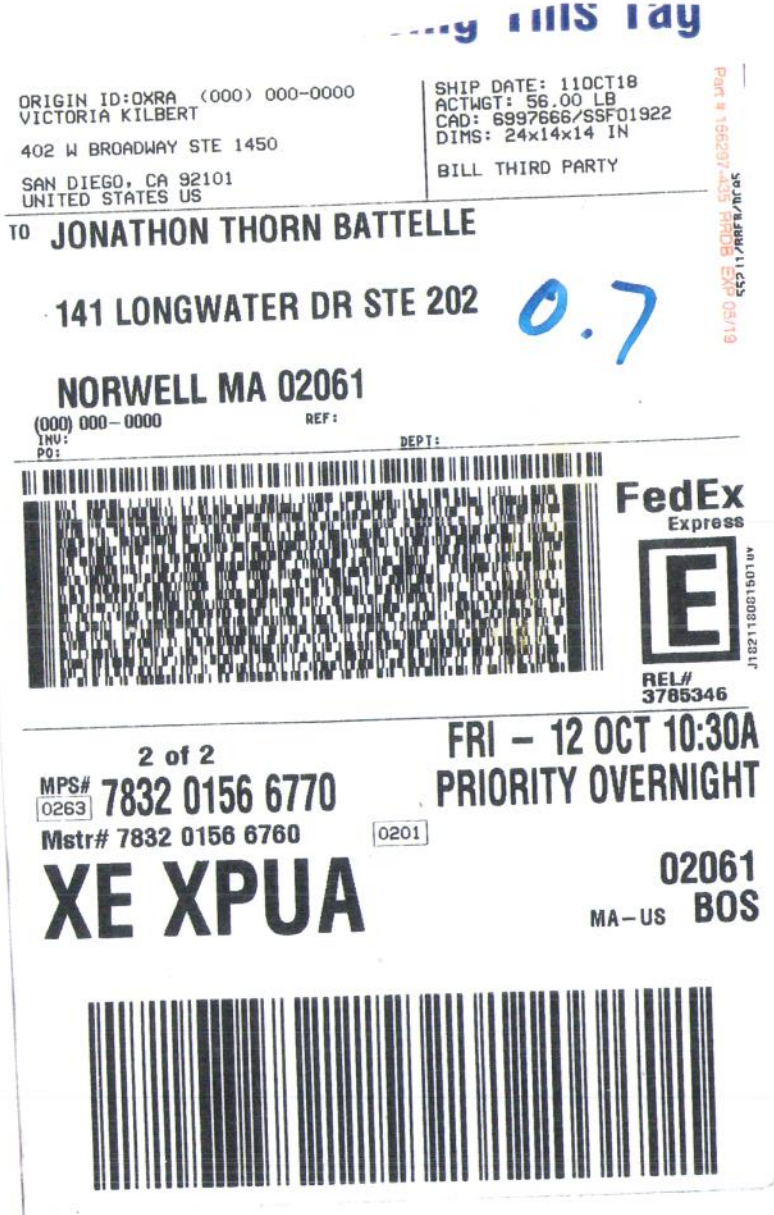
MASTER
XE XPUA

FRI - 12 OCT 10:30A
PRIORITY OVERNIGHT
02061
MA-US BOS



ORIGIN ID:OXRA (000) 000-0000
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BILL THIRD PARTY

TO JONATHON THORN BATTELLE
141 LONGWATER DR STE 202
NORWELL MA 02061
(000) 000-0000

REF:
INV:
PO:
DEPT:

0.7

FedEx Express
REL# 3785346

2 of 2
MPS# 0263 7832 0156 6770
Mstr# 7832 0156 6760
0201
XE XPUA

FRI - 12 OCT 10:30A
PRIORITY OVERNIGHT
02061
MA-US BOS

Data Tables

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM323-324-SD01-000H			
Battelle ID		J8777-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		27.15			
Matrix		SD			
Sample Size		1.52			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.32 U	0.43	1.32	6.58
PFHpA	375-85-9	1.32 U	0.58	1.32	6.58
PFOA	335-67-1	1.32 U	0.66	1.32	6.58
PFNA	375-95-1	1.32 U	0.57	1.32	6.58
PFDA	335-76-2	1.32 U	0.36	1.32	6.58
PFUnA	2058-94-8	1.32 U	0.54	1.32	6.58
PFDoA	307-55-1	0.66 U	0.32	0.66	6.58
PFTrDA	72629-94-8	1.32 U	0.37	1.32	6.58
PFTeDA	376-06-7	2.63 U	0.83	2.63	6.58
NMeFOSAA	2355-31-9	3.29 U	1.47	3.29	6.58
NEtFOSAA	2991-50-6	2.63 U	0.75	2.63	6.58
PFBS	375-73-5	1.32 U	0.47	1.32	6.58
PFHxS	355-46-4	0.32 J	0.29	0.66	6.58
PFOS	1763-23-1	7.63	0.36	1.32	6.58

Surrogate Recoveries (%)

13C5-PFHxA	99
13C4-PFHpA	109
13C8-PFOA	109
13C9-PFNA	94
13C6-PFDA	113
13C7-PFUnA	122
13C2-PFDoA	123
13C2-PFTeDA	138
d3-MeFOSAA	97
d5-EtFOSAA	108
13C3-PFBS	121
13C3-PFHxS	103
13C8-PFOS	105

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM323-324-SD01-0102			
Battelle ID		J8778-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		26.86			
Matrix		SD			
Sample Size		1.54			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.30 U	0.43	1.30	6.49
PFHpA	375-85-9	1.30 U	0.57	1.30	6.49
PFOA	335-67-1	1.30 U	0.65	1.30	6.49
PFNA	375-95-1	1.30 U	0.56	1.30	6.49
PFDA	335-76-2	1.30 U	0.35	1.30	6.49
PFUnA	2058-94-8	1.30 U	0.53	1.30	6.49
PFDoA	307-55-1	0.65 U	0.31	0.65	6.49
PFTrDA	72629-94-8	1.30 U	0.36	1.30	6.49
PFTeDA	376-06-7	2.60 U	0.82	2.60	6.49
NMeFOSAA	2355-31-9	3.25 U	1.45	3.25	6.49
NEtFOSAA	2991-50-6	2.60 U	0.74	2.60	6.49
PFBS	375-73-5	1.30 U	0.47	1.30	6.49
PFHxS	355-46-4	0.46 J	0.29	0.65	6.49
PFOS	1763-23-1	14.23	0.35	1.30	6.49

Surrogate Recoveries (%)

13C5-PFHxA	104
13C4-PFHpA	112
13C8-PFOA	106
13C9-PFNA	94
13C6-PFDA	106
13C7-PFUnA	116
13C2-PFDoA	114
13C2-PFTeDA	131
d3-MeFOSAA	106
d5-EtFOSAA	113
13C3-PFBS	126
13C3-PFHxS	95
13C8-PFOS	113

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM553-SD01-000H			
Battelle ID		J8779-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		26.97			
Matrix		SD			
Sample Size		1.53			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.31 U	0.43	1.31	6.54
PFHpA	375-85-9	1.31 U	0.58	1.31	6.54
PFOA	335-67-1	1.31 U	0.65	1.31	6.54
PFNA	375-95-1	1.31 U	0.56	1.31	6.54
PFDA	335-76-2	1.31 U	0.35	1.31	6.54
PFUnA	2058-94-8	1.31 U	0.54	1.31	6.54
PFDoA	307-55-1	0.65 U	0.31	0.65	6.54
PFTrDA	72629-94-8	1.31 U	0.37	1.31	6.54
PFTeDA	376-06-7	2.61 U	0.82	2.61	6.54
NMeFOSAA	2355-31-9	3.27 U	1.46	3.27	6.54
NEtFOSAA	2991-50-6	2.61 U	0.75	2.61	6.54
PFBS	375-73-5	1.31 U	0.47	1.31	6.54
PFHxS	355-46-4	0.65 U	0.29	0.65	6.54
PFOS	1763-23-1	3.55 J	0.35	1.31	6.54

Surrogate Recoveries (%)

13C5-PFHxA	110
13C4-PFHpA	114
13C8-PFOA	117
13C9-PFNA	101
13C6-PFDA	115
13C7-PFUnA	113
13C2-PFDoA	124
13C2-PFTeDA	132
d3-MeFOSAA	99
d5-EtFOSAA	106
13C3-PFBS	129
13C3-PFHxS	127
13C8-PFOS	112

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM553-SD01-0102			
Battelle ID		J8780-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		20.00			
Matrix		SD			
Sample Size		1.55			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.29 U	0.43	1.29	6.45
PFHpA	375-85-9	1.29 U	0.57	1.29	6.45
PFOA	335-67-1	1.29 U	0.65	1.29	6.45
PFNA	375-95-1	1.29 U	0.55	1.29	6.45
PFDA	335-76-2	1.29 U	0.35	1.29	6.45
PFUnA	2058-94-8	1.29 U	0.53	1.29	6.45
PFDoA	307-55-1	0.65 U	0.31	0.65	6.45
PFTrDA	72629-94-8	1.29 U	0.36	1.29	6.45
PFTeDA	376-06-7	2.58 U	0.81	2.58	6.45
NMeFOSAA	2355-31-9	3.23 U	1.45	3.23	6.45
NEtFOSAA	2991-50-6	2.58 U	0.74	2.58	6.45
PFBS	375-73-5	1.29 U	0.46	1.29	6.45
PFHxS	355-46-4	0.65 U	0.28	0.65	6.45
PFOS	1763-23-1	0.84 J	0.35	1.29	6.45

Surrogate Recoveries (%)

13C5-PFHxA	104
13C4-PFHpA	107
13C8-PFOA	114
13C9-PFNA	100
13C6-PFDA	119
13C7-PFUnA	121
13C2-PFDoA	127
13C2-PFTeDA	144
d3-MeFOSAA	106
d5-EtFOSAA	93
13C3-PFBS	117
13C3-PFHxS	113
13C8-PFOS	105

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM3009-SD01-000H			
Battelle ID		J8783-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		21.69			
Matrix		SD			
Sample Size		1.61			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.24 U	0.41	1.24	6.21
PFHpA	375-85-9	1.24 U	0.55	1.24	6.21
PFOA	335-67-1	1.24 U	0.62	1.24	6.21
PFNA	375-95-1	1.24 U	0.53	1.24	6.21
PFDA	335-76-2	1.24 U	0.34	1.24	6.21
PFUnA	2058-94-8	1.24 U	0.51	1.24	6.21
PFDoA	307-55-1	0.91 J	0.30	0.62	6.21
PFTrDA	72629-94-8	1.24 U	0.35	1.24	6.21
PFTeDA	376-06-7	2.48 U	0.78	2.48	6.21
NMeFOSAA	2355-31-9	3.11 U	1.39	3.11	6.21
NEtFOSAA	2991-50-6	2.48 U	0.71	2.48	6.21
PFBS	375-73-5	1.24 U	0.45	1.24	6.21
PFHxS	355-46-4	0.62 U	0.27	0.62	6.21
PFOS	1763-23-1	2.81 J	0.34	1.24	6.21

Surrogate Recoveries (%)

13C5-PFHxA	120
13C4-PFHpA	133
13C8-PFOA	132
13C9-PFNA	112
13C6-PFDA	119
13C7-PFUnA	124
13C2-PFDoA	127
13C2-PFTeDA	148
d3-MeFOSAA	119
d5-EtFOSAA	132
13C3-PFBS	137
13C3-PFHxS	135
13C8-PFOS	126

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM3009-SD01-0102			
Battelle ID		J8784-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		21.00			
Matrix		SD			
Sample Size		1.56			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.28 U	0.42	1.28	6.41
PFHpA	375-85-9	1.28 U	0.56	1.28	6.41
PFOA	335-67-1	1.28 U	0.64	1.28	6.41
PFNA	375-95-1	1.28 U	0.55	1.28	6.41
PFDA	335-76-2	1.28 U	0.35	1.28	6.41
PFUnA	2058-94-8	1.28 U	0.53	1.28	6.41
PFDoA	307-55-1	0.64 U	0.31	0.64	6.41
PFTrDA	72629-94-8	1.28 U	0.36	1.28	6.41
PFTeDA	376-06-7	2.56 U	0.81	2.56	6.41
NMeFOSAA	2355-31-9	3.21 U	1.44	3.21	6.41
NEtFOSAA	2991-50-6	2.56 U	0.73	2.56	6.41
PFBS	375-73-5	1.28 U	0.46	1.28	6.41
PFHxS	355-46-4	0.64 U	0.28	0.64	6.41
PFOS	1763-23-1	2.22 J	0.35	1.28	6.41

Surrogate Recoveries (%)

13C5-PFHxA	120
13C4-PFHpA	124
13C8-PFOA	121
13C9-PFNA	110
13C6-PFDA	111
13C7-PFUnA	124
13C2-PFDoA	126
13C2-PFTeDA	136
d3-MeFOSAA	132
d5-EtFOSAA	128
13C3-PFBS	149
13C3-PFHxS	128
13C8-PFOS	132

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM372-SD01-000H			
Battelle ID		J8785-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		25.16			
Matrix		SD			
Sample Size		1.48			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.35 U	0.45	1.35	6.76
PFHpA	375-85-9	1.35 U	0.59	1.35	6.76
PFOA	335-67-1	1.35 U	0.68	1.35	6.76
PFNA	375-95-1	1.35 U	0.58	1.35	6.76
PFDA	335-76-2	1.35 U	0.36	1.35	6.76
PFUnA	2058-94-8	1.35 U	0.55	1.35	6.76
PFDoA	307-55-1	0.68 U	0.32	0.68	6.76
PFTrDA	72629-94-8	1.35 U	0.38	1.35	6.76
PFTeDA	376-06-7	2.70 U	0.85	2.70	6.76
NMeFOSAA	2355-31-9	3.38 U	1.51	3.38	6.76
NEtFOSAA	2991-50-6	2.70 U	0.77	2.70	6.76
PFBS	375-73-5	1.35 U	0.49	1.35	6.76
PFHxS	355-46-4	0.68 U	0.30	0.68	6.76
PFOS	1763-23-1	6.17 J	0.36	1.35	6.76

Surrogate Recoveries (%)

13C5-PFHxA	101
13C4-PFHpA	107
13C8-PFOA	102
13C9-PFNA	91
13C6-PFDA	97
13C7-PFUnA	115
13C2-PFDoA	123
13C2-PFTeDA	123
d3-MeFOSAA	102
d5-EtFOSAA	114
13C3-PFBS	116
13C3-PFHxS	112
13C8-PFOS	94

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM372-SD01-0102			
Battelle ID		J8786-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		20.23			
Matrix		SD			
Sample Size		1.64			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.22 U	0.40	1.22	6.10
PFHpA	375-85-9	1.22 U	0.54	1.22	6.10
PFOA	335-67-1	1.22 U	0.61	1.22	6.10
PFNA	375-95-1	1.22 U	0.52	1.22	6.10
PFDA	335-76-2	1.22 U	0.33	1.22	6.10
PFUnA	2058-94-8	1.22 U	0.50	1.22	6.10
PFDoA	307-55-1	0.61 U	0.29	0.61	6.10
PFTrDA	72629-94-8	1.22 U	0.34	1.22	6.10
PFTeDA	376-06-7	2.44 U	0.77	2.44	6.10
NMeFOSAA	2355-31-9	3.05 U	1.37	3.05	6.10
NEtFOSAA	2991-50-6	2.44 U	0.70	2.44	6.10
PFBS	375-73-5	1.22 U	0.44	1.22	6.10
PFHxS	355-46-4	0.61 U	0.27	0.61	6.10
PFOS	1763-23-1	2.10 J	0.33	1.22	6.10

Surrogate Recoveries (%)

13C5-PFHxA	101
13C4-PFHpA	108
13C8-PFOA	100
13C9-PFNA	99
13C6-PFDA	116
13C7-PFUnA	121
13C2-PFDoA	130
13C2-PFTeDA	139
d3-MeFOSAA	115
d5-EtFOSAA	125
13C3-PFBS	133
13C3-PFHxS	122
13C8-PFOS	124

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-CS11-SD01-000H			
Battelle ID		J8787-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		62.85			
Matrix		SD			
Sample Size		0.74			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	2.70 U	0.89	2.70	13.51
PFHpA	375-85-9	2.70 U	1.19	2.70	13.51
PFOA	335-67-1	2.70 U	1.35	2.70	13.51
PFNA	375-95-1	2.70 U	1.16	2.70	13.51
PFDA	335-76-2	2.70 U	0.73	2.70	13.51
PFUnA	2058-94-8	2.70 U	1.11	2.70	13.51
PFDoA	307-55-1	1.35 U	0.65	1.35	13.51
PFTrDA	72629-94-8	2.70 U	0.76	2.70	13.51
PFTeDA	376-06-7	5.41 U	1.70	5.41	13.51
NMeFOSAA	2355-31-9	6.76 U	3.03	6.76	13.51
NEtFOSAA	2991-50-6	5.41 U	1.54	5.41	13.51
PFBS	375-73-5	2.70 U	0.97	2.70	13.51
PFHxS	355-46-4	1.35 U	0.59	1.35	13.51
PFOS	1763-23-1	31.06	0.73	2.70	13.51

Surrogate Recoveries (%)

13C5-PFHxA	93
13C4-PFHpA	90
13C8-PFOA	94
13C9-PFNA	83
13C6-PFDA	99
13C7-PFUnA	103
13C2-PFDoA	103
13C2-PFTeDA	115
d3-MeFOSAA	98
d5-EtFOSAA	98
13C3-PFBS	113
13C3-PFHxS	94
13C8-PFOS	106

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-CS11-SD01-0102				
Battelle ID		J8788-FS				
Sample Type		SA				
Collection Date		10/09/2018				
Extraction Date		10/18/2018				
Analysis Date		10/24/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		52.00				
Matrix		SD				
Sample Size		0.98				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	2.04	U	0.67	2.04	10.20
PFHpA	375-85-9	2.04	U	0.90	2.04	10.20
PFOA	335-67-1	2.04	U	1.02	2.04	10.20
PFNA	375-95-1	2.04	U	0.88	2.04	10.20
PFDA	335-76-2	2.04	U	0.55	2.04	10.20
PFUnA	2058-94-8	2.04	U	0.84	2.04	10.20
PFDoA	307-55-1	1.02	U	0.49	1.02	10.20
PFTrDA	72629-94-8	2.04	U	0.57	2.04	10.20
PFTeDA	376-06-7	4.08	U	1.29	4.08	10.20
NMeFOSAA	2355-31-9	5.10	U	2.29	5.10	10.20
NEtFOSAA	2991-50-6	4.08	U	1.16	4.08	10.20
PFBS	375-73-5	2.04	U	0.73	2.04	10.20
PFHxS	355-46-4	0.67	J	0.45	1.02	10.20
PFOS	1763-23-1	3.89	J	0.55	2.04	10.20

Surrogate Recoveries (%)

13C5-PFHxA	94
13C4-PFHpA	98
13C8-PFOA	99
13C9-PFNA	87
13C6-PFDA	110
13C7-PFUnA	115
13C2-PFDoA	124
13C2-PFTeDA	136
d3-MeFOSAA	108
d5-EtFOSAA	112
13C3-PFBS	117
13C3-PFHxS	108
13C8-PFOS	115

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD01-000H			
Battelle ID		J8809-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		41.70			
Matrix		SD			
Sample Size		1.16			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.72 U	0.57	1.72	8.62
PFHpA	375-85-9	1.72 U	0.76	1.72	8.62
PFOA	335-67-1	1.72 U	0.86	1.72	8.62
PFNA	375-95-1	1.72 U	0.74	1.72	8.62
PFDA	335-76-2	1.72 U	0.47	1.72	8.62
PFUnA	2058-94-8	1.72 U	0.71	1.72	8.62
PFDoA	307-55-1	0.86 U	0.41	0.86	8.62
PFTrDA	72629-94-8	1.72 U	0.48	1.72	8.62
PFTeDA	376-06-7	3.45 U	1.09	3.45	8.62
NMeFOSAA	2355-31-9	4.31 U	1.93	4.31	8.62
NEtFOSAA	2991-50-6	1.58 J	0.98	3.45	8.62
PFBS	375-73-5	1.72 U	0.62	1.72	8.62
PFHxS	355-46-4	0.86 U	0.38	0.86	8.62
PFOS	1763-23-1	16.53	0.47	1.72	8.62

Surrogate Recoveries (%)

13C5-PFHxA	106
13C4-PFHpA	106
13C8-PFOA	106
13C9-PFNA	99
13C6-PFDA	110
13C7-PFUnA	133
13C2-PFDoA	131
13C2-PFTeDA	141
d3-MeFOSAA	132
d5-EtFOSAA	128
13C3-PFBS	129
13C3-PFHxS	138
13C8-PFOS	122

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD01-0102			
Battelle ID		J8810-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		36.20			
Matrix		SD			
Sample Size		1.26			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	0.79 J	0.52	1.59	7.94
PFHpA	375-85-9	1.59 U	0.70	1.59	7.94
PFOA	335-67-1	1.04 J	0.79	1.59	7.94
PFNA	375-95-1	1.59 U	0.68	1.59	7.94
PFDA	335-76-2	1.59 U	0.43	1.59	7.94
PFUnA	2058-94-8	1.59 U	0.65	1.59	7.94
PFDoA	307-55-1	0.79 U	0.38	0.79	7.94
PFTrDA	72629-94-8	1.59 U	0.44	1.59	7.94
PFTeDA	376-06-7	3.17 U	1.00	3.17	7.94
NMeFOSAA	2355-31-9	3.97 U	1.78	3.97	7.94
NEtFOSAA	2991-50-6	3.17 U	0.90	3.17	7.94
PFBS	375-73-5	1.59 U	0.57	1.59	7.94
PFHxS	355-46-4	3.18 J	0.35	0.79	7.94
PFOS	1763-23-1	6.86 J	0.43	1.59	7.94

Surrogate Recoveries (%)

13C5-PFHxA	106
13C4-PFHpA	110
13C8-PFOA	109
13C9-PFNA	95
13C6-PFDA	106
13C7-PFUnA	109
13C2-PFDoA	116
13C2-PFTeDA	126
d3-MeFOSAA	113
d5-EtFOSAA	104
13C3-PFBS	119
13C3-PFHxS	101
13C8-PFOS	113

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD02-000H			
Battelle ID		J8811-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		36.17			
Matrix		SD			
Sample Size		1.28			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.56 U	0.52	1.56	7.81
PFHpA	375-85-9	1.56 U	0.69	1.56	7.81
PFOA	335-67-1	1.56 U	0.78	1.56	7.81
PFNA	375-95-1	1.56 U	0.67	1.56	7.81
PFDA	335-76-2	1.56 U	0.42	1.56	7.81
PFUnA	2058-94-8	1.56 U	0.64	1.56	7.81
PFDoA	307-55-1	0.78 U	0.38	0.78	7.81
PFTrDA	72629-94-8	1.56 U	0.44	1.56	7.81
PFTeDA	376-06-7	3.13 U	0.98	3.13	7.81
NMeFOSAA	2355-31-9	3.91 U	1.75	3.91	7.81
NEtFOSAA	2991-50-6	3.13 U	0.89	3.13	7.81
PFBS	375-73-5	1.56 U	0.56	1.56	7.81
PFHxS	355-46-4	0.78 U	0.34	0.78	7.81
PFOS	1763-23-1	3.80 J	0.42	1.56	7.81

Surrogate Recoveries (%)

13C5-PFHxA	89
13C4-PFHpA	91
13C8-PFOA	99
13C9-PFNA	90
13C6-PFDA	96
13C7-PFUnA	114
13C2-PFDoA	111
13C2-PFTeDA	121
d3-MeFOSAA	130
d5-EtFOSAA	131
13C3-PFBS	138
13C3-PFHxS	126
13C8-PFOS	109

BATTELLE
It can be done

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD02-0102			
Battelle ID		J8812-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		31.85			
Matrix		SD			
Sample Size		1.40			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.43 U	0.47	1.43	7.14
PFHpA	375-85-9	1.43 U	0.63	1.43	7.14
PFOA	335-67-1	1.43 U	0.71	1.43	7.14
PFNA	375-95-1	1.43 U	0.61	1.43	7.14
PFDA	335-76-2	1.43 U	0.39	1.43	7.14
PFUnA	2058-94-8	1.43 U	0.59	1.43	7.14
PFDoA	307-55-1	0.71 U	0.34	0.71	7.14
PFTrDA	72629-94-8	1.43 U	0.40	1.43	7.14
PFTeDA	376-06-7	2.86 U	0.90	2.86	7.14
NMeFOSAA	2355-31-9	3.57 U	1.60	3.57	7.14
NEtFOSAA	2991-50-6	0.94 J	0.81	2.86	7.14
PFBS	375-73-5	1.43 U	0.51	1.43	7.14
PFHxS	355-46-4	1.38 J	0.31	0.71	7.14
PFOS	1763-23-1	15.33	0.39	1.43	7.14

Surrogate Recoveries (%)

13C5-PFHxA	102
13C4-PFHpA	108
13C8-PFOA	103
13C9-PFNA	91
13C6-PFDA	95
13C7-PFUnA	108
13C2-PFDoA	106
13C2-PFTeDA	116
d3-MeFOSAA	107
d5-EtFOSAA	112
13C3-PFBS	112
13C3-PFHxS	106
13C8-PFOS	115

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD03-000H			
Battelle ID		J8813-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		47.84			
Matrix		SD			
Sample Size		1.04			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.92 U	0.63	1.92	9.62
PFHpA	375-85-9	1.92 U	0.85	1.92	9.62
PFOA	335-67-1	1.92 U	0.96	1.92	9.62
PFNA	375-95-1	1.92 U	0.83	1.92	9.62
PFDA	335-76-2	1.92 U	0.52	1.92	9.62
PFUnA	2058-94-8	1.92 U	0.79	1.92	9.62
PFDoA	307-55-1	0.96 U	0.46	0.96	9.62
PFTrDA	72629-94-8	1.92 U	0.54	1.92	9.62
PFTeDA	376-06-7	3.85 U	1.21	3.85	9.62
NMeFOSAA	2355-31-9	4.81 U	2.15	4.81	9.62
NEtFOSAA	2991-50-6	3.85 U	1.10	3.85	9.62
PFBS	375-73-5	1.92 U	0.69	1.92	9.62
PFHxS	355-46-4	0.96 U	0.42	0.96	9.62
PFOS	1763-23-1	1.33 J	0.52	1.92	9.62

Surrogate Recoveries (%)

13C5-PFHxA	99
13C4-PFHpA	107
13C8-PFOA	112
13C9-PFNA	92
13C6-PFDA	101
13C7-PFUnA	111
13C2-PFDoA	115
13C2-PFTeDA	114
d3-MeFOSAA	98
d5-EtFOSAA	92
13C3-PFBS	103
13C3-PFHxS	94
13C8-PFOS	88

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD03-0102			
Battelle ID		J8814-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/25/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		33.79			
Matrix		SD			
Sample Size		1.36			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.47 U	0.49	1.47	7.35
PFHpA	375-85-9	1.47 U	0.65	1.47	7.35
PFOA	335-67-1	1.47 U	0.74	1.47	7.35
PFNA	375-95-1	1.47 U	0.63	1.47	7.35
PFDA	335-76-2	1.47 U	0.40	1.47	7.35
PFUnA	2058-94-8	1.47 U	0.60	1.47	7.35
PFDoA	307-55-1	0.74 U	0.35	0.74	7.35
PFTrDA	72629-94-8	1.47 U	0.41	1.47	7.35
PFTeDA	376-06-7	2.94 U	0.93	2.94	7.35
NMeFOSAA	2355-31-9	3.68 U	1.65	3.68	7.35
NEtFOSAA	2991-50-6	2.94 U	0.84	2.94	7.35
PFBS	375-73-5	1.47 U	0.53	1.47	7.35
PFHxS	355-46-4	0.74 U	0.32	0.74	7.35
PFOS	1763-23-1	4.30 J	0.40	1.47	7.35

Surrogate Recoveries (%)

13C5-PFHxA	92
13C4-PFHpA	91
13C8-PFOA	91
13C9-PFNA	75
13C6-PFDA	92
13C7-PFUnA	105
13C2-PFDoA	99
13C2-PFTeDA	112
d3-MeFOSAA	112
d5-EtFOSAA	102
13C3-PFBS	103
13C3-PFHxS	98
13C8-PFOS	93

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD04-000H			
Battelle ID		J8815-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/25/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		35.90			
Matrix		SD			
Sample Size		1.33			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.50 U	0.50	1.50	7.52
PFHpA	375-85-9	1.50 U	0.66	1.50	7.52
PFOA	335-67-1	1.50 U	0.75	1.50	7.52
PFNA	375-95-1	1.50 U	0.65	1.50	7.52
PFDA	335-76-2	1.50 U	0.41	1.50	7.52
PFUnA	2058-94-8	1.50 U	0.62	1.50	7.52
PFDoA	307-55-1	0.75 U	0.36	0.75	7.52
PFTrDA	72629-94-8	1.50 U	0.42	1.50	7.52
PFTeDA	376-06-7	3.01 U	0.95	3.01	7.52
NMeFOSAA	2355-31-9	3.76 U	1.68	3.76	7.52
NEtFOSAA	2991-50-6	1.33 J	0.86	3.01	7.52
PFBS	375-73-5	1.50 U	0.54	1.50	7.52
PFHxS	355-46-4	0.53 J	0.33	0.75	7.52
PFOS	1763-23-1	9.01	0.41	1.50	7.52

Surrogate Recoveries (%)

13C5-PFHxA	101
13C4-PFHpA	105
13C8-PFOA	105
13C9-PFNA	94
13C6-PFDA	113
13C7-PFUnA	123
13C2-PFDoA	115
13C2-PFTeDA	132
d3-MeFOSAA	119
d5-EtFOSAA	107
13C3-PFBS	122
13C3-PFHxS	121
13C8-PFOS	126

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD04-0102				
Battelle ID		J8816-FS				
Sample Type		SA				
Collection Date		10/09/2018				
Extraction Date		10/18/2018				
Analysis Date		10/25/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		28.19				
Matrix		SD				
Sample Size		1.43				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.40	U	0.46	1.40	6.99
PFHpA	375-85-9	1.40	U	0.62	1.40	6.99
PFOA	335-67-1	1.40	U	0.70	1.40	6.99
PFNA	375-95-1	1.40	U	0.60	1.40	6.99
PFDA	335-76-2	1.40	U	0.38	1.40	6.99
PFUnA	2058-94-8	1.40	U	0.57	1.40	6.99
PFDoA	307-55-1	0.70	U	0.34	0.70	6.99
PFTrDA	72629-94-8	1.40	U	0.39	1.40	6.99
PFTeDA	376-06-7	2.80	U	0.88	2.80	6.99
NMeFOSAA	2355-31-9	3.50	U	1.57	3.50	6.99
NEtFOSAA	2991-50-6	0.84	J	0.80	2.80	6.99
PFBS	375-73-5	1.40	U	0.50	1.40	6.99
PFHxS	355-46-4	1.43	J	0.31	0.70	6.99
PFOS	1763-23-1	11.69		0.38	1.40	6.99

Surrogate Recoveries (%)

13C5-PFHxA	101
13C4-PFHpA	107
13C8-PFOA	101
13C9-PFNA	92
13C6-PFDA	104
13C7-PFUnA	105
13C2-PFDoA	106
13C2-PFTeDA	120
d3-MeFOSAA	123
d5-EtFOSAA	118
13C3-PFBS	140
13C3-PFHxS	117
13C8-PFOS	119

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		KB80 IB			
Battelle ID		KB80 IB_10/17/2018			
Sample Type		IB			
Collection Date		NA			
Extraction Date		NA			
Analysis Date		10/17/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		NA			
Matrix		Solid			
Sample Size		2.00			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.00 U	0.33	1.00	5.00
PFHpA	375-85-9	1.00 U	0.44	1.00	5.00
PFOA	335-67-1	1.00 U	0.50	1.00	5.00
PFNA	375-95-1	1.00 U	0.43	1.00	5.00
PFDA	335-76-2	1.00 U	0.27	1.00	5.00
PFUnA	2058-94-8	1.00 U	0.41	1.00	5.00
PFDoA	307-55-1	0.50 U	0.24	0.50	5.00
PFTrDA	72629-94-8	1.00 U	0.28	1.00	5.00
PFTeDA	376-06-7	2.00 U	0.63	2.00	5.00
NMeFOSAA	2355-31-9	2.50 U	1.12	2.50	5.00
NEtFOSAA	2991-50-6	2.00 U	0.57	2.00	5.00
PFBS	375-73-5	1.00 U	0.36	1.00	5.00
PFHxS	355-46-4	0.50 U	0.22	0.50	5.00
PFOS	1763-23-1	1.00 U	0.27	1.00	5.00

Surrogate Recoveries (%)

13C5-PFHxA	98
13C4-PFHpA	98
13C8-PFOA	101
13C9-PFNA	100
13C6-PFDA	103
13C7-PFUnA	102
13C2-PFDoA	98
13C2-PFTeDA	93
d3-MeFOSAA	104
d5-EtFOSAA	96
13C3-PFBS	95
13C3-PFHxS	103
13C8-PFOS	96

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		KB80 IB			
Battelle ID		KB80 IB_10/24/2018			
Sample Type		IB			
Collection Date		NA			
Extraction Date		NA			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		NA			
Matrix		Solid			
Sample Size		2.00			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.00 U	0.33	1.00	5.00
PFHpA	375-85-9	1.00 U	0.44	1.00	5.00
PFOA	335-67-1	1.00 U	0.50	1.00	5.00
PFNA	375-95-1	1.00 U	0.43	1.00	5.00
PFDA	335-76-2	1.00 U	0.27	1.00	5.00
PFUnA	2058-94-8	1.00 U	0.41	1.00	5.00
PFDoA	307-55-1	0.50 U	0.24	0.50	5.00
PFTrDA	72629-94-8	1.00 U	0.28	1.00	5.00
PFTeDA	376-06-7	2.00 U	0.63	2.00	5.00
NMeFOSAA	2355-31-9	2.50 U	1.12	2.50	5.00
NEtFOSAA	2991-50-6	2.00 U	0.57	2.00	5.00
PFBS	375-73-5	1.00 U	0.36	1.00	5.00
PFHxS	355-46-4	0.50 U	0.22	0.50	5.00
PFOS	1763-23-1	1.00 U	0.27	1.00	5.00

Surrogate Recoveries (%)

13C5-PFHxA	104
13C4-PFHpA	92
13C8-PFOA	92
13C9-PFNA	87
13C6-PFDA	104
13C7-PFUnA	117
13C2-PFDoA	120
13C2-PFTeDA	122
d3-MeFOSAA	91
d5-EtFOSAA	86
13C3-PFBS	107
13C3-PFHxS	90
13C8-PFOS	94

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		Procedural Blank			
Battelle ID		CS011PB-FS			
Sample Type		PB			
Collection Date		10/18/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		0.00			
Matrix		SEDIMENT			
Sample Size		2.01			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.00 U	0.33	1.00	4.98
PFHpA	375-85-9	1.00 U	0.44	1.00	4.98
PFOA	335-67-1	1.00 U	0.50	1.00	4.98
PFNA	375-95-1	1.00 U	0.43	1.00	4.98
PFDA	335-76-2	1.00 U	0.27	1.00	4.98
PFUnA	2058-94-8	1.00 U	0.41	1.00	4.98
PFDoA	307-55-1	0.50 U	0.24	0.50	4.98
PFTrDA	72629-94-8	1.00 U	0.28	1.00	4.98
PFTeDA	376-06-7	1.99 U	0.63	1.99	4.98
NMeFOSAA	2355-31-9	2.49 U	1.11	2.49	4.98
NEtFOSAA	2991-50-6	1.99 U	0.57	1.99	4.98
PFBS	375-73-5	1.00 U	0.36	1.00	4.98
PFHxS	355-46-4	0.50 U	0.22	0.50	4.98
PFOS	1763-23-1	1.00 U	0.27	1.00	4.98

Surrogate Recoveries (%)

13C5-PFHxA	98
13C4-PFHpA	104
13C8-PFOA	106
13C9-PFNA	89
13C6-PFDA	99
13C7-PFUnA	110
13C2-PFDoA	106
13C2-PFTeDA	119
d3-MeFOSAA	112
d5-EtFOSAA	100
13C3-PFBS	105
13C3-PFHxS	108
13C8-PFOS	114

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		Laboratory Control Sample					
Battelle ID		CS012LCS-FS					
Sample Type		LCS					
Collection Date		10/18/2018					
Extraction Date		10/18/2018					
Analysis Date		10/24/2018					
Analytical Instrument		Sciex 5500 LC/MS/MS					
% Moisture		0.00					
Matrix		SEDIMENT					
Sample Size		1.99					
Size Unit-Basis		g				Control Limits	
Units		ng/g_Dry	Target	Recovery	Qual	Lower	Upper
PFHxA	307-24-4	15.55	15.23	102		45	135
PFHpA	375-85-9	13.91	15.08	92		60	128
PFOA	335-67-1	14.60	15.08	97		56	136
PFNA	375-95-1	14.70	15.08	98		54	130
PFDA	335-76-2	14.46	15.08	96		55	141
PFUnA	2058-94-8	14.39	15.08	95		57	137
PFDoA	307-55-1	14.84	15.08	98		62	134
PFTrDA	72629-94-8	15.29	15.08	101		51	127
PFTeDA	376-06-7	15.42	15.08	102		34	162
NMeFOSAA	2355-31-9	15.47	15.08	103		52	146
NEtFOSAA	2991-50-6	16.21	15.08	108		54	124
PFBS	375-73-5	15.73	15.23	103		57	145
PFHxS	355-46-4	17.18	15.23	113		52	132
PFOS	1763-23-1	14.05	15.08	93		50	130
Surrogate Recoveries (%)							
13C5-PFHxA		118					
13C4-PFHpA		128					
13C8-PFOA		116					
13C9-PFNA		105					
13C6-PFDA		114					
13C7-PFUnA		120					
13C2-PFDoA		127					
13C2-PFTeDA		139					
d3-MeFOSAA		135					
d5-EtFOSAA		112					
13C3-PFBS		123					
13C3-PFHxS		110					
13C8-PFOS		115					

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM553-SD01-0102	VC-PM553-SD01-0102-MS					
Battelle ID		J8780-FS	J8781MS-FS					
Sample Type		SA	MS					
Collection Date		10/08/2018	10/08/2018					
Extraction Date		10/18/2018	10/18/2018					
Analysis Date		10/24/2018	10/24/2018					
Analytical Instrument		Sciex 5500 LC/MS/MS	Sciex 5500 LC/MS/MS					
% Moisture		20.00	23.94					
Matrix		SD	SD					
Sample Size		1.55	1.55					
Size Unit-Basis		g	g				Control Limits	
Units		ng/g_Dry	ng/g_Dry	Target	Recovery	Qual	Lower	Upper
PFHxA	307-24-4	1.29 U	37.98	32.58	117		45	135
PFHpA	375-85-9	1.29 U	32.53	32.26	101		60	128
PFOA	335-67-1	1.29 U	34.55	32.26	107		56	136
PFNA	375-95-1	1.29 U	36.97	32.26	115		54	130
PFDA	335-76-2	1.29 U	32.08	32.26	99		55	141
PFUnA	2058-94-8	1.29 U	34.97	32.26	108		57	137
PFDoA	307-55-1	0.65 U	33.69	32.26	104		62	134
PFTrDA	72629-94-8	1.29 U	32.26	32.26	100		51	127
PFTeDA	376-06-7	2.58 U	32.52	32.26	101		34	162
NMeFOSAA	2355-31-9	3.23 U	38.56	32.26	120		52	146
NEtFOSAA	2991-50-6	2.58 U	36.13	32.26	112		54	124
PFBS	375-73-5	1.29 U	33.88	32.58	104		57	145
PFHxS	355-46-4	0.65 U	37.98	32.58	117		52	132
PFOS	1763-23-1	0.84 J	31.75	32.26	96		50	130
Surrogate Recoveries (%)								
13C5-PFHxA		104	101					
13C4-PFHpA		107	114					
13C8-PFOA		114	103					
13C9-PFNA		100	91					
13C6-PFDA		119	101					
13C7-PFUnA		121	108					
13C2-PFDoA		127	114					
13C2-PFTeDA		144	135					
d3-MeFOSAA		106	116					
d5-EtFOSAA		93	108					
13C3-PFBS		117	135					
13C3-PFHxS		113	107					
13C8-PFOS		105	124					

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM553-SD01-0102-MSD								
Battelle ID		J8782MSD-FS								
Sample Type		MSD								
Collection Date		10/08/2018								
Extraction Date		10/18/2018								
Analysis Date		10/24/2018								
Analytical Instrument		Sciex 5500 LC/MS/MS								
% Moisture		22.72								
Matrix		SD								
Sample Size		1.53								
Size Unit-Basis		g				Control Limits				RPD
Units		ng/g_Dry	Target	Recovery	Qual	Lower	Upper	RPD	Qual	Limit
PFHxA	307-24-4	34.42	33.01	104		45	135	11.8		≤ 30
PFHpA	375-85-9	30.46	32.68	93		60	128	8.2		≤ 30
PFOA	335-67-1	34.03	32.68	104		56	136	2.8		≤ 30
PFNA	375-95-1	35.60	32.68	109		54	130	5.4		≤ 30
PFDA	335-76-2	31.38	32.68	96		55	141	3.1		≤ 30
PFUnA	2058-94-8	34.26	32.68	105		57	137	2.8		≤ 30
PFDoA	307-55-1	33.59	32.68	103		62	134	1.0		≤ 30
PFTrDA	72629-94-8	33.23	32.68	102		51	127	2.0		≤ 30
PFTeDA	376-06-7	33.97	32.68	104		34	162	2.9		≤ 30
NMeFOSAA	2355-31-9	33.54	32.68	103		52	146	15.2		≤ 30
NEtFOSAA	2991-50-6	34.95	32.68	107		54	124	4.6		≤ 30
PFBS	375-73-5	31.72	33.01	96		57	145	8.0		≤ 30
PFHxS	355-46-4	36.55	33.01	111		52	132	5.3		≤ 30
PFOS	1763-23-1	34.37	32.68	103		50	130	7.0		≤ 30

Surrogate Recoveries (%)

13C5-PFHxA	103
13C4-PFHpA	112
13C8-PFOA	97
13C9-PFNA	90
13C6-PFDA	105
13C7-PFUnA	108
13C2-PFDoA	118
13C2-PFTeDA	131
d3-MeFOSAA	123
d5-EtFOSAA	104
13C3-PFBS	142
13C3-PFHxS	109
13C8-PFOS	114

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Glossary of Data Qualifiers

Flag:	Application:
B	Analyte found in the sample at a concentration <10x the level found in the procedural blank
D	Dilution Run. Initial run outside the initial calibration range of the instrument
E	Estimate, result is greater than the highers concentration level in the calibration
H	Surrogate diluted out. Used when surrogate recovery is affected by excessive dilution of the sample extract.
J	Analyte detected below the Limit of Quantitation (LOQ)
ME	Significant Matrix Interference - Estimated value.
MI	Significant Matrix Interference - value could not be determined.
n	Quality Control (QC) value is outside the accuracy or precision Data Quality Objective (DQO), but meets secondary criteria
N	Quality Control (QC) value is outside the accuracy or precision Data Quality Objective (DQO)
NA	Not Applicable
T	Holding Time (HT) exceeded
U	Analyte not detected or detected below the Method detection limit (MDL) value, Limit of Detection (LOD) reported

Miscellaneous Documentation

QA/QC Summary
Batch 18-0621

Project:	CTO-4164 Naval Base Ventura County, California
Parameters:	PFAS
Laboratory:	Battelle, Norwell, MA
Matrix:	SD
Data Set:	DP-18-0319
Analytical SOP:	5-369
Method Reference:	PFAS to QSM 5.1 Table B-15

Sample Custody		
Collection Date	Receipt Date	Temp (°C)
10/8-9/2018	10/12/2018	1.3 and 0.7
Corrective Actions	On COC#7 (page 5 of 8 on the hand written COC forms from the field), all samples on this page, except for the SD01 set of samples, do not match collection times from the COC to the sample label. Client verified that COC records are correct.	
Sample Storage	The samples were stored refrigerated until extraction.	
Related samples	NA	

	METHOD SUMMARIES
Sample Preparation	Solid samples were aliquoted into extraction tubes and spiked with surrogates prior to the addition of solvent. The sediment was serially extracted on the Geno/Grinder with 0.4% NH_3 in methanol. 1 mL of extract was refined using ENVI-carb SPE cartridges. Extracts were 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	All samples were pre-screened prior to extraction to check potential levels of PFAS in the samples.
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/g concentrations.
Analysis Comments	Samples analyzed on Sciex 5500 LC-MS/MS. When detected, PFHxS and PFOS contain both linear and branched isomers. Data file 5500_10242018_05-0369.wiff utilizes the calibration from data file Data18-0590_18-01588_18-0589.wiff and reported from the result table files 18-0620_18-0621_18-0622_BASE and 18-0620_18-0621_18-0622_SIS.

Holding Times	Extraction Date(s)	Analysis Date(s)
	10/18/2018	10/17, 24, and 25/2018

QA/QC Summary
Batch 18-0621

Procedural Blank (PB)	A PB was prepared with this analytical batch to ensure the sample extraction and analysis methods are free of contamination.
≤ ½ the LOQ Samples >10x PB	No exceedances noted.
	No comments.

Laboratory Control Spike (LCS)	A LCS was prepared with this analytical batch. The percent recoveries of target analytes were calculated to measure accuracy.
Laboratory derived control limits for recovery	No exceedances noted.
	No comments.

Matrix Spike and Matrix Spike Duplicate (MS/MSD)	A MS/MSD was prepared with this analytical batch. The percent recoveries of target analytes were calculated to measure accuracy.
Laboratory derived control limits for recovery and <30% RPD	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.

Internal Standard Analytes	Labelled analog compounds were added prior to analysis.
+/- 50% of the area of the L5 calibration point.	No exceedances noted.
	No comments.

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

Independent Calibration Check (ICC)	The independent check was run after each initial calibration to verify the calibration. This standard is from a different source than the ICAL.
+/- 30% of true value	No exceedances noted.
	No comments.

QA/QC Summary
Batch 18-0621

Continuing Calibration Verification (CCV)	Continuing calibration standards were run at the beginning and end of 10 injections and at the end of the sequence to ensure that initial calibration is still valid.
+/- 30% of true value	No exceedances noted.
	No comments.

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

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Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project Number: 100110125-01
Preparation Batch: 18-0621
Data Set: DP-18-0319
Test Code: Master_369

QC Parameter:	Exceed:	Justification:
Procedural Blank	0	None
PB Measurement Quality Objective	0	None
Laboratory Control Sample	0	None
Matrix Spike / Matrix Spike Duplicate Recovery	0	None
Matrix Spike / Matrix Spike Duplicate Precision	0	None
Extracted Internal Standard Analytes (Surrogates)	0	None
Instrument Calibration	0	None
Instrument Blank	0	None
Independent Calibration Check	0	None
Continuing Calibration Verification	0	None

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BATTELLE - NORWELL OPERATIONS
MISCELLANEOUS DOCUMENTATION FORM

Project Title:	CTO-4164 Naval Base Ventura County,	**Data Set Number:**	DP-18-0319
Project Number:	100110125-01	**Prep Batch Number:**	18-0621
Entered By:	Lauren Griffith	**Entered On:**	10/30/2018
Test Code (Matrix Type):	Master_369(S)		

Samples that were manually integrated are noted on the quant reports with the comment (TRUE).
LMG 10/30/18

Data file 5500_10242018_05-0369.wiff utilizes the calibration from data file Data18-0590_18-01588_18-0589.wiff
LMG 10/30/18

KB79 was not utilized for the SIS method for d3-MeFOSAA. There is no impact on the data once this point is removed.
LMG 10/30/18

Task Leader Approval:

SupervisorApproval:

PM Approval:

Digitally signed by Jonathan Thorn
Date: 2018.10.30 17:11:33 -04'00'

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Example Calculation for PFAS

Calculation of final concentration from area:

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

Where:

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

Sample ID:	J8781MS-FS(3)
Client Sample ID:	VC-PM553-SD01-0102-MS
Sample Size:	1.55
Units:	g
Dilution Factor:	10.000
PIV (L):	0.001
Target Analyte:	PFDoA
MRM Transition:	613.0 / 569.0
Data file:	5500_10242018_05-0369.wiff
Result table:	18-0620_18-0621_18-0622_BASE
Area:	1,964,130.01
IS Name:	13C2-PFDoA
IS Area:	103,358.22
IS Amount (ng/L):	250
y-intercept:	0.1055
slope:	0.90471

$$\text{Concentration} = \frac{[(1964130.01/103358.22) - 0.1055]}{0.90471} * 250 * 0.001 * 10 / 1.55$$

ng/g = 33.69

*Final concentration may vary based on rounding.

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01
Preparation Batch: 18-0621
Data Set: DP-18-0319

		CS011PB-FS (Procedural Blank)	CS012LCS-FS (Laboratory Control Sample)	J8781MS-FS (VC-PM553-SD01-0102-MS)	J8782MSD-FS (VC-PM553-SD01-0102-MSD)	J8777-FS (VC-PM323-324-SD01-000H)	J8778-FS (VC-PM323-324-SD01-0102)	J8779-FS (VC-PM553-SD01-000H)	J8780-FS (VC-PM553-SD01-0102)
PFHxA	307-24-4	-	L	L	L	-	-	-	-
PFHpA	375-85-9	-	L	L	L	-	-	-	-
PFOA	335-67-1	-	L	L	L	-	-	-	-
PFNA	375-95-1	-	L	L	L	-	-	-	-
PFDA	335-76-2	-	L	L	L	-	-	-	-
PFUnA	2058-94-8	-	L	L	L	-	-	-	-
PFDoA	307-55-1	-	L	L	L	-	-	-	-
PFTrDA	72629-94-8	-	L	L	L	-	-	-	-
PFTeDA	376-06-7	-	L	L	L	-	-	-	-
NMeFOSAA	2355-31-9	-	L	L	L	-	-	-	-
NEtFOSAA	2991-50-6	-	L	L	L	-	-	-	-
PFBS	375-73-5	-	L	L	L	-	-	-	-
PFHxS	355-46-4	-	L/Br	L/Br	L/Br	-	-	-	-
PFOS	1763-23-1	-	L/Br	L/Br	L/Br	L/Br	L/Br	-	-

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

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01
Preparation Batc
Data Set: DP-18-

	J8783-FS (VC-PM3009-SD01-000H)	J8784-FS (VC-PM3009-SD01-0102)	J8785-FS (VC-PM372-SD01-000H)	J8786-FS (VC-PM372-SD01-0102)	J8787-FS (VC-CS11-SD01-000H)	J8788-FS (VC-CS11-SD01-0102)	J8809-FS (VC-STP-SD01-000H)	J8810-FS (VC-STP-SD01-0102)
PFHxA	-	-	-	-	-	-	-	-
PFHpA	-	-	-	-	-	-	-	-
PFOA	-	-	-	-	-	-	-	-
PFNA	-	-	-	-	-	-	-	-
PFDA	-	-	-	-	-	-	-	-
PFUnA	-	-	-	-	-	-	-	-
PFDoA	-	-	-	-	-	-	-	-
PFTrDA	-	-	-	-	-	-	-	-
PFTeDA	-	-	-	-	-	-	-	-
NMeFOSAA	-	-	-	-	-	-	-	-
NEtFOSAA	-	-	-	-	-	-	-	-
PFBS	-	-	-	-	-	-	-	-
PFHxS	-	-	-	-	-	-	-	-
PFOS	-	-	-	-	L/Br	-	L/Br	-

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

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01
Preparation Batc
Data Set: DP-18-

	J8811-FS (VC-STP-SD02-000H)	J8812-FS (VC-STP-SD02-0102)	J8813-FS (VC-STP-SD03-000H)	J8814-FS (VC-STP-SD03-0102)	J8815-FS (VC-STP-SD04-000H)	J8816-FS (VC-STP-SD04-0102)
PFHxA	-	-	-	-	-	-
PFHpA	-	-	-	-	-	-
PFOA	-	-	-	-	-	-
PFNA	-	-	-	-	-	-
PFDA	-	-	-	-	-	-
PFUnA	-	-	-	-	-	-
PFDoA	-	-	-	-	-	-
PFTrDA	-	-	-	-	-	-
PFTeDA	-	-	-	-	-	-
NMeFOSAA	-	-	-	-	-	-
NEtFOSAA	-	-	-	-	-	-
PFBS	-	-	-	-	-	-
PFHxS	-	-	-	-	-	-
PFOS	-	L/Br	-	-	L/Br	L/Br

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

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

BATTELLE
It can be done

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper
KB77	L5	10/17/18 20:30	13C2-PFOA	80,369.12	40,184.56	120,553.68

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper	Qualifier
KB73	L1	10/17/18 19:46	13C2-PFOA	79,095.63	40,184.56	120,553.68	
KB74	L2	10/17/18 19:57	13C2-PFOA	89,971.31	40,184.56	120,553.68	
KB75	L3	10/17/18 20:08	13C2-PFOA	87,799.30	40,184.56	120,553.68	
KB76	L4	10/17/18 20:19	13C2-PFOA	84,567.91	40,184.56	120,553.68	
KB77	L5	10/17/18 20:30	13C2-PFOA	80,369.12	40,184.56	120,553.68	
KB78	L6	10/17/18 20:41	13C2-PFOA	85,964.25	40,184.56	120,553.68	
KB79	L7	10/17/18 20:52	13C2-PFOA	86,636.81	40,184.56	120,553.68	
KB80 IB	IB	10/17/18 21:02	13C2-PFOA	85,730.94	40,184.56	120,553.68	
KB81 ICC	ICC	10/17/18 21:13	13C2-PFOA	85,242.44	40,184.56	120,553.68	
KB75 ISC	ISC	10/24/18 17:30	13C2-PFOA	78,275.39	40,184.56	120,553.68	
KB80 IB	IB	10/24/18 17:41	13C2-PFOA	76,306.33	40,184.56	120,553.68	
KB76 CCV	CCV	10/24/18 19:51	13C2-PFOA	88,842.83	40,184.56	120,553.68	
CS011PB-FS(3)	Procedural Blank	10/24/18 20:13	13C2-PFOA	78,653.06	40,184.56	120,553.68	
CS012LCS-FS(3)	Laboratory Control Sample	10/24/18 20:24	13C2-PFOA	81,098.45	40,184.56	120,553.68	
J8777-FS(3)	VC-PM323-324-SD01-000H	10/24/18 20:34	13C2-PFOA	86,865.48	40,184.56	120,553.68	
J8778-FS(3)	VC-PM323-324-SD01-0102	10/24/18 20:45	13C2-PFOA	85,213.87	40,184.56	120,553.68	
J8779-FS(3)	VC-PM553-SD01-000H	10/24/18 20:56	13C2-PFOA	88,902.32	40,184.56	120,553.68	
J8780-FS(3)	VC-PM553-SD01-0102	10/24/18 21:07	13C2-PFOA	72,268.52	40,184.56	120,553.68	
J8781MS-FS(3)	VC-PM553-SD01-0102-MS	10/24/18 21:18	13C2-PFOA	75,451.45	40,184.56	120,553.68	
J8782MSD-FS(3)	VC-PM553-SD01-0102-MSD	10/24/18 21:29	13C2-PFOA	84,711.52	40,184.56	120,553.68	
J8783-FS(3)	VC-PM3009-SD01-000H	10/24/18 21:40	13C2-PFOA	73,007.31	40,184.56	120,553.68	
J8784-FS(3)	VC-PM3009-SD01-0102	10/24/18 21:50	13C2-PFOA	70,253.78	40,184.56	120,553.68	
KB77 CCV	CCV	10/24/18 22:01	13C2-PFOA	85,568.76	40,184.56	120,553.68	
J8785-FS(3)	VC-PM372-SD01-000H	10/24/18 22:23	13C2-PFOA	79,018.98	40,184.56	120,553.68	
J8786-FS(3)	VC-PM372-SD01-0102	10/24/18 22:34	13C2-PFOA	80,911.91	40,184.56	120,553.68	
J8787-FS(3)	VC-CS11-SD01-000H	10/24/18 22:45	13C2-PFOA	78,599.39	40,184.56	120,553.68	
J8788-FS(3)	VC-CS11-SD01-0102	10/24/18 22:56	13C2-PFOA	81,062.07	40,184.56	120,553.68	
J8809-FS(3)	VC-STP-SD01-000H	10/24/18 23:07	13C2-PFOA	88,369.45	40,184.56	120,553.68	
J8810-FS(3)	VC-STP-SD01-0102	10/24/18 23:17	13C2-PFOA	74,023.73	40,184.56	120,553.68	
J8811-FS(3)	VC-STP-SD02-000H	10/24/18 23:28	13C2-PFOA	77,923.47	40,184.56	120,553.68	
J8812-FS(3)	VC-STP-SD02-0102	10/24/18 23:39	13C2-PFOA	69,186.43	40,184.56	120,553.68	
J8813-FS(3)	VC-STP-SD03-000H	10/24/18 23:50	13C2-PFOA	70,810.59	40,184.56	120,553.68	
J8814-FS(3)	VC-STP-SD03-0102	10/25/18 0:01	13C2-PFOA	79,067.25	40,184.56	120,553.68	
KB76 CCV	CCV	10/25/18 0:12	13C2-PFOA	80,939.40	40,184.56	120,553.68	
J8815-FS(3)	VC-STP-SD04-000H	10/25/18 0:33	13C2-PFOA	71,592.21	40,184.56	120,553.68	
J8816-FS(3)	VC-STP-SD04-0102	10/25/18 0:44	13C2-PFOA	71,265.12	40,184.56	120,553.68	
KB77 CCV	CCV	10/25/18 0:55	13C2-PFOA	87,478.75	40,184.56	120,553.68	

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

BATTELLE
It can be done

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper
KB77	L5	10/17/18 20:30	13C2-PFDA	90,129.70	45,064.85	135,194.55

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper	Qualifier
KB73	L1	10/17/18 19:46	13C2-PFDA	100,139.46	45,064.85	135,194.55	
KB74	L2	10/17/18 19:57	13C2-PFDA	103,883.83	45,064.85	135,194.55	
KB75	L3	10/17/18 20:08	13C2-PFDA	98,052.33	45,064.85	135,194.55	
KB76	L4	10/17/18 20:19	13C2-PFDA	99,978.99	45,064.85	135,194.55	
KB77	L5	10/17/18 20:30	13C2-PFDA	90,129.70	45,064.85	135,194.55	
KB78	L6	10/17/18 20:41	13C2-PFDA	104,169.70	45,064.85	135,194.55	
KB79	L7	10/17/18 20:52	13C2-PFDA	100,765.46	45,064.85	135,194.55	
KB80 IB	IB	10/17/18 21:02	13C2-PFDA	96,280.28	45,064.85	135,194.55	
KB81 ICC	ICC	10/17/18 21:13	13C2-PFDA	103,402.36	45,064.85	135,194.55	
KB75 ISC	ISC	10/24/18 17:30	13C2-PFDA	88,361.09	45,064.85	135,194.55	
KB80 IB	IB	10/24/18 17:41	13C2-PFDA	78,942.69	45,064.85	135,194.55	
KB76 CCV	CCV	10/24/18 19:51	13C2-PFDA	104,742.48	45,064.85	135,194.55	
CS011PB-FS(3)	Procedural Blank	10/24/18 20:13	13C2-PFDA	92,071.23	45,064.85	135,194.55	
CS012LCS-FS(3)	Laboratory Control Sample	10/24/18 20:24	13C2-PFDA	96,845.11	45,064.85	135,194.55	
J8777-FS(3)	VC-PM323-324-SD01-000H	10/24/18 20:34	13C2-PFDA	93,087.05	45,064.85	135,194.55	
J8778-FS(3)	VC-PM323-324-SD01-0102	10/24/18 20:45	13C2-PFDA	100,788.55	45,064.85	135,194.55	
J8779-FS(3)	VC-PM553-SD01-000H	10/24/18 20:56	13C2-PFDA	104,384.22	45,064.85	135,194.55	
J8780-FS(3)	VC-PM553-SD01-0102	10/24/18 21:07	13C2-PFDA	80,862.54	45,064.85	135,194.55	
J8781MS-FS(3)	VC-PM553-SD01-0102-MS	10/24/18 21:18	13C2-PFDA	93,279.61	45,064.85	135,194.55	
J8782MSD-FS(3)	VC-PM553-SD01-0102-MSD	10/24/18 21:29	13C2-PFDA	100,001.89	45,064.85	135,194.55	
J8783-FS(3)	VC-PM3009-SD01-000H	10/24/18 21:40	13C2-PFDA	89,859.73	45,064.85	135,194.55	
J8784-FS(3)	VC-PM3009-SD01-0102	10/24/18 21:50	13C2-PFDA	89,623.53	45,064.85	135,194.55	
KB77 CCV	CCV	10/24/18 22:01	13C2-PFDA	102,061.73	45,064.85	135,194.55	
J8785-FS(3)	VC-PM372-SD01-000H	10/24/18 22:23	13C2-PFDA	92,869.70	45,064.85	135,194.55	
J8786-FS(3)	VC-PM372-SD01-0102	10/24/18 22:34	13C2-PFDA	94,509.59	45,064.85	135,194.55	
J8787-FS(3)	VC-CS11-SD01-000H	10/24/18 22:45	13C2-PFDA	90,397.15	45,064.85	135,194.55	
J8788-FS(3)	VC-CS11-SD01-0102	10/24/18 22:56	13C2-PFDA	88,531.68	45,064.85	135,194.55	
J8809-FS(3)	VC-STP-SD01-000H	10/24/18 23:07	13C2-PFDA	99,129.25	45,064.85	135,194.55	
J8810-FS(3)	VC-STP-SD01-0102	10/24/18 23:17	13C2-PFDA	92,983.34	45,064.85	135,194.55	
J8811-FS(3)	VC-STP-SD02-000H	10/24/18 23:28	13C2-PFDA	94,113.50	45,064.85	135,194.55	
J8812-FS(3)	VC-STP-SD02-0102	10/24/18 23:39	13C2-PFDA	85,976.13	45,064.85	135,194.55	
J8813-FS(3)	VC-STP-SD03-000H	10/24/18 23:50	13C2-PFDA	88,444.21	45,064.85	135,194.55	
J8814-FS(3)	VC-STP-SD03-0102	10/25/18 0:01	13C2-PFDA	91,347.85	45,064.85	135,194.55	
KB76 CCV	CCV	10/25/18 0:12	13C2-PFDA	99,230.65	45,064.85	135,194.55	
J8815-FS(3)	VC-STP-SD04-000H	10/25/18 0:33	13C2-PFDA	84,734.43	45,064.85	135,194.55	
J8816-FS(3)	VC-STP-SD04-0102	10/25/18 0:44	13C2-PFDA	88,843.20	45,064.85	135,194.55	
KB77 CCV	CCV	10/25/18 0:55	13C2-PFDA	105,607.64	45,064.85	135,194.55	

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

BATTELLE
It can be done

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper
KB77	L5	10/17/18 20:30	13C4-PFOS	31,518.26	15,759.13	47,277.39

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper	Qualifier
KB73	L1	10/17/18 19:46	13C4-PFOS	29,846.55	15,759.13	47,277.39	
KB74	L2	10/17/18 19:57	13C4-PFOS	34,856.85	15,759.13	47,277.39	
KB75	L3	10/17/18 20:08	13C4-PFOS	30,684.77	15,759.13	47,277.39	
KB76	L4	10/17/18 20:19	13C4-PFOS	30,962.75	15,759.13	47,277.39	
KB77	L5	10/17/18 20:30	13C4-PFOS	31,518.26	15,759.13	47,277.39	
KB78	L6	10/17/18 20:41	13C4-PFOS	29,589.19	15,759.13	47,277.39	
KB79	L7	10/17/18 20:52	13C4-PFOS	26,984.04	15,759.13	47,277.39	
KB80 IB	IB	10/17/18 21:02	13C4-PFOS	29,371.12	15,759.13	47,277.39	
KB81 ICC	ICC	10/17/18 21:13	13C4-PFOS	33,690.55	15,759.13	47,277.39	
KB75 ISC	ISC	10/24/18 17:30	13C4-PFOS	28,379.24	15,759.13	47,277.39	
KB80 IB	IB	10/24/18 17:41	13C4-PFOS	27,128.85	15,759.13	47,277.39	
KB76 CCV	CCV	10/24/18 19:51	13C4-PFOS	31,832.31	15,759.13	47,277.39	
CS011PB-FS(3)	Procedural Blank	10/24/18 20:13	13C4-PFOS	26,334.61	15,759.13	47,277.39	
CS012LCS-FS(3)	Laboratory Control Sample	10/24/18 20:24	13C4-PFOS	26,845.02	15,759.13	47,277.39	
J8777-FS(3)	VC-PM323-324-SD01-000H	10/24/18 20:34	13C4-PFOS	30,731.04	15,759.13	47,277.39	
J8778-FS(3)	VC-PM323-324-SD01-0102	10/24/18 20:45	13C4-PFOS	28,574.05	15,759.13	47,277.39	
J8779-FS(3)	VC-PM553-SD01-000H	10/24/18 20:56	13C4-PFOS	30,282.43	15,759.13	47,277.39	
J8780-FS(3)	VC-PM553-SD01-0102	10/24/18 21:07	13C4-PFOS	26,142.40	15,759.13	47,277.39	
J8781MS-FS(3)	VC-PM553-SD01-0102-MS	10/24/18 21:18	13C4-PFOS	24,593.57	15,759.13	47,277.39	
J8782MSD-FS(3)	VC-PM553-SD01-0102-MSD	10/24/18 21:29	13C4-PFOS	26,914.91	15,759.13	47,277.39	
J8783-FS(3)	VC-PM3009-SD01-000H	10/24/18 21:40	13C4-PFOS	24,239.19	15,759.13	47,277.39	
J8784-FS(3)	VC-PM3009-SD01-0102	10/24/18 21:50	13C4-PFOS	23,408.78	15,759.13	47,277.39	
KB77 CCV	CCV	10/24/18 22:01	13C4-PFOS	31,062.94	15,759.13	47,277.39	
J8785-FS(3)	VC-PM372-SD01-000H	10/24/18 22:23	13C4-PFOS	27,752.31	15,759.13	47,277.39	
J8786-FS(3)	VC-PM372-SD01-0102	10/24/18 22:34	13C4-PFOS	26,547.61	15,759.13	47,277.39	
J8787-FS(3)	VC-CS11-SD01-000H	10/24/18 22:45	13C4-PFOS	25,198.28	15,759.13	47,277.39	
J8788-FS(3)	VC-CS11-SD01-0102	10/24/18 22:56	13C4-PFOS	26,442.23	15,759.13	47,277.39	
J8809-FS(3)	VC-STP-SD01-000H	10/24/18 23:07	13C4-PFOS	27,761.02	15,759.13	47,277.39	
J8810-FS(3)	VC-STP-SD01-0102	10/24/18 23:17	13C4-PFOS	25,531.75	15,759.13	47,277.39	
J8811-FS(3)	VC-STP-SD02-000H	10/24/18 23:28	13C4-PFOS	23,325.57	15,759.13	47,277.39	
J8812-FS(3)	VC-STP-SD02-0102	10/24/18 23:39	13C4-PFOS	22,976.58	15,759.13	47,277.39	
J8813-FS(3)	VC-STP-SD03-000H	10/24/18 23:50	13C4-PFOS	26,680.61	15,759.13	47,277.39	
J8814-FS(3)	VC-STP-SD03-0102	10/25/18 0:01	13C4-PFOS	25,993.72	15,759.13	47,277.39	
KB76 CCV	CCV	10/25/18 0:12	13C4-PFOS	28,746.07	15,759.13	47,277.39	
J8815-FS(3)	VC-STP-SD04-000H	10/25/18 0:33	13C4-PFOS	23,712.27	15,759.13	47,277.39	
J8816-FS(3)	VC-STP-SD04-0102	10/25/18 0:44	13C4-PFOS	21,268.99	15,759.13	47,277.39	
KB77 CCV	CCV	10/25/18 0:55	13C4-PFOS	28,635.14	15,759.13	47,277.39	

Sample Name	KB79	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 8:52:06 PM	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
PFBS_1	298.9 / 80.0	1.56	22	>10
PFBS_2	298.9 / 99.0	1.56	22	>10
PFHxA_1	313.0 / 269.0	1.89	21	>10
PFHxA_2	313.0 / 119.0	1.88	22	>10
PFHpA_1	363.0 / 319.0	2.29	30	>10
PFHpA_2	363.0 / 169.0	2.30	23	>10
PFHxS_1	399.0 / 80.0	2.32	33	>10
PFHxS_2	399.0 / 99.0	2.32	35	>10
PFOA_1	413.0 / 369.0	2.71	32	>10
PFOA_2	413.0 / 169.0	2.71	30	>10
PFNA_1	463.0 / 419.0	3.11	29	>10
PFNA_2	463.0 / 219.0	3.11	27	>10
PFOS_1	499.0 / 80.0	3.10	43	>10
PFOS_2	499.0 / 99.0	3.10	45	>10
PFDA_1	513.0 / 469.0	3.47	31	>10
PFDA_2	513.0 / 219.0	3.47	34	>10
PFUnA_1	563.0 / 519.0	3.79	30	>10
PFUnA_2	563.0 / 269.0	3.79	43	>10
PFDoA_1	613.0 / 569.0	4.07	39	>10
PFDoA_2	613.0 / 319.0	4.07	46	>10
PFTrDA_1	663.0 / 619.0	4.32	56	>10
PFTrDA_2	663.0 / 169.0	4.32	40	>10
PFTeDA_1	713.0 / 669.0	4.54	59	>10
PFTeDA_2	713.0 / 169.0	4.54	64	>10
NMeFOSAA_1	570.0 / 419.0	3.62	29	>10
NMeFOSAA_2	570.0 / 512.0	3.62	39	>10
NEtFOSAA_1	584.0 / 419.0	3.78	31	>10
NEtFOSAA_2	584.0 / 483.0	3.78	19	>10

Mass Spectral Acquisition Rate Report

Sample Name	KB79	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 8:52:06 PM	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
13C2-PFDoA	615.0 / 570.0	4.07	23	>10
d3-MeFOSAA	573.0 / 419.0	3.62	18	>10
d5-EtFOSAA	589.0 / 419.0	3.78	27	>10
13C5-PFHxA	318.0 / 273.0	1.87	23	>10
13C4-PFHpA	367.0 / 322.0	2.28	26	>10
13C8-PFOA	421.0 / 376.0	2.70	47	>10
13C9-PFNA	472.0 / 427.0	3.09	24	>10
13C6-PFDA	519.0 / 474.0	3.45	29	>10
13C7-PFUnA	570.0 / 525.0	3.78	36	>10
13C2-PFTeDA	715.0 / 670.0	4.54	38	>10
13C3-PFBS	302.0 / 99.0	1.54	24	>10
13C3-PFHxS	402.0 / 99.0	2.31	27	>10
13C8-PFOS	507.0 / 99.0	3.09	33	>10

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It can be done

Precision and Bias at the LOQ for PFAS in Solids

Analyte	CAS No.	Average (ng/g)	ST DEV	2 Sigma	n
PFBA	375-22-4	11.08	1.57	3.14	20
PFPeA	2706-90-3	10.94	1.44	2.88	20
PFHxA	307-24-4	11.11	2.08	4.16	26
PFHpA	375-85-9	11.13	1.83	3.66	26
PFOA	335-67-1	11.22	1.83	3.66	26
PFNA	375-95-1	11.05	1.63	3.26	26
PFDA	335-76-2	11.68	2.06	4.12	26
PFUnA	2058-94-8	11.4	1.84	3.68	26
PFDoA	307-55-1	11.54	1.53	3.06	26
PFTrDA	72629-94-8	10.89	1.28	2.56	26
PFTeDA	376-06-7	11.86	2.17	4.34	26
NMeFOSAA	2355-31-9	11.76	1.59	3.18	26
NEtFOSAA	2991-50-6	10.69	1.45	2.9	26
PFOSA	754-91-6	10.75	1.63	3.26	4
PFBS	375-73-5	11.51	1.74	3.48	26
PFPeS	BDO-2114	11.67	1.22	2.44	4
PFHxS	355-46-4	11.24	1.73	3.46	26
PFHpS	375-99-6	11.05	1.68	3.36	20
PFOS	1763-23-1	11.04	1.62	3.24	26
PFNS	98789-57-2	10.67	1.01	2.02	4
PFDS	2806-15-7	11.84	2.23	4.46	20
4:2FTS	BDO-2205	12.03	1.86	3.72	20
6:2FTS	27619-97-2	12.48	1.33	2.66	12
8:2FTS	39108-34-4	12.08	2.01	4.02	20

BATTELLE DETECTION LIMITS FOR PFAS IN SOLIDS (SEDIMENT/SOIL)

Analytical SOP 5-369
Extraction SOP 5-370

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

Analyte	CAS No.	MDL (ng/g)	LOD (ng/g)	LOQ (ng/g)
PFBA	375-22-4	0.36	1.0	5.0
PFPeA	2706-90-3	0.39	1.0	5.0
PFHxA	307-24-4	0.33	1.0	5.0
PFHpA	375-85-9	0.44	1.0	5.0
PFOA	335-67-1	0.50	1.0	5.0
PFNA	375-95-1	0.43	1.0	5.0
PFDA	335-76-2	0.27	1.0	5.0
PFUnA	2058-94-8	0.41	1.0	5.0
PFDoA	307-55-1	0.24	0.5	5.0
PFTrDA	72629-94-8	0.28	1.0	5.0
PFTeDA	376-06-7	0.63	2.0	5.0
NMeFOSAA	2355-31-9	1.12	2.5	5.0
NEtFOSAA	2991-50-6	0.57	2.0	5.0
PFOSA	754-91-6	0.39	1.0	5.0
PFBS	375-73-5	0.36	1.0	5.0
PFPeS	BDO-2114	0.57	2.0	5.0
PFHxS	355-46-4	0.22	0.5	5.0
PFHpS	375-99-6	0.34	1.0	5.0
PFOS	1763-23-1	0.27	1.0	5.0
PFNS	98789-57-2	0.74	2.0	5.0
PFDS	2806-15-7	0.19	0.5	5.0
4:2FTS	BDO-2205	0.29	1.0	5.0
6:2FTS	27619-97-2	2.31	2.5	5.0
8:2FTS	39108-34-4	0.59	2.0	5.0

Analytes on NELAP and ELAP QSM 5.1 Scope of accreditation

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ID 595 04/18

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

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

Analyte	CAS No.	Type	Primary Transition	Secondary Transition
PFBA	375-22-4	Target	213.0 / 169.0	NA
PFPeA	2706-90-3	Target	263.0 / 219.0	NA
PFHxA	307-24-4	Target	313.0 / 269.0	313.0 / 119.0
PFHpA	375-85-9	Target	363.0 / 319.0	363.0 / 169.0
PFOA	335-67-1	Target	413.0 / 369.0	413.0 / 169.0
PFNA	375-95-1	Target	463.0 / 419.0	463.0 / 219.0
PFDA	335-76-2	Target	513.0 / 469.0	513.0 / 219.0
PFUnA	2058-94-8	Target	563.0 / 519.0	563.0 / 269.0
PFDoA	307-55-1	Target	613.0 / 569.0	613.0 / 319.0
PFTrDA	72629-94-8	Target	663.0 / 619.0	663.0 / 169.0
PFTeDA	376-06-7	Target	713.0 / 669.0	713.0 / 169.0
NMeFOSAA	2355-31-9	Target	570.0 / 419.0	570.0 / 512.0
NEtFOSAA	2991-50-6	Target	584.0 / 419.0	584.0 / 483.0
PFOSA	754-91-6	Target	498.0 / 78.0	498.0 / 83.0
PFBS	375-73-5	Target	299.0 / 80.0	299.0 / 99.0
PFPeS	BDO-2114	Target	349.0 / 99.0	249.0 / 80.0
PFHxS	355-46-4	Target	399.0 / 80.0	399.0 / 99.0
PFHpS	375-99-6	Target	449.0 / 80.0	449.0 / 99.0
PFOS	1763-23-1	Target	499.0 / 80.0	499.0 / 99.0
PFNS	98789-57-2	Target	549.0 / 99.0	549.0 / 80.0
PFDS	2806-15-7	Target	599.0 / 80.0	599.0 / 99.0
4:2FTS	BDO-2205	Target	327.0 / 307.0	327.0 / 80.0
6:2FTS	27619-97-2	Target	427.0 / 407.0	427.0 / 81.0
8:2FTS	39108-34-4	Target	527.0 / 507.0	527.0 / 487.0
13C4-PFBA	BDO-2105	SIS[1]	217.0 / 172.0	NA
13C5-PFPeA	BDO-2216	SIS[1]	268.0 / 223.0	NA
13C5-PFHxA	BDO-2217	SIS[1]	318.0 / 273.0	NA

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

[1] – extracted internal standard (surrogate)
[2] – injection internal standard

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Solids Calibration to Sample Equivalents

ICAL (ng/L)	PIV (mL)	DF[1]	Sample Size (g)	Sample Equivalent (ng/g)[2]
25	1	10	2.0	0.1
50	1	10	2.0	0.3
100	1	10	2.0	0.5
250	1	10	2.0	1.3
500	1	10	2.0	2.5
1,000	1	10	2.0	5.0
2,500	1	10	2.0	12.5
10,000	1	10	2.0	50.0
20,000	1	10	2.0	100.0

[1] - base level dilution as part of the extraction procedure

[2] - calculated equivalent of a sample based on the ICAL concentration

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

QTRAP 5500
Preventive Maintenance Checklist

Preventive Maintenance Date:	12-June-2018

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

☑ **PASS** ☐ **FAIL**

Any failure will lead to an automatic Service Call being open to investigate fault.

Preventive Maintenance is performed twice every year unless specified in the Service Contract. It is designed to help maintain optimum system performance and to help diagnose any system deficiencies.

Engineer is required the assigned Request ID for this PM otherwise making this job invalid.

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

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

Approved By :_____ **Date:** _____

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QTRAP 5500

LC/MS/MS Detector System
Appendix ZEFPM003-2L

PRE PM PPG PERFORMANCE EVALUATION:

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

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

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

☑ No degradation or Sensitivity drop

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

☑ No degradation or Sensitivity drop

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

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

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

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

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

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

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

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

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

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

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

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

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

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

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

PREVENTIVE MAINTENANCE CHECKLIST:

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

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

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

☑Pump down overnight if possible. ☐ N/A

☑Perform Maintenance on Turbo V source.

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

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

POST PM PPG PERFORMANCE TESTS:

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

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

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

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

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

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

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

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

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

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

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

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

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

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

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

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

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

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

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

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

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

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

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

Mass	Scan Rate (Da/s)	Fragamentation OFF		Fragmentation ON	
		Intensity	Spec	Intensity	Spec
MS3 397.2	1000	Yes	Contains only 397.2	N/A	N/A
☐ 236 OR ☑ 365	1000	Yes	Fragment Intensity	> 2.0 e6	≥1.6x $10^{e}6$

REVIEW:

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

END OF PREVENTIVE MAINTENANCE CHECKLIST

Document history:

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

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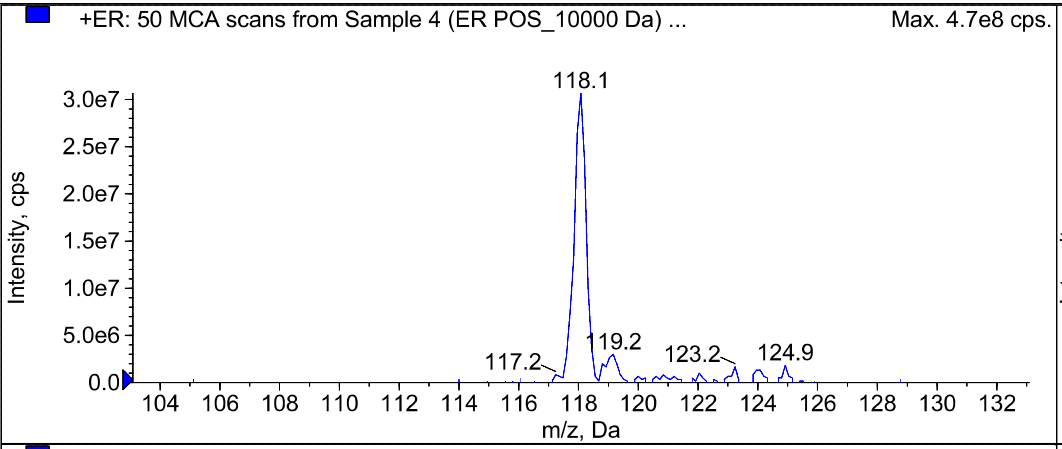
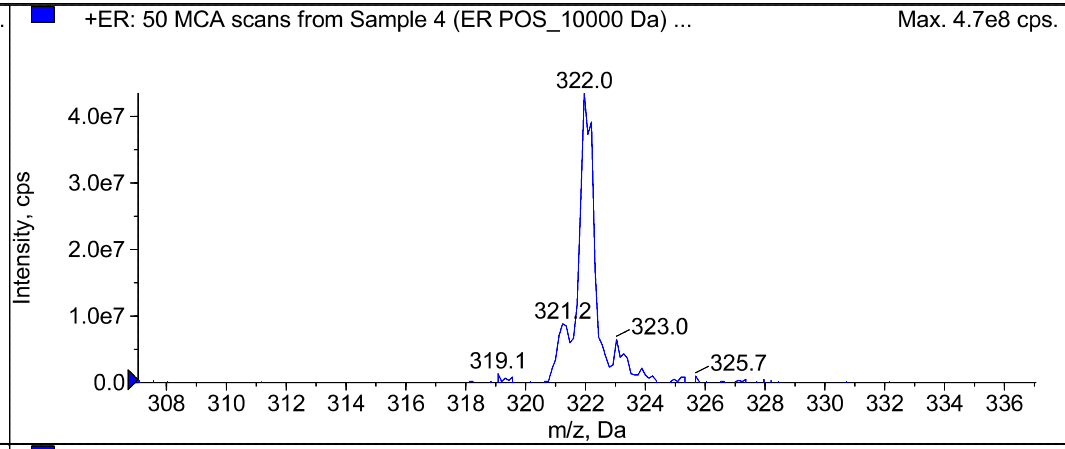
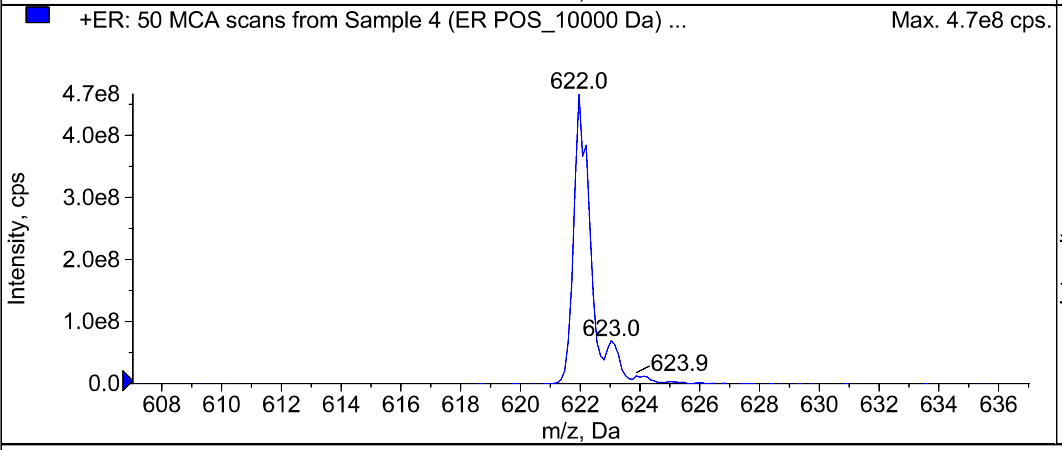
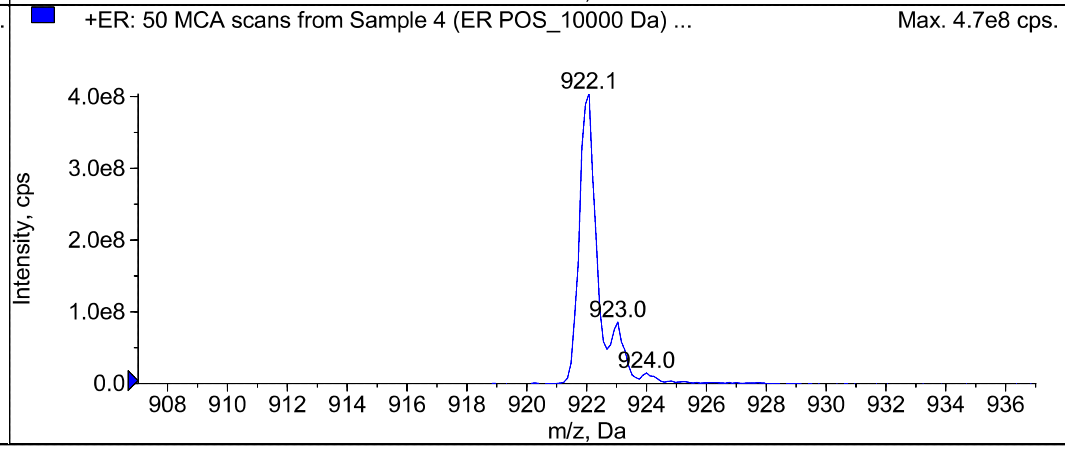








Peak List for " +ER: 50 MCA scans from Sample 4 (ER POS_10000 Da) of TRAP ER with NEW Pulse Manifold.wiff (Turbo Spray)"

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

Battelle Standard ID	Description	Intermediate Solutions	Battelle Reagent ID (purchased solutions)
KB71	PFAS - DoD High Level Labeled Extracted Internal Standard (SIS)	-	180726-05
KB82	PFAS - DoD Second Source LCS/MS Solution	-	170724-01
KC52	PFAS - DoD Internal Standard Spiking Solution	JY25	180726-04
KB73	PFAS - DoD Calibration L1	JY25	180726-04
KB73	PFAS - DoD Calibration L1	JY23	180705-02
KB73	PFAS - DoD Calibration L1	KB71	180726-05
KB74	PFAS - DoD Calibration L2	KB71	180726-05
KB74	PFAS - DoD Calibration L2	JY23	180705-02
KB74	PFAS - DoD Calibration L2	JY25	180726-04
KB75	PFAS - DoD Calibration L3	JY25	180726-04
KB75	PFAS - DoD Calibration L3	KB70	180705-02
KB75	PFAS - DoD Calibration L3	KB71	180726-05
KB76	PFAS - DoD Calibration L4	KB71	180726-05
KB76	PFAS - DoD Calibration L4	KB70	180705-02
KB76	PFAS - DoD Calibration L4	JY25	180726-04
KB77	PFAS - DoD Calibration L5	KB70	180705-02
KB77	PFAS - DoD Calibration L5	JY25	180726-04
KB77	PFAS - DoD Calibration L5	KB71	180726-05
KB78	PFAS - DoD Calibraiton L6	KB71	180726-05
KB78	PFAS - DoD Calibraiton L6	JY25	180726-04
KB78	PFAS - DoD Calibraiton L6	KB70	180705-02
KB79	PFAS - DoD Calibration L7	KB70	180705-02
KB79	PFAS - DoD Calibration L7	JY25	180726-04
KB79	PFAS - DoD Calibration L7	KB71	180726-05
KB80	PFAS - DoD Instrument Blank	KB71	180726-05
KB80	PFAS - DoD Instrument Blank	JY25	180726-04
KB81	PFAS - DoD ICC	JY25	180726-04
KB81	PFAS - DoD ICC	KB82	170724-01
KB81	PFAS - DoD ICC	KB71	180726-05
KB89	PFAS Branched Solution (~5,000 ng/L)	JX28	180618-02
KB89	PFAS Branched Solution (~5,000 ng/L)	JX28	180618-03
KB89	PFAS Branched Solution (~5,000 ng/L)	JX28	180618-04
KB89	PFAS Branched Solution (~5,000 ng/L)	JX28	180618-06
KB89	PFAS Branched Solution (~5,000 ng/L)	JX28	180618-07

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: JX28

Description: PFAS Branched Standard Stock

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

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

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

Balance ID:

Comment:

Solvent:	Lot:
Methanol (HPLC)	179315

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

BATTELLE

It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: JX28

Description: PFAS Branched Standard Stock

Stock Id: 180618-02

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

Stock Id: 180618-03

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

Stock Id: 180618-04

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

Stock Id: 180618-06

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

Stock Id: 180618-07

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

Final Concentrations:

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

Syringes/Pipettes:

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

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

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

Comment:

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

BATTELLE

It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: JY23

Description: PFAS - DoD Low ICAL Stock

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

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

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

Balance ID: _____

Comment: 96/4 Methanol/milli-q water

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

BATTELLE

It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: JY23

Description: PFAS - DoD Low ICAL Stock

Stock Id: 180705-02

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

Final Concentrations:

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

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

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

Comment: 96/4 Methanol/milli-q water

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

BATTELLE

It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: JY23

Description: PFAS - DoD Low ICAL Stock

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

Syringes/Pipettes:

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

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

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

Comment: 96/4 Methanol/milli-q water

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

BATTELLE

It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: JY25

Description: PFAS - DoD Internal Standard Stock Solution

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

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

Balance ID:

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

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

BATTELLE

It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: JY25

Description: PFAS - DoD Internal Standard Stock Solution

Stock Id: 180726-04

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

Final Concentrations:

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

Syringes/Pipettes:

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

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

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

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

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

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KB70**

Description: PFAS - DoD High ICAL Stock

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

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

Balance ID: _____

Comment: 96/4 Methanol/milli-q water

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

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB70

Description: PFAS - DoD High ICAL Stock

Stock Id: 180705-02

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

Final Concentrations:

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

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

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

Comment: 96/4 Methanol/milli-q water

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

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB70

Description: PFAS - DoD High ICAL Stock

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

Syringes/Pipettes:

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

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

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

Comment: 96/4 Methanol/milli-q water

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

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KB71**

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

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

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

Balance ID: _____

Comment: 96/4 Methanol/Milli-q water

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

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB71

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

Stock Id: 180726-05

Chemical Name	Stock Amount uL	Initial Conc. (ug/mL)	Density (g/mL)	Purity	Conv. Factor	Final Vol mL	Concentration (ug/mL)
13C2-4:2FTS	1000	0.94	1	100.000	1	20	0.04675
13C2-6:2FTS	1000	0.95	1	100.000	1	20	0.04745
13C2-8:2FTS	1000	0.96	1	100.000	1	20	0.04790
13C2-PFDoA	1000	1.00	1	100.000	1	20	0.05000
13C2-PFTeDA	1000	1.00	1	100.000	1	20	0.05000
13C3-PFBS	1000	0.93	1	100.000	1	20	0.04645
13C3-PFHxS	1000	0.95	1	100.000	1	20	0.04730
13C4-PFBA	1000	1.00	1	100.000	1	20	0.05000
13C4-PFHpA	1000	1.00	1	100.000	1	20	0.05000
13C5-PFHxA	1000	1.00	1	100.000	1	20	0.05000
13C5-PFPeA	1000	1.00	1	100.000	1	20	0.05000
13C6-PFDA	1000	1.00	1	100.000	1	20	0.05000
13C7-PFUnA	1000	1.00	1	100.000	1	20	0.05000
13C8-FOSA	1000	1.00	1	100.000	1	20	0.05000
13C8-PFOA	1000	1.00	1	100.000	1	20	0.05000
13C8-PFOS	1000	0.96	1	100.000	1	20	0.04785
13C9-PFNA	1000	1.00	1	100.000	1	20	0.05000
d3-MeFOSAA	1000	1.00	1	100.000	1	20	0.05000
d5-EtFOSAA	1000	1.00	1	100.000	1	20	0.05000

Final Concentrations:

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

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

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

Comment: 96/4 Methanol/Milli-q water

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

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB71

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

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

Syringes/Pipettes:

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

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

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

Comment: 96/4 Methanol/Milli-q water

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

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KB73**

Description: PFAS - DoD Calibration L1

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

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

Balance ID: _____

Comment: 80/20 Methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:40:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB73

Description: PFAS - DoD Calibration L1

Stock Id: JY23

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

Stock Id: JY25

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

Stock Id: KB71

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:40:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB73**

Description: PFAS - DoD Calibration L1

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

Final Concentrations:

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:40:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB73**

Description: PFAS - DoD Calibration L1

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

Syringes/Pipettes:

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:40:00 AM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KB74**

Description: PFAS - DoD Calibration L2

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

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

Balance ID: _____

Comment: 80/20 Methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:40:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB74

Description: PFAS - DoD Calibration L2

Stock Id: JY23

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

Stock Id: JY25

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

Stock Id: KB71

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:40:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB74

Description: PFAS - DoD Calibration L2

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

Final Concentrations:

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:40:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB74**

Description: PFAS - DoD Calibration L2

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

Syringes/Pipettes:

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:40:00 AM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KB75**

Description: PFAS - DoD Calibration L3

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

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

Balance ID: _____

Comment: 80/20 Methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:40:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB75

Description: PFAS - DoD Calibration L3

Stock Id: JY25

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

Stock Id: KB70

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

Stock Id: KB71

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:40:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB75**

Description: PFAS - DoD Calibration L3

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

Final Concentrations:

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:40:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB75**

Description: PFAS - DoD Calibration L3

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

Syringes/Pipettes:

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:40:00 AM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KB76**

Description: PFAS - DoD Calibration L4

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

Solution Prepared By	Schultz, Stephanie	**Date Prepared:**	10/1/2018	**Expiration Date**	7/16/2019
Solution Volume	40 **mL X** 2 **Vials**	**Refrigerator/Freezer No:**	LC Laboratory: Refrigerator - R0107		

Balance ID: _____

Comment: 80/20 Methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:40:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB76

Description: PFAS - DoD Calibration L4

Stock Id: JY25

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

Stock Id: KB70

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

Stock Id: KB71

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:40:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB76**

Description: PFAS - DoD Calibration L4

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

Final Concentrations:

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:40:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB76**

Description: PFAS - DoD Calibration L4

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

Syringes/Pipettes:

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:40:00 AM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KB77**

Description: PFAS - DoD Calibration L5

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

Solution Prepared By	Schultz, Stephanie	**Date Prepared:**	10/1/2018	**Expiration Date**	7/16/2019
Solution Volume	40 **mL X** 2 **Vials**	**Refrigerator/Freezer No:**	LC Laboratory: Refrigerator - R0107		

Balance ID: _____

Comment: 80/20 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:41:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB77

Description: PFAS - DoD Calibration L5

Stock Id: JY25

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

Stock Id: KB70

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

Stock Id: KB71

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:41:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB77

Description: PFAS - DoD Calibration L5

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

Final Concentrations:

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:41:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB77**

Description: PFAS - DoD Calibration L5

13C4-PFOS	.00024
13C5-PFHxA	.00025
13C5-PFPeA	.00025
13C6-PFDA	.00025
13C7-PFUnA	.00025
13C8-FOSA	.00025
13C8-PFOA	.00025
13C8-PFOS	.00024
13C9-PFNA	.00025
d3-MeFOSAA	.00025
d5-EtFOSAA	.00025
N-ethylperfluoro-octanesulfonamidoacetic acid	.00250
N-methylperfluoro-1-octanesulfonamidoacetic acid	.00250
Perfluoro-1-butanesulfonate	.00253
Perfluoro-1-hexanesulfonate	.00253
Perfluoro-1-octanesulfonamide	.00250
Perfluoro-1-octanesulfonate	.00250
Perfluoro-n-butanoic Acid	.00250
Perfluoro-n-decanoic Acid	.00250
Perfluoro-n-dodecanoic acid	.00250
Perfluoro-n-heptanoic Acid	.00250
Perfluoro-n-hexanoic acid	.00253
Perfluoro-n-octanoic Acid	.00250
Perfluorononanoic Acid	.00250
Perfluoro-n-pentanoic acid	.00253
Perfluoro-n-tetradecanoic acid	.00250
Perfluoro-n-tridecanoic acid	.00250
Perfluoro-n-undecanoic acid	.00250
Sodium perfluoro-1-pentanesulfonate	.00250

Syringes/Pipettes:

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:41:00 AM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KB78**

Description: PFAS - DoD Calibraiton L6

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

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

Balance ID: _____

Comment: 80/20 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:41:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB78

Description: PFAS - DoD Calibraiton L6

Stock Id: JY25

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

Stock Id: KB70

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

Stock Id: KB71

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:41:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB78**

Description: PFAS - DoD Calibraiton L6

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

Final Concentrations:

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:41:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB78**

Description: PFAS - DoD Calibraiton L6

13C4-PFOS	.00024
13C5-PFHxA	.00025
13C5-PFPeA	.00025
13C6-PFDA	.00025
13C7-PFUnA	.00025
13C8-FOSA	.00025
13C8-PFOA	.00025
13C8-PFOS	.00024
13C9-PFNA	.00025
d3-MeFOSAA	.00025
d5-EtFOSAA	.00025
N-ethylperfluoro-octanesulfonamidoacetic acid	.01000
N-methylperfluoro-1-octanesulfonamidoacetic acid	.01000
Perfluoro-1-butanesulfonate	.01010
Perfluoro-1-hexanesulfonate	.01010
Perfluoro-1-octanesulfonamide	.01000
Perfluoro-1-octanesulfonate	.01000
Perfluoro-n-butanoic Acid	.01000
Perfluoro-n-decanoic Acid	.01000
Perfluoro-n-dodecanoic acid	.01000
Perfluoro-n-heptanoic Acid	.01000
Perfluoro-n-hexanoic acid	.01010
Perfluoro-n-octanoic Acid	.01000
Perfluorononanoic Acid	.01000
Perfluoro-n-pentanoic acid	.01010
Perfluoro-n-tetradecanoic acid	.01000
Perfluoro-n-tridecanoic acid	.01000
Perfluoro-n-undecanoic acid	.01000
Sodium perfluoro-1-pentanesulfonate	.01000

Syringes/Pipettes:

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:41:00 AM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KB79**

Description: PFAS - DoD Calibration L7

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

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

Balance ID: _____

Comment: 80/20 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:41:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB79

Description: PFAS - DoD Calibration L7

Stock Id: JY25

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

Stock Id: KB70

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

Stock Id: KB71

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:41:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB79**

Description: PFAS - DoD Calibration L7

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

Final Concentrations:

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:41:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB79**

Description: PFAS - DoD Calibration L7

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

Syringes/Pipettes:

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:41:00 AM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KB80**

Description: PFAS - DoD Instrument Blank

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

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

Balance ID: _____

Comment: 80/20 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:41:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB80

Description: PFAS - DoD Instrument Blank

Stock Id: JY25

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

Stock Id: KB71

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

Final Concentrations:

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:41:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB80**

Description: PFAS - DoD Instrument Blank

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

Syringes/Pipettes:

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:41:00 AM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KB81**

Description: PFAS - DoD ICC

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

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

Balance ID: _____

Comment: 80/20 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:41:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB81

Description: PFAS - DoD ICC

Stock Id: JY25

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

Stock Id: KB71

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

Stock Id: KB82

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:41:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB81**

Description: PFAS - DoD ICC

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

Final Concentrations:

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:41:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB81**

Description: PFAS - DoD ICC

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

Syringes/Pipettes:

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/1/2018 **Expiration Date:** 7/16/2019

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

Comment: 80/20 Methanol/Milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:41:00 AM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KB82**

Description: PFAS - DoD Second Source LCS/MS Solution

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

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

Balance ID:

Comment: 80/20 Methanol/Milli-q water

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

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB82

Description: PFAS - DoD Second Source LCS/MS Solution

Stock Id: 170724-01

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

Final Concentrations:

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

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

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

Comment: 80/20 Methanol/Milli-q water

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

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB82

Description: PFAS - DoD Second Source LCS/MS Solution

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

Syringes/Pipettes:

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

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

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

Comment: 80/20 Methanol/Milli-q water

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

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB89

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

Stock Id: JX28

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

Final Concentrations:

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

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
JX28	Pipette	B814659662

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/3/2018 **Expiration Date:** 6/18/2019

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

Comment: 80/20 Methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:43:00 AM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KB89**

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

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

Solution Prepared By	Schultz, Stephanie	**Date Prepared:**	10/3/2018	**Expiration Date**	6/18/2019
Solution Volume	40 **mL X** 1 **Vials**	**Refrigerator/Freezer No:**	LC Laboratory: Refrigerator - R0107		

Balance ID: _____

Comment: 80/20 Methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 10/9/2018 9:43:00 AM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KC52**

Description: PFAS - DoD Internal Standard Spiking Solution

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

Solution Prepared By: Schultz, Stephanie		**Date Prepared:**	10/19/2018	**Expiration Date:**	7/16/2019
Solution Volume 40 **mL X** 1 **Vials**		**Refrigerator/Freezer No:**	LC Laboratory: Refrigerator - R0107		

Balance ID:

Comment: 96/4 methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 10/23/2018 8:56:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KC52

Description: PFAS - DoD Internal Standard Spiking Solution

Stock Id: JY25

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

Final Concentrations:

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

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
JY25	Pipette	OU16914

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 10/19/2018 **Expiration Date:** 7/16/2019

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

Comment: 96/4 methanol/milli-q water

Approved By: Schumitz, Denise **Date:** 10/23/2018 8:56:00 AM

BATTELLE
It can be done

BDO Id: 170724-01

Reagent Receipt Report

Approved: ☐ **Authorized** ☐

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

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

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

Total Analytes: 24

Notes:

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

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

CERTIFIED WEIGHT REPORT

170214-01

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

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

5E-05 Balance Uncertainty
0.007 Flask Uncertainty

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

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

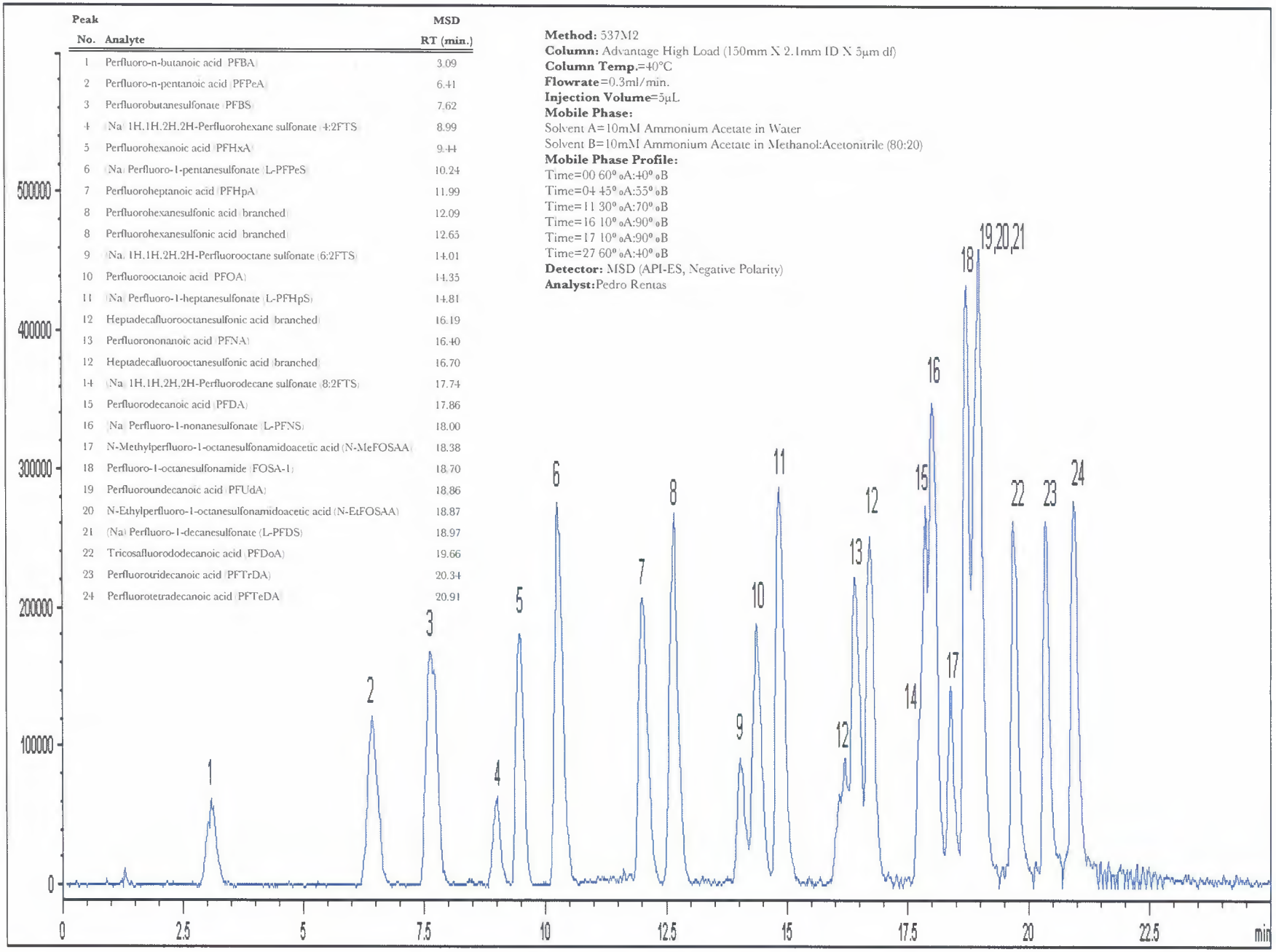
Note: All assigned values are anion concentrations.

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc.(µg/mL)	Final Conc.(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Perfluoro-n-butanoic acid	3670	PFBA0516	0.02	1.00	0.004	50.0	1.00	0.01	375-22-4	N/A	N/A
2. Perfluoro-n-pentanoic acid	3669	PFPeA0516	0.02	1.00	0.004	50.0	1.00	0.01	2706-90-3	N/A	N/A
3. Perfluorohexanoic acid	99199	030617	0.02	1.00	0.004	50.3	1.01	0.01	307-24-4	N/A	N/A
4. Perfluoroheptanoic acid	99197	030517	0.02	1.00	0.004	50.1	1.00	0.01	375-85-9	N/A	N/A
5. Perfluorooctanoic acid	99202	030617	0.02	1.00	0.004	50.2	1.00	0.01	335-67-1	N/A	ipr-rat 189mg/kg
6. Perfluorononanoic acid	99200	030617	0.02	1.00	0.004	50.1	1.00	0.01	375-95-1	N/A	N/A
7. Perfluorodecanoic acid	99195	030617	0.02	1.00	0.004	50.1	1.00	0.01	335-76-2	N/A	orl-rat 57mg/kg
8. Perfluoroundecanoic acid	99205	030617	0.02	1.00	0.004	50.1	1.00	0.01	2058-94-8	N/A	N/A
9. Tricosafluorododecanoic acid	99196	030617	0.02	1.00	0.004	50.1	1.00	0.01	307-55-1	N/A	N/A
10. Perfluorotridecanoic acid	99204	030617	0.02	1.00	0.004	50.1	1.00	0.01	72629-94-8	N/A	N/A
11. Perfluorotetradecanoic acid	99203	030617	0.02	1.00	0.004	50.1	1.00	0.01	376-06-7	N/A	N/A
12. Perfluoro-1-octanesulfonamide	3677	FOSA0916I	0.02	1.00	0.004	50.0	1.00	0.01	754-91-6	N/A	N/A
13. N-Methylperfluoro-1-octanesulfonamidoacetic acid	3667	NMeFOSAA0117	0.02	1.00	0.004	50.0	1.00	0.01	2355-31-9	N/A	N/A
14. N-Ethylperfluoro-1-octanesulfonamidoacetic acid	3664	NEtFOSAA0117	0.02	1.00	0.004	50.0	1.00	0.01	2991-50-6	N/A	N/A
15. Perfluorobutanesulfonic acid	99194	031017	0.02	1.00	0.004	50.7	1.01	0.01	375-73-5	N/A	N/A
16. Perfluoro-1-pentanesulfonic acid	3956	LPFPeS0117	0.0214	1.07	0.004	46.9	1.00	0.01	00-00-0	N/A	N/A
17. Perfluorohexanesulfonic acid (branched)	99198	030617	0.02	1.00	0.004	50.6	1.01	0.01	3871-99-6	N/A	N/A
18. Perfluoro-1-heptanesulfonic acid	3672	LPFHpS1016	0.021	1.05	0.004	47.6	1.00	0.01	375-92-8	N/A	N/A
19. Heptadecafluorooctanesulfonic acid (branched)	99201	030617	0.02	1.00	0.004	50.2	1.00	0.01	1763-23-1	N/A	N/A
20. Perfluoro-1-nonanesulfonic acid	3957	LPFNS0516	0.021	1.05	0.004	48.0	1.01	0.01	98789-57-2	N/A	N/A
21. Perfluoro-1-decanesulfonic acid	3671	LPFDS0217	0.021	1.05	0.004	48.2	1.01	0.01	2806-15-7	N/A	N/A
22. 1H,1H,2H,2H-Perfluorohexane sulfonic acid	3955	42FTS1216	0.0214	1.07	0.004	46.7	1.00	0.01	00-00-0	N/A	N/A
23. 1H,1H,2H,2H-Perfluorooctane sulfonic acid	3661	62FTS0616	0.021	1.05	0.004	47.4	1.00	0.01	27619-97-2	N/A	N/A
24. 1H,1H,2H,2H-Perfluorodecane sulfonic acid	3662	82FTS1216	0.021	1.05	0.004	47.9	1.01	0.01	39108-34-4	N/A	N/A

- **The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.**
- **Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).**
- **Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.**
- **All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.**
- **Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).**

Peak No.	Analyte	MSD RT (min.)
1	Perfluoro-n-butanoic acid (PFBA)	3.09
2	Perfluoro-n-pentanoic acid (PFPeA)	6.41
3	Perfluorobutanesulfonate (PFBS)	7.62
4	(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate (4:2FTS)	8.99
5	Perfluorohexanoic acid (PFHxA)	9.44
6	(Na) Perfluoro-1-pentanesulfonate (L-PFPeS)	10.24
7	Perfluoroheptanoic acid (PFHpA)	11.99
8	Perfluorohexanesulfonic acid (branched)	12.09
8	Perfluorohexanesulfonic acid (branched)	12.63
9	(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate (6:2FTS)	14.01
10	Perfluorooctanoic acid (PFOA)	14.35
11	(Na) Perfluoro-1-heptanesulfonate (L-PFHpS)	14.81
12	Heptadecafluorooctanesulfonic acid (branched)	16.19
13	Perfluorononanoic acid (PFNA)	16.40
12	Heptadecafluorooctanesulfonic acid (branched)	16.70
14	(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate (8:2FTS)	17.74
15	Perfluorodecanoic acid (PFDA)	17.86
16	(Na) Perfluoro-1-nonanesulfonate (L-PFNS)	18.00
17	N-Methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA)	18.38
18	Perfluoro-1-octanesulfonamide (FOSA-1)	18.70
19	Perfluoroundecanoic acid (PFUdA)	18.86
20	N-Ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	18.87
21	(Na) Perfluoro-1-decanesulfonate (L-PFDS)	18.97
22	Tricosafluorododecanoic acid (PFDoA)	19.66
23	Perfluorotridecanoic acid (PFTrDA)	20.34
24	Perfluorotetradecanoic acid (PFTeDA)	20.91

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



BATTELLE

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BDO Id: 180618-02

Reagent Receipt Report

Approved: ☐ Authorized ☐

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

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

Notes:

Approved by: _____ Approved on: _____

Authorized by: _____ Authorized on: _____

180618-02

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

br-NEtFOSAA

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

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

DESCRIPTION:

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

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

INTENDED USE:

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

HANDLING:

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

SYNTHESIS / CHARACTERIZATION:

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

HOMOGENEITY:

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

UNCERTAINTY:

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

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

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

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

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

TRACEABILITY:

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

EXPIRY DATE / PERIOD OF VALIDITY:

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

LIMITED WARRANTY:

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

QUALITY MANAGEMENT:

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

CALA Testing Accreditation No. A1226

ANAB ACCREDITED 17034 REFERENCE MATERIAL PRODUCER

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

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

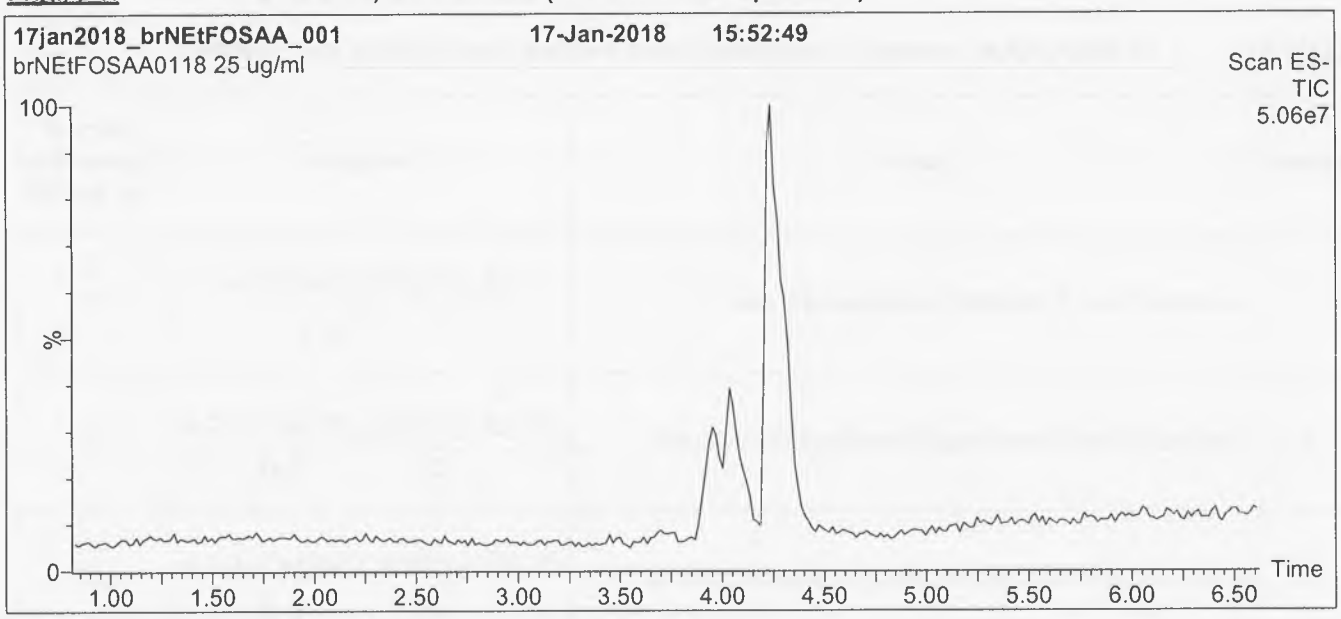
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	N-ethylperfluoro-1-octanesulfonamidoacetic acid	$CF_3(CF_2)_7SO_2N(C_2H_5)CH_2CO_2H$	77.5
2	N-ethylperfluoro-3-methylheptanesulfonamidoacetic acid	$CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(C_2H_5)CH_2CO_2H$	2.3
3	N-ethylperfluoro-4-methylheptanesulfonamidoacetic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

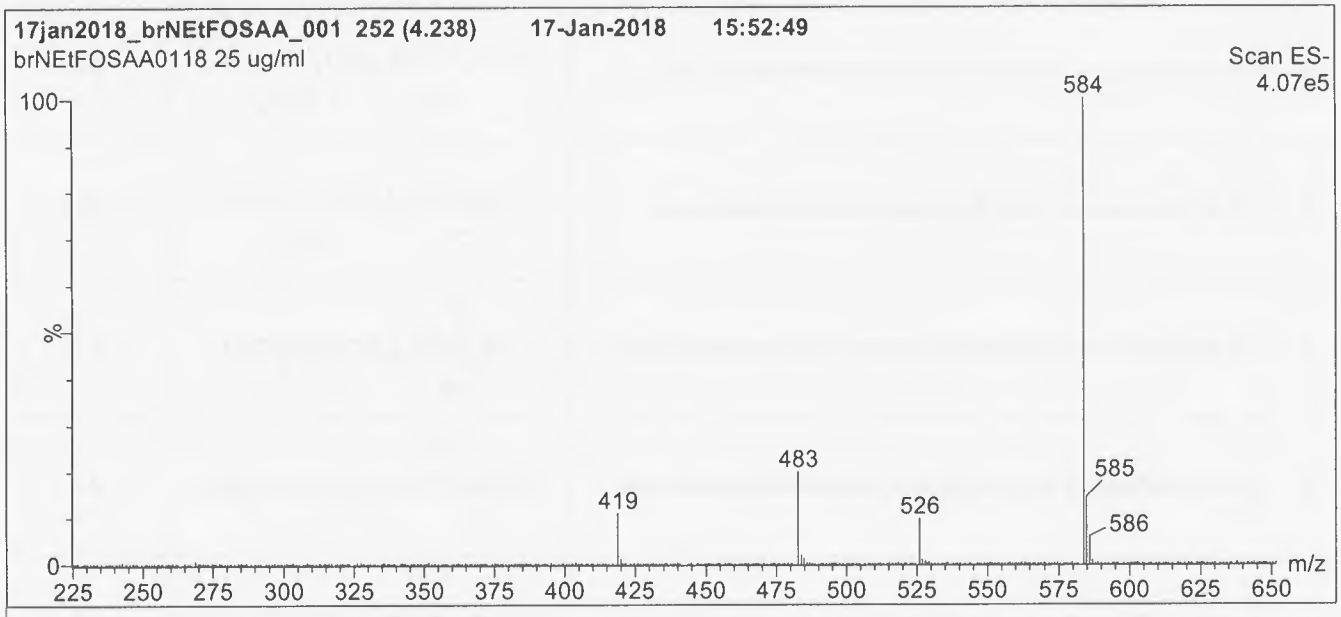
* Percent of total N-ethylperfluorooctanesulfonamidoacetic acid isomers only.

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

B.G. Chittim, General Manager

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





Conditions for Figure 1:

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

Chromatographic Conditions

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

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

Time: 10 min

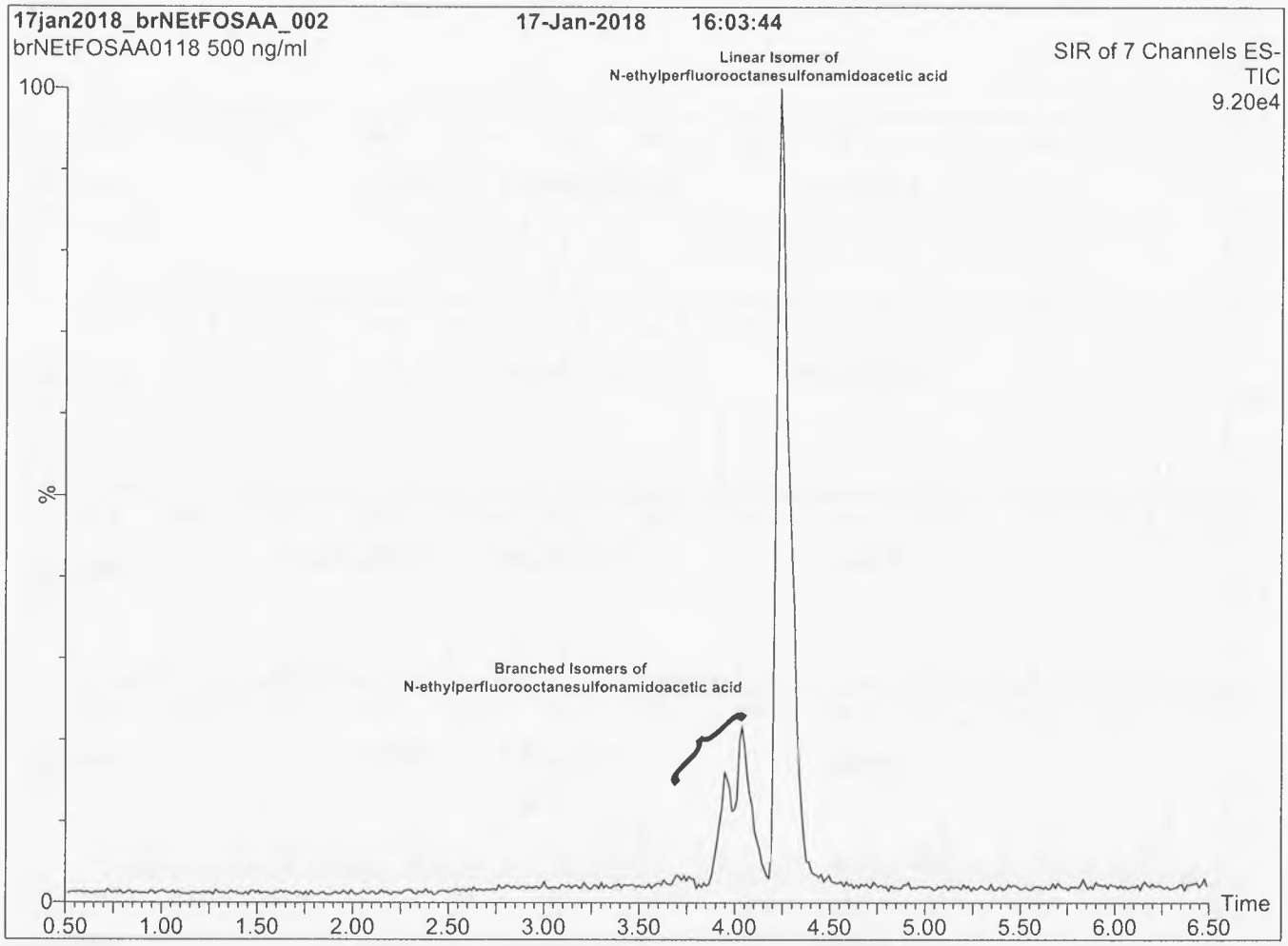
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

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

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



Conditions for Figure 2:

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

Chromatographic Conditions

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

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

Time: 10 min

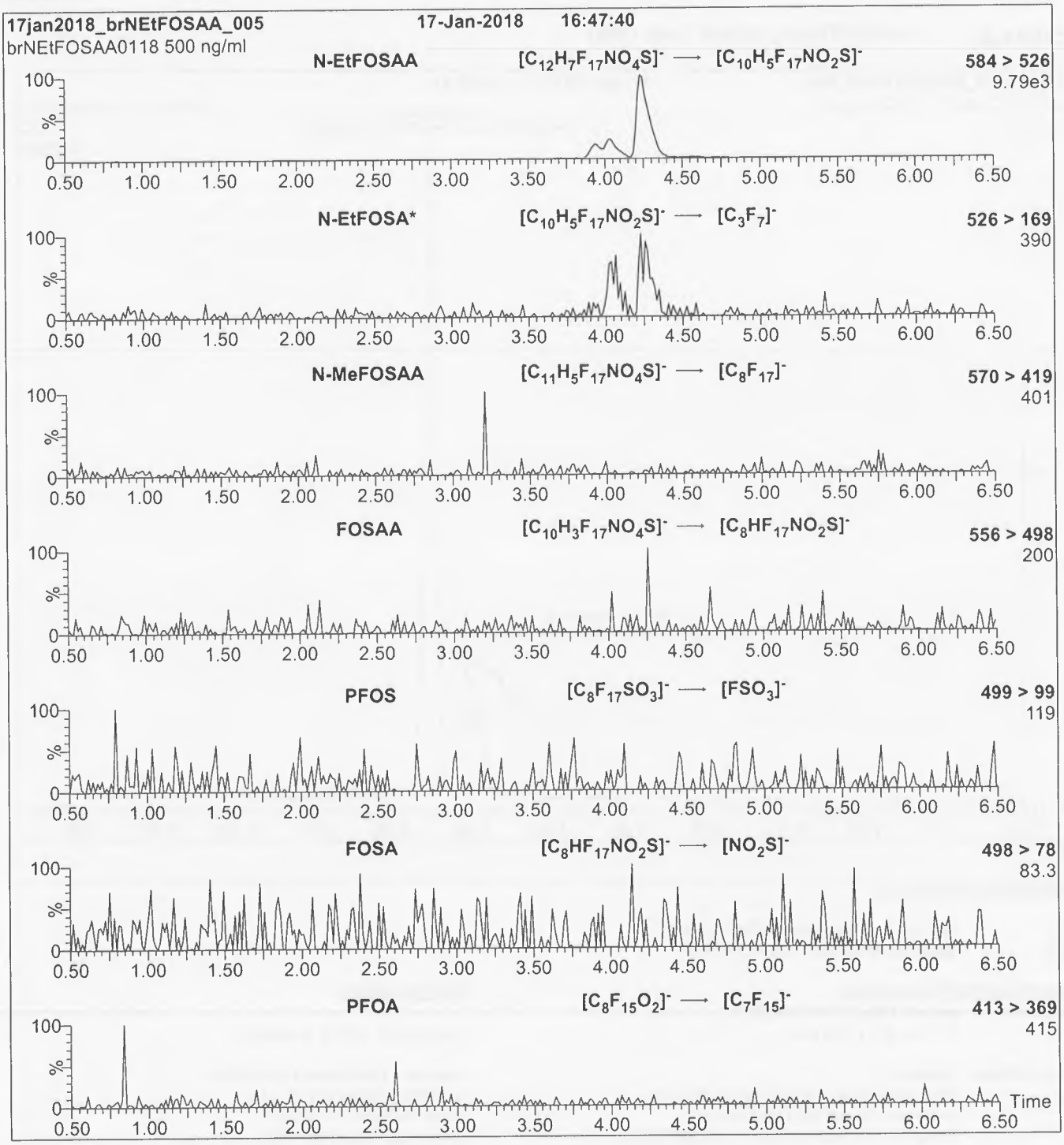
Flow: 300 µl/min

MS Parameters

Experiment: SIR (7 channels)

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

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



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

Conditions for Figure 3:

Injection: On-column

Mobile phase: Same as Figure 2

Flow: 300 µl/min

MS Parameters

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

BATTELLE
It can be done

BDO Id: 180618-03

Reagent Receipt Report

Approved: ☐ Authorized ☐

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

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

Notes:

Approved by: _____ Approved on: _____

Authorized by: _____ Authorized on: _____

180618-03

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

br-NMeFOSAA

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

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

DESCRIPTION:

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

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

INTENDED USE:

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

HANDLING:

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

SYNTHESIS / CHARACTERIZATION:

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

HOMOGENEITY:

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

UNCERTAINTY:

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

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

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

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

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

TRACEABILITY:

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

EXPIRY DATE / PERIOD OF VALIDITY:

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

LIMITED WARRANTY:

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

QUALITY MANAGEMENT:

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

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER

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

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

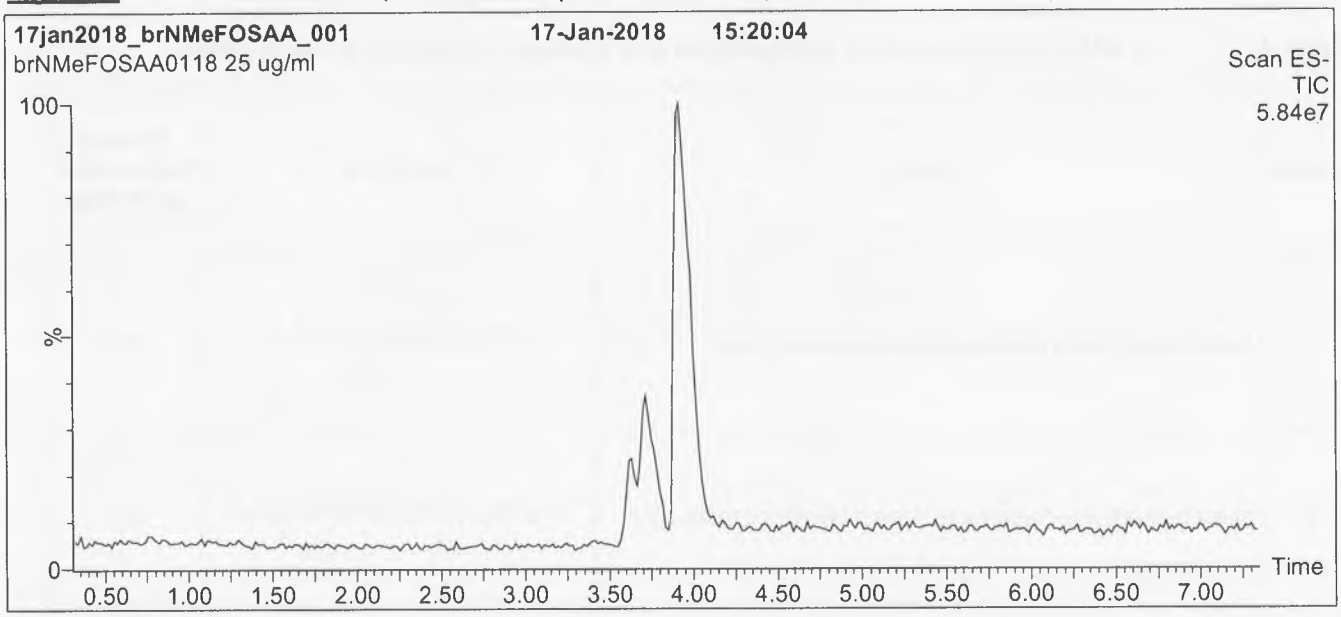
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	N-methylperfluoro-1-octanesulfonamidoacetic acid	$CF_3(CF_2)_7SO_2N(CH_3)CH_2CO_2H$	76.0
2	N-methylperfluoro-3-methylheptanesulfonamidoacetic acid	$CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_3)CH_2CO_2H$	0.7
3	N-methylperfluoro-4-methylheptanesulfonamidoacetic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

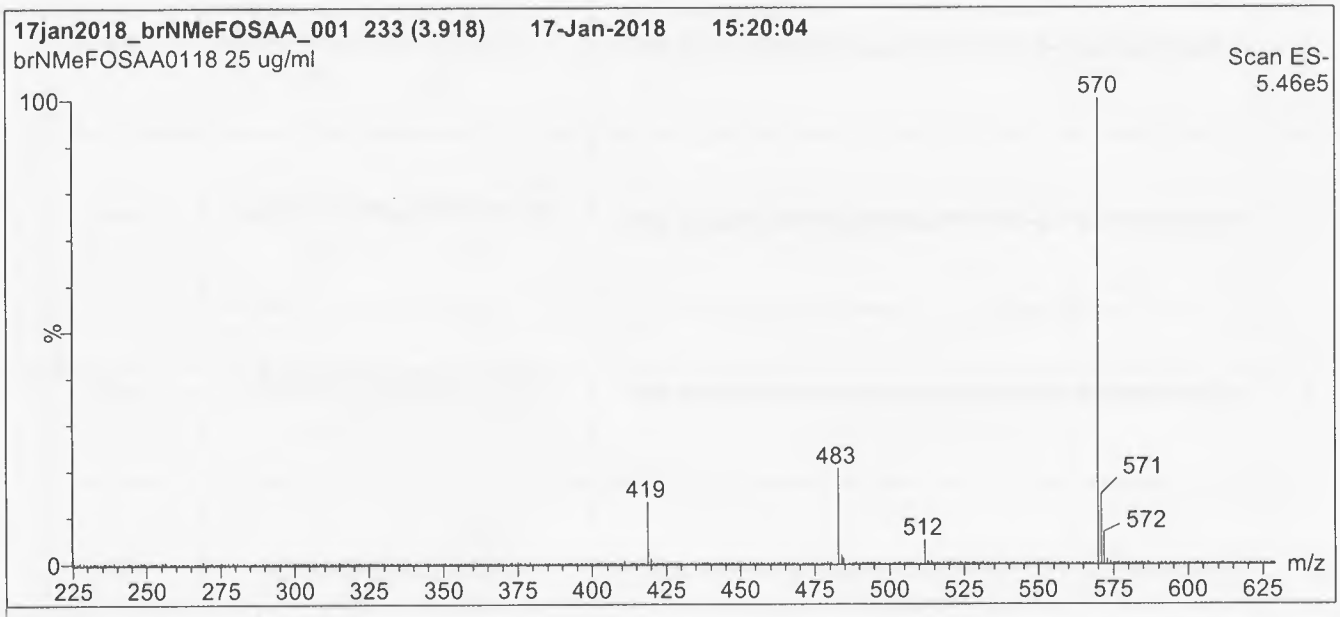
* Percent of total N-methylperfluorooctanesulfonamidoacetic acid isomers only.

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

B.G. Chittim, General Manager

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





Conditions for Figure 1:

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

Chromatographic Conditions

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

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

Time: 10 min

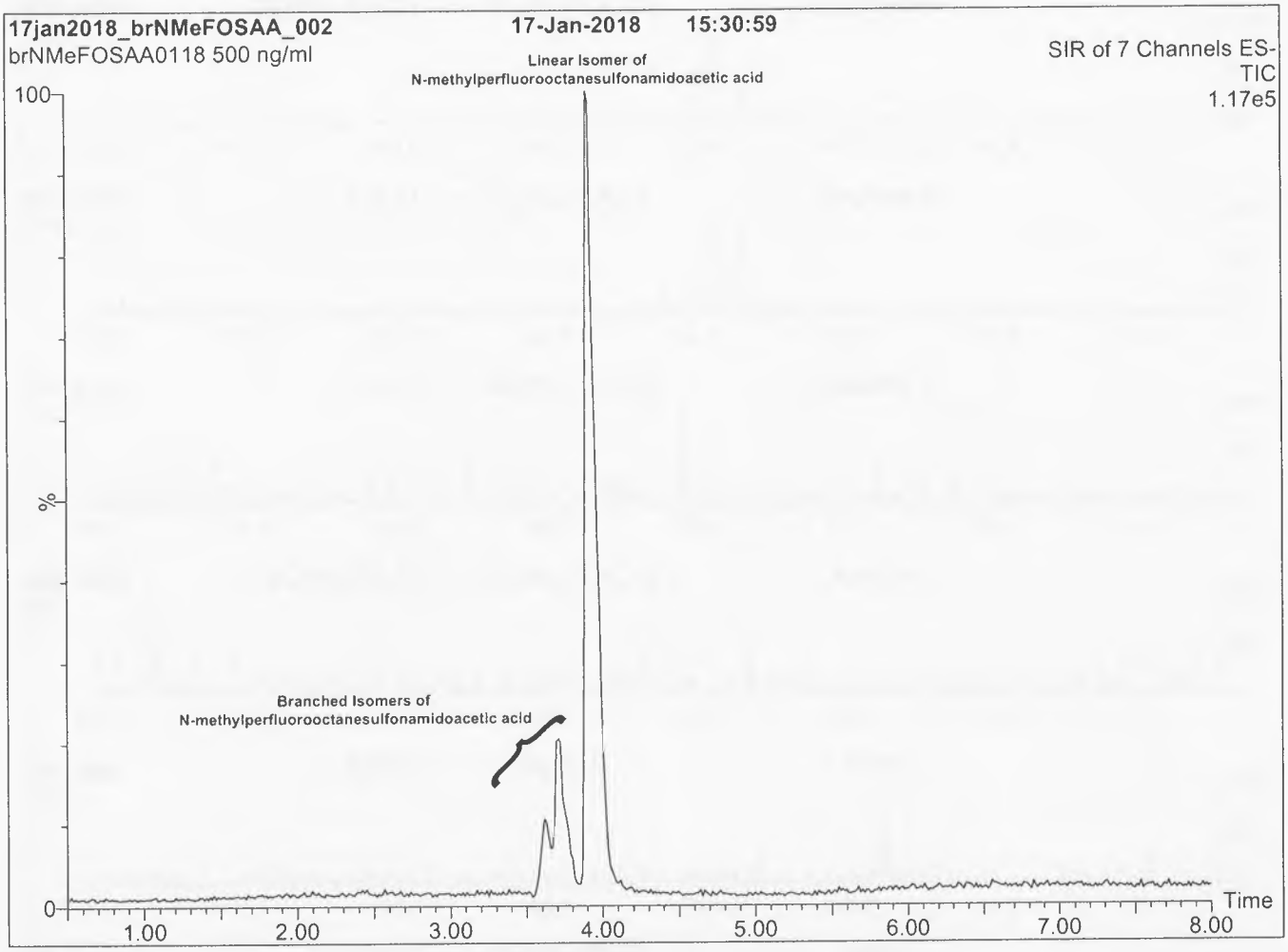
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

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

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



Conditions for Figure 2:

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

Chromatographic Conditions

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

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

Time: 10 min

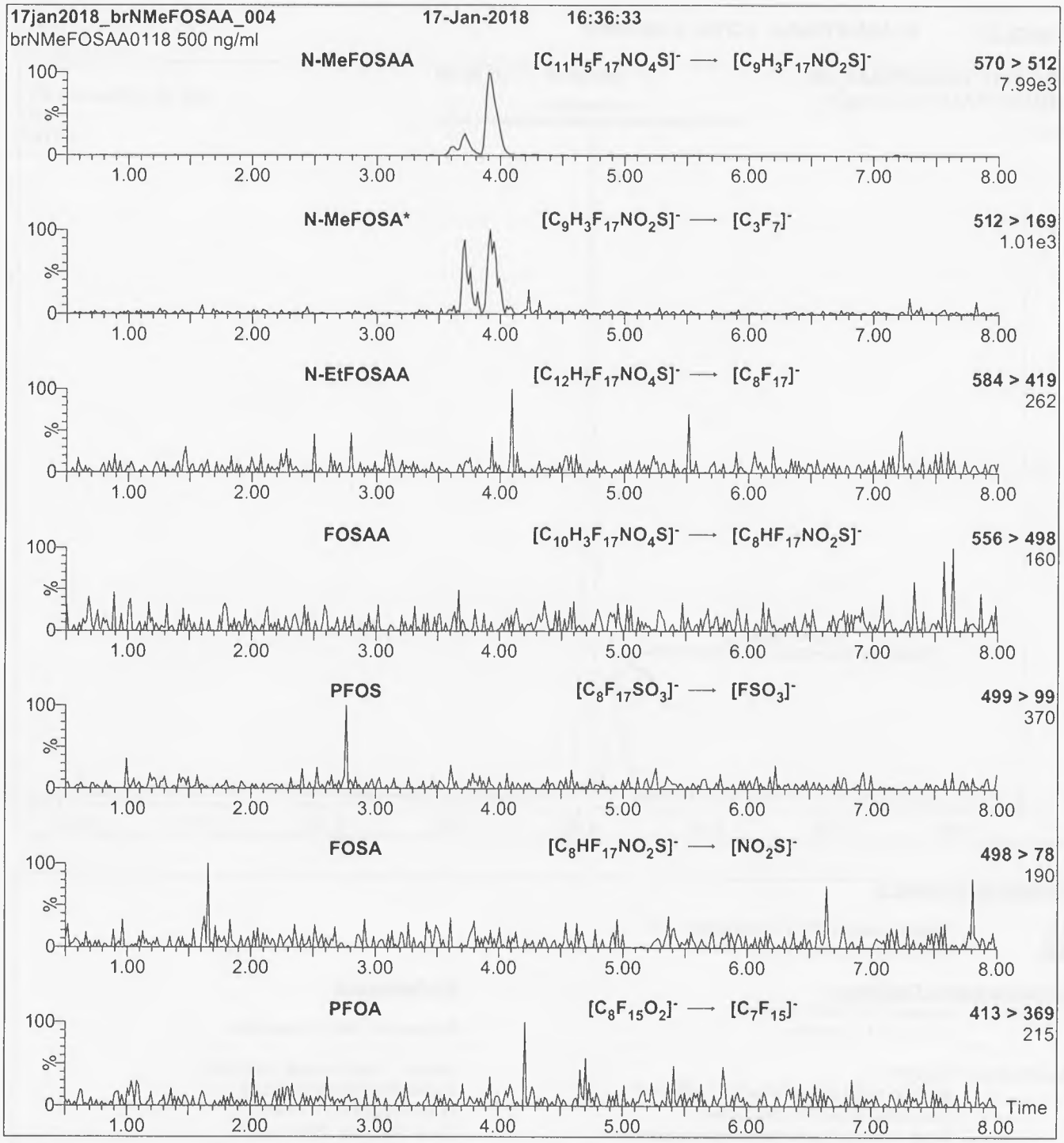
Flow: 300 µl/min

MS Parameters

Experiment: SIR (7 channels)

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

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



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

Conditions for Figure 3:

Injection: On-column

Mobile phase: Same as Figure 2

Flow: 300 µl/min

MS Parameters

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

BATTELLE

It can be done

BDO Id: 180618-04

Reagent Receipt Report

Approved: ☐ Authorized ☐

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

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

Notes:

Approved by: _____ Approved on: _____

Authorized by: _____ Authorized on: _____

180618-04

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

PRODUCT CODE:	T-PFOA	**LOT NUMBER:**	TPFOA0217
COMPOUND:	Technical Ammonium Perfluorooctanoate		
STRUCTURE:	(see Table A)	**CAS #:**	95328-99-7 (for linear ammonium perfluorooctanoate)

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

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

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

INTENDED USE:

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

HAZARDS:

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

CHARACTERIZATION / HOMOGENEITY:

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

UNCERTAINTY:

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

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

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

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

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

TRACEABILITY:

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

EXPIRY DATE / PERIOD OF VALIDITY:

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

LIMITED WARRANTY:

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

QUALITY MANAGEMENT:

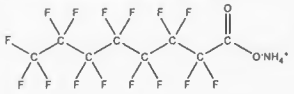
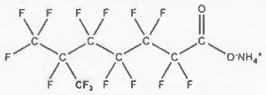
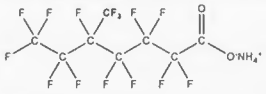
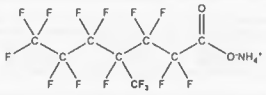
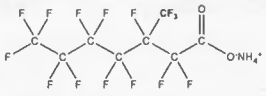
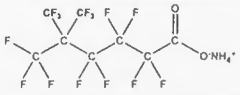
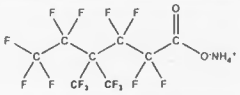
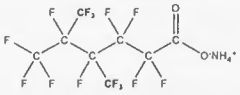
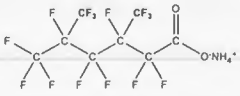
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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

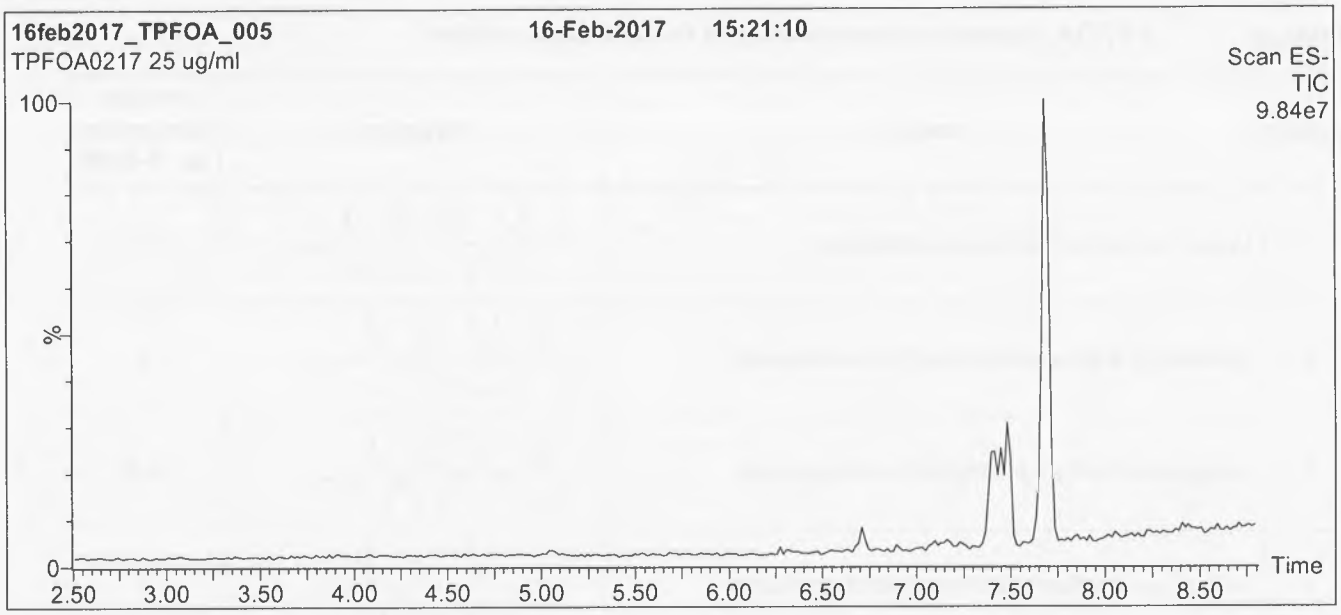
Table A: **T-PFOA; Isomeric Components and Percent Composition***

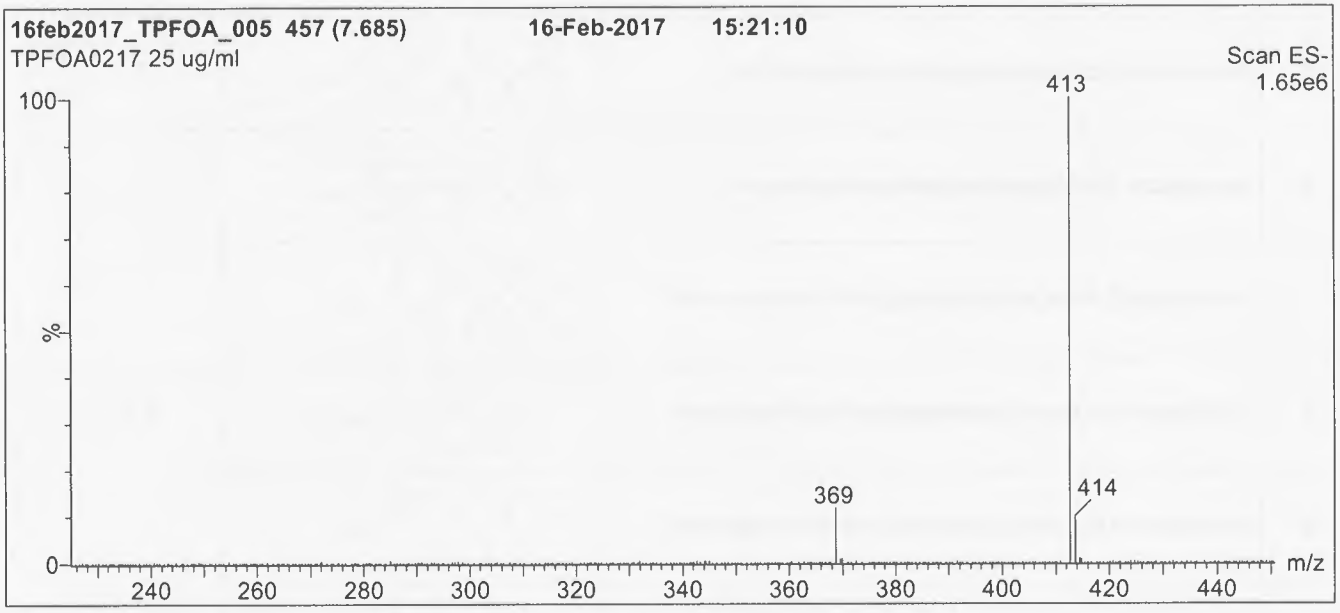
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Linear ammonium perfluoro-n-octanoate		79
2	Ammonium 6-trifluoromethylperfluoroheptanoate		9
3	Ammonium 5-trifluoromethylperfluoroheptanoate		4.5
4	Ammonium 4-trifluoromethylperfluoroheptanoate		4
5	Ammonium 3-trifluoromethylperfluoroheptanoate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

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

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

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





Conditions for Figure 1:

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

Chromatographic Conditions:

Column: Kinetex PFP
2.6 µm, 4.6 x 100 mm

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

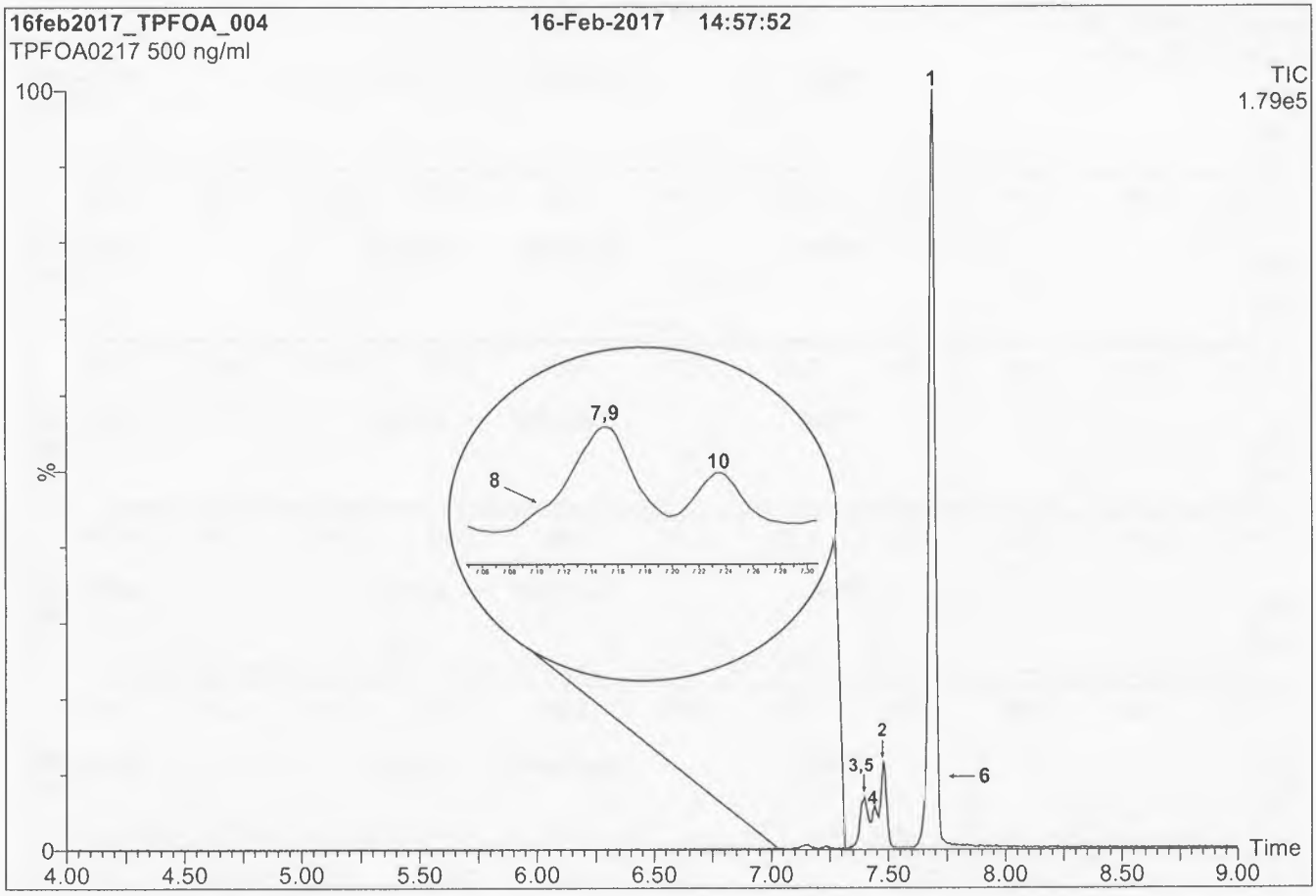
Flow: 1.0 ml/min

MS Parameters:

Experiment: Full Scan (225 - 850 amu)

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

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



Conditions for Figure 2:

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

Chromatographic Conditions:

Column: Kinetex PFP
2.6 µm, 4.6 x 100 mm

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

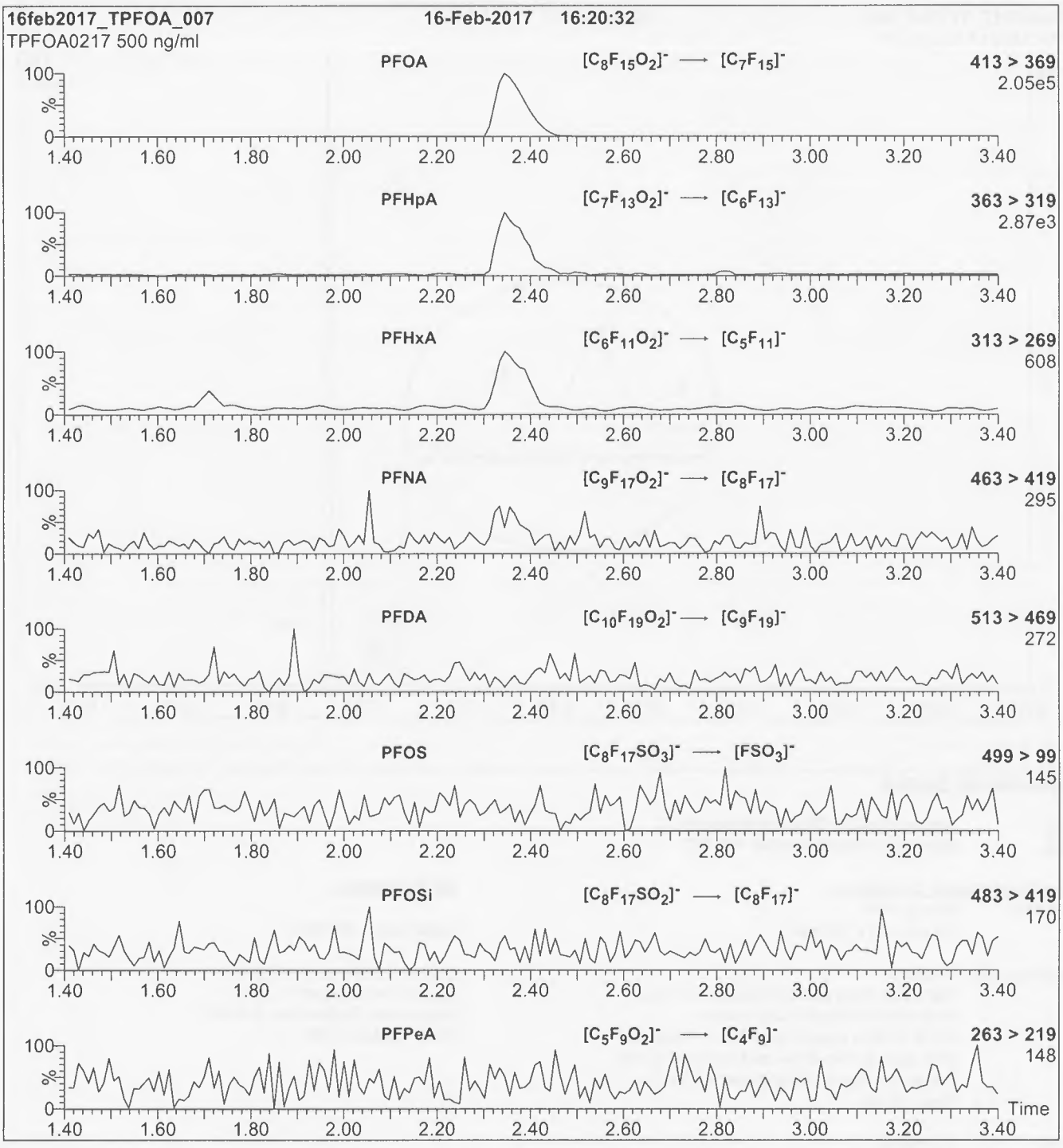
Flow: 1.0 ml/min

MS Parameters:

Experiment: SIR (ES^-)

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

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



Conditions for Figure 3:

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

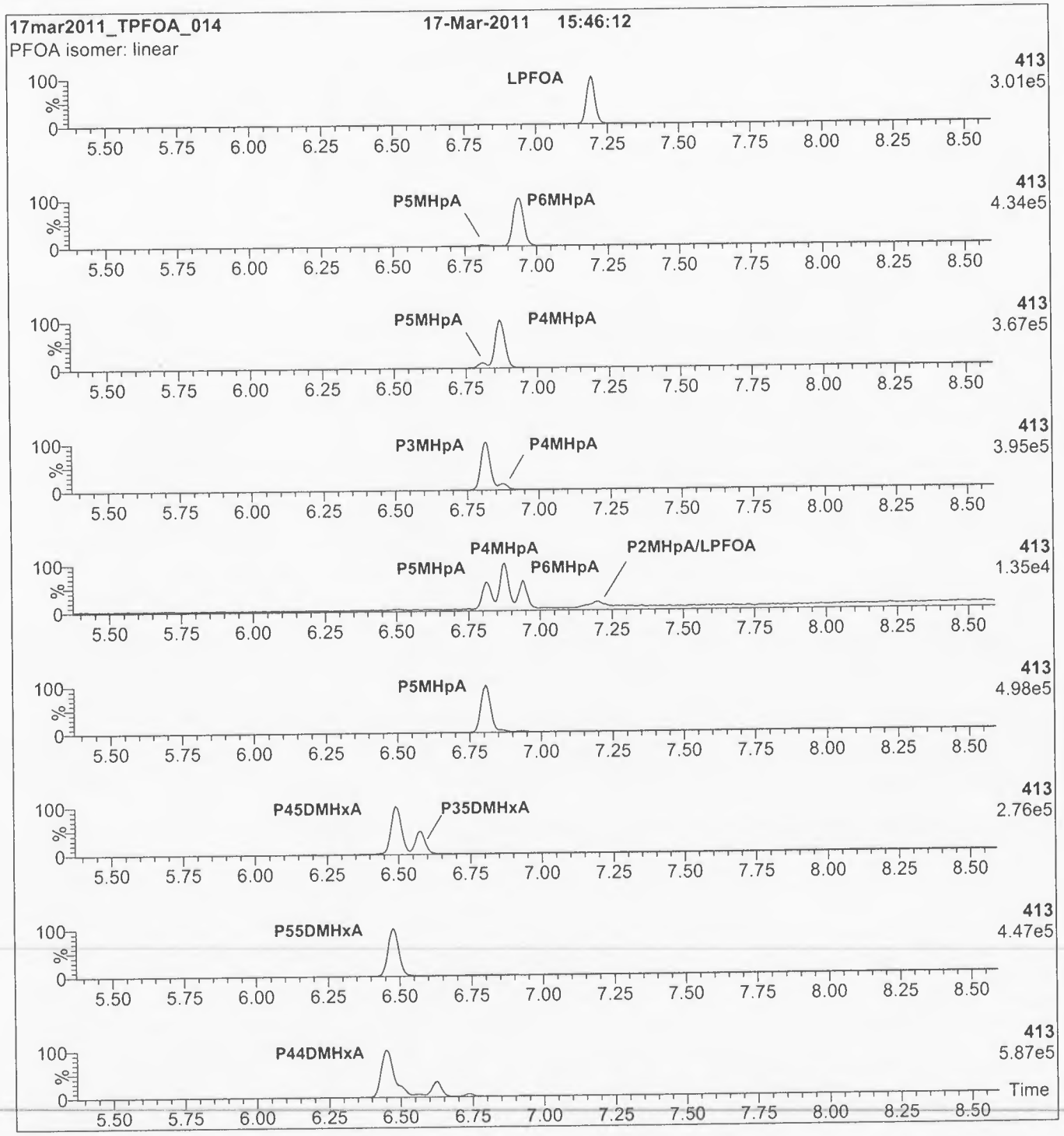
Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

Flow: 300 µl/min

MS Parameters

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

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



Conditions for Figure 4:

Same as Figure 2.

BATTELLE

It can be done

BDO Id: 180618-06

Reagent Receipt Report

Approved: ☐ Authorized ☐

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

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

Notes:

Approved by: _____ Approved on: _____

Authorized by: _____ Authorized on: _____

180618-06

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

br-PFHxSK

Potassium Perfluorohexanesulfonate Solution/Mixture of Linear and Branched Isomers

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

DESCRIPTION:

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

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

INTENDED USE:

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

HAZARDS:

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

SYNTHESIS / CHARACTERIZATION:

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

HOMOGENEITY:

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

UNCERTAINTY:

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

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

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

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

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

TRACEABILITY:

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

EXPIRY DATE / PERIOD OF VALIDITY:

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

LIMITED WARRANTY:

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

QUALITY MANAGEMENT:

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

CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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

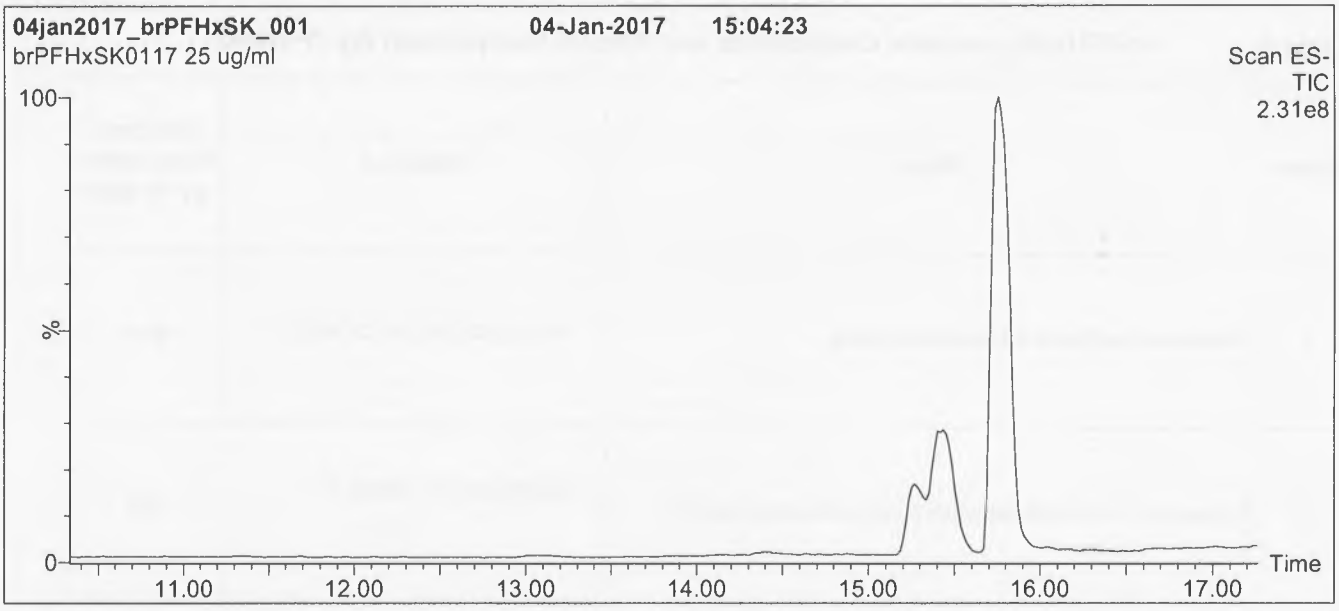
Table A: **br-PFHxSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

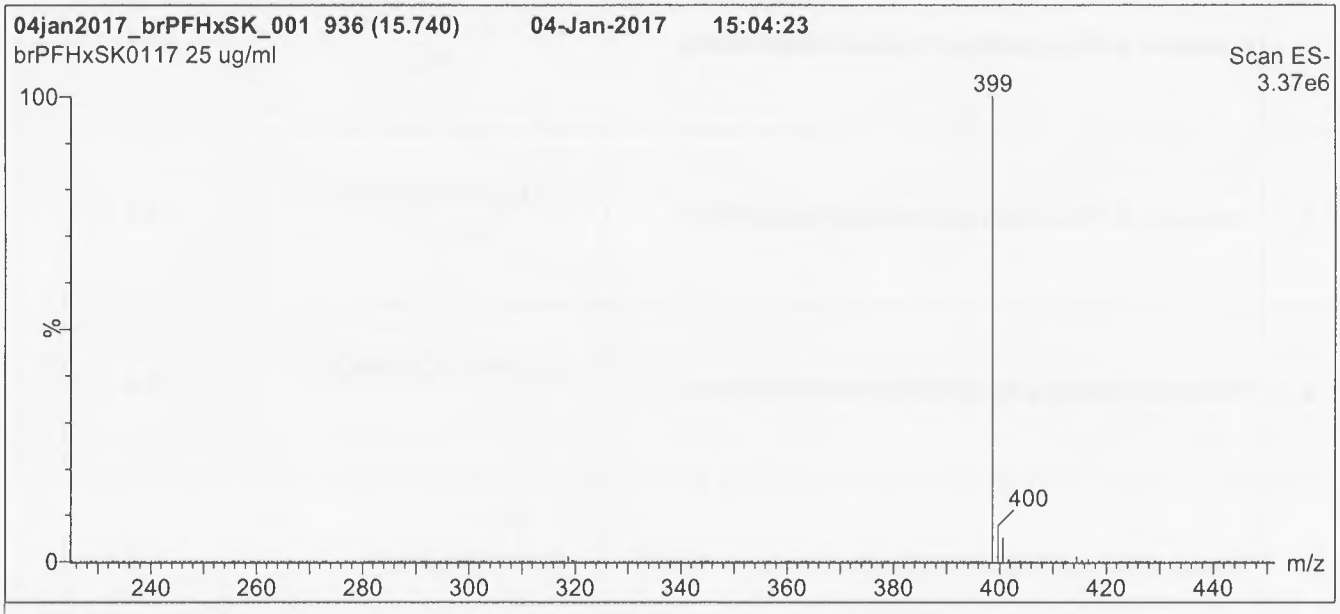
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-hexanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	81.1
2	Potassium 1-trifluoromethylperfluoropentanesulfonate**	$CF_3CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	2.9
3	Potassium 2-trifluoromethylperfluoropentanesulfonate	$CF_3CF_2CF_2CF(CF_3)CF_2SO_3^-K^+$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

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

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

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





Conditions for Figure 1:

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

Chromatographic Conditions

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

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

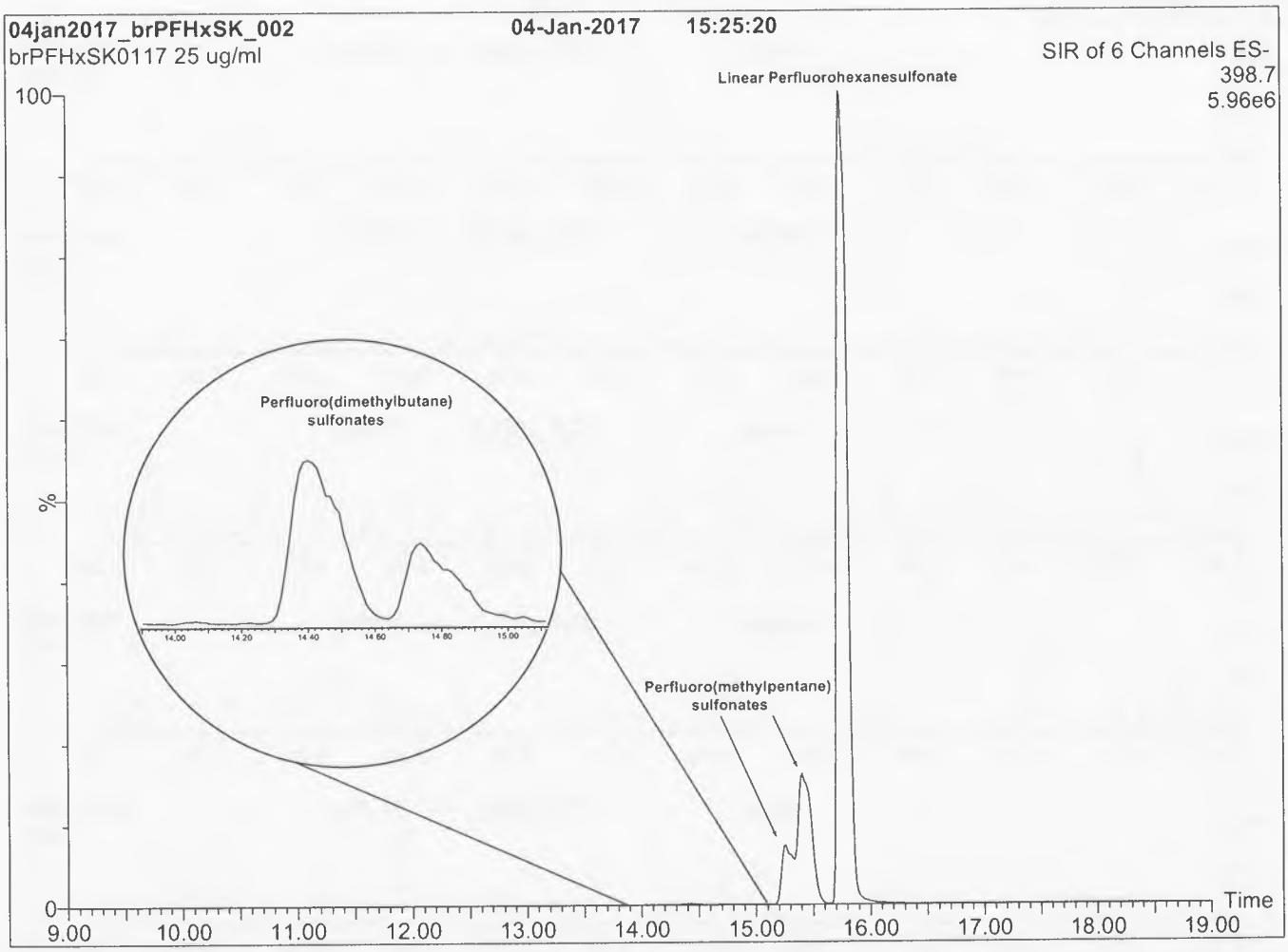
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

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

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



Conditions for Figure 2:

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

Chromatographic Conditions

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

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

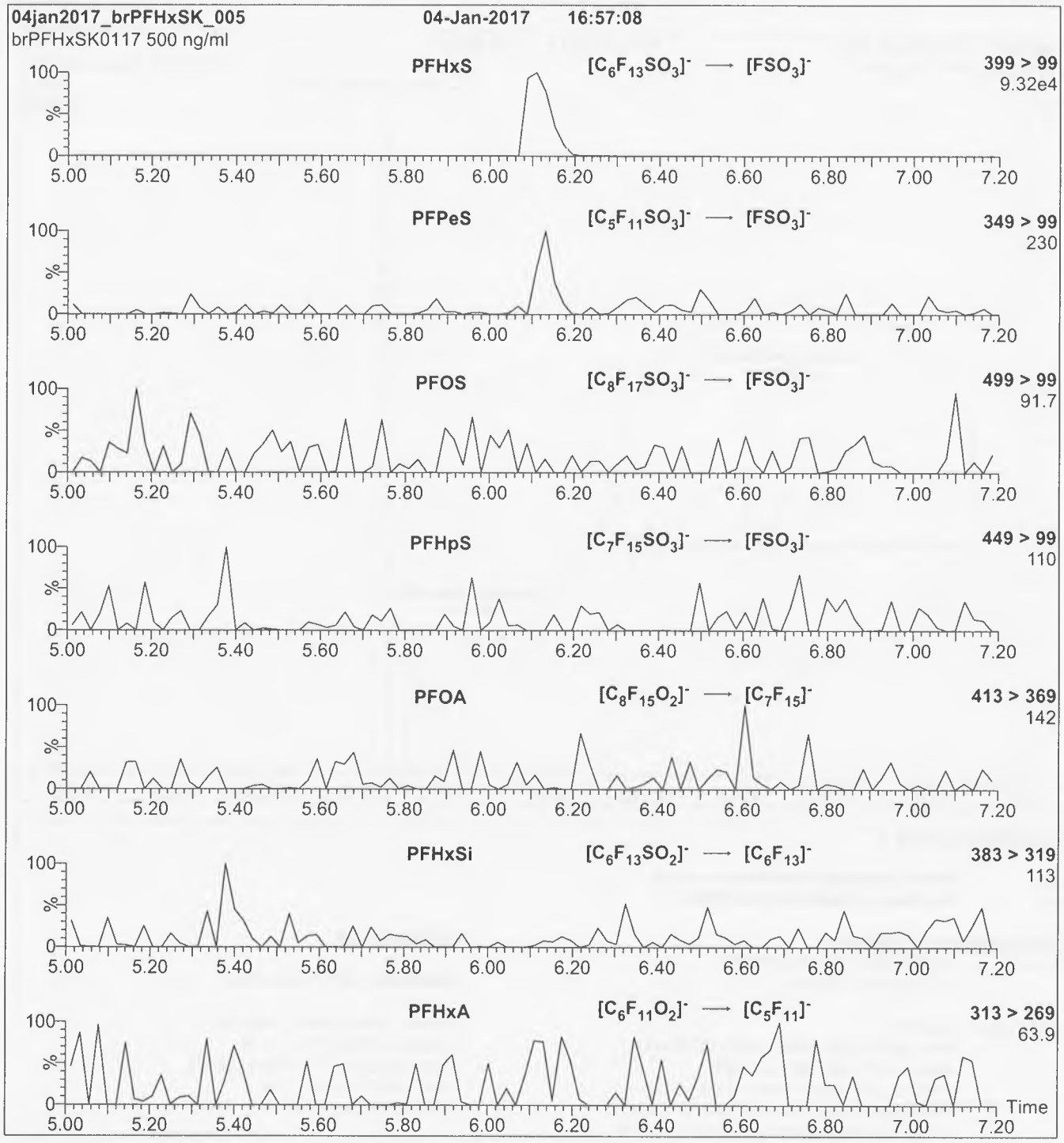
Flow: 300 µl/min

MS Parameters

Experiment: SIR (6 channels)

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

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



Conditions for Figure 3:

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

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

Flow: 300 µl/min

MS Parameters

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

BATTELLE

It can be done

BDO Id: 180618-07

Reagent Receipt Report

Approved: ☐ Authorized ☐

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

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

Notes:

Approved by: _____ Approved on: _____

Authorized by: _____ Authorized on: _____

180618-07

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

br-PFOSK

Potassium Perfluorooctanesulfonate Solution/Mixture of Linear and Branched Isomers

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

DESCRIPTION:

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

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

INTENDED USE:

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

HAZARDS:

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

SYNTHESIS / CHARACTERIZATION:

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

HOMOGENEITY:

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

UNCERTAINTY:

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

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

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

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

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

TRACEABILITY:

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

EXPIRY DATE / PERIOD OF VALIDITY:

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

LIMITED WARRANTY:

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

QUALITY MANAGEMENT:

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

CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

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

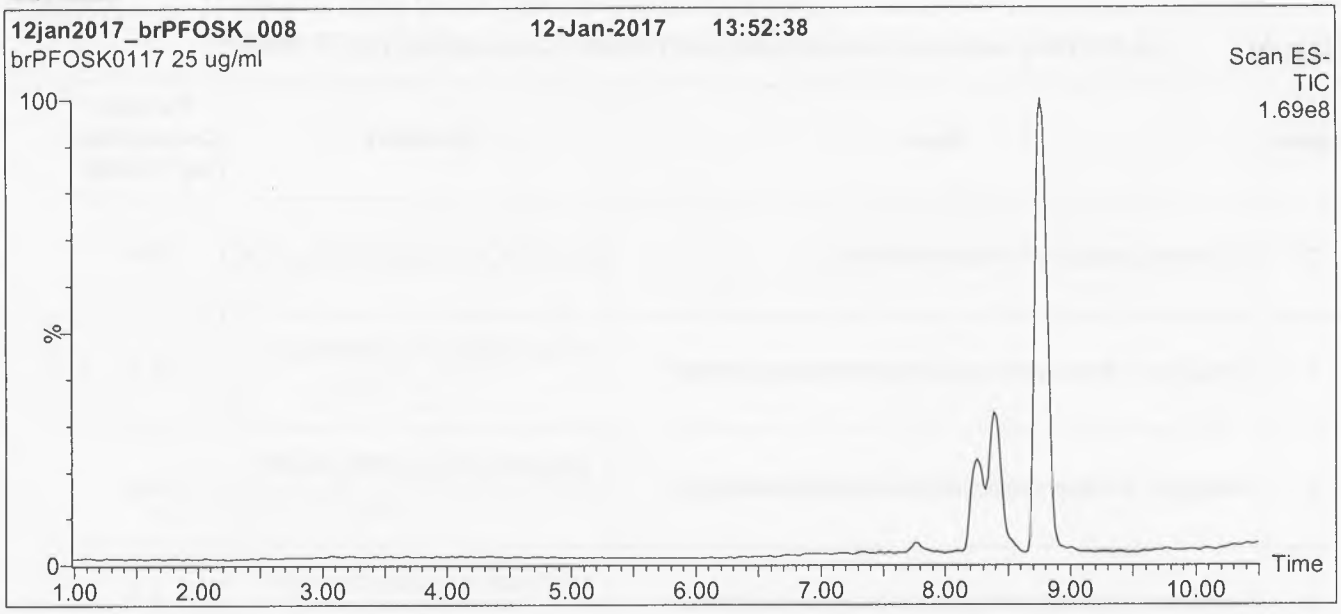
Table A: **br-PFOSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

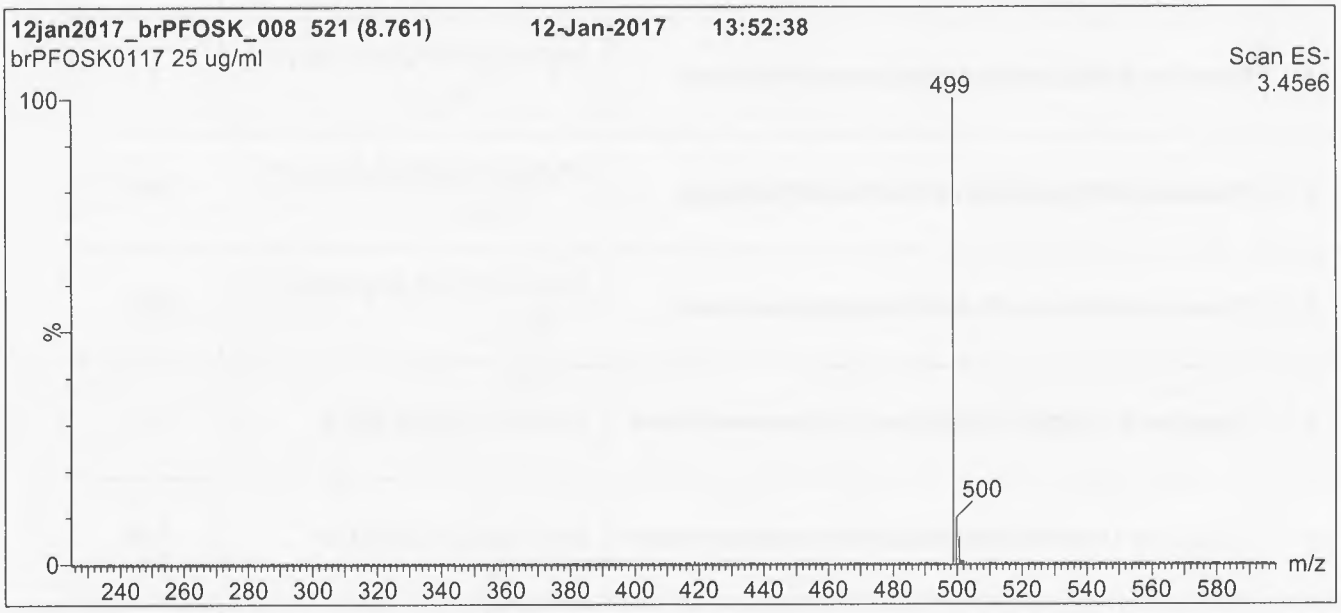
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-octanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	78.8
2	Potassium 1-trifluoromethylperfluoroheptanesulfonate**	$CF_3CF_2CF_2CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	1.2
3	Potassium 2-trifluoromethylperfluoroheptanesulfonate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

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

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

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





Conditions for Figure 1:

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

Chromatographic Conditions

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

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

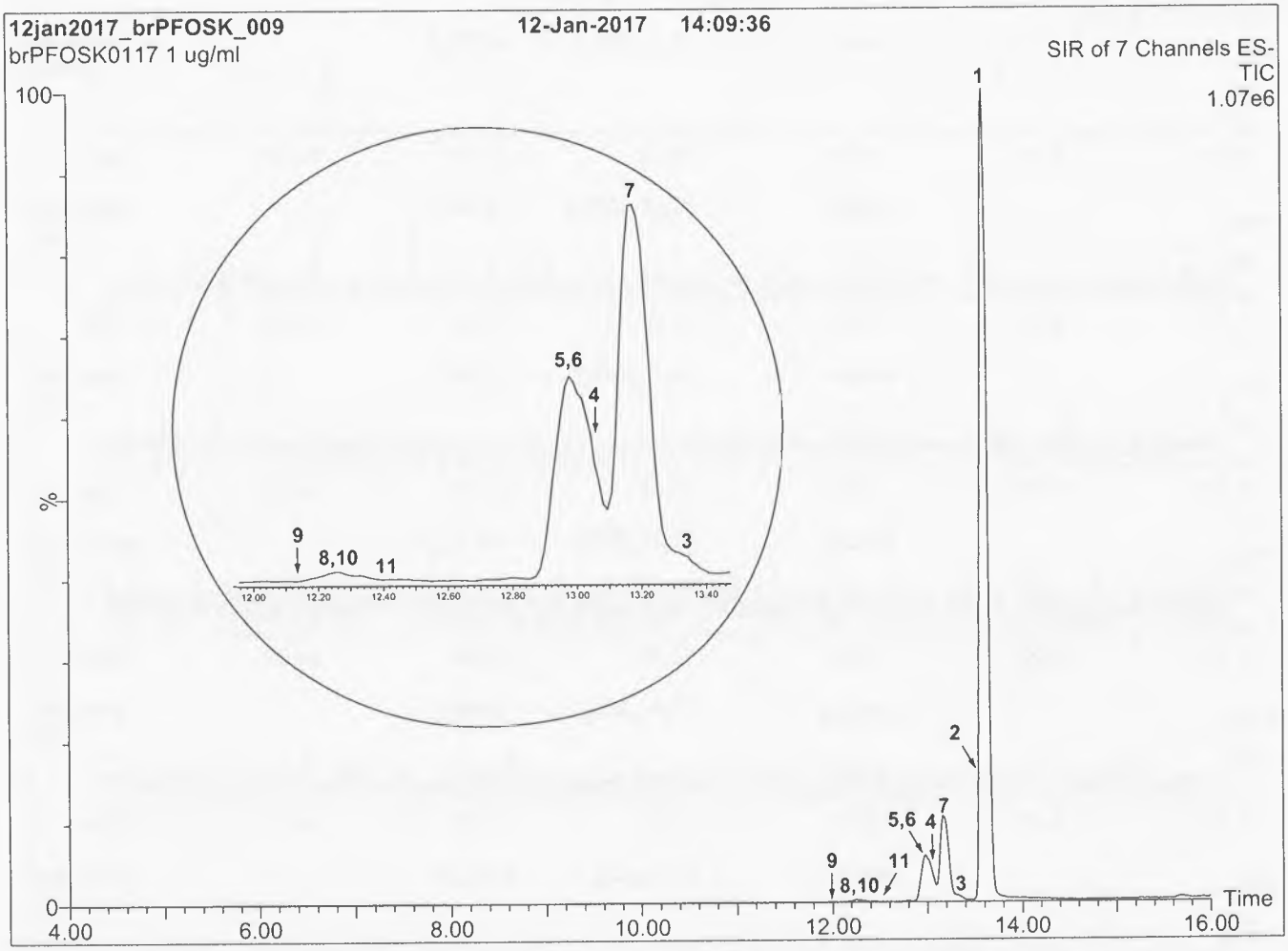
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

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

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



Conditions for Figure 2:

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

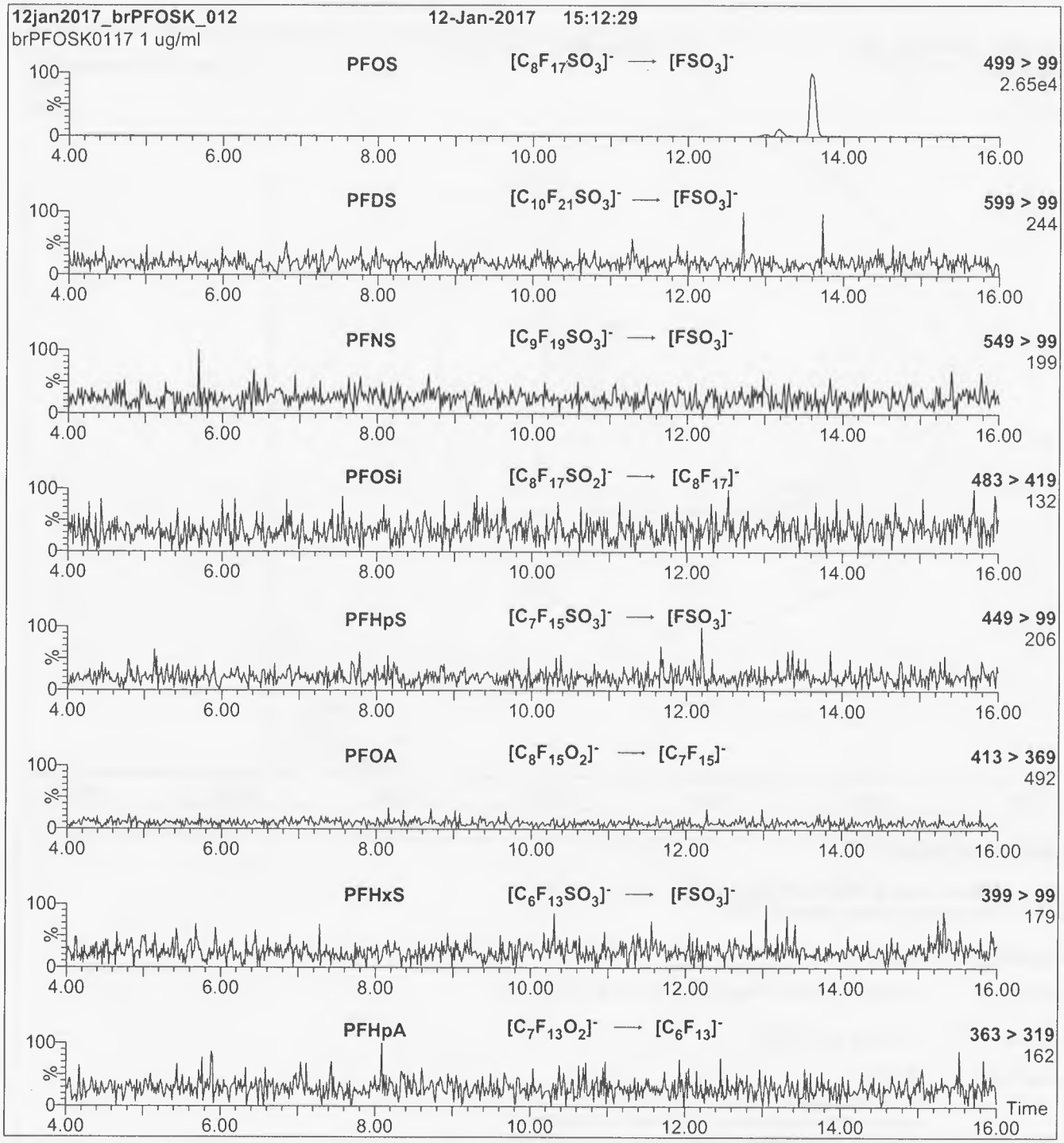
Chromatographic Conditions:

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

MS Conditions:

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

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



Conditions for Figure 3:

Injection: On-column

Mobile phase: Same as Figure 2

Flow: 300 µl/min

MS Parameters

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

CERTIFIED WEIGHT REPORT

180705-02

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

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

5E-05 Balance Uncertainty
0.007 Flask Uncertainty

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

Note: All assigned values are anion concentrations.

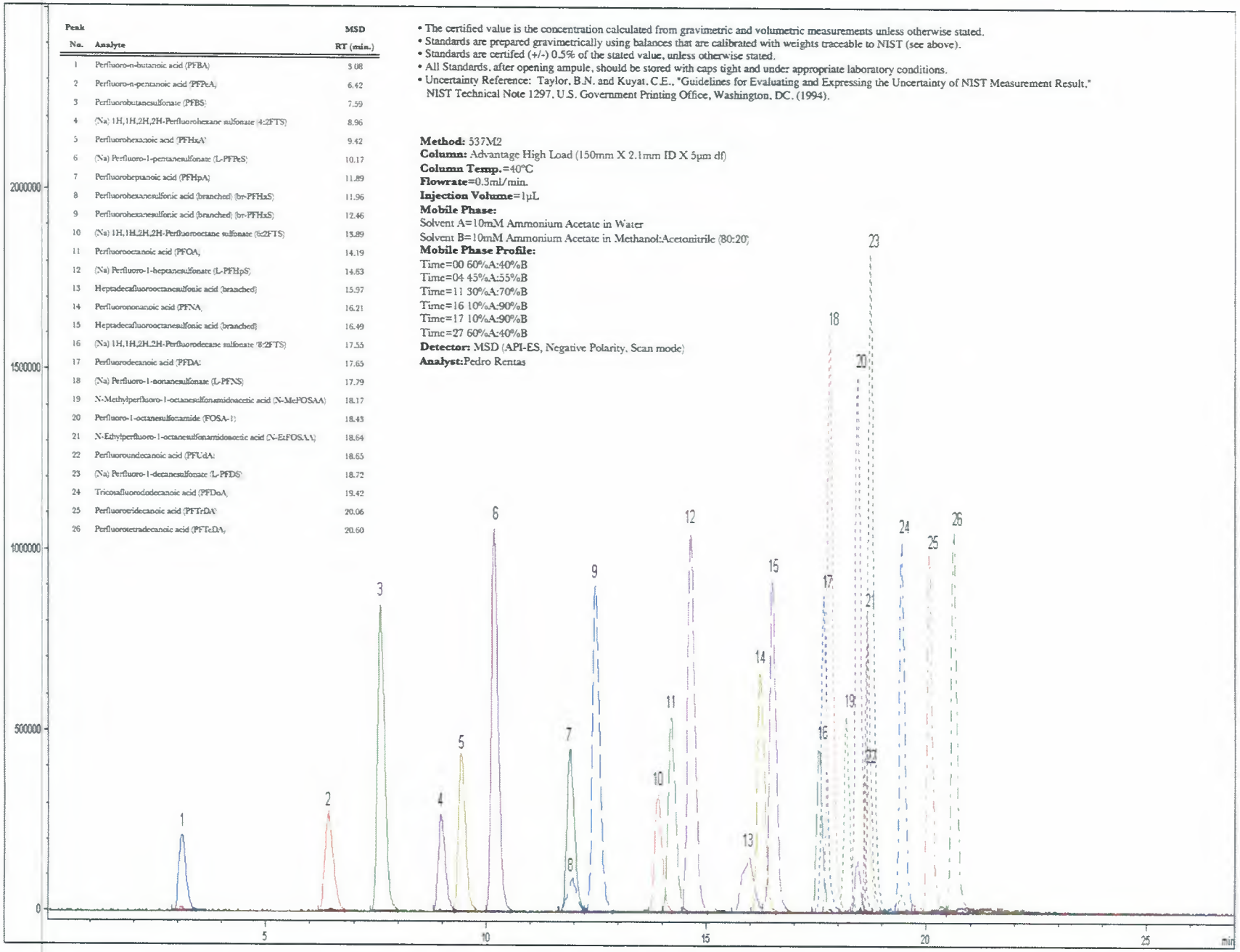
		061918
Formulated By:	Mario Luis	DATE
		061918
Reviewed By:	Pedro L. Rentas	DATE

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc.(µg/mL)	Final Conc.(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Perfluoro-n-butanoic acid (linear)	99542	110317	0.02	1.00	0.004	50.2	1.00	0.01	375-22-4	N/A	N/A
2. Perfluoro-n-pentanoic acid	99543	110317	0.02	1.00	0.004	50.7	1.01	0.01	2706-90-3	N/A	N/A
3. Perfluorohexanoic acid	99199	030617	0.02	1.00	0.004	50.3	1.01	0.01	307-24-4	N/A	N/A
4. Perfluoroheptanoic acid	99197	030517	0.02	1.00	0.004	50.1	1.00	0.01	375-85-9	N/A	N/A
5. Perfluorooctanoic acid	99202	030617	0.02	1.00	0.004	50.2	1.00	0.01	335-67-1	N/A	ipr-rat 189mg/kg
6. Perfluorononanoic acid	99200	030617	0.02	1.00	0.004	50.1	1.00	0.01	375-95-1	N/A	N/A
7. Perfluorodecanoic acid	99195	030617	0.02	1.00	0.004	50.1	1.00	0.01	335-76-2	N/A	orl-rat 57mg/kg
8. Perfluoroundecanoic acid	99205	030617	0.02	1.00	0.004	50.1	1.00	0.01	2058-94-8	N/A	N/A
9. Tricosafluorododecanoic acid	99196	030617	0.02	1.00	0.004	50.1	1.00	0.01	307-55-1	N/A	N/A
10. Perfluorotridecanoic acid	99204	030617	0.02	1.00	0.004	50.1	1.00	0.01	72629-94-8	N/A	N/A
11. Perfluorotetradecanoic acid	99203	030617	0.02	1.00	0.004	50.1	1.00	0.01	376-06-7	N/A	N/A
12. Perfluoro-1-octanesulfonamide	3677	FOSA0817I	0.02	1.00	0.004	50.0	1.00	0.01	754-91-6	N/A	N/A
13. N-Methylperfluoro-1-octanesulfonamidoacetic acid	3667	NMeFOSAA0118	0.02	1.00	0.004	50.0	1.00	0.01	2355-31-9	N/A	N/A
14. N-Ethylperfluoro-1-octanesulfonamidoacetic acid	3664	NEtFOSAA0118	0.02	1.00	0.004	50.0	1.00	0.01	2991-50-6	N/A	N/A
15. Perfluorobutanesulfonic acid	99194	031017	0.02	1.00	0.004	50.7	1.01	0.01	375-73-5	N/A	N/A
16. Perfluoro-1-pentanesulfonate	99544	111017	0.02	0.98	0.004	51.3	1.00	0.01	630402-22-1	N/A	N/A
17. Perfluorohexanesulfonic acid (branched)	99198	030617	0.02	1.00	0.004	50.6	1.01	0.01	3871-99-6	N/A	N/A
18. Perfluoro-1-heptanesulfonic acid	3672	LPFHpS0817	0.021	1.05	0.004	47.6	1.00	0.01	375-92-8	N/A	N/A
19. Heptadecafluorooctanesulfonic acid (branched)	99201	030617	0.02	1.00	0.004	50.2	1.00	0.01	1763-23-1	N/A	N/A
20. Perfluoro-1-nonanesulfonic acid	3957	LPFNS0917	0.021	1.05	0.004	48.0	1.01	0.01	98789-57-2	N/A	N/A
21. Perfluoro-1-decanesulfonic acid	3671	LPFDS0217	0.021	1.05	0.004	48.2	1.01	0.01	2806-15-7	N/A	N/A
22. 1H,1H,2H,2H-Perfluorohexane sulfonic acid	3955	42FTS1216	0.0214	1.07	0.004	46.7	1.00	0.01	00-00-0	N/A	N/A
23. 1H,1H,2H,2H-Perfluorooctane sulfonic acid	3661	62FTS0616	0.021	1.05	0.004	47.4	1.00	0.01	27619-97-2	N/A	N/A
24. 1H,1H,2H,2H-Perfluorodecane sulfonic acid	3662	82FTS1216	0.021	1.05	0.004	47.9	1.01	0.01	39108-34-4	N/A	N/A

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

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are 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).

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



BATTELLE

It can be done

BDO Id: 180726-04

Reagent Receipt Report

Approved: ☑ Authorized ☐

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

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

Total Analytes: 4

Notes:

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

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

MPFAC-C-IS

Mass-Labelled Perfluorinated Compound Injection Standards Solution

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

DESCRIPTION:

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

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

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

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

INTENDED USE:

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

HAZARDS:

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

SYNTHESIS / CHARACTERIZATION:

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

HOMOGENEITY:

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

UNCERTAINTY:

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

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

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

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

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

TRACEABILITY:

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

EXPIRY DATE / PERIOD OF VALIDITY:

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

LIMITED WARRANTY:

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

QUALITY MANAGEMENT:

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

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17025 REFERENCE MATERIAL PRODUCER

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

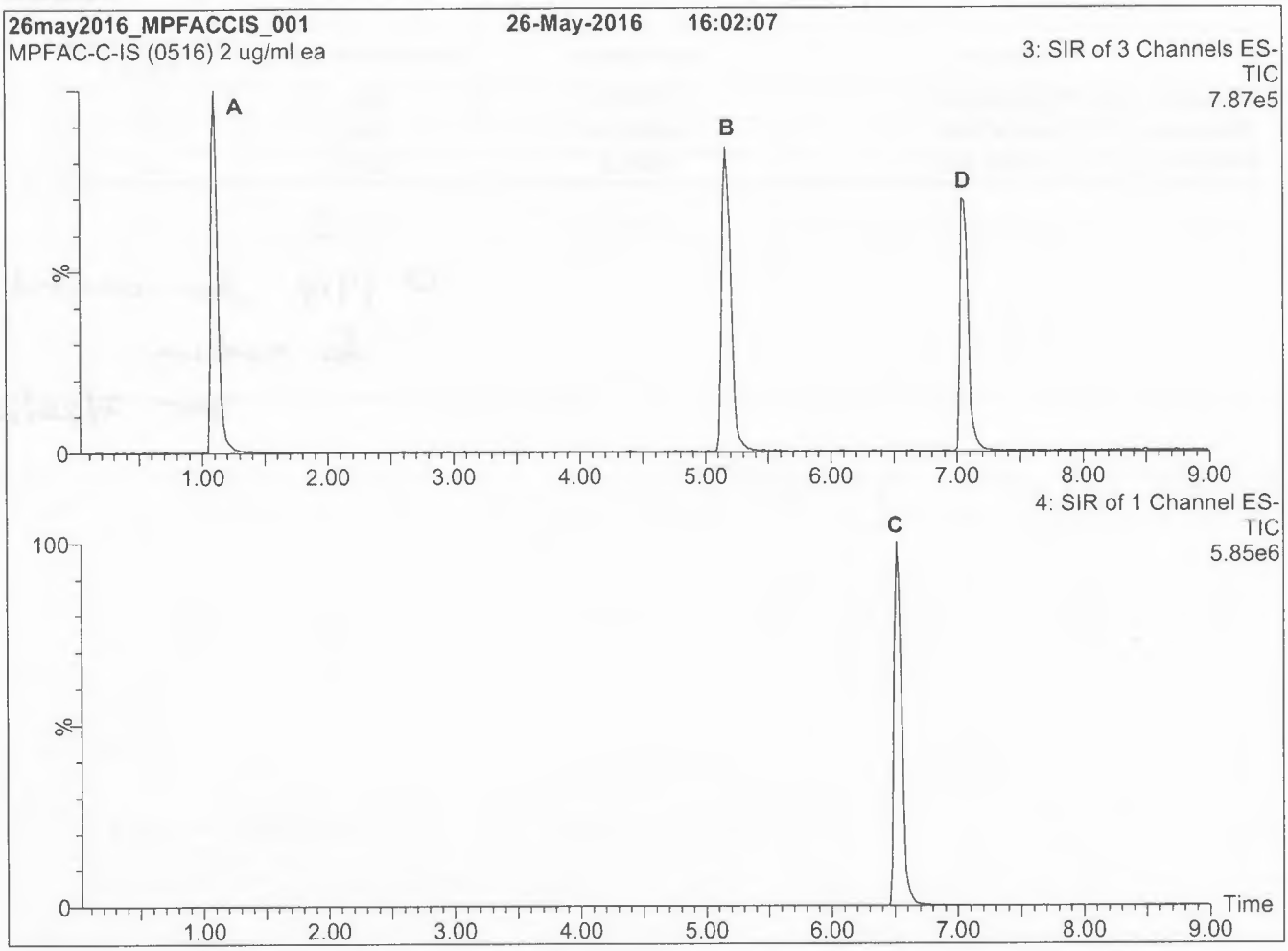
Table A: **MPFAC-C-IS; Components and Concentrations (ng/ml; ± 5% in Methanol / Water (<1%))**

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

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

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

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



Conditions for Figure 1:

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

Chromatographic Conditions

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

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

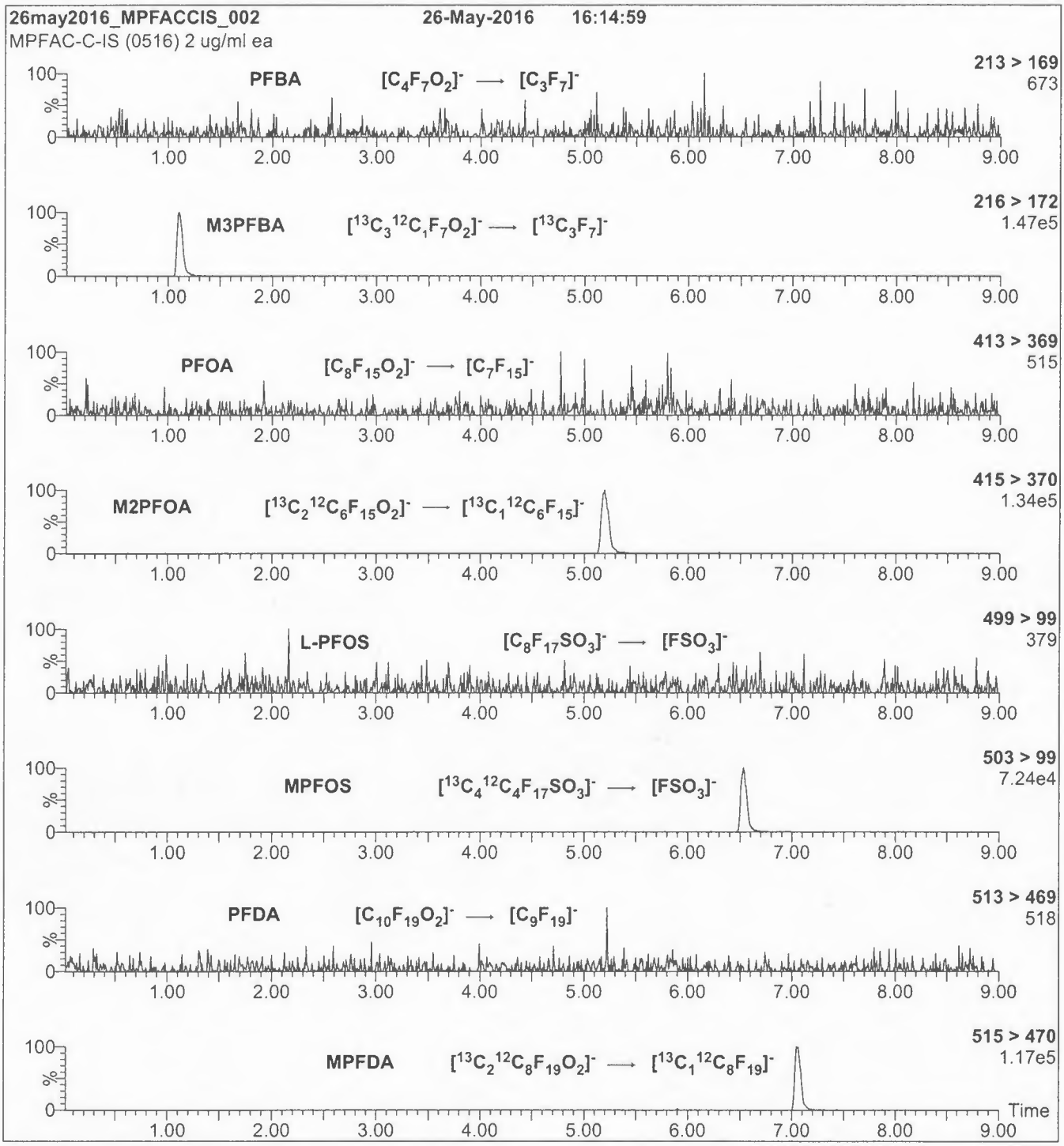
Flow: 300 µl/min

MS Parameters

Experiment: SIR

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

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



Conditions for Figure 2:

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

Mobile phase: Same as Figure 1

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.50e-3

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

BATTELLE

It can be done

BDO Id: 180726-05

Reagent Receipt Report

Approved: ☑ Authorized ☐

Name: Mass-labelled PFAS Extraction Stand
Vendor: Wellington Laboratories
Catalogue No: MPFAC-24ES
Type: Solution
Lot No: MPFAC24ES0218
Quantity: 2 ea 1.2 mL **% Moisture:** 0
Description: Mass-labelled PFAS Extraction Standard Solution

Received: 7/26/2018
Custodian: Thorn, Jonathan
Expires: 2/7/2023
Consumed:
Stored In: LC Laboratory - R0107

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

Total Analytes: 19

Notes:

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

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

MPFAC-24ES

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

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

DESCRIPTION:

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

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

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

INTENDED USE:

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

HANDLING:

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

SYNTHESIS / CHARACTERIZATION:

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

HOMOGENEITY:

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

UNCERTAINTY:

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

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

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

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

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

TRACEABILITY:

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

EXPIRY DATE / PERIOD OF VALIDITY:

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

LIMITED WARRANTY:

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

QUALITY MANAGEMENT:

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

CALA Testing Accreditation No. A1226

ANAB ACCREDITED 9017034 REFERENCE MATERIAL PRODUCER

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

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

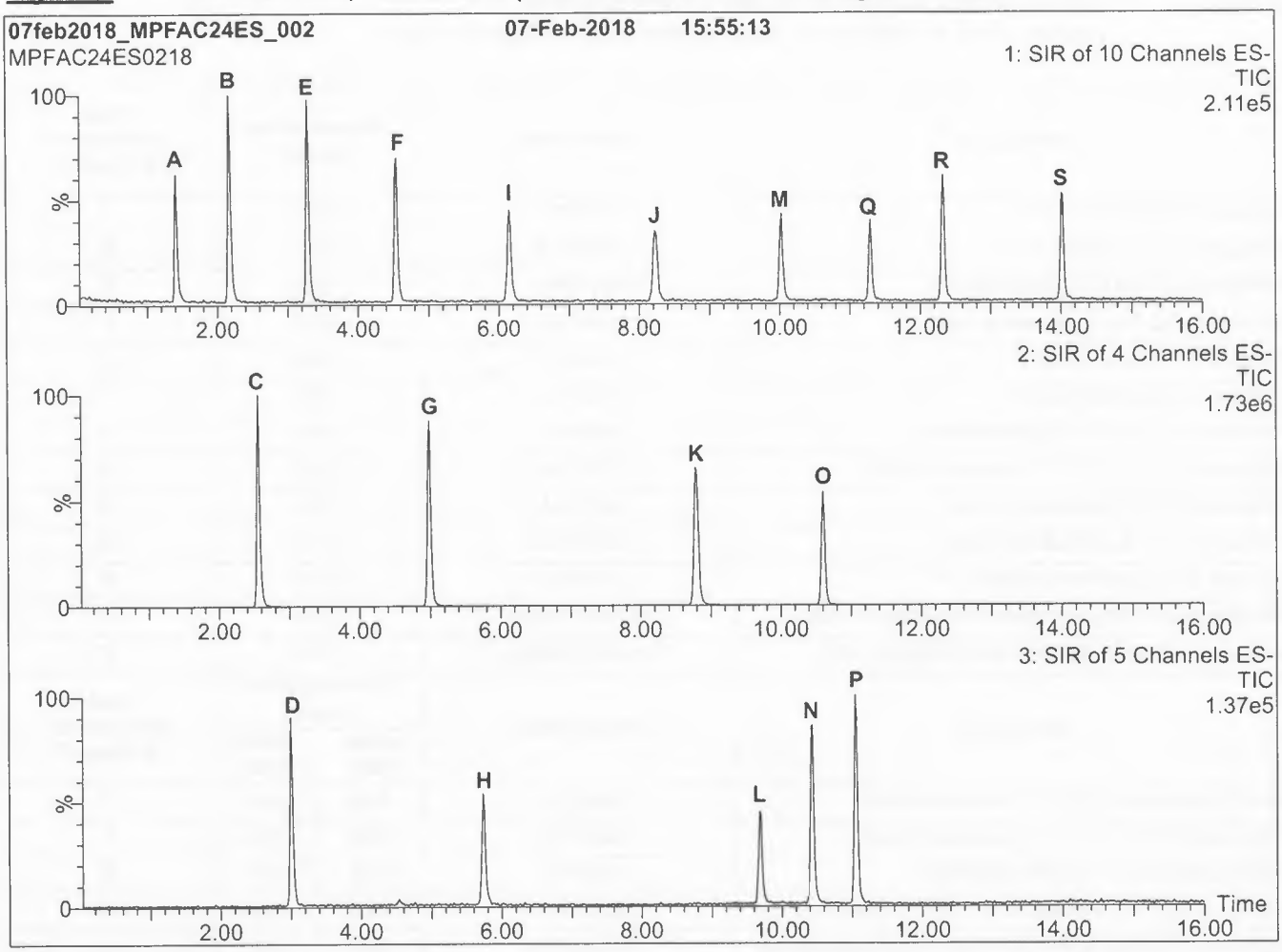
Compound	Abbreviation	Concentration (ng/ml)	Peak Assignment in Figure 1
Perfluoro-n-[$^{13}C_4$]butanoic acid	MPFBA	1000	A
Perfluoro-n-[$^{13}C_5$]pentanoic acid	M5PFPeA	1000	B
Perfluoro-n-[1,2,3,4,6-$^{13}C_5$]hexanoic acid	M5PFHxA	1000	E
Perfluoro-n-[1,2,3,4-$^{13}C_4$]heptanoic acid	M4PFHpA	1000	F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

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

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

B.G. Chittim, General Manager

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



Conditions for Figure 1:

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

Chromatographic Conditions

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

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

Flow: 300 µl/min

MS Parameters

Experiment: SIR

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

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

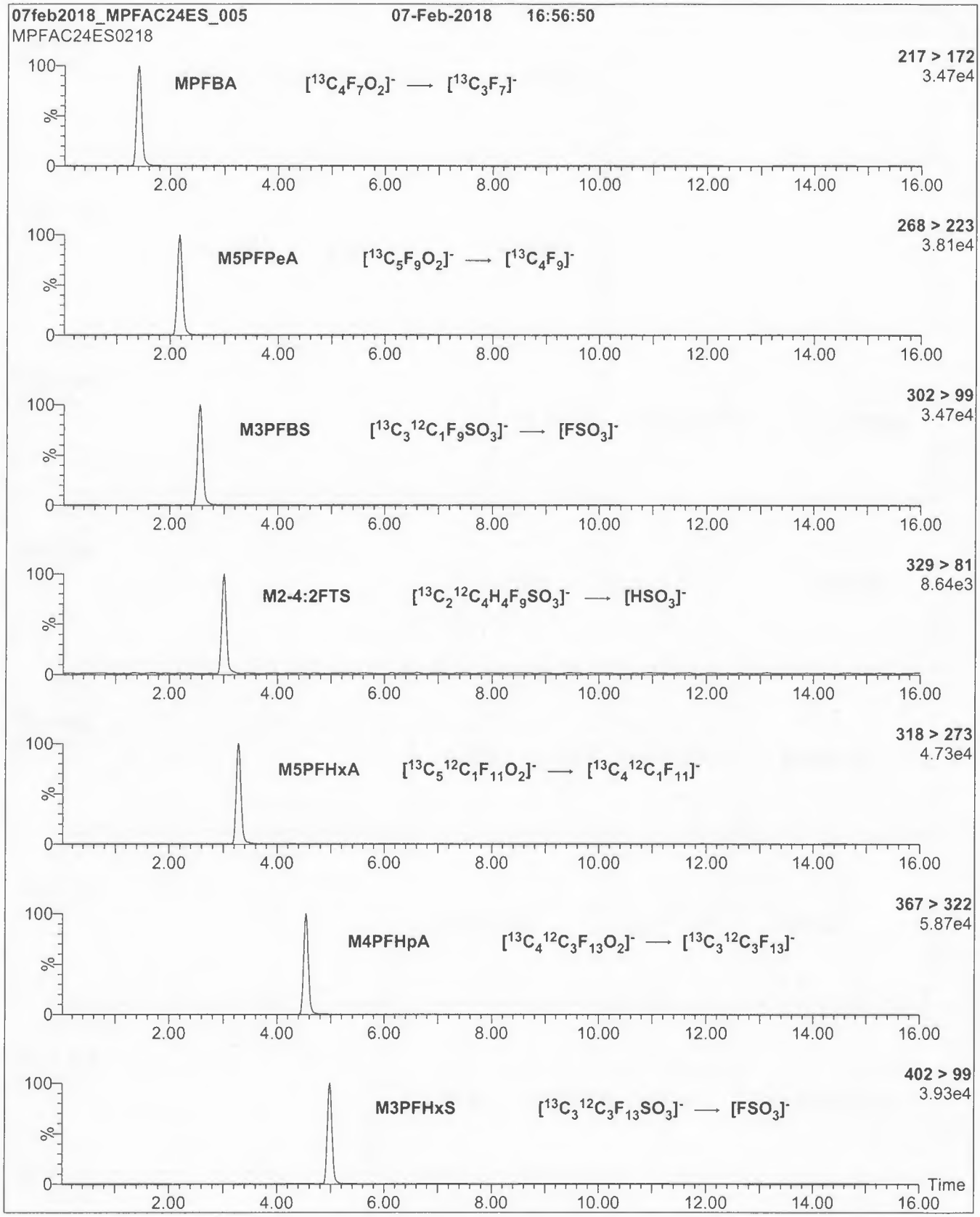


Figure 2: **MPFAC-24ES; LC/MS/MS Data (Selected MRM Transitions)**

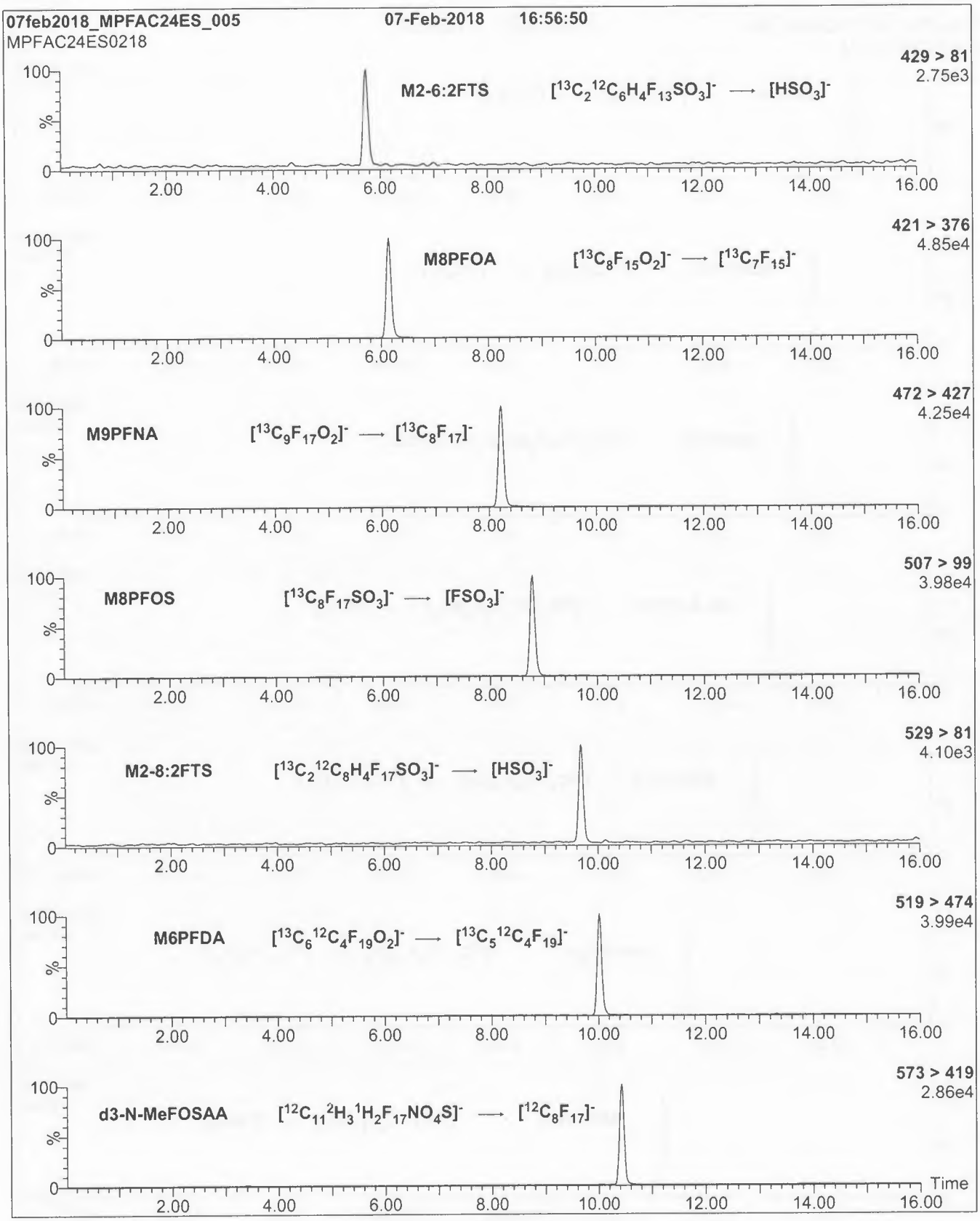
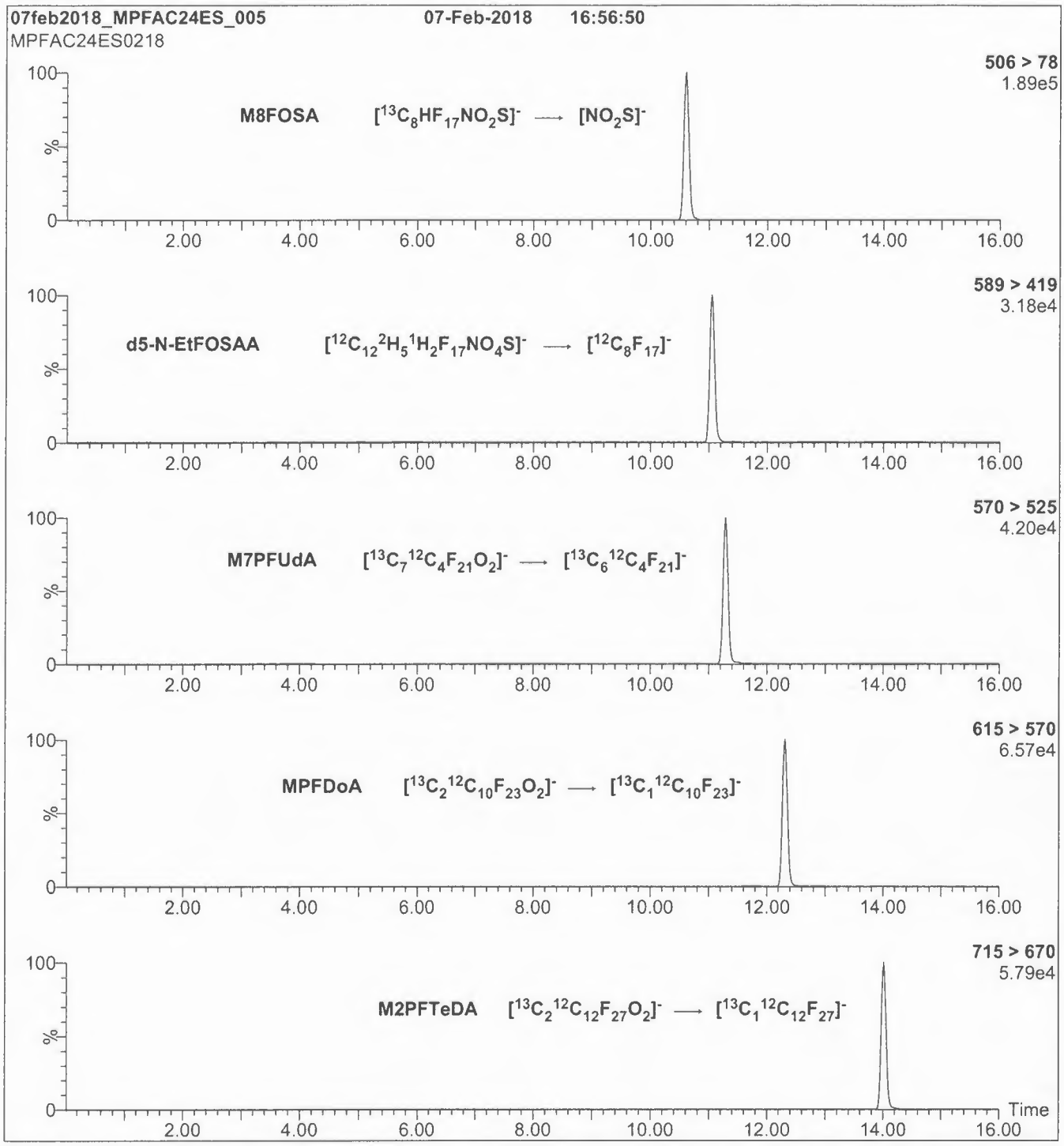


Figure 2: **MPFAC-24ES; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFAC-24ES)

Mobile phase: Same as Figure 1

Flow: 300 µl/min

MS Parameters

Collision Gas (mbar) = 3.28e-3

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

Sample Preparation

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BATTELLE - NORWELL OPERATIONS
SAMPLE PREPARATION RECORDS

Project Title(s)	Project No.(s)
CTO-4164 Naval Base Ventura County, California	100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

SOP Numbers (see workplan for modifications)

ExtractionSOP No. 5-370

This Batch Contains The Following Samples:			
CS011PB-FS	J8781MS-FS	J8787-FS	J8813-FS
CS012LCS-FS	J8782MSD-FS	J8788-FS	J8814-FS
J8777-FS	J8783-FS	J8809-FS	J8815-FS
J8778-FS	J8784-FS	J8810-FS	J8816-FS
J8779-FS	J8785-FS	J8811-FS	
J8780-FS	J8786-FS	J8812-FS	

Laboratory Preparation Records
COMPLETE AND VALIDATED

Prep Task Leader: Stephanie Schultz

Approved By:	Date	Initials
Denise Schumitz	11/05/2018	DMS

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BATTELLE - NORWELL OPERATIONS
SAMPLE IDENTIFICATION PAGE

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Sample ID	Description
CS011PB-FS	Procedural Blank - Ottawa Sand (180507-02)
CS012LCS-FS	Laboratory Control Sample - Ottawa Sand (180507-02)
J8777-FS	VC-PM323-324-SD01-000H
J8778-FS	VC-PM323-324-SD01-0102
J8779-FS	VC-PM553-SD01-000H
J8780-FS	VC-PM553-SD01-0102
J8781MS-FS	Matrix Spike of VC-PM553-SD01-0102-MS
J8782MSD-FS	Matrix Spike Duplicate of VC-PM553-SD01-0102-MSD
J8783-FS	VC-PM3009-SD01-000H
J8784-FS	VC-PM3009-SD01-0102
J8785-FS	VC-PM372-SD01-000H
J8786-FS	VC-PM372-SD01-0102
J8787-FS	VC-CS11-SD01-000H
J8788-FS	VC-CS11-SD01-0102
J8809-FS	VC-STP-SD01-000H
J8810-FS	VC-STP-SD01-0102
J8811-FS	VC-STP-SD02-000H
J8812-FS	VC-STP-SD02-0102
J8813-FS	VC-STP-SD03-000H
J8814-FS	VC-STP-SD03-0102
J8815-FS	VC-STP-SD04-000H

Samples Assigned By: Jonathan Thorn Date : October 12, 2018

Comments:

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BATTELLE - NORWELL OPERATIONS
SAMPLE IDENTIFICATION PAGE

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Sample ID	Description
J8816-FS	VC-STP-SD04-0102

Samples Assigned By: Jonathan Thorn Date : October 12, 2018

Comments:

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BATTELLE - NORWELL OPERATIONS
SAMPLE CUSTODY LOG

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Requested On/By:	10/16/2018 KB	**Purpose:**	Sample Preparation
Relinquished On/By:	10/16/2018 MDS	**Last Activity:**	Return

Accepted On/By:	10/16/2018 KB	**Returned On/To:**	10/16/2018 MDS
Stored In Facility:	Sample Preparation	**Returned To Facility:**	Custody: NA
Stored Until	10/16/2018		
Stored Comment:	NA	**Returned Comment:**	NA

No.	BDO-ID:	Ctrs	*	Condition:	Custody Comment:
1	J8777	1	--	Intact	NA
2	J8778	1	--	Intact	NA
3	J8779	1	--	Intact	NA
4	J8780	1	--	Intact	NA
5	J8783	1	--	Intact	NA
6	J8784	1	--	Intact	NA
7	J8785	1	--	Intact	NA
8	J8786	1	--	Intact	NA
9	J8787	1	--	Intact	NA
10	J8788	1	--	Intact	NA
11	J8809	1	--	Intact	NA
12	J8810	1	--	Intact	NA
13	J8811	1	--	Intact	NA
14	J8812	1	--	Intact	NA
15	J8813	1	--	Intact	NA
16	J8814	1	--	Intact	NA
17	J8815	1	--	Intact	NA
18	J8816	1	--	Intact	NA

Total Samples 18 * "C" = Consumed Container

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BATTELLE - NORWELL OPERATIONS
ELECTRONIC DRY WEIGHT DETERMINATION

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Sample ID:	Ctrs.	*	Tare Wt. (g)	Aliquot Wt. (g)	Dry Wt. (g)	Sample Wet Wt. (g)	% Dry Wt.	% Moisture	Sample Dry Wt. (g)
CS011PB-FS	NA	--	NA	NA	NA	2.01	100.00	0.00	2.01
CS012LCS-FS	NA	--	NA	NA	NA	1.99	100.00	0.00	1.99
J8777-FS	1	--	1.07	9.21	7.00	2.09	72.85	27.15	1.52
J8778-FS	1	--	1.08	9.68	7.37	2.10	73.14	26.86	1.54
J8779-FS	1	--	1.12	14.06	10.57	2.09	73.03	26.97	1.53
J8780-FS	1	--	1.10	14.35	11.70	1.94	80.00	20.00	1.55
J8781MS-FS	1	--	1.08	11.02	8.64	2.04	76.06	23.94	1.55
J8782MSD-FS	1	--	1.08	12.04	9.55	1.98	77.28	22.72	1.53
J8783-FS	1	--	1.07	12.87	10.31	2.05	78.31	21.69	1.61
J8784-FS	1	--	1.07	10.50	8.52	1.98	79.00	21.00	1.56
J8785-FS	1	--	1.11	10.77	8.34	1.98	74.84	25.16	1.48
J8786-FS	1	--	1.08	10.47	8.57	2.06	79.77	20.23	1.64
J8787-FS	1	--	1.08	7.54	3.48	1.99	37.15	62.85	0.74
J8788-FS	1	--	1.08	9.81	5.27	2.05	48.00	52.00	0.98
J8809-FS	1	--	1.07	8.48	5.39	1.99	58.30	41.70	1.16
J8810-FS	1	--	1.08	8.87	6.05	1.98	63.80	36.20	1.26
J8811-FS	1	--	1.06	6.70	4.66	2.01	63.83	36.17	1.28
J8812-FS	1	--	1.11	7.83	5.69	2.05	68.15	31.85	1.40
J8813-FS	1	--	1.09	6.42	3.87	2.00	52.16	47.84	1.04
J8814-FS	1	--	1.13	6.96	4.99	2.05	66.21	33.79	1.36
J8815-FS	1	--	1.13	9.82	6.70	2.07	64.10	35.90	1.33
J8816-FS	1	--	1.07	8.52	6.42	1.99	71.81	28.19	1.43

Percent Dry Wt (%) = [(Sample Dry Wt. (g) - Tare Wt. (g))/(Aliquot Wet Wt. (g) - Tare Wt. (g))] * 100
Sample Dry Wt. (%) = [(Sample Wet Wt. (g) * (Percent Dry Wt./100)]
* "C" = Sample Container Is Consumed

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
ELECTRONIC DRY WEIGHT DETERMINATION

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Sample ID:	Ctrs.	*	Tare Wt. (g)	Aliquot Wt. (g)	Dry Wt. (g)	Sample Wet Wt. (g)	% Dry Wt.	% Moisture	Sample Dry Wt. (g)

Task: Wet Weight

BNO-ID:	Date/Initials:	Battelle-ID:
CS011PB-FS	10/18/2018 KB	BAL-015
CS012LCS-FS	10/18/2018 KB	BAL-015
J8777-FS	10/17/2018 KB	BAL-015
J8778-FS	10/17/2018 KB	BAL-015
J8779-FS	10/17/2018 KB	BAL-015
J8780-FS	10/17/2018 KB	BAL-015
J8781MS-FS	10/17/2018 KB	BAL-015
J8782MSD-FS	10/17/2018 AEK	BAL-015
J8783-FS	10/17/2018 AEK	BAL-015
J8784-FS	10/17/2018 AEK	BAL-015
J8785-FS	10/17/2018 AEK	BAL-015
J8786-FS	10/17/2018 AEK	BAL-015
J8787-FS	10/17/2018 AEK	BAL-015
J8788-FS	10/17/2018 AEK	BAL-015
J8809-FS	10/17/2018 AEK	BAL-015
J8810-FS	10/17/2018 AEK	BAL-015
J8811-FS	10/17/2018 AEK	BAL-015
J8812-FS	10/17/2018 AEK	BAL-015
J8813-FS	10/17/2018 AEK	BAL-015
J8814-FS	10/17/2018 AEK	BAL-015
J8815-FS	10/17/2018 AEK	BAL-015
J8816-FS	10/17/2018 AEK	BAL-015

Percent Dry Wt (%) = [(Sample Dry Wt. (g) - Tare Wt. (g))/(Aliquot Wet Wt. (g) - Tare Wt. (g))] * 100
Sample Dry Wt. (%) = [(Sample Wet Wt. (g) * (Percent Dry Wt./100)]
* "C" = Sample Container Is Consumed

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
ELECTRONIC DRY WEIGHT DETERMINATION

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Sample ID:	Ctrs.	*	Tare Wt. (g)	Aliquot Wt. (g)	Dry Wt. (g)	Sample Wet Wt. (g)	% Dry Wt.	% Moisture	Sample Dry Wt. (g)

Task: Tare Weight

BNO-ID:	Date/Initials:	Battelle-ID:
CS011PB-FS	--	--
CS012LCS-FS	--	--
J8777-FS	10/17/2018 KB	BAL-015
J8778-FS	10/17/2018 KB	BAL-015
J8779-FS	10/17/2018 KB	BAL-015
J8780-FS	10/17/2018 KB	BAL-015
J8781MS-FS	10/17/2018 KB	BAL-015
J8782MSD-FS	10/17/2018 AEK	BAL-015
J8783-FS	10/17/2018 AEK	BAL-015
J8784-FS	10/17/2018 AEK	BAL-015
J8785-FS	10/17/2018 AEK	BAL-015
J8786-FS	10/17/2018 AEK	BAL-015
J8787-FS	10/17/2018 AEK	BAL-015
J8788-FS	10/17/2018 AEK	BAL-015
J8809-FS	10/17/2018 AEK	BAL-015
J8810-FS	10/17/2018 AEK	BAL-015
J8811-FS	10/17/2018 AEK	BAL-015
J8812-FS	10/17/2018 AEK	BAL-015
J8813-FS	10/17/2018 AEK	BAL-015
J8814-FS	10/17/2018 AEK	BAL-015
J8815-FS	10/17/2018 AEK	BAL-015
J8816-FS	10/17/2018 AEK	BAL-015

Percent Dry Wt (%) = [(Sample Dry Wt. (g) - Tare Wt. (g))/(Aliquot Wet Wt. (g) - Tare Wt. (g))] * 100
Sample Dry Wt. (%) = [(Sample Wet Wt. (g) * (Percent Dry Wt./100)]
* "C" = Sample Container Is Consumed

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BATTELLE - NORWELL OPERATIONS
ELECTRONIC DRY WEIGHT DETERMINATION

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Sample ID:	Ctrs.	*	Tare Wt. (g)	Aliquot Wt. (g)	Dry Wt. (g)	Sample Wet Wt. (g)	% Dry Wt.	% Moisture	Sample Dry Wt. (g)

Task: Aliquot Wet Weight

BNO-ID:	Date/Initials:	Battelle-ID:
CS011PB-FS	--	--
CS012LCS-FS	--	--
J8777-FS	10/17/2018 KB	BAL-015
J8778-FS	10/17/2018 KB	BAL-015
J8779-FS	10/17/2018 KB	BAL-015
J8780-FS	10/17/2018 KB	BAL-015
J8781MS-FS	10/17/2018 KB	BAL-015
J8782MSD-FS	10/17/2018 AEK	BAL-015
J8783-FS	10/17/2018 AEK	BAL-015
J8784-FS	10/17/2018 AEK	BAL-015
J8785-FS	10/17/2018 AEK	BAL-015
J8786-FS	10/17/2018 AEK	BAL-015
J8787-FS	10/17/2018 AEK	BAL-015
J8788-FS	10/17/2018 AEK	BAL-015
J8809-FS	10/17/2018 AEK	BAL-015
J8810-FS	10/17/2018 AEK	BAL-015
J8811-FS	10/17/2018 AEK	BAL-015
J8812-FS	10/17/2018 AEK	BAL-015
J8813-FS	10/17/2018 AEK	BAL-015
J8814-FS	10/17/2018 AEK	BAL-015
J8815-FS	10/17/2018 AEK	BAL-015
J8816-FS	10/17/2018 AEK	BAL-015

Percent Dry Wt (%) = [(Sample Dry Wt. (g) - Tare Wt. (g))/(Aliquot Wet Wt. (g) - Tare Wt. (g))] * 100
Sample Dry Wt. (%) = [(Sample Wet Wt. (g) * (Percent Dry Wt./100)]
* "C" = Sample Container Is Consumed

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
ELECTRONIC DRY WEIGHT DETERMINATION

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Sample ID:	Ctrs.	*	Tare Wt. (g)	Aliquot Wt. (g)	Dry Wt. (g)	Sample Wet Wt. (g)	% Dry Wt.	% Moisture	Sample Dry Wt. (g)

Task: Aliquot Dry Weight

BNO-ID:	Date/Initials:	Battelle-ID:
CS011PB-FS	--	--
CS012LCS-FS	--	--
J8777-FS	--	BAL-015
J8778-FS	10/18/2018 KB	BAL-015
J8779-FS	10/18/2018 KB	BAL-015
J8780-FS	10/18/2018 KB	BAL-015
J8781MS-FS	10/18/2018 KB	BAL-015
J8782MSD-FS	10/18/2018 KB	BAL-015
J8783-FS	10/18/2018 KB	BAL-015
J8784-FS	10/18/2018 KB	BAL-015
J8785-FS	10/18/2018 KB	BAL-015
J8786-FS	10/18/2018 KB	BAL-015
J8787-FS	10/18/2018 KB	BAL-015
J8788-FS	10/18/2018 KB	BAL-015
J8809-FS	10/18/2018 KB	BAL-015
J8810-FS	10/18/2018 KB	BAL-015
J8811-FS	10/18/2018 KB	BAL-015
J8812-FS	10/18/2018 KB	BAL-015
J8813-FS	10/18/2018 KB	BAL-015
J8814-FS	10/18/2018 KB	BAL-015
J8815-FS	10/18/2018 KB	BAL-015
J8816-FS	10/18/2018 KB	BAL-015

Percent Dry Wt (%) = [(Sample Dry Wt. (g) - Tare Wt. (g))/(Aliquot Wet Wt. (g) - Tare Wt. (g))] * 100
Sample Dry Wt. (%) = [(Sample Wet Wt. (g) * (Percent Dry Wt./100)]
* "C" = Sample Container Is Consumed

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BATTELLE - NORWELL OPERATIONS
SURROGATE SPIKE FORM

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Sample ID	Standard ID	Type	Vial No.	Vol Added (uL)	Date Spiked/ Spiked By	Witn'd By	Comment
CS011PB-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
CS012LCS-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
CS012LCS-FS	KC02	LCS/MS	1	150	10/18/18 KB	SAS	NA
J8777-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
J8778-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
J8779-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
J8780-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
J8781MS-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
J8781MS-FS	KC02	LCS/MS	1	250	10/18/18 KB	SAS	NA
J8782MSD-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
J8782MSD-FS	KC02	LCS/MS	1	250	10/18/18 KB	SAS	NA
J8783-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
J8784-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
J8785-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
J8786-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
J8787-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
J8788-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
J8809-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
J8810-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
J8811-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
J8812-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
J8813-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
J8814-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
J8815-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA
J8816-FS	KB71	SIS	1	50	10/18/18 KB	SAS	NA

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BATTELLE - NORWELL OPERATIONS
SURROGATE SPIKE FORM

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Sample ID	Standard ID	Type	Vial No.	Vol Added (uL)	Date Spiked/ Spiked By	Witn'd By	Comment

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
KB71	Pipette	B814659662
KC02	Pipette	B814657482

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BATTELLE - NORWELL OPERATIONS
SAMPLE EXTRACTION FORM

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Sample ID	1st Extraction	2nd Extraction	3rd Extraction	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comment
CS011PB-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
CS012LCS-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
J8777-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
J8778-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
J8779-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
J8780-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
J8781MS-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
J8782MSD-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
J8783-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
J8784-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
J8785-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
J8786-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
J8787-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
J8788-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
J8809-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
J8810-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
J8811-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
J8812-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
J8813-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
J8814-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
J8815-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA
J8816-FS	10/18/18 KB	10/18/18 KB	NA	NA	NA	NA	NA	NA

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
SAMPLE EXTRACTION FORM

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Sample ID	1st Extraction	2nd Extraction	3rd Extraction	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comment

Solvents/Reagent Preparations:

Name	ID	Expires	Lot No	Procedure	Comments
0.4% NH3 in Methanol	RP-181018-7	10/18/18	182000	Per 100 mL, 3.5 mL ammonia solution brought to 100 mL with methanol	
0.4% NH3 in Methanol	RP-181018-7	10/18/18	SHBJ0412	Per 100 mL, 3.5 mL ammonia solution brought to 100 mL with methanol	

Solvents/Reagents:

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It can be done

BATTELLE - NORWELL OPERATIONS
COLUMN FRACTIONATION FORM

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Extract Id	Date	Init.	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comments
CS011PB-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA
CS012LCS-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA
J8777-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA
J8778-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA
J8779-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA
J8780-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA
J8781MS-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA
J8782MSD-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA
J8783-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA
J8784-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA
J8785-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA
J8786-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA
J8787-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA
J8788-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA
J8809-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA
J8810-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA
J8811-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA
J8812-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA
J8813-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA
J8814-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA

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It can be done

BATTELLE - NORWELL OPERATIONS
COLUMN FRACTIONATION FORM

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Extract Id	Date	Init.	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comments
J8815-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA
J8816-FS(3)	10/19/18	KB	NA	NA	NA	NA	NA

Column Diameter: 13 mm **Procedure Comment:**

Elution Volume: 10 mL

Solvents

Reagents

Reagent Prep	Weight g	Name	Expires	Lot No	Procedure
RP-181019-11	0.50	ENVI-CARB SPE	10/20/18	10527405	Rinse SPE cartridge wi
RP-181019-2	Not Measured	0.4% NH3 in Methanol	10/19/18	182000	Per 100 mL, 3.5 mL am brought to 100 mL with
RP-181019-2	Not Measured	0.4% NH3 in Methanol	10/19/18	SHBJ0412	Per 100 mL, 3.5 mL am brought to 100 mL with

Fractions

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
INTERNAL STANDARD SPIKING FORM

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

(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
CS011PB-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS
CS012LCS-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS
J8777-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS
J8778-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS
J8779-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS
J8780-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS
J8781MS-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS
J8782MSD-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS
J8783-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS
J8784-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS
J8785-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS
J8786-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS
J8787-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS
J8788-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS
J8809-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS
J8810-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS
J8811-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS
J8812-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS
J8813-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS

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

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

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
INTERNAL STANDARD SPIKING FORM

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

(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
J8814-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS
J8815-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS
J8816-FS(3)	950	50	KC52	50	1	1000	10.000	10/23/18 KB	SAS

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
KC52	Pipette	B814659662

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

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

BATTELLE
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BATTELLE - NORWELL OPERATIONS
PREPARATION EXTRACT SPLIT FORM

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
CS011PB-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
CS011PB-FS	2	--	10/19/2018 4:34:00 PM	CS011PB-FS	0	10000	9000	1.111	1.111	10/19/18 KB
CS011PB-FS	3	--	10/19/2018 4:34:00 PM	CS011PB-FS	0	10000	1000	10.000	10.000	10/19/18 KB
CS012LCS-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
CS012LCS-FS	2	--	10/19/2018 4:34:00 PM	CS012LCS-FS	0	10000	9000	1.111	1.111	10/19/18 KB
CS012LCS-FS	3	--	10/19/2018 4:34:00 PM	CS012LCS-FS	0	10000	1000	10.000	10.000	10/19/18 KB
J8777-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
J8777-FS	2	--	10/19/2018 4:34:00 PM	J8777-FS	0	10000	9000	1.111	1.111	10/19/18 KB
J8777-FS	3	--	10/19/2018 4:34:00 PM	J8777-FS	0	10000	1000	10.000	10.000	10/19/18 KB
J8778-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
J8778-FS	2	--	10/19/2018 4:34:00 PM	J8778-FS	0	10000	9000	1.111	1.111	10/19/18 KB
J8778-FS	3	--	10/19/2018 4:34:00 PM	J8778-FS	0	10000	1000	10.000	10.000	10/19/18 KB
J8779-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
J8779-FS	2	--	10/19/2018 4:34:00 PM	J8779-FS	0	10000	9000	1.111	1.111	10/19/18 KB

Total Oil = [Sample Volume (uL) / Aliquot Volume (uL)] * [Aliquot Weight (mg)]
Dilution Factor = [Sample Volume (uL) / Aliqot Volume (uL))] * Prior Dilution Factor
* - "C" = Extract is Consumed

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
PREPARATION EXTRACT SPLIT FORM

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
J8779-FS	3	--	10/19/2018 4:34:00 PM	J8779-FS	0	10000	1000	10.000	10.000	10/19/18 KB
J8780-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
J8780-FS	2	--	10/19/2018 4:34:00 PM	J8780-FS	0	10000	9000	1.111	1.111	10/19/18 KB
J8780-FS	3	--	10/19/2018 4:34:00 PM	J8780-FS	0	10000	1000	10.000	10.000	10/19/18 KB
J8781MS-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
J8781MS-FS	2	--	10/19/2018 4:34:00 PM	J8781MS-FS	0	10000	9000	1.111	1.111	10/19/18 KB
J8781MS-FS	3	--	10/19/2018 4:34:00 PM	J8781MS-FS	0	10000	1000	10.000	10.000	10/19/18 KB
J8782MSD-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
J8782MSD-FS	2	--	10/19/2018 4:34:00 PM	J8782MSD-FS	0	10000	9000	1.111	1.111	10/19/18 KB
J8782MSD-FS	3	--	10/19/2018 4:34:00 PM	J8782MSD-FS	0	10000	1000	10.000	10.000	10/19/18 KB
J8783-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
J8783-FS	2	--	10/19/2018 4:34:00 PM	J8783-FS	0	10000	9000	1.111	1.111	10/19/18 KB
J8783-FS	3	--	10/19/2018 4:34:00 PM	J8783-FS	0	10000	1000	10.000	10.000	10/19/18 KB
J8784-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB

Total Oil = [Sample Volume (uL) / Aliquot Volume (uL)] * [Aliquot Weight (mg)]
Dilution Factor = [Sample Volume (uL) / Aliqot Volume (uL))] * Prior Dilution Factor
* - "C" = Extract is Consumed

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
PREPARATION EXTRACT SPLIT FORM

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
J8784-FS	2	--	10/19/2018 4:34:00 PM	J8784-FS	0	10000	9000	1.111	1.111	10/19/18 KB
J8784-FS	3	--	10/19/2018 4:34:00 PM	J8784-FS	0	10000	1000	10.000	10.000	10/19/18 KB
J8785-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
J8785-FS	2	--	10/19/2018 4:34:00 PM	J8785-FS	0	10000	9000	1.111	1.111	10/19/18 KB
J8785-FS	3	--	10/19/2018 4:34:00 PM	J8785-FS	0	10000	1000	10.000	10.000	10/19/18 KB
J8786-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
J8786-FS	2	--	10/19/2018 4:34:00 PM	J8786-FS	0	10000	9000	1.111	1.111	10/19/18 KB
J8786-FS	3	--	10/19/2018 4:34:00 PM	J8786-FS	0	10000	1000	10.000	10.000	10/19/18 KB
J8787-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
J8787-FS	2	--	10/19/2018 4:34:00 PM	J8787-FS	0	10000	9000	1.111	1.111	10/19/18 KB
J8787-FS	3	--	10/19/2018 4:34:00 PM	J8787-FS	0	10000	1000	10.000	10.000	10/19/18 KB
J8788-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
J8788-FS	2	--	10/19/2018 4:34:00 PM	J8788-FS	0	10000	9000	1.111	1.111	10/19/18 KB
J8788-FS	3	--	10/19/2018 4:34:00 PM	J8788-FS	0	10000	1000	10.000	10.000	10/19/18 KB

Total Oil = [Sample Volume (uL) / Aliquot Volume (uL)] * [Aliquot Weight (mg)]
Dilution Factor = [Sample Volume (uL) / Aliqot Volume (uL))] * Prior Dilution Factor
* - "C" = Extract is Consumed

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
PREPARATION EXTRACT SPLIT FORM

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
J8809-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
J8809-FS	2	--	10/19/2018 4:34:00 PM	J8809-FS	0	10000	9000	1.111	1.111	10/19/18 KB
J8809-FS	3	--	10/19/2018 4:34:00 PM	J8809-FS	0	10000	1000	10.000	10.000	10/19/18 KB
J8810-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
J8810-FS	2	--	10/19/2018 4:34:00 PM	J8810-FS	0	10000	9000	1.111	1.111	10/19/18 KB
J8810-FS	3	--	10/19/2018 4:34:00 PM	J8810-FS	0	10000	1000	10.000	10.000	10/19/18 KB
J8811-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
J8811-FS	2	--	10/19/2018 4:34:00 PM	J8811-FS	0	10000	9000	1.111	1.111	10/19/18 KB
J8811-FS	3	--	10/19/2018 4:34:00 PM	J8811-FS	0	10000	1000	10.000	10.000	10/19/18 KB
J8812-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
J8812-FS	2	--	10/19/2018 4:34:00 PM	J8812-FS	0	10000	9000	1.111	1.111	10/19/18 KB
J8812-FS	3	--	10/19/2018 4:34:00 PM	J8812-FS	0	10000	1000	10.000	10.000	10/19/18 KB
J8813-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
J8813-FS	2	--	10/19/2018 4:34:00 PM	J8813-FS	0	10000	9000	1.111	1.111	10/19/18 KB

Total Oil = [Sample Volume (uL) / Aliquot Volume (uL)] * [Aliquot Weight (mg)]
Dilution Factor = [Sample Volume (uL) / Aliqot Volume (uL))] * Prior Dilution Factor
* - "C" = Extract is Consumed

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
PREPARATION EXTRACT SPLIT FORM

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
J8813-FS	3	--	10/19/2018 4:34:00 PM	J8813-FS	0	10000	1000	10.000	10.000	10/19/18 KB
J8814-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
J8814-FS	2	--	10/19/2018 4:34:00 PM	J8814-FS	0	10000	9000	1.111	1.111	10/19/18 KB
J8814-FS	3	--	10/19/2018 4:34:00 PM	J8814-FS	0	10000	1000	10.000	10.000	10/19/18 KB
J8815-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
J8815-FS	2	--	10/19/2018 4:34:00 PM	J8815-FS	0	10000	9000	1.111	1.111	10/19/18 KB
J8815-FS	3	--	10/19/2018 4:34:00 PM	J8815-FS	0	10000	1000	10.000	10.000	10/19/18 KB
J8816-FS	0	C	10/18/2018 3:30:00 PM	NA		NA	NA	1.000	1.000	10/18/18 KB
J8816-FS	2	--	10/19/2018 4:34:00 PM	J8816-FS	0	10000	9000	1.111	1.111	10/19/18 KB
J8816-FS	3	--	10/19/2018 4:34:00 PM	J8816-FS	0	10000	1000	10.000	10.000	10/19/18 KB

Total Oil = [Sample Volume (uL) / Aliquot Volume (uL)] * [Aliquot Weight (mg)]
Dilution Factor = [Sample Volume (uL) / Aliqot Volume (uL))] * Prior Dilution Factor
* - "C" = Extract is Consumed

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BATTELLE - NORWELL OPERATIONS
EXTRACT - INSTRUMENT FACILITY CUSTODY PAGE

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Purpose:	LC-MS/MS TRANSFER	**Last Activity:**	Prep->Inst
Relinquished On/By:	Oct 24 2018 5:33PM SAS	**Received On/By:**	Oct 24 2018 5:33PM LMG
Relinquished From:	Sample Preparation: NA	**Received Location:**	LC Laboratory: NA
Relinquish Comment:	NA	**Received Comment:**	NA

No.	BDO-ID:	PIV:	DF:	Condition:	Custody Comment:
1	CS011PB-FS(3)	1000	10	Intact	NA
2	CS012LCS-FS(3)	1000	10	Intact	NA
3	J8777-FS(3)	1000	10	Intact	NA
4	J8778-FS(3)	1000	10	Intact	NA
5	J8779-FS(3)	1000	10	Intact	NA
6	J8780-FS(3)	1000	10	Intact	NA
7	J8781MS-FS(3)	1000	10	Intact	NA
8	J8782MSD-FS(3)	1000	10	Intact	NA
9	J8783-FS(3)	1000	10	Intact	NA
10	J8784-FS(3)	1000	10	Intact	NA
11	J8785-FS(3)	1000	10	Intact	NA
12	J8786-FS(3)	1000	10	Intact	NA
13	J8787-FS(3)	1000	10	Intact	NA
14	J8788-FS(3)	1000	10	Intact	NA
15	J8809-FS(3)	1000	10	Intact	NA
16	J8810-FS(3)	1000	10	Intact	NA
17	J8811-FS(3)	1000	10	Intact	NA
18	J8812-FS(3)	1000	10	Intact	NA
19	J8813-FS(3)	1000	10	Intact	NA
20	J8814-FS(3)	1000	10	Intact	NA
21	J8815-FS(3)	1000	10	Intact	NA
22	J8816-FS(3)	1000	10	Intact	NA

Total Extracts: 22

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
SAMPLE SPECIFIC COMMENTS

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Sample ID:	Comment:	Date/Initials:
CS011PB-FS	NA	NA
CS012LCS-FS	NA	NA
J8777-FS	NA	NA
J8778-FS	NA	NA
J8779-FS	NA	NA
J8780-FS	NA	NA
J8781MS-FS	NA	NA
J8782MSD-FS	NA	NA
J8783-FS	NA	NA
J8784-FS	NA	NA
J8785-FS	NA	NA
J8786-FS	NA	NA
J8787-FS	NA	NA
J8788-FS	NA	NA
J8809-FS	NA	NA
J8810-FS	NA	NA
J8811-FS	NA	NA
J8812-FS	NA	NA
J8813-FS	NA	NA
J8814-FS	NA	NA
J8815-FS	NA	NA
J8816-FS	NA	NA

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It can be done

BATTELLE - NORWELL OPERATIONS
MISCELLANEOUS DOCUMENTATION FORM

Project Title(s)	**Project No.(s)**
CTO-4164 Naval Base Ventura County, California	100110125-01

18-0621

CTO-4164: Analysis of Solids

SD

Entered By:	**On:**

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

Analytical Calibrations

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Sequence Report

Created with Analyst Reporter
Printed: 31/10/2018 8:12:09 AM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
1	MeOH		10/17/2018 7:36:00 PM	5-0369.dam	Data18-0590_18-01588_18-0589.wiff
2	KB73	L1	10/17/2018 7:46:52 PM	5-0369.dam	Data18-0590_18-01588_18-0589.wiff
3	KB74	L2	10/17/2018 7:57:45 PM	5-0369.dam	Data18-0590_18-01588_18-0589.wiff
4	KB75	L3	10/17/2018 8:08:39 PM	5-0369.dam	Data18-0590_18-01588_18-0589.wiff
5	KB76	L4	10/17/2018 8:19:32 PM	5-0369.dam	Data18-0590_18-01588_18-0589.wiff
6	KB77	L5	10/17/2018 8:30:23 PM	5-0369.dam	Data18-0590_18-01588_18-0589.wiff
7	KB78	L6	10/17/2018 8:41:14 PM	5-0369.dam	Data18-0590_18-01588_18-0589.wiff
8	KB79	L7	10/17/2018 8:52:06 PM	5-0369.dam	Data18-0590_18-01588_18-0589.wiff
9	KB80 IB	IB	10/17/2018 9:02:57 PM	5-0369.dam	Data18-0590_18-01588_18-0589.wiff
10	KB81 ICC	ICC	10/17/2018 9:13:49 PM	5-0369.dam	Data18-0590_18-01588_18-0589.wiff
11	KB89 Branch	BRANCH	10/17/2018 9:24:41 PM	5-0369.dam	Data18-0590_18-01588_18-0589.wiff

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Sequence Report

Created with Analyst Reporter
Printed: 30/10/2018 3:42:45 PM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
1	KB75 ISC	ISC	10/24/2018 5:30:17 PM	5-0369.dam	5500_10242018_05-0369.wiff
2	KB80 IB	IB	10/24/2018 5:41:09 PM	5-0369.dam	5500_10242018_05-0369.wiff
3	MeOH		10/24/2018 5:52:02 PM	5-0369.dam	5500_10242018_05-0369.wiff
4	CS009PB-FS(0)	Procedural Blank	10/24/2018 6:02:54 PM	5-0369.dam	5500_10242018_05-0369.wiff
5	CS010LCS-FS(0)	Laboratory Control Sample	10/24/2018 6:13:45 PM	5-0369.dam	5500_10242018_05-0369.wiff
6	J8801-FS(0)	VC-SD-FB12-10092018	10/24/2018 6:24:36 PM	5-0369.dam	5500_10242018_05-0369.wiff
7	J8802-FS(0)	VC-SD-EB12-10092018	10/24/2018 6:35:29 PM	5-0369.dam	5500_10242018_05-0369.wiff
8	J8803-FS(0)	VC-SD-EB13-10092018	10/24/2018 6:46:20 PM	5-0369.dam	5500_10242018_05-0369.wiff
9	J8804-FS(0)	VC-S14GW02-1018	10/24/2018 6:57:10 PM	5-0369.dam	5500_10242018_05-0369.wiff
10	J8805-FS(0)	VC-S14GW02P-1018	10/24/2018 7:08:00 PM	5-0369.dam	5500_10242018_05-0369.wiff
11	J8806-FS(0)	VC-S14GW19-1018	10/24/2018 7:18:52 PM	5-0369.dam	5500_10242018_05-0369.wiff
12	J8807MS-FS(0)	VC-S14GW02-1018-MS	10/24/2018 7:29:44 PM	5-0369.dam	5500_10242018_05-0369.wiff
13	J8808MSD-FS(0)	VC-S14GW02-1018-MSD	10/24/2018 7:40:36 PM	5-0369.dam	5500_10242018_05-0369.wiff
14	KB76 CCV	CCV	10/24/2018 7:51:29 PM	5-0369.dam	5500_10242018_05-0369.wiff
15	MeOH		10/24/2018 8:02:21 PM	5-0369.dam	5500_10242018_05-0369.wiff
16	CS011PB-FS(3)	Procedural Blank	10/24/2018 8:13:12 PM	5-0369.dam	5500_10242018_05-0369.wiff
17	CS012LCS-FS(3)	Laboratory Control Sample	10/24/2018 8:24:04 PM	5-0369.dam	5500_10242018_05-0369.wiff
18	J8777-FS(3)	VC-PM323-324-SD01-000H	10/24/2018 8:34:55 PM	5-0369.dam	5500_10242018_05-0369.wiff
19	J8778-FS(3)	VC-PM323-324-SD01-0102	10/24/2018 8:45:47 PM	5-0369.dam	5500_10242018_05-0369.wiff
20	J8779-FS(3)	VC-PM553-SD01-000H	10/24/2018 8:56:39 PM	5-0369.dam	5500_10242018_05-0369.wiff
21	J8780-FS(3)	VC-PM553-SD01-0102	10/24/2018 9:07:31 PM	5-0369.dam	5500_10242018_05-0369.wiff
22	J8781MS-FS(3)	VC-PM553-SD01-0102-MS	10/24/2018 9:18:23 PM	5-0369.dam	5500_10242018_05-0369.wiff
23	J8782MSD-FS(3)	VC-PM553-SD01-0102-MSD	10/24/2018 9:29:15 PM	5-0369.dam	5500_10242018_05-0369.wiff
24	J8783-FS(3)	VC-PM3009-SD01-000H	10/24/2018 9:40:07 PM	5-0369.dam	5500_10242018_05-0369.wiff
25	J8784-FS(3)	VC-PM3009-SD01-0102	10/24/2018 9:50:59 PM	5-0369.dam	5500_10242018_05-0369.wiff
26	KB77 CCV	CCV	10/24/2018 10:01:50 PM	5-0369.dam	5500_10242018_05-0369.wiff
27	MeOH		10/24/2018 10:12:41	5-0369.dam	5500_10242018_05-

(1)

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Sequence Report

Created with Analyst Reporter
Printed: 30/10/2018 3:42:45 PM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
			PM		0369.wiff
28	J8785-FS(3)	VC-PM372-SD01-000H	10/24/2018 10:23:33 PM	5-0369.dam	5500_10242018_05-0369.wiff
29	J8786-FS(3)	VC-PM372-SD01-0102	10/24/2018 10:34:26 PM	5-0369.dam	5500_10242018_05-0369.wiff
30	J8787-FS(3)	VC-CS11-SD01-000H	10/24/2018 10:45:17 PM	5-0369.dam	5500_10242018_05-0369.wiff
31	J8788-FS(3)	VC-CS11-SD01-0102	10/24/2018 10:56:09 PM	5-0369.dam	5500_10242018_05-0369.wiff
32	J8809-FS(3)	VC-STP-SD01-000H	10/24/2018 11:07:00 PM	5-0369.dam	5500_10242018_05-0369.wiff
33	J8810-FS(3)	VC-STP-SD01-0102	10/24/2018 11:17:52 PM	5-0369.dam	5500_10242018_05-0369.wiff
34	J8811-FS(3)	VC-STP-SD02-000H	10/24/2018 11:28:43 PM	5-0369.dam	5500_10242018_05-0369.wiff
35	J8812-FS(3)	VC-STP-SD02-0102	10/24/2018 11:39:36 PM	5-0369.dam	5500_10242018_05-0369.wiff
36	J8813-FS(3)	VC-STP-SD03-000H	10/24/2018 11:50:27 PM	5-0369.dam	5500_10242018_05-0369.wiff
37	J8814-FS(3)	VC-STP-SD03-0102	10/25/2018 12:01:19 AM	5-0369.dam	5500_10242018_05-0369.wiff
38	KB76 CCV	CCV	10/25/2018 12:12:12 AM	5-0369.dam	5500_10242018_05-0369.wiff
39	MeOH		10/25/2018 12:23:05 AM	5-0369.dam	5500_10242018_05-0369.wiff
40	J8815-FS(3)	VC-STP-SD04-000H	10/25/2018 12:33:58 AM	5-0369.dam	5500_10242018_05-0369.wiff
41	J8816-FS(3)	VC-STP-SD04-0102	10/25/2018 12:44:50 AM	5-0369.dam	5500_10242018_05-0369.wiff
42	KB77 CCV	CCV	10/25/2018 12:55:41 AM	5-0369.dam	5500_10242018_05-0369.wiff

(1) Samples do not apply to this batch. LMG 10/30/18

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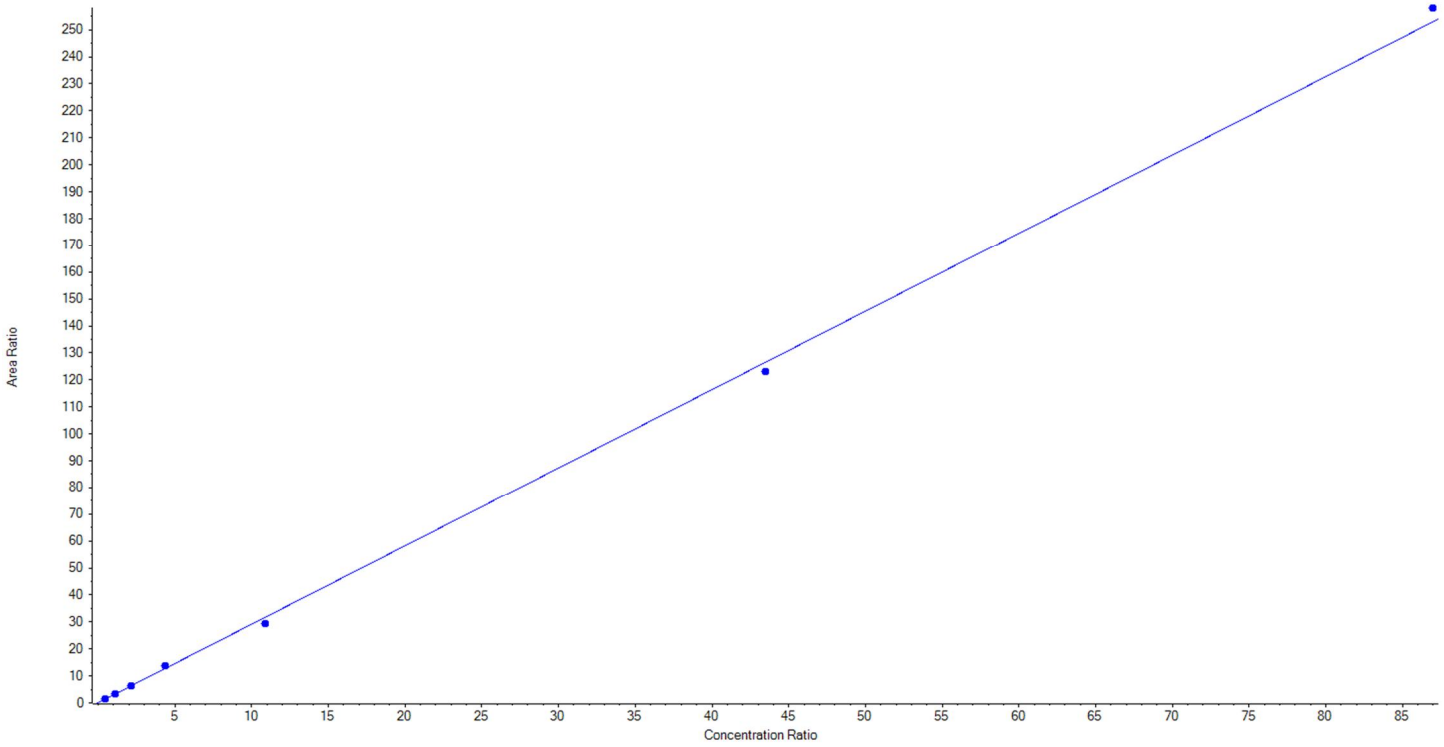
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFBS_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	298.9 / 80.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C3-PFBS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 2.90746 x + 0.06970 (r = 0.99940) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	101.00	104.635578	103.6
3	KB74	L2	True	252.50	249.370464	98.8
4	KB75	L3	True	505.00	495.098560	98.0
5	KB76	L4	True	1010.00	1091.288759	108.1
6	KB77	L5	True	2525.00	2332.691625	92.4
7	KB78	L6	True	10100.00	9811.581725	97.1
8	KB79	L7	True	20200.00	20608.833290	102.0



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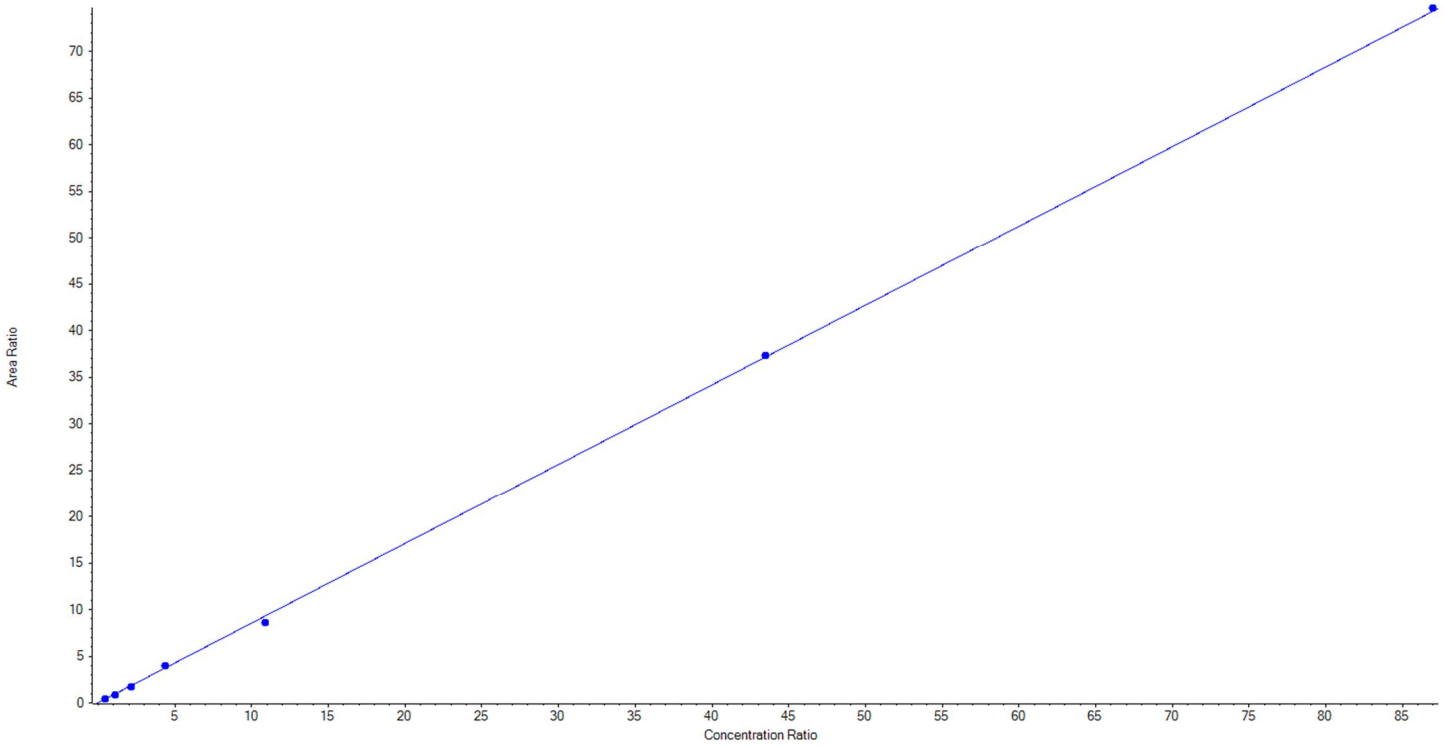
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFBS_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	298.9 / 99.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C3-PFBS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.85386 x + 0.01367 (r = 0.99964) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	101.00	109.976962	108.9
3	KB74	L2	True	252.50	242.180085	95.9
4	KB75	L3	True	505.00	475.121472	94.1
5	KB76	L4	True	1010.00	1086.381545	107.6
6	KB77	L5	True	2525.00	2339.199841	92.6
7	KB78	L6	True	10100.00	10143.472130	100.4
8	KB79	L7	True	20200.00	20297.167965	100.5



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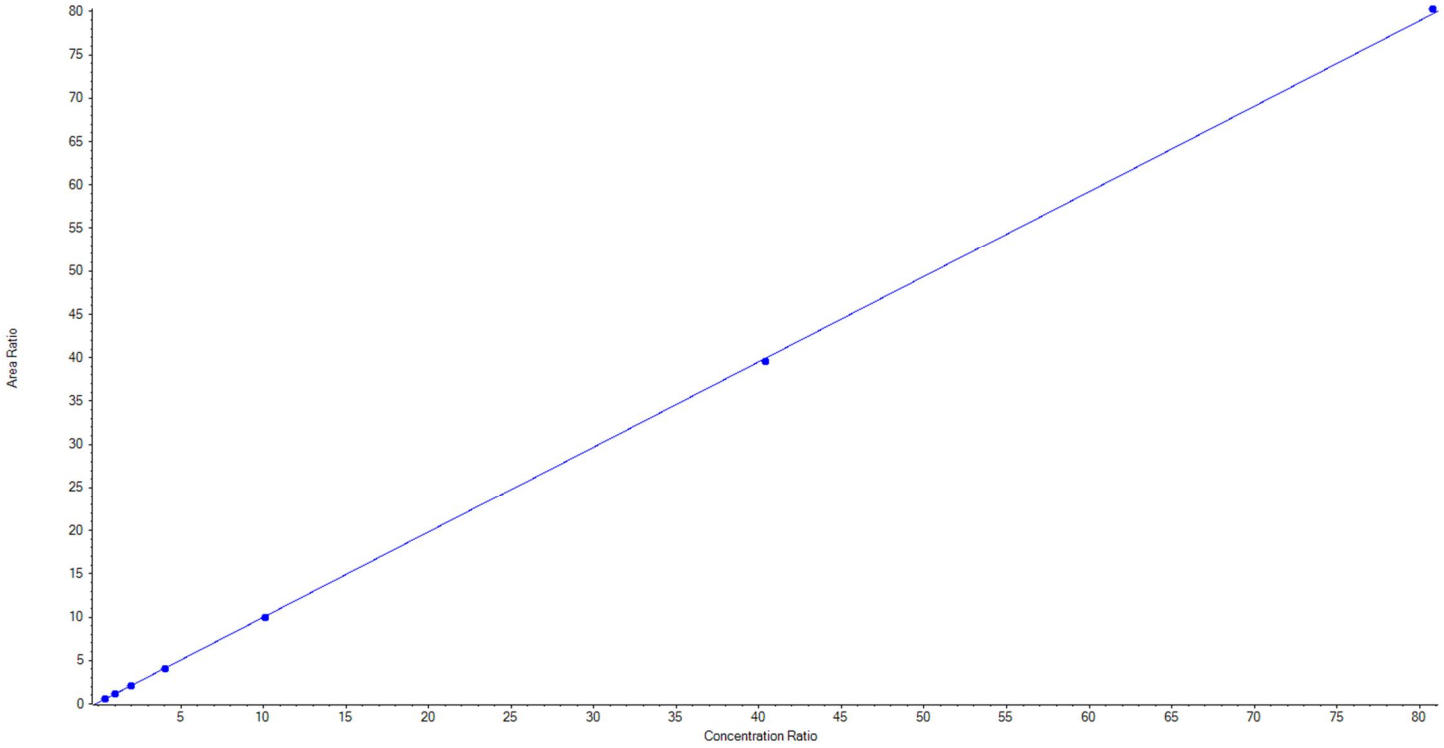
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFHxA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	313.0 / 269.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C5-PFHxA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.98501 x + 0.13333 (r = 0.99994) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	101.00	98.968181	98.0
3	KB74	L2	True	252.50	269.910942	106.9
4	KB75	L3	True	505.00	490.752146	97.2
5	KB76	L4	True	1010.00	1004.472242	99.5
6	KB77	L5	True	2525.00	2495.865956	98.9
7	KB78	L6	True	10100.00	9993.499522	99.0
8	KB79	L7	True	20200.00	20340.031011	100.7



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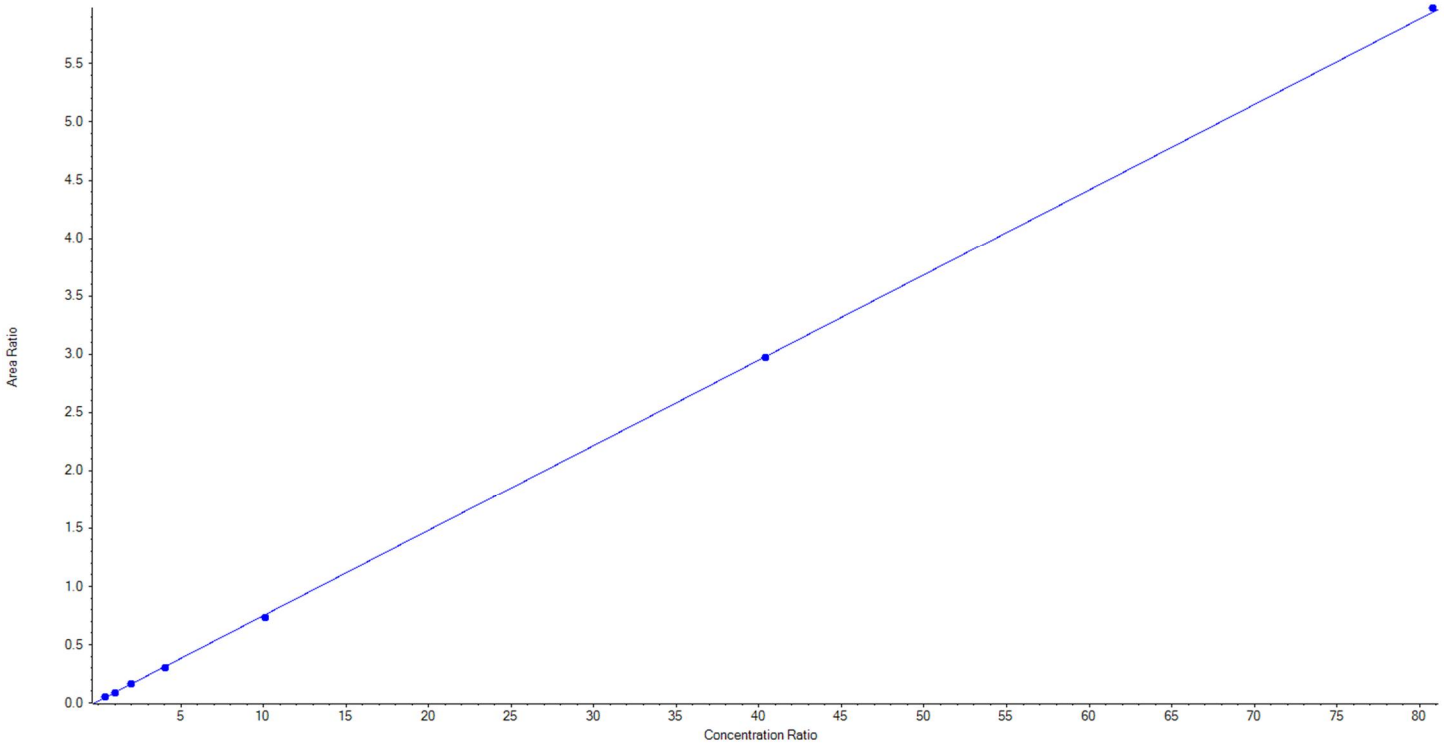
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFHxA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	313.0 / 119.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C5-PFHxA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.07336 x + 0.01493 (r = 0.99989) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	101.00	113.183087	112.1
3	KB74	L2	True	252.50	230.645561	91.3
4	KB75	L3	True	505.00	514.901118	102.0
5	KB76	L4	True	1010.00	980.952621	97.1
6	KB77	L5	True	2525.00	2451.366061	97.1
7	KB78	L6	True	10100.00	10083.260482	99.8
8	KB79	L7	True	20200.00	20319.191070	100.6



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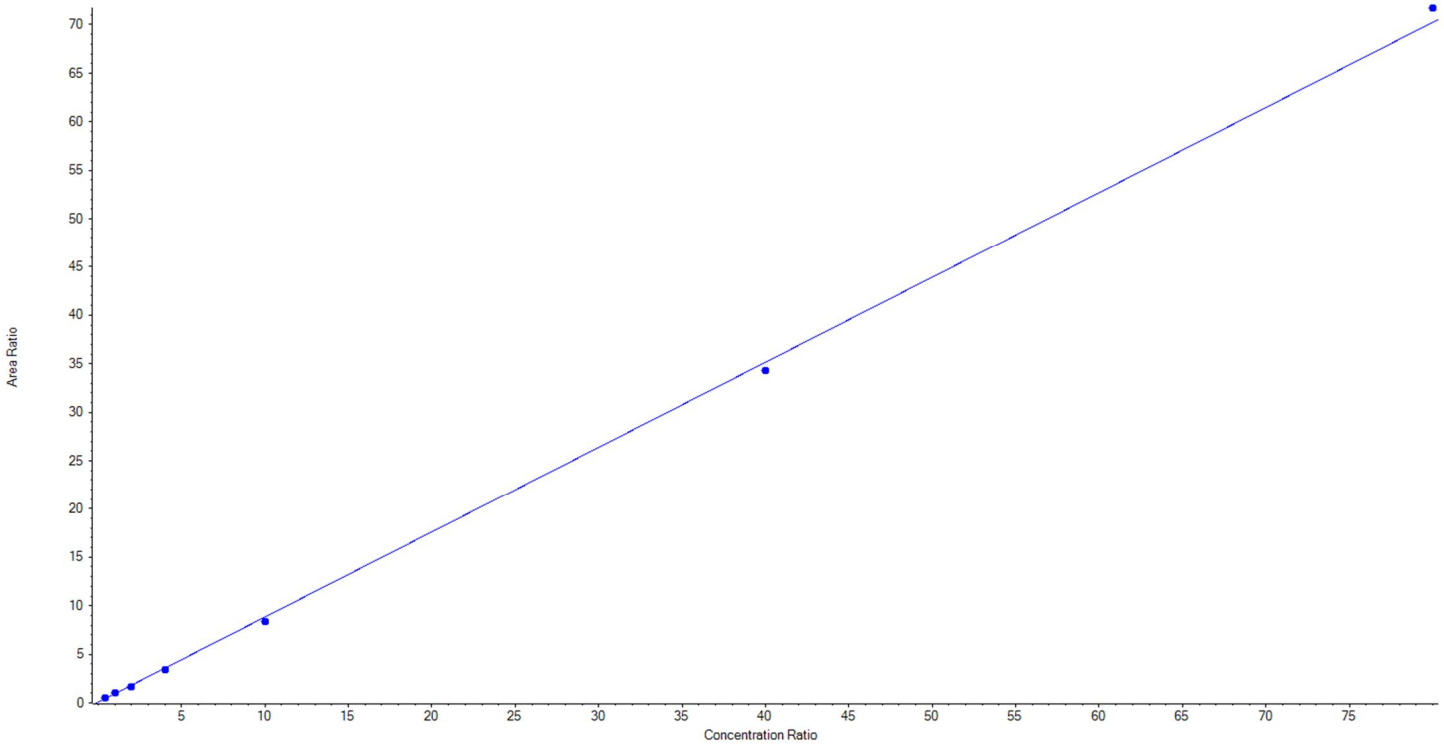
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFHpA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	363.0 / 319.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C4-PFHpA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.87722 x + 0.06760 (r = 0.99955) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	113.465532	113.5
3	KB74	L2	True	250.00	261.922885	104.8
4	KB75	L3	True	500.00	452.888167	90.6
5	KB76	L4	True	1000.00	963.772233	96.4
6	KB77	L5	True	2500.00	2376.996854	95.1
7	KB78	L6	True	10000.00	9765.162244	97.7
8	KB79	L7	True	20000.00	20415.792084	102.1



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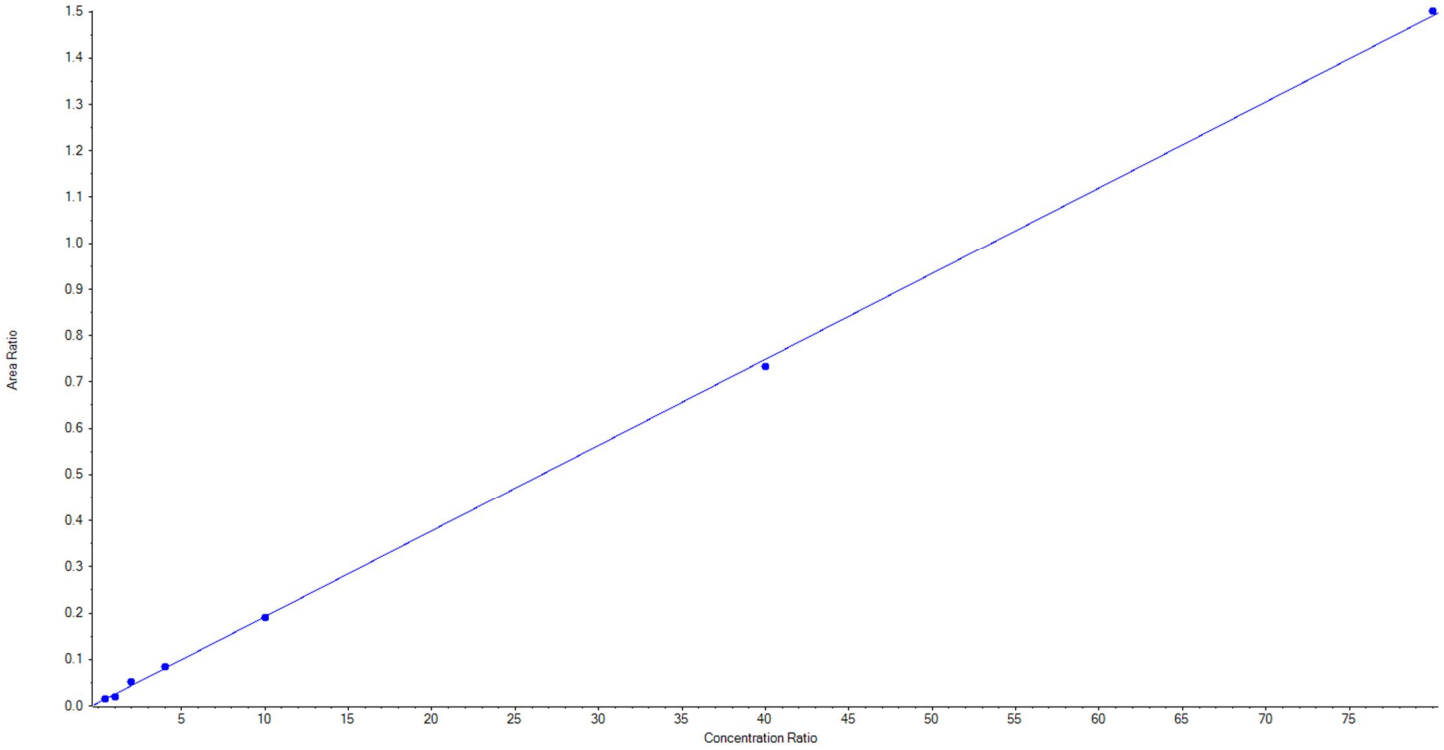
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFHpA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	363.0 / 169.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C4-PFHpA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.01856 x + 0.00664 (r = 0.99907) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	103.311634	103.3
3	KB74	L2	True	250.00	175.823351	70.3
4	KB75	L3	True	500.00	618.850678	123.8
5	KB76	L4	True	1000.00	1051.701356	105.2
6	KB77	L5	True	2500.00	2469.602759	98.8
7	KB78	L6	True	10000.00	9796.218447	98.0
8	KB79	L7	True	20000.00	20134.491774	100.7



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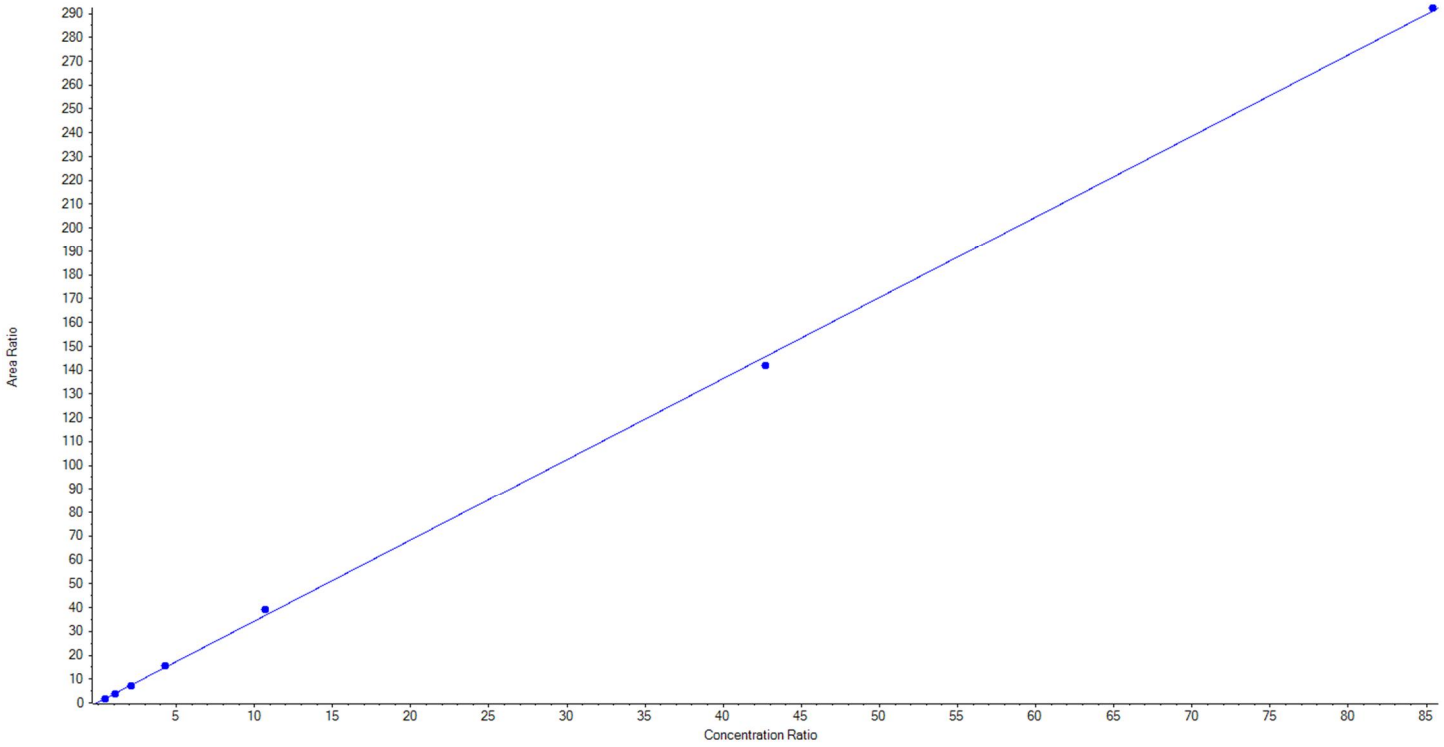
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFHxS_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	399.0 / 80.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C3-PFHxS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 3.40443 x + 0.28942 (r = 0.99956) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	101.00	105.225987	104.2
3	KB74	L2	True	252.50	232.865372	92.2
4	KB75	L3	True	505.00	467.824000	92.6
5	KB76	L4	True	1010.00	1074.776448	106.4
6	KB77	L5	True	2525.00	2696.493262	106.8
7	KB78	L6	True	10100.00	9828.822898	97.3
8	KB79	L7	True	20200.00	20287.492034	100.4



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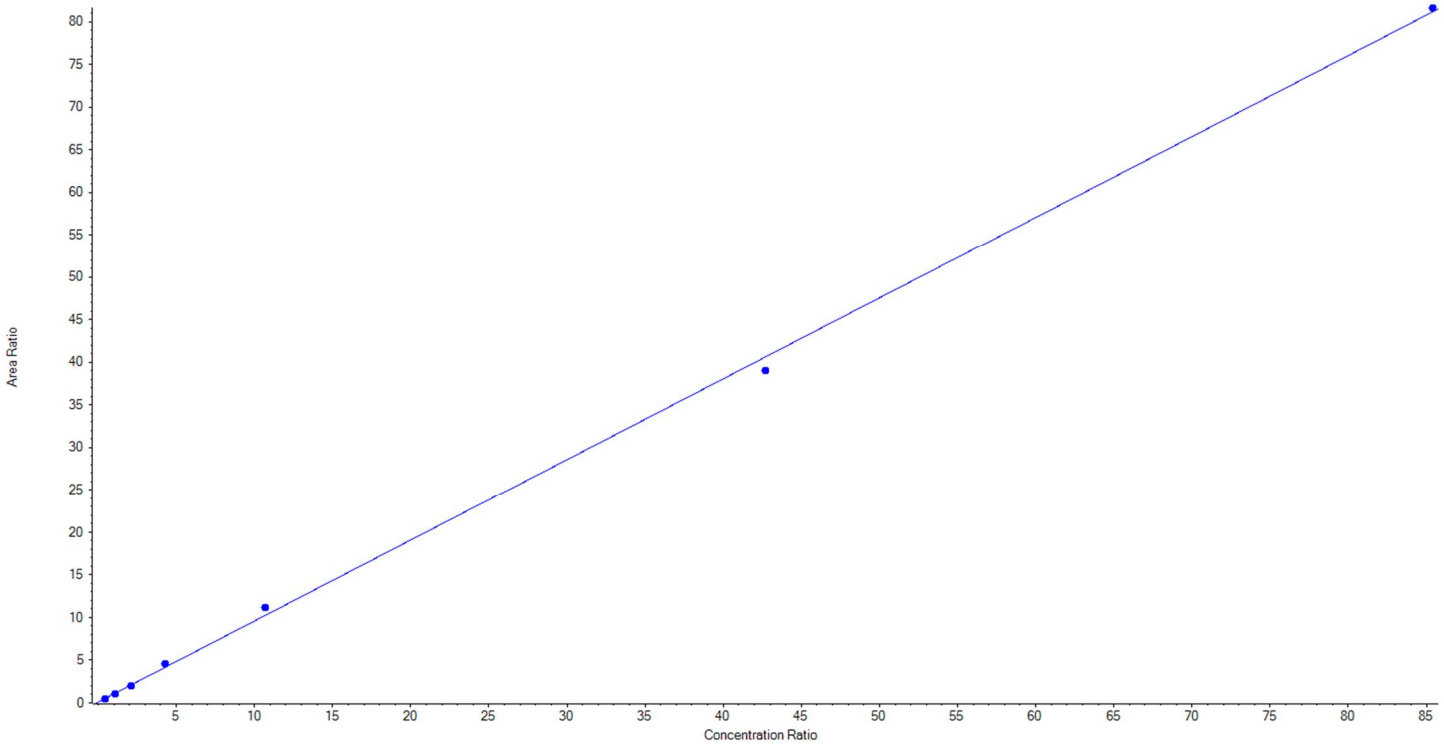
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFHxS_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	399.0 / 99.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C3-PFHxS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.94916 x + 0.10161 (r = 0.99926) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	101.00	98.139274	97.2
3	KB74	L2	True	252.50	231.314187	91.6
4	KB75	L3	True	505.00	484.563583	96.0
5	KB76	L4	True	1010.00	1107.476178	109.7
6	KB77	L5	True	2525.00	2749.725828	108.9
7	KB78	L6	True	10100.00	9714.855919	96.2
8	KB79	L7	True	20200.00	20307.425032	100.5



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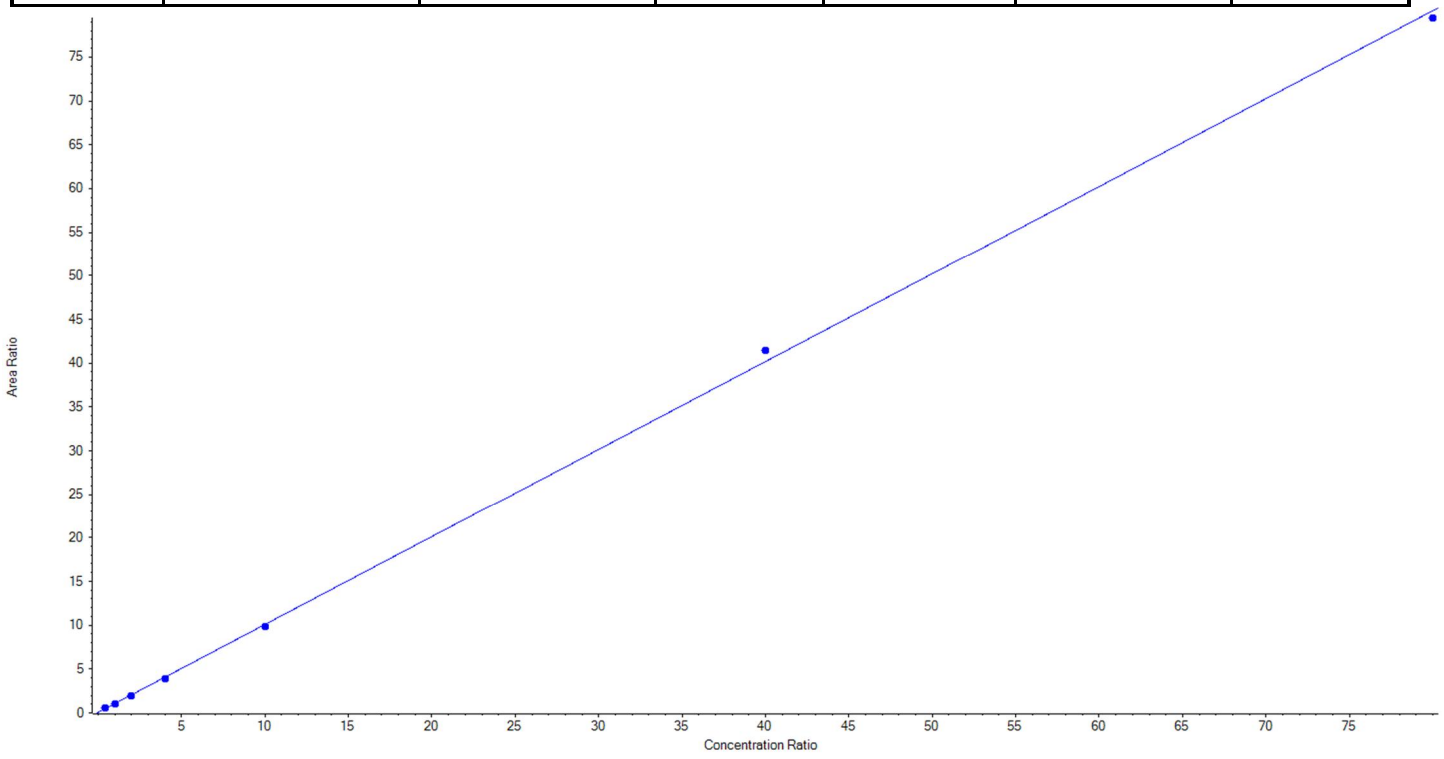
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFOA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	413.0 / 369.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C8-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.00279 x + 0.06080 (r = 0.99969) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	113.608497	113.6
3	KB74	L2	True	250.00	242.259718	96.9
4	KB75	L3	True	500.00	467.456638	93.5
5	KB76	L4	True	1000.00	956.844142	95.7
6	KB77	L5	True	2500.00	2452.232813	98.1
7	KB78	L6	True	10000.00	10326.914009	103.3
8	KB79	L7	True	20000.00	19790.684183	99.0



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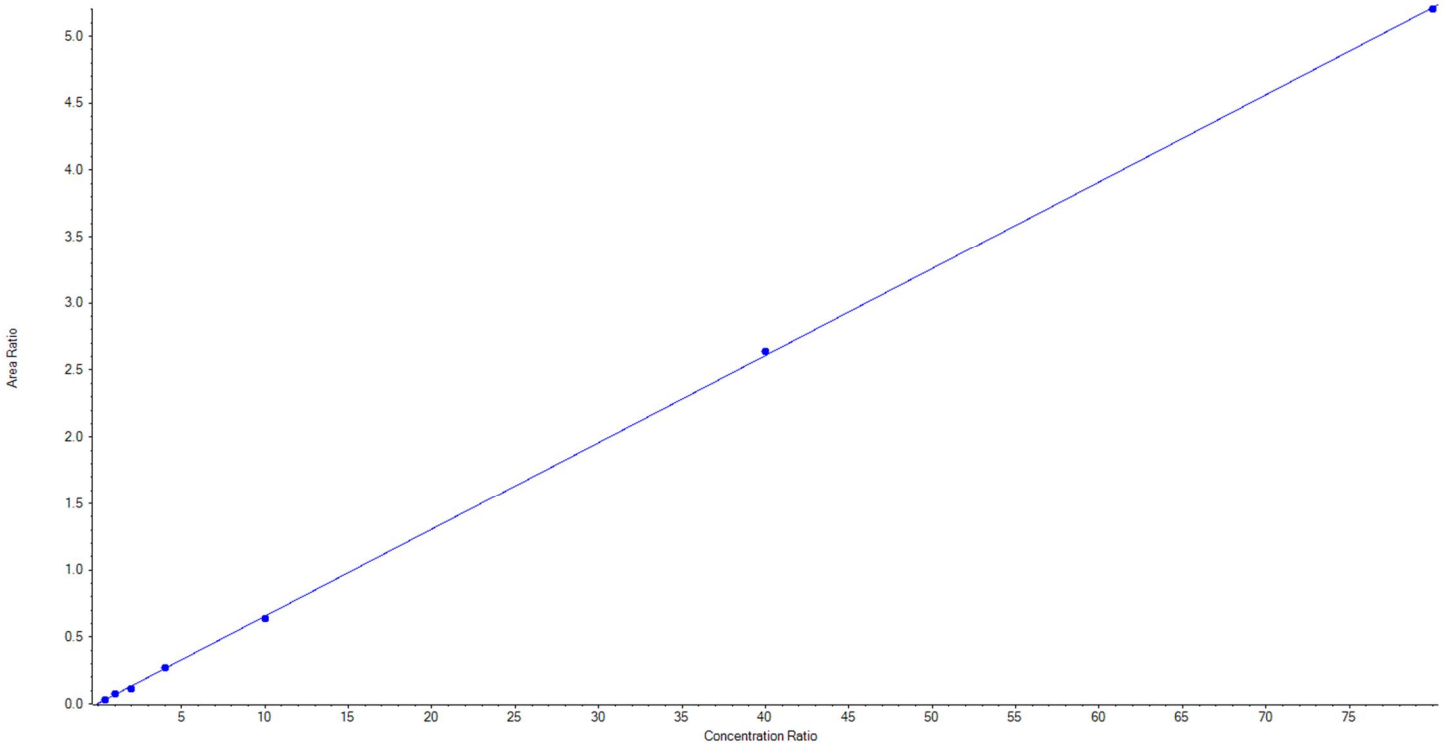
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFOA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	413.0 / 169.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C8-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.06512 x + 0.00376 (r = 0.99971) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	104.849376	104.9
3	KB74	L2	True	250.00	273.238913	109.3
4	KB75	L3	True	500.00	421.303706	84.3
5	KB76	L4	True	1000.00	1028.034772	102.8
6	KB77	L5	True	2500.00	2444.883328	97.8
7	KB78	L6	True	10000.00	10121.411629	101.2
8	KB79	L7	True	20000.00	19956.278277	99.8



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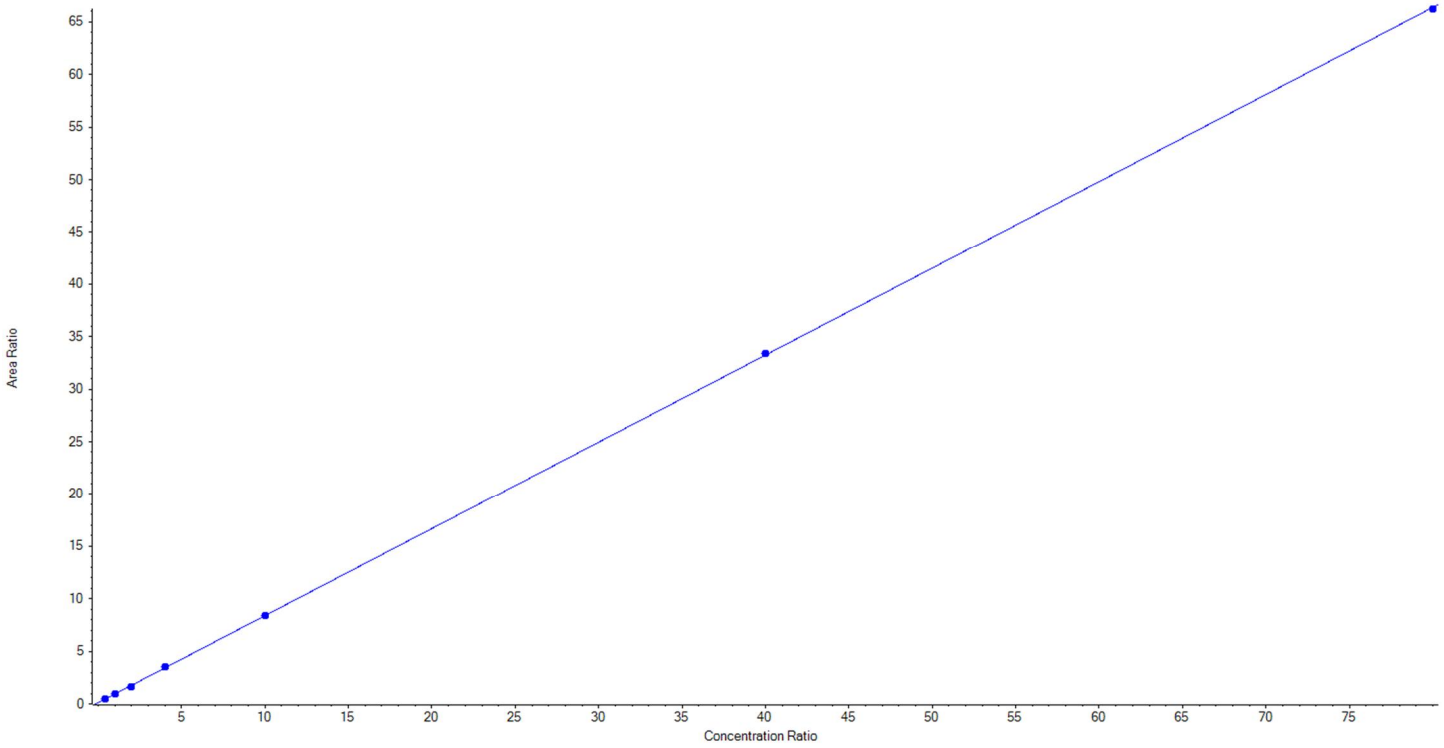
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFNA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	463.0 / 419.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C9-PFNA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.82839 x + 0.10849 (r = 0.99987) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	100.132667	100.1
3	KB74	L2	True	250.00	263.216231	105.3
4	KB75	L3	True	500.00	450.336433	90.1
5	KB76	L4	True	1000.00	1046.243999	104.6
6	KB77	L5	True	2500.00	2491.510736	99.7
7	KB78	L6	True	10000.00	10047.185055	100.5
8	KB79	L7	True	20000.00	19951.374879	99.8



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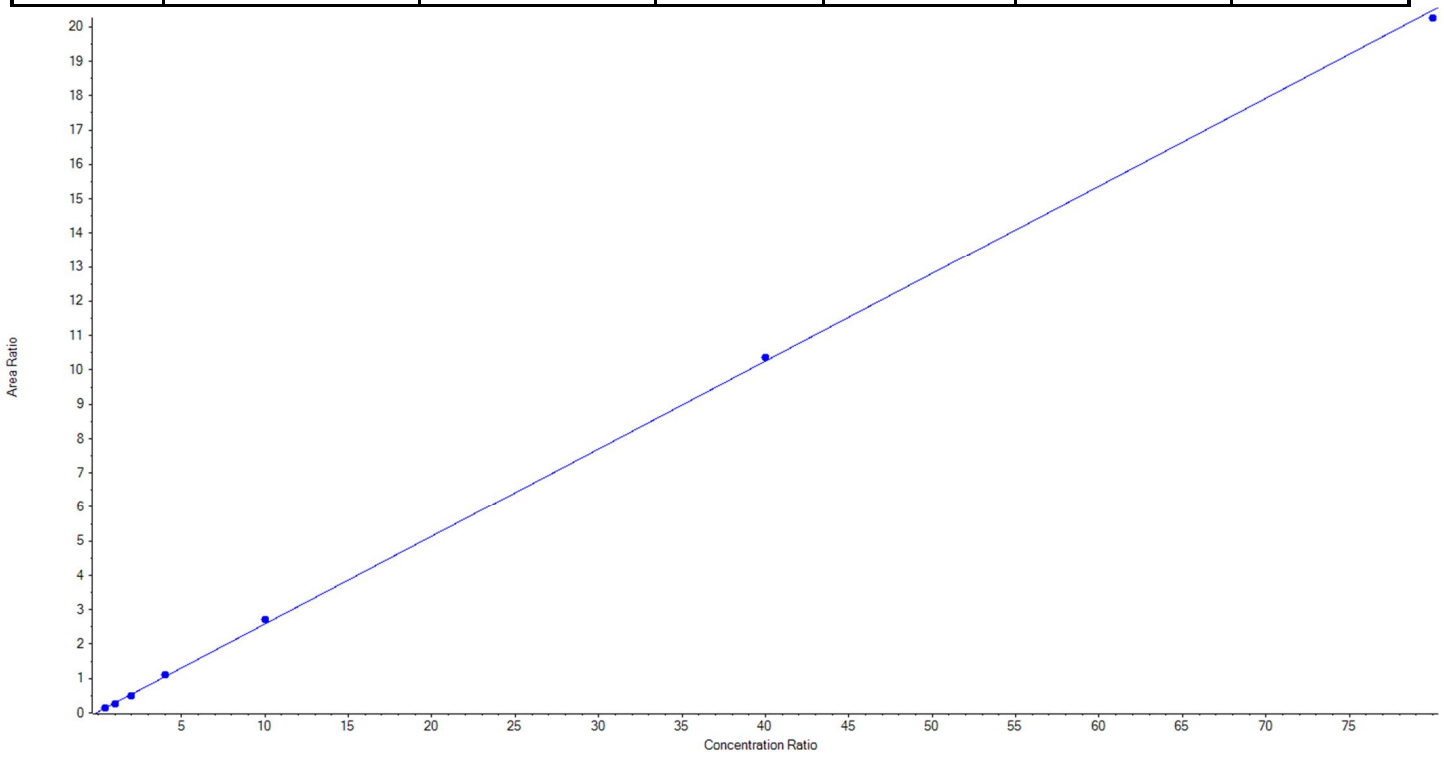
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFNA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	463.0 / 219.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C9-PFNA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.25566 x + 0.02957 (r = 0.99963) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	111.702594	111.7
3	KB74	L2	True	250.00	220.916460	88.4
4	KB75	L3	True	500.00	448.287193	89.7
5	KB76	L4	True	1000.00	1050.052047	105.0
6	KB77	L5	True	2500.00	2632.290752	105.3
7	KB78	L6	True	10000.00	10108.558837	101.1
8	KB79	L7	True	20000.00	19778.192118	98.9



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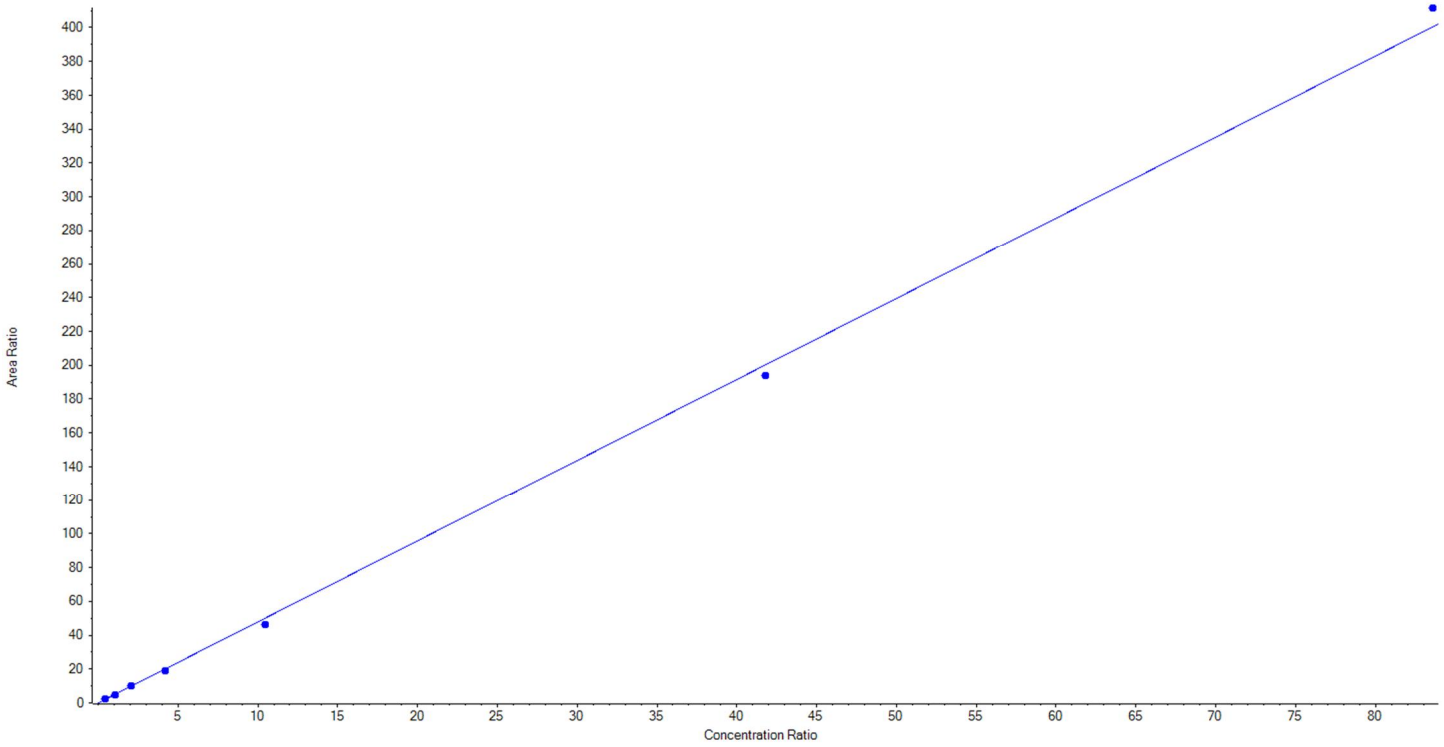
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFOS_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	499.0 / 80.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C8-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 4.79098 x + -0.03583 (r = 0.99927) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	112.998705	113.0
3	KB74	L2	True	250.00	245.807613	98.3
4	KB75	L3	True	500.00	508.954098	101.8
5	KB76	L4	True	1000.00	953.422687	95.3
6	KB77	L5	True	2500.00	2300.880982	92.0
7	KB78	L6	True	10000.00	9674.048541	96.7
8	KB79	L7	True	20000.00	20553.887374	102.8



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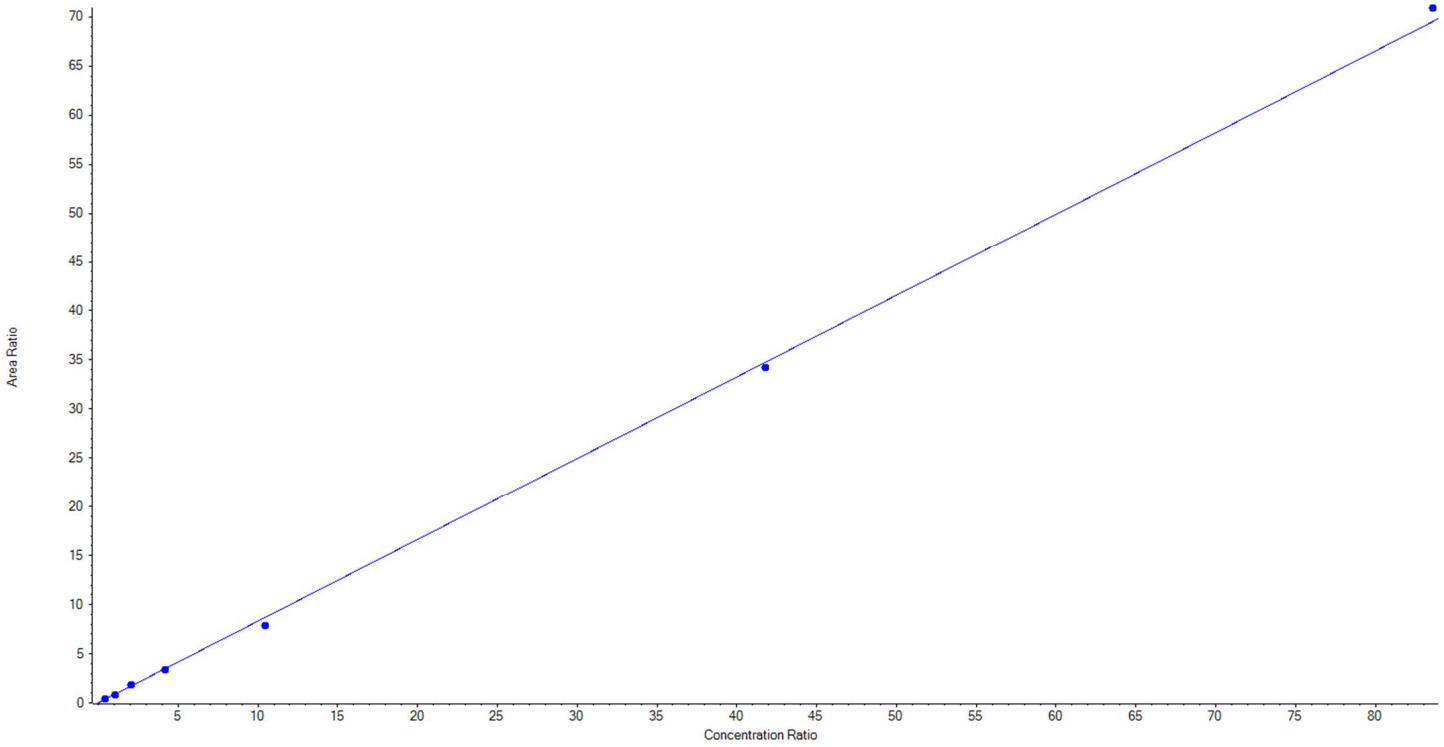
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFOS_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	499.0 / 99.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C8-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.83172 x + -0.00135 (r = 0.99945) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	110.962710	111.0
3	KB74	L2	True	250.00	244.538081	97.8
4	KB75	L3	True	500.00	520.238814	104.1
5	KB76	L4	True	1000.00	958.547975	95.9
6	KB77	L5	True	2500.00	2271.299000	90.9
7	KB78	L6	True	10000.00	9849.093945	98.5
8	KB79	L7	True	20000.00	20395.319474	102.0



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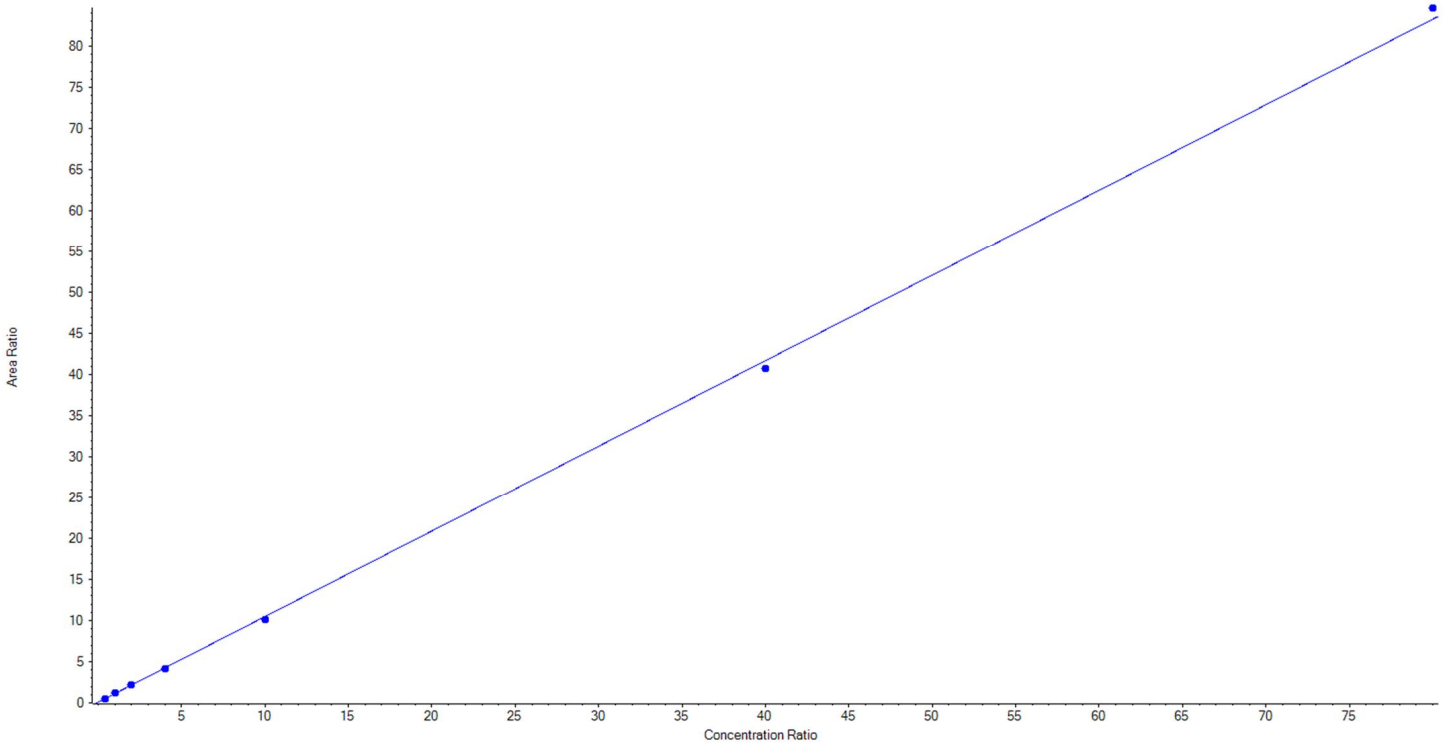
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFDA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	513.0 / 469.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C6-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.03992 x + 0.08967 (r = 0.99977) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	100.375074	100.4
3	KB74	L2	True	250.00	264.467518	105.8
4	KB75	L3	True	500.00	495.556524	99.1
5	KB76	L4	True	1000.00	987.592944	98.8
6	KB77	L5	True	2500.00	2418.646707	96.8
7	KB78	L6	True	10000.00	9760.929085	97.6
8	KB79	L7	True	20000.00	20322.432148	101.6



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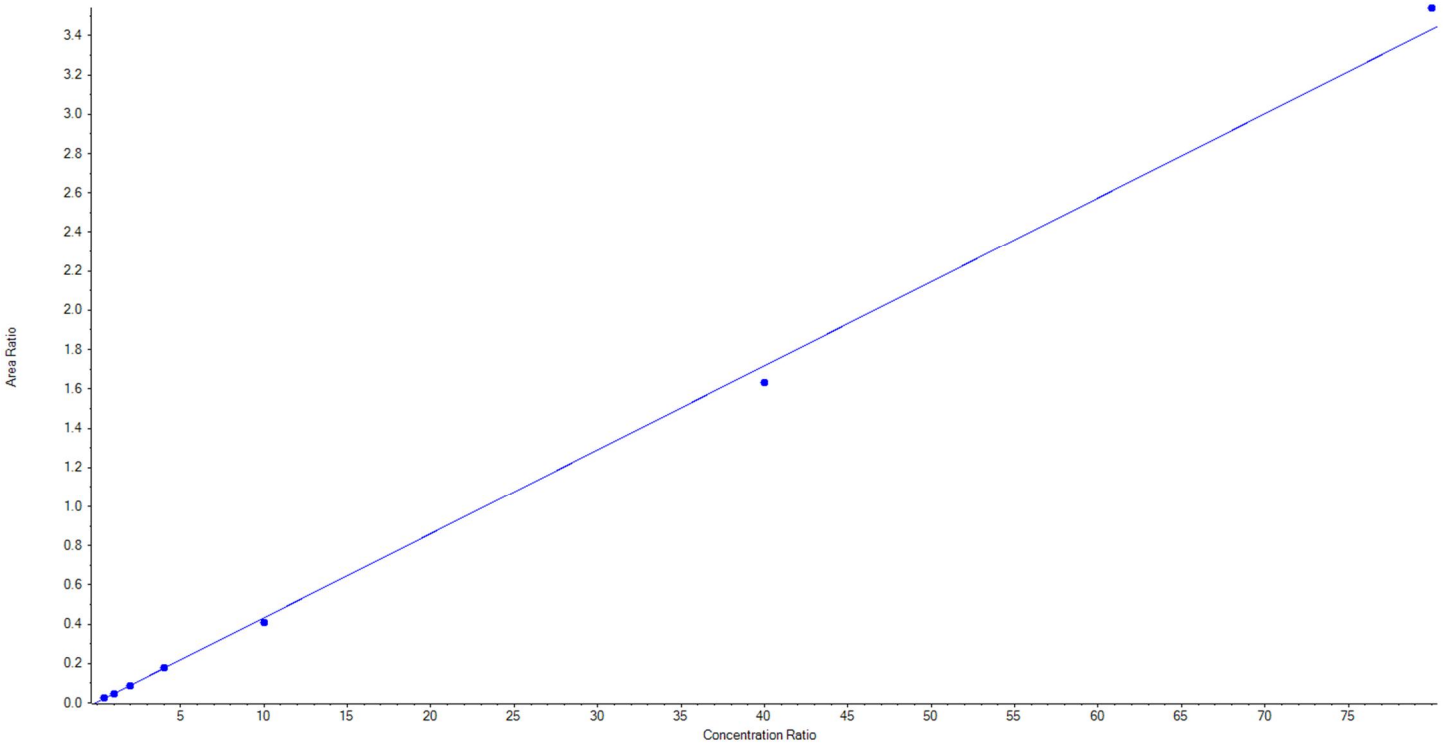
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFDA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	513.0 / 219.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C6-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.04284 x + 0.00408 (r = 0.99914) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	112.406023	112.4
3	KB74	L2	True	250.00	245.500787	98.2
4	KB75	L3	True	500.00	479.073328	95.8
5	KB76	L4	True	1000.00	1010.924950	101.1
6	KB77	L5	True	2500.00	2354.317167	94.2
7	KB78	L6	True	10000.00	9514.985150	95.2
8	KB79	L7	True	20000.00	20632.792594	103.2



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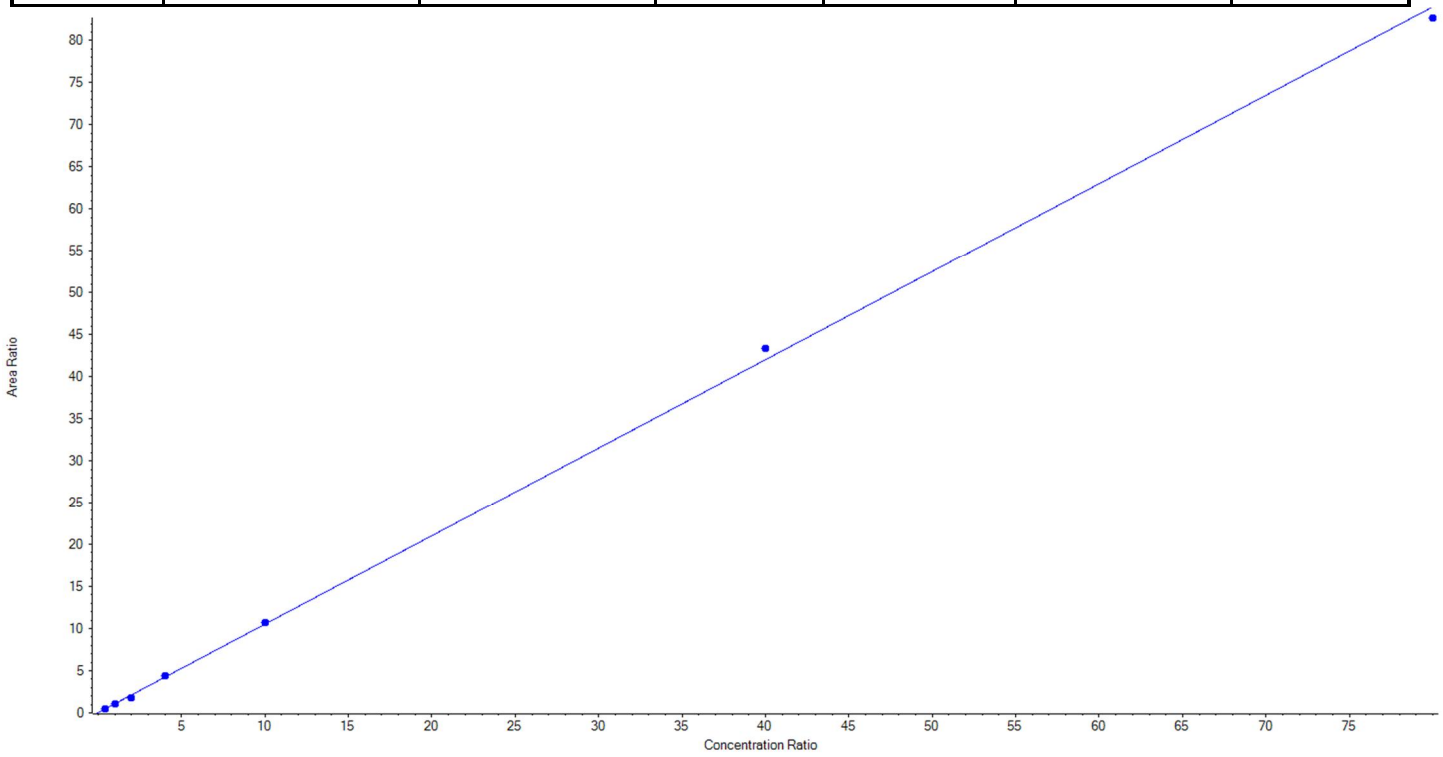
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFUnA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	563.0 / 519.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C7-PFUnA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.04939 x + 0.04151 (r = 0.99953) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	111.527231	111.5
3	KB74	L2	True	250.00	244.824605	97.9
4	KB75	L3	True	500.00	423.690587	84.7
5	KB76	L4	True	1000.00	1026.343861	102.6
6	KB77	L5	True	2500.00	2538.187940	101.5
7	KB78	L6	True	10000.00	10323.155375	103.2
8	KB79	L7	True	20000.00	19682.270401	98.4



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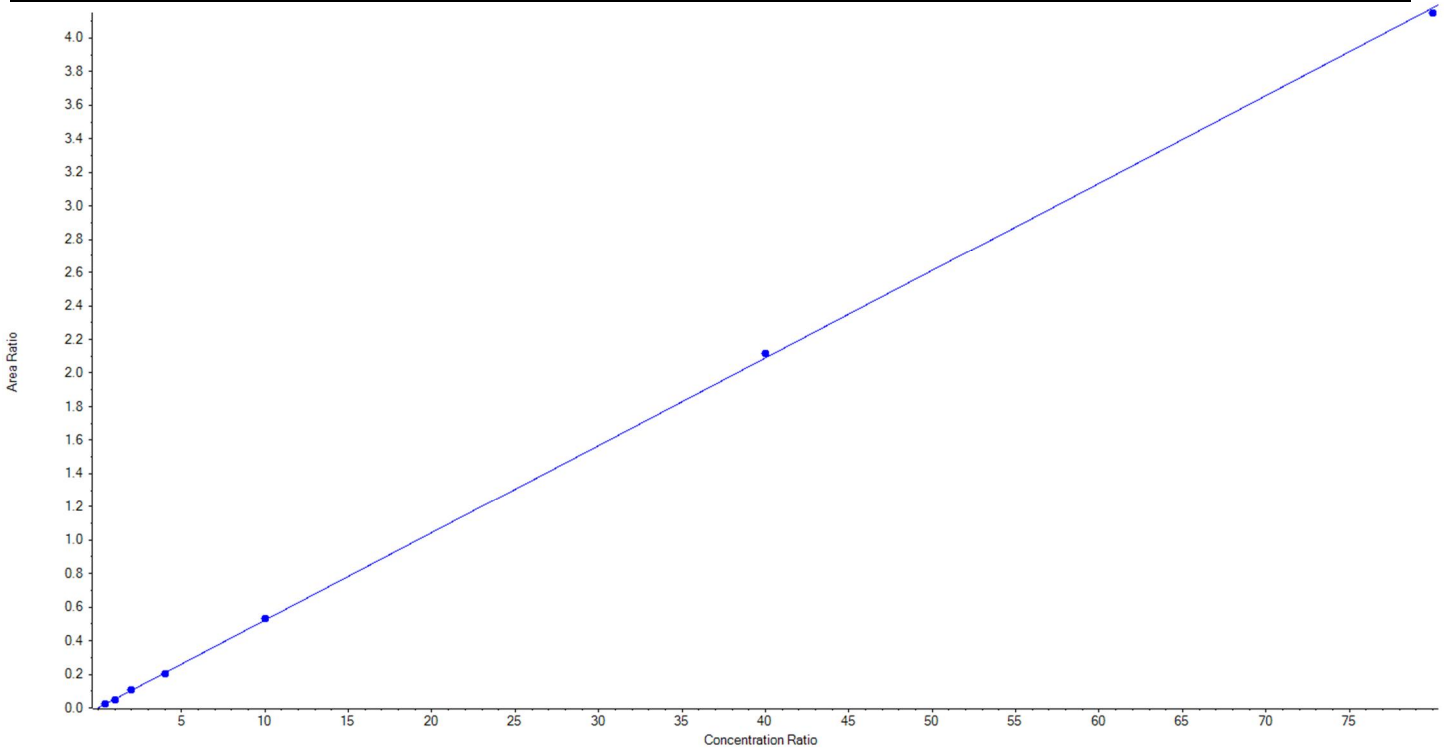
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFUnA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	563.0 / 269.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C7-PFUnA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.05225 x + -5.79528e-5 (r = 0.99994) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	102.220892	102.2
3	KB74	L2	True	250.00	242.442598	97.0
4	KB75	L3	True	500.00	501.608235	100.3
5	KB76	L4	True	1000.00	981.918474	98.2
6	KB77	L5	True	2500.00	2544.385755	101.8
7	KB78	L6	True	10000.00	10125.204796	101.3
8	KB79	L7	True	20000.00	19852.219250	99.3



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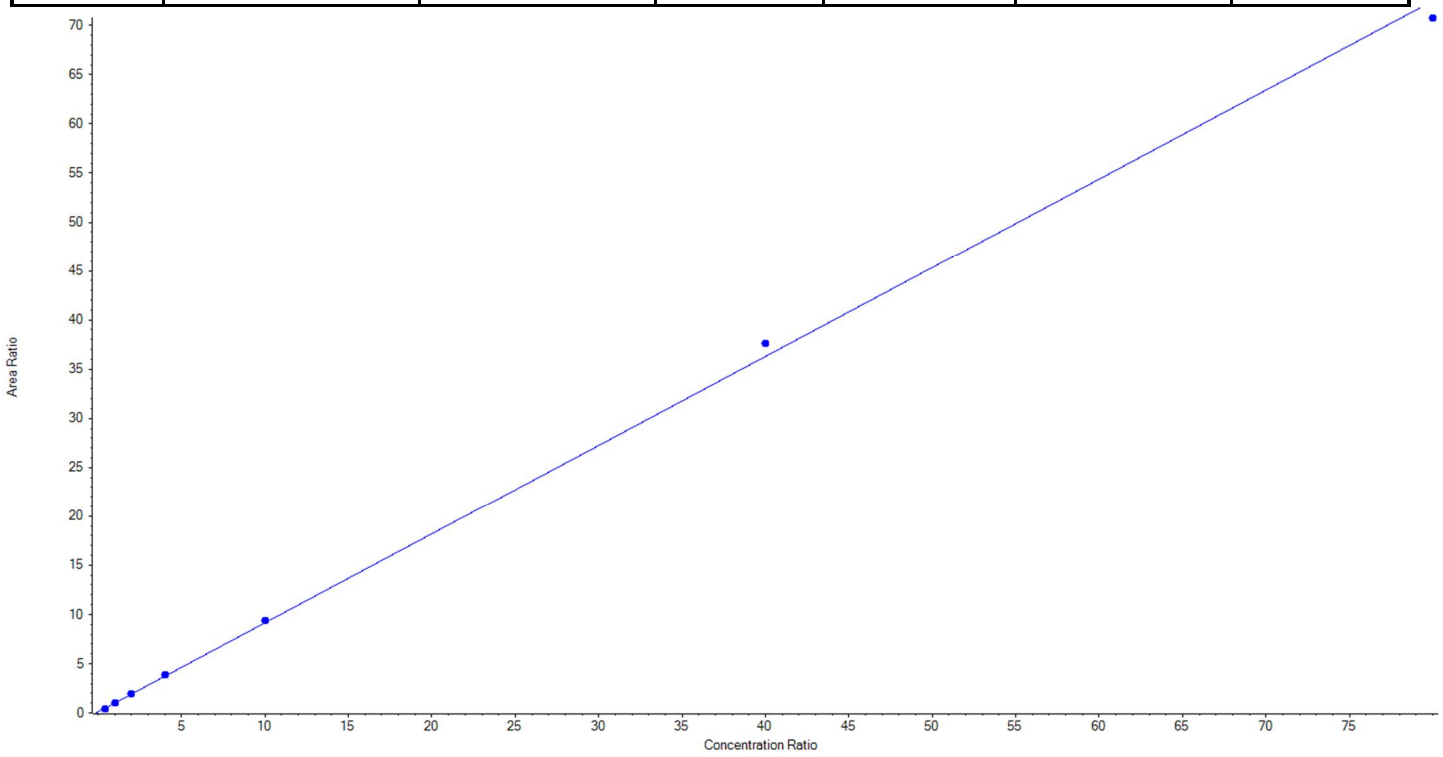
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFDoA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	613.0 / 569.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C2-PFDoA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.90471 x + 0.10550 (r = 0.99952) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	90.939755	90.9
3	KB74	L2	True	250.00	247.072023	98.8
4	KB75	L3	True	500.00	506.360909	101.3
5	KB76	L4	True	1000.00	1050.478389	105.1
6	KB77	L5	True	2500.00	2565.539851	102.6
7	KB78	L6	True	10000.00	10368.355085	103.7
8	KB79	L7	True	20000.00	19521.253987	97.6



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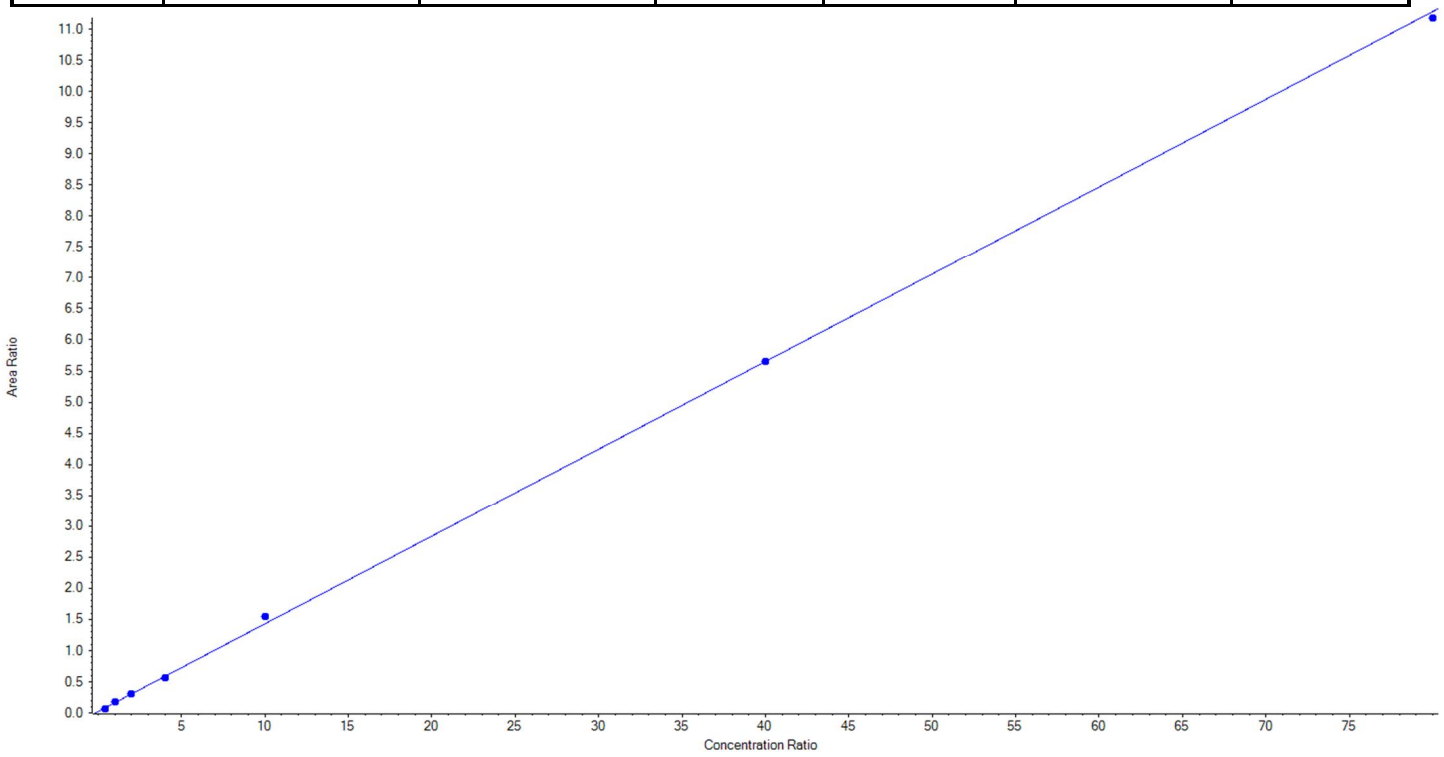
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFDoA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	613.0 / 319.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C2-PFDoA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.14074 x + 0.02292 (r = 0.99961) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	86.545687	86.6
3	KB74	L2	True	250.00	274.615048	109.9
4	KB75	L3	True	500.00	494.661881	98.9
5	KB76	L4	True	1000.00	971.395687	97.1
6	KB77	L5	True	2500.00	2712.576260	108.5
7	KB78	L6	True	10000.00	9996.454238	100.0
8	KB79	L7	True	20000.00	19813.751199	99.1



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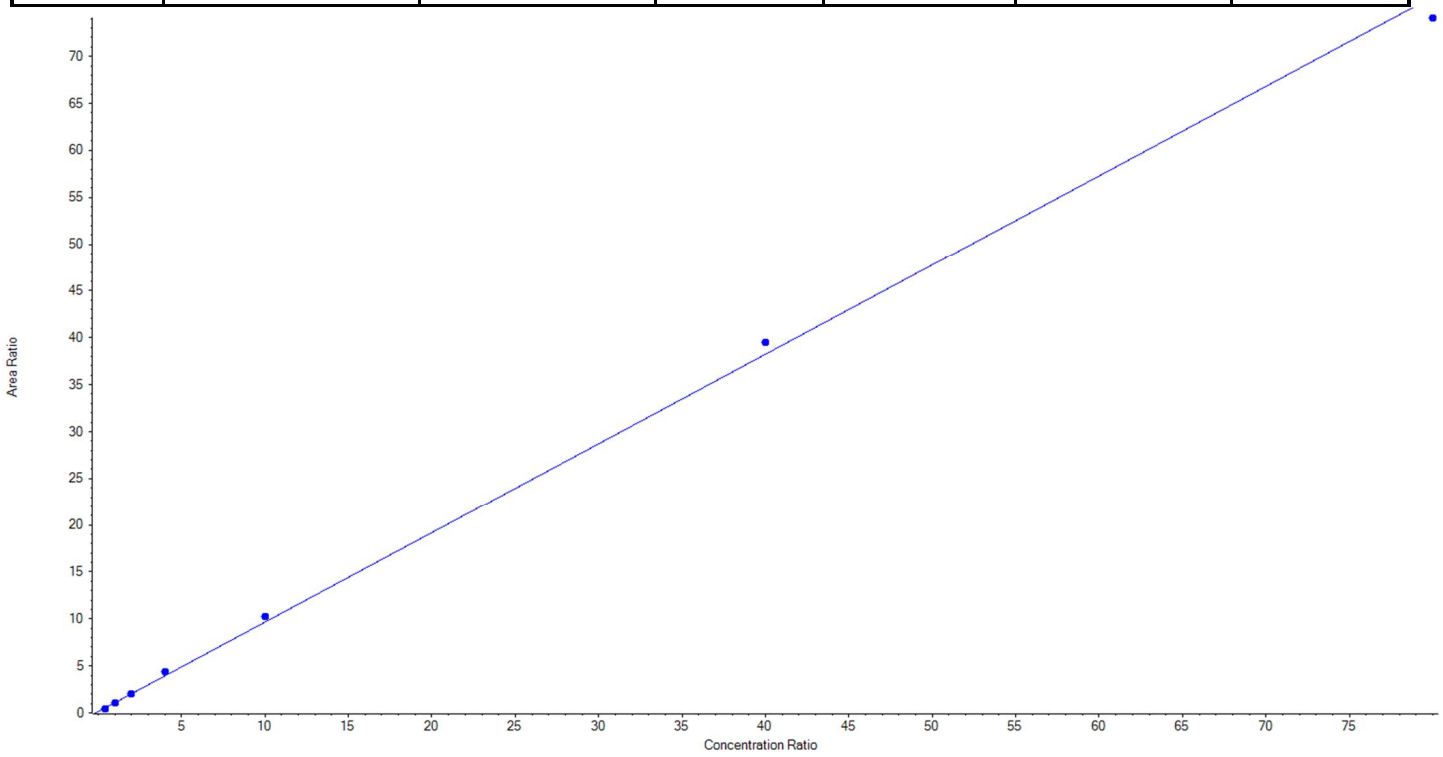
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFTrDA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	663.0 / 619.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.95260 x + 0.12887 (r = 0.99908) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	85.967911	86.0
3	KB74	L2	True	250.00	241.563939	96.6
4	KB75	L3	True	500.00	488.700899	97.7
5	KB76	L4	True	1000.00	1126.764608	112.7
6	KB77	L5	True	2500.00	2664.921530	106.6
7	KB78	L6	True	10000.00	10336.521146	103.4
8	KB79	L7	True	20000.00	19405.559967	97.0



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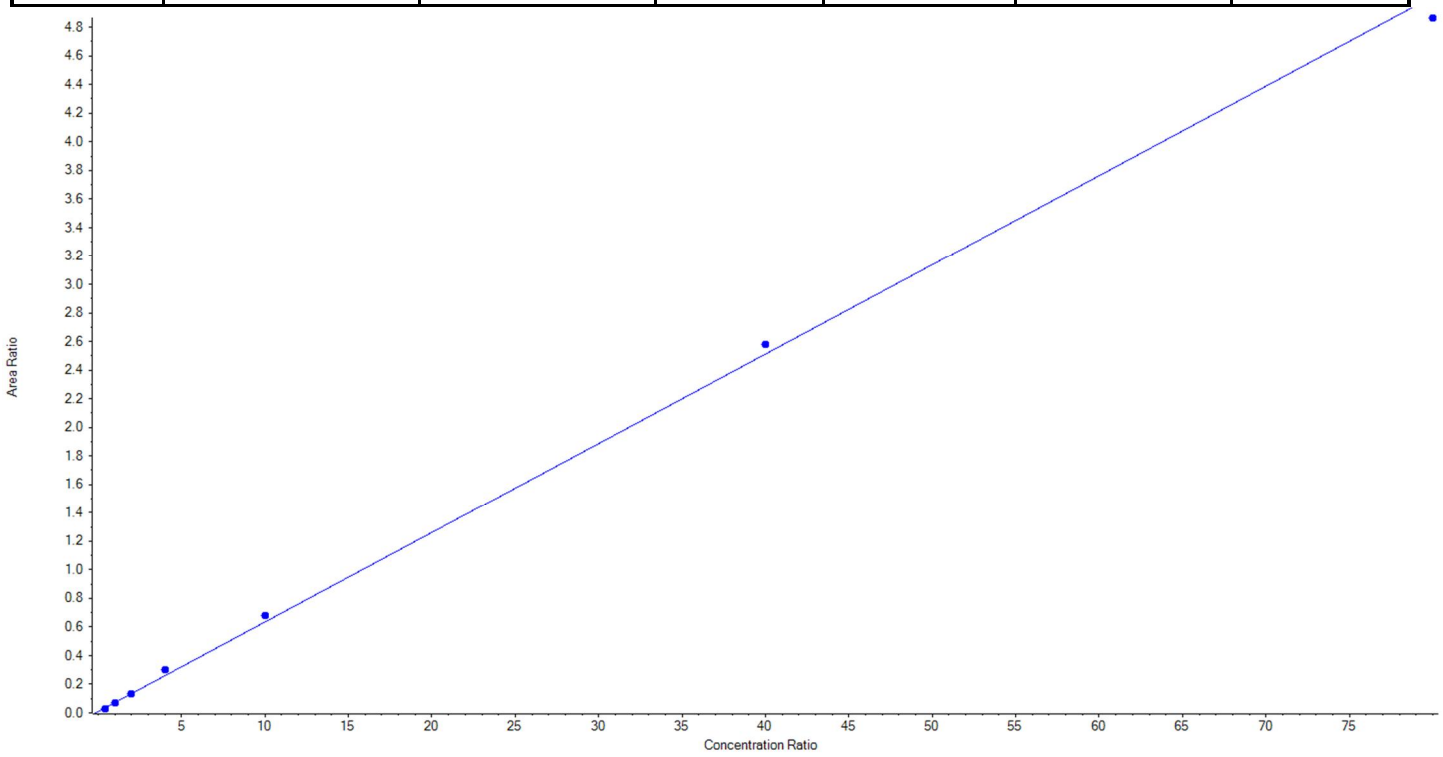
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFTrDA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	663.0 / 169.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.06256 x + 0.00941 (r = 0.99887) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	78.198175	78.2
3	KB74	L2	True	250.00	247.986856	99.2
4	KB75	L3	True	500.00	495.036348	99.0
5	KB76	L4	True	1000.00	1164.067670	116.4
6	KB77	L5	True	2500.00	2684.712399	107.4
7	KB78	L6	True	10000.00	10280.911529	102.8
8	KB79	L7	True	20000.00	19399.087023	97.0



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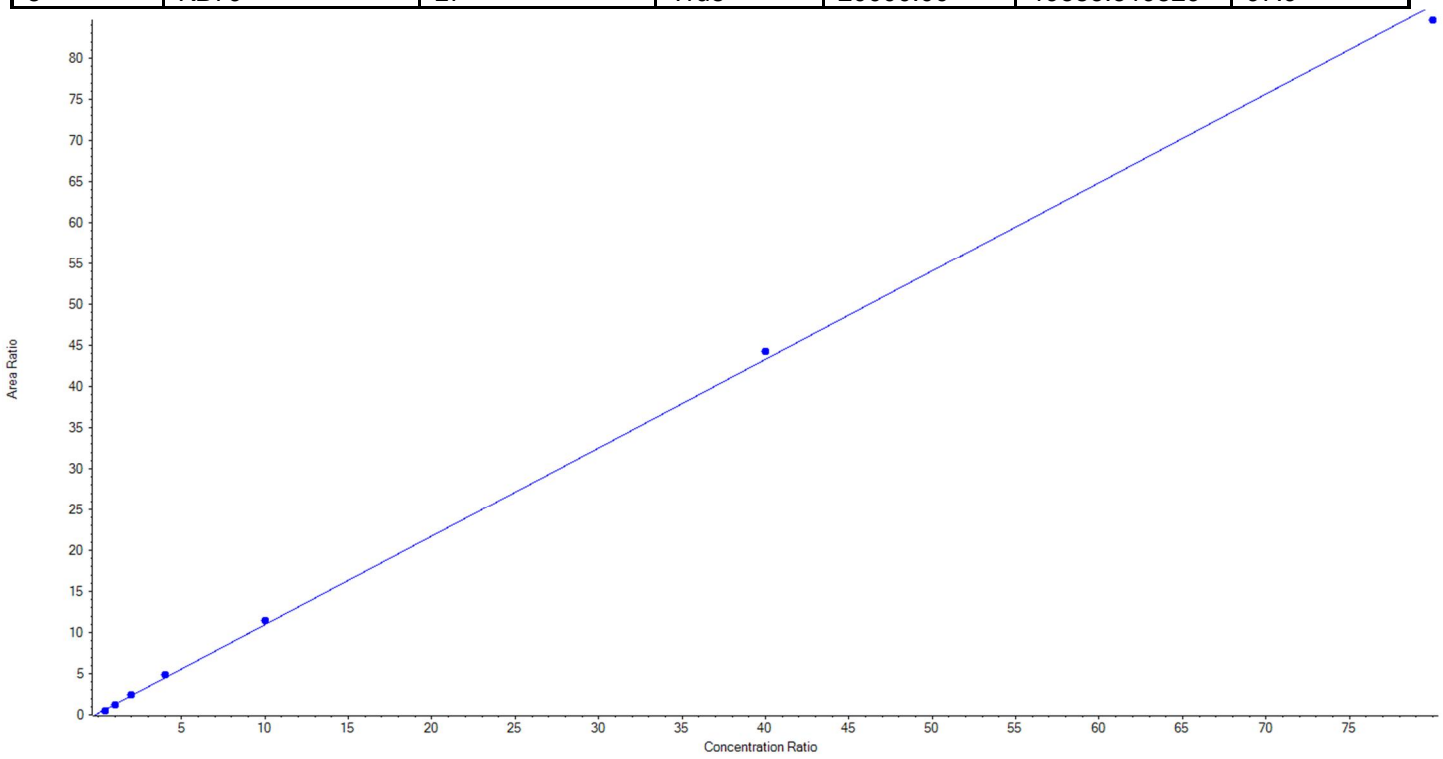
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFTeDA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	713.0 / 669.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.07817 x + 0.18334 (r = 0.99951) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	81.728327	81.7
3	KB74	L2	True	250.00	253.645310	101.5
4	KB75	L3	True	500.00	515.154084	103.0
5	KB76	L4	True	1000.00	1095.645152	109.6
6	KB77	L5	True	2500.00	2603.218162	104.1
7	KB78	L6	True	10000.00	10217.289136	102.2
8	KB79	L7	True	20000.00	19583.319829	97.9



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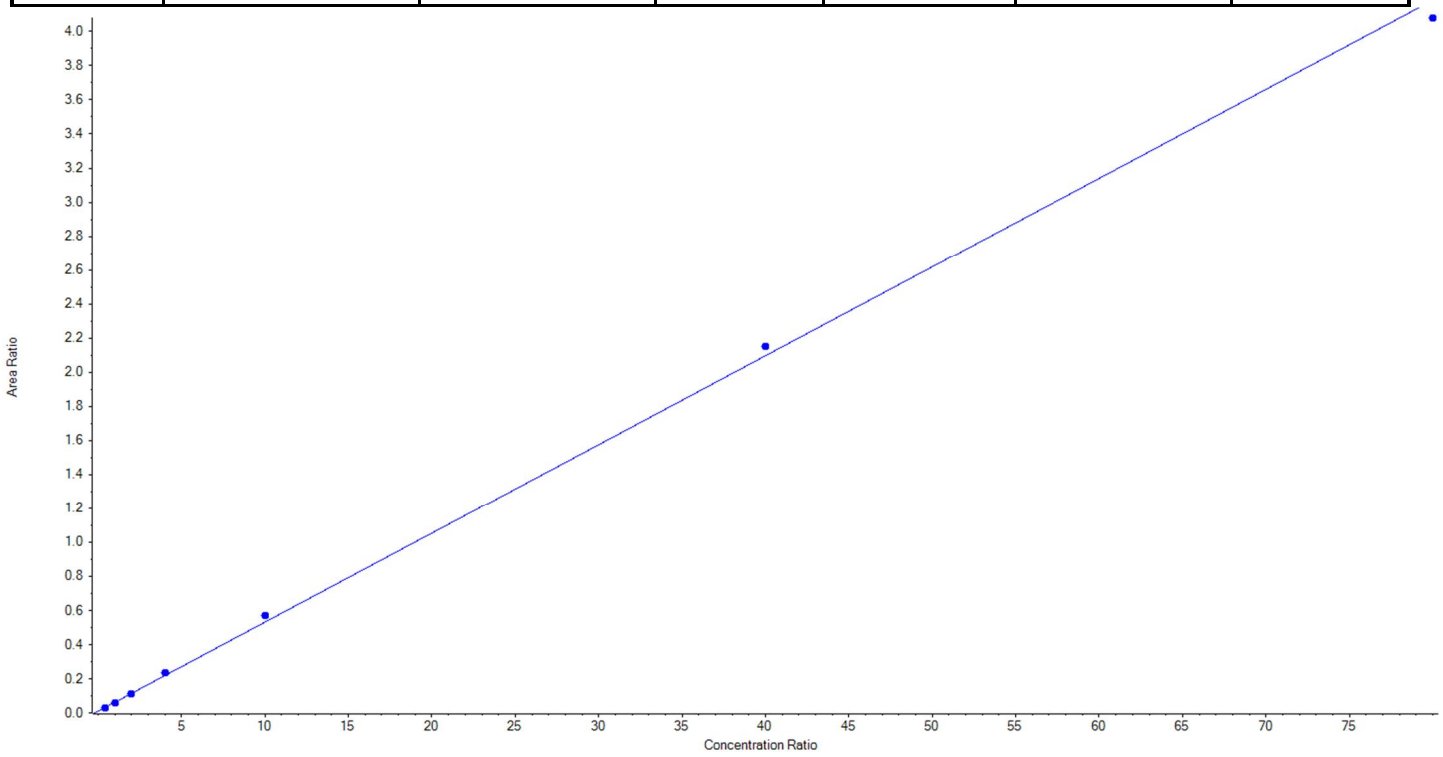
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	PFTeDA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	713.0 / 169.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.05216 x + 0.01003 (r = 0.99933) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	89.886117	89.9
3	KB74	L2	True	250.00	238.937138	95.6
4	KB75	L3	True	500.00	490.005825	98.0
5	KB76	L4	True	1000.00	1092.239213	109.2
6	KB77	L5	True	2500.00	2680.771848	107.2
7	KB78	L6	True	10000.00	10258.453725	102.6
8	KB79	L7	True	20000.00	19499.706134	97.5



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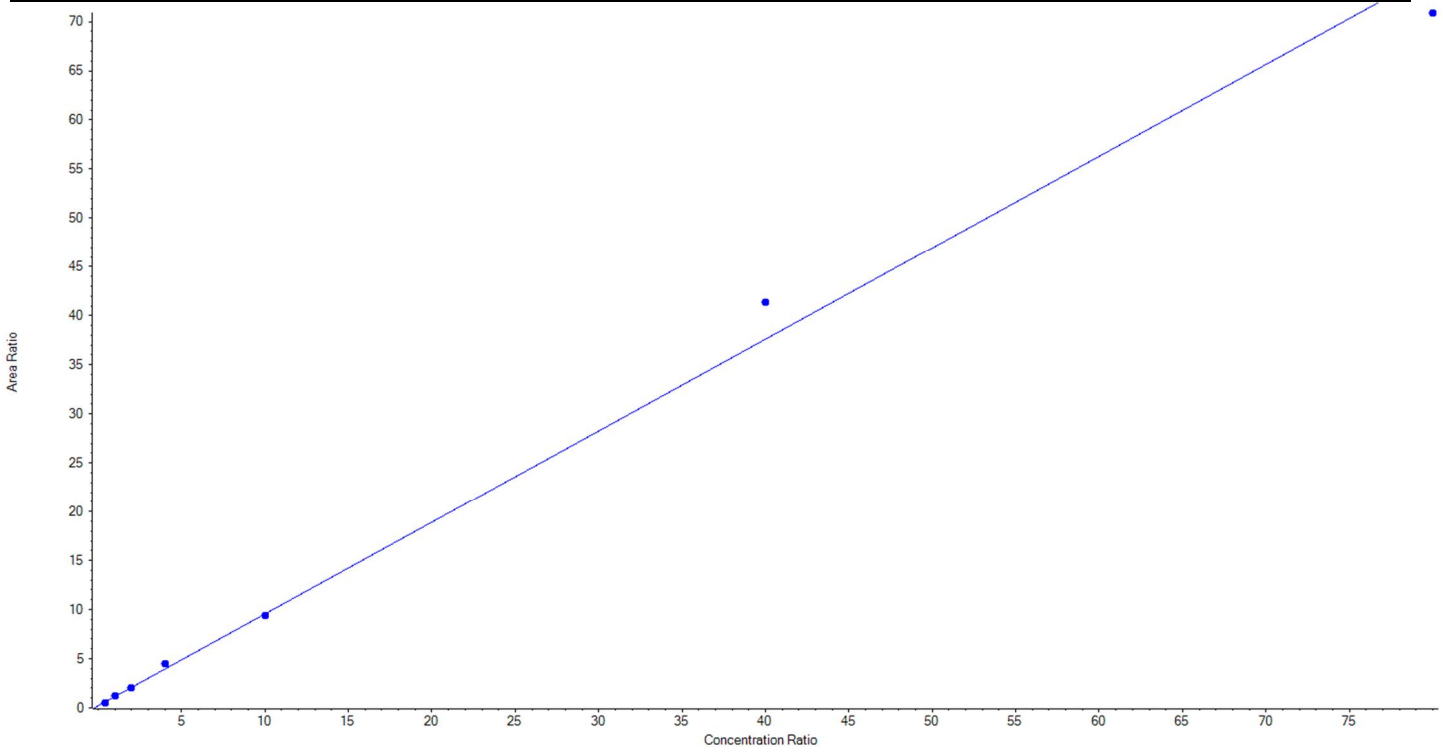
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	NMeFOSAA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	570.0 / 419.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	d3-MeFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.93472 x + 0.21431 (r = 0.99704) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	75.824991	75.8
3	KB74	L2	True	250.00	268.876365	107.6
4	KB75	L3	True	500.00	500.524214	100.1
5	KB76	L4	True	1000.00	1133.404189	113.3
6	KB77	L5	True	2500.00	2465.257046	98.6
7	KB78	L6	True	10000.00	11007.670601	110.1
8	KB79	L7	True	20000.00	18898.442593	94.5



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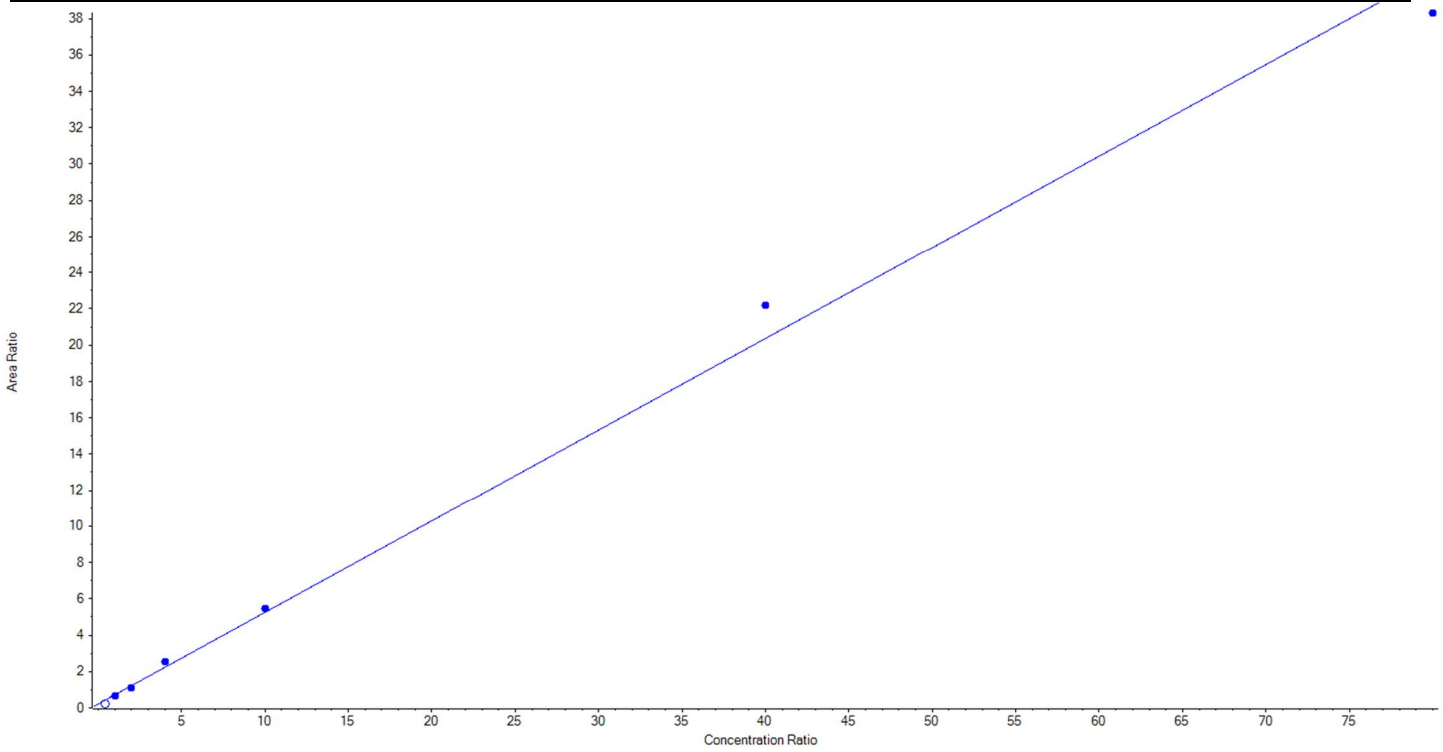
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	NMeFOSAA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	570.0 / 512.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	d3-MeFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.50367 x + 0.21759 (r = 0.99687) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	False	100.00	3.453918	3.5
3	KB74	L2	True	250.00	218.419800	87.4
4	KB75	L3	True	500.00	439.990383	88.0
5	KB76	L4	True	1000.00	1163.925478	116.4
6	KB77	L5	True	2500.00	2616.439396	104.7
7	KB78	L6	True	10000.00	10905.550987	109.1
8	KB79	L7	True	20000.00	18905.673956	94.5



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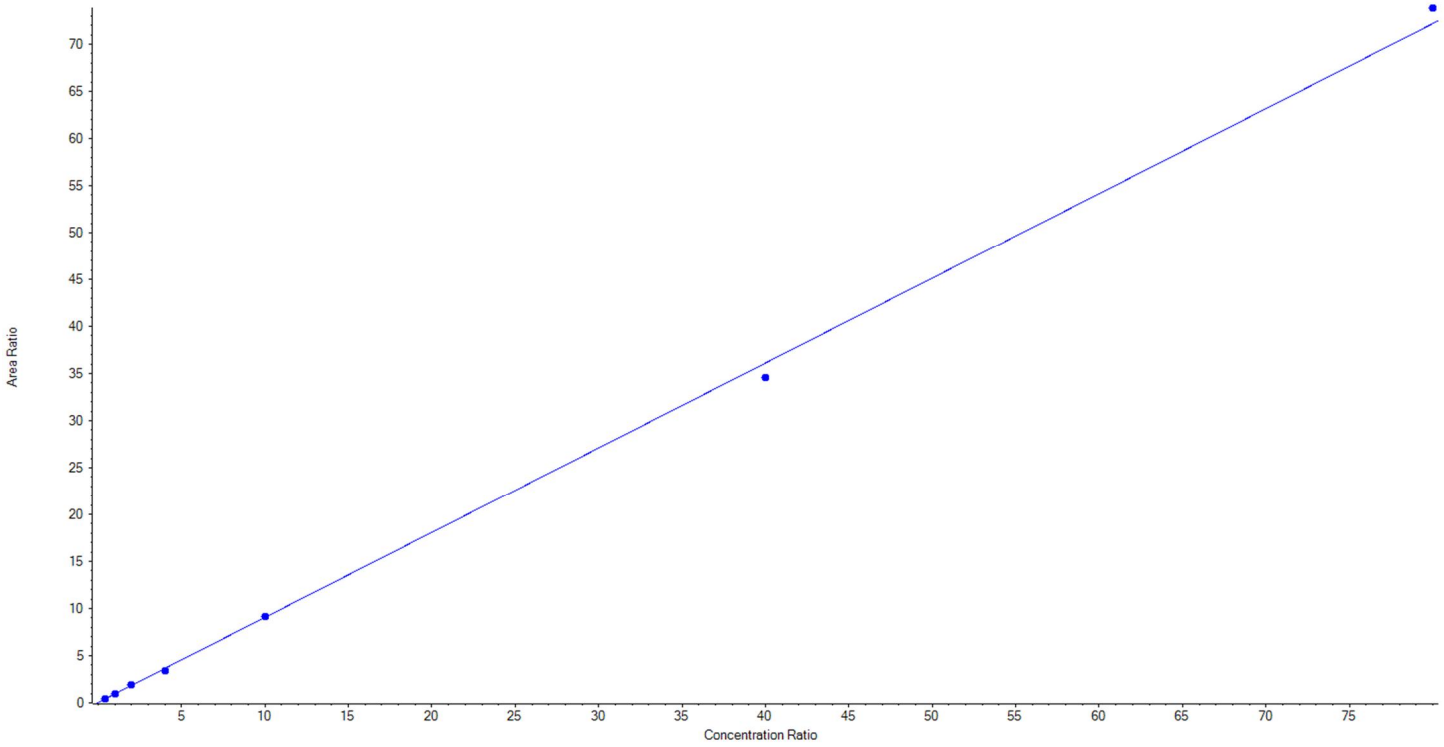
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	NEtFOSAA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	584.0 / 419.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	d5-EtFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.90168 x + 0.04836 (r = 0.99948) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	104.771450	104.8
3	KB74	L2	True	250.00	251.018896	100.4
4	KB75	L3	True	500.00	508.056535	101.6
5	KB76	L4	True	1000.00	943.782521	94.4
6	KB77	L5	True	2500.00	2522.760733	100.9
7	KB78	L6	True	10000.00	9564.590700	95.7
8	KB79	L7	True	20000.00	20455.019164	102.3



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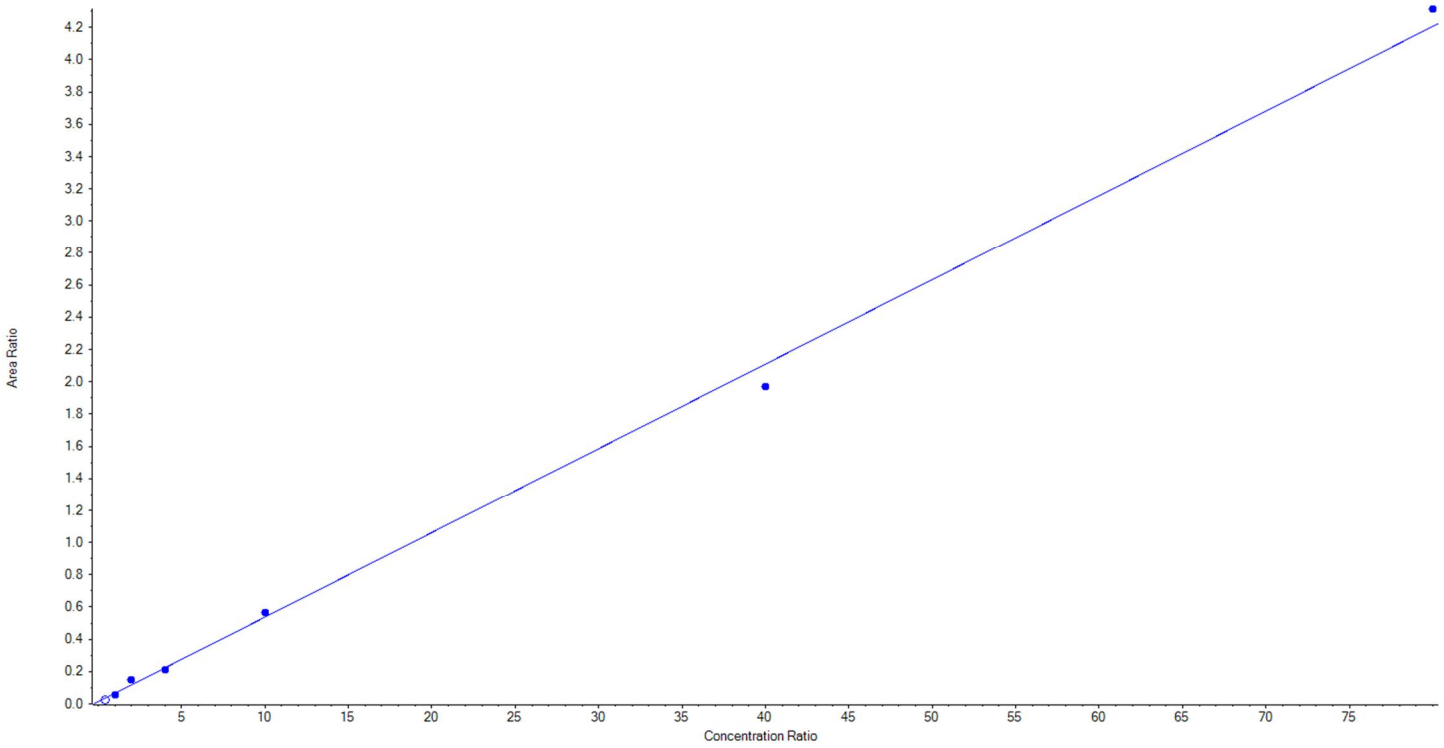
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:50:36 PM

Analyte Name	NEtFOSAA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	584.0 / 483.0	**Result Table**	18-0620_18-0621_18-0622_BASE
Internal Standard	d5-EtFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.05241 x + 0.01326 (r = 0.99796) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	False	100.00	41.412646	41.4
3	KB74	L2	True	250.00	191.667209	76.7
4	KB75	L3	True	500.00	637.470069	127.5
5	KB76	L4	True	1000.00	945.207707	94.5
6	KB77	L5	True	2500.00	2637.389496	105.5
7	KB78	L6	True	10000.00	9326.284871	93.3
8	KB79	L7	True	20000.00	20511.980648	102.6



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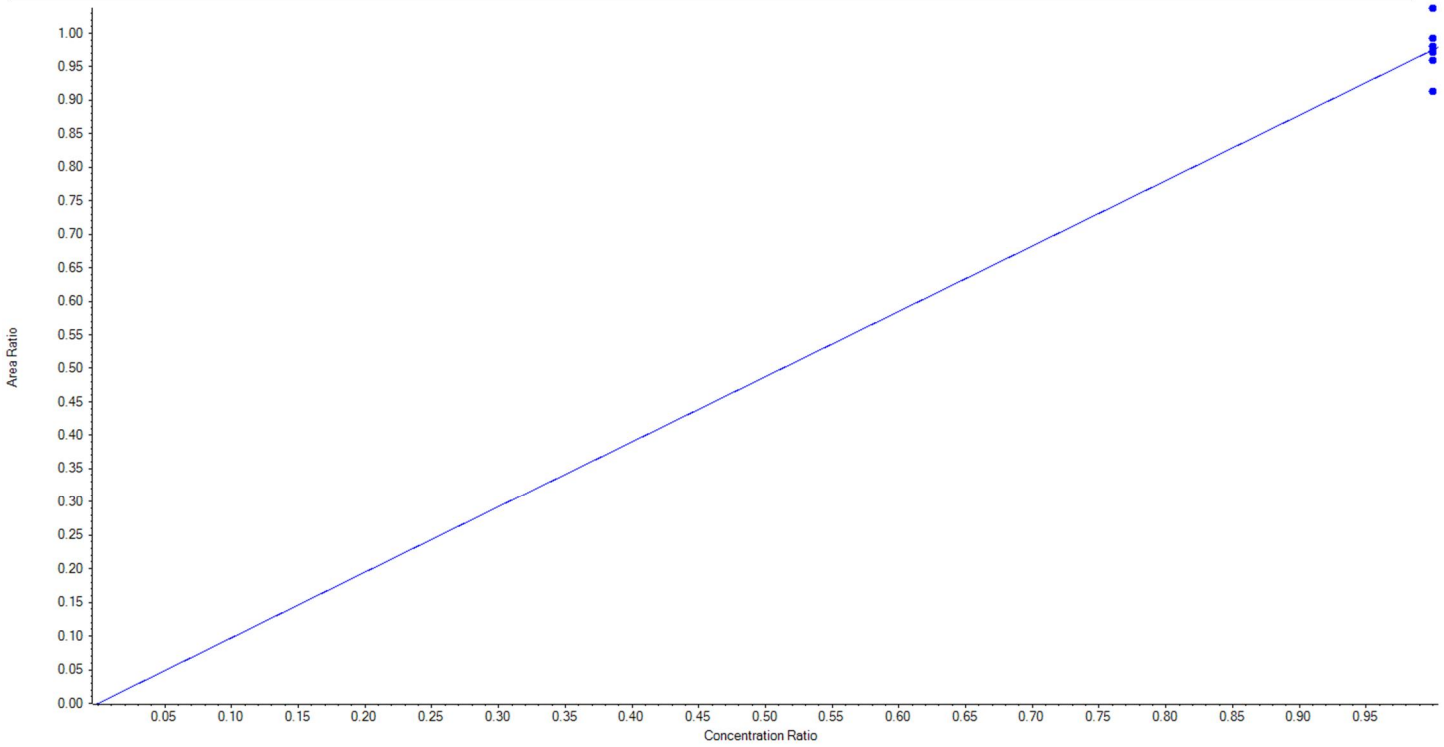
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:47:52 PM

Analyte Name	13C2-PFDoA	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	615.0 / 570.0	**Result Table**	18-0620_18-0621_18-0622_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.97505 x (std. dev. = 0.03727) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	250.00	234.027671	93.6
3	KB74	L2	True	250.00	265.932266	106.4
4	KB75	L3	True	250.00	249.447374	99.8
5	KB76	L4	True	250.00	245.945631	98.4
6	KB77	L5	True	250.00	248.975274	99.6
7	KB78	L6	True	250.00	251.235272	100.5
8	KB79	L7	True	250.00	254.436513	101.8



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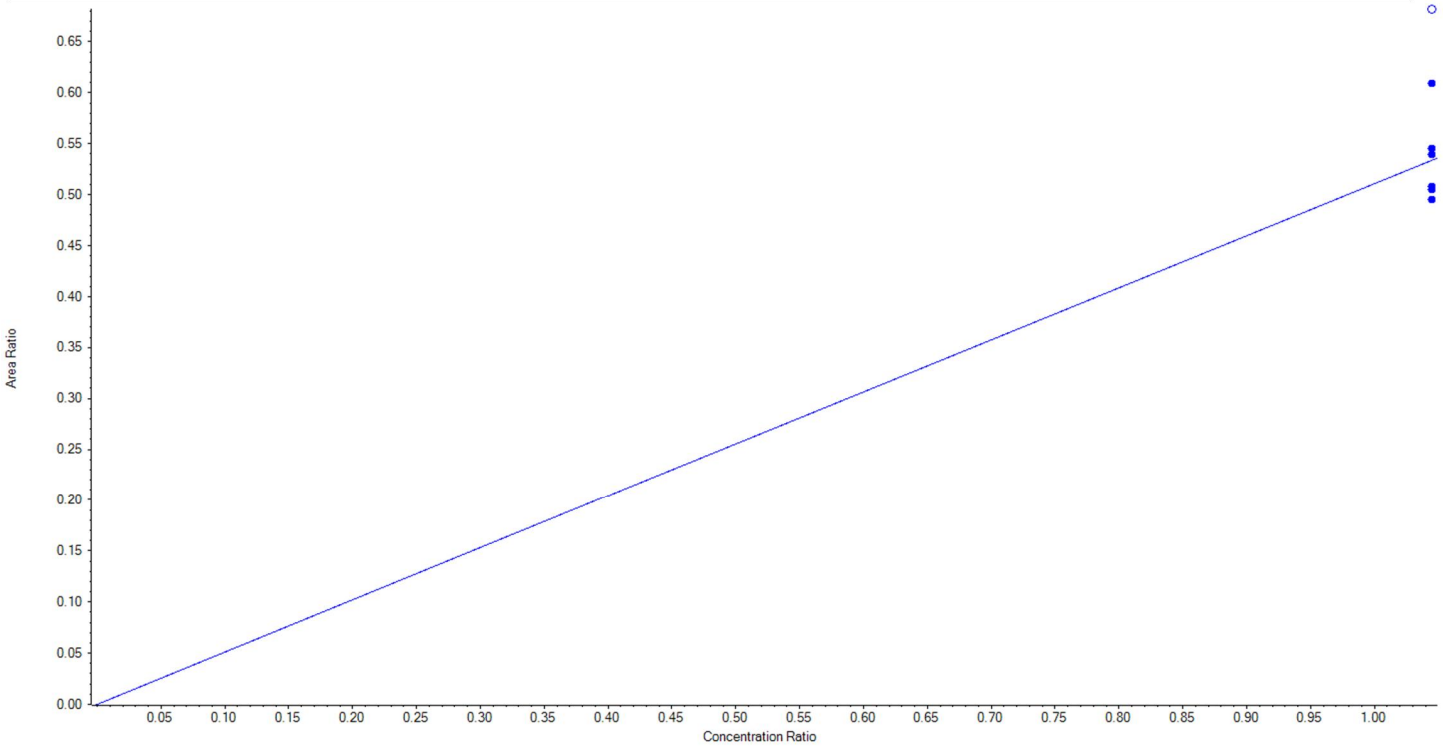
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:47:52 PM

Analyte Name	d3-MeFOSAA	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	573.0 / 419.0	**Result Table**	18-0620_18-0621_18-0622_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.51076 x (std. dev. = 0.04023) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	250.00	252.745204	101.1
3	KB74	L2	True	250.00	237.867686	95.2
4	KB75	L3	True	250.00	255.434971	102.2
5	KB76	L4	True	250.00	232.186572	92.9
6	KB77	L5	True	250.00	236.383719	94.6
7	KB78	L6	True	250.00	285.381847	114.2
8	KB79	L7	False	250.00	319.413436	127.8



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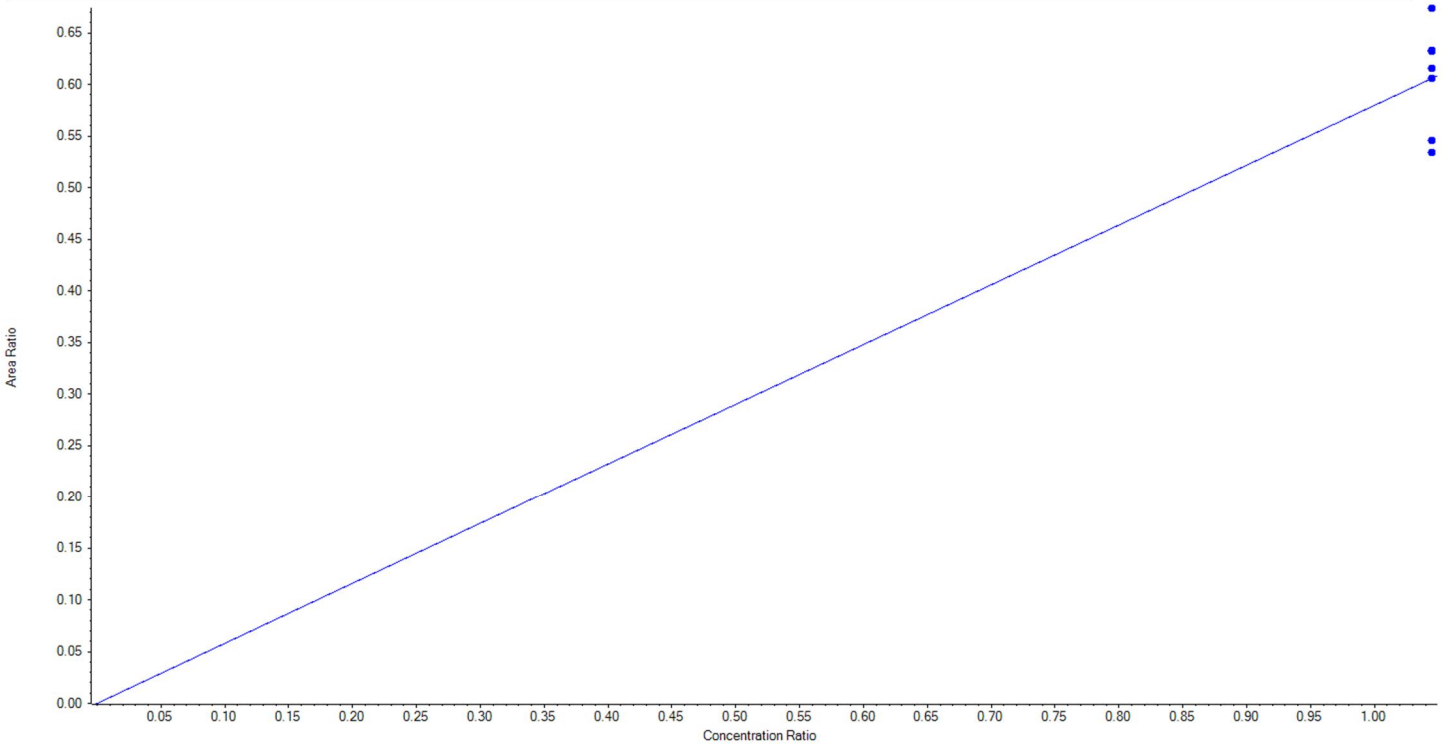
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:47:52 PM

Analyte Name	d5-EtFOSAA	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	589.0 / 419.0	**Result Table**	18-0620_18-0621_18-0622_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.57975 x (std. dev. = 0.04771) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	250.00	261.116785	104.5
3	KB74	L2	True	250.00	260.842878	104.3
4	KB75	L3	True	250.00	225.192349	90.1
5	KB76	L4	True	250.00	254.251713	101.7
6	KB77	L5	True	250.00	220.425706	88.2
7	KB78	L6	True	250.00	278.106701	111.2
8	KB79	L7	True	250.00	250.063868	100.0



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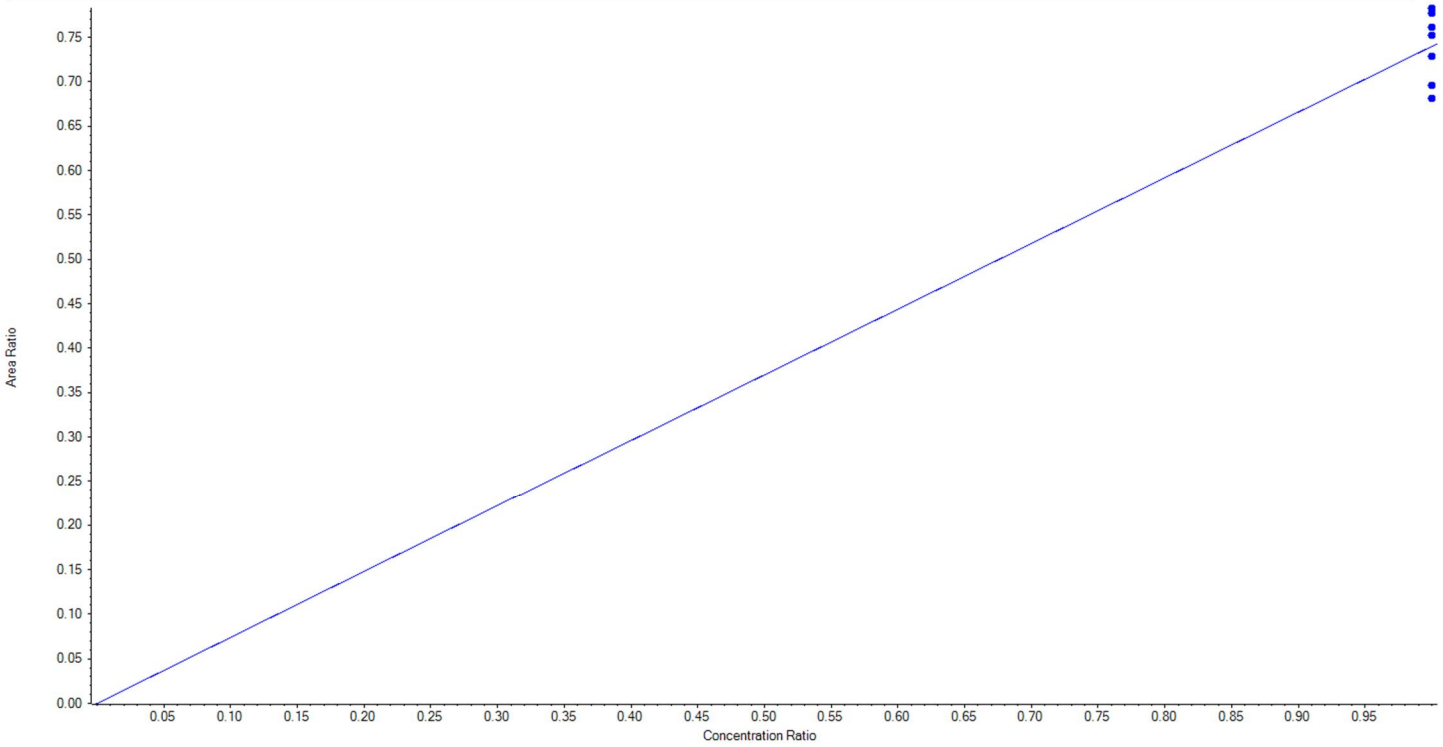
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:47:52 PM

Analyte Name	13C5-PFHxA	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	318.0 / 273.0	**Result Table**	18-0620_18-0621_18-0622_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.73994 x (std. dev. = 0.03937) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	250.00	262.567314	105.0
3	KB74	L2	True	250.00	254.187234	101.7
4	KB75	L3	True	250.00	230.325952	92.1
5	KB76	L4	True	250.00	235.058052	94.0
6	KB77	L5	True	250.00	257.145365	102.9
7	KB78	L6	True	250.00	264.503275	105.8
8	KB79	L7	True	250.00	246.212808	98.5



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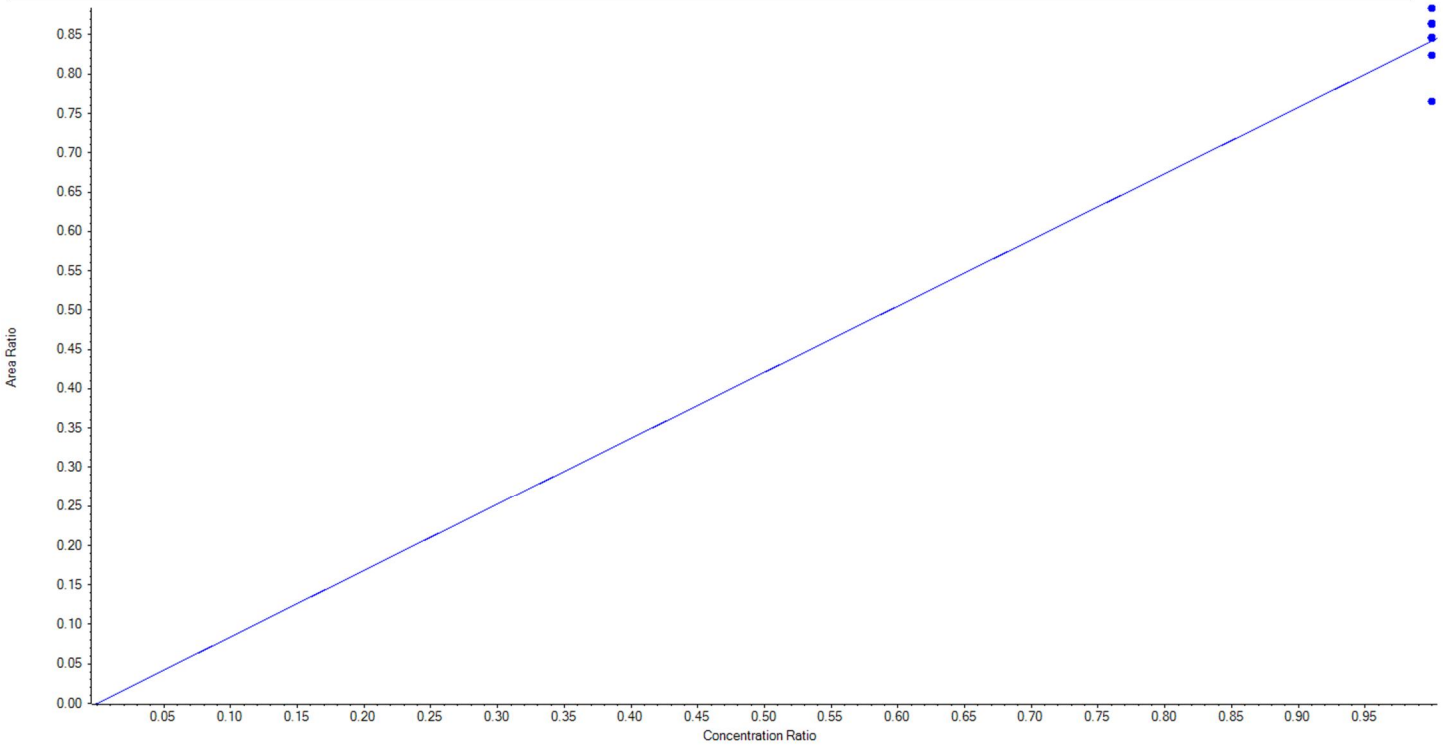
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:47:52 PM

Analyte Name	13C4-PFHpA	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	367.0 / 322.0	**Result Table**	18-0620_18-0621_18-0622_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.84182 x (std. dev. = 0.03866) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	250.00	262.427043	105.0
3	KB74	L2	True	250.00	251.075240	100.4
4	KB75	L3	True	250.00	244.763156	97.9
5	KB76	L4	True	250.00	256.507439	102.6
6	KB77	L5	True	250.00	256.669677	102.7
7	KB78	L6	True	250.00	251.342992	100.5
8	KB79	L7	True	250.00	227.214453	90.9



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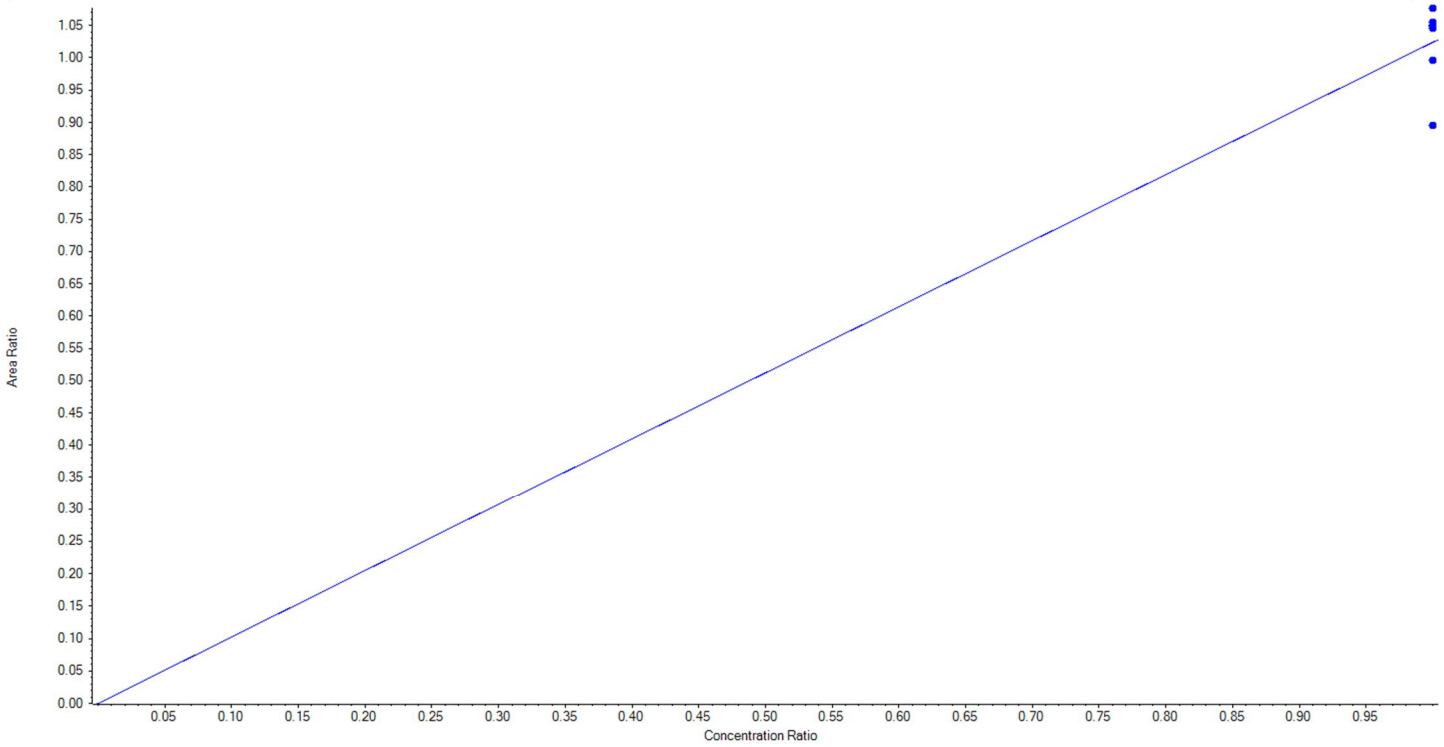
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:47:52 PM

Analyte Name	13C8-PFOA	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	421.0 / 376.0	**Result Table**	18-0620_18-0621_18-0622_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.02405 x (std. dev. = 0.06175) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	250.00	255.212785	102.1
3	KB74	L2	True	250.00	262.875155	105.2
4	KB75	L3	True	250.00	256.482263	102.6
5	KB76	L4	True	250.00	257.662297	103.1
6	KB77	L5	True	250.00	256.019871	102.4
7	KB78	L6	True	250.00	243.157749	97.3
8	KB79	L7	True	250.00	218.589880	87.4



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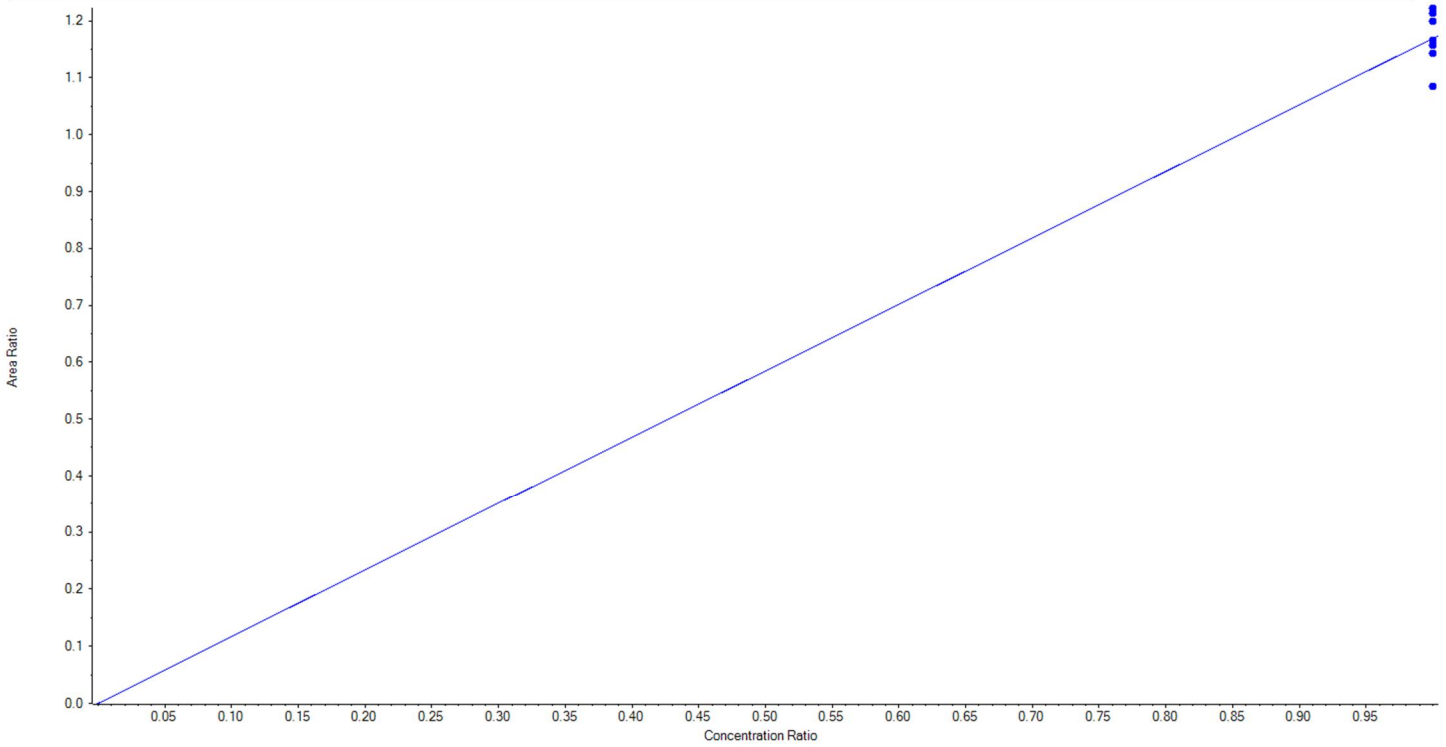
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:47:52 PM

Analyte Name	13C9-PFNA	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	472.0 / 427.0	**Result Table**	18-0620_18-0621_18-0622_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.16930 x (std. dev. = 0.04759) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	250.00	247.430463	99.0
3	KB74	L2	True	250.00	261.328420	104.5
4	KB75	L3	True	250.00	259.384215	103.8
5	KB76	L4	True	250.00	244.372857	97.8
6	KB77	L5	True	250.00	249.179395	99.7
7	KB78	L6	True	250.00	256.344825	102.5
8	KB79	L7	True	250.00	231.959824	92.8



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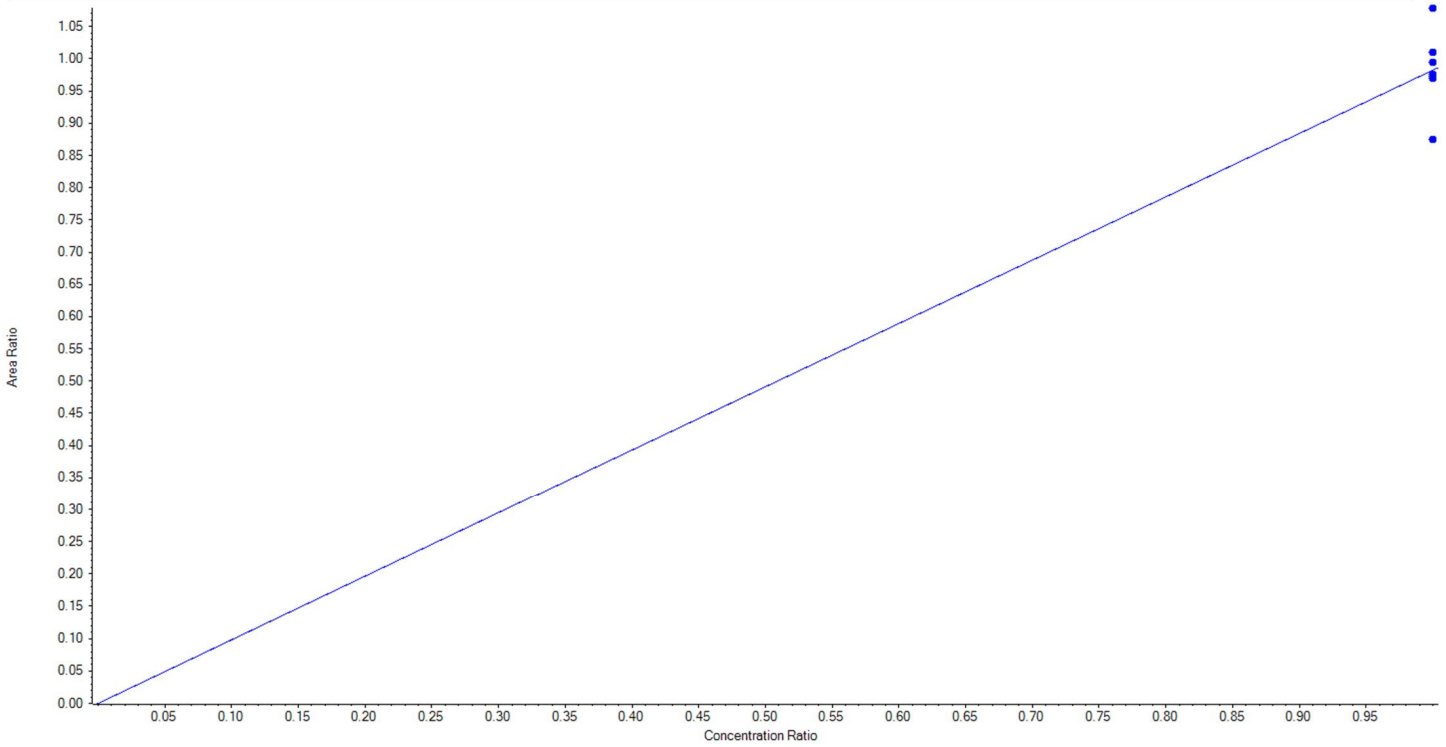
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:47:52 PM

Analyte Name	13C6-PFDA	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	519.0 / 474.0	**Result Table**	18-0620_18-0621_18-0622_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.98235 x (std. dev. = 0.06079) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	250.00	246.733475	98.7
3	KB74	L2	True	250.00	253.248818	101.3
4	KB75	L3	True	250.00	257.192135	102.9
5	KB76	L4	True	250.00	248.450649	99.4
6	KB77	L5	True	250.00	274.445566	109.8
7	KB78	L6	True	250.00	247.435316	99.0
8	KB79	L7	True	250.00	222.494042	89.0



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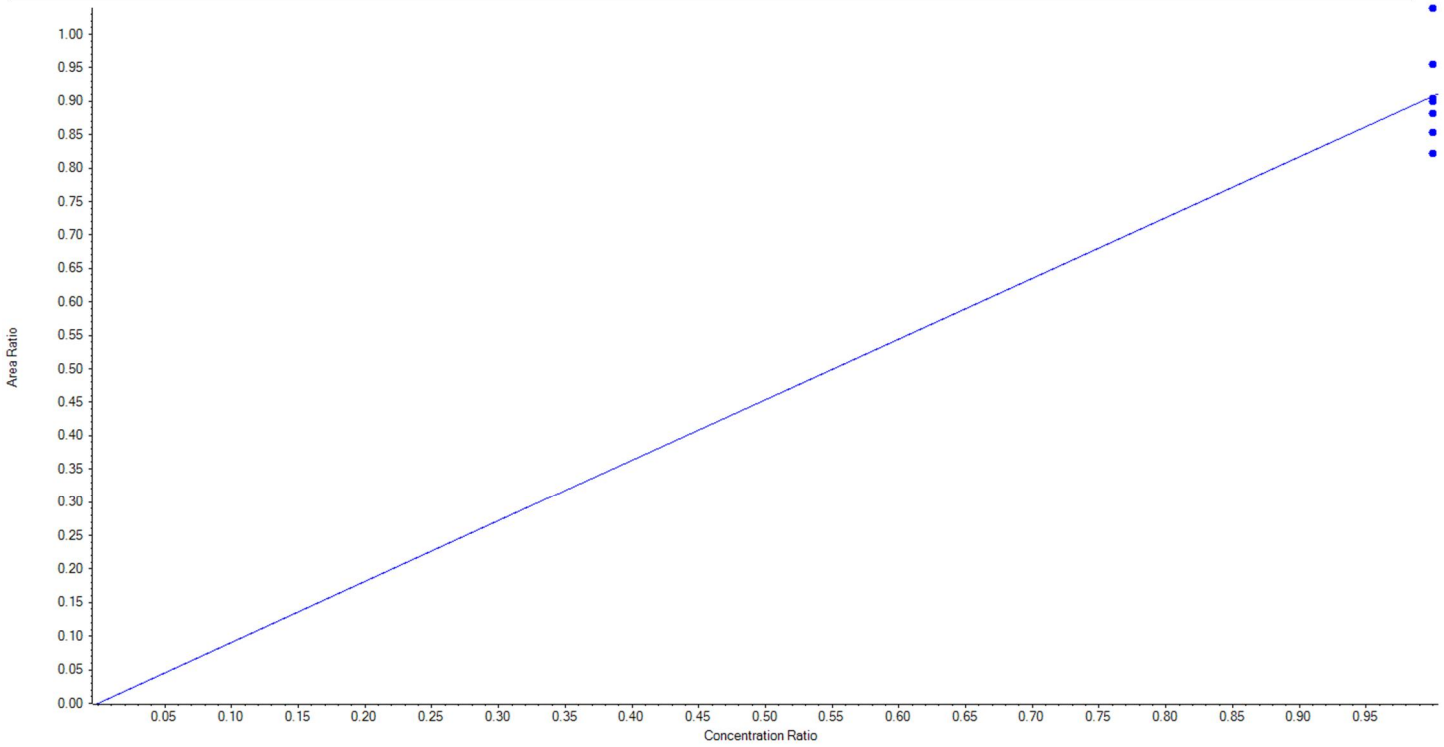
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:47:52 PM

Analyte Name	13C7-PFUnA	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	570.0 / 525.0	**Result Table**	18-0620_18-0621_18-0622_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.90743 x (std. dev. = 0.07148) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	250.00	247.760751	99.1
3	KB74	L2	True	250.00	262.960755	105.2
4	KB75	L3	True	250.00	286.201660	114.5
5	KB76	L4	True	250.00	234.954208	94.0
6	KB77	L5	True	250.00	249.135582	99.7
7	KB78	L6	True	250.00	242.726450	97.1
8	KB79	L7	True	250.00	226.260594	90.5



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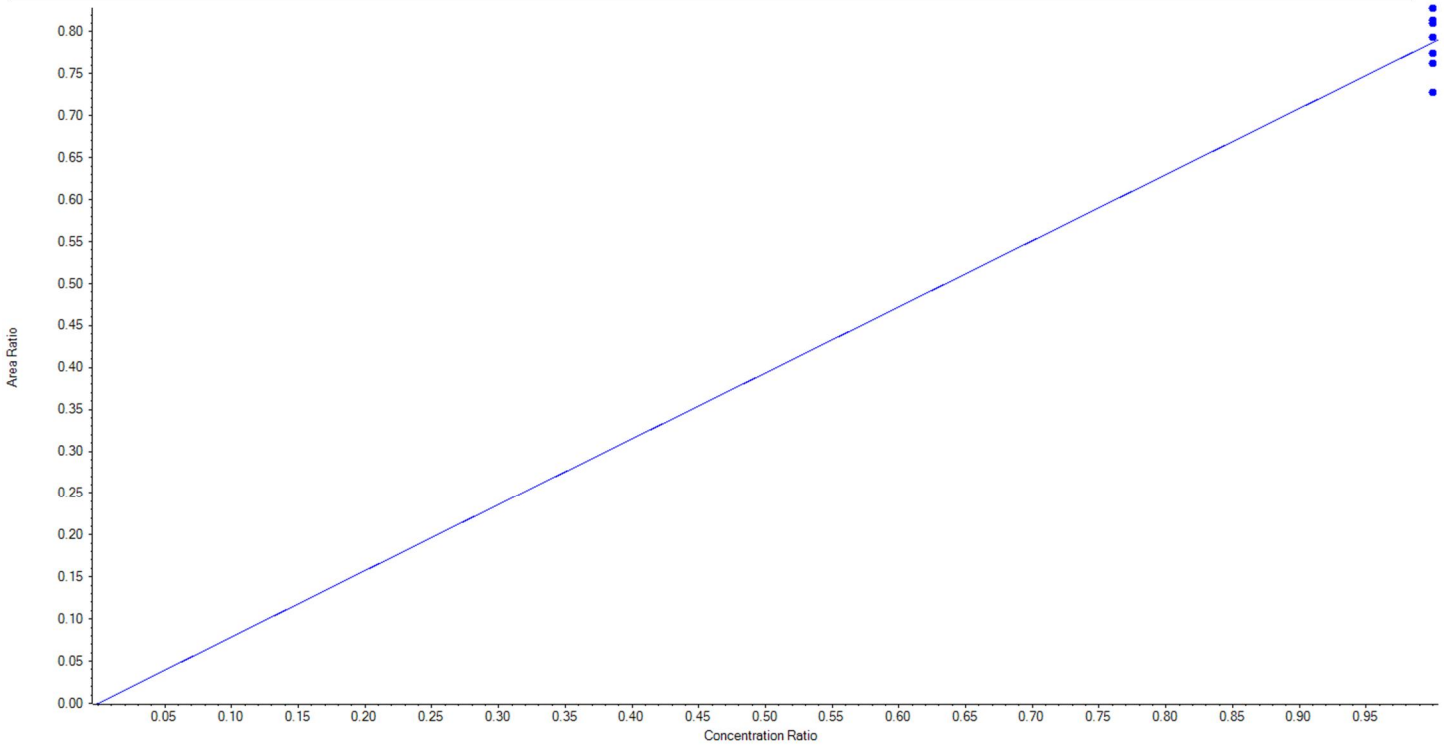
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:47:52 PM

Analyte Name	13C2-PFTeDA	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	715.0 / 670.0	**Result Table**	18-0620_18-0621_18-0622_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.78723 x (std. dev. = 0.03476) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	250.00	242.249601	96.9
3	KB74	L2	True	250.00	262.922814	105.2
4	KB75	L3	True	250.00	245.975733	98.4
5	KB76	L4	True	250.00	231.048930	92.4
6	KB77	L5	True	250.00	252.097071	100.8
7	KB78	L6	True	250.00	258.482884	103.4
8	KB79	L7	True	250.00	257.222966	102.9



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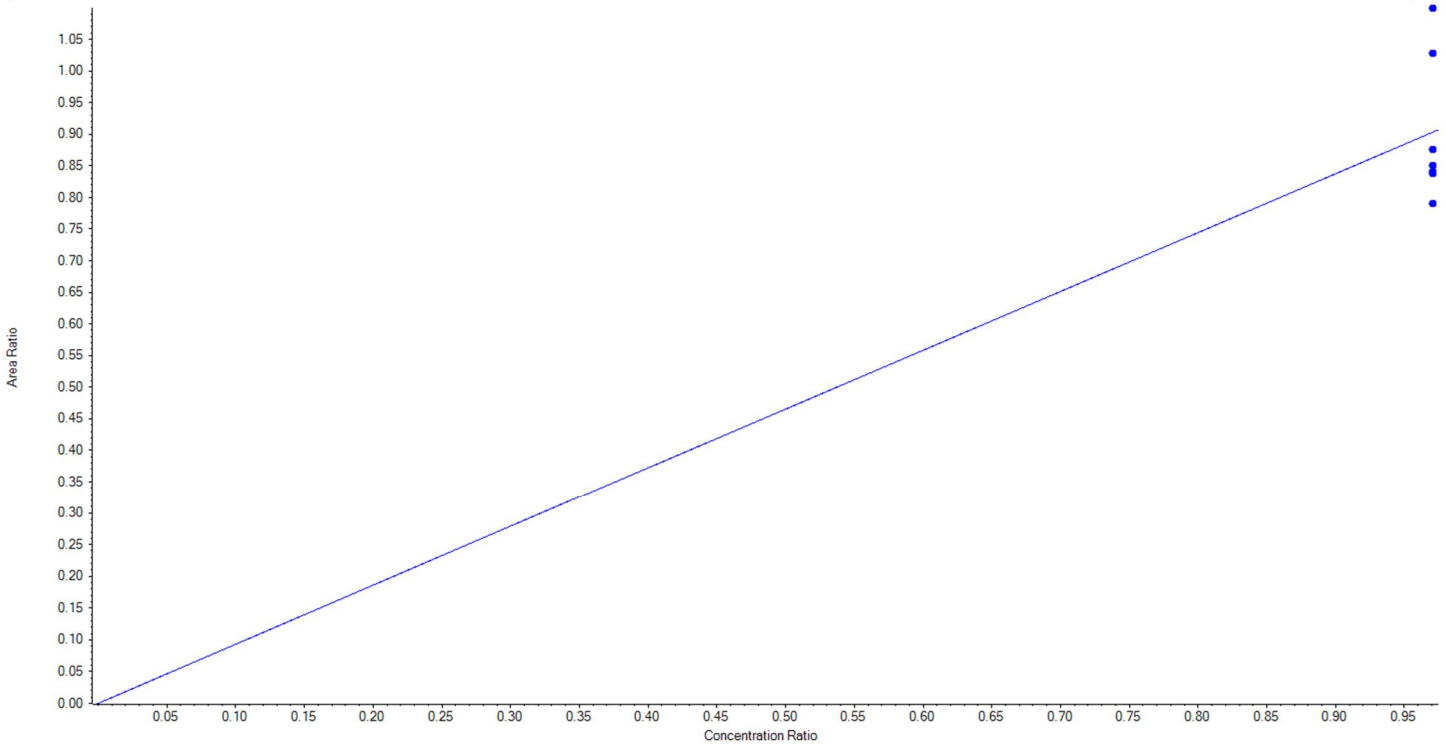
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:47:52 PM

Analyte Name	13C3-PFBS	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	302.0 / 99.0	**Result Table**	18-0620_18-0621_18-0622_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.93048 x (std. dev. = 0.11752) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	232.25	225.022462	96.9
3	KB74	L2	True	232.25	215.609121	92.8
4	KB75	L3	True	232.25	218.748838	94.2
5	KB76	L4	True	232.25	203.233433	87.5
6	KB77	L5	True	232.25	216.348971	93.2
7	KB78	L6	True	232.25	264.163371	113.7
8	KB79	L7	True	232.25	282.623804	121.7



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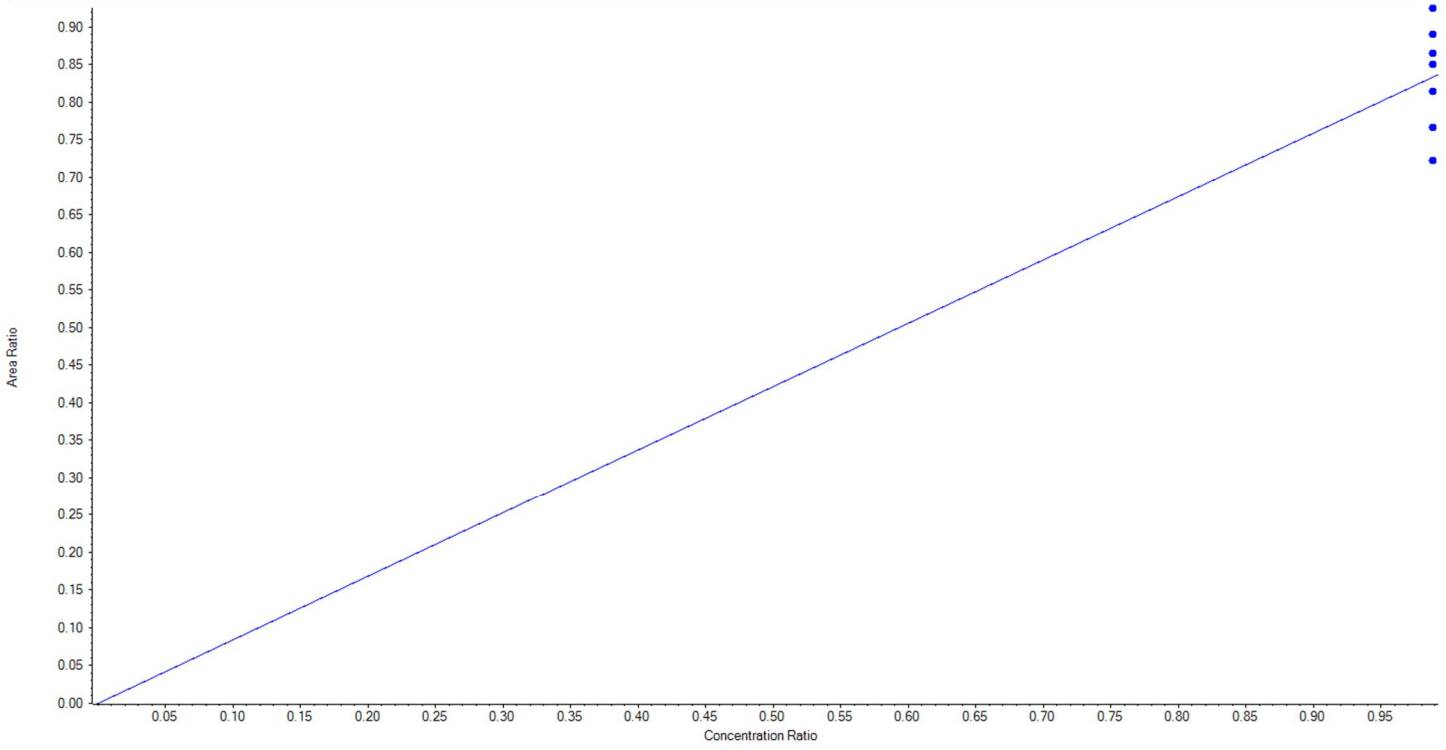
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:47:52 PM

Analyte Name	13C3-PFHxS	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	402.0 / 99.0	**Result Table**	18-0620_18-0621_18-0622_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.84316 x (std. dev. = 0.07172) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	236.50	231.144826	97.7
3	KB74	L2	True	236.50	241.172849	102.0
4	KB75	L3	True	236.50	245.474666	103.8
5	KB76	L4	True	236.50	217.481590	92.0
6	KB77	L5	True	236.50	204.966129	86.7
7	KB78	L6	True	236.50	262.529838	111.0
8	KB79	L7	True	236.50	252.730102	106.9



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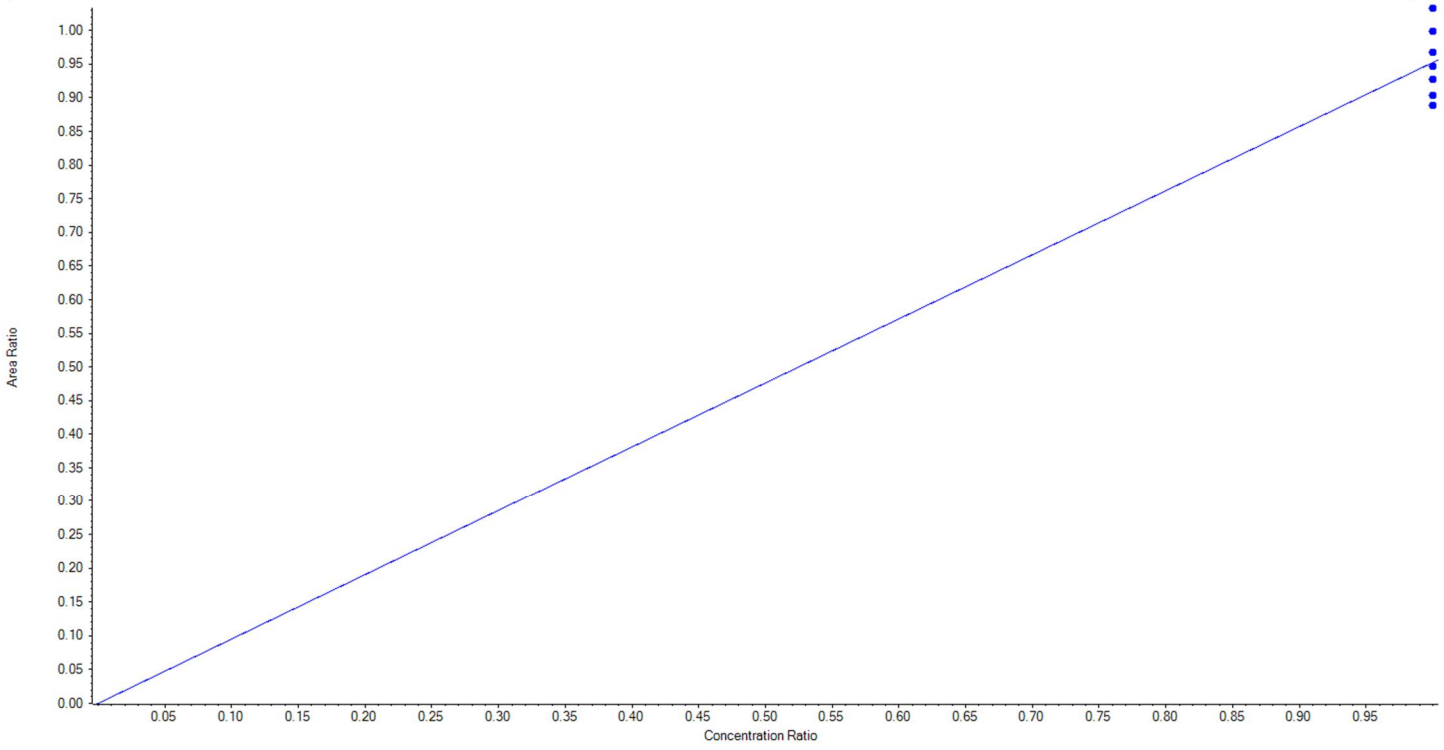
Calibration Summary Report

Created with Analyst Reporter
Printed: 30/10/2018 3:47:52 PM

Analyte Name	13C8-PFOS	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	507.0 / 99.0	**Result Table**	18-0620_18-0621_18-0622_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.95250 x (std. dev. = 0.05159) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	239.25	250.871078	104.9
3	KB74	L2	True	239.25	243.225761	101.7
4	KB75	L3	True	239.25	223.367998	93.4
5	KB76	L4	True	239.25	233.089271	97.4
6	KB77	L5	True	239.25	226.800752	94.8
7	KB78	L6	True	239.25	259.494294	108.5
8	KB79	L7	True	239.25	237.900846	99.4



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	Isotope Dilution Calibration Curve Concentrations (ng/L)						
	KB73	KB74	KB75	KB76	KB77	KB78	KB79
PFBA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFPeA	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFHxA	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFHpA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFOA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFNA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFDA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFUnA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFDoA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFTrDA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFTeDA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
NMeFOSAA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
NEtFOSAA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFOSA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFBS	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFPeS	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFHxS (Branched)	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFHpS	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFOS (Branched)	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFDS	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFNS	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
4:2FTS	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
6:2FTS	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
8:2FTS	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
	Surrogates / Extracted Internal Standards						
13C4-PFBA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C5-PFPeA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C5-PFHxA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C4-PFHpA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C8-PFOA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C9-PFNA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C6-PFDA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C7-PFUnA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C2-PFDoA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C2-PFTeDA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
d3-MeFOSAA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
d5-EtFOSAA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C8-FOSA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C3-PFBS	232.25	232.25	232.25	232.25	232.25	232.25	232.25
13C3-PFHxS	236.50	236.50	236.50	236.50	236.50	236.50	236.50
13C8-PFOS	239.25	239.25	239.25	239.25	239.25	239.25	239.25
13C2-4:2FTS	233.75	233.75	233.75	233.75	233.75	233.75	233.75
13C2-6:2FTS	237.25	237.25	237.25	237.25	237.25	237.25	237.25
13C2-8:2FTS	239.50	239.50	239.50	239.50	239.50	239.50	239.50
	Internal Standards						
13C3-PFBA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C2-PFOA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C2-PFDA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C4-PFOS	239.25	239.25	239.25	239.25	239.25	239.25	239.25

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Summary Quant Report

Sample Name	KB73	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T19:46:52	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.57	36035.22	104.635578	126.2	true
PFBS_2	298.9 / 99.0	1.57	10918.15	109.976962	78.2	true
PFHxA_1	313.0 / 269.0	1.90	32164.19	98.968181	3.3	false
PFHxA_2	313.0 / 119.0	1.91	2959.44	113.183087	3.5	false
PFHpA_1	363.0 / 319.0	2.32	32551.91	113.465532	39.8	false
PFHpA_2	363.0 / 169.0	2.32	1000.19	103.311634	29.1	false
PFHxS_1	399.0 / 80.0	2.34	44418.07	105.225987	134.5	false
PFHxS_2	399.0 / 99.0	2.34	12198.64	98.139274	86.9	false
PFOA_1	413.0 / 369.0	2.73	42708.15	113.608497	67.5	false
PFOA_2	413.0 / 169.0	2.73	2568.95	104.849376	46.6	false
PFNA_1	463.0 / 419.0	3.14	40302.36	100.132667	94.3	false
PFNA_2	463.0 / 219.0	3.14	13162.53	111.702594	118.3	false
PFOS_1	499.0 / 80.0	3.13	65728.52	112.998705	102.9	false
PFOS_2	499.0 / 99.0	3.13	11345.50	110.962710	100.1	false
PFDA_1	513.0 / 469.0	3.50	49242.60	100.375074	136.7	false
PFDA_2	513.0 / 219.0	3.49	2266.31	112.406023	88.7	false
PFUnA_1	563.0 / 519.0	3.83	45897.49	111.527231	163.3	false
PFUnA_2	563.0 / 269.0	3.82	1918.57	102.220892	42.6	true
PFDoA_1	613.0 / 569.0	4.11	39723.04	90.939755	179.1	false
PFDoA_2	613.0 / 319.0	4.11	6547.85	86.545687	145.5	false
PFTrDA_1	663.0 / 619.0	4.37	34866.78	85.967911	309.6	false
PFTrDA_2	663.0 / 169.0	4.36	2214.00	78.198175	110.2	false
PFTeDA_1	713.0 / 669.0	4.59	40930.04	81.728327	685.4	false
PFTeDA_2	713.0 / 169.0	4.58	2198.76	89.886117	212.0	false
NMeFOSAA_1	570.0 / 419.0	3.65	8081.03	75.824991	298.4	false
NMeFOSAA_2	570.0 / 512.0	3.65	3645.21	3.453918	224.2	false
NEtFOSAA_1	584.0 / 419.0	3.82	8180.80	104.771450	524.6	false
NEtFOSAA_2	584.0 / 483.0	3.82	421.19	41.412646	48.5	false

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Summary Quant Report

Sample Name	KB74	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T19:57:45	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.57	93283.23	249.370464	246.3	false
PFBS_2	298.9 / 99.0	1.57	26423.99	242.180085	146.1	false
PFHxA_1	313.0 / 269.0	1.90	81008.49	269.910942	7.1	false
PFHxA_2	313.0 / 119.0	1.89	5592.03	230.645561	6.5	false
PFHpA_1	363.0 / 319.0	2.31	75049.99	261.922885	57.6	false
PFHpA_2	363.0 / 169.0	2.31	1497.90	175.823351	28.9	true
PFHxS_1	399.0 / 80.0	2.33	108184.43	232.865372	188.9	false
PFHxS_2	399.0 / 99.0	2.33	30598.50	231.314187	310.4	false
PFOA_1	413.0 / 369.0	2.73	100033.19	242.259718	128.9	false
PFOA_2	413.0 / 169.0	2.73	7259.40	273.238913	110.3	false
PFNA_1	463.0 / 419.0	3.13	107846.09	263.216231	192.5	false
PFNA_2	463.0 / 219.0	3.12	28095.55	220.916460	213.9	false
PFOS_1	499.0 / 80.0	3.12	165271.40	245.807613	161.0	false
PFOS_2	499.0 / 99.0	3.12	28706.92	244.538081	211.7	true
PFDA_1	513.0 / 469.0	3.49	122994.62	264.467518	236.7	false
PFDA_2	513.0 / 219.0	3.48	4770.77	245.500787	791.7	false
PFUnA_1	563.0 / 519.0	3.82	106014.14	244.824605	237.3	false
PFUnA_2	563.0 / 269.0	3.81	5018.00	242.442598	81.5	false
PFDoA_1	613.0 / 569.0	4.10	107705.01	247.072023	318.6	false
PFDoA_2	613.0 / 319.0	4.10	19126.54	274.615048	276.9	false
PFTrDA_1	663.0 / 619.0	4.35	90249.73	241.563939	481.4	false
PFTrDA_2	663.0 / 169.0	4.35	6147.30	247.986856	208.6	false
PFTeDA_1	713.0 / 669.0	4.58	109852.37	253.645310	931.4	false
PFTeDA_2	713.0 / 169.0	4.58	5150.42	238.937138	369.4	false
NMeFOSAA_1	570.0 / 419.0	3.65	21539.90	268.876365	843.1	false
NMeFOSAA_2	570.0 / 512.0	3.65	11614.86	218.419800	528.2	false
NEtFOSAA_1	584.0 / 419.0	3.81	21525.62	251.018896	397.7	false
NEtFOSAA_2	584.0 / 483.0	3.80	1206.24	191.667209	290.9	false

Sample Name	KB75	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:08:39	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.57	163617.84	495.098560	296.3	false
PFBS_2	298.9 / 99.0	1.57	45956.46	475.121472	212.6	false
PFHxA_1	313.0 / 269.0	1.89	123711.77	490.752146	10.9	false
PFHxA_2	313.0 / 119.0	1.89	9937.29	514.901118	10.8	false
PFHpA_1	363.0 / 319.0	2.31	119885.50	452.888167	85.7	false
PFHpA_2	363.0 / 169.0	2.31	3804.54	618.850678	67.0	false
PFHxS_1	399.0 / 80.0	2.33	185842.71	467.824000	256.2	false
PFHxS_2	399.0 / 99.0	2.33	54144.25	484.563583	238.2	false
PFOA_1	413.0 / 369.0	2.72	178566.76	467.456638	160.8	false
PFOA_2	413.0 / 169.0	2.72	10469.56	421.303706	138.9	false
PFNA_1	463.0 / 419.0	3.12	170504.46	450.336433	203.9	false
PFNA_2	463.0 / 219.0	3.12	51980.47	448.287193	301.6	false
PFOS_1	499.0 / 80.0	3.12	275067.90	508.954098	204.8	false
PFOS_2	499.0 / 99.0	3.12	48946.70	520.238814	287.5	false
PFDA_1	513.0 / 469.0	3.48	213151.42	495.556524	301.2	false
PFDA_2	513.0 / 219.0	3.48	8539.13	479.073328	239.1	false
PFUnA_1	563.0 / 519.0	3.81	185383.49	423.690587	269.5	false
PFUnA_2	563.0 / 269.0	3.81	10671.72	501.608235	165.4	false
PFDoA_1	613.0 / 569.0	4.09	184868.00	506.360909	343.9	false
PFDoA_2	613.0 / 319.0	4.09	28751.08	494.661881	331.3	false
PFTrDA_1	663.0 / 619.0	4.35	151211.59	488.700899	597.4	false
PFTrDA_2	663.0 / 169.0	4.34	10123.70	495.036348	322.3	false
PFTeDA_1	713.0 / 669.0	4.57	182656.44	515.154084	1232.8	false
PFTeDA_2	713.0 / 169.0	4.56	8526.49	490.005825	501.7	false
NMeFOSAA_1	570.0 / 419.0	3.63	34656.73	500.524214	2338.0	false
NMeFOSAA_2	570.0 / 512.0	3.64	18345.00	439.990383	658.5	false
NEtFOSAA_1	584.0 / 419.0	3.80	31971.45	508.056535	633.3	false
NEtFOSAA_2	584.0 / 483.0	3.80	2497.16	637.470069	8056.1	true

Sample Name	KB76	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:19:32	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.56	336045.72	1091.288759	552.2	false
PFBS_2	298.9 / 99.0	1.56	98081.89	1086.381545	407.4	false
PFHxA_1	313.0 / 269.0	1.89	240693.36	1004.472242	18.1	false
PFHxA_2	313.0 / 119.0	1.89	17814.42	980.952621	16.5	false
PFHpA_1	363.0 / 319.0	2.30	251954.77	963.772233	144.8	false
PFHpA_2	363.0 / 169.0	2.30	6187.13	1051.701356	84.1	false
PFHxS_1	399.0 / 80.0	2.32	369801.30	1074.776448	333.3	false
PFHxS_2	399.0 / 99.0	2.32	106671.06	1107.476178	416.8	false
PFOA_1	413.0 / 369.0	2.71	347996.75	956.844142	237.9	false
PFOA_2	413.0 / 169.0	2.71	24237.17	1028.034772	244.5	false
PFNA_1	463.0 / 419.0	3.11	345587.51	1046.243999	410.7	false
PFNA_2	463.0 / 219.0	3.11	106652.75	1050.052047	427.7	false
PFOS_1	499.0 / 80.0	3.11	549475.41	953.422687	298.0	false
PFOS_2	499.0 / 99.0	3.11	96044.01	958.547975	432.6	false
PFDA_1	513.0 / 469.0	3.47	409723.46	987.592944	454.6	false
PFDA_2	513.0 / 219.0	3.47	17306.29	1010.924950	319.9	false
PFUnA_1	563.0 / 519.0	3.80	370869.35	1026.343861	315.7	false
PFUnA_2	563.0 / 269.0	3.80	17491.40	981.918474	206.5	false
PFDoA_1	613.0 / 569.0	4.09	374694.74	1050.478389	498.6	false
PFDoA_2	613.0 / 319.0	4.09	54643.36	971.395687	458.0	false
PFTrDA_1	663.0 / 619.0	4.34	321677.62	1126.764608	812.9	false
PFTrDA_2	663.0 / 169.0	4.34	21874.98	1164.067670	449.0	false
PFTeDA_1	713.0 / 669.0	4.56	357047.01	1095.645152	1545.8	false
PFTeDA_2	713.0 / 169.0	4.56	17306.66	1092.239213	701.8	false
NMeFOSAA_1	570.0 / 419.0	3.63	68030.30	1133.404189	751.5	false
NMeFOSAA_2	570.0 / 512.0	3.63	39158.03	1163.925478	709.7	false
NEtFOSAA_1	584.0 / 419.0	3.80	66289.88	943.782521	754.6	false
NEtFOSAA_2	584.0 / 483.0	3.80	4059.44	945.207707	43600.8	false

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Summary Quant Report

Sample Name	KB77	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:30:23	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.57	776289.58	2332.691625	927.0	false
PFBS_2	298.9 / 99.0	1.56	228434.75	2339.199841	734.2	false
PFHxA_1	313.0 / 269.0	1.89	609668.03	2495.865956	39.8	false
PFHxA_2	313.0 / 119.0	1.89	44913.51	2451.366061	32.3	false
PFHpA_1	363.0 / 319.0	2.30	584043.68	2376.996854	232.0	false
PFHpA_2	363.0 / 169.0	2.30	13193.99	2469.602759	211.4	false
PFHxS_1	399.0 / 80.0	2.32	886495.01	2696.493262	388.0	false
PFHxS_2	399.0 / 99.0	2.32	252473.06	2749.725828	571.1	false
PFOA_1	413.0 / 369.0	2.71	834165.44	2452.232813	357.8	false
PFOA_2	413.0 / 169.0	2.71	53993.69	2444.883328	444.0	false
PFNA_1	463.0 / 419.0	3.11	783461.97	2491.510736	552.9	false
PFNA_2	463.0 / 219.0	3.11	254909.55	2632.290752	603.7	false
PFOS_1	499.0 / 80.0	3.11	1306443.89	2300.880982	452.4	false
PFOS_2	499.0 / 99.0	3.11	224020.69	2271.299000	545.6	false
PFDA_1	513.0 / 469.0	3.47	986588.88	2418.646707	564.2	false
PFDA_2	513.0 / 219.0	3.47	39607.95	2354.317167	415.6	false
PFUnA_1	563.0 / 519.0	3.80	871741.30	2538.187940	460.9	false
PFUnA_2	563.0 / 269.0	3.80	43333.05	2544.385755	300.0	false
PFDoA_1	613.0 / 569.0	4.09	821796.76	2565.539851	662.4	false
PFDoA_2	613.0 / 319.0	4.09	135656.47	2712.576260	522.0	false
PFTrDA_1	663.0 / 619.0	4.33	735746.86	2664.921530	986.7	false
PFTrDA_2	663.0 / 169.0	4.33	48743.98	2684.712399	618.7	false
PFTeDA_1	713.0 / 669.0	4.56	816378.76	2603.218162	1929.9	false
PFTeDA_2	713.0 / 169.0	4.55	40737.36	2680.771848	1193.3	false
NMeFOSAA_1	570.0 / 419.0	3.63	151508.36	2465.257046	2245.1	false
NMeFOSAA_2	570.0 / 512.0	3.63	88173.15	2616.439396	615.9	false
NEtFOSAA_1	584.0 / 419.0	3.79	155433.42	2522.760733	648.0	false
NEtFOSAA_2	584.0 / 483.0	3.79	9620.27	2637.389496	1231310.6	false

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Summary Quant Report

Sample Name	KB78	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:41:14	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.56	3735985.71	9811.581725	1503.9	false
PFBS_2	298.9 / 99.0	1.56	1134069.29	10143.472130	1449.0	false
PFHxA_1	313.0 / 269.0	1.88	2658827.36	9993.499522	90.8	false
PFHxA_2	313.0 / 119.0	1.88	200130.60	10083.260482	76.5	false
PFHpA_1	363.0 / 319.0	2.30	2497856.31	9765.162244	436.5	false
PFHpA_2	363.0 / 169.0	2.30	53385.07	9796.218447	441.5	false
PFHxS_1	399.0 / 80.0	2.32	3854430.51	9828.822898	984.2	false
PFHxS_2	399.0 / 99.0	2.32	1062752.95	9714.855919	1104.6	false
PFOA_1	413.0 / 369.0	2.71	3551933.53	10326.914009	921.2	false
PFOA_2	413.0 / 169.0	2.71	226064.95	10121.411629	875.1	false
PFNA_1	463.0 / 419.0	3.11	3442576.47	10047.185055	870.1	false
PFNA_2	463.0 / 219.0	3.11	1068510.97	10108.558837	1018.0	false
PFOS_1	499.0 / 80.0	3.10	5888305.73	9674.048541	719.2	false
PFOS_2	499.0 / 99.0	3.10	1040866.54	9849.093945	1187.7	false
PFDA_1	513.0 / 469.0	3.47	4121337.28	9760.929085	867.9	false
PFDA_2	513.0 / 219.0	3.46	165545.81	9514.985150	1080.3	false
PFUnA_1	563.0 / 519.0	3.79	3980687.38	10323.155375	894.2	false
PFUnA_2	563.0 / 269.0	3.79	194191.57	10125.204796	674.2	false
PFDoA_1	613.0 / 569.0	4.08	3840657.97	10368.355085	1057.4	false
PFDoA_2	613.0 / 319.0	4.08	576764.61	9996.454238	1020.7	false
PFTrDA_1	663.0 / 619.0	4.33	3350407.66	10336.521146	1444.2	false
PFTrDA_2	663.0 / 169.0	4.33	218945.29	10280.911529	1007.9	false
PFTeDA_1	713.0 / 669.0	4.55	3751651.69	10217.289136	2725.0	false
PFTeDA_2	713.0 / 169.0	4.54	182332.73	10258.453725	1759.6	false
NMeFOSAA_1	570.0 / 419.0	3.62	753927.92	11007.670601	2278.1	false
NMeFOSAA_2	570.0 / 512.0	3.62	404364.11	10905.550987	1426.8	false
NEtFOSAA_1	584.0 / 419.0	3.79	707833.72	9564.590700	1144.3	false
NEtFOSAA_2	584.0 / 483.0	3.79	40332.26	9326.284871	2770.2	false

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Summary Quant Report

Sample Name	KB79	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:52:06	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.56	7654212.63	20608.833290	2863.5	false
PFBS_2	298.9 / 99.0	1.56	2213700.05	20297.167965	1861.8	false
PFHxA_1	313.0 / 269.0	1.89	5068064.70	20340.031011	123.0	false
PFHxA_2	313.0 / 119.0	1.88	377383.63	20319.191070	98.6	false
PFHpA_1	363.0 / 319.0	2.29	4752932.81	20415.792084	545.6	false
PFHpA_2	363.0 / 169.0	2.30	99502.18	20134.491774	637.6	false
PFHxS_1	399.0 / 80.0	2.32	6929917.90	20287.492034	1348.5	false
PFHxS_2	399.0 / 99.0	2.32	1934460.53	20307.425032	1153.9	false
PFOA_1	413.0 / 369.0	2.71	6162786.15	19790.684183	1174.3	false
PFOA_2	413.0 / 169.0	2.71	403546.52	19956.278277	1429.0	false
PFNA_1	463.0 / 419.0	3.11	6224206.25	19951.374879	1314.8	false
PFNA_2	463.0 / 219.0	3.11	1903895.81	19778.192118	1655.3	false
PFOS_1	499.0 / 80.0	3.10	10402856.43	20553.887374	904.0	true
PFOS_2	499.0 / 99.0	3.10	1792140.82	20395.319474	1641.5	false
PFDA_1	513.0 / 469.0	3.47	7455074.70	20322.432148	1181.3	false
PFDA_2	513.0 / 219.0	3.47	311824.53	20632.792594	1380.7	false
PFUnA_1	563.0 / 519.0	3.79	6840458.50	19682.270401	830.9	false
PFUnA_2	563.0 / 269.0	3.79	343323.53	19852.219250	642.0	false
PFDoA_1	613.0 / 569.0	4.07	7074590.20	19521.253987	1036.7	false
PFDoA_2	613.0 / 319.0	4.07	1117673.36	19813.751199	984.9	false
PFTrDA_1	663.0 / 619.0	4.32	6045542.29	19405.559967	1420.4	false
PFTrDA_2	663.0 / 169.0	4.32	396998.36	19399.087023	1127.9	false
PFTeDA_1	713.0 / 669.0	4.54	6908120.06	19583.319829	2951.8	false
PFTeDA_2	713.0 / 169.0	4.54	332887.97	19499.706134	2522.7	false
NMeFOSAA_1	570.0 / 419.0	3.62	1331189.45	18898.442593	2363.5	false
NMeFOSAA_2	570.0 / 512.0	3.62	719500.36	18905.673956	1612.0	false
NEtFOSAA_1	584.0 / 419.0	3.78	1231583.02	20455.019164	1168.4	false
NEtFOSAA_2	584.0 / 483.0	3.78	71957.40	20511.980648	877.0	false

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Summary Quant Report

Sample Name	KB73	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T19:46:52	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.10	91402.83	234.027671	1231.7	false
d3-MeFOSAA	573.0 / 419.0	3.65	16104.22	252.745204	203.5	false
d5-EtFOSAA	589.0 / 419.0	3.81	18885.04	261.116785	197.5	false
13C5-PFHxA	318.0 / 273.0	1.89	61468.01	262.567314	846.3	false
13C4-PFHpA	367.0 / 322.0	2.30	69894.37	262.427043	1233.4	false
13C8-PFOA	421.0 / 376.0	2.72	82686.75	255.212785	7328.7	false
13C9-PFNA	472.0 / 427.0	3.12	91536.04	247.430463	984.5	false
13C6-PFDA	519.0 / 474.0	3.48	97086.56	246.733475	862.5	false
13C7-PFUnA	570.0 / 525.0	3.81	90055.69	247.760751	681.9	false
13C2-PFTeDA	715.0 / 670.0	4.58	76389.03	242.249601	2670.6	false
13C3-PFBS	302.0 / 99.0	1.55	26120.14	225.022462	521.2	false
13C3-PFHxS	402.0 / 99.0	2.33	24312.83	231.144826	504.5	false
13C8-PFOS	507.0 / 99.0	3.12	29809.56	250.871078	289.5	false

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Summary Quant Report

Sample Name	KB74	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T19:57:45	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.09	107747.25	265.932266	1391.1	false
d3-MeFOSAA	573.0 / 419.0	3.64	17700.53	237.867686	243.9	false
d5-EtFOSAA	589.0 / 419.0	3.80	22032.11	260.842878	257.9	false
13C5-PFHxA	318.0 / 273.0	1.89	67688.32	254.187234	641.8	false
13C4-PFHpA	367.0 / 322.0	2.30	76065.72	251.075240	798.7	false
13C8-PFOA	421.0 / 376.0	2.72	96880.10	262.875155	404.7	false
13C9-PFNA	472.0 / 427.0	3.11	109970.74	261.328420	1372.3	false
13C6-PFDA	519.0 / 474.0	3.48	103376.35	253.248818	1556.3	false
13C7-PFUnA	570.0 / 525.0	3.80	99154.47	262.960755	932.2	false
13C2-PFTeDA	715.0 / 670.0	4.57	86008.02	262.922814	1938.6	false
13C3-PFBS	302.0 / 99.0	1.55	29228.78	215.609121	465.4	false
13C3-PFHxS	402.0 / 99.0	2.32	29626.05	241.172849	441.9	false
13C8-PFOS	507.0 / 99.0	3.11	33752.70	243.225761	275.4	false

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Summary Quant Report

Sample Name	KB75	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:08:39	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.08	95394.66	249.447374	1919.0	false
d3-MeFOSAA	573.0 / 419.0	3.63	16732.69	255.434971	259.5	false
d5-EtFOSAA	589.0 / 419.0	3.79	16744.24	225.192349	304.7	false
13C5-PFHxA	318.0 / 273.0	1.88	59853.55	230.325952	495.7	false
13C4-PFHpA	367.0 / 322.0	2.29	72363.27	244.763156	5134.6	false
13C8-PFOA	421.0 / 376.0	2.71	92242.14	256.482263	3147.3	false
13C9-PFNA	472.0 / 427.0	3.10	106517.52	259.384215	1506.1	false
13C6-PFDA	519.0 / 474.0	3.47	99092.64	257.192135	1016.5	false
13C7-PFUnA	570.0 / 525.0	3.79	101859.96	286.201660	947.8	false
13C2-PFTeDA	715.0 / 670.0	4.56	75947.40	245.975733	2310.8	false
13C3-PFBS	302.0 / 99.0	1.55	26105.02	218.748838	604.7	false
13C3-PFHxS	402.0 / 99.0	2.32	26545.24	245.474666	396.8	false
13C8-PFOS	507.0 / 99.0	3.10	27286.93	223.367998	263.5	false

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Summary Quant Report

Sample Name	KB76	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:19:32	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.08	95903.63	245.945631	1244.5	false
d3-MeFOSAA	573.0 / 419.0	3.62	15347.55	232.186572	188.7	false
d5-EtFOSAA	589.0 / 419.0	3.79	19076.22	254.251713	210.8	false
13C5-PFHxA	318.0 / 273.0	1.88	58835.13	235.058052	1009.1	false
13C4-PFHpA	367.0 / 322.0	2.29	73044.35	256.507439	778.8	false
13C8-PFOA	421.0 / 376.0	2.70	89256.01	257.662297	1337.8	false
13C9-PFNA	472.0 / 427.0	3.10	96659.60	244.372857	1496.3	false
13C6-PFDA	519.0 / 474.0	3.46	97605.58	248.450649	1104.6	false
13C7-PFUnA	570.0 / 525.0	3.78	85263.94	234.954208	671.4	false
13C2-PFTeDA	715.0 / 670.0	4.55	72740.35	231.048930	2036.8	false
13C3-PFBS	302.0 / 99.0	1.55	24473.16	203.233433	669.1	false
13C3-PFHxS	402.0 / 99.0	2.32	23731.17	217.481590	485.7	false
13C8-PFOS	507.0 / 99.0	3.10	28732.45	233.089271	315.7	false

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Summary Quant Report

Sample Name	KB77	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:30:23	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.07	87520.82	248.975274	984.0	false
d3-MeFOSAA	573.0 / 419.0	3.62	15905.32	236.383719	163.7	false
d5-EtFOSAA	589.0 / 419.0	3.78	16835.01	220.425706	271.8	false
13C5-PFHxA	318.0 / 273.0	1.88	61167.94	257.145365	677.6	false
13C4-PFHpA	367.0 / 322.0	2.29	69461.61	256.669677	849.4	false
13C8-PFOA	421.0 / 376.0	2.70	84283.75	256.019871	1295.1	false
13C9-PFNA	472.0 / 427.0	3.10	93667.25	249.179395	1439.8	false
13C6-PFDA	519.0 / 474.0	3.46	97196.35	274.445566	2304.2	false
13C7-PFUnA	570.0 / 525.0	3.78	81503.66	249.135582	792.6	false
13C2-PFTeDA	715.0 / 670.0	4.55	71548.15	252.097071	2268.3	false
13C3-PFBS	302.0 / 99.0	1.55	26519.94	216.348971	787.4	false
13C3-PFHxS	402.0 / 99.0	2.31	22766.78	204.966129	549.1	false
13C8-PFOS	507.0 / 99.0	3.10	28458.87	226.800752	280.5	false

BATTELLE

Summary Quant Report

Sample Name	KB78	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:41:14	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.07	102072.61	251.235272	905.7	false
d3-MeFOSAA	573.0 / 419.0	3.61	18026.94	285.381847	140.7	false
d5-EtFOSAA	589.0 / 419.0	3.78	19940.39	278.106701	245.9	false
13C5-PFHxA	318.0 / 273.0	1.87	67298.42	264.503275	733.1	false
13C4-PFHpA	367.0 / 322.0	2.28	72755.48	251.342992	508.8	false
13C8-PFOA	421.0 / 376.0	2.70	85622.31	243.157749	1201.3	false
13C9-PFNA	472.0 / 427.0	3.09	103069.19	256.344825	1142.1	false
13C6-PFDA	519.0 / 474.0	3.45	101281.21	247.435316	1442.1	false
13C7-PFUnA	570.0 / 525.0	3.78	91776.59	242.726450	856.9	false
13C2-PFTeDA	715.0 / 670.0	4.54	84788.29	258.482884	1567.2	false
13C3-PFBS	302.0 / 99.0	1.54	30399.13	264.163371	680.5	false
13C3-PFHxS	402.0 / 99.0	2.31	27375.94	262.529838	495.9	false
13C8-PFOS	507.0 / 99.0	3.09	30568.34	259.494294	315.3	false

BATTELLE

Summary Quant Report

Sample Name	KB79	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:52:06	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.07	99995.01	254.436513	1141.6	false
d3-MeFOSAA	573.0 / 419.0	3.62	18400.21	319.413436	102.1	false
d5-EtFOSAA	589.0 / 419.0	3.78	16351.10	250.063868	251.7	false
13C5-PFHxA	318.0 / 273.0	1.87	63134.84	246.212808	622.1	false
13C4-PFHpA	367.0 / 322.0	2.28	66285.64	227.214453	928.8	false
13C8-PFOA	421.0 / 376.0	2.70	77573.52	218.589880	452635.8	false
13C9-PFNA	472.0 / 427.0	3.09	93994.33	231.959824	113653.9	false
13C6-PFDA	519.0 / 474.0	3.45	88095.93	222.494042	731.4	false
13C7-PFUnA	570.0 / 525.0	3.78	82754.96	226.260594	1283.3	false
13C2-PFTeDA	715.0 / 670.0	4.54	81617.66	257.222966	1991.1	false
13C3-PFBS	302.0 / 99.0	1.54	29660.00	282.623804	815.0	false
13C3-PFHxS	402.0 / 99.0	2.31	24033.73	252.730102	656.4	false
13C8-PFOS	507.0 / 99.0	3.09	25557.23	237.900846	289.4	false

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Summary Ion Ratio Report

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Sample Name	KB73	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T19:46:52	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.57	PFBS			
PFBS_2	298.9 / 99.0	1.57	PFBS	0.300	0.292	ü
PFHxA_1	313.0 / 269.0	1.90	PFHxA			
PFHxA_2	313.0 / 119.0	1.91	PFHxA	0.090	0.077	ü
PFHpA_1	363.0 / 319.0	2.32	PFHpA			
PFHpA_2	363.0 / 169.0	2.32	PFHpA	0.030	0.025	ü
PFHxS_1	399.0 / 80.0	2.34	PFHxS			
PFHxS_2	399.0 / 99.0	2.34	PFHxS	0.270	0.282	ü
PFOA_1	413.0 / 369.0	2.73	PFOA			
PFOA_2	413.0 / 169.0	2.73	PFOA	0.060	0.065	ü
PFNA_1	463.0 / 419.0	3.14	PFNA			
PFNA_2	463.0 / 219.0	3.14	PFNA	0.330	0.306	ü
PFOS_1	499.0 / 80.0	3.13	PFOS			
PFOS_2	499.0 / 99.0	3.13	PFOS	0.170	0.174	ü
PFDA_1	513.0 / 469.0	3.50	PFDA			
PFDA_2	513.0 / 219.0	3.49	PFDA	0.050	0.041	ü
PFUnA_1	563.0 / 519.0	3.83	PFUnA			
PFUnA_2	563.0 / 269.0	3.82	PFUnA	0.040	0.049	ü
PFDoA_1	613.0 / 569.0	4.11	PFDoA			
PFDoA_2	613.0 / 319.0	4.11	PFDoA	0.160	0.160	ü
PFTrDA_1	663.0 / 619.0	4.37	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.36	PFTrDA	0.060	0.066	ü
PFTeDA_1	713.0 / 669.0	4.59	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.58	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.65	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.65	NMeFOSAA	0.450	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.82	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.82	NEtFOSAA	0.050	0.062	ü

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Summary Ion Ratio Report

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Sample Name	KB74	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T19:57:45	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.57	PFBS			
PFBS_2	298.9 / 99.0	1.57	PFBS	0.280	0.292	ü
PFHxA_1	313.0 / 269.0	1.90	PFHxA			
PFHxA_2	313.0 / 119.0	1.89	PFHxA	0.070	0.077	ü
PFHpA_1	363.0 / 319.0	2.31	PFHpA			
PFHpA_2	363.0 / 169.0	2.31	PFHpA	0.020	0.025	ü
PFHxS_1	399.0 / 80.0	2.33	PFHxS			
PFHxS_2	399.0 / 99.0	2.33	PFHxS	0.280	0.282	ü
PFOA_1	413.0 / 369.0	2.73	PFOA			
PFOA_2	413.0 / 169.0	2.73	PFOA	0.070	0.065	ü
PFNA_1	463.0 / 419.0	3.13	PFNA			
PFNA_2	463.0 / 219.0	3.12	PFNA	0.260	0.306	ü
PFOS_1	499.0 / 80.0	3.12	PFOS			
PFOS_2	499.0 / 99.0	3.12	PFOS	0.170	0.174	ü
PFDA_1	513.0 / 469.0	3.49	PFDA			
PFDA_2	513.0 / 219.0	3.48	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.82	PFUnA			
PFUnA_2	563.0 / 269.0	3.81	PFUnA	0.050	0.049	ü
PFDoA_1	613.0 / 569.0	4.10	PFDoA			
PFDoA_2	613.0 / 319.0	4.10	PFDoA	0.180	0.160	ü
PFTrDA_1	663.0 / 619.0	4.35	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.35	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.58	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.58	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.65	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.65	NMeFOSAA	0.540	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.81	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.80	NEtFOSAA	0.060	0.062	ü

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Summary Ion Ratio Report

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Sample Name	KB75	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:08:39	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.57	PFBS			
PFBS_2	298.9 / 99.0	1.57	PFBS	0.280	0.292	ü
PFHxA_1	313.0 / 269.0	1.89	PFHxA			
PFHxA_2	313.0 / 119.0	1.89	PFHxA	0.080	0.077	ü
PFHpA_1	363.0 / 319.0	2.31	PFHpA			
PFHpA_2	363.0 / 169.0	2.31	PFHpA	0.030	0.025	ü
PFHxS_1	399.0 / 80.0	2.33	PFHxS			
PFHxS_2	399.0 / 99.0	2.33	PFHxS	0.290	0.282	ü
PFOA_1	413.0 / 369.0	2.72	PFOA			
PFOA_2	413.0 / 169.0	2.72	PFOA	0.060	0.065	ü
PFNA_1	463.0 / 419.0	3.12	PFNA			
PFNA_2	463.0 / 219.0	3.12	PFNA	0.300	0.306	ü
PFOS_1	499.0 / 80.0	3.12	PFOS			
PFOS_2	499.0 / 99.0	3.12	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	3.48	PFDA			
PFDA_2	513.0 / 219.0	3.48	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.81	PFUnA			
PFUnA_2	563.0 / 269.0	3.81	PFUnA	0.060	0.049	ü
PFDoA_1	613.0 / 569.0	4.09	PFDoA			
PFDoA_2	613.0 / 319.0	4.09	PFDoA	0.160	0.160	ü
PFTrDA_1	663.0 / 619.0	4.35	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.34	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.57	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.56	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.63	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.64	NMeFOSAA	0.530	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.80	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.80	NEtFOSAA	0.080	0.062	ü

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Summary Ion Ratio Report

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Sample Name	KB76	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:19:32	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.56	PFBS			
PFBS_2	298.9 / 99.0	1.56	PFBS	0.290	0.292	ü
PFHxA_1	313.0 / 269.0	1.89	PFHxA			
PFHxA_2	313.0 / 119.0	1.89	PFHxA	0.070	0.077	ü
PFHpA_1	363.0 / 319.0	2.30	PFHpA			
PFHpA_2	363.0 / 169.0	2.30	PFHpA	0.020	0.025	ü
PFHxS_1	399.0 / 80.0	2.32	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	PFHxS	0.290	0.282	ü
PFOA_1	413.0 / 369.0	2.71	PFOA			
PFOA_2	413.0 / 169.0	2.71	PFOA	0.070	0.065	ü
PFNA_1	463.0 / 419.0	3.11	PFNA			
PFNA_2	463.0 / 219.0	3.11	PFNA	0.310	0.306	ü
PFOS_1	499.0 / 80.0	3.11	PFOS			
PFOS_2	499.0 / 99.0	3.11	PFOS	0.170	0.174	ü
PFDA_1	513.0 / 469.0	3.47	PFDA			
PFDA_2	513.0 / 219.0	3.47	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.80	PFUnA			
PFUnA_2	563.0 / 269.0	3.80	PFUnA	0.050	0.049	ü
PFDoA_1	613.0 / 569.0	4.09	PFDoA			
PFDoA_2	613.0 / 319.0	4.09	PFDoA	0.150	0.160	ü
PFTrDA_1	663.0 / 619.0	4.34	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.34	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.56	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.56	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.63	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.63	NMeFOSAA	0.580	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.80	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.80	NEtFOSAA	0.060	0.062	ü

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Summary Ion Ratio Report

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Sample Name	KB77	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:30:23	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.57	PFBS			
PFBS_2	298.9 / 99.0	1.56	PFBS	0.290	0.292	ü
PFHxA_1	313.0 / 269.0	1.89	PFHxA			
PFHxA_2	313.0 / 119.0	1.89	PFHxA	0.070	0.077	ü
PFHpA_1	363.0 / 319.0	2.30	PFHpA			
PFHpA_2	363.0 / 169.0	2.30	PFHpA	0.020	0.025	ü
PFHxS_1	399.0 / 80.0	2.32	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	PFHxS	0.280	0.282	ü
PFOA_1	413.0 / 369.0	2.71	PFOA			
PFOA_2	413.0 / 169.0	2.71	PFOA	0.060	0.065	ü
PFNA_1	463.0 / 419.0	3.11	PFNA			
PFNA_2	463.0 / 219.0	3.11	PFNA	0.330	0.306	ü
PFOS_1	499.0 / 80.0	3.11	PFOS			
PFOS_2	499.0 / 99.0	3.11	PFOS	0.170	0.174	ü
PFDA_1	513.0 / 469.0	3.47	PFDA			
PFDA_2	513.0 / 219.0	3.47	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.80	PFUnA			
PFUnA_2	563.0 / 269.0	3.80	PFUnA	0.050	0.049	ü
PFDoA_1	613.0 / 569.0	4.09	PFDoA			
PFDoA_2	613.0 / 319.0	4.09	PFDoA	0.170	0.160	ü
PFTrDA_1	663.0 / 619.0	4.33	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.33	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.56	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.55	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.63	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.63	NMeFOSAA	0.580	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.79	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.79	NEtFOSAA	0.060	0.062	ü

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Summary Ion Ratio Report

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Sample Name	KB78	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:41:14	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.56	PFBS			
PFBS_2	298.9 / 99.0	1.56	PFBS	0.300	0.292	ü
PFHxA_1	313.0 / 269.0	1.88	PFHxA			
PFHxA_2	313.0 / 119.0	1.88	PFHxA	0.080	0.077	ü
PFHpA_1	363.0 / 319.0	2.30	PFHpA			
PFHpA_2	363.0 / 169.0	2.30	PFHpA	0.020	0.025	ü
PFHxS_1	399.0 / 80.0	2.32	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	PFHxS	0.280	0.282	ü
PFOA_1	413.0 / 369.0	2.71	PFOA			
PFOA_2	413.0 / 169.0	2.71	PFOA	0.060	0.065	ü
PFNA_1	463.0 / 419.0	3.11	PFNA			
PFNA_2	463.0 / 219.0	3.11	PFNA	0.310	0.306	ü
PFOS_1	499.0 / 80.0	3.10	PFOS			
PFOS_2	499.0 / 99.0	3.10	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	3.47	PFDA			
PFDA_2	513.0 / 219.0	3.46	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.79	PFUnA			
PFUnA_2	563.0 / 269.0	3.79	PFUnA	0.050	0.049	ü
PFDoA_1	613.0 / 569.0	4.08	PFDoA			
PFDoA_2	613.0 / 319.0	4.08	PFDoA	0.150	0.160	ü
PFTrDA_1	663.0 / 619.0	4.33	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.33	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.55	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.54	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.62	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.62	NMeFOSAA	0.540	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.79	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.79	NEtFOSAA	0.060	0.062	ü

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Summary Ion Ratio Report

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Sample Name	KB79	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:52:06	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.56	PFBS			
PFBS_2	298.9 / 99.0	1.56	PFBS	0.290	0.292	ü
PFHxA_1	313.0 / 269.0	1.89	PFHxA			
PFHxA_2	313.0 / 119.0	1.88	PFHxA	0.070	0.077	ü
PFHpA_1	363.0 / 319.0	2.29	PFHpA			
PFHpA_2	363.0 / 169.0	2.30	PFHpA	0.020	0.025	ü
PFHxS_1	399.0 / 80.0	2.32	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	PFHxS	0.280	0.282	ü
PFOA_1	413.0 / 369.0	2.71	PFOA			
PFOA_2	413.0 / 169.0	2.71	PFOA	0.070	0.065	ü
PFNA_1	463.0 / 419.0	3.11	PFNA			
PFNA_2	463.0 / 219.0	3.11	PFNA	0.310	0.306	ü
PFOS_1	499.0 / 80.0	3.10	PFOS			
PFOS_2	499.0 / 99.0	3.10	PFOS	0.170	0.174	ü
PFDA_1	513.0 / 469.0	3.47	PFDA			
PFDA_2	513.0 / 219.0	3.47	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.79	PFUnA			
PFUnA_2	563.0 / 269.0	3.79	PFUnA	0.050	0.049	ü
PFDoA_1	613.0 / 569.0	4.07	PFDoA			
PFDoA_2	613.0 / 319.0	4.07	PFDoA	0.160	0.160	ü
PFTrDA_1	663.0 / 619.0	4.32	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.32	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.54	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.54	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.62	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.62	NMeFOSAA	0.540	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.78	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.78	NEtFOSAA	0.060	0.062	ü

BATTELLE

Summary Internal Standard Report

Sample Name	KB73	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T19:46:52	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.57	13C3-PFBS	302.0 / 99.0	26120.14	232.25
PFBS_2	298.9 / 99.0	1.57	13C3-PFBS	302.0 / 99.0	26120.14	232.25
PFHxA_1	313.0 / 269.0	1.90	13C5-PFHxA	318.0 / 273.0	61468.01	250.00
PFHxA_2	313.0 / 119.0	1.91	13C5-PFHxA	318.0 / 273.0	61468.01	250.00
PFHpA_1	363.0 / 319.0	2.32	13C4-PFHpA	367.0 / 322.0	69894.37	250.00
PFHpA_2	363.0 / 169.0	2.32	13C4-PFHpA	367.0 / 322.0	69894.37	250.00
PFHxS_1	399.0 / 80.0	2.34	13C3-PFHxS	402.0 / 99.0	24619.85	236.50
PFHxS_2	399.0 / 99.0	2.34	13C3-PFHxS	402.0 / 99.0	24619.85	236.50
PFOA_1	413.0 / 369.0	2.73	13C8-PFOA	421.0 / 376.0	82686.75	250.00
PFOA_2	413.0 / 169.0	2.73	13C8-PFOA	421.0 / 376.0	82686.75	250.00
PFNA_1	463.0 / 419.0	3.14	13C9-PFNA	472.0 / 427.0	91536.04	250.00
PFNA_2	463.0 / 219.0	3.14	13C9-PFNA	472.0 / 427.0	91536.04	250.00
PFOS_1	499.0 / 80.0	3.13	13C8-PFOS	507.0 / 99.0	29514.87	239.25
PFOS_2	499.0 / 99.0	3.13	13C8-PFOS	507.0 / 99.0	29514.87	239.25
PFDA_1	513.0 / 469.0	3.50	13C6-PFDA	519.0 / 474.0	97086.56	250.00
PFDA_2	513.0 / 219.0	3.49	13C6-PFDA	519.0 / 474.0	97086.56	250.00
PFUnA_1	563.0 / 519.0	3.83	13C7-PFUnA	570.0 / 525.0	90055.69	250.00
PFUnA_2	563.0 / 269.0	3.82	13C7-PFUnA	570.0 / 525.0	90055.69	250.00
PFDoA_1	613.0 / 569.0	4.11	13C2-PFDoA	615.0 / 570.0	91402.83	250.00
PFDoA_2	613.0 / 319.0	4.11	13C2-PFDoA	615.0 / 570.0	91402.83	250.00
PFTrDA_1	663.0 / 619.0	4.37	13C2-PFTeDA	715.0 / 670.0	76389.03	250.00
PFTrDA_2	663.0 / 169.0	4.36	13C2-PFTeDA	715.0 / 670.0	76389.03	250.00
PFTeDA_1	713.0 / 669.0	4.59	13C2-PFTeDA	715.0 / 670.0	76389.03	250.00
PFTeDA_2	713.0 / 169.0	4.58	13C2-PFTeDA	715.0 / 670.0	76389.03	250.00
NMeFOSAA_1	570.0 / 419.0	3.65	d3-MeFOSAA	573.0 / 419.0	16233.26	250.00
NMeFOSAA_2	570.0 / 512.0	3.65	d3-MeFOSAA	573.0 / 419.0	16233.26	250.00
NEtFOSAA_1	584.0 / 419.0	3.82	d5-EtFOSAA	589.0 / 419.0	19192.99	250.00
NEtFOSAA_2	584.0 / 483.0	3.82	d5-EtFOSAA	589.0 / 419.0	19192.99	250.00

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Summary Internal Standard Report

Sample Name	KB74	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T19:57:45	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.57	13C3-PFBS	302.0 / 99.0	29228.78	232.25
PFBS_2	298.9 / 99.0	1.57	13C3-PFBS	302.0 / 99.0	29228.78	232.25
PFHxA_1	313.0 / 269.0	1.90	13C5-PFHxA	318.0 / 273.0	67688.32	250.00
PFHxA_2	313.0 / 119.0	1.89	13C5-PFHxA	318.0 / 273.0	67688.32	250.00
PFHpA_1	363.0 / 319.0	2.31	13C4-PFHpA	367.0 / 322.0	76065.72	250.00
PFHpA_2	363.0 / 169.0	2.31	13C4-PFHpA	367.0 / 322.0	76065.72	250.00
PFHxS_1	399.0 / 80.0	2.33	13C3-PFHxS	402.0 / 99.0	29708.48	236.50
PFHxS_2	399.0 / 99.0	2.33	13C3-PFHxS	402.0 / 99.0	29708.48	236.50
PFOA_1	413.0 / 369.0	2.73	13C8-PFOA	421.0 / 376.0	96880.10	250.00
PFOA_2	413.0 / 169.0	2.73	13C8-PFOA	421.0 / 376.0	96880.10	250.00
PFNA_1	463.0 / 419.0	3.13	13C9-PFNA	472.0 / 427.0	109970.74	250.00
PFNA_2	463.0 / 219.0	3.12	13C9-PFNA	472.0 / 427.0	109970.74	250.00
PFOS_1	499.0 / 80.0	3.12	13C8-PFOS	507.0 / 99.0	33822.33	239.25
PFOS_2	499.0 / 99.0	3.12	13C8-PFOS	507.0 / 99.0	33822.33	239.25
PFDA_1	513.0 / 469.0	3.49	13C6-PFDA	519.0 / 474.0	103376.35	250.00
PFDA_2	513.0 / 219.0	3.48	13C6-PFDA	519.0 / 474.0	103376.35	250.00
PFUnA_1	563.0 / 519.0	3.82	13C7-PFUnA	570.0 / 525.0	99154.47	250.00
PFUnA_2	563.0 / 269.0	3.81	13C7-PFUnA	570.0 / 525.0	99154.47	250.00
PFDoA_1	613.0 / 569.0	4.10	13C2-PFDoA	615.0 / 570.0	107747.25	250.00
PFDoA_2	613.0 / 319.0	4.10	13C2-PFDoA	615.0 / 570.0	107747.25	250.00
PFTrDA_1	663.0 / 619.0	4.35	13C2-PFTeDA	715.0 / 670.0	86008.02	250.00
PFTrDA_2	663.0 / 169.0	4.35	13C2-PFTeDA	715.0 / 670.0	86008.02	250.00
PFTeDA_1	713.0 / 669.0	4.58	13C2-PFTeDA	715.0 / 670.0	86008.02	250.00
PFTeDA_2	713.0 / 169.0	4.58	13C2-PFTeDA	715.0 / 670.0	86008.02	250.00
NMeFOSAA_1	570.0 / 419.0	3.65	d3-MeFOSAA	573.0 / 419.0	17661.42	250.00
NMeFOSAA_2	570.0 / 512.0	3.65	d3-MeFOSAA	573.0 / 419.0	17661.42	250.00
NEtFOSAA_1	584.0 / 419.0	3.81	d5-EtFOSAA	589.0 / 419.0	22570.27	250.00
NEtFOSAA_2	584.0 / 483.0	3.80	d5-EtFOSAA	589.0 / 419.0	22570.27	250.00

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Summary Internal Standard Report

Sample Name	KB75	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:08:39	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.57	13C3-PFBS	302.0 / 99.0	26105.02	232.25
PFBS_2	298.9 / 99.0	1.57	13C3-PFBS	302.0 / 99.0	26105.02	232.25
PFHxA_1	313.0 / 269.0	1.89	13C5-PFHxA	318.0 / 273.0	59853.55	250.00
PFHxA_2	313.0 / 119.0	1.89	13C5-PFHxA	318.0 / 273.0	59853.55	250.00
PFHpA_1	363.0 / 319.0	2.31	13C4-PFHpA	367.0 / 322.0	72363.27	250.00
PFHpA_2	363.0 / 169.0	2.31	13C4-PFHpA	367.0 / 322.0	72363.27	250.00
PFHxS_1	399.0 / 80.0	2.33	13C3-PFHxS	402.0 / 99.0	26459.07	236.50
PFHxS_2	399.0 / 99.0	2.33	13C3-PFHxS	402.0 / 99.0	26459.07	236.50
PFOA_1	413.0 / 369.0	2.72	13C8-PFOA	421.0 / 376.0	92242.14	250.00
PFOA_2	413.0 / 169.0	2.72	13C8-PFOA	421.0 / 376.0	92242.14	250.00
PFNA_1	463.0 / 419.0	3.12	13C9-PFNA	472.0 / 427.0	106517.52	250.00
PFNA_2	463.0 / 219.0	3.12	13C9-PFNA	472.0 / 427.0	106517.52	250.00
PFOS_1	499.0 / 80.0	3.12	13C8-PFOS	507.0 / 99.0	27084.38	239.25
PFOS_2	499.0 / 99.0	3.12	13C8-PFOS	507.0 / 99.0	27084.38	239.25
PFDA_1	513.0 / 469.0	3.48	13C6-PFDA	519.0 / 474.0	99092.64	250.00
PFDA_2	513.0 / 219.0	3.48	13C6-PFDA	519.0 / 474.0	99092.64	250.00
PFUnA_1	563.0 / 519.0	3.81	13C7-PFUnA	570.0 / 525.0	101859.96	250.00
PFUnA_2	563.0 / 269.0	3.81	13C7-PFUnA	570.0 / 525.0	101859.96	250.00
PFDoA_1	613.0 / 569.0	4.09	13C2-PFDoA	615.0 / 570.0	95394.66	250.00
PFDoA_2	613.0 / 319.0	4.09	13C2-PFDoA	615.0 / 570.0	95394.66	250.00
PFTrDA_1	663.0 / 619.0	4.35	13C2-PFTeDA	715.0 / 670.0	75947.40	250.00
PFTrDA_2	663.0 / 169.0	4.34	13C2-PFTeDA	715.0 / 670.0	75947.40	250.00
PFTeDA_1	713.0 / 669.0	4.57	13C2-PFTeDA	715.0 / 670.0	75947.40	250.00
PFTeDA_2	713.0 / 169.0	4.56	13C2-PFTeDA	715.0 / 670.0	75947.40	250.00
NMeFOSAA_1	570.0 / 419.0	3.63	d3-MeFOSAA	573.0 / 419.0	16616.33	250.00
NMeFOSAA_2	570.0 / 512.0	3.64	d3-MeFOSAA	573.0 / 419.0	16616.33	250.00
NEtFOSAA_1	584.0 / 419.0	3.80	d5-EtFOSAA	589.0 / 419.0	16999.01	250.00
NEtFOSAA_2	584.0 / 483.0	3.80	d5-EtFOSAA	589.0 / 419.0	16999.01	250.00

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Summary Internal Standard Report

Sample Name	KB76	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:19:32	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.56	13C3-PFBS	302.0 / 99.0	24473.16	232.25
PFBS_2	298.9 / 99.0	1.56	13C3-PFBS	302.0 / 99.0	24473.16	232.25
PFHxA_1	313.0 / 269.0	1.89	13C5-PFHxA	318.0 / 273.0	58835.13	250.00
PFHxA_2	313.0 / 119.0	1.89	13C5-PFHxA	318.0 / 273.0	58835.13	250.00
PFHpA_1	363.0 / 319.0	2.30	13C4-PFHpA	367.0 / 322.0	73044.35	250.00
PFHpA_2	363.0 / 169.0	2.30	13C4-PFHpA	367.0 / 322.0	73044.35	250.00
PFHxS_1	399.0 / 80.0	2.32	13C3-PFHxS	402.0 / 99.0	23463.21	236.50
PFHxS_2	399.0 / 99.0	2.32	13C3-PFHxS	402.0 / 99.0	23463.21	236.50
PFOA_1	413.0 / 369.0	2.71	13C8-PFOA	421.0 / 376.0	89256.01	250.00
PFOA_2	413.0 / 169.0	2.71	13C8-PFOA	421.0 / 376.0	89256.01	250.00
PFNA_1	463.0 / 419.0	3.11	13C9-PFNA	472.0 / 427.0	96659.60	250.00
PFNA_2	463.0 / 219.0	3.11	13C9-PFNA	472.0 / 427.0	96659.60	250.00
PFOS_1	499.0 / 80.0	3.11	13C8-PFOS	507.0 / 99.0	28834.11	239.25
PFOS_2	499.0 / 99.0	3.11	13C8-PFOS	507.0 / 99.0	28834.11	239.25
PFDA_1	513.0 / 469.0	3.47	13C6-PFDA	519.0 / 474.0	97605.58	250.00
PFDA_2	513.0 / 219.0	3.47	13C6-PFDA	519.0 / 474.0	97605.58	250.00
PFUnA_1	563.0 / 519.0	3.80	13C7-PFUnA	570.0 / 525.0	85263.94	250.00
PFUnA_2	563.0 / 269.0	3.80	13C7-PFUnA	570.0 / 525.0	85263.94	250.00
PFDoA_1	613.0 / 569.0	4.09	13C2-PFDoA	615.0 / 570.0	95903.63	250.00
PFDoA_2	613.0 / 319.0	4.09	13C2-PFDoA	615.0 / 570.0	95903.63	250.00
PFTrDA_1	663.0 / 619.0	4.34	13C2-PFTeDA	715.0 / 670.0	72740.35	250.00
PFTrDA_2	663.0 / 169.0	4.34	13C2-PFTeDA	715.0 / 670.0	72740.35	250.00
PFTeDA_1	713.0 / 669.0	4.56	13C2-PFTeDA	715.0 / 670.0	72740.35	250.00
PFTeDA_2	713.0 / 169.0	4.56	13C2-PFTeDA	715.0 / 670.0	72740.35	250.00
NMeFOSAA_1	570.0 / 419.0	3.63	d3-MeFOSAA	573.0 / 419.0	15280.98	250.00
NMeFOSAA_2	570.0 / 512.0	3.63	d3-MeFOSAA	573.0 / 419.0	15280.98	250.00
NEtFOSAA_1	584.0 / 419.0	3.80	d5-EtFOSAA	589.0 / 419.0	19201.47	250.00
NEtFOSAA_2	584.0 / 483.0	3.80	d5-EtFOSAA	589.0 / 419.0	19201.47	250.00

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Summary Internal Standard Report

Sample Name	KB77	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:30:23	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.57	13C3-PFBS	302.0 / 99.0	26519.94	232.25
PFBS_2	298.9 / 99.0	1.56	13C3-PFBS	302.0 / 99.0	26519.94	232.25
PFHxA_1	313.0 / 269.0	1.89	13C5-PFHxA	318.0 / 273.0	61167.94	250.00
PFHxA_2	313.0 / 119.0	1.89	13C5-PFHxA	318.0 / 273.0	61167.94	250.00
PFHpA_1	363.0 / 319.0	2.30	13C4-PFHpA	367.0 / 322.0	69461.61	250.00
PFHpA_2	363.0 / 169.0	2.30	13C4-PFHpA	367.0 / 322.0	69461.61	250.00
PFHxS_1	399.0 / 80.0	2.32	13C3-PFHxS	402.0 / 99.0	22669.25	236.50
PFHxS_2	399.0 / 99.0	2.32	13C3-PFHxS	402.0 / 99.0	22669.25	236.50
PFOA_1	413.0 / 369.0	2.71	13C8-PFOA	421.0 / 376.0	84283.75	250.00
PFOA_2	413.0 / 169.0	2.71	13C8-PFOA	421.0 / 376.0	84283.75	250.00
PFNA_1	463.0 / 419.0	3.11	13C9-PFNA	472.0 / 427.0	93667.25	250.00
PFNA_2	463.0 / 219.0	3.11	13C9-PFNA	472.0 / 427.0	93667.25	250.00
PFOS_1	499.0 / 80.0	3.11	13C8-PFOS	507.0 / 99.0	28376.74	239.25
PFOS_2	499.0 / 99.0	3.11	13C8-PFOS	507.0 / 99.0	28376.74	239.25
PFDA_1	513.0 / 469.0	3.47	13C6-PFDA	519.0 / 474.0	97196.35	250.00
PFDA_2	513.0 / 219.0	3.47	13C6-PFDA	519.0 / 474.0	97196.35	250.00
PFUnA_1	563.0 / 519.0	3.80	13C7-PFUnA	570.0 / 525.0	81503.66	250.00
PFUnA_2	563.0 / 269.0	3.80	13C7-PFUnA	570.0 / 525.0	81503.66	250.00
PFDoA_1	613.0 / 569.0	4.09	13C2-PFDoA	615.0 / 570.0	87520.82	250.00
PFDoA_2	613.0 / 319.0	4.09	13C2-PFDoA	615.0 / 570.0	87520.82	250.00
PFTrDA_1	663.0 / 619.0	4.33	13C2-PFTeDA	715.0 / 670.0	71548.15	250.00
PFTrDA_2	663.0 / 169.0	4.33	13C2-PFTeDA	715.0 / 670.0	71548.15	250.00
PFTeDA_1	713.0 / 669.0	4.56	13C2-PFTeDA	715.0 / 670.0	71548.15	250.00
PFTeDA_2	713.0 / 169.0	4.55	13C2-PFTeDA	715.0 / 670.0	71548.15	250.00
NMeFOSAA_1	570.0 / 419.0	3.63	d3-MeFOSAA	573.0 / 419.0	16063.93	250.00
NMeFOSAA_2	570.0 / 512.0	3.63	d3-MeFOSAA	573.0 / 419.0	16063.93	250.00
NEtFOSAA_1	584.0 / 419.0	3.79	d5-EtFOSAA	589.0 / 419.0	16992.28	250.00
NEtFOSAA_2	584.0 / 483.0	3.79	d5-EtFOSAA	589.0 / 419.0	16992.28	250.00

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Summary Internal Standard Report

Sample Name	KB78	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:41:14	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.56	13C3-PFBS	302.0 / 99.0	30399.13	232.25
PFBS_2	298.9 / 99.0	1.56	13C3-PFBS	302.0 / 99.0	30399.13	232.25
PFHxA_1	313.0 / 269.0	1.88	13C5-PFHxA	318.0 / 273.0	67298.42	250.00
PFHxA_2	313.0 / 119.0	1.88	13C5-PFHxA	318.0 / 273.0	67298.42	250.00
PFHpA_1	363.0 / 319.0	2.30	13C4-PFHpA	367.0 / 322.0	72755.48	250.00
PFHpA_2	363.0 / 169.0	2.30	13C4-PFHpA	367.0 / 322.0	72755.48	250.00
PFHxS_1	399.0 / 80.0	2.32	13C3-PFHxS	402.0 / 99.0	27186.76	236.50
PFHxS_2	399.0 / 99.0	2.32	13C3-PFHxS	402.0 / 99.0	27186.76	236.50
PFOA_1	413.0 / 369.0	2.71	13C8-PFOA	421.0 / 376.0	85622.31	250.00
PFOA_2	413.0 / 169.0	2.71	13C8-PFOA	421.0 / 376.0	85622.31	250.00
PFNA_1	463.0 / 419.0	3.11	13C9-PFNA	472.0 / 427.0	103069.19	250.00
PFNA_2	463.0 / 219.0	3.11	13C9-PFNA	472.0 / 427.0	103069.19	250.00
PFOS_1	499.0 / 80.0	3.10	13C8-PFOS	507.0 / 99.0	30401.17	239.25
PFOS_2	499.0 / 99.0	3.10	13C8-PFOS	507.0 / 99.0	30401.17	239.25
PFDA_1	513.0 / 469.0	3.47	13C6-PFDA	519.0 / 474.0	101281.21	250.00
PFDA_2	513.0 / 219.0	3.46	13C6-PFDA	519.0 / 474.0	101281.21	250.00
PFUnA_1	563.0 / 519.0	3.79	13C7-PFUnA	570.0 / 525.0	91776.59	250.00
PFUnA_2	563.0 / 269.0	3.79	13C7-PFUnA	570.0 / 525.0	91776.59	250.00
PFDoA_1	613.0 / 569.0	4.08	13C2-PFDoA	615.0 / 570.0	102072.61	250.00
PFDoA_2	613.0 / 319.0	4.08	13C2-PFDoA	615.0 / 570.0	102072.61	250.00
PFTrDA_1	663.0 / 619.0	4.33	13C2-PFTeDA	715.0 / 670.0	84788.29	250.00
PFTrDA_2	663.0 / 169.0	4.33	13C2-PFTeDA	715.0 / 670.0	84788.29	250.00
PFTeDA_1	713.0 / 669.0	4.55	13C2-PFTeDA	715.0 / 670.0	84788.29	250.00
PFTeDA_2	713.0 / 169.0	4.54	13C2-PFTeDA	715.0 / 670.0	84788.29	250.00
NMeFOSAA_1	570.0 / 419.0	3.62	d3-MeFOSAA	573.0 / 419.0	18223.77	250.00
NMeFOSAA_2	570.0 / 512.0	3.62	d3-MeFOSAA	573.0 / 419.0	18223.77	250.00
NEtFOSAA_1	584.0 / 419.0	3.79	d5-EtFOSAA	589.0 / 419.0	20489.99	250.00
NEtFOSAA_2	584.0 / 483.0	3.79	d5-EtFOSAA	589.0 / 419.0	20489.99	250.00

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Summary Internal Standard Report

Sample Name	KB79	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:52:06	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.56	13C3-PFBS	302.0 / 99.0	29660.00	232.25
PFBS_2	298.9 / 99.0	1.56	13C3-PFBS	302.0 / 99.0	29660.00	232.25
PFHxA_1	313.0 / 269.0	1.89	13C5-PFHxA	318.0 / 273.0	63134.84	250.00
PFHxA_2	313.0 / 119.0	1.88	13C5-PFHxA	318.0 / 273.0	63134.84	250.00
PFHpA_1	363.0 / 319.0	2.29	13C4-PFHpA	367.0 / 322.0	66285.64	250.00
PFHpA_2	363.0 / 169.0	2.30	13C4-PFHpA	367.0 / 322.0	66285.64	250.00
PFHxS_1	399.0 / 80.0	2.32	13C3-PFHxS	402.0 / 99.0	23705.87	236.50
PFHxS_2	399.0 / 99.0	2.32	13C3-PFHxS	402.0 / 99.0	23705.87	236.50
PFOA_1	413.0 / 369.0	2.71	13C8-PFOA	421.0 / 376.0	77573.52	250.00
PFOA_2	413.0 / 169.0	2.71	13C8-PFOA	421.0 / 376.0	77573.52	250.00
PFNA_1	463.0 / 419.0	3.11	13C9-PFNA	472.0 / 427.0	93994.33	250.00
PFNA_2	463.0 / 219.0	3.11	13C9-PFNA	472.0 / 427.0	93994.33	250.00
PFOS_1	499.0 / 80.0	3.10	13C8-PFOS	507.0 / 99.0	25276.93	239.25
PFOS_2	499.0 / 99.0	3.10	13C8-PFOS	507.0 / 99.0	25276.93	239.25
PFDA_1	513.0 / 469.0	3.47	13C6-PFDA	519.0 / 474.0	88095.93	250.00
PFDA_2	513.0 / 219.0	3.47	13C6-PFDA	519.0 / 474.0	88095.93	250.00
PFUnA_1	563.0 / 519.0	3.79	13C7-PFUnA	570.0 / 525.0	82754.96	250.00
PFUnA_2	563.0 / 269.0	3.79	13C7-PFUnA	570.0 / 525.0	82754.96	250.00
PFDoA_1	613.0 / 569.0	4.07	13C2-PFDoA	615.0 / 570.0	99995.01	250.00
PFDoA_2	613.0 / 319.0	4.07	13C2-PFDoA	615.0 / 570.0	99995.01	250.00
PFTrDA_1	663.0 / 619.0	4.32	13C2-PFTeDA	715.0 / 670.0	81617.66	250.00
PFTrDA_2	663.0 / 169.0	4.32	13C2-PFTeDA	715.0 / 670.0	81617.66	250.00
PFTeDA_1	713.0 / 669.0	4.54	13C2-PFTeDA	715.0 / 670.0	81617.66	250.00
PFTeDA_2	713.0 / 169.0	4.54	13C2-PFTeDA	715.0 / 670.0	81617.66	250.00
NMeFOSAA_1	570.0 / 419.0	3.62	d3-MeFOSAA	573.0 / 419.0	18782.71	250.00
NMeFOSAA_2	570.0 / 512.0	3.62	d3-MeFOSAA	573.0 / 419.0	18782.71	250.00
NEtFOSAA_1	584.0 / 419.0	3.78	d5-EtFOSAA	589.0 / 419.0	16682.63	250.00
NEtFOSAA_2	584.0 / 483.0	3.78	d5-EtFOSAA	589.0 / 419.0	16682.63	250.00

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Summary Internal Standard Report

Sample Name	KB73	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T19:46:52	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.10	13C2-PFDA	515.0 / 470.0	100139.46	250.00
d3-MeFOSAA	573.0 / 419.0	3.65	13C4-PFOS	503.0 / 99.0	29846.55	239.25
d5-EtFOSAA	589.0 / 419.0	3.81	13C4-PFOS	503.0 / 99.0	29846.55	239.25
13C5-PFHxA	318.0 / 273.0	1.89	13C2-PFOA	415.0 / 370.0	79095.63	250.00
13C4-PFHpA	367.0 / 322.0	2.30	13C2-PFOA	415.0 / 370.0	79095.63	250.00
13C8-PFOA	421.0 / 376.0	2.72	13C2-PFOA	415.0 / 370.0	79095.63	250.00
13C9-PFNA	472.0 / 427.0	3.12	13C2-PFOA	415.0 / 370.0	79095.63	250.00
13C6-PFDA	519.0 / 474.0	3.48	13C2-PFDA	515.0 / 470.0	100139.46	250.00
13C7-PFUnA	570.0 / 525.0	3.81	13C2-PFDA	515.0 / 470.0	100139.46	250.00
13C2-PFTeDA	715.0 / 670.0	4.58	13C2-PFDA	515.0 / 470.0	100139.46	250.00
13C3-PFBS	302.0 / 99.0	1.55	13C4-PFOS	503.0 / 99.0	29846.55	239.25
13C3-PFHxS	402.0 / 99.0	2.33	13C4-PFOS	503.0 / 99.0	29846.55	239.25
13C8-PFOS	507.0 / 99.0	3.12	13C4-PFOS	503.0 / 99.0	29846.55	239.25

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Summary Internal Standard Report

Sample Name	KB74	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T19:57:45	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.09	13C2-PFDA	515.0 / 470.0	103883.83	250.00
d3-MeFOSAA	573.0 / 419.0	3.64	13C4-PFOS	503.0 / 99.0	34856.85	239.25
d5-EtFOSAA	589.0 / 419.0	3.80	13C4-PFOS	503.0 / 99.0	34856.85	239.25
13C5-PFHxA	318.0 / 273.0	1.89	13C2-PFOA	415.0 / 370.0	89971.31	250.00
13C4-PFHpA	367.0 / 322.0	2.30	13C2-PFOA	415.0 / 370.0	89971.31	250.00
13C8-PFOA	421.0 / 376.0	2.72	13C2-PFOA	415.0 / 370.0	89971.31	250.00
13C9-PFNA	472.0 / 427.0	3.11	13C2-PFOA	415.0 / 370.0	89971.31	250.00
13C6-PFDA	519.0 / 474.0	3.48	13C2-PFDA	515.0 / 470.0	103883.83	250.00
13C7-PFUnA	570.0 / 525.0	3.80	13C2-PFDA	515.0 / 470.0	103883.83	250.00
13C2-PFTeDA	715.0 / 670.0	4.57	13C2-PFDA	515.0 / 470.0	103883.83	250.00
13C3-PFBS	302.0 / 99.0	1.55	13C4-PFOS	503.0 / 99.0	34856.85	239.25
13C3-PFHxS	402.0 / 99.0	2.32	13C4-PFOS	503.0 / 99.0	34856.85	239.25
13C8-PFOS	507.0 / 99.0	3.11	13C4-PFOS	503.0 / 99.0	34856.85	239.25

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Summary Internal Standard Report

Sample Name	KB75	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:08:39	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.08	13C2-PFDA	515.0 / 470.0	98052.33	250.00
d3-MeFOSAA	573.0 / 419.0	3.63	13C4-PFOS	503.0 / 99.0	30684.77	239.25
d5-EtFOSAA	589.0 / 419.0	3.79	13C4-PFOS	503.0 / 99.0	30684.77	239.25
13C5-PFHxA	318.0 / 273.0	1.88	13C2-PFOA	415.0 / 370.0	87799.30	250.00
13C4-PFHpA	367.0 / 322.0	2.29	13C2-PFOA	415.0 / 370.0	87799.30	250.00
13C8-PFOA	421.0 / 376.0	2.71	13C2-PFOA	415.0 / 370.0	87799.30	250.00
13C9-PFNA	472.0 / 427.0	3.10	13C2-PFOA	415.0 / 370.0	87799.30	250.00
13C6-PFDA	519.0 / 474.0	3.47	13C2-PFDA	515.0 / 470.0	98052.33	250.00
13C7-PFUnA	570.0 / 525.0	3.79	13C2-PFDA	515.0 / 470.0	98052.33	250.00
13C2-PFTeDA	715.0 / 670.0	4.56	13C2-PFDA	515.0 / 470.0	98052.33	250.00
13C3-PFBS	302.0 / 99.0	1.55	13C4-PFOS	503.0 / 99.0	30684.77	239.25
13C3-PFHxS	402.0 / 99.0	2.32	13C4-PFOS	503.0 / 99.0	30684.77	239.25
13C8-PFOS	507.0 / 99.0	3.10	13C4-PFOS	503.0 / 99.0	30684.77	239.25

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Summary Internal Standard Report

Sample Name	KB76	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:19:32	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.08	13C2-PFDA	515.0 / 470.0	99978.99	250.00
d3-MeFOSAA	573.0 / 419.0	3.62	13C4-PFOS	503.0 / 99.0	30962.75	239.25
d5-EtFOSAA	589.0 / 419.0	3.79	13C4-PFOS	503.0 / 99.0	30962.75	239.25
13C5-PFHxA	318.0 / 273.0	1.88	13C2-PFOA	415.0 / 370.0	84567.91	250.00
13C4-PFHpA	367.0 / 322.0	2.29	13C2-PFOA	415.0 / 370.0	84567.91	250.00
13C8-PFOA	421.0 / 376.0	2.70	13C2-PFOA	415.0 / 370.0	84567.91	250.00
13C9-PFNA	472.0 / 427.0	3.10	13C2-PFOA	415.0 / 370.0	84567.91	250.00
13C6-PFDA	519.0 / 474.0	3.46	13C2-PFDA	515.0 / 470.0	99978.99	250.00
13C7-PFUnA	570.0 / 525.0	3.78	13C2-PFDA	515.0 / 470.0	99978.99	250.00
13C2-PFTeDA	715.0 / 670.0	4.55	13C2-PFDA	515.0 / 470.0	99978.99	250.00
13C3-PFBS	302.0 / 99.0	1.55	13C4-PFOS	503.0 / 99.0	30962.75	239.25
13C3-PFHxS	402.0 / 99.0	2.32	13C4-PFOS	503.0 / 99.0	30962.75	239.25
13C8-PFOS	507.0 / 99.0	3.10	13C4-PFOS	503.0 / 99.0	30962.75	239.25

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Summary Internal Standard Report

Sample Name	KB77	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:30:23	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.07	13C2-PFDA	515.0 / 470.0	90129.70	250.00
d3-MeFOSAA	573.0 / 419.0	3.62	13C4-PFOS	503.0 / 99.0	31518.26	239.25
d5-EtFOSAA	589.0 / 419.0	3.78	13C4-PFOS	503.0 / 99.0	31518.26	239.25
13C5-PFHxA	318.0 / 273.0	1.88	13C2-PFOA	415.0 / 370.0	80369.12	250.00
13C4-PFHpA	367.0 / 322.0	2.29	13C2-PFOA	415.0 / 370.0	80369.12	250.00
13C8-PFOA	421.0 / 376.0	2.70	13C2-PFOA	415.0 / 370.0	80369.12	250.00
13C9-PFNA	472.0 / 427.0	3.10	13C2-PFOA	415.0 / 370.0	80369.12	250.00
13C6-PFDA	519.0 / 474.0	3.46	13C2-PFDA	515.0 / 470.0	90129.70	250.00
13C7-PFUnA	570.0 / 525.0	3.78	13C2-PFDA	515.0 / 470.0	90129.70	250.00
13C2-PFTeDA	715.0 / 670.0	4.55	13C2-PFDA	515.0 / 470.0	90129.70	250.00
13C3-PFBS	302.0 / 99.0	1.55	13C4-PFOS	503.0 / 99.0	31518.26	239.25
13C3-PFHxS	402.0 / 99.0	2.31	13C4-PFOS	503.0 / 99.0	31518.26	239.25
13C8-PFOS	507.0 / 99.0	3.10	13C4-PFOS	503.0 / 99.0	31518.26	239.25

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Summary Internal Standard Report

Sample Name	KB78	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:41:14	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.07	13C2-PFDA	515.0 / 470.0	104169.70	250.00
d3-MeFOSAA	573.0 / 419.0	3.61	13C4-PFOS	503.0 / 99.0	29589.19	239.25
d5-EtFOSAA	589.0 / 419.0	3.78	13C4-PFOS	503.0 / 99.0	29589.19	239.25
13C5-PFHxA	318.0 / 273.0	1.87	13C2-PFOA	415.0 / 370.0	85964.25	250.00
13C4-PFHpA	367.0 / 322.0	2.28	13C2-PFOA	415.0 / 370.0	85964.25	250.00
13C8-PFOA	421.0 / 376.0	2.70	13C2-PFOA	415.0 / 370.0	85964.25	250.00
13C9-PFNA	472.0 / 427.0	3.09	13C2-PFOA	415.0 / 370.0	85964.25	250.00
13C6-PFDA	519.0 / 474.0	3.45	13C2-PFDA	515.0 / 470.0	104169.70	250.00
13C7-PFUnA	570.0 / 525.0	3.78	13C2-PFDA	515.0 / 470.0	104169.70	250.00
13C2-PFTeDA	715.0 / 670.0	4.54	13C2-PFDA	515.0 / 470.0	104169.70	250.00
13C3-PFBS	302.0 / 99.0	1.54	13C4-PFOS	503.0 / 99.0	29589.19	239.25
13C3-PFHxS	402.0 / 99.0	2.31	13C4-PFOS	503.0 / 99.0	29589.19	239.25
13C8-PFOS	507.0 / 99.0	3.09	13C4-PFOS	503.0 / 99.0	29589.19	239.25

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Summary Internal Standard Report

Sample Name	KB79	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:52:06	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.07	13C2-PFDA	515.0 / 470.0	100765.46	250.00
d3-MeFOSAA	573.0 / 419.0	3.62	13C4-PFOS	503.0 / 99.0	26984.04	239.25
d5-EtFOSAA	589.0 / 419.0	3.78	13C4-PFOS	503.0 / 99.0	26984.04	239.25
13C5-PFHxA	318.0 / 273.0	1.87	13C2-PFOA	415.0 / 370.0	86636.81	250.00
13C4-PFHpA	367.0 / 322.0	2.28	13C2-PFOA	415.0 / 370.0	86636.81	250.00
13C8-PFOA	421.0 / 376.0	2.70	13C2-PFOA	415.0 / 370.0	86636.81	250.00
13C9-PFNA	472.0 / 427.0	3.09	13C2-PFOA	415.0 / 370.0	86636.81	250.00
13C6-PFDA	519.0 / 474.0	3.45	13C2-PFDA	515.0 / 470.0	100765.46	250.00
13C7-PFUnA	570.0 / 525.0	3.78	13C2-PFDA	515.0 / 470.0	100765.46	250.00
13C2-PFTeDA	715.0 / 670.0	4.54	13C2-PFDA	515.0 / 470.0	100765.46	250.00
13C3-PFBS	302.0 / 99.0	1.54	13C4-PFOS	503.0 / 99.0	26984.04	239.25
13C3-PFHxS	402.0 / 99.0	2.31	13C4-PFOS	503.0 / 99.0	26984.04	239.25
13C8-PFOS	507.0 / 99.0	3.09	13C4-PFOS	503.0 / 99.0	26984.04	239.25

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QC Summary Report

Sample Name	KB81 ICC	**Injection Vial**	10
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T21:13:49	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.56	877.420602	1010.00	86.87
PFBS_2	298.9 / 99.0	1.56	838.659062	1010.00	83.04
PFHxA_1	313.0 / 269.0	1.89	1006.652936	1010.00	99.67
PFHxA_2	313.0 / 119.0	1.89	896.376115	1010.00	88.75
PFHpA_1	363.0 / 319.0	2.30	856.292979	1000.00	85.63
PFHpA_2	363.0 / 169.0	2.29	976.724688	1000.00	97.67
PFHxS_1	399.0 / 80.0	2.32	998.233289	1010.00	98.83
PFHxS_2	399.0 / 99.0	2.32	992.688608	1010.00	98.29
PFOA_1	413.0 / 369.0	2.71	930.879127	1000.00	93.09
PFOA_2	413.0 / 169.0	2.71	872.168076	1000.00	87.22
PFNA_1	463.0 / 419.0	3.11	1034.052055	1000.00	103.41
PFNA_2	463.0 / 219.0	3.10	1037.625087	1000.00	103.76
PFOS_1	499.0 / 80.0	3.10	906.626239	1000.00	90.66
PFOS_2	499.0 / 99.0	3.10	919.881718	1000.00	91.99
PFDA_1	513.0 / 469.0	3.46	983.979238	1000.00	98.40
PFDA_2	513.0 / 219.0	3.46	976.593938	1000.00	97.66
PFUnA_1	563.0 / 519.0	3.79	923.159866	1000.00	92.32
PFUnA_2	563.0 / 269.0	3.79	975.741234	1000.00	97.57
PFDoA_1	613.0 / 569.0	4.07	980.552902	1000.00	98.06
PFDoA_2	613.0 / 319.0	4.07	934.947666	1000.00	93.49
PFTrDA_1	663.0 / 619.0	4.32	1073.075185	1000.00	107.31
PFTrDA_2	663.0 / 169.0	4.32	1041.820014	1000.00	104.18
PFTeDA_1	713.0 / 669.0	4.54	1020.055697	1000.00	102.01
PFTeDA_2	713.0 / 169.0	4.54	1079.815842	1000.00	107.98
NMeFOSAA_1	570.0 / 419.0	3.62	945.129517	1000.00	94.51
NMeFOSAA_2	570.0 / 512.0	3.62	965.108458	1000.00	96.51
NEtFOSAA_1	584.0 / 419.0	3.78	1244.646852	1000.00	124.46
NEtFOSAA_2	584.0 / 483.0	3.78	1233.660110	1000.00	123.37

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QC Summary Report

Sample Name	KB75 ISC	**Injection Vial**	1
Sample ID		**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T17:30:17	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.56	489.952850	505.00	97.02
PFBS_2	298.9 / 99.0	1.56	527.034370	505.00	104.36
PFHxA_1	313.0 / 269.0	1.88	464.527034	505.00	91.99
PFHxA_2	313.0 / 119.0	1.88	458.651056	505.00	90.82
PFHpA_1	363.0 / 319.0	2.30	440.394900	500.00	88.08
PFHpA_2	363.0 / 169.0	2.30	361.675495	500.00	72.34
PFHxS_1	399.0 / 80.0	2.32	510.828078	505.00	101.15
PFHxS_2	399.0 / 99.0	2.32	520.283374	505.00	103.03
PFOA_1	413.0 / 369.0	2.72	477.786913	500.00	95.56
PFOA_2	413.0 / 169.0	2.72	539.891735	500.00	107.98
PFNA_1	463.0 / 419.0	3.12	519.496976	500.00	103.90
PFNA_2	463.0 / 219.0	3.12	498.474275	500.00	99.69
PFOS_1	499.0 / 80.0	3.12	515.101381	500.00	103.02
PFOS_2	499.0 / 99.0	3.12	495.393011	500.00	99.08
PFDA_1	513.0 / 469.0	3.48	513.573733	500.00	102.71
PFDA_2	513.0 / 219.0	3.48	478.534634	500.00	95.71
PFUnA_1	563.0 / 519.0	3.80	514.895534	500.00	102.98
PFUnA_2	563.0 / 269.0	3.80	480.805561	500.00	96.16
PFDoA_1	613.0 / 569.0	4.09	519.973990	500.00	103.99
PFDoA_2	613.0 / 319.0	4.08	493.775307	500.00	98.76
PFTrDA_1	663.0 / 619.0	4.33	519.060343	500.00	103.81
PFTrDA_2	663.0 / 169.0	4.33	538.983521	500.00	107.80
PFTeDA_1	713.0 / 669.0	4.55	525.554424	500.00	105.11
PFTeDA_2	713.0 / 169.0	4.55	505.833690	500.00	101.17
NMeFOSAA_1	570.0 / 419.0	3.63	508.727954	500.00	101.75
NMeFOSAA_2	570.0 / 512.0	3.63	433.992876	500.00	86.80
NEtFOSAA_1	584.0 / 419.0	3.80	500.869553	500.00	100.17
NEtFOSAA_2	584.0 / 483.0	3.79	489.174879	500.00	97.83

Sample Name	KB76 CCV	**Injection Vial**	14
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T19:51:29	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.54	991.437798	1010.00	98.16
PFBS_2	298.9 / 99.0	1.54	987.194127	1010.00	97.74
PFHxA_1	313.0 / 269.0	1.87	1016.629894	1010.00	100.66
PFHxA_2	313.0 / 119.0	1.87	1016.812687	1010.00	100.67
PFHpA_1	363.0 / 319.0	2.28	971.360652	1000.00	97.14
PFHpA_2	363.0 / 169.0	2.28	817.356325	1000.00	81.74
PFHxS_1	399.0 / 80.0	2.30	1144.828496	1010.00	113.35
PFHxS_2	399.0 / 99.0	2.30	1114.475454	1010.00	110.34
PFOA_1	413.0 / 369.0	2.69	1049.668109	1000.00	104.97
PFOA_2	413.0 / 169.0	2.69	1015.955557	1000.00	101.60
PFNA_1	463.0 / 419.0	3.09	1036.354311	1000.00	103.64
PFNA_2	463.0 / 219.0	3.09	1063.814346	1000.00	106.38
PFOS_1	499.0 / 80.0	3.08	1014.503600	1000.00	101.45
PFOS_2	499.0 / 99.0	3.08	1008.353396	1000.00	100.84
PFDA_1	513.0 / 469.0	3.44	1013.485124	1000.00	101.35
PFDA_2	513.0 / 219.0	3.44	1099.789775	1000.00	109.98
PFUnA_1	563.0 / 519.0	3.76	1035.527631	1000.00	103.55
PFUnA_2	563.0 / 269.0	3.76	1164.145883	1000.00	116.41
PFDoA_1	613.0 / 569.0	4.04	969.112622	1000.00	96.91
PFDoA_2	613.0 / 319.0	4.03	994.068305	1000.00	99.41
PFTrDA_1	663.0 / 619.0	4.28	1039.808952	1000.00	103.98
PFTrDA_2	663.0 / 169.0	4.28	990.526101	1000.00	99.05
PFTeDA_1	713.0 / 669.0	4.49	1056.135138	1000.00	105.61
PFTeDA_2	713.0 / 169.0	4.49	1110.780601	1000.00	111.08
NMeFOSAA_1	570.0 / 419.0	3.59	937.271482	1000.00	93.73
NMeFOSAA_2	570.0 / 512.0	3.59	1044.482177	1000.00	104.45
NEtFOSAA_1	584.0 / 419.0	3.75	1056.330693	1000.00	105.63
NEtFOSAA_2	584.0 / 483.0	3.75	1033.405997	1000.00	103.34

Sample Name	KB77 CCV	**Injection Vial**	26
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:01:50	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.54	2561.228540	2525.00	101.43
PFBS_2	298.9 / 99.0	1.54	2528.981985	2525.00	100.16
PFHxA_1	313.0 / 269.0	1.86	2501.930087	2525.00	99.09
PFHxA_2	313.0 / 119.0	1.86	2566.521331	2525.00	101.64
PFHpA_1	363.0 / 319.0	2.28	2400.883295	2500.00	96.04
PFHpA_2	363.0 / 169.0	2.28	2438.633475	2500.00	97.55
PFHxS_1	399.0 / 80.0	2.30	2771.684795	2525.00	109.77
PFHxS_2	399.0 / 99.0	2.30	2755.278358	2525.00	109.12
PFOA_1	413.0 / 369.0	2.69	2357.304375	2500.00	94.29
PFOA_2	413.0 / 169.0	2.69	2356.784685	2500.00	94.27
PFNA_1	463.0 / 419.0	3.08	2629.235249	2500.00	105.17
PFNA_2	463.0 / 219.0	3.08	2654.792201	2500.00	106.19
PFOS_1	499.0 / 80.0	3.08	2446.582653	2500.00	97.86
PFOS_2	499.0 / 99.0	3.08	2436.963681	2500.00	97.48
PFDA_1	513.0 / 469.0	3.44	2402.241658	2500.00	96.09
PFDA_2	513.0 / 219.0	3.44	2499.584790	2500.00	99.98
PFUnA_1	563.0 / 519.0	3.76	2554.874988	2500.00	102.19
PFUnA_2	563.0 / 269.0	3.76	2600.081717	2500.00	104.00
PFDoA_1	613.0 / 569.0	4.03	2442.352184	2500.00	97.69
PFDoA_2	613.0 / 319.0	4.03	2421.758526	2500.00	96.87
PFTrDA_1	663.0 / 619.0	4.27	2625.636352	2500.00	105.03
PFTrDA_2	663.0 / 169.0	4.27	2616.451735	2500.00	104.66
PFTeDA_1	713.0 / 669.0	4.49	2471.362902	2500.00	98.85
PFTeDA_2	713.0 / 169.0	4.48	2553.217382	2500.00	102.13
NMeFOSAA_1	570.0 / 419.0	3.59	2681.900835	2500.00	107.28
NMeFOSAA_2	570.0 / 512.0	3.59	2795.820082	2500.00	111.83
NEtFOSAA_1	584.0 / 419.0	3.75	2455.640624	2500.00	98.23
NEtFOSAA_2	584.0 / 483.0	3.75	2677.893227	2500.00	107.12

Sample Name	KB76 CCV	**Injection Vial**	38
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:12:12	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.54	950.429682	1010.00	94.10
PFBS_2	298.9 / 99.0	1.54	943.880596	1010.00	93.45
PFHxA_1	313.0 / 269.0	1.86	1058.042027	1010.00	104.76
PFHxA_2	313.0 / 119.0	1.86	1041.605820	1010.00	103.13
PFHpA_1	363.0 / 319.0	2.27	951.519363	1000.00	95.15
PFHpA_2	363.0 / 169.0	2.27	1064.024844	1000.00	106.40
PFHxS_1	399.0 / 80.0	2.29	989.081435	1010.00	97.93
PFHxS_2	399.0 / 99.0	2.29	959.551716	1010.00	95.01
PFOA_1	413.0 / 369.0	2.68	998.290748	1000.00	99.83
PFOA_2	413.0 / 169.0	2.68	1034.034889	1000.00	103.40
PFNA_1	463.0 / 419.0	3.08	1089.692769	1000.00	108.97
PFNA_2	463.0 / 219.0	3.08	1114.630137	1000.00	111.46
PFOS_1	499.0 / 80.0	3.07	979.384650	1000.00	97.94
PFOS_2	499.0 / 99.0	3.08	1026.923331	1000.00	102.69
PFDA_1	513.0 / 469.0	3.43	850.213002	1000.00	85.02
PFDA_2	513.0 / 219.0	3.43	940.248211	1000.00	94.02
PFUnA_1	563.0 / 519.0	3.75	922.918319	1000.00	92.29
PFUnA_2	563.0 / 269.0	3.75	953.319593	1000.00	95.33
PFDoA_1	613.0 / 569.0	4.03	1011.094783	1000.00	101.11
PFDoA_2	613.0 / 319.0	4.03	1042.262861	1000.00	104.23
PFTrDA_1	663.0 / 619.0	4.27	1058.937755	1000.00	105.89
PFTrDA_2	663.0 / 169.0	4.26	1049.164037	1000.00	104.92
PFTeDA_1	713.0 / 669.0	4.48	1023.871157	1000.00	102.39
PFTeDA_2	713.0 / 169.0	4.47	1059.740932	1000.00	105.97
NMeFOSAA_1	570.0 / 419.0	3.59	1174.993393	1000.00	117.50
NMeFOSAA_2	570.0 / 512.0	3.58	988.723928	1000.00	98.87
NEtFOSAA_1	584.0 / 419.0	3.74	1073.328833	1000.00	107.33
NEtFOSAA_2	584.0 / 483.0	3.74	990.911479	1000.00	99.09

Sample Name	KB77 CCV	**Injection Vial**	42
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:55:41	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.54	2336.478143	2525.00	92.53
PFBS_2	298.9 / 99.0	1.54	2368.345100	2525.00	93.80
PFHxA_1	313.0 / 269.0	1.86	2594.035379	2525.00	102.73
PFHxA_2	313.0 / 119.0	1.86	2470.011336	2525.00	97.82
PFHpA_1	363.0 / 319.0	2.27	2567.421099	2500.00	102.70
PFHpA_2	363.0 / 169.0	2.27	2675.058188	2500.00	107.00
PFHxS_1	399.0 / 80.0	2.29	2415.612138	2525.00	95.67
PFHxS_2	399.0 / 99.0	2.29	2597.911324	2525.00	102.89
PFOA_1	413.0 / 369.0	2.68	2494.355049	2500.00	99.77
PFOA_2	413.0 / 169.0	2.68	2356.143760	2500.00	94.25
PFNA_1	463.0 / 419.0	3.07	2626.972768	2500.00	105.08
PFNA_2	463.0 / 219.0	3.07	2677.766564	2500.00	107.11
PFOS_1	499.0 / 80.0	3.07	2488.218915	2500.00	99.53
PFOS_2	499.0 / 99.0	3.07	2571.666800	2500.00	102.87
PFDA_1	513.0 / 469.0	3.43	2392.023158	2500.00	95.68
PFDA_2	513.0 / 219.0	3.42	2632.115954	2500.00	105.28
PFUnA_1	563.0 / 519.0	3.75	2490.803164	2500.00	99.63
PFUnA_2	563.0 / 269.0	3.75	2430.124943	2500.00	97.20
PFDoA_1	613.0 / 569.0	4.03	2623.814794	2500.00	104.95
PFDoA_2	613.0 / 319.0	4.03	2557.098054	2500.00	102.28
PFTrDA_1	663.0 / 619.0	4.27	2719.992405	2500.00	108.80
PFTrDA_2	663.0 / 169.0	4.27	2751.801053	2500.00	110.07
PFTeDA_1	713.0 / 669.0	4.48	2685.828977	2500.00	107.43
PFTeDA_2	713.0 / 169.0	4.48	2678.712259	2500.00	107.15
NMeFOSAA_1	570.0 / 419.0	3.58	2820.479585	2500.00	112.82
NMeFOSAA_2	570.0 / 512.0	3.58	2615.738822	2500.00	104.63
NEtFOSAA_1	584.0 / 419.0	3.74	2696.133180	2500.00	107.85
NEtFOSAA_2	584.0 / 483.0	3.74	2796.939864	2500.00	111.88

Sample Name	KB81 ICC	**Injection Vial**	10
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T21:13:49	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	4.06	231.611603	250.00	92.64
d3-MeFOSAA	573.0 / 419.0	3.61	244.423694	250.00	97.77
d5-EtFOSAA	589.0 / 419.0	3.78	176.181506	250.00	70.47
13C5-PFHxA	318.0 / 273.0	1.88	233.905404	250.00	93.56
13C4-PFHpA	367.0 / 322.0	2.29	244.843738	250.00	97.94
13C8-PFOA	421.0 / 376.0	2.70	255.222211	250.00	102.09
13C9-PFNA	472.0 / 427.0	3.09	253.115276	250.00	101.25
13C6-PFDA	519.0 / 474.0	3.45	223.796875	250.00	89.52
13C7-PFUnA	570.0 / 525.0	3.77	237.910809	250.00	95.16
13C2-PFTeDA	715.0 / 670.0	4.54	218.862217	250.00	87.54
13C3-PFBS	302.0 / 99.0	1.55	206.860264	232.25	89.07
13C3-PFHxS	402.0 / 99.0	2.31	210.154754	236.50	88.86
13C8-PFOS	507.0 / 99.0	3.09	222.736043	239.25	93.10

Sample Name	KB75 ISC	**Injection Vial**	1
Sample ID	ISC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T17:30:17	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	4.07	282.311575	250.00	112.92
d3-MeFOSAA	573.0 / 419.0	3.63	260.739109	250.00	104.30
d5-EtFOSAA	589.0 / 419.0	3.79	233.419386	250.00	93.37
13C5-PFHxA	318.0 / 273.0	1.87	278.724605	250.00	111.49
13C4-PFHpA	367.0 / 322.0	2.29	286.311436	250.00	114.52
13C8-PFOA	421.0 / 376.0	2.71	253.044922	250.00	101.22
13C9-PFNA	472.0 / 427.0	3.10	230.948912	250.00	92.38
13C6-PFDA	519.0 / 474.0	3.46	251.665808	250.00	100.67
13C7-PFUnA	570.0 / 525.0	3.79	250.698048	250.00	100.28
13C2-PFTeDA	715.0 / 670.0	4.54	301.014991	250.00	120.41
13C3-PFBS	302.0 / 99.0	1.54	234.372196	232.25	100.91
13C3-PFHxS	402.0 / 99.0	2.31	242.181253	236.50	102.40
13C8-PFOS	507.0 / 99.0	3.10	210.787062	239.25	88.10

Sample Name	KB76 CCV	**Injection Vial**	14
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T19:51:29	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	4.02	287.835912	250.00	115.13
d3-MeFOSAA	573.0 / 419.0	3.59	288.345139	250.00	115.34
d5-EtFOSAA	589.0 / 419.0	3.74	247.467780	250.00	98.99
13C5-PFHxA	318.0 / 273.0	1.85	285.512057	250.00	114.20
13C4-PFHpA	367.0 / 322.0	2.27	286.600385	250.00	114.64
13C8-PFOA	421.0 / 376.0	2.68	260.622004	250.00	104.25
13C9-PFNA	472.0 / 427.0	3.07	240.051682	250.00	96.02
13C6-PFDA	519.0 / 474.0	3.42	263.850020	250.00	105.54
13C7-PFUnA	570.0 / 525.0	3.74	268.933527	250.00	107.57
13C2-PFTeDA	715.0 / 670.0	4.49	309.127464	250.00	123.65
13C3-PFBS	302.0 / 99.0	1.53	279.721383	232.25	120.44
13C3-PFHxS	402.0 / 99.0	2.29	232.189379	236.50	98.18
13C8-PFOS	507.0 / 99.0	3.07	237.189105	239.25	99.14

Sample Name	KB77 CCV	**Injection Vial**	26
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:01:50	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	4.02	278.168949	250.00	111.27
d3-MeFOSAA	573.0 / 419.0	3.58	255.141851	250.00	102.06
d5-EtFOSAA	589.0 / 419.0	3.74	237.497417	250.00	95.00
13C5-PFHxA	318.0 / 273.0	1.85	261.401387	250.00	104.56
13C4-PFHpA	367.0 / 322.0	2.26	254.129916	250.00	101.65
13C8-PFOA	421.0 / 376.0	2.68	242.082313	250.00	96.83
13C9-PFNA	472.0 / 427.0	3.07	225.688164	250.00	90.28
13C6-PFDA	519.0 / 474.0	3.42	242.506320	250.00	97.00
13C7-PFUnA	570.0 / 525.0	3.74	245.753417	250.00	98.30
13C2-PFTeDA	715.0 / 670.0	4.48	293.097568	250.00	117.24
13C3-PFBS	302.0 / 99.0	1.52	228.336534	232.25	98.31
13C3-PFHxS	402.0 / 99.0	2.29	200.032917	236.50	84.58
13C8-PFOS	507.0 / 99.0	3.07	218.816233	239.25	91.46

Sample Name	KB76 CCV	**Injection Vial**	38
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:12:12	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	4.01	268.107746	250.00	107.24
d3-MeFOSAA	573.0 / 419.0	3.58	259.138509	250.00	103.66
d5-EtFOSAA	589.0 / 419.0	3.74	260.432740	250.00	104.17
13C5-PFHxA	318.0 / 273.0	1.85	258.908932	250.00	103.56
13C4-PFHpA	367.0 / 322.0	2.26	267.166728	250.00	106.87
13C8-PFOA	421.0 / 376.0	2.67	249.500039	250.00	99.80
13C9-PFNA	472.0 / 427.0	3.06	220.787888	250.00	88.32
13C6-PFDA	519.0 / 474.0	3.41	254.031674	250.00	101.61
13C7-PFUnA	570.0 / 525.0	3.73	270.640142	250.00	108.26
13C2-PFTeDA	715.0 / 670.0	4.47	281.088798	250.00	112.44
13C3-PFBS	302.0 / 99.0	1.52	264.088763	232.25	113.71
13C3-PFHxS	402.0 / 99.0	2.28	251.699772	236.50	106.43
13C8-PFOS	507.0 / 99.0	3.06	231.095436	239.25	96.59

Sample Name	KB77 CCV	**Injection Vial**	42
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:55:41	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	4.02	268.059035	250.00	107.22
d3-MeFOSAA	573.0 / 419.0	3.58	293.323421	250.00	117.33
d5-EtFOSAA	589.0 / 419.0	3.73	263.677790	250.00	105.47
13C5-PFHxA	318.0 / 273.0	1.85	265.313310	250.00	106.13
13C4-PFHpA	367.0 / 322.0	2.26	252.868348	250.00	101.15
13C8-PFOA	421.0 / 376.0	2.67	255.734669	250.00	102.29
13C9-PFNA	472.0 / 427.0	3.06	233.650231	250.00	93.46
13C6-PFDA	519.0 / 474.0	3.41	236.951115	250.00	94.78
13C7-PFUnA	570.0 / 525.0	3.73	270.364994	250.00	108.15
13C2-PFTeDA	715.0 / 670.0	4.47	279.664797	250.00	111.87
13C3-PFBS	302.0 / 99.0	1.52	294.931815	232.25	126.99
13C3-PFHxS	402.0 / 99.0	2.28	267.120258	236.50	112.95
13C8-PFOS	507.0 / 99.0	3.06	240.189464	239.25	100.39

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Summary Quant Report

Sample Name	KB81 ICC	**Injection Vial**	10
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T21:13:49	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.56	299608.43	877.420602	544.9	false
PFBS_2	298.9 / 99.0	1.56	83942.08	838.659062	365.9	false
PFHxA_1	313.0 / 269.0	1.89	241930.51	1006.652936	19.8	false
PFHxA_2	313.0 / 119.0	1.89	16403.84	896.376115	16.0	false
PFHpA_1	363.0 / 319.0	2.30	215911.99	856.292979	126.4	false
PFHpA_2	363.0 / 169.0	2.29	5561.78	976.724688	99.7	false
PFHxS_1	399.0 / 80.0	2.32	361966.55	998.233289	454.9	false
PFHxS_2	399.0 / 99.0	2.32	100883.75	992.688608	416.4	false
PFOA_1	413.0 / 369.0	2.71	338169.16	930.879127	304.4	false
PFOA_2	413.0 / 169.0	2.71	20580.91	872.168076	223.7	false
PFNA_1	463.0 / 419.0	3.11	356729.03	1034.052055	304.0	false
PFNA_2	463.0 / 219.0	3.10	110066.88	1037.625087	466.5	false
PFOS_1	499.0 / 80.0	3.10	539708.03	906.626239	343.1	false
PFOS_2	499.0 / 99.0	3.10	95211.86	919.881718	450.1	false
PFDA_1	513.0 / 469.0	3.46	380336.88	983.979238	327.0	false
PFDA_2	513.0 / 219.0	3.46	15587.84	976.593938	361.3	false
PFUnA_1	563.0 / 519.0	3.79	349720.15	923.159866	376.6	false
PFUnA_2	563.0 / 269.0	3.79	18202.70	975.741234	188.3	false
PFDoA_1	613.0 / 569.0	4.07	341302.82	980.552902	460.6	false
PFDoA_2	613.0 / 319.0	4.07	51304.06	934.947666	412.2	false
PFTrDA_1	663.0 / 619.0	4.32	300565.45	1073.075185	751.7	false
PFTrDA_2	663.0 / 169.0	4.32	19250.55	1041.820014	533.2	false
PFTeDA_1	713.0 / 669.0	4.54	326564.00	1020.055697	1259.1	false
PFTeDA_2	713.0 / 169.0	4.54	16770.44	1079.815842	804.1	false
NMeFOSAA_1	570.0 / 419.0	3.62	66944.31	945.129517	505.3	false
NMeFOSAA_2	570.0 / 512.0	3.62	38615.63	965.108458	1105.4	false
NEtFOSAA_1	584.0 / 419.0	3.78	66942.43	1244.646852	673.7	true
NEtFOSAA_2	584.0 / 483.0	3.78	4011.16	1233.660110	1226.3	false

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Summary Quant Report

Sample Name	KB75 ISC	**Injection Vial**	1
Sample ID		**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T17:30:17	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.56	160465.72	489.952850	240.2	false
PFBS_2	298.9 / 99.0	1.56	50476.22	527.034370	253.1	false
PFHxA_1	313.0 / 269.0	1.88	126795.88	464.527034	50.7	false
PFHxA_2	313.0 / 119.0	1.88	9655.12	458.651056	40.4	false
PFHpA_1	363.0 / 319.0	2.30	121715.86	440.394900	115.9	false
PFHpA_2	363.0 / 169.0	2.30	2527.09	361.675495	46.3	true
PFHxS_1	399.0 / 80.0	2.32	183913.41	510.828078	209.4	false
PFHxS_2	399.0 / 99.0	2.32	52691.82	520.283374	373.3	false
PFOA_1	413.0 / 369.0	2.72	160425.34	477.786913	167.9	false
PFOA_2	413.0 / 169.0	2.72	11715.09	539.891735	144.6	false
PFNA_1	463.0 / 419.0	3.12	154721.89	519.496976	187.4	false
PFNA_2	463.0 / 219.0	3.12	45601.17	498.474275	201.4	false
PFOS_1	499.0 / 80.0	3.12	245092.56	515.101381	130.4	false
PFOS_2	499.0 / 99.0	3.12	41031.01	495.393011	258.6	false
PFDA_1	513.0 / 469.0	3.48	194505.48	513.573733	339.6	false
PFDA_2	513.0 / 219.0	3.48	7521.74	478.534634	126.5	false
PFUnA_1	563.0 / 519.0	3.80	177118.95	514.895534	219.5	false
PFUnA_2	563.0 / 269.0	3.80	8074.41	480.805561	117.0	false
PFDoA_1	613.0 / 569.0	4.09	193337.75	519.973990	353.4	false
PFDoA_2	613.0 / 319.0	4.08	29274.35	493.775307	218.5	false
PFTrDA_1	663.0 / 619.0	4.33	176445.90	519.060343	407.6	false
PFTrDA_2	663.0 / 169.0	4.33	12085.61	538.983521	226.6	false
PFTeDA_1	713.0 / 669.0	4.55	205191.27	525.554424	935.4	false
PFTeDA_2	713.0 / 169.0	4.55	9679.66	505.833690	441.9	false
NMeFOSAA_1	570.0 / 419.0	3.63	33452.18	508.727954	728.2	false
NMeFOSAA_2	570.0 / 512.0	3.63	17259.77	433.992876	236.2	false
NEtFOSAA_1	584.0 / 419.0	3.80	31090.74	500.869553	471.5	false
NEtFOSAA_2	584.0 / 483.0	3.79	1941.22	489.174879	140.5	false

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Summary Quant Report

Sample Name	KB76 CCV	**Injection Vial**	14
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T19:51:29	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	432220.47	991.437798	369.7	false
PFBS_2	298.9 / 99.0	1.54	126158.65	987.194127	409.1	false
PFHxA_1	313.0 / 269.0	1.87	310731.89	1016.629894	79.2	false
PFHxA_2	313.0 / 119.0	1.87	23522.02	1016.812687	57.7	false
PFHpA_1	363.0 / 319.0	2.28	298027.11	971.360652	175.2	false
PFHpA_2	363.0 / 169.0	2.28	5771.08	817.356325	123.5	false
PFHxS_1	399.0 / 80.0	2.30	426945.20	1144.828496	364.3	false
PFHxS_2	399.0 / 99.0	2.30	116463.93	1114.475454	693.1	false
PFOA_1	413.0 / 369.0	2.69	405101.29	1049.668109	311.7	false
PFOA_2	413.0 / 169.0	2.69	25456.41	1015.955557	233.0	false
PFNA_1	463.0 / 419.0	3.09	353368.33	1036.354311	300.5	false
PFNA_2	463.0 / 219.0	3.09	111466.68	1063.814346	401.5	false
PFOS_1	499.0 / 80.0	3.08	610389.37	1014.503600	207.0	false
PFOS_2	499.0 / 99.0	3.08	105467.66	1008.353396	521.8	false
PFDA_1	513.0 / 469.0	3.44	467545.92	1013.485124	360.1	false
PFDA_2	513.0 / 219.0	3.44	20908.22	1099.789775	214.7	false
PFUnA_1	563.0 / 519.0	3.76	448671.86	1035.527631	307.2	false
PFUnA_2	563.0 / 269.0	3.76	24868.62	1164.145883	221.1	false
PFDoA_1	613.0 / 569.0	4.04	424784.04	969.112622	430.4	false
PFDoA_2	613.0 / 319.0	4.03	68498.15	994.068305	344.2	false
PFTrDA_1	663.0 / 619.0	4.28	417105.58	1039.808952	636.1	false
PFTrDA_2	663.0 / 169.0	4.28	26233.64	990.526101	289.3	false
PFTeDA_1	713.0 / 669.0	4.49	483091.23	1056.135138	1169.0	false
PFTeDA_2	713.0 / 169.0	4.49	24652.78	1110.780601	583.4	false
NMeFOSAA_1	570.0 / 419.0	3.59	76443.45	937.271482	453.1	false
NMeFOSAA_2	570.0 / 512.0	3.59	47730.72	1044.482177	332.4	false
NEtFOSAA_1	584.0 / 419.0	3.75	74261.12	1056.330693	580.5	false
NEtFOSAA_2	584.0 / 483.0	3.75	4425.00	1033.405997	188.4	false

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Summary Quant Report

Sample Name	KB77 CCV	**Injection Vial**	26
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:01:50	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	886387.06	2561.228540	647.0	false
PFBS_2	298.9 / 99.0	1.54	256856.04	2528.981985	654.8	false
PFHxA_1	313.0 / 269.0	1.86	661436.98	2501.930087	125.6	false
PFHxA_2	313.0 / 119.0	1.86	50847.83	2566.521331	96.5	false
PFHpA_1	363.0 / 319.0	2.28	621813.72	2400.883295	314.1	false
PFHpA_2	363.0 / 169.0	2.28	13740.28	2438.633475	165.2	false
PFHxS_1	399.0 / 80.0	2.30	877037.83	2771.684795	654.9	false
PFHxS_2	399.0 / 99.0	2.30	243538.64	2755.278358	978.6	false
PFOA_1	413.0 / 369.0	2.69	807474.85	2357.304375	415.2	false
PFOA_2	413.0 / 169.0	2.69	52410.14	2356.784685	344.6	false
PFNA_1	463.0 / 419.0	3.08	796731.74	2629.235249	446.1	false
PFNA_2	463.0 / 219.0	3.08	247893.70	2654.792201	597.3	false
PFOS_1	499.0 / 80.0	3.08	1291145.74	2446.582653	289.9	false
PFOS_2	499.0 / 99.0	3.08	223391.45	2436.963681	958.7	false
PFDA_1	513.0 / 469.0	3.44	980547.25	2402.241658	681.5	false
PFDA_2	513.0 / 219.0	3.44	42052.74	2499.584790	343.3	false
PFUnA_1	563.0 / 519.0	3.76	980124.63	2554.874988	453.8	false
PFUnA_2	563.0 / 269.0	3.76	49463.31	2600.081717	282.6	false
PFDoA_1	613.0 / 569.0	4.03	990347.09	2442.352184	548.4	false
PFDoA_2	613.0 / 319.0	4.03	153499.58	2421.758526	378.9	false
PFTrDA_1	663.0 / 619.0	4.27	954551.61	2625.636352	856.8	false
PFTrDA_2	663.0 / 169.0	4.27	62565.07	2616.451735	448.7	false
PFTeDA_1	713.0 / 669.0	4.49	1021243.33	2471.362902	1796.9	false
PFTeDA_2	713.0 / 169.0	4.48	51126.06	2553.217382	799.9	false
NMeFOSAA_1	570.0 / 419.0	3.59	176376.48	2681.900835	834.2	false
NMeFOSAA_2	570.0 / 512.0	3.59	100751.23	2795.820082	815.7	false
NEtFOSAA_1	584.0 / 419.0	3.75	162765.80	2455.640624	942.1	false
NEtFOSAA_2	584.0 / 483.0	3.75	10503.15	2677.893227	558.1	false

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Summary Quant Report

Sample Name	KB76 CCV	**Injection Vial**	38
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:12:12	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	353345.07	950.429682	356.1	false
PFBS_2	298.9 / 99.0	1.54	102858.66	943.880596	399.2	false
PFHxA_1	313.0 / 269.0	1.86	266832.13	1058.042027	75.0	false
PFHxA_2	313.0 / 119.0	1.86	19884.02	1041.605820	55.8	false
PFHpA_1	363.0 / 319.0	2.27	248034.54	951.519363	162.1	false
PFHpA_2	363.0 / 169.0	2.27	6234.34	1064.024844	110.3	false
PFHxS_1	399.0 / 80.0	2.29	361374.23	989.081435	258.4	false
PFHxS_2	399.0 / 99.0	2.29	98323.84	959.551716	359.6	false
PFOA_1	413.0 / 369.0	2.68	336266.70	998.290748	226.3	false
PFOA_2	413.0 / 169.0	2.68	22591.68	1034.034889	213.3	false
PFNA_1	463.0 / 419.0	3.08	310870.84	1089.692769	345.6	false
PFNA_2	463.0 / 219.0	3.08	97744.86	1114.630137	427.4	false
PFOS_1	499.0 / 80.0	3.07	521111.07	979.384650	179.9	false
PFOS_2	499.0 / 99.0	3.08	94994.56	1026.923331	366.1	false
PFDA_1	513.0 / 469.0	3.43	359188.12	850.213002	383.0	false
PFDA_2	513.0 / 219.0	3.43	16363.01	940.248211	159.8	false
PFUnA_1	563.0 / 519.0	3.75	381681.97	922.918319	360.0	false
PFUnA_2	563.0 / 269.0	3.75	19414.68	953.319593	183.4	false
PFDoA_1	613.0 / 569.0	4.03	390612.59	1011.094783	464.5	false
PFDoA_2	613.0 / 319.0	4.03	63261.07	1042.262861	334.9	false
PFTrDA_1	663.0 / 619.0	4.27	365716.55	1058.937755	652.8	false
PFTrDA_2	663.0 / 169.0	4.26	23887.79	1049.164037	318.8	false
PFTeDA_1	713.0 / 669.0	4.48	403936.53	1023.871157	1156.5	false
PFTeDA_2	713.0 / 169.0	4.47	20301.73	1059.740932	511.5	false
NMeFOSAA_1	570.0 / 419.0	3.59	75204.63	1174.993393	625.2	false
NMeFOSAA_2	570.0 / 512.0	3.58	36065.25	988.723928	345.3	false
NEtFOSAA_1	584.0 / 419.0	3.74	71828.09	1073.328833	744.1	false
NEtFOSAA_2	584.0 / 483.0	3.74	4049.83	990.911479	720.2	false

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Summary Quant Report

Sample Name	KB77 CCV	**Injection Vial**	42
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:55:41	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	963009.01	2336.478143	584.8	false
PFBS_2	298.9 / 99.0	1.54	286441.03	2368.345100	605.2	false
PFHxA_1	313.0 / 269.0	1.86	711249.24	2594.035379	138.1	false
PFHxA_2	313.0 / 119.0	1.86	50815.33	2470.011336	98.2	false
PFHpA_1	363.0 / 319.0	2.27	676064.35	2567.421099	272.9	false
PFHpA_2	363.0 / 169.0	2.27	15284.38	2675.058188	173.8	false
PFHxS_1	399.0 / 80.0	2.29	946230.72	2415.612138	403.2	false
PFHxS_2	399.0 / 99.0	2.29	284119.32	2597.911324	552.5	false
PFOA_1	413.0 / 369.0	2.68	922429.05	2494.355049	468.7	false
PFOA_2	413.0 / 169.0	2.68	56586.37	2356.143760	300.1	false
PFNA_1	463.0 / 419.0	3.07	842534.26	2626.972768	531.1	false
PFNA_2	463.0 / 219.0	3.07	264613.65	2677.766564	597.8	false
PFOS_1	499.0 / 80.0	3.07	1385879.44	2488.218915	232.5	false
PFOS_2	499.0 / 99.0	3.07	248800.92	2571.666800	540.3	false
PFDA_1	513.0 / 469.0	3.43	987192.41	2392.023158	514.1	false
PFDA_2	513.0 / 219.0	3.42	44750.00	2632.115954	295.6	false
PFUnA_1	563.0 / 519.0	3.75	1087871.07	2490.803164	586.0	false
PFUnA_2	563.0 / 269.0	3.75	52626.54	2430.124943	305.0	false
PFDoA_1	613.0 / 569.0	4.03	1060015.18	2623.814794	670.9	false
PFDoA_2	613.0 / 319.0	4.03	161472.21	2557.098054	471.5	false
PFTrDA_1	663.0 / 619.0	4.27	975885.55	2719.992405	929.8	false
PFTrDA_2	663.0 / 169.0	4.27	64921.92	2751.801053	611.0	false
PFTeDA_1	713.0 / 669.0	4.48	1094314.61	2685.828977	1644.1	false
PFTeDA_2	713.0 / 169.0	4.48	52913.01	2678.712259	773.9	false
NMeFOSAA_1	570.0 / 419.0	3.58	194178.96	2820.479585	1277.2	false
NMeFOSAA_2	570.0 / 512.0	3.58	99031.68	2615.738822	720.8	false
NEtFOSAA_1	584.0 / 419.0	3.74	179994.94	2696.133180	908.5	false
NEtFOSAA_2	584.0 / 483.0	3.74	11043.67	2796.939864	2034.8	false

BATTELLE

Summary Quant Report

Sample Name	KB81 ICC	**Injection Vial**	10
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T21:13:49	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.06	93406.68	231.611603	1689.5	false
d3-MeFOSAA	573.0 / 419.0	3.61	17579.80	244.423694	175.3	false
d5-EtFOSAA	589.0 / 419.0	3.78	14383.26	176.181506	200.6	false
13C5-PFHxA	318.0 / 273.0	1.88	59013.59	233.905404	685.2	false
13C4-PFHpA	367.0 / 322.0	2.29	70279.06	244.843738	1118.6	false
13C8-PFOA	421.0 / 376.0	2.70	89115.92	255.222211	9011.3	false
13C9-PFNA	472.0 / 427.0	3.09	100916.15	253.115276	1888.1	false
13C6-PFDA	519.0 / 474.0	3.45	90930.64	223.796875	1073.3	false
13C7-PFUnA	570.0 / 525.0	3.77	89293.12	237.910809	829.4	false
13C2-PFTeDA	715.0 / 670.0	4.54	71262.97	218.862217	1767.1	false
13C3-PFBS	302.0 / 99.0	1.55	27104.45	206.860264	624.1	false
13C3-PFHxS	402.0 / 99.0	2.31	24951.95	210.154754	577.2	false
13C8-PFOS	507.0 / 99.0	3.09	29875.11	222.736043	244.5	false

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Summary Quant Report

Sample Name	KB75 ISC	**Injection Vial**	1
Sample ID	ISC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T17:30:17	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.07	97291.96	282.311575	944.6	false
d3-MeFOSAA	573.0 / 419.0	3.63	15796.81	260.739109	188.1	false
d5-EtFOSAA	589.0 / 419.0	3.79	16051.91	233.419386	153.3	false
13C5-PFHxA	318.0 / 273.0	1.87	64573.83	278.724605	751.0	false
13C4-PFHpA	367.0 / 322.0	2.29	75464.90	286.311436	829.3	false
13C8-PFOA	421.0 / 376.0	2.71	81134.18	253.044922	1399.8	false
13C9-PFNA	472.0 / 427.0	3.10	84552.73	230.948912	1423.6	false
13C6-PFDA	519.0 / 474.0	3.46	87379.81	251.665808	1473953.9	false
13C7-PFUnA	570.0 / 525.0	3.79	80405.44	250.698048	1905.7	false
13C2-PFTeDA	715.0 / 670.0	4.54	83755.22	301.014991	1376.0	false
13C3-PFBS	302.0 / 99.0	1.54	25867.97	234.372196	318.5	false
13C3-PFHxS	402.0 / 99.0	2.31	24221.36	242.181253	330.4	false
13C8-PFOS	507.0 / 99.0	3.10	23815.27	210.787062	180.6	false

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Summary Quant Report

Sample Name	KB76 CCV	**Injection Vial**	14
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T19:51:29	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.02	117585.85	287.835912	914.4	false
d3-MeFOSAA	573.0 / 419.0	3.59	19594.92	288.345139	204.0	false
d5-EtFOSAA	589.0 / 419.0	3.74	19088.68	247.467780	211.6	false
13C5-PFHxA	318.0 / 273.0	1.85	75076.29	285.512057	622.1	false
13C4-PFHpA	367.0 / 322.0	2.27	85739.36	286.600385	714.4	false
13C8-PFOA	421.0 / 376.0	2.68	94845.00	260.622004	884.9	false
13C9-PFNA	472.0 / 427.0	3.07	99750.15	240.051682	1130.9	false
13C6-PFDA	519.0 / 474.0	3.42	108593.99	263.850020	1499.8	false
13C7-PFUnA	570.0 / 525.0	3.74	102244.80	268.933527	973.2	false
13C2-PFTeDA	715.0 / 670.0	4.49	101958.43	309.127464	1614.5	false
13C3-PFBS	302.0 / 99.0	1.53	34629.75	279.721383	469.7	false
13C3-PFHxS	402.0 / 99.0	2.29	26047.60	232.189379	450.5	false
13C8-PFOS	507.0 / 99.0	3.07	30058.95	237.189105	260.2	false

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Summary Quant Report

Sample Name	KB77 CCV	**Injection Vial**	26
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:01:50	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.02	110728.34	278.168949	1284.6	false
d3-MeFOSAA	573.0 / 419.0	3.58	16919.48	255.141851	192.9	false
d5-EtFOSAA	589.0 / 419.0	3.74	17876.83	237.497417	218.1	false
13C5-PFHxA	318.0 / 273.0	1.85	66203.22	261.401387	502.1	false
13C4-PFHpA	367.0 / 322.0	2.26	73223.78	254.129916	749.0	false
13C8-PFOA	421.0 / 376.0	2.68	84851.45	242.082313	1013.3	false
13C9-PFNA	472.0 / 427.0	3.07	90325.52	225.688164	1219.9	false
13C6-PFDA	519.0 / 474.0	3.42	97254.97	242.506320	1128.6	false
13C7-PFUnA	570.0 / 525.0	3.74	91040.77	245.753417	864.2	false
13C2-PFTeDA	715.0 / 670.0	4.48	94197.17	293.097568	1923.7	false
13C3-PFBS	302.0 / 99.0	1.52	27585.03	228.336534	435.5	false
13C3-PFHxS	402.0 / 99.0	2.29	21897.84	200.032917	268.8	false
13C8-PFOS	507.0 / 99.0	3.07	27060.32	218.816233	248.3	false

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Summary Quant Report

Sample Name	KB76 CCV	**Injection Vial**	38
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:12:12	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.01	103762.97	268.107746	1112.5	false
d3-MeFOSAA	573.0 / 419.0	3.58	15902.78	259.138509	204.0	false
d5-EtFOSAA	589.0 / 419.0	3.74	18141.08	260.432740	212.6	false
13C5-PFHxA	318.0 / 273.0	1.85	62024.46	258.908932	712.6	false
13C4-PFHpA	367.0 / 322.0	2.26	72815.43	267.166728	1062.2	false
13C8-PFOA	421.0 / 376.0	2.67	82720.20	249.500039	972.8	false
13C9-PFNA	472.0 / 427.0	3.06	83583.71	220.787888	1009.4	false
13C6-PFDA	519.0 / 474.0	3.41	99051.15	254.031674	1199.4	false
13C7-PFUnA	570.0 / 525.0	3.73	97479.09	270.640142	700.6	false
13C2-PFTeDA	715.0 / 670.0	4.47	87831.86	281.088798	1602.9	false
13C3-PFBS	302.0 / 99.0	1.52	29524.59	264.088763	430.7	false
13C3-PFHxS	402.0 / 99.0	2.28	25498.73	251.699772	336.4	false
13C8-PFOS	507.0 / 99.0	3.06	26447.26	231.095436	237.5	false

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Summary Quant Report

Sample Name	KB77 CCV	**Injection Vial**	42
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:55:41	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.02	110411.16	268.059035	935.5	false
d3-MeFOSAA	573.0 / 419.0	3.58	17931.17	293.323421	191.8	false
d5-EtFOSAA	589.0 / 419.0	3.73	18296.24	263.677790	221.6	false
13C5-PFHxA	318.0 / 273.0	1.85	68693.80	265.313310	596.2	false
13C4-PFHpA	367.0 / 322.0	2.26	74486.59	252.868348	828.4	false
13C8-PFOA	421.0 / 376.0	2.67	91637.48	255.734669	1225.3	false
13C9-PFNA	472.0 / 427.0	3.06	95599.41	233.650231	1481.5	false
13C6-PFDA	519.0 / 474.0	3.41	98328.61	236.951115	982.6	false
13C7-PFUnA	570.0 / 525.0	3.73	103638.05	270.364994	727.0	false
13C2-PFTeDA	715.0 / 670.0	4.47	93002.76	279.664797	1918.8	false
13C3-PFBS	302.0 / 99.0	1.52	32845.54	294.931815	508.4	false
13C3-PFHxS	402.0 / 99.0	2.28	26956.49	267.120258	358.2	false
13C8-PFOS	507.0 / 99.0	3.06	27381.94	240.189464	219.5	false

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Summary Ion Ratio Report

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Sample Name	KB81 ICC	**Injection Vial**	10
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T21:13:49	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.56	PFBS			
PFBS_2	298.9 / 99.0	1.56	PFBS	0.280	0.292	ü
PFHxA_1	313.0 / 269.0	1.89	PFHxA			
PFHxA_2	313.0 / 119.0	1.89	PFHxA	0.070	0.077	ü
PFHpA_1	363.0 / 319.0	2.30	PFHpA			
PFHpA_2	363.0 / 169.0	2.29	PFHpA	0.030	0.025	ü
PFHxS_1	399.0 / 80.0	2.32	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	PFHxS	0.280	0.282	ü
PFOA_1	413.0 / 369.0	2.71	PFOA			
PFOA_2	413.0 / 169.0	2.71	PFOA	0.060	0.065	ü
PFNA_1	463.0 / 419.0	3.11	PFNA			
PFNA_2	463.0 / 219.0	3.10	PFNA	0.310	0.306	ü
PFOS_1	499.0 / 80.0	3.10	PFOS			
PFOS_2	499.0 / 99.0	3.10	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	3.46	PFDA			
PFDA_2	513.0 / 219.0	3.46	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.79	PFUnA			
PFUnA_2	563.0 / 269.0	3.79	PFUnA	0.050	0.049	ü
PFDoA_1	613.0 / 569.0	4.07	PFDoA			
PFDoA_2	613.0 / 319.0	4.07	PFDoA	0.150	0.160	ü
PFTrDA_1	663.0 / 619.0	4.32	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.32	PFTrDA	0.060	0.066	ü
PFTeDA_1	713.0 / 669.0	4.54	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.54	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.62	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.62	NMeFOSAA	0.580	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.78	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.78	NEtFOSAA	0.060	0.062	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 31/10/2018 7:50:25 AM

Sample Name	KB75 ISC	**Injection Vial**	1
Sample ID		**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T17:30:17	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.56	PFBS			
PFBS_2	298.9 / 99.0	1.56	PFBS	0.310	0.292	ü
PFHxA_1	313.0 / 269.0	1.88	PFHxA			
PFHxA_2	313.0 / 119.0	1.88	PFHxA	0.080	0.077	ü
PFHpA_1	363.0 / 319.0	2.30	PFHpA			
PFHpA_2	363.0 / 169.0	2.30	PFHpA	0.020	0.025	ü
PFHxS_1	399.0 / 80.0	2.32	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	PFHxS	0.290	0.282	ü
PFOA_1	413.0 / 369.0	2.72	PFOA			
PFOA_2	413.0 / 169.0	2.72	PFOA	0.070	0.065	ü
PFNA_1	463.0 / 419.0	3.12	PFNA			
PFNA_2	463.0 / 219.0	3.12	PFNA	0.290	0.306	ü
PFOS_1	499.0 / 80.0	3.12	PFOS			
PFOS_2	499.0 / 99.0	3.12	PFOS	0.170	0.174	ü
PFDA_1	513.0 / 469.0	3.48	PFDA			
PFDA_2	513.0 / 219.0	3.48	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.80	PFUnA			
PFUnA_2	563.0 / 269.0	3.80	PFUnA	0.050	0.049	ü
PFDoA_1	613.0 / 569.0	4.09	PFDoA			
PFDoA_2	613.0 / 319.0	4.08	PFDoA	0.150	0.160	ü
PFTrDA_1	663.0 / 619.0	4.33	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.33	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.55	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.55	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.63	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.63	NMeFOSAA	0.520	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.80	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.79	NEtFOSAA	0.060	0.062	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 31/10/2018 7:50:30 AM

Sample Name	KB76 CCV	**Injection Vial**	14
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T19:51:29	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	PFBS			
PFBS_2	298.9 / 99.0	1.54	PFBS	0.290	0.292	ü
PFHxA_1	313.0 / 269.0	1.87	PFHxA			
PFHxA_2	313.0 / 119.0	1.87	PFHxA	0.080	0.077	ü
PFHpA_1	363.0 / 319.0	2.28	PFHpA			
PFHpA_2	363.0 / 169.0	2.28	PFHpA	0.020	0.025	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.270	0.282	ü
PFOA_1	413.0 / 369.0	2.69	PFOA			
PFOA_2	413.0 / 169.0	2.69	PFOA	0.060	0.065	ü
PFNA_1	463.0 / 419.0	3.09	PFNA			
PFNA_2	463.0 / 219.0	3.09	PFNA	0.320	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.170	0.174	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.44	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.76	PFUnA			
PFUnA_2	563.0 / 269.0	3.76	PFUnA	0.060	0.049	ü
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.160	0.160	ü
PFTrDA_1	663.0 / 619.0	4.28	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.28	PFTrDA	0.060	0.066	ü
PFTeDA_1	713.0 / 669.0	4.49	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.49	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.620	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.75	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.75	NEtFOSAA	0.060	0.062	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 31/10/2018 7:50:36 AM

Sample Name	KB77 CCV	**Injection Vial**	26
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:01:50	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	PFBS			
PFBS_2	298.9 / 99.0	1.54	PFBS	0.290	0.292	ü
PFHxA_1	313.0 / 269.0	1.86	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.080	0.077	ü
PFHpA_1	363.0 / 319.0	2.28	PFHpA			
PFHpA_2	363.0 / 169.0	2.28	PFHpA	0.020	0.025	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.280	0.282	ü
PFOA_1	413.0 / 369.0	2.69	PFOA			
PFOA_2	413.0 / 169.0	2.69	PFOA	0.060	0.065	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.310	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.170	0.174	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.44	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.76	PFUnA			
PFUnA_2	563.0 / 269.0	3.76	PFUnA	0.050	0.049	ü
PFDoA_1	613.0 / 569.0	4.03	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.150	0.160	ü
PFTrDA_1	663.0 / 619.0	4.27	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.27	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.49	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.48	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.570	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.75	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.75	NEtFOSAA	0.060	0.062	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 31/10/2018 7:50:42 AM

Sample Name	KB76 CCV	**Injection Vial**	38
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:12:12	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	PFBS			
PFBS_2	298.9 / 99.0	1.54	PFBS	0.290	0.292	ü
PFHxA_1	313.0 / 269.0	1.86	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.070	0.077	ü
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	2.27	PFHpA	0.030	0.025	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.270	0.282	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.070	0.065	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.310	0.306	ü
PFOS_1	499.0 / 80.0	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.43	PFDA	0.050	0.041	ü
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	3.75	PFUnA	0.050	0.049	ü
PFDoA_1	613.0 / 569.0	4.03	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.160	0.160	ü
PFTrDA_1	663.0 / 619.0	4.27	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.26	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.48	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.47	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.58	NMeFOSAA	0.480	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.74	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.74	NEtFOSAA	0.060	0.062	ü

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Summary Ion Ratio Report

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Printed: 31/10/2018 7:50:47 AM

Sample Name	KB77 CCV	**Injection Vial**	42
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:55:41	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	PFBS			
PFBS_2	298.9 / 99.0	1.54	PFBS	0.300	0.292	ü
PFHxA_1	313.0 / 269.0	1.86	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.070	0.077	ü
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	2.27	PFHpA	0.020	0.025	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.300	0.282	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.060	0.065	ü
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.310	0.306	ü
PFOS_1	499.0 / 80.0	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.42	PFDA	0.050	0.041	ü
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	3.75	PFUnA	0.050	0.049	ü
PFDoA_1	613.0 / 569.0	4.03	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.150	0.160	ü
PFTrDA_1	663.0 / 619.0	4.27	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.27	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.48	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.48	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.58	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.58	NMeFOSAA	0.510	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.74	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.74	NEtFOSAA	0.060	0.062	ü

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Summary Internal Standard Report

Sample Name	KB81 ICC	**Injection Vial**	10
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T21:13:49	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.56	13C3-PFBS	302.0 / 99.0	27104.45	232.25
PFBS_2	298.9 / 99.0	1.56	13C3-PFBS	302.0 / 99.0	27104.45	232.25
PFHxA_1	313.0 / 269.0	1.89	13C5-PFHxA	318.0 / 273.0	59013.59	250.00
PFHxA_2	313.0 / 119.0	1.89	13C5-PFHxA	318.0 / 273.0	59013.59	250.00
PFHpA_1	363.0 / 319.0	2.30	13C4-PFHpA	367.0 / 322.0	70279.06	250.00
PFHpA_2	363.0 / 169.0	2.29	13C4-PFHpA	367.0 / 322.0	70279.06	250.00
PFHxS_1	399.0 / 80.0	2.32	13C3-PFHxS	402.0 / 99.0	24692.35	236.50
PFHxS_2	399.0 / 99.0	2.32	13C3-PFHxS	402.0 / 99.0	24692.35	236.50
PFOA_1	413.0 / 369.0	2.71	13C8-PFOA	421.0 / 376.0	89115.92	250.00
PFOA_2	413.0 / 169.0	2.71	13C8-PFOA	421.0 / 376.0	89115.92	250.00
PFNA_1	463.0 / 419.0	3.11	13C9-PFNA	472.0 / 427.0	100916.15	250.00
PFNA_2	463.0 / 219.0	3.10	13C9-PFNA	472.0 / 427.0	100916.15	250.00
PFOS_1	499.0 / 80.0	3.10	13C8-PFOS	507.0 / 99.0	29786.30	239.25
PFOS_2	499.0 / 99.0	3.10	13C8-PFOS	507.0 / 99.0	29786.30	239.25
PFDA_1	513.0 / 469.0	3.46	13C6-PFDA	519.0 / 474.0	90930.64	250.00
PFDA_2	513.0 / 219.0	3.46	13C6-PFDA	519.0 / 474.0	90930.64	250.00
PFUnA_1	563.0 / 519.0	3.79	13C7-PFUnA	570.0 / 525.0	89293.12	250.00
PFUnA_2	563.0 / 269.0	3.79	13C7-PFUnA	570.0 / 525.0	89293.12	250.00
PFDoA_1	613.0 / 569.0	4.07	13C2-PFDoA	615.0 / 570.0	93406.68	250.00
PFDoA_2	613.0 / 319.0	4.07	13C2-PFDoA	615.0 / 570.0	93406.68	250.00
PFTrDA_1	663.0 / 619.0	4.32	13C2-PFTeDA	715.0 / 670.0	71262.97	250.00
PFTrDA_2	663.0 / 169.0	4.32	13C2-PFTeDA	715.0 / 670.0	71262.97	250.00
PFTeDA_1	713.0 / 669.0	4.54	13C2-PFTeDA	715.0 / 670.0	71262.97	250.00
PFTeDA_2	713.0 / 169.0	4.54	13C2-PFTeDA	715.0 / 670.0	71262.97	250.00
NMeFOSAA_1	570.0 / 419.0	3.62	d3-MeFOSAA	573.0 / 419.0	17861.22	250.00
NMeFOSAA_2	570.0 / 512.0	3.62	d3-MeFOSAA	573.0 / 419.0	17861.22	250.00
NEtFOSAA_1	584.0 / 419.0	3.78	d5-EtFOSAA	589.0 / 419.0	14753.24	250.00
NEtFOSAA_2	584.0 / 483.0	3.78	d5-EtFOSAA	589.0 / 419.0	14753.24	250.00

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Summary Internal Standard Report

Sample Name	KB75 ISC	**Injection Vial**	1
Sample ID		**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T17:30:17	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.56	13C3-PFBS	302.0 / 99.0	25867.97	232.25
PFBS_2	298.9 / 99.0	1.56	13C3-PFBS	302.0 / 99.0	25867.97	232.25
PFHxA_1	313.0 / 269.0	1.88	13C5-PFHxA	318.0 / 273.0	64573.83	250.00
PFHxA_2	313.0 / 119.0	1.88	13C5-PFHxA	318.0 / 273.0	64573.83	250.00
PFHpA_1	363.0 / 319.0	2.30	13C4-PFHpA	367.0 / 322.0	75464.90	250.00
PFHpA_2	363.0 / 169.0	2.30	13C4-PFHpA	367.0 / 322.0	75464.90	250.00
PFHxS_1	399.0 / 80.0	2.32	13C3-PFHxS	402.0 / 99.0	24063.53	236.50
PFHxS_2	399.0 / 99.0	2.32	13C3-PFHxS	402.0 / 99.0	24063.53	236.50
PFOA_1	413.0 / 369.0	2.72	13C8-PFOA	421.0 / 376.0	81134.18	250.00
PFOA_2	413.0 / 169.0	2.72	13C8-PFOA	421.0 / 376.0	81134.18	250.00
PFNA_1	463.0 / 419.0	3.12	13C9-PFNA	472.0 / 427.0	84552.73	250.00
PFNA_2	463.0 / 219.0	3.12	13C9-PFNA	472.0 / 427.0	84552.73	250.00
PFOS_1	499.0 / 80.0	3.12	13C8-PFOS	507.0 / 99.0	23843.87	239.25
PFOS_2	499.0 / 99.0	3.12	13C8-PFOS	507.0 / 99.0	23843.87	239.25
PFDA_1	513.0 / 469.0	3.48	13C6-PFDA	519.0 / 474.0	87379.81	250.00
PFDA_2	513.0 / 219.0	3.48	13C6-PFDA	519.0 / 474.0	87379.81	250.00
PFUnA_1	563.0 / 519.0	3.80	13C7-PFUnA	570.0 / 525.0	80405.44	250.00
PFUnA_2	563.0 / 269.0	3.80	13C7-PFUnA	570.0 / 525.0	80405.44	250.00
PFDoA_1	613.0 / 569.0	4.09	13C2-PFDoA	615.0 / 570.0	97291.96	250.00
PFDoA_2	613.0 / 319.0	4.08	13C2-PFDoA	615.0 / 570.0	97291.96	250.00
PFTrDA_1	663.0 / 619.0	4.33	13C2-PFTeDA	715.0 / 670.0	83755.22	250.00
PFTrDA_2	663.0 / 169.0	4.33	13C2-PFTeDA	715.0 / 670.0	83755.22	250.00
PFTeDA_1	713.0 / 669.0	4.55	13C2-PFTeDA	715.0 / 670.0	83755.22	250.00
PFTeDA_2	713.0 / 169.0	4.55	13C2-PFTeDA	715.0 / 670.0	83755.22	250.00
NMeFOSAA_1	570.0 / 419.0	3.63	d3-MeFOSAA	573.0 / 419.0	15806.35	250.00
NMeFOSAA_2	570.0 / 512.0	3.63	d3-MeFOSAA	573.0 / 419.0	15806.35	250.00
NEtFOSAA_1	584.0 / 419.0	3.80	d5-EtFOSAA	589.0 / 419.0	16761.76	250.00
NEtFOSAA_2	584.0 / 483.0	3.79	d5-EtFOSAA	589.0 / 419.0	16761.76	250.00

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Summary Internal Standard Report

Sample Name	KB76 CCV	**Injection Vial**	14
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T19:51:29	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	13C3-PFBS	302.0 / 99.0	34629.75	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	34629.75	232.25
PFHxA_1	313.0 / 269.0	1.87	13C5-PFHxA	318.0 / 273.0	75076.29	250.00
PFHxA_2	313.0 / 119.0	1.87	13C5-PFHxA	318.0 / 273.0	75076.29	250.00
PFHpA_1	363.0 / 319.0	2.28	13C4-PFHpA	367.0 / 322.0	85739.36	250.00
PFHpA_2	363.0 / 169.0	2.28	13C4-PFHpA	367.0 / 322.0	85739.36	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	25459.92	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	25459.92	236.50
PFOA_1	413.0 / 369.0	2.69	13C8-PFOA	421.0 / 376.0	94845.00	250.00
PFOA_2	413.0 / 169.0	2.69	13C8-PFOA	421.0 / 376.0	94845.00	250.00
PFNA_1	463.0 / 419.0	3.09	13C9-PFNA	472.0 / 427.0	99750.15	250.00
PFNA_2	463.0 / 219.0	3.09	13C9-PFNA	472.0 / 427.0	99750.15	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	30098.72	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	30098.72	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	108593.99	250.00
PFDA_2	513.0 / 219.0	3.44	13C6-PFDA	519.0 / 474.0	108593.99	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	102244.80	250.00
PFUnA_2	563.0 / 269.0	3.76	13C7-PFUnA	570.0 / 525.0	102244.80	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	117585.85	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	117585.85	250.00
PFTrDA_1	663.0 / 619.0	4.28	13C2-PFTeDA	715.0 / 670.0	101958.43	250.00
PFTrDA_2	663.0 / 169.0	4.28	13C2-PFTeDA	715.0 / 670.0	101958.43	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	101958.43	250.00
PFTeDA_2	713.0 / 169.0	4.49	13C2-PFTeDA	715.0 / 670.0	101958.43	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	20556.80	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	20556.80	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	19247.28	250.00
NEtFOSAA_2	584.0 / 483.0	3.75	d5-EtFOSAA	589.0 / 419.0	19247.28	250.00

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Summary Internal Standard Report

Sample Name	KB77 CCV	**Injection Vial**	26
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:01:50	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	13C3-PFBS	302.0 / 99.0	27585.03	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	27585.03	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	66203.22	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	66203.22	250.00
PFHpA_1	363.0 / 319.0	2.28	13C4-PFHpA	367.0 / 322.0	73223.78	250.00
PFHpA_2	363.0 / 169.0	2.28	13C4-PFHpA	367.0 / 322.0	73223.78	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	21823.37	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	21823.37	236.50
PFOA_1	413.0 / 369.0	2.69	13C8-PFOA	421.0 / 376.0	84851.45	250.00
PFOA_2	413.0 / 169.0	2.69	13C8-PFOA	421.0 / 376.0	84851.45	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	90325.52	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	90325.52	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	26373.09	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	26373.09	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	97254.97	250.00
PFDA_2	513.0 / 219.0	3.44	13C6-PFDA	519.0 / 474.0	97254.97	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	91040.77	250.00
PFUnA_2	563.0 / 269.0	3.76	13C7-PFUnA	570.0 / 525.0	91040.77	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	110728.34	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	110728.34	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	94197.17	250.00
PFTrDA_2	663.0 / 169.0	4.27	13C2-PFTeDA	715.0 / 670.0	94197.17	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	94197.17	250.00
PFTeDA_2	713.0 / 169.0	4.48	13C2-PFTeDA	715.0 / 670.0	94197.17	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	17221.59	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	17221.59	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	18277.59	250.00
NEtFOSAA_2	584.0 / 483.0	3.75	d5-EtFOSAA	589.0 / 419.0	18277.59	250.00

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Summary Internal Standard Report

Sample Name	KB76 CCV	**Injection Vial**	38
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:12:12	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	13C3-PFBS	302.0 / 99.0	29524.59	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	29524.59	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	62024.46	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	62024.46	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	72815.43	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	72815.43	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	24875.50	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	24875.50	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	82720.20	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	82720.20	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	83583.71	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	83583.71	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	26619.46	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	26619.46	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	99051.15	250.00
PFDA_2	513.0 / 219.0	3.43	13C6-PFDA	519.0 / 474.0	99051.15	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	97479.09	250.00
PFUnA_2	563.0 / 269.0	3.75	13C7-PFUnA	570.0 / 525.0	97479.09	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	103762.97	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	103762.97	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	87831.86	250.00
PFTrDA_2	663.0 / 169.0	4.26	13C2-PFTeDA	715.0 / 670.0	87831.86	250.00
PFTeDA_1	713.0 / 669.0	4.48	13C2-PFTeDA	715.0 / 670.0	87831.86	250.00
PFTeDA_2	713.0 / 169.0	4.47	13C2-PFTeDA	715.0 / 670.0	87831.86	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	16322.37	250.00
NMeFOSAA_2	570.0 / 512.0	3.58	d3-MeFOSAA	573.0 / 419.0	16322.37	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	18325.49	250.00
NEtFOSAA_2	584.0 / 483.0	3.74	d5-EtFOSAA	589.0 / 419.0	18325.49	250.00

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Summary Internal Standard Report

Sample Name	KB77 CCV	**Injection Vial**	42
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:55:41	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	13C3-PFBS	302.0 / 99.0	32845.54	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	32845.54	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	68693.80	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	68693.80	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	74486.59	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	74486.59	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	26987.11	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	26987.11	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	91637.48	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	91637.48	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	95599.41	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	95599.41	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	27834.10	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	27834.10	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	98328.61	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	98328.61	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	103638.05	250.00
PFUnA_2	563.0 / 269.0	3.75	13C7-PFUnA	570.0 / 525.0	103638.05	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	110411.16	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	110411.16	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	93002.76	250.00
PFTrDA_2	663.0 / 169.0	4.27	13C2-PFTeDA	715.0 / 670.0	93002.76	250.00
PFTeDA_1	713.0 / 669.0	4.48	13C2-PFTeDA	715.0 / 670.0	93002.76	250.00
PFTeDA_2	713.0 / 169.0	4.48	13C2-PFTeDA	715.0 / 670.0	93002.76	250.00
NMeFOSAA_1	570.0 / 419.0	3.58	d3-MeFOSAA	573.0 / 419.0	18046.85	250.00
NMeFOSAA_2	570.0 / 512.0	3.58	d3-MeFOSAA	573.0 / 419.0	18046.85	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	18418.32	250.00
NEtFOSAA_2	584.0 / 483.0	3.74	d5-EtFOSAA	589.0 / 419.0	18418.32	250.00

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Summary Internal Standard Report

Sample Name	KB81 ICC	**Injection Vial**	10
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T21:13:49	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.06	13C2-PFDA	515.0 / 470.0	103402.36	250.00
d3-MeFOSAA	573.0 / 419.0	3.61	13C4-PFOS	503.0 / 99.0	33690.55	239.25
d5-EtFOSAA	589.0 / 419.0	3.78	13C4-PFOS	503.0 / 99.0	33690.55	239.25
13C5-PFHxA	318.0 / 273.0	1.88	13C2-PFOA	415.0 / 370.0	85242.44	250.00
13C4-PFHpA	367.0 / 322.0	2.29	13C2-PFOA	415.0 / 370.0	85242.44	250.00
13C8-PFOA	421.0 / 376.0	2.70	13C2-PFOA	415.0 / 370.0	85242.44	250.00
13C9-PFNA	472.0 / 427.0	3.09	13C2-PFOA	415.0 / 370.0	85242.44	250.00
13C6-PFDA	519.0 / 474.0	3.45	13C2-PFDA	515.0 / 470.0	103402.36	250.00
13C7-PFUnA	570.0 / 525.0	3.77	13C2-PFDA	515.0 / 470.0	103402.36	250.00
13C2-PFTeDA	715.0 / 670.0	4.54	13C2-PFDA	515.0 / 470.0	103402.36	250.00
13C3-PFBS	302.0 / 99.0	1.55	13C4-PFOS	503.0 / 99.0	33690.55	239.25
13C3-PFHxS	402.0 / 99.0	2.31	13C4-PFOS	503.0 / 99.0	33690.55	239.25
13C8-PFOS	507.0 / 99.0	3.09	13C4-PFOS	503.0 / 99.0	33690.55	239.25

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Summary Internal Standard Report

Sample Name	KB75 ISC	**Injection Vial**	1
Sample ID	ISC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T17:30:17	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.07	13C2-PFDA	515.0 / 470.0	88361.09	250.00
d3-MeFOSAA	573.0 / 419.0	3.63	13C4-PFOS	503.0 / 99.0	28379.24	239.25
d5-EtFOSAA	589.0 / 419.0	3.79	13C4-PFOS	503.0 / 99.0	28379.24	239.25
13C5-PFHxA	318.0 / 273.0	1.87	13C2-PFOA	415.0 / 370.0	78275.39	250.00
13C4-PFHpA	367.0 / 322.0	2.29	13C2-PFOA	415.0 / 370.0	78275.39	250.00
13C8-PFOA	421.0 / 376.0	2.71	13C2-PFOA	415.0 / 370.0	78275.39	250.00
13C9-PFNA	472.0 / 427.0	3.10	13C2-PFOA	415.0 / 370.0	78275.39	250.00
13C6-PFDA	519.0 / 474.0	3.46	13C2-PFDA	515.0 / 470.0	88361.09	250.00
13C7-PFUnA	570.0 / 525.0	3.79	13C2-PFDA	515.0 / 470.0	88361.09	250.00
13C2-PFTeDA	715.0 / 670.0	4.54	13C2-PFDA	515.0 / 470.0	88361.09	250.00
13C3-PFBS	302.0 / 99.0	1.54	13C4-PFOS	503.0 / 99.0	28379.24	239.25
13C3-PFHxS	402.0 / 99.0	2.31	13C4-PFOS	503.0 / 99.0	28379.24	239.25
13C8-PFOS	507.0 / 99.0	3.10	13C4-PFOS	503.0 / 99.0	28379.24	239.25

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Summary Internal Standard Report

Sample Name	KB76 CCV	**Injection Vial**	14
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T19:51:29	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.02	13C2-PFDA	515.0 / 470.0	104742.48	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	31832.31	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	31832.31	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	88842.83	250.00
13C4-PFHpA	367.0 / 322.0	2.27	13C2-PFOA	415.0 / 370.0	88842.83	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	88842.83	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	88842.83	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	104742.48	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	104742.48	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	104742.48	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	31832.31	239.25
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	31832.31	239.25
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	31832.31	239.25

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Summary Internal Standard Report

Sample Name	KB77 CCV	**Injection Vial**	26
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:01:50	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.02	13C2-PFDA	515.0 / 470.0	102061.73	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	31062.94	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	31062.94	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	85568.76	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	85568.76	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	85568.76	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	85568.76	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	102061.73	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	102061.73	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	102061.73	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	31062.94	239.25
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	31062.94	239.25
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	31062.94	239.25

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Summary Internal Standard Report

Sample Name	KB76 CCV	**Injection Vial**	38
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:12:12	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.01	13C2-PFDA	515.0 / 470.0	99230.65	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	28746.07	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	28746.07	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	80939.40	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	80939.40	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	80939.40	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	80939.40	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	99230.65	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	99230.65	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	99230.65	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	28746.07	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	28746.07	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	28746.07	239.25

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Summary Internal Standard Report

Sample Name	KB77 CCV	**Injection Vial**	42
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:55:41	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.02	13C2-PFDA	515.0 / 470.0	105607.64	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	28635.14	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	28635.14	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	87478.75	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	87478.75	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	87478.75	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	87478.75	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	105607.64	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	105607.64	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	105607.64	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	28635.14	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	28635.14	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	28635.14	239.25

Raw Analytical Data

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Summary Quant Report

Created with Analyst Reporter
Printed: 31/10/2018 7:52:48 AM

Sample Name	KB80 IB	**Injection Vial**	9
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T21:02:57	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.57	4270.08	7.967207	23.4	true
PFBS_2	298.9 / 99.0	1.57	1751.65	15.187213	22.1	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	3.11	5116.99	< 0	29.4	false
PFNA_2	463.0 / 219.0	3.11	1412.81	< 0	28.4	false
PFOS_1	499.0 / 80.0	3.10	10007.21	20.457445	28.3	false
PFOS_2	499.0 / 99.0	3.11	2107.71	23.036162	36.0	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	4.08	4132.45	< 0	50.7	false
PFDoA_2	613.0 / 319.0	4.08	648.21	< 0	25.1	false
PFTrDA_1	663.0 / 619.0	4.32	3827.82	< 0	101.8	false
PFTrDA_2	663.0 / 169.0	4.34	292.14	< 0	21.8	false
PFTeDA_1	713.0 / 669.0	4.54	4005.90	< 0	149.6	false
PFTeDA_2	713.0 / 169.0	4.54	211.66	< 0	28.3	false
NMeFOSAA_1	570.0 / 419.0	3.63	1091.61	< 0	277.3	false
NMeFOSAA_2	570.0 / 512.0	3.61	558.08	< 0	27.6	false
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Printed: 31/10/2018 7:52:53 AM

Sample Name	KB80 IB	**Injection Vial**	2
Sample ID		**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T17:41:09	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.56	1239.82	9.122221	24.0	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	true
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	true
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	true
PFOA_1	413.0 / 369.0	2.71	3556.32	< 0	14.0	false
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	N/A	N/A	N/A	N/A	true
PFOS_2	499.0 / 99.0	N/A	N/A	N/A	N/A	true
PFDA_1	513.0 / 469.0	3.46	1534.31	< 0	11.3	false
PFDA_2	513.0 / 219.0	3.50	303.79	< 0	13.9	false
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.07	898.92	< 0	14.6	false
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.54	822.34	< 0	47.4	false
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Printed: 31/10/2018 7:53:40 AM

Sample Name	CS011PB-FS(3)	**Injection Vial**	16
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:13:12	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	2.69	2561.91	< 0	11.8	false
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	N/A	N/A	N/A	N/A	true
PFOS_2	499.0 / 99.0	N/A	N/A	N/A	N/A	true
PFDA_1	513.0 / 469.0	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	4.05	1165.69	< 0	14.4	false
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	4.28	594.89	< 0	17.1	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.50	409.07	< 0	12.4	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

Sample Name	CS012LCS-FS(3)	**Injection Vial**	17
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:24:04	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	1168508.75	3129.688192	678.8	false
PFBS_2	298.9 / 99.0	1.54	345417.38	3152.094521	665.1	false
PFHxA_1	313.0 / 269.0	1.87	870746.54	3094.117896	158.3	false
PFHxA_2	313.0 / 119.0	1.87	63527.64	3013.260211	107.8	false
PFHpA_1	363.0 / 319.0	2.28	853147.33	2768.233421	318.2	false
PFHpA_2	363.0 / 169.0	2.28	17435.78	2603.611410	180.7	false
PFHxS_1	399.0 / 80.0	2.30	1193546.23	3419.442699	668.1	false
PFHxS_2	399.0 / 99.0	2.30	340533.91	3494.564223	1041.3	false
PFOA_1	413.0 / 369.0	2.69	1130803.46	2905.806610	525.4	false
PFOA_2	413.0 / 169.0	2.69	68837.42	2723.666370	384.6	false
PFNA_1	463.0 / 419.0	3.09	979510.02	2924.550525	512.2	false
PFNA_2	463.0 / 219.0	3.09	314241.78	3045.246488	588.5	false
PFOS_1	499.0 / 80.0	3.09	1654335.02	2795.804235	315.2	false
PFOS_2	499.0 / 99.0	3.09	298614.54	2905.498785	578.0	false
PFDA_1	513.0 / 469.0	3.44	1305086.55	2877.351553	666.3	false
PFDA_2	513.0 / 219.0	3.44	54351.56	2906.883388	226.0	false
PFUnA_1	563.0 / 519.0	3.76	1269021.03	2863.220213	506.5	false
PFUnA_2	563.0 / 269.0	3.76	64252.03	2922.152163	282.2	false
PFDoA_1	613.0 / 569.0	4.04	1291290.64	2953.527889	581.6	false
PFDoA_2	613.0 / 319.0	4.04	202805.47	2970.574000	429.2	false
PFTrDA_1	663.0 / 619.0	4.28	1245629.49	3043.495472	872.2	false
PFTrDA_2	663.0 / 169.0	4.28	83141.67	3089.820742	470.4	false
PFTeDA_1	713.0 / 669.0	4.49	1425749.57	3069.543840	1932.7	false
PFTeDA_2	713.0 / 169.0	4.49	70519.65	3133.531573	765.9	false
NMeFOSAA_1	570.0 / 419.0	3.60	231687.95	3078.709198	1032.3	false
NMeFOSAA_2	570.0 / 512.0	3.59	132022.60	3208.332015	689.9	false
NEtFOSAA_1	584.0 / 419.0	3.76	214175.81	3225.676530	844.8	false
NEtFOSAA_2	584.0 / 483.0	3.76	12143.46	3096.410813	700.7	false

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Summary Quant Report

Sample Name	J8777-FS(3)	**Injection Vial**	18
Sample ID	VC-PM323-324-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:34:55	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.55	3303.66	2.260178	26.9	true
PFBS_2	298.9 / 99.0	1.52	1386.85	7.470820	24.0	true
PFHxA_1	313.0 / 269.0	1.86	21172.44	50.457619	13.7	false
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	2.28	13572.65	29.064369	25.0	false
PFHpA_2	363.0 / 169.0	2.28	888.42	60.063432	22.6	false
PFHxS_1	399.0 / 80.0	2.30	25726.97	48.147682	99.3	false
PFHxS_2	399.0 / 99.0	2.30	6813.48	39.516664	77.4	false
PFOA_1	413.0 / 369.0	2.69	19395.45	34.865103	44.6	false
PFOA_2	413.0 / 169.0	2.68	1892.09	60.724053	25.8	false
PFNA_1	463.0 / 419.0	3.09	21592.39	35.621903	80.0	false
PFNA_2	463.0 / 219.0	3.08	5567.16	28.202168	73.9	false
PFOS_1	499.0 / 80.0	3.08	716347.70	1159.368498	428.2	false
PFOS_2	499.0 / 99.0	3.08	149811.03	1394.883225	549.9	false
PFDA_1	513.0 / 469.0	3.44	12270.31	6.933793	65.3	false
PFDA_2	513.0 / 219.0	3.45	996.43	32.344753	25.1	false
PFUnA_1	563.0 / 519.0	3.76	10379.37	14.087435	47.7	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.04	5803.51	< 0	56.6	false
PFDoA_2	613.0 / 319.0	4.02	814.50	< 0	19.6	false
PFTrDA_1	663.0 / 619.0	4.28	5022.33	< 0	79.6	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.49	4028.22	< 0	81.6	false
PFTeDA_2	713.0 / 169.0	4.47	455.10	< 0	26.1	false
NMeFOSAA_1	570.0 / 419.0	3.61	597.14	< 0	177.6	true
NMeFOSAA_2	570.0 / 512.0	3.60	285.96	< 0	10.4	false
NEtFOSAA_1	584.0 / 419.0	3.75	1018.86	0.551416	80.3	false
NEtFOSAA_2	584.0 / 483.0	3.76	44.13	< 0	210.6	false

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Summary Quant Report

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Sample Name	J8778-FS(3)	**Injection Vial**	19
Sample ID	VC-PM323-324-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:45:47	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.53	2654.10	0.947316	16.1	true
PFBS_2	298.9 / 99.0	1.52	907.83	3.869635	13.4	true
PFHxA_1	313.0 / 269.0	1.86	17471.89	34.104314	12.2	false
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	2.27	9670.21	15.057852	20.0	true
PFHpA_2	363.0 / 169.0	2.33	1088.64	93.176721	15.0	false
PFHxS_1	399.0 / 80.0	2.30	28926.53	70.256491	95.5	false
PFHxS_2	399.0 / 99.0	2.30	8153.10	66.033655	90.2	false
PFOA_1	413.0 / 369.0	2.69	15746.97	27.115424	39.9	false
PFOA_2	413.0 / 169.0	2.70	1866.58	62.741466	28.5	false
PFNA_1	463.0 / 419.0	3.08	10884.28	2.276842	42.2	false
PFNA_2	463.0 / 219.0	3.09	5466.03	28.072394	66.5	false
PFOS_1	499.0 / 80.0	3.08	1366918.55	2192.062425	627.4	false
PFOS_2	499.0 / 99.0	3.08	284817.26	2629.253788	1180.4	false
PFDA_1	513.0 / 469.0	3.44	6495.05	< 0	31.6	false
PFDA_2	513.0 / 219.0	3.42	734.48	17.031292	19.9	true
PFUnA_1	563.0 / 519.0	3.74	7749.63	7.547370	34.3	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.04	1927.19	< 0	27.4	false
PFDoA_2	613.0 / 319.0	4.04	758.15	< 0	17.0	false
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.47	1653.10	< 0	33.9	false
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

Sample Name	J8779-FS(3)	**Injection Vial**	20
Sample ID	VC-PM553-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:56:39	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	2.30	4282.61	< 0	31.1	false
PFHxS_2	399.0 / 99.0	2.29	1856.94	< 0	28.1	false
PFOA_1	413.0 / 369.0	2.68	9588.76	7.237437	32.0	true
PFOA_2	413.0 / 169.0	2.69	730.62	11.856433	16.1	true
PFNA_1	463.0 / 419.0	3.08	13088.71	5.004929	52.1	false
PFNA_2	463.0 / 219.0	3.09	3569.20	4.441746	45.0	false
PFOS_1	499.0 / 80.0	3.08	355941.65	543.210439	279.8	false
PFOS_2	499.0 / 99.0	3.08	75068.72	658.139072	631.4	false
PFDA_1	513.0 / 469.0	3.44	7371.95	< 0	38.2	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.76	4702.24	0.530388	32.6	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.04	3955.11	< 0	53.5	false
PFDoA_2	613.0 / 319.0	4.04	462.91	< 0	13.5	false
PFTrDA_1	663.0 / 619.0	4.28	2087.43	< 0	49.2	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.49	2791.29	< 0	62.6	false
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J8780-FS(3)	**Injection Vial**	21
Sample ID	VC-PM553-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:07:31	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	2.30	1589.49	< 0	11.3	true
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	true
PFOA_1	413.0 / 369.0	2.70	3384.15	< 0	13.1	false
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	3.08	68114.68	129.900307	80.0	false
PFOS_2	499.0 / 99.0	3.08	14116.22	153.323736	131.9	false
PFDA_1	513.0 / 469.0	3.44	4475.35	< 0	29.8	false
PFDA_2	513.0 / 219.0	3.45	396.32	0.666655	13.5	true
PFUnA_1	563.0 / 519.0	3.75	1047.73	< 0	12.1	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.49	403.98	< 0	10.5	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Printed: 31/10/2018 7:54:03 AM

Sample Name	J8781MS-FS(3)	**Injection Vial**	22
Sample ID	VC-PM553-SD01-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:18:23	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	1974604.87	5251.839491	836.9	false
PFBS_2	298.9 / 99.0	1.54	584375.88	5294.254407	959.9	false
PFHxA_1	313.0 / 269.0	1.87	1320898.43	5886.835457	190.0	false
PFHxA_2	313.0 / 119.0	1.87	97828.31	5836.795879	138.3	false
PFHpA_1	363.0 / 319.0	2.28	1291538.04	5042.034189	433.2	false
PFHpA_2	363.0 / 169.0	2.28	24680.10	4482.677182	245.6	false
PFHxS_1	399.0 / 80.0	2.30	1839984.76	5886.720166	796.0	false
PFHxS_2	399.0 / 99.0	2.30	526781.49	6040.313970	1067.9	false
PFOA_1	413.0 / 369.0	2.69	1714184.96	5354.707082	568.4	false
PFOA_2	413.0 / 169.0	2.69	110434.92	5312.737306	359.8	false
PFNA_1	463.0 / 419.0	3.08	1526688.17	5730.872292	642.3	false
PFNA_2	463.0 / 219.0	3.08	476535.70	5800.394289	733.0	false
PFOS_1	499.0 / 80.0	3.08	2878573.55	4920.769388	448.4	false
PFOS_2	499.0 / 99.0	3.08	509425.54	5014.857227	856.1	false
PFDA_1	513.0 / 469.0	3.44	1931372.90	4971.752684	885.6	false
PFDA_2	513.0 / 219.0	3.44	76890.39	4801.866236	433.9	false
PFUnA_1	563.0 / 519.0	3.76	2078281.01	5420.694657	685.4	false
PFUnA_2	563.0 / 269.0	3.76	101273.12	5315.577103	380.2	false
PFDoA_1	613.0 / 569.0	4.04	1964130.01	5222.041006	735.3	false
PFDoA_2	613.0 / 319.0	4.04	329043.09	5614.250182	607.8	false
PFTrDA_1	663.0 / 619.0	4.28	1900819.84	4999.710531	1062.9	false
PFTrDA_2	663.0 / 169.0	4.28	123753.34	4952.094828	546.2	false
PFTeDA_1	713.0 / 669.0	4.49	2172536.48	5040.484950	1878.8	false
PFTeDA_2	713.0 / 169.0	4.49	108490.82	5198.518893	978.4	false
NMeFOSAA_1	570.0 / 419.0	3.59	343319.44	5976.689929	728.4	false
NMeFOSAA_2	570.0 / 512.0	3.59	175848.65	5627.615504	830.9	false
NEtFOSAA_1	584.0 / 419.0	3.75	331926.81	5599.636610	917.1	false
NEtFOSAA_2	584.0 / 483.0	3.75	20903.98	6018.555549	3276.2	false

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Summary Quant Report

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Sample Name	J8782MSD-FS(3)	**Injection Vial**	23
Sample ID	VC-PM553-SD01-0102-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:29:15	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	2106839.72	4853.548883	888.2	false
PFBS_2	298.9 / 99.0	1.54	626024.63	4912.637024	870.7	false
PFHxA_1	313.0 / 269.0	1.86	1345497.66	5266.214939	193.1	false
PFHxA_2	313.0 / 119.0	1.86	99760.88	5225.488351	138.8	false
PFHpA_1	363.0 / 319.0	2.27	1316269.53	4660.502910	372.2	false
PFHpA_2	363.0 / 169.0	2.27	27669.52	4561.029488	214.4	false
PFHxS_1	399.0 / 80.0	2.30	1956445.10	5591.796833	796.4	false
PFHxS_2	399.0 / 99.0	2.30	558165.32	5717.312992	978.1	false
PFOA_1	413.0 / 369.0	2.68	1756214.54	5206.784086	517.8	false
PFOA_2	413.0 / 169.0	2.68	108795.43	4966.946883	323.9	false
PFNA_1	463.0 / 419.0	3.08	1624557.98	5447.125973	639.8	false
PFNA_2	463.0 / 219.0	3.08	527199.39	5733.265682	813.4	false
PFOS_1	499.0 / 80.0	3.08	3074781.18	5259.291946	413.0	false
PFOS_2	499.0 / 99.0	3.08	548072.90	5398.602526	938.9	false
PFDA_1	513.0 / 469.0	3.43	2063613.24	4801.859068	816.3	false
PFDA_2	513.0 / 219.0	3.43	80583.41	4548.501362	379.3	false
PFUnA_1	563.0 / 519.0	3.75	2164238.86	5241.319088	702.7	false
PFUnA_2	563.0 / 269.0	3.75	111497.76	5434.175725	444.6	false
PFDoA_1	613.0 / 569.0	4.03	2157146.97	5139.978124	653.8	false
PFDoA_2	613.0 / 319.0	4.03	354014.22	5412.440477	507.0	false
PFTrDA_1	663.0 / 619.0	4.27	2013072.47	5083.594346	1073.2	false
PFTrDA_2	663.0 / 169.0	4.27	134916.58	5184.459960	608.4	false
PFTeDA_1	713.0 / 669.0	4.49	2333144.64	5197.760314	2193.3	false
PFTeDA_2	713.0 / 169.0	4.48	116680.70	5368.726158	1100.0	false
NMeFOSAA_1	570.0 / 419.0	3.59	348004.08	5132.134316	1204.9	false
NMeFOSAA_2	570.0 / 512.0	3.59	186144.80	5043.356310	825.5	false
NEtFOSAA_1	584.0 / 419.0	3.75	336989.18	5346.593613	1052.3	false
NEtFOSAA_2	584.0 / 483.0	3.75	20248.87	5477.863855	681.8	false

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Summary Quant Report

Sample Name	J8783-FS(3)	**Injection Vial**	24
Sample ID	VC-PM3009-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:40:07	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.56	3864.17	4.686689	26.3	true
PFBS_2	298.9 / 99.0	1.55	820.96	3.699998	12.8	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	2.27	8261.48	9.540873	17.5	false
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.30	7684.93	< 0	34.6	false
PFHxS_2	399.0 / 99.0	2.31	2250.66	< 0	21.0	false
PFOA_1	413.0 / 369.0	2.68	19759.25	34.636141	44.6	false
PFOA_2	413.0 / 169.0	2.68	1108.73	28.604225	25.2	false
PFNA_1	463.0 / 419.0	3.08	7834.18	< 0	39.6	false
PFNA_2	463.0 / 219.0	3.09	1062.74	< 0	17.1	false
PFOS_1	499.0 / 80.0	3.08	266783.78	453.011200	240.8	false
PFOS_2	499.0 / 99.0	3.08	54439.82	530.775790	419.4	false
PFDA_1	513.0 / 469.0	3.43	22584.54	29.993964	99.3	false
PFDA_2	513.0 / 219.0	3.43	1702.62	70.523371	41.0	false
PFUnA_1	563.0 / 519.0	3.75	30971.63	63.017644	97.3	false
PFUnA_2	563.0 / 269.0	3.76	1567.31	74.383294	28.9	false
PFDoA_1	613.0 / 569.0	4.03	70780.74	146.638519	200.0	false
PFDoA_2	613.0 / 319.0	4.03	11437.38	141.893411	150.9	false
PFTrDA_1	663.0 / 619.0	4.27	22309.29	22.071025	173.6	false
PFTrDA_2	663.0 / 169.0	4.26	2016.27	39.294869	63.4	false
PFTeDA_1	713.0 / 669.0	4.49	21188.10	4.387165	284.9	false
PFTeDA_2	713.0 / 169.0	4.48	1017.57	< 0	67.5	false
NMeFOSAA_1	570.0 / 419.0	3.58	999.44	< 0	56.4	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	3.75	1459.69	7.242529	46.7	false
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

Sample Name	J8784-FS(3)	**Injection Vial**	25
Sample ID	VC-PM3009-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:50:59	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.53	1628.99	< 0	10.9	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	2.30	7057.20	< 0	31.5	false
PFHxS_2	399.0 / 99.0	2.29	2287.26	< 0	36.8	false
PFOA_1	413.0 / 369.0	2.68	6947.95	4.696841	24.1	true
PFOA_2	413.0 / 169.0	2.68	1453.48	49.539967	20.1	false
PFNA_1	463.0 / 419.0	3.08	3557.89	< 0	16.6	false
PFNA_2	463.0 / 219.0	3.04	878.81	< 0	9.8	false
PFOS_1	499.0 / 80.0	3.08	204298.68	346.579050	190.7	false
PFOS_2	499.0 / 99.0	3.08	43425.66	422.551933	322.4	false
PFDA_1	513.0 / 469.0	3.44	3306.63	< 0	22.3	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.75	3439.83	< 0	28.1	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.04	7043.69	< 0	76.2	false
PFDoA_2	613.0 / 319.0	4.03	1886.63	< 0	37.4	false
PFTrDA_1	663.0 / 619.0	4.28	2477.85	< 0	51.0	false
PFTrDA_2	663.0 / 169.0	4.25	930.36	1.127984	24.7	false
PFTeDA_1	713.0 / 669.0	4.48	4069.15	< 0	72.5	false
PFTeDA_2	713.0 / 169.0	4.49	129.13	< 0	11.2	false
NMeFOSAA_1	570.0 / 419.0	3.59	514.69	< 0	21.8	false
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	3.76	214.49	< 0	9.1	false
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J8785-FS(3)	**Injection Vial**	28
Sample ID	VC-PM372-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:23:33	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.53	1456.72	< 0	10.8	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	2.29	9919.94	6.875363	43.3	false
PFHxS_2	399.0 / 99.0	2.30	2679.60	0.822706	38.0	false
PFOA_1	413.0 / 369.0	2.68	17607.66	38.155309	47.2	false
PFOA_2	413.0 / 169.0	2.69	1335.02	47.824773	37.0	false
PFNA_1	463.0 / 419.0	3.08	6291.62	< 0	33.5	false
PFNA_2	463.0 / 219.0	3.08	2495.69	0.001574	35.2	false
PFOS_1	499.0 / 80.0	3.08	462128.57	912.855404	297.9	false
PFOS_2	499.0 / 99.0	3.08	96322.39	1094.245319	608.0	false
PFDA_1	513.0 / 469.0	3.43	15392.96	20.202128	62.9	false
PFDA_2	513.0 / 219.0	3.41	805.41	29.220609	15.4	false
PFUnA_1	563.0 / 519.0	3.76	9580.91	13.731097	44.2	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.03	12023.89	0.637427	119.1	false
PFDoA_2	613.0 / 319.0	4.03	1986.95	< 0	42.5	false
PFTrDA_1	663.0 / 619.0	4.26	3644.21	< 0	76.0	false
PFTrDA_2	663.0 / 169.0	4.25	282.77	< 0	14.0	false
PFTeDA_1	713.0 / 669.0	4.48	4736.20	< 0	90.5	false
PFTeDA_2	713.0 / 169.0	4.48	179.51	< 0	13.7	false
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

Sample Name	J8786-FS(3)	**Injection Vial**	29
Sample ID	VC-PM372-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:34:26	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	2.29	3607.45	< 0	16.0	false
PFHxS_2	399.0 / 99.0	2.29	1071.77	< 0	21.6	false
PFOA_1	413.0 / 369.0	2.67	2641.99	< 0	10.6	false
PFOA_2	413.0 / 169.0	2.66	348.57	1.734356	9.0	false
PFNA_1	463.0 / 419.0	3.06	1707.74	< 0	12.4	false
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	3.08	217871.42	345.198824	242.3	false
PFOS_2	499.0 / 99.0	3.08	45415.35	412.732943	459.3	false
PFDA_1	513.0 / 469.0	3.46	1011.41	< 0	10.0	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.75	1134.96	< 0	10.3	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.03	1643.63	< 0	22.4	false
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	4.26	720.60	< 0	25.3	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

Sample Name	J8787-FS(3)	**Injection Vial**	30
Sample ID	VC-CS11-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:45:17	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	2.29	11336.21	20.634634	38.5	false
PFHxS_2	399.0 / 99.0	2.30	2917.12	12.284007	41.4	false
PFOA_1	413.0 / 369.0	2.67	3068.02	< 0	12.5	true
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	true
PFNA_1	463.0 / 419.0	3.08	4636.17	< 0	21.7	false
PFNA_2	463.0 / 219.0	3.08	1432.82	< 0	18.0	false
PFOS_1	499.0 / 80.0	3.08	1162332.50	2298.079181	373.0	false
PFOS_2	499.0 / 99.0	3.08	225509.75	2566.692158	547.9	false
PFDA_1	513.0 / 469.0	3.43	6833.40	< 0	43.2	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.02	7249.14	< 0	60.7	true
PFDoA_2	613.0 / 319.0	4.04	1338.46	< 0	24.3	false
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.47	1345.87	< 0	34.7	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	3.59	1091.92	< 0	44.6	true
NMeFOSAA_2	570.0 / 512.0	3.59	784.76	< 0	19.8	true
NEtFOSAA_1	584.0 / 419.0	3.75	5364.49	85.480391	137.2	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

Sample Name	J8788-FS(3)	**Injection Vial**	31
Sample ID	VC-CS11-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:56:09	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	2.30	28766.10	65.634657	83.5	false
PFHxS_2	399.0 / 99.0	2.30	10171.14	83.419036	105.1	false
PFOA_1	413.0 / 369.0	2.68	6783.96	5.409333	22.5	false
PFOA_2	413.0 / 169.0	2.68	401.30	4.314408	13.2	true
PFNA_1	463.0 / 419.0	3.06	2633.04	< 0	13.7	false
PFNA_2	463.0 / 219.0	3.06	1380.91	< 0	23.4	false
PFOS_1	499.0 / 80.0	3.05	223361.95	381.027223	111.3	false
PFOS_2	499.0 / 99.0	3.08	33110.31	324.213969	178.3	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
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	4.50	98.32	< 0	12.4	false
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

Sample Name	J8809-FS(3)	**Injection Vial**	32
Sample ID	VC-STP-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:07:00	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	1662.28	< 0	12.9	true
PFBS_2	298.9 / 99.0	1.52	563.79	1.016926	15.5	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	2.29	13122.48	9.034755	65.7	false
PFHxS_2	399.0 / 99.0	2.29	3729.67	4.388372	54.8	false
PFOA_1	413.0 / 369.0	2.68	7475.19	4.291908	27.7	false
PFOA_2	413.0 / 169.0	2.68	489.62	5.196734	10.6	false
PFNA_1	463.0 / 419.0	3.07	3163.22	< 0	16.9	false
PFNA_2	463.0 / 219.0	3.08	925.81	< 0	18.2	false
PFOS_1	499.0 / 80.0	3.08	1243862.32	1917.331754	378.8	false
PFOS_2	499.0 / 99.0	3.08	263340.36	2336.444550	763.1	false
PFDA_1	513.0 / 469.0	3.43	7738.96	< 0	46.5	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.75	5642.88	1.330090	36.7	false
PFUnA_2	563.0 / 269.0	3.76	1074.76	43.200554	22.8	false
PFDoA_1	613.0 / 569.0	4.03	11080.71	< 0	89.5	false
PFDoA_2	613.0 / 319.0	4.03	1983.38	< 0	57.1	false
PFTrDA_1	663.0 / 619.0	4.26	3601.07	< 0	74.2	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.47	6052.52	< 0	116.2	false
PFTeDA_2	713.0 / 169.0	4.47	227.66	< 0	16.3	false
NMeFOSAA_1	570.0 / 419.0	3.59	5519.42	16.874212	158.9	false
NMeFOSAA_2	570.0 / 512.0	3.59	2778.22	< 0	84.8	false
NEtFOSAA_1	584.0 / 419.0	3.75	14780.44	182.979837	313.4	false
NEtFOSAA_2	584.0 / 483.0	3.74	1331.20	241.042751	99.9	false

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Summary Quant Report

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Sample Name	J8810-FS(3)	**Injection Vial**	33
Sample ID	VC-STP-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:17:52	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.53	19111.16	49.972707	58.7	true
PFBS_2	298.9 / 99.0	1.53	5827.76	53.951578	54.3	false
PFHxA_1	313.0 / 269.0	1.85	30512.30	99.243707	16.7	false
PFHxA_2	313.0 / 119.0	1.85	1605.49	43.132506	8.3	false
PFHpA_1	363.0 / 319.0	2.27	18980.85	59.956928	36.5	false
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.29	129218.01	400.787397	156.1	false
PFHxS_2	399.0 / 99.0	2.29	33235.29	362.969405	198.6	false
PFOA_1	413.0 / 369.0	2.68	48325.77	131.221882	95.0	false
PFOA_2	413.0 / 169.0	2.67	2200.62	88.222934	43.3	false
PFNA_1	463.0 / 419.0	3.08	3268.24	< 0	20.4	false
PFNA_2	463.0 / 219.0	3.08	1696.37	< 0	25.2	false
PFOS_1	499.0 / 80.0	3.08	481212.35	864.176735	185.8	false
PFOS_2	499.0 / 99.0	3.08	85728.49	885.375413	419.2	false
PFDA_1	513.0 / 469.0	3.43	3211.53	< 0	19.8	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.74	1852.58	< 0	16.5	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.02	3440.20	< 0	38.7	false
PFDoA_2	613.0 / 319.0	4.01	529.60	< 0	13.7	false
PFTrDA_1	663.0 / 619.0	4.27	636.49	< 0	26.9	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.47	1552.32	< 0	36.0	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	3.59	2067.03	< 0	50.2	false
NMeFOSAA_2	570.0 / 512.0	3.58	729.47	< 0	45.6	false
NEtFOSAA_1	584.0 / 419.0	3.74	4338.09	61.182633	131.7	false
NEtFOSAA_2	584.0 / 483.0	3.72	539.18	96.230980	236.2	false

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Summary Quant Report

Sample Name	J8811-FS(3)	**Injection Vial**	34
Sample ID	VC-STP-SD02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:28:43	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	1481.65	< 0	10.6	true
PFBS_2	298.9 / 99.0	1.54	468.24	0.649980	12.8	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	true
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.29	11521.86	13.831856	45.5	false
PFHxS_2	399.0 / 99.0	2.30	3466.33	11.302788	48.9	false
PFOA_1	413.0 / 369.0	2.67	8583.19	11.897522	26.7	false
PFOA_2	413.0 / 169.0	2.68	529.53	11.282327	11.3	false
PFNA_1	463.0 / 419.0	3.08	2236.89	< 0	12.7	false
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	3.08	234496.79	486.685293	194.2	false
PFOS_2	499.0 / 99.0	3.08	49372.11	588.472213	300.9	false
PFDA_1	513.0 / 469.0	3.43	2773.32	< 0	22.0	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.74	2035.23	< 0	17.9	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.03	4242.10	< 0	43.2	false
PFDoA_2	613.0 / 319.0	4.02	1234.11	< 0	32.8	false
PFTrDA_1	663.0 / 619.0	4.26	1848.10	< 0	39.1	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.47	2173.85	< 0	41.1	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	3.58	1338.27	< 0	70.2	true
NMeFOSAA_2	570.0 / 512.0	3.59	643.54	< 0	24.3	false
NEtFOSAA_1	584.0 / 419.0	3.74	2009.39	16.300126	65.6	false
NEtFOSAA_2	584.0 / 483.0	3.76	299.69	12.960192	61.1	false

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Summary Quant Report

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Sample Name	J8812-FS(3)	**Injection Vial**	35
Sample ID	VC-STP-SD02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:39:36	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	2806.40	4.073740	16.6	true
PFBS_2	298.9 / 99.0	1.54	939.82	7.275857	18.2	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	2.27	7771.98	15.971071	16.1	false
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.29	61199.00	192.503009	119.3	false
PFHxS_2	399.0 / 99.0	2.29	17338.94	190.736856	165.0	false
PFOA_1	413.0 / 369.0	2.68	25876.53	73.096064	52.0	false
PFOA_2	413.0 / 169.0	2.68	1432.21	60.797133	33.8	true
PFNA_1	463.0 / 419.0	3.07	3830.56	< 0	22.5	false
PFNA_2	463.0 / 219.0	3.08	1142.89	< 0	19.9	false
PFOS_1	499.0 / 80.0	3.08	1056442.81	2146.526418	321.9	false
PFOS_2	499.0 / 99.0	3.08	196534.85	2298.727139	586.3	false
PFDA_1	513.0 / 469.0	3.42	4047.05	< 0	33.9	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.75	1533.59	< 0	14.1	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.02	1909.55	< 0	25.9	false
PFDoA_2	613.0 / 319.0	4.02	316.71	< 0	15.7	false
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	3.58	2773.90	< 0	78.6	false
NMeFOSAA_2	570.0 / 512.0	3.58	860.38	< 0	33.9	true
NEtFOSAA_1	584.0 / 419.0	3.74	8241.40	131.042276	176.0	false
NEtFOSAA_2	584.0 / 483.0	3.75	882.03	202.709305	197.9	false

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Summary Quant Report

Sample Name	J8813-FS(3)	**Injection Vial**	36
Sample ID	VC-STP-SD03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:50:27	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	1751.35	0.049591	11.6	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	2.29	2723.35	< 0	11.1	true
PFHxS_2	399.0 / 99.0	2.29	847.52	< 0	12.5	false
PFOA_1	413.0 / 369.0	2.68	6563.70	5.031131	24.1	true
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	true
PFNA_1	463.0 / 419.0	3.08	2366.57	< 0	16.1	false
PFNA_2	463.0 / 219.0	3.07	636.86	< 0	11.9	false
PFOS_1	499.0 / 80.0	3.08	61659.27	138.393873	92.8	false
PFOS_2	499.0 / 99.0	3.08	10327.35	132.183457	122.9	false
PFDA_1	513.0 / 469.0	3.43	4195.27	< 0	32.5	false
PFDA_2	513.0 / 219.0	3.44	823.93	30.931832	23.5	false
PFUnA_1	563.0 / 519.0	3.74	2676.28	< 0	22.6	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.02	4558.24	< 0	54.9	false
PFDoA_2	613.0 / 319.0	4.01	1374.88	< 0	21.1	false
PFTrDA_1	663.0 / 619.0	4.27	1148.38	< 0	40.3	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.47	1575.22	< 0	34.7	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	3.59	275.40	< 0	12.8	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

Sample Name	J8814-FS(3)	**Injection Vial**	37
Sample ID	VC-STP-SD03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:01:19	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	2.29	12403.84	20.770055	40.4	false
PFHxS_2	399.0 / 99.0	2.29	2569.50	5.052868	34.9	false
PFOA_1	413.0 / 369.0	2.68	7371.44	9.869374	21.5	true
PFOA_2	413.0 / 169.0	2.68	509.01	12.191173	11.5	false
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	true
PFNA_2	463.0 / 219.0	3.07	798.10	< 0	20.1	false
PFOS_1	499.0 / 80.0	3.08	272607.09	584.501629	182.1	false
PFOS_2	499.0 / 99.0	3.08	51524.81	634.812058	292.1	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
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

Sample Name	J8815-FS(3)	**Injection Vial**	40
Sample ID	VC-STP-SD04-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:33:58	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.53	1901.00	0.243546	10.8	true
PFBS_2	298.9 / 99.0	1.52	650.92	3.057125	13.9	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	true
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.29	30646.96	70.328566	87.0	false
PFHxS_2	399.0 / 99.0	2.29	7896.20	58.255205	90.8	false
PFOA_1	413.0 / 369.0	2.68	13579.97	28.952599	36.9	false
PFOA_2	413.0 / 169.0	2.68	811.00	26.144061	27.0	false
PFNA_1	463.0 / 419.0	3.07	3501.83	< 0	20.7	false
PFNA_2	463.0 / 219.0	3.06	744.67	< 0	13.6	false
PFOS_1	499.0 / 80.0	3.07	697053.36	1197.814867	315.7	false
PFOS_2	499.0 / 99.0	3.07	134466.86	1329.421966	544.2	false
PFDA_1	513.0 / 469.0	3.43	4034.12	< 0	27.6	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.74	4682.21	1.868829	28.3	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.02	5206.14	< 0	60.8	false
PFDoA_2	613.0 / 319.0	4.01	1267.90	< 0	28.6	false
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.46	3796.93	< 0	64.4	false
PFTeDA_2	713.0 / 169.0	4.46	293.92	< 0	19.6	false
NMeFOSAA_1	570.0 / 419.0	3.58	2078.37	< 0	136.5	false
NMeFOSAA_2	570.0 / 512.0	3.58	1485.31	< 0	36.1	true
NEtFOSAA_1	584.0 / 419.0	3.74	10801.95	177.233816	218.7	false
NEtFOSAA_2	584.0 / 483.0	3.73	708.38	151.825378	1521.2	false

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Summary Quant Report

Sample Name	J8816-FS(3)	**Injection Vial**	41
Sample ID	VC-STP-SD04-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:44:50	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.54	3604.95	5.138009	21.1	true
PFBS_2	298.9 / 99.0	1.53	1911.24	15.608123	25.5	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	2.26	3727.38	< 0	10.8	false
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.29	64921.69	204.773368	124.3	false
PFHxS_2	399.0 / 99.0	2.29	16813.67	183.576233	138.1	false
PFOA_1	413.0 / 369.0	2.68	18083.26	46.018015	48.4	false
PFOA_2	413.0 / 169.0	2.68	1217.11	48.983968	27.3	true
PFNA_1	463.0 / 419.0	3.08	5517.96	< 0	25.6	false
PFNA_2	463.0 / 219.0	3.07	1971.84	< 0	20.5	false
PFOS_1	499.0 / 80.0	3.08	823998.31	1671.855321	215.0	false
PFOS_2	499.0 / 99.0	3.08	156317.60	1825.382771	562.9	false
PFDA_1	513.0 / 469.0	3.43	3047.67	< 0	27.6	false
PFDA_2	513.0 / 219.0	3.40	567.12	12.571583	12.4	false
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.03	985.03	< 0	16.0	false
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	3.59	1190.73	< 0	28.6	false
NMeFOSAA_2	570.0 / 512.0	3.58	575.77	< 0	13.8	false
NEtFOSAA_1	584.0 / 419.0	3.74	7302.55	120.591644	195.8	false
NEtFOSAA_2	584.0 / 483.0	3.73	347.95	46.580152	35.0	true

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Summary Quant Report

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Sample Name	KB80 IB	**Injection Vial**	9
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T21:02:57	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.07	91698.47	244.195426	1281.1	false
d3-MeFOSAA	573.0 / 419.0	3.61	16302.89	260.004961	195.5	false
d5-EtFOSAA	589.0 / 419.0	3.78	17051.45	239.580705	212.6	false
13C5-PFHxA	318.0 / 273.0	1.87	61987.66	244.293373	826.7	false
13C4-PFHpA	367.0 / 322.0	2.28	70438.43	244.000657	1152.0	false
13C8-PFOA	421.0 / 376.0	2.70	88535.23	252.114367	1604.4	false
13C9-PFNA	472.0 / 427.0	3.09	100138.19	249.732890	1149.5	false
13C6-PFDA	519.0 / 474.0	3.45	97258.51	257.077741	4005.3	false
13C7-PFUnA	570.0 / 525.0	3.78	88898.52	254.380465	800.7	false
13C2-PFTeDA	715.0 / 670.0	4.54	70451.22	232.374509	2131.0	false
13C3-PFBS	302.0 / 99.0	1.55	25201.92	220.626542	798.1	false
13C3-PFHxS	402.0 / 99.0	2.31	25094.63	242.439381	606.8	false
13C8-PFOS	507.0 / 99.0	3.09	26831.98	229.467599	276.5	false

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Summary Quant Report

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Sample Name	KB80 IB	**Injection Vial**	2
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T17:41:09	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.06	92068.64	299.028519	1485.8	false
d3-MeFOSAA	573.0 / 419.0	3.62	13186.13	227.679274	165.0	false
d5-EtFOSAA	589.0 / 419.0	3.78	14087.19	214.291012	185.4	false
13C5-PFHxA	318.0 / 273.0	1.87	58955.34	261.039730	648.9	false
13C4-PFHpA	367.0 / 322.0	2.29	58825.17	228.939954	992.3	false
13C8-PFOA	421.0 / 376.0	2.70	71660.35	229.264811	1351.8	false
13C9-PFNA	472.0 / 427.0	3.10	77866.43	218.174140	907.3	false
13C6-PFDA	519.0 / 474.0	3.46	81001.26	261.128387	1244.3	false
13C7-PFUnA	570.0 / 525.0	3.78	83789.10	292.416724	913.3	false
13C2-PFTeDA	715.0 / 670.0	4.53	75524.75	303.818838	1445.5	false
13C3-PFBS	302.0 / 99.0	1.54	26263.58	248.924192	348.4	false
13C3-PFHxS	402.0 / 99.0	2.31	20416.27	213.544186	396.9	false
13C8-PFOS	507.0 / 99.0	3.09	24224.63	224.292598	252.2	false

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Summary Quant Report

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Sample Name	CS011PB-FS(3)	**Injection Vial**	16
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:13:12	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	95209.19	265.135416	848.1	false
d3-MeFOSAA	573.0 / 419.0	3.59	15768.39	280.477359	218.7	false
d5-EtFOSAA	589.0 / 419.0	3.75	15975.46	250.344096	191.5	false
13C5-PFHxA	318.0 / 273.0	1.86	56875.27	244.315987	408.3	false
13C4-PFHpA	367.0 / 322.0	2.27	69174.60	261.186055	788.9	false
13C8-PFOA	421.0 / 376.0	2.68	85677.60	265.932077	1632.7	false
13C9-PFNA	472.0 / 427.0	3.08	81884.81	222.587749	1111.7	false
13C6-PFDA	519.0 / 474.0	3.43	89832.58	248.304254	837.2	false
13C7-PFUnA	570.0 / 525.0	3.75	91811.03	274.724574	877.9	false
13C2-PFTeDA	715.0 / 670.0	4.49	86328.59	297.761158	1598.3	false
13C3-PFBS	302.0 / 99.0	1.53	25079.98	244.875194	360.5	false
13C3-PFHxS	402.0 / 99.0	2.30	23636.50	254.682433	318.6	false
13C8-PFOS	507.0 / 99.0	3.07	28682.95	273.581010	265.4	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 30/10/2018 4:19:30 PM

Sample Name	CS012LCS-FS(3)	**Injection Vial**	17
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:24:04	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	119632.75	316.727073	1491.1	false
d3-MeFOSAA	573.0 / 419.0	3.59	19293.74	336.658978	224.3	false
d5-EtFOSAA	589.0 / 419.0	3.75	18274.24	280.922573	224.4	false
13C5-PFHxA	318.0 / 273.0	1.86	70653.12	294.349177	555.5	false
13C4-PFHpA	367.0 / 322.0	2.27	87225.44	319.410762	713.0	false
13C8-PFOA	421.0 / 376.0	2.68	96514.03	290.533976	1531.7	false
13C9-PFNA	472.0 / 427.0	3.07	99957.94	263.522855	931.9	false
13C6-PFDA	519.0 / 474.0	3.43	108229.25	284.407567	1093.7	false
13C7-PFUnA	570.0 / 525.0	3.74	105224.95	299.341969	742.0	false
13C2-PFTeDA	715.0 / 670.0	4.49	106230.24	348.343541	1761.3	false
13C3-PFBS	302.0 / 99.0	1.53	29771.48	285.155176	428.3	false
13C3-PFHxS	402.0 / 99.0	2.29	24518.79	259.166102	261.8	false
13C8-PFOS	507.0 / 99.0	3.07	29439.66	275.459851	261.8	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 30/10/2018 4:19:35 PM

Sample Name	J8777-FS(3)	**Injection Vial**	18
Sample ID	VC-PM323-324-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:34:55	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	111287.07	306.526670	1202.6	false
d3-MeFOSAA	573.0 / 419.0	3.59	15876.01	241.992317	190.8	false
d5-EtFOSAA	589.0 / 419.0	3.75	20162.31	270.753415	230.0	false
13C5-PFHxA	318.0 / 273.0	1.85	63746.66	247.944363	609.9	false
13C4-PFHpA	367.0 / 322.0	2.26	80037.79	273.631935	733.7	false
13C8-PFOA	421.0 / 376.0	2.68	96661.71	271.660351	1005.1	false
13C9-PFNA	472.0 / 427.0	3.07	95318.84	234.609219	1044.9	false
13C6-PFDA	519.0 / 474.0	3.43	103531.90	283.047388	881.5	false
13C7-PFUnA	570.0 / 525.0	3.74	103127.05	305.217859	964.3	false
13C2-PFTeDA	715.0 / 670.0	4.49	101294.96	345.569877	1881.8	false
13C3-PFBS	302.0 / 99.0	1.52	33714.09	282.084140	494.5	false
13C3-PFHxS	402.0 / 99.0	2.29	26360.62	243.400317	386.5	false
13C8-PFOS	507.0 / 99.0	3.07	30735.18	251.216161	291.7	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 30/10/2018 4:19:39 PM

Sample Name	J8778-FS(3)	**Injection Vial**	19
Sample ID	VC-PM323-324-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:45:47	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	112196.81	285.418491	1204.8	false
d3-MeFOSAA	573.0 / 419.0	3.59	16211.47	265.759000	178.3	false
d5-EtFOSAA	589.0 / 419.0	3.75	19505.45	281.705403	190.3	false
13C5-PFHxA	318.0 / 273.0	1.85	65266.30	258.775261	586.0	false
13C4-PFHpA	367.0 / 322.0	2.26	80296.61	279.837479	881.5	false
13C8-PFOA	421.0 / 376.0	2.68	92865.42	266.049707	1296.1	false
13C9-PFNA	472.0 / 427.0	3.07	93800.44	235.346723	1144.3	false
13C6-PFDA	519.0 / 474.0	3.42	104920.48	264.925202	1161.1	false
13C7-PFUnA	570.0 / 525.0	3.74	105877.78	289.414440	983.5	false
13C2-PFTeDA	715.0 / 670.0	4.49	103724.40	326.818800	1326.6	false
13C3-PFBS	302.0 / 99.0	1.52	32543.66	292.845817	443.6	false
13C3-PFHxS	402.0 / 99.0	2.29	22633.48	224.761658	266.0	false
13C8-PFOS	507.0 / 99.0	3.07	30619.50	269.163053	253.9	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 30/10/2018 4:19:43 PM

Sample Name	J8779-FS(3)	**Injection Vial**	20
Sample ID	VC-PM553-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:56:39	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	126424.84	310.534849	1007.0	false
d3-MeFOSAA	573.0 / 419.0	3.59	16041.59	248.138444	190.7	false
d5-EtFOSAA	589.0 / 419.0	3.74	19476.03	265.412080	205.7	false
13C5-PFHxA	318.0 / 273.0	1.85	72578.52	275.828435	723.2	false
13C4-PFHpA	367.0 / 322.0	2.26	85529.74	285.708387	633.6	false
13C8-PFOA	421.0 / 376.0	2.68	106738.93	293.108741	5293.3	false
13C9-PFNA	472.0 / 427.0	3.07	104645.78	251.664629	1550.6	false
13C6-PFDA	519.0 / 474.0	3.42	117812.68	287.231037	1548.6	false
13C7-PFUnA	570.0 / 525.0	3.74	107504.66	283.738980	1196.2	false
13C2-PFTeDA	715.0 / 670.0	4.49	108818.85	331.059886	1405.8	false
13C3-PFBS	302.0 / 99.0	1.52	35317.05	299.873622	498.0	false
13C3-PFHxS	402.0 / 99.0	2.29	32139.54	301.156150	370.3	false
13C8-PFOS	507.0 / 99.0	3.07	32395.11	268.706323	283.1	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 30/10/2018 4:19:47 PM

Sample Name	J8780-FS(3)	**Injection Vial**	21
Sample ID	VC-PM553-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:07:31	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	100413.28	318.387920	1156.3	false
d3-MeFOSAA	573.0 / 419.0	3.59	14848.04	266.048573	218.4	false
d5-EtFOSAA	589.0 / 419.0	3.74	14686.65	231.839995	210.2	false
13C5-PFHxA	318.0 / 273.0	1.85	55569.73	259.796458	587.6	false
13C4-PFHpA	367.0 / 322.0	2.27	65319.51	268.418672	740.8	false
13C8-PFOA	421.0 / 376.0	2.68	84331.98	284.880150	1146.2	false
13C9-PFNA	472.0 / 427.0	3.07	84682.12	250.527928	842.8	false
13C6-PFDA	519.0 / 474.0	3.42	94447.32	297.246319	4142.5	false
13C7-PFUnA	570.0 / 525.0	3.74	88874.65	302.800874	631.7	false
13C2-PFTeDA	715.0 / 670.0	4.49	91719.37	360.206056	1712.4	false
13C3-PFBS	302.0 / 99.0	1.52	27541.17	270.882738	488.0	false
13C3-PFHxS	402.0 / 99.0	2.29	24544.31	266.408469	369.6	false
13C8-PFOS	507.0 / 99.0	3.07	26266.27	252.372495	277.9	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 30/10/2018 4:19:51 PM

Sample Name	J8781MS-FS(3)	**Injection Vial**	22
Sample ID	VC-PM553-SD01-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:18:23	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	103358.22	284.099926	1612.0	false
d3-MeFOSAA	573.0 / 419.0	3.58	15233.79	290.150840	152.1	false
d5-EtFOSAA	589.0 / 419.0	3.74	16061.14	269.504407	189.2	false
13C5-PFHxA	318.0 / 273.0	1.85	56623.75	253.556704	610.6	false
13C4-PFHpA	367.0 / 322.0	2.27	72724.19	286.239953	709.5	false
13C8-PFOA	421.0 / 376.0	2.68	79583.67	257.498923	1406.9	false
13C9-PFNA	472.0 / 427.0	3.07	79938.89	226.518709	1477.8	false
13C6-PFDA	519.0 / 474.0	3.42	92985.99	253.690991	37637.8	false
13C7-PFUnA	570.0 / 525.0	3.74	91171.66	269.277303	1037.9	false
13C2-PFTeDA	715.0 / 670.0	4.49	99105.90	337.403929	1751.0	false
13C3-PFBS	302.0 / 99.0	1.53	30001.99	313.669953	514.6	false
13C3-PFHxS	402.0 / 99.0	2.29	21849.19	252.090460	273.7	false
13C8-PFOS	507.0 / 99.0	3.07	29004.31	296.230707	268.6	false

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Summary Quant Report

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Sample Name	J8782MSD-FS(3)	**Injection Vial**	23
Sample ID	VC-PM553-SD01-0102-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:29:15	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.02	115317.45	295.664806	792.4	false
d3-MeFOSAA	573.0 / 419.0	3.58	17647.32	307.130648	205.5	false
d5-EtFOSAA	589.0 / 419.0	3.74	17022.08	260.994090	182.4	false
13C5-PFHxA	318.0 / 273.0	1.85	64432.21	256.983146	595.1	false
13C4-PFHpA	367.0 / 322.0	2.26	80159.36	281.015782	967.9	false
13C8-PFOA	421.0 / 376.0	2.67	83844.62	241.630504	15337.4	false
13C9-PFNA	472.0 / 427.0	3.07	89468.01	225.807780	797.9	false
13C6-PFDA	519.0 / 474.0	3.42	102852.18	261.745657	1002.3	false
13C7-PFUnA	570.0 / 525.0	3.74	98185.66	270.499483	780.6	false
13C2-PFTeDA	715.0 / 670.0	4.48	103238.12	327.845484	2762.6	false
13C3-PFBS	302.0 / 99.0	1.52	34635.03	330.877453	431.9	false
13C3-PFHxS	402.0 / 99.0	2.28	24433.70	257.595920	303.1	false
13C8-PFOS	507.0 / 99.0	3.06	29117.71	271.739909	255.6	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 30/10/2018 4:19:59 PM

Sample Name	J8783-FS(3)	**Injection Vial**	24
Sample ID	VC-PM3009-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:40:07	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.02	111263.00	317.466921	1268.3	false
d3-MeFOSAA	573.0 / 419.0	3.58	15368.26	296.991474	174.8	false
d5-EtFOSAA	589.0 / 419.0	3.74	19454.23	331.212610	212.1	false
13C5-PFHxA	318.0 / 273.0	1.85	64641.18	299.148576	864.5	false
13C4-PFHpA	367.0 / 322.0	2.26	81737.91	332.488087	783.2	false
13C8-PFOA	421.0 / 376.0	2.67	98927.62	330.803608	2095.7	false
13C9-PFNA	472.0 / 427.0	3.07	95253.42	278.950913	858.5	false
13C6-PFDA	519.0 / 474.0	3.42	105318.66	298.273329	1150.7	false
13C7-PFUnA	570.0 / 525.0	3.74	101203.11	310.281131	966.2	false
13C2-PFTeDA	715.0 / 670.0	4.48	104755.50	370.210758	1833.5	false
13C3-PFBS	302.0 / 99.0	1.52	30102.50	319.322097	460.0	false
13C3-PFHxS	402.0 / 99.0	2.28	27321.39	319.836092	337.0	false
13C8-PFOS	507.0 / 99.0	3.06	29058.35	301.121608	229.4	false

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Summary Quant Report

Sample Name	J8784-FS(3)	**Injection Vial**	25
Sample ID	VC-PM3009-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:50:59	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.02	110104.71	314.989910	1190.6	false
d3-MeFOSAA	573.0 / 419.0	3.58	16519.16	330.557103	197.8	false
d5-EtFOSAA	589.0 / 419.0	3.74	18189.34	320.663162	196.3	false
13C5-PFHxA	318.0 / 273.0	1.85	62289.54	299.563878	645.8	false
13C4-PFHpA	367.0 / 322.0	2.26	73290.20	309.809778	720.6	false
13C8-PFOA	421.0 / 376.0	2.67	87238.64	303.150451	3029.2	false
13C9-PFNA	472.0 / 427.0	3.07	90765.06	276.224720	2355.1	false
13C6-PFDA	519.0 / 474.0	3.42	97868.65	277.904607	1834.3	false
13C7-PFUnA	570.0 / 525.0	3.74	100925.47	310.245354	1192.8	false
13C2-PFTeDA	715.0 / 670.0	4.48	95953.09	339.996299	1411.9	false
13C3-PFBS	302.0 / 99.0	1.52	31446.43	345.411747	482.3	false
13C3-PFHxS	402.0 / 99.0	2.29	24889.70	301.705800	328.2	false
13C8-PFOS	507.0 / 99.0	3.06	29525.31	316.814355	212.8	false

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Summary Quant Report

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Sample Name	J8785-FS(3)	**Injection Vial**	28
Sample ID	VC-PM372-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:23:33	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.02	111533.65	307.924794	1230.0	false
d3-MeFOSAA	573.0 / 419.0	3.58	15057.20	254.145459	205.8	false
d5-EtFOSAA	589.0 / 419.0	3.74	19242.15	286.131337	249.4	false
13C5-PFHxA	318.0 / 273.0	1.85	59139.78	252.867109	582.5	false
13C4-PFHpA	367.0 / 322.0	2.26	70889.79	266.422688	1025.5	false
13C8-PFOA	421.0 / 376.0	2.67	82336.34	254.377779	1608.0	false
13C9-PFNA	472.0 / 427.0	3.07	84408.72	228.385986	797.2	false
13C6-PFDA	519.0 / 474.0	3.42	88613.42	242.828494	862.4	false
13C7-PFUnA	570.0 / 525.0	3.73	96629.76	286.657575	1003.4	false
13C2-PFTeDA	715.0 / 670.0	4.48	89983.89	307.700385	1790.9	false
13C3-PFBS	302.0 / 99.0	1.52	29127.11	269.862705	388.5	false
13C3-PFHxS	402.0 / 99.0	2.28	25838.14	264.183023	271.1	false
13C8-PFOS	507.0 / 99.0	3.07	24936.33	225.695352	195.5	false

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Summary Quant Report

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Sample Name	J8786-FS(3)	**Injection Vial**	29
Sample ID	VC-PM372-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:34:26	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.02	119395.66	323.910844	1207.5	false
d3-MeFOSAA	573.0 / 419.0	3.58	16237.72	286.508193	203.1	false
d5-EtFOSAA	589.0 / 419.0	3.74	20084.48	312.209552	224.4	false
13C5-PFHxA	318.0 / 273.0	1.84	60746.43	253.660189	576.4	false
13C4-PFHpA	367.0 / 322.0	2.26	73555.55	269.973980	706.3	false
13C8-PFOA	421.0 / 376.0	2.67	82830.31	249.917032	1564.6	false
13C9-PFNA	472.0 / 427.0	3.06	93683.60	247.550990	1087.4	false
13C6-PFDA	519.0 / 474.0	3.42	107396.11	289.192409	1032.1	false
13C7-PFUnA	570.0 / 525.0	3.73	104042.96	303.293730	853.5	false
13C2-PFTeDA	715.0 / 670.0	4.48	103418.39	347.503541	1386.6	false
13C3-PFBS	302.0 / 99.0	1.52	31803.39	308.029621	358.1	false
13C3-PFHxS	402.0 / 99.0	2.28	26922.15	287.757783	315.3	false
13C8-PFOS	507.0 / 99.0	3.06	31249.88	295.673263	242.7	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 30/10/2018 4:20:16 PM

Sample Name	J8787-FS(3)	**Injection Vial**	30
Sample ID	VC-CS11-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:45:17	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.02	90987.65	258.071774	881.1	false
d3-MeFOSAA	573.0 / 419.0	3.58	13233.29	245.999460	173.2	false
d5-EtFOSAA	589.0 / 419.0	3.73	14954.50	244.913128	180.2	false
13C5-PFHxA	318.0 / 273.0	1.84	53947.34	231.896858	489.3	false
13C4-PFHpA	367.0 / 322.0	2.26	59667.21	225.442316	671.8	false
13C8-PFOA	421.0 / 376.0	2.67	75569.76	234.718804	948.3	false
13C9-PFNA	472.0 / 427.0	3.06	76241.94	207.390233	906.5	false
13C6-PFDA	519.0 / 474.0	3.42	88310.22	248.616778	2553.9	false
13C7-PFUnA	570.0 / 525.0	3.73	84891.36	258.723183	753.2	false
13C2-PFTeDA	715.0 / 670.0	4.48	81556.08	286.509421	1240.4	false
13C3-PFBS	302.0 / 99.0	1.52	25703.39	262.279332	387.6	false
13C3-PFHxS	402.0 / 99.0	2.28	19651.61	221.294142	302.1	false
13C8-PFOS	507.0 / 99.0	3.06	25329.71	252.492429	214.7	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 30/10/2018 4:20:20 PM

Sample Name	J8788-FS(3)	**Injection Vial**	31
Sample ID	VC-CS11-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:56:09	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.02	106657.25	308.890435	5173.8	false
d3-MeFOSAA	573.0 / 419.0	3.58	15289.31	270.849008	206.7	false
d5-EtFOSAA	589.0 / 419.0	3.74	18003.11	280.970415	199.6	false
13C5-PFHxA	318.0 / 273.0	1.85	56437.51	235.230815	456.5	false
13C4-PFHpA	367.0 / 322.0	2.26	66593.22	243.967089	918.9	false
13C8-PFOA	421.0 / 376.0	2.67	82228.83	247.642662	1424.8	false
13C9-PFNA	472.0 / 427.0	3.07	82573.08	217.788198	682.9	false
13C6-PFDA	519.0 / 474.0	3.42	95784.85	275.341912	1154.2	false
13C7-PFUnA	570.0 / 525.0	3.74	92399.76	287.540281	987.1	false
13C2-PFTeDA	715.0 / 670.0	4.48	94534.45	339.100715	1743.5	false
13C3-PFBS	302.0 / 99.0	1.52	28000.11	272.274052	357.0	false
13C3-PFHxS	402.0 / 99.0	2.29	23830.67	255.729545	353.8	false
13C8-PFOS	507.0 / 99.0	3.06	29071.39	276.157494	214.3	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 30/10/2018 4:20:24 PM

Sample Name	J8809-FS(3)	**Injection Vial**	32
Sample ID	VC-STP-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:07:00	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.02	126958.79	328.377778	1192.5	false
d3-MeFOSAA	573.0 / 419.0	3.58	19520.03	329.368756	222.0	false
d5-EtFOSAA	589.0 / 419.0	3.74	21489.23	319.445266	297.3	false
13C5-PFHxA	318.0 / 273.0	1.85	69442.10	265.500134	594.3	false
13C4-PFHpA	367.0 / 322.0	2.26	78951.35	265.323887	1401.1	false
13C8-PFOA	421.0 / 376.0	2.67	95812.77	264.691688	1467.8	false
13C9-PFNA	472.0 / 427.0	3.06	102519.48	248.037777	1382.1	false
13C6-PFDA	519.0 / 474.0	3.42	106763.42	274.091043	1143.1	false
13C7-PFUnA	570.0 / 525.0	3.74	119814.99	332.993625	987.1	false
13C2-PFTeDA	715.0 / 670.0	4.48	110188.70	352.998242	1761.0	false
13C3-PFBS	302.0 / 99.0	1.52	32387.40	299.975088	410.9	false
13C3-PFHxS	402.0 / 99.0	2.28	31848.59	325.534914	382.9	false
13C8-PFOS	507.0 / 99.0	3.06	32258.66	291.877146	269.0	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 30/10/2018 4:20:28 PM

Sample Name	J8810-FS(3)	**Injection Vial**	33
Sample ID	VC-STP-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:17:52	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.01	105001.18	289.535515	898.4	false
d3-MeFOSAA	573.0 / 419.0	3.58	15363.32	281.865563	256.8	false
d5-EtFOSAA	589.0 / 419.0	3.73	16094.00	260.132461	193.3	false
13C5-PFHxA	318.0 / 273.0	1.84	58190.41	265.597823	493.4	false
13C4-PFHpA	367.0 / 322.0	2.26	68282.37	273.940708	600.2	false
13C8-PFOA	421.0 / 376.0	2.67	82304.89	271.439905	933.1	false
13C9-PFNA	472.0 / 427.0	3.06	82507.15	238.305578	752.8	false
13C6-PFDA	519.0 / 474.0	3.41	96664.20	264.566434	794.7	false
13C7-PFUnA	570.0 / 525.0	3.73	91648.40	271.547846	1187.9	false
13C2-PFTeDA	715.0 / 670.0	4.47	92157.69	314.748560	1625.2	false
13C3-PFBS	302.0 / 99.0	1.51	27486.67	276.812797	479.5	false
13C3-PFHxS	402.0 / 99.0	2.28	21409.65	237.942385	254.4	false
13C8-PFOS	507.0 / 99.0	3.06	27429.10	269.848615	265.4	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 30/10/2018 4:20:32 PM

Sample Name	J8811-FS(3)	**Injection Vial**	34
Sample ID	VC-STP-SD02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:28:43	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.01	101507.12	276.539638	1195.6	false
d3-MeFOSAA	573.0 / 419.0	3.58	16193.53	325.197063	189.4	false
d5-EtFOSAA	589.0 / 419.0	3.73	18448.99	326.400889	195.2	false
13C5-PFHxA	318.0 / 273.0	1.84	51372.49	222.744185	544.3	false
13C4-PFHpA	367.0 / 322.0	2.26	59598.41	227.135670	727.0	false
13C8-PFOA	421.0 / 376.0	2.67	79088.70	247.779394	1358.2	false
13C9-PFNA	472.0 / 427.0	3.06	82310.15	225.838864	910.1	false
13C6-PFDA	519.0 / 474.0	3.41	89007.95	240.686150	873.5	false
13C7-PFUnA	570.0 / 525.0	3.73	97386.20	285.083489	868.7	false
13C2-PFTeDA	715.0 / 670.0	4.47	89973.46	303.598627	2286.1	false
13C3-PFBS	302.0 / 99.0	1.52	29158.19	321.419938	466.6	false
13C3-PFHxS	402.0 / 99.0	2.28	24409.22	296.936951	306.0	false
13C8-PFOS	507.0 / 99.0	3.06	24214.68	260.756724	205.9	false

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Summary Quant Report

Created with Analyst Reporter
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Sample Name	J8812-FS(3)	**Injection Vial**	35
Sample ID	VC-STP-SD02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:39:36	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.01	88730.00	264.609481	839.0	false
d3-MeFOSAA	573.0 / 419.0	3.57	13158.44	268.260241	170.2	false
d5-EtFOSAA	589.0 / 419.0	3.73	15586.68	279.949193	175.1	false
13C5-PFHxA	318.0 / 273.0	1.85	52177.73	254.805228	664.4	false
13C4-PFHpA	367.0 / 322.0	2.26	62862.06	269.827782	735.4	false
13C8-PFOA	421.0 / 376.0	2.67	73096.82	257.926896	1483.7	false
13C9-PFNA	472.0 / 427.0	3.06	73712.26	227.788810	800.6	false
13C6-PFDA	519.0 / 474.0	3.41	80063.25	236.989732	1003.7	false
13C7-PFUnA	570.0 / 525.0	3.73	84479.80	270.708295	669.8	false
13C2-PFTeDA	715.0 / 670.0	4.47	78470.55	289.845177	1296.2	false
13C3-PFBS	302.0 / 99.0	1.52	23252.21	260.209705	351.3	false
13C3-PFHxS	402.0 / 99.0	2.28	20306.45	250.779161	273.3	false
13C8-PFOS	507.0 / 99.0	3.06	25098.88	274.383547	239.7	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 30/10/2018 4:20:41 PM

Sample Name	J8813-FS(3)	**Injection Vial**	36
Sample ID	VC-STP-SD03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:50:27	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.01	98749.13	286.270569	1441.1	false
d3-MeFOSAA	573.0 / 419.0	3.58	13936.38	244.676136	205.2	false
d5-EtFOSAA	589.0 / 419.0	3.73	14852.66	229.730906	174.8	false
13C5-PFHxA	318.0 / 273.0	1.85	51641.24	246.401047	510.3	false
13C4-PFHpA	367.0 / 322.0	2.26	63655.65	266.967095	934.3	false
13C8-PFOA	421.0 / 376.0	2.67	81049.43	279.428580	993.0	false
13C9-PFNA	472.0 / 427.0	3.06	75997.15	229.463018	986.9	false
13C6-PFDA	519.0 / 474.0	3.42	87818.35	252.691179	5186.2	false
13C7-PFUnA	570.0 / 525.0	3.73	89061.51	277.426064	1092.2	false
13C2-PFTeDA	715.0 / 670.0	4.47	79541.38	285.601845	1771.6	false
13C3-PFBS	302.0 / 99.0	1.52	24906.54	240.028120	336.3	false
13C3-PFHxS	402.0 / 99.0	2.28	20860.20	221.853104	218.9	false
13C8-PFOS	507.0 / 99.0	3.06	22471.10	211.552309	194.3	false

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Summary Quant Report

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Sample Name	J8814-FS(3)	**Injection Vial**	37
Sample ID	VC-STP-SD03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:01:19	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.01	88293.92	247.825076	858.2	false
d3-MeFOSAA	573.0 / 419.0	3.57	15601.58	281.149740	271.1	false
d5-EtFOSAA	589.0 / 419.0	3.73	16121.34	255.943259	210.0	false
13C5-PFHxA	318.0 / 273.0	1.85	53765.59	229.748055	740.8	false
13C4-PFHpA	367.0 / 322.0	2.26	60840.39	228.514749	844.1	false
13C8-PFOA	421.0 / 376.0	2.67	73427.34	226.714971	1266.4	false
13C9-PFNA	472.0 / 427.0	3.06	69089.82	186.823265	1264.9	false
13C6-PFDA	519.0 / 474.0	3.42	82557.13	230.001382	8230.5	false
13C7-PFUnA	570.0 / 525.0	3.73	86720.40	261.546870	724.1	false
13C2-PFTeDA	715.0 / 670.0	4.47	80212.49	278.856622	1396.2	false
13C3-PFBS	302.0 / 99.0	1.52	24183.98	239.223498	354.9	false
13C3-PFHxS	402.0 / 99.0	2.28	21145.41	230.829091	281.6	false
13C8-PFOS	507.0 / 99.0	3.06	22980.37	222.063814	231.8	false

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Summary Quant Report

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Sample Name	J8815-FS(3)	**Injection Vial**	40
Sample ID	VC-STP-SD04-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:33:58	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.01	94647.19	286.391831	881.0	false
d3-MeFOSAA	573.0 / 419.0	3.57	15039.34	297.093275	232.9	false
d5-EtFOSAA	589.0 / 419.0	3.73	15386.67	267.782606	219.5	false
13C5-PFHxA	318.0 / 273.0	1.84	53592.11	252.917628	632.7	false
13C4-PFHpA	367.0 / 322.0	2.26	63001.39	261.338431	768.4	false
13C8-PFOA	421.0 / 376.0	2.67	76750.38	261.718096	1185.5	false
13C9-PFNA	472.0 / 427.0	3.06	78421.30	234.197262	945.1	false
13C6-PFDA	519.0 / 474.0	3.41	94405.06	283.536896	2174.8	false
13C7-PFUnA	570.0 / 525.0	3.73	94862.14	308.432121	765.3	false
13C2-PFTeDA	715.0 / 670.0	4.47	88365.11	331.175506	1338.1	false
13C3-PFBS	302.0 / 99.0	1.52	26132.49	283.368870	422.0	false
13C3-PFHxS	402.0 / 99.0	2.28	23894.25	285.932130	321.5	false
13C8-PFOS	507.0 / 99.0	3.06	28484.43	301.733492	245.2	false

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Summary Quant Report

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Sample Name	J8816-FS(3)	**Injection Vial**	41
Sample ID	VC-STP-SD04-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:44:50	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.02	91682.52	264.591044	1546.9	false
d3-MeFOSAA	573.0 / 419.0	3.57	13944.75	307.115111	185.6	false
d5-EtFOSAA	589.0 / 419.0	3.73	15251.47	295.921021	180.0	false
13C5-PFHxA	318.0 / 273.0	1.85	53381.11	253.078162	523.0	false
13C4-PFHpA	367.0 / 322.0	2.26	64376.96	268.270187	754.0	false
13C8-PFOA	421.0 / 376.0	2.67	73692.23	252.443218	1779.4	false
13C9-PFNA	472.0 / 427.0	3.06	76785.64	230.365053	898.2	false
13C6-PFDA	519.0 / 474.0	3.41	90940.82	260.500705	2295.2	false
13C7-PFUnA	570.0 / 525.0	3.73	84400.63	261.726745	1049.4	false
13C2-PFTeDA	715.0 / 670.0	4.47	83936.55	300.029691	2151.6	false
13C3-PFBS	302.0 / 99.0	1.52	26899.19	325.189742	362.9	false
13C3-PFHxS	402.0 / 99.0	2.28	20713.17	276.339136	278.0	false
13C8-PFOS	507.0 / 99.0	3.06	24049.86	284.023850	224.8	false

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Summary Ion Ratio Report

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Sample Name	KB80 IB	**Injection Vial**	9
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T21:02:57	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.57	PFBS			
PFBS_2	298.9 / 99.0	1.57	PFBS	0.410	0.292	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.077	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	ü
PFHxS_1	399.0 / 80.0	N/A	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	PFHxS	N/A	0.282	ü
PFOA_1	413.0 / 369.0	N/A	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.065	ü
PFNA_1	463.0 / 419.0	3.11	PFNA			
PFNA_2	463.0 / 219.0	3.11	PFNA	0.280	0.306	ü
PFOS_1	499.0 / 80.0	3.10	PFOS			
PFOS_2	499.0 / 99.0	3.11	PFOS	0.210	0.174	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	0.049	ü
PFDoA_1	613.0 / 569.0	4.08	PFDoA			
PFDoA_2	613.0 / 319.0	4.08	PFDoA	0.160	0.160	ü
PFTrDA_1	663.0 / 619.0	4.32	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.34	PFTrDA	0.080	0.066	ü
PFTeDA_1	713.0 / 669.0	4.54	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.54	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.63	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.61	NMeFOSAA	0.510	0.551	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.062	ü

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Summary Ion Ratio Report

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Sample Name	KB80 IB	**Injection Vial**	2
Sample ID		**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T17:41:09	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.56	PFBS	N/A	0.292	
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.077	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	ü
PFHxS_1	399.0 / 80.0	N/A	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	PFHxS	N/A	0.282	ü
PFOA_1	413.0 / 369.0	2.71	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.065	
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.306	ü
PFOS_1	499.0 / 80.0	N/A	PFOS			
PFOS_2	499.0 / 99.0	N/A	PFOS	N/A	0.174	ü
PFDA_1	513.0 / 469.0	3.46	PFDA			
PFDA_2	513.0 / 219.0	3.50	PFDA	0.200	0.041	
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.049	ü
PFDoA_1	613.0 / 569.0	4.07	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.160	
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	4.54	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.551	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.062	ü

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Summary Ion Ratio Report

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Sample Name	CS011PB-FS(3)	**Injection Vial**	16
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:13:12	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	0.292	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.077	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	ü
PFHxS_1	399.0 / 80.0	N/A	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	PFHxS	N/A	0.282	ü
PFOA_1	413.0 / 369.0	2.69	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.065	
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.306	ü
PFOS_1	499.0 / 80.0	N/A	PFOS			
PFOS_2	499.0 / 99.0	N/A	PFOS	N/A	0.174	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	0.049	ü
PFDoA_1	613.0 / 569.0	4.05	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.160	
PFTrDA_1	663.0 / 619.0	4.28	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	
PFTeDA_1	713.0 / 669.0	4.50	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.551	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.062	ü

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Summary Ion Ratio Report

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Sample Name	CS012LCS-FS(3)	**Injection Vial**	17
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:24:04	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.55	PFBS			
PFBS_2	298.9 / 99.0	1.54	PFBS	0.300	0.292	ü
PFHxA_1	313.0 / 269.0	1.87	PFHxA			
PFHxA_2	313.0 / 119.0	1.87	PFHxA	0.070	0.077	ü
PFHpA_1	363.0 / 319.0	2.28	PFHpA			
PFHpA_2	363.0 / 169.0	2.28	PFHpA	0.020	0.025	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.290	0.282	ü
PFOA_1	413.0 / 369.0	2.69	PFOA			
PFOA_2	413.0 / 169.0	2.69	PFOA	0.060	0.065	ü
PFNA_1	463.0 / 419.0	3.09	PFNA			
PFNA_2	463.0 / 219.0	3.09	PFNA	0.320	0.306	ü
PFOS_1	499.0 / 80.0	3.09	PFOS			
PFOS_2	499.0 / 99.0	3.09	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.44	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.76	PFUnA			
PFUnA_2	563.0 / 269.0	3.76	PFUnA	0.050	0.049	ü
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.04	PFDoA	0.160	0.160	ü
PFTrDA_1	663.0 / 619.0	4.28	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.28	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.49	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.49	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.60	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.570	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.76	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.76	NEtFOSAA	0.060	0.062	ü

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Summary Ion Ratio Report

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Sample Name	J8777-FS(3)	**Injection Vial**	18
Sample ID	VC-PM323-324-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:34:55	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.55	PFBS			
PFBS_2	298.9 / 99.0	1.52	PFBS	0.420	0.292	ü
PFHxA_1	313.0 / 269.0	1.86	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.077	
PFHpA_1	363.0 / 319.0	2.28	PFHpA			
PFHpA_2	363.0 / 169.0	2.28	PFHpA	0.070	0.025	
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.260	0.282	ü
PFOA_1	413.0 / 369.0	2.69	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.100	0.065	
PFNA_1	463.0 / 419.0	3.09	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.260	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.210	0.174	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.45	PFDA	0.080	0.041	
PFUnA_1	563.0 / 519.0	3.76	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.049	
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.02	PFDoA	0.140	0.160	ü
PFTrDA_1	663.0 / 619.0	4.28	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	
PFTeDA_1	713.0 / 669.0	4.49	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.47	PFTeDA	0.110	0.049	
NMeFOSAA_1	570.0 / 419.0	3.61	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.60	NMeFOSAA	0.480	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.75	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.76	NEtFOSAA	0.040	0.062	ü

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Summary Ion Ratio Report

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Sample Name	J8778-FS(3)	**Injection Vial**	19
Sample ID	VC-PM323-324-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:45:47	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.53	PFBS			
PFBS_2	298.9 / 99.0	1.52	PFBS	0.340	0.292	ü
PFHxA_1	313.0 / 269.0	1.86	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.077	
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	2.33	PFHpA	0.110	0.025	
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.280	0.282	ü
PFOA_1	413.0 / 369.0	2.69	PFOA			
PFOA_2	413.0 / 169.0	2.70	PFOA	0.120	0.065	
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.09	PFNA	0.500	0.306	
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.210	0.174	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.42	PFDA	0.110	0.041	
PFUnA_1	563.0 / 519.0	3.74	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.049	
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.04	PFDoA	0.390	0.160	
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	4.47	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.551	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.062	ü

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Summary Ion Ratio Report

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Sample Name	J8779-FS(3)	**Injection Vial**	20
Sample ID	VC-PM553-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:56:39	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	0.292	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.077	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.430	0.282	
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.69	PFOA	0.080	0.065	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.09	PFNA	0.270	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.210	0.174	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	
PFUnA_1	563.0 / 519.0	3.76	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.049	
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.04	PFDoA	0.120	0.160	ü
PFTrDA_1	663.0 / 619.0	4.28	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	
PFTeDA_1	713.0 / 669.0	4.49	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.551	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.062	ü

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Summary Ion Ratio Report

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Sample Name	J8780-FS(3)	**Injection Vial**	21
Sample ID	VC-PM553-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:07:31	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	0.292	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.077	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	PFHxS	N/A	0.282	
PFOA_1	413.0 / 369.0	2.70	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.065	
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.210	0.174	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.45	PFDA	0.090	0.041	
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.049	
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.160	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	4.49	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.551	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.062	ü

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Summary Ion Ratio Report

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Sample Name	J8781MS-FS(3)	**Injection Vial**	22
Sample ID	VC-PM553-SD01-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:18:23	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	PFBS			
PFBS_2	298.9 / 99.0	1.54	PFBS	0.300	0.292	ü
PFHxA_1	313.0 / 269.0	1.87	PFHxA			
PFHxA_2	313.0 / 119.0	1.87	PFHxA	0.070	0.077	ü
PFHpA_1	363.0 / 319.0	2.28	PFHpA			
PFHpA_2	363.0 / 169.0	2.28	PFHpA	0.020	0.025	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.290	0.282	ü
PFOA_1	413.0 / 369.0	2.69	PFOA			
PFOA_2	413.0 / 169.0	2.69	PFOA	0.060	0.065	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.310	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.44	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.76	PFUnA			
PFUnA_2	563.0 / 269.0	3.76	PFUnA	0.050	0.049	ü
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.04	PFDoA	0.170	0.160	ü
PFTrDA_1	663.0 / 619.0	4.28	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.28	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.49	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.49	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.510	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.75	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.75	NEtFOSAA	0.060	0.062	ü

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Summary Ion Ratio Report

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Sample Name	J8782MSD-FS(3)	**Injection Vial**	23
Sample ID	VC-PM553-SD01-0102-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:29:15	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	PFBS			
PFBS_2	298.9 / 99.0	1.54	PFBS	0.300	0.292	ü
PFHxA_1	313.0 / 269.0	1.86	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.070	0.077	ü
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	2.27	PFHpA	0.020	0.025	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.290	0.282	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.060	0.065	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.320	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.43	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	3.75	PFUnA	0.050	0.049	ü
PFDoA_1	613.0 / 569.0	4.03	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.160	0.160	ü
PFTrDA_1	663.0 / 619.0	4.27	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.27	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.49	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.48	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.530	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.75	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.75	NEtFOSAA	0.060	0.062	ü

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Summary Ion Ratio Report

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Sample Name	J8783-FS(3)	**Injection Vial**	24
Sample ID	VC-PM3009-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:40:07	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.56	PFBS			
PFBS_2	298.9 / 99.0	1.55	PFBS	0.210	0.292	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.077	ü
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.31	PFHxS	0.290	0.282	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.060	0.065	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.09	PFNA	0.140	0.306	
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.200	0.174	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.43	PFDA	0.080	0.041	
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	3.76	PFUnA	0.050	0.049	ü
PFDoA_1	613.0 / 569.0	4.03	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.160	0.160	ü
PFTrDA_1	663.0 / 619.0	4.27	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.26	PFTrDA	0.090	0.066	ü
PFTeDA_1	713.0 / 669.0	4.49	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.48	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.58	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.551	
NEtFOSAA_1	584.0 / 419.0	3.75	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.062	

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Summary Ion Ratio Report

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Sample Name	J8784-FS(3)	**Injection Vial**	25
Sample ID	VC-PM3009-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:50:59	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.53	PFBS			
PFBS_2	298.9 / 99.0	N/A	PFBS	N/A	0.292	
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.077	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.320	0.282	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.210	0.065	
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.04	PFNA	0.250	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.210	0.174	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.049	
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.270	0.160	
PFTrDA_1	663.0 / 619.0	4.28	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.25	PFTrDA	0.380	0.066	
PFTeDA_1	713.0 / 669.0	4.48	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.49	PFTeDA	0.030	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.551	
NEtFOSAA_1	584.0 / 419.0	3.76	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.062	

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Summary Ion Ratio Report

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Sample Name	J8785-FS(3)	**Injection Vial**	28
Sample ID	VC-PM372-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:23:33	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.53	PFBS			
PFBS_2	298.9 / 99.0	N/A	PFBS	N/A	0.292	
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.077	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.270	0.282	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.69	PFOA	0.080	0.065	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.400	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.210	0.174	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.41	PFDA	0.050	0.041	ü
PFUnA_1	563.0 / 519.0	3.76	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.049	
PFDoA_1	613.0 / 569.0	4.03	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.170	0.160	ü
PFTrDA_1	663.0 / 619.0	4.26	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.25	PFTrDA	0.080	0.066	ü
PFTeDA_1	713.0 / 669.0	4.48	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.48	PFTeDA	0.040	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.551	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.062	ü

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Summary Ion Ratio Report

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Sample Name	J8786-FS(3)	**Injection Vial**	29
Sample ID	VC-PM372-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:34:26	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	0.292	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.077	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.300	0.282	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.66	PFOA	0.130	0.065	
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.306	
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.210	0.174	ü
PFDA_1	513.0 / 469.0	3.46	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.049	
PFDoA_1	613.0 / 569.0	4.03	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.160	
PFTrDA_1	663.0 / 619.0	4.26	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.551	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.062	ü

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Summary Ion Ratio Report

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Printed: 31/10/2018 7:58:35 AM

Sample Name	J8787-FS(3)	**Injection Vial**	30
Sample ID	VC-CS11-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:45:17	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	0.292	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.077	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.260	0.282	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.065	
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.310	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.190	0.174	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.049	ü
PFDoA_1	613.0 / 569.0	4.02	PFDoA			
PFDoA_2	613.0 / 319.0	4.04	PFDoA	0.180	0.160	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	4.47	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.720	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.75	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.062	

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Summary Ion Ratio Report

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Sample Name	J8788-FS(3)	**Injection Vial**	31
Sample ID	VC-CS11-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:56:09	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	0.292	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.077	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.350	0.282	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.060	0.065	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.520	0.306	
PFOS_1	499.0 / 80.0	3.05	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.150	0.174	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	0.049	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.160	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.50	PFTeDA	N/A	0.049	
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.551	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.062	ü

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Summary Ion Ratio Report

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Sample Name	J8809-FS(3)	**Injection Vial**	32
Sample ID	VC-STP-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:07:00	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	PFBS			
PFBS_2	298.9 / 99.0	1.52	PFBS	0.340	0.292	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.077	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.280	0.282	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.070	0.065	ü
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.290	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.210	0.174	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	3.76	PFUnA	0.190	0.049	
PFDoA_1	613.0 / 569.0	4.03	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.180	0.160	ü
PFTrDA_1	663.0 / 619.0	4.26	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	
PFTeDA_1	713.0 / 669.0	4.47	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.47	PFTeDA	0.040	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.500	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.75	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.74	NEtFOSAA	0.090	0.062	ü

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Summary Ion Ratio Report

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Sample Name	J8810-FS(3)	**Injection Vial**	33
Sample ID	VC-STP-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:17:52	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.53	PFBS			
PFBS_2	298.9 / 99.0	1.53	PFBS	0.300	0.292	ü
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.050	0.077	ü
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.260	0.282	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.050	0.065	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.520	0.306	
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	
PFUnA_1	563.0 / 519.0	3.74	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.049	
PFDoA_1	613.0 / 569.0	4.02	PFDoA			
PFDoA_2	613.0 / 319.0	4.01	PFDoA	0.150	0.160	ü
PFTrDA_1	663.0 / 619.0	4.27	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	
PFTeDA_1	713.0 / 669.0	4.47	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.58	NMeFOSAA	0.350	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.74	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.72	NEtFOSAA	0.120	0.062	

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Summary Ion Ratio Report

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Sample Name	J8811-FS(3)	**Injection Vial**	34
Sample ID	VC-STP-SD02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:28:43	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	PFBS			
PFBS_2	298.9 / 99.0	1.54	PFBS	0.320	0.292	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.077	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.300	0.282	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.060	0.065	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.306	
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.210	0.174	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	
PFUnA_1	563.0 / 519.0	3.74	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.049	
PFDoA_1	613.0 / 569.0	4.03	PFDoA			
PFDoA_2	613.0 / 319.0	4.02	PFDoA	0.290	0.160	
PFTrDA_1	663.0 / 619.0	4.26	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	
PFTeDA_1	713.0 / 669.0	4.47	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	
NMeFOSAA_1	570.0 / 419.0	3.58	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.480	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.74	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.76	NEtFOSAA	0.150	0.062	

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Summary Ion Ratio Report

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Sample Name	J8812-FS(3)	**Injection Vial**	35
Sample ID	VC-STP-SD02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:39:36	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	PFBS			
PFBS_2	298.9 / 99.0	1.54	PFBS	0.330	0.292	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.077	ü
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.280	0.282	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.060	0.065	ü
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.300	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.190	0.174	ü
PFDA_1	513.0 / 469.0	3.42	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.049	
PFDoA_1	613.0 / 569.0	4.02	PFDoA			
PFDoA_2	613.0 / 319.0	4.02	PFDoA	0.170	0.160	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.58	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.58	NMeFOSAA	0.310	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.74	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.75	NEtFOSAA	0.110	0.062	

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Summary Ion Ratio Report

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Printed: 31/10/2018 7:59:00 AM

Sample Name	J8813-FS(3)	**Injection Vial**	36
Sample ID	VC-STP-SD03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:50:27	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	PFBS			
PFBS_2	298.9 / 99.0	N/A	PFBS	N/A	0.292	
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.077	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.310	0.282	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.065	
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.270	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.170	0.174	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.44	PFDA	0.200	0.041	
PFUnA_1	563.0 / 519.0	3.74	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.049	
PFDoA_1	613.0 / 569.0	4.02	PFDoA			
PFDoA_2	613.0 / 319.0	4.01	PFDoA	0.300	0.160	
PFTrDA_1	663.0 / 619.0	4.27	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	
PFTeDA_1	713.0 / 669.0	4.47	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.551	
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.062	ü

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Summary Ion Ratio Report

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Printed: 31/10/2018 7:59:04 AM

Sample Name	J8814-FS(3)	**Injection Vial**	37
Sample ID	VC-STP-SD03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:01:19	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	0.292	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.077	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.210	0.282	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.070	0.065	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	N/A	0.306	
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.190	0.174	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	0.049	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.160	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.551	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.062	ü

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Summary Ion Ratio Report

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Sample Name	J8815-FS(3)	**Injection Vial**	40
Sample ID	VC-STP-SD04-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:33:58	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.53	PFBS			
PFBS_2	298.9 / 99.0	1.52	PFBS	0.340	0.292	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.077	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.260	0.282	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.060	0.065	ü
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.210	0.306	ü
PFOS_1	499.0 / 80.0	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.190	0.174	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	
PFUnA_1	563.0 / 519.0	3.74	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.049	
PFDoA_1	613.0 / 569.0	4.02	PFDoA			
PFDoA_2	613.0 / 319.0	4.01	PFDoA	0.240	0.160	
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	4.46	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.46	PFTeDA	0.080	0.049	
NMeFOSAA_1	570.0 / 419.0	3.58	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.58	NMeFOSAA	0.710	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.74	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.73	NEtFOSAA	0.070	0.062	ü

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Summary Ion Ratio Report

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Printed: 31/10/2018 7:59:13 AM

Sample Name	J8816-FS(3)	**Injection Vial**	41
Sample ID	VC-STP-SD04-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:44:50	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	PFBS			
PFBS_2	298.9 / 99.0	1.53	PFBS	0.530	0.292	
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.077	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.260	0.282	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.070	0.065	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.360	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.190	0.174	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.40	PFDA	0.190	0.041	
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.049	ü
PFDoA_1	613.0 / 569.0	4.03	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.160	
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.58	NMeFOSAA	0.480	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.74	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.73	NEtFOSAA	0.050	0.062	ü

Sample Name	KB80 IB	**Injection Vial**	9
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T21:02:57	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.57	13C3-PFBS	302.0 / 99.0	25201.92	232.25
PFBS_2	298.9 / 99.0	1.57	13C3-PFBS	302.0 / 99.0	25201.92	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	61987.66	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	61987.66	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	70438.43	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	70438.43	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	24683.15	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	24683.15	236.50
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	88535.23	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	88535.23	250.00
PFNA_1	463.0 / 419.0	3.11	13C9-PFNA	472.0 / 427.0	100138.19	250.00
PFNA_2	463.0 / 219.0	3.11	13C9-PFNA	472.0 / 427.0	100138.19	250.00
PFOS_1	499.0 / 80.0	3.10	13C8-PFOS	507.0 / 99.0	26769.68	239.25
PFOS_2	499.0 / 99.0	3.11	13C8-PFOS	507.0 / 99.0	26769.68	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	97258.51	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	97258.51	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	88898.52	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	88898.52	250.00
PFDoA_1	613.0 / 569.0	4.08	13C2-PFDoA	615.0 / 570.0	91698.47	250.00
PFDoA_2	613.0 / 319.0	4.08	13C2-PFDoA	615.0 / 570.0	91698.47	250.00
PFTrDA_1	663.0 / 619.0	4.32	13C2-PFTeDA	715.0 / 670.0	70451.22	250.00
PFTrDA_2	663.0 / 169.0	4.34	13C2-PFTeDA	715.0 / 670.0	70451.22	250.00
PFTeDA_1	713.0 / 669.0	4.54	13C2-PFTeDA	715.0 / 670.0	70451.22	250.00
PFTeDA_2	713.0 / 169.0	4.54	13C2-PFTeDA	715.0 / 670.0	70451.22	250.00
NMeFOSAA_1	570.0 / 419.0	3.63	d3-MeFOSAA	573.0 / 419.0	16454.46	250.00
NMeFOSAA_2	570.0 / 512.0	3.61	d3-MeFOSAA	573.0 / 419.0	16454.46	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	17612.55	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	17612.55	250.00

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Summary Internal Standard Report

Sample Name	KB80 IB	**Injection Vial**	2
Sample ID		**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T17:41:09	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	26263.58	232.25
PFBS_2	298.9 / 99.0	1.56	13C3-PFBS	302.0 / 99.0	26263.58	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	58955.34	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	58955.34	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	58825.17	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	58825.17	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	20506.67	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	20506.67	236.50
PFOA_1	413.0 / 369.0	2.71	13C8-PFOA	421.0 / 376.0	71660.35	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	71660.35	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	77866.43	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	77866.43	250.00
PFOS_1	499.0 / 80.0	N/A	13C8-PFOS	507.0 / 99.0	23828.73	239.25
PFOS_2	499.0 / 99.0	N/A	13C8-PFOS	507.0 / 99.0	23828.73	239.25
PFDA_1	513.0 / 469.0	3.46	13C6-PFDA	519.0 / 474.0	81001.26	250.00
PFDA_2	513.0 / 219.0	3.50	13C6-PFDA	519.0 / 474.0	81001.26	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	83789.10	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	83789.10	250.00
PFDoA_1	613.0 / 569.0	4.07	13C2-PFDoA	615.0 / 570.0	92068.64	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	92068.64	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	75524.75	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	75524.75	250.00
PFTeDA_1	713.0 / 669.0	4.54	13C2-PFTeDA	715.0 / 670.0	75524.75	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	75524.75	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	13382.48	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	13382.48	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	14616.31	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	14616.31	250.00

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Summary Internal Standard Report

Sample Name	CS011PB-FS(3)	**Injection Vial**	16
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:13:12	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	25079.98	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	25079.98	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	56875.27	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	56875.27	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	69174.60	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	69174.60	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	23186.55	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	23186.55	236.50
PFOA_1	413.0 / 369.0	2.69	13C8-PFOA	421.0 / 376.0	85677.60	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	85677.60	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	81884.81	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	81884.81	250.00
PFOS_1	499.0 / 80.0	N/A	13C8-PFOS	507.0 / 99.0	28869.99	239.25
PFOS_2	499.0 / 99.0	N/A	13C8-PFOS	507.0 / 99.0	28869.99	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	89832.58	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	89832.58	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	91811.03	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	91811.03	250.00
PFDoA_1	613.0 / 569.0	4.05	13C2-PFDoA	615.0 / 570.0	95209.19	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	95209.19	250.00
PFTrDA_1	663.0 / 619.0	4.28	13C2-PFTeDA	715.0 / 670.0	86328.59	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	86328.59	250.00
PFTeDA_1	713.0 / 669.0	4.50	13C2-PFTeDA	715.0 / 670.0	86328.59	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	86328.59	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	15679.95	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	15679.95	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	16171.19	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	16171.19	250.00

Sample Name	CS012LCS-FS(3)	**Injection Vial**	17
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:24:04	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.55	13C3-PFBS	302.0 / 99.0	29771.48	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	29771.48	232.25
PFHxA_1	313.0 / 269.0	1.87	13C5-PFHxA	318.0 / 273.0	70653.12	250.00
PFHxA_2	313.0 / 119.0	1.87	13C5-PFHxA	318.0 / 273.0	70653.12	250.00
PFHpA_1	363.0 / 319.0	2.28	13C4-PFHpA	367.0 / 322.0	87225.44	250.00
PFHpA_2	363.0 / 169.0	2.28	13C4-PFHpA	367.0 / 322.0	87225.44	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	24105.94	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	24105.94	236.50
PFOA_1	413.0 / 369.0	2.69	13C8-PFOA	421.0 / 376.0	96514.03	250.00
PFOA_2	413.0 / 169.0	2.69	13C8-PFOA	421.0 / 376.0	96514.03	250.00
PFNA_1	463.0 / 419.0	3.09	13C9-PFNA	472.0 / 427.0	99957.94	250.00
PFNA_2	463.0 / 219.0	3.09	13C9-PFNA	472.0 / 427.0	99957.94	250.00
PFOS_1	499.0 / 80.0	3.09	13C8-PFOS	507.0 / 99.0	29568.05	239.25
PFOS_2	499.0 / 99.0	3.09	13C8-PFOS	507.0 / 99.0	29568.05	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	108229.25	250.00
PFDA_2	513.0 / 219.0	3.44	13C6-PFDA	519.0 / 474.0	108229.25	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	105224.95	250.00
PFUnA_2	563.0 / 269.0	3.76	13C7-PFUnA	570.0 / 525.0	105224.95	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	119632.75	250.00
PFDoA_2	613.0 / 319.0	4.04	13C2-PFDoA	615.0 / 570.0	119632.75	250.00
PFTrDA_1	663.0 / 619.0	4.28	13C2-PFTeDA	715.0 / 670.0	106230.24	250.00
PFTrDA_2	663.0 / 169.0	4.28	13C2-PFTeDA	715.0 / 670.0	106230.24	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	106230.24	250.00
PFTeDA_2	713.0 / 169.0	4.49	13C2-PFTeDA	715.0 / 670.0	106230.24	250.00
NMeFOSAA_1	570.0 / 419.0	3.60	d3-MeFOSAA	573.0 / 419.0	19759.82	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	19759.82	250.00
NEtFOSAA_1	584.0 / 419.0	3.76	d5-EtFOSAA	589.0 / 419.0	18333.00	250.00
NEtFOSAA_2	584.0 / 483.0	3.76	d5-EtFOSAA	589.0 / 419.0	18333.00	250.00

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Summary Internal Standard Report

Sample Name	J8777-FS(3)	**Injection Vial**	18
Sample ID	VC-PM323-324-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:34:55	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.55	13C3-PFBS	302.0 / 99.0	33714.09	232.25
PFBS_2	298.9 / 99.0	1.52	13C3-PFBS	302.0 / 99.0	33714.09	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	63746.66	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	63746.66	250.00
PFHpA_1	363.0 / 319.0	2.28	13C4-PFHpA	367.0 / 322.0	80037.79	250.00
PFHpA_2	363.0 / 169.0	2.28	13C4-PFHpA	367.0 / 322.0	80037.79	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	26184.94	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	26184.94	236.50
PFOA_1	413.0 / 369.0	2.69	13C8-PFOA	421.0 / 376.0	96661.71	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	96661.71	250.00
PFNA_1	463.0 / 419.0	3.09	13C9-PFNA	472.0 / 427.0	95318.84	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	95318.84	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	30903.04	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	30903.04	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	103531.90	250.00
PFDA_2	513.0 / 219.0	3.45	13C6-PFDA	519.0 / 474.0	103531.90	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	103127.05	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	103127.05	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	111287.07	250.00
PFDoA_2	613.0 / 319.0	4.02	13C2-PFDoA	615.0 / 570.0	111287.07	250.00
PFTrDA_1	663.0 / 619.0	4.28	13C2-PFTeDA	715.0 / 670.0	101294.96	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	101294.96	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	101294.96	250.00
PFTeDA_2	713.0 / 169.0	4.47	13C2-PFTeDA	715.0 / 670.0	101294.96	250.00
NMeFOSAA_1	570.0 / 419.0	3.61	d3-MeFOSAA	573.0 / 419.0	16203.47	250.00
NMeFOSAA_2	570.0 / 512.0	3.60	d3-MeFOSAA	573.0 / 419.0	16203.47	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	20237.90	250.00
NEtFOSAA_2	584.0 / 483.0	3.76	d5-EtFOSAA	589.0 / 419.0	20237.90	250.00

Sample Name	J8778-FS(3)	**Injection Vial**	19
Sample ID	VC-PM323-324-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:45:47	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.53	13C3-PFBS	302.0 / 99.0	32543.66	232.25
PFBS_2	298.9 / 99.0	1.52	13C3-PFBS	302.0 / 99.0	32543.66	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	65266.30	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	65266.30	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	80296.61	250.00
PFHpA_2	363.0 / 169.0	2.33	13C4-PFHpA	367.0 / 322.0	80296.61	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	22238.04	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	22238.04	236.50
PFOA_1	413.0 / 369.0	2.69	13C8-PFOA	421.0 / 376.0	92865.42	250.00
PFOA_2	413.0 / 169.0	2.70	13C8-PFOA	421.0 / 376.0	92865.42	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	93800.44	250.00
PFNA_2	463.0 / 219.0	3.09	13C9-PFNA	472.0 / 427.0	93800.44	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	31165.37	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	31165.37	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	104920.48	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	104920.48	250.00
PFUnA_1	563.0 / 519.0	3.74	13C7-PFUnA	570.0 / 525.0	105877.78	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	105877.78	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	112196.81	250.00
PFDoA_2	613.0 / 319.0	4.04	13C2-PFDoA	615.0 / 570.0	112196.81	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	103724.40	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	103724.40	250.00
PFTeDA_1	713.0 / 669.0	4.47	13C2-PFTeDA	715.0 / 670.0	103724.40	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	103724.40	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	16730.15	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	16730.15	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	19977.09	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	19977.09	250.00

Sample Name	J8779-FS(3)	**Injection Vial**	20
Sample ID	VC-PM553-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:56:39	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	35317.05	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	35317.05	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	72578.52	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	72578.52	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	85529.74	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	85529.74	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	31364.42	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	31364.42	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	106738.93	250.00
PFOA_2	413.0 / 169.0	2.69	13C8-PFOA	421.0 / 376.0	106738.93	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	104645.78	250.00
PFNA_2	463.0 / 219.0	3.09	13C9-PFNA	472.0 / 427.0	104645.78	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	32830.06	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	32830.06	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	117812.68	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	117812.68	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	107504.66	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	107504.66	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	126424.84	250.00
PFDoA_2	613.0 / 319.0	4.04	13C2-PFDoA	615.0 / 570.0	126424.84	250.00
PFTrDA_1	663.0 / 619.0	4.28	13C2-PFTeDA	715.0 / 670.0	108818.85	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	108818.85	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	108818.85	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	108818.85	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	16384.05	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	16384.05	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	19778.08	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	19778.08	250.00

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Summary Internal Standard Report

Sample Name	J8780-FS(3)	**Injection Vial**	21
Sample ID	VC-PM553-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:07:31	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	27541.17	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	27541.17	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	55569.73	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	55569.73	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	65319.51	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	65319.51	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	24269.00	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	24269.00	236.50
PFOA_1	413.0 / 369.0	2.70	13C8-PFOA	421.0 / 376.0	84331.98	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	84331.98	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	84682.12	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	84682.12	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	26551.11	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	26551.11	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	94447.32	250.00
PFDA_2	513.0 / 219.0	3.45	13C6-PFDA	519.0 / 474.0	94447.32	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	88874.65	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	88874.65	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	100413.28	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	100413.28	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	91719.37	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	91719.37	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	91719.37	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	91719.37	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	15198.75	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	15198.75	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	15035.13	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	15035.13	250.00

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Summary Internal Standard Report

Sample Name	J8781MS-FS(3)	**Injection Vial**	22
Sample ID	VC-PM553-SD01-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:18:23	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	13C3-PFBS	302.0 / 99.0	30001.99	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	30001.99	232.25
PFHxA_1	313.0 / 269.0	1.87	13C5-PFHxA	318.0 / 273.0	56623.75	250.00
PFHxA_2	313.0 / 119.0	1.87	13C5-PFHxA	318.0 / 273.0	56623.75	250.00
PFHpA_1	363.0 / 319.0	2.28	13C4-PFHpA	367.0 / 322.0	72724.19	250.00
PFHpA_2	363.0 / 169.0	2.28	13C4-PFHpA	367.0 / 322.0	72724.19	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	21639.46	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	21639.46	236.50
PFOA_1	413.0 / 369.0	2.69	13C8-PFOA	421.0 / 376.0	79583.67	250.00
PFOA_2	413.0 / 169.0	2.69	13C8-PFOA	421.0 / 376.0	79583.67	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	79938.89	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	79938.89	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	29223.36	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	29223.36	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	92985.99	250.00
PFDA_2	513.0 / 219.0	3.44	13C6-PFDA	519.0 / 474.0	92985.99	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	91171.66	250.00
PFUnA_2	563.0 / 269.0	3.76	13C7-PFUnA	570.0 / 525.0	91171.66	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	103358.22	250.00
PFDoA_2	613.0 / 319.0	4.04	13C2-PFDoA	615.0 / 570.0	103358.22	250.00
PFTrDA_1	663.0 / 619.0	4.28	13C2-PFTeDA	715.0 / 670.0	99105.90	250.00
PFTrDA_2	663.0 / 169.0	4.28	13C2-PFTeDA	715.0 / 670.0	99105.90	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	99105.90	250.00
PFTeDA_2	713.0 / 169.0	4.49	13C2-PFTeDA	715.0 / 670.0	99105.90	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	15217.80	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	15217.80	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	16395.67	250.00
NEtFOSAA_2	584.0 / 483.0	3.75	d5-EtFOSAA	589.0 / 419.0	16395.67	250.00

Sample Name	J8782MSD-FS(3)	**Injection Vial**	23
Sample ID	VC-PM553-SD01-0102-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:29:15	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	13C3-PFBS	302.0 / 99.0	34635.03	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	34635.03	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	64432.21	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	64432.21	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	80159.36	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	80159.36	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	24218.31	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	24218.31	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	83844.62	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	83844.62	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	89468.01	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	89468.01	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	29205.37	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	29205.37	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	102852.18	250.00
PFDA_2	513.0 / 219.0	3.43	13C6-PFDA	519.0 / 474.0	102852.18	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	98185.66	250.00
PFUnA_2	563.0 / 269.0	3.75	13C7-PFUnA	570.0 / 525.0	98185.66	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	115317.45	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	115317.45	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	103238.12	250.00
PFTrDA_2	663.0 / 169.0	4.27	13C2-PFTeDA	715.0 / 670.0	103238.12	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	103238.12	250.00
PFTeDA_2	713.0 / 169.0	4.48	13C2-PFTeDA	715.0 / 670.0	103238.12	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	17935.86	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	17935.86	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	17431.56	250.00
NEtFOSAA_2	584.0 / 483.0	3.75	d5-EtFOSAA	589.0 / 419.0	17431.56	250.00

Sample Name	J8783-FS(3)	**Injection Vial**	24
Sample ID	VC-PM3009-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:40:07	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.56	13C3-PFBS	302.0 / 99.0	30102.50	232.25
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	30102.50	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	64641.18	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	64641.18	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	81737.91	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	81737.91	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	26713.12	236.50
PFHxS_2	399.0 / 99.0	2.31	13C3-PFHxS	402.0 / 99.0	26713.12	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	98927.62	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	98927.62	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	95253.42	250.00
PFNA_2	463.0 / 219.0	3.09	13C9-PFNA	472.0 / 427.0	95253.42	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	29525.51	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	29525.51	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	105318.66	250.00
PFDA_2	513.0 / 219.0	3.43	13C6-PFDA	519.0 / 474.0	105318.66	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	101203.11	250.00
PFUnA_2	563.0 / 269.0	3.76	13C7-PFUnA	570.0 / 525.0	101203.11	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	111263.00	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	111263.00	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	104755.50	250.00
PFTrDA_2	663.0 / 169.0	4.26	13C2-PFTeDA	715.0 / 670.0	104755.50	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	104755.50	250.00
PFTeDA_2	713.0 / 169.0	4.48	13C2-PFTeDA	715.0 / 670.0	104755.50	250.00
NMeFOSAA_1	570.0 / 419.0	3.58	d3-MeFOSAA	573.0 / 419.0	15660.99	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	15660.99	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	19599.09	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	19599.09	250.00

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Summary Internal Standard Report

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Sample Name	J8784-FS(3)	**Injection Vial**	25
Sample ID	VC-PM3009-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:50:59	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.53	13C3-PFBS	302.0 / 99.0	31446.43	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	31446.43	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	62289.54	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	62289.54	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	73290.20	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	73290.20	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	24627.04	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	24627.04	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	87238.64	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	87238.64	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	90765.06	250.00
PFNA_2	463.0 / 219.0	3.04	13C9-PFNA	472.0 / 427.0	90765.06	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	29589.62	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	29589.62	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	97868.65	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	97868.65	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	100925.47	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	100925.47	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	110104.71	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	110104.71	250.00
PFTrDA_1	663.0 / 619.0	4.28	13C2-PFTeDA	715.0 / 670.0	95953.09	250.00
PFTrDA_2	663.0 / 169.0	4.25	13C2-PFTeDA	715.0 / 670.0	95953.09	250.00
PFTeDA_1	713.0 / 669.0	4.48	13C2-PFTeDA	715.0 / 670.0	95953.09	250.00
PFTeDA_2	713.0 / 169.0	4.49	13C2-PFTeDA	715.0 / 670.0	95953.09	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	16788.00	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	16788.00	250.00
NEtFOSAA_1	584.0 / 419.0	3.76	d5-EtFOSAA	589.0 / 419.0	18646.79	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	18646.79	250.00

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Summary Internal Standard Report

Sample Name	J8785-FS(3)	**Injection Vial**	28
Sample ID	VC-PM372-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:23:33	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.53	13C3-PFBS	302.0 / 99.0	29127.11	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	29127.11	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	59139.78	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	59139.78	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	70889.79	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	70889.79	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	25541.03	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	25541.03	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	82336.34	250.00
PFOA_2	413.0 / 169.0	2.69	13C8-PFOA	421.0 / 376.0	82336.34	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	84408.72	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	84408.72	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	25330.33	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	25330.33	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	88613.42	250.00
PFDA_2	513.0 / 219.0	3.41	13C6-PFDA	519.0 / 474.0	88613.42	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	96629.76	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	96629.76	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	111533.65	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	111533.65	250.00
PFTrDA_1	663.0 / 619.0	4.26	13C2-PFTeDA	715.0 / 670.0	89983.89	250.00
PFTrDA_2	663.0 / 169.0	4.25	13C2-PFTeDA	715.0 / 670.0	89983.89	250.00
PFTeDA_1	713.0 / 669.0	4.48	13C2-PFTeDA	715.0 / 670.0	89983.89	250.00
PFTeDA_2	713.0 / 169.0	4.48	13C2-PFTeDA	715.0 / 670.0	89983.89	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	15488.77	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	15488.77	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	19551.73	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	19551.73	250.00

Sample Name	J8786-FS(3)	**Injection Vial**	29
Sample ID	VC-PM372-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:34:26	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	31803.39	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	31803.39	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	60746.43	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	60746.43	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	73555.55	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	73555.55	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	26576.03	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	26576.03	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	82830.31	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	82830.31	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	93683.60	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	93683.60	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	31682.25	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	31682.25	239.25
PFDA_1	513.0 / 469.0	3.46	13C6-PFDA	519.0 / 474.0	107396.11	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	107396.11	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	104042.96	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	104042.96	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	119395.66	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	119395.66	250.00
PFTrDA_1	663.0 / 619.0	4.26	13C2-PFTeDA	715.0 / 670.0	103418.39	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	103418.39	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	103418.39	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	103418.39	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	16474.46	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	16474.46	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	20382.04	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	20382.04	250.00

Sample Name	J8787-FS(3)	**Injection Vial**	30
Sample ID	VC-CS11-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:45:17	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	25703.39	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	25703.39	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	53947.34	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	53947.34	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	59667.21	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	59667.21	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	19329.96	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	19329.96	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	75569.76	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	75569.76	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	76241.94	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	76241.94	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	25277.36	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	25277.36	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	88310.22	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	88310.22	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	84891.36	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	84891.36	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	90987.65	250.00
PFDoA_2	613.0 / 319.0	4.04	13C2-PFDoA	615.0 / 570.0	90987.65	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	81556.08	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	81556.08	250.00
PFTeDA_1	713.0 / 669.0	4.47	13C2-PFTeDA	715.0 / 670.0	81556.08	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	81556.08	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	13599.64	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	13599.64	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	15040.86	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	15040.86	250.00

Sample Name	J8788-FS(3)	**Injection Vial**	31
Sample ID	VC-CS11-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:56:09	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	28000.11	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	28000.11	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	56437.51	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	56437.51	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	66593.22	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	66593.22	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	23306.80	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	23306.80	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	82228.83	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	82228.83	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	82573.08	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	82573.08	250.00
PFOS_1	499.0 / 80.0	3.05	13C8-PFOS	507.0 / 99.0	29412.07	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	29412.07	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	95784.85	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	95784.85	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	92399.76	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	92399.76	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	106657.25	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	106657.25	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	94534.45	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	94534.45	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	94534.45	250.00
PFTeDA_2	713.0 / 169.0	4.50	13C2-PFTeDA	715.0 / 670.0	94534.45	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	15605.43	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	15605.43	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	18016.63	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	18016.63	250.00

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Summary Internal Standard Report

Sample Name	J8809-FS(3)	**Injection Vial**	32
Sample ID	VC-STP-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:07:00	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	13C3-PFBS	302.0 / 99.0	32387.40	232.25
PFBS_2	298.9 / 99.0	1.52	13C3-PFBS	302.0 / 99.0	32387.40	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	69442.10	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	69442.10	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	78951.35	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	78951.35	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	31282.95	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	31282.95	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	95812.77	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	95812.77	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	102519.48	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	102519.48	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	32427.13	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	32427.13	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	106763.42	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	106763.42	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	119814.99	250.00
PFUnA_2	563.0 / 269.0	3.76	13C7-PFUnA	570.0 / 525.0	119814.99	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	126958.79	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	126958.79	250.00
PFTrDA_1	663.0 / 619.0	4.26	13C2-PFTeDA	715.0 / 670.0	110188.70	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	110188.70	250.00
PFTeDA_1	713.0 / 669.0	4.47	13C2-PFTeDA	715.0 / 670.0	110188.70	250.00
PFTeDA_2	713.0 / 169.0	4.47	13C2-PFTeDA	715.0 / 670.0	110188.70	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	19897.12	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	19897.12	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	20867.00	250.00
NEtFOSAA_2	584.0 / 483.0	3.74	d5-EtFOSAA	589.0 / 419.0	20867.00	250.00

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Summary Internal Standard Report

Sample Name	J8810-FS(3)	**Injection Vial**	33
Sample ID	VC-STP-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:17:52	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.53	13C3-PFBS	302.0 / 99.0	27486.67	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	27486.67	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	58190.41	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	58190.41	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	68282.37	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	68282.37	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	21327.39	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	21327.39	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	82304.89	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	82304.89	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	82507.15	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	82507.15	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	27865.21	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	27865.21	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	96664.20	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	96664.20	250.00
PFUnA_1	563.0 / 519.0	3.74	13C7-PFUnA	570.0 / 525.0	91648.40	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	91648.40	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	105001.18	250.00
PFDoA_2	613.0 / 319.0	4.01	13C2-PFDoA	615.0 / 570.0	105001.18	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	92157.69	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	92157.69	250.00
PFTeDA_1	713.0 / 669.0	4.47	13C2-PFTeDA	715.0 / 670.0	92157.69	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	92157.69	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	15684.19	250.00
NMeFOSAA_2	570.0 / 512.0	3.58	d3-MeFOSAA	573.0 / 419.0	15684.19	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	16125.20	250.00
NEtFOSAA_2	584.0 / 483.0	3.72	d5-EtFOSAA	589.0 / 419.0	16125.20	250.00

Sample Name	J8811-FS(3)	**Injection Vial**	34
Sample ID	VC-STP-SD02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:28:43	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	13C3-PFBS	302.0 / 99.0	29158.19	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	29158.19	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	51372.49	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	51372.49	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	59598.41	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	59598.41	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	23584.67	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	23584.67	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	79088.70	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	79088.70	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	82310.15	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	82310.15	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	24149.96	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	24149.96	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	89007.95	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	89007.95	250.00
PFUnA_1	563.0 / 519.0	3.74	13C7-PFUnA	570.0 / 525.0	97386.20	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	97386.20	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	101507.12	250.00
PFDoA_2	613.0 / 319.0	4.02	13C2-PFDoA	615.0 / 570.0	101507.12	250.00
PFTrDA_1	663.0 / 619.0	4.26	13C2-PFTeDA	715.0 / 670.0	89973.46	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	89973.46	250.00
PFTeDA_1	713.0 / 669.0	4.47	13C2-PFTeDA	715.0 / 670.0	89973.46	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	89973.46	250.00
NMeFOSAA_1	570.0 / 419.0	3.58	d3-MeFOSAA	573.0 / 419.0	16484.08	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	16484.08	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	18753.77	250.00
NEtFOSAA_2	584.0 / 483.0	3.76	d5-EtFOSAA	589.0 / 419.0	18753.77	250.00

Sample Name	J8812-FS(3)	**Injection Vial**	35
Sample ID	VC-STP-SD02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:39:36	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	13C3-PFBS	302.0 / 99.0	23252.21	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	23252.21	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	52177.73	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	52177.73	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	62862.06	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	62862.06	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	19996.31	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	19996.31	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	73096.82	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	73096.82	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	73712.26	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	73712.26	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	24598.01	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	24598.01	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	80063.25	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	80063.25	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	84479.80	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	84479.80	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	88730.00	250.00
PFDoA_2	613.0 / 319.0	4.02	13C2-PFDoA	615.0 / 570.0	88730.00	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	78470.55	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	78470.55	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	78470.55	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	78470.55	250.00
NMeFOSAA_1	570.0 / 419.0	3.58	d3-MeFOSAA	573.0 / 419.0	13784.69	250.00
NMeFOSAA_2	570.0 / 512.0	3.58	d3-MeFOSAA	573.0 / 419.0	13784.69	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	15818.70	250.00
NEtFOSAA_2	584.0 / 483.0	3.75	d5-EtFOSAA	589.0 / 419.0	15818.70	250.00

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Summary Internal Standard Report

Sample Name	J8813-FS(3)	**Injection Vial**	36
Sample ID	VC-STP-SD03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:50:27	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	13C3-PFBS	302.0 / 99.0	24906.54	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	24906.54	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	51641.24	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	51641.24	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	63655.65	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	63655.65	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	20585.64	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	20585.64	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	81049.43	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	81049.43	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	75997.15	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	75997.15	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	22540.40	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	22540.40	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	87818.35	250.00
PFDA_2	513.0 / 219.0	3.44	13C6-PFDA	519.0 / 474.0	87818.35	250.00
PFUnA_1	563.0 / 519.0	3.74	13C7-PFUnA	570.0 / 525.0	89061.51	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	89061.51	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	98749.13	250.00
PFDoA_2	613.0 / 319.0	4.01	13C2-PFDoA	615.0 / 570.0	98749.13	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	79541.38	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	79541.38	250.00
PFTeDA_1	713.0 / 669.0	4.47	13C2-PFTeDA	715.0 / 670.0	79541.38	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	79541.38	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	14696.63	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	14696.63	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	15081.16	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	15081.16	250.00

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Summary Internal Standard Report

Sample Name	J8814-FS(3)	**Injection Vial**	37
Sample ID	VC-STP-SD03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:01:19	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	24183.98	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	24183.98	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	53765.59	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	53765.59	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	60840.39	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	60840.39	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	21080.37	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	21080.37	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	73427.34	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	73427.34	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	69089.82	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	69089.82	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	23362.05	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	23362.05	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	82557.13	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	82557.13	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	86720.40	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	86720.40	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	88293.92	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	88293.92	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	80212.49	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	80212.49	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	80212.49	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	80212.49	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	15155.40	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	15155.40	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	16239.71	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	16239.71	250.00

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Summary Internal Standard Report

Sample Name	J8815-FS(3)	**Injection Vial**	40
Sample ID	VC-STP-SD04-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:33:58	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.53	13C3-PFBS	302.0 / 99.0	26132.49	232.25
PFBS_2	298.9 / 99.0	1.52	13C3-PFBS	302.0 / 99.0	26132.49	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	53592.11	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	53592.11	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	63001.39	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	63001.39	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	23541.89	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	23541.89	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	76750.38	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	76750.38	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	78421.30	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	78421.30	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	29104.06	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	29104.06	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	94405.06	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	94405.06	250.00
PFUnA_1	563.0 / 519.0	3.74	13C7-PFUnA	570.0 / 525.0	94862.14	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	94862.14	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	94647.19	250.00
PFDoA_2	613.0 / 319.0	4.01	13C2-PFDoA	615.0 / 570.0	94647.19	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	88365.11	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	88365.11	250.00
PFTeDA_1	713.0 / 669.0	4.46	13C2-PFTeDA	715.0 / 670.0	88365.11	250.00
PFTeDA_2	713.0 / 169.0	4.46	13C2-PFTeDA	715.0 / 670.0	88365.11	250.00
NMeFOSAA_1	570.0 / 419.0	3.58	d3-MeFOSAA	573.0 / 419.0	15292.75	250.00
NMeFOSAA_2	570.0 / 512.0	3.58	d3-MeFOSAA	573.0 / 419.0	15292.75	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	15709.83	250.00
NEtFOSAA_2	584.0 / 483.0	3.73	d5-EtFOSAA	589.0 / 419.0	15709.83	250.00

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Summary Internal Standard Report

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Sample Name	J8816-FS(3)	**Injection Vial**	41
Sample ID	VC-STP-SD04-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:44:50	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_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	1.54	13C3-PFBS	302.0 / 99.0	26899.19	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	26899.19	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	53381.11	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	53381.11	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	64376.96	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	64376.96	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	20055.21	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	20055.21	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	73692.23	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	73692.23	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	76785.64	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	76785.64	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	24638.86	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	24638.86	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	90940.82	250.00
PFDA_2	513.0 / 219.0	3.40	13C6-PFDA	519.0 / 474.0	90940.82	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	84400.63	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	84400.63	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	91682.52	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	91682.52	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	83936.55	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	83936.55	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	83936.55	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	83936.55	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	14193.05	250.00
NMeFOSAA_2	570.0 / 512.0	3.58	d3-MeFOSAA	573.0 / 419.0	14193.05	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	15109.83	250.00
NEtFOSAA_2	584.0 / 483.0	3.73	d5-EtFOSAA	589.0 / 419.0	15109.83	250.00

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Summary Internal Standard Report

Sample Name	KB80 IB	**Injection Vial**	9
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T21:02:57	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.07	13C2-PFDA	515.0 / 470.0	96280.28	250.00
d3-MeFOSAA	573.0 / 419.0	3.61	13C4-PFOS	503.0 / 99.0	29371.12	239.25
d5-EtFOSAA	589.0 / 419.0	3.78	13C4-PFOS	503.0 / 99.0	29371.12	239.25
13C5-PFHxA	318.0 / 273.0	1.87	13C2-PFOA	415.0 / 370.0	85730.94	250.00
13C4-PFHpA	367.0 / 322.0	2.28	13C2-PFOA	415.0 / 370.0	85730.94	250.00
13C8-PFOA	421.0 / 376.0	2.70	13C2-PFOA	415.0 / 370.0	85730.94	250.00
13C9-PFNA	472.0 / 427.0	3.09	13C2-PFOA	415.0 / 370.0	85730.94	250.00
13C6-PFDA	519.0 / 474.0	3.45	13C2-PFDA	515.0 / 470.0	96280.28	250.00
13C7-PFUnA	570.0 / 525.0	3.78	13C2-PFDA	515.0 / 470.0	96280.28	250.00
13C2-PFTeDA	715.0 / 670.0	4.54	13C2-PFDA	515.0 / 470.0	96280.28	250.00
13C3-PFBS	302.0 / 99.0	1.55	13C4-PFOS	503.0 / 99.0	29371.12	239.25
13C3-PFHxS	402.0 / 99.0	2.31	13C4-PFOS	503.0 / 99.0	29371.12	239.25
13C8-PFOS	507.0 / 99.0	3.09	13C4-PFOS	503.0 / 99.0	29371.12	239.25

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Summary Internal Standard Report

Sample Name	KB80 IB	**Injection Vial**	2
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T17:41:09	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.06	13C2-PFDA	515.0 / 470.0	78942.69	250.00
d3-MeFOSAA	573.0 / 419.0	3.62	13C4-PFOS	503.0 / 99.0	27128.85	239.25
d5-EtFOSAA	589.0 / 419.0	3.78	13C4-PFOS	503.0 / 99.0	27128.85	239.25
13C5-PFHxA	318.0 / 273.0	1.87	13C2-PFOA	415.0 / 370.0	76306.33	250.00
13C4-PFHpA	367.0 / 322.0	2.29	13C2-PFOA	415.0 / 370.0	76306.33	250.00
13C8-PFOA	421.0 / 376.0	2.70	13C2-PFOA	415.0 / 370.0	76306.33	250.00
13C9-PFNA	472.0 / 427.0	3.10	13C2-PFOA	415.0 / 370.0	76306.33	250.00
13C6-PFDA	519.0 / 474.0	3.46	13C2-PFDA	515.0 / 470.0	78942.69	250.00
13C7-PFUnA	570.0 / 525.0	3.78	13C2-PFDA	515.0 / 470.0	78942.69	250.00
13C2-PFTeDA	715.0 / 670.0	4.53	13C2-PFDA	515.0 / 470.0	78942.69	250.00
13C3-PFBS	302.0 / 99.0	1.54	13C4-PFOS	503.0 / 99.0	27128.85	239.25
13C3-PFHxS	402.0 / 99.0	2.31	13C4-PFOS	503.0 / 99.0	27128.85	239.25
13C8-PFOS	507.0 / 99.0	3.09	13C4-PFOS	503.0 / 99.0	27128.85	239.25

Sample Name	CS011PB-FS(3)	**Injection Vial**	16
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:13:12	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	92071.23	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	26334.61	239.25
d5-EtFOSAA	589.0 / 419.0	3.75	13C4-PFOS	503.0 / 99.0	26334.61	239.25
13C5-PFHxA	318.0 / 273.0	1.86	13C2-PFOA	415.0 / 370.0	78653.06	250.00
13C4-PFHpA	367.0 / 322.0	2.27	13C2-PFOA	415.0 / 370.0	78653.06	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	78653.06	250.00
13C9-PFNA	472.0 / 427.0	3.08	13C2-PFOA	415.0 / 370.0	78653.06	250.00
13C6-PFDA	519.0 / 474.0	3.43	13C2-PFDA	515.0 / 470.0	92071.23	250.00
13C7-PFUnA	570.0 / 525.0	3.75	13C2-PFDA	515.0 / 470.0	92071.23	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	92071.23	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	26334.61	239.25
13C3-PFHxS	402.0 / 99.0	2.30	13C4-PFOS	503.0 / 99.0	26334.61	239.25
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	26334.61	239.25

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Summary Internal Standard Report

Sample Name	CS012LCS-FS(3)	**Injection Vial**	17
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:24:04	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	96845.11	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	26845.02	239.25
d5-EtFOSAA	589.0 / 419.0	3.75	13C4-PFOS	503.0 / 99.0	26845.02	239.25
13C5-PFHxA	318.0 / 273.0	1.86	13C2-PFOA	415.0 / 370.0	81098.45	250.00
13C4-PFHpA	367.0 / 322.0	2.27	13C2-PFOA	415.0 / 370.0	81098.45	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	81098.45	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	81098.45	250.00
13C6-PFDA	519.0 / 474.0	3.43	13C2-PFDA	515.0 / 470.0	96845.11	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	96845.11	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	96845.11	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	26845.02	239.25
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	26845.02	239.25
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	26845.02	239.25

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Summary Internal Standard Report

Sample Name	J8777-FS(3)	**Injection Vial**	18
Sample ID	VC-PM323-324-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:34:55	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	93087.05	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	30731.04	239.25
d5-EtFOSAA	589.0 / 419.0	3.75	13C4-PFOS	503.0 / 99.0	30731.04	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	86865.48	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	86865.48	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	86865.48	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	86865.48	250.00
13C6-PFDA	519.0 / 474.0	3.43	13C2-PFDA	515.0 / 470.0	93087.05	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	93087.05	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	93087.05	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	30731.04	239.25
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	30731.04	239.25
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	30731.04	239.25

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Summary Internal Standard Report

Sample Name	J8778-FS(3)	**Injection Vial**	19
Sample ID	VC-PM323-324-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:45:47	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	100788.55	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	28574.05	239.25
d5-EtFOSAA	589.0 / 419.0	3.75	13C4-PFOS	503.0 / 99.0	28574.05	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	85213.87	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	85213.87	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	85213.87	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	85213.87	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	100788.55	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	100788.55	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	100788.55	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	28574.05	239.25
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	28574.05	239.25
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	28574.05	239.25

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Summary Internal Standard Report

Sample Name	J8779-FS(3)	**Injection Vial**	20
Sample ID	VC-PM553-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:56:39	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	104384.22	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	30282.43	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	30282.43	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	88902.32	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	88902.32	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	88902.32	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	88902.32	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	104384.22	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	104384.22	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	104384.22	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	30282.43	239.25
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	30282.43	239.25
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	30282.43	239.25

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Summary Internal Standard Report

Sample Name	J8780-FS(3)	**Injection Vial**	21
Sample ID	VC-PM553-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:07:31	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	80862.54	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	26142.40	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	26142.40	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	72268.52	250.00
13C4-PFHpA	367.0 / 322.0	2.27	13C2-PFOA	415.0 / 370.0	72268.52	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	72268.52	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	72268.52	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	80862.54	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	80862.54	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	80862.54	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	26142.40	239.25
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	26142.40	239.25
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	26142.40	239.25

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Summary Internal Standard Report

Sample Name	J8781MS-FS(3)	**Injection Vial**	22
Sample ID	VC-PM553-SD01-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:18:23	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	93279.61	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	24593.57	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	24593.57	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	75451.45	250.00
13C4-PFHpA	367.0 / 322.0	2.27	13C2-PFOA	415.0 / 370.0	75451.45	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	75451.45	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	75451.45	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	93279.61	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	93279.61	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	93279.61	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	24593.57	239.25
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	24593.57	239.25
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	24593.57	239.25

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Summary Internal Standard Report

Sample Name	J8782MSD-FS(3)	**Injection Vial**	23
Sample ID	VC-PM553-SD01-0102-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:29:15	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.02	13C2-PFDA	515.0 / 470.0	100001.89	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	26914.91	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	26914.91	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	84711.52	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	84711.52	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	84711.52	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	84711.52	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	100001.89	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	100001.89	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	100001.89	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	26914.91	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	26914.91	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	26914.91	239.25

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Summary Internal Standard Report

Sample Name	J8783-FS(3)	**Injection Vial**	24
Sample ID	VC-PM3009-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:40:07	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.02	13C2-PFDA	515.0 / 470.0	89859.73	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	24239.19	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	24239.19	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	73007.31	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	73007.31	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	73007.31	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	73007.31	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	89859.73	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	89859.73	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	89859.73	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	24239.19	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	24239.19	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	24239.19	239.25

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Summary Internal Standard Report

Sample Name	J8784-FS(3)	**Injection Vial**	25
Sample ID	VC-PM3009-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:50:59	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.02	13C2-PFDA	515.0 / 470.0	89623.53	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	23408.78	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	23408.78	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	70253.78	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	70253.78	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	70253.78	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	70253.78	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	89623.53	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	89623.53	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	89623.53	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	23408.78	239.25
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	23408.78	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	23408.78	239.25

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Summary Internal Standard Report

Sample Name	J8785-FS(3)	**Injection Vial**	28
Sample ID	VC-PM372-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:23:33	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.02	13C2-PFDA	515.0 / 470.0	92869.70	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	27752.31	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	27752.31	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	79018.98	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	79018.98	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	79018.98	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	79018.98	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	92869.70	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	92869.70	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	92869.70	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	27752.31	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	27752.31	239.25
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	27752.31	239.25

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Summary Internal Standard Report

Sample Name	J8786-FS(3)	**Injection Vial**	29
Sample ID	VC-PM372-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:34:26	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.02	13C2-PFDA	515.0 / 470.0	94509.59	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	26547.61	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	26547.61	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	80911.91	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	80911.91	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	80911.91	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	80911.91	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	94509.59	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	94509.59	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	94509.59	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	26547.61	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	26547.61	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	26547.61	239.25

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Summary Internal Standard Report

Sample Name	J8787-FS(3)	**Injection Vial**	30
Sample ID	VC-CS11-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:45:17	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.02	13C2-PFDA	515.0 / 470.0	90397.15	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	25198.28	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	25198.28	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	78599.39	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	78599.39	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	78599.39	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	78599.39	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	90397.15	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	90397.15	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	90397.15	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	25198.28	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	25198.28	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	25198.28	239.25

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Summary Internal Standard Report

Sample Name	J8788-FS(3)	**Injection Vial**	31
Sample ID	VC-CS11-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:56:09	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.02	13C2-PFDA	515.0 / 470.0	88531.68	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	26442.23	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	26442.23	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	81062.07	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	81062.07	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	81062.07	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	81062.07	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	88531.68	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	88531.68	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	88531.68	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	26442.23	239.25
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	26442.23	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	26442.23	239.25

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Summary Internal Standard Report

Sample Name	J8809-FS(3)	**Injection Vial**	32
Sample ID	VC-STP-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:07:00	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.02	13C2-PFDA	515.0 / 470.0	99129.25	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	27761.02	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	27761.02	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	88369.45	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	88369.45	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	88369.45	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	88369.45	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	99129.25	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	99129.25	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	99129.25	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	27761.02	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	27761.02	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	27761.02	239.25

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Summary Internal Standard Report

Sample Name	J8810-FS(3)	**Injection Vial**	33
Sample ID	VC-STP-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:17:52	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.01	13C2-PFDA	515.0 / 470.0	92983.34	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	25531.75	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	25531.75	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	74023.73	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	74023.73	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	74023.73	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	74023.73	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	92983.34	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	92983.34	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	92983.34	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	25531.75	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	25531.75	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	25531.75	239.25

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Summary Internal Standard Report

Sample Name	J8811-FS(3)	**Injection Vial**	34
Sample ID	VC-STP-SD02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:28:43	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.01	13C2-PFDA	515.0 / 470.0	94113.50	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	23325.57	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	23325.57	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	77923.47	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	77923.47	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	77923.47	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	77923.47	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	94113.50	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	94113.50	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	94113.50	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	23325.57	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	23325.57	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	23325.57	239.25

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Summary Internal Standard Report

Sample Name	J8812-FS(3)	**Injection Vial**	35
Sample ID	VC-STP-SD02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:39:36	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.01	13C2-PFDA	515.0 / 470.0	85976.13	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	22976.58	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	22976.58	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	69186.43	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	69186.43	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	69186.43	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	69186.43	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	85976.13	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	85976.13	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	85976.13	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	22976.58	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	22976.58	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	22976.58	239.25

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Summary Internal Standard Report

Sample Name	J8813-FS(3)	**Injection Vial**	36
Sample ID	VC-STP-SD03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:50:27	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.01	13C2-PFDA	515.0 / 470.0	88444.21	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	26680.61	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	26680.61	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	70810.59	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	70810.59	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	70810.59	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	70810.59	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	88444.21	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	88444.21	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	88444.21	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	26680.61	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	26680.61	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	26680.61	239.25

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Summary Internal Standard Report

Sample Name	J8814-FS(3)	**Injection Vial**	37
Sample ID	VC-STP-SD03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:01:19	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.01	13C2-PFDA	515.0 / 470.0	91347.85	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	25993.72	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	25993.72	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	79067.25	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	79067.25	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	79067.25	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	79067.25	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	91347.85	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	91347.85	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	91347.85	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	25993.72	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	25993.72	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	25993.72	239.25

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Summary Internal Standard Report

Sample Name	J8815-FS(3)	**Injection Vial**	40
Sample ID	VC-STP-SD04-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:33:58	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.01	13C2-PFDA	515.0 / 470.0	84734.43	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	23712.27	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	23712.27	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	71592.21	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	71592.21	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	71592.21	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	71592.21	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	84734.43	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	84734.43	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	84734.43	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	23712.27	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	23712.27	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	23712.27	239.25

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Summary Internal Standard Report

Sample Name	J8816-FS(3)	**Injection Vial**	41
Sample ID	VC-STP-SD04-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:44:50	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.02	13C2-PFDA	515.0 / 470.0	88843.20	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	21268.99	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	21268.99	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	71265.12	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	71265.12	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	71265.12	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	71265.12	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	88843.20	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	88843.20	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	88843.20	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	21268.99	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	21268.99	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	21268.99	239.25

Chromatograms

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Chromatogram Report

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Printed: 07/11/2018 12:07:56 PM

Sample Name	KB73	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T19:46:52	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

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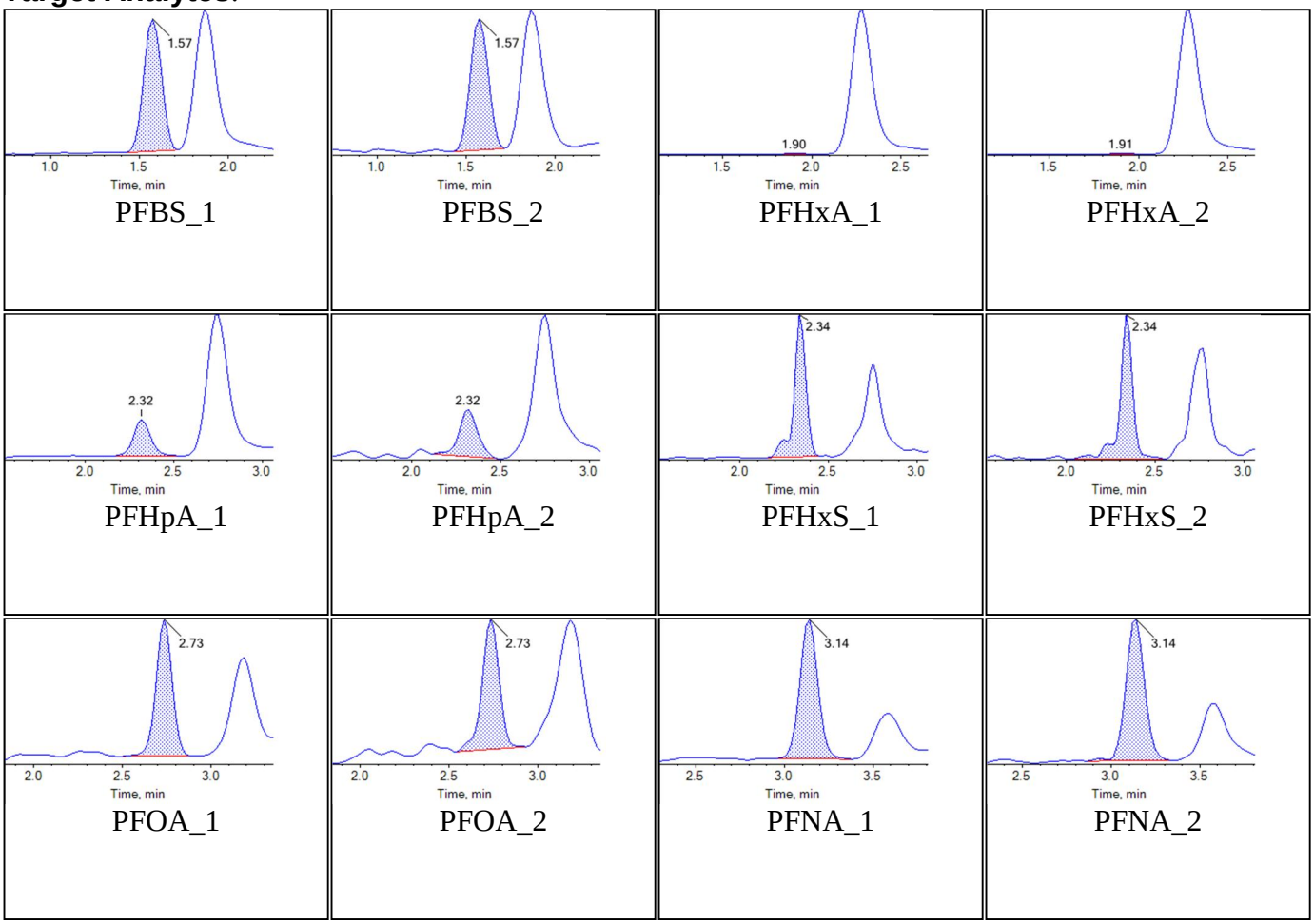

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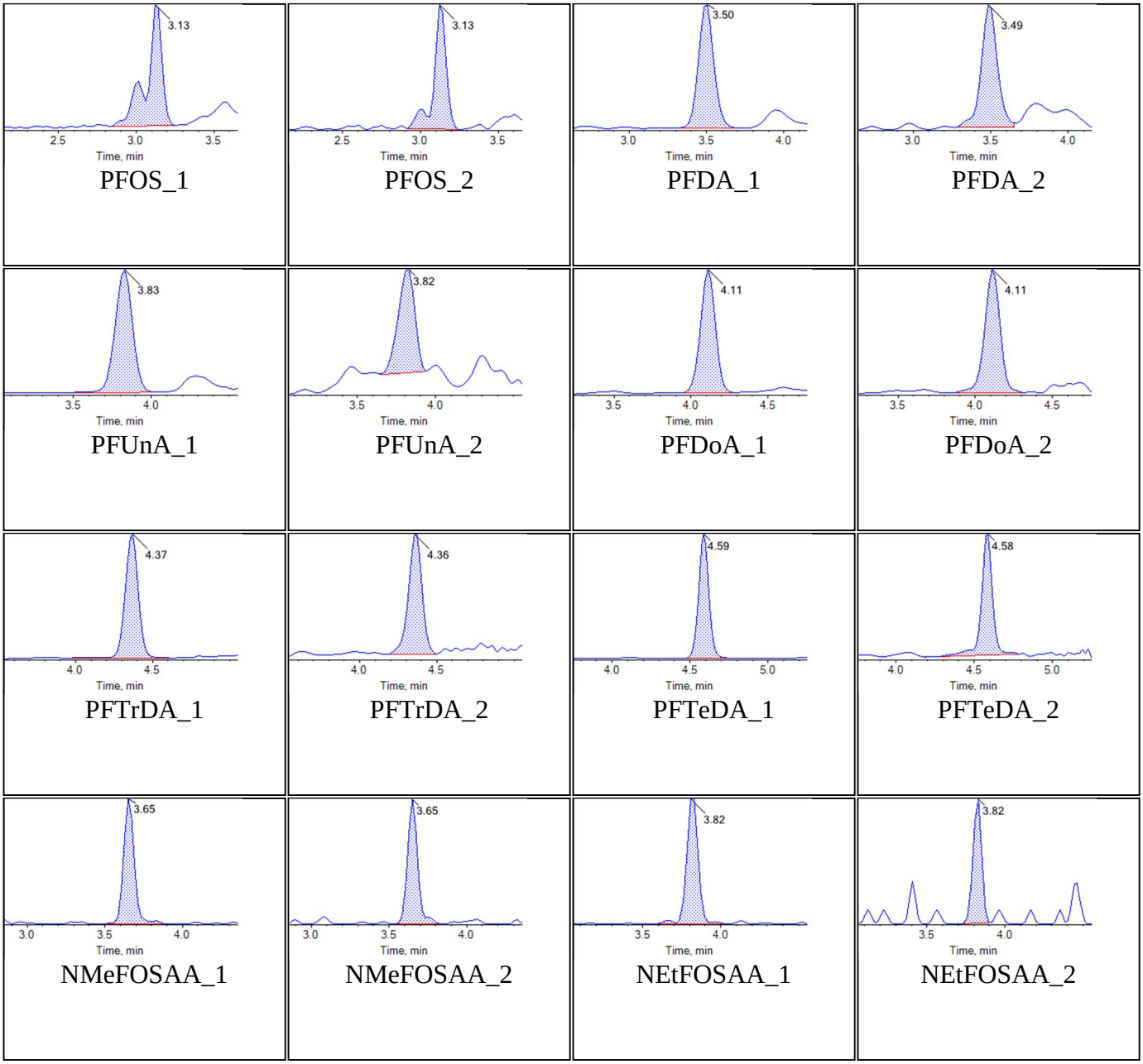
Chromatogram Report

Created with Analyst Reporter
Printed: 07/11/2018 12:07:56 PM



Internal Standards:

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Chromatogram Report

Created with Analyst Reporter
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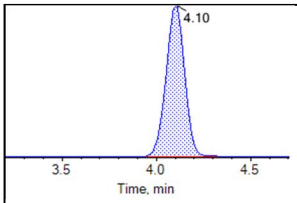
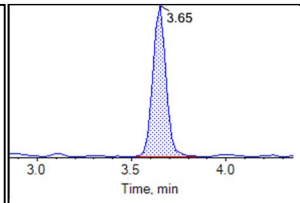
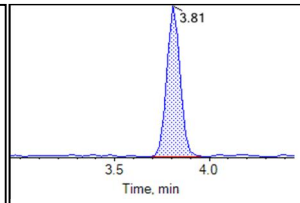


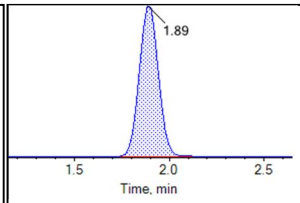
13C2-PFDoA



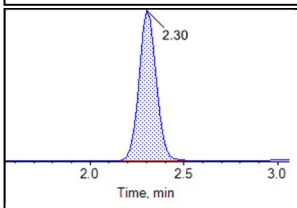
d3-MeFOSAA



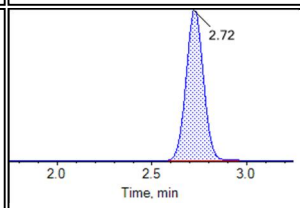
d5-EtFOSAA



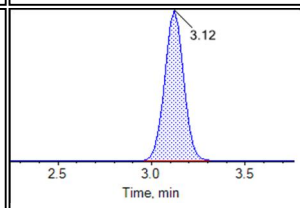
13C5-PFHxA



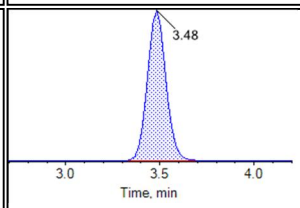
13C4-PFHpA



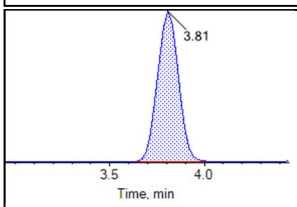
13C8-PFOA



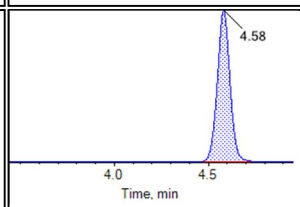
13C9-PFNA



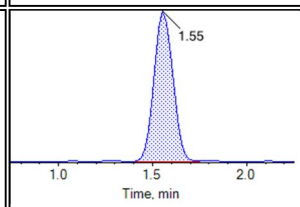
13C6-PFDA



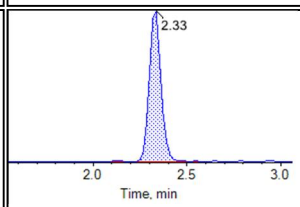
13C7-PFUnA



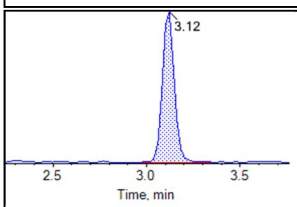
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

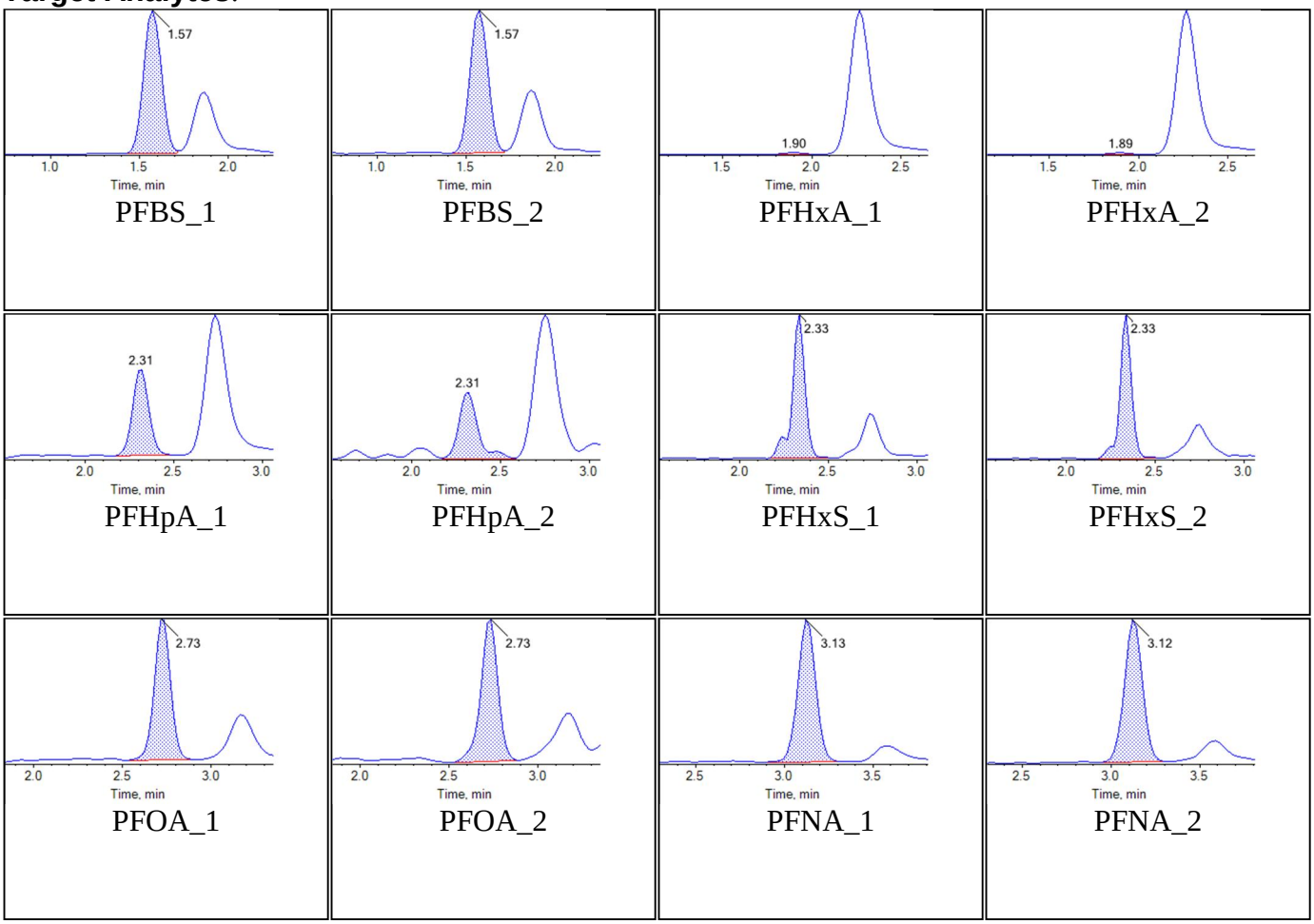
Chromatogram Report

Created with Analyst Reporter
Printed: 07/11/2018 12:08:02 PM

Sample Name	KB74	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T19:57:45	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

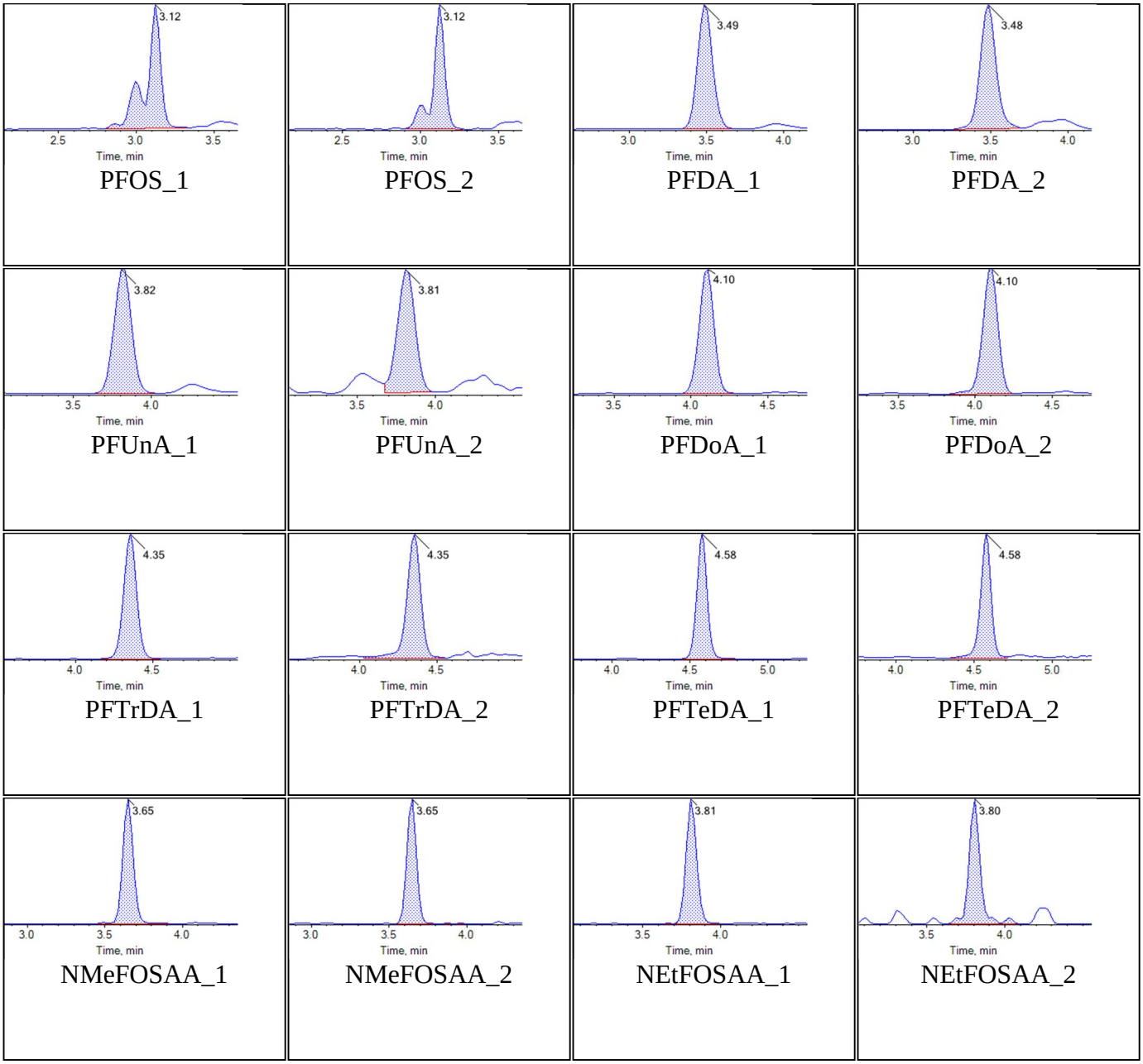
Target Analytes:



BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 07/11/2018 12:08:02 PM

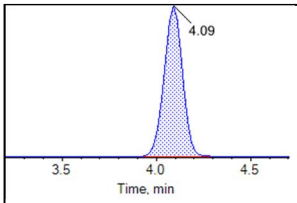


Internal Standards:

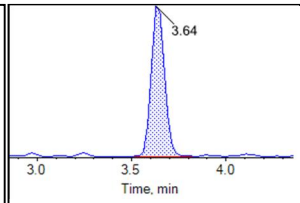
BATTELLE

Chromatogram Report

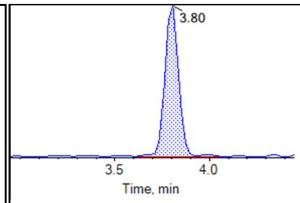
Created with Analyst Reporter
Printed: 07/11/2018 12:08:02 PM



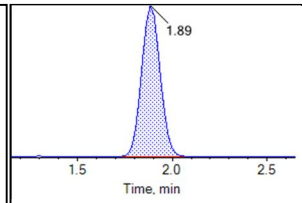
13C2-PFDoA



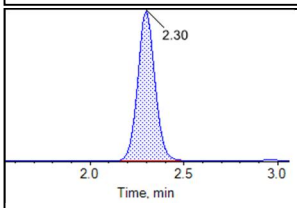
d3-MeFOSAA



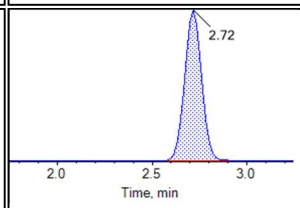
d5-EtFOSAA



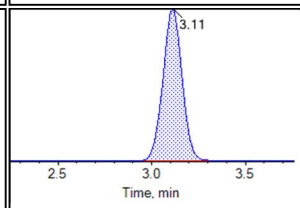
13C5-PFHxA



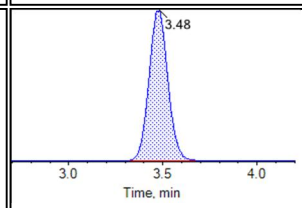
13C4-PFHpA



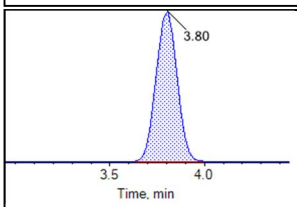
13C8-PFOA



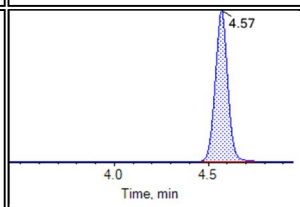
13C9-PFNA



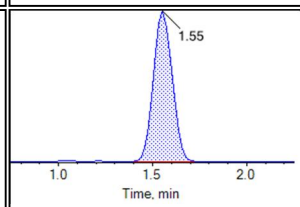
13C6-PFDA



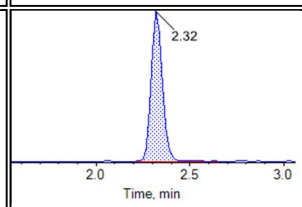
13C7-PFUnA



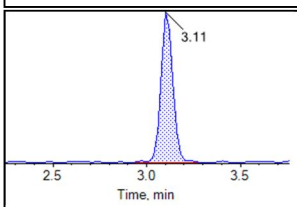
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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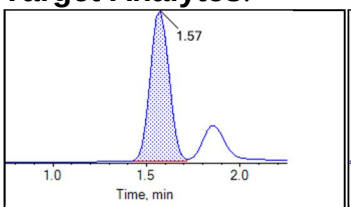
Chromatogram Report

Created with Analyst Reporter
Printed: 07/11/2018 12:08:08 PM

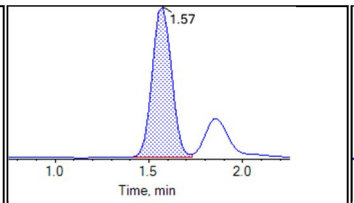
Sample Name	KB75	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:08:39	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

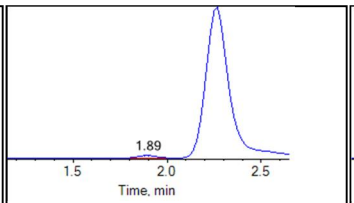
Target Analytes:



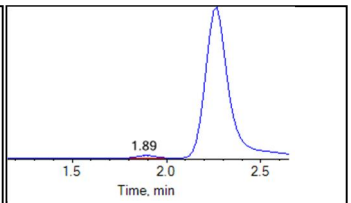
PFBS_1



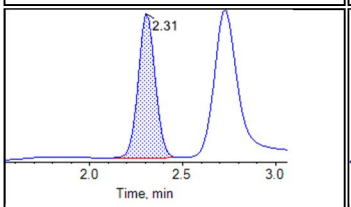
PFBS_2



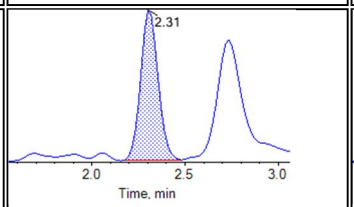
PFHxA_1



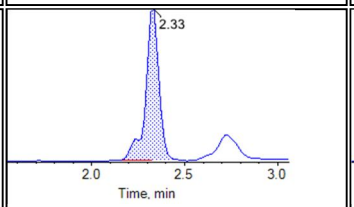
PFHxA_2



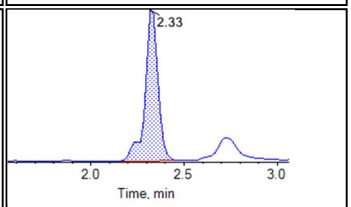
PFHpA_1



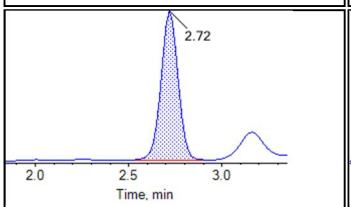
PFHpA_2



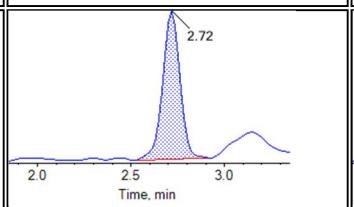
PFHxS_1



PFHxS_2



PFOA_1



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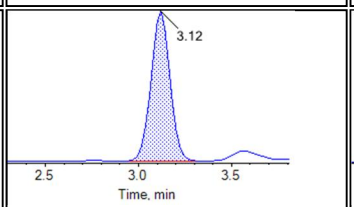

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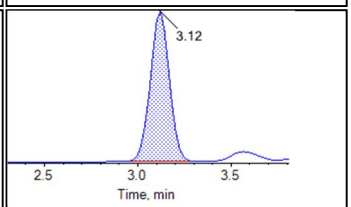

PFNA_2

BATTELLE

Chromatogram Report

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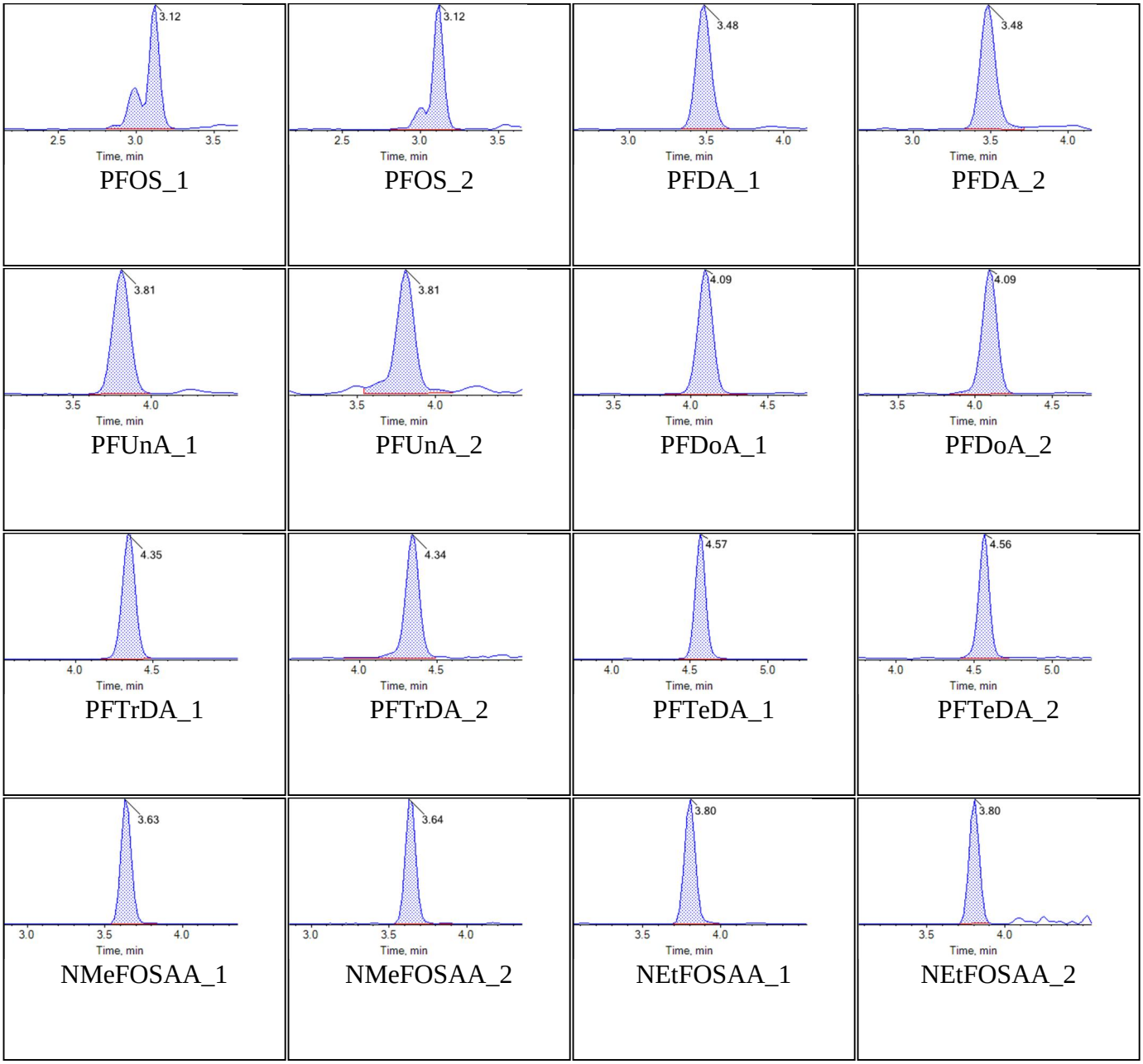
Printed: 07/11/2018 12:08:08 PM

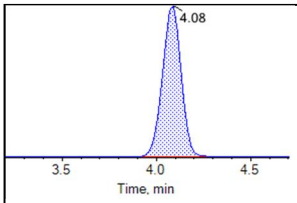


Internal Standards:

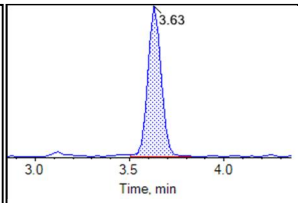
BATTELLE

Chromatogram Report

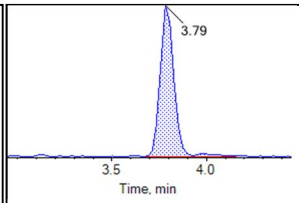
Created with Analyst Reporter
Printed: 07/11/2018 12:08:08 PM



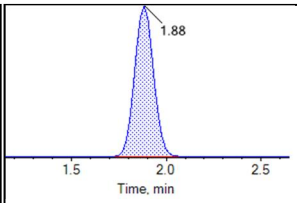
13C2-PFDoA



d3-MeFOSAA



d5-EtFOSAA



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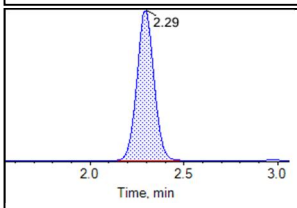

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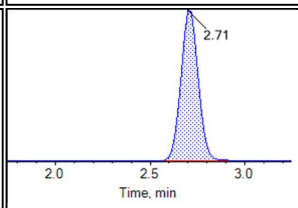

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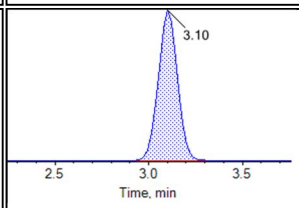
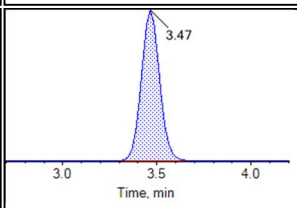
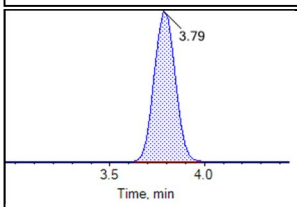


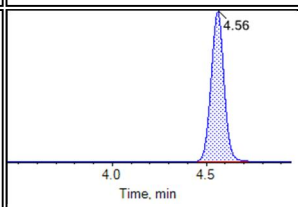
13C9-PFNA



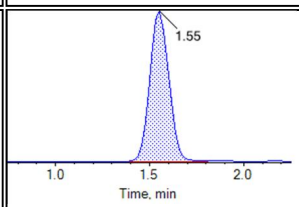
13C6-PFDA



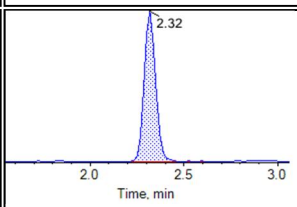
13C7-PFUnA



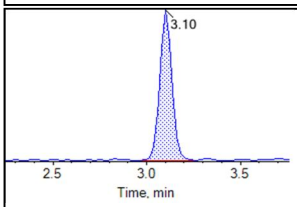
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

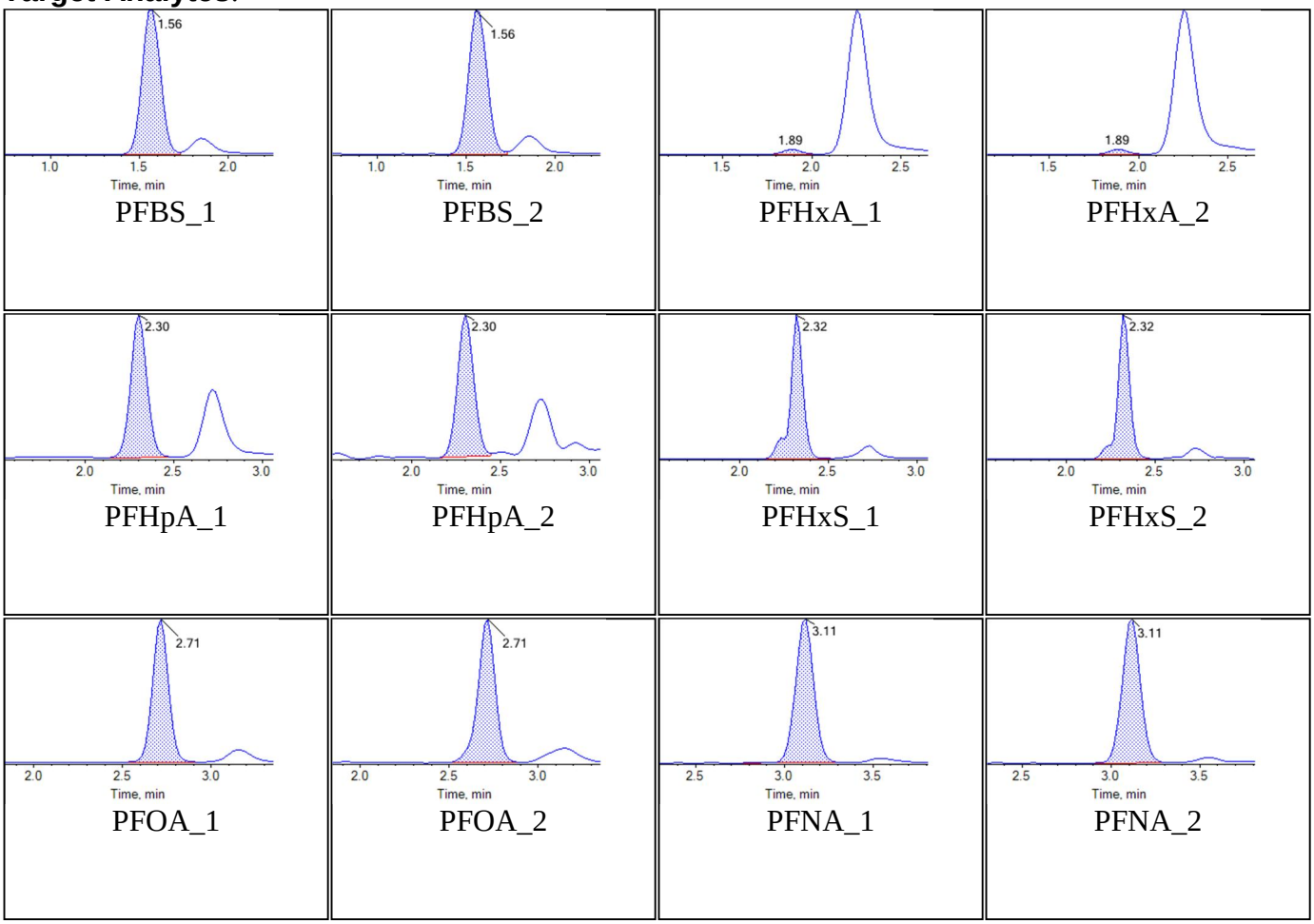
Chromatogram Report

Created with Analyst Reporter
Printed: 07/11/2018 12:08:14 PM

Sample Name	KB76	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:19:32	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

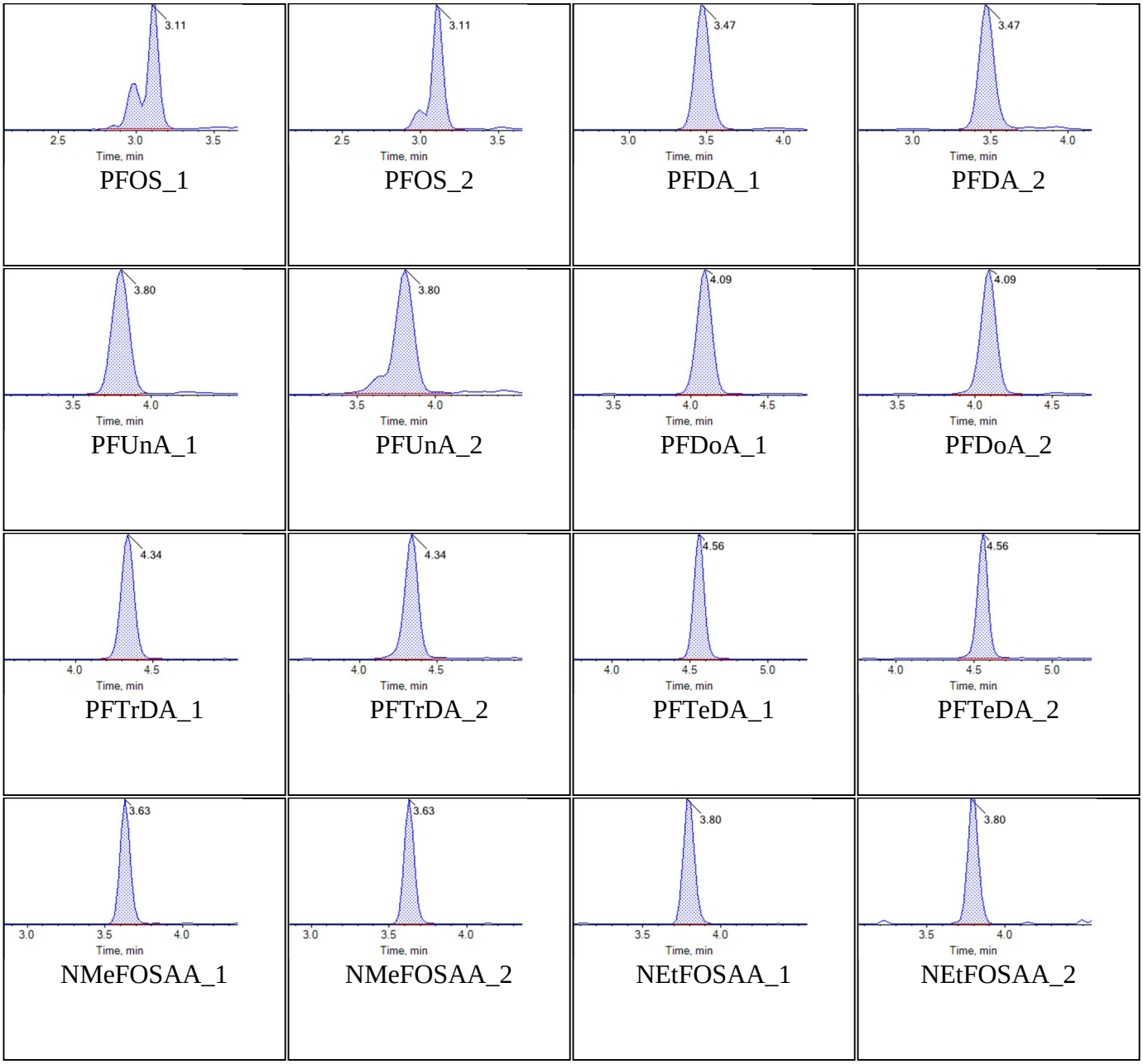
Target Analytes:



BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 07/11/2018 12:08:14 PM

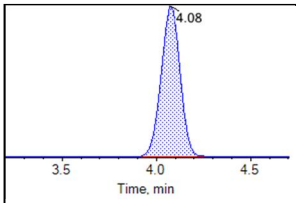


Internal Standards:

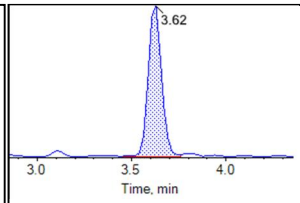
BATTELLE

Chromatogram Report

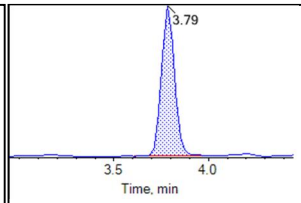
Created with Analyst Reporter
Printed: 07/11/2018 12:08:14 PM



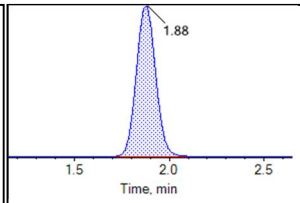
13C2-PFDoA



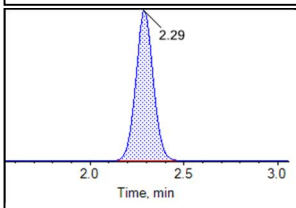
d3-MeFOSAA



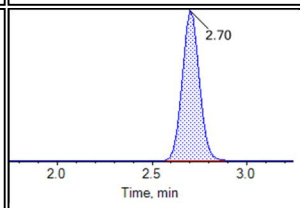
d5-EtFOSAA



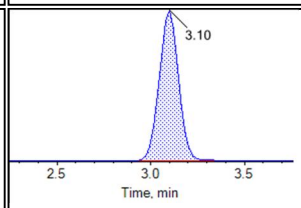
13C5-PFHxA



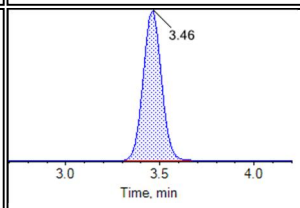
13C4-PFHpA



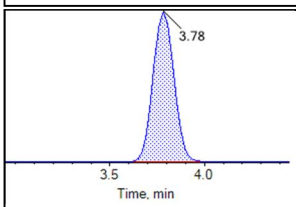
13C8-PFOA



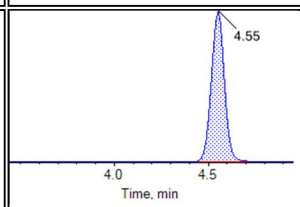
13C9-PFNA



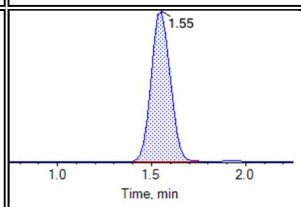
13C6-PFDA



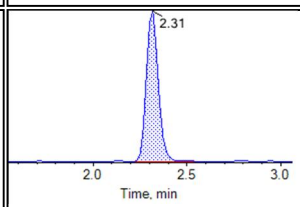
13C7-PFUnA



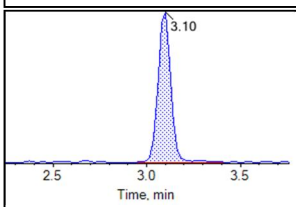
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

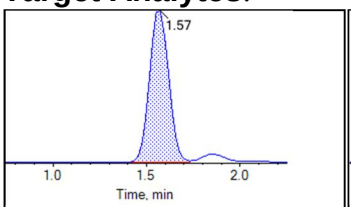
Chromatogram Report

Created with Analyst Reporter
Printed: 07/11/2018 12:08:20 PM

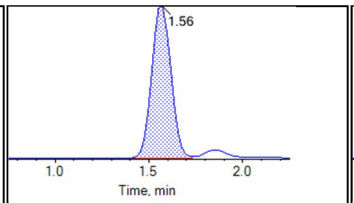
Sample Name	KB77	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:30:23	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

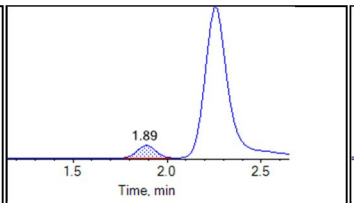
Target Analytes:



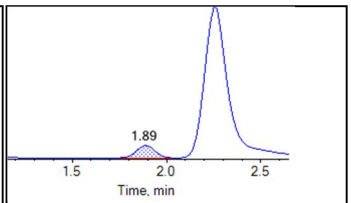
PFBS_1



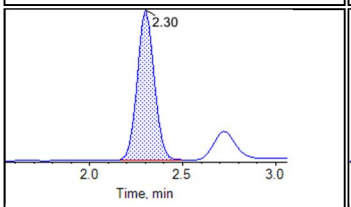
PFBS_2



PFHxA_1



PFHxA_2



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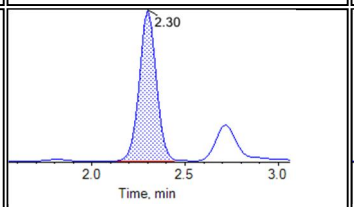

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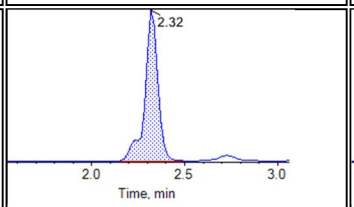
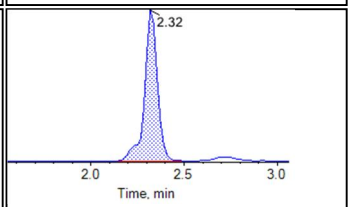


PFHxS_1



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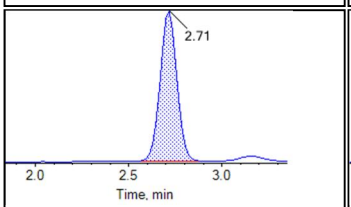
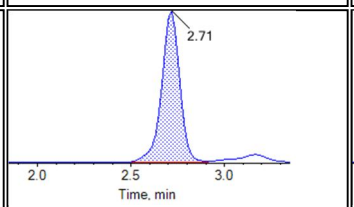


PFOA_1



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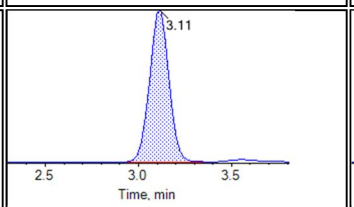

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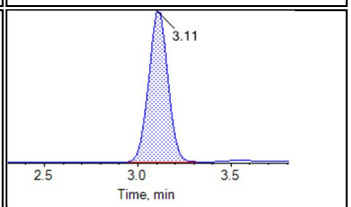
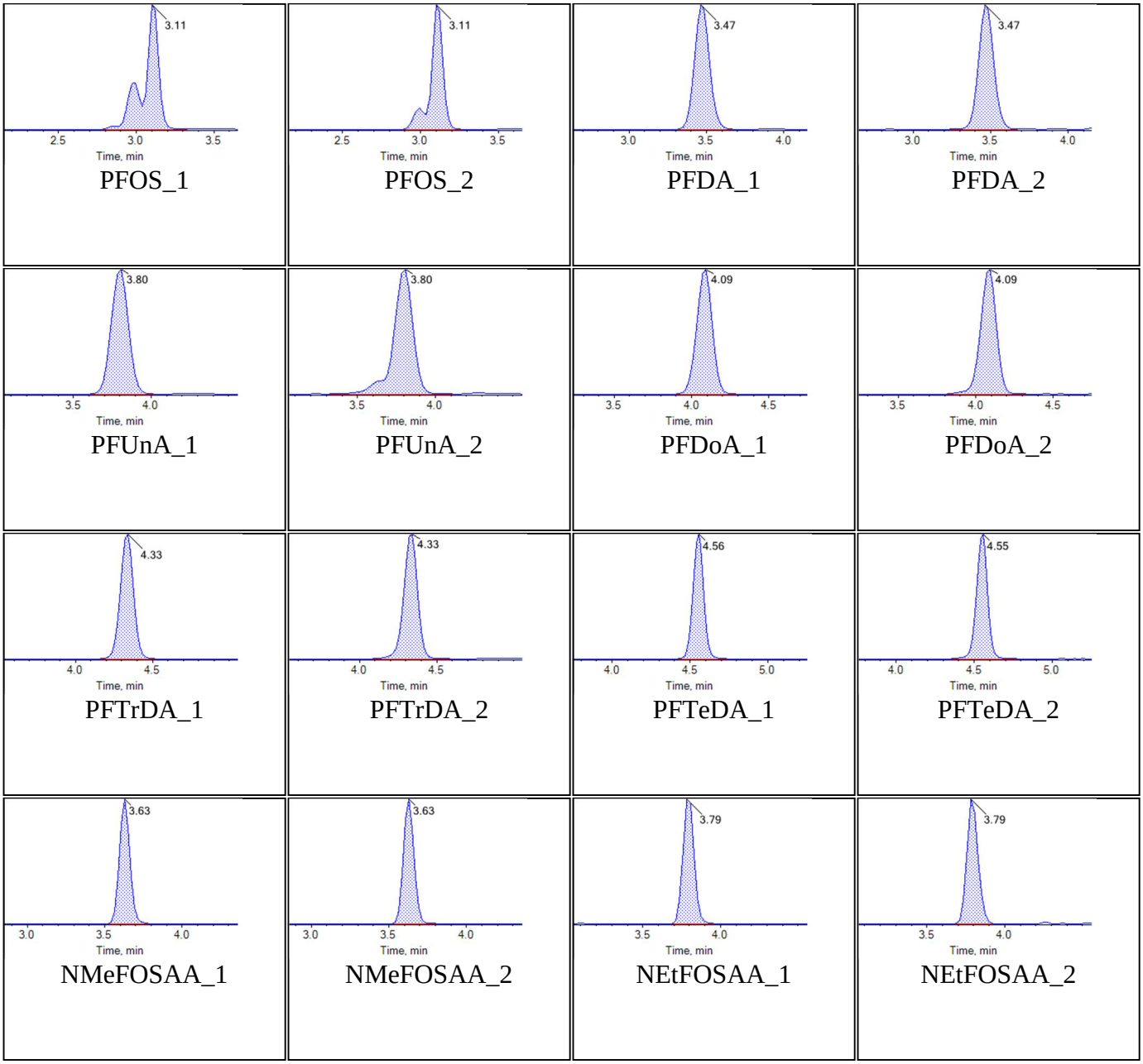


PFNA_2

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 07/11/2018 12:08:20 PM

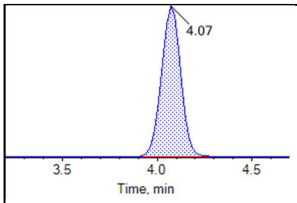


Internal Standards:

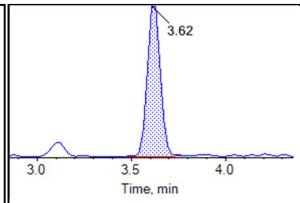
BATTELLE

Chromatogram Report

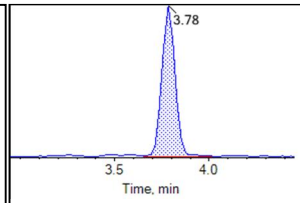
Created with Analyst Reporter
Printed: 07/11/2018 12:08:20 PM



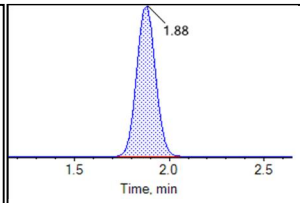
13C2-PFDoA



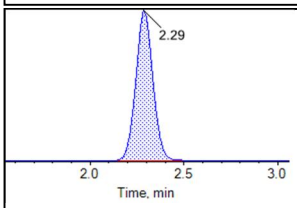
d3-MeFOSAA



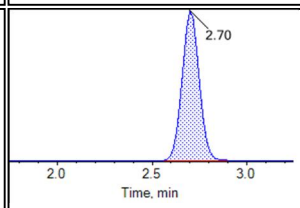
d5-EtFOSAA



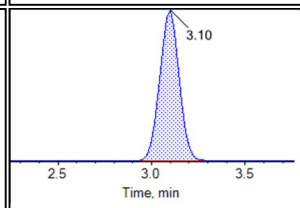
13C5-PFHxA



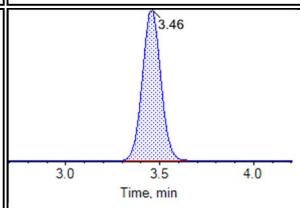
13C4-PFHpA



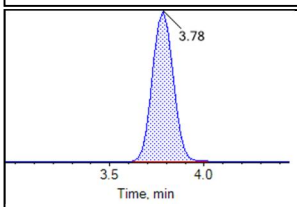
13C8-PFOA



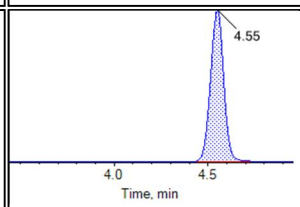
13C9-PFNA



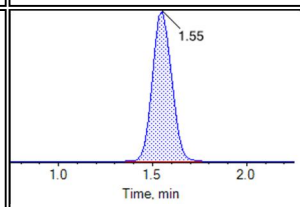
13C6-PFDA



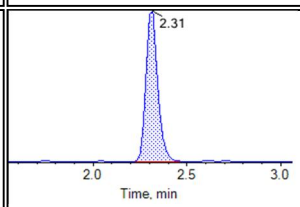
13C7-PFUnA



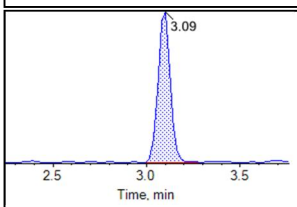
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

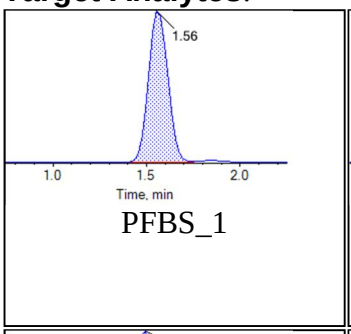
Chromatogram Report

Created with Analyst Reporter
Printed: 07/11/2018 12:08:25 PM

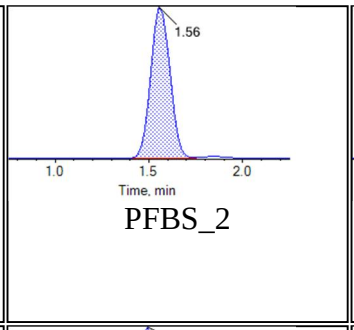
Sample Name	KB78	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:41:14	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

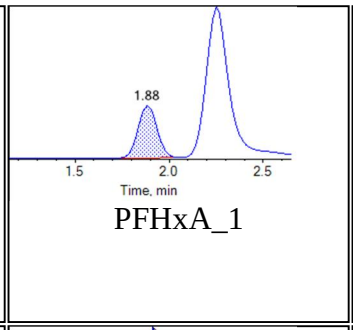
Target Analytes:



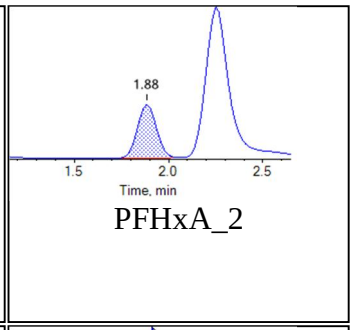
PFBS_1



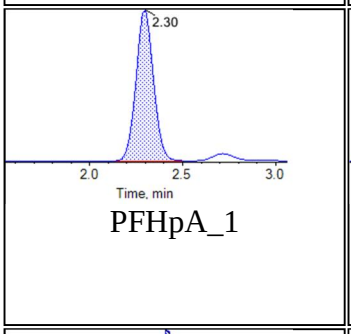
PFBS_2



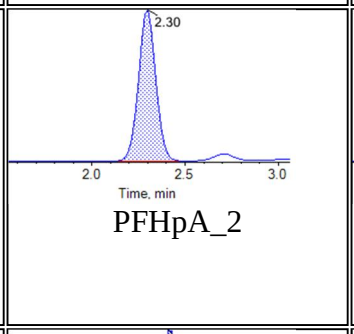
PFHxA_1



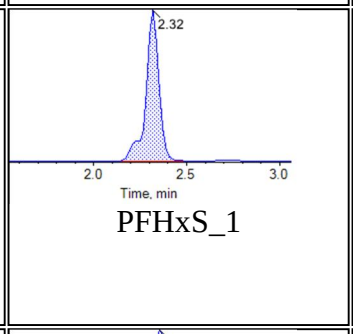
PFHxA_2



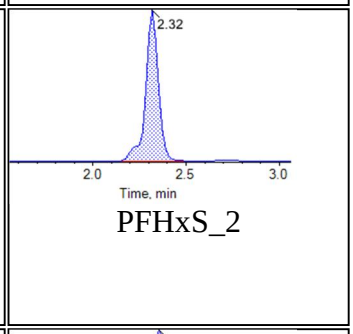
PFHpA_1



PFHpA_2



PFHxS_1



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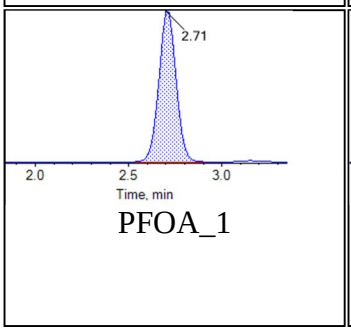

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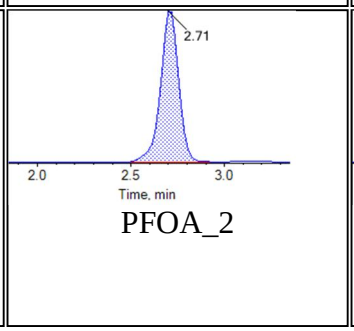
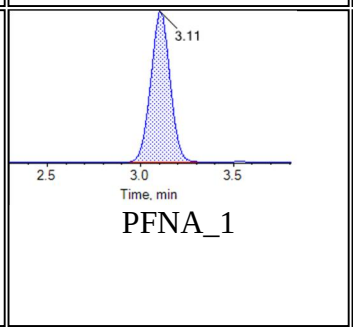
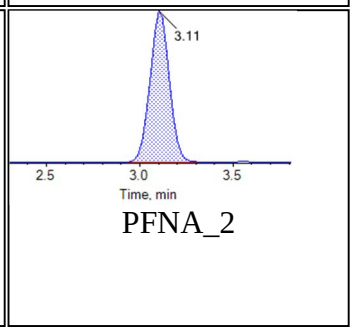


PFOA_2



PFNA_1



PFNA_2

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Chromatogram Report

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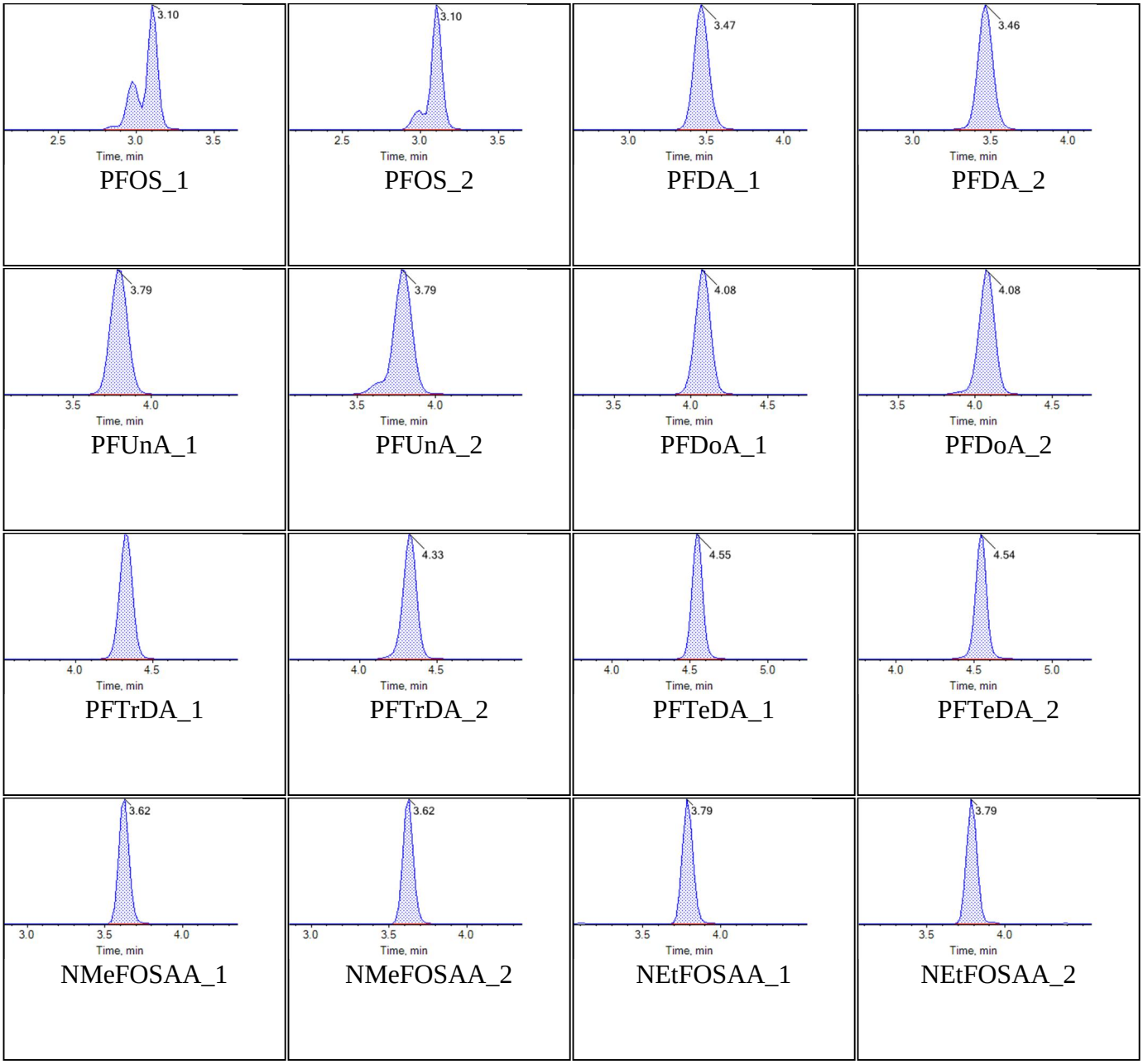

Internal Standards:

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Chromatogram Report

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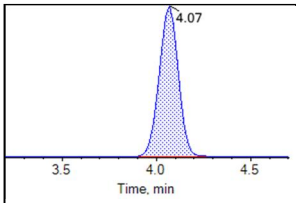
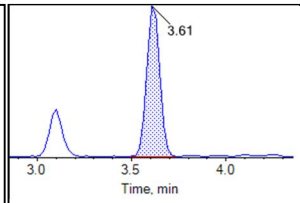
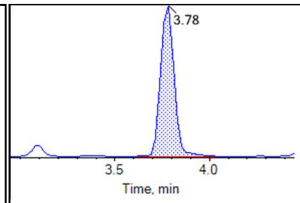


13C2-PFDoA



d3-MeFOSAA



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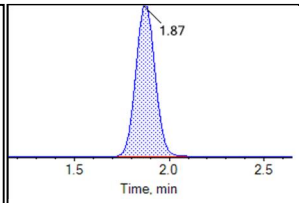
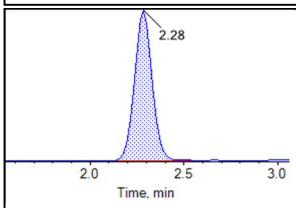
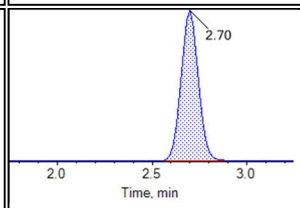


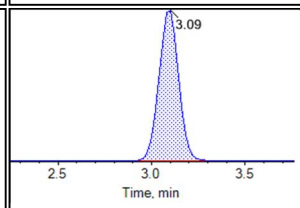
13C5-PFHxA



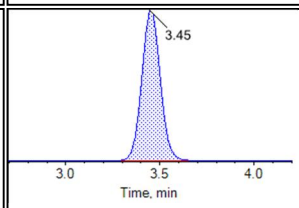
13C4-PFHpA



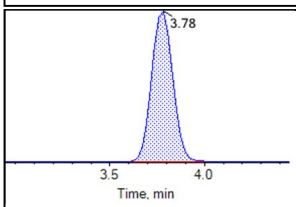
13C8-PFOA



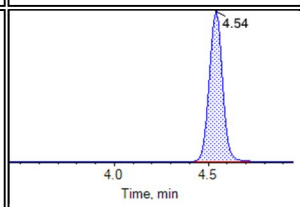
13C9-PFNA



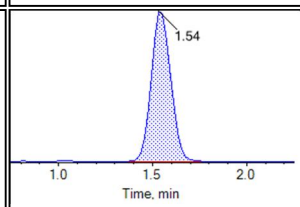
13C6-PFDA



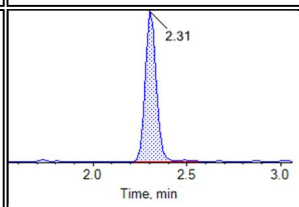
13C7-PFUnA



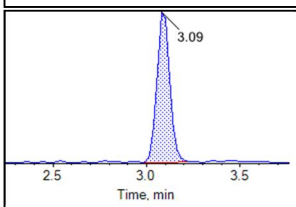
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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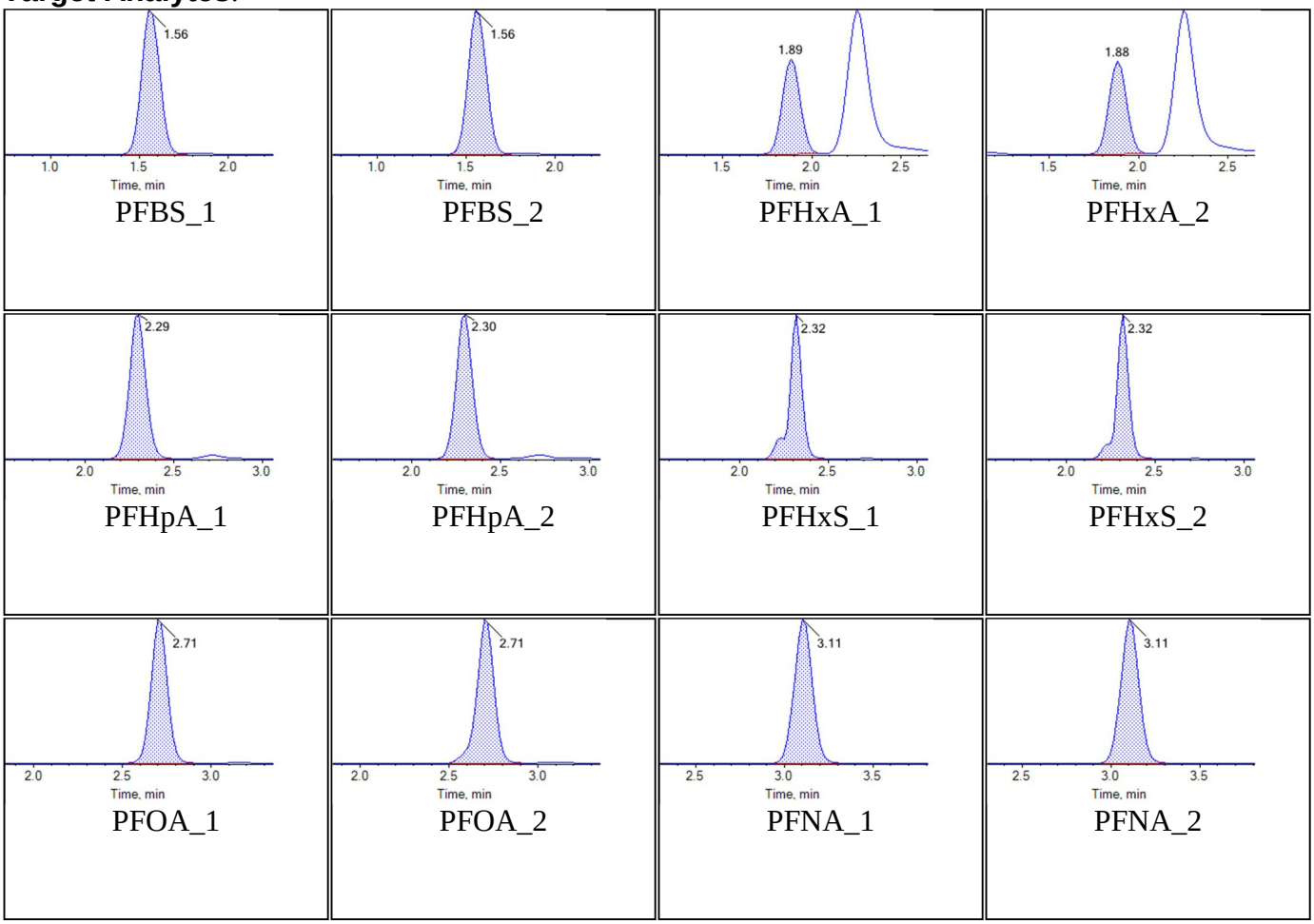
Sample Name	KB79	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:52:06	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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Chromatogram Report

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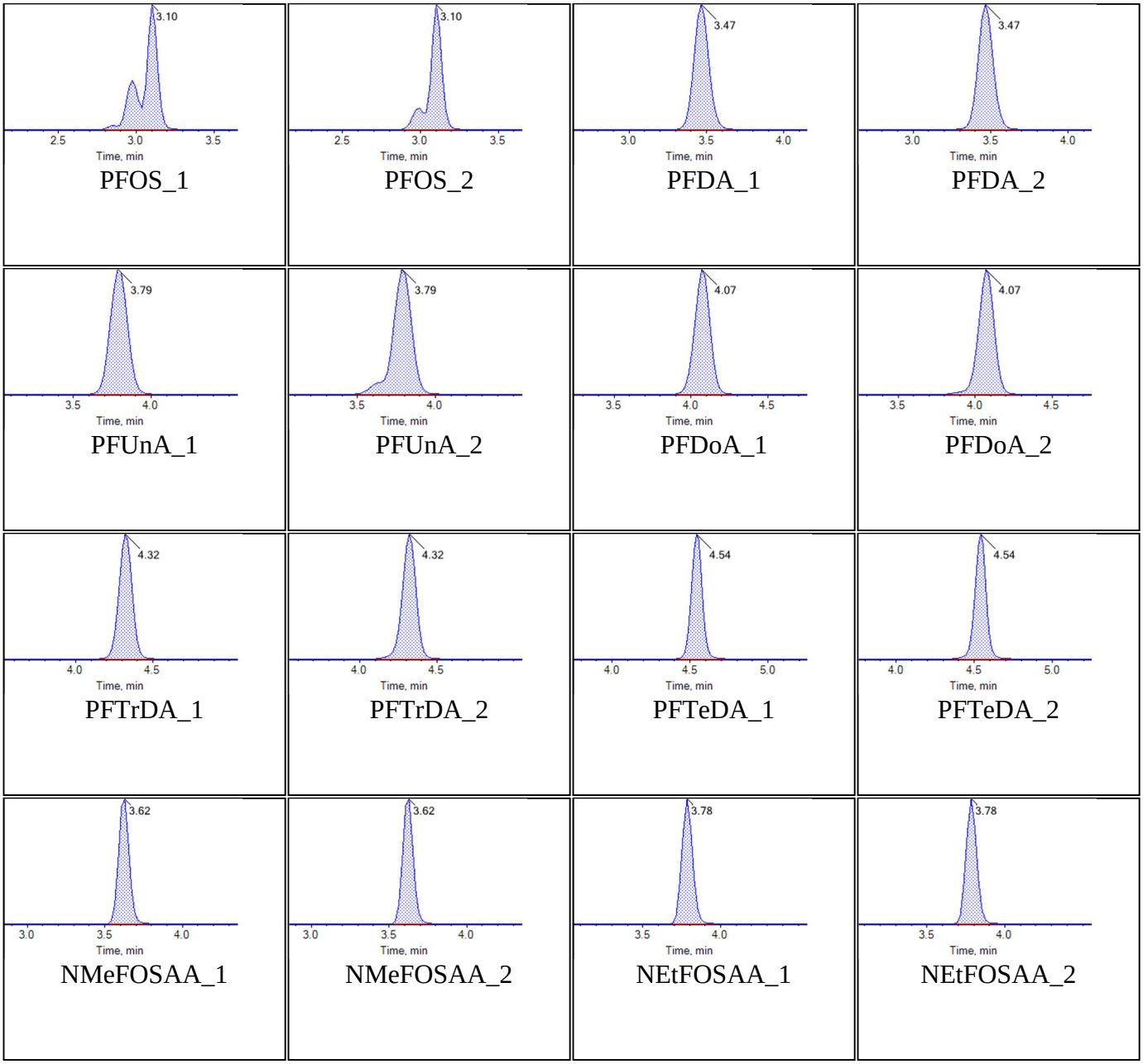

Internal Standards:

BATTELLE

Chromatogram Report

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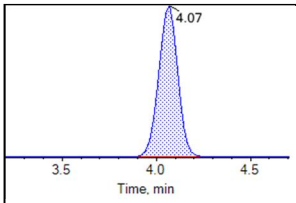

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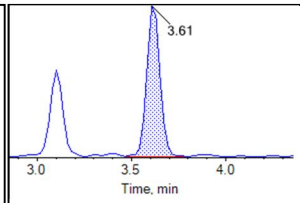
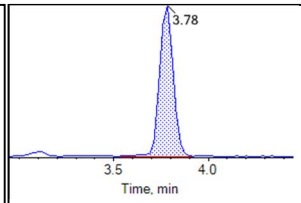
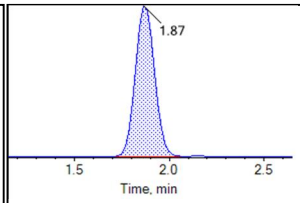


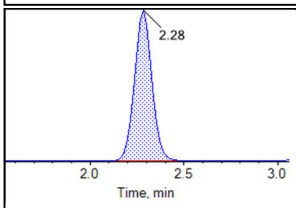
d3-MeFOSAA



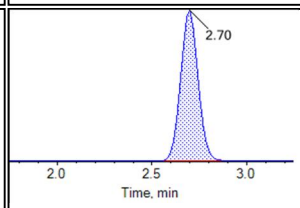
d5-EtFOSAA



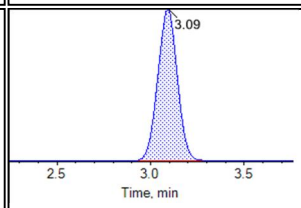
13C5-PFHxA



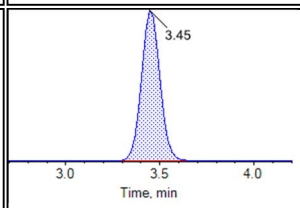
13C4-PFHpA



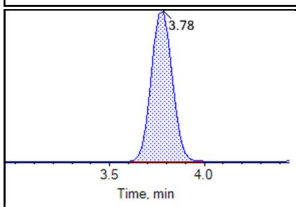
13C8-PFOA



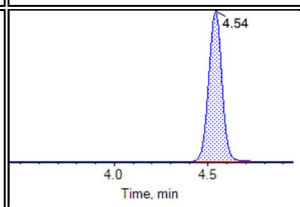
13C9-PFNA



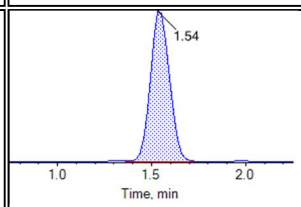
13C6-PFDA



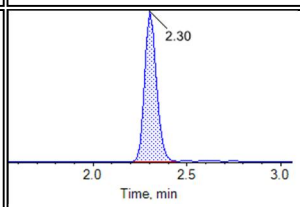
13C7-PFUnA



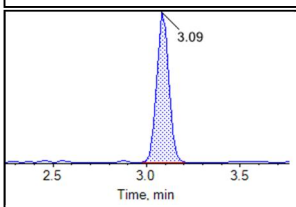
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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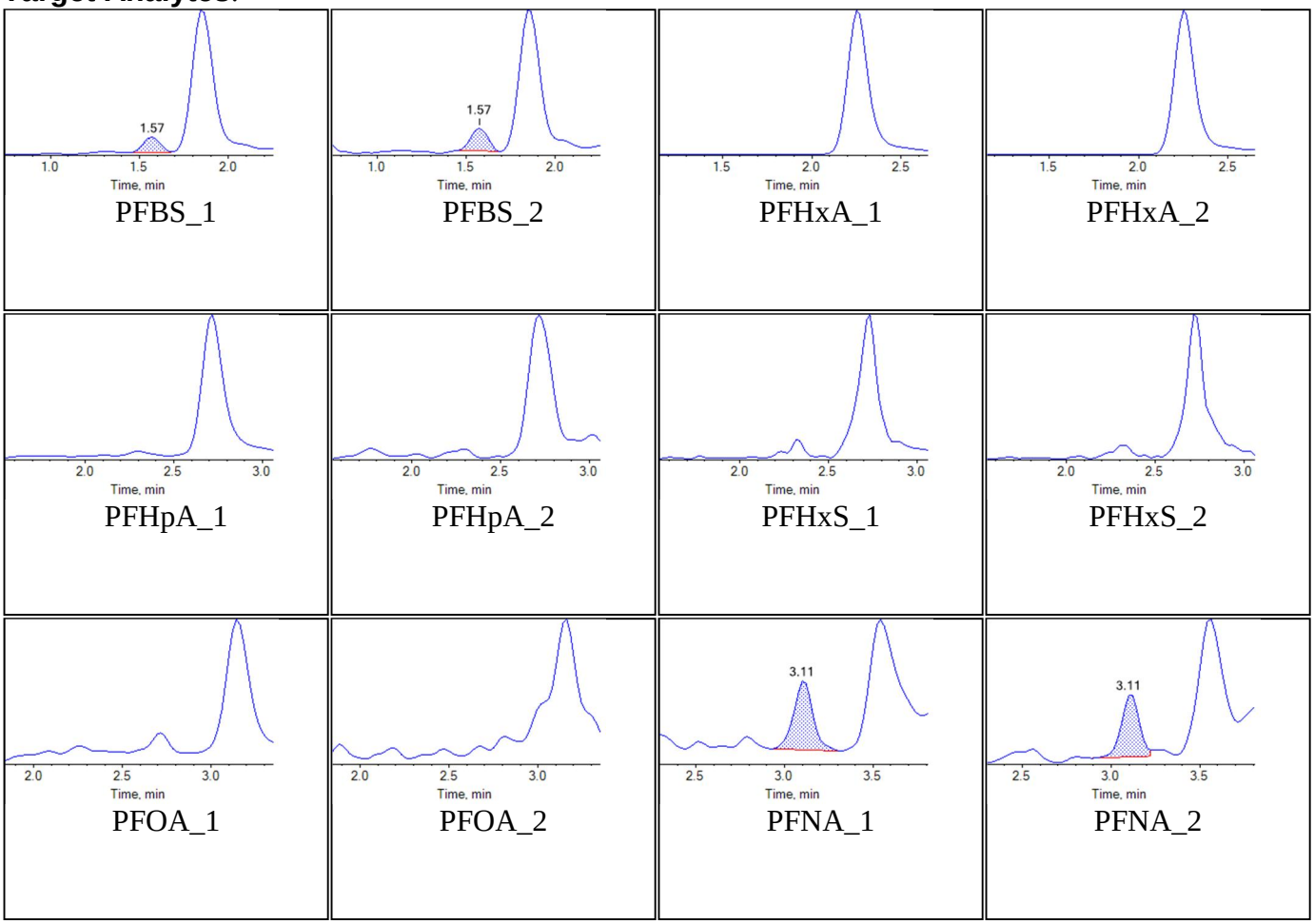
Printed: 07/11/2018 12:08:38 PM

Sample Name	KB80 IB	**Injection Vial**	9
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T21:02:57	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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Chromatogram Report

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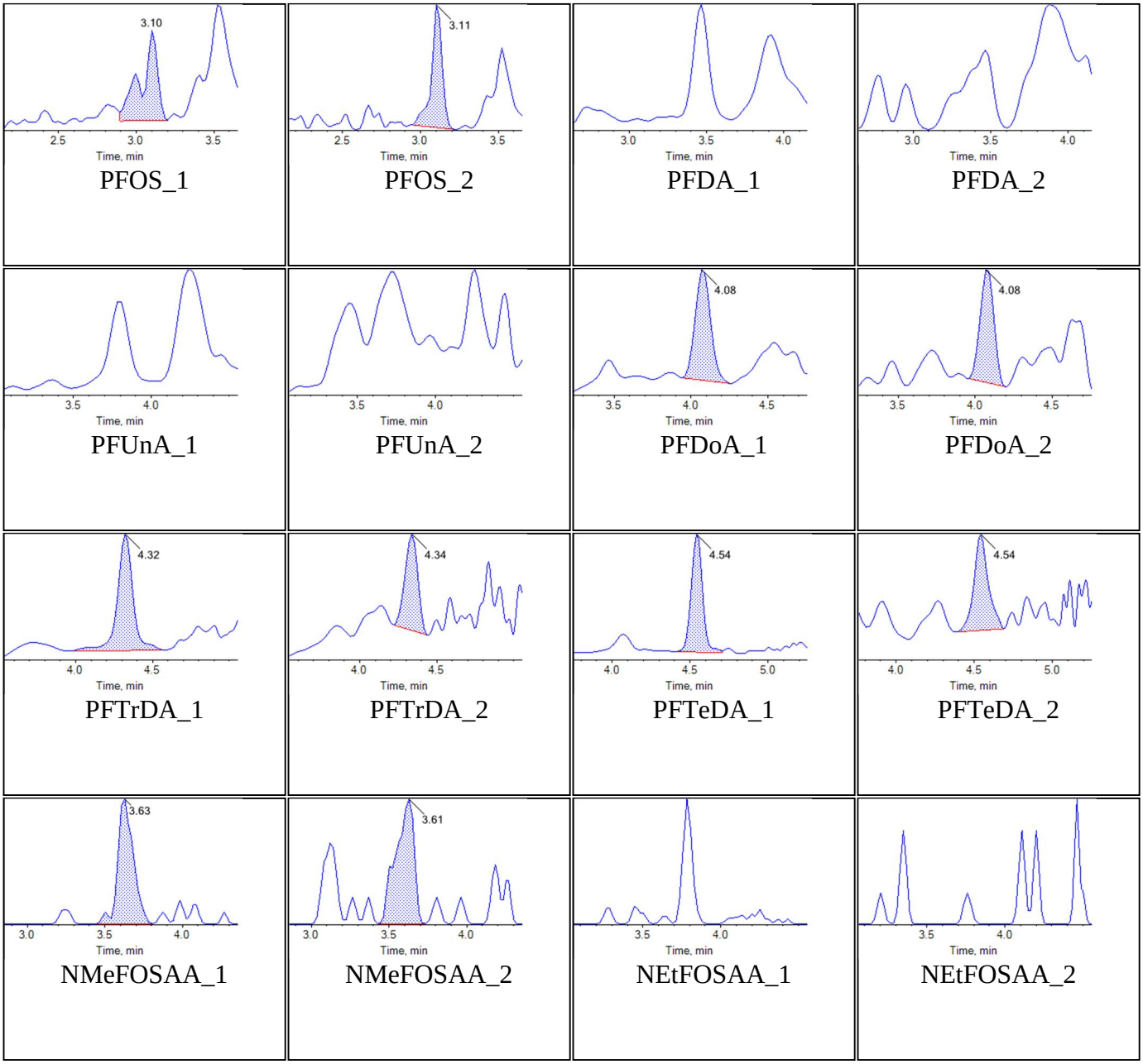

Internal Standards:

BATTELLE

Chromatogram Report

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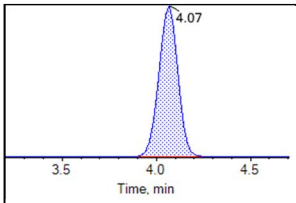
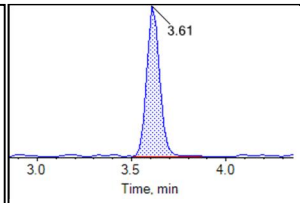
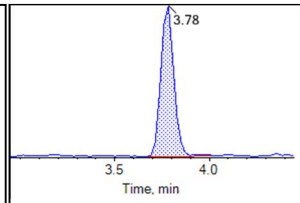


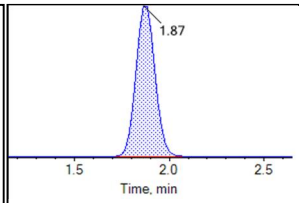
13C2-PFDoA



d3-MeFOSAA



d5-EtFOSAA



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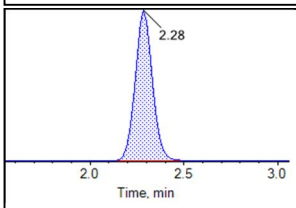
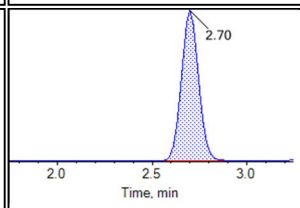
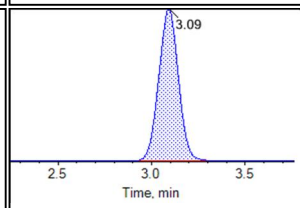


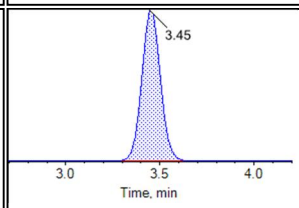
13C4-PFHpA



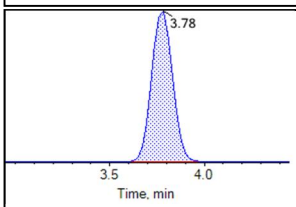
13C8-PFOA



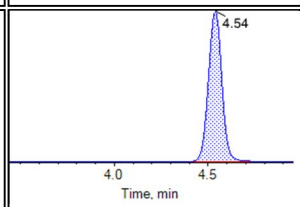
13C9-PFNA



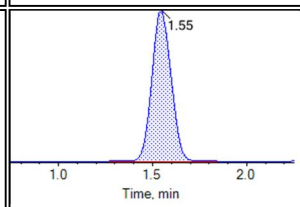
13C6-PFDA



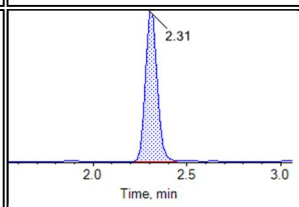
13C7-PFUnA



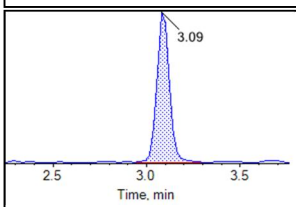
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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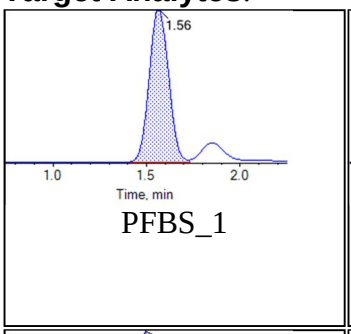
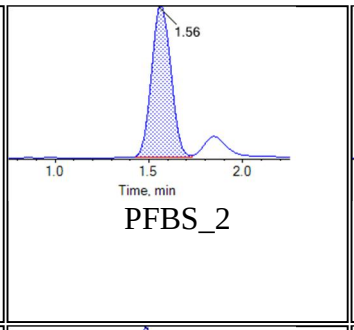
Sample Name	KB81 ICC	**Injection Vial**	10
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T21:13:49	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



PFBS_1



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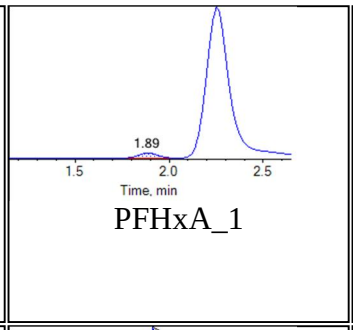

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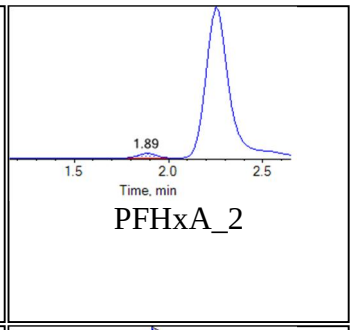

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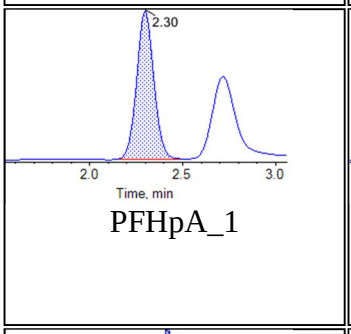

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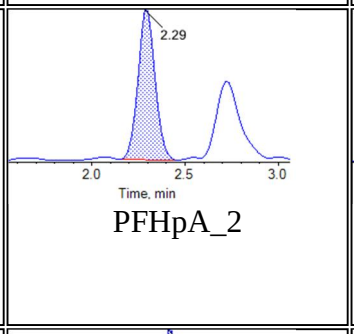

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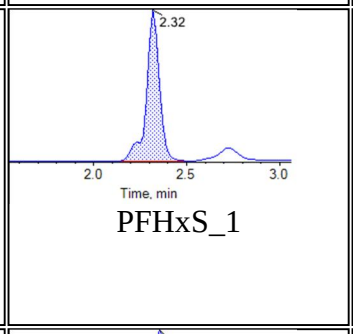

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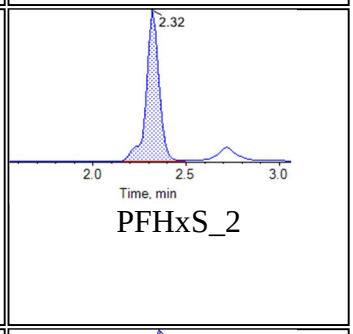

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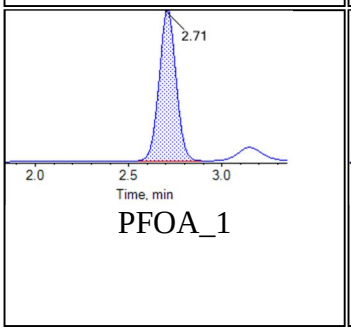

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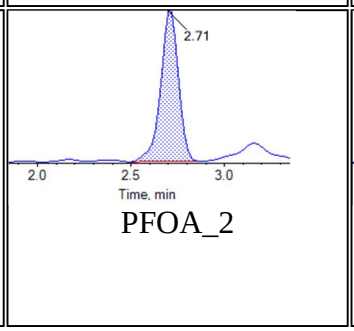

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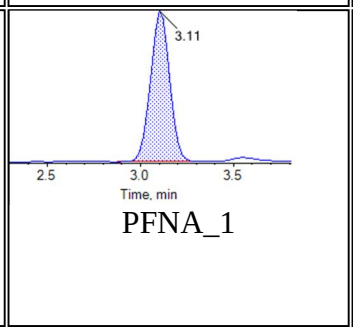

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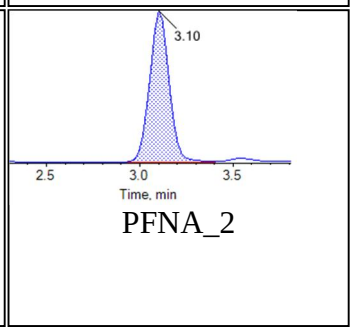

PFNA_2

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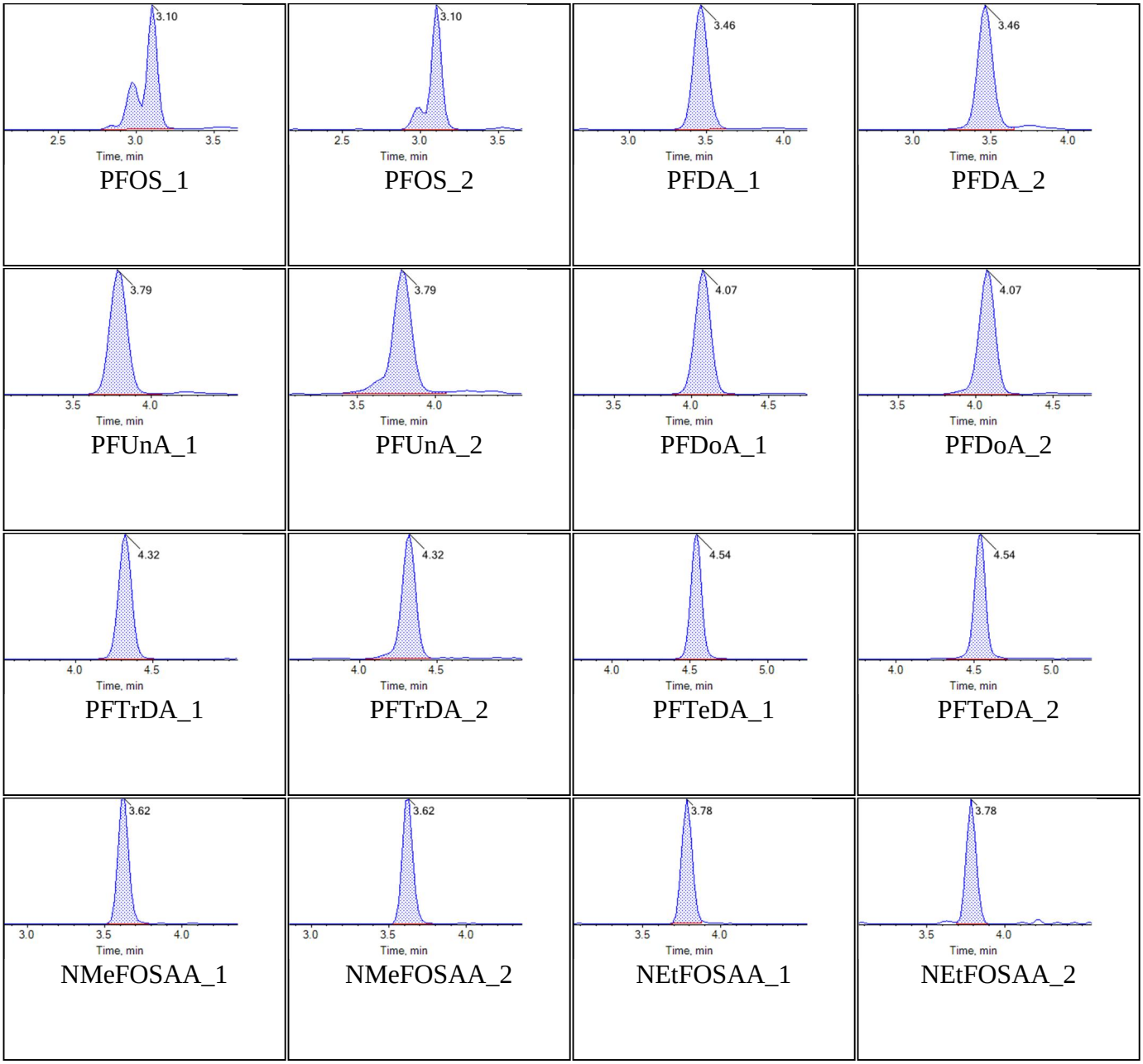

Internal Standards:

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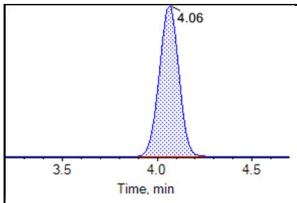
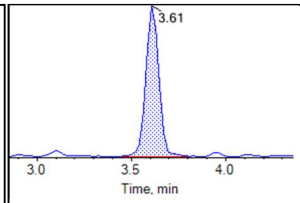


13C2-PFDoA



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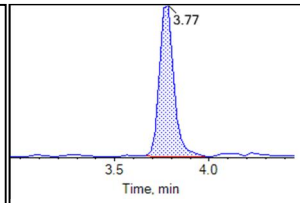

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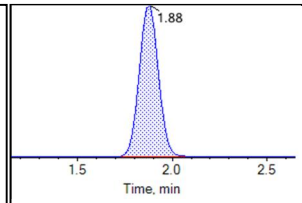

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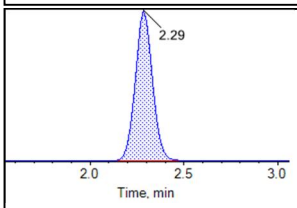

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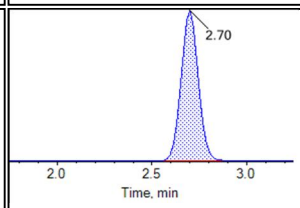

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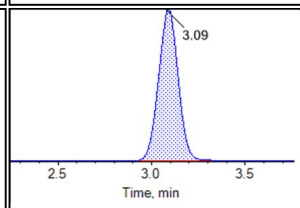

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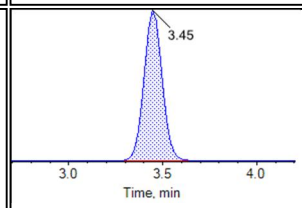

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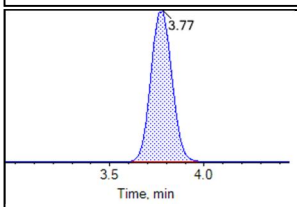

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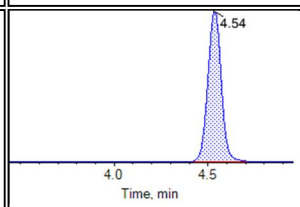

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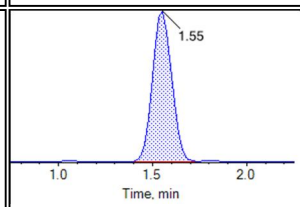

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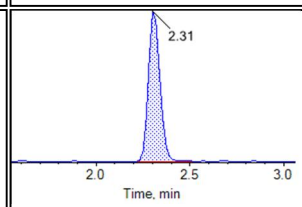

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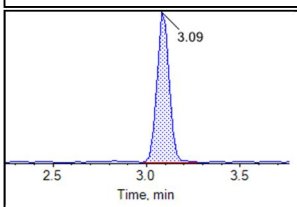

13C8-PFOS

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Sample Name	KB75 ISC	**Injection Vial**	1
Sample ID	ISC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T17:30:17	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

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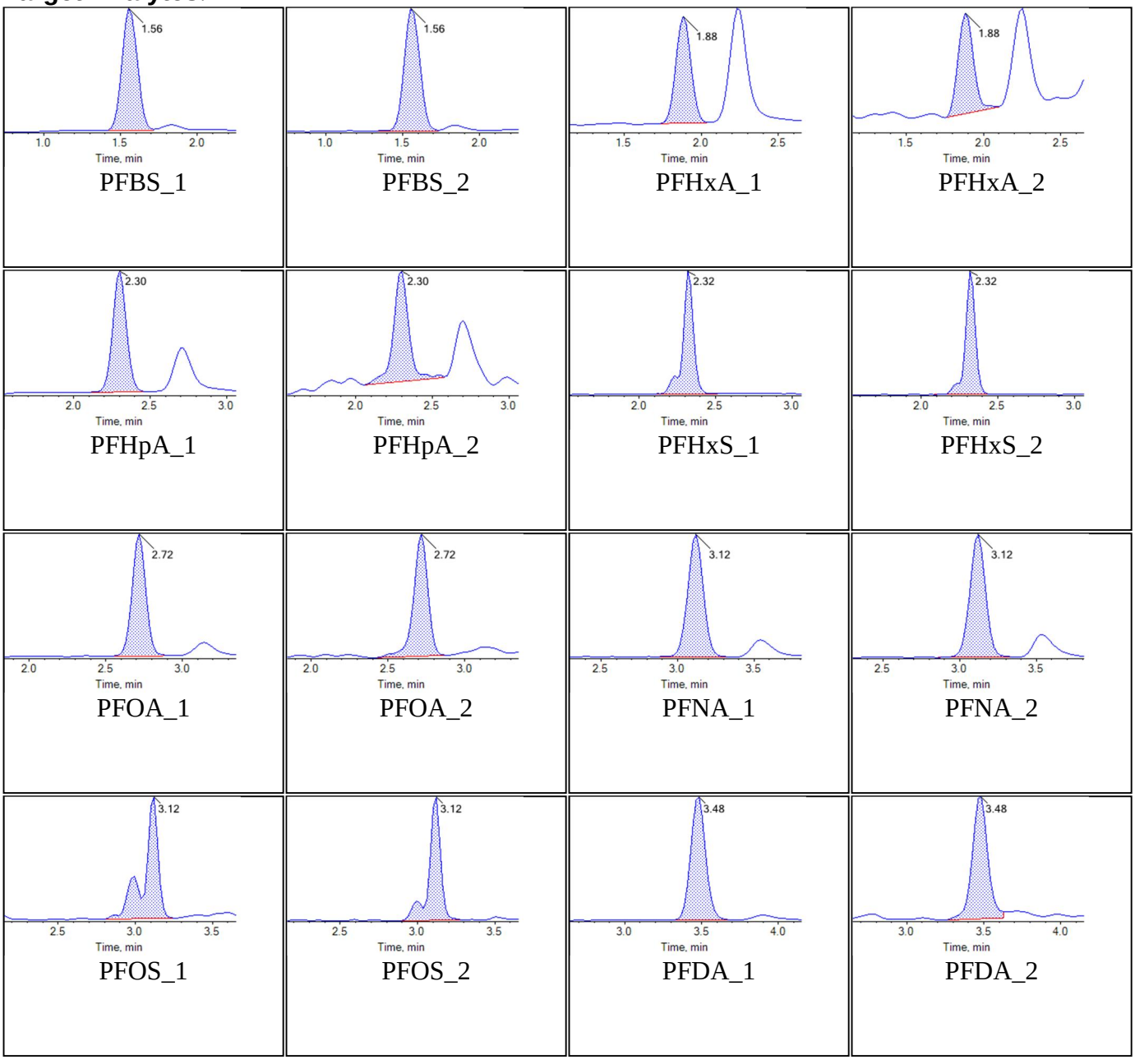

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Chromatogram Report

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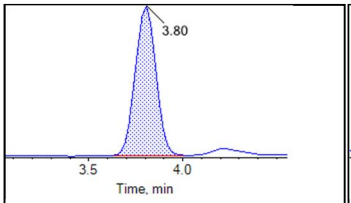

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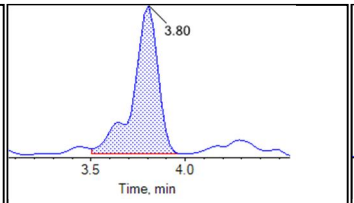

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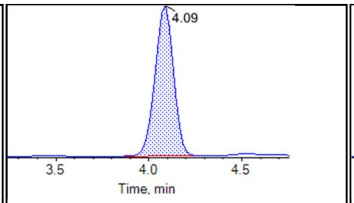

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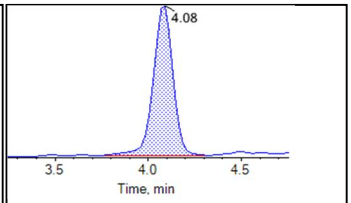

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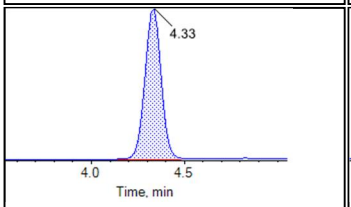

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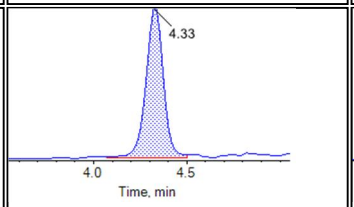

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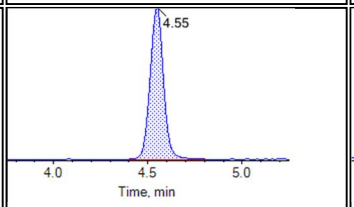

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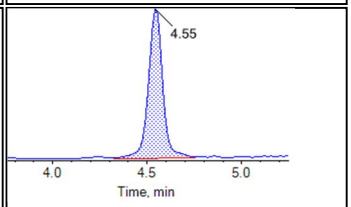

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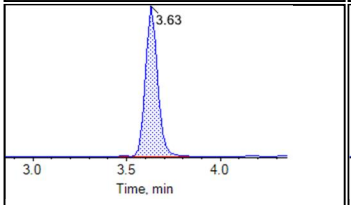

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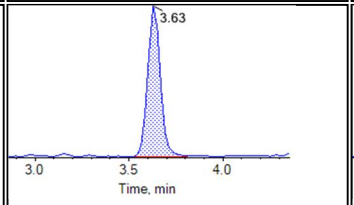

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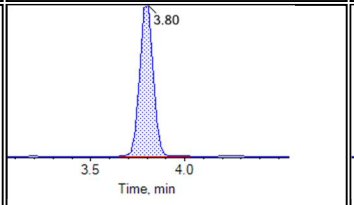

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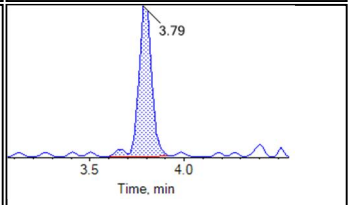

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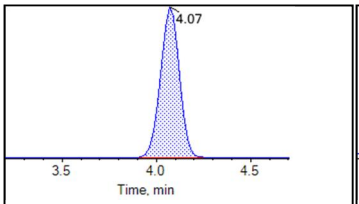

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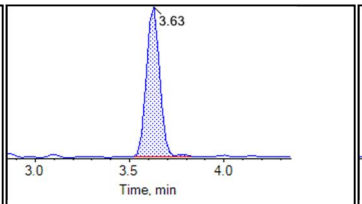

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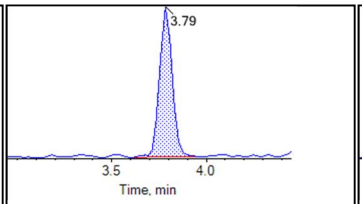
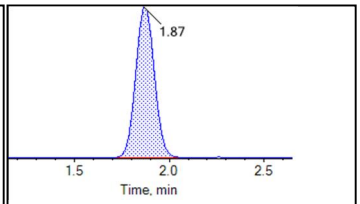
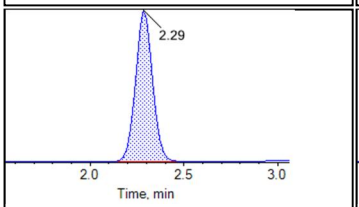


d5-EtFOSAA



13C5-PFHxA



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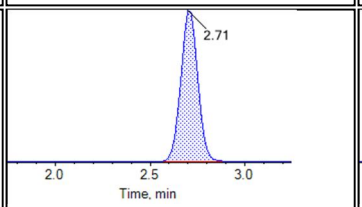

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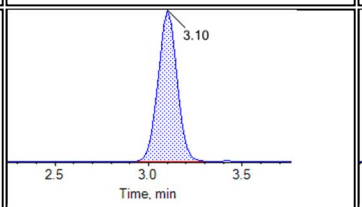
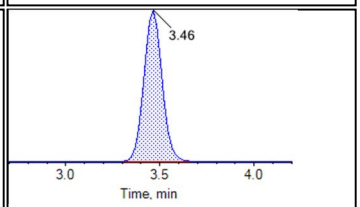


13C9-PFNA



13C6-PFDA

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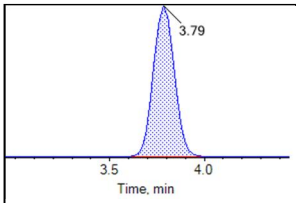

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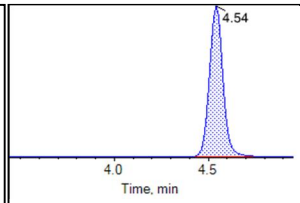

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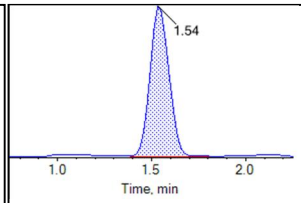

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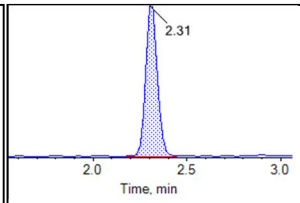

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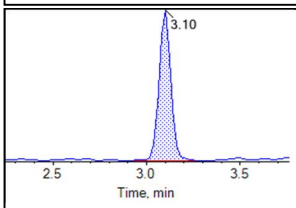

13C8-PFOS

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Chromatogram Report

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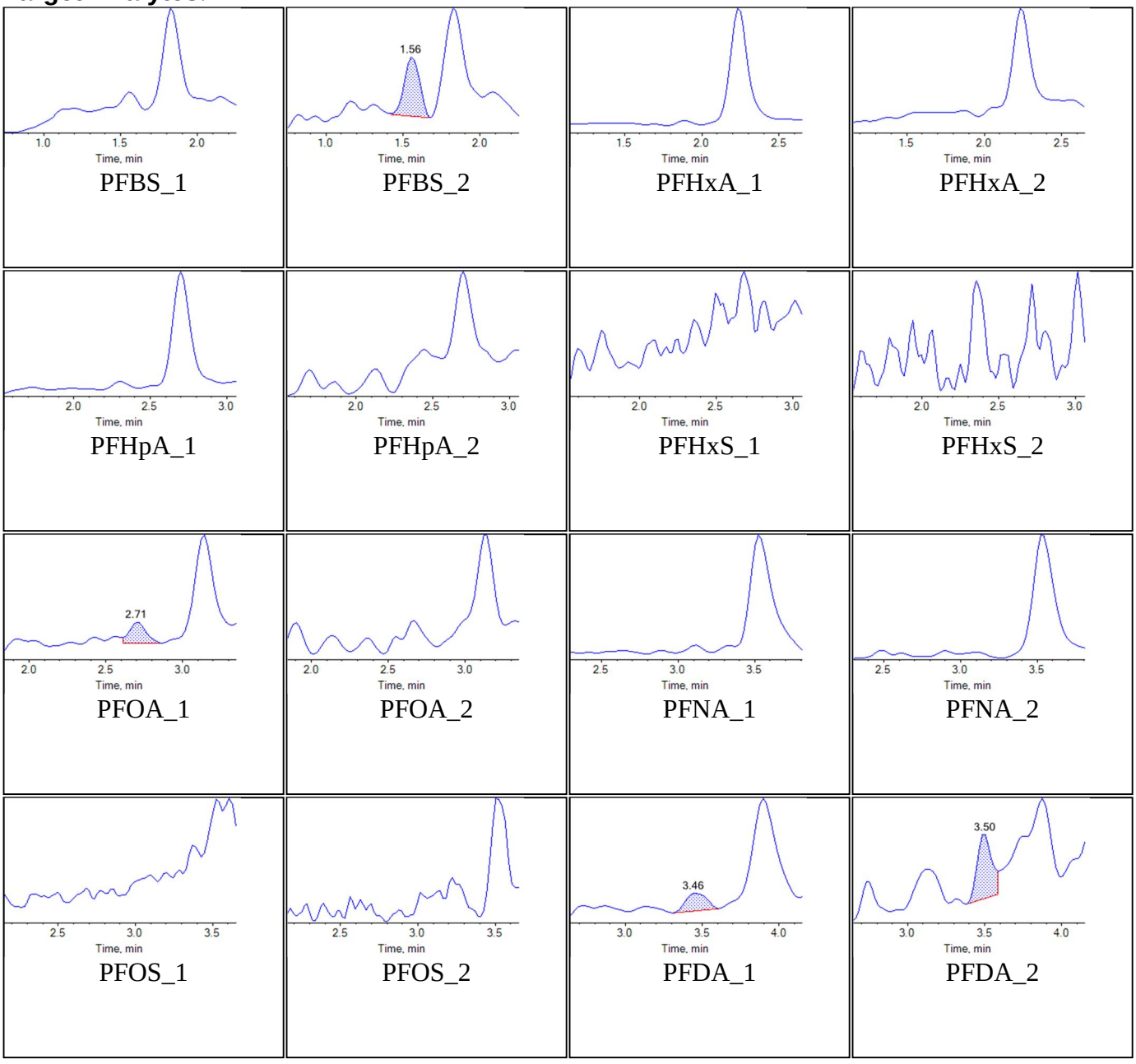
Sample Name	KB80 IB	**Injection Vial**	2
Sample ID		**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T17:41:09	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

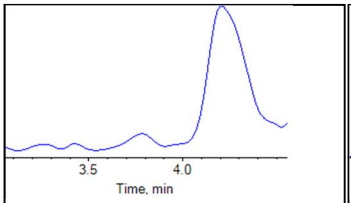
Target Analytes:



BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 07/11/2018 12:08:55 PM



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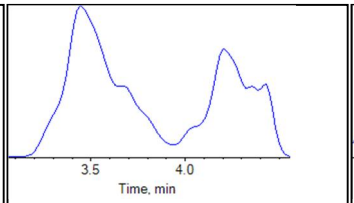
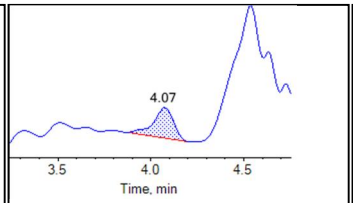


PFUnA_2



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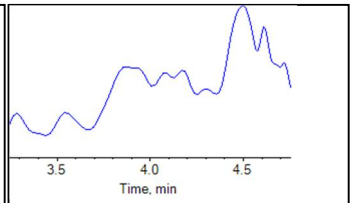
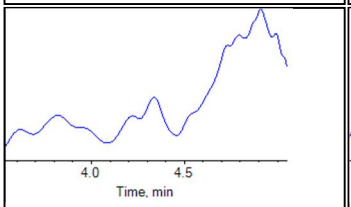
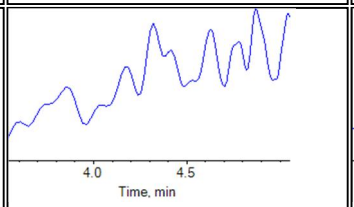


PFDoA_2



PFTrDA_1



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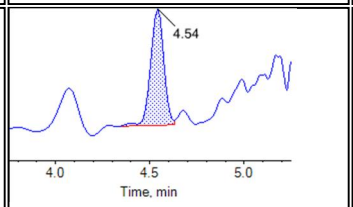

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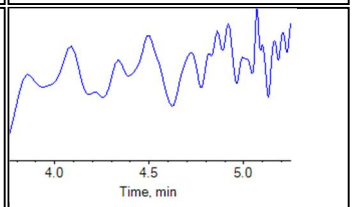

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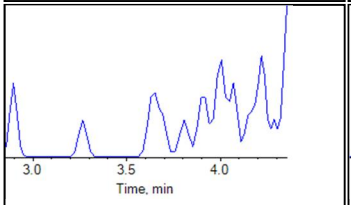
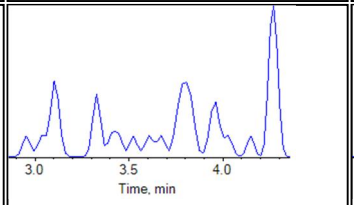
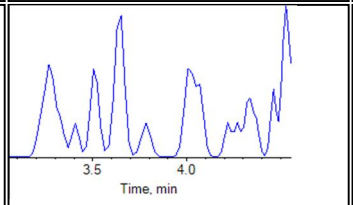


NMeFOSAA_1



NMeFOSAA_2



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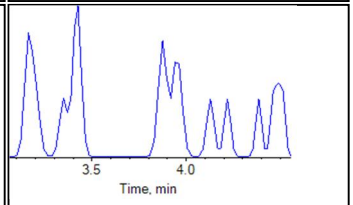
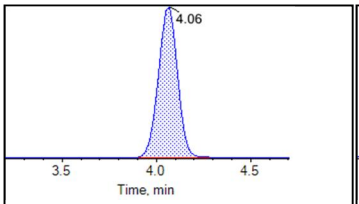
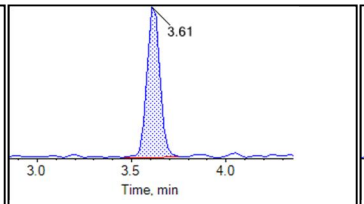


NEtFOSAA_2

Internal Standards:



13C2-PFDoA



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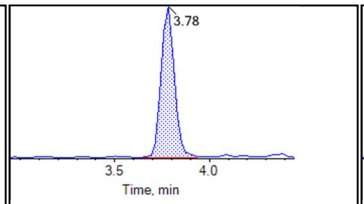
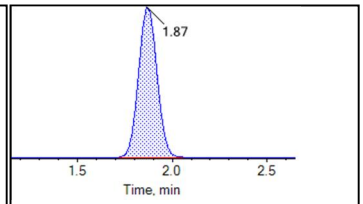
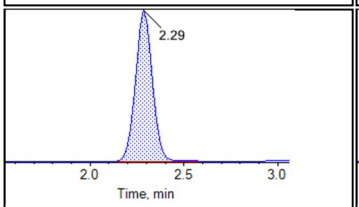


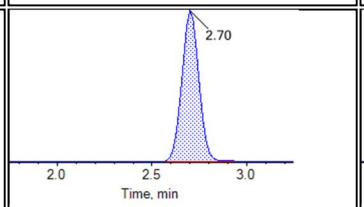
d5-EtFOSAA



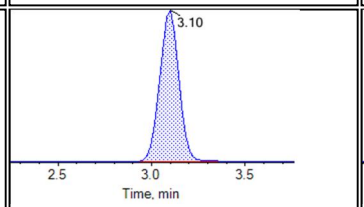
13C5-PFHxA



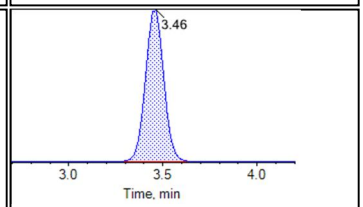
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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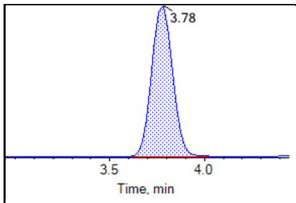
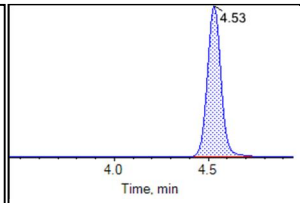


13C7-PFUnA



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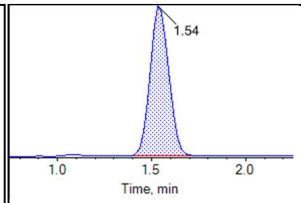

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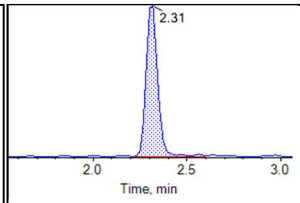

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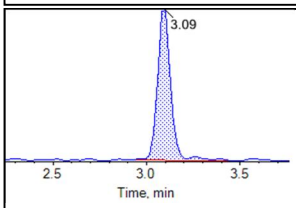

13C8-PFOS

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Chromatogram Report

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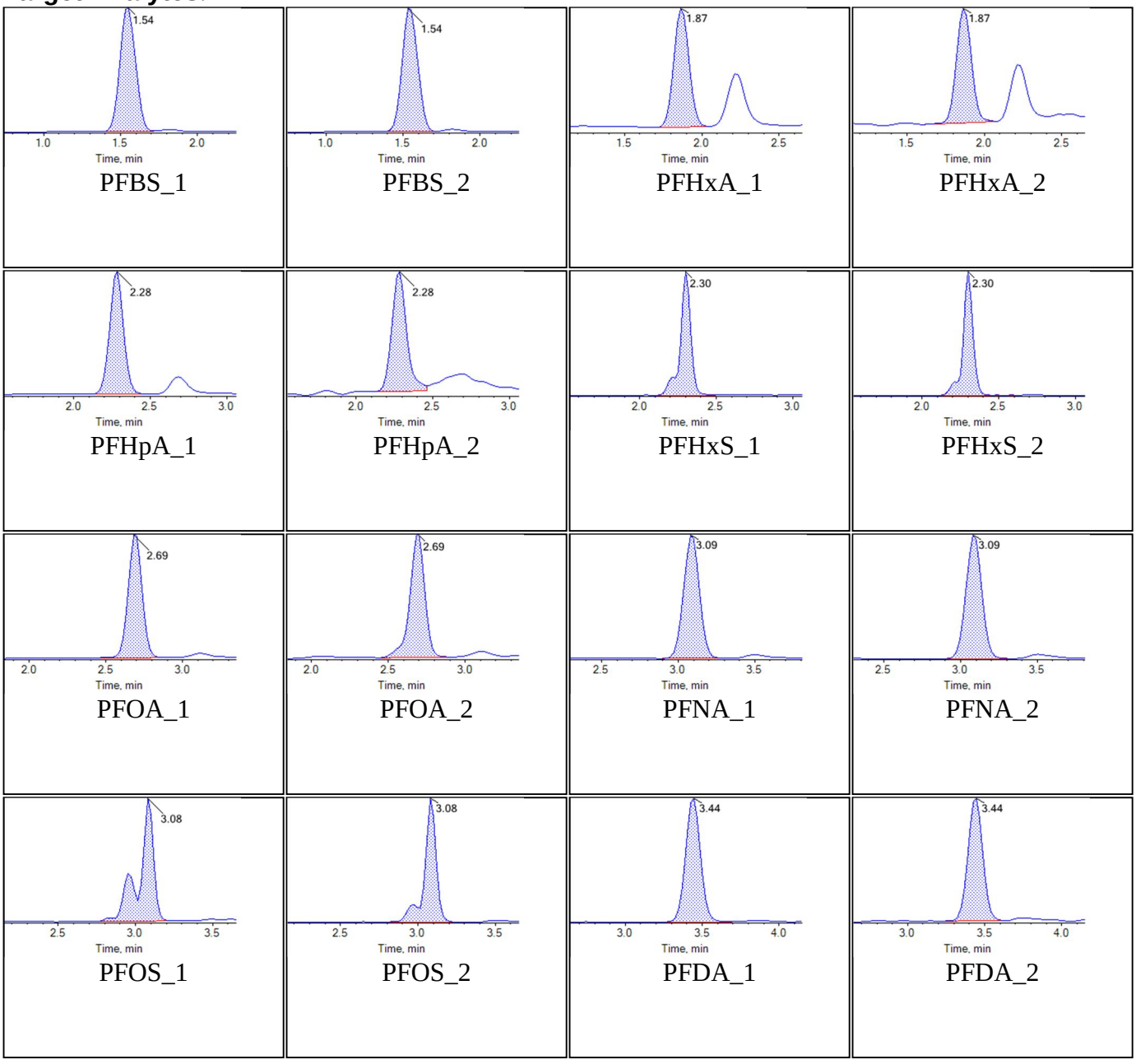
Printed: 07/11/2018 12:09:01 PM

Sample Name	KB76 CCV	**Injection Vial**	14
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T19:51:29	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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Chromatogram Report

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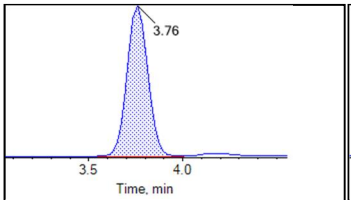

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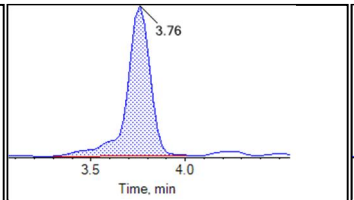
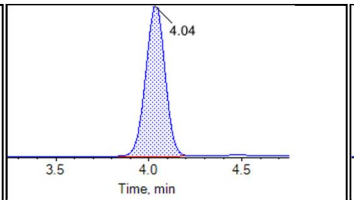
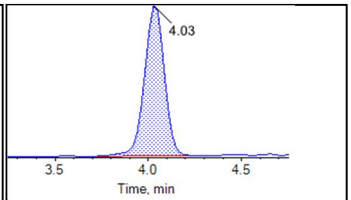


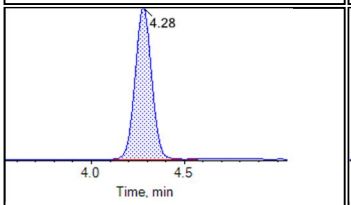
PFUnA_2



PFDoA_1



PFDoA_2



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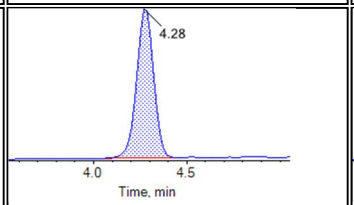

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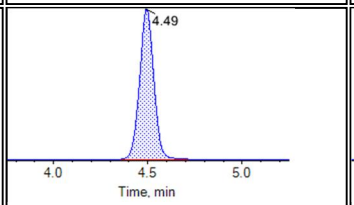

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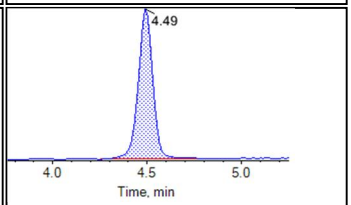

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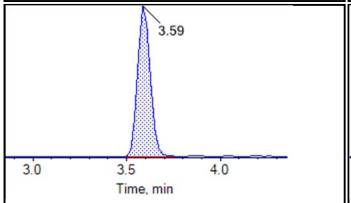

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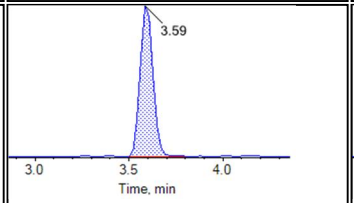

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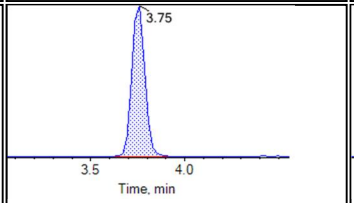
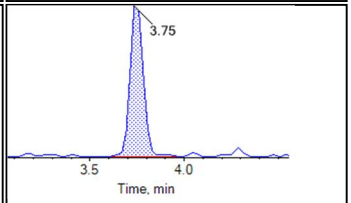
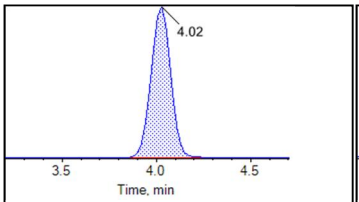


NEtFOSAA_1

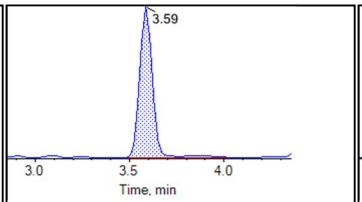


NEtFOSAA_2

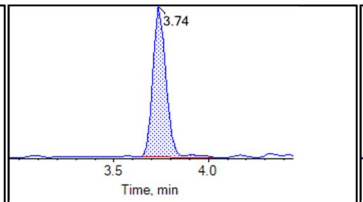
Internal Standards:



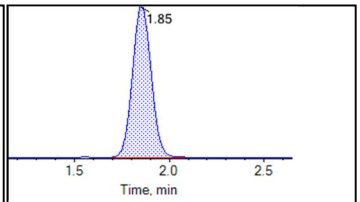
13C2-PFDoA



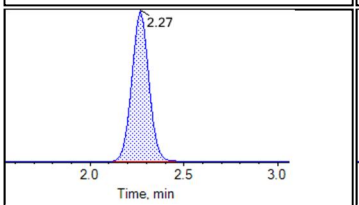
d3-MeFOSAA



d5-EtFOSAA



13C5-PFHxA



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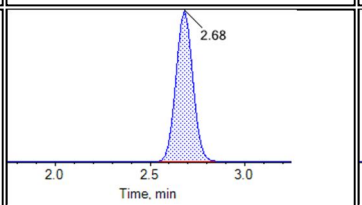
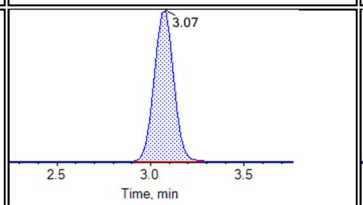
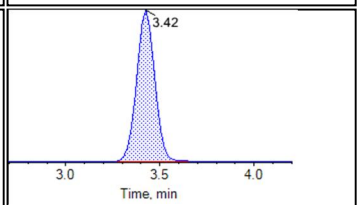


13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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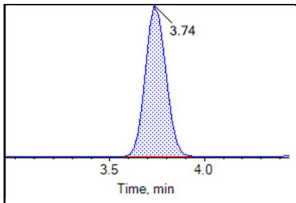
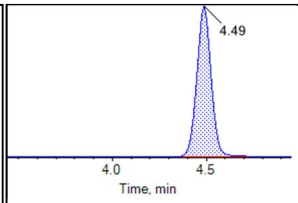


13C7-PFUnA



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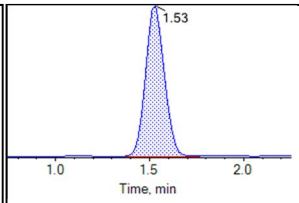
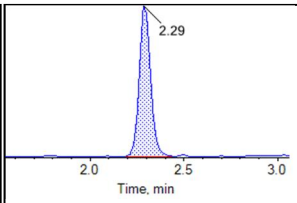
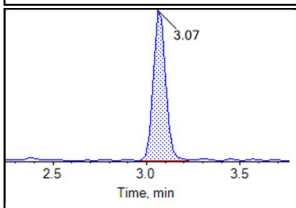


13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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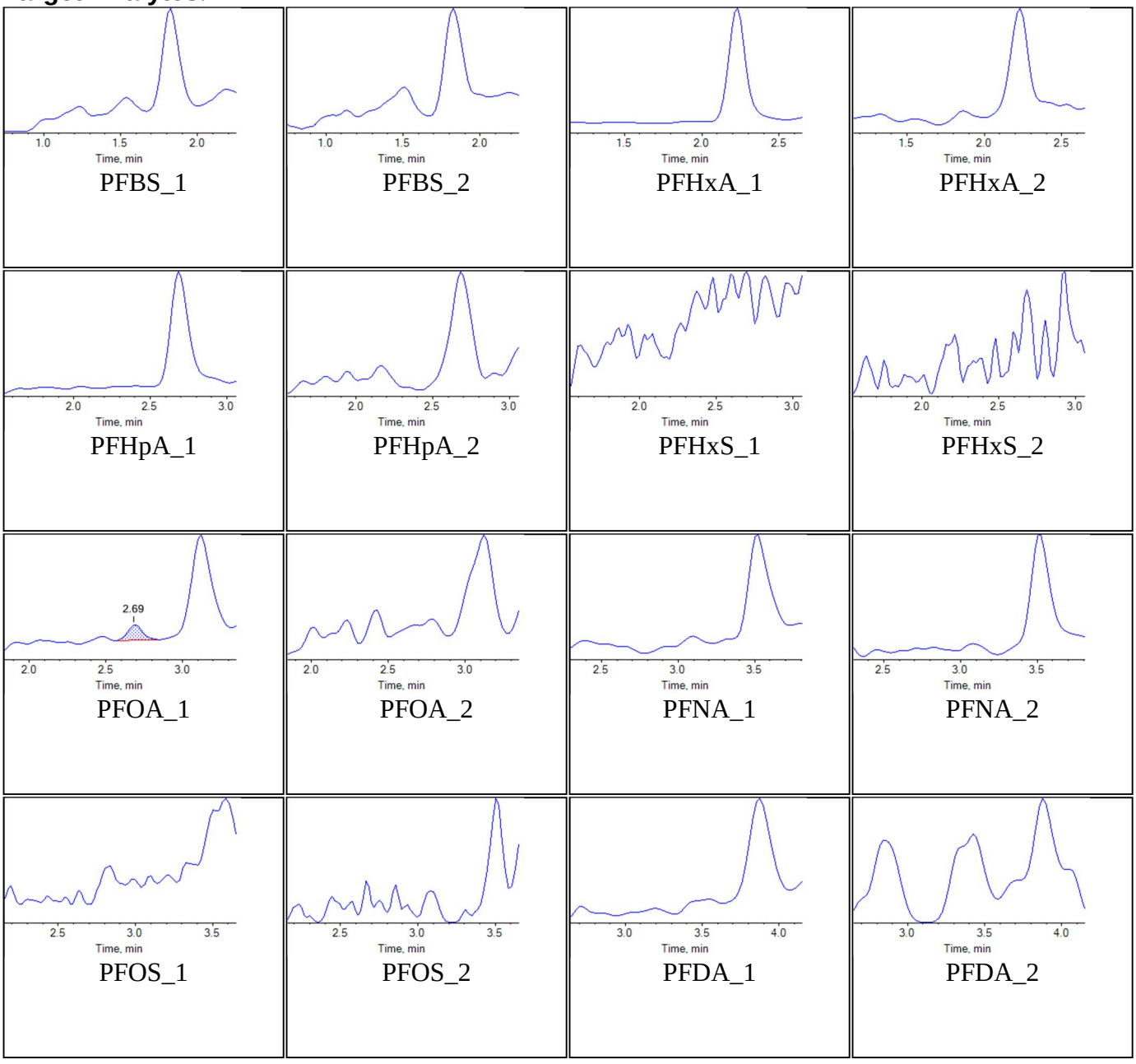
Sample Name	CS011PB-FS(3)	**Injection Vial**	16
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:13:12	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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Chromatogram Report

Created with Analyst Reporter
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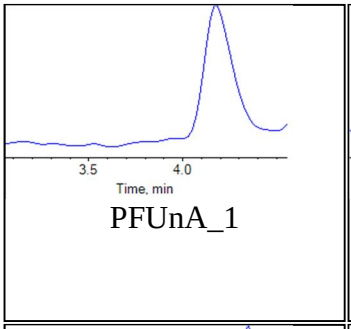
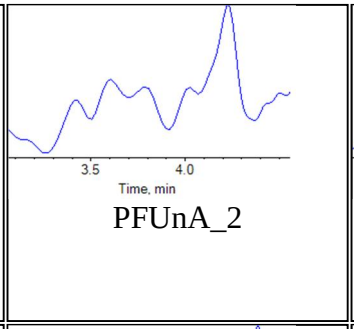
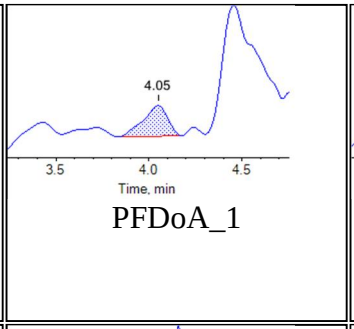


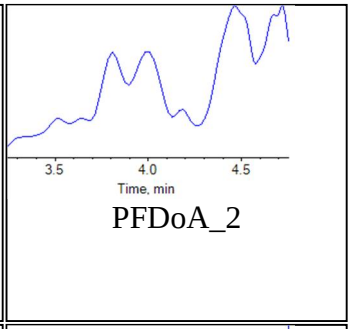
PFUnA_1



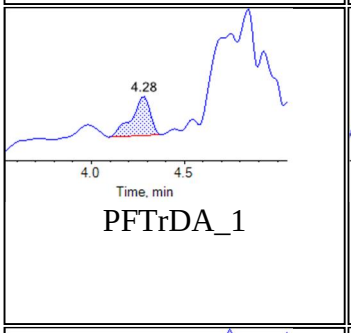
PFUnA_2



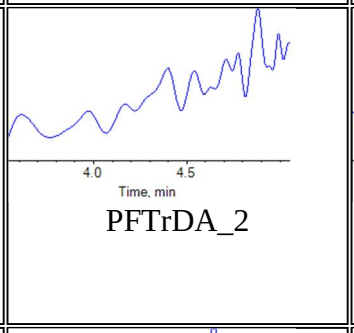
PFDoA_1



PFDoA_2



PFTrDA_1



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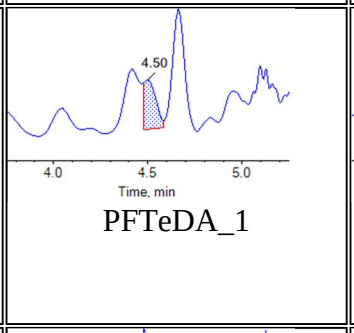
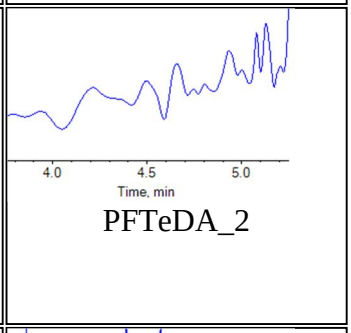


PFTeDA_1



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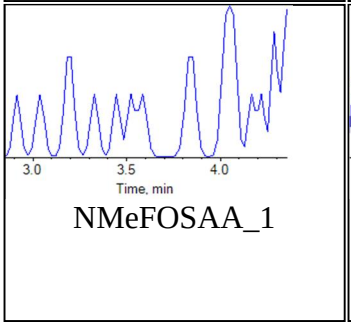
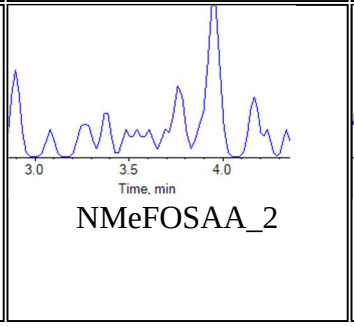


NMeFOSAA_1



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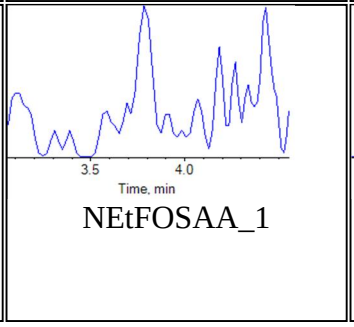
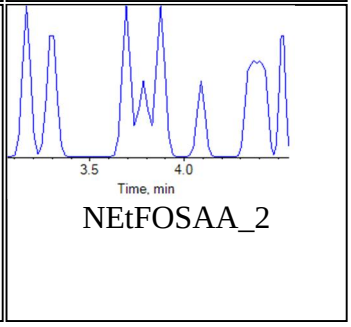
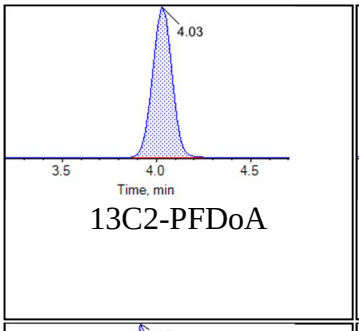


NEtFOSAA_1

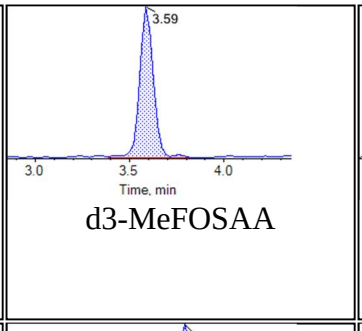


NEtFOSAA_2

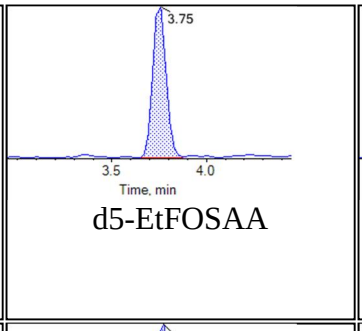
Internal Standards:



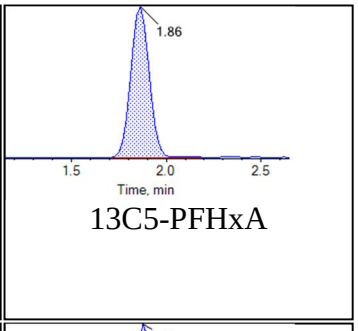
13C2-PFDoA



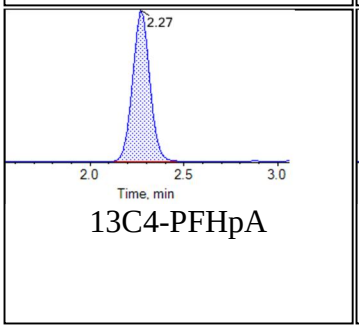
d3-MeFOSAA



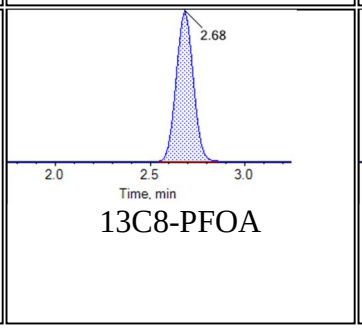
d5-EtFOSAA



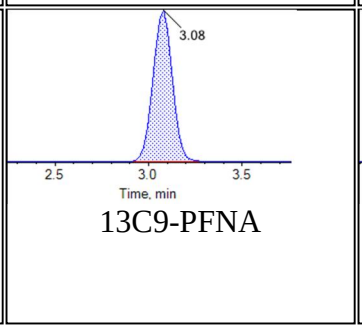
13C5-PFHxA



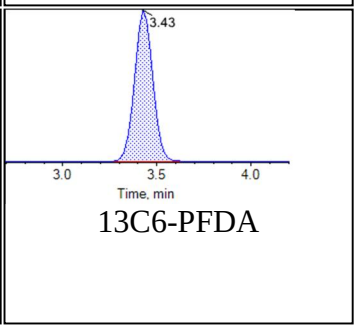
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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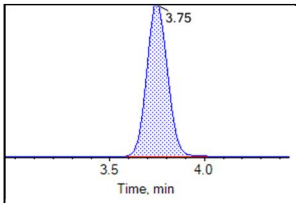
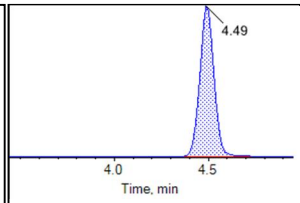
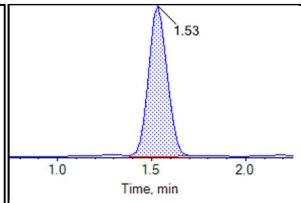


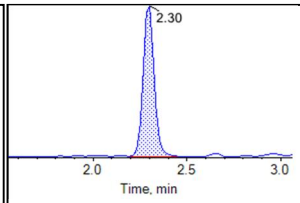
13C7-PFUnA



13C2-PFTeDA



13C3-PFBS



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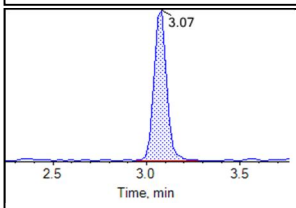

13C8-PFOS

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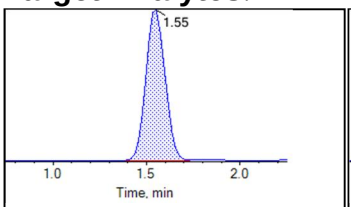
Chromatogram Report

Created with Analyst Reporter
Printed: 07/11/2018 12:09:14 PM

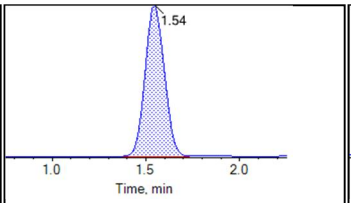
Sample Name	CS012LCS-FS(3)	**Injection Vial**	17
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:24:04	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

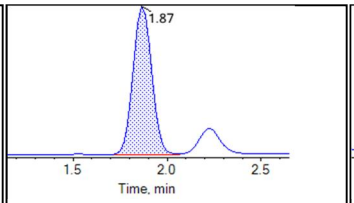
Target Analytes:



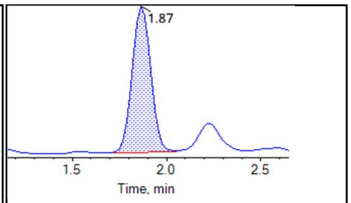
PFBS_1



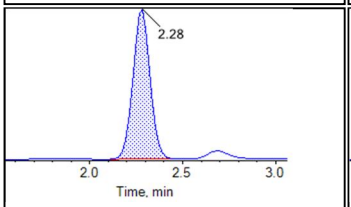
PFBS_2



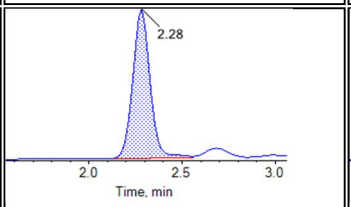
PFHxA_1



PFHxA_2



PFHpA_1



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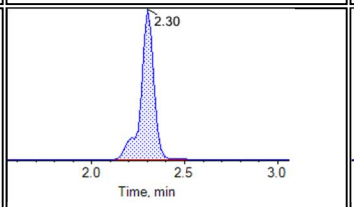
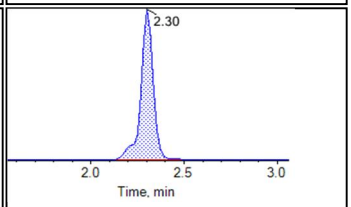
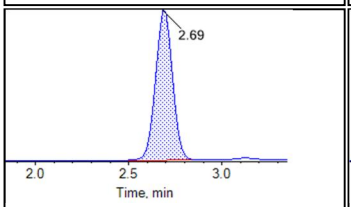


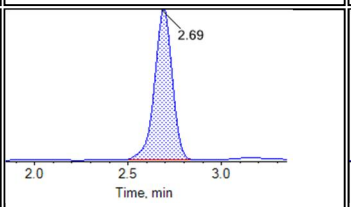
PFHxS_1



PFHxS_2



PFOA_1



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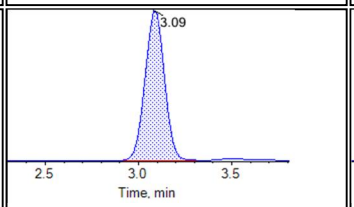
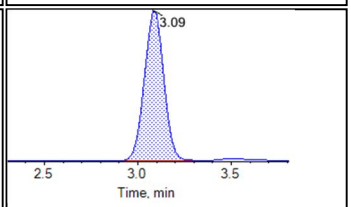


PFNA_1



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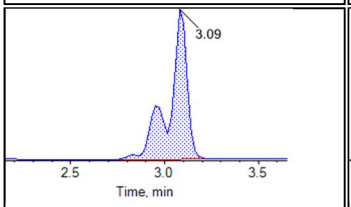
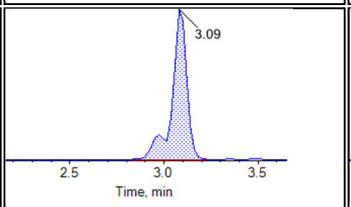
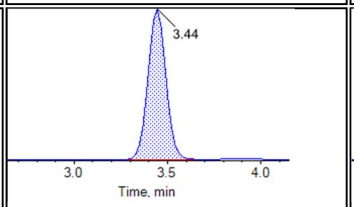


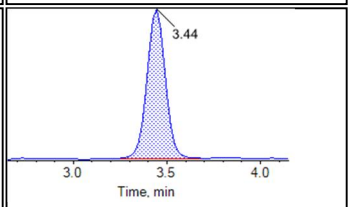
PFOS_1



PFOS_2



PFDA_1



PFDA_2

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Chromatogram Report

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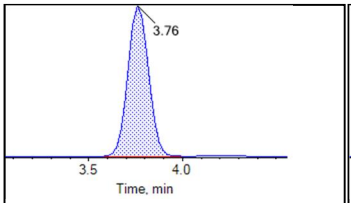
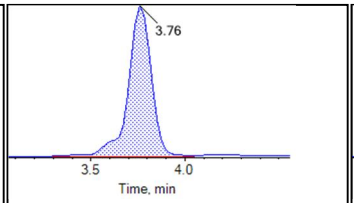
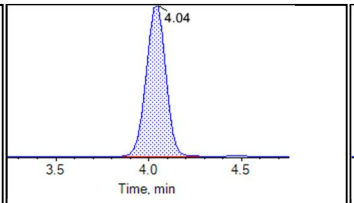


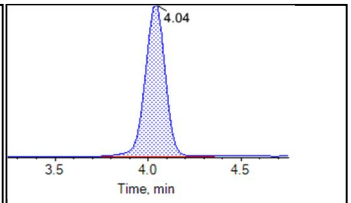
PFUnA_1



PFUnA_2



PFDoA_1



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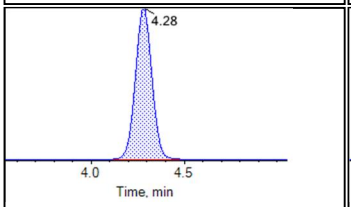

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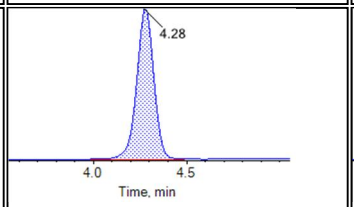

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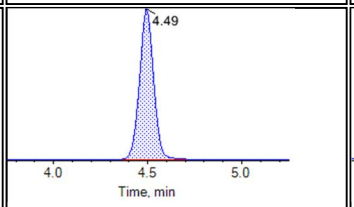
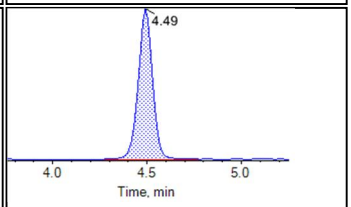


PFTeDA_1



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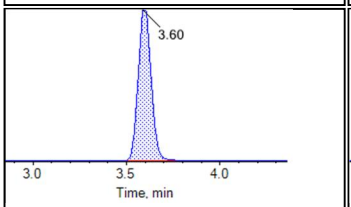

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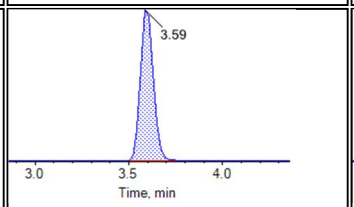

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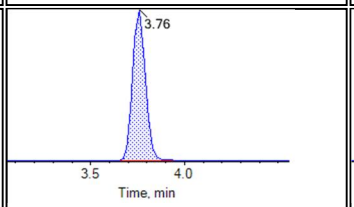

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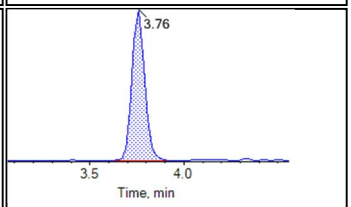

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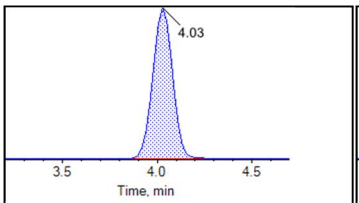

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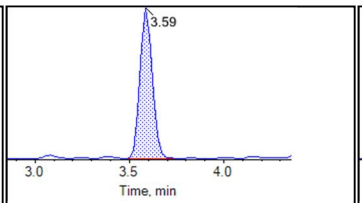
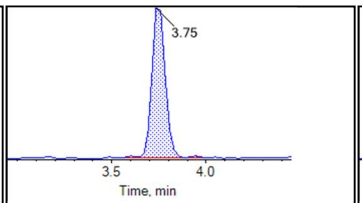


d3-MeFOSAA



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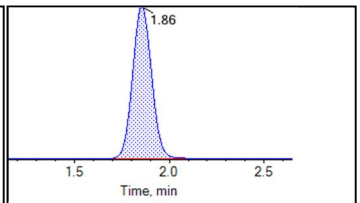

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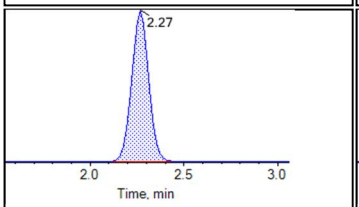

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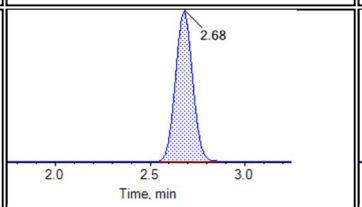
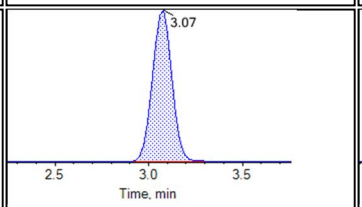
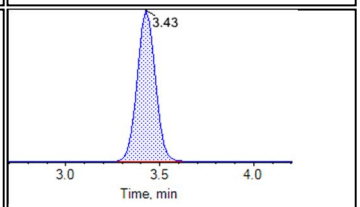


13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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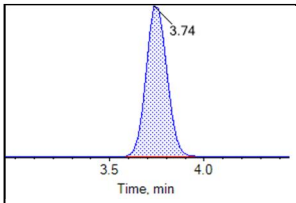
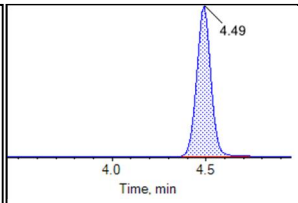


13C7-PFUnA



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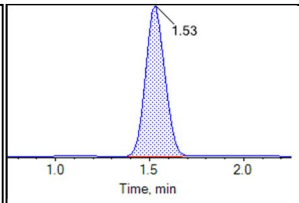

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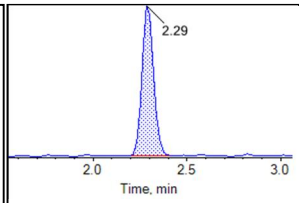

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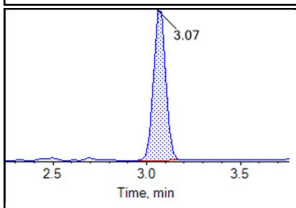

13C8-PFOS

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Chromatogram Report

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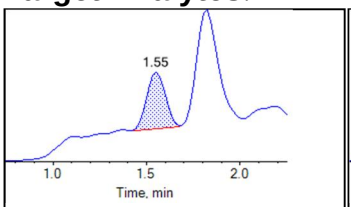
Sample Name	J8777-FS(3)	**Injection Vial**	18
Sample ID	VC-PM323-324-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:34:55	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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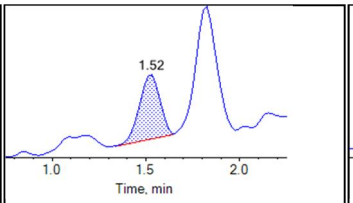

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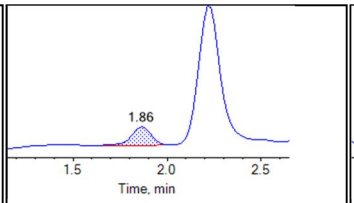

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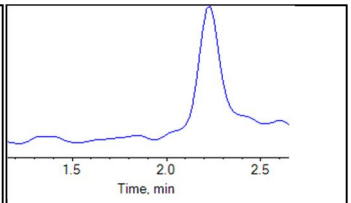

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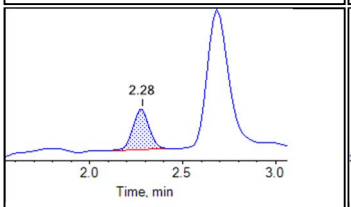

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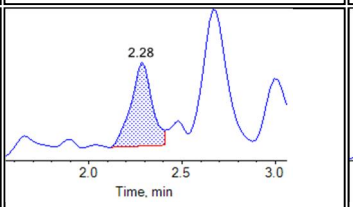

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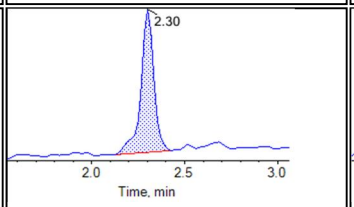

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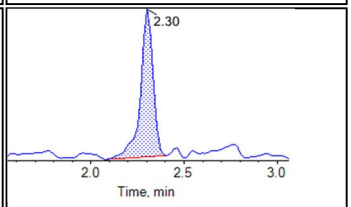

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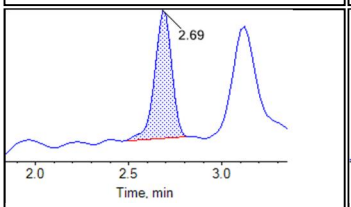

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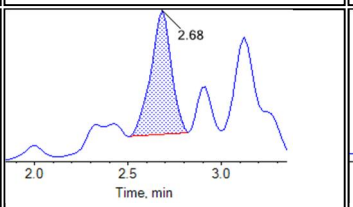

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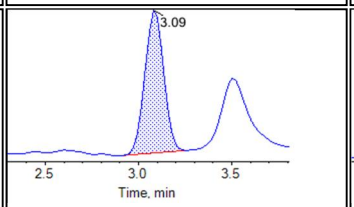

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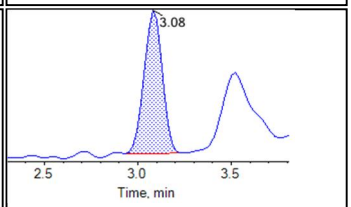

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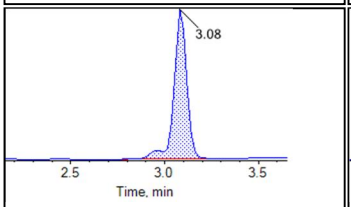

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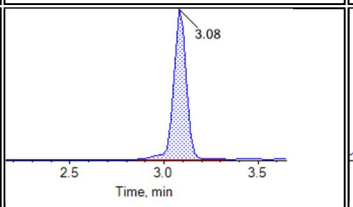

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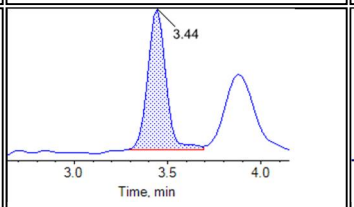

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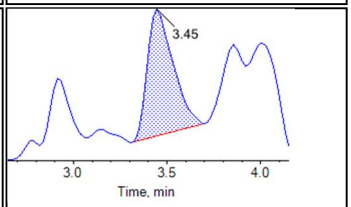

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Chromatogram Report

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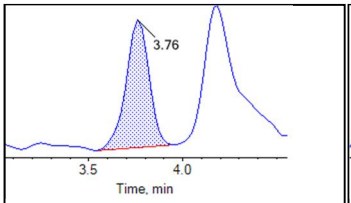

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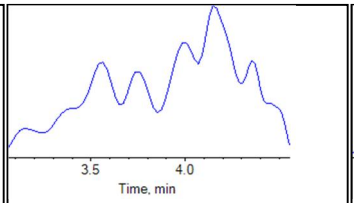

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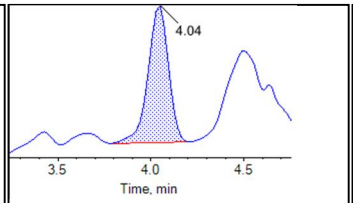

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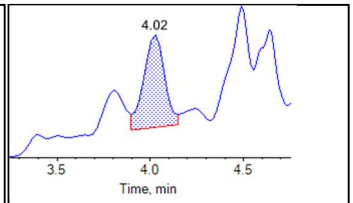

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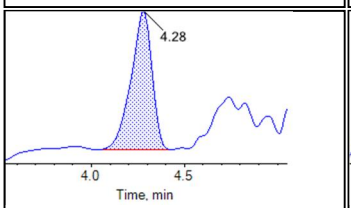

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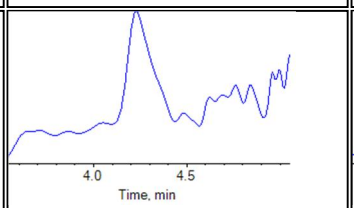

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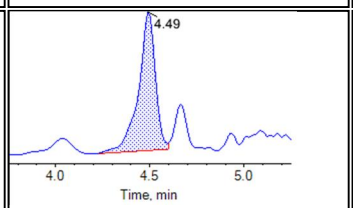

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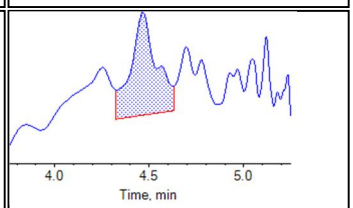

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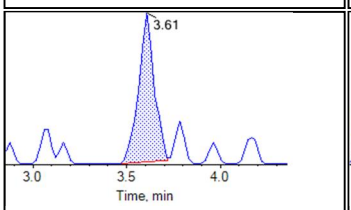

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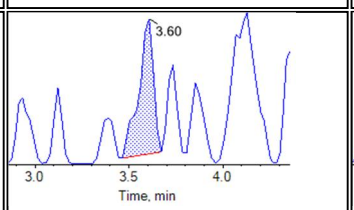

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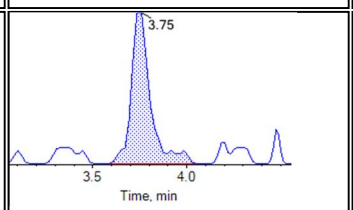

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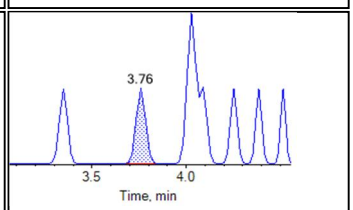

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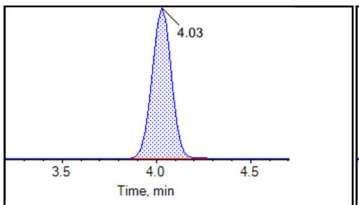

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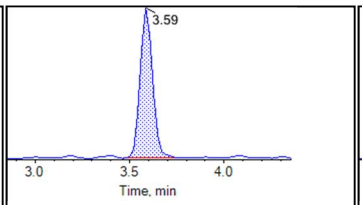

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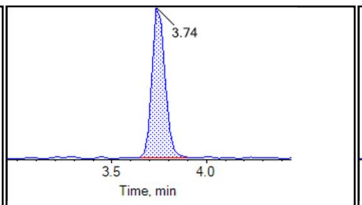

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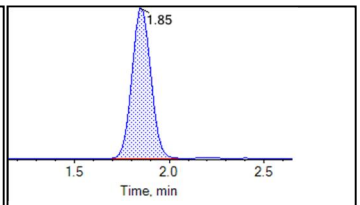
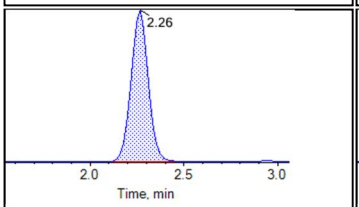


13C5-PFHxA



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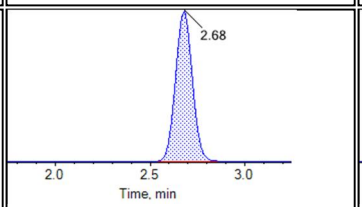
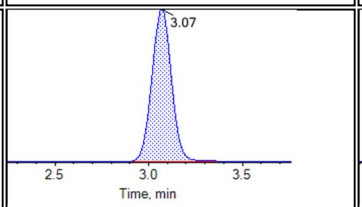
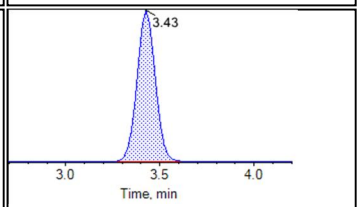


13C8-PFOA



13C9-PFNA



13C6-PFDA

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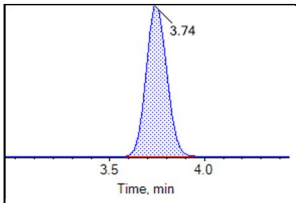
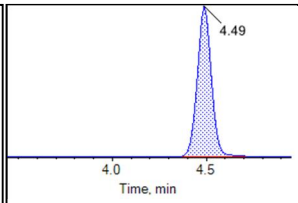


13C7-PFUnA



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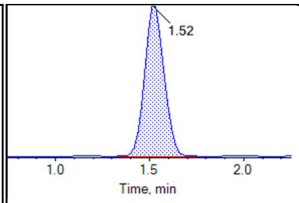
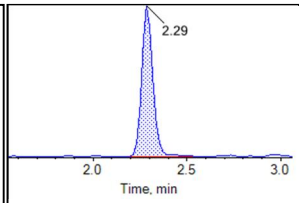
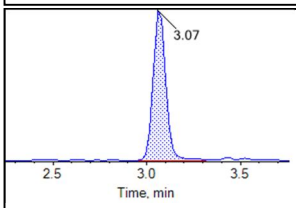


13C3-PFBS



13C3-PFHxS



13C8-PFOS

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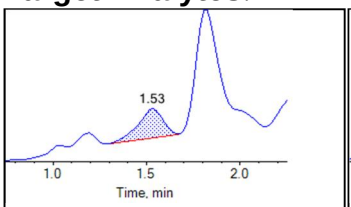
Sample Name	J8778-FS(3)	**Injection Vial**	19
Sample ID	VC-PM323-324-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:45:47	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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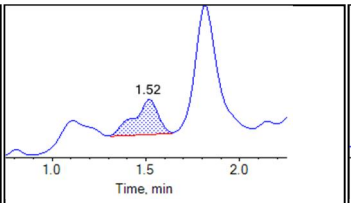
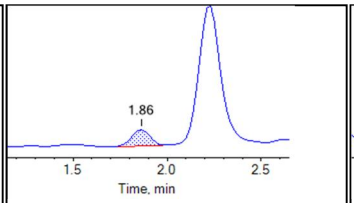


PFBS_2



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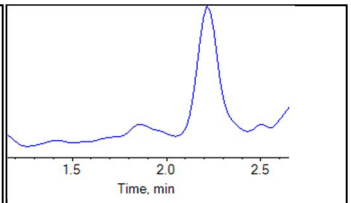

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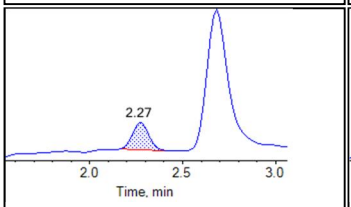

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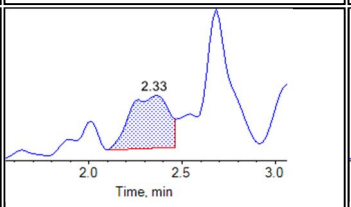

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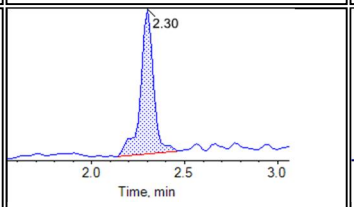

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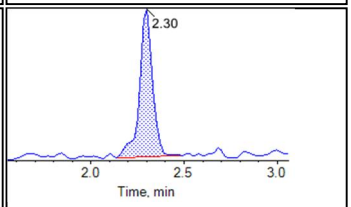

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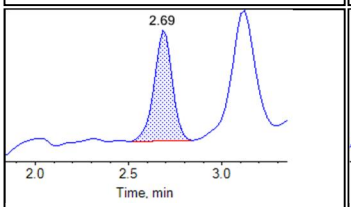
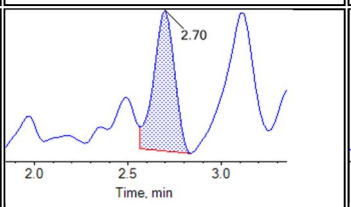


PFOA_1



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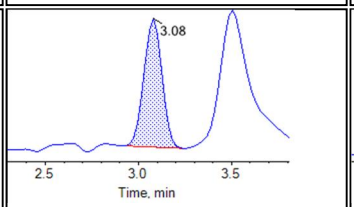

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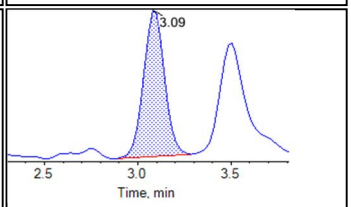

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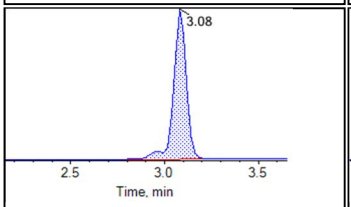
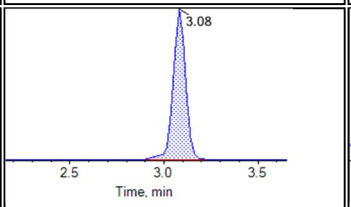


PFOS_1



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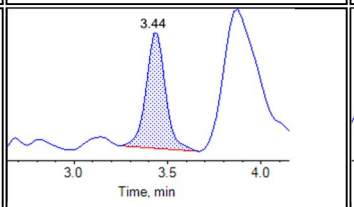

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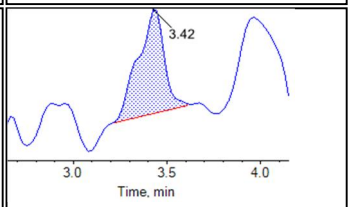

PFDA_2

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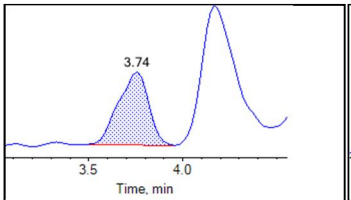

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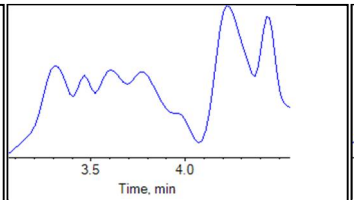

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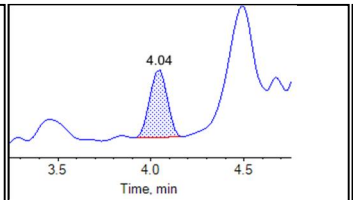

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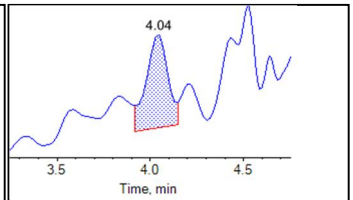

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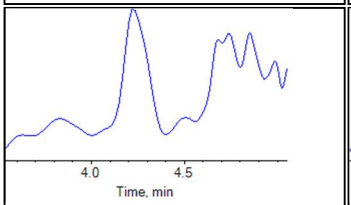

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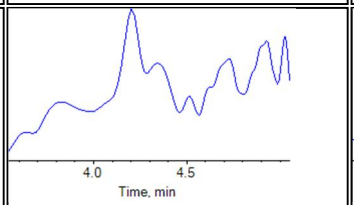

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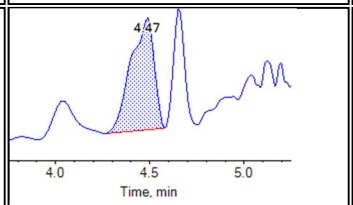

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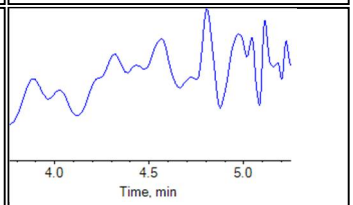

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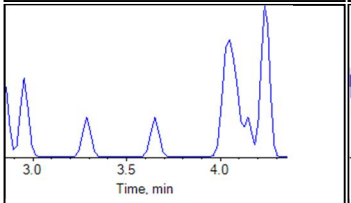

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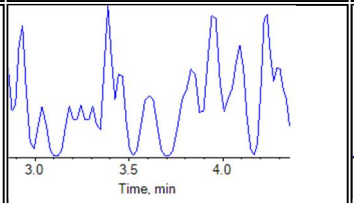

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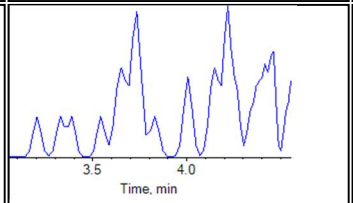

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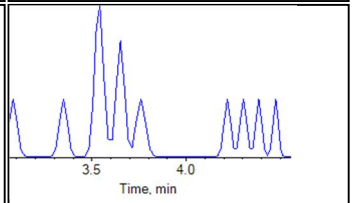
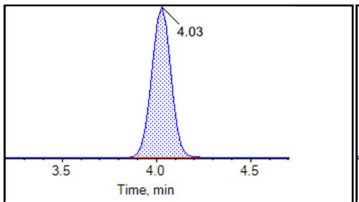
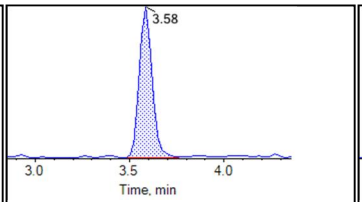


NEtFOSAA_2

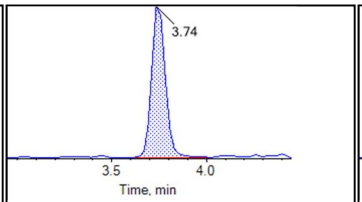
Internal Standards:



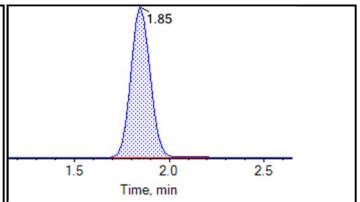
13C2-PFDoA



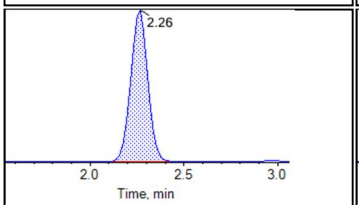
d3-MeFOSAA



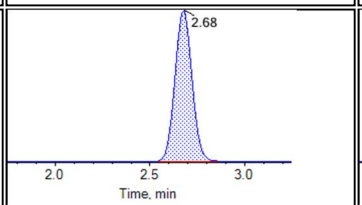
d5-EtFOSAA



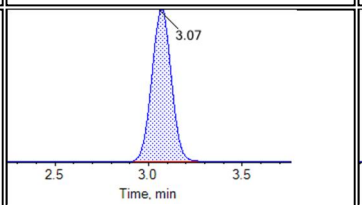
13C5-PFHxA



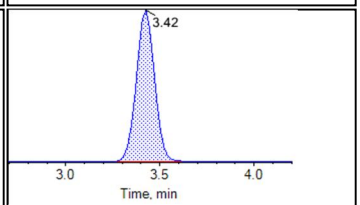
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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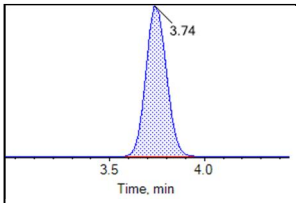
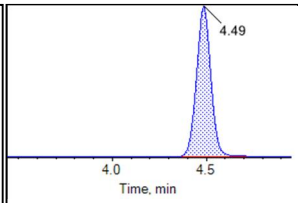
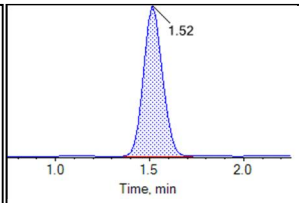


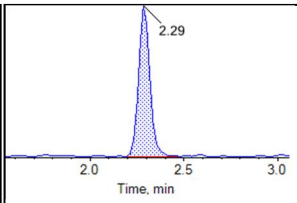
13C7-PFUnA



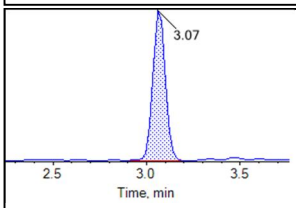
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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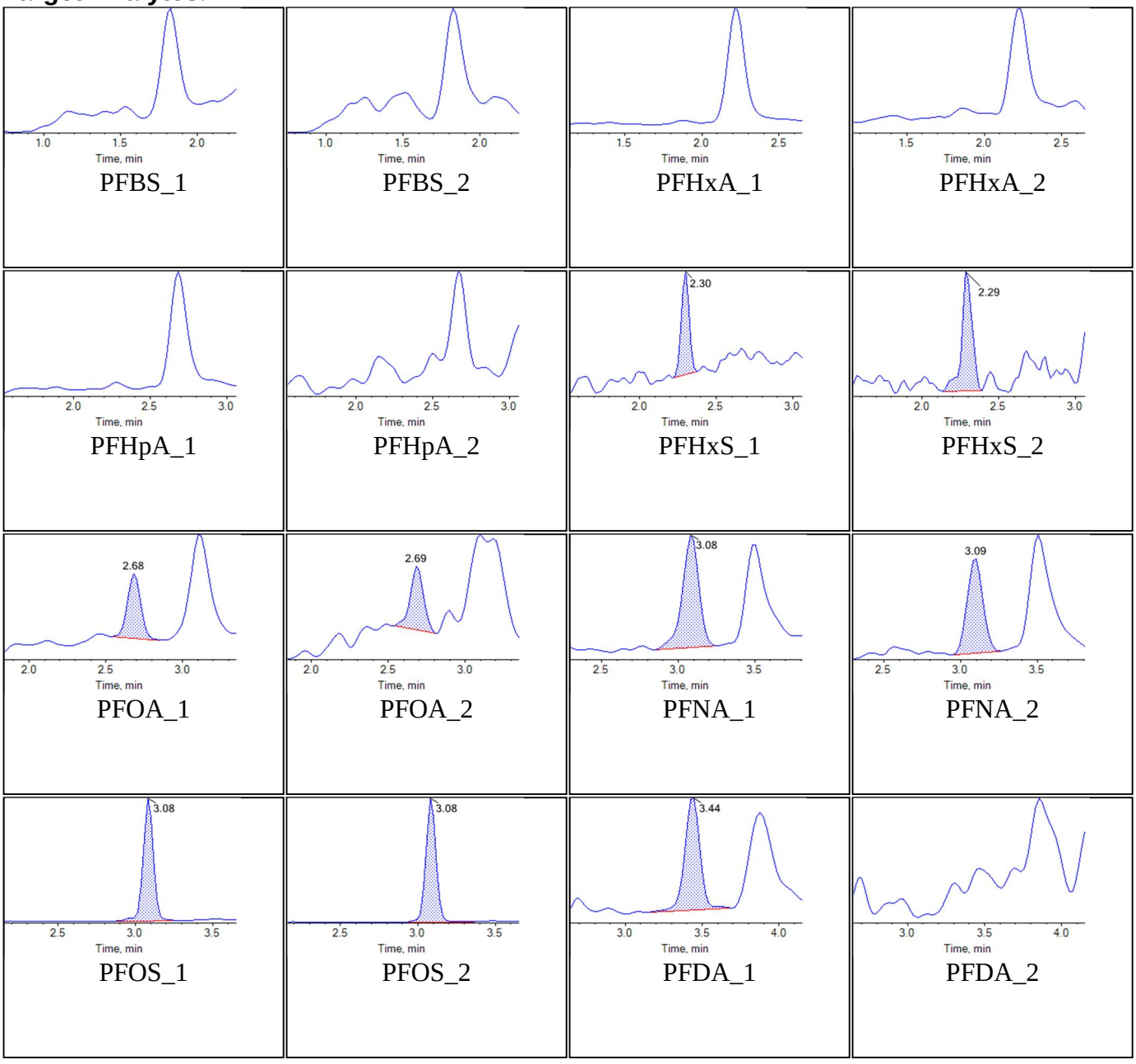
Sample Name	J8779-FS(3)	**Injection Vial**	20
Sample ID	VC-PM553-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:56:39	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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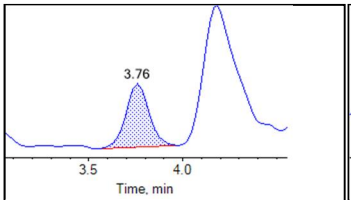
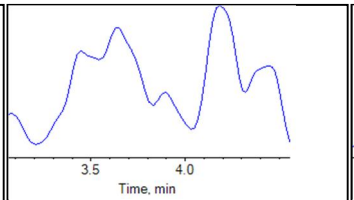


PFUnA_1



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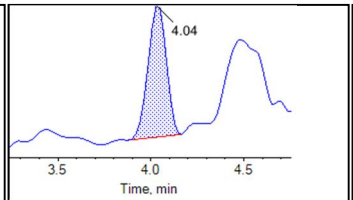

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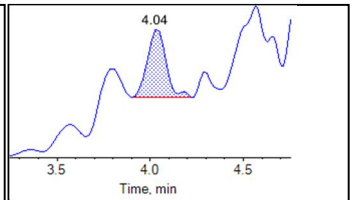

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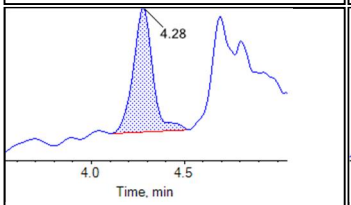
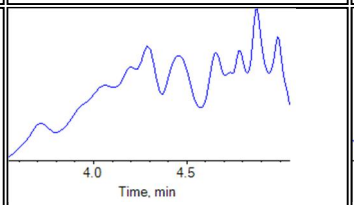


PFTrDA_1



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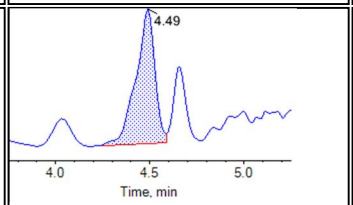

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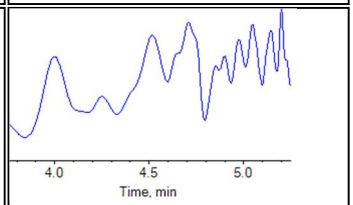

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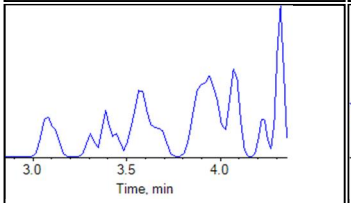

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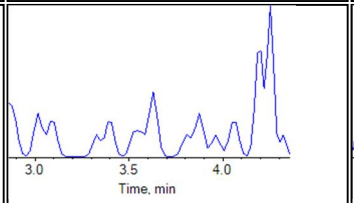

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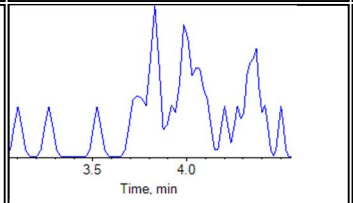

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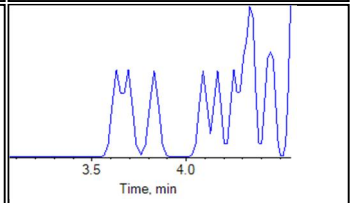
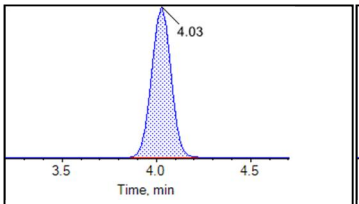
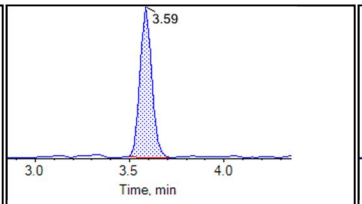


NEtFOSAA_2

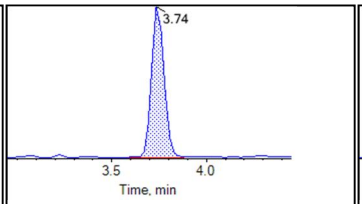
Internal Standards:



13C2-PFDoA



d3-MeFOSAA



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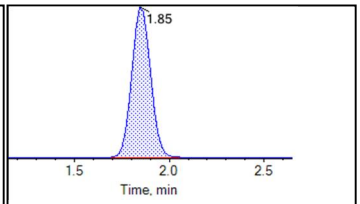

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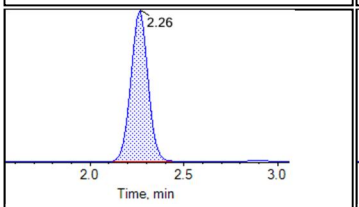
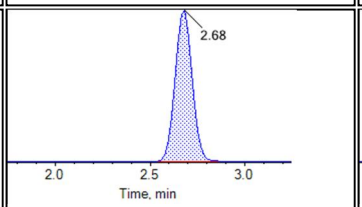
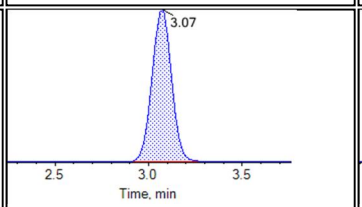


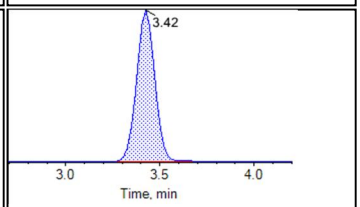
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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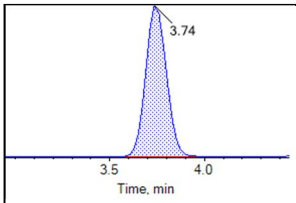
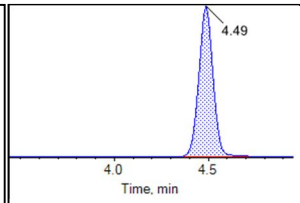
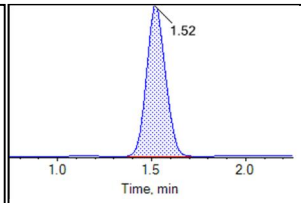


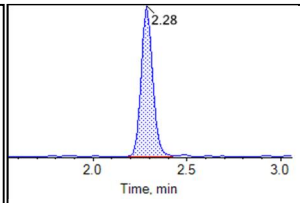
13C7-PFUnA



13C2-PFTeDA



13C3-PFBS



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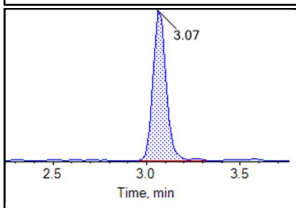

13C8-PFOS

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Chromatogram Report

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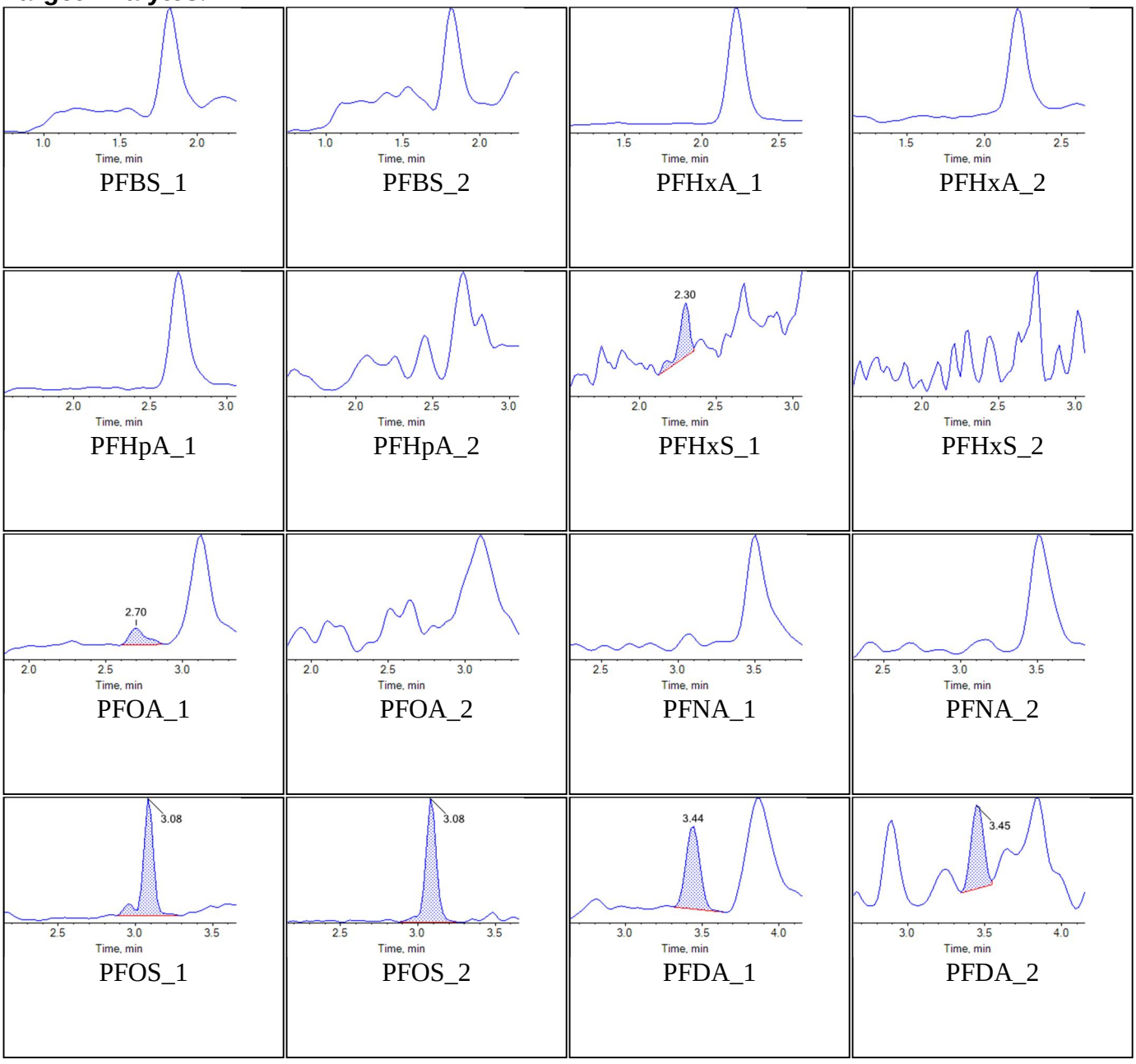
Printed: 07/11/2018 12:09:39 PM

Sample Name	J8780-FS(3)	**Injection Vial**	21
Sample ID	VC-PM553-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:07:31	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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Chromatogram Report

Created with Analyst Reporter
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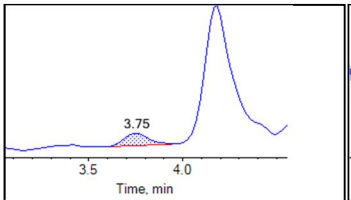

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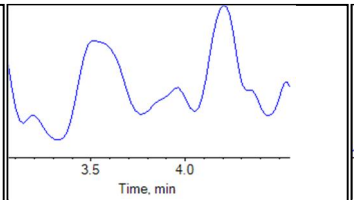

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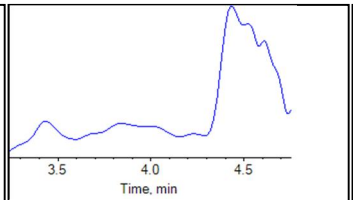

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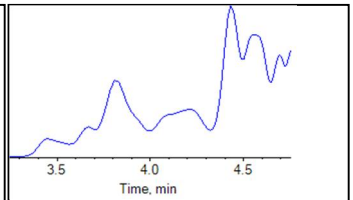
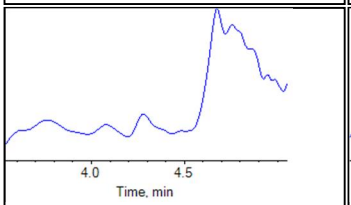


PFDoA_2



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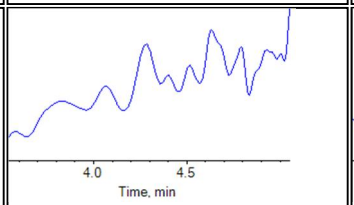

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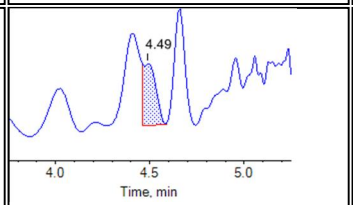

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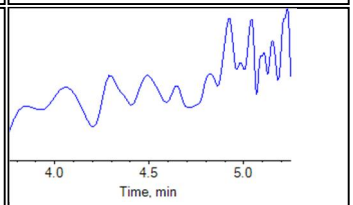

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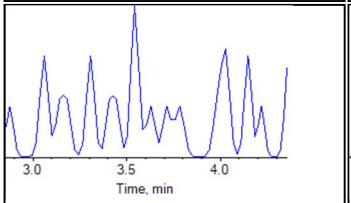

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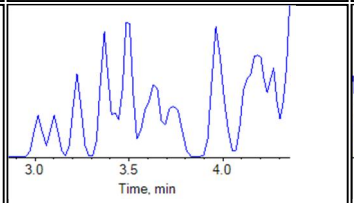

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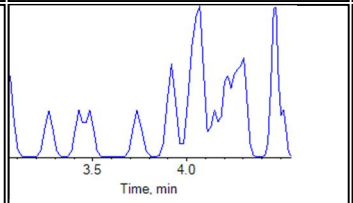

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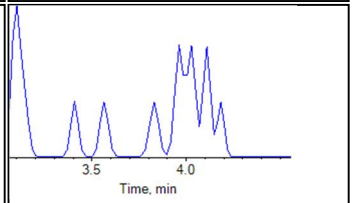

NEtFOSAA_2

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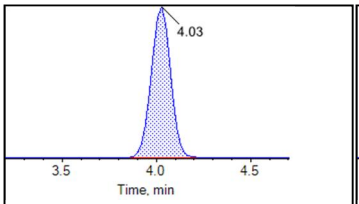

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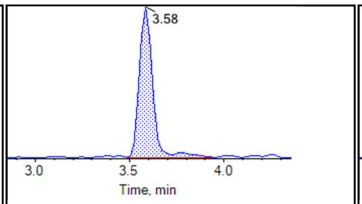
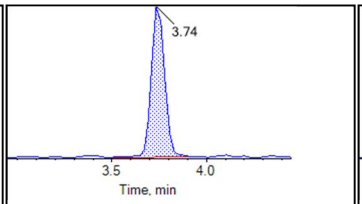
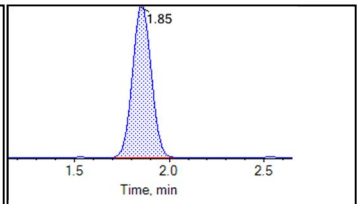


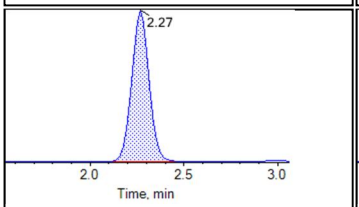
d3-MeFOSAA



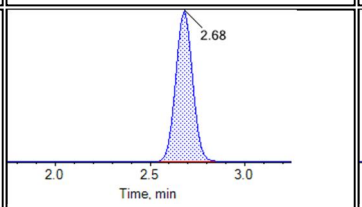
d5-EtFOSAA



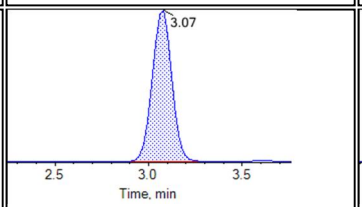
13C5-PFHxA



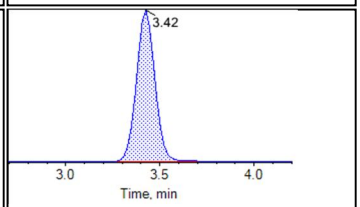
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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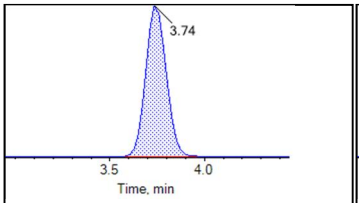
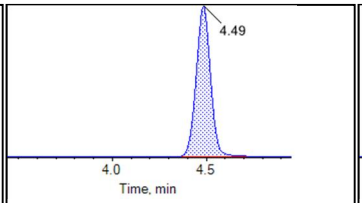
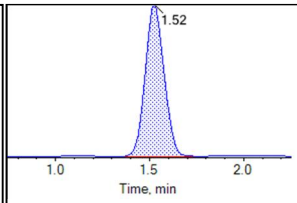


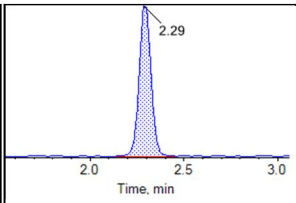
13C7-PFUnA



13C2-PFTeDA



13C3-PFBS



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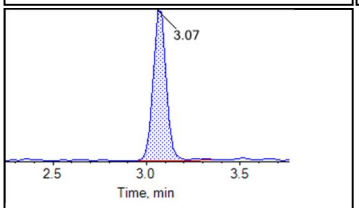

13C8-PFOS

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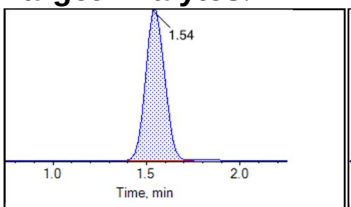
Chromatogram Report

Created with Analyst Reporter
Printed: 07/11/2018 12:09:45 PM

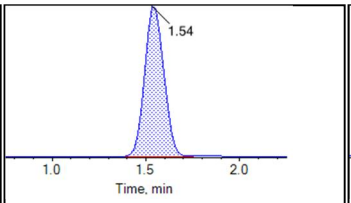
Sample Name	J8781MS-FS(3)	**Injection Vial**	22
Sample ID	VC-PM553-SD01-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:18:23	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



PFBS_1



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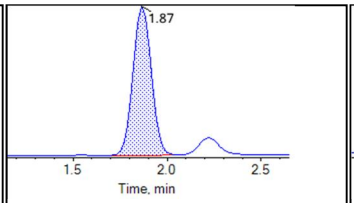

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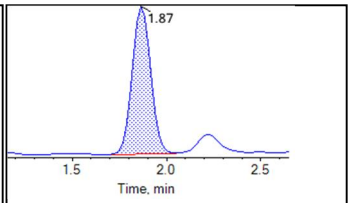

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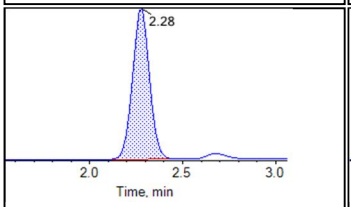

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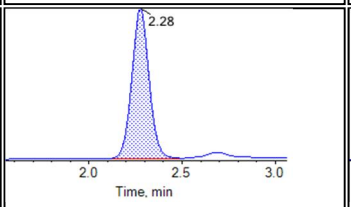

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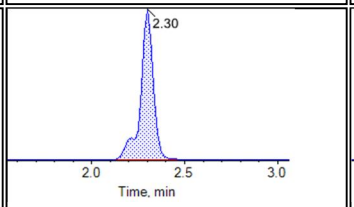

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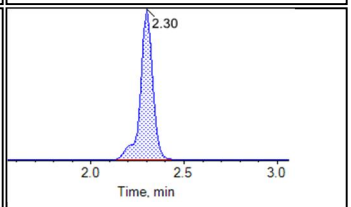

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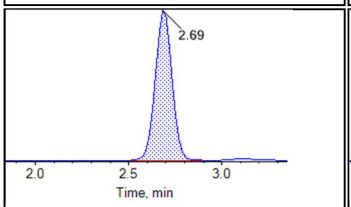

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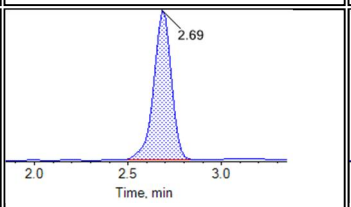

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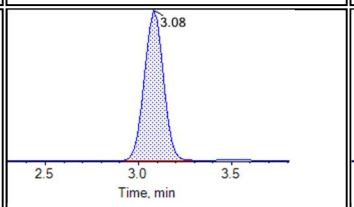

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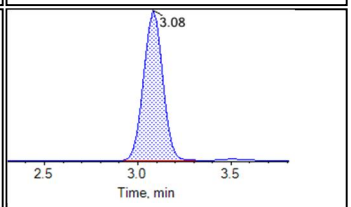

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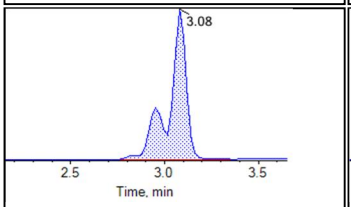

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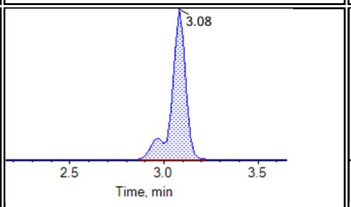

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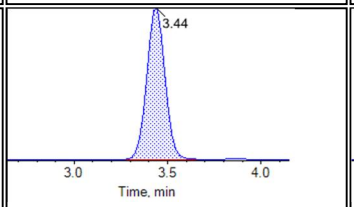

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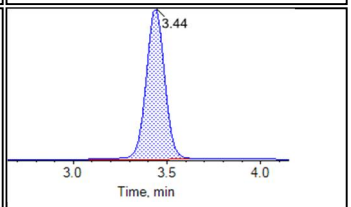

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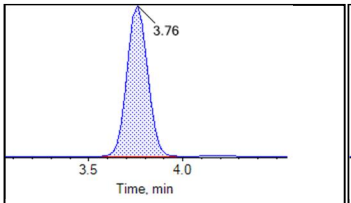

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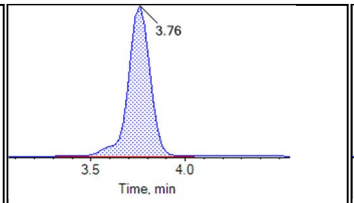

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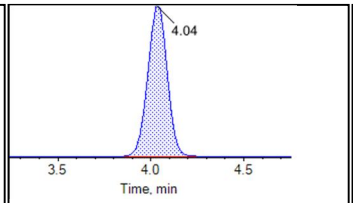

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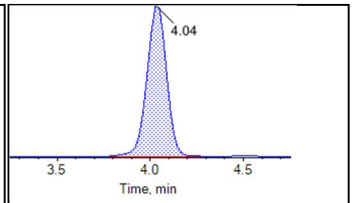

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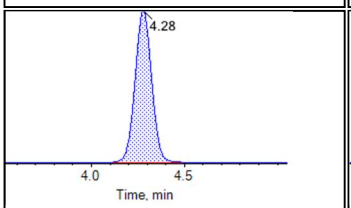

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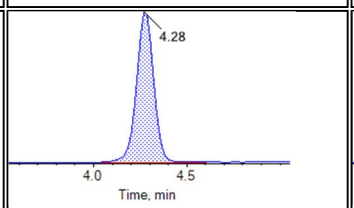

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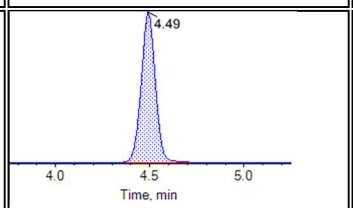

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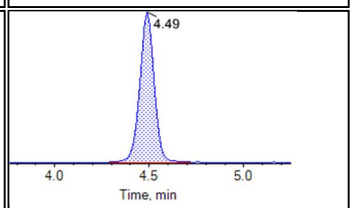

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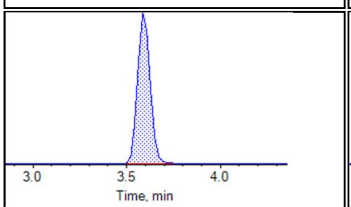

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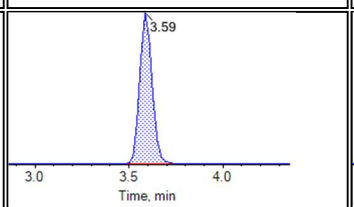

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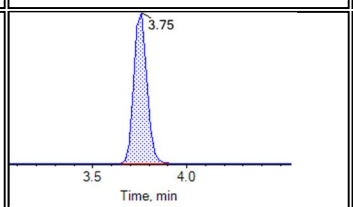

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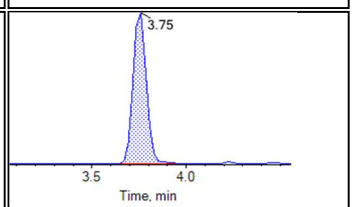

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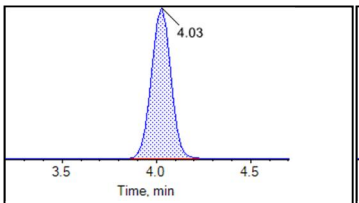

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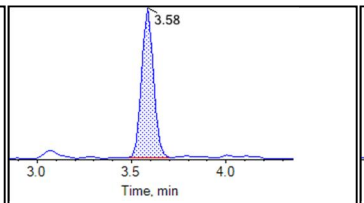

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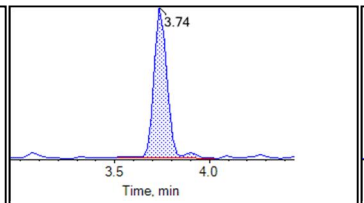

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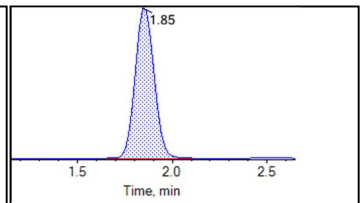

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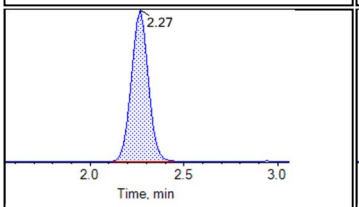

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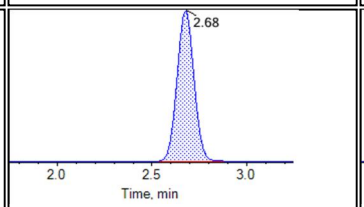

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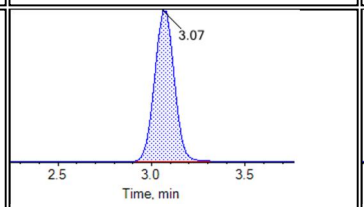

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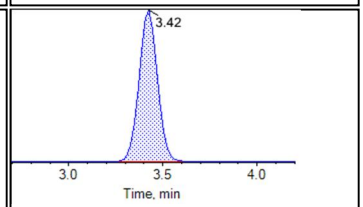

13C6-PFDA

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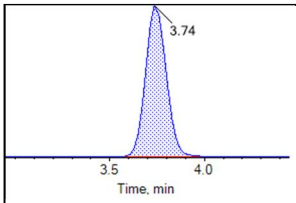

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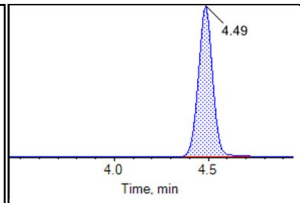

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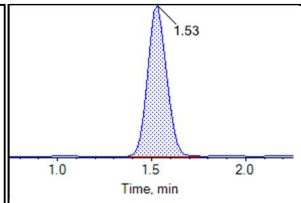

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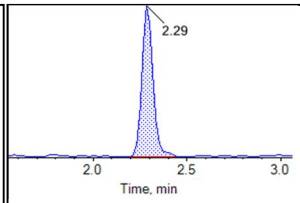

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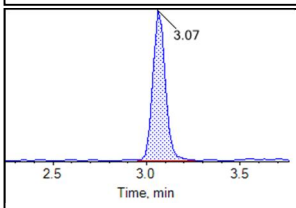

13C8-PFOS

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Chromatogram Report

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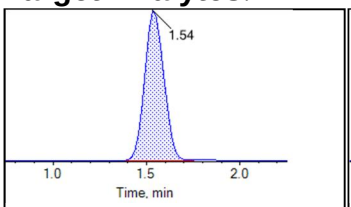
Sample Name	J8782MSD-FS(3)	**Injection Vial**	23
Sample ID	VC-PM553-SD01-0102-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:29:15	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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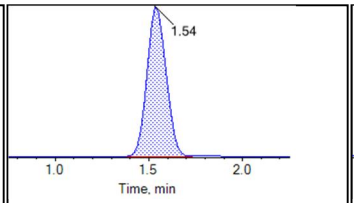

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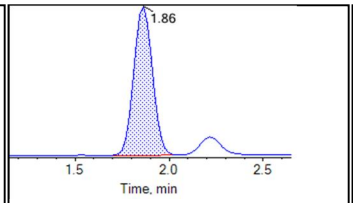

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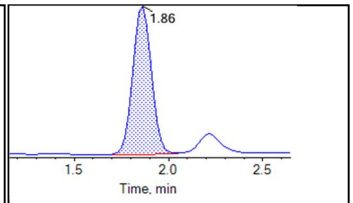

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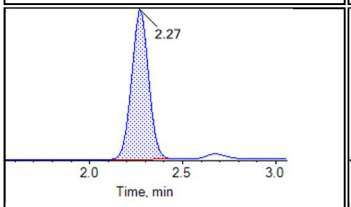

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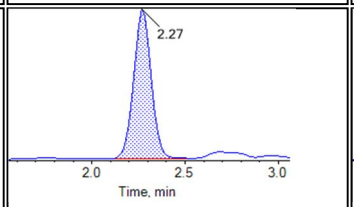

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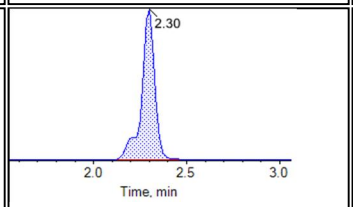

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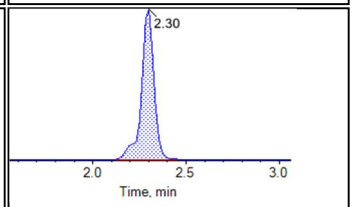

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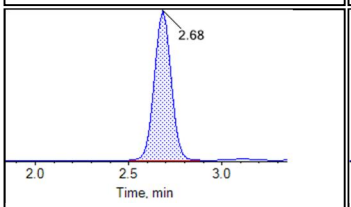

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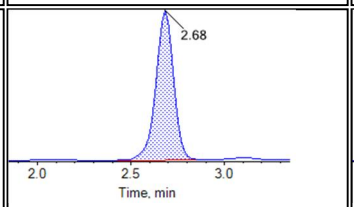

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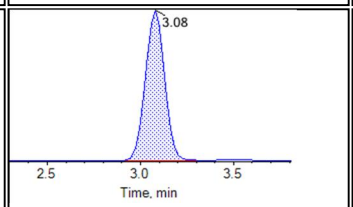

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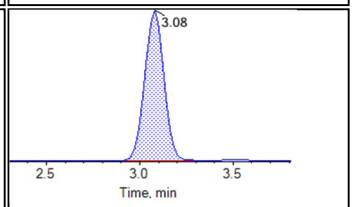

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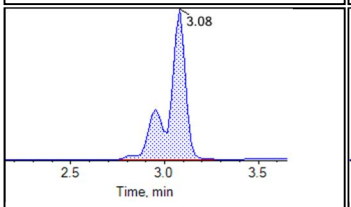

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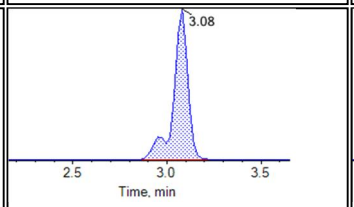

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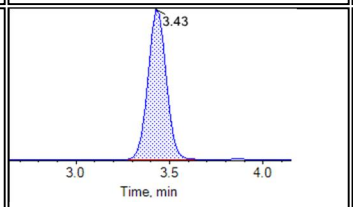

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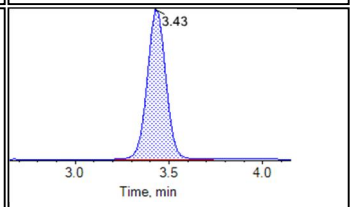

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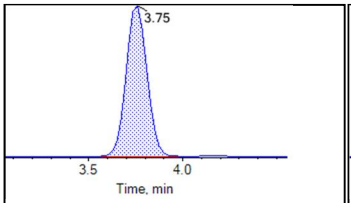

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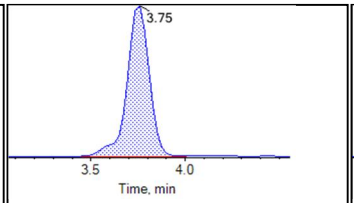

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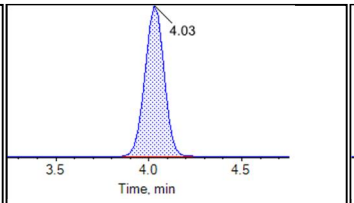

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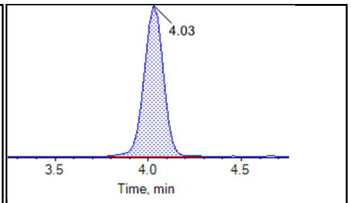

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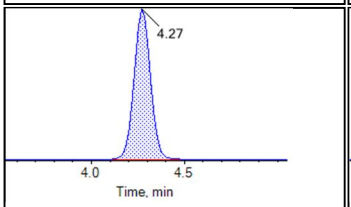

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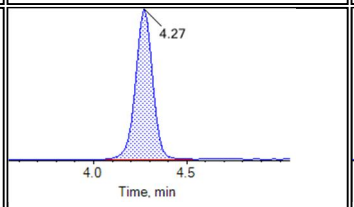

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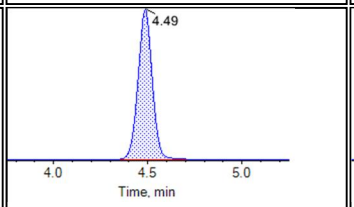

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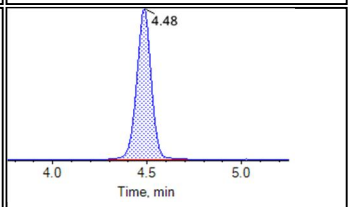

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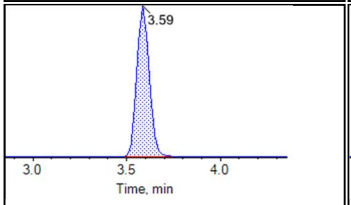

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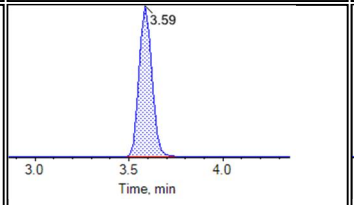

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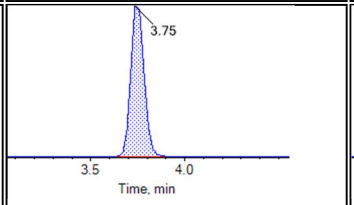

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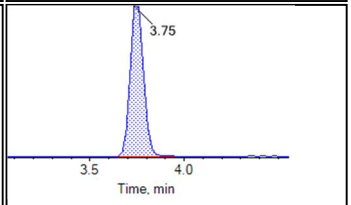

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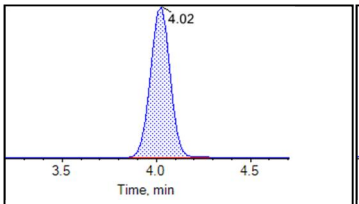

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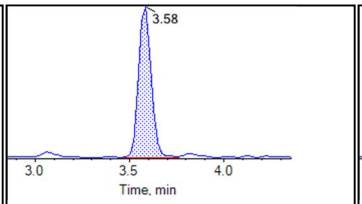

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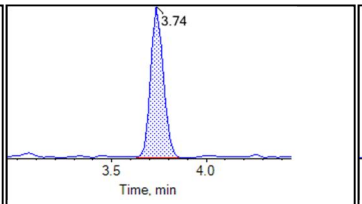

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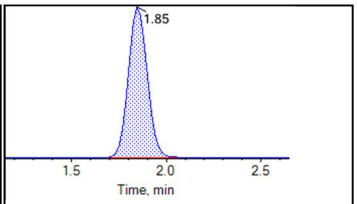

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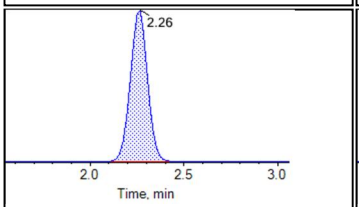

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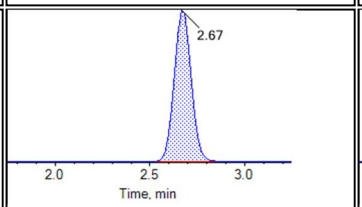

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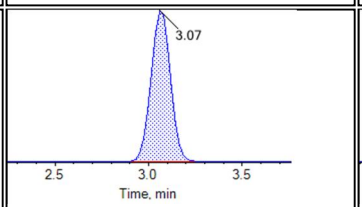

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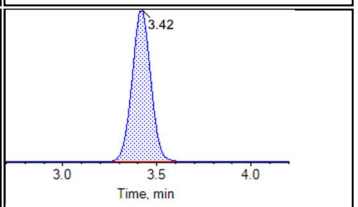

13C6-PFDA

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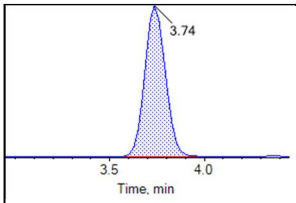

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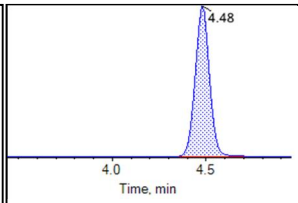

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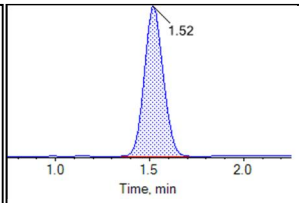

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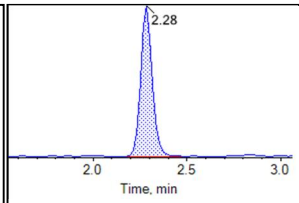

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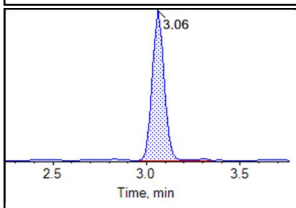

13C8-PFOS

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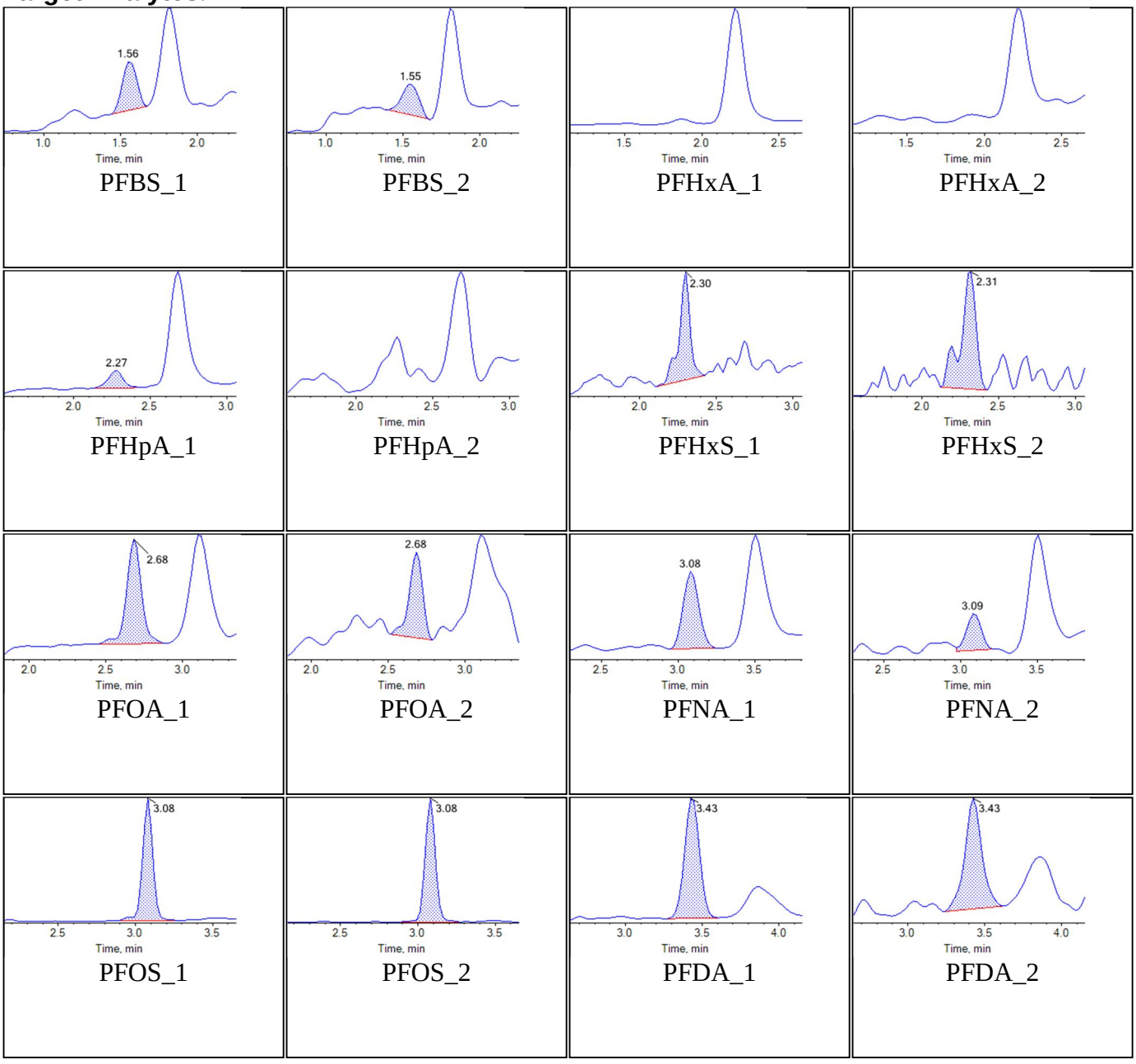
Sample Name	J8783-FS(3)	**Injection Vial**	24
Sample ID	VC-PM3009-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:40:07	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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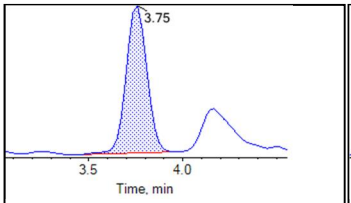

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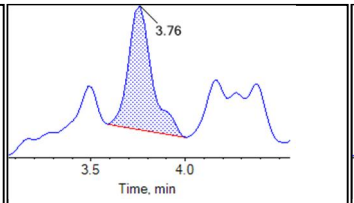

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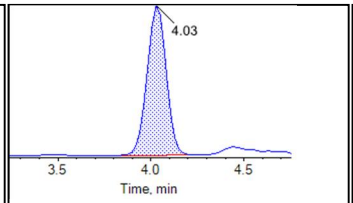

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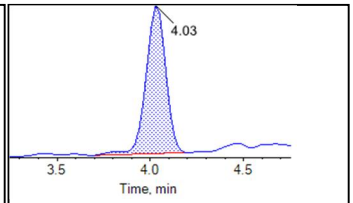

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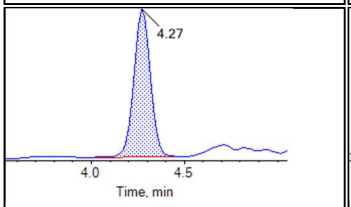

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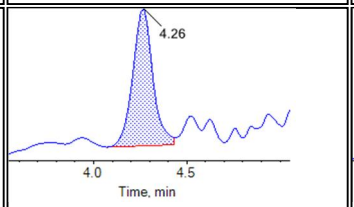

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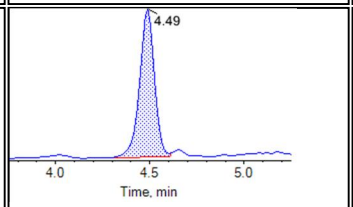

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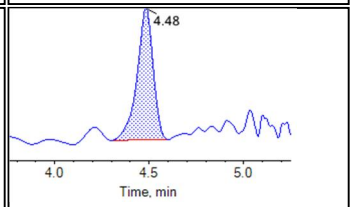

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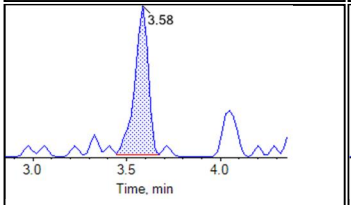

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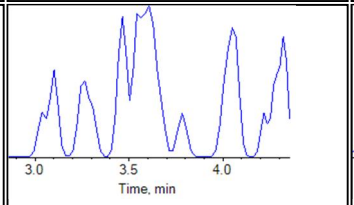

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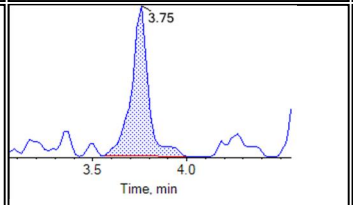

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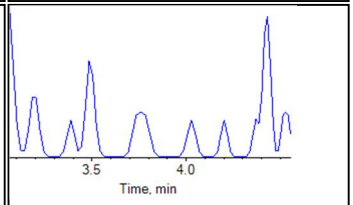

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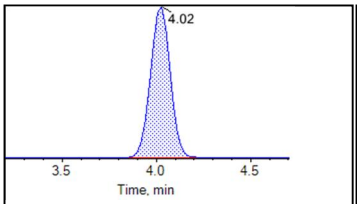

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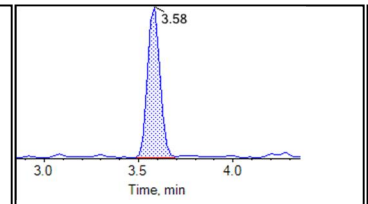

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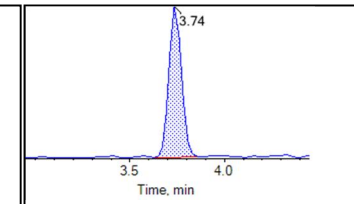
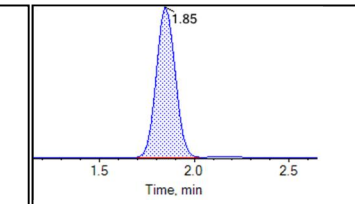


d5-EtFOSAA



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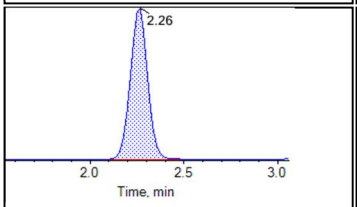

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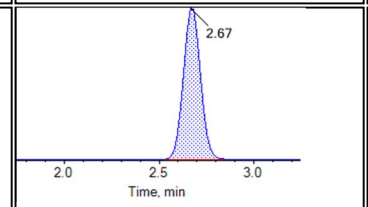

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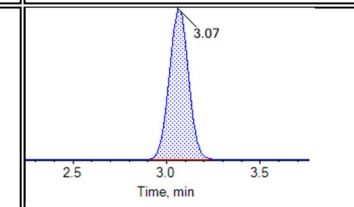

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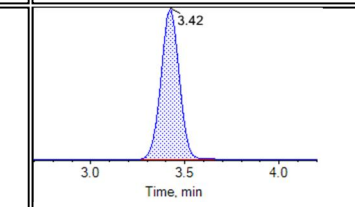

13C6-PFDA

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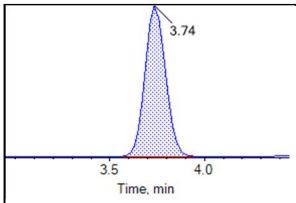
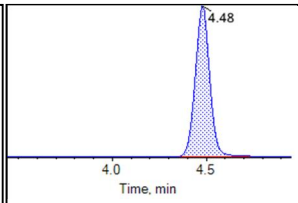
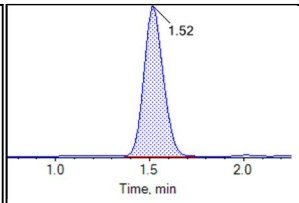


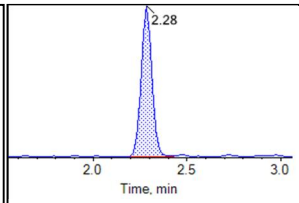
13C7-PFUnA



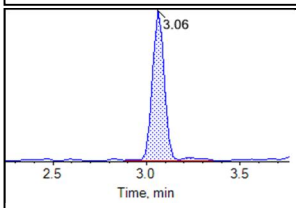
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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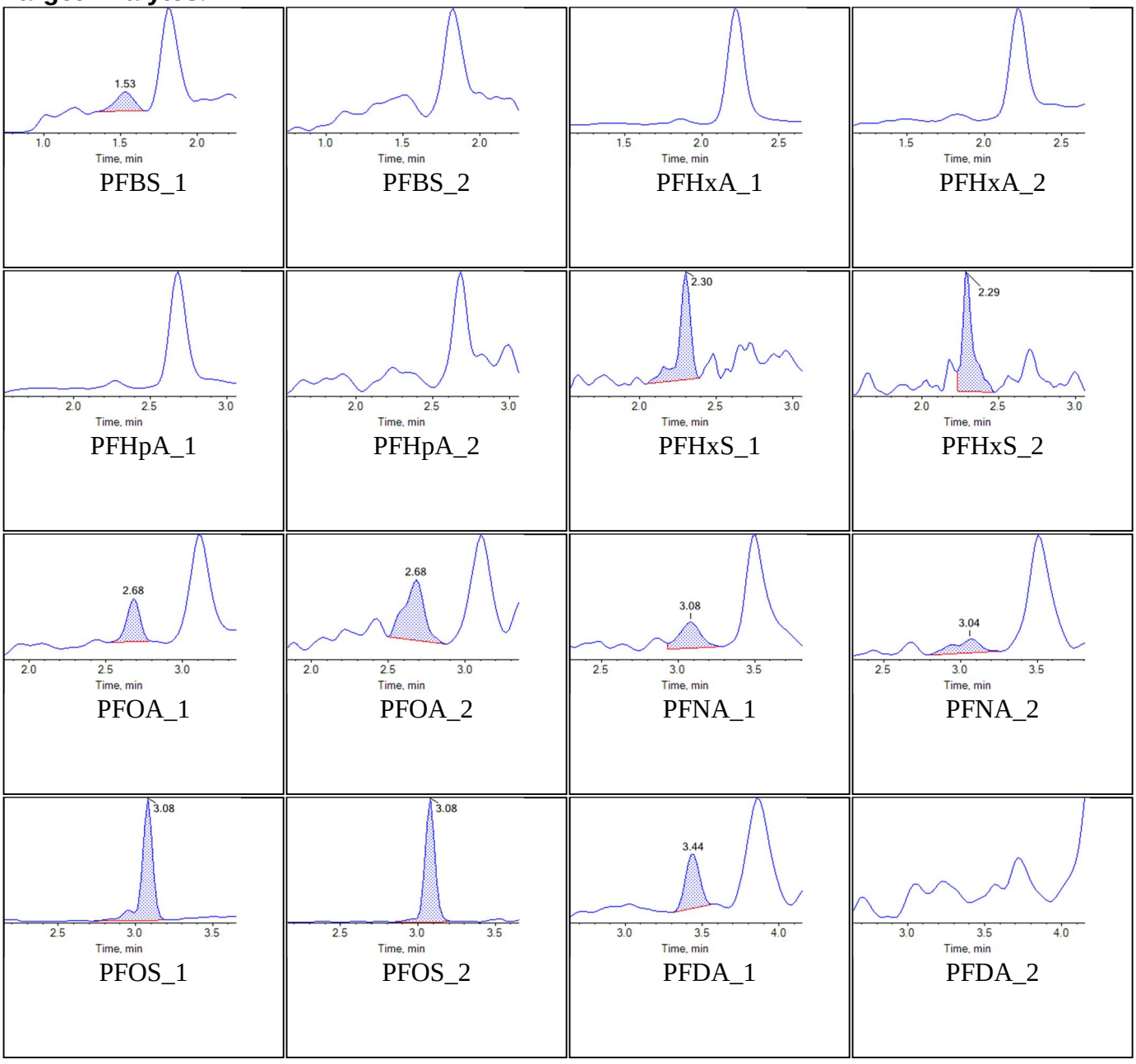
Sample Name	J8784-FS(3)	**Injection Vial**	25
Sample ID	VC-PM3009-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:50:59	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



BATTELLE

Chromatogram Report

Created with Analyst Reporter
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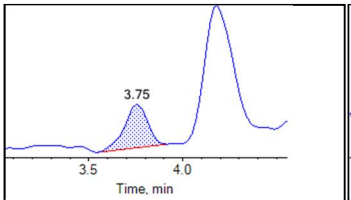
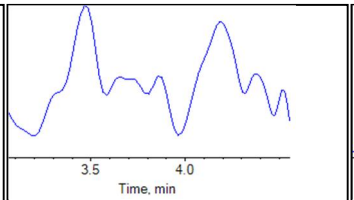
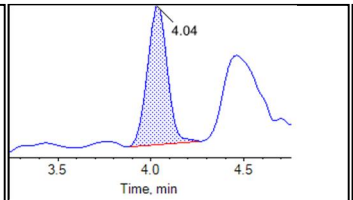


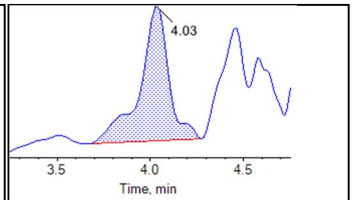
PFUnA_1



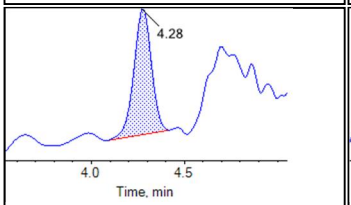
PFUnA_2



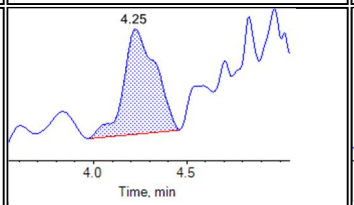
PFDoA_1



PFDoA_2



PFTrDA_1



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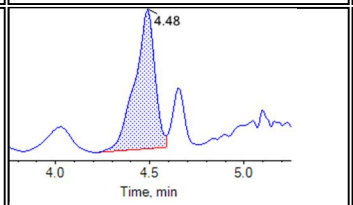

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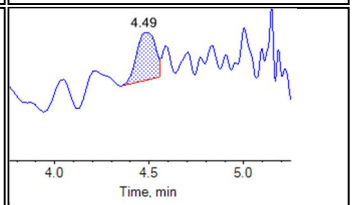

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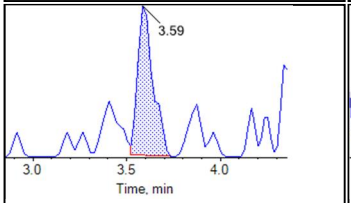
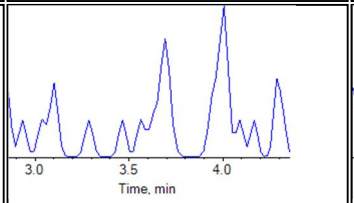
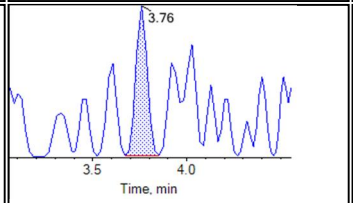


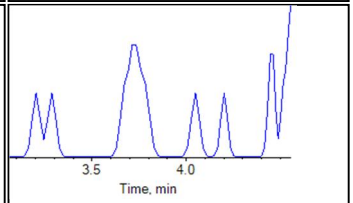
NMeFOSAA_1



NMeFOSAA_2

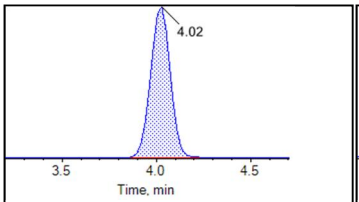


NEtFOSAA_1

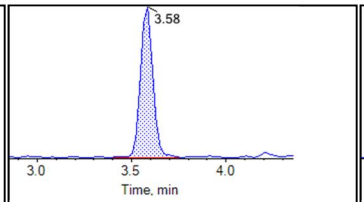


NEtFOSAA_2

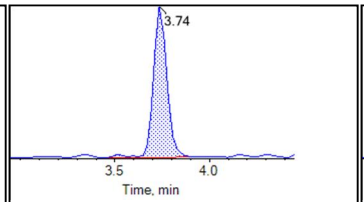
Internal Standards:



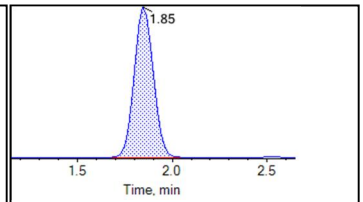
13C2-PFDoA



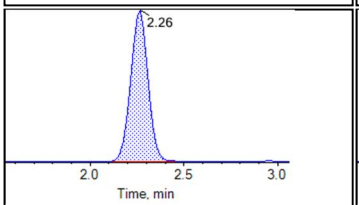
d3-MeFOSAA



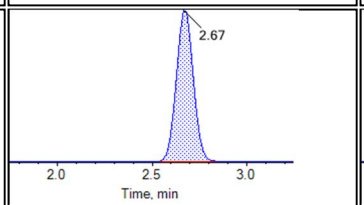
d5-EtFOSAA



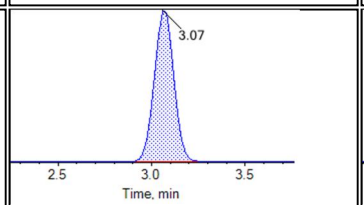
13C5-PFHxA



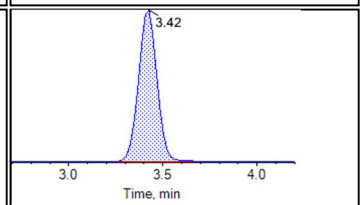
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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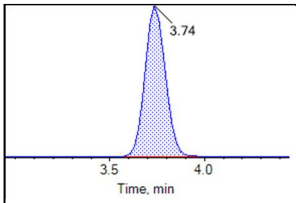
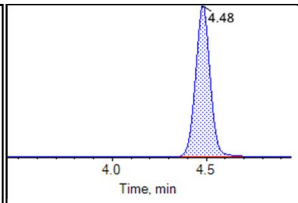
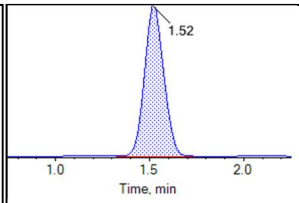


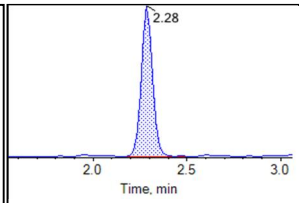
13C7-PFUnA



13C2-PFTeDA



13C3-PFBS



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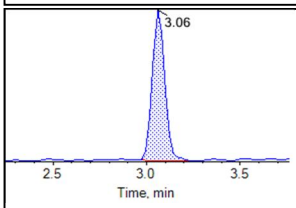

13C8-PFOS

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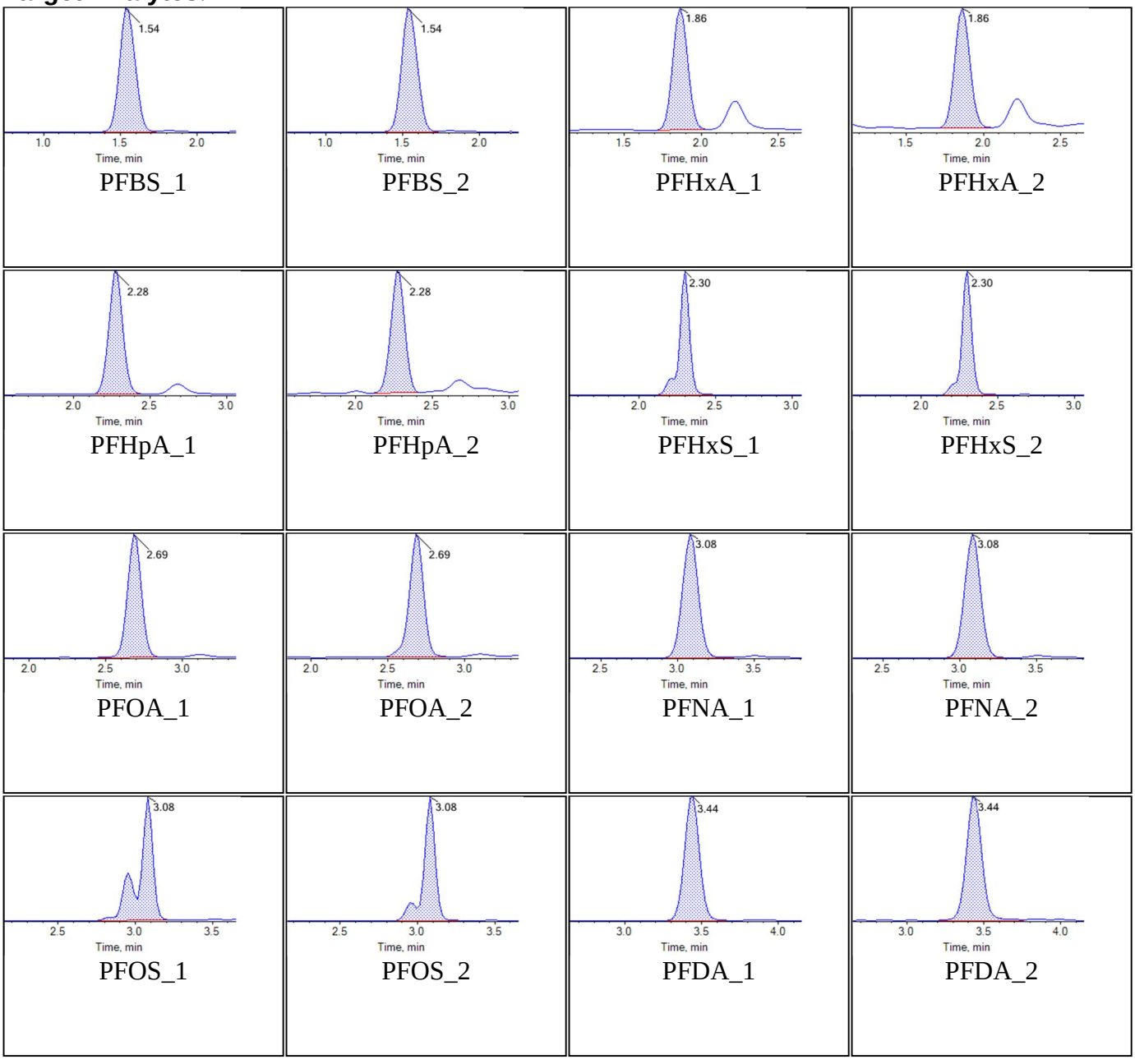
Chromatogram Report

Created with Analyst Reporter
Printed: 07/11/2018 12:10:09 PM

Sample Name	KB77 CCV	**Injection Vial**	26
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:01:50	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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Chromatogram Report

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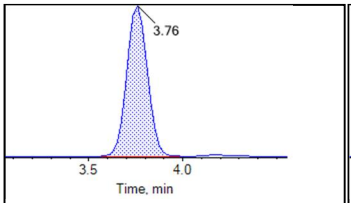
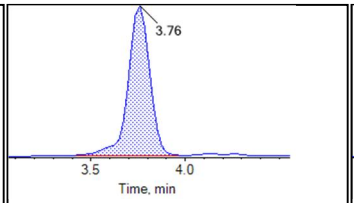
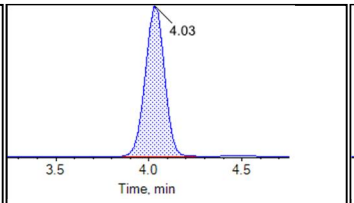


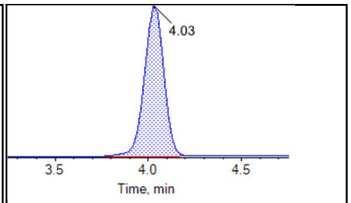
PFUnA_1



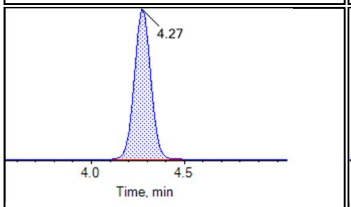
PFUnA_2



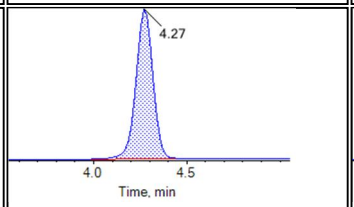
PFDoA_1



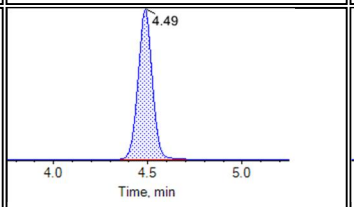
PFDoA_2



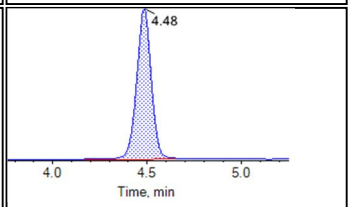
PFTrDA_1



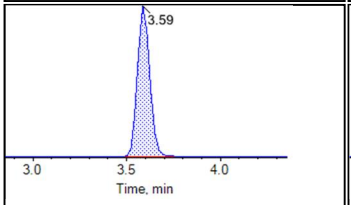
PFTrDA_2



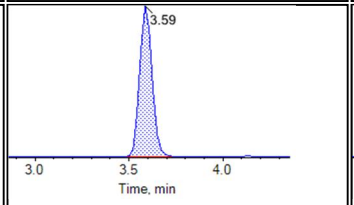
PFTeDA_1



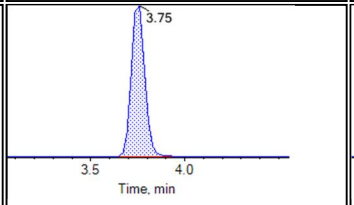
PFTeDA_2



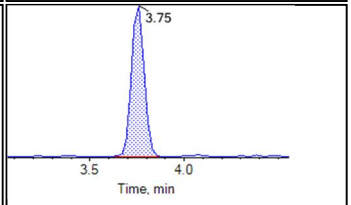
NMeFOSAA_1



NMeFOSAA_2

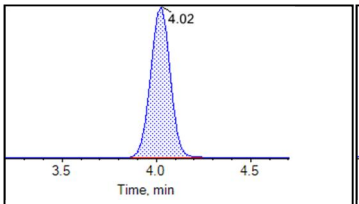


NEtFOSAA_1

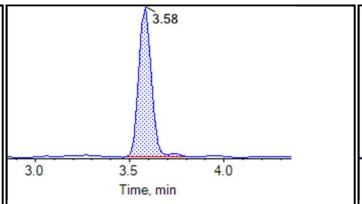


NEtFOSAA_2

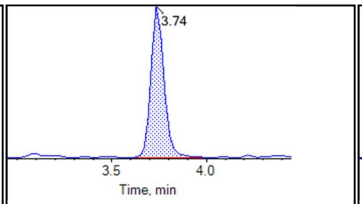
Internal Standards:



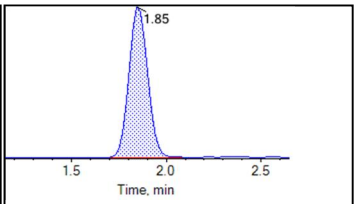
13C2-PFDoA



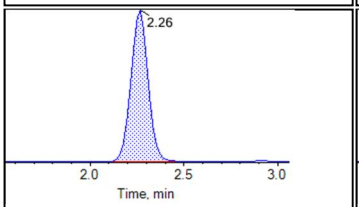
d3-MeFOSAA



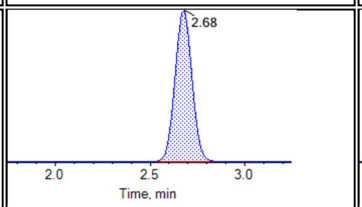
d5-EtFOSAA



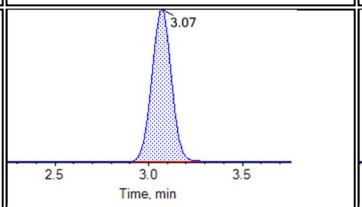
13C5-PFHxA



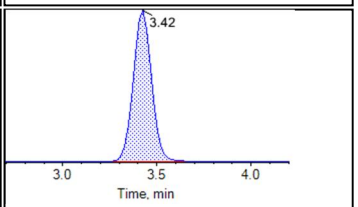
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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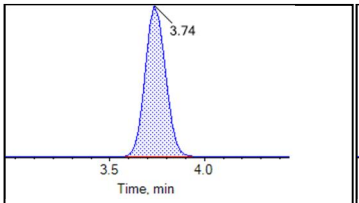
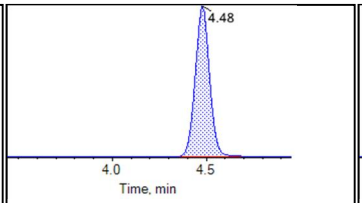
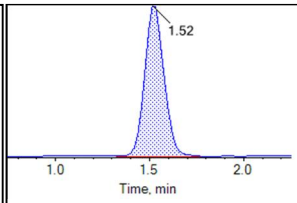


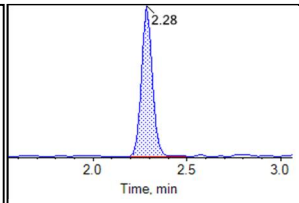
13C7-PFUnA



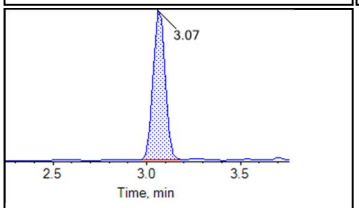
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

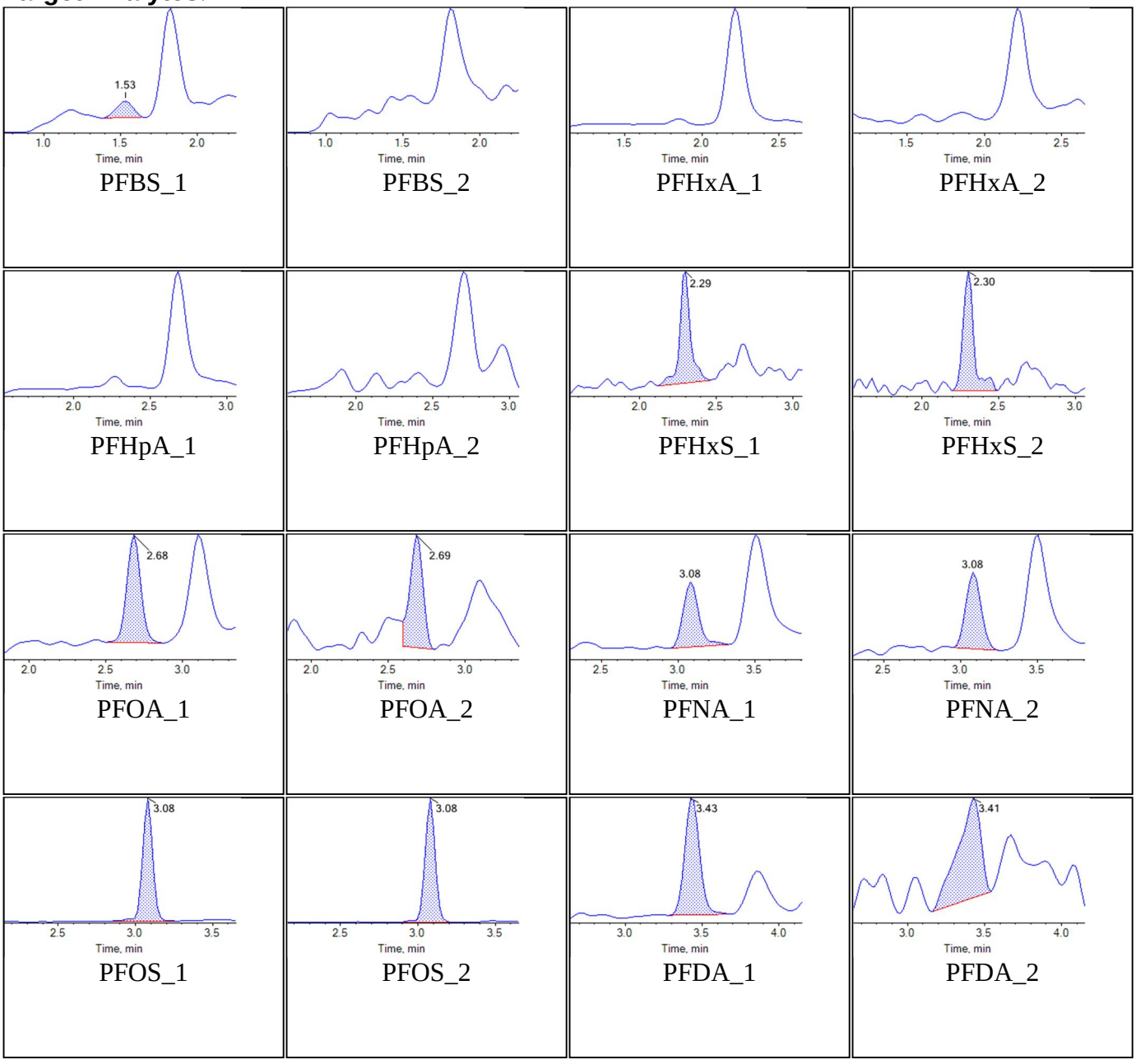
Chromatogram Report

Created with Analyst Reporter
Printed: 07/11/2018 12:10:14 PM

Sample Name	J8785-FS(3)	**Injection Vial**	28
Sample ID	VC-PM372-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:23:33	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

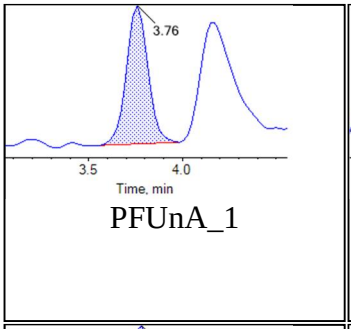
Target Analytes:



BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 07/11/2018 12:10:14 PM



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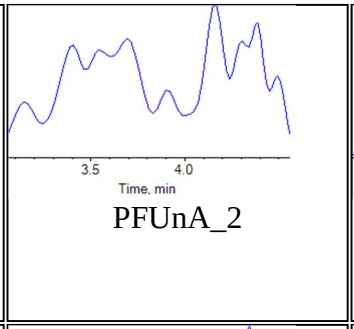
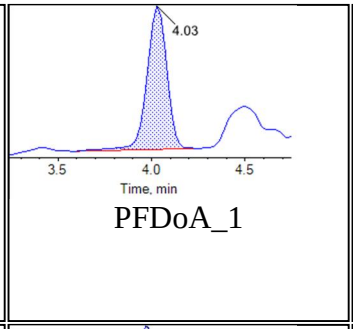


PFUnA_2



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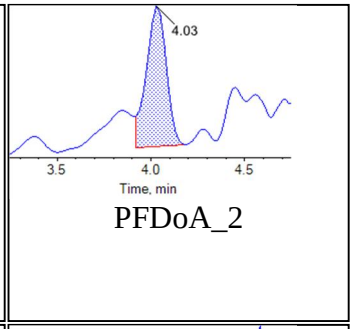
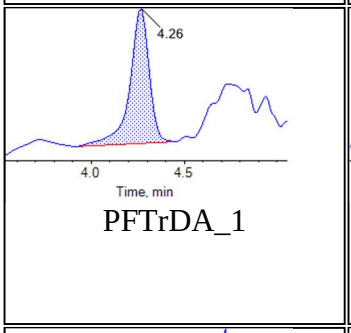
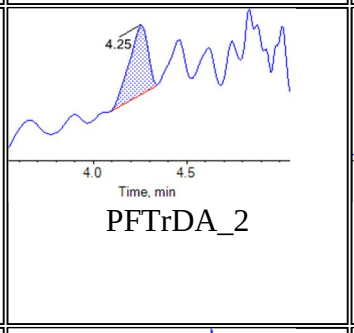


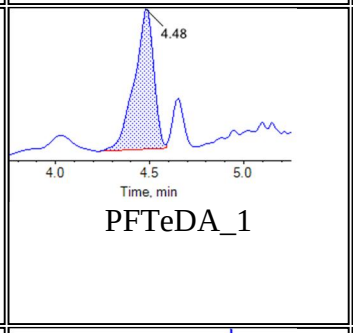
PFDoA_2



PFTrDA_1



PFTrDA_2



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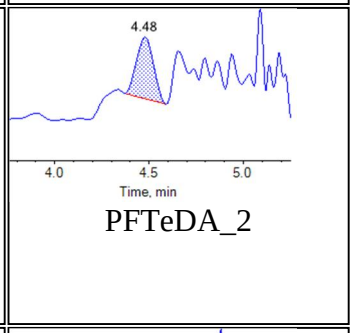
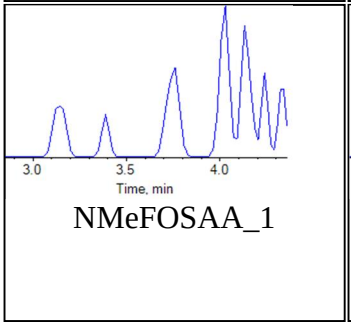
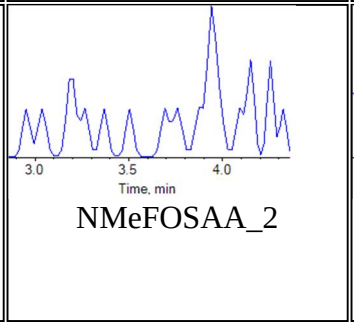


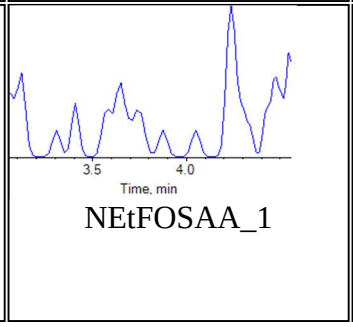
PFTeDA_2



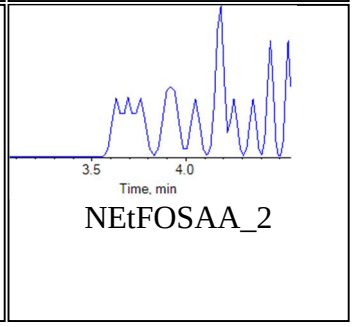
NMeFOSAA_1



NMeFOSAA_2

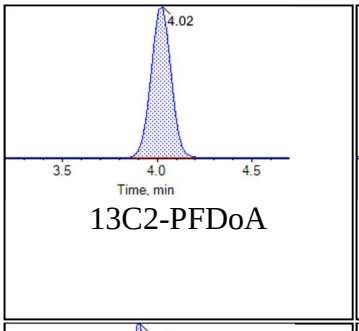


NEtFOSAA_1

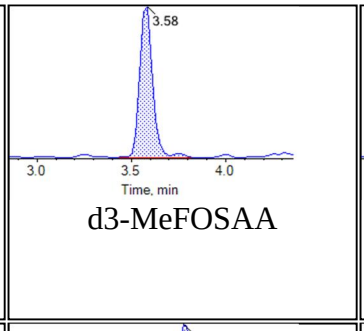


NEtFOSAA_2

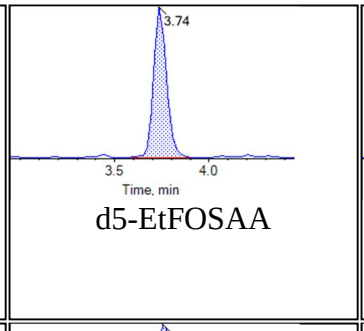
Internal Standards:



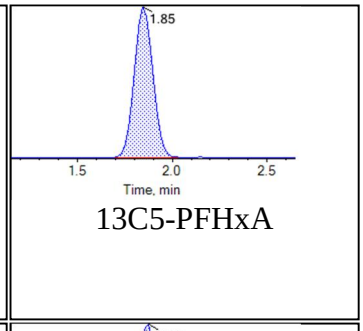
13C2-PFDoA



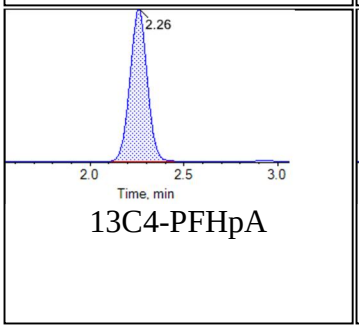
d3-MeFOSAA



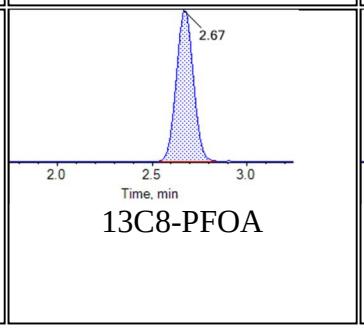
d5-EtFOSAA



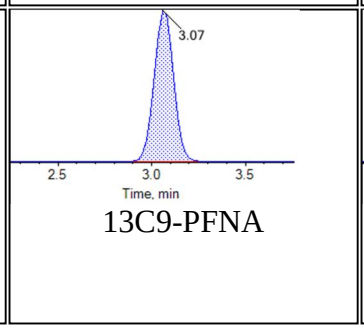
13C5-PFHxA



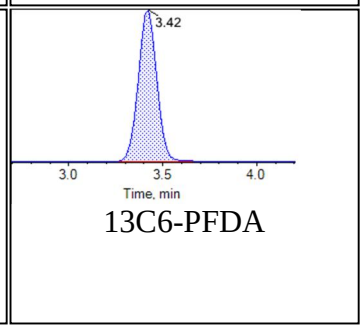
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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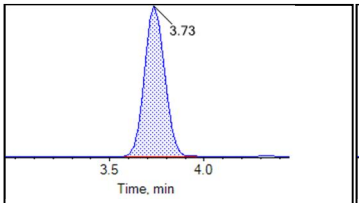
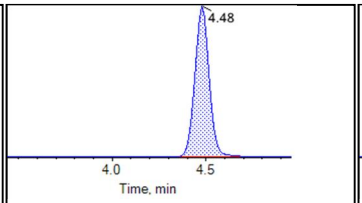
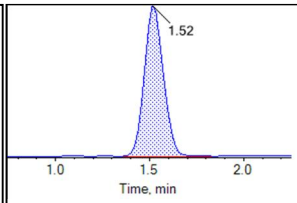


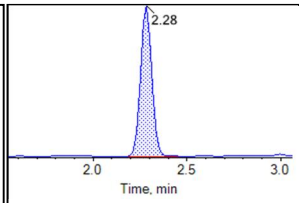
13C7-PFUnA



13C2-PFTeDA



13C3-PFBS



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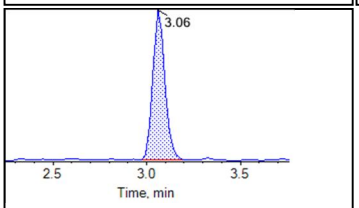


13C8-PFOS

BATTELLE

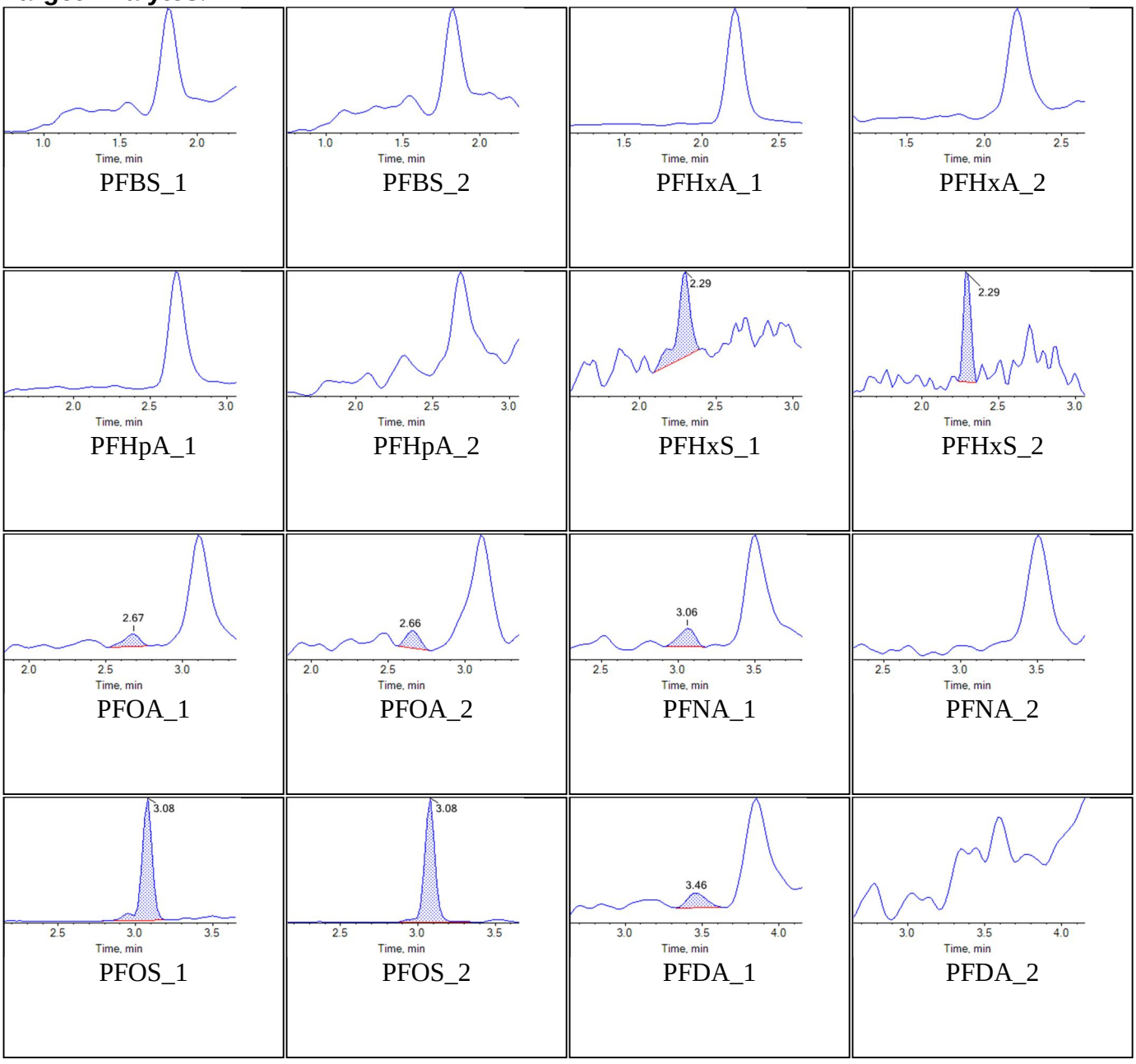
Chromatogram Report

Created with Analyst Reporter
Printed: 07/11/2018 12:10:20 PM

Sample Name	J8786-FS(3)	**Injection Vial**	29
Sample ID	VC-PM372-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:34:26	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



BATTELLE

Chromatogram Report

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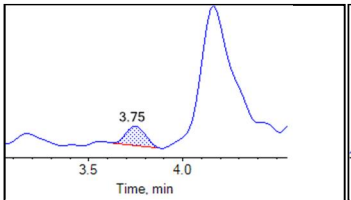
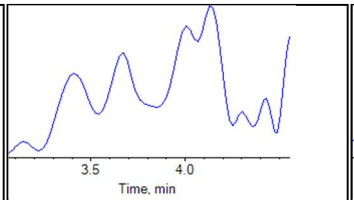
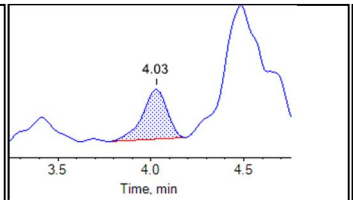


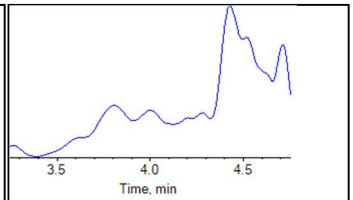
PFUnA_1



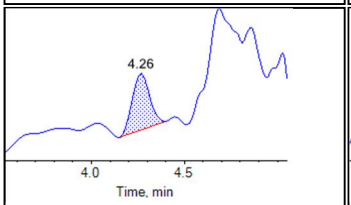
PFUnA_2



PFDoA_1



PFDoA_2



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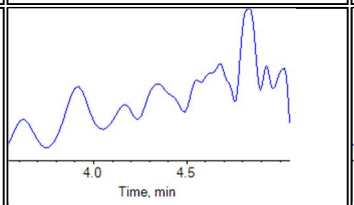

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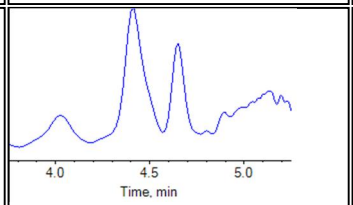
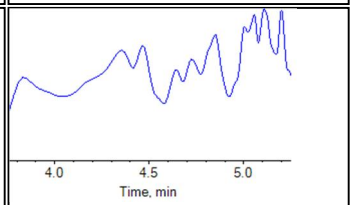
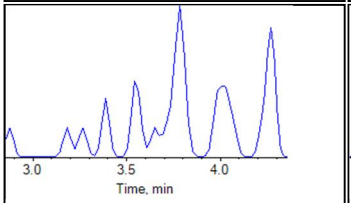


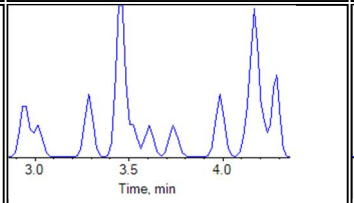
PFTeDA_1



PFTeDA_2



NMeFOSAA_1



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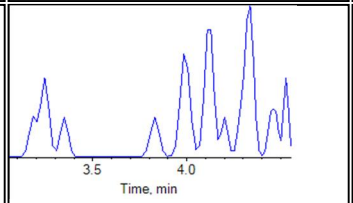
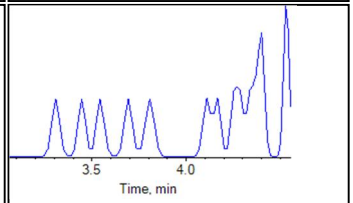
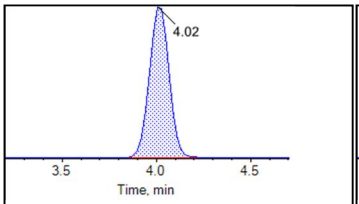


NEtFOSAA_1

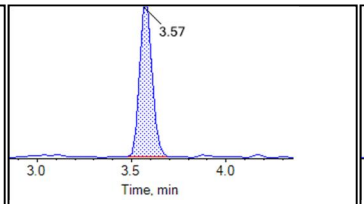


NEtFOSAA_2

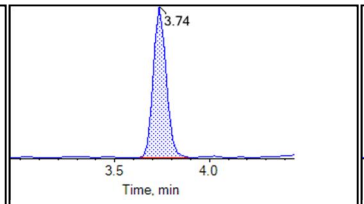
Internal Standards:



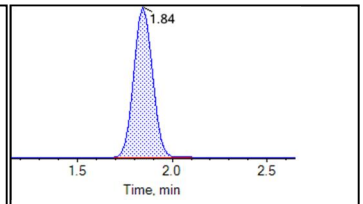
13C2-PFDoA



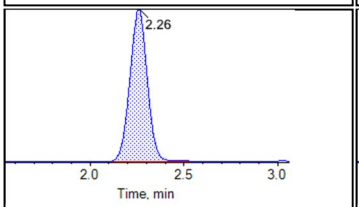
d3-MeFOSAA



d5-EtFOSAA



13C5-PFHxA



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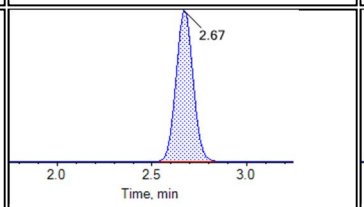
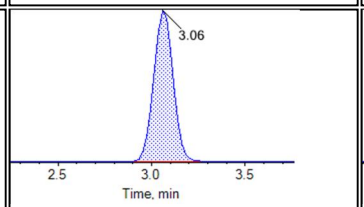
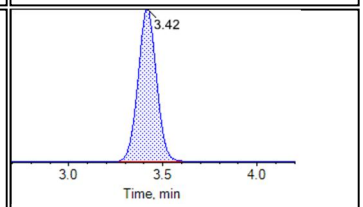


13C8-PFOA



13C9-PFNA



13C6-PFDA

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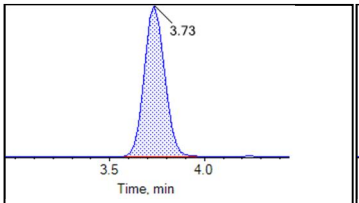
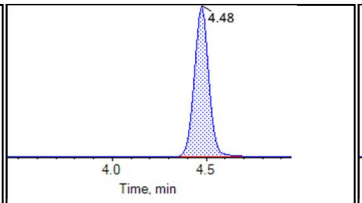


13C7-PFUnA



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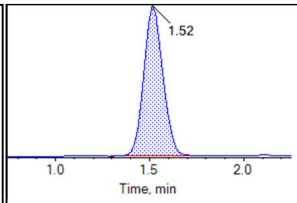
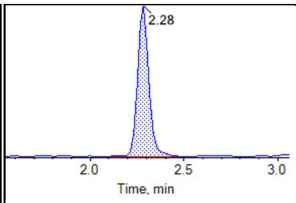
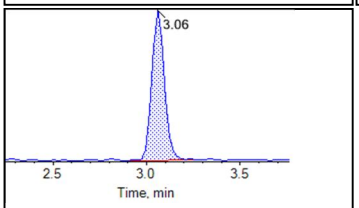


13C3-PFBS



13C3-PFHxS



13C8-PFOS

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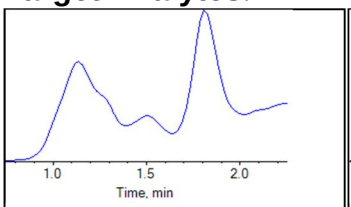
Sample Name	J8787-FS(3)	**Injection Vial**	30
Sample ID	VC-CS11-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:45:17	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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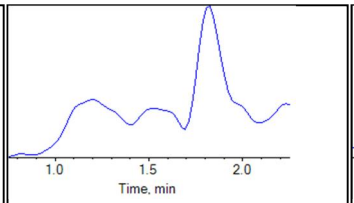

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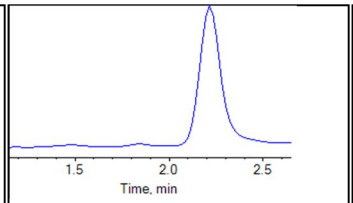

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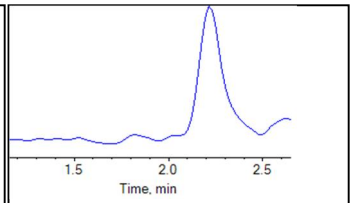

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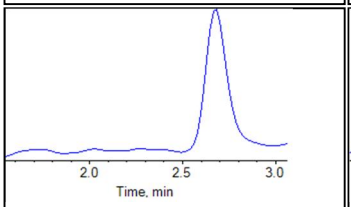

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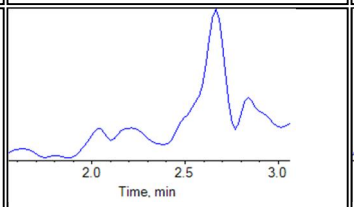

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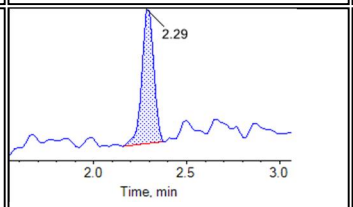

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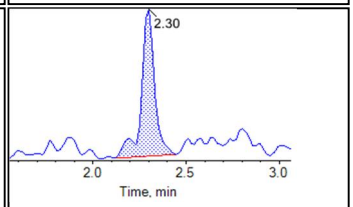

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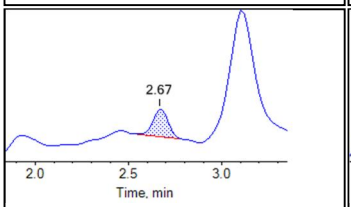

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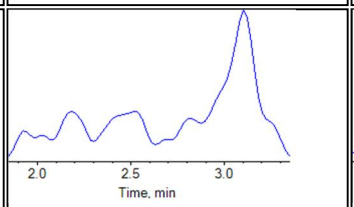

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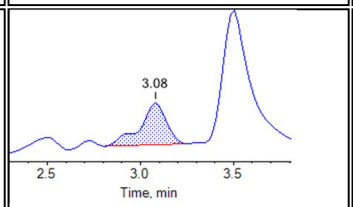

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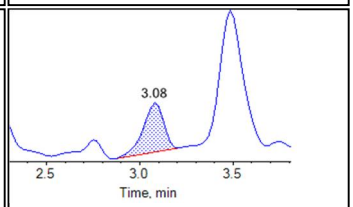

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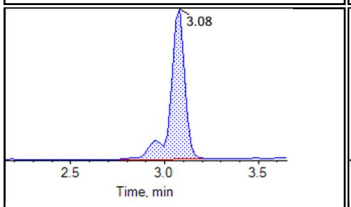
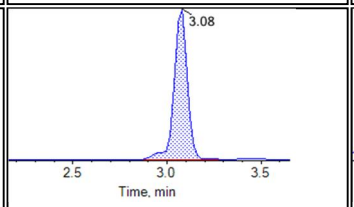


PFOS_1



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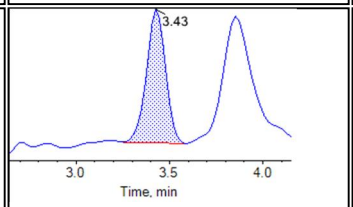

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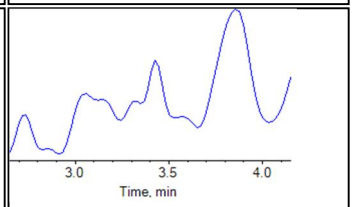

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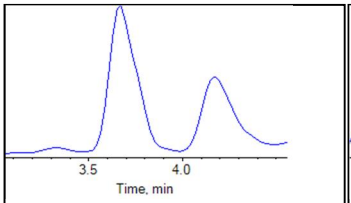
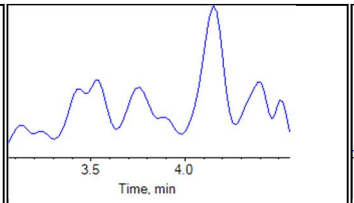


PFUnA_1



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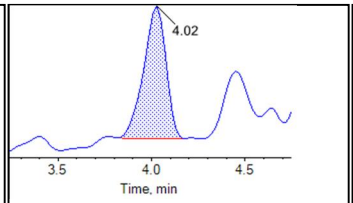

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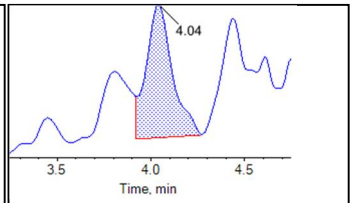

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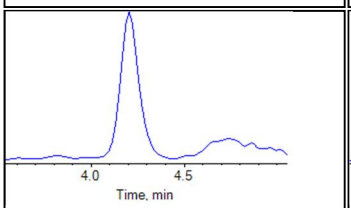

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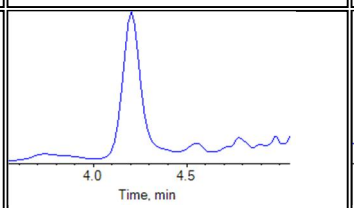

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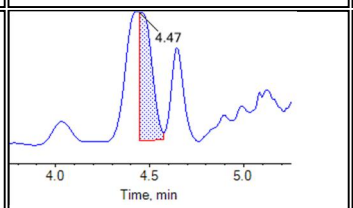

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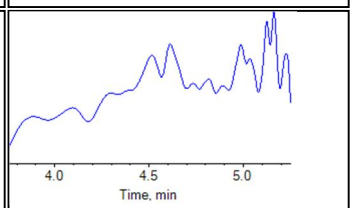

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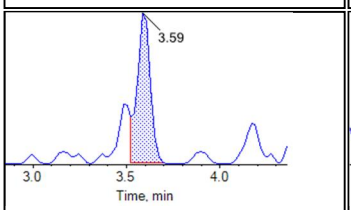

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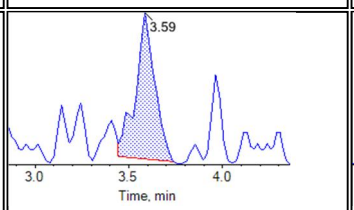

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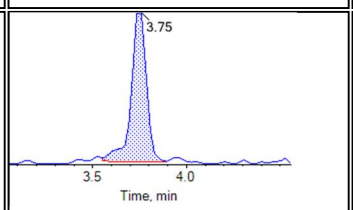

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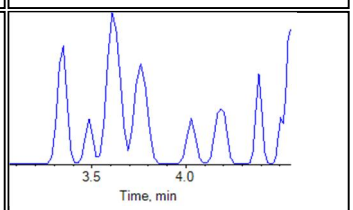
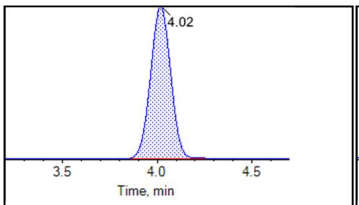
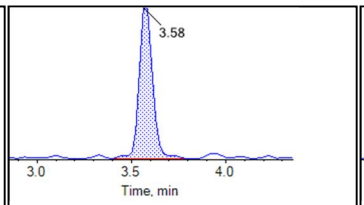


NEtFOSAA_2

Internal Standards:



13C2-PFDoA



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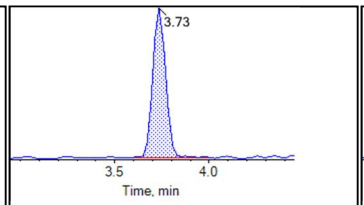
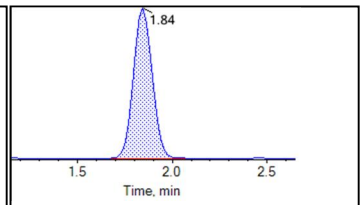
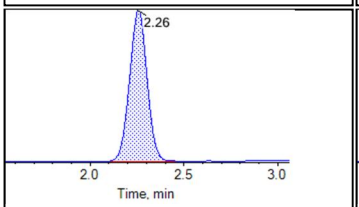


d5-EtFOSAA



13C5-PFHxA



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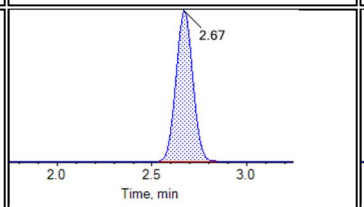
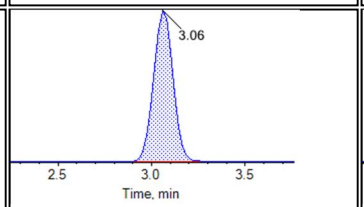
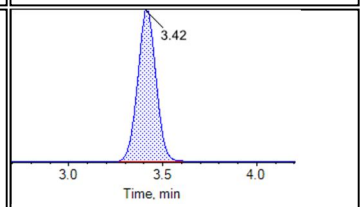


13C8-PFOA



13C9-PFNA



13C6-PFDA

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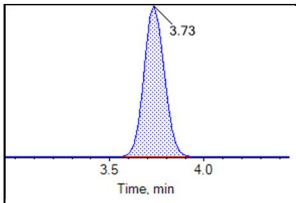
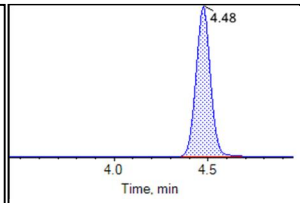
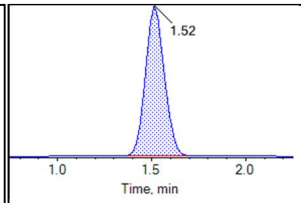


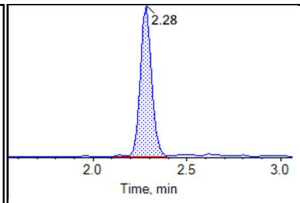
13C7-PFUnA



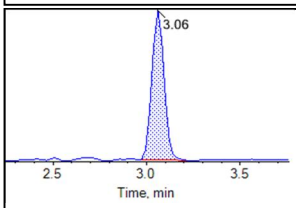
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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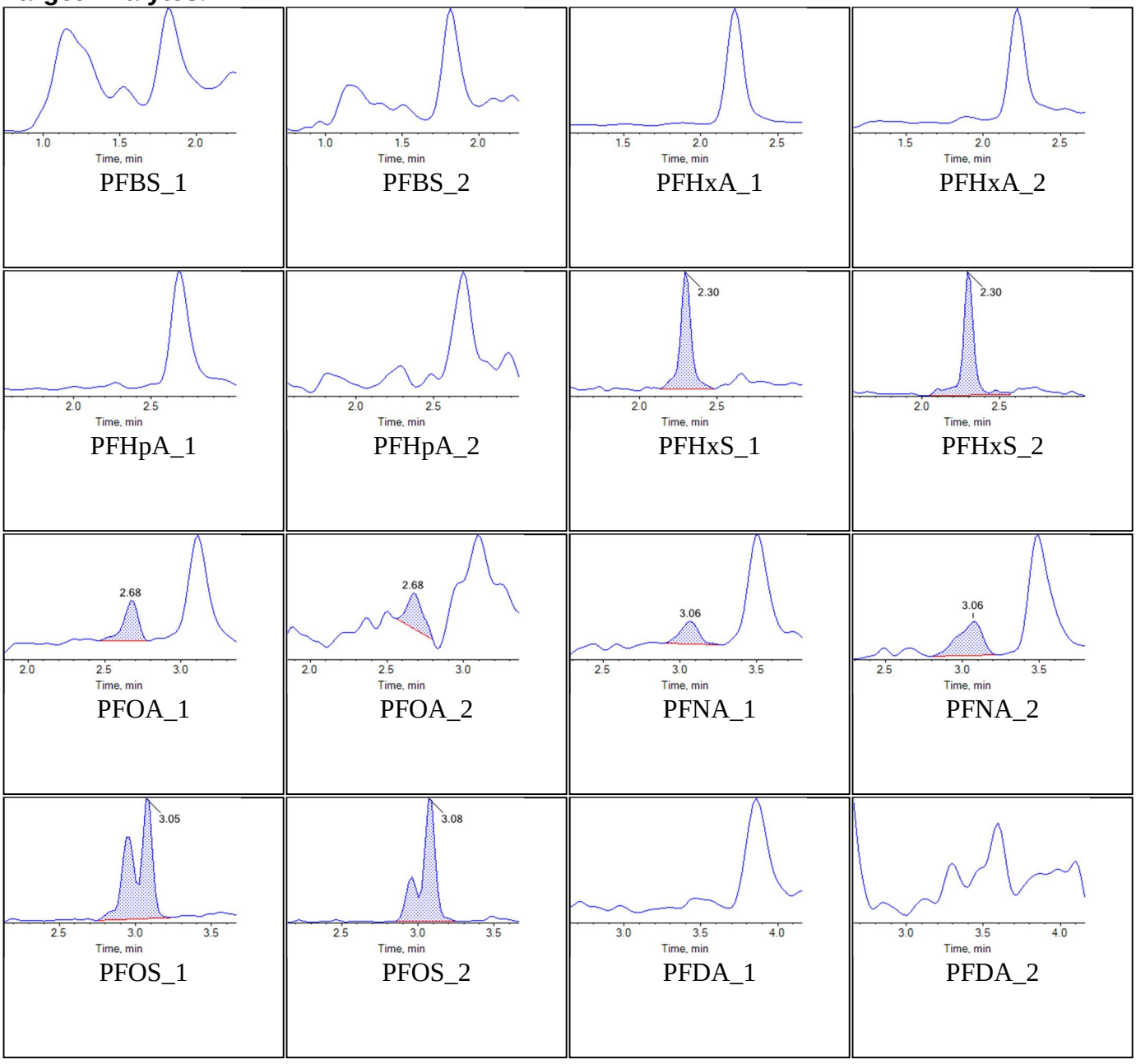
Sample Name	J8788-FS(3)	**Injection Vial**	31
Sample ID	VC-CS11-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:56:09	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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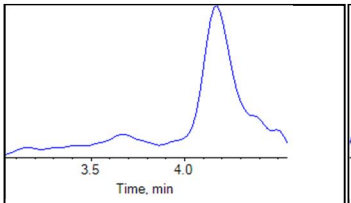
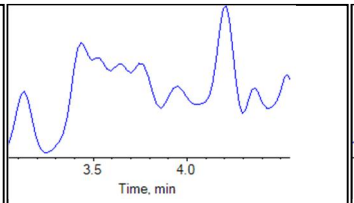


PFUnA_1



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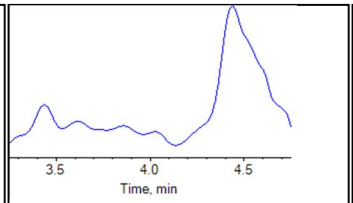
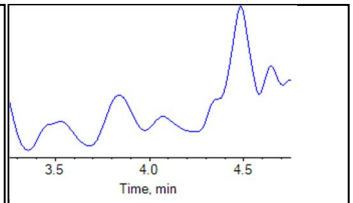


PFDoA_1



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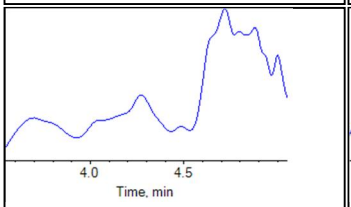

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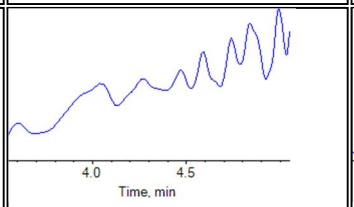

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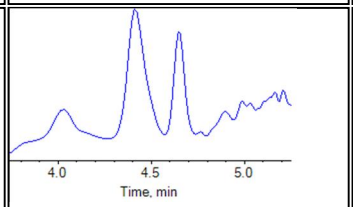

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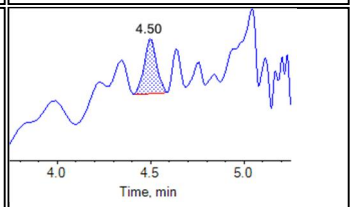

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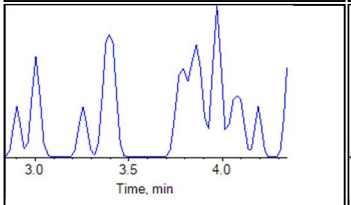

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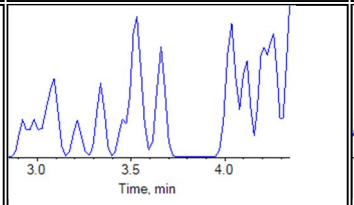

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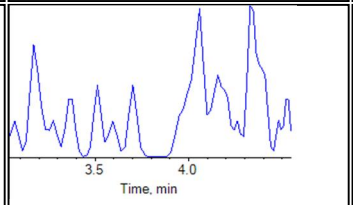

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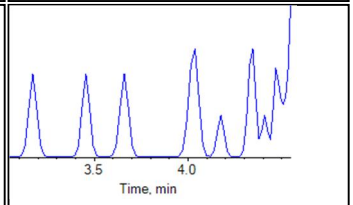

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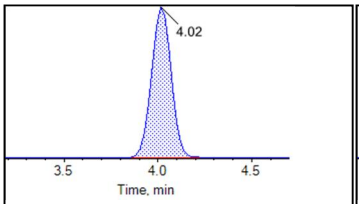

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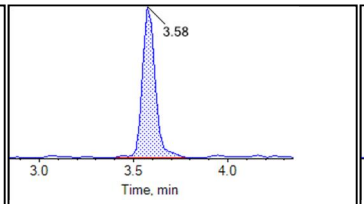

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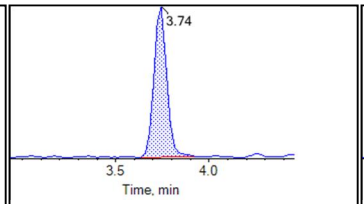

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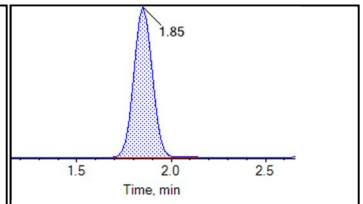
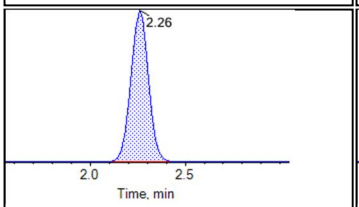


13C5-PFHxA



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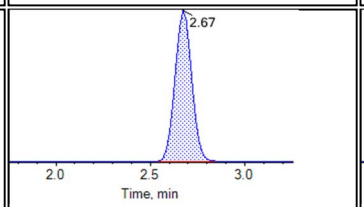

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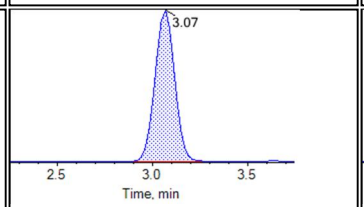

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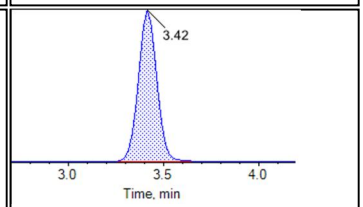

13C6-PFDA

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Chromatogram Report

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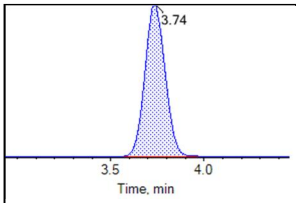
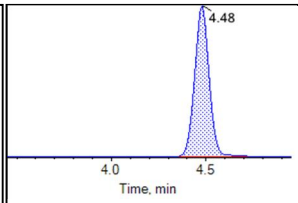


13C7-PFUnA



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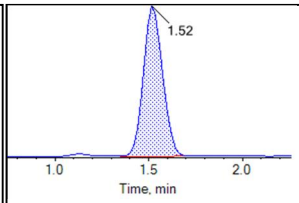

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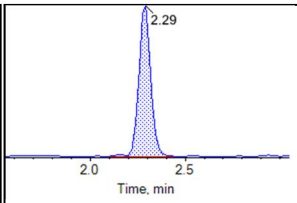

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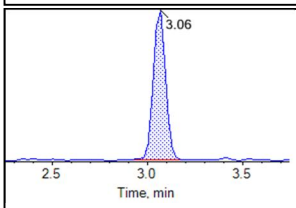

13C8-PFOS

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Chromatogram Report

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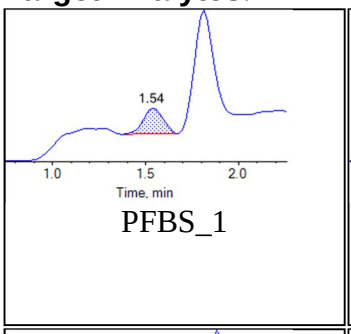
Sample Name	J8809-FS(3)	**Injection Vial**	32
Sample ID	VC-STP-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:07:00	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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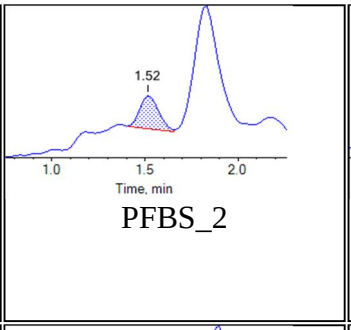

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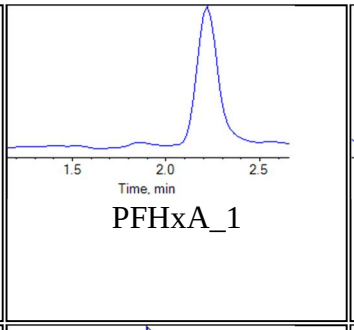

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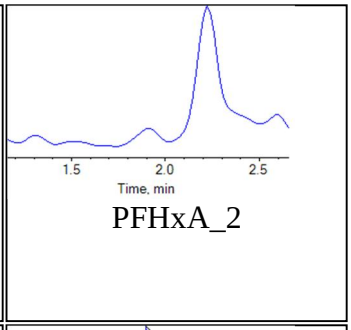

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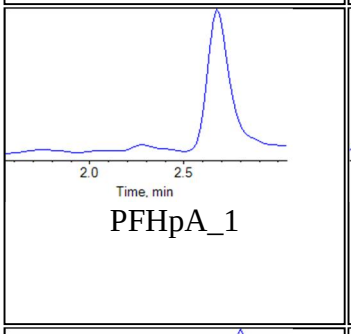

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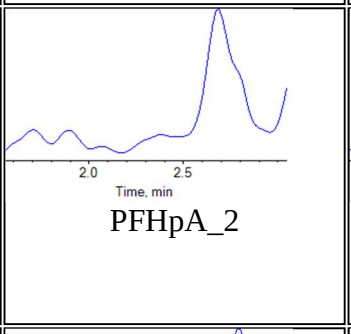

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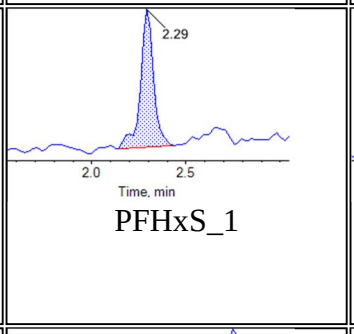

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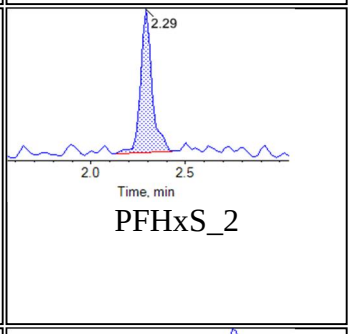

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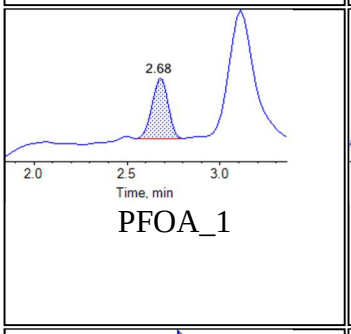

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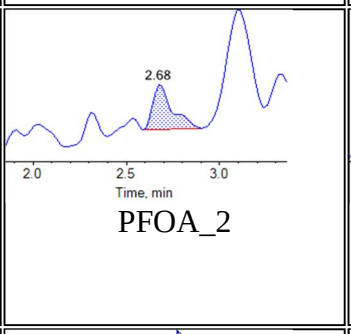

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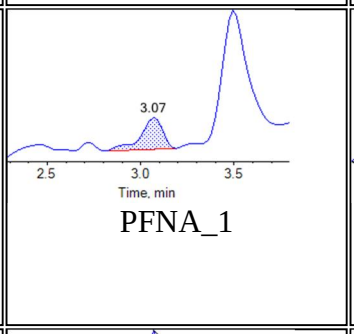

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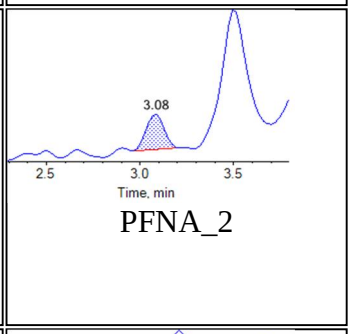

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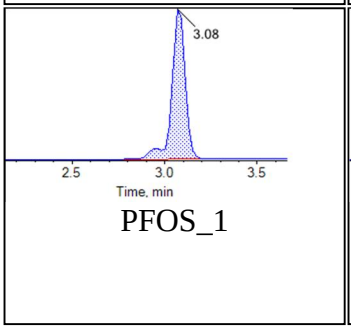

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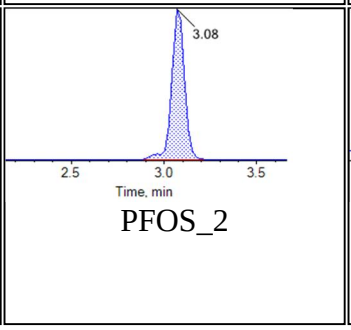

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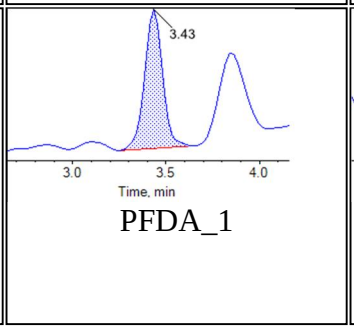

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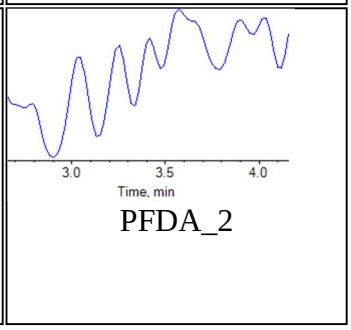

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Chromatogram Report

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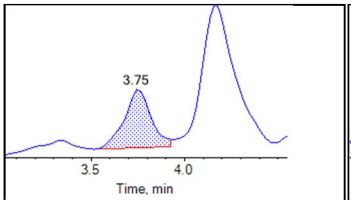

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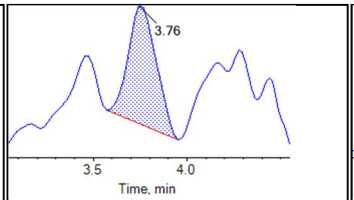

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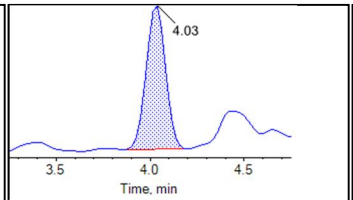

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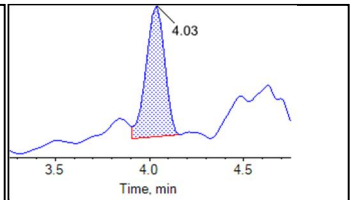

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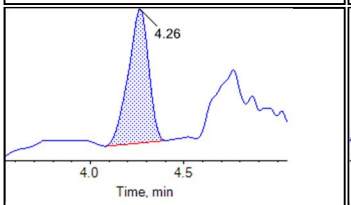

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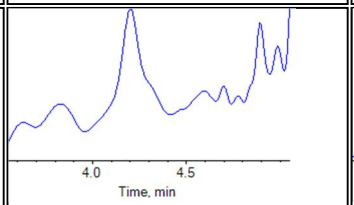

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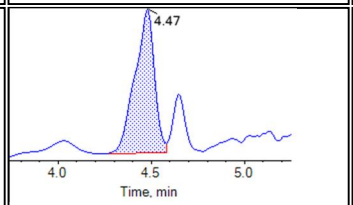

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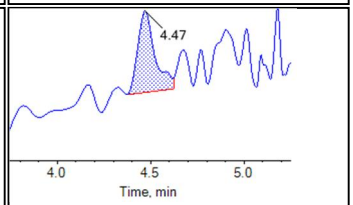

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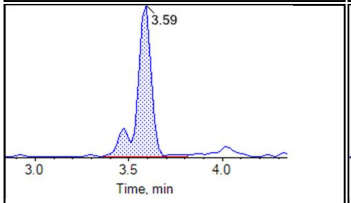

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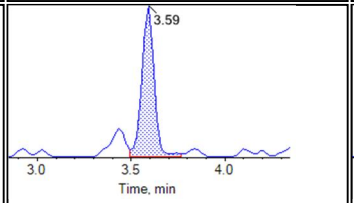

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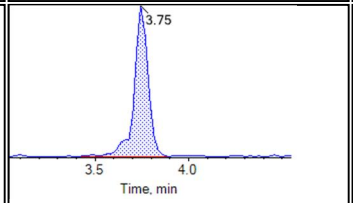

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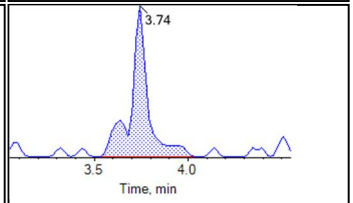

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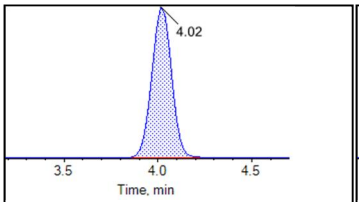

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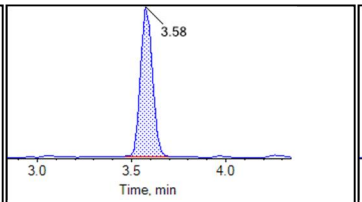
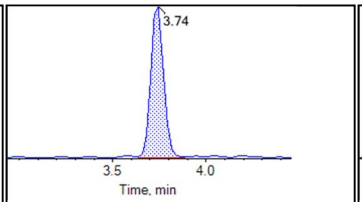


d3-MeFOSAA



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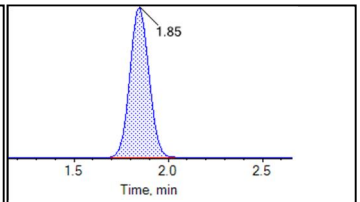
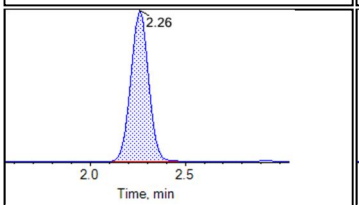


13C5-PFHxA



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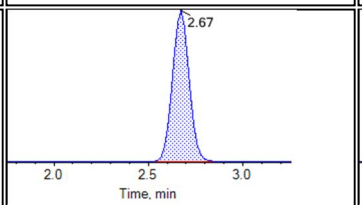

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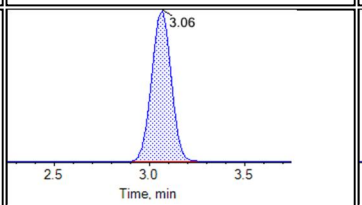
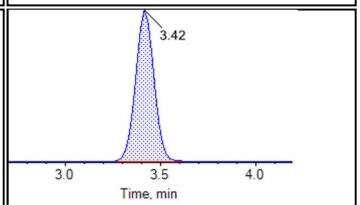


13C9-PFNA



13C6-PFDA

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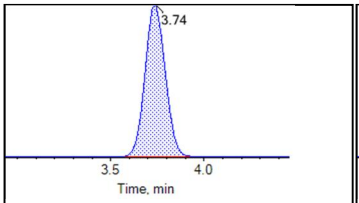
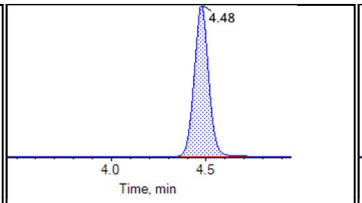


13C7-PFUnA



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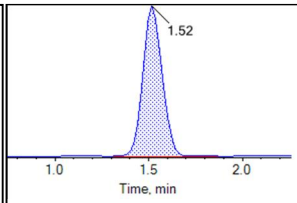
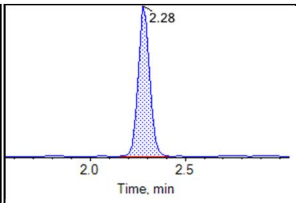
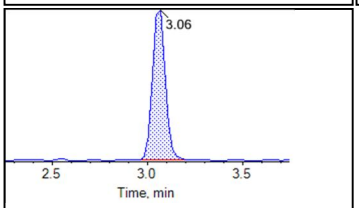


13C3-PFBS



13C3-PFHxS



13C8-PFOS

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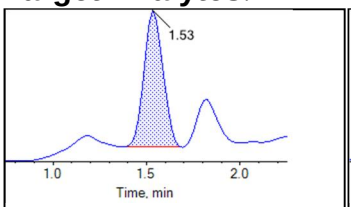
Sample Name	J8810-FS(3)	**Injection Vial**	33
Sample ID	VC-STP-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:17:52	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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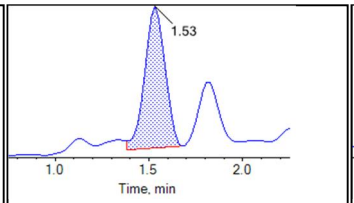

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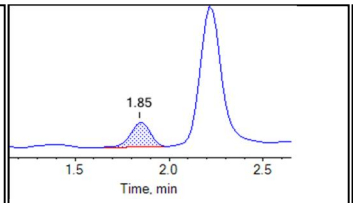

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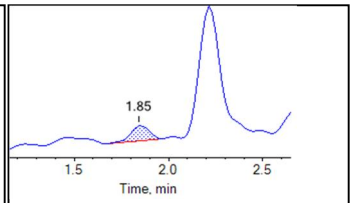

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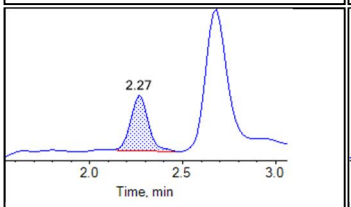

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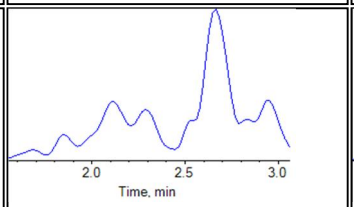

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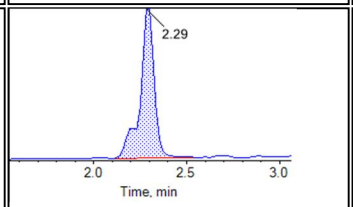

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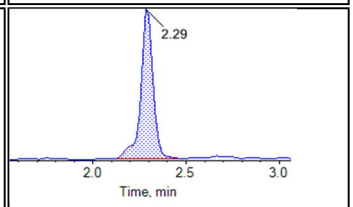

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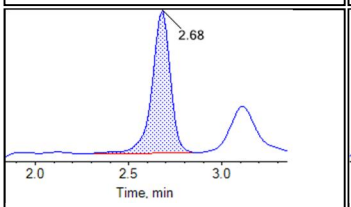

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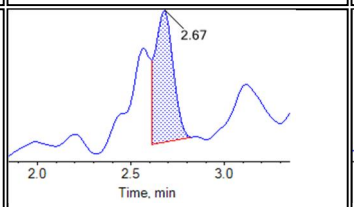

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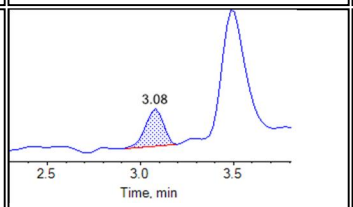

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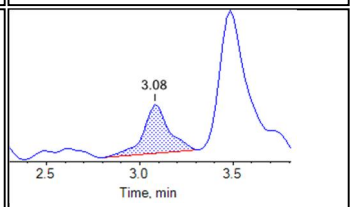

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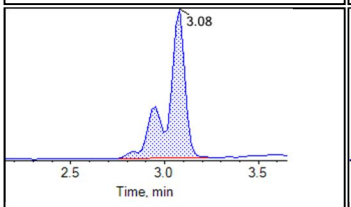

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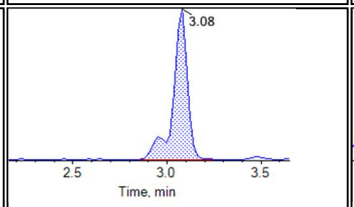

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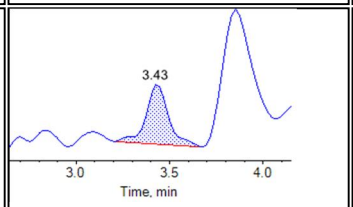

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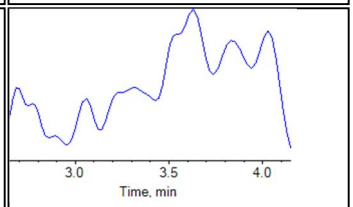

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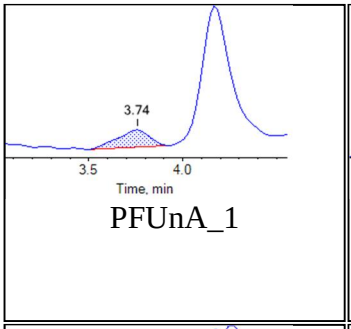

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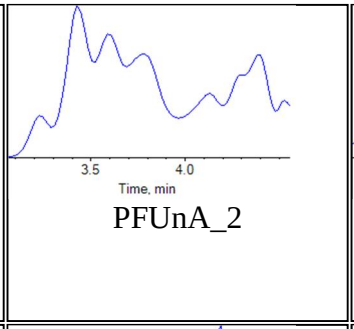

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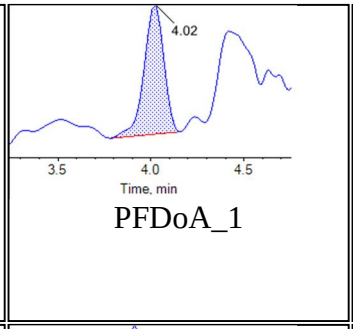

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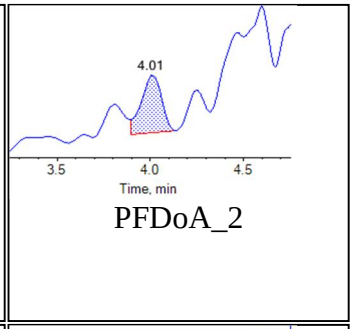

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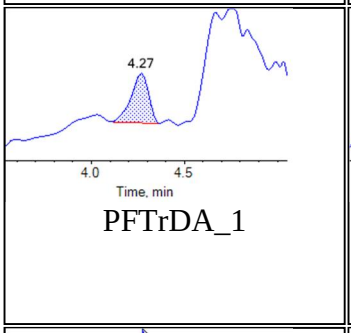

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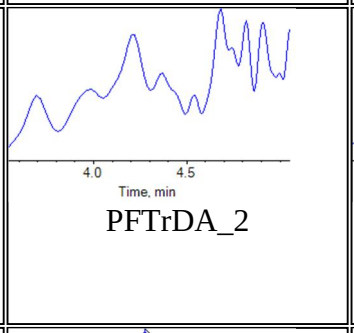

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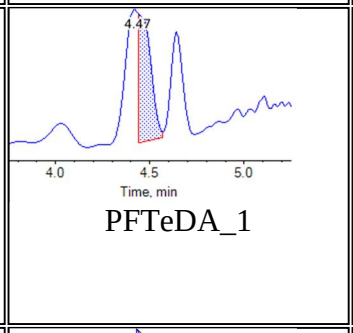

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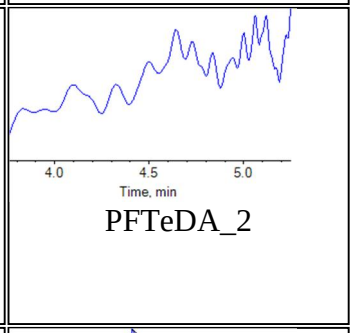

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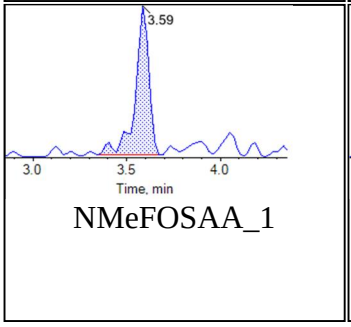

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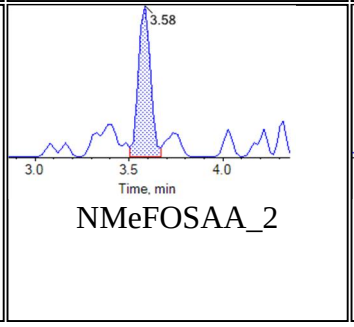

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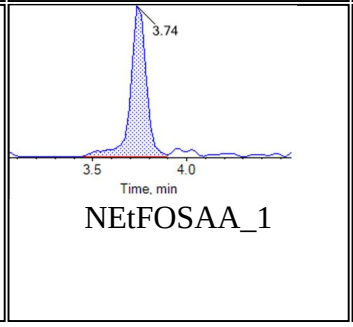

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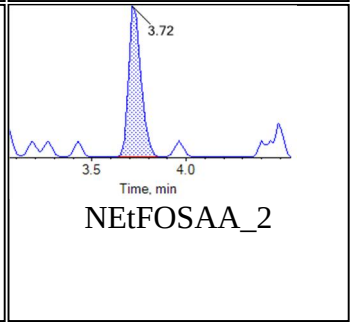

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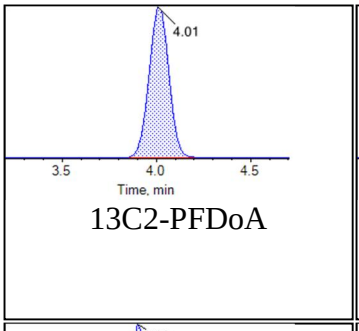

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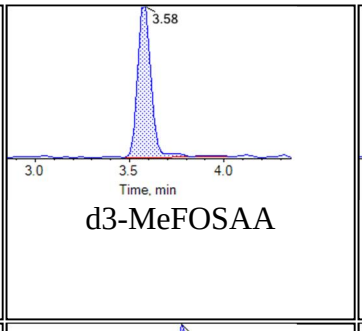

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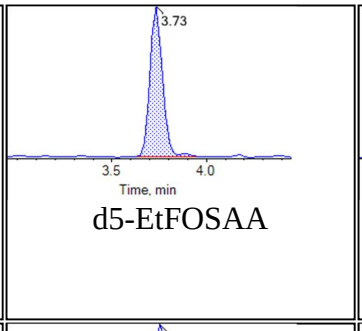

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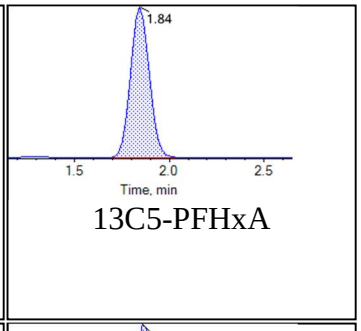

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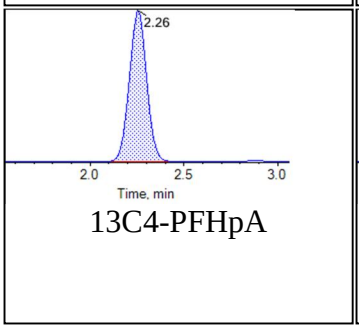

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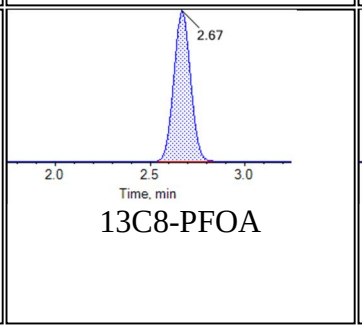

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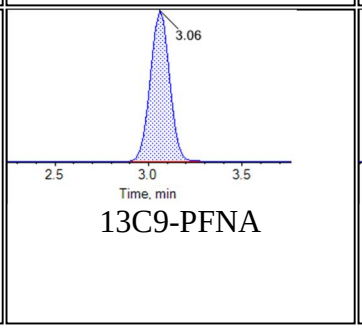

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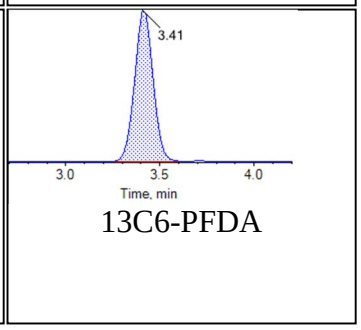

13C6-PFDA

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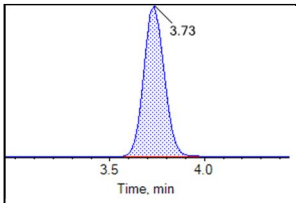
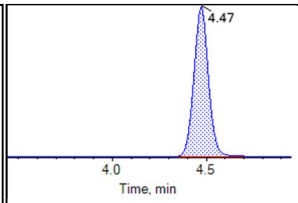


13C7-PFUnA



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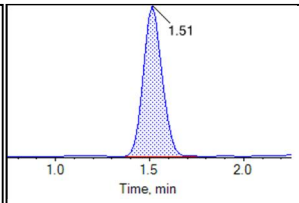

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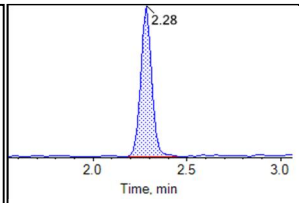

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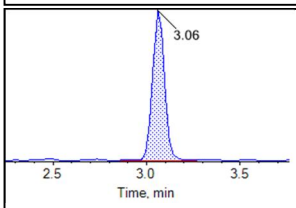

13C8-PFOS

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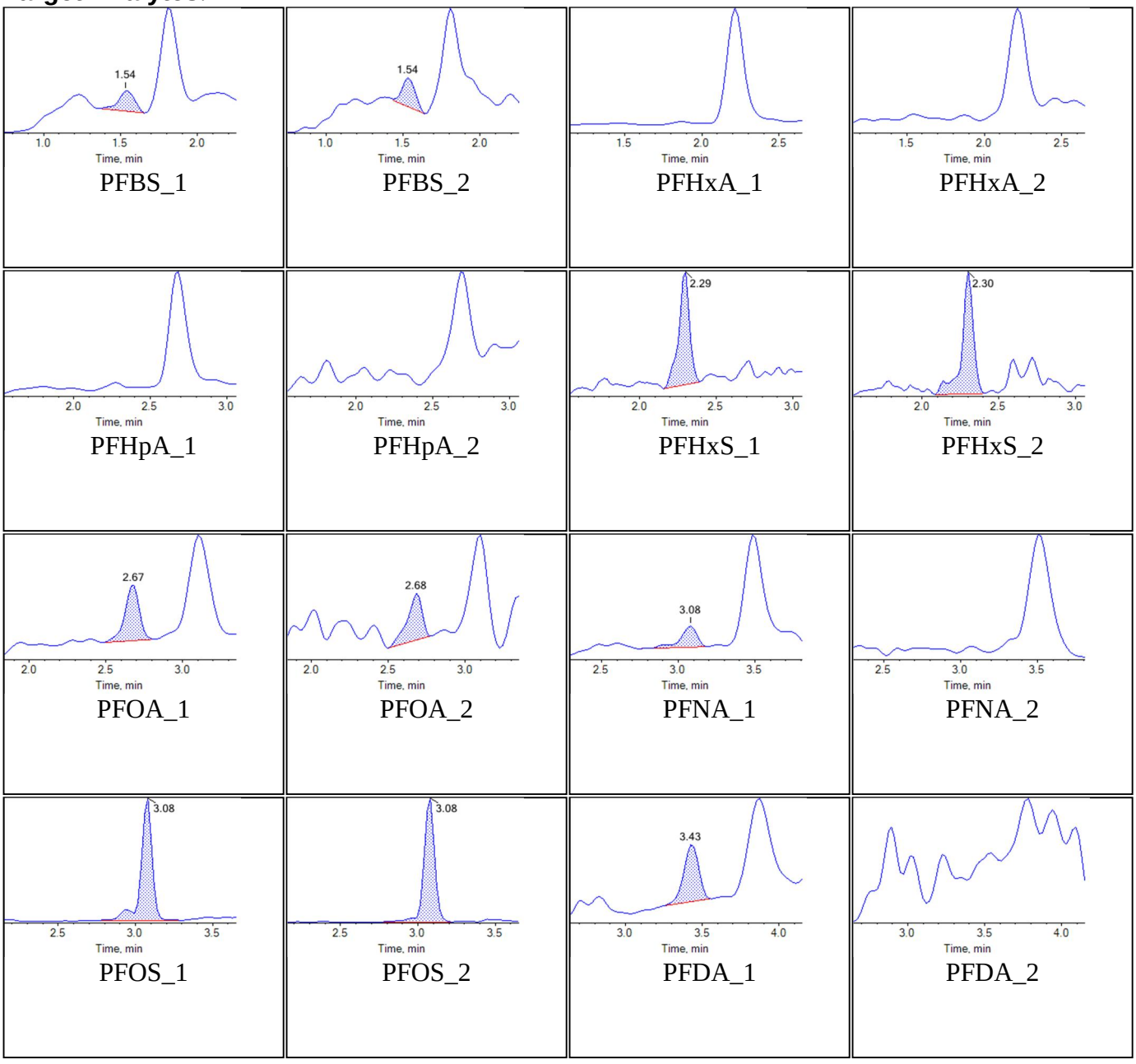
Sample Name	J8811-FS(3)	**Injection Vial**	34
Sample ID	VC-STP-SD02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:28:43	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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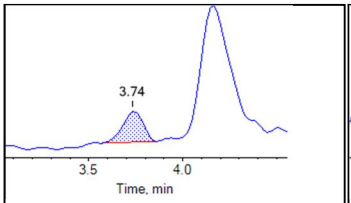
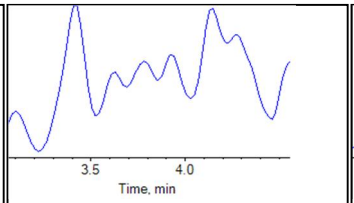


PFUnA_1



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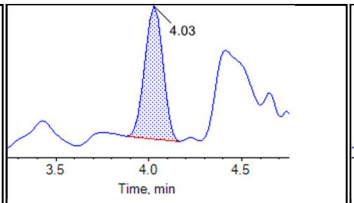

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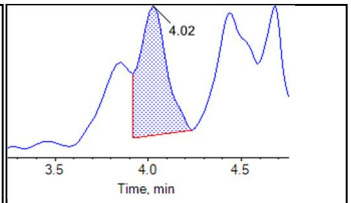

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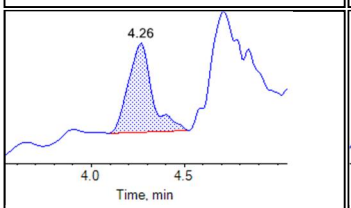

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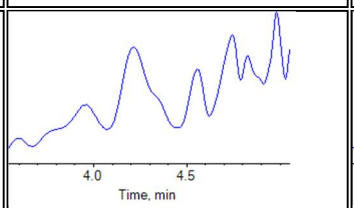

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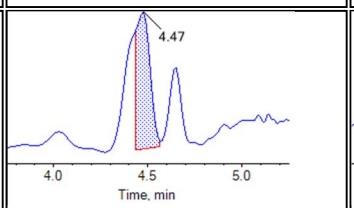

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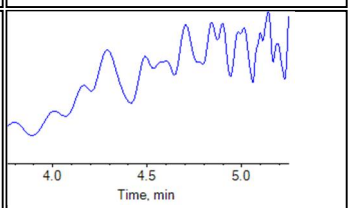

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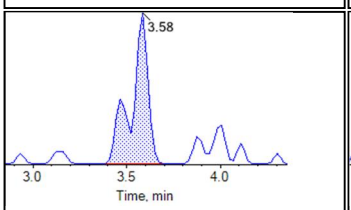

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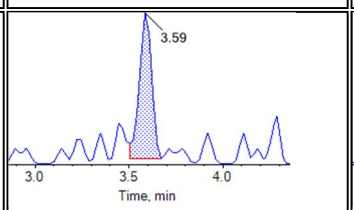

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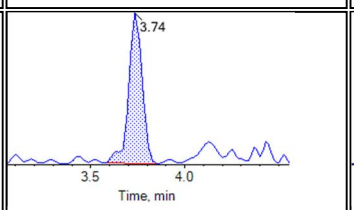

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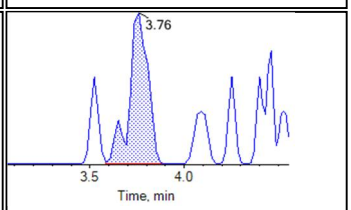

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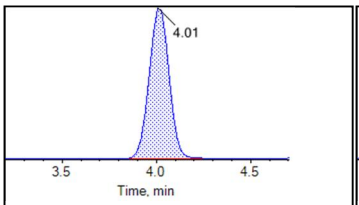

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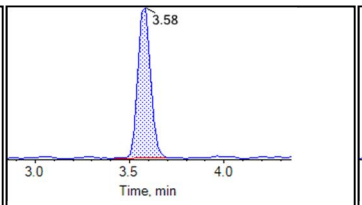
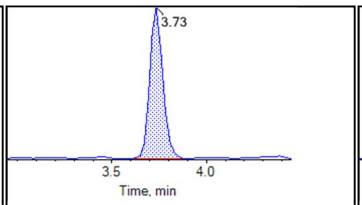


d3-MeFOSAA



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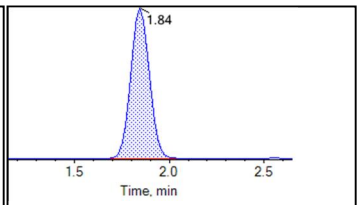

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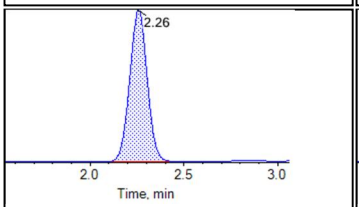

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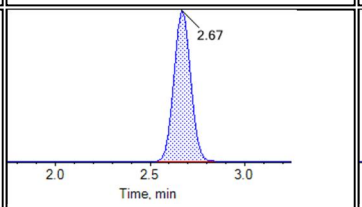

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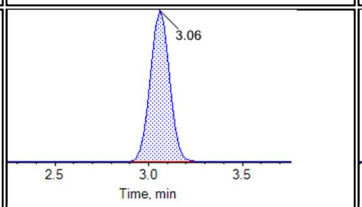

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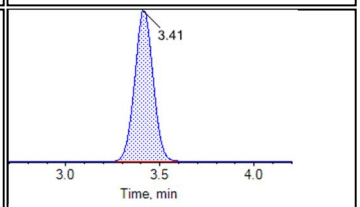

13C6-PFDA

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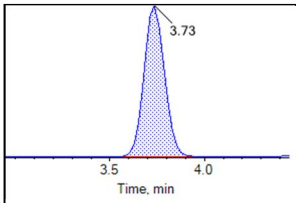

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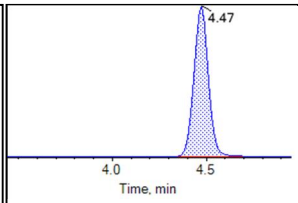

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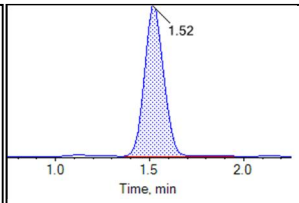

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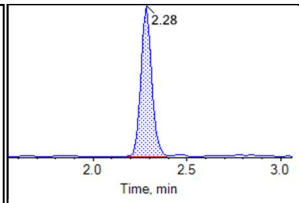

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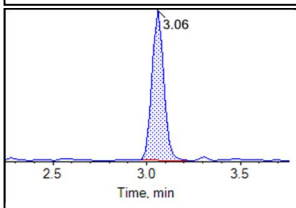

13C8-PFOS

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Chromatogram Report

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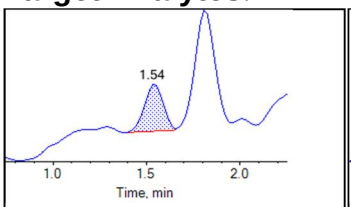
Sample Name	J8812-FS(3)	**Injection Vial**	35
Sample ID	VC-STP-SD02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:39:36	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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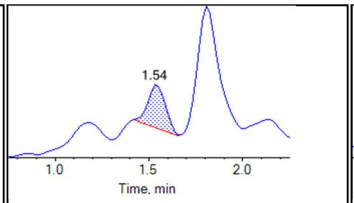
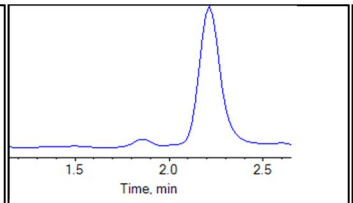


PFBS_2



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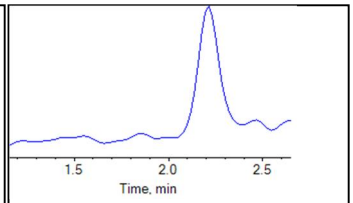

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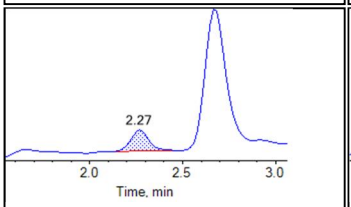

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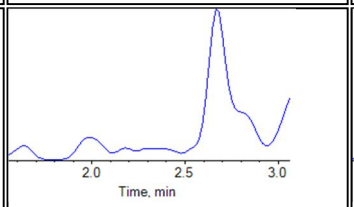

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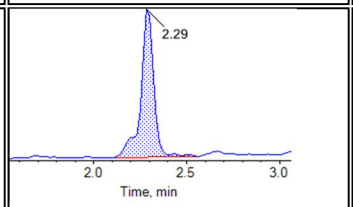

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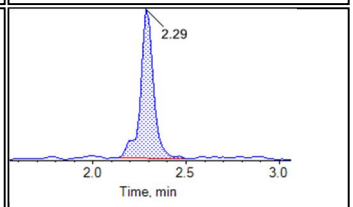

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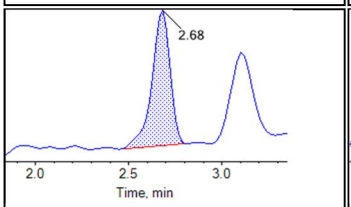

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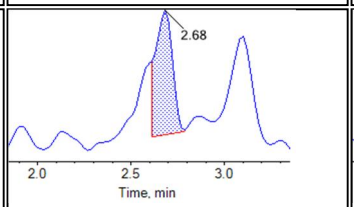

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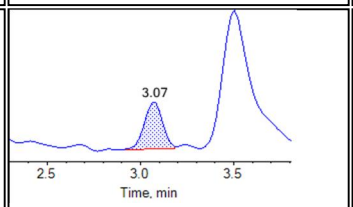

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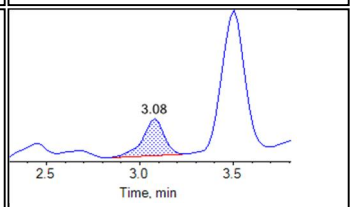

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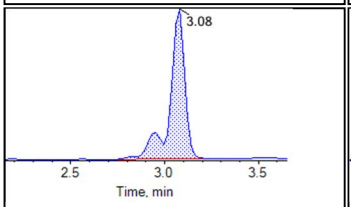
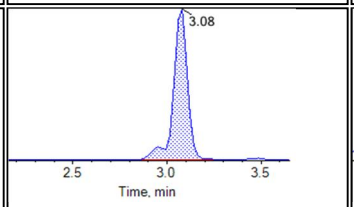
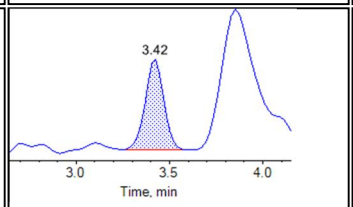


PFOS_1



PFOS_2



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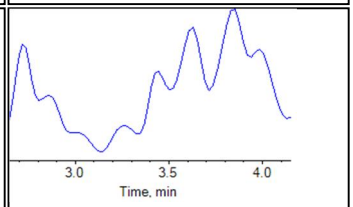

PFDA_2

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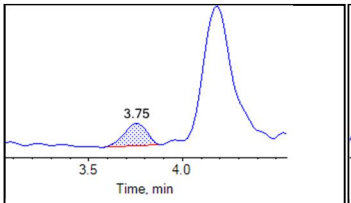

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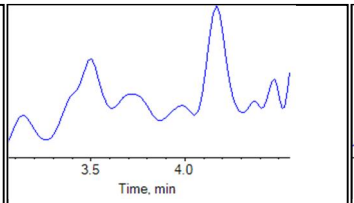

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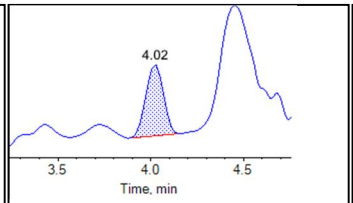

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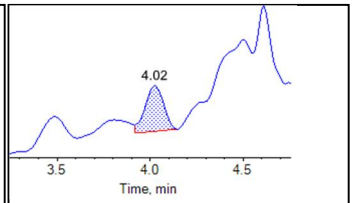

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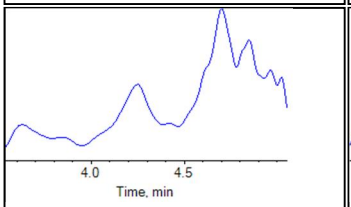

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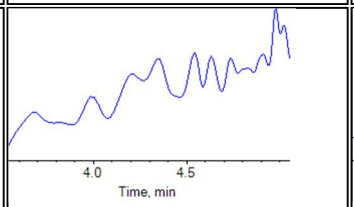

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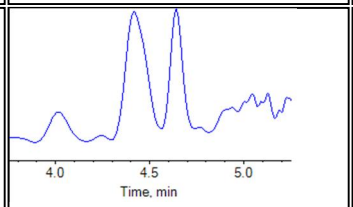

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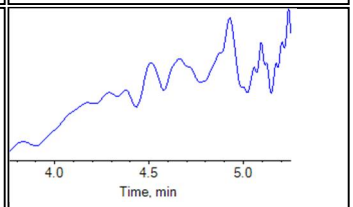

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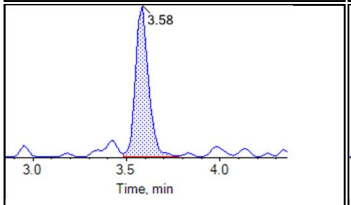

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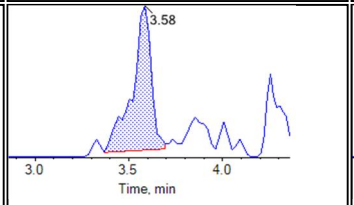

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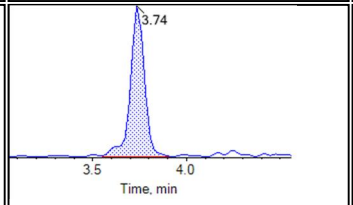

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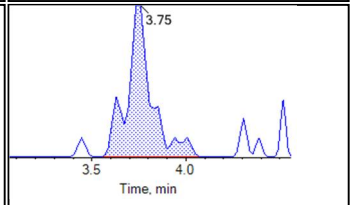

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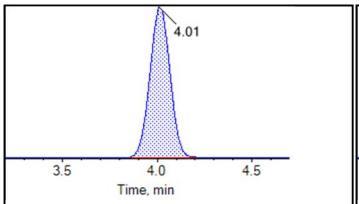

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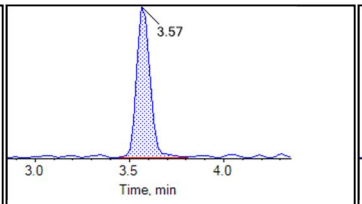

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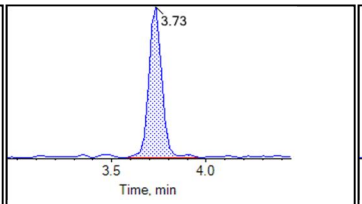

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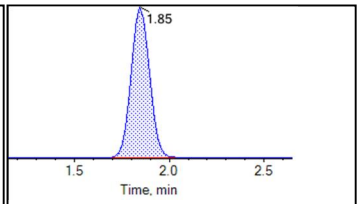

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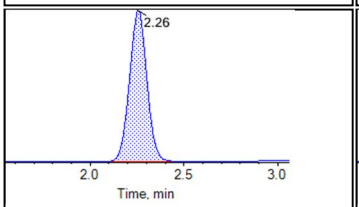

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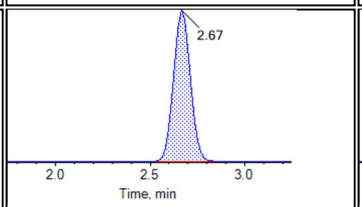

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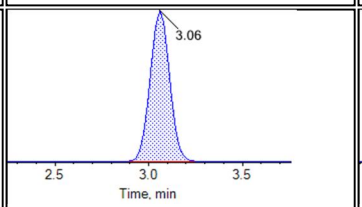

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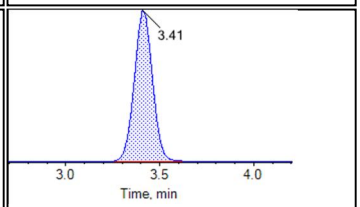

13C6-PFDA

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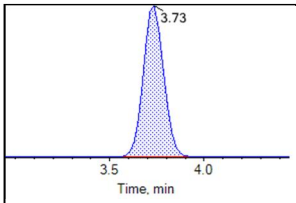
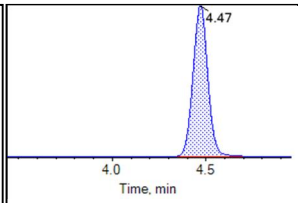


13C7-PFUnA



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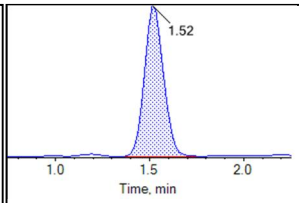

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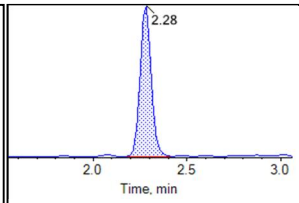

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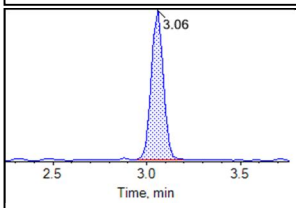

13C8-PFOS

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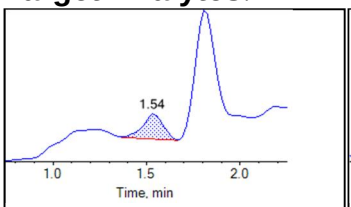
Sample Name	J8813-FS(3)	**Injection Vial**	36
Sample ID	VC-STP-SD03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:50:27	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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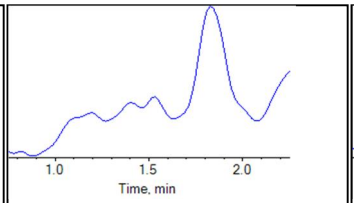

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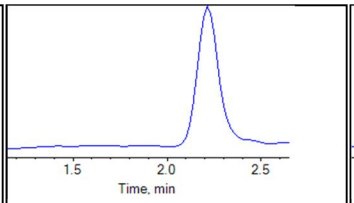

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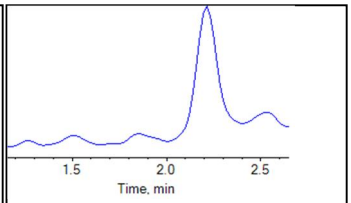

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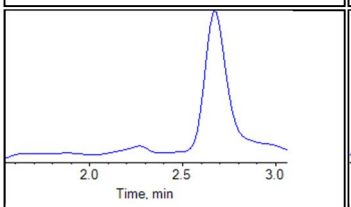

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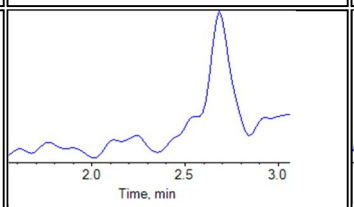

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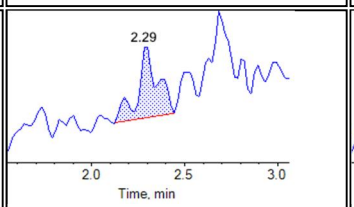

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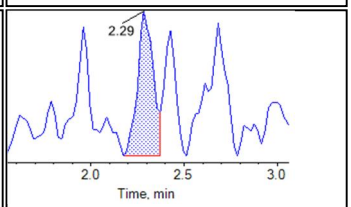

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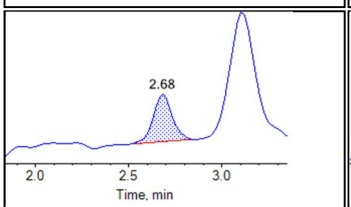

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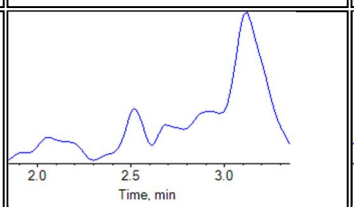

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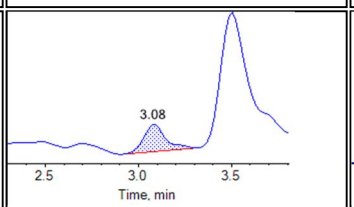

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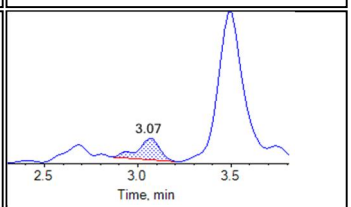

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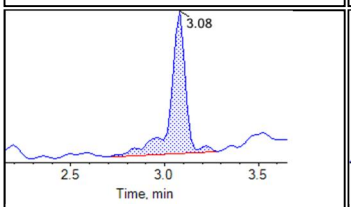

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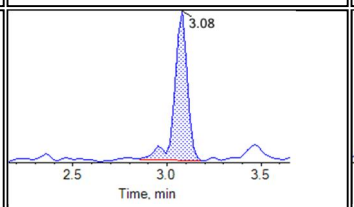

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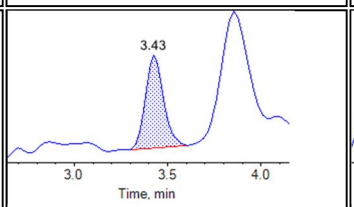

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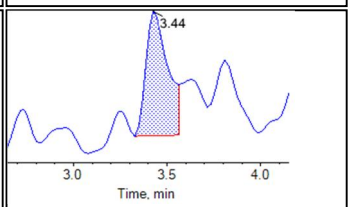

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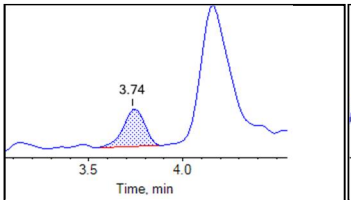

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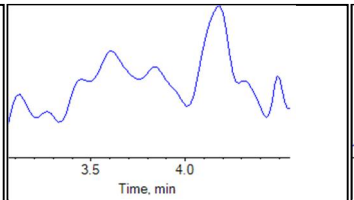

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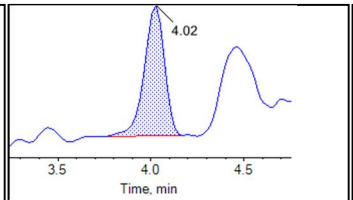

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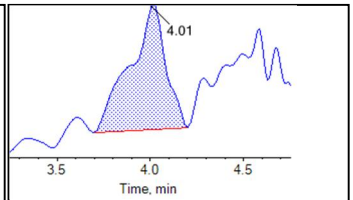

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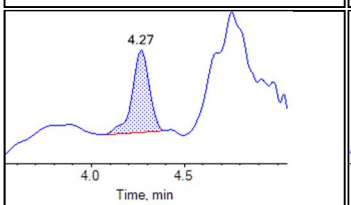

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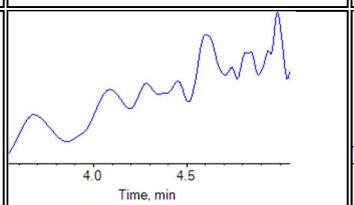

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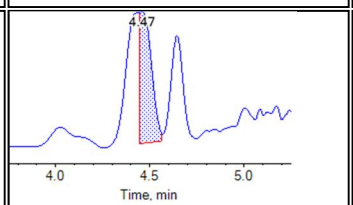

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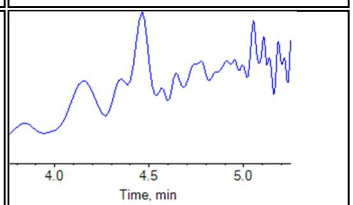

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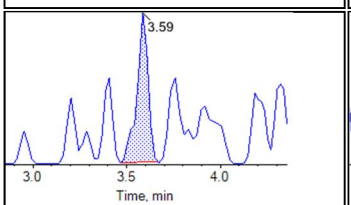

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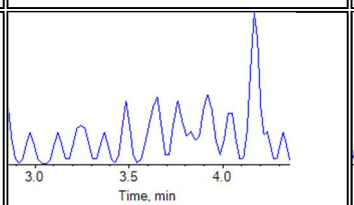

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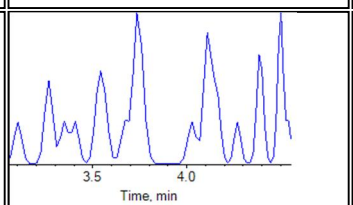

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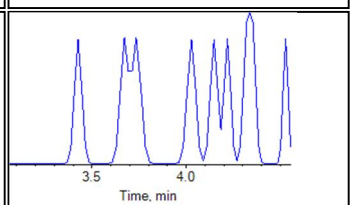

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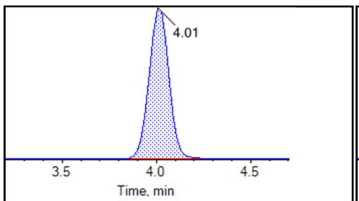

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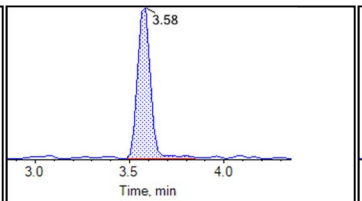

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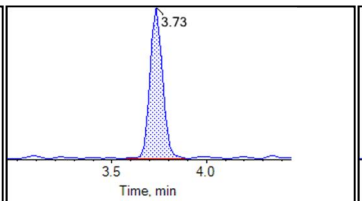

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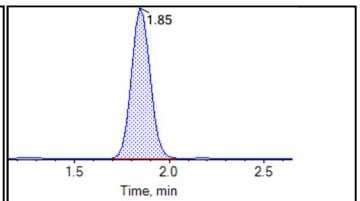

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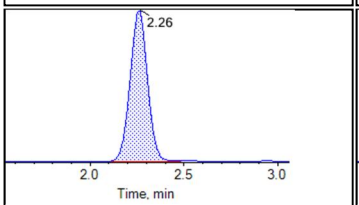

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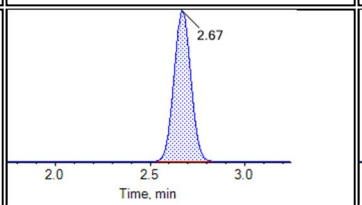

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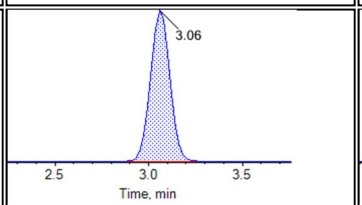

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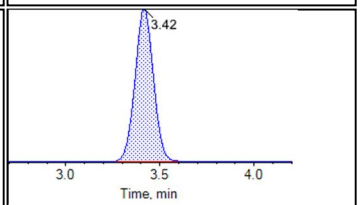

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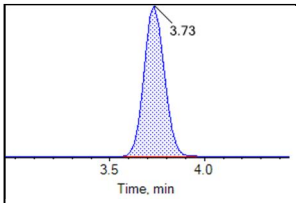
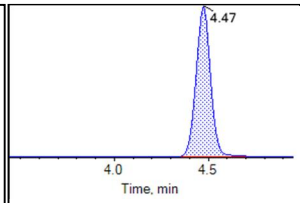
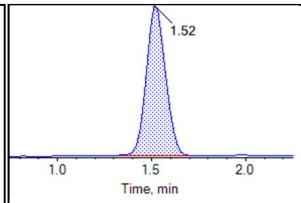


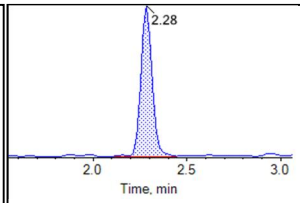
13C7-PFUnA



13C2-PFTeDA



13C3-PFBS



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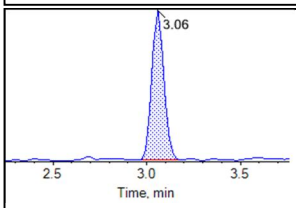

13C8-PFOS

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Chromatogram Report

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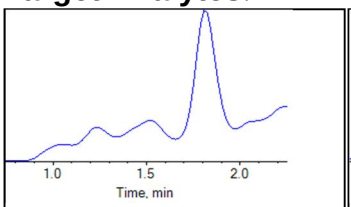
Sample Name	J8814-FS(3)	**Injection Vial**	37
Sample ID	VC-STP-SD03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:01:19	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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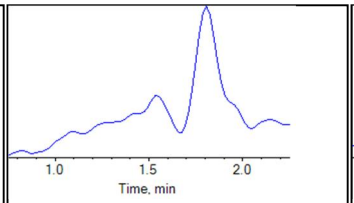

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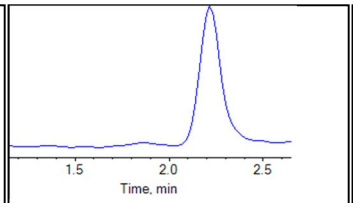

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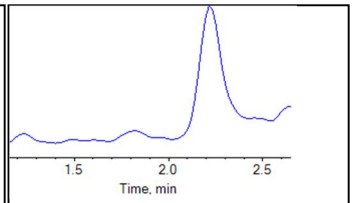

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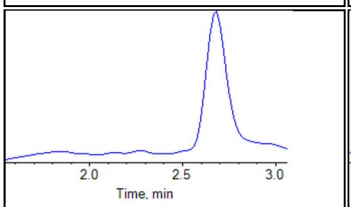

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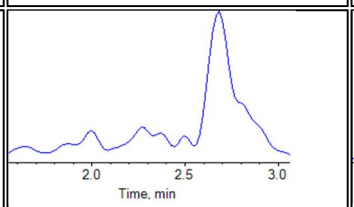

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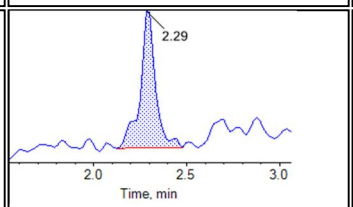

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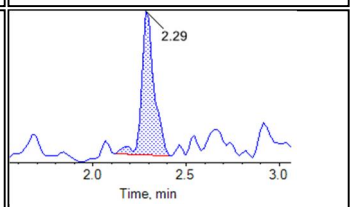

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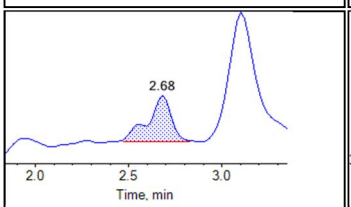

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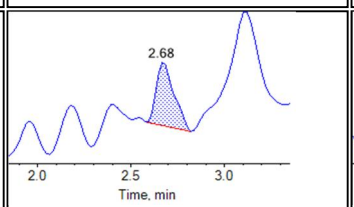

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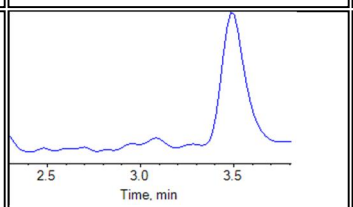

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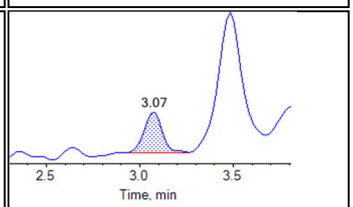

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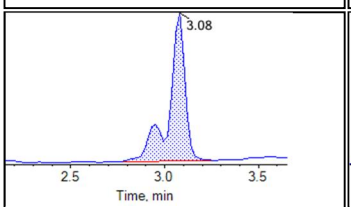
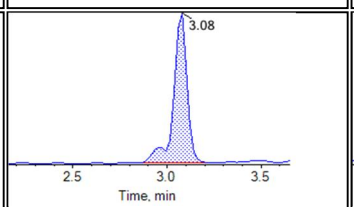


PFOS_1



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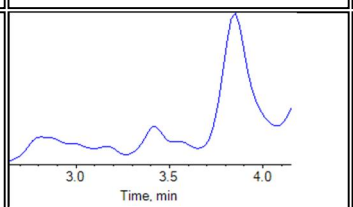

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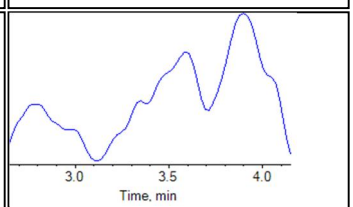

PFDA_2

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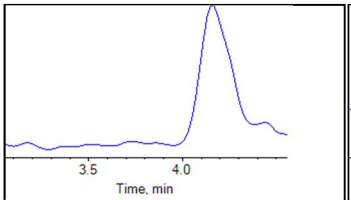

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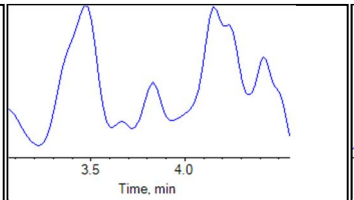

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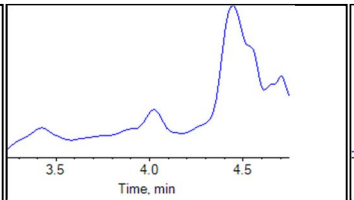

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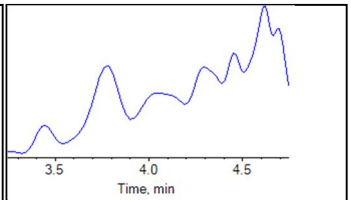

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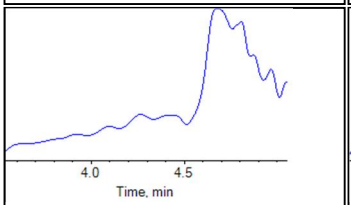

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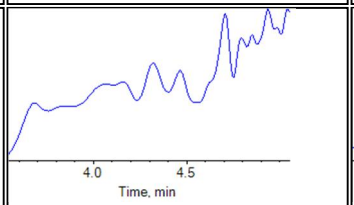

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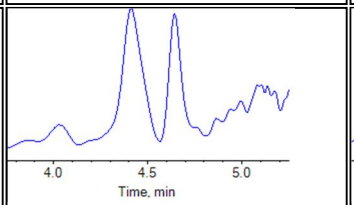

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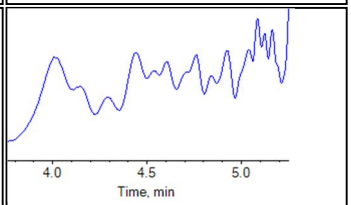

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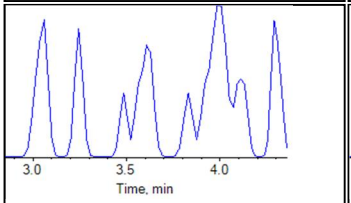

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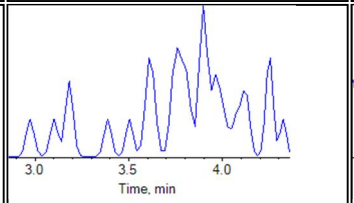

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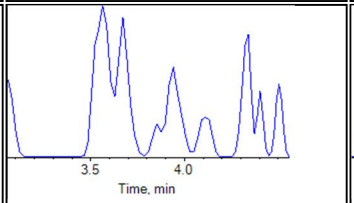

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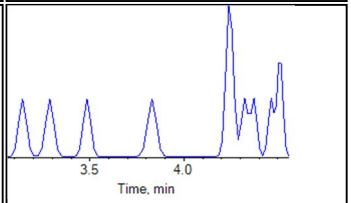
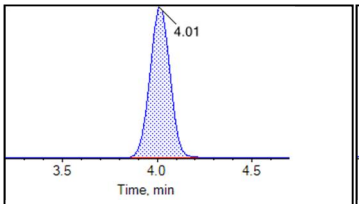
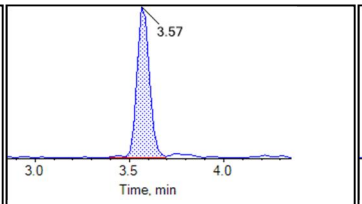


NEtFOSAA_2

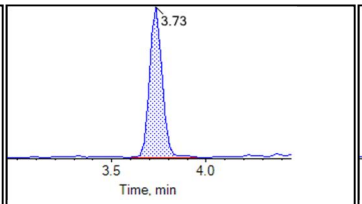
Internal Standards:



13C2-PFDoA



d3-MeFOSAA



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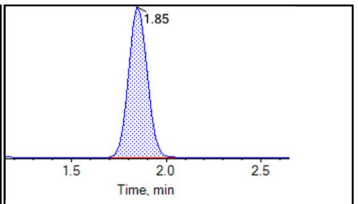
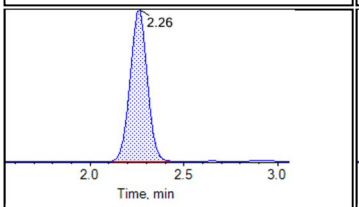


13C5-PFHxA



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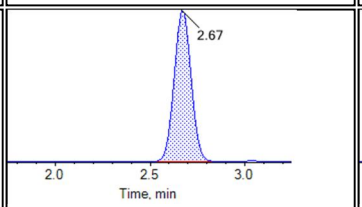
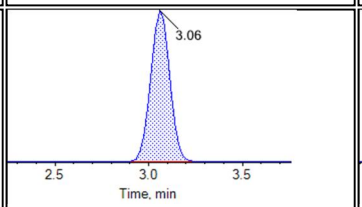


13C8-PFOA



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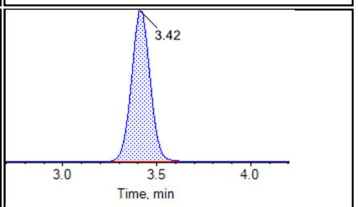

13C6-PFDA

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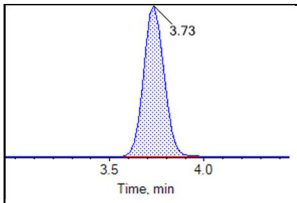
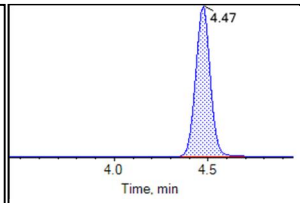
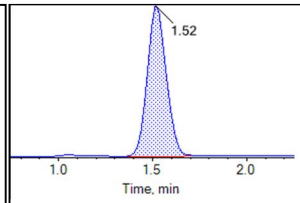


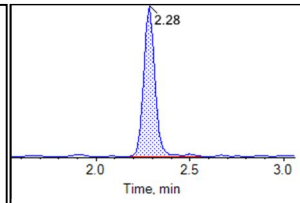
13C7-PFUnA



13C2-PFTeDA



13C3-PFBS



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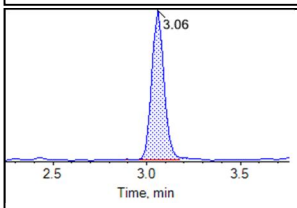

13C8-PFOS

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Chromatogram Report

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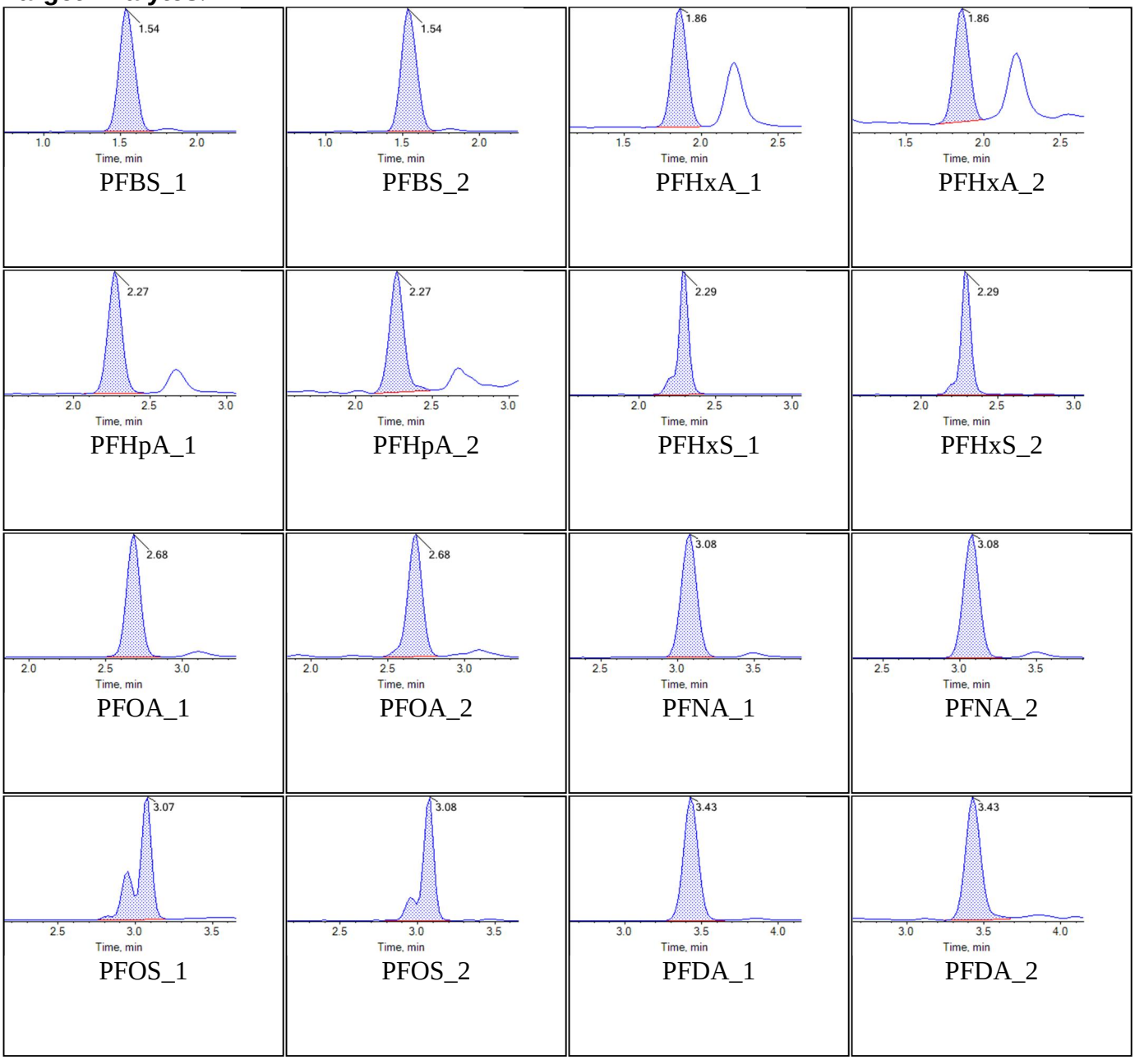
Sample Name	KB76 CCV	**Injection Vial**	38
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:12:12	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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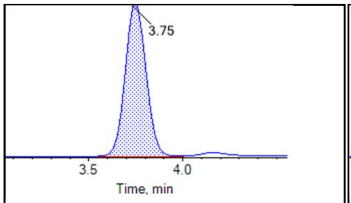
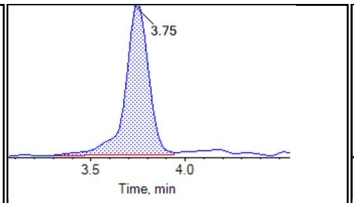
Chromatogram Report

Created with Analyst Reporter
Printed: 07/11/2018 12:11:12 PM



PFUnA_1



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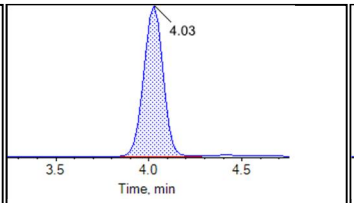
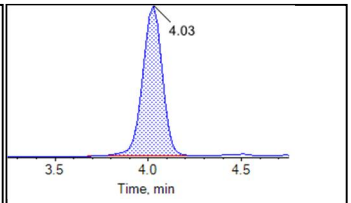
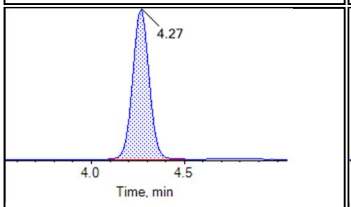


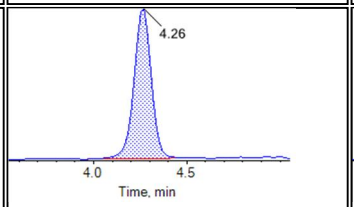
PFDoA_1



PFDoA_2



PFTrDA_1



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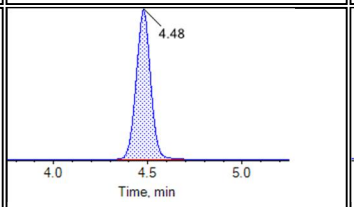

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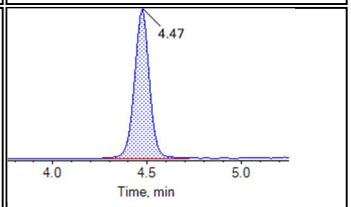

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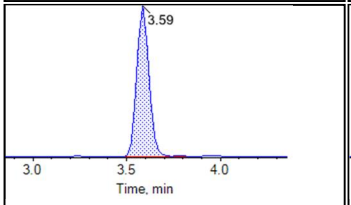

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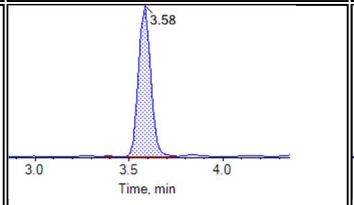

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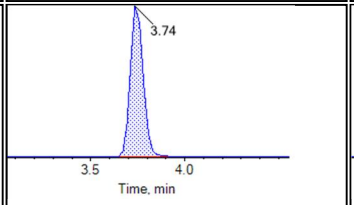

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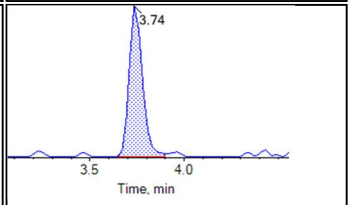

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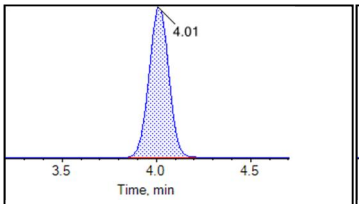

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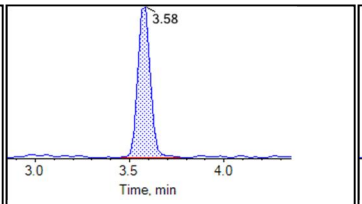

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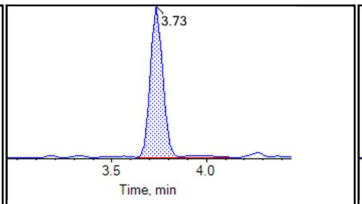

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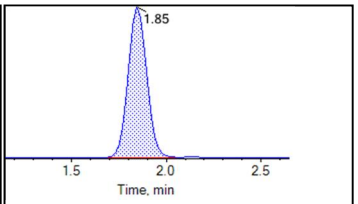

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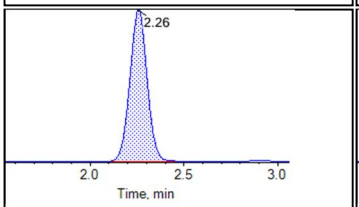

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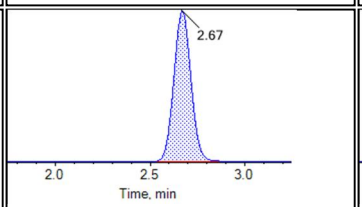

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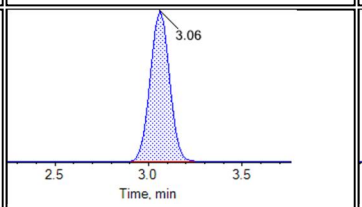

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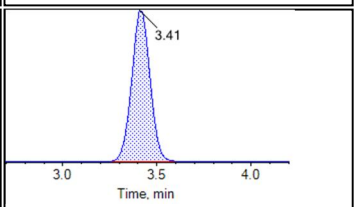

13C6-PFDA

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Chromatogram Report

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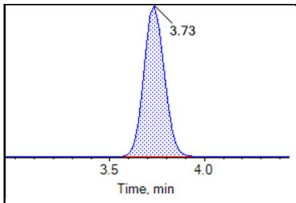
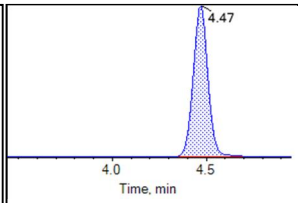


13C7-PFUnA



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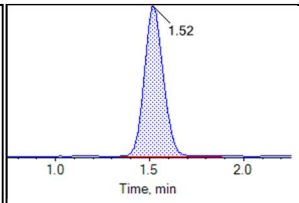

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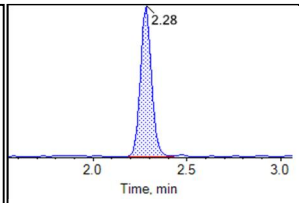

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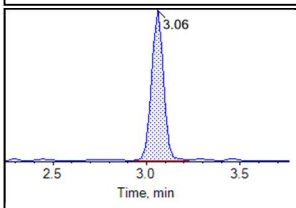

13C8-PFOS

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Chromatogram Report

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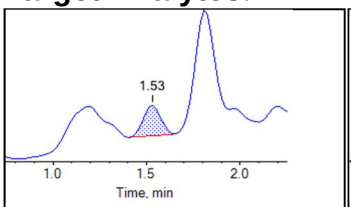
Sample Name	J8815-FS(3)	**Injection Vial**	40
Sample ID	VC-STP-SD04-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:33:58	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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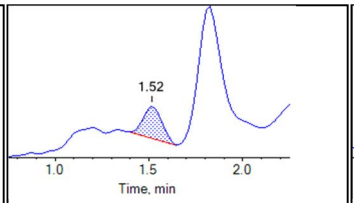

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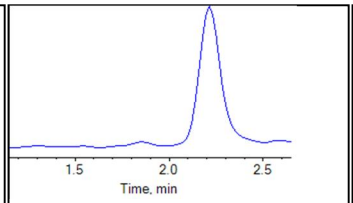

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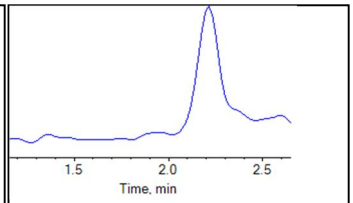

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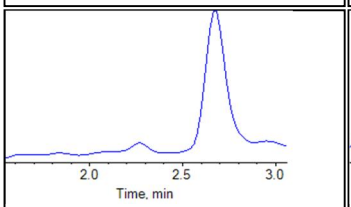

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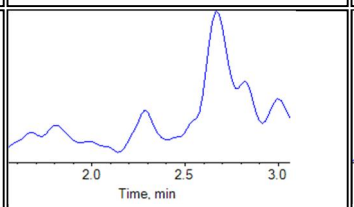

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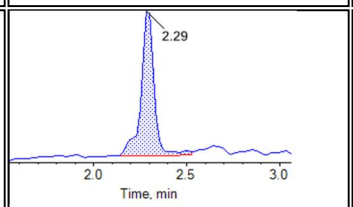

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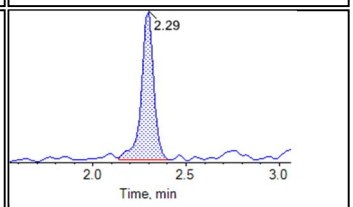

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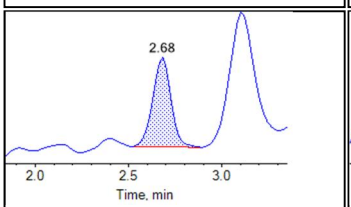

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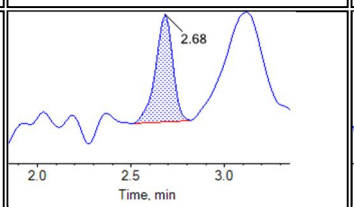

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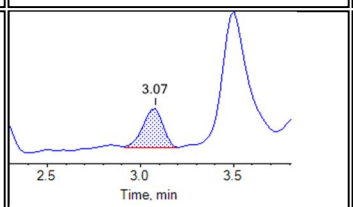

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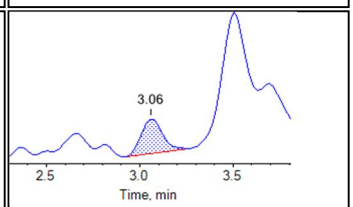

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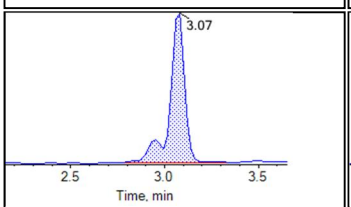

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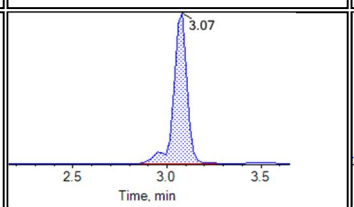

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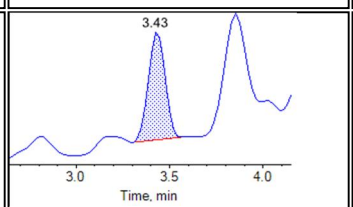

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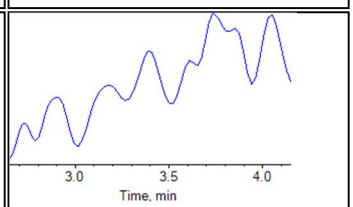

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Chromatogram Report

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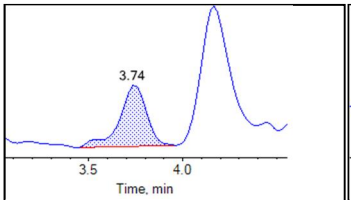

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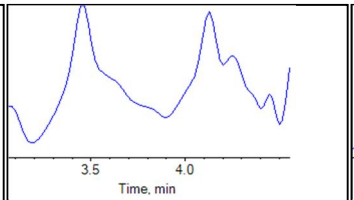

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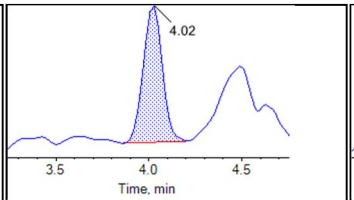

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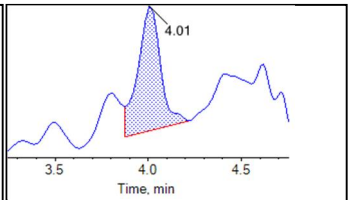

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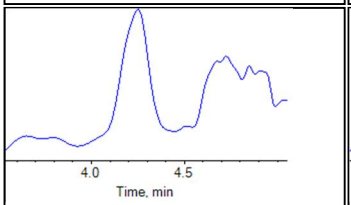

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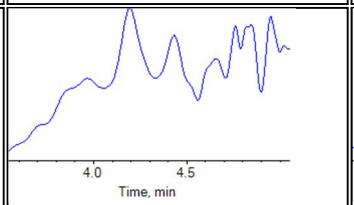

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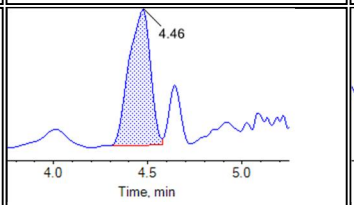

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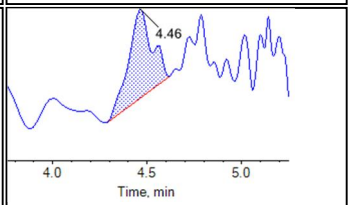

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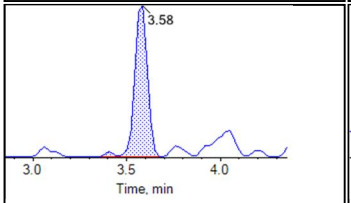

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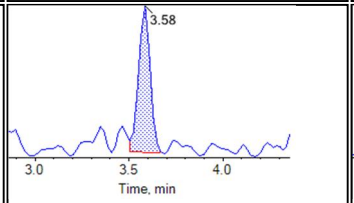

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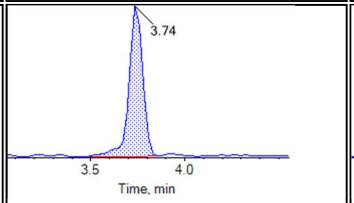

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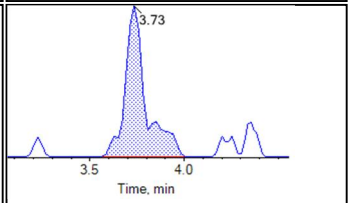

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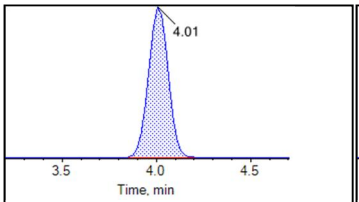

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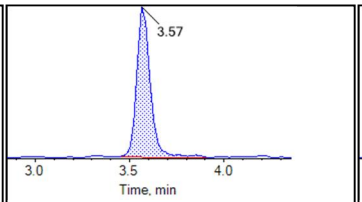

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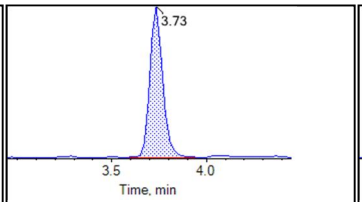

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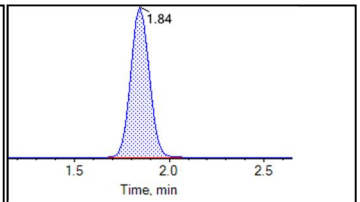
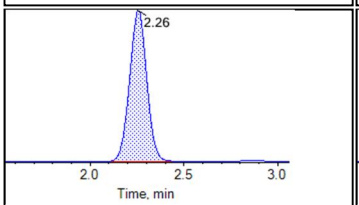
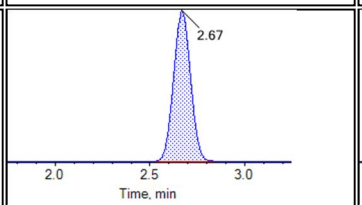


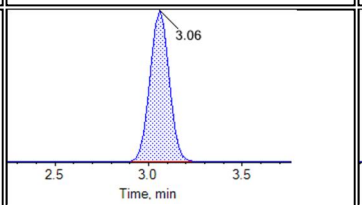
13C5-PFHxA



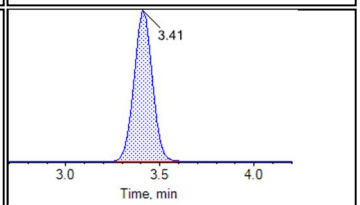
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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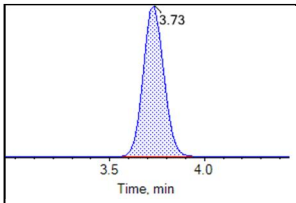
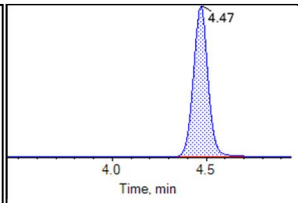


13C7-PFUnA



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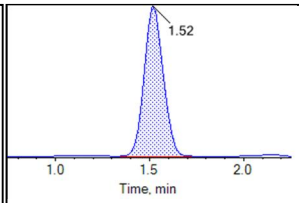
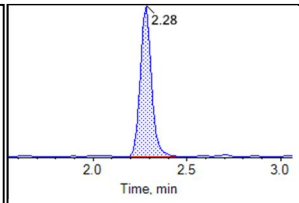
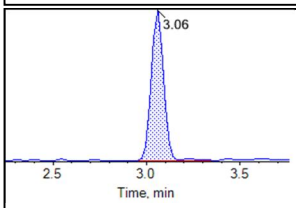


13C3-PFBS



13C3-PFHxS



13C8-PFOS

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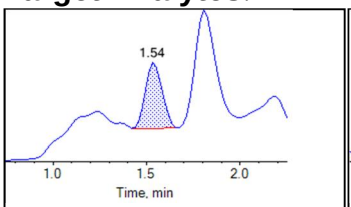
Sample Name	J8816-FS(3)	**Injection Vial**	41
Sample ID	VC-STP-SD04-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:44:50	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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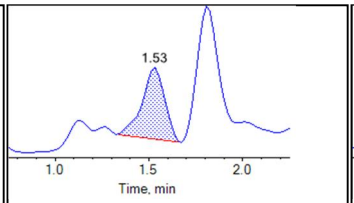
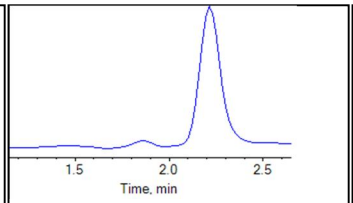
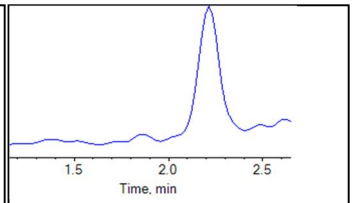


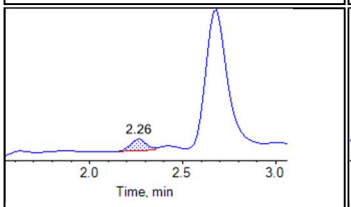
PFBS_2



PFHxA_1



PFHxA_2



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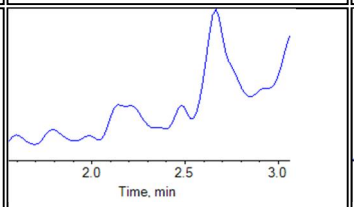
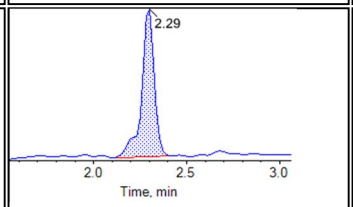
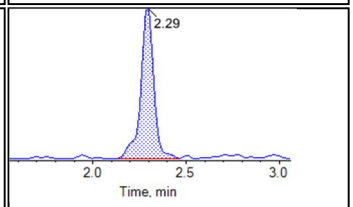


PFHpA_2



PFHxS_1



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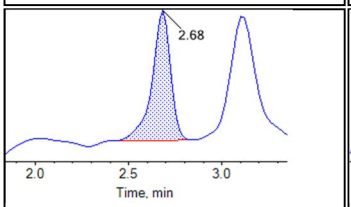
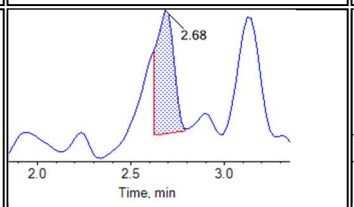


PFOA_1



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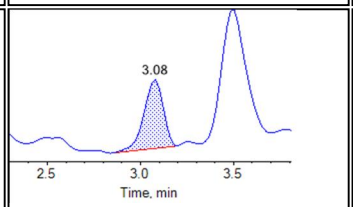

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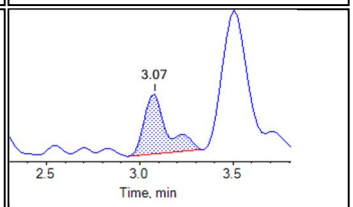

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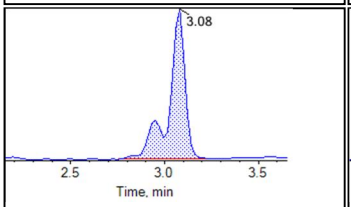
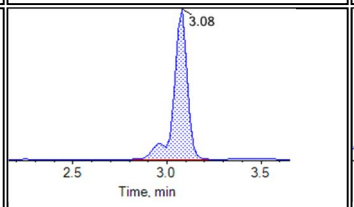


PFOS_1



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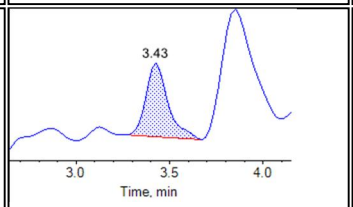
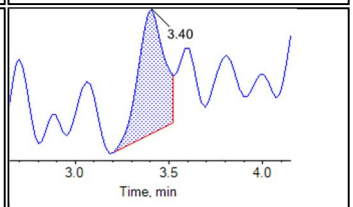


PFDA_1



PFDA_2

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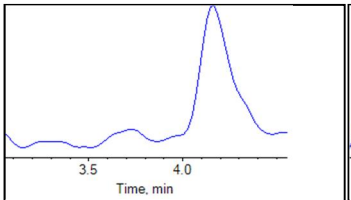
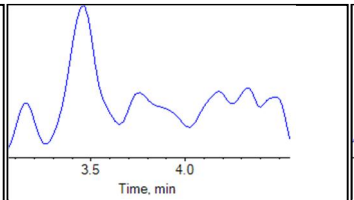


PFUnA_1



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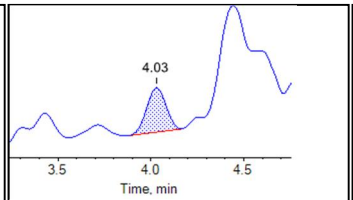

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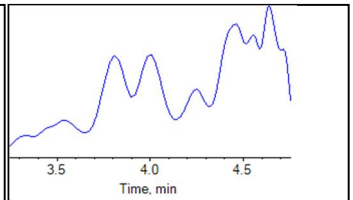

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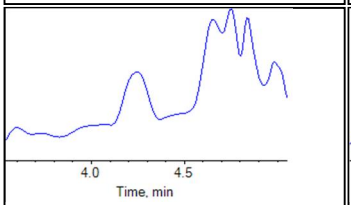

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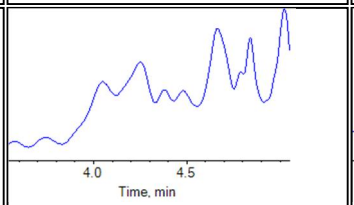

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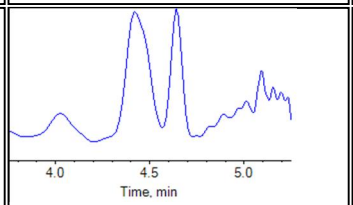

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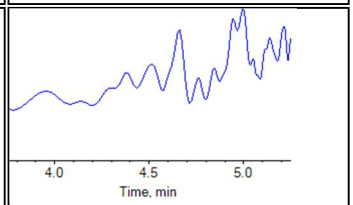

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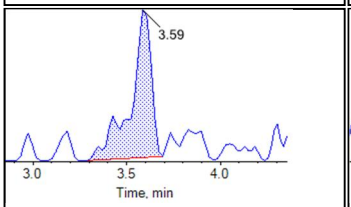

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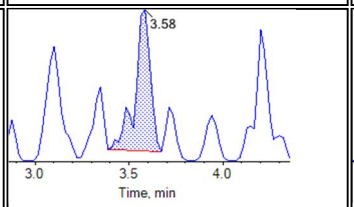

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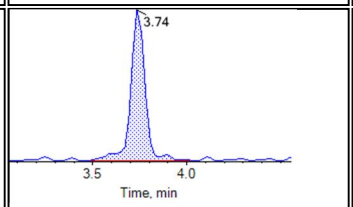

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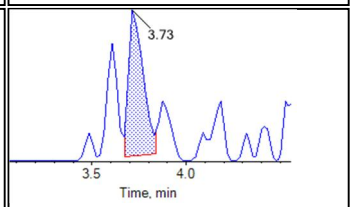
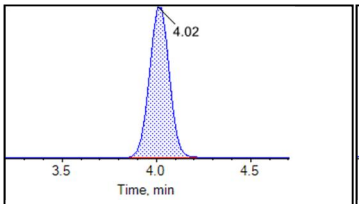


NEtFOSAA_2

Internal Standards:



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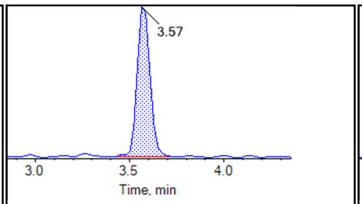
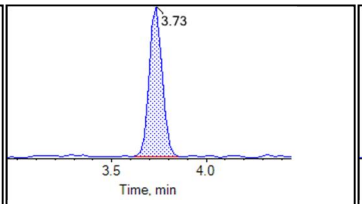
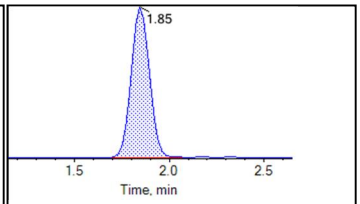


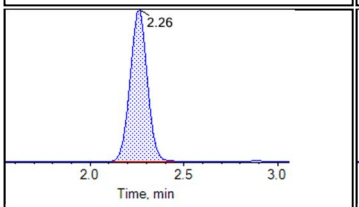
d3-MeFOSAA



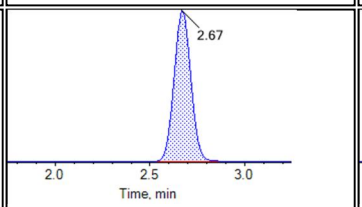
d5-EtFOSAA



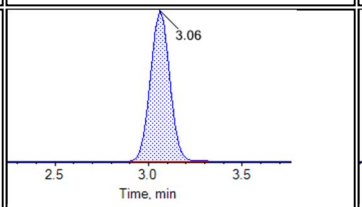
13C5-PFHxA



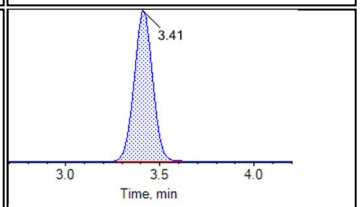
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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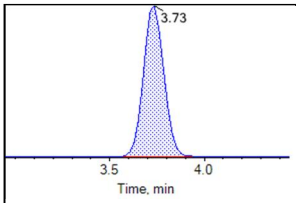
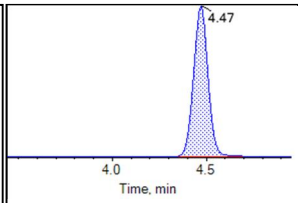
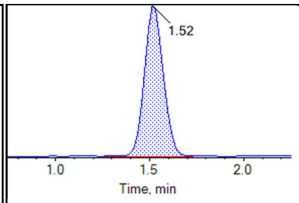


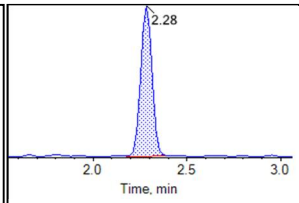
13C7-PFUnA



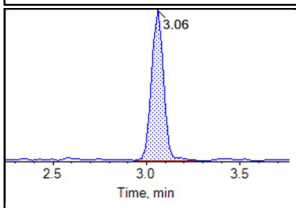
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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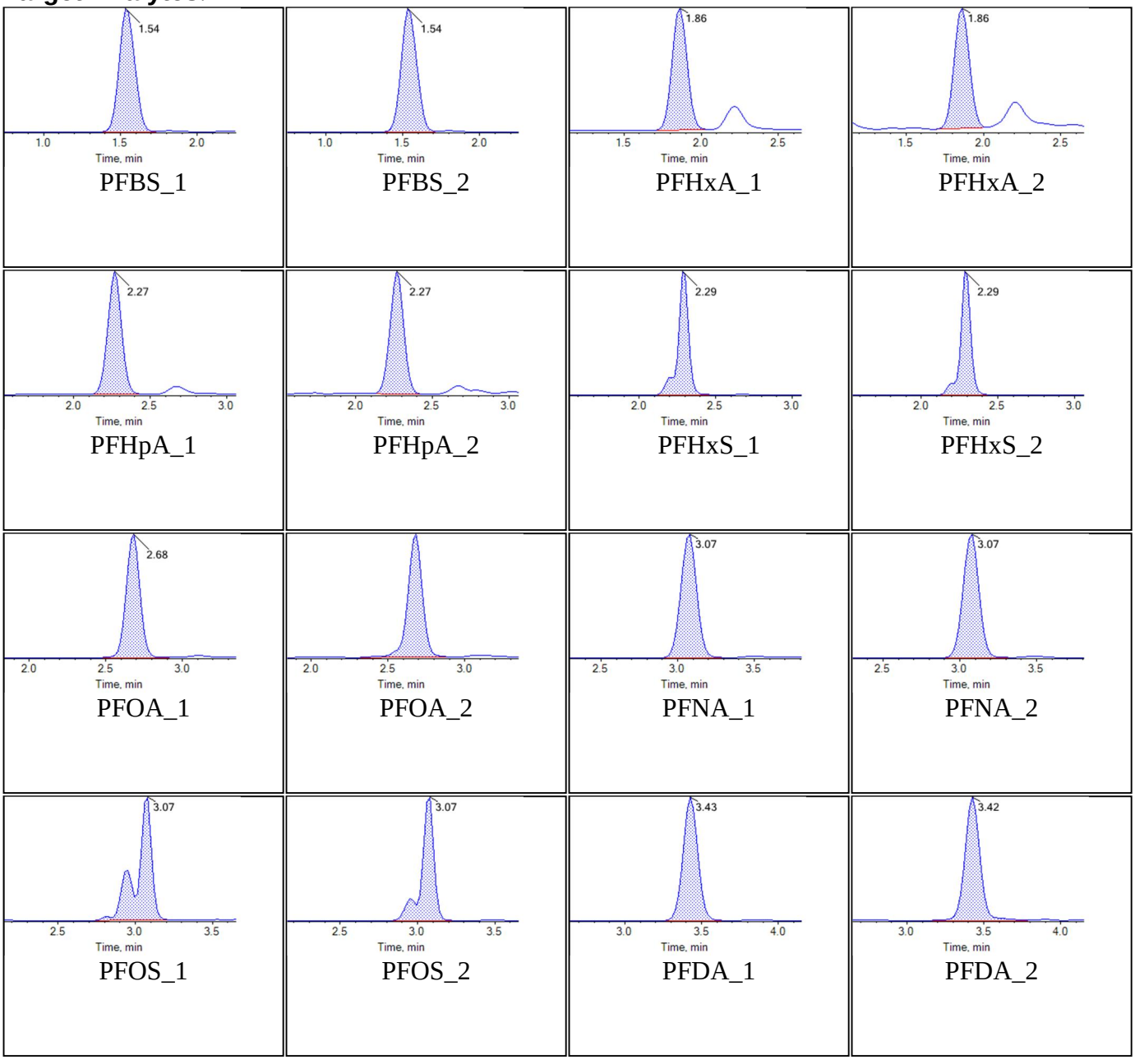
Sample Name	KB77 CCV	**Injection Vial**	42
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:55:41	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_BASE
Sample Comment			

Chromatograms

Target Analytes:



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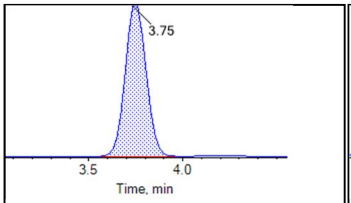
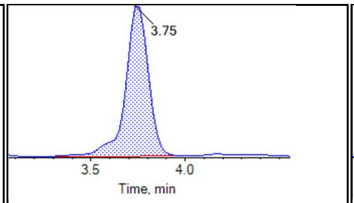


PFUnA_1



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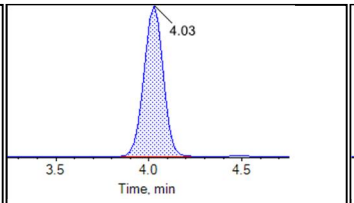

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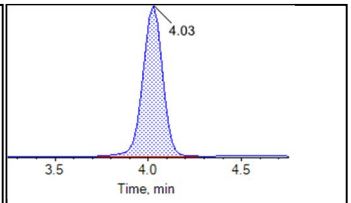

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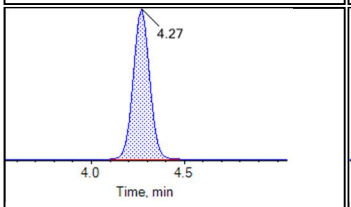
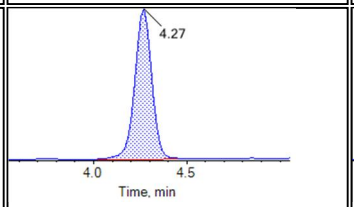


PFTrDA_1



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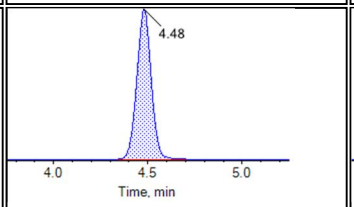

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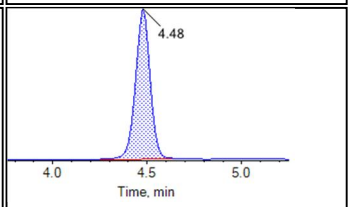

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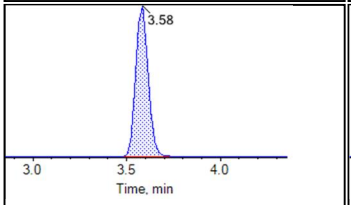
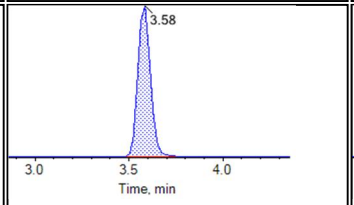


NMeFOSAA_1



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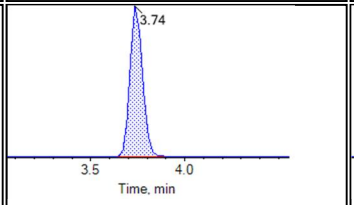
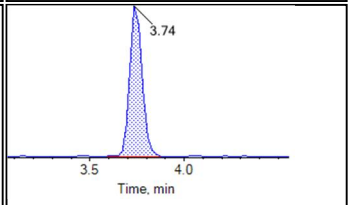


NEtFOSAA_1



NEtFOSAA_2

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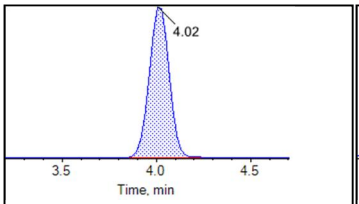
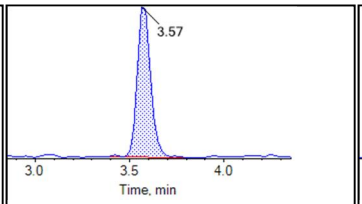
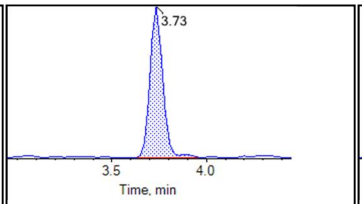


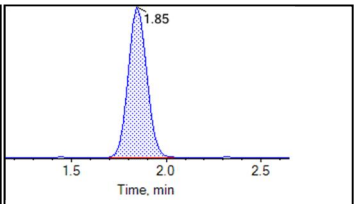
13C2-PFDoA



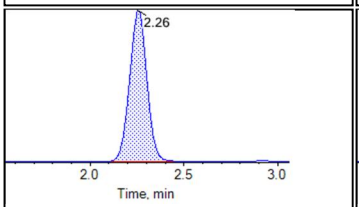
d3-MeFOSAA



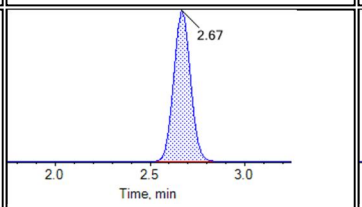
d5-EtFOSAA



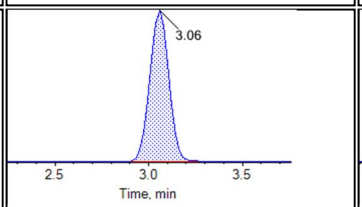
13C5-PFHxA



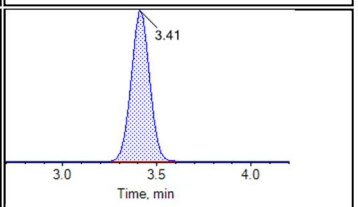
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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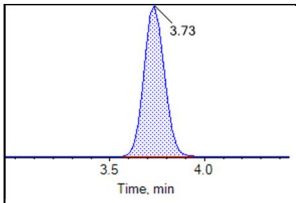
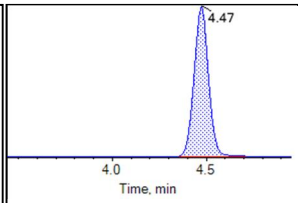
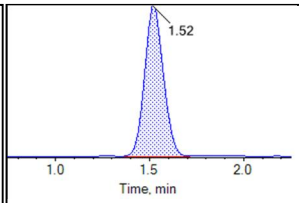


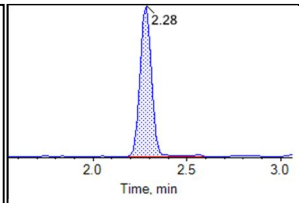
13C7-PFUnA



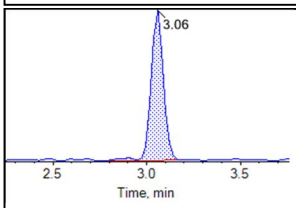
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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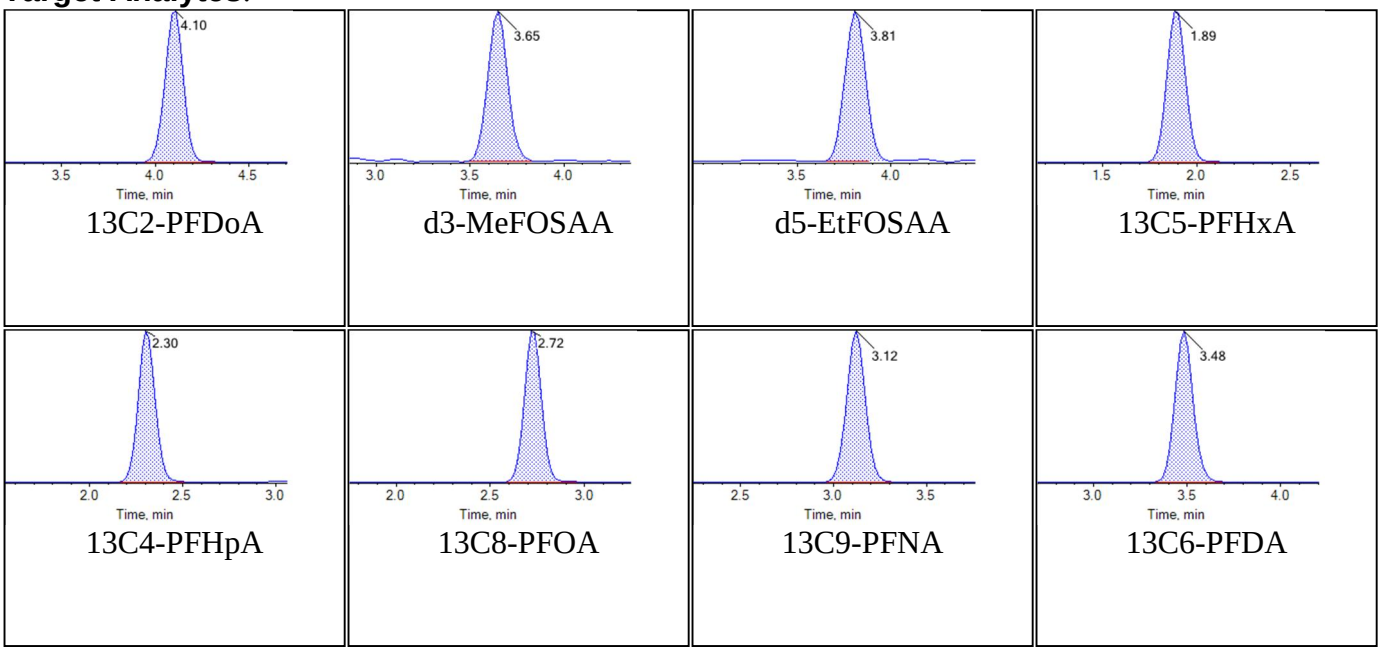
Sample Name	KB73	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T19:46:52	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

Target Analytes:



BATTELLE

Chromatogram Report

Created with Analyst Reporter
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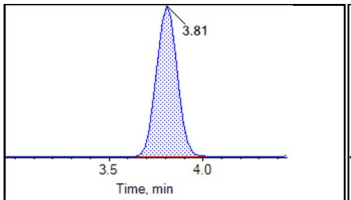
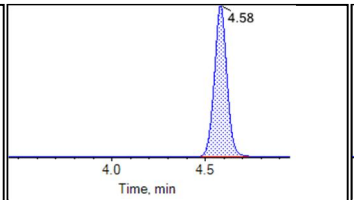
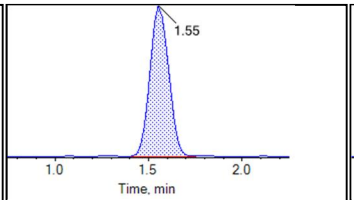


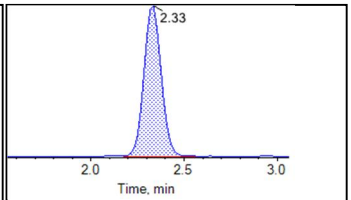
13C7-PFUnA



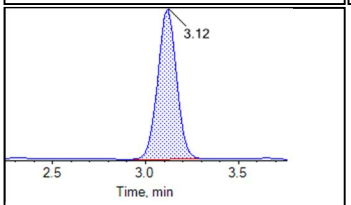
13C2-PFTeDA



13C3-PFBS

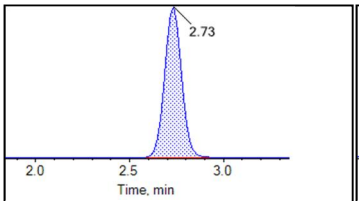


13C3-PFHxS

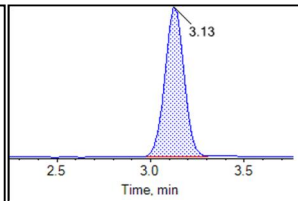


13C8-PFOS

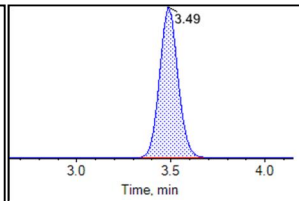
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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Chromatogram Report

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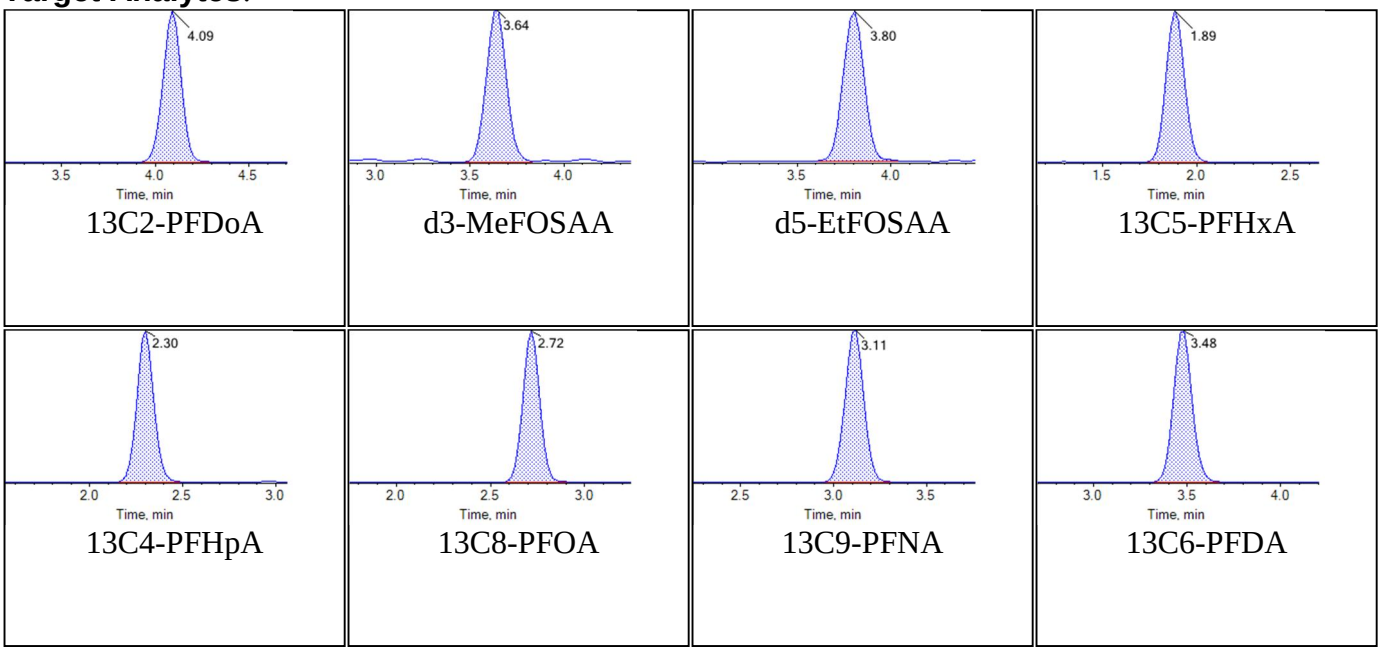
Sample Name	KB74	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T19:57:45	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

Target Analytes:



BATTELLE

Chromatogram Report

Created with Analyst Reporter
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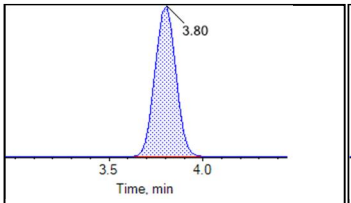
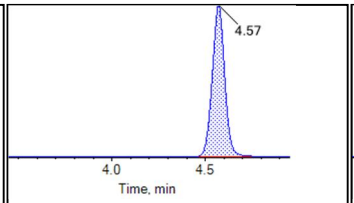
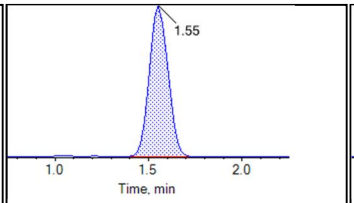


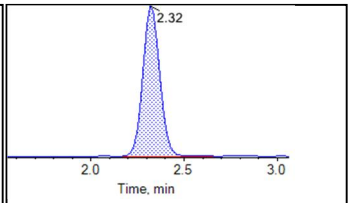
13C7-PFUnA



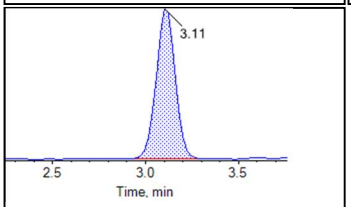
13C2-PFTeDA



13C3-PFBS

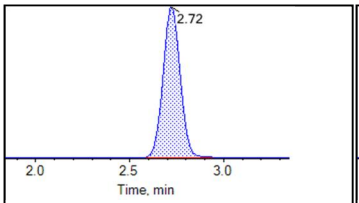


13C3-PFHxS

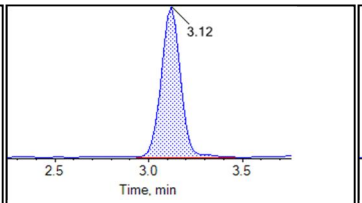


13C8-PFOS

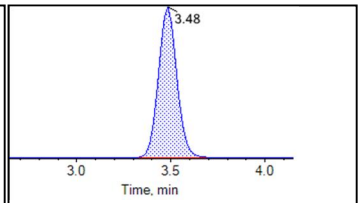
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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Chromatogram Report

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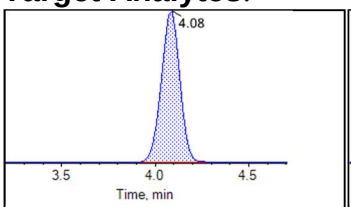
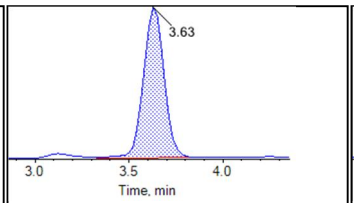
Sample Name	KB75	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:08:39	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

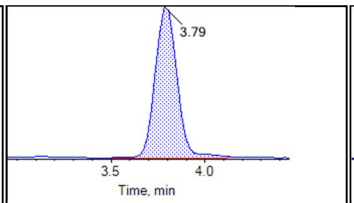
Target Analytes:



13C2-PFDoA



d3-MeFOSAA



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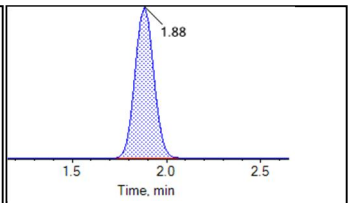
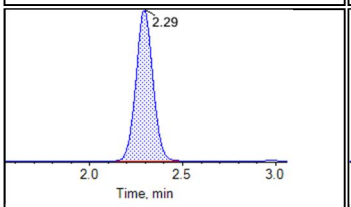


13C5-PFHxA



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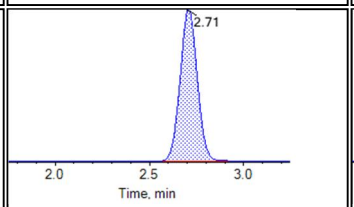
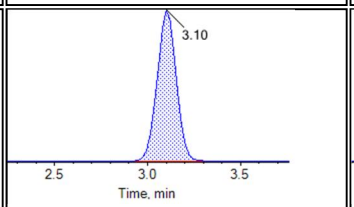
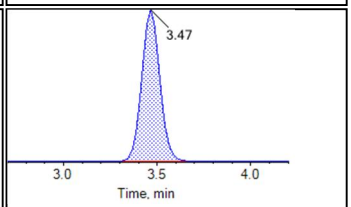


13C8-PFOA



13C9-PFNA



13C6-PFDA

BATTELLE

Chromatogram Report

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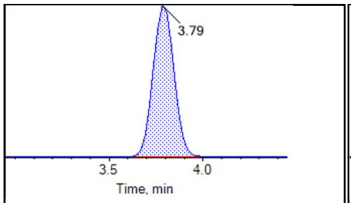
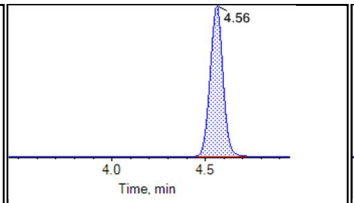
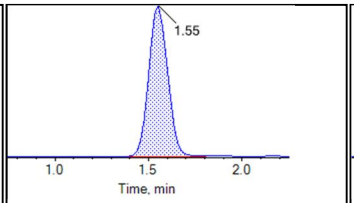


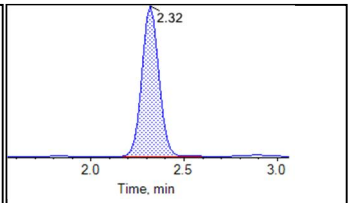
13C7-PFUnA



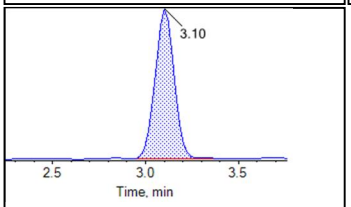
13C2-PFTeDA



13C3-PFBS

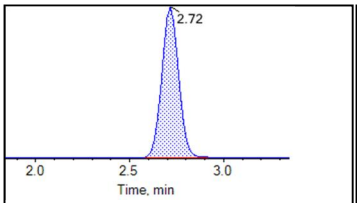


13C3-PFHxS

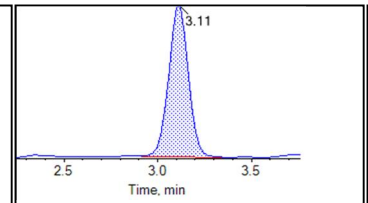


13C8-PFOS

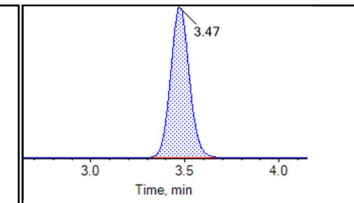
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

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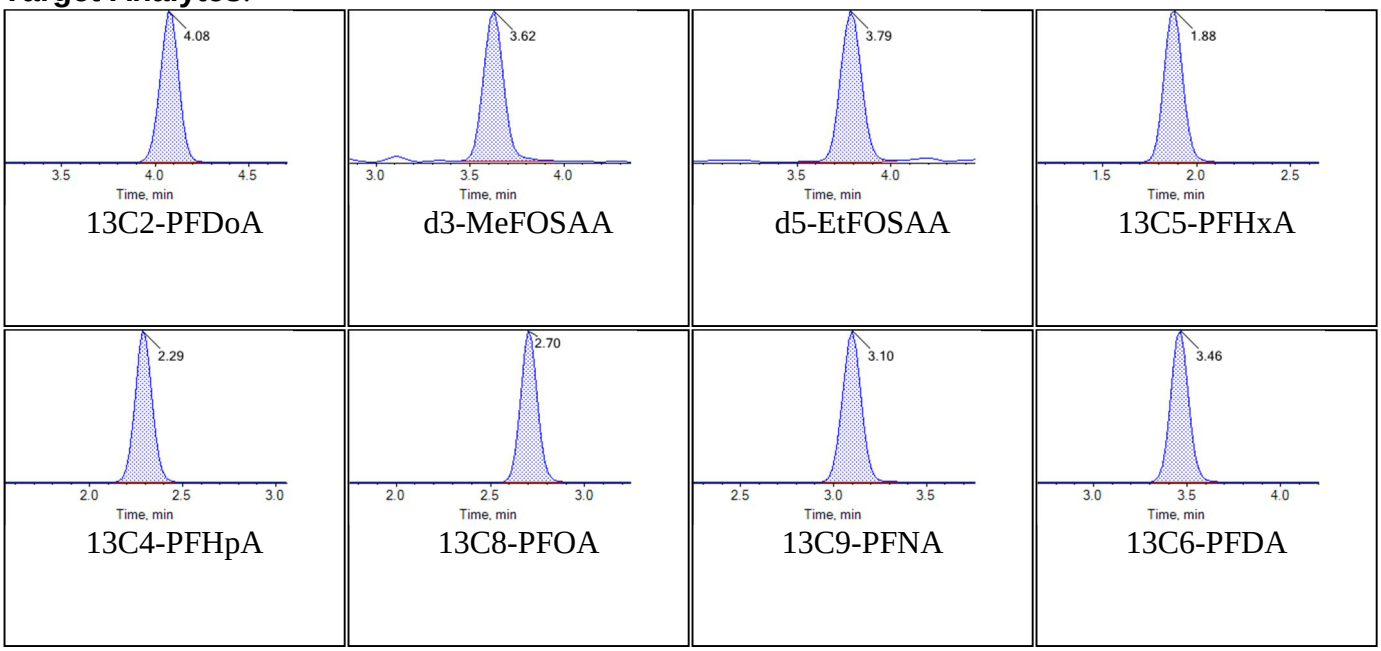
Sample Name	KB76	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:19:32	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

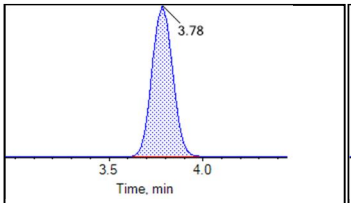
Target Analytes:



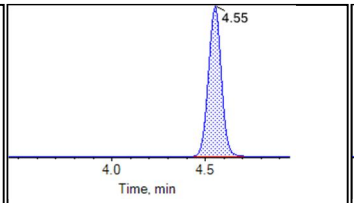
BATTELLE

Chromatogram Report

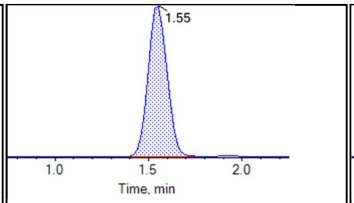
Created with Analyst Reporter
Printed: 30/10/2018 4:37:53 PM



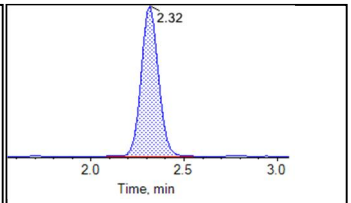
13C7-PFUnA



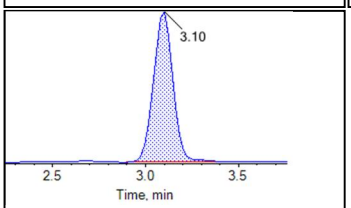
13C2-PFTeDA



13C3-PFBS

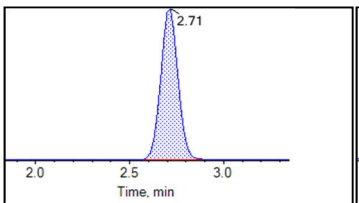


13C3-PFHxS

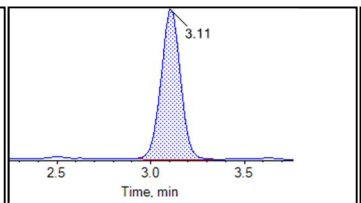


13C8-PFOS

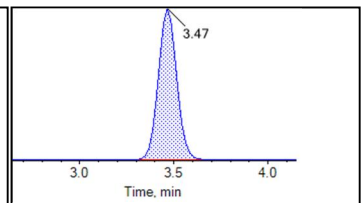
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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Chromatogram Report

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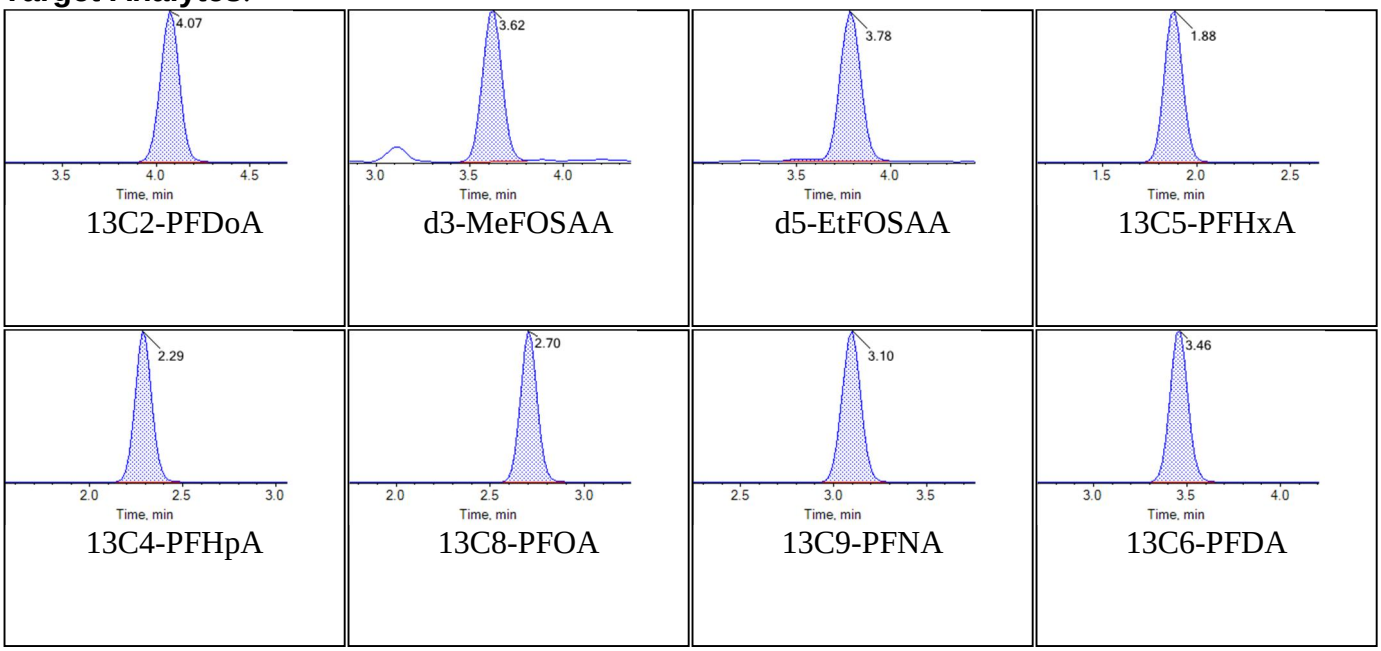
Sample Name	KB77	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:30:23	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

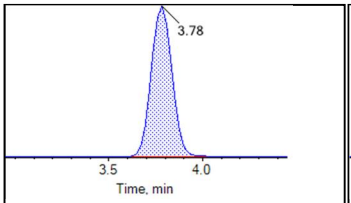
Target Analytes:



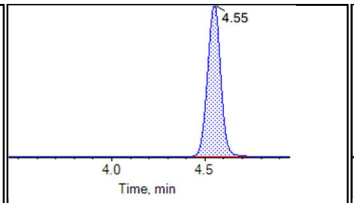
BATTELLE

Chromatogram Report

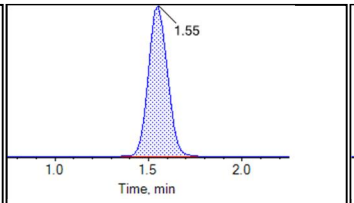
Created with Analyst Reporter
Printed: 30/10/2018 4:38:00 PM



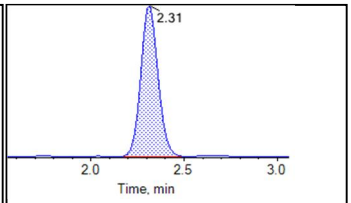
13C7-PFUnA



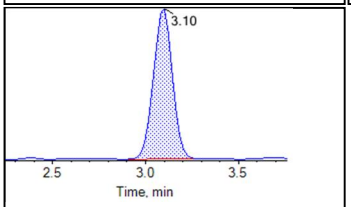
13C2-PFTeDA



13C3-PFBS

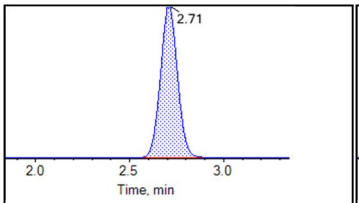


13C3-PFHxS

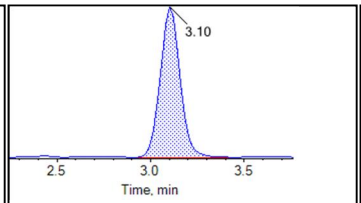


13C8-PFOS

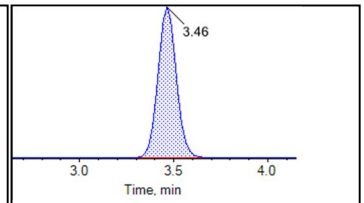
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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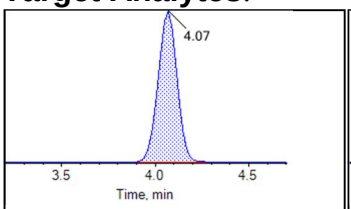
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:38:04 PM

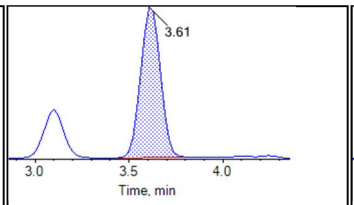
Sample Name	KB78	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:41:14	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

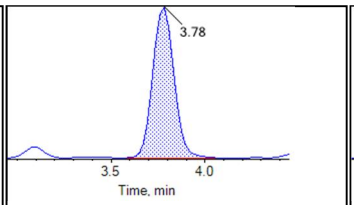
Target Analytes:



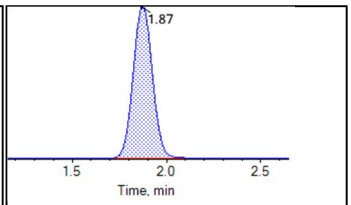
13C2-PFDoA



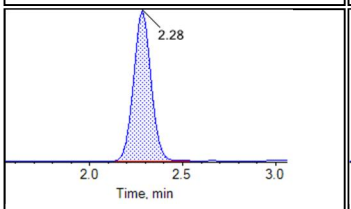
d3-MeFOSAA



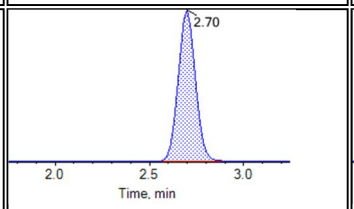
d5-EtFOSAA



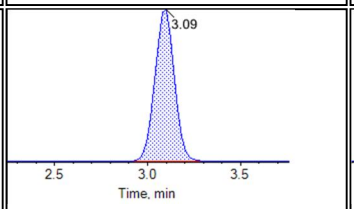
13C5-PFHxA



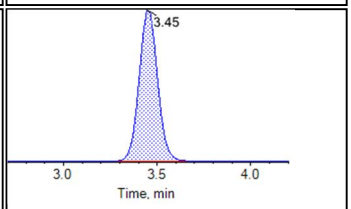
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

BATTELLE

Chromatogram Report

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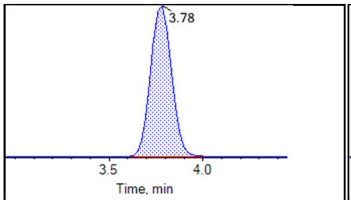
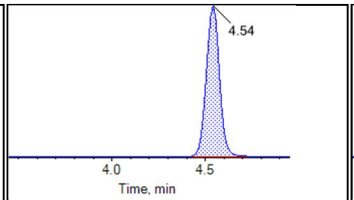
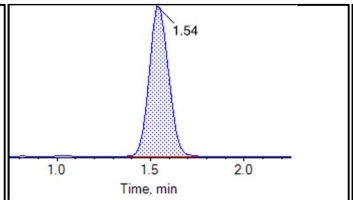


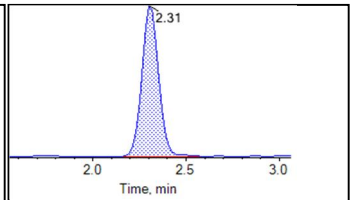
13C7-PFUnA



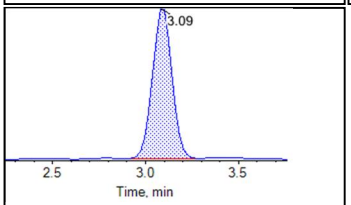
13C2-PFTeDA



13C3-PFBS

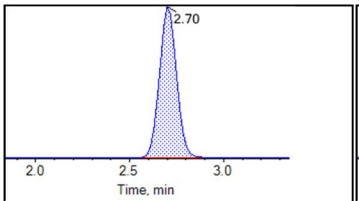


13C3-PFHxS

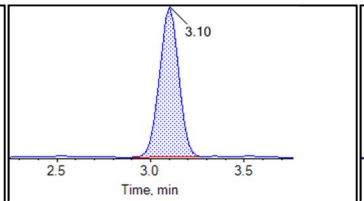


13C8-PFOS

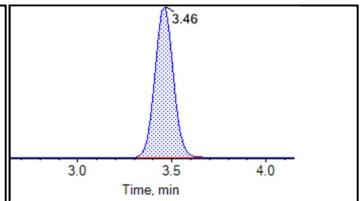
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

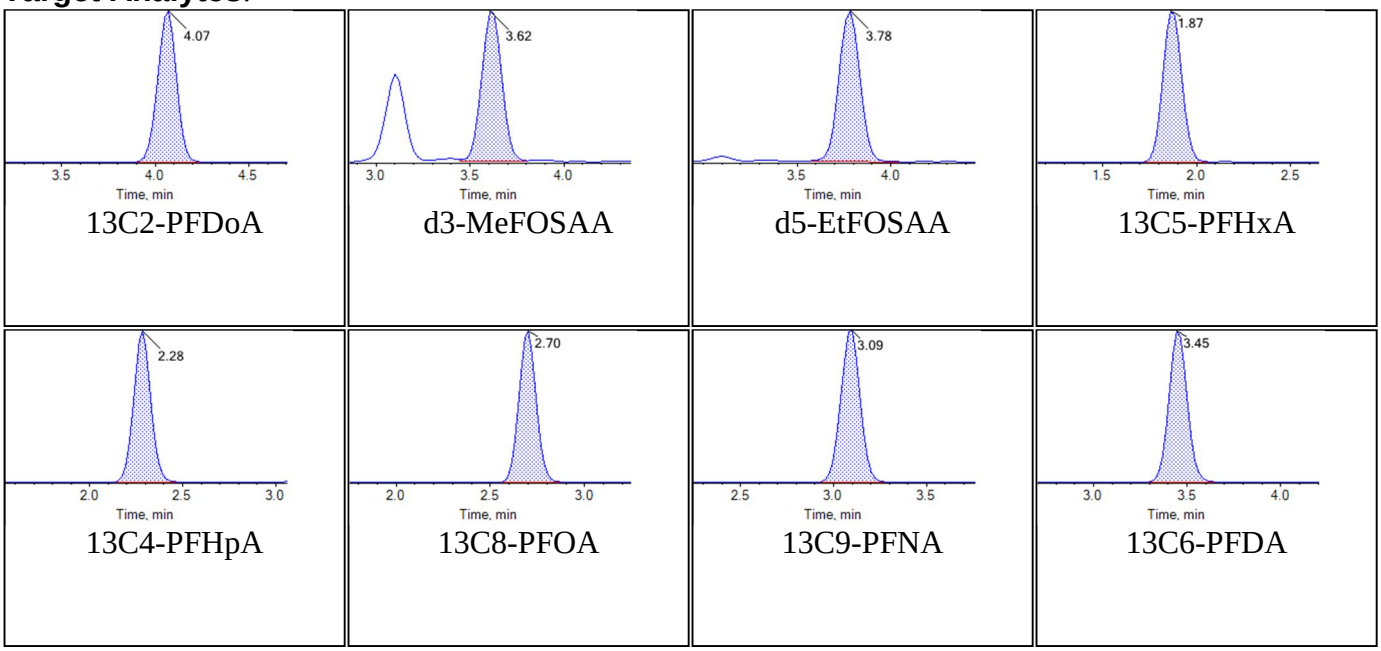
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:38:09 PM

Sample Name	KB79	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:52:06	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

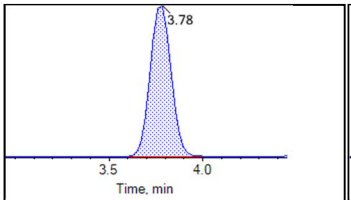
Target Analytes:



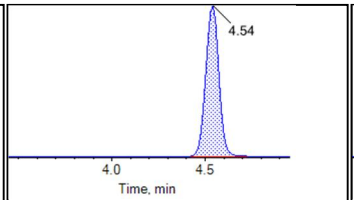
BATTELLE

Chromatogram Report

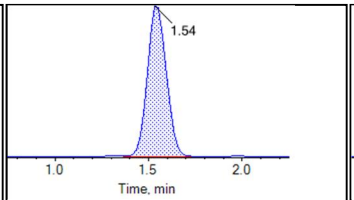
Created with Analyst Reporter
Printed: 30/10/2018 4:38:09 PM



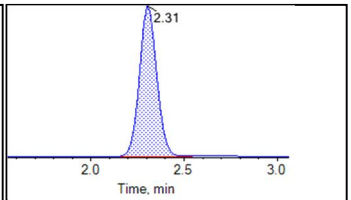
13C7-PFUnA



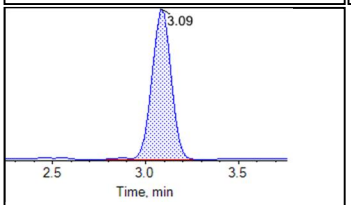
13C2-PFTeDA



13C3-PFBS

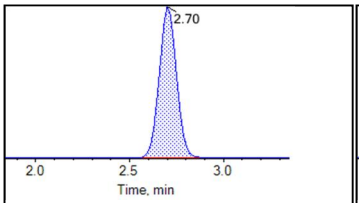


13C3-PFHxS

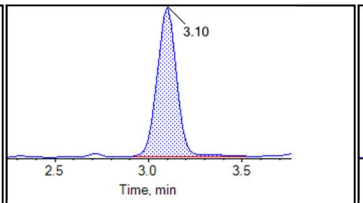


13C8-PFOS

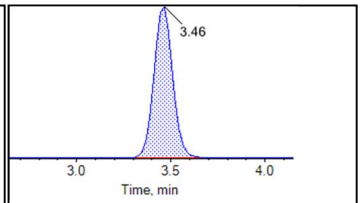
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

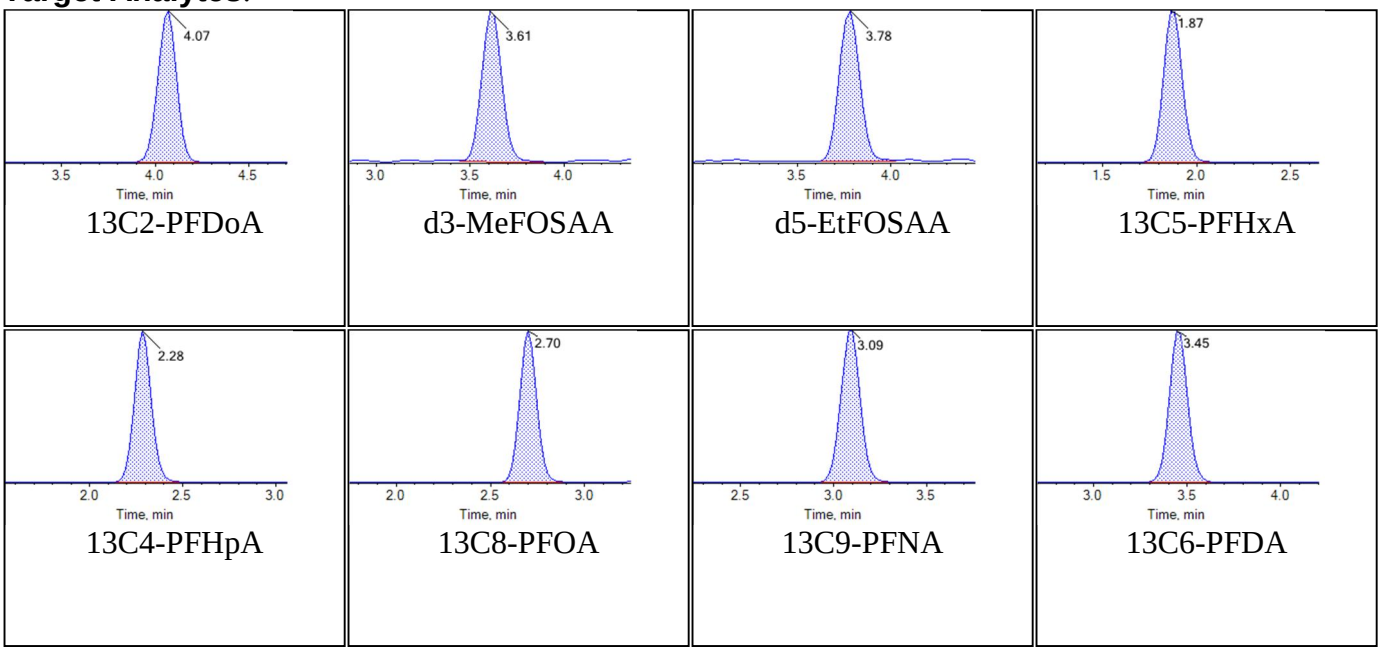
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:38:17 PM

Sample Name	KB80 IB	**Injection Vial**	9
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T21:02:57	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

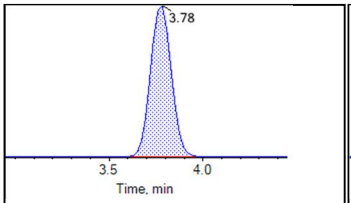
Target Analytes:



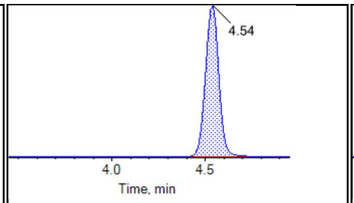
BATTELLE

Chromatogram Report

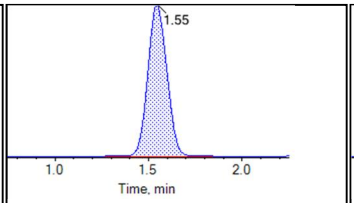
Created with Analyst Reporter
Printed: 30/10/2018 4:38:17 PM



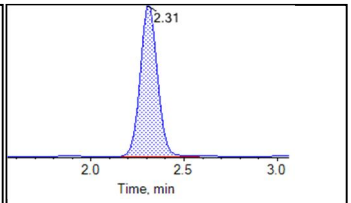
13C7-PFUnA



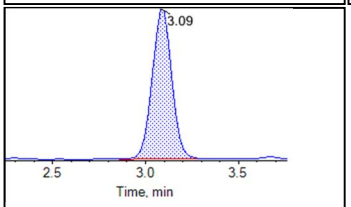
13C2-PFTeDA



13C3-PFBS

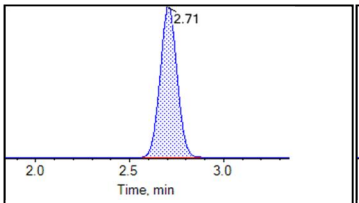


13C3-PFHxS

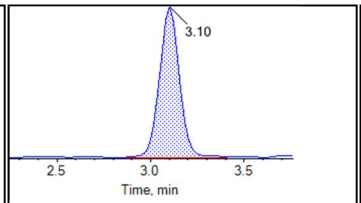


13C8-PFOS

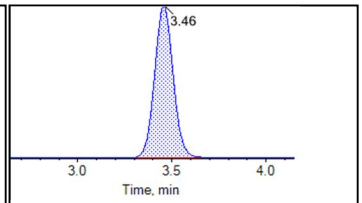
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

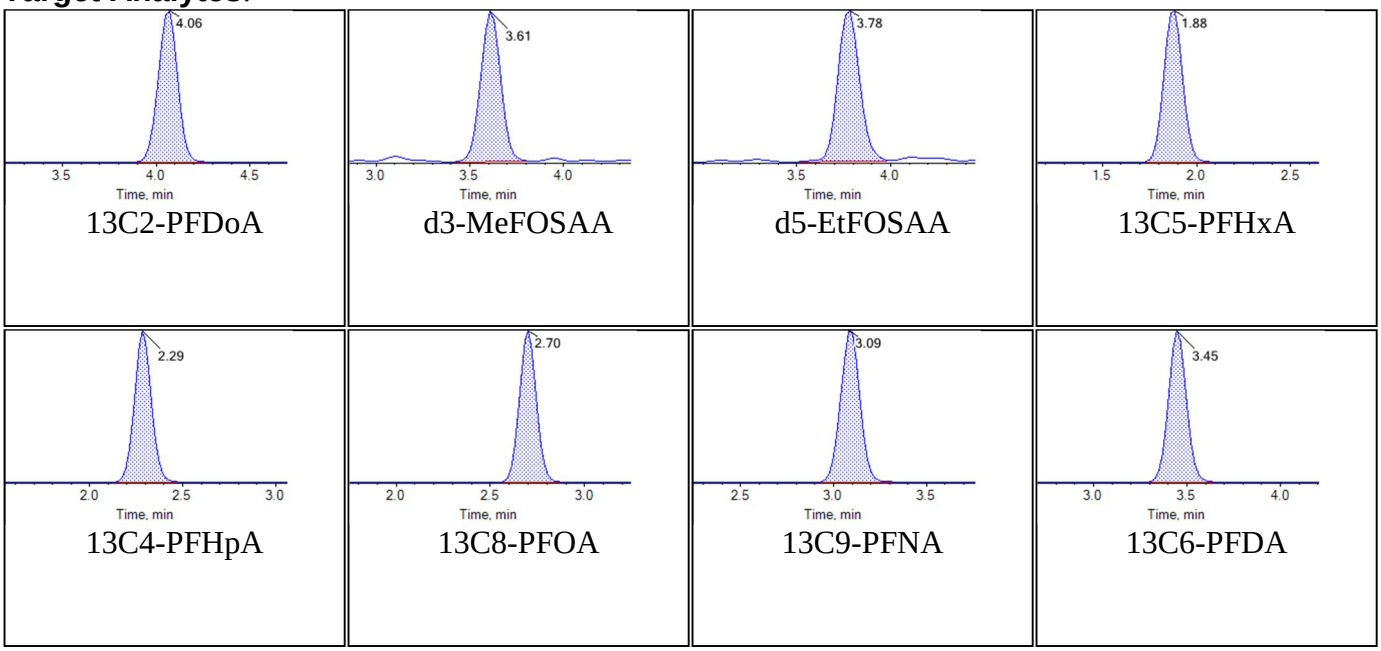
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:38:22 PM

Sample Name	KB81 ICC	**Injection Vial**	10
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T21:13:49	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

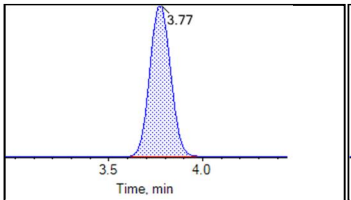
Target Analytes:



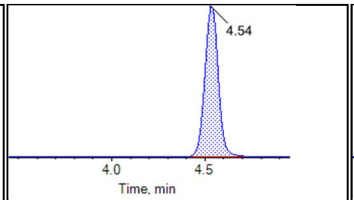
BATTELLE

Chromatogram Report

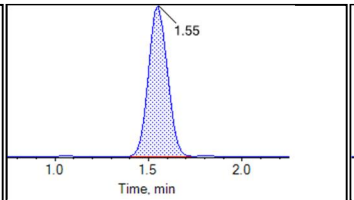
Created with Analyst Reporter
Printed: 30/10/2018 4:38:22 PM



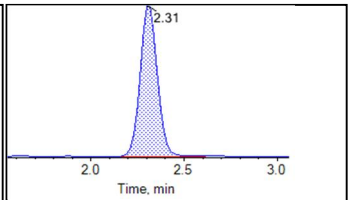
13C7-PFUnA



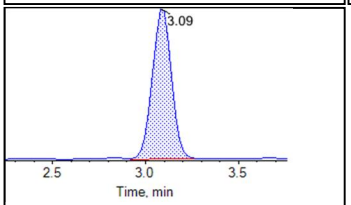
13C2-PFTeDA



13C3-PFBS

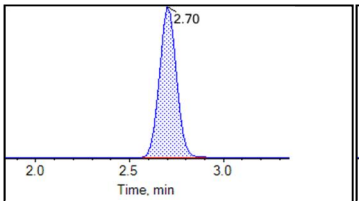


13C3-PFHxS

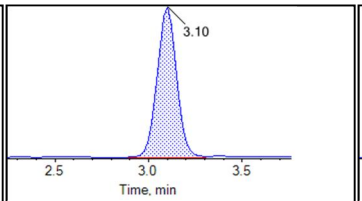


13C8-PFOS

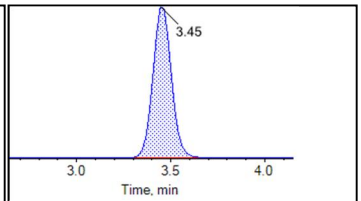
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

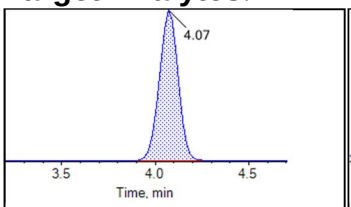
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:38:38 PM

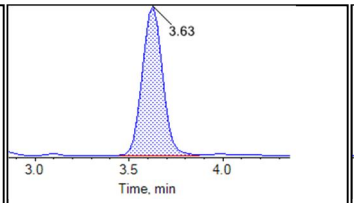
Sample Name	KB75 ISC	**Injection Vial**	1
Sample ID	ISC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T17:30:17	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

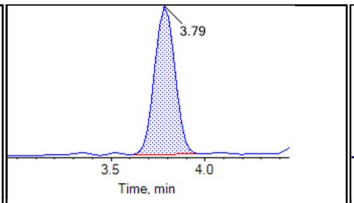
Target Analytes:



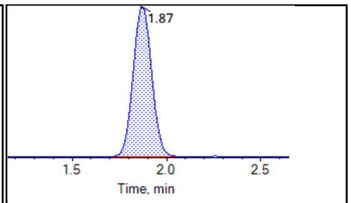
13C2-PFDoA



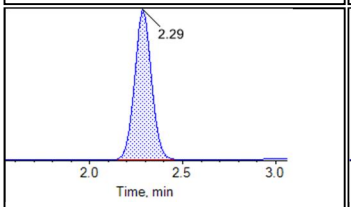
d3-MeFOSAA



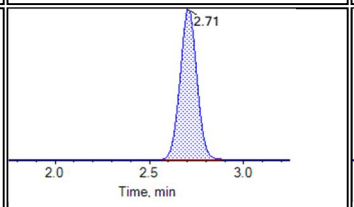
d5-EtFOSAA



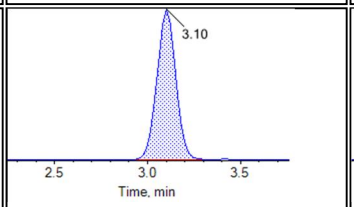
13C5-PFHxA



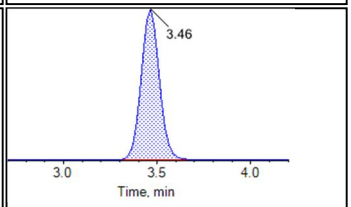
13C4-PFHpA



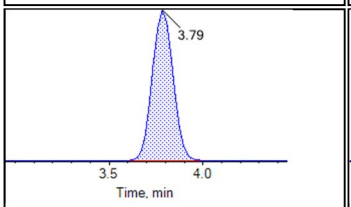
13C8-PFOA



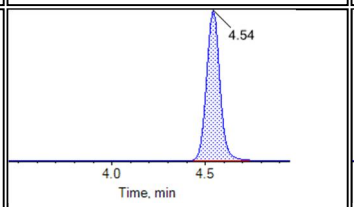
13C9-PFNA



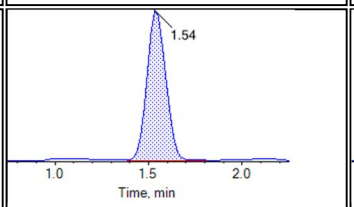
13C6-PFDA



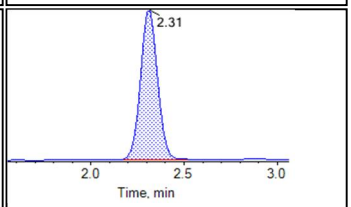
13C7-PFUnA



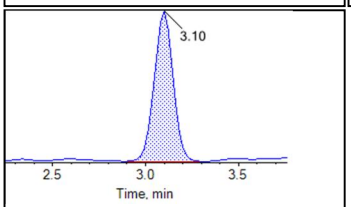
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

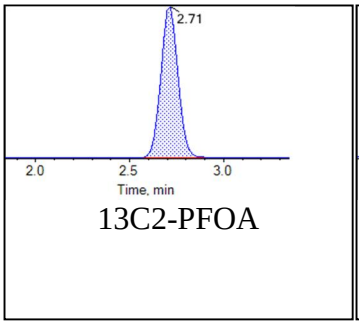


13C8-PFOS

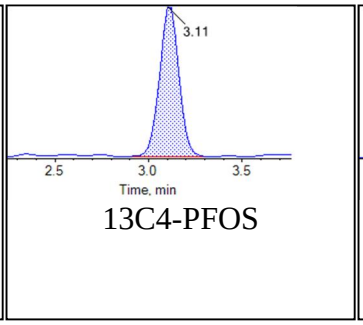
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:38:38 PM

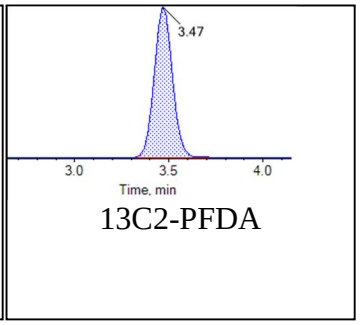
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

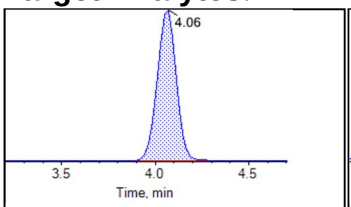
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:38:44 PM

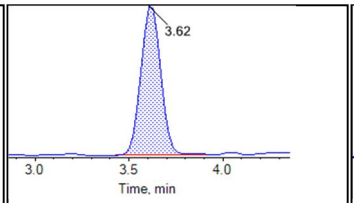
Sample Name	KB80 IB	**Injection Vial**	2
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T17:41:09	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

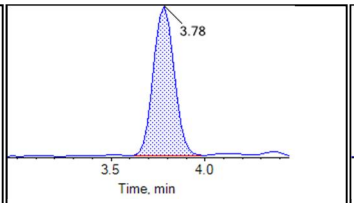
Target Analytes:



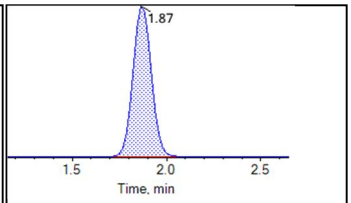
13C2-PFDoA



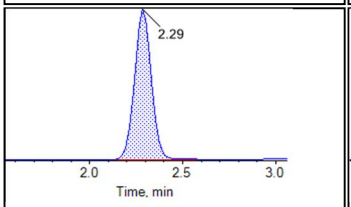
d3-MeFOSAA



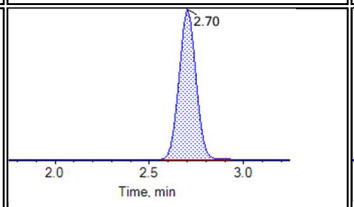
d5-EtFOSAA



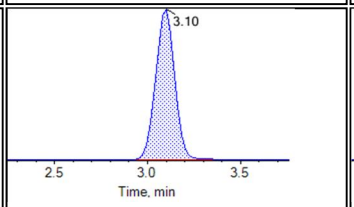
13C5-PFHxA



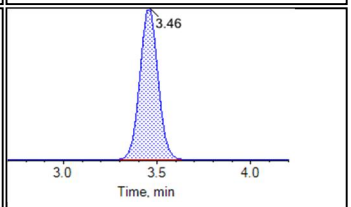
13C4-PFHpA



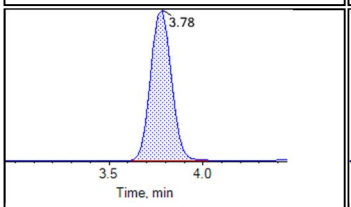
13C8-PFOA



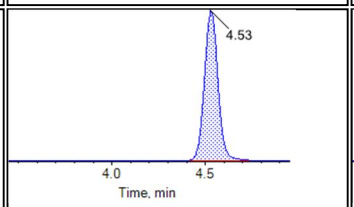
13C9-PFNA



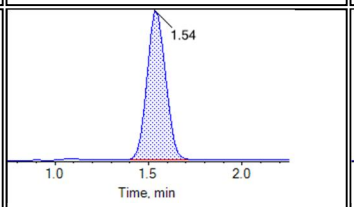
13C6-PFDA



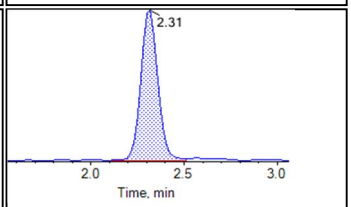
13C7-PFUnA



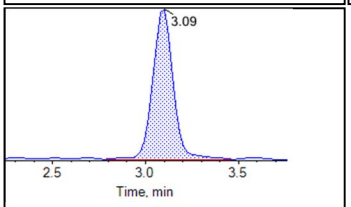
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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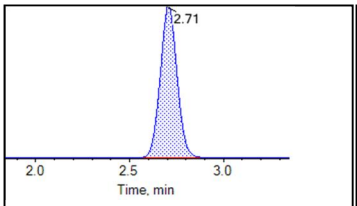
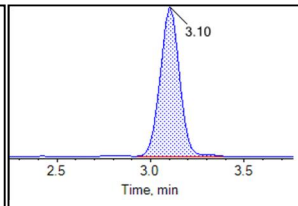
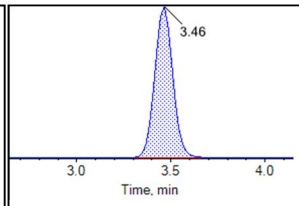
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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Chromatogram Report

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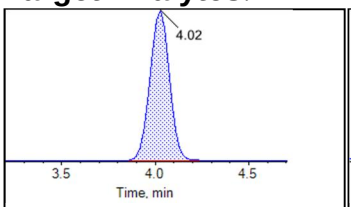
Printed: 30/10/2018 4:38:49 PM

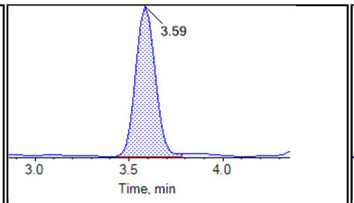
Sample Name	KB76 CCV	**Injection Vial**	14
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T19:51:29	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

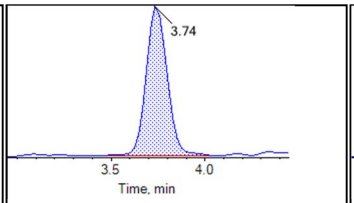
Target Analytes:



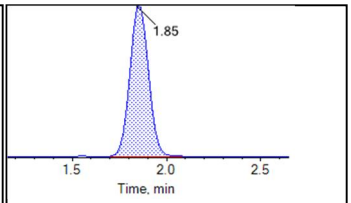
13C2-PFDoA



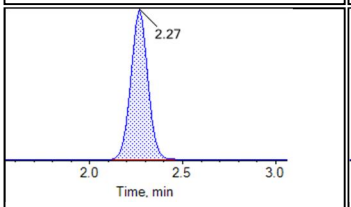
d3-MeFOSAA



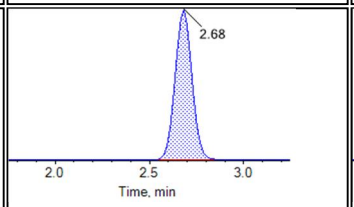
d5-EtFOSAA



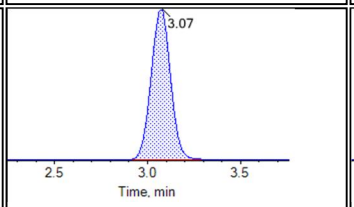
13C5-PFHxA



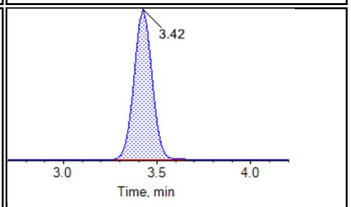
13C4-PFHpA



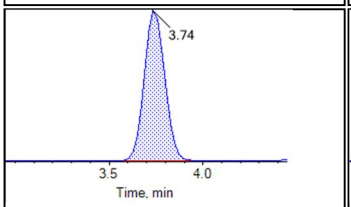
13C8-PFOA



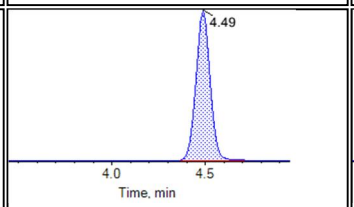
13C9-PFNA



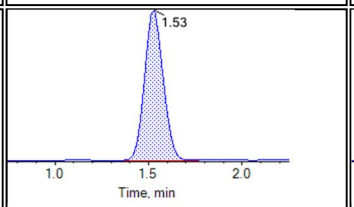
13C6-PFDA



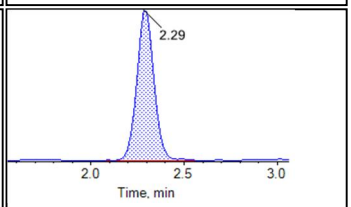
13C7-PFUnA



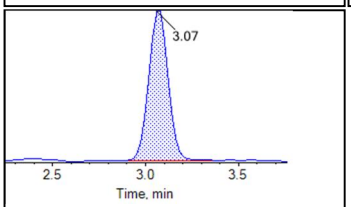
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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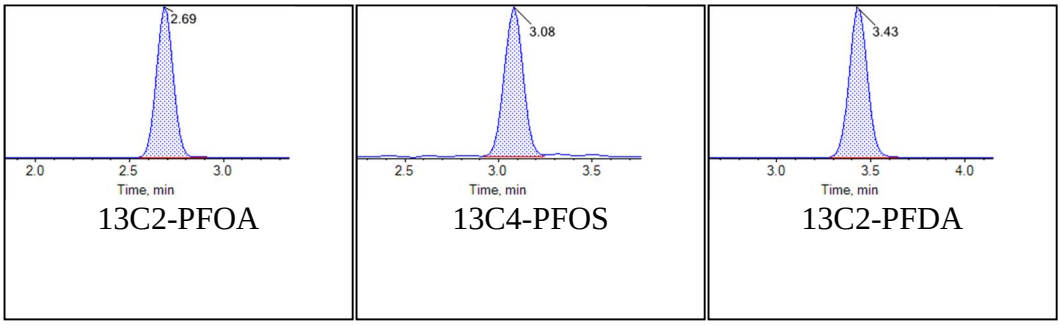
Internal Standards:



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Chromatogram Report

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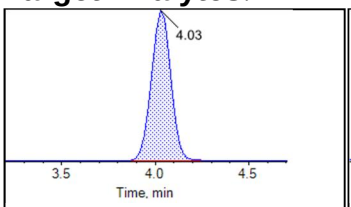
Printed: 30/10/2018 4:39:00 PM

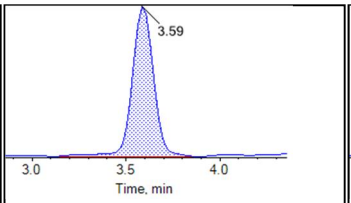
Sample Name	CS011PB-FS(3)	**Injection Vial**	16
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:13:12	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

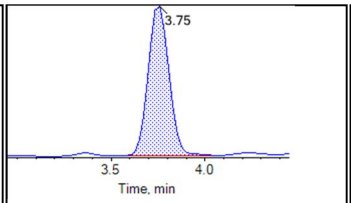
Target Analytes:



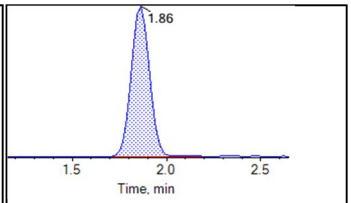
13C2-PFDoA



d3-MeFOSAA



d5-EtFOSAA



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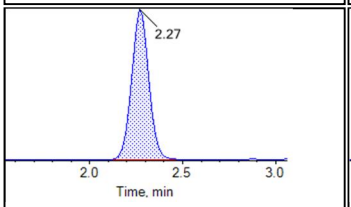

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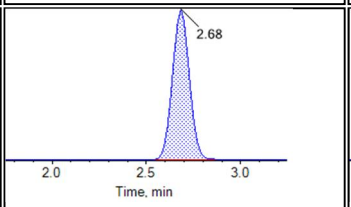

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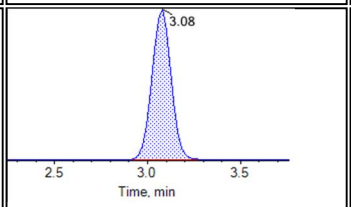
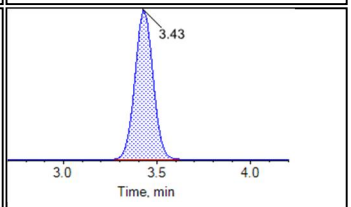
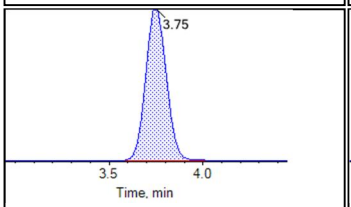


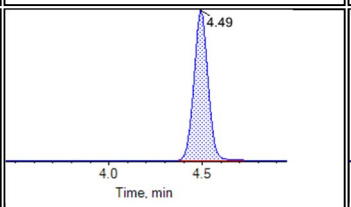
13C9-PFNA



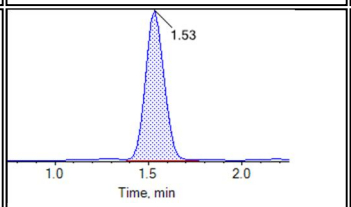
13C6-PFDA



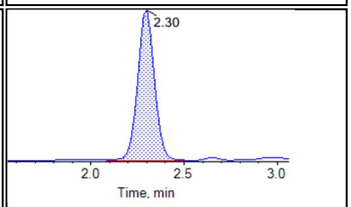
13C7-PFUnA



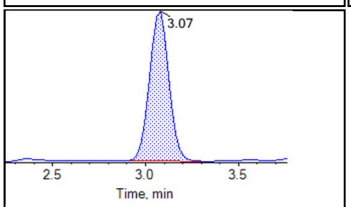
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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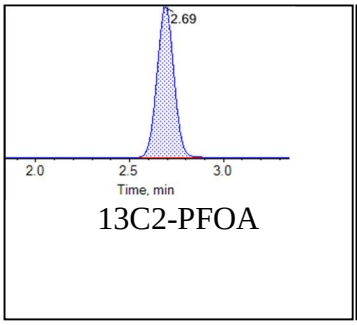
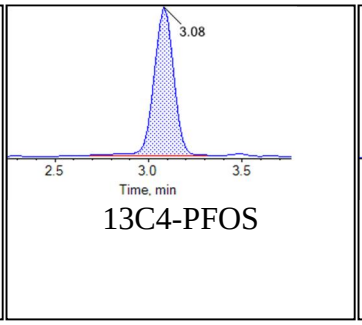
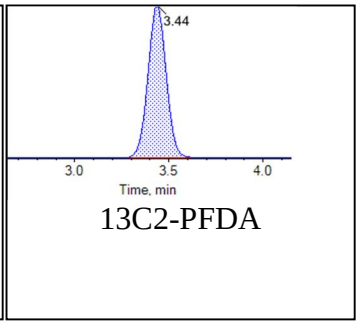
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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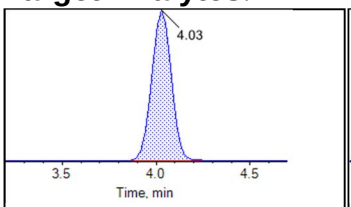
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:39:05 PM

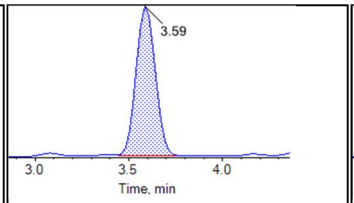
Sample Name	CS012LCS-FS(3)	**Injection Vial**	17
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:24:04	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

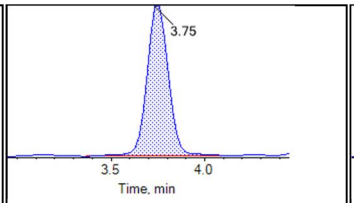
Target Analytes:



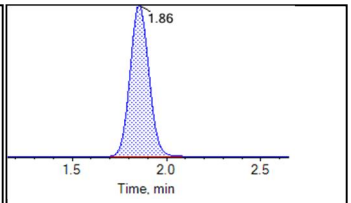
13C2-PFDoA



d3-MeFOSAA



d5-EtFOSAA



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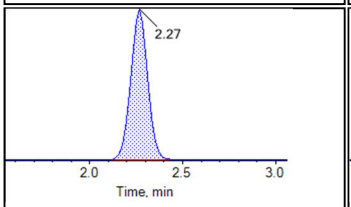

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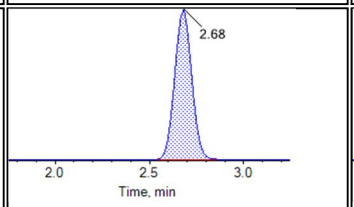
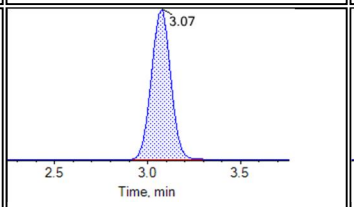
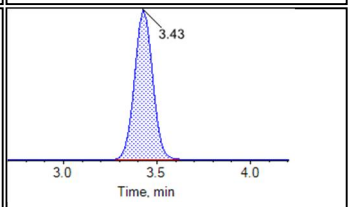


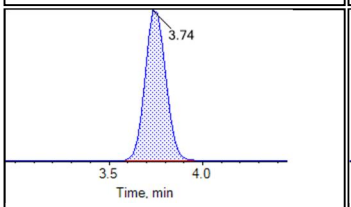
13C8-PFOA



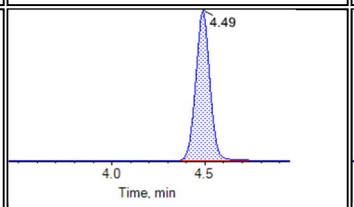
13C9-PFNA



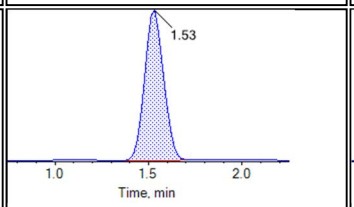
13C6-PFDA



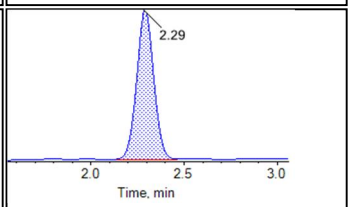
13C7-PFUnA



13C2-PFTeDA



13C3-PFBS



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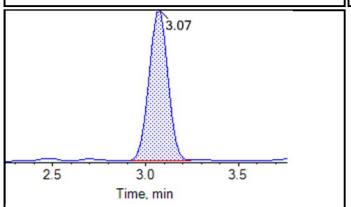

13C8-PFOS

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Chromatogram Report

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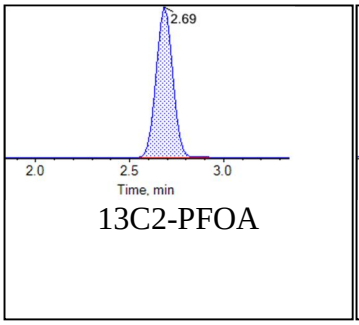
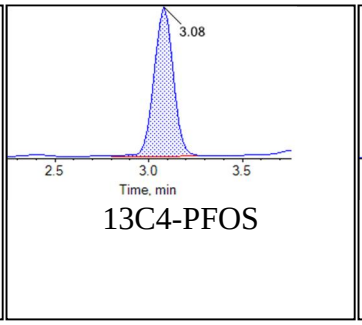
Printed: 30/10/2018 4:39:05 PM

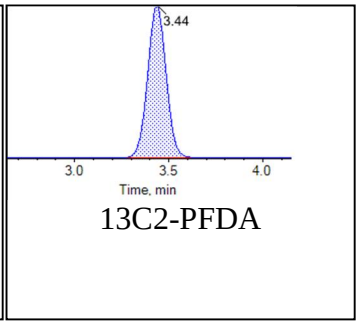
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

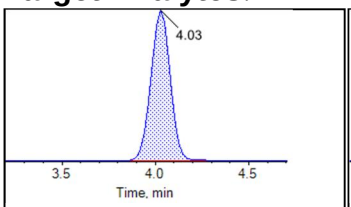
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:39:11 PM

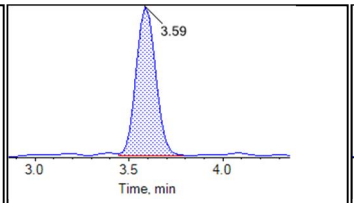
Sample Name	J8777-FS(3)	**Injection Vial**	18
Sample ID	VC-PM323-324-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:34:55	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

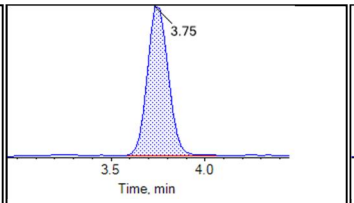
Target Analytes:



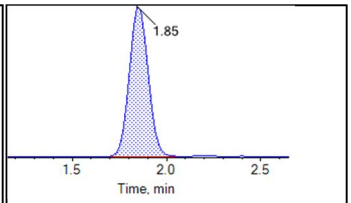
13C2-PFDoA



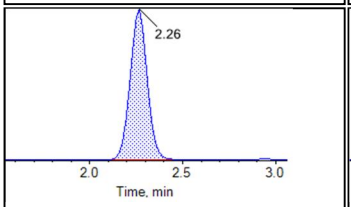
d3-MeFOSAA



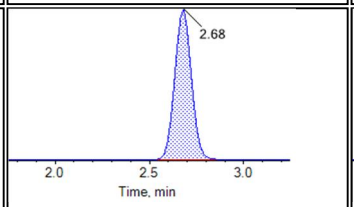
d5-EtFOSAA



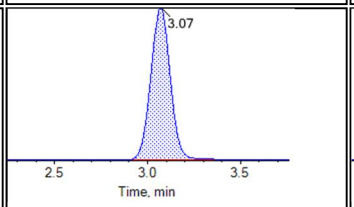
13C5-PFHxA



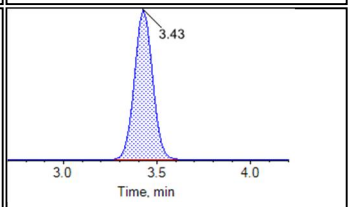
13C4-PFHpA



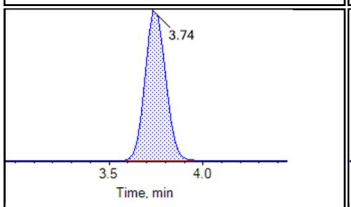
13C8-PFOA



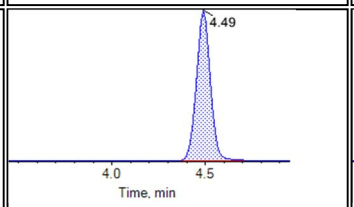
13C9-PFNA



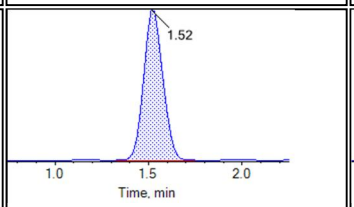
13C6-PFDA



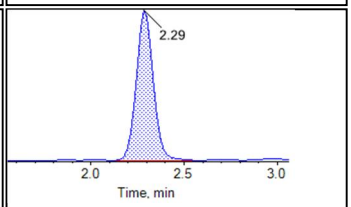
13C7-PFUnA



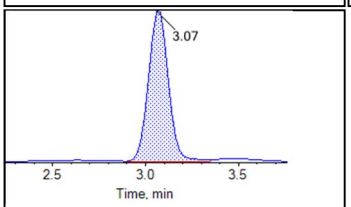
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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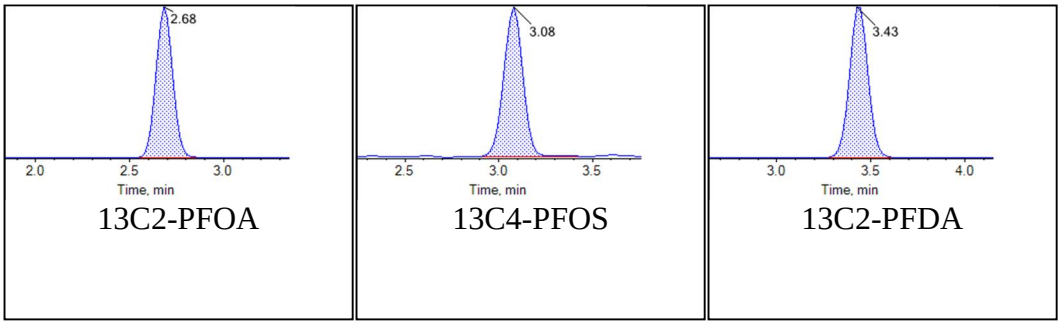
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:39:11 PM

Internal Standards:



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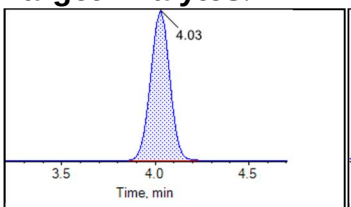
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:39:17 PM

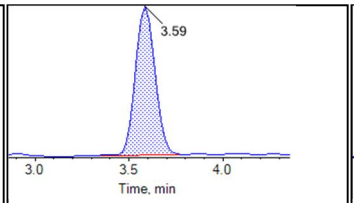
Sample Name	J8778-FS(3)	**Injection Vial**	19
Sample ID	VC-PM323-324-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:45:47	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

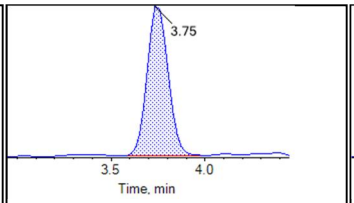
Target Analytes:



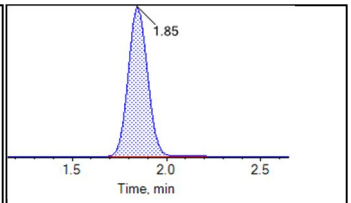
13C2-PFDoA



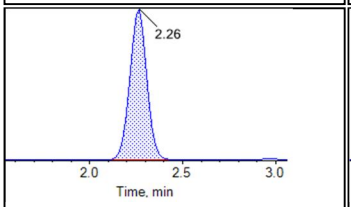
d3-MeFOSAA



d5-EtFOSAA



13C5-PFHxA



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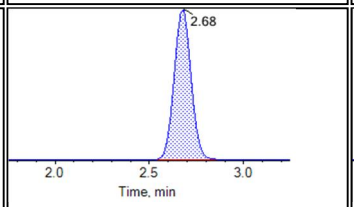
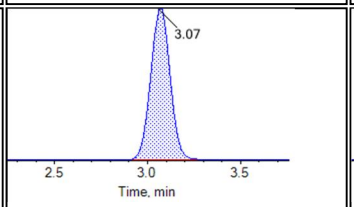
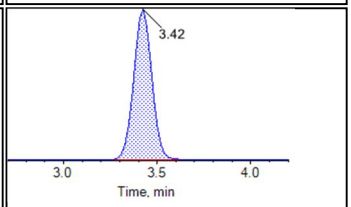


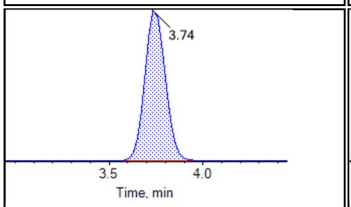
13C8-PFOA



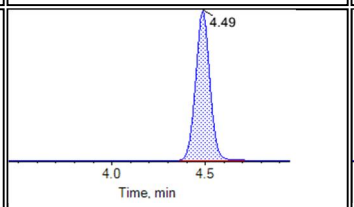
13C9-PFNA



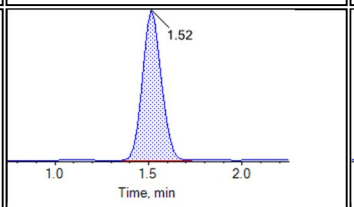
13C6-PFDA



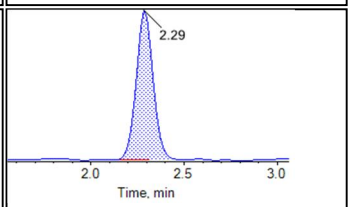
13C7-PFUnA



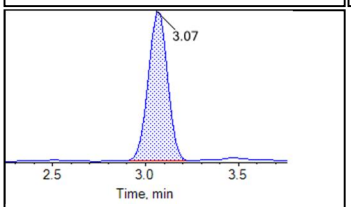
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



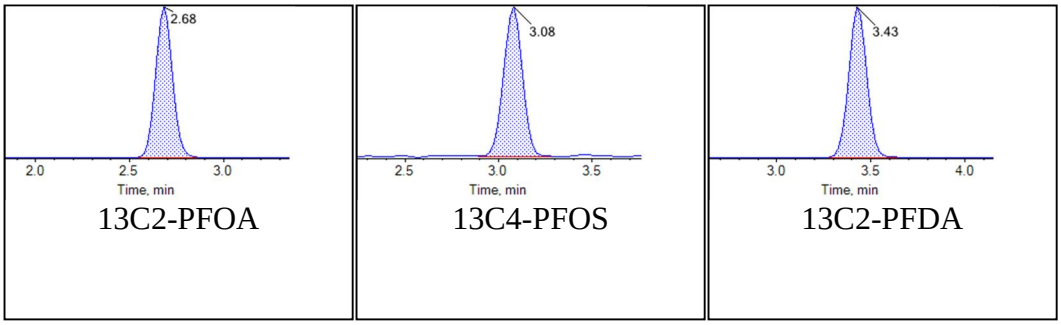
13C8-PFOS

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:39:17 PM

Internal Standards:



BATTELLE

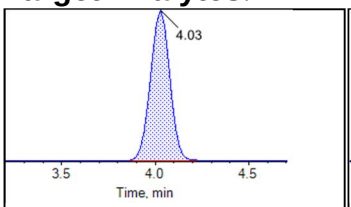
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:39:22 PM

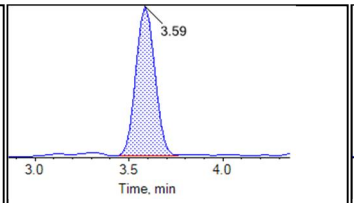
Sample Name	J8779-FS(3)	**Injection Vial**	20
Sample ID	VC-PM553-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T20:56:39	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

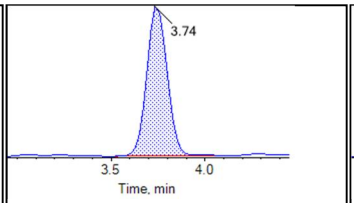
Target Analytes:



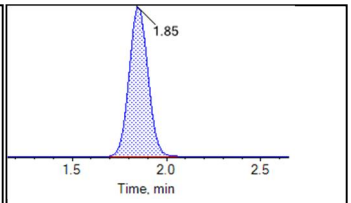
13C2-PFDoA



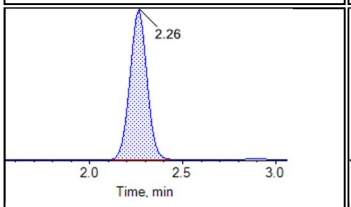
d3-MeFOSAA



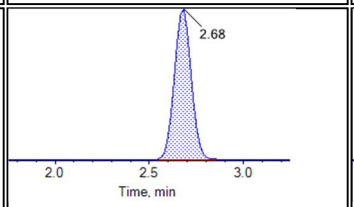
d5-EtFOSAA



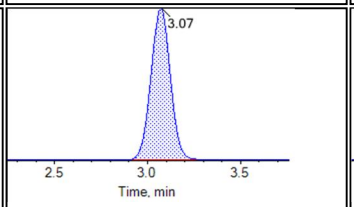
13C5-PFHxA



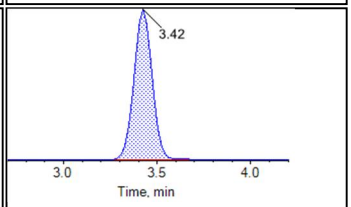
13C4-PFHpA



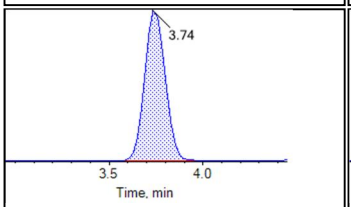
13C8-PFOA



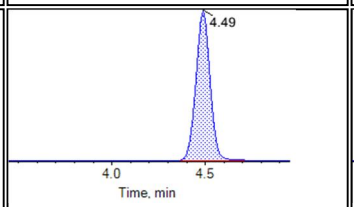
13C9-PFNA



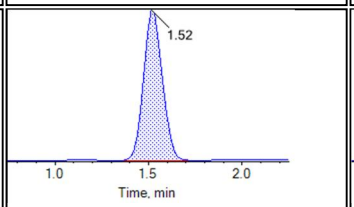
13C6-PFDA



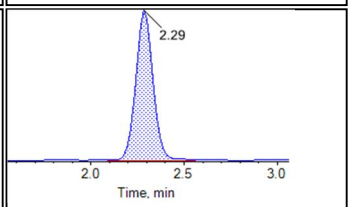
13C7-PFUnA



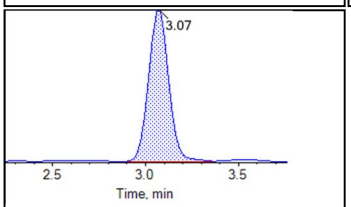
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



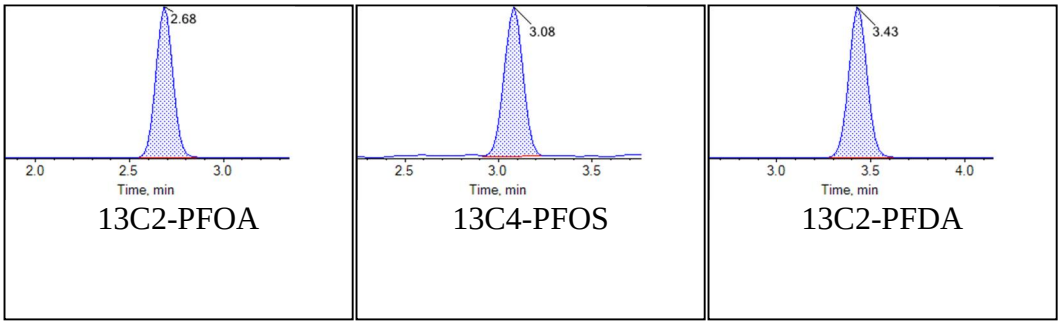
13C8-PFOS

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:39:22 PM

Internal Standards:



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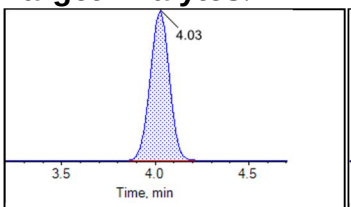
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:39:28 PM

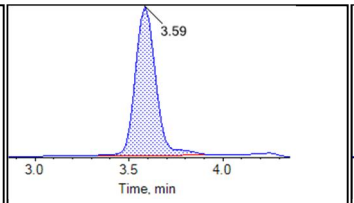
Sample Name	J8780-FS(3)	**Injection Vial**	21
Sample ID	VC-PM553-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:07:31	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

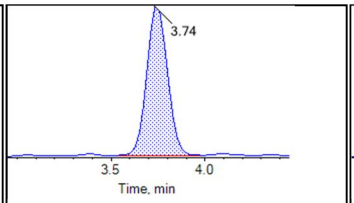
Target Analytes:



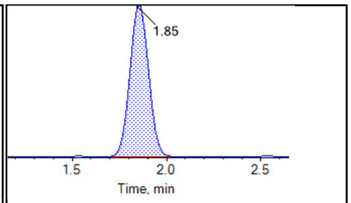
13C2-PFDoA



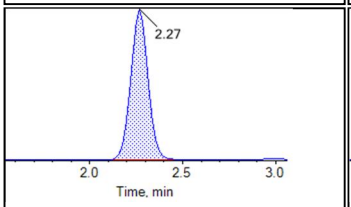
d3-MeFOSAA



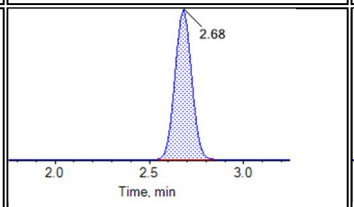
d5-EtFOSAA



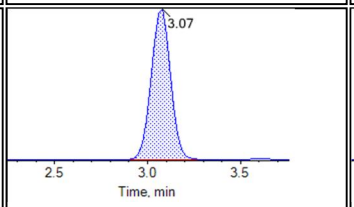
13C5-PFHxA



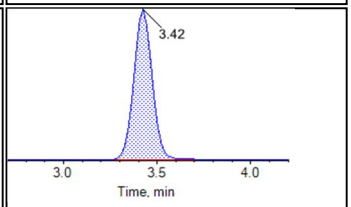
13C4-PFHpA



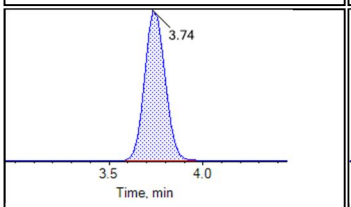
13C8-PFOA



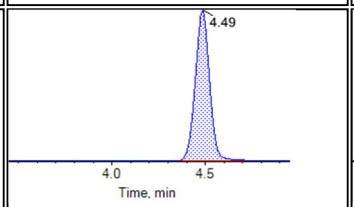
13C9-PFNA



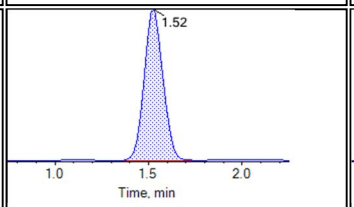
13C6-PFDA



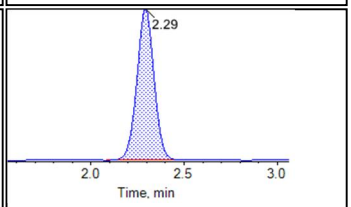
13C7-PFUnA



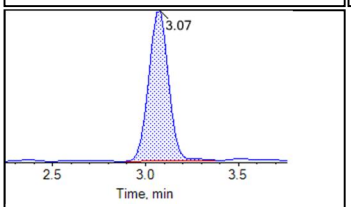
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

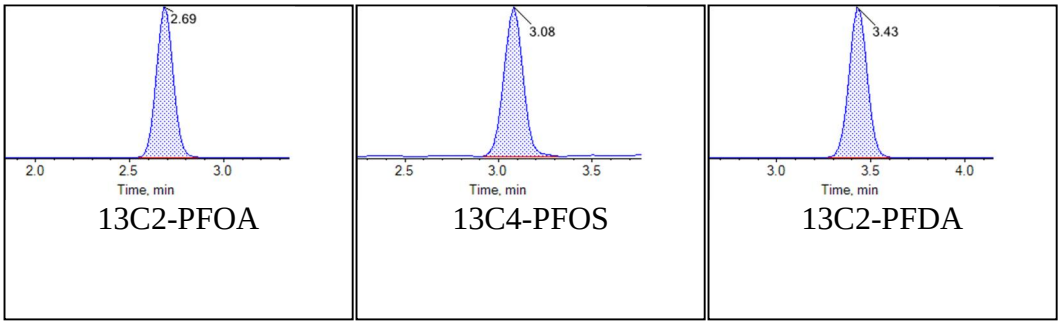


13C8-PFOS

Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:39:28 PM

Internal Standards:



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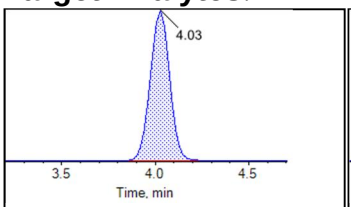
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:39:34 PM

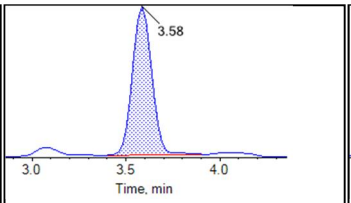
Sample Name	J8781MS-FS(3)	**Injection Vial**	22
Sample ID	VC-PM553-SD01-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:18:23	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

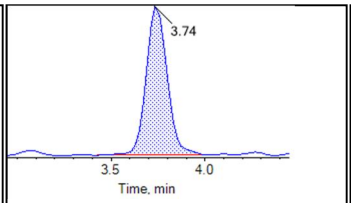
Target Analytes:



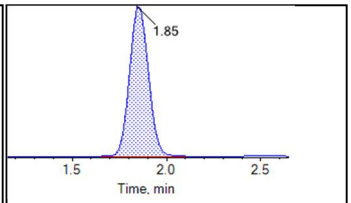
13C2-PFDoA



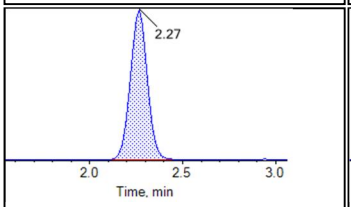
d3-MeFOSAA



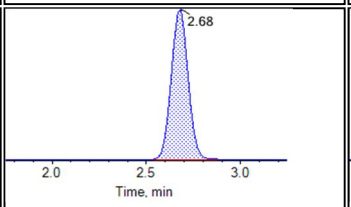
d5-EtFOSAA



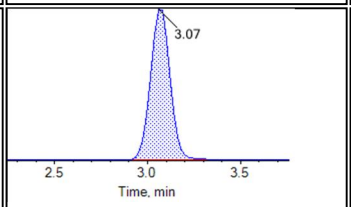
13C5-PFHxA



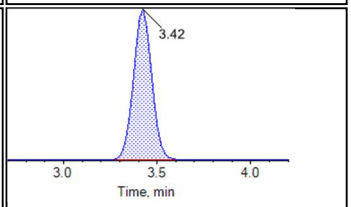
13C4-PFHpA



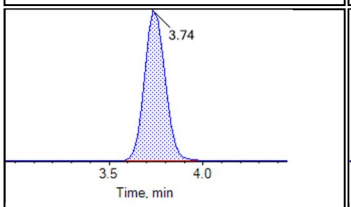
13C8-PFOA



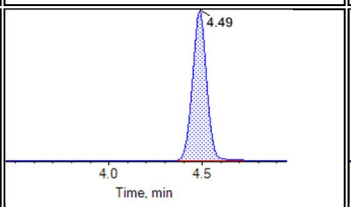
13C9-PFNA



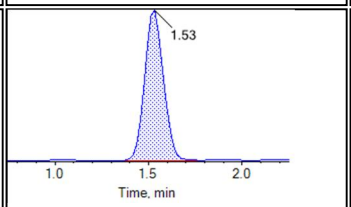
13C6-PFDA



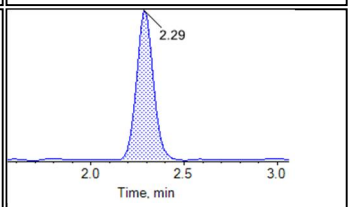
13C7-PFUnA



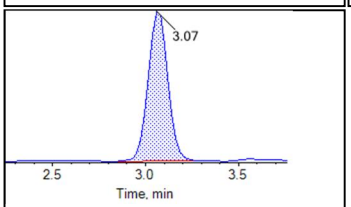
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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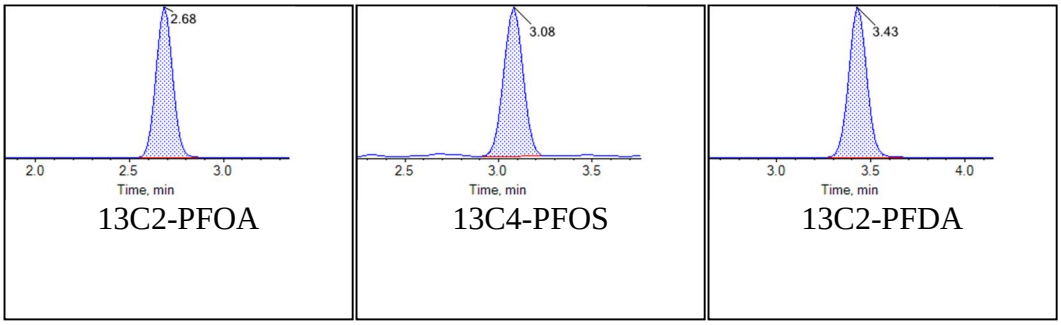
Printed: 30/10/2018 4:39:34 PM

Internal Standards:



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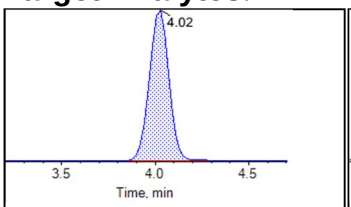
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:39:39 PM

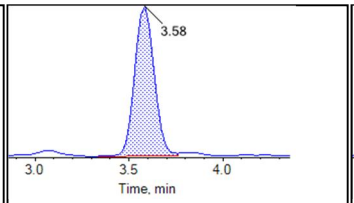
Sample Name	J8782MSD-FS(3)	**Injection Vial**	23
Sample ID	VC-PM553-SD01-0102-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:29:15	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

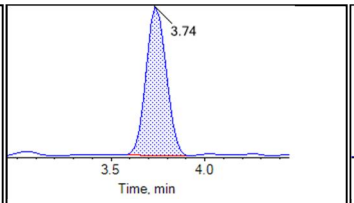
Target Analytes:



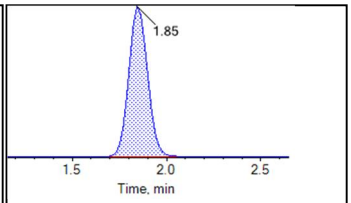
13C2-PFDoA



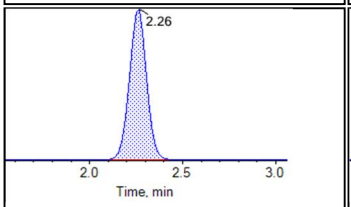
d3-MeFOSAA



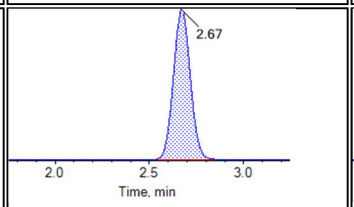
d5-EtFOSAA



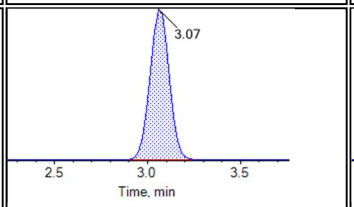
13C5-PFHxA



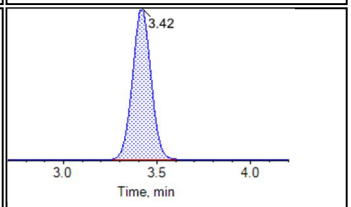
13C4-PFHpA



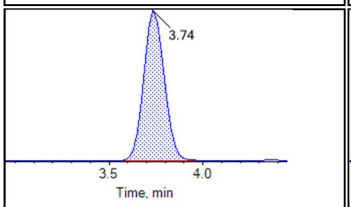
13C8-PFOA



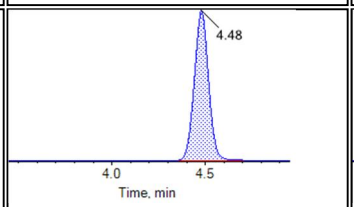
13C9-PFNA



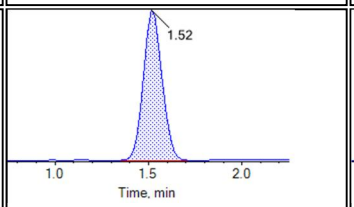
13C6-PFDA



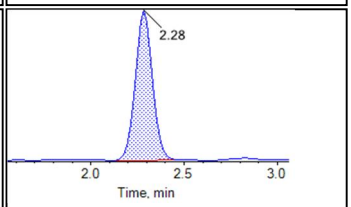
13C7-PFUnA



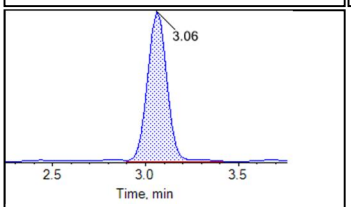
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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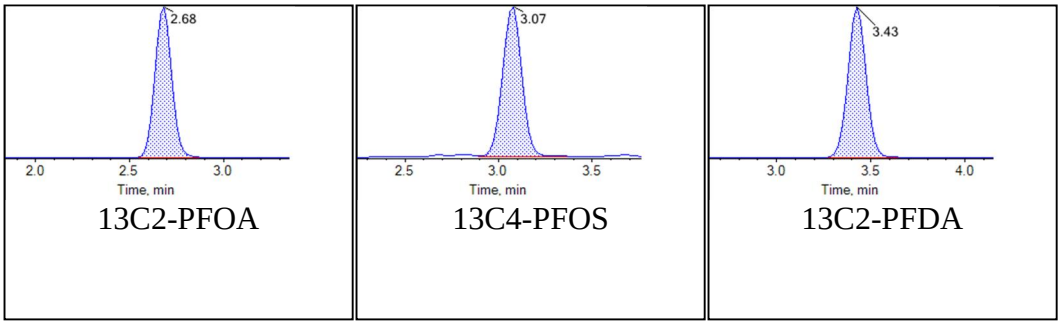
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:39:39 PM

Internal Standards:



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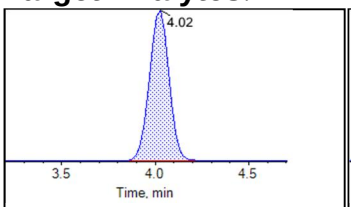
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:39:43 PM

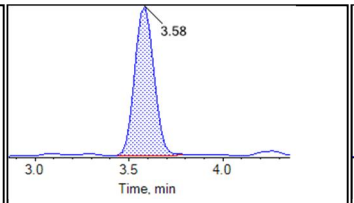
Sample Name	J8783-FS(3)	**Injection Vial**	24
Sample ID	VC-PM3009-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:40:07	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

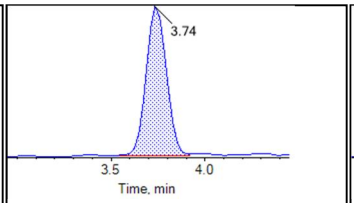
Target Analytes:



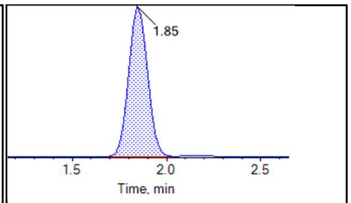
13C2-PFDoA



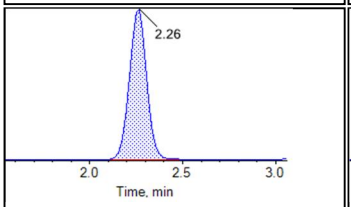
d3-MeFOSAA



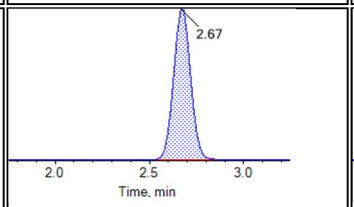
d5-EtFOSAA



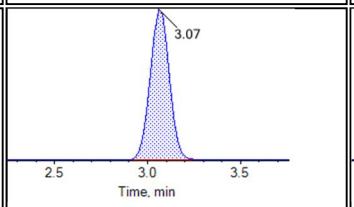
13C5-PFHxA



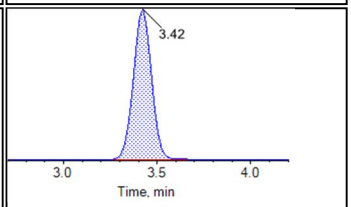
13C4-PFHpA



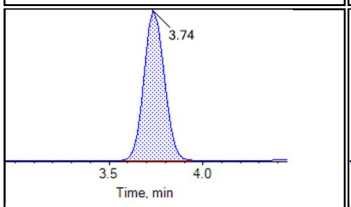
13C8-PFOA



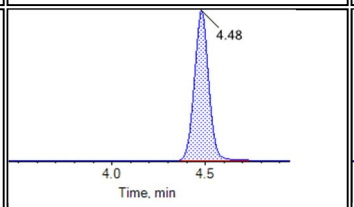
13C9-PFNA



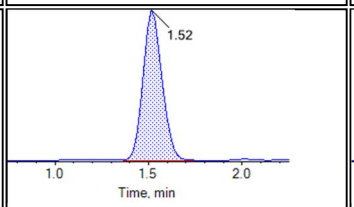
13C6-PFDA



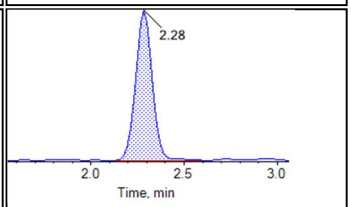
13C7-PFUnA



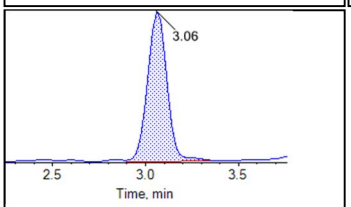
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

Chromatogram Report

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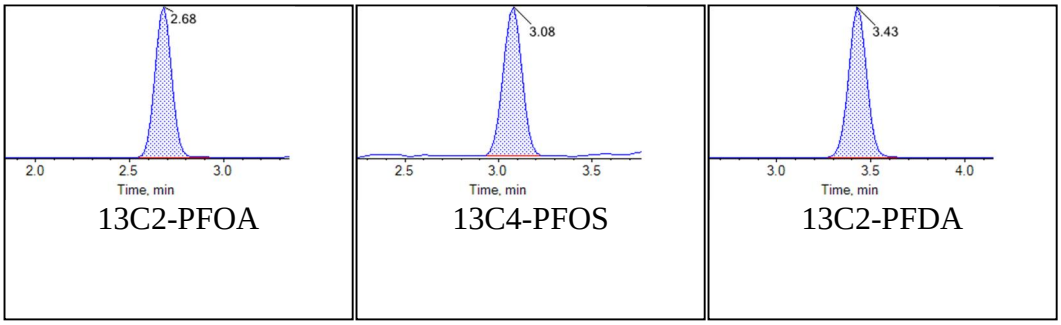
Printed: 30/10/2018 4:39:43 PM

Internal Standards:



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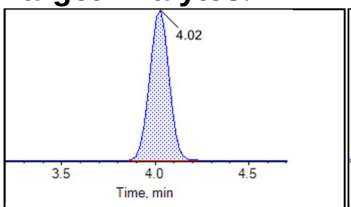
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:39:48 PM

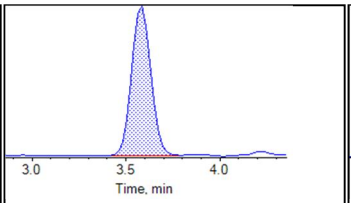
Sample Name	J8784-FS(3)	**Injection Vial**	25
Sample ID	VC-PM3009-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T21:50:59	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

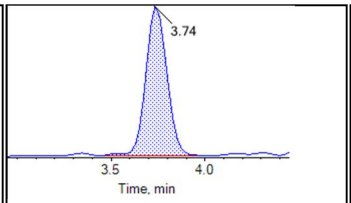
Target Analytes:



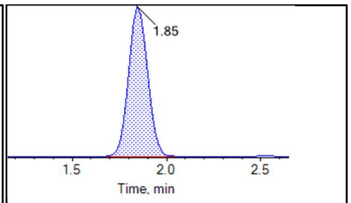
13C2-PFDoA



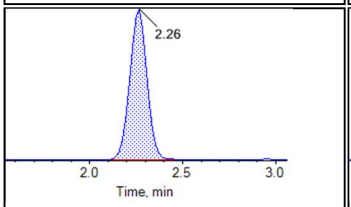
d3-MeFOSAA



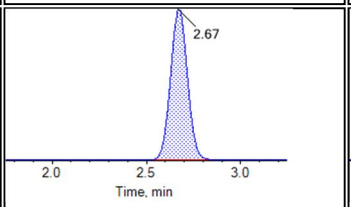
d5-EtFOSAA



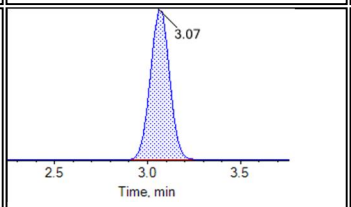
13C5-PFHxA



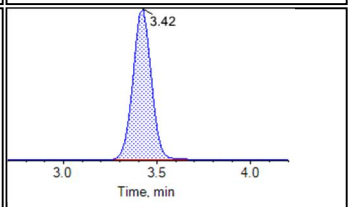
13C4-PFHpA



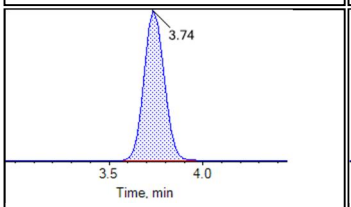
13C8-PFOA



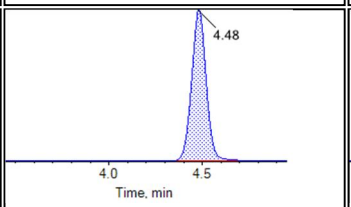
13C9-PFNA



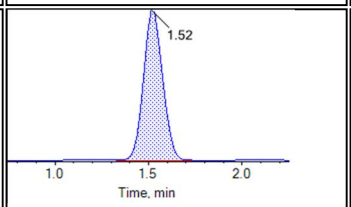
13C6-PFDA



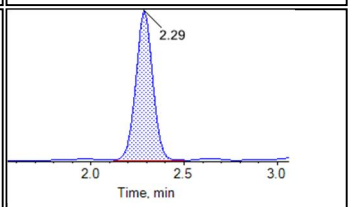
13C7-PFUnA



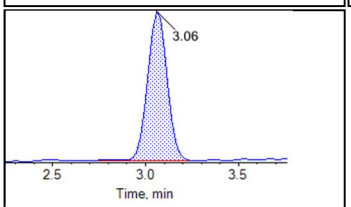
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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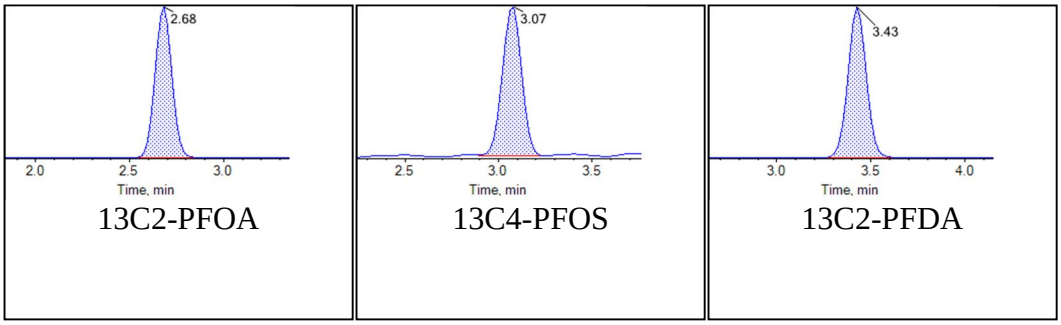
Printed: 30/10/2018 4:39:48 PM

Internal Standards:



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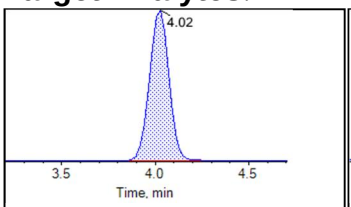
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:39:53 PM

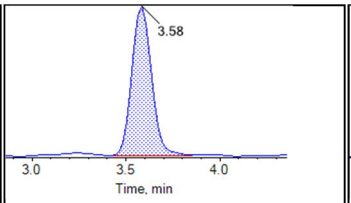
Sample Name	KB77 CCV	**Injection Vial**	26
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:01:50	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

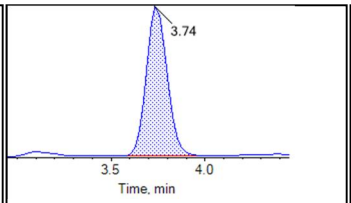
Target Analytes:



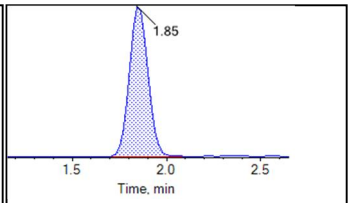
13C2-PFDoA



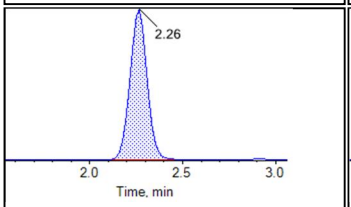
d3-MeFOSAA



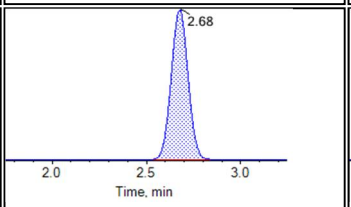
d5-EtFOSAA



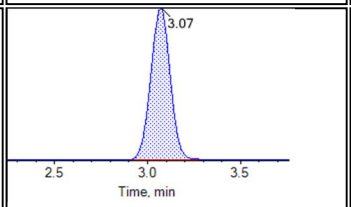
13C5-PFHxA



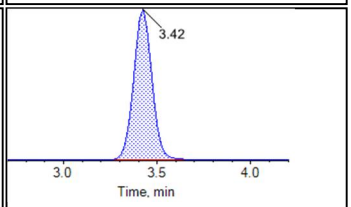
13C4-PFHpA



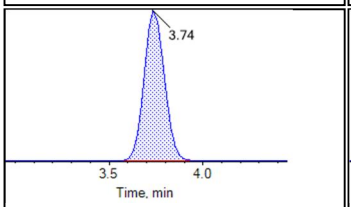
13C8-PFOA



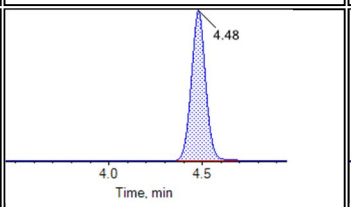
13C9-PFNA



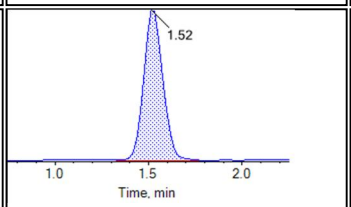
13C6-PFDA



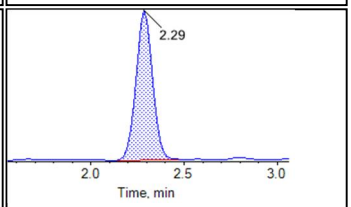
13C7-PFUnA



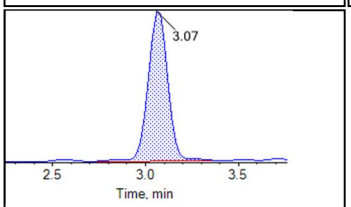
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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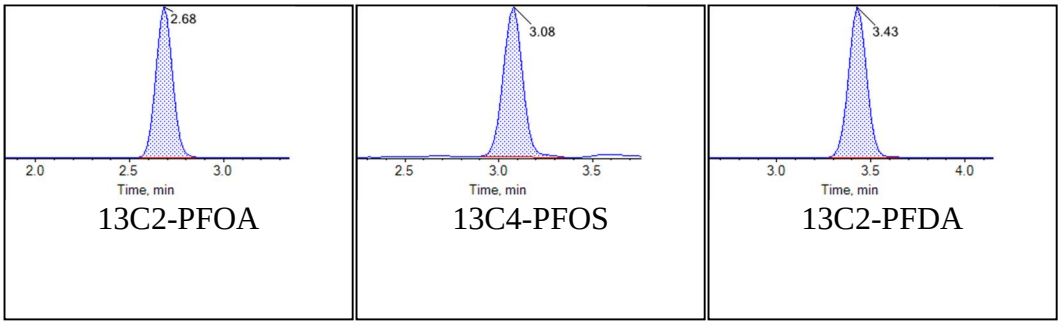
Internal Standards:



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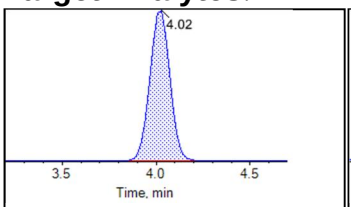
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:40:03 PM

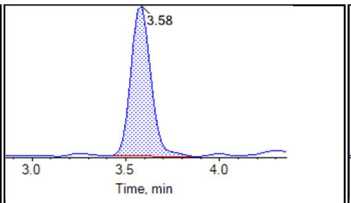
Sample Name	J8785-FS(3)	**Injection Vial**	28
Sample ID	VC-PM372-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:23:33	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

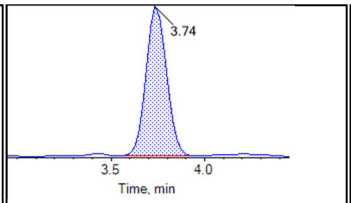
Target Analytes:



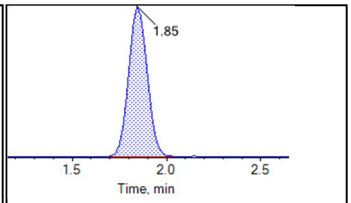
13C2-PFDoA



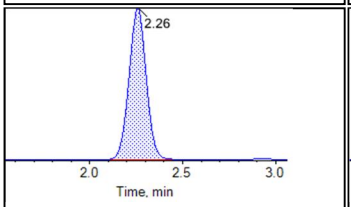
d3-MeFOSAA



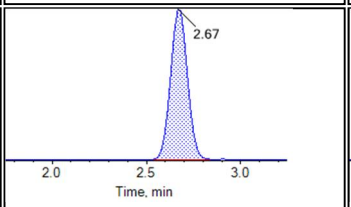
d5-EtFOSAA



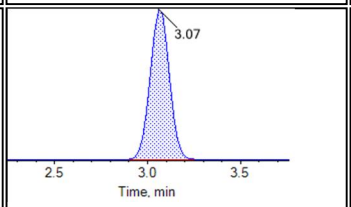
13C5-PFHxA



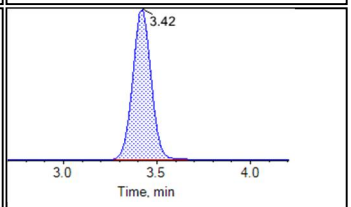
13C4-PFHpA



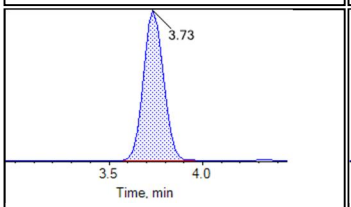
13C8-PFOA



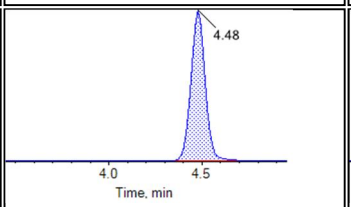
13C9-PFNA



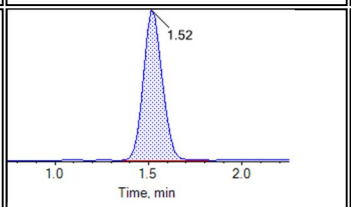
13C6-PFDA



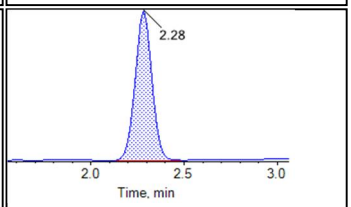
13C7-PFUnA



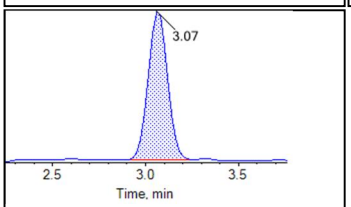
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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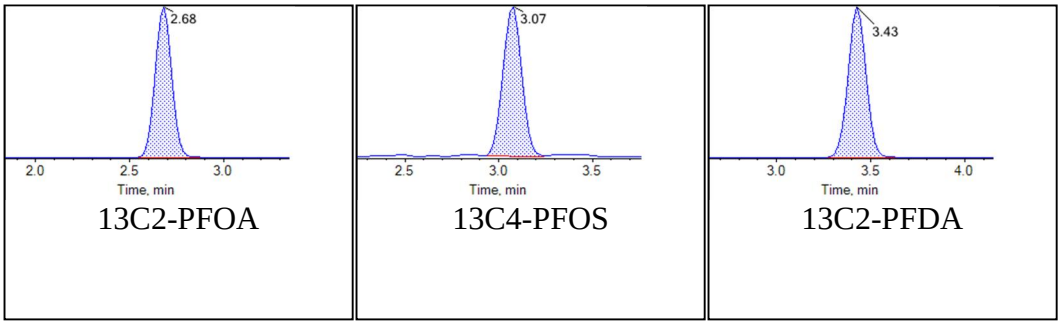
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:40:03 PM

Internal Standards:



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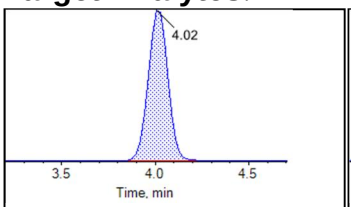
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:40:08 PM

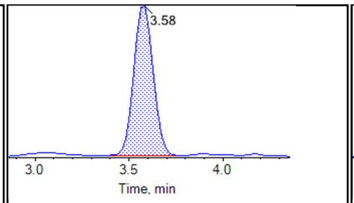
Sample Name	J8786-FS(3)	**Injection Vial**	29
Sample ID	VC-PM372-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:34:26	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

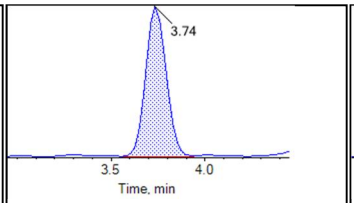
Target Analytes:



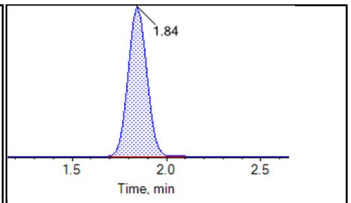
13C2-PFDoA



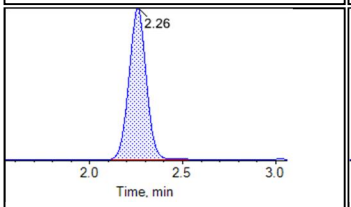
d3-MeFOSAA



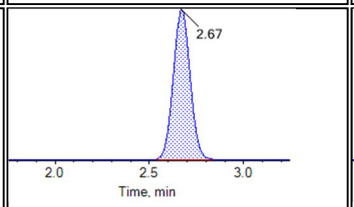
d5-EtFOSAA



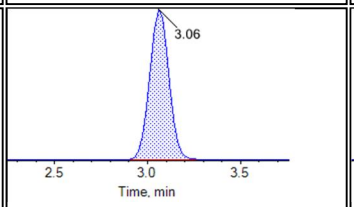
13C5-PFHxA



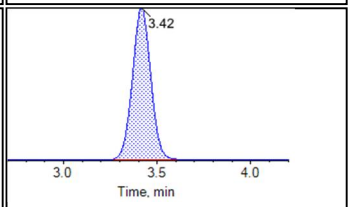
13C4-PFHpA



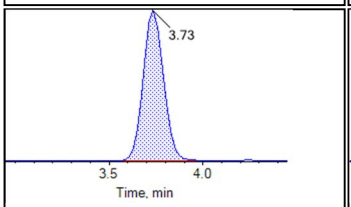
13C8-PFOA



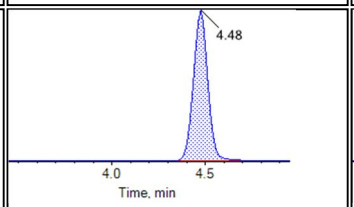
13C9-PFNA



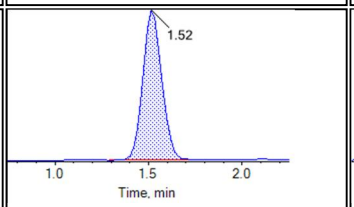
13C6-PFDA



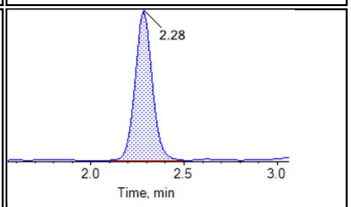
13C7-PFUnA



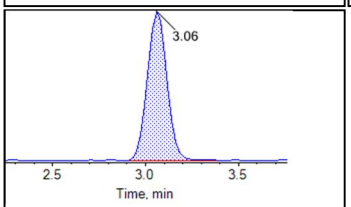
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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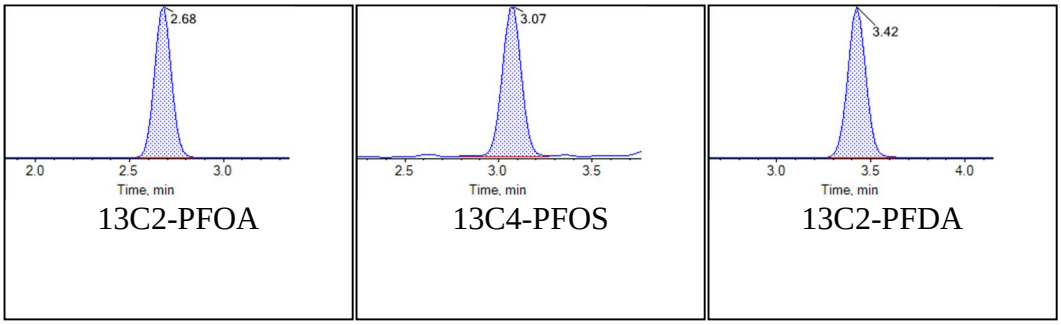
Printed: 30/10/2018 4:40:08 PM

Internal Standards:



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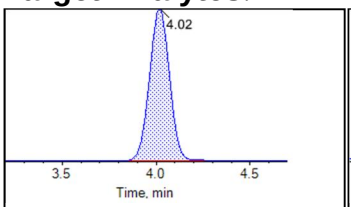
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:40:13 PM

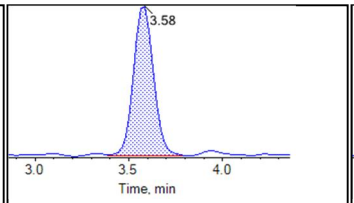
Sample Name	J8787-FS(3)	**Injection Vial**	30
Sample ID	VC-CS11-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:45:17	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

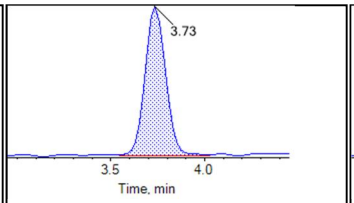
Target Analytes:



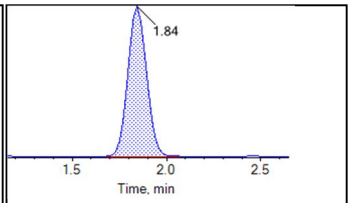
13C2-PFDoA



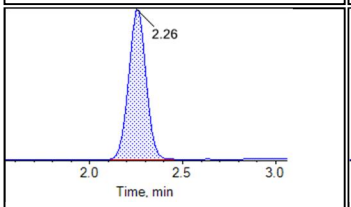
d3-MeFOSAA



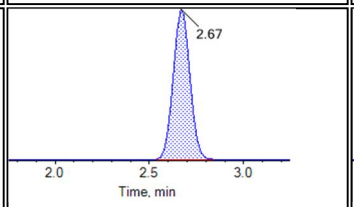
d5-EtFOSAA



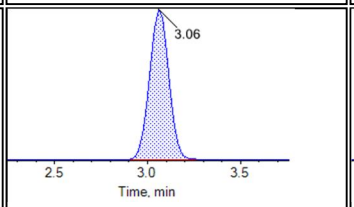
13C5-PFHxA



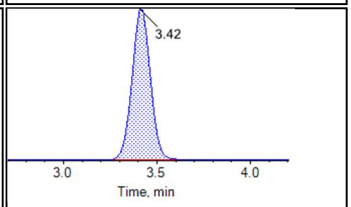
13C4-PFHpA



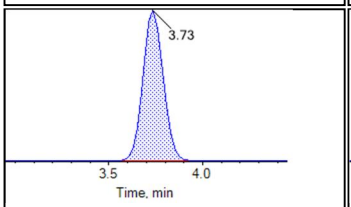
13C8-PFOA



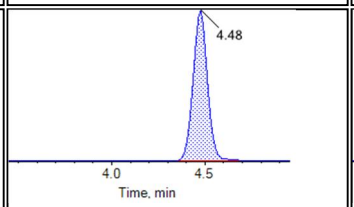
13C9-PFNA



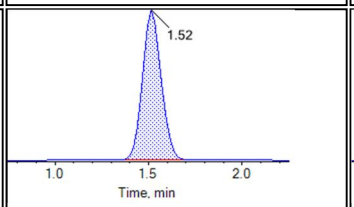
13C6-PFDA



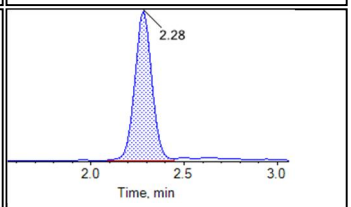
13C7-PFUnA



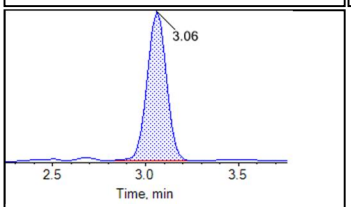
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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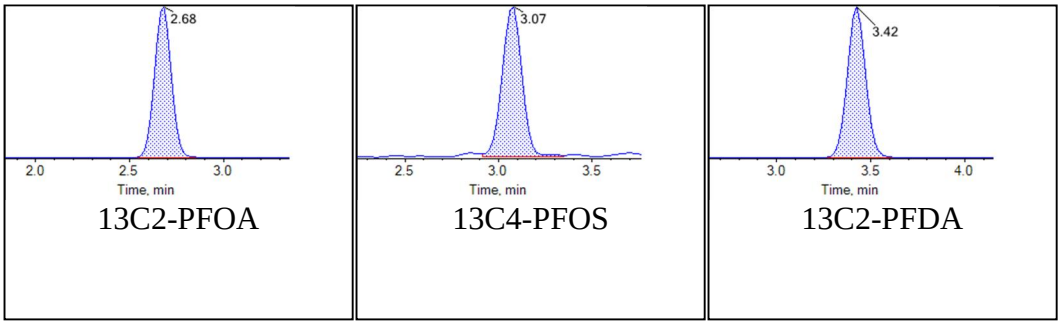
Printed: 30/10/2018 4:40:13 PM

Internal Standards:



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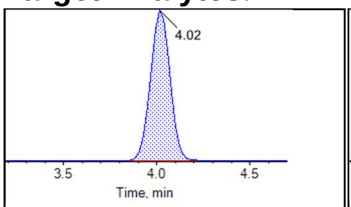
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:40:18 PM

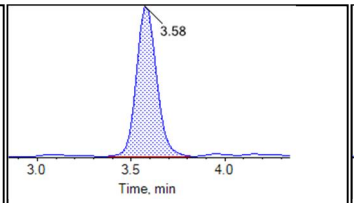
Sample Name	J8788-FS(3)	**Injection Vial**	31
Sample ID	VC-CS11-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T22:56:09	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

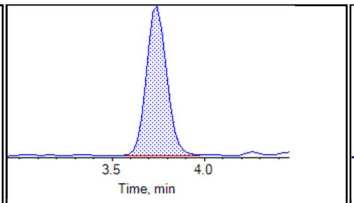
Target Analytes:



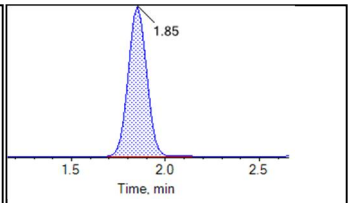
13C2-PFDoA



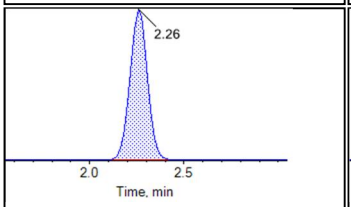
d3-MeFOSAA



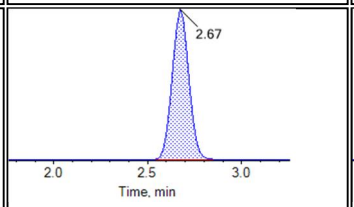
d5-EtFOSAA



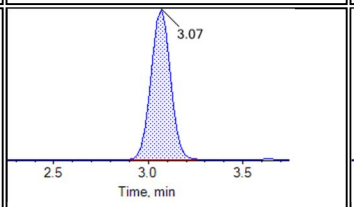
13C5-PFHxA



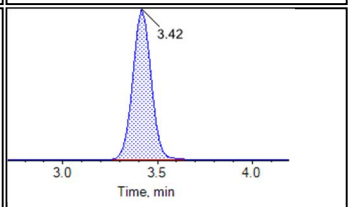
13C4-PFHpA



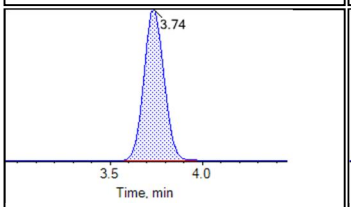
13C8-PFOA



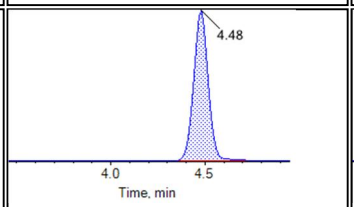
13C9-PFNA



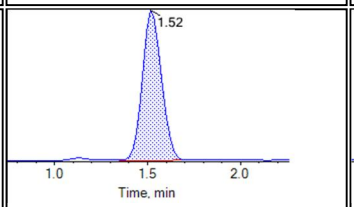
13C6-PFDA



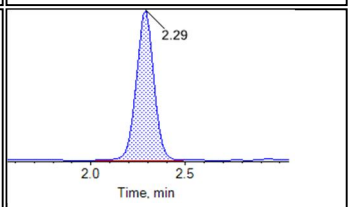
13C7-PFUnA



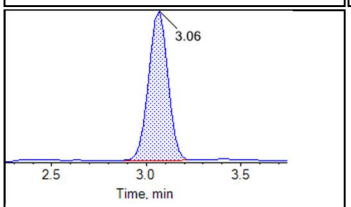
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

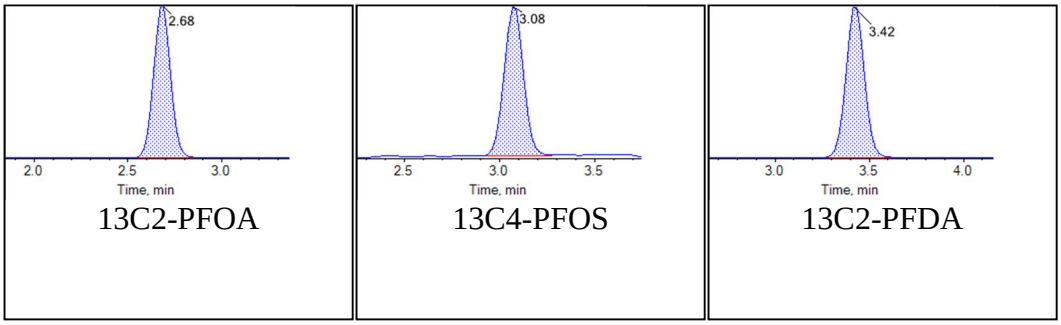


13C8-PFOS

Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:40:18 PM

Internal Standards:



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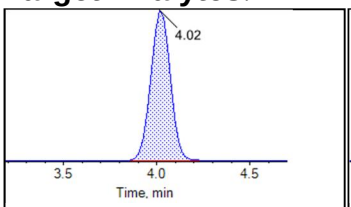
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:40:24 PM

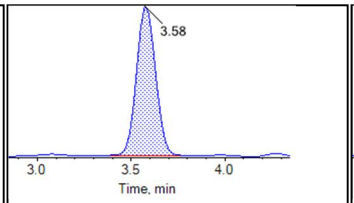
Sample Name	J8809-FS(3)	**Injection Vial**	32
Sample ID	VC-STP-SD01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:07:00	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

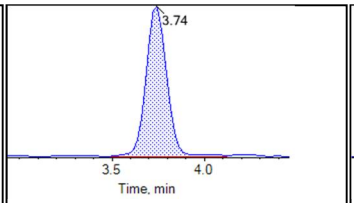
Target Analytes:



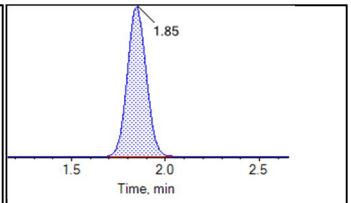
13C2-PFDoA



d3-MeFOSAA



d5-EtFOSAA



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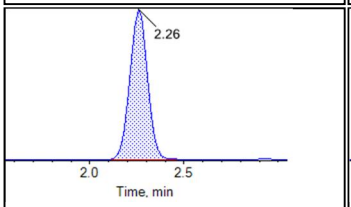
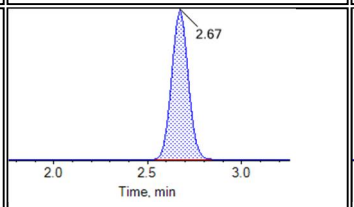
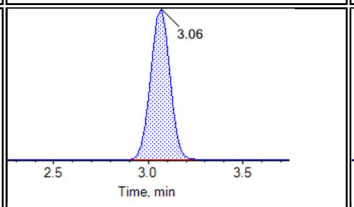


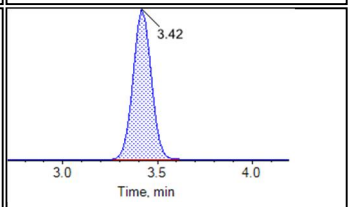
13C4-PFHpA



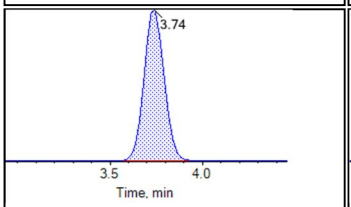
13C8-PFOA



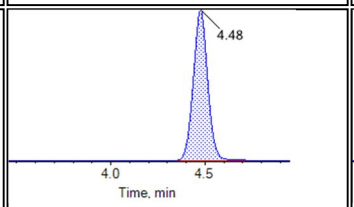
13C9-PFNA



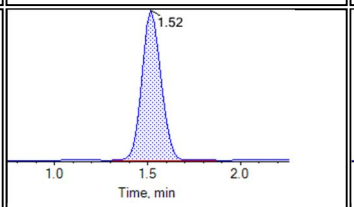
13C6-PFDA



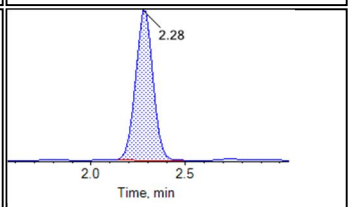
13C7-PFUnA



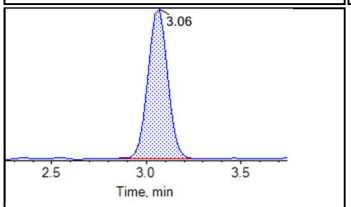
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

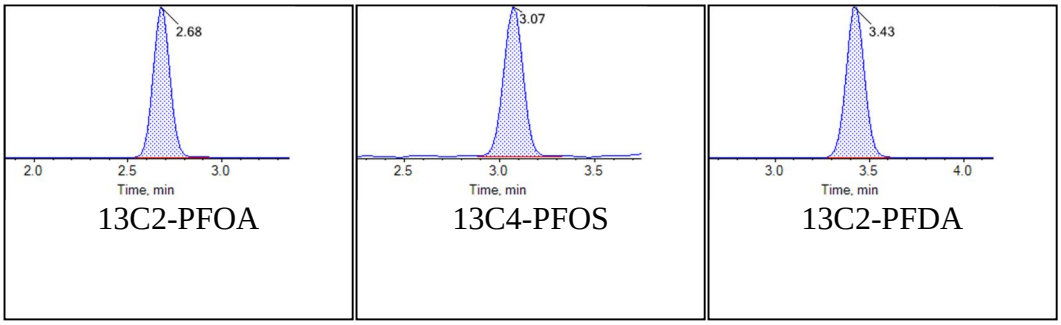


13C8-PFOS

Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:40:24 PM

Internal Standards:



BATTELLE

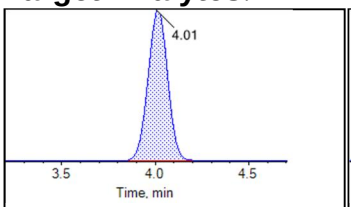
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:40:29 PM

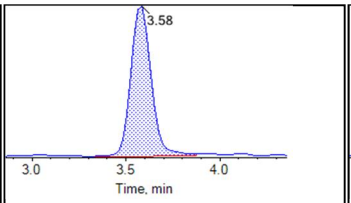
Sample Name	J8810-FS(3)	**Injection Vial**	33
Sample ID	VC-STP-SD01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:17:52	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

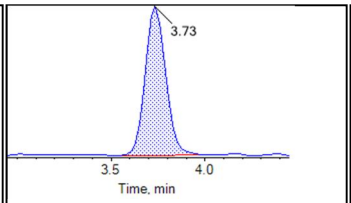
Target Analytes:



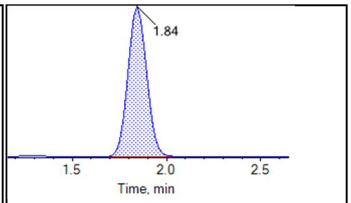
13C2-PFDoA



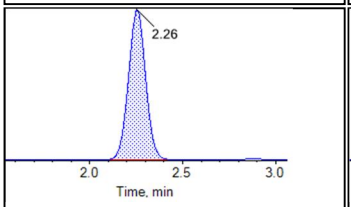
d3-MeFOSAA



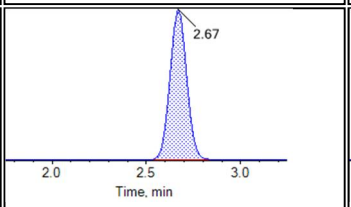
d5-EtFOSAA



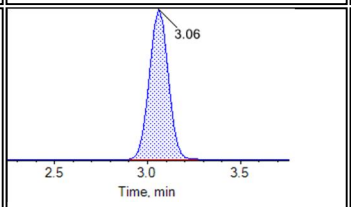
13C5-PFHxA



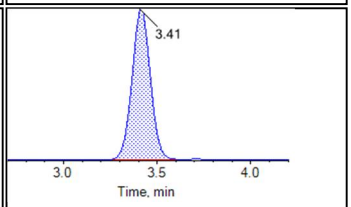
13C4-PFHpA



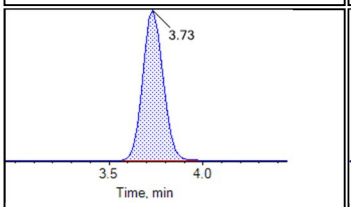
13C8-PFOA



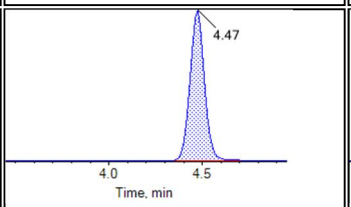
13C9-PFNA



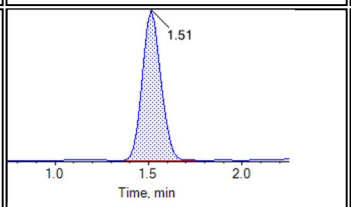
13C6-PFDA



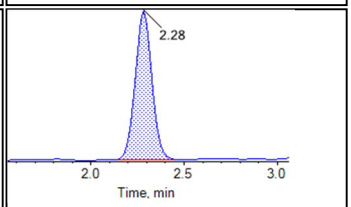
13C7-PFUnA



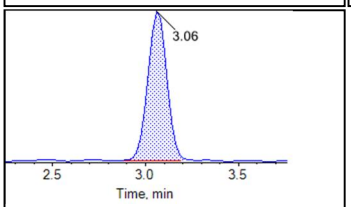
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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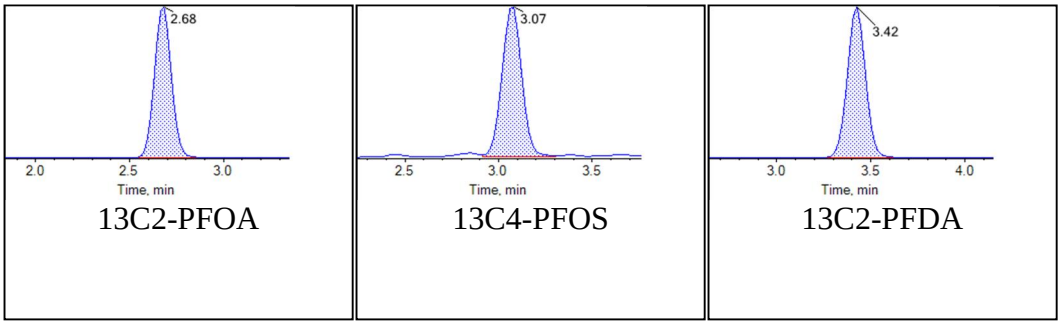
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:40:29 PM

Internal Standards:



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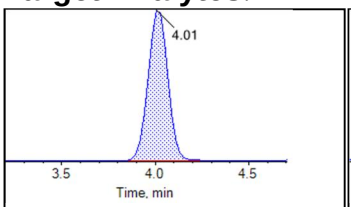
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:40:34 PM

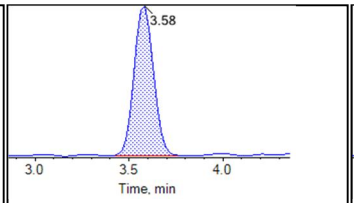
Sample Name	J8811-FS(3)	**Injection Vial**	34
Sample ID	VC-STP-SD02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:28:43	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

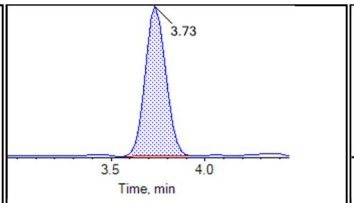
Target Analytes:



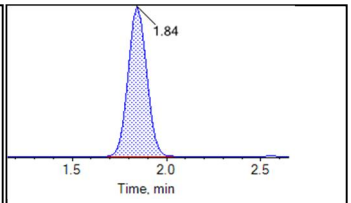
13C2-PFDoA



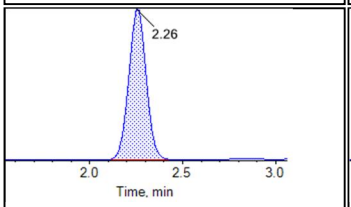
d3-MeFOSAA



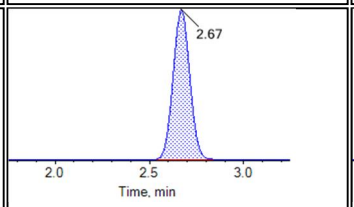
d5-EtFOSAA



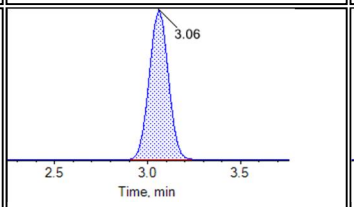
13C5-PFHxA



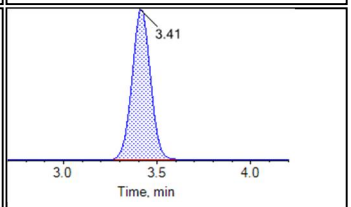
13C4-PFHpA



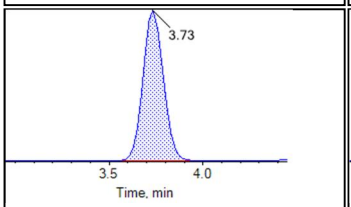
13C8-PFOA



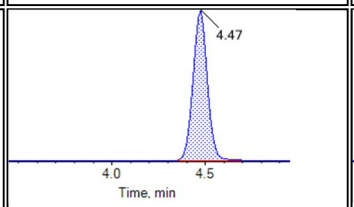
13C9-PFNA



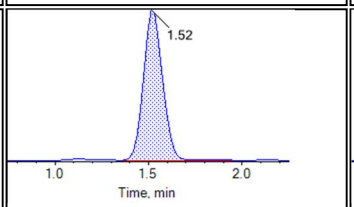
13C6-PFDA



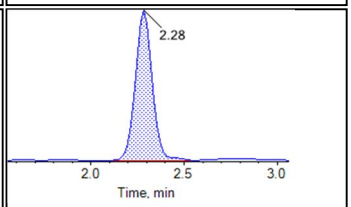
13C7-PFUnA



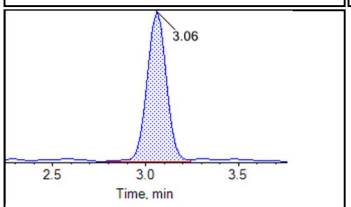
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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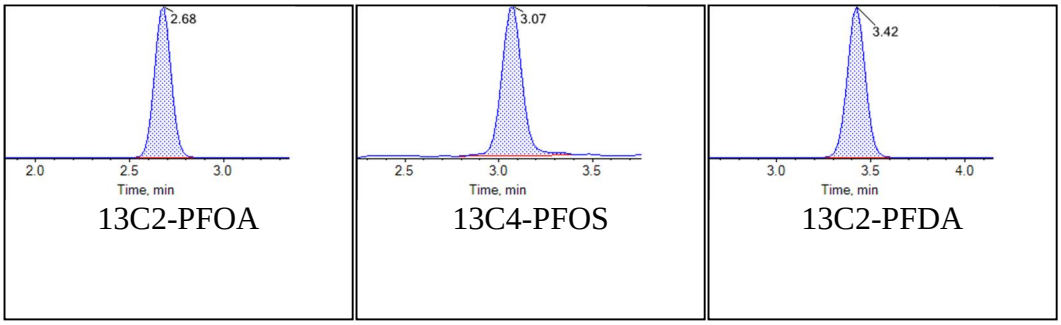
Printed: 30/10/2018 4:40:34 PM

Internal Standards:



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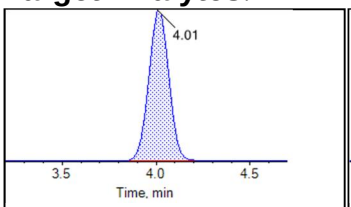
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:40:39 PM

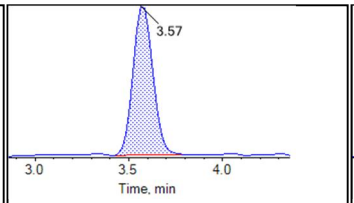
Sample Name	J8812-FS(3)	**Injection Vial**	35
Sample ID	VC-STP-SD02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:39:36	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

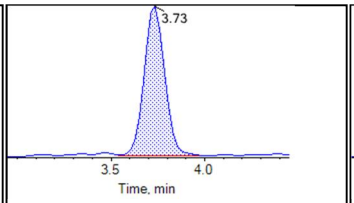
Target Analytes:



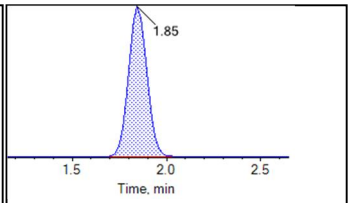
13C2-PFDoA



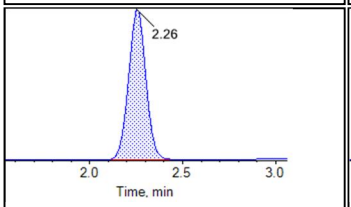
d3-MeFOSAA



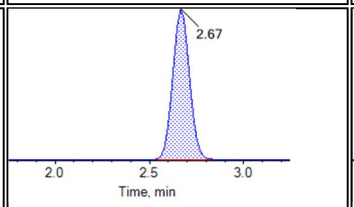
d5-EtFOSAA



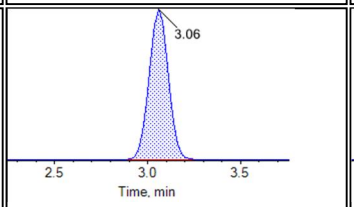
13C5-PFHxA



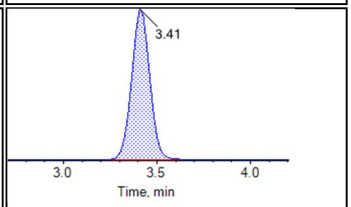
13C4-PFHpA



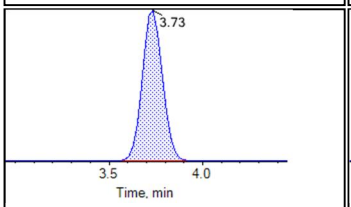
13C8-PFOA



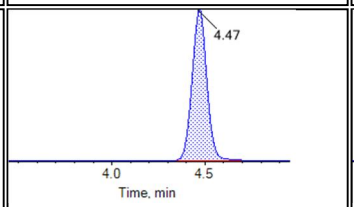
13C9-PFNA



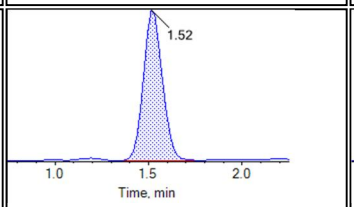
13C6-PFDA



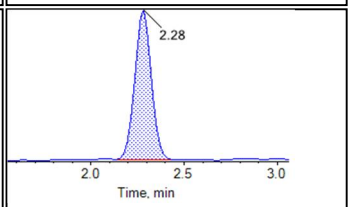
13C7-PFUnA



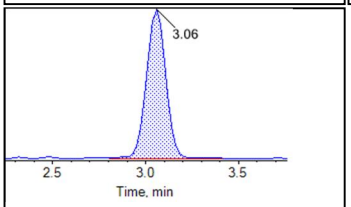
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

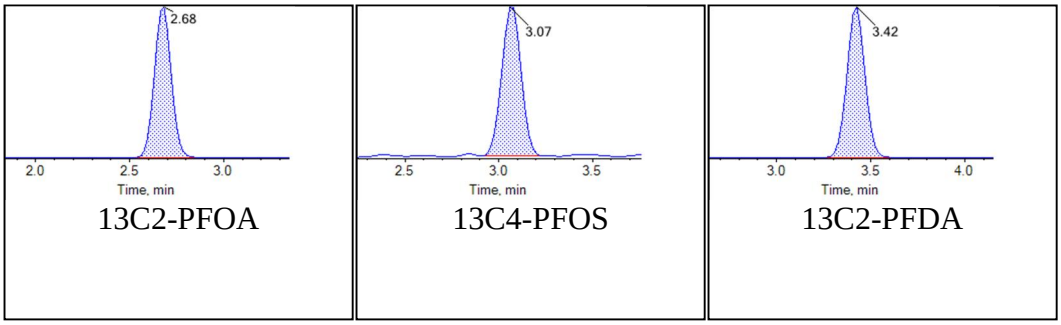


13C8-PFOS

Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:40:39 PM

Internal Standards:



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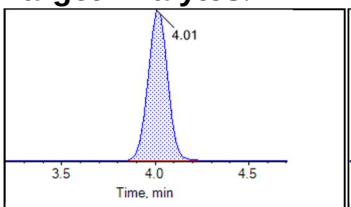
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:40:44 PM

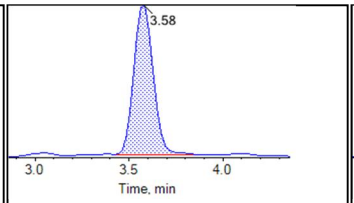
Sample Name	J8813-FS(3)	**Injection Vial**	36
Sample ID	VC-STP-SD03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-24T23:50:27	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

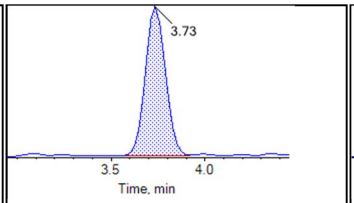
Target Analytes:



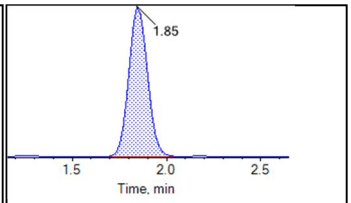
13C2-PFDoA



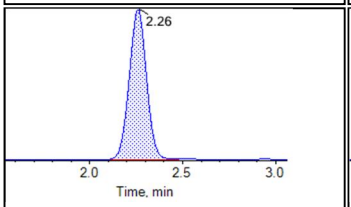
d3-MeFOSAA



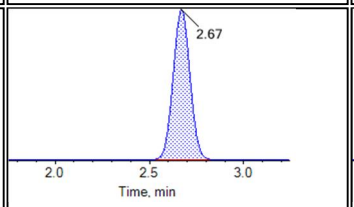
d5-EtFOSAA



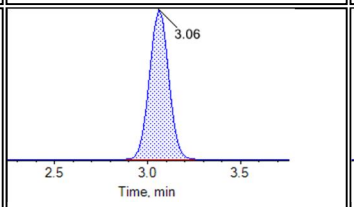
13C5-PFHxA



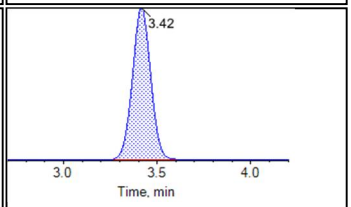
13C4-PFHpA



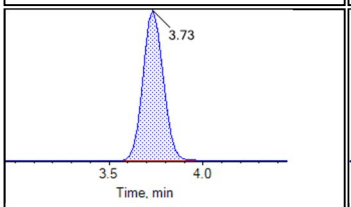
13C8-PFOA



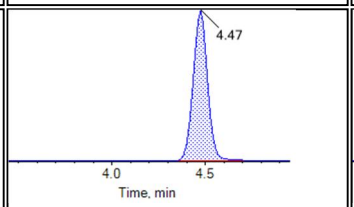
13C9-PFNA



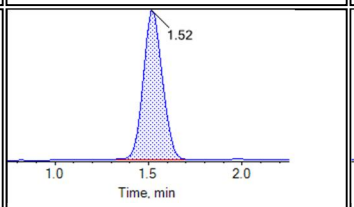
13C6-PFDA



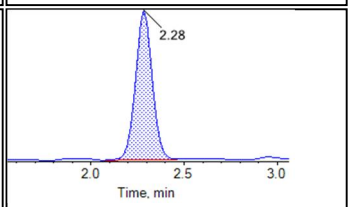
13C7-PFUnA



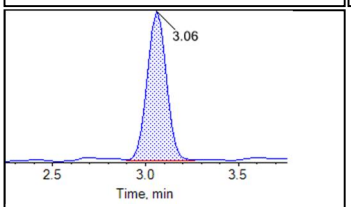
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



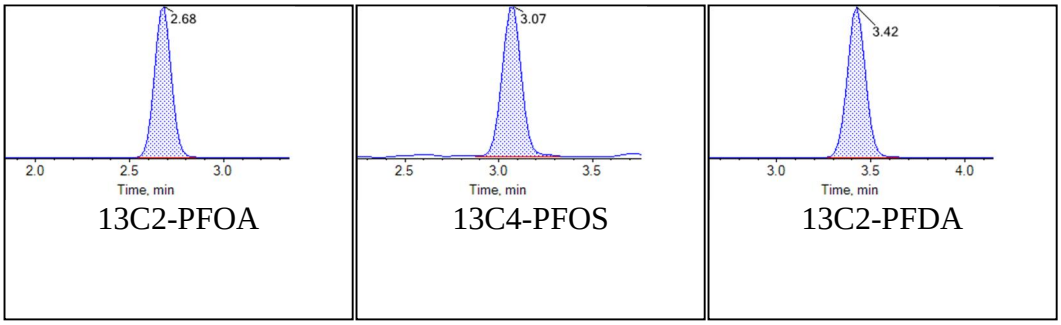
13C8-PFOS

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:40:44 PM

Internal Standards:



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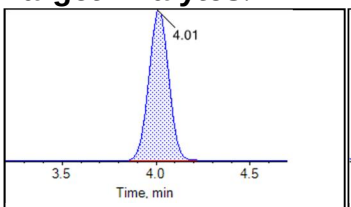
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:40:48 PM

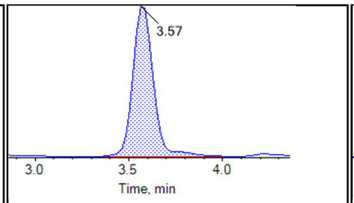
Sample Name	J8814-FS(3)	**Injection Vial**	37
Sample ID	VC-STP-SD03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:01:19	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

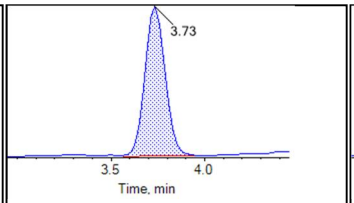
Target Analytes:



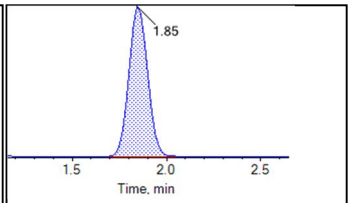
13C2-PFDoA



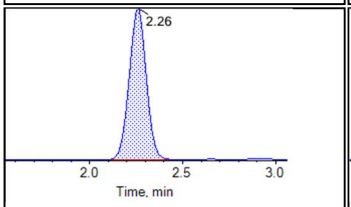
d3-MeFOSAA



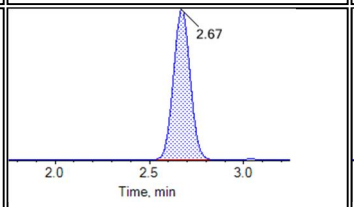
d5-EtFOSAA



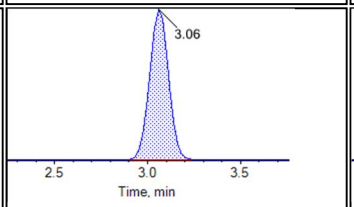
13C5-PFHxA



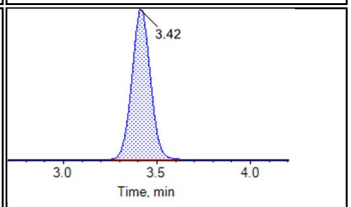
13C4-PFHpA



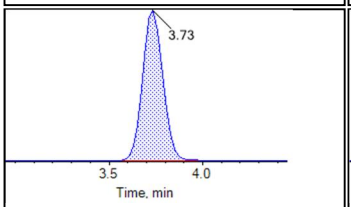
13C8-PFOA



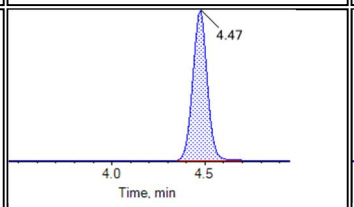
13C9-PFNA



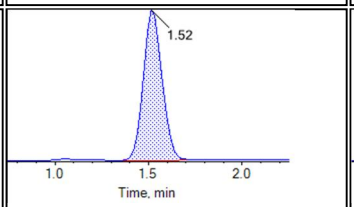
13C6-PFDA



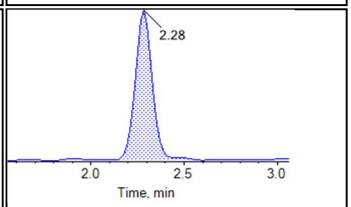
13C7-PFUnA



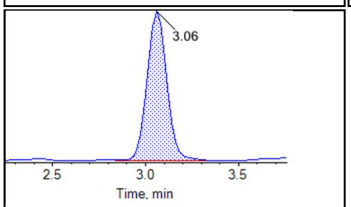
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



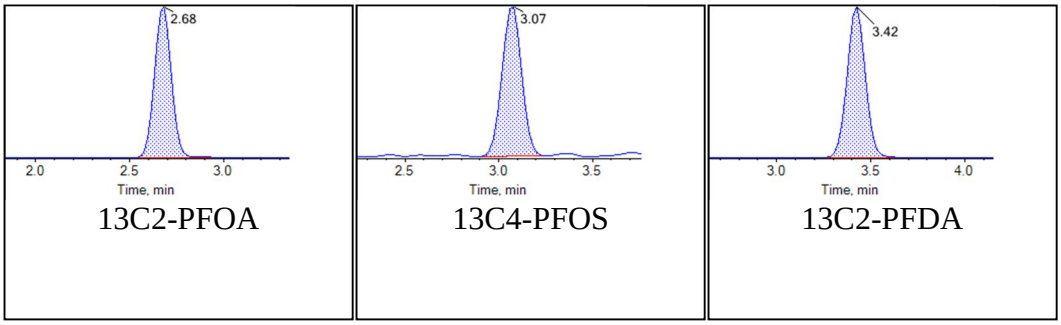
13C8-PFOS

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:40:48 PM

Internal Standards:



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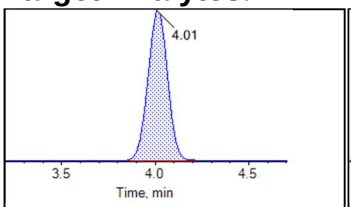
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:40:53 PM

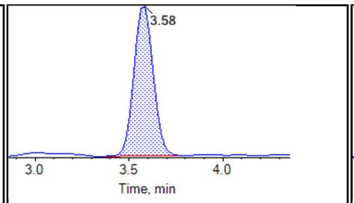
Sample Name	KB76 CCV	**Injection Vial**	38
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:12:12	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

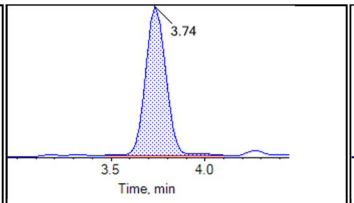
Target Analytes:



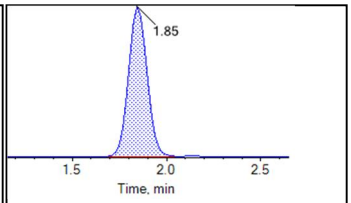
13C2-PFDoA



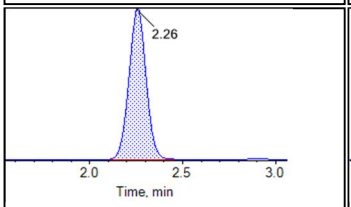
d3-MeFOSAA



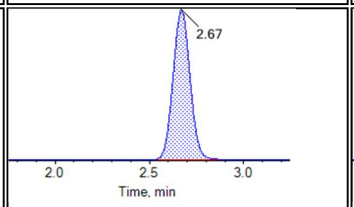
d5-EtFOSAA



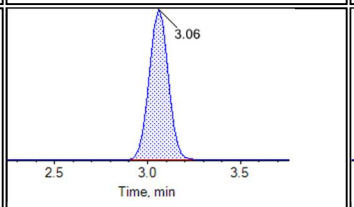
13C5-PFHxA



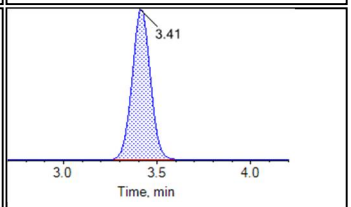
13C4-PFHpA



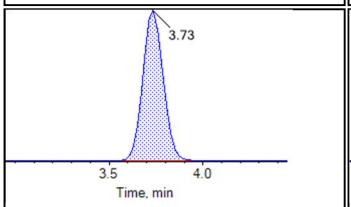
13C8-PFOA



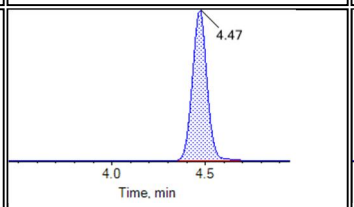
13C9-PFNA



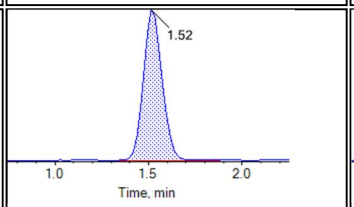
13C6-PFDA



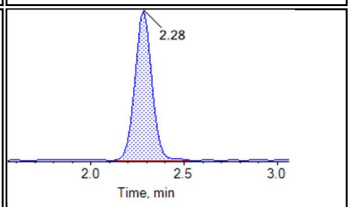
13C7-PFUnA



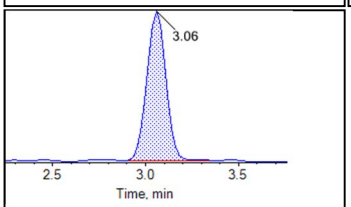
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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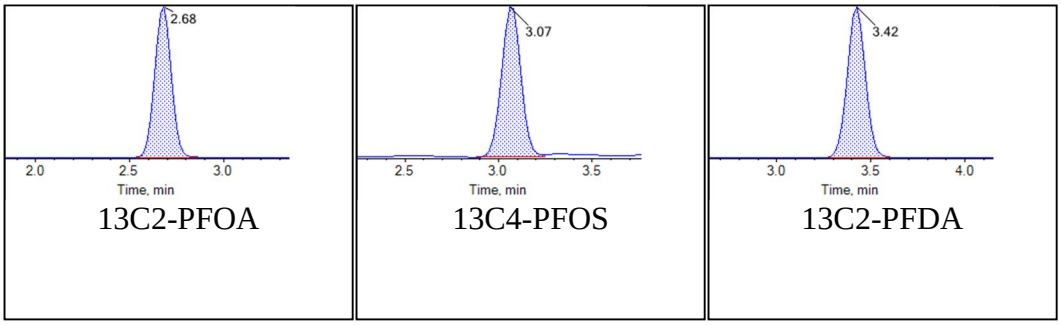
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:40:53 PM

Internal Standards:



BATTELLE

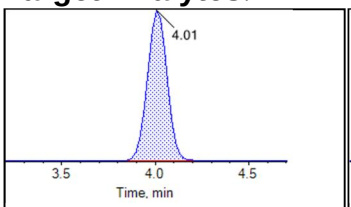
Chromatogram Report

Created with Analyst Reporter
Printed: 30/10/2018 4:41:02 PM

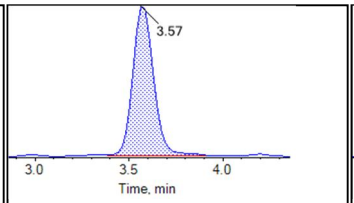
Sample Name	J8815-FS(3)	**Injection Vial**	40
Sample ID	VC-STP-SD04-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:33:58	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

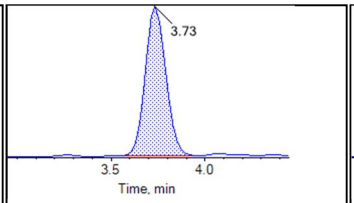
Target Analytes:



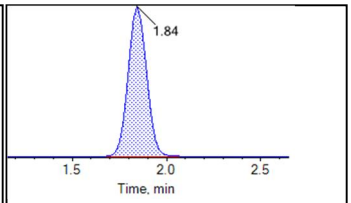
13C2-PFDoA



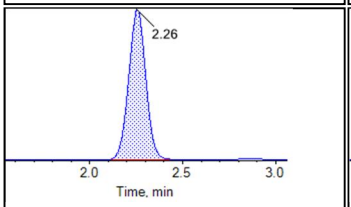
d3-MeFOSAA



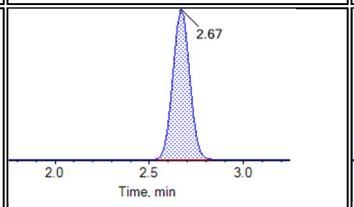
d5-EtFOSAA



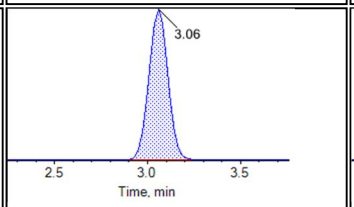
13C5-PFHxA



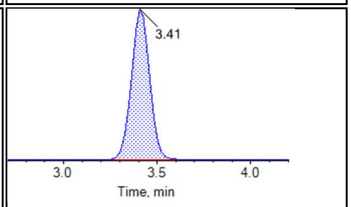
13C4-PFHpA



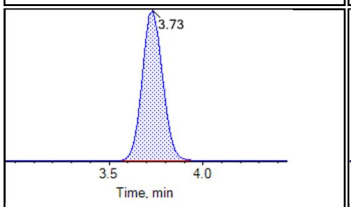
13C8-PFOA



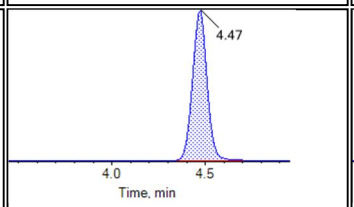
13C9-PFNA



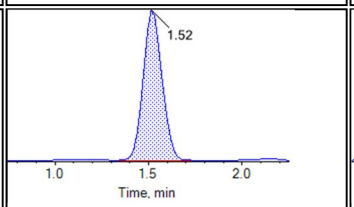
13C6-PFDA



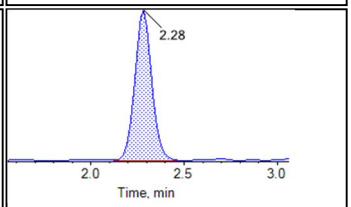
13C7-PFUnA



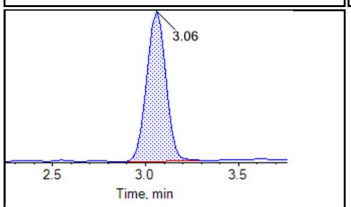
13C2-PFTeDA



13C3-PFBS

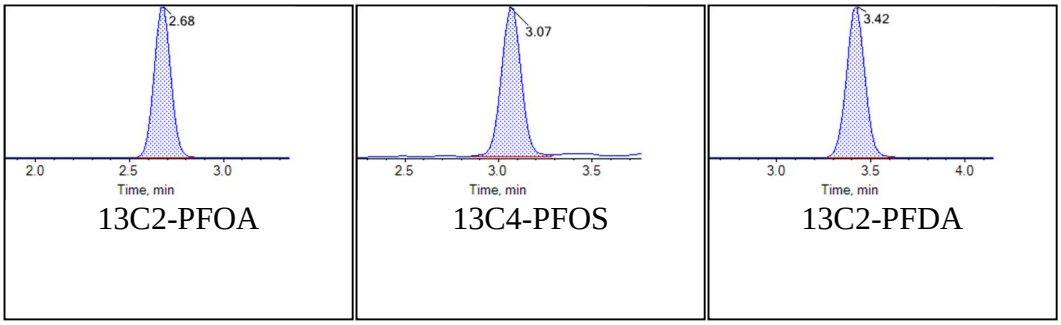


13C3-PFHxS



13C8-PFOS

Internal Standards:



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Chromatogram Report

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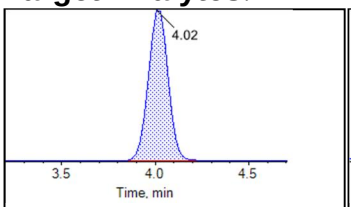
Sample Name	J8816-FS(3)	**Injection Vial**	41
Sample ID	VC-STP-SD04-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:44:50	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

Target Analytes:



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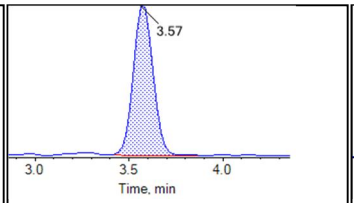
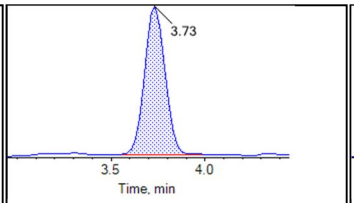


d3-MeFOSAA



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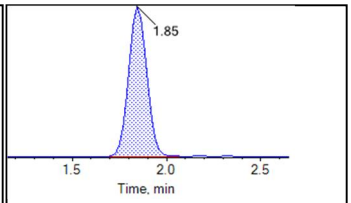

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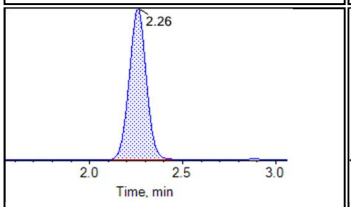

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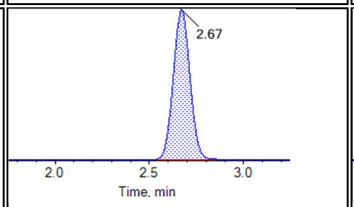
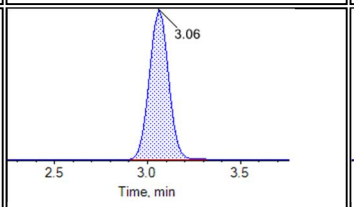
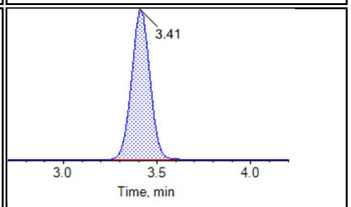


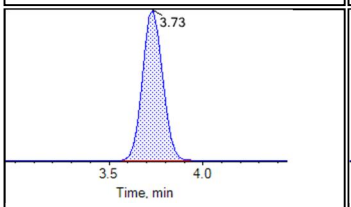
13C8-PFOA



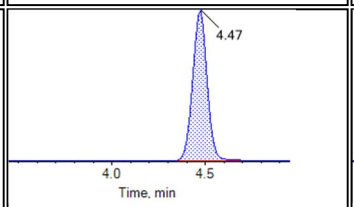
13C9-PFNA



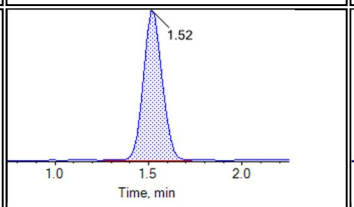
13C6-PFDA



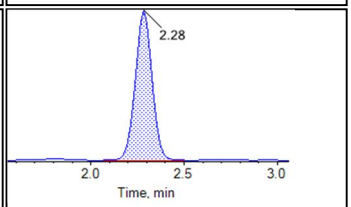
13C7-PFUnA



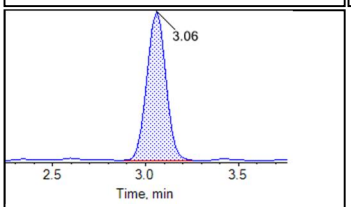
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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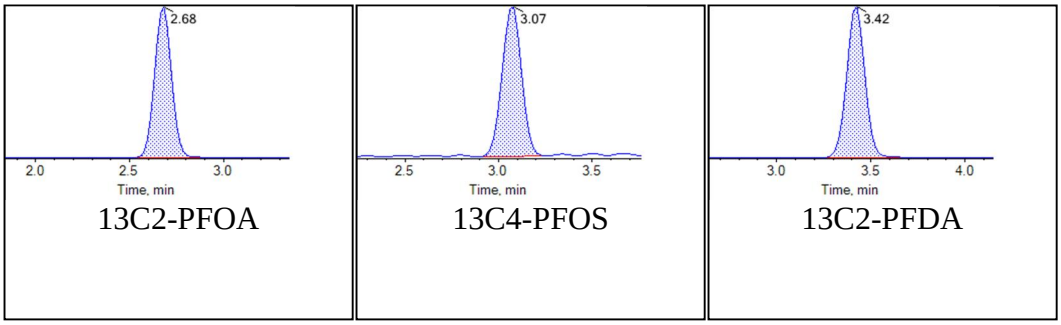
Internal Standards:



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Chromatogram Report

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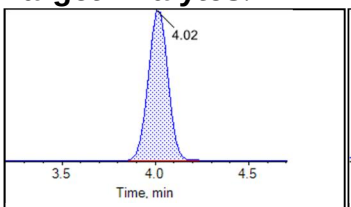
Printed: 30/10/2018 4:41:12 PM

Sample Name	KB77 CCV	**Injection Vial**	42
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-25T00:55:41	**Data File**	5500_10242018_05-0369.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0620_18-0621_18-0622_SIS
Sample Comment			

Chromatograms

Target Analytes:



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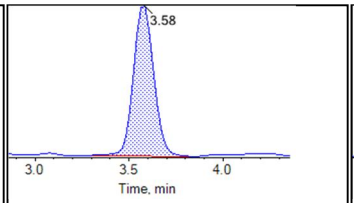
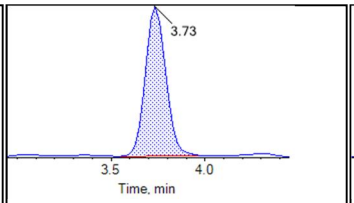
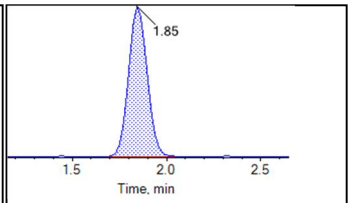


d3-MeFOSAA



d5-EtFOSAA



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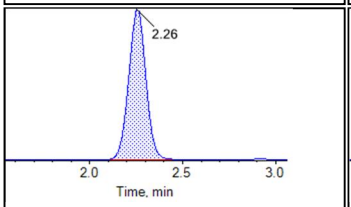

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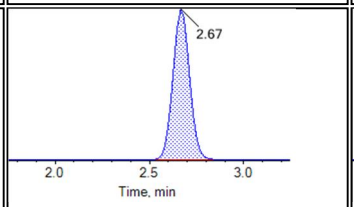

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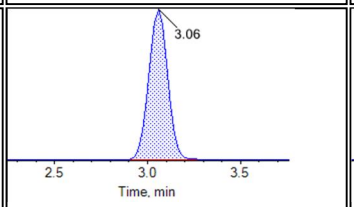
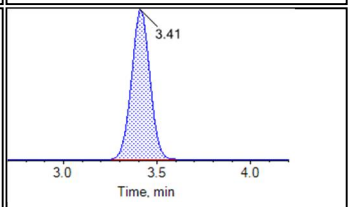
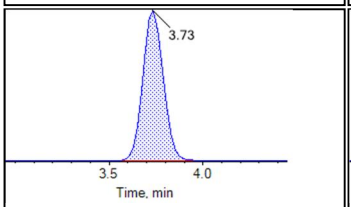


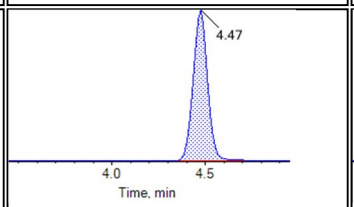
13C9-PFNA



13C6-PFDA



13C7-PFUnA



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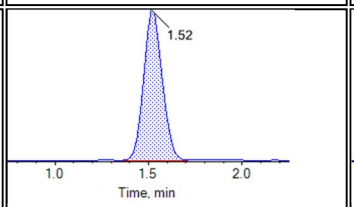

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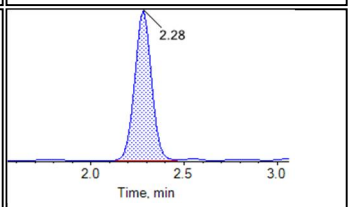

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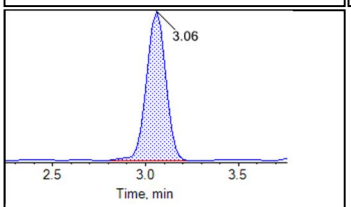

13C8-PFOS

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Chromatogram Report

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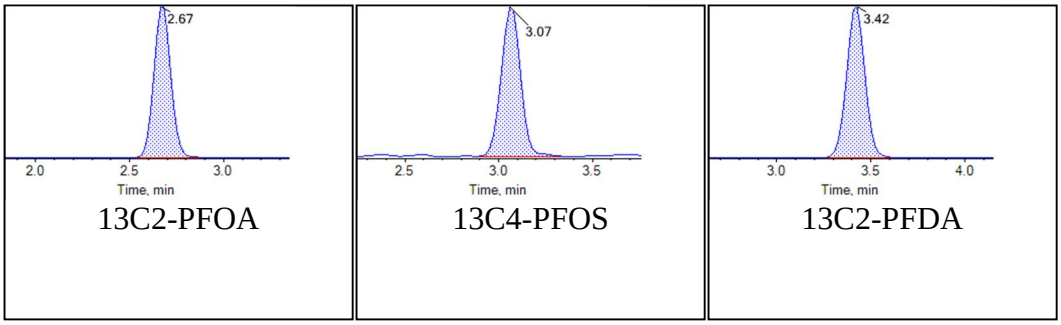
Internal Standards:



EDD

Contract_I	DO_CTO_N	Phase	Installatior	Sample_Nu	CH2M_Cor	Analysis_G	Analytical_	PRC_Code	Lab_Code	Lab_Name	Leachate_I	SAMPLE_B	Extraction_	Result_Typ	Lab_QC_ty	SAMPLE_N	QC_Level	DateTime_	Date_Rece	Leachate_I	Leachate_	Extraction_	Extraction_	Analysis_D	Analysis_T	Lab_Sampl	Dilution	Run_Numt	PERCENT_I	PERCENT_I	Chem_Nan	Analyte_ID	Analyte_Vi	Original_A	Result_Uni	Lab_Qualif	Validator_	QC_Colum	Analysis_R	Result_Nar	QC_Contrc	QC_Accura	QC_Accura	Control_Lir	QC_Narrat	MDL	Detection_	QSM_Vers	DL	LOD	LOQ	SDG	Analysis_B	Validator_	Val_Date
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N6247016I	4164		POINT_MU	CS01PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:13:12	CS01PB-F	10	1	0		Perfluoro	h 355-46-4		0.5	NG_G	U		TRG					20171116		0.22	0.22	5.1	70	0.5	4.98	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS01PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:13:12	CS01PB-F	10	1	0		Perfluoro	o 1763-23-1		1	NG_G	U		TRG					20171116		0.27	0.27	5.1	70	1	4.98	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS01PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:13:12	CS01PB-F	10	1	0		13C5-PFH	x BDO-2217		98	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS01PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:13:12	CS01PB-F	10	1	0		13C4-PFH	p BDO-2218		104	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS01PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:13:12	CS01PB-F	10	1	0		13C8-PFO	A BDO-2219		106	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS01PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:13:12	CS01PB-F	10	1	0		13C9-PFN	A BDO-2221		89	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS01PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:13:12	CS01PB-F	10	1	0		13C6-PFD	A BDO-2222		99	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS01PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:13:12	CS01PB-F	10	1	0		13C7-PFU	n BDO-2223		110	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS01PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:13:12	CS01PB-F	10	1	0		13C2-PFD	o BDO-2112		106	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS01PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:13:12	CS01PB-F	10	1	0		13C2-PFT	e BDO-2224		119	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS01PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:13:12	CS01PB-F	10	1	0		d3-MeFOS	BDO-1838		112	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS01PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:13:12	CS01PB-F	10	1	0		d5-EtFOS	A BDO-1839		100	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS01PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:13:12	CS01PB-F	10	1	0		13C3-PFB	S BDO-2226		105	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS01PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:13:12	CS01PB-F	10	1	0		13C3-PFH	x BDO-2227		108	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS01PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:13:12	CS01PB-F	10	1	0		13C8-PFO	S BDO-2228		114	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		Perfluoroh	307-24-4		102	PCT_REC			TRG	LSA	135	45	20171116		0.33	0.33	5.1		1.01	5.03	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		Perfluoro	375-85-9		92	PCT_REC			TRG	LSA	128	60	20171116		0.44	0.44	5.1		1.01	5.03	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		Perfluoroo	335-67-1		97	PCT_REC			TRG	LSA	136	56	20171116		0.5	0.5	5.1		1.01	5.03	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		Perfluoro	n 375-95-1		98	PCT_REC			TRG	LSA	130	54	20171116		0.43	0.43	5.1		1.01	5.03	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		Perfluorod	335-76-2		96	PCT_REC			TRG	LSA	141	55	20171116		0.27	0.27	5.1		1.01	5.03	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		Perfluorou	2058-94-8		95	PCT_REC			TRG	LSA	137	57	20171116		0.41	0.41	5.1		1.01	5.03	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		Perfluorod	307-55-1		98	PCT_REC			TRG	LSA	134	62	20171116		0.24	0.24	5.1		0.5	5.03	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		Perfluorot	r 72629-94-8		101	PCT_REC			TRG	LSA	127	51	20171116		0.28	0.28	5.1		1.01	5.03	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		Perfluorot	r 376-06-7		102	PCT_REC			TRG	LSA	162	34	20171116		0.63	0.63	5.1		2.01	5.03	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		N-Methyl	F 2355-31-9		103	PCT_REC			TRG	LSA	146	52	20171116		1.13	1.13	5.1		2.51	5.03	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		N-Ethyl P	er 2991-50-6		108	PCT_REC			TRG	LSA	124	54	20171116		0.57	0.57	5.1		2.01	5.03	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		Perfluorob	375-73-5		103	PCT_REC			TRG	LSA	145	57	20171116		0.36	0.36	5.1		1.01	5.03	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		Perfluoro	h 355-46-4		113	PCT_REC			TRG	LSA	132	52	20171116		0.22	0.22	5.1		0.5	5.03	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		Perfluoro	o 1763-23-1		93	PCT_REC			TRG	LSA	130	50	20171116		0.27	0.27	5.1		1.01	5.03	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		13C5-PFH	x BDO-2217		118	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		13C4-PFH	p BDO-2218		128	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		13C8-PFO	A BDO-2219		116	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		13C9-PFN	A BDO-2221		105	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		13C6-PFD	A BDO-2222		114	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		13C7-PFU	n BDO-2223		120	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		13C2-PFD	o BDO-2112		127	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		13C2-PFT	e BDO-2224		139	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		d3-MeFOS	BDO-1838		135	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		d5-EtFOS	A BDO-1839		112	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		13C3-PFB	S BDO-2226		123	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		13C3-PFH	x BDO-2227		110	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	CS12LCS-I	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181018	20181018			20181018	15:30:00	20181024	20:24:04	CS012LCS-I	10	1	0		13C8-PFO	S BDO-2228		115	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:34:55	J8777-FS	10	1	27.15		Perfluoroh	307-24-4		1.32	NG_G	U		TRG					20171116		0.43	0.43	5.1	70	1.32	6.58	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:34:55	J8777-FS	10	1	27.15		Perfluoro	375-85-9		1.32	NG_G	U		TRG					20171116		0.58	0.58	5.1	70	1.32	6.58	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:34:55	J8777-FS	10	1	27.15		Perfluoroo	335-67-1		1.32	NG_G	U		TRG					20171116		0.66	0.66	5.1	70	1.32	6.58	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:34:55	J8777-FS	10	1	27.15		Perfluoro	n 375-95-1		1.32	NG_G	U		TRG					20171116		0.57	0.57	5.1	70	1.32	6.58	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:34:55	J8777-FS	10	1	27.15		Perfluorod	335-76-2		1.32	NG_G	U		TRG					20171116		0.54	0.54	5.1	70	1.32	6.58	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:34:55	J8777-FS	10	1	27.15		Perfluorou	2058-94-8		1.32	NG_G	U		TRG					20171116		0.32	0.32	5.1	70	0.66	6.58	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:34:55	J8777-FS	10	1	27.15		Perfluorod	307-55-1		0.66	NG_G	U		TRG					20171116		0.37	0.37	5.1	70	1.32	6.58	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	B

Contract_I	DO_CTO_N	Phase	Installatior	Sample_Nu	CH2M_Cor	Analysis_G	Analytical_	PRC_Code	Lab_Code	Lab_Name	Leachate_I	SAMPLE_B	Extraction_	Result_Typ	Lab_QC_ty	SAMPLE_N	QC_Level	DateTime_	Date_Rece	Leachate_I	Leachate_	Extraction_	Extraction_	Analysis_D	Analysis_T	Lab_Sampl	Dilution	Run_Numb	PERCENT_I	PERCENT_I	Chem_Nan	Analyte_ID	Analyte_Vi	Original_A	Result_Uni	Lab_Qualif	Validator_	GC_Colum	Analysis_R	Result_Nar	QC_Contro	QC_Accura	QC_Accura	Control_Lir	QC_Narrat	MDL		Detection_Q	SM_Vers	DL		LOD		LOQ		SDG	Analysis_B	Validator_	Val_Date
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:56:39	J8779-FS	10	1	26.97		Perfluorot	376-06-7		2.61	NG_G	U			TRG					20171116		0.82	0.82	5.1		70	2.61		6.54	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:56:39	J8779-FS	10	1	26.97		N-Methyl	F2355-31-9		3.27	NG_G	U			TRG					20171116		1.46	1.46	5.1		70	3.27		6.54	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:56:39	J8779-FS	10	1	26.97		N-Ethyl Pe	r2991-50-6		2.61	NG_G	U			TRG					20171116		0.75	0.75	5.1		70	2.61		6.54	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:56:39	J8779-FS	10	1	26.97		Perfluorob	375-73-5		1.31	NG_G	U			TRG					20171116		0.47	0.47	5.1		70	1.31		6.54	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:56:39	J8779-FS	10	1	26.97		Perfluoroh	355-46-4		0.65	NG_G	U			TRG					20171116		0.29	0.29	5.1		70	0.65		6.54	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:56:39	J8779-FS	10	1	26.97		Perfluoroo	1763-23-1		3.55	NG_G	J			TRG					20171116		0.35	0.35	5.1		70	1.31		6.54	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:56:39	J8779-FS	10	1	26.97		13C5-PFHx	BDO-2217		110	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:56:39	J8779-FS	10	1	26.97		13C4-PFHp	BDO-2218		114	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:56:39	J8779-FS	10	1	26.97		13C8-PFOA	BDO-2219		117	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:56:39	J8779-FS	10	1	26.97		13C9-PFNA	BDO-2221		101	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:56:39	J8779-FS	10	1	26.97		13C6-PFDA	BDO-2222		115	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:56:39	J8779-FS	10	1	26.97		13C7-PFUn	BDO-2223		113	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:56:39	J8779-FS	10	1	26.97		13C2-PFDo	BDO-2112		124	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:56:39	J8779-FS	10	1	26.97		13C2-PFTe	BDO-2224		132	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:56:39	J8779-FS	10	1	26.97		d3-MeFOS	BDO-1838		99	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:56:39	J8779-FS	10	1	26.97		d5-EtFOSA	BDO-1839		106	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:56:39	J8779-FS	10	1	26.97		13C3-PFBS	BDO-2226		129	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:56:39	J8779-FS	10	1	26.97		13C3-PFHx	BDO-2227		127	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	20:56:39	J8779-FS	10	1	26.97		13C8-PFOS	BDO-2228		112	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		Perfluoroh	307-24-4		1.29	NG_G	U			TRG					20171116		0.43	0.43	5.1		70	1.29		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		Perfluoroh	375-85-9		1.29	NG_G	U			TRG					20171116		0.57	0.57	5.1		70	1.29		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		Perfluoroo	335-67-1		1.29	NG_G	U			TRG					20171116		0.65	0.65	5.1		70	1.29		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		Perfluoron	375-95-1		1.29	NG_G	U			TRG					20171116		0.55	0.55	5.1		70	1.29		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		Perfluorod	335-76-2		1.29	NG_G	U			TRG					20171116		0.35	0.35	5.1		70	1.29		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		Perfluorou	2058-94-8		1.29	NG_G	U			TRG					20171116		0.53	0.53	5.1		70	1.29		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		Perfluorod	307-55-1		0.65	NG_G	U			TRG					20171116		0.31	0.31	5.1		70	0.65		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		Perfluorot	72629-94-8		1.29	NG_G	U			TRG					20171116		0.36	0.36	5.1		70	1.29		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		Perfluorot	376-06-7		2.58	NG_G	U			TRG					20171116		0.81	0.81	5.1		70	2.58		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		N-Methyl	F2355-31-9		3.23	NG_G	U			TRG					20171116		1.45	1.45	5.1		70	3.23		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		N-Ethyl Pe	r2991-50-6		2.58	NG_G	U			TRG					20171116		0.74	0.74	5.1		70	2.58		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		Perfluorob	375-73-5		1.29	NG_G	U			TRG					20171116		0.46	0.46	5.1		70	1.29		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		Perfluoroh	355-46-4		0.65	NG_G	U			TRG					20171116		0.28	0.28	5.1		70	0.65		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		Perfluoroo	1763-23-1		0.84	NG_G	J			TRG					20171116		0.35	0.35	5.1		70	1.29		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		13C5-PFHx	BDO-2217		104	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		13C4-PFHp	BDO-2218		107	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		13C8-PFOA	BDO-2219		114	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		13C9-PFNA	BDO-2221		100	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		13C6-PFDA	BDO-2222		119	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		13C7-PFUn	BDO-2223		121	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		13C2-PFDo	BDO-2112		127	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		13C2-PFTe	BDO-2224		144	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		d3-MeFOS	BDO-1838		106	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		d5-EtFOSA	BDO-1839		93	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		13C3-PFBS	BDO-2226		117	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		13C3-PFHx	BDO-2227		113	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:07:31	J8780-FS	10	1	20		13C8-PFOS	BDO-2228		105	PCT_REC				SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	MS	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:18:23	J8781MS-F	10	1	23.94		Perfluoroh	307-24-4		117	PCT_REC				TRG	LSA	135	45	20171116		0.43	0.43	5.1			1.29		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	MS	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:18:23	J8781MS-F	10	1	23.94		Perfluoroh	375-85-9		101	PCT_REC				TRG	LSA	128	60	20171116		0.57	0.57	5.1			1.29		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	MS	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:18:23	J8781MS-F	10	1	23.94		Perfluoroo	335-67-1		107	PCT_REC				TRG	LSA	136	56	20171116		0.65	0.65	5.1			1.29		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	MS	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:18:23	J8781MS-F	10	1	23.94		Perfluoron	375-95-1		115	PCT_REC				TRG	LSA	130	54	20171116		0.55	0.55	5.1			1.29		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	MS	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:18:23	J8781MS-F	10	1	23.94		Perfluorod	335-76-2		99	PCT_REC				TRG	LSA	141	55	20171116		0.35	0.35	5.1			1.29		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	MS	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:18:23	J8781MS-F	10	1	23.94		Perfluorou	2058-94-8		108	PCT_REC				TRG	LSA	137	57	20171116		0.53	0.53	5.1			1.29		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	MS	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:18:23	J8781MS-F	10	1	23.94		Perfluorod	307-55-1		104	PCT_REC				TRG	LSA	134	62	20171116		0.31	0.31	5.1			0.65		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	MS	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:18:23	J8781MS-F	10	1	23.94		Perfluorot	72629-94-8		100	PCT_REC				TRG	LSA	127	51	20171116		0.36	0.36	5.1			1.29		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	MS	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:18:23	J8781MS-F	10	1	23.94		Perfluorot	376-06-7		101	PCT_REC				TRG	LSA	162	34	20171116		0.81	0.81	5.1			2.58		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	MS	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:18:23	J8781MS-F	10	1	23.94		N-Methyl	F2355-31-9		120	PCT_REC				TRG	LSA	146	52	20171116		1.46	1.46	5.1			3.27		6.54	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	MS	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:18:23	J8781MS-F	10	1	23.94		N-Ethyl Pe	r2991-50-6		112	PCT_REC				TRG	LSA	124	54	20171116		0.74	0.74	5.1			2.58		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	MS	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:18:23	J8781MS-F	10	1	23.94		Perfluorob	375-73-5		104	PCT_REC				TRG	LSA	145	57	20171116		0.46	0.46	5.1			1.29		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	MS	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:18:23	J8781MS-F	10	1	23.94		Perfluoroh	355-46-4		117	PCT_REC				TRG	LSA	132	52	20171116		0.28	0.28	5.1			0.65		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	MS	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:18:23	J8781MS-F	10	1	23.94		Perfluoroo	1763-23-1		96	PCT_REC				TRG	LSA	130	50	20171116		0.35	0.35	5.1			1.29		6.45	18-0621	DP-18-0319			
N6247016I	4164		POINT_MU	VC-PM553	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	MS	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:18:23	J8781MS-F	10	1

Contract_I	DO_CTO_N	Phase	Installatior	Sample_Ni	CH2M_Cor	Analysis_G	Analytical_	PRC_Code	Lab_Code	Lab_Name	Leachate_I	SAMPLE_B	Extraction	Result_Typ	Lab_QC_ty	SAMPLE_N	QC_Level	DateTime_	Date_Rece	Leachate_I	Leachate_	Extraction	Extraction	Analysis_D	Analysis_T	Lab_Sampl	Dilution	Run_Numt	PERCENT_I	PERCENT_I	Chem_Nan	Analyte_ID	Analyte_Vi	Original_A	Result_Uni	Lab_Qualif	Validator_I	GC_Colum	Analysis_R	Result_Nat	QC_Contrc	QC_Accura	QC_Accura	Control_Lir	QC_Narrat	MDL	Detection_Q	SM_Vers	DL	LOD	LOQ	SDG	Analysis_B	Validator_I	Val_Date
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:40:07	J8783-FS	10	1	21.69	13C8-PFO	A BDO-2219		132	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:40:07	J8783-FS	10	1	21.69	13C9-PFN	A BDO-2221		112	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:40:07	J8783-FS	10	1	21.69	13C6-PFD	A BDO-2222		119	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:40:07	J8783-FS	10	1	21.69	13C7-PFU	nBDO-2223		124	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:40:07	J8783-FS	10	1	21.69	13C2-PFD	oBDO-2112		127	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:40:07	J8783-FS	10	1	21.69	13C2-PFT	e BDO-2224		148	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:40:07	J8783-FS	10	1	21.69	d3-MeFOS	BDO-1838		119	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:40:07	J8783-FS	10	1	21.69	d5-EtFOS	A BDO-1839		132	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:40:07	J8783-FS	10	1	21.69	13C3-PFB	S BDO-2226		137	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:40:07	J8783-FS	10	1	21.69	13C3-PFH	x BDO-2227		135	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:40:07	J8783-FS	10	1	21.69	13C8-PFO	S BDO-2228		126	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	Perfluoro	h 307-24-4		1.28	NG_G	U		TRG				20171116	0.42	0.42	5.1	70	1.28	6.41	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	Perfluoro	h 375-85-9		1.28	NG_G	U		TRG				20171116	0.56	0.56	5.1	70	1.28	6.41	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	Perfluoro	oo 335-67-1		1.28	NG_G	U		TRG				20171116	0.64	0.64	5.1	70	1.28	6.41	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	Perfluoro	n 375-95-1		1.28	NG_G	U		TRG				20171116	0.55	0.55	5.1	70	1.28	6.41	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	Perfluoro	d 335-76-2		1.28	NG_G	U		TRG				20171116	0.35	0.35	5.1	70	1.28	6.41	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	Perfluoro	u 2058-94-8		1.28	NG_G	U		TRG				20171116	0.53	0.53	5.1	70	1.28	6.41	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	Perfluoro	d 307-55-1		0.64	NG_G	U		TRG				20171116	0.31	0.31	5.1	70	0.64	6.41	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	Perfluoro	t 72629-94-8		1.28	NG_G	U		TRG				20171116	0.36	0.36	5.1	70	1.28	6.41	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	Perfluoro	t 376-06-7		2.56	NG_G	U		TRG				20171116	0.81	0.81	5.1	70	2.56	6.41	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	N-Methyl	FOSS-31-9		3.21	NG_G	U		TRG				20171116	1.44	1.44	5.1	70	3.21	6.41	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	N-Ethyl P	er2991-50-6		2.56	NG_G	U		TRG				20171116	0.73	0.73	5.1	70	2.56	6.41	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	Perfluoro	b 375-73-5		1.28	NG_G	U		TRG				20171116	0.46	0.46	5.1	70	1.28	6.41	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	Perfluoro	h 355-46-4		0.64	NG_G	U		TRG				20171116	0.28	0.28	5.1	70	0.64	6.41	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	Perfluoro	o 1763-23-1		2.22	NG_G	J		TRG				20171116	0.35	0.35	5.1	70	1.28	6.41	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	13C5-PFH	x BDO-2217		120	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	13C4-PFH	p BDO-2218		124	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	13C8-PFO	A BDO-2219		121	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	13C9-PFN	A BDO-2221		110	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	13C6-PFD	A BDO-2222		111	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	13C7-PFU	nBDO-2223		124	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	13C2-PFD	oBDO-2112		126	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	13C2-PFT	e BDO-2224		136	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	d3-MeFOS	BDO-1838		132	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	d5-EtFOS	A BDO-1839		128	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	13C3-PFB	S BDO-2226		149	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	13C3-PFH	x BDO-2227		128	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM300	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	21:50:59	J8784-FS	10	1	21	13C8-PFO	S BDO-2228		132	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	Perfluoro	h 307-24-4		1.35	NG_G	U		TRG				20171116	0.45	0.45	5.1	70	1.35	6.76	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	Perfluoro	h 375-85-9		1.35	NG_G	U		TRG				20171116	0.59	0.59	5.1	70	1.35	6.76	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	Perfluoro	oo 335-67-1		1.35	NG_G	U		TRG				20171116	0.68	0.68	5.1	70	1.35	6.76	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	Perfluoro	n 375-95-1		1.35	NG_G	U		TRG				20171116	0.58	0.58	5.1	70	1.35	6.76	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	Perfluoro	d 335-76-2		1.35	NG_G	U		TRG				20171116	0.36	0.36	5.1	70	1.35	6.76	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	Perfluoro	u 2058-94-8		1.35	NG_G	U		TRG				20171116	0.55	0.55	5.1	70	1.35	6.76	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	Perfluoro	d 307-55-1		0.68	NG_G	U		TRG				20171116	0.32	0.32	5.1	70	0.68	6.76	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	Perfluoro	t 72629-94-8		1.35	NG_G	U		TRG				20171116	0.38	0.38	5.1	70	1.35	6.76	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	Perfluoro	t 376-06-7		2.7	NG_G	U		TRG				20171116	0.85	0.85	5.1	70	2.7	6.76	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	N-Methyl	FOSS-31-9		3.38	NG_G	U		TRG				20171116	1.51	1.51	5.1	70	3.38	6.76	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	N-Ethyl P	er2991-50-6		2.7	NG_G	U		TRG				20171116	0.77	0.77	5.1	70	2.7	6.76	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	Perfluoro	b 375-73-5		1.35	NG_G	U		TRG				20171116	0.49	0.49	5.1	70	1.35	6.76	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	Perfluoro	h 355-46-4		0.68	NG_G	U		TRG				20171116	0.3	0.3	5.1	70	0.68	6.76	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	Perfluoro	o 1763-23-1		6.17	NG_G	J		TRG				20171116	0.36	0.36	5.1	70	1.35	6.76	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	13C5-PFH	x BDO-2217		101	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	13C4-PFH	p BDO-2218		107	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	13C8-PFO	A BDO-2219		102	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	13C9-PFN	A BDO-2221		91	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	13C6-PFD	A BDO-2222		97	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	13C7-PFU	nBDO-2223		115	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	13C2-PFD	oBDO-2112		123	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	13C2-PFT	e BDO-2224		123	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	d3-MeFOS	BDO-1838		102	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012			20181018	15:30:00	20181024	22:23:33	J8785-FS	10	1	25.16	d5-EtFOS	A BDO-1839		114	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-PM372	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181008	20181012		

Contract_I	DO_CTO_N	Phase	Installatior	Sample_Ni	CH2M_Cor	Analysis_G	Analytical_	PRC_Code	Lab_Code	Lab_Name	Leachate_I	SAMPLE_B	Extraction_	Result_Typ	Lab_QC_ty	SAMPLE_N	QC_Level	DateTime_	Date_Rece	Leachate_I	Leachate_	Extraction_	Extraction_	Analysis_D	Analysis_T	Lab_Sampl	Dilution	Run_Numt	PERCENT_I	PERCENT_I	Chem_Nan	Analyte_ID	Analyte_Vi	Original_A	Result_Uni	Lab_Qualif	Validator_	GC_Colum	Analysis_R	Result_Nar	QC_Contrc	QC_Accura	QC_Accura	Control_Lir	QC_Narrat	MDL	Detection_Q	SM_Vers	DL	LOD	LOQ	SDG	Analysis_B	Validator_	Val_Date
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:45:17	J8787-FS	10	1	62.85		13C3-PFBS	BDO-2226		113	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:45:17	J8787-FS	10	1	62.85		13C3-PFHx	BDO-2227		94	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:45:17	J8787-FS	10	1	62.85		13C8-PFOS	BDO-2228		106	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		Perfluoroh	307-24-4		2.04	NG_G	U		TRG				20171116		0.67	0.67	5.1	70	2.04	10.2	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		Perfluoroh	375-85-9		2.04	NG_G	U		TRG				20171116		0.9	0.9	5.1	70	2.04	10.2	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		Perfluoroo	335-67-1		2.04	NG_G	U		TRG				20171116		1.02	1.02	5.1	70	2.04	10.2	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		Perfluoro	375-95-1		2.04	NG_G	U		TRG				20171116		0.88	0.88	5.1	70	2.04	10.2	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		Perfluoro	d 335-76-2		2.04	NG_G	U		TRG				20171116		0.55	0.55	5.1	70	2.04	10.2	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		Perfluorou	2058-94-8		2.04	NG_G	U		TRG				20171116		0.84	0.84	5.1	70	2.04	10.2	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		Perfluorod	307-55-1		1.02	NG_G	U		TRG				20171116		0.49	0.49	5.1	70	1.02	10.2	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		Perfluorot	72629-94-8		2.04	NG_G	U		TRG				20171116		0.57	0.57	5.1	70	2.04	10.2	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		Perfluorot	376-06-7		4.08	NG_G	U		TRG				20171116		1.29	1.29	5.1	70	4.08	10.2	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		N-Methyl	FZ355-31-9		5.1	NG_G	U		TRG				20171116		2.29	2.29	5.1	70	5.1	10.2	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		N-Ethyl Pe	r2991-50-6		4.08	NG_G	U		TRG				20171116		1.16	1.16	5.1	70	4.08	10.2	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		Perfluorob	375-73-5		2.04	NG_G	U		TRG				20171116		0.73	0.73	5.1	70	2.04	10.2	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		Perfluoroh	355-46-4		0.67	NG_G	J		TRG				20171116		0.45	0.45	5.1	70	1.02	10.2	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		Perfluoroo	1763-23-1		3.89	NG_G	J		TRG				20171116		0.55	0.55	5.1	70	2.04	10.2	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		13C5-PFHx	BDO-2217		94	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		13C4-PFHp	BDO-2218		98	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		13C8-PFOA	BDO-2219		99	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		13C9-PFNA	BDO-2221		87	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		13C6-PFDA	BDO-2222		110	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		13C7-PFUn	BDO-2223		115	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		13C2-PFDo	BDO-2112		124	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		13C2-PFTe	BDO-2224		136	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		d3-MeFOS	BDO-1838		108	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		d5-EtFOSA	BDO-1839		112	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		13C3-PFBS	BDO-2226		117	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		13C3-PFHx	BDO-2227		108	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-CS11-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	22:56:09	J8788-FS	10	1	52		13C8-PFOS	BDO-2228		115	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		Perfluoroh	307-24-4		1.72	NG_G	U		TRG				20171116		0.57	0.57	5.1	70	1.72	8.62	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		Perfluoroh	375-85-9		1.72	NG_G	U		TRG				20171116		0.76	0.76	5.1	70	1.72	8.62	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		Perfluoroo	335-67-1		1.72	NG_G	U		TRG				20171116		0.86	0.86	5.1	70	1.72	8.62	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		Perfluoro	375-95-1		1.72	NG_G	U		TRG				20171116		0.74	0.74	5.1	70	1.72	8.62	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		Perfluorod	335-76-2		1.72	NG_G	U		TRG				20171116		0.47	0.47	5.1	70	1.72	8.62	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		Perfluorou	2058-94-8		1.72	NG_G	U		TRG				20171116		0.71	0.71	5.1	70	1.72	8.62	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		Perfluorod	307-55-1		0.86	NG_G	U		TRG				20171116		0.41	0.41	5.1	70	0.86	8.62	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		Perfluorot	72629-94-8		1.72	NG_G	U		TRG				20171116		0.48	0.48	5.1	70	1.72	8.62	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		Perfluorot	376-06-7		3.45	NG_G	U		TRG				20171116		1.09	1.09	5.1	70	3.45	8.62	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		N-Methyl	FZ355-31-9		4.31	NG_G	U		TRG				20171116		1.93	1.93	5.1	70	4.31	8.62	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		N-Ethyl Pe	r2991-50-6		1.58	NG_G	J		TRG				20171116		0.98	0.98	5.1	70	3.45	8.62	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		Perfluorob	375-73-5		1.72	NG_G	U		TRG				20171116		0.62	0.62	5.1	70	1.72	8.62	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		Perfluoroh	355-46-4		0.86	NG_G	U		TRG				20171116		0.38	0.38	5.1	70	0.86	8.62	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		Perfluoroo	1763-23-1		16.53	NG_G	J		TRG				20171116		0.47	0.47	5.1	70	1.72	8.62	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		13C5-PFHx	BDO-2217		106	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		13C4-PFHp	BDO-2218		106	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		13C8-PFOA	BDO-2219		106	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		13C9-PFNA	BDO-2221		99	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		13C6-PFDA	BDO-2222		110	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		13C7-PFUn	BDO-2223		133	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		13C2-PFDo	BDO-2112		131	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		13C2-PFTe	BDO-2224		141	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		d3-MeFOS	BDO-1838		132	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		d5-EtFOSA	BDO-1839		128	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		13C3-PFBS	BDO-2226		129	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		13C3-PFHx	BDO-2227		138	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:07:00	J8809-FS	10	1	41.7		13C8-PFOS	BDO-2228		122	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:17:52	J8810-FS	10	1	36.2		Perfluoroh	307-24-4		0.79	NG_G	J		TRG				20171116		0.52	0.52	5.1	70	1.59	7.94	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:17:52	J8810-FS	10	1	36.2		Perfluoroh	375-85-9		1.59	NG_G	U		TRG				20171116		0.7	0.7	5.1	70	1.59	7.94	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:17:52	J8810-FS	10	1	36.2		Perfluoroo	335-67-1		1.04	NG_G	J		TRG				20171116		0.79	0.79	5.1	70	1.59	7.94	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:17:52	J8810-FS	10	1	36.2		Perfluoro	375-95-1		1.59	NG_G	U		TRG				20171116		0.68	0.68	5.1	70	1.59	7.94	18-0621	DP-18-0319		
N6247016I	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:17:52	J8810-FS	10	1	36.2		Perflu

Contract_I	DO_CTO_N	Phase	Installatior	Sample_Nu	CH2M_Cor	Analysis_G	Analytical_	PRC_Code	Lab_Code	Lab_Name	Leachate_I	SAMPLE_B	Extraction_	Result_Typ	Lab_QC_ty	SAMPLE_N	QC_Level	DateTime_	Date_Rece	Leachate_I	Leachate_	Extraction_	Extraction_	Analysis_D	Analysis_T	Lab_Sampl	Dilution	Run_Numt	PERCENT_I	PERCENT_I	Chem_Nan	Analyte_ID	Analyte_Vi	Original_A	Result_Uni	Lab_Qualif	Validator_	QC_Colum	Analysis_R	Result_Nar	QC_Contrc	QC_Accura	QC_Accura	Control_Lir	QC_Narrat	MDL	Detection_Q	SM_Vers	DL	LOD	LOQ	SDG	Analysis_B	Validator_	Val_Date
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		Perfluorou	2058-94-8		1.43	NG_G	U			TRG					20171116		0.59	0.59	5.1	70	1.43	7.14	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		Perfluorod	307-55-1		0.71	NG_G	U			TRG					20171116		0.34	0.34	5.1	70	0.71	7.14	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		Perfluorot	r72629-94-8		1.43	NG_G	U			TRG					20171116		0.4	0.4	5.1	70	1.43	7.14	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		Perfluorot	376-06-7		2.86	NG_G	U			TRG					20171116		0.9	0.9	5.1	70	2.86	7.14	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		N-Methyl F	2355-31-9		3.57	NG_G	U			TRG					20171116		1.6	1.6	5.1	70	3.57	7.14	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		N-Ethyl Pe	r2991-50-6		0.94	NG_G	J			TRG					20171116		0.81	0.81	5.1	70	2.86	7.14	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		Perfluorob	375-73-5		1.43	NG_G	U			TRG					20171116		0.51	0.51	5.1	70	1.43	7.14	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		Perfluorob	355-46-4		1.38	NG_G	J			TRG					20171116		0.31	0.31	5.1	70	0.71	7.14	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		Perfluoroo	1763-23-1		15.33	NG_G				TRG					20171116		0.39	0.39	5.1	70	1.43	7.14	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		13C5-PFHx	BDO-2217		102	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		13C4-PFHp	BDO-2218		108	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		13C8-PFOA	BDO-2219		103	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		13C9-PFNA	BDO-2221		91	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		13C6-PFDA	BDO-2222		95	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		13C7-PFUn	BDO-2223		108	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		13C2-PFDo	BDO-2112		106	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		13C2-PFTe	BDO-2224		116	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		d3-MeFOS	BDO-1838		107	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		d5-EtFOSA	BDO-1839		112	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		13C3-PFBS	BDO-2226		112	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		13C3-PFHx	BDO-2227		106	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:39:36	J8812-FS	10	1	31.85		13C8-PFOS	BDO-2228		115	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		Perfluoroh	307-24-4		1.92	NG_G	U			TRG					20171116		0.63	0.63	5.1	70	1.92	9.62	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		Perfluoroh	375-85-9		1.92	NG_G	U			TRG					20171116		0.85	0.85	5.1	70	1.92	9.62	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		Perfluoroo	335-67-1		1.92	NG_G	U			TRG					20171116		0.96	0.96	5.1	70	1.92	9.62	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		Perfluoro	375-95-1		1.92	NG_G	U			TRG					20171116		0.83	0.83	5.1	70	1.92	9.62	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		Perfluorod	335-76-2		1.92	NG_G	U			TRG					20171116		0.52	0.52	5.1	70	1.92	9.62	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		Perfluorou	2058-94-8		1.92	NG_G	U			TRG					20171116		0.79	0.79	5.1	70	1.92	9.62	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		Perfluorod	307-55-1		0.96	NG_G	U			TRG					20171116		0.46	0.46	5.1	70	0.96	9.62	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		Perfluorot	r72629-94-8		1.92	NG_G	U			TRG					20171116		0.54	0.54	5.1	70	1.92	9.62	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		Perfluorot	376-06-7		3.85	NG_G	U			TRG					20171116		1.21	1.21	5.1	70	3.85	9.62	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		N-Methyl F	2355-31-9		4.81	NG_G	U			TRG					20171116		2.15	2.15	5.1	70	4.81	9.62	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		N-Ethyl Pe	r2991-50-6		3.85	NG_G	U			TRG					20171116		1.1	1.1	5.1	70	3.85	9.62	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		Perfluorob	375-73-5		1.92	NG_G	U			TRG					20171116		0.69	0.69	5.1	70	1.92	9.62	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		Perfluoroh	355-46-4		0.96	NG_G	U			TRG					20171116		0.42	0.42	5.1	70	0.96	9.62	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		Perfluoroo	1763-23-1		1.33	NG_G	J			TRG					20171116		0.52	0.52	5.1	70	1.92	9.62	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		13C5-PFHx	BDO-2217		99	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		13C4-PFHp	BDO-2218		107	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		13C8-PFOA	BDO-2219		112	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		13C9-PFNA	BDO-2221		92	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		13C6-PFDA	BDO-2222		101	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		13C7-PFUn	BDO-2223		111	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		13C2-PFDo	BDO-2112		115	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		13C2-PFTe	BDO-2224		114	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		d3-MeFOS	BDO-1838		98	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		d5-EtFOSA	BDO-1839		92	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		13C3-PFBS	BDO-2226		103	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		13C3-PFHx	BDO-2227		94	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181024	23:50:27	J8813-FS	10	1	47.84		13C8-PFOS	BDO-2228		88	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181025	00:01:19	J8814-FS	10	1	33.79		Perfluoroh	307-24-4		1.47	NG_G	U			TRG					20171116		0.49	0.49	5.1	70	1.47	7.35	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181025	00:01:19	J8814-FS	10	1	33.79		Perfluoroh	375-85-9		1.47	NG_G	U			TRG					20171116		0.65	0.65	5.1	70	1.47	7.35	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181025	00:01:19	J8814-FS	10	1	33.79		Perfluoroo	335-67-1		1.47	NG_G	U			TRG					20171116		0.74	0.74	5.1	70	1.47	7.35	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181025	00:01:19	J8814-FS	10	1	33.79		Perfluoro	375-95-1		1.47	NG_G	U			TRG					20171116		0.63	0.63	5.1	70	1.47	7.35	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181025	00:01:19	J8814-FS	10	1	33.79		Perfluorod	335-76-2		1.47	NG_G	U			TRG					20171116		0.4	0.4	5.1	70	1.47	7.35	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181025	00:01:19	J8814-FS	10	1	33.79		Perfluorou	2058-94-8		1.47	NG_G	U			TRG					20171116		0.6	0.6	5.1	70	1.47	7.35	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181025	00:01:19	J8814-FS	10	1	33.79		Perfluorod	307-55-1		0.74	NG_G	U			TRG					20171116		0.35	0.35	5.1	70	0.74	7.35	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181025	00:01:19	J8814-FS	10	1	33.79		Perfluorot	r72629-94-8		1.47	NG_G	U			TRG					20171116		0.41	0.41	5.1	70	1.47	7.35	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181025	00:01:19	J8814-FS	10	1	33.79		Perfluorot	376-06-7		2.94	NG_G	U			TRG					20171116		0.93	0.93	5.1	70	2.94	7.35	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181025	00:01:19	J8814-FS	10	1	33.79		N-Methyl F	2355-31-9		3.68	NG_G	U			TRG					20171116		1.65	1.65	5.1	70	3.68	7.35	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181025	00:01:19	J8814-FS	10	1	33.79		N-Ethyl Pe	r2991-50-6		2.94	NG_G	U			TRG					20171116		0.84	0.84	5.1	70	2.94	7.35	18-0621	DP-18-0319		
N6247016	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SD	4	20181009	20181012			20181018	15:30:00	20181025	00:01:19	J8814-FS	10	1	33.79		Perfluorob	375-73-5		1.47	NG_G	U			TRG					20171116		0.53	0.53	5.1	70	1.47	7.35	18-0621	DP-18-0319		
N6247016

Contract_I	DO_CTO_N	Phase	Installatior	Sample_Nu	CH2M_Coc	Analysis_G	Analytical_	PRC_Code	Lab_Code	Lab_Name	Leachate_I	SAMPLE_B	Extraction_	Result_Typ	Lab_QC_ty	SAMPLE_N	QC_Level	DateTime_	Date_Rece	Leachate_I	Leachate_	Extraction_	Extraction_	Analysis_D	Analysis_T	Lab_Sampl	Dilution	Run_Numt	PERCENT_I	PERCENT_I	Chem_Nan	Analyte_ID	Analyte_Vi	Original_A	Result_Uni	Lab_Qualif	Validator_	GC_Colum	Analysis_R	Result_Nat	QC_Contrc	QC_Accura	QC_Accura	Control_Lir	QC_Narrat	MDL	Detection_	QSM_Vers	DL	LOD	LOQ	SDG	Analysis_B	Validator_	Val_Date
N6247016(	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD	000	REG	SD	4	20181009	20181012		20181018	15:30:00	20181025	00:44:50	J8816-FS		10	1	28.19		Perfluoroo	1763-23-1	11.69	NG_G		TRG					20171116		0.38	0.38	5.1	70	1.4	6.99	18-0621	DP-18-0319		
N6247016(	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD	000	REG	SD	4	20181009	20181012		20181018	15:30:00	20181025	00:44:50	J8816-FS		10	1	28.19		13C5-PFHx	BDO-2217	101	PCT_REC		SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016(	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD	000	REG	SD	4	20181009	20181012		20181018	15:30:00	20181025	00:44:50	J8816-FS		10	1	28.19		13C4-PFHp	BDO-2218	107	PCT_REC		SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016(	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD	000	REG	SD	4	20181009	20181012		20181018	15:30:00	20181025	00:44:50	J8816-FS		10	1	28.19		13C8-PFOA	BDO-2219	101	PCT_REC		SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016(	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD	000	REG	SD	4	20181009	20181012		20181018	15:30:00	20181025	00:44:50	J8816-FS		10	1	28.19		13C9-PFNA	BDO-2221	92	PCT_REC		SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016(	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD	000	REG	SD	4	20181009	20181012		20181018	15:30:00	20181025	00:44:50	J8816-FS		10	1	28.19		13C6-PFDA	BDO-2222	104	PCT_REC		SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016(	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD	000	REG	SD	4	20181009	20181012		20181018	15:30:00	20181025	00:44:50	J8816-FS		10	1	28.19		13C7-PFUn	BDO-2223	105	PCT_REC		SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016(	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD	000	REG	SD	4	20181009	20181012		20181018	15:30:00	20181025	00:44:50	J8816-FS		10	1	28.19		13C2-PFDo	BDO-2112	106	PCT_REC		SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016(	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD	000	REG	SD	4	20181009	20181012		20181018	15:30:00	20181025	00:44:50	J8816-FS		10	1	28.19		13C2-PFTe	BDO-2224	120	PCT_REC		SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016(	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD	000	REG	SD	4	20181009	20181012		20181018	15:30:00	20181025	00:44:50	J8816-FS		10	1	28.19		d3-MeFOS	BDO-1838	123	PCT_REC		SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016(	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD	000	REG	SD	4	20181009	20181012		20181018	15:30:00	20181025	00:44:50	J8816-FS		10	1	28.19		d5-EtFOSA	BDO-1839	118	PCT_REC		SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016(	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD	000	REG	SD	4	20181009	20181012		20181018	15:30:00	20181025	00:44:50	J8816-FS		10	1	28.19		13C3-PFBS	BDO-2226	140	PCT_REC		SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016(	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD	000	REG	SD	4	20181009	20181012		20181018	15:30:00	20181025	00:44:50	J8816-FS		10	1	28.19		13C3-PFHx	BDO-2227	117	PCT_REC		SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		
N6247016(	4164		POINT_MU	VC-STP-SD	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD	000	REG	SD	4	20181009	20181012		20181018	15:30:00	20181025	00:44:50	J8816-FS		10	1	28.19		13C8-PFOS	BDO-2228	119	PCT_REC		SURR	SLSP	150	50	20171116				5.1				18-0621	DP-18-0319		

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
NAVAL BASE VENTURA COUNTY, CALIFORNIA

Client: CH2M HILL, Inc., Corvallis, Oregon
SDG: 18-0621
Laboratory: Battelle Norwell Operations, Norwell, Massachusetts
Site: Naval Base Ventura County, CTO-4164, California
Date: January 12, 2019

PFCs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	VC-PM323-324-SD01-000H	J8777-FS	Soil
2	VC-PM323-324-SD01-0102	J8778-FS	Soil
3	VC-PM553-SD01-000H	J8779-FS	Soil
4	VC-PM553-SD01-0102	J8780-FS	Soil
4MS	VC-PM553-SD01-0102MS	J8781-FSMS	Soil
4MSD	VC-PM553-SD01-0102MSD	J8782-FSMSD	Soil
5	VC-PM3009-SD01-000H	J8783-FS	Soil
6	VC-PM3009-SD01-0102	J8784-FS	Soil
7	VC-PM372-SD01-000H	J8785-FS	Soil
8	VC-PM372-SD01-0102	J8786-FS	Soil
9	VC-CS11-SD01-000H	J8787-FS	Soil
10	VC-CS11-SD01-0102	J8788-FS	Soil
11	VC-STP-SD01-000H	J8809-FS	Soil
12	VC-STP-SD01-0102	J8810-FS	Soil
13	VC-STP-SD02-000H	J8811-FS	Soil
14	VC-STP-SD02-0102	J8812-FS	Soil
15	VC-STP-SD03-000H	J8813-FS	Soil
16	VC-STP-SD03-0102	J8814-FS	Soil
17	VC-STP-SD04-000H	J8815-FS	Soil
18	VC-STP-SD04-0102	J8816-FS	Soil

A full data validation was performed on the analytical data for eighteen soil samples collected on October 8-9, 2018 by CH2M HILL at the Naval Base Ventura County site in California. The samples were analyzed under the Battelle SOP Method for "Analysis of Perfluoroalkyl Substances in Environmental Samples by Liquid Chromatography and Tandem Mass Spectrometry (LC-MS/MS)".

Specific method references are as follows:

Analysis	*Method References*
PFCs	SOP 5-369

The data have been validated according to the protocols and quality control (QC) requirements of the analytical method, the DoD Quality Systems Manual for Environmental Laboratories, Version 5.1, February 2018, the Final Sampling and Analysis Plan Basewide Preliminary Assessments/Site

Inspections of Per- and Polyfluoroalkyl Substances, August 2018, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratories Program National Functional Guidelines for Organic Superfund Methods Data Review," January 2017;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Organics

- Date Completeness, Case Narrative & Custody Documentation
- Holding times
- Liquid Chromatography/Mass Spectrometry (LC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Field Duplicate sample precision

A full (Level IV) data validation was performed with this review including a recalculation of 10% of the detected results in the samples.

Data Usability Assessment

There were no rejections of data.

Overall the data is acceptable for the intended purposes. There were no qualifications.

Perfluorinated Compounds (PFCs)

Data Completeness, Case Narrative & Custody Documentation

- The case narrative and chain-of-custody documentation were included in the data package as required. All criteria were met.

Holding Times

- All samples were extracted within 28 days for soil samples and analyzed within 30 days.

LC/MS Tuning

- All criteria were met.

Initial Calibration

- All relative standard deviation (%RSD) and/or correlation coefficients criteria were met.

Continuing Calibration

- All percent recovery (%R) criteria were met.

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- Field QC samples were free of contamination.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
VC-SD-FB12-10092018	None - ND	-	-	-
VC-SD-EB12-10092018	None - ND	-	-	-
VC-SD-EB13-10092018	None - ND	-	-	-

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable percent recoveries (%R) and RPD values.

Laboratory Control Samples

- The LCS samples exhibited acceptable percent recoveries (%R).

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate samples were not collected.

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

Signed: Nancy Weaver Dated: 1/12/19

Nancy Weaver
Senior Chemist

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limits is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.

BATTELLE
It can be done

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM323-324-SD01-000H			
Battelle ID		J8777-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		27.15			
Matrix		SD			
Sample Size		1.52			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.32 U	0.43	1.32	6.58
PFHpA	375-85-9	1.32 U	0.58	1.32	6.58
PFOA	335-67-1	1.32 U	0.66	1.32	6.58
PFNA	375-95-1	1.32 U	0.57	1.32	6.58
PFDA	335-76-2	1.32 U	0.36	1.32	6.58
PFUnA	2058-94-8	1.32 U	0.54	1.32	6.58
PFDoA	307-55-1	0.66 U	0.32	0.66	6.58
PFTrDA	72629-94-8	1.32 U	0.37	1.32	6.58
PFTeDA	376-06-7	2.63 U	0.83	2.63	6.58
NMeFOSAA	2355-31-9	3.29 U	1.47	3.29	6.58
NEtFOSAA	2991-50-6	2.63 U	0.75	2.63	6.58
PFBS	375-73-5	1.32 U	0.47	1.32	6.58
PFHxS	355-46-4	0.32 J	0.29	0.66	6.58
PFOS	1763-23-1	7.63	0.36	1.32	6.58
Surrogate Recoveries (%)					
13C5-PFHxA		99			
13C4-PFHpA		109			
13C8-PFOA		109			
13C9-PFNA		94			
13C6-PFDA		113			
13C7-PFUnA		122			
13C2-PFDoA		123			
13C2-PFTeDA		138			
d3-MeFOSAA		97			
d5-EtFOSAA		108			
13C3-PFBS		121			
13C3-PFHxS		103			
13C8-PFOS		105			

NW 12/29/18

Analyzed by: Griffith, Lauren
Printed: 11/8/2018

2

BATTELLE
it can be done

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM323-324-SD01-0102			
Battelle ID		J8778-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		26.86			
Matrix		SD			
Sample Size		1.54			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.30 U	0.43	1.30	6.49
PFHpA	375-85-9	1.30 U	0.57	1.30	6.49
PFOA	335-67-1	1.30 U	0.65	1.30	6.49
PFNA	375-95-1	1.30 U	0.56	1.30	6.49
PFDA	335-76-2	1.30 U	0.35	1.30	6.49
PFUnA	2058-94-8	1.30 U	0.53	1.30	6.49
PFDoA	307-55-1	0.65 U	0.31	0.65	6.49
PFTrDA	72629-94-8	1.30 U	0.36	1.30	6.49
PFTeDA	376-06-7	2.60 U	0.82	2.60	6.49
NMeFOSAA	2355-31-9	3.25 U	1.45	3.25	6.49
NEtFOSAA	2991-50-6	2.60 U	0.74	2.60	6.49
PFBS	375-73-5	1.30 U	0.47	1.30	6.49
PFHxS	355-46-4	0.46 J	0.29	0.65	6.49
PFOS	1763-23-1	14.23	0.35	1.30	6.49
Surrogate Recoveries (%)					
13C5-PFHxA		104			
13C4-PFHpA		112			
13C8-PFOA		106			
13C9-PFNA		94			
13C6-PFDA		106			
13C7-PFUnA		116			
13C2-PFDoA		114			
13C2-PFTeDA		131			
d3-MeFOSAA		106			
d5-EtFOSAA		113			
13C3-PFBS		126			
13C3-PFHxS		95			
13C8-PFOS		113			

NW 12/29/18

3

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Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM553-SD01-000H			
Battelle ID		J8779-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		26.97			
Matrix		SD			
Sample Size		1.53			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.31 U	0.43	1.31	6.54
PFHpA	375-85-9	1.31 U	0.58	1.31	6.54
PFOA	335-67-1	1.31 U	0.65	1.31	6.54
PFNA	375-95-1	1.31 U	0.56	1.31	6.54
PFDA	335-76-2	1.31 U	0.35	1.31	6.54
PFUnA	2058-94-8	1.31 U	0.54	1.31	6.54
PFDoA	307-55-1	0.65 U	0.31	0.65	6.54
PFTrDA	72629-94-8	1.31 U	0.37	1.31	6.54
PFTeDA	376-06-7	2.61 U	0.82	2.61	6.54
NMeFOSAA	2355-31-9	3.27 U	1.46	3.27	6.54
NEtFOSAA	2991-50-6	2.61 U	0.75	2.61	6.54
PFBS	375-73-5	1.31 U	0.47	1.31	6.54
PFHxS	355-46-4	0.65 U	0.29	0.65	6.54
PFOS	1763-23-1	3.55 J	0.35	1.31	6.54

Surrogate Recoveries (%)

13C5-PFHxA	110
13C4-PFHpA	114
13C8-PFOA	117
13C9-PFNA	101
13C6-PFDA	115
13C7-PFUnA	113
13C2-PFDoA	124
13C2-PFTeDA	132
d3-MeFOSAA	99
d5-EtFOSAA	106
13C3-PFBS	129
13C3-PFHxS	127
13C8-PFOS	112

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4

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Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM553-SD01-0102			
Battelle ID		J8780-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		20.00			
Matrix		SD			
Sample Size		1.55			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.29 U	0.43	1.29	6.45
PFHpA	375-85-9	1.29 U	0.57	1.29	6.45
PFOA	335-67-1	1.29 U	0.65	1.29	6.45
PFNA	375-95-1	1.29 U	0.55	1.29	6.45
PFDA	335-76-2	1.29 U	0.35	1.29	6.45
PFUnA	2058-94-8	1.29 U	0.53	1.29	6.45
PFDoA	307-55-1	0.65 U	0.31	0.65	6.45
PFTrDA	72629-94-8	1.29 U	0.36	1.29	6.45
PFTeDA	376-06-7	2.58 U	0.81	2.58	6.45
NMeFOSAA	2355-31-9	3.23 U	1.45	3.23	6.45
NEtFOSAA	2991-50-6	2.58 U	0.74	2.58	6.45
PFBS	375-73-5	1.29 U	0.46	1.29	6.45
PFHxS	355-46-4	0.65 U	0.28	0.65	6.45
PFOS	1763-23-1	0.84 J	0.35	1.29	6.45

Surrogate Recoveries (%)

13C5-PFHxA	104
13C4-PFHpA	107
13C8-PFOA	114
13C9-PFNA	100
13C6-PFDA	119
13C7-PFUnA	121
13C2-PFDoA	127
13C2-PFTeDA	144
d3-MeFOSAA	106
d5-EtFOSAA	93
13C3-PFBS	117
13C3-PFHxS	113
13C8-PFOS	105

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5

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM3009-SD01-000H			
Battelle ID		J8783-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		21.69			
Matrix		SD			
Sample Size		1.61			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.24 U	0.41	1.24	6.21
PFHpA	375-85-9	1.24 U	0.55	1.24	6.21
PFOA	335-67-1	1.24 U	0.62	1.24	6.21
PFNA	375-95-1	1.24 U	0.53	1.24	6.21
PFDA	335-76-2	1.24 U	0.34	1.24	6.21
PFUnA	2058-94-8	1.24 U	0.51	1.24	6.21
PFDoA	307-55-1	0.91 J	0.30	0.62	6.21
PFTrDA	72629-94-8	1.24 U	0.35	1.24	6.21
PFTeDA	376-06-7	2.48 U	0.78	2.48	6.21
NMeFOSAA	2355-31-9	3.11 U	1.39	3.11	6.21
NEtFOSAA	2991-50-6	2.48 U	0.71	2.48	6.21
PFBS	375-73-5	1.24 U	0.45	1.24	6.21
PFHxS	355-46-4	0.62 U	0.27	0.62	6.21
PFOS	1763-23-1	2.81 J	0.34	1.24	6.21

Surrogate Recoveries (%)

13C5-PFHxA	120
13C4-PFHpA	133
13C8-PFOA	132
13C9-PFNA	112
13C6-PFDA	119
13C7-PFUnA	124
13C2-PFDoA	127
13C2-PFTeDA	148
d3-MeFOSAA	119
d5-EtFOSAA	132
13C3-PFBS	137
13C3-PFHxS	135
13C8-PFOS	126

12/29/18
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6

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM3009-SD01-0102			
Battelle ID		J8784-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		21.00			
Matrix		SD			
Sample Size		1.56			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.28 U	0.42	1.28	6.41
PFHpA	375-85-9	1.28 U	0.56	1.28	6.41
PFOA	335-67-1	1.28 U	0.64	1.28	6.41
PFNA	375-95-1	1.28 U	0.55	1.28	6.41
PFDA	335-76-2	1.28 U	0.35	1.28	6.41
PFUnA	2058-94-8	1.28 U	0.53	1.28	6.41
PFDoA	307-55-1	0.64 U	0.31	0.64	6.41
PFTrDA	72629-94-8	1.28 U	0.36	1.28	6.41
PFTeDA	376-06-7	2.56 U	0.81	2.56	6.41
NMeFOSAA	2355-31-9	3.21 U	1.44	3.21	6.41
NEtFOSAA	2991-50-6	2.56 U	0.73	2.56	6.41
PFBS	375-73-5	1.28 U	0.46	1.28	6.41
PFHxS	355-46-4	0.64 U	0.28	0.64	6.41
PFOS	1763-23-1	2.22 J	0.35	1.28	6.41

Surrogate Recoveries (%)

13C5-PFHxA	120
13C4-PFHpA	124
13C8-PFOA	121
13C9-PFNA	110
13C6-PFDA	111
13C7-PFUnA	124
13C2-PFDoA	126
13C2-PFTeDA	136
d3-MeFOSAA	132
d5-EtFOSAA	128
13C3-PFBS	149
13C3-PFHxS	128
13C8-PFOS	132

NW 12/29/18

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7

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM372-SD01-000H			
Battelle ID		J8785-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		25.16			
Matrix		SD			
Sample Size		1.48			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.35 U	0.45	1.35	6.76
PFHpA	375-85-9	1.35 U	0.59	1.35	6.76
PFOA	335-67-1	1.35 U	0.68	1.35	6.76
PFNA	375-95-1	1.35 U	0.58	1.35	6.76
PFDA	335-76-2	1.35 U	0.36	1.35	6.76
PFUnA	2058-94-8	1.35 U	0.55	1.35	6.76
PFDoA	307-55-1	0.68 U	0.32	0.68	6.76
PFTrDA	72629-94-8	1.35 U	0.38	1.35	6.76
PFTeDA	376-06-7	2.70 U	0.85	2.70	6.76
NMeFOSAA	2355-31-9	3.38 U	1.51	3.38	6.76
NEtFOSAA	2991-50-6	2.70 U	0.77	2.70	6.76
PFBS	375-73-5	1.35 U	0.49	1.35	6.76
PFHxS	355-46-4	0.68 U	0.30	0.68	6.76
PFOS	1763-23-1	6.17 J	0.36	1.35	6.76

Surrogate Recoveries (%)

13C5-PFHxA	101
13C4-PFHpA	107
13C8-PFOA	102
13C9-PFNA	91
13C6-PFDA	97
13C7-PFUnA	115
13C2-PFDoA	123
13C2-PFTeDA	123
d3-MeFOSAA	102
d5-EtFOSAA	114
13C3-PFBS	116
13C3-PFHxS	112
13C8-PFOS	94

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8

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-PM372-SD01-0102			
Battelle ID		J8786-FS			
Sample Type		SA			
Collection Date		10/08/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		20.23			
Matrix		SD			
Sample Size		1.64			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.22 U	0.40	1.22	6.10
PFHpA	375-85-9	1.22 U	0.54	1.22	6.10
PFOA	335-67-1	1.22 U	0.61	1.22	6.10
PFNA	375-95-1	1.22 U	0.52	1.22	6.10
PFDA	335-76-2	1.22 U	0.33	1.22	6.10
PFUnA	2058-94-8	1.22 U	0.50	1.22	6.10
PFDoA	307-55-1	0.61 U	0.29	0.61	6.10
PFTrDA	72629-94-8	1.22 U	0.34	1.22	6.10
PFTeDA	376-06-7	2.44 U	0.77	2.44	6.10
NMeFOSAA	2355-31-9	3.05 U	1.37	3.05	6.10
NEtFOSAA	2991-50-6	2.44 U	0.70	2.44	6.10
PFBS	375-73-5	1.22 U	0.44	1.22	6.10
PFHxS	355-46-4	0.61 U	0.27	0.61	6.10
PFOS	1763-23-1	2.10 J	0.33	1.22	6.10
Surrogate Recoveries (%)					
13C5-PFHxA		101			
13C4-PFHpA		108			
13C8-PFOA		100			
13C9-PFNA		99			
13C6-PFDA		116			
13C7-PFUnA		121			
13C2-PFDoA		130			
13C2-PFTeDA		139			
d3-MeFOSAA		115			
d5-EtFOSAA		125			
13C3-PFBS		133			
13C3-PFHxS		122			
13C8-PFOS		124			

11/29/18
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9

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-CS11-SD01-000H			
Battelle ID		J8787-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		62.85			
Matrix		SD			
Sample Size		0.74			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	2.70 U	0.89	2.70	13.51
PFHpA	375-85-9	2.70 U	1.19	2.70	13.51
PFOA	335-67-1	2.70 U	1.35	2.70	13.51
PFNA	375-95-1	2.70 U	1.16	2.70	13.51
PFDA	335-76-2	2.70 U	0.73	2.70	13.51
PFUnA	2058-94-8	2.70 U	1.11	2.70	13.51
PFDoA	307-55-1	1.35 U	0.65	1.35	13.51
PFTrDA	72629-94-8	2.70 U	0.76	2.70	13.51
PFTeDA	376-06-7	5.41 U	1.70	5.41	13.51
NMeFOSAA	2355-31-9	6.76 U	3.03	6.76	13.51
NEtFOSAA	2991-50-6	5.41 U	1.54	5.41	13.51
PFBS	375-73-5	2.70 U	0.97	2.70	13.51
PFHxS	355-46-4	1.35 U	0.59	1.35	13.51
PFOS	1763-23-1	31.06	0.73	2.70	13.51
Surrogate Recoveries (%)					
13C5-PFHxA		93			
13C4-PFHpA		90			
13C8-PFOA		94			
13C9-PFNA		83			
13C6-PFDA		99			
13C7-PFUnA		103			
13C2-PFDoA		103			
13C2-PFTeDA		115			
d3-MeFOSAA		98			
d5-EtFOSAA		98			
13C3-PFBS		113			
13C3-PFHxS		94			
13C8-PFOS		106			

12/29/18

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10

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-CS11-SD01-0102			
Battelle ID		J8788-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		52.00			
Matrix		SD			
Sample Size		0.98			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	2.04 U	0.67	2.04	10.20
PFHpA	375-85-9	2.04 U	0.90	2.04	10.20
PFOA	335-67-1	2.04 U	1.02	2.04	10.20
PFNA	375-95-1	2.04 U	0.88	2.04	10.20
PFDA	335-76-2	2.04 U	0.55	2.04	10.20
PFUnA	2058-94-8	2.04 U	0.84	2.04	10.20
PFDoA	307-55-1	1.02 U	0.49	1.02	10.20
PFTrDA	72629-94-8	2.04 U	0.57	2.04	10.20
PFTeDA	376-06-7	4.08 U	1.29	4.08	10.20
NMeFOSAA	2355-31-9	5.10 U	2.29	5.10	10.20
NEtFOSAA	2991-50-6	4.08 U	1.16	4.08	10.20
PFBS	375-73-5	2.04 U	0.73	2.04	10.20
PFHxS	355-46-4	0.67 J	0.45	1.02	10.20
PFOS	1763-23-1	3.89 J	0.55	2.04	10.20

Surrogate Recoveries (%)

13C5-PFHxA	94
13C4-PFHpA	98
13C8-PFOA	99
13C9-PFNA	87
13C6-PFDA	110
13C7-PFUnA	115
13C2-PFDoA	124
13C2-PFTeDA	136
d3-MeFOSAA	108
d5-EtFOSAA	112
13C3-PFBS	117
13C3-PFHxS	108
13C8-PFOS	115

MW 12/29/18

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11

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD01-000H			
Battelle ID		J8809-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		41.70			
Matrix		SD			
Sample Size		1.16			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.72 U	0.57	1.72	8.62
PFHpA	375-85-9	1.72 U	0.76	1.72	8.62
PFOA	335-67-1	1.72 U	0.86	1.72	8.62
PFNA	375-95-1	1.72 U	0.74	1.72	8.62
PFDA	335-76-2	1.72 U	0.47	1.72	8.62
PFUnA	2058-94-8	1.72 U	0.71	1.72	8.62
PFDoA	307-55-1	0.86 U	0.41	0.86	8.62
PFTrDA	72629-94-8	1.72 U	0.48	1.72	8.62
PFTeDA	376-06-7	3.45 U	1.09	3.45	8.62
NMeFOSAA	2355-31-9	4.31 U	1.93	4.31	8.62
NEtFOSAA	2991-50-6	1.58 J	0.98	3.45	8.62
PFBS	375-73-5	1.72 U	0.62	1.72	8.62
PFHxS	355-46-4	0.86 U	0.38	0.86	8.62
PFOS	1763-23-1	16.53	0.47	1.72	8.62
Surrogate Recoveries (%)					
13C5-PFHxA		106			
13C4-PFHpA		106			
13C8-PFOA		106			
13C9-PFNA		99			
13C6-PFDA		110			
13C7-PFUnA		133			
13C2-PFDoA		131			
13C2-PFTeDA		141			
d3-MeFOSAA		132			
d5-EtFOSAA		128			
13C3-PFBS		129			
13C3-PFHxS		138			
13C8-PFOS		122			

11/29/18

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12

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD01-0102			
Battelle ID		J8810-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		36.20			
Matrix		SD			
Sample Size		1.26			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	0.79 J	0.52	1.59	7.94
PFHpA	375-85-9	1.59 U	0.70	1.59	7.94
PFOA	335-67-1	1.04 J	0.79	1.59	7.94
PFNA	375-95-1	1.59 U	0.68	1.59	7.94
PFDA	335-76-2	1.59 U	0.43	1.59	7.94
PFUnA	2058-94-8	1.59 U	0.65	1.59	7.94
PFDoA	307-55-1	0.79 U	0.38	0.79	7.94
PFTrDA	72629-94-8	1.59 U	0.44	1.59	7.94
PFTeDA	376-06-7	3.17 U	1.00	3.17	7.94
NMeFOSAA	2355-31-9	3.97 U	1.78	3.97	7.94
NEtFOSAA	2991-50-6	3.17 U	0.90	3.17	7.94
PFBS	375-73-5	1.59 U	0.57	1.59	7.94
PFHxS	355-46-4	3.18 J	0.35	0.79	7.94
PFOS	1763-23-1	6.86 J	0.43	1.59	7.94

Surrogate Recoveries (%)

13C5-PFHxA	106
13C4-PFHpA	110
13C8-PFOA	109
13C9-PFNA	95
13C6-PFDA	106
13C7-PFUnA	109
13C2-PFDoA	116
13C2-PFTeDA	126
d3-MeFOSAA	113
d5-EtFOSAA	104
13C3-PFBS	119
13C3-PFHxS	101
13C8-PFOS	113

NW 12/29/18

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13

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD02-000H			
Battelle ID		J8811-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		36.17			
Matrix		SD			
Sample Size		1.28			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.56 U	0.52	1.56	7.81
PFHpA	375-85-9	1.56 U	0.69	1.56	7.81
PFOA	335-67-1	1.56 U	0.78	1.56	7.81
PFNA	375-95-1	1.56 U	0.67	1.56	7.81
PFDA	335-76-2	1.56 U	0.42	1.56	7.81
PFUnA	2058-94-8	1.56 U	0.64	1.56	7.81
PFDoA	307-55-1	0.78 U	0.38	0.78	7.81
PFTrDA	72629-94-8	1.56 U	0.44	1.56	7.81
PFTeDA	376-06-7	3.13 U	0.98	3.13	7.81
NMeFOSAA	2355-31-9	3.91 U	1.75	3.91	7.81
NEtFOSAA	2991-50-6	3.13 U	0.89	3.13	7.81
PFBS	375-73-5	1.56 U	0.56	1.56	7.81
PFHxS	355-46-4	0.78 U	0.34	0.78	7.81
PFOS	1763-23-1	3.80 J	0.42	1.56	7.81
Surrogate Recoveries (%)					
13C5-PFHxA		89			
13C4-PFHpA		91			
13C8-PFOA		99			
13C9-PFNA		90			
13C6-PFDA		96			
13C7-PFUnA		114			
13C2-PFDoA		111			
13C2-PFTeDA		121			
d3-MeFOSAA		130			
d5-EtFOSAA		131			
13C3-PFBS		138			
13C3-PFHxS		126			
13C8-PFOS		109			

NW12/29/18

Analyzed by: Griffith, Lauren
Printed: 11/8/2018

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14

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD02-0102			
Battelle ID		J8812-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		31.85			
Matrix		SD			
Sample Size		1.40			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.43 U	0.47	1.43	7.14
PFHpA	375-85-9	1.43 U	0.63	1.43	7.14
PFOA	335-67-1	1.43 U	0.71	1.43	7.14
PFNA	375-95-1	1.43 U	0.61	1.43	7.14
PFDA	335-76-2	1.43 U	0.39	1.43	7.14
PFUnA	2058-94-8	1.43 U	0.59	1.43	7.14
PFDoA	307-55-1	0.71 U	0.34	0.71	7.14
PFTrDA	72629-94-8	1.43 U	0.40	1.43	7.14
PFTeDA	376-06-7	2.86 U	0.90	2.86	7.14
NMeFOSAA	2355-31-9	3.57 U	1.60	3.57	7.14
NEtFOSAA	2991-50-6	0.94 J	0.81	2.86	7.14
PFBS	375-73-5	1.43 U	0.51	1.43	7.14
PFHxS	355-46-4	1.38 J	0.31	0.71	7.14
PFOS	1763-23-1	15.33	0.39	1.43	7.14
Surrogate Recoveries (%)					
13C5-PFHxA		102			
13C4-PFHpA		108			
13C8-PFOA		103			
13C9-PFNA		91			
13C6-PFDA		95			
13C7-PFUnA		108			
13C2-PFDoA		106			
13C2-PFTeDA		116			
d3-MeFOSAA		107			
d5-EtFOSAA		112			
13C3-PFBS		112			
13C3-PFHxS		106			
13C8-PFOS		115			

MW12/29/18

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15

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD03-000H			
Battelle ID		J8813-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/24/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		47.84			
Matrix		SD			
Sample Size		1.04			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.92 U	0.63	1.92	9.62
PFHpA	375-85-9	1.92 U	0.85	1.92	9.62
PFOA	335-67-1	1.92 U	0.96	1.92	9.62
PFNA	375-95-1	1.92 U	0.83	1.92	9.62
PFDA	335-76-2	1.92 U	0.52	1.92	9.62
PFUnA	2058-94-8	1.92 U	0.79	1.92	9.62
PFDoA	307-55-1	0.96 U	0.46	0.96	9.62
PFTrDA	72629-94-8	1.92 U	0.54	1.92	9.62
PFTeDA	376-06-7	3.85 U	1.21	3.85	9.62
NMeFOSAA	2355-31-9	4.81 U	2.15	4.81	9.62
NEtFOSAA	2991-50-6	3.85 U	1.10	3.85	9.62
PFBS	375-73-5	1.92 U	0.69	1.92	9.62
PFHxS	355-46-4	0.96 U	0.42	0.96	9.62
PFOS	1763-23-1	1.33 J	0.52	1.92	9.62

Surrogate Recoveries (%)

13C5-PFHxA	99
13C4-PFHpA	107
13C8-PFOA	112
13C9-PFNA	92
13C6-PFDA	101
13C7-PFUnA	111
13C2-PFDoA	115
13C2-PFTeDA	114
d3-MeFOSAA	98
d5-EtFOSAA	92
13C3-PFBS	103
13C3-PFHxS	94
13C8-PFOS	88

AW 12/29/18

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16

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD03-0102			
Battelle ID		J8814-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/25/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		33.79			
Matrix		SD			
Sample Size		1.36			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.47 U	0.49	1.47	7.35
PFHpA	375-85-9	1.47 U	0.65	1.47	7.35
PFOA	335-67-1	1.47 U	0.74	1.47	7.35
PFNA	375-95-1	1.47 U	0.63	1.47	7.35
PFDA	335-76-2	1.47 U	0.40	1.47	7.35
PFUnA	2058-94-8	1.47 U	0.60	1.47	7.35
PFDoA	307-55-1	0.74 U	0.35	0.74	7.35
PFTrDA	72629-94-8	1.47 U	0.41	1.47	7.35
PFTeDA	376-06-7	2.94 U	0.93	2.94	7.35
NMeFOSAA	2355-31-9	3.68 U	1.65	3.68	7.35
NEtFOSAA	2991-50-6	2.94 U	0.84	2.94	7.35
PFBS	375-73-5	1.47 U	0.53	1.47	7.35
PFHxS	355-46-4	0.74 U	0.32	0.74	7.35
PFOS	1763-23-1	4.30 J	0.40	1.47	7.35
Surrogate Recoveries (%)					
13C5-PFHxA		92			
13C4-PFHpA		91			
13C8-PFOA		91			
13C9-PFNA		75			
13C6-PFDA		92			
13C7-PFUnA		105			
13C2-PFDoA		99			
13C2-PFTeDA		112			
d3-MeFOSAA		112			
d5-EtFOSAA		102			
13C3-PFBS		103			
13C3-PFHxS		98			
13C8-PFOS		93			

MW 12/29/18

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17

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD04-000H			
Battelle ID		J8815-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/25/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		35.90			
Matrix		SD			
Sample Size		1.33			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.50 U	0.50	1.50	7.52
PFHpA	375-85-9	1.50 U	0.66	1.50	7.52
PFOA	335-67-1	1.50 U	0.75	1.50	7.52
PFNA	375-95-1	1.50 U	0.65	1.50	7.52
PFDA	335-76-2	1.50 U	0.41	1.50	7.52
PFUnA	2058-94-8	1.50 U	0.62	1.50	7.52
PFDoA	307-55-1	0.75 U	0.36	0.75	7.52
PFTrDA	72629-94-8	1.50 U	0.42	1.50	7.52
PFTeDA	376-06-7	3.01 U	0.95	3.01	7.52
NMeFOSAA	2355-31-9	3.76 U	1.68	3.76	7.52
NEtFOSAA	2991-50-6	1.33 J	0.86	3.01	7.52
PFBS	375-73-5	1.50 U	0.54	1.50	7.52
PFHxS	355-46-4	0.53 J	0.33	0.75	7.52
PFOS	1763-23-1	9.01	0.41	1.50	7.52

Surrogate Recoveries (%)	
13C5-PFHxA	101
13C4-PFHpA	105
13C8-PFOA	105
13C9-PFNA	94
13C6-PFDA	113
13C7-PFUnA	123
13C2-PFDoA	115
13C2-PFTeDA	132
d3-MeFOSAA	119
d5-EtFOSAA	107
13C3-PFBS	122
13C3-PFHxS	121
13C8-PFOS	126

MW 12/29/18

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18

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01

Client ID		VC-STP-SD04-0102			
Battelle ID		J8816-FS			
Sample Type		SA			
Collection Date		10/09/2018			
Extraction Date		10/18/2018			
Analysis Date		10/25/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		28.19			
Matrix		SD			
Sample Size		1.43			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.40 U	0.46	1.40	6.99
PFHpA	375-85-9	1.40 U	0.62	1.40	6.99
PFOA	335-67-1	1.40 U	0.70	1.40	6.99
PFNA	375-95-1	1.40 U	0.60	1.40	6.99
PFDA	335-76-2	1.40 U	0.38	1.40	6.99
PFUnA	2058-94-8	1.40 U	0.57	1.40	6.99
PFDoA	307-55-1	0.70 U	0.34	0.70	6.99
PFTrDA	72629-94-8	1.40 U	0.39	1.40	6.99
PFTeDA	376-06-7	2.80 U	0.88	2.80	6.99
NMeFOSAA	2355-31-9	3.50 U	1.57	3.50	6.99
NEtFOSAA	2991-50-6	0.84 J	0.80	2.80	6.99
PFBS	375-73-5	1.40 U	0.50	1.40	6.99
PFHxS	355-46-4	1.43 J	0.31	0.70	6.99
PFOS	1763-23-1	11.69	0.38	1.40	6.99

Surrogate Recoveries (%)

13C5-PFHxA	101
13C4-PFHpA	107
13C8-PFOA	101
13C9-PFNA	92
13C6-PFDA	104
13C7-PFUnA	105
13C2-PFDoA	106
13C2-PFTeDA	120
d3-MeFOSAA	123
d5-EtFOSAA	118
13C3-PFBS	140
13C3-PFHxS	117
13C8-PFOS	119

MW12/29/18

Analyzed by: Griffith, Lauren
Printed: 11/8/2018

LOCATION_NAME	SITE_NAME	INSTALLATION_ID	LOCATION_TYPE	LOCATION_TYPE_DESC	SDG	COORD_X	COORD_Y	ANALYTICAL_METHOD_GRP_DESC	SAMPLE_NAME	SAMPLE_MATRIX	SAMPLE_MATRIX_DESC	COLLECT_DATE
VC-CS11-SD01	BASEWIDE PFAS	POINT_MUGU_NAS	MS	Sediment e.g., Marine Sediment	18-0621	6219291	1863744.4	Perfluoroalkyl Compounds	VC-CS11-SD01-000H	SE	Sediment	09-Oct-18
VC-CS11-SD01	BASEWIDE PFAS	POINT_MUGU_NAS	MS	Sediment e.g., Marine Sediment	18-0621	6219291	1863744.4	Perfluoroalkyl Compounds	VC-CS11-SD01-0102	SE	Sediment	09-Oct-18
VC-PM3009-SD01	BASEWIDE PFAS	POINT_MUGU_NAS	MS	Sediment e.g., Marine Sediment	18-0621	6223371.3	1865899.1	Perfluoroalkyl Compounds	VC-PM3009-SD01-000H	SE	Sediment	08-Oct-18
VC-PM3009-SD01	BASEWIDE PFAS	POINT_MUGU_NAS	MS	Sediment e.g., Marine Sediment	18-0621	6223371.3	1865899.1	Perfluoroalkyl Compounds	VC-PM3009-SD01-0102	SE	Sediment	08-Oct-18
VC-PM323-324-SD01	BASEWIDE PFAS	POINT_MUGU_NAS	MS	Sediment e.g., Marine Sediment	18-0621	6225960.2	1868768.4	Perfluoroalkyl Compounds	VC-PM323-324-SD01-000H	SE	Sediment	08-Oct-18
VC-PM323-324-SD01	BASEWIDE PFAS	POINT_MUGU_NAS	MS	Sediment e.g., Marine Sediment	18-0621	6225960.2	1868768.4	Perfluoroalkyl Compounds	VC-PM323-324-SD01-0102	SE	Sediment	08-Oct-18
VC-PM372-SD01	BASEWIDE PFAS	POINT_MUGU_NAS	MS	Sediment e.g., Marine Sediment	18-0621	6226798.5	1864395.6	Perfluoroalkyl Compounds	VC-PM372-SD01-000H	SE	Sediment	08-Oct-18
VC-PM372-SD01	BASEWIDE PFAS	POINT_MUGU_NAS	MS	Sediment e.g., Marine Sediment	18-0621	6226798.5	1864395.6	Perfluoroalkyl Compounds	VC-PM372-SD01-0102	SE	Sediment	08-Oct-18
VC-PM553-SD01	BASEWIDE PFAS	POINT_MUGU_NAS	MS	Sediment e.g., Marine Sediment	18-0621	6222181.1	1865217.9	Perfluoroalkyl Compounds	VC-PM553-SD01-000H	SE	Sediment	08-Oct-18
VC-PM553-SD01	BASEWIDE PFAS	POINT_MUGU_NAS	MS	Sediment e.g., Marine Sediment	18-0621	6222181.1	1865217.9	Perfluoroalkyl Compounds	VC-PM553-SD01-0102	SE	Sediment	08-Oct-18
VC-STP-SD01	BASEWIDE PFAS	POINT_MUGU_NAS	MS	Sediment e.g., Marine Sediment	18-0621	6231389	1864393.7	Perfluoroalkyl Compounds	VC-STP-SD01-000H	SE	Sediment	09-Oct-18
VC-STP-SD01	BASEWIDE PFAS	POINT_MUGU_NAS	MS	Sediment e.g., Marine Sediment	18-0621	6231389	1864393.7	Perfluoroalkyl Compounds	VC-STP-SD01-0102	SE	Sediment	09-Oct-18
VC-STP-SD02	BASEWIDE PFAS	POINT_MUGU_NAS	MS	Sediment e.g., Marine Sediment	18-0621	6231733.4	1864372.3	Perfluoroalkyl Compounds	VC-STP-SD02-000H	SE	Sediment	09-Oct-18
VC-STP-SD02	BASEWIDE PFAS	POINT_MUGU_NAS	MS	Sediment e.g., Marine Sediment	18-0621	6231733.4	1864372.3	Perfluoroalkyl Compounds	VC-STP-SD02-0102	SE	Sediment	09-Oct-18
VC-STP-SD03	BASEWIDE PFAS	POINT_MUGU_NAS	MS	Sediment e.g., Marine Sediment	18-0621	6231835.6	1864013.5	Perfluoroalkyl Compounds	VC-STP-SD03-000H	SE	Sediment	09-Oct-18
VC-STP-SD03	BASEWIDE PFAS	POINT_MUGU_NAS	MS	Sediment e.g., Marine Sediment	18-0621	6231835.6	1864013.5	Perfluoroalkyl Compounds	VC-STP-SD03-0102	SE	Sediment	09-Oct-18
VC-STP-SD04	BASEWIDE PFAS	POINT_MUGU_NAS	MS	Sediment e.g., Marine Sediment	18-0621	6232052.3	1864290.4	Perfluoroalkyl Compounds	VC-STP-SD04-000H	SE	Sediment	09-Oct-18
VC-STP-SD04	BASEWIDE PFAS	POINT_MUGU_NAS	MS	Sediment e.g., Marine Sediment	18-0621	6232052.3	1864290.4	Perfluoroalkyl Compounds	VC-STP-SD04-0102	SE	Sediment	09-Oct-18